

## 3100 Mobile Fault Finder



SCPI reference guide  
Firmware version 12.30

boosting wireless efficiency



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# SCPI

## 1

This chapter describes the remote control capabilities of the 3100. The topics described in this chapter are as follows:

- ["Overview" on page 2,](#)
- ["What SCPI is" on page 2](#)
- ["Structure" on page 3](#)
- ["Syntax and notation" on page 3](#)
- ["Command subsystem overview" on page 6](#)
- ["The Node B and UE parameter subsystems" on page 15](#)
- ["The communication-related subsystems" on page 8](#)
- ["SCPI command errors" on page 31](#)

## Overview

SCPI (pronounced as 'skippy') is a world-wide standard. The basic idea of SCPI is to define a command language for measurement systems that is independent of the related manufacturers.

This chapter explains how SCPI works on the 3100. It is divided into six subsections:

[What SCPI is](#) – Here you will find a short definition of SCPI and some general information.

[Structure](#) – This subsection explains the common commands, the subsystems and the command tree.

[Syntax and notation](#) – The command syntax, the parameters and the syntax of queries are explained in this subsection.

[Command subsystem overview](#) – This subsection gives a brief overview on the subsystems into which the SCPI commands are split.

[The Node B and UE parameter subsystems](#)

[The communication-related subsystems](#)

[SCPI command errors](#) – Here, you will find a table with explanations of syntax errors, run-time errors, device errors or any other errors.

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## What SCPI is

SCPI (Standard Commands for Programmable Instruments) was introduced in 1990. It is a world-wide standard, independent of single manufacturers. The SCPI specifications define a command language for measurement systems and – in principle – are based on IEEE 488.2. SCPI is independent of the physical transmission channel of the commands. Although this chapter refers to the GPIB as the physical interface, you can also control the 3100 via a local area network and USB.

The idea behind SCPI is to shorten program development times for the automated control of test equipment and to make that program development as efficient as possible.

Of course, one of the main requirements for this goal is that the language must be understood by as many measurement devices as possible. Therefore, SCPI is pushed by the SCPI consortium. Quite a number of the main test and measurement equipment manufacturers are members of the SCPI consortium.

Implementing just standard commands on a complex communications test system like the 3100 would lead to a poor performance. Therefore, we were obliged to find a compromise between standard commands and performance. This is the reason why you will find many more SCPI commands on the 3100 than

specified in the standard SCPI specification.

However, all SCPI commands implemented on the 3100 follow the standard SCPI syntax and rules.

For additional details on the SCPI standard, the current version can be found on page [www.scpiconsortium.org/scpistandard.htm](http://www.scpiconsortium.org/scpistandard.htm). You can download the full SCPI specification from there free of charge (some 3.5 Mb in PDF format).

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## Structure

SCPI defines programming commands, program messages, return values and data formats, which are consistent for all measurement systems independent of their manufacturer and purpose.

SCPI uses a device-independent command set, the so-called **Common commands**, understood by all SCPI devices.

The 3100-specific SCPI commands are called **Compound commands** and will only be understood by the 3100 and its subsystems.

A subsystem in terms of SCPI is quite abstract: it is the set of commands implemented to perform specific tasks of the SCPI device (the 'measurement subsystem' of the 3100, for instance, is the set of commands implemented for taking all kind of measurements, while the 'configuration subsystem' is the set of all configuration commands for all areas of the 3100).

All these subsystems are using the same, SCPI-based messaging and data formats.

Any SCPI command is built in a hierarchical way – similar to how a path in a file system is built.

The single command elements are separated by colons (:).

The complete set of commands of a subsystem is called the 'command tree'.

The command trees for the SCPI command set implemented on the 3100 is available in this manual.

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## Syntax and notation

There are two types of SCPI commands:

- compound commands and
- common commands.

Both types of commands differ in syntax.

### Compound commands

Compound commands are always referred to as **commands** throughout this chapter.

- Any compound command is built in a hierarchical way. The single command elements are separated by colons (:).

- A command usually starts with a colon (:). However, the colon **must be omitted** when the subsequent command continues on the same hierarchical level (see examples below).
- The first command element always is the name of the subsystem like `CONFigure` or `MEASure`.
- Then follows one of the commands available for that subsystem like `GSM` or `RFTX`.
- The subsequent command element(s) may now be one or more subcommand(s) and/or one or more parameter term(s) (e.g. `BS:ID:BCC 5`).
- A SCPI program line may contain more than one command. In this case, the single commands have to be separated by a semicolon (;).
- There is also a short form for every command. This is usually formed of the first four letters (`CONF` instead of `CONFigure`). When the fourth letter is a vowel (a,e,i,o,u), only the first three letters are used (`RFG` instead of `RFGenerator`).
- Throughout this manual, the short form is always written in capitals to make it easy to identify it. However, the SCPI system of the 3100 is not case-sensitive.

### Examples

- The complete SCPI command to set the base station color code (i.e. the training sequence) to 5 would be: `:CONFigure:GSM:BS:ID:BCC 5`. The short form `:CONF:GSM:BS:ID:BCC 5` is completely identical.
- `:RFGenerator:STATe ON` is identical with `:RFG:STAT ON`. However, the long version of the commands is – especially in the beginning – easier to work with.
- `:RFGenerator:STATe ON; LEVel 20` is a valid two-command statement. `STATe ON` and `LEVel` are both commands of the `RFGenerator` subsystem. Both are working on the same hierarchical level. Therefore, the colon in front of `LEVel 20` has to be omitted. An alternative with the identical meaning would be: `:RFGenerator:STATe ON; :RFGenerator:LEVel 20`. The form `:RFGenerator:STATe ON; :LEVel 20` would be invalid, because `LEVel` is no subsystem of the 3100.
- `:RFGenerator:MODulation:STATe ON` is invalid. `STATe ON` is no subcommand of the `:RFG:MOD` level.
- `:RFGenerator:MODulation ON; FREQuency 850.2` In this case, the first part up to the semicolon(;) is valid. The second part is invalid as `FREQ` is no subcommand of the `:RFG:MOD` level. The correct command would be: `:RFGenerator:MODulation ON; :RFGenerator:FREQuency 850.2`.

### Parameters

Many commands require parameters to be specified. Those parameters are placed behind the command, separated by at least one blank (space). The following types of parameters do exist on the 3100:

- **Numeric parameters.** These are integers, floating point numbers (with a maximum of 6 decimals) or exponential numbers (see specifications IEEE 488.2 NRf format or ANSI X3.42-1975 for details).

#### NOTE

The decimal point of floating point numbers **must be** the dot (.) within SCPI as a comma (,) will always be interpreted as the separator between two parameters (see Notes below for details).

- **Boolean parameters** are specified using the binary numbers 0 | 1, or ON | OFF instead.
- **Enumerated parameters** are strings that only may be selected from a predefined list. To distinguish them from string parameters, the enumerated parameters **must not** be put in quotation marks.  
**Example:** `:CONFigure:GSM:TYPE GSM9001800` sets the 3100 to work as test set for GSM 900/1800.
- **String parameters** are user-defined strings.
- **Block parameters** are a special case and will be described with the related commands.

#### Queries

Many commands also have a query form. These queries enable you to read out the current value of parameters or the results of measurements.

For a query, simply add a question mark to the command (without any spaces or other symbols in-between).

**Example:** `:RFG:FREQ?` returns the current transmission frequency of the RF generator.

#### NOTE

The result of a query is saved internally on the 3100.

#### Common commands

Common commands are defined in IEEE 488.2.

They work on the device itself (and on any subsystem) and always start with an asterisk (\*).

**Example:** `*RST` resets the 3100 and sets all system parameters to default values.

A list of all common commands can be found in subsection "[Common commands](#)" on page 5.

#### NOTE

The SCPI system is not case-sensitive. It does not matter for the syntax whether commands are written using capital letters, lowercase letters, or a mixture of both.

However, for easy maintenance of SCPI programs, it is recommended to type in the short form of a command in capital letters (`CONF`) and the rest of it in lowercase letters (`CONFigure`).

#### NOTE

Some commands allow more than one parameter. In those cases, the single parameters are separated by commas (,). There **must not be** any spaces between the commas and the parameters.

**Example:** `:CONF:GSM:BS:TCH:NCELL 63,45,39,17,23,9`

### SCPI notation

[ **item** ] – Square brackets indicate an optional item, which can also be omitted.

**Example:** `:MEASure[:CONTinuous]:RFTX:PPEak`. Regardless whether the `:CONTinuous` command element is used or not, the 3100 will start taking continuous measurements of the peak phase error.

**item** | **item** – Vertical bars separate entries of a list and indicate that precisely one element out of that list **must** be used.

**Example:** Some commands require boolean parameters to be specified. This means

that either on (1) or off (0) needs to follow the command. This is expressed by using vertical bars: `ON | OFF`.

< **item** > – Pointed brackets indicate that either a parameter or a subcommand must be used in order to build a valid command.

**Example:** `:RFGenerator:STATE <ON | OFF>`. The RF generator can be set either on or off.

{ **item** } – Braces stand for a parameter or a subcommand that has to be selected from a predefined table.

**Example:** `:MEASure<:{measProp}>` indicates all subcommands of the `MEASure` subsystem, like `RFTX`, `RFRX` or `AFAN`.

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## Command subsystem overview

This subsection provides information about the SCPI command subsystems.

[The Measurement subsystems](#) – `MEASure`, `FETCh`, `CALCulate`

[Measurement device configuration subsystems](#) – `RFGenerator`, `RFSPectrum`, `RFANalyser`, `AFGenerator`, `AFANalyser`, `MS Power Supply`

[The Node B and UE parameter subsystems](#) – `CONFigure`, `CALL`

[The communication-related subsystems](#) – `PROGram`, `STATus`, `SYSTem`, `FORMat`

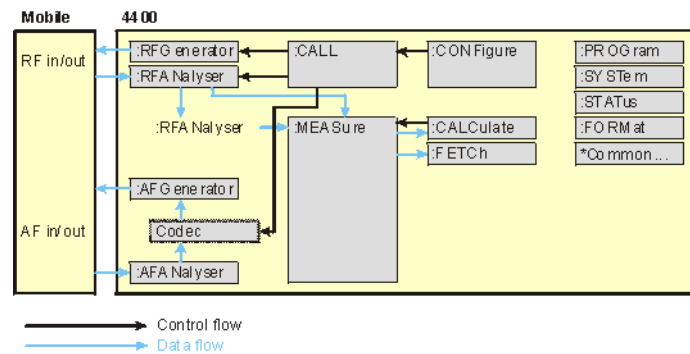
[SCPI command errors](#)

### Using the SCPI commands

The various SCPI commands and their arguments/parameters are described below. Please note that any SCPI command specified with an invalid or without an argument required will be totally ignored by the system. This means that an incomplete SCPI command will not affect the current system status at all.

## Schematic view of the subsystems of the 3100

This is a very simplified schematic view of the control and data flow inside the 3100.



## Common commands

The common commands are understood by all SCPI and IEEE 488.2 instruments. Their purpose is to perform general tasks and to read or work with the registers common to all SCPI instruments. The following common commands have been implemented.

Command	Short description	Command group
: *CLS	Resets the entire status reporting system.	General common commands
: *ESE	Sets and queries the event status register mask.	Event status register
: *ESR?	Reads out the current contents of the event status register.	Event status register
: *IDN?	Returns device identity.	General common commands
: *OPC	Waits until previous command has been completed.	General common commands
: *RST	Resets the entire test set. All parameters, limits etc. will be set to internally predefined default values.	General common commands
: *SRE	Sets and queries service register mask.	Service register
: *STB?	Returns the current contents of the service register and clears the service register.	Service register
: *WAI	Waits until previous command has been completed.	General common commands

## The communication-related subsystems

These subsystems cover system relevant tasks, which are not primarily involved in the measurement process.

**SYSTEM** – System parameters, such as the number of unread error messages, the test set's GPIB address etc. may be read out or set using the commands of this subsystem.

**STATUS** – The STATUS subsystem controls and provides information on the state of the 3100. There are two types of states: operational states describe what is currently going on within the test set while questionable states deliver questionable states of the 3100.

**FORMAT** – The commands of this subsystem enable settings of the data output format in remote mode.

### The SYSTEM subsystem

System parameters, such as the number of unread error messages, the test set's GPIB address etc. may be read out or set using the commands of this subsystem.

### The STATUS subsystem

The STATUS subsystem delivers detailed information about the internal status of the 3100, its error conditions and special events. These three areas are dealt with in three different sections of the status subsystem. These three sections are addressed, using different commands.

Status Area	Related commands	Main functional aspects
Operation Status	STATUS:OPERation...	These commands deal with the operation status of the 3100. They describe what is currently going on inside the test set, mainly in respect of signaling and measuring.
System Errors	STATUS:QUESTionable...	This area of the internal status report system mainly deals with errors and warnings regarding the hardware stages of the 3100 (like 'RF input overload' or 'frequency out of range').
Execution Errors	*ESE, *ESR?	Mainly program or SCPI command execution errors are dealt with in this area of the internal status report system.

The status subsystem provides in-depth information about the internal status of the test set. Furthermore, powerful event processing tools allow any form of flexible control over the 3100.

However, the use of the status subsystem is a bit tricky because of the many



parameters involved. Therefore, we kindly suggest to carefully read subsection "Understanding the STATUS subsystem" on page 9 before using the status subsystem.

A table of all registers implemented can be found in subsection "Table of registers" on page 11.

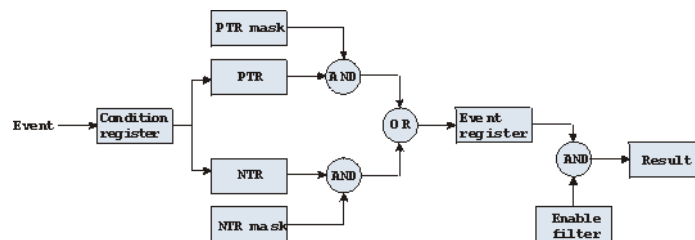
## Understanding the STATUS subsystem

The STATUS subsystem is intended to deal with special events occurring inside the test set. It provides tools to enable any current condition to raise a system event. These system events may then be used to trigger service requests (SRQ) on the GPIB.

There are several groups of registers, structured in a hierarchical order. Lower-level registers work on specific conditions and single parameters while higher-level registers integrate the result of several lower-level registers and thus provide a more general view.

The highest level of these registers is the service register, sometimes also referred to as the statusbyte register or status byte.

The figure below gives an example of a group of registers.



A group of registers starts with a Condition register. An internal Event will set the corresponding bit of the Condition register (to 'set a bit' means a transition from binary 0 to a binary 1). Any Condition register will be updated continuously. This means that a bit will be reset as soon as the condition which rose that bit is no longer valid.

### Example:

As soon as the 3100 starts to page a mobile under test, a certain bit of a certain condition register will be set. When the 3100 stops paging the mobile (because e.g. it responded to the paging requests), this bit will be reset. Now, there is no chance to find any evidence for a paging process in this Condition register.

Therefore, there is an Event register included in every group of registers. In the Event register, a bit will remain set even when the condition for it to be set is no longer valid. Any Event register, however, will be cleared after a query.

### Example:

Continuing our example from above, in the related Event register, the corresponding bit would still be set. A query of this register would provide evidence that there has been some paging in progress. However, the Event register is not able to provide any information if the condition is still valid.

### Summary 1: condition-type versus event-type registers

- The condition-type registers reflect the current status of the test set and is updated continuously. When you would like to know if a special condition is currently valid, then read out the related condition-type register with a query.
- The condition-type register and the event-type register have an identical structure. This means that they are of the same length and the single indicator bits are at the same positions.
- The event-type registers are the 'memory' of the status system. Once a bit has been set, it will remain set until the event-type register is read out with a query. When you want to trigger e.g. your program with a certain event, always read out the related event-type register.
- Event-type registers are read-only and self-destructive. They will be cleared after any query.

### Transition of a bit from the condition-type to the event-type register

How will a bit find its way to the Event register?

This depends on the transition filter and its settings. The transition filter works as follows:

First, there are two branches: the **Positive TRansition** and the **Negative TRansition** filter. Both only react on the corresponding transitions of bits and both contain as many bit positions as the condition register.

**PTR** will carry a binary 1 at a bit position only when the corresponding bit of the condition register is set, while **NTR** will carry a binary 1 at a bit position only when the corresponding bit of the condition register is reset.

Both the output of **PTR** and **NTR** will be combined with the corresponding mask, using a logical **AND** operation.

These masks are user-definable (using the **STAT:xxxx:xTR** commands) and again contain as many bit positions as the condition register.

#### Example:

The only chance for bit 4 (that has just been set in the condition register) to reach the **Event register** is that the **PTR mask** carries a binary 1 at bit position 4. The logical **AND** between the **PTR filter** and the **PTR mask** will then deliver a binary 1. This binary 1 will pass the logical **OR** and thus set bit 4 of the **Event register**.

### Summary 2: from the condition-type to the event-type registers

- There are two detectors for every bit of a condition register: the **positive** transition and the **negative** transition branch. Positive transition means a change of a bit from a binary 0 to a binary 1 while a negative transition is a bit change from a binary 1 to a 0.
- To every branch, there is a filter mask (**PTR** and **NTR** mask). This filter mask is user-definable.
- The filter mask and the result of the transition filter are combined using a logical **AND** operation.

- The results of the AND operation in both branches will be combined, using a logical OR operation.
- The results of the OR operation are the contents of the related event-type register.

#### **Moving up: an event reaches the condition register one hierarchical level up**

The **Event register** contains summary bits, corresponding to the bits of the condition register. A summary bit will be set, when the initial event passes the transition filter.

The **Enable filter** is a mask to filter events that are allowed to move one level up. The Enable filter is user-definable (using the **STAT:xxxx:ENABLe** commands) and again contains as many bit positions as the condition-type register.

Again, the Enable filter mask is ANDed with the Event register and a nonzero result will finally set the **Result bit**. This Result bit may be a summary bit either in a higher-level register, or in the service register.

#### **Summary 3: raising the Result bit**

- The event-type register will be ANDed with the related Enable filter mask.
- The Enable filter mask is user-definable.
- The result of the logical AND operation between event-type register and related Enable filter will be the Result bit.
- The result bit will set the corresponding bit of the condition register one level up.

#### **At the top: the service register**

The **service register** contains eight summary bits: three for the status groups available on the 3100, two for internal queue handling, two for remote control and one bit for it's own status: the **summary status bit**.

When an event passes through and sets one of the seven corresponding summary bits of the service register, the contents of the service register will be ANDed with the service register mask. This mask can be set using the **\*SRE** common command.

When the logical AND operation of the current contents of the service register and the service register mask leads to a binary **1**, then the summary status bit will be set as well.

If both bit 6 of the service register mask and bit 6 (the summary status bit) of the service register are set, then a service request (SRQ) is executed.

### **Table of registers**

The **STATus** subsystem uses and/or provides access the following registers:

#### **Service register**

This register represents the highest level within the report structure of the 3100. The service register contains eight bits. A detailed description of the service register can be found in the appendix (SCPI Command Reference).

### Event status register group

This group of registers collects all general events of the 3100 (mostly command errors).

Depending on the setting of the event status register mask, bits set in the event status register may be transferred to bit 5 of the service register.

For further details regarding the event status register, please refer to the appendix (SCPI Command Reference).

### General operation register group

This group of registers is 16 bits wide and reflects the general operation status of the 3100.

#### NOTE

The commands related to the general operation register group and its subordinate groups of registers all start with **:STATus:OPERation:**. See the various **:STATus:OPERation:EVENT** commands in [Chapter 2 "SCPI Command Reference"](#) for the meaning of the individual status bits.

### Signaling operation register group

This group of registers is 16 bits wide. Its main task is to deal with events related to the signaling status. The signaling operations depend on the system option and the contents of the signaling operation register group are detailed in the appendix.

The Result bit of this group of registers is forwarded to bit 8 of the general operation register group.

### Measuring operation register group

This group of registers is 16 bits wide. Its main task is to deal with events related to the measurement status.

The Result bit of this group of registers is forwarded to bit 9 of the general operation register group.

Bit	Decimal	Meaning
0	1	Set while RFTX measurements are in progress.
1	2	Set while RFRX measurements are in progress.
2	4	Set while RFSPectrum measurements are in progress.
3	8	Set while audio measurements are in progress.
4	16	Not in use.
5	32	Not in use.
6	64	Not in use.
7	128	Not in use.
8	256	Not in use.
9	512	Not in use.

10	1024	Not in use.
11	2048	Not in use.
12	4096	Not in use.
13	8192	Not in use.
14	16384	Not in use.
15	32768	Not in use.

### General questionable status register group

This group of registers is 16 bits wide and reflects the general questionable status of the 3100. The events taken care of this group of registers are mainly errors and warnings.

Some of the bits of this register (like bits 9,10 and 11) are summary bits. Those summary bits are result bits of subordinate groups of registers and described below.

#### NOTE

The commands related to the general questionable status register group and its subordinate groups of registers all start with **:STATus:QUESTIONable:**.

Bit	Decimal	Meaning
0	1	Voltage out of range. Not used on the 3100.
1	2	Current out of range. Not used on the 3100.
2	4	Time out of range. Not used on the 3100.
3	8	Power out of range. Not used on the 3100.
4	16	Temperature out of range. Not used on the 3100.
5	32	Frequency out of range. Not used on the 3100.
6	64	Phase out of range. Not used on the 3100.
7	128	Modulation out of range. Not used on the 3100.
8	256	Calibration out of range.
9	512	This is the RF summary bit. This is the Result bit of the RF questionable status register group (see below for details).
10	1024	This is the SYNChronization summary bit. This is the Result bit of the SNYChronization questionable status register group (see below for details).
11	2048	This is the AUDio summary bit. This is the Result bit of the AUDio questionable status register group (see below for details).
12	4096	Not in use.
13	8192	General warning, concerning the test set.

14	16384	Command not understood warning.
15	32768	Not in use.

### RF questionable status register group

This group of registers is 16 bits wide. Its main task is to deal with warnings and errors regarding the RF stages of the 3100.

The Result bit of this group of registers is forwarded to bit 9 of the general questionable status register group.

Bit	Decimal	Meaning
0	1	Input overload. Reduce RF power immediately to avoid possible damage of the 3100's highly sensitive input stages!
1	2	Output level out of range.
2	4	Transmission frequency out of range.
3	8	Reception frequency out of range.
4...15		Not in use.

### SYNChronization questionable status register group

This group of registers is 16 bits wide. Its main task is to deal with warnings and errors regarding the external synchronization of the 3100.

The Result bit of this group of registers is forwarded to bit 10 of the general questionable status register group.

Bit	Decimal	Meaning
0	1	Set when an external RF synchronization signal is recognized on the EXT SNYC prog. socket.
1	2	Set when an external frame synchronization signal is recognized on the SNYC IN/OUT socket.
2...15		Not in use.

### AUDio questionable status register group

This group of registers is 16 bits wide. Its main task is to deal with warnings and errors regarding the audio stages of the 3100.

The Result bit of this group of registers is forwarded to bit 11 of the general questionable status register group.

Bit	Decimal	Meaning
0	1	Input overload. Reduce signal level immediately to avoid possible damage of the 3100's highly sensitive input stages!
1	2	Output level out of range.

2...15 Not in use.

## The FORMat subsystem – overview

The FORMat subsystem sets and queries settings concerning the data output in remote mode.

## The Node B and UE parameter subsystems

These subsystems allow access to the node B parameters (i.e. the 3100 simulating a Node B) and to the information received from the mobile under test like the measurement report. The commands of these subsystems are described here.

CONFigure – This subsystem incorporates all changeable Node B parameters of all implemented communication systems.

### NOTE

The settings made here directly affect all communication system-specific subsystems.

CALL – This subsystem handles call procedures and allows to read out the measurement report generated by the mobile under test. The information available is dependent on the current state of a call, i.e. some commands require an established radio communication link between the 3100 and the mobile under test.

## The CONFigure subsystem

This subsystem incorporates all changeable NB parameters of all systems implemented. The key commands are the following:

**CONFigure:CSYSstem** Selects the communications system to work with.

**CONFigure:<SystemOption>:...** These commands select parameters within a communications system.

**CONFigure:<SystemOption>:NB:...** These are the commands to set specific system parameters like the node B's RF output power level or its identity.

**CONFigure:<SystemOption>:UE:...** The mobile-specific information is handed over to the 3100 using these commands. One example is the power level.

**CONFigure:<SystemOption>:BER:...** These commands set the BER parameters.

**CONFigure:<SystemOption>:GROup:...** With the help of these commands, groups of measurements may be defined.

### CONFigure:COUPloss:...

These commands provide access to the coupling loss compensation feature of the 3100.

#### NOTE

Always select the communication system via the :Configure:CSYSTEM command first before you change any parameters using different SCPI commands.

### The CALL subsystem

This subsystem contains commands

- for call setup and handling procedures and
- to read out the measurement report, generated by the mobile.

---

## The Measurement subsystems

The 3100 provides the following measurement subsystems:

**The MEASure subsystem** – This subsystem provides the commands for all kinds of measurements: Single-shot as well as series of measurements, measurements of single parameters as well as of groups of parameters.

**The FETCh subsystem** – To read out the latest measurement result of a specific parameter or a group of parameters.

#### NOTE

FETCh requires that a measurement is started first, using the MEASure commands.

#### NOTE

FETCh will neither start nor terminate continuous measurements.

**The CALCulate Subsystem** – All kinds of statistic evaluations and checks of measurement results against predefined limits.

### The MEASure subsystem

The MEASure subsystem is probably the most important SCPI command subsystem of the 3100. There you will find all commands to acquire measurement results of the mobile under test. Measurements can be taken as one-shot measurements or as series of measurements:



Type of measurement	Related command element	Short description
One-shot	[:CONTinuous]	Actually :CONT starts a measurement, that will be performed continuously. Single measurement results can be read out using the related :FETCh commands. Thus several measurements can be started (where those measurements are started first that take the longest time, like e.g. BER).
Series	:ARRay	This command element offers the possibility to carry through a specific measurement a certain number of times. All the single measurement result values can be read out with just one command. Using this feature, measurement results returned can then be used e.g. for statistic data evaluation on an external computer.

#### Example:

First a BER measurement command is issued to start a BER measurement (because it takes some time). Then several RF TX measurements are performed and the measurement results are read out and used for statistic data evaluation. After that the result of the BER measurement is read out.

#### Important notes:

- A newly issued RF TX MEASure command will terminate any RF TX or RF spectrum measurements currently in progress.
- A newly issued RF SPectrum MEASure command will terminate any RF TX or RF spectrum measurements currently in progress.
- A newly issued RF RX MEASure command will terminate any RF RX measurements currently in progress.
- A newly issued AF MEASure command will terminate any RF TX, RF RX, RF spectrum or AF measurements currently in progress.
- Measurements are always started, using the current system parameters and the current state of the 3100.
- In case the 3100 is in a state that does not allow a specific measurement command to be performed or completed, an error message will be added to the 3100's internal error queue. The related flag in [The STATus subsystem](#) will be set, too.  
In case this is the first error message to appear within the error queue, the error indicator bit of the service register (bit 2) will be set as well.

**:MEASure[:CONTInuous]** MEASure commands that are stated with or without the optional :CONTInuous command element will make the 3100 perform the related measurement for an unlimited number of times.  
The measurement will only be terminated if a new MEASure command of the same or related type is issued (see Notes above).

<b>Syntax</b>	:MEASure[ :CONTInuous ] < { :measProp } > [ ? ]
<b>Parameters</b>	The one-shot measurements do not require any parameters.
<b>Description</b>	<p>Starts the (continuous) measurement of the specified measurable property. The CONTInuous command element is optional.</p> <p>Unless a measurement result is read out (using the FETCh subsystem), no measurement result values will be given back.</p> <p>The measurement result(s) of any measurement will be stored internally. Any previously stored result will be overwritten as soon as a new measurement result has been achieved.</p> <p>The latest result measured may be read out using the FETCh subsystem.</p> <p>Any FETCh command will wait for a measurement result value(s) to be available. In case there is more than one measurement result value, the single measurement result values are separated by commas (like e.g. "50.5,3.46"). Should the FETCh command fail to obtain a measurement result value (because e.g. the current state of the 3100 does not allow the measurement to be performed or completed), a timeout will occur and an error message will be added to the 3100's internal error queue.</p> <p>The related flag in the STATus subsystem will be set, too.</p> <p>In case this is the first error message to appear within the error queue, the error indicator bit of the service register (bit 2) will be set as well.</p> <p>The main application of the combination of the MEAS and the FETC subsystems: Starting a measurement that takes some time to deliver a measurement result back (e.g. the BER measurement. After the measurement has been started with the MEAS command, the test set 'is free' to perform other tasks. If in this case the query form of the MEAS command is used, the test set is blocked until a measurement result is available.</p> <p>Sometimes, measurement results will need to 'sweep in'. In this case, the first measurement result might be totally misleading. Using the MEAS command will allow the measurement result value to stabilize on a meaningful result before the latest result value is read out using the FETC subsystem.</p>
<b>Query</b>	<p>The query form of any MEASure command will start the (continuous) measurement of the specified measurable property.</p> <p>The CONTInuous command element is optional.</p> <p>After the first measurement has been completed, the measurement result value(s) will be delivered back in a string as outlined above.</p> <p>Should the query fail to obtain a measurement result value, a timeout will occur and an error message will be added to the 3100's internal error queue as explained above.</p> <p>The main application of the query form of a MEAS command is speed. When combined with 'fast' measurements (like e.g. the fast power level measurement), the query form of a MEAS command delivers measurement results as fast as possible.</p> <p><b>Note:</b> The measurement started with the query form of the MEAS command will be continued in the background. Any further measurement result values may be read out, using the appropriate FETCh command.</p>

### Examples

```
:MEASure:GSM:CONTinuous:RFTX:PPEAk and
:MEASure:GSM:RFTX:PPEAk
```

are identical. Either command will start the measurement of the peak phase error. The latest result of this measurement (like "5.84") will be stored internally. It will be overwritten as soon as a new measurement result has been achieved.

To read out the current measurement result, use the FETCh subsystem:

```
:FETCh:GSM:RFTX:PPEAk?
:MEASure:RFTX:ALL
```

This command will start the continuous measurement of all relevant RFTX parameters. After this command has been issued, you may continue with e.g. an RF RX MEASure command.

All 19 single measurement results will be stored internally. As soon as a new measurement result has been achieved, the previous value will be overwritten.

To read out the measurement results achieved by the :MEAS:RFTX:ALL command, use the :FETCh:GSM:RFTX:ALL? command.

```
:MEASure:GSM:RFTX:ALL?
```

As in the example above, the continuous measurement of all relevant RFTX parameters will be started. Unlike the example above, this command will wait until all 19 measurement results have been achieved and will return all of them in a string, separated by commas. The measurements will continue and later results may be read out, using the FETCh:GSM:RFTX:ALL? command.

### How to convert a result string back into numeric variables

The example program below illustrates how the returned string can be converted back into numeric variables in a program on an external PC controlling the instrument.

```
PRINT #scpi, ":MEAS:GSM:RFTX:ALL?"
INPUT #scpi, result$
index = 0
result$ = result$ + ","
```

```
DO
```

```
  ' Find the position within result$, where the first
  comma appears
```

```
  P = INSTR(result$, ",")
```

```
  ' Read out the part of result$ in front of the first
  comma and convert it into a numeric value
```

```
  result(index) = VAL(LEFT$(result$, P - 1))
```

```
  ' Cut off the value just read from result$
```

```
  result$ = MID$(result$, P + 1)
```

```
  index = index + 1
```

```
LOOP UNTIL result$=""
```

### MEASure:ARRay

The :ARRay command element makes the 3100 perform any measurement property a user-definable number of times. All measurement result values obtained during the process will be stored in an internal array and can be read out using the related commands of the FETCh subsystem or will be returned in case the measurement process has been started using the query format of the command.

After the specified number of measurements have been performed, the measure-

ment will be stopped and no further measurement result values will be stored internally. Therefore, any attempt to read out data again (unless any measurement has been started before) will result in a timeout and thus in an error message.

This is one of the main differences between the `[:CONTInuous]` and the `:ARRay` command element.

**Note:** Any measurement will be terminated if a new `MEASure` command of the same or related type is issued (see **Notes** in section ["The MEASure subsystem" on page 16](#) for details).

<b>Syntax</b>	<code>MEASure:ARRay&lt;{:measProp}&gt;[?] &lt;numMeas&gt;</code>
<b>Parameters</b>	<code>numMeas</code> is the number of measurements to be performed.
<b>Description</b>	<p>Takes a <code>numMeas</code> number of measurements of the specified type <code>measProp</code>. The results of the single measurements will be stored in an internal array. The measurement results array can be read out using the related command of the <code>FETCh</code> subsystem (see examples below for reference).</p> <p>After an array has been read out using the related <code>FETCh</code> command, the internal array will be cleared. Any subsequent <code>FETCh</code> command trying to read out the same measurement result array will not be able to read any measurement results and thus result in a timeout. In this case, an error message will be added to the 3100's internal error queue (for further details, refer to section <a href="#">":MEASure[:CONTInuous]" on page 18</a>).</p>
<b>Query</b>	<p>The query form of any <code>MEAS:ARR</code> command will start the related measurement the specified number of times. After the number of measurements specified have been performed, the measurement will be stopped.</p> <p>The query will then return a string containing all the measurement results. The single result values will be separated by commas.</p> <p>Any subsequent <code>FETCh</code> command trying to read out the same measurement result array will not be able to read any measurement results and thus result in a timeout. In this case, an error message will be added to the 3100's internal error queue (for further details, refer to section <a href="#">":MEASure[:CONTInuous]" on page 18</a>).</p>
<b>Examples</b>	<p><code>:MEASure:GSM:ARRay:RFTX:PPEAk 10</code>  This command will make the 3100 perform 10 independent measurements of the maximum phase error in GSM.  After those 10 results have been achieved, the measurement will be stopped. The ten result values will be stored in an internal array.  To read out the measurement result array, use the <code>FETCh</code> subsystem:  <code>:FETCh:GSM:RFTX:PPEAK?</code>  will return the 10 values in one string (like  <code>"5.42,5.44,5.80,...5.72,5.64"</code>)  Any subsequent <code>:FETCh:GSM:RFTX:PPEAK?</code> command will result in a timeout.  <code>MEASure:GSM:ARRay:RFTX:ALL? 2</code>  This command takes all relevant RFTX measurements twice. The measurements will be stopped as soon as the 2 x 19 result values are available.  The 38 result values will be returned as a string; the single values will be separated by commas.  Any subsequent <code>:FETCh:GSM:RFTX:PPEAK?</code> command will result in a timeout.</p>

### How to convert a result string back into numeric variables

The example program below illustrates how the returned string can be converted back into numeric variables in a program running on an external PC to control the instrument.

```
PRINT #scpi, ":MEAS:GSM:ARR:RFTX:ALL? 2"
INPUT #scpi, result$
index = 0
result$ = result$ + ","

DO

  ' Find the position within result$, where the first
  comma appears
  P = INSTR(result$, ",")
  ' Read out the part of result$ in front of the first
  comma and convert it into a numeric value
  result(index) = VAL(LEFT$(result$, P - 1))
  ' Cut off the value just read from result$
  result$ = MID$(result$, P + 1)
  index = index + 1

LOOP UNTIL result$=""
```

#### **:MEAS[:CONT]:BLOCkdata**

The BLOCkdata command element of this subsystem is used to read out all the single measurement results necessary to generate the result graphics.

#### **:MEASure:....:GROup**

As mentioned before (see Notes in section ["The MEASure subsystem" on page 16](#)), a new measurement will always terminate a preceding one of the same or related type.

Therefore, the GROup command element has been implemented in the SCPI command set of the 3100. This command element allows to specify a user-definable list of measurements than can then be started with one command. The measurement results can be read out using the query form of this command – or with the related command of the FETCh subsystem..

#### **NOTE**

In this respect, :MEAS:RFTX:ALL can be regarded as a predefined 'group', containing all important RFTX measurements.

#### **NOTE**

The AFANalyser subsystem also allows to define 'groups'. However, all commands of the AFANalyser subsystem will only obtain measurement results if the Audio Option has been installed.

<b>Syntax</b>	<pre> :CONFigure:MEASure:GROup[:RFTX] &lt;{RFTXprop}&gt; MEASure[:CONTInuous]:RFTX:GROup or MEASure:ARRAy:RFTX:GROup or :CONFigure:MEASure:GROup:AFANalyser &lt;{AFANprop}&gt; MEASure[:CONTInuous]:AFANalyser:GROup or MEASure:ARRAy:AFANalyser:GROup </pre>
<b>Parameters</b>	<p>&lt;{RFTXprop}&gt; is one or more of the single RFTX measurements PPEAK, PRMS, FREQUency, LENGth, UTIME, POWer, TEMPlate, COR- Ner, FLATness</p> <p>&lt;{AFANprop}&gt; is one or more of the single AF Analyser measurements SINad, DISTortion, FREQUency, ACV:PEAKp, ACV:RMS, DCV:RMS</p>
<b>Description</b>	<p>Starting a 'group' measurement will take all measurements specified just with one single command.</p> <p>After the group command has been completed, all 'group' measurement results are available at the same time and can be read out using either the query form of the command or the related commands of the FETCh subsystem.</p>
<b>Example</b>	<pre> :CONF:GSM:MEAS:GRO:RFTX PPEAK, FREQUency, POWer, LENGth :MEAS:RFTX:GRO </pre> <p>This sequence of commands first defines a group of RFTX measurements and then issues a group command. As soon as all the measurements specified in the group command have been completed, the measurement result values can be read out using the :FETCh:GSM:RFTX:GRO? command.</p>

## The FETCh subsystem

The FETCh subsystem enables you to read out the currently valid measurement result value(s) of a measurement.

### Important notes

- Before a measurement value may be read out with commands of the FETCh subsystem, a MEASure command has to be issued first.
- After a continuous measurement has been started, the latest measurement result value can be obtained using the related :FETCh command.
- In case an array measurement has been started, the related :FETCh command will return the entire measurement result array.
- If there are no measurement results to be read out by a FETCh command for any reason, a timeout will occur. The wait time until a timeout occurs is dependent on the type of measurement to be performed (see below).
- If the preceding MEASure command and the FETCh command do not match, a timeout will occur.
- When you use the query form of any MEASure command, all measurement results obtained will be handed back and the internal result register will be cleared afterwards. Consequently, a subsequent FETCh command will lead to a timeout (as above).

- The following timeouts have been implemented:
  - 5 s for all RFTX measurements
  - 30 s for all RFRX measurements
  - 10 s for all RFSpectrum measurements
  - 10 s for all AF measurements

There are two versions of a FETCh command:

- The **:FETCh:LAST?** command will read out the latest result of the last MEASurement command issued - whatever command that was. Using this command, please keep in mind that your control program then has to take care of the number and format of the measurement result values returned.
- The **:FETCh:{measProp};** commands will read out the latest result of the measurement specified with **{measProp}**.

**FETCh:LAST** The **:FETCh:LAST?** command will read out the latest result of the last MEASurement command issued - whatever command that was. Using this command, please keep in mind that your control program then has to take care of the number and format of the measurement result values returned. To convert a result string back into single measurement result values, please refer to section "[How to convert a result string back into numeric variables](#)" on [page 19](#).

**FETCh:BLOCKdata:...?** The commands with the **:BLOCKdata** command element are used to read out all the single measurement results necessary to generate the result graphics.

**FETCh<{:measProp}>** The **:FETCh<{:measProp}>** commands will read out the latest result of the measurement specified with **measProp**.

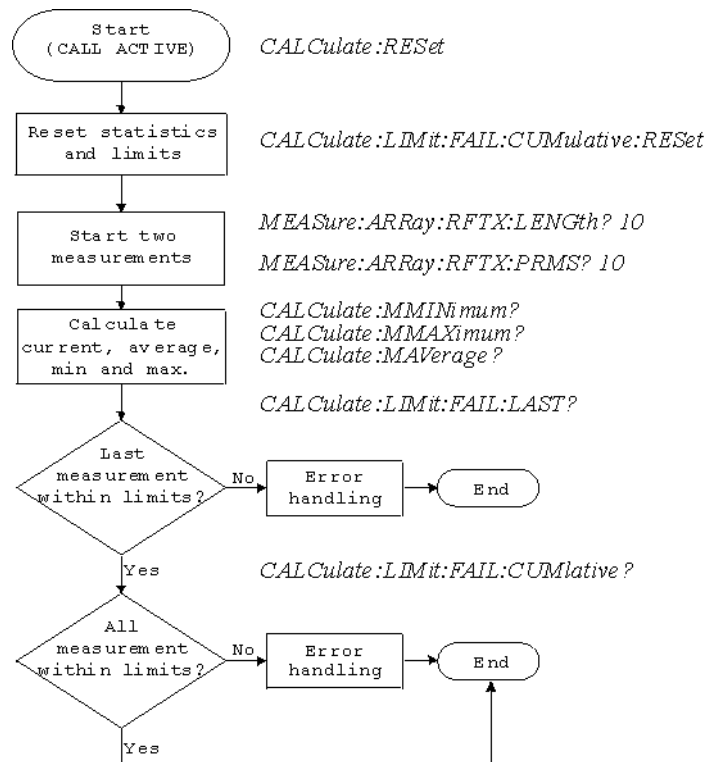
## The CALCulate Subsystem

The CALCulate subsystem performs statistic evaluation of measurement results and also allows to check results against user-definable limits.

The basic scheme outlined below gives an idea of how to work with the CALCulate subsystem and to use the single queries as branching decisions within a program flow.

### NOTE

Statistic evaluations on measurable properties like average, minimum or maximum will only be performed on the type of measurement started last (i.e. the **PRMS** measurement in the example below).



### Reading the basic scheme

- First, the limits of the measurements to be performed are set (not shown in the basic scheme).
- After a call has been established, the CALCulate subsystem is reset using the **:CALCulate:RESet** command. Only measurements started after this command will be taken into account for the statistic evaluation. Any results from previously started (and still running) measurements will be ignored as well as all existing measurement results.
- The CALCulate subsystem of the 3100 allows to perform a cumulative check of the measurement results of a measurement. This means that all measurement results obtained (since the last reset of this part of the subsystem) will be checked against the corresponding limits. This cumulative check is reset as well in the example shown above with the **:CALCulate:LIMit:FAIL:CUMulative:RESet** command. For further details, check with section "**CALCulate:LIMit**" on page 25.
- Then, two measurements are started in this example (commands **:MEASure:ARRay:RFTX:LENGth? 10** and **:MEASure:ARRay:RFTX:PRMS? 10**).
- As soon as the measurements have been completed, the CALCulate subsystem is used to identify the minimum and maximum measurement result value and to calculate the average measurement result value. Please note that these commands will work only on the results of the measurement started last (the RMS-valued phase error in this example).
- The command **:CALCulate:LIMit:FAIL:LAST?** will return a boolean number, indicating whether the last measurement of the RMS-valued phase error was within the limits set (then a 0 will be returned) or whether it was off the limits (then a 1 will be returned).



- The last command (**:CALCulate:LIMit:FAIL:CUMulative?**) is similar to the one above, with the main difference that this query will tell whether **all** measurements of the RMS-valued phase error taken since the last reset of the cumulative check are within the limits set (then a **0** will be returned) or whether at least one measurement result value did violate at least one of the user-definable limits (in this case, the query will deliver back a **1**).

**CALCulate:LIMit** The **CALCulate** commands that incorporate the **LIMit** command element

- check whether one or more measurement result(s) did violate the user-definable limits
- reset the cumulative limit evaluation system
- switch the limit evaluation system for specific measurements on or off
- set the limits

**FAIL[ :LAST ]? - did the latest measurement result value fail?**

<b>Syntax</b>	<b>:CALCulate:LIMit:FAIL[ :LAST ]?</b>
<b>Returns</b>	<b>0</b> when the limits were not violated or <b>1</b> in case at least one limit was violated by the latest measurement result value.
<b>Description</b>	Checks whether the latest measurement result value of the measurement started last is within its limits.
<b>Examples</b>	<p><b>:MEAS:GSM:ARR:RFTX:LENG</b>  <b>:MEAS:GSM:ARR:RFTX:PRMS</b>  <b>:CALC:GSM:LIM:FAIL:LAST?</b></p> <p>This command of the <b>CALCulate</b> subsystem will check whether the latest measurement result value of the <b>PRMS</b> measurement is within its limits.</p> <p><b>:MEAS:GSM:ARR:RFTX:LENG 10</b>  <b>:CALC:GSM:LIM:FAIL:LAST?</b></p> <p>In this example, the <b>:CALC</b> command will check if <b>all 10</b> measurement result values of the burst length measurement array are within their limits.</p>

**{measProp}:LIMit[:FAIL] - did the latest measurement result value of a specific measurement fail?**

<b>Syntax</b>	<b>:CALCulate:{measProp}:LIMit[:FAIL]?</b>
<b>Returns</b>	<b>0</b> when the limits were not violated or <b>1</b> in case at least one limit was violated by the latest measurement result value.
<b>Description</b>	<p>Checks whether measurement result values of the measurement specified with the <b>{measProp}</b> command element are within their limits.</p> <p>In case, this command is used during a continuous measurement, only the <b>latest</b> measurement result will be checked.</p> <p>When this command is used subsequent to an array measurement, <b>all</b> measurement result values of the array will be checked against the limits. This means that a <b>1</b> will be returned if a single measurement result of an array is off the limits.</p>

<b>Example</b>	<pre> :MEAS:GSM:ARR:RFTX:LENG 10 :MEAS:GSM:ARR:RFTX:PRMS 10 :CALC:GSM:RFTX:LENG:LIM:FAIL? </pre> <p>In this example, the <code>:CALC</code> command will check whether all 10 measurement result values of the <code>LENG</code> measurement array are within their limits.</p>
----------------	---

**FAIL:CUMulative?** – did any measurement result value fail?

<b>Syntax</b>	<code>CALCulate:LIMit:FAIL:CUMulative?</code>
<b>Returns</b>	0 when the limits were not violated or 1 in case at least one limit was violated by at least one measurement result value.
<b>Description</b>	Checks whether all measurement result values of the measurement started last are within their limits.
<b>Example</b>	<pre> :MEAS:GSM:ARR:RFTX:LENG 10 :MEAS:GSM:ARR:RFTX:PRMS 10 :CALC:GSM:LIM:FAIL:CUM? </pre> <p>This command of the <code>CALCulate</code> subsystem will check whether all measurement result values of the <code>PRMS</code> measurement are within their limits.</p>

**FAIL:CUM:RESet** – resets the cumulative limit evaluation

<b>Syntax</b>	<code>CALCulate:LIMit:FAIL:CUMulative:RESet</code>
<b>Description</b>	Resets (clears) the cumulative check of measurement result values against their limits. Only the measurement results from <code>:MEAS:...</code> commands issued subsequent to this reset command will be taken into account for any limit checks.

**{measProp}:LIMit:STATe** – switches the limit check for a specific measurement on or off

<b>Syntax</b>	<code>CALCulate:{measProp}:LIMit:STATe</code>
<b>Description</b>	Switches the limit check for a measurement specified with the <code>{measProp}</code> command element either <b>ON</b> or <b>OFF</b> .
<b>Example</b>	<pre> :CALC:RFTX:ALL:LIM:STAT OFF </pre> <p>Switches the limit check for the 19 main RF TX measurements off.</p>

**{measProp}:LIMit:UPPer[:DATA]** – sets the upper limit for a specific measurement

<b>Syntax</b>	<code>CALCulate:{measProp}:LIMit:UPPer[:DATA]</code>
<b>Description</b>	Sets the upper limit for the limit check of the measurement specified with the <code>{measProp}</code> ; command element. The upper limit is the maximum measurement result allowed. Any measurement result value exceeding the value set with this command will result in a violation of the upper limit.

<b>Example</b>	<p><b>:CALC:GSM:RFTX:PRMS:LIM:UPP 10.0</b> This command sets the maximum RMS-valued phase error allowed to <b>10.0</b>. Any measurement result value exceeding this limit (e.g. 10.01) will result in a violation of the limits of the RMS-valued phase error measurement.</p>
----------------	--

**:{measProp}:LIMit:LOWer[:DATA]** – sets the lower limit for a specific measurement

<b>Syntax</b>	<b>CALCulate: {measProp}:LIMit:LOWer[:DATA]</b>
<b>Description</b>	Sets the lower limit for the limit check of the measurement specified with the {measProp}; command element. The lower limit is the minimum measurement result allowed. Any measurement result value falling below the value set with this command will result in a violation of the lower limit.
<b>Example</b>	<p><b>:CALC:AFAN:SIN:LIM:LOW 25.5</b> This command sets the minimum SINAD required in order to pass the test to <b>25.5</b>. Any measurement result value falling below this limit (e.g. 25.4) will result in a violation of the limits of the RMS-valued phase error measurement.</p>

**CALCulate:{Statistics}** On the results of the last measurement performed, statistic test evaluation can be used. The related commands are described in this section.

**NOTE**

The commands described in this section will be reset with any new **MEASure** command. Therefore, the commands described below will only deliver the statistic evaluation of the measurement started last.

<b>Syntax</b>	<b>CALCulate:{Statistics}?</b>
<b>Parameters</b>	<b>{Statistics}</b> is one command element out of the following list: <b>MAverage</b>   <b>MMAximum</b>   <b>MMINimum</b>
<b>Returns</b>	A floating point real number representing the result of the related statistic evaluation, performed on all available results of the measurement started last.
<b>Description</b>	Calculates and returns the specified statistical property referring to the most recent measurement.
<b>Examples</b>	<p><b>MEASure:GSM:ARRay:RFTX:ALL 10</b> <b>MEASure:GSM:ARRay:RFTX:PPEAk 10</b> <b>CALCulate:GSM:MMINimum?</b> The first command takes 10 measurements of all RFTX parameters (190 then all together); the second one takes ten measurements of the peak phase error. The <b>CALC:MMIN?</b> command will only deliver back the minimum result of the peak phase error measurement as this was the measurement started last. The value delivered back in the result string is <b>"5.05"</b> in this example.</p>

**Using limits** The question 'do the performance characteristics of a mobile stay within the limits set by the appropriate specifications' is the core question of all GSM testing. The **LIMit** subsystem of the 3100 offers a broad range of:

- defining single or complex limits, using the **[ :DATA ]** command element of the **CALCulate** subsystem and
- reading out the results of the limit checks, using the **:LIMit[ :FAIL ]?** query.

The limit evaluation system can be switched on or off for every single measurement parameter using the **:LIMit:STATe** command element.

#### **[ :DATA ]** - customize or query limits

<b>Syntax</b>	<code>CALCulate&lt;{measProp}&gt;:LIMit&lt;{limType}&gt;[ :DATA ] &lt;Val&gt;</code>
<b>Parameters</b>	<b>limType</b> is a placeholder for <b>:UPPER</b> or <b>:LOWER</b> . <b>Val</b> is the numeric value (floating) for the limit of the specific measurement parameter.
<b>Description</b>	Sets or queries the limit value(s) for the limit identified with <b>limType</b> . The limit evaluation will check the measurement results obtained against the limits set, using this command. <b>Note:</b> Some measurement types have more complex limits (such as the power/time template or the modulation spectrum). Please find a detailed explanation on those complex limits in subsection <a href="#">"Working with complex limits" on page 29</a> .
<b>Examples</b>	<b>:CALCulate:GSM:RFTX:PRMS:LIMit:UPPER:DATA 4.00</b> Sets the upper limit of the RMS phase error to <b>4.00</b> . <b>:CALC:GSM:RFTX:PPEA:LIM:UPP?</b> Queries the currently set upper result limit for the peak phase error. The value will be returned as floating in the result string like <b>6.35</b> .

#### **[ :FAIL ]?** - pass/fail result query

<b>Syntax</b>	<code>CALCulate&lt;{measProp}&gt;:LIMit[ :FAIL ]?</code>
<b>Returns</b>	A boolean value or array (dependent on the type of measurement as defined by <b>measProp</b> ). When all measurements of a type are within the limits, a <b>0</b> (pass) will be returned. If at least one measurement result is beyond the limits, a <b>1</b> (fail) will be returned.
<b>Description</b>	Checks whether any of the current measurement(s) failed to meet the limits. The type of measurement is defined by <b>measProp</b> .
<b>Examples</b>	<b>MEASure:GSM:ARRAY:RFTX:POWer 10</b> Starts a series of 10 measurements of the RF peak power. <b>CALCulate:GSM:RFTX:POWer:LIMit:FAIL?</b> This command reads out the result of the 10 measurements checked against the limit. When all 10 measurement results are within the limits, a single <b>0</b> will be returned. If one or more measurement results are beyond the limits, a single <b>1</b> will be returned.

#### **:STATe** - switch limit evaluation on/off

<b>Syntax</b>	<code>CALCulate&lt;{measProp}&gt;:LIMit:STATe &lt;limState&gt;</code>
<b>Parameters</b>	<b>limState</b> is either <b>ON</b> or <b>OFF</b> .

<b>Description</b>	<p>Activates or deactivates the check of the measurement results against the limit of the measurement type defined by <b>measProp</b>.</p> <p><b>Note:</b> When the limit evaluation has been switched off, a <b>:FAIL</b> query will only return 0(s) (pass).</p>
<b>Example</b>	<p><b>CALCulate:GSM:RFTX:PRMS:LIMit:STATe OFF</b> This command switches the limit evaluation of the RMS phase error off.</p> <p><b>MEASure:GSM:RFTX:PRMS</b> Starts a series of RMS phase error measurements.</p> <p><b>CALCulate:GSM:RFTX:PRMS:LIMit:FAIL?</b> This query of the pass/fail evaluation will always return 0 (pass) as the limit evaluation of this parameter has been switched off.</p>

### Working with complex limits

It is not possible to define all relevant limits by just one number. Some limits are quite complex, like the power/time template, the corner points or the modulation spectrum.

#### Limits for the power/time template

The limits for the power/time template are made up by a total of 16 vectors; 9 for the upper limits and 7 for the lower limits.

These vectors have the following format: x,y.

- where x is the time in microseconds in relation to the beginning of the burst (i.e. the first bit of the useful part)
- and y is the RF power level in dB(c) in relation to the nominal output power level of the mobile.

#### Examples:

```
CALC:RFTX:TEMP:LIM:UPP -42,-47,-28,-47,-18,-28,-10,
-4,0,4, 552.8,1,560.8,-4,570.8,-28,580,-47
```

```
CALC:RFTX:TEMP:LIM:LOW 0,-150,0,-150,0,-40,20,
-1,270,-1,543,-1,543,-150
```

#### Limits for the corner points

The corner points are a maximum of eight positions to check critical parts of the burst. For each position, a minimum and a maximum RF power level may be specified.

- Positions are specified in microseconds in relation to the beginning of the burst (i.e. the first bit of the useful part)
- minimum and maximum RF power levels are specified in dB(c) in relation to the nominal output power level of the mobile.

#### Examples:

```
CALC:RFTX:CORN:POS -28,-18,-10,0,542.8,
552.8,560.8,570.8
```

```
CALC:RFTX:CORN:LIM:LOW -150,-150,-150,-150,
-150,-150,-150,-150
```

```
CALC:RFTX:CORN:LIM:UPP 4,4,4,4,4,4,4,4
```

### Limits for the modulation spectrum

In case of the modulation spectrum, 23 positions (i.e. frequencies) have been predefined (see subsection Generator/Analyser for details).  
With the related commands, the upper and lower limits for those 23 positions may be set. Those limits are specified in dB.

---

## Measurement device configuration subsystems

These subsystems provide commands for setting and reading out the states of the various measurement devices of the 3100.  
The following subsystems are available and described in this subsection.

### RF measurement devices

**RFGenerator** – The radio frequency generator provides both continuous signals and bursts according to the specifications of the system (e.g. GSM) currently set. The RFGenerator subsystem controls the accessible parameters of the RF generator, such as RF level, frequency etc.

**RFAnalyser** – This subsystem gives access to the setup parameters of the RF Analyser, such as frequency or trigger mode.

**RFSpectrum** – The commands of this subsystem are used to set span and resolution of the RF spectrum analyser.

### AF measurement devices

**AFGenerator** – The audio frequency generator provides signals for audio measurements.  
The AFGenerator subsystem controls the accessible parameters of the AF generator, such as output level, frequency, multitone signals etc.

**AFAnalyzer** – The AF analyzer measures audio parameters. The related subsystem gives access to the settings.

**MS Power Supply** – The MS power supply option is an (optional) external device that simulates the power supply (battery) of a mobile under test. Together with the 3100, it provides a lot of interesting performance data of the mobile station. The related subsystem gives access to all relevant settings.

### The RFGenerator subsystem

The RFG subsystem controls the accessible parameters of the RF generator.

#### Important notes:

- The RF generator can only be used if all communication systems have been switched off (and unloaded) before.

- The RF generator functionality of the 3100 will enable you to even provide a base channel to allow the mobile under test to synchronize to the base station. However, as long as the RF generator is active, there will be **no call setup and no reaction to signaling**.  
Some of the data transmitted by the 3100 in the base channel can be set or altered using the SCPI commands described in section "[The CONFigure subsystem](#)" on page 15.
- A good way to set up the 3100 as a RF generator for **circuit-switched standard GSM** signals is the use of the **:CONFigure:CSYSTEM GCGenana** command.  
While working in this mode, a base channel will **not** be provided.
- To set up the 3100 as a RF generator for **both packet-switched and circuit-switched GSM** signals, use the **:CONFigure:CSYSTEM GPGenana** command instead.  
In this mode, a base channel can be provided (see command **:RFG:GSM:MOD:CHAN** for details).

**The RFANalyser subsystem**      The RFAN subsystem controls the accessible parameters of the RF analyzer.

**The RFSPectrum subsystem**      The RFSP subsystem controls the accessible parameters of the RF modulation spectrum analyzer.

**The AFGenerator subsystem**      The AFG subsystem controls the accessible parameters of the audio generator. Please note that all commands of this subsystem require the Audio Option to be installed on your 3100.

**The AFANalyser subsystem**      The AFAN subsystem controls the accessible parameters of the AF analyzer. Please note that all commands of this subsystem require the Audio Option to be installed on your 3100.

**The MS Power Supply subsystem**      The PSUPply subsystem controls the accessible parameters of the MS Power Supply Option.

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## SCPI command errors

This subsection contains a table of SCPI command errors.

### NOTE

If a query for an error code returns "0" then no error did occur.

<b>Error Code</b>	<b>Meaning</b>
61	QNX semaphore error. The operating system of the 3100 encountered a flag communication error.
62	TMSG QNX send error.
63	TMSG QNX sync error.
64	Internal communication error.
65	Unknown message received.
66	GPIB cannot be initialized.
67	This command is invalid.
68	Internal error of the task state system.
69	Error of the GPIB system.
70	QNX proxy error.
71	Process coordination error.
72	Message sent to the GPIB system is not understood there.
75	Error within the error message system.
78	Language expression invalid.
80	Name attachment error.
81	Proxy attachment error.
82	Proxy detach error.
83	Timer attachment error.
85	Timer delete error.
86	Parameter can not be set.
87	INI file error.
88	The file selected was not found.
89	DSP setup error.
100	Command error.
101	Invalid character.
102	Syntax error.
103	Invalid separator.
104	Data type error.
108	Parameter not allowed.
109	Parameter missing.
111	Header separator error.
112	Program mnemonic too long.
113	Undefined header.



114	Header suffix out of range.
121	Invalid character within a number.
123	Exponent too large.
128	Numeric data not allowed in this context.
131	Invalid suffix.
134	Suffix too long.
138	No suffix allowed in this context.
141	Invalid character data.
144	Character data too long.
158	No string allowed in this context.
160	Block data error.
168	No block data allowed in this context.
200	General execution error.
201	Multislot not active.
202	The external synchronization frequency is not within the ranges specified.
203	External synchronization changed during remote operation.
204	The operation is not possible in the current state of the 3100.
221	Settings of the 3100 lead to a conflict.
222	Data out of range.
225	No communication system running.
226	Timeout occurred while waiting for an uplink message to arrive from the mobile.
227	Layers 2/3 failed. Communication could not be established due to problems on the layer 2 and/or layer 3 level.
228	Mobile can not work in the enhanced frequency range.
229	No call release while an SMS is in progress.
230	Generator/Analyzer not running.
231	System running – no system expected.
250	Mass storage error.
253	Corrupt media.
256	File name not found.
272	Macro execution error.
280	Program error.
310	System error.

320	Save/recall memory lost.
330	Function not supported.
350	Queue overflow.
362	There needs to be an active call in order to start the codec option.
364	No audio hardware. The audio option would be required to complete a command, but it is not installed.
365	No codec hardware. The codec option would be required to complete a command, but it is not installed.
370	No results available.
371	Fetch: timeout occurred.
372	Fetch: no BER synchronization.
373	Fetch: arb data.
374	Measurement task error.
375	Error in burst data encountered.
376	ACPM receive error.
377	Autotemplate error.
378	Setting value for modulation spectrum out of range.
399	Invalid error code.
401	General CDMA measurement error: Invalid return code for sample acquisition.
402	CDMA Measurement error: Signal level too high for current input attenuation.
403	CDMA Measurement error: Signal level dropped below valid level during acquisition.
407	CDMA Measurement error: Sample acquisition RAM failure.
408	CDMA Measurement error: Signal level below minimum accuracy specification.
411	CDMA Measurement error: DSP EEPROM error. Default correction data loaded, measurement accuracy not verified.
413	CDMA Measurement error: synchronization to mobile signal failed.
415	CDMA Measurement error: Cannot trigger on mobile signal.

# SCPI Command Reference

## 2

This SCPI Command Reference describes the commands for test automation using Lector and Scriptor or a self-developed remote software utilizing either the General Purpose Interface Bus (GPIB), a USB, an RS-232 or a TCP/IP connection. The SCPI commands are divided into the following subsystems:

- ["Important notes" on page 36](#)
- ["Bluetooth commands" on page 36](#)
- ["Signaling operation register group" on page 36](#)
- ["Common commands" on page 37](#)
- ["SYSTEM subsystem" on page 42](#)
- ["STATus subsystem" on page 51](#)
- ["FORMat subsystem" on page 78](#)
- ["CONFigure subsystem" on page 80](#)
- ["CALL subsystem" on page 188](#)
- ["MEASure subsystem" on page 227](#)
- ["FETCh Subsystem" on page 397](#)
- ["CALCulate Subsystem" on page 469](#)
- ["READ subsystem" on page 708](#)
- ["RFGenerator subsystem" on page 709](#)
- ["RFANalyser subsystem" on page 745](#)
- ["RFSpectrum subsystem" on page 757](#)
- ["MS Power Supply subsystem" on page 761](#)

## Important notes

Following are important notes regarding specific SCPI commands or general usage conditions.

**NOTE:**

The commands listed in the following sections are valid from 3100 firmware version 11.10. Especially WCDMA BER measurements are only supported from this version number onwards.

**NOTE:**

When you are using a USB or RS-232 interface, every command, which is sent to the 3100 will be answered by a CR LF (Carriage Return Line Feed) command.

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## Bluetooth commands

The SCPI commands for the 4489 Bluetooth Connectivity Test Package can be found in the Bluetooth Connectivity Test Products user's guide, ordering number M 292 018.

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## Signaling operation register group

This group of registers is 16 bits wide. Its main task is to deal with events related to the signaling status. The signaling operations depend on the system option and can be found in the :STATus:OPERation:SIGNalling group of commands (see the respective EVENT command for the signaling system at hand). The Result bit of this group of registers is forwarded to bit 8 of the general operation register group.

## Common commands

The common commands are understood by all SCPI and IEEE 488.2 instruments. Their purpose is to perform general tasks and to read or work with the registers common to all SCPI instruments. The following common commands have been implemented.

### General common commands \*CLS

<b>Syntax</b>	: *CLS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Resets the entire status reporting system: <ul style="list-style-type: none"> <li>- The service register will be cleared (all bits will be set to 0).</li> <li>- The event status register will be cleared (all bits will be set to 0).</li> <li>- The error message queue will be emptied.</li> <li>- All event-type registers will be cleared.</li> </ul>
<b>Query</b>	There is no query form of this command available.

### \*IDN?

<b>Syntax</b>	: *IDN?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	Returns a string, containing the following information: <ul style="list-style-type: none"> <li>- manufacturer's name</li> <li>- name of the device</li> <li>- serial number</li> <li>- software revision number</li> </ul> <p>All parameters are separated by commas.</p> <p><b>Note:</b> In times of company mergers and acquisitions, it is a good idea to check the name of the device, not the manufacturer's name which may change between software updates. This does not preclude any name changes at Willtek but rather applies to instrumentation in general.</p>
<b>Example</b>	"WILLTEK, 3100, 0511099, 3.10.0001".

### \*OPC

<b>Syntax</b>	: *OPC
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Postpones the execution of a command until all commands issued previously have been completed.

<b>Query</b>	Returns the 'operation complete' flag in a string. A <b>1</b> indicates that all commands have been completed while a <b>0</b> means that there is at least one command still under execution.
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**\*RST**

<b>Syntax</b>	: *RST
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Resets the entire test set. All parameters, limits etc. will be set to the internally pre-defined default values.
<b>Query</b>	There is no query form of this command available.

**\*WAI**

<b>Syntax</b>	: *WAI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Postpones the execution of a command until all commands issued previously have been completed.
<b>Query</b>	There is no query form of this command available.

**Commands affecting the event status register**

The event status register contains eight bits. The meaning of these bits is outlined in the table below. The commands working on the event status register are described below the table.

Bit	Decimal	Meaning
7	128	Power on – this bit is always set.
6	64	User Request – a <b>1</b> on this position indicates that the 3100 is no longer controlled by remote commands but by user interaction.
5	32	Command error – this bit indicates that one of the <a href="#">SCPI command errors</a> occurred.
4	16	Execution error – is set after a SCPI execution error did occur.
3	8	Device-dependent error – this bit indicates that a device-specific SCPI error did occur.
2	4	Query error – is set after a SCPI query error occurred.
1	2	Request control – this bit is reserved for future use.
0	1	Operation complete flag – is set as soon as the execution of a command has been completed.

**\*ESE**

<b>Syntax</b>	:*ESE <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The valid range is from 0 to 255 (8 bits).
<b>Description</b>	Sets the enable filter (mask) of the event status register. <b>int1</b> is the decimal representation of the binary mask. The mask and the current content of the event status register will be ANDed. If the result is not zero, then bit 5 of the <a href="#">Service register</a> will be set.
<b>Query</b>	The query form reads out the enable filter (mask) currently set and returns its binary representation in a string.
<b>Example</b>	:*ESE 128 As soon as power has been switched on, bit 7 (Power on) will be set. ANDed with the mask <b>128</b> , a binary <b>1</b> will occur and thus bit 5 of the service register will be set.

**\*ESR?**

<b>Syntax</b>	:*ESR?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	Returns the decimal representation of the current contents of the event status register in a string. <b>Note:</b> This register is self-destructive, i.e. its contents will be cleared after reading.
<b>Example</b>	After power-on, an :*ESR? command will return " <b>128</b> ". This means that bit 7 is set and all the other bits of the event status register are <b>0</b> . The command will clear the event status register and a subsequent :*ESR? command will return " <b>0</b> ".

**Commands affecting the service register**

The service register represents the highest level within the report structure of the 3100.  
The service register contains eight bits.  
If any one of the bits 0...5 or 7 is set, the summary status bit (bit 6) of the service register will be set as well.

**NOTE**

The service register is self-destructive. This means that its contents will be cleared after reading.

Bit	Decimal	Meaning
7	128	OPERational status summary. When this bit is set, an event within the <a href="#">General operation register group</a> (e.g. the 3100 is waiting for a trigger) passed all filters.

6	64	Summary status bit. This bit will always be set as soon as any other bit of the service register has been set. <b>Note:</b> The summary status bit may be ANDed with the service request enable filter in order to generate a Service ReQuest on GPIB. The related command is <b>*SRE</b> (see below for details).
5	32	Event status summary. When this bit is set, an event within the <a href="#">Event status register group</a> (e.g. an error occurred) passed all filters.
4	16	Message available. This bit will be set to <b>1</b> as soon as a query has been completed and measurement result(s) are available.
3	8	QUESTionable status summary. If this bit is set, an event within the <a href="#">General questionable status register group</a> (e.g. 'value out of range') passed all filters.
2	4	Error queue status. When this bit is set, the error queue contains error messages. Up to 10 error messages can be logged in the error queue. The error queue can be read out, using the :SYSTEM:ERRor? command.
1	2	Remote command completed. This bit will be set to <b>1</b> after a remote (SCPI) command has been completed. <b>Note:</b> However, when the 3100 receives a SCPI command, it will block the GPIB until the command has been completed.
0	1	Message queue status. This bit will be set to <b>1</b> as soon as a message is available in the 3100's internal message queue. Up to 10 messages can be logged in the message queue. To write to or to read from the message queue, use the :SYSTEM:MESSAge command.

**\*SRE**

<b>Syntax</b>	:*SRE <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The valid range is from 0 to 255 (8 bits).
<b>Description</b>	Sets the enable filter (mask) for the service register. <b>int1</b> is the decimal representation of this binary mask. The mask and the current content of the service register will be ANDed. If the result is not zero, a service request (SRQ) will occur on the GPIB.
<b>Query</b>	The query form reads out the mask currently set and returns its binary representation in a string.
<b>Example</b>	<b>:*SRE 68</b> As soon as an error occurs, bits 2 and 6 of the service register will be set. ANDed with the mask ( <b>68</b> ), a binary <b>1</b> will be the result and a SRQ will occur on the GPIB.



**\*STB?**

<b>Syntax</b>	:*STB?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	Returns the decimal representation of the current contents of the service register in a string. <b>Note:</b> This register is self-destructive, i.e. its contents will be cleared after reading.
<b>Example</b>	A :*STB? command returns "68". The return value of 68 (= 64 + 4) means that an error occurred (4).

## SYSTem subsystem

System parameters, such as the number of unread error messages, the test set's GPIB address etc. may be read out or set using the commands of this subsystem.

### **:SYSTem:ERRor[:NEXT]?**

<b>Syntax</b>	:SYSTem:ERRor[:NEXT]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the oldest unread error message from the internal error queue of the Willtek 3100. The queue entry returned will be a string containing the error no. and additional text. The maximum length of the string is 255 characters. <b>Note:</b> An overview of all SCPI error messages can be found in section "SCPI command errors".
<b>Example</b>	<b>:SYSTem:ERRor:NEXT?</b> String returned: <b>"66 GPIB cannot be initialised."</b>

### **:SYSTem:ERRor:COUNT?**

<b>Syntax</b>	:SYSTem:ERRor:COUNT?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the number of unread error messages in the internal error queue of the Willtek 3100. The string returned will contain one integer. The maximum number of errors stored internally is 10.
<b>Example</b>	<b>:SYSTem:ERRor:COUNT?</b> String returned: <b>"0"</b> This means that there are no unread error messages in the error queue.

### **:SYSTem:ERRor:CODE[:NEXT]?**

<b>Syntax</b>	:SYSTem:ERRor:CODE[:NEXT]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the code of the oldest unread error message in the internal error queue of the Willtek 3100. The string returned will contain one integer (and no text). <b>Note:</b> An overview of all SCPI error messages can be found in section "SCPI command errors".
<b>Example</b>	<b>:SYSTem:ERRor:CODE?</b> String returned: <b>"66"</b> This means that the GPIB could not be initialized.

**:SYSTem:ERRor:CODE:ALL?**

<b>Syntax</b>	:SYSTem:ERRor:CODE:ALL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the error codes of all unread error messages in the internal error queue of the Willtek 3100. The string returned will contain a maximum of 10 integers, separated by commas. <b>Note:</b> An overview of all SCPI error messages can be found in section "SCPI command errors".
<b>Example</b>	<b>:SYSTem:ERRor:CODE:ALL?</b> String returned: "371,66" This means that there were two unread error messages in the error queue (the first one indicating that there was a time-out on a <b>FETCh</b> command and the second one meaning that the GPIB could not be initialized).

**:SYSTem:ERRor:REMOte:DISPlay**

<b>Syntax</b>	:SYSTem:ERRor:REMOte:DISPlay <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: OFF   ON. Default is OFF.
<b>Description</b>	Switches the error display on the start screen on and off. If it is switched to ON, the error log will be displayed after the first error occurred.
<b>Query</b>	Reads and returns the current setting.
<b>Example</b>	<b>:SYST:ERR:REM:DISP ON</b> In remote case the error log window will be displayed.

**:SYSTem:MESSAge**

<b>Syntax</b>	:SYSTem:MESSAge <string1>
<b>Parameters</b>	<b>string1</b> is a string (text) parameter. The maximum length of <b>string1</b> is 255 characters.
<b>Description</b>	Writes the message specified with the <b>string1</b> parameter to the Willtek 3100's internal system message queue.
<b>Query</b>	Reads and returns the oldest unread message in the Willtek 3100's internal message queue. The string returned will contain a maximum of 255 characters.
<b>Example</b>	<b>:SYSTem:MESSAge "23.17,Procedure A5"</b> <b>:SYST:MESS?</b> String returned: "23.17,Procedure A5" In this example, a RAPID! program performs some internal calculations and then writes the result to the system message queue. This result is then read by the external controller.

### :SYSTem:COMMunicate:LOCAl

<b>Syntax</b>	:SYSTem:COMMunicate:LOCAl
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Sets up the Willtek 3100 to allow manual operation on the front panel during SCPI operation. <b>Note:</b> This command may be used e.g. to allow interactive alignment procedures in a production or quality assurance flow.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:SYSTem:COMM:LOC

### :SYSTem:COMMunicate:GPIB:ADDRess

<b>Syntax</b>	:SYSTem:COMMunicate:GPIB:ADDRess <int1>[,<int2>]
<b>Parameters</b>	<b>intx</b> are two integers. The minimum value for <b>int1</b> is <b>1</b> , the maximum is <b>32</b> . The default value is <b>4</b> . The minimum value for <b>int2</b> is <b>0</b> , the maximum is <b>30</b> . The default value is <b>1</b> . <b>int1</b> must be specified while <b>int2</b> is an optional parameter.
<b>Description</b>	Sets the GPIB address of the Willtek 3100. For details regarding the GPIB address, refer to section Setting the GPIB address.
<b>Query</b>	Reads and returns the current setting of the GPIB address as explained above.
<b>Example</b>	:SYST:COMM:GPIB:ADDR 14 Sets the GPIB address to 14.

### :SYSTem:COMMunicate:GPIB:TERMinator

<b>Syntax</b>	:SYSTem:COMMunicate:GPIB:TERMinator <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>LF</b>   <b>CR</b>   <b>CRLF</b> . Default is <b>LF</b> .
<b>Description</b>	Sets the terminator used on the GPIB. For details regarding the terminator, refer to section Setup.
<b>Query</b>	Reads and returns the current setting of the terminator used on the GPIB as explained above.
<b>Example</b>	:SYST:COMM:GPIB:TERM CRLF Sets the GPIB terminator to 'carriage return plus line feed'.

### :SYSTem:COMMunicate:TCPIP:ADDRess

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIP:ADDRess <string>
<b>Parameters</b>	<b>string</b> is a string only containing the IP address for the 3100.
<b>Description</b>	This command sets the IP address of the 3100. See section I/O Configuration for more details.

<b>Query</b>	Reads and returns the current setting of the IP address as explained above.
<b>Example</b>	<b>SYST:COMM:TCP:ADDR "192.16.16.114"</b> sets the IP address to a defined value.

**:SYSTem:COMMunicate:TCPIp:NETMask**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIp:NETMask <string>
<b>Parameters</b>	<b>string</b> is a string only containing the net mask for the 3100.
<b>Description</b>	This command sets the net mask of the 3100. See section I/O Configuration for more details.
<b>Query</b>	Reads and returns the current setting of the net mask as explained above.
<b>Example</b>	<b>SYST:COMM:TCP:NETM "255.255.255.0"</b> sets the net mask to a defined value.

**:SYSTem:COMMunicate:TCPIp:GATeway**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIp:GATeway <string>
<b>Parameters</b>	<b>string</b> is a string only containing the default gateway address for the 3100.
<b>Description</b>	This command sets the default gateway address of the 3100. See section I/O Configuration for more details.
<b>Query</b>	Reads and returns the current setting of the gateway address as explained above.
<b>Example</b>	<b>SYST:COMM:TCP:GAT "192.16.16.1"</b> sets the gateway address to a defined value.

**:SYSTem:COMMunicate:TCPIp:PORT**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIp:PORT <int>
<b>Parameters</b>	<b>int</b> defines the TCP/IP port address of the 3100. The address must be in the range from 49152 to 65535.
<b>Description</b>	This command sets the port address on which the 3100 can be controlled via LAN. See section I/O Configuration for more details.
<b>Query</b>	Reads and returns the current setting of the port used by TCPIP as explained above.
<b>Example</b>	<b>SYST:COMM:TCP:PORT 49200</b> sets the TCP/IP port address to its default.

**:SYSTem:COMMunicate:TCPIp:TERMinator**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIp:TERMinator <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> can take on one of the following values: <b>LF</b> or <b>CR</b> or <b>CRLF</b> . The default is <b>LF</b> .
<b>Description</b>	The command defines the delimiter for SCPI control strings. See section I/O Configuration for more details.

<b>Query</b>	Reads and returns the current setting of the terminator used by TCP/IP as explained above.
<b>Example</b>	<b>SYST:COMM:TCP:TERM CRLF</b> sets the line terminator for SCPI commands via LAN to CR (Carriage Return) followed by LF (Line Feed).

**:SYSTem:COMMunicate:TCPIP:MOUNT**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIP:MOUNT <string1> <string2>
<b>Parameters</b>	<b>string1</b> defines the network address which shall be mounted as a device for remote control. The maximum allowable length of the string is 255 characters. <b>string2</b> is the symbolic device address used in SCPI programming. The maximum allowable length of <b>string2</b> is 25 characters. The default is "server".
<b>Description</b>	This command mounts a server disk as a 3100 device which can be used to load or save data to/from. See section I/O Configuration for more details.
<b>Query</b>	Reads and returns the last settings for the mount path and the corresponding local name as explained above.
<b>Example</b>	:SYST:COMM:TCP:MOUNT "unixpc/disk2/results", "resdir"

**:SYSTem:COMMunicate:TCPIP:DHCP**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIP:DHCP <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> can take on one of the following values: ON or OFF. The default is OFF.
<b>Description</b>	The command turns DHCP on or off. See section I/O Configuration for more details.
<b>Query</b>	Reads and returns the current setting of DHCP operation.
<b>Example</b>	:SYST:COMM:TCP:DHCP ON sets the software to use DHCP.

**:SYSTem:COMMunicate:TCPIP:WCDMA:ADDRESS**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIP:WCDMA:ADDRESS <string>
<b>Parameters</b>	<b>string</b> is a string only containing the IP address for the 3100 WCDMA board.
<b>Description</b>	This command sets the IP address of the 3100 WCDMA board.
<b>Query</b>	Reads and returns the current setting of the IP address as explained above.
<b>Example</b>	SYST:COMM:TCP:WCDMA:ADDR "192.16.16.114" sets the IP address to a defined value.

**:SYSTem:COMMunicate:TCPIP:WCDMA:NETMASK**

<b>Syntax</b>	:SYSTem:COMMunicate:TCPIP:WCDMA:NETMASK <string>
<b>Parameters</b>	<b>string</b> is a string only containing the net mask for the 3100 WCDMA board.
<b>Description</b>	This command sets the Netmask of the 3100 WCDMA board.

<b>Query</b>	Reads and returns the current setting of the IP address as explained above.
<b>Example</b>	SYST:COMM:TCP:WCDMA:NETM "255.255.255.0" sets the Netmask to a defined value.

**:SYSTEM:COMMunicate:TCPip:WCDMa:GATeway**

<b>Syntax</b>	:SYSTEM:COMMunicate:TCPip:WCDMa:GATeway <string>
<b>Parameters</b>	string is a string only containing the default gateway address for the 3100 WCDMA board.
<b>Description</b>	This command sets the default gateway address of the 3100 WCDMA board.
<b>Query</b>	Reads and returns the current setting of the IP address as explained above.
<b>Example</b>	SYST:COMM:TCP:WCDMA:GAT "192.16.16.1" sets the Gateway address to a defined value.

**:SYSTEM:COMMunicate:TCPip:WCDMa:HOSTaddress**

<b>Syntax</b>	:SYSTEM:COMMunicate:TCPip:WCDMa:HOSTaddress <string>
<b>Parameters</b>	string is a string only containing the Host IP address for the 3100 WCDMA board.
<b>Description</b>	This command sets the Host IP address of the 3100 WCDMA board.
<b>Query</b>	Reads and returns the current setting of the Host IP address as explained above.
<b>Example</b>	SYST:COMM:TCP:WCDMA:HOST "192.16.16.114" sets the Host IP address to a defined value.

**:SYSTEM:COMMunicate:SERa:PARAmeter**

<b>Syntax</b>	:SYSTEM:COMMunicate:SERa:PARAmeter <int1>,<int2>,<int3>,<PredefExpr4>
<b>Parameters</b>	There are four parameters. <b>int1</b> is the bit rate on the serial interface. Valid values are <b>110,300,600,1200,2400,4800,9600,19200,38400,57600,115200</b> . The default value is <b>38400</b> . <b>int2</b> is the number of bits per character. The minimum value is <b>5</b> , the maximum is <b>8</b> . The default value is <b>8</b> . <b>int3</b> is the number of stop bits. It can take on the values <b>1</b> or <b>2</b> . The default value is <b>1</b> . <b>&lt;PredefExpr4&gt;</b> specifies the parity bit. The value is one of the following pre-defined expressions: <b>NO   ODD   EVEN</b> . Default is <b>NO</b> .
<b>Description</b>	Sets the parameters for serial port COM1. This command uses the following format: <b>baud, bits, stop, parity</b> where <b>baud</b> stands for the bit rate ( <b>int1</b> ), <b>bits</b> stands for the number of bits per character ( <b>int2</b> ), <b>stop</b> stands for the number of stop bits ( <b>int3</b> ) and <b>parity</b> represents the parity (No, Odd or Even)( <b>PredefExpr4</b> ).
<b>Query</b>	Reads and returns the current settings of COM1 as explained above.

**Example**        :SYST:COMM:SERA:PAR 9600,8,1,ODD  
                   :SYST:COMM:SERA:PAR?  
 String returned: "9600,8,1,ODD".

**:SYSTem:COMMunicate:SERA:REMote**

**Syntax**         :SYSTem:COMMunicate:SERA:REMote <PredefExpr>

**Parameters**    **PredefExpr**> can take on either of the following expressions: ON | OFF. Default is ON.

**Description**    Enables or disables remote control of the 3100 via the serial interface port COM 1. Note: The remote control capability at COM 1 should be disabled prior to controlling external equipment (e.g. the Bluetooth Connectivity Test products) through this interface.

**Query**          Returns the current setting.

**Example**        :SYST:COMM:SERA:REM OFF  
                   :SYST:COMM:SERA:REM?  
 Returns the following string: "OFF"

**:SYSTem:COMMunicate:SERA:BAUD**

**Syntax**         :SYSTem:COMMunicate:SERA:BAUD <int1>

**Parameters**    **int1** is the bit rate on the serial interface. Valid values are 9600, 19200, 38400, 57600, 115200. The default value is 57600.

**Description**    Sets the baud rate for serial port COM1. The other serial parameter settings are fixed at 8 bits per char, 1 stop bit, no parity.

**Query**          Reads and returns the current settings of COM1 as explained above.

**Example**        :SYST:COMM:SERA:BAUD 115200  
                   :SYST:COMM:SERA:BAUD?  
 Returns the following string:  
 "9600".

**:SYSTem:KEYBoard**

**Syntax**         :SYSTem:KEYBoard <PredefExp>

**Parameters**    **PredefExp** is one of the following predefined expressions:  
 USA | BELGium\_fr | BELGium\_nl | CANFr | CANEng  
 | DEN | FR | GER | ITA | JAP | LATAm\_spa | LATAm\_port | NL | NOR | PORTu-  
 gal | SPA | SWE | SWISS\_fr | SWISS\_ger | UK.  
 Default is USA.

**Description**    Selects the language for the external keyboard. Note: The language setting defines the position and type of special characters.

**Query**          Reads and returns the current setting of the language of the external keyboard. The string returned will contain one of the predefined expressions as explained above.

**Example**        :SYST:KEYB SWE  
 Sets the language for the external keyboard to 'Swedish'.



**:SYSTem:DATE**

<b>Syntax</b>	:SYSTem:DATE <int1>,<int2>,<int3>
<b>Parameters</b>	<b>int<sub>x</sub></b> are three integers. The minimum value for <b>int1</b> is <b>1998</b> , the maximum is <b>2100</b> . The default value is <b>1998</b> . The minimum value for <b>int2</b> is <b>1</b> , the maximum is <b>12</b> . The default value is <b>1</b> . The minimum value for <b>int3</b> is <b>1</b> , the maximum is <b>31</b> . The default value is <b>1</b> .
<b>Description</b>	Sets the system date. This command uses the following format: <b>jjjjmmdd</b> where <b>jjjj</b> stands for the four digits of the year ( <b>int1</b> ), <b>mm</b> gives the two digits of the current month ( <b>int2</b> ) and, <b>dd</b> represents the day of the current month ( <b>int3</b> ).
<b>Query</b>	Reads and returns the current system date in a string, using the format explained above.
<b>Example</b>	<b>:SYST:DATE 2001,7,6</b> Sets the system date to the 6th of July, 2001.

**:SYSTem:TIME**

<b>Syntax</b>	:SYSTem:TIME <int1>,<int2>,<int3>
<b>Parameters</b>	<b>int<sub>x</sub></b> are three integers. The minimum value for <b>int1</b> is <b>0</b> , the maximum is <b>23</b> . The default value is <b>0</b> . The minimum value for <b>int2</b> is <b>0</b> , the maximum is <b>59</b> . The default value is <b>0</b> . The minimum value for <b>int3</b> is <b>0</b> , the maximum is <b>59</b> . The default value is <b>0</b> .
<b>Description</b>	Sets the system time. This command uses the following format: <b>hhmmss</b> where <b>hh</b> stands for the two digits of the current hour, using a 24 hour time format ( <b>int1</b> ), <b>mm</b> gives the two digits of the current minute ( <b>int2</b> ) and, <b>ss</b> represents the seconds of the system time ( <b>int3</b> ).
<b>Query</b>	Reads and returns the current system time in a string, using the format explained above.
<b>Example</b>	<b>:SYST:TIME?</b> String returned: " <b>12,56,05</b> ".

**:SYSTem:VERSion?**

<b>Syntax</b>	:SYSTem:VERSion?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	Reads and returns the version number of the SCPI command system used on your Willtek 3100. The command will return a string, containing one floating point real number.
<b>Example</b>	<b>:SYST:VERS?</b> String returned: " <b>2001.7</b> ".

**:SYSTem:PRINTer**

<b>Syntax</b>	<code>:SYSTem:PRINTer &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>HP400</b>   <b>HP680</b>   <b>EPST</b>   <b>HPLJ</b>   <b>EPSP</b>   <b>EPSX</b>   <b>EPSI</b>   <b>EPCI</b>   <b>EPS1</b>   <b>EPPX</b>   <b>EPC2</b>   <b>EPC4</b>   <b>EPC5</b>   <b>EPC6</b>   <b>EPC8</b>   <b>EPC1</b>   <b>EPC3</b>   <b>BMPF</b>   <b>CANO</b> . Default is <b>HP400</b> .
<b>Description</b>	Selects the printer for screen dumps. The printers selectable are: <b>HP400</b> means the Hewlett-Packard (HP) deskjet 400 series, <b>HP680</b> stands for the DP deskjet 680 series, <b>EPST</b> means the Epson (EP) stylus series, <b>HPLJ</b> stands for the HP laserjet series, <b>EPSP</b> , <b>EPSX</b> , <b>EPSI</b> , <b>EPCI</b> , <b>EPS1</b> , <b>EPPX</b> , <b>EPC1</b> , <b>EPC2</b> , <b>EPC3</b> , <b>EPC4</b> , <b>EPC5</b> , <b>EPC6</b> , and <b>EPC8</b> stand for the corresponding Epson printer series, <b>BMPF</b> means that the screen dump will be output as a bit map file, while <b>CANO</b> will generate an output signal suitable for Canon printers.
<b>Query</b>	Reads and returns the current setting for the printer. The string returned will contain one of the predefined expressions as explained above.
<b>Example</b>	<b>:SYST:PRIN?</b> String returned: " <b>HPLJ</b> ".

## STATus subsystem

The STATus subsystem offers commands to read out and deal with

- the general operation register group and its subordinate groups of registers and
- the general questionable status register group and its subordinate groups of registers.

### NOTE

The commands to deal with the event status register group and the service register are part of the SCPI command errors.

### **:STATus:PRESet**

<b>Syntax</b>	:STATus:PRESet
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command sets all user-definable settings of the status subsystem to their factory default values. The default values for the single commands are explained below.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:PRESet</b> Will reset all parameters of the status subsystem to their default values as listed below.

### **:STATus:GSM:SUMMARY**

<b>Syntax</b>	:STATus:GSM:SUMMARY
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command returns a summary of important status registers. The string returned contains an integer, representing a 16 bit word. <b>Note:</b> Bit 15 (the MSB) is not used. Therefore, the maximum value returned will be "32767".
<b>Example</b>	:STAT:GSM:SUMM?

### **:STATus:OPERation[:EVENT]?**

<b>Syntax</b>	:STATus:OPERation[:EVENT]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the General Operation Event Register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.

<b>Query</b>	<p>There is only a query form of this command available. The query will return a string, containing one integer.</p> <p>The value returned represents all general operation events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, condition-type registers will be updated continuously.</p> <p>The bits of the operation event register have the following meaning:</p> <ul style="list-style-type: none"> <li>Bits 0 through 7: reserved</li> <li>Bit 8 (decimal 256): GSM signaling active</li> <li>Bit 9 (decimal 512): measurements active</li> <li>Bit 10 (decimal 1024): GPRS signaling active</li> <li>Bit 11 (decimal 2048): CDMA2000 signaling active</li> <li>Bit 12 (decimal 4096): WCDMA or TD-SCDMA signaling active</li> <li>Bit 13 (decimal 8192): 1xEV-DO signaling active</li> </ul> <p>Note: In case a certain event shall be trapped in a loop within a program, always query the event-type register.</p>
<b>Example</b>	<p><b>:STATus:OPERation:EVENT?</b></p> <p>Value returned: "768".</p> <p>This means that bit 8 (the 'GSM signaling active' bit) and bit 9 (the 'measurements active' bit) have been set.</p>

**:STATus:OPERation:CONDition?**

<b>Syntax</b>	<b>:STATus:OPERation:CONDition?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>This command reads out the current contents of the General Operation Condition Register. This register reflects the current operational state of the Willtek 3100 and will be updated continuously.</p> <p><b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.</p>
<b>Query</b>	<p>There is only a query form of this command available. The query will return a string, containing one integer. The integer will express all bits currently set in the 16 bit general operation condition register.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>– Bit 15 (the MSB) of this register is not used. Therefore, the maximum value returned will be <b>"32767"</b>.</li> </ul>
<b>Example</b>	<p><b>:STATus:OPERation:CONDition?</b></p> <p>Value returned: "512".</p> <p>This means that bit 9 (the MEASure summary bit) has been set, indicating that some measurement is currently in progress. Bit 9 will be reset as soon as the measurement has been completed.</p>

**:STATus:OPERation:ENABLE**

<b>Syntax</b>	<b>:STATus:OPERation:ENABLE &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is <b>32767</b> . The default value is 0.

<b>Description</b>	This command sets the Enable filter of the General operation register group. This mask will be <b>ANDed</b> with the general operation event register and thus decide what kind of events will be forwarded to bit 7 of the service register. <b>Note:</b> The service register is often also referred to as the status byte register or status byte.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:ENABLE 129</b> This means that any setting of bits 1 (calibrating) or 7 (correcting) of the general operation event register will rise bit 7 of the service register.

**:STATus:OPERation:NTRansition**

<b>Syntax</b>	<b>:STATus:OPERation:NTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	Sets the NTR mask of the General operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the NTR transition filter of the general operation condition register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the general operation event register. <b>Notes</b> <ul style="list-style-type: none"> <li>- The default of this mask is 0 – that means that the mask will <b>not</b> allow any negative transition of the lower 15 bits of the condition-type register to reach the event-type register.</li> <li>- Bit 16 of the general operation condition register is not used.</li> </ul>
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:NTRansition 32767</b> This means that all of the negative transitions of the condition-type register will be forwarded to the event-type register.

**:STATus:OPERation:PTRansition**

<b>Syntax</b>	<b>:STATus:OPERation:PTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the General operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the PTR transition filter of the general operation condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the general operation event register. <b>Notes</b> <ul style="list-style-type: none"> <li>- The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.</li> <li>- Bit 16 of the general operation condition register is not used.</li> </ul>
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:PTRansition 0</b> This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register.

**:STATus:OPERation:COMplete:CONDition**

<b>Syntax</b>	:STATus:OPERation:COMplete:CONDition?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form available.
<b>Query</b>	Returns a string containing an integer number (for CDMA operation only). The number indicates which condition(s) lead to completion. Valid numbers are: 1 – indicating that the signaling has been completed.
<b>Example</b>	:STATus:OPERation:COMP:COND? Results in a string like this: 1, meaning that the signaling operation is completed.

**:STATus:OPERation:COMplete:ERRor**

<b>Syntax</b>	:STATus:OPERation:COMplete:ERRor?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form available.
<b>Query</b>	The query returns TRUE if an error occurred, otherwise it returns FALSE (for CDMA operation only).
<b>Example</b>	:STAT:OPER:COMP:ENAB 1 :CALL:CDMA:REG;*WAI; This will cause the 3100 to wait until the phone has registered or an error has occurred. :STAT:OPER:COMP:ERR? To check if an error has occurred.

**:STATus:OPERation:COMplete:ENABle**

<b>Syntax</b>	:STATus:OPERation:COMplete:ENABle <int1>
<b>Parameters</b>	int1 is an integer; the valid range for int1 is from 0 to 32767 and the default value is 0.
<b>Description</b>	This command sets the conditions for which to wait until completion (for CDMA operation only). A value of 1 enables waiting for call processing to complete.
<b>Query</b>	There is no query form available.
<b>Example</b>	:STAT:OPER:COMP:ENAB 1 This command enables the signaling complete check. :CALL:CDMA:REG;*WAI; This will cause the 3100 to wait until the phone has registered or an error has occurred. :STAT:OPER:COMP:ERR? To check if an error has occurred.

**:STATus:OPERation:SIGNalling:GSM[:EVENT]?**

<b>Syntax</b>	:STATus:OPERation:SIGNalling:GSM[:EVENT]?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Reads out the current contents of the signaling operation event register.</p> <p><b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.</p>
<b>Query</b>	<p>There is only a query form of this command available. The query will return a string, containing one integer.</p> <p>The value returned represents all signaling operation events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, condition-type registers will be updated continuously.</p> <p>The bits of the signaling operation event register have the following meaning:</p> <p>Bit 0 (decimal 1): The 3100 is in idle mode</p> <p>Bit 1 (decimal 2): The 3100 is paging the mobile.</p> <p>Bit 2 (decimal 4): A call has been established and is currently active.</p> <p>Bit 3 (decimal 8): The BER loop has been closed.</p> <p>Bit 4 (decimal 16): Async mode (e.g. Generator/Analyzer) active.</p> <p>Bit 5 (decimal 32): The 3100 is calling the mobile under test. A BS call is in progress.</p> <p>Bit 6 (decimal 64): Not used (reserved).</p> <p>Bit 7 (decimal 128): Not used (reserved).</p> <p>Bit 8 (decimal 256): Alerting.</p> <p>Bits 9 through 15: Not used (reserved).</p> <p><b>Note:</b> In case, a certain event shall be trapped in a loop within a program, always query the event-type register.</p>
<b>Example</b>	<p><b>:STATus:OPERation:SIGNalling:GSM:EVENT?</b></p> <p>Value returned: "8".</p> <p>This means that bit 3 of the signaling operation event register (stands for BER loop being closed) has been set.</p>

**:STAT:OPERation:SIGNalling:GSM:CONDition?**

<b>Syntax</b>	<b>:STAT:OPERation:SIGNalling:GSM:CONDition?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>This command reads out the current contents of the signaling operation condition register. This register reflects the current state of the Willtek 3100 in terms of signaling and will be updated continuously.</p> <p><b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.</p>
<b>Query</b>	<p>There is only a query form of this command available. The query will return a string, containing one integer. The integer will express all bits set in the 16 bit signaling operation condition register.</p> <p><b>Note:</b> Bits 14 and 15 (the MSB) of this register are not used. Therefore, the maximum value returned will be "16383".</p>
<b>Example</b>	<p><b>:STATus:OPERation:SIGNalling:GSM:CONDition?</b></p> <p>Value returned: "512".</p> <p>This means that bit 9 has been set and that there is a change of the call channel currently in progress. Bit 9 will be reset as soon as the change of the call channel has been completed. For details on return data (bits and decimals and their meaning) refer to section "<b>:STATus:OPERation:SIGNalling:GSM[:EVENT]?"</b> on page 54.</p>

**:STATus:OPERation:SIGNalling:GSM:ENABLE**

<b>Syntax</b>	<code>:STATus:OPERation:SIGNalling:GSM:ENABLE &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	This command sets the enable filter of the signaling operation register group. This mask will be <b>ANDed</b> with the signaling operation event register and thus decide what kind of events will be forwarded to bit 8 of the General operation register group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:SIGNalling:GSM:ENABLE 16</b> This means that any setting of bit 4 (MS clearing) of the signaling operation event register will rise bit 8 of the general operation condition register. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:GSM[:EVENT]?"</a> " on page 54.

**:STAT:OPERation:SIGNalling:GSM:PTRansition**

<b>Syntax</b>	<code>:STAT:OPERation:SIGNalling:GSM:PTRansition &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the Signaling operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the PTR filter of the signaling operation condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the signaling operation event register. <b>Note:</b> The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:SIGNalling:GSM:PTRansition 0</b> This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:GSM[:EVENT]?"</a> " on page 54.

**:STAT:OPERation:SIGNalling:GSM:NTRansition**

<b>Syntax</b>	<code>:STAT:OPERation:SIGNalling:GSM:NTRansition &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	Sets the NTR mask of the Signaling operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the NTR filter of the signaling operation condition register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the signaling operation event register. <b>Note:</b> The default of this mask is 0 – that means that the mask will not allow any negative transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.



<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:SIGNalling:GSM:NTRansition 0</b> This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section " <b>:STATus:OPERation:SIGNalling:GSM[:EVENT]?"</b> on page 54.

**:STATus:OPERation:SIGNalling:GPRS[:EVENT]?**

<b>Syntax</b>	<b>:STATus:OPERation:SIGNalling:GPRS[:EVENT]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the GPRS Signaling Operation Event Register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string containing one integer. The value returned represents all signaling operation events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, condition-type registers will be updated continuously. <b>Note:</b> In case that a certain event shall be trapped in a loop within a program, always query the event-type register. The meaning of the bits is: bit 0 – Set when the mobile is GPRS Attached bit 1 – Set when signaling is in progress bit 2 – Set when the 3100 is ready to measure (PDTCH set up) <b>Examples</b> If the status is 0 then the mobile is not GPRS attached. If the status is 1, the mobile is attached (and nothing more). If the status is 3, the mobile is attached and a TBF setup is progressing (but not yet completed). If the status is 5, the mobile is attached and a TBF is set up; measurements can be taken immediately.
<b>Example</b>	<b>:STATus:OPERation:SIGNalling:GPRS:EVENT?</b> Value returned: "5". This means that bits 0 and 2 of the GPRS signaling operation event register have been set: The mobile is GPRS Attached and the PDTCH is set up so the Willtek 3100 is ready to take measurements. .

**:STAT:OPERation:SIGNalling:GPRS:CONDition?**

<b>Syntax</b>	<b>:STAT:OPERation:SIGNalling:GPRS:CONDition?</b>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	This command reads out the current contents of the Signaling Operation Condition Register. This register reflects the current state of the Willtek 3100 in terms of signaling and will be updated continuously. <b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The integer will express all bits set in the 16 bit signaling operation condition register. <b>Note:</b> See :STATus:OPERation:SIGNalling:GPRS[:EVENT] for the meaning of the individual bits of the register.
<b>Example</b>	:STATus:OPERation:SIGNalling:GPRS:CONDition? Value returned: "3". This means that bits 0 and 1 have been set. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:GPRS[:EVENT]?</a> " on page 57.

**:STATus:OPERation:SIGNalling:GPRS:ENABLE**

<b>Syntax</b>	:STATus:OPERation:SIGNalling:GPRS:ENABLE <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	This command sets the Enable filter of the GPRS Signaling Operation Register Group. This mask will be ANDed with the GPRS signaling operation event register and thus decide what kind of events will be forwarded to bit 10 of the General Operation Register Group. See :STATus:OPERation:SIGNalling:GPRS[:EVENT] for the meaning of the individual bits of the register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:STATus:OPERation:SIGNalling:GPRS:ENABLE 4 This means that any setting of bit 2 (PDTCH set up, ready for measurements) of the GPRS signaling operation event register will rise bit 10 of the general operation condition register. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:GPRS[:EVENT]?</a> " on page 57.

**:STAT:OPERation:SIGNalling:GPRS:PTRansition**

<b>Syntax</b>	:STAT:OPERation:SIGNalling:GPRS:PTRansition <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the GPRS Signaling Operation Register Group. This mask will be ANDed with the up to 15 bits of the PTR filter of the GPRS signaling operation condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the signaling operation event register. <b>Note:</b> The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.

**Example**           :STATus:OPERation:SIGNalling:GPRS:PTRansition 0  
 This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section "[:STATus:OPERation:SIGNalling:GPRS\[:EVENT\]?](#)" on page 57.

**:STAT:OPERation:SIGNalling:GPRS:NTRansition**

**Syntax**           :STAT:OPERation:SIGNalling:GPRS:NTRansition <int1>  
**Parameters**       int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The default value is 0.  
**Description**       Sets the NTR mask of the GPRS Signaling Operation Register Group. This mask will be **ANDed** with the up to 15 bits of the NTR filter of the GPRS signaling operation **condition** register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the signaling operation **event** register.  
**Note:** The default of this mask is 0 – that means that the mask will **not** allow any negative transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.  
**Query**             There is no query form of this command available.  
**Example**           :STATus:OPERation:SIGNalling:GPRS:NTRansition 0  
 This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section "[:STATus:OPERation:SIGNalling:GPRS\[:EVENT\]?](#)" on page 57.

**:STATus:OPERation:SIGNalling:EGPRS[:EVENT]?**

**Syntax**           :STATus:OPERation:SIGNalling:EGPRS[:EVENT]?  
**Parameters**       There are no parameters.  
**Description**       Reads out the current contents of the GPRS Signaling Operation Event Register.  
**Note:** Event-type registers are read-only and self-destructive. They will be cleared after any query.  
**Query**             There is only a query form of this command available. The query will return a string, containing one integer.  
 The value returned represents all signaling operation events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, condition-type registers will be updated continuously.  
**Note:** In case a certain event shall be trapped in a loop within a program, always query the event-type register.  
 The meaning of the bits is:  
 bit 0 - Set when the mobile is GPRS Attached  
 bit 1 - Set when signaling is in progress  
 bit 2 - Set when the 3100 is ready to measure (PDTCH set up)

<b>Example</b>	<pre>:STATus:OPERation:SIGNalling:EGPRs:EVENT?</pre> <p>Value returned in this example: "5".</p> <p>This means that bits 0 and 2 of the GPRS signaling operation event register have been set: The mobile is GPRS Attached and the PDTCH is set up so the Willtek 3100 is ready to take measurements.</p>
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**:STAT:OPERation:SIGNalling:EGPRs:CONDition?**

<b>Syntax</b>	<pre>:STAT:OPERation:SIGNalling:EGPRs:CONDition?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>This command reads out the current contents of the GPRS Signaling Operation Condition Register. This register reflects the current state of the Willtek 3100 in terms of signaling and will be updated continuously.</p> <p>Note This register is non-destructive. This means that it will keep its contents after any query.</p>
<b>Query</b>	<p>There is only a query form of this command available. The query will return a string containing one integer. The integer will express all bits set in the 16 bit signaling operation condition register.</p> <p><b>Note:</b>          See <code>:STATus:OPERation:SIGNalling:EGPRs[:EVENT]</code> for the meaning of the individual bits of the register.</p>
<b>Example</b>	<pre>:STATus:OPERation:SIGNalling:EGPRs:CONDition?</pre> <p>Value returned in this example: "3".</p> <p>This means that bits 0 and 1 have been set. For details on return data (bits and decimals and their meaning) refer to section "<a href="#">:STATus:OPERation:SIGNalling:EGPRs[:EVENT]?"</a>" on page 59.</p>

**:STATus:OPERation:SIGNalling:EGPRs:ENABLE**

<b>Syntax</b>	<pre>:STATus:OPERation:SIGNalling:EGPRs:ENABLE &lt;int1&gt;</pre>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 32767. The value default is 0.
<b>Description</b>	<p>This command sets the Enable filter of the GPRS Signaling Operation Register Group. This mask will be <b>ANDed</b> with the GPRS signaling operation event register and thus decide what kind of events will be forwarded to bit 10 of the General Operation Register Group.</p> <p>See <code>:STATus:OPERation:SIGNalling:EGPRs[:EVENT]</code> for the meaning of the individual bits of the register.</p>
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>STATus:OPERation:SIGNalling:EGPRs:ENABLE 4</pre> <p>This means that any setting of bit 2 (PDTCH set up, ready for measurements) of the GPRS signaling operation event register will raise bit 10 of the general operation condition register. For details on return data (bits and decimals and their meaning) refer to section "<a href="#">:STATus:OPERation:SIGNalling:EGPRs[:EVENT]?"</a>" on page 59.</p>

**:STAT:OPERation:SIGNalling:EGPRs:PTRansition**

<b>Syntax</b>	:STAT:OPERation:SIGNalling:EGPRs:PTRansition <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The value default is 32767.
<b>Description</b>	Sets the PTR mask of the GPRS Signaling Operation Register Group. This mask will be <b>ANDed</b> with the up to 15 bits of the PTR filter of the GPRS signaling operation <b>condition</b> register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the signaling operation event register. <b>Note:</b> The default of this mask is 32767 - that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:STATus:OPERation:SIGNalling:EGPRs:PTRansition 0 This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:EGPRs[:EVENT]?" on page 59.</a>

**:STAT:OPERation:SIGNalling:EGPRs:NTRansition**

<b>Syntax</b>	:STAT:OPERation:SIGNalling:EGPRs:NTRansition <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The value default is 0.
<b>Description</b>	Sets the NTR mask of the GPRS Signaling Operation Register Group. This mask will be <b>ANDed</b> with the up to 15 bits of the NTR filter of the GPRS signaling operation <b>condition</b> register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the signaling operation event register. <b>Note:</b> The default of this mask is 0 - that means that the mask will <b>not</b> allow any negative transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:STATus:OPERation:SIGNalling:EGPRs:NTRansition 0 This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:EGPRs[:EVENT]?" on page 59.</a>

**:STATus:OPERation:SIGNalling:CDMA[:EVENT]?**

<b>Syntax</b>	:STATus:OPERation:SIGNalling:CDMA[:EVENT]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the signaling operation event register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.

<b>Query</b>	<p>There is only a query form of this command available. The query will return a string containing one integer.</p> <p>The value returned represents all signaling operation events that have occurred since the last query of this register. As with any event-type register, the individual bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of Willtek 3100. Consequently, condition-type registers will be updated continuously.</p> <p>The bits of the signaling operation event register have the following meaning:</p> <p>Bit 0 (decimal 1): CDMA mode disabled.</p> <p>Bit 1 (decimal 2): The 3100 is in CDMA mode and on a control channel.</p> <p>Bit 2 (decimal 4): Alerting mobile, waiting for the phone to answer the call.</p> <p>Bit 3 (decimal 8): 3100 and phone on a traffic channel.</p> <p>Bit 4 (decimal 16): Async mode (i.e. generator/analyzer) active.</p> <p>Bits 5 to 7: Not used (reserved).</p> <p>Bit 8 (decimal 256): Mobile registration received.</p> <p>Bit 9 (decimal 512): Beginning a BS-initiated call.</p> <p>Bit 10 (decimal 1024): Beginning a MS-initiated call.</p> <p>Bit 11 (decimal 2048): RESERVED – DTMF key press detected.</p> <p>Bit 12 (decimal 4096): Mobile power report received.</p> <p>Bit 13 (decimal 8192): Mobile pilot strength report received.</p> <p>Bit 14 (decimal 16384): Mobile power correction completed (if :CONF:CDMA:BS:TCH:PCON:RES was issued, the flag indicates that the Power Control Reset has finished).</p> <p>Bit 15 (decimal 32768): Not used (reserved).</p> <p><b>Note:</b> In case a certain event shall be trapped in a loop within a program, always query the event-type register.</p>
<b>Example</b>	<pre>:STATus:OPERation:SIGNalling:CDMA:EVENT?</pre> <p>Value returned: "8".</p> <p>This means that bit 3 signaling operation event register has been set.</p>

**:STAT:OPERation:SIGNalling:CDMA:CONDition?**

<b>Syntax</b>	<pre>:STAT:OPERation:SIGNalling:CDMA:CONDition?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>This command reads out the <b>current</b> contents of the signaling operation condition register. This register reflects the current state of Willtek 3100 in terms of signaling and will be updated continuously.</p> <p><b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.</p>
<b>Query</b>	There is only a query form of this command available. The query will return a string containing one integer. The integer will express all bits set in the 16 bit signaling operation condition register.
<b>Example</b>	<pre>:STATus:OPERation:SIGNalling:CDMA:CONDition?</pre> <p>Value returned: "512".</p> <p>This means that bit 9 has been set. Bit 9 will be reset as soon as the change of the call channel has been completed. For details on return data (bits and decimals and their meaning) refer to section "<a href="#">":STATus:OPERation:SIGNalling:CDMA[:EVENT]?"</a>" on <a href="#">page 61</a>.</p>

**:STATus:OPERation:SIGNalling:CDMA:ENABLE**

<b>Syntax</b>	:STATus:OPERation:SIGNalling:CDMA:ENABLE <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	This command sets the Enable filter of the signaling operation register group. This mask will be <b>ANDed</b> with the signaling operation event register and thus decide what kind of events will be forwarded to bit 10 of the general operation register group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:STATus:OPERation:SIGNalling:CDMA:ENABLE 16 This means that any setting of bit 4 of the signaling operation event register will rise bit 8 of the general operation condition register. For details on return data (bits and decimals and their meaning) refer to section <a href="#">":STATus:OPERation:SIGNalling:CDMA[:EVENT]?"</a> on page 61.

**:STAT:OPERation:SIGNalling:CDMA:PTRansition**

<b>Syntax</b>	:STAT:OPERation:SIGNalling:CDMA:PTRansition <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the signaling operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the PTR filter of the signaling operation condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the signaling operation event register. <b>Note:</b> The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:STATus:OPERation:SIGNalling:CDMA:PTRansition 0 This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section <a href="#">":STATus:OPERation:SIGNalling:CDMA[:EVENT]?"</a> on page 61.

**:STAT:OPERation:SIGNalling:CDMA:NTRansition**

<b>Syntax</b>	:STAT:OPERation:SIGNalling:CDMA:NTRansition <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	Sets the NTR mask of the signaling operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the NTR filter of the signaling operation condition register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the signaling operation event register. <b>Note:</b> The default of this mask is 0 – that means that the mask will not allow any negative transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.

<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:STATus:OPERation:SIGNalling:CDMA:NTRansition 0</code> This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:CDMA[:EVENT]?</a> " on page 61.

**:STATus:OPERation:SIGNalling:WCDMa[:EVENT]?**

<b>Syntax</b>	<code>:STATus:OPERation:SIGNalling:WCDMa[:EVENT]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the signaling operation event register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string containing one integer. The value returned represents all signaling operation events that have occurred since the last query of this register. As with any event-type register, the individual bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of Willtek 3100. Consequently, condition-type registers will be updated continuously. The bits of the signaling operation event register have the following meaning: Bit 0 (decimal 1): not set: WCDMA mode disabled. set: The UE is not registered. Bit 1 (decimal 2): A UE is registered to the tester. Bit 2 (decimal 4): The tester is alerting the UE to answer call. Bit 3 (decimal 8): An uplink channel is assigned (speech call active or test loopback connection active). Bit 4 (decimal 16): Async mode (i.e. generator/analyzer) active. Bits 5 to 7: Not used (reserved). Bit 8 (decimal 256): A test loopback has been started. Bit 9 (decimal 512): A mobile-terminated call has been set up. Bit 10 (decimal 1024): A mobile-originated call has been set up. Bit 11 to 15: Not used (reserved) <b>Note:</b> In case a certain event shall be trapped in a loop within a program, always query the event-type register.
<b>Example</b>	<code>:STATus:OPERation:SIGNalling:WCDMa:EVENT?</code> Value returned in this example: "8". This means that bit 3 of the signaling operation event register has been set. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:WCDMa[:EVENT]?</a> " on page 64.

**:STAT:OPERation:SIGNalling:WCDMa:CONDition?**

<b>Syntax</b>	<code>:STAT:OPERation:SIGNalling:WCDMa:CONDition?</code>
<b>Parameters</b>	There are no parameters.



<b>Description</b>	This command reads out the current contents of the signaling operation condition register. This register reflects the current state of Willtek 3100 in terms of signaling and will be updated continuously. <b>Note:</b> This register is non-destructive. This means that it will keep its contents after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string containing one integer. The integer will express all bits set in the 16 bit signaling operation condition register. <b>Note:</b> For further details regarding the basic functions of the STATus subsystem, please refer to section Understanding the STATus Subsystem.
<b>Example</b>	<code>:STATus:OPERation:SIGNalling:WCDMa:CONDition?</code> Value returned in this example: "512". This means that bit 9 has been set. Bit 9 will be reset as soon as the change of the call channel has been completed. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:WCDMa[:EVENT]?"</a> " on <a href="#">page 64</a> .

**:STATus:OPERation:SIGNalling:WCDMa:ENABLE**

<b>Syntax</b>	<code>:STATus:OPERation:SIGNalling:WCDMa:ENABLE &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 32767. The value default is 0.
<b>Description</b>	This command sets the enable filter of the signaling operation register group. This mask will be <b>ANDed</b> with the signaling operation event register and thus decide what kind of events will be forwarded to bit 8 of the general operation register group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:STATus:OPERation:SIGNalling:WCDMa:ENABLE 16</code> This means that any setting of bit 4 of the signaling operation event register will rise bit 8 of the general operation condition register. For details on return data (bits and decimals and their meaning) refer to section " <a href="#">:STATus:OPERation:SIGNalling:WCDMa[:EVENT]?"</a> " on <a href="#">page 64</a> .

**:STAT:OPERation:SIGNalling:WCDMa:PTRansition**

<b>Syntax</b>	<code>:STAT:OPERation:SIGNalling:WCDMa:PTRansition &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 32767. The value default is 32767.
<b>Description</b>	Sets the PTR mask of the signaling operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the PTR filter of the signaling operation condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the signaling operation event register. <b>Note</b> The default of this mask is 32767 - that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.

**Example** :STATus:OPERation:SIGNalling:WCDma:PTRansition 0  
 This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section "[:STATus:OPERation:SIGNalling:WCDma\[:EVENT\]?](#)" on page 64.

**:STAT:OPERation:SIGNalling:WCDma:NTRansition**

**Syntax** :STAT:OPERation:SIGNalling:WCDma:NTRansition <int1>  
**Parameters** int1 is an integer. The minimum value for int1 is 0, the maximum value is 32767. The value default is 0.  
**Description** Sets the NTR mask of the signaling operation register group. This mask will be **ANDed** with the up to 15 bits of the NTR filter of the signaling operation **condition** register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the signaling operation **event** register.  
**Note:** The default of this mask is 0 - that means that the mask will **not** allow any negative transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.  
**Query** There is no query form of this command available.  
**Example** :STATus:OPERation:SIGNalling:WCDma:NTRansition 0  
 This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register. For details on return data (bits and decimals and their meaning) refer to section "[:STATus:OPERation:SIGNalling:WCDma\[:EVENT\]?](#)" on page 64.

**:STATus:OPERation:SIGNalling:EVDO[:EVENT]**

**Syntax** :STATus:OPERation:SIGNalling:EVDO[:EVENT]?  
**Parameters** There are no parameters.  
**Description** Reads out the current contents of the signaling operation **event** register.  
**Note:** Event-type registers are read-only and self-destructive. They will be cleared after any query.

<b>Query</b>	<p>There is only a query form of this command available. The query will return a string containing one integer.</p> <p>The value returned represents all signaling operation events that have occurred since the last query of this register. As with any event-type register, the individual bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of Willtek 3100. Consequently, condition-type registers will be updated continuously.</p> <p>The bits of the signaling operation event register have the following meaning:</p> <p>Bit 0 (decimal 1): Disabled – set when EVDO mode is disabled.</p> <p>Bit 1 (decimal 2): Control channel – set when the EVDO mode is on a control channel.</p> <p>Bit 2 (decimal 4): Session open – set when a terminal has opened a session.</p> <p>Bit 3 (decimal 8): Connected – set when a connection has been established with a terminal.</p> <p>Bit 4 (decimal 16): Generator/Analyzer mode – set when 3100 is in generator/analyzer mode.</p> <p>Bit 5 (decimal 32): Unit is currently performing self-calibration.</p> <p>Bit 6 (decimal 64): Session information is now available.</p> <p>Bit 7 (decimal 128): The terminal has requested a session.</p> <p>Bit 8 (decimal 256): Beginning an Access Network connection.</p> <p>Bit 9 (decimal 512): Beginning an Access Terminal connection.</p> <p>Bit 10 (decimal 1024): Reserved.</p> <p>Bit 11 (decimal 2048): Mobile power correction completed.</p> <p>Bits 12. to 15: Not used (reserved)</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>– The lower five bits (0 to 4) are considered the current state, so one (and only one) of these bits is set at all times. The other bits (5 to 15) may be set independently of any other.</li> <li>– For further details regarding the basic functions of the STATus subsystem, please refer to section <a href="#">Understanding the STATus Subsystem</a>.</li> <li>– In case a certain event shall be trapped in a loop within a program, always query the event-type register.</li> </ul>
<b>Example</b>	<pre>:STATus:OPERation:SIGNalling:EVDO:EVENT?</pre> <p>Value returned in this example: " 8 "</p> <p>This means that bit 3 of the signaling operation event register has been set.</p>

**:STATus:OPERation:SIGNalling:EVDO:CONDition**

<b>Syntax</b>	<pre>:STATus:OPERation:SIGNalling:EVDO:CONDition?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>This command reads out the current contents of the signaling operation <b>condition</b> register. This register reflects the current state of Willtek 3100 in terms of signaling and will be updated continuously.</p> <p><b>Note:</b> This register is non-destructive. This means that it will keep its contents after any query.</p>
<b>Query</b>	<ul style="list-style-type: none"> <li>– There is only a query form of this command available. The query will return a string containing one integer. The integer will express all bits set in the 16 bit signaling operation condition register.</li> </ul> <p><b>Note:</b> For further details regarding the basic functions of the STATus subsystem, please refer to section <a href="#">Understanding the STATus Subsystem</a>.</p>

<b>Example</b>	<b>:STATus:OPERation:SIGNalling:EVDO:CONDition?</b> Value returned in this example: "512". This means that bit 9 has been set. Bit 9 will be reset as soon as the change of the call channel has been completed.
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**:STATus:OPERation:SIGNalling:EVDO:ENABLe**

<b>Syntax</b>	<b>:STATus:OPERation:SIGNalling:EVDO:ENABLe &lt;int1&gt;</b>
<b>Parameters</b>	<i>int1</i> is an integer. The minimum value for <i>int1</i> is 0, the maximum value is 32767. The value default is 0.
<b>Description</b>	This command sets the enable filter of the signaling operation register group. This mask will be <b>ANDed</b> with the signaling operation <b>event</b> register and thus decide what kind of events will be forwarded to bit 8 of the general operation register group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:SIGNalling:EVDO:ENABLe 16</b> This means that any setting of bit 4 of the signaling operation event register will rise bit 8 of the general operation condition register.

**:STATus:OPERation:SIGNalling:EVDO:PTRansition**

<b>Syntax</b>	<b>:STATus:OPERation:SIGNalling:EVDO:PTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<i>int1</i> is an integer. The minimum value for <i>int1</i> is 0, the maximum value is 32767. The value default is 32767.
<b>Description</b>	Sets the PTR mask of the signaling operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the PTR filter of the signaling operation <b>condition</b> register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the signaling operation <b>event</b> register. <b>Note:</b> The default of this mask is 32767 - that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:SIGNalling:EVDO:PTRansition 0</b> This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register.

**:STATus:OPERation:SIGNalling:EVDO:NTRansition**

<b>Syntax</b>	<b>:STATus:OPERation:SIGNalling:EVDO:NTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<i>int1</i> is an integer. The minimum value for <i>int1</i> is 0, the maximum value is 32767. The value default is 0.

<b>Description</b>	Sets the NTR mask of the signaling operation register group. This mask will be <b>ANDed</b> with the up to 15 bits of the NTR filter of the signaling operation <b>condition</b> register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the signaling operation <b>event</b> register. <b>Note:</b> The default of this mask is 0 - that means that the mask will <b>not</b> allow any negative transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:STATus:OPERation:SIGNalling:EVDO:NTRansition 0</code> This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register.

**:STATus:OPERation:MEASuring[:EVENT]?**

<b>Syntax</b>	<code>:STATus:OPERation:MEASuring[:EVENT]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the measuring operation event register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The value returned represents all measuring operation events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, the condition type registers will be updated continuously. <b>Notes</b> <ul style="list-style-type: none"> <li>- For further details regarding the basic functions of the STATus subsystem, please refer to section "Understanding the STATus Subsystem".</li> <li>- In case, a certain event shall be trapped in a loop within a program, always query the event-type register.</li> </ul>
<b>Example</b>	<code>:STATus:OPERation:MEASuring:EVENT?</code> Value returned: "8". This means that bit 3 (stands for AF measurement) has been set.

**:STAT:OPERation:MEASuring:CONDition?**

<b>Syntax</b>	<code>:STAT:OPERation:MEASuring:CONDition?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command reads out the current contents of the measuring operation condition register. This register reflects the current state of the Willtek 3100 in terms of measurements and will be updated continuously. <b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.

<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The integer will express all bits set in the 16 bit measuring operation condition register. <b>Note:</b> Bits 4 to 15 (the MSB) of this register are not used. Therefore, the maximum value returned will be "7".
<b>Example</b>	<b>:STATus:OPERation:MEASuring:CONDition?</b> Value returned: "1". This means that bit 0 has been set and that there is an RFTX measurement currently in progress. This bit will be reset as soon as the RFTX measurements have been completed.

**:STATus:OPERation:MEASuring:ENABLE**

<b>Syntax</b>	<b>:STATus:OPERation:MEASuring:ENABLE &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	This command sets the enable filter of the Measuring operation register group. This mask will be ANDed with the measuring operation event register and thus decide what kind of events will be forwarded to bit 9 of the General operation register group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:MEASuring:ENABLE 4</b> This means that any setting of bit 2 (RF spectrum) of the measuring operation event register will rise bit 9 of the general operation condition register.

**:STAT:OPERation:MEASuring:PTRansition**

<b>Syntax</b>	<b>:STAT:OPERation:MEASuring:PTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the Measuring operation register group. This mask will be ANDed with the up to 16 bits of the PTR filter of the measuring operation condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the measuring operation event register. <b>Note:</b> The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:MEASuring:PTRansition 0</b> This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register.

**:STAT:OPERation:MEASuring:NTRansition**

<b>Syntax</b>	<b>:STAT:OPERation:MEASuring:NTRansition &lt;int1&gt;</b>
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<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	Sets the NTR mask of the Measuring operation register group. This mask will be ANDed with the up to 16 bits of the NTR filter of the measuring operation condition register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the measuring operation event register. <b>Note:</b> The default of this mask is 0 – that means that the mask will not allow any negative transition of the 16 bits of the condition-type register to reach the event-type register of this group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:OPERation:MEASuring:NTRansition 0</b> This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register.

**:STATus:QUESTionable[:EVENT]?**

<b>Syntax</b>	<b>:STATus:QUESTionable[:EVENT]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the general questionable status event register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The value returned represents all general questionable status events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, condition-type registers will be updated continuously. <b>Note:</b> In case, a certain event shall be trapped in a loop within a program, always query the event-type register.
<b>Example</b>	<b>:STATus:QUESTionable:EVENT?</b> Value returned: "256". This means that bit 8 has been set, indicating that the calibration of the Willtek 3100 is out of range. If you want to know whether the Willtek 3100 calibration is still out of range, read out the related condition-type register (see command explained below).

**:STATus:QUESTionable:CONDition?**

<b>Syntax</b>	<b>:STATus:QUESTionable:CONDition?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command reads out the current contents of the general questionable status condition register. This register reflects the current questionable state of the Willtek 3100 and will be updated continuously. <b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.

<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The integer will express all bits currently set in the 16 bit questionable status condition register. <b>Note:</b> Bit 15 (the MSB) of this register is not used. Therefore, the maximum value returned will be "32767".
<b>Example</b>	<b>:STATus:QUESTionable:CONDition?</b> Value returned: "512". This means that bit 9 (the RF summary bit) has been set, indicating a current problem on the RF side of the Willtek 3100.

**:STATus:QUESTionable:ENABLE**

<b>Syntax</b>	<b>:STATus:QUESTionable:ENABLE</b> <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	This command sets the Enable filter of the General questionable status register group. This mask will be <b>ANDed</b> with the general questionable status event register and thus decide what kind of events will be forwarded to bit 3 of the service register. <b>Note:</b> The service register is often also referred to as the status byte register or status byte.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:ENABLE 512</b> This means that any setting of bit 9 (RF summary bit) of the general questionable status event register will rise bit 3 of the service register.

**:STATus:QUESTionable:PTRansition**

<b>Syntax</b>	<b>:STATus:QUESTionable:PTRansition</b> <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the General questionable status register group. This mask will be <b>ANDed</b> with the up to 16 bits of the PTR filter of the general questionable status condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the questionable status event register. <b>Note:</b> The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:PTRansition 0</b> This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register of this group.

**:STATus:QUESTionable:NTRansition**

<b>Syntax</b>	<b>:STATus:QUESTionable:NTRansition</b> <int1>
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<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	Sets the NTR mask of the General questionable status register group. This mask will be ANDed with the up to 16 bits of the NTR filter of the general questionable status condition register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the general questionable status event register. <b>Note:</b> The default of this mask is 0 – that means that the mask will <b>not</b> allow any negative transition of the 16 bits of the condition-type register to reach the event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:NTRansition 0</b> This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register of this group.

**:STATus:QUESTionable:RF[:EVENT]?**

<b>Syntax</b>	<b>:STATus:QUESTionable:RF[:EVENT]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the RF questionable status event register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The value returned represents all RF questionable status events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, condition-type registers will be updated continuously. <b>Note:</b> In case, a certain event shall be trapped in a loop within a program, always query the event-type register.
<b>Example</b>	<b>:STATus:QUESTionable:RF:EVENT?</b> Value returned: "1". This means that bit 1 has been set, indicating an RF input overload. If you want to know whether this RF input overload still persists, read out the related condition-type register (see command explained below).

**:STATus:QUESTionable:RF:CONDition?**

<b>Syntax</b>	<b>:STATus:QUESTionable:RF:CONDition?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command reads out the current contents of the RF questionable status condition register. This register reflects the current questionable state of the Willtek 3100 regarding RF and will be updated continuously. <b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.

<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The integer will express all bits currently set in the 16 bit RF questionable status condition register. <b>Note:</b> Bits 4 to 15 (the MSB) of this register are not used. Therefore, the maximum value returned will be "15"
<b>Example</b>	<b>:STATus:QUESTionable:RF:CONDition?</b> Value returned: "8". This means that bit 3 has been set, indicating that the frequency currently received is out of range of the Willtek 3100 receiver.

**:STATus:QUESTionable:RF:ENABLe**

<b>Syntax</b>	<b>:STATus:QUESTionable:RF:ENABLe &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	This command sets the enable filter of the RF questionable status register group. This mask will be <b>ANDed</b> with the RF questionable status event register and thus decide what kind of events will be forwarded to bit 9 of the General questionable status register group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:RF:ENABLe 15</b> This means that any setting of one of the lower four bits of the RF questionable status event register will rise bit 9 of the general questionable status condition register.

**:STATus:QUESTionable:RF:PTRansition**

<b>Syntax</b>	<b>:STATus:QUESTionable:RF:PTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the RF questionable status register group. This mask will be <b>ANDed</b> with the up to 16 bits of the PTR filter of the RF questionable status condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the RF questionable status event register. <b>Note:</b> The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:RF:PTRansition 0</b> This means that none of the positive transitions of the condition-type register will be forwarded to the event-type register.

**:STATus:QUESTionable:RF:NTRansition**

<b>Syntax</b>	<b>:STATus:QUESTionable:RF:NTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.

<b>Description</b>	Sets the NTR mask of the RF questionable status register group. This mask will be ANDed with the up to 16 bits of the NTR filter of the RF questionable status condition register to allow a negative transition of any bit (i.e. a transition from logic '1' to '0') to reach the RF questionable status event register. <b>Note:</b> The default of this mask is 0 – that means that the mask will not allow any negative transition of the 16 bits of the condition-type register to reach the event-type register of this group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:RF:NTRansition 0</b> This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register.

**:STATus:QUESTionable:SYNChron[:EVENT]?**

<b>Syntax</b>	<b>:STATus:QUESTionable:SYNChron[:EVENT]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reads out the current contents of the synchronization questionable status event register. <b>Note:</b> Event-type registers are read-only and self-destructive. They will be cleared after any query.
<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The value returned represents all synchronization questionable status events that have occurred since the last query of this register. As with any event-type register, the single bits will remain set even when the reason for the bits to be set is no longer valid. Please note that this is the main difference between event-type and condition-type registers. Condition-type registers reflect the current state of the Willtek 3100. Consequently, condition-type registers will be updated continuously. <b>Note:</b> In case, a certain event shall be trapped in a loop within a program, always query the event-type register.
<b>Example</b>	<b>:STATus:QUESTionable:SYNChron:EVENT?</b> Value returned: "2". This means that bit 2 has been set, indicating that an external frame synchronization signal has been recognized on the SYNC IN/OUT socket on the rear panel of the Willtek 3100.

**:STAT:QUESTionable:SYNChron:CONDition?**

<b>Syntax</b>	<b>:STAT:QUESTionable:SYNChron:CONDition?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command reads out the current contents of the synchronization questionable status condition register. This register reflects the current questionable state of the Willtek 3100 regarding synchronization and will be updated continuously. <b>Note:</b> This register is nondestructive. This means that it will keep its contents after any query.

<b>Query</b>	There is only a query form of this command available. The query will return a string, containing one integer. The integer will express all bits currently set in the 16 bit synchronization questionable status condition register. <b>Note:</b> Bits 2 to 15 (the MSB) of this register are not used. Therefore, the maximum value returned will be "3".
<b>Example</b>	<b>:STATus:QUESTionable:SYNChron:CONDition?</b> Value returned: "1". This means that bit 1 has been set, indicating that an external RF synchronization signal is being received on the EXT SYNC prog. socket on the real panel of the Willtek 3100.

**:STATus:QUESTionable:SYNChron:ENABLE**

<b>Syntax</b>	<b>:STATus:QUESTionable:SYNChron:ENABLE &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 0.
<b>Description</b>	This command sets the Enable filter of the SYNChronization questionable status register group. This mask will be <b>ANDed</b> with the synchronization questionable status event register and thus decide what kind of events will be forwarded to bit 10 of the General questionable status register group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:SYNChron:ENABLE 3</b> This means that any setting of one of the lower two bits of the synchronization questionable status event register will rise bit 10 of the general questionable status condition register.

**:STAT:QUES:SYNChron:PTRansition**

<b>Syntax</b>	<b>:STAT:QUES:SYNChron:PTRansition &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 32767. The default value is 32767.
<b>Description</b>	Sets the PTR mask of the SYNChronization questionable status register group. This mask will be <b>ANDed</b> with the up to 16 bits of the PTR filter of the synchronization questionable status condition register to allow a positive transition of any bit (i.e. a transition from logic '0' to '1') to reach the synchronization questionable status event register. <b>Note:</b> The default of this mask is 32767 – that means that the mask will allow any positive transition of the lower 15 bits of the condition-type register to reach the event-type register of this group.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STAT:QUES:SYNChron:PTRansition 0</b> This means that none of the positive transitions of the synchronization questionable status condition register will be forwarded to the event-type register.

**:STAT:QUES:SYNChron:NTRansition**

<b>Syntax</b>	<code>:STAT:QUES:SYNChron:NTRansition &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is <b>0</b> , the maximum value is <b>32767</b> . The default value is <b>0</b> .
<b>Description</b>	Sets the NTR mask of the SYNChronization questionable status register group. This mask will be <b>ANDed</b> with the up to 16 bits of the NTR filter of the synchronization questionable status <b>condition</b> register to allow a reset (negative transition) of any bit (i.e. a transition from logic '1' to '0') to reach the corresponding <b>event</b> -type register. <b>Note:</b> The default of this mask is 0 – that means that the mask will <b>not</b> allow any negative transition of the 16 bits of the condition-type register to reach the corresponding event-type register.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:STATus:QUESTionable:SYNChron:NTRansition 0</b> This means that none of the negative transitions of the condition-type register will be forwarded to the event-type register of this group.

## FORMat subsystem

The FORMat subsystem sets and queries settings concerning the data output in remote mode.

### **:FORMat:MRESult:STYPe**

<b>Syntax</b>	<code>:FORMat:MRESult:STYPe &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>STB</b>   <b>SIGNal-ling</b>   <b>MEASuring</b>   <b>OPERation</b>   <b>QUESTionable</b>   <b>ALL</b> . Default is that no additional information will be provided with the measurement result values.
<b>Description</b>	Specifies the type of additional information to be returned with any measurement result obtained by a <b>FETCh</b> command. The meaning of the settings is as follows: <b>STB</b> will deliver the current contents of the Service register. <b>SIGNalling</b> stands for the current contents of the signaling operation condition register. <b>MEASuring</b> means that the current contents of the measuring operation condition register will be delivered back. <b>OPERation</b> will deliver the current contents of the general operation condition register. <b>QUESTionable</b> stands for the current contents of the general questionable status condition register. <b>ALL</b> will deliver the current contents of the eight most important registers. The order is as follows: 1. Service register, 2. event status register, 3. general operation condition register, 4. signaling operation condition register, 5. measuring operation condition register, 6. general questionable status condition register, 7. RF questionable status condition register, and 8. synchronization questionable status condition register. The contents of every single register will be returned as an integer; the single values will be separated by commas.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:FORMat:MRESult:HEADer ON</b> <b>:FORMat:MRESult:STYPe ALL</b> <b>:MEASure:RFTX:PRMS</b> <b>:FETCh:RFTX:PRMS</b></pre> <p>The first command switches the transmission of the additional information on, the second command specifies that all current contents of the eight most important registers shall be returned.</p> <p>The third command starts a continuous measurement. The last command finally delivers the latest measurement result value plus the current contents of the main registers. The string delivered back:</p> <pre><b>"0,128,256,8,1,0,0,0,4.63"</b></pre>

**:FORMat:MRESult:HEADer**

<b>Syntax</b>	:FORMat:MRESult:HEADer <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>OFF</b>   <b>ON</b> . Default is <b>OFF</b> .
<b>Description</b>	Switches the transmission of the additional information (see explanation of the command above) either on or off. <b>ON</b> means that the current contents of the corresponding register(s) will be added at the beginning of every string returned by a FETCh command.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:FORM:MRES:HEAD</b> This command will switch the transmission of the additional information off.

**:FORMat:ADELimiter**

<b>Syntax</b>	:FORMat:ADELimiter <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>COMMa</b>   <b>COLOn</b>   <b>SEMIcolon</b> . Default is <b>COMMa</b> .
<b>Description</b>	Selects the delimiter to be used to separate parameters on commands and single measurement result values. <b>COMMa</b> stands for commas (default), <b>COLOn</b> sets the delimiter to be a colon (:), while <b>SEMIcolon</b> will use and expect a semicolon (;) to be used.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:FORM:ADEL</b> Defines the comma to be used as delimiter for both commands and measurement results.

**:FORMat:RESolution**

<b>Syntax</b>	:FORMat:RESolution <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <int1> is 0, the maximum is 20. The default value is 6.
<b>Description</b>	Defines the number of digits after the decimal point to be used for floating point real numbers.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:FORM:RES 0</b> Defines that there will be no digits after the decimal point.

## CONFigure subsystem

This subsystem incorporates all changeable network parameters of all systems implemented. The key commands are as follows:

<b>CONFigure:CSYSstem</b>	Selects the communications system to work with.
<b>CONFigure:&lt;SystemOption&gt;:...</b>	These commands select parameters within a communications system.
<b>CONFigure:&lt;SystemOption&gt;:BS: ... or CONFigure:&lt;SystemOption&gt; :NB:...</b>	These are the commands to set specific system parameters like the base station's RF output power level or its identity.
<b>CONFigure:&lt;SystemOption&gt; :MSTation:... or CONFigure:&lt;SystemOption&gt; :UE:...</b>	The mobile-specific information is handed over to the 3100 using these commands. One example is the power level.
<b>CONFigure:&lt;SystemOption&gt;:... :GROup:...</b>	With the help of these commands, groups of measurements may be defined.
<b>CONFigure:COUPloss:...</b>	These commands provide access to the coupling loss compensation feature of the 3100.

### NOTE

Always select the communication system via the `:Configure:CSYSstem` command first before you change any parameters using different SCPI commands.

### General commands `:CONFigure:CSYSstem`

<b>Syntax</b>	<code>:CONFigure:CSYSstem &lt;PredefExp&gt;</code>
<b>Parameters</b>	<p><b>PredefExp</b> is one of the following predefined expressions:</p> <p>NONE   GSM   GPRS   EGPRS   WCDma   TDSCdma   AMPS   CDMA   EVDO   GENana   GPGenana   EGPGenana   WCGenana   TDGenana   AMGenana   CDGenana   EVGenana .</p> <p>Default is NONE .</p>



<b>Description</b>	<p>Selects the type of communication system to be used.</p> <p><b>NONE</b> means that there is no system loaded and that there will be no basic generator or analyzer functionality available. This parameter may be used to cancel all RF radiation from the Willtek 3100.</p> <p><b>GENana</b> will make the Willtek 3100 work as a generator and analyzer for circuit-switched GSM signals.</p> <p><b>GSM</b> will set up the Willtek 3100 as a test set for circuit-switched GSM systems. All tests performed with this setting require a call setup. Therefore, this test mode is called the 'call mode'.</p> <p><b>GPGenana</b> will make the Willtek 3100 work as an asynchronous generator and analyzer for all kinds of GSM signals (circuit-switched signals in single or multislot mode as well as packet-data channels (PDTCH in GPRS)).</p> <p><b>GPRS</b> will bring the Willtek 3100 into call mode for standard GSM and GPRS systems. This means that this parameter will enable testing of all kinds of GSM signals (circuit-switched signals in single or multislot mode as well as packet-data channels (GPRS)).</p> <p><b>EGPGenana</b> calls up the asynchronous mode of EGPRS with signal generation and measurements of GMSK and 8-PSK signals.</p> <p><b>EGPRS</b> switches the 3100 into EDGE call mode, allowing call setup procedures.</p> <p><b>WCGenana</b> activates the asynchronous (generator and analyzer) mode of WCDMA. <b>WCDMA</b> sets up the 3100 for the call mode of Wideband CDMA.</p> <p><b>AMGenana</b> enables generator and analyzer operation for AMPS signals. <b>AMPS</b> switches the 3100 into call mode for analog AMPS operation.</p> <p><b>CDGenana</b> sets up the 3100 for generator and analyzer mode of CDMA2000. <b>CDMA</b> will bring the 3100 into call mode operation for CDMA2000.</p> <p><b>EVGenana</b> will set up the Willtek 3100 to work as an asynchronous generator and analyzer for all kinds of 1xEV-DO signals. The generator may be utilized for tuning an access terminal, while the analyzer may be used for modulation quality and power measurements of the access terminal's transmitter.</p> <p><b>EVDO</b> will make the Willtek 3100 to simulate a 1xEV-DO base station. The mobile will then be allowed to perform a session open and a data connection. Once in the connection mode, the user may perform transmitter and receiver tests on the access terminal.</p> <p><b>Note:</b> Please keep in mind that you have to select the communication system first when working with SCPI, as the default of this command is <b>NONE</b>.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.</p>
<b>Example</b>	<pre><b>:CONFigure:CSYSTEM GSM</b> <b>:CONF:CSYS?</b> Value returned: <b>"GSM"</b>.</pre>

**GSM commands**     **:CONFigure:GSM:TYPE**

<b>Syntax</b>	<b>:CONFigure:GSM:TYPE</b> <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>GSM9001800</b>   <b>GSM9001900</b> . Default is <b>GSM9001800</b> .

<b>Description</b>	<p>Selects the type of GSM system to be used after the Willtek 3100 was brought into GSM call mode.</p> <p><b>GSM9001800</b> will make the Willtek 3100 work as a test set for the GSM system types GSM 900 and GSM 1800.</p> <p><b>GSM9001900</b> will set up the Willtek 3100 as a test set for the GSM system types GSM 900 and GSM 1900.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- This command will have no effect when the Willtek 3100 is in generator/analyzer mode.</li> <li>- The main reason for this command to exist is the 'double numbering' of channels. GSM 1800 and GSM 1900 use the same channel numbers above channel number 511, but the related physical channels are in different frequency bands.</li> </ul>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<pre><b>:CONFigure:GSM:TYPE GSM9001900</b> <b>:CONF:GSM:TYPE?</b> Value returned: "<b>GSM9001900</b>".</pre>

**:CONFigure:GSM:ASSAll**

<b>Syntax</b>	<b>:CONFigure:GSM:ASSAll</b> <int1>,<int2>
<b>Parameters</b>	<p><b>int1</b> and <b>int2</b> are two integers.</p> <p>The minimum value for <b>int1</b> is 0, the maximum value is 1023. The default value for <b>int1</b> is 45.</p> <p>The minimum value for <b>int2</b> is 0, the maximum value is 31. The default value for <b>int2</b> is 10.</p>
<b>Description</b>	<p>This command changes the TCH (traffic channel) number and the mobile's power control level in one assignment.</p> <p><b>int1</b> is the new TCH channel number and <b>int2</b> is the MS power control level.</p> <p><b>Note:</b> The RF power control level is a code. The corresponding RF output power of the mobile under test depends on the type of GSM system and the frequency range.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain two integers. The first one expresses the TCH number and the second one the MS power control level.
<b>Example</b>	<pre><b>:CONFigure:GSM:ASAll 45,10</b> <b>:CONF:GSM:ASA?</b> Value returned: "<b>45,10</b>".</pre>

**:CONFigure:GSM:BS:LEVel**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:LEVel</b> <real1>
<b>Parameters</b>	<p><b>real1</b> is a floating point real number.</p> <p>The minimum value for <b>real1</b> is -120.0, the maximum value -10.0. The minimum resolution possible for <b>real1</b> is 0.1. The default value for <b>real1</b> is -60.0.</p>
<b>Description</b>	This command sets the RF output power level of the Willtek 3100 (i.e. the simulated base station). The physical dimension of <b>real1</b> is dBm.
<b>Query</b>	The query form of this command will return the current RF output power setting of the Willtek 3100. The string delivered back will contain one real number.

**Example**        **:CONFigure:GSM:BS:LEVel -50.5**  
                   **:CONF:GSM:BS:LEV?**  
 Value returned: **"-50.5"**.

**:CONFigure:GSM:BS:CMODE**

**Syntax**        **:CONFigure:GSM:BS:CMODE <PredefExp>**

**Parameters**    **PredefExp** is one of the following predefined expressions: **FACCh | SDCCh.**

**Description**    sets the mode of call setup to FACCH or SDCCH

**Query**         Returns the mode of call setup

**Example**        **:CONFigure:GSM:BS:CMODE FACCh**  
                   **:CONFigure:GSM:BS:CMODE?**  
 Value returned: **"FACCh"**.

**:CONFigure:GSM:BS:LAI:MCC**

**Syntax**        **:CONFigure:GSM:BS:LAI:MCC <int1>**

**Parameters**    **int1** is an integer.  
 The minimum value for **int1** is 0, the maximum value is 1000. The default value for **int1** is 1.

**Description**    This command sets the mobile country code. More details regarding the MCC can be found in section Basic System Parameters.

**Query**         The query form of this command will return the current setting. The string delivered back will contain one integer.

**Example**        **:CONFigure:GSM:BS:LAI:MCC 238**  
                   **:CONF:GSM:BS:LAI:MCC?**  
 Value returned: **"238"**.

**:CONFigure:GSM:BS:LAI:MNC[:DATA]**

**Syntax**        **:CONFigure:GSM:BS:LAI:MNC[:DATA] <int1>**

**Parameters**    **int1** is an integer.  
 The minimum value for **int1** is 0, the maximum value is 99 for a two-digit MNC and 999 for a three-digit MNC; see command **:CONF:GSM:BS:LAI:MNC:FORMat**. The default value for **int1** is 1.

**Description**    This command sets the mobile network code. More details regarding the MNC can be found in section Basic System Parameters.

**Query**         The query form of this command will return the current setting. The string delivered back will contain one integer.

**Example**        **:CONFigure:GSM:BS:LAI:MNC 20**  
                   **:CONF:GSM:BS:LAI:MNC?**  
 Value returned: **"20"**.

**:CONFigure:GSM:BS:LAI:MNC:FORM**

<b>Syntax</b>	:CONFigure:GSM:BS:LAI:MNC:FORM <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>TWODigits</b>   <b>THREEdigits</b> . Default is <b>TWODigits</b> .
<b>Description</b>	This command sets the format of the mobile network code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<b>:CONFigure:GSM:BS:LAI:MNC:FORM THREE</b> <b>:CONF:GSM:BS:LAI:MNC:FORM?</b> Value returned: <b>"THRE"</b> .

**:CONFigure:GSM:BS:LAI:LAC**

<b>Syntax</b>	:CONFigure:GSM:BS:LAI:LAC <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 65535. The default value for <b>int1</b> is 1.
<b>Description</b>	This command sets the location area code. For details, please refer to section Basic System Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:LAI:LAC 17399</b> <b>:CONF:GSM:BS:LAI:LAC?</b> Value returned: <b>"17399"</b> .

**:CONFigure:GSM:BS:NCC**

<b>Syntax</b>	:CONFigure:GSM:BS:NCC <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 7. The default value for <b>int1</b> is 2.
<b>Description</b>	This command sets the network color code. For details, please refer to section Basic System Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:NCC 2</b> <b>:CONF:GSM:BS:NCC?</b> Value returned: <b>"2"</b> .

**:CONFigure:GSM:BS:BCC**

<b>Syntax</b>	:CONFigure:GSM:BS:BCC <int1>
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<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 7. The default value for <b>int1</b> is 0.
<b>Description</b>	This command sets the base station color code. For details, please refer to section Basic System Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:BCC 1</b> <b>:CONF:GSM:BS:BCC?</b> Value returned: "1".

**:CONFigure:GSM:BS:PUIT**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:PUIT &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 255. The default value for <b>int1</b> is 0.
<b>Description</b>	This command sets the periodic updating interval timer T3212. For details, please refer to section Basic System Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:PUIT 1</b> <b>:CONF:GSM:BS:PUIT?</b> Value returned in this example: "1".

**:CONFigure:GSM:BS:BCH:ARFCn**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:BCH:ARFCn &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 1023. The default value for <b>int1</b> is 63.
<b>Description</b>	This command sets the channel number for the Willtek 3100 base channel (BCCH). For details, please refer to section Test Parameters. <b>Note:</b> The base channel is sometimes also referred to as the 'channel number of the main carrier'.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:BCH:ARFCn 60</b> <b>:CONF:GSM:BS:BCH:ARFC?</b> Value returned: "60".

**:CONFigure:GSM:BS:TCH:ARFCn**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:TCH:ARFCn &lt;int1&gt;</b>
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<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 1023. The default value for <b>int1</b> is 45.
<b>Description</b>	This command sets the traffic channel (TCH) number to be used. For details, please refer to section Test Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:TCH:ARFCn 917</b> <b>:CONF:GSM:BS:TCH:ARFC?</b> Value returned: "917".

**:CONFigure:GSM:BS:TCH:TSLot**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:TCH:TSLot &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 2, the maximum value is 6. The default value for <b>int1</b> is 2.
<b>Description</b>	This command sets the time slot to be used for the traffic channel (TCH). For details, please refer to section Basic System Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:TCH:TSLot 5</b> <b>:CONF:GSM:BS:TCH:TSL?</b> Value returned: "5".

**:CONFigure:GSM:BS:TCH:TYPE**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:TCH:TYPE &lt;PredefExp&gt;</b>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>FR</b>   <b>EFR</b> . Default is <b>FR</b> .
<b>Description</b>	This command sets the type of traffic channel. <b>FR</b> stands for full rate and <b>EFR</b> for enhanced full rate. For details, please refer to section Test Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<b>:CONFigure:GSM:BS:TCH:TYPE EFR</b> <b>:CONF:GSM:BS:TCH:TYPE?</b> Value returned: "EFR".

**:CONFigure:GSM:BS:NCEL**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:NCEL1</b> <b>[int1],[int2],[int3],[int4],[int5],[int6]</b>
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<b>Parameters</b>	<b>int1</b> to <b>int6</b> are integers. The minimum value for each <b>intx</b> is 0, the maximum value is 1023. The default value for each <b>intx</b> is 0.
<b>Description</b>	This command is used to set the channel numbers for up to six neighboring cells. These channel numbers are broadcast in the system information message by the Willtek 3100. The mobile under test has to perform a MS report on those frequency channels. For details, please check with section MS Report. <b>Notes</b> <ul style="list-style-type: none"> <li>- All six integer values are optional. If the command is sent without any channel number specified, the default values (=0) will be broadcast by the Willtek 3100 in the system information message.</li> <li>- Let's assume that there was a first command sent with six channel numbers specified. After that, a second command is sent with only two channel numbers specified. Now, the Willtek 3100 will alter only the first two channel numbers and maintain all other settings (see example below for details).</li> </ul>
<b>Query</b>	The query form of this command will always return the complete set of neighboring channel numbers currently in use. The string delivered back will always contain six integers.
<b>Example</b>	<b>:CONFigure:GSM:BS:NCEL1 10,20,30,40,50,60</b> <b>:CONF:GSM:BS:NCEL 70,80</b> <b>:CONF:GSM:BS:NCEL?</b> Values returned: "70,80,30,40,50,60".

**:CONFigure:GSM:BS:CI**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:CI &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 65535. The default value for <b>int1</b> is 255.
<b>Description</b>	This command sets the cell identity parameter (i.e. the radio cell number), broadcast in the system information message. For more details on the CI, please refer to section Basic System Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:BS:CI 127</b> <b>:CONF:GSM:BS:CI?</b> Value returned: "127".

**:CONFigure:GSM:BS:CBA**

<b>Syntax</b>	<b>:CONFigure:GSM:BS:CBA &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 1. The default value for <b>int1</b> is 0.
<b>Description</b>	This command sets the cell barred access parameter. A 0 set for the CBA will allow the mobile to contact the base station, while a 1 will block the base station and the mobile under test will not be granted access.

**Query** The query form of this command will return the current setting. The string delivered back will contain one integer.

**Example** `:CONFigure:GSM:BS:CBA 1`  
`:CONF:GSM:BS:CBA?`  
Value returned: "1".

### **:CONFigure:GSM:BS:ATTach**

**Syntax** `:CONFigure:GSM:BS:ATTach <PredefExp>`

**Parameters** **PredefExp** is one of the following predefined expressions: **ON** | **OFF**.  
Default is **OFF**.

**Description** Switches the IMSI Attach/Detach flag in the System Information messages broadcast on the BCCH on or off. If ON, the mobile must register and deregister with the network simulated by the Willtek 3100 when switched on or off, respectively. This can be used to detect when the mobile is switched on and listening to the Willtek 3100 network.

**Query** The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.

**Example** `:CONFigure:GSM:BS:ATTach OFF`  
`:CONF:GSM:BS:ATT?`  
Value returned: "OFF".

### **:CONFigure:GSM:MSTAtion:DRX**

**Syntax** `:CONFigure:GSM:MSTAtion:DRX <int1>`

**Parameters** **int1** is an integer.  
The minimum value for **int1** is 0, the maximum value is 7. The default value for **int1** is 0.

**Description** This command sets the BS-PA-MFRMS parameter, broadcast in the control channel description information element. This parameter is used for discontinuous reception (DRX). For more information about DRX, please refer to section Basic System Parameters.

**Note:** The value entered here is coded according to the following scheme: the number of multiframes used is the number entered here plus 2. This means that the default value (0) will lead to a DRX period of two multiframes.

**Query** The query form of this command will return the current setting. The string delivered back will contain one integer.

**Example** `:CONFigure:GSM:MSTAtion:DRX 2`  
`:CONF:GSM:MSTA:DRX?`  
Value returned: "2", resulting in a DRX period of four multiframes.

### **:CONFigure:GSM:MSTAtion:TADVance**

**Syntax** `:CONFigure:GSM:MSTAtion:TADVance <int1>`

**Parameters** **int1** is an integer.  
The minimum value for **int1** is 0, the maximum value is 63. The default value for **int1** is 0.



<b>Description</b>	This command sets the timing advance for the mobile under test to use. The current setting of the timing advance is broadcast to the mobile in the SACCH physical header. <b>Note:</b> More details regarding the timing advance can be found in section Time Slots and Bursts.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>:CONFigure:GSM:MSTation:TADVance 12</b> <b>:CONF:GSM:MSTA:TADV?</b> Value returned: "12".

**:CONFigure:GSM:MSTation:PLEvel[:ALL]**

<b>Syntax</b>	<b>:CONFigure:GSM:MSTation:PLEvel[:ALL] &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 31. The default value for <b>int1</b> is 10.
<b>Description</b>	This command sets the mobile's power control level. <b>Notes</b> <ul style="list-style-type: none"> <li>- The RF power control level is a code. The corresponding RF output power of the mobile under test depends on the type of GSM system and the frequency range.</li> <li>- The power control level is broadcast in the SACCH physical header.</li> </ul>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<b>CONFigure:GSM:MSTation:PLEvel:ALL 17</b> <b>:CONF:GSM:MSTA:PLEV?</b> Value returned: "17".

**:CONFigure:GSM:MSTation:MODE**

<b>Syntax</b>	<b>:CONFigure:GSM:MSTation:MODE &lt;PredefExp&gt;</b>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>FACCh</b>   <b>SDCCh</b> . Default is <b>FACCh</b> .
<b>Description</b>	Defines whether the call setup takes place on <b>FACCh</b> or on <b>SDCCh</b> . <b>Note:</b> There are two standard signaling channels in GSM: SDCCH and FACCH. The FACCH is always associated with a traffic channel. However, some mobiles will only listen to signaling provided on the SDCCH. For details, please check with section Basic System Parameters.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	<b>:CONFigure:GSM:BS:CMODE FACCh</b> <b>:CONF:GSM:BS:CMOD?</b> Value returned: "FACC".

### :CONFigure:GSM:BER:LOOP

<b>Syntax</b>	:CONFigure:GSM:BER:LOOP <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>NONResidual</b>   <b>RESidual</b>   <b>FAST</b> . Default is <b>NONResidual</b> .
<b>Description</b>	This command sets the type of BER loop (inside the mobile under test) to be used for bit error measurements. <b>NONResidual</b> means that a standard bit error ratio test will be performed. This test is called <b>BER</b> on the graphical user interface of the Willtek 3100. <b>RESidual</b> will set up the test loop of a residual bit error ratio measurement. This test is called <b>RBER</b> on the graphical user interface of the Willtek 3100. <b>FAST</b> means that a fast bit error ration measurement will be performed. This test is called <b>FastBER</b> on the graphical user interface of the Willtek 3100.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	<b>:CONFigure:GSM:BER:LOOP RESidual</b> <b>:CONF:GSM:BER:LOOP?</b> Value returned: " <b>RES</b> ".

### :CONFigure:GSM:BER:BITPattern

<b>Syntax</b>	:CONFigure:GSM:BER:BITPattern <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>PRBS9</b>   <b>PRBS15</b>   <b>PRBS23</b>   <b>ALLZero</b>   <b>ALLOne</b>   <b>ONEZero</b>   <b>ZEROone</b> . Default is <b>PRBS9</b> .
<b>Description</b>	This command selects the test bit sequence to be used for the BER measurements. <b>PRBS9</b> stands for a pseudorandom bit sequence. The length of this sequence will be 511 bits ((2 to the power of 9)-1). <b>PRBS15</b> is a pseudorandom bit sequence with a length of 32767 bits. <b>PRBS23</b> is a pseudorandom bit sequence as well. The length is 8388607 bits. <b>ALLZero</b> means that all bits used for testing are 'zeros' ( <b>000...</b> ). In case, <b>ALLOne</b> is selected, all bits used for testing will be set to 'ones' ( <b>111...</b> ). <b>ONEZero</b> stands for a bit sequence starting with a 'one' and continuing with the inverted value of the current bit ( <b>10101...</b> ). <b>ZEROone</b> means a bit sequence starting with a 'zero' and continuing with the inverted value of the current bit ( <b>01010...</b> ).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	<b>:CONFigure:GSM:BER:BITPattern ALLZero</b> <b>:CONF:GSM:BER:BITP?</b> Value returned: " <b>ALLZ</b> ".

**:CONFigure:GSM:BER:COUNT**

<b>Syntax</b>	:CONFigure:GSM:BER:COUNT <long1>
<b>Parameters</b>	<b>long1</b> is a long integer number. The minimum value for <b>long1</b> is <b>2,000</b> , the maximum value is <b>1,000,000</b> . The default value for <b>long1</b> is <b>10,000</b> .
<b>Description</b>	This command sets the number of bits that shall be used for a BER measurement.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one long integer number.
<b>Example</b>	:CONFigure:GSM:BER:COUNT 100000 :CONF:GSM:BER:COUNT? Value returned: "100000".

**:CONFigure:GSM:BER:RTDelay**

<b>Syntax</b>	:CONFigure:GSM:BER:RTDelay <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is <b>0</b> , the maximum value is <b>30</b> . The default value for <b>int1</b> is <b>0</b> .
<b>Description</b>	This command allows to predefine a round trip delay in order to achieve a fast synchronization. <b>Note:</b> During BER testing, there will be a delay between the reception of the first burst of a particular voice block at the mobile and the transmission of the first burst of the same voice block (after decoding and coding) on the uplink. This delay is called the round trip delay.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GSM:BER:RTDelay 9 :CONF:GSM:BER:RTD? Value returned: "9"

**:CONFigure:GSM:SMS:MClass**

<b>Syntax</b>	:CONFigure:GSM:SMS:MClass <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is <b>0</b> , the maximum value is <b>3</b> . The default value for <b>int1</b> is <b>0</b> .
<b>Description</b>	This command allows to predefine the SMS data coding scheme message class.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GSM:SMS:MClass 1 :CONF:GSM:SMS:MCL? Value returned in this example: "1"#

**:CONFigure:GSM:MEASure:GROUP[:RFTX]**

<b>Syntax</b>	:CONFigure:GSM:MEASure:GROUP[:RFTX] <PredefExp1> , [PredefExp2], [PredefExp3], [PredefExp4] , [PredefExp5], [PredefExp6], [PredefExp7] , [PredefExp8], [PredefExp9]
<b>Parameters</b>	<b>PredefExp<sub>x</sub></b> is one of the following predefined expressions: <b>PPEAK</b>   <b>PRMS</b>   <b>FREQuency</b>   <b>LENGth</b>   <b>UTIME</b>   <b>POWER</b>   <b>TEMPlate</b>   <b>CORNER</b>   <b>FLATness</b> . Default is <b>PPEAK</b> .
<b>Description</b>	This command allows to set a user-specific sequence of RF TX tests on the Willtek 3100. The sequence has to be started with the appropriate commands of the <b>MEASure</b> subsystem ( <b>:MEAS:GSM:CONT:RFTX:GROU</b> or <b>:MEAS:GSM:ARR:RFTX:GROU</b> ). The meaning of the parameters is as follows: <b>PPEAK</b> is the peak phase error measurement, <b>PRMS</b> the root-mean square value of the phase error measurement. <b>FREQuency</b> means the frequency error of the mobile under test, <b>LENGth</b> the length of the burst in microseconds. <b>UTIME</b> stands for the timing error of the mobile under test in microseconds, taking the ordered timing advance into account. <b>POWER</b> is the mobile's RF output power level in dBm. <b>TEMPlate</b> indicates whether the power/time template has been violated by a burst or not. <b>CORNER</b> gives the RF power level in dBm at eight predefined positions of a burst (see section Corner Points for details). <b>FLATness</b> gives an indication whether the mobile's RF output power is constant during the useful part of the burst. <b>Notes</b> <ul style="list-style-type: none"> <li>- This command must be used with at least one parameter specified. All other parameters are optional.</li> <li>- Unless organized in this sequence, the start of a new RF TX test will always terminate the preceding one instantly. Therefore, this command is an efficient way to perform several RF TX measurements in a sequence.</li> </ul>
<b>Query</b>	The query form of this command will return the current sequence of RF TX tests to be performed by the Willtek 3100. The string delivered back will contain a maximum of nine short-form versions of the predefined expressions explained above.
<b>Example</b>	<b>:CONFigure:GSM:MEASure:GROUP:RFTX PRMS,POWER,FLATness</b> <b>:CONF:GSM:MEAS:GROU?</b> Value returned: " <b>PRMS,POW,FLAT</b> "

**:CONFigure[:GSM]:MEASure:GROUP:AFANalyser**

<b>Syntax</b>	:CONFigure[:GSM]:MEASure:GROUP:AFANalyser <PredefExp1>, [PredefExp2], [PredefExp3] , [PredefExp4], [PredefExp5], [PredefExp6]
<b>Parameters</b>	<b>PredefExp<sub>x</sub></b> is one of the following predefined expressions: <b>SINad</b>   <b>DISTor-</b> <b>tion</b>   <b>FREQuency</b>   <b>ACVPeakp</b>   <b>ACVRms</b>   <b>DCVRms</b> . Default is <b>SINad</b> .

<b>Description</b>	<p>This command allows to set a user-specific sequence of AF tests on the Willtek 3100. The sequence has to be started with the appropriate commands of the <b>MEASure</b> subsystem (<b>:MEAS:CONT:AFAN:GROU</b> or <b>:MEAS:ARR:AFAN:GROU</b>).</p> <p>The meaning of the parameters is as follows:</p> <p><b>SINad</b> is the signal to noise ratio, expressed in dB,</p> <p><b>DISTortion</b> is the distortion measurement on the third harmonic of a sine wave and expressed in %.</p> <p><b>FREQuency</b> is the measurement of the audio frequency.</p> <p><b>ACVPeakp</b> stands for an AC voltage peak-to-peak measurement, while <b>ACVRms</b> is the same measurement, but the result will be expressed as root-mean square value of the AC voltage.</p> <p><b>DCVRms</b> is used to measure ripple on DC lines (this measurement gives the root-mean square voltage of the AC component of the applied DC signal).</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- This command must be used with at least one parameter specified. All other parameters are optional.</li> <li>- Unless organized in this sequence, the start of a new AF test will always terminate the preceding one instantly. Therefore, this command is an efficient way to perform several AF measurements in a sequence.</li> <li>- Please note that any AF test command will need the audio option to be installed on your Willtek 3100.</li> </ul>
<b>Query</b>	<p>The query form of this command will return the current sequence of AF tests to be performed by the Willtek 3100. The string delivered back will contain a maximum of six predefined short-form versions of the expressions explained above.</p>
<b>Example</b>	<pre><b>:CONFigure:GSM:MEASure:GROUp:AFANalyser SINad,DISTor- tion,FREQuency :CONF:MEAS:GROU:AFAN? Value returned: "SIN,DIST,FREQ"</b></pre>

**:CONFigure:MEASure:GROUp:PSUPply**

<b>Syntax</b>	<pre><b>:CONFigure:MEASure:GROUp:PSUPply &lt;PredefExp1&gt;,[PredefExp2],[PredefExp3]</b></pre>
<b>Parameters</b>	<p><b>PredefExp<sub>x</sub></b> is one of the following predefined expressions: <b>CAVG   CPeak   PAVG</b>. Default is <b>CAVG</b>.</p>

<b>Description</b>	<p>This command allows to set a user-specific sequence of power supply tests on the Willtek 3100. The sequence has to be started with the appropriate commands of the <b>MEASure</b> subsystem (<b>:MEAS:CONT:PSUP:GROU</b> or <b>:MEAS:ARR:PSUP:GROU</b>).</p> <p>The meaning of the parameters is as follows:  <b>CAVG</b> stands for the average current drawn by the mobile, while <b>CPEak</b> is the peak current drawn by the mobile over the defined measurement period. The defined measurement period can be set using the command <b>:PSUP:MEAS:DURA</b>. Please refer to section "<a href="#">MS Power Supply subsystem</a>" on <a href="#">page 327</a> for further details.  <b>PAVG</b> is the average power requirement of the mobile under test.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- This command must be used with at least one parameter specified. All other parameters are optional.</li> <li>- Unless organized in this sequence, the start of a new power supply test will always terminate the preceding one instantly. Therefore, this command is an efficient way to perform several power supply measurements in a sequence.</li> <li>- Please note that any power supply test command will need the power supply option to be installed on your Willtek 3100 (see section Accessories for details).</li> <li>- Further details regarding the tests can be found in the "MEASure subsystem" section.</li> </ul>
<b>Query</b>	<p>The query form of this command will return the current sequence of power supply tests to be performed by the Willtek 3100. The string delivered back will contain a maximum of three short-form versions of the predefined expressions explained above.</p>
<b>Example</b>	<pre><b>:CONFigure:MEASure:GROUP:PSUPply CPEak,PAVG</b> <b>:CONF:MEAS:GROU:PSUP?</b> Value returned: <b>"CPE,PAVG"</b></pre>

**:CONFigure:GSM:MEASure:ACPM:TRANSient**

<b>Syntax</b>	<b>:CONFigure:GSM:MEASure:ACPM:TRANSient</b> <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>EDGes</b>   <b>FULL</b> . Default is <b>EDGes</b> .
<b>Description</b>	<p>Selects the time period over which the Willtek 3100 calculates the RF output spectrum due to switching transients (or ACP Transient for short).</p> <p>If <b>FULL</b> is selected, the Willtek 3100 will perform the measurement over the whole burst (including the edges); this is in line with the ETSI specifications.</p> <p>With <b>EDGes</b>, measurements are performed over the leading and trailing edges of the burst only, ignoring any spectral impact of the modulation (active part of the burst). The latter measurement takes less time and hence leads to faster measurements.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.</p>
<b>Example</b>	<pre><b>:CONF:GSM:MEASure:ACPM:TRAN FULL</b> <b>:CONF:GSM:MEASure:ACPM:TRAN?</b> In this example, the query will return the string <b>FULL</b>.</pre>

**:CONFigure:GSM:MEASure:LEVel:EXPEct**

<b>Syntax</b>	:CONFigure:GSM:MEASure:LEVel:EXPEct <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value for <b>real1</b> is <b>-16.0</b> , the maximum value <b>30.0</b> . The minimum resolution possible for <b>real1</b> is <b>0.1</b> . The default value for <b>real1</b> is <b>0.0</b> .
<b>Description</b>	this Level is expected for Fast Power Measurement (avoids delays due to gain control)
<b>Query</b>	The query form of this command will return the currently expected level for Fast Power Measurement
<b>Example</b>	:CONFigure[:GSM]:MEASure:LEVel:EXPEct 7 :CONFigure[:GSM]:MEASure:LEVel:EXPEct? Value returned: "7".

**:CONFigure:COUPloss:STATE**

<b>Syntax</b>	:CONFigure:COUPloss:STATE <PredefExp1>
<b>Parameters</b>	<b>PredefExp1</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>OFF</b> .
<b>Description</b>	This command switches the use of a coupling loss table either on or off. <b>Note:</b> Coupling loss tables are used to compensate e.g. losses in cables. For more details, please refer to section Coupling Loss.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one predefined expression as explained above.
<b>Example</b>	:CONFigure:COUPloss:STATE ON :CONF:COUP:STAT? Value returned: "ON"

**:CONFigure:COUPloss:NAME**

<b>Syntax</b>	:CONFigure:COUPloss:NAME <string1>
<b>Parameters</b>	<b>string1</b> is as string giving the complete file name (and directory) of the coupling loss file to be loaded. The maximum length of <b>string1</b> is 50 characters. The default for <b>string1</b> is <b>"example.cpl"</b> .
<b>Description</b>	This command loads the coupling loss description file, specified with the command's parameter. Please note that the data contained in the file need to be activated (using the <b>CONF:COUP:STAT ON</b> command described above) before the data contained in the file specified will have any effect on the measurement results. For more details, please refer to section "Coupling Loss".
<b>Query</b>	The query form of this command will return the name of the currently loaded coupling loss description file. The string delivered back will contain the full file name.
<b>Example</b>	:CONFigure:COUPloss:NAME "m7389.cpl" :CONF:COUP:NAME? Value returned: "m7389.cpl"

**:CONFigure:COUPloss:INFormation?**

<b>Syntax</b>	:CONFigure:COUPloss:INFormation?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command is used to read out the comments saved with the coupling loss description file currently loaded. <b>Note:</b> There is only a query form of this command available.
<b>Query</b>	The query form of this command will return the comments saved with the coupling loss description. The string delivered back will contain a maximum of 255 characters.
<b>Example</b>	:CONFigure:COUPloss:INFormation? Value returned: "Motorola P7389 with Antenna Coupler"

**:CONFigure:COUPloss:DATA**

<b>Syntax</b>	:CONFigure:COUPloss:DATA <string1> ,<realf1>,<reala1>,<realf2>,<reala2> [,realf3] [,reala3] [,realf4] [,reala4] [,realf5] [,reala5] [,realf6] [,reala6] [,realf7] [,reala7] [,realf8] [,reala8] [,realf9] [,reala9] [,realf10] [,reala10] [,realf11] [,reala11] [,realf12] [,reala12] [,realf13] [,reala13] [,realf14] [,reala14] [,realf15] [,reala15] [,realf16] [,reala16] [,realf17] [,reala17] [,realf18] [,reala18] [,realf19] [,reala19] [,realf20] [,reala20]
<b>Parameters</b>	<b>string1</b> is the file name of the coupling loss data stored in directory /rapid/cpl. The maximum length of <b>string1</b> is 255 characters. <b>realfx</b> are floating point real numbers, giving frequencies in MHz while <b>realax</b> are floating point real numbers, giving the corresponding coupling loss in dB. All <b>realfx</b> have to be within two frequency ranges. The lower frequency range is from 800.0 MHz to 1000.0 MHz; the higher frequency range is from 1700.0 MHz to 2000.0 MHz. The minimum resolution for all <b>realfx</b> values is 10 Hz (0.00001 MHz). The default value for all <b>realfx</b> is 800.0 MHz. The minimum value for all <b>realax</b> is -5.0 dB. The maximum value for all <b>realax</b> is 40.0 dB. The minimum resolution for all <b>realax</b> is 0.01 dB. The default value for all <b>realax</b> is 0.0.
	<b>Notes</b> - Please keep in mind that at least one pair of values for a frequency and the related attenuation must be specified per frequency range, while all other 18 pairs are optional. - All <b>realax</b> values are interpreted as an attenuation level in dB. As a consequence, negative values mean an amplification of the input signal.
<b>Description</b>	With the help of this command, you may create a coupling loss description table, similar to how you would do it on the graphical user interface of the Willtek 3100.
<b>Query</b>	The query form of this command returns the coupling loss values of the current setting.
<b>Example</b>	:CONFigure:COUPloss:DATA "Motorola7389.cpl",825.0,15.0,1750.0,19.0 :CONF:COUP:DATA? Value returned: 825.0,15.0,1750.0,19.0



**:CONFigure:ESYNc**

<b>Syntax</b>	:CONFigure:ESYNc?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form will return the status of the current external synchronization. The string delivered back will contain one of the following expressions: NONE   MHZ5   MHZ10   MHZ13.
<b>Example</b>	:CONFigure:ESYNc? Value returned for example: "MHZ10". In this example, the 3100 frequency reference is synchronized to an external 10 MHz clock signal fed into the EXT SYNC connector on the rear panel.

**GSM/GPRS commands**    **:CONFigure:GPRS:ANALyzer:LEVel:EXPEct[:DATA]**

<b>Syntax</b>	:CONFigure:GPRS:ANALyzer:LEVel:EXPEct[:DATA] <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is -10, the maximum value is 30. The default value for int1 is 10.
<b>Description</b>	Sets the RF power level at which the mobile under test is going to transmit. The physical dimension of int1 is dBm. <b>Note:</b> Specifying an expected power level in analyzer mode speeds up testing as it avoids or shortens auto ranging and auto triggering procedures.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:ANALyzer:LEVel:EXPEct[:DATA] 20 :CONF:GPRS:ANAL:LEV:EXP? Value returned: "20". This means that the Willtek 3100 will expect the mobile to send its data at an RF power level of 20 dBm.

**:CONFigure:GPRS:ANALyzer:LEVel:EXPEct:MODE**

<b>Syntax</b>	:CONFigure:GPRS:ANALyzer:LEVel:EXPEct:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the use of the 'expected level feature' on or off. Please refer to the description of the :CONF:GPRS:ANAL:LEV:EXP command above for details.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:GPRS:ANALyzer:LEVel:EXPEct:MODE ON :CONF:GPRS:ANAL:Lev:EXP:MODE? Value returned: "ON".

**:CONFigure:GPRS:BS:RCL**

<b>Syntax</b>	:CONFigure:GPRS:BS:RCL <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 1, the maximum value is 7. The default value for int1 is 1.
<b>Description</b>	This command sets the routing area color code. This code is used to indicate to the mobile that adjacent cells belong to different routing areas. This parameter is broadcast by the Willtek 3100 in the SI3 and SI4 rest octets.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:RCL 3 :CONF:GPRS:BS:RCL? Value returned: " 3 "

**:CONFigure:GPRS:BS:RCO**

<b>Syntax</b>	:CONFigure:GPRS:BS:RCO <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 255. The default value for int1 is 0.
<b>Description</b>	This command sets the routing area code. This code is used to indicate the routing area, the base station belongs to. This parameter is broadcast by the Willtek 3100 in the SI13 rest octets.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:RCO 124 :CONF:GPRS:BS:RCO? Value returned: "124 "

**:CONFigure:GPRS:BS:ALPHA**

<b>Syntax</b>	:CONFigure:GPRS:BS:ALPHA <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 15. The default value for int1 is 0.
<b>Description</b>	This command sets the alpha factor in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information). The alpha factor is one of the GPRS power control parameters. It is required by the mobile to calculate the uplink power level it has to use on a PDCH (packed data channel). The alpha factor is broadcast by the Willtek 3100 in the SI13 rest octets.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.

<b>Example</b>	<pre>:CONFigure:GPRS:BS:ALPHa 10 :CONF:GPRS:BS:ALPH? Value returned: "10"</pre>
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### **:CONFigure:GPRS:BS:RLCMac:USF**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:RLCMac:USF &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 7. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>This command sets the uplink state flag (USF) in (asynchronous) generator/analyzer mode (please refer to the description of the <code>:CONF:CSYS:GPG</code> command for further information).</p> <p>The USF is used to either assign a block to a particular mobile (one out of seven possible) or to mark it as unassigned. All time slots will use the same USF. The USF is part of the MAC header on the PDTCH.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<pre>:CONFigure:GPRS:BS:RLCMac:USF 0 :CONF:GPRS:BS:RLCM:USF? Value returned: "0"</pre>

### **:CONFigure:GPRS:BS:RLCMac:USF:INC**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:RLCMac:USF:INC &lt;PredefExp&gt;</code>
<b>Parameters</b>	<p><code>PredefExp</code> is one of the following predefined expressions: ON   OFF. Default is ON.</p>
<b>Description</b>	<p>Switches the auto-incrementing of the USF either on or off. For further details regarding the USF, please refer to the description of the <code>:CONFigure:GPRS:BS:RLCMac:USF</code> command above.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	<pre>:CONFigure:GPRS:BS:RLCMac:USF:INC OFF :CONF:GPRS:BS:RLCM:USF:INC? Value returned: "OFF".</pre>

### **:CONFigure:GPRS:BS:RLCMac:RRBP[:DATA]**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:RLCMac:RRBP[:DATA] &lt;PredefExp1&gt;</code>
<b>Parameters</b>	<p><code>PredefExp1</code> is one of the following predefined expressions: N13   N17   N21   26. Default is N13.</p>
<b>Description</b>	<p>This command sets the relative reserved block period (RRBP) in (asynchronous) generator/analyzer mode (please refer to the description of the <code>:CONF:CSYS:GPG</code> command for further information).</p> <p>The RRBP marks the block to which the USF parameter corresponds, in relation to the block currently used.</p>

<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:GPRS:BS:RLCMac:RRBP:DATA N21 :CONF:GPRS:BS:RLCM:RRBP? Value returned: "N21 "

**:CONFigure:GPRS:BS:RLCMac:RRBP:MODE**

<b>Syntax</b>	:CONFigure:GPRS:BS:RLCMac:RRBP:MODE <PredefExp1>
<b>Parameters</b>	PredefExp1 is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command indicates whether the value specified for the relative reserved block period (RRBP) shall be used by the mobile (ON) or not (OFF) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:GPRS:BS:RLCMac:RRBP:MODE OFF :CONF:GPRS:BS:RLCM:RRBP:MODE? Value returned: "OFF "

**:CONFigure:GPRS:BS:RLCMac:PR**

<b>Syntax</b>	:CONFigure:GPRS:BS:RLCMac:PR <PredefExp1>
<b>Parameters</b>	PredefExp1 is one of the following predefined expressions: RNG6   RNG14   RNG22   RNG30. Default is RNG6.
<b>Description</b>	This command specifies the power reduction (PR) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information). The power reduction the reduction in RF power (in dB) from the BCCH to the PDCH in downlink. PredefExp1 indicates the range of the power reduction: RNG6 stands for a power reduction of 0...6 dB, RNG 14 indicates a power reduction of 8...14 dB, RNG22 stands for a power reduction of 16...22 dB, while RNG30 indicates a power reduction of 24...30 dB.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:GPRS:BS:RLCMac:RRBP:PR RNG6 :CONF:GPRS:BS:RLCM:RRBP:PR? Value returned: "RNG6 "

**:CONFigure:GPRS:BS:RLCMac:TFI**

<b>Syntax</b>	:CONFigure:GPRS:BS:RLCMac:TFI <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 31. The default value for int1 is 0.
<b>Description</b>	This command sets the temporary flow identifier (TFI) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:RLCMac:TFI 15 :CONF:GPRS:BS:RLCM:TFI? Value returned: "15"

**:CONFigure:GPRS:BS:RLCMac:BSN[:DATA]**

<b>Syntax</b>	:CONFigure:GPRS:BS:RLCMac:BSN[:DATA] <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 127. The default value for int1 is 0.
<b>Description</b>	This command sets the block sequence number (BSN) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information). The BSN is the absolute block sequence number modulo 128 of each RLC data block within the TBF. It is used to enumerate the RLC data blocks, starting with 1.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:RLCMac:BSN:DATA 1 :CONF:GPRS:BS:RLCM:BSN? Value returned: "1"

**:CONFigure:GPRS:BS:RLCMac:BSN:INC**

<b>Syntax</b>	:CONFigure:GPRS:BS:RLCMac:BSN:INC <PredefExp1>
<b>Parameters</b>	PredefExp1 is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the auto-increment of the block sequence number either on (ON) or off (OFF) as long as the Willtek 3100 is working in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:GPRS:BS:RLCMac:BSN:INC OFF :CONF:GPRS:BS:RLCM:BSN:INC? Value returned: "OFF"

### :CONFigure:GPRS:BS:ATTach

<b>Syntax</b>	:CONFigure:GPRS:BS:ATTach <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the IMSI Attach/Detach flag in the System Information messages broadcast on the BCCH on or off. If ON, the mobile must register and deregister with the network simulated by the Willtek 3100 when switched on or off, respectively. This can be used to detect when the mobile is switched on and listening to the Willtek 3100 network.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	:CONFigure:GPRS:BS:ATTach OFF :CONF:GPRS:BS:ATT? Value returned: "OFF".

### :CONFigure:GPRS:BS:MSTation:MSLot

<b>Syntax</b>	:CONFigure:GPRS:BS:MSTation:MSLot <int1>
<b>Parameters</b>	int1 is an integer parameter. The minimum value for int1 is 1, the maximum value is 4. The default value for int1 is 1.
<b>Description</b>	This command either sets the number of UL time slots expected by the Willtek 3100 (asynchronous mode) or the number of UL time slots that the mobile under test is commanded to use (synchronous mode) during multislot testing.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:MSTation:MSLot 4 :CONF:GPRS:BS:MSTA:MSL? Value returned: "4".

### :CONFigure:GPRS:BS:BCC

<b>Syntax</b>	:CONFigure:GPRS:BS:BCC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 7. The default value for int1 is 0.
<b>Description</b>	This command sets the base station color code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:BCC 1 :CONF:GPRS:BS:BCC? Value returned: "1".

**:CONFigure:GPRS:BS:BCH:ARFCn**

<b>Syntax</b>	:CONFigure:GPRS:BS:BCH:ARFCn <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1023. The default value for int1 is 63.
<b>Description</b>	This command sets the channel number for the Willtek 3100's base channel (BCCH). <b>Note:</b> The base channel is sometimes also referred to as the 'channel number of the main carrier'.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:BCH:ARFCn 60 :CONF:GPRS:BS:BCH:ARFC? Value returned: "60".

**:CONFigure:GPRS:BS:CBA**

<b>Syntax</b>	:CONFigure:GPRS:BS:CBA <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1. The default value for int1 is 0.
<b>Description</b>	This command sets the cell barred access parameter. A 0 set for the CBA will allow the mobile to contact the base station, while a 1 will block the base station and the mobile under test will not be granted access.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:CBA 1 :CONF:GPRS:BS:CBA? Value returned: "1".

**:CONFigure:GPRS:BS:CI**

<b>Syntax</b>	:CONFigure:GPRS:BS:CI <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 65535. The default value for int1 is 255.
<b>Description</b>	This command sets the cell identity parameter (i.e. the radio cell number), broadcast in the system information message.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:CI 127 :CONF:GPRS:BS:CI? Value returned: "127".

**:CONFigure:GPRS:BS:LAI:MCC**

<b>Syntax</b>	:CONFigure:GPRS:BS:LAI:MCC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1000. The default value for int1 is 1.
<b>Description</b>	This command sets the mobile country code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:LAI:MCC 238 :CONF:GPRS:BS:LAI:MCC? Value returned: "238".

**:CONFigure:GPRS:BS:LAI:MNC**

<b>Syntax</b>	:CONFigure:GPRS:BS:LAI:MNC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 99 for a two-digit MNC and 999 for a three-digit MNC; see command :CONF:GSM:BS:LAI:MNC:FORMat. The default value for int1 is 1.
<b>Description</b>	This command sets the mobile network code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:LAI:MNC 20 :CONF:GPRS:BS:LAI:MNC? Value returned: "20".

**:CONFigure:GPRS:BS:LAI:MNC:FORMat**

<b>Syntax</b>	:CONFigure:GPRS:BS:LAI:MNC:FORMat <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: TWODigits THREEdigits. Default is TWODigits.
<b>Description</b>	This command sets the format of the mobile network code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	:CONFigure:GPRS:BS:LAI:MNC:FORMat THRE :CONF:GPRS:BS:LAI:MNC:FORM? Value returned: "THRE".

**:CONFigure:GPRS:BS:LAI:LAC**

<b>Syntax</b>	:CONFigure:GPRS:BS:LAI:LAC <int1>
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<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 65535. The default value for <code>int1</code> is 1.
<b>Description</b>	This command sets the location area code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:CONFigure:GPRS:BS:LAI:LAC 17399</code> <code>:CONF:GPRS:BS:LAI:LAC?</code> Value returned: "17399".

**:CONFigure:GPRS:BS:LEVel**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:LEVel &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is -120.0, the maximum value is -10.0. The resolution of <code>real1</code> is 0.1. The default value for <code>real1</code> is -60.0.
<b>Description</b>	Sets the (standard) output level of the Willtek 3100. If individual levels are selected for GPRS tests, this level is used on the base channel. Applies to GSM/GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one real number.
<b>Example</b>	<code>:CONFigure:GPRS:BS:LEVel -100.0</code> <code>:CONF:GPRS:BS:LEVel?</code> Value returned: "-100.0".

**:CONFigure:GPRS:BS:MSLot[:DATA]**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:MSLot[:DATA] &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer parameter. The minimum value for <code>int1</code> is 1, the maximum value is 2. The default value for <code>int1</code> is 1.
<b>Description</b>	Sets the number of PDTCH channels (slots) to be sent in the downlink. Applies to GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:CONFigure:GPRS:BS:MSLot[:DATA] 1</code> <code>:CONF:GPRS:BS:MSLot[:DATA]?</code> Value returned: "1".

**:CONFigure:GPRS:BS:MSLot:LEVel[:DATA]**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:MSLot:LEVel[:DATA] &lt;real1&gt;, &lt;real2&gt;, &lt;real3&gt;, &lt;real4&gt;</code>
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<b>Parameters</b>	<code>real1</code> to <code>real4</code> are floating point real numbers. The minimum value for each <code>realx</code> is <code>-120.0</code> , the maximum value is <code>-10.0</code> . The resolution of each <code>realx</code> is <code>0.1</code> . The default value for each <code>realx</code> is <code>-60.0</code> .
<b>Description</b>	Sets individual downlink slot levels for active (PDTCH) slots in Multislot GPRS operation (BCH remains at the level set by <code>CONFigure:GPRS:BS:LEVel</code> . Applies to GPRS synchronous test mode. Data are used only if <code>CONFigure:GPRS:BS:MSLot:LEVel:MODE</code> is set to <code>INDL</code> .
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain four real numbers.
<b>Example</b>	<pre>:CONFigure:GPRS:BS:MSLot:LEVel:DATA -80.0,-20.5,-60.0,-60.0 :CONF:GPRS:BS:MSL:LEV:DATA? Values returned: "-80.0,-20.5,-60.0,-60.0".</pre>

**:CONFigure:GPRS:BS:MSLot:LEVel:MODE**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:MSLot:LEVel:MODE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>INDLev</code>   <code>STDLev</code> . Default is <code>INDLev</code> .
<b>Description</b>	Selects between individual slot levels and standard slot level for PDTCHs. If <code>STDLev</code> is selected, the Willtek 3100 transmits at the level selected by <code>CONFigure:GPRS:BS:LEVel</code> . If <code>INDLev</code> is selected, the Willtek 3100 uses the power levels selected with <code>CONFigure:GPRS:BS:MSLot:LEVel</code> for the up to four used time slots; time slot 0 is transmitted at the level selected by <code>CONFigure:GPRS:BS:LEVel</code> , and the level selected by <code>CONFigure:GPRS:BS:MSLot:UNUSed</code> for the other slots.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<pre>:CONFigure:GPRS:BS:MSLot:LEVel:MODE INDLev :CONF:GPRS:BS:MSL:LEV:MODE? Value returned: "INDLev".</pre>

**:CONFigure:GPRS:BS:MSLot:LEVel:UNUSed**

<b>Syntax</b>	<code>:CONFigure:GPRS:BS:MSLot:LEVel:UNUSed &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>-120.0</code> , the maximum value is <code>-10.0</code> . The resolution of <code>real1</code> is <code>0.1</code> . The default value for <code>real1</code> is <code>-60.0</code> .
<b>Description</b>	Sets the power level that the Willtek 3100 transmits in the unused time slots in packet data mode (i.e. except in time slot 0 and the assigned PDCH slots). Applies to GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one real number.
<b>Example</b>	<pre>:CONFigure:GPRS:BS:MSLot:LEVel:UNUSed -60.0 :CONF:GPRS:BS:MSL:LEV:UNUS? Value returned: "-60.0".</pre>

**:CONFigure:GPRS:BS:NCC**

<b>Syntax</b>	:CONFigure:GPRS:BS:NCC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 7. The default value for int1 is 2.
<b>Description</b>	This command sets the network color code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:NCC 2 :CONF:GPRS:BS:NCC? Value returned: "2".

**:CONFigure:GPRS:BS:NCEL**

<b>Syntax</b>	:CONFigure:GPRS:BS:NCELL [int1],[int2],[int3],[int4],[int5],[int6]
<b>Parameters</b>	int1 to int6 are integers. The minimum value for each intx is 0, the maximum value is 1023. The default value for each intx is 0.
<b>Description</b>	This command is used to set the channel numbers for up to six neighboring cells. These channel numbers are broadcast in the system information message by the Willtek 3100. The mobile under test has to perform a MS report on those frequency channels. <b>Notes:</b> All six integer values are optional. If the command is sent without any channel number specified, the default values (=0) will be broadcast by the Willtek 3100 in the system information message. Let's assume that there was a first command sent with six channel numbers specified. After that, a second command is sent with only two channel numbers specified. Now, the Willtek 3100 will alter only the first two channel numbers and maintain all other settings (see example below for details).
<b>Query</b>	The query form of this command will always return the complete set of neighboring channel numbers currently in use. The string delivered back will always contain six integers.
<b>Example</b>	:CONFigure:GPRS:BS:NCELL 10,20,30,40,50,60 :CONF:GPRS:BS:NCEL 70,80 :CONF:GPRS:BS:NCEL? Values returned: "70,80,30,40,50,60".

**:CONFigure:GPRS:BS:ORIGinate**

<b>Syntax</b>	:CONFigure:GPRS:BS:ORIGinate <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ONRequest   ONLocation. Default is ONRequest.

<b>Description</b>	In GSM/GPRS, a TCH can be assigned either on request or as soon as the mobile has been registered (= immediately after a location update). ONRequest will assign a TCH only when either the mobile under test or the Willtek 3100 initializes a call. ONLOcation will assign a TCH as soon as the registration has been completed.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version one of the predefined expressions as explained above.
<b>Example</b>	:CONFigure:GPRS:BS:ORIGinate ONLOcation :CONF:GPRS:BS:ORIG? Value returned: "ONLO".

**:CONFigure:GPRS:BS:PDTCh:ARFCn**

<b>Syntax</b>	:CONFigure:GPRS:BS:PDTCh:ARFCn <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1023. The default value for int1 is 2.
<b>Description</b>	This command sets the frequency channel number of the simulated packet data traffic channel.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:PDTCh 2 :CONF:GPRS:BS:PDTCh? Value returned: "2".

**:CONFigure:GPRS:BS:TCH:ARFCn**

<b>Syntax</b>	:CONFigure:GPRS:BS:TCH:ARFCn <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1023. The default value for int1 is 45.
<b>Description</b>	This command sets the traffic channel (TCH) number to be used.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:TCH:ARFCn 917 :CONF:GPRS:BS:TCH:ARFC? Value returned: "917".

**:CONFigure:GPRS:BS:TCH:TSLot**

<b>Syntax</b>	:CONFigure:GPRS:BS:TCH:TSLot <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 2, the maximum value is 6. The default value for int1 is 2.

<b>Description</b>	This command sets the time slot to be used for the traffic channel (TCH) or the PDTCH.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BS:TCH:TSLot 5 :CONF:GPRS:BS:TCH:TSL? Value returned: "5".

**:CONFigure:GPRS:BS:TCH:TYPE**

<b>Syntax</b>	:CONFigure:GPRS:BS:TCH:TYPE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FR   EFR. Default is FR.
<b>Description</b>	This command sets the type of traffic channel. FR stands for full rate and EFR for enhanced full rate.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	:CONFigure:GPRS:BS:TCH:TYPE EFR :CONF:GPRS:BS:TCH:TYPE? Value returned: "EFR".

**:CONFigure:GPRS:BLER:COUNT**

<b>Syntax</b>	:CONFigure:GPRS:BLER:COUNT <int1>
<b>Parameters</b>	int1 is an integer parameter. The minimum value for int1 is 0, the maximum value is 10000. The default value for int1 is 1.
<b>Description</b>	Defines the number of samples (blocks) for each BLER measurement. Applies to BLER measurements in GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:BLER:COUNT 1 :CONF:GPRS:BLER:COUNT? Value returned: "1".

**:CONFigure:GPRS:BER:LOOP**

<b>Syntax</b>	:CONFigure:GPRS:BER:LOOP <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: NONResidual   RESidual   FAST. Default is NONResidual.

<b>Description</b>	<p>This command sets the type of BER loop (inside the mobile under test) to be used for bit error measurements.</p> <p>NONResidual means that a standard bit error ratio test will be performed. This test is called BER on the graphical user interface of the Willtek 3100.</p> <p>RESidual will set up the test loop of a residual bit error ratio measurement. This test is called RBER on the graphical user interface of the Willtek 3100.</p> <p>FAST means that a fast bit error ration measurement will be performed. This test is called FastBER on the graphical user interface of the Willtek 3100.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.</p>
<b>Example</b>	<pre>:CONFigure:GPRS:BER:LOOP RESidual :CONF:GPRS:BER:LOOP? Value returned: "RES".</pre>

**:CONFigure:GPRS:BER:BITPattern**

<b>Syntax</b>	<pre>:CONFigure:GPRS:BER:BITPattern &lt;PredefExp&gt;</pre>
<b>Parameters</b>	<p>PredefExp is one of the following predefined expressions:          PRBS9   PRBS15   PRBS23   ALLZero   ALLOne   ONEZero   ZEROone.          Default is PRBS9.</p>
<b>Description</b>	<p>This command selects the test bit sequence to be used for the BER measurements.</p> <p>PRBS9 stands for a pseudorandom bit sequence. The length of this sequence will be 511 bits ((2 to the power of 9)-1).</p> <p>PRBS15 is a pseudorandom bit sequence with a length of 32767 bits.</p> <p>PRBS23 is a pseudorandom bit sequence as well. The length is 8388607 bits.</p> <p>ALLZero means that all bits used for testing are 'zeros' (000 . . .).</p> <p>In case, ALLOne is selected, all bits used for testing will be set to 'ones' (111 . . .).</p> <p>ONEZero stands for a bit sequence starting with a 'one' and continuing with the inverted value of the current bit (10101 . . .).</p> <p>ZEROone means a bit sequence starting with a 'zero' and continuing with the inverted value of the current bit (01010 . . .).</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.</p>
<b>Example</b>	<pre>:CONFigure:GPRS:BER:BITPattern ALLZero :CONF:GPRS:BER:BITP? Value returned: "ALLZ".</pre>

**:CONFigure:GPRS:BER:COUNT**

<b>Syntax</b>	<pre>:CONFigure:GPRS:BER:COUNT &lt;long1&gt;</pre>
<b>Parameters</b>	<p>long1 is a long integer number.          The minimum value for long1 is 2,000, the maximum value is 100,000. The default value for long1 is 1,000,000.</p>
<b>Description</b>	<p>This command sets the number of bits that shall be used for a BER measurement.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain one long integer number.</p>

<b>Example</b>	<pre>:CONFigure:GPRS:BER:COUNT 100000 :CONF:GPRS:BER:COUN? Value returned: "100000".</pre>
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### **:CONFigure:GPRS:BER:RTDelay**

<b>Syntax</b>	<code>:CONFigure:GPRS:BER:RTDelay &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 30. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>This command allows to predefine a round trip delay in order to achieve a fast synchronization.</p> <p><b>Note:</b> During BER testing, there will be a delay between the reception of the first burst of a particular voice block at the mobile and the transmission of the first burst of the same voice block (after decoding and coding) on the uplink. This delay is called the round trip delay.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<pre>:CONFigure:GPRS:BER:RTDelay 9 :CONF:GPRS:BER:RTD? Value returned: "9"</pre>

### **:CONFigure:GPRS:MSTAtion:DRX**

<b>Syntax</b>	<code>:CONFigure:GPRS:MSTAtion:DRX &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 7. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>This command sets the BS-PA-MFRMS parameter, broadcast in the control channel description information element. This parameter is used for discontinuous reception (DRX).</p> <p><b>Note:</b> The value entered here is coded according to the following scheme: the number of multiframe used is the number entered here plus 2. This means that the default value (0) will lead to a DRX period of two multiframe.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<pre>:CONFigure:GPRS:MSTAtion:DRX 2 :CONF:GPRS:MSTA:DRX? Value returned: "2", resulting in a DRX period of four multiframe.</pre>

### **:CONFigure:GPRS:MSTAtion:TADVance**

<b>Syntax</b>	<code>:CONFigure:GPRS:MSTAtion:TADVance &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 63. The default value for <code>int1</code> is 0.</p>

<b>Description</b>	This command sets the timing advance for the mobile under test to use. The current setting of the timing advance is broadcast to the mobile in the SACCH physical header.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:MSTation:TADVance 12 :CONF:GPRS:MSTA:TADV? Value returned: "12".

**:CONFigure:GPRS:MSTation:PLEVel[:ALL]**

<b>Syntax</b>	CONFigure:GPRS:MSTation:PLEVel[:ALL] <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 1, the maximum value is 31. The default value for int1 is 10.
<b>Description</b>	This command sets the mobile's power control level. <b>Notes:</b> The RF power control level is a code. The corresponding RF output power of the mobile under test depends on the type of GSM system and the frequency range. The power control level is broadcast in the SACCH physical header.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:MSTation:PLEVel:ALL 17 :CONF:GPRS:MSTA:PLEV? Value returned: "17".

**:CONFigure:GPRS:MSTation:MODE**

<b>Syntax</b>	:CONFigure:GPRS:MSTation:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FACCh   SDCCh. Default is FACCh.
<b>Description</b>	Defines whether the call setup takes place on FACCh or on SDCCh. <b>Note:</b> There are two standard signaling channels in GSM: SDCCH and FACCH. The FACCH is always associated with a traffic channel. However, some mobiles will only listen to signaling provided on the SDCCH.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:GPRS:BS:CMODE FACCh :CONF:GPRS:BS:CMOD? Value returned: "FACC".

**:CONFigure:GPRS:MSTation:MSLot**

<b>Syntax</b>	:CONFigure:GPRS:MSTation:MSLot <int1>
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<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 1, the maximum value is 4. The default value for <code>int1</code> is 2.
<b>Description</b>	This command sets the number of UL time slots that the mobile under test is commanded to use during multislot testing.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:CONFigure:GPRS:MSTAtion:MSLot 4</code> <code>:CONF:GPRS:MSTA:MSL?</code> Value returned: "4".

### **:CONFigure:GPRS:MSTAtion:LOOPback**

<b>Syntax</b>	<code>:CONFigure:GPRS:MSTAtion:LOOPback &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	Selects the loopback mode. If the parameter <code>PredefExp</code> is set to ON, the mobile station will support GPRS loopback (mode B), if the parameter <code>PredefExp</code> is set to OFF, the mobile station will not support GPRS loopback (mode A).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<code>:CONFigure:GPRS:MSTAtion:LOOPback ON</code> <code>:CONF:GPRS:MSTA:LOOP?</code> Value returned: "ON".

### **:CONFigure:GPRS:MSTAtion:PSLots**

<b>Syntax</b>	<code>:CONFigure:GPRS:MSTAtion:PSLots &lt;int1&gt;, &lt;int2&gt;, &lt;int3&gt;, &lt;int4&gt;</code>
<b>Parameters</b>	<code>int1</code> to <code>int4</code> are integer parameters. The minimum value for each <code>intx</code> is -26, the maximum value is 39. The resolution of each <code>intx</code> is 2, the default value for each <code>intx</code> is 5.
<b>Description</b>	Sets the uplink power level in the range of -23 ... +39 dBm (GSM900) or -26 ... +36 dBm (upper band). Applies to GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain four integers.
<b>Example</b>	<code>:CONFigure:GPRS:MSTAtion:PSLots -10,-6,0,6</code> <code>:CONF:GPRS:MSTA:PSL?</code> Value returned: "-10,-6,0,6".

### **:CONFigure:GPRS:TYPE**

<b>Syntax</b>	<code>:CONFigure:GPRS:TYPE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: GSM9001800   GSM9001900. Default is GSM9001800.

<b>Description</b>	<p>Selects the type of GSM system to be used after the Willtek 3100 was brought into GSM call mode.</p> <p>GSM9001800 will make the Willtek 3100 work as a test set for the GSM system types GSM 900 and GSM 1800.</p> <p>GSM9001900 will set up the Willtek 3100 as a test set for the GSM system types GSM 900 and GSM 1900.</p> <p><b>Notes:</b></p> <p>This command will have no effect when the Willtek 3100 is in generator/analyzer mode.</p> <p>The main reason for this command to exist is the 'double numbering' of channels. GSM 1800 and GSM 1900 use the same channel numbers above channel number 511, but the related physical channels are in different frequency regions.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<pre>:CONFigure:GPRS:TYPE GSM9001900 :CONF:GPRS:TYPE? Value returned: "GSM9001900".</pre>

**:CONFigure:GSM:SMS:MClass**

<b>Syntax</b>	<code>:CONFigure:GSM:SMS:MClass &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 3. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	This command allows to predefine the SMS data coding scheme message class.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<pre>:CONFigure:GSM:SMS:MClass 1 :CONF:GSM:SMS:MCL? Value returned in this example: "1"#</pre>

**:CONFigure:GPRS:MEASure:GROUp[:RFTX]**

<b>Syntax</b>	<pre>:CONFigure:GPRS:MEASure:GROUp[:RFTX] &lt;PredefExp1&gt; , [PredefExp2], [PredefExp3], [PredefExp4] , [PredefExp5], [PredefExp6], [PredefExp7] , [PredefExp8], [PredefExp9]</pre>
<b>Parameters</b>	<p><code>PredefExp<sub>x</sub></code> is one of the following predefined expressions:  PPEAK   PRMS   FREQUency   LENGth   UTIMe   POWer    TEMPlate   CORNer   FLATness.  Default is PPEAK.</p>

<b>Description</b>	<p>This command allows you to set a user-specific sequence of RF TX tests on the Willtek 3100. The sequence has to be started with the appropriate commands of the MEASure subsystem (:MEAS:GPRS:CONT:RFTX:GROU or :MEAS:GPRS:ARR:RFTX:GROU).</p> <p>The meaning of the parameters is as follows:  <b>PPEAk</b> is the peak phase error measurement,  <b>PRMS</b> the root-mean square value of the phase error measurement.  <b>FREQuency</b> means the frequency error of the mobile under test,  <b>LENGTh</b> the length of the burst in microseconds.  <b>UTIME</b> stands for the timing error of the mobile under test in microseconds, taking the ordered timing advance into account.  <b>POWer</b> is the mobile's RF output power level in dBm.  <b>TEMPlate</b> indicates whether the power/time template has been violated by a burst or not.  <b>CORNER</b> gives the RF power level in dBm at eight predefined positions of a burst.  <b>FLATness</b> gives an indication whether the mobile's RF output power is constant during the useful part of the burst.</p> <p><b>Notes:</b>  This command must be used with at least one parameter specified. All other parameters are optional.  Unless organized in this sequence, the start of a new RF TX test will always terminate the preceding one instantly. Therefore, this command is an efficient way to perform several RF TX measurements in a sequence.</p>
<b>Query</b>	<p>The query form of this command will return the current sequence of RF TX tests to be performed by the Willtek 3100. The string delivered back will contain a maximum of nine short-form versions of the predefined expressions explained above.</p>
<b>Example</b>	<pre>:CONFigure:GPRS:MEASure:GROUp:RFTX PRMS , POWer , FLATness :CONF:GPRS:MEAS:GROU? Value returned: " PRMS , POW , FLAT "</pre>

**:CONFigure:GPRS:MEASure:GROUp:AFANalyser**

<b>Syntax</b>	<pre>:CONFigure:GPRS:MEASure:GROUp:AFANalyser &lt;PredefExp1&gt; , [ PredefExp2 ] , [ PredefExp3 ] , [ PredefExp4 ] , [ PredefExp5 ] , [ PredefExp6 ]</pre>
<b>Parameters</b>	<p>PredefExp<i>x</i> is one of the following predefined expressions: SINad   DISTOr-tion   FREQuency   ACVPeakp   ACVRms   DCVRms.  Default is SINad.</p>

<b>Description</b>	<p>This command allows you to set a user-specific sequence of AF tests on the Willtek 3100. The sequence has to be started with the appropriate commands of the MEASure subsystem (:MEAS:CONT:AFAN:GROU or :MEAS:ARR:AFAN:GROU).</p> <p>The meaning of the parameters is as follows:          SINad is the signal to noise ratio, expressed in dB,          DISTortion is the distortion measurement on the third harmonic of a sine wave and expressed in %.          FREQuency is the measurement of the audio frequency.          ACVPeakp stands for an AC voltage peak-to-peak measurement, while ACVRms is the same measurement, but the result will be expressed as root-mean square value of the AC voltage.          DCVRms is used to measure ripple on DC lines (this measurement gives the root-mean square voltage of the AC component of the applied DC signal).</p> <p><b>Notes:</b>          This command must be used with at least one parameter specified. All other parameters are optional.          Unless organized in this sequence, the start of a new AF test will always terminate the preceding one instantly. Therefore, this command is an efficient way to perform several AF measurements in a sequence.          Please note that any AF test command will need the audio option to be installed on the Willtek 3100.</p>
<b>Query</b>	<p>The query form of this command will return the current sequence of AF tests to be performed by the Willtek 3100. The string delivered back will contain a maximum of six predefined short-form versions of the expressions explained above.</p>
<b>Example</b>	<pre>:CONFigure:GPRS:MEASure:GROUp:AFANalyser SINad, DISTortion, FREQuency :CONF:GPRS:MEAS:GROU:AFAN? Value returned: "SIN ,DIST ,FREQ"</pre>

**:CONFigure:GPRS:MEASure:ACPM:TRANSient**

<b>Syntax</b>	<pre>:CONFigure:GPRS:MEASure:ACPM:TRANSient &lt;PredefExp&gt;</pre>
<b>Parameters</b>	<p>PredefExp is one of the following predefined expressions: EDGes   FULL.          Default is EDGes.</p>
<b>Description</b>	<p>Selects the time period over which the Willtek 3100 calculates the RF output spectrum due to switching transients (or ACP Transient for short).          If FULL is selected, the Willtek 3100 will perform the measurement over the whole burst (including the edges); this is in line with the ETSI specifications.          With EDGes, measurements are performed over the leading and trailing edges of the burst only, ignoring any spectral impact of the modulation (active part of the burst). The latter measurement takes less time and hence leads to faster measurements.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.</p>
<b>Example</b>	<pre>:CONF:GPRS:MEASure:ACPM:TRAN FULL :CONF:GPRS:MEASure:ACPM:TRAN? In this example, the query will return the string FULL.</pre>

**:CONFigure:GPRS:MSLot:RESult**

<b>Syntax</b>	:CONFigure:GPRS:MSLot:RESult <int1>
<b>Parameters</b>	int1 is an integer parameter. The minimum value for int1 is 1, the maximum value is 4. The default value for int1 is 1.
<b>Description</b>	Sets the number of the burst for which to deliver measurement results. Delivers the results for the selected slot out of the number of all measured slots. This command can be used in GPRS synchronous mode when the mobile transmits on multiple time slots but results are fetched from one (selectable) time slot only.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:GPRS:MSLot:RESult 1 :CONF:GPRS:MSLot:RESult? Value returned: "1".

**:CONFigure:GPRS:IDRequest**

<b>Syntax</b>	:CONFigure:GPRS:IDRequest <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: OFF   ON. Default is OFF.
<b>Description</b>	Switches the ID Request procedure during the Attach on or off
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:GPRS:IDRequest ON :CONF:GPRS:IDRE? Value returned in this example: "ON".

**EGPRS commands**    **:CONFigure:EGPRs:ANALyzer:LEVel:EXPeCt[:DATA]**

<b>Syntax</b>	:CONFigure:EGPRs:ANALyzer:LEVel:EXPeCt[:DATA] <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is -10, the maximum value is 30. The default value for int1 is 10.
<b>Description</b>	Sets the RF power level at which the mobile under test is going to transmit. The physical dimension of int1 is dBm. <b>Note:</b> Specifying an expected power level in analyzer mode speeds up testing as it avoids or shortens auto ranging and auto triggering procedures.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:ANALyzer:LEVel:EXPeCt[:DATA] 20 :CONF:EGPRs:ANAL:LEV:EXP? Value returned in this example: "20". This means that the Willtek 3100 will expect the mobile to send its data at a RF power level of 20 dBm.

**:CONFigure:EGPRs:ANALyzer:LEVel:EXPEct:MODE**

<b>Syntax</b>	:CONFigure:EGPRs:ANALyzer:LEVel:EXPEct:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the use of the 'expected level feature' ON or OFF. Please refer to the description of the :CONF:EGPRs:ANAL:LEV:EXP command above for details.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:EGPRs:ANALyzer:LEVel:EXPEct:MODE ON :CONF:EGPRs:ANAL:Lev:EXP:MODE? Value returned in this example: "ON".

**:CONFigure:EGPRs:BS:RCL**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RCL <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 1, the maximum value is 7. The default value for int1 is 1.
<b>Description</b>	This command sets the routing area color code. This code is used to indicate to the mobile that adjacent cells belong to different routing areas. This parameter is broadcast by the Willtek 3100 in the SI3 and SI4 rest octets.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:RCL 3 :CONF:EGPRs:BS:RCL? Value returned in this example: "3"

**:CONFigure:EGPRs:BS:RCO**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RCO <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 255. The default value for int1 is 0.
<b>Description</b>	This command sets the routing area code. This code is used to indicate the routing area, the base station belongs to. This parameter is broadcast by the Willtek 3100 in the SI13 rest octets.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	CONFigure:EGPRs:BS:RCO 124 :CONF:EGPRs:BS:RCO? Value returned in this example: "124"

**:CONFigure:EGPRs:BS:ALPHA**

<b>Syntax</b>	:CONFigure:EGPRs:BS:ALPHA <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 15. The default value for int1 is 0.
<b>Description</b>	This command sets the alpha factor in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information). The alpha factor is one of the GPRS power control parameters. It is required by the mobile to calculate the uplink power level it has to use on a PDCH (packed data channel). The alpha factor is broadcast by the Willtek 3100 in the SI13 rest octets.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:ALPHA 10 :CONF:EGPRs:BS:ALPH? Value returned in this example: "10"

**:CONFigure:EGPRs:BS:RLCMac:USF**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RLCMac:USF <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 7. The default value for int1 is 0.
<b>Description</b>	This command sets the uplink state flag (USF) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information). The USF is used to either assign a block to a particular mobile (one out of seven possible) or to mark it as unassigned. All time slots will use the same USF. The USF is part of the MAC header on the PDTCH
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:RLCMac:USF 0 :CONF:EGPRs:BS:RLCM:USF? Value returned in this example: "0"

**:CONFigure:EGPRs:BS:RLCMac:USF:INC**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RLCMac:USF:INC <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	Switches the auto-incrementing of the USF either ON or OFF. For further details regarding the USF, please refer to the description of the :CONFigure:EGPRs:BS:RLCMac:USF command above.

<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:EGPRs:BS:RLCMac:USF:INC OFF :CONF:EGPRs:BS:RLCM:USF:INC? Value returned in this example: "OFF".

**:CONFigure:EGPRs:BS:RLCMac:RRBP[:DATA]**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RLCMac:RRBP[:DATA] <PredefExp1>
<b>Parameters</b>	PredefExp1 is one of the following predefined expressions: N13   N17   N21   26. Default is N13.
<b>Description</b>	This command sets the relative reserved block period (RRBP) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information). The RRBP marks the block to which the USF parameter corresponds, in relation to the block currently used.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:EGPRs:BS:RLCMac:RRBP:DATA N21 :CONF:EGPRs:BS:RLCM:RRBP? Value returned in this example: "N21"

**:CONFigure:EGPRs:BS:RLCMac:RRBP:MODE**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RLCMac:RRBP:MODE <PredefExp1>
<b>Parameters</b>	PredefExp1 is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command indicates whether the value specified for the relative reserved block period (RRBP) shall be used by the mobile (ON) or not (OFF) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:EGPRs:BS:RLCMac:RRBP:MODE OFF :CONF:EGPRs:BS:RLCM:RRBP:MODE? Value returned in this example: "OFF"

**:CONFigure:EGPRs:BS:RLCMac:PR**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RLCMac:PR <PredefExp1>
<b>Parameters</b>	PredefExp1 is one of the following predefined expressions: RNG6   RNG14   RNG22   RNG30. Default is RNG6.



<b>Description</b>	<p>This command specifies the power reduction (PR) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).</p> <p>The power reduction the reduction in RF power (in dB) from the BCCH to the PDCH in downlink.</p> <p>PredefExp1 indicates the range of the power reduction:  RNG6 stands for a power reduction of 0...6 dB,  RNG14 indicates a power reduction of 8...14 dB,  RNG22 stands for a power reduction of 16...22 dB, while  RNG30 indicates a power reduction of 24...30 dB.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	<pre>:CONFigure:EGPRS:BS:RLCMac:RRBP:PR RNG6 :CONF:EGPRS:BS:RLCM:RRBP:PR?</pre> <p>Value returned in this example: "RNG6"</p>

**:CONFigure:EGPRS:BS:RLCMac:TFI**

<b>Syntax</b>	:CONFigure:EGPRS:BS:RLCMac:TFI <int1>
<b>Parameters</b>	<p>int1 is an integer.</p> <p>The minimum value for int1 is 0, the maximum value is 31. The default value for int1 is 0.</p>
<b>Description</b>	This command sets the temporary flow identifier (TFI) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<pre>:CONFigure:EGPRS:BS:RLCMac:TFI 15 :CONF:EGPRS:BS:RLCM:TFI?</pre> <p>Value returned in this example: "15"</p>

**:CONFigure:EGPRS:BS:RLCMac:BSN[:DATA]**

<b>Syntax</b>	:CONFigure:EGPRS:BS:RLCMac:BSN[:DATA] <int1>
<b>Parameters</b>	<p>int1 is an integer.</p> <p>The minimum value for int1 is 0, the maximum value is 127. The default value for int1 is 0.</p>
<b>Description</b>	<p>This command sets the block sequence number (BSN) in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).</p> <p>The BSN is the absolute block sequence number modulo 128 of each RLC data block within the TBF. It is used to enumerate the RLC data blocks, starting with 1.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<pre>:CONFigure:EGPRS:BS:RLCMac:BSN:DATA 1 :CONF:EGPRS:BS:RLCM:BSN?</pre> <p>Value returned in this example: "1"</p>

**:CONFigure:EGPRs:BS:RLCMac:BSN:INC**

<b>Syntax</b>	:CONFigure:EGPRs:BS:RLCMac:BSN:INC <PredefExp1>
<b>Parameters</b>	PredefExp1 is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the auto-increment of the block sequence number either on (ON) or off (OFF) as long as the Willtek 3100 is working in (asynchronous) generator/analyzer mode (please refer to the description of the :CONF:CSYS:GPG command for further information).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:EGPRs:BS:RLCMac:BSN:INC OFF :CONF:EGPRs:BS:RLCM:BSN:INC? Value returned in this example: "OFF"

**:CONFigure:EGPRs:BS:ATTach**

<b>Syntax</b>	:CONFigure:EGPRs:BS:ATTach <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the IMSI Attach/Detach flag in the System Information messages broadcast on the BCCH on or off. If ON, the mobile must register and deregister with the network simulated by the Willtek 3100 when switched on or off, respectively. This can be used to detect when the mobile is switched on and listening to the Willtek 3100 network.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	:CONFigure:EGPRs:BS:ATTach OFF :CONF:GSM:BS:ATT? Value returned in this example: "OFF".

**:CONFigure:EGPRs:BS:MSTation:MSLot**

<b>Syntax</b>	:CONFigure:EGPRs:BS:MSTation:MSLot <int1>
<b>Parameters</b>	int1 is an integer parameter. The minimum value for int1 is 1, the maximum value is 4. The default value for int1 is 1.
<b>Description</b>	This command either sets the number of UL time slots expected by the Willtek 3100 (asynchronous mode) or the number of UL time slots that the mobile under test is commanded to use (synchronous mode) during multislot testing.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:MSTation:MSLot 4 :CONF:EGPRs:MSTA:MSL? Value returned in this example: "4".

**:CONFigure:EGPRs:BS:BCC**

<b>Syntax</b>	:CONFigure:EGPRs:BS:BCC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 7. The default value for int1 is 0.
<b>Description</b>	This command sets the base station color code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:BCC 1 :CONF:EGPRs:BS:BCC? Value returned in this example: "1".

**:CONFigure:EGPRs:BS:BCH:ARFCn**

<b>Syntax</b>	:CONFigure:EGPRs:BS:BCH:ARFCn <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1023. The default value for int1 is 63.
<b>Description</b>	This command sets the channel number for the Willtek 3100's base channel (BCCH). <b>Note:</b> The base channel is sometimes also referred to as the 'channel number of the main carrier'.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:BCH:ARFCn 60 :CONF:EGPRs:BS:BCH:ARFC? Value returned in this example: "60".

**:CONFigure:EGPRs:BS:CBA**

<b>Syntax</b>	:CONFigure:EGPRs:BS:CBA <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1. The default value for int1 is 0.
<b>Description</b>	This command sets the cell barred access parameter. A 0 set for the CBA will allow the mobile to contact the base station, while a 1 will block the base station and the mobile under test will not be granted access.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:CBA 1 :CONF:EGPRs:BS:CBA? Value returned in this example: "1".

**:CONFigure:EGPRs:BS:CI**

<b>Syntax</b>	:CONFigure:EGPRs:BS:CI <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 65535. The default value for int1 is 255.
<b>Description</b>	This command sets the cell identity parameter (i.e. the radio cell number), broadcast in the system information message.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:CI 127 :CONF:EGPRs:BS:CI? Value returned in this example: "127".

**:CONFigure:EGPRs:BS:LAI:MCC**

<b>Syntax</b>	:CONFigure:EGPRs:BS:LAI:MCC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 1000. The default value for int1 is 1.
<b>Description</b>	This command sets the mobile country code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:LAI:MCC 238 :CONF:EGPRs:BS:LAI:MCC? Value returned in this example: "238".

**:CONFigure:EGPRs:BS:LAI:MNC**

<b>Syntax</b>	:CONFigure:EGPRs:BS:LAI:MNC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 99 for a two-digit MNC and 999 for a three-digit MNC; see command :CONF:GSM:BS:LAI:MNC:FOR- Mat. The default value for int1 is 1
<b>Description</b>	This command sets the mobile network code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:LAI:MNC 20 :CONF:EGPRs:BS:LAI:MNC? Value returned in this example: "20".

**:CONFigure:EGPRs:BS:LAI:MNC:FORMat**

<b>Syntax</b>	:CONFigure:EGPRs:BS:LAI:MNC:FORMat <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: TWOdigits THREEdigits. Default is TWOdigits.
<b>Description</b>	This command sets the format of the mobile network code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	:CONFigure:EGPRs:BS:LAI:MNC:FORMat THRE :CONF:EGPRs:BS:LAI:MNC:FORM? Value returned in this example: "THRE".

**:CONFigure:EGPRs:BS:LAI:LAC**

<b>Syntax</b>	:CONFigure:EGPRs:BS:LAI:LAC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 65535. The default value for int1 is 1.
<b>Description</b>	This command sets the location area code.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:LAI:LAC 17399 :CONF:EGPRs:BS:LAI:LAC? Value returned in this example: "17399".

**:CONFigure:EGPRs:BS:LEVel**

<b>Syntax</b>	:CONFigure:EGPRs:BS:LEVel <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is -120.0, the maximum value is -10.0. The resolution of real1 is 0.1. The default value for real1 is -60.0.
<b>Description</b>	Sets the (standard) output level of the Willtek 3100. If individual levels are selected for GPRS tests, this level is used on the base channel. Applies to GSM/GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one real number.
<b>Example</b>	:CONFigure:EGPRs:BS:LEVel -100.0 :CONF:EGPRs:BS:LEVel? Value returned in this example: "-100.0".

**:CONFigure:EGPRs:BS:MSLot[:DATA]**

<b>Syntax</b>	:CONFigure:EGPRs:BS:MSLot[:DATA] <int1>
<b>Parameters</b>	int1 is an integer parameter. The minimum value for int1 is 1, the maximum value is 2. The default value for int1 is 1.
<b>Description</b>	Sets the number of PDTCH channels (slots) to be sent in the downlink. Applies to GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BS:MSLot[:DATA] 1 :CONF:EGPRs:BS:MSLot[:DATA]? Value returned in this example: "1".

**:CONFigure:EGPRs:BS:MSLot:LEVel[:DATA]**

<b>Syntax</b>	:CONFigure:EGPRs:BS:MSLot:LEVel[:DATA] <real1>, <real2>, <real3>, <real4>
<b>Parameters</b>	real1 to real4 are floating point real numbers. The minimum value for each realx is -120.0, the maximum value is -10.0. The resolution of each realx is 0.1. The default value for each realx is -60.0.
<b>Description</b>	Sets individual downlink slot levels for active (PDTCH) slots in Multislot GPRS operation (BCH remains at the level set by CONFigure:EGPRs:BS:LEVel. Applies to GPRS synchronous test mode. Data are used only if CONFigure:EGPRs:BS:MSLot:LEVel:MODE is set to INDL.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain four real numbers.
<b>Example</b>	:CONFigure:EGPRs:BS:MSLot:LEVel:DATA -80.0, -20.5, -60.0, -60.0 :CONF:EGPRs:BS:MSL:LEV:DATA? Values returned in this example: "-80.0, -20.5, -60.0, -60.0".

**:CONFigure:EGPRs:BS:MSLot:LEVel:MODE**

<b>Syntax</b>	:CONFigure:EGPRs:BS:MSLot:LEVel:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: INDL STDLev. Default is INDL.
<b>Description</b>	Selects between individual slot levels and standard slot level for PDTCHs. If STDLev is selected, the Willtek 3100 transmits at the level selected by CONFigure:EGPRs:BS:LEVel. If INDL is selected, the Willtek 3100 uses the power levels selected with CONFigure:EGPRs:BS:MSLot:LEVel for the up to four used time slots; time slot 0 is transmitted at the level selected by CONFigure:EGPRs:BS:LEVel, and the level selected by CONFigure:EGPRs:BS:MSLot:UNUSEd for the other slots.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.

<b>Example</b>	<pre>:CONFigure:EGPRs:BS:MSLot:LEVel:MODE INDLev :CONF:EGPRs:BS:MSL:LEV:MODE? Value returned in this example: "INDLev".</pre>
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**:CONFigure:EGPRs:BS:MSLot:LEVel:UNUSed**

<b>Syntax</b>	<pre>:CONFigure:EGPRs:BS:MSLot:LEVel:UNUSed &lt;real1&gt;</pre>
<b>Parameters</b>	<p>real1 is a floating point real number.</p> <p>The minimum value for real1 is -120.0, the maximum value is -10.0. The resolution of real1 is 0.1. The default value for real1 is -60.0.</p>
<b>Description</b>	<p>Sets the power level that the Willtek 3100 transmits in the unused time slots in packet data mode (i.e. except in time slot 0 and the assigned PDCH slots). Applies to GPRS synchronous mode.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain one real number.</p>
<b>Example</b>	<pre>:CONFigure:EGPRs:BS:MSLot:LEVel:UNUSed -60.0 :CONF:EGPRs:BS:MSL:LEV:UNUS? Value returned in this example: "-60.0".</pre>

**:CONFigure:EGPRs:BS:NCC**

<b>Syntax</b>	<pre>:CONFigure:EGPRs:BS:NCC &lt;int1&gt;</pre>
<b>Parameters</b>	<p>int1 is an integer.</p> <p>The minimum value for int1 is 0, the maximum value is 7. The default value for int1 is 2.</p>
<b>Description</b>	<p>This command sets the network color code.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain one integer.</p>
<b>Example</b>	<pre>:CONFigure:EGPRs:BS:NCC 2 :CONF:EGPRs:BS:NCC? Value returned in this example: "2".</pre>

**:CONFigure:EGPRs:BS:NCEL**

<b>Syntax</b>	<pre>:CONFigure:EGPRs:BS:NCEL1 [int1],[int2],[int3],[int4],[int5],[int6]</pre>
<b>Parameters</b>	<p>int1 to int6 are integers.</p> <p>The minimum value for each intx is 0, the maximum value is 1023. The default value for each intx is 0.</p>

<b>Description</b>	<p>This command is used to set the channel numbers for up to six neighboring cells. These channel numbers are broadcast in the system information message by the Willtek 3100. The mobile under test has to perform a MS report on those frequency channels.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- All six integer values are optional. If the command is sent without any channel number specified, the default values (=0) will be broadcast by the Willtek 3100 in the system information message.</li> <li>- Let's assume that there was a first command sent with six channel numbers specified. After that, a second command is sent with only two channel numbers specified. Now, the Willtek 3100 will alter only the first two channel numbers and maintain all other settings (see example below for details).</li> </ul>
<b>Query</b>	<p>The query form of this command will always return the complete set of neighbouring channel numbers currently in use. The string delivered back will always contain six integers.</p>
<b>Example</b>	<pre>:CONFigure:EGPRs:BS:NCEl1 10,20,30,40,50,60 :CONF:EGPRs:BS:NCEL 70,80 :CONF:EGPRs:BS:NCEL?</pre> <p>Values returned in this example: "70,80,30,40,50,60".</p>

**:CONFigure:EGPRs:BS:ORIGinate**

<b>Syntax</b>	<code>:CONFigure:EGPRs:BS:ORIGinate &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ONRequest ONLOcation. Default is ONRequest.
<b>Description</b>	<p>In GSM/GPRS, a TCH can be assigned either on request or as soon as the mobile has been registered (= immediately after a location update).</p> <p>ONRequest will assign a TCH only when either the mobile under test or the Willtek 3100 initializes a call.</p> <p>ONLOcation will assign a TCH as soon as the registration has been completed.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain the short-form version one of the predefined expressions as explained above.</p>
<b>Example</b>	<pre>:CONFigure:EGPRs:BS:ORIGinate ONLOcation :CONF:EGPRs:BS:ORIG?</pre> <p>Value returned in this example: "ONLO".</p>

**:CONFigure:EGPRs:BS:PDTCh:ARFCn**

<b>Syntax</b>	<code>:CONFigure:EGPRs:BS:PDTCh:ARFCn &lt;int1&gt;</code>
<b>Parameters</b>	<p>int1 is an integer.</p> <p>The minimum value for int1 is 0, the maximum value is 1023. The default value for int1 is 2.</p>
<b>Description</b>	<p>This command sets the frequency channel number of the simulated packet data traffic channel.</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain one integer.</p>



<b>Example</b>	<code>:CONFigure:EGPRs:BS:PDTCh 2</code> <code>:CONF:EGPRs:BS:PDTCh?</code> Value returned in this example: "2".
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**:CONFigure:EGPRs:BS:TCH:ARFCn**

<b>Syntax</b>	<code>:CONFigure:EGPRs:BS:TCH:ARFCn &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 1023. The default value for <code>int1</code> is 45.
<b>Description</b>	This command sets the traffic channel (TCH) number to be used.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:CONFigure:EGPRs:BS:TCH:ARFCn 917</code> <code>:CONF:EGPRs:BS:TCH:ARFC?</code> Value returned in this example: "917".

**:CONFigure:EGPRs:BS:TCH:TSLot**

<b>Syntax</b>	<code>:CONFigure:EGPRs:BS:TCH:TSLot &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 2, the maximum value is 6. The default value for <code>int1</code> is 2.
<b>Description</b>	This command sets the time slot to be used for the traffic channel (TCH).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:CONFigure:EGPRs:BS:TCH:TSLot 5</code> <code>:CONF:EGPRs:BS:TCH:TSL?</code> Value returned in this example: "5".

**:CONFigure:EGPRs:BS:TCH:TYPE**

<b>Syntax</b>	<code>:CONFigure:EGPRs:BS:TCH:TYPE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>FR</code>   <code>EFR</code> . Default is <code>FR</code> .
<b>Description</b>	This command sets the type of traffic channel. <code>FR</code> stands for full rate and <code>EFR</code> for enhanced full rate.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<code>:CONFigure:EGPRs:BS:TCH:TYPE EFR</code> <code>:CONF:EGPRs:BS:TCH:TYPE?</code> Value returned in this example: "EFR".

**:CONFigure:EGPRs:BER:RTDelay**

<b>Syntax</b>	:CONFigure:EGPRs:BER:RTDelay <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 30. The default value for int1 is 0.
<b>Description</b>	This command allows to predefine a round trip delay in order to achieve a fast synchronization. <b>Note:</b> During BER testing, there will be a delay between the reception of the first burst of a particular voice block at the mobile and the transmission of the first burst of the same voice block (after decoding and coding) on the uplink. This delay is called the round trip delay.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:BER:RTDelay 9 :CONF:EGPRs:BER:RTD? Value returned in this example: "9"

**:CONFigure:EGPRs:MSTation:DRX**

<b>Syntax</b>	:CONFigure:EGPRs:MSTation:DRX <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 7. The default value for int1 is 0.
<b>Description</b>	This command sets the BS-PA-MFRMS parameter, broadcast in the control channel description information element. This parameter is used for discontinuous reception (DRX). <b>Note:</b> The value entered here is coded according to the following scheme: the number of multiframes used is the number entered here plus 2. This means that the default value (0) will lead to a DRX period of two multiframes.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:MSTation:DRX 2 :CONF:EGPRs:MSTA:DRX? Value returned in this example: "2", resulting in a DRX period of four multiframes.

**:CONFigure:EGPRs:MSTation:TADVance**

<b>Syntax</b>	:CONFigure:EGPRs:MSTation:TADVance <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 63. The default value for int1 is 0.
<b>Description</b>	This command sets the timing advance for the mobile under test to use. The current setting of the timing advance is broadcast to the mobile in the SACCH physical header.

<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:MSTation:TADVance 12 :CONF:EGPRs:MSTA:TADV? Value returned in this example: "12".

**:CONFigure:EGPRs:MSTation:PLEvel[:ALL]**

<b>Syntax</b>	:CONFigure:EGPRs:MSTation:PLEvel[:ALL] <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 31. The default value for int1 is 10.
<b>Description</b>	This command sets the mobile's power control level. <b>Notes:</b> <ul style="list-style-type: none"> <li>- The RF power control level is a code. The corresponding RF output power of the mobile under test depends on the type of GSM system and the frequency range.</li> <li>- The power control level is broadcast in the SACCH physical header.</li> </ul>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:MSTation:PLEvel:ALL 17 :CONF:EGPRs:MSTA:PLEV? Value returned in this example: "17".

**:CONFigure:EGPRs:MSTation:MODE**

<b>Syntax</b>	:CONFigure:EGPRs:MSTation:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FACCh   SDCCh. Default is FACCh.
<b>Description</b>	Defines whether the call setup takes place on FACCh or on SDCCh. <b>Note:</b> There are two standard signalling channels in GSM: SDCCH and FACCH. The FACCH is always associated with a traffic channel. However, some mobiles will only listen to signalling provided on the SDCCH.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:EGPRs:BS:CMODE FACCh :CONF:EGPRs:BS:CMOD? Value returned in this example: "FACC".

**:CONFigure:EGPRs:MSTation:MSLot**

<b>Syntax</b>	:CONFigure:EGPRs:MSTation:MSLot <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 1, the maximum value is 4. The default value for int1 is 2.

<b>Description</b>	This command either sets the number of UL time slots expected by the Willtek 3100 (asynchronous mode) or the number of UL time slots that the mobile under test is commanded to use (synchronous mode) during multislot testing.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:CONFigure:EGPRs:MSTAtion:MSLot 4 :CONF:EGPRs:MSTA:MSL? Value returned in this example: "4".

#### :CONFigure:EGPRs:MSTAtion:LOOPback

<b>Syntax</b>	:CONFigure:EGPRs:MSTAtion:LOOPback <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	Selects the loopback mode. If the parameter PredefExp is set to ON, the mobile station will support GPRS loopback (mode B), if the parameter PredefExp is set to OFF, the mobile station will not support GPRS loopback (mode A).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	:CONFigure:EGPRs:MSTAtion:LOOPback ON :CONF:EGPRs:MSTA:LOOP? Value returned in this example: "ON".

#### :CONFigure:EGPRs:MSTAtion:PSLots

<b>Syntax</b>	:CONFigure:EGPRs:MSTAtion:PSLots <int1>, <int2>, <int3>, <int4>
<b>Parameters</b>	int1 to int4 are integer parameters. The minimum value for each intx is -26, the maximum value is 39. The resolution of each intx is 2, the default value for each intx is 5.
<b>Description</b>	Sets the uplink power level in the range of -23 ... +39 dBm (GSM900) or -26 ... +36 dBm (upper band). Applies to GPRS synchronous mode.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain four integers.
<b>Example</b>	:CONFigure:EGPRs:MSTAtion:PSLots -10,-6,0,6 :CONF:EGPRs:MSTA:PSL? Value returned in this example: "-10,-6,0,6".

#### :CONFigure:EGPRs:TYPE

<b>Syntax</b>	:CONFigure:EGPRs:TYPE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: GSM9001800   GSM9001900. Default is GSM9001800.

<b>Description</b>	<p>Selects the type of GSM system to be used after the Willtek 3100 was brought into GSM call mode.</p> <p>GSM9001800 will make the Willtek 3100 work as a test set for the GSM system types GSM 900 and GSM 1800.</p> <p>GSM9001900 will set up the Willtek 3100 as a test set for the GSM system types GSM 900 and GSM 1900.</p> <p>Notes</p> <ul style="list-style-type: none"> <li>- This command will have no effect when the Willtek 3100 is in generator/analyzer mode.</li> <li>- The main reason for this command to exist is the 'double numbering' of channels. GSM 1800 and GSM 1900 use the same channel numbers above channel number 511, but the related physical channels are in different frequency regions.</li> </ul>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions as explained above.
<b>Example</b>	<pre>:CONFigure:EGPRs:TYPE GSM9001900 :CONF:EGPRs:TYPE? Value returned in this example: "GSM9001900".</pre>

**:CONFigure:EGPRs:MEASure:GROUP[:RFTX]**

<b>Syntax</b>	<pre>:CONFigure:EGPRs:MEASure:GROUP[:RFTX] &lt;PredefExp1&gt;,[PredefExp2],[PredefExp3],[PredefExp4],[PredefExp5],[PredefExp6],[PredefExp7],[PredefExp8],[PredefExp9]</pre>
<b>Parameters</b>	<p>PredefExp<math>x</math> is one of the following predefined expressions: PPEAK   PRMS   FREQUENCY   LENGTH   UTIME   POWER   TEMPLATE   CORNER   FLATNESS. Default is PPEAK.</p>
<b>Description</b>	<p>This command allows you to set a user-specific sequence of RF TX tests on the Willtek 3100. The sequence has to be started with the appropriate commands of the MEASure subsystem (:MEAS:EGPRs:CONT:RFTX:GROUP or :MEAS:EGPRs:ARR:RFTX:GROUP).</p> <p>The meaning of the parameters is as follows: PPEAK is the peak phase error measurement, PRMS the root-mean square value of the phase error measurement. FREQUENCY means the frequency error of the mobile under test, LENGTH the length of the burst in microseconds. UTIME stands for the timing error of the mobile under test in microseconds, taking the ordered timing advance into account. POWER is the mobile's RF output power level in dBm. TEMPLATE indicates whether the power/time template has been violated by a burst or not. CORNER gives the RF power level in dBm at eight pre-defined positions of a burst. FLATNESS gives an indication whether the mobile's RF output power is constant during the useful part of the burst.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- This command must be used with at least one parameter specified. All other parameters are optional.</li> <li>- Unless organized in this sequence, the start of a new RF TX test will always terminate the preceding one instantly. Therefore, this command is an efficient way to perform several RF TX measurements in a sequence.</li> </ul>

<b>Query</b>	The query form of this command will return the current sequence of RF TX tests to be performed by the Willtek 3100. The string delivered back will contain a maximum of nine short-form versions of the predefined expressions explained above
<b>Example</b>	:CONFigure:EGPRs:MEASure:GROUP:RFTX PRMS,POWer,FLATness :CONF:EGPRs:MEAS:GROU? Value returned in this example: "PRMS,POW,FLAT"

**:CONFigure:EGPRs:MEASure:GROUP:AFANalyser**

<b>Syntax</b>	:CONFigure:EGPRs:MEASure:GROUP:AFANalyser <PredefExp1>,[PredefExp2],[PredefExp3],[PredefExp4], [PredefExp5],[PredefExp6]
<b>Parameters</b>	PredefExp is one of the following predefined expressions: SINad DISTor- tion FREQuency ACVPeakp ACVRms DCVRms. Default is SINad.
<b>Description</b>	This command allows you to set a user-specific sequence of AF tests on the Willtek 3100. The sequence has to be started with the appropriate commands of the MEASure subsystem (:MEAS:CONT:AFAN:GROU or :MEAS:ARR:AFAN:GROU). The meaning of the parameters is as follows: SINad is the signal to noise ratio, expressed in dB, DISTor-tion is the distortion measurement on the third harmonic of a sine wave and expressed in %. FREQuency is the measurement of the audio frequency. ACVPeakp stands for an AC voltage peak-to-peak measurement, while ACVRms is the same measurement, but the result will be expressed as root-mean square value of the AC voltage. DCVRms is used to measure ripple on DC lines (this measurement gives the root-mean spare voltage of the AC component of the applied DC signal).
<b>Notes</b>	<ul style="list-style-type: none"> <li>- This command must be used with at least one parameter specified. All other parameters are optional.</li> <li>- Unless organized in this sequence, the start of a new AF test will always terminate the preceding one instantly. Therefore, this command is an efficient way to perform several AF measurements in a sequence.</li> <li>- Please note that any AF test command will need the audio option to be installed on the Willtek 3100.</li> </ul>
<b>Query</b>	The query form of this command will return the current sequence of AF tests to be performed by the Willtek 3100. The string delivered back will contain a maximum of six predefined short-form versions of the expressions explained above.
<b>Example</b>	:CONFigure:EGPRs:MEASure:GROUP:AFANalyser SINad,DISTor- tion,FREQuency :CONF:EGPRs:MEAS:GROU:AFAN? Value returned in this example: "SIN,DIST,FREQ"

**:CONFigure:EGPRs:MEASure:ACPM:TRANSient**

<b>Syntax</b>	:CONFigure:EGPRs:MEASure:ACPM:TRANSient <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: EDGes FULL. Default is EDGes.

<b>Description</b>	<p>Selects the time period over which the Willtek 3100 calculates the RF output spectrum due to switching transients (or ACP Transient for short).</p> <p>If FULL is selected, the Willtek 3100 will perform the measurement over the whole burst (including the edges); this is in line with the ETSI specifications.</p> <p>With EDGes, measurements are performed over the leading and trailing edges of the burst only, ignoring any spectral impact of the modulation (active part of the burst). The latter measurement takes less time and hence leads to faster measurements.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	<pre>:CONF:EGPRS:MEASure:ACPM:TRAN FULL :CONF:EGPRS:MEASure:ACPM:TRAN?</pre> <p>In this example, the query will return the string FULL.</p>

**:CONFigure:EGPRs:MSLot:RESult**

<b>Syntax</b>	:CONFigure:EGPRs:MSLot:RESult <int1>
<b>Parameters</b>	<p>int1 is an integer parameter.</p> <p>The minimum value for int1 is 1, the maximum value is 4. The default value for int1 is 1.</p>
<b>Description</b>	Sets the number of the burst for which to deliver measurement results. Delivers the results for the selected slot out of the number of all measured slots. This command can be used in GPRS synchronous mode when the mobile transmits on multiple time slots but results are fetched from one (selectable) time slot only.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre>:CONFigure:EGPRs:MSLot:RESult 1 :CONF:EGPRs:MSLot:RESult?</pre> <p>Value returned in this example: "1".</p>

**CDMA2000 commands :CONFigure:CDMA:REFerence:CLOCK**

<b>Syntax</b>	:CONFigure:CDMA:REFerence:CLOCK <PredefExp>
<b>Parameters</b>	<p>PredefExp is one of the following predefined expressions: CHIPx1   CHIPx16   CHIPx8   EVEN   PCG   PN   FRAMe   SFRAMe. Default is CHIPx1.</p>
<b>Description</b>	This command sets the CDMA reference clock output signal.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	<pre>:CONF:CDMA:REF:CLOC CHIPx16 :CONF:CDMA:REF:CLOC?</pre> <p>Value returned: CHIPx16.</p>

### **:CONFigure:CDMA:BS:LEVel**

<b>Syntax</b>	<code>:CONFigure:CDMA:BS:LEVel &lt;Real1&gt;</code>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -120.0, the maximum value is 0.0. The minimum resolution is 0.1. The default value is -60.0.
<b>Description</b>	This command sets the RF output power level of the Willtek 3100 (i.e. simulated base station). The physical dimension is dBm.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one real number.
<b>Example</b>	<code>:CONF:CDMA:BS:LEVel -50.5</code> <code>:CONF:CDMA:BS:LEV?</code> Value returned: -50.5.

### **:CONFigure:CDMA:BS:PAGing**

<b>Syntax</b>	<code>:CONFigure:CDMA:BS:PAGing &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FULL   HALF. Default is FULL.
<b>Description</b>	This command sets the paging rate.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	<code>:CONF:CDMA:BS:PAG FULL</code> <code>:CONF:CDMA:BS:PAG?</code> Value returned: FULL.

### **:CONFigure:CDMA:BS:PNOFfset**

<b>Syntax</b>	<code>:CONFigure:CDMA:BS:PNOFfset &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 511. The default value is 0.
<b>Description</b>	This command sets the pilot PN offset.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	<code>:CONF:CDMA:BS:PNOF 0</code> <code>:CONF:CDMA:BS:PNOF?</code> Value returned: 0.

### **:CONFigure:CDMA:BS:MCC**

<b>Syntax</b>	<code>:CONFigure:CDMA:BS:MCC &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 999. The default value is 1.
<b>Description</b>	This command sets the mobile country code (MCC).



<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:MCC 1 :CONF:CDMA:BS:MCC? Value returned: 1.

**:CONFigure:CDMA:BS:MNC**

<b>Syntax</b>	:CONFigure:CDMA:BS:MNC <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 99. The default value is 0.
<b>Description</b>	This command sets the mobile network code (MNC).
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:MNC 0 :CONF:CDMA:BS:MNC? Value returned: 0.

**:CONFigure:CDMA:BS:SYNC:SID**

<b>Syntax</b>	:CONFigure:CDMA:BS:SYNC:SID <Int1>
<b>Parameters</b>	Int1 is an integer number in the range from 0 to 32767. The default is 1.
<b>Description</b>	This command sets the system identification (SID).
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:SYNC:SID 1 :CONF:CDMA:BS:SYNC:SID? Value returned: 1.

**:CONFigure:CDMA:BS:SYNC:NID**

<b>Syntax</b>	:CONFigure:CDMA:BS:SYNC:NID <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 65535. The default value is 0.
<b>Description</b>	This command sets the network identification (NID).
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:SYNC:NID 0 :CONF:CDMA:BS:SYNC:NID? Value returned: 0.

### CONFigure:CDMA:BS:CCH:BAND

<b>Syntax</b>	:CONFigure:CDMA:BS:CCH:BAND <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACs   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	This command sets the control channel band.
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONF:CDMA:BS:CCH:BAND US800 :CONF:CDMA:BS:CCH:BAND? Value returned: US800.

### :CONFigure:CDMA:BS:CCH:ARFCn

<b>Syntax</b>	:CONFigure:CDMA:BS:CCH:ARFCn <Int1>, [<PredefExp>]
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2047. The default value is 29. PredefExp is an optional expression which can take on one of the following values: US800   USPCs   TACS   JTACs   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. The default is US800.
<b>Description</b>	This command sets the channel for the control channel.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:BS:CCH:ARFC 0 :CONF:CDMA:BS:CCH:ARFC? Value returned: 0.

### :CONFigure:CDMA:BS:TCH:BAND

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:BAND <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACs   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	This sets the traffic channel band.
<b>Query</b>	The query form of this command returns the selected band.
<b>Example</b>	:CONF:CDMA:BS:TCH:BAND US800 :CONF:CDMA:BS:TCH:BAND? Value returned: US800.

### :CONFigure:CDMA:BS:TCH:ARFCn

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:ARFCn <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2047. The default value is 29.

<b>Description</b>	This command sets the channel number for the traffic channel.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:TCH:ARFC 0 :CONF:CDMA:BS:TCH:ARFC? Value returned: 0.

**:CONFigure:CDMA:BS:TCH:RCONfig[:FORward]**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:RCONfig[:FORward] <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 1, the maximum value 5. The default value is 1.
<b>Description</b>	This command sets the forward radio configuration.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:TCH:RCON:FORW 3 :CONF:CDMA:BS:TCH:RCON:FORW? Value returned: 3.

**:CONFigure:CDMA:BS:TCH:RCONfig:ACTiv**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:RCONfig:ACTive
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command returns the forward radio configuration, which may be different from the default forward radio configuration.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:TCH:RCON:ACT? Value returned: 3.

**:CONFigure:CDMA:BS:TCH:SOPTion[:DATA]**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:SOPTion[:DATA] <Int1>, <Int2>
<b>Parameters</b>	Int1 is an integer value with a minimum value of 1, the maximum value is 32768. The default value is 1. Int2 is an integer value. The minimum value for Int2 is 1, the maximum value 5, the default value is equal to the current forward radio configuration.
<b>Description</b>	This command sets the default service options for a particular radio configuration.
<b>Query</b>	The query form of this command will return the current setting for a particular radio configuration.
<b>Example</b>	:CONF:CDMA:BS:TCH:SOPT 2,3 :CONF:CDMA:BS:TCH:SOPT? 3 Value returned: 2.

**:CONFigure:CDMA:BS:TCH:SOPTion:ACTive**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:SOPTion:ACTive
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the current setting of the Service Option which maybe different from the default value for a particular radio configuration once a call has been established.
<b>Example</b>	:CONF:CDMA:BS:TCH:SOPT:ACT? Value returned: 2.

**:CONFigure:CDMA:BS:TCH:PCONtrol:SElect**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:PCONtrol:SElect <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ALternating   ACTive   UP   DOWN. Default is ALternating.
<b>Description</b>	This sets how power control should be handled with the mobile.
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONF:CDMA:BS:TCH:PCON:SEL ACT :CONF:CDMA:BS:TCH:PCON:SEL? Value returned: ACT.

**:CONFigure:CDMA:BS:TCH:PCONtrol:RESet[:IMMediate]**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:PCONtrol:RESet[:IMMediate]
<b>Parameters</b>	No parameters.
<b>Description</b>	This performs a power control reset. This is only valid when the power control mode selected is ALternating, which returns the mobile power to initial test conditions.
<b>Query</b>	No query is available with this command.
<b>Example</b>	:CONF:CDMA:BS:TCH:PCON:RES:IMM

**:CONFigure:CDMA:BS:TCH:PCONtrol:ONCE**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:PCONtrol:ONCE <PredefExp> , <Int1>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: UP   DOWN. Int1 is an integer number with a minimum value of 1, the maximum value is 100. The default value is 1.
<b>Description</b>	This command causes a number of power control bits to be sent to the mobile in the direction specified.
<b>Query</b>	The query form of this command is not available.

**Example** :CONF:CDMA:BS:TCH:PCON:ONCE UP,10  
Commands the 3100 to send ten power control bits for the uplink.

**:CONFigure:CDMA:BS:TCH:FCH:TCODE**

**Syntax** :CONFigure:CDMA:BS:TCH:FCH:TCODE <Int1>  
**Parameters** Int1 is an integer number. The minimum value is 2, the maximum value 63. The default value is 8.  
**Description** This command sets the traffic code for the forward link channel.  
**Query** The query form of this command will return the current setting of the Willtek 3100.  
**Example** :CONF:CDMA:BS:TCH:FCH:TCODE 8  
:CONF:CDMA:BS:TCH:FCH:TCODE? Value returned: 8.

**:CONFigure:CDMA:BS:TCH:FCH:VMODE**

**Syntax** :CONFigure:CDMA:BS:TCH:FCH:VMODE <PredefExp>  
**Parameters** PredefExp is one of the following predefined expressions: LOOPback | GENSpeech | GENHz400 | GENKHz | GENAudioSwp | SILent. Default is LOOPback.  
**Description** Sets the voice mode default configuration.  
**Query** The query form of this command returns the current setting.  
**Example** :CONF:CDMA:BS:TCH:FCH:VMOD GENHz400  
:CONF:CDMA:BS:TCH:VMOD? Value returned: GENHz400.

**:CONFigure:CDMA:BS:TCH:FCH:DRATE**

**Syntax** :CONFigure:CDMA:BS:TCH:FCH:DRATE <PredefExp>  
**Parameters** PredefExp is one of the following predefined expressions: FULL | HALF | QUAR-ter | EIGHth. Default is FULL.  
**Description** Sets the data rate used on the forward link channel.  
**Query** The query form of this command returns the current setting.  
**Example** :CONF:CDMA:BS:TCH:FCH:DRATE FULL  
:CONF:CDMA:BS:TCH:DRAT?  
Value returned: FULL.

**:CONFigure:CDMA:BS:TCH:FCH:VOICE:DELAY**

**Syntax** :CONFigure:CDMA:BS:TCH:FCH:VOICE:DELAY <Int1>  
**Parameters** Int1 is an integer number. The parameter's minimum value is 0, the maximum value 5. The default value is 1.  
**Description** Sets the voice delay used on the forward link channel, in seconds.

<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:BS:TCH:FCH:VOIC:DEL 2 :CONF:CDMA:BS:TCH:FCH:VOIC:DEL? Value returned: 2.

**:CONFigure:CDMA:BS:TCH:SCH[:FORWARD]:ENCoding**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:SCH[:FORWARD]:ENCoding <Pre-defExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: CONVen-tional   TURBo. Default is CONVen-tional.
<b>Description</b>	Sets the forward encoding used on the supplemental channel.
<b>Query</b>	The query form of this command returns one of the predefined expressions CONVen-tional   TURBo.
<b>Example</b>	:CONF:CDMA:BS:TCH:SCH:FORW:ENC TURBo :CONF:CDMA:BS:TCH:SCH:FORW:ENC? Value returned: TURBo.

**:CONFigure:CDMA:BS:TCH:SCH:FORW:DRATe3**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:SCH:FORW:DRATe3 <PredefExp> :CONFigure:CDMA:BS:TCH:SCH:FORW:DRATe4 <PredefExp> :CONFigure:CDMA:BS:TCH:SCH:FORW:DRATe5 <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FULL   DRATe_x2   DRATe_x4   DRATe_x8   DRATe_x16   DRATe_x32. Default is FULL.
<b>Description</b>	Sets the data rate used on the supplemental channel for a particular radio configuration.
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONF:CDMA:BS:TCH:SCH:FORW:DRATe3 FULL :CONF:CDMA:BS:TCH:SCH:FORW:DRAT3? Value returned: FULL. :CONF:CDMA:BS:TCH:SCH:FORW:DRATe4 FULL :CONF:CDMA:BS:TCH:SCH:FORW:DRAT4? Value returned: FULL.

**:CONFigure:CDMA:BS:TCH:SCH:FORW:PATtern**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:SCH:FORW:PATtern <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FIXEd   PBRs. Default is FIXEd.
<b>Description</b>	Sets the pattern used on supplemental channel.
<b>Query</b>	The query form of this command returns the current setting.

**Example** :CONF:CDMA:BS:TCH:SCH:FORW:PATtern PBR5  
:CONF:CDMA:BS:TCH:SCH:FORW:PATT?  
Value returned: PBR5.

### **:CONFigure:CDMA:BS:TCH:SCH:FORW:PATtern:TYPE**

**Syntax** :CONFigure:CDMA:BS:TCH:SCH:FORW:PATtern:TYPE <Int1>  
**Parameters** Int1 is an integer number. The minimum value is 0, the maximum value 255. The default value is 255.  
**Description** Sets the type of data pattern used on the supplemental channel.  
**Query** The query form of this command will return the current setting of the Willtek 3100.  
**Example** :CONF:CDMA:BS:TCH:SCH:FORW:PATT:TYPE 255  
:CONF:CDMA:BS:TCH:SCH:FORW:PATT:TYPE?  
Value returned: 255.

### **:CONFigure:CDMA:BS:TCH:SCH:REVERSE:ENCoding**

**Syntax** :CONFigure:CDMA:BS:TCH:SCH:REVERSE:ENCoding <PredefExp>  
**Parameters** PredefExp is one of the following predefined expressions: CONVen-tional | TURBo. Default is CONVen-tional.  
**Description** Sets the reverse encoding used on the supplemental channel.  
**Query** The query form of this command returns the current setting.  
**Example** :CONF:CDMA:BS:TCH:SCH:REV:ENCoding TURBo  
:CONF:CDMA:BS:TCH:SCH:REV:ENC?  
Value returned: TURBo.

### **:CONFigure:CDMA:BS:TCH:SCH:REV:DRATE3**

**Syntax** :CONFigure:CDMA:BS:TCH:SCH:REV:DRATE3 <PredefExp>  
:CONFigure:CDMA:BS:TCH:SCH:REV:DRATE4 <PredefExp>  
:CONFigure:CDMA:BS:TCH:SCH:REV:DRATE5 <PredefExp>  
**Parameters** PredefExp is one of the following predefined expressions: FULL | DRATE\_x2 | DRATE\_x4 | DRATE\_x8 | DRATE\_x16 | DRATE\_x32. Default is FULL.  
**Description** Sets the data rate used on the supplemental channel for a particular radio configuration.  
**Query** The query form of this command returns the current setting.  
**Example** :CONF:CDMA:BS:TCH:SCH:REV:DRAT3 FULL  
:CONF:CDMA:BS:TCH:SCH:REV:DRAT3?  
Value returned: FULL.  
:CONF:CDMA:BS:TCH:SCH:REV:DRATE4 FULL  
:CONF:CDMA:BS:TCH:SCH:REV:DRAT4?  
Value returned: FULL.

**:CONFigure:CDMA:BS:TCH:SCH:REVerse:STATe**

<b>Syntax</b>	:CONFigure:CDMA:BS:TCH:SCH:REVerse:STATe <Boolean>
<b>Parameters</b>	Boolean is a boolean parameter which can take on the values 0   1. The default is 0.
<b>Description</b>	This command turns the reverse channel on (1) or off (0).
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONF:CDMA:BS:TCH:SCH:REV:STAT 0 :CONF:CDMA:BS:TCH:SCH:REV:STAT? Returns 0, meaning that the supplemental reverse channel is switched off.

**:CONFigure:CDMA:BS:BASE:ID**

<b>Syntax</b>	:CONFigure:CDMA:BS:BASE:ID <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 65535. The default value is 39.
<b>Description</b>	This command sets the registration toggles low bit between 0 and 1.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:BASE:ID 39 :CONF:CDMA:BS:BASE:ID? Value returned in this example: 0.

**:CONFigure:CDMA:BS:BASE:LAT**

<b>Syntax</b>	:CONFigure:CDMA:BS:BASE:LAT <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 1. The default value is 0.
<b>Description</b>	This command sets the registration toggles low bit between 0 and 1.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:PARAM:REG 1 :CONF:CDMA:BS:PARAM:REG? Value returned in this example: 0.

**:CONFigure:CDMA:BS:BASE:LONG**

<b>Syntax</b>	:CONFigure:CDMA:BS:BASE:LONG <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 1. The default value is 0.
<b>Description</b>	This command sets the registration toggles low bit between 0 and 1.



<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:BASE:LONG 1 :CONF:CDMA:BS:BASE:LONG? Value returned in this example: 0.

**:CONFigure:CDMA:BS:SLOT:IND**

<b>Syntax</b>	:CONFigure:CDMA:BS:SLOT:IND <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 7. The default value is 1.
<b>Description</b>	This command sets the Registration toggles low bit between 0 and 1.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:SLOT:IND 1 :CONF:CDMA:BS:BASE:ID? Value returned in this example: 0.

**:CONFigure:CDMA:BS:REGZ**

<b>Syntax</b>	:CONFigure:CDMA:BS:REGZ <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 4095. The default value is 0.
<b>Description</b>	This command sets the registration toggles low bit between 0 and 1.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:REGZ 0 :CONF:CDMA:BS:REGZ? Value returned in this example: 0.

**:CONFigure:CDMA:BS:PARAM:REG**

<b>Syntax</b>	:CONFigure:CDMA:BS:PARAM:REG <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 1. The default value is 0.
<b>Description</b>	This command sets the registration toggles low bit between 0 and 1.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:PARAM:REG 1 :CONF:CDMA:BS:PARAM:REG? Value returned in this example: 0.

**:CONFigure:CDMA:BS:REG:PRD**

<b>Syntax</b>	:CONFigure:CDMA:BS:REG:PRD <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 1. The default value is 0.
<b>Description</b>	This command sets the registration toggles low bit between 0 and 1.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:REG:PRD 0 :CONF:CDMA:BS:REG:PRD? Value returned in this example: 0.

**:CONFigure:CDMA:BS:REG:DIST**

<b>Syntax</b>	:CONFigure:CDMA:BS:REG:DIST <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 1. The default value is 0.
<b>Description</b>	This command sets the registration toggles low bit between 0 and 1.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:REG:DIST 0 :CONF:CDMA:BS:REG:DIST? Value returned in this example: 0.

**:CONFigure:CDMA:BS:PREF:MSID:TYPE**

<b>Syntax</b>	:CONFigure:CDMA:BS:PREF:MSID:TYPE <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 3. The default value is 3.
<b>Description</b>	This command sets the Preferred MSID type.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:PREF:MSID:TYPE 3 :CONF:CDMA:BS:REG:DIST? Value returned in this example: 3.

**:CONFigure:CDMA:BS:MAX:CAP:SZ**

<b>Syntax</b>	:CONFigure:CDMA:BS:MAX:CAP:SZ <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 7. The default value is 7.
<b>Description</b>	This command sets the Preferred MSID type.

<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:MAX:CAP:SZ 7 :CONF:CDMA:BS:REG:DIST? Value returned in this example: 7.

**:CONFigure:CDMA:BS:PROB:PN:RAN**

<b>Syntax</b>	:CONFigure:CDMA:BS:PROB:PN:RAN <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 15. The default value is 0.
<b>Description</b>	This command sets the Preferred MSID type.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:CDMA:BS:PROB:PN:RAN 0 :CONF:CDMA:BS:PROB:PN:RAN? Value returned in this example: 7.

**:CONFigure:CDMA:BS:ACCess:PNOMinal**

<b>Syntax</b>	:CONFigure:CDMA:BS:ACCess:PNOMinal <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is -24, the maximum value 7. The minimum resolution is 1. The default value is 0.
<b>Description</b>	This command sets the access probe's nominal power of the Willtek 3100 ( i.e. simulated base station). The physical dimension is dBm.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:BS:ACCess:PNOMinal 0 :CONF:CDMA:BS:ACC:PNOM? Value returned: 0.

**:CONFigure:CDMA:BS:ACCess:PINit**

<b>Syntax</b>	:CONFigure:CDMA:BS:ACCess:PINit <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is -16, the maximum value 15. The default value is 0.
<b>Description</b>	This command sets the initial power used on the access probe.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:BS:ACC:PIN 3 :CONF:CDMA:BS:ACC:PIN? Value returned: 3.

**:CONFigure:CDMA:BS:ACCess:PSTep**

<b>Syntax</b>	:CONFigure:CDMA:BS:ACCess:PSTep <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 7. The default value is 0.
<b>Description</b>	This command sets the power step used on the access probe.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:BS:ACC:PST 0 :CONF:CDMA:BS:ACC:PST? Value returned: 0.

**:CONFigure:CDMA:BS:ACCess:STEPs**

<b>Syntax</b>	:CONFigure:CDMA:BS:ACCess:STEPs <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 1, the maximum value 16. The default value is 4.
<b>Description</b>	This command sets the number of probes to be used with an access probe.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:BS:ACC:STEP 5 :CONF:CDMA:BS:ACC:STEP? Value returned: 5.

**:CONFigure:CDMA:BS:ACCess:RESPonse**

<b>Syntax</b>	:CONFigure:CDMA:BS:ACCess:RESPonse <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 1, the maximum value 15. The default value is 15.
<b>Description</b>	This command sets the number of response sequences.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:BS:ACC:RESP 15 :CONF:CDMA:BS:ACC:RESP? Value returned: 15.

**:CONFigure:CDMA:BS:ACCess:Request**

<b>Syntax</b>	:CONFigure:CDMA:BS:ACCess:Request <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 1, the maximum value 15. The default value is 15.
<b>Description</b>	This command sets the number of request sequences.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.

**Example**       :CONF:CDMA:BS:ACC:REQ 15  
                  :CONF:CDMA:BS:ACC:REQ?  
Value returned: 15.

### **:CONFigure:CDMA:BS:ACCess:PREamble**

**Syntax**        :CONFigure:CDMA:BS:ACCess:PREamble <Int1>  
**Parameters**   Int1 is an integer number. The minimum value is 1, the maximum value 16. The default value is 1.  
**Description**   This command sets the preamble length.  
**Query**         The query form of this command will return the current setting of the Willtek 3100.  
**Example**        :CONF:CDMA:BS:ACC:PRE 1  
                  :CONF:CDMA:BS:ACC:PRE?  
Value returned: 1.

### **:CONFigure:CDMA:BS:ACCess:TIMEout**

**Syntax**        :CONFigure:CDMA:BS:ACCess:TIMEout <Reall>  
**Parameters**   Reall is a floating point real number. The minimum value is 0.16, the maximum value 1.36. The minimum resolution is 0.08. The default value is 1.36.  
**Description**   This command sets the access probe's nominal power of the Willtek 3100 ( i.e. simulated base station). The physical dimension is microseconds.  
**Query**         The query form of this command will return the current setting of the Willtek 3100.  
**Example**        :CONF:CDMA:BS:ACCess:TIMEout 0.16  
                  :CONF:CDMA:BS:ACC:TIM?  
Value returned: 0.16.

### **:CONFigure:CDMA:BS:MEID:STATE**

**Syntax**        :CONFigure:CDMA:BS:MEID:STATE <PredefExp>  
**Parameters**   PredefExp is one of the following predefined expressions: ON | OFF. Default is ON.  
**Description**   This command sets the CDMA network setup MEID supported flag on or off.  
**Query**         The query form of this command returns the current setting for PredefExp.  
**Example**        :CONF:CDMA:BS:MEID:STAT ON  
                  :CONF:CDMA:BS:MEID:STAT?  
Value returned: ON.

### **:CONFigure:CDMA:BS:PLCM**

**Syntax**        :CONFigure:CDMA:BS:PLCM <PredefExp>  
**Parameters**   PredefExp is one of the following predefined expressions: ESN | BS | MEID. Default is ESN.

<b>Description</b>	This command sets the Public Long Code Mask (PLCM). If ESN Based or BS Assigned is selected, a call can be established regardless of MEID value. If MEID Based is selected, a call can be established only when the MEID value is successfully reported or retrieved.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CONF:CDMA:BS:PLCM MEID :CONF:CDMA:BS:PLCM? Value returned: MEID.

**:CONFigure:CDMA:MEASure:GROup[:RFTX]**

<b>Syntax</b>	:CONFigure:CDMA:MEASure:GROup[:RFTX] <PredefExp1>[, <PredefExp2>][, ... <PredefExp20>]
<b>Parameters</b>	At least one and up to 20 parameters can be given, each with the same range of pre-defined expressions: NONE   PPHAserr   PHAserr   PEAKerr   RMSErr   FREQuency   POWer   PMAGerr   MAGerr   TIMEerr   WQUAlity   CARRierfeed   IQIMbalance   CDPOwer   CDPHase   CDTime   CDIPower   CDINoise   CDQPowEr   CDQNOise. Default is NONE in all cases.
<b>Description</b>	Sets the group of measurements to be carried out. Up to 20 measurements can be grouped.
<b>Query</b>	The query form of this command returns the measurements that have been grouped.
<b>Example</b>	:CONF:CDMA:MEAS:GRO:RFTX WQUA, POWer :CONF:CDMA:MEAS:GRO? Returned string: WQUA, POW.

**:CONFigure:CDMA:MEAS:RFRX:FER[MAximum]**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:FER[MAximum] <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 10, the maximum value 10000. The default value is 1000.
<b>Description</b>	This command sets the maximum number of frames to use in the frame error rate test.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:FER:MAX 10000 :CONF:CDMA:MEAS:RFRX:FER:MAX? Value returned: 10000.

**:CONFigure:CDMA:MEAS:RFRX:FER:CONFidence**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:FER:CONFidence <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is 90, the maximum value 100. The minimum resolution is 0.5. The default value is 95.0.
<b>Description</b>	This command sets the percentage used to indicate if FER test passed with a certain confidence level.

<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:FER:CONFidence 95 :CONF:CDMA:MEAS:RFRX:FER:CONF? Value returned: 95.

**:CONFigure:CDMA:MEAS:RFRX:FER:LIMit[:MAXimum]**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:FER:LIMit[:MAXimum] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is 0, the maximum value 5. The minimum resolution is 0.1. The default value is 0.5.
<b>Description</b>	This command sets the percentage used when the 3100 indicates if the FER test is failed.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:FER:LIM:MAX 5.0 :CONF:CDMA:MEAS:RFRX:FER:LIM? Value returned: 5.0.

**:CONFigure:CDMA:MEAS:RFRX:FER:ENABLE**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:FER:ENABLE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	Enables or disables the limit that is applied to the FER test.
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:FER:ENAB OFF :CONF:CDMA:MEAS:RFRX:FER:ENAB? Value returned: OFF.

**:CONFigure:CDMA:MEAS:RFRX:RFER:PERE**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:RFER:PERE <PredefExp<>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	Sets the reported FER periodic enable flag.
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:RFER:PERE OFF :CONF:CDMA:MEAS:RFRX:RFER:PERE? Value returned: OFF.

**:CONFigure:CDMA:MEAS:RFRX:RFER:THRE**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:RFER:THRE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.

<b>Description</b>	Sets the reported FER threshold enable flag.
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:RFER:THRE OFF :CONF:CDMA:MEAS:RFRX:RFER:THRE? Value returned: OFF.

**:CONFigure:CDMA:MEAS:RFRX:RFER:THRS**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:RFER:THRS <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 31. The default value is 0.
<b>Description</b>	This command sets the threshold used with reported frame error rate.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:RFER:THRS 0 :CONF:CDMA:MEAS:RFRX:RFER:THRS? Value returned: 0.

**:CONFigure:CDMA:MEAS:RFRX:RFER:REPPeriod**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:RFER:REPPeriod <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 16. The default value is 10.
<b>Description</b>	This command sets the report period used with the reported frame error rate.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:RFER:REPP 12 :CONF:CDMA:MEAS:RFRX:RFER:REPP? Value returned: 12.

**:CONFigure:CDMA:MEAS:RFRX:RFER:DELAy**

<b>Syntax</b>	:CONFigure:CDMA:MEAS:RFRX:RFER:DELAy <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 31. The default value is 0.
<b>Description</b>	This command sets the delay used with the reported frame error rate.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:CDMA:MEAS:RFRX:RFER:DELAy 0 :CONF:CDMA:MEAS:RFRX:RFER:DELAy? Value returned: 0.

**:CONFigure:CDMA:COUPLoss:STATE**

<b>Syntax</b>	:CONFigure:CDMA:COUPLoss:STATE <PredefExp>
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<b>Parameters</b>	<PredefExp1> is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	This command switches the use of a coupling loss table either on or off. <b>Note:</b> Coupling loss tables are used to compensate e.g. losses in cables. For more details, please refer to section "Coupling Loss".
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one predefined expression as explained above.
<b>Example</b>	:CONFigure:COUPLoss:STATE ON :CONF:COUP:STAT? Value returned: "ON"

**:CONFigure:CDMA:COUPLoss:NAME**

<b>Syntax</b>	:CONFigure:CDMA:COUPLoss:NAME <string1>
<b>Parameters</b>	string1 is a string giving the complete file name (and directory) of the coupling loss file to be loaded. The maximum length of string1 is 50 characters. The default for string1 is "example.cpl".
<b>Description</b>	This command loads the coupling loss description file specified with the command parameter. Please note that the data contained in the file need to be activated (using the CONF:COUP:STAT ON command described above) before the data contained in the file specified will have any effect on the measurement results.
<b>Query</b>	The query form of this command will return the name of the currently loaded coupling loss description file. The string delivered back will contain the full file name.
<b>Example</b>	:CONFigure:COUPLoss:NAME "m7389.cpl" :CONF:COUP:NAME? Value returned: "m7389.cpl"

**:CONFigure:CDMA:COUPLoss:INFORMATION?**

<b>Syntax</b>	:CONFigure:CDMA:COUPLoss:INFORMATION?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command is used to read out the comments saved with the coupling loss description file currently loaded. <b>Note:</b> There is only a query form of this command available.
<b>Query</b>	The query form of this command will return the comments saved with the coupling loss description. The string delivered back will contain a maximum of 255 characters.
<b>Example</b>	:CONFigure:CDMA:COUPLoss:INFORMATION? Value returned: "Motorola P7389 with Antenna Coupler"

**:CONFigure:CDMA:COUPloss:DATA**

<b>Syntax</b>	<pre>:CONFigure:CDMA:COUPloss:NAME &gt;string1&gt; ,&lt;realf1&gt;,&lt;reala1&gt;,&lt;realf2&gt;,&lt;reala2&gt; [,&lt;realf3&gt;] [,&lt;reala3&gt;] [,&lt;realf4&gt;] [,&lt;reala4&gt;] [,&lt;realf5&gt;] [,&lt;reala5&gt;] [,&lt;realf6&gt;] [,&lt;reala6&gt;] [,&lt;realf7&gt;] [,&lt;reala7&gt;] [,&lt;realf8&gt;] [,&lt;reala8&gt;] [,&lt;realf9&gt;] [,&lt;reala9&gt;] [,&lt;realf10&gt;] [,&lt;reala10&gt;] [,&lt;realf11&gt;] [,&lt;reala11&gt;] [,&lt;realf12&gt;] [,&lt;reala12&gt;] [,&lt;realf13&gt;] [,&lt;reala13&gt;] [,&lt;realf14&gt;] [,&lt;reala14&gt;] [,&lt;realf15&gt;] [,&lt;reala15&gt;] [,&lt;realf16&gt;] [,&lt;reala16&gt;] [,&lt;realf17&gt;] [,&lt;reala17&gt;] [,&lt;realf18&gt;] [,&lt;reala18&gt;] [,&lt;realf19&gt;] [,&lt;reala19&gt;] [,&lt;realf20&gt;] [,&lt;reala20&gt;]</pre>
<b>Parameters</b>	<p>string1 is a comment line related to the coupling loss data. The maximum length of string1 is 255 characters.</p> <p>realfx are floating point real numbers, giving frequencies in MHz while realax are floating point real numbers, giving the corresponding coupling loss in dB.</p> <p>All realfx have to be within two frequency ranges. The lower frequency range is from 800.0 MHz to 1000.0 MHz; the higher frequency range is from 1700.0 MHz to 2000.0 MHz.</p> <p>The minimum resolution for all realfx values is 10 Hz (0.00001 MHz).</p> <p>The default value for all realfx is 800.0 MHz.</p> <p>The minimum value for all realax is -5.0 dB.</p> <p>The maximum value for all realax is 40.0 dB.</p> <p>The minimum resolution for all realax is 0.01 dB.</p> <p>The default value for all realax is 0.0.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- Please keep in mind that at least one pair of values for a frequency and the related attenuation <b>must</b> be specified <b>per frequency range</b>, while all other 18 pairs are optional.</li> <li>- All realax values are interpreted as an attenuation level in dB. As a consequence, negative values mean an amplification of the input signal.</li> </ul>
<b>Description</b>	With the help of this command, you may create a coupling loss description table, similar to how you would do it on the graphical user interface of the Willtek 3100.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CONFigure:CDMA:COUPloss:DATA "Motorola 7389 with cable #23",825.0,15.0,1750.0,19.0

**AMPS commands**    **:CONFigure:AMPS:BS:MAC**

<b>Syntax</b>	:CONFigure:AMPS:BS:MAC <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is 0, the maximum value is 7. The minimum resolution is 1. The default value is 2.
<b>Description</b>	This command sets the MAC power level of the mobile under test.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one real number.

<b>Example</b>	:CONF:AMPS:BS:MAC 2 :CONF:AMPS:BS:MAC? Value returned in this example: 2.
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**:CONFigure:AMPS:BS:SAT**

<b>Syntax</b>	:CONFigure:AMPS:BS:SAT <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is 0, the maximum value is 2. The minimum resolution is 1. The default value is 0.
<b>Description</b>	This command sets the SAT frequency to be utilized when a voice channel is established.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one real number.
<b>Example</b>	:CONF:AMPS:BS:SAT 2 :CONF:AMPS:BS:SAT? Value returned in this example: 2.

**:CONFigure:AMPS:BS:VCH:ARFCn**

<b>Syntax</b>	:CONFigure:AMPS:BS:VCH:ARFCn <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2047. The default value is 29.
<b>Description</b>	This command sets the channel number for the voice channel.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.
<b>Example</b>	:CONF:AMPS:BS:VCH:ARFC 0 :CONF:AMPS:BS:VCH:ARFC? Value returned in this example: 0.

**CONFigure:AMPS:MEAS:RFTX:FM:DETECTOR**

<b>Syntax</b>	:CONFigure:AMPS:MEAS:RFTX:FM:DETECTOR <PredefExp1>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: PEAKpeak   PPOSitive   PNEGative   NONE. Default is PEAKpeak.
<b>Description</b>	This command selects the detector type used for deviation measurements.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:AMPS:MEAS:RFTX:FM:DET PPOSitive :CONFigure:AMPS:MEAS:RFTX:FM:DET? Value returned in this example "PPOSitive".

**:CONFigure:AMPS:MEAS:RFTX:FM:FILTEr**

<b>Syntax</b>	:CONFigure:AMPS:MEAS:RFTX:FM:FILTEr <PredefExp1>
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<b>Parameters</b>	PredefExp is one of the following predefined expressions: NORMAl   CMESsage. Default is NORMAl.
<b>Description</b>	This command selects the filter type used for AMPS deviation measurements.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:CONFigure:AMPS:MEAS:RFTX:FM:FILT CMESsage :CONFigure:AMPS:MEAS:RFTX:FM:FILT? Value returned in this example CMES.

**:CONFigure:AMPS:MEASure:GROup[:RFTX]**

<b>Syntax</b>	CONFigure:AMPS:MEASure:GROup[:RFTX] <PredefExp1>[, <PredefExp2>][, ... <PredefExp20>]
<b>Parameters</b>	At least one and up to 5 parameters can be given, each with the same range of predefined expressions: NONE   SATDev   SATFreq   STDev   STFReq   AUD-Dev   FREQUENCY   POWER. Default is NONE in all cases.
<b>Description</b>	Sets the group of measurements to be carried out. Up to 19 measurements can be grouped.
<b>Query</b>	The query form of this command returns the measurements that have been grouped.
<b>Example</b>	:CONF:AMPS:MEAS:GRO:RFTX SATD, SATFreq, Power :CONF:AMPS:MEAS:GRO? Returned string in this example: SATD, SATF, POW.

**:CONFigure:AMPS:MEASure:GROup:RFRX**

<b>Syntax</b>	CONFigure:AMPS:MEASure:GROup:RFRX <PredefExp1>[, <PredefExp2>][, ... <PredefExp20>]
<b>Parameters</b>	At least one and up to 2 parameters can be given, each with the same range of predefined expressions: NONE   SINad   ACLevel. Default is NONE in all cases.
<b>Description</b>	Sets the group of measurements to be carried out. Up to 19 measurements can be grouped.
<b>Query</b>	The query form of this command returns the measurements that have been grouped.
<b>Example</b>	:CONF:AMPS:MEAS:GRO:RFRX SINad, ACLevel :CONF:AMPS:MEAS:GRO? Returned string in this example: SIN, ACL.

**1xEV-DO commands :CONFigure:EVDO:RANGing:MODE**

<b>Syntax</b>	:CONFigure:EVDO:RANGing:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: AUTO   FIXEd   UP   DOWN   NO   FORCed_up. Default is AUTO.
<b>Description</b>	This command selects the ranging mode of the RF analyzer.

<b>Query</b>	The query form of this command returns the current setting in form of one of the pre-defined expressions explained above, contained in a string.
<b>Example</b>	:CONFigure:EVDO:RANGing:MODE FIXEd :CONF:EVDO:RANG:MODE? Value returned: "FIXEd".

**:CONFigure:EVDO:BS:LEVel**

<b>Syntax</b>	:CONFigure:EVDO:BS:LEVel <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -120.0, the maximum value is 0.0. The minimum resolution is 0.1. The default value is -60.0.
<b>Description</b>	This command sets the RF output power level of the Willtek 3100 (i.e. simulated base station). The physical dimension is dBm.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:LEVel -50.5 :CONF:EVDO:BS:LEV? Value returned: "-50.5".

**:CONFigure:EVDO:BS:CCHannel:BAND**

<b>Syntax</b>	:CONFigure:EVDO:BS:CCHannel:BAND <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACs   KPCS   NMT450   IMT2000   MHZ900   MHZ1800   SEC800   PAMR400   PAMR800. Default is US800.
<b>Description</b>	This command sets the frequency band for the control channel.
<b>Query</b>	The query form of this command returns the current setting in form of one of the pre-defined expressions explained above, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:CCHannel:BAND SEC800 :CONF:EVDO:BS:CCH:BAND? Value returned: "SEC800".

**:CONFigure:EVDO:BS:CCHannel:ARFCn[:DATA]**

<b>Syntax</b>	:CONFigure:EVDO:BS:CCHannel:ARFCn[:DATA] <Int>, [<PredefExp>]
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 2047. The default value is 589. PredefExp is an optional predefined expression which can take on one of the following values: US800   USPCs   TACS   JTACs   KPCS   NMT450   IMT2000   MHZ900   MHZ1800   SEC800   PAMR400   PAMR800. Default is US800.
<b>Description</b>	This command sets the channel number for the control channel.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.

**Example** :CONFigure:EVDO:BS:CCHannel:ARFCn:DATA 117  
 :CONF:EVDO:BS:CCH:ARFC?  
 Value returned: "117".

**:CONFigure:EVDO:BS:TCHannel:BAND**

**Syntax** :CONFigure:EVDO:BS:TCHannel:BAND <PredefExp>

**Parameters** PredefExp is one of the following predefined expressions:  
 US800 | USPCs | TACS | JTACS | KPCS | NMT450 | IMT2000 | MHZ900 |  
 MHZ1800 | SEC800 | PAMR400 | PAMR800. Default is US800.

**Description** This command sets the frequency band for the traffic (data) channel.

**Query** The query form of this command returns the current setting in form of one of the pre-defined expressions explained above, contained in a string.

**Example** :CONFigure:EVDO:BS:TCHannel:BAND TACS  
 :CONF:EVDO:BS:TCH:BAND?  
 Value returned: "TACS".

**:CONFigure:EVDO:BS:TCHannel:ARFCn[:DATA]**

**Syntax** :CONFigure:EVDO:BS:TCHannel:ARFCn[:DATA]  
 <Int>, [<PredefExp>]

**Parameters** Int is an integer number. The minimum value is 0, the maximum value is 2047. The default value is 589.  
 PredefExp is an optional predefined expression which can take on one of the following values:  
 US800 | USPCs | TACS | JTACS | KPCS | NMT450 | IMT2000 | MHZ900 |  
 MHZ1800 | SEC800 | PAMR400 | PAMR800. Default is US800.

**Description** This command sets the channel number for the traffic (data) channel.

**Query** The query form of this command returns the current setting in form of one integer number, contained in a string.

**Example** :CONFigure:EVDO:BS:TCHannel:ARFCn 0  
 :CONF:EVDO:BS:TCH:ARFC?  
 Value returned: "0".

**:CONFigure:EVDO:BS:TCHannel:PCONtrol:SElect**

**Syntax** :CONFigure:EVDO:BS:TCHannel:PCONtrol:SElect <PredefExp>

**Parameters** PredefExp is one of the following predefined expressions:  
 ALternating | ACTive | UP | DOWN. Default is ALternating.

**Description** This command sets, how power control is to be handled with the mobile.

**Query** The query form of this command returns the current setting in form of one of the pre-defined expressions explained above, contained in a string.

**Example** :CONFigure:EVDO:BS:TCHannel:PCONtrol:SElect ACTive  
 :CONF:EVDO:BS:TCH:PCON:SEL?  
 Value returned: "ACTive".

**:CONFigure:EVDO:BS:TCHannel:PCONTrol:RESet[:IMMedia  
te]**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:PCONTrol:RESet[:IMMEDIATE]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command resets the power control and makes the Willtek 3100 return the mobile power to initial test conditions. <b>Note:</b> This command is only valid if the power control mode selected is <b>ALternating</b> (see above).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CONF:EVDO:BS:TCH:PCON:RES

**:CONFigure:EVDO:BS:TCHannel:PCONTrol:ONCE**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:PCONTrol:ONCE <PredefExp>, <Int>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: UP   DOWN. The default is UP. Int is an integer number. The minimum value is 1, the maximum value is 100. The default value is 1.
<b>Description</b>	This command causes a number of power control bits (specified by the integer number) to be sent to the mobile in the direction specified (by the predefined expression).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CONF:EVDO:BS:TCH:PCON:ONCE UP,10 Commands the Willtek 3100 to send ten power increase control bits to the mobile.

**:CONFigure:EVDO:BS:TCHannel:APPLication[:TYPE]**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCH:APPLication[:TYPE] <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FTAP   RTAP.
<b>Description</b>	This command specifies the test application protocol to use when in the connected state.
<b>Query</b>	The query form of this command returns the current setting.
<b>Example</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:TYPE FTAP :CONF:EVDO:BS:TCH:APPL? Value returned in this example: FTAP.

**:CONFigure:EVDO:BS:TCHannel:APPLication:LTAP**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:LTAP <Bool>
<b>Parameters</b>	Bool is a boolean value 0 1. Default is 0.

<b>Description</b>	This command specifies whether a limited subset of the test application protocol (TAP) shall be used in order to support older chipsets. A value of <b>0</b> will make the Willtek 3100 to use the standard TAP (in the direction as specified with the command described above), while a parameter value of <b>1</b> will make the test set to only use a limited TAP (LTAP).
<b>Query</b>	The query form of this command returns the current setting in form of one boolean value, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:LTAP 1 :CONF:EVDO:BS:TCH:APPL:LTAP? Value returned: "1".

**:CONFigure:EVDO:BS:TCHannel:APPLication:FTAP:DRATe**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:FTAP:DRATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: QPSK38   QPSK76   QPSK153   QPSK307   QPSK614   EPSK921   QPSK1228   EPSK1843   QAM2457   QAM3072. Default is QPSK307.
<b>Description</b>	This command specifies the forward channel data rate to be used when running FTAP.
<b>Query</b>	The query form of this command returns the current setting in form of one of the predefined expressions explained above, contained in a string.
<b>Example</b>	:CONF:EVDO:BS:TCHannel:APPLication:FTAP:DRATe QPSK153 :CONF:EVDO:BS:TCH:APPL:FTAP:DRAT? Value returned: "QPSK153".

**:CONFigure:EVDO:BS:TCHannel:APPLication:FTAP:ABFMod  
e**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:FTAP:ABFMode <Bool>
<b>Parameters</b>	Bool is a boolean value 0 1. Default is 1.
<b>Description</b>	This command either enables the use of the ACK channel bit fixed mode (parameter value <b>1</b> ) or disables it (parameter value <b>0</b> ).
<b>Query</b>	The query form of this command returns the current setting in form of one boolean value, contained in a string.
<b>Example</b>	:CONF:EVDO:BS:TCHannel:APPLication:FTAP:ABFMode 0 :CONF:EVDO:BS:TCH:APPL:FTAP:ABFM? Value returned: "0".

**:CONFigure:EVDO:BS:TCHannel:APPLication:RTAP:DRATe**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:RTAP:DRATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: BPSK9   BPSK19   BPSK38   BPSK76   BPSK153   QPSK230   QPSK307   QPSK460   QPSK614   QPSK921   QPSK1228   EPSK1843. Default is BPSK9.



<b>Description</b>	This command specifies the reverse channel data rate to be used when running RTAP.
<b>Query</b>	The query form of this command returns the current setting in form of one of the pre-defined expressions explained above, contained in a string.
<b>Example</b>	:CONF:EVDO:BS:TCH:APPL:RTAP:DRAT BPSK76 :CONF:EVDO:BS:TCH:APPL:RTAP:DRAT? Value returned: "BPSK76".

**:CONFigure:EVDO:BS:TCHannel:APPLication:DPACkets**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:DPACkets <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 100. The default value is 50.
<b>Description</b>	This command specifies the percentage of packets addressed to the mobile under test (in relation to the total amount of packets sent by the 3100). Increasing this value will increase the data handling load on the mobile.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:TCHannel:APPLication:DPACkets 75 :CONF:EVDO:BS:TCH:APPL:DPAC? Value returned: "75".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:ACKChannel**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:ACKChannel <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -3.0, the maximum value is 6.0. The resolution is 0.5. The default value is 3.0.
<b>Description</b>	This command specifies the ACK channel gain. This is an offset in dB to the mobile's R-pilot power. This value is sent in the TCH assignment message to the mobile. The mobile needs this value to calculate its power level when transmitting data on the R-ACK (reverse acknowledgement channel).
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:ACKChannel 2.5 :CONF:EVDO:BS:TCH:REV:GAIN:ACKC? Value returned: "2.5".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DRCChannel**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DRCChannel <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -9.0, the maximum value is 6.0. The resolution is 0.5. The default value is 3.0.

<b>Description</b>	This command specifies the DRC channel gain. This is an offset in dB to the mobile's R-pilot power. This value is sent in the TCH assignment message to the mobile. The mobile needs this value to calculate its power level when transmitting data on the R-DRC (reverse data rate control channel).
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DRCCannel 2.5 :CONF:EVDO:BS:TCH:REV:GAIN:DRCC? Value returned: "2.5".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DSCChannel**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DSCChannel <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -12.0, the maximum value is 0.0. The resolution is 0.5. The default value is 0.0.
<b>Description</b>	This command specifies the DSC channel gain. This is an offset in dB to the mobile's R-pilot power. This value is sent in the TCH assignment message to the mobile. The mobile needs this value to calculate its power level when transmitting data on the R-DSC (reverse data source channel).
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DSCChannel -4.0 :CONF:EVDO:BS:TCH:REV:GAIN:DSCC? Value returned: "-4.0".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:NOMinal**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset :NOMinal <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -3.5, the maximum value is 4.0. The resolution is 0.5. The default value is 0.0.
<b>Description</b>	This command specifies the data offset nominal. This is an offset in dB to the mobile's R-pilot power. This value is sent in the TCH assignment message to the mobile. The mobile needs this value to calculate its power level when transmitting data.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:TCH:REVerse:GAIN:DOFFset:NOMinal -1.5 :CONF:EVDO:BS:TCH:REV:GAIN:DOFF:NOM? Value returned: "-1.5".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RA  
TA**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATA <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -1.75, the maximum value is 2.0. The resolution is 0.25. The default value is 0.0.
<b>Description</b>	This command specifies the data power offset to use for the 9.6 Kbps data rate on the R-TCH. This value is relative to the R-Pilot power in dB (and is used in addition to the data offset nominal gain). The value is sent in the TCH assignment message to the mobile.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONF:EVDO:BS:TCH:REV:GAIN:DOFF:RATA -1.25 :CONF:EVDO:BS:TCH:REV:GAIN:DOFF:RATA? Value returned: "-1.25".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RA  
TB**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATB <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -1.75, the maximum value is 2.0. The resolution is 0.25. The default value is 0.0.
<b>Description</b>	This command specifies the data power offset to use for the 19.2 Kbps data rate on the R-TCH. This value is relative to the R-Pilot power in dB (and is used in addition to the data offset nominal gain). The value is sent in the TCH assignment message to the mobile.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONF:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATB -1.25 :CONF:EVDO:BS:TCH:REV:GAIN:DOFF:RATB? Value returned: "-1.25".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RA  
TC**

<b>Syntax</b>	:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATC <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -1.75, the maximum value is 2.0. The resolution is 0.25. The default value is 0.0.
<b>Description</b>	This command specifies the data power offset to use for the 38.4 Kbps data rate on the R-TCH. This value is relative to the R-Pilot power in dB (and is used in addition to the data offset nominal gain). The value is sent in the TCH assignment message to the mobile.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.

**Example** :CONF:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATC -1.25  
 :CONF:EVDO:BS:TCH:REV:GAIN:DOFF:RATC?  
 Value returned: "-1.25".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RA  
 TD**

**Syntax** :CONF:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATD  
 <Real>

**Parameters** Real is a floating point real number. The minimum value is -2.0, the maximum value is 1.75. The resolution is 0.25. The default value is -2.0.

**Description** This command specifies the data power offset to use for the 76.9 Kbps data rate on the R-TCH. This value is relative to the R-Pilot power in dB (and is used in addition to the data offset nominal gain). The value is sent in the TCH assignment message to the mobile.

**Query** The query form of this command returns the current setting in form of one floating point real number, contained in a string.

**Example** :CONF:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATD -1.25  
 :CONF:EVDO:BS:TCH:REV:GAIN:DOFF:RATD?  
 Value returned: "-1.25".

**:CONFigure:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RA  
 TE**

**Syntax** :CONF:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATE  
 <Real>

**Parameters** Real is a floating point real number. The minimum value is -2.0, the maximum value is 1.75. The resolution is 0.25. The default value is -2.0.

**Description** This command specifies the data power offset to use for the 153.6 Kbps data rate on the R-TCH. This value is relative to the R-Pilot power in dB (and is used in addition to the data offset nominal gain). The value is sent in the TCH assignment message to the mobile.

**Query** The query form of this command returns the current setting in form of one floating point real number, contained in a string.

**Example** :CONF:EVDO:BS:TCHannel:REVerse:GAIN:DOFFset:RATE -1.25  
 :CONF:EVDO:BS:TCH:REV:GAIN:DOFF:RATE?  
 Value returned: "-1.25".

**:CONFigure:EVDO:BS:TCHannel:REVerse:MTYPE:ACKChanne  
 1**

**Syntax** :CONF:EVDO:BS:TCH:REVerse:MTYPE:ACKChannel <Pre-  
 defExp>

**Parameters** PredefExp is one of the following predefined expressions: BIPo-  
 lar|OoFFkeying.

**Description** This command specifies the ACK channel modulation type the AT should use when using Physical Layer Subtype 2.

<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:EVDO:BS:TCH:REV:MTYP:ACKC OOFF :CONF:EVDO:BS:TCH:REV:MTYPe:ACKC? Value returned in this example: OOFF.

**:CONFigure:EVDO:BS:NETWork:PREVision**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:PREVision <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: REVO   REVA. Default is REVO.
<b>Description</b>	This command specifies the protocol revision of the 1xEV-DO standard to use.
<b>Query</b>	The query form of this command returns the current setting in form of one of the predefined expressions explained above, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:PREVision REVA :CONF:EVDO:BS:NETW:PREV? Value returned: "REVA".

**:CONFigure:EVDO:BS:NETWork:PLAYer:TYPE**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:PLAYer:TYPE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: TYPE0   TYPE2. Default is TYPE0.
<b>Description</b>	This command specifies the subtype of the physical layer that is to be used if the protocol version is set to REVA (see command above). For REVO, subtype 0 (TYPE0) will always be used.
<b>Query</b>	The query form of this command returns the current setting in form of one of the predefined expressions explained above, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:PLAYer:TYPE TYP0 :CONF:EVDO:BS:NETW:PLAY:TYPE? Value returned: "TYP0".

**:CONFigure:EVDO:BS:NETWork:PNOffset**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:PNOffset <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum values is 511. The default value is 12.
<b>Description</b>	This command sets the time offset to the PN sequence.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:PNOffset 50 :CONF:EVDO:BS:NETW:PNOF? Value returned: "50".

**:CONFigure:EVDO:BS:NETWork:MCCode**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:MCCode <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum values is 999. The default value is 310.
<b>Description</b>	This command sets the mobile country code to be broadcast by the Willtek 3100. <b>Note:</b> This is an important parameter that needs to match the mobile's preferred roaming list (PRL). Otherwise, it might not be possible to initiate a session.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:MCCode 249 :CONF:EVDO:BS:NETW:MCC? Value returned: "249".

**:CONFigure:EVDO:BS:NETWork:CCODE**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:CCODE <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum values is 255. The default value is 64 (80 in hex notation).
<b>Description</b>	This command sets the network's color code to be broadcast by the Willtek 3100. <b>Note:</b> This is an important parameter that needs to match the mobile's preferred roaming list (PRL). Otherwise, it might not be possible to initiate a session.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:CCODE 10 :CONF:EVDO:BS:NETW:CCOD? Value returned: "10".

**:CONFigure:EVDO:BS:NETWork:SECTOR:ID:MSW**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:SECTOR:ID:MSW <String>
<b>Parameters</b>	String represents a hexadecimal value with a maximum length of eight hexadecimal symbols (0 to 9, A to F a to f).
<b>Description</b>	This command specifies the most significant 32 bits (i.e. bits 127 to 96) of the 128 bit long sector ID parameter.
<b>Query</b>	The query form of this command returns the current setting in form of eight hexadecimal symbols, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:SECTOR:ID:MSW "2468ACEF" :CONF:EVDO:BS:NETW:SECT:ID:MSW? Value returned: " "2468ACEF" ".

**:CONFigure:EVDO:BS:NETWork:SECTor:ID:SSW**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:SECTor:ID:SSW <String>
<b>Parameters</b>	String represents a hexadecimal value with a maximum length of eight hexadecimal symbols (0 to 9, A to F a to f).
<b>Description</b>	This command specifies the second most significant 32 bits (i.e. bits 95 to 64) of the 128 bit long sector ID parameter.
<b>Query</b>	The query form of this command returns the current setting in form of eight hexadecimal symbols, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:SECTor:ID:SSW "1357bdfF" :CONF:EVDO:BS:NETW:SECT:ID:SSW? Value returned: " "1357bdfF" ".

**:CONFigure:EVDO:BS:NETWork:SECTor:ID:TSW**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:SECTor:ID:TSW <String>
<b>Parameters</b>	String represents a hexadecimal value with a maximum length of eight hexadecimal symbols (0 to 9, A to F a to f).
<b>Description</b>	This command specifies the third most significant 32 bits (i.e. bits 63 to 32) of the 128 bit long sector ID parameter.
<b>Query</b>	The query form of this command returns the current setting in form of eight hexadecimal symbols, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:SECTor:ID:TSW "2468ACEF" :CONF:EVDO:BS:NETW:SECT:ID:TSW? Value returned: " "2468ACEF" ".

**:CONFigure:EVDO:BS:NETWork:SECTor:ID:LSW**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:SECTor:ID:LSW <String>
<b>Parameters</b>	String represents a hexadecimal value with a maximum length of eight hexadecimal symbols (0 to 9, A to F a to f).
<b>Description</b>	This command specifies the least significant 32 bits (i.e. bits 31 to 0) of the 128 bit long sector ID parameter.
<b>Query</b>	The query form of this command returns the current setting in form of eight hexadecimal symbols, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:SECTor:ID:LSW "FDBA9753" :CONF:EVDO:BS:NETW:SECT:ID:LSW? Value returned: " "FDBA9753" ".

**:CONFigure:EVDO:BS:NETWork:SECTor:SMASK**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:SECTor:SMASK <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 128. The default value is 104.

<b>Description</b>	This command specifies the number of consecutive 1s in the subnet mask value to use (when looking at its binary representation). <b>Note:</b> This is an important parameter that needs to match the mobile's preferred roaming list (PRL). Otherwise, it might not be possible to initiate a session.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:SECTor:SMASk 0 :CONF:EVDO:BS:NETW:SECT:SMAS? Value returned: "0".

**:CONFigure:EVDO:BS:NETWork:CCHannel:DRATE**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:CCHannel:DRATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: R38400   R76800. Default is R76800.
<b>Description</b>	This command specifies the data rate for the Willtek 3100 to use on its control channel.
<b>Query</b>	The query form of this command returns the current setting in form of one predefined expression as explained above, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:CCHannel:DRATE R76800 :CONF:EVDO:BS:NETW:CCH:DRAT? Value returned: "R76800".

**:CONFigure:EVDO:BS:NETWork:CCHannel:PCCycle:STATE**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:CCHannel:PCCycle:STATE <Bool>
<b>Parameters</b>	Bool is a boolean value (0   1). The default value is 0.
<b>Description</b>	This command enables (parameter value set to 1) or disables (parameter value set to 0) the preferred control channel cycle.
<b>Query</b>	The query form of this command returns the current setting in form of one boolean value, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:CCHannel:PCCycle:STATE 1 :CONF:EVDO:BS:NETW:CCH:PCCC:STAT? Value returned: "1".

**:CONFigure:EVDO:BS:NETWork:CCHannel:PCCycle:NUMBER**

<b>Syntax</b>	:CONFigure:EVDO:BS:NETWork:CCHannel:PCCycle:NUMBER <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 32767. The default value is 8096.
<b>Description</b>	This command sets the preferred control channel cycle value. <b>Note:</b> This is an important parameter that needs to match the corresponding value for the mobile (it may be different from mobile to mobile). An improper setting will result in a rejection from the mobile during session negotiation.



<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:NETWork:CCHannel:PCCCycle:NUMBER 102 :CONF:EVDO:BS:NETW:CCH:PCCC:NUMB? Value returned: "102".

**:CONFigure:EVDO:BS:ACCess:OLADjust[:DATA]**

<b>Syntax</b>	:CONFigure:EVDO:BS:ACCess:OLADjust[:DATA] <Int>, <PredefExp>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 255. The default value is 78. PredefExp is one of the following predefined expressions: US800 USPCs TACS JTACs KPCS NMT450 IMT2000 MHZ900 MHZ1800 SEC800 PAMR400 PAMR800. Default is US800.
<b>Description</b>	This command sets the open loop adjust value. This is an offset in dB needed by the mobile to calculate its pilot initial power. As this parameter may be different for every frequency band, the related frequency band has to be stated as well.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string. The frequency band needs to be specified with the query (see example below).
<b>Example</b>	:CONFigure:EVDO:BS:ACCess:OLADjust:DATA 81,USPC :CONF:EVDO:BS:ACC:OLAD? USPC Value returned: "81".

**:CONFigure:EVDO:BS:ACCess:PREamble**

<b>Syntax</b>	:CONFigure:EVDO:BS:ACCess:PREamble <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 7. The default value is 2.
<b>Description</b>	This command sets the length (in frames) of the access probe preamble.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:BS:ACCess:PREamble 1 :CONF:EVDO:BS:ACC:PRE? Value returned: "1".

**:CONFigure:EVDO:BS:ACCess:PROBe:IADJust**

<b>Syntax</b>	:CONFigure:EVDO:BS:ACCess:PROBe:IADJust <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is -15, the maximum value is 16. The default value is 0.
<b>Description</b>	This command sets the initial adjust. This is an offset in dB, required by the mobile to calculate its pilot initial power.

<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	<pre>:CONFigure:EVDO:BS:ACCess:PROBe:IADJust 3 :CONF:EVDO:BS:ACC:PROB:IADJ? Value returned: "3".</pre>

**:CONFigure:EVDO:BS:ACCess:PROBe:PSTep**

<b>Syntax</b>	<pre>:CONFigure:EVDO:BS:ACCess:PROBe:PSTep &lt;Real&gt;</pre>
<b>Parameters</b>	Real is a floating point real number. The minimum value is 0.0, the maximum value is 7.5, the resolution is 0.5. The default value is 1.0.
<b>Description</b>	This command sets the power step. The power step (in dB, relative to the mobile's initial pilot power level) represents the amount by which the mobile shall increase its transmit power should the base station not react to its access probe.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	<pre>:CONFigure:EVDO:BS:ACCess:PROBe:PSTep 2.5 :CONF:EVDO:BS:ACC:PROB:PST? Value returned: "2.5".</pre>

**:CONFigure:EVDO:BS:ACCess:PROBe:NSTep**

<b>Syntax</b>	<pre>:CONFigure:EVDO:BS:ACCess:PROBe:NSTep &lt;Int&gt;</pre>
<b>Parameters</b>	Int is an integer number. The minimum value is 1, the maximum value is 15. The default value is 8.
<b>Description</b>	This command sets the number of steps (access probes) in a single access probe sequence.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	<pre>:CONFigure:EVDO:BS:ACCess:PROBe:NSTep 10 :CONF:EVDO:BS:ACC:PROB:NST? Value returned: "10".</pre>

**:CONFigure:EVDO:BS:ACCess:PROBe:SEQMax**

<b>Syntax</b>	<pre>:CONFigure:EVDO:BS:ACCess:PROBe:SEQMax &lt;Int&gt;</pre>
<b>Parameters</b>	Int is an integer number. The minimum value is 1, the maximum value is 15. The default value is 8.
<b>Description</b>	This command sets the maximum number of access probe sequences the mobile is to use.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	<pre>:CONFigure:EVDO:BS:ACCess:PROBe:SEQMax 15 :CONF:EVDO:BS:ACC:PROB:SEQM? Value returned: "10".</pre>

**:CONFigure:EVDO:MEASure:GROup[:RFTX]**

<b>Syntax</b>	:CONFigure:EVDO:MEASure:GROup[:RFTX] <PredefExp1>[, <PredefExp2>, ... <PredefExp12>]
<b>Parameters</b>	PredefExpn is one of the following 12 predefined expressions: PPHAserr   PHASeerr   PEAKerr   RMSErr   FREQuency   POWer   PMAGerr   MAGerr   TIMEerr   WQUAlity   CARRierfeed   IQIMbalance. At least one parameter needs to be specified. A maximum of 12 parameters can be specified, separated by commas (see example below).
<b>Description</b>	Sets the group of measurements to be carried out by the :MEASure:EVDO:RFTX:GROup command. A maximum of twelve individual measurements can be specified for the group measurement: PPHAserr - peak value of the error vector's phase component PHASeerr - RMS value of the error vector's phase component PEAKerr - peak value of the error vector RMSErr - RMS value of the error vector FREQuency - frequency error POWer - the mobile's effective radiated power PMAGerr - the peak value of the error vector's magnitude component MAGerr - the RMS value of the error vector's magnitude component TIMEerr - the mobile's transmit time error WQUAlity - the modulation quality (rho) CARRierfeed - the mobile's carrier feedthrough IQIMbalance - the mobile's IQ imbalance
<b>Query</b>	The query form of this command returns the current setting in form of one or several (up to 12) predefined expressions as described above, contained in a string.
<b>Example</b>	:CONFigure:EVDO:MEASure:GROup:RFTX POW,WQUA,PEAK :CONF:EVDO:MEAS:GRO? Returned string: "POW,WQUA,PEAK".

**:CONFigure:EVDO:MEASure:RFRX:PER[:MAXimum]**

<b>Syntax</b>	:CONFigure:EVDO:MEASure:RFRX:PER[:MAXimum] <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 100, the maximum value 10000. The default value is 1000.
<b>Description</b>	This command sets the maximum number of packets to be used for the packet error rate measurement.
<b>Query</b>	The query form of this command returns the current setting in form of one integer number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:MEASure:RFRX:PER:MAXimum 10000 :CONF:EVDO:MEAS:RFRX:PER? Value returned: "10000".

**:CONFigure:EVDO:MEASure:RFRX:PER:CONFidence**

<b>Syntax</b>	:CONFigure:EVDO:MEASure:RFRX:PER:CONFidence <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is 90, the maximum value is 100, the resolution is 0.5. The default value is 95.0.
<b>Description</b>	This command sets the confidence (i.e. a percentage) for the PER measurement. The confidence is a statistical measure of the completeness of information obtained about a statistical process. A confidence level of less than 100% may result in the test being concluded before the specified number of packets has been reached, so that the test time can be shortened.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:MEASure:RFRX:PER:CONFidence 97.5 :CONF:EVDO:MEAS:RFRX:PER:CONF? Value returned: "97.5".

**:CONFigure:EVDO:MEASure:RFRX:PER:LIMit[:MAXimum]**

<b>Syntax</b>	:CONFigure:EVDO:MEASure:RFRX:PER:LIMit[:MAXimum] <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is 0, the maximum value is 5, the resolution is 0.1. The default value is 0.5.
<b>Description</b>	This command specifies the limit applied by the 3100 when indicating whether a PER measurement was passed or failed.
<b>Query</b>	The query form of this command returns the current setting in form of one floating point real number, contained in a string.
<b>Example</b>	:CONFigure:EVDO:MEASure:RFRX:PER:LIMit:MAXimum 0.8 :CONF:EVDO:MEAS:RFRX:PER:LIM? Value returned: "0.8".

**WCDMA commands**    **:CONFigure:WCDMa:POWMeasure:RRCFilter**

<b>Syntax</b>	:CONFigure:WCDMa:POWMeasure:RRCFilter <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command sets the state of the RRC Filter for power measurements.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CONF:WCDM:POWM:RRCF OFF :CONF:WCDMA:POWM:RRCF? Value returned in this example: OFF.

**:CONF:WCDMa:POWMeasure:ULTarget**

<b>Syntax</b>	:CONF:WCDMa:POWMeasure:ULTarget <Real1>
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<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -50, the maximum value 33. The minimum resolution is 0.1. The default value is -50.
<b>Description</b>	This command will set the UL Target Power.
<b>Query</b>	This query gets the UL Target Power.
<b>Example</b>	:CONF:WCDM:POWM:ULTA -10.0 :CONF:WCDM:POWM:ULTA? Value returned in this example: -10.0

**:CONF:WCDMa:POWMeasure:ULTarget:FORCE**

<b>Syntax</b>	:CONF:WCDMa:POWMeasure:ULTarget:FORCE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: NONE   MINimum   MAXimum. Default is NONE.
<b>Description</b>	This command forces the UE to transmit with minimum or maximum power. If set to NONE the UE is set to transmit with the value set by command: CONF:WCDM:POWM:ULTA.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CONF:WCDM:POWM:ULTA:FORC MAX :CONF:WCDM:POWM:ULTA:FORC? Value returned in this example: MAX.

**:CONFigure:WCDMa:NB:LEVel**

<b>Syntax</b>	:CONFigure:WCDMa:NB:LEVel <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -120, the maximum value -20. The minimum resolution is 0.1. The default value is -70.
<b>Description</b>	This command sets the RF output level of the 3100. The value specified for real1 is the power output level in dBm.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:WCDM:NB:LEV -38.0 :CONF:WCDMA:NB:LEV? Value returned in this example: -38.0.

**:CONFigure:WCDMa:NB:LEVel:RELative**

<b>Syntax</b>	:CONFigure:WCDMa:NB:LEVel:RELative <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: CPICH   IOR. The default is CHICH.
<b>Description</b>	This command sets the power type which each code channel is relative to.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CONF:WCDM:NB:LEV:REL IOR :CONF:WCDMA:NB:LEV:REL? Value returned in this example: IOR.

**NOTE**

In remote mode (via SCPI) the power levels of the individual code channels can only be set relative to  $I_{or}$  (output power). Furthermore in remote mode you have to make sure that the sum of the power levels for all code channel plus OCNS is equal to  $I_{or}$ .

Code channel levels relative to  $I_{or}$

PCPICH_Ec	:	$10 \cdot \log_{10}(\rho I_{or})$ dBm	= $10 \cdot \log_{10}(\rho)$ dB
SCH_Ec	:	$10 \cdot \log_{10}(\alpha I_{or})$ dBm	= $10 \cdot \log_{10}(\alpha)$ dB
P-CCPCH_Ec	:	$10 \cdot \log_{10}(\gamma I_{or})$ dBm	= $10 \cdot \log_{10}(\gamma)$ dB
S-CCPCH_Ec	:	$10 \cdot \log_{10}(\chi I_{or})$ dBm	= $10 \cdot \log_{10}(\chi)$ dB
PICH_Ec	:	$10 \cdot \log_{10}(\delta I_{or})$ dBm	= $10 \cdot \log_{10}(\delta)$ dB
AICH_Ec	:	$10 \cdot \log_{10}(\mu I_{or})$ dBm	= $10 \cdot \log_{10}(\mu)$ dB
DPCH_Ec	:	$10 \cdot \log_{10}(\lambda I_{or})$ dBm	= $10 \cdot \log_{10}(\lambda)$ dB
OCNS_Ec	:	$10 \cdot \log_{10}(\sigma I_{or})$ dBm	= $10 \cdot \log_{10}(\sigma)$ dB

- $\rho + 0.1 \cdot \alpha + 0.9 \cdot \alpha + 0.96 \cdot \delta + \lambda \leq 1$
- $\sigma = 1 - (\rho + 0.1 \cdot \alpha + 0.9 \cdot \alpha + 0.96 \cdot \delta + \lambda)$
- $OCNS\_Ec - PCPICH\_Ec \leq 15.0$  dB
- $SCH\_Ec, P-CCPCH\_Ec, S-CCPCH\_Ec, PICH\_Ec, AICH\_Ec, DPCH\_Ec \leq PCPICH\_Ec$
- $PICH\_Ec[dB] - PCPICH\_Ec[dB] \geq -10$ dB (PICH\_Ec and PCPICH\_Ec are relative to  $I_{or}$ )
- $AICH\_Ec[dB] - PCPICH\_Ec[dB] \geq -22$ dB (AICH\_Ec and PCPICH\_Ec are relative to  $I_{or}$ )

**:CONFigure:WCDMA:NB:LEVel:CPICH**

<b>Syntax</b>	:CONFigure:WCDMA:NB:LEVel:CPICH <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -35, the maximum value is 0. The minimum resolution is 0.1. The default value is -4.1.
<b>Description</b>	This command sets the Primary CPICH power relative to $I_{or}$ . This is an exception, because this special code channel is always defined relative to $I_{or}$ , regardless of what is set with <code>CONF:WCDM:LEV:REL</code> .
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:WCDM:NB:LEV:CPIC -30 :CONF:WCDMA:NB:LEV:CPIC? Value returned in this example: -30.

**:CONFigure:WCDMa:NB:LEVel:DPCH**

<b>Syntax</b>	:CONFigure:WCDMa:NB:LEVel:DPCH <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -35, the maximum value is 0. The minimum resolution is 0.1. The default value is -5.0.
<b>Description</b>	This command sets the DPCH power relative to CPICH or Ior, depending on what is set with CONF:WCDM:LEV:REL.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:WCDM:NB:LEV:DPCH -20 :CONF:WCDMA:NB:LEV:DPCH? Value returned in this example: -20.

**:CONFigure:WCDMa:NB:LEVel:PCCPch**

<b>Syntax</b>	:CONFigure:WCDMa:NB:LEVel:PCCPch <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -35, the maximum value is 0. The minimum resolution is 0.1. The default value is -6.0.
<b>Description</b>	This command sets the PCCPCH power relative to CPICH or Ior, depending on what is set with CONF:WCDM:LEV:REL.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:WCDM:NB:LEV:PCCP -10 :CONF:WCDMA:NB:LEV:PCCP? Value returned in this example: -10.

**:CONFigure:WCDMa:NB:LEVel:SCCPch**

<b>Syntax</b>	:CONFigure:WCDMa:NB:LEVel:SCCPch <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -35, the maximum value is 0. The minimum resolution is 0.1. The default value is -3.0.
<b>Description</b>	This command sets the SCCPCH power relative to CPICH or Ior, dependent from what is set with CONF:WCDM:LEV:REL.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:WCDM:NB:LEV:SCCP -15 :CONF:WCDMA:NB:LEV:SCCP? Value returned in this example: -15.

**:CONFigure:WCDMa:NB:LEVel:PSCH**

<b>Syntax</b>	:CONFigure:WCDMa:NB:LEVel:PSCH <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -35, the maximum value is 0. The minimum resolution is 0.1. The default value is -3.0.
<b>Description</b>	This command sets the PSCH power relative to CPICH or Ior, depending on what is set with CONF:WCDM:LEV:REL.

**Query** The query form of this command will return the current setting of the Willtek 3100.

**Example** : CONF:WCDM:NB:LEV:PSCH -12  
: CONF:WCDMA:NB:LEV:PSCH?  
Value returned in this example: -12.

**:CONFigure:WCDMa:NB:LEVel:PICh**

**Syntax** : CONFigure:WCDMa:NB:LEVel:PICh <Real1>

**Parameters** Real1 is a floating point real number. The minimum value is -35, the maximum value is 0. The minimum resolution is 1.0. The default value is 0.0.

**Description** This command sets the PICH power relative to CPICH or Ior, depending on what is set with CONF:WCDM:LEV:REL. Also this parameter range depends on the setting from CONF:WCDM:LEV:REL. Its minimum is -35.0 in case that it is relative to Ior. If it is relative to CPICH, however, then it is -10.0.

**Query** The query form of this command will return the current setting of the Willtek 3100.

**Example** : CONF:WCDM:NB:LEV:PICh -16  
: CONF:WCDMA:NB:LEV:PICh?  
Value returned in this example: -16.

**:CONFigure:WCDMa:NB:LEVel:AICH**

**Syntax** : CONFigure:WCDMa:NB:LEVel:AICH <Real1>

**Parameters** Real1 is a floating point real number. The minimum value is -35, the maximum value is 0. The minimum resolution is 1.0. The default value is -6.0.

**Description** This command sets the AICH power relative to CPICH or Ior, depending on what is set with CONF:WCDM:LEV:REL.

**Query** The query form of this command will return the current setting of the Willtek 3100.

**Example** : CONF:WCDM:NB:LEV:AICH -17  
: CONF:WCDMA:NB:LEV:AICH?  
Value returned in this example: -17.

**:CONFigure:WCDMa:NB:LEVel:OCNS**

**Syntax** : CONFigure:WCDMa:NB:LEVel:OCNS <Real1>

**Parameters** Real1 is a floating point real number. The minimum value is -35, the maximum value is 15. The minimum resolution is 0.1. The default value is -5.0.

**Description** This command sets the OCNS power relative to CPICH or Ior, depending on what is set with CONF:WCDM:LEV:REL.

**Query** The query form of this command will return the current setting of the Willtek 3100.

**Example** : CONF:WCDM:NB:LEV:OCNS -18  
: CONF:WCDMA:NB:LEV:OCNS?  
Value returned in this example: -18.



**:CONFigure:WCDMa:NB:LEVel:OCNS:STATe**

<b>Syntax</b>	:CONFigure:WCDMa:NB:LEVel:OCNS:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. The default is OFF.
<b>Description</b>	This command sets the OCNS state on or off.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CONF:WCDM:NB:LEV:OCNS:STAT OFF :CONF:WCDMA:NB:LEV:OCNS:STAT? Value returned in this example: OFF.

**:CONFigure:WCDMa:NB:CELL:MCC**

<b>Syntax</b>	:CONFigure:WCDMa:NB:CELL:MCC <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 999. The default value is 1.
<b>Description</b>	This command sets the mobile country code (MCC).
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.
<b>Example</b>	:CONF:WCDM:NB:CELL:MCC 1 :CONF:WCDMA:NB:CELL:MCC? Value returned in this example: 1.

**:CONFigure:WCDMa:NB:CELL:MNC**

<b>Syntax</b>	:CONFigure:WCDMa:NB:CELL:MNC <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 99. The default value is 1.
<b>Description</b>	This command sets the mobile network code (MNC).
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.
<b>Example</b>	:CONF:WCDM:NB:CELL:MNC 0 :CONF:WCDMA:NB:CELL:MNC? Value returned in this example: 0.

**:CONFigure:WCDMa:NB:CELL:LAC**

<b>Syntax</b>	:CONFigure:WCDMa:NB:CELL:LAC <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 65535. The default value is 4660.
<b>Description</b>	This command sets the UE's LAC.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.

**Example** :CONF:WCDM:NB:CELL:LAC 0  
:CONF:WCDMA:NB:CELL:LAC?  
Value returned in this example: 0.

**:CONFigure:WCDMa:NB:CELL:URA**

**Syntax** :CONFigure:WCDMa:NB:CELL:URA <Int1>  
**Parameters** Int1 is an integer number. The minimum value is 0, the maximum value 65535. The default value is 29136.  
**Description** This command sets the UE's URA.  
**Query** The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.  
**Example** :CONF:WCDM:NB:CELL:URA 30000  
:CONF:WCDMA:NB:CELL:URA?  
Value returned in this example: 30000.

**:CONFigure:WCDMa:NB:CELL:CIDentity**

**Syntax** :CONFigure:WCDMa:NB:CELL:CIDentity <Int1>  
**Parameters** Int1 is an integer number. The minimum value is 0, the maximum value 216494545. The default value is 216494544.  
**Description** This command sets the UE's cell identity.  
**Query** The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.  
**Example** :CONF:WCDM:NB:CELL:CID 216494545  
:CONF:WCDMA:NB:CELL:CID?  
Value returned in this example: 216494545.

**:CONFigure:WCDMa:NB:CELL:PSC**

**Syntax** :CONFigure:WCDMa:NB:CELL:PSC <Int1>  
**Parameters** Int1 is an integer number. The minimum value is 0, the maximum value 511. The default value is 0.  
**Description** This command sets the NB primary scrambling code.  
**Query** The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.  
**Example** :CONF:WCDM:NB:CELL:PSC 5  
:CONF:WCDMA:NB:CELL:PSC?  
Value returned in this example: 5.

**:CONFigure:WCDMa:NB:CELL:KI**

**Syntax** :CONFigure:WCDMa:NB:CELL:KI <string1>

<b>Parameters</b>	<code>string1</code> is a string, giving the KI value. The length of <code>string1</code> is 32 characters. The default for <code>string1</code> is "000102030405060708090A0B0C0D0E0F".
<b>Description</b>	This command sets the KI value.
<b>Query</b>	The query form of this command will return the current setting.
<b>Example</b>	:CONF:WCDM:NB:CELL:KI "000102030405060708090A0B0C0D0E0F" :CONF:WCDMA:NB:CELL:KI? Value returned in this example: "000102030405060708090A0B0C0D0E0F"

**:CONFigure:WCDMa:NB:RMC**

<b>Syntax</b>	:CONFigure:WCDMa:NB:RMC <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RMC12   RMC64   RMC144   RMC384. The default is RMC12.
<b>Description</b>	This command sets the Reference Measurement Channel.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CONF:WCDM:NB:RMC RMC384 :CONF:WCDMA:NB:RMC? Value returned in this example: RMC384.

**:CONFigure:WCDMa:NB:BAND**

<b>Syntax</b>	:CONFigure:WCDMa:NB:BAND <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: BAND1   BAND2   BAND3   BAND4   BAND5   BAND6   BAND8. The default is BAND1.
<b>Description</b>	This command sets the actual WCDMA operating band. The channels will be set to the first in this band. For example if Band is set to BAND1 the uplink channel is set to 9612 and the downlink channel is set to 10562.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CONF:WCDM:NB:BAND BAND2 Value returned in this example: BAND2.

**:CONFigure:WCDMa:NB:DLUarfcn**

<b>Syntax</b>	:CONFigure:WCDMa:NB:DLUarfcn <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 412, the maximum value 10838. The default value is 10700.
<b>Description</b>	This command sets the WCDMA Downlink channel. <b>Note:</b> This command also sets the Uplink channel to the corresponding channel.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one integer number.

<b>Example</b>	:CONF:WCDM:NB:DLU 5000 :CONF:WCDMA:NB:DLU? Value returned in this example: 5000.
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**:CONFigure:WCDMa:NB:DLFRrequency**

<b>Syntax</b>	CONFigure:WCDMa:NB:DLFRrequency?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form of this command will return the center frequency in Hz depending on the DLUArfcn which is set.
<b>Example</b>	:CONF:WCDM:NB:DLFR? Value returned if DLUArfcn is set to 10700: 2140000000.

**:CONFigure:WCDMa:NB:ULUArfcn**

<b>Syntax</b>	:CONFigure:WCDMa:NB:ULUArfcn <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 12, the maximum value 9888. The default value is 9750.
<b>Description</b>	This command sets the WCDMA Uplink channel. <b>Note:</b> This command also sets the Downlink channel to the corresponding channel.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.
<b>Example</b>	:CONF:WCDM:NB:ULU 5000 :CONF:WCDMA:NB:ULU? Value returned in this example: 5000.

**:CONFigure:WCDMa:NB:ULFRrequency**

<b>Syntax</b>	:CONFigure:WCDMa:NB:ULFRrequency?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form of this command will return the center frequency in Hz depending on the ULUArfcn which is set.
<b>Example</b>	:CONF:WCDM:NB:ULFR? Value returned if ULUArfcn is set to 9750: 1950000000.

**:CONFigure:WCDMa:MEASure:UEReport:TRCH**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:UEReport:TRCH
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RAB1   RAB2   RAB3   SRB. The default is RAB1.

<b>Description</b>	Defines on which kind of Transport Channel the BLER estimation within the UE applies.
<b>Query</b>	The query form of this command returns the measurement that has been chosen.
<b>Example</b>	:CONF:WCDM:MEAS:UEReport:TRCH RAB2 :CONF:WCDMA:MEAS:UEReport:TRCH? Returned string in this example: RAB2.

**:CONFigure:WCDMa:MEASure:GROup:RFTX**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:GROup:RFTX <PredefExp1>[ , <PredefExp2>][ , ... <PredefExp11>]
<b>Parameters</b>	At least one and up to 11 parameters can be given, each with the same range of pre-defined expressions: NONE   FREQuency   CPOWer   ERMS   EPEAk   MRMS   MPEAk   PRMS   PPEAk   RHO   IQOffset   IQIMbalance. Default is NONE in all cases.
<b>Description</b>	Sets the group of measurements to be carried out. Up to 11 measurements can be grouped.
<b>Query</b>	The query form of this command returns the measurements that have been grouped.
<b>Example</b>	:CONF:WCDM:MEAS:GRO:RFTX CPOW , FREQ , ERMS :CONF:WCDMA:MEAS:GRO? Returned string in this example: CPOW , FREQ , ERMS.

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEQuence  
:SELEct**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFTX :INNERloop:SEQuence:SELEct <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ILS1   ILS2   ILS33   ILS4   ILS5   SEQA   SEQB   SEQC   SEQDSEQE   SEQF   SEQG   SEQH Default is ILS1.
<b>Description</b>	This command selects the inner loop power control sequence.
<b>Query</b>	The query form of this command will return the current selected inner loop power control sequence.
<b>Example</b>	:CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE SEQE :CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE? Value returned in this example: "SEQE".

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEQuence  
:ISLA**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEQuence:ISLA <string1>
<b>Parameters</b>	string1 is a string, defining the inner loop power control sequence. The maximum length of string1 is 20 characters. The default for string1 is "11111111110000000000".

<b>Description</b>	This command defines the inner loop power control sequence for the user sequence ISL1 that could be selected using the command <code>:CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL1.</code>
<b>Query</b>	The query form of this command will return the Inner loop power control sequence associated with user defined sequence ISL1 and that could be selected using the command <code>:CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL1.</code>
<b>Example</b>	<code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLA</code> <code>"11111111110000000000"</code> <code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLA?</code> Value returned in this example: <code>"11111111110000000000"</code>

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence  
 :ISLB**

<b>Syntax</b>	<code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLB</code> <code>&lt;string1&gt;</code>
<b>Parameters</b>	<code>string1</code> is a string, defining the inner loop power control sequence. The maximum length of <code>string1</code> is 20 characters. The default for <code>string1</code> is <code>"10101010101010101010"</code> .
<b>Description</b>	This command defines the inner loop power control sequence for the user sequence ISL2 that could be selected using the command <code>:CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL2.</code>
<b>Query</b>	The query form of this command will return the inner loop power control sequence associated with user defined sequence ISL2 and that could be selected using the command <code>:CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL2.</code>
<b>Example</b>	<code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLB</code> <code>"11111111110000000000"</code> <code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLB?</code> Value returned in this example: <code>"11111111110000000000"</code>

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence  
 :ISLC**

<b>Syntax</b>	<code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLC</code> <code>&lt;string1&gt;</code>
<b>Parameters</b>	<code>string1</code> is a string, defining the inner loop power control sequence. The maximum length of <code>string1</code> is 20 characters. The default for <code>string1</code> is <code>"1111111111"</code> .
<b>Description</b>	This command defines the Inner loop power control sequence for the user sequence ISL3 that could be selected using the command <code>:CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL3.</code>
<b>Query</b>	The query form of this command will return the Inner loop power control sequence associated with user defined sequence ISL3 and that could be selected using the command <code>:CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL3.</code>
<b>Example</b>	<code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLC</code> <code>"11111111110000000000"</code> <code>:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEquence:ISLC?</code> Value returned in this example: <code>"11111111110000000000"</code>

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEQuence  
:ISLV**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEQuence:ISLV <string1>
<b>Parameters</b>	string1 is a string, defining the inner loop power control sequence. The maximum length of string1 is 20 characters. The default for string1 is "00000000001111111111".
<b>Description</b>	This command defines the inner loop power control sequence for the user sequence ISL5 that could be selected using the command :CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL5.
<b>Query</b>	The query form of this command will return the inner loop power control sequence associated with user defined sequence ISL5 and that could be selected using the command :CONF:WCDM:MEAS:RFTX:INNE:SEQ:SELE ISL5.
<b>Example</b>	:CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEQuence:ISLV "11111111110000000000" :CONFigure:WCDMa:MEASure:RFTX:INNERloop:SEQuence:ISLV? Value returned in this example: "11111111110000000000"

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:ALGOritHm**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFTX:INNERloop:ALGOritHm <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ALGO1   ALGO2 Default is ALGO1.
<b>Description</b>	This command selects the TPC algorithm for inner loop power control.
<b>Query</b>	The query form of this command will return the current selected inner loop power control algorithm. This command has only effect on definable sequences ILS1, ILS2, ILS3, ILS4, ILS5.
<b>Example</b>	:CONF:WCDM:MEAS:RFTX:INNE:ALGO ALGO2 :CONF:WCDM:MEAS:RFTX:INNE:ALGO? Value returned in this example: "ALGO2".

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:STEPsize**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFTX:INNERloop:STEPsize <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: STEP1   STEP2 Default is STEP1.
<b>Description</b>	This command selects the TPC algorithm step size for the inner loop power control, but only if algorithm 1 is selected. This command has only effect on definable sequences ILS1, ILS2, ILS3, ILS4, ILS5.
<b>Query</b>	The query form of this command will return the current selected inner loop power control algorithm step size.
<b>Example</b>	:CONF:WCDM:MEAS:RFTX:INNE:STEP STEP2 :CONF:WCDM:MEAS:RFTX:INNE:STEP? Value returned in this example: "STEP2".

**:CONFigure:WCDMa:MEASure:RFTX:INNERloop:MODE**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFTX:INNERloop:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: NORMAL   SINGLE Default is NORMAL.
<b>Description</b>	This command sets the mode of the inner loop power control algorithm.
<b>Query</b>	The query form of this command will return the current selected mode for the inner loop power control algorithm.
<b>Example</b>	:CONF:WCDM:MEAS:RFTX:INNE:MOD SING :CONF:WCDM:MEAS:RFTX:INNE:MOD? Value returned in this example: "SING".

**:CONFigure:WCDMa:MEASure:RFRX:SYNChronise**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFRX:SYNChronise
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will synchronise the 3100 to the data looped back from the mobile. The command has to be executed on a normal output level before measuring the Bit Error Rate or the Block Error Rate.
<b>Query</b>	The query form of this command returns whether the 3100 could synchronise to the data from the mobile or not. If it is synchronised, the output level can be changed to low values and a Bit/Block Error Rate can be measured.
<b>Example</b>	:CONFigure:WCDMa:MEASure:RFRX:SYNChronise :CONFigure:WCDMa:MEASure:RFRX:SYNChronise? Value returned in this example "ON".

**:CONFigure:WCDMa:MEASure:RFRX:NBLOck**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFRX:NBLOck <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 10, the maximum value 4096. The default value is 40.
<b>Description</b>	This command sets the number of blocks to use in the BER/BLER test.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CONF:WCDM:MEAS:RFRX:NBLO 1000 :CONF:WCDMA:MEAS:RFRX:NBLO? Value returned in this example: 1000.

**:CONFigure:WCDMa:MEASure:POLar:REFLevel**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:POLar:REFLevel <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is -23.0, the maximum value is 36.0. The minimum resolution for real1 is 0.1. The default value for real1 is 0.0.



<b>Description</b>	This command sets the reference level for the polar calibration measurement (upper limit). The value specified for <code>real1</code> is in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one floating point real number.
<b>Example</b>	:CONF:WCDM:MEAS:POL:REFL -10.5 :CONF:WCDM:MEAS:POL:REFL? Value returned in this example: -10.5.

**:CONFigure:WCDMa:MEASure:POLar:TRGLevel**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:POLar:TRGLevel <real1>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is -60.0, the maximum value is 36.0. The minimum resolution for <code>real1</code> is 0.1. The default value for <code>real1</code> is 0.0.
<b>Description</b>	This command sets the trigger level for the polar calibration measurement. The value specified for <code>real1</code> is in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one floating point real number.
<b>Example</b>	:CONF:WCDM:MEAS:POL:TRGL -10.5 :CONF:WCDM:MEAS:POL:TRGL? Value returned in this example: -10.5.

**:CONFigure:WCDMa:MEASure:POLar:SEGment:NUMBer**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:POLar:SEGment:NUMBer <Int1>
<b>Parameters</b>	<code>Int1</code> is an integer number. The minimum value is 1, the maximum value 300. The default value is 1.
<b>Description</b>	This command sets the total number of segments for polar calibration measurement.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.
<b>Example</b>	:CONF:WCDM:MEAS:POL:SEGM:NUMB 1 :CONF:WCDM:MEAS:POL:SEGM:NUMB? Value returned in this example: 1.

**:CONFigure:WCDMa:MEASure:POLar:SEGment:LENGth**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:POLar:SEGment:LENGth <Int1>
<b>Parameters</b>	<code>Int1</code> is an integer number. The minimum value is 50, the maximum value 2048. The default value is 200.
<b>Description</b>	This command sets the segment length in $\mu\text{sec}$ for polar calibration measurement.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.

<b>Example</b>	<code>:CONF:WCDM:MEAS:POL:SEGM:LENG 500</code> <code>:CONF:WCDM:MEAS:POL:SEGM:LENG?</code> Value returned in this example: 500.
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**:CONFigure:WCDMa:MEASure:POLar:SEGMENT:START**

<b>Syntax</b>	<code>:CONFigure:WCDMa:MEASure:POLar:SEGMENT:START &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 1, the maximum value 300. The default value is 1.
<b>Description</b>	This command sets the segment to start polar calibration measurement at, this is required due to limited sample window size.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.
<b>Example</b>	<code>:CONF:WCDM:MEAS:POL:SEGM:STAR 1</code> <code>:CONF:WCDM:MEAS:POL:SEGM:STAR?</code> Value returned in this example: 1.

**:CONFigure:WCDMa:MEASure:POLar:WINDOW:SIZE**

<b>Syntax</b>	<code>:CONFigure:WCDMa:MEASure:POLar:WINDOW:SIZE &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 50, the maximum value 90. The default value is 50.
<b>Description</b>	This command sets the window size in percent for polar calibration measurement.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.
<b>Example</b>	<code>:CONF:WCDM:MEAS:POL:WIND:SIZ 60</code> <code>:CONF:WCDM:MEAS:POL:WIND:SIZ?</code> Value returned in this example: 60.

**:CONFigure:WCDMa:MEASure:POLar:WINDOW:OFFSet**

<b>Syntax</b>	<code>:CONFigure:WCDMa:MEASure:POLar:WINDOW:OFFSet &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 5, the maximum value 50. The default value is 5.
<b>Description</b>	This command sets the window offset in percent for polar calibration measurement.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered will contain one integer number.
<b>Example</b>	<code>:CONF:WCDM:MEAS:POL:WIND:OFFS 6</code> <code>:CONF:WCDM:MEAS:POL:WIND:OFFS?</code> Value returned in this example: 6.

**:CONFigure:WCDMa:MEASure:POLar:RESolution**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:POLar:RESolution <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RES25   RES100. Default is RES25.
<b>Description</b>	This command will set the resolution bandwidth for polar calibration measurements.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:CONF:WCDM:MEAS:POL:RES RES100 :CONF:WCDM:MEAS:POL:RES? Value returned in this example "RES100".

**:CONFigure:WCDMa:MEASure:POLar:FREQuency**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:POLar:FREQuency <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: OFF   ON. Default is OFF.
<b>Description</b>	This command allows to fetch the frequency error within a polar measurement. If it is set to ON the polar measurement will append the frequency error in Hz after the measured power and/or phase values.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:CONF:WCDM:MEAS:POL:FREQ ON :CONF:WCDM:MEAS:POL:FREQ? Value returned in this example "ON".

**:CONFigure:WCDMa:MEASure:RFRX:BITPattern**

<b>Syntax</b>	:CONFigure:WCDMa:MEASure:RFRX:BITPattern <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: PRBS9   PRBS15   PRBS23   ALLZero   ALLOne   ONEZero   ZEROOne. Default is PRBS9.
<b>Description</b>	This command sets the bit pattern for the WCDMA signal.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:CONF:WCDM:MEAS:RFRX:BITP ONEZero :CONF:WCDM:MEAS:RFRX:BITP? Value returned in this example "ONEZero".

## CALL subsystem

This subsystem contains commands

- for call setup and handling procedures.
- to read out the measurement report generated by the mobile.
- to read out the mobile's ID and further mobile parameters.

### GSM commands :CALL:GSM:BSORiginate

<b>Syntax</b>	:CALL:GSM:BSORiginate
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Initiates a call-setup by the base station (Willtek 3100). For details regarding a BS initiated call, please refer to section BS Call.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALL:GSM:BSOR</b> This command will initiate a BS-originated call.

### :CALL:GSM:RSIGnaling

<b>Syntax</b>	:CALL:GSM:RSIGnaling
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Makes the Willtek 3100 use reduced signaling. This means that the test set will provide a base channel and react to the mobile's signals without prior call setup. For details regarding reduced signaling, please refer to section Reduced Signaling.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:GSM:RSIG

### :CALL:GSM:BSRelease

<b>Syntax</b>	:CALL:GSM:BSRelease
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will make the Willtek 3100 terminate the ongoing call. For details regarding a BS terminated call, please refer to section BS Call.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALL:GSM:BSR</b> This command will release the call.

### :CALL:GSM:MSORiginate

<b>Syntax</b>	:CALL:GSM:MSORiginate
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command initiates the MS call procedure on the Willtek 3100. For details regarding the MS call procedure, please refer to section MS Call. <b>Note:</b> This command is no longer required. This means that the Willtek 3100 will automatically respond to the mobile's channel request.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	As this command is no longer required, an example was skipped.

### :CALL:GSM:MSRelease

<b>Syntax</b>	:CALL:GSM:MSRelease
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command prepares the call termination by the mobile under test. For details regarding the MS call procedure, please refer to section MS Call. <b>Note:</b> This command is no longer required.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	As this command is no longer required, an example was skipped.

### :CALL:GSM:PAGing

<b>Syntax</b>	:CALL:GSM:PAGing <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>OFF</b> .
<b>Description</b>	Switches the continuous paging of the mobile <b>ON</b> or <b>OFF</b> . <b>ON</b> means that the Willtek 3100 will start to broadcast paging requests, but will not answer to the mobile's access bursts. For details regarding continuous paging, please refer to section Call Graph.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALL:GSM:PAG ON</b> This command switches continuous paging on.

### **:CALL:GSM:ASSignment**

<b>Syntax</b>	<code>:CALL:GSM:ASSignment &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>LATE</b>   <b>EARLY</b> . Default is <b>LATE</b> .
<b>Description</b>	Determines whether early or late assignment shall be used. For details regarding assignment, please refer to section Basic System Parameters.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALL:GSM:ASS EARL</b> Early assignment will be used.

### **:CALL:GSM:SMS:MSOR**

<b>Syntax</b>	<code>:CALL[:GSM]:SMS:MSOR &lt;string1&gt;</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command reads out the text and the phone number of the last received short message.
<b>Query</b>	There is only a query form of this command available. The query will return a string containing 2 values coded as explained above.
<b>Example</b>	<b>:CALL:GSM:SMS:MSOR?</b> The string delivered back in this example is: " <code>3100 Mobile Tester</code> ", " <code>+4989996410</code> ".

### **:CALL[:GSM]:SMS:MSOR:TEXT**

<b>Syntax</b>	<code>:CALL[:GSM]:SMS:MSOR:TEXT &lt;string1&gt;</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command reads out the text of the last received short message.
<b>Query</b>	There is only a query form of this command available. The query will return a string containing a value coded as explained above.
<b>Example</b>	<b>:CALL:GSM:SMS:MSOR:TEXT?</b> The string delivered in this example is: " <code>3100 Mobile Tester</code> ".

**:CALL[:GSM]:SMS:MSOR:NUMB**

<b>Syntax</b>	:CALL[:GSM]:SMS:MSOR:NUMB <string1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command reads out the phone number of the last received short message.
<b>Query</b>	There is only a query form of this command available. The query will return a string containing a value coded as explained above.
<b>Example</b>	:CALL:GSM:SMS:MSOR:NUMB? The string delivered back in this example is: "+4989996410".

**:CALL[:GSM]:SMS:BSOR**

<b>Syntax</b>	:CALL[:GSM]:SMS:BSOR <string1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command sends a short message.
<b>Query</b>	A query form of this command is not available.
<b>Example</b>	:CALL:GSM:SMS:BSOR "Willtek Mobile Tester", "12345" This command will send a BS-originated short message.

**:CALL:GSM:BERLoop**

<b>Syntax</b>	:CALL:GSM:BERLoop <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>OFF</b> .
<b>Description</b>	This command is used to close or open the internal loop of the mobile for BER testing. <b>ON</b> means that the Willtek 3100 will tell the mobile under test to close its internal loop, while <b>OFF</b> will make the Willtek 3100 tell the mobile under test to open the internal loop. For details regarding BER testing, please refer to section BER Measurements.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CALL:GSM:BERL ON :CALL:BERL? Value returned: "ON".

**:CALL:GSM:MSInfo:ALL**

<b>Syntax</b>	<code>:CALL:GSM:MSInfo:ALL</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>This command reads out all MS Info result values with one query. For details on MS Info, please refer to section MS Info Test Menu.</p> <p>The query will deliver back 15 single values in the following sequence, all separated by commas:</p> <ul style="list-style-type: none"><li>- <b>RX Lev (Integer)</b> The mobile estimates the RF power level at which it receives the base station. The coding of this figure can be found in section Coding of RX Lev.</li><li>- <b>RX Qual (Integer)</b> Based on the number of bits corrected by its own channel decoder, the mobile estimates the BER. The coding of this figure can be found in section Coding of RX Qual.</li><li>- <b>Number (String)</b> This position contains the number dialed on the mobile. In case the call was BS originated, this position will be left empty (i.e. two consecutive commas in the result string).</li><li>- <b>IMSI (String)</b> This is the international mobile subscriber identity.</li><li>- <b>IMEI (String)</b> This position contains the international mobile equipment identity.</li><li>- <b>MS Class (Integer)</b> Shows the mobile's power class. The coding of this figure can be found in section MS Power Classes.</li><li>- <b>Rev. Level (Integer)</b> This parameter indicates whether the mobile supports all features of GSM phase 1 or phase 2 or any later phase.</li><li>- <b>RX Lev Sub (Integer)</b> Similar to RX Lev, but only carried out on a subset of frames. For details, please refer to section MS Report Display. The coding of the RX Lev Sub result value can be found in section Coding of RX Lev.</li><li>- <b>SMS (Boolean)</b> A <b>0</b> on this position means that the mobile under test has no SMS capabilities, while a <b>1</b> indicates that the mobile can handle SMS.</li><li>- <b>Ext. Freq (Boolean)</b> A <b>0</b> on this position means that the mobile under test can't use the extended GSM frequency range (E-GSM), while a <b>1</b> indicates that the mobile is able to work in the extended GSM frequency range.</li><li>- <b>A5 Cyph. (Integer)</b> This position shows the A5 ciphering key supported by the mobile.</li><li>- <b>Timing Advance (Integer)</b> Here, the timing advance of the mobile is shown in bit periods. More details regarding the timing advance can be found in section Timeslots and Bursts.</li><li>- <b>Dualband (Integer)</b> A <b>6</b> on this position indicates that the mobile under test supports both the E-GSM and GSM 1800 (PCN) bands.</li><li>- <b>MS Pwr (Integer)</b> Here, the power control level currently used by the mobile is shown. This figure is coded according to the scheme explained in section Power Control Levels and Tolerances.</li><li>- <b>EFR (Boolean)</b> A <b>0</b> on this position means that the mobile under test cannot use enhanced full rate TCHs, while a <b>1</b> indicates that the mobile is capable of doing so.</li></ul>
<b>Query</b>	There is only a query form of this command available. The query will return a string containing 15 values coded as explained above.
<b>Example</b>	<p><code>:CALL:GSM:MSInfo:ALL?</code></p> <p>The string delivered back is, for example:</p> <pre>"49,0","+4989996410","001010123456789", "520040190000430",4,2,49,1,0,3,0,1,16,1".</pre>



**:CALL:GSM:MSInfo:RXLevel**

<b>Syntax</b>	:CALL:GSM:MSInfo:RXLevel
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The mobile estimates the RF power level at which it receives the base station. The coding of the result value delivered back can be found in section Coding of RX Lev.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:RXL?</b> The string delivered back: "49".

**:CALL:GSM:MSInfo:RXQual**

<b>Syntax</b>	:CALL:GSM:MSInfo:RXQual
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Based on the number of bits corrected by its own channel decoder, the mobile estimates the BER. The coding of the result value delivered back can be found in section Coding of RX Qual.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:RXQ?</b> The string delivered back: "0".

**:CALL:GSM:MSInfo:NUMBer**

<b>Syntax</b>	:CALL:GSM:MSInfo:NUMBer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the number dialed on the mobile as a string. In case the call was BS originated, the string will be empty ("").
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	<b>:CALL:MSInfo:NUMB?</b> The string delivered back: "+4989996410".

**:CALL:GSM:MSInfo:IMSI**

<b>Syntax</b>	:CALL:GSM:MSInfo:IMSI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver the international mobile subscriber identity as stored on the mobile's SIM card.
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.

<b>Example</b>	<b>:CALL:GSM:MSInfo:IMSI?</b> The string delivered back: "001010123456789".
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**:CALL:GSM:MSInfo:IMEI**

<b>Syntax</b>	:CALL:GSM:MSInfo:IMEI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the international mobile equipment identity as stored inside the mobile (the so-called serial number).
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	<b>:CALL:GSM:MSInfo:IMSI?</b> The string delivered back: "520040190000430".

**:CALL:GSM:MSInfo:IMEI:SV**

<b>Syntax</b>	:CALL:GSM:MSInfo:IMEI:SV
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the international mobile equipment identity and the software version number as stored inside the mobile.
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	<b>:CALL:GSM:MSInfo:IMSI:SV?</b> The string delivered back: "52004019000043-0(01)". The first part is the IMEI with the calculated check digit after the hyphen; the string in brackets indicates the software version reported over the air interface.

**:CALL:GSM:MSInfo:MSClass**

<b>Syntax</b>	:CALL:GSM:MSInfo:MSClass
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the code representing the mobile's power class. The coding of this figure can be found in section MS Power Classes.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:MSClass?</b> The integer delivered back: "4".

**:CALL:GSM:MSInfo:RLevel**

<b>Syntax</b>	:CALL:GSM:MSInfo:RLevel
<b>Parameters</b>	There are no parameters.

<b>Description</b>	This query will deliver back the mobile's GSM revision level (GSM phase 1 or phase 2 or any later phase).
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:RLevel?</b> The integer delivered back: "2".

**:CALL:GSM:MSInfo:RXLSub**

<b>Syntax</b>	:CALL:GSM:MSInfo:RXLSub
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query is similar to <b>:CALL:MSInfo:RXLevel?</b> as explained above. However, this measurement is only carried out on a subset of frames. For details, please refer to section MS Report Display. The coding of this result value can be found in section Coding of RX Lev.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:RXLSub?</b> The integer delivered back: "49".

**:CALL:GSM:MSInfo:SMS**

<b>Syntax</b>	:CALL:GSM:MSInfo:SMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back a boolean number indicating whether the mobile is able to handle short message service (SMS) or not. A 0 delivered back indicates that the mobile under test has no SMS capabilities.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one boolean number.
<b>Example</b>	<b>:CALL:GSM:MSInfo:SMS?</b> The boolean number delivered back: "1".

**:CALL:GSM:MSInfo:ATTached?**

<b>Syntax</b>	:CALL:GSM:MSInfo:ATTached?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query will deliver back one boolean number, indicating whether the mobile is GSM-attached to the base station simulated by the Willtek 3100. The GSM attach is usually part of the location update procedure. In a real network, the mobile can be paged only when it is attached and a TMSI (temporary mobile subscriber identity) is assigned to the mobile. Without the attach procedure, the mobile can be called (by its IMSI) if the Test SIM is being used.

<b>Example</b>	<b>:CALL:GSM:MSInfo:ATT?</b> The boolean number delivered back: "1".
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**:CALL:GSM:MSInfo:EGSM**

<b>Syntax</b>	:CALL:GSM:MSInfo:EGSM
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back a boolean number indicating whether the mobile is able to use the extended GSM frequency range (channel numbers 0 and 975 to 1023) or not. A 0 indicates that the mobile under test cannot use the extended GSM frequency range.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one boolean number.
<b>Example</b>	<b>:CALL:GSM:MSInfo:EGSM?</b> The boolean number delivered back: "0".

**:CALL:GSM:MSInfo:AFIVE**

<b>Syntax</b>	:CALL:GSM:MSInfo:AFIVE
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the A5 ciphering key supported by the mobile.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:AFIVE?</b> The integer delivered back: "3".

**:CALL:GSM:MSInfo:TADVance**

<b>Syntax</b>	:CALL:GSM:MSInfo:TADVance
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the timing advance currently used by the mobile (in bit periods). More details regarding the timing advance can be found in section Timeslots and Bursts.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:TADVance?</b> The integer delivered back: "0".

**:CALL:GSM:MSInfo:DUALband**

<b>Syntax</b>	:CALL:GSM:MSInfo:DUALband
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<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back an integer indicating whether the mobile is able to use both the GSM and PCN frequency ranges (GSM 900 and GSM 1800).
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer indicating the supported bands: 1 - P-GSM only 2 - E-GSM only 4 - GSM 1800 only 5 - P-GSM and GSM 1800 6 - E-GSM and GSM 1800
<b>Example</b>	<b>:CALL:GSM:MSInfo:DUALband?</b> The integer delivered back is: "6".

**:CALL:GSM:MSInfo:PCONtrol**

<b>Syntax</b>	<b>:CALL:GSM:MSInfo:PCONtrol</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the power control level currently used by the mobile. This figure is coded according to the scheme explained in section Power Control Levels and Tolerances.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<b>:CALL:GSM:MSInfo:PCONtrol?</b> The integer delivered back is: "16".

**:CALL:GSM:MSInfo:EFRCapab**

<b>Syntax</b>	<b>:CALL:GSM:MSInfo:EFRCapab</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back a boolean number indicating whether the mobile is capable of using enhanced full rate TCHs or not. A 0 means that the mobile under test is not able to support enhanced full rate TCHs.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one boolean number.
<b>Example</b>	<b>:CALL:GSM:MSInfo:EFRCapab?</b> The boolean number delivered back is: "1".

**GSM/GPRS commands**     **:CALL:GPRS:BSORiginate**

<b>Syntax</b>	<b>:CALL:GPRS:BSORiginate</b>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Initiates a call setup by the base station (Willtek 3100). Before initiating a call, ensure that the GPRS Attach procedure has been completed to avoid any confusion in the call procedures. See the <b>:STATus:OPERation:SIGNaling:GPRS[:EVENT]</b> command for more details.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:GPRS:BSOR This command will initiate a BS-originated call.

### **:CALL:GPRS:RSIGNALing**

<b>Syntax</b>	:CALL:GPRS:RSIGNALing
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Makes the Willtek 3100 use reduced signaling. This means that the test set will provide a base channel and react to the mobile's signals without prior call setup. For details regarding reduced signaling, please refer to section Reduced Signaling.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:GPRS:RSIG

### **:CALL:GPRS:BSRelease**

<b>Syntax</b>	:CALL:GPRS:BSRelease
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will make the Willtek 3100 terminate the ongoing call. For details regarding a BS terminated call, please refer to section BS Call.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:GPRS:BSR This command will release the call.

### **:CALL:GPRS:PAGing**

<b>Syntax</b>	:CALL:GPRS:PAGing <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the continuous paging of the mobile on or off. ON means that the Willtek 3100 will start to broadcast paging requests, but will not answer to the mobile's access bursts. For details regarding continuous paging, please refer to section Call Graph.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:GPRS:PAG ON This command switches continuous paging on.

**:CALL:GPRS:ASSignment**

<b>Syntax</b>	:CALL:GPRS:ASSignment <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: LATE   EARLY. Default is LATE.
<b>Description</b>	Determines whether early or late assignment shall be used. For details regarding assignment, please refer to section Basic System Parameters.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:GPRS:ASS EARL Early assignment will be used.

**:CALL:GPRS:BERLoop**

<b>Syntax</b>	:CALL:GPRS:BERLoop <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	This command is used to close or open the internal loop of the mobile for BER testing. ON means that the Willtek 3100 will tell the mobile under test to close its internal loop, while OFF will make the Willtek 3100 tell the mobile under test to open the internal loop. For details regarding BER testing, please refer to section BER Measurements.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of the predefined expressions explained above.
<b>Example</b>	:CALL:GPRS:BERL ON :CALL:GPRS:BERL? Value returned: "ON".

**:CALL:GPRS:MSINFO:ALL**

<b>Syntax</b>	:CALL:GPRS:MSINFO:ALL
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>This command reads out all MS Info result values with one query. For details on MS Info, please refer to section MS Info Test Menu.</p> <p>The query will deliver back 15 single values in the following sequence, all separated by commas:</p> <p><b>RX Lev (Integer)</b> The mobile estimates the RF power level at which it receives the base station.</p> <p><b>RX Qual (Integer)</b> Based on the number of bits corrected by its own channel decoder, the mobile estimates the BER.</p> <p><b>Number (String)</b> This position contains the number dialed on the mobile. In case the call was BS originated, this position will be left empty (i.e. two consecutive commas in the result string).</p> <p><b>IMSI (String)</b> This is the international mobile subscriber identity.</p> <p><b>IMEI (String)</b> This position contains the international mobile equipment identity.</p> <p><b>MS Class (Integer)</b> Shows the mobile's power class.</p> <p><b>Rev. Level (Integer)</b> This parameter indicates whether the mobile supports all features of GSM phase 1 or phase 2 or any later phase.</p> <p><b>RX Lev Sub (Integer)</b> Similar to RX Lev, but only carried out on a subset of frames. For details, please refer to section MS Report Display.</p> <p><b>SMS (Boolean)</b> A 0 on this position means that the mobile under test has no SMS capabilities, while a 1 indicates that the mobile can handle SMS.</p> <p><b>Ext. Freq (Boolean)</b> A 0 on this position means that the mobile under test can't use the extended GSM frequency range (E-GSM), while a 1 indicates that the mobile is able to work in the extended GSM frequency range.</p> <p><b>A5 Cyph. (Integer)</b> This position shows the A5 ciphering key supported by the mobile.</p> <p><b>Timing Advance (Integer)</b> Here, the timing advance of the mobile is shown in bit periods.</p> <p><b>Dualband (Integer)</b> A 0 on this position indicates that the mobile under test supports both the E-GSM and the GSM 1800 bands.</p> <p><b>MS Pwr (Integer)</b> Here, the power control level currently used by the mobile is shown. This figure is coded according to the scheme explained in section Power Control Levels and Tolerances.</p> <p><b>EFR (Boolean)</b> A 0 on this position means that the mobile under test cannot use enhanced full rate TCHs, while a 1 indicates that the mobile is capable of doing so.</p>
<b>Query</b>	There is only a query form of this command available. The query will return a string containing 15 values coded as explained above.
<b>Example</b>	<pre>:CALL:GPRS:MSINFO:ALL?</pre> <p>The string delivered back is:</p> <pre>"49,0","+4989996410","001010123456789", "520040190000430",4,2,49,1,0,3,0,1,16,1".</pre>

**:CALL:GPRS:MSINFO:RXLevel**

<b>Syntax</b>	<code>:CALL:GPRS:MSINFO:RXLevel</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The mobile estimates the RF power level at which it receives the base station.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<pre>:CALL:GPRS:MSINFO:RXL?</pre> <p>The string delivered back is: "49".</p>



**:CALL:GPRS:MSInfo:RXQual**

<b>Syntax</b>	:CALL:GPRS:MSInfo:RXQual
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Based on the number of bits corrected by its own channel decoder, the mobile estimates the BER.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	:CALL:GPRS:MSInfo:RXQ? The string delivered back is: "0".

**:CALL:GPRS:MSInfo:NUMBER**

<b>Syntax</b>	:CALL:GPRS:MSInfo:NUMBER
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the number dialed on the mobile as a string. In case the call was BS originated, the string will be empty ("").
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	:CALL:GPRS:MSInfo:NUMB? The string delivered back is: "+4989996410".

**:CALL:GPRS:MSInfo:IMSI**

<b>Syntax</b>	:CALL:GPRS:MSInfo:IMSI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the international mobile subscriber identity as stored on the mobile's SIM card.
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	:CALL:GPRS:MSInfo:IMSI? The string delivered back is: "001010123456789".

**:CALL:GPRS:MSInfo:IMEI**

<b>Syntax</b>	:CALL:GPRS:MSInfo:IMEI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the international mobile equipment identity as stored inside the mobile (the so-called serial number).
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.

<b>Example</b>	<code>:CALL:GPRS:MSInfo:IMSI?</code> The string delivered back is: "520040190000430".
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**:CALL:GPRS:MSInfo:MSClass**

<b>Syntax</b>	<code>:CALL:GPRS:MSInfo:MSClass</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the code representing the mobile's power class.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<code>:CALL:GPRS:MSInfo:MSClass?</code> The integer delivered back is: "4".

**:CALL:GPRS:MSInfo:RLevel**

<b>Syntax</b>	<code>:CALL:GPRS:MSInfo:RLevel</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the mobile's GSM revision level (GSM phase 1 or phase 2 or any later phase).
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<code>:CALL:GPRS:MSInfo:RLevel?</code> The integer delivered back is: "2".

**:CALL:GPRS:MSInfo:RXLSub**

<b>Syntax</b>	<code>:CALL:GPRS:MSInfo:RXLSub</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query is similar to <code>:CALL:MSInfo:RXLevel?</code> as explained above. However, this measurement is only carried out on a subset of frames.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	<code>:CALL:GPRS:MSInfo:RXLSub?</code> The integer delivered back is: "49".

**:CALL:GPRS:MSInfo:SMS**

<b>Syntax</b>	<code>:CALL:GPRS:MSInfo:SMS</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back a boolean number indicating whether the mobile is able to handle short message service (SMS) or not. A 0 delivered back indicates that the mobile under test has no SMS capabilities.

<b>Query</b>	There is only a query form of this command available. The query will deliver back one boolean number.
<b>Example</b>	:CALL:GPRS:MSINfo:SMS? The boolean number delivered back is: " 1 ".

**:CALL:GPRS:MSINfo:EGSM**

<b>Syntax</b>	:CALL:GPRS:MSINfo:EGSM
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back a boolean number indicating whether the mobile is able to use the extended GSM frequency range (channel numbers 0 and 975 to 1023) or not. A 0 indicates that the mobile under test cannot use the extended GSM frequency range.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one boolean number.
<b>Example</b>	:CALL:GPRS:MSINfo:EGSM? The boolean number delivered back is: " 0 ".

**:CALL:GPRS:MSINfo:AFIVE**

<b>Syntax</b>	:CALL:GPRS:MSINfo:AFIVE
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the A5 ciphering key supported by the mobile.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	:CALL:GPRS:MSINfo:AFIVE? The integer delivered back is: " 3 ".

**:CALL:GPRS:MSINfo:TADVance**

<b>Syntax</b>	:CALL:GPRS:MSINfo:TADVance
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the timing advance currently used by the mobile (in bit periods).
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	:CALL:GPRS:MSINfo:TADVance? The integer delivered back is: " 0 ".

**:CALL:GPRS:MSInfo:DUALband**

<b>Syntax</b>	:CALL:GPRS:MSInfo:DUALband
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back an integer indicating whether the mobile is able to use both the GSM and PCN frequency ranges (GSM 900 and GSM 1800).
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer indicating the supported bands: 1 - P-GSM only 2 - E-GSM only 4 - GSM 1800 only 5 - P-GSM and GSM 1800 6 - E-GSM and GSM 1800
<b>Example</b>	:CALL:GPRS:MSInfo:DUALband? The integer delivered back is: "6".

**:CALL:GPRS:MSInfo:PCONTrol**

<b>Syntax</b>	:CALL:GPRS:MSInfo:PCONTrol
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the power control level currently used by the mobile.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one integer.
<b>Example</b>	:CALL:GPRS:MSInfo:PCONTrol? The integer delivered back is: "16".

**:CALL:GPRS:MSInfo:EFRCapab**

<b>Syntax</b>	:CALL:GPRS:MSInfo:EFRCapab
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back a boolean number indicating whether the mobile is capable of using enhanced full rate TCHs or not. A 0 means that the mobile under test is not able to support enhanced full rate TCHs.
<b>Query</b>	There is only a query form of this command available. The query will deliver back one boolean number.
<b>Example</b>	:CALL:GPRS:MSInfo:EFRCapab? The boolean number delivered back is: "1".

**:CALL:GPRS:MSInfo:ATYPe**

<b>Syntax</b>	:CALL:GPRS:MSInfo:ATYPe?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.

<b>Query</b>	This query returns a string containing an integer number pointing to the attach type. A return value of 1 indicates that the mobile requested a standalone GPRS attach. 2 indicates that the mobile requested a GPRS attach after IMSI attach. 3 means that the mobile requested a combined IMSI/GPRS attach.
<b>Example</b>	:CALL:GPRS:MSInfo:AType? Returns a string like the following: " 2 "

**:CALL:GPRS:MSInfo:MClass:GPRS**

<b>Syntax</b>	:CALL:GPRS:MSInfo:MClass:GPRS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns a string containing the GPRS multislot class reported by the MS. Valid return values are in the range 1 to 29.
<b>Example</b>	:CALL:GPRS:MSIN:MCL:GPRS? Returns a string, for example " 3 "

**:CALL:GPRS:MSInfo:MClass:HSCsd**

<b>Syntax</b>	:CALL:GPRS:MSInfo:MClass:?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns a string containing the multislot class reported by the MS. Valid return values are in the range 1 to 18.
<b>Example</b>	:CALL:GPRS:MSIN:MCL:HSCS? Returns a string, for example " 2 "

**:CALL:GPRS:MSInfo:SMTtime**

<b>Syntax</b>	:CALL:GPRS:MSInfo:SMTtime?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns a string containing the switch-measure time reported by the mobile phone. Valid return values are in the range 0 through 15.
<b>Example</b>	:CALL:GPRS:MSIN:SMT? Returns a string, for example 4

**:CALL:GPRS:MSInfo:SMSTime**

<b>Syntax</b>	:CALL:GPRS:MSInfo:SMSTime?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns a string containing the switch-measure-switch time reported by the mobile phone. Valid return values are in the range 0 through 15.
<b>Example</b>	:CALL:GPRS:MSIN:SMST? Returns a string, for example 4

**:CALL:GPRS:MSInfo:ATTached?**

<b>Syntax</b>	:CALL:GPRS:MSInfo:ATTached?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query will deliver back one boolean number, indicating whether the mobile is GSM-attached to the base station simulated by the Willtek 3100. The GSM attach is usually part of the location update procedure. In a real network, the mobile can be paged only when it is attached and a TMSI (temporary mobile subscriber identity) is assigned to the mobile. Without the attach procedure, the mobile can be called (by its IMSI) if the Test SIM is being used. The GSM attach is not to be confused with the GPRS attach.
<b>Example</b>	:CALL:GPRS:MSInfo:ATT? The boolean number delivered back is: " 1 ".

**:CALL:GPRS:MODE**

<b>Syntax</b>	:CALL:GPRS:MODE <PredefExpr>
<b>Parameters</b>	PredefExp is one of the following expressions: TX   BCS   USF   STOP   DETach.
<b>Description</b>	Initiates the signaling state required for the respective measurement, or leads back to idle mode. TX starts the signaling required for transmitter measurements. BCS starts signaling to bring the mobile into a state where BLER-BCS measurements are possible. USF initiates signaling that allows both BLER-USF and TX measurements. STOP initiates signaling to terminate the current uplink and/or downlink TBF. DETach starts the signaling to resume GPRS idle mode.
<b>Query</b>	Returns the short form predefined expression for MODE.
<b>Example</b>	:CONF:GPRS:MSTA:MSL 3 CALL:GPRS:MODE USF MEAS:GPRS:MULT:TX:ALL?Initiates an uplink TBF on three time slots, starts the transmitter measurements and returns results for three time slots.

**EGPRS commands :CALL:EGPRS:MSInfo:ALL**

<b>Syntax</b>	:CALL:EGPRS:MSInfo:ALL
<b>Parameters</b>	There are no parameters.

<b>Description</b>	This command reads out all EGPRS MS Info result values with one query. The query will deliver back 3 single values in the following sequence, all separated by commas: <ul style="list-style-type: none"> <li>- IMSI (String) This is the international mobile subscriber identity.</li> <li>- IMEI (String) This position contains the international mobile equipment identity.</li> <li>- MClass shows the GPRS multislots class reported by the MS. Valid return values are in the range 1 to 29.</li> </ul>
<b>Query</b>	There is only a query form of this command available. The query will return a string containing 15 values coded as explained above.
<b>Example</b>	:CALL:EGPRS:MSINFO:ALL? The string delivered back in this example is: "001010123456789", "520040190000430",3.

**:CALL:EGPRS:MSINFO:IMSI**

<b>Syntax</b>	:CALL:EGPRS:MSINFO:IMSI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the international mobile subscriber identity as stored on the mobile's SIM card.
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	:CALL:EGPRS:MSINFO:IMSI? The string delivered back in this example is: "001010123456789".

**:CALL:EGPRS:MSINFO:IMEI**

<b>Syntax</b>	:CALL:EGPRS:MSINFO:IMEI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the international mobile equipment identity as stored inside the mobile (the so-called serial number).
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	:CALL:EGPRS:MSINFO:IMEI? The string delivered back in this example is: "520040190000430".

**:CALL:EGPRS:MSINFO:MCLASS:GPRS**

<b>Syntax</b>	:CALL:EGPRS:MSINFO:MCLASS:GPRS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns a string containing the GPRS multislots class reported by the MS. Valid return values are in the range 1 to 29.

<b>Example</b>	CALL:EGPRS:MSIN:MCL:GPRS? Returns a string, for example "10"
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**:CALL:EGPRS:MODE**

<b>Syntax</b>	:CALL:EGPRS:MODE <PredefExpr>
<b>Parameters</b>	PredefExpr is one of the following expressions: TX   STOP   DETach.
<b>Description</b>	Initiates the signaling state required for the respective measurement, or leads back to idle mode. TX starts the signaling required for transmitter measurements. STOP initiates signaling to terminate the current uplink and/or downlink TBF. DETach starts the signaling to resume GPRS idle mode.
<b>Query</b>	Returns the short form predefined expression for MODE.
<b>Example</b>	:CONF:EGPRS:MSTA:MSL 3 CALL:EGPRS:MODE TX MEAS:EGPRS:MULT:TX:ALL? Initiates a downlink TBF on three time slots, starts the transmitter measurements and returns results for three time slots.

**CDMA2000 commands :CALL:CDMA:BSORiginate**

<b>Syntax</b>	:CALL:CDMA:BSORiginate
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Initiates a call setup by the base station (Willtek 3100).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:CDMA:BSOR This command will initiate a BS-originated call in thte 3100 (i.e. the mobile phone will be called).

**:CALL:CDMA:ABORt**

<b>Syntax</b>	:CALL:CDMA:ABORt
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Terminates a call setup attempt by the base station (Willtek 3100). This will also stop the Access Probe measurement (if active) and tear down a call (if on a traffic channel). This is used to halt a pending BS origination. The BS release should be used instead if the BS origination has completed, since it signals the mobile to release prior to tearing down the traffic channel.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:CDMA:ABOR This command will terminate a BS-originated call in the 3100 (i.e. the mobile and 3100 will be on the Control Channel upon completion).



**:CALL:CDMA:BSRelease**

<b>Syntax</b>	:CALL:CDMA:BSRelease
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will make the Willtek 3100 terminate the ongoing call.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:CDMA:BSR This command will release the call.

**:CALL:CDMA:REGISTRATION**

<b>Syntax</b>	:CALL:CDMA:REGISTRATION
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command causes the mobile to try to register with the Willtek 3100.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:CDMA:REG

**:CALL:CDMA:REGISTRATION:CLEAR**

<b>Syntax</b>	:CALL:CDMA:REGISTRATION:CLEAR
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command causes the Willtek 3100 to erase any stored information about a previous registration by a mobile.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:CDMA:REG:CLEAR

**:CALL:CDMA:HANDOFF[:IMMEDIATE]**

<b>Syntax</b>	:CALL:CDMA:HANDOFF[:IMMEDIATE]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command causes the Willtek 3100 to send a handoff to the mobile.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:CDMA:HAND:TCH 25 :CALL:CDMA:HAND:IMM Performs a handoff to channel 25.

**:CALL:CDMA:HANdoff:BAND**

<b>Syntax</b>	:CALL:CDMA:HANdoff:BAND <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	This command changes the band setting used when a :CALL:HANdoff:IMMediate is issued.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:CDMA:HANdoff:BAND USPCs

**:CALL:CDMA:HANdoff:TCH**

<b>Syntax</b>	:CALL:CDMA:HANdoff:TCH <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2047. The initial default is 29, which changes to the current channel during a call setup.
<b>Description</b>	This command sets the channel number for the traffic channel used during a handoff.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CALL:CDMA:HAND:TCH 30 :CALL:CDMA:HAND:TCH? Value returned: 30.

**:CALL:CDMA:HANdoff:RCONfig**

<b>Syntax</b>	:CALL:CDMA:HANdoff:RCONfig <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 1, the maximum value 5. The ini- tial default is 1, which changes to the current radio configuration during a call setup.
<b>Description</b>	This command sets the forward radio configuration used in a handoff.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CALL:CDMA:HAND:RCON 3 :CALL:CDMA:HAND:RCON? Value returned: 3.

**:CALL:CDMA:HANdoff:SOPTion**

<b>Syntax</b>	:CALL:CDMA:HANdoff:SOPTion <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 1, the maximum value 32768. The default value is initialized to the current value set by :CONF:CDMA:BS:TCH:SOPT.
<b>Description</b>	This command sets the service option to be used in a service option handoff.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.

<b>Example</b>	<pre>:CALL:CDMA:HAND:SOPT 3 :CALL:CDMA:HAND:SOPT? Value returned: 3.</pre>
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**:CALL:CDMA:MSINFO:ALL**

<b>Syntax</b>	:CALL:CDMA:MSINFO:ALL
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	<p>This command reads out all MS Info result values with one query. The query will return a string containing 11 values.</p> <ol style="list-style-type: none"> <li>1. NUMBER, string</li> <li>2. MIN IMSI, string</li> <li>3. ESN, string</li> <li>4. SCM, integer</li> <li>5. Protocol Version, integer</li> <li>6. Slot Cycle Index, integer</li> <li>7. TCALLs, BOOL</li> <li>8. RTYPE, integer</li> <li>9. Manufacture Code, integer</li> <li>10. Serial Number, integer</li> <li>11. MSCClass, integer</li> </ol>
<b>Example</b>	<pre>:CALL:CDMA:MSINFO:ALL? The string delivered back is for example: "5551234,"001010123456789","B04F575F",106,3, 1,1,0,82,166398,3".</pre>

**:CALL:CDMA:MSINFO:NUMBER**

<b>Syntax</b>	:CALL:CDMA:MSINFO:NUMBER
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver back the number dialed on the mobile as a string. In case the call was BS originated, the string will be empty ("").
<b>Query</b>	There is only a query form of this command available. The query will deliver back a string.
<b>Example</b>	<pre>:CALL:CDMA:MSINFO:NUMB? The string delivered back is, for example: "5551234".</pre>

**:CALL:CDMA:MSINFO:IMSI**

<b>Syntax</b>	:CALL:CDMA:MSINFO:IMSI
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will deliver back a string containing the international mobile subscriber identity.

<b>Example</b>	<code>:CALL:CDMA:MSInfo:IMSI?</code> The string delivered back: could be: "001010123456789".
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**:CALL:CDMA:MSInfo:MSClass**

<b>Syntax</b>	<code>:CALL:CDMA:MSInfo:MSClass</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will deliver back the code representing the mobile's power class. The query will deliver back one integer.
<b>Example</b>	<code>:CALL:CDMA:MSInfo:MSClass?</code> The integer delivered back could be: 3.

**:CALL:CDMA:MSInfo:ESN[:IMmediate]**

<b>Syntax</b>	<code>:CALL:CDMA:MSInfo:ESN[:IMmediate]</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will deliver back a string containing the mobile's electronic serial number.
<b>Example</b>	<code>:CALL:CDMA:MSInfo:ESN:IMM?</code> The string delivered back is: "B04F575F".

**:CALL:CDMA:MSInfo:ESN:MCODE**

<b>Syntax</b>	<code>:CALL:CDMA:MSInfo:ESN:MCODE</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will deliver back the mobile's manufacturer identity code. The query will deliver back an integer.
<b>Example</b>	<code>:CALL:CDMA:MSInfo:ESN:MCODE?</code> The integer delivered back is: 82.

**:CALL:CDMA:MSInfo:ESN:SNUMBER**

<b>Syntax</b>	<code>:CALL:CDMA:MSInfo:ESN:SNUMBER</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will deliver back the mobile's equipment serial number. The query will deliver back an integer.

**Example** :CALL:CDMA:MSInfo:ESN:SNUM?  
The integer delivered back is: 428542.

**:CALL:CDMA:MSInfo:SCM**

**Syntax** :CALL:CDMA:MSInfo:SCM  
**Parameters** There are no parameters.  
**Description** There is only a query form of this command available.  
**Query** This query will deliver back the mobile's station class mark. The query will deliver back an integer.  
**Example** :CALL:CDMA:MSInfo:ESN:SNUM?  
The integer delivered back is: 106.

**:CALL:CDMA:MSInfo:PREVision**

**Syntax** :CALL:CDMA:MSInfo:PREVision  
**Parameters** There are no parameters.  
**Description** There is only a query form of this command available.  
**Query** This query will deliver back the mobile's protocol revision. The query will deliver back an integer.  
**Example** :CALL:CDMA:MSInfo:PREV?  
The integer delivered back is: 3.

**:CALL:CDMA:MSInfo:SCIndex**

**Syntax** :CALL:CDMA:MSInfo:SCIndex  
**Parameters** There are no parameters.  
**Description** There is only a query form of this command available.  
**Query** This query will deliver back the slot cycle index. The query will deliver back an integer.  
**Example** :CALL:CDMA:MSInfo:SCIN?  
The integer delivered back is: 1.

**:CALL:CDMA:MSInfo:TCALls**

**Syntax** :CALL:CDMA:MSInfo:TCALls  
**Parameters** There are no parameters.  
**Description** There is only a query form of this command available.  
**Query** This query will deliver back a boolean indicating if calls are terminated. The query will deliver back a boolean.

**Example** :CALL:CDMA:MSInfo:TCAL?  
The boolean delivered back is: 1.

**:CALL:CDMA:MSInfo:RTYPE**

**Syntax** :CALL:CDMA:MSInfo:RTYPE  
**Parameters** There are no parameters.  
**Description** There is only a query form of this command available.  
**Query** This query will deliver back the registration type. The query will deliver back an integer.  
**Example** :CALL:CDMA:MSInfo:RTYPE?  
The integer delivered back is: 0.

**:CALL:CDMA:MSInfo:CAPable?**

**Syntax** :CALL:CDMA:MSInfo:CAPable? <PredefExp>  
**Parameters** PredefExp is one of  
US800 | USPCS | TACS | JTACS | KPCS | NMT450 | IMT2000 | MHZ900 | MHZ1800.  
**Description** There is only a query form of this command available.  
**Query** This query will deliver back one of the following expressions: YES | NO | UNKNown. It reflects the mobile's capability to set up calls in the respective frequency band.  
**Example** :CALL:CDMA:MSInfo:CAP? USPCS  
The string delivered back is: YES.

**:CALL:CDMA:MSInfo:SUPported**

**Syntax** :CALL:CDMA:MSInfo:SUPported?  
**Parameters** There are no parameters.  
**Description** There is only a query form of this command available.  
**Query** This query will deliver back one of the following expressions: YES|NO. It reflects the mobile's capability to get the Mobile Equipment Identifier (MEID).  
**Example** :CALL:CDMA:MSIN:MEID:STAT?  
The string delivered back is: YES.

**:CALL:CDMA:MSInfo:MEID:HEXadecimal**

**Syntax** :CALL:CDMA:MSInfo:MEID:HEXadecimal?  
**Parameters** There are no parameters.  
**Description** There is only a query form of this command available.

<b>Query</b>	This query will deliver back the Mobile Equipment Identifier (MEID) as a 14 digit hexadecimal number. The first 8 digits represent the manufacturer code and the last 6 digits represent the serial number.
<b>Example</b>	:CALL:CDMA:MSIN:MEID:HEX? The string delivered back is, for example: "A0 73E0F2 198AB0".

**:CALL:CDMA:MSINfo:MEID:DECimal**

<b>Syntax</b>	:CALL:CDMA:MSINfo:MEID:DECimal?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will deliver back the Mobile Equipment Identifier (MEID) as an 18 digit decimal number. The first 10 digits represent the manufacturer code and the last 8 digits represent the serial number.
<b>Example</b>	:CALL:CDMA:MSIN:MEID:DEC? The string delivered back is, for example: "160 07594226 01673904".

**AMPS commands :CALL:AMPS:HANDoff[:IMMediate]**

<b>Syntax</b>	:CALL:AMPS:HANDoff[:IMMediate]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command causes the Willtek 3100 to send a handoff to the mobile.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:AMPS:HAND:VCH 25 :CALL:AMPS:HAND:IMM Performs a handoff to channel 25.

**:CALL:AMPS:HANDoff:VCH**

<b>Syntax</b>	:CALL:AMPS:HANDoff:VCH <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 1023. The initial default is 29, which changes to the current channel during a call setup.
<b>Description</b>	This command sets the channel number for the voice channel used during a handoff.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CALL:AMPS:HAND:VCH 30 :CALL:AMPS:HAND:VCH? Value returned in this example: 30.

**:CALL:AMPS:HANdoff:SAT**

<b>Syntax</b>	:CALL:AMPS:HANdoff:SAT <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2. The initial default is 0, which changes to the current radio configuration during a call setup.
<b>Description</b>	This command sets the SAT frequency used in a handoff.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CALL:AMPS:HAND:SAT 2 :CALL:AMPS:HAND:SAT? Value returned in this example: 2.

**:CALL:AMPS:HANdoff:MAC**

<b>Syntax</b>	:CALL:AMPS:HANdoff:MAC <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 10. The default value is initialized to the current value set by :CONF:AMPS:BS:MAC.
<b>Description</b>	This command sets the MAC level of the mobile during a handoff.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:CALL:AMPS:HAND:MAC :CALL:AMPS:HAND:MAC? Value returned in this example: 3.

**:CALL:AMPS:SAT:REP:STATE**

<b>Syntax</b>	:CALL:AMPS:SAT:REP:STATE <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: OFF   ON. The default is OFF.
<b>Description</b>	This command switches receive SAT Status reports on.
<b>Query</b>	This command enables/disables the receive SAT Status reports.
<b>Example</b>	:CALL:AMPS:SAT:REP:STAT ON Switches the SAT Status reports on.

**1xEV-DO commands**    **:CALL:EVDO:SESSion:OPEN:ENABle**

<b>Syntax</b>	:CALL:EVDO:SESSion:OPEN:ENABle <Bool>
<b>Parameters</b>	Bool is a boolean value 0 1. Default is 1.



<b>Description</b>	This command determines whether the mobile is allowed to open a session with the base station simulated by the Willtek 3100 or not. When disabled (parameter value set to 0), the test set will not respond to the mobile's UATI request message. This will cause the mobile to repeatedly send access probes, but a session will not commence. The parameter value is normally set to 1 to allow connection of the mobile to the Willtek 3100 for testing.
<b>Query</b>	The query form of this command returns the current setting in form of one boolean value, contained in a string.
<b>Example</b>	:CALL:EVDO:SESSion:OPEN:ENABle 0 :CALL:EVDO:SESS:OPEN:ENAB? Value returned: "0".

**:CALL:EVDO:SESSion:OPEN:STATE**

<b>Syntax</b>	:CALL:EVDO:SESSion:OPEN:STATe? <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This is a query-only command. This command checks whether a session has been opened with the mobile. If the parameter value is set to 0, or if a session is already open, this command will return the current session state immediately. Otherwise, it will wait for the next change of the session state with the maximum time-out specified by the parameter value (in seconds) before returning the state. <b>Note:</b> This is an overlapped command using the OPC_CALL_PROC bit.
<b>Query</b>	The query form of this command returns the current session state in form of one boolean value, contained in a string. This boolean value will be set to 1 if a session is open.
<b>Example</b>	:CALL:EVDO:SESSion:OPEN:STATe? 10 This command will wait for a maximum of 10 seconds for the current session state to change. After a change in the session state, or latest after 10 seconds, it will return the current session state. If there is no session open, the query will return "0".

**:CALL:EVDO:SESSion:CLOSe[:IMMediate]**

<b>Syntax</b>	:CALL:EVDO:SESSion:CLOSe[:IMMediate]
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command immediately closes a session with the mobile.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:EVDO:SESSion:CLOSe:IMMediate

**:CALL:EVDO:CONNection:OPEN[:IMMediate]**

<b>Syntax</b>	:CALL:EVDO:CONNection:OPEN[:IMMediate]
<b>Parameters</b>	There are no parameters for this command.

<b>Description</b>	This command will make the Willtek 3100 to immediately respond to the mobile's UATI request message. A session will be negotiated and opened with the mobile. Forward and reverse traffic channels will be activated.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:EVDO:CONNECTION:OPEN:IMMEDIATE

**:CALL:EVDO:CONNECTION:OPEN:STATE**

<b>Syntax</b>	:CALL:EVDO:CONNECTION:OPEN:STATE <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This is a query-only command. This command checks whether there is a connection between the mobile and the Willtek 3100. If the parameter value is set to 0, or if there is already a connection open, this command will return the current connection state immediately. Otherwise, it will wait for the next change of the connection state with the maximum time-out specified by the parameter value (in seconds) before returning the state. <b>Note:</b> This is an overlapped command using the OPC_CALL_PROC bit.
<b>Query</b>	The query form of this command returns the current connection state in form of one boolean value, contained in a string. This boolean value will be set to 1 if there is a connection between the mobile and the Willtek 3100.
<b>Example</b>	:CALL:EVDO:CONNECTION:OPEN:STATE? 10 This command will wait for a maximum of 10 seconds for the current connection state to change. After a change in the connection state, or latest after 10 seconds, it will return the current state. If there is no connection, the query will return "0".

**:CALL:EVDO:CONNECTION:CLOSE[:IMMEDIATE]**

<b>Syntax</b>	:CALL:EVDO:CONNECTION:CLOSE[:IMMEDIATE]
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command immediately closes a connection with the mobile and deactivates the forward and reverse traffic channels.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:EVDO:CONNECTION:CLOSE:IMMEDIATE

**:CALL:EVDO:HANDOFF[:IMMEDIATE]**

<b>Syntax</b>	:CALL:EVDO:HANDOFF[:IMMEDIATE]
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command initiates a handoff to the channel and frequency band selected using the :CALL:EVDO:HAND commands (see below).
<b>Query</b>	There is no query form of this command available.

**Example** :CALL:EVDO:HANDoff:IMMediate

**:CALL:EVDO:HANDoff:BAND**

<b>Syntax</b>	:CALL:EVDO:HANDoff:BAND <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800   SEC800   PAMR400   PAMR800. Default is US800.
<b>Description</b>	This command specifies the band to be used <b>following</b> the issue of a :CALL:EVDO:HANDoff:IMMediate command (see above).
<b>Query</b>	The query form of this command returns the currently set frequency band in form of one of the predefined expressions explained above, contained in a string.
<b>Example</b>	:CALL:EVDO:HANDoff:BAND USPCs :CALL:EVDO:HAND:BAND? - Value returned: "US800" :CALL:EVDO:HAND :CALL:EVDO:HAND:BAND? - Value returned: "USPCs".

**:CALL:EVDO:HANDoff:ARFCn**

<b>Syntax</b>	:CALL:EVDO:HANDoff:ARFCn <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 2047. The initial default is 29, which changes to the current channel during a call setup.
<b>Description</b>	This command specifies the frequency channel for the TCH to be used <b>following</b> the issue of a :CALL:EVDO:HANDoff:IMMediate command (see above).
<b>Query</b>	The query form of this command returns the currently set frequency channel in form of one integer number, contained in a string.
<b>Example</b>	:CALL:EVDO:HANDoff:ARFCn 150 :CALL:EVDO:HAND :CALL:EVDO:HAND:ARFC? Value returned: "150".

**:CALL:EVDO:MSInfo:PClass[:DATA]**

<b>Syntax</b>	:CALL:EVDO:MSInfo:PClass[:DATA] <Int>, <PredefExp>
<b>Parameters</b>	Int is an integer number with a minimum value of 1, the maximum value is 5. The default value is 1. PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800   SEC800   PAMR400   PAMR800. Default is US800.
<b>Description</b>	This command specifies the mobile's power class for a specified band. It is used to indicate the maximum power the mobile can output, which will affect the maximum power test as well as the expected power value used in a power control reset.

<b>Query</b>	The query form of this command returns the mobile's power class in form of one integer and the corresponding maximum output power level (in dBm) in form of a floating point real number, both separated by a comma. The band needs to be used as a parameter when issuing the query form of the command (see example below).
<b>Example</b>	:CALL:EVDO:MSINFO:PCLASS:DATA 2, US800 :CALL:EVDO:MSIN:PCL? US800 String returned: " 2, 27.0".

**:CALL:EVDO:MSINFO:MACINDEX**

<b>Syntax</b>	:CALL:EVDO:MSINFO:MACINDEX?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This is a query-only command, returning the MAC index assigned to the mobile.
<b>Query</b>	The query form of this command returns the MAC index in form of one integer number, contained in a string.
<b>Example</b>	:CALL:EVDO:MSINFO:MACINDEX? Value returned: " 6".

**:CALL:EVDO:MSINFO:HARDWARE:IDTYPE**

<b>Syntax</b>	:CALL:EVDO:MSINFO:HARDWARE:IDTYPE?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This is a query-only command, returning the 24 bit hardware ID type for the mobile. <b>Note:</b> This information will only be available after a session has been opened successfully.
<b>Query</b>	The query form of this command returns the MAC index in form of six hexadecimal values (0 to 9, A to F a to f), contained in a string.
<b>Example</b>	:CALL:EVDO:MSINFO:HARDWARE:IDTYPE? Value returned: " "248ACE" ".

**:CALL:EVDO:MSINFO:HARDWARE:IDVALUE[:DECIMAL]**

<b>Syntax</b>	:CALL:EVDO:MSINFO:HARDWARE:IDVALUE[:DECIMAL]?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This is a query-only command, returning the mobile's hardware ID value. <b>Note:</b> This information will only be available after a session has been opened successfully. The response data is a string formatted as a 3-digit followed by a 8-digit decimal value as "DDD-DDDDDDDD" if ID Type = 0x010000 (ESN) and as a 10-digit followed by a 8-digit decimal value as "DDDDDDDDDD-DDDDDDDD" if ID Type = 0x00FFFF (MEID) and as a single 10-digit value "DDDDDDDDDD" otherwise, where D = decimal digit { 0-9 }.

**Example** :CALL:EVDO:MSIN:HARD:IDV?  
Value returned such as: "123-45678901".

**:CALL:EVDO:MSINfo:HARDware:IDValue:HEX**

**Syntax** :CALL:EVDO:MSINfo:HARDware:IDValue:HEX?

**Parameters** There are no parameters for this command.

**Description** There is only a query form of this command available.

**Query** This query returns the mobile's hardware ID value in hexadecimal format.  
**Note:** This information will only be available after a session has been opened successfully.  
The response data is a string formatted as a 2-digit followed by a 6-digit hex value as "HH-HHHHHH" if ID Type = 0x010000 (ESN) and as an 8-digit followed by a 6-digit hex value as "HHHHHHHH-HHHHHH" if ID Type = 0x00FFFF (MEID) and as a single 8-digit value "HHHHHHHH" otherwise, where H = hexadecimal digit { 0-9, A-F }.

**Example** :CALL:EVDO:MSIN:HARD:IDV:HEX?  
Value returned such as: "12-ABCDEF".

**:CALL:EVDO:MSINfo:UCCode**

**Syntax** :CALL:EVDO:MSINfo:UCCode?

**Parameters** There are no parameters for this command.

**Description** There is only a query form of this command available.

**Query** This query returns the mobile's UATI color code in decimal format.  
**Note:** This information will only be available after a session has been opened successfully.

**Example** :CALL:EVDO:MSIM:UCC?  
Value returned such as: "64".

**:CALL:EVDO:MSINfo:UATI**

**Syntax** :CALL:EVDO:MSINfo:UATI?

**Parameters** There are no parameters for this command.

**Description** There is only a query form of this command available.

**Query** This query returns the 24 LSBits of the mobile's UATI value in decimal format.  
**Note:** This information will only be available after a session has been opened successfully.

**Example** :CALL:EVDO:MSIN:UATI?  
Value returned such as: "6636321".

**:CALL:EVDO:MSINFO:SSEEd**

<b>Syntax</b>	:CALL:EVDO:MSINFO:SSEEd
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command returns the 32-bit session seed value for the AT as a hexadecimal value. This information is received after a session is successfully opened.
<b>Query</b>	This is a query-only command. The response data is a string formatted as a 8-digit hex value "0xHHHHHHHH" otherwise, where H = hex digit { 0-9, A-F }.
<b>Example</b>	:CALL:EVDO:MSIN:SSEE? Value returned such as: "0x12345678"

**WCDMA commands :CALL:WCDMA:POWER:ULTarget**

<b>Syntax</b>	:CALL:WCDMA:POWER:ULTarget <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -50, the maximum value 33. The minimum resolution is 0.1. The default value is -50.
<b>Description</b>	This command will set the UL target power.
<b>Query</b>	This query gets the UL target power.
<b>Example</b>	:CALL:WCDM:POW:ULTA -10.0 :CALL:WCDM:POW:ULTA? Value returned in this example: -10.0

**:CALL:WCDMA:POWER:ULTarget:FORCE**

<b>Syntax</b>	:CALL:WCDMA:POWER:ULTarget:FORCE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: NONE   MINi- mum   MAXimum. Default is NONE.
<b>Description</b>	This command forces the UE to transmit with minimum or maximum power. If set to NONE the UE is set to transmit with the value specified by command: CALL:WCDM:POW:ULTA.
<b>Query</b>	The query form of this command returns the current setting for PredefExp.
<b>Example</b>	:CALL:WCDM:POW:ULTA:FORC MAX :CALL:WCDM:POW:ULTA:FORC? Value returned in this example: MAX.

**:CALL:WCDMA:POWER:PREAmble**

<b>Syntax</b>	:CALL:WCDMA:POWER:PREAmble?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is no set form of this command.
<b>Query</b>	This query gets the calculated Preamble Initial Power.

<b>Example</b>	:CALL:WCDM:POW:PREA? Value returned in this example: -20.0
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**:CALL:WCDMa:ACTive**

<b>Syntax</b>	:CALL:WCDMa:ACTive?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query checks if a call is established. Possible returns are NO   YES.
<b>Example</b>	:CALL:WCDM:ACT? The string delivered is, for example: "YES".

**:CALL:WCDMa:NB:ORIGinate**

<b>Syntax</b>	:CALL:WCDMa:NB:ORIGinate
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Initiates a call setup by the base station (Willtek 3100).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:WCDM:NB:ORIG This command will initiate a NB-originated call in the 3100 (i.e. the mobile phone will be called).

**:CALL:WCDMa:NB:RELease**

<b>Syntax</b>	:CALL:WCDMa:NB:RELease
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will make the Willtek 3100 terminate the ongoing call.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:WCDM:NB:REL This command will release the call.

**:CALL:WCDMa:NB:LOOPback [ :START ]**

<b>Syntax</b>	:CALL:WCDMa:NB:LOOPback [ :START ]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will set the UE into loopback test mode.
<b>Query</b>	This query checks if the UE is in loopback mode. Possible returns are ON   OFF.
<b>Example</b>	:CALL:WCDM:NB:LOOP:CALL:WCDM:NB:LOOP? Value returned in this example: "ON".

**:CALL:WCDMA:NB:LOOPback:RELease**

<b>Syntax</b>	:CALL:WCDMA:NB:LOOPback:RELease
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will stop loopback mode.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALL:WCDM:NB:LOOP:REL

**:CALL:WCDMA:UE:NUMBer**

<b>Syntax</b>	:CALL:WCDMA:UE:NUMBer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will deliver the number dialed on the mobile as a string. In case the call was NB-originated, the string will be empty ("").
<b>Query</b>	There is only a query form of this command available. The query will deliver a string.
<b>Example</b>	:CALL:WCDM:UE:NUMB? The string delivered is, for example: "5551234".

**:CALL:WCDMA:UE:IMEISv**

<b>Syntax</b>	:CALL:WCDMA:UE:IMEISv?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This query will report the IMEI-(SV) of the UE.
<b>Query</b>	There is only a query form of this command available. The query will deliver a string.
<b>Example</b>	:CALL:WCDM:UE:IMEI? The string delivered is, for example: "5553434251234".

**:CALL:WCDMA:UE:IMSI**

<b>Syntax</b>	:CALL:WCDMA:UE:IMSI?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available. The query will deliver a string.
<b>Query</b>	This query will deliver back a string containing the international mobile subscriber identity.
<b>Example</b>	:CALL:WCDM:UE:IMSI? The string delivered in this example could be: "001010123456789".



**:CALL:WCDMa:UE:POWClass**

<b>Syntax</b>	:CALL:WCDMa:UE:POWClass?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will deliver the code representing the UE's power class. The query will deliver one integer.
<b>Example</b>	:CALL:WCDM:UE:POWC? The integer delivered back could be: 3.

**:CALL:WCDMa:UE:MRAT**

<b>Syntax</b>	:CALL:WCDMa:UE:MRAT?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query will report the supported Multi-RAT capabilities of the Mobile. Possible returns are NON   GSM.
<b>Example</b>	:CALL:WCDM:UE:MRAT? The string delivered in this example could be: "GSM".

**:CALL:WCDMa:UE:MCAPability**

<b>Syntax</b>	:CALL:WCDMa:UE:MCAPability?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query reports the UE's measurement capabilities for compressed mode for Uplink (first return value) and Downlink (second return value). 0 means compressed mode is not needed, 1 means compressed mode is needed.
<b>Example</b>	:CALL:WCDM:UE:MCAP? The string delivered in this example could be: 1 , 1.

**:CALL:WCDMa:UE:POSitioning**

<b>Syntax</b>	:CALL:WCDMa:UE:POSitioning?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This query reports the supported positioning mechanisms. Positioning capabilities have 4 possible values: NONE   NETWork   GPS   BOTH (none, Network based, UE based, both). What is meant by UE based is UE GPS methods and what is meant by Network based is Network based methods.

<b>Example</b>	<code>:CALL:WCDM:UE:POS?</code> The string delivered in this example could be: "NET".
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**:CALL:WCDMa:UE:REGISTRATION**

<b>Syntax</b>	<code>:CALL:WCDMa:UE:REGISTRATION?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command will check if the UE has registered. If not, it will set the Status Register Pending flag
<b>Query</b>	This query checks if the UE has registered with the Willtek 3100. Possible returns are NO   YES.
<b>Example</b>	<code>:CALL:WCDM:UE:REG?</code>

**:CALL:WCDMa:UE:REGISTRATION:CLEAR**

<b>Syntax</b>	<code>:CALL:WCDMa:UE:REGISTRATION:CLEAR</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command causes the Willtek 3100 to erase any stored information about a previous registration by a mobile.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:CALL:WCDM:UE:REG:CLEAR</code>

## MEASure subsystem

The MEASure subsystem is probably the most important SCPI command subsystem of the Willtek 3100. There, you will find all commands required to acquire measurement results of the mobile under test.

### GSM commands **:MEASure:GSM[:CONTinuous]:RFTX:STOP**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTinuous]:RFTX:STOP</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops a continuous measurement of the RF TX tests. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CONF:GSM:MEAS:GRO:RFTX POW,PRMS</b> <b>:MEAS:RFTX:GRO</b> <b>:MEAS:RFTX:STOP</b> Configures, starts and stops a measurement.

### **:MEASure:GSM[:CONTinuous]:RFTX:GROUp**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTinuous]:RFTX:GROUp</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the RF TX tests, specified with the <b>:CONF:GSM:MEAS:GRO:RFTX</b> command. To read out the latest measurement results, use the <b>:FETCh:GSM:RFTX:GROUp</b> command. <b>Note:</b> Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.
<b>Query</b>	The query form of this command will start the sequence of RF TX measurements as specified with the <b>:CONF:GSM:MEAS:GRO:RFTX</b> command. As soon as all measurements of the first sequence have been completed, a string will be delivered back, containing the related measurement result values, separated by commas. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the measurements specified. The order of the measurement result values within the string is as described below for the <b>:MEAS:GSM:CONT:RFTX:ALL</b> command.
<b>Example</b>	<b>:CONF:GSM:MEAS:GRO:RFTX POW,PRMS</b> <b>:MEASure:GSM:CONTinuous:RFTX:GROUp?</b> In this example, the group of measurements is defined by a power level measurement combined with a RMS phase error measurement. The string returned is: <b>"4.53,9.98"</b> . Because of the internal order (see description of the command below), the first measurement result value delivered back is the RMS phase error, the second one the mobile's RF output power level.

**:MEASure:GSM[:CONTInuous]:RFTX:ALL**

<b>Syntax</b>	:MEASure:GSM[:CONTInuous]:RFTX:ALL
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the most important RF TX tests. To read out the latest measurement results, use the :FETCh:GSM:RFTX:ALL command.</p> <p>The RF TX tests performed by this command are:</p> <ul style="list-style-type: none"><li><b>PPEAK</b>, the peak phase error measurement,</li><li><b>PRMS</b>, the root-mean square valued phase error measurement,</li><li><b>FREQuency</b> means the frequency error of the mobile under test,</li><li><b>LENGth</b> the length of the burst in microseconds,</li><li><b>UTIME</b> stands for the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li><li><b>POWer</b> is the mobile's RF output power level in dBm,</li><li><b>TEMPlate</b> indicates whether the power/time template has been violated by a burst or not,</li><li><b>CORNER</b> gives the RF power level in dBm at eight predefined positions of a burst (see section Corner Points for details),</li><li><b>FLATness</b> gives an indication whether the mobile's RF output power is constant during the active part of the burst.</li></ul> <p><b>Notes:</b></p> <ul style="list-style-type: none"><li>– Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.</li><li>– For a further description of the single measurements, see description of the related commands below.</li></ul>
<b>Query</b>	<p>The query form of this command starts the measurements and – after all 19 measurements have been completed and all measurement results obtained – delivers a string, containing 19 measurement result values, separated with commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"><li>1. <b>PPEAK</b>, floating point real number, representing the result of the peak phase error measurement,</li><li>2. <b>PRMS</b>, floating point real number representing the result of the root-mean square valued phase error measurement,</li><li>3. <b>FREQuency</b>, floating point real number representing the mobile's frequency error,</li><li>4. <b>LENGth</b>, floating point real number representing the length of the burst in microseconds,</li><li>5. <b>UTIME</b>, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li><li>6. <b>POWer</b>, floating point real number representing the mobile's RF output power level in dBm,</li><li>7. <b>TEMPlate</b> boolean number. A <b>0</b> indicates that the power/time template (PTT) was <b>not</b> violated by the last burst measured, while a <b>1</b> means that the burst did violate the PTT.</li><li>8...15. <b>CORNER</b>, eight floating point real numbers, representing the RF power level in dBm at eight predefined positions of a burst.</li><li>16...19. <b>FLATness</b>, four floating point real numbers, representing the absolute minimum and maximum relative RF power levels of the mobile and their positions during the active part of the burst.</li></ol> <p><b>Note:</b> For a further description of the single measurements, see description of the related commands below.</p>

<b>Example</b>	<p><b>:MEASure:GSM:CONTInuous:RFTX:ALL?</b></p> <p>In this case, all relevant RF TX measurements will be performed in a sequence. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing 19 measurement results:  <b>"5.13,1.94,-2.22,557.0,0.1,11.22,0,-72.18, -61.91,-20.91,-0.05,-0.04,-17.97,-56.60, -73.95,-0.05,-0.01,0.02,-0.05"</b>.</p>
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**:MEASure:GSM[:CONTInuous]:RFTX:PPEAk**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTInuous]:RFTX:PPEAk</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the peak phase error. To read out the latest measurement result, use the <b>:FETCh:GSM:RFTX:PPEAk</b> command. For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of degrees.
<b>Example</b>	<p><b>:MEASure:GSM:CONTInuous:RFTX:PPEAk?</b></p> <p>The string returned is: <b>"5.13"</b>.</p>

**:MEASure:GSM[:CONTInuous]:RFTX:PRMS**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTInuous]:RFTX:PRMS</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the root-mean square valued (RMS) phase error. To read out the latest measurement result, use the <b>:FETCh:GSM:RFTX:PRMS</b> command. For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of degrees.
<b>Example</b>	<p><b>:MEASure:GSM:CONTInuous:RFTX:PRMS?</b></p> <p>The string returned is: <b>"1.54"</b>.</p>

**:MEASure:GSM[:CONTInuous]:RFTX:FREQuency**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTInuous]:RFTX:FREQuency</b>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the mobile's frequency error. To read out the latest measurement result, use the <code>:FETCh:GSM:RFTX:FREQuency</code> command. For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of Hertz.
<b>Example</b>	<b><code>:MEASure:GSM:CONTinuous:RFTX:FREQuency?</code></b> The string returned is: <code>"-31.92"</code> .

**`:MEASure:GSM[:CONTinuous]:RFTX:LENGth`**

<b>Syntax</b>	<code>:MEASure:GSM[:CONTinuous]:RFTX:LENGth</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the burst length. To read out the latest measurement result, use the <code>:FETCh:GSM:RFTX:LENGth</code> command. For details regarding this RF TX measurement, refer to section Burst Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of microseconds.
<b>Example</b>	<b><code>:MEASure:GSM:CONTinuous:RFTX:LENGth?</code></b> The string returned is: <code>"557.0"</code> .

**`:MEASure:GSM[:CONTinuous]:RFTX:UTIME`**

<b>Syntax</b>	<code>:MEASure:GSM[:CONTinuous]:RFTX:UTIME</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the uplink timing error. To read out the latest measurement result, use the <code>:FETCh:GSM:RFTX:UTIME</code> command. For details regarding this RF TX measurement, refer to section Burst Results Display.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of microseconds.
<b>Example</b>	<b><code>:MEASure:GSM:CONTinuous:RFTX:UTIME?</code></b> The string returned is: <code>"0.1"</code> .

**`:MEASure:GSM[:CONTinuous]:RFTX:POWEr`**

<b>Syntax</b>	<code>:MEASure:GSM[:CONTinuous]:RFTX:POWEr</code>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the mobile's RF output power level. To read out the latest measurement result, use the <code>:FETCh:GSM:RFTX:POWer</code> command. For details regarding this RF TX measurement, refer to section Burst Results Display.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of dBm.
<b>Example</b>	<b><code>:MEASure:GSM:CONTInuous:RFTX:POWer?</code></b> The string returned is: <b>"11.22"</b> .

**`:MEASure:GSM[:CONTInuous]:RFTX:TEMPlate`**

<b>Syntax</b>	<code>:MEASure:GSM[:CONTInuous]:RFTX:TEMPlate</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous check of the UL burst against the power/time template (PTT). To read out the latest measurement result, use the <code>:FETCh:GSM:RFTX:TEMPlate</code> command. For details regarding this RF TX measurement, refer to section Burst Test Menu. The power/time template (PTT) is user-definable. For details, please refer to section Power/Time Templates (PTT). <b>Note:</b> The power/time template can also be set using the <code>:CALC:RFTX:TEMP</code> commands.
<b>Query</b>	The query form of this command will start the (continuous) check and return a result value as soon as the first check has been completed. The string delivered back will contain one boolean number. A <b>0</b> indicates that there was <b>no</b> violation of the PTT, while a <b>1</b> means that the last burst measured did violate the PTT.
<b>Example</b>	<b><code>:MEASure:GSM:CONTInuous:RFTX:TEMPlate</code></b> This command will start the continuous check of the burst against the PTT.

**`:MEASURE:GSM[:CONTInuous]:RFTX:CORNeR`**

<b>Syntax</b>	<code>:MEASURE:GSM[:CONTInuous]:RFTX:CORNeR</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's RF output power level on eight user-definable positions of the ramping phases of a burst (the so-called corner points). To read out the latest measurement results, use the <code>:FETCh:GSM:RFTX:CORNeR</code> command. For details regarding this RF TX measurement, please refer to section Burst Results Display. More details regarding the corner points can be found in section Corner Points. <b>Note:</b> The corner points can also be set using the <code>:CALC:RFTX:CORN</code> commands.
<b>Query</b>	The query form of this command will start the measurement and return eight measurement result values as soon as the first measurement has been completed. The string delivered back will contain eight floating point real numbers with the physical dimension of dBm. The single values are separated by commas.

<b>Example</b>	<b>:MEASure:GSM:CONTinuous:RFTX:CORner?</b> The string returned is: "-72.18,-61.91,-20.91,-0.05, -0.04,-17.97,-56.60,-73.95".
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**:MEASURE:GSM[:CONTinuous]:RFTX:FLATness**

<b>Syntax</b>	<b>:MEASURE:GSM[:CONTinuous]:RFTX:FLATness</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the flatness of the mobile's burst during the active part of it. In short words, it is a search for both the absolute minimum and the absolute maximum of the mobile's output power level during the active part of the burst. This measurement will collect four measurement result values: <ul style="list-style-type: none"> <li>- the first value is the minimum RF power level in dB,</li> <li>- the second one is the position of this minimum within the burst in bit positions,</li> <li>- the third value is the maximum RF power level in dB, while</li> <li>- the last value is the position of the maximum within the burst in terms of bit position.</li> </ul> The resolution of this measurement in the time domain is approx. 0.825 microseconds, equaling approx. 1/5 bit periods. To read out the latest measurement result, use the <b>:FETCh:GSM:RFTX:FLATness</b> command.
<b>Query</b>	The query form of this command will start the measurement and return four measurement result values as soon as the first measurement has been completed. The string delivered back will contain four floating point real numbers with the physical dimensions explained above. The single values are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:CONTinuous:RFTX:FLATness?</b> The string returned is: "-0.12,113,7,0.56,34.0".

**:MEASURE:GSM[:CONTinuous]:RFTX:FPOWER**

<b>Syntax</b>	<b>:MEASURE:GSM[:CONTinuous]:RFTX:FPOWER</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the fast burst peak power level. This measurement is very similar to the <b>:MEAS:GSM:RFTX:POWER</b> measurement, but it is faster. To read out the latest measurement result, use the <b>:FETCh:GSM:RFTX:FPOWER</b> and the <b>:CALCulate:GSM:RFTX:POWER:...</b> commands. For further details, refer to the description of the <b>:CONF:GSM:MEAS:LEV:EXP</b> command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimensions of dBm.
<b>Example</b>	<b>:MEASure:GSM:CONTinuous:RFTX:FPOWER?</b> The string returned is: "13.05".



**:MEASure:GSM[:CONTInuous]:BLOCkdata:BURStshape**

<b>Syntax</b>	:MEASure:GSM[:CONTInuous]:BLOCkdata:BURStshape
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the mobile's UL burst shape. To read out the measurement result values of the last burst sampled, use the :FETCh:GSM:RFTX:BLOCkdata:BURStshape command.</p> <p>The aim of this measurement is to obtain the pure RF power levels, sampled by the Willtek 3100 in order to display the shape of the burst graphically on another computer or to perform some special analysis of the burst shape.</p> <p>For details regarding the burst measurement, also refer to section Burst Test Menu.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain 700 floating point real numbers with the physical dimension of dB (except the first two).</p> <p>The first data position of the array is the absolute position of the middle of the burst (i.e. bit 73) within the burst data supplied. In order to allocate the RF power level obtained for the middle of the burst, add 2 to this first value of the array to find the relative position within this data array (as the first two positions of this array are no data values).</p> <p>The second number is the absolute peak power level of the burst in dBm, obtained at the middle of the burst.</p> <p>All the data values following are relative RF power levels (in dB) with the peak power level (second data value of the array) being the reference.</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:GSM:CONT:BLOC:BURStshape?</b></p> <p>The array returned is: "353.0,10.0,-73.5,-69.6,-70.8, ... -0.1,0.0,0.2, ... -68.4".</p> <p>The data have the following meaning: 353.0 on the first position means that the absolute position of the middle of the burst is position 353 of the burst data array. Thus, it can be found on position 355 of the data block returned.</p> <p>The relative power level at the middle of the burst will always be 0.0 as it is the reference point.</p> <p>The peak power of the burst (obtained at the reference point 'middle of the burst') can be found on the second position of the data array and is 10.0 dBm.</p> <p>Then follows the relative RF power levels sampled at the various time positions of the burst (-73.5,-69.6, ... dB). This means that the absolute power level at the first position sampled is -63,5 dBm (-73.5+10.0).</p> <p>All the remaining data values are relative RF power levels sampled by the Willtek 3100 during the burst period.</p>

**:MEASure:GSM[:CONTInuous]:BLOCkdata:PHASerror**

<b>Syntax</b>	:MEASure:GSM[:CONTInuous]:BLOCkdata:PHASerror
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the mobile's phase error curve. To read out the measurement result values of the latest phase error curve, use the <code>:FETCh:GSM:RFTX:BLOCKdata:PHASerror</code> command.</p> <p>The aim of this measurement is to obtain the pure phase error levels, calculated by the Willtek 3100 in order to graphically display the phase error curve on another computer or to perform some special analysis of the phase error on an external computer.</p> <p>For details regarding the phase error measurement, please also refer to section Phase/Frequency Test Menu.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain 590 floating point real numbers with the physical dimensions of degrees (except the first two).</p> <p>The first number is the absolute position of the middle of the burst (i.e. bit 73). In order to allocate the phase error obtained for bit 73, add 2 to this first value of the array to find the relative position within this data array (as the first two positions of this array are no data values).</p> <p>The second number of this data array is always set to 0.0. All the data values following are phase errors, forming the curve of the phase error during a burst. The single measurement result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:GSM:CONT:BLOCKdata:PHASerror?</b></p> <p>The array returned is: "353.0,0.0,0.0,0.21,0.41,0.32, ...-2.17,-2.01,-1.87,...0.0".</p> <p>The data have the following meaning: 353.0 on the first position means that the absolute position of the middle of the burst is position 353 of the pure data array. Thus, it can be found on position 355 of the entire data block.</p> <p>The result value 0.0 on the second position has no particular meaning. However, it may be used to detect a phase error data array.</p> <p>All the remaining data levels are phase errors calculated, forming the graph of the phase error.</p>

**:MEASure[:CONTinuous]  
:BLOCKdata:AFSPectrum[:CURRent]**

<b>Syntax</b>	<code>:MEASure[:CONTinuous]:BLOCKdata:AFSPectrum[:CURRent]</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the audio spectrum curve. To read out the measurement result values of the latest audio spectrum curve, use the <code>:FETCh:GSM:RFTX:BLOCKdata:AFSPectrum</code> command.</p> <p>The aim of this measurement is to obtain the pure audio spectrum levels, calculated by the Willtek 3100 in order to graphically display the audio spectrum curve on another computer or to perform some special analysis of the audio spectrum.</p> <p>For details regarding the audio spectrum measurement, also refer to the short-form manual, AF options.</p> <p><b>Note:</b> Any audio measurements require the Audio Option to be installed on your Willtek 3100.</p>

<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the audio spectrum analyzer.</p> <p>The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:CONT:BLOCKdata:AFSPectrum:CURRent?</b></p> <p>The array returned is: "-120.0,-119.5,-119.7, ...-30.4,-30.4,-30.3, ...-119.7".</p>

**:MEASure[:CONTinuous]:BLOCkdata:AFSPectrum:AVG**

<b>Syntax</b>	<b>:MEASure[:CONTinuous]:BLOCkdata:AFSPectrum:AVG &lt;int1&gt;</b>
<b>Parameters</b>	<p><b>int1</b> is an integer.</p> <p>The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.</p>
<b>Description</b>	<p>Starts a process that measures and averages the audio spectrum for a specified number of times (<b>int1</b>). The aim of this measurement is to obtain a 'smoothed' audio spectrum curve that can then be displayed on another computer or used to perform some special analysis of the audio spectrum.</p> <p>For details regarding the audio spectrum measurement, also refer to the short-form manual, AF options.</p> <p><b>Note:</b> Any audio measurements require the Audio Option to be installed on your Willtek 3100.</p>
<b>Query</b>	<p>The query form of this command will start the averaging process and return an array of measurement result values as soon as all the measurements have been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the audio spectrum analyzer.</p> <p>The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:CONT:BLOCKdata:AFSPectrum:AVG? 25</b></p> <p>The array returned is: "-61.0,-61.0,-61.1, ...0.0,0.0,0.0, ...-61.0".</p>

**:MEASure:GSM[:CONTinuous]  
:BLOCkdata:MSPectrum[:CURRent]**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTinuous]:BLOCkdata:MSPectrum[:CURRent]</b>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the modulation spectrum curve. To read out the measurement result values of the latest modulation spectrum curve, use the <code>:FETCh:GSM:RFTX:BLOCKdata:MSpectrum</code> command.</p> <p>The aim of this measurement is to obtain the pure modulation spectrum levels, calculated by the Willtek 3100 in order to graphically display the modulation spectrum curve on another computer or to perform some special analysis of the modulation spectrum.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer.</p> <p>The span can be set using the <code>:RFSP:MSP:SPAN</code> command; the resolution may be set using the <code>:RFSP:MSP:RES</code> command. The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:GSM:CONT:BLOCKdata:MSpectrum?</b></p> <p>The array returned is: "-62.0,-61.5,-62.2, ...-0.4,0.0,-0.3,...-62.4".</p>

**:MEASure:GSM[:CONTInuous]  
:BLOCKdata:MSpectrum:AVG**

<b>Syntax</b>	<p><code>:MEASure:GSM[:CONTInuous]:BLOCKdata:MSpectrum:AVG</code> <code>&lt;int1&gt;</code></p>
<b>Parameters</b>	<p><b>int1</b> is an integer.</p> <p>The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.</p>
<b>Description</b>	<p>Starts a process that measures and averages the modulation spectrum for a specified number of times. The aim of this measurement is to obtain a 'smoothed' modulation spectrum curve in order to graphically display the modulation spectrum on another computer or to perform some special analysis.</p> <p><b>Note:</b> To read out the measurement result values of the averaging process, the <code>:FETCh:GSM:RFTX:BLOCKdata:MSpectrum</code> command may be used.</p>
<b>Query</b>	<p>The query form of this command will start the averaging process and return an array of measurement result values as soon as all the measurements have been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer.</p> <p>The span can be set using the <code>:RFSP:MSP:SPAN</code> command; the resolution may be set using the <code>:RFSP:MSP:RES</code> command.</p> <p>The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:GSM:CONT:BLOCKdata:MSpectrum:AVG? 25</b></p> <p>The array returned is: "-61.0,-61.0,-61.1, ...0.0,0.0,0.0,...-61.0".</p>

**:MEASure:GSM[:CONTInuous]  
:BLOCKdata:PSCShape[:CURRent]**

<b>Syntax</b>	:MEASure[:GSM][:CONTInuous]:BLOCKdata:PSCShape[:CURRent]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the current shape curve. To read out the measurement result values of the latest curve, use the :FETCh:BLOCKdata:PSCShape command. The aim of this measurement is to obtain the current consumption values at each point in time during an entire TDMA frame. The time/current points are also drawn as a curve on the Power Supply graphical display.
<b>Query</b>	The query form of this command will start the measurement and return an array of measurement result values as soon as the measurement has been completed. The string delivered back will contain about 886 floating point real numbers with the physical dimension of mA. The current is sampled at a rate of 192 kHz, starting with the beginning of a new downlink TDMA frame.
<b>Example</b>	<b>:MEAS:GSM:CONT:BLOCKdata:PSCShape?</b> Returns about 886 measurement values, describing the current shape over a TDMA frame.

**:MEASure:GSM[:CONTInuous]:RFRX:STOP**

<b>Syntax</b>	:MEASure:GSM[:CONTInuous]:RFRX:STOP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops a continuous measurement of the RF RX tests. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:MEAS:RFRX:RBER ALL</b> <b>:MEAS:RFRX:STOP</b> Starts and stops a measurement. There are no parameters.

**:MEASURE:GSM[:CONTInuous]:RFRX:RBER:ALL**

<b>Syntax</b>	:MEASURE:GSM[:CONTInuous]:RFRX:RBER:ALL
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the residual bit error ratios (RBER). To read out the latest measurement results, use the <code>:FETCh:GSM:RFRX:RBER:ALL</code> command.</p> <p>The RF RX tests performed by this command are:  <b>CIB</b>, the residual bit error ratio of the class Ib bits,  <b>CII</b>, the residual bit error ratio of the class II bits, and  <b>FER</b>, the frame erasure ratio.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- More details regarding RBER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly.</li> <li>- The number of samples to be used for testing can be set, using the <code>:CONF:GSM:BER:COUNT</code> command.</li> </ul>
<b>Query</b>	<p>The query form of this command starts the measurements and – after all measurements have been completed and all measurement results obtained – delivers a string, containing three floating point real numbers. The order and meaning of these numbers delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>CIB</b>, representing the residual bit error ratio of the class Ib bits,</li> <li>2. <b>CII</b>, representing the residual bit error ratio of the class II bits and</li> <li>3. <b>FER</b>, representing the frame erasure ratio.</li> </ol> <p>The single result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:GSM:CONT:RFRX:RBER:ALL?</b></p> <p>In this case, all RBER measurements will be performed. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the three measurement result values:  <b>"0.0,1.2,0.0"</b>.</p>

**:MEASURE:GSM[:CONTinuous]:RFRX:RBER:CIB**

<b>Syntax</b>	<code>:MEASURE:GSM[:CONTinuous]:RFRX:RBER:CIB</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the residual bit error ratio of the class Ib bits. To read out the latest measurement result, use the <code>:FETCh:GSM:RFRX:RBER:CIB</code> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- More details regarding RBER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the <code>:CONF:GSM:BER:COUNT</code> command.</li> </ul>
<b>Query</b>	<p>The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.</p>
<b>Example</b>	<p><b>:MEASure:CONTinuous:RFRX:RBER:CIB?</b></p> <p>Measurement result string delivered back:  <b>"0.1"</b>.</p>

**:MEASURE:GSM[:CONTInuous]:RFRX:RBER:CII**

<b>Syntax</b>	:MEASURE:GSM[:CONTInuous]:RFRX:RBER:CII
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the residual bit error ratio on the class II bits. To read out the latest measurement result, use the :FETCh:GSM:RFRX:RBER:CII command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- More details regarding RBER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	<b>:MEAS:GSM:CONT:RFRX:RBER:CII?</b> Measurement result string delivered back: "1.2".

**:MEASURE:GSM[:CONTInuous]:RFRX:RBER:FER**

<b>Syntax</b>	:MEASURE:GSM[:CONTInuous]:RFRX:RBER:FER
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the frame erasure ratio. To read out the latest measurement result, use the :FETCh:GSM:RFRX:RBER:FER command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- More details regarding RBER testing can be found in section BER Live Display.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the frame erasure ratio.
<b>Example</b>	<b>:MEAS:GSM:CONT:RFRX:RBER:FER?</b> Measurement result string delivered back: "0.0".

**:MEASURE:GSM[:CONTInuous]:RFRX:BER:ALL**

<b>Syntax</b>	:MEASURE:GSM[:CONTInuous]:RFRX:BER:ALL
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the (nonresidual) bit error ratios (BER). To read out the latest measurement results, use the <code>:FETCh:GSM:RFRX:BER:ALL</code> command.</p> <p>The RF RX tests performed on this command are:  <b>CIA</b>, the bit error ratio of the class Ia bits,  <b>CIB</b>, the bit error ratio of the class Ib bits, and  <b>CII</b>, the bit error ratio of the class II bits.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly.</li> <li>- The number of samples to be used for testing can be set, using the <code>:CONF:GSM:BER:COUNT</code> command.</li> </ul>
<b>Query</b>	<p>The query form of this command starts the measurements and – after all measurements have been completed and all measurement results obtained – delivers a string, containing three floating point real numbers. The order and meaning of these numbers delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>CIA</b>, representing the bit error ratio of the class Ia bits,</li> <li>2. <b>CIB</b>, representing the bit error ratio of the class Ib bits, and</li> <li>3. <b>CII</b>, representing the bit error ratio of the class II bits.</li> </ol> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p><b>:MEASure:GSM:CONTinuous:RFRX:BER:ALL?</b></p> <p>In this case, all BER measurements will be performed in a sequence. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the three measurement result values:  <b>"0.0,0.0,0.2"</b>.</p>

**:MEASURE:GSM[:CONTinuous]:RFRX:BER:CIA**

<b>Syntax</b>	<code>:MEASURE:GSM[:CONTinuous]:RFRX:BER:CIA</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the (nonresidual) bit error ratio of the class Ia bits. To read out the latest measurement result, use the <code>:FETCh:GSM:RFRX:BER:CIA</code> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the <code>:CONF:GSM:BER:COUNT</code> command.</li> </ul>
<b>Query</b>	<p>The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.</p>
<b>Example</b>	<p><b>:MEAS:GSM:CONT:RFRX:BER:CIA?</b></p> <p>Measurement result string delivered back:  <b>"0.0"</b>.</p>



**:MEASURE:GSM[:CONTInuous]:RFRX:BER:CIB**

<b>Syntax</b>	:MEASURE:GSM[:CONTInuous]:RFRX:BER:CIB
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the (nonresidual) bit error ratio of the class Ib bits. To read out the latest measurement result, use the :FETCh:GSM:RFRX:BER:CIB command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	<b>:MEAS:GSM:CONT:RFRX:BER:CIB?</b> Measurement result string delivered back: "0.1".

**:MEASURE:GSM[:CONTInuous]:RFRX:BER:CII**

<b>Syntax</b>	:MEASURE:GSM[:CONTInuous]:RFRX:BER:CII
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the (nonresidual) bit error ratio on the class II bits. To read out the latest measurement result, use the :FETCh:GSM:RFRX:BER:CII command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	<b>:MEAS:GSM:CONT:RFRX:BER:CII?</b> Measurement result string delivered back: "0.2".

**:MEASure[:GSM][:CONTInuous]:RFRX:BER:CRC**

<b>Syntax</b>	:MEASure[:GSM][:CONTInuous]:RFRX:BER:CRC
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the (non-residual) bit error ratio on the class II bits. To read out the latest measurement result, use the :FETCh:GSM:RFRX:BER:CII command. Notes <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GSM:RFRX:BER:CRC? Measurement result string delivered back in this example: "0.2".

**:MEASure:GSM[:CONTInuous]:RFRX:FBER**

<b>Syntax</b>	:MEASure:GSM[:CONTInuous]:RFRX:FBER
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the fast bit error ratio (C-type loop). To read out the latest measurement result, use the :FETCh:GSM:RFRX:FBER command. Notes: <ul style="list-style-type: none"> <li>- More details regarding Fast BER testing can be found in section BER Live Display.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GSM:CONT:RFRX:FBER? Measurement result string delivered back: "1.5".

**:MEASURE:GSM[:CONTInuous]:RFRX:RTDelay**

<b>Syntax</b>	:MEASURE:GSM[:CONTInuous]:RFRX:RTDelay
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the round trip delay for data during bit error ratio measurements. To read out the latest measurement result, use the :FETCh:GSM:RFRX:RTD command. Note: More details regarding the round-trip delay can be found in section BER Live Display.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one integer, representing the round trip delay.

**Example**        **:MEAS:GSM:CONT:RFRX:RTDelay?**  
Measurement result string delivered back:  
"8".

**:MEASure:GSM[:CONTInuous]:RFSPectrum:STOP**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTInuous]:RFSPectrum:STOP</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops continuous RF spectrum measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:MEAS:RFSP:ACPM MOD</b> <b>:MEAS:RFSP:STOP</b> Starts and stops a measurement.

**:MEASure:GSM[:CONTInuous]:RFSP:ACPM:MODulation**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTInuous]:RFSP:ACPM:MODulation</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the ACPM modulation spectrum. To read out the latest measurement results, use the <b>:FETCh:GSM:RFSP:ACPM:MOD</b> command. <b>Note:</b> According to GSM specification 05.05, this measurement will be performed on ( $\pm$ )100 kHz and ( $\pm$ )250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of ( $\pm$ )1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing 23 measurement result values separated by commas. These 23 measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile). The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.
<b>Example</b>	<b>:MEAS:GSM:CONT:RFSP:ACPM:MODulation?</b> In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 23 floating point real numbers.

**:MEASure:GSM[:CONTInuous]:RFSPectrum:ACPM:MODPower?**

<b>Syntax</b>	<b>:MEASure:GSM[:CONTInuous]:RFSPectrum:ACPM:MODPower?</b>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the ACPM modulation spectrum. To read out the latest measurement results, use the <code>:FETCh:GSM:RFSP:ACPM:MODP</code> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>– The first result is the absolute power in dBm, measured at the center frequency. The remaining 23 values are the same as in the <code>ACPM:MODulation</code> command.</li> <li>– According to GSM specification 05.05, this measurement will be performed on <math>(\pm)100</math> kHz and <math>(\pm)250</math> kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of <math>(\pm)1.8</math> MHz. Including the carrier frequency (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</li> </ul>
<b>Query</b>	<p>The query form of this command starts the measurement and delivers back a string, containing the absolute power at the center frequency (within a 30 kHz bandwidth) as the first value with the physical dimension of dBm and after that 23 measurement result values, all separated by commas. These 23 measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile).</p>
<b>Example</b>	<p><code>:MEAS:RFSP:ACPM:MODP?</code></p> <p>In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 24 floating point real numbers.</p>

**:MEASure:GSM[:CONTinuous]:RFSP:ACPM:TRANSient**

<b>Syntax</b>	<code>:MEASure:GSM[:CONTinuous]:RFSP:ACPM:TRANSient</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the ACPM spectrum due to switching transients. To read out the latest measurement results, use the <code>:FETCh:GSM:RFSP:ACPM:TRANS</code> command.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on 0, <math>(\pm)400</math>, <math>(\pm)600</math>, <math>(\pm)1.200</math> and <math>(\pm)1.800</math> kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the 30 kHz windows below and above the frequencies specified by GSM standard 05.05 will be delivered back. This adds up to <math>9 \times 3 = 27</math> measurement result values, that are returned.</p>
<b>Query</b>	<p>The query form of this command starts the measurement and delivers a string, containing 27 measurement result values separated by commas. These 27 measurement result values are floating point real numbers with the physical dimension dBm.</p>
<b>Example</b>	<p><code>:MEAS:GSM:CONT:RFSP:ACPM:TRANSient?</code></p> <p>In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 27 floating point real numbers.</p>

**:MEASure[:CONTinuous]:AFANalyser:STOP**

<b>Syntax</b>	<code>:MEASure[:CONTinuous]:AFANalyser:STOP</code>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Stops continuous audio measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:MEAS:AFAN:SIN</b> <b>:MEAS:AFAN:STOP</b> Starts and stops a measurement.

**:MEASure[:CONTInuous]:AFANalyser:GROup**

<b>Syntax</b>	:MEASure[:CONTInuous]:AFANalyser:GROup
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the audio tests, specified with the :CONF:MEAS:GRO:AFAN command. To read out the latest measurement results, use the :FETCh:AFAN:GROup command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- Please keep in mind that the start of a new AF test will always terminate all other measurements.</li> <li>- To perform any audio measurements on your Willtek 3100, the Audio Option must be installed.</li> </ul>
<b>Query</b>	The query form of this command will start the measurements and deliver back a string, containing the latest set of measurement result values. All measurement result values returned will be floating point real numbers. The order of the measurement result values returned is as described below (see command <b>:MEAS:AFAN:ALL</b> ). The single measurement result values are separated by commas.
<b>Example</b>	<b>:CONF:MEAS:GRO:AFAN SIN,FREQ</b> <b>:MEASure:CONTInuous:AFANalyser:GROup?</b> In this example, the group of measurements is defined by a SINAD measurement, combined with an AF frequency measurement. The measurement result string returned is: "1000.0,50.5". Because of the internal order, the first measurement result value delivered back is the audio frequency, the second one the SINAD.

**:MEASure[:CONTInuous]:AFANalyser:ALL**

<b>Syntax</b>	:MEASure[:CONTInuous]:AFANalyser:ALL
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the most important audio tests. To read out the latest measurement results, use the <code>:FETCh:AFAN:ALL</code> command.</p> <p>The audio tests performed by this command are:</p> <p><b>ACVPeakp</b>, the peak-to-peak measurement of an AC voltage,  <b>ACVRms</b>, the RMS-valued measurement of an AC voltage,  <b>DCV</b> is used to measure AC ripple on DC lines (this measurement gives the root-mean square voltage of the AC component of the applied DC signal).  <b>FREQuency</b> is the measurement of the audio frequency in Hertz,  <b>DISToRTion</b> is the distortion measurement on the third harmonic of a sine wave and expressed in %, while  <b>SINad</b> is the measurement of the signal to noise ratio, expressed in dB.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- Please keep in mind that the start of a new AF test will always terminate all other measurements.</li> <li>- Any AF measurement will need the Audio Option to be installed on your Willtek 3100.</li> </ul>
<b>Query</b>	<p>The query form of this command starts the measurements and – after all measurements have been completed and all measurement results obtained – delivers a string, containing six floating point real numbers, representing the six measurement result values. The order of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>ACVPeakp</b>, representing the AC peak-to-peak voltage of the AF signal,</li> <li>2. <b>ACVRms</b>, representing the RMS-valued AC voltage of the AF signal,</li> <li>3. <b>DCV</b>, representing the RMS-valued AC voltage on an applied DC signal,</li> <li>4. <b>FREQuency</b>, representing the audio frequency,</li> <li>5. <b>DISToRTion</b>, representing the third-harmonic distortion of the applied sine-wave AF signal and,</li> <li>6. <b>SINad</b>, representing the signal to noise ratio of the applied AF signal.</li> </ol>
<b>Example</b>	<p><b>:MEASure:CONTinuous:AFANalyser:ALL?</b></p> <p>In this case, all audio measurements will be performed in a sequence. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing six measurement result values:</p> <p><b>"0.7,0.25,0.0,1000.0,0.3,50.5"</b>.</p>

**:MEASure[:CONTinuous]:AFANalyser:ACVoltage:PEAKp**

<b>Syntax</b>	<code>:MEASure[:CONTinuous]:AFANalyser:ACVoltage:PEAKp</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the AC peak-to-peak voltage of the AF signal applied to the audio analyzer. To read out the latest measurement result, use the <code>:FETCh:AFAN:ACV:PEAK</code> command.</p> <p><b>Note:</b> Any AF test command needs the Audio Option to be installed on your Willtek 3100.</p>
<b>Query</b>	<p>The query form of this command starts the measurement and delivers a string, containing a floating point real number, representing the first measurement result value. The physical dimension is volt, measured peak-to-peak (<math>V_{pp}</math>).</p>
<b>Example</b>	<p><b>:MEAS:CONT:AFAN:ACV:PEAKp?</b></p> <p>String delivered back: <b>"0.7"</b>.</p>

**:MEASure[:CONTInuous]:AFANalyser:ACVoltage:RMS**

<b>Syntax</b>	:MEASure[:CONTInuous]:AFANalyser:ACVoltage:RMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the RMS-valued AC voltage of the AF signal applied to the audio analyzer. To read out the latest measurement result, use the :FETCh:AFAN:ACV:RMS command. <b>Note:</b> Any AF test command needs the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing a floating point real number, representing the first measurement result value. The physical dimension is volt, RMS-valued ( $V_{rms}$ ).
<b>Example</b>	<b>:MEAS:CONT:AFAN:ACVoltage:RMS?</b> String delivered back: "0.25".

**:MEASure[:CONTInuous]:AFANalyser:DCVoltage**

<b>Syntax</b>	:MEASure[:CONTInuous]:AFANalyser:DCVoltage
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the RMS-valued AC component of an applied DC signal. To read out the latest measurement result, use the :FETCh:AFAN:DCV command. <b>Note:</b> Any AF test command needs the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing a floating point real number, representing the first measurement result value. The physical dimension is volt, RMS-valued ( $V_{rms}$ ).
<b>Example</b>	<b>:MEAS:CONT:AFAN:DCVoltage?</b> String delivered back: "0.025".

**:MEASure[:CONTInuous]:AFANalyser:FREQuency**

<b>Syntax</b>	:MEASure[:CONTInuous]:AFANalyser:FREQuency
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the frequency of the audio signal applied to the audio analyzer. To read out the latest measurement result, use the :FETCh:AFAN:FREQ command. <b>Note:</b> Any AF test command needs the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing a floating point real number, representing the first measurement result value. The physical dimension is Hertz (Hz).
<b>Example</b>	<b>:MEAS:CONT:AFAN:FREQuency?</b> String delivered back: "1000.0".

**:MEASure[:CONTinuous]:AFANalyser:DIStortion**

<b>Syntax</b>	:MEASure[:CONTinuous]:AFANalyser:DIStortion
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the third-harmonic distortion of a sine wave applied to the audio analyzer. To read out the latest measurement result, use the :FETCh:AFAN:DISt command. <b>Note:</b> Any AF test command needs the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing a floating point real number, representing the first measurement result value. The physical dimension is percent (%).
<b>Example</b>	<b>:MEAS:CONT:AFAN:DIStortion?</b> String delivered back: "0.3".

**:MEASure[:CONTinuous]:AFANalyser:SIAd**

<b>Syntax</b>	:MEASure[:CONTinuous]:AFANalyser:SIAd
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the SINAD (i.e. signal to noise ratio). To read out the latest measurement result, use the :FETCh:AFAN:SIAd command. <b>Note:</b> Any AF test command needs the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing one floating point real number, representing the first measurement result value. The physical dimension is dB.
<b>Example</b>	<b>:MEAS:CONT:AFANalyser:SIAd?</b> Value delivered back: "50.5".

**:MEASure[:CONTinuous]:PSUPply:STOP**

<b>Syntax</b>	:MEASure[:CONTinuous]:AFANalyser:STOP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops continuous current measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:MEAS:PSUP:ALL</b> <b>:MEAS:PSUP:STOP</b> Starts and stops a measurement.

**:MEASure[:CONTinuous]:PSUPply:GRoup**

<b>Syntax</b>	:MEASure[:CONTinuous]:PSUPply:GRoup
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<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the power supply tests specified with the <code>:CONF:MEAS:GRO:PSUP</code> command. To read out the latest measurement results, use the <code>:FETCh:PSUP:GROup</code> command.
	<b>Notes</b> <ul style="list-style-type: none"> <li>- To perform any power and current consumption measurements on your Willtek 3100, the MS Power Supply and Current Measurements Option must be installed.</li> <li>- For further details regarding group measurements, please refer to section <code>:MEASure: . . . :GROup</code>.</li> </ul>
<b>Query</b>	<p>The query form of this command will start the measurements and deliver back a string containing the latest set of measurement result values. All measurement result values returned will be floating point real numbers. The order of the measurement result values returned is as described below (see command <code>:MEAS:PSUP:ALL</code>).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<pre>:CONF:MEAS:GRO:PSUP ACUR,APOW :MEAS:PSUP:GRO?</pre> <p>In this example, the group of measurements is defined by a power consumption measurement combined with a current consumption measurement. The measurement result string returned in this example is: "863.6,304.2". Because of the internal order, the first measurement result value delivered back is the power consumption, the second one the average current consumption measurement.</p>

**:MEASure[:CONTInuous]:PSUPply:ALL**

<b>Syntax</b>	<code>:MEASure[:CONTInuous]:PSUPply:ALL</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the power and current consumption tests. To read out the latest measurement results, use the <code>:FETCh:PSUP:ALL?</code> query. The power supply/current measurement tests performed by this command are: <code>APOW</code> for the average power consumption measurement, measured in mW; <code>ACUR</code> for the average current consumption measurement in mA, <code>PCUR</code> for the peak current consumption in mA.</p> <b>Notes</b> <ul style="list-style-type: none"> <li>- Any power and current consumption measurement will need the MS Power Supply and the Current Measurement Options to be installed on your Willtek 3100.</li> <li>- For further details regarding group measurements, please refer to section <code>:MEASure: . . . :GROup</code>.</li> </ul>
<b>Query</b>	<p>The query form of this command starts the measurements and – after all measurements have been completed and all measurement results obtained – delivers back a string containing three floating point real numbers, representing the three measurement result values. The order of these measurement result values delivered back is as follows:</p> <ul style="list-style-type: none"> <li>- <code>APOW</code>, representing the average power consumption in mW,</li> <li>- <code>ACUR</code>, representing the average current consumption in mA,</li> <li>- <code>PCUR</code>, representing the peak current consumption in mA.</li> </ul>

<b>Example</b>	<code>:MEAS:PSUP:ALL?</code> In this case, all power/current consumption measurements are performed in one go. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing three measurement result values, for example <code>"863.6,304.2,1352.9"</code> .
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**:MEASure[:CONTInuous]:PSUPply:APower**

<b>Syntax</b>	<code>:MEASure[:CONTInuous]:PSUPply:APower</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the power consumption test. To read out the latest measurement result, use the <code>:FETCh:PSUP:APOW?</code> query. <b>Note:</b> Any power and current consumption measurement will need the MS Power Supply and the Current Measurement Options to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurements and - after all measurements have been completed and all measurement results obtained - delivers back a string containing the measurement result value. The value represents the average power consumption in mW.
<b>Example</b>	<code>:MEAS:PSUP:APOW?</code> In this case, all the average power consumption measurements is performed. As soon as the measurement has been completed, a string will be delivered back containing the measurement result value, for example <code>"863.6"</code> .

**:MEASure[:CONTInuous]:PSUPply:ACURrent**

<b>Syntax</b>	<code>:MEASure[:CONTInuous]:PSUPply:ACURrent</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the average current consumption test. To read out the latest measurement result, use the <code>:FETCh:PSUP:ACUR</code> command. Any power and current consumption measurement will need the MS Power Supply and the Current Measurement Options to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurement and - after the measurement has been completed and the measurement result obtained - delivers back a string containing a floating point real number representing the average current consumption in mA.
<b>Example</b>	<code>:MEAS:PSUP:ACUR?</code> In this case, the average current consumption measurement is performed. As soon as the measurement has been completed, a string will be delivered back containing the measurement result value, for example <code>"304.2,"</code> .

**:MEASure[:CONTInuous]:PSUPply:PCURrent**

<b>Syntax</b>	<code>:MEASure[:CONTInuous]:PSUPply:PCURrent</code>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the peak current consumption test. To read out the latest measurement result, use the <code>:FETCh:PSUP:PCUR</code> command. Any power and current consumption measurement will need the MS Power Supply and the Current Measurement Options to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurement and - after the measurement has been completed and the measurement result obtained - delivers back a string containing a floating point real number representing the peak current consumption in mA.
<b>Example</b>	<code>:MEAS:PSUP:PCUR?</code> In this case, all the peak current consumption measurement is performed. As soon as the measurement has been completed, a string will be delivered back containing the measurement result value, for example <code>"1352.9"</code> .

### **:MEASure:GSM:ARRay:RFTX:GRoup**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFTX:GRoup &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is <b>0</b> , the maximum value is <b>100</b> . The default value for <b>int1</b> is <b>0</b> .
<b>Description</b>	Performs the RF TX tests, specified with the <code>:CONF:GSM:MEAS:GRO:RFTX</code> command for a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFTX:GRoup</code> command. <b>Note:</b> Please keep in mind that the start of a new RF TX test will always terminate any preceding measurement of the same type instantly.
<b>Query</b>	The query form of this command will start the sequence of RF TX measurements as specified with the <code>:CONF:GSM:MEAS:GRO:RFTX</code> command for a specific number of times (set with the <b>int1</b> parameter). As soon as all measurements have been completed, a string will be delivered back, containing the related measurement result values, separated by commas. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the measurements specified. The order of the measurement result values within the string is as described below for the <code>:MEAS:GSM:CONT:RFTX:ALL</code> command. <b>Note:</b> Please keep in mind that the number of measurement result values delivered back is the number of measurement result values of a single execution multiplied with the <b>int1</b> parameter.
<b>Example</b>	<code>:CONF:GSM:MEAS:GRO:RFTX POW,PRMS</code> <code>:MEASure:GSM:ARRay:RFTX:GRoup? 3</code> In this example, the group of measurements is defined by a power level measurement combined with a RMS phase error measurement. This group of measurements will be carried out three times. After all measurements have been completed, a result string will be delivered back, containing six measurement result values. The string returned is: <code>"4.53,9.98,4.08,10.02,4.32,9.99"</code> . Because of the internal order (see description of the command below), the first (third and fifth) measurement result value delivered back is the RMS phase error, while the second (fourth and sixth) measurement result value is the mobile's RF output power level.

**:MEASure:GSM:ARRay:RFTX:ALL**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFTX:ALL &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is <b>0</b> , the maximum value is <b>100</b> . The default value for <b>int1</b> is <b>0</b> .
<b>Description</b>	Performs a sequential measurement of the most important RF TX tests for a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFTX:ALL</code> command. The RF TX tests performed by this command are: <b>PPEAK</b> , the peak phase error measurement, <b>PRMS</b> , the root-mean square valued phase error measurement, <b>FREQuency</b> means the frequency error of the mobile under test, <b>LENGth</b> the length of the burst in microseconds, <b>UTIME</b> stands for the timing error of the mobile under test in microseconds (taking the ordered timing advance into account), <b>POWer</b> is the mobile's RF output power level in dBm, <b>TEMPlate</b> indicates whether the power/time template has been violated by a burst or not, <b>CORNER</b> gives the RF power level in dBm at eight predefined positions of a burst (see section Corner Points for details), <b>FLATness</b> gives an indication whether the mobile's RF output power is constant during the active part of the burst. <b>Notes:</b> <ul style="list-style-type: none"><li>– Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.</li><li>– For a further description of the single measurements, see description of the related commands below.</li></ul>
<b>Query</b>	The query form of this command performs the measurements and – after all measurements have been completed and all measurement results obtained – delivers a string, containing (19 * <b>int1</b> ) measurement result values. The single measurement result values are separated by commas. The order and type of these measurement result values delivered back is as follows: <ol style="list-style-type: none"><li>1. <b>PPEAK</b>, floating point real number, representing the result of the peak phase error measurement,</li><li>2. <b>PRMS</b>, floating point real number representing the result of the root-mean square valued phase error measurement,</li><li>3. <b>FREQuency</b>, floating point real number representing the mobile's frequency error,</li><li>4. <b>LENGth</b>, floating point real number representing the length of the burst in microseconds,</li><li>5. <b>UTIME</b>, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li><li>6. <b>POWer</b>, floating point real number representing the mobile's RF output power level in dBm,</li><li>7. <b>TEMPlate</b> boolean number. A <b>0</b> indicates that the power/time template (PTT) was <b>not</b> violated by the last burst measured, while a <b>1</b> means that the burst did violate the PTT.</li><li>8...15. <b>CORNER</b>, eight floating point real numbers, representing the RF power level in dBm at eight predefined positions of a burst.</li><li>16...19. <b>FLATness</b>, four floating point real numbers, representing the absolute minimum and maximum relative RF power levels of the mobile and their positions during the active part of the burst.</li></ol>

**Example**            **:MEASure:GSM:ARRay:RFTX:ALL 2**  
                         **:FETCh:GSM:RFTX:ALL?**

In this case, the sequence of the most important RF TX measurements will be performed twice. All 38 measurement result values will be kept in an internal memory until they are read out with the **FETCh** command. After the internal memory has been read out, it will be cleared.

**Note:** A subsequent **:FETCh** command (without any previous start of a measurement) will therefore try to read nonexistent measurement data and thus create a timeout error.

**:MEASure:GSM:ARRay:RFTX:PPEAk**

**Syntax**            **:MEASure:GSM:ARRay:RFTX:PPEAk <int1>**

**Parameters**      **int1** is an integer.  
The minimum value for **int1** is 0, the maximum value is 100. The default value for **int1** is 0.

**Description**      Performs the measurement of the peak phase error for a specific number of times (set with the **int1** parameter). To read out the entire measurement results array, use the **:FETCh:GSM:RFTX:PPEAk** command.  
For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.

**Query**            The query form of this command will perform the measurement the specified number of times (**int1** parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain **int1** floating point real numbers with the physical dimension of degrees. The single measurement results are separated by commas.

**Example**            **:MEASure:GSM:ARRay:RFTX:PPEAk? 5**  
The string returned is: "5.13,5.23,4.97,5.21,4.59".

**:MEASure:GSM:ARRay:RFTX:PRMS**

**Syntax**            **:MEASure:GSM:ARRay:RFTX:PRMS <int1>**

**Parameters**      **int1** is an integer.  
The minimum value for **int1** is 0, the maximum value is 100. The default value for **int1** is 0.

**Description**      Performs the measurement of the root-mean square valued (RMS) phase error for a specific number of times (set with the **int1** parameter). To read out the entire measurement results array, use the **:FETCh:GSM:RFTX:PRMS** command.  
For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.

**Query**            The query form of this command will perform the measurement the specified number of times (**int1** parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain **int1** floating point real numbers with the physical dimension of degrees. The single measurement results are separated by commas.

**Example**            **:MEASure:ARRay:RFTX:PRMS? 5**  
The string returned is: "2.33,2.53,1.97,2.41,1.79".

**:MEASure:GSM:ARRay:RFTX:FREQuency**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFTX:FREQuency &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the measurement of the mobile's frequency error for a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFTX:FREQ</code> command. For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <code>int1</code> floating point real numbers with the physical dimension of Hertz. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:ARRay:RFTX:FREQuency 5</b> <b>:FETCh:GSM:RFTX:FREQ?</b> The frequency error measurement will be performed five times. The measurement result values will be stored internally and are read out by the <b>FETC</b> command. The string returned is: <b>"22.33,22.53,21.97,22.41,21.79"</b> .

**:MEASure:GSM:ARRay:RFTX:LENGth**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFTX:LENGth &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the measurement of the burst length for a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFTX:LENGth</code> command. For details regarding this RF TX measurement, refer to section Burst Test Menu.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <code>int1</code> floating point real numbers with the physical dimension of microseconds. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:ARRay:RFTX:LENGth 5</b> <b>:FETCh:GSM:RFTX:LENG?</b> The measurement of the burst length will be performed five times. The measurement result values will be stored internally and are read out by the <b>FETC</b> command. The string returned is: <b>"556.4,557.2,558.2,557.8,556.5"</b> .

**:MEASure:GSM:ARRay:RFTX:UTIME**

<b>Syntax</b>	:MEASure:GSM:ARRay:RFTX:UTIME <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the uplink timing error for a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the :FETCh:GSM:RFTX:UTIME command. For details regarding this RF TX measurement, refer to section Burst Results Display.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers with the physical dimension of microseconds. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:ARRay:RFTX:UTIME? 5</b> The string returned is: "0.0,0.1,0.0,-0.2,0.1".

**:MEASure:GSM:ARRay:RFTX:POWer**

<b>Syntax</b>	:MEASure:GSM:ARRay:RFTX:POWer <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 1000. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the mobile's RF output power level a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the :FETCh:GSM:RFTX:POWer command. For details regarding this RF TX measurement, refer to section Burst Results Display.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers with the physical dimension of dBm. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:ARRay:RFTX:POWer? 5</b> The string returned is: "11.22,11.09,11.21,11.14,10.99".

**:MEASure:GSM:ARRay:RFTX:TEMPlate**

<b>Syntax</b>	:MEASure:GSM:ARRay:RFTX:TEMPlate <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.

<b>Description</b>	<p>Performs a check of the UL bursts against the power/time template (PTT) a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:GSM:RFTX:TEMPlate</b> command. For details regarding this RF TX measurement, refer to section Burst Test Menu. The power/time template (PTT) is user-definable. For details, please refer to section Power/Time Templates (PTT).</p> <p><b>Note:</b> The power/time template can also be set using the <b>:CALC:RFTX:TEMP</b> commands.</p>
<b>Query</b>	<p>The query form of this command will perform the check of the burst shape against the PTT the specified number of times (<b>int1</b> parameter). As soon as all checks have been completed, all check result values will be returned in a string. The string delivered back will contain <b>int1</b> boolean numbers. A <b>0</b> indicates that there was no violation of the PTT by that burst, while a <b>1</b> means that a burst did violate the PTT. The single measurement results are separated by commas.</p>
<b>Example</b>	<p><b>:MEASure:GSM:ARRay:RFTX:TEMPlate 10</b>  <b>:FETCh:GSM:RFTX:TEMP?</b> The check of the current burst against the PTT will be performed ten times. The check result values will be stored internally and are read out by the <b>FETC</b> command. The string returned is: "<b>0,0,0,0,0,0,1,0,0,0</b>", indicating that the seventh burst checked violated the PTT.</p>

**:MEASure:GSM:ARRay:RFTX:CORner**

<b>Syntax</b>	<b>:MEASure:GSM:ARRay:RFTX:CORner &lt;int1&gt;</b>
<b>Parameters</b>	<p><b>int1</b> is an integer.  The minimum value for <b>int1</b> is <b>0</b>, the maximum value is <b>100</b>. The default value for <b>int1</b> is <b>0</b>.</p>
<b>Description</b>	<p>Performs the measurement of the mobile's RF output power level on eight user-definable positions of the ramping phases of a burst (the so-called corner points) a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:GSM:RFTX:CORner</b> command. For details regarding this RF TX measurement, please refer to section Burst Results Display.</p> <p>For details on the corner points, refer to section Corner Points.</p> <p><b>Note:</b> The corner points can also be set using the <b>:CALC:RFTX:CORN</b> commands.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain (<b>8 * int1</b>) floating point real numbers with the physical dimension of dBm. The single measurement results are separated by commas.</p>
<b>Example</b>	<p><b>:MEASure:GSM:ARRay:RFTX:CORner? 2</b>  The string returned is: "<b>-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95,-71.38,-60.71,-20.11,-0.01,0.04,-18.14,-63.66,-72.97</b>".</p>

**:MEASure:GSM:ARRay:RFTX:FLATness**

<b>Syntax</b>	<b>:MEASure:GSM:ARRay:RFTX:FLATness &lt;int1&gt;</b>
<b>Parameters</b>	<p><b>int1</b> is an integer.  The minimum value for <b>int1</b> is <b>0</b>, the maximum value is <b>100</b>. The default value for <b>int1</b> is <b>0</b>.</p>



<b>Description</b>	<p>Performs the measurement of the flatness of the mobile's burst during the active part of it a specific number of times (set with the <b>int1</b> parameter). In short words, this measurement is a search for both the absolute minimum and the absolute maximum of the mobile's output power level during the active part of the burst (relative to the peak power). This measurement will collect four measurement result values per run:</p> <ul style="list-style-type: none"> <li>- the first value is the minimum RF power level in dB,</li> <li>- the second one is the position of this minimum within the burst in bit positions,</li> <li>- the third value is the maximum RF power level in dB, while</li> <li>- the last value is the position of the maximum within the burst in terms of the bit position.</li> </ul> <p>The resolution in the time domain is approx. 0.825 microseconds, equaling approx. 1/5 bit periods.</p> <p>To read out the entire measurement results array, use the <code>:FETCh:GSM:RFTX:FLATness</code> command.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain (4 * <b>int1</b>) floating point real numbers with the physical dimensions as explained above.</p> <p>The single measurement results are separated by commas.</p>
<b>Example</b>	<p><b>:MEASure:GSM:ARRay:RFTX:FLATness? 2</b> The string returned is: "-0.12,113,7,0.56,34.0, - 0.35,57.9,0.75,117.2".</p>

**:MEASure:GSM:ARRay:RFTX:FPOWer**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFTX:FPOWer &lt;int1&gt;</code>
<b>Parameters</b>	<p><b>int1</b> is an integer.</p> <p>The minimum value for <b>int1</b> is 0, the maximum value is 1000. The default value for <b>int1</b> is 0.</p>
<b>Description</b>	<p>Performs the measurement of the fast burst peak power level a specific number of times (set with the <b>int1</b> parameter). This measurement is very similar to the <b>:MEAS:ARR:RFTX:POW</b> measurement, but it is faster. To read out the entire measurement results array, use the <code>:FETCh:GSM:RFTX:FPOWer</code> and the <code>:CALCulate:GSM:RFTX:POWer:...</code> commands.</p> <p>For further details, refer to the description of the <code>:CONF:GSM:MEAS:LEV:EXP</code> command.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers with the physical dimension of dBm. The single measurement results are separated by commas.</p>
<b>Example</b>	<p><b>:MEASure:GSM:ARRay:RFTX:FPOWer? 5</b> The string returned is: "13.02,13.09,13.01,13.14,13.29".</p>

**:MEASure:GSM:ARRay:RFRX:RBER:ALL**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFRX:RBER:ALL &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs a sequential measurement of the residual bit error ratios (RBER) a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFRX:RBER:ALL</code> command. The RF RX tests performed by this command are: <b>CIB</b> , the residual bit error ratio of the class Ib bits, <b>CII</b> , the residual bit error ratio of the class II bits, and <b>FER</b> , the frame erasure ratio. <b>Notes:</b> <ul style="list-style-type: none"><li>– More details regarding RBER testing can be found in section BER Live Display.</li><li>– More details regarding bit classes can be found in section Voice Coding.</li><li>– Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly.</li><li>– The number of samples to be used for testing can be set, using the <code>:CONF:GSM:BER:COUNT</code> command.</li></ul>
<b>Query</b>	The query form of this command will perform the measurements the specified number of times ( <code>int1</code> parameter). After all measurements have been completed and all measurement results obtained, the query delivers a string, containing (3 * <code>int1</code> ) measurement result values. The single measurement result values are separated by commas. All measurement result values are floating point real numbers. The order of the measurement result values delivered back is as follows: <ol style="list-style-type: none"><li>1. <b>CIB</b>, representing the residual bit error ratio of the class Ib bits,</li><li>2. <b>CII</b>, representing the residual bit error ratio of the class II bits and</li><li>3. <b>FER</b>, representing the frame erasure ratio.</li></ol>
<b>Example</b>	<code>:MEASure:GSM:ARRay:RFRX:RBER:ALL 2</code> <code>:FETCh:GSM:RFRX:RBER:ALL?</code> In this case, the sequence of the residual bit error measurements will be performed twice. All six measurement result values will be kept in an internal memory until they are read out with the <b>FETCh</b> command. The string returned is: <code>"0.1,1.5,0.0,0.2,2.7,0.1"</code> .

**:MEASure:GSM:ARRay:RFRX:RBER:CIB**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFRX:RBER:CIB &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the measurement of the residual bit error ratio of the class Ib bits a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFRX:RBER:CIB</code> command. <b>Notes:</b> <ul style="list-style-type: none"><li>– More details regarding RBER testing can be found in section BER Live Display.</li><li>– More details regarding bit classes can be found in section Voice Coding.</li><li>– The number of samples to be used for testing can be set, using the <code>:CONF:GSM:BER:COUNT</code> command.</li></ul>

<b>Query</b>	The query form of this command will perform the measurement the specified number of times (<int1> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <int1> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:ARRay:RFRX:RBER:CIB? 5</b> The string returned is: "0.2,0.2,0.1,0.3,0.2".

**:MEASure:GSM:ARRay:RFRX:RBER:CII**

<b>Syntax</b>	:MEASure:GSM:ARRay:RFRX:RBER:CII <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the residual bit error ratio of the class II bits a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the :FETCh:GSM:RFRX:RBER:CII command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- More details regarding RBER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:ARRay:RFRX:RBER:CII? 5</b> The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GSM:ARRay:RFRX:RBER:FER**

<b>Syntax</b>	:MEASure:GSM:ARRay:RFRX:RBER:FER <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the frame erasure ratio a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the :FETCh:GSM:RFRX:RBER:FER command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- More details regarding RBER testing can be found in section BER Live Display.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GSM:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers, representing the frame erasure ratios. The single measurement results are separated by commas.

**Example**        **:MEASure:GSM:ARRay:RFRX:RBER:FER 5**  
                   **:FETCh:GSM:RFRX:RBER:FER?**  
 The string returned is: "0.0,0.1,0.0,0.2,0.1".

**:MEASure:GSM:ARRay:RFRX:BER:ALL**

**Syntax**            **:MEASure:GSM:ARRay:RFRX:BER:ALL <int1>**

**Parameters**        **int1** is an integer.  
 The minimum value for **int1** is 0, the maximum value is 100. The default value for **int1** is 0.

**Description**        Performs a sequential measurement of the (nonresidual) residual bit error ratios (RBER) a specific number of times (set with the **int1** parameter). To read out the entire measurement results array, use the **:FETCh:GSM:RFRX:BER:ALL** command.  
 The RF RX tests performed by this command are:  
**CIA**, the (nonresidual) bit error ratio of the class Ia bits,  
**CIB**, the (nonresidual) bit error ratio of the class Ib bits, and  
**CII**, the (nonresidual) bit error ratio of the class II bits.  
**Notes:**

- More details regarding BER testing can be found in section BER Live Display.
- More details regarding bit classes can be found in section Voice Coding.
- Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly.
- The number of samples to be used for testing can be set, using the **:CONF:GSM:BER:COUNT** command.

**Query**              The query form of this command will perform the measurements the specified number of times (**int1** parameter). After all measurements have been completed and all measurement results obtained, the query delivers a string, containing (3 \* **int1**) measurement result values. The single measurement result values are separated by commas. All measurement result values are floating point real numbers. The order of the measurement result values delivered back is as follows:

1. **CIA**, representing the (nonresidual) bit error ratio of the class Ia bits,
2. **CIB**, representing the (nonresidual) bit error ratio of the class Ib bits, and
3. **CII**, representing the (nonresidual) bit error ratio of the class II bits.

**Example**            **:MEASure:GSM:ARRay:RFRX:BER:ALL 2**  
                   **:FETCh:GSM:RFRX:BER:ALL?**  
 In this case, the sequence of the (nonresidual) bit error measurements will be performed twice. All six measurement result values will be kept in an internal memory until they are read out with the **FETCh** command.  
 The string returned is:  
 "0.1,1.5,0.0,0.2,2.7,0.1".

**:MEASure:GSM:ARRay:RFRX:BER:CIA**

**Syntax**            **:MEASure:GSM:ARRay:RFRX:BER:CIA <int1>**

**Parameters**        **int1** is an integer.  
 The minimum value for **int1** is 0, the maximum value is 100. The default value for **int1** is 0.

<b>Description</b>	<p>Performs the measurement of the (nonresidual) bit error ratio on the class Ia bits a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:GSM:RFRX:BER:CIA</b> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the <b>:CONF:GSM:BER:COUNT</b> command.</li> </ul>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.</p>
<b>Example</b>	<p><b>:MEASure:GSM:ARRay:RFRX:BER:CIA? 5</b> The string returned is: "1.4,1.4,1.5,1.7,1.3".</p>

**:MEASure:GSM:ARRay:RFRX:BER:CIB**

<b>Syntax</b>	<b>:MEASure:GSM:ARRay:RFRX:BER:CIB &lt;int1&gt;</b>
<b>Parameters</b>	<p><b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.</p>
<b>Description</b>	<p>Performs the measurement of the (nonresidual) bit error ratio on the class Ib bits a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:GSM:RFRX:BER:CIB</b> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the <b>:CONF:GSM:BER:COUNT</b> command.</li> </ul>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.</p>
<b>Example</b>	<p><b>:MEASure:GSM:ARRay:RFRX:BER:CIB? 5</b> The string returned is: "1.4,1.4,1.5,1.7,1.3".</p>

**:MEASure:GSM:ARRay:RFRX:BER:CII**

<b>Syntax</b>	<b>:MEASure:GSM:ARRay:RFRX:BER:CII &lt;int1&gt;</b>
<b>Parameters</b>	<p><b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.</p>

<b>Description</b>	Performs the measurement of the (nonresidual) bit error ratio on the class II bits a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:GSM:RFRX:BER:CII</b> command. <b>Notes:</b> <ul style="list-style-type: none"><li>– More details regarding BER testing can be found in section BER Live Display.</li><li>– More details regarding bit classes can be found in section Voice Coding.</li><li>– The number of samples to be used for testing can be set, using the <b>:CONF:GSM:BER:COUNT</b> command.</li></ul>
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:GSM:ARRay:RFRX:BER:CII? 5</b> The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure[:GSM]:ARRay:RFRX:BER:CRC**

<b>Syntax</b>	<b>:MEASure[:GSM]:ARRay:RFRX:BER:CRC &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the (non-residual) bit error ratio on the class II bits a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:GSM:RFRX:BER:CII</b> command. <b>Notes</b> <ul style="list-style-type: none"><li>– More details regarding BER testing can be found in section BER Live Display.</li><li>– More details regarding bit classes can be found in section Voice Coding.</li><li>– The number of samples to be used for testing can be set, using the <b>:CONF:GSM:BER:COUNT</b> command.</li></ul>
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEAS:GSM:ARR:RFRX:BER:CRC? 5</b> The string returned in this example is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GSM:ARRay:RFRX:FBER**

<b>Syntax</b>	<b>:MEASure:GSM:ARRay:RFRX:FBER &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.

<b>Description</b>	Performs the fast bit error ratio (C-loop) test a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFRX:FBER</code> command. <b>Notes:</b> <ul style="list-style-type: none"> <li>– More details regarding Fast BER testing can be found in section BER Live Display.</li> <li>– The number of samples to be used for testing can be set, using the <code>:CONF:GSM:BER:COUNT</code> command.</li> </ul>
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEASure:GSM:ARRay:RFRX:FBER? 5</code> The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GSM:ARRay:RFRX:RTDelay**

<b>Syntax</b>	<code>:MEASure:GSM:ARRay:RFRX:RTDelay &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the round trip delay (of data during bit error ratio measurements) a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFRX:RTD</code> command. <b>Note:</b> More details regarding the round-trip delay can be found in section BER Live Display.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> integers, representing the single round trip delays. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEASure:GSM:ARRay:RFRX:RTDelay? 5</code> The string returned is: "8,8,8,8,8".

**:MEAS:GSM:ARR:RFSP:ACPM:MODulation**

<b>Syntax</b>	<code>:MEAS:GSM:ARR:RFSP:ACPM:MODulation &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.

<b>Description</b>	<p>Performs the measurement of the ACPM modulation spectrum a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFSP:ACPM:MOD</code> command.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</p> <p>More information regarding <b>ARRay</b> measurements can be found in section <code>:MEASure:ARRay</code>.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain (<math>23 * \mathbf{int1}</math>) floating point real numbers. The physical dimension is dBc. The single measurement results are separated by commas. The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz,, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.</p>
<b>Example</b>	<p><b>:MEAS:GSM:ARR:RFSPpectrum:ACPM:MODulation 5</b> <b>:FETCh:GSM:RFSP:ACPM:MOD?</b></p> <p>The string returned would contain 115 floating point real numbers, representing the 23 measurement result values of five measurement runs.</p>

**:MEASure:GSM:ARRay:RFSPpectrum:ACPM:MODPower**

<b>Syntax</b>	<code>:MEASure[:GSM]:ARRay:RFSPpectrum:ACPM:MODPower &lt;int1&gt;</code>
<b>Parameters</b>	<p><b>int1</b> is an integer.</p> <p>The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.</p>
<b>Description</b>	<p>Performs the measurement of the ACPM modulation spectrum a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFSP:ACPM:MODP</code> command.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- The first result is the absolute power in dBm, measured at the center frequency. The remaining 23 values are the same as from the <code>ACPM:MODulation</code> command.</li> <li>- According to GSM specification 05.05, this measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. Including the carrier frequency (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</li> </ul> <p>More information regarding <b>ARRay</b> measurements can be found in section <code>:MEASure:ARRay</code>.</p>



<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain the absolute power at the center frequency (within a 30 kHz bandwidth) as the first value with the physical dimension of dBm and after that 23 floating point real numbers with the physical dimension dBc. The total count of the values is $24 * \text{int1}$ . The individual measurement results are separated by commas.
<b>Example</b>	<pre>:MEAS:ARR:RFSP:ACPM:MODP 5 :FETC:RFSP:ACPM:MODP?</pre> <p>The string returned in this example would contain 120 floating point real numbers, representing the 24 measurement result values of five measurement runs.</p>

**:MEAS:GSM:ARR:RFSP:ACPM:TRANSient**

<b>Syntax</b>	<pre>:MEAS:GSM:ARR:RFSP:ACPM:TRANSient &lt;int1&gt;</pre>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the ACPM spectrum due to switching transients a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:GSM:RFSP:ACPM:TRAN</code> command. <b>Note:</b> According to GSM specification 05.05, this measurement will be performed on 0, ( $\pm$ )400, ( $\pm$ )600, ( $\pm$ )1.200 and ( $\pm$ )1.800 kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the adjacent 30 kHz windows below and above the frequencies given above will be delivered back. This adds up to $9 \times 3 = 27$ measurement result values, that are returned per measurement run.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain ( $27 * \text{int1}$ ) floating point real numbers. The physical dimension is dBm. The single measurement results are separated by commas.
<b>Example</b>	<pre>:MEAS:GSM:ARR:RFSP:ACPM:TRANSient 5 :FETCh:GSM:RFSP:ACPM:TRAN?</pre> <p>The string returned would contain 135 floating point real numbers, representing the 27 measurement result values of five measurement runs.</p>

**:MEASure:ARRay:AFANalyser:GROup**

<b>Syntax</b>	<pre>:MEASure:ARRay:AFANalyser:GROup &lt;int1&gt;</pre>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.

<b>Description</b>	<p>Performs the audio tests, specified with the <code>:CONF:MEAS:GRO:AFAN</code> command for a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:AFAN:GROUp</code> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- Please keep in mind that the start of a new AF test will always terminate all other measurements.</li> <li>- To perform any audio measurements on your Willtek 3100, the Audio Option must be installed.</li> </ul>
<b>Query</b>	<p>The query form of this command will start the sequence of audio measurements as specified with the <code>:CONF:MEAS:GRO:AFAN</code> command for a specific number of times (set with the <code>int1</code> parameter). As soon as all measurements have been completed, a string will be delivered back. It will contain floating point real numbers, representing the measurement result values. The order of the measurement result values returned is as described below (see command <code>:MEAS[:GSM]:ARR:AFAN:ALL</code>).</p> <p>The single measurement result values are separated by commas.</p> <p><b>Note:</b> The number of measurement result values delivered back is the number of measurement result values of a single test run multiplied with the <code>int1</code> parameter.</p>
<b>Example</b>	<p><code>:CONF:MEAS:GRO:AFAN SIN,FREQ</code> <code>:MEASure:ARRay:AFAN:GROUp? 3</code></p> <p>In this example, the group of measurements is defined by a SINAD measurement, combined with an AF frequency measurement. This group of measurements will be carried out three times. After all measurements have been completed, a result string will be delivered back, containing six measurement result values.</p> <p>The measurement result values returned are: <code>"1000.0,50.5,1000.1,50.1,999.9,50.6"</code>.</p> <p>Because of the internal order, the first (third and fifth) measurement result value delivered back is the audio frequency, the second (fourth and sixth) one the SINAD.</p>

**:MEASure:ARRay:AFANalyser:ALL**

<b>Syntax</b>	<code>:MEASure:ARRay:AFANalyser:ALL &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>Performs a standard sequence of the most important audio tests a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:AFAN:ALL</code> command. The tests performed by this command are:</p> <p><b>ACVPeakp</b>, the peak-to-peak measurement of an AC voltage,  <b>ACVRms</b>, the RMS-valued measurement of an AC voltage,  <b>DCVRms</b> is used to measure AC ripple on DC lines (this measurement gives the root-mean square voltage of the AC component of the applied DC signal).  <b>FREQuency</b> is the measurement of the audio frequency in Hertz,  <b>DISToRTion</b> is the distortion measurement on the third harmonic of a sine wave and expressed in %, while  <b>SINad</b> is the measurement of the signal to noise ratio, expressed in dB.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- Please keep in mind that the start of a new AF test will always terminate all other measurements.</li> <li>- Any AF measurement will need the Audio Option to be installed on your Willtek 3100.</li> </ul>

<b>Query</b>	<p>The query form of this command performs the measurements and – after all measurements have been completed and all measurement results obtained – delivers a string, containing (6* <b>int1</b>) measurement result values. The single measurement result values are separated by commas. All measurement result values are floating point real numbers. The order of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>ACVPeakp</b>, representing the AC peak-to-peak voltage of the AF signal,</li> <li>2. <b>ACVRms</b>, representing the RMS-valued AC voltage of the AF signal,</li> <li>3. <b>DCVRms</b>, representing the RMS-valued AC voltage on an applied DC signal,</li> <li>4. <b>FREQuency</b>, representing the audio frequency,</li> <li>5. <b>DISTortion</b>, representing the third-harmonic distortion of the applied sine-wave AF signal and,</li> <li>6. <b>SINad</b>, representing the signal to noise ratio of the applied AF signal.</li> </ol>
<b>Example</b>	<p><b>:MEASure:ARRay:AFANalyser:ALL? 2</b></p> <p>In this case, the sequence of standard AF measurements will be performed twice. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing twelve measurement result values:</p> <p><b>"0.7,0.25,0.0,1000.0,0.3,50.5,0.75,0.3,0.0,1000.0,0.25,50.9"</b></p>

**:MEAS:ARRay:AFAN:ACVoltage:PEAKp**

<b>Syntax</b>	<b>:MEAS:ARRay:AFAN:ACVoltage:PEAKp &lt;int1&gt;</b>
<b>Parameters</b>	<p><b>int1</b> is an integer.</p> <p>The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.</p>
<b>Description</b>	<p>Performs the measurement of the AC peak-to-peak voltage of the AF signal applied to the audio analyzer a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:AFAN:ACV:PEAK</b> command.</p> <p><b>Note:</b> Any AF test command will need the Audio Option to be installed on your Willtek 3100.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers. The physical dimension of the measurement result values is volt, measured peak-to-peak (<math>V_{pp}</math>).</p> <p>The single measurement results are separated by commas.</p>
<b>Example</b>	<p><b>:MEAS:ARR:AFANalyser:ACVoltage:PEAKp? 5</b></p> <p>The string returned is: <b>"0.7,0.8,0.75,0.71,0.79"</b>.</p>

**:MEAS[:GSM]:ARR:AFAN:ACVoltage:RMS**

<b>Syntax</b>	<b>:MEAS[:GSM]:ARR:AFAN:ACVoltage:RMS &lt;int1&gt;</b>
<b>Parameters</b>	<p><b>int1</b> is an integer.</p> <p>The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.</p>

<b>Description</b>	Performs the measurement of the RMS-valued AC voltage of the AF signal applied to the audio analyzer a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:AFAN:ACV:RMS</code> command. <b>Note:</b> Any AF test command will need the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers. The physical dimension of the measurement result values is volt, RMS-valued ( $V_{rms}$ ). The single measurement results are separated by commas.
<b>Example</b>	<b>:MEAS:GSM:ARR:AFANalyser:ACVoltage:RMS? 5</b> The string returned is: "2.52,2.55,2.42,2.49,2.51".

**:MEAS:ARR:AFAN:DCVoltage**

<b>Syntax</b>	<code>:MEAS:ARR:AFAN:DCVoltage &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the RMS-valued AC component of a DC signal applied to the audio analyzer a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:AFAN:DCV</code> command. <b>Note:</b> Any AF test command will need the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers. The physical dimension of the measurement result values is volt, RMS-valued ( $V_{rms}$ ). The single measurement results are separated by commas.
<b>Example</b>	<b>:MEAS:ARR:AFANalyser:DCVoltage? 5</b> The string returned is: "0.025,0.029,0.019,0.030,0.025".

**:MEASure:ARRay:AFAN:FREQuency**

<b>Syntax</b>	<code>:MEASure:ARRay:AFAN:FREQuency &lt;int1&gt;</code>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the frequency of the audio signal applied to the audio analyzer a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <code>:FETCh:AFAN:FREQ</code> command. <b>Note:</b> Any AF test command will need the Audio Option to be installed on your Willtek 3100.

<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers. The physical dimension of the measurement result values is Hertz. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:ARRay:AFANalyser:FREQ? 5</b> The string returned is: "1000.0,1000.5,1000.9,999.9,1000.0".

**:MEASure:ARRay:AFAN:DISortion**

<b>Syntax</b>	<b>:MEASure:ARRay:AFAN:DISortion &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the distortion of a sine wave applied to the audio analyzer a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:AFAN:DIS</b> command. <b>Note:</b> Any AF test command will need the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers. The physical dimension of the measurement result values is percentage (%). The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:ARRay:AFANalyser:DIS? 5</b> The string returned is: "0.5,0.7,1.1,1.2,0.9".

**:MEASure:ARRay:AFANalyser:SINad**

<b>Syntax</b>	<b>:MEASure:ARRay:AFANalyser:SINad &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 100. The default value for <b>int1</b> is 0.
<b>Description</b>	Performs the measurement of the SINAD (i.e. signal to noise ratio) a specific number of times (set with the <b>int1</b> parameter). To read out the entire measurement results array, use the <b>:FETCh:AFAN:SIN</b> command. <b>Note:</b> Any AF test command will need the Audio Option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <b>int1</b> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <b>int1</b> floating point real numbers. The physical dimension of the measurement result values is dB. The single measurement results are separated by commas.
<b>Example</b>	<b>:MEASure:ARRay:AFANalyser:SINad? 5</b> The string returned is: "50.5,50.0,49.1,51.2,50.9".

### **:MEASure:ARRay:PSUPply:GROup**

<b>Syntax</b>	<code>:MEASure:ARRay:PSUPply:GROup &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the power supply measurements specified with the <code>:CONF:MEAS:GRO:PSUP</code> command for a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:PSUP:GROup</code> command. <b>Note:</b> To perform any power and current consumption measurements on your Willtek 3100, the MS Power Supply and Current Measurements Option must be installed.
<b>Query</b>	The query form of this command will start the sequence of power/current consumption measurements as specified with the <code>:CONF:MEAS:GRO:PSUP</code> command for a specific number of times (set with the <code>int1</code> parameter). The order of the measurement result values returned is as described below (see command <code>:MEAS:PSUP:ALL</code> ).
<b>Example</b>	<code>:CONF:MEAS:GRO:PSUP ACUR,APOW</code> <code>:MEASure:ARRay:PSUP:GROup?</code> In this example, the group of measurements is defined by a power consumption measurement combined with a current consumption measurement. The measurement result string returned is: "863.6,304.2". Because of the internal order, the first measurement result value delivered back is the power consumption, the second one the average current consumption measurement.

### **:MEASure:ARRay:PSUPply:ALL**

<b>Syntax</b>	<code>:MEASure:ARRay:PSUPply:ALL &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs all measurements of the power and current consumption tests for a specific number of times (set with the <code>int1</code> parameter). To read out the latest measurement results, use the <code>:FETCh:PSUP:ALL</code> command. The power supply/current measurement tests performed by this command are: <b>APOW</b> for the average power consumption measurement, measured in mW; <b>ACUR</b> for the average current consumption measurement in mA, <b>PCUR</b> for the peak current consumption in mA. <b>Note:</b> Any power and current consumption measurement will need the MS Power Supply and the Current Measurement Options to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command starts the measurements for a specific number of times (set with the <code>int1</code> parameter). The order of these measurement result values delivered back is as follows: <ul style="list-style-type: none"><li>- <b>APOW</b>, representing the average power consumption in mW,</li><li>- <b>ACUR</b>, representing the average current consumption in mA,</li><li>- <b>PCUR</b>, representing the peak current consumption in mA.</li></ul>

**Example**            **:MEASure:ARRay:PSUP:ALL? 10**  
 In this case, all power/current consumption measurements are performed ten times. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing ten times three measurement result values.

**:MEASure:ARRay:PSUPply:APOWER**

**Syntax**            **:MEASure:ARRay:PSUPply:APOWER <int1>**

**Parameters**        **int1** is an integer.  
 The minimum value for **int1** is 0, the maximum value is 100. The default value for **int1** is 0.

**Description**        Performs the power consumption measurement for a specific number of times (set with the **int1** parameter). To read out the latest measurement results, use the **:FETCh:PSUP:APOW** command.

**Query**              The query form of this command starts the measurements for a specific number of times (set with the **int1** parameter). The returned string contains **int1** floating point values representing the average power consumption in mW.

**Example**            **:MEASure:ARRay:PSUP:APOW? 3**  
 In this case, the power consumption measurement is performed three times. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the three measurement result values.

**:MEASure:ARRay:PSUPply:ACURRENT**

**Syntax**            **:MEASure:ARRay:PSUPply:ACURRENT <int1>**

**Parameters**        **int1** is an integer.  
 The minimum value for **int1** is 0, the maximum value is 100. The default value for **int1** is 0.

**Description**        Performs the average current consumption measurement for a specific number of times (set with the **int1** parameter). To read out the latest measurement results, use the **:FETCh:PSUP:ACUR** command.

**Query**              The query form of this command starts the measurements for a specific number of times (set with the **int1** parameter). The returned string contains **int1** floating point values representing the average current consumption in mA.

**Example**            **:MEASure:ARRay:PSUP:ACUR? 3**  
 In this case, the current consumption measurement is performed three times. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the three measurement result values.

**:MEASure:ARRay:PSUPply:PCURRENT**

**Syntax**            **:MEASure:ARRay:PSUPply:PCURRENT <int1>**

**Parameters**        **int1** is an integer.  
 The minimum value for **int1** is 0, the maximum value is 100. The default value for **int1** is 0.

<b>Description</b>	Performs the peak current consumption measurement for a specific number of times (set with the <b>int1</b> parameter). To read out the latest measurement results, use the <b>:FETCh:PSUP:PCUR</b> command.
<b>Query</b>	The query form of this command starts the measurements for a specific number of times (set with the <b>int1</b> parameter). The returned string contains <b>int1</b> floating point values representing the peak current consumption in mA.
<b>Example</b>	<b>:MEASure:ARRay:PSUP:PCUR? 3</b> In this case, the peak current consumption measurement is performed three times. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the three measurement result values.

**GSM/GPRS commands** Please note that the accuracy specified for multislots transmitter measurements applies to the time slot with the highest power level. The accuracy of results at levels of more than 10 dB below the highest power level may be significantly lower.

**:MEASure:GPRS[:CONTInuous]:RFTX:STOP**

<b>Syntax</b>	<b>:MEASure:GPRS[:CONTInuous]:RFTX:STOP</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops continuous RF transmitter measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:MEAS:GPRS:RFTX:ALL</b> <b>:MEAS:GPRS:RFTX:STOP</b> Starts and stops a measurement.

**:MEASure:GPRS[:CONTInuous]:RFTX:GRoup**

<b>Syntax</b>	<b>:MEASure:GPRS[:CONTInuous]:RFTX:GRoup</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the GSM RF TX tests, specified with the <b>:CONF:GPRS:MEAS:GRO:RFTX</b> command. To read out the latest measurement results, use the <b>:FETCh:GPRS:RFTX:GRoup</b> command. <b>Note:</b> Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.



<b>Query</b>	The query form of this command will start the sequence of RF TX measurements as specified with the <code>:CONF:GPRS:MEAS:GRO:RFTX</code> command. As soon as all measurements of the first sequence have been completed, a string will be delivered back, containing the related measurement result values, separated by commas. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the measurements specified. The order of the measurement result values within the string is as described below for the <code>:MEAS:GPRS:CONT:RFTX:ALL</code> command.
<b>Example</b>	<pre>:CONF:GPRS:MEAS:GRO:RFTX POW,PRMS :MEASure:GPRS:CONTinuous:RFTX:GROup?</pre> <p>In this example, the group of measurements is defined by a power level measurement combined with a RMS phase error measurement. The string returned is: "4.53,9.98".</p> <p>Because of the internal order (see description of the command below), the first measurement result value delivered back is the RMS phase error, the second one the mobile's RF output power level.</p>

**:MEASure:GPRS[:CONTinuous]:RFTX:ALL**

<b>Syntax</b>	<code>:MEASure:GPRS[:CONTinuous]:RFTX:ALL</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the most important GSM RF TX tests. To read out the latest measurement results, use the <code>:FETCh:GPRS:RFTX:ALL</code> command.</p> <p>The RF TX tests performed by this command are:</p> <ul style="list-style-type: none"> <li>PPEAK, the peak phase error measurement,</li> <li>PRMS, the root-mean square valued phase error measurement,</li> <li>FREQuency means the frequency error of the mobile under test,</li> <li>LENGTh the length of the burst in microseconds,</li> <li>UTIME stands for the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li> <li>POWer is the mobile's RF output power level in dBm,</li> <li>TEMPlate indicates whether the power/time template has been violated by a burst or not,</li> <li>CORNEr gives the RF power level in dBm at eight predefined positions of a burst (see section Corner Points for details),</li> <li>FLATness gives an indication whether the mobile's RF output power is constant during the active part of the burst.</li> </ul> <p><b>Notes:</b></p> <p>Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.</p> <p>For <code>[:CONTinuous]</code> measurements in general, check with section <code>:MEASure:GPRS[:CONTinuous]</code>.</p> <p>For a further description of the single measurements, see description of the related commands below.</p>

<b>Query</b>	<p>The query form of this command starts the measurements and – after all 19 measurements have been completed and all measurement results obtained – delivers a string, containing 19 measurement result values, separated with commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>PPEAK</b>, floating point real number, representing the result of the peak phase error measurement,</li> <li>2. <b>PRMS</b>, floating point real number representing the result of the root-mean square valued phase error measurement,</li> <li>3. <b>FREQuency</b>, floating point real number representing the mobile's frequency error,</li> <li>4. <b>LENGTh</b>, floating point real number representing the length of the burst in microseconds,</li> <li>5. <b>UTIME</b>, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li> <li>6. <b>POWEr</b>, floating point real number representing the mobile's RF output power level in dBm,</li> <li>7. <b>TEMPlate</b> boolean number. A 0 indicates that the power/time template (PTT) was not violated by the last burst measured, while a 1 means that the burst did violate the PTT.</li> <li>8...15. <b>CORNEr</b>, eight floating point real numbers, representing the RF power level in dBm at eight predefined positions of a burst.</li> <li>16...19. <b>FLATness</b>, four floating point real numbers, representing the absolute minimum and maximum relative RF power levels of the mobile and their positions during the active part of the burst.</li> </ol> <p><b>Note:</b> For a further description of the single measurements, see description of the related commands below.</p>
<b>Example</b>	<pre>:MEASure:GPRS:CONTinuous:RFTX:ALL?</pre> <p>In this case, all relevant RF TX measurements will be performed in a sequence. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing 19 measurement results:</p> <pre>"5.13,1.94,-2.22,557.0,0.1,11.22,0,-72.18, -61.91,-20.91,-0.05,-0.04,-17.97,-56.60, -73.95,-0.05,-0.01,0.02,-0.05"</pre>

**:MEASure:GPRS[:CONTinuous]:RFTX:PPEAk**

<b>Syntax</b>	<pre>:MEASure:GPRS[:CONTinuous]:RFTX:PPEAk</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the GSM peak phase error. To read out the latest measurement result, use the <code>:FETCh:GPRS:RFTX:PPEAk</code> command.</p> <p>For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of degrees.</p>
<b>Example</b>	<pre>:MEASure:GPRS:CONTinuous:RFTX:PPEAk?</pre> <p>The string returned is: " 5 . 13 ".</p>

**:MEASure:GPRS[:CONTInuous]:RFTX:PRMS**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:PRMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the root-mean square valued (RMS) phase error in GSM. To read out the latest measurement result, use the :FETCh:GPRS:RFTX:PRMS command. For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of degrees.
<b>Example</b>	:MEASure:GPRS:CONTInuous:RFTX:PRMS? The string returned is: "1.54".

**:MEASure:GPRS[:CONTInuous]:RFTX:FREQuency**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:FREQuency
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's frequency error in GSM mode. To read out the latest measurement result, use the :FETCh:GPRS:RFTX:FRE-Quency command. For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of Hertz.
<b>Example</b>	:MEASure:GPRS:CONTInuous:RFTX:FREQuency? The string returned is: "-31.92".

**:MEASure:GPRS[:CONTInuous]:RFTX:LENGth**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:LENGth
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the burst length in GSM mode. To read out the latest measurement result, use the :FETCh:GPRS:RFTX:LENGth command. For details regarding this RF TX measurement, refer to section Burst Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of microseconds.
<b>Example</b>	:MEASure:CONTInuous:RFTX:LENGth? The string returned is: "557.0".

**:MEASure:GPRS[:CONTInuous]:RFTX:UTIME**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:UTIME
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the GSM uplink timing error. To read out the latest measurement result, use the :FETCh:GPRS:RFTX:UTIME command. For details regarding this RF TX measurement, refer to section Burst Results Display.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of microseconds.
<b>Example</b>	:MEASure:GPRS:CONTInuous:RFTX:UTIME? The string returned is: "0.1".

**:MEASure:GPRS[:CONTInuous]:RFTX:POWer**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:POWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's RF output power level. To read out the latest measurement result, use the :FETCh:GPRS:RFTX:POWer command. For details regarding this RF TX measurement, refer to section Burst Results Display.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of dBm.
<b>Example</b>	:MEASure:GPRS:CONTInuous:RFTX:POWer? The string returned is: "11.22".

**:MEASure:GPRS[:CONTInuous]:RFTX:TEMPlate**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:TEMPlate
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous check of the UL burst against the power/time template (PTT). To read out the latest measurement result, use the :FETCh:GPRS:RFTX:TEMPlate command. For details regarding this RF TX measurement, refer to section Burst Test Menu. The power/time template (PTT) is user-definable. For details, please refer to section Power/Time Templates (PTT). <b>Note:</b> The power/time template can also be set using the :CALC:RFTX:TEMP commands.
<b>Query</b>	The query form of this command will start the (continuous) check and return a result value as soon as the first check has been completed. The string delivered back will contain one boolean number. A 0 indicates that there was <b>no</b> violation of the PTT, while a 1 means that the last burst measured did violate the PTT.

**Example** :MEASure:GPRS:CONTInuous:RFTX:TEMPlate  
This command will start the continuous check of the burst against the PTT.

**:MEASure:GPRS[:CONTInuous]:RFTX:CORner**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:CORner
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's RF output power level on eight user-definable positions of the ramping phases of a burst (the so-called corner points). To read out the latest measurement results, use the :FETCh:GPRS:RFTX:CORner command. For details regarding this RF TX measurement, please refer to section Burst Results Display. More details regarding the corner points can be found in section Corner Points. <b>Note:</b> The corner points can also be set using the :CALC:RFTX:CORN commands.
<b>Query</b>	The query form of this command will start the measurement and return eight measurement result values as soon as the first measurement has been completed. The string delivered back will contain eight floating point real numbers with the physical dimension of dBm. The single values are separated by commas.
<b>Example</b>	:MEASure:GPRS:CONTInuous:RFTX:CORner? The string returned is: "-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95".

**:MEASure:GPRS[:CONTInuous]:RFTX:FLATness**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:FLATness
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the flatness of the mobile's burst during the active part of it. In short words, it is a search for both the absolute minimum and the absolute maximum of the mobile's output power level during the active part of the burst. This measurement will collect four measurement result values: <ul style="list-style-type: none"> <li>- the first value is the minimum RF power level in dB,</li> <li>- the second one is the position of this minimum within the burst in bit positions,</li> <li>- the third value is the maximum RF power level in dB, while</li> <li>- the last value is the position of the maximum within the burst in terms of bit position.</li> </ul> The resolution of this measurement in the time domain is approx. 0.825 microseconds, equaling approx. 1/5 bit periods. To read out the latest measurement result, use the :FETCh:GPRS:RFTX:FLATness command.
<b>Query</b>	The query form of this command will start the measurement and return four measurement result values as soon as the first measurement has been completed. The string delivered back will contain four floating point real numbers with the physical dimensions explained above. The single values are separated by commas.
<b>Example</b>	:MEASure:GPRS:CONTInuous:RFTX:FLATness? The string returned is: "-0.12,113,7,0.56,34.0".

**:MEASure:GPRS[:CONTInuous]:RFTX:FPOWer**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFTX:FPOWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the fast burst peak power level. This measurement is very similar to the :MEAS:GPRS:RFTX:POWer measurement, but it is faster. To read out the latest measurement result, use the :FETCh:GPRS:RFTX:FPOWer and the :CALCulate:GSM:RFTX:POWer:... commands. For further details, refer to the description of the :CONF:GPRS:MEAS:LEV:EXP command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimensions of dBm.
<b>Example</b>	:MEASure:GPRS:CONTInuous:RFTX:FPOWer? The string returned is: "13.05".

**:MEASure:GPRS[:CONTInuous]:BLOCKdata:BURStshape**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:BLOCKdata:BURStshape
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's UL burst shape. To read out the measurement result values of the last burst sampled, use the :FETCh:GPRS:BLOCKdata:BURStshape command. The aim of this measurement is to obtain the pure RF power levels, sampled by the Willtek 3100 in order to display the shape of the burst graphically on another computer or to perform some special analysis of the burst shape. For details regarding the burst measurement, also refer to section Burst Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain 700 floating point real numbers with the physical dimension of dB (except the first two). The first data position of the array is the absolute position of the middle of the burst (i.e. bit 73) within the burst data supplied. In order to allocate the RF power level obtained for the middle of the burst, add 2 to this first value of the array to find the relative position within this data array (as the first two positions of this array are no data values). The second number is the absolute peak power level of the burst in dBm, obtained at the middle of the burst. All the data values following are relative RF power levels (in dB) with the peak power level (second data value of the array) being the reference. The single measurement result values are separated by commas.

<b>Example</b>	<pre>:MEAS:GPRS:CONT:BLOC:BURStshape?</pre> <p>The array returned is: "353.0,10.0,-73.5,-69.6,-70.8, . . . -0.1,0.0,0.2, . . . -68.4".</p> <p>The data have the following meaning: 353.0 on the first position means that the absolute position of the middle of the burst is position 353 of the burst data array. Thus, it can be found on position 355 of the data block returned.</p> <p>The relative power level at the middle of the burst will always be 0.0 as it is the reference point.</p> <p>The peak power of the burst (obtained at the reference point 'middle of the burst') can be found on the second position of the data array and is 10.0 dBm in this example.</p> <p>Then follows the relative RF power levels sampled at the various time positions of the burst (-73.5,-69.6, . . . dB). This means that the absolute power level at the first position sampled is -63,5 dBm (-73.5+10.0).</p> <p>All the remaining data values are relative RF power levels sampled by the Willtek 3100 during the burst period.</p>
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**:MEASure:GPRS[:CONTInuous]:BLOCkdata:PHASeerror**

<b>Syntax</b>	<pre>:MEASure:GPRS[:CONTInuous]:BLOCkdata:PHASeerror</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the mobile's phase error curve. To read out the measurement result values of the latest phase error curve, use the <code>:FETCh:GPRS:BLOCkdata:PHASeerror</code> command.</p> <p>The aim of this measurement is to obtain the pure phase error levels, calculated by the Willtek 3100 in order to graphically display the phase error curve on another computer or to perform some special analysis of the phase error on an external computer.</p> <p>For details regarding the phase error measurement, please also refer to section Phase/Frequency Test Menu.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain 590 floating point real numbers with the physical dimensions of degrees (except the first two).</p> <p>The first number is the absolute position of the middle of the burst (i.e. bit 73). In order to allocate the phase error obtained for bit 73, add 2 to this first value of the array to find the relative position within this data array (as the first two positions of this array are no data values).</p> <p>The second number of this data array is always set to 0.0. All following 709 data values are phase errors, forming the curve of the phase error during a burst.</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<pre>:MEAS:GPRS:CONT:BLOCkdata:PHASeerror?</pre> <p>The array returned in this example is: "353.0,0.0,0.0,0.21,0.41,0.32, . . . -2.17,-2.01,-1.87, . . . 0.0".</p> <p>The data have the following meaning: 353.0 on the first position means that the absolute position of the middle of the burst is position 353 of the pure data array. Thus, it can be found on position 355 of the entire data block.</p> <p>The result value 0.0 on the second position has no particular meaning. However, it may be used to detect a phase error data array.</p> <p>All the remaining data levels are phase errors calculated, forming the graph of the phase error.</p>

**:MEASure:GPRS[:CONTInuous]:BLOCkdata:MSpectrum  
[:CURR]**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:BLOCkdata:MSpectrum[:CURR]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the modulation spectrum curve. To read out the measurement result values of the latest modulation spectrum curve, use the :FETCh:GPRS:BLOCkdata:MSpectrum command.</p> <p>The aim of this measurement is to obtain the pure modulation spectrum levels, calculated by the Willtek 3100 in order to graphically display the modulation spectrum curve on another computer or to perform some special analysis of the modulation spectrum.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer.</p> <p>The span can be set using the :RFSP:MSP:SPAN command; the resolution may be set using the :RFSP:MSP:RES command. The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p>:MEAS:GPRS:CONT:BLOCkdata:MSpectrum?</p> <p>The array returned is: "-62.0,-61.5,-62.2, ...-0.4,0.0,-0.3,...-62.4".</p>

**:MEASure:GPRS[:CONTInuous]:BLOCkdata:MSpectrum:AVG**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:BLOCkdata:MSpectrum:AVG <int1>
<b>Parameters</b>	<p>int1 is an integer.</p> <p>The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.</p>
<b>Description</b>	<p>Starts a process that measures and averages the modulation spectrum for a specified number of times. The aim of this measurement is to obtain a 'smoothed' modulation spectrum curve in order to graphically display the modulation spectrum on another computer or to perform some special analysis.</p> <p><b>Note:</b> To read out the measurement result values of the averaging process, the :FETCh:GPRS:BLOCkdata:MSpectrum command may be used.</p>
<b>Query</b>	<p>The query form of this command will start the averaging process and return an array of measurement result values as soon as all the measurements have been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer.</p> <p>The span can be set using the :RFSP:MSP:SPAN command; the resolution may be set using the :RFSP:MSP:RES command.</p> <p>The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>



**Example** :MEAS:GPRS:CONT:BLOCKdata:MSpectrum:AVG? 25  
The array returned is: "-61.0,-61.0,-61.1, ...0.0,0.0,0.0,...-61.0".

**:MEASure:GPRS[:CONTinuous]:RFRX:STOP**

<b>Syntax</b>	:MEASure:GPRS[:CONTinuous]:RFRX:STOP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops continuous RF receiver measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:MEAS:GPRS:RFRX:RBER:ALL :MEAS:GPRS:RFRX:STOP Starts and stops a measurement.

**:MEASure:GPRS[:CONTinuous]:RFRX:RBER:ALL**

<b>Syntax</b>	:MEASure:GPRS[:CONTinuous]:RFRX:RBER:ALL
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the residual bit error ratios (RBER). To read out the latest measurement results, use the :FETCh:GPRS:RFRX:RBER:ALL command. The RF RX tests performed by this command are: CIB, the residual bit error ratio of the class Ib bits, CII, the residual bit error ratio of the class II bits, and FER, the frame erasure ratio. <b>Notes:</b> More details regarding RBER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly. The number of samples to be used for testing can be set using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command starts the measurements and - after all measurements have been completed and all measurement results obtained - delivers a string, containing three floating point real numbers. The order and meaning of these numbers delivered back is as follows: 1. CIB, representing the residual bit error ratio of the class Ib bits, 2. CII, representing the residual bit error ratio of the class II bits and 3. FER, representing the frame erasure ratio. The single result values are separated by commas.
<b>Example</b>	:MEAS:GPRS:CONT:RFRX:RBER:ALL? In this case, all RBER measurements will be performed. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the three measurement result values: "0.0,1.2,0.0".

**:MEASure:GPRS[:CONTInuous]:RFRX:RBER:CIB**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFRX:RBER:CIB
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the residual bit error ratio of the class Ib bits. To read out the latest measurement result, use the :FETCh:GPRS:RFRX:RBER:CIB command. <b>Notes:</b> More details regarding RBER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEASure:CONTInuous:RFRX:RBER:CIB? Measurement result string delivered back: "0.1".

**:MEASure:GPRS[:CONTInuous]:RFRX:RBER:CII**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFRX:RBER:CII
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the residual bit error ratio on the class II bits. To read out the latest measurement result, use the :FETCh:GPRS:RFRX:RBER:CII command. <b>Notes:</b> More details regarding RBER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GPRS:CONT:RFRX:RBER:CII? Measurement result string delivered back: "1.2".

**:MEASure:GPRS[:CONTInuous]:RFRX:RBER:FER**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFRX:RBER:FER
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the frame erasure ratio. To read out the latest measurement result, use the <code>:FETCh:GPRS:RFRX:RBER:FER</code> command. <b>Notes:</b> More details regarding RBER testing can be found in section BER Live Display. The number of samples to be used for testing can be set, using the <code>:CONF:GPRS:BER:COUNT</code> command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the frame erasure ratio.
<b>Example</b>	<code>:MEAS:GPRS:CONT:RFRX:RBER:FER?</code> Measurement result string delivered back: "0.0".

**:MEASure:GPRS[:CONTInuous]:RFRX:BER:ALL**

<b>Syntax</b>	<code>:MEASure:GPRS[:CONTInuous]:RFRX:BER:ALL</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the (nonresidual) bit error ratios (BER). To read out the latest measurement results, use the <code>:FETCh:GPRS:RFRX:BER:ALL</code> command. The RF RX tests performed on this command are: CIA, the bit error ratio of the class Ia bits, CIB, the bit error ratio of the class Ib bits, and CII, the bit error ratio of the class II bits. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly. The number of samples to be used for testing can be set, using the <code>:CONF:GPRS:BER:COUNT</code> command.
<b>Query</b>	The query form of this command starts the measurements and – after all measurements have been completed and all measurement results obtained – delivers a string, containing three floating point real numbers. The order and meaning of these numbers delivered back is as follows: 1. CIA, representing the bit error ratio of the class Ia bits, 2. CIB, representing the bit error ratio of the class Ib bits, and 3. CII, representing the bit error ratio of the class II bits. The single measurement result values are separated by commas.
<b>Example</b>	<code>:MEASure:GPRS:CONTInuous:RFRX:BER:ALL?</code> In this case, all BER measurements will be performed in a sequence. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the three measurement result values: "0.0,0.0,0.2".

**:MEASure:GPRS[:CONTInuous]:RFRX:BER:CIA**

<b>Syntax</b>	<code>:MEASure:GPRS[:CONTInuous]:RFRX:BER:CIA</code>
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<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the (nonresidual) bit error ratio of the class Ia bits. To read out the latest measurement result, use the :FETCh:GPRS:RFRX:BER:CIA command. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GPRS:CONT:RFRX:BER:CIA? Measurement result string delivered back: "0.0".

**:MEASure:GPRS[:CONTInuous]:RFRX:BER:CIB**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFRX:BER:CIB
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the (nonresidual) bit error ratio of the class Ib bits. To read out the latest measurement result, use the :FETCh:GPRS:RFRX:BER:CIB command. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GPRS:CONT:RFRX:BER:CIB? Measurement result string delivered back: "0.1".

**:MEASure:GPRS[:CONTInuous]:RFRX:BER:CII**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFRX:BER:CII
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the (nonresidual) bit error ratio on the class II bits. To read out the latest measurement result, use the :FETCh:GPRS:RFRX:BER:CII command. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GPRS:CONT:RFRX:BER:CII? Measurement result string delivered back: "0.2".

**:MEASure:GPRS[:CONTinuous]:RFRX:BER:CRC**

<b>Syntax</b>	:MEASure:GPRS[:CONTinuous]:RFRX:BER:CRC
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the (non-residual) bit error ratio on the class II bits. To read out the latest measurement result, use the :FETCh:GPRS:RFRX:BER:CII command. <b>Notes</b> <ul style="list-style-type: none"> <li>- More details regarding BER testing can be found in section BER Live Display.</li> <li>- More details regarding bit classes can be found in section Voice Coding.</li> <li>- The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.</li> </ul>
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GPRS:RFRX:BER:CRC? Measurement result string delivered back in this example: "0.2".

**:MEASure:GPRS[:CONTinuous]:RFRX:FBER**

<b>Syntax</b>	:MEASure:GPRS[:CONTinuous]:RFRX:FBER
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the fast bit error ratio (C-type loop). To read out the latest measurement result, use the :FETCh:GPRS:RFRX:FBER command. <b>Notes:</b> More details regarding Fast BER testing can be found in section BER Live Display. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.

<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number, representing the bit error ratio.
<b>Example</b>	:MEAS:GPRS:CONT:RFRX:FBER? Measurement result string delivered back: "1.5".

**:MEASure:GPRS[:CONTinuous]:RFRX:RTDelay**

<b>Syntax</b>	:MEASure:GPRS[:CONTinuous]:RFRX:RTDelay
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the round trip delay for data during bit error ratio measurements. To read out the latest measurement result, use the :FETCh:GPRS:RFRX:RTD command. <b>Note:</b> More details regarding the round-trip delay can be found in section BER Live Display.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one integer, representing the round trip delay.
<b>Example</b>	:MEAS:GPRS:CONT:RFRX:RTDelay? Measurement result string delivered back: "8".

**:MEASure:GPRS[:CONTinuous]:RFSPectrum:STOP**

<b>Syntax</b>	:MEASure:GPRS[:CONTinuous]:RFSPectrum:STOP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops continuous RF spectrum measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:MEAS:GPRS:RFSP:ACPM MOD :MEAS:GPRS:RFSP:STOP Starts and stops a measurement.

**:MEASure:GPRS[:CONTinuous]:RFSP:ACPM:MODulation**

<b>Syntax</b>	:MEASure:GPRS[:CONTinuous]:RFSP:ACPM:MODulation
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the ACPM modulation spectrum. To read out the latest measurement results, use the <code>:FETCh:GPRS:RFSP:ACPM:MOD</code> command. <b>Note:</b> According to GSM specification 05.05, this measurement will be performed on $(\pm)100$ kHz and $(\pm)250$ kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of $(\pm)1.8$ MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing 23 measurement result values separated by commas. These 23 measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile). The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz,, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.
<b>Example</b>	<code>:MEAS:GPRS:CONT:RFSP:ACPM:MODulation?</code> In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 23 floating point real numbers.

**:MEASure:GPRS[:CONTinuous]:RFSPpectrum:ACPM:MODPower**

<b>Syntax</b>	<code>:MEASure:GPRS[:CONTinuous]:RFSPpectrum:ACPM:MODPower</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the ACPM modulation spectrum. To read out the latest measurement results, use the <a href="#">:FETCh:GPRS:RFSP:ACPM:MODP</a> command.
<b>Notes</b>	<ul style="list-style-type: none"> <li>- The first result is the absolute power in dBm, measured at the center frequency. The remaining 23 values are the same as in the <code>ACPM:MODulation</code> command.</li> <li>- According to GSM specification 05.05, this measurement will be performed on <math>(\pm)100</math> kHz and <math>(\pm)250</math> kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of <math>(\pm)1.8</math> MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</li> </ul>
<b>Query</b>	The query form of this command starts the measurement and delivers back a string, containing the absolute power at the center frequency (within a 30 kHz bandwidth) as the first value with the physical dimension of dBm and after that 23 measurement result values, all separated by commas. These 23 measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile). The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz,, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.
<b>Example</b>	<code>:MEAS:GPRS:RFSP:ACPM:MODP?</code> In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 24 floating point real numbers.

**:MEASure:GPRS[:CONTInuous]:RFSP:ACPM:TRANsient**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:RFSP:ACPM:TRANsient
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the ACPM spectrum due to switching transients. To read out the latest measurement results, use the :FETCh:GPRS:RFSP:ACPM:TRANsient command.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on 0, (<math>\pm</math>)400, (<math>\pm</math>)600, (<math>\pm</math>)1.200 and (<math>\pm</math>)1.800 kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the 30 kHz windows below and above the frequencies specified by GSM standard 05.05 will be delivered back. This adds up to <math>9 \times 3 = 27</math> measurement result values, that are returned.</p>
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing 27 measurement result values separated by commas. These 27 measurement result values are floating point real numbers with the physical dimension dBm.
<b>Example</b>	<p>:MEAS:GPRS:CONT:RFSP:ACPM:TRANsient?</p> <p>In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 27 floating point real numbers.</p>

**:MEASure:GPRS[:CONTInuous]:MULTIslot:RFTX:ALL**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:MULTIslot:RFTX:ALL
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Measures repetitively all RF TX parameters for the number of time slots set by the :CONFIgure:GPRS:MSTAtion:MSLot command. The number of time slots measured is the first parameter in the result string. To read out the latest measurement results, use the :FETCh:GPRS:MULTIslot:RFTX:ALL command.</p> <p>The RF TX tests performed by this command are:</p> <p>PPEAk, the peak phase error measurement,  PRMS, the root-mean square valued phase error measurement,  FREQUency means the frequency error of the mobile under test,  LENGTh is the length of the burst in microseconds,  UTIME stands for the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),  POWEr is the mobile's RF output power level in dBm,  TEMPlate indicates by returning 1 and 0 that the power/time template has and has not been violated by a burst respectively,  CORNEr gives the RF power level in dBm at eight predefined positions of a burst,  FLATness indicates whether the mobile's RF output power is constant during the active part of the burst.</p> <p><b>Notes:</b></p> <p>Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.</p> <p>For more information on the single measurements, see description of the related commands below.</p>



<b>Query</b>	<p>The query form of this command starts the measurements and - after all measurements have been completed and all measurement results have been obtained for all time slots - delivers a string, containing an integer number indicating the number of time slots measured followed by 19 measured values for each time slot, separated with commas. The order and type of the measurement results delivered back are as follows:</p> <ol style="list-style-type: none"> <li>1. The number of time slots measured, an integer number,</li> <li>2. PPEAK, floating point real number,</li> <li>3. PRMS, floating point real number,</li> <li>4. FREQuency, floating point real number,</li> <li>5. LENGth, floating point real number,</li> <li>6. UTIME, floating point real number,</li> <li>7. POWer, floating point real number,</li> <li>8. TEMPlate, a boolean number,</li> <li>9...16. CORNer, eight floating point real numbers,</li> <li>17...20. FLATness, four floating point real numbers.</li> </ol> <p>The items 2... 20 are repeated in the same order and format for each time slot measured.</p>
<b>Example</b>	<pre>:MEAS:GPRS:CONT:MULT:RFTX:ALL?</pre> <p>For the number of measured time slots set to 1, 19 relevant RF TX measurements will be performed in a sequence. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing the number of time slots measured and the measurement results. Example:</p> <pre>"1,5.13,1.94,-2.22,557.0,0.1,11.22,0,-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95,-0.05,-0.01,0.02,-0.05"</pre>

**:MEASure:GPRS[:CONTinuous]:MULTislot:RFTX:PPEAk**

<b>Syntax</b>	<code>:MEASure:GPRS[:CONTinuous]:MULTislot:RFTX:PPEAk</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Measures repetitively the peak phase error for all time slots assigned by the Willtek 3100 using the <code>:CONFIgure:GPRS:MSTation:MSLot</code> command. To read out the latest measurement result, use the <code>:FETCh:GPRS:MULTi-slot:RFTX:PPEAk</code> command.
<b>Query</b>	The query form of this command starts the measurements and returns measurement results as soon as the measurements have been completed. The string delivered back contains an integer number indicating the number of time slots measured followed by floating point real numbers with the physical dimension of degrees, representing the measurement results for each time slot.
<b>Example</b>	<pre>:MEAS:GPRS:CONT:MULT:RFTX:PPEA?</pre> <p>For the number of time slots measured set to 2, an example of the string returned is:</p> <pre>"2,5.13,6.28"</pre>

**:MEASure:GPRS[:CONTinuous]:MULTislot:RFTX:TEMPlate**

<b>Syntax</b>	<code>:MEASure:GPRS[:CONTinuous]:MULTislot:RFTX:TEMPlate</code>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Checks repetitively the TX bursts against the power/time template (PTT). To read out the latest measurement result, use the :FETCh:GPRS:MULTislot:RFTX:TEMPlate command. <b>Note:</b> The power/time templates are user-definable and can be set up using the :CALC:GPRS:RFTX:TEMP commands.
<b>Query</b>	The query form of this command starts the check and returns measurement results as soon as the check has been completed. The string delivered back contains an integer number indicating the number of time slots measured, followed by boolean numbers signaling in turn possible violation of the power-time template (PTT) for each slot. A 0 indicates <b>no</b> violation of the PTT, while a 1 means that a burst measured violated the PTT.
<b>Example</b>	:MEAS:GPRS:CONT:MULT:RFTX:TEMP? For two TX bursts measured, an example of the string returned is: "2,0,1" indicating a PTT violation in the second slot.

**:MEASure:GPRS[:CONTInuous]:MULTislot:RFRX:BLER**

<b>Syntax</b>	:MEASure:GPRS[:CONTInuous]:MULTislot:RFRX:BLER
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Measures repetitively the BLER in USF or BLER-BCS test mode for each of the time slots assigned by the Willtek 3100 using the :CONFIgure:GPRS:MSTation:MSLot and :CONFIgure:GPRS:BS:MSLot[:DATA] commands respectively. The test mode can be set by the :CALL:GPRS:MODE command. <b>Notes:</b> The start of a new RF RX test will always terminate the preceding one instantly. The number of samples to be used for testing can be set using the :CONF:GPRS:BLER:COUNT command. To read out the latest measurement results, use the :FETCh:GPRS:MULTislot:RFRX:BLER command.
<b>Query</b>	The query form of this command starts the measurements and - after all measurements have been completed and all measurement results obtained - delivers a string, containing an integer number indicating the number of time slots measured, a floating point real number giving the BLER for all slots followed by floating point real numbers giving the BLER for individual slots, separated by commas.
<b>Example</b>	:MEASure:GPRS:CONT:MULT:RFRX:BLER? For the number of time slots set to 2, an example of the string returned is: "2,0.2,0.0,0.2".

**:MEASure:GPRS:ARRay:RFTX:GRoup**

<b>Syntax</b>	:MEASure:GPRS:ARRay:RFTX:GRoup <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.

<b>Description</b>	<p>Performs the RF TX tests, specified with the <code>:CONF:GPRS:MEAS:GRO:RFTX</code> command for a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:GROup</code> command.</p> <p><b>Note:</b> Please keep in mind that the start of a new RF TX test will always terminate any preceding measurement of the same type instantly.</p>
<b>Query</b>	<p>The query form of this command will start the sequence of RF TX measurements as specified with the <code>:CONF:MEAS:GRO:RFTX</code> command for a specific number of times (set with the <code>int1</code> parameter). As soon as all measurements have been completed, a string will be delivered back, containing the related measurement result values, separated by commas. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the measurements specified. The order of the measurement result values within the string is as described below for the <code>:MEAS:GPRS:CONT:RFTX:ALL</code> command.</p> <p><b>Note:</b> Please keep in mind that the number of measurement results delivered back is the number of measurement results of a single execution multiplied with the <code>int1</code> parameter.</p>
<b>Example</b>	<pre>:CONF:GPRS:MEAS:GRO:RFTX POW,PRMS :MEASure:GPRS:ARRay:RFTX:GROup? 3</pre> <p>In this example, the group of measurements is defined by a power level measurement combined with a RMS phase error measurement. This group of measurements will be carried out three times. After all measurements have been completed, a result string will be delivered back, containing six measurement result values.</p> <p>The string returned is: "4.53,9.98,4.08,10.02,4.32,9.99".</p> <p>Because of the internal order (see description of the command below), the first (third and fifth) measured value delivered back is the RMS phase error, while the second (fourth and sixth) measured value is the mobile's RF output power level.</p>

**:MEASure:GPRS:ARRay:RFTX:ALL**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:ALL &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>

<b>Description</b>	<p>Measures multiple times (set with the <code>int1</code> parameter) all RF TX parameters. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:ALL</code> command.</p> <p>The RF TX tests performed by this command are:  <code>PPEAk</code>, the peak phase error measurement,  <code>PRMS</code>, the root-mean square valued phase error measurement,  <code>FREQuency</code> means the frequency error of the mobile under test,  <code>LENGTh</code> is the length of the burst in microseconds,  <code>UTIME</code> stands for the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),  <code>POWEr</code> is the mobile's RF output power level in dBm,  <code>TEMPlate</code> indicates by returning 1 and 0 that the power/time template has and has not been violated by a burst respectively,  <code>CORNEr</code> gives the RF power level in dBm at eight predefined positions of a burst,  <code>FLATness</code> indicates whether the mobile's RF output power is constant during the active part of the burst.</p> <p><b>Notes:</b>  Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.  For more information on the single measurements, see description of the related commands below.</p>
<b>Query</b>	<p>The query form of this command returns a string, containing <code>int1</code> times 19 measured values separated with commas. The order and type of the measurement results delivered back are as follows:</p> <ol style="list-style-type: none"> <li>1. <code>PPEAk</code>, floating point real number,</li> <li>2. <code>PRMS</code>, floating point real number,</li> <li>3. <code>FREQuency</code>, floating point real number,</li> <li>4. <code>LENGTh</code>, floating point real number,</li> <li>5. <code>UTIME</code>, floating point real number,</li> <li>6. <code>POWEr</code>, floating point real number,</li> <li>7. <code>TEMPlate</code>, a boolean number,</li> <li>8...15. <code>CORNEr</code>, eight floating point real numbers,</li> <li>16...19. <code>FLATness</code>, four floating point real numbers.</li> </ol> <p>The items 1... 19 are repeated in the same order and format <code>int1</code> times for all measurements.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFTX:ALL 2 :FETCh:GPRS:RFTX:ALL?</pre> <p>In this example, the sequence of the RX TX measurements will be performed twice. All 38 measured values will be kept in an internal memory until they are read out with the <code>:FETCh</code> command. After the internal memory has been read out, it will be cleared.</p> <p><b>Note:</b> Consequently, a subsequent <code>:FETCh</code> command (without any previous start of a measurement) will try to read nonexistent measurement data and result in a time-out error.</p>

**:MEASure:GPRS:ARRay:RFTX:PPEAk**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:PPEAk &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.  The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>

<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the peak phase error. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:PPEAK</code> command.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of degrees, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFTX:PPEA? 5</code> An example of the string returned is: "5.13,5.23,4.97,5.12,4.59".

**:MEASure:GPRS:ARRay:RFTX:PRMS**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:PRMS &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the rms phase error. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:PRMS</code> command.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of degrees, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFTX:PRMS? 5</code> An example of the string returned is: "5.13,5.23,4.97,5.12,4.59".

**:MEASure:GPRS:ARRay:RFTX:FREQuency**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:FREQuency &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the frequency error. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:FREQ</code> command.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of Hz, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFTX:FREQ 5</code> <code>:FETC:GPRS:RFTX:FREQ?</code> The frequency error measurement will be performed five times. The measurement results will be stored internally and read by the <code>FETC</code> command. An example of the string returned is: "22.33,22.53,21.97,22.41,21.79".

**:MEASure:GPRS:ARRay:RFTX:LENGth**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:LENGth &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the burst length. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:LENGth</code> command.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of microseconds, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFTX:LENG 5</code> <code>:FETC:GPRS:RFTX:LENG?</code> The measurement of the burst length will be performed five times. The measurement results will be stored internally and read by the <code>FETC</code> command. An example of the string returned is: "556.4,557.2,558.2,557.8,556.5".

**:MEASure:GPRS:ARRay:RFTX:UTIME**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:UTIME &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the uplink timing error. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:UTIME</code> command.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of microseconds, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFTX:UTIM? 5</code> An example of the string returned is: "0.0,0.1,0.0,-0.2,0.1".

**:MEASure:GPRS:ARRay:RFTX:POWer**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:POWer &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the burst peak power. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:POWer</code> command.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of dBm, representing the measurement results. The single measurement results are separated by commas.

<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFTX:POW? 5</pre> <p>An example of the string returned is: "11.22,11.09,11.21,11.14,10.99".</p>
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**:MEASure:GPRS:ARRay:RFTX:TEMPlate**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:TEMPlate &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>Checks multiple times (set with the <code>int1</code> parameter) if TX burst fits into the power/time template. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:TEMPlate</code> command.</p> <p><b>Note:</b> The power/time template is user-definable. It can be set up using the <code>:CALC:GPRS:RFTX:TEMP</code> commands.</p>
<b>Query</b>	<p>The query form of this command returns a string, containing <code>int1</code> boolean numbers. A 0 indicates no violation of the PTT by the current burst, while a 1 signals PTT violation.</p> <p>The single measurement results are separated by commas.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFTX:TEMP 10 :FETC:GPRS:RFTX:TEMP?</pre> <p>The check of the current burst against the PTT will be performed ten times. The check results will be stored internally and read out by the <code>FETC</code> command. An example of the string returned is: "0,0,0,0,0,0,1,0,0,0", indicating that the seventh burst checked violated the PTT.</p>

**:MEASure:GPRS:ARRay:RFTX:CORNER**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:CORNER &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>Measures multiple times (set with the <code>int1</code> parameter) the RF power levels at eight user-definable positions specified by the <code>CALC:GPRS:RFTX:CORN:POS</code> command. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:CORNER</code> command.</p>
<b>Query</b>	<p>The query form of this command returns a string, containing <code>int1</code> times 8 floating point real numbers with the physical dimension of dBm, representing the measurement results.</p> <p>The single measurement results are separated by commas.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFTX:CORN? 2</pre> <p>An example of the string returned is: "-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95,-71.38,-60.71,-20.11,-0.01,0.04,-18.14,-63.66,-72.97".</p>

**:MEASure:GPRS:ARRay:RFTX:FLATness**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:FLATness &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the flatness of the burst top level. This measurement is a search for both the absolute minimum and the absolute maximum of the mobile's output power level during the active part of the burst. This measurement will collect four measurement result values per run: <ul style="list-style-type: none"><li>– the first value is the minimum RF power level in dB,</li><li>– the second one is the position of this minimum within the burst in bit positions,</li><li>– the third value is the maximum RF power level in dB, while</li><li>– the last value is the position of the maximum within the burst in terms of the bit position.</li></ul> The resolution in the time domain is approx. 0.825 microseconds, equaling approx. 1/5 bit periods. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:FLATness</code> command.
<b>Query</b>	The query form of this command returns a string, containing (4 * <code>int1</code> ) floating point real numbers with the physical dimensions as explained above. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEASure:GPRS:ARRay:RFTX:FLATness? 2</code> The string returned is: "-0.12,113,7,0.56,34.0, -0.35,57.9,0.75,117.2".

**:MEASure:GPRS:ARRay:RFTX:FPOWER**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFTX:FPOWER &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the fast burst peak power. This measurement is very similar to the <code>:MEAS:GPRS:ARR:RFTX:POW</code> measurement, but its is faster. To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFTX:FPOWER</code> and the <code>:CALCulate:GSM:RFTX:POWER:...</code> commands.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of dBm, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFTX:FPOW? 5</code> An example of the string returned is: "13.02,13.09,13.01,13.14,13.29".

**:MEASure:GPRS:ARRay:RFRX:RBER:ALL**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFRX:RBER:ALL &lt;int1&gt;</code>
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<b>Parameters</b>	<p><code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>Performs a sequential measurement of the residual bit error ratios (RBER) a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFRX:RBER:ALL</code> command.</p> <p>The RF RX tests performed by this command are:  <code>CIB</code>, the residual bit error ratio of the class Ib bits,  <code>CII</code>, the residual bit error ratio of the class II bits, and  <code>FER</code>, the frame erasure ratio.</p> <p><b>Notes:</b>  More details regarding RBER testing can be found in section BER Live Display.  More details regarding bit classes can be found in section Voice Coding.  Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly.  The number of samples to be used for testing can be set, using the <code>:CONF:GPRS:BER:COUNT</code> command.  For further details regarding group measurements, please refer to section <code>:MEASure: . . . :GRoup</code>.  More information regarding <code>ARRay</code> measurements can be found in section <code>:MEASure:ARRay</code>.</p>
<b>Query</b>	<p>The query form of this command will perform the measurements the specified number of times (<code>int1</code> parameter). After all measurements have been completed and all measurement results obtained, the query delivers a string, containing (<math>3 * int1</math>) measurement result values. The single measurement result values are separated by commas. All measurement result values are floating point real numbers. The order of the measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <code>CIB</code>, representing the residual bit error ratio of the class Ib bits,</li> <li>2. <code>CII</code>, representing the residual bit error ratio of the class II bits and</li> <li>3. <code>FER</code>, representing the frame erasure ratio.</li> </ol>
<b>Example</b>	<pre>:MEASure:GPRS:ARRay:RFRX:RBER:ALL 2 :FETCh:GPRS:RFRX:RBER:ALL?</pre> <p>In this case, the sequence of the residual bit error measurements will be performed twice. All six measurement result values will be kept in an internal memory until they are read out with the <code>FETCh</code> command.  The string returned is:  "0.1,1.5,0.0,0.2,2.7,0.1".</p>

**:MEASure:GPRS:ARRay:RFRX:RBER:CIB**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFRX:RBER:CIB &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>Performs the measurement of the residual bit error ratio of the class Ib bits a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFRX:RBER:CIB</code> command.</p> <p><b>Notes:</b>  More details regarding RBER testing can be found in section BER Live Display.  More details regarding bit classes can be found in section Voice Coding.  The number of samples to be used for testing can be set, using the <code>:CONF:GPRS:BER:COUNT</code> command.</p>

<b>Query</b>	The query form of this command will perform the measurement the specified number of times (<int1> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <int1> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	:MEASure:GPRS:ARRay:RFRX:RBER:CIB? 5 The string returned is: "0.2,0.2,0.1,0.3,0.2".

**:MEASure:GPRS:ARRay:RFRX:RBER:CII**

<b>Syntax</b>	:MEASure:GPRS:ARRay:RFRX:RBER:CII <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Performs the measurement of the residual bit error ratio of the class II bits a specific number of times (set with the int1 parameter). To read out the entire measurement results array, use the :FETCh:GPRS:RFRX:RBER:CII command. <b>Notes:</b> More details regarding RBER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times (int1 parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain int1 floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	:MEASure:GPRS:ARRay:RFRX:RBER:CII? 5 The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GPRS:ARRay:RFRX:RBER:FER**

<b>Syntax</b>	:MEASure:GPRS:ARRay:RFRX:RBER:FER <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Performs the measurement of the frame erasure ratio a specific number of times (set with the int1 parameter). To read out the entire measurement results array, use the :FETCh:GPRS:RFRX:RBER:FER command. <b>Notes:</b> More details regarding RBER testing can be found in section BER Live Display. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times (int1 parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain int1 floating point real numbers, representing the frame erasure ratios. The single measurement results are separated by commas.

**Example**       :MEASure:GPRS:ARRay:RFRX:RBER:FER 5  
                  :FETCh:GPRS:RFRX:RBER:FER?  
The string returned is: "0.0,0.1,0.0,0.2,0.1".

**:MEASure:GPRS:ARRay:RFRX:BER:ALL**

<b>Syntax</b>	:MEASure:GPRS:ARRay:RFRX:BER:ALL <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Performs a sequential measurement of the (nonresidual) residual bit error ratios (RBER) a specific number of times (set with the int1 parameter). To read out the entire measurement results array, use the :FETCh:GPRS:RFRX:BER:ALL? command. The RF RX tests performed by this command are: CIA, the (nonresidual) bit error ratio of the class Ia bits, CIB, the (nonresidual) bit error ratio of the class Ib bits, and CII, the (nonresidual) bit error ratio of the class II bits. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. Please keep in mind that the start of a new RF RX test will always terminate the preceding one instantly. The number of samples to be used for testing can be set, using the :CONFigure:GPRS:BLER:COUNT command. For further details regarding group measurements, please refer to section :MEASure: . . . :GROup. More information regarding ARRay measurements can be found in section MEASure:ARRay.
<b>Query</b>	The query form of this command will perform the measurements the specified number of times (int1 parameter). After all measurements have been completed and all measurement results obtained, the query delivers a string, containing (3 * int1) measurement result values. The single measurement result values are separated by commas. All measurement result values are floating point real numbers. The order of the measurement result values delivered back is as follows: 1. CIA, representing the (nonresidual) bit error ratio of the class Ia bits, 2. CIB, representing the (nonresidual) bit error ratio of the class Ib bits, and 3. CII, representing the (nonresidual) bit error ratio of the class II bits.
<b>Example</b>	:MEASure:GPRS:ARRay:RFRX:BER:ALL 2 :FETCh:GPRS:RFRX:BER:ALL? In this case, the sequence of the (nonresidual) bit error measurements will be performed twice. All six measurement result values will be kept in an internal memory until they are read out with the FETCh command. The string returned is: "0.1,1.5,0.0,0.2,2.7,0.1".

**:MEASure:GPRS:ARRay:RFRX:BER:CIA**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFRX:BER:CIA &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the measurement of the (nonresidual) bit error ratio on the class Ia bits a specific number of times (set with the <code>int1</code> parameter). To read out <b>the entire</b> measurement results array, use the <code>:FETCh:GPRS:RFRX:BER:CIA</code> command. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the <code>:CONF:GPRS:BER:COUNT</code> command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <code>int1</code> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEASure:GPRS:ARRay:RFRX:BER:CIA? 5</code> The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GPRS:ARRay:RFRX:BER:CIB**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFRX:BER:CIB &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the measurement of the (nonresidual) bit error ratio on the class Ib bits a specific number of times (set with the <code>int1</code> parameter). To read out <b>the entire</b> measurement results array, use the <code>:FETCh:GPRS:RFRX:BER:CIB</code> command. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the <code>:CONF:GPRS:BER:COUNT</code> command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <code>int1</code> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEASure:GPRS:ARRay:RFRX:BER:CIB? 5</code> The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GPRS:ARRay:RFRX:BER:CII**

<b>Syntax</b>	:MEASure:GPRS:ARRay:RFRX:BER:CII <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Performs the measurement of the (nonresidual) bit error ratio on the class II bits a specific number of times (set with the int1 parameter). To read out the entire measurement results array, use the :FETCh:GPRS:RFRX:BER:CII command. <b>Notes:</b> More details regarding BER testing can be found in section BER Live Display. More details regarding bit classes can be found in section Voice Coding. The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times (int1 parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain int1 floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	:MEASure:GPRS:ARRay:RFRX:BER:CII? 5 The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GPRS:ARRay:RFRX:BER:CRC**

<b>Syntax</b>	:MEASure:GPRS:ARRay:RFRX:BER:CRC <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	– Performs the measurement of the (non-residual) bit error ratio on the class II bits a specific number of times (set with the int1 parameter). To read out the entire measurement results array, use the :FETCh:GPRS:RFRX:BER:CII command. <b>Notes</b> – More details regarding BER testing can be found in section BER Live Display. – More details regarding bit classes can be found in section Voice Coding. – The number of samples to be used for testing can be set, using the :CONF:GPRS:BER:COUNT command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times (int1 parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain int1 floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	:MEAS:GPRS:ARR:RFRX:BER:CRC? 5 The string returned in this example is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GPRS:ARRay:RFRX:FBER**

<b>Syntax</b>	:MEASure:GPRS:ARRay:RFRX:FBER <int1>
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<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the fast bit error ratio (C-loop) test a specific number of times (set with the <code>int1</code> parameter). To read out <b>the entire</b> measurement results array, use the <code>:FETCh:GPRS:RFRX:FBER</code> command. <b>Notes:</b> More details regarding Fast BER testing can be found in section BER Live Display. The number of samples to be used for testing can be set, using the <code>:CONF:GPRS:BER:COUNT</code> command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <code>int1</code> floating point real numbers, representing the bit error ratios. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEASure:GPRS:ARRay:RFRX:FBER? 5</code> The string returned is: "1.4,1.4,1.5,1.7,1.3".

**:MEASure:GPRS:ARRay:RFRX:RTDelay**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFRX:RTDelay &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the measurement of the round trip delay (of data during bit error ratio measurements) a specific number of times (set with the <code>int1</code> parameter). To read out <b>the entire</b> measurement results array, use the <code>:FETCh:GPRS:RFRX:RTD</code> command. <b>Note:</b> More details regarding the round-trip delay can be found in section BER Live Display.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <code>int1</code> integers, representing the single round trip delays. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEASure:GPRS:ARRay:RFRX:RTDelay? 5</code> The string returned is: "8,8,8,8,8".

**:MEAS:GPRS:ARR:RFSP:ACPM:MODulation**

<b>Syntax</b>	<code>:MEAS:GPRS:ARR:RFSP:ACPM:MODulation &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.

<b>Description</b>	<p>Performs the measurement of the ACPM modulation spectrum a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFSP:ACPM:MOD</code> command.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</p> <p>More information regarding ARRay measurements can be found in section <code>:MEASure:ARRay</code>.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain (<math>23 * int1</math>) floating point real numbers. The physical dimension is dBc. The single measurement results are separated by commas. The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFSPectrum:ACPM:MODulation 5 :FETCh:GPRS:RFSP:ACPM:MOD?</pre> <p>The string returned would contain 115 floating point real numbers, representing the 23 measurement result values of five measurement runs.</p>

**:MEASure:GPRS:ARRay:RFSPectrum:ACPM:MODPower**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:RFSPectrum:ACPM:MODPower &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>Performs the measurement of the ACPM modulation spectrum a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFSP:ACPM:MODP</code> command.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- The first result is the absolute power in dBm, measured at the center frequency. The remaining 23 values are the same as from the <code>ACPM:MODulation</code> command.</li> <li>- According to GSM specification 05.05, this measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. Including the carrier frequency (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</li> </ul> <p>More information regarding ARRay measurements can be found in section <code>:MEASure:ARRay</code>.</p>

<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain the absolute power at the center frequency (within a 30 kHz bandwidth) as the first value with the physical dimension of dBm and after that 23 floating point real numbers with the physical dimension dBc. The total count of the values is $24 * int1$ . The individual measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFSP:ACPM:MODP 5</code> <code>:FETCh:GPRS:RFSP:ACPM:MODP?</code> The string returned in this example would contain 120 floating point real numbers, representing the 24 measurement result values of five measurement runs.

**:MEAS:GPRS:ARR:RFSP:ACPM:TRANSient**

<b>Syntax</b>	<code>:MEAS:GPRS:ARR:RFSP:ACPM:TRANSient &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.
<b>Description</b>	Performs the measurement of the ACPM spectrum due to switching transients a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:GPRS:RFSP:ACPM:TRAN</code> command. <b>Note:</b> According to GSM specification 05.05, this measurement will be performed on 0, ( $\pm$ )400, ( $\pm$ )600, ( $\pm$ )1.200 and ( $\pm$ )1.800 kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the adjacent 30 kHz windows below and above the frequencies given above will be delivered back. This adds up to $9 \times 3 = 27$ measurement result values, that are returned per measurement run. More information regarding <code>ARRay</code> measurements can be found in section <code>:MEASure:ARRay</code> .
<b>Query</b>	The query form of this command will perform the measurement the specified number of times ( <code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain $(27 * int1)$ floating point real numbers. The physical dimension is dBm. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFSPpectrum:ACPM:TRANSient 5</code> <code>:FETCh:GPRS:RFSP:ACPM:TRAN?</code> The string returned would contain 135 floating point real numbers, representing the 27 measurement result values of five measurement runs.

**:MEASure:GPRS:ARRay:MULTislot:RFTX:ALL**

<b>Syntax</b>	<code>:MEASure:GPRS:ARRay:MULTislot:RFTX:ALL &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> specifies how many <code>MULT:RFTX:ALL</code> measurements (over multiple slots of a frame) shall be performed. Up to 100 measurements can be specified.
<b>Description</b>	Measures all RFTX parameters for a defined number of times, on all the available uplink slots.



<b>Query</b>	Performs <i>int1</i> times an RFTX:ALL measurement on all the available uplink slots and returns a string containing <i>int1</i> times the result string from the :MEASure:GPRS:CONT:MULT:RFTX:ALL query.
<b>Example</b>	:CONF:GPRS:MSTA:MSL 2 :MEAS:GPRS:ARR:MULT:RFTX:ALL 10 :FETCh:GPRS:MULT:RFTX:ALL? Delivers a string containing $10 \times (1 + 2 \times 19) = 390$ results, separated by commas.

**:MEASure:GPRS:ARRay:MULTislot:RFTX:PPEAk**

<b>Syntax</b>	:MEASure:GPRS:ARRay:MULTislot:RFTX:PPEAk < <i>int1</i> >
<b>Parameters</b>	<i>int1</i> specifies how many MULT:RFTX:PPEAk measurements (over multiple slots of a frame) shall be performed. Up to 100 measurements can be specified.
<b>Description</b>	Measures <i>int1</i> times the RFTX parameter peak phase error, on all the available uplink slots.
<b>Query</b>	Performs <i>int1</i> times a peak phase error measurement on all the available uplink slots and returns a string containing <i>int1</i> times the result string from the :MEASure:GPRS:CONT:MULT:RFTX:PPEAk query.
<b>Example</b>	:CONF:GPRS:MSTA:MSL 2 :MEAS:GPRS:ARR:MULT:RFTX:PPEAk? 3 Returns a string containing nine results separated by commas, for example 2,8.3,9.6, 2,8.1,8.9, 2,8.2,9.5

**:MEASure:GPRS:ARRay:MULTislot:RFTX:TEMPlate**

<b>Syntax</b>	:MEASure:GPRS:ARRay:MULTislot:RFTX:TEMPlate < <i>int1</i> >
<b>Parameters</b>	<i>int1</i> specifies how many measurements shall be taken. Up to 100 measurements can be specified.
<b>Description</b>	Checks repetitively whether the <i>int1</i> TX bursts fit into the respective power/time templates.
<b>Query</b>	The return string contains <i>int1</i> times the number of the uplink time slots followed by the pass/fail result for each individual slot. A 0 indicates that the burst shape is inside limits, 1 indicates outside limits for the respective part.
<b>Example</b>	:CONF:GPRS:MSTA:MSL 2 :MEAS:GPRS:ARR:MULT:RFTX:TEMP? 3 Returns a string like the following: 2,0,0, 2,0,1, 2,0,1 In this example, the signal hit the limits during the second slot in the second and third measurement.

**:MEASure:GPRS:ARRay:MULTislot:RFRX:BLER**

<b>Syntax</b>	:MEASure:GPRS:ARRay:MULTislot:RFRX:BLER
<b>Parameters</b>	<i>int1</i> specifies how many measurements shall be taken. Up to 100 measurements are supported.

<b>Description</b>	Measures a specified number of times the block error rate (BLER) for all the available slots. The results can be requested with the <code>:FETCh:GPRS:MuLT:RFRX:BLER</code> command. <b>Note:</b> Two types of BLER are available: BLER-USF and BLER-BCS. The type is selected with the <code>:CALL:GPRS:MODE</code> command.
<b>Query</b>	Starts <code>int1</code> measurements and returns a string containing <code>int1</code> times the number of active slots followed by the overall block error rate (BLER) and the individual BLER values for each of these time slots. The BLER is expressed in % and a floating point real value.
<b>Example</b>	<code>:CONF:GPRS:MSTA:MSL 2</code> <code>:CALL:GPRS:MODE USF</code> <code>:MEAS:GPRS:ARR:MuLT:RFRX:BLER? 3</code> Returns a string like <code>2,1.1,0.7,1.4, 2,1.2,0.9,1.5, 2,1.1,0.8,1.3</code>

**EGPRS commands** Please note that the accuracy specified for multislot transmitter measurements applies to the time slot with the highest power level. The accuracy of results at levels of more than 10 dB below the highest power level may be significantly lower.

**:MEASure:EGPRs[:CONTInuous]:RFTX:STOP**

<b>Syntax</b>	<code>:MEASure:EGPRs[:CONTInuous]:RFTX:STOP</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops continuous RF transmitter measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:MEAS:EGPR:RFTX:ALL</code> <code>:MEAS:EGPR:RFTX:STOP</code> Starts and stops a measurement.

**:MEASure:EGPRs[:CONTInuous]:RFTX:GRouP**

<b>Syntax</b>	<code>:MEASure:EGPRs[:CONTInuous]:RFTX:GRouP</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the GSM RF TX tests, specified with the <code>:CONF:EGPRs:MEAS:GRO:RFTX</code> command. To read out the latest measurement results, use the <code>:FETCh:EGPRs:RFTX:GRouP</code> command. <b>Notes:</b> <ul style="list-style-type: none"> <li>- Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly.</li> <li>- For further details regarding group measurements and their specific advantages, refer to section <code>:MEAS: . . . :GRouP</code>.</li> <li>- For <code>[:CONTInuous]</code> measurements in general, check with section <code>:MEASure:EGPRs[:CONTInuous]</code>.</li> </ul>

<b>Query</b>	The query form of this command will start the sequence of RF TX measurements as specified with the <code>:CONF:EGPRS:MEAS:GRO:RFTX</code> command. As soon as all measurements of the first sequence have been completed, a string will be delivered back, containing the related measurement result values, separated by commas. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the measurements specified. The order of the measurement result values within the string is as described below for the <code>:MEAS:EGPRS:CONT:RFTX:ALL</code> command.
<b>Example</b>	<pre>:CONF:EGPRS:MEAS:GRO:RFTX POW,EVM :MEASure:EGPRS:CONTinuous:RFTX:GROup?</pre> <p>In this example, the group of measurements is defined by a power level measurement combined with an error vector magnitude measurement. The string returned in this example is: "4.53,0.05".</p> <p>Because of the internal order (see description of the command below), the first measurement result value delivered back is the RMS phase error, the second one the mobile's RF output power level.</p>

**:MEASure:EGPRS[:CONTinuous]:RFTX:ALL**

<b>Syntax</b>	<code>:MEASure:EGPRS[:CONTinuous]:RFTX:ALL</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the most important EGPRS RF TX tests. To read out the latest measurement results, use the <code>:FETCh:EGPRS:RFTX:ALL</code> command. The RF TX tests performed by this command are:</p> <ul style="list-style-type: none"> <li>ERMS, the error vector magnitude rms-averaged over a burst.</li> <li>EVM is a relative value and shown as a percentage.</li> <li>EPEAK, the maximum error vector magnitude within a burst.</li> <li>EVM is indicated in per cent.</li> <li>ENFTH, the error vector magnitude that is not exceeded by 95 % of the symbols of a burst. The 95 % EVM is shown in %.</li> <li>EOffset, the origin offset indicates the accuracy of the i/Q modulators DC setup; it is usually an undesire leakage produced due to a DC offset in the phones I/Q modulator. It is measured in dBc, FREQuency means the frequency error of the mobile under test.</li> <li>LENGth the length of the burst in microseconds.</li> <li>UTIME stands for the timing error of the mobile under test in microseconds (taking the ordered timing advance into account).</li> <li>POWER is the mobile's RF output power level in dBm.</li> <li>TEMPlate indicates whether the power-time template has been violated by a burst or not.</li> <li>CORNER gives the RF power level in dBm at eight predefined positions of a burst (see section Corner Points for details).</li> </ul> <p><b>Notes:</b> Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly. For further details regarding group measurements and their specific advantages, refer to section <code>:MEAS: . . . :GROup</code>. For <code>[:CONTinuous]</code> measurements in general, check with section <code>:MEASure:EGPRS[:CON-Tinuous]</code>. For a further description of the single measurements, see description of the related commands below.</p>

<b>Query</b>	<p>The query form of this command starts the measurements and - after all measurements have been completed and all measurement results obtained - delivers a string, containing 17 measurement result values, separated with commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>ERMS</b>, the error vector magnitude rms-averaged over a burst. <b>EVM</b> is a relative value and shown as a percentage,</li> <li>2. <b>EPEAK</b>, the maximum error vector magnitude within a burst. <b>EVM</b> is indicated per cent,</li> <li>3. <b>ENFTh</b>, the error vector magnitude that is not exceeded by 95% of the symbols of a burst. The 95% <b>EVM</b> is shown in %,</li> <li>4. <b>EOFFset</b>, the origin offset indicates the accuracy of the i/Q modulators DC setup; it is usually an undesire leakage produced due to a DC offset in the phones I/Q modulator. It is measured in dBc,</li> <li>5. <b>FREQuency</b>, floating point real number representing the mobile's frequency error,</li> <li>6. <b>LENGth</b>, floating point real number representing the length of the burst in microseconds,</li> <li>7. <b>UTIME</b>, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li> <li>8. <b>POWER</b>, floating point real number representing the mobile's RF output power level in dBm,</li> <li>9. <b>TEMPlate</b> boolean number. A 0 indicates that the power-time template (PTT) was not violated by the last burst measured, while a 1 means that the burst did violate the PTT.</li> <li>10..17. <b>CORNeR</b>, eight floating point real numbers, representing the RF power level in dBm at eight predefined positions of a burst.</li> </ol>
<b>Example</b>	<pre>:MEASure:EGPRS:CONTinuous:RFTX:ALL?</pre> <p>In this case, all relevant EGPRS RF TX measurements will be performed in a sequence. As soon as all measurements have been completed and all measurement results obtained, a string will be delivered back containing 17 measurement results: "5.13,11.94,2.43,4.55,-2.22,557.0,0.1,11.22,0,-72.18, -61.91,-20.91,-0.05,-0.04,-17.97,-56.60, -73.95".</p>

**:MEASure:EGPRS[:CONTinuous]:RFTX:ERMS**

<b>Syntax</b>	<code>:MEASure:EGPRS[:CONTinuous]:RFTX:ERMS</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the error vector magnitude rms-averaged over a burst. <b>EVM</b> is a relative value and shown as a percentage. To read out the measurement results, use the <code>:FETCh:EGPRS:RFTX:ERMS</code> command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of %.
<b>Example</b>	<pre>:MEAS:EGPRS:RFTX:ERMS :FETC:EGPRS:RFTX:ERMS?</pre> <p>The error vector magnitude rms-averaged measurement will be performed. The measurement result will be stored internally and read by the <code>FETC</code> command. An example of the string returned is: "2.33".</p>

**:MEASure:EGPRs[:CONTinuous]:RFTX:EPEAk**

<b>Syntax</b>	:MEASure:EGPRs[:CONTinuous]:RFTX:EPEAk
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the maximum error vector magnitude within a burst. EVM is indicated per cent. To read out the measurement results, use the :FETCh:EGPRs:RFTX:EPEAk command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of %.
<b>Example</b>	:MEAS:EGPRs:RFTX:EPEAk? The maximum error vector magnitude measurement will be performed and the result will be returned. Example of the returned string: "6.33".

**:MEASure:EGPRs[:CONTinuous]:RFTX:ENFTh**

<b>Syntax</b>	:MEASure:EGPRs[:CONTinuous]:RFTX:ENFTh
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the error vector magnitude that is not exceeded by 95% of the symbols of a burst. The 95% EVM is shown in %. To read out the measurement results, use the :FETCh:EGPRs:RFTX:ENFTh command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of %.
<b>Example</b>	:MEAS:EGPRs:RFTX:ENFTh :FETC:EGPRs:RFTX:ENFTh? The maximum error vector magnitude measurement will be performed. The measurement result will be stored internally and read by the FETC command. An example of the string returned is: "4.33".

**:MEASure:EGPRs[:CONTinuous]:RFTX:EOFFset**

<b>Syntax</b>	:MEASure:EGPRs[:CONTinuous]:RFTX:EOFFset
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the origin offset. The origin offset indicates the accuracy of the i/Q modulators DC setup; it is usually an undesire leakage produced due to a DC offset in the phones I/Q modulator. It is measured in dBc. To read out the measurement results, use the :FETCh:EGPRs:RFTX:ENFTh command.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of dBc.

<b>Example</b>	<code>:MEAS:EGPRS:FTX:EOFFset?</code> The maximum error vector magnitude measurement will be performed and the result will be returned, for example: "1.97".
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**:MEASure:EGPRS[:CONTinuous]:RFTX:FREQuency**

<b>Syntax</b>	<code>:MEASure:EGPRS[:CONTinuous]:RFTX:FREQuency</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's frequency error in GSM mode. To read out the latest measurement result, use the <code>:FETCh:EGPRS:RFTX:FRE-Quency</code> command. For details regarding this RF TX measurement, refer to section Phase/Frequency Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of Hertz.
<b>Example</b>	<code>:MEASure:EGPRS:CONTinuous:RFTX:FREQuency?</code> The string returned in this example is: "-31.92".

**:MEASure:EGPRS[:CONTinuous]:RFTX:LENGth**

<b>Syntax</b>	<code>:MEASure:EGPRS[:CONTinuous]:RFTX:LENGth</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the burst length in GSM mode. To read out the latest measurement result, use the <code>:FETCh:EGPRS:RFTX:LENGth</code> command. For details regarding this RF TX measurement, refer to section Burst Test Menu.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of microseconds.
<b>Example</b>	<code>:MEASure:EGPRS:CONTinuous:RFTX:LENGth?</code> The string returned in this example is: "557.0".

**:MEASure:EGPRS[:CONTinuous]:RFTX:UTIME**

<b>Syntax</b>	<code>:MEASure:EGPRS[:CONTinuous]:RFTX:UTIME</code>
<b>Parameters</b>	There are no parameters
<b>Description</b>	Starts a continuous measurement of the GSM uplink timing error. To read out the latest measurement result, use the <code>:FETCh:EGPRS:RFTX:UTIME</code> command. For details regarding this RF TX measurement, refer to section Burst Results Display.
<b>Query</b>	The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of microseconds.

**Example** :MEASure:EGPRs:CONTInuous:RFTX:UTIME?  
The string returned in this example is: "0.1".

**:MEASure:EGPRs[:CONTInuous]:RFTX:POWer**

**Syntax** :MEASure:EGPRs[:CONTInuous]:RFTX:POWer

**Parameters** There are no parameters.

**Description** Starts a continuous measurement of the mobile's RF output power level. To read out the latest measurement result, use the :FETCh:EGPRs:RFTX:POWer command. For details regarding this RF TX measurement, refer to section Burst Results Display.

**Query** The query form of this command will start the measurement and return a measurement result value as soon as the first measurement has been completed. The string delivered back will contain one floating point real number with the physical dimension of dBm.

**Example** :MEASure:EGPRs:CONTInuous:RFTX:POWer?  
The string returned in this example is: "11.22".

**:MEASure:EGPRs[:CONTInuous]:RFTX:TEMPlate**

**Syntax** :MEASure:EGPRs[:CONTInuous]:RFTX:TEMPlate

**Parameters** There are no parameters.

**Description** Starts a continuous check of the UL burst against the power-time template (PTT). To read out the latest measurement result, use the :FETCh:EGPRs:RFTX:TEMPlate command. For details regarding this RF TX measurement, refer to section Burst Test Menu. The power-time template (PTT) is user-definable. For details, please refer to section Power-Time Templates (PTT).  
**Note:** The power-time template can also be set using the :CALC:RFTX:TEMP commands.

**Query** The query form of this command will start the (continuous) check and return a result value as soon as the first check has been completed. The string delivered back will contain one boolean number.  
A 0 indicates that there was no violation of the PTT, while a 1 means that the last burst measured did violate the PTT.

**Example** :MEASure:EGPRs:CONTInuous:RFTX:TEMPlate  
This command will start the continuous check of the burst against the PTT.

**:MEASure:EGPRs[:CONTInuous]:RFTX:CORner**

**Syntax** :MEASure:EGPRs[:CONTInuous]:RFTX:CORner

**Parameters** There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the mobile's RF output power level on eight user-definable positions of the ramping phases of a burst (the so-called corner points). To read out the latest measurement results, use the <code>:FETCh:EGPRs:RFTX:CORNeR</code> command.</p> <p>For details regarding this RF TX measurement, please refer to section Burst Results Display.</p> <p>More details regarding the corner points can be found in section Corner Points.</p> <p><b>Note:</b> The corner points can also be set using the <code>:CALC:RFTX:CORN</code> commands.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return eight measurement result values as soon as the first measurement has been completed. The string delivered back will contain eight floating point real numbers with the physical dimension of dBm. The single values are separated by commas.</p>
<b>Example</b>	<p><code>:MEASure:EGPRs:CONTInuous:RFTX:CORNeR?</code></p> <p>The string returned in this example is: "-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95".</p>

**:MEASure:EGPRs[:CONTInuous]:BLOCkdata:BURStshape**

<b>Syntax</b>	<code>:MEASure:EGPRs[:CONTInuous]:BLOCkdata:BURStshape</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the mobile's UL burst shape. To read out the measurement result values of the last burst sampled, use the <code>:FETCh:EGPRs:RFTX:BLOCkdata:BURStshape</code> command.</p> <p>The aim of this measurement is to obtain the pure RF power levels, sampled by the Willtek 3100 in order to display the shape of the burst graphically on another computer or to perform some special analysis of the burst shape.</p> <p>For details regarding the burst measurement, also refer to section Burst Test Menu. Further information regarding this kind of measurement can be found in section <code>:MEASure:...:BLOCkdata</code>.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain 700 floating point real numbers with the physical dimension of dB (except the first two).</p> <p>The first data position of the array is the absolute position of the middle of the burst (i.e. bit 73) within the burst data supplied. In order to allocate the RF power level obtained for the middle of the burst, <b>add 2</b> to this first value of the array to find the relative position within this data array (as the first two positions of this array are no data values).</p> <p>The second number is the <b>absolute</b> peak power level of the burst in dBm, obtained at the middle of the burst.</p> <p>All the data values following are <b>relative</b> RF power levels (in dB) with the peak power level (second data value of the array) being the reference.</p> <p>The single measurement result values are separated by commas.</p>



**Example**           :MEAS:EGPRS:CONT:BLOC:BURStshape?

The array returned in this example is: "353.0,10.0,-73.5,-69.6,-70.8, . . . -0.1,0.0,0.2, . . . -68.4".

The data have the following meaning: 353.0 on the first position means that the absolute position of the middle of the burst is position 353 of the burst data array. Thus, it can be found on position 355 of the data block returned.

The relative power level at the middle of the burst will always be 0.0 as it is the reference point.

The peak power of the burst (obtained at the reference point 'middle of the burst') can be found on the second position of the data array and is 10.0 dBm in this example.

Then follows the relative RF power levels sampled at the various time positions of the burst (-73.5, -69.6, ... dB). This means that the absolute power level at the first position sampled is -63,5 dBm (-73.5+10.0).

All the remaining data values are relative RF power levels sampled by the Willtek 3100 during the burst period.

**:MEASure:EGPRS[:CONTInuous]:BLOCkdata:MSpectrum  
[:CURR]**

<b>Syntax</b>	:MEASure:EGPRS[:CONTInuous]:BLOCkdata:MSpectrum[:CURR]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the modulation spectrum curve. To read out the measurement result values of the latest modulation spectrum curve, use the :FETCh:EGPRS:RFtX:BLOCkdata:MSpectrum command.</p> <p>The aim of this measurement is to obtain the pure modulation spectrum levels, calculated by the Willtek 3100 in order to graphically display the modulation spectrum curve on another computer or to perform some special analysis of the modulation spectrum.</p> <p>Further information regarding this kind of measurement can also be found in section :MEASure: . . . :BLOCkdata.</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer.</p> <p>The span can be set using the :RFSP:MSP:SPAN command; the resolution may be set using the :RFSP:MSP:RES command. The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p>:MEAS:EGPRS:CONT:BLOCkdata:MSpectrum?</p> <p>The array returned in this example is: "-62.0,-61.5,-62.2, . . . -0.4,0.0,-0.3, . . . -62.4".</p>

**:MEASure:EGPRs[:CONTinuous]:BLOCkdata:MSpectrum:AVG**

<b>Syntax</b>	:MEASure:EGPRs[:CONTinuous]:BLOCkdata:MSpectrum:AVG <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Starts a process that measures and averages the modulation spectrum for a specified number of times. The aim of this measurement is to obtain a 'smoothed' modulation spectrum curve in order to graphically display the modulation spectrum on another computer or to perform some special analysis. Further information regarding this kind of measurement can be found in section :MEASure: . . . :BLOCkdata. <b>Note:</b> To read out the measurement result values of the averaging process, the :FETCh:EGPRs:RFTX:BLOCkdata:MSpectrum command can be used.
<b>Query</b>	The query form of this command will start the averaging process and return an array of measurement result values as soon as all the measurements have been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB. The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer. The span can be set using the :RFSP:MSP:SPAN command; the resolution may be set using the :RFSP:MSP:RES command. The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions). The single measurement result values are separated by commas.
<b>Example</b>	:MEAS:EGPRs:CONT:BLOCkdata:MSpectrum:AVG? 25 The array returned in this example is: "-61.0, -61.0, -61.1, . . . 0.0, 0.0, 0.0, . . . -61.0".

**:MEASure:EGPRs[:CONTinuous]:RFSpectrum:STOP**

<b>Syntax</b>	:MEASure:EGPRs[:CONTinuous]:RFSpectrum:STOP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops continuous RF spectrum measurements. <b>Note</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:MEAS:EGPR:RFSP:ACPM MOD :MEAS:EGPR:RFSP:STOP Starts and stops a measurement.

**:MEASure:EGPRs[:CONTinuous]:RFSpectrum:ACPM:MODulation**

<b>Syntax</b>	:MEASure:EGPRs[:CONTinuous]:RFSpectrum:ACPM:MODulation
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the ACPM modulation spectrum. To read out the latest measurement results, use the <code>:FETCh:EGPRs:RFSP:ACPM:MOD</code> command.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</p>
<b>Query</b>	<p>The query form of this command starts the measurement and delivers a string, containing 23 measurement result values separated by commas. These 23 measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile). The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.</p>
<b>Example</b>	<p><code>:MEAS:EGPRs:CONT:RFSP:ACPM:MODulation?</code></p> <p>In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 23 floating point real numbers.</p>

**:MEASure:EGPRs[:CONTinuous]:RFSPectrum:ACPM:MODPower**

<b>Syntax</b>	<code>:MEASure:EGPRs[:CONTinuous]:RFSPectrum:ACPM:MODPower</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	<p>Starts a continuous measurement of the ACPM modulation spectrum. To read out the latest measurement results, use the <code>:FETCh:EGPRs:RFSP:ACPM:MODP</code> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- The first result is the absolute power in dBm, measured at the center frequency. The remaining 23 values are the same as in the <code>ACPM:MODulation</code> command.</li> <li>- According to GSM specification 05.05, this measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</li> </ul>
<b>Query</b>	<p>The query form of this command starts the measurement and delivers a string, containing the absolute power at the center frequency (within a 30 kHz bandwidth) as the first value with the physical dimension of dBm and after that 23 measurement result values, all separated by commas. These 23 measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile). The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.</p>

**Example** :MEAS:EGPRS:CONT:RFSP:ACPM:MODP?  
In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 24 floating point real numbers.

**:MEASure:EGPRS[:CONTinuous]:RFSpectrum:ACPM:TRANSient**

**Syntax** :MEASure:EGPRS[:CONTinuous]:RFSpectrum:ACPM:TRANSient  
**Parameters** There are no parameters.  
**Description** Starts a continuous measurement of the ACPM spectrum due to switching transients. To read out the latest measurement results, use the :FETCh:EGPRS:RFSP:ACPM:TRANS command.  
**Note:** According to GSM specification 05.05, this measurement will be performed on 0, (±)400, (±)600, (±)1.200 and (±)1.800 kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the 30 kHz windows below and above the frequencies specified by GSM standard 05.05 will be delivered back. This adds up to  $9 \times 3 = 27$  measurement result values returned.  
**Query** The query form of this command starts the measurement and delivers a string, containing 27 measurement result values separated by commas. These 27 measurement result values are floating point real numbers with the physical dimension dBm.  
**Example** :MEAS:EGPRS:CONT:RFSP:ACPM:TRANSient?  
In this case, a measurement of the modulation spectrum will be performed. As soon as the measurement has been completed, a string will be delivered back containing 27 floating point real numbers.

**:MEASure:EGPRS[:CONTinuous]:MULTislot:RFTX:TEMPlate**

**Syntax** :MEASure:EGPRS[:CONTinuous]:MULTislot:RFTX:TEMPlate  
**Parameters** There are no parameters.  
**Description** Checks repetitively the TX bursts against the power/time template (PTT). To read out the latest measurement result, use the :FETCh:EGPRS:MULTislot:RFTX:TEMPlate command.  
**Note:** The power/time templates are user-definable and can be set up using the :CALC:EGPRS:RFTX:TEMP commands.  
**Query** The query form of this command starts the check and returns measurement results as soon as the check has been completed. The string delivered back contains an integer number indicating the number of time slots measured, followed by boolean numbers signaling in turn compliance with or violation of the PTT for the each individual slot. A 0 indicates no violation of the PTT, while a 1 means that a burst measured violated the PTT.  
**Example** :MEAS:EGPRS:CONT:MULT:RFTX:TEMP?  
For two TX bursts measured, an example of the string returned is: "2,1,0" indicating a PTT violation in the first slot.

**:MEASure:EGPRs:ARRay:RFTX:GRoup**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:RFTX:GRoup <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Performs the RF TX tests, specified with the :CONF:EGPRs:MEAS:GRO:RFTX command for a specific number of times (set with the int1 parameter). To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:GRoup command. <b>Note:</b> Please keep in mind that the start of a new RF TX test will always terminate any preceding measurement of the same type instantly.
<b>Query</b>	The query form of this command will start the sequence of RF TX measurements as specified with the :CONF:MEAS:GRO:RFTX command for a specific number of times (set with the int1 parameter). As soon as all measurements have been completed, a string will be delivered back, containing the related measurement result values, separated by commas. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the measurements specified. The order of the measurement result values within the string is as described below for the :MEAS:EGPRs:CONT:RFTX:ALL command. <b>Note:</b> Please keep in mind that the number of measurement results delivered back is the number of measurement results of a single execution multiplied with the int1 parameter.
<b>Example</b>	:CONF:EGPRs:MEAS:GRO:RFTX POW,ERMS :MEASure:EGPRs:ARRay:RFTX:GRoup? 3 In this example, the group of measurements is defined by a power level measurement combined with a RMS phase error measurement. This group of measurements will be carried out three times. After all measurements have been completed, a result string will be delivered back, containing six measurement result values. The string returned in this example is: "4.53,9.98,4.08,10.02,4.32,9.99". Because of the internal order (see description of the command below), the first (third and fifth) measured value delivered back is the RMS phase error, while the second (fourth and sixth) measured value is the mobile's RF output power level.

**:MEASure:EGPRs:ARRay:RFTX:ALL**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:RFTX:ALL <int1>
<b>Parameters</b>	<int1> is an integer. The minimum value for <int1> is 0, the maximum value is 100. The default value for <int1> is 0.

<b>Description</b>	<p>Performs a sequential measurement of the most important EGPRS RF TX tests for a specific number of times (set with the <code>&lt;int1&gt;</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:EGPRS:RFTX:ALL</code> command. The RF TX tests performed by this command are:</p> <ul style="list-style-type: none"><li><code>ERMS</code>, the error vector magnitude rms-averaged over a burst. EVM is a relative value and shown as a percentage,</li><li><code>EPEAK</code>, the maximum error vector magnitude within a burst. EVM is indicated per cent,</li><li><code>ENFTh</code>, the error vector magnitude that is not exceeded by 95% of the symbols of a burst. The 95% EVM is shown in %,</li><li><code>EOFFset</code>, the origin offset indicates the accuracy of the i/Q modulators DC setup; it is usually an undesire leakage produced due to a DC offset in the phones I/Q modulator. It is measured in dBc,</li><li><code>FREQuency</code> means the frequency error of the mobile under test,</li><li><code>LENGth</code>, the length of the burst in microseconds,</li><li><code>UTIME</code> stands for the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li><li><code>POWer</code> is the mobile's RF output power level in dBm,</li><li><code>TEMPlate</code> indicates whether the power-time template has been violated by a burst or not,</li><li><code>CORNEr</code> gives the RF power level in dBm at eight pre-defined positions of a burst (see section Corner Points for details).</li></ul> <p><b>Notes:</b> Please keep in mind that the start of a new RF TX test will always terminate the preceding one instantly. For further details regarding group measurements and their specific advantages, refer to section <code>:MEAS: . . . :GRoup</code>. For <code>ARRAY</code> measurements in general, check with section <code>:MEASure: . . . :ARRAy</code>. For a further description of the single measurements, see description of the related commands below.</p>
<b>Query</b>	<p>The query form of this command performs the measurements and - after all measurements have been completed and all measurement results obtained - delivers a string, containing (17 * <code>&lt;int1&gt;</code>) measurement result values. The single measurement result values are separated by commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"><li>1. <code>ERMS</code>, the error vector magnitude rms-averaged over a burst. EVM is a relative value and shown as a percentage,</li><li>2. <code>EPEAK</code>, the maximum error vector magnitude within a burst. EVM is indicated per cent,</li><li>3. <code>ENFTh</code>, the error vector magnitude that is not exceeded by 95% of the symbols of a burst. The 95% EVM is shown in %,</li><li>4. <code>EOFFset</code>, the origin offset indicates the accuracy of the i/Q modulators DC setup; it is usually an undesire leakage produced due to a DC offset in the phones I/Q modulator. It is measured in dBc,</li><li>5. <code>FREQuency</code>, floating point real number representing the mobile's frequency error,</li><li>6. <code>LENGth</code>, floating point real number representing the length of the burst in microseconds,</li><li>7. <code>UTIME</code>, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li><li>8. <code>POWer</code>, floating point real number representing the mobile's RF output power level in dBm,</li><li>9. <code>TEMPlate</code>, boolean number. A 0 indicates that the power-time template (PTT) was <b>not</b> violated by the last burst measured, while a 1 means that the burst did violate the PTT.</li><li>10...17. <code>CORNEr</code>, eight floating point real numbers, representing the RF power level in dBm at eight predefined positions of a burst.</li></ol>

**Example**           :MEASure:EGPRs:ARRay:RFTX:ALL 2  
                      :FETCh:EGPRs:RFTX:ALL?

In this case, the sequence of the most important EGPRS RF TX measurements will be performed twice. All 34 measurement result values will be kept in an internal memory until they are read out with the FETCh command. After the internal memory has been read out, it will be cleared.

**Note:** A subsequent :FETCh command (without any previous start of a measurement) will therefore try to read non-existing measurement data and thus create a timeout error.

**:MEASure:EGPRs:ARRay:RFTX:ERMS**

**Syntax**            :MEASure:EGPRs:ARRay:RFTX:ERMS <int1>

**Parameters**       int1 is an integer.  
The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.

**Description**       Measures multiple times (set with the int1 parameter) the error vector magnitude rms-averaged over a burst. EVM is a relative value and shown as a percentage. To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:ERMS command.

**Query**             The query form of this command returns a string, containing int1 floating point real numbers with the physical dimension of %, representing the measurement results. The single measurement results are separated by commas.

**Example**           :MEAS:EGPRs:ARR:RFTX:ERMS 5  
                      :FETC:EGPRs:RFTX:ERMS?

The error vector magnitude rms-averaged measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "2.33,2.53,1.97,2.41,1.79".

**:MEASure:EGPRs:ARRay:RFTX:EPEAk**

**Syntax**            :MEASure:EGPRs:ARRay:RFTX:EPEAk <int1>

**Parameters**       int1 is an integer.  
The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.

**Description**       Measures multiple times (set with the int1 parameter) the maximum error vector magnitude within a burst. EVM is indicated per cent. To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:EPEAk command.

**Query**             The query form of this command returns a string, containing int1 floating point real numbers with the physical dimension of %, representing the measurement results. The single measurement results are separated by commas.

**Example**           :MEAS:EGPRs:ARR:RFTX:EPEAk 5  
                      :FETC:EGPRs:RFTX:EPEAk?

The maximum error vector magnitude measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "6.33,8.53,11.97,9.41,10.79".

**:MEASure:EGPRs:ARRay:RFTX:ENFTh**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:RFTX:ENFTh <int1>
<b>Parameters</b>	<int1> is an integer. The minimum value for <int1> is 0, the maximum value is 100. The default value for <int1> is 0.
<b>Description</b>	Measures multiple times (set with the <int1> parameter) the error vector magnitude that is not exceeded by 95% of the symbols of a burst. The 95% EVM is shown in %. To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:ENFTh command.
<b>Query</b>	The query form of this command returns a string, containing <int1> floating point real numbers with the physical dimension of %, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	:MEAS:EGPRs:ARR:RFTX:ENFTh 5 :FETC:EGPRs:RFTX:ENFTh? The maximum error vector magnitude measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "4.33,5.53,1.97,3.41,2.79".

**:MEASure:EGPRs:ARRay:RFTX:EOFFset**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:RFTX:EOFFset <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Measures multiple times (set with the int1 parameter) the Origin Offset. The origin offset indicates the accuracy of the i/Q modulators DC setup; it is usually an undesire leakage produced due to a DC offset in the phones I/Q modulator. It is measured in dBc. To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:ENFTh command.
<b>Query</b>	The query form of this command returns a string, containing int1 floating point real numbers with the physical dimension of dBc, representing the measurement results.  The single measurement results are separated by commas.
<b>Example</b>	:MEAS:EGPRs:ARR:RFTX:EOFFset 5 :FETC:EGPRs:RFTX:EOFFset? The maximum error vector magnitude measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "4.33,5.53,1.97,3.41,2.79".

**:MEASure:EGPRs:ARRay:RFTX:FREQuency**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:RFTX:FREQuency <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.



<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the frequency error. To read out the entire measurement results array, use the <code>:FETCh:EGPRs:RFTX:FREQ</code> command.
<b>Query</b>	The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of Hz, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<pre>:MEAS:EGPRs:ARR:RFTX:FREQ 5 :FETC:EGPRs:RFTX:FREQ?</pre> <p>The frequency error measurement will be performed five times. The measurement results will be stored internally and read by the <code>FETC</code> command. An example of the string returned is: "22.33,22.53,21.97,22.41,21.79".</p>

**:MEASure:EGPRs:ARRay:RFTX:LENGth**

<b>Syntax</b>	<code>:MEASure:EGPRs:ARRay:RFTX:LENGth &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the burst length. To read out the entire measurement results array, use the <code>:FETCh:EGPRs:RFTX:LENGth</code> command.
<b>Query</b>	<p>The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of microseconds, representing the measurement results.</p> <p>The single measurement results are separated by commas.</p>
<b>Example</b>	<pre>:MEAS:EGPRs:ARR:RFTX:LENG 5 :FETC:EGPRs:RFTX:LENG?</pre> <p>The measurement of the burst length will be performed five times. The measurement results will be stored internally and read by the <code>FETC</code> command. An example of the string returned is: "556.4,557.2,558.2,557.8,556.5".</p>

**:MEASure:EGPRs:ARRay:RFTX:UTIME**

<b>Syntax</b>	<code>:MEASure:EGPRs:ARRay:RFTX:UTIME &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	Measures multiple times (set with the <code>int1</code> parameter) the uplink timing error. To read out the entire measurement results array, use the <code>:FETCh:EGPRs:RFTX:UTIME</code> command.
<b>Query</b>	<p>The query form of this command returns a string, containing <code>int1</code> floating point real numbers with the physical dimension of microseconds, representing the measurement results.</p> <p>The single measurement results are separated by commas.</p>
<b>Example</b>	<pre>:MEAS:EGPRs:ARR:RFTX:UTIM? 5</pre> <p>An example of the string returned is: "0.0,0.1,0.0,-0.2,0.1".</p>

**:MEASure:EGPRs:ARRay:RFTX:POWer**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:RFTX:POWer <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Measures multiple times (set with the int1 parameter) the burst peak power. To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:POWer command.
<b>Query</b>	The query form of this command returns a string, containing int1 floating point real numbers with the physical dimension of dBm, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	:MEAS:EGPRs:ARR:RFTX:POW? 5 An example of the string returned is: "11.22,11.09,11.21,11.14,10.99".

**:MEAS:EGPRs:ARR:RFTX:TEMP**

<b>Syntax</b>	:MEAS:EGPRs:ARR:RFTX:TEMP <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Checks multiple times (set with the int1 parameter) if TX burst fits into the power/time template. To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:TEMPlate command. <b>Note:</b> The power/time template is user-definable. It can be set up using the :CALC:EGPRs:RFTX:TEMP commands.
<b>Query</b>	The query form of this command returns a string containing int1 boolean numbers. A 0 indicates no violation of the PTT by the current burst, while a 1 signals PTT violation. The single measurement results are separated by commas.
<b>Example</b>	:MEAS:EGPRs:ARR:RFTX:TEMP 10 :FETC:EGPRs:RFTX:TEMP? The check of the current burst against the PTT will be performed ten times. The check results will be stored internally and read out by the FETC command. An example of the string returned is: "0,0,0,0,0,0,1,0,0,0", indicating that the seventh burst checked violated the PTT.

**:MEASure:EGPRs:ARRay:RFTX:CORNER**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:RFTX:CORNER <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Measures multiple times (set with the int1 parameter) the RF power levels at eight user-definable positions specified by the CALC:EGPRs:RFTX:CORN:POS command. To read out the entire measurement results array, use the :FETCh:EGPRs:RFTX:CORNER command.

<b>Query</b>	The query form of this command returns a string, containing int1 times 8 floating point real numbers with the physical dimension of dBm, representing the measurement results. The single measurement results are separated by commas.
<b>Example</b>	<code>:MEAS:EGPRS:ARR:RFTX:CORN? 2</code> An example of the string returned is: "-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95,-71.38,-60.71,-20.11,-0.01,0.04,-18.14,-63.66,-72.97".

**:MEAS:EGPRS:ARR:RFSP:ACPM:MODulation**

<b>Syntax</b>	<code>:MEAS:EGPRS:ARR:RFSP:ACPM:MODulation &lt;int1&gt;</code>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Performs the measurement of the ACPM modulation spectrum a specific number of times (set with the int1 parameter). To read out the entire measurement results array, use the <code>:FETCh:EGPRS:RFSP:ACPM:MOD</code> command. <b>Note:</b> According to GSM specification 05.05, this measurement will be performed on ( $\pm$ )100 kHz and ( $\pm$ )250 kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of ( $\pm$ )1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz. More information regarding ARRay measurements can be found in section <code>:MEASure:ARRay</code> .
<b>Query</b>	The query form of this command will perform the measurement the specified number of times (int1 parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain (23 * int1) floating point real numbers. The physical dimension is dBc. The single measurement results are separated by commas. The 23 values represent the power in a 30 kHz bandwidth at the following frequencies: -1.8 MHz, -1.6 MHz, -1.4 MHz, -1.2 MHz, -1.0 MHz, -800 kHz, -600 kHz, -400 kHz, -250 kHz, -200 kHz, -100 kHz, 0 kHz, +100 kHz, 200 kHz, 250 kHz, 400 kHz, 600 kHz, 800 kHz, 1.0 MHz, 1.2 MHz, 1.4 MHz, 1.6 MHz, 1.8 MHz.
<b>Example</b>	<code>:MEAS:EGPRS:ARR:RFSPpectrum:ACPM:MODulation 5</code> <code>:FETCh:EGPRS:RFSP:ACPM:MOD?</code> The string returned in this example would contain 115 floating point real numbers, representing the 23 measurement result values of five measurement runs.

**:MEASure:EGPRS:ARRay:RFSPpectrum:ACPM:MODPower**

<b>Syntax</b>	<code>:MEASure:EGPRS:ARRay:RFSPpectrum:ACPM:MODPower &lt;int1&gt;</code>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.

<b>Description</b>	<p>Performs the measurement of the ACPM modulation spectrum a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:EGPRs:RFSP:ACPM:MODP</code> command.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>- The first result is the absolute power in dBm, measured at the center frequency. The remaining 23 values are the same as from the <code>ACPM:MODulation</code> command.</li> <li>- According to GSM specification 05.05, this measurement will be performed on <math>(\pm)100</math> kHz and <math>(\pm)250</math> kHz offset from the carrier as well as on all multiples of 200 kHz offset from the carrier up to (and including) an offset of <math>(\pm)1.8</math> MHz. Including the carrier frequency (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</li> </ul> <p>More information regarding <code>ARRay</code> measurements can be found in section <code>:MEASure:ARRay</code>.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain the absolute power at the center frequency (within a 30 kHz bandwidth) as the first value with the physical dimension of dBm and after that 23 floating point real numbers with the physical dimension dBc. The total count of the values is <math>24 * int1</math>.</p> <p>The individual measurement results are separated by commas.</p>
<b>Example</b>	<pre>:MEAS:EGPRs:ARR:RFSPpectrum:ACPM:MODPower 5 :FETCh:EGPRs:RFSP:ACPM:MODP?</pre> <p>The string returned in this example would contain 120 floating point real numbers, representing the 24 measurement result values of five measurement runs.</p>

**:MEASure:EGPRs:ARRay:RFSPpectrum:ACPM:TRANSient**

<b>Syntax</b>	<code>:MEASure:EGPRs:ARRay:RFSPpectrum:ACPM:TRANSient &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer.</p> <p>The minimum value for <code>int1</code> is 0, the maximum value is 100. The default value for <code>int1</code> is 0.</p>
<b>Description</b>	<p>Performs the measurement of the ACPM spectrum due to switching transients a specific number of times (set with the <code>int1</code> parameter). To read out the entire measurement results array, use the <code>:FETCh:EGPRs:RFSP:ACPM:TRAN</code> command.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on 0, <math>(\pm)400</math>, <math>(\pm)600</math>, <math>(\pm)1.200</math> and <math>(\pm)1.800</math> kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the adjacent 30 kHz windows below and above the frequencies given above will be delivered back. This adds up to <math>9 * 3 = 27</math> measurement result values, that are returned per measurement run.</p> <p>More information regarding <code>ARRay</code> measurements can be found in section <code>:MEASure:ARRay</code>.</p>
<b>Query</b>	<p>The query form of this command will perform the measurement the specified number of times (<code>int1</code> parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain <math>(27 * int1)</math> floating point real numbers. The physical dimension is dBm.</p> <p>The single measurement results are separated by commas.</p>

<b>Example</b>	<pre>:MEAS:EGPRS:ARR:RFSpectrum:ACPM:TRANSient 5 :FETCh:EGPRS:RFSP:ACPM:TRAN?</pre> <p>The string returned in this example would contain 135 floating point real numbers, representing the 27 measurement result values of five measurement runs.</p>
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**:MEASure:EGPRs:ARRay:MULTislot:RFTX:TEMPlate**

<b>Syntax</b>	:MEASure:EGPRs:ARRay:MULTislot:RFTX:TEMPlate <int1>
<b>Parameters</b>	int1 specifies how many measurements shall be taken. Up to 100 measurements can be specified.
<b>Description</b>	Checks repetitively whether the int1 TX bursts fit into the respective power/time templates.
<b>Query</b>	The return string contains int1 times the number of the uplink time slots followed by the pass/fail results for each of the individual slot. A 0 indicates that the burst shape is inside limits, 1 indicates outside limits.
<b>Example</b>	<pre>CONF:EGPRS:MSTA:MSL 2 :MEAS:EGPRS:ARR:MULT:RFTX:TEMP? 3</pre> <p>Returns a string like the following: 2,0,0 2,1,0, 2,0,0</p> <p>In this example, the signal hit the limits in the first slot of the second measurement.</p>

**CDMA2000 commands**    **:MEASure:CDMA[:CONTinuous]:RFTX:GROup**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:GROup
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the RF TX tests.
<b>Query</b>	The query form of this command will start the sequence of RF TX measurements.
<b>Example</b>	<pre>:CONF:CDMA:MEAS:GRO:RFTX WQU,POW :MEASure:CDMA:RFTX:GROup?</pre> <p>In this example, the group of measurements is defined by waveform quality and RF power results.</p>

**:MEASure:CDMA[:CONTinuous]:RFTX:FREQuency:ERRor**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:FREQuency:ERRor
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the frequency error.
<b>Query</b>	The query form of this command will start the sequence of frequency error measurements.
<b>Example</b>	<pre>:MEASure:CDMA:RFTX:FREQ:ERR?</pre> <p>Starts a frequency error measurement and returns the result.</p>

**:MEASure:CDMA[:CONTInuous]:RFTX:FREQuency:UNITs**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:FREQuency:UNITs <Pre-defExp>
<b>Parameters</b>	PredefExp is a predefined expression: HZ   KHZ   MHZ. Default is HZ.
<b>Description</b>	Sets the units used in returning results of the frequency error measurement.
<b>Query</b>	The query form of this command will return the current stored settings.
<b>Example</b>	:MEASure:CDMA:RFTX:FREQ:UNIT HZ :MEASure:CDMA:RFTX:FREQ:UNITs? Returns the following string: HZ

**:MEASure:CDMA[:CONTInuous]:RFTX:POWer**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:POWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's RF power.
<b>Query</b>	The query form of this command will return the float value for power.
<b>Example</b>	:MEASure:CDMA:RFTX:POWer? Starts an RF power measurement and returns the result (in dBm), e.g. -45.3.

**:MEASure:CDMA[:CONTInuous]:RFTX:MINimum**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:MINimum
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the minimum RF power.
<b>Query</b>	The query form of this command will return the float value.
<b>Example</b>	:MEASure:CDMA:RFTX:MINimum? Starts a minimum RF power measurement and returns the result, e.g. -46.1.

**:MEASure:CDMA[:CONTInuous]:RFTX:MAXimum**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:MAXimum
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the maximum RF power.
<b>Query</b>	The query form of this command will return the float value.
<b>Example</b>	:MEASure:CDMA:RFTX:MAXimum? Starts the maximum RF power measurement and returns the result in a string: "-46.1"

**:MEASure:CDMA[:CONTInuous]:RFTX:STANdby**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:STANdby
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the standby RF power.
<b>Query</b>	The query form of this command will return the float value.
<b>Example</b>	:MEASure:CDMA:RFTX:STANdby? Starts the standby RF power measurement and returns the result in a string, e.g. "-54.9"

**:MEASure:CDMA[:CONTInuous]:RFTX:ACCess**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:ACCess
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the access channel power.
<b>Query</b>	The query form of this command will return the float value.
<b>Example</b>	:MEASure:CDMA:RFTX:ACCess? Starts the access channel power measurement and returns a string containing the result, e.g. "-46.1"

**:MEASure:CDMA[:CONTInuous]:RFTX:CODEdomain[:IMMediate]**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:CODEdomain[:IMMediate]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the code domain power.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE.
<b>Example</b>	:MEASure:CDMA:RFTX:CODE:IMM? Starts the measurement and returns a string containing the result.

**:MEASure:CDMA[:CONTInuous]:RFTX:CODE:IPOW**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:CODE:IPOW
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the code domain I channel power.
<b>Query</b>	The query form of this command will return 16 floating point values.
<b>Example</b>	:MEASure:CDMA:RFTX:CODE:IPOW? Starts the measurement and returns a string containing the results (in dB) for the 16 code channels.

**:MEASure:CDMA[:CONTinuous]:RFTX:CODE:INOIse**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:CODE:INOIse
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the code domain I channel noise.
<b>Query</b>	The query form of this command will return 16 floating point values.
<b>Example</b>	:MEASure:CDMA:RFTX:CODE:INOI? Starts the I channel noise measurement and returns a string containing the results (in dB) for the 16 code channels.

**:MEASure:CDMA[:CONTinuous]:RFTX:CODE:QPOWer**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:CODE:QPOWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the code domain Q channel power.
<b>Query</b>	The query form of this command will return 16 floating point values.
<b>Example</b>	:MEASure:CDMA:RFTX:CODE:QPOW? Starts the measurement and returns a string with the results for the 16 code channels.

**:MEASure:CDMA[:CONTinuous]:RFTX:CODE:QNOIse**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:CODE:QNOIse
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the code domain Q channel noise.
<b>Query</b>	The query form of this command will return 16 floating point values for the 16 code channels.
<b>Example</b>	:MEASure:CDMA:RFTX:CODE:QNOIse?

**:MEASure:CDMA[:CONTinuous]:RFTX:GATed**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:GATed
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the gated power/time template measurement.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE.
<b>Example</b>	:MEASure:CDMA:RFTX:GATed:IMM?



**:MEASure:CDMA[:CONTinuous]:RFTX:GATed:AVERage**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:GATed:AVERage
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the average power.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX:GATed:AVER?

**:MEASure:CDMA[:CONTinuous]:RFTX:GATed:DROOp**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:GATed:DROOp
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous gated power measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX:GATed:DROOp?

**:MEASure:CDMA[:CONTinuous]:RFTX:GATed:PEAk**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:GATed:PEAk
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the gated power measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX:GATed:PEAk?

**:MEASure:CDMA[:CONTinuous]:RFTX:OPEN**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:OPEN
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous open loop measurement.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE.
<b>Example</b>	:MEASure:CDMA:RFTX:OPEN:IMM? Returns a pass/fail indication as a result.

**:MEASure:CDMA[:CONTinuous]:RFTX:OPEN:INITial**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:OPEN:INITial
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous open loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX:OPEN:INIT? Returns the initial power.

**:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE.
<b>Example</b>	:MEASure:CDMA:RFTX:CLOSeD:IMM?

**:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD:INITial**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD:INITial
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value for the initial power.
<b>Example</b>	:MEASure:CDMA:RFTX:CLOSeD:INIT?

**:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD:MAXimum**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD:MAXimum
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX:CLOSeD:MAXimum?

**:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD:MINimum**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:CLOSeD:MINimum
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX:CLOSeD:MINimum?

**:MEASure:CDMA[:CONTinuous]:RFTX:WQUality**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:WQUality
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX:WQUality? Returns the waveform quality, e.g. 0.9989.

**:MEAS:CDMA[:CONTinuous]:RFTX:CDPHase**

<b>Syntax</b>	:MEAS:CDMA[:CONTinuous]:RFTX:CDPHase? [<PredefExp>]
<b>Parameters</b>	The optional PredefExp is one of the predefined expressions ALL   RPICh   RDCCh   RSCH2x2   RSCH2x4   RFCh   RCCCh   RSCH1x4   RSCH1x8. The default is ALL. The channels are: RPICh = R_PICH ( $W_0^{32}$ ) = pilot channel RDCCh = R_DCCH ( $W_8^{16}$ ) = dedicated control channel RSCH2x2 = R_SCH2_x2 ( $W_6^8$ ) = supplementary channel 2 RSCH2x4 = R_SCH2_x4 ( $W_2^4$ ) = supplementary channel 2 RFCh = R_FCH ( $W_4^{16}$ ) = fundamental channel RCCCh = R_CCCH ( $W_2^8$ ) = common control channel RSCH1x4 = R_SCH1_x4 ( $W_2^4$ ) = supplementary channel 1 RSCH1x8 = R_SCH1_x8 ( $W_1^2$ ) = supplementary channel 1
<b>Description</b>	Starts a Reverse Pilot to Code Channel Phase Offset measurement.
<b>Query</b>	The query form of this command can have an optional parameter specifying which channel to measure. It will return either a floating point value for the selected channel, or eight floating point values for all code channels. The unit for the value is radians.
<b>Example</b>	:MEASure:CDMA:RFTX:CDPHase? ALL

**:MEAS:CDMA[:CONTinuous]:RFTX:CDPower**

<b>Syntax</b>	:MEAS:CDMA[:CONTinuous]:RFTX:CDPower? [<PredefExp>]
<b>Parameters</b>	The optional PredefExp is one of the predefined expressions ALL   RPICh   RDCCh   RSCH2x2   RSCH2x4   RFCh   RCCCh   RSCH1x4   RSCH1x8. The default is ALL.
<b>Description</b>	The commands starts a Reverse Pilot to Code Channel Power Offset measurement.
<b>Query</b>	The query form of this command can have an optional parameter specifying which channel to measure. It will return either one or eight floating point values for the results in dB.
<b>Example</b>	:MEASure:CDMA:RFTX:CDPower? ALL

**:MEAS:CDMA[:CONTinuous]:RFTX:CDTIme**

<b>Syntax</b>	:MEAS:CDMA[:CONTinuous]:RFTX:CDTIme? [<PredefExp>]
<b>Parameters</b>	The optional PredefExp is one of the predefined expressions ALL   RPICH   RDCCCh   RSCH2x2   RSCH2x4   RFCH   RCCCh   RSCH1x4   RSCH1x8. The default is ALL.
<b>Description</b>	The commands starts a Reverse Pilot to Code Channel Time Offset measurement.
<b>Query</b>	The query form of this command can have an optional parameter specifying which channel to measure. It will return either one or eight floating point values expressing the result in microseconds.
<b>Example</b>	:MEASure:CDMA:RFTX:CDTIme? ALL

**:MEASure:CDMA[:CONTinuous]:RFTX:TIME:OFFSet**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:TIME:OFFSet
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous time offset measurement.
<b>Query</b>	The query form of this command will return a floating point value for the measurement time offset.
<b>Example</b>	:MEASure:CDMA:RFTX:TIME:OFFSet? Returns a string containing the result, e.g. -4.334.

**:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:RMS**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:RMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous RMS vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value; the unit is percent.
<b>Example</b>	:MEASure:CDMA:RFTX:VERRor:RMS? Returns the measured RMS vector error, e.g. 100.1.

**:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:PEAK**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:PEAK
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous peak vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value in percent.
<b>Example</b>	:MEASure:CDMA:RFTX:VERRor:PEAK

**:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:OOffset**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:OOffset
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous origin offset vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in dBc.
<b>Example</b>	:MEASure:CDMA:RFTX:VERRor:OOffset? Returns a string with the origin offset in dBc, e.g. -40.1.

**:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:IQIMbalance**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:IQIMbalance
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous IQ Imbalance vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in dB.
<b>Example</b>	MEAS:CDMA:ARR:RFTX:IQIM? 20 :CALC:CDMA:RFTX:VERR:IQIM:LIM? Returns 0 if all the 20 results are within limits.

**:MEASure:CDMA[:CONTinuous]  
:RFTX:VERRor:MAGNitude:RMS**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:MAGNitude:RMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous RMS magnitude vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in percent.
<b>Example</b>	:MEASure:CDMA:RFTX:VERRor:MAGNitude:RMS?

**:MEASure:CDMA[:CONTinuous]  
:RFTX:VERRor:MAGNitude:PEAK**

<b>Syntax</b>	:MEASure:CDMA[:CONTinuous]:RFTX:VERRor:MAGNitude:PEAK
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous peak magnitude vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in percent.
<b>Example</b>	:MEASure:CDMA:RFTX:VERRor:MAGNitude:PEAK?

**:MEASure:CDMA[:CONTInuous]:RFTX:VERRor:PHASe:RMS**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:VERRor:PHASe:RMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous RMS phase vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in degrees.
<b>Example</b>	:MEASure:CDMA:RFTX:VERRor:PHASe:RMS?

**:MEASure:CDMA[:CONTInuous]:RFTX:VERRor:PHASe:PEAK**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFTX:VERRor:PHASe:PEAK
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous PEAK phase vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in degrees.
<b>Example</b>	:MEASure:CDMA:RFTX:VERRor:PHASe:PEAK?

**:MEAS:CDMA[:CONT]:RFSPectrum:ACPM:MODulation**

<b>Syntax</b>	:MEAS:CDMA[:CONT]:RFSPectrum:ACPM:MODulation
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the ACPM modulation spectrum.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing 25 measurement result values separated by commas (12 offsets in both directions from the carrier, plus the result at the carrier itself). These measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile).
<b>Example</b>	:MEAS:CDMA:CONT:RFSP:ACPM:MODulation?

**:MEAS:CDMA[:CONT]:MSP[:CURR]**

<b>Syntax</b>	:MEAS:CDMA[:CONT]:MSP[:CURR]
<b>Parameters</b>	There are no parameters.

<b>Description</b>	<p>Starts a continuous measurement of the modulation spectrum curve. To read out the measurement result values of the latest modulation spectrum curve, use the :FETCh:GPRS:RFTX:BLOCKdata:MSpectrum command.</p> <p>The aim of this measurement is to obtain the pure modulation spectrum levels, calculated by the Willtek 3100 in order to graphically display the modulation spectrum curve on another computer or to perform some special analysis of the modulation spectrum.</p> <p>Further information regarding this kind of measurement can also be found in section :MEASure: . . . .</p>
<b>Query</b>	<p>The query form of this command will start the measurement and return an array of measurement result values as soon as the first measurement has been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer.</p> <p>The span can be set using the :RFSP:MSP:SPAN command; the resolution may be set using the :RFSP:MSP:RES command. The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p>:MEAS:CDMA:CONT:MSpectrum?</p> <p>The array returned in this example is: "-62.0,-61.5,-62.2, . . .-0.4,0.0,-0.3, . . .-62.4".</p>

**:MEAS:CDMA[:CONT]:MSP:AVG**

<b>Syntax</b>	:MEAS:CDMA[:CONT]:MSP:AVG <int1>
<b>Parameters</b>	<p>int1 is an integer.</p> <p>The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.</p>
<b>Description</b>	<p>Starts a process that measures and averages the modulation spectrum for a specified number of times. The aim of this measurement is to obtain a 'smoothed' modulation spectrum curve in order to graphically display the modulation spectrum on another computer or to perform some special analysis.</p> <p>Further information regarding this kind of measurement can be found in section :MEASure: . . . .</p> <p>Note To read out the measurement result values of the averaging process, the :FETCh:GPRS:RFTX:BLOCKdata:MSpectrum command may be used.</p>
<b>Query</b>	<p>The query form of this command will start the averaging process and return an array of measurement result values as soon as all the measurements have been completed. The string delivered back will contain a set of floating point real numbers with the physical dimension of dB.</p> <p>The number of measurement result values depends on the span and the resolution currently set for the modulation spectrum analyzer.</p> <p>The span can be set using the :RFSP:MSP:SPAN command; the resolution may be set using the :RFSP:MSP:RES command.</p> <p>The data array returned will only contain measurement result data values (there are no offset or reference levels in the first data positions).</p> <p>The single measurement result values are separated by commas.</p>
<b>Example</b>	<p>:MEAS:CDMA:CONT:MSpectrum:AVG? 25</p> <p>The array returned in this example is: "-61.0,-61.0,-61.1, . . .0.0,0.0,0.0, . . .-61.0".</p>

**:MEASure:CDMA[:CONTInuous]:RFRX:FER:IMMediate**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFRX:FER:IMMediate
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous FER measurement.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the FER result.
<b>Example</b>	:MEASure:CDMA:RFTX[::CONTInuous]:RFRX:FER:IMMediate? Starts the measurement and returns the result, e.g. 3.1.

**:MEASure:CDMA[:CONTInuous]:RFRX:RFER:IMMediate**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFRX:RFER:IMMediate
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous reported FER measurement.
<b>Query</b>	The query form of this command will return a floating point value for the result.
<b>Example</b>	:MEASure:CDMA:RFTX[::CONTInuous]:RFRX:RFER:IMMediate?

**:MEASure:CDMA[:CONTInuous]:RFRX:RFER:PILA**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFRX:RFER:PILA
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous reported FER measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX[::CONTInuous]:RFRX:RFER:PILA? Returns a measurement result, e.g. -7.1.

**:MEASure:CDMA[:CONTInuous]:RFRX:RFER:PILB**

<b>Syntax</b>	:MEASure:CDMA[:CONTInuous]:RFRX:RFER:PILB
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous reported FER measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEASure:CDMA:RFTX[::CONTInuous]:RFRX:RFER:PILB?



**:MEASure:CDMA:ARRay:RFTX:GRoup**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:GRoup <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of a group of RF TX tests as many times as specified with Int1.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:CONF:CDMA:MEAS:GRO:RFTX WQU, POW :MEASure:CDMA:ARR:RFTX:GRoup? 10 In this example, the group of measurements is defined by waveform quality and RF power results. Ten measurements are performed and the results returned in a string.

**:MEASure:CDMA:ARRay:RFTX:FREQuency:ERRor**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:FREQuency:ERRor <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the frequency error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:CDMA:ARRay:RFTX:FREQ:ERR? 5 Starts five measurements, the results of which are returned. Example: 47.1, 91.5, 13.6, -4.8, 15.3

**:MEASure:CDMA:ARRay:RFTX:Power**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:Power <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's RF power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:POWER? 10

**:MEASure:CDMA:ARRay:RFTX:MAXimum**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:MAXimum <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's maximum RF power as many times as specified.

<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the measurement results.
<b>Example</b>	<code>:MEASure:CDMA:ARR:RFTX:MAXimum? 10</code>

**:MEASure:CDMA:ARRay:RFTX:MINimum**

<b>Syntax</b>	<code>:MEASure:CDMA:ARRay:RFTX:MINimum &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's minimum RF power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	<code>:MEASure:CDMA:ARR:RFTX:MINimum? 10</code>

**:MEASure:CDMA:ARRay:RFTX:STANdby**

<b>Syntax</b>	<code>:MEASure:CDMA:ARRay:RFTX:STANdby &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the standby RF power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the result (in dBm).
<b>Example</b>	<code>:MEASure:CDMA:ARR:RFTX:STANdby? 10</code>

**:MEASure:CDMA:ARRay:RFTX:ACCess**

<b>Syntax</b>	<code>:MEASure:CDMA:ARRay:RFTX:ACCess &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the access channel RF power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results (in dBm).
<b>Example</b>	<code>:MEASure:CDMA:ARR:RFTX:ACCess? 1</code>

**:MEASure:CDMA:ARRay:RFTX:CODEdomain:IPower**

<b>Syntax</b>	<code>:MEASure:CDMA:ARRay:RFTX:CODEdomain:IPower &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 1. The default value is 0.

<b>Description</b>	Performs a measurement of the code domain I channel power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results, in dB.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CODE:IPOW? 1

**:MEASure:CDMA:ARRay:RFTX:CODEdomain:INOIse**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:CODEdomain:INOIse <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 1. The default value is 0.
<b>Description</b>	Performs a measurement of the code domain I channel noise as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results (in dB).
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CODE:INOIse? 1

**:MEASure:CDMA:ARRay:RFTX:CODE:QPOWER**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:CODE:QPOWER <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 1. The default value is 0.
<b>Description</b>	Performs a measurement of the code domain Q channel power.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results (in dB).
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CODE:QPOWER? 1

**:MEASure:CDMA:ARRay:RFTX:CODE:QNOIse**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:CODE:QNOIse <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 1. The default value is 0.
<b>Description</b>	Performs a measurement of the code domain Q channel noise as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results (in dB).
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CODE:QNOIse? 1

**:MEASure:CDMA:ARRay:RFTX:GATed[:IMMediate]**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:GATed[:IMMediate] <Int1>
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<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a measurement of the gated power/time template measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and returns the pass/fail results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:GATed:IMM? 12

**:MEASure:CDMA:ARRay:RFTX:GATed:AVERAge**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:GATed:AVERAge <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a measurement of the gated power/time template measurement as many times as specified, and gets the average values.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:GATed:AVERAge? 10

**:MEASure:CDMA:ARRay:RFTX:GATed:DROOp**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:GATed:DROOp <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a measurement of the gated power/time template measurement as many times as specified, and get the minimum values.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:GATed:DROOp? 20

**:MEASure:CDMA:ARRay:RFTX:GATed:PEAK**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:GATed:PEAK <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a measurement of the gated power/time template measurement as many times as specified, and get the maximum values.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:GATed:PEAK? 30

**:MEASure:CDMA:ARRay:RFTX:OPEN**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:OPEN <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a measurement of the open loop power a specified number of times.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE for each of the measurements.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:OPEN:IMM? 10

**:MEASure:CDMA:ARRay:RFTX:OPEN:INITial**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:OPEN:INITial <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an open loop measurement and gets the initial power values, as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:OPEN:INIT? 10

**:MEASure:CDMA:ARRay:RFTX:CLOSeD**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:CLOSeD <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a measurement of the closed loop power a specified number of times.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE for each of the measurements.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CLOS:IMM? 100

**:MEASure:CDMA:ARRay:RFTX:CLOSeD:INITial**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:CLOSeD:INITial <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a closed loop measurement and gets the initial power values as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CLOS:INIT? 10

**:MEASure:CDMA:ARRay:RFTX:CLOSeD:MAXimum**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:CLOSeD:MAXimum <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a closed loop measurement and gets the maximum power values as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CLOS:MAXimum? 10

**:MEASure:CDMA:ARRay:RFTX:CLOSeD:MINimum**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:CLOSeD:MINimum <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a closed loop measurement and gets the minimum power values as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CLOS:MINimum? 10

**:MEASure:CDMA:ARRay:RFTX:WQQuality**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:WQQuality <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a waveform quality measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:WQU? 10

**:MEAS:CDMA:ARRAY:RFTX:CDPhase?**

<b>Syntax</b>	:MEAS:CDMA:ARRAY:RFTX:CDPhase? <Int1>, <PredefExp>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 1. The default value is 0. PredefExp is an optional parameter and one of the predefined expressions ALL RPICH RDCCh RSCH2x2 RSCH2x4 RFCH RCCCh RSCH1x4 RSCH1x8. The default is ALL. The channels are: RPICH = R_PICH (W032) = pilot channel RDCCh = R_DCCH (W816) = dedicated control channel RSCH2x2 = R_SCH2_x2 (W68) = supplementary channel 2 RSCH2x4 = R_SCH2_x4 (W24) = supplementary channel 2 RFCH = R_FCH (W416) = fundamental channel RCCCh = R_CCCH (W28) = common control channel RSCH1x4 = R_SCH1_x4 (W24) = supplementary channel 1 RSCH1x8 = R_SCH1_x8 (W12) = supplementary channel 1
<b>Description</b>	The command performs the code domain phase measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results (in radians).
<b>Example</b>	:MEASure:CDMA:ARR:RFTX:CDPH? 1, ALL

**:MEAS:CDMA:ARRAY:RFTX:CDPower?**

<b>Syntax</b>	:MEAS:CDMA:ARRAY:RFTX:CDPower? <Int1>, <PredefExp>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 1. The default value is 0. PredefExp is an optional parameter and is one of the predefined expressions ALL RPICH RDCCh RSCH2x2 RSCH2x4 RFCH RCCCh RSCH1x4 RSCH1x8. The default is ALL.
<b>Description</b>	The command performs the code domain power measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results (in dB).
<b>Example</b>	:MEASure:CDMA:RFTX:CDPOwer? 1,ALL

**:MEAS:CDMA:ARRAY:RFTX:CDTime?**

<b>Syntax</b>	:MEAS:CDMA:ARRAY:RFTX:CDTime? <Int1>, <PredefExp>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 1. The default value is 0. PredefExp is an optional parameter and is one of the predefined expressions ALL RPICH RDCCh RSCH2x2 RSCH2x4 RFCH RCCCh RSCH1x4 RSCH1x8. The default is ALL.
<b>Description</b>	The command performs the code domain time measurement as many times as specified.

<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results (in microseconds).
<b>Example</b>	:MEASure:CDMA:RFTX:CDTime? 1,ALL

**:MEASure:CDMA:ARRAY:RFTX:TIME:OFFSet**

<b>Syntax</b>	:MEASure:CDMA:ARRAY:RFTX:TIME:OFFSet <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a time offset measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRAY:RFTX:TIME:OFFSet? 5

**:MEASure:CDMA:ARRAY:RFTX:VERRor:RMS**

<b>Syntax</b>	:MEASure:CDMA:ARRAY:RFTX:VERRor:RMS <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an RMS vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRAY:RFTX:VERRor:RMS? 19

**:MEASure:CDMA:ARRAY:RFTX:VERRor:PEAK**

<b>Syntax</b>	:MEASure:CDMA:ARRAY:RFTX:VERRor:PEAK <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a peak vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRAY:RFTX:VERRor:PEAK? 10

**:MEASure:CDMA:ARRAY:RFTX:VERRor:OOFFset**

<b>Syntax</b>	:MEASure:CDMA:ARRAY:RFTX:VERRor:OOFFset <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an origin offset vector error measurement as many times as specified.



<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:OOFset? 10

**:MEASure:CDMA:ARRay:RFTX:VERRor:IQIMbalance**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:IQIMbalance <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an IQ imbalance vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:IQIMbalance? 10

**:MEASure:CDMA:ARRay:RFTX:VERRor:MAGNitude:RMS**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:MAGNitude:RMS <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an RMS magnitude vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:MAGN:RMS? 10

**:MEASure:CDMA:ARRay:RFTX:VERRor:MAGNitude:PEAK**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:MAGNitude:PEAK <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a peak magnitude vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:MAGN:PEAK? 10

**:MEASure:CDMA:ARRay:RFTX:VERRor:PHASe:RMS**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:PHASe:RMS <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an RMS phase vector error measurement as many times as specified.

<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:PHase:RMS? 10

**:MEASure:CDMA:ARRay:RFTX:VERRor:PHase:PEAK**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:PHase:PEAK <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a peak phase vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:ARRay:RFTX:VERRor:PHase:PEAK? 10

**:MEAS:CDMA:ARR:RFSP:ACPM:MODulation**

<b>Syntax</b>	:MEAS[:CDMA]:ARR:RFSP:ACPM:MODulation <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for int1 is 0.
<b>Description</b>	Performs the measurement of the ACPM modulation spectrum a specific number of times (set with the int1 parameter).
<b>Query</b>	The query form of this command will perform the measurement the specified number of times (int1 parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered back will contain (25 * int1) floating point real numbers. The physical dimension is dBc. The single measurement results are separated by commas.
<b>Example</b>	:MEAS:CDMA:ARR:RFSPpectrum:ACPM:MODulation 5 :FETCh:CDMA:RFSP:ACPM:MOD The string returned would contain 125 floating point real numbers, representing the 25 measurement result values of five measurement runs.

**:MEASure:CDMA:ARRay:RFRX:FER:IMMediate**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFRX:FER:IMMediate <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an FER measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:RFTX:ARR:RFRX:FER:IMMediate? 100

**:MEASure:CDMA:ARRay:RFRX:RFER:IMMediate**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFRX:RFER:IMMediate <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a reported FER measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:RFTX:ARR:RFRX:RFER:IMMediate? 10

**:MEASure:CDMA:ARRay:RFRX:RFER:PILA**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFRX:RFER:PILA <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a reported FER measurement and sector 1 pilot as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:RFTX:ARR:RFRX:RFER:PILA? 10

**:MEASure:CDMA:ARRay:RFRX:RFER:PILB**

<b>Syntax</b>	:MEASure:CDMA:ARRay:RFRX:RFER:PILB <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a reported FER measurement and sector 2 pilot as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:CDMA:RFTX:ARR:RFRX:RFER:PILB? 30

**AMPS commands**    **:MEASure:AMPS[:CONTInuous]:RFTX:GROup**

<b>Syntax</b>	:MEASure:AMPS[:CONTInuous]:RFTX:GROup
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the RF TX tests.
<b>Query</b>	The query form of this command will start the sequence of RF TX measurements.

<b>Example</b>	<code>:CONF:AMPS:MEAS:GRO:RFTX SATD, POW</code> <code>:MEASure:AMPS:RFTX:GROup?</code> In this example, the group of measurements is defined by SAT Deviation and RF power results.
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**:MEASure:AMPS[:CONTInuous]:RFTX:POWer**

<b>Syntax</b>	<code>:MEASure:AMPS[:CONTInuous]:RFTX:POWer</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's RF power.
<b>Query</b>	The query form of this command will return the float value for power.
<b>Example</b>	<code>:MEASure:AMPS:RFTX:POWer?</code> Starts an RF power measurement and returns the result (in dBm), e.g. -45.3.

**:MEASure:AMPS[:CONTInuous]:RFTX:DEV:SAT**

<b>Syntax</b>	<code>:MEASure:AMPS[:CONTInuous]:RFTX:DEV:SAT</code>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the mobile's SAT deviation.
<b>Query</b>	The query form of this command will return the float value for deviation.
<b>Example</b>	<code>:MEASure:AMPS:RFTX:DEV:SAT?</code>

**:MEASure:AMPS[:CONTInuous]:RFTX:DEV:ST**

<b>Syntax</b>	<code>:MEASure:AMPS[:CONTInuous]:RFTX:DEV:ST</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the mobile's ST deviation.
<b>Query</b>	The query form of this command will return the float value for deviation.
<b>Example</b>	<code>:MEASure:AMPS:RFTX:DEV:ST?</code>

**:MEASure:AMPS[:CONTInuous]:RFTX:DEV:AUD**

<b>Syntax</b>	<code>:MEASure:AMPS[:CONTInuous]:RFTX:DEV:AUD</code>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the mobile's Audio deviation.
<b>Query</b>	The query form of this command will return the float value for deviation.
<b>Example</b>	<code>:MEASure:AMPS:RFTX:DEV:AUD?</code>

**:MEASure:AMPS[:CONTinuous]:RFTX:FREQuency:ERROr:RF**

<b>Syntax</b>	:MEASure:AMPS[:CONTinuous]:RFTX:FREQuency:ERROr:RF
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continous measurement of the frequency error.
<b>Query</b>	The query form of this command will start the sequence of frequency error measurements.
<b>Example</b>	:MEASure:AMPS:RFTX:FREQ:ERR:RF? Starts a frequency error measurement and returns the result.

**:MEASure:AMPS[:CONTinuous]:RFTX:FREQ:ERR:SAT**

<b>Syntax</b>	:MEASure:AMPS[:CONTinuous]:RFTX:FREQ:ERR:SAT
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the frequency error.
<b>Query</b>	The query form of this command will start the sequence of frequency error measurements.
<b>Example</b>	:MEASure:AMPS:RFTX:FREQ:ERR:SAT? Starts a frequency error measurement and returns the result.

**:MEASure:AMPS[:CONTinuous]:RFTX:FREQ:ERR:ST**

<b>Syntax</b>	:MEASure:AMPS[:CONTinuous]:RFTX:FREQ:ERR:ST
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the frequency error.
<b>Query</b>	The query form of this command will start the sequence of frequency error measurements.
<b>Example</b>	:MEASure:AMPS:RFTX:FREQ:ERR:ST? Starts a frequency error measurement and returns the result..

**:MEASure:AMPS[:CONTinuous]:RFRX:GRoup**

<b>Syntax</b>	:MEASure:AMPS[:CONTinuous]:RFRX:GRoup
<b>Parameters</b>	There are no parameters
<b>Description</b>	Starts a continuous measurement of the RFRX measurement group.
<b>Query</b>	The query form of this command will start the sequence of measurements.
<b>Example</b>	:CONF:AMPS:MEAS:GRO:RFRX SIN,ACL :MEASure:AMPS:RFTX:GRoup? In this example, the group of measurements is defined by Sinad and AC Level results.

**:MEASure:AMPS[:CONTinous]:RFRX:SINad**

<b>Syntax</b>	:MEASure:AMPS[:CONTinous]:RFRX:SINad
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the Sinad measurement.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:AMPS:RFTX:SINad?

**:MEASure:AMPS[:CONTinous]:RFRX:ACLevel**

<b>Syntax</b>	:MEASure:AMPS[:CONTinous]:RFRX:ACLevel
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the AC Level measurement.
<b>Query</b>	The query form of this command will start the sequence of measurements.
<b>Example</b>	:MEASure:AMPS:RFTX:ACLevel?

**:MEASure:AMPS:ARRay:RFTX:GRoup**

<b>Syntax</b>	:MEASure:AMPS:ARRay:RFTX:GRoup <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of a group of RF TX tests as many times as specified with Int1.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:CONF:AMPS:MEAS:GRO:RFTX WQU, POW :MEASure:AMPS:ARR:RFTX:GRoup? 10 In this example, the group of measurements is defined by waveform quality and RF power results. Ten measurements are performed and the results returned in a string.

**:MEASure:AMPS:ARRay:RFTX:Power**

<b>Syntax</b>	:MEASure:AMPS:ARRay:RFTX:Power <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's RF power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:AMPS:ARR:RFTX:POWer? 10

**:MEASure:AMPS:ARRay:RFTX:DEV:SAT**

<b>Syntax</b>	:MEASure:AMPS:ARRay:RFTX:DEV:SAT <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's SAT deviation as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:AMPS:ARR:RFTX:DEV:SAT? 10

**:MEASure:AMPS:ARRay:RFTX:DEV:ST**

<b>Syntax</b>	:MEASure:AMPS:ARRay:RFTX:DEV:ST <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's ST deviation as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:AMPS:ARR:RFTX:DEV:ST? 10

**:MEASure:AMPS:ARRay:RFTX:DEV:AUD**

<b>Syntax</b>	:MEASure:AMPS:ARRay:RFTX:DEV:AUD <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's Audio deviation as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:AMPS:ARR:RFTX:DEV:AUD? 10

**:MEASure:AMPS:ARRay:RFTX:FREQuency:ERRor:RF**

<b>Syntax</b>	:MEASure:AMPS:ARRay:RFTX:FREQuency:ERRor:RF <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the frequency error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.

<b>Example</b>	<code>:MEASure:AMPS:ARRay:RFTX:FREQ:ERR:RF? 5</code> Starts five measurements, the results of which are returned. Example: 47.1, 91.5, 13.6, -4.8, 15.3
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**:MEASure:AMPS:ARRay:RFTX:FREQ:ERR:SAT**

<b>Syntax</b>	<code>:MEASure:AMPS:ARRay:RFTX:FREQ:ERR:SAT &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's SAT frequency error as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	<code>:MEASure:AMPS:ARR:RFTX:FREQ:ERR:SAT? 10</code>

**:MEASure:AMPS:ARRay:RFTX:FREQ:ERR:ST**

<b>Syntax</b>	<code>:MEASure:AMPS:ARRay:RFTX:FREQ:ERR:ST &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's ST frequency error as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	<code>:MEASure:AMPS:ARR:RFTX:FREQ:ERR:ST? 10</code>

**:MEASure:AMPS:ARRay:RFRX:GRoup**

<b>Syntax</b>	<code>:MEASure:AMPS:ARRay:RFRX:GRoup &lt;Int1&gt;</code>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of a group of RF TX tests as many times as specified with Int1.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	<code>:CONF:AMPS:MEAS:GRO:RFRX SATD, POW</code> <code>:MEASure:AMPS:ARR:RFTX:GRoup? 10</code> In this example, the group of measurements is defined by SAT deviation and RF power results. Ten measurements are performed and the results returned in a string.

**:MEASure:AMPS:ARRay:RFRX:SINad**

<b>Syntax</b>	<code>:MEASure:AMPS:ARRay:RFRX:SINad &lt;Int1&gt;</code>
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<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's sinad as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:AMPS:ARR:RFTX:SINad? 10

**:MEASure:AMPS:ARRay:RFRX:ACLevel**

<b>Syntax</b>	:MEASure:AMPS:ARRay:RFRX:ACLevel <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the mobile's AC level as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEASure:AMPS:ARR:RFTX:ACLevel? 10

**1xEV-DO commands :MEASure:EVDO[:CONTInuous]:RFTX:STOP**

<b>Syntax</b>	:MEASure:EVDO[:CONTInuous]:RFTX:STOP
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Stops a continuous measurement of the EVDO RF Tx tests. <b>Note:</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:MEAS:EVDO:RFTX:FREQ:ERR :MEAS:EVDO:RFTX:STOP Starts and stops a measurement.

**:MEASure:EVDO[:CONTInuous]:RFTX:GRoup**

<b>Syntax</b>	:MEASure:EVDO[:CONTInuous]:RFTX:GRoup
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a sequence of (continuous) RF TX measurement. The single measurements to be performed are set using the :CONF:EVDO:MEAS:GRO:RFTX command.
<b>Query</b>	The query form of this command starts the sequence of RF TX measurements as defined with the :CONF:EVDO:MEAS:GRO:RFTX command. After the single measurements have been completed, it returns the corresponding measurement results in their related form (i.e. usually in form of floating point real numbers), contained in a string.

<b>Example</b>	<pre>:CONF:EVDO:MEAS:GRO:RFTX FREQ,POW</pre> <p>In this example, the group of measurements is defined by a frequency error and a RF power measurement.</p> <pre>:MEAS:EVDO:RFTX:GRO?</pre> <p>String returned: " 503 , 26 . 9 ".</p>
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**:MEASure:EVDO[:CONTInuous]:RFTX:FREQuency:ERRor**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:FREQuency:ERRor</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a continuous measurement of the frequency error.
<b>Query</b>	<p>The query form of this command starts the measurement and - after the measurement has been completed and the measurement result obtained - returns a string containing one floating point real number, representing the mobile's frequency error in hertz.</p> <p>The real number returned is in the range from -1000 to 1000 with a resolution of 1.0.</p>
<b>Example</b>	<pre>:MEASure:EVDO:CONTInuous:RFTX:FREQuency:ERRor?</pre> <p>Starts a frequency error measurement and returns the result, e.g.: " 503 ".</p>

**:MEASure:EVDO[:CONTInuous]:RFTX:TIME:OFFSet**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:TIME:OFFSet</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a continuous measurement of the mobile's transmit time error.
<b>Query</b>	<p>The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's transmit time error in microseconds (<math>10^{-6}</math> s).</p> <p>The real number returned is in the range from -5 to 5 with a resolution of 0.001.</p>
<b>Example</b>	<pre>:MEASure:EVDO:CONTInuous:RFTX:TIME:OFFSet?</pre> <p>String returned in this example: "-4.334".</p>

**:MEASure:EVDO[:CONTInuous]:RFTX:POWer[:MEAN]**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:POWer[:MEAN]</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a continuous measurement of the mobile's transmit power level.
<b>Query</b>	<p>The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's transmit power level in dBm.</p> <p>The real number returned is in the range from -70 to 36 with a resolution of 0.1.</p>
<b>Example</b>	<pre>:MEAS:EVDO:RFTX:POW?</pre> <p>String returned in this example: "-45.3".</p>

**:MEASure:EVDO[:CONTinuous]:RFTX:POWer:MINimum**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:POWer:MINimum
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a continuous measurement of the mobile's minimum RF power.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's minimum power level in dBm. The real number returned is in the range from -70 to 36 with a resolution of 0.1.
<b>Example</b>	:MEAS:EVDO:RFTX:POW:MIN? Starts a minimum RF power measurement and returns the result, e.g. -46.1.

**:MEASure:EVDO[:CONTinuous]:RFTX:POWer:MAXimum**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:POWer:MAXimum
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a continuous measurement of the mobile's maximum RF power.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's maximum power level in dBm. The real number returned is in the range from -70 to 36 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:CONTinuous:RFTX:POWer:MAXimum? Starts the maximum RF power measurement and returns the result in a string, e.g. "22.7".

**:MEASure:EVDO[:CONTinuous]:RFTX:POWer:STANdby**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:POWer:STANdby
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous measurement of the standby RF power.
<b>Query</b>	The query form of this command will return the float value.
<b>Example</b>	:MEASure:EVDO:RFTX:POWer:STANdby? Starts the standby RF power measurement and returns the result in a string, e.g. -54.9.

**:MEASure:EVDO[:CONTinuous]:RFTX:POWer:APRobe**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:POWer:APRobe
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous measurement of the access probe power.
<b>Query</b>	The query form of this command will return the float value.

<b>Example</b>	<code>:MEASure:EVDO:RFTX:POWer:APRobe?</code> Starts the standby RF power measurement and returns the result in a string, e.g. – 54.9.
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**`:MEASure:EVDO[:CONTInuous]:RFTX:CLOSeD[:IMMediate]`**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:CLOSeD[:IMMediate]</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE.
<b>Example</b>	<code>:MEAS:EVDO:RFTX:POW:CLOS:IMM?</code>

**`:MEASure:EVDO[:CONTInuous]:RFTX:POWer:CLOSeD:INITia  
l`**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:POWer:CLOSeD:INITial</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value for the initial power.
<b>Example</b>	<code>:MEASure:EVDO:RFTX:POWer:CLOSeD:INITial?</code>

**`:MEASure:EVDO[:CONTInuous]:RFTX:POWer:CLOSeD:MINimu  
m`**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:POWer:CLOSeD:MINimum</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	<code>:MEASure:EVDO:RFTX:POWer:CLOSeD:MINimum?</code>

**`:MEASure:EVDO[:CONTInuous]:RFTX:POWer:CLOSeD:MAXimu  
m`**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:POWer:CLOSeD:MAXimum</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.

**Example** :MEASure:EVDO:RFTX:POWer:CLOSeD:MAXimum?

**:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:RMS**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:RMS
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the RMS-averaged error vector.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's RMS vector error as a percentage. The real number returned is in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:RFTX:VERRor:RMS? Returns the measured RMS vector error, e.g. 100.1.

**:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:PEAK**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:PEAK
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the peak vector error.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's peak vector error as a percentage. The real number returned is in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:RFTX:VERRor:PEAK? String returned in this example: "23.9".

**:MEAS:EVDO[:CONTinuous]:RFTX:VERRor:MAGNitude:RMS**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:MAGNitude:RMS
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the RMS-averaged magnitude component of the vector error.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the measurement result, expressed as a percentage. The real number returned is in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:CONTinuous:RFTX:VERRor:MAGNitude:RMS? String returned in this example: "17.9".

**:MEAS:EVDO[:CONTinuous]:RFTX:VERRor:MAGNitude:PEAK**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:MAGNitude:PEAK
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the peak magnitude component of the vector error.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the measurement result, expressed as a percentage. The real number returned is in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEAS:EVDO:RFTX:VERR:MAGN:PEAK? String returned in this example: "23.6".

**:MEAS:EVDO[:CONTinuous]:RFTX:VERRor:PHASe:RMS**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:PHASe:RMS
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the RMS-averaged phase component of the vector error.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the measurement result in degrees. The real number returned is in the range from -45 to 45 with a resolution of 0.01.
<b>Example</b>	:MEASure:EVDO:CONTinuous:RFTX:VERRor:PHAS:RMS? String returned in this example: "9.07".

**:MEAS:EVDO[:CONTinuous]:RFTX:VERRor:PHASe:PEAK**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:PHASe:PEAK
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the peak phase component of the error vector.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the measurement result in degrees. The real number returned is in the range from -45 to 45 with a resolution of 0.01.
<b>Example</b>	:MEAS:EVDO:RFTX:VERR:PHAS:PEAK? String returned in this example: "-12.23".

**:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:IQOFset**

<b>Syntax</b>	:MEASure:EVDO[:CONTinuous]:RFTX:VERRor:IQOFset
<b>Parameters</b>	There are no parameters for this command.

<b>Description</b>	This command starts the continuous measurement of the origin offset.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's IQ offset in dBc. The real number returned is in the range from -60 to 0 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:CONTInuous:RFTX:VERRor:IQOFset? String returned in this example: "-40.1".

**:MEASure:EVDO[:CONTInuous]:RFTX:VERRor:IQIMbalance**

<b>Syntax</b>	:MEASure:EVDO[:CONTInuous]:RFTX:VERRor:IQIMbalance
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the IQ imbalance.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's IQ imbalance in dB. The real number returned is in the range from -60 to 0 with a resolution of 0.1.
<b>Example</b>	:MEAS:EVDO:RFTX:VERR:IQIM? String returned in this example: "-53.2".

**:MEASure:EVDO[:CONTInuous]:RFTX:WQUality|RHO**

<b>Syntax</b>	:MEASure:EVDO[:CONTInuous]:RFTX:WQUality RHO
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a continuous measurement of the modulation quality factor rho.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's modulation quality factor rho. The real number returned is in the range from 0.9 to 1.0 with a resolution of 0.0001.
<b>Example</b>	:MEAS:EVDO:CONT:RFTX:RHO? Returns the waveform quality, e.g. 0.9989.

**:MEAS:EVDO[:CONTInuous]:RFTX:CODEdomain[:IMMediate]**

<b>Syntax</b>	:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain[:IMMediate]
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the code domain power.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the result obtained - checks the results against the corresponding limits. It will return one of the following predefined expressions, contained in a string: <ul style="list-style-type: none"> <li>- PASS - if the measurement results were within their limits,</li> <li>- FAIL - if one or several measurement results did violate their limits,</li> <li>- NONE - if a measurement result could not be obtained for any reason.</li> </ul>

<b>Example</b>	<code>:MEAS:EVDO:RFTX:CODE:IMM?</code> String returned in this example: "PASS".
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**:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:IPower**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:IPower</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the channel power levels in the 16 code channels of the I portion.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the results obtained - returns a string containing 16 floating point real numbers, separated by commas and representing the related measurement results in dB (relative to the power level of the active code channels). The first value represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:MEAS:EVDO:RFTX:CODE:IPOW?</code> Starts the measurement and returns a string containing the results (in dB) for the 16 code channels, e.g. "-40.0,-39.9,-39.8,-0.3,-33.7,-0.2,-37.6,-39.9,-0.2,-29.7,-32.9,-39.6,-1.1,-36.8,-39.7,-29.9".

**:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:INOise**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:INOise</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the channel noise levels in the 16 single code channels of the I portion.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the results obtained - returns a string containing 16 floating point real numbers, separated by commas and representing the related measurement results in dB (relative to the power level of the active code channels). The first value represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:MEAS:EVDO:RFTX:CODE:INOI?</code> Starts the I channel noise measurement and returns a string containing the results (in dB) for the 16 code channels, e.g. "-32.6,-39.9,-39.8,-27.5,-33.7,-30.2,-37.6,-39.9,-32.7,-29.7,-32.9,-39.6,-31.1,-26.8,-39.7,-29.6".

**:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:QPowEr**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:QPowEr</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the channel power levels in the 16 single code channels of the Q portion.



<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the results obtained - returns a string containing 16 floating point real numbers, separated by commas and representing the measurement results in dB (relative to the power level of the active code channels). The first value represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:MEAS:EVDO:RFTX:CODE:QPOW?</code> Starts the measurement and returns a string with the results for the 16 code channels, e.g. "-40.0,-39.9,-39.8,-0.3,-33.7,-0.2,-37.6,-39.9,-0.2,-29.7,-32.9,-39.6,-1.1,-36.8,-39.7,-29.9".

**:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:QNOIse**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFTX:CODEdomain:QNOIse</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts the continuous measurement of the channel noise levels in the 16 single code channels of the Q portion.
<b>Query</b>	The query form of this command starts the measurement and - after it has been completed and the results obtained - returns a string containing 16 floating point real numbers, separated by commas and representing the related measurement results in dB (relative to the power level of the active code channels). The first value represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:MEASure:EVDO:CONTInuous:RFTX:CODEdomain:QNOIse?</code> String returned in this example: "-32.6,-39.9,-39.8,-27.5,-33.7,-30.2,-37.6,-39.9,-32.7,-29.7,-32.9,-39.6,-31.1,-26.8,-39.7,-29.6".

**:MEASure:EVDO[:CONTInuous]:RFSpectrum:STOP**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFSpectrum:STOP</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Stops a continuous measurement of the EVDO RF SP tests. <b>Note:</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:MEAS:EVDO:RFSP:MSP</code> <code>:MEAS:EVDO:RFSP:STOP</code> Starts and stops a measurement.

**:MEASure:EVDO[:CONTInuous]:RFSpectrum:MSpectrum[:DATa]**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFSpectrum:MSpectrum[:DATa]</code>
<b>Parameters</b>	There are no parameters for this command.

<b>Description</b>	Starts a continuous measurement of the RF modulation spectrum. To read out the latest measurement result, use <code>FETC:EVDO:RFSP:MSP[:DATA]</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered will contain an array of 501 floating point numbers.
<b>Example</b>	<code>:MEAS:EVDO:RFSP:MSP?</code>

**:MEASure:EVDO[:CONTInuous]:RFSpectrum:MSpectrum:AVG**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFSpectrum:MSpectrum:AVG &lt;Int1&gt;</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous measurement of the RF modulation spectrum averaged over <Int1> measurements. To read out the latest measurement result, use <code>FETC:EVDO:RFSP:MSP:AVG</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as <Int1> measurements has been completed. The result delivered will contain an array of 501 floating point numbers.
<b>Example</b>	<code>:MEAS:EVDO:RFSP:MSP:AVG 10?</code>

**:MEAS:EVDO[:CONTInuous]:RFSpectrum:ACPM**

<b>Syntax</b>	<code>:MEAS:EVDO[:CONTInuous]:RFSpectrum:ACPM</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Starts a continuous measurement of the ACPM modulation spectrum.
<b>Query</b>	The query form of this command starts the measurement and delivers back a string, containing 25 measurement result values separated by commas (12 offsets in both directions from the carrier, plus the result at the carrier itself). These measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile).
<b>Example</b>	<code>:MEAS:EVDO:CONT:RFSP:ACPM?</code>

**:MEASure:EVDO[:CONTInuous]:RFRX:STOP**

<b>Syntax</b>	<code>:MEASure:EVDO[:CONTInuous]:RFRX:STOP</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Stops a continuous measurement of the EVDO RF Rx tests. <b>Note:</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	There is no query form of this command available.

<b>Example</b>	<pre>:MEASure:EVDO:CONTInuous:RFRX:PER:IMMediate :MEAS:EVDO:RFRX:STOP</pre> <p>The first command starts a continuous measurement of the packet error rate (PER). The second command stops it.</p>
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**:MEASure:EVDO[:CONTInuous]:RFRX:PER[:IMMediate]**

<b>Syntax</b>	:MEASure:EVDO[:CONTInuous]:RFRX:PER[:IMMediate]
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	This command starts a continuous measurement of the packet error rate (PER).
<b>Query</b>	<p>The query form of this command starts the measurement and - after it has been completed and the result obtained - returns a string containing one floating point real number, representing the mobile's PER as a percentage.</p> <p>The real number returned is in the range from 0 to 10 with a resolution of 0.1.</p>
<b>Example</b>	<pre>:MEASure:EVDO:CONTInuous:RFRX:PER:IMMediate?</pre> <p>String returned in this example: "3.1".</p>

**:MEASure:EVDO:ARRay:RFTX:GROup**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:GROup <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of a group of RF TX tests as many times as specified with Int1.
<b>Query</b>	<p>The query form of this command starts the sequence of RF TX measurements as defined with the :CONF:EVDO:MEAS:GRO:RFTX command. After the single measurements have been completed, it returns the corresponding measurement results in their related form (i.e. usually in form of floating point real numbers), contained in a string.</p>
<b>Example</b>	<pre>:CONF:EVDO:MEAS:GRO:RFTX RHO,POW</pre> <p>In this example, the group of measurements is defined by a measurement of the modulation quality and a RF power measurement.</p> <pre>:MEASure:EVDO:ARRayRFTX:GROup? 2</pre> <p>String returned: "0.9989,26.9,0.9987,27.1".</p>

**:MEASure:EVDO:ARRay:RFTX:FREQuency:ERRor**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:FREQuency:ERRor <Int1>
<b>Parameters</b>	Int1 is an integer number. Its minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs measurements of the frequency error as many times as specified by the parameter value.

<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing <code>Int1</code> floating point real numbers, representing the mobile's frequency error in hertz. The real numbers returned are in the range from -1000 to 1000, the resolution is 1.0.
<b>Example</b>	<code>:MEASure:EVDO:ARRAY:RFTX:FREQ:ERR? 5</code> Starts five measurements, the results of which are returned in a string. Example: <code>47.1,91.5,13.6,-4.8,15.3</code>

**:MEASure:EVDO:ARRAY:RFTX:TIME:OFFSet**

<b>Syntax</b>	<code>:MEASure:EVDO:ARRAY:RFTX:TIME:OFFSet &lt;Int1&gt;</code>
<b>Parameters</b>	<code>Int1</code> is an integer number. Its minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs measurements of the mobile's transmit time error as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing <code>Int1</code> floating point real numbers, representing the mobile's transmit time error in microseconds ( $10^{-6}$ s). The real numbers returned are in the range from -5 to +5 with a resolution of 0.001.
<b>Example</b>	<code>:MEASure:EVDO:ARRAY:RFTX:TIME:OFFSet? 5</code> String returned in this example: <code>"-0.103,0.247,1.101,-0.034,1.109"</code> .

**:MEASure:EVDO:ARRAY:RFTX:POWER[:MEAN]**

<b>Syntax</b>	<code>:MEASure:EVDO:ARRAY:RFTX:POWER[:MEAN] &lt;Int&gt;</code>
<b>Parameters</b>	<code>Int1</code> is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs measurements of the mobile's transmit power level as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing <code>Int1</code> floating point real numbers, representing the mobile's transmit power level in dBm. The real numbers returned are in the range from -70 to 36 with a resolution of 0.1.
<b>Example</b>	<code>:MEAS:EVDO:ARR:RFTX:POW? 3</code> String returned in this example: <code>"27.1,26.9,27.0"</code> .

**:MEASure:EVDO:ARRAY:RFTX:POWER:MINimum**

<b>Syntax</b>	<code>:MEASure:EVDO:ARRAY:RFTX:POWER:MINimum &lt;Int1&gt;</code>
<b>Parameters</b>	<code>Int1</code> is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs measurements of the mobile's minimum RF power level as many times as specified by the parameter value.

<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing <code>Int1</code> floating point real numbers, representing the mobile's minimum power level in dBm. The real numbers returned are in the range from -70 to 36 with a resolution of 0.1.
<b>Example</b>	<code>:MEASure:EVDO:ARRay:RFTX:POWer:MINimum? 4</code> String returned in this example: "-62.9, -64.2, -59.5, -61.8".

**:MEASure:EVDO:ARRay:RFTX:POWer:MAXimum**

<b>Syntax</b>	<code>:MEASure:EVDO:ARRay:RFTX:POWer:MAXimum &lt;Int1&gt;</code>
<b>Parameters</b>	<code>Int1</code> is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs measurements of the mobile's maximum power level as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing <code>Int1</code> floating point real numbers, representing the mobile's maximum power level in dBm. The real numbers returned are in the range from -70 to 36 with a resolution of 0.1.
<b>Example</b>	<code>:MEAS:EVDO:ARR:RFTX:POW:MAX? 4</code> String returned in this example: "30.7, 30.9, 30.7, 30.5".

**MEASure:EVDO:ARRay:RFTX:POWer:STANdby**

<b>Syntax</b>	<code>MEASure:EVDO:ARRay:RFTX:POWer:STANdby &lt;Int1&gt;</code>
<b>Parameters</b>	<code>Int1</code> is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the standby RF power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the result (in dBm).
<b>Example</b>	<code>:MEAS:EVDO:ARR:RFTX:POW:STAN? 10</code>

**:MEASure:EVDO:ARRay:RFTX:POWer:APRobe**

<b>Syntax</b>	<code>:MEASure:EVDO:ARRay:RFTX:POWer:APRobe &lt;Int1&gt;</code>
<b>Parameters</b>	<code>Int1</code> is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the access probe power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the result (in dBm).
<b>Example</b>	<code>:MEAS:EVDO:ARR:RFTX:POW:APR? 10</code>

**:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a measurement of the closed loop power a specified number of times.
<b>Query</b>	The query form of this command will return a predefined expression: PASS   FAIL   NONE for each of the measurements.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:POW:CLOS:IMM? 100

**:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd:INITial**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd:INITial <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a closed loop measurement and gets the initial power values as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:POW:CLOS:INIT? 10

**:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd:MINimum**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd:MINimum <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a closed loop measurement and gets the minimum power values as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd:MINimum? 10

**:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd:MAXimum**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:POWer:CLOSEd:MAXimum <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a closed loop measurement and gets the maximum power values as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.

**Example** :MEAS:EVDO:ARR:RFTX:POW:CLOS:MAX? 10

**:MEASure:EVDO:ARRay:RFTX:VERRor:RMS**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:RMS <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the RMS-averaged vector error as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results in form of a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:RMS? 19

**:MEASure:EVDO:ARRay:RFTX:VERRor:PEAK**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:PEAK <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the peak vector error measurement as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results as a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:PEAK? 3 String returned in this example: "12.7,13.9,16.1".

**:MEASure:EVDO:ARRay:RFTX:VERRor:IQOffset**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:IQOffset <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the carrier feedthrough as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results in dBc. The real numbers returned are in the range from -60 to 0 with a resolution of 0.1.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:IQOF? 10

**:MEASure:EVDO:ARRay:RFTX:VERRor:IQIMbalance**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:IQIMbalance <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the IQ imbalance as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results in dB. The real numbers returned are in the range from -99 to 0 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:IQIMbalance? 10

**:MEASure:EVDO:ARRay:RFTX:VERRor:MAGNitude:RMS**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:MAGNitude:RMS <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the RMS-averaged magnitude component of the error vector as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results as a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:MAGN:RMS? 10

**:MEASure:EVDO:ARRay:RFTX:VERRor:MAGNitude:PEAK**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:MAGNitude:PEAK <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the peak magnitude component of the error vector as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results as a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:MAGNitude:PEAK? 10



**:MEASure:EVDO:ARRay:RFTX:VERRor:PHASe:RMS**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:PHASe:RMS <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the RMS-averaged phase component of the error vector as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results in degrees. The real numbers returned are in the range from -45 to +45 with a resolution of 0.01.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:PHASe:RMS? 10

**:MEASure:EVDO:ARRay:RFTX:VERRor:PHASe:PEAK**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:VERRor:PHASe:PEAK <Int1>
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the peak phase component of the error vector as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results in degrees. The real numbers returned are in the range from -45 to +45 with a resolution of 0.01.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:PHAS:PEAK? 10

**:MEASure:EVDO:ARRay:RFTX:WQQuality|RHO**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:WQQuality RHO <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the mobile's modulation quality factor (rho) as many times as specified by the parameter value.
<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing Int1 floating point real numbers, representing the measurement results. The real numbers returned are in the range from 0.95 to 1.0 with a resolution of 0.0001.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:RHO? 10

**:MEASure:EVDO:ARRay:RFTX:CODEdomain:IPower**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:CODEdomain:IPower <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the channel power levels in the 16 single code channels of the I proportion as many times as specified by the parameter value.
<b>Query</b>	The query form of this command performs the measurement Int times and returns a string containing (Int1 * 16) floating point real numbers, separated by commas and representing the related code channel power levels in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:CODE:IPOW? 7

**:MEASure:EVDO:ARRay:RFTX:CODEdomain:INOise**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:CODEdomain:INOise <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the channel noise levels in the 16 single code channels of the I proportion as many times as specified by the parameter value.
<b>Query</b>	The query form of this command performs the measurement Int times and returns a string containing (Int1 * 16) floating point real numbers, separated by commas and representing the related code channel noise levels in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:CODE:INOise? 3

**:MEASure:EVDO:ARRay:RFTX:CODEdomain:QPower**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:CODEdomain:QPower <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the channel power levels in the 16 single code channels of the Q proportion as many times as specified by the parameter value.
<b>Query</b>	The query form of this command performs the measurement Int times and returns a string containing (Int1 * 16) floating point real numbers, separated by commas and representing the related code channel power levels in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:CODE:QPOW? 1

**:MEASure:EVDO:ARRay:RFTX:CODEdomain:QNOIse**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFTX:CODEdomain:QNOIse <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the channel noise levels in the 16 single code channels of the Q proportion as many times as specified by the parameter value.
<b>Query</b>	The query form of this command performs the measurement Int times and returns a string containing (Int1 * 16) floating point real numbers, separated by commas and representing the related code channel noise levels in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	:MEASure:EVDO:ARRay:RFTX:CODEdomain:QNOIse? 1

**:MEASure:EVDO:ARRay:RFSpectrum:ACPM**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFSpectrum:ACPM <int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a measurement of the ACPM modulation spectrum as many times as specified by the parameter value.
<b>Query</b>	The query form of this command performs the measurement Int times and returns a string, containing (Int1 * 25) floating point real numbers, separated by commas and representing the single results obtained at the 25 discrete measurement frequencies (12 offsets in both directions from the carrier, plus the result at the carrier itself). The first of the 25 measurement results always represents the result obtained at the lowest measurement frequency, value 13 represents the result obtained for the carrier, and value 25 represents the result obtained at the highest measurement frequency. The floating point real numbers returned are in the range from -200 to 0 with a resolution of 0.1. The physical units are dB, relative to the measurement result obtained at the carrier frequency.
<b>Example</b>	:MEAS:EVDO:ARR:RFSP:ACPM 5 :FETC:EVDO:RFSP:ACPM The string returned in this example would contain 125 floating point real numbers, representing the 25 measurement result values of five measurement runs.

**:MEASure:EVDO:ARRay:RFRX:PER[:IMMediate]**

<b>Syntax</b>	:MEASure:EVDO:ARRay:RFRX:PER[:IMMediate] <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command performs a packet error ratio (PER) measurement as many times as specified by the parameter value.

<b>Query</b>	The query form of this command starts the measurements and - after the number of measurements specified by the parameter value have been completed and the measurement results obtained - returns a string containing <code>Int1</code> floating point real numbers, representing the measurement results in form of a percentage. The real numbers returned are in the range from 0 to 10 with a resolution of 0.1.
<b>Example</b>	<code>:MEASure:EVDO:ARRay:RFRX:PER:IMMediate? 4</code> String returned in this example: "2.7,3.9,2.8,4.9".

## WCDMA commands `:MEASure:WCDMa[:CONTInuous]:RFTX:STOP`

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTInuous]:RFTX:STOP</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops a continuous measurement of the WCDMA RF TX tests. <b>Note:</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:FREQ</code> <code>:MEAS:WCDM:RFTX:STOP</code> Configures, starts and stops a measurement.

## `:MEASure:WCDMa[:CONTInuous]:RFTX:FREQuency`

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTInuous]:RFTX:FREQuency</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the frequency error.
<b>Query</b>	The query form of this command will start the sequence of frequency error measurements.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:FREQ?</code> Returns the measured frequency error, e.g. -7.834.

## `:MEASure:WCDMa[:CONTInuous]:RFTX:POWer:MEAN`

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTInuous]:RFTX:POWer:MEAN</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts a continuous measurement of the mobile's mean output power. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:POWer:MEAN</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered back will contain one floating point number in dBm.
<b>Example</b>	<code>:MEA:WCDMA:RFTX:POW:MEAN?</code> Starts an RF power measurement and returns the result (in dBm), e.g. -45.3.

**:MEASure:WCDMa[:CONTInuous]:RFTX:POWer:PEAK**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:POWer:PEAK
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts a continuous measurement of the mobile's peak output power. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:POWer:PEAK</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered back will contain one floating-point number in dBm.
<b>Example</b>	:MEAS:WCDM:RFTX:POW:PEAK? Starts the Peak RF power measurement and returns the result, e.g. -36.8.

**:MEASure:WCDMa[:CONTInuous]:RFTX:NSTair[:DATA]**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:NSTair[:DATA]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts a continuous measurement of the staircase measurement. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:NSTair?</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered back will contain 512 floating-point numbers in dBm.
<b>Example</b>	:MEAS:WCDM:RFTX:NST?

**:MEASure:WCDMa[:CONTInuous]:RFTX:NSTair:POWer**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:NSTair:POWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts a continuous measurement of the staircase power measurement. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:NSTair:POWer?</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered will contain 7 floating point numbers in dBm.
<b>Example</b>	:MEAS:WCDM:RFTX:NST:POW?

**:MEASure:WCDMa[:CONTInuous]:RFTX:ZSPan:POWer**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:ZSPan:POWer
<b>Parameters</b>	There are no parameters.

<b>Description</b>	This command starts the zerospan analyzer measurement. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:ZSP:POW?</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the measurement has been completed. The result delivered back will contain as many floating-point numbers in dBm as defined with the <code>RFAN:WCDM:ZSP:REFF</code> command.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:ZSP:POW?</code> Starts the zerospan analyzer measurement and returns the result in a string, e.g. <code>-54.9,-62.7,-61.3</code> .

**:MEASure:WCDMa:RFTX:POLar[:ALL]**

<b>Syntax</b>	<code>:MEASure:WCDMa:RFTX:POLar[:ALL]</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts the polar measurement. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:POL?</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the measurement has been completed. The result delivered will contain the number of segments, the starting segment and after that as many pairs of floating point numbers of power (in dbm) and phase (in deg) results as returned in field number of segments.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:POL?</code> Returns the result in a string, e.g. <code>34,2,10.1,3.4,9.1,3.5,8.1,3.8,...</code>

**:MEASure:WCDMa:RFTX:POLar:POWer**

<b>Syntax</b>	<code>:MEASure:WCDMa:RFTX:POLar:POWer</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts the polar power measurement. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:POL:POW?</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the measurement has been completed. The result delivered will contain the number of segments, the starting segment and after that as many floating point numbers of power (in dbm) results as returned in field number of segments.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:POL:POW?</code> Returns the result in a string, e.g. <code>34,2,10.1,9.1,8.1,...</code>

**:MEASure:WCDMa:RFTX:POLar:PHASe**

<b>Syntax</b>	<code>:MEASure:WCDMa:RFTX:POLar:PHASe</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts the polar phase measurement. To read out the latest measurement result, use the <code>FETCh:WCDMa:RFTX:POL:PHAS?</code> command.

<b>Query</b>	This query command will start the measurement and return a result value as soon as the measurement has been completed. The result delivered will contain the number of segments, the starting segment and after that as many floating point numbers of phase (in deg) results as returned in field number of segments.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:POL:PHAS?</code> Returns the result in a string, e.g. 34,2,3.4,3.5,3.8,...

**:MEASure:WCDMa[:CONTinuous]:RFTX:IQSamples**

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTinuous]:RFTX:IQSamples</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts the measurement of the IQ-Samples. To read out the latest measurement result, use the <code>FETCH:WCDMa:RFTX:IQS?</code> command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the measurement has been completed. The result delivered will contain floating point numbers I and Q for each measured sample. The number of samples result from the value specified in <code>RFAN:WCDM:IQS:REFP</code> for the second timing interval. The sampling frequency here is 5.12 MHz.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:IQS?</code> Starts the zthe measurement of the IQ-Samples and returns the result in a string, e.g. 0.81,-0.32,0.78,0.33,0.31,-0.87,0.91,-0.29,...

**:MEASure:WCDMa[:CONTinuous]:RFTX:CPOWer**

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTinuous]:RFTX:CPOWer</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the channel power.
<b>Query</b>	The query form of this command will return the float value for power.
<b>Example</b>	<code>:MEAS:WCDM:RFTX:CPOWer?</code> Starts a channel power measurement and returns the result (in dBm), e.g. -45.3.

**:MEASure:WCDMa[:CONTinuous]:RFTX:MODQuality:ALL**

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTinuous]:RFTX:MODQuality:ALL</code>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous measurement of the most important RF TX Modulation Quality tests.
<b>Query</b>	<p>The query form of this command starts the measurements and – after all 10 measurements have been completed and all measurement results obtained – delivers a string, containing 10 measurement result values, separated with commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <code>EVM RMS</code>, floating point real number representing the RMS vector error measurement in percent,</li> <li>2. <code>EVM Peak</code>, floating point real number representing the peak vector error measurement in percent,</li> <li>3. <code>Magnitude error RMS</code>, floating point real number representing the RMS magnitude vector error measurement in percent,</li> <li>4. <code>Magnitude error Peak</code>, floating point real number representing the PEAK magnitude vector error measurement in percent,</li> <li>5. <code>Phase error RMS</code>, floating point real number representing the RMS phase vector error measurement in degree,</li> <li>6. <code>Phase error Peak</code>, floating point real number representing the PEAK phase vector error measurement in degree</li> <li>7. <code>Frequency error</code>, floating point real number representing the mobile's frequency error,</li> <li>8. <code>RHO</code>, floating point real number representing the mobile's modulation quality,</li> <li>9. <code>I/Q Offset</code>, a floating point value with the result in dBc, representing the result of the origin offset vector error measurement,</li> <li>10. <code>I/Q Imbalance</code>, floating point real number representing the result of the IQImbalance vector error measurement with the result in dB.</li> </ol> <p><b>Note:</b> For a further description of the single measurements, see description of the related commands below.</p>
<b>Example</b>	<p><code>:MEAS:WCDM:RFTX:MODQ:ALL?</code></p> <p>In this case, all relevant RFTX measurements will be performed in a sequence, e.g. <code>21.624,72.8,15.335,72.736,6.738,27.512,-6.378,0.961,-28.251,-43.743</code>.</p>

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:ERMS**

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:ERMS</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous RMS vector error magnitude measurement.
<b>Query</b>	The query form of this command will return a floating point value; the unit is percent.
<b>Example</b>	<p><code>:MEAS:WCDM:RFTX:MODQ:ERMS?</code></p> <p>Returns the measured EVM RMS vector error, e.g. <code>21.624</code>.</p>

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:EPEAK**

<b>Syntax</b>	<code>:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:EPEAK</code>
<b>Parameters</b>	There are no parameters.



<b>Description</b>	Starts a continuous peak vector error magnitude measurement.
<b>Query</b>	The query form of this command will return a floating point value in percent.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:EPEA? Returns the measured EVM peak vector error, e.g. 72.8.

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:MRMS**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:MRMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous RMS magnitude measurement.
<b>Query</b>	The query form of this command will return a floating point value; the unit is percent.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:MRMS? Returns the measured Magnitude RMS vector error, e.g. 15.335.

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:MPEAk**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:MPEAk
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous peak magnitude measurement.
<b>Query</b>	The query form of this command will return a floating point value in percent.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:MPEA? Returns the measured Magnitude peak vector error, e.g. 72.736.

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:PRMS**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:PRMS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous RMS phase error measurement.
<b>Query</b>	The query form of this command will return a floating point value; the unit is percent.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:PRMS? Returns the measured RMS phase vector error, e.g. 6.738.

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:PPEAk**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:PPEAk
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Starts a continuous peak phase error measurement.
<b>Query</b>	The query form of this command will return a floating point value in percent.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:PPEA? Returns the measured phase peak vector error, e.g. 27.512.

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:RHO**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:RHO
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:RHO? Returns the modulation quality, e.g. 0.9989.

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:IQOffset**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:IQOffset
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous IQ origin offset vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in dBc.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:IQOF? Returns the origin offset in dBc, e.g. -28.251.

**:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:IQImbalance**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:MODQuality:IQImbalance
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous IQ imbalance vector error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in dB.
<b>Example</b>	:MEAS:WCDM:RFTX:MODQ:IQIM? Returns the IQ imbalance in dBc, e.g. -43.743.

**:MEASure:WCDMa[:CONTInuous]:RFTX:INNERloop**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:INNERloop
<b>Parameters</b>	There are no parameters.

<b>Description</b>	It starts a continuous inner loop power measurement.
<b>Query</b>	The query form of this command will start the measurement and return the results values as soon as the first measurement has been completed as well the error values. The result delivered will contain an array of floating point numbers.
<b>Example</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:INNERloop?

**:MEASure:WCDMa:RFTX:OPENloop**

<b>Syntax</b>	:MEASure:WCDMa:RFTX:OPENloop
<b>Parameters</b>	There are no parameters.
<b>Description</b>	It starts a single openloop power measurement.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:MEASure:WCDMa:RFTX:OPENloop Starts the open loop power measurement, then a loopback or speechcall has to be established to measure the PRACH. :FETC:WCDM:RFTX:OPEN? will deliver the measured value for open loop power.

**:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:PCDe**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:PCDe
<b>Parameters</b>	There are no parameters.
<b>Description</b>	It starts a continuous Peak Code Domain Error measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in dB.
<b>Example</b>	:MEAS:WCDM:RFTX:COD:PCD? Returns the measured PCDE value, e.g. -47.23.

**:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:  
:IPOWER[:DATA]**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX :CODedomain:IPOWER[:DATA]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the Code Domain Power levels in the I-plane code channels. To read out the latest measurement result, use FETC:WCDM:RFTX:COD:IPOW[:DATA]? command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered will contain an array of 4 to 256 floating point numbers, depending on the spreading factor.
<b>Example</b>	:MEAS:WCDM:RFTX:COD:IPOW?

**:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:IPower:AVG**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:IPower:AVG <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the Code Domain Power levels of the I-plane code channels averaged over <Int1> measurements. To read out the latest measurement result, use FETC:WCDM:RFTX:COD:IPOW? command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as <Int1> measurements has been completed. The result delivered will contain an array of 4 till 256 floating point numbers, depending on the spreading factor.
<b>Example</b>	:MEAS:WCDM:RFTX:COD:IPOW:AVG 10?

**:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:QPOWER[:DATA]**

<b>Syntax</b>	MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:QPOWER[:DATA]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the code domain power levels of the Q-plane code channels. To read out the latest measurement result, use FETC:WCDM:RFTX:COD:QPOW[:DATA]? command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered will contain an array of 256 floating point numbers.
<b>Example</b>	:MEAS:WCDM:RFTX:COD:QPOW?

**:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:QPOWER:AVG**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFTX:CODedomain:QPOWER:AVG <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the code domain power levels of the Q-plane code channels averaged over <Int1> measurements. To read out the latest measurement result, use FETC:WCDM:RFTX:COD:QPOW? command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as <Int1> measurements has been completed. The result delivered will contain an array of 256 floating point numbers.
<b>Example</b>	:MEAS:WCDM:RFTX:COD:QPOW:AVG 10?

**:MEASure:WCDMa[:CONTInuous]:RFSP:STOP**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFSP:STOP
<b>Parameters</b>	There are no parameters
<b>Description</b>	Stops a continuous measurement of the WCDMA RF SP tests. Note: Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:MEAS:WCDM:RFSP:MSP :MEAS:WCDM:RFSP:STOP Configures, starts and stops a measurement.

**:MEASure:WCDMa[:CONTInuous]:RFSpectrum:MSpectrum[:DATA]**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFSpectrum:MSpectrum[:DATA]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the RF modulation spectrum. To read out the latest measurement result, use the FETC:WCDM:RFSP:MSP[:DATA] command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered will contain an array of 501 floating point numbers.
<b>Example</b>	:MEAS:WCDM:RFSP:MSP?

**:MEASure:WCDMa[:CONTInuous]:RFSpectrum:MSpectrum:AVG**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFSpectrum:MSpectrum:AVG <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the code domain power levels in the Q-plane code channels averaged over <Int1> measurements. To read out the latest measurement result, use FETC:WCDM:RFTX:COD:QPOW? command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as <Int1> measurements have been completed. The result delivered will contain an array of 501 floating point numbers.
<b>Example</b>	:MEAS:WCDM:RFSP:MSP:AVG 10?

**:MEASure:WCDMa[:CONTInuous]:RFSPectrum:MSpectrum:OBW**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFSPectrum:MSpectrum:OBW
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the occupied bandwidth. To read out the latest measurement result use the FETC:WCDM:RFSP:MSP:OBW command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement have been completed. The result delivered will contain one floating point number.
<b>Example</b>	:MEAS:WCDM:RFSP:OBW?

**:MEAS:WCDMA[:CONTInuous]:RFSPectrum:ACLR**

<b>Syntax</b>	:MEAS:WCDMA[:CONTInuous]:RFSPectrum:ACLR
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts the adjacent channel leakage power ratio measurement. To read out the latest measurement result use the FETC:WCDM:RFSP:ACLR? command.
<b>Query</b>	The query form of this command starts the measurement and delivers a string, containing 5 measurement result values separated by commas (12 offsets in both directions from the carrier, plus the result at the carrier itself). These measurement result values are floating point real numbers with the physical dimension dBc (dB relative to the carrier, being the transmission frequency of the mobile).
<b>Example</b>	:MEAS:WCDM:RFSP:ACLR?

**:MEASure:WCDMa[:CONTInuous]:RFSPectrum:SEM[:DATA]**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFSPectrum:SEM[:DATA]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous measurement of the Spectrum Emission Mask. To read out the latest measurement result use the FETC:WCDM:RFSP:SEM[:DATA] command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered back will contain an array of 501 floating point numbers.
<b>Example</b>	:MEAS:WCDM:RFSP:SEM?

**:MEASure:WCDMa[:CONTInuous]:RFSpectrum:SEM:AVG**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFSpectrum:SEM:AVG <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous measurement of the RF modulation spectrum averaged over <Int1> measurements. To read out the latest measurement result use the FETC:WCDM:RFSP:SEM:AVG command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as <Int1> measurements have been completed. The result delivered back will contain an array of 501 floating point numbers.
<b>Example</b>	:MEAS:WCDM:RFSP:SEM:AVG 10?

**:MEASure:WCDMa[:CONTInuous]:RFRX:STOP**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFRX:STOP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops a continuous measurement of the WCDMA RF RX tests. <b>Note:</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:MEAS:WCDMa:RFRX:FREQ :MEAS:WCDMa:RFRX:STOP Configures, starts and stops a measurement.

**:MEASure:WCDMa[:CONTInuous]:RFRX:BER:RATIo**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFRX:BER:RATIo
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous BER measurement. Before you can start a RX Measurement you have to synchronise at once the 3100 to the mobile on a normal Output Power Level with the command CONFigure:WCDMa:MEASure:RFRX:SYNChronise?. If it is synchronised the Power can be changed to a low Level and the measurement can be started.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the BER result.
<b>Example</b>	:MEAS:WCDM:RFRX:BER? Starts the measurement and returns the result, e.g. 3.1.

**:MEASure:WCDMa[:CONTInuous]:RFRX:BLER:RATIo**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:RFRX:BLER:RATIo
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous BLER measurement. Before you can start a RX Measurement you have to synchronise at once the 3100 to the mobile on a normal Output Power Level with the command CONFigure:WCDMa:MEASure:RFRX:SYNChronise?. If it is synchronised the Power can be changed to a low Level and the measurement can be started.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the BLER result.
<b>Example</b>	:MEAS:WCDM:RFRX:BLER? Starts the measurement and returns the result, e.g. 3.1.

**:MEASure:WCDMa[:CONTInuous]:UEReport:STOP**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:UEReport:STOP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Stops a continuous measurement of the WCDMA UE Report. <b>Note:</b> Stopping the test is not required since a test is automatically stopped when you start a new test.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:MEAS:WCDM:UER:PLoS :MEAS:WCDM:UER:STOP Configures, starts and stops a measurement.

**:MEASure:WCDMa[:CONTInuous]:UEReport:ALL**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:UEReport:ALL
<b>Parameters</b>	There are no parameters.



<b>Description</b>	Starts a continuous measurement of all available UE Report tests.
<b>Query</b>	<p>The query form of this command starts the measurements and – after all 6 measurements have been completed and all measurement results obtained – delivers a string, containing 6 measurement result values, separated with commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. CPICH_ECNO, floating point real number representing UE measured normalized chip energy per noise value of the P-CPICH,</li> <li>2. CPICH_RSCP, floating point real number representing UE measured received signal code power of the P-CPICH,</li> <li>3. PLOSS, floating point real number representing the pathloss between Node-B and UE, estimated by the UE,</li> <li>4. TXPower, floating point real number representing the UE transmit power,</li> <li>5. RTTDifference, floating point real number representing UE measured RX-Time-Difference between UL and DL signal,</li> <li>6. TRCH_BLER, floating point real number representing the UE estimated BLER value for the Transport Channel defined with CONFIGure:WCDMA:MEASure:UEReport:TRCH.</li> </ol> <p><b>Note:</b> For a further description of the single measurements, see description of the related commands below.</p>
<b>Example</b>	<pre>:MEAS:WCDM:UER:ALL?</pre> <p>All UE Report measurements will be performed in a sequence, e.g. 23,85,102,97,992,3.</p>

**:MEASure:WCDMa[:CONTInuous]:UEReport:CPICH:ECNO**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:UEReport:CPICH:ECNO
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reports the UE measured normalized chip energy per noise value of the P-CPICH.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the result.
<b>Example</b>	<pre>:MEAS:WCDM:UER:CPICH:ECNO?</pre> <p>Starts the measurement and returns the result, e.g. 31.</p>

**:MEASure:WCDMa[:CONTInuous]:UEReport:CPICH:RSCP**

<b>Syntax</b>	:MEASure:WCDMa[:CONTInuous]:UEReport:CPICH:RSCP
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reports the UE measured received signal code power of the P-CPICH.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the result.
<b>Example</b>	<pre>:MEAS:WCDM:UER:CPICH:RSCP?</pre> <p>Starts the measurement and returns the result, e.g. 41.</p>

**:MEASure:WCDMa[:CONTinuous]:UEReport:PLOSS**

<b>Syntax</b>	:MEASure:WCDMa[:CONTinuous]:UEReport:PLOSS
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reports the path loss between Node B and UE, estimated by the UE.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the result.
<b>Example</b>	:MEAS:WCDM:UER:PLOS? Starts the measurement and returns the result, e.g. 61.

**:MEASure:WCDMa[:CONTinuous]:UEReport:TXPower**

<b>Syntax</b>	:MEASure:WCDMa[:CONTinuous]:UEReport:TXPower
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reports the UE transmit power.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the result.
<b>Example</b>	:MEAS:WCDM:UER:TXPO? Starts the measurement and returns the result, e.g. 66.

**:MEASure:WCDMa[:CONTinuous]:UEReport:RTTDifference**

<b>Syntax</b>	:MEASure:WCDMa[:CONTinuous]:UEReport:RTTDifference
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reports the UE measured RX-Time-Difference between UL and DL signal.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the result.
<b>Example</b>	:MEAS:WCDM:UER:RTTD? Starts the measurement and returns the result, e.g. 1056.

**:MEASure:WCDMa[:CONTinuous]:UEReport:TRCH:BLER**

<b>Syntax</b>	:MEASure:WCDMa[:CONTinuous]:UEReport:TRCH:BLER
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Reports the UE estimated BLER value for the Transport Channel defined with CONFigure:WCDMa:MEASure:UEReport:TRCH.
<b>Query</b>	The query form of this command will return a string containing the floating point value with the result.
<b>Example</b>	:MEAS:WCDM:UER:TRCH:BLER? Starts the measurement and returns the result, e.g. 5.

**:MEASure:WCDMa[:CONTinuous]:WLAN:POWer**

<b>Syntax</b>	MEASure:WCDMa[:CONTinuous]:WLAN:POWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts a continuous WLAN power measurement.
<b>Query</b>	The query form of this command will return a floating point value with the result in dBm.
<b>Example</b>	:MEAS:WCDM:WLAN:POWer? Returns the WLAN power level, e.g. -7.743.

**:MEASure:WCDMa:ARRay:RFTX:FREQuency**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:FREQuency <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the frequency error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:FREQ? 5 Starts five measurements, the results of which are returned. Example: 47.1, 91.5, 13.6, -4.8, 15.3.

**:MEASure:WCDMa:ARRay:RFTX:POWer:MEAN**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:POWer:MEAN <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command starts a continuous array measurement of the mobile's output power specified by number of arrays <Int1>. To read out the entire measurement results array use the command FETCh:WCDMa:RFTX:POWer:MEAN.
<b>Query</b>	This query command will perform the measurement the number of times specified by <Int1>. As soon as all measurements have been completed, all result values will be returned. The values delivered will contain Int1 floating-point numbers in dBm.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:POW:MEAN? 10 Starts ten measurements, the results of which are returned. Example: 47.1, 91.5, 13.6, -4.8, 15.3, 37.1, 51.5, 33.6, -4.4, 55.3

**:MEASure:WCDMa:ARRay:RFTX:POWer:PEAK**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:POWer:PEAK <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	This command starts a continuous array measurement of the mobile's peak output power specified by number of arrays <Int1>. To read out the entire measurement results array use the command FETCh:WCDMa:RFTX:POWer:PEAK.
<b>Query</b>	This query command will perform the measurement the specified number of <Int1>. As soon as all measurements have been completed, all result values will be returned. The values delivered back will contain <Int1> floating-point numbers in dBm.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:POW:PEAK? 10

**:MEASure:WCDMa:ARRay:RFTX:NSTair[:DATA]**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:NSTair[:DATA]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts a continuous measurement of the Staircase measurement. To read out the latest measurement result, use the FETCh:WCDMa:RFTX:NSTair? command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered back will contain 512 floating-point numbers in dBm.
<b>Example</b>	:MEAS:WCDM:ARRay:RFTX:NST?

**:MEASure:WCDMa:ARRay:RFTX:NSTair:POWer**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:NSTair:POWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts a continuous measurement of the staircase power measurement. To read out the latest measurement result use the FETCh:WCDMa:RFTX:NSTair:POWer? command.
<b>Query</b>	This query command will start the measurement and return a result value as soon as the first measurement has been completed. The result delivered back will contain 7 floating point numbers in dBm.
<b>Example</b>	:MEAS:WCDM:ARRay:RFTX:NST:POW?

**:MEASure:WCDMa:ARRay:RFTX:CPOWer**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:CPOWer <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs the measurement of the channel power as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the result (in dBm).
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:CPOW? 10

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:ALL**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:ALL <Int1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts an array measurement of the most important RF TX Modulation Quality tests as many times as specified.
<b>Query</b>	<p>The query form of this command starts the measurements and - after all 10 measurements have been completed and all measurement results obtained - delivers a string, containing 10 measurement result values, separated with commas. The order and type of these measurement result values delivered is as follows:</p> <ol style="list-style-type: none"> <li>1. EVM RMS, floating point real number representing the RMS vector error measurement in percent,</li> <li>2. EVM Peak, floating point real number representing the peak vector error measurement in percent,</li> <li>3. Magnitude error RMS, floating point real number representing the RMS magnitude vector error measurement in percent,</li> <li>4. Magnitude error Peak, floating point real number representing the PEAK magnitude vector error measurement in percent,</li> <li>5. Phase error RMS, floating point real number representing the RMS phase vector error measurement in degree,</li> <li>6. Phase error Peak, floating point real number representing the PEAK phase vector error measurement in degree,</li> <li>7. Frequency error, floating point real number representing the mobile's frequency error,</li> <li>8. RHO, floating point real number representing the mobile's modulation quality,</li> <li>9. I/Q Offset, a floating point value with the result in dBc, representing the result of the origin offset vector error measurement,</li> <li>10. I/Q Imbalance, floating point real number representing the result of the IQ Imbalance vector error measurement with the result in dB.</li> </ol> <p><b>Note:</b> For a further description of the single measurements, see description of the related commands below.</p>
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:ALL? 5 In this case, all relevant RF TX measurements will be performed in a sequence.

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:ERMS**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:ERMS <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an RMS vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:ERMS? 19

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:EPEAK**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:EPEAK <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a peak vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:EPEA? 10

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:MRMS**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:MRMS <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an RMS magnitude vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:MRMS? 10

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:MPEAK**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:MPEAK <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a peak magnitude vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:MPEA? 10

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:PHASe:RMS !!**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:PHASe:RMS <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an RMS phase vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:PRMS? 10

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:PPEAk**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:PPEAk <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a peak phase vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:PPEA? 10

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:RHO**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:RHO <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Starts a continuous closed loop measurement.
<b>Query</b>	The query form of this command will return a floating point value.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:RHO? 5

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:IQOFfset**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:IQOFfset <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an origin offset vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:IQOF? 10

**:MEASure:WCDMa:ARRay:RFTX:MODQuality:IQIMbalance**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:MODQuality:IQIMbalance <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an IQ imbalance vector error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:MODQ:IQIM? 10

**:MEASure:WCDMa:ARRay:RFTX:INNERloop**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:INNERloop <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	It starts inner loop power control measurements and it returns an array of Int1 measurements values as well as the TPC step error for each step.
<b>Query</b>	The query form of this command will perform the measurement Int1 and return the results values as well the error values. The result delivered will contain an array of floating point numbers.
<b>Example</b>	:MEASure:WCDMa:ARRay:RFTX:INNERloop? 10

**:MEASure:WCDMa:ARRay:RFTX:QMAX**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:QMAX <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	It starts UE power measurements at maximum levels and it returns an array of Int1 measurement values.
<b>Query</b>	The query form of this command will perform the measurement Int1 and return the result values. The result delivered will contain an array of floating point numbers.
<b>Example</b>	:MEASure:WCDMa:ARRay:RFTX:QMAX? 10

**:MEASure:WCDMa:ARRay:RFTX:CODedomain:PCDe**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFTX:QMAX
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs an peak code domain error measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.



**Example** :MEAS:WCDM:ARR:RFTX:COD:PCD? 10

**:MEASure:WCDMa:ARRay:RFSpectrum:MSpectrum:OBW**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFSpectrum:MSpectrum:OBW <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value for Int1 is 0.
<b>Description</b>	Performs an occupied bandwidth measurement as many times as specified. To read out the latest measurement result use the FETC:WCDM:RFSP:MSP:OBW command.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:RFSP:OBW? 15

**:MEASure:WCDMa:ARRay:RFSpectrum:ACLR**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFSpectrum:ACLR <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for int1 is 0, the maximum value is 100. The default value for Int1 is 0.
<b>Description</b>	Performs the measurement of the ACLR modulation spectrum a specific number of times (set with the Int1 parameter).
<b>Query</b>	The query form of this command will perform the measurement the specified number of times (Int1 parameter). As soon as all measurements have been completed, all measurement result values will be returned in a string. The string delivered will contain (25 * Int1) floating point real numbers. The physical dimension is dBc. The single measurement results are separated by commas.
<b>Example</b>	:MEAS:WCDM:ARR:RFSP:ACLR 10 :FETCh:WCDMA:RFSP:ACLR The string returned in this example would contain 50 floating point real numbers, representing the 5 measurement result values of 10 measurement runs.

**:MEASure:WCDMa:ARRay:RFRX:BER:RATIo**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:RFRX:BER:RATIo <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.

<b>Description</b>	Performs a BER measurement as many times as specified. Before you can start a RX Measurement you have to synchronise at once the 3100 to the mobile on a normal Output Power Level with the command <code>CONFigure:WCDMa:MEASure:RFRX:SYNChronise?</code> . If it is synchronised the Power can be changed to a low Level and the measurement can be started.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	<code>:MEAS:WCDM:ARR:RFRX:BER? 100</code>

**:MEASure:WCDMa:ARRay:UEReport:ALL**

<b>Syntax</b>	<code>:MEASure:WCDMa:ARRay:UEReport:ALL</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Starts an array measurement of all available UE Report tests.
<b>Query</b>	<p>The query form of this command starts the measurements and - after all 6 measurements have been completed and all measurement results obtained - delivers a string, containing 6 measurement result values, separated with commas. The order and type of these measurement result values delivered is as follows:</p> <ol style="list-style-type: none"> <li>1. <code>CPICH_ECNO</code>, floating point real number representing UE measured normalized chip energy per noise value of the P-CPICH,</li> <li>2. <code>CPICH_RSCP</code>, floating point real number representing UE measured received signal code power of the P-CPICH,</li> <li>3. <code>PLOSS</code>, floating point real number representing the path loss between Node B and UE, estimated by the UE,</li> <li>4. <code>TXPower</code>, floating point real number representing the UE transmit power,</li> <li>5. <code>RTTDifference</code>, floating point real number representing UE measured RX-Time-Difference between UL and DL signal,</li> <li>6. <code>TRCH_BLER</code>, floating point real number representing the UE estimated BLER value for the Transport Channel defined with <code>CONFigure:WCDMa:MEASure:UEReport:TRCH</code>.</li> </ol> <p><b>Note:</b> For a further description of the single measurements, see description of the related commands below.</p>
<b>Example</b>	<p><code>:MEAS:WCDM:ARR:UER:ALL? 2</code>  All UE Report measurements will be performed in a sequence, e.g.  <code>23,85,102,97,992,3,23,85,102,97,992,3.</code></p>

**:MEASure:WCDMa:ARRay:UEReport:CPICH:ECNO**

<b>Syntax</b>	<code>:MEASure:WCDMa:ARRay:UEReport:CPICH:ECNO &lt;Int1&gt;</code>
<b>Parameters</b>	<code>Int1</code> is an integer. The minimum value for <code>Int1</code> is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Reports the UE measured normalized chip energy per noise value of the P-CPICH.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	<p><code>:MEAS:WCDM:ARR:UER:CPICH:ECNO? 7</code>  Starts the measurement and returns the result, e.g. <code>31,43,16,5,43,28,31.</code></p>

**:MEASure:WCDMa:ARRay:UEReport:CPICH:RSCP**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:UEReport:CPICH:RSCP <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Reports the UE measured received signal code power of the P-CPICH.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:UER:CPICH:RSCP? 6 Starts the measurement and returns the result, e.g. 31, 43, 66, 75, 43, 28.

**:MEASure:WCDMa:ARRay:UEReport:PLOSS**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:UEReport:PLOSS <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Reports the path loss between Node B and UE, estimated by the UE.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:UER:PLOS? 3 Starts the measurement and returns the result, e.g. 75, 46, 128.

**:MEASure:WCDMa:ARRay:UEReport:TXPower**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:UEReport:TXPower <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Reports the UE transmit power.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:UER:TXPO? 4 Starts the measurement and returns the result, e.g. 66, 75, 43, 28.

**:MEASure:WCDMa:ARRay:UEReport:RTTDifference**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:UEReport:RTTDifference <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.

<b>Description</b>	Reports the UE measured RX-Time-Difference between UL and DL signal.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:UER:RTTD? 5 Starts the measurement and returns the result, e.g. 854,966,1075,943,1128.

**:MEASure:WCDMa:ARRay:UEReport:TRCH:BLER**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:UEReport:TRCH:BLER <Int1>
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Reports the UE estimated BLER value for the Transport Channel defined with CONFIGure:WCDMa:MEASure:UEReport:TRCH.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:UER:TRCH:BLER? 2 Starts the measurement and returns the result, e.g. 0,2.

**:MEASure:WCDMa:ARRay:WLAN:POWer**

<b>Syntax</b>	:MEASure:WCDMa:ARRay:WLAN:POWer
<b>Parameters</b>	Int1 is an integer. The minimum value for Int1 is 0, the maximum value is 100. The default value is 0.
<b>Description</b>	Performs a WLAN power measurement as many times as specified.
<b>Query</b>	The query form of this command will perform the measurement the specified number of times, and return the results.
<b>Example</b>	:MEAS:WCDM:ARR:WLAN:POW? 10 Returns ten results of the WLAN power level measurement, e.g. -4.7,-3.5,-6.2,-4.3,...

## FETCh Subsystem

The commands of this subsystem are used to read out measurement result values both from continuous and array measurements.

### :FETCh:LAST?

<b>Syntax</b>	:FETCh:LAST?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns in a string the latest measurement result value(s) of the measurement started last. The number and format of the measurement result values returned is dependent on the type of measurement.
<b>Example</b>	<p><b>:MEAS:GSM:RFTX:PRMS</b>  <b>:MEAS:GSM:RFRX:RBER:ALL</b>  <b>:FETCh:LAST?</b></p> <p>In this example, the <b>FETCh:LAST</b> command will return the three residual bit error ratios (three floating point real numbers) as this is the measurement started last.</p>

### GSM commands :FETCh:GSM:RFTX:GROup?

<b>Syntax</b>	:FETCh:GSM:RFTX:GROup?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result values of the sequence of RF TX measurements as specified with the :CONF:MEAS:GRO:RFTX command and measured with the :MEAS:GSM[:ARRay]:RFTX:GROup command. The string returned contains the related measurement result values. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the kind of measurements. The order of the measurement result values within the string is as described below for the :FETCh:GSM:RFTX:ALL command.
<b>Example</b>	<p><b>:CONF:MEAS:GRO:RFTX POW,PRMS</b>  <b>:MEAS:GSM:RFTX:GRO</b>  <b>:FETCh:GSM:RFTX:GROup?</b></p> <p>In this example, the group of measurements is defined by a power measurement combined with a RMS phase error measurement. The values returned in this example are:  <b>"4.53,9.98"</b>.</p> <p>Because of the internal order (see description of the command below), the first measurement result value delivered back is the RMS phase error, the second one the mobile's RF output power.</p>

### :FETCh:GSM:RFTX:ALL?

<b>Syntax</b>	:FETCh:GSM:RFTX:ALL?
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<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result values of the :MEAS:GSM[:ARRay]:RFTX:ALL measurement. The string delivered back will contain 19 measurement result values, separated by commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>PPEAk</b>, floating point real number, representing the peak phase error measurement,</li> <li>2. <b>PRMS</b>, floating point real number representing the root-mean square value of the phase error,</li> <li>3. <b>FREQuency</b>, floating point real number representing the mobile's frequency error,</li> <li>4. <b>LENGth</b>, floating point real number representing the length of the burst in microseconds,</li> <li>5. <b>UTIME</b>, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li> <li>6. <b>POWER</b>, floating point real number representing the mobile's RF output power level in dBm,</li> <li>7. <b>TEMPlate</b> boolean number. A 0 indicates that the power/time template was not violated by a burst while a 1 means that there was a violation of the power/time template.</li> <li>8...15. <b>CORNER</b>, eight floating point real numbers, representing the RF power level in dBm at eight predefined positions of a burst (see section Corner Points for details).</li> <li>16...19. <b>FLATness</b>, four floating point real numbers, representing the absolute minimum and maximum RF power levels of the mobile and their positions during the active part of the burst.</li> </ol>
<b>Example</b>	<p><b>:MEAS:GSM:RFTX:ALL</b>  <b>:FETCh:GSM:RFTX:ALL?</b></p> <p>This example will return the latest measurement result values for the 19 most important RF TX measurements. The string delivered back is:</p> <p><b>"5.13,1.94,-2.22,557.0,0.1,11.22,0,-72.18, -61.91,-20.91,-0.05,-0.04,-17.97,-56.60, -73.95,-0.05,-0.01,0.02,-0.05"</b>.</p>

**:FETCh:GSM:RFTX:PPEAk?**

<b>Syntax</b>	:FETCh:GSM:RFTX:PPEAk?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command returns the latest measurement result value(s) of the MEAS:GSM[:ARRay]:RFTX:PPEAk measurement. The string delivered back will contain at least one floating point real number with the physical dimension of degrees.</p>
<b>Example</b>	<p><b>:MEAS:GSM:RFTX:PPEAk</b>  <b>:FETCh:GSM:RFTX:PPEAk?</b></p> <p>The value returned is: <b>"5.13"</b>.</p>

**:FETCh:GSM:RFTX:PRMS?**

<b>Syntax</b>	:FETCh:GSM:RFTX:PRMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GSM[:ARRay]:RFTX:PRMS measurement. The string delivered back will contain at least one floating point real number with the physical dimension of degrees.
<b>Example</b>	:MEAS:GSM:ARR:RFTX:PRMS 5 :FETCh:GSM:RFTX:PRMS? The values returned are: "2.49,2.37,2.51,2.47,2.35".

**:FETCh:GSM:RFTX:FREQuency?**

<b>Syntax</b>	:FETCh:GSM:RFTX:FREQuency?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GSM[:ARRay]:RFTX:FREQ measurement. The string delivered back will contain at least one floating point real number with the physical dimension of Hertz.
<b>Example</b>	:MEAS:GSM:ARR:RFTX:FREQ 5 :FETCh:GSM:RFTX:FREQ? The values returned are: "22.49,24.37,21.51,29.47,23.35".

**:FETCh:GSM:RFTX:LENGth?**

<b>Syntax</b>	:FETCh:GSM:RFTX:LENGth?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GSM[:ARRay]:RFTX:LENGth measurement. The string delivered back will contain at least one floating point real number with the physical dimension of microseconds.
<b>Example</b>	:MEAS:GSM:RFTX:LENGth :FETCh:GSM:RFTX:LENG? The value returned is: "557.0".

**:FETCh:GSM:RFTX:UTIME?**

<b>Syntax</b>	:FETCh:GSM:RFTX:UTIME?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the <code>MEAS:GSM[:ARRay]:RFTX:UTIME</code> measurement. The string delivered back will contain at least one floating point real number with the physical dimension of microseconds.
<b>Example</b>	<code>:MEAS:GSM:ARR:RFTX:UTIME 5</code> <code>:FETCh:GSM:RFTX:UTIM?</code> The values returned are: "1.1,0.8,1.2,0.5,0.2".

**:FETCh:GSM:RFTX:POWer?**

<b>Syntax</b>	<code>:FETCh:GSM:RFTX:POWer?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the <code>MEAS:GSM[:ARRay]:RFTX:POWer</code> measurement. The string delivered back will contain at least one floating point real number with the physical dimension of dBm.
<b>Example</b>	<code>:MEAS:GSM:RFTX:POWer</code> <code>:FETCh:GSM:RFTX:POWer?</code> The value returned is: "13.05".

**:FETCh:GSM:RFTX:TEMPlate?**

<b>Syntax</b>	<code>:FETCh:GSM:RFTX:TEMPlate?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest result value(s) of the <code>:MEAS:GSM[:ARRay]:RFTX:TEMPlate</code> check. The string delivered back will contain at least one boolean number, representing the result of the check. A <code>0</code> indicates that the burst measured was within the PTT specified, while a <code>1</code> means that the burst did violate the PTT. The PTT is user-definable and can be set using the <code>:CALC:GSM:RFTX:TEMP</code> commands.
<b>Example</b>	<code>:MEAS:GSM:ARR:RFTX:TEMPlate 10</code> <code>:FETCh:GSM:RFTX:TEMP?</code> The values returned are: "0,0,0,0,0,0,0,0,0,0". This means that all the ten bursts checked were within the PTT.

**:FETCh:GSM:RFTX:CORNer?**

<b>Syntax</b>	<code>:FETCh:GSM:RFTX:CORNer?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.



<b>Query</b>	The query form of this command returns the latest measurement result values of the :MEAS:GSM[:ARRay]:RFTX:CORNEr measurement. The string delivered back will contain at least eight floating point real numbers with the physical dimension of dBm.
<b>Example</b>	<b>:MEAS:GSM:RFTX:CORNEr</b> <b>:FETCh:GSM:RFTX:CORNEr</b> The values returned are: "-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95".

**:FETCh:GSM:RFTX:FLATness?**

<b>Syntax</b>	:FETCh:GSM:RFTX:FLATness?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result values of the :MEAS:GSM[:ARRay]:RFTX:FLATness measurement. The string delivered back will contain at least four floating point real numbers with the physical dimensions of dBm (first and third number) and bit periods (second and fourth number).
<b>Example</b>	<b>:MEAS:GSM:RFTX:FLATness</b> <b>:FETCh:GSM:RFTX:FLAT?</b> The values returned are: "-0.12,113.7,0.56,34.0".

**:FETCh:GSM:RFTX:FPOWER?**

<b>Syntax</b>	:FETCh:GSM:RFTX:FPOWER?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFTX:FPOWER measurement. The string delivered back will contain at least one floating point real number with the physical dimension of dBm.
<b>Example</b>	<b>:MEAS:GSM:RFTX:FPOWER</b> <b>:FETCh:GSM:RFTX:FPOWER?</b> The value returned is: "13.05".

**:FETCh:GSM:BLOCKdata:BURStshape?**

<b>Syntax</b>	:FETCh:GSM:BLOCKdata:BURStshape?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the burst shape.

<b>Example</b>	<b>:MEAS:GSM:BLOC:BURS</b> <b>:FETC:GSM:BLOC:BURS?</b> The <b>FETC</b> command will return a data array, containing 700 floating point real numbers.
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**:FETCh:GSM:BLOCKdata:PHASerror?**

<b>Syntax</b>	<b>:FETCh:GSM:BLOCKdata:PHASerror?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the graph of the phase error. For further details regarding this measurement, please refer to the description of the <b>:MEAS:GSM:BLOC:PHAS</b> command and the explanations given in section <b>:MEASure:BLOCKdata</b> . There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	<b>:MEAS:GSM:BLOC:PHAS</b> <b>:FETC:GSM:BLOC:PHAS?</b> The <b>FETC</b> command will return a data array, containing 711 floating point real numbers.

**:FETCh:BLOCKdata:AFSPpectrum?**

<b>Syntax</b>	<b>:FETCh:BLOCKdata:AFSPpectrum?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the graph of the audio spectrum measurement. For further details regarding this measurement, please refer to the description of the <b>:MEAS:BLOC:AFSP</b> command and the explanations given in section <b>:MEASure:BLOCKdata</b> . There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	<b>:MEAS:BLOC:AFSP</b> <b>:FETC:BLOC:AFSP?</b> The <b>FETC</b> command will return a data array. The number of measurement result values delivered back is dependent on the span and resolution settings of the audio spectrum analyzer.

**:FETCh:GSM:BLOCKdata:MSpectrum?**

<b>Syntax</b>	<b>:FETCh:GSM:BLOCKdata:MSpectrum?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	The query form of this command returns the latest data block describing the graph of the modulation spectrum measurement. For further details regarding this measurement, please refer to the description of the <code>:MEAS:GSM:BLOC:MSP</code> command and the explanations given in section <code>:MEASure:BLOCKdata</code> . There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	<pre><b>:MEAS:GSM:BLOC:MSP</b> <b>:FETC:GSM:BLOC:MSP?</b></pre> <p>The <b>FETC</b> command will return a data array. The number of measurement result values delivered back is dependent on the span and resolution settings of the modulation spectrum analyzer.</p>

**:FETCh:GSM:BLOCKdata:PSCShape?**

<b>Syntax</b>	<code>:FETCh:GSM:BLOCKdata:PSCShape?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the current consumption shape over a TDMA frame. The data block is a string consisting of 886 measurement result floating point real values with the physical dimension of mA. The current is sampled at a rate of 192 kHz, starting with the beginning of a new down-link TDMA frame.
<b>Example</b>	<pre><b>:MEAS:GSM:CONT:BLOCKdata:PSCShape</b> <b>:FETCh:GSM:BLOC:PSCS?</b></pre> <p>Returns 886 measurement values, describing the current consumption shape over a TDMA frame.</p>

**:FETCh:GSM:RFRX:RBER:ALL?**

<b>Syntax</b>	<code>:FETCh:GSM:RFRX:RBER:ALL?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result values of the <code>:MEAS:GSM[:ARRay]:RFRX:RBER:ALL</code> measurement. The string returned will contain three floating point real numbers, separated by commas. The order of these numbers and their meaning is as follows:</p> <ol style="list-style-type: none"> <li>1. the result of the residual bit error ratio measurement of the class Ib bits,</li> <li>2. the result of the residual bit error ratio measurement of the class II bits, and</li> <li>3. the result of the frame erasure ratio measurement.</li> </ol>
<b>Example</b>	<pre><b>:MEAS:GSM:RFRX:RBER:ALL</b> <b>:FETCh:GSM:RFRX:RBER:ALL?</b></pre> <p>This example will return the latest measurement result values for the three residual bit error measurements. The string delivered back is: "0.2,1.7,0.3". This means that the RBER for class Ib bits is 0.2.</p>

**:FETCh:GSM:RFRX:RBER:CIB?**

<b>Syntax</b>	:FETCh:GSM:RFRX:RBER:CIB?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:RBER:CIB measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<b>:MEAS:GSM:ARR:RFRX:RBER:CIB 5</b> <b>:FETCh:GSM:RFRX:RBER:CIB?</b> The string delivered back is: <b>"0.2,0.1,0.2,0.3,0.2"</b> .

**:FETCh:GSM:RFRX:RBER:CII?**

<b>Syntax</b>	:FETCh:GSM:RFRX:RBER:CII?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:RBER:CII measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<b>:MEAS:GSM:ARR:RFRX:RBER:CII 5</b> <b>:FETCh:GSM:RFRX:RBER:CII?</b> The string delivered back is: <b>"1.5,1.7,2.1,2.3,2.6"</b> .

**:FETCh:GSM:RFRX:RBER:FER?**

<b>Syntax</b>	:FETCh:GSM:RFRX:RBER:FER?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:RBER:FER measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<b>:MEAS:GSM:RFRX:RBER:FER</b> <b>:FETCh:GSM:RFRX:RBER:FER?</b> The string delivered back is: <b>"1.5"</b> .

**:FETCh:GSM:RFRX:BER:ALL?**

<b>Syntax</b>	:FETCh:GSM:RFRX:BER:ALL?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result values of the :MEAS:GSM[:ARRay]:RFRX:BER:ALL measurement. The string returned will contain three floating point real numbers, separated by commas. The order of these numbers and their meaning is as follows: <ol style="list-style-type: none"> <li>1. the result of the (nonresidual) bit error ratio measurement of the class Ia bits,</li> <li>2. the result of the (nonresidual) bit error ratio measurement of the class Ib bits, and</li> <li>3. the result of the (nonresidual) bit error ratio measurement of the class II bits.</li> </ol>
<b>Example</b>	<pre><b>:MEAS:GSM:ARR:RFRX:BER:ALL 3</b> <b>:FETCh:GSM:RFRX:BER:ALL?</b></pre> <p>This example will deliver back the latest measurement result values for the three residual bit error measurements. The string delivered back is:  <b>"0.2,0.3,1.7,0.2,0.4,1.8,0.1,0.2,0.8".</b></p>

**:FETCh:GSM:RFRX:BER:CIA?**

<b>Syntax</b>	:FETCh:GSM:RFRX:BER:CIA?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:BER:CIA measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<pre><b>:MEAS:GSM:RFRX:BER:CIA</b> <b>:FETCh:GSM:RFRX:BER:CIA?</b></pre> <p>The string delivered back is:  <b>"0.1".</b></p>

**:FETCh:GSM:RFRX:BER:CIB?**

<b>Syntax</b>	:FETCh:GSM:RFRX:BER:CIB?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:BER:CIB measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<pre><b>:MEAS:GSM:ARR:RFRX:BER:CIB 5</b> <b>:FETCh:GSM:RFRX:BER:CIB?</b></pre> <p>The string delivered back is:  <b>"0.4,0.3,0.7,0.6,0.5".</b></p>

**:FETCh:GSM:RFRX:BER:CII?**

<b>Syntax</b>	:FETCh:GSM:RFRX:BER:CII?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:BER:CII measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<pre><b>:MEAS:GSM:RFRX:BER:CII</b> <b>:FETCh:GSM:RFRX:BER:CII?</b></pre> The string delivered back is: <b>"1.9"</b> .

**:FETCh[:GSM]:RFRX:BER:CRC?**

<b>Syntax</b>	:FETCh[:GSM]:RFRX:BER:CRC?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:BER:CII measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<pre>:MEAS:RFRX:BER:CRC</pre> <pre>:FETCh:RFRX:BER:CRC?</pre> The string delivered back in this example is: <b>"1.9"</b> .

**:FETCh:GSM:RFRX:FBER?**

<b>Syntax</b>	:FETCh:GSM:RFRX:FBER?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GSM[:ARRay]:RFRX:FBER measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	<pre><b>:MEAS:GSM:ARR:RFRX:FBER 5</b></pre> <pre><b>:FETCh:GSM:RFRX:FBER?</b></pre> The string delivered back is: <b>"0.7,0.9,1.2,1.8,2.0"</b> .

**:FETCh:GSM:RFRX:RTDelay?**

<b>Syntax</b>	:FETCh:GSM:RFRX:RTDelay?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEASure:GSM:ARRay:RFRX: measurement. The string delivered back will contain at least one integer.

<b>Example</b>	<pre>:MEAS:GSM:RFRX:RTD :FETCh:GSM:RFRX:RTD? The string delivered back is: "8".</pre>
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**:FETCh:GSM:RFSP:ACPM:MODulation?**

<b>Syntax</b>	<code>:FETCh:GSM:RFSP:ACPM:MODulation?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data array for the ACPM modulation spectrum measurement. The string returned contains a multiple of 23 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the <code>:MEAS:GSM[:ARRay]:RFSPepectrum:ACPM:MOD</code> command.
<b>Example</b>	<pre>:MEAS:GSM:RFSPepectrum:ACPM:MOD :FETC:GSM:RFSP:ACPM:MOD? The FETC command will return a data array, containing 23 floating point real numbers.</pre>

**:FETCh:GSM:RFSPepectrum:ACPM:MODPower?**

<b>Syntax</b>	<code>:FETCh[:GSM]:RFSPepectrum:ACPM:MODPower?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data array for the ACPM modulation spectrum measurement. The string returned contains a multiple of 24 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the <code>:MEAS:GSM:ARRay:RFSPepectrum:ACPM:MODP</code> command.
<b>Example</b>	<pre>:MEAS:RFSP:ACPM:MODP :FETC:RFSP:ACPM:MODP? The FETC command will return a data array, containing 24 floating point real numbers.</pre>

**:FETCh:GSM:RFSP:ACPM:TRANsient?**

<b>Syntax</b>	<code>:FETCh:GSM:RFSP:ACPM:TRANsient?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data array for the measurement of the ACPM spectrum due to switching transients. The string returned contains a multiple of 27 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the <code>:MEAS:GSM[:ARRay]:RFSP:ACPM:TRAN</code> command.

**Example**            **:MEAS:GSM:RFSPectrum:ACPM:TRAN**  
                         **:FETC:GSM:RFSP:ACPM:TRAN?**  
The **FETC** command will return a data array, containing 27 floating point real numbers.

**:FETCh:AFANalyser:GROup?**

**Syntax**            **:FETCh:AFANalyser:GROup?**

**Parameters**        There are no parameters.

**Description**        There is solely a query form of this command available.

**Query**             The query form of this command will return the latest measurement result values of the sequence of AF measurements as specified with the **:CONF:MEAS:GRO:AFAN** command and measured with the **:MEAS[ARRAY]:AFAN:GRO** command. The string returned contains the related measurement result values, separated by commas. All measurement result values are floating point real numbers. The number of measurement result values handed back depends on the number and type of measurements defined with the **:CONF:MEAS:GRO:AFAN** command. The order of the measurement result values within the result string is as described below for the **:FETCh:AFANalyser:ALL** command.

**Example**            **:CONF:MEAS:GRO:AFAN SIN,FREQ**  
                         **:MEAS:AFAN:GRO**  
                         **:FETCh:AFAN:GRO?**  
In this example, the group of measurements is defined by a SINAD measurement combined with an audio frequency measurement. The values returned are: **"1000.0,53.5"**. Because of the internal order (see description of the command below), the first measurement result value delivered back is the audio frequency, the second one the SINAD.

**:FETCh:AFANalyser:ALL?**

**Syntax**            **:FETCh:AFANalyser:ALL?**

**Parameters**        There are no parameters.

**Description**        There is solely a query form of this command available.



<b>Query</b>	<p>The query form of this command will return the latest measurement result values of the :MEAS[ :ARRay ] :AFAN:ALL measurement in a string. All measurement result values of the AF measurements will be floating point real numbers, separated by commas.</p> <p>The order of the measurement result values within the result string is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>ACVPeakp</b>, representing the AC peak-to-peak voltage of the AF signal, expressed in V(pp)</li> <li>2. <b>ACVRms</b>, representing the rms-valued AC voltage of the AF signal, expressed in V(rms),</li> <li>3. <b>DCVRms</b>, representing the rms-valued AC voltage on an applied DC signal, expressed in V(rms),</li> <li>4. <b>FREQuency</b>, representing the audio frequency, expressed in Hertz,</li> <li>5. <b>DISTortion</b>, representing the third-harmonic distortion of the applied sine-wave AF signal (expressed in percent),</li> <li>6. <b>SINad</b>, representing the signal to noise ratio of the applied AF signal, expressed in dB.</li> </ol> <p><b>Note:</b> Any AF test will need the audio option to be installed on your Willtek 3100.</p>
<b>Example</b>	<pre><b>:MEAS:ARR:AFAN:ALL 2</b> <b>:FETCh:AFAN:ALL?</b></pre> <p>In this example, the six most important AF measurements are performed twice in a sequence. The measurement result string in this example is:</p> <pre><b>"3.2,2.7,0.1,1000.0,1.1,53.5,</b> <b>2.7,1.7,0.08,1000.0,0.9,55.2"</b></pre>

**:FETCh:AFAN:ACVoltage:PEAKp?**

<b>Syntax</b>	<b>:FETCh:AFAN:ACVoltage:PEAKp?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result value(s) of the :MEAS[ :ARRay ] :AFAN:ACV:PEAKp measurement. The string delivered back will contain at least one floating point real number.</p> <p><b>Note:</b> Any AF test will need the audio option to be installed on your Willtek 3100.</p>
<b>Example</b>	<pre><b>:MEAS:ARR:AFAN:ACV:PEAK 5</b> <b>:FETCh:AFAN:ACV:PEAK?</b></pre> <p>The string delivered back is: <b>"3.2,3.1,3.3,3.2,2.9"</b>.</p>

**:FETCh:AFAN:ACVoltage:RMS?**

<b>Syntax</b>	<b>:FETCh:AFAN:ACVoltage:RMS?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result value(s) of the :MEAS[ :ARRay ] :AFAN:ACV:RMS measurement. The string delivered back will contain at least one floating point real number.</p> <p><b>Note:</b> Any AF test will need the audio option to be installed on your Willtek 3100.</p>

**Example**            :**MEAS:AFAN:ACV:RMS**  
                      :**FETC:AFAN:ACV:RMS?**  
The string delivered back is: "1.7".

**:FETCh:AFAN:DCVoltage?**

**Syntax**            :**FETCh:AFAN:DCVoltage?**  
**Parameters**        There are no parameters.  
**Description**        There is solely a query form of this command available.  
**Query**             The query form of this command will return the latest measurement result value(s) of the :MEAS[:ARRay]:AFAN:DCV measurement. The string delivered back will contain at least one floating point real number.  
**Note:** Any AF test will need the audio option to be installed on your Willtek 3100.  
**Example**            :**MEAS:AFAN:DCV**  
                      :**FETC:AFAN:DCV?**  
The string delivered back is: "1.7".

**:FETCh:AFANalyser:FREQuency?**

**Syntax**            :**FETCh:AFANalyser:FREQuency?**  
**Parameters**        There are no parameters.  
**Description**        There is solely a query form of this command available.  
**Query**             The query form of this command will return the latest measurement result value(s) of the :MEAS[:ARRay]:AFAN:FREQ measurement. The string delivered back will contain at least one floating point real number.  
**Note:** Any AF test will need the audio option to be installed on your Willtek 3100.  
**Example**            :**MEAS:ARR:AFAN:FREQ 5**  
                      :**FETC:AFAN:FREQ?**  
The string delivered back is: "1000.5,1497.0,2004.7,2491.2,3005.0".

**:FETCh:AFANalyser:DISToRTion?**

**Syntax**            :**FETCh:AFANalyser:DISToRTion?**  
**Parameters**        There are no parameters.  
**Description**        There is solely a query form of this command available.  
**Query**             The query form of this command will return the latest measurement result value(s) of the :MEAS[:ARRay]:AFAN:DIST measurement. The string delivered back will contain at least one floating point real number.  
**Note:** Any AF test will need the audio option to be installed on your Willtek 3100.  
**Example**            :**MEAS:AFAN:DIST**  
                      :**FETC:AFAN:DIST?**  
The string delivered back is: "1.5".

**:FETCh:AFANalyser:SINad?**

<b>Syntax</b>	:FETCh:AFANalyser:SINad?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS[:ARRay]:AFAN:SINad measurement. The string delivered back will contain at least one floating point real number. <b>Note:</b> Any AF test will need the audio option to be installed on your Willtek 3100.
<b>Example</b>	<b>:MEAS:ARR:AFAN:SIN 3</b> <b>:FETCh:AFAN:SIN?</b> The string delivered back is: "53.5,55.2,54.2".

**:FETCh:PSUPply:GROup**

<b>Syntax</b>	:FETCh:PSUPply:GROup?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This query returns the latest measurement result values of the sequence of power/ current consumption measurements as specified with the :CONF:MEAS:GRO:PSUP command and measured with the :MEAS[ARRay]:PSUP:GRO command. The string returned contains the related measurement result values, separated by commas. All measurement result values are floating point real numbers. The number of measurement result values handed back depends on the number and type of measurements defined with the :CONF:MEAS:GRO:PSUP command. The order of the measurement result values within the result string is as described below for the :FETCh:PSUP:ALL command.
<b>Example</b>	<b>:CONF:MEAS:GRO:PSUP ACUR,APOW</b> <b>:MEAS:PSUP:GRO</b> <b>:FETCh:PSUP:GRO?</b> In this example, the group of measurements consists of the average current consumption and the average power consumption measurements. The values returned in this example are: <b>"859.2,293.7"</b> . Because of the internal order (see description of the command below), the first measurement result value delivered back is the power consumption (in mW), followed by the average current consumption (in mA).

**:FETCh:PSUPply:ALL**

<b>Syntax</b>	:FETCh:PSUPply:ALL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	This query returns the latest measurement result values of the :MEAS[:ARRAY]:PSUP:ALL measurement in a string. All measurement result values of the power and current consumption measurements are floating point real numbers, separated by commas. The order of the measurement result values within the result string is as follows: 1. <b>APOW</b> , representing the average power consumption (in mW), 2. <b>ACUR</b> , representing the average current consumption, expressed in mA, 3. <b>PCUR</b> , representing the peak current consumption, expressed in mA. <b>Note:</b> Any current measurement will need the MS Power Supply and Current Measurement options to be installed on your Willtek 3100.
<b>Example</b>	<b>:MEAS:PSUP:ALL</b> <b>:FETCh:PSUP:ALL?</b> Returns a string like "893.5,395.4,1256.2".

**:FETCh:PSUPply:APower**

<b>Syntax</b>	:FETCh:PSUPply:APower?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This query returns the latest measurement result values of the :MEAS[:ARRAY]:PSUP:APOW measurement in a string. The measurement result value is a floating point real numbers representing the average current consumption, expressed in mA. <b>Note:</b> Any current measurement will need the MS Power Supply and Current Measurement options to be installed on your Willtek 3100.
<b>Example</b>	<b>:MEAS:PSUP:APOW</b> <b>:FETCh:PSUP:APOW?</b> Returns a string like "893.5" giving the average power consumption in mW.

**:FETCh:PSUPply:ACurrent**

<b>Syntax</b>	:FETCh:PSUPply:ACurrent?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This query returns the latest measurement result values of the :MEAS[:ARRAY]:PSUP:ACUR measurement in a string. The measurement result value is a floating point real numbers representing the average current consumption, expressed in mA. <b>Note:</b> Any current measurement will need the MS Power Supply and Current Measurement options to be installed on your Willtek 3100.
<b>Example</b>	<b>:MEAS:PSUP:ACUR</b> <b>:FETCh:PSUP:ACUR?</b> Returns a string like "395.4" giving the average current consumption in mA.

**:FETCh:PSUPply:PCURrent**

<b>Syntax</b>	:FETCh:PSUPply:PCURrent?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This query returns the latest measurement result values of the :MEAS[:ARRay]:PSUP:ALL measurement in a string. All measurement result values of the power and current consumption measurements are floating point real numbers, separated by commas.</p> <p>The order of the measurement result values within the result string is as follows:</p> <ol style="list-style-type: none"> <li>1. <b>APOW</b>, representing the average power consumption (in mW),</li> <li>2. <b>ACUR</b>, representing the average current consumption, expressed in mA,</li> <li>3. <b>PCUR</b>, representing the peak current consumption, expressed in mA.</li> </ol> <p><b>Note:</b> Any current measurement will need the MS Power Supply and Current Measurement options to be installed on your Willtek 3100.</p>
<b>Example</b>	<p><b>:MEAS:PSUP:PCUR</b> <b>:FETCh:PSUP:PCUR?</b></p> <p>Returns a string like "1256.2" giving the peak current consumption in mA.</p>

**GSM/GPRS commands :FETCh:GPRS:RFTX:GROup?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:GROup?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result values of the sequence of RF TX measurements as specified with the :CONF:MEAS:GRO:RFTX command and measured with the :MEAS:GPRS[:ARRay]:RFTX:GROup command. The string returned contains the related measurement result values. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the kind of measurements. The order of the measurement result values within the string is as described below for the :FETCh:GPRS:RFTX:ALL command.</p>
<b>Example</b>	<p><b>:CONF:MEAS:GRO:RFTX POW,PRMS</b> <b>:MEAS:GPRS:RFTX:GRO</b> <b>:FETCh:GPRS:RFTX:GROup?</b></p> <p>In this example, the group of measurements is defined by a power measurement combined with a RMS phase error measurement. The values returned in this example are: "4.53,9.98".</p> <p>Because of the internal order (see description of the command below), the first measurement result value delivered back is the RMS phase error, the second one the mobile's RF output power.</p>

**:FETCh:GPRS:RFTX:ALL?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:ALL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result values of the :MEAS:GPRS[:ARRay]:RFTX:ALL measurement. The string delivered back will contain 19 measurement result values, separated by commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. PPEAk, floating point real number, representing the peak phase error measurement,</li> <li>2. PRMS, floating point real number representing the root-mean square value of the phase error,</li> <li>3. FREQuency, floating point real number representing the mobile's frequency error,</li> <li>4. LENGTh, floating point real number representing the length of the burst in microseconds,</li> <li>5. UTIME, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li> <li>6. POWER, floating point real number representing the mobile's RF output power level in dBm,</li> <li>7. TEMPlate boolean number. A 0 indicates that the power/time template was <b>not</b> violated by a burst while a 1 means that there was a violation of the power/time template.</li> <li>8...15. CORNEr, eight floating point real numbers, representing the RF power level in dBm at eight predefined positions of a burst (see section Corner Points for details).</li> <li>16...19. FLATness, four floating point real numbers, representing the absolute minimum and maximum RF power levels of the mobile and their positions during the active part of the burst.</li> </ol>
<b>Example</b>	<pre>:MEAS:GPRS:RFTX:ALL :FETCh:GPRS:RFTX:ALL?</pre> <p>This example will return the latest measurement result values for the 19 most important RF TX measurements. The string delivered back is:</p> <pre>"5.13,1.94,-2.22,557.0,0.1,11.22,0,-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95,-0.05,-0.01,0.02,-0.05".</pre>

**:FETCh:GPRS:RFTX:PPEAK?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:PPEAK?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command returns the latest measurement result value(s) of the MEAS:GPRS[:ARRay]:RFTX:PPEAK measurement. The string delivered back will contain at least one floating point real number with the physical dimension of degrees.</p>
<b>Example</b>	<pre>:MEAS:GPRS:RFTX:PPEAK :FETCh:GPRS:RFTX:PPEAK?</pre> <p>The value returned is: "5.13".</p>

**:FETCh:GPRS:RFTX:PRMS?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:PRMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GPRS[:ARRay]:RFTX:PRMS measurement. The string delivered back will contain at least one floating point real number with the physical dimension of degrees.
<b>Example</b>	:MEAS:GPRS:ARR:RFTX:PRMS 5 :FETCh:GPRS:RFTX:PRMS? The values returned are: "2.49,2.37,2.51,2.47,2.35".

**:FETCh:GPRS:RFTX:FREQuency?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:FREQuency?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GPRS[:ARRay]:RFTX:FREQ measurement. The string delivered back will contain at least one floating point real number with the physical dimension of Hertz.
<b>Example</b>	:MEAS:GPRS:ARR:RFTX:FREQ 5 :FETCh:GPRS:RFTX:FREQ? The values returned are: "22.49,24.37,21.51,29.47,23.35".

**:FETCh:GPRS:RFTX:LENGth?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:LENGth?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GPRS[:ARRay]:RFTX:LENGth measurement. The string delivered back will contain at least one floating point real number with the physical dimension of microseconds.
<b>Example</b>	:MEAS:GPRS:RFTX:LENGth :FETCh:GPRS:RFTX:LENG? The value returned is: "557.0".

**:FETCh:GPRS:RFTX:UTIME?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:UTIME?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GPRS[:ARRay]:RFTX:UTIME measurement. The string delivered back will contain at least one floating point real number with the physical dimension of microseconds.
<b>Example</b>	:MEAS:GPRS:ARR:RFTX:UTIME 5 :FETCh:GPRS:RFTX:UTIM? The values returned are: "1.1,0.8,1.2,0.5,0.2".

**:FETCh:GPRS:RFTX:POWer?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:POWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:GPRS[:ARRay]:RFTX:POWer measurement. The string delivered back will contain at least one floating point real number with the physical dimension of dBm.
<b>Example</b>	:MEAS:GPRS:RFTX:POWer :FETCh:GPRS:RFTX:POWer? The value returned is: "13.05".

**:FETCh:GPRS:RFTX:TEMPlate?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:TEMPlate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest result value(s) of the :MEAS:GPRS[:ARRay]:RFTX:TEMPlate check. The string delivered back will contain at least one boolean number, representing the result of the check. A 0 indicates that the burst measured was within the PTT specified, while a 1 means that the burst did violate the PTT. The PTT is user-definable and can be set using the :CALC:GPRS:RFTX:TEMP commands.
<b>Example</b>	:MEAS:GPRS:ARR:RFTX:TEMPlate 10 :FETCh:GPRS:RFTX:TEMP? The values returned in this example are: "0,0,0,0,0,0,0,0,0,0". This means that all the ten bursts checked were within the PTT.

**:FETCh:GPRS:RFTX:CORNEr?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:CORNEr?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.



<b>Query</b>	The query form of this command returns the latest measurement result values of the :MEAS:GPRS[:ARRAY]:RFTX:CORNER measurement. The string delivered back will contain at least eight floating point real numbers with the physical dimension of dBm.
<b>Example</b>	:MEAS:GPRS:RFTX:CORNER :FETCh:GPRS:RFTX:CORN? The values returned are: "-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95".

**:FETCh:GPRS:RFTX:FLATness?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:FLATness?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result values of the :MEAS:GPRS[:ARRAY]:RFTX:FLATness measurement. The string delivered back will contain at least four floating point real numbers with the physical dimensions of dBm (first and third number) and bit periods (second and fourth number).
<b>Example</b>	:MEAS:GPRS:RFTX:FLATness :FETCh:GPRS:RFTX:FLAT? The values returned are: "-0.12,113.7,0.56,34.0".

**:FETCh:GPRS:RFTX:FPOWER?**

<b>Syntax</b>	:FETCh:GPRS:RFTX:FPOWER?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the :MEAS:GPRS[:ARRAY]:RFTX:FPOWER measurement. The string delivered back will contain at least one floating point real number with the physical dimension of dBm.
<b>Example</b>	:MEAS:GPRS:RFTX:FPOWER :FETCh:GPRS:RFTX:FPOWER? The value returned is: "13.05".

**:FETCh:GPRS:BLOCKdata:BURStshape?**

<b>Syntax</b>	:FETCh:GPRS:BLOCKdata:BURStshape?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	The query form of this command returns the latest data block describing the burst shape. For further details regarding this measurement, please refer to the description of the :MEAS:GPRS:BLOC:BURS command and the explanations given in section :MEASure:BLOCkdata. There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	:MEAS:GPRS:BLOC:BURS :FETC:GPRS:BLOC:BURS? The FETC command will return a data array, containing 711 floating point real numbers.

**:FETCh:GPRS:BLOCkdata:PHASerror?**

<b>Syntax</b>	:FETCh:GPRS:BLOCkdata:PHASerror?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the graph of the phase error. For further details regarding this measurement, please refer to the description of the :MEAS:GPRS:BLOC:PHAS command and the explanations given in section :MEASure:BLOCkdata. There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	:MEAS:GPRS:BLOC:PHAS :FETC:GPRS:BLOC:PHAS? The FETC command will return a data array, containing 711 floating point real numbers.

**:FETCh:GPRS:BLOCkdata:MSpectrum?**

<b>Syntax</b>	:FETCh:GPRS:BLOCkdata:MSpectrum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the graph of the modulation spectrum measurement. For further details regarding this measurement, please refer to the description of the :MEAS:GPRS:BLOC:MSP command and the explanations given in section :MEASure:BLOCkdata. There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	:MEAS:GPRS:BLOC:MSP :FETC:GPRS:BLOC:MSP? The FETC command will return a data array. The number of measurement result values delivered back is dependent on the span and resolution settings of the modulation spectrum analyzer.

**:FETCh:GPRS:RFRX:RBER:ALL?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:RBER:ALL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result values of the :MEAS:GPRS[:ARRay]:RFRX:RBER:ALL measurement. The string returned will contain three floating point real numbers, separated by commas. The order of these numbers and their meaning is as follows:</p> <ol style="list-style-type: none"> <li>1. the result of the residual bit error ratio measurement of the class Ib bits,</li> <li>2. the result of the residual bit error ratio measurement of the class II bits, and</li> <li>3. the result of the frame erasure ratio measurement.</li> </ol>
<b>Example</b>	<pre>:MEAS:GPRS:RFRX:RBER:ALL :FETCh:GPRS:RFRX:RBER:ALL?</pre> <p>This example will return the latest measurement result values for the three residual bit error measurements. The string delivered back in this example is: "0.2,1.7,0.3". This means that the RBER for class Ib bits is 0.2.</p>

**:FETCh:GPRS:RFRX:RBER:CIB?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:RBER:CIB?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRay]:RFRX:RBER:CIB measurement. The string delivered back will contain at least one floating point real number.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFRX:RBER:CIB 5 :FETCh:GPRS:RFRX:RBER:CIB?</pre> <p>The string delivered back is:  "0.2,0.1,0.2,0.3,0.2".</p>

**:FETCh:GPRS:RFRX:RBER:CII?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:RBER:CII?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRay]:RFRX:RBER:CII measurement. The string delivered back will contain at least one floating point real number.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFRX:RBER:CII 5 :FETCh:GPRS:RFRX:RBER:CII?</pre> <p>The string delivered back is:  "1.5,1.7,2.1,2.3,2.6".</p>

**:FETCh:GPRS:RFRX:RBER:FER?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:RBER:FER?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRay]:RFRX:RBER:FER measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	:MEAS:GPRS:RFRX:RBER:FER :FETCh:GPRS:RFRX:RBER:FER? The string delivered back is: "1.5".

**:FETCh:GPRS:RFRX:BER:ALL?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:BER:ALL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result values of the :MEAS:GPRS[:ARRay]:RFRX:BER:ALL measurement. The string returned will contain three floating point real numbers, separated by commas. The order of these numbers and their meaning is as follows: <ol style="list-style-type: none"><li>1. the result of the (nonresidual) bit error ratio measurement of the class Ia bits,</li><li>2. the result of the (nonresidual) bit error ratio measurement of the class Ib bits, and</li><li>3. the result of the (nonresidual) bit error ratio measurement of the class II bits.</li></ol>
<b>Example</b>	:MEAS:GPRS:ARR:RFRX:BER:ALL 3 :FETCh:GPRS:RFRX:BER:ALL? This example will deliver back the latest measurement result values for the three residual bit error measurements. The string delivered back in this example is: "0.2,0.3,1.7,0.2,0.4,1.8,0.1,0.2,0.8".

**:FETCh:GPRS:RFRX:BER:CIA?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:BER:CIA?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRay]:RFRX:BER:CIA measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	:MEAS:GPRS:RFRX:BER:CIA :FETCh:GPRS:RFRX:BER:CIA? The string delivered back is: "0.1".

**:FETCh:GPRS:RFRX:BER:CIB?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:BER:CIB?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRay]:RFRX:BER:CIB measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	:MEAS:GPRS:ARR:RFRX:BER:CIB 5 :FETCh:GPRS:RFRX:BER:CIB? The string delivered back is: "0.4,0.3,0.7,0.6,0.5".

**:FETCh:GPRS:RFRX:BER:CII?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:BER:CII?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRay]:RFRX:BER:CII measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	:MEAS:GPRS:RFRX:BER:CII :FETCh:GPRS:RFRX:BER:CII? The string delivered back is: "1.9".

**:FETCh:GPRS:RFRX:BER:CRC?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:BER:CRC?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRay]:RFRX:BER:CII measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	:MEAS:GPRS:RFRX:BER:CRC :FETCh:GPRS:RFRX:BER:CRC? The string delivered back in this example is: "1.9".

**:FETCh:GPRS:RFRX:FBER?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:FBER?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRAY]:RFRX:FBER measurement. The string delivered back will contain at least one floating point real number.
<b>Example</b>	:MEAS:GPRS:ARR:RFRX:FBER 5 :FETCh:GPRS:RFRX:FBER? The string delivered back is: "0.7,0.9,1.2,1.8,2.0".

**:FETCh:GPRS:RFRX:RTDelay?**

<b>Syntax</b>	:FETCh:GPRS:RFRX:RTDelay?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result value(s) of the :MEAS:GPRS[:ARRAY]:RFRX:RTDelay measurement. The string delivered back will contain at least one integer.
<b>Example</b>	:MEAS:GPRS:RFRX:RTD :FETCh:GPRS:RFRX:RTD? The string delivered back is: "8".

**:FETCh:GPRS:RFSP:ACPM:MODulation?**

<b>Syntax</b>	:FETCh:GPRS:RFSP:ACPM:MODulation?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data array for the ACPM modulation spectrum measurement. The string returned contains a multiple of 23 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the :MEAS:GPRS[:ARRAY]:RFSPpectrum:ACPM:MOD command.
<b>Example</b>	:MEAS:GPRS:RFSPpectrum:ACPM:MOD :FETCh:GPRS:RFSP:ACPM:MOD? The FETCh command will return a data array, containing 23 floating point real numbers.

**:FETCh:GPRS:RFSPpectrum:ACPM:MODPower?**

<b>Syntax</b>	:FETCh:GPRS:RFSPpectrum:ACPM:MODPower?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	The query form of this command returns the latest data array for the ACPM modulation spectrum measurement. The string returned contains a multiple of 24 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the :MEAS:GPRS[:ARRAY]:RFSpectrum:ACPM:MOD command.
<b>Example</b>	:MEAS:GPRS:RFSP:ACPM:MOD :FETC:GPRS:RFSP:ACPM:MOD? The FETC command will return a data array, containing 24 floating point real numbers (the power reference value and 23 values as in ACPM:MOD).

**:FETCh:GPRS:RFSP:ACPM:TRANSient?**

<b>Syntax</b>	:FETCh:GPRS:RFSP:ACPM:TRANSient?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data array for the measurement of the ACPM spectrum due to switching transients. The string returned contains a multiple of 27 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the :MEAS:GPRS[:ARRAY]:RFSpectrum:ACPM:TRAN command.
<b>Example</b>	:MEAS:GPRS:RFSpectrum:ACPM:TRAN :FETC:GPRS:RFSP:ACPM:TRAN? The FETC command will return a data array, containing 27 floating point real numbers.

**:FETCh:GPRS:MULTIslot:RFTX:ALL?**

<b>Syntax</b>	:FETCh:GPRS:MULTIslot:RFTX:ALL?
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	Only the query form of this command is available.
<b>Query</b>	Requires a preceding :MEAS:GPRS:ARR:MULT:RFTX:ALL <int1> command. Returns a string containing int1 times the result string defined for the :FETCh:GPRS:MULT:RFTX:ALL query.
<b>Example</b>	:CONF:GPRS:MSTA:MSL 2 :MEAS:GPRS:ARR:MULT:RFTX:ALL 10 :FETCh:GPRS:MULT:RFTX:ALL? Delivers a string containing $10 \times (1 + 2 \times 19) = 390$ results, separated by commas.

**:FETCh:GPRS:MULTIslot:RFTX:PPEAk?**

<b>Syntax</b>	:FETCh:GPRS:MULTIslot:RFTX:PPEAk?
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	Only the query form of this command is available.

<b>Query</b>	Returns a string containing <code>int1</code> times the result string from the <code>:MEASure:GPRS:CONT:MULT:RFTX:PPEAK</code> query. <code>int1</code> is specified with the preceding <code>:MEAS:GPRS:ARR:MULT:RFTX:PPEAK</code> command.
<b>Example</b>	<pre>:CONF:GPRS:MSTA:MSL 2 :MEAS:GPRS:ARR:MULT:RFTX:PPEAK 3 :FETCh:GPRS:MULT:RFTX:PPEAK?</pre> <p>Returns a string containing nine results separated by commas, for example  <code>2,8.3,9.6, 2,8.1,8.9, 2,8.2,9.5</code></p>

**:FETCh:GPRS:MULTIslot:RFTX:TEMPlate?**

<b>Syntax</b>	<code>:FETCh:GPRS:MULTIslot:RFTX:TEMPlate?</code>
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	Only the query form of this command is available.
<b>Query</b>	The return string contains <code>int1</code> times the number of the uplink time slots followed by the pass/fail results for the individual slots, one result for each slot. A 0 indicates that the burst shape is inside limits, 1 indicates outside limits for the respective part. <code>int1</code> is specified with the preceding <code>:MEAS:GPRS:ARR:MULT:RFTX:TEMP</code> command.
<b>Example</b>	<pre>:CONF:GPRS:MSTA:MSL 2 :MEAS:GPRS:ARR:MULT:RFTX:TEMP 3 :FETCh:GPRS:MULT:RFTX:TEMP?</pre> <p>Returns a string like the following:  <code>2,0,0, 2,0,1, 2,0,1</code>      In this example, the signal hits the limits in the second slot for the second and third measurement.</p>

**:FETCh:GPRS:MULTIslot:RFRX:BLER?**

<b>Syntax</b>	<code>:FETCh:GPRS:MULTIslot:RFRX:BLER?</code>
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	Only the query form of this command is available.
<b>Query</b>	Returns a string containing an integer number indicating the number of time slots measured, a floating point real number giving the BLER for all slots followed by floating point real numbers giving the BLER for individual slots, separated by commas.
<b>Example</b>	<pre>:CONF:GPRS:MSTA:MSL 2 :CALL:GPRS:MODE USF :MEAS:GPRS:ARR:MULT:RFRX:BLER 3 :FETCh:GPRS:MULT:RFRX:BLER?</pre> <p>Returns a string like  <code>2,1.1,0.7,1.4, 2,1.2,0.9,1.5, 2,1.1,0.8,1.3</code></p>



**EGPRS commands** : `FEtCh:EGPRs:RFTX:GRoup?`

<b>Syntax</b>	: <code>FEtCh:EGPRs:RFTX:GRoup?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the latest measurement result values of the sequence of EGPRS RF TX measurements as specified with the : <code>CONF:EGPRs:MEAS:GRo:RFTX</code> command and measured with the : <code>MEAS:EGPRs[:ARRAy]:RFTX:GRoup</code> command. As soon as all measurements of the first sequence have been completed, a string will be delivered back, containing the related measurement result values, separated by commas. The type of the measurement result values (i.e. floating point real numbers, integers or boolean numbers) depends on the measurements specified. The order of the measurement result values within the string is as described below for the : <code>FEtCh:EGPRs:RFTX:ALL</code> command.
<b>Example</b>	<pre>:CONF:EGPR:MEAS:GRo:RFTX POW,ERMS :MEAS:EGPR:RFTX:GRo :FEtCh:EGPR:RFTX:GRo?</pre> <p>In this example, the group of measurements is defined by a power level measurement combined with a EVM RMS phase error measurement. The string returned in this example is:  "4.53,9.98".</p> <p>Because of the internal order (see description of the command below), the first measurement result value delivered back is the EVM RMS phase error, the second one the mobile's RF output power level.</p>

**: `FEtCh:EGPRs:RFTX:ALL?`**

<b>Syntax</b>	: <code>FEtCh:EGPRs:RFTX:ALL?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>The query form of this command will return the latest measurement result values of the :MEAS:EGPR[:ARR]:RFTX:ALL measurement. The string delivered back will contain 17 measurement result values, separated with commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. ERMS, the error vector magnitude rms-averaged over a burst. EVM is a relative value and shown as a percentage,</li> <li>2. EPEAK, the maximum error vector magnitude within a burst. EVM is indicated per cent,</li> <li>3. ENFTH, the error vector magnitude that is not exceeded by 95% of the symbols of a burst. The 95% EVM is shown in %,</li> <li>4. EOFFSET, the origin offset indicates the accuracy of the i/Q modulators DC setup; it is usually an undesire leakage produced due to a DC offset in the phones I/Q modulator. It is measured in dBc,</li> <li>5. FREQUENCY, floating point real number representing the mobile's frequency error,</li> <li>6. LENGTH, floating point real number representing the length of the burst in microseconds,</li> <li>7. UTIME, floating point real number representing the timing error of the mobile under test in microseconds (taking the ordered timing advance into account),</li> <li>8. POWER, floating point real number representing the mobile's RF output power level in dBm,</li> <li>9. TEMPLATE boolean number. 0 indicates that the power-time template (PTT) was not violated by the last burst measured, while a 1 means that the burst did violate the PTT.</li> <li>10..17. CORNER, eight floating point real numbers, representing the RF power level in dBm at eight pre-defined positions of a burst.</li> </ol>
<b>Example</b>	<pre>:MEAS:EGPR:RFTX:ALL :FETC:EGPR:RFTX:ALL?</pre> <p>This example will return the latest measurement result values for the 17 most important EGPRS RF TX measurements. The string delivered back in this example is: "5.13,11.94,3,12,4.54,-2.22,557.0,0.1,11.22,0,-72.18, -61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95".</p>

**:FETCh:EGPRs:RFTX:ERMS?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:ERMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPR[:ARR]:RFTX:ERMS measurement. The string delivered back will contain at least one floating point real number with the physical dimension of %.
<b>Example</b>	<pre>:MEAS:EGPR:ARR:RFTX:ERMS 5 :FETC:EGPR:RFTX:ERMS?</pre> <p>The error vector magnitude rms-averaged measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "2.33,2.53,1.97,2.41,1.79".</p>

**:FETCh:EGPRs:RFTX:EPEAk?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:EPEAk?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPR[:ARR]:RFTX:EPEA measurement. The string delivered back will contain at least one floating point real number with the physical dimension of %.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:EPEA 5 :FETC:EGPR:RFTX:EPEA? The maximum error vector magnitude measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "6.33,8.53,11.97,9.41,10.79".

**:FETCh:EGPRs:RFTX:ENFT?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:ENFT?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPR[:ARR]:RFTX:ENFT measurement. The string delivered back will contain at least one floating point real number with the physical dimension of %.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:ENFT 5 :FETC:EGPR:RFTX:ENFT? The maximum error vector magnitude measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "4.33,5.53,1.97,3.41,2.79".

**:FETCh:EGPRs:RFTX:EOFFset?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:EOFFset?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPR[:ARR]:RFTX:EOFF measurement. The string delivered back will contain at least one floating point real number with the physical dimension of dBc.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:EOFF 5 :FETC:EGPR:RFTX:EOFF? The maximum error vector magnitude measurement will be performed five times. The measurement results will be stored internally and read by the FETC command. An example of the string returned is: "4.33,5.53,1.97,3.41,2.79".

**:FETCh:EGPRs:RFTX:FREQuency?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:FREQuency?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPRs[:ARRay]:RFTX:FREQ measurement. The string delivered back will contain at least one floating point real number with the physical dimension of Hertz.
<b>Example</b>	:MEAS:EGPRs:ARR:RFTX:FREQ 5 :FETCh:EGPRs:RFTX:FREQ? The values returned in this example are: "22.49,24.37,21.51,29.47,23.35".

**:FETCh:EGPRs:RFTX:LENGth?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:LENGth?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPRs[:ARRay]:RFTX:LENGth measurement. The string delivered back will contain at least one floating point real number with the physical dimension of microseconds.
<b>Example</b>	:MEAS:EGPRs:RFTX:LENGth :FETCh:EGPRs:RFTX:LENG? The value returned in this example is: "557.0".

**:FETCh:EGPRs:RFTX:UTIME?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:UTIME?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPRs[:ARRay]:RFTX:UTIME measurement. The string delivered back will contain at least one floating point real number with the physical dimension of microseconds.
<b>Example</b>	:MEAS:EGPRs:ARR:RFTX:UTIME 5 :FETCh:EGPRs:RFTX:UTIM? The values returned in this example are: "1.1,0.8,1.2,0.5,0.2".

**:FETCh:EGPRs:RFTX:POWer?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:POWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result value(s) of the MEAS:EGPRs[:ARRay]:RFTX:POWer measurement. The string delivered back will contain at least one floating point real number with the physical dimension of dBm.
<b>Example</b>	:MEAS:EGPRs:RFTX:POWer :FETCh:EGPRs:RFTX:POWer? The value returned in this example is: "13.05".

**:FETCh:EGPRs:RFTX:TEMPlate?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:TEMPlate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest result value(s) of the :MEAS:EGPRs[:ARRay]:RFTX:TEMPlate check. The string delivered back will contain at least one boolean number, representing the result of the check. A 0 indicates that the burst measured was within the PTT specified, while a 1 means that the burst did violate the PTT. The PTT is user-definable and can be set using the :CALC:EGPRs:RFTX:TEMP commands.
<b>Example</b>	:MEAS:EGPRs:ARR:RFTX:TEMPlate 10 :FETCh:EGPRs:RFTX:TEMP? The values returned in this example are: "0,0,0,0,0,0,0,0,0,0". This means that all the ten bursts checked were within the PTT.

**:FETCh:EGPRs:RFTX:CORNEr?**

<b>Syntax</b>	:FETCh:EGPRs:RFTX:CORNEr?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest measurement result values of the :MEAS:EGPRs[:ARRay]:RFTX:CORNEr measurement. The string delivered back will contain at least eight floating point real numbers with the physical dimension of dBm.
<b>Example</b>	:MEAS:EGPRs:RFTX:CORNEr :FETCh:EGPRs:RFTX:CORNEr? The values returned in this example are: "-72.18,-61.91,-20.91,-0.05,-0.04,-17.97,-56.60,-73.95".

**:FETCh:EGPRs:BLOCKdata:BURStshape?**

<b>Syntax</b>	:FETCh:EGPRs:BLOCKdata:BURStshape?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the burst shape. For further details regarding this measurement, please refer to the description of the :MEAS:EGPRs:BLOC:BURS command and the explanations given in section :MEASure:BLOCKdata. There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	:MEAS:EGPRs:BLOC:BURS :FETCh:EGPRs:BLOC:BURS? The FETCh command will return a data array, containing 711 floating point real numbers.

**:FETCh:EGPRs:BLOCKdata:MSpectrum?**

<b>Syntax</b>	:FETCh:EGPRs:BLOCKdata:MSpectrum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the graph of the modulation spectrum measurement. For further details regarding this measurement, please refer to the description of the :MEAS:EGPRs:BLOC:MSP command and the explanations given in section :MEASure:BLOCKdata. There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	:MEAS:EGPRs:BLOC:MSP :FETCh:EGPRs:BLOC:MSP? The FETCh command will return a data array. The number of measurement result values delivered back is dependent on the span and resolution settings of the modulation spectrum analyzer.

**:FETCh:EGPRs:RFSP:ACPM:MODulation?**

<b>Syntax</b>	:FETCh:EGPRs:RFSP:ACPM:MODulation?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data array for the ACPM modulation spectrum measurement. The string returned contains a multiple of 23 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the :MEAS:EGPRs[:ARRAY]:RFSPpectrum:ACPM:MOD command.

**Example** :MEAS:EGPRS:RFSPectrum:ACPM:MOD  
:FETC:EGPRS:RFSP:ACPM:MOD?  
The FETC command will return a data array, containing 23 floating point real numbers.

**:FETCh:EGPRs:RFSP:ACPM:MODPower?**

**Syntax** :FETCh:EGPRs:RFSP:ACPM:MODPower?  
**Parameters** There are no parameters.  
**Description** There is solely a query form of this command available.  
**Query** The query form of this command returns the latest data array for the ACPM modulation spectrum measurement. The string returned contains a multiple of 24 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the :MEAS:EGPRS[:ARRay]:RFSPectrum:ACPM:MOD command.  
**Example** :MEAS:EGPRS:RFSPectrum:ACPM:MOD  
:FETC:EGPRS:RFSP:ACPM:MOD?  
The FETC command will return a data array, containing 24 floating point real numbers (the power reference value and 23 values as in ACPM:MOD).

**:FETCh:EGPRs:RFSP:ACPM:TRANsient?**

**Syntax** :FETCh:EGPRs:RFSP:ACPM:TRANsient?  
**Parameters** There are no parameters.  
**Description** There is solely a query form of this command available.  
**Query** The query form of this command returns the latest data array for the measurement of the ACPM spectrum due to switching transients. The string returned contains a multiple of 27 floating point real numbers, separated by commas. For further details regarding this measurement, please refer to the description of the :MEAS:EGPRS[:ARRay]:RFSP:ACPM:TRAN command.  
**Example** :MEAS:EGPRS:RFSPectrum:ACPM:TRAN  
:FETC:EGPRS:RFSP:ACPM:TRAN?  
The FETC command will return a data array, containing 27 floating point real numbers.

**:FETCh:EGPRs:MULTIslot:RFTX:TEMPlate?**

**Syntax** :FETCh:EGPRs:MULTIslot:RFTX:TEMPlate?  
**Parameters** There are no parameters with this command.  
**Description** Only the query form of this command is available.  
**Query** The return string contains *int1* times the number of the uplink time slots followed by the pass/fail results for the individual slots, one result for each slot. A 0 indicates that the burst shape is inside limits, 1 indicates outside limits for the respective part. *int1* is specified with the preceding :MEAS:EGPRS:ARR:MULT:RFTX:TEMP command.

**Example** :CONF:EGPRS:MSTA:MSL 2  
 :MEAS:EGPRS:ARR:MULT:RFTX:TEMP 3  
 :FETCh:EGPRS:MULT:RFTX:TEMP?  
 Returns a string like the following:  
 2,0,0, 2,0,1, 2,0,1  
 In this example, the signal hit the limits for the second slot in the second and third measurement.

**:FETCh:EGPRS:MULTIslot:RFSPectrum:ACPM:MODulation?**

**Syntax** :FETCh:EGPRS:MULTIslot:RFSPectrum:ACPM:MODulation?  
**Parameters** There are no parameters with this command.  
**Description** Only the query form of this command is available.  
**Query** Returns int1 times the number of active uplink slots followed by 23 float values per time slot. int1 is the number of measurements defined in the respective MEAS:EGPRS:ARRay command. For the meaning of the 23 float values per slot, see :MEAS:EGPRS:ACPM:MODulation.  
**Example** :CONF:EGPRS:MSTA:MSL 2  
 :MEAS:EGPRS:ARR:MULT:RFSP:ACPM:MOD 3  
 :FETCh:EGPRS:MULT:RFSP:ACPM:MOD?

**:FETCh:EGPRS:MULTIslot:RFSPectrum:ACPM:TRANSient?**

**Syntax** :FETCh:EGPRS:MULTIslot:RFSPectrum:ACPM:TRANSient?  
**Parameters** There are no parameters with this command.  
**Description** Only the query form of this command is available.  
**Query** Returns int1 times the number of active uplink slots followed by 27 float values per time slot. For the meaning of the 27 float values, see :MEAS:EGPRS:ACPM:TRANSient.  
**Example** :CONF:EGPRS:MSTA:MSL 2  
 :FETCh:EGPRS:MULT:RFSP:ACPM:TRAN?

**CDMA2000 commands** :FETCh:CDMA:LAST

**Syntax** :FETCh:CDMA:LAST  
**Parameters** There are no parameters.  
**Description** Only the query form is supported.  
**Query** Returns exactly the same values returned by the last FETCh or MEASure query.  
**Example** :FETCh:CDMA:LAST?



**:FEtCh:CDMA:RfTX:GRoup**

<b>Syntax</b>	:FEtCh:CDMA:RfTX:GRoup
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns the same parameters as for the :MEASure:ARRAY:RfTX:GRoup measurement and as defined by :CONfIGure:MEASure:GRoup:RfTX.
<b>Example</b>	:FEtCh:CDMA:RfTX:GRo?

**:FEtCh:CDMA:RfTX:FREQ:ERRor**

<b>Syntax</b>	:FEtCh:CDMA:RfTX:FREQ:ERRor?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:CDMA:CONT ARRay:RfTX:FREQ:ERR measurement command.
<b>Example</b>	:FEtCh:CDMA:RfTX:FREQ?

**:FEtCh:CDMA:RfTX:POWer**

<b>Syntax</b>	:FEtCh:CDMA:RfTX:POWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form of this command is supported only.
<b>Query</b>	The command returns the results from the :MEASure:CDMA:CONT ARRay:RfTX:POWer measurement command.
<b>Example</b>	:FEtCh:CDMA:RfTX:POW?

**:FEtCh:CDMA:RfTX:MAXimum**

<b>Syntax</b>	:FEtCh:CDMA:RfTX:MAXimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the results from the :MEASure:CDMA:CONT ARRay:RfTX:MAXimum measurement command.
<b>Example</b>	:FEtCh:CDMA:RfTX:MAXimum?

**:FEtCh:CDMA:RfTX:MINimum**

<b>Syntax</b>	:FEtCh:CDMA:RfTX:MINimum?
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<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the results from the :MEASure:CDMA:CONT ARRay:RFTX:MINimum measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:MINimum?

**:FETCh:CDMA:RFTX:STANdby**

<b>Syntax</b>	:FETCh:CDMA:RFTX:STANdby?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the results from the :MEASure:CDMA:CONT ARRay:RFTX:STANdby measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:STANdby?

**:FETCh:CDMA:RFTX:ACCess**

<b>Syntax</b>	:FETCh:CDMA:RFTX:ACCess?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The commands return the results from the :MEASure:CDMA:CONT:RFTX:ACCess measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:ACCess?

**:FETCh:CDMA:RFTX:CODEdomain:IMMediate**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CODEdomain:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns one of the predefined expressions PASS   FAIL   NONE as a result from a previous code domain measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CODEdomain?

**:FETCh:CDMA:RFTX:CODEdomain:IPOWer?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CODEdomain:IPOWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.

<b>Query</b>	The command returns the 16 results from a previous :MEASure:CDMA:CONT:RFTX:CODE:IPOW measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CODE:IPOWER?

**:FETCh:CDMA:RFTX:CODEdomain:INOIse**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CODEdomain:INOIse?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the 16 results from a previous :MEASure:CDMA:CONT:RFTX:CODE:INOIse measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CODE:INOIse?

**:FETCh:CDMA:RFTX:CODEdomain:QPOWER?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CODEdomain:QPOWER?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The commands return the 16 results from a previous :MEASure:CDMA:CONT:RFTX:CODE:QPOWER measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CODE:QPOWER?

**:FETCh:CDMA:RFTX:CODEdomain:QNOIse?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CODEdomain:QNOIse?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the 16 results from a previous :MEASure:CDMA:CONT:RFTX:CODE:QNOIse measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CODE:QNOIse?

**:FETCh:CDMA:RFTX:GATed:IMMediate?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:GATed:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns one of the predefined expressions PASS   FAIL   NONE as result from a gated power measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:GATed:IMMediate?

**:FETCh:CDMA:RFTX:GATed:AVERAge?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:GATed:AVERAge?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:GATed:AVERAge measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:GATed:AVERAge?

**:FETCh:CDMA:RFTX:GATed:MINimum**

<b>Syntax</b>	:FETCh:CDMA:RFTX:GATed:MINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:GATed:MINimum measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:GATed:MINimum?

**:FETCh:CDMA:RFTX:GATed:MAXimum?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:GATed:MAXimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The commands return result from a previous :MEASure:CDMA:CONT:RFTX:GATed:MAXimum measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:GATed:MAXimum?

**:FETCh:CDMA:RFTX:OPEN:IMMediate?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:OPEN:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns one of the predefined expressions PASS   FAIL   NONE as result from an open loop power measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:OPEN:IMMediate?

**:FETCh:CDMA:RFTX:OPEN:INITial**

<b>Syntax</b>	:FETCh:CDMA:RFTX:OPEN:INITial?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:OPEN:INITial measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:OPEN:INITial?

**:FETCh:CDMA:RFTX:CLOSeD:IMMediate?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CLOSeD:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns one of the predefined expressions PASS   FAIL   NONE as a result from a closed loop power measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CLOSeD:IMMediate?

**:FETCh:CDMA:RFTX:CLOSeD:INITial?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CLOSeD:INITial?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:CLOSeD:INITial measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CLOSeD:INITial?

**:FETCh:CDMA:RFTX:CLOSeD:MAXimum?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CLOSeD:MAXimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:CLOSeD:MAXimum measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CLOSeD:MAXimum?

**:FETCh:CDMA:RFTX:CLOSeD:MINimum?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CLOSeD:MINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:CLOSeD:MINimum measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CLOSeD:MINimum?

**:FETCh:CDMA:RFTX:WQUality?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:WQUality?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:WQUality measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:WQUality?

**:FETCh:CDMA:RFTX:CDPHase?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CDPHase? <PredefExp>
<b>Parameters</b>	PredefExp is one of the predefined expressions ALL   RPICh   RDCCh   RSCH2x2   RSCH2x4   RFCh   RCCCh   RSCH1x4   RSCH1x8. The default is ALL.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:CDPHase measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CDPHase?

**:FETCh:CDMA:RFTX:CDPower?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CDPower? <PredefExp>
<b>Parameters</b>	PredefExp is one of the predefined expressions ALL   RPICh   RDCCh   RSCH2x2   RSCH2x4   RFCh   RCCCh   RSCH1x4   RSCH1x8. The default is ALL.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:CDPower measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CDPower?

**:FETCh:CDMA:RFTX:CDTIme?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:CDTIme? <PredefExp>
<b>Parameters</b>	PredefExp is one of the predefined expressions ALL   RPICCh   RDCCh   RSCH2x2   RSCH2x4   RFCH   RCCCh   RSCH1x4   RSCH1x8. The default is ALL.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:CDTIme measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:CDTIme?

**:FETCh:CDMA:RFTX:TIme**

<b>Syntax</b>	:FETCh:CDMA:RFTX:TIme?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:TIme measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:TIme?

**:FETCh:CDMA:RFTX:VERRor:RMS?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:RMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:RMS measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:RMS?

**:FETCh:CDMA:RFTX:VERRor:PEAK?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:PEAK?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:PEAK measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:PEAK?

**:FETCh:CDMA:RFTX:VERRor:OOFFset**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:OOFFset?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:OOFFset measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:OOFFset?

**:FETCh:CDMA:RFTX:VERRor:IQIMbalance?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:IQIMbalance?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:IQIMbalance measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:IQIMbalance?

**:FETCh:CDMA:RFTX:VERRor:MAGNitude:RMS**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:MAGNitude:RMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:MAGNitude:RMS measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:MAGNitude:RMS?

**:FETCh:CDMA:RFTX:VERRor:MAGNitude:PEAK?**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:MAGNitude:PEAK?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:MAGNitude:PEAK measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:MAGNitude:PEAK?



**:FETCh:CDMA:RFTX:VERRor:PHASe:RMS**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:PHASe:RMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:PHASE:RMS measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:PHASe:RMS?

**:FETCh:CDMA:RFTX:VERRor:PHASe:PEAK**

<b>Syntax</b>	:FETCh:CDMA:RFTX:VERRor:PHASe:PEAK?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFTX:VERR:PHASE:PEAK measurement command.
<b>Example</b>	:FETCh:CDMA:RFTX:VERRor:PHASe:PEAK?

**:FETCh:CDMA:RFRX:FER:IMMediate?**

<b>Syntax</b>	:FETCh:CDMA:RFRX:FER:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:FER:IMMediate measurement command.
<b>Example</b>	:FETCh:CDMA:RFRX:FER:IMMediate?

**:FETCh:CDMA:RFRX:FER:FRAMe:ERRor**

<b>Syntax</b>	:FETCh:CDMA:RFRX:FER:FRAMe:ERRor?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:FER:FRAMe:ERRor measurement command.
<b>Example</b>	:FETCh:CDMA:RFRX:FER:FRAMe:ERR?

**:FETCh:CDMA:RFRX:FER:FRAMe:TRANsmitted?**

<b>Syntax</b>	:FETCh:CDMA:RFRX:FER:FRAMe:TRANsmitted?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:FER:FRAMe:TRANsmitted measurement command.
<b>Example</b>	:FETCh:CDMA:RFRX:FER:FRAMe:TRANsmitted?

**:FETCh:CDMA:RFRX:FER:STATus:IMMediate**

<b>Syntax</b>	:FETCh:CDMA:RFRX:FER:STATus:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns one of the predefined expressions PASS   FAIL   CONPASS   CONFALL   NONE as result from a FER measurement command.
<b>Example</b>	:FETCh:CDMA:RFRX:FER:STAT:IMMediate?

**:FETCh:CDMA:RFRX:RFER:IMMediate**

<b>Syntax</b>	:FETCh:CDMA:RFRX:RFER:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:RFER:IMMediate measurement command.
<b>Example</b>	:FETCh:CDMA:RFRX:RFER:IMMediate?

**:FETCh:CDMA:RFRX:RFER:PILA:LEVel?**

<b>Syntax</b>	:FETCh:CDMA:RFRX:RFER:PILA:LEVel?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:RFER:PILA:LEVel measurement command.
<b>Example</b>	:FETCh:CDMA:RFRX:RFER:PILA:LEVel?

**:FETCh:CDMA:RFRX:RFER:PILB:LEVel**

<b>Syntax</b>	:FETCh:CDMA:RFRX:RFER:PILB:LEVel?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:RFER:PILB:LEVel measurement command.
<b>Example</b>	:FETCh:CDMA:RFRX:RFER:PILB:LEVel?

**:FETCh:CDMA:RFRX:RFER:FRAMe:ERRor?**

<b>Syntax</b>	:FETCh:CDMA:RFRX:RFER:FRAMe:ERRor?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:RFER:FRAMe:ERRor measurement com- mand.
<b>Example</b>	:FETCh:CDMA:RFRX:RFER:FRAMe:ERR?

**:FETCh:CDMA:RFRX:RFER:FRAMe:TRANSmitted?**

<b>Syntax</b>	:FETCh:CDMA:RFRX:RFER:FRAMe:TRANSmitted?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:CDMA:CONT:RFRX:RFER:FRAMe:TRANSmitted measure- ment command.
<b>Example</b>	:FETCh:CDMA:RFRX:RFER:FRAMe:TRANSmitted?

**:FETCh:CDMA:RFSP:ACPM:MODulation?**

<b>Syntax</b>	:FETCh:CDMA:RFSP:ACPM:MODulation?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data array for the ACPM modula- tion spectrum measurement.
<b>Example</b>	:MEAS:CDMA:ARRay:RFSPectrum:ACPM:MOD 5 :FETC:CDMA:RFSP:ACPM:MOD? The Fetch command will return a data array, containing 5 times 25 floating point real numbers.

**:FETCh:CDMA:MSpectrum?**

<b>Syntax</b>	:FETCh:CDMA:MSpectrum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command returns the latest data block describing the graph of the modulation spectrum measurement. For further details regarding this measurement, please refer to the description of the :MEAS:CDMA:MSP command and the explanations given in section :MEASure:BLOCKdata. There, you will also find all information about the number, type and order of the measurement result values returned in the result string.
<b>Example</b>	:MEAS:CDMA:MSP :FETCh:CDMA:MSP? The FETCh command will return a data array. The number of measurement result values delivered back is dependent on the span and resolution settings of the modulation spectrum analyzer.

**AMPS commands :FETCh:AMPS:LAST**

<b>Syntax</b>	:FETCh:AMPS:LAST
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns exactly the same values returned by the last FETCh: or MEASure: query.
<b>Example</b>	:FETCh:AMPS:LAST?

**:FETCh:AMPS:RFTX:GROup**

<b>Syntax</b>	:FETCh:AMPS:RFTX:GROup
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns the same parameters as for the :MEASure:ARRAY:RFTX:GROup measurement and as defined by :CONFIgure:MEASure:GROup:RFTX.
<b>Example</b>	:FETCh:AMPS:RFTX:GRO?

**:FETCh:AMPS:RFTX:POWer**

<b>Syntax</b>	:FETCh:AMPS:RFTX:POWer?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:POWer measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:POW?

**:FETCh:AMPS:RFTX:DEV:SAT**

<b>Syntax</b>	:FETCh:AMPS:RFTX:DEV:SAT <Int1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:DEV:SAT measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:DEV:SAT?

**:FETCh:AMPS:RFTX:DEV:ST**

<b>Syntax</b>	:FETCh:AMPS:RFTX:DEV:ST <Int1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:DEV:ST measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:DEV:ST?

**:FETCh:AMPS:RFTX:DEV:AUD**

<b>Syntax</b>	:FETCh:AMPS:RFTX:DEV:AUD <Int1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:DEV:AUD measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:DEV:AUD?

**:FETCh:AMPS:RFTX:FREQ:ERRor**

<b>Syntax</b>	:FETCh:AMPS:RFTX:FREQ:ERRor?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:FREQ:ERR measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:FREQ?

**:FETCh:AMPS:RFTX:FREQ:ERR:SAT**

<b>Syntax</b>	:FETCh:AMPS:RFTX:FREQ:ERR:SAT <Int1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:FREQ:ERR:SAT measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:FREQ:ERR:SAT?

**:FETCh:AMPS:RFTX:FREQ:ERR:ST**

<b>Syntax</b>	:FETCh:AMPS:RFTX:FREQ:ERR:ST <Int1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:FREQ:ERR:ST measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:FREQ:ERR:ST?

**:FETCh:AMPS:RFRX:GROup**

<b>Syntax</b>	:FETCh:AMPS:RFRX:GROup
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns the same parameters as for the :MEASure:ARRAY:RFRX:GROup measurement and as defined by :CONFIgure:MEASure:GROup:RFRX.
<b>Example</b>	:FETCh:AMPS:RFRX:GRO?

**:FETCh:AMPS:RFRX:SINad**

<b>Syntax</b>	:FETCh:AMPS:FRX:SINad <Int1>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFRX:SINT measurement command.
<b>Example</b>	:FETCh:AMPS:RFRX:SINad?

**:FETCh:AMPS:RFRX:ACLevel**

<b>Syntax</b>	:FETCh:AMPS:RFRX:ACLevel <Int1>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFRX:ACL measurement command.
<b>Example</b>	:FETCh:AMPS:RFTX:ACLevel?

**1xEV-DO commands :FETCh:EVDO:LAST**

<b>Syntax</b>	:FETCh:EVDO:LAST?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns exactly the same values returned by the last FETCh: or MEASure: query.
<b>Example</b>	:MEAS:EVDO:RFTX:FREQ:ERR? Starts the measurement of the mobile's frequency error and returns the result, e.g.: "-53" :FETCh:EVDO:LAST? String returned in this example: "-53".

**:FETCh:EVDO:RFTX:GRoup**

<b>Syntax</b>	:FETCh:EVDO:RFTX:GRoup?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns the same parameters as for the :MEASure:ARRAY:RFTX:GRoup mea- surement and as defined by :CONFIgure:MEASure:GRoup:RFTX.
<b>Example</b>	:FETCh:EVDO:RFTX:GRoup?

**:FETCh:EVDO:RFTX:FREQuency:ERRor**

<b>Syntax</b>	:FETCh:EVDO:RFTX:FREQuency:ERRor?
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<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEAS:EVDO:CONT ARR:RFTX:FREQ:ERR measurement command, i.e. a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the mobile's frequency error. The physical units are set using the :MEAS:EVDO:RFTX:FREQ:UNIT command. The real numbers returned are in the range from -1000 to 1000 with a resolution of 1.0.
<b>Example</b>	:MEAS:EVDO:RFTX:FREQ:UNIT HZ :MEAS:EVDO:ARR:RFTX:FREQ:ERR 5 :FETCh:EVDO:RFTX:FREQuency:ERRor? The first command sets the physical units to Hz. The second command starts an array measurement of the frequency error. The results returned in this example by the third command are: "-53, -48, -39, 47, 63".

**:FETCh:EVDO:RFTX:Time:OFFSet**

<b>Syntax</b>	:FETCh:EVDO:RFTX:Time:OFFSet?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONT:RFTX:Time measurement command, i.e. a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in microseconds (1E-6 s). The real numbers returned are in the range from -5 to 5 with a resolution of 0.001.
<b>Example</b>	:FETCh:EVDO:RFTX:Time:OFFSet?

**:FETCh:EVDO:RFTX:POWer[:MEAN]**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer[:MEAN]?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form of this command is supported only.
<b>Query</b>	The command returns the results from the :MEASure:EVDO:CONT ARRay:RFTX:POWer:MEAN measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in dBm. The real numbers returned are in the range from -70 to +36 with a resolution of 0.1.
<b>Example</b>	:FETCh:EVDO:RFTX:POW:MEAN?

**:FETCh:EVDO:RFTX:POWer:MAXimum**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:MAXimum?
<b>Parameters</b>	There are no parameters for this command.



<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the results from the :MEAS:EVDO:CONT ARR:RFTX:POW:MAX measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in dBm. The real numbers returned are in the range from -70 to +36 with a resolution of 0.1.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:MAXimum?

**:FETCh:EVDO:RFTX:POWer:MINimum**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:MINimum?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the results from the :MEASure:EVDO:CONTInuous ARRay:RFTX:POWer:MINimum measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in dBm. The real numbers returned are in the range from -70 to +36 with a resolution of 0.1.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:MINimum?

**:FETCh:EVDO:RFTX:POWer:STANdby**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:STANdby?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the results from the :MEASure:EVDO:CONT ARRay:RFTX:POWer:STANdby measurement command.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:STANdby?

**:FETCh:EVDO:RFTX:POWer:APRobe**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:APRobe?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the results from the :MEASure:EVDO:CONTInuous ARRay:RFTX:POWer:APRobe measurement command.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:APRobe?

**:FETCh:EVDO:RFTX:POWer:CLOSEd:IMMediate**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:IMMediate?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns one of the predefined expressions PASS   FAIL   NONE as a result from a closed loop power measurement command.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:IMMediate?

**:FETCh:EVDO:RFTX:POWer:CLOSEd:INITial**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:INITial?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONT:RFTX:CLOSEd:INITial measurement command.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:INITial?

**:FETCh:EVDO:RFTX:POWer:CLOSEd:MAXimum**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:MAXimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONT:RFTX:CLOSEd:MAXimum measurement command.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:MAXimum?

**:FETCh:EVDO:RFTX:POWer:CLOSEd:MINimum**

<b>Syntax</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:MINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONT:RFTX:CLOSEd:MINimum measurement command.
<b>Example</b>	:FETCh:EVDO:RFTX:POWer:CLOSEd:MINimum?

**:FETCh:EVDO:RFTX:VERRor:RMS**

<b>Syntax</b>	:FETCh:EVDO:RFTX:VERRor:RMS?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEAS:EVDO:CONTinuous   ARRay:RFTX:VERR:RMS measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in form of a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:FETCh:EVDO:RFTX:VERRor:RMS?

**:FETCh:EVDO:RFTX:VERRor:PEAK**

<b>Syntax</b>	:FETCh:EVDO:RFTX:VERRor:PEAK?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONTinuous   ARRay:RFTX:VERRor:PEAK measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in form of a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:FETCh:EVDO:RFTX:VERRor:PEAK?

**:FETCh:EVDO:RFTX:VERRor:MAGNitude:RMS**

<b>Syntax</b>	:FETCh:EVDO:RFTX:VERRor:MAGNitude:RMS?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONTinuous   ARRay:RFTX:VERR:MAGNitude:RMS measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in form of a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:FETCh:EVDO:RFTX:VERRor:MAGNitude:RMS?

**:FETCh:EVDO:RFTX:VERRor:MAGNitude:PEAK**

<b>Syntax</b>	:FETCh:EVDO:RFTX:VERRor:MAGNitude:PEAK?
<b>Parameters</b>	There are no parameters for this command.

<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONTinuous ARRay:RFTX:VERR:MAGNitude:PEAK measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in form of a percentage. The real numbers returned are in the range from 0 to 200 with a resolution of 0.1.
<b>Example</b>	:FETCh:EVDO:RFTX:VERRor:MAGNitude:PEAK?

**:FETCh:EVDO:RFTX:VERRor:PHASe:RMS**

<b>Syntax</b>	:FETCh:EVDO:RFTX:VERRor:PHASe:RMS?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONTinuous ARRay:RFTX:VERRor:PHASe:RMS measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in degrees. The real numbers returned are in the range from -45 to 45 with a resolution of 0.01.
<b>Example</b>	:FETCh:EVDO:RFTX:VERRor:PHASe:RMS?

**:FETCh:EVDO:RFTX:VERRor:PHASe:PEAK**

<b>Syntax</b>	:FETCh:EVDO:RFTX:VERRor:PHASe:PEAK?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONT:RFTX:VERR:PHASe:PEAK measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in degrees. The real numbers returned are in the range from -45 to 45 with a resolution of 0.01.
<b>Example</b>	:FETCh:EVDO:RFTX:VERRor:PHASe:PEAK?

**:FETCh:EVDO:RFTX:VERRor:IQOFfset**

<b>Syntax</b>	:FETCh:EVDO:RFTX:VERRor:IQOFfset?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.

<b>Query</b>	The command returns the result from a previous <code>:MEASure:EVDO:CONTInuous ARRay:RFTX:VERRor:OOffset</code> measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in dBc. The real numbers returned are in the range from -60 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:FETCh:EVDO:RFTX:VERRor:IQOffset?</code>

**:FETCh:EVDO:RFTX:VERRor:IQIMbalance**

<b>Syntax</b>	<code>:FETCh:EVDO:RFTX:VERRor:IQIMbalance?</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous <code>:MEASure:EVDO:CONTInuous ARRay:RFTX:VERRor:IQIMbalance</code> measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the measurement results in dB. The real numbers returned are in the range from -99 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:FETCh:EVDO:RFTX:VERRor:IQIMbalance?</code>

**:FETCh:EVDO:RFTX:WQUality**

<b>Syntax</b>	<code>:FETCh:EVDO:RFTX:WQUality?</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the result from a previous <code>:MEASure:EVDO:CONTInuous ARRay:RFTX:WQUality</code> measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the modulation quality factor. The real numbers returned are in the range from 0.9 to 1.0 with a resolution of 0.0001.
<b>Example</b>	<code>:FETCh:EVDO:RFTX:WQUality?</code>

**:FETCh:EVDO:RFTX:CODEdomain:IMMediate**

<b>Syntax</b>	<code>:FETCh:EVDO:RFTX:CODEdomain:IMMediate?</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.

**Query** The command checks the results against the corresponding limits and returns one of the predefined expressions `PASS` | `FAIL` | `NONE` as a result from a previous code domain measurement command.

- `PASS` - the measurement results were within their limits,
- `FAIL` - one or several measurement results violated their limits,
- `NONE` - a measurement result could not be obtained for any reason.

**Example** `:FETCh:EVDO:RFTX:CODEdomain?`

**:FETCh:EVDO:RFTX:CODEdomain:IPower**

**Syntax** `:FETCh:EVDO:RFTX:CODEdomain:IPower?`

**Parameters** There are no parameters for this command.

**Description** The query form is supported only.

**Query** The command returns the 16 results from a previous `:MEAS:EVDO:CONT|ARR:RFTX:CODE:IPow` measurement command, i.e. it returns a string containing 16 (continuous measurement) or a multiple of 16 (array measurement) floating point real numbers, separated by commas and representing the related measurement results in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16.  
The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.

**Example** `:FETCh:EVDO:RFTX:CODE:IPower?`

**:FETCh:EVDO:RFTX:CODEdomain:INOise**

**Syntax** `:FETCh:EVDO:RFTX:CODEdomain:INOise?`

**Parameters** There are no parameters for this command.

**Description** The query form is supported only.

**Query** The command returns the 16 results from a previous `:MEASure:EVDO:CONTinuous|ARRay:RFTX:CODE:INOise` measurement command, i.e. it returns a string containing 16 (continuous measurement) or a multiple of 16 (array measurement) floating point real numbers, separated by commas and representing the related measurement results in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16.  
The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.

**Example** `:FETCh:EVDO:RFTX:CODE:INOise?`

**:FETCh:EVDO:RFTX:CODEdomain:QPower**

**Syntax** `:FETCh:EVDO:RFTX:CODEdomain:QPower?`

**Parameters** There are no parameters for this command.

**Description** The query form is supported only.

<b>Query</b>	The commands return the 16 results from a previous <code>:MEASure:EVDO:CONTInuous ARRay:RFTX:CODE:QPoweR</code> measurement command, i.e. it returns a string containing 16 (continuous measurement) or a multiple of 16 (array measurement) floating point real numbers, separated by commas and representing the related measurement results in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:FETCh:EVDO:RFTX:CODE:QPoweR?</code>

**:FETCh:EVDO:RFTX:CODEdomain:QNOIse**

<b>Syntax</b>	<code>:FETCh:EVDO:RFTX:CODEdomain:QNOIse?</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns the 16 results from a previous <code>:MEASure:EVDO:CONTInuous ARRay:RFTX:CODE:QNOIse</code> measurement command, i.e. it returns a string containing 16 (continuous measurement) or a multiple of 16 (array measurement) floating point real numbers, separated by commas and representing the related measurement results in dB (relative to the power level of the active code channels). The first of the 16 values always represents code channel 1; the last one code channel 16. The real numbers returned are in the range from -40 to 0 with a resolution of 0.1.
<b>Example</b>	<code>:FETCh:EVDO:RFTX:CODE:QNOIse?</code>

**:FETCh:EVDO:RFSPectrum:MSpectrum[:DATA]**

<b>Syntax</b>	<code>:FETCh:EVDO:RFSPectrum:MSpectrum[:DATA]?</code>
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous <code>:MEASure:EVDO:RFSPectrum:MSpectrum[:DATA AVG]</code> measurement command, i.e. it returns a string containing an array of 501 floating point real numbers, separated by commas and representing the single measurement results at the discrete frequencies (250 in the range below, 250 in the range above the carrier and at the carrier itself). The discrete frequencies depend on the currently selected span of the RF modulation spectrum measurement. If the span, for example, is +/- 2500 kHz, the discrete frequencies to measure at are in steps of 10 kHz both below and above the carrier frequency. Value 1 of the array returned represents the result obtained for the lowest frequency, value 251 represents the result obtained for the carrier, and value 501 represents the result obtained for the highest frequency measured at. The real numbers returned are in the range from -100 to 30 with a resolution of 0.1. The physical units are dBm.
<b>Example</b>	<code>:MEAS:EVDO:RFSP:MSP:AVG 10</code> <code>:FETCh:EVDO:RFSP:MSP?</code>

**:FETCh:EVDO:RFSPectrum:ACPM**

<b>Syntax</b>	:FETCh:EVDO:RFSPectrum:ACPM?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>The query form of this command returns the latest data array for the ACPM modulation spectrum measurement, following a :MEAS:EVDO:CONT ARR:RFSP:ACPM command. The string returned contains 25 (continuous measurement) or a multiple of 25 (array measurement) floating point real numbers, separated by commas and representing the single results obtained at the 25 discrete measurement frequencies (12 offsets in both directions from the carrier, plus the result at the carrier itself).</p> <p>The first of the 25 values always represents the result obtained at the lowest measurement frequency, value 13 represents the result obtained for the carrier, and value 25 represents the result obtained at the highest measurement frequency.</p> <p>The real numbers returned are in the range from -120 to 0 with a resolution of 0.1. The physical units are dB, relative to the measurement result obtained for the carrier.</p>
<b>Example</b>	:MEAS:EVDO:RFSP:ACPM :FETCh:EVDO:RFSPectrum:ACPM?

**:FETCh:EVDO:RFRX:PER[:IMMediate]**

<b>Syntax</b>	:FETCh:EVDO:RFRX:PER[:IMMediate]?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	<p>The command returns the result from a previous :MEASure:EVDO:CONTinuous ARRay:RFRX:PER:IMMediate measurement command, i.e. it returns a string containing one (continuous measurement) or several (array measurement) floating point real number(s), representing the packet error rate (PER). The real numbers returned are in the range from 0 to 10 with a resolution of 0.1.</p>
<b>Example</b>	:FETCh:EVDO:RFRX:PER:IMMediate?

**:FETCh:EVDO:RFRX:PER:PACKet:ERRor**

<b>Syntax</b>	:FETCh:EVDO:RFRX:PER:PACKet:ERRor?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	<p>The command returns the result from a previous :MEASure:EVDO:CONTinuous:RFRX:PER:PACKet:ERRor measurement command, i.e. it returns a string containing one integer number, representing the number of erroneous packets obtained during the last PER test run. The Willtek 3100 uses this number to calculate the PER.</p>
<b>Example</b>	:FETCh:EVDO:RFRX:PER:PACK:ERR?



**:FETCh:EVDO:RFRX:PER:PACKet:TRANsmitted**

<b>Syntax</b>	:FETCh:EVDO:RFRX:PER:PACKet:TRANsmitted?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.  This is a query-only command, returning the total number of packets sent by the Willtek 3100 during the last PER test run. The test set uses this number to calculate the PER.
<b>Query</b>	The command returns the result from a previous :MEASure:EVDO:CONTInuous:RFRX:PER:PACKet:TRANsmitted measurement command, i.e. it returns a string containing one integer number, representing the total number of packets transmitted during the last PER test run. The test set uses this number to calculate the PER.
<b>Example</b>	:FETCh:EVDO:RFRX:PER:PACKet:TRANsmitted?

**:FETCh:EVDO:RFRX:PER:STATus[:IMMediate]**

<b>Syntax</b>	:FETCh:EVDO:RFRX:PER:STATus[:IMMediate]?
<b>Parameters</b>	There are no parameters for this command.
<b>Description</b>	The query form is supported only.
<b>Query</b>	The command returns one of the predefined expressions PASS   FAIL   CONP   CONF   LBF   NONE as result from a PER measurement command. PASS indicates that the test ran to the max frames specified and the error rate was less than or equal to the limit. FAIL indicates that the test ran to the max frames specified and the error rate was greater than the limit. CONP indicates that the test completed early (due to confidence factor statistics) and the test passed with confidence. CONF indicates that the test completed early (due to confidence factor statistics) and the test failed with confidence. LBF indicates that the test was unable to be completed because loopback frames were not received (the frame statistics are not valid for this case). NONE indicates that the test has not yet completed.
<b>Example</b>	:MEAS:EVDO:RFRX:PER :FETCh:EVDO:RFRX:PER:STAT? The first command starts a PER measurement. The second command checks the measurement results against their limits and returns the final test verdict in form of one of the predefined expressions explained above, like "CONP" in this example.

**WCDMA commands :FETCh:WCDMa:LAST**

<b>Syntax</b>	:FETCh:WCDMa:LAST
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Only the query form is supported.
<b>Query</b>	Returns exactly the same values returned by the last FETCh: or MEASure: query.
<b>Example</b>	:FETC:WCDM:LAST?

**:FETCh:WCDMa:RFTX:FREQ:ERRor**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:FREQ:ERRor?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results of the :MEASure:WCDMa:CONT ARRay:RFTX:FREQ:ERR measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:FREQ? Returns the measured frequency error, e.g. -7.834.

**:FETCh:WCDMa:RFTX:POWer:MEAN**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:POWer:MEAN?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form returns the latest result value of the MEASure:WCDMa:RFTX:POWer:MEAN measurement respectively the latest result values of the MEASure:WCDMa:ARRay:RFTX:POWer:MEAN measurement. The values delivered will contain at least one floating-point number in dBm.
<b>Example</b>	:FETC:WCDM:RFTX:POW:MEAN? Returns an RF power measurement result, e.g. -45.3.

**:FETCh:WCDMa:RFTX:POWer:PEAK**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:POWer:PEAK?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form returns the result of a previous :MEASure:WCDMa:CONT ARRay:RFTX:POWer:PEAK measurement. The values delivered will contain at least one floating-point number in dBm.
<b>Example</b>	:FETC:WCDM:RFTX:POW:PEAK? Returns the Peak RF power measurement result, e.g. -36.8.

**:FETCh:WCDMa:RFTX:NSTair[:DATA]**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:NSTair[:DATA]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form of this command returns the latest result value of the MEASure:WCDMa:CONT ARRay:RFTX:NSTair measurement. The values delivered will contain 501 floating-point number in dBm.
<b>Example</b>	:FETC:WCDM:RFTX:NST?

**:FETCh:WCDMa:RFTX:NSTair:POWer**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:NSTair:POWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form of this command returns the latest result value of the MEASure:WCDMa:CONT ARRay:RFTX:NSTair:POWer measurement. The values delivered will contain at least seven floating-point numbers in dBm.
<b>Example</b>	:FETC:WCDM:RFTX:NST:POW?

**:FETCh:WCDMa:RFTX:ZSPan:POWer**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:ZSPan:POWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form of this command returns the latest result value of the MEASure:WCDMa:RFTX:ZSPan:POWer measurement. The result delivered will contain as many floating point numbers in dBm as defined with the RFAN:WCDM:ZSP:REFP command.
<b>Example</b>	:FETC:WCDM:RFTX:ZSP:POW?-54.9,-62.7,-61.3.

**:FETCh:WCDMa:RFTX:POLar[:ALL]**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:POLar[:ALL]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form returns the result of a previous :MEASure:WCDMa:RFTX:POL measurement. The result delivered will contain the number of segments, the starting segment and after that as many pairs of floating point numbers of of power (in dbm) and phase (in deg) results as returned in field number of segments.

<b>Example</b>	:FETC:WCDM:RFTX:POL?Returns the result in a string, e.g. 34,2,10.1,3.4,9.1,3.5,8.1,3.8,...
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**:FETCh:WCDMa:RFTX:POLar:POWer**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:POLar:POWer
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form returns the result of a previous :MEASure:WCDMa:RFTX:POL:POW measurement. The result delivered will contain the number of segments, the starting segment and after that as many floating point numbers of of power (in dbm) results as returned in field numer of segments.
<b>Example</b>	:FETC:WCDM:RFTX:POL:POW? Returns the result in a string, e.g. 34,2,10.1,9.1,8.1,...

**:FETCh:WCDMa:RFTX:POLar:PHASe**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:POLar:PHASe
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form returns the result of a previous :MEASure:WCDMa:RFTX:POL:PHAS measurement. The result delivered will contain the number of segments, the starting segment and after that as many floating point numbers of of phase (in deg) results as returned in field numer of segments.
<b>Example</b>	:FETC:WCDM:RFTX:POL:PHAS? Returns the result in a string, e.g. 34,2,3.4,3.5,3.8,...

**:FETCh:WCDMa:RFTX:IQSamples**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:IQSamples?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form of this command returns the latest result value of the MEASure:WCDMa:RFTX:IQSamples measurement. The result delivered will contain floating point numbers I and Q for each measured sample. The number of samples result from the value specified in RFAN:WCDM:IQS:REFP for the second timing interval. The sampling frequency here is 5.12 MHz.
<b>Example</b>	:FETC:WCDM:RFTX:IQS? 0.81,-0.32,0.78,0.33,0.31,-0.87,0.91,-0.29,...

**FETCh:WCDMa:RFTX:CPOWer**

<b>Syntax</b>	FETCh:WCDMa:RFTX:CPOWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results of the :MEASure:WCDMa:CONT ARRay:RFTX:CHPower measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:CPOW?

**:FETCh:WCDMa:RFTX:MODQuality:ALL?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:ALL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	<p>The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:ALL measurement command. It delivers a string, containing 10 measurement result values, separated by commas. The order and type of these measurement result values delivered back is as follows:</p> <ol style="list-style-type: none"> <li>1. <code>EVM RMS</code>, floating point real number representing the RMS vector error measurement in percent,</li> <li>2. <code>EVM Peak</code>, floating point real number representing the peak vector error measurement in percent,</li> <li>3. <code>Magnitude error RMS</code>, floating point real number representing the RMS magnitude vector error measurement in percent,</li> <li>4. <code>Magnitude error Peak</code>, floating point real number representing the PEAK magnitude vector error measurement in percent,</li> <li>5. <code>Phase error RMS</code>, floating point real number representing the RMS phase vector error measurement in degrees,</li> <li>6. <code>Phase error Peak</code>, floating point real number representing the PEAK phase vector error measurement in degrees,</li> <li>7. <code>Frequency error</code>, floating point real number representing the mobile's frequency error,</li> <li>8. <code>RHO</code>, floating point real number representing the mobile's modulation quality,</li> <li>9. <code>I/Q Offset</code>, a floating point value with the result in dBc, representing the result of the origin offset vector error measurement,</li> <li>10. <code>I/Q Imbalance</code>, floating point real number representing the result of the IQ Imbalance vector error measurement with the result in dB.</li> </ol> <p><b>Note:</b> For a further description of the single measurements, see description of the related commands below.</p>
<b>Example</b>	<pre>:MEAS:WCDMA:RFTX:MODQ:ALL :FETC:WCDM:RFTX:MODQ:ALL?</pre> <p>In this case, all relevant RF TX measurements will be performed in a sequence, e.g. 21.624, 72.8, 15.335, 72.736, 6.738, 27.512, -6.378, 0.961, -28.251, -43.743.</p>

**:FETCh:WCDMa:RFTX:MODQuality:ERMS?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:ERMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:ERMS measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:ERMS? Returns the measured EVM RMS vector error, e.g. 21.624.

**:FETCh:WCDMa:RFTX:MODQuality:EPEAK?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:EPEAK?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:EPEAK measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:EPEAK? Returns the measured EVM peak vector error, e.g. 72.8.

**:FETCh:WCDMa:RFTX:MODQuality:MRMS?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:MRMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:MRMS measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQuality:MRMS? Returns the measured Magnitude RMS vector error, e.g. 15.335.

**:FETCh:WCDMa:RFTX:VERRor:MODQuality:MPEAK?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:VERRor:MODQuality:MPEAK?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:MPEAk measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:MPEA? Returns the measured magnitude peak vector error, e.g. 72.736.

**:FETCh:WCDMa:RFTX:MODQuality:PRMS?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:PRMS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:PRMS measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:PRMS? Returns the measured RMS phase vector error, e.g. 6.738.

**:FETCh:WCDMa:RFTX:MODQuality:PPEAk?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:PPEAk?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:PPEAk measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:PPEAk? Returns the measured phase peak vector error, e.g. 27.512.

**:FETCh:WCDMa:RFTX:MODQuality:RHO?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:RHO?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:RHO measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:RHO? Returns the modulation quality, e.g. 0.9989.

**:FETCh:WCDMa:RFTX:MODQuality:IQOffset?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:IQOffset?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:IQOffset measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:IQOF? Returns the origin offset in dBc, e.g. -28.251.

**:FETCh:WCDMa:RFTX:MODQuality:IQImbalance?**

<b>Syntax</b>	:FETCh:WCDMa:RFTX:MODQuality:IQImbalance?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFTX:MODQuality:IQImbalance measurement command.
<b>Example</b>	:FETC:WCDM:RFTX:MODQ:IQIM? Returns the IQ imbalance in dBc, e.g. -43.743.

**:FETCh:WCDMa:RFSpectrum:MSpectrum[:DATA]?**

<b>Syntax</b>	:FETCh:WCDMa:RFSpectrum:MSpectrum[:DATA]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:RFSpectrum:MSpectrum[:DATA AVG] measurement command.
<b>Example</b>	MEAS:WCDM:RFSP:MSP:AVG 10 :FETC:WCDM:RFSP:MSP?

**:FETCh:WCDMa:RFSpectrum:MSpectrum:OBW?**

<b>Syntax</b>	:FETCh:WCDMa:RFSpectrum:MSpectrum:OBW?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT ARR:RFSpectrum:MSpectrum:OBW measurement command.
<b>Example</b>	:FETC:WCDM:RFSP:MSP:OBW?



**:FETCh:WCDMa:RFSPectrum:ACLR?**

<b>Syntax</b>	:FETCh:WCDMa:RFSPectrum:ACLR?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query form of this command returns the latest result value of the MEAS:WCDM:RFSP:ACLR measurement. The values delivered will contain at least one array of floating-point numbers in dBm. The results for the adjacent channel leakage power ratio at the following offsets: -10 MHz, -5 MHz, 0 MHz, +5 MHz, +10 MHz.
<b>Example</b>	:MEAS:WCDMA:ARR:RFSP:ACLR 5 :FETC:WCDM:RFSP:ACLR? The Fetch command will return a data array, containing 5 times 5 floating point real numbers.

**:FETCh:WCDMa:RFSPectrum:SEM[:DATA]?**

<b>Syntax</b>	:FETCh:WCDMa:RFSPectrum:SEM[:DATA]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:RFSPectrum:SEM[:DATA AVG] Spectrum Emission Mask measurement.
<b>Example</b>	MEAS:WCDM:RFSP:SEM:AVG 10 :FETC:WCDM:RFSP:SEM?

**:FETCh:WCDMa:RFRX:BER:RATIo?**

<b>Syntax</b>	:FETCh:WCDMa:RFRX:BER:RATIo?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT:RFRX:BER:RATIo measurement command.
<b>Example</b>	:FETC:WCDM:RFRX:BER?

**:FETCh:WCDMa:RFRX:BLER:RATIo?**

<b>Syntax</b>	:FETCh:WCDMa:RFRX:BLER:RATIo?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the result of a previous :MEASure:WCDMa:CONT:RFRX:BLER:RATIo measurement command.
<b>Example</b>	:FETC:WCDM:RFRX:BLER?

**:FETCh:WCDMa:UEReport:ALL**

<b>Syntax</b>	:FETCh:WCDMa:UEReport:ALL
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The query delivers a string, containing 6 measurement result values, separated by commas started by MEASure:WCDMa[:CONT ARRay]:UEReport:ALL. The order and type of these measurement result values delivered is as follows: 1. CPICH_ECNO, floating point real number representing UE measured normalized chip energy per noise value of the P-CPICH, 2. CPICH_RSCP, floating point real number representing UE measured received signal code power of the P-CPICH, 3. PLOSS, floating point real number representing the pathloss between Node B and UE, estimated by the UE, 4. TXPower, floating point real number representing the UE transmit power, 5. RTTDifference, floating point real number representing UE measured RX-Time-Difference between UL and DL signal, 6. TRCH_BLER, floating point real number representing the UE estimated BLER value for the Transport Channel defined with CONFIgure:WCDMa:MEASure:UEReport:TRCH. <b>Note:</b> For a further description of the single measurements, see description of the related commands below.
<b>Example</b>	:MEAS:WCDM:UER:ALL? :FETC:WCDM:UER:ALL? All UE Report measurements will be performed in a sequence, e.g. 23,85,102,97,992,3.

**:FETCh:WCDMa:UEReport:CPICH:ECNO**

<b>Syntax</b>	:FETCh:WCDMa:UEReport:CPICH:ECNO?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Reports the UE measured normalized chip energy per noise value of the P-CPICH started by MEASure:WCDMa[:CONT ARRay]:UEReport:CPICH:ECNO.
<b>Example</b>	:FETC:WCDM:UER:CPICH:ECNO? Starts the measurement and returns the result, e.g. 22.

**:FETCh:WCDMa:UEReport:CPICH:RSCP**

<b>Syntax</b>	:FETCh:WCDMa:UEReport:CPICH:RSCP?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Reports the UE measured received signal code power of the P-CPICH started by MEASure:WCDMa[:CONT ARRay]:UEReport:CPICH:RSCP.
<b>Example</b>	:FETC:WCDM:UER:CPICH:RSCP? Starts the measurement and returns the result, e.g. 74.

**:FETCh:WCDMa:UEReport:PLOSS**

<b>Syntax</b>	:FETCh:WCDMa:UEReport:PLOSS?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The query form is supported only, started by MEASure:WCDMa[:CONT ARRay]:UEReport:PLOSS.
<b>Query</b>	Reports the path loss between Node B and UE, estimated by the UE.
<b>Example</b>	:FETC:WCDM:UER:PLOS? Starts the measurement and returns the result, e.g. 85.

**:FETCh:WCDMa:UEReport:TXPower**

<b>Syntax</b>	:FETCh:WCDMa:UEReport:TXPower?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Reports the UE transmit power started by MEASure:WCDMa[:CONT ARRay]:UEReport:TXPower.
<b>Example</b>	:FETC:WCDM:UER:TXPO? Starts the measurement and returns the result, e.g. 66.

**:FETCh:WCDMa:UEReport:RTTDifference**

<b>Syntax</b>	:FETCh:WCDMa:UEReport:RTTDifference?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Reports the UE measured RX-Time-Difference between UL and DL signal started by MEASure:WCDMa[:CONT ARRay]:UEReport:RTTDifference.
<b>Example</b>	:FETC:WCDM:UER:RTTD? Starts the measurement and returns the result, e.g. 956.

**:FETCh:WCDMa:UEReport:TRCH:BLER**

<b>Syntax</b>	:FETCh:WCDMa:UEReport:TRCH:BLER?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	Reports the UE estimated BLER value for the Transport Channel started by MEASure:WCDMa[:CONT ARRay]:UEReport:TRCH:BLER.
<b>Example</b>	:FETC:WCDM:UER:TRCH:BLER? Starts the measurement and returns the result, e.g. 0.

## CALCulate Subsystem

The CALCulate subsystem provides a large number of commands in order to set limits, check measurement result values against those limits and to perform statistic evaluation of measurement result values.

### General commands :CALCulate:RESet

<b>Syntax</b>	:CALCulate:RESet
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Resets the <b>CALC</b> subsystem and brings it into a defined operating state. We kindly recommend to use this command to initialize the <b>CALC</b> subsystem when starting a new test run.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre> <b>:CALCulate:RESet</b> <b>:MEAS:GSM:ARR:RFTX:LENG 10</b> <b>:CALC:MAverage?</b> </pre> <p>This example first resets the <b>CALC</b> subsystem and then starts the measurement of the frequency error for 10 measurement runs. The average measurement result value of those ten measurement runs will then be calculated and returned by the <b>:CALC:MAV?</b> query (see below for details regarding this command).</p>

### :CALCulate:LIMit:FAIL[:LAST]?

<b>Syntax</b>	:CALCulate:LIMit:FAIL[:LAST]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>Checks whether the result(s) of the <b>last</b> measurement performed did violate the user-defined measurement result limits or not. As long as all single measurement results are within the limits, a <b>0</b> will be returned. A <b>1</b> indicates that at least one measurement result did violate at least one limit.</p> <p>The limits for the single measurements can be set using the appropriate commands of the <b>CALC</b> subsystem (as explained in this section).</p>
<b>Example</b>	<pre> <b>:CALCulate:RESet</b> <b>:MEAS:GSM:RFTX:ALL</b> <b>:CALC:LIM:FAIL?</b> </pre> <p>This example first resets the <b>CALC</b> subsystem and then starts the measurement of all relevant RF TX parameters. If a measurement result of the current sequence violates the corresponding measurement result limits, the query will return a <b>1</b>. When all measurement results are within their limits, a <b>0</b> will be returned.</p>

### :CALCulate:LIMit:FAIL:CUMulative?

<b>Syntax</b>	:CALCulate:LIMit:FAIL:CUMulative?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Checks whether any result(s) of the measurement started last did violate their corresponding, user-defined measurement result limits. As long as all single measurement results are within their limits, a <b>0</b> will be returned. A <b>1</b> indicates that at least one measurement result did violate at least one limit. The limits for the single measurements can be set using the appropriate commands of the <b>CALC</b> subsystem (as explained in this section). To reset the cumulative check of the measurement results, use the <b>:CALC:LIM:FAIL:CUM:RES</b> command as explained below.
<b>Example</b>	<b>:CALC:LIM:FAIL:CUM:RES</b> <b>:MEAS:GSM:RFTX:TEMP</b> <b>...(other SCPI commands)... :CALC:LIM:FAIL:CUM?</b> This example first resets the cumulative process then starts the continuous check of the UL burst against the power/time template (PTT). After that, other SCPI commands are performed. After a while, the <b>:CALC:LIM:FAIL:CUM</b> command is used to check whether there has been any violation of the PTT since the start of the <b>:MEAS:GSM:RFTX:TEMP</b> measurement.

**:CALCulate:LIMit:FAIL:RESet**

<b>Syntax</b>	<b>:CALCulate:LIMit:FAIL:RESet</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command resets the cumulative process as explained above (see description of command <b>:CALC:LIM:FAIL:CUM</b> for details).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:LIM:FAIL:RES</b> <b>:MEAS:GSM:RFTX:TEMP</b> <b>...(other SCPI commands)... :CALC:LIM:FAIL:CUM?</b> This example first resets the cumulative process then starts the continuous check of the UL burst against the power/time template (PTT). After that, other SCPI commands are performed. After a while, the <b>:CALC:LIM:FAIL:CUM</b> command is used to check whether there has been any violation of the PTT since the start of the <b>:MEAS:GSM:RFTX:TEMP</b> measurement.

**:CALCulate:MAverage?**

<b>Syntax</b>	<b>:CALCulate:MAverage?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.

**Example**        **:CONF:MEAS:GRO:RFTX POW,PRMS**  
                   **:CALC:RES**  
                   **:MEAS:GSM:ARR:RFTX:GROup 20**  
                   **:CALCulate:MAVaverage?**

In this example, first the group of measurements is defined by a power measurement combined with a RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are:  
**"4.53,9.98"**.

**:CALCulate:MMINimum?**

**Syntax**        **:CALCulate:MMINimum?**

**Parameters**    There are no parameters.

**Description**    There is solely a query form of this command available.

**Query**         Returns the **minimum** measurement result value of the measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.

**Example**        **:MEAS:AFAN:SIN**  
                   **:CALC:RES**  
                   **...(other SCPI commands)...**  
                   **:CALCulate:MMIN?**

In this example, first a continuous SINAD measurement is started. After some time, the **:CALC:MMIN** command is used to read out the minimum SINAD measured. The string returned in this example is **"42.6"**.

**:CALCulate:MMAximum?**

**Syntax**        **:CALCulate:MMAximum?**

**Parameters**    There are no parameters.

**Description**    There is solely a query form of this command available.

**Query**         Returns the **maximum** measurement result value of the measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.

**Example**        **:MEAS:GSM:RFTX:FREQ**  
                   **:CALC:RES**  
                   **...(other SCPI commands)...**  
                   **:CALCulate:MMAx?**

In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the **:CALC:MMAx** command is used to read out the maximum frequency error of the mobile. The string returned in this example is **"22.1"**.

**:CALCulate:MSIGma?**

<b>Syntax</b>	:CALCulate:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the measurement results since the last measurement start. The string delivered back contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre><b>:MEAS:GSM:RFTX:FREQ</b> <b>:CALC:RES</b> <b>...(other SCPI commands)...</b> <b>:CALC:MSIG?</b></pre> <p>In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the <b>:CALC:MSIG</b> command is used to read out the mean frequency error and its standard deviation. The string returned in this example is <b>"22.1, 3.4"</b></p>

**GSM commands**    **:CALCulate:GSM:RFTX:MAverage?**

<b>Syntax</b>	:CALCulate:GSM:RFTX:MAverage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the TX measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre><b>:CONF:GSM:MEAS:GRO:RFTX POW,PRMS</b> <b>:CALC:RES</b> <b>:MEAS:GSM:ARR:RFTX:GRO 20</b> <b>:CALC:GSM:RFTX:MAV?</b></pre> <p>In this example, first the group of measurements is defined by a power measurement combined with a RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are: <b>"4.53, 9.98"</b>.</p>

**:CALCulate:GSM:RFTX:MMINimum?**

<b>Syntax</b>	:CALCulate:GSM:RFTX:MMINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.



<b>Query</b>	Returns the <b>minimum</b> measurement result value of the TX measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre>:CONF:GSM:MEAS:GRO:RFTX POW,PRMS :CALC:RES :MEAS:GSM:ARR:RFTX:GRO 20 :CALC:GSM:RFTX:MMIN?</pre> <p>In this example, first the group of measurements is defined by a power measurement combined with a RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are: "4.53,9.98".</p> <p>Because of the internal order (see description of the :MEAS:GSM[:ARR]:RFTX:ALL command, the first measurement result value delivered back is the minimum RMS phase error, the second one the mobile's minimum RF output power.</p>

**:CALCulate:GSM:RFTX:MMAximum?**

<b>Syntax</b>	:CALCulate:GSM:RFTX:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the TX measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre>:MEAS:GSM:RFTX:FREQ :CALC:RES ... (other SCPI commands) ... :CALC:GSM:RFTX:MMAx?</pre> <p>In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the :CALC:GSM:RFTX:MMAx command is used to read out the maximum frequency deviation of the mobile. The string returned in this example is "22.1".</p>

**:CALCulate:GSM:RFTX:MSIGma?**

<b>Syntax</b>	:CALCulate:GSM:RFTX:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the TX measurement last started. The string delivered back contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and will be separated by commas.

**Example** :MEAS:GSM:RFTX:FREQ  
:CALC:RES  
...(other SCPI commands)...  
:CALC:GSM:RFTX:MSIG?  
In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the :CALC:GSM:RFTX:MSIG command is used to read out the mean frequency error and its standard deviation. The string returned in this example is "15.7, 3.4".

**:CALCulate:GSM:RFTX:ALL:LIMit[:FAIL]?**

**Syntax** :CALCulate:GSM:RFTX:ALL:LIMit[:FAIL]?

**Parameters** There are no parameters.

**Description** There is solely a query form of this command available.

**Query** This command delivers 15 boolean numbers in a string, separated by commas. These numbers indicate, whether the single measurement results of the :MEAS:GSM[:ARRAY]:RFTX:ALL measurement did violate their test limits. The position of the boolean number within the string returned indicates the result of the limit check for the following measurements:  
 1. peak phase error measurement,  
 2. root-mean square phase error measurement ,  
 3. measurement of the mobile's frequency error,  
 4. measurement of the burst lenght,  
 5. timing error measurement,  
 6. measurement of the mobile's RF output power level,  
 7. check of the burst against the PTT,  
 8...15. measurement of RF power level at the corner points.

**Example** :CALC:GSM:RFTX:ALL:LIM?  
String returned:  
"0,0,0,0,0,1,0,0,0,0,0,0,0,0,0"  
The 1 on position 6 indicates that the mobile's RF power level violated its test limits.

**:CALCulate:GSM:RFTX:ALL:LIMit:STATe**

**Syntax** :CALCulate:GSM:RFTX:ALL:LIMit:STATe <PredefExp>

**Parameters** **PredefExp** is one of the following predefined expressions: **ON** | **OFF**. Default is **ON**.

**Description** This command switches the limit check for the relevant RF TX measurements either on or off (see description of the :MEASure:GSM:RFTX:ALL command for reference).

**Query** There is no query form of this command available.

**Example** :CALC:GSM:RFTX:ALL:LIM:STAT OFF  
Switches the limit check for the most relevant RF TX measurements off.

**:CALCulate:GSM:RFTX:PPEAK:LIMit[:FAIL]?**

**Syntax** :CALCulate:GSM:RFTX:PPEAK:LIMit[:FAIL]?

**Parameters** There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the peak phase error measurement were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:GSM:ARRay:PPEAK 20</b> <b>:CALC:GSM:RFTX:PPEAk:LIM?</b> String returned: " <b>1</b> " This result indicates that at least one measurement result value did violate the limits of the peak phase error measurement.

**:CALCulate:GSM:RFTX:PPEAk:LIMit:STATe**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:PPEAK:LIMit:STATe</b> <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFTX:PPEAk</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:PPEAk:LIM:STAT OFF</b> Switches the limit check for the peak phase error measurement off.

**:CALCulate:GSM:RFTX:PPEAk:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:PPEAK:LIMit:UPPer[:DATA]</b> <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>90.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>20.0</b> .
<b>Description</b>	Sets the <b>upper</b> limit of the peak phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:PPEA:LIM:UPP 15</b> Sets the upper limit for the peak phase error to 15 degrees.

**:CALCulate:GSM:RFTX:PPEAk:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:PPEAK:LIMit:LOWer[:DATA]</b> <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-90.0</b> , the maximum is <b>0.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>-20.0</b> .
<b>Description</b>	Sets the <b>lower</b> limit of the peak phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.

<b>Example</b>	<b>:CALC:GSM:RFTX:PPEA:LIM:LOW -15</b> Sets the lower limit for the peak phase error measurement to -15 degrees.
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**:CALCulate:GSM:RFTX:PRMS:LIMit[:FAIL]?**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:PRMS:LIMit[:FAIL]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the RMS-valued phase error measurement were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:GSM:ARRay:RFTX:PRMS 10</b> <b>:CALC:GSM:RFTX:PRMS:LIM?</b> String returned: " <b>0</b> " This string delivered back indicates that there was no violation of the measurement limits.

**:CALCulate:GSM:RFTX:PRMS:LIMit:STATe**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:PRMS:LIMit:STATe &lt;PredefExp&gt;</b>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFTX:PRMS</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:PRMS:LIM:STAT OFF</b> Switches the limit check for the RMS-valued phase error measurement off.

**:CALCulate:GSM:RFTX:PRMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:PRMS:LIMit:UPPer[:DATA] &lt;real1&gt;</b>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>90.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>5.0</b> .
<b>Description</b>	Sets the <b>upper</b> limit of the RMS-valued phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:PRMS:LIM:UPP 6.2</b> Sets the upper limit for the RMS-valued phase error measurement to 6.2 degrees.

**:CALCulate:GSM:RFTX:PRMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFTX:PRMS:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-90.0</b> , the maximum is <b>0.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>-5.0</b> .
<b>Description</b>	Sets the lower limit of the RMS-valued phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:PRMS:LIM:LOW 0.0</b> Sets the lower limit for the RMS-valued phase error measurement to 0 degrees.

**::CALCulate:GSM:RFTX:FREQuency:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFTX:FREQuency:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the frequency error measurement were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:GSM:ARRay:RFTX:FREQ 20</b> <b>:CALC:GSM:RFTX:FREQ:LIM?</b> String returned: "0" This string delivered back indicates that there was no violation of the measurement limits.

**CALCulate:GSM:RFTX:FREQuency:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFTX:FREQuency:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFTX:FREQ</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:FREQ:LIM:STAT ON</b> Switches the limit check for the frequency error measurement on.

**:CALCulate:GSM:RFTX:FREQUENCY:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFTX:FREQUENCY:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100000.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>90.0</b> .
<b>Description</b>	Sets the <b>upper</b> limit of the frequency error for measurements in asynchronous mode (Gen/Ana); the physical dimension of the number stated is Hertz.
<b>Query</b>	Returns the current setting for the upper limit.
<b>Example</b>	<b>:CALC:GSM:RFTX:FREQ:LIM:UPP 45</b> Sets the upper limit of the frequency error measurement result to 45 Hz.

**:CALCulate:GSM:RFTX:FREQUENCY:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFTX:FREQUENCY:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-100000.0</b> , the maximum is <b>0.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>-90.0</b> .
<b>Description</b>	Sets the <b>lower</b> limit of the frequency error for measurements in asynchronous mode; the physical dimension of the number stated is Hertz.
<b>Query</b>	Returns the current setting for the lower limit.
<b>Example</b>	<b>:CALC:GSM:RFTX:FREQ:LIM:LOW -60.8</b> Sets the lower limit of the frequency error measurement result to -60.8 Hz.

**:CALCulate:GSM:RFTX:FREQUENCY:LIMit:GSM**

<b>Syntax</b>	:CALCulate:GSM:RFTX:FREQUENCY:LIMit:GSM <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100000.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>90.0</b> .
<b>Description</b>	Sets the <b>symmetrical</b> limits of the frequency error for measurements in synchronous (call) mode for GSM-900 and GSM-850; the physical dimension of the number stated is Hertz.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:FREQ:LIM:GSM 65</b> Sets the lower limit of the frequency error measurement result on GSM-900 and GSM-850 channels to -65 Hz and the upper limit to +65 Hz.

**:CALCulate:GSM:RFTX:FREQUENCY:LIMit:PCN**

<b>Syntax</b>	:CALCulate:GSM:RFTX:FREQUENCY:LIMit:PCN <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100000.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>180.0</b> .

**Description** Sets the symmetrical limits of the frequency error for measurements in synchronous (call) mode for GSM-1800 (also known as DCS-1800 or PCN); the physical dimension of the number stated is Hertz.

**Query** There is no query form of this command available.

**Example** **:CALC:GSM:RFTX:FREQ:LIM:PCN 120**  
Sets the lower limit of the frequency error measurement result on GSM-1800 channels to -120 Hz and the upper limit to +120 Hz.

**:CALCulate:GSM:RFTX:FREQuency:LIMit:PCS**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:FREQuency:LIMit:PCS &lt;real1&gt;</b>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100000.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>180.0</b> .
<b>Description</b>	Sets the symmetrical limits of the frequency error for measurements in synchronous (call) mode for GSM-1900 (also known as PCS); the physical dimension of the number stated is Hertz.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:FREQ:LIM:PCS 120</b> Sets the lower limit of the frequency error measurement result on GSM-1900 channels to -120 Hz and the upper limit to +120 Hz.

**:CALCulate:GSM:RFTX:LENGth:LIMit[:FAIL]?**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:LENGth:LIMit[:FAIL]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the burst length measurement were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:GSM:ARRay:RFTX:LENG 10</b> <b>:CALC:GSM:RFTX:LENG:LIM?</b> String returned: " <b>0</b> " This string indicates that there was no violation of the measurement limits.

**:CALCulate:GSM:RFTX:LENGth:LIMit:STATE**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:LENGth:LIMit:STATE &lt;PredefExp&gt;</b>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFTX:LENGth</b> measurement against their user-definable limits either on or off.

**Query** There is no query form of this command available.

**Example** **:CALC:GSM:RFTX:LENG:LIM:STAT ON**  
Switches the limit check for the burst length measurement on.

**:CALCulate:GSM:RFTX:LENGth:LIMit:UPPer[:DATA]**

**Syntax** **:CALCulate:GSM:RFTX:LENGth:LIMit:UPPer[:DATA]** <real1>

**Parameters** **real1** is a floating point real number. The minimum value is **0.0**, the maximum is **700.0**. The minimum resolution possible is **0.1**, the default value is **562.8**.

**Description** Sets the **upper** limit of the burst length measurement; the physical dimension of the number stated is microseconds.

**Query** There is no query form of this command available.

**Example** **:CALC:GSM:RFTX:LENG:LIM:UPP 563**  
Sets the upper limit of the burst length to 563.0  $\mu$ s.

**:CALCulate:GSM:RFTX:LENGth:LIMit:LOWer[:DATA]**

**Syntax** **:CALCulate:GSM:RFTX:LENGth:LIMit:LOWer[:DATA]** <real1>

**Parameters** **real1** is a floating point real number. The minimum value is **0.0**, the maximum is **700.0**. The minimum resolution possible is **0.1**, the default value is **542.8**.

**Description** Sets the **lower** limit of the burst length measurement; the physical dimension of the number stated is microseconds.

**Query** There is no query form of this command available.

**Example** **:CALC:GSM:RFTX:LENG:LIM:LOW 541.9**  
Sets the lower limit of the burst length to 541.9  $\mu$ s.

**:CALCulate:GSM:RFTX:UTIME:LIMit[:FAIL]?**

**Syntax** **:CALCulate:GSM:RFTX:UTIME:LIMit[:FAIL]?**

**Parameters** There are no parameters.

**Description** There is solely a query form of this command available.

**Query** This command delivers one boolean number, indicating whether the user-definable limits of the UL timing error measurement were violated by a measurement result value or not.

A **0** means that all measurement result values were within the limits set, while a **1** indicates that at least one measurement result value did violate at least one of the limits.

The limits can be set using the commands described below.

**Example** **:MEAS:GSM:ARRay:RFTX:UTIM 10**  
**:CALC:GSM:RFTX:UTIM:LIM?**  
String returned: "**0**"  
This string indicates that there was no violation of the measurement limits.



**:CALCulate:GSM:RFTX:UTIME:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFTX:UTIME:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GSM:RFTX:UTIME measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:UTIM:LIM:STAT ON</b> Switches the limit check for the UL timing error measurement on.

**:CALCulate:GSM:RFTX:UTIME:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFTX:UTIME:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>64.0</b> . The minimum resolution possible is <b>0.01</b> , the default value is <b>3</b> .
<b>Description</b>	Sets the upper limit of the UL timing error measurement; the physical dimension of the number stated is microseconds. <b>Note:</b> The UL timing error measurement takes the ordered timing advance into account.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:UTIM:LIM:UPP 5</b> Sets the upper limit of the uplink timing error measurement result to 5.0 μs.

**:CALCulate:GSM:RFTX:UTIME:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFTX:UTIME:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-64.0</b> , the maximum is <b>0.0</b> . The minimum resolution possible is <b>0.01</b> , the default value is <b>-3</b> .
<b>Description</b>	Sets the lower limit of the UL timing error measurement; the physical dimension of the number stated is microseconds. <b>Note:</b> The UL timing error measurement takes the ordered timing advance into account.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:UTIM:LIM:LOW -5</b> Sets the lower limit of the uplink timing error measurement result to -5.0 μs.

**:CALCulate:GSM:RFTX:POWer:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFTX:POWer:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the measurement of the mobile's RF output power level were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:GSM:ARRAY:POW 20</b> <b>:CALC:GSM:RFTX:POW:LIM?</b> String returned: " <b>0</b> " This string indicates that there was no violation of the measurement limits.

**:CALCulate:GSM:RFTX:POWer:LIMit:STATe**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:POWer:LIMit:STATe &lt;PredefExp&gt;</b>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFTX:POWer</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:POW:LIM:STAT ON</b> Switches the limit check for the RF output power level measurement on.

**:CALCulate:GSM:RFTX:POWer:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:POWer:LIMit:UPPer[:DATA] &lt;real1&gt;</b>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-120.0</b> , the maximum is <b>50.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>39</b> .
<b>Description</b>	Sets the <b>upper</b> limit for the analyzer's RF input power level. The physical dimension of the number stated is dBm.
<b>Query</b>	Returns the current setting for the upper limit.
<b>Example</b>	<b>:CALC:GSM:RFTX:POW:LIM:UPP 13</b> Sets the upper limit of the peak power measurement to 13 dBm.

**:CALCulate:GSM:RFTX:POWer:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:POWer:LIMit:LOWer[:DATA] &lt;real1&gt;</b>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-120.0</b> , the maximum is <b>50.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>-60.0</b> .
<b>Description</b>	Sets the <b>lower</b> limit for the analyzer's RF input power level. The physical dimension of the number stated is dBm.
<b>Query</b>	Returns the current setting for the lower limit.

**Example**        **:CALC:GSM:RFTX:POW:LIM:LOW -45**  
Sets the lower limit of the peak power measurement to -45 dBm.

**:CALCulate:GSM:RFTX:POWer:LIMit:GSM**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:POWer:LIMit:GSM</b> <real1>,<real2>,...,<real18>
<b>Parameters</b>	<b>real1</b> through <b>real18</b> are floating point real numbers. The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.1</b> . The default values are: <b>2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5</b> .
<b>Description</b>	Sets the <b>symmetrical</b> limits of the peak power for measurements in synchronous (call) mode on GSM-900 and GSM-850 channels; the physical dimension of the number stated is dB. The first value applies to power control steps 0-2 (39 dBm), the second value applies to power control 3 (37 dBm) and so forth up to the eighteenth value for power control steps 19 through 31 (5 dBm).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:POW:LIM:GSM 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5</b> Sets the lower and upper limits of the power measurement result on GSM-900 and GSM-850 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5 dB around the nominal level.

**:CALCulate:GSM:RFTX:POWer:LIMit:PCN**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:POWer:LIMit:PCN</b> <real1>,<real2>,...,<real19>
<b>Parameters</b>	<b>real1</b> through <b>real19</b> are floating point real numbers. The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.1</b> . The default values are: <b>2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5</b> .
<b>Description</b>	Sets the <b>symmetrical</b> limits of the peak power for measurements in synchronous (call) mode on GSM-1800 channels; the physical dimension of the number stated is dB. The first value applies to power control step 29 (36 dBm), the second value applies to power control 30 (34 dBm) and so forth up to the nineteenth value for power control steps 15 through 28 (0 dBm).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:POW:LIM:PCN 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5</b> Sets the lower and upper limits of the power measurement result on GSM-1800 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5 dB around the nominal level.

**:CALCulate:GSM:RFTX:POWER:LIMit:PCS**

<b>Syntax</b>	:CALCulate:GSM:RFTX:POWER:LIMit:PCS <real1>,<real2>,...,<real18>
<b>Parameters</b>	<b>real1</b> through <b>real19</b> are floating point real numbers. The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.1</b> . The default values are: <b>2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5</b> .
<b>Description</b>	Sets the <b>symmetrical</b> limits of the peak power for measurements in synchronous (call) mode on GSM-1900 channels; the physical dimension of the number stated is dB. The first value applies to power control step 30 (34 dBm), the second value applies to power control step 31 (32 dBm), the third value applies to power control step 0 (30 dBm) and so forth up to the eighteenth value for power control steps 15 through 28 (0 dBm).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:POW:LIM:PCN 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5</b> Sets the lower and upper limits of the power measurement result on GSM-1800 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5 dB around the nominal level.

**:CALCulate:GSM:RFTX:TEMPlate[:NORMal]:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFTX:TEMPlate[:NORMal]:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers 14 boolean numbers, indicating whether the PTT limits for a <b>normal</b> burst were violated or not. A <b>0</b> on a position means that there was no violation of the limits while a <b>1</b> indicates that at least one measurement result did violate one of the corresponding measurement limits. The 14 boolean numbers correspond to the limits of the PTT as defined on the user interface or with the <b>:CALC:GSM:RFTX:TEMP</b> commands as described below. The first eight numbers stand for the eight 'upper' segments of the burst, while the following six numbers stand for the six 'lower' segments of the burst. Refer to section Power/Time Templates (PTT) for further details.
<b>Example</b>	<b>:MEAS:GSM:RFTX:TEMP</b> <b>:CALC:GSM:RFTX:TEMP:LIM?</b> String returned: " <b>0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0</b> " This string indicates that there was a violation of the limits of one of the 'lower' segments of the PTT (in this example during the ramping up phase of the burst).

**:CALCulate:GSM:RFTX:TEMPlate[:NORMal]:LIMit:AUTO**

<b>Syntax</b>	:CALCulate:GSM:RFTX:TEMPlate[:NORMal]:LIMit:AUTO <Pre-defExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .

<b>Description</b>	This command selects the power/time template to check normal bursts against. <b>Auto mode</b> (parameter <b>ON</b> ) means that the Willtek 3100 will use the appropriate PTT as defined in the GSM/ETSI standards. Those PTTs vary with the frequency range and the RF power level used by the mobile. <b>Manual mode</b> (parameter <b>OFF</b> ) means that the GSM/ETSI specifications will be ignored and that the Willtek 3100 will use the manually set limits instead (see description of the <b>:CALC:GSM:RFTX:TEMP:LIM:UPP</b> and <b>:CALC:GSM:RFTX:TEMP:LIM:LOW</b> commands for further details).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:TEMP:LIM:AUTO ON</b> Switches the limit check for the burst shape to use the standard PTTs as defined by ETSI standards.

**:CALCulate:GSM:RFTX:TEMPlate[:NORMal]:LIMit:STATE**

<b>Syntax</b>	<b>:CALCulate:GSM:RFTX:TEMPlate[:NORMal]:LIMit:STATE</b> <Pre-defExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFTX:TEMPlate</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:TEMP:LIM:STAT ON</b> Switches on the limit check of the burst shape against the PTT for normal bursts.

**:CALCulate:GSM  
:RFTX:TEMPlate[:NORMal]:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:GSM :RFTX:TEMPlate[:NORMal]:LIMit:UPPer[:DATA]</b> <real0t>,<real0p>,<real1t>,<real1p>, <real2t>,<real2p>,<real3t>,<real3p>, <real4t>,<real4p>,<real5t>,<real5p>, <real6t>,<real6p>,<real7t>,<real7p>,<real8t>,<real8p>
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<b>Parameters</b>	<p><b>realxt</b> and <b>realxp</b> are floating point real numbers.</p> <p>The minimum value for all <b>realxt</b> is <b>-41.0</b>, the maximum value <b>580.0</b>. The minimum resolution possible for all <b>realxt</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real0t</b>: <b>-41.0</b>,  for <b>real1t</b>: <b>-28.0</b>,  for <b>real2t</b>: <b>-18.0</b>,  for <b>real3t</b>: <b>-10.0</b>  for <b>real4t</b>: <b>0.0</b>,  for <b>real5t</b>: <b>553.0</b>  for <b>real6t</b>: <b>561.0</b>,  for <b>real7t</b>: <b>571.0</b>  for <b>real8t</b>: <b>580.0</b>.</p> <p>The minimum value for all <b>realxp</b> is <b>-150.0</b>, the maximum value <b>5.0</b>. The minimum resolution possible for all <b>realxp</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real0p</b>: <b>-59.0</b>,  for <b>real1p</b>: <b>-59.0</b>,  for <b>real2p</b>: <b>-30.0</b>,  for <b>real3p</b>: <b>-6.0</b>  for <b>real4p</b>: <b>4.0</b>,  for <b>real5p</b>: <b>1.0</b>  for <b>real6p</b>: <b>-6.0</b>,  for <b>real7p</b>: <b>-30.0</b>  for <b>real8p</b>: <b>-59.0</b>.</p>
<b>Description</b>	<p>Sets the upper limits for the user-definable PTT (for normal bursts). The upper limits of the user-defined PTT are made up by nine pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst).</p> <p>For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).</p>
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:CALC:GSM:RFTX:TEMP:LIM:UPP -41,-47,-28,-47,-18,-28,-10,-4,0,4,553,1,561,-4,571,-28,580,-47</code>

**:CALCulate:GSM**  
**:RFTX:TEMPlate[:NORMal]:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GSM :RFTX:TEMPlate[:NORMal]:LIMit:LOWer[:DATA] &lt;real0t&gt;,&lt;real0p&gt;,&lt;real1t&gt;,&lt;real1p&gt;,&lt;real2t&gt;,&lt;real2p&gt;,&lt;real3t&gt;,&lt;real3p&gt;,&lt;real4t&gt;,&lt;real4p&gt;,&lt;real5t&gt;,&lt;real5p&gt;,&lt;real6t&gt;,&lt;real6p&gt;</pre>
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<b>Parameters</b>	<p><b>realxt</b> and <b>realxp</b> are floating point real numbers. The minimum value for all <b>realxt</b> is <b>-41.0</b>, the maximum value <b>580.0</b>. The minimum resolution possible for all <b>realxt</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real0t</b>: <b>-41.0</b>,  for <b>real1t</b>: <b>0.0</b>,  for <b>real2t</b>: <b>0.0</b>,  for <b>real3t</b>: <b>20.0</b>  for <b>real4t</b>: <b>270.0</b>,  for <b>real5t</b>: <b>543.0</b>  for <b>real6t</b>: <b>543.0</b>.</p> <p>The minimum value for all <b>realxp</b> is <b>-150.0</b>, the maximum value <b>5.0</b>. The minimum resolution possible for all <b>realxp</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real0p</b>: <b>-150.0</b>,  for <b>real1p</b>: <b>-150.0</b>,  for <b>real2p</b>: <b>-40.0</b>,  for <b>real3p</b>: <b>-1.0</b>  for <b>real4p</b>: <b>-1.0</b>,  for <b>real5p</b>: <b>-1.0</b>  for <b>real6p</b>: <b>-150.0</b>.</p>
<b>Description</b>	<p>Sets the lower limits for the user-definable PTT (for normal bursts). The lower limits of the user-defined PTT are made up by seven pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst).</p> <p>For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).</p>
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre>:CALC:GSM:RFTX:TEMP:LIM:LOW -41,-150,0,-150,0,-40,20,-1,270,-1,543,-1,543,-150</pre>

**:CALCulate:GSM**  
**:RFTX:TEMPlate:RACH:LIMit[:FAIL]?**

<b>Syntax</b>	<pre>:CALCulate:GSM :RFTX:TEMPlate:RACH:LIMit[:FAIL]?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers 14 boolean numbers, indicating whether the PTT limits for a <b>random access</b> burst were violated or not. A <b>0</b> on a position means that there was no violation of the limits while a <b>1</b> indicates that at least one measurement result did violate one of the corresponding measurement limits.</p> <p>The 14 boolean numbers correspond to the limits of the PTT as defined on the user interface or with the <b>:CALC:GSM:RFTX:TEMP:RACH:LIM</b> commands as described below. The first eight numbers stand for the eight 'upper' segments of the burst, while the following six numbers stand for the six 'lower' segments of the burst. Refer to section Power/Time Templates (PTT) for further details.</p>
<b>Example</b>	<pre>:CALC:GSM:RFTX:TEMP:RACH:LIM? String returned:"0,0,0,0,0,0,0,0,0,0,0,1,0,0,0"</pre> <p>This string indicates that there was a violation of the limits of one of the 'lower' segments of the PTT (in this example during the ramping up phase of the burst).</p>

**:CALCulate:GSM:RFTX:TEMPlate:RACH:LIMit:AUTO**

<b>Syntax</b>	:CALCulate:GSM:RFTX:TEMPlate:RACH:LIMit:AUTO <Pre-defExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command selects the power/time template to check a random access burst against. <b>Auto mode</b> (parameter <b>ON</b> ) means that the Willtek 3100 will use the appropriate PTT as defined in the GSM/ETSI standards. Those PTTs vary with the frequency range and the RF power level used by the mobile. <b>Manual mode</b> (parameter <b>OFF</b> ) means that the GSM/ETSI specifications will be ignored and that the Willtek 3100 will use the manually set limits instead (see description of the <b>:CALC:GSM:RFTX:TEMP:RACH:LIM:UPP</b> and <b>:CALC:GSM:RFTX:TEMP:RACH:LIM:LOW</b> commands for further details).
<b>Query</b>	There is on query form to this commmand.
<b>Example</b>	<b>:CALC:GSM:RFTX:TEMP:RACH:LIM:AUTO ON</b> Switches the limit check for the shape of random access bursts to use the standard PTTs as defined by GSM/ETSI.

**:CALCulate:GSM:RFTX:TEMPlate:RACH:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GSM:RFTX:TEMPlate:RACH:LIMit:STATE <Pre-defExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the limit check of the burst shape against the PTT (of random access bursts) either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:TEMP:RACH:LIM:STAT ON</b> Switches on the limit check of the shape of random access bursts against the PTT.

**:CALCulate:GSM  
:RFTX:TEMPlate:RACH:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:GSM :RFTX:TEMPlate:RACH:LIMit:UPPer[:DATA] <real0t>,<real0p>,<real1t>,<real1p>, <real2t>,<real2p>,<real3t>,<real3p>, <real4t>,<real4p>,<real5t>,<real5p>, <real6t>,<real6p>,<real7t>,<real7p>,<real8t>,<real8p>
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<b>Parameters</b>	<p><b>realxt</b> and <b>realxp</b> are floating point real numbers.</p> <p>The minimum value for all <b>realxt</b> is <b>-41.0</b>, the maximum value <b>580.0</b>. The minimum resolution possible for all <b>realxt</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real0t</b>: <b>-41.0</b>,  for <b>real1t</b>: <b>-28.0</b>,  for <b>real2t</b>: <b>-18.0</b>,  for <b>real3t</b>: <b>-10.0</b>  for <b>real4t</b>: <b>0.0</b>,  for <b>real5t</b>: <b>331.0</b>  for <b>real6t</b>: <b>339.0</b>,  for <b>real7t</b>: <b>349.0</b>  for <b>real8t</b>: <b>349.0</b>.</p> <p>The minimum value for all <b>realxp</b> is <b>-150.0</b>, the maximum value <b>5.0</b>. The minimum resolution possible for all <b>realxp</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real0p</b>: <b>-59.0</b>,  for <b>real1p</b>: <b>-59.0</b>,  for <b>real2p</b>: <b>-30.0</b>,  for <b>real3p</b>: <b>-6.0</b>  for <b>real4p</b>: <b>4.0</b>,  for <b>real5p</b>: <b>1.0</b>  for <b>real6p</b>: <b>-6.0</b>,  for <b>real7p</b>: <b>-30.0</b>  for <b>real8p</b>: <b>-59.0</b>.</p>
<b>Description</b>	<p>Sets the upper limits for the user-definable PTT for random access bursts. The upper limits of the user-defined PTT are made up by nine pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst).</p> <p>For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).</p>
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<pre>:CALC:GSM:RFTX:TEMP:RACH:LIM:UPP -41,-59,-28,-59,-18,-30,-10,-6,0, 4,331,1,339,-6,349,- 30,349,-59</pre>

**:CALCulate:GSM**  
**:RFTX:TEMPlate:RACH:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GSM :RFTX:TEMPlate:RACH:LIMit:LOWer[:DATA] &lt;real0t&gt;,&lt;real0p&gt;,&lt;real1t&gt;,&lt;real1p&gt;,&lt;real2t&gt;,&lt;real2p&gt;,&lt;real3t&gt;,&lt;real3p&gt;,&lt;real4t&gt;,&lt;real4p&gt;,&lt;real5t&gt;,&lt;real5p&gt;,&lt;real6t&gt;,&lt;real6p&gt;</pre>
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<b>Parameters</b>	<p><b>realxt</b> and <b>realxp</b> are floating point real numbers. The minimum value for all <b>realxt</b> is <b>-41.0</b>, the maximum value <b>580.0</b>. The minimum resolution possible for all <b>realxt</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real10t</b>: <b>-41.0</b>,  for <b>real11t</b>: <b>0.0</b>,  for <b>real12t</b>: <b>0.0</b>,  for <b>real13t</b>: <b>20.0</b>  for <b>real14t</b>: <b>270.0</b>,  for <b>real15t</b>: <b>321.0</b>  for <b>real16t</b>: <b>321.0</b>.</p> <p>The minimum value for all <b>realxp</b> is <b>-150.0</b>, the maximum value <b>5.0</b>. The minimum resolution possible for all <b>realxp</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real10p</b>: <b>-150.0</b>,  for <b>real11p</b>: <b>-150.0</b>,  for <b>real12p</b>: <b>-40.0</b>,  for <b>real13p</b>: <b>-1.0</b>  for <b>real14p</b>: <b>-1.0</b>,  for <b>real15p</b>: <b>-1.0</b>  for <b>real16p</b>: <b>-150.0</b>.</p>
<b>Description</b>	<p>Sets the lower limits for the user-definable PTT for random access bursts. The lower limits of the user-defined PTT are made up by seven pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst). For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).</p>
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<pre>:CALC:GSM:RFTX:TEMP:RACH:LIM:LOW -41,-150,0,-150,0,-40,20,-1,270,-1,321,-1,321,-150</pre>

**:CALCulate:GSM  
:RFTX:CORNER[:NORMAL]:POSITION**

<b>Syntax</b>	<pre>:CALCulate:GSM :RFTX:CORNER[:NORMAL]:POSITION &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;,&lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;</pre>
<b>Parameters</b>	<p><b>realx</b> are floating point real numbers. The minimum value for all <b>realx</b> is <b>-28.0</b>, the maximum value <b>580.0</b>. The minimum resolution possible for all <b>realx</b> is <b>0.1</b>. The default values are:</p> <p>for <b>real1</b>: <b>-28.0</b>,  for <b>real2</b>: <b>-18.0</b>,  for <b>real3</b>: <b>-10.0</b>,  for <b>real4</b>: <b>0.0</b>  for <b>real5</b>: <b>542.8</b>,  for <b>real6</b>: <b>552.8</b>  for <b>real7</b>: <b>560.8</b>.  for <b>real8</b>: <b>570.8</b>.</p>
<b>Description</b>	<p>Sets the position of the eight user-definable corner points in relation to the beginning of the burst for <b>normal</b> bursts. The positions are given in microseconds. For further details, refer to section Corner Points.</p>
<b>Query</b>	There is no query form to this command.

**Example** :CALC:GSM:RFTX:CORN:POS -28,-18,-10,0,542.8,552.8,562.8,572.8

**:CALCulate:GSM  
:RFTX:CORner[:NORMal]:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM :RFTX:CORner[:NORMal]:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers eight boolean numbers, indicating whether the limits for the eight corner positions of <b>normal</b> bursts were violated by the bursts received or not. A <b>0</b> on a position means that there was no violation of the limits while a <b>1</b> indicates that at least one measurement result did violate the corresponding measurement limits. The eight boolean numbers correspond with the eight corner points set with the <b>:CALC:GSM:RFTX:CORN:NORM:POS</b> command as described above. Please refer to section Corner Points for further details.
<b>Example</b>	:MEAS:GSM:ARR:CORN 10 :CALC:GSM:RFTX:CORN:LIM:FAIL? String returned in this example:"0,0,1,0,0,0,0,0" This string indicates that the limits set for corner point 3 were violated.

**:CALCulate:GSM  
:RFTX:CORner[:NORMal]:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GSM :RFTX:CORner[:NORMal]:LIMit:STATE <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFTX:CORner</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GSM:RFTX:CORN:LIM:STAT OFF Switches the limit check at the eight corner positions off.

**:CALCulate:GSM  
:RFTX:CORner[:NORMal]:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFTX:CORner[:NORMal]:LIMit:UPPer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	<b>realx</b> are floating point real numbers. The minimum value for all <b>realx</b> is <b>-150.0</b> , the maximum is <b>10.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.01</b> . The default value is <b>4.0</b> for all <b>realx</b> .

<b>Description</b>	Sets the upper limits at the eight user-definable corner points for normal bursts. The single data values are dB relative to the power level during the active part of the burst.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GSM:RFTX:CORN:LIM:UPP 4,4,4,4,4,4,4,4

**:CALCulate:GSM  
:RFTX:CORN[:NORM]:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFTX:CORN[:NORM]:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	<b>realx</b> are floating point real numbers. The minimum value for all <b>realx</b> is <b>-150.0</b> , the maximum is <b>10.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.01</b> . The default value is <b>-150.0</b> for all <b>realx</b> .
<b>Description</b>	Sets the lower limits at the eight user-definable corner points for normal bursts. The single data values are dB relative to the power level during the active part of the burst.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GSM:RFTX:CORN:LIM:LOW -150,-150,-150,-150,-150,-150,-150,-150

**:CALCulate:GSM:RFTX:CORner:RACH:POSition**

<b>Syntax</b>	:CALCulate:GSM:RFTX:CORner:RACH:POSition <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	<b>realx</b> are floating point real numbers. The minimum value for all <b>realx</b> is <b>-28.0</b> , the maximum value <b>580.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.1</b> . The default values are: for <b>real1</b> : <b>-28.0</b> , for <b>real2</b> : <b>-18.0</b> , for <b>real3</b> : <b>-10.0</b> , for <b>real4</b> : <b>0.0</b> for <b>real5</b> : <b>321.2</b> , for <b>real6</b> : <b>331.2</b> for <b>real7</b> : <b>339.2</b> . for <b>real8</b> : <b>349.2</b> .
<b>Description</b>	Sets the position of the eight user-definable corner points in relation to the beginning of the burst for random access bursts. The positions are given in microseconds. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GSM:RFTX:CORN:RACH:POS -28,-18,-10,0,321.2,331.2,341.2,351.2

**:CALC:GSM**  
**:RFTX:CORNER:RACH:LIMIT[:FAIL]?**

<b>Syntax</b>	:CALC:GSM :RFTX:CORNER:RACH:LIMIT[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers eight boolean numbers, indicating whether the limits for the eight corner positions of <b>random access burst</b> were violated by the bursts received or not. A <b>0</b> on a position means that there was no violation of the limits while a <b>1</b> indicates that at least one measurement result did violate one of the two corresponding measurement limits. The eight boolean numbers correspond with the eight corner points set with the <b>:CALC:GSM:RFTX:CORN:RACH:POS</b> command as described above.
<b>Example</b>	<b>:CALC:GSM:RFTX:CORN:RACH:LIM:FAIL?</b> String returned: "0,1,0,0,0,0,0,0" This string indicates that one of the two limits set for corner point 2 was violated.

**:CALCulate:GSM:RFTX:CORN:RACH:LIMIT:STATE**

<b>Syntax</b>	:CALCulate:GSM:RFTX:CORN:RACH:LIMIT:STATE <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the bursts against the limits at the corner points either on or off for <b>random access bursts</b> .
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFTX:CORN:RACH:LIM:STAT OFF</b> Switches the limit check at the eight corner positions off.

**:CALCulate:GSM**  
**:RFTX:CORNER:RACH:LIMIT:UPPER[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFTX:CORNER:RACH:LIMIT:UPPER[:DATA] <real1>, <real2>, <real3>, <real4>, <real5>, <real6>, <real7>, <real8>
<b>Parameters</b>	<b>realx</b> are floating point real numbers. The minimum value for all <b>realx</b> is <b>-150.0</b> , the maximum is <b>10.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.01</b> . The default value is <b>4.0</b> for all <b>realx</b> .
<b>Description</b>	Sets the upper limits at the eight user-definable corner points for <b>random access bursts</b> . The single data values are dB relative to the power level during the active part of the burst.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	<b>:CALC:GSM:RFTX:CORNER:NORMAL:LIM:UPP:DATA</b> 4,4,4,4,4,4,4,4

**:CALCulate:GSM**  
**:RFTX:CORNER:RACH:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFTX:CORNER:RACH:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>,<real4>,<real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	<b>realx</b> are floating point real numbers. The minimum value for all <b>realx</b> is <b>-150.0</b> , the maximum is <b>10.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.01</b> . The default value is <b>-150.0</b> for all <b>realx</b> .
<b>Description</b>	Sets the lower limits at the eight user-definable corner points for random access bursts. The single data values are dB relative to the power level during the active part of the burst.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GSM:RFTX:CORN:RACH:LIM:LOW -150,-150,-150,-150,-150,-150,-150,-150

**:CALCulate:GSM:RFRX:MAverage?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:MAverage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the RX measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:GSM:ARR:RFRX:RBER:ALL :CALC:GSM:RFRX:MAV?

**:CALCulate:GSM:RFRX:MMINimum?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:MMINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>minimum</b> measurement result value of the RX measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:GSM:ARR:RFRX:RBER:ALL :CALC:GSM:RFRX:MMIN?

**:CALCulate:GSM:RFRX:MMAximum?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the RX measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre> <b>:CALC:RES</b> <b>:MEAS:GSM:ARR:RFRX:RBER:ALL</b> <b>:CALC:GSM:RFRX:MMAx?</b> </pre>

**:CALCulate:GSM:RFRX:MSIGma?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the RX measurement last started. The string delivered back contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre> <b>:CALC:RES</b> <b>:MEAS:GSM:RFRX:RBER:MSIG</b> ... (other SCPI commands) ... <b>:CALC:GSM:RFRX:MSIG?</b> </pre> <p>In this example, first a continuous measurement of the residual bit error rate (RBER) on class II bits is started. After some time, the <b>:CALC:GSM:RFRX:MSIG</b> command is used to read out the mean RBER and its standard deviation. The string returned in this example is "5.3, 3.1".</p>

**:CALCulate:GSM:RFRX:RBER:ALL:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:RBER:ALL:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers 3 boolean numbers in a string, separated by commas. These numbers indicate, whether one of the residual bit error ratio measurements did violate the corresponding test limits. While a 0 delivered back on any position means that the related test was passed without exceeding the limits, a 1 indicates that at least one of the limits was violated by the measurement result value.</p> <p>The position of the boolean number within the string returned indicates the result of the check for the following measurements:</p> <ol style="list-style-type: none"> <li>1. the bit error ratio measurement of the class 1b bits,</li> <li>2. the bit error ratio measurement of the class II bits and,</li> <li>3. the frame erasure ratio measurement.</li> </ol> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- For further details regarding bit classes, please refer to section voice coding.</li> <li>- For details regarding the three measurement types, see the description of the :MEAS:GSM:RFRX:RBER:ALL command.</li> </ul>
<b>Example</b>	<pre><b>:MEAS:GSM:RFRX:RBER:ALL</b> <b>:CALC:GSM:RFRX:RBER:ALL:LIM?</b></pre> <p>String returned: "0,0,1"</p> <p>The 1 on position 3 indicates that there was a violation of at least one limit of the frame erasure measurement.</p>

**:CALCulate:GSM:RFRX:RBER:ALL:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFRX:RBER:ALL:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the :MEAS:GSM:RFRX:RBER:ALL measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:CALC:GSM:RFRX:RBER:ALL:LIM:STAT OFF</b></pre> <p>Switches the limit check of all residual bit error ratio measurements off.</p>

**:CALCulate:GSM:RFRX:RBER:ALL:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GSM :RFRX:RBER:ALL:LIMit:UPPer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;</pre>
<b>Parameters</b>	<p><b>realx</b> are three floating point real numbers.</p> <p>The minimum value for all <b>realx</b> is 0.0, the maximum is 100.0. The minimum resolution possible for all <b>realx</b> is 0.1. The default value for all <b>realx</b> is 2.5.</p>
<b>Description</b>	<p>Sets the upper limits for three residual bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning:</p> <p><b>real1</b> represents the upper limit of the bit error ratio measurement for the class 1b bits,</p> <p><b>real2</b> represents the upper limit of the bit error ratio measurement of the class II bits, while</p> <p><b>real3</b> represents the upper limit of the frame erasure ratio measurement.</p> <p><b>Note:</b> For further details regarding bit classes, please refer to section voice coding.</p>
<b>Query</b>	The query form of this command is not available.



**Example**        **:CALC:GSM:RFRX:RBER:ALL:LIM:UPP 1,2,1**  
Sets the upper limits as follows:

- RBER class Ia: 1.0%
- RBER class II: 2.0%
- FER: 1.0%

**:CALCulate:GSM**  
**:RFRX:RBER:ALL:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:GSM</b> <b>:RFRX:RBER:ALL:LIMit:LOWer[:DATA]</b> <b>&lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;</b>
<b>Parameters</b>	<b>realx</b> are three floating point real numbers. The minimum value for all <b>realx</b> is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.1</b> . The default value for all <b>realx</b> is <b>0.0</b> .
<b>Description</b>	Sets the lower limits for three residual bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning: <b>real1</b> represents the lower limit of the bit error ratio measurement for the class 1b bits, <b>real2</b> represents the lower limit of the bit error ratio measurement of the class II bits, while <b>real3</b> represents the lower limit of the frame erasure ratio measurement.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:GSM:RFRX:RBER:ALL:LIM:LOW 0,0,0,</b> Sets the lower limits for RBER class Ia bits, RBER class II bits and FER to 0.0%.

**:CALCulate:GSM**  
**:RFRX:RBER:CIB:LIMit[:FAIL]?**

<b>Syntax</b>	<b>:CALCulate:GSM</b> <b>:RFRX:RBER:CIB:LIMit[:FAIL]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the residual bit error ratio measurement of the class Ib bits did violate the user-definable test limits. While a <b>0</b> delivered back means that the related test was passed without exceeding the limits, a <b>1</b> indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	<b>:MEAS:GSM:RFRX:RBER:CIB</b> <b>:CALC:GSM:RFRX:RBER:CIB:LIM?</b> String returned: " <b>0</b> " This means that the bit error ratio measured was within the limits set with the commands explained in this section.

**:CALCulate:GSM:RFRX:RBER:CIB:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFRX:RBER:CIB:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GSM:RFRX:RBER:CIB measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFRX:RBER:CIB:LIM:STAT OFF</b> Switches the limit check of the residual bit error ratio measurement for the class 1b bits off.

**:CALCulate:GSM  
:RFRX:RBER:CIB:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFRX:RBER:CIB:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>2.5</b> .
<b>Description</b>	Sets the upper limit for the residual bit error ratio measurement of the class 1b bits.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:GSM:RFRX:RBER:CIB:LIM:UPP 5</b> Sets the upper limit for the class 1 bit error rate results to 5.0.

**:CALCulate:GSM  
:RFRX:RBER:CIB:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFRX:RBER:CIB:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>0.0</b> .
<b>Description</b>	Sets the lower limit for the residual bit error ratio measurement of the class 1b bits.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:GSM:RFRX:RBER:CIB:LIM:LOW 0.0</b> Sets the lower limit for the class 1 bit error rate results to 0.

**:CALCulate:GSM  
:RFRX:RBER:CII:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM :RFRX:RBER:CII:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the residual bit error ratio measurement of the class II bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	<pre><b>:MEAS:GSM:RFRX:RBER:CII</b> <b>:CALC:GSM:RFRX:RBER:CII:LIM?</b></pre> String returned: "1" This means that the bit error ratio measured was outside the limits set with the commands explained in this section.

**:CALCulate:GSM:RFRX:RBER:CII:LIMit:STATe**

<b>Syntax</b>	<code>:CALCulate:GSM:RFRX:RBER:CII:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:GSM:RFRX:RBER:CII</code> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:CALC:GSM:RFRX:RBER:CII:LIM:STAT ON</b></pre> Switches the limit check of the residual bit error ratio measurement for the class II bits on.

**:CALCulate:GSM:RFRX:RBER:CII:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre><code>:CALCulate:GSM:RFRX:RBER:CII:LIMit:UPPer[:DATA] &lt;real1&gt;</code></pre>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>2.5</b> .
<b>Description</b>	Sets the upper limit for the residual bit error ratio measurement of the class II bits.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre><b>:CALC:GSM:RFRX:RBER:CII:LIM:UPP 5</b></pre> Sets the upper limit of the class II RBER measurement to 5%.

**:CALCulate:GSM:RFRX:RBER:CII:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre><code>:CALC:GSM:RFRX:RBER:CII:LIMit:LOWer[:DATA] &lt;real1&gt;</code></pre>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>0.0</b> .
<b>Description</b>	Sets the lower limit for the residual bit error ratio measurement of the class II bits.
<b>Query</b>	The query form of this command is not available.

**Example**            :**CALC:GSM:RFRX:RBER:CII:LIM:LOW 0.0**  
Sets the lower limit of the class II RBER measurement to 0%.

**:CALCulate:GSM:RFRX:RBER:FER:LIM[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:RBER:FER:LIM[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the frame erasure ratio measurement did violate the user-definable test limits. While a <b>0</b> delivered back means that the related test was passed without exceeding the limits, a <b>1</b> indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding the frame error ratio, please refer to section RBER live display.
<b>Example</b>	<b>:MEAS:GSM:RFRX:RBER:FER</b> <b>:CALC:GSM:RFRX:RBER:FER:LIM?</b> String returned: " <b>0</b> " This means that the frame erasure ratio was within the limits set with the commands explained in this section.

**:CALCulate:GSM:RFRX:RBER:FER:LIMit:STATe**

<b>Syntax</b>	:CALC:GSM:RFRX:RBER:FER:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFRX:RBER:FER</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFRX:RBER:FER:LIM:STAT ON</b> Switches the limit check of the frame erasure ratio measurement on.

**:CALCulate:GSM**  
**:RFRX:RBER:FER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFRX:RBER:FER:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>2.5</b> .
<b>Description</b>	Sets the upper limit for the frame erasure ratio measurement. <b>Note:</b> For further details regarding the FER, please refer to section RBER live display.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:RBER:FER:LIM:UPP 4.5</b> Sets the upper limit for the FER measurement results to 4.5%.

**:CALCulate:GSM  
:RFRX:RBER:FER:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFRX:RBER:FER:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1. The default value is 0.0.
<b>Description</b>	Sets the lower limit for the frame erasure ratio measurement.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:RBER:FER:LIM:LOW 0</b> Sets the lower limit for the FER measurement results to 0%.

**:CALCulate:GSM:RFRX:BER:ALL:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:ALL:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers 3 boolean numbers in a string, separated by commas. These numbers indicate, which one of the (nonresidual) bit error ratio measurements did violate the corresponding test limits. While a 0 delivered back on any position means that the related test was passed without exceeding the limits, a 1 indicates that at least one of the limits was violated by the measurement result value. The position of the boolean number within the string returned indicates the result of the check for the following measurements: 1. the bit error ratio measurement of the class Ia bits, 2. the bit error ratio measurement of the class Ib bits and, 3. the bit error ratio measurement of the class II bits. <b>Notes</b> – For further details regarding bit classes, please refer to section voice coding. – For a description of the measurements performed, refer to the description of the :MEAS:GSM:RFRX:BER:ALL command.
<b>Example</b>	<b>:MEAS:GSM:RFRX:BER:ALL 3</b> <b>:CALC:GSM:RFRX:BER:ALL:LIM?</b> String returned: "0,0,1" The 1 on position 3 indicates that there was a violation of at least one limit of the bit error ratio measurement of the class II bits.

**:CALCulate:GSM:RFRX:BER:ALL:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:ALL:LIMit:STATE <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the :MEAS:GSM:RFRX:BER:ALL measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.

**Example**        :CALC:GSM:RFRX:BER:ALL:LIM:STAT OFF  
Switches the limit check of all (nonresidual) bit error ratio measurements off.

**:CALCulate:GSM**  
**:RFRX:BER:ALL:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFRX:BER:ALL:LIMit:UPPer[:DATA] <real1>,<real2>,<real3>
<b>Parameters</b>	<b>realx</b> are three floating point real numbers. The minimum value for all <b>realx</b> is <b>0.0</b> , the maximum value <b>100.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.1</b> . The default value for all <b>realx</b> is <b>2.5</b> .
<b>Description</b>	Sets the upper limits for the three (nonresidual) bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning: <b>real1</b> represents the upper limit of the bit error ratio measurement for the class Ia bits, <b>real2</b> represents the upper limit of the bit error ratio measurement for the class Ib bits and, <b>real3</b> represents the upper limit of the bit error ratio measurement for the class II bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:ALL:LIM:UPP 1,2,2.8</b> Sets the upper limit of the BER measurements to 1.0% for class Ia bits, 2.0% for class Ib bits and 2.8% for class II bits.

**:CALCulate:GSM**  
**:RFRX:BER:ALL:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFRX:BER:ALL:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>
<b>Parameters</b>	<b>realx</b> are three floating point real numbers. The minimum value for all <b>realx</b> is <b>0.0</b> , the maximum value <b>100.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.1</b> . The default value for all <b>realx</b> is <b>0.0</b> .
<b>Description</b>	Sets the lower limits for the three (nonresidual) bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning: <b>real1</b> represents the lower limit of the bit error ratio measurement for the class Ia bits, <b>real2</b> represents the lower limit of the bit error ratio measurement for the class Ib bits and, <b>real3</b> represents the lower limit of the bit error ratio measurement for the class II bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:ALL:LIM:LOW</b> Sets the lower limit for all three BER measurements (class Ia, class Ib and class II) to 0%.

**:CALCulate:GSM:RFRX:BER:CIA:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CIA:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the (nonresidual) bit error ratio measurement of the class la bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	<p><b>:MEAS:GSM:ARRAY:RFRX:BER:CIA 5</b>  <b>:CALC:GSM:RFRX:BER:CIA:LIM?</b>  String returned: "1"  This means that the bit error ratio measured for the class la bits was outside the limits set with the commands explained in this section.</p>

**:CALCulate:GSM:RFRX:BER:CIA:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CIA:LIMit:STATE <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GSM:RFRX:BER:CIA measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<p><b>:CALC:GSM:RFRX:BER:CIA:LIM:STAT ON</b>  Switches the limit check of the (nonresidual) bit error ratio measurement for the class la bits on.</p>

**:CALCulate:GSM:RFRX:BER:CIA:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CIA:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the (nonresidual) bit error ratio measurement of the class la bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<p><b>:CALC:GSM:RFRX:BER:CIA:LIM:UPP 2</b>  Sets the upper limit for bit error rate measurements on class la bits to 2.0%.</p>

**:CALCulate:GSM**  
**:RFRX:BER:CIA:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM :RFRX:BER:CIA:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>0.0</b> .
<b>Description</b>	Sets the lower limit for the (nonresidual) bit error ratio measurement of the class Ia bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:CIA:LIM:LOW 0.0</b> Sets the lower limit for BER measurements on class Ia bits to 0.

**:CALCulate:GSM:RFRX:BER:CIB:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CIB:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the (nonresidual) bit error ratio measurement of the class Ib bits did violate the user-definable test limits. While a <b>0</b> delivered back means that the related test was passed without exceeding the limits, a <b>1</b> indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	<b>:MEAS:GSM:RFRX:BER:CIB</b> <b>:CALC:GSM:RFRX:BER:CIB:LIM?</b> String returned: " <b>1</b> " This means that the bit error ratio measured for the class Ib bits was outside the limits set with the commands explained in this section.

**:CALCulate:GSM:RFRX:BER:CIB:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CIB:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:GSM:RFRX:BER:CIB</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:CIB:LIM:STAT ON</b> Switches the limit check of the (nonresidual) bit error ratio measurement for the class Ib bits on.



**:CALCulate:GSM**  
**:RFRX:BER:CIB:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:GSM</code> <code>:RFRX:BER:CIB:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>2.5</b> .
<b>Description</b>	Sets the upper limit for the (nonresidual) bit error ratio measurement of the class Ib bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:CIB:LIM:UPP 2.0</b> Sets the upper limit for class Ib bits to 2%.

**:CALCulate:GSM**  
**:RFRX:BER:CIB:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:GSM</code> <code>:RFRX:BER:CIB:LIMit:LOWer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>0.0</b> .
<b>Description</b>	Sets the lower limit for the (nonresidual) bit error ratio measurement of the class Ib bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:CIB:LIM:LOW 0</b> Sets the lower limit for class Ib bits to 0%.

**:CALCulate:GSM:RFRX:BER:CII:LIMit[:FAIL]?**

<b>Syntax</b>	<code>:CALCulate:GSM:RFRX:BER:CII:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the (nonresidual) bit error ratio measurement of the class II bits did violate the user-definable test limits. While a <b>0</b> delivered back means that the related test was passed without exceeding the limits, a <b>1</b> indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	<b>:MEAS:GSM:ARRay:RFRX:BER:CII 3</b> <b>:CALC:GSM:RFRX:BER:CII:LIM?</b> String returned: " <b>1</b> " This means that the bit error ratio measured for the class II bits was outside the limits set with the commands explained in this section.

**:CALCulate:GSM:RFRX:BER:CII:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CII:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GSM:RFRX:BER:CII measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:CII:LIM:STAT ON</b> Switches the limit check of the (nonresidual) bit error ratio measurement for the class II bits on.

**:CALCulate:GSM:RFRX:BER:CII:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CII:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>2.5</b> .
<b>Description</b>	Sets the upper limit for the (nonresidual) bit error ratio measurement of the class II bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:GSM:RFRX:BER:CII:LIM:UPP 7.5</b> Sets the upper limit of the class II BER measurements to 7.5%.

**:CALCulate:GSM:RFRX:BER:CII:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CII:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>0.0</b> .
<b>Description</b>	Sets the lower limit for the (nonresidual) bit error ratio measurement of the class II bits.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:SGM:RFRX:BER:CII:LIM:LOW 0</b> Sets the lower limit of the class II BER measurements to 0%.

**:CALCulate:GSM:RFRX:BER:CRC:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CRC:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	This command delivers back one boolean number, indicating, whether the result value of the (non-residual) bit error ratio measurement of the class II bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. Note: For further details regarding bit classes, please refer to section voice coding.
<b>Example</b>	:MEAS:GSM:ARRay:RFRX:BER:CRc 3 :CALC:GSM:RFRX:BER:CII:LIM? String returned in this example:"1" This means that the bit error ratio measured for the class II bits was outside the limits set with the commands explained in this section.

**:CALCulate:GSM:RFRX:BER:CRc:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CRc:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GSM:RFRX:BER:CII measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GSM:RFRX:BER:CRc:LIM:STAT ON Switches the limit check of the (non-residual) bit error ratio measurement for the class II bits on.

**:CALCulate:GSM:RFRX:BER:CRc:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CRc:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the (non-residual) bit error ratio measurement of the class II bits. Note For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GSM:RFRX:BER:CRc:LIM:UPP 7.5 Sets the upper limit of the class II BER measurements to 7.5%.

**:CALCulate:GSM:RFRX:BER:CRc:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GSM:RFRX:BER:CRc:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.

<b>Description</b>	Sets the lower limit for the (non-residual) bit error ratio measurement of the class II bits. Note For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:SGM:RFRX:BER:CRC:LIM:LOW 0 Sets the lower limit of the class II BER measurements to 0%.

**:CALCulate:GSM:RFRX:FBER:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFRX:FBER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the fast bit error ratio measurement (C-type loop) did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding the fast BER measurement, please refer to section FBER live display.
<b>Example</b>	:MEAS:GSM:RFRX:FBER :CALC:GSM:RFRX:FBER:LIM? String returned: "1" This means that the fast bit error ratio measured was outside the limits set with the commands explained in this section.

**:CALCulate:GSM:RFRX:FBER:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GSM:RFRX:FBER:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GSM:RFRX:FBER measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GSM:RFRX:FBER:LIM:STAT ON Switches the limit check of the fast bit error ratio measurement on.

**:CALCulate:GSM:RFRX:FBER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:GSM:RFRX:FBER:LIM:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the fast bit error ratio measurement result value.
<b>Query</b>	The query form of this command is not supported.

**Example**        **:CALC:GSM:RFRX:FBER:LIM:UPP 7.5**  
Sets the upper limit of the FER measurement results to 7.5%.

**:CALCulate:GSM:RFRX:FBER:LIMit:LOWer[:DATA]**

**Syntax**        **:CALC:GSM:RFRX:FBER:LIM:LOWer[:DATA] <real1>**

**Parameters**    **real1** is a floating point real number. The minimum value is **0.0**, the maximum is **100.0**. The minimum resolution possible is **0.1**, the default value is **0.0**.

**Description**    Sets the lower limit for the fast bit error ratio measurement result value.  
**Note:** For further details regarding the fast BER measurement, please refer to section FER live display.

**Query**        The query form of this command is not supported.

**Example**        **:CALC:GSM:RFRX:FBER:LIM:LOW 0.0**  
Sets the lower limit of the FER measurement results to 0%.

**:CALCulate:GSM:RFSPectrum:ACPM:MAVerage?**

**Syntax**        **:CALCulate:GSM:RFSPectrum:ACPM:MAVerage?**

**Parameters**    There are no parameters.

**Description**    There is solely a query form of this command available.

**Query**        Calculates and returns the **average** measurement result value of the ACPM measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.

**Example**        **:CALC:RES**  
**:MEAS:GSM:ARR:RFSP:ACPM:MOD**  
**:CALC:RFSP:ACPM:MAV?**

**:CALCulate:GSM:RFSPectrum:ACPM:MMINimum?**

**Syntax**        **:CALCulate:GSM:RFSPectrum:ACPM:MMINimum?**

**Parameters**    There are no parameters.

**Description**    There is solely a query form of this command available.

**Query**        Returns the **minimum** measurement result value of the ACPM measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.

**Example**        **:CALC:RES**  
**:MEAS:GSM:ARR:RFSP:ACPM:MOD**  
**:CALCulate:RFSP:ACPM:MMIN?**

**:CALCulate:GSM:RFSPectrum:ACPM:MMAximum?**

<b>Syntax</b>	:CALCulate:GSM:RFSPectrum:ACPM:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the ACPM measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:GSM:ARR:RFSP:ACPM:MOD</b> <b>:CALC:RFSP:ACPM:MMAx?</b>

**:CALCulate:GSM:RFSPectrum:ACPM:MSIGma?**

<b>Syntax</b>	:CALCulate:GSM:RFSPectrum:ACPM:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the RF spectrum measurement. In the case of the ACP Mod measurement, the string delivered back contains 27 pairs of mean values and standard deviation values for the ACP Mod measurement. In the ACP Transient case, these are 23 pairs of mean values and standard deviation values. In either case, the values are floating point real values and separated by commas.
<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:GSM:ARR:RFSP:ACPM:MOD</b> <b>...(other SCPI commands)...</b> <b>:CALCulate:GSM:RFSP:ACPM:MSIG?</b>

**:CALCulate:GSM:RFSPectrum:ACPM:MODulation:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GSM:RFSPectrum:ACPM:MODulation:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers 23 boolean numbers in a string, separated by commas. These numbers indicate whether the 23 single measurement result values of the <code>MEAS:GSM:RFSP:ACPM:MOD</code> measurement did violate their individual limits (set with the commands explained below). Every boolean number represents the result of the limit check of one of the 23 measurement result values. The first value will give the result of the limit check at -1.8 MHz offset to the carrier, the second one for -1.6 MHz offset to the carrier and so on.</p> <p>While a <code>0</code> delivered back on any position means that the related measurement result value did not exceed the limits, a <code>1</code> indicates that at least one limit was violated by the measurement result value.</p> <p><b>Note:</b> According to GSM specification 05.05, the <code>MEAS:GSM:RFSP:ACPM:MOD</code> measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of (<math>\pm</math>)200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</p>
<b>Example</b>	<pre><b>:MEAS:GSM:BLOC:MSP:AVG 20</b> <b>:CALC:GSM:RFSP:ACPM:MOD:LIM?</b></pre> <p>String returned:  <code>"0,0,0,0,0,0,0,0,1, 0,0,0,0,0,0,0,0,0,0,0,0,0"</code></p> <p>The <code>1</code> on position 9 indicates that there was a violation of at least one limit by the measurement result value taken at an offset of -0.25 MHz from the carrier.</p>

**:CALCulate:GSM:RFSPectrum:ACPM:MODulation:LIMit  
:STATe**

<b>Syntax</b>	<code>:CALC:GSM:RFSP:ACPM:MOD:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <code>ON</code>   <code>OFF</code> . Default is <code>ON</code> .
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:GSM:RFSP:ACPM:MOD</code> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:CALC:GSM:RFSP:ACPM:MOD:LIM:STAT ON</b></pre> <p>Switches the limit check of the ACPM of the modulation spectrum measurement on.</p>

**:CALCulate:GSM  
:RFSPectrum:ACPM:MODulation:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre><b>:CALCulate:GSM</b> <b>:RFSPectrum:ACPM:MODulation:LIMit:UPPer[:DATA]</b> <b>&lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;,&lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;,&lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;,&lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;,&lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;,&lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt;</b></pre>
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<b>Parameters</b>	<p><b>realx</b> are 23 floating point real numbers.</p> <p>The minimum value for all <b>realx</b> is <b>-100.0</b>, the maximum value <b>10.0</b>. The minimum resolution possible for all <b>realx</b> is <b>0.01</b>. The default values are:</p> <p><b>-60.0</b> for <b>real1...real18</b>,  <b>-33.0</b> for <b>real19</b>,  <b>-30.0</b> for <b>real10</b>,  <b>0.5</b> for <b>real11</b>,  <b>0.5</b> for <b>real12</b>,  <b>0.5</b> for <b>real13</b>,  <b>-30.0</b> for <b>real14</b>,  <b>-33.0</b> for <b>real15</b> and  <b>-60.0</b> for <b>real16...real23</b>.</p>
<b>Description</b>	<p>Sets the upper limits for the 23 single measurement result values of the ACPM modulation spectrum measurement. The single data values are interpreted as dBc (dB relative to the power level measured at the transmission frequency).</p>
<b>Query</b>	<p>The query form of this command is not supported.</p>
<b>Example</b>	<p><b>:CALC:GSM:RFSP:ACPM:MOD:LIM:UPP -65,-60,-60,-60,-60,-60,-60,-60,-33,-30,0.5,0.5,0.5,-30,-33,-60,-60,-60,-60,-60,-60,-60,-60,-65</b></p> <p>Sets the upper limits of the ACP modulation spectrum to these values. The first value applies to -1.6 MHz, the twelfth value to the carrier frequency and the 23rd value to a +1.6 MHz offset.</p>

**:CALCulate:GSM**  
**:RFSpectrum:ACPM:MODulation:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre> :CALC:GSM :RFSpectrum:ACPM:MODulation:LIMit:LOWer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;, &lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;, &lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;, &lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;, &lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;, &lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt; </pre>
<b>Parameters</b>	<p><b>realx</b> are 23 floating point real numbers.</p> <p>The minimum value for all <b>realx</b> is <b>-100.0</b>, the maximum value <b>10.0</b>. The minimum resolution possible for all <b>realx</b> is <b>0.01</b>. The default value for all <b>realx</b> is <b>-100.0</b>.</p>
<b>Description</b>	<p>Sets the lower limits for the 23 single measurement result values of the ACPM modulation spectrum measurement. The single data values are interpreted as dBc (dB relative to the power level measured at the transmission frequency).</p>
<b>Query</b>	<p>The query form of this command is not supported.</p>
<b>Example</b>	<p><b>:CALC:GSM:RFSP:ACPM:MOD:LIM:LOW -100,-100</b></p> <p>Sets the lower limits of the ACP modulation measurement to zero for all 23 measured frequencies.</p>



**:CALCulate:GSM:RFSPectrum  
:ACPM:TRANSient:LIMit[:FAIL]?**

<b>Syntax</b>	<code>:CALCulate:GSM:RFSPectrum :ACPM:TRANSient:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers 27 boolean numbers in a string, separated by commas. These numbers indicate whether the 27 measurement result values of the <code>MEAS:GSM:RFSP:ACPM:TRAN</code> measurement did violate their individual limits (set with the commands explained below). Every boolean number represents the result of the limit check for one of the 27 measurement result values. The first value will give the result of the limit check at -1.83 MHz offset to the carrier, the second one for -1.80 MHz offset to the carrier and so on.</p> <p>While a <code>0</code> delivered back on any position means that the related measurement result value did not exceed the limits, a <code>1</code> indicates that at least one limit was violated by the measurement result value.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on <code>0</code>, <code>(±)400</code>, <code>(±)600</code>, <code>(±)1.200</code> and <code>(±)1.800</code> kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the 30 kHz windows below and above the frequencies specified by GSM standard 05.05 will be taken into account. This adds up to <math>9 \times 3 = 27</math> measurement result values.</p>
<b>Example</b>	<p><code>:MEAS:GSM:ARRay:RFSP:ACPM:TRANSient 10</code>  <code>:CALC:GSM:RFSP:ACPM:TRAN:LIM?</code>  String returned: <code>"0,0,0,0,0,0,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0"</code>  The <code>1</code> on position 9 indicates that there was a violation of at least one limit by the measurement result value taken at an offset of -0.57 MHz from the carrier.</p>

**:CALCulate:GSM:RFSPectrum:ACPM:TRANSient:LIMit  
:STATe**

<b>Syntax</b>	<code>:CALCulate:GSM:RFSPectrum:ACPM:TRANSient:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:GSM:RFSP:ACPM:TRAN</code> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<p><code>:CALC:GSM:RFSP:ACPM:TRAN:LIM:STAT ON</code>  Switches the limit check of the ACPM of the spectrum due to switching transients on.</p>

**:CALCulate:GSM**  
**:RFSpectrum:ACPM:TRANSient:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GSM :RFSpectrum:ACPM:TRANSient:LIMit:UPPer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;, &lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;, &lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;, &lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;, &lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;, &lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt;,&lt;real24&gt;, &lt;real25&gt;,&lt;real26&gt;,&lt;real27&gt;</pre>
<b>Parameters</b>	<p><b>realx</b> are 27 floating point real numbers. The minimum value for all <b>realx</b> is <b>-100.0</b>, the maximum value <b>10.0</b>. The minimum resolution possible for all <b>realx</b> is <b>0.01</b>. The default value for all <b>realx</b> is <b>0.0</b>.</p>
<b>Description</b>	Sets the upper limits for the 27 single measurement result values of the ACPM measurement of the spectrum due to switching transients. The physical dimension of the single data values is dBm.
<b>Query</b>	The query form of this command delivers the current settings of the upper limits. The string returned will contain 27 floating point real numbers, separated by commas, in the order and meaning as explained above.
<b>Example</b>	<pre>:CALC:GSM:RFSP:ACPM:TRAN:LIM:UPP?</pre> <p>This command will return the 27 upper limit values.</p>

**:CALCulate:GSM**  
**:RFSpectrum:ACPM:TRANSient:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre>:CALC:GSM :RFSP:ACPM:TRAN:LIMit:LOWer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;, &lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;, &lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;, &lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;, &lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;, &lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt;,&lt;real24&gt;, &lt;real25&gt;,&lt;real26&gt;,&lt;real27&gt;</pre>
<b>Parameters</b>	<p><b>realx</b> are 27 floating point real numbers. The minimum value for all <b>realx</b> is <b>-100.0</b>, the maximum value <b>10.0</b>. The minimum resolution possible for all <b>realx</b> is <b>0.01</b>. The default value for all <b>realx</b> is <b>0.0</b>.</p>
<b>Description</b>	Sets the lower limits for the 27 single measurement result values of the ACPM measurement of the spectrum due to switching transients. The physical dimension of the single data values is dBm.
<b>Query</b>	The query form of this command delivers the current settings of the lower limits. The string returned will contain 27 floating point real numbers, separated by commas, in the order and meaning as explained above.
<b>Example</b>	<pre>:CALC:GSM:RFSP:ACPM:TRAN:LIM:LOW?</pre> <p>This command will return the 27 lower limit values.</p>

**:CALCulate:GSM:RFSPectrum:MSpectrum:VALue**

<b>Syntax</b>	:CALCulate:GSM:RFSPectrum:MSpectrum:VALue <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-1,000,000.0</b> , the maximum is <b>1,000,000.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>-200.0</b> .
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers an (interpolated) measurement result value of the modulation spectrum curve at the frequency specified with the <b>real1</b> parameter. <b>real1</b> is interpreted as an offset from the carrier (i.e. the transmission frequency). The string returned will contain one floating point real number. The physical dimension of the measurement result value returned is dBc.
	<p><b>Notes</b></p> <ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:BLOC:MSP:AVG command to do so.</li> <li>- The :CALC:GSM:RFSP:MSP:VAL command is not really a measurement - it is an interpolation of the spectrum curve for the frequency specified.</li> </ul>
<b>Example</b>	<pre>:MEAS:BLOC:MSP:AVG 20 :CALC:GPRS:RFSP:MSP:VAL? -50000</pre> <p>This command will interpolate a modulation spectrum measurement at an offset of 50 kHz to the carrier. The value returned in this example is: "<b>-4.7</b>".</p>

**:CALCulate:GSM:RFSPectrum:MSpectrum:MAXPeak**

<b>Syntax</b>	:CALCulate:GSM:RFSPectrum:MSpectrum:MAXPeak?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers back the frequency offset (in Hz) from the carrier and the maximum value of the measured modulation spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dBc.
	<p><b>Notes</b></p> <p>Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:BLOC:MSP:AVG command to do so.</p> <p>The :CALC:GSM:RFSP:MSP:MAXP command is not really a measurement - it is an readout of the spectrum curve.</p>
<b>Example</b>	<pre>:MEAS:GSM:BLOC:MSP:AVG 20 :CALC:GSM:RFSP:MSP:MAXP?</pre> <p>This command will read at the modulation spectrum measurement maximum the frequency offset to the carrier and the measurement result value. The values returned in this example is: "<b>-67700.0, -5.2</b>".</p>

**:CALCulate:AFANalyser:MAverage?**

<b>Syntax</b>	:CALCulate:AFANalyser:MAverage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the Audio measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:ARR:AFAN:ALL</b> <b>:CALC:AFAN:MAV?</b>

**:CALCulate:AFANalyser:MMINimum?**

<b>Syntax</b>	:CALCulate:AFANalyser:MMINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>minimum</b> measurement result value of the Audio measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:ARR:AFAN:ALL</b> <b>:CALC:AFAN:MMIN?</b>

**:CALCulate:AFANalyser:MMAximum?**

<b>Syntax</b>	:CALCulate:AFANalyser:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the Audio measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:ARR:AFAN:ALL</b> <b>:CALC:AFAN:MMAx?</b>

**:CALCulate:AFANalyser:MSIGma?**

<b>Syntax</b>	:CALCulate:AFANalyser:MSIGma?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the audio measurement results since the last measurement start. The string delivered back contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre><b>:CALC:RES</b> <b>:MEAS:AFAN:ACV</b> ...<b>(other SCPI commands)</b>... <b>:CALC:AFAN:MSIG?</b></pre> <p>In this example, first a continuous measurement of the audio voltage is started. After some time, the <b>:CALC:AFAN:MSIGma</b> command is used to read out the mean voltage and its standard deviation. The string returned in this example is <b>"1.1, 0.2"</b>.</p>

**:CALC:AFANalyser:ALL:LIMit[:FAIL]?**

<b>Syntax</b>	<b>:CALC:AFANalyser:ALL:LIMit[:FAIL]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers six boolean numbers in a string, separated by commas. These numbers indicate whether the six single measurement result values of the <b>MEAS:AFAN:ALL</b> measurement did violate their individual limits (set with the commands explained below) or not.</p> <p>The position of the boolean number within the string returned indicates the result of the check of following measurements:</p> <ol style="list-style-type: none"> <li>1. the peak-to-peak measurement of the AC voltage,</li> <li>2. the root-mean square value of the AC voltage,</li> <li>3. the RMS-valued AC ripple on a DC voltage,</li> <li>4. the audio frequency measurement,</li> <li>5. the measurement of the third-harmonic distortion (THD) of a sine wave and</li> <li>6. the SINAD measurement.</li> </ol> <p>While a <b>0</b> on any position indicates that the related measurement result value is within the limits specified, a <b>1</b> indicates that the measurement result value did violate at least one of the limits set for the related test.</p>
<b>Example</b>	<pre><b>:MEAS:AFAN:ALL</b> <b>:CALC:AFAN:ALL:LIM?</b></pre> <p>String returned: <b>"0,0,0,0,1,0"</b></p> <p>The <b>1</b> on position 5 indicates that the distortion measurement is off its limits.</p>

**:CALCulate:AFANalyser:ALL:LIMit:STATe**

<b>Syntax</b>	<b>:CALCulate:AFANalyser:ALL:LIMit:STATe</b> <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:AFAN:ALL</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.

<b>Example</b>	<b>:CALC:AFAN:ALL:LIM:STAT ON</b> Switches the limit check of the main audio measurements on.
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**:CALCulate:AFANalyser:ALL:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:AFANalyser:ALL:LIMit:UPPer[:DATA]</b> <b>&lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;,&lt;real5&gt;,&lt;real6&gt;</b>
<b>Parameters</b>	<b>realx</b> are six floating point real numbers. <b>real1</b> : The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>5.0</b> . <b>real2</b> : The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>5.0</b> . <b>real3</b> : The minimum value is <b>-40.0</b> , the maximum is <b>40.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>5.0</b> . <b>real4</b> : The minimum value is <b>0.0</b> , the maximum is <b>20,000.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>5,000.0</b> . <b>real5</b> : The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>5.0</b> . <b>real6</b> : The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>20.0</b> .
<b>Description</b>	Sets the upper limits for the six main audio frequency measurements with one command. The order of the floating point real numbers defines their meaning: <b>real1</b> represents the upper limit of the peak-to-peak AC voltage measurement; the physical dimension of the number stated is V(pp). <b>real2</b> represents the upper limit of the RMS-valued AC voltage measurement; the physical dimension of the number stated is V(rms). <b>real3</b> represents the upper limit of the RMS-valued measurement of an AC voltage ripple on a DC voltage; the physical dimension of the number stated is V(rms). <b>real4</b> represents the upper limit of the audio frequency measurement; the physical dimension of the number stated is Hertz. <b>real5</b> represents the upper limit of the distortion measurement, carried out on the third harmonic of a sine wave. The physical dimension of the number stated is percentage. <b>real6</b> represents the upper limit of the SINAD signal-to-noise ratio measurement; the physical dimension of the number stated is dB.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:AFAN:ALL:LIM:UPP 3,3,1,4000,5,100</b> Sets the upper limits for the audio measurements: 3 V for the peak-to-peak AC voltage, 3 V for the rms-valued AC voltage, 1 V for the rms-valued ripple voltage, 4 kHz for the audio frequency, 5% for THD, and 100 dB for SINAD.

**:CALCulate:AFANalyser:ALL:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:AFANalyser:ALL:LIMit:LOWer[:DATA]</code> <code>&lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;,&lt;real5&gt;,&lt;real6&gt;</code>
<b>Parameters</b>	<p><b>realx</b> are six floating point real numbers.</p> <p><b>real1</b>: The minimum value is <b>0.0</b>, the maximum is <b>30.0</b>. The minimum resolution possible is <b>0.0001</b>, the default value is <b>1.0</b>.</p> <p><b>real2</b>: The minimum value is <b>0.0</b>, the maximum is <b>30.0</b>. The minimum resolution possible is <b>0.0001</b>, the default value is <b>1.0</b>.</p> <p><b>real3</b>: The minimum value is <b>-40.0</b>, the maximum is <b>40.0</b>. The minimum resolution possible is <b>0.0001</b>, the default value is <b>-5.0</b>.</p> <p><b>real4</b>: The minimum value is <b>0.0</b>, the maximum is <b>20,000.0</b>. The minimum resolution possible is <b>1.0</b>, the default value is <b>1,000.0</b>.</p> <p><b>real5</b>: The minimum value is <b>0.0</b>, the maximum is <b>100.0</b>. The minimum resolution possible is <b>0.1</b>, the default value is <b>0.0</b>.</p> <p><b>real6</b>: The minimum value is <b>0.0</b>, the maximum is <b>100.0</b>. The minimum resolution possible is <b>0.1</b>, the default value is <b>0.0</b>.</p>
<b>Description</b>	<p>Sets the lower limits for the six main audio frequency measurements with one command. The order of the floating point real numbers defines their meaning:</p> <p><b>real1</b> represents the lower limit of the peak-to-peak AC voltage measurement; the physical dimension of the number stated is V(pp).</p> <p><b>real2</b> represents the lower limit of the RMS-valued AC voltage measurement; the physical dimension of the number stated is V(rms).</p> <p><b>real3</b> represents the lower limit of the RMS-valued measurement of an AC voltage ripple on a DC voltage; the physical dimension of the number stated is V(rms).</p> <p><b>real4</b> represents the lower limit of the audio frequency measurement; the physical dimension of the number stated is Hertz.</p> <p><b>real5</b> represents the lower limit of the distortion measurement, carried out on the third harmonic of a sine wave. The physical dimension of the number stated is percentage.</p> <p><b>real6</b> represents the lower limit of the SINAD signal-to-noise ratio measurement; the physical dimension of the number stated is dB.</p>
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<code>:CALC:AFAN:ALL:LIM:LOW 1,1,0,400,0,25</code> Sets the lower limits for the audio measurements.

**:CALCulate:AFANalyser**  
**:ACVoltage:PPEAk:LIMit[:FAIL]?**

<b>Syntax</b>	<code>:CALCulate:AFANalyser</code> <code>:ACVoltage:PPEAk:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers one boolean number, indicating whether the user-definable limits of the peak-to-peak measurement of the AC voltage applied to the audio analyzer were violated by a measurement result value or not.</p> <p>A <b>0</b> means that the measurement result value is within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.</p>

<b>Example</b>	<pre><b>:MEAS:ARRay:AFAN:ACV:PPEA 10</b> <b>:CALC:AFAN:ACV:PPEA:LIM?</b> String returned: "1" This string delivered back indicates that at least one measurement result value did violate the limits of the peak-to-peak AC measurement.</pre>
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**:CALCulate:AFANalyser:ACVoltage:PEAKp:LIMit:STATE**

<b>Syntax</b>	<code>:CALCulate:AFANalyser:ACVoltage:PEAKp:LIMit:STATE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:AFAN:ACV:PEAK</code> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:CALC:AFAN:ACV:PEAK:LIM:STAT ON</b> Switches the limit check of the peak-to-peak AC voltage measurement on.</pre>

**:CALCulate:AFANalyser:ACVoltage:PEAKp:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:AFANalyser:ACVoltage:PEAKp:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>5.0</b> .
<b>Description</b>	Sets the <b>upper</b> limit for the peak-to-peak measurement of the AC voltage applied to the audio analyzer. The physical dimension of the number stated is V(pp).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre><b>:CALC:AFAN:ACV:PEAK:LIM:UPP 3</b> Sets the upper limit of the peak-to-peak AC voltage measurement to 3 V.</pre>

**:CALCulate:AFANalyser:ACVoltage:PEAKp:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:AFANalyser:ACVoltage:PEAKp:LIMit:LOWer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>1.0</b> .
<b>Description</b>	Sets the <b>lower</b> limit for the peak-to-peak measurement of the AC voltage applied to the audio analyzer. The physical dimension of the number stated is V(pp).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre><b>:CALC:AFAN:ACV:PEAK:LIM:LOW 0</b> Sets the lower limit of the peak-to-peak AC voltage measurement to 0 V.</pre>



**:CALCulate:AFANalyser  
:ACVoltage:RMS:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:AFANalyser :ACVoltage:RMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the RMS-valued measurement of the AC voltage applied to the audio analyzer were violated by a measurement result value or not. A <b>0</b> means that the measurement result value is within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:ARRAY:AFAN:ACV:RMS 5</b> <b>:CALC:AFAN:ACV:RMS:LIM?</b> String returned: " <b>0</b> " This string delivered back indicates that there was no violation of the limits set.

**:CALCulate:AFANalyser  
:ACVoltage:RMS:LIMit:STATe**

<b>Syntax</b>	:CALCulate:AFANalyser :ACVoltage:RMS:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:AFAN:ACV:RMS measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:AFAN:ACV:RMS:LIM:STAT ON</b> Switches the limit check of the RMS-valued AC voltage measurement on.

**:CALCulate:AFANalyser  
:ACVoltage:RMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:AFANalyser :ACVoltage:RMS:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>5.0</b> .
<b>Description</b>	Sets the upper limit for the RMS-valued measurement of the AC voltage applied to the audio analyzer. The physical dimension of the number stated is V(rms).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFAN:ACV:RMS:LIM:UPP 3</b> Sets the upper limit of the rms-valued AC voltage measurement to 3 V.

**:CALCulate:AFANalyser  
:ACVoltage:RMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:AFANalyser :ACVoltage:RMS:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>30.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>1.0</b> .
<b>Description</b>	Sets the lower limit for the RMS-valued measurement of the AC voltage applied to the audio analyzer. The physical dimension of the number stated is V(rms).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFAN:ACV:RMS:LIM:LOW 0</b> Sets the lower limit of the rms-valued AC voltage measurement to 0 V.

**:CALCulate:AFANalyser  
:DCVoltage:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:AFANalyser :DCVoltage:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the RMS-valued measurement of the AC ripple on a DC voltage were violated by a measurement result value or not. A <b>0</b> means that the measurement result value is within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:ARRAY:AFAN:DCV 10</b> <b>:CALC:AFAN:DCV:LIM?</b> String returned: <b>"0"</b> This string delivered back indicates that there has been no violation of the limits set.

**:CALCulate:AFANalyser  
:DCVoltage:LIMit:STATE**

<b>Syntax</b>	:CALCulate:AFANalyser :DCVoltage:LIMit:STATE <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the :MEAS:AFAN:DCV measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:AFAN:DCV:LIM:STAT ON</b> Switches the limit check of the RMS-valued AC voltage ripple measurement of a DC voltage on.

**:CALCulate:AFANalyser**  
**:DCVoltage:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:AFANalyser</code> <code>:DCVoltage:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-40.0</b> , the maximum is <b>40.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>5.0</b> .
<b>Description</b>	Sets the upper limit for the RMS-valued measurement of the AC voltage component on a DC voltage, applied to the audio analyzer. The physical dimension of the number stated is V(rms).
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:AFAN:DCV:LIM:UPP 6</b> Sets the upper limit of the rms-valued ripple voltage measurement to 6 V.

**:CALCulate:AFANalyser**  
**:DCVoltage:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:AFANalyser</code> <code>:DCVoltage:LIMit:LOWer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>-40.0</b> , the maximum is <b>40.0</b> . The minimum resolution possible is <b>0.0001</b> , the default value is <b>-5.0</b> .
<b>Description</b>	Sets the lower limit for the RMS-valued measurement of the AC voltage component on a DC voltage, applied to the audio analyzer. The physical dimension of the number stated is V(rms).
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<b>:CALC:AFAN:DCV:LIM:LOW 1.75</b> Sets the upper limit of the rms-valued ripple voltage measurement to 1.75 V.

**:CALCulate:AFANalyser**  
**:FREQuency:LIMit[:FAIL]?**

<b>Syntax</b>	<code>:CALCulate:AFANalyser</code> <code>:FREQuency:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the AF frequency measurement were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:MEAS:AFAN:FREQ</b> <b>:CALC:AFAN:FREQ:LIM?</b> String returned: <b>"1"</b> This string delivered back indicates that there has been a violation of the limits set.

**:CALCulate:AFANalyser:FREQUENCY:LIMit:STate?**

<b>Syntax</b>	:CALCulate:AFANalyser:FREQUENCY:LIMit:STate? <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:AFAN:FREQ measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:AFAN:FREQ:LIM:STAT ON</b> Switches the limit check of the AF frequency measurement on.

**:CALCulate:AFANalyser  
:FREQUENCY:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:AFANalyser :FREQUENCY:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>20,000.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>5,000.0</b> .
<b>Description</b>	Sets the <b>upper</b> limit for the AF frequency measurement. The physical dimension of the number stated is Hertz.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFAN:FREQ:LIM:UPP 10000</b> Sets the upper limit of the audio frequency measurement to 10 kHz.

**:CALCulate:AFANalyser  
:FREQUENCY:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:AFANalyser :FREQUENCY:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>20,000.0</b> . The minimum resolution possible is <b>1.0</b> , the default value is <b>1,000.0</b> .
<b>Description</b>	Sets the <b>lower</b> limit for the AF frequency measurement. The physical dimension of the number stated is Hertz.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFAN:FREQ:LIM:LOW 950</b> Sets the lower limit of the audio frequency measurement to 950 Hz.

**:CALCulate:AFANalyser  
:DISTortion:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:AFANalyser :DISTortion:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the distortion measurement were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below. <b>Notes</b> <ul style="list-style-type: none"> <li>- The distortion measurement is carried through on the third harmonic of a 1 kHz sine wave.</li> <li>- All audio measurements require the Audio Option to be installed on your Willtek 3100.</li> </ul>
<b>Example</b>	<b>:MEAS:ARRay:AFAN:DIST 10</b> <b>:CALC:AFAN:DIST:LIM?</b> String returned: "1" This string delivered back indicates that there was a violation of the limits set.

**:CALCulate:AFANalyser  
:DISTortion:AFAN:DIST:LIMit:STATe**

<b>Syntax</b>	:CALCulate:AFANalyser :DISTortion:LIMit:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:AFAN:DIST</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:AFAN:DIST:LIM:STAT ON</b> Switches the limit check of the distortion measurement on.

**:CALCulate:AFANalyser  
:DISTortion:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:AFANalyser :DISTortion:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>5.0</b> .

<b>Description</b>	Sets the upper limit for the distortion measurement. The physical dimension of the number stated is percent (the relation of the AC voltage measured for the third harmonic of a 1 kHz sine wave in relation to the AC voltage measured for the nominal frequency).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFAN:DIST:LIM:UPP 4.5</b> Sets the upper limit of the distortion measurement to 4.5%.

**:CALCulate:AFANalyser**  
**:DISTortion:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:AFANalyser</b> <b>:DISTortion:LIMit:LOWer[:DATA] &lt;real1&gt;</b>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>0.0</b> .
<b>Description</b>	Sets the lower limit for the distortion measurement. The physical dimension of the number stated is percent (the relation of the AC voltage measured for the third harmonic of a 1 kHz sine wave in relation to the AC voltage measured for the nominal frequency).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFAN:DIST:LIM:LOW 0.0</b> Sets the lower limit of the distortion measurement to 0%.

**:CALCulate:AFANalyser**  
**:SINad:LIMit[:FAIL]?**

<b>Syntax</b>	<b>:CALCulate:AFANalyser</b> <b>:SINad:LIMit[:FAIL]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the SINAD measurement were violated by a measurement result value or not. A <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below. <b>Notes</b> <ul style="list-style-type: none"> <li>- The SINAD measurement is carried through with a 1 kHz sine wave.</li> <li>- All audio measurements require the Audio Option to be installed on your Willtek 3100.</li> </ul>
<b>Example</b>	<b>:MEAS:ARRay:AFAN:SIN 5</b> <b>:CALC:AFAN:SIN:LIM?</b> String returned: <b>"1"</b> This string delivered back indicates that there was a violation of the limits set.

**:CALCulate:AFANalyser**  
**:SINad:LIMit:STATE**

<b>Syntax</b>	<code>:CALCulate:AFANalyser</code> <code>:SINad:LIMit:STATE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:AFAN:SIN measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:CALC:AFAN:SIN:LIM:STAT ON</code> Switches the limit check of the SINAD measurement on.

**:CALCulate:AFANalyser**  
**:SINad:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:AFANalyser</code> <code>:SINad:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>20.0</b> .
<b>Description</b>	Sets the upper limit for the SINAD measurement. The physical dimension of the number stated is dB.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:CALC:AFAN:SIN:LIM:UPP 100</code> Sets the upper limit of the SINAD measurement to 100% dB.

**:CALCulate:AFANalyser**  
**:SINad:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:AFANalyser</code> <code>:SINad:LIMit:LOWer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value is <b>0.0</b> , the maximum is <b>100.0</b> . The minimum resolution possible is <b>0.1</b> , the default value is <b>0.0</b> .
<b>Description</b>	Sets the lower limit for the SINAD measurement. The physical dimension of the number stated is dB.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:CALC:AFAN:SIN:LIM:LOW 30</code> Sets the lower limit of the SINAD measurement to 30 dB.

**:CALCulate:AFSPectrum:TEMPlate:LIMit[:FAIL]**

<b>Syntax</b>	<code>:CALCulate:AFSPectrum:TEMPlate:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers ten boolean numbers, indicating whether the user-definable limits of the audio spectrum measurement were violated by a measurement result value or not.</p> <p>A <b>0</b> means that the measurement result values for the respective section of the template were within the limits set, while a <b>1</b> indicates that at least one measurement result value did violate at least one of the limits.</p> <p>The limits can be set using the commands described below.</p>
<b>Example</b>	<pre><b>:MEAS:ARRay:AFSP 10</b> <b>:CALC:AFSP:TEMP:LIM:FAIL?</b></pre> <p>String returned: "0,1,0,0,0,0,0,0,0,0"</p> <p>This string delivered back indicates that there was a violation of the limits set for the second area.</p>

**:CALCulate:AFSPectrum:TEMPlate:LIMit:STATe**

<b>Syntax</b>	<code>:CALCulate:AFSPectrum:TEMPlate:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:AFSP:TEMPlate</code> and <code>MEAS:ARR:AFSP:TEMPlate</code> measurements against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:CALC:GSM:RFTX:TEMP:LIM:STAT ON</b></pre> <p>Switches on the limit check of the audio spectrum measurement against the user-defined template.</p>

**:CALCulate:AFSPectrum:TEMPlate:LIMit:LOAD**

<b>Syntax</b>	<code>:CALCulate:AFSPectrum:TEMPlate:LIMit:LOAD &lt;string1&gt;</code>
<b>Parameters</b>	<b>string1</b> is a string giving the name of the file containing the audio limits. The maximum length of <b>string1</b> is 50 characters. The default for <b>string1</b> is <b>"example.lmt"</b> .
<b>Description</b>	This command loads the audio template description file. Please note that the data contained in the file need to be activated (using the <b>CALC:AFSP:TEMP:LIM:STAT ON</b> command described above) before the template will have any effect on the measurement results.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:CALC:AFSP:LIM:LOAD "example.lmt"</b></pre> <p>Loads the audio spectrum template file <code>example.lmt</code> which resides in the <code>/rapid/audiolmt</code> directory.</p>

**:CALCulate:AFSPectrum:TEMPlate:LIMit:STORE**

<b>Syntax</b>	<code>:CALCulate:AFSPectrum:TEMPlate:LIMit:STORE &lt;string1&gt;</code>
<b>Parameters</b>	<b>string1</b> is a string giving the name of the file in which the current audio limits are to be saved. The maximum length of <b>string1</b> is 50 characters.



<b>Description</b>	This command saves the current audio template in a file. The template can be defined by the <b>FREQ</b> , <b>UPPER</b> , <b>LOWER</b> and <b>COMMENT</b> comments.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:AFSP:LIM:STORE "example.lmt"</b> Stores the currently defined audio spectrum template in the file <code>example.lmt</code> in the <code>/rapid/audiolmt</code> directory. If a file of this name already exists, it will be overwritten.

**:CALCulate:AFSPectrum:TEMPlate:LIMit:COMMENT**

<b>Syntax</b>	<b>:CALCulate:AFSPectrum:TEMPlate:LIMit:COMMENT</b> <string1>
<b>Parameters</b>	<b>string1</b> is a comment line related to the coupling loss data. The maximum length of <b>string1</b> is 80 characters.
<b>Description</b>	Defines a comment line for storage in the audio template file and for display in the <b>Comment line</b> field on the Limits screen. <b>Note:</b> The comment can be saved with the <b>STORE</b> command, together with the other template parameters.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:AFSP:LIM:COMM "Audio template for Siemens S35"</b>

**:CALCulate:AFSPectrum:TEMPlate:LIMit:FREQuency**

<b>Syntax</b>	<b>:CALCulate:AFSPectrum:TEMPlate:LIMit:FREQuency</b> <real1>, <real2>, <real3>, <real4>, <real5>, <real6>, <real7>, <real8>, <real9>, <real10>
<b>Parameters</b>	<b>real1</b> through <b>realxp</b> are floating point real numbers. The minimum value for all numbers is <b>0.0</b> , the maximum value <b>20000.0</b> . The minimum resolution possible for all <b>realxt</b> is <b>0.1</b> . The default values are: for <b>real10t</b> : <b>-41.0</b> , for <b>real11t</b> : <b>-28.0</b> , for <b>real2t</b> : <b>-18.0</b> , for <b>real3t</b> : <b>-10.0</b> for <b>real4t</b> : <b>0.0</b> , for <b>real5t</b> : <b>553.0</b> for <b>real6t</b> : <b>561.0</b> , for <b>real7t</b> : <b>571.0</b> for <b>real8t</b> : <b>580.0</b> . The minimum value for all <b>realxp</b> is <b>-150.0</b> , the maximum value <b>5.0</b> . The minimum resolution possible for all <b>realx</b> is <b>0.1</b> .
<b>Description</b>	Sets the frequency values for the user-definable audio spectrum template. The values are in Hz. They are used in conjunction with the definitions for the upper and lower limits.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFSP:TEMP:LIM:FREQ 25, 50, 100, 200, 500, 1000, 2000, 4000, 8000, 16000</b> This command sets the frequency values for the upper and lower limits. <b>Note:</b> These are the default values after an instrument reset.

**:CALCulate:AFSPectrum:TEMPlate:LIMit:UPPer**

<b>Syntax</b>	:CALCulate:AFSPectrum:TEMPlate:LIMit:UPPer <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>,<real9>,<real10>
<b>Parameters</b>	The <b>realx</b> values are floating point real numbers. The minimum value is <b>-120</b> , the maximum value is <b>+10</b> . The resolution for all values is <b>0.1</b> . The values are the upper limits for the audio template in dB, relative to the reference level.
<b>Description</b>	Sets the upper limits for the user-definable audio spectrum template. These upper limits refer to the frequencies defined in the <b>FREQuency</b> command above.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFSP:TEMP:LIM:UPP 5, 5, 5, 5, 5, 5, 5, 5, 5, 5</b> This command sets all upper limits to +5 dB at the frequencies defined with the <b>:CALC:AFSP:TEMP:LIM:FREQ</b> command.

**:CALCulate:AFSPectrum:TEMPlate:LIMit:LOWer**

<b>Syntax</b>	:CALCulate:AFSPectrum:TEMPlate:LIMit:LOWer <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>,<real9>,<real10>
<b>Parameters</b>	The <b>realx</b> values are floating point real numbers. The minimum value is <b>-120</b> , the maximum value is <b>+10</b> . The resolution for all values is <b>0.1</b> . The values are the lower limits for the audio template in dB, relative to the reference level.
<b>Description</b>	Sets the lower limits for the user-definable audio spectrum template. These upper limits refer to the frequencies defined in the <b>FREQuency</b> command above.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:AFSP:TEMP:LIM:LOW -25, -25, -25, -25, -25, -25, -25, -25, -25, -25</b> This command sets all lower limits to -25 dB at the frequencies defined with the <b>:CALC:AFSP:TEMP:LIM:FREQ</b> command.

**:CALCulate:AFSPectrum:VALue?**

<b>Syntax</b>	:CALCulate:AFSPectrum:VALue? <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. It provides the position on the frequency axis for which the audio spectrum value is being requested.
<b>Query</b>	Provides the measurement value (audio spectrum level) for the given frequency value. If there is no measurement value at exactly this frequency, the value is interpolated.
<b>Example</b>	<b>:MEAS:BLOC:AFSP:AVG</b> <b>:CALC:AFSP:VAL? 1200</b> Delivers the audio spectrum value at the frequency of 1.2 kHz.

**:CALCulate:AFSPectrum:MAXPeak**

<b>Syntax</b>	:CALCulate:PSUPply:MAVerage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	The query form of this command delivers back the frequency (in Hz) and the maximum audio spectrum level of the measured audio spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dB. <b>Note:</b> Please note that you need to have a audio measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:BLOC:AFSP:AVG command to do so.
<b>Example</b>	:MEAS:BLOC:AFSP:AVG 10 :CALC:AFSP:MAXP? This command will read at the audio spectrum measurement maximum the frequency and the measurement result value. The values returned in this example is: "1230.0,-5.2".

**:CALCulate:PSUPply:MAVerage?**

<b>Syntax</b>	:CALCulate:PSUPply:MAVerage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the current measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:ARR:PSUP:ALL :CALC:PSUP:MAV? 603.1,215.8,908.2 Returns the average values for average power consumption (603.1 mW), average current consumption (215.8 mA) and peak current consumption (908.2 mA).

**:CALCulate:PSUPply:MMINimum?**

<b>Syntax</b>	:CALCulate:PSUPply:MMINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>minimum</b> measurement result value of the current measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.

<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:ARR:PSUP:ALL</b> <b>:CALC:PSUP:MMIN?</b> Returns the minimum values for average power consumption (in mW), average current consumption (in mA), and peak current consumption (in mA).
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**:CALCulate:PSUPply:MMAximum?**

<b>Syntax</b>	:CALCulate:PSUPply:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the current measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:ARR:PSUP:ALL</b> <b>:CALC:PSUP:MMAx?</b> Returns the maximum values for average power consumption (in mW), average current consumption (in mA), and peak current consumption (in mA).

**:CALCulate:PSUPply:MSIGma?**

<b>Syntax</b>	:CALCulate:PSUPply:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the current measurement started last. The string delivered back will contain as many pairs of mean and standard deviation values as measurement types performed. All values have the format of floating point real numbers and are separated by commas.
<b>Example</b>	<b>:CALC:RES</b> <b>:MEAS:ARR:PSUP:ALL</b> <b>:CALC:PSUP:MSIG?</b> Returns three pairs of mean value and standard deviation for average power consumption (in mW), average current consumption (in mA), and peak current consumption (in mA).

**:CALCulate:PSUPply:ALL:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:PSUPply:ALL:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers three boolean values, indicating whether the user-definable limits of the current measurements were violated by a measurement result value or not.</p> <p>For each of the three boolean values, a <b>0</b> means that all measurement result values were within the limits set, while a <b>1</b> indicates that at least one measurement result value violated at least one of the limits.</p> <p>The limits can be set using the commands described below. The results are in the sequence power consumption, average current consumption, peak current consumption.</p>
<b>Example</b>	<pre><b>:MEAS:ARR:PSUP:CPEA 5</b> <b>:CALC:PSUP:ALL:LIM?</b> String returned: <b>"1,0,0"</b> This string delivered back indicates that there was a violation of the limits for the power consumption while the other two types of measurements passed the limits.</pre>

**:CALCulate:PSUPply:ALL:LIMit:STATe**

<b>Syntax</b>	<b>:CALCulate:PSUPply:ALL:LIMit:STATe</b> <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the check of the measurement result values of the <b>MEAS:PSUP:ALL</b> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre><b>:CALC:PSUP:ALL:LIM:STAT ON</b> Switches the limit check for the current measurements on.</pre>

**:CALCulate:PSUPply:ALL:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:PSUPply:ALL:LIMit:UPPer[:DATA]</b> <real1>, <real2>, <real3>
<b>Parameters</b>	<p><b>real1</b>, <b>real2</b> and <b>real3</b> are floating point real numbers.</p> <ul style="list-style-type: none"> <li>- <b>real1</b> is the upper limit for the average power consumption. Its minimum value is <b>0.0</b>, the maximum is <b>2000.0</b>, the default value is <b>2000.0</b>.</li> <li>- <b>real2</b> is the upper limit for average current consumption. Its minimum value is <b>0.0</b>, the maximum is <b>1000.0</b>, the default value is <b>1000.0</b></li> <li>- <b>real3</b> is the upper limit for peak current consumption. Its minimum value is <b>0.0</b>, the maximum is <b>4000.0</b>, the default value is <b>4000.0</b></li> </ul>
<b>Description</b>	Sets the upper limits for the current measurements.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre><b>:CALC:PSUP:ALL:LIM:UPP 2.3, 200.0, 1400.0</b> Sets the upper limit of the current measurements to 2.3 W for the average power, 200 mA for the average current and 1400 mW for the peak current.</pre>

**:CALCulate:PSUPply:ALL:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<b>:CALCulate:PSUPply:ALL:LIMit:LOWer[:DATA]</b> <real1>, <real2>, <real3>
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<b>Parameters</b>	<p><b>real1, real2, real3</b> are floating point real numbers.</p> <ul style="list-style-type: none"> <li>- <b>real1</b> is the lower limit for power consumption. Its minimum value is <b>0.0</b>, the maximum is <b>2000.0</b>, the default value is <b>2000.0</b>.</li> <li>- <b>real2</b> is the lower limit for average current consumption. Its minimum value is <b>0.0</b>, the maximum is <b>1000.0</b>, the default value is <b>1000.0</b></li> <li>- <b>real3</b> is the lower limit for peak current consumption. Its minimum value is <b>0.0</b>, the maximum is <b>4000.0</b>, the default value is <b>4000.0</b></li> </ul>
<b>Description</b>	Sets the lower limits for the current measurements.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<p><b>:CALC:PSUP:ALL:LIM:LOW 0,0,0</b> Sets the lower limit of the current measurements to all 0.0.</p>

**:CALCulate:PSUPply:APOWer:LIMit[:FAIL]?**

<b>Syntax</b>	<b>:CALCulate:PSUPply:APOWer:LIMit[:FAIL]?</b>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers one boolean number, indicating whether the user-definable limits of the average power consumption measurement were violated by a measurement result value or not.</p> <p>A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits.</p> <p>The limits can be set using the commands described below.</p>
<b>Example</b>	<p><b>:CALC:PSUP:APOW:LIM:UPP 2.3</b> <b>:CALC:PSUP:APOWer:LIM:LOW 0</b> <b>:MEAS:ARRAY:PSUP:APOWer 5</b> <b>:CALC:PSUP:APOWer:LIM?</b> String returned in this example:"1" This string delivered back indicates that there was a violation of the limits set.</p>

**:CALCulate:PSUPply:APOWer:LIMit:STATe**

<b>Syntax</b>	<b>:CALCulate:PSUPply:APOWer:LIMit:STATe &lt;PreDefExp&gt;</b>
<b>Parameters</b>	PreDefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	<p>This command switches the check of the power consumption measurement result values of the MEAS:PSUP:APOWer measurement against their user-definable limits either ON or OFF.</p> <p><b>Note:</b> All current measurements require the MS Power Supply and Current Measurement options to be installed on your Willtek 3100.</p>
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<p><b>:CALC:PSUP:APOW:LIM:STAT ON</b> Switches the limit check of the current measurement on.</p>

**:CALCulate:PSUPply:APOWer:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:PSUPply:APOWer:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value is 0.0, the maximum is 2000.0. The resolution is 1, the default value is 2000.0.
<b>Description</b>	Sets the upper limit for the power consumption measurement. The physical dimension of the number stated is mW.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:PSUP:APOW:LIM:UPP 100</b> Sets the upper limit of the power consumption measurement to 100 mW.

**:CALCulate:PSUPply:APOWer:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:PSUPply:APOWer:LIMit:LOWer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value is 0.0, the maximum is 2000.0. The resolution is 1, the default value is 2000.0.
<b>Description</b>	Sets the lower limit for the power consumption measurement. The physical dimension of the number stated is mW.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:PSUP:APOW:LIM:LOW 10</b> Sets the lower limit of the power consumption measurement to 10 mW.

**:CALCulate:PSUPply:ACURrent:LIMit:STATE**

<b>Syntax</b>	<code>:CALCulate:PSUPply:ACURrent:LIMit:STATE &lt;PreDefExp&gt;</code>
<b>Parameters</b>	<code>PreDefExp</code> is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the current measurement result values of the MEAS:PSUP:ACURrent measurement against their user-definable limits either ON or OFF. Note All current measurements require the MS Power Supply and Current Measurement options to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:PSUP:ACUR:LIM:STAT ON</b> Switches the limit check of the average current measurement on.

**:CALCulate:PSUPply:ACURrent:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:PSUPply:ACURrent:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value is 0.0, the maximum is 1000.0. The resolution is 1, the default value is 1000.0.

<b>Description</b>	Sets the upper limit for the average current measurement. The physical dimension of the number stated is mA.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:PSUP:ACUR:LIM:UPP 400</b> Sets the upper limit of the average current measurement to 400 mA.

**:CALCulate:PSUPply:ACURrent:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:PSUPply:ACURrent:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 1000.0. The resolution is 1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the peak current consumption measurement. The physical dimension of the number stated is mA.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<b>:CALC:PSUP:ACUR:LIM:LOW 10</b> Sets the lower limit of the current consumption measurement to 10 mA.

**:CALCulate:PSUPply:PCURrent:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:PSUPply:PCURrent:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the peak current measurement were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<b>:CALC:PSUP:PCUR:LIM:UPP 1000.0</b> <b>:CALC:PSUP:PCURrent:LIM:LOW 0</b> <b>:MEAS:ARRAY:PSUP:PCURrent 5</b> <b>:CALC:PSUP:PCURrent:LIM?</b> String returned in this example: "1" This string delivered back indicates that there was a violation of the defined limits.

**:CALCulate:PSUPply:PCURrent:LIMit:STATE**

<b>Syntax</b>	:CALCulate:PSUPply:PCURrent:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.



<b>Description</b>	This command switches the check of the peak current measurement result values of the MEAS:PSUP:PCURRENT measurement against their user-definable limits either ON or OFF. Note All current consumption measurements require the MS Power Supply and Current Measurement options to be installed on your Willtek 3100.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:PSUP:PCUR:LIM:STAT ON</b> Switches the limit check of the peak current measurement on.

**:CALCulate:PSUPply:PCURrent:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:PSUPply:PCURrent:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 4000.0. The resolution is 1, the default value is 4000.0.
<b>Description</b>	Sets the upper limit for the peak current consumption measurement. The physical dimension of the number stated is mA.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:PSUP:PCUR:LIM:UPP 1000.0</b> Sets the upper limit of the peak current consumption measurement to 1000 mA.

**:CALCulate:PSUPply:PCURrent:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:PSUPply:PCURrent:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 4000.0. The resolution is 1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the peak current consumption measurement. The physical dimension of the number stated is mA.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<b>:CALC:PSUP:PCUR:LIM:LOW 10</b> Sets the lower limit of the peak current consumption measurement to 10 mA.

**GSM/GPRS commands**    **:CALCulate:GPRS:RFTX:MAverage?**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:MAverage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the average measurement result value of the TX measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.

**Example**           :CONF:MEAS:GRO:RFTX POW,PRMS  
                       :CALC:RES  
                       :MEAS:GPRS:ARR:RFTX:GRO 20  
                       :CALC:GPRS:RFTX:MAV?  
 In this example, first the group of measurements is defined by a power measurement combined with a RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are:  
 "4.53,9.98".  
 Because of the internal order (see description of the :MEASure:GPRS[:ARRay]:RFTX:ALL command), the first measurement result value delivered back is the average RMS phase error, the second one the mobile's average RF output power.

**:CALCulate:GPRS:RFTX:MMINimum?**

**Syntax**            :CALCulate:GPRS:RFTX:MMINimum?  
**Parameters**       There are no parameters.  
**Description**       There is solely a query form of this command available.  
**Query**             Returns the **minimum** measurement result value of the TX measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.  
**Example**            :CONF:MEAS:GRO:RFTX POW,PRMS  
                       :CALC:RES  
                       :MEAS:GPRS:ARR:RFTX:GROup 20  
                       :CALCulate:GPRS:RFTX:MMIN?  
 In this example, first the group of measurements is defined by a power measurement combined with a RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are:  
 "4.53,9.98".  
 Because of the internal order (see description of the :MEASure:GSM[:ARRay]:RFTX:ALL command), the first measurement result value delivered back is the minimum RMS phase error, the second one the mobile's minimum RF output power.

**:CALCulate:GPRS:RFTX:MMAximum?**

**Syntax**            :CALCulate:GPRS:RFTX:MMAximum?  
**Parameters**       There are no parameters.  
**Description**       There is solely a query form of this command available.  
**Query**             Returns the **maximum** measurement result value of the TX measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.

**Example**       :MEAS:GPRS:RFTX:FREQ  
                  :CALC:RES  
                  ...(other SCPI commands)...  
                  :CALC:GPRS:RFTX:MMAx?  
In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the :CALC:MMAx command is used to read out the maximum frequency deviation of the mobile. The string returned in this example is "22.1".

**:CALCulate:GPRS:RFTX:MSIGma?**

**Syntax**        :CALCulate:GPRS:RFTX:MSIGma?

**Parameters**    There are no parameters.

**Description**    There is solely a query form of this command available.

**Query**         Returns the **mean value** and the **standard deviation** of the TX measurement last started. The string delivered back contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and are separated by commas.

**Example**        :MEAS:GPRS:RFTX:FREQ  
                  :CALC:RES  
                  ...(other SCPI commands)...  
                  :CALC:GPRS:RFTX:MSIG?  
In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the :CALC:GPRS:RFTX:MSIG command is used to read out the mean frequency error and its standard deviation. The string returned in this example is "15.7, 3.4".

**:CALCulate:GPRS:RFTX:ALL:LIMit[:FAIL]?**

**Syntax**        :CALCulate:GPRS:RFTX:ALL:LIMit[:FAIL]?

**Parameters**    There are no parameters.

**Description**    There is solely a query form of this command available.

**Query**         This command delivers 19 boolean numbers in a string, separated by commas. These numbers indicate whether the single measurement results of the :MEAS:GPRS[:ARRay]:RFTX:ALL measurement did violate their test limits. The position of the boolean number within the string returned indicates the result of the limit check for the following measurements:  
                   1. peak phase error measurement,  
                   2. root-mean square phase error measurement ,  
                   3. measurement of the mobile's frequency error,  
                   4. measurement of the burst lenght,  
                   5. timing error measurement,  
                   6. measurement of the mobile's RF output power level,  
                   7. check of the burst against the PTT,  
                   8...15. measurement of RF power level at the corner points.

<b>Example</b>	<pre>:CALC:GPRS:RFTX:ALL:LIM?</pre> <p>String returned: "0,0,0,0,0,1,0,0,0,0,0,0,0,0"</p> <p>The 1 on position 6 indicates that the mobile's RF power level violated its test limits.</p>
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**:CALCulate:GPRS:RFTX:ALL:LIMit:STATe**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFTX:ALL:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the limit check for the relevant RF TX measurements either on or off (see description of the :MEASure:GPRS:RFTX:ALL command for reference).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:ALL:LIM:STAT OFF</pre> <p>Switches the limit check for the most relevant RF TX measurements off.</p>

**:CALC:GPRS:RFTX:PPEAk:LIMit[:FAIL]?**

<b>Syntax</b>	<code>:CALC:GPRS:RFTX:PPEAk:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers one boolean number, indicating whether the user-definable limits of the peak phase error measurement were violated by a measurement result value or not.</p> <p>A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits.</p> <p>The limits can be set using the commands described below.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARR:RFTX:PPEA 20</pre> <pre>:CALC:GPRS:RFTX:PPEA:LIM?</pre> <p>String returned: "1"</p> <p>This result indicates that at least one measurement result value did violate the limits of the peak phase error measurement.</p>

**:CALCulate:GPRS:RFTX:PPEAk:LIMit:STATe**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFTX:PPEAk:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFTX:PPEA measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:PPEAk:LIM:STAT OFF</pre> <p>Switches the limit check for the peak phase error measurement off.</p>

**:CALCulate:GPRS:RFTX:PPEAK:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:PPEAK:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 90.0. The minimum resolution possible is 0.1, the default value is 20.0.
<b>Description</b>	Sets the upper limit of the peak phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:PPEA:LIM:UPP 15 Sets the upper limit for the peak phase error to 15 degrees.

**:CALCulate:GPRS:RFTX:PPEAK:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:PPEAK:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -90.0, the maximum is 0.0. The minimum resolution possible is 0.1, the default value is -20.0.
<b>Description</b>	Sets the lower limit of the peak phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:PPEA:LIM:LOW -15 Sets the lower limit for the peak phase error measurement to -15 degrees.

**:CALCulate:GPRS:RFTX:PRMS:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:PRMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the RMS-valued phase error measurement were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:GPRS:ARR:RFTX:PRMS 10 :CALC:GPRS:RFTX:PRMS:LIM? String returned: "0" This string delivered back indicates that there was no violation of the measurement limits.

**:CALCulate:GPRS:RFTX:PRMS:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:PRMS:LIMit:STATE <PredefExp>
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<b>Parameters</b>	PreDefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFTX:PRMS measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:PRMS:LIM:STAT OFF Switches the limit check for the RMS-valued phase error measurement off.

**:CALCulate:GPRS:RFTX:PRMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:PRMS:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 90.0. The minimum resolution possible is 0.1, the default value is 5.0.
<b>Description</b>	Sets the upper limit of the RMS-valued phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:PRMS:LIM:UPP 6.2 Sets the upper limit for the RMS-valued phase error measurement to 6.2 degrees.

**:CALCulate:GPRS:RFTX:PRMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:PRMS:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -90.0, the maximum is 0.0. The minimum resolution possible is 0.1, the default value is -5.0.
<b>Description</b>	Sets the lower limit of the RMS-valued phase error measurement; the physical dimension of the number stated is degrees.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:PRMS:LIM:LOW 0.0 Sets the lower limit for the RMS-valued phase error measurement to 0 degrees.

**:CALCulate:GPRS:RFTX:FREQuency:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:FREQuency:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the frequency error measurement were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.

<b>Example</b>	<pre>:MEAS:GPRS:ARRay:RFTX:FREQ 20 :CALC:GPRS:RFTX:FREQ:LIM? String returned:" 0 " This string delivered back indicates that there was no violation of the measurement limits.</pre>
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**:CALCulate:GPRS:RFTX:FREQuency:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:FREQuency:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFTX:FREQ measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:FREQ:LIM:STAT ON Switches the limit check for the frequency error measurement on.</pre>

**:CALCulate:GPRS:RFTX:FREQuency:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:FREQuency:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100000.0. The minimum resolution possible is 1.0, the default value is 90.0.
<b>Description</b>	Sets the upper limit of the frequency error measurement; the physical dimension of the number stated is Hertz.
<b>Query</b>	The query form of this command delivers the current setting of the command. The string returned will contain one floating point real number.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:FREQ:LIM:UPP 45 Sets the upper limit of the frequency error measurement result to 45 Hz.</pre>

**:CALCulate:GPRS:RFTX:FREQuency:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:FREQuency:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -100000.0, the maximum is 0.0. The minimum resolution possible is 1.0, the default value is -90.0.
<b>Description</b>	Sets the lower limit of the frequency error measurement; the physical dimension of the number stated is Hertz.
<b>Query</b>	The query form of this command delivers back the current setting of the command. The string returned will contain one floating point real number.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:FREQ:LIM:LOW -60.8 Sets the lower limit of the frequency error measurement result to -60.8 Hz.</pre>

**:CALCulate:GPRS:RFTX:FREQUENCY:LIMit:GSM**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:FREQUENCY:LIMit:GSM <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100000.0. The minimum resolution possible is 1.0, the default value is 90.0.
<b>Description</b>	Sets the <i>symmetrical</i> limits of the frequency error for measurements in synchronous (call) mode for GSM-900 and GSM-850; the physical dimension of the number stated is Hertz.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:FREQ:LIM:GSM 65 Sets the lower limit of the frequency error measurement result on GSM-900 and GSM-850 channels to -65 Hz and the upper limit to +65 Hz.

**:CALCulate:GPRS:RFTX:FREQUENCY:LIMit:PCN**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:FREQUENCY:LIMit:PCN <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100000.0. The minimum resolution possible is 1.0, the default value is 180.0.
<b>Description</b>	Sets the <i>symmetrical</i> limits of the frequency error for measurements in synchronous (call) mode for GSM-1800 (also known as DCS-1800 or PCN); the physical dimension of the number stated is Hertz.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:FREQ:LIM:PCN 120 Sets the lower limit of the frequency error measurement result on GSM-1800 channels to -120 Hz and the upper limit to +120 Hz.

**:CALCulate:GPRS:RFTX:FREQUENCY:LIMit:PCS**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:FREQUENCY:LIMit:PCS <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100000.0. The minimum resolution possible is 1.0, the default value is 180.0.
<b>Description</b>	Sets the <i>symmetrical</i> limits of the frequency error for measurements in synchronous (call) mode for GSM-1900 (also known as PCS); the physical dimension of the number stated is Hertz.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:FREQ:LIM:PCS 120 Sets the lower limit of the frequency error measurement result on GSM-1900 channels to -120 Hz and the upper limit to +120 Hz.

**:CALCulate:GPRS:RFTX:LENGTH:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:LENGTH:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.



<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the burst length measurement were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:GPRS:ARR:RFTX:LENG 10 :CALC:GPRS:RFTX:LENG:LIM? String returned:" 0 " This string indicates that there was no violation of the measurement limits.

**:CALCulate:GPRS:RFTX:LENGth:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:LENGth:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFTX:LENGth measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:LENG:LIM:STAT ON Switches the limit check for the burst length measurement on.

**:CALCulate:GPRS:RFTX:LENGth:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:LENGth:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 700.0. The minimum resolution possible is 0.1, the default value is 562.8.
<b>Description</b>	Sets the upper limit of the burst length measurement; the physical dimension of the number stated is microseconds.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:LENG:LIM:UPP 563 Sets the upper limit of the burst length to 563.0 μs.

**:CALCulate:GPRS:RFTX:LENGth:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:LENGth:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 700.0. The minimum resolution possible is 0.1, the default value is 542.8.
<b>Description</b>	Sets the lower limit of the burst length measurement; the physical dimension of the number stated is microseconds.
<b>Query</b>	There is no query form of this command available.

<b>Example</b>	<code>:CALC:GPRS:RFTX:LENG:LIM:LOW 541.9</code> Sets the lower limit of the burst length to 541.9 $\mu$ s.
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**:CALCulate:GPRS:RFTX:UTIME:LIMit[:FAIL]?**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFTX:UTIME:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the UL timing error measurement were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	<code>:MEAS:GPRS:ARR:RFTX:UTIM 10</code> <code>:CALC:GPRS:RFTX:UTIM:LIM?</code> String returned: "0" This string indicates that there was no violation of the measurement limits.

**:CALCulate:GPRS:RFTX:UTIME:LIMit:STATE**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFTX:UTIME:LIMit:STATE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:GPRS:RFTX:UTIME</code> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:CALC:GPRS:RFTX:UTIM:LIM:STAT ON</code> Switches the limit check for the UL timing error measurement on.

**:CALCulate:GPRS:RFTX:UTIME:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFTX:UTIME:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value is 0.0, the maximum is 64.0. The minimum resolution possible is 0.01, the default value is 3.
<b>Description</b>	Sets the upper limit of the UL timing error measurement; the physical dimension of the number stated is microseconds. <b>Note:</b> The UL timing error measurement takes the ordered timing advance into account.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:CALC:GPRS:RFTX:UTIM:LIM:UPP 5</code> Sets the upper limit of the uplink timing error measurement result to 5.0 $\mu$ s.

**:CALCulate:GPRS:RFTX:UTIME:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:UTIME:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -64.0, the maximum is 0.0. The minimum resolution possible is 0.01, the default value is -3.
<b>Description</b>	Sets the lower limit of the UL timing error measurement; the physical dimension of the number stated is microseconds. <b>Note:</b> The UL timing error measurement takes the ordered timing advance into account.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:UTIM:LIM:LOW -5 Sets the lower limit of the uplink timing error measurement result to -5.0 μs.

**:CALCulate:GPRS:RFTX:POWer:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:POWer:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the measurement of the mobile's RF output power level were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:GPRS:ARRay:POW 20 :CALC:GPRS:RFTX:POW:LIM? String returned: "0" This string indicates that there was no violation of the measurement limits.

**:CALCulate:GPRS:RFTX:POWer:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:POWer:LIMit:STATe <PreDefExp>
<b>Parameters</b>	PreDefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFTX:POWer measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:POW:LIM:STAT ON Switches the limit check for the RF output power level measurement on.

**:CALCulate:GPRS:RFTX:POWER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:POWer:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 99.0. The minimum resolution possible is 0.01, the default value is 2.
<b>Description</b>	Sets the <b>upper</b> limit for the mobile's RF output power level. The physical dimension of the number stated is dBm.
<b>Query</b>	Returns the upper limit currently set.
<b>Example</b>	:CALC:GPRS:RFTX:POW:LIM:UPP 13 Sets the upper limit of the peak power measurement to 13 dBm.

**:CALCulate:GPRS:RFTX:POWER:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:POWer:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -99.0, the maximum is 0.0. The minimum resolution possible is 0.01, the default value is -2.
<b>Description</b>	Sets the <b>lower</b> limit for the mobile's RF output power level. The physical dimension of the number stated is dBm.
<b>Query</b>	Returns the lower limit currently set.
<b>Example</b>	:CALC:GPRS:RFTX:POW:LIM:LOW -45 Sets the lower limit of the peak power measurement to -45 dBm.

**:CALCulate:GPRS:RFTX:POWER:LIMit:GSM**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:POWer:LIMit:GSM <real1>,<real2>,...,<real18>
<b>Parameters</b>	real1 through real18 are floating point real numbers. The minimum value is 0.0, the maximum is 30.0. The minimum resolution possible is 0.1. The default values are: 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5.
<b>Description</b>	Sets the <b>symmetrical</b> limits of the peak power for measurements in synchronous (call) mode on GSM-900 and GSM-850 channels; the physical dimension of the number stated is dB. The first value applies to power control steps 0-2 (39 dBm), the second value applies to power control 3 (37 dBm) and so forth up to the eighteenth value for power control steps 19 through 31 (5 dBm).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:POW:LIM:GSM 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5 Sets the lower and upper limits of the power measurement result on GSM-900 and GSM-850 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5 dB around the nominal level.

**:CALCulate:GPRS:RFTX:POWer:LIMit:PCN**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:POWer:LIMit:PCN <real1>,<real2>,...,<real19>
<b>Parameters</b>	real1 through real19 are floating point real numbers. The minimum value is 0.0, the maximum is 30.0. The minimum resolution possible is 0.1. The default values are: 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5.
<b>Description</b>	Sets the symmetrical limits of the peak power for measurements in synchronous (call) mode on GSM-1800 channels; the physical dimension of the number stated is dB. The first value applies to power control step 29 (36 dBm), the second value applies to power control 30 (34 dBm) and so forth up to the nineteenth value for power control steps 15 through 28 (0 dBm).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:POW:LIM:PCN 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5 Sets the lower and upper limits of the power measurement result on GSM-1800 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5 dB around the nominal level.

**:CALCulate:GPRS:RFTX:POWer:LIMit:PCS**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:POWer:LIMit:PCS <real1>,<real2>,...,<real18>
<b>Parameters</b>	real1 through real19 are floating point real numbers. The minimum value is 0.0, the maximum is 30.0. The minimum resolution possible is 0.1. The default values are: 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5.
<b>Description</b>	Sets the symmetrical limits of the peak power for measurements in synchronous (call) mode on GSM-1900 channels; the physical dimension of the number stated is dB. The first value applies to power control step 30 (34 dBm), the second value applies to power control step 31 (32 dBm), the third value applies to power control step 0 (30 dBm) and so forth up to the eighteenth value for power control steps 15 through 28 (0 dBm).
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:POW:LIM:PCS 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5 Sets the lower and upper limits of the power measurement result on GSM-1800 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5 dB around the nominal level.

**:CALCulate:GPRS:RFTX:TEMPlate[:NORMal]:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:TEMPlate[:NORMal]:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers 14 boolean numbers, indicating whether the PTT limits for a normal burst were violated or not.</p> <p>A 0 on a position means that there was no violation of the limits while a 1 indicates that at least one measurement result did violate one of the corresponding measurement limits.</p> <p>The 14 boolean numbers correspond to the limits of the PTT as defined on the user interface or with the :CALC:GPRS:RFTX:TEMP commands as described below. The first eight numbers stand for the eight 'upper' segments of the burst, while the following six numbers stand for the six 'lower' segments of the burst. Refer to section Power/Time Templates (PTT) for further details.</p>
<b>Example</b>	<pre>:MEAS:GPRS:RFTX:TEMP :CALC:GPRS:RFTX:TEMP:LIM? String returned:"0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0" This string indicates that there was a violation of the limits of one of the 'lower' segments of the PTT (in this example during the ramping up phase of the burst).</pre>

**:CALCulate:GPRS:RFTX:TEMPlate[:NORMal]:LIMit:AUTO**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:TEMPlate[:NORMal]:LIMit:AUTO <Pre-defExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	<p>This command selects the power/time template to check normal bursts against. <b>Auto mode</b> (parameter ON) means that the Willtek 3100 will use the appropriate PTT as defined in the GSM/ETSI standards. Those PTTs vary with the frequency range and the RF power level used by the mobile.</p> <p><b>Manual mode</b> (parameter OFF) means that the GSM/ETSI specifications will be ignored and that the Willtek 3100 will use the manually set limits instead (see description of the :CALC:GPRS:RFTX:TEMP:LIM:UPP and :CALC:GPRS:RFTX:TEMP:LIM:LOW commands for further details).</p>
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:TEMP:LIM:AUTO ON Switches the limit check for the burst shape to use the standard PTTs as defined by ETSI standards.</pre>

**:CALCulate:GPRS:RFTX:TEMPlate[:NORMal]:LIMit:STAT**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:TEMPlate[:NORMal]:LIMit:STAT <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFTX:TEMPlate measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:TEMP:LIM:STAT ON Switches on the limit check of the burst shape against the PTT for normal bursts.</pre>

**:CALCulate:GPRS**  
**:RFTX:TEMPlate[:NORMal]:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFTX:TEMPlate[:NORMal]:LIMit:UPPer[:DATA] &lt;real0t&gt;,&lt;real0p&gt;,&lt;real1t&gt;,&lt;real1p&gt;,&lt;real2t&gt;,&lt;real2p&gt;,&lt;real3t&gt;,&lt;real3p&gt;,&lt;real4t&gt;,&lt;real4p&gt;,&lt;real5t&gt;,&lt;real5p&gt;,&lt;real6t&gt;,&lt;real6p&gt;,&lt;real7t&gt;,&lt;real7p&gt;,&lt;real8t&gt;,&lt;real8p&gt;</pre>
<b>Parameters</b>	<p>realxt and realxp are floating point real numbers. The minimum value for all realxt is -41.0, the maximum value 580.0. The minimum resolution possible for all realxt is 0.1. The default values are:</p> <p>for real0t: -41.0, for real1t: -28.0, for real2t: -18.0, for real3t: -10.0 for real4t: 0.0, for real5t: 553.0 for real6t: 561.0, for real7t: 571.0 for real8t: 580.0.</p> <p>The minimum value for all realxp is -150.0, the maximum value 5.0. The minimum resolution possible for all realxp is 0.1. The default values are:</p> <p>for real0p: -59.0, for real1p: -59.0, for real2p: -30.0, for real3p: -6.0 for real4p: 4.0, for real5p: 1.0 for real6p: -6.0, for real7p: -30.0 for real8p: -59.0.</p>
<b>Description</b>	<p>Sets the upper limits for the user-definable PTT (for normal bursts). The upper limits of the user-defined PTT are made up by nine pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst).</p> <p>For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).</p>
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:TEMP:LIM:UPP -41,-47,-28,-47,-18,-28,-10,-4,0,4,553,1,561,-4,571,-28,580,-47</pre>

**:CALCulate:GPRS**  
**:RFTX:TEMPlate[:NORMal]:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:TEMPlate[:NORMal]:LIMit:LOWer[:DATA] <real0t>, <real0p>, <real1t>, <real1p>, <real2t>, <real2p>, <real3t>, <real3p>, <real4t>, <real4p>, <real5t>, <real5p>, <real6t>, <real6p>
<b>Parameters</b>	realxt and realxp are floating point real numbers. The minimum value for all realxt is -41.0, the maximum value 580.0. The minimum resolution possible for all realxt is 0.1. The default values are: for real0t: -41.0, for real1t: 0.0, for real2t: 0.0, for real3t: 20.0 for real4t: 270.0, for real5t: 543.0 for real6t: 543.0. The minimum value for all realxp is -150.0, the maximum value 5.0. The minimum resolution possible for all realxp is 0.1. The default values are: for real0p: -150.0, for real1p: -150.0, for real2p: -40.0, for real3p: -1.0 for real4p: -1.0, for real5p: -1.0 for real6p: -150.0.
<b>Description</b>	Sets the lower limits for the user-definable PTT (for normal bursts). The lower limits of the user-defined PTT are made up by seven pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst). For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:CALC:GPRS:RFTX:TEMP:LIM:LOW -41,-150,0,-150,0,-40,20,-1,270,-1,543,-1,543,-150

**:CALCulate:GPRS:RFTX:TEMPlate:RACH:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:TEMPlate:RACH:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.



<b>Query</b>	<p>This command delivers 14 boolean numbers, indicating whether the PTT limits for a <b>random access</b> burst were violated or not.</p> <p>A 0 on a position means that there was no violation of the limits while a 1 indicates that at least one measurement result did violate one of the corresponding measurement limits.</p> <p>The 14 boolean numbers correspond to the limits of the PTT as defined on the user interface or with the :CALC:GPRS:RFTX:TEMP:RACH:LIM commands as described below. The first eight numbers stand for the eight 'upper' segments of the burst, while the following six numbers stand for the six 'lower' segments of the burst. Refer to section Power/Time Templates (PTT) for further details.</p>
<b>Example</b>	<pre>:CALC:GPRS:RFTX:TEMP:RACH:LIM?</pre> <p>String returned: "0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0"</p> <p>This string indicates that there was a violation of the limits of one of the 'lower' segments of the PTT (in this example during the ramping up phase of the burst).</p>

**:CALCulate:GPRS:RFTX:TEMPlate:RACH:LIMit:AUTO**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:TEMPlate:RACH:LIMit:AUTO <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	<p>This command selects the power/time template to check a random access burst against.</p> <p><b>Auto mode</b> (parameter ON) means that the Willtek 3100 will use the appropriate PTT as defined in the GSM/ETSI standards. Those PTTs vary with the frequency range and the RF power level used by the mobile.</p> <p><b>Manual mode</b> (parameter OFF) means that the GSM/ETSI specifications will be ignored and that the Willtek 3100 will use the manually set limits instead (see description of the :CALC:GPRS:RFTX:TEMP:RACH:LIM:UPP and :CALC:GPRS:RFTX:TEMP:RACH:LIM:LOW commands for further details).</p>
<b>Query</b>	There is on query form to this command.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:TEMP:RACH:LIM:AUTO ON</pre> <p>Switches the limit check for the shape of <b>random access</b> bursts to use the standard PTTs as defined by GSM/ETSI.</p>

**:CALCulate:GPRS:RFTX:TEMPlate:RACH:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:TEMPlate:RACH:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the limit check of the burst shape against the PTT (of random access bursts) either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFTX:TEMP:RACH:LIM:STAT ON</pre> <p>Switches on the limit check of the shape of random access bursts against the PTT.</p>

**:CALCulate:GPRS**  
**:RFTX:TEMPlate:RACH:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFTX:TEMPlate:RACH:LIMit:UPPer[:DATA] &lt;real0t&gt;,&lt;real0p&gt;,&lt;real1t&gt;,&lt;real1p&gt;, &lt;real2t&gt;,&lt;real2p&gt;,&lt;real3t&gt;,&lt;real3p&gt;, &lt;real4t&gt;,&lt;real4p&gt;,&lt;real5t&gt;,&lt;real5p&gt;, &lt;real6t&gt;,&lt;real6p&gt;,&lt;real7t&gt;,&lt;real7p&gt;,&lt;real8t&gt;,&lt;real8p&gt;</pre>
<b>Parameters</b>	<p>realxt and realxp are floating point real numbers. The minimum value for all realxt is -41.0, the maximum value 580.0. The minimum resolution possible for all realxt is 0.1. The default values are:</p> <p>for real0t: -41.0, for real1t: -28.0, for real2t: -18.0, for real3t: -10.0 for real4t: 0.0, for real5t: 331.0 for real6t: 339.0, for real7t: 349.0 for real8t: 349.0.</p> <p>The minimum value for all realxp is -150.0, the maximum value 5.0. The minimum resolution possible for all realxp is 0.1. The default values are:</p> <p>for real0p: -59.0, for real1p: -59.0, for real2p: -30.0, for real3p: -6.0 for real4p: 4.0, for real5p: 1.0 for real6p: -6.0, for real7p: -30.0 for real8p: -59.0.</p>
<b>Description</b>	<p>Sets the upper limits for the user-definable PTT for random access bursts. The upper limits of the user-defined PTT are made up by nine pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst).</p> <p>For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).</p>
<b>Query</b>	<p>The query form of this command is not available.</p>
<b>Example</b>	<pre>:CALC:GPRS:RFTX:TEMP:RACH:LIM:UPP -41,-59,-28,-59,-18,-30,-10,-6,0,4,331,1,339,-6,349, -30,349,-59</pre>

**:CALCulate:GPRS**  
**:RFTX:TEMPlate:RACH:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFTX:TEMPlate:RACH:LIMit:LOWer[:DATA] &lt;real0t&gt;,&lt;real0p&gt;,&lt;real1t&gt;,&lt;real1p&gt;,&lt;real2t&gt;,&lt;real2p&gt;,&lt;real3t&gt;,&lt;real3p&gt;,&lt;real4t&gt;,&lt;real4p&gt;,&lt;real5t&gt;,&lt;real5p&gt;,&lt;real6t&gt;,&lt;real6p&gt;</pre>
<b>Parameters</b>	<p>realxt and realxp are floating point real numbers. The minimum value for all realxt is -41.0, the maximum value 580.0. The minimum resolution possible for all realxt is 0.1. The default values are:</p> <p>for real0t: -41.0, for real1t: 0.0, for real2t: 0.0, for real3t: 20.0, for real4t: 270.0, for real5t: 321.0, for real6t: 321.0.</p> <p>The minimum value for all realxp is -150.0, the maximum value 5.0. The minimum resolution possible for all realxp is 0.1. The default values are:</p> <p>for real0p: -150.0, for real1p: -150.0, for real2p: -40.0, for real3p: -1.0, for real4p: -1.0, for real5p: -1.0, for real6p: -150.0.</p>
<b>Description</b>	<p>Sets the lower limits for the user-definable PTT for random access bursts. The lower limits of the user-defined PTT are made up by seven pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst).</p> <p>For further details regarding the user-definable PTT, refer to section Power/Time Templates (PTT).</p>
<b>Query</b>	<p>The query form of this command is not available.</p>
<b>Example</b>	<pre>:CALC:GSM:RFTX:TEMP:RACH:LIM:LOW -41,-150,0,-150,0,-40,20,-1,270,-1,321,-1,321,-150</pre>

**:CALCulate:GPRS**  
**:RFTX:CORner[:NORMal]:POSition**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:CORner[:NORMal]:POSition <real1>, <real2>, <real3>, <real4>, <real5>, <real6>, <real7>, <real8>
<b>Parameters</b>	realx are floating point real numbers. The minimum value for all realx is -28.0, the maximum value 580.0. The minimum resolution possible for all realx is 0.1. The default values are: for real1: -28.0, for real2: -18.0, for real3: -10.0, for real4: 0.0 for real5: 542.8, for real6: 552.8 for real7: 560.8. for real8: 570.8.
<b>Description</b>	Sets the position of the eight user-definable corner points in relation to the beginning of the burst for <b>normal</b> bursts. The positions are given in microseconds. For further details, refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:POS -28,-18,- 10,0,542.8,552.8,562.8,572.8

**:CALCulate:GPRS**  
**:RFTX:CORner[:NORMal]:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:CORner[:NORMal]:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers eight boolean numbers, indicating whether the limits for the eight corner positions of <b>normal</b> bursts were violated by the bursts received or not. A 0 on a position means that there was no violation of the limits while a 1 indicates that at least one measurement result did violate the corresponding measurement limits. The eight boolean numbers correspond with the eight corner points set with the :CALC:GPRS:RFTX:CORN:NORM:POS command as described above. Please refer to section Corner Points for further details.
<b>Example</b>	:MEAS:GPRS:ARRAY:CORN 10 :CALC:GPRS:RFTX:CORN:LIM:FAIL? String returned: "0,0,1,0,0,0,0,0" This string indicates that the limits set for corner point 3 were violated.

**:CALCulate:GPRS**  
**:RFTX:CORner[:NORMal]:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:CORner[:NORMal]:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFTX:CORner measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:LIM:STAT OFF Switches the limit check at the eight corner positions off.

**:CALCulate:GPRS**  
**:RFTX:CORner[:NORMal]:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:CORner[:NORMal]:LIMit:UPPer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	realx are floating point real numbers. The minimum value for all realx is -150.0, the maximum is 10.0. The minimum resolution possible for all realx is 0.01. The default value is 4.0 for all realx.
<b>Description</b>	Sets the upper limits at the eight user-definable corner points for normal bursts. The single data values are dB relative to the power level during the active part of the burst. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:LIM:UPP 4,4,4,4,4,4,4,4

**:CALCulate:GPRS**  
**:RFTX:CORner[:NORMal]:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:CORner[:NORMal]:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	realx are floating point real numbers. The minimum value for all realx is -150.0, the maximum is 10.0. The minimum resolution possible for all realx is 0.01. The default value is -150.0 for all realx.
<b>Description</b>	Sets the lower limits at the eight user-definable corner points for normal bursts. The single data values are dB relative to the power level during the active part of the burst. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.

<b>Example</b>	:CALC:GPRS:RFTX:CORN:LIM:LOW -150,-150,-150,-150,-150,-150,-150,-150
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**:CALCulate:GPRS:RFTX:CORner:RACH:POSition**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:CORner:RACH:POSition <real1>,<real2>,<real3>,<real4>,<real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	realx are floating point real numbers. The minimum value for all realx is -28.0, the maximum value 580.0. The minimum resolution possible for all realx is 0.1. The default values are: for real1: -28.0, for real2: -18.0, for real3: -10.0, for real4: 0.0 for real5: 321.2, for real6: 331.2 for real7: 339.2. for real8: 349.2.
<b>Description</b>	Sets the position of the eight user-definable corner points in relation to the beginning of the burst for random access bursts. The positions are given in microseconds. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:RACH:POS -28,-18,-10,0,321.2,331.2,341.2,351.2

**:CALCulate:GPRS:RFTX:CORner:RACH:LIMit[:FAIL]?**

<b>Syntax</b>	:CALC:GPRS:RFTX:CORner:RACH:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers eight boolean numbers, indicating whether the limits for the eight corner positions of random access burst were violated by the bursts received or not. A 0 on a position means that there was no violation of the limits while a 1 indicates that at least one measurement result did violate one of the two corresponding measurement limits. The eight boolean numbers correspond with the eight corner points set with the :CALC:GPRS:RFTX:CORN:RACH:POS command as described above. Please refer to section Corner Points for further details.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:RACH:LIM:FAIL? String returned: "0,1,0,0,0,0,0,0" This string indicates that one of the two limits set for corner point 2 was violated.

**:CALCulate:GPRS:RFTX:CORN:RACH:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFTX:CORN:RACH:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the bursts against the limits at the corner points either on or off for <b>random access</b> bursts.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:RACH:LIM:STAT OFF Switches the limit check at the eight corner positions off.

**:CALCulate:GPRS:RFTX:CORner:RACH:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:CORner:RACH:LIMit:UPPer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	realx are floating point real numbers. The minimum value for all realx is -150.0, the maximum is 10.0. The minimum resolution possible for all realx is 0.01. The default value is 4.0 for all realx.
<b>Description</b>	Sets the <b>upper</b> limits at the eight user-definable corner points for <b>random access</b> bursts. The single data values are dB relative to the power level during the active part of the burst. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:RACH:LIM:UPP 4,4,4,4,4,4,4,4

**:CALCulate:GPRS  
:RFTX:CORner:RACH:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFTX:CORner:RACH:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	realx are floating point real numbers. The minimum value for all realx is -150.0, the maximum is 10.0. The minimum resolution possible for all realx is 0.01. The default value is -150.0 for all realx.
<b>Description</b>	Sets the <b>lower</b> limits at the eight user-definable corner points for <b>random access</b> bursts. The single data values are dB relative to the power level during the active part of the burst. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:GPRS:RFTX:CORN:RACH:LIM:LOW -150,-150,-150,-150,- 150,-150,-150,-150

**:CALCulate:GPRS:RFRX:MAverage?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:MAverage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the RX measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:GPRS:ARR:RFRX:RBER:ALL :CALC:GPRS:RFRX:MAV?

**:CALCulate:GPRS:RFRX:MMINimum?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:MMINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>minimum</b> measurement result value of the RX measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:GPRS:ARR:RFRX:RBER:ALL :CALC:GPRS:RFRX:MMIN?

**:CALCulate:GPRS:RFRX:MMAximum?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the RX measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:GPRS:ARR:RFRX:RBER:ALL :CALC:GPRS:RFRX:MMAx?

**:CALCulate:GPRS:RFRX:MSIGma?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:MSIGma?
<b>Parameters</b>	There are no parameters.



<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the RX measurement last started. The string delivered back contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre>:CALC:RES :MEAS:GPRS:RFRX:RBER:CII ... (other SCPI commands) ... :CALC:GPRS:RFRX:MSIG?</pre> <p>In this example, first a continuous measurement of the residual bit error rate (RBER) on class II bits is started. After some time, the <code>:CALC:GPRS:RFRX:MSIG</code> command is used to read out the mean RBER and its standard deviation. The string returned in this example is "5.3, 3.1".</p>

**:CALCulate:GPRS:RFRX:RBER:ALL:LIMit[:FAIL]?**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFRX:RBER:ALL:LIMit[:FAIL]?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers 3 boolean numbers in a string, separated by commas. These numbers indicate, whether one of the residual bit error ratio measurements did violate the corresponding test limits. While a 0 delivered back on any position means that the related test was passed without exceeding the limits, a 1 indicates that at least one of the limits was violated by the measurement result value.</p> <p>The position of the boolean number within the string returned indicates the result of the check for the following measurements:</p> <ol style="list-style-type: none"> <li>1. the bit error ratio measurement of the class 1b bits,</li> <li>2. the bit error ratio measurement of the class II bits and,</li> <li>3. the frame erasure ratio measurement.</li> </ol> <p><b>Notes:</b></p> <p>For further details regarding bit classes, please refer to section voice coding. For details regarding the three measurement types, see the description of the <code>:MEAS:GPRS:RFRX:RBER:ALL</code> command.</p>
<b>Example</b>	<pre>:MEAS:GPRS:RFRX:RBER:ALL :CALC:GPRS:RFRX:RBER:ALL:LIM?v</pre> <p>String returned: "0,0,1"</p> <p>The 1 on position 3 indicates that there was a violation of at least one limit of the frame erasure measurement.</p>

**:CALCulate:GPRS:RFRX:RBER:ALL:LIMit:STATE**

<b>Syntax</b>	<pre>:CALCulate:GPRS:RFRX:RBER:ALL:LIMit:STATE &lt;PredefExp&gt;</pre>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:GPRS:RFRX:RBER:ALL</code> measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.

<b>Example</b>	<pre>:CALC:GPRS:RFRX:RBER:ALL:LIM:STAT OFF</pre> <p>Switches the limit check of all residual bit error ratio measurements off.</p>
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**:CALCulate:GPRS:RFRX:RBER:ALL:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFRX:RBER:ALL:LIMit:UPPer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;</pre>
<b>Parameters</b>	<p><i>realx</i> are three floating point real numbers. The minimum value for all <i>realx</i> is 0.0, the maximum is 100.0. The minimum resolution possible for all <i>realx</i> is 0.1. The default value for all <i>realx</i> is 2.5.</p>
<b>Description</b>	<p>Sets the upper limits for three residual bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning: <i>real1</i> represents the upper limit of the bit error ratio measurement for the class 1b bits, <i>real2</i> represents the upper limit of the bit error ratio measurement of the class II bits, while <i>real3</i> represents the upper limit of the frame erasure ratio measurement. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.</p>
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre>:CALC:GPRS:RFRX:RBER:ALL:LIM:UPP 1,2,1</pre> <p>Sets the upper limits as follows:</p> <ul style="list-style-type: none"> <li>- RBER class Ia: 1.0%</li> <li>- RBER class II: 2.0%</li> <li>- FER: 1.0%</li> </ul>

**:CALCulate:GPRS:RFRX:RBER:ALL:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFRX:RBER:ALL:LIMit:LOWer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;</pre>
<b>Parameters</b>	<p><i>realx</i> are three floating point real numbers. The minimum value for all <i>realx</i> is 0.0, the maximum is 100.0. The minimum resolution possible for all <i>realx</i> is 0.1. The default value for all <i>realx</i> is 0.0.</p>
<b>Description</b>	<p>Sets the lower limits for three residual bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning: <i>real1</i> represents the lower limit of the bit error ratio measurement for the class 1b bits, <i>real2</i> represents the lower limit of the bit error ratio measurement of the class II bits, while <i>real3</i> represents the lower limit of the frame erasure ratio measurement. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.</p>
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre>:CALC:GPRS:RFRX:RBER:ALL:LIM:LOW 0,0,0,</pre> <p>Sets the lower limits for RBER class Ia bits, RBER class II bits and FER to 0.0%.</p>

**:CALCulate:GPRS:RFRX:RBER:CIB:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:RBER:CIB:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the residual bit error ratio measurement of the class 1b bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding bit classes, refer to section voice coding.
<b>Example</b>	:MEAS:GPRS:RFRX:RBER:CIB :CALC:GPRS:RFRX:RBER:CIB:LIM? String returned: "0" This means that the bit error ratio measured was within the limits set with the commands explained in this section.

**:CALCulate:GPRS:RFRX:RBER:CIB:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:RBER:CIB:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:RBER:CIB measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:CIB:LIM:STAT OFF Switches the limit check of the residual bit error ratio measurement for the class 1b bits off.

**:CALCulate:GPRS:RFRX:RBER:CIB:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:RBER:CIB:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the residual bit error ratio measurement of the class 1b bits. <b>Note:</b> For further details regarding bit classes, refer to section voice coding.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:CIB:LIM:UPP 5 Sets the upper limit for the class 1 bit error rate results to 5.0.

**:CALCulate:GPRS:RFRX:RBER:CIB:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:RBER:CIB:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the residual bit error ratio measurement of the class Ib bits. <b>Note:</b> For further details regarding bit classes, refer to section voice coding.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:CIB:LIM:LOW 0.0 Sets the lower limit for the class I bit error rate results to 0.

**:CALCulate:GPRS:RFRX:RBER:CII:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:RBER:CII:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the residual bit error ratio measurement of the class II bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Example</b>	:MEAS:GPRS:RFRX:RBER:CII :CALC:GPRS:RFRX:RBER:CII:LIM? String returned: "1" This means that the bit error ratio measured was outside the limits set with the commands explained in this section.

**:CALCulate:GPRS:RFRX:RBER:CII:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:RBER:CII:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:RBER:CII measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:CII:LIM:STAT ON Switches the limit check of the residual bit error ratio measurement for the class II bits on.

**:CALCulate:GPRS:RFRX:RBER:CII:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:RBER:CII:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the residual bit error ratio measurement of the class II bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:CII:LIM:UPP 5 Sets the upper limit of the class II RBER measurement to 5%.

**:CALCulate:GPRS:RFRX:RBER:CII:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:RBER:CII:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the residual bit error ratio measurement of the class II bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:CII:LIM:LOW 0.0 Sets the lower limit of the class II RBER measurement to 0%.

**:CALCulate:GPRS  
:RFRX:RBER:FER:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:RBER:FER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the frame erasure ratio measurement did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding the frame error ratio, please refer to section RBER live display.
<b>Example</b>	:MEAS:GPRS:RFRX:RBER:FER :CALC:GPRS:RFRX:RBER:FER:LIM? String returned: "0" This means that the frame erasure ratio was within the limits set with the commands explained in this section.

**:CALCulate:GPRS:RFRX:RBER:FER:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:RBER:FER:LIMit:STATE <PredefExp>
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<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:RBER:FER measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:FER:LIM:STAT ON Switches the limit check of the frame erasure ratio measurement on.

**:CALCulate:GPRS:RFRX:RBER:FER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:GPRS :RFRX:RBER:FER:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the frame erasure ratio measurement. <b>Note:</b> For further details regarding the FER, please refer to section RBER live display.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:FER:LIM:UPP 4.5 Sets the upper limit for the FER measurement results to 4.5%.

**:CALCulate:GPRS:RFRX:RBER:FER:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:GPRS :RFRX:RBER:FER:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1. The default value is 0.0.
<b>Description</b>	Sets the lower limit for the frame erasure ratio measurement. <b>Note:</b> for further details regarding the FER, please refer to section RBER live display.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:RBER:FER:LIM:LOW 0 Sets the lower limit for the FER measurement results to 0%.

**:CALCulate:GPRS:RFRX:BER:ALL:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BER:ALL:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers 3 boolean numbers in a string, separated by commas. These numbers indicate, which one of the (nonresidual) bit error ratio measurements did violate the corresponding test limits. While a 0 delivered back on any position means that the related test was passed without exceeding the limits, a 1 indicates that at least one of the limits was violated by the measurement result value.</p> <p>The position of the boolean number within the string returned indicates the result of the check for the following measurements:</p> <ol style="list-style-type: none"> <li>1. the bit error ratio measurement of the class Ia bits,</li> <li>2. the bit error ratio measurement of the class Ib bits and,</li> <li>3. the bit error ratio measurement of the class II bits.</li> </ol> <p>Notes:</p> <p>For further details regarding bit classes, please refer to section voice coding. For a description of the measurements performed, refer to the description of the :MEAS:GPRS:RFRX:BER:ALL command.</p>
<b>Example</b>	<pre>:MEAS:GPRS:RFRX:BER:ALL 3 :CALC:GPRS:RFRX:BER:ALL:LIM? String returned: "0,0,1" The 1 on position 3 indicates that there was a violation of at least one limit of the bit error ratio measurement of the class II bits.</pre>

**:CALCulate:GPRS:RFRX:BER:ALL:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BER:ALL:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:BER:ALL measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFRX:BER:ALL:LIM:STAT OFF Switches the limit check of all (nonresidual) bit error ratio measurements off.</pre>

**:CALCulate:GPRS:RFRX:BER:ALL:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFRX:BER:ALL:LIMit:UPPer[:DATA] &lt;real1&gt;, &lt;real2&gt;, &lt;real3&gt;</pre>
<b>Parameters</b>	<p>realx are three floating point real numbers.</p> <p>The minimum value for all realx is 0.0, the maximum value 100.0. The minimum resolution possible for all realx is 0.1. The default value for all realx is 2.5.</p>
<b>Description</b>	<p>Sets the upper limits for the three (nonresidual) bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning:</p> <p>real1 represents the upper limit of the bit error ratio measurement for the class Ia bits,</p> <p>real2 represents the upper limit of the bit error ratio measurement for the class Ib bits and,</p> <p>real3 represents the upper limit of the bit error ratio measurement for the class II bits.</p> <p><b>Note:</b> For further details regarding bit classes, please refer to section voice coding.</p>
<b>Query</b>	The query form of this command is not supported.

<b>Example</b>	<pre>:CALC:GPRS:RFRX:BER:ALL:LIM:UPP 1,2,2.8</pre> <p>Sets the upper limit of the BER measurements to 1.0% for class Ia bits, 2.0% for class Ib bits and 2.8% for class II bits.</p>
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**:CALCulate:GPRS:RFRX:BER:ALL:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS :RFRX:BER:ALL:LIMit:LOWer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;</pre>
<b>Parameters</b>	<p><i>realx</i> are three floating point real numbers given as a percentage. The minimum value for all <i>realx</i> is 0.0, the maximum value 100.0. The minimum resolution possible for all <i>realx</i> is 0.1. The default value for all <i>realx</i> is 0.0.</p>
<b>Description</b>	<p>Sets the lower limits for the three (nonresidual) bit error ratio measurements with one command. The order of the floating point real numbers defines their meaning: <i>real1</i> represents the lower limit of the bit error ratio measurement for the class Ia bits, <i>real2</i> represents the lower limit of the bit error ratio measurement for the class Ib bits and, <i>real3</i> represents the lower limit of the bit error ratio measurement for the class II bits.</p> <p><b>Note:</b> For further details regarding bit classes, please refer to section voice coding.</p>
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<pre>:CALC:GPRS:RFRX:BER:ALL:LIM:LOW 0.0,0.0,0.0</pre> <p>Sets the lower limit for all three BER measurements (class Ia, class Ib and class II) to 0%.</p>

**:CALCulate:GPRS:RFRX:BER:CIA:LIMit[:FAIL]?**

<b>Syntax</b>	<pre>:CALCulate:GPRS:RFRX:BER:CIA:LIMit[:FAIL]?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers one boolean number, indicating, whether the result value of the (nonresidual) bit error ratio measurement of the class Ia bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value.</p> <p><b>Note:</b> For further details regarding bit classes, please refer to section voice coding.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARRAY:RFRX:BER:CIA 5 :CALC:GPRS:RFRX:BER:CIA:LIM?</pre> <p>String returned: "1"</p> <p>This means that the bit error ratio measured for the class Ia bits was outside the limits set with the commands explained in this section.</p>

**:CALCulate:GPRS:RFRX:BER:CIA:LIMit:STATE**

**Syntax**           :CALCulate:GPRS:RFRX:BER:CIA:LIMit:STATE <PredefExp>

<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
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<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:BER:CIA measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CIA:LIM:STAT ON Switches the limit check of the (nonresidual) bit error ratio measurement for the class la bits on.

**:CALCulate:GPRS:RFRX:BER:CIA:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BER:CIA:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the (nonresidual) bit error ratio measurement of the class la bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CIA:LIM:UPP 2 Sets the upper limit for bit error rate measurements on class la bits to 2.0%.

**:CALCulate:GPRS:RFRX:BER:CIA:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BER:CIA:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the (nonresidual) bit error ratio measurement of the class la bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CIA:LIM:LOW 0.0 Sets the lower limit for BER measurements on class la bits to 0.

**:CALCulate:GPRS:RFRX:BER:CIB:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BER:CIB:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the (nonresidual) bit error ratio measurement of the class Ib bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Example</b>	:MEAS:GPRS:RFRX:BER:CIB :CALC:GPRS:RFRX:BER:CIB:LIM? String returned: "1" This means that the bit error ratio measured for the class Ib bits was outside the limits set with the commands explained in this section.

**:CALCulate:GPRS:RFRX:BER:CIB:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BER:CIB:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:BER:CIB measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CIB:LIM:STAT ON Switches the limit check of the (nonresidual) bit error ratio measurement for the class Ib bits on.

**:CALCulate:GPRS:RFRX:BER:CIB:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BER:CIB:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the (nonresidual) bit error ratio measurement of the class Ib bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CIB:LIM:UPP 2.0 Sets the upper limit for class Ib bits to 2%.

**:CALCulate:GPRS:RFRX:BER:CIB:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BER:CIB:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the (nonresidual) bit error ratio measurement of the class Ib bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.

<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CIB:LIM:LOW 0 Sets the lower limit for class Ib bits to 0%.

**:CALCulate:GPRS:RFRX:BER:CII:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BER:CII:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the (nonresidual) bit error ratio measurement of the class II bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Example</b>	:MEAS:GPRS:ARRay:RFRX:BER:CII 3 :CALC:GPRS:RFRX:BER:CII:LIM? String returned: "1" This means that the bit error ratio measured for the class II bits was outside the limits set with the commands explained in this section.

**:CALCulate:GPRS:RFRX:BER:CII:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BER:CII:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:BER:CII measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CII:LIM:STAT ON Switches the limit check of the (nonresidual) bit error ratio measurement for the class II bits on.

**:CALCulate:GPRS:RFRX:BER:CII:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BER:CII:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the (nonresidual) bit error ratio measurement of the class II bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.

<b>Example</b>	<code>:CALC:GPRS:RFRX:BER:CII:LIM:UPP 7.5</code> Sets the upper limit of the class II BER measurements to 7.5%.
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**:CALCulate:GPRS:RFRX:BER:CII:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:GPRS</code> <code>:RFRX:BER:CII:LIMit:LOWer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the (nonresidual) bit error ratio measurement of the class II bits. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	<code>:CALC:GPRS:RFRX:BER:CII:LIM:LOW 0</code> Sets the lower limit of the class II BER measurements to 0%.

**:CALCulate:GPRS:RFRX:BER:CRC:LIMit[:FAIL]?**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFRX:BER:CRC:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers back one boolean number, indicating, whether the result value of the (non-residual) bit error ratio measurement of the class II bits did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. <b>Note:</b> For further details regarding bit classes, please refer to section voice coding.
<b>Example</b>	<code>:MEAS:GPRS:ARRay:RFRX:BER:CRC 3</code> <code>:CALC:GPRS:RFRX:BER:CII:LIM?</code> String returned in this example: "1" This means that the bit error ratio measured for the class II bits was outside the limits set with the commands explained in this section.

**:CALCulate:GPRS:RFRX:BER:CRC:LIMit:STATE**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFRX:BER:CRC:LIMit:STATE</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the <code>MEAS:GPRS:RFRX:BER:CII</code> measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:CALC:GPRS:RFRX:BER:CRC:LIM:STAT ON</code> Switches the limit check of the (non-residual) bit error ratio measurement for the class II bits on.

**:CALCulate:GPRS**  
**:RFRX:BER:CRC:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BER:CRC:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the (non-residual) bit error ratio measurement of the class II bits. Note: For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CRC:LIM:UPP 7.5 Sets the upper limit of the class II BER measurements to 7.5%.

**:CALCulate:GPRS**  
**:RFRX:BER:CRC:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BER:CRC:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the (non-residual) bit error ratio measurement of the class II bits. Note: For further details regarding bit classes, please refer to section voice coding.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BER:CRC:LIM:LOW 0 Sets the lower limit of the class II BER measurements to 0%.

**:CALCulate:GPRS:RFRX:FBER:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:FBER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating, whether the result value of the fast bit error ratio measurement (C-type loop) did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value. Note: For further details regarding the fast BER measurement, please refer to section FBER live display.
<b>Example</b>	:MEAS:GPRS:RFRX:FBER :CALC:GPRS:RFRX:FBER:LIM? String returned: "1" This means that the fast bit error ratio measured was outside the limits set with the commands explained in this section.

**:CALCulate:GPRS:RFRX:FBER:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:FBER:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFRX:FBER measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:FBER:LIM:STAT ON Switches the limit check of the fast bit error ratio measurement on.

**:CALCulate:GPRS:RFRX:FBER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:FBER:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the fast bit error ratio measurement result value. <b>Note:</b> For further details regarding the fast BER measurement, please refer to section FBER live display.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:FBER:LIM:UPP 7.5 Sets the upper limit of the FER measurement results to 7.5%.

**:CALCulate:GPRS:RFRX:FBER:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:FBER:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the fast bit error ratio measurement result value. <b>Note:</b> For further details regarding the fast BER measurement, please refer to section FBER live display.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:FBER:LIM:LOW 0.0 Sets the lower limit of the FER measurement results to 0%.

**:CALCulate:GPRS:RFRX:BLER:BCS:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BLER:BCS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	This command delivers one boolean number, indicating whether the result value of the block error rate measurement based on the block check sequence (BLER-BCS) did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	:MEAS:GPRS:ARRAY:MULT:RFRX:BLER 3 :CALC:GPRS:RFRX:BLER:BCS:LIM? String returned: "1" This means that the block error rate based on the block check sequence was outside the limits.

**:CALCulate:GPRS:RFRX:BLER:BCS:LIMit:STATE**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BLER:BCS:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS(:MULT):RFRX:BLER measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:BLER:BCS:LIM:STAT ON Switches the limit check for the BCS-based block error rate measurement on.

**:CALCulate:GPRS:RFRX:BLER:BCS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BLER:BCS:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The resolution is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the BCS-based block error rate measurement.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BLER:BCS:LIM:UPP 2 Sets the upper limit for BCS-based block error rate measurements to 2.0%.

**:CALCulate:GPRS:RFRX:BLER:BCS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BLER:BCS:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the BCS-based block error rate measurement.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BLER:BCS:LIM:LOW 0.0 Sets the lower limit for BCS-based BLER measurements to 0%.

**:CALCulate:GPRS:RFRX:BLER:USF:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BLER:USF:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the result value of the block error rate measurement based on the uplink state flag (BLER-USF) did violate the user-definable test limits. While a 0 delivered back means that the related test was passed without exceeding the limits, a 1 indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	:MEAS:GPRS:ARRay:RFRX:BLER 3 :CALC:GPRS:RFRX:BLER:USF:LIM? String returned: "1" This means that the block error rate based on the block check sequence was outside the limits.

**:CALCulate:GPRS:RFRX:BLER:USF:LIMit:STATe**

<b>Syntax</b>	:CALCulate:GPRS:RFRX:BLER:USF:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS(:MULT):RFRX:BLER measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:GPRS:RFRX:BLER:USF:LIM:STAT ON Switches the limit check for the USF-based block error rate measurement on.

**:CALCulate:GPRS:RFRX:BLER:USF:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BLER:USF:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The resolution is 0.1, the default value is 2.5.
<b>Description</b>	Sets the upper limit for the USF-based block error rate measurement.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BLER:USF:LIM:UPP 2 Sets the upper limit for USF-based block error rate measurements to 2.0%.

**:CALCulate:GPRS:RFRX:BLER:USF:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:GPRS :RFRX:BLER:USF:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is 0.0, the maximum is 100.0. The minimum resolution possible is 0.1, the default value is 0.0.



<b>Description</b>	Sets the lower limit for the USF-based block error rate measurement.
<b>Query</b>	The query form of this command is not supported.
<b>Example</b>	:CALC:GPRS:RFRX:BLER:USF:LIM:LOW 0.0 Sets the lower limit for USF-based BLER measurements to 0%.

**:CALCulate:GPRS:RFSpectrum:ACPM:MAverage?**

<b>Syntax</b>	:CALCulate:GPRS:RFSpectrum:ACPM:MAverage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the ACPM measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:GPRS:ARR:RFSP:ACPM:MOD :CALC:GPRS:RFSP:ACPM:MAV?

**:CALCulate:GPRS:RFSpectrum:ACPM:MMINimum?**

<b>Syntax</b>	:CALCulate:GPRS:RFSpectrum:ACPM:MMINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>minimum</b> measurement result value of the ACPM measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:GPRS:ARR:RFSP:ACPM:MOD :CALC:GPRS:RFSP:ACPM:MMIN?

**:CALCulate:GPRS:RFSpectrum:ACPM:MMAximum?**

<b>Syntax</b>	:CALCulate:GPRS:RFSpectrum:ACPM:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the ACPM measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.

<b>Example</b>	<pre>:CALC:RES :MEAS:GPRS:ARR:RFSP:ACPM:MOD :CALC:GPRS:RFSP:ACPM:MMAx?</pre>
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**:CALCulate:GPRS:RFSPectrum:ACPM:MSIGma?**

<b>Syntax</b>	:CALCulate:GPRS:RFSPectrum:ACPM:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>Returns the mean value and the standard deviation of the RF spectrum measurement.</p> <p>In the case of the ACP Mod measurement, the string delivered back contains 27 pairs of mean values and standard deviation values for the ACP Mod measurement. In the ACP Transient case, 23 pairs of mean values and standard deviation values are returned.</p> <p>The values are floating point real values and separated by commas.</p>
<b>Example</b>	<pre>:CALC:RES :MEAS:GPRS:ARR:RFSP:ACPM:MOD ... (other SCPI commands) ... :CALC:GPRS:RFSP:ACPM:MSIG?</pre>

**:CALCulate:GPRS  
:RFSPectrum:ACPM:MODulation:LIMit[:FAIL]?**

<b>Syntax</b>	<pre>:CALCulate:GPRS:RFSPectrum :ACPM:MODulation:LIMit[:FAIL]?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers 23 boolean numbers in a string, separated by commas. These numbers indicate whether the 23 single measurement result values of the MEAS:GPRS:RFSP:ACPM:MOD measurement did violate their individual limits (set with the commands explained below). Every boolean number represents the result of the limit check of one of the 23 measurement result values. The first value will give the result of the limit check at -1.8 MHz offset to the carrier, the second one for -1.6 MHz offset to the carrier and so on.</p> <p>While a 0 delivered back on any position means that the related measurement result value did not exceed the limits, a 1 indicates that at least one limit was violated by the measurement result value.</p> <p><b>Note:</b> According to GSM specification 05.05, the MEAS:GPRS:RFSP:ACPM:MOD measurement will be performed on (<math>\pm</math>)100 kHz and (<math>\pm</math>)250 kHz offset from the carrier as well as on all multiples of (<math>\pm</math>)200 kHz offset from the carrier up to (and including) an offset of (<math>\pm</math>)1.8 MHz. If one includes the carrier frequency as well (0.0 dBc), this adds up to the 23 measurement values returned. All measurements will be performed with a measuring bandwidth of 30 kHz.</p>

<b>Example</b>	<pre>:MEAS:GSM:BLOC:MSP:AVG 20 :CALC:GSM:RFSP:ACPM:MOD:LIM? String returned: "0,0,0,0,0,0,0,0,1, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0" The 1 on position 9 indicates that there was a violation of at least one limit by the measurement result value taken at an offset of -0.25 MHz from the carrier.</pre>
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**:CALCulate:GPRS:RFSPectrum  
:ACPM:MODulation:LIMit:STATe**

<b>Syntax</b>	<pre>:CALCulate:GPRS:RFSPectrum :ACPM:MODulation:LIMit:STATe &lt;PredefExp&gt;</pre>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFSP:ACPM:MOD measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFSP:ACPM:MOD:LIM:STAT ON Switches the limit check of the ACPM of the modulation spectrum measurement on.</pre>

**:CALCulate:GPRS:RFSP:RFSPectrum  
:ACPM:MODulation:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS:RFSP:RFSPectrum :ACPM:MODulation:LIMit:UPPer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;, &lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;, &lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;, &lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;, &lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;, &lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt;</pre>
<b>Parameters</b>	<p>realx are 23 floating point real numbers. The minimum value for all realx is -100.0, the maximum value 10.0. The minimum resolution possible for all realx is 0.01. The default values are:</p> <ul style="list-style-type: none"> <li>-60.0 for real1...real8,</li> <li>-33.0 for real9,</li> <li>-30.0 for real10,</li> <li>0.5 for real11,</li> <li>0.5 for real12,</li> <li>0.5 for real13,</li> <li>-30.0 for real14,</li> <li>-33.0 for real15 and</li> <li>-60.0 for real16...real23.</li> </ul>
<b>Description</b>	Sets the upper limits for the 23 single measurement result values of the ACPM modulation spectrum measurement. The single data values are interpreted as dBc (dB relative to the power level measured at the transmission frequency).
<b>Query</b>	The query form of this command is not supported.

**Example** :CALC:GPRS:RFSP:ACPM:MOD:LIM:UPP -65,-60,-60,-60,-60,-60,-60,-60,-33,-30,0.5,0.5,0.5,-30,-33,-60,-60,-60,-60,-60,-60,-65  
Sets the upper limits of the ACP modulation spectrum to these values. The first value applies to -1.6 MHz, the twelfth value to the carrier frequency and the 23rd value to a +1.6 MHz offset.

**:CALCulate:GPRS:RFSPpectrum  
:ACPM:MODulation:LIMit:LOWer[:DATA]**

**Syntax** :CALCulate:GPRS:RFSPpectrum  
:ACPM:MODulation:LIMit:LOWer[:DATA]  
<real1>,<real2>,<real3>,<real4>,  
<real5>,<real6>,<real7>,<real8>,  
<real9>,<real10>,<real11>,<real12>,  
<real13>,<real14>,<real15>,<real16>,  
<real17>,<real18>,<real19>,<real20>,  
<real21>,<real22>,<real23>

**Parameters** realx are 23 floating point real numbers.  
The minimum value for all realx is -100.0, the maximum value 10.0. The minimum resolution possible for all realx is 0.01. The default value for all realx is -100.0.

**Description** Sets the lower limits for the 23 single measurement result values of the ACP modulation spectrum measurement. The single data values are interpreted as dBc (dB relative to the power level measured at the transmission frequency).

**Query** The query form of this command is not supported.

**Example** :CALC:GPRS:RFSP:ACPM:MOD:LIM:LOW -100,  
Sets the lower limits of the ACP modulation measurement to zero for all 23 measured frequencies.

**:CALCulate  
:GPRS:RFSPpectrum:ACPM:TRANSient:LIMit[:FAIL]?**

**Syntax** :CALCulate  
:GPRS:RFSPpectrum:ACPM:TRANSient:LIMit[:FAIL]?

**Parameters** There are no parameters.

**Description** There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers 27 boolean numbers in a string, separated by commas. These numbers indicate whether the 27 measurement result values of the MEAS:GPRS:RFSP:ACPM:TRAN measurement did violate their individual limits (set with the commands explained below). Every boolean number represents the result of the limit check for one of the 27 measurement result values. The first value will give the result of the limit check at -1.83 MHz offset to the carrier, the second one for -1.80 MHz offset to the carrier and so on.</p> <p>While a 0 delivered back on any position means that the related measurement result value did not exceed the limits, a 1 indicates that at least one limit was violated by the measurement result value.</p> <p><b>Note:</b> According to GSM specification 05.05, this measurement will be performed on 0, (±)400, (±)600, (±)1.200 and (±)1.800 kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the 30 kHz windows below and above the frequencies specified by GSM standard 05.05 will be taken into account. This adds up to <math>9 \times 3 = 27</math> measurement result values.</p>
<b>Example</b>	<pre>:MEAS:GPRS:ARRAY:RFSP:ACPM:TRANSient 10 :CALC:GPRS:RFSP:ACPM:TRAN:LIM? String returned:"0,0,0,0,0,0,0,0,0,1, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0" The 1 on position 9 indicates that there was a violation of at least one limit by the measurement result value taken at an offset of -0.57 MHz from the carrier.</pre>

**:CALCulate:GPRS:RFSPpectrum  
:ACPM:TRANSient:LIMit:STATE**

<b>Syntax</b>	<pre>:CALCulate:GPRS:RFSPpectrum :ACPM:TRANSient:LIMit:STATE &lt;PredefExp&gt;</pre>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:GPRS:RFSP:ACPM:TRAN measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:GPRS:RFSP:ACPM:TRAN:LIM:STAT ON Switches the limit check of the ACPM of the spectrum due to switching transients on.</pre>

**:CALCulate:GPRS:RFSPpectrum  
:ACPM:TRANSient:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:GPRS:RFSPpectrum :ACPM:TRANSient:LIMit:UPPer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;, &lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;, &lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;, &lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;, &lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;, &lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt;,&lt;real24&gt;, &lt;real25&gt;,&lt;real26&gt;,&lt;real27&gt;</pre>
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<b>Parameters</b>	<code>realx</code> are 27 floating point real numbers. The minimum value for all <code>realx</code> is <code>-100.0</code> , the maximum value <code>10.0</code> . The minimum resolution possible for all <code>realx</code> is <code>0.01</code> . The default value for all <code>realx</code> is <code>0.0</code> .
<b>Description</b>	Sets the <b>upper</b> limits for the 27 single measurement result values of the ACPM measurement of the spectrum due to switching transients. The physical dimension of the single data values is dBm.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:CALC:GPRS:RFSP:ACPM:TRAN:LIM:UPP?</code> This command will return the 27 upper limit values.

**:CALCulate:GPRS:RFSPectrum:ACPM:TRANSient:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:GPRS</code> <code>:RFSPectrum:ACPM:TRANSient:LIMit:LOWer[:DATA]</code> <code>&lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;,&lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;,&lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;,&lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;,&lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;,&lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt;,&lt;real24&gt;,&lt;real25&gt;,&lt;real26&gt;,&lt;real27&gt;</code>
<b>Parameters</b>	<code>realx</code> are 27 floating point real numbers. The minimum value for all <code>realx</code> is <code>-100.0</code> , the maximum value <code>10.0</code> . The minimum resolution possible for all <code>realx</code> is <code>0.01</code> . The default value for all <code>realx</code> is <code>0.0</code> .
<b>Description</b>	Sets the <b>lower</b> limits for the 27 single measurement result values of the ACPM measurement of the spectrum due to switching transients. The physical dimension of the single data values is dBm.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<code>:CALC:GPRS:RFSP:ACPM:TRAN:LIM:LOW?</code> This command will return the 27 lower limit values.

**:CALCulate:GPRS:RFSPectrum:MSpectrum:VALue**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFSPectrum:MSpectrum:VALue &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value is <code>-2,000,000.0</code> , the maximum is <code>2,000,000.0</code> . The minimum resolution possible is <code>0.1</code> .
<b>Description</b>	There is only a query form of this command available.

<b>Query</b>	The query form of this command delivers back an (interpolated) measurement result value of the modulation spectrum curve at the frequency specified with the <code>real1</code> parameter. <code>real1</code> is interpreted as an offset from the carrier (i.e. the transmission frequency). The string returned will contain one floating point real number. The physical dimension of the measurement result value returned is dBc.
	<b>Notes</b>
	<ul style="list-style-type: none"> <li>– Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the <code>:MEAS:BLOC:MSP:AVG</code> command to do so.</li> <li>– The <code>:CALC:GPRS:RFSP:MSP:VAL</code> command is not really a measurement - it is an interpolation of the spectrum curve for the frequency specified.</li> </ul>
<b>Example</b>	<pre>:MEAS:GPRS:BLOC:MSP:AVG 20 :CALC:GPRS:RFSP:MSP:VAL? -50000</pre> <p>This command will interpolate a modulation spectrum measurement at an offset of 50 kHz to the carrier. The value returned in this example is: "-4.7".</p>

**:CALCulate:GPRS:RFSpectrum:MSpectrum:MAXPeak**

<b>Syntax</b>	<code>:CALCulate:GPRS:RFSpectrum:MSpectrum:MAXPeak?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers back the frequency offset from the carrier and the maximum value of the measured modulation spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dBc.
	<b>Notes</b>
	<ul style="list-style-type: none"> <li>– Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the <code>:MEAS:BLOC:MSP:AVG</code> command to do so.</li> <li>– The <code>:CALC:GPRS:RFSP:MSP:MAXP</code> command is not really a measurement - it is an readout of the spectrum curve.</li> </ul>
<b>Example</b>	<pre>:MEAS:GPRS:BLOC:MSP:AVG 20 :CALC:GPRS:RFSP:MSP:MAXP?</pre> <p>This command will read at the modulation spectrum measurement maximum the frequency offset to the carrier and the measurement result value. The values returned in this example is: "-67700.0, -5.2".</p>

**EGPRS commands**     **:CALCulate:EGPRS:RFTX:MAverage**

<b>Syntax</b>	<code>:CALCulate:EGPRS:RFTX:MAverage?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the TX measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.

**Example** :CONF:EGPR:MEAS:GRO:RFTX POW,ERMS  
:CALC:RES  
:MEAS:EGPR:ARR:RFTX:GRO 20  
:CALC:EGPR:RFTX:MAV?

In this example, first the group of measurements is defined by a power measurement combined with a EVM RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are:  
"4.53,5.98".

#### **:CALCulate:EGPRs:RFTX:MMINimum**

**Syntax** :CALCulate:EGPRs:RFTX:MMINimum?

**Parameters** There are no parameters.

**Description** There is solely a query form of this command available.

**Query** Returns the **minimum** measurement result value of the TX measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.

**Example** :CONF:EGPR:MEAS:GRO:RFTX POW,ERMS  
:CALC:RES  
:MEAS:EGPR:ARR:RFTX:GRO 20  
:CALC:EGPR:RFTX:MMIN?

In this example, first the group of measurements is defined by a power measurement combined with a EVM RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are:  
"3.53,2.98".

#### **:CALCulate:EGPRs:RFTX:MMAXimum**

**Syntax** :CALCulate:EGPRs:RFTX:MMAXimum?

**Parameters** There are no parameters.

**Description** There is solely a query form of this command available.

**Query** Returns the **maximum** measurement result value of the TX measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.

**Example** :CONF:EGPR:MEAS:GRO:RFTX POW,ERMS  
:CALC:RES  
:MEAS:EGPR:ARR:RFTX:GRO 20  
:CALC:EGPR:RFTX:MMAX?

In this example, first the group of measurements is defined by a power measurement combined with a EVM RMS phase error measurement. This group of measurements is performed 20 times. After that, the single measurement result values will be averaged and returned. The values returned in this example are:  
"6.53,15.98".



**:CALCulate:EGPRs:RFTX:MSIGma**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the TX measurement last started. The string delivered back contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and are separated by commas.
<b>Example</b>	<pre>:MEAS:EGPRs:RFTX:FREQ :CALC:RES ... (other SCPI commands) ... :CALC:EGPR:RFTX:MSIG?</pre> <p>In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the :CALC:EGPR:RFTX:MSIG command is used to read out the mean frequency error and its standard deviation. The string returned in this example is "15.7, 3.4".</p>

**:CALCulate:EGPRs:RFTX:ALL:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:ALL:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers 8 boolean numbers in a string, separated by commas. These numbers indicate, whether the single measurement results of the :MEAS:EGPRs[:ARRay]:RFTX:ALL measurement did violate their test limits. The position of the boolean number within the string returned indicates the result of the limit check for the following measurements:</p> <ol style="list-style-type: none"> <li>1. error vector magnitude rms-averaged measurement,</li> <li>2. maximum error vector magnitude measurement,</li> <li>3. error vector magnitude that is not exceeded by 95% of the symbols of a burst measurement,</li> <li>4. error vector magnitude origin offset measurement,</li> <li>5. measurement of the mobile's frequency error,</li> <li>6. measurement of the burst length,</li> <li>7. timing error measurement,</li> <li>8. measurement of the mobile's RF output power level.</li> </ol>
<b>Example</b>	<pre>:MEAS:EGPR:RFTX:ALL :CALC:EGPR:RFTX:ALL:LIM?</pre> <p>String returned in this example: "0,0,0,0,0,0,0,1" 1 on position 8 indicates that the mobile's RF power level violated its test limits.</p>

**:CALCulate:EGPRs:RFTX:ALL:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:ALL:LIMit:STATE <PreDefExp>
<b>Parameters</b>	PreDefExp is one of the following predefined expressions: ON   OFF. Default is ON.

<b>Description</b>	This command switches the limit check of the relevant EGPRS RF TX measurement result values of the MEAS:EGPRS:RFTX:ALL measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:ALL:LIM:STAT OFF Switches the limit check for the most relevant EGPRS RF TX measurements off.

**:CALCulate:EGPRS:RFTX:ERMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:ERMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns a boolean value indicating whether the RMS EVM measurement result has failed the limits.
<b>Example</b>	:CALC:EGPR:ERMS:LIM:FAIL? Returns "0" after an RMS EVM measurement failing the set limits.

**:CALCulate:EGPRS:RFTX:ERMS:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:ERMS:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRS:RFTX:ERMS measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:ERMS:LIM:STAT ON Switches the limit check for the error vector magnitude rms-averaged measurement on.

**:CALCulate:EGPRS:RFTX:ERMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:ERMS:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 500. The resolution is 0.1 and the default value is 9.
<b>Description</b>	Sets the upper limit for the RMS EVM measurement (in %).
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:ERMS:LIM:UPP 45 This command will sets the upper limit to 45%.

**:CALCulate:EGPRS:RFTX:ERMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:ERMS:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 500. The resolution is 0.1 and the default value is 0.
<b>Description</b>	Sets the lower limit for the RMS EVM measurement (in %).
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:ERMS:LIM:LOW 0.8 Sets the lower limit of the error vector magnitude rms-averaged measurement result to 0.8 %.

**:CALCulate:EGPRS:RFTX:EPEAk:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:EPEAk:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns a boolean value indicating whether the peak EVM measurement result has failed the limits.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:EPEA 20 :CALC:EGPR:RFTX:EPEA:LIM? String returned in this example:"0" This string delivered back indicates that there was no violation of the measurement limits.

**:CALCulate:EGPRS:RFTX:EPEAk:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:EPEAk:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRS:RFTX:EPEA measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:EPEA:LIM:STAT ON Switches the limit check for the maximum error vector magnitude measurement on.

**:CALCulate:EGPRS:RFTX:EPEAk:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:EPEAk:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 500. The resolution is 0.1 and the default value is 30.
<b>Description</b>	Sets the upper limit for the peak EVM measurement (in %).

<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:EPEA:LIM:UPP 25.0 This command will sets the upper limit to 25%.

**:CALCulate:EGPRS:RFTX:EPEAk:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:EPEAk:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 500. The resolution is 0.1 and the default value is 0.
<b>Description</b>	Sets the lower limit for the peak EVM measurement (in %).
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:EPEAk:LIM:LOW 0 This command will sets the lower limit to 0%.

**:CALCulate:EGPRs:RFTX:ENFTh:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:ENFTh:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the error vector magnitude that is not exceeded by 95% of the symbols of a burst were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:ENFT 20 :CALC:EGPR:RFTX:ENFT:LIM? String returned in this example: "0" This string delivered back indicates that there was no violation of the measurement limits.

**:CALCulate:EGPRs:RFTX:ENFTh:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:ENFTh:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRs:RFTX:ENFTh measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:ENFT:LIM:STAT ON Switches the limit check for the error vector magnitude that is not exceeded by 95% of the symbols of a burst measurement on.

**:CALCulate:EGPRs:RFTX:ENFTh:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:ENFTh:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 500. The resolution is 0.1 and the default value is 15.
<b>Description</b>	Sets the upper limit of the error vector magnitude that is not exceeded by 95% of the symbols of a burst measurement; the physical dimension of the number stated is %.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:ENFT:LIMi:UPP 75 Sets the upper limit of the error vector magnitude that is not exceeded by 95% of the symbols of a burst measurement result to 75 %.

**:CALCulate:EGPRs:RFTX:ENFTh:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:ENFTh:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 500. The resolution is 0.1 and the default value is 0.
<b>Description</b>	Sets the lower limit of the error vector magnitude that is not exceeded by 95% of the symbols of a burst measurement; the physical dimension of the number stated is %.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:ENFT:LIM:LOW 1.1 Sets the lower limit of the error vector magnitude that is not exceeded by 95% of the symbols of a burst measurement result to 1.1 %.

**:CALCulate:EGPRs:RFTX:EOFFset:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:EOFFset:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the error vector magnitude origin offset were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:EOFF 20 :CALC:EGPR:RFTX:EOFF:LIM? String returned in this example: "0" This string delivered back indicates that there was no violation of the measurement limits.

**:CALC:EGPRs:RFTX:EOFFset:LIMit:STATe**

<b>Syntax</b>	:CALC:EGPRs:RFTX:EOFFset:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPR:RFTX:EOFF measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:EOFF:LIM:STAT ON Switches the limit check for the error vector magnitude origin offset measurement on.

**:CALCulate:EGPRs:RFTX:EOFFset:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:EOFFset:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is -120, the maximum is 0. The resolution is 0.1 and the default value is -30.
<b>Description</b>	Sets the upper limit of the error vector magnitude origin offset measurement; the physical dimension of the number stated is dBc.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:EOFF:LIM:UPP -10 Sets the upper limit of the error vector magnitude origin offset measurement result to -10 dBc.

**:CALCulate:EGPRs:RFTX:EOFFset:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:EOFFset:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is -120, the maximum is 0. The resolution is 0.1 and the default value is -120.
<b>Description</b>	Sets the lower limit of the error vector magnitude origin offset measurement; the physical dimension of the number stated is dBc.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:EOFF:LIM:LOW -100 Sets the lower limit of the error vector magnitude origin offset measurement result to -100 dBc.

**:CALCulate:EGPRs:RFTX:FREQuency:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:FREQuency:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters with this command.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command delivers one boolean number, indicating whether the user-definable limits of the frequency error measurement were violated by a measurement result value or not.</p> <p>A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits.</p> <p>The limits can be set using the commands described below.</p>
<b>Example</b>	<pre>:MEAS:EGPR:ARR:RFTX:FREQ 20 :CALC:EGPR:RFTX:FREQ:LIM? String returned in this example:"0" This string delivered back indicates that there was no violation of the measurement limits.</pre>

**:CALCulate:EGPRs:RFTX:FREQuency:LIMit:STATe**

<b>Syntax</b>	<code>:CALCulate:EGPRs:RFTX:FREQuency:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRs:RFTX:FREQuency measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:EGPR:RFTX:FREQuency:LIM:STAT ON Switches the limit check on frequency measurements on.</pre>

**:CALCulate:EGPRs:RFTX:FREQuency:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:EGPRs:RFTX:FREQuency:LIMit:UPPer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 100000. The resolution is 1 and the default value is 90.
<b>Description</b>	Sets the upper limit for the frequency error measurement (in Hertz).
<b>Query</b>	Returns the upper limit currently set.
<b>Example</b>	<pre>:CALC:EGPR:RFTX:FREQ:LIM:UPP 45 Sets the upper limit of the frequency error measurement result to 45 Hz.</pre>

**:CALCulate:EGPRs:RFTX:FREQuency:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<code>:CALCulate:EGPRs:RFTX:FREQuency:LIMit:LOWer[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is -100000, the maximum is 0. The resolution is 1 and the default value is -90.
<b>Description</b>	Sets the lower limit for the frequency error measurement (in Hertz).
<b>Query</b>	Returns the lower limit currently set.

<b>Example</b>	<code>:CALC:EGPR:RFTX:FREQ:LIM:LOW -60.8</code> Sets the lower limit of the frequency error measurement result to $-60.8$ Hz.
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**:CALCulate:EGPRs:RFTX:FREQuency:LIMit:GSM**

<b>Syntax</b>	<code>:CALCulate:EGPRs:RFTX:FREQuency:LIMit:GSM &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for each is 0, the maximum is 100000. The resolution is 1 and the default value is 90.
<b>Description</b>	Sets the <b>symmetrical</b> limits of the frequency error for measurements in synchronous (call) mode for GSM 900 and GSM 850; the physical dimension of the number stated is Hertz.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<code>:CALC:EGPR:RFTX:FREQ:LIM:GSM 65</code> Sets the lower limit of the frequency error measurement result on GSM 900 and GSM 850 channels to $-65$ Hz and the upper limit to $+65$ Hz.

**:CALCulate:EGPRs:RFTX:FREQuency:LIMit:PCN**

<b>Syntax</b>	<code>:CALCulate:EGPRs:RFTX:FREQuency:LIMit:PCN &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for each is 0, the maximum is 100000. The resolution is 1 and the default value is 180.
<b>Description</b>	Sets the <b>symmetrical</b> limits of the frequency error for measurements in synchronous (call) mode for GSM 1800 (also known as DCS-1800 or PCN); the physical dimension of the number stated is Hertz.
<b>Query</b>	There is only a command form available.
<b>Example</b>	<code>:CALC:EGPR:RFTX:FREQ:LIM:PCN 120</code> Sets the lower limit of the frequency error measurement result on GSM 1800 channels to $-120$ Hz and the upper limit to $+120$ Hz.

**:CALCulate:EGPRs:RFTX:FREQuency:LIMit:PCS**

<b>Syntax</b>	<code>:CALCulate:EGPRs:RFTX:FREQuency:LIMit:PCS &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for each is 0, the maximum is 100000. The resolution is 1 and the default value is 180.
<b>Description</b>	Sets the <b>symmetrical</b> limits of the frequency error for measurements in synchronous (call) mode for GSM 1900 (also known as PCS); the physical dimension of the number stated is Hertz.
<b>Query</b>	There is only a command form available.
<b>Example</b>	<code>:CALC:EGPR:RFTX:FREQ:LIM:PCS 120</code> Sets the lower limit of the frequency error measurement result on GSM 1900 channels to $-120$ Hz and the upper limit to $+120$ Hz.



**:CALCulate:EGPRS:RFTX:LENGth:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:LENGth:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the burst length measurement were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:LENG 10 :CALC:EGPR:RFTX:LENG:LIM?  String returned in this example: "0" This string indicates that there was no violation of the measurement limits.

**:CALCulate:EGPRs:RFTX:LENGth:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:LENGth:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRs:RFTX:LENGth measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:LENG:LIM:STAT ON Switches the limit check on frequency measurements on.

**:CALCulate:EGPRs:RFTX:LENGth:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:LENGth:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 700. The resolution is 0.1 and the default value is 562.8.
<b>Description</b>	Sets the upper limit for the burst length measurement; the physical dimension of the number stated is microseconds.
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:LENG:LIM:UPP 563 This command will sets the upper limit of the burst length to 563 $\mu$ s.

**:CALCulate:EGPRS:RFTX:LENGTH:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:LENGTH:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 700. The resolution is 0.1 and the default value is 542.8.
<b>Description</b>	Sets the lower limit for the burst length measurement; the physical dimension of the number stated is microseconds.
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:LENG:LIM:LOW 541.9 This command will sets the lower limit of the burst length to 541.9 μs.

**:CALCulate:EGPRS:RFTX:UTIME:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:UTIME:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the UL timing error measurement were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:EGPR:ARR:RFTX:UTIM 10 :CALC:EGPR:RFTX:UTIM:LIM? String returned in this example: "0" This string indicates that there was no violation of the measurement limits.

**:CALCulate:EGPRS:RFTX:UTIME:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:UTIME:LIMit:STATE <PreDefExp>
<b>Parameters</b>	PreDefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRS:RFTX:UTIME measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:UTIM:LIM:STAT ON Switches the limit check for the uplink timing error measurement on.

**:CALCulate:EGPRS:RFTX:UTIME:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:UTIME:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is 0, the maximum is 64. The resolution is 0.01 and the default value is 3.

<b>Description</b>	Sets the upper limit for the uplink timing error measurement; the physical dimension of the number stated is microseconds. <b>Note:</b> The UL timing error measurement takes the ordered timing advance into account.
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:UTIM:LIM:UPP 5 Sets the upper limit of the uplink timing error measurement result to 5 $\mu$ s.

**:CALCulate:EGPRs:RFTX:UTIME:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:UTIME:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for each is -64, the maximum is 0. The resolution is 0.01 and the default value is -3.
<b>Description</b>	Sets the lower limit for the uplink timing error measurement; the physical dimension of the number stated is microseconds.
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:UTIM:LIM:LOW -5 Sets the lower limit of the uplink error timing measurement to -5 $\mu$ s.

**:CALCulate:EGPRS:RFTX:POWer:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:POWer:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers one boolean number, indicating whether the user-definable limits of the measurement of the mobile's RF output power level were violated by a measurement result value or not. A 0 means that all measurement result values were within the limits set, while a 1 indicates that at least one measurement result value did violate at least one of the limits. The limits can be set using the commands described below.
<b>Example</b>	:MEAS:EGPR:ARR:POW 20 :CALC:EGPR:RFTX:POW:LIM? String returned in this example: "0" This string indicates that there was no violation of the measurement limits.

**:CALCulate:EGPRs:RFTX:POWer:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:POWer:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRs:RFTX:POWer measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.

**Example** :CALC:EGPR:RFTX:POWer:LIM:STAT ON  
Switches the limit check for the RF output power level measurement on.

**:CALCulate:EGPRs:RFTX:POWer:LIMit:UPPer[:DATA]**

**Syntax** :CALCulate:EGPRs:RFTX:POWer:LIMit:UPPer[:DATA] <real1>  
**Parameters** real1 is a floating point real number. The minimum value for each is -120, the maximum is +50. The resolution is 0.1 and the default value is 39.  
**Description** Sets the upper limit for the mobile's RF output power level; the physical dimension of the number stated is dBm.  
**Query** Returns the upper limit currently set.  
**Example** :CALC:EGPR:RFTX:POW:LIM:UPP 13  
Sets the upper limit of the peak power measurement to 13 dBm.

**:CALCulate:EGPRs:RFTX:POWer:LIMit:LOWer[:DATA]**

**Syntax** :CALCulate:EGPRs:RFTX:POWer:LIMit:LOWer[:DATA] <real1>  
**Parameters** real1 is a floating point real number. The minimum value for each is -120, the maximum is 50. The resolution is 0.1 and the default value is -60.  
**Description** Sets the lower limit for the mobile's RF output power level; the physical dimension of the number stated is dBm.  
**Query** Returns the lower limit currently set.  
**Example** :CALC:EGPR:RFTX:POW:LIM:LOW -45  
Sets the lower limit of the peak power measurement to -45 dBm.

**:CALCulate:EGPRs:RFTX:POWer:LIMit:GSM**

**Syntax** :CALCulate:EGPRs:RFTX:POWer:LIMit:GSM  
<real1>,<real2>,...,<real18>  
**Parameters** real1 thru real18 are floating point real numbers. The minimum value for each is 0, the maximum is 30 and the resolution is 0.1. The default values are 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5, respectively.  
**Description** Sets the symmetrical limits of the peak power for measurements in synchronous (call) mode for GSM 900 and GSM 850; the physical dimension of the number stated is dB. The first value applies to power control steps 0 to 2 (39 dBm), the second value applies to power control level 3 (37 dBm) and so forth up to the eighteenth value for power control steps 19 thru 31 (5 dBm).  
**Query** There is no query form of this command available.  
**Example** :CALC:EGPR:RFTX:POW:LIM:GSM 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5  
Sets the lower and upper limits of the power measurement result on GSM 900 and GSM 850 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 5, 5, 5, 5 dB around the nominal level.

**:CALCulate:EGPRs:RFTX:POWer:LIMit:PCN**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:POWer:LIMit:PCN <real1>,<real2>,...,<real19>
<b>Parameters</b>	real1 thru real19 are floating point real numbers. The minimum value for each is 0, the maximum is 30 and the resolution is 0.1. The default values are 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, respectively.
<b>Description</b>	Sets the symmetrical limits of the peak power for measurements in synchronous (call) mode for GSM 1800 (also known as DCS-1800 or PCN); the physical dimension of the number stated is dB. The first value applies to power control step 29 (36 dBm), the second value applies to power control 30 (34 dBm) and so forth up to the nineteenth value for power control steps 15 through 28 (0 dBm).
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:POW:LIM:PCN 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5 Sets the lower and upper limits of the power level measurement result on GSM 1800 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5 dB around the nominal level.

**:CALCulate:EGPRs:RFTX:POWer:LIMit:PCS**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:POWer:LIMit:PCS <real1>,<real2>,...,<real18>
<b>Parameters</b>	real1 through real18 are floating point real numbers. The minimum value for each is 0, the maximum is 30 and the resolution is 0.1. The default values are 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, respectively.
<b>Description</b>	Sets the symmetrical limits of the peak power for measurements in synchronous (call) mode for GSM 1900 (also known as PCS); the physical dimension of the number stated is dB. The first value applies to power control step 30 (34 dBm), the second value applies to power control 31 (32 dBm), the third value applies to power control step 0 (30 dBm) and so forth up to the eighteenth value for power control steps 15 thru 28 (0 dBm).
<b>Query</b>	There is only a command form available.
<b>Example</b>	:CALC:EGPR:RFTX:POW:LIM:PCS 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5 Sets the lower limit of the power measurement result on GSM 1900 channels to 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5 dB around the nominal level.

**:CALCulate:EGPRs:RFTX:TEMPlate[:NORMal]:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EGPRs:RFTX:TEMPlate[:NORMal]:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	<p>This command returns 18 boolean numbers, indicating whether the PTT limits for a normal burst were violated or not.</p> <p>A 0 on a position means that there was no violation of the limits while a 1 indicates that at least one measurement result did violate one of the corresponding measurement limits.</p> <p>The 18 boolean numbers correspond to the limits of the PTT as defined on the user interface or with the :CALC:EGPRS:RFTX:TEMP commands as described below. The first eleven numbers stand for the eleven 'upper' segments of the burst, while the following seven numbers stand for the seven 'lower' segments of the burst. Refer to section Power-Time Templates (PTT) for further details.</p>
<b>Example</b>	<pre>:MEAS:EGPR:RFTX:TEMP :CALC:EGPR:RFTX:TEMP:LIM?</pre> <p>String returned in this example: "0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0,0,0"</p> <p>This string indicates that there was a violation of the limits of one of the 'lower' segments of the PTT (in this example during the ramping up phase of the burst).</p>

**:CALCulate:EGPRS:RFTX:TEMPlate[:NORMal]:LIMit:AUTO**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:TEMPlate[:NORMal]:LIMit:AUTO <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	<p>This command selects the power-time template to check normal bursts against.</p> <p><b>Auto mode</b> (parameter ON) means that the Willtek 3100 will use the appropriate PTT as defined in the GSM/ETSI standards. Those PTTs vary with the frequency range and the RF power level used by the mobile.</p> <p><b>Manual mode</b> (parameter OFF) means that the GSM/ETSI specifications will be ignored and that the Willtek 3100 will use the manually set limits instead (see description of the :CALC:EGPRS:RFTX:TEMP:LIM:UPP and :CALC:EGPRS:RFTX:TEMP:LIM:LOW commands for further details).</p>
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:EGPR:RFTX:TEMP:LIM:AUTO ON</pre> <p>Switches the limit check for the burst shape to use the standard PTTs as defined by ETSI standards.</p>

**:CALCulate:EGPRS:RFTX:TEMPlate[:NORMal]:LIMit:STAT**

<b>Syntax</b>	:CALCulate:EGPRS:RFTX:TEMPlate[:NORMal]:LIMit:STAT <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	<p>This command switches the check of the measurement result values of the MEAS:EGPRS:RFTX:TEMPlate measurement against their user-definable limits either ON or OFF.</p>
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:EGPR:RFTX:TEMP:LIM:STAT ON</pre> <p>Switches on the limit check of the burst shape against the PTT for normal bursts.</p>

**:CALCulate:EGPRs**  
**:RFTX:TEMPlate[:NORMal]:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre> :CALCulate:EGPRs :RFTX:TEMPlate[:NORMal]:LIMit:UPPer[:DATA] &lt;real0t&gt;,&lt;real0p&gt;,&lt;real1t&gt;,&lt;real1p&gt;,&lt;real2t&gt;,&lt;real2p&gt;,&lt;real3t&gt;,&lt;real3p&gt;,&lt;real4t&gt;,&lt;real4p&gt;,&lt;real5t&gt;,&lt;real5p&gt;,&lt;real6t&gt;,&lt;real6p&gt;,&lt;real7t&gt;,&lt;real7p&gt;,&lt;real8t&gt;,&lt;real8p&gt;,&lt;real9t&gt;,&lt;real9p&gt;,&lt;real10t&gt;,&lt;real10p&gt;,&lt;real11t&gt;,&lt;real11p&gt; </pre>
<b>Parameters</b>	<p>realxt and realxp are floating point real numbers. The minimum value for all realxt is -41.0, the maximum value 580.0. The minimum resolution possible for all realxt is 0.1. The default values are:</p> <pre> for real0t: -41.0, for real1t: -28.0, for real2t: -18.0, for real3t: -10.0, for real4t: 0.0, for real5t: 4, for real6t: 539.0, for real7t: 543.0, for real8t: 553.0, for real9t: 561.0, for real10t: 571.0, for real11t: 580.0. </pre> <p>The minimum value for realxp is -150.0, the maximum value 5.0. The minimum resolution possible for realxp is 0.1. The default values are:</p> <pre> for real0p: -59.0, for real1p: -59.0, for real2p: -30.0, for real3p: -6.0, for real4p: 4.0, for real5p: 2.4, for real6p: 4.0, for real7p: 2.4, for real8p: 4.0, for real9p: -6.0, for real10p: -30.0, for real11p: -59.0. </pre>
<b>Description</b>	<p>Sets the upper limits for the user-definable PTT (for normal bursts). The upper limits of the user-defined PTT are made up by twelve pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst). For further details regarding the user-definable PTT, refer to section Power-Time Templates (PTT).</p>
<b>Query</b>	<p>The query form of this command is not available.</p>
<b>Example</b>	<pre> :CALC:EGPR:RFTX:TEMP:LIM:UPP -41,-59,-28,-59,-18,-30,-10,-6,0,4,4,2.4,539,4,543,2.4,553,4,561,-6,571,-30,580,-59 </pre>

**:CALCulate:EGPRs**  
**:RFTX:TEMPlate[:NORMal]:LIMit:LOWer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:EGPRs :RFTX:TEMPlate[:NORMal]:LIMit:LOWer[:DATA] &lt;real0t&gt;,&lt;real0p&gt;,&lt;real1t&gt;,&lt;real1p&gt;, &lt;real2t&gt;,&lt;real2p&gt;,&lt;real3t&gt;,&lt;real3p&gt;, &lt;real4t&gt;,&lt;real4p&gt;,&lt;real5t&gt;,&lt;real5p&gt;,&lt;real6t&gt;,&lt;real6p&gt;, &lt;real7t&gt;,&lt;real7p&gt;</pre>
<b>Parameters</b>	<p>realxt and realxp are floating point real numbers. The minimum value for realxt is -41.0, the maximum value 580.0. The minimum resolution possible for realxt is 0.1. The default values are:</p> <pre>for real0t: -41.0, for real1t: 0.0, for real2t: 2.0, for real3t: 4.0, for real4t: 539.0, for real5t: 541.0, for real6t: 543.0, for real7t: 580.0.</pre> <p>The minimum value for realxp is -150.0, the maximum value 5.0. The minimum resolution possible for all realxp is 0.1. The default values are:</p> <pre>for real0p: -150.0, for real1p: -150.0, for real2p: -2.0, for real3p: 0.0, for real4p: -20.0, for real5p: -0.0, for real6p: -2.0, for real7p: -150.0.</pre>
<b>Description</b>	<p>Sets the lower limits for the user-definable PTT (for normal bursts). The lower limits of the user-defined PTT are made up by eight pairs of position (in microseconds relative to the beginning of the burst) and the related RF power level (in dB relative to the power level during the active part of the burst). For further details regarding the user-definable PTT, refer to section Power-Time Templates (PTT).</p>
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre>:CALC:EGPR:RFTX:TEMP:LIM:LOW -41,-150,0,-150,0,-40,20,-1,270,-1,543,-1,543,-150</pre>

**:CALCulate:EGPRs**  
**:RFTX:CORNER[:NORMal]:POSITION**

<b>Syntax</b>	<pre>:CALCulate:EGPRs :RFTX:CORNER[:NORMal]:POSITION &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;, &lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;</pre>
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<b>Parameters</b>	<p>realx stands for floating point real numbers.</p> <p>The minimum value for realx is -28.0, the maximum value 580.0. The minimum resolution possible for realx is 0.1. The default values are:</p> <pre>for real1: -28.0, for real2: -18.0, for real3: -10.0, for real4: 0.0, for real5: 542.8, for real6: 552.8, for real7: 560.8, for real8: 570.8.</pre>
<b>Description</b>	<p>Sets the position of the eight user-definable corner points in relation to the beginning of the burst for <b>normal</b> bursts. The positions are given in microseconds. For further details, refer to section Corner Points.</p>
<b>Query</b>	There is no query form to this command.
<b>Example</b>	<pre>:CALC:EGPR:RFTX:CORN:POS -28,-18,- 10,0,542.8,552.8,562.8,572.8</pre>

**:CALCulate:EGPRs  
:RFTX:CORner[:NORMal]:LIMit[:FAIL]?**

<b>Syntax</b>	<pre>:CALCulate:EGPRs :RFTX:CORner[:NORMal]:LIMit[:FAIL]?</pre>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	<p>This command delivers eight boolean numbers, indicating whether the limits for the eight corner positions of <b>normal</b> bursts were violated by the bursts received or not. A 0 on a position means that there was no violation of the limits while a 1 indicates that at least one measurement result did violate the corresponding measurement limits.</p> <p>The eight boolean numbers correspond with the eight corner points set with the :CALC:EGPRs:RFTX:CORN:NORM:POS command as described above. Please refer to section Corner Points for further details.</p>
<b>Example</b>	<pre>:MEAS:EGPR:ARR:CORN 10 :CALC:EGPR:RFTX:CORN:LIM? String returned in this example: "0,0,1,0,0,0,0,0" This string indicates that the limits set for corner point 3 were violated.</pre>

**:CALCulate:EGPRs  
:RFTX:CORner[:NORMal]:LIMit:STATE**

<b>Syntax</b>	<pre>:CALCulate:EGPRs :RFTX:CORner[:NORMal]:LIMit:STATE &lt;PredefExp&gt;</pre>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	<p>This command switches the check of the measurement result values of the MEAS:EGPRs:RFTX:CORner measurement against their user-definable limits either ON or OFF.</p>

<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFTX:CORN:LIM:STAT OFF Switches the limit check at the eight corner positions off.

**:CALCulate:EGPRs**  
**:RFTX:CORNEr[:NORMal]:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs :RFTX:CORNEr[:NORMal]:LIMit:UPPer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	realx are floating point real numbers. The minimum value for realx is -150.0, the maximum is 10.0. The minimum resolution possible for realx is 0.01. The default value for realx is 4.0.
<b>Description</b>	Sets the upper limits at the eight user-definable corner points for normal bursts. The single data values are dB relative to the power level during the active part of the burst. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:EGPR:RFTX:CORN:LIM:UPP 4,4,4,4,4,4,4,4

**:CALCulate:EGPRs**  
**:RFTX:CORNEr[:NORMal]:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs :RFTX:CORNEr[:NORMal]:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>
<b>Parameters</b>	realx stands for floating point real numbers. The minimum value for realx is -150.0, the maximum is 10.0. The minimum resolution possible for realx is 0.01. The default value for realx is -150.0.
<b>Description</b>	Sets the lower limits at the eight user-definable corner points for normal bursts. The single data values are dB relative to the power level during the active part of the burst. For further details, please refer to section Corner Points.
<b>Query</b>	There is no query form to this command.
<b>Example</b>	:CALC:EGPR:RFTX:CORN:LIM:LOW -150,-150,-150,-150,-150,-150,-150,-150

**:CALCulate:EGPRs:RFSpectrum:ACPM:MAverage?**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:ACPM:MAverage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	Calculates and returns the <b>average</b> measurement result value of the ACPM measurement started last. The string delivered back will contain as many average values as measurement types performed. The single average values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:EGPR:ARR:RFSP:ACPM:MOD :CALC:EGPRs:RFSP:ACPM:MAV?

**:CALCulate:EGPRs:RFSPectrum:ACPM:MMINimum?**

<b>Syntax</b>	:CALCulate:EGPRs:RFSPectrum:ACPM:MMINimum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>minimum</b> measurement result value of the ACPM measurement started last. The string delivered back will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:EGPR:ARR:RFSP:ACPM:MOD :CALC:EGPRs:RFSP:ACPM:MMIN?

**:CALCulate:EGPRs:RFSPectrum:ACPM:MMAximum?**

<b>Syntax</b>	:CALCulate:EGPRs:RFSPectrum:ACPM:MMAximum?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the ACPM measurement started last. The string delivered back will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	:CALC:RES :MEAS:EGPR:ARR:RFSP:ACPM:MOD :CALC:EGPRs:RFSP:ACPM:MMAx?

**:CALCulate:EGPRs:RFSPectrum:ACPM:MSIGma?**

<b>Syntax</b>	:CALCulate:EGPRs:RFSPectrum:ACPM:MSIGma?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	Returns the mean value and the standard deviation of the RF spectrum measurement. In the case of the ACP Mod measurement, the string delivered back contains 27 pairs of mean values and standard deviation values for the ACP Mod measurement. In the ACP Transient case, 23 pairs of mean values and standard deviation values are returned. The values are floating point real values and separated by commas.
<b>Example</b>	:CALC:RES :MEAS:EGPR:ARR:RFSP:ACPM:MOD ...(other SCPI commands)... :CALC:EGPR:RFSP:ACPM:MSIG?

**:CALCulate:EGPRs:RFSpectrum:ACPM:MODulation:LIMit  
[:FAIL]?**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:ACPM :MODulation:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers 27 boolean numbers in a string, separated by commas. These numbers indicate whether the 27 measurement result values of the MEAS:EGPRs:RFSP:ACPM:TRAN measurement did violate their individual limits (set with the commands explained below). Every boolean number represents the result of the limit check for one of the 27 measurement result values. The first value will give the result of the limit check at -1.83 MHz offset to the carrier, the second one for -1.80 MHz offset to the carrier and so on. While a 0 delivered on any position means that the related measurement result value did not exceed the limits, a 1 indicates that at least one limit was violated by the measurement result value. Note According to GSM specification 05.05, this measurement will be performed on 0, (±)400, (±)600, (±)1.200 and (±)1.800 kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the 30 kHz windows below and above the frequencies specified by GSM standard 05.05 will be taken into account. This adds up to $9 \times 3 = 27$ measurement result values.
<b>Example</b>	:MEAS:EGPR:BLOC:MSP:AVG 20 :CALC:EGPR:RFSP:ACPM:MOD:LIM? String returned in this example: "0,0,0,0,0,0,0,0,0,1, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0" The 1 on position 9 indicates that there was a violation of at least one limit by the measurement result value taken at an offset of -0.57 MHz from the carrier.

**:CALCulate:EGPRs:RFSpectrum:ACPM:MODulation  
:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:ACPM :MODulation:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.

<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRS:RFSP:ACPM:TRAN measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFSP:ACPM:MOD:LIM:STAT ON Switches the limit check of the ACPM of the spectrum due to switching transients on.

**:CALCulate:EGPRs:RFSpectrum:ACPM:MODulation  
:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:ACPM :MODulation:LIMit:UPPer[:DATA] <real1>,<real2>,<real3>,<real4>, <real5>,<real6>,<real7>,<real8>, <real9>,<real10>,<real11>,<real12>, <real13>,<real14>,<real15>,<real16>, <real17>,<real18>,<real19>,<real20>, <real21>,<real22>,<real23>
<b>Parameters</b>	realx are 23 floating point real numbers. The minimum value for all realx is -100.0, the maximum value 10.0. The minimum resolution possible for all realx is 0.01. The default values are: -60.0 for real1...real8, -33.0 for real9, -30.0 for real10, 0.5 for real11, 0.5 for real12, 0.5 for real13, -30.0 for real14, -33.0 for real15 and -60.0 for real16...real23.
<b>Description</b>	Sets the upper limits for the 23 single measurement result values of the ACPM modulation spectrum measurement. The single data values are interpreted as dBc (dB relative to the power level measured at the transmission frequency).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:CALC:EGPR:RFSP:ACPM:MOD:LIM:UPP -65,-60,-60,-60,-60,- 60,-60,-60,-33,-30,0.5,0.5,0.5,-30,-33,-60,-60,-60,- 60,-60,-60,-60,-65 Sets the upper limits of the ACP modulation spectrum to these values. The first value applies to -1.6 MHz, the twelfth value to the carrier frequency and the 23rd value to a +1.6 MHz offset.

**:CALCulate:EGPRs:RFSpectrum:ACPM:MODulation:LIMit  
:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:ACPM:MODulation:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>,<real4>,<real5>,<real6>,<real7>,<real8>,<real9>,<real10>,<real11>,<real12>,<real13>,<real14>,<real15>,<real16>,<real17>,<real18>,<real19>,<real20>,<real21>,<real22>,<real23>
<b>Parameters</b>	realx are 23 floating point real numbers. The minimum value for all realx is -100.0, the maximum value 10.0. The minimum resolution possible for all realx is 0.01. The default value for all realx is -100.0.
<b>Description</b>	Sets the lower limits for the 23 single measurement result values of the ACPM modulation spectrum measurement. The single data values are interpreted as dBc (dB relative to the power level measured at the transmission frequency).
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	:CALC:EGPR:RFSP:ACPM:MOD:LIM:LOW -100, Sets the lower limits of the ACP modulation measurement to zero for all 23 measured frequencies.

**:CALCulate:EGPRs:RFSpectrum:ACPM:TRANSient:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:ACPM:TRANSient:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers 27 boolean numbers in a string, separated by commas. These numbers indicate whether the 27 measurement result values of the MEAS:EGPRs:RFSP:ACPM:TRAN measurement did violate their individual limits (set with the commands explained below). Every boolean number represents the result of the limit check for one of the 27 measurement result values. The first value will give the result of the limit check at -1.83 MHz offset to the carrier, the second one for -1.80 MHz offset to the carrier and so on. While a 0 delivered back on any position means that the related measurement result value did not exceed the limits, a 1 indicates that at least one limit was violated by the measurement result value. Note According to GSM specification 05.05, this measurement will be performed on 0, (±)400, (±)600, (±)1.200 and (±)1.800 kHz offset from the carrier. All measurements will be performed with a measuring bandwidth of 30 kHz. For additional information, also the measurement values of the 30 kHz windows below and above the frequencies specified by GSM standard 05.05 will be taken into account. This adds up to 9 x 3 = 27 measurement result values.

<b>Example</b>	<pre>:MEAS:EGPR:ARRay:RFSP:ACPM:TRAN 10 :CALC:EGPR:RFSP:ACPM:TRAN:LIM? String returned in this example: "0,0,0,0,0,0,0,0,1, 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0" The 1 on position 9 indicates that there was a violation of at least one limit by the measurement result value taken at an offset of -0.57 MHz from the carrier.</pre>
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**:CALCulate:EGPRs:RFSPectrum:ACPM:TRANSient:LIMit:STATE**

<b>Syntax</b>	<pre>:CALCulate:EGPRs:RFSPectrum:ACPM:TRANSient:LIMit:STATE &lt;PredefExp&gt;</pre>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EGPRs:RFSP:ACPM:TRAN measurement against their user-definable limits either ON or OFF.
<b>Query</b>	The query form of this command is not available.
<b>Example</b>	<pre>:CALC:EGPR:RFSP:ACPM:TRAN:LIM:STAT ON Switches the limit check of the ACPM of the spectrum due to switching transients on.</pre>

**:CALCulate:EGPRs:RFSPectrum:ACPM:TRANSient:LIMit:UPPer[:DATA]**

<b>Syntax</b>	<pre>:CALCulate:EGPRs:RFSPectrum:ACPM :TRANSient:LIMit:UPPer[:DATA] &lt;real1&gt;,&lt;real2&gt;,&lt;real3&gt;,&lt;real4&gt;, &lt;real5&gt;,&lt;real6&gt;,&lt;real7&gt;,&lt;real8&gt;, &lt;real9&gt;,&lt;real10&gt;,&lt;real11&gt;,&lt;real12&gt;, &lt;real13&gt;,&lt;real14&gt;,&lt;real15&gt;,&lt;real16&gt;, &lt;real17&gt;,&lt;real18&gt;,&lt;real19&gt;,&lt;real20&gt;, &lt;real21&gt;,&lt;real22&gt;,&lt;real23&gt;,&lt;real24&gt;, &lt;real25&gt;,&lt;real26&gt;,&lt;real27&gt;</pre>
<b>Parameters</b>	realx are 27 floating point real numbers. The minimum value for all realx is -100.0, the maximum value 10.0. The minimum resolution possible for all realx is 0.01. The default value for all realx is 0.0.
<b>Description</b>	Sets the upper limits for the 27 single measurement result values of the ACPM measurement of the spectrum due to switching transients. The physical dimension of the single data values is dBm.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:EGPR:RFSP:ACPM:TRAN:LIM:UPP? This command will return the 27 upper limit values.</pre>

**:CALCulate:EGPRs:RFSpectrum:ACPM:TRANSient:LIMit  
:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:ACPM:TRANSient:LIMit:LOWer[:DATA] <real1>,<real2>,<real3>,<real4>,<real5>,<real6>,<real7>,<real8>,<real9>,<real10>,<real11>,<real12>,<real13>,<real14>,<real15>,<real16>,<real17>,<real18>,<real19>,<real20>,<real21>,<real22>,<real23>,<real24>,<real25>,<real26>,<real27>
<b>Parameters</b>	realx are 27 floating point real numbers. The minimum value for all realx is -100.0, the maximum value 10.0. The minimum resolution possible for all realx is 0.01. The default value for all realx is 0.0.
<b>Description</b>	Sets the lower limits for the 27 single measurement result values of the ACPM measurement of the spectrum due to switching transients. The physical dimension of the single data values is dBm.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EGPR:RFSP:ACPM:TRAN:LIM:LOW? This command will return the 27 lower limit values.

**:CALCulate:EGPRs:RFSpectrum:MSpectrum:VALue**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:MSpectrum:VALue <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -1,000,000.0, the maximum is 1,000,000.0. The minimum resolution possible is 0.1, the default value is -200.0.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers an (interpolated) measurement result value of the modulation spectrum curve at the frequency specified with the real1 parameter. real1 is interpreted as an offset from the carrier (i.e. the transmission frequency). The string returned will contain one floating point real number. The physical dimension of the measurement result value returned is dBc. <b>Notes:</b> - Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:BLOC:MSP:AVG command to do so. - The :CALC:EGPRs:RFSP:MSP:VAL command is not really a measurement - it is an interpolation of the spectrum curve for the frequency specified.
<b>Example</b>	:MEAS:EGPR:BLOC:MSP:AVG 20 :CALC:EGPR:RFSP:MSP:VAL? -50000 This command will interpolate a modulation spectrum measurement at an offset of 50 kHz to the carrier. The value returned in this example is: "-4.7".



**:CALCulate:EGPRs:RFSpectrum:MSpectrum:MAXPeak?**

<b>Syntax</b>	:CALCulate:EGPRs:RFSpectrum:MSpectrum:MAXPeak?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers back the frequency offset from the carrier and the maximum value of the measured modulation spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dBc. <b>Notes</b> <ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the <a href="#">:MEAS:BLOC:MSP:AVG</a> command to do so.</li> <li>- The :CALC:EGPR:RFSP:MSP:MAXP command is not really a measurement - it is an readout of the spectrum curve.</li> </ul>
<b>Example</b>	:MEAS:EGPR:BLOC:MSP:AVG 20 :CALC:EGPR:RFSP:MSP:MAXP? This command will read at the modulation spectrum measurement maximum the frequency offset to the carrier and the measurement result value. The values returned in this example is: "-67700.0,-5.2".

**CDMA2000 commands**

**:CALCulate:CDMA:  
RFSpectrum:ACPM:MODulation:FREQ[:DATA]**

<b>Syntax</b>	:CALCulate:CDMA: RFSpectrum:ACPM:MODulation:FREQ[:DATA] <int1>, <int1>, ... <int12> [,<PredefExp>]
<b>Parameters</b>	int1 through int12 are integer values representing frequency offsets (in kHz). There minimum value is 0 and the maximum is 2500. PredefExp is one of the following expressions: US800 USPCs TACS JTACS KPCS NMT450 IMT2000 MHZ900 MHZ1800. Each of these expressions characterizes a frequency band for which the frequencies apply.
<b>Description</b>	This command sets the 12 frequency offsets from the carrier at which adjacent channel power shall be measured. A set of offsets can be defined for each individual band.
<b>Query</b>	Returns the 12 frequencies to be sampled by the ACP measurement. A frequency band should be specified (see PredefExp above).
<b>Example</b>	:CALC:CDMA:RFSP:ACPM:MOD:FREQ:DATA 700,750,800,890, 1000,1250,1400,1600,1800,1980,2200,2400,US800 :CALC:CDMA:RFSP:ACPM:MOD:FREQ:DATA? US800 The values returned: 700,750,800,890,1000,1250,1400,1600,1800,1980,2200,2400

**:CALCulate:CDMA  
:RFSpectrum:ACPM:MODulation:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:CDMA:RFSpectrum:ACPM :MODulation:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers 24 boolean numbers in a string, separated by commas. These numbers indicate whether the 24 individual measurement result values of the MEAS:CDMA:RFSP:ACPM:MOD measurement did violate their individual limits (set with the commands explained above). Every boolean number represents the result of the limit check of one of the 24 measurement result values. The first two values will give the result of the limit check at the first offset (negative, then positive offset) defined with the CALC:CDMA:RFSP:ACPM:MOD:FREQ[:DATA] command. The list continues with the second pair of carrier offsets (negative and positive) and so on.
<b>Example</b>	:MEAS:CDMA:RFSP:ACPM:MOD :CALC:CDMA:RFSP:ACPM:MOD:LIM? Returns 24 numbers representing pass/results for ACP measurements at 24 frequencies.

**:CALCulate[:CDMA]:RFSP:ACPM:MOD:LIMit:STATe**

<b>Syntax</b>	:CALCulate[:CDMA]:RFSP:ACPM:MOD:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:CDMA:RFSP:ACPM:MOD measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFSP:ACPM:MOD:LIM:STAT ON Switches the limit check of the ACPM of the modulation spectrum measurement on.

**:CALC:CDMA:RFSpectrum:ACPM:MODulation:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFSpectrum:ACPM:MODulation:UPPer[:DATA] <real1>,<real2>,...<real12> [, <PredefExp>]
<b>Parameters</b>	real1 through real12 represent 12 floating point real numbers. The minimum value is -100.0, the maximum is 10.0, the resolution is 0.01. PredefExp is an optional predefined value used to select the band for which the upper limit values apply. Allowable values are: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800.
<b>Description</b>	This command sets the 12 levels used for upper limits at the 12 frequency offsets used in the ACPM measurement. The levels are in dB.
<b>Query</b>	Returns 12 floating point values.

**Example**           :CALC:CDMA:RFSP:ACPM:MOD:UPPer:DATA  
-42,-42,-42,-42,-42,-42,-42,-42,-42,-42,-54,54,US800  
:CALC:CDMA:RFSP:ACPM:MOD:UPPer:DATA? US800  
The values returned: -42,-42,-42,-42,-42,-42,-42,-42,-42,-42,-54,-54

**:CALC:CDMA:RFSPpectrum:ACPM:MODulation:UPPer  
:ENABLE[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFSPpectrum:ACPM:MODulation:UPPer:ENABLE[:DATA] <boolean1>, <boolean2>, ... <boolean12> [, <PredefExp>]
<b>Parameters</b>	boolean1 through boolean12 are 12 boolean numbers. PredefExp is an optional expression which can take on one of the following values: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800
<b>Description</b>	This command sets the 12 boolean numbers used to indicate if the upper limits are to be applied to the adjacent channel measurements (ACPM). A 0 means that the upper limit is not applicable while a 1 indicates that it does apply. The additional parameter sets the frequency band for which the limit settings are applicable. The upper limits are set with the :CALC:CDMA:RFSPpectrum:ACPM:MODulation:UPPer[:DATA] command.
<b>Query</b>	Returns the current settings for the twelve limits.
<b>Example</b>	:CALC:CDMA:RFSP:ACPM:MOD:UPPer:ENABLE:DATA 0,0,0,1,1,1,1,1,1,1,1,1,US800 :CALC:CDMA:RFSP:ACPM:MOD:UPPer:ENABLE:DATA? US800 The values returned: 0,0,0,1,1,1,1,1,1,1,1,1,1

**:CALC:CDMA:RFSPpectrum:ACPM:MODulation:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFSPpectrum:ACPM:MODulation:LOWer[:DATA] <real1>, <real2>, ... <real12> [, <PredefExp>]
<b>Parameters</b>	real1 through real12 represent 12 floating point real numbers. The minimum value is -100.0, the maximum is 10.0, the resolution is 0.01. PredefExp is an optional predefined value used to select the band for which the lower limit values apply. Allowable values are: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800.
<b>Description</b>	This command sets the 12 levels used for lower limits at the 12 frequency offsets used in the ACPM measurement. The levels are in dB.
<b>Query</b>	Returns 12 floating point values.
<b>Example</b>	:CALC:CDMA:RFSP:ACPM:MOD:LOWer:DATA -10,-10,-10,-60,-60,-60,-60,-80,-80,-80,-120,-120,US800 :CALC:CDMA:RFSP:ACPM:MOD:LOWer:DATA? US800 The values returned are the values set (-10,-10,-10,-60 etc.)

**:CALC:CDMA:RFSpectrum:ACPM:MODulation:LOWer  
:ENABLE[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFSpectrum:ACPM: MODulation:LOWer:ENABLE[:DATA] <boolean1>,<boolean2>, ... <boolean12> [<PredefExp>]
<b>Parameters</b>	boolean1 through boolean12 are 12 boolean numbers. PredefExp is an optional expression which can take on one of the following values: US800   USPCS   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800
<b>Description</b>	This command sets the 12 boolean numbers used to indicate if the lower limits are to be applied to the adjacent channel measurements (ACPM). A 0 means that the lower limit is not applicable while a 1 indicates that it does apply. The additional parameter sets the frequency band for which the limit settings are applicable. The lower limits are set with the :CALC:CDMA:RFSpectrum:ACPM:MODulation:LOWer[:DATA] command.
<b>Query</b>	Returns the current settings for the twelve limits.
<b>Example</b>	:CALC:CDMA:RFSpectrum:ACPM:MOD:LOWer:ENABLE:DATA 0,0,0,1,1,1, 1,1,1,1,1,1,US800 :CALC:CDMA:RFSpectrum:ACPM:MOD:LOWer:ENABLE:DATA? US800 The values returned: 0,0,0,1,1,1,1,1,1,1,1,1

**:CALC:CDMA:MSpectrum:VALue**

<b>Syntax</b>	:CALC:CDMA:MSpectrum:VALue <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -1,000,000.0, the maximum is 1,000,000.0. The minimum resolution possible is 0.1, the default value is -200.0.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers an (interpolated) measurement result value of the modulation spectrum curve at the frequency specified with the real1 parameter. real1 is interpreted as an offset from the carrier (i.e. the transmission frequency). The string returned will contain one floating point real number. The physical dimension of the measurement result value returned is dBc. <b>Notes</b> - Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:CDMA:BLOC:MSP:AVG command to do so. - The :CALC:CDMA:RFSpectrum:MSpectrum:VAL command is not really a measurement - it is an interpolation of the spectrum curve for the frequency specified.
<b>Example</b>	:MEAS:CDMA:BLOCdata:MSP:AVG 20 :CALC:CDMA:MSpectrum:VAL? -50000 This command will interpolate a modulation spectrum measurement at an offset of 50 kHz to the carrier. The value returned in this example is: "-4.7".

**:CALC:CDMA:MSpectrum:MAXPeak**

<b>Syntax</b>	:CALC:CDMA:MSpectrum:MAXPeak?
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<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers the frequency offset (in Hz) from the carrier and the maximum value of the measured modulation spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dBc.
	<b>Notes</b> <ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:CDMA:RFSP:MSP:AVG command to do so.</li> <li>- The :CALC:CDMA:MSP:MAXP command is not really a measurement - it is a read-out of the spectrum curve.</li> </ul>
<b>Example</b>	<pre>:MEAS:CDMA:RFSP:MSP:AVG 20 :CALC:CDMA:MSP:MAXP?</pre> <p>This command will read at the modulation spectrum measurement maximum the frequency offset to the carrier and the measurement result value. The values returned in this example is: "-67700.0, -5.2".</p>

**:CALC:CDMA:RFTX:FREQ:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:FREQ:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers boolean number in a string which indicates if the :MEAS:CDMA:ARR:RFTX:FREQ measurement violated its limits.
<b>Example</b>	<pre>:MEAS:CDMA:ARR:RFTX:FREQ 20 :CALC:CDMA:RFTX:FREQ:LIM?</pre> <p>The MEASurement command starts 20 frequency measurements. The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.</p>

**:CALC:CDMA:RFTX:FREQuency:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:FREQuency:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:CDMA:RFTX:FREQ:LIM:STAT ON</pre> <p>Switches the limit check for the frequency error measurement on.</p>

**:CALC:CDMA:RFTX:FREQUENCY:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:FREQUENCY:LIMit:UPPer[:DATA] <int1>, <PredefExp>
<b>Parameters</b>	int1 is an integer number. The minimum value for int1 is 0, the maximum is 1000, the default is 300. PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	This command sets the upper limit of the frequency error measurement by band. The physical dimension of the number stated is Hz.
<b>Query</b>	The query form returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:FREQ:LIM:UPP 310, US800 :CALC:CDMA:RFTX:FREQ:LIM:UPP? US800 The query returns the previously set limit of 310 (hertz).

**:CALC:CDMA:RFTX:FREQUENCY:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:FREQUENCY:LIMit:LOWer[:DATA] <int1> <PredefExp>
<b>Parameters</b>	int1 is an integer number. The minimum value for int1 is -1000, the maximum is 0, the default is -300. PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	This command sets the lower limit of the frequency error measurement by band. The physical dimension of the number stated is Hz.
<b>Query</b>	The query form returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:FREQ:LIM:LOW -310, US800 :CALC:CDMA:RFTX:FREQ:LIM:LOW? US800 The query returns the previously set limit of -310 (hertz).

**:CALC:CDMA:RFTX:POWER:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:POWER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:CDMA:ARR:RFTX:POW measurement violated the defined limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:POW 20 :CALC:CDMA:RFTX:POW:LIM? Returns 0 if any of the 20 power measurements was out of limits, and a 1 if all results were inside limits.

**:CALC:CDMA:RFTX:POWer:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:POWer:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: ON OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the power measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:POWer:LIM:STAT ON Switches the limit check for the frequency error measurement on.

**:CALC:CDMA:RFTX:POWer:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:POWer:LIMit:UPPer[:DATA] <real>, <PredefExp1>, <PredefExp2>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 99.0, the resolution is 0.01 and the default is 2.0. PredefExp1 can take on one of the following values: PCL1 PCL2 PCL3 PCL4 PCL5. Default is PCL1. PredefExp2 is one of the following: US800 USPCs TACS JTACS KPCS NMT450 IMT2000 MHZ900 MHZ1800. Default is US800.
<b>Description</b>	Sets the upper limit for the mobile's RF output power in a given band and power class. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:POW:LIM:UPP 2.5,PCL1,US800 :CALC:CDMA:RFTX:POW:LIM:UPP? PCL1,US800 Returns 2.5.

**:CALC:CDMA:RFTX:FREQuency:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:FREQuency:LIMit:LOWer[:DATA] <real>, <PredefExp1>, <PredefExp2>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -99.0, the maximum is 0.0, the resolution is 0.01 and the default is -99.0. PredefExp1 can take on one of the following values: PCL1 PCL2 PCL3 PCL4 PCL5. Default is PCL1. PredefExp2 is one of the following: US800 USPCs TACS JTACS KPCS NMT450 IMT2000 MHZ900 MHZ1800. Default is US800.
<b>Description</b>	Sets the lower limit for the mobile's RF output power in a given band and at a given power control level. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:FREQ:LIM:LOW -2.5,PCL1,US800 :CALC:CDMA:RFTX:FREQ:LIM:LOW? PCL1,US800 Returns -2.5.

**:CALCulate:CDMA:RFTX:VERRor:RMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:RMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:CDMA:ARR:RFTX:VERR:RMS measurement violated its limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:VERR:RMS 20 :CALC:CDMA:RFTX:VERR:RMS:LIM? Returns a 0 if any of the RMS vector error measurement results is out of limits.

**:CALCulate:CDMA:RFTX:VERRor:RMS:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERR:RMS:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the RMS vector error measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:RMS:LIM:STAT ON Switches the limit check for the RMS-averaged vector error measurement on.

**:CALCulate:CDMA:RFTX:VERRor:RMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERR:RMS:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default value is 24.4.
<b>Description</b>	Sets the upper limit for the RMS average vector error. The physical dimension of the number is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:RMS:LIM:UPP 200 :CALC:CDMA:RFTX:VERR:RMS:LIM:UPP? The query returns the previously set value 200.0.

**:CALCulate:CDMA:RFTX:VERRor:RMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERR:RMS:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit for the RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.



**Example** :CALC:CDMA:RFTX:VERR:RMS:LIM:LOW 200  
:CALC:CDMA:RFTX:VERR:RMS:LIM:LOW?  
The query returns the previously set value 200.0.

**:CALC:CDMA:RFTX:VERRor:PEAK:LIMit[:FAIL]**

**Syntax** :CALC:CDMA:RFTX:VERRor:PEAK:LIMit[:FAIL]?  
**Parameters** There are no parameters.  
**Description** There is solely a query form of this command available.  
**Query** This command delivers a boolean number in a string which indicates if the :MEAS:CDMA:ARR:RFTX:VERRor:PEAK measurement violated its limits.  
**Example** :MEAS:CDMA:ARR:RFTX:VERR:PEAK 20  
:CALC:CDMA:RFTX:VERR:PEAK:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.

**:CALC:CDMA:RFTX:VERRor:PEAK:LIMit:STATe**

**Syntax** :CALC:CDMA:RFTX:VERRor:PEAK:LIMit:STATe <PredefExp>  
**Parameters** PredefExp is one of the following predefined expressions: ON | OFF. Default is ON.  
**Description** This command switches the check of the measurement result values of the measurement against their user-definable limits either on or off.  
**Query** There is no query form of this command available.  
**Example** :CALC:CDMA:RFTX:VERR:PEAK:LIM:STAT ON  
Switches the limit check for the peak vector error measurement on.

**:CALC:CDMA:RFTX:VERR:PEAK:LIMit:UPPer[:DATA]**

**Syntax** :CALC:CDMA:RFTX:VERR:PEAK:LIMit:UPPer[:DATA] <Real1>  
**Parameters** Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, and the default value is 200.0.  
**Description** Sets the upper limit for the peak vector error measurement. The physical dimension of the number is percentage.  
**Query** There is query form which returns the stored settings.  
**Example** :CALC:CDMA:RFTX:VERR:PEAK:LIM:UPP 200  
:CALC:CDMA:RFTX:VERR:PEAK:LIM:UPP?  
Returns 200.

**:CALC:CDMA:RFTX:VERR:PEAK:LIMit:LOWer[:DATA]**

**Syntax** :CALC:CDMA:RFTX:VERR:PEAK:LIMit:LOWer[:DATA] <Real1>  
**Parameters** Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, the default value is 0.0.

<b>Description</b>	Sets the upper limit. The physical dimension of the number is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PEAK:LIM:LOWer 0 :CALC:CDMA:RFTX:VERR:PEAK:LIM:LOWer? Returns 0.

**:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the RMS phase error measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:VERR:PHAS:RMS? 5 :CALC:CDMA:RFTX:PHASe:RMS:LIM? Returns 1 if any of the five results exceeds the given limits.

**:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the RMS phase error measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:STAT ON Switches the limit check for the RMS phase error measurement on.

**:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is 0.0, the maximum is 45, the resolution is 0.01, the default value is 14.
<b>Description</b>	Sets the upper limit for the peak vector error measurement. The physical dimension of the number stated is degrees.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:UPP 45 :CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:UPP? The returned result is 45.0.

**:CALC:CDMA:RFTX:VERRor:PHASe:RMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:RMS:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is 0, the maximum is 45, the resolution is 0.01, the default value is 0.
<b>Description</b>	Sets the upper limit of the peak vector error measurement. The physical dimension of the number stated is degrees.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:LOWer -44.0 :CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:LOW? The query returns 44.0.

**:CALC:CDMA:RFTX:VERRor:PHASe:PEAK:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:PEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the peak phase measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:VERR:PHAS:PEAK? 5 :CALC:CDMA:RFTX:VERR:PHASe:PEAK:LIM? Returns 1 if any of the results exceeded the limits.

**:CALC:CDMA:RFTX:VERRor:PEAK:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PEAK:LIMit:STATe <PredefinExp>
<b>Parameters</b>	PredefinExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the peak vector error measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PEAK:LIM:STAT ON Switches the limit check for the peak phase measurement on.

**:CALC:CDMA:RFTX:VERRor:PHASe:RMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:RMS:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -45.0, the maximum is 45.0, the resolution is 0.01, the default value is 45.0.
<b>Description</b>	Sets the upper limit of the RMS phase error. The physical dimension of the number stated is degrees.

<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:UPP 45 :CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:UPP? Returns the upper limit of 45.0 (degrees).

**:CALC:CDMA:RFTX:VERRor:PHASe:RMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:RMS:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -45.0, the maximum is 45.0, the resolution is 0.01, the default value is 45.0.
<b>Description</b>	Sets the upper limit of the RMS phase error measurement. The physical dimension of the number stated is degrees.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:LOW 45 :CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:LOW? Returns -45.0.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the RMS phase magnitude measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:VERR:PHAS:MAGNitude:RMS? 10 :CALC:CDMA:RFTX:VERR:PHASe:MAGN:RMS:LIM? Returns 0 if all the results are within the limits.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the result values of the RMS phase magnitude measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:MAGN:RMS:LIM:STAT ON Switches the limit check for the RMS phase magnitude measurement on.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit  
:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0, the maximum is 200, the resolution is 0.1, the default value is 24.4.
<b>Description</b>	Sets the upper limit of the RMS phase magnitude measurement. The physical dimension of the number stated is percent.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:MAGNitude:RMS:LIM:UPP 200.0 :CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:UPP? Returns the setting of 200.0.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit  
:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERR:PHASe:MAGNitude:RMS:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default value is 0.0.
<b>Description</b>	This command sets the lower limit of the RMS phase magnitude. The physical dimension of the number stated is percent.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:MAGNitude:RMS:LIM:LOW 0.0 :CALC:CDMA:RFTX:VERR:PHASe:RMS:LIM:UPP? Returns 0.0.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK  
:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the peak phase magnitude measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:PHAS:MAGNitude:PEAK? 5 :CALC:CDMA:RFTX:PHASe:MAGN:PEAK:LIM? Returns 0 if none of the results exceeded the limits.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK:LIMit  
:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:MAGN:PEAK:LIM:STAT ON Switches the limit check for the peak magnitude measurement on.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK:LIMit  
:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default value is 200.0.
<b>Description</b>	Sets the upper limit for the peak phase magnitude. The physical dimension of the number stated is percent.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:MAGNitude:PEAK:LIM:UPP 200.0 :CALC:CDMA:RFTX:VERR:PHASe:PEAK:LIM:UPP? Returns 200.0.

**:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK:LIMit  
:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:VERRor:PHASe:MAGNitude:PEAK:LIMit:LOWer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default value is 0.0.
<b>Description</b>	Sets the lower limit of the peak phase magnitude. The physical dimension of the number stated is percent.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:VERR:PHASe:MAGNitude:PEAK:LIM:LOW 0.0 :CALC:CDMA:RFTX:VERR:PHASe:PEAK:LIM:LOW? Returns 0.0.

**:CALC:CDMA:RFTX:TIMEoffset:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:TIMEoffset:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the time offset error measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:TIMEoffset? 5 :CALC:CDMA:RFTX:TIM:LIM? Returns 1 if the limits are exceeded in any of the time offset error measurements.

**:CALC:CDMA:RFTX:TIMEoffset:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:TIMEoffset:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the time offset error measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:TIMEoffset:LIM:STAT ON Switches the limit check for the time offset measurement on.

**:CALC:CDMA:RFTX:TIMEoffset:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:TIMEoffset:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -5, the maximum is 5, the resolution is 0.1, the default value is 1.
<b>Description</b>	Set this sets upper limit. The physical dimension of the number stated is nanoseconds.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:TIMEoffset:LIM:UPP 5.0 :CALC:CDMA:RFTX:TIM:LIM:UPP? Value returned is "5.0".

**:CALC:CDMA:RFTX:TIMEoffset:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:TIMEoffset:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -5, the maximum is 5, the resolution is 0.1, the default value is -1.
<b>Description</b>	Sets the lower limit for the time offset error measurement. The physical dimension of the number stated is nanoseconds.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:TIMEoffset:LIM:LOW -5.0 :CALC:CDMA:RFTX:TIM:LIM:LOW? Value returned is -5.0.

**:CALC:CDMA:RFTX:WQUality:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:WQUality:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the waveform quality measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:WQUality? 1 :CALC:CDMA:RFTX:WQU:LIM? Returns 0 if the result is within limits.

**:CALC:CDMA:RFTX:WQUality:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:WQUality:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the waveform quality measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:WQUality:LIM:STAT ON Switches the limit check for the waveform quality measurement on.

**:CALC:CDMA:RFTX:WQUality:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:WQUality:LIMit:UPPer[:DATA] <PredefExp>
<b>Parameters</b>	PredefExp is a floating point real number. The minimum value for this parameter is 0.90, the maximum is 1.0, the resolution is 0.0001, the default value is 1.0.
<b>Description</b>	Sets the upper limit for the waveform quality measurement.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:WQUality:LIM:UPP 1.0 :CALC:CDMA:RFTX:WQU:LIM:UPP? Returns 1.0.

**:CALC:CDMA:RFTX:WQUality:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:WQUality:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is 0.9, the maximum is 1.0, the resolution is 0.0001, the default value is 0.944.
<b>Description</b>	Sets the lower limit for the waveform quality measurement.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:WQUality:LIM:LOW 0.944 :CALC:CDMA:RFTX:WQU:LIM:LOW? Returns 0.944.



**:CALC:CDMA:RFTX:STANdby:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:STANdby:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the standby power measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:STANdby? 1 :CALC:CDMA:RFTX:STAN:LIM? Returns 1 if the chapter exceeds the limits.

**:CALC:CDMA:RFTX:STANdby:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:STANdby:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:STAN:LIM:STAT ON Switches the limit check for the standby power measurement on.

**:CALC:CDMA:RFTX:STANdby:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:STANdby:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for this parameter is -200, the maximum is 36, the resolution is 0.01, the default value is -61.
<b>Description</b>	Sets the upper limit for the standby power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:STANdby:LIM:UPP 1.0 :CALC:CDMA:RFTX:STAN:LIM:UPP? Returns 1.0.

**:CALC:CDMA:RFTX:STANdby:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:STANdby:LIMit:LOWer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is -70.0, the maximum is 36.0, the resolution is 0.01, the default value is -70.0.
<b>Description</b>	Sets the lower limit for the standby power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.

<b>Example</b>	<pre>:CALC:CDMA:RFTX:STANdby:LIM:LOWer -70.0 :CALC:CDMA:RFTX:STAN:LIM:LOW? Returned value is -70.0.</pre>
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**:CALC:CDMA:RFTX:MINimum:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:MINimum:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the minimum power measurement exceeds the limits.
<b>Example</b>	<pre>:MEAS:CDMA:ARR:RFTX:MINimum? 5 :CALC:CDMA:RFTX:MIN:LIM? Returns 1 if any of the results exceeds the limits.</pre>

**:CALC:CDMA:RFTX:MINimum:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:MINimum:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:CDMA:RFTX:MINimum:LIM:STAT ON Switches the limit check for the minimum power measurement on.</pre>

**:CALC:CDMA:RFTX:MINimum:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:MINimum:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is -200, the maximum is 36, the resolution is 0.1, the default value is -50.
<b>Description</b>	Sets the upper limit for the minimum power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:CDMA:RFTX:MINimum:LIM:UPP 36.0 :CALC:CDMA:RFTX:MIN:LIM:UPP? Returns 36.0.</pre>

**:CALC:CDMA:RFTX:MINimum:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:MINimum:LIMit:LOWer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is -200, the maximum is 36, the resolution is 0.1, the default value is -70.
<b>Description</b>	Set this sets lower limit. The physical dimension of the number stated is dBm.

<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:MINimum:LIM:LOWer -70.0 :CALC:CDMA:RFTX:MIN:LIM:LOW? Returns -70.0.

**:CALC:CDMA:RFTX:ACCesschannel:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:ACCesschannel:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the access channel power measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:ACCesschannel? 1 :CALC:CDMA:RFTX:ACC:LIM? Returns 1 if the result exceeds the limits.

**:CALC:CDMA:RFTX:ACCesschannel:LIMit:STATE**

<b>Syntax</b>	:CALC:CDMA:RFTX:ACCesschannel:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:ACC:LIM:STAT ON Switches the limit check for the access channel power measurement on.

**:CALC:CDMA:RFTX:Accesschannel:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:Accesschannel:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for this parameter is -70.0, the maximum is 36, the resolution is 0.1, the default value is 9.5.
<b>Description</b>	Sets the upper limit for the access channel power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:ACC:LIM:UPP 36.0 :CALC:CDMA:RFTX:ACC:LIM:UPP? Returns 36.0.

**:CALC:CDMA:RFTX:ACCesschannel:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:ACCesschannel:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is -70, the maximum is 36, the resolution is 0.1, the default value is -9.5.
<b>Description</b>	Sets the upper limit for the access channel power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:ACC:LIM:LOWer -70.0 :CALC:CDMA:RFTX:ACC:LIM:LOW? Returns -70.0.

**:CALC:CDMA:RFTX:CLOSeDloop:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:CLOSeDloop:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the closed loop power measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:CLOSeDloop? 1 :CALC:CDMA:RFTX:CLOS:LIM?

**:CALC:CDMA:RFTX:CLOSeDloop:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:CLOSeDloop:LIMit:STATe <PreDefExp>
<b>Parameters</b>	PreDefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:CLOS:LIM:STAT ON Switches the limit check for the closed-loop power measurement on.

**:CALC:CDMA:RFTX:CLOSeDloop:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:CLOSeDloop:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0, the maximum is 99, the resolution is 0.01, the default value is 24.
<b>Description</b>	Sets the upper limit for the closed loop power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.

**Example** :CALC:CDMA:RFTX:CLOSeDloop:LIM:UPP 36.0  
:CALC:CDMA:RFTX:CLOS:LIM:UPP? Returns 36.0.

**:CALC:CDMA:RFTX:CLOSeDloop:LIMit:LOWer[:DATA]**

**Syntax** :CALC:CDMA:RFTX:CLOSeDloop:LIMit:LOWer[:DATA] <Real1>  
**Parameters** Real1 is a floating point real number. The minimum value is -99, the maximum is 0, the resolution is 0.1, the default value is -24.  
**Description** Sets the lower limit for the closed loop power measurement. The physical dimension of the number stated is dBm.  
**Query** There is a query form which returns the stored settings.  
**Example** :CALC:CDMA:RFTX:CLOSeDloop:LIM:LOWer -70.0  
:CALC:CDMA:RFTX:CLOS:LIM:LOW? Returns -70.0.

**:CALC:CDMA:RFTX:CCHNoise:LIMit[:FAIL]**

**Syntax** :CALC:CDMA:RFTX:CCHNoise:LIMit[:FAIL]?  
**Parameters** There are no parameters.  
**Description** There is solely a query form of this command available.  
**Query** This command delivers a boolean number in a string which indicates if the code channel noise measurement exceeds the limits.  
**Example** :MEAS:CDMA:ARR:RFTX:CCHNoise? 10  
:CALC:CDMA:RFTX:CCHN:LIM?

**:CALC:CDMA:RFTX:CCHNoise:LIMit:STATe**

**Syntax** :CALC:CDMA:RFTX:CCHNoise:LIMit:STATe <PreDefExp>  
**Parameters** PreDefExp is one of the following predefined expressions: ON | OFF. Default is ON.  
**Description** This command switches the check of the measurement result values of the code channel noise measurement against their user-definable limits either on or off.  
**Query** There is no query form of this command available.  
**Example** :CALC:CDMA:RFTX:CCHNoise:LIM:STAT ON  
Switches the limit check for the code channel noise measurement on.

**:CALC:CDMA:RFTX:CCHNoise:LIMit:UPPer[:DATA]**

**Syntax** :CALC:CDMA:RFTX:CCHNoise:LIMit:UPPer[:DATA] <Real1>  
**Parameters** Real1 is a floating point real number. The minimum value for parameter is -99, the maximum is 0, the resolution is 0.1, the default value is -23.  
**Description** Sets the upper limit for the code channel noise measurement. The physical dimension of the number stated is dBm.

<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:CCHNoise:LIM:UPP -25.0 :CALC:CDMA:RFTX:CCHN:LIM:UPP? Value returned: -25.0.

**:CALC:CDMA:RFTX:CCHNoise:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:CCHNoise:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -40.0, the maximum is 0.0, the resolution is 0.1, the default value is -40.0.
<b>Description</b>	Sets the lower limit for the code channel noise measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:CCHNoise:LIM:LOW -40.0 :CALC:CDMA:RFTX:CCHN:LIM:LOW? Value returned: -40.0.

**:CALC:CDMA:RFTX:CDPower:LIMit[:FAIL]?**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPower:LIMit[:FAIL]? <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RPICH   RDCCh   RSCH2x2   RSCH2x4   RFCH   RCCCh   RSCH1x4   RSCH1x8. Default is RPICH.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the code domain power measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:CDPower? 1,ALL :CALC:CDMA:RFTX:CDPO:LIM? RPICH Returns 0 if the code domain power measurement on the RPICH is within limits.

**:CALC:CDMA:RFTX:CDPower:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPower:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the code domain power measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:CDPO:LIM:STAT ON Switches the limit check for the code domain power measurement on.

**:CALC:CDMA:RFTX:CDPower:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPower:LIMit:UPPer[:DATA] <Real1> <PredefExp>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is -40.0, the maximum is 0.0, the resolution is 0.1, the default value is 0.0. PredefExp is one of the following predefined expressions: RPICh   RDCCh   RSCH2x2   RSCH2x4   RFCh   RCCCh   RSCH1x4   RSCH1x8. Default is RPICh.
<b>Description</b>	Sets the upper limit for the code domain power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:CDPower:LIM:UPP 0.0 :CALC:CDMA:RFTX:CDP:LIM:UPP? Returns 0.0.

**:CALC:CDMA:RFTX:CDPower:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPower:LIMit:LOWer[:DATA] <Real1> <PredefExp>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is -40.0, the maximum is 0.0, the resolution is 0.1, the default value is 0.0. PredefExp is one of the following predefined expressions: RPICh   RDCCh   RSCH2x2   RSCH2x4   RFCh   RCCCh   RSCH1x4   RSCH1x8. Default is RPICh.
<b>Description</b>	Sets the lower limit for the code domain power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:CDPower:LIM:LOW -40.0 :CALC:CDMA:RFTX:CDP:LIM:LOW? Returns -40.0.

**:CALC:CDMA:RFTX:CDPhase:LIMit[:FAIL]?**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPhase:LIMit[:FAIL]? <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RPICh   RDCCh   RSCH2x2   RSCH2x4   RFCh   RCCCh   RSCH1x4   RSCH1x8. Default is RPICh.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the code domain phase measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:CDPhase? 10,ALL :CALC:CDMA:RFTX:CDPH:LIM? RPICh Returns 1 if any of the results fails the limits.

**:CALC:CDMA:RFTX:CDPhase:LIMit:STATe**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPhase:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the code domain phase measurement against their user-definable limits either on or off.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:CDMA:RFTX:CDPhase:LIM:STAT ON Switches the limit check for the code domain phase measurement on.

**:CALC:CDMA:RFTX:CDPhase:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPhase:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 0.5, the resolution is 0.0001, the default value is 0.5.
<b>Description</b>	Sets the upper limit for the code domain phase measurement. The physical dimension of the number stated is radians.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:CDPhase:LIM:UPP 0.5 :CALC:CDMA:RFTX:CDPhase:LIM:UPP? Returns 0.5.

**:CALC:CDMA:RFTX:CDPhase:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDPhase:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 0.5, the resolution is 0.0001, the default value is 0.
<b>Description</b>	Sets the lower limit for the code domain phase measurement. The physical dimension of the number stated is radians.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:CDPhase:LIM:LOW 0.1 :CALC:CDMA:RFTX:CDPhase:LIM:LOW? Returns 0.1.

**:CALC:CDMA:RFTX:CDTime:LIMit[:FAIL]?**

<b>Syntax</b>	:CALC:CDMA:RFTX:CDTime:LIMit[:FAIL]? <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RPICH   RDCCCh   RSCH2x2   RSCH2x4   RFCH   RCCCh   RSCH1x4   RSCH1x8. Default is RPICH.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the code domain time measurement exceeds the limits.



**Example** :MEAS:CDMA:ARR:RFTX:CDTime? 1,ALL  
:CALC:CDMA:RFTX:CDT:LIM? RPICH

**:CALC:CDMA:RFTX:CDTime:LIMit:STATe**

**Syntax** :CALC:CDMA:RFTX:CDTime:LIMit:STATe <PredefExp>  
**Parameters** PredefExp is one of the following predefined expressions: ON | OFF. Default is ON.  
**Description** This command switches the check of the measurement result values of the code domain time measurement against their user-definable limits either on or off.  
**Query** There is no query form of this command available.  
**Example** :CALC:CDMA:RFTX:CDTime:LIM:STAT ON  
Switches the limit check for the code domain time measurement on.

**:CALC:CDMA:RFTX:CDTime:LIMit:UPPer[:DATA]**

**Syntax** :CALC:CDMA:RFTX:CDTime:LIMit:UPPer[:DATA] <Reall>  
**Parameters** Reall is a floating point real number. The minimum value is 0.0, the maximum is 200.0, the resolution is 0.5, the default value is 200.0.  
**Description** Sets the upper limit for the code domain time measurement. The physical dimension of the number is stated as a percentage.  
**Query** There is a query form which returns the stored settings.  
**Example** :CALC:CDMA:RFTX:CDTime:LIM:UPP 200.0  
:CALC:CDMA:RFTX:CDT:LIM:UPP?  
Value returned is 200.0.

**:CALC:CDMA:RFTX:CDTime:LIMit:LOWer[:DATA]**

**Syntax** :CALC:CDMA:RFTX:CDTime:LIMit:LOWer[:DATA] <Reall>  
**Parameters** Reall is a floating point real number. The minimum value is 0.0, the maximum is 200.0, the resolution is 0.5, the default value is 0.  
**Description** Sets the lower limit for the code domain time measurement. The physical dimension of the number is stated as a percentage.  
**Query** There is a query form which returns the stored settings.  
**Example** :CALC:CDMA:RFTX:CDTime:LIM:LOW 10  
:CALC:CDMA:RFTX:CDT:LIM:LOW?  
Value returned is 10.0.

**:CALC:CDMA:RFTX:GATedptt:LIMit[:FAIL]**

**Syntax** :CALC:CDMA:RFTX:GATedptt:LIMit[:FAIL]?  
**Parameters** There are no parameters.  
**Description** There is solely a query form of this command available.

<b>Query</b>	This command delivers a boolean number in a string which indicates if the gated power/time template measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:GATedptt? 1 :CALC:CDMA:RFTX:GATedptt:LIM?

**:CALC:CDMA:RFTX:GATedptt:LIMit:UPPer1:USEC[:DATA]**  
**:CALC:CDMA:RFTX:GATedptt:LIMit:UPPer2:USEC[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:GATedptt:LIMit:UPPer1:USEC[:DATA] <Int1>, &PredefExp> :CALC:CDMA:RFTX:GATedppt:LIMit:UPPer2:USEC[:DATA] <Int1>, &PredefExp>
<b>Parameters</b>	Int1 is an integer number. The minimum value for Int1 is 0, the maximum is 2500, the default value is 0. PredefExp is one of the following predefined expressions: RC12   RC34. Default is RC12.
<b>Description</b>	Sets the upper limit for the gated power/time template measurement. The physical dimension of the number stated is microseconds.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:GATedptt:LIM:UPP1:USEC 0,RC12 :CALC:CDMA:RFTX:GAT:LIM:UPP1:USEC? Returned string: 0,RC12 :CALC:CDMA:RFTX:GATedppt:LIM:UPP2:USEC 1250,RC12 :CALC:CDMA:RFTX:GAT:LIM:UPP2:USEC? Returns 1250,RC12

**:CALC:CDMA:RFTX:GATedptt:LIMit:UPPer1:DB[:DATA]**  
**:CALC:CDMA:RFTX:GATedptt:LIMit:UPPer2:DB[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:GATedptt:LIMit:UPPer1:DB[:DATA] <Reall>, <PredefExp> :CALC:CDMA:RFTX:GATedppt:LIMit:UPPer2:DB[:DATA] <Reall> <PredefExp>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for Reall is -70, the maximum is 10, the resolution is 0.1, the default value is -6.0. PredefExp is one of the following predefined expressions: RC12   RC34. Default is RC12.
<b>Description</b>	Sets the upper limit for the gated power/time template measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:GATedptt:LIM:UPP1:DB 0.0,RC12 :CALC:CDMA:RFTX:GAT:LIM:UPP1:DB? Returned string: 0.0,RC12 :CALC:CDMA:RFTX:GATedppt:LIM:UPP2:DB 10.0,RC12 :CALC:CDMA:RFTX:GAT:LIM:UPP2:DB? Returned string: 10.0,RC12.

**:CALC:CDMA:RFTX:GATedptt:LIMit:LOWer1:USEC[:DATA]**

**:CALC:CDMA:RFTX:GATedptt:LIMit:LOWer2:USEC[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:GATedptt:LIMit:LOWer1:USEC[:DATA] <Int1>, &PredefExp :CALC:CDMA:RFTX:GATedppt:LIMit:LOWer2:USEC[:DATA] <Int1>, &PredefExp
<b>Parameters</b>	Int1 is an integer number. The minimum value for Int1 is 0, the maximum is 2500, the default value is 0. PredefExp is one of the following predefined expressions: RC12   RC34. Default is RC12.
<b>Description</b>	Sets the upper limit for the gated power/time template measurement. The physical dimension of the number stated is microseconds.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:GATedptt:LIM:LOW1:USEC 0,RC12 :CALC:CDMA:RFTX:GAT:LIM:LOW1:USEC? Returned string: 0,RC12 :CALC:CDMA:RFTX:GATedppt:LIM:LOW2:USEC 1250,RC12 :CALC:CDMA:RFTX:GAT:LIM:LOW2:USEC? Returns 1250,RC12

**:CALC:CDMA:RFTX:GATedptt:LIMit:LOWer1:DB[:DATA]**

**:CALC:CDMA:RFTX:GATedppt:LIMit:LOWer2:DB[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:GATedptt:LIMit:LOWer1:DB[:DATA] <Reall>, <PredefExp> :CALC:CDMA:RFTX:GATedppt:LIM:LOWer2:DB[:DATA] <Reall> <PredefExp>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for Reall is -90, the maximum is 10, the resolution is 0.1, the default value is 0.0. PredefExp is one of the following predefined expressions: RC12   RC34. Default is RC12.
<b>Description</b>	Sets the upper limit for the gated power/time template measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:GATedptt:LIM:UPP1:DB 0.0,RC12 :CALC:CDMA:RFTX:GAT:LIM:UPP1:DB? Returned string: 0.0,RC12 :CALC:CDMA:RFTX:GATedppt:LIM:UPP2:DB 10.0,RC12 :CALC:CDMA:RFTX:GAT:LIM:UPP2:DB? Returned string: 10.0,RC12.

**:CALC:CDMA:RFTX:GATedptt:LIMit:AVERages[:DATA]**

<b>Syntax</b>	:CALC:CDMA:RFTX:GATedptt:LIMit:AVERages[:DATA] <Int1>, <PredefExp> :CALC:CDMA:RFTX:GATedppt:LIM:AVER[:DATA] <Int1>, <PredefExp>
<b>Parameters</b>	Int1 is an integer number. The minimum value for Int1 is 0, the maximum is 200, the default value is 100. PredefExp is one of the following predefined expressions: RC12   RC34. Default is RC12.

<b>Description</b>	Sets the number of gates to average.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:GATedp $\mu$ tt:LIM:AVERage 50,RC12 :CALC:CDMA:RFTX:GAT:LIM:AVER? Returns 50,RC12. :CALC:CDMA:RFTX:GATedp $\mu$ tt:LIM:AVERage 100,RC34 :CALC:CDMA:RFTX:GAT:LIM:AVER? Returned string is 100,RC34.

**:CALC:CDMA:RFTX:OPENloop:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the open loop power control measurement exceeds the limits.
<b>Example</b>	:MEAS:CDMA:ARR:RFTX:OPENloop? 1 :CALC:CDMA:RFTX:OPEN:LIM?

**:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:MAXium**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:MAXium <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is 100, the maximum is 200, the resolution is 1.0, the default value is 120.
<b>Description</b>	Sets the upper limit for the open loop power control measurement. The physical dimension of the number stated is percent.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:MAXimum 120 :CALC:CDMA:RFTX:OPEN:LIM:UPP:MAX? Returned string: 120.

**:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:OFFset**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:OFFset <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is 0.0, the maximum is 10, the resolution is 0.1, the default value is 1.5.
<b>Description</b>	Sets the upper limit for the offset in the open loop power control measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:OFFSet 1.5 :CALC:CDMA:RFTX:OPEN:LIM:UPP:OFFSet? Returned string: 1.5.

**:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:VARA**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:VARA <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is 0.0, the maximum is 5, the resolution is 0.1, the default value is 0.5.
<b>Description</b>	Sets variable A when (t>=24) value. This variable is used to calculate the upper limit.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:VARA 0.5 :CALC:CDMA:RFTX:OPEN:LIM:UPP:VARA? Returned string: 0.5.

**:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:VARB**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:VARB <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is 0, the maximum is 10, the resolution is 0.1, the default value is 2.
<b>Description</b>	Sets variable B when t<24, used to calculate the upper limit.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:UPPer:VARB 2.0 :CALC:CDMA:RFTX:OPEN:LIM:UPP:VARB? Returns 2.0.

**:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:MINimum**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:MINimum <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 1, the maximum is 100, the resolution is 1.0, the default value is 80.
<b>Description</b>	Sets the lower limit for the open loop power control measurement. The physical dimension of the number stated is percent.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:MINimum 80 :CALC:CDMA:RFTX:OPEN:LIM:UPP:MAX? Returns 80

**:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:OFFSet**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:OFFSet <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -10.0, the maximum is 0, the resolution is 0.1, the default value is -1.0.
<b>Description</b>	Sets the lower limit for the offset in the open loop power control measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:OFFSet -1.0 :CALC:CDMA:RFTX:OPEN:LIM:LOW:OFFSet? Returns -1.0

**:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:VARC**

<b>Syntax</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:VARC
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:POW measurement violated the defined limits.
<b>Example</b>	:CALC:CDMA:RFTX:OPENloop:LIMit:LOWer:VARC 2.0 :CALC:CDMA:RFTX:OPEN:LIM:LOW:VARC? Returns 2.0

**AMPS commands :CALC:AMPS:RFTX:POWER:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:AMPS:RFTX:POWER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:POW measurement violated the defined limits.
<b>Example</b>	:MEAS:AMPS:ARR:RFTX:POW 20 :CALC:AMPS:RFTX:POWER:LIM? Returns 0 if any of the 20 power measurements was out of limits, and 1 if all results were inside limits.

**:CALC:AMPS:RFTX:POWER:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFTX:POWER:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the power measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:AMPS:RFTX:POWER:LIM:STAT ON Switches the limit check for the power measurement on.

**:CALC:AMPS:RFTX:POWER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:POWER:LIMit:UPPer[:DATA] <real>, <int1>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 99.0, the resolution is 0.01 and the default is 2.0. int1 specifies the MAC level which the limit will apply to. The range is 0 to 7. Default is 0.
<b>Description</b>	Sets the upper limit for the mobile's RF output power at a given MAC lev. The physical dimension of the number stated is dB.

<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:POW:LIM:UPP 2.5,1 :CALC:AMPS:RFTX:POW:LIM:UPP? 1 Returns 2.5.

**:CALC:AMPS:RFTX:FREQuency:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQuency:LIMit:LOWer[:DATA] <real>, <int1>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -99.0, the maximum is 0.0, the resolution is 0.01 and the default is -99.0. PredefExp1 can take on one of the following values: PCL1 PCL2 PCL3 PCL4 PCL5. Default is PCL1. int1 specifies the MAC level which the limit will apply to. The range is 0 to 7. Default is 0.
<b>Description</b>	Sets the lower limit for the mobile's RF output power at a given power MAC level. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:MAC:LIM:LOW -2.5,1 :CALC:AMPS:RFTX:MAC:LIM:LOW? 1 Returns -2.5.

**:CALC:AMPS:RFTX:DEV:SAT:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:SAT:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:SAT:DEV measurement violated its limits.
<b>Example</b>	:MEAS:AMPS:ARR:RFTX:DEV:SAT 20 CALC:AMPS:RFTX:DEV:SAT:LIM? Returns 0 if any of the SAT DEVIation measurement results is out of limits.

**:CALC:AMPS:RFTX:DEV:SAT:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:SAT:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:SAT:LIM:STAT ON Switches the limit check for the SAT deviation measurement on.

**:CALC:AMPS:RFTX:DEV:SAT:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:SAT:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 1600, the maximum is 2400, the resolution is 1, the default is value is 2200.
<b>Description</b>	Sets the upper limit for the SAT Deviation measurement. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:SAT:LIM:UPP 2200 :CALC:AMPS:RFTX:DEV:SAT:LIM:UPP? The query returns the previously set value 2200.

**:CALC:AMPS:RFTX:DEV:SAT:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:SAT:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 1600, the maximum is 2400, the resolution is 1, the default is value is 1800.
<b>Description</b>	Sets the lower limit for the SAT Deviation measurement. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:SAT:LIM:LOW 1800 :CALC:AMPS:RFTX:DEV:SAT:LIM:LOW? The query returns the previously set value 1800.

**:CALC:AMPS:RFTX:DEV:ST:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:ST:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:ST:DEV measurement violated its limits.
<b>Example</b>	:MEAS:AMPS:ARR:RFTX:DEV:ST 20 :CALC:AMPS:RFTX:DEV:ST:LIM? Returns a 0 if any of the ST DEVIation measurement results is out of limits.

**:CALC:AMPS:RFTX:DEV:ST:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:ST:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.



<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:ST:LIM:STAT ON Switches the limit check for the ST deviation measurement on.

**:CALC:AMPS:RFTX:DEV:ST:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:ST:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 6400, the maximum is 9600, the resolution is 1, the default is value is 8800.
<b>Description</b>	Sets the upper limit for the ST Deviation measurement. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:ST:LIM:UPP 8800 :CALC:AMPS:RFTX:DEV:ST:LIM:UPP? The query returns the previously set value 8800.

**:CALC:AMPS:RFTX:DEV:ST:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:ST:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 6400, the maximum is 9600, the resolution is 1, the default is value is 7200.
<b>Description</b>	Sets the lower limit for the ST Deviation measurement. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:ST:LIM:LOW 7200 :CALC:AMPS:RFTX:DEV:ST:LIM:LOW? The query returns the previously set value 7200.

**:CALC:AMPS:RFTX:DEV:AUD:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:AUD:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:DEV:AUD measurement violated its limits.
<b>Example</b>	:MEAS:AMPS:ARR:RFTX:DEV:AUD 20 :CALC:AMPS:RFTX:DEV:AUD:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.

**:CALC:AMPS:RFTX:DEV:AUD:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:AUD:LIMit:STATe <PredefExp>
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<b>Parameters</b>	<code>PreDefExp</code> is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:AUD:LIM:STAT ON Switches the limit check for the audio deviation measurement on.

**:CALC:AMPS:RFTX:DEV:AUD:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:AUD:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	<code>Real1</code> is a floating point real number. Its minimum value is 0, the maximum is 30000, the resolution is 1, and the default is value is 12000.
<b>Description</b>	Sets the upper limit for the audio deviation measurement. The physical dimension of the number is stated as a Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:AUD:LIM:UPP 12000 :CALC:AMPS:RFTX:DEV:AUD:LIM:UPP? Returns 12000.

**:CALC:AMPS:RFTX:DEV:AUD:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:DEV:AUD:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	<code>Real1</code> is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, and the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the audio deviation measurement. The physical dimension of the number is stated as a Hz.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:DEV:AUD:LIM:LOWer 0 :CALC:AMPS:RFTX:AUD:DEV:LIM:LOWer? Returns 0 in this example.

**:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:FREQ:ERR:RF measurement violated its limits.
<b>Example</b>	:MEAS:AMPS:ARR:RFTX:FREQ:ERR:RF 20 :CALC:AMPS:RFTX:FREQ:ERR:RF:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.

**:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. The Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:AMPS:RFTX:FREQ:ERR:RF:LIM:STAT ON Switches the limit check for the frequency error measurement on.

**:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is -5000, the maximum is 5000, the resolution is 1, and the default is value is 2600.
<b>Description</b>	Sets the upper limit for the frequency error measurement. The physical dimension of the number is stated as Hz.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:FREQ:ERR:RF:LIM :UPP 2600 :CALC:AMPS:RFTX:FREQ:ERR:RF:LIM:UPP? Returns 2600

**:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:RF:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is -5000, the maximum is 5000, the resolution is 1, the default is value is -2060.
<b>Description</b>	Sets the lower limit for the frequency error measurement. The physical dimension of the number is stated as Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:FREQ:ERR:RF:LIM:LOWer 0 :CALC:AMPS:RFTX:FREQ:ERR:RF:LIM:LOWer? Returns 0 in this example.

**:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:FREQ:ERR:SAT measurement violated its limits.

<b>Example</b>	<pre>:MEAS:AMPS:ARR:RFTX:FREQ:ERR:SAT 20 :CALC:AMPS:RFTX:FREQ:ERR:SAT:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.</pre>
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**:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIM:STAT ON Switches the limit check for the SAT frequency error measurement on.</pre>

**:CALC:AMPS:RFTX:SAT:FREQ:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:SAT:FREQ:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is -5.0, the maximum is 5.0, the resolution is 1.0, and the default is value is 1.0.
<b>Description</b>	Sets the upper limit for the SAT frequency error measurement. The physical dimension of the number is stated as a Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:AMPS:RFTX:SAT:FREQ:LIM:UPP 200 :CALC:AMPS:RFTX:SAT:FREQ:LIM:UPP? Returns 200.</pre>

**:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is -5.0, the maximum is 5.0, the resolution is 1.0, the default is value is -1.0.
<b>Description</b>	Sets the lower limit for the SAT frequency error measurement. The physical dimension of the number is stated as a Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:AMPS:RFTX:FREQ:ERR:SAT:LIM:LOWer -1 :CALC:AMPS:RFTX:FREQ:ERR:SAT:LIM:LOWer? Returns -1 in this example.</pre>

**:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit[:FAIL]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFTX:FREQ:ERR:ST measurement violated its limits.
<b>Example</b>	:MEAS:AMPS:ARR:RFTX:FREQ:ERR:ST 20 :CALC:AMPS:RFTX:FREQ:ERR:ST:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.

**:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIM:STAT ON Switches the limit check for the ST frequency error measurement on.

**:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is -5.0, the maximum is 5.0, the resolution is 1.0, and the default is value is 1.0.
<b>Description</b>	Sets the upper limit for the ST frequency error measurement. The physical dimension of the number is stated as a Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIM:UPP 1 :CALC:AMPS:RFTX:FREQ:ERR:ST:LIM:UPP? Returns 1.

**:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is -5.0, the maximum is 5.0, the resolution is 1.0, and the default is value is 1.0.
<b>Description</b>	Sets the lower limit for the ST frequency error measurement. The physical dimension of the number is stated as a Hz.
<b>Query</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIM:LOWer -1 :CALC:AMPS:RFTX:FREQ:ERR:ST:LIM:LOWer? Returns -1 in this example.
<b>Example</b>	:CALC:AMPS:RFTX:FREQ:ERR:ST:LIM:LOWer 0 :CALC:AMPS:RFTX:SAT:FREQ:LIM:LOWer? Returns 0 in this example.

**:CALC:AMPS:RFRX:SIN:LIMit[:FAIL]?**

<b>Syntax</b>	:CALC:AMPS:RFRX:SIN:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:AMPS:ARR:RFRX:SIN measurement violated its limits.
<b>Example</b>	:MEAS:AMPS:ARR:RFRX:SIN :CALC:AMPS:RFRX:SIN:LIM? Returns a 0 if any of the Sinad measurement results is out of limits.

**:CALC:AMPS:RFRX:SIN:LIMit:STATe**

<b>Syntax</b>	:CALC:AMPS:RFRX:SIN:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:AMPS:RFRX:SIN:LIM:STAT ON Switches the limit check for the Sinad measurement on.

**:CALC:AMPS:RFRX:SIN:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFRX:SIN:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 100.0, the resolution is 0.1, the default is value is 100.0.
<b>Description</b>	Sets the upper limit for the Sinad measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:AMPS:RFRX:SIN:LIM:UPP 20.00 :CALC:AMPS:RFRX:SIN:LIM:UPP? The query returns the previously set value 20.0.

**:CALC:AMPS:RFRX:SIN:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALC:AMPS:RFRX:SIN:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 100.0, the resolution is 0.1, the default is value is 12.0.
<b>Description</b>	Sets the lower limit for the Sinad measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.

<b>Example</b>	<pre>:CALC:AMPS:RFRX:SIN:LIM:LOW 10.0 :CALC:AMPS:RFRX:SIN:LIM:LOW? The query returns the previously set value 10.0.</pre>
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### 1xEV-DO commands :CALCulate:EVDO:RFTX:FREQuency:LIMit[:FAIL]

<b>Syntax</b>	:CALCulate:EVDO:RFTX:FREQuency:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers boolean number in a string which indicates if the :MEAS:EVDO:ARR:RFTX:FREQ measurement violated its limits.
<b>Example</b>	<pre>:MEAS:EVDO:ARR:RFTX:FREQ 20 :CALC:EVDO:RFTX:FREQ:LIM? The MEASurement command starts 20 frequency measurements. The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.</pre>

### :CALCulate:EVDO:RFTX:FREQuency:LIMit:STATE

<b>Syntax</b>	:CALCulate:EVDO:RFTX:FREQuency:LIMit:STATE <PreDefExp>
<b>Parameters</b>	PreDefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:EVDO:RFTX:FREQ:LIM:STAT ON Switches the limit check for the frequency error measurement on.</pre>

### :CALCulate:EVDO:RFTX:FREQuency:LIMit:UPPER[:DATA]

<b>Syntax</b>	:CALCulate:EVDO:RFTX:FREQuency:LIMit:UPPER[:DATA] <int1>, <PreDefExp>
<b>Parameters</b>	int1 is an integer number. The minimum value for int1 is 0, the maximum is 1000, the default is 300. PreDefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	This command sets the upper limit of the frequency error measurement by band. The physical dimension of the number stated is Hz.
<b>Query</b>	The query form returns the stored settings.
<b>Example</b>	<pre>:CALC:EVDO:RFTX:FREQ:LIM:UPP 310, US800 :CALC:EVDO:RFTX:FREQ:LIM:UPP? US800 The query returns the previously set limit of 310 (hertz).</pre>

**:CALCulate:EVDO:RFTX:FREQuency:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:FREQuency:LIMit:LOWer[:DATA] <int1> <PredefExp>
<b>Parameters</b>	int1 is an integer number. The minimum value for int1 is -1000, the maximum is 0, the default is -300. PredefExp is one of the following predefined expressions: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	This command sets the lower limit of the frequency error measurement by band. The physical dimension of the number stated is Hz.
<b>Query</b>	The query form returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:FREQ:LIM:LOW -310, US800 :CALC:EVDO:RFTX:FREQ:LIM:LOW? US800 The query returns the previously set limit of -310 (hertz).

**:CALCulate:EVDO:RFTX:TIMEoffset:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:TIMEoffset:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the time offset error measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:TIMEoffset? 5 :CALC:EVDO:RFTX:TIM:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:TIMEoffset:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:TIMEoffset:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the time offset error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:TIM:LIM:STAT ON Switches the limit check for the time offset measurement on.

**:CALCulate:EVDO:RFTX:TIMEoffset:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:TIMEoffset:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0, the maximum is 5.0, the resolution is 0.001, the default is value is 1.



<b>Description</b>	This command sets the upper limit for the mobile's transmit time error measurement in microseconds (1E-6 s).
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:TIM:LIM:UPP 5.0 :CALCulate:EVDO:RFTX:TIMEoffset:LIMit:UPPer? Value returned in this example is 5.0.

**:CALCulate:EVDO:RFTX:TIMEoffset:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:TIMEoffset:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -5.0, the maximum is 0, the resolution is 0.001. The default value is -1.0.
<b>Description</b>	This command sets the lower limit for the mobile's transmit time error measurement in microseconds (1E-6 s).
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:TIM:LIM:LOW -3.0 :CALCulate:EVDO:RFTX:TIMEoffset:LIMit:LOWer:DATA? String returned: "-3.0".

**:CALCulate:EVDO:RFTX:POWER:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:EVDO:ARR:RFTX:POW measurement violated the defined limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:POW 20 :CALC:EVDO:RFTX:POW:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:POWER:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWER:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the power measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:POWER:LIM:STAT ON Switches the limit check for the frequency error measurement on.

**:CALCulate:EVDO:RFTX:POWER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWER:LIMit:UPPer[:DATA] <real>, <PredefExp1>, <PredefExp2>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 99.0, the resolution is 0.01 and the default is 2.0. PredefExp1 can take on one of the following values: PCL1   PCL2   PCL3   PCL4   PCL5. Default is PCL1. PredefExp2 is one of the following: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	Sets the upper limit for the mobile's RF output power in a given band and power class. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:POW:LIM:UPP 2.5,PCL1,US800 :CALC:EVDO:RFTX:POW:LIM:UPP? PCL1,US800 Returns 2.5.

**:CALCulate:EVDO:RFTX:FREQuency:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:FREQuency:LIMit:LOWer[:DATA] <real>, <PredefExp1>, <PredefExp2>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -99.0, the maximum is 0.0, the resolution is 0.01 and the default is -99.0. PredefExp1 can take on one of the following values: PCL1   PCL2   PCL3   PCL4   PCL5. Default is PCL1. PredefExp2 is one of the following: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Default is US800.
<b>Description</b>	Sets the lower limit for the mobile's RF output power in a given band and at a given power control level. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:FREQ:LIM:LOW -2.5,PCL1,US800 :CALC:EVDO:RFTX:FREQ:LIM:LOW? PCL1,US800 Returns -2.5.

**:CALCulate:EVDO:RFTX:STANdby:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:STANdby:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the standby power measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:POW:STAN? 1 :CALC:EVDO:RFTX:STAN:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:STANdby:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:STANdby:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:STAN:LIM:STAT ON Switches the limit check for the standby power measurement on.

**:CALCulate:EVDO:RFTX:STANdby:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:STANdby:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is -200, the maximum is 36, the resolution is 0.1, the default value is -61.
<b>Description</b>	Sets the upper limit for the standby power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:STAN:LIM:UPP 1.0 :CALC:EVDO:RFTX:STAN:LIM:UPP? Returns 1.0.

**:CALCulate:EVDO:RFTX:STANdby:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:STANdby:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -70.0, the maximum is 36.0, the resolution is 0.01, the default is value is -70.0.
<b>Description</b>	Sets the lower limit for the standby power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:STAN:LIM:LOW -70.0 :CALC:EVDO:RFTX:STAN:LIM:LOW? Returned value in this example is -70.0.

**:CALCulate:EVDO:RFTX:MINimum:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:MINimum:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the minimum power measurement exceeds the limits.

<b>Example</b>	<pre>:MEAS:EVDO:ARR:RFTX:POW:MIN? 5 :CALC:EVDO:RFTX:MIN:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.</pre>
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**:CALCulate:EVDO:RFTX:MINimum:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:MINimum:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:EVDO:RFTX:MIN:LIM:STAT ON Switches the limit check for the minimum power measurement on.</pre>

**:CALCulate:EVDO:RFTX:MINimum:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:MINimum:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -200, the maximum is 36, the resolution is 0.1, the default is value is -50.
<b>Description</b>	Sets the upper limit for the minimum power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:EVDO:RFTX:MIN:LIM:UPP 36.0 :CALC:EVDO:RFTX:MIN:LIM:UPP? Returns 36.0.</pre>

**:CALCulate:EVDO:RFTX:MINimum:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:MINimum:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -200, the maximum is 36, the resolution is 0.1, the default is value is -70.
<b>Description</b>	This command sets the lower limit. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:EVDO:RFTX:MIN:LIM:LOWer -70.0 :CALC:EVDO:RFTX:MIN:LIM:LOW? Returns -70.0.</pre>

**:CALCulate:EVDO:RFTX:POW:APR:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POW:APR:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the access channel power measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:POW:APR? 1 :CALC:EVDO:RFTX:POW:APR:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:POWER:APRobe:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWER:APRobe:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:POW:APR:LIM:STAT ON</TT>  Switches the limit check for the access channel power measurement on.

**:CALCulate:EVDO:RFTX:POWER:APRobe:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POW:APRobe:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for this parameter is -70.0, the maximum is 36.0, the resolution is 0.1, the default is value is 9.5.
<b>Description</b>	Sets the upper limit for the access channel power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:POW:APR:LIM:UPP 9.5 :CALC:EVDO:RFTX:POW:APR:LIM:UPP? Returns 9.5.

**:CALCulate:EVDO:RFTX:POWER:APRobe:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWER:APRobe:LIMit:LOWer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for this parameter is -70.0, the maximum is 36.0, the resolution is 0.1, the default is value is -9.5.
<b>Description</b>	Sets the upper limit for the access channel power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.

<b>Example</b>	<pre>:CALC:EVDO:RFTX:POW:APR:LIM:LOW -70.0 :CALC:EVDO:RFTX:POW:APR:LIM:LOW? Returns -70.0.</pre>
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**:CALCulate:EVDO:RFTX:POWER:ClosedLoop:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWer:CLosedLoop:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the closed loop power measurement exceeds the limits.
<b>Example</b>	<pre>:MEAS:EVDO:ARR:RFTX:POW:CLOSeD? 1 :CALC:EVDO:RFTX:POW:CLOS:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.</pre>

**:CALCulate:EVDO:RFTX:POWER:CLOSeDloop:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWer:CLOSedloop:LIMit:STATe <Pre-defExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	<pre>:CALC:EVDO:RFTX:POW:CLOS:LIM:STAT ON Switches the limit check for the closed-loop power measurement on.</pre>

**:CALCulate:EVDO:RFTX:POWER:CLOSeDloop:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWer:CLOSed-loop:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0, the maximum is 99, the resolution is 0.1, the default is value is 24.
<b>Description</b>	Sets the upper limit for the closed loop power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:EVDO:RFTX:POW:CLOSedloop:LIM:UPP 36.0 :CALC:EVDO:RFTX:POW:CLOS:LIM:UPP? Returns 36.0.</pre>

**:CALCulate:EVDO:RFTX:POWer:CLOSedloop:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:POWer:CLOSed-loop:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -99, the maximum is 0, the resolution is 0.1, the default is value is -24.
<b>Description</b>	Sets the lower limit for the closed loop power measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:POW:CLOS:LIM:LOWer -70.0 :CALC:EVDO:RFTX:POW:CLOS:LIM:LOW? Returns -70.0.

**:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:EVDO:ARR:RFTX:VERR:RMS measurement violated its limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:RMS 20 :CALC:EVDO:RFTX:VERR:RMS:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp</TT> may take on one of the following predefined expressions: ON OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the RMS vector error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:RMS:LIM:STAT ON Switches the limit check for the RMS-averaged vector error measurement on.

**:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 24.4.

<b>Description</b>	Sets the upper limit for the RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:RMS:LIM:UPP 200 :CALC:EVDO:RFTX:VERR:RMS:LIM:UPP? The query returns the previously set value 200.0.

**:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:RMS:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:RMS:LIM:LOW 200 :CALC:EVDO:RFTX:VERR:RMS:LIM:LOW? The query returns the previously set value 200.0.

**:CALCulate:EVDO:RFTX:VERRor:PEAK:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:PEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:EVDO:ARR:RFTX:VERR:PEAK measurement violated its limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:PEAK 20 :CALC:EVDO:RFTX:VERR:PEAK:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VERRor:PEAK:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:PEAK:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PEAK:LIM:STAT ON Switches the limit check for the peak vector error measurement on.



**:CALCulate:EVDO:RFTX:VError:PEAK:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PEAK:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, and the default is value is 200.0.
<b>Description</b>	Sets the upper limit for the peak vector error measurement. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PEAK:LIM:UPP 200 :CALC:EVDO:RFTX:VERR:PEAK:LIM:UPP? Returns 200.

**:CALCulate:EVDO:RFTX:VErrorr:PEAK:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VErrorr:PEAK:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the upper limit. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PEAK:LIM:LOWer 0 :CALC:EVDO:RFTX:VERR:PEAK:LIM:LOWer? Returns 0 in this example.

**:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:RMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:RMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the RMS phase magnitude measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:PHAS:MAGNitude:RMS? 10 :CALC:EVDO:RFTX:VERR:PHASe:MAGN:RMS:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the result values of the RMS phase magnitude measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:MAGN:RMS:LIM:STAT ON Switches the limit check for the RMS phase magnitude measurement on.

**:CALCulate:EVDO:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. Its minimum value is 0, the maximum is 200, the resolution is 0.1, the default is value is 24.4.
<b>Description</b>	Sets the upper limit of the RMS phase magnitude measurement. The physical dimension of the number stated is percent.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:MAGN:RMS:LIM:UPP 200.0 :CALC:EVDO:RFTX:VERR:PHAS:RMS:LIM:UPP? Returns the setting of 200.0.

**:CALCulate:EVDO:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:PHASe:MAGNitude:RMS:LIMit:LOWer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	This command sets the lower limit of the RMS phase magnitude. The physical dimension of the number stated is percent.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:MAGN:RMS:LIM:LOW 0.0 :CALC:EVDO:RFTX:VERR:PHAS:MAGN:RMS:LIM:UPP? Returns 0.0.

**:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the peak phase magnitude measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:PHAS:MAGNitude:PEAK? 5 :CALC:EVDO:RFTX:PHASe:MAGN:PEAK:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:MAGN:PEAK:LIM:STAT ON Switches the limit check for the peak magnitude measurement on.

**:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 200.0.
<b>Description</b>	Sets the upper limit for the peak phase magnitude. The physical dimension of the number stated is percent.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:MAGN:PEAK:LIM:UPP 200.0 :CALC:EVDO:RFTX:VERR:PHAS:MAGN:PEAK:LIM:UPP? Returns 200.0.

**:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:MAGNitude:PEAK:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit of the peak phase magnitude. The physical dimension of the number stated is percent.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:MAGN:PEAK:LIM:LOW 0.0 :CALC:EVDO:RFTX:VERR:PHAS:MAGN:PEAK:LIM:LOW? Returns 0.0.

**:CALCulate:EVDO:RFTX:VError:PHASe:RMS:LIMit[:FAIL]?**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:RMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the RMS phase error measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:PHAS:RMS? 5 :CALC:EVDO:RFTX:PHASe:RMS:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VError:PHASe:RMS:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:RMS:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the RMS phase error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:RMS:LIM:STAT ON Switches the limit check for the RMS phase error measurement on.

**:CALCulate:EVDO:RFTX:VError:PHASe:RMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:PHASe:RMS:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is 0, the maximum is 45, the resolution is 0.01, the default is value is 14.

<b>Description</b>	Sets the upper limit for the peak vector error measurement. The physical dimension of the number stated is degrees.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:RMS:LIM:UPP 45 :CALC:EVDO:RFTX:VERR:PHAS:RMS:LIM:UPP? The returned result is 45.0.

**:CALCulate:EVDO:RFTX:VERRor:PHASe:RMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VER- Ror:PHASe:RMS:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is 0, the maximum is 45, the resolution is 0.01, the default is value is 0.
<b>Description</b>	Sets the upper limit of the peak vector error measurement. The physical dimension of the number stated is degrees.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:RMS:LIM:LOWer -44.0 :CALC:EVDO:RFTX:VERR:PHAS:RMS:LIM:LOW? The query returns -44.0.

**:CALCulate:EVDO:RFTX:VERRor:PHASe:PEAK:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:PHASe:PEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the peak phase measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:PHAS:PEAK? 5 :CALC:EVDO:RFTX:VERR:PHAS:PEAK:LIM? The query returns <TT>1</TT> if the measurement results were out of limits, or a 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VERRor:PHASe:PEAK:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:PHASe:PEAK:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the peak vector error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:PEAK:LIM:STAT ON Switches the limit check for the peak phase measurement on.

**:CALCulate:EVDO:RFTX:VERRor:PHASe:PEAK:LIMit:UPPer[  
:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VER- Ror:PHASe:PEAK:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -45.0, the maximum is 45.0, the resolution is 0.01, the default is value is 45.0.
<b>Description</b>	Sets the upper limit of the peak phase error. The physical dimension of the number stated is degrees.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHASe:PEAK:LIM:UPP 45 :CALC:EVDO:RFTX:VERR:PHASe:PEAK:LIM:UPP? Returns the upper limit of 45.0 (degrees).

**:CALCulate:EVDO:RFTX:VERRor:PHASe:PEAK:LIMit:LOWer[  
:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VER- Ror:PHASe:PEAK:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -45.0, the maximum is 45.0, the resolution is 0.01, the default is value is 45.0.
<b>Description</b>	Sets the upper limit of the peak phase error measurement. The physical dimension of the number stated is degrees.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:PHAS:PEAK:LIM:LOW 45 :CALC:EVDO:RFTX:VERR:PHAS:PEAK:LIM:LOW? Returns -45.0.

**:CALCulate:EVDO:RFTX:VERRor:IQOFFset:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:IQOFFset:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the origin off-set measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:VERR:IQOF? 20 :CALC:EVDO:RFTX:VERR:OOFF:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VError:IQOffset:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:IQOffset:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the origin offset measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:IQOF:LIM:STAT ON Switches the limit check for the origin offset measurement on.

**:CALCulate:EVDO:RFTX:VError:IQOffset:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:IQOffset:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the minimum is 0.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the upper limit for the origin offset measurement. The physical dimension of the number stated is dBc.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:IQOF:LIM:UPP 0 :CALC:EVDO:RFTX:VERR:OFFset:LIM:UPP? Returns 0 in this case.

**:CALCulate:EVDO:RFTX:VError:IQOffset:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VError:IQOffset:LIMit:LOWer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. Its minimum value is -99.0, the maximum is 0.0, the resolution is 0.1, the default is value is -99.0.
<b>Description</b>	Sets the lower limit for the origin offset measurement. The physical dimension of the number stated is dBc.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:IQOF:LIM:LOW -60.0 :CALC:EVDO:RFTX:VERR:OFFset:LIM:LOW? Returns -60.0.

**:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the IQ imbalance measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:IQIM? 20 :CALC:EVDO:RFTX:VERR:IQIM:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the IQ imbalance measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:IQIM:LIM:STAT ON Switches the limit check for the IQ imbalance measurement on.

**:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit:UPPer[:DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the maximum is 0.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Set this sets upper limit. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:IQIM:LIM:UPP 0 :CALC:EVDO:RFTX:VERR:IQIM:LIM:UPP? Returns 0.

**:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:VERRor:IQIMbalance:LIMit:LOWer[:DATA] <PredefExp>
<b>Parameters</b>	PredefExp is a floating point real number. The minimum value is -99.0, the maximum is 0.0, the resolution is 0.1, the default is value is -99.0.



<b>Description</b>	This command sets lower limit for the IQ imbalance measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:VERR:IQIM:LIM:LOW -99.0 :CALC:EVDO:RFTX:VERR:IQIM:LIM:LOW? Returns -99.0.

**:CALCulate:EVDO:RFTX:WQQuality:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:WQQuality:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the waveform quality measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:WQU? 1 :CALC:EVDO:RFTX:WQU:LIM? The query returns 1 if the measurement results were out of limits, or 0 if the results were within limits.

**:CALCulate:EVDO:RFTX:WQQuality:LIMit:STATe**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:WQQuality:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the waveform quality measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:WQU:LIM:STAT ON Switches the limit check for the waveform quality measurement on.

**:CALCulate:EVDO:RFTX:WQQuality:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:WQQuality:LIMit:UPPer[:DATA] <PredefExp>
<b>Parameters</b>	PredefExp is a floating point real number. The minimum value for this parameter is 0.90, the maximum is 1.0, the resolution is 0.0001, the default is value is 1.0.
<b>Description</b>	Sets the upper limit for the waveform quality measurement.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:WQU:LIM:UPP 1.0 :CALC:EVDO:RFTX:WQU:LIM:UPP? Returns 1.0.

**:CALCulate:EVDO:RFTX:WQQuality:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:WQQuality:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is 0.0, the maximum is 1.0, the resolution is 0.0001, the default is value is 0.944.
<b>Description</b>	Sets the lower limit for the waveform quality measurement.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:WQU:LIM:LOW 0.944 :CALC:EVDO:RFTX:WQU:LIM:LOW? Returns 0.944.

**:CALCulate:EVDO:RFTX:CODEdomain:NOISe:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:CODEdomain:NOISe:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the code channel noise measurement exceeds the limits.
<b>Example</b>	:MEAS:EVDO:ARR:RFTX:CODE:NOIS? 10 :CALC:EVDO:RFTX:CODE:NOIS:LIM?

**:CALCulate:EVDO:RFTX:CODEdomain:NOISe:LIMit:STATE**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:CODEdomain:NOISe:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the code channel noise measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFTX:CODE:NOIS:LIM:STAT ON Switches the limit check for the code channel noise measurement on.

**:CALCulate:EVDO:RFTX:CODEdomain:NOISe:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:CODEdo- main:NOISe:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -99, the maximum is 0, the resolution is 0.1, the default is value is -23.
<b>Description</b>	Sets the upper limit for the code channel noise measurement. The physical dimension of the number stated is dBm.

<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:CODE:NOIS:LIM:UPP -25.0 :CALC:EVDO:RFTX:CODE:NOIS:LIM:UPP? Value returned in this example: -23.0.

**:CALCulate:EVDO:RFTX:CODEdomain:NOISE:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFTX:CODEdo- main:NOISe:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -40, the maximum is 0, the resolution is 0.1, the default is value is -40.
<b>Description</b>	Sets the lower limit for the code channel noise measurement. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:EVDO:RFTX:CODE:NOIS:LIM:LOW -40.0 :CALC:EVDO:RFTX:CODE:NOIS:LIM:LOW? Value returned in this example: -40.0.

**:CALCulate:EVDO:RFSPectrum:MSpectrum:VALue**

<b>Syntax</b>	:CALCulate:EVDO:RFSPectrum:MSpectrum:VALue <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -5,000,000.0, the maximum is 5,000,000.0. The minimum resolution possible is 0.1.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers back an (interpolated) measurement result value of the modulation spectrum curve at the frequency specified with the real1 parameter. real1 is interpreted as an offset from the carrier (i.e. the transmission frequency). The string returned will contain one floating point real number. The physical dimension of the measurement result value returned is dBc.
	<b>Notes</b>
	<ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:EVDO:RFSP:MSP:AVG command to do so.</li> <li>- The :CALC:EVDO:RFSP:MSP:VAL command is not really a measurement - it is an interpolation of the spectrum curve for the frequency specified.</li> </ul>
<b>Example</b>	:MEAS:EVDO:RFSP:MSP:AVG 20 :CALC:EVDO:RFSP:MSP:VAL? -50000 This command will interpolate a modulation spectrum measurement at an offset of 50 kHz to the carrier. The value returned in this example is: "-4.7".

**:CALCulate:EVDO:RFSPectrum:MSpectrum:MAXPeak**

<b>Syntax</b>	:CALCulate:EVDO:RFSPectrum:MSpectrum:MAXPeak?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers back the frequency offset (in Hz) from the carrier and the maximum value of the measured modulation spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dBc.
	<b>Notes</b> <ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:EVDO:RFSP:MSP:AVG command to do so.</li> <li>- The :CALC:EVDO:RFSP:MSP:MAXP command is not really a measurement - it is a readout of the spectrum curve.</li> </ul>
<b>Example</b>	<pre>:MEAS:EVDO:RFSP:MSP:AVG 20 :CALC:EVDO:RFSP:MSP:MAXP?</pre> <p>This command will read at the modulation spectrum measurement maximum the frequency offset to the carrier and the measurement result value. The values returned in this example is: " ; -67700.0 , -5.2".</p>

**:CALCulate:EVDO:  
RFSpectrum:ACPM:MODulation:FREQ[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFSpectrum:ACPM:MODulation:FREQ[:DATA] <int1>, <int2>, ... <int12> [, <PredefExp>]
<b>Parameters</b>	int1 through int12 are integer values representing frequency offsets (in kHz). There minimum value is 700 and the maximum is 2500. PredefExp is one of the following expressions: US800   USPCS   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. Each of these expressions characterizes a frequency band for which the frequencies apply.
<b>Description</b>	This command sets the 12 frequency offsets from the carrier at which adjacent channel power shall be measured. A set of offsets can be defined for each individual band.
<b>Query</b>	Returns the 12 frequencies to be sampled by the ACP measurement. A frequency band should be specified (see PredefExp above).
<b>Example</b>	<pre>:CALC:EVDO:RFSP:ACPM:MOD:FREQ:DATA 700,750,800,890, 1000,1250,1400,1600,1800,1980,2200,2400,US800 :CALC:EVDO:RFSP:ACPM:MOD:FREQ:DATA? US800</pre> <p>The values returned in this example: 700,750,800,890,1000,1250,1400,1600,1800,1980,2200,2400</p>

**:CALCulate:EVDO:RFSpectrum:ACPM:MODulation:LIMit[:F  
AIL]**

<b>Syntax</b>	:CALCulate:EVDO:RFSpectrum:ACPM:MODulation:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.

<b>Query</b>	This command delivers back 12 boolean numbers in a string, separated by commas. These numbers indicate whether the 29 single measurement result values of the MEAS:EVDO:RFSP:ACPM:MOD measurement did violate their individual limits (set with the commands explained below). Every boolean number represents the result of the limit check of one of the 23 measurement result values. The first value will give the result of the limit check at -1.8 MHz offset to the carrier, the second one for -1.6 MHz offset to the carrier and so on. While a 0 delivered back on any position means that the related measurement result value did not exceed the limits, a 1 indicates that at least one limit was violated by the measurement result value.
<b>Example</b>	:MEAS:EVDO:BLOCKdata:MSpectrum:AVG 20 :CALC:EVDO:RFSP:ACPM:MOD:LIM?

**:CALCulate:EVDO:RFSPectrum:ACPM:MODulation:LIMit:STATe**

<b>Syntax</b>	:CALCulate[:EVDO]:RFSPectrum:ACPM:MODulation:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the MEAS:EVDO:RFSP:ACPM:MOD measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:EVDO:RFSP:ACPM:MOD:LIM:STAT ON Switches the limit check of the ACPM of the modulation spectrum measurement on.

**:CALCulate:EVDO:RFSPectrum:ACPM:MODulation:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFSPectrum:ACPM:MODulation:UPPer[:DATA] <real1>,<real2>, ... <real12> [, <PredefExp>]
<b>Parameters</b>	real1 through real12 represent 12 floating point real numbers. The minimum value is -100.0, the maximum is 10.0, the resolution is 0.01. PredefExp is an optional predefined value used to select the band for which the upper limit values apply. Allowable values are: US800   USPCS   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800.
<b>Description</b>	This command sets the 12 levels used for upper limits at the 12 frequency offsets used in the ACPM measurement. The levels are in dB.
<b>Query</b>	Returns 12 floating point values.
<b>Example</b>	:CALC:EVDO:RFSP:ACPM:MOD:UPP:DATA -42,-42,-42,-42,-42,-42,-42,-42,-42,-42,-42,-42 :CALC:EVDO:RFSP:ACPM:MOD:UPPer:DATA? US800 The values returned in this example: -42,-42,-42,-42,-42,-42,-42,-42,-42,-42,-42,-42

**:CALCulate:EVDO:RFSpectrum:ACPM:MODulation:UPPer:EN  
ABLE[:DATA]**

<b>Syntax</b>	<code>:CALCulate:EVDO:RFSpectrum:ACPM:MODulation:UPPer:ENABLE[:DATA] &lt;boolean1&gt;, &lt;boolean2&gt;, ... &lt;boolean12&gt; [, &lt;PredefExp&gt;]</code>
<b>Parameters</b>	boolean1 through boolean12 are 12 boolean numbers. PredefExp is an optional expression which can take on one of the following values: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800
<b>Description</b>	This command sets the 12 boolean numbers used to indicate if the upper limits are to be applied to the adjacent channel measurements (ACPM). A 0 means that the upper limit is not applicable while a 1 indicates that it does apply. The additional parameter sets the frequency band for which the limit settings are applicable. The upper limits are set with the <code>:CALC:EVDO:RFSpectrum:ACPM:MODulation:UPPer[:DATA]</code> command.
<b>Query</b>	Returns the current settings for the twelve limits.
<b>Example</b>	<code>:CALC:EVDO:RFSP:ACPM:MOD:UPPer:ENABLE:DATA 0,0,0,1,1,1,1,1,1,1,1,1,US800 :CALC:EVDO:RFSP:ACPM:MOD:UPPer:ENABLE:DATA? US800</code> The values returned in this example: 0,0,0,1,1,1,1,1,1,1,1,1

**:CALCulate:EVDO:RFSpectrum:ACPM:MODulation:LOWer[:D  
ATA]**

<b>Syntax</b>	<code>:CALCulate:EVDO:RFSpectrum:ACPM:MODulation:LOWer[:DATA] &lt;real1&gt;, &lt;real2&gt;, ... &lt;real12&gt; [, &lt;PredefExp&gt;]</code>
<b>Parameters</b>	real1 through real12 represent 12 floating point real numbers. The minimum value is -100.0, the maximum is 10.0, the resolution is 0.01. PredefExp is an optional predefined value used to select the band for which the lower limit values apply. Allowable values are: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800.
<b>Description</b>	This command sets the 12 levels used for lower limits at the 12 frequency offsets used in the ACPM measurement. The levels are in dB.
<b>Query</b>	Returns 12 floating point values.
<b>Example</b>	<code>:CALC:EVDO:RFSP:ACPM:MOD:LOWer:DATA -10,-10,-10,-60,-60,-60,-60,-80,-80,-80,-120,-120,US800 :CALC:EVDO:RFSP:ACPM:MOD:LOWer:DATA? US800</code> The values returned are the values set (-10, -10, -10, -60 etc.)

**:CALCulate:EVDO:RFSPectrum:ACPM:MODulation:LOWer:EN  
ABLE[:DATA]**

<b>Syntax</b>	:CALCulate:EVDO:RFSPectrum:ACPM:MODulation:LOWer:ENABLE[:DATA] <boolean1>, <boolean2>, ... <boolean12> [<PredefExp>]
<b>Parameters</b>	boolean1 through boolean12 are 12 boolean numbers. PredefExp is an optional expression which can take on one of the following values: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800
<b>Description</b>	This command sets the 12 boolean numbers used to indicate if the lower limits are to be applied to the adjacent channel measurements (ACPM). A 0 means that the lower limit is not applicable while a 1 indicates that it does apply. The additional parameter sets the frequency band for which the limit settings are applicable. The lower limits are set with the :CALC:EVDO:RFSPectrum:ACPM:MODulation:LOWer[:DATA] command.
<b>Query</b>	Returns the current settings for the twelve limits.
<b>Example</b>	:CALC:EVDO:RFSP:ACPM:MOD:LOWer:ENABLE:DATA 0,0,0,1,1,1,1,1,1,1,1,1,US800 :CALC:EVDO:RFSP:ACPM:MOD:LOWer:ENABLE:DATA? US800 The values returned in this example: 0,0,0,1,1,1,1,1,1,1,1,1

**WCDMA commands :CALCulate:WCDMa:RFTX:MAVerage?**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MAVerage?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:MEAS:WCDM:RFTX:FREQ :CALC:RES ...(other SCPI commands)... :CALC:WCDM:RFTX:MAV? In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the :CALC:WCDM:RFTX:MAV command is used to read out the average frequency deviation of the mobile. The string returned in this example is "12.9".

**:CALCulate:WCDMa:RFTX:MMINimum?**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MMINimum?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>minimum</b> measurement result value of the TX measurement started last. The string delivered will contain as many minimum values as measurement types performed. The single minimum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre>:MEAS:WCDM:RFTX:FREQ :CALC:RES ...(other SCPI commands)... :CALC:WCDM:RFTX:MMIN?</pre> <p>In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the <code>:CALC:WCDM:RFTX:MMAx</code> command is used to read out the minimum frequency deviation of the mobile. The string returned in this example is "10.2".</p>

**:CALCulate:WCDMa:RFTX:MMAximum?**

<b>Syntax</b>	<code>:CALCulate:WCDMa:RFTX:MMAximum?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>maximum</b> measurement result value of the TX measurement started last. The string delivered will contain as many maximum values as measurement types performed. The single maximum values will always have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre>:MEAS:WCDM:RFTX:FREQ :CALC:RES ...(other SCPI commands)... :CALC:WCDM:RFTX:MMAx?</pre> <p>In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the <code>:CALC:WCDM:RFTX:MMAx</code> command is used to read out the maximum frequency deviation of the mobile. The string returned in this example is "22.1".</p>

**:CALCulate:WCDMa:RFTX:MSIGma?**

<b>Syntax</b>	<code>:CALCulate:WCDMa:RFTX:MSIGma?</code>
<b>Parameters</b>	There are no parameters.



<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the <b>mean value</b> and the <b>standard deviation</b> of the TX measurement last started. The string delivered contains as many pairs of mean and standard deviation values as measurement types performed. The individual values all have the format of floating point real numbers and will be separated by commas.
<b>Example</b>	<pre>:MEAS:WCDM:RFTX:FREQ :CALC:RES ...(other SCPI commands)... :CALCulate:WCDM:RFTX:MSIG?</pre> <p>In this example, first a continuous measurement of the mobile's frequency error is started. After some time, the <code>:CALC:WCDM:RFTX:MSIG</code> command is used to read out the mean frequency error and its standard deviation. The string returned in this example is "15.7,3.4".</p>

**:CALCulate:WCDMa:RFTX:FREQ:LIMit[:FAIL]**

<b>Syntax</b>	<code>:CALCulate:WCDMa:RFTX:FREQ:LIMit[:FAIL]?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers boolean number in a string which indicates if the <code>:MEAS:WCDMA:ARR:RFTX:FREQ</code> measurement violated its limits.
<b>Example</b>	<pre>:MEAS:WCDMA:ARR:RFTX:FREQ 20 :CALC:WCDM:RFTX:FREQ:LIM?</pre> <p>The MEASurement command starts 20 frequency measurements. The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.</p>

**:CALCulate:WCDMa:RFTX:FREQuency:LIMit:STATe**

<b>Syntax</b>	<code>:CALCulate:WCDMa:RFTX:FREQuency:LIMit:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:WCDM:RFTX:FREQ:LIM:STAT ON</pre> <p>Switches the limit check for the frequency error measurement on.</p>

**:CALCulate:WCDMA:RFTX:FREQuency:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:FREQuency:LIMit:UPPer[:DATA] <real1>
<b>Parameters</b>	real1 is a real number. The minimum value for real1 is 0, the maximum is 10000, the resolution is 0.1 and the default is 200.
<b>Description</b>	This command sets the upper limit of the frequency error measurement by band. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:FREQ:LIM:UPP 310 :CALC:WCDM:RFTX:FREQ:LIM:UPP? The query returns the previously set limit of 310 (hertz).

**:CALCulate:WCDMA:RFTX:FREQuency:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:FREQuency:LIMit:LOWer[:DATA] <real1>
<b>Parameters</b>	real1 is a real number. The minimum value for real1 is -10000, the maximum is 0, the resolution is 0.1 and the default is -200.
<b>Description</b>	This command sets the lower limit of the frequency error measurement by band. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:FREQ:LIM:LOW -310 :CALC:WCDM:RFTX:FREQ:LIM:LOW? The query returns the previously set limit of -310 (hertz).

**:CALCulate:WCDMA:RFTX:POWer:MEAN:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:POWer:MEAN:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:POW:MEAN measurement violated the defined limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:POW:MEAN 20 :CALC:WCDM:RFTX:POW:MEAN:LIM? The query returns 1 if any of the 20 measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the mean power measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:MEAN:LIM:STAT ON Switches the limit check for the frequency error measurement on.

**:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:UPPer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 50.0, the resolution is 0.1 and the default is 34.0.
<b>Description</b>	Sets the upper limit for the mobile's RF output mean power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:MEAN:LIM:UPP 12.5 :CALC:WCDM:RFTX:POW:MEAN:LIM:UPP? Returns 12.5.

**:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:LOWer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 50.0, the resolution is 0.1 and the default is -60.0.
<b>Description</b>	Sets the lower limit for the mobile's RF output mean power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:MEAN:LIM:LOW -32.5 :CALC:WCDM:RFTX:POW:MEAN:LIM:LOW? Returns -32.5.

**:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:MAXimum:UPPer:  
[DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit :MAXimum:UPPer[:DATA] <Real1>,<Real2>,<Real3>,<Real4>
<b>Parameters</b>	realx are floating point real numbers. The minimum value of <Real1> is 10.0, the maximum is 44.0 and the default is 34.0. The minimum value of <Real2> is 4.0, the maximum is 38.0 and the default is 28.0. The minimum value of <Real3> is 1.0, the maximum is 35.0 and the default is 25.0. The minimum value of <Real4> is -1.0, the maximum is 33.0 and the default is 23.0. The resolution of all values is 0.1.
<b>Description</b>	Sets the upper limits for the mobile's RF output mean maximum power for the power classes 1, 2, 3 and 4. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:MEAN:LIM:MAX:UPP 35,29,26,24 :CALC:WCDM:RFTX:POW:MEAN:MAX:LIM:UPP? Returns 35.0,29.0,26.0,24.0.

**:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:MAXimum:LOWer:  
[DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:MAXi- mum:LOWer[:DATA] <Real1>,<Real2>,<Real3>,<Real4>
<b>Parameters</b>	realx are floating point real numbers. The minimum value of <Real1> is 10.0, the maximum is 44.0 and the default is 30.0. The minimum value of <Real2> is 4.0, the maximum is 38.0 and the default is 24.0. The minimum value of <Real3> is 1.0, the maximum is 35.0 and the default is 21.0. The minimum value of <Real4> is -1.0, the maximum is 33.0 and the default is 19.0. The resolution of all values is 0.1.
<b>Description</b>	Sets the lower limits for the mobile's RF output mean maximum power for the power classes 1, 2, 3 and 4. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:MEAN:LIM:MAX:LOW 29,23,20,18 :CALC:WCDM:RFTX:POW:MEAN:MAX:LIM:LOW? Returns 29.0,23.0,20.0,18.0.

**:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:MINimum:UPPer[:DAT  
A]**

<b>Syntax</b>	CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:MINi- mum:UPPer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 0.0, the resolution is 0.1 and the default is -50.0.

<b>Description</b>	Sets the upper limit for the mobile's RF mean minimum power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:MEAN:LIM:MIN:UPP -40.5 :CALC:WCDM:RFTX:POW:MEAN:LIM:MIN:UPP? Returns -40.5.

**:CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:MINimum:LOWer:[DATA]**

<b>Syntax</b>	CALCulate:WCDMa:RFTX:POWer:MEAN:LIMit:MINimum:LOWer:[DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 0.0, the resolution is 0.1 and the default is -120.0.
<b>Description</b>	Sets the lower limit for the mobile's RF mean minimum power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:MEAN:LIM:MIN:LOW -60.5 :CALC:WCDM:RFTX:POW:MEAN:LIM:MIN:LOW? Returns -60.5.

**CALCulate:WCDMa:RFTX:POWer:PEAK:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:POWer:PEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:POW:PEAK measurement violated the defined limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:PEAK:POW 20 :CALC:WCDM:RFTX:POW:PEAK:LIM? Returns 0 if any of the 20 power measurements was out of limits, and 1 if all results were within limits.

**:CALCulate:WCDMa:RFTX:POWer:PEAK:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:POWer:PEAK:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: ON OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the peak power measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POWer:PEAK:LIM:STAT ON Switches the limit check for the frequency error measurement on

**:CALCulate:WCDMA:RFTX:POWer:PEAK:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:POWer:PEAK:LIMit:UPPer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 50.0, the resolution is 0.1 and the default is 34.0.
<b>Description</b>	Sets the upper limit for the mobile's RF output peak power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:PEAK:LIM:UPP 2.5 :CALC:WCDM:RFTX:POW:PEAK:LIM:UPP? Returns 2.5.

**:CALCulate:WCDMA:RFTX:POWer:PEAK:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:POWer:PEAK:LIMit:LOWer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 50.0, the resolution is 0.1 and the default is -60.0.
<b>Description</b>	Sets the lower limit for the mobile's RF output peak power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:POW:PEAK:LIM:LOW -2.5 :CALC:WCDM:RFTX:POW:PEAK:LIM:LOW? Returns -2.5.

**:CALCulate:WCDMA:RFTX:CPOWer:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:CPOWer:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:CPOW measurement violated the defined limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:CPOW 20 :CALC:WCDM:RFTX:CPOW:LIM? Returns 1 if any of the 20 power measurements was out of limits, and 0 if all results were inside limits.

**:CALCulate:WCDMA:RFTX:CPOWer:LIMit:STATE**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:CPOWer:LIMit:STATE <PreDefExp>
<b>Parameters</b>	PreDefExp can take on one of the following values: ON   OFF. The default is ON.

<b>Description</b>	This command switches the check of the measurement result values of the channel power measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:CPOW:LIM:STAT ON Switches the limit check for the frequency error measurement on.

**:CALCulate:WCDMa:RFTX:CPOWer:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:CPOWer:LIMit:UPPer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 50.0, the resolution is 0.1 and the default is 34.0.
<b>Description</b>	Sets the upper limit for the mobile's RF output channel power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:CPOW:LIM:UPP 2.5 :CALC:WCDM:RFTX:CPOW:LIM:UPP? Returns 2.5.

**:CALCulate:WCDMa:RFTX:CPOWer:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:CPOWer:LIMit:LOWer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is -120.0, the maximum is 50.0, the resolution is 0.1 and the default is -60.0.
<b>Description</b>	Sets the lower limit for the mobile's RF output channel power. The physical dimension of the number stated is dBm.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:CPOW:LIM:LOW -2.5 :CALC:WCDM:RFTX:CPOW:LIM:LOW? Returns -2.5.

**:CALCulate:WCDMa:RFTX:MODQuality:ALL:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:ALL:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:MODQ:ALL measurement violated its limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:ALL 20 :CALC:WCDM:RFTX:MODQ:ALL:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDma:RFTX:MODQuality:ALL:LIMit:STATE**

<b>Syntax</b>	:CALCulate:WCDma:RFTX:MODQuality:ALL:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of all modulation quality measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:ALL:LIM:STAT ON Switches the limit check for all modulation quality measurement on.

**:CALCulate:WCDma:RFTX:MODQuality:ERMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDma:RFTX:MODQuality:ERMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:MODQ:ERMS measurement violated its limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:ERMS 20 :CALC:WCDM:RFTX:MODQ:ERMS:LIM? Returns 1 if any of the EVM RMS vector error measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDma:RFTX:MODQuality:ERMS:LIMit:STATE**

<b>Syntax</b>	:CALCulate:WCDma:RFTX:MODQuality:ERMS:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the EVM RMS vector error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:ERMS:LIM:STAT ON Switches the limit check for the EVM RMS-averaged vector error measurement on.

**:CALCulate:WCDma:RFTX:MODQuality:ERMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDma:RFTX:MODQuality:ERMS:LIMit:UPPer [:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 17.5.



<b>Description</b>	Sets the upper limit for the EVM RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:ERMS:LIM:UPP 200 :CALC:WCDM:RFTX:MODQ:ERMS:LIM:UPP? The query returns the previously set value 200.0.

**:CALCulate:WCDMa:RFTX:MODQuality:ERMS:LIMit:Lower[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:ERMS:LIMit:Lower[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the EVM RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:ERMS:LIM:LOW 200 :CALC:WCDM:RFTX:MODQ:ERMS:LIM:LOW? The query returns the previously set value 200.0.

**:CALCulate:WCDMa:RFTX:MODQuality:EPEAK:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:EPEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:MODQ:EPEA measurement violated its limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:EPEA 20 :CALC:WCDM:RFTX:MODQ:EPEA:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.

**:CALCulate:WCDMa:RFTX:MODQuality:EPEAK:LIMit:STATE**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:EPEAK:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:EPEA:LIM:STAT ON Switches the limit check for the EVM peak vector error measurement on.

**:CALCulate:WCDMA:RFTX:MODQuality:EPEAK:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:EPEAK:LIMit:UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1 and the default is value is 50.0.
<b>Description</b>	Sets the upper limit for the EVM peak vector error measurement. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:EPEA:LIM:UPP 200 :CALC:WCDM:RFTX:MODQ:EPEA:LIM:UPP? Returns 200.

**:CALCulate:WCDMA:RFTX:MODQuality:EPEAK:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:EPEAK:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the EVM peak vector error measurement. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:EPEA:LIM:LOW 0 :CALC:WCDM:RFTX:MODQ:EPEA:LIM:LOW? Returns 0 in this example.

**:CALCulate:WCDMA:RFTX:MODQuality:MRMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MRMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:MODQ:MRMS measurement violated its limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:MRMS 20 :CALC:WCDM:RFTX:MODQ:MRMS:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMa:RFTX:MODQuality:MRMS:LIMit:STATE**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MRMS:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the magnitude RMS vector error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:MRMS:LIM:STAT ON Switches the limit check for the magnitude RMS-averaged vector error measurement on.

**:CALCulate:WCDMa:RFTX:MODQuality:MRMS:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MRMS:LIMit:UPPer: [DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 17.5.
<b>Description</b>	Sets the upper limit for the magnitude RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:MRMS:LIM:UPP 200 :CALC:WCDM:RFTX:MODQ:MRMS:LIM:UPP? The query returns the previously set value 200.0.

**:CALCulate:WCDMa:RFTX:MODQuality:MRMS:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MRMS:LIMit:LOWer: [DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the magnitude RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:MRMS:LIM:LOW 200 :CALC:WCDM:RFTX:MODQ:MRMS:LIM:LOW? The query returns the previously set value 200.0.

**:CALCulate:WCDMa:RFTX:MODQuality:MPEAK:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MPEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:MODQ:MPEA measurement violated its limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:MPEA 20 :CALC:WCDM:RFTX:MODQ:MPEA:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.

**:CALCulate:WCDMa:RFTX:MODQuality:MPEAk:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MPEAk:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:MPEA:LIM:STAT ON Switches the limit check for the magnitude peak vector error measurement on.

**:CALCulate:WCDMa:RFTX:MODQuality:MPEAk:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MPEAk:LIMit:UPPer: [DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, and the default is value is 50.0.
<b>Description</b>	Sets the upper limit for the magnitude peak vector error measurement. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:MPEA:LIM:UPP 200 :CALC:WCDM:RFTX:MODQ:MPEA:LIM:UPP? Returns 200.

**:CALCulate:WCDMa:RFTX:MODQuality:MPEAk:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:MPEAk:LIMit:LOWer: [DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 200.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the magnitude peak vector error measurement. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:MPEA:LIM:LOW 0 :CALC:WCDM:RFTX:MODQ:MPEA:LIM:LOW? Returns 0 in this example.

**:CALCulate:WCDma:RFTX:MODQuality:PRMS:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDma:RFTX:MODQuality:PRMS:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:MODQ:PRMS measurement violated its limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:PRMS 20 :CALC:WCDM:RFTX:MODQ:PRMS:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDma:RFTX:MODQuality:PRMS:LIMit:STATE**

<b>Syntax</b>	:CALCulate:WCDma:RFTX:MODQuality:PRMS:LIMit:STATE <PredefExp>
<b>Parameters</b>	PredefExp may take on one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the Phase RMS vector error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:PRMS:LIM:STAT ON Switches the limit check for the Phase RMS-averaged vector error measurement on.

**:CALCulate:WCDma:RFTX:MODQuality:PRMS:LIMit:UPPer:  
[DATA]**

<b>Syntax</b>	:CALCulate:WCDma:RFTX:MODQuality:PRMS:LIMit:UPPer: [DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 180.0, the resolution is 0.1, the default is value is 10.0.
<b>Description</b>	Sets the upper limit for the Phase RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:PRMS:LIM:UPP 200 :CALC:WCDM:RFTX:MODQ:PRMS:LIM:UPP? The query returns the previously set value 200.0.

**:CALCulate:WCDMa:RFTX:MODQuality:PRMS:LIMit:LOWer:  
[DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:PRMS:LIMit:LOWer: [DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is 0.0, the maximum is 180.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the Phase RMS average vector error. The physical dimension of the number stated is percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:PRMS:LIM:LOW 200 :CALC:WCDM:RFTX:MODQ:PRMS:LIM:LOW? The query returns the previously set value 200.0.

**:CALCulate:WCDMa:RFTX:MODQuality:PPEAK:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:PPEAK:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFTX:MODQ:PPEA measurement violated its limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:PPEA 20 :CALC:WCDM:RFTX:MODQ:PPEA:LIM? Returns 0 if all 20 results are within limits, or 1 if any result is outside the limits.

**:CALCulate:WCDMa:RFTX:MODQuality:PPEAK:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:PPEAK:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:PPEA:LIM:STAT ON Switches the limit check for the phase peak vector error measurement on.

**:CALCulate:WCDMa:RFTX:MODQuality:PPEAk:LIMit:UPPer[  
:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:PPEAk:LIMit:UPPer:[DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 180.0, the resolution is 0.1, and the default is value is 45.0.
<b>Description</b>	Sets the upper limit for the phase peak vector error measurement. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:PPEA:LIM:UPP 200 :CALC:WCDM:RFTX:MODQ:PPEA:LIM:UPP? Returns 200.

**:CALCulate:WCDMa:RFTX:MODQuality:PPEAk:LIMit:LOWer[  
:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:PPEAk:LIMit:LOWer:[DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is 0.0, the maximum is 180.0, the resolution is 0.1, the default is value is 0.0.
<b>Description</b>	Sets the lower limit for the Phase peak vector error measurement. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:PPEA:LIM:LOW 0 :CALC:WCDM:RFTX:MODQ:PPEA:LIM:LOW? Returns 0 in this example.

**:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the waveform quality measurement exceeds the limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:RHO? 1 :CALC:WCDM:RFTX:MODQ:RHO:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the waveform quality measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:RHO:LIM:STAT ON Switches the limit check for the waveform quality measurement on.

**:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit:UPPer [ :DATA ]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit:UPPer [ :DATA ] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is 0.0, the maximum is 1.0, the resolution is 0.0001, the default is value is 1.0.
<b>Description</b>	Sets the upper limit for the waveform quality measurement.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:RHO:LIM:UPP 1.0 :CALC:WCDM:RFTX:MODQ:RHO:LIM:UPP? Returns 1.0.

**:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit:LOWer [ :DATA ]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:RHO:LIMit:LOWer [ :DATA ] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for this parameter is 0.0, the maximum is 1.0, the resolution is 0.0001, the default is value is 0.944.
<b>Description</b>	Sets the lower limit for the waveform quality measurement.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:RHO:LIM:LOW 0.944 :CALC:WCDM:RFTX:MODQ:RHO:LIM:LOW? Returns 0.944.



**:CALCulate:WCDMa:RFTX:MODQuality:IQOffset:LIMit  
[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:IQOffset:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the origin offset measurement exceeds the limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:IQOF? 20 :CALC:WCDM:RFTX:MODQ:IQOF:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMa:RFTX:MODQuality:IQOffset:LIMit  
:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:IQOffset:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the origin offset measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:IQOF:LIM:STAT ON Switches the limit check for the origin offset measurement on.

**:CALCulate:WCDMa:RFTX:MODQuality:IQOffset:LIMit  
:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:IQOffset:LIMit:UPPer[: DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -120.0, the minimum is 0.0, the resolution is 0.1, the default is value is -15.0.
<b>Description</b>	Sets the upper limit for the origin offset measurement. The physical dimension of the number stated is dBc.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:IQOF:LIM:UPP 0 :CALC:WCDM:RFTX:MODQ:IQOF:LIM:UPP? Returns 0 in this case.

**:CALCulate:WCDMA:RFTX:MODQuality:IQOffset:LIMit  
:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:MODQuality:IQOffset:LIMit:LOWer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. Its minimum value is -120.0, the maximum is 0.0, the resolution is 0.1, the default is value is -120.0.
<b>Description</b>	Sets the lower limit for the origin offset measurement. The physical dimension of the number stated is dBc.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:IQOF:LIM:LOW -60.0 :CALC:WCDM:RFTX:MODQ:IQOF:LIM:LOW? Returns -60.0.

**:CALCulate:WCDMA:RFTX:MODQuality:IQIMbalance:LIMit  
[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:MODQuality:IQIMbalance:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the IQ imbalance measurement exceeds the limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:MODQ:IQIM? 20 :CALC:WCDM:RFTX:MODQ:IQIM:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMA:RFTX:MODQuality:IQIMbalance:LIMit  
:STATe**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:MODQuality:IQIMbalance:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the IQ imbalance measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:IQIM:LIM:STAT ON Switches the limit check for the IQ imbalance measurement on.

**:CALCulate:WCDMa:RFTX:MODQuality:IQIMbalance:LIMit  
:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:IQIMbalance:LIMit :UPPer[:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for parameter is -120.0, the maximum is 0.0, the resolution is 0.1, the default is value is -25.0.
<b>Description</b>	This command sets the upper limit for the IQ imbalance measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:IQIM:LIM:UPP 0 :CALC:WCDM:RFTX:MODQ:IQIM:LIM:UPP? Returns 0.

**:CALCulate:WCDMa:RFTX:MODQuality:IQIMbalance:LIMit  
:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:MODQuality:IQIMbalance:LIMit :LOWer[:DATA] <PredefExp>
<b>Parameters</b>	PredefExp is a floating point real number. The minimum value is -120.0, the maximum is 0.0, the resolution is 0.1, the default is value is -120.0.
<b>Description</b>	This command sets the lower limit for the IQ imbalance measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:MODQ:IQIM:LIM:LOW -99.0 :CALC:WCDM:RFTX:MODQ:IQIM:LIM:LOW? Returns -99.0.

**:CALCulate:WCDMa:RFTX:INNERloop:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:INNERloop:LIMit[:FAIL]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a string of as many boolean numbers as slots should be evaluated. They indicate if the inner loop power control measurement do exceed their limits in the respective slot.
<b>Example</b>	:MEAS:WCDM:ARR:RFTX:INNE? 10 :CALC:WCDM:RFTX:INNE:LIM? The query returns a boolean number for every evaluated slot. The numbers are separated with commas. The number is 1, if the measurement result in this slot was out of limits, or 0 if the result was within the limits.

**:CALCulate:WCDMA:RFTX:INNERloop:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:INNERloop:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the inner loop Power Control measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFTX:INNE:LIM:STAT ON Switches the limit check for the inner loop power control ratio measurement on.

**:CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBONE:TPCUp:UPPer**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBONE:TPCUp:UPPer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is 0.0, the maximum is 3.0, the resolution is 0.1, the default is value is 1.5.
<b>Description</b>	Sets the upper limit for TPC_cmd +1 for the 1 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCU:UPP 0 CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCU:UPP? Returns 0 in this case.

**:CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBONE:TPCUp:LOWer**

<b>Syntax</b>	CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBONE:TPCUp:LOWer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is 0.0, the maximum is 3.0, the resolution is 0.1, the default is value is 0.5.
<b>Description</b>	Sets the lower limit for TPC_cmd +1 for the 1 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCU:LOW 0 CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCU:LOW? Returns 0 in this case.

**:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBONE:TPCDown:UPPer**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBONE:TPCDown:UPPer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -3.0, the maximum is 0.0, the resolution is 0.1, the default is value is -0.5.
<b>Description</b>	Sets the upper limit for TPC_cmd -1 for the 1 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCD:UPP 0 CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCD:UPP? Returns 0 in this case.

**:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBONE:TPCDown:LOWer**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBONE:TPCDown:LOWer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -3.0, the maximum is 0.0, the resolution is 0.1, the default is value is -1.5.
<b>Description</b>	Sets the lower limit for TPC_cmd -1 for the 1 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCD:LOW 0 CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCDU:LOW? Returns 0 in this case.

**:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBONE:TPCZero:UPPer**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBONE:TPCZero:UPPer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -1.0, the maximum is 1.0, the resolution is 0.1, the default is value is 0.5.
<b>Description</b>	Sets the upper limit for TPC_cmd 0 for the 1 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCZero:UPP 0 CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCZero:UPP? Returns 0 in this case.

**:CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBONE:TPCZero:LOWer**

<b>Syntax</b>	CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBONE:TPCZero:LOWer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -1.0, the maximum is 1.0, the resolution is 0.1, the default is value is -0.5.
<b>Description</b>	Sets the lower limit for TPC_cmd 0 for the 1 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCZero:LOW 0 CALCul:WCDM:RFTX:INNE:LIM:DBON:TPCZero:LOW? Returns 0 in this case.

**:CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBTwo:TPCUp:UPPer**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBTwo:TPCUp:UPPer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is 0.0, the maximum is 6.0, the resolution is 0.1, the default is value is 3.0.
<b>Description</b>	Sets the upper limit for TPC_cmd +1 for the 2 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCU:UPP 0 CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCU:UPP? Returns 0 in this case.

**:CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBTwo:TPCUp:LOWer**

<b>Syntax</b>	CALCulate:WCDMA:RFTX:INNERloop:LIMit:DBTwo:TPCUp:LOWer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is 0.0, the maximum is 6.0, the resolution is 0.1, the default is value is 1.0.
<b>Description</b>	Sets the lower limit for TPC_cmd +1 for the 2 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCU:LOW 0 CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCU:LOW? Returns 0 in this case.

**:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBTWo:TPCDown:UPPer**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBTWo:TPCDown:UPPer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -6.0, the maximum is 0.0, the resolution is 0.1, the default is value is -1.0.
<b>Description</b>	Sets the upper limit for TPC_cmd -1 for the 2 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCD:UPP 0 CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCD:UPP? Returns 0 in this case.

**:CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBTWo:TPCDown:LOWer**

<b>Syntax</b>	CALCulate:WCDMa:RFTX:INNERloop:LIMit:DBTWo:TPCDown:LOWer <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -6.0, the maximum is 0.0, the resolution is 0.1, the default is value is -3.0.
<b>Description</b>	Sets the lower limit for TPC_cmd -1 for the 2 dB step.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCD:LOW 0 CALCul:WCDM:RFTX:INNE:LIM:DBTW:TPCDU:LOW? Returns 0 in this case.

**:CALCulate:WCDMa:RFTX:OPEN:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:OPEN:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:RFTX:OPEN measurement violated the defined limits.
<b>Example</b>	:MEAS:WCDMA:RFTX:OPEN :CALC:WCDM:RFTX:OPEN:LIM? The query returns 1 if the measurement result was out of limits, or a 0 if the result was not out of limits.

**:CALCulate:WCDMA:RFTX:OPEN:LIMit:STATe**

<b>Syntax</b>	CALCulate:WCDMA:RFTX:OPEN:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the open loop power measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:OPEN:LIM:STAT ON Switches the limit check for the open loop power measurement on.

**:CALCulate:WCDMA:RFTX:OPEN:LIMit:RELative[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:OPEN:LIMit:RELative[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 15.0, the resolution is 0.1 and the default is 9.0.
<b>Description</b>	Sets the lower and upper limit for the mobile's open loop power. The physical dimension of the number is stated as dB relative to the estimated Preamble Initial Power. If the value is set to 9.0 the lower limit is set to -9.0dB and the upper is set to +9dB relative to estimated preamble initial power.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:OPEN:LIM:REL 9.0 :CALC:WCDM:RFTX:OPEN:LIM:REL? Returns 9.0.

**:CALCulate:WCDMA:RFTX:CODedomain:PCDe:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:CODedomain:PCDe:LIMit[:FAIL]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the peak code domain error measurement exceeds the limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFTX:COD:PCD? 20 :CALC:WCDM:RFTX:COD:PCD:LIM? The query returns 1 if any of the measurement results was out of limits, or a 0 if none of the results was out of limits.

**:CALCulate:WCDMA:RFTX:CODedomain:PCDe:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMA:RFTX:CODedomain:PCDe:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.



<b>Description</b>	This command switches the check of the measurement result values of the peak code domain error measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFTX:COD:PCD:LIM:STAT ON Switches the limit check for the peak code domain error measurement on.

**:CALCulate:WCDMa:RFTX:CODedomain:PCDe:LIMit:UPPer  
[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:CODedomain:PCDe:LIMit:UPPer: [:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -120.0, the maximum is 0.0, the resolution is 0.1, the default is value is -15.0.
<b>Description</b>	This command sets the upper limit for the peak code domain error measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:COD:PCD:LIM:UPP -32.0 :CALC:WCDM:RFTX:COD:PCD:LIM:UPP? Returns -32.0.

**:CALCulate:WCDMa:RFTX:CODedomain:PCDe:LIMit:LOWer  
[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFTX:CODedomain:PCDe:LIMit:LOWer [:DATA] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for the parameter is -120.0, the maximum is 0.0, the resolution is 0.1, the default is value is -120.0.
<b>Description</b>	This command sets the lower limit for the peak code domain error measurement. The physical dimension of the number stated is dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFTX:COD:PCD:LIM:LOW -99.0 :CALC:WCDM:RFTX:COD:PCD:LIM:LOW? Returns -99.0.

**:CALCulate:WCDMa:RFSPectrum:MSpectrum:VALue**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPectrum:MSpectrum:VALue <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -5,000,000.0, the maximum is 5,000,000.0. The minimum resolution possible is 0.1.

<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers an (interpolated) measurement result value of the modulation spectrum curve at the frequency specified with the <code>real1</code> parameter. <code>real1</code> is interpreted as an offset from the carrier (i.e. the transmission frequency). The string returned will contain one floating point real number. The physical dimension of the measurement result value returned is dBc. <b>Notes</b> <ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the <code>:MEAS:WCDM:RFSP:MSP:AVG</code> command to do so.</li> <li>- The <code>:CALC:WCDM:RFSP:MSP:VAL</code> command is not really a measurement - it is an interpolation of the spectrum curve for the frequency specified.</li> </ul>
<b>Example</b>	<code>:MEAS:WCDM:RFSP:MSP:AVG 20</code> <code>:CALC:WCDM:RFSP:MSP:VAL? -50000</code> This command will interpolate a modulation spectrum measurement at an offset of 50 kHz to the carrier. The value returned in this example is: "-4.7".

**:CALCulate:WCDMa:RFSpectrum:MSpectrum:MAXPeak**

<b>Syntax</b>	<code>:CALCulate:WCDMa:RFSpectrum:MSpectrum:MAXPeak?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers the frequency offset (in Hz) from the carrier and the maximum value of the measured modulation spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dBc. <b>Notes</b> <ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the <code>:MEAS:WCDM:RFSP:MSP:AVG</code> command to do so.</li> <li>- The <code>:CALC:WCDM:RFSP:MSP:MAXP</code> command is not really a measurement - it is an readout of the spectrum curve.</li> </ul>
<b>Example</b>	<code>:MEAS:WCDM:RFSP:MSP:AVG 20</code> <code>:CALC:WCDM:RFSP:MSP:MAXP?</code> This command will read at the modulation spectrum measurement maximum the frequency offset to the carrier and the measurement result value. The values returned in this example is: "-67700.0, -5.2".

**:CALCulate:WCDMa:RFSpectrum:MSpectrum:OBW:LIMit [ :FAIL ]**

<b>Syntax</b>	<code>:CALCulate:WCDMa:RFSpectrum:MSpectrum:OBW:LIMit [ :FAIL ]?</code>
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the occupied bandwidth measurement exceeds the limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFSP:MSP:OBW? 20 :CALC:WCDM:RFSP:MSP:OBW:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMa:RFSPpectrum:MSpectrum:OBW:LIMit  
:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPpectrum:MSpectrum:OBW:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the occupied bandwidth measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFSP:MSP:OBW:LIM:STAT ON Switches the limit check for the occupied bandwidth measurement on.

**:CALCulate:WCDMa:RFSPpectrum:MSpectrum:OBW:LIMit  
:UPPer [ :DATA ]**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPpectrum:MSpectrum:OBW:LIMit:UPPer: [DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for the parameter is 0, the maximum is 10000000, the resolution is 1, the default value is 5000000.
<b>Description</b>	This command sets the upper limit for the occupied bandwidth measurement. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFSP:MSP:OBW:LIM:UPP 0 :CALC:WCDM:RFSP:MSP:OBW:LIM:UPP? Returns 0.

**:CALCulate:WCDMa:RFSPpectrum:MSpectrum:OBW:LIMit  
:LOWer [ :DATA ]**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPpectrum:MSpectrum:OBW:LIMit:LOWer: [DATA] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for parameter is 0, the maximum is 10,000,000, the resolution is 1, the default value is 15000.

<b>Description</b>	This command sets the lower limit for the occupied bandwidth measurement. The physical dimension of the number stated is Hz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFSP:MSP:OBW:LIM:LOW -99.0 :CALC:WCDM:RFSP:MSP:OBW:LIM:LOW? Returns -99.0.

**:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the adjacent channel leakage power ratio measurement exceeds the limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFSP:ACLR? 20 :CALC:WCDM:RFSP:ACLR:LIM? The query returns 1 if any of the measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the adjacent channel leakage power ratio measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFSP:MSP:ACLR:STAT ON Switches the limit check for the adjacent channel leakage power ratio measurement on.

**:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit:UPPer[:DATA] <Real1>,<Real2>,<Real3>
<b>Parameters</b>	Realx are floating point real numbers. The minimum value for the parameters is -120.0, the maximum is 0.0, the resolution is 0.1, the default value is for Real1 -33.0, for Real2 -43.0 and for Real3 -50.0.

<b>Description</b>	This command sets the upper limits for the adjacent channel leakage power ratio measurement. <i>Real1</i> represents the 5 MHz lines in dBc and <i>Real2</i> represents the 10 MHz lines also in dBc. <i>Real3</i> represents the minimum power of the center frequency in dBm where this upper limits are valid.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFSP:ACLR:LIM:UPP -20.0,-25.0,-70.0 :CALC:WCDM:RFSP:ACLR:LIM:UPP? Returns -20.0,-25.0,-70.0.

**:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPectrum:ACLR:LIMit:LOWer[:DATA] <Real1>,<Real2>
<b>Parameters</b>	<i>Realx</i> are floating point real numbers. The minimum value for the parameters is -120.0, the maximum is 0.0, the resolution is 0.1, the default value is for both values -120.0.
<b>Description</b>	This command sets the lower limits for the adjacent channel leakage power ratio measurement. The physical dimension of the number stated is dBc. <i>Real1</i> represents the 5 MHz lines and <i>Real2</i> represents the 10 MHz lines.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFSP:ACLR:LIM:LOW -60.0,-65.0 :CALC:WCDM:RFSP:ACLR:LIM:LOW? Returns -60.0,-65.0.

**:CALCulate:WCDMa:RFSPectrum:SEM:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPectrum:SEM:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the adjacent channel leakage power ratio measurement exceeds the limits.
<b>Example</b>	:MEAS:WCDMA:RFSP:SEM:AVG? 20 :CALC:WCDM:RFSP:SEM:LIM? Returns 0 if the average spectrum line is within the template limits, otherwise 1.

**:CALCulate:WCDMa:RFSPectrum:SEM:LIMit:STATE**

<b>Syntax</b>	:CALCulate:WCDMa:RFSPectrum:SEM:LIMit:STATE <PredefExp>
<b>Parameters</b>	<i>PredefExp</i> is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the spectrum emission mask measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is no query form of this command available.
<b>Example</b>	:CALC:WCDM:RFSP:MSP:SEM:STAT ON Switches the limit check for the spectrum emission mask measurement on.

**:CALCulate:WCDMA:RFSpectrum:SEM:LIMit:FREQuency**

<b>Syntax</b>	:CALCulate:WCDMA:RFSpectrum:SEM:LIMit:FREQuency <Real1>, <Real2>, <Real3>, <Real4>, <Real5>, <Real6>, <Real7> , <Real8>, <Real9>, <Real10>, <Real11>, <Real12>
<b>Parameters</b>	Realx are floating point real numbers. The minimum value for the parameters 1 to 4 is -12.5, the maximum is -4.0, the minimum value for the parameters 5 to 8 is -3.5, the maximum is +3.5, the minimum value for the parameters 9 to 12 is +4.0, the maximum is +12.5, the resolution is 0.1. The default value is for Real1 -12.5, for Real2 -8.5, for Real3 -7.5, for Real4 -4.0, for Real5 -3.5, for Real6 -2.5, for Real7 +2.5, for Real8 +3.5, for Real9 +4.0, for Real10 +7.5, for Real11 +8.5, for Real12 +12.5.
<b>Description</b>	This command sets the frequency values for the limits for the spectrum emission mask measurement. Real1 to Real4 represent the frequency values of the left part of the spectrum emission mask (-12 MHz to -4 MHz) in MHz. Real5 to Real8 represent the frequency values of the middle part of the spectrum emission mask (-3.845 MHz to +3.845 MHz) in MHz. Real9 to Real12 represent the frequency values of the right part of the spectrum emission mask (+4 MHz to +12 MHz) in MHz.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFSP:SEM:LIM:FREQ -12,-8,-7,-5,-3, -2,2,3,5,7,8,12 :CALC:WCDM:RFSP:SEM:LIM:FREQ? Returns -12.0,-8.0,-7.0,-5.0,-3.0, -2.0,2.0,3.0,5.0,7.0,8.0,12.0.

**:CALCulate:WCDMA:RFSpectrum:SEM:LIMit:UPPER[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMA:RFSpectrum:SEM:LIMit:UPPER[:DATA] <Real1>, <Real2>, <Real3>, <Real4>, <Real5>, <Real6>, <Real7> , <Real8>, <Real9>, <Real10>, <Real11>, <Real12>
<b>Parameters</b>	Realx are floating point real numbers. The minimum value for the parameters is -120, the maximum is 0, the resolution is 1, the default value is for Real1 -49, for Real2 -49, for Real3 -39, for Real4 -35, for Real5 -50, for Real6 -35, for Real7 -35, for Real8 -50, for Real9 -35, for Real10 -39, for Real11 -49, for Real12 -49.
<b>Description</b>	This command sets the upper limits for the spectrum emission mask measurement. Real1 to Real4 represents the upper limits of the left part of the spectrum emission mask (-12 MHz to -4 MHz) in dB. Real5 to Real8 represent the upper limits of the middle part of the spectrum emission mask (-3.845 MHz to +3.845 MHz) in dB. Real9 to Real12 represent the upper limits of the right part of the spectrum emission mask (+4 MHz to +12 MHz) in dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFSP:SEM:LIM:UPP -49,-49,-39,-35,-50,-35, -35,-50,-35,-39,-49,-49 :CALC:WCDM:RFSP:SEM:LIM:UPP? Returns -49,-49,-39,-35,-50,-35,-35,-50,-35,-39,-49,-49.

**:CALCulate:WCDMa:RFSpectrum:SEM:LIMit:UPPer:ABSolute**

<b>Syntax</b>	:CALCulate:WCDMa:RFSpectrum:SEM:LIMit:UPPer:ABSolute <Real1>,<Real2>,<Real3>
<b>Parameters</b>	Realx are floating point real numbers. The minimum value for the parameters is -120, the maximum is 0, the resolution is 1, the default value is for Real1 -55.843, for Real2 -71.072, for Real3 -55.843.
<b>Description</b>	This command sets the minimum values for the upper limits for the spectrum emission mask measurement. Real1 represents the minimum limit due to center channel power for the left part of the spectrum emission mask (-12 MHz to +4 MHz) in dB. Real2 represents the minimum limit due to center channel power for the middle part of the spectrum emission mask (-3.845 MHz to +3.845 MHz) in dB. Real3 represents the minimum limit due to center channel power for the right part of the spectrum emission mask (+4 MHz to +12 MHz) in dB.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFSP:SEM:LIM:UPP:ABS -55,-77,-55 :CALC:WCDM:RFSP:SEM:LIM:UPP:ABS? Returns -55,-77,-55.

**:CALCulate:WCDMa:RFSpectrum:SEM:VALue**

<b>Syntax</b>	:CALCulate:WCDMa:RFSpectrum:SEM:VALue <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value is -12,000,000.0, the maximum is 12,000,000.0. The minimum resolution possible is 0.1.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers an (interpolated) measurement result value of the modulation spectrum curve at the frequency specified with the real1 parameter. real1 is interpreted as an offset from the carrier (i.e. the transmission frequency). The string returned will contain one floating point real number. The physical dimension of the measurement result value returned is dBc. <b>Notes</b> <ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:WCDM:RFSP:SEM:AVG command to do so.</li> <li>- The :CALC:WCDM:RFSP:SEM:VAL command is not really a measurement - it is an interpolation of the spectrum curve for the frequency specified.</li> </ul>
<b>Example</b>	:MEAS:WCDM:RFSP:SEM:AVG 20 :CALC:WCDM:RFSP:SEM:VAL? -50000 This command will interpolate a modulation spectrum measurement at an offset of 50 kHz to the carrier. The value returned in this example is: "-4.7".

**:CALCulate:WCDMa:RFSpectrum:SEM:MAXPeak**

<b>Syntax</b>	:CALCulate:WCDMa:RFSpectrum:SEM:MAXPeak?
<b>Parameters</b>	There are no parameters.

<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	The query form of this command delivers the frequency offset (in Hz) from the carrier and the maximum value of the measured modulation spectrum curve. The string returned will contain two floating point real numbers. The physical dimension of the measurement result values returned is for the first value Hz and for the second value dBc.
	<b>Notes</b>
	<ul style="list-style-type: none"> <li>- Please note that you need to have a spectrum measurement taken before this command will return any meaningful result. We recommend to use the :MEAS:WCDM:RFSP:SEM:AVG command to do so.</li> <li>- The :CALC:WCDM:RFSP:MSP:MAXP command is not really a measurement - it is an readout of the spectrum curve.</li> </ul>
<b>Example</b>	<pre>:MEAS:WCDM:RFSP:SEM:AVG 20 :CALC:WCDM:RFSP:SEM:MAXP?</pre> <p>This command will read at the modulation spectrum measurement maximum the frequency offset to the carrier and the measurement result value. The values returned in this example is: "-67700.0, -5.2".</p>

**:CALCulate:WCDMa:RFRX:BER:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is only a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFRX:BER measurement violated the defined limits.
<b>Example</b>	<pre>:MEAS:WCDMA:ARR:RFRX:BER 20 :CALC:WCDM:RFRX:BER:LIM?</pre> <p>The query returns 1 if any of the 20 measurement results was out of limits, or 0 if none of the results was out of limits.</p>

**:CALCulate:WCDMa:RFRX:BER:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BER:LIMit:STATe <PredefExp>
<b>Parameters</b>	PredefExp can take on one of the following values: ON   OFF. The default is ON.
<b>Description</b>	This command switches the check of the measurement result values of the BER measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	<pre>:CALC:WCDM:RFRX:BER:LIM:STAT ON</pre> <p>Switches the limit check for the BER measurement on.</p>



**:CALCulate:WCDMa:RFRX:BER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BER:LIMit:UPPer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 50.0, the resolution is 0.1 and the default is 0.1.
<b>Description</b>	Sets the upper limit for the mobile's Bit Error Rate. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFRX:BER:LIM:UPP 2.5 :CALC:WCDM:RFRX:BER:LIM:UPP? Returns 2.5.

**:CALCulate:WCDMa:RFRX:BER:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BER:LIMit:LOWer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 1.0, the resolution is 0.1 and the default is 0.0.
<b>Description</b>	Sets the lower limit for the mobile's Bit Error Rate. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFRX:BER:LIM:LOW 0.0 :CALC:WCDM:RFRX:BER:LIM:LOW? Returns 0.0.

**:CALCulate:WCDMa:RFRX:BLER:LIMit[:FAIL]**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BLER:LIMit[:FAIL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the :MEAS:WCDMA:ARR:RFRX:BLER measurement violated the defined limits.
<b>Example</b>	:MEAS:WCDMA:ARR:RFRX:BLER 20 :CALC:WCDM:RFRX:BLER:LIM? The query returns 1 if any of the 20 measurement results was out of limits, or 0 if none of the results was out of limits.

**:CALCulate:WCDMa:RFRX:BLER:LIMit:STATe**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BLER:LIMit:STATe <PreDefExp>
<b>Parameters</b>	PreDefExp can take on one of the following values: ON   OFF. The default is ON.

<b>Description</b>	This command switches the check of the measurement result values of the Bler measurement against their user-definable limits either ON or OFF.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFRX:BLER:LIM:STAT ON Switches the limit check for the Bler measurement on.

**:CALCulate:WCDMa:RFRX:BLER:LIMit:UPPer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BLER:LIMit:UPPer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 100.0, the resolution is 0.1 and the default is 0.1.
<b>Description</b>	Sets the upper limit for the mobile's Block Error Rate. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFRX:BLER:LIM:UPP 2.5 :CALC:WCDM:RFRX:BLER:LIM:UPP? Returns 2.5.

**:CALCulate:WCDMa:RFRX:BLER:LIMit:LOWer[:DATA]**

<b>Syntax</b>	:CALCulate:WCDMa:RFRX:BLER:LIMit:LOWer[:DATA] <real>
<b>Parameters</b>	real is a floating point real number. Its minimum value is 0.0, the maximum is 1.0, the resolution is 0.1 and the default is 0.0.
<b>Description</b>	Sets the lower limit for the mobile's Block Error Rate. The physical dimension of the number is stated as a percentage.
<b>Query</b>	There is a query form which returns the stored settings.
<b>Example</b>	:CALC:WCDM:RFRX:BLER:LIM:LOW 0.0 :CALC:WCDM:RFRX:BLER:LIM:LOW? Returns 0.0.

## READ subsystem

The commands of this subsystem are used to read out the next measurement result values from the continuous measurements.

### **:READ:AMPS:RFTX:POWer**

<b>Syntax</b>	:READ:AMPS:RFTX:POWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:AMPS:CONT ARRay:RFTX:POWer measurement command.
<b>Example</b>	:READ:AMPS:RFTX:POW?

### **:READ:CDMA:RFTX:POWer**

<b>Syntax</b>	:READ:CDMA:RFTX:POWer?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	The command returns the results from the :MEASure:CDMA:CONT ARRay:RFTX:POWer measurement command.
<b>Example</b>	:READ:CDMA:RFTX:POWer?

## RFGenerator subsystem

The RFG subsystem controls the accessible parameters of the RF generator.

### Important notes:

- The RF generator can only be used if all communication systems have been switched off (and unloaded) before.
- The RF generator functionality of the 3100 will enable you to provide a base channel to allow the mobile under test to synchronize to the base station. However, as long as the RF generator is active, there will be **no call setup and no reaction to signaling**. Some of the data transmitted by the 3100 in the base channel can be set or altered using the SCPI commands described in section "CONFigure subsystem".
- The RF generator and analyzer are enabled using the appropriate `:CONFigure:CSYSem` command.
- For **circuit-switched standard GSM** signals, use of the `:CONFigure:CSYSem GCGenana` command. While working in this mode, a base channel will **not** be provided.
- To set up the 3100 as an RF generator for **both packet-switched and circuit-switched GSM** signals, use the `:CONFigure:CSYSem GPGenana` command instead. In this mode, a base channel can be provided (see command `:RFG:GSM:MOD:CHAN` for details).

### GSM commands `:RFGenerator:GSM:STATE`

<b>Syntax</b>	<code>:RFGenerator:GSM:STATE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>OFF</b> .
<b>Description</b>	Switches the RF generator on or off. While the Willtek 3100 is in RF generator mode, there is no signaling active. This means that the Willtek 3100 may be used as RF signal generator for all kinds of RF and GSM signals. While working as an RF generator, the Willtek 3100 does not respond to any messages sent by the mobile nor does the test set expect the mobile under test to react in any way.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:GSM:STATE ON</code> <code>:RFG:GSM:STAT?</code> Value returned: <b>"ON"</b> .

### :RFGenerator:GSM:LEVel

<b>Syntax</b>	:RFGenerator:GSM:LEVel <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value for <b>real1</b> is <b>-120.0</b> , the maximum value is <b>-10.0</b> . The minimum resolution for <b>real1</b> is <b>0.1</b> . The default value for <b>real1</b> is <b>-60.0</b> .
<b>Description</b>	This command sets the RF output power level of the Willtek 3100. The value specified for <b>real1</b> is the power output level in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<b>:RFGenerator:GSM:LEVel -50.5</b> <b>:RFG:GSM:LEV?</b> Value returned: <b>"-50.5"</b> .

### :RFGenerator:GSM:FREQuency

<b>Syntax</b>	:RFGenerator:GSM:FREQuency <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value for <b>real1</b> is <b>800,000,000</b> , the maximum value is <b>2,600,000,000</b> (depending on the revision of your instrument and if the 1209 Downconverter is attached). The minimum resolution for <b>real1</b> is <b>10</b> . The default value for <b>real1</b> is <b>800,000,000</b> .
<b>Description</b>	This command sets the RF generator's frequency. The value specified for <b>real1</b> is the output frequency in Hz. <b>Note:</b> For more details on the GSM frequency ranges, please refer to section Basic Specifications of GSM Bands.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<b>:RFGenerator:GSM:FREQuency 880200010</b> <b>:RFG:GSM:FREQ?</b> Value returned: <b>"880200010"</b> .

### :RFGenerator:GSM:MODulation

<b>Syntax</b>	:RFGenerator:GSM:MODulation <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>NO</b>   <b>GMSK</b>   <b>AM</b> . Default is <b>NO</b> .
<b>Description</b>	This command selects the type of modulation to be used on the RF output signal. <b>NO</b> means that the output signal will <b>not</b> be modulated, while <b>GMSK</b> means that the output signal will be GMSK (Gaussian Minimum Shift Keying) modulated. Another alternative is Amplitude Modulation. <b>Notes</b> <ul style="list-style-type: none"> <li>- As soon as <b>GMSK</b> is selected, the Willtek 3100 will provide a GSM-like RF output signal. A number of GSM-specific parameters (like burst transmission or the type of training sequence to be integrated into the bursts) may be selected with the commands described below.</li> <li>- AM is available only if the AM Signal Generator Option is installed.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.

**Example**            :**RFGenerator:GSM:MODulation** GMSK  
                     :**RFG:GSM:MOD?** Value returned: "GMSK".

**:RFGenerator:GSM:MODulation:AM:MFRrequency**

**Syntax**            :**RFGenerator:GSM:MODulation:AM:MFR**frequency <real1>

**Parameters**       **real1** is a floating point real number. The minimum value for **real1** is 1,000, the maximum value is 50,000. The resolution for **real1** is 1000. The default value for **real1** is 10,000.

**Description**       This command sets the modulating frequency for the AM modulated signal. **Note:** AM is available only if the AM Signal Generator Option is installed.

**Query**             The query form of this command will return the current setting. The string delivered back will contain one floating point real number.

**Example**            :**RFGenerator:GSM:MOD:AM:MFR** 2000  
                     :**RFG:GSM:MOD:AM:MFR?** Value returned: "2000".

**:RFGenerator:GSM:MODulation:AM:MDEPTH**

**Syntax**            :**RFGenerator:GSM:MODulation:AM:MDEP**th <int1>

**Parameters**       **int1** is an integer. The minimum value for **int1** is 50, the maximum value is 90. The default value is 83.

**Description**       This parameter describes the AM modulation depth in %.  
**Note:** AM is available only if the AM Signal Generator Option is installed.

**Query**             The query form of this command returns the current setting. A query will return a string containing one integer.

**Example**            :**RFGenerator:GSM:MOD:AM:MDEP** 50  
                     :**MOD:AM:MDEP?** Value returned: "50".

**:RFGenerator:GSM:MODulation:POLarity**

**Syntax**            :**RFGenerator:GSM:MODulation:POL**arity <PredefExp>

**Parameters**       **PredefExp** is one of the following predefined expressions: **NORMal** | **INVert**. Default is **NORMal**.

**Description**       Sets the modulation polarity for the GMSK coded RF output signals. **NORMal** means standard modulation polarity while **INVert** will invert the modulation polarity.

**Query**             The query form of this command returns the current setting. A query will return a string, containing the short-form version of one of the predefined expressions explained above.

**Example**            :**RFG:GSM:MODulation:POL**arity **INVert**  
                     :**RFG:MOD:POL?** Value returned: "INV".

**:RFG:GSM:MODulation:TSEQuence:STATe**

<b>Syntax</b>	:RFG:GSM:MODulation:TSEQuence:STATe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches the use of a training sequence either on or off.
<b>Notes</b>	<ul style="list-style-type: none"> <li>- The type of training sequence can be set using the command described below.</li> <li>- More details regarding the training sequence can be found in section Timeslots and Bursts.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<b>:RFG:GSM:MODulation:TSEQuence:STATe ON</b> <b>:RFG:MOD:TSEQ:STAT?</b> Value returned: "ON".

**:RFG:GSM:MODulation:TSEQuence[:DATA]**

<b>Syntax</b>	:RFG:GSM:MODulation:TSEQuence[:DATA] <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is <b>0</b> , the maximum value is <b>7</b> . The default value is <b>0</b> . <b>Note:</b> This command only selects the type of training sequence. To switch the use of a training sequence on or off, use the command described above.
<b>Description</b>	This command selects the type of training sequence to be used. More details regarding the training sequence can be found in section Timeslots and Bursts.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one integer.
<b>Example</b>	<b>:RFG:GSM:MODulation:TSEQuence:DATA 3</b> <b>:RFG:MOD:TSEQ?</b> Value returned: "3".

**:RFG:GSM:MODulation:BITPattern**

<b>Syntax</b>	:RFG:GSM:MODulation:BITPattern <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>PRBS9</b>   <b>PRBS15</b>   <b>PRBS23</b>   <b>ALLZero</b>   <b>ALLOne</b>   <b>ONEZero</b>   <b>DOUBleonezer</b>   <b>FOURonezero</b>   <b>EIGHTonezero</b> . Default is <b>PRBS9</b> .

<b>Description</b>	<p>This command selects the bit sequence to be transmitted by the RF generator in GMSK mode on the 'encrypted data' positions (see section Timeslots and Bursts for reference). When <b>:RFG[:GSM]:MOD:TSEQ:STAT OFF</b> has been selected, all 148 'useful' bits of a timeslot will be filled with the bit pattern specified with this command.</p> <p><b>PRBS9</b> stands for a pseudorandom bit sequence. The length of this sequence will be 511 bits ((2 to the power of 9)-1).</p> <p><b>PRBS15</b> is a pseudorandom bit sequence with a length of 32767 bits.</p> <p><b>PRBS23</b> is a pseudorandom bit sequence as well. The length is 8388607 bits.</p> <p><b>ALLZero</b> means that all bits transmitted are 'zeros' (000...).</p> <p>In case, <b>ALLOne</b> is selected, all bits transmitted will be set to 'ones' (111...).</p> <p><b>ONEZero</b> stands for a bit sequence starting with a 'one' and continuing with the inverted value of the current bit (10101...).</p> <p><b>DOUBLEonezero</b> will set the bits transmitted to a sequence of double 'ones' and double 'zeros' (11001100...).</p> <p><b>FOURonezero</b> means a bit sequence starting with four 'ones' and continuing with the inverted value of the current four bits (111100001111...), while <b>EIGHTonezero</b> means a bit sequence starting with eight 'ones' and continuing with the inverted value of the current eight bits (111111110000000011111111...).</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain one of short-form versions of the predefined expressions explained above.</p>
<b>Example</b>	<p><b>:RFG:GSM:MODulation:BITPattern PRBS15</b> <b>:RFG:MOD:BITP?</b> Value returned: "PRBS15".</p>

**:RFG:GSM:MODulation:DIFFbitcod**

<b>Syntax</b>	<b>:RFG:GSM:MODulation:DIFFbitcod &lt;PredefExp&gt;</b>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>ON</b> .
<b>Description</b>	This command switches differential bit coding either on or off.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<p><b>:RFGenerator:GSM:MODulation:DIFFbitcod ON</b> <b>:RFG:MOD:DIFF?</b> Value returned: "ON".</p>

**:RFGenerator:GSM:BURSt:TSLot**

<b>Syntax</b>	<b>:RFGenerator:GSM:BURSt:TSLot &lt;int1&gt;</b>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 7. The default value is 0.
<b>Description</b>	<p>This command selects the time slot during which the Willtek 3100 will transmit its burst.</p> <p><b>Note:</b> With the help of command <b>RFG:STYP</b> you may select whether the Willtek 3100 transmits a continuous wave or bursts. This command is described below.</p>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one integer.



**Example**        :RFGenerator:GSM:BURSt:TSLot 3  
                  :RFG:BURSt:TSL? Value returned: "3".

**:RFGenerator:GSM:STYPe**

<b>Syntax</b>	:RFGenerator:GSM:STYPe <PredefExp>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>BURSt</b>   <b>CWAVE</b> . Default is <b>BURSt</b> .
<b>Description</b>	This command switches between burst transmission ( <b>BURSt</b> ) or continuous signal transmission without bursts ( <b>CWAVE</b> ). <b>CWAVE</b> means that the Willtek 3100 will generate a coded GSM signal in all timeslots according to the settings above. When set to <b>BURSt</b> , the Willtek 3100 will generate only one burst per TDMA frame. This means that there will be no RF transmission during the remaining 7 timeslots.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing the short-form version of one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:GSM:STYPe BURSt :RFG:STYP? Value returned: "BURSt".

**GSM/GPRS commands**        **:RFGenerator:GPRS:BURSt:TSLot**

<b>Syntax</b>	:RFGenerator:GPRS:BURSt:TSLot <int1>
<b>Parameters</b>	<b>int1</b> is an integer. The minimum value for <b>int1</b> is 0, the maximum value is 7. The default value is 0.
<b>Description</b>	This command selects the time slot during which the Willtek 3100 will transmit its burst. <b>Notes:</b> With the help of command <b>RFG:STYP</b> you may select whether the Willtek 3100 transmits a continuous wave or bursts. This command is described below. More details regarding timeslots and bursts can be found in section Timeslots and Bursts.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one integer.
<b>Example</b>	:RFGenerator:GPRS:BURSt:TSLot 3 :RFG:BURSt:TSL? Value returned: "3".

**:RFGenerator:GPRS:FREQuency**

<b>Syntax</b>	:RFGenerator:GPRS:FREQuency <real1>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value for <b>real1</b> is 800,000,000, the maximum value is 2,600,000,000 (depending on the revision of your instrument and if the 1209 Downconverter is attached). The minimum resolution for <b>real1</b> is 10. The default value for <b>real1</b> is 800,000,000.
<b>Description</b>	This command sets the RF generator's frequency. The value specified for <b>real1</b> is the output frequency in Hz.

<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:GPRS:FREQuency 880200010 :RFG:GPRS:FREQ? Value returned: "880200010".

### **:RFGenerator:GPRS:LEVel**

<b>Syntax</b>	:RFGenerator:GPRS:LEVel <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is -120.0, the maximum value is -10.0. The minimum resolution for real1 is 0.1. The default value for real1 is -60.0.
<b>Description</b>	This command sets the RF output power level of the Willtek 3100. The value specified for real1 is the power output level in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:GPRS:LEVel -50.5 :RFG:GPRS:LEV? Value returned: "-50.5".

### **:RFGenerator:GPRS:MODulation**

<b>Syntax</b>	:RFGenerator:GPRS:MODulation <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: NO   GMSK   AM. Default is NO.
<b>Description</b>	This command selects the type of modulation to be used on the RF output signal. NO means that the output signal will <b>not</b> be modulated, while GMSK means that the output signal will be GMSK (Gaussian Minimum Shift Keying) modulated. Another alternative is Amplitude Modulation. <b>Notes</b> <ul style="list-style-type: none"> <li>- As soon as GMSK is selected, the Willtek 3100 will provide a GSM-like RF output signal. A number of GSM-specific parameters (like burst transmission or the type of training sequence to be integrated into the bursts) may be selected with the commands described below.</li> <li>- AM is available only if the AM Signal Generator Option is installed.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:GPRS:MODulation GMSK :RFG:MOD? Value returned: "GMSK".

### **:RFGenerator:GPRS:MODulation:AM:MFREquency**

<b>Syntax</b>	:RFGenerator:GPRS:MODulation:AM:MFREquency <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is 1,000, the maximum value is 50,000. The resolution for real1 is 1000. The default value for real1 is 10,000.
<b>Description</b>	This command sets the modulating frequency for the AM modulated signal. <b>Note:</b> AM is available only if the AM Signal Generator Option is installed.

<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:GPRS:MOD:AM:MFR 2000 :RFG:GPRS:MOD:AM:MFR? Value returned: "2000".

**:RFGenerator:GPRS:MODulation:AM:MDEPTH**

<b>Syntax</b>	:RFGenerator:GPRS:MODulation:AM:MDEPTH <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 50, the maximum value is 90. The default value is 83.
<b>Description</b>	This parameter describes the AM modulation depth in %. <b>Note:</b> AM is available only if the AM Signal Generator Option is installed.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string containing one integer.
<b>Example</b>	:RFGenerator:GPRS:MOD:AM:MDEP 50 :RFG:GPRS:MOD:AM:MDEP? Value returned: "50".

**:RFGenerator:GPRS:MODulation:BITPattern**

<b>Syntax</b>	:RFG:GPRS:MODulation:BITPattern <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: PRBS9   PRBS15   PRBS23   ALLZero   ALLOne   ONEZero   DOUBLeonezer   FOURonezero   EIGHTonezero. Default is PRBS9.
<b>Description</b>	This command selects the bit sequence to be transmitted by the RF generator in GMSK mode on the 'encrypted data' positions. When :RFG[:GSM]:MOD:TSEQ:STAT OFF has been selected, all 148 'useful' bits of a timeslot will be filled with the bit pattern specified with this command. PRBS9 stands for a pseudorandom bit sequence. The length of this sequence will be 511 bits ((2 to the power of 9)-1). PRBS15 is a pseudorandom bit sequence with a length of 32767 bits. PRBS23 is a pseudorandom bit sequence as well. The length is 8388607 bits. ALLZero means that all bits transmitted are 'zeros' (000 . . .). In case, ALLOne is selected, all bits transmitted will be set to 'ones' (111 . . .). ONEZero stands for a bit sequence starting with a 'one' and continuing with the inverted value of the current bit (10101 . . .). DOUBLeonezero will set the bits transmitted to a sequence of double 'ones' and double 'zeros' (11001100 . . .). FOURonezero means a bit sequence starting with four 'ones' and continuing with the inverted value of the current four bits (111100001111 . . .), while EIGHTonezero means a bit sequence starting with eight 'ones' and continuing with the inverted value of the current eight bits (111111110000000011111111 . . .).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one of short-form versions of the predefined expressions explained above.
<b>Example</b>	:RFG:GPRS:MODulation:BITPattern PRBS15 :RFG:GPRS:MOD:BITP? Value returned: "PRBS15".

### **:RFGenerator:GPRS:MODulation:CHANnel**

<b>Syntax</b>	<code>:RFGenerator:GPRS:MODulation:CHANnel &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: GSM   PDCH   BPDCh.
<b>Description</b>	Sets the channel type to be generated. With the GSM setting, the Willtek 3100 sends an uncoded bit pattern (with or without training sequence). The PDCH setting results in one or multiple time slots with channel encoded Packet Data Channel data. With BPDCh, time slot 0 contains FCCH/SCH/BCCH/CCCH, the other slots are filled with PDCH.
<b>Query</b>	The query form of this command returns the current setting. The string delivered back contains one of short-form versions of the predefined expressions explained above.
<b>Example</b>	<code>:RFG:GPRS:MOD:CHAN BPDCh</code> <code>:RFG:GPRS:MOD:CHAN? Returns the string BPDCh.</code>

### **:RFGenerator:GPRS:MODulation:CS**

<b>Syntax</b>	<code>:RFGenerator:GPRS:MODulation:CS &lt;int1&gt;</code>
<b>Parameters</b>	Valid entries for int1 are in the range from 1 to 4. The default is 1.
<b>Description</b>	Sets the coding scheme. If :RFG:GPRS:MOD:CHAN is set to either PDCH or BPDCh, the Willtek 3100 transmits a packet data channel which is encoded using this coding scheme.
<b>Query</b>	The query form of this command returns the current setting. The string delivered back contains a one-digit number.
<b>Example</b>	<code>:RFG:GPRS:MOD:CS 4</code> <code>&gt;:RFG:GPRS:MOD:CS? Returns the following string: 4.</code>

### **:RFGenerator:GPRS:MODulation:DIFFbitcod**

<b>Syntax</b>	<code>:RFGenerator:GPRS:MODulation:DIFFbitcod &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches differential bit coding either on or off.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:GPRS:MODulation:DIFFbitcod ON</code> <code>:RFG:GPRS:MOD:DIFF? Value returned: "ON".</code>

### **:RFGenerator:GPRS:MODulation:POLarity**

<b>Syntax</b>	<code>:RFGenerator:GPRS:MODulation:POLarity &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: NORMAL   INVERT. Default is NORMAL.

<b>Description</b>	Sets the modulation polarity for the GMSK coded RF output signals. NORMAl means standard modulation polarity while INVert will invert the modulation polarity.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing the short-form version of one of the predefined expressions explained above.
<b>Example</b>	:RFG:GPRS:MODulation:POLarity INVert :RFG:GPRS:MOD:POL? Value returned: "INV".

**:RFGenerator:GPRS:MODulation:TSEQuence:STATe**

<b>Syntax</b>	:RFGenerator:GPRS:MODulation:TSEQuence:STATe <Pre-defExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.
<b>Description</b>	This command switches the use of a training sequence either on or off. <b>Note:</b> The type of training sequence can be set using the command described below.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFG:GPRS:MODulation:TSEQuence:STATe ON :RFG:GPRS:MOD:TSEQ:STAT? Value returned: "ON".

**:RFGenerator:GPRS:MODulation:TSEQuence[:DATA]**

<b>Syntax</b>	:RFGenerator:GPRS:MODulation:TSEQuence[:DATA] <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 7. The default value is 0. <b>Note:</b> This command only selects the type of training sequence. To switch the use of a training sequence on or off, use the command described above.
<b>Description</b>	This command selects the type of training sequence to be used.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one integer.
<b>Example</b>	:RFG:GPRS:MODulation:TSEQuence:DATA 3 :RFG:GPRS:MOD:TSEQ? Value returned: "3".

**:RFGenerator:GPRS:MSLOT:LEVel[:DATA]**

<b>Syntax</b>	:RFGenerator:GPRS:MSLOT:LEVel[:DATA] <real1>
<b>Parameters</b>	real1...real8 are eight floating point real numbers. The minimum value for each realx is -120.0, the maximum value is -10.0. The resolution of each realx is 0.1. The default value for each realx is -60.0. <b>Note:</b> All eight values must be specified.

<b>Description</b>	This command configures individual RF output power levels for the eight DL timeslots. Every value represents the RF output power level of Willtek 3100 in dBm during the related timeslot. <b>Note:</b> This command <b>only prepares</b> the use of individual RF power levels. To activate them, use the <code>RFGenerator:MSL:LEV:MODE</code> command.
<b>Query</b>	The query form of this command will return the current setting. Always eight floating point real numbers will be returned in a string.
<b>Example</b>	<code>:RFGenerator:GPRS:MSLot:LEVel:DATA -80.0,-70.0,-60.0,-50.0,-40.0,-30.0,-20.0,-10.0</code> <code>:RFGenerator:MSL:LEV?</code> Values returned: <code>"-80.0,-70.0,-60.0,-50.0,-40.0,-30.0,-20.0,-10.0"</code>

**:RFGenerator:GPRS:MSLOT:LEVEL:MODE**

<b>Syntax</b>	<code>:RFGenerator:GPRS:MSLOT:LEVEL:MODE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>INDividual</code>   <code>STANdard</code> . Default is <code>INDividual</code> .
<b>Description</b>	Switches the use of individual RF output power levels on or off. <code>INDividual</code> means that the individual RF output power levels, specified with the <code>:RFGenerator:MSL:LEV</code> command will be used. <code>STANdard</code> means that the individual RF power levels will be ignored and that the standard RF output level of Willtek 3100 (as set with the <code>:RFGenerator:LEV</code> command) will be used.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:GPRS:MSLot:LEVel:MODE INDividual</code> <code>:RFGenerator:GPRS:MSL:LEV:MODE?</code> Value returned: <code>"IND"</code> .

**:RFGenerator:GPRS:STATE**

<b>Syntax</b>	<code>:RFGenerator:GPRS:STATE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>ON</code>   <code>OFF</code> . Default is <code>OFF</code> .
<b>Description</b>	Switches the RF generator on or off. While Willtek 3100 is in RF generator mode, there is no signaling active. This means that Willtek 3100 may be used as RF signal generator for all kinds of RF and GSM signals. While working as an RF generator, Willtek 3100 does not respond to any messages sent by the mobile nor does the test set expect the mobile under test to react in any way.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:GPRS:STATE ON</code> <code>:RFGenerator:GPRS:STAT?</code> Value returned: <code>"ON"</code> .

**:RFGenerator:GPRS:SType**

<b>Syntax</b>	:RFGenerator:GPRS:SType <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: BURSt   CWAVE. Default is BURSt.
<b>Description</b>	This command switches between burst transmission (BURSt) or continuous signal transmission without bursts (CWAVE). CWAVE means that Willtek 3100 will generate a coded GSM signal in all timeslots according to the settings above. When set to BURSt, Willtek 3100 will generate only one burst per TDMA frame. This means that there will be no RF transmission during the remaining 7 timeslots.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing the short-form version of one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:GPRS:SType BURSt :RFG:GPRS:STYP? Value returned: "BURS".

**EGPRS commands :RFGenerator:EGPRs:BURSt:TSLot**

<b>Syntax</b>	:RFGenerator:EGPRs:BURSt:TSLot <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 0, the maximum value is 7. The default value is 0.
<b>Description</b>	This command selects the time slot during which the Willtek 3100 will transmit its burst. <b>Notes:</b> <ul style="list-style-type: none"> <li>- With the help of command RFG:STYP you may select whether the Willtek 3100 transmits a continuous wave or bursts. This command is described below.</li> <li>- More details regarding timeslots and bursts can be found in section Timeslots and Bursts.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one integer.
<b>Example</b>	:RFGenerator:EGPRs:BURSt:TSLot 3 :RFG:EGPRs:TSL? Value returned in this example "3".

**:RFGenerator:EGPRs:FREQuency**

<b>Syntax</b>	:RFGenerator:EGPRs:FREQuency <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is 800,000,000, the maximum value is 2,600,000,000 (depending on the revision of your instrument and if the 1209 Downconverter is attached). The minimum resolution for real1 is 10. The default value for real1 is 800,000,000.

<b>Description</b>	This command sets the RF generator's frequency. The value specified for <code>real1</code> is the output frequency in Hz. <b>Note:</b> For more details on the GSM frequency ranges, please refer to section Basic Specifications of GSM Bands.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFGenerator:EGPRs:FREQuency 880200010</code> <code>:RFG:EGPRs:FREQ?</code> Value returned in this example: "880200010".

**:RFGenerator:EGPRs:LEVel**

<b>Syntax</b>	<code>:RFGenerator:EGPRs:LEVel &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>-120.0</code> , the maximum value is <code>-10.0</code> . The minimum resolution for <code>real1</code> is <code>0.1</code> . The default value for <code>real1</code> is <code>-60.0</code> .
<b>Description</b>	This command sets the RF output power level of the Willtek 3100. The value specified for <code>real1</code> is the power output level in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFGenerator:EGPRs:LEVel -50.5</code> <code>:RFG:EGPRs:LEV?</code> Value returned in this example: "-50.5".

**:RFGenerator:EGPRs:MODulation**

<b>Syntax</b>	<code>:RFGenerator:EGPRs:MODulation &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>NO</code>   <code>GMSK</code>   <code>AM</code> . Default is <code>NO</code> .
<b>Description</b>	This command selects the type of modulation to be used on the RF output signal. <code>NO</code> means that the output signal will not be modulated, while <code>GMSK</code> means that the output signal will be <code>GMSK (Gaussian Minimum Shift Keying)</code> modulated. Another alternative is <code>Amplitude Modulation (AM)</code> . <b>Notes:</b> <ul style="list-style-type: none"> <li>- As soon as <code>GMSK</code> is selected, the Willtek 3100 will provide a GSM-like RF output signal. A number of GSM-specific parameters (like burst transmission or the type of training sequence to be integrated into the bursts) may be selected with the commands described below.</li> <li>- <code>AM</code> will only available, if the <code>AM Signal Generator Option</code> is installed.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:EGPRs:MODulation GMSK</code> <code>:RFG:MOD?</code> Value returned in this example "GMSK".



**:RFGenerator:EGPRs:MODulation:AM:MFRequency**

<b>Syntax</b>	:RFGenerator:EGPRs:MODulation:AM:MFRequency <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is 1,000, the maximum value is 50,000. The resolution for real1 is 1000. The default value for real1 is 10,000.
<b>Description</b>	This command sets the modulating frequency for the AM modulated signal. Note that AM will only be available, if the AM Signal Generator Option is installed.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:EGPRs:MOD:MFR 2000 :RFG:EGPRs:MOD:AM:MFR? Value returned in this example: "2000".

**:RFGenerator:EGPRs:MODulation:AM:MDEPth**

<b>Syntax</b>	:RFGenerator:EGPRs:MODulation:AM:MDEPth <int1>
<b>Parameters</b>	int1 is an integer. The minimum value for int1 is 50, the maximum value is 90. The default value is 83.
<b>Description</b>	This parameter describes the AM modulation depth in %. Note that AM will only be available, if the AM Signal Generator Option is installed.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string containing one integer.
<b>Example</b>	:RFGenerator:EGPRs:MOD:AM:MDEP 50 :RFG:EGPRs:MOD:AM:MDEP? Value returned in this example: "50".

**:RFG:EGPRs:MODulation:BITPattern**

<b>Syntax</b>	:RFG:EGPRs:MODulation:BITPattern <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: PRBS9   PRBS15   PRBS23   ALLZero   ALLOne   ONEZero   DOUBLeonezer   FOURonezero   EIGHTonezero. Default is PRBS9.

<b>Description</b>	<p>This command selects the bit sequence to be transmitted by the RF generator in GMSK mode on the 'encrypted data' positions (see section Timeslots and Bursts for reference). When <code>:RFG[:GSM]:MOD:TSEQ:STAT OFF</code> has been selected, all 148 'useful' bits of a timeslot will be filled with the bit pattern specified with this command.</p> <p>PRBS9 stands for a pseudo-random bit sequence. The length of this sequence will be 511 bits ((2 to the power of 9)-1).</p> <p>PRBS15 is a pseudo-random bit sequence with a length of 32767 bits.</p> <p>PRBS23 is a pseudo-random bit sequence as well. The length is 8388607 bits.</p> <p>ALLZero means that all bits transmitted are 'zeros' (000...).</p> <p>In case ALLOne is selected, all bits transmitted will be set to 'ones' (111...).</p> <p>ONEZero stands for a bit sequence starting with a 'one' and continuing with the inverted value of the current bit (10101...).</p> <p>DOUBLEonezero will set the bits transmitted to a sequence of double 'ones' and double 'zeros' (11001100...).</p> <p>FOURonezero means a bit sequence starting with four 'ones' and continuing with the inverted value of the current four bits (111100001111...), while EIGHTonezero means a bit sequence starting with eight 'ones' and continuing with the inverted value of the current eight bits (111111110000000011111111...).</p>
<b>Query</b>	<p>The query form of this command will return the current setting. The string delivered back will contain one of short-form versions of the predefined expressions explained above.</p>
<b>Example</b>	<pre>:RFG:EGPRS:MODulation:BITPattern PRBS15 :RFG:EGPRS:MOD:BITP? Value returned in this example: "PRBS15".</pre>

**:RFGenerator:EGPRS:MODulation:CHANnel**

<b>Syntax</b>	<pre>:RFGenerator:EGPRS:MODulation:CHANnel &lt;PredefExp&gt;</pre>
<b>Parameters</b>	<p>PredefExp is one of the following predefined expressions: GSM   PDCH   BPDCh.</p>
<b>Description</b>	<p>Sets the channel type to be generated.</p> <p>With the GSM setting, the Willtek 3100 sends an uncoded bit pattern (with or without training sequence).</p> <p>The PDCH setting results in one or multiple time slots with channel encoded Packet Data Channel data.</p> <p>With BPDCh, time slot 0 contains FCCH/SCH/BCCH/CCCH, the other slots are filled with PDCH.</p>
<b>Query</b>	<p>The query form of this command returns the current setting. The string delivered back contains one of short-form versions of the predefined expressions explained above.</p>
<b>Example</b>	<pre>:RFG:EGPRS:MOD:CHAN BPDCh :RFG:EGPRS:MOD:CHAN? Returns the string BPDCh.</pre>

**:RFGenerator:EGPRS:MODulation:CS**

<b>Syntax</b>	<pre>:RFGenerator:EGPRS:MODulation:CS &lt;int1&gt;</pre>
<b>Parameters</b>	<p>Valid entries for int1 are in the range from 1 to 4. The default is 1.</p>

<b>Description</b>	Sets the coding scheme. If <code>:RFG:EGPRS:MOD:CHAN</code> is set to either <code>PDCH</code> or <code>BPDCh</code> , the Willtek 3100 transmits a packet data channel which is encoded using this coding scheme.
<b>Query</b>	The query form of this command returns the current setting. The string delivered back contains a one-digit number.
<b>Example</b>	<code>:RFG:EGPRS:MOD:CS 4</code> <code>&gt;:RFG:EGPRS:MOD:CS?</code> Returns the following string: 4.

**:RFGenerator:EGPRS:MODulation:DIFFbitcod**

<b>Syntax</b>	<code>:RFGenerator:EGPRS:MODulation:DIFFbitcod &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>ON</code>   <code>OFF</code> . Default is <code>ON</code> .
<b>Description</b>	This command switches differential bit coding either <code>ON</code> or <code>OFF</code> .
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:EGPRS:MODulation:DIFFbitcod ON</code> <code>:RFG:EGPRS:MOD:DIFF?</code> Value returned in this example "ON".

**:RFGenerator:EGPRS:MODulation:POLarity**

<b>Syntax</b>	<code>:RFGenerator:EGPRS:MODulation:POLarity &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>NORMAL</code>   <code>INVERT</code> . Default is <code>NORMAL</code> .
<b>Description</b>	Sets the modulation polarity for the GMSK coded RF output signals. <code>NORMAL</code> means standard modulation polarity while <code>INVERT</code> will invert the modulation polarity.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing the short-form version of one of the predefined expressions explained above.
<b>Example</b>	<code>:RFG:EGPRS:MODulation:POLarity INVERT</code> <code>:RFG:EGPRS:MOD:POL?</code> Value returned in this example "INV".

**:RFGenerator:EGPRS:MODulation:TSEquence:STATE**

<b>Syntax</b>	<code>:RFGenerator:EGPRS:MODulation:TSEquence:STATE &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>ON</code>   <code>OFF</code> . Default is <code>ON</code> .

<b>Description</b>	This command switches the use of a training sequence either ON or OFF. <b>Notes:</b> <ul style="list-style-type: none"> <li>- The type of training sequence can be set using the command described below.</li> <li>- More details regarding the training sequence can be found in section Timeslots and Bursts.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFG:EGPRS:MODulation:TSEquence:STATE ON</code> <code>:RFG:EGPRS:MOD:TSEQ:STAT?</code> Value returned in this example "ON".

**:RFGenerator:EGPRS:MODulation:TSEquence[:DATA]**

<b>Syntax</b>	<code>:RFGenerator:EGPRS:MODulation:TSEquence[:DATA] &lt;int1&gt;</code>
<b>Parameters</b>	<code>int1</code> is an integer. The minimum value for <code>int1</code> is 0, the maximum value is 7. The default value is 0. <b>Note:</b> This command only selects the type of training sequence. To switch the use of a training sequence on or off, use the command described above.
<b>Description</b>	This command selects the type of training sequence to be used. More details regarding the training sequence can be found in section Timeslots and Bursts.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one integer.
<b>Example</b>	<code>:RFG:EGPRS:MODulation:TSEquence:DATA 3</code> <code>:RFG:EGPRS:MOD:TSEQ?</code> Value returned in this example "3".

**:RFGenerator:EGPRS:MSLOT:LEVel[:DATA]**

<b>Syntax</b>	<code>:RFGenerator:EGPRS:MSLOT:LEVel[:DATA] &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1...real8</code> are eight floating point real numbers. The minimum value for each <code>realx</code> is -120.0, the maximum value is -10.0. The resolution of each <code>realx</code> is 0.1. The default value for each <code>realx</code> is -60.0. <b>Note:</b> All eight values must be specified.
<b>Description</b>	This command configures individual RF output power levels for the eight DL timeslots. Every value represents the RF output power level of Willtek 3100 in dBm during the related timeslot. <b>Note:</b> This command <b>only</b> prepares the use of individual RF power levels. To activate them, use the <code>RFG:MSL:LEV:MODE</code> command.
<b>Query</b>	The query form of this command will return the current setting. Always eight floating point real numbers will be returned in a string.
<b>Example</b>	<code>:RFGenerator:EGPRS:MSLot:LEVel:DATA -80.0,-70.0,-60.0,-50.0,-40.0,-30.0,-20.0,-10.0</code> <code>:RFG:MSL:LEV?</code> Values returned in this example: "-80.0,-70.0,-60.0,-50.0,-40.0,-30.0,-20.0,-10.0"

**:RFGenerator:EGPRs:MSLOT:LEVel:MODE**

<b>Syntax</b>	:RFGenerator:EGPRs:MSLOT:LEVel:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: INDividual   STANdard. Default is INDividual.
<b>Description</b>	Switches the use of individual RF output power levels on or off. INDividual means that the individual RF output power levels, specified with the :RFG:MSL:LEV command will be used. STANdard means that the individual RF power levels will be ignored and that the standard RF output level of Willtek 3100 (as set with the :RFG:LEV command) will be used.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain the short-form version of one of the predefined expressions explained above.
<b>Example</b>	:RFG:EGPRs:MSLot:LEVel:MODE INDividual :RFG:EGPRs:MSL:LEV:MODE? Value returned in this example: "IND".

**:RFGenerator:EGPRs:STATe**

<b>Syntax</b>	:RFGenerator:EGPRs:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the RF generator ON or OFF. While Willtek 3100 is in RF generator mode, there is no signalling active. This means that Willtek 3100 may be used as RF signal generator for all kinds of RF and GSM signals. While working as a RF generator, Willtek 3100 does not respond to any messages sent by the mobile nor does the test set expect the mobile under test to react in any way.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:EGPRs:STATe ON :RFG:EGPRs:STAT? Value returned in this example "ON".

**:RFGenerator:EGPRs:STYPe**

<b>Syntax</b>	:RFGenerator:EGPRs:STYPe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: BURSt   CWAVe. Default is BURSt.
<b>Description</b>	This command switches between burst transmission (BURSt) or continuous signal transmission without bursts (CWAVe). CWAVe means that Willtek 3100 will generate a coded GSM signal in all timeslots according to the settings above. When set to BURSt, Willtek 3100 will generate only one burst per TDMA frame. This means that there will be no RF transmission during the remaining 7 timeslots.

<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing the short-form version of one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:EGPRs:STYPe BURSt</code> <code>:RFG:EGPRs:STYP?</code> Value returned in this example "BURSt".

**CDMA2000 commands :RFGenerator:CDMA:STATE**

<b>Syntax</b>	<code>:RFGenerator:CDMA:STATE &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the RF generator on or off. While the Willtek 3100 is in RF generator mode, there is no signaling active. This means that the Willtek 3100 may be used as RF signal generator for all kinds of RF and CDMA signals. While working as an RF generator, Willtek 3100 does not respond to any messages sent by the mobile nor does the test set expect the mobile under test to react in any way.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFGenerator:CDMA:STATE ON</code> <code>:RFG:STAT?</code> Value returned: "ON".

**:RFGenerator:CDMA:LEVel**

<b>Syntax</b>	<code>:RFGenerator:CDMA:LEVel &lt;real1&gt;</code>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is -120.0, the maximum value is 0.0. The minimum resolution for real1 is 0.1. The default value for real1 is -70.0.
<b>Description</b>	This command sets the RF output power level of Willtek 3100. The value specified for real1 is the power output level in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFGenerator:CDMA:LEVel -50.5</code> <code>:RFG:CDMA:LEV?</code> Value returned: "-50.5".

**:RFGenerator:CDMA:FREQuency**

<b>Syntax</b>	<code>:RFGenerator:CDMA:FREQuency &lt;real1&gt;</code>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is 430,000,000, the maximum value is 2,300,000,000. The minimum resolution for real1 is 10. The default value for real1 is 800,000,000.
<b>Description</b>	This command sets the RF generator's frequency. The value specified for real1 is the output frequency in Hz.

<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:CDMA:FREQuency 880200010 :RFG:CDMA:FREQ? Value returned: "880200010".

**:RFGenerator:CDMA:EXpected**

<b>Syntax</b>	:RFGenerator:CDMA:EXpected <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is -70.0, the maximum value is 36.0. The minimum resolution for real1 is 0.1. The default value for real1 is 0.0.
<b>Description</b>	This command sets the expected power of the mobile. The value specified for real1 is the power level in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:CDMA:EXpected -50.5 :RFG:CDMA:EXP? Value returned: "-50.5".

**:RFGenerator:CDMA:MODulation**

<b>Syntax</b>	:RFGenerator:CDMA:MODulation <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: CDMA   NONE. Default is CDMA.
<b>Description</b>	This command selects the type of modulation to be used on the RF output signal. NO means that the output signal will not be modulated, while QPSK means that the output signal will be QPSK (Gaussian Minimum Shift Keying) modulated. <b>Note:</b> As soon as QPSK is selected, the Willtek 3100 will provide a CDMA-like RF output signal.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:CDMA:MODulation CDMA :RFG:CDMA:MOD? Value returned in this example "CDMA".

**:RFG:CDMA:BS:CCH:ARFCn**

<b>Syntax</b>	:RFG:CDMA:BS:CCH:ARFCn <Int1>, [ <PredefExp> ]
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2047. The default value is 29. PredefExp is an optional expression which can take on one of the following values: US800   USPCs   TACS   JTACs   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. The default is US800.
<b>Description</b>	This command sets RF generator's frequency. Channel and band are used to calculate the frequency.

<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	RFG:CDMA:BS:CCH:ARFC 0,US800

**:RFGenerator:CDMA:SSEctor[:LEVel]**

<b>Syntax</b>	:RFGenerator:CDMA:SSEctor[:LEVel] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is -12.0, the maximum value 3.0. The minimum resolution is 0.1. The default value is -3.0.
<b>Description</b>	This command sets the sector ratio. The physical dimension is dB.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFGenerator:CDMA:SSEctor:LEV -7.0 :RFG:CDMA:SSECT? Value returned: -7.0.

**:RFGenerator:CDMA:SSEctor:STATE**

<b>Syntax</b>	:RFGenerator:CDMA:SSEctor:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: OFF   ON. Default is OFF.
<b>Description</b>	This command switches the sector 2 to OFF or ON.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:SSEC:STATE ON :RFG:CDMA:SSEC:STAT? Value returned: ON.

**:RFGenerator:CDMA:SSEctor:TCODE**

<b>Syntax</b>	:RFGenerator:CDMA:SSEctor:TCODE <Int1>
<b>Parameters</b>	Int1 is an integer number. The minimum value is 2, the maximum value 63. The default value is 8.
<b>Description</b>	This command sets the traffic code for sector 2.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:SSECT:TCOD 8 :RFG:CDMA:SSECT:TCOD? Value returned: 8.

**:RFGenerator:CDMA:PILot1[:LEVel]**

<b>Syntax</b>	:RFGenerator:CDMA:PILot1[:LEVel] <Reall> :RFGenerator:CDMA:PILot2[:LEVel] <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value is -32.0, the maximum value -5.0. The minimum resolution is 0.1. The default value is -7.0.
<b>Description</b>	This command sets the pilot channel power for sector 1 or sector 2. The physical dimension is dB.



<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:PIL1:LEV -7.0 :RFG:CDMA:PIL1:LEV? Value returned for sector 1 pilot: -7.0. :RFG:CDMA:PIL2:LEV -16.0 :RFG:CDMA:PIL2:LEV? Value returned for sector 2 pilot: -16.0.

**:RFGenerator:CDMA:PILOt1:ECIO**

<b>Syntax</b>	:RFGenerator:CDMA:PILOt1:ECIO? :RFGenerator:CDA:PILOt2:ECIO?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Pilot Channel Power to Pilot Channel Power plus Noise Ratio expressed in dB. There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one real number.
<b>Example</b>	:RFG:CDMA:PIL1:ECIO? Value returned for sector 1: -7.0. :RFG:CDMA:PIL2:ECIO? Value returned for sector 2: -7.0.

**:RFGenerator:CDMA:SYNC[:LEVel]**

<b>Syntax</b>	:RFGenerator:CDMA:SYNC[:LEVel] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -32.0, the maximum value -5.0. The minimum resolution is 0.1. The default value is -16.0.
<b>Description</b>	This command sets the sync channel power. The physical dimension is dB.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:SYNC:LEV -7.0 :RFG:CDMA:SYNC:LEV? Value returned for: -7.0.

**:RFGenerator:CDMA:SYNC:ECIO**

<b>Syntax</b>	:RFGenerator:CDMA:SYNC:ECIO?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Sync. Channel Power to Sync Channel Power plus Noise Ratio expressed in dB. There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one real number.
<b>Example</b>	:RFG:CDMA:SYNC:ECIO? Value returned for sector 1: -7.0.

**:RFGenerator:CDMA:QPCH:STATe**

<b>Syntax</b>	:RFGenerator:CDMA:QPCH:STATe <PredefExp>
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<b>Parameters</b>	PredefExp is one of the following predefined expressions: OFF   ON. Default is OFF.
<b>Description</b>	This command switches the generation of the quick paging channel to OFF or ON.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:QPCH:STAT ON :RFG:CDMA:QPCH:STAT? Value return: ON.

**:RFGenerator:CDMA:PAG:ECIO**

<b>Syntax</b>	:RFGenerator:CDMA:PAG:ECIO?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Paging channel power to paging channel power plus noise ratio expressed in dB.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:PAGing:ECIO? Value returned for sector 1: -7.0.

**:RFGenerator:CDMA:FCH1[:LEVEL]**

<b>Syntax</b>	:RFGenerator:CDMA:FCH1[:LEVEL] <Real1> :RFGenerator:CDMA:FCH2[:LEVEL] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -32.0, the maximum value -5.0. The minimum resolution is 0.1. The default value is -7.4.
<b>Description</b>	This command sets the fundamental channel power for sector 1 or sector 2. The physical dimension is dB.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:FCH1:LEV -7.5 :RFG:CDMA:FCH1:LEV? Value returned for sector 1 Fundamental power: -7.5. :RFG:CDMA:FCH2:LEV -6.2 :RFG:CDMA:FCH2:LEV? Value returned for sector 2 Fundamental power: -6.2.

**:RFGenerator:CDMA:FCH1:ECIO**

<b>Syntax</b>	:RFGenerator:CDMA:FCH1:ECIO? :RFGenerator:CDMA:FCH2:ECIO?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Fundamental channel power to fundamental channel power plus noise ratio expressed in dB. There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one real number.
<b>Example</b>	:RFG:CDMA:FCH1:ECIO? Value returned for sector 1 for example: -7.4. :RFG:CDMA:FCH2:ECIO? Value returned for sector 2 for example: -7.4.

**:RFGenerator:CDMA:FCH1:EBNT**

<b>Syntax</b>	:RFGenerator:CDMA:FCH1:EBNT? :RFGenerator:CDMA:FCH2:EBNT?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Ratio in dB of the fundamental channel's combined received energy per bit to the effective noise power spectral density. There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:FCH1:EBNT? Value returned for sector 1 for example: -7.4. :RFG:CDMA:FCH2:EBNT? Value returned for sector 2 for example: -7.4.

**:RFGenerator:CDMA:FCH1:RATE**

<b>Syntax</b>	:RFGenerator:CDMA:FCH1:RATE? :RFGenerator:CDMA:FCH2:RATE?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is available.
<b>Query</b>	This query returns the data rate of fundamental channels in sector 1 or sector 2.
<b>Example</b>	:RFG:CDMA:FCH1:RATE? Value returned for sector 1: FULL. :RFG:CDMA:FCH2:RATE? Value returned for sector 2: FULL.

**:RFGenerator:CDMA:SCH[:LEVel]**

<b>Syntax</b>	:RFGenerator:CDMA:SCH[:LEVel] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -32.0, the maximum value -5.0. The minimum resolution is 0.1. The default value is -7.4.
<b>Description</b>	This command sets the sector ratio. The physical dimension is dB.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFGenerator:CDMA:SSECTOR:LEV -7.4 :RFG:CDMA:SSECTOR? Value returned: -7.4.

**:RFGenerator:CDMA:SCH:ECIO**

<b>Syntax</b>	:RFGenerator:CDMA:SCH:ECIO?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Supplemental channel power to supplemental channel power plus noise ratio expressed in dB. There is solely a query form of this command available.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100. The string delivered back will contain one real number.
<b>Example</b>	:RFG:CDMA:SCH:ECIO? Value returned for sector 1: -7.0.

**:RFGenerator:CDMA:SCH:EBNT?**

<b>Syntax</b>	:RFGenerator:CDMA:SCH:EBNT?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	Returns the ratio in dB of the supplemental channel's combined received energy per bit to the effective noise power spectral density.
<b>Example</b>	:RFG:CDMA:SCH:EBNT? Value returned for example: -7.4.

**:RFGenerator:CDMA:SCH:RATE**

<b>Syntax</b>	:RFGenerator:CDMA:SCH:RATE?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The command form is not available.
<b>Query</b>	This query returns the data rate of supplemental channel.
<b>Example</b>	:RFG:CDMA:SCH:RATE? Value returned for example: FULL.

**:RFGenerator:CDMA:OCNS1[:LEVEL]**

<b>Syntax</b>	:RFGenerator:CDMA:OCNS1[:LEVEL]? :RFGenerator:CDMA:OCNS2[:LEVEL]?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	The command form is not available.
<b>Query</b>	This query returns the OCNS channel power for sector 1 or sector 2. The physical dimension is dB.
<b>Example</b>	:RFG:CDMA:OCNS1:LEV? Value returned for sector 1 OCNS, for example -4.5. :RFG:CDMA:OCN22:LEV? Value returned for sector 2 OCNS, for example -2.1.

**:RFGenerator:CDMA:AWGN[:LEVEL]**

<b>Syntax</b>	:RFGenerator:CDMA:AWGN[:LEVEL] <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value is -10.0, the maximum value 5.0. The minimum resolution is 0.1. The default value is 0.0.
<b>Description</b>	This command sets the AWGN level. The physical dimension is dB.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFGenerator:CDMA:AWGN:LEV -1.0 :RFG:CDMA:AWGN:LEV? Value returned: -1.0.

**:RFGenerator:CDMA:AWGN:STATe**

<b>Syntax</b>	:RFGenerator:CDMA:AWGN:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: OFF   ON. Default is OFF.
<b>Description</b>	This command switches the generation of AWGN to OFF or ON.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:CDMA:AWGN:STAT ON :RFG:CDMA:AWGN:STAT? Value returned: ON.

**:RFGenerator:CDMA:TXCorrection[:IMMediate]**

<b>Syntax</b>	:RFGenerator:CDMA:TXCorrection[:IMMediate]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command starts the internal TX correction procedure. This procedure should be carried out when a temperature change has occurred since the last TX level correction, before performing a quality measurement. The need for such a procedure can be tested with the :RFG:CDMA:TXCO:CALibrate query.
<b>Query</b>	There is no query form of this command.
<b>Example</b>	:RFG:CDMA:TXCO

**:RFGenerator:CDMA:TXCorrection:CALibrate**

<b>Syntax</b>	:RFGenerator:CDMA:TXCorrection:CALibrate?
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if the calibration command should be issued.
<b>Example</b>	:RFG:CDMA:TXCO:CALi? The query returns 1 if the RFG:CDMA:TXCO command needs to be issued, or 0 if ok.

**AMPS commands :RFGenerator:AMPS:STATe**

<b>Syntax</b>	:RFGenerator:AMPS:STATe <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.

<b>Description</b>	Switches the RF generator ON or OFF. While the Willtek 3100 is in RF generator mode, there is no signalling active. This means that the Willtek 3100 may be used as RF signal generator for all kinds of RF and CDMA signals. While working as a RF generator, the Willtek 3100 does not respond to any messages sent by the mobile nor does the test set expect the mobile under test to react in any way.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:AMPS:STATe ON :RFG:AMPS:STAT? Value returned in this example "ON".

**:RFGenerator:AMPS:LEVel**

<b>Syntax</b>	:RFGenerator:AMPS:LEVel <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is -120.0, the maximum value is 0.0. The minimum resolution for real1 is 0.1. The default value for real1 is -70.0.
<b>Description</b>	This command sets the RF output power level of Willtek 3100. The value specified for real1 is the power output level in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:AMPS:LEVel -50.5 :RFG:AMPS:LEV? Value returned in this example: "-50.5".

**:RFGenerator:AMPS:FREQuency**

<b>Syntax</b>	:RFGenerator:AMPS:FREQuency <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is 430,000,000, the maximum value is 2,300,000,000. The minimum resolution for real1 is 10. The default value for real1 is 800,000,000.
<b>Description</b>	This command sets the RF generator's frequency. The value specified for real1 is the output frequency in Hz. <b>Note:</b> For more details on the CDMA frequency ranges, please refer to section Basic Specifications of CDMA Bands.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFGenerator:AMPS:FREQuency 880200010 :RFG:CDMA:FREQ? Value returned in this example: "880200010".

**:RFG:AMPS:BS:VCH:ARFCn**

<b>Syntax</b>	:RFG:AMPS:BS:VCH:ARFCn <Int1>, [<PredefExp>]
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2047. The default value is 29. PredefExp is an optional expression which can take on one of the following values: US800 USPCS TACS JTACS KPCS NMT450 IMT2000 MHZ900 MHZ1800. The default is US800.
<b>Description</b>	This command sets RF generator's frequency. The channel and band are used to calculate the frequency.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFG:AMPS:BS:VCH:ARFC 0,AMPS

**:RFGenerator:AMPS:MODulation**

<b>Syntax</b>	:RFGenerator:AMPS:MODulation <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: FM NONE. Default is FM.
<b>Description</b>	This command selects the type of modulation to be used on the RF output signal. NONE means that the output signal will not be modulated, while FM means that the output signal will be frequency modulated.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:AMPS:MODulation FM :RFG:AMPS:MOD? Value returned in this example "FM".

**:RFGenerator:AMPS:MOD:FM:SAT**

<b>Syntax</b>	:RFGenerator:AMPS:MOD:FM:SAT <int1>
<b>Parameters</b>	int1 is one of the following predefined expressions: 0,1,2. Default is 1.
<b>Description</b>	This command defines which FM modulation rate will be utilized to modulate the output signal. 0 = 5970 Hz, 1 - 6000 Hz, 2 - 6030Hz.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions
<b>Example</b>	:RFGenerator:AMPS:MOD:FM:SAT 0 :RFG:AMPS:MOD:FM:SAT? Value returned in this example "0".

**:RFGenerator:AMPS:MOD:FM:KHZ**

<b>Syntax</b>	:RFGenerator:AMPS:MOD:FM:KHZ <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON OFF. Default is ON.

<b>Description</b>	This command enables or disables the 1kHz tone.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:AMPS:MOD:FM:KHZ ON :RFG:AMPS:MOD:FM:KHZ? Value returned in this example "0".

**:RFGenerator:AMPS:TXCorrection [:IMMEDIATE]**

<b>Syntax</b>	:RFGenerator:AMPS:MOD:FM:KHZ [:IMMEDIATE]
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command sends a message to perform TX Correction procedure
<b>Query</b>	There is no query form of this command.
<b>Example</b>	:RFG:AMPS:TXC.

**:RFG:AMPS:TXC:CAL**

<b>Syntax</b>	:RFG:AMPS:TXC:CAL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers boolean number in a string which indicates if Calibration Command should be issued.
<b>Example</b>	:RFG:AMPS:TXC:CAL? The query returns 1, if the RFG:CDMA:TXC command needs to be issued, or 0 if ok.

**1xEV-DO commands :RFGenerator:EVDO:STATE**

<b>Syntax</b>	:RFGenerator:EVDO:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. The default is OFF.
<b>Description</b>	Switches the RF generator on or off. The Willtek 3100 may be used as RF signal generator for all kinds of RF and EVDO signals. <b>Note:</b> While the RF generator of the Willtek 3100 is active, there is no signaling available. This means that the Willtek 3100 does not respond to any signaling messages sent by the mobile nor does the test set expect the mobile under test to react in any way.
<b>Query</b>	The query form of this command returns the current setting of the Willtek 3100 in the form of one of the predefined expressions explained above, contained in a string.



<b>Example</b>	<pre>:RFGenerator:EVDO:STATe ON :RFG:EVDO:STAT? String returned: "ON".</pre>
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**:RFGenerator:EVDO:LEVel**

<b>Syntax</b>	:RFGenerator:EVDO:LEVel <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is -120.0, the maximum value is 0.0, the resolution is 0.1. The default value is -70.0.
<b>Description</b>	This command sets the RF generator's output power level (RF in/out socket). The physical dimension of the parameter value is dBm.
<b>Query</b>	The query form of this command returns the current setting of the Willtek 3100 in the form of one floating point real number, contained in a string.
<b>Example</b>	<pre>:RFGenerator:EVDO:LEVel -50.5 :RFG:EVDO:LEV? String returned: "-50.5".</pre>

**:RFGenerator:EVDO:FREQuency**

<b>Syntax</b>	:RFGenerator:EVDO:FREQuency <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is 430,000,000, the maximum value is 2,300,000,000, the resolution is 10. The default value is 800,000,000.
<b>Description</b>	This command sets the RF generator's frequency. The physical dimension of the parameter value is Hz.
<b>Query</b>	The query form of this command returns the current setting of the Willtek 3100 in the form of one floating point real number, contained in a string
<b>Example</b>	<pre>:RFGenerator:EVDO:FREQuency 880200010 :RFG:EVDO:FREQ? String returned: "880200010".</pre>

**:RFGenerator:EVDO:MODulation**

<b>Syntax</b>	:RFGenerator:EVDO:MODulation <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: NONE   CDMA. The default is NONE.
<b>Description</b>	<p>This command selects the type of modulation to be used on the RF output signal.</p> <ul style="list-style-type: none"> <li>- NONE means that the RF output signal will be not be modulated (unmodulated carrier).</li> <li>- CDMA means that the RF output signal will be CDMA modulated.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting of the Willtek 3100 in the form of one of the predefined expressions explained above, contained in a string.
<b>Example</b>	<pre>:RFGenerator:EVDO:MODulation NONE :RFG:EVDO:MOD? String returned: "NONE".</pre>

**:RFGenerator:EVDO:BS:CCH:ARFCn**

<b>Syntax</b>	:RFGenerator:EVDO:BS:CCH:ARFCn <Int>, [ <PredefExp> ]
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum is 2047. The default value is 29. PredefExp is an optional predefined expression which can take on one of the following values: US800   USPCS   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800   SEC800   PAMR400   PAMR800. The default is US800.
<b>Description</b>	This command sets RF generator's frequency by frequency band and corresponding channel number. The Willtek 3100 will automatically calculate the corresponding RF frequency from the parameter values specified.
<b>Query</b>	The query form of this command returns the currently set channel number and the related frequency band, both contained in a string and separated by commas.
<b>Example</b>	RFGenerator:EVDO:BS:CCH:ARFC 0,US800 RFGenerator:EVDO:BS:CCH:ARFCn? String returned: "0,US800"

**WCDMA commands**     **:RFGenerator:WCDMA:STATE**

<b>Syntax</b>	:RFGenerator:WCDMA:STATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is OFF.
<b>Description</b>	Switches the RF generator ON or OFF. While the Willtek 3100 is in RF generator mode, there is no signalling active. This means that the Willtek 3100 may be used as RF signal generator for all kinds of RF and WCDMA signals. While working as a RF generator, the Willtek 3100 does not respond to any messages sent by the mobile nor does the test set expect the mobile under test to react in any way.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFGenerator:WCDMA:STATE ON :RFGenerator:WCDMA:STATE? Value returned in this example "ON".

**:RFGenerator:WCDMA:LEVEL**

<b>Syntax</b>	:RFGenerator:WCDMA:LEVEL <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is -120.0, the maximum value is -20.0. The minimum resolution for real1 is 0.1. The default value for real1 is -70.0.
<b>Description</b>	This command sets the RF output power level of the Willtek 3100. The value specified for real1 is the power output level in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one floating point real number.

<b>Example</b>	<pre>:RFG:WCDMA:LEV -50.5 :RFG:WCDMA:LEV? Value returned in this example: -50.5.</pre>
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**:RFGenerator:WCDMa:FREQuency**

<b>Syntax</b>	<code>:RFGenerator:WCDMa:FREQuency &lt;real1&gt;</code>
<b>Parameters</b>	<p><code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is 430,000,000, the maximum value is 2,300,000,000. The minimum resolution for <code>real1</code> is 10. The default value for <code>real1</code> is 2,140,000,000.</p>
<b>Description</b>	<p>This command sets the RF generator's frequency. The value specified for <code>real1</code> is the output frequency in Hz.</p> <p><b>Note:</b> For more details on the WCDMA frequency ranges, please refer to section Basic Specifications of WCDMA Bands.</p>
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<pre>:RFG:WCDMA:FREQ 880200010 :RFG:WCDMA:FREQ? Value returned in this example: 880200010.</pre>

**:RFGenerator:WCDMa:UARFcn**

<b>Syntax</b>	<code>:RFGenerator:WCDMa:UARFcn &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer number. The minimum value is 0, the maximum value 10838. The initial default is 10700.</p>
<b>Description</b>	This command will set the Downlink channel number of the 3100.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<pre>:RFG:WCDMA:UARF 2010 :RFG:WCDMA:UARF? Value returned in this example: 2010.</pre>

**:RFGenerator:WCDMa:FOFFset**

<b>Syntax</b>	<code>:RFGenerator:WCDMa:FOFFset &lt;int1&gt;</code>
<b>Parameters</b>	<p><code>int1</code> is an integer number. The minimum value is -200000, the maximum value +200000. The initial default is 0.</p>
<b>Description</b>	This command will set the Downlink frequency offset of the 3100.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one integer.
<b>Example</b>	<pre>:RFG:WCDMA:FOFF 30000 :RFG:WCDMA:FOFF? Value returned in this example: 30000.</pre>

### **:RFGenerator:WCDMA:BAND?**

<b>Syntax</b>	<code>:RFGenerator:WCDMA:BAND?</code>
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	This query determines the current Signal Band (based on the current UARFCN).
<b>Example</b>	<code>:RFG:WCDMA:BAND?</code> Value returned in this example: 2.

### **:RFGenerator:WCDMA:MODulation**

<b>Syntax</b>	<code>:RFGenerator:WCDMA:MODulation &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>NONE</code>   <code>FM</code>   <code>WCDMA</code> . Default is <code>NONE</code> .
<b>Description</b>	This command selects the type of modulation to be used on the RF output signal. <code>NONE</code> means that the output signal will not be modulated, while <code>FM</code> means that the output signal will be FM modulated and <code>WCDMA</code> means that the Willtek 3100 will provide a WCDMA-like RF output signal.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFG:WCDMA:MOD WCDMA</code> <code>:RFG:WCDMA:MOD?</code> Value returned in this example "WCDM".

### **:RFGenerator:WCDMA:MODulation:FM:MFRrequency**

<b>Syntax</b>	<code>:RFGenerator:WCDMA:MODulation:FM:MFRrequency &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is 1,000, the maximum value is 100,000. The minimum resolution for <code>real1</code> is 10. The default value for <code>real1</code> is 50,000.
<b>Description</b>	This command sets the modulation frequency for the generated FM signal.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:RFG:WCDMA:MOD:FM:MFR 30000</code> <code>:RFG:WCDMA:MOD:FM:MFR?</code> Value returned in this example: 30000.

**:RFGenerator:WCDMa:MODulation:FM:FDEVIation**

<b>Syntax</b>	:RFGenerator:WCDMa:MODulation:FM:FDEVIation <real1>
<b>Parameters</b>	real1 is a floating point real number. The minimum value for real1 is 250,000, the maximum value is 1,000,000. The minimum resolution for real1 is 10. The default value for real1 is 500,000.
<b>Description</b>	This command sets the Modulation Frequency for the generated FM signal.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:RFG:WCDMA:MOD:FM:FDEV 300000 :RFG:WCDMA:MOD:FM:FDEV? Value returned in this example: 300000.

**:RFGenerator:WCDMa:MODulation:WCDMa:BITPattern**

<b>Syntax</b>	:RFGenerator:WCDMa:MODulation:WCDMa:BITPattern <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: PRBS9   PRBS15   PRBS23   ALLZero   ALLOne   ONEZero   ZEROOne. The default is PRBS9.
<b>Description</b>	This command sets the bit pattern for the WCDMA signal.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFG:WCDMA:MOD:WCDM:BITP ONEZero :RFG:WCDMA:MOD:WCDM:BITP? Value returned in this example "ONEZero".

**:RFGenerator:WCDMa:MODulation:WCDMa:SCODE**

<b>Syntax</b>	:RFGenerator:WCDMa:MODulation:WCDMa:SCODE <int1>
<b>Parameters</b>	int1 is an integer number. The minimum value is 0, the maximum value 15. The initial default is 0.
<b>Description</b>	This command sets the DPCH (secondary) scrambling code for the WCDMA signal.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:RFG:WCDMA:MOD:WCDM:SCOD 10 :RFG:WCDMA:MOD:WCDM:SCOD? Value returned in this example: 10.

**:RFGenerator:WCDMA:MODulation:WCDMA:CCODE**

<b>Syntax</b>	:RFGenerator:WCDMA:MODulation:WCDMA:CCODE <int1>
<b>Parameters</b>	int1 is an integer number. The minimum value is 3, the maximum value 511. The initial default is 3.
<b>Description</b>	This command sets the channelization code for the WCDMA signal.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one integer.
<b>Example</b>	:RFG:WCDMA:MOD:WCDM:CCOD 10 :RFG:WCDMA:MOD:WCDM:CCOD? Value returned in this example: 10.

**:RFGenerator:WCDMA:MODulation:WCDMA:SFormat**

<b>Syntax</b>	:RFGenerator:WCDMA:MODulation:WCDMA:SFormat <int1>
<b>Parameters</b>	int1 is an integer number. The minimum value is 0, the maximum value 16. The initial default is 11.
<b>Description</b>	This command sets the slot format for the WCDMA signal.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:RFG:WCDMA:MOD:WCDM:SFOR 10 :RFG:WCDMA:MOD:WCDM:SFOR? Value returned in this example: 10.

**:RFGenerator:WCDMA:MODulation:WCDMA:SFACTOR?**

<b>Syntax</b>	:RFGenerator:WCDMA:MODulation:WCDMA:SFACTOR?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	Only the query form is supported.
<b>Query</b>	This query determines the spreading factor for the WCDMA signal.
<b>Example</b>	:RFG:WCDMA:MOD:WCDM:SFAC? Value returned in this example: 20.

**:RFGenerator:WCDMA:MODulation:WCDMA:DState**

<b>Syntax</b>	:RFGenerator:WCDMA:MODulation:WCDMA:DState <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: ON   OFF. Default is ON.

<b>Description</b>	This command switches the DPCH code channel ON or OFF.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFG:WCDMA:MOD:WCDM:DSTA ON :RFG:WCDMA:MOD:WCDM:DSTA? Value returned in this example "ON".

**:RFGenerator:WCDMa:TXCorrection**

<b>Syntax</b>	:RFGenerator:WCDMa:TXCorrection
<b>Parameters</b>	There are no parameters.
<b>Description</b>	This command sends a message to start the TX correction procedure.
<b>Query</b>	There is no query form of this command.
<b>Example</b>	:RFG:WCDMA:TXC

**:RFG:WCDMa:TXC:CAL**

<b>Syntax</b>	:RFG:WCDMa:TXC:CAL?
<b>Parameters</b>	There are no parameters.
<b>Description</b>	There is solely a query form of this command available.
<b>Query</b>	This command delivers a boolean number in a string which indicates if a calibration command should be issued.
<b>Example</b>	:RFG:WCDMA:TXC:CAL? The query returns 1 if a RFG:WCDMA:TXC command needs to be issued, or 0 if ok.

## RFAnalyser subsystem

The RFAN subsystem controls the accessible parameters of the RF analyzer.

### **:RFAnalyser:GSM:FREQuency**

<b>Syntax</b>	<code>:RFAnalyser:GSM:FREQuency &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>800,000,000</code> , the maximum value is <code>2,000,000,000</code> . The minimum resolution for <code>real1</code> is <code>1</code> . The default value for <code>real1</code> is <code>800,000,000</code> .
<b>Description</b>	This command sets the RF analyzer's center frequency. The value specified for <code>real1</code> is the center frequency in Hz. <b>Note:</b> The frequency of the Willtek 3100 internal synthesizer can be changed in steps of 10 Hz.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFAnalyser:GSM:FREQuency 880200000</code> <code>:RFAN:FREQ?</code> Value returned: <code>"880200000"</code> .

### **:RFAnalyser:GSM:MODulation**

<b>Syntax</b>	<code>:RFAnalyser:GSM:MODulation &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>GMSK</code>   <code>UNMod</code> . Default is <code>GMSK</code> .
<b>Description</b>	Sets the modulation type to be expected by the RF analyzer. By nature, measurement results differ depending on the expected type of modulation.
<b>Query</b>	Returns the current setting, which is either <code>GMSK</code> or <code>UNM</code> .
<b>Example</b>	<code>:RFAnalyser:GSM:MODulation GMSK</code> <code>::RFAnalyser:GSM:MODulation?</code> Value returned: <code>"GMSK"</code> .

### **:RFAnalyser:GPRS:FREQuency**

<b>Syntax</b>	<code>:RFAnalyser:GPRS:FREQuency &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>800,000,000</code> , the maximum value is <code>2,000,000,000</code> . The minimum resolution for <code>real1</code> is <code>1</code> . The default value for <code>real1</code> is <code>800,000,000</code> .
<b>Description</b>	This command sets the RF analyzer's center frequency. The value specified for <code>real1</code> is the center frequency in Hz. <b>Note:</b> The frequency of the Willtek 3100's internal synthesizer can be changed in steps of 10 Hz.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFAnalyser:GPRS:FREQuency 880200000</code> <code>:RFAN:GPRS:FREQ?</code> Value returned: <code>"880200000"</code> .



**:RFANalyser:GPRS:MODulation**

<b>Syntax</b>	:RFANalyser:GPRS:MODulation <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: GMSK   UNMod. Default is GMSK.
<b>Description</b>	Sets the modulation type to be expected by the RF analyzer. By nature, measurement results differ depending on the expected type of modulation.
<b>Query</b>	Returns the current setting, which is either GMSK or UNM.
<b>Example</b>	:RFANalyser:GPRS:MODulation GMSK ::RFANalyser:GPRS:MODulation? Value returned: "GMSK".

**:RFANalyser:CDMA:BS:CCH:ARFCn**

<b>Syntax</b>	:RFANalyser:CDMA:BS:CCH:ARFCn <Int1>, [<PredefExp>]
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum value 2047. The default value is 29. PredefExp is an optional predefined expression which can take on one of the following values: US800   USPCs   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800. The default is US800.
<b>Description</b>	This command sets RF analyzer's center frequency by frequency band and corresponding channel number. The Willtek 3100 will automatically calculate the correct RF frequency from the parameters supplied.
<b>Query</b>	The query form of this command returns the current setting of the Willtek 3100.
<b>Example</b>	RFAN:CDMA:BS:CCH:ARFC 0,US800

**:RFANalyser:CDMA:FREQuency**

<b>Syntax</b>	:RFANalyser:CDMA:FREQuency <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is 430,000,000, the maximum value is 2,300,000,000, the resolution is 10. The default value is 800,000,000.
<b>Description</b>	This command sets the RF analyzer's center frequency. The physical dimension of the parameter value is Hz. <b>Note:</b> The frequency of the internal synthesizer can be changed in steps of 10 Hz.
<b>Query</b>	The query form of this command returns the current setting of the Willtek 3100 in the form of a floating point real number, contained in a string.
<b>Example</b>	:RFANalyser:CDMA:FREQuency 880200000 :RFAN:CDMA:FREQ? Value returned: "880200000".

**:RFANalyser:CDMA:ESN**

<b>Syntax</b>	:RFANalyser:CDMA:ESN <String>
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<b>Parameters</b>	String is a text of up to 15 characters, representing the mobile's electronic serial number (ESN).
<b>Description</b>	This command sets the ESN, required by the RF analyzer in order to perform waveform quality measurements.
<b>Query</b>	The query form of this command returns the current setting of the Willtek 3100 in the form of a string, contained in a string.
<b>Example</b>	:RFANalyser:CDMA:ESN 2468ACEF :RFAN:CDMA:ESN? Value returned: "AAAABBCD".

### **:RFANalyser:CDMA:RCONfig[:REVerse]**

<b>Syntax</b>	:RFANalyser:CDMA:RCONfig[:REVerse] <Int>
<b>Parameters</b>	Int is an integer number. The minimum value is 1, the maximum is 4. The default is 1.
<b>Description</b>	This command sets the reverse radio configuration used by the mobile under test to transmit data. The RF analyzer needs to know these settings in order to correctly decode the data received.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFAN:CDMA:RCON:REV 2 :RFAN:CDMA:RCON:REV? Value returned: 2.

### **:RFANalyser:AMPS:FREQuency**

<b>Syntax</b>	:RFANalyser:AMPS:FREQuency <Reall>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for Reall is 430,000,000, the maximum value is 2,300,000,000. The minimum resolution for reall is 10. The default value is 800,000,000.
<b>Description</b>	This command sets the RF analyzer's center frequency. The value specified is the center frequency in Hz. The frequency of the internal synthesizer can be changed in steps of 10 Hz.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFANalyser:AMPS:FREQuency 880200000 :RFAN:AMPS:FREQ? Value returned in this example: 880200000.

### **:RFAN:AMPS:BS:VCH:ARFCn**

<b>Syntax</b>	:RFAN:AMPS:BS:VCH:ARFCn <Int1>, [<PredefExp>]
<b>Parameters</b>	Int1 is an integer number. The minimum value is 0, the maximum value 2047. The default value is 29. PredefExp is an optional expression which can take on one of the following values: US800 USPCs TACS JTACS KPCS NMT450 IMT2000 MHZ900 MHZ1800. The default is US800.

<b>Description</b>	This command sets RF Analyzer's frequency. The channel and band are used to calculate the frequency.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFAN:AMPS:BS:VCH:ARFC 0,AMPS

**:RFANalyser:EVDO:BS:CCH:ARFCn**

<b>Syntax</b>	:RFANalyser:EVDO:BS:CCH:ARFCn <Int>, [ <PredefExp> ]
<b>Parameters</b>	Int is an integer number. The minimum value is 0, the maximum is 2047. The default value is 29. PredefExp is an optional predefined expression which can take on one of the following values: US800   USPCS   TACS   JTACS   KPCS   NMT450   IMT2000   MHZ900   MHZ1800   SEC800   PAMR400   PAMR800. The default is US800.
<b>Description</b>	This command sets the RF analyzer's center frequency by frequency band and corresponding channel number. The Willtek 3100 will automatically calculate the corresponding RF frequency from the parameter values specified.
<b>Query</b>	The query form of this command returns the currently set channel number and the related frequency band, both contained in a string and separated by commas.
<b>Example</b>	RFAN:EVDO:BS:CCH:ARFC 0,US800 RFANalyser:EVDO:BS:CCH:ARFCn? String returned: "0,US800"

**:RFANalyser:EVDO:FREQUENCY**

<b>Syntax</b>	:RFANalyser:EVDO:FREQUENCY <Real>
<b>Parameters</b>	Real is a floating point real number. The minimum value is 430,000,000, the maximum is 2,300,000,000, the resolution is 10. The default value is 800,000,000.
<b>Description</b>	This command sets the RF analyzer's center frequency. The physical dimension of the parameter value is Hz.
<b>Query</b>	The query form of this command returns one floating point real number contained in a string, representing the currently set analyzer center frequency in Hertz.
<b>Example</b>	:RFANalyser:EVDO:FREQUENCY 880200000 :RFAN:EVDO:FREQ? String returned: "880200000".

**:RFANalyser:EVDO:LCMask:ATI**

<b>Syntax</b>	:RFANalyser:EVDO:LCMask:ATI <String>
<b>Parameters</b>	String is a text, representing a 32-bit value in the form of up to eight hexadecimal symbols (0 to 9, A to F a to f).
<b>Description</b>	This command sets the access terminal identifier (ATI) used by the mobile. This parameter is required by the Willtek 3100 in order to perform waveform quality measurements.

<b>Query</b>	The query form of this command returns a string, containing a maximum of eight hexadecimal symbols. This string represents the ATI currently set on the Willtek 3100.
<b>Example</b>	<pre>:RFANalyser:EVDO:LCMask:ATI 2468ACEF :RFAN:EVDO:ELCM:ATI? String returned: "2468ACEF".</pre>

#### **:RFANalyser:EVDO:REVerse:DRATe**

<b>Syntax</b>	<pre>:RFANalyser:EVDO:REVerse:DRATe &lt;PredefExp&gt;</pre>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: BPSK9   BPSK19   BPSK38   BPSK76   BPSK153   QPSK230   QPSK307   QPSK460   QPSK614   QPSK921   QPSK1228   EPSK1843. Default is BPSK9.
<b>Description</b>	This command sets the (reverse) data rate and modulation type as used by the mobile under test to transmit data. The RF analyzer needs to know these settings in order to correctly decode the data received.
<b>Query</b>	The query form of this command returns one of the predefined expressions as explained above, contained in a string and representing the Willtek 3100's current setting.
<b>Example</b>	<pre>:RFANalyser:EVDO:REVerse:DRATe BPSK76 :RFAN:EVDO:REV:DRAT? String returned: "BPSK76".</pre>

#### **:RFANalyser:WCDMa:FREQuency**

<b>Syntax</b>	<pre>:RFANalyser:WCDMa:FREQuency &lt;Reall&gt;</pre>
<b>Parameters</b>	Reall is a floating point real number. The minimum value for Reall is 430,000,000, the maximum value is 2,300,000,000. The minimum resolution for reall is 10. The default value is 1,950,000,000.
<b>Description</b>	This command sets the RF analyzer's center frequency. The value specified is the center frequency in Hz. The frequency of the internal synthesizer can be changed in steps of 10 Hz.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<pre>:RFAN:WCDM:FREQ 1950000000 :RFAN:WCDM:FREQ? Value returned in this example: 1950000000.</pre>

#### **:RFANalyser:WCDMa:UARFcn**

<b>Syntax</b>	<pre>:RFANalyser:WCDMa:UARFcn &lt;int1&gt;</pre>
<b>Parameters</b>	int1 is an integer number. The minimum value is 0, the maximum value 9888. The initial default is 9750.

<b>Description</b>	This command will set the Uplink channel number of the 3100.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:RFAN:WCDM:UARF 6510 :RFAN:WCDM:UARF? Value returned in this example: 6510.

**:RFANalyser:WCDMa:FOFFset**

<b>Syntax</b>	:RFANalyser:WCDMa:FOFFset <int1>
<b>Parameters</b>	int1 is an integer number. The minimum value is -200000, the maximum value +200000. The initial default is 0.
<b>Description</b>	This command will set the Uplink frequency offset of the 3100.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:RFAN:WCDM:FOFF 30000 :RFAN:WCDM:FOFF? Value returned in this example: 30000.

**:RFANalyser:WCDMa:SCODE**

<b>Syntax</b>	:RFANalyser:WCDMa:SCODE <string1>
<b>Parameters</b>	string1 is a string of up to 6 characters.
<b>Description</b>	This command sets the scrambling code used by the RF analyzer for WCDMA measurements.
<b>Query</b>	The query form of this command will return the current setting of the Willtek 3100.
<b>Example</b>	:RFAN:WCDM:SCOD "AABBCD" :RFAN:WCDM:SCOD? Value returned in this example: "AABBCD".

**:RFANalyser:WCDMa:SRATE**

<b>Syntax</b>	:RFANalyser:WCDMa:SRATE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: SR60   SR15   SR30   SR120   SR240   SR480   SR960. Default is SR60.
<b>Description</b>	This command will set the symbol rate of the 3100 Analyzer.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFAN:WCDM:SRAT SR15 :RFAN:WCDM:SRAT? Value returned in this example "SR15".

### **:RFAnalyser:WCDMa:SRATe**

<b>Syntax</b>	<code>:RFAnalyser:WCDMa:SRATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: SR60   SR15   SR30   SR120   SR240   SR480   SR960. Default is SR60.
<b>Description</b>	This command will set the symbol rate of the 3100 Analyzer.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFAN:WCDM:SRAT SR15</code> <code>:RFAN:WCDM:SRAT?</code> Value returned in this example "SR15".

### **:RFAnalyser:WCDMa:CCODE**

<b>Syntax</b>	<code>:RFAnalyser:WCDMa:CCODE &lt;int1&gt;</code>
<b>Parameters</b>	int1 is an integer number. The minimum value is 1, the maximum value 256. The initial default is 16.
<b>Description</b>	This command will set the channel code of the 3100 Analyzer.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:RFAN:WCDM:CCOD 10</code> <code>:RFAN:WCDM:CCOD?</code> Value returned in this example: 10.

### **:RFAnalyser:WCDMa:MODulation:WCDMa:SFORmat**

<b>Syntax</b>	<code>:RFAnalyser:WCDMa:MODulation:WCDMa:SFORmat &lt;int1&gt;</code>
<b>Parameters</b>	int1 is an integer number. The minimum value is 0, the maximum value 5. The initial default is 0.
<b>Description</b>	This command will set the slot format of the 3100 Analyzer.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	<code>:RFAN:WCDM:SFOR 2</code> <code>:RFAN:WCDM:SFOR?</code> Value returned in this example: 2.

**:RFANalyser:WCDMA:NSTaircase:FREQuency**

<b>Syntax</b>	:RFANalyser:WCDMA:NSTaircase:FREQuency <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for Real1 is 430,000,000, the maximum value is 2,300,000,000. The minimum resolution for real1 is 10. The default value is 1,950,300,000.
<b>Description</b>	This command will set the Uplink frequency of the 3100 in Hz for Staircase Measurements. The frequency of can be changed in steps of 10 Hz.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one floating point real number.
<b>Example</b>	:RFAN:WCDM:NST:FREQ 1950000000 :RFAN:WCDM:NST:FREQ? Value returned in this example: 1950000000.

**:RFANalyser:WCDMA:NSTaircase:UARFcn**

<b>Syntax</b>	:RFANalyser:WCDMA:NSTaircase:UARFcn <int1>
<b>Parameters</b>	int1 is an integer number. The minimum value is 0, the maximum value 9888. The initial default is 9750.
<b>Description</b>	This command will set the Uplink channel number of the 3100 for Staircase measurements.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one integer.
<b>Example</b>	:RFAN:WCDM:NST:UARF 7510 :RFAN:WCDM:NST:UARF? Value returned in this example: 7510.

**:RFANalyser:WCDMA:RANGing:MODE**

<b>Syntax</b>	:RFANalyser:WCDMA:RANGing:MODE <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: AUTO   FIXEd. Default is AUTO.
<b>Description</b>	This command selects the ranging mode for the input of the RF analyzer. AUTO means that the Willtek 3100 will perform a measurement of the input power and then automatically select the optimum ranging for the test signal applied. FIXEd will set the input ranging to a fixed RF power level. This RF power level can be specified, using the RFAN:WCDM:LEV command as described below. AUTO ranging of the input signal requires time. Therefore, it is highly recommended to work with fixed ranging when fast measurement responses are an issue.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing the short-form version of one of the predefined expressions as explained above.
<b>Example</b>	:RFAN:WCDM:RANG:MODE FIXEd :RFAN:WCDM:RANG:MODE? Value returned in this example "FIXEd".

**:RFAnalyser:WCDMa:RANGing:LEVel**

<b>Syntax</b>	<code>:RFAnalyser:WCDMa:RANGing:LEVel &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>-23.0</code> , the maximum value is <code>36.0</code> . The minimum resolution for <code>real1</code> is <code>0.1</code> . The default value for <code>real1</code> is <code>0.0</code> .
<b>Description</b>	This command sets the expected RF input power level for the RF analyzer. The physical dimension of <code>real1</code> is dBm. This command will only have any effect on the Willtek 3100 when the <code>FIXed</code> ranging mode has been specified before (see command <code>RFAN:WCDM:RANG:MODE</code> ). Please note that the Willtek 3100 is able to handle input signals with a tolerance of 10 dB from the level specified here. For lower RF power levels, the measurement error will increase, while higher RF power levels will result in an input overload and distorted signals (and that will also lead to significant increases in measurement errors).
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFAN:WCDM:RANG:LEV 13.0</code> <code>:RFAN:WCDM:RANG:LEV?</code> Value returned in this example: <code>13.0</code> .

**:RFAnalyser:WCDMa:ZSPan:REFLevel**

<b>Syntax</b>	<code>:RFAnalyser:WCDMa:ZSPan:REFLevel &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>-23.0</code> , the maximum value is <code>36.0</code> . The minimum resolution for <code>real1</code> is <code>0.1</code> . The default value for <code>real1</code> is <code>0.0</code> .
<b>Description</b>	This command sets the reference level of the zero span Analyzer (upper limit). The value specified for <code>real1</code> is in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFAN:WCDM:ZSP:REFL -10.5</code> <code>:RFAN:WCDM:ZSP:REFL?</code> Value returned in this example: <code>-10.5</code> .

**:RFAnalyser:WCDMa:ZSPan:TRGLevel**

<b>Syntax</b>	<code>:RFAnalyser:WCDMa:ZSPan:TRGLevel &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>-60.0</code> , the maximum value is <code>36.0</code> . The minimum resolution for <code>real1</code> is <code>0.1</code> . The default value for <code>real1</code> is <code>0.0</code> .



<b>Description</b>	This command sets the trigger level of the zero span Analyzer. The value specified for <code>real1</code> is in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one floating point real number.
<b>Example</b>	<code>:RFAN:WCDM:ZSP:TRGL -10.5</code> <code>:RFAN:WCDM:ZSP:TRGL?</code> Value returned in this example: <code>-10.5</code> .

#### **:RFANalyser:WCDMa:ZSpan:RES**

<b>Syntax</b>	<code>:RFANalyser:WCDMa:ZSpan:RES &lt;PredefExp&gt;</code>
<b>Parameters</b>	<code>PredefExp</code> is one of the following predefined expressions: <code>RES30</code>   <code>RES100</code>   <code>RES46848</code> . Default is <code>RES46848</code> .
<b>Description</b>	This command will set the resolution bandwidth for zero span measurements.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFAN:WCDM:ZSP:RES RES100</code> <code>:RFAN:WCDM:ZSP:RES?</code> Value returned in this example <code>"RES100"</code> .

#### **:RFANalyser:WCDMa:ZSpan:REFPoints**

<b>Syntax</b>	<code>:RFANalyser:WCDMa:ZSpan:REFPoints</code> <code>&lt;real1&gt;&lt;real2&gt;...&lt;realn&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value depends on RBW; it is -51000 $\mu$ s for 4.6848 MHz and -85000 $\mu$ s for 30 and 100 kHz. The maximum value for <code>real1</code> is 50000 $\mu$ s. The initial default is 0 $\mu$ s. <code>real2</code> to <code>realn</code> are floating point real numbers. The minimum value is 0 $\mu$ s, the maximum value depends on RBW and is 51000 $\mu$ s for 4.6848 MHz and 85000 $\mu$ s for 30 and 100 kHz. The initial default is 5000 $\mu$ s. Minimum are two parameters <code>RP0</code> , <code>RP1</code> .
<b>Description</b>	The reference points <code>RP0</code> thru <code>RPn</code> define timing intervals for measuring and not measuring. The timing interval <code>RP0</code> will be not measured, after that alternating measure and non-measure intervals follow. Every timing interval <code>RPn</code> ; <code>RPn+1</code> may have a length between 0 $\mu$ s and 51000 resp. 85000 $\mu$ s. The maximum length of the sequence due to ACQ-RAM is 51000 resp. 85000 $\mu$ s (without consideration of the first <code>RP0</code> interval). <code>RP0</code> : -51000 $\mu$ s to +50000 $\mu$ s => <code>RP0</code> corresponds to "PRE-TRIGGER" in zerospan graphic display. <code>RP1</code> thru <code>RPn</code> : 0 $\mu$ s to 51000 $\mu$ s => <code>RP1</code> correspond to sweep time in zero-span graphic display. Sum of <code>RP1</code> to <code>RPn</code> must be =< 51000 resp. 85000 $\mu$ s.
<b>Query</b>	The query form of this command will return the current settings.
<b>Example</b>	<code>:RFAN:WCDM:ZSP:REFP</code> <code>0,100,200,300,400,500,600,700,800,</code> <code>900,1000,1100,1200,1300,1400,1500,1600,1700</code>

### **:RFAnalyser:WCDMA:IQSamples:REFLevel**

<b>Syntax</b>	<code>:RFAnalyser:WCDMA:IQSamples:REFLevel &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>-23.0</code> , the maximum value is <code>36.0</code> . The minimum resolution for <code>real1</code> is <code>0.1</code> . The default value for <code>real1</code> is <code>0.0</code> .
<b>Description</b>	This command sets the reference level for the measurement of the IQ-Samples (upper limit). The value specified for <code>real1</code> is in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	<code>:RFAN:WCDM:IQS:REFL -10.5</code> <code>:RFAN:WCDM:IQS:REFL?</code> Value returned in this example: <code>-10.5</code> .

### **:RFAnalyser:WCDMA:IQSamples:TRGLevel**

<b>Syntax</b>	<code>:RFAnalyser:WCDMA:IQSamples:TRGLevel &lt;real1&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value for <code>real1</code> is <code>-60.0</code> , the maximum value is <code>36.0</code> . The minimum resolution for <code>real1</code> is <code>0.1</code> . The default value for <code>real1</code> is <code>0.0</code> .
<b>Description</b>	This command sets the trigger level for the measurement of the IQ-Samples. The value specified for <code>real1</code> is in dBm.
<b>Query</b>	The query form of this command will return the current setting. The string delivered will contain one floating point real number.
<b>Example</b>	<code>:RFAN:WCDM:IQS:TRGL -10.5</code> <code>:RFAN:WCDM:IQS:TRGL?</code> Value returned in this example: <code>-10.5</code> .

### **:RFAnalyser:WCDMA:IQSamples:REFPoints**

<b>Syntax</b>	<code>:RFAnalyser:WCDMA:IQSamples:REFPoints &lt;real1&gt;&lt;real2&gt;</code>
<b>Parameters</b>	<code>real1</code> is a floating point real number. The minimum value is <code>-17000</code> $\mu$ s. The maximum value for <code>real1</code> is <code>50000</code> $\mu$ s. The initial default is <code>0</code> $\mu$ s. <code>real2</code> is a floating point real number. The minimum value is <code>0</code> $\mu$ s, the maximum value is <code>17000</code> $\mu$ s. The initial default is <code>5000</code> $\mu$ s.
<b>Description</b>	The reference points RPO and RP1 define timing intervals for measuring and not measuring. The timing interval RPO will be not measured, RP1 will be measured. The maximum length of the sequence due to ACQ-RAM is <code>17000</code> $\mu$ s (without consideration of the first RPO interval).
<b>Query</b>	The query form of this command will return the current settings.
<b>Example</b>	<code>:RFAN:WCDM:IQS:REFP 0,10000</code>

**:RFAnalyser:WCDMA:WLAN:FREQuency**

<b>Syntax</b>	:RFAnalyser:WCDMA:WLAN:FREQuency <Real1>
<b>Parameters</b>	Real1 is a floating point real number. The minimum value for Real1 is 2,400,000,000, the maximum value is 2,483,500,000. The minimum resolution for real1 is 10. The default value is 2,400,000,000.
<b>Description</b>	This command sets the RF analyzer's center frequency for WLAN measurement. The value specified is the center frequency in Hz. The frequency can be set in steps of 10 Hz.
<b>Query</b>	The query form of this command will return the current setting. The string delivered back will contain one floating point real number.
<b>Example</b>	:RFAN:WCDM:WLAN:FREQ 2450000000 :RFAN:WCDM:WLAN:FREQ? Value returned in this example: 2450000000.

## RFSpectrum subsystem

The RFSP subsystem controls the accessible parameters of the RF modulation spectrum analyzer.

### **:RFSpectrum[ :GSM | GPRS | EGPRS ] :MSpectrum:SPAN**

<b>Syntax</b>	<code>:RFSpectrum[ :GSM   GPRS   EGPRS ] :MSpectrum:SPAN &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: SP400   SP1000   SP3600. Default is SP400.
<b>Description</b>	Sets the span (i.e. the spectral bandwidth) of the modulation spectrum analyzer. SP400 will set a span of 400 kHz, SP1000 will set a span of 1 MHz. SP3600 will set a span of 3.6 MHz. <b>Note:</b> More details regarding the modulation spectrum analyzer can be found in section <b>Spectrum Measurements</b> .
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:RFSP:MSP:SPAN SP1000</code> <code>:RFSP:MSP:SPAN?</code> Value returned in this example "SP1000".

### **:RFSpectrum[ :GSM | GPRS | EGPRS ] :MSpectrum:RESolution**

<b>Syntax</b>	<code>:RFSpectrum[ :GSM   GPRS   EGPRS ] :MSpectrum:RESolution &lt;PredefExp&gt;</code>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RES5   RES10   RES30. Default is RES2.
<b>Description</b>	Sets the spectral resolution of the modulation spectrum analyzer. RES5 stands for a resolution of 5 kHz. This resolution may only be chosen in conjunction with the 400 kHz spectral bandwidth (span) as described above. RES5 will set a resolution of 5 kHz. This resolution may only be chosen in conjunction with the 400 kHz and 1 MHz spectral bandwidth (span) as described above. RES10 means a resolution of 10 kHz, while RES30 will set a resolution of 30 kHz. This resolution may only be chosen in conjunction with the 3.6 MHz spectral bandwidth (span) as described above. <b>Notes</b> <ul style="list-style-type: none"><li>– With the span set to 400 kHz, only the following spectral resolutions are available: 2 kHz (RES2), 5 kHz (RES5) and 10 kHz (RES10).</li><li>– With the span set to 1 MHz, only the following spectral resolutions are available: 5 kHz (RES5) and 10 kHz (RES10).</li><li>– With the span set to 3.6 MHz, only the following spectral resolutions are available: 10 kHz (RES10) and 30 kHz (RES30).</li></ul> More details regarding the modulation spectrum analyzer can be found in section <b>Spectrum Measurements</b> Please note that illegal combinations of span and resolution may be accepted by the Willtek 3100 and might lead to undefined measurement results.

<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFSpectrum:MSP:RES RES10 :RFSpectrum:MSP:RES? Value returned in this example "RES10".

**:RFSpectrum:CMDA:MSpectrum:SPAN**

<b>Syntax</b>	:RFSpectrum:CMDA:MSpectrum:SPAN <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: SP500   SP1250   SP2500. Default is SP500.
<b>Description</b>	Sets the span (i.e. the spectral bandwidth) of the modulation spectrum analyzer. SP500 will set a span of 500 kHz, SP1250 will set a span of 1.25 MHz. SP2500 will set a span of 2.5 MHz.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFSpectrum:CMDA:MSpectrum:SPAN SP1250 :RFSpectrum:CMDA:MSpectrum:SPAN? Value returned: "SP1250".

**:RFSpectrum:CMDA:MSpectrum:RESolution**

<b>Syntax</b>	:RFSpectrum:CMDA:MSpectrum:RESolution <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RES2   RES5   RES10   RES30. Default is RES2.
<b>Description</b>	Sets the spectral resolution of the modulation spectrum analyzer. RES2 stands for a resolution of 2 kHz. This resolution may only be chosen in conjunction with the 500 kHz spectral bandwidth (span) as described above. RES5 will set a resolution of 5 kHz. This resolution may only be chosen in conjunction with the 500 kHz and 1.25 MHz spectral bandwidth (span) as described above. RES10 means a resolution of 10 kHz, while RES30 will set a resolution of 30 kHz. This resolution may only be chosen in conjunction with the 2.5 MHz spectral bandwidth (span) as described above. <b>Notes:</b> <ul style="list-style-type: none"> <li>- With the span set to 500 kHz, only the following spectral resolutions are available: 2 kHz (RES2), 5 kHz (RES5) and 10 kHz (RES10).</li> <li>- With the span set to 1.25 MHz, only the following spectral resolutions are available: 5 kHz (RES5) and 10 kHz (RES10).</li> <li>- With the span set to 2.5 MHz, only the following spectral resolutions are available: 10 kHz (RES10) and 30 kHz (RES30).</li> <li>- Please note that illegal combinations of span and resolution may be accepted by the Willtek 3100 and might lead to undefined measurement results.</li> </ul>
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFSpectrum:CMDA:MSpectrum:RESolution RES10 :RFSpectrum:CMDA:MSpectrum:RES? Value returned: "RES10".

**:RFSpectrum:EVDO:MSpectrum:SPAN**

<b>Syntax</b>	:RFSpectrum:EVDO:MSpectrum:SPAN <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: SP500   SP2500. Default is SP2500.
<b>Description</b>	This command sets the span (i.e. the spectral bandwidth) of the modulation spectrum analyzer. <ul style="list-style-type: none"><li>- SP500 sets a span of 500 kHz,</li><li>- SP2500 sets a span of 2.5 MHz.</li></ul>
<b>Query</b>	The query form of this command returns one of the predefined expressions explained above contained in a string, representing the current setting of the Willtek 3100.
<b>Example</b>	:RFSpectrum:EVDO:MSpectrum:SPAN SP500 :RFSpectrum:EVDO:MSpectrum:SPAN? String returned: "SP500".

**:RFSpectrum:EVDO:MSpectrum:RESolution**

<b>Syntax</b>	:RFSpectrum:EVDO:MSpectrum:RESolution <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RES15   RES30. Default is RES30.
<b>Description</b>	This command sets the spectral resolution of the modulation spectrum analyzer. RES15 sets a resolution of 15 kHz, RES30 sets a resolution of 30 kHz.
<b>Query</b>	The query form of this command returns one of the predefined expressions explained above contained in a string, representing the current setting of the Willtek 3100.
<b>Example</b>	:RFSpectrum:EVDO:MSpectrum:RESolution RES15 :RFSpectrum:EVDO:MSpectrum:RES? String returned: "RES15".

**:RFSpectrum:WCDMA:MSpectrum:SPAN**

<b>Syntax</b>	:RFSpectrum:WCDMA:MSpectrum:SPAN <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: SP10   SP6. The default is SP10.
<b>Description</b>	Sets the span (i.e. the spectral bandwidth) of the modulation spectrum analyzer. SP6 will set a span of 6 MHz (+/- 3 MHz), SP10 will set a span of 10 MHz (+/- 5 MHz).
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFSpectrum:WCDMA:MSpectrum:SPAN SP10 :RFSpectrum:WCDMA:MSpectrum:SPAN? Value returned in this example SP10.

**:RFSpectrum:WCDMA:MSpectrum:RESolution**

<b>Syntax</b>	:RFSpectrum:WCDMA:MSpectrum:RESolution <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RES15   RES30. The default is RES15.
<b>Description</b>	Sets the spectral resolution of the modulation spectrum analyzer. RES30 will set a resolution of 30 kHz. RES15 will set a resolution of 15 kHz.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFSpectrum:WCDMA:MSpectrum:RESolution RES15 :RFSpectrum:WCDMA:MSpectrum:RESolution? Value returned in this example "RES15".

**:RFSpectrum:WCDMA:MSpectrum:SEM:SPAN**

<b>Syntax</b>	:RFSpectrum:WCDMA:MSpectrum:SEM:SPAN <PredefExp>
<b>Parameters</b>	PredefExp is the following predefined expression: SP12. The default is SP12.
<b>Description</b>	Sets the span (i.e. the spectral bandwidth) of the spectrum emission mask spectrum analyzer. SP12 will set a span of 12 MHz.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFSpectrum:WCDMA:MSpectrum:SEM:SPAN SP12 :RFSpectrum:WCDMA:MSpectrum:SEM:SPAN? Value returned in this example SP12.

**:RFSpectrum:WCDMA:MSpectrum:SEM:RESolution**

<b>Syntax</b>	:RFSpectrum:WCDMA:MSpectrum:SEM:RESolution <PredefExp>
<b>Parameters</b>	PredefExp is one of the following predefined expressions: RES30. The default is RES30.
<b>Description</b>	Sets the spectral resolution of the spectrum emission mask spectrum analyzer. RES30 will set a resolution of 30 kHz.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	:RFSpectrum:WCDMA:MSpectrum:SEM:RESolution RES30 :RFSpectrum:WCDMA:MSpectrum:SEM:RESolution? Value returned in this example RES30.

## MS Power Supply subsystem

The PSUPply subsystem controls the accessible parameters of the MS Power Supply Option.

### **:PSUPply:STATe**

<b>Syntax</b>	<code>:PSUPply:STATe &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>ON</b>   <b>OFF</b> . Default is <b>OFF</b> .
<b>Description</b>	Switches the output of the power supply option of the Willtek 3100 either on or off. Please note that this command needs the power supply option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.
<b>Example</b>	<code>:PSUPply:STATe ON</code> <code>:PSUP:STAT?</code> Value returned: "ON".

### **:PSUPply:LEVEl**

<b>Syntax</b>	<code>:PSUPply:LEVEl &lt;real1&gt;</code>
<b>Parameters</b>	<b>real1</b> is a floating point real number. The minimum value for <b>real1</b> is <b>0.0</b> , the maximum value is <b>10.0</b> . The minimum resolution for <b>real1</b> is <b>0.05</b> . The default value for <b>real1</b> is <b>0.0</b> .
<b>Description</b>	This command sets the output voltage of the optional power supply. The value specified for <b>real1</b> is the output voltage in volt. Please note that this command needs the power supply option to be installed on your Willtek 3100.
<b>Query</b>	The query form of this command returns the current setting. The query will return a string, containing one floating point real number.
<b>Example</b>	<code>:PSUPply:LEVEl 3.65</code> <code>:PSUP:LEV?</code> Value returned: "3.65".

### **:PSUPply:MEASure:CMAX**

<b>Syntax</b>	<code>:PSUPply:MEASure:CMAX &lt;PredefExp&gt;</code>
<b>Parameters</b>	<b>PredefExp</b> is one of the following predefined expressions: <b>A4</b>   <b>A2</b>   <b>A1</b>   <b>MA400</b> . Default is <b>A4</b> .
<b>Description</b>	Selects the range of the maximum current the mobile under test is expected to draw. For a maximum current of up to 400 mA, the <b>MA400</b> setting can be used. If the mobile will not draw more than 400 mA, the <b>MA400</b> setting is appropriate. In case the maximum power requirement of the mobile is unknown, setting <b>A4</b> (the default setting) is recommended as it will allow the mobile to draw a maximum current of 4 A. Please note that this command needs both the power supply option and the current measurement option to be installed on your Willtek 3100.



**Query** The query form of this command returns the current setting. A query will return a string, containing one of the predefined expressions explained above.

**Example**     :PSUPply:MEASure:CMAX MA400  
              :PSUP:MEAS:CMAX? Value returned: "MA400".



# Publication History

Revision	Comment
0510-100-A	First version.
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