Series 37XXXC
Vector Network Analyzer

GPIB QUICK REFERENCE GUIDE

This manual supplements the 37XXXC Series Vector Network Analyzer Programming Manual. Insert it behind the tab marked Appendix B, GPIB Quick Reference Guide in that manual.

Anritsu

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37XXXC VNA GPIB Quick Reference Guide

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37XXXC VNA GPIB Quick Reference Guide

1. *INTRODUCTION*

This appendix provides a quick reference to the 37XXXC GPIB Programming commands.

2. *GENERAL*

This guide is divided into two listings: alphabetical and functional. The alphabetical listing begins on page 5 and lists the commands alphabetically with a brief description. The functional listing begins on page 39 and lists the commands, a brief description, and the functional group with the list sorted alphabetically by the functional group.

All of these commands are described in detail in Chapter 10 of the 37XXXC Programming Manual.

Command	Description
*CLS	Clear status bytes and structures
*DDT	Enter the 488.2 Define Device Trigger command string
*DDT?	Output the 488.2 Define Device Trigger command string
*ESE	Enter the 488.2 Standard Event Status Enable mask
*ESE?	Output the 488.2 Standard Event Status Enable mask
*ESR?	Output the 488.2 Standard Event Status Register value
*IDN?	Output the 488.2 instrument identification string
*IST?	Output the value of the ist message
*OPC	Initiate the 488.2 Operation Complete sequence
*OPC?	Initiate the 488.2 Operation Complete Query sequence
*OPT?	Output the 488.2 options installed string
*PRE	Enter the 488.2 Parallel Poll Register Enable mask
*PRE?	Output the 488.2 Parallel Poll Register Enable mask
*RST	Instrument reset
*SRE	Enter the 488.2 Service Request Enable mask
*SRE?	Output the 488.2 Service Request Enable mask
*STB?	Output the 488.2 Status Byte value
*TRG	Initiate a Group Execute Trigger sequence
*TST?	Perform self test and output status
*WAI	Wait to continue
A12	Simulate 12-term calibration
A8R	Simulate 1-path 2-port calibration reverse path
A8T	Simulate 1-path 2-port calibration forward path
ABORTCAL	Abort calibration in progress and keep existing calibration data
ABT	Simulate trans freq response calibration forward and reverse
ACAA	Set AutoCal standard to assurance
ACADPL	Enter AutoCal adapter length
ACADPL?	Output AutoCal adapter length
ACADR	Set AutoCal type to adapter removal
ACAL1R2	Set adapter removal port configuration to ADAPT & L=1 and R=2
ACAR1L2	Set adapter removal port configuration to ADAPT & R=1 and L=2
ACARP?	Output AutoCal adapter removal port configuration
ACDEF	Select default AutoCal isolation averaging factor
ACF2P?	Output AutoCal full 2 port configuration
ACF2TC	Set AutoCal 2 port thru type to calibrator
ACF2TT	Set AutoCal 2 port thru type to true thru
ACF2TX?	Output AutoCal 2 port thru type selection
ACHFD	Save AutoCal characterization data to floppy disk
ACHHD	Save AutoCal characterization data to hard disk

Command	Description
ACIAF	Enter user AutoCal isolation averaging factor
ACIAF?	Output user AutoCal isolation averaging factor
ACIAX?	Output AutoCal isolation averaging factor omit/default/user selection
ACISO	Enter AutoCal isolation averaging number
ACISO?	Output AutoCal isolation averaging number
ACL1AR2	Set adapter removal port configuration to L=1 and ADAPT & R=2
ACL1R2	Set AutoCal full 2 port configuration to L=1 and R=2
ACLO	Enter AutoCal load averaging number
ACLO?	Output AutoCal load averaging number
ACLOAD	Set AutoCal standard to load
ACOMIT	Omit using AutoCal isolation averaging factor
ACOPEN	Set AutoCal standard to open
ACP1?	Output AutoCal S11 port configuration
ACP1L	Set AutoCal S11 port configuration to left
ACP1R	Set AutoCal S11 port configuration to right
ACP2?	Output AutoCal S22 port configuration
ACP2L	Set AutoCal S22 port configuration to left
ACP2R	Set AutoCal S22 port configuration to right
ACPL	Set AutoCal S11 port configuration to left
ACPR	Set AutoCal S11 port configuration to right
ACR1AL2	Set adapter removal port configuration to R=1 and ADAPT & L=2
ACR1L2	Set AutoCal full 2 port configuration to R=1 and L=2
ACRFL	Enter AutoCal reflection averaging number
ACRFL?	Output AutoCal reflection averaging number
ACS11	Set AutoCal type to S11
ACS22	Set AutoCal type to S22
ACSF2P	Set AutoCal type to full 2 port
ACSHORT	Set AutoCal standard to short
ACSTD?	Output AutoCal standard
ACSW	Enter AutoCal switch averaging number
ACSW?	Output AutoCal switch averaging number
ACTHRU	Set AutoCal standard to thru
ACTU	Enter AutoCal thru averaging number
ACTU?	Output AutoCal thru averaging number
ACTUAVG	Enter AutoCal thru update averaging number
ACTUAVG?	Output AutoCal thru update averaging number
ACTULS	Apply last thru update cal setup
ACX?	Output AutoCal type
ADD	Select addition as trace math for active channel

Command	Description
ADDFC	Enter frequency counter GPIB address
ADDFC?	Output frequency counter GPIB address
ADDPLT	Enter plotter GPIB address
ADDPLT?	Output plotter GPIB address
ADDPM	Enter power meter GPIB address
ADDPM?	Output power meter GPIB address
ADPL	Enter electrical length for adapter removal
ADPL?	Output electrical length for adapter removal
ADRIVE	Select the floppy drive as the default drive
AFT	Simulate transmission frequency response calibration forward path
AH0	Turn automatic DUT protection off
AH1	Turn automatic DUT protection on
AHX?	Output automatic DUT protection on/off status
ALC	Perform ALC loop internal calibration
AMKR	Select active marker on all channels marker mode
ANNCOL	Enter the color number for annotation and menu text
ANNCOL?	Output the color number for annotation and menu text
AOF	Turn averaging off
AOF?	Output averaging on/off status
AON	Turn averaging on
APR	Enter group delay aperture setting on active channel
APR?	Output group delay aperture setting on active channel
ARB	Simulate reflection only calibration both ports
ARF	Simulate reflection only calibration port 1
ARR	Simulate reflection only calibration port 2
ART	Simulate trans freq response calibration reverse path
ASC	Autoscale the active channel display
ASP	Enter polar stop sweep position angle
ASP?	Output polar stop sweep position angle
AST	Enter polar start sweep position angle
AST?	Output polar start sweep position angle
ATTN	Attach next segment and make the active segment
AVG	Enter averaging count and turn on
AVG?	Output averaging count
AVGCNT?	Output the current sweep-by-sweep average sweep count
BBL	Select broadband load for calibration
BBZ	Enter broadband load impedance for calibration
BBZL	Enter broadband load inductance for calibration
BC0	Turn CRT display off (disabled)

Command	Description
BC1	Turn CRT display on (disabled)
BCKCOL	Enter the color number for background
BCKCOL?	Output the color number for background
BCX?	Output CRT display on/off status
BD1	Select band 1 for definition
BD2	Select band 2 for definition
BD3	Select band 3 for definition
BD4	Select band 4 for definition
BD5	Select band 5 for definition
BDMM	Define Millimeter Wave band equations
BEEP0	Disable the instrument beeper on GPIB errors
BEEP1	Enable the instrument beeper on GPIB errors
BEEPX?	Output GPIB beep on error enable/disable status
BEG	Begin taking calibration data
BEGAC	Start AutoCal
BEGCH	Start AutoCal characterization
BEGN	Begin next segment and make it the active segment
BEGTU	Start AutoCal thru update
BH0	Turn bias off while in hold
BH1	Turn bias on while in hold
BHX?	Output bias on/off during hold status
BMPB	Select Black on White as bitmap type
BMPC	Select Color on White as bitmap type
BMPT	Select true color as bitmap type
BPF	Enter break point frequency for 3 line LRL calibration
BRILL	Activate color configuration Brilliant
BSP	Enter band stop frequency
BSP?	Output band stop frequency
BST	Enter band start frequency
BST?	Output band start frequency
BWL3	Set bandwidth loss value to 3 dB
BWLS	Enter bandwidth loss value
BWLS?	Output bandwidth loss value
C12	Select 12 term calibration
C8R	Select 1-path 2-port calibration reverse path
C8T	Select 1-path 2-port calibration forward path
CALR	Perform receiver cal for gain compression testing
CAS	Clear active segmented limit vertical/horizontal definitions
CBT	Select trans freq response calibration forward and reverse

Command	Description
CC0	Enter capacitance coefficient 0 for open
CC1	Enter capacitance coefficient 1 for open
CC2	Enter capacitance coefficient 2 for open
CC3	Enter capacitance coefficient 3 for open
CCD	Collect corrected data in an internal buffer
CD	Change default directory
CDRIVE	Select the hard disk as the default drive
CF1	Select female 1.0 mm connector for current port
CF2	Select female 2.4mm connector for current port
CF3	Select female GPC-3.5 connector for current port
CF716	Select female 7/16 connector for current port
CFC	Select female TNC connector for current port
CFD	Collect final data in an internal buffer
CFK	Select female K connector for current port
CFN	Select female Type N connector for current port
CFN75	Select Female type N 75-ohm connector for current port
CFS	Select female SMA connector for current port
CFSP	Select Special Female connector for current port
CFSPA	Select Band A special female connector for current port
CFSPB	Select Band B special female connector for current port
CFSPC	Select Band C special female connector for current port
CFT	Select trans freq response calibration forward path
CFV	Select female V connector for current port
CH1	Make channel 1 the active channel
CH2	Make channel 2 the active channel
CH3	Make channel 3 the active channel
CH4	Make channel 4 the active channel
CHX?	Output active channel number
CL0	Enter inductive coefficient 0 for short
CL1	Enter inductive coefficient 1 for short
CL2	Enter inductive coefficient 2 for short
CL3	Enter inductive coefficient 3 for short
CLASS	Activate color configuration Classic
CLB	Clear all multiple source band definitions
CLBMM	Clear the new Millimeter Wave band definitions
CM	Suffix sets distance data type and scales by 1E-2
CM1	Select male 1.0 mm connector for current port
CM2	Select male 2.4mm connector for current port
CM3	Select male GPC-3.5 connector for current port

Command	Description
CM716	Select male 7/16 connector for current port
CMC	Select male TNC connector for current port
CMK	Select male K connector for current port
CMN	Select male N connector for current port
CMN75	Select Male type N 75-Ohm connector for current port
CMS	Select male SMA connector for current port
CMSP	Select Special Male connector for current port
CMSPA	Select Band A special male connector for current port
CMSPB	Select Band B special male connector for current port
CMSPC	Select Band C special male connector for current port
CMT	Suffix sets distance data type and scales by 1E-2
CMV	Select male V connector for current port
CMX?	Output calibration method
CND	Select user specified connector for current port
CNG	Select GPC-7 connector for current port
CNTR	Enter center frequency
CNTR?	Output center frequency
COF	Turn error correction off
CON	Turn error correction on
CON?	Output error correction on/off status
COO	Enter offset for open for user specified connector (Standard Calibration)
COPY	Copy a files contents to another file
COS	Enter offset for short for user specified connector
CRB	Select reflection only calibration both ports
CRD	Collect raw data in an internal buffer
CRF	Select reflection only calibration port 1
CRR	Select reflection only calibration port 2
CRT	Select trans freq response calibration reverse path
CSB	Clear status bytes and structures (same as *CLS)
CSF?	Output cal start frequency
CSL	Clear service log
CTF?	Output cal stop frequency
CTN	Continue sweeping from current point
CWC	Select CW frequency calibration data points
CWD?	Output current working directory string
CWDEC	Subtract 1 from the current CW index
CWF	Enter CW frequency and turn CW on
CWF2I?	Output index for frequency given
CWF?	Output CW frequency

Command	Description
CWI	Enter index for CW frequency and turn CW on
CWI2F?	Output frequency for index given
CWI?	Output current index number
CWINC	Add 1 to the current CW index
CWN2I	Add N to the current CW index
CWON	Turn CW on at current CW frequency
CWON?	Output CW on/off status
CWP	Enter number of points drawn in CW
CWP?	Output number of points drawn in CW
CWSRT	Set CW frequency to the start frequency
CWSTP	Set CW frequency to the stop frequency
CXD?	Output internal buffer data collection mode
CXX?	Output calibration type
D13	Display channels 1 & 3
D14	Display all four channels
D24	Select dual channel display with channels 2 & 4
DA1	Select a1 = Ra as denominator for parameter being defined
DA2	Select a2 = Rb as denominator for parameter being defined
DAT	Display data only on active channel
DAT?	Output trace memory display mode
DATCOL	Enter the color number for data
DATCOL?	Output the color number for data
DATE	Enter the system date
DATE?	Output the system date
DB	Suffix sets power data type
DB1	Select b1 = Ta as denominator for parameter being defined
DB2	Select b2 = Tb as denominator for parameter being defined
DBL	Suffix sets power data type
DBM	Suffix sets power data type
DBP	Select distance bandpass mode for active channel
DC1	Display channel 1 and 2 operating parameters
DC3	Display channel 3 and 4 operating parameters
DCA	Select automatic DC term calculation for lowpass
DCCTN	Resume internal buffer data collection
DCCTN?	Output internal buffer data collection resume/suspend status
DCHLD	Suspend internal buffer data collection
DCMRK	Inserts the mark value into the internal buffer
DCO	Select open for DC term for lowpass
DCOFF	Turn internal buffer data collection mode off

Command	Description
DCP	Display calibration parameters 1st page
DCP1	Display calibration parameters 1st page
DCP2	Display calibration parameters 2nd page
DCPCUR?	Outputs the current point count in the collect buffer
DCPMAX?	Outputs the maximum number of points that can be collected in the collect buffer
DCS	Select short for DC term for lowpass
DCV	Enter value for DC term for lowpass
DCV?	Output lowpass DC term value
DCX?	Output lowpass DC term selection
DCZ	Select line impedance for DC term for lowpass
DD0	Turn data drawing off
DD1	Turn data drawing on
DD1?	Output data drawing on/off status
DDX?	Output active channel domain parameter frequency distance or time
DE1	Select unity as denominator for parameter being defined
DEG	Suffix sets phase data type
DEL	Delete a file from disk
DEN?	Output denominator selection for parameter being defined
DF1	Display 1.0 mm female connector information
DF2	Display 2.4mm female connector information
DF3	Display GPC-3.5 female connector information
DF716	Display 7/16 female connector information
DFC	Select discrete frequency calibration data points
DFD	Done specifying discrete frequency ranges
DFK	Display K female connector information
DFN	Display N female connector information
DFN75	Display N Female 75-Ohm connector information
DFP	Display Front panel instrument state
DFQ	Enter single discrete frequency
DFS	Display SMA female connector information
DFSP	Display Special Female connector information
DFT	Display TNC female connector information
DFV	Display V female connector information
DG7	Display GPC-7 Male connector information
DGS	Display GPIB status information
DGT	Display 1st CRT test pattern
DGT1	Display 1st CRT test pattern
DGT2	Display 2nd CRT test pattern
DGT3	Display 3rd CRT test pattern

Command	Description
DIA	Select air as active dielectric
DIE	Enter a dielectric value
DIM	Select microporous teflon as active dielectric
DIP	Select polyethylene as active dielectric
DIR	Output a directory listing to the GPIB
DIS	Display active segmented limit
DIS?	Output active segmented limit on/off status
DISKRD	Output disk file data to the GPIB
DISKWR	Write GPIB data to a disk file
DIT	Select Teflon as active dielectric
DIV	Select division as trace math for active channel
DIX?	Output dielectric constant
DLA	Select group delay display for active channel
DLP	Select distance lowpass mode for active channel
DM1	Display 1.0 mm male connector information
DM2	Display 2.4mm male connector information
DM3	Display GPC-3.5 male connector information
DM716	Display 7/16 male connector information
DMK	Display K male connector information
DMN	Display N male connector information
DMN75	Display N Male 75-Ohm connector information
DMS	Display SMA male connector information
DMSP	Display Special Male connector information
DMT	Display TNC male connector information
DMV	Display V male connector information
DNM	Display data normalized to trace memory on active channel
DOASF	Display band A special female connector offset-short information
DOASM	Display band A special male connector offset-short information
DOBSF	Display band B special female connector offset-short information
DOBSM	Display band B special male connector offset-short information
DOCSF	Display band C special female connector offset-short information
DOCSM	Display band C special male connector offset-short information
DOF1	Display 1.0 mm female connector offset-short information
DOM1	Display 1.0 mm male connector offset-short information
DPI	Select distance phasor impulse mode for active channel
DPN	Enter pen number for data
DPN?	Output pen number for data
DPR0	Visible data only OFD format
DPR1	Data pair always OFD format

Command	Description
DPRX?	Output data pair mode visible only or pair always
DR1	Select Marker 1 as Delta Reference Marker
DR2	Select Marker 2 as Delta Reference Marker
DR3	Select Marker 3 as Delta Reference Marker
DR4	Select Marker 4 as Delta Reference Marker
DR5	Select Marker 5 as Delta Reference Marker
DR6	Select Marker 6 as Delta Reference Marker
DRF	Turn delta reference mode on
DRL	Diagnostic read latch
DRO	Turn delta reference mode off
DRO?	Output delta reference mode on/off status
DRX?	Output delta reference marker number
DSF0	Disable filter shape factor calculation
DSF1	Enable filter shape factor calculation
DSFX?	Output filter shape factor calculation enable/disable status
DSP	Select single channel display
DSP?	Output channel display mode
DSPS21	Select Gain Compression bottom graph displays S21
DSPS21?	Output Gain Compression bottom graph selection Normalized/S2
DSQ0	Disable filter Q calculation
DSQ1	Enable filter Q calculation
DSQX?	Output filter Q calculation enable/disable status
DTM	Display measurement data and trace memory on active channel
DVM	Enter DVM channel number
DWG	Display waveguide parameters
DWL	Diagnostic write latch
E12	Set Millimeter Wave band to E band (WR-12)
E12E	Set Millimeter Wave band to E band (WR-12)
EANAIN	Measure External Analog In on active channel
ECW	Select CW operation for component being edited
ED1	Edit source 1 equation
ED2	Edit source 2 equation
EDG	End diagnostics mode
EDR	Edit receiver equation
EDV	Enter divisor value for equation being edited
EDV?	Output divisor value for equation being edited
EKT	Select external keyboard testing
EML	Enter multiplier value for equation being edited
EML?	Output multiplier value for equation being edited

Command	Description
EOS	Enter offset frequency for equation being edited
EOS?	Output offset frequency for equation being edited
ESW	Select sweep operation for component being edited
EX1RF0	Turn external source 1 rf off
EX1RF1	Turn external source 1 rf on
EX2RF0	Turn external source 2 rf off
EX2RF1	Turn external source 2 rf on
EXD	Display external A/D input
EXISTD?	Output directory existence information
EXISTF?	Output file existence information
EXW?	Output multiple source sweep flag for equation being edited
F08	Set Millimeter Wave Band to F Band (WR-8)
FCW0	Turn fast CW measurement mode off
FCW1	Turn fast CW measurement mode on
FCW2	Turn Fast CW mode 2 on
FCWX?	Output fast CW measurement mode on/off status
FDE0	Disable Output Data End Message
FDE1	Enable Output Data End Message
FDEX?	Output Output Data End Message enable/disable status
FDH0	Select variable length arbitrary block headers
FDH1	Select fixed length arbitrary block headers
FDH2	Select zero length arbitrary block headers
FDHX?	Output arbitrary block header length selection
FFD	Send form feed to printer and stop print/plot
FGT	Select frequency with time gate for active channel
FHI	Set data points to 1601
FIL	Fill defined discrete frequency range
FLC	Source frequency linearity internal calibration
FLO	Set data points to 101
FLTBW?	Output filter bandwidth
FLTC?	Output filter center frequency
FLTL?	Output filter loss at reference value
FLTQ?	Output filter Q
FLTS?	Output filter shape factor
FMA	Select ASCII data transfer format
FMB	Select IEEE754 64 bit data transfer format
FMC	Select IEEE754 32 bit data transfer format
FME	Set data points to 401
FMKR	Select filter parameters marker mode

Command	Description
FMT0	Select normal ascii data element delimiting
FMT1	Select enhanced ascii data element delimiting
FMTX?	Output ascii data element delimiting mode
FMX?	Output data output mode FMA FMB or FMC
FOF	Blank frequency information
FON	Display frequency information
FOX?	Output frequency information on/off status
FP0	Turn flat power correction off
FP1	Turn flat power correction on
FPT	Select front panel keypad testing
FPX?	Output flat power correction on/off status
FQD	Select frequency domain for active channel
FRC	Clear all defined discrete frequency ranges
FRI	Enter Discrete Fill increment frequency
FRP	Enter Discrete Fill number of points
FRS	Enter Discrete Fill start frequency
GCMP	Enter gain compression point search value
GCMP?	Output gain compression point search value
GCT	Enter gate center value distance or time
GCT?	Output gate center value
GDS	Gate symbols displayed on active channel
GHZ	Suffix sets frequency data type and scales by 1E9
GLS	Select low sidelobe gate shape
GMS	Select minimum sidelobe gate shape
GNM	Select nominal gate shape
GOF	Turn off gating on active channel
GOF?	Output gating mode on active channel
GON	Turn on gating on active channel
GPN	Enter pen number for graticule
GPN?	Output pen number for graticule
GRF?	Output graph type for active channel
GRT	Select Rectangular gate shape
GRTCOL	Enter the color number for the graticule
GRTCOL?	Output the color number for the graticule
GSN	Enter gate span value distance or time
GSN?	Output gate span value
GSP	Enter gate stop value distance or time
GSP?	Output gate stop value
GST	Enter gate start value distance or time

Command	Description
GST?	Output gate start value
GSX?	Output gate shape
HC0	Disable internal IF calibration
HC1	Enable internal IF calibration and trigger an IF calibration
HCT	Trigger an IF calibration
HCX?	Output internal IF calibration enable/disable status
HD0	Turn off tabular data headers and page formatting
HD1	Turn on tabular data headers and page formatting
HID	Hide active segmented limit
HIST0	Turns off GPIB history writing to disk
HIST1	Turns on GPIB history writing to disk
HISTX?	Outputs the history writes to hard disk enable/disable status
HLD	Put sweep into hold mode
HLD?	Output the sweep hold status
HLDX?	Output hold mode (continue, restart, or single sweep)
HPN	Enter pen number for header
HPN?	Output pen number for header
HZ	Suffix sets frequency data type
IACCHAR	Input AutoCal characterization data from the GPIB
IARF	Enter adapter removal data from GPIB and calibrate
IC1	Enter calibration coefficient 1
IC10	Enter calibration coefficient 10
IC11	Enter calibration coefficient 11
IC12	Enter calibration coefficient 12
IC2	Input Calibration Coefficient 2
IC3	Enter calibration coefficient 3
IC4	Enter calibration coefficient 4
IC5	Enter calibration coefficient 5
IC6	Enter calibration coefficient 6
IC7	Enter calibration coefficient 7
IC8	Enter calibration coefficient 8
IC9	Enter calibration coefficient 9
ICA	Enter calibration coefficient 10
ICB	Enter calibration coefficient 11
ICC	Enter calibration coefficient 12
ICD	Enter corrected data for active channel parameter
ICF	Enter front panel setup and calibration data
ICL	Enter all applicable calibration coefficients for cal type
IEM	Enter extended status byte mask

Command	Description
IF1	Select 10 Hz IF bandwidth
IF2	Select 100 Hz IF bandwidth
IF3	Select 1 KHz IF bandwidth
IF4	Select 10 KHz IF bandwidth
IFA	Select 30 KHz IF bandwidth
IFB	Select 1st IF bandpass testing
IFD	Enter final data for active channel parameter
IFM	Select 10 Hz IF bandwidth
IFN	Select 1 KHz IF bandwidth
IFP	Enter current front panel setup
IFPC	Enter flat power coefficients
IFR	Select 100 Hz IF bandwidth
IFV	Enter frequency values
IFX?	Output IF bandwidth
IHDW	Enter hardware cal data from GPIB
IKIT	Enter calkit data from GPIB
ILM	Enter limits status byte mask
IMCF	Enter merge calibration files from GPIB and combine
IMG	Select imaginary display for active channel
IMU	Suffix sets imaginary data type
IND	Input Normalization data
INRM	Enter normalization data from GPIB
INT	Initialize (format) floppy disk
INVER	Activate color configuration Inverse
IODF	Enter the optical file data from GPIB and calibrate
IPM	Enter the 488.2 Service Request Enable mask
IPSC	Enter power sweep linearity calibration coefficients
IS1	Enter front panel setup 1
IS10	Enter front panel setup 10
IS2	Enter front panel setup 2
IS3	Enter front panel setup 3
IS4	Enter front panel setup 4
IS5	Enter front panel setup 5
IS6	Enter front panel setup 6
IS7	Enter front panel setup 7
IS8	Enter front panel setup 8
IS9	Enter front panel setup 9
ISC	Enter scale and select inverted compressed Smith Chart display
ISE	Enter scale and select inverted expanded Smith Chart display

Command	Description
ISF	Exclude isolation
ISM	Select normal inverted Smith Chart for active channel
ISN	Include isolation
KEC	Keep existing calibration data
KHZ	Suffix sets frequency data type and scales by 1E3
L1C	Perform LO1 internal calibration
L2C	Perform LO2 internal calibration
LA1	Select a1 = Ra as phase lock for parameter being defined
LA2	Select a2 = Rb as phase lock for parameter being defined
LAND	Select landscape mode for output plot
LAX?	Output phase lock selection for parameter being defined
LAYCOL	Enter the color number for overlay data
LAYCOL?	Output the color number for overlay data
LB0	Turn limits testing beep on failure off
LB1	Turn limits testing beep on failure on
LBX?	Output limits testing beeper enable status
LCM	Select LRL calibration method
LDARF	Load adapter removal files from disk and calibrate
LDMCF	Load merge calibration files from disk and combine
LDODF	Load optical data files from disk and calibrate
LDT0	Disable printing date/time
LDT1	Enable printing date/time
LFD	Enter limit frequency readout delta value
LFD2	Enter limit frequency readout delta value for bottom graph
LFD2?	Output limit frequency readout delta value for bottom graph
LFD?	Output limit frequency readout delta value
LFP	Select limit frequency readout for phase displays
LFR	Select limit frequency readout for active channel
LID	Enter string for DUT identity
LID?	Output string for DUT identity
LIN	Select linear magnitude display for active channel
LKS0	Disable lock search mode
LKS1	Enable lock search mode
LKT	Load calibration kit information from floppy disk
LL1	Enter length of line 1 for LRL calibration
LL2	Enter length of line 2 for LRL calibration
LL3	Enter length of line 3 for LRL calibration
LLM?	Output limit line display mode single or segmented
LLO	Enter lower limit value for top graph on active channel

Command	Description
LLO2	Enter lower limit value for bottom graph on active channel
LLO2?	Output lower limit value for bottom graph on active channel
LLO?	Output lower limit value for top graph on active channel
LLZ	Enter line impedance for LRL calibration
LM2	Select a match for the second device during a LRM type calibration
LM3	Select a match for the third device during a LRM type calibration
LMS	Enter string for DUT model/serial number
LMS?	Output string for DUT model/serial number
LMZ	Enter match impedance for LRM calibration
LMZ?	Output match impedance for LRM calibration
LMZL	Enter match inductance for LRM calibration
LMZL?	Output match inductance for LRM calibration
LNM	Enter string for operator name
LNM?	Output string for operator name
LO11	Select LO1 phase lock voltage testing
LO12	Select LO1 D/A voltage testing
LO21	Select LO2 main phase lock voltage testing
LO22	Select LO2 offset phase lock voltage testing
LO23	Select LO2 DDS phase lock voltage testing
LO24	Select LO2 main D/A voltage testing
LO25	Select LO2 offset D/A voltage testing
LOC	Enter string for operator comment
LOC?	Output string for operator comment
LOF	Limits display off
LOGO0	Turn hard copy logo off
LOGO1	Turn hard copy logo on
LOGO?	Output hard copy logo selection standard/user defined
LOGOS	Select standard hard copy logo
LOGOU	Select user defined hard copy logo
LOGOX?	Output hard copy logo on/off status
LOL0	Turn lower limit off
LOL1	Turn lower limit on at current value
LOL20	Turn lower limit off for bottom graph
LOL21	Turn lower limit on at current value for bottom graph
LOL2X?	Output lower limit on/off status for bottom graph
LOLX?	Output lower limit on/off status
LON	Limits display on
LON?	Output limits display on/off status
LPF1?	Output limit test failure status on channel 1

Command	Description
LPF2?	Output limit test failure status on channel 2
LPF3?	Output limit test failure status on channel 3
LPF4?	Output limit test failure status on channel 4
LPF?	Output limit test failure status all channels
LPH	Select linear magnitude and phase display for active channel
LPI	Select lowpass impulse response for active channel
LPS	Select lowpass step response for active channel
LPSX?	Output lowpass response for active channel impulse or step
LR2	Specify 2 line LRL calibration
LR3	Specify 3 line LRL calibration
LS1	Set lower segmented limit 100 as the active segment
LS10	Select lower segmented limit 10 as the active segment
LS2	Select lower segmented limit 2 as the active segment
LS3	Select lower segmented limit 3 as the active segment
LS4	Select lower segmented limit 4 as the active segment
LS5	Select lower segmented limit 5 as the active segment
LS6	Select lower segmented limit 6 as the active segment
LS7	Select lower segmented limit 7 as the active segment
LS8	Select lower segmented limit 8 as the active segment
LS9	Select lower segmented limit 9 as the active segment
LSB	Select least significant byte first binary transfer
LSEG	Select segmented limit line display mode
LSNG	Select single limit line display mode
LSX?	Output active segmented limit
LT0	Turn limits testing off
LT1	Turn limits testing on
LT1?	Output limits testing enable status
LTC	Select coaxial transmission line for calibration
LTRD	Output response data from the dedicated GPIB bus
LTST	Display the limits testing menu
LTU	Select microstrip transmission line for calibration
LTW	Select waveguide transmission line for calibration
LTWRT	Send program data to the dedicated GPIB bus
LTX?	Output line type
LUP	Enter upper limit value for top graph on active channel
LUP2	Enter upper limit value for bottom graph on active channel
LUP2?	Output upper limit value for bottom graph on active channel
LUP?	Output upper limit value for top graph on active channel
LVH	Select high as limits testing TTL level

Command	Description
LVL	Select low as limits testing TTL level
LVX?	Output limits testing ttl level status
M	Suffix sets distance data type
M1C	Set CW mode at marker 1 frequency
M1E	Set sweep/zoom end to marker 1 frequency distance or time
M1S	Set sweep/zoom start to marker 1 frequency distance or time
M2C	Set CW mode at marker 2 frequency
M2E	Set sweep/zoom end to marker 2 frequency distance or time
M2S	Set sweep/zoom start to marker 2 frequency distance or time
M3C	Set CW mode at marker 3 frequency
M3E	Set sweep/zoom end to marker 3 frequency distance or time
M3S	Set sweep/zoom start to marker 3 frequency distance or time
M4C	Set CW mode at marker 4 frequency
M4E	Set sweep/zoom end to marker 4 frequency distance or time
M4S	Set sweep/zoom start to marker 4 frequency distance or time
M5C	Set CW mode at marker 5 frequency
M5E	Set sweep/zoom end to marker 5 frequency distance or time
M5S	Set sweep/zoom start to marker 5 frequency distance or time
M6C	Set CW mode at marker 6 frequency
M6E	Set sweep/zoom end to marker 6 frequency distance or time
M6S	Set sweep/zoom start to marker 6 frequency distance or time
MAG	Select log magnitude display for active channel
MAT	Select matched reflective devices during cal
MD	Create a new disk directory
MEASDLY	Set Measurement Delay time
MEASDLY0	Disable Measurement Delay
MEASDLY1	Enable Measurement Delay
MEASDLY?	Output Measurement Delay time
MEASDLYX?	Output Measurement Delay on/off status
MEM	Display trace memory on active channel
MFGCT	Start multiple frequency swept power gain compression test
MHZ	Suffix sets frequency data type and scales by 1E6
MIN	Select subtraction as trace math for active channel
MIX	Select mixed reflective devices during calibration
MK1	Enter marker 1 frequency distance or time and turn on
MK1?	Output marker 1 frequency distance or time
MK2	Enter marker 2 frequency distance or time and turn on
MK2?	Output marker 2 frequency distance or time
MK3	Enter marker 3 frequency distance or time and turn on

Command	Description
MK3?	Output marker 3 frequency distance or time
MK4	Enter marker 4 frequency distance or time and turn on
MK4?	Output marker 4 frequency distance or time
MK5	Enter marker 5 frequency distance or time and turn on
MK5?	Output marker 5 frequency distance or time
MK6	Enter marker 6 frequency distance or time and turn on
MK6?	Output marker 6 frequency distance or time
MKRC	Select interpolated marker functionality
MKRCOL	Enter the color number for the markers
MKRCOL?	Output the color number for the markers
MKRD	Select discrete marker functionality
MKRX?	Output interpolated/discrete marker functionality
MKSL	Marker search left
MKSR	Marker search right
MKT0	Turn marker tracking off
MKT1	Turn marker tracking on
MKTX?	Output marker tracking on/off status
MM	Suffix sets distance data type and scales by 1E-3
MMBX?	Output Millimeter Wave band selection
MMN	Move active marker to minimum trace value
MMT	Suffix sets distance data type and scales by 1E-3
MMX	Move active marker to maximum trace value
MNUCOL	Enter the color number for the menu headers
MNUCOL?	Output the color number for the menu headers
MO1	Turn off marker 1
MO2	Turn off marker 2
MO3	Turn off marker 3
MO4	Turn off marker 4
MO5	Turn off marker 5
MO6	Turn off marker 6
MOF	Turn marker display off
MON	Turn marker display on
MON?	Output marker display on/off status
MOSET	Enter constant offset log magnitude for active channel
MOSET?	Output constant offset log magnitude for active channel
MPH	Select log magnitude and phase display for active channel
MPN	Enter pen number for markers and limits
MPN?	Output pen number for markers and limits
MR1	Turn marker 1 on and make it the active marker

Command	Description
MR1?	Output marker 1 on/off status
MR2	Turn marker 2 on and make it the active marker
MR2?	Output marker 2 on/off status
MR3	Turn marker 3 on and make it the active marker
MR3?	Output marker 3 on/off status
MR4	Turn marker 4 on and make it the active marker
MR4?	Output marker 4 on/off status
MR5	Turn marker 5 on and make it the active marker
MR5?	Output marker 5 on/off status
MR6	Turn marker 6 on and make it the active marker
MR6?	Output marker 6 on/off status
MRM	Display the Marker Readout menu
MRR	Restore original marker range
MRX?	Output active marker number
MS	Suffix sets time data type and scales by 1E-3
MS0	Turn multiple source mode off
MS1	Turn multiple source mode on
MSB	Select most significant byte first binary transfer
MSD	Select multiple source define mode
MSFH	Enter high loss value for shape factor calculation
MSFH?	Output high loss value for shape factor calculation
MSFL	Enter low loss value for shape factor calculation
MSFL?	Output low loss value for shape factor calculation
MSR0	Select 0 as reference for marker search and bandwidth calculation
MSRD	Select delta reference marker as reference for marker search and bandwidth calculation
MSRM	Select maximum as reference for marker search and bandwidth calculation
MSRX?	Output reference selection for marker search and bandwidth calculation
MSX?	Output multiple source mode on/off/define
MTH?	Output trace math math type
MTR	Suffix sets distance data type
MUL	Select multiplication as trace math for active channel
MV	Suffix sets voltage data type and scales by 1E-3
NA1	Select a1 as numerator for parameter being defined
NA2	Select a2 as numerator for parameter being defined
NB1	Select b1 as numerator for parameter being defined
NB2	Select b2 as numerator for parameter being defined
NCS	Go to next calibration step
NEWCO	Activate color configuration New
NMKR	Select normal markers on active channel marker mode

Command	Description
NOC	Select normal calibration data points
NOFST	Enter nominal offset value for external gain
NOFST?	Output nominal offset value for external gain
NP101	Set data points to 101
NP1601	Set data points to 1601
NP201	Set data points to 201
NP401	Set data points to 401
NP51	Set data points to 51
NP801	Set data points to 801
NRD	Display non-ratioed parameters on 4 channels
NRMS	Normalize S21 for gain compression testing
NRMS21	Select Gain Compression bottom graph displays Normalized S21
NS	Suffix sets time data type and scales by 1E-9
NSC	Suffix sets time data type and scales by 1E-9
NU1	Select unity as numerator for parameter being defined
NUM?	Output numerator selection for parameter being defined
O3CM	Select Triple Offset Short calibration method
O4FD	Output final data for all 4 channels to the GPIB
O4SC	Output corrected data for all four S-parameters
O4SR	Output raw data for all four S-parameters
OACCHAR	Output AutoCal characterization data to the GPIB
OACSER	Output auto-cal box serial number
OACTYPE	Output auto-cal box type
OAM1	Output channel 1 active marker value
OAM2	Output channel 2 active marker value
OAM3	Output channel 3 active marker value
OAM4	Output channel 4 active marker value
OBMP	Output the display as a bitmap
OC1	Output calibration coefficients 1
OC10	Output calibration coefficients 10
OC11	Output calibration coefficients 11
OC12	Output calibration coefficients 12
OC2	Output calibration coefficients 2
OC3	Output calibration coefficients 3
OC4	Output calibration coefficients 4
OC5	Output calibration coefficients 5
OC6	Output calibration coefficients 6
OC7	Output calibration coefficients 7
OC8	Output calibration coefficients 8

Command	Description
OC9	Output calibration coefficients 9
OCA	Output calibration coefficient A
OCB	Output calibration coefficient B
OCC	Output calibration coefficient C
OCD	Output corrected data for active channel parameter
OCF	Output front panel setup and calibration data
OCL	Output all applicable calibration coefficients for cal type
OCM	Select offset short calibration method
OCS	Output internal buffer collected data
ODAT	Output hard copy tabular data to GPIB
ODR	Output directory listing of the floppy drive
ODRH	Output directory listing of the hard drive
ODV	Output distance values for time domain
OEB	Output extended status byte
OEL	Output error list
OEM	Output extended status byte mask
OFD	Output final data for active channel parameter
OFD1	Output final data for channel 1 parameter
OFD2	Output final data for channel 2 parameter
OFD3	Output final data for channel 3 parameter
OFD4	Output final data for channel 4 parameter
OFF	Enter offset value for top graph of active channel
OFF2	Enter offset value for bottom graph of active channel
OFF2?	Output offset value for bottom graph of active channel
OFF?	Output offset value for top graph of active channel
OFP	Output current front panel setup
OFPC	Output flat power coefficients
OFV	Output frequency values
OGCFD	Output gain compression final data to GPIB
OGCFV	Output gain compression frequency values to GPIB
OGCTXT	Output text format gain compression data to GPIB
OGE	Output extended description of current GPIB error
OGL	Output extended description of previous GPIB error
OHDR	Output hard copy header information to GPIB
OHDW	Output hardware cal data to GPIB
OHGL	Output HPGL format data to GPIB
OHM	Suffix sets impedance data type
OID	Output instrument identification string
OLB	Output limits status byte

Command	Description
OLM	Output limits status byte mask
OM1	Output marker 1 value
OM2	Output marker 2 value
OM3	Output marker 3 value
OM4	Output marker 4 value
OM5	Output marker 5 value
OM6	Output marker 6 value
ONCP	Output number of points for current calibration
ONCT	Output number of cal terms for current calibration
OND	Output Normalization data
ONDF	Output number of discrete frequencies
ONE	Output number of lines in the error list
ONP	Output number of points currently being measured
ONPV	Output the number of power sweep power values
ONRM	Output stored normalization data to GPIB
OPB	Output the 488.2 Status Byte value (same as *STB?)
OPSC	Output power sweep linearity calibration coefficients
OPSV	Output power sweep power values
ORD	Output raw data for active channel parameter
OS1	Output front panel setup number 1
OS10	Output front panel setup number 10
OS11C	Output corrected S11 data
OS11R	Output raw S11 data
OS12C	Output corrected S12 data
OS12R	Output raw S12 data
OS2	Output front panel setup number 2
OS21C	Output corrected S21 data
OS21R	Output raw S21 data
OS22C	Output corrected S22 data
OS22R	Output raw S22 data
OS2P	Output S2P format data to GPIB
OS3	Output front panel setup number 3
OS4	Output front panel setup number 4
OS5	Output front panel setup number 5
OS6	Output front panel setup number 6
OS7	Output front panel setup number 7
OS8	Output front panel setup number 8
OS9	Output front panel setup number 9
OSL	Output service log

Command	Description
OTV	Output time values for time domain
OTXT	Output text format data to GPIB
P1C	Select port 1 for connector specification
P1C?	Output port 1 connector type
P1MMA	Set Port 1 Millimeter Wave Head to Amplified (3742)
P1MMN	Set Port 1 Millimeter Wave Head to None
P1MMR	Set Port 1 Millimeter Wave Head to Receiver (3741)
P1MMT	Set Port 1 Millimeter Wave Head to Transmit/Receiver (3740)
P1MMX?	Output Port 1 Millimeter Wave Head type
P1P?	Output approximate power level at port 1
P2ALC	Perform Port 2 ALC loop internal calibration
P2C	Select port 2 for connector specification
P2C?	Output port 2 connector type
P2MMA	Set Port 2 Millimeter Wave Head to Amplified (3742)
P2MMN	Set Port 2 Millimeter Wave Head to none
P2MMR	Set Port 2 Millimeter Wave Head to Receiver (3741)
P2MMT	Set Port 2 Millimeter Wave Head to Transmit/Receiver (3740)
P2MMX?	Output Port 2 Millimeter Wave Head type
PBL	Select 1/4 size plot bottom left corner
PBR	Select 1/4 size plot bottom right corner
PCP	Select measurement phase polar chart mode
PCS	Select sweep position polar chart mode
PCX?	Output polar chart mode
PDR	Print directory listing of the floppy drive
PDRH	Print directory listing of the hard drive
PEL	Print the error list
PFL	Select full-size plot
PFS	Print full screen image
PFSC	Configure for printing entire screen graphic image
PGR	Print graph area screen image
PGRC	Configure for printing data area graphic image
PGT	Plot graticule
PGTC	Configure for plotting graticule
PHA	Select phase display for active channel
PHO	Enter phase offset for display channel
PHO?	Output phase offset for display channel
PLD	Plot data area only
PLDC	Configure for plotting data area
PLG	Select log polar display for active channel

Command	Description
PLH	Plot header
PLHC	Configure for plotting header
PLM	Plot markers and limits
PLMC	Configure for plotting markers and limits
PLO?	Output plot mode portrait or landscape
PLR	Select linear polar display for active channel
PLS	Plot entire screen
PLSC	Configure for plotting entire screen
PLT	Plot data traces only
PLTC	Configure for plotting data traces
PMK	Print tabular data for Markers
PMKC	Configure for printing tabular data for markers
PMN	Plot menu
PMNC	Configure for plotting menu
PMT	Print tabular data for traces and markers
PMTC	Configure for printing tabular data for traces and markers
PORT	Select portrait mode for output plot
POSET	Enter constant offset phase for active channel
POSET?	Output constant offset phase for active channel
POW	Select power out display for active channel
PRT?	Perform printer test and output status
PS	Suffix sets time data type and scales by 1E02
PSC	Suffix sets time data type and scales by 1E02
PSCNFRQ?	Output the power sweep linearity cal number of frequency poi
PSCNPWR?	Output the power sweep linearity cal number of power points
PSCSTEP?	Output the power sweep linearity cal power step size
PSL	Print the service log
PSP	Enter number of power sweeps for flat power correction (obsolete)
PSP?	Output number of power sweeps for flat power correction (obsolete)
PSPWR	Enter power sweep off power level
PSPWR?	Output power sweep off power level
PST	Stop print/plot
PSTEP	Enter power sweep step size
PSTEP?	Output power sweep step size
PSTOP	Enter power sweep stop power
PSTOP?	Output power sweep stop power
PSTRT	Enter power sweep start power
PSTRT?	Output power sweep start power
PSWC	Perform power sweep linearity calibration

Command	Description
PSWC0	Turn power sweep linearity calibration off
PSWC1	Turn power sweep linearity calibration on
PSWCX?	Output power sweep linearity calibration on/off status
PSWP0	Turn power sweep off
PSWP1	Turn power sweep on
PSWPX?	Output power sweep on/off status
PT0	Set tabular printout points skipped to 0
PT1	Set tabular printout points skipped to 1
PT2	Set tabular printout points skipped to 2
PT3	Set tabular printout points skipped to 3
PT4	Set tabular printout points skipped to 4
PT5	Set tabular printout points skipped to 5
PT6	Set tabular printout points skipped to 6
PT7	Set tabular printout points skipped to 7
PT8	Set tabular printout points skipped to 8
PT9	Set tabular printout points skipped to 9
PTAVG	Set averaging type to point-by-point averaging
PTB	Print tabular data for Traces
PTBC	Configure for printing tabular data for traces
PTL	Select 1/4 size plot top left corner
PTP	Enter the target power for flat power correction
PTP?	Output the target power for flat power correction
PTR	Select 1/4 size plot top right corner
PTS	Enter number of points to be skipped during flat power correction
PTS?	Output number of points to be skipped during flat power correction
PW1	Enter external source 1 power level
PW1?	Output external source 1 power level
PW2	Enter external source power level
PW2?	Output external source power level
PWR	Enter internal source power level
PWR?	Output internal source power level
Q22	Set Millimeter Wave Band to Q Band (WR-22)
RAD	Suffix sets phase data type and scales by 180/pi
RC1	Recall front panel setup number 1 from memory
RC10	Recall front panel setup number 10 from memory
RC2	Recall front panel setup number 2 from memory
RC3	Recall front panel setup number 3 from memory
RC4	Recall front panel setup number 4 from memory
RC5	Recall front panel setup number 5 from memory

Command	Description
RC6	Recall front panel setup number 6 from memory
RC7	Recall front panel setup number 7 from memory
RC8	Recall front panel setup number 8 from memory
RC9	Recall front panel setup number 9 from memory
RD	Remove a disk directory
RDA	Select automatic reference delay calculation
RDD	Enter reference delay in distance for active channel
RDD?	Output reference delay in distance for active channel
RDT	Enter reference delay in time for active channel
RDT?	Output reference delay in time for active channel
RECALL	Recall a data file from disk to a task
REF	Enter reference line for top graph of active channel
REF2	Enter reference line for bottom graph of active channel
REF2?	Output reference line for bottom graph of active channel
REF?	Output reference line for top graph of active channel
REL	Select real display for active channel
REU	Suffix sets real data type
RGZ	Select reflective device greater than Z0
RH0	Select RF off in hold mode
RH1	Select RF on in hold
RHX?	Output RF on/off during hold status
RIM	Select real and imaginary display for active channel
RLZ	Select reflective device less than Z0
RM1	Select reference plane at line 1 midpoint
ROL	Enter reflective device offset length
RPC	Repeat previous calibration
RPO	Enter rear panel dc voltage value
RPO?	Output rear panel dc voltage value
RRP	Select reference plane at reflection plane
RST	Instrument reset (same as *RST)
RST0	Reset instrument front panel memories and reserved parameters
RST1	Reset instrument and front panel memories
RSTAVG	Reset the sweep-by-sweep averaging sweep count
RSTCOL	Reset color configuration to default
RSTGC	Reset gain compression parameters to default
RT0	Turn retrace rf off
RT1	Turn retrace rf on
RTL	Return to local
RTX?	Output retrace rf on/off status

Command	Description
RV0	Turn rear panel output voltage off
RV1	Turn rear panel output voltage on
RV1?	Output rear panel output voltage on/off status
RVD	Set rear panel output mode to dc value
RVH	Set rear panel output mode to horizontal
RVL	Set rear panel output mode to lock direction
RVV	Set rear panel output mode to vertical
RVX?	Output rear panel output mode
S	Suffix sets time data type
S11	Measure S11 on active channel
S12	Measure S12 on active channel
S21	Measure S21 on active channel
S22	Measure S22 on active channel
SA1	Enter port 1 source attenuator value
SA1?	Output port 1 source attenuator value
SA1MAX?	Output port 1 source attenuator max value
SAMP2	Use 2 samplers for measurements
SAMP3	Use 3 samplers for measurements
SAMP?	Output the number of samplers used for measurements
SAVE	Save a data file to disk
SAVEGC	Save text format gain compression data to disk
SBD	Enter substrate dielectric for microstrip calibration
SBT	Enter substrate thickness for microstrip calibration
SCL	Enter Scale Resolution for top graph of active channel
SCL2	Enter Scale Resolution for bottom graph of active channel
SCL2?	Output Scale Resolution for bottom graph of active channel
SCL?	Output Scale Resolution for top graph of active channel
SCM	Select standard calibration method
SDG	Start diagnostics mode
SDR	Select standard receiver mode
SDR?	Output receiver mode
SELBB	Select Broadband test set operation
SELINT	Select Internal (normal) test set operation
SELMM	Select Millimeter Wave test set operation
SELSP	Select S-parameter test set operation
SELXX?	Output the test set selection MMWave/Internal
SETUP	Display setup menu
SFC	Perform flat test port calibration
SFGCA	Select swept frequency gain compression application

Command	Description
SFGCT	Start swept frequency gain compression test
SH1	Set offset short 1 or 2 offset length for offset short calibration
SH2	Set offset short 1 or 2 offset length for offset short calibration
SL1	Select source lock mode
SLC	Clear all segmented limits definitions
SLD	Select sliding load for calibration
SLH	Enter segmented limits horizontal offset
SLH?	Output segmented limits horizontal offset
SLL0	Turn lower segmented limits display off
SLL1	Turn lower segmented limits display on
SLLX?	Output lower segmented limits display on/off status
SLT	Perform SLT internal calibration
SLU0	Turn upper segmented limits display off
SLU1	Turn upper segmented limits display on
SLUX?	Output upper segmented limits display on/off status
SLV	Enter segmented limits vertical offset
SLV?	Output segmented limits vertical offset
SMC	Enter scale and select compressed Smith Chart display
SME	Enter scale and select expanded Smith Chart display
SMI	Select normal Smith Chart for active channel
SMKR	Select marker search marker mode
SOF	Turn off smoothing
SOF?	Output smoothing on/off status
SOFTCO	Activate color configuration Soft
SON	Enter smoothing value and turn on
SON?	Output smoothing value
SPAMPMT	Start swept power gain compression AM/PM test
SPAN	Enter frequency span
SPAN?	Output frequency span
SPD	Enter pen speed percentage
SPGCA	Select swept power gain compression application
SPGCT	Start swept power gain compression test
SPH	Enter active segmented limit horizontal stop position
SPH?	Output active segmented limit horizontal stop position
SPLN	Select normal source lock polarity
SPLR	Select reverse source lock polarity
SPLX?	Output source lock polarity normal/reverse status
SPR0	Turn spur reduction off
SPR1	Turn spur reduction on

Command	Description
SPRX?	Output spur reduction on/off status
SPTS?	Output number of smoothing points
SPV	Enter active segmented limit vertical stop position
SPV?	Output active segmented limit vertical stop position
SRC1	Select source linearity voltage testing
SRC1?	Output external source 1 existence information
SRC1AC	Select source 1 as active
SRC1AC?	Output source 1 active/inactive status
SRC1ADD	Enter external source 1 GPIB address
SRC1ADD?	Output external source 1 GPIB address
SRC1EX	Select source 1 as external
SRC1EX?	Output source 1 external/internal status
SRC1G0	Turn source 1 GPIB control off
SRC1G1	Turn source 1 GPIB control on
SRC1GX?	Output source 1 GPIB control on/off status
SRC1MOD?	Output external source 1 model/version string
SRC1NA	Select source 1 as not active
SRC1NT	Select source 1 as internal
SRC2	Select source power voltage testing
SRC2?	Output external source 2 existence information
SRC2AC	Select source 2 as active
SRC2AC?	Output source 2 active/inactive status
SRC2ADD	Enter external source 2 GPIB address
SRC2ADD?	Output external source 2 GPIB address
SRC2G0	Turn source 2 GPIB control off
SRC2G1	Turn source 2 GPIB control on
SRC2GX?	Output source 2 GPIB control on/off status
SRC2MOD?	Output external Source 2 model/version string
SRC2NA	Select source 2 as not active
SRCH	Enter marker search value
SRCH?	Output marker search value
SRT	Enter start frequency
SRT?	Output start frequency
ST1	Select set on mode
STD	Store trace to memory on active channel
STH	Enter active segmented limit horizontal start position
STH?	Output active segmented limit horizontal start position
STOCO	Store the current color configuration as Reset
STP	Enter stop frequency

Command	Description
STP?	Output stop frequency
STV	Enter active segmented limit vertical start position
STV?	Output active segmented limit vertical start position
SV1	Save front panel setup number 1 to memory
SV10	Save front panel setup number 10 to memory
SV2	Save front panel setup number 2 to memory
SV3	Save front panel setup number 3 to memory
SV4	Save front panel setup number 4 to memory
SV5	Save front panel setup number 5 to memory
SV6	Save front panel setup number 6 to memory
SV7	Save front panel setup number 7 to memory
SV8	Save front panel setup number 8 to memory
SV9	Save front panel setup number 9 to memory
SVB	Save current band definitions
SVBMM	Save and activate the new Millimeter Wave band definitions
SWAVG	Set averaging type to sweep-by-sweep averaging
SWAVG?	Output averaging type (sweep-by-sweep or point-by-point)
SWP	Return to normal sweep mode
SWP?	Output sweep mode
SWPDIR?	Output instantaneous sweep direction forward/reverse
SWR	Select SWR display for active channel
SXX?	Output s parameter or user defined parameter of active channel
T13	Select overlaid channel 1 and 3 display
T24	Select overlaid channel 2 and 4 display
TA2	Enter port 2 test attenuator value
TA2?	Output port 2 test attenuator value
TA2MAX?	Output port 2 test attenuator max value
TACD	Take AutoCal data
TBP	Select time bandpass mode for active channel
TC1	Take calibration data for port 1
TC2	Take calibration data for port 2
TCD	Take calibration data on one or both ports as necessary
TCM	Select the TRM calibration method
TDC	Select time domain harmonic frequency calibration data points
TDDIST	Set time domain parameter to distance for active channel
TDDIST?	Output active channel time domain parameter distance or time
TDPI0	Turn phasor impulse response off for active channel
TDPI1	Turn phasor impulse response on for active channel
TDPIX?	Output phasor impulse on/off status for active channel

Command	Description
TDTIME	Set time domain parameter to time for active channel
TDX?	Output domain mode for active channel
TEB	Select external trigger and executes *DDT definition
TEX	Select external (rear panel) measurement triggering
TIB	Select GPIB measurement triggering
TIME	Enter the system time
TIME?	Output the system time
TIN	Select internal measurement triggering
TK1	Select tracking mode
TLP	Select time lowpass mode for active channel
TLZ	Enter through line impedance for calibration
TOL	Enter through offset length for calibration
TPI	Select time phasor impulse mode for active channel
TPN	Enter pen number for trace overlay data
TPN?	Output pen number for trace overlay data
TRCCOL	Enter the color number for memory data
TRCCOL?	Output the color number for memory data
TRS	Trigger/restart sweep
TST	Perform self test and output status (same as *TST?)
TXX?	Output trigger source internal/external/get/extddt status
U10	Select 10 mil UTF calibration kit
U15	Select 15 mil UTF calibration kit
U25	Select 25 mil UTF calibration kit
UNDOGC	Exit gain compression and undo changes
UPL0	Turn upper limit off
UPL1	Turn upper limit on at current value
UPL20	Turn upper limit off for bottom graph
UPL21	Turn upper limit on at current value for bottom graph
UPL2X?	Output upper limit on/off status for bottom graph
UPLX?	Output upper limit on/off status
US	Suffix sets time data type and scales by 1E-6
US1	Select upper segmented limit 1 as the active segment
US10	Select upper segmented limit 10 as the active segment
US2	Select upper segmented limit 2 as the active segment
US3	Select upper segmented limit 3 as the active segment
US4	Select upper segmented limit 4 as the active segment
US5	Select upper segmented limit 5 as the active segment
US6	Select upper segmented limit 6 as the active segment
US7	Select upper segmented limit 7 as the active segment

Command	Description
US8	Select upper segmented limit 8 as the active segment
US9	Select upper segmented limit 9 as the active segment
USC	Suffix sets time data type and scales by 1E-6
USE	Enter effective dielectric for microstrip calibration
USL	Enter label string for user parameter being defined
USL?	Output label string for user parameter being defined
USR1	Measure user parameter 1 on active channel
USR2	Measure user parameter 2 on active channel
USR3	Measure user parameter 3 on active channel
USR4	Measure user parameter 4 on active channel
USW	Enter microstrip width for microstrip calibration
USZ	Enter microstrip impedance for microstrip calibration
V	Suffix sets voltage data type
V15	Set Millimeter Wave Band to V Band (WR-15)
VLT	Suffix sets voltage data type
VSP	Enter rear panel stop voltage value
VSP?	Output rear panel stop voltage value
VST	Enter rear panel start voltage value
VST?	Output rear panel start voltage value
W10	Set Millimeter Wave Band to W Band (WR-10)
W10E	Set Millimeter Wave Band to extended W Band (WR-10E)
WCO	Enter waveguide cutoff frequency for user defined kit
WFS	Wait full sweep until all display data is valid
WIDE	Use entire display width for graphs
WKD	Select user defined waveguide calibration kit
WKI	Select installed waveguide calibration kit
WLS	Select low sidelobe window shape
WMS	Select minimum sidelobe window shape
WNM	Select nominal window shape
WRT	Select rectangular window shape
WSH1	Enter waveguide short offset 1 for user defined kit
WSH2	Enter waveguide short offset 2 for user defined kit
WSH3	Enter waveguide short 3 offset for user defined kit
WSX?	Output window shape
XM3	Suffix sets unitless data type and scales by 1E-3
XMKR?	Output marker mode
XSB?	Output byte order for output data LSB or MSB
XX1	Suffix sets unitless data type
XX3	Suffix sets unitless data type and scales by 1E3

Command	Description
ZCT	Enter zoom range center value time or distance
ZCT?	Output zoom range center value
ZSN	Enter zoom range span value time or distance
ZSN?	Output zoom range span value
ZSP	Enter zoom range stop value time or distance
ZSP?	Output zoom range stop value
ZST	Enter zoom range start value time or distance
ZST?	Output zoom range start value

Command	Description	Group
ADPL	Enter electrical length for adapter removal	ADAPTER REMOVAL (Ch 9)
ADPL?	Output electrical length for adapter removal	ADAPTER REMOVAL (Ch 9)
IARF	Enter adapter removal data from GPIB and calibrate	ADAPTER REMOVAL (Ch 9)
ADDFC	Enter frequency counter GPIB address	ADDRESSING (Ch 8)
ADDFC?	Output frequency counter GPIB address	ADDRESSING (Ch 8)
ADDPLT	Enter plotter GPIB address	ADDRESSING (Ch 8)
ADDPLT?	Output plotter GPIB address	ADDRESSING (Ch 8)
ADDPM	Enter power meter GPIB address	ADDRESSING (Ch 8)
ADDPM?	Output power meter GPIB address	ADDRESSING (Ch 8)
SRC1ADD?	Output external source 1 GPIB address	ADDRESSING (Ch 8)
ABORTCAL	Abort calibration in progress and keep existing calibration data	AUTOCAL (Ch 5)
ACAA	Set AutoCal standard to assurance	AUTOCAL (Ch 5)
ACADPL	Enter AutoCal adapter length	AUTOCAL (Ch 5)
ACADPL?	Output AutoCal adapter length	AUTOCAL (Ch 5)
ACADR	Set AutoCal type to adapter removal	AUTOCAL (Ch 5)
ACAL1R2	Set adapter removal port configuration to ADAPT & L=1 and R=2	AUTOCAL (Ch 5)
ACAR1L2	Set adapter removal port configuration to ADAPT & R=1 and L=2	AUTOCAL (Ch 5)
ACARP?	Output AutoCal adapter removal port configuration	AUTOCAL (Ch 5)
ACDEF	Select default AutoCal isolation averaging factor	AUTOCAL (Ch 5)
ACF2P?	Output AutoCal full 2 port configuration	AUTOCAL (Ch 5)
ACF2TC	Set AutoCal 2 port thru type to calibrator	AUTOCAL (Ch 5)
ACF2TT	Set AutoCal 2 port thru type to true thru	AUTOCAL (Ch 5)
ACF2TX?	Output AutoCal 2 port thru type selection	AUTOCAL (Ch 5)
ACHFD	Save AutoCal characterization data to floppy disk	AUTOCAL (Ch 5)
ACHHD	Save AutoCal characterization data to hard disk	AUTOCAL (Ch 5)
ACIAF	Enter user AutoCal isolation averaging factor	AUTOCAL (Ch 5)
ACIAF?	Output user AutoCal isolation averaging factor	AUTOCAL (Ch 5)
ACIAX?	Output AutoCal isolation averaging factor omit/default/user selection	AUTOCAL (Ch 5)
ACISO	Enter AutoCal isolation averaging number	AUTOCAL (Ch 5)
ACISO?	Output AutoCal isolation averaging number	AUTOCAL (Ch 5)
ACL1AR2	Set adapter removal port configuration to L=1 and ADAPT & R=2	AUTOCAL (Ch 5)
ACL1R2	Set AutoCal full 2 port configuration to L=1 and R=2	AUTOCAL (Ch 5)
ACLO	Enter AutoCal load averaging number	AUTOCAL (Ch 5)
ACLO?	Output AutoCal load averaging number	AUTOCAL (Ch 5)
ACLOAD	Set AutoCal standard to load	AUTOCAL (Ch 5)

Command	Description	Group
ACOMIT	Omit using AutoCal isolation averaging factor	AUTOCAL (Ch 5)
ACOPEN	Set AutoCal standard to open	AUTOCAL (Ch 5)
ACP1?	Output AutoCal S11 port configuration	AUTOCAL (Ch 5)
ACP1L	Set AutoCal S11 port configuration to left	AUTOCAL (Ch 5)
ACP1R	Set AutoCal S11 port configuration to right	AUTOCAL (Ch 5)
ACP2?	Output AutoCal S22 port configuration	AUTOCAL (Ch 5)
ACP2L	Set AutoCal S22 port configuration to left	AUTOCAL (Ch 5)
ACP2R	Set AutoCal S22 port configuration to right	AUTOCAL (Ch 5)
ACPL	Set AutoCal S11 port configuration to left	AUTOCAL (Ch 5)
ACPR	Set AutoCal S11 port configuration to right	AUTOCAL (Ch 5)
ACR1AL2	Set adapter removal port configuration to R=1 and ADAPT & L=2	AUTOCAL (Ch 5)
ACR1L2	Set AutoCal full 2 port configuration to R=1 and L=2	AUTOCAL (Ch 5)
ACRFL	Enter AutoCal reflection averaging number	AUTOCAL (Ch 5)
ACRFL?	Output AutoCal reflection averaging number	AUTOCAL (Ch 5)
ACS11	Set AutoCal type to S11	AUTOCAL (Ch 5)
ACS22	Set AutoCal type to S22	AUTOCAL (Ch 5)
ACSF2P	Set AutoCal type to full 2 port	AUTOCAL (Ch 5)
ACSHORT	Set AutoCal standard to short	AUTOCAL (Ch 5)
ACSTD?	Output AutoCal standard	AUTOCAL (Ch 5)
ACSW	Enter AutoCal switch averaging number	AUTOCAL (Ch 5)
ACSW?	Output AutoCal switch averaging number	AUTOCAL (Ch 5)
ACTHRU	Set AutoCal standard to thru	AUTOCAL (Ch 5)
ACTU	Enter AutoCal thru averaging number	AUTOCAL (Ch 5)
ACTU?	Output AutoCal thru averaging number	AUTOCAL (Ch 5)
ACTUAVG	Enter AutoCal thru update averaging number	AUTOCAL (Ch 5)
ACTUAVG?	Output AutoCal thru update averaging number	AUTOCAL (Ch 5)
ACTULS	Apply last thru update cal setup	AUTOCAL (Ch 5)
ACX?	Output AutoCal type	AUTOCAL (Ch 5)
BEGAC	Start AutoCal	AUTOCAL (Ch 5)
BEGCH	Start AutoCal characterization	AUTOCAL (Ch 5)
BEGTU	Start AutoCal thru update	AUTOCAL (Ch 5)
IACCHAR	Input AutoCal characterization data from the GPIB	AUTOCAL (Ch 5)
OACCHAR	Output AutoCal characterization data to the GPIB	AUTOCAL (Ch 5)
OACSER	Output auto-cal box serial number	AUTOCAL (Ch 5)
OACTYPE	Output auto-cal box type	AUTOCAL (Ch 5)
TACD	Take AutoCal data	AUTOCAL (Ch 5)
A12	Simulate 12-term calibration	CALIBRATION (Ch 5)
A8R	Simulate 1-path 2-port calibration reverse path	CALIBRATION (Ch 5)

Command	Description	Group
A8T	Simulate 1-path 2-port calibration forward path	CALIBRATION (Ch 5)
ABT	Simulate trans freq response calibration forward and reverse	CALIBRATION (Ch 5)
AFT	Simulate transmission frequency response calibration forward path	CALIBRATION (Ch 5)
ARB	Simulate reflection only calibration both ports	CALIBRATION (Ch 5)
ARF	Simulate reflection only calibration port 1	CALIBRATION (Ch 5)
ARR	Simulate reflection only calibration port 2	CALIBRATION (Ch 5)
ART	Simulate trans freq response calibration reverse path	CALIBRATION (Ch 5)
BBL	Select broadband load for calibration	CALIBRATION (Ch 5)
BBZ	Enter broadband load impedance for calibration	CALIBRATION (Ch 5)
BBZL	Enter broadband load inductance for calibration	CALIBRATION (Ch 5)
BEG	Begin taking calibration data	CALIBRATION (Ch 5)
BPF	Enter break point frequency for 3 line LRL calibration	CALIBRATION (Ch 5)
C12	Select 12 term calibration	CALIBRATION (Ch 5)
C8R	Select 1-path 2-port calibration reverse path	CALIBRATION (Ch 5)
C8T	Select 1-path 2-port calibration forward path	CALIBRATION (Ch 5)
CBT	Select trans freq response calibration forward and reverse	CALIBRATION (Ch 5)
CC0	Enter capacitance coefficient 0 for open	CALIBRATION (Ch 5)
CC1	Enter capacitance coefficient 1 for open	CALIBRATION (Ch 5)
CC2	Enter capacitance coefficient 2 for open	CALIBRATION (Ch 5)
CC3	Enter capacitance coefficient 3 for open	CALIBRATION (Ch 5)
CF1	Select female 1.0 mm connector for current port	CALIBRATION (Ch 5)
CF2	Select female 2.4mm connector for current port	CALIBRATION (Ch 5)
CF3	Select female GPC-3.5 connector for current port	CALIBRATION (Ch 5)
CF716	Select female 7/16 connector for current port	CALIBRATION (Ch 5)
CFC	Select female TNC connector for current port	CALIBRATION (Ch 5)
CFK	Select female K connector for current port	CALIBRATION (Ch 5)
CFN	Select female Type N connector for current port	CALIBRATION (Ch 5)
CFN75	Select Female type N 75-ohm connector for current port	CALIBRATION (Ch 5)
CFS	Select female SMA connector for current port	CALIBRATION (Ch 5)
CFSP	Select Special Female connector for current port	CALIBRATION (Ch 5)
CFSPA	Select Band A special female connector for current port	CALIBRATION (Ch 5)
CFSPB	Select Band B special female connector for current port	CALIBRATION (Ch 5)
CFSPC	Select Band C special female connector for current port	CALIBRATION (Ch 5)
CFT	Select trans freq response calibration forward path	CALIBRATION (Ch 5)
CFV	Select female V connector for current port	CALIBRATION (Ch 5)
CL0	Enter inductive coefficient 0 for short	CALIBRATION (Ch 5)
CL1	Enter inductive coefficient 1 for short	CALIBRATION (Ch 5)

Command	Description	Group
CL2	Enter inductive coefficient 2 for short	CALIBRATION (Ch 5)
CL3	Enter inductive coefficient 3 for short	CALIBRATION (Ch 5)
CM1	Select male 1.0 mm connector for current port	CALIBRATION (Ch 5)
CM2	Select male 2.4mm connector for current port	CALIBRATION (Ch 5)
CM3	Select male GPC-3.5 connector for current port	CALIBRATION (Ch 5)
CM716	Select male 7/16 connector for current port	CALIBRATION (Ch 5)
CMC	Select male TNC connector for current port	CALIBRATION (Ch 5)
CMK	Select male K connector for current port	CALIBRATION (Ch 5)
CMN	Select male N connector for current port	CALIBRATION (Ch 5)
CMN75	Select Male type N 75-Ohm connector for current port	CALIBRATION (Ch 5)
CMS	Select male SMA connector for current port	CALIBRATION (Ch 5)
CMSP	Select Special Male connector for current port	CALIBRATION (Ch 5)
CMSPA	Select Band A special male connector for current port	CALIBRATION (Ch 5)
CMSPB	Select Band B special male connector for current port	CALIBRATION (Ch 5)
CMSPC	Select Band C special male connector for current port	CALIBRATION (Ch 5)
CMV	Select male V connector for current port	CALIBRATION (Ch 5)
CMX?	Output calibration method	CALIBRATION (Ch 5)
CND	Select user specified connector for current port	CALIBRATION (Ch 5)
CNG	Select GPC-7 connector for current port	CALIBRATION (Ch 5)
COF	Turn error correction off	CALIBRATION (Ch 5)
CON	Turn error correction on	CALIBRATION (Ch 5)
CON?	Output error correction on/off status	CALIBRATION (Ch 5)
COO	Enter offset for open for user specified connector (Standard Calibration)	CALIBRATION (Ch 5)
COS	Enter offset for short for user specified connector	CALIBRATION (Ch 5)
CRB	Select reflection only calibration both ports	CALIBRATION (Ch 5)
CRF	Select reflection only calibration port 1	CALIBRATION (Ch 5)
CRR	Select reflection only calibration port 2	CALIBRATION (Ch 5)
CRT	Select trans freq response calibration reverse path	CALIBRATION (Ch 5)
CSF?	Output cal start frequency	CALIBRATION (Ch 5)
CTF?	Output cal stop frequency	CALIBRATION (Ch 5)
CWC	Select CW frequency calibration data points	CALIBRATION (Ch 5)
CXX?	Output calibration type	CALIBRATION (Ch 5)
DFC	Select discrete frequency calibration data points	CALIBRATION (Ch 5)
DFD	Done specifying discrete frequency ranges	CALIBRATION (Ch 5)
DFQ	Enter single discrete frequency	CALIBRATION (Ch 5)
OCM	Select offset short calibration method	CALIBRATION (Ch 5)
IC2	Input Calibration Coefficient 2	CALIBRATION (Ch 5)
IC3	Enter calibration coefficient 3	CALIBRATION (Ch 5)

Command	Description	Group
IC4	Enter calibration coefficient 4	CALIBRATION (Ch 5)
IC5	Enter calibration coefficient 5	CALIBRATION (Ch 5)
IC6	Enter calibration coefficient 6	CALIBRATION (Ch 5)
IC7	Enter calibration coefficient 7	CALIBRATION (Ch 5)
IC8	Enter calibration coefficient 8	CALIBRATION (Ch 5)
IC9	Enter calibration coefficient 9	CALIBRATION (Ch 5)
ICA	Enter calibration coefficient 10	CALIBRATION (Ch 5)
ICB	Enter calibration coefficient 11	CALIBRATION (Ch 5)
ICC	Enter calibration coefficient 12	CALIBRATION (Ch 5)
ICD	Enter corrected data for active channel parameter	CALIBRATION (Ch 5)
ICF	Enter front panel setup and calibration data	CALIBRATION (Ch 5)
ICL	Enter all applicable calibration coefficients for cal type	CALIBRATION (Ch 5)
IFD	Enter final data for active channel parameter	CALIBRATION (Ch 5)
ISF	Exclude isolation	CALIBRATION (Ch 5)
ISN	Include isolation	CALIBRATION (Ch 5)
KEC	Keep existing calibration data	CALIBRATION (Ch 5)
LCM	Select LRL calibration method	CALIBRATION (Ch 5)
LL1	Enter length of line 1 for LRL calibration	CALIBRATION (Ch 5)
LL2	Enter length of line 2 for LRL calibration	CALIBRATION (Ch 5)
LL3	Enter length of line 3 for LRL calibration	CALIBRATION (Ch 5)
LLZ	Enter line impedance for LRL calibration	CALIBRATION (Ch 5)
LM2	Select a match for the second device during a LRM type calibration	CALIBRATION (Ch 5)
LM3	Select a match for the third device during a LRM type calibration	CALIBRATION (Ch 5)
LMZ	Enter match impedance for LRM calibration	CALIBRATION (Ch 5)
LMZ?	Output match impedance for LRM calibration	CALIBRATION (Ch 5)
LMZL	Enter match inductance for LRM calibration	CALIBRATION (Ch 5)
LMZL?	Output match inductance for LRM calibration	CALIBRATION (Ch 5)
LR2	Specify 2 line LRL calibration	CALIBRATION (Ch 5)
LR3	Specify 3 line LRL calibration	CALIBRATION (Ch 5)
LTC	Select coaxial transmission line for calibration	CALIBRATION (Ch 5)
LTU	Select microstrip transmission line for calibration	CALIBRATION (Ch 5)
LTW	Select waveguide transmission line for calibration	CALIBRATION (Ch 5)
LTX?	Output line type	CALIBRATION (Ch 5)
MAT	Select matched reflective devices during cal	CALIBRATION (Ch 5)
MIX	Select mixed reflective devices during calibration	CALIBRATION (Ch 5)
NCS	Go to next calibration step	CALIBRATION (Ch 5)
NOC	Select normal calibration data points	CALIBRATION (Ch 5)

Command	Description	Group
O3CM	Select Triple Offset Short calibration method	CALIBRATION (Ch 5)
ONCT	Output number of cal terms for current calibration	CALIBRATION (Ch 5)
P1C	Select port 1 for connector specification	CALIBRATION (Ch 5)
P1C?	Output port 1 connector type	CALIBRATION (Ch 5)
P1P?	Output approximate power level at port 1	CALIBRATION (Ch 5)
P2C	Select port 2 for connector specification	CALIBRATION (Ch 5)
P2C?	Output port 2 connector type	CALIBRATION (Ch 5)
PSP	Enter number of power sweeps for flat power correction (obsolete)	CALIBRATION (Ch 5)
PSP?	Output number of power sweeps for flat power correction (obsolete)	CALIBRATION (Ch 5)
PTS	Enter number of points to be skipped during flat power correction	CALIBRATION (Ch 5)
PTS?	Output number of points to be skipped during flat power correction	CALIBRATION (Ch 5)
RGZ	Select reflective device greater than Z0	CALIBRATION (Ch 5)
RLZ	Select reflective device less than Z0	CALIBRATION (Ch 5)
RM1	Select reference plane at line 1 midpoint	CALIBRATION (Ch 5)
ROL	Enter reflective device offset length	CALIBRATION (Ch 5)
RPC	Repeat previous calibration	CALIBRATION (Ch 5)
RRP	Select reference plane at reflection plane	CALIBRATION (Ch 5)
SBD	Enter substrate dielectric for microstrip calibration	CALIBRATION (Ch 5)
SBT	Enter substrate thickness for microstrip calibration	CALIBRATION (Ch 5)
SCM	Select standard calibration method	CALIBRATION (Ch 5)
SFC	Perform flat test port calibration	CALIBRATION (Ch 5)
SH1	Set offset short 1 or 2 offset length for offset short calibration	CALIBRATION (Ch 5)
SH2	Set offset short 1 or 2 offset length for offset short calibration	CALIBRATION (Ch 5)
SLD	Select sliding load for calibration	CALIBRATION (Ch 5)
TC1	Take calibration data for port 1	CALIBRATION (Ch 5)
TC2	Take calibration data for port 2	CALIBRATION (Ch 5)
TCD	Take calibration data on one or both ports as necessary	CALIBRATION (Ch 5)
TCM	Select the TRM calibration method	CALIBRATION (Ch 5)
TDC	Select time domain harmonic frequency calibration data points	CALIBRATION (Ch 5)
TLZ	Enter through line impedance for calibration	CALIBRATION (Ch 5)
TOL	Enter through offset length for calibration	CALIBRATION (Ch 5)
U10	Select 10 mil UTF calibration kit	CALIBRATION (Ch 5)
U15	Select 15 mil UTF calibration kit	CALIBRATION (Ch 5)
U25	Select 25 mil UTF calibration kit	CALIBRATION (Ch 5)

Command	Description	Group
USE	Enter effective dielectric for microstrip calibration	CALIBRATION (Ch 5)
USW	Enter microstrip width for microstrip calibration	CALIBRATION (Ch 5)
USZ	Enter microstrip impedance for microstrip calibration	CALIBRATION (Ch 5)
WCO	Enter waveguide cutoff frequency for user defined kit	CALIBRATION (Ch 5)
WKD	Select user defined waveguide calibration kit	CALIBRATION (Ch 5)
WKI	Select installed waveguide calibration kit	CALIBRATION (Ch 5)
WSH1	Enter waveguide short offset 1 for user defined kit	CALIBRATION (Ch 5)
WSH2	Enter waveguide short offset 2 for user defined kit	CALIBRATION (Ch 5)
WSH3	Enter waveguide short 3 offset for user defined kit	CALIBRATION (Ch 5)
CH1	Make channel 1 the active channel	CHANNELS (Ch 4)
CH2	Make channel 2 the active channel	CHANNELS (Ch 4)
CH3	Make channel 3 the active channel	CHANNELS (Ch 4)
CH4	Make channel 4 the active channel	CHANNELS (Ch 4)
CHX?	Output active channel number	CHANNELS (Ch 4)
D13	Display channels 1 & 3	CHANNELS (Ch 4)
D14	Display all four channels	CHANNELS (Ch 4)
D24	Select dual channel display with channels 2 & 4	CHANNELS (Ch 4)
DSP	Select single channel display	CHANNELS (Ch 4)
DSP?	Output channel display mode	CHANNELS (Ch 4)
T13	Select overlaid channel 1 and 3 display	CHANNELS (Ch 4)
T24	Select overlaid channel 2 and 4 display	CHANNELS (Ch 4)
CM	Suffix sets distance data type and scales by 1E-2	DATA ENTRY SUFFIXES (Ch 4)
CMT	Suffix sets distance data type and scales by 1E-2	DATA ENTRY SUFFIXES (Ch 4)
DB	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 4)
DBL	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 4)
DBM	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 4)
DEG	Suffix sets phase data type	DATA ENTRY SUFFIXES (Ch 4)
RAD	Suffix sets phase data type and scales by 180/pi	DATA ENTRY SUFFIXES (Ch 4)
GHZ	Suffix sets frequency data type and scales by 1E9	DATA ENTRY SUFFIXES (Ch 4)
HZ	Suffix sets frequency data type	DATA ENTRY SUFFIXES (Ch 4)
IMU	Suffix sets imaginary data type	DATA ENTRY SUFFIXES (Ch 4)
KHZ	Suffix sets frequency data type and scales by 1E3	DATA ENTRY SUFFIXES (Ch 4)
M	Suffix sets distance data type	DATA ENTRY SUFFIXES (Ch 4)
MHZ	Suffix sets frequency data type and scales by 1E6	DATA ENTRY SUFFIXES (Ch 4)
MM	Suffix sets distance data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 4)
MMT	Suffix sets distance data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 4)
MS	Suffix sets time data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 4)
MTR	Suffix sets distance data type	DATA ENTRY SUFFIXES (Ch 4)
MV	Suffix sets voltage data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 4)

Command	Description	Group
NS	Suffix sets time data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 4)
NSC	Suffix sets time data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 4)
OHM	Suffix sets impedance data type	DATA ENTRY SUFFIXES (Ch 4)
PS	Suffix sets time data type and scales by 1E02	DATA ENTRY SUFFIXES (Ch 4)
PSC	Suffix sets time data type and scales by 1E02	DATA ENTRY SUFFIXES (Ch 4)
REU	Suffix sets real data type	DATA ENTRY SUFFIXES (Ch 4)
S	Suffix sets time data type	DATA ENTRY SUFFIXES (Ch 4)
US	Suffix sets time data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 4)
USC	Suffix sets time data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 4)
V	Suffix sets voltage data type	DATA ENTRY SUFFIXES (Ch 4)
VLT	Suffix sets voltage data type	DATA ENTRY SUFFIXES (Ch 4)
XM3	Suffix sets unitless data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 4)
XX1	Suffix sets unitless data type	DATA ENTRY SUFFIXES (Ch 4)
XX3	Suffix sets unitless data type and scales by 1E3	DATA ENTRY SUFFIXES (Ch 4)
DPR0	Visible data only OFD format	DATA TRANSFER (Ch 7)
DPR1	Data pair always OFD format	DATA TRANSFER (Ch 7)
FDE0	Disable Output Data End Message	DATA TRANSFER (Ch 7)
FDE1	Enable Output Data End Message	DATA TRANSFER (Ch 7)
FDEX?	Output Output Data End Message enable/disable status	DATA TRANSFER (Ch 7)
FMA	Select ASCII data transfer format	DATA TRANSFER (Ch 7)
FMB	Select IEEE754 64 bit data transfer format	DATA TRANSFER (Ch 7)
FMC	Select IEEE754 32 bit data transfer format	DATA TRANSFER (Ch 7)
FMX?	Output data output mode FMA FMB or FMC	DATA TRANSFER (Ch 7)
OCA	Output calibration coefficient A	DATA TRANSFER (Ch 7)
OCB	Output calibration coefficient B	DATA TRANSFER (Ch 7)
OCC	Output calibration coefficient C	DATA TRANSFER (Ch 7)
OCD	Output corrected data for active channel parameter	DATA TRANSFER (Ch 7)
OCF	Output front panel setup and calibration data	DATA TRANSFER (Ch 7)
OCL	Output all applicable calibration coefficients for cal type	DATA TRANSFER (Ch 7)
IC1	Enter calibration coefficient 1	DATA TRANSFER (Ch 7)
IC10	Enter calibration coefficient 10	DATA TRANSFER (Ch 7)
IC11	Enter calibration coefficient 11	DATA TRANSFER (Ch 7)
IC12	Enter calibration coefficient 12	DATA TRANSFER (Ch 7)
IFPC	Enter flat power coefficients	DATA TRANSFER (Ch 7)
LSB	Select least significant byte first binary transfer	DATA TRANSFER (Ch 7)
MSB	Select most significant byte first binary transfer	DATA TRANSFER (Ch 7)
O4FD	Output final data for all 4 channels to the GPIB	DATA TRANSFER (Ch 7)
O4SC	Output corrected data for all four S-parameters	DATA TRANSFER (Ch 7)
O4SR	Output raw data for all four S-parameters	DATA TRANSFER (Ch 7)

Command	Description	Group
OAM1	Output channel 1 active marker value	DATA TRANSFER (Ch 7)
OAM2	Output channel 2 active marker value	DATA TRANSFER (Ch 7)
OAM3	Output channel 3 active marker value	DATA TRANSFER (Ch 7)
OAM4	Output channel 4 active marker value	DATA TRANSFER (Ch 7)
OC1	Output calibration coefficients 1	DATA TRANSFER (Ch 7)
OC10	Output calibration coefficients 10	DATA TRANSFER (Ch 7)
OC11	Output calibration coefficients 11	DATA TRANSFER (Ch 7)
OC12	Output calibration coefficients 12	DATA TRANSFER (Ch 7)
OC2	Output calibration coefficients 2	DATA TRANSFER (Ch 7)
OC3	Output calibration coefficients 3	DATA TRANSFER (Ch 7)
OC4	Output calibration coefficients 4	DATA TRANSFER (Ch 7)
OC5	Output calibration coefficients 5	DATA TRANSFER (Ch 7)
OC6	Output calibration coefficients 6	DATA TRANSFER (Ch 7)
OC7	Output calibration coefficients 7	DATA TRANSFER (Ch 7)
OC8	Output calibration coefficients 8	DATA TRANSFER (Ch 7)
OC9	Output calibration coefficients 9	DATA TRANSFER (Ch 7)
ODR	Output directory listing of the floppy drive	DATA TRANSFER (Ch 7)
ODRH	Output directory listing of the hard drive	DATA TRANSFER (Ch 7)
ODV	Output distance values for time domain	DATA TRANSFER (Ch 7)
OEL	Output error list	DATA TRANSFER (Ch 7)
OFD	Output final data for active channel parameter	DATA TRANSFER (Ch 7)
OFD1	Output final data for channel 1 parameter	DATA TRANSFER (Ch 7)
OFD2	Output final data for channel 2 parameter	DATA TRANSFER (Ch 7)
OFD3	Output final data for channel 3 parameter	DATA TRANSFER (Ch 7)
OFD4	Output final data for channel 4 parameter	DATA TRANSFER (Ch 7)
OFP	Output current front panel setup	DATA TRANSFER (Ch 7)
OFPC	Output flat power coefficients	DATA TRANSFER (Ch 7)
OFV	Output frequency values	DATA TRANSFER (Ch 7)
OGE	Output extended description of current GPIB error	DATA TRANSFER (Ch 7)
OGL	Output extended description of previous GPIB error	DATA TRANSFER (Ch 7)
OID	Output instrument identification string	DATA TRANSFER (Ch 7)
OLM	Output limits status byte mask	DATA TRANSFER (Ch 7)
OM1	Output marker 1 value	DATA TRANSFER (Ch 7)
OM2	Output marker 2 value	DATA TRANSFER (Ch 7)
OM3	Output marker 3 value	DATA TRANSFER (Ch 7)
OM4	Output marker 4 value	DATA TRANSFER (Ch 7)
OM5	Output marker 5 value	DATA TRANSFER (Ch 7)
OM6	Output marker 6 value	DATA TRANSFER (Ch 7)
ONCP	Output number of points for current calibration	DATA TRANSFER (Ch 7)

Command	Description	Group
OND	Output Normalization data	DATA TRANSFER (Ch 7)
ONE	Output number of lines in the error list	DATA TRANSFER (Ch 7)
ORD	Output raw data for active channel parameter	DATA TRANSFER (Ch 7)
OS1	Output front panel setup number 1	DATA TRANSFER (Ch 7)
OS10	Output front panel setup number 10	DATA TRANSFER (Ch 7)
OS2	Output front panel setup number 2	DATA TRANSFER (Ch 7)
OS3	Output front panel setup number 3	DATA TRANSFER (Ch 7)
OS4	Output front panel setup number 4	DATA TRANSFER (Ch 7)
OS5	Output front panel setup number 5	DATA TRANSFER (Ch 7)
OS6	Output front panel setup number 6	DATA TRANSFER (Ch 7)
OS7	Output front panel setup number 7	DATA TRANSFER (Ch 7)
OS8	Output front panel setup number 8	DATA TRANSFER (Ch 7)
OS9	Output front panel setup number 9	DATA TRANSFER (Ch 7)
OSL	Output service log	DATA TRANSFER (Ch 7)
XSB?	Output byte order for output data LSB or MSB	DATA TRANSFER (Ch 7)
ALC	Perform ALC loop internal calibration	DIAGNOSTICS (Ch 8)
DBP	Select distance bandpass mode for active channel	DIAGNOSTICS (Ch 8)
DCA	Select automatic DC term calculation for lowpass	DIAGNOSTICS (Ch 8)
DCO	Select open for DC term for lowpass	DIAGNOSTICS (Ch 8)
DLP	Select distance lowpass mode for active channel	DIAGNOSTICS (Ch 8)
DRL	Diagnostic read latch	DIAGNOSTICS (Ch 8)
DVM	Enter DVM channel number	DIAGNOSTICS (Ch 8)
DWL	Diagnostic write latch	DIAGNOSTICS (Ch 8)
EDG	End diagnostics mode	DIAGNOSTICS (Ch 8)
EXD	Display external A/D input	DIAGNOSTICS (Ch 8)
FLC	Source frequency linearity internal calibration	DIAGNOSTICS (Ch 8)
FPX?	Output flat power correction on/off status	DIAGNOSTICS (Ch 8)
LO25	Select LO2 offset D/A voltage testing	DIAGNOSTICS (Ch 8)
IFB	Select 1st IF bandpass testing	DIAGNOSTICS (Ch 8)
L1C	Perform LO1 internal calibration	DIAGNOSTICS (Ch 8)
L2C	Perform LO2 internal calibration	DIAGNOSTICS (Ch 8)
LKS0	Disable lock search mode	DIAGNOSTICS (Ch 8)
LKS1	Enable lock search mode	DIAGNOSTICS (Ch 8)
LO11	Select LO1 phase lock voltage testing	DIAGNOSTICS (Ch 8)
LO12	Select LO1 D/A voltage testing	DIAGNOSTICS (Ch 8)
LO21	Select LO2 main phase lock voltage testing	DIAGNOSTICS (Ch 8)
LO22	Select LO2 offset phase lock voltage testing	DIAGNOSTICS (Ch 8)
LO23	Select LO2 DDS phase lock voltage testing	DIAGNOSTICS (Ch 8)
LO24	Select LO2 main D/A voltage testing	DIAGNOSTICS (Ch 8)

Command	Description	Group
NRD	Display non-ratioed parameters on 4 channels	DIAGNOSTICS (Ch 8)
P2ALC	Perform Port 2 ALC loop internal calibration	DIAGNOSTICS (Ch 8)
PSL	Print the service log	DIAGNOSTICS (Ch 8)
SDG	Start diagnostics mode	DIAGNOSTICS (Ch 8)
SDR	Select standard receiver mode	DIAGNOSTICS (Ch 8)
SLT	Perform SLT internal calibration	DIAGNOSTICS (Ch 8)
SRC1	Select source linearity voltage testing	DIAGNOSTICS (Ch 8)
ADRIVE	Select the floppy drive as the default drive	DISK FUNCTION (Ch 8)
CD	Change default directory	DISK FUNCTION (Ch 8)
CDRIVE	Select the hard disk as the default drive	DISK FUNCTION (Ch 8)
COPY	Copy a files contents to another file	DISK FUNCTION (Ch 8)
CWD?	Output current working directory string	DISK FUNCTION (Ch 8)
DEL	Delete a file from disk	DISK FUNCTION (Ch 8)
DIR	Output a directory listing to the GPIB	DISK FUNCTION (Ch 8)
DISKRD	Output disk file data to the GPIB	DISK FUNCTION (Ch 8)
DISKWR	Write GPIB data to a disk file	DISK FUNCTION (Ch 8)
EXISTD?	Output directory existence information	DISK FUNCTION (Ch 8)
EXISTF?	Output file existence information	DISK FUNCTION (Ch 8)
INT	Initialize (format) floppy disk	DISK FUNCTION (Ch 8)
LDARF	Load adapter removal files from disk and calibrate	DISK FUNCTION (Ch 8)
LKT	Load calibration kit information from floppy disk	DISK FUNCTION (Ch 8)
MD	Create a new disk directory	DISK FUNCTION (Ch 8)
PDR	Print directory listing of the floppy drive	DISK FUNCTION (Ch 8)
PDRH	Print directory listing of the hard drive	DISK FUNCTION (Ch 8)
PGT	Plot graticule	DISK FUNCTION (Ch 8)
RD	Remove a disk directory	DISK FUNCTION (Ch 8)
RECALL	Recall a data file from disk to a task	DISK FUNCTION (Ch 8)
SAVE	Save a data file to disk	DISK FUNCTION (Ch 8)
SAVEGC	Save text format gain compression data to disk	DISK FUNCTION (Ch 8)
ADD	Select addition as trace math for active channel	DISPLAY (Ch 4)
APR	Enter group delay aperture setting on active channel	DISPLAY (Ch 4)
APR?	Output group delay aperture setting on active channel	DISPLAY (Ch 4)
ASC	Autoscale the active channel display	DISPLAY (Ch 4)
ASP	Enter polar stop sweep position angle	DISPLAY (Ch 4)
ASP?	Output polar stop sweep position angle	DISPLAY (Ch 4)
AST	Enter polar start sweep position angle	DISPLAY (Ch 4)
AST?	Output polar start sweep position angle	DISPLAY (Ch 4)
DAT	Display data only on active channel	DISPLAY (Ch 4)
DAT?	Output trace memory display mode	DISPLAY (Ch 4)

Command	Description	Group
DIA	Select air as active dielectric	DISPLAY (Ch 4)
DIE	Enter a dielectric value	DISPLAY (Ch 4)
DIM	Select microporous teflon as active dielectric	DISPLAY (Ch 4)
DIP	Select polyethylene as active dielectric	DISPLAY (Ch 4)
DIT	Select Teflon as active dielectric	DISPLAY (Ch 4)
DIV	Select division as trace math for active channel	DISPLAY (Ch 4)
DIX?	Output dielectric constant	DISPLAY (Ch 4)
DLA	Select group delay display for active channel	DISPLAY (Ch 4)
DNM	Display data normalized to trace memory on active channel	DISPLAY (Ch 4)
DTM	Display measurement data and trace memory on active channel	DISPLAY (Ch 4)
GRF?	Output graph type for active channel	DISPLAY (Ch 4)
IMG	Select imaginary display for active channel	DISPLAY (Ch 4)
ISC	Enter scale and select inverted compressed Smith Chart display	DISPLAY (Ch 4)
ISE	Enter scale and select inverted expanded Smith Chart display	DISPLAY (Ch 4)
ISM	Select normal inverted Smith Chart for active channel	DISPLAY (Ch 4)
LIN	Select linear magnitude display for active channel	DISPLAY (Ch 4)
LPH	Select linear magnitude and phase display for active channel	DISPLAY (Ch 4)
MAG	Select log magnitude display for active channel	DISPLAY (Ch 4)
MEM	Display trace memory on active channel	DISPLAY (Ch 4)
MIN	Select subtraction as trace math for active channel	DISPLAY (Ch 4)
MOSET	Enter constant offset log magnitude for active channel	DISPLAY (Ch 4)
MOSET?	Output constant offset log magnitude for active channel	DISPLAY (Ch 4)
MPH	Select log magnitude and phase display for active channel	DISPLAY (Ch 4)
MTH?	Output trace math math type	DISPLAY (Ch 4)
MUL	Select multiplication as trace math for active channel	DISPLAY (Ch 4)
OFF	Enter offset value for top graph of active channel	DISPLAY (Ch 4)
OFF?	Output offset value for top graph of active channel	DISPLAY (Ch 4)
OFF2	Enter offset value for bottom graph of active channel	DISPLAY (Ch 4)
OFF2?	Output offset value for bottom graph of active channel	DISPLAY (Ch 4)
PCP	Select measurement phase polar chart mode	DISPLAY (Ch 4)
PCS	Select sweep position polar chart mode	DISPLAY (Ch 4)
PCX?	Output polar chart mode	DISPLAY (Ch 4)
PHA	Select phase display for active channel	DISPLAY (Ch 4)
PHO	Enter phase offset for display channel	DISPLAY (Ch 4)
PHO?	Output phase offset for display channel	DISPLAY (Ch 4)

Command	Description	Group
PLG	Select log polar display for active channel	DISPLAY (Ch 4)
PLR	Select linear polar display for active channel	DISPLAY (Ch 4)
POSET	Enter constant offset phase for active channel	DISPLAY (Ch 4)
POSET?	Output constant offset phase for active channel	DISPLAY (Ch 4)
POW	Select power out display for active channel	DISPLAY (Ch 4)
RDA	Select automatic reference delay calculation	DISPLAY (Ch 4)
RDD	Enter reference delay in distance for active channel	DISPLAY (Ch 4)
RDD?	Output reference delay in distance for active channel	DISPLAY (Ch 4)
RDT	Enter reference delay in time for active channel	DISPLAY (Ch 4)
RDT?	Output reference delay in time for active channel	DISPLAY (Ch 4)
REF	Enter reference line for top graph of active channel	DISPLAY (Ch 4)
REF?	Output reference line for top graph of active channel	DISPLAY (Ch 4)
REF2	Enter reference line for bottom graph of active channel	DISPLAY (Ch 4)
REF2?	Output reference line for bottom graph of active channel	DISPLAY (Ch 4)
REL	Select real display for active channel	DISPLAY (Ch 4)
RIM	Select real and imaginary display for active channel	DISPLAY (Ch 4)
SCL	Enter Scale Resolution for top graph of active channel	DISPLAY (Ch 4)
SCL?	Output Scale Resolution for top graph of active channel	DISPLAY (Ch 4)
SCL2	Enter Scale Resolution for bottom graph of active channel	DISPLAY (Ch 4)
SCL2?	Output Scale Resolution for bottom graph of active channel	DISPLAY (Ch 4)
SETUP	Display setup menu	DISPLAY (Ch 4)
SMC	Enter scale and select compressed Smith Chart display	DISPLAY (Ch 4)
SME	Enter scale and select expanded Smith Chart display	DISPLAY (Ch 4)
SMI	Select normal Smith Chart for active channel	DISPLAY (Ch 4)
STD	Store trace to memory on active channel	DISPLAY (Ch 4)
SWR	Select SWR display for active channel	DISPLAY (Ch 4)
AOF	Turn averaging off	ENHANCEMENT (Ch 4)
AOF?	Output averaging on/off status	ENHANCEMENT (Ch 4)
AON	Turn averaging on	ENHANCEMENT (Ch 4)
AVG	Enter averaging count and turn on	ENHANCEMENT (Ch 4)
AVG?	Output averaging count	ENHANCEMENT (Ch 4)
IF1	Select 10 Hz IF bandwidth	ENHANCEMENT (Ch 4)
IF2	Select 100 Hz IF bandwidth	ENHANCEMENT (Ch 4)
IF3	Select 1 KHz IF bandwidth	ENHANCEMENT (Ch 4)
IF4	Select 10 KHz IF bandwidth	ENHANCEMENT (Ch 4)
IFA	Select 30 KHz IF bandwidth	ENHANCEMENT (Ch 4)
IFM	Select 10 Hz IF bandwidth	ENHANCEMENT (Ch 4)

Command	Description	Group
IFN	Select 1 KHz IF bandwidth	ENHANCEMENT (Ch 4)
IFR	Select 100 Hz IF bandwidth	ENHANCEMENT (Ch 4)
IFX?	Output IF bandwidth	ENHANCEMENT (Ch 4)
MEASDLY	Set Measurement Delay time	ENHANCEMENT (Ch 4)
MEASDLY?	Output Measurement Delay time	ENHANCEMENT (Ch 4)
MEASDLY0	Disable Measurement Delay	ENHANCEMENT (Ch 4)
MEASDLY1	Enable Measurement Delay	ENHANCEMENT (Ch 4)
MEASDLYX?	Output Measurement Delay on/off status	ENHANCEMENT (Ch 4)
PTAVG	Set averaging type to point-by-point averaging	ENHANCEMENT (Ch 4)
RSTAVG	Reset the sweep-by-sweep averaging sweep count	ENHANCEMENT (Ch 4)
SOF	Turn off smoothing	ENHANCEMENT (Ch 4)
SOF?	Output smoothing on/off status	ENHANCEMENT (Ch 4)
SON	Enter smoothing value and turn on	ENHANCEMENT (Ch 4)
SON?	Output smoothing value	ENHANCEMENT (Ch 4)
SPLN	Select normal source lock polarity	ENHANCEMENT (Ch 4)
SPLR	Select reverse source lock polarity	ENHANCEMENT (Ch 4)
SPLX?	Output source lock polarity normal/reverse status	ENHANCEMENT (Ch 4)
SPR0	Turn spur reduction off	ENHANCEMENT (Ch 4)
SPR1	Turn spur reduction on	ENHANCEMENT (Ch 4)
SPRX?	Output spur reduction on/off status	ENHANCEMENT (Ch 4)
SWAVG	Set averaging type to sweep-by-sweep averaging	ENHANCEMENT (Ch 4)
SWAVG?	Output averaging type (sweep-by-sweep or point-by-point)	ENHANCEMENT (Ch 4)
FCW0	Turn fast CW measurement mode off	FAST CW (Ch 7)
FCW1	Turn fast CW measurement mode on	FAST CW (Ch 7)
FCW2	Turn Fast CW mode 2 on	FAST CW (Ch 7)
FCWX?	Output fast CW measurement mode on/off status	FAST CW (Ch 7)
CALR	Perform receiver cal for gain compression testing	GAIN COMPRESSION (Ch 9)
DSPS21	Select Gain Compression bottom graph displays S21	GAIN COMPRESSION (Ch 9)
DSPS21?	Output Gain Compression bottom graph selection Normalized/S2	GAIN COMPRESSION (Ch 9)
GCMP	Enter gain compression point search value	GAIN COMPRESSION (Ch 9)
GCMP?	Output gain compression point search value	GAIN COMPRESSION (Ch 9)
IPSC	Enter power sweep linearity calibration coefficients	GAIN COMPRESSION (Ch 9)
MFGCT	Start multiple frequency swept power gain compression test	GAIN COMPRESSION (Ch 9)
NOFST	Enter nominal offset value for external gain	GAIN COMPRESSION (Ch 9)
NOFST?	Output nominal offset value for external gain	GAIN COMPRESSION (Ch 9)
NRMS	Normalize S21 for gain compression testing	GAIN COMPRESSION (Ch 9)

Command	Description	Group
NRMS21	Select Gain Compression bottom graph displays Normalized S21	GAIN COMPRESSION (Ch 9)
OPSC	Output power sweep linearity calibration coefficients	GAIN COMPRESSION (Ch 9)
PSCNFRQ?	Output the power sweep linearity cal number of frequency poi	GAIN COMPRESSION (Ch 9)
PSCNPWR?	Output the power sweep linearity cal number of power points	GAIN COMPRESSION (Ch 9)
PSCSTEP?	Output the power sweep linearity cal power step size	GAIN COMPRESSION (Ch 9)
PSPWR	Enter power sweep off power level	GAIN COMPRESSION (Ch 9)
PSPWR?	Output power sweep off power level	GAIN COMPRESSION (Ch 9)
PSTEP	Enter power sweep step size	GAIN COMPRESSION (Ch 9)
PSTEP?	Output power sweep step size	GAIN COMPRESSION (Ch 9)
PSTOP	Enter power sweep stop power	GAIN COMPRESSION (Ch 9)
PSTOP?	Output power sweep stop power	GAIN COMPRESSION (Ch 9)
PSTRT	Enter power sweep start power	GAIN COMPRESSION (Ch 9)
PSTRT?	Output power sweep start power	GAIN COMPRESSION (Ch 9)
PSWC	Perform power sweep linearity calibration	GAIN COMPRESSION (Ch 9)
PSWC0	Turn power sweep linearity calibration off	GAIN COMPRESSION (Ch 9)
PSWC1	Turn power sweep linearity calibration on	GAIN COMPRESSION (Ch 9)
PSWCX?	Output power sweep linearity calibration on/off status	GAIN COMPRESSION (Ch 9)
PSWP0	Turn power sweep off	GAIN COMPRESSION (Ch 9)
PSWP1	Turn power sweep on	GAIN COMPRESSION (Ch 9)
PSWPX?	Output power sweep on/off status	GAIN COMPRESSION (Ch 9)
RSTGC	Reset gain compression parameters to default	GAIN COMPRESSION (Ch 9)
SFGCA	Select swept frequency gain compression application	GAIN COMPRESSION (Ch 9)
SFGCT	Start swept frequency gain compression test	GAIN COMPRESSION (Ch 9)
SPAMPMT	Start swept power gain compression AM/PM test	GAIN COMPRESSION (Ch 9)
SPGCA	Select swept power gain compression application	GAIN COMPRESSION (Ch 9)
SPGCT	Start swept power gain compression test	GAIN COMPRESSION (Ch 9)
UNDOGC	Exit gain compression and undo changes	GAIN COMPRESSION (Ch 9)
BMPB	Select Black on White as bitmap type	HARD COPY (Ch 8)
BMPC	Select Color on White as bitmap type	HARD COPY (Ch 8)
BMPT	Select true color as bitmap type	HARD COPY (Ch 8)
DPN	Enter pen number for data	HARD COPY (Ch 8)
DPN?	Output pen number for data	HARD COPY (Ch 8)
FFD	Send form feed to printer and stop print/plot	HARD COPY (Ch 8)
LOC	Enter string for operator comment	HARD COPY (Ch 8)
LOC?	Output string for operator comment	HARD COPY (Ch 8)
LOGO?	Output hard copy logo selection standard/user defined	HARD COPY (Ch 8)
LOGO0	Turn hard copy logo off	HARD COPY (Ch 8)

Command	Description	Group
LOGO1	Turn hard copy logo on	HARD COPY (Ch 8)
LOGOS	Select standard hard copy logo	HARD COPY (Ch 8)
LOGOU	Select user defined hard copy logo	HARD COPY (Ch 8)
LOGOX?	Output hard copy logo on/off status	HARD COPY (Ch 8)
ODAT	Output hard copy tabular data to GPIB	HARD COPY (Ch 8)
GPN	Enter pen number for graticule	HARD COPY (Ch 8)
GPN?	Output pen number for graticule	HARD COPY (Ch 8)
HD0	Turn off tabular data headers and page formatting	HARD COPY (Ch 8)
HD1	Turn on tabular data headers and page formatting	HARD COPY (Ch 8)
HIST0	Turns off GPIB history writing to disk	HARD COPY (Ch 8)
HIST1	Turns on GPIB history writing to disk	HARD COPY (Ch 8)
HISTX?	Outputs the history writes to hard disk enable/disable status	HARD COPY (Ch 8)
HPN	Enter pen number for header	HARD COPY (Ch 8)
HPN?	Output pen number for header	HARD COPY (Ch 8)
LAND	Select landscape mode for output plot	HARD COPY (Ch 8)
LDT0	Disable printing date/time	HARD COPY (Ch 8)
LDT1	Enable printing date/time	HARD COPY (Ch 8)
LMS	Enter string for DUT model/serial number	HARD COPY (Ch 8)
LMS?	Output string for DUT model/serial number	HARD COPY (Ch 8)
LNM	Enter string for operator name	HARD COPY (Ch 8)
LNM?	Output string for operator name	HARD COPY (Ch 8)
MPN	Enter pen number for markers and limits	HARD COPY (Ch 8)
MPN?	Output pen number for markers and limits	HARD COPY (Ch 8)
OBMP	Output the display as a bitmap	HARD COPY (Ch 8)
OGCTXT	Output text format gain compression data to GPIB	HARD COPY (Ch 8)
OHDR	Output hard copy header information to GPIB	HARD COPY (Ch 8)
OHGL	Output HPGL format data to GPIB	HARD COPY (Ch 8)
OS2P	Output S2P format data to GPIB	HARD COPY (Ch 8)
OTXT	Output text format data to GPIB	HARD COPY (Ch 8)
PBL	Select 1/4 size plot bottom left corner	HARD COPY (Ch 8)
PBR	Select 1/4 size plot bottom right corner	HARD COPY (Ch 8)
PFL	Select full-size plot	HARD COPY (Ch 8)
PFS	Print full screen image	HARD COPY (Ch 8)
PFSC	Configure for printing entire screen graphic image	HARD COPY (Ch 8)
PGR	Print graph area screen image	HARD COPY (Ch 8)
PGRC	Configure for printing data area graphic image	HARD COPY (Ch 8)
PGTC	Configure for plotting graticule	HARD COPY (Ch 8)
PLD	Plot data area only	HARD COPY (Ch 8)

Command	Description	Group
PLDC	Configure for plotting data area	HARD COPY (Ch 8)
PLH	Plot header	HARD COPY (Ch 8)
PLHC	Configure for plotting header	HARD COPY (Ch 8)
PLM	Plot markers and limits	HARD COPY (Ch 8)
PLMC	Configure for plotting markers and limits	HARD COPY (Ch 8)
PLO?	Output plot mode portrait or landscape	HARD COPY (Ch 8)
PLS	Plot entire screen	HARD COPY (Ch 8)
PLSC	Configure for plotting entire screen	HARD COPY (Ch 8)
PLT	Plot data traces only	HARD COPY (Ch 8)
PLTC	Configure for plotting data traces	HARD COPY (Ch 8)
PMK	Print tabular data for Markers	HARD COPY (Ch 8)
PMKC	Configure for printing tabular data for markers	HARD COPY (Ch 8)
PMN	Plot menu	HARD COPY (Ch 8)
PMNC	Configure for plotting menu	HARD COPY (Ch 8)
PMT	Print tabular data for traces and markers	HARD COPY (Ch 8)
PMTC	Configure for printing tabular data for traces and markers	HARD COPY (Ch 8)
PORT	Select portrait mode for output plot	HARD COPY (Ch 8)
PST	Stop print/plot	HARD COPY (Ch 8)
PT0	Set tabular printout points skipped to 0	HARD COPY (Ch 8)
PT1	Set tabular printout points skipped to 1	HARD COPY (Ch 8)
PT2	Set tabular printout points skipped to 2	HARD COPY (Ch 8)
PT3	Set tabular printout points skipped to 3	HARD COPY (Ch 8)
PT4	Set tabular printout points skipped to 4	HARD COPY (Ch 8)
PT5	Set tabular printout points skipped to 5	HARD COPY (Ch 8)
PT6	Set tabular printout points skipped to 6	HARD COPY (Ch 8)
PT7	Set tabular printout points skipped to 7	HARD COPY (Ch 8)
PT8	Set tabular printout points skipped to 8	HARD COPY (Ch 8)
PT9	Set tabular printout points skipped to 9	HARD COPY (Ch 8)
PTB	Print tabular data for Traces	HARD COPY (Ch 8)
PTBC	Configure for printing tabular data for traces	HARD COPY (Ch 8)
PTL	Select 1/4 size plot top left corner	HARD COPY (Ch 8)
PTR	Select 1/4 size plot top right corner	HARD COPY (Ch 8)
SPD	Enter pen speed percentage	HARD COPY (Ch 8)
TPN	Enter pen number for trace overlay data	HARD COPY (Ch 8)
TPN?	Output pen number for trace overlay data	HARD COPY (Ch 8)
*CLS	Clear status bytes and structures	IEEE 488.2 (Ch 7)
*DDT	Enter the 488.2 Define Device Trigger command string	IEEE 488.2 (Ch 7)
*DDT?	Output the 488.2 Define Device Trigger command string	IEEE 488.2 (Ch 7)
*ESE	Enter the 488.2 Standard Event Status Enable mask	IEEE 488.2 (Ch 7)

Command	Description	Group
*ESE?	Output the 488.2 Standard Event Status Enable mask	IEEE 488.2 (Ch 7)
*ESR?	Output the 488.2 Standard Event Status Register value	IEEE 488.2 (Ch 7)
*IDN?	Output the 488.2 instrument identification string	IEEE 488.2 (Ch 7)
*IST?	Output the value of the ist message	IEEE 488.2 (Ch 7)
*OPC	Initiate the 488.2 Operation Complete sequence	IEEE 488.2 (Ch 7)
*OPC?	Initiate the 488.2 Operation Complete Query sequence	IEEE 488.2 (Ch 7)
*PRE	Enter the 488.2 Parallel Poll Register Enable mask	IEEE 488.2 (Ch 7)
*PRE?	Output the 488.2 Parallel Poll Register Enable mask	IEEE 488.2 (Ch 7)
*RST	Instrument reset	IEEE 488.2 (Ch 7)
*SRE	Enter the 488.2 Service Request Enable mask	IEEE 488.2 (Ch 7)
*SRE?	Output the 488.2 Service Request Enable mask	IEEE 488.2 (Ch 7)
*STB?	Output the 488.2 Status Byte value	IEEE 488.2 (Ch 7)
*TRG	Initiate a Group Execute Trigger sequence	IEEE 488.2 (Ch 7)
*TST?	Perform self test and output status	IEEE 488.2 (Ch 7)
*WAI	Wait to continue	IEEE 488.2 (Ch 7)
OPB	Output the 488.2 Status Byte value (same as *STB?)	IEEE 488.2 (Ch 7)
TST	Perform self test and output status (same as *TST?)	IEEE 488.2 (Ch 7)
CCD	Collect corrected data in an internal buffer	INT. BUFFER DATA COLL. (Ch 7)
CFD	Collect final data in an internal buffer	INT. BUFFER DATA COLL. (Ch 7)
CRD	Collect raw data in an internal buffer	INT. BUFFER DATA COLL. (Ch 7)
CXD?	Output internal buffer data collection mode	INT. BUFFER DATA COLL. (Ch 7)
DCCTN	Resume internal buffer data collection	INT. BUFFER DATA COLL. (Ch 7)
DCCTN?	Output internal buffer data collection resume/suspend status	INT. BUFFER DATA COLL. (Ch 7)
DCHLD	Suspend internal buffer data collection	INT. BUFFER DATA COLL. (Ch 7)
DCMRK	Inserts the mark value into the internal buffer	INT. BUFFER DATA COLL. (Ch 7)
DCOFF	Turn internal buffer data collection mode off	INT. BUFFER DATA COLL. (Ch 7)
DCPCUR?	Outputs the current point count in the collect buffer	INT. BUFFER DATA COLL. (Ch 7)
DCPMAX?	Outputs the maximum number of points that can be collected in the collect buffer	INT. BUFFER DATA COLL. (Ch 7)
OCS	Output internal buffer collected data	INT. BUFFER DATA COLL. (Ch 7)
ATTN	Attach next segment and make the active segment	LIMITS (Ch 6)
BEGN	Begin next segment and make it the active segment	LIMITS (Ch 6)
CAS	Clear active segmented limit vertical/horizontal definitions	LIMITS (Ch 6)
DIS	Display active segmented limit	LIMITS (Ch 6)
DIS?	Output active segmented limit on/off status	LIMITS (Ch 6)
LOF	Limits display off	LIMITS (Ch 6)
LOL0	Turn lower limit off	LIMITS (Ch 6)
LOL1	Turn lower limit on at current value	LIMITS (Ch 6)

Command	Description	Group
LOL20	Turn lower limit off for bottom graph	LIMITS (Ch 6)
LOL21	Turn lower limit on at current value for bottom graph	LIMITS (Ch 6)
LOL2X?	Output lower limit on/off status for bottom graph	LIMITS (Ch 6)
LOLX?	Output lower limit on/off status	LIMITS (Ch 6)
STV	Enter active segmented limit vertical start position	LIMITS (Ch 6)
STV?	Output active segmented limit vertical start position	LIMITS (Ch 6)
HID	Hide active segmented limit	LIMITS (Ch 6)
LB0	Turn limits testing beep on failure off	LIMITS (Ch 6)
LB1	Turn limits testing beep on failure on	LIMITS (Ch 6)
LBX?	Output limits testing beeper enable status	LIMITS (Ch 6)
LFD	Enter limit frequency readout delta value	LIMITS (Ch 6)
LFD?	Output limit frequency readout delta value	LIMITS (Ch 6)
LFD2	Enter limit frequency readout delta value for bottom graph	LIMITS (Ch 6)
LFD2?	Output limit frequency readout delta value for bottom graph	LIMITS (Ch 6)
LFP	Select limit frequency readout for phase displays	LIMITS (Ch 6)
LFR	Select limit frequency readout for active channel	LIMITS (Ch 6)
LLM?	Output limit line display mode single or segmented	LIMITS (Ch 6)
LLO	Enter lower limit value for top graph on active channel	LIMITS (Ch 6)
LLO?	Output lower limit value for top graph on active channel	LIMITS (Ch 6)
LLO2	Enter lower limit value for bottom graph on active channel	LIMITS (Ch 6)
LLO2?	Output lower limit value for bottom graph on active channel	LIMITS (Ch 6)
LON	Limits display on	LIMITS (Ch 6)
LON?	Output limits display on/off status	LIMITS (Ch 6)
LPF?	Output limit test failure status all channels	LIMITS (Ch 6)
LPF1?	Output limit test failure status on channel 1	LIMITS (Ch 6)
LPF2?	Output limit test failure status on channel 2	LIMITS (Ch 6)
LPF3?	Output limit test failure status on channel 3	LIMITS (Ch 6)
LPF4?	Output limit test failure status on channel 4	LIMITS (Ch 6)
LS1	Set lower segmented limit 100 as the active segment	LIMITS (Ch 6)
LS10	Select lower segmented limit 10 as the active segment	LIMITS (Ch 6)
LS2	Select lower segmented limit 2 as the active segment	LIMITS (Ch 6)
LS3	Select lower segmented limit 3 as the active segment	LIMITS (Ch 6)
LS4	Select lower segmented limit 4 as the active segment	LIMITS (Ch 6)
LS5	Select lower segmented limit 5 as the active segment	LIMITS (Ch 6)
LS6	Select lower segmented limit 6 as the active segment	LIMITS (Ch 6)
LS7	Select lower segmented limit 7 as the active segment	LIMITS (Ch 6)

Command	Description	Group
LS8	Select lower segmented limit 8 as the active segment	LIMITS (Ch 6)
LS9	Select lower segmented limit 9 as the active segment	LIMITS (Ch 6)
LSEG	Select segmented limit line display mode	LIMITS (Ch 6)
LSNG	Select single limit line display mode	LIMITS (Ch 6)
LSX?	Output active segmented limit	LIMITS (Ch 6)
LT0	Turn limits testing off	LIMITS (Ch 6)
LT1	Turn limits testing on	LIMITS (Ch 6)
LT1?	Output limits testing enable status	LIMITS (Ch 6)
LTST	Display the limits testing menu	LIMITS (Ch 6)
LUP	Enter upper limit value for top graph on active channel	LIMITS (Ch 6)
LUP?	Output upper limit value for top graph on active channel	LIMITS (Ch 6)
LUP2	Enter upper limit value for bottom graph on active channel	LIMITS (Ch 6)
LUP2?	Output upper limit value for bottom graph on active channel	LIMITS (Ch 6)
LVH	Select high as limits testing TTL level	LIMITS (Ch 6)
LVL	Select low as limits testing TTL level	LIMITS (Ch 6)
LVX?	Output limits testing ttl level status	LIMITS (Ch 6)
SLC	Clear all segmented limits definitions	LIMITS (Ch 6)
SLH	Enter segmented limits horizontal offset	LIMITS (Ch 6)
SLH?	Output segmented limits horizontal offset	LIMITS (Ch 6)
SLL0	Turn lower segmented limits display off	LIMITS (Ch 6)
SLL1	Turn lower segmented limits display on	LIMITS (Ch 6)
SLLX?	Output lower segmented limits display on/off status	LIMITS (Ch 6)
SLU0	Turn upper segmented limits display off	LIMITS (Ch 6)
SLU1	Turn upper segmented limits display on	LIMITS (Ch 6)
SLV	Enter segmented limits vertical offset	LIMITS (Ch 6)
SLV?	Output segmented limits vertical offset	LIMITS (Ch 6)
SPH	Enter active segmented limit horizontal stop position	LIMITS (Ch 6)
SPH?	Output active segmented limit horizontal stop position	LIMITS (Ch 6)
SPV	Enter active segmented limit vertical stop position	LIMITS (Ch 6)
SPV?	Output active segmented limit vertical stop position	LIMITS (Ch 6)
STH	Enter active segmented limit horizontal start position	LIMITS (Ch 6)
STH?	Output active segmented limit horizontal start position	LIMITS (Ch 6)
UPL0	Turn upper limit off	LIMITS (Ch 6)
UPL1	Turn upper limit on at current value	LIMITS (Ch 6)
UPL20	Turn upper limit off for bottom graph	LIMITS (Ch 6)
UPL21	Turn upper limit on at current value for bottom graph	LIMITS (Ch 6)
UPL2X?	Output upper limit on/off status for bottom graph	LIMITS (Ch 6)

Command	Description	Group
UPLX?	Output upper limit on/off status	LIMITS (Ch 6)
US1	Select upper segmented limit 1 as the active segment	LIMITS (Ch 6)
US10	Select upper segmented limit 10 as the active segment	LIMITS (Ch 6)
US2	Select upper segmented limit 2 as the active segment	LIMITS (Ch 6)
US3	Select upper segmented limit 3 as the active segment	LIMITS (Ch 6)
US4	Select upper segmented limit 4 as the active segment	LIMITS (Ch 6)
US5	Select upper segmented limit 5 as the active segment	LIMITS (Ch 6)
US6	Select upper segmented limit 6 as the active segment	LIMITS (Ch 6)
US7	Select upper segmented limit 7 as the active segment	LIMITS (Ch 6)
US8	Select upper segmented limit 8 as the active segment	LIMITS (Ch 6)
US9	Select upper segmented limit 9 as the active segment	LIMITS (Ch 6)
SLUX?	Output upper segmented limits display on/off status	LMITS (Ch 7)
AMKR	Select active marker on all channels marker mode	MARKERS (Ch 6)
BWL3	Set bandwidth loss value to 3 dB	MARKERS (Ch 6)
BWLS	Enter bandwidth loss value	MARKERS (Ch 6)
BWLS?	Output bandwidth loss value	MARKERS (Ch 6)
DR1	Select Marker 1 as Delta Reference Marker	MARKERS (Ch 6)
DR2	Select Marker 2 as Delta Reference Marker	MARKERS (Ch 6)
DR3	Select Marker 3 as Delta Reference Marker	MARKERS (Ch 6)
DR4	Select Marker 4 as Delta Reference Marker	MARKERS (Ch 6)
DR5	Select Marker 5 as Delta Reference Marker	MARKERS (Ch 6)
DR6	Select Marker 6 as Delta Reference Marker	MARKERS (Ch 6)
DRF	Turn delta reference mode on	MARKERS (Ch 6)
DRO	Turn delta reference mode off	MARKERS (Ch 6)
DRO?	Output delta reference mode on/off status	MARKERS (Ch 6)
DRX?	Output delta reference marker number	MARKERS (Ch 6)
DSF0	Disable filter shape factor calculation	MARKERS (Ch 6)
DSF1	Enable filter shape factor calculation	MARKERS (Ch 6)
DSFX?	Output filter shape factor calculation enable/disable status	MARKERS (Ch 6)
DSQ0	Disable filter Q calculation	MARKERS (Ch 6)
DSQ1	Enable filter Q calculation	MARKERS (Ch 6)
DSQX?	Output filter Q calculation enable/disable status	MARKERS (Ch 6)
FLTBW?	Output filter bandwidth	MARKERS (Ch 6)
FLTC?	Output filter center frequency	MARKERS (Ch 6)
FLTL?	Output filter loss at reference value	MARKERS (Ch 6)
FLTQ?	Output filter Q	MARKERS (Ch 6)
FLTS?	Output filter shape factor	MARKERS (Ch 6)
FMKR	Select filter parameters marker mode	MARKERS (Ch 6)

Command	Description	Group
M1C	Set CW mode at marker 1 frequency	MARKERS (Ch 6)
M1E	Set sweep/zoom end to marker 1 frequency distance or time	MARKERS (Ch 6)
M1S	Set sweep/zoom start to marker 1 frequency distance or time	MARKERS (Ch 6)
M2C	Set CW mode at marker 2 frequency	MARKERS (Ch 6)
M2E	Set sweep/zoom end to marker 2 frequency distance or time	MARKERS (Ch 6)
M2S	Set sweep/zoom start to marker 2 frequency distance or time	MARKERS (Ch 6)
M3C	Set CW mode at marker 3 frequency	MARKERS (Ch 6)
M3E	Set sweep/zoom end to marker 3 frequency distance or time	MARKERS (Ch 6)
M3S	Set sweep/zoom start to marker 3 frequency distance or time	MARKERS (Ch 6)
M4C	Set CW mode at marker 4 frequency	MARKERS (Ch 6)
M4E	Set sweep/zoom end to marker 4 frequency distance or time	MARKERS (Ch 6)
M4S	Set sweep/zoom start to marker 4 frequency distance or time	MARKERS (Ch 6)
M5C	Set CW mode at marker 5 frequency	MARKERS (Ch 6)
M5E	Set sweep/zoom end to marker 5 frequency distance or time	MARKERS (Ch 6)
M5S	Set sweep/zoom start to marker 5 frequency distance or time	MARKERS (Ch 6)
M6C	Set CW mode at marker 6 frequency	MARKERS (Ch 6)
M6E	Set sweep/zoom end to marker 6 frequency distance or time	MARKERS (Ch 6)
M6S	Set sweep/zoom start to marker 6 frequency distance or time	MARKERS (Ch 6)
MK1	Enter marker 1 frequency distance or time and turn on	MARKERS (Ch 6)
MK1?	Output marker 1 frequency distance or time	MARKERS (Ch 6)
MK2	Enter marker 2 frequency distance or time and turn on	MARKERS (Ch 6)
MK2?	Output marker 2 frequency distance or time	MARKERS (Ch 6)
MK3	Enter marker 3 frequency distance or time and turn on	MARKERS (Ch 6)
MK3?	Output marker 3 frequency distance or time	MARKERS (Ch 6)
MK4	Enter marker 4 frequency distance or time and turn on	MARKERS (Ch 6)
MK4?	Output marker 4 frequency distance or time	MARKERS (Ch 6)
MK5	Enter marker 5 frequency distance or time and turn on	MARKERS (Ch 6)
MK5?	Output marker 5 frequency distance or time	MARKERS (Ch 6)
MK6	Enter marker 6 frequency distance or time and turn on	MARKERS (Ch 6)
MK6?	Output marker 6 frequency distance or time	MARKERS (Ch 6)
MKRC	Select interpolated marker functionality	MARKERS (Ch 6)

Command	Description	Group
MKRD	Select discrete marker functionality	MARKERS (Ch 6)
MKRX?	Output interpolated/discrete marker functionality	MARKERS (Ch 6)
MKSL	Marker search left	MARKERS (Ch 6)
MKSR	Marker search right	MARKERS (Ch 6)
MKT0	Turn marker tracking off	MARKERS (Ch 6)
MKT1	Turn marker tracking on	MARKERS (Ch 6)
MKTX?	Output marker tracking on/off status	MARKERS (Ch 6)
MMN	Move active marker to minimum trace value	MARKERS (Ch 6)
MMX	Move active marker to maximum trace value	MARKERS (Ch 6)
MO1	Turn off marker 1	MARKERS (Ch 6)
MO2	Turn off marker 2	MARKERS (Ch 6)
MO3	Turn off marker 3	MARKERS (Ch 6)
MO4	Turn off marker 4	MARKERS (Ch 6)
MO5	Turn off marker 5	MARKERS (Ch 6)
MO6	Turn off marker 6	MARKERS (Ch 6)
MOF	Turn marker display off	MARKERS (Ch 6)
MON	Turn marker display on	MARKERS (Ch 6)
MON?	Output marker display on/off status	MARKERS (Ch 6)
MR1	Turn marker 1 on and make it the active marker	MARKERS (Ch 6)
MR1?	Output marker 1 on/off status	MARKERS (Ch 6)
MR2	Turn marker 2 on and make it the active marker	MARKERS (Ch 6)
MR2?	Output marker 2 on/off status	MARKERS (Ch 6)
MR3	Turn marker 3 on and make it the active marker	MARKERS (Ch 6)
MR3?	Output marker 3 on/off status	MARKERS (Ch 6)
MR4	Turn marker 4 on and make it the active marker	MARKERS (Ch 6)
MR4?	Output marker 4 on/off status	MARKERS (Ch 6)
MR5	Turn marker 5 on and make it the active marker	MARKERS (Ch 6)
MR5?	Output marker 5 on/off status	MARKERS (Ch 6)
MR6	Turn marker 6 on and make it the active marker	MARKERS (Ch 6)
MR6?	Output marker 6 on/off status	MARKERS (Ch 6)
MRM	Display the Marker Readout menu	MARKERS (Ch 6)
MRX?	Output active marker number	MARKERS (Ch 6)
MSFH	Enter high loss value for shape factor calculation	MARKERS (Ch 6)
MSFH?	Output high loss value for shape factor calculation	MARKERS (Ch 6)
MSFL	Enter low loss value for shape factor calculation	MARKERS (Ch 6)
MSFL?	Output low loss value for shape factor calculation	MARKERS (Ch 6)
MSR0	Select 0 as reference for marker search and bandwidth calculation	MARKERS (Ch 6)

Command	Description	Group
MSRD	Select delta reference marker as reference for marker search and bandwidth calculation	MARKERS (Ch 6)
MSRM	Select maximum as reference for marker search and bandwidth calculation	MARKERS (Ch 6)
MSRX?	Output reference selection for marker search and band-width calculation	MARKERS (Ch 6)
NMKR	Select normal markers on active channel marker mode	MARKERS (Ch 6)
SMKR	Select marker search marker mode	MARKERS (Ch 6)
SRCH	Enter marker search value	MARKERS (Ch 6)
SRCH?	Output marker search value	MARKERS (Ch 6)
XMKR?	Output marker mode	MARKERS (Ch 6)
AH0	Turn automatic DUT protection off	MEASUREMENT (Ch 4)
AH1	Turn automatic DUT protection on	MEASUREMENT (Ch 4)
AHX?	Output automatic DUT protection on/off status	MEASUREMENT (Ch 4)
AVGCNT?	Output the current sweep-by-sweep average sweep count	MEASUREMENT (Ch 4)
BH0	Turn bias off while in hold	MEASUREMENT (Ch 4)
BH1	Turn bias on while in hold	MEASUREMENT (Ch 4)
BHX?	Output bias on/off during hold status	MEASUREMENT (Ch 4)
CNTR	Enter center frequency	MEASUREMENT (Ch 4)
CNTR?	Output center frequency	MEASUREMENT (Ch 4)
CTN	Continue sweeping from current point	MEASUREMENT (Ch 4)
CWDEC	Subtract 1 from the current CW index	MEASUREMENT (Ch 4)
CWF	Enter CW frequency and turn CW on	MEASUREMENT (Ch 4)
CWF?	Output CW frequency	MEASUREMENT (Ch 4)
CWF2I?	Output index for frequency given	MEASUREMENT (Ch 4)
CWI	Enter index for CW frequency and turn CW on	MEASUREMENT (Ch 4)
CWI?	Output current index number	MEASUREMENT (Ch 4)
CWI2F?	Output frequency for index given	MEASUREMENT (Ch 4)
CWINC	Add 1 to the current CW index	MEASUREMENT (Ch 4)
CWN2I	Add N to the current CW index	MEASUREMENT (Ch 4)
CWON	Turn CW on at current CW frequency	MEASUREMENT (Ch 4)
CWON?	Output CW on/off status	MEASUREMENT (Ch 4)
CWP	Enter number of points drawn in CW	MEASUREMENT (Ch 4)
CWP?	Output number of points drawn in CW	MEASUREMENT (Ch 4)
CWSRT	Set CW frequency to the start frequency	MEASUREMENT (Ch 4)
CWSTP	Set CW frequency to the stop frequency	MEASUREMENT (Ch 4)
EANAIN	Measure External Analog In on active channel	MEASUREMENT (Ch 4)
FHI	Set data points to 1601	MEASUREMENT (Ch 4)
FIL	Fill defined discrete frequency range	MEASUREMENT (Ch 4)

Command	Description	Group
FLO	Set data points to 101	MEASUREMENT (Ch 4)
FME	Set data points to 401	MEASUREMENT (Ch 4)
FP0	Turn flat power correction off	MEASUREMENT (Ch 4)
FP1	Turn flat power correction on	MEASUREMENT (Ch 4)
FRC	Clear all defined discrete frequency ranges	MEASUREMENT (Ch 4)
FRI	Enter Discrete Fill increment frequency	MEASUREMENT (Ch 4)
FRP	Enter Discrete Fill number of points	MEASUREMENT (Ch 4)
STP	Enter stop frequency	MEASUREMENT (Ch 4)
STP?	Output stop frequency	MEASUREMENT (Ch 4)
FRS	Enter Discrete Fill start frequency	MEASUREMENT (Ch 4)
HC0	Disable internal IF calibration	MEASUREMENT (Ch 4)
HC1	Enable internal IF calibration and trigger an IF calibration	MEASUREMENT (Ch 4)
HCT	Trigger an IF calibration	MEASUREMENT (Ch 4)
HCX?	Output internal IF calibration enable/disable status	MEASUREMENT (Ch 4)
HLD	Put sweep into hold mode	MEASUREMENT (Ch 4)
HLD?	Output the sweep hold status	MEASUREMENT (Ch 4)
HLDX?	Output hold mode (continue, restart, or single sweep)	MEASUREMENT (Ch 4)
IFP	Enter current front panel setup	MEASUREMENT (Ch 4)
IFV	Enter frequency values	MEASUREMENT (Ch 4)
IS1	Enter front panel setup 1	MEASUREMENT (Ch 4)
IS10	Enter front panel setup 10	MEASUREMENT (Ch 4)
IS2	Enter front panel setup 2	MEASUREMENT (Ch 4)
IS3	Enter front panel setup 3	MEASUREMENT (Ch 4)
IS4	Enter front panel setup 4	MEASUREMENT (Ch 4)
IS5	Enter front panel setup 5	MEASUREMENT (Ch 4)
IS6	Enter front panel setup 6	MEASUREMENT (Ch 4)
IS7	Enter front panel setup 7	MEASUREMENT (Ch 4)
IS8	Enter front panel setup 8	MEASUREMENT (Ch 4)
IS9	Enter front panel setup 9	MEASUREMENT (Ch 4)
LA1	Select a1 = Ra as phase lock for parameter being defined	MEASUREMENT (Ch 4)
LA2	Select a2 = Rb as phase lock for parameter being defined	MEASUREMENT (Ch 4)
LAX?	Output phase lock selection for parameter being defined	MEASUREMENT (Ch 4)
NP101	Set data points to 101	MEASUREMENT (Ch 4)
NP1601	Set data points to 1601	MEASUREMENT (Ch 4)
NP201	Set data points to 201	MEASUREMENT (Ch 4)
NP401	Set data points to 401	MEASUREMENT (Ch 4)
NP51	Set data points to 51	MEASUREMENT (Ch 4)

Command	Description	Group
NP801	Set data points to 801	MEASUREMENT (Ch 4)
ONDF	Output number of discrete frequencies	MEASUREMENT (Ch 4)
PTP	Enter the target power for flat power correction	MEASUREMENT (Ch 4)
PTP?	Output the target power for flat power correction	MEASUREMENT (Ch 4)
PW1	Enter external source 1 power level	MEASUREMENT (Ch 4)
PW1?	Output external source 1 power level	MEASUREMENT (Ch 4)
PW2	Enter external source power level	MEASUREMENT (Ch 4)
PW2?	Output external source power level	MEASUREMENT (Ch 4)
PWR	Enter internal source power level	MEASUREMENT (Ch 4)
PWR?	Output internal source power level	MEASUREMENT (Ch 4)
RH0	Select RF off in hold mode	MEASUREMENT (Ch 4)
RH1	Select RF on in hold	MEASUREMENT (Ch 4)
RHX?	Output RF on/off during hold status	MEASUREMENT (Ch 4)
RT0	Turn retrace rf off	MEASUREMENT (Ch 4)
RT1	Turn retrace rf on	MEASUREMENT (Ch 4)
RTX?	Output retrace rf on/off status	MEASUREMENT (Ch 4)
S11	Measure S11 on active channel	MEASUREMENT (Ch 4)
S12	Measure S12 on active channel	MEASUREMENT (Ch 4)
S21	Measure S21 on active channel	MEASUREMENT (Ch 4)
S22	Measure S22 on active channel	MEASUREMENT (Ch 4)
SA1	Enter port 1 source attenuator value	MEASUREMENT (Ch 4)
SA1?	Output port 1 source attenuator value	MEASUREMENT (Ch 4)
SA1MAX?	Output port 1 source attenuator max value	MEASUREMENT (Ch 4)
SAMP?	Output the number of samplers used for measurements	MEASUREMENT (Ch 4)
SAMP2	Use 2 samplers for measurements	MEASUREMENT (Ch 4)
SAMP3	Use 3 samplers for measurements	MEASUREMENT (Ch 4)
SPAN	Enter frequency span	MEASUREMENT (Ch 4)
SPAN?	Output frequency span	MEASUREMENT (Ch 4)
SRC2?	Output external source 2 existence information	MEASUREMENT (Ch 4)
SRT	Enter start frequency	MEASUREMENT (Ch 4)
SRT?	Output start frequency	MEASUREMENT (Ch 4)
SWP	Return to normal sweep mode	MEASUREMENT (Ch 4)
SWP?	Output sweep mode	MEASUREMENT (Ch 4)
SWPDIR?	Output instantaneous sweep direction forward/reverse	MEASUREMENT (Ch 4)
SXX?	Output s parameter or user defined parameter of active channel	MEASUREMENT (Ch 4)
TA2	Enter port 2 test attenuator value	MEASUREMENT (Ch 4)
TA2?	Output port 2 test attenuator value	MEASUREMENT (Ch 4)
TA2MAX?	Output port 2 test attenuator max value	MEASUREMENT (Ch 4)

Command	Description	Group
TEX	Select external (rear panel) measurement triggering	MEASUREMENT (Ch 4)
TIN	Select internal measurement triggering	MEASUREMENT (Ch 4)
TRS	Trigger/restart sweep	MEASUREMENT (Ch 4)
TXX?	Output trigger source internal/external/get/extddt status	MEASUREMENT (Ch 4)
WFS	Wait full sweep until all display data is valid	MEASUREMENT (Ch 4)
DPRX?	Output data pair mode visible only or pair always	MEASUREMENT DATA (Ch 7)
OGCFD	Output gain compression final data to GPIB	MEASUREMENT DATA (Ch 7)
OGCFV	Output gain compression frequency values to GPIB	MEASUREMENT DATA (Ch 7)
ONP	Output number of points currently being measured	MEASUREMENT DATA (Ch 7)
ONPV	Output the number of power sweep power values	MEASUREMENT DATA (Ch 7)
OPSV	Output power sweep power values	MEASUREMENT DATA (Ch 7)
OS11C	Output corrected S11 data	MEASUREMENT DATA (Ch 7)
OS11R	Output raw S11 data	MEASUREMENT DATA (Ch 7)
OS12C	Output corrected S12 data	MEASUREMENT DATA (Ch 7)
OS12R	Output raw S12 data	MEASUREMENT DATA (Ch 7)
OS21C	Output corrected S21 data	MEASUREMENT DATA (Ch 7)
OS21R	Output raw S21 data	MEASUREMENT DATA (Ch 7)
OS22C	Output corrected S22 data	MEASUREMENT DATA (Ch 7)
OS22R	Output raw S22 data	MEASUREMENT DATA (Ch 7)
OTV	Output time values for time domain	MEASUREMENT DATA (Ch 7)
IMCF	Enter merge calibration files from GPIB and combine	MERGE CAL FILES (Ch 9)
LDMCF	Load merge calibration files from disk and combine	MERGE CAL FILES (Ch 9)
BDMM	Define Millimeter Wave band equations	MILLIMETER WAVE (Ch 9)
BSP	Enter band stop frequency	MILLIMETER WAVE (Ch 9)
BSP?	Output band stop frequency	MILLIMETER WAVE (Ch 9)
BST	Enter band start frequency	MILLIMETER WAVE (Ch 9)
BST?	Output band start frequency	MILLIMETER WAVE (Ch 9)
CLBMM	Clear the new Millimeter Wave band definitions	MILLIMETER WAVE (Ch 9)
E12	Set Millimeter Wave band to E band (WR-12)	MILLIMETER WAVE (Ch 9)
E12E	Set Millimeter Wave band to E band (WR-12)	MILLIMETER WAVE (Ch 9)
F08	Set Millimeter Wave Band to F Band (WR-8)	MILLIMETER WAVE (Ch 9)
Q22	Set Millimeter Wave Band to Q Band (WR-22)	MILLIMETER WAVE (Ch 9)
MMBX?	Output Millimeter Wave band selection	MILLIMETER WAVE (Ch 9)
P1MMA	Set Port 1 Millimeter Wave Head to Amplified (3742)	MILLIMETER WAVE (Ch 9)
P1MMN	Set Port 1 Millimeter Wave Head to None	MILLIMETER WAVE (Ch 9)
P1MMR	Set Port 1 Millimeter Wave Head to Receiver (3741)	MILLIMETER WAVE (Ch 9)
P1MMT	Set Port 1 Millimeter Wave Head to Transmit/Receiver (3740)	MILLIMETER WAVE (Ch 9)
P1MMX?	Output Port 1 Millimeter Wave Head type	MILLIMETER WAVE (Ch 9)

Command	Description	Group
P2MMA	Set Port 2 Millimeter Wave Head to Amplified (3742)	MILLIMETER WAVE (Ch 9)
P2MMN	Set Port 2 Millimeter Wave Head to none	MILLIMETER WAVE (Ch 9)
P2MMR	Set Port 2 Millimeter Wave Head to Receiver (3741)	MILLIMETER WAVE (Ch 9)
P2MMT	Set Port 2 Millimeter Wave Head to Transmit/Receiver (3740)	MILLIMETER WAVE (Ch 9)
P2MMX?	Output Port 2 Millimeter Wave Head type	MILLIMETER WAVE (Ch 9)
SELBB	Select Broadband test set operation	MILLIMETER WAVE (Ch 9)
SELINT	Select Internal (normal) test set operation	MILLIMETER WAVE (Ch 9)
SELMM	Select Millimeter Wave test set operation	MILLIMETER WAVE (Ch 9)
SELSP	Select S-parameter test set operation	MILLIMETER WAVE (Ch 9)
SELXX?	Output the test set selection MMWave/Internal	MILLIMETER WAVE (Ch 9)
SVBMM	Save and activate the new Millimeter Wave band definitions	MILLIMETER WAVE (Ch 9)
V15	Set Millimeter Wave Band to V Band (WR-15)	MILLIMETER WAVE (Ch 9)
W10	Set Millimeter Wave Band to W Band (WR-10)	MILLIMETER WAVE (Ch 9)
W10E	Set Millimeter Wave Band to extended W Band (WR-10E)	MILLIMETER WAVE (Ch 9)
IHDW	Enter hardware cal data from GPIB	MISCELLANEOUS (Ch 7)
IKIT	Enter calkit data from GPIB	MISCELLANEOUS (Ch 7)
IND	Input Normalization data	MISCELLANEOUS (Ch 7)
INRM	Enter normalization data from GPIB	MISCELLANEOUS (Ch 7)
LID	Enter string for DUT identity	MISCELLANEOUS (Ch 7)
LID?	Output string for DUT identity	MISCELLANEOUS (Ch 7)
OHDW	Output hardware cal data to GPIB	MISCELLANEOUS (Ch 7)
ONRM	Output stored normalization data to GPIB	MISCELLANEOUS (Ch 7)
BD1	Select band 1 for definition	MULTIPLE SOURCE CONTROL (Ch 9)
BD2	Select band 2 for definition	MULTIPLE SOURCE CONTROL (Ch 9)
BD3	Select band 3 for definition	MULTIPLE SOURCE CONTROL (Ch 9)
BD4	Select band 4 for definition	MULTIPLE SOURCE CONTROL (Ch 9)
BD5	Select band 5 for definition	MULTIPLE SOURCE CONTROL (Ch 9)
CLB	Clear all multiple source band definitions	MULTIPLE SOURCE CONTROL (Ch 9)
ECW	Select CW operation for component being edited	MULTIPLE SOURCE CONTROL (Ch 9)
ED1	Edit source 1 equation	MULTIPLE SOURCE CONTROL (Ch 9)
ED2	Edit source 2 equation	MULTIPLE SOURCE CONTROL (Ch 9)
EDR	Edit receiver equation	MULTIPLE SOURCE CONTROL (Ch 9)
EDV	Enter divisor value for equation being edited	MULTIPLE SOURCE CONTROL (Ch 9)
EDV?	Output divisor value for equation being edited	MULTIPLE SOURCE CONTROL (Ch 9)
EML	Enter multiplier value for equation being edited	MULTIPLE SOURCE CONTROL (Ch 9)
EML?	Output multiplier value for equation being edited	MULTIPLE SOURCE CONTROL (Ch 9)
EOS	Enter offset frequency for equation being edited	MULTIPLE SOURCE CONTROL (Ch 9)

Command	Description	Group
EOS?	Output offset frequency for equation being edited	MULTIPLE SOURCE CONTROL (Ch 9)
ESW	Select sweep operation for component being edited	MULTIPLE SOURCE CONTROL (Ch 9)
EX1RF0	Turn external source 1 rf off	MULTIPLE SOURCE CONTROL (Ch 9)
EX1RF1	Turn external source 1 rf on	MULTIPLE SOURCE CONTROL (Ch 9)
EX2RF0	Turn external source 2 rf off	MULTIPLE SOURCE CONTROL (Ch 9)
EX2RF1	Turn external source 2 rf on	MULTIPLE SOURCE CONTROL (Ch 9)
EXW?	Output multiple source sweep flag for equation being edited	MULTIPLE SOURCE CONTROL (Ch 9)
LTRD	Output response data from the dedicated GPIB bus	MULTIPLE SOURCE CONTROL (Ch 9)
LTWRT	Send program data to the dedicated GPIB bus	MULTIPLE SOURCE CONTROL (Ch 9)
MS0	Turn multiple source mode off	MULTIPLE SOURCE CONTROL (Ch 9)
MS1	Turn multiple source mode on	MULTIPLE SOURCE CONTROL (Ch 9)
MSD	Select multiple source define mode	MULTIPLE SOURCE CONTROL (Ch 9)
MSX?	Output multiple source mode on/off/define	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1?	Output external source 1 existence information	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1AC	Select source 1 as active	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1AC?	Output source 1 active/inactive status	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1ADD	Enter external source 1 GPIB address	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1EX	Select source 1 as external	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1EX?	Output source 1 external/internal status	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1G0	Turn source 1 GPIB control off	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1G1	Turn source 1 GPIB control on	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1GX?	Output source 1 GPIB control on/off status	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1MOD?	Output external source 1 model/version string	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1NA	Select source 1 as not active	MULTIPLE SOURCE CONTROL (Ch 9)
SRC1NT	Select source 1 as internal	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2	Select source power voltage testing	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2AC	Select source 2 as active	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2AC?	Output source 2 active/inactive status	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2ADD	Enter external source 2 GPIB address	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2ADD?	Output external source 2 GPIB address	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2G0	Turn source 2 GPIB control off	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2G1	Turn source 2 GPIB control on	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2GX?	Output source 2 GPIB control on/off status	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2MOD?	Output external Source 2 model/version string	MULTIPLE SOURCE CONTROL (Ch 9)
SRC2NA	Select source 2 as not active	MULTIPLE SOURCE CONTROL (Ch 9)
SVB	Save current band definitions	MULTIPLE SOURCE CONTROL (Ch 9)
IODF	Enter the optical file data from GPIB and calibrate	OPTICAL APPLICATION (Ch 9)
LDODF	Load optical data files from disk and calibrate	OPTICAL APPLICATION (Ch 9)

Command	Description	Group
DGT	Display 1st CRT test pattern	PERIPHERAL TESTS (Ch 8)
DGT1	Display 1st CRT test pattern	PERIPHERAL TESTS (Ch 8)
DGT2	Display 2nd CRT test pattern	PERIPHERAL TESTS (Ch 8)
DGT3	Display 3rd CRT test pattern	PERIPHERAL TESTS (Ch 8)
EKT	Select external keyboard testing	PERIPHERAL TESTS (Ch 8)
FPT	Select front panel keypad testing	PERIPHERAL TESTS (Ch 8)
PRT?	Perform printer test and output status	PERIPHERAL TESTS (Ch 8)
RPO	Enter rear panel dc voltage value	REAR PANEL OUTPUT (Ch 9)
RPO?	Output rear panel dc voltage value	REAR PANEL OUTPUT (Ch 9)
RV0	Turn rear panel output voltage off	REAR PANEL OUTPUT (Ch 9)
RV1	Turn rear panel output voltage on	REAR PANEL OUTPUT (Ch 9)
RV1?	Output rear panel output voltage on/off status	REAR PANEL OUTPUT (Ch 9)
RVD	Set rear panel output mode to dc value	REAR PANEL OUTPUT (Ch 9)
RVH	Set rear panel output mode to horizontal	REAR PANEL OUTPUT (Ch 9)
RVL	Set rear panel output mode to lock direction	REAR PANEL OUTPUT (Ch 9)
RVV	Set rear panel output mode to vertical	REAR PANEL OUTPUT (Ch 9)
RVX?	Output rear panel output mode	REAR PANEL OUTPUT (Ch 9)
VSP	Enter rear panel stop voltage value	REAR PANEL OUTPUT (Ch 9)
VSP?	Output rear panel stop voltage value	REAR PANEL OUTPUT (Ch 9)
VST	Enter rear panel start voltage value	REAR PANEL OUTPUT (Ch 9)
VST?	Output rear panel start voltage value	REAR PANEL OUTPUT (Ch 9)
SDR?	Output receiver mode	RECEIVER MODE (Ch 9)
SL1	Select source lock mode	RECEIVER MODE (Ch 9)
ST1	Select set on mode	RECEIVER MODE (Ch 9)
TK1	Select tracking mode	RECEIVER MODE (Ch 9)
RC1	Recall front panel setup number 1 from memory	SAVE/RECALL (Ch 8)
RC10	Recall front panel setup number 10 from memory	SAVE/RECALL (Ch 8)
RC2	Recall front panel setup number 2 from memory	SAVE/RECALL (Ch 8)
RC3	Recall front panel setup number 3 from memory	SAVE/RECALL (Ch 8)
RC4	Recall front panel setup number 4 from memory	SAVE/RECALL (Ch 8)
RC5	Recall front panel setup number 5 from memory	SAVE/RECALL (Ch 8)
RC6	Recall front panel setup number 6 from memory	SAVE/RECALL (Ch 8)
RC7	Recall front panel setup number 7 from memory	SAVE/RECALL (Ch 8)
RC8	Recall front panel setup number 8 from memory	SAVE/RECALL (Ch 8)
RC9	Recall front panel setup number 9 from memory	SAVE/RECALL (Ch 8)
SV1	Save front panel setup number 1 to memory	SAVE/RECALL (Ch 8)
SV10	Save front panel setup number 10 to memory	SAVE/RECALL (Ch 8)
SV2	Save front panel setup number 2 to memory	SAVE/RECALL (Ch 8)
SV3	Save front panel setup number 3 to memory	SAVE/RECALL (Ch 8)

Command	Description	Group
SV4	Save front panel setup number 4 to memory	SAVE/RECALL (Ch 8)
SV5	Save front panel setup number 5 to memory	SAVE/RECALL (Ch 8)
SV6	Save front panel setup number 6 to memory	SAVE/RECALL (Ch 8)
SV7	Save front panel setup number 7 to memory	SAVE/RECALL (Ch 8)
SV8	Save front panel setup number 8 to memory	SAVE/RECALL (Ch 8)
SV9	Save front panel setup number 9 to memory	SAVE/RECALL (Ch 8)
*OPT?	Output the 488.2 options installed string	SERVICE LOG (Ch 8)
CSL	Clear service log	SERVICE LOG (Ch 8)
PEL	Print the error list	SERVICE LOG (Ch 8)
ILM	Enter limits status byte mask	STATUS BYTE (Ch 7)
IPM	Enter the 488.2 Service Request Enable mask	STATUS BYTE (Ch 7)
IEM	Enter extended status byte mask	STATUS BYTE (Ch 8)
CSB	Clear status bytes and structures (same as *CLS)	STATUS REPORTING (Ch 7)
OEB	Output extended status byte	STATUS REPORTING (Ch 7)
OEM	Output extended status byte mask	STATUS REPORTING (Ch 7)
OLB	Output limits status byte	STATUS REPORTING (Ch 7)
ANNCOL	Enter the color number for annotation and menu text	SYSTEM STATE (Ch 8)
ANNCOL?	Output the color number for annotation and menu text	SYSTEM STATE (Ch 8)
BC0	Turn CRT display off (disabled)	SYSTEM STATE (Ch 8)
BC1	Turn CRT display on (disabled)	SYSTEM STATE (Ch 8)
BCKCOL	Enter the color number for background	SYSTEM STATE (Ch 8)
BCKCOL?	Output the color number for background	SYSTEM STATE (Ch 8)
BCX?	Output CRT display on/off status	SYSTEM STATE (Ch 8)
BEEP0	Disable the instrument beeper on GPIB errors	SYSTEM STATE (Ch 8)
BEEP1	Enable the instrument beeper on GPIB errors	SYSTEM STATE (Ch 8)
BEEPX?	Output GPIB beep on error enable/disable status	SYSTEM STATE (Ch 8)
BRILL	Activate color configuration Brilliant	SYSTEM STATE (Ch 8)
CLASS	Activate color configuration Classic	SYSTEM STATE (Ch 8)
DATCOL	Enter the color number for data	SYSTEM STATE (Ch 8)
DATCOL?	Output the color number for data	SYSTEM STATE (Ch 8)
DATE	Enter the system date	SYSTEM STATE (Ch 8)
DATE?	Output the system date	SYSTEM STATE (Ch 8)
DC1	Display channel 1 and 2 operating parameters	SYSTEM STATE (Ch 8)
DC3	Display channel 3 and 4 operating parameters	SYSTEM STATE (Ch 8)
DCP	Display calibration parameters 1st page	SYSTEM STATE (Ch 8)
DCP1	Display calibration parameters 1st page	SYSTEM STATE (Ch 8)
DCP2	Display calibration parameters 2nd page	SYSTEM STATE (Ch 8)
DD0	Turn data drawing off	SYSTEM STATE (Ch 8)
DD1	Turn data drawing on	SYSTEM STATE (Ch 8)

Command	Description	Group
DD1?	Output data drawing on/off status	SYSTEM STATE (Ch 8)
DF1	Display 1.0 mm female connector information	SYSTEM STATE (Ch 8)
DF2	Display 2.4mm female connector information	SYSTEM STATE (Ch 8)
DF3	Display GPC-3.5 female connector information	SYSTEM STATE (Ch 8)
DF716	Display 7/16 female connector information	SYSTEM STATE (Ch 8)
DFK	Display K female connector information	SYSTEM STATE (Ch 8)
DFN	Display N female connector information	SYSTEM STATE (Ch 8)
DFN75	Display N Female 75-Ohm connector information	SYSTEM STATE (Ch 8)
DFP	Display Front panel instrument state	SYSTEM STATE (Ch 8)
DFS	Display SMA female connector information	SYSTEM STATE (Ch 8)
DFSP	Display Special Female connector information	SYSTEM STATE (Ch 8)
DFT	Display TNC female connector information	SYSTEM STATE (Ch 8)
DFV	Display V female connector information	SYSTEM STATE (Ch 8)
DG7	Display GPC-7 Male connector information	SYSTEM STATE (Ch 8)
DGS	Display GPIB status information	SYSTEM STATE (Ch 8)
DM1	Display 1.0 mm male connector information	SYSTEM STATE (Ch 8)
DM2	Display 2.4mm male connector information	SYSTEM STATE (Ch 8)
DM3	Display GPC-3.5 male connector information	SYSTEM STATE (Ch 8)
DM716	Display 7/16 male connector information	SYSTEM STATE (Ch 8)
DMK	Display K male connector information	SYSTEM STATE (Ch 8)
DMN	Display N male connector information	SYSTEM STATE (Ch 8)
DMN75	Display N Male 75-Ohm connector information	SYSTEM STATE (Ch 8)
DMS	Display SMA male connector information	SYSTEM STATE (Ch 8)
DMSP	Display Special Male connector information	SYSTEM STATE (Ch 8)
DMT	Display TNC male connector information	SYSTEM STATE (Ch 8)
DMV	Display V male connector information	SYSTEM STATE (Ch 8)
DOASF	Display band A special female connector offset-short information	SYSTEM STATE (Ch 8)
DOASM	Display band A special male connector offset-short information	SYSTEM STATE (Ch 8)
DOBSF	Display band B special female connector offset-short information	SYSTEM STATE (Ch 8)
DOBSM	Display band B special male connector offset-short information	SYSTEM STATE (Ch 8)
DOCSF	Display band C special female connector offset-short information	SYSTEM STATE (Ch 8)
DOCSM	Display band C special male connector offset-short information	SYSTEM STATE (Ch 8)
DOF1	Display 1.0 mm female connector offset-short information	SYSTEM STATE (Ch 8)
DOM1	Display 1.0 mm male connector offset-short information	SYSTEM STATE (Ch 8)

Command	Description	Group
DWG	Display waveguide parameters	SYSTEM STATE (Ch 8)
FOF	Blank frequency information	SYSTEM STATE (Ch 8)
FON	Display frequency information	SYSTEM STATE (Ch 8)
FOX?	Output frequency information on/off status	SYSTEM STATE (Ch 8)
STOCO	Store the current color configuration as Reset	SYSTEM STATE (Ch 8)
GRTCOL	Enter the color number for the graticule	SYSTEM STATE (Ch 8)
GRTCOL?	Output the color number for the graticule	SYSTEM STATE (Ch 8)
INVER	Activate color configuration Inverse	SYSTEM STATE (Ch 8)
LAYCOL	Enter the color number for overlay data	SYSTEM STATE (Ch 8)
LAYCOL?	Output the color number for overlay data	SYSTEM STATE (Ch 8)
MKRCOL	Enter the color number for the markers	SYSTEM STATE (Ch 8)
MKRCOL?	Output the color number for the markers	SYSTEM STATE (Ch 8)
MNUCOL	Enter the color number for the menu headers	SYSTEM STATE (Ch 8)
MNUCOL?	Output the color number for the menu headers	SYSTEM STATE (Ch 8)
NEWCO	Activate color configuration New	SYSTEM STATE (Ch 8)
RST	Instrument reset (same as *RST)	SYSTEM STATE (Ch 8)
RST0	Reset instrument front panel memories and reserved parameters	SYSTEM STATE (Ch 8)
RST1	Reset instrument and front panel memories	SYSTEM STATE (Ch 8)
RSTCOL	Reset color configuration to default	SYSTEM STATE (Ch 8)
RTL	Return to local	SYSTEM STATE (Ch 8)
SOFTCO	Activate color configuration Soft	SYSTEM STATE (Ch 8)
SPTS?	Output number of smoothing points	SYSTEM STATE (Ch 8)
TIME	Enter the system time	SYSTEM STATE (Ch 8)
TIME?	Output the system time	SYSTEM STATE (Ch 8)
TRCCOL	Enter the color number for memory data	SYSTEM STATE (Ch 8)
TRCCOL?	Output the color number for memory data	SYSTEM STATE (Ch 8)
WIDE	Use entire display width for graphs	SYSTEM STATE (Ch 8)
DCS	Select short for DC term for lowpass	TIME DOMAIN (Ch 9)
DCV	Enter value for DC term for lowpass	TIME DOMAIN (Ch 9)
DCV?	Output lowpass DC term value	TIME DOMAIN (Ch 9)
DCX?	Output lowpass DC term selection	TIME DOMAIN (Ch 9)
DCZ	Select line impedance for DC term for lowpass	TIME DOMAIN (Ch 9)
DDX?	Output active channel domain parameter frequency distance or time	TIME DOMAIN (Ch 9)
DPI	Select distance phasor impulse mode for active channel	TIME DOMAIN (Ch 9)
FGT	Select frequency with time gate for active channel	TIME DOMAIN (Ch 9)
FQD	Select frequency domain for active channel	TIME DOMAIN (Ch 9)
GCT	Enter gate center value distance or time	TIME DOMAIN (Ch 9)

Command	Description	Group
GCT?	Output gate center value	TIME DOMAIN (Ch 9)
GDS	Gate symbols displayed on active channel	TIME DOMAIN (Ch 9)
GLS	Select low sidelobe gate shape	TIME DOMAIN (Ch 9)
GMS	Select minimum sidelobe gate shape	TIME DOMAIN (Ch 9)
GNM	Select nominal gate shape	TIME DOMAIN (Ch 9)
GOF	Turn off gating on active channel	TIME DOMAIN (Ch 9)
GOF?	Output gating mode on active channel	TIME DOMAIN (Ch 9)
GON	Turn on gating on active channel	TIME DOMAIN (Ch 9)
GRT	Select Rectangular gate shape	TIME DOMAIN (Ch 9)
GSN	Enter gate span value distance or time	TIME DOMAIN (Ch 9)
GSN?	Output gate span value	TIME DOMAIN (Ch 9)
GSP	Enter gate stop value distance or time	TIME DOMAIN (Ch 9)
GSP?	Output gate stop value	TIME DOMAIN (Ch 9)
GST	Enter gate start value distance or time	TIME DOMAIN (Ch 9)
GST?	Output gate start value	TIME DOMAIN (Ch 9)
GSX?	Output gate shape	TIME DOMAIN (Ch 9)
LPI	Select lowpass impulse response for active channel	TIME DOMAIN (Ch 9)
LPS	Select lowpass step response for active channel	TIME DOMAIN (Ch 9)
LPSX?	Output lowpass response for active channel impulse or step	TIME DOMAIN (Ch 9)
MRR	Restore original marker range	TIME DOMAIN (Ch 9)
TBP	Select time bandpass mode for active channel	TIME DOMAIN (Ch 9)
TDDIST	Set time domain parameter to distance for active channel	TIME DOMAIN (Ch 9)
TDDIST?	Output active channel time domain parameter distance or time	TIME DOMAIN (Ch 9)
TDPI0	Turn phasor impulse response off for active channel	TIME DOMAIN (Ch 9)
TDPI1	Turn phasor impulse response on for active channel	TIME DOMAIN (Ch 9)
TDPIX?	Output phasor impulse on/off status for active channel	TIME DOMAIN (Ch 9)
TDTIME	Set time domain parameter to time for active channel	TIME DOMAIN (Ch 9)
TDX?	Output domain mode for active channel	TIME DOMAIN (Ch 9)
TLP	Select time lowpass mode for active channel	TIME DOMAIN (Ch 9)
TPI	Select time phasor impulse mode for active channel	TIME DOMAIN (Ch 9)
WLS	Select low sidelobe window shape	TIME DOMAIN (Ch 9)
WMS	Select minimum sidelobe window shape	TIME DOMAIN (Ch 9)
WNM	Select nominal window shape	TIME DOMAIN (Ch 9)
WRT	Select rectangular window shape	TIME DOMAIN (Ch 9)
WSX?	Output window shape	TIME DOMAIN (Ch 9)
ZCT	Enter zoom range center value time or distance	TIME DOMAIN (Ch 9)
ZCT?	Output zoom range center value	TIME DOMAIN (Ch 9)

Command	Description	Group
ZSN	Enter zoom range span value time or distance	TIME DOMAIN (Ch 9)
ZSN?	Output zoom range span value	TIME DOMAIN (Ch 9)
ZSP	Enter zoom range stop value time or distance	TIME DOMAIN (Ch 9)
ZSP?	Output zoom range stop value	TIME DOMAIN (Ch 9)
ZST	Enter zoom range start value time or distance	TIME DOMAIN (Ch 9)
ZST?	Output zoom range start value	TIME DOMAIN (Ch 9)
FDH0	Select variable length arbitrary block headers	TRANSMISSION METHODS (Ch 7)
FDH1	Select fixed length arbitrary block headers	TRANSMISSION METHODS (Ch 7)
FDH2	Select zero length arbitrary block headers	TRANSMISSION METHODS (Ch 7)
FDHX?	Output arbitrary block header length selection	TRANSMISSION METHODS (Ch 7)
FMT0	Select normal ascii data element delimiting	TRANSMISSION METHODS (Ch 7)
FMT1	Select enhanced ascii data element delimiting	TRANSMISSION METHODS (Ch 7)
FMTX?	Output ascii data element delimiting mode	TRANSMISSION METHODS (Ch 7)
TEB	Select external trigger and executes *DDT definition	TRIGGERS (Ch 7)
TIB	Select GPIB measurement triggering	TRIGGERS (Ch 7)
DA1	Select a1 = Ra as denominator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
DA2	Select a2 = Rb as denominator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
DB1	Select b1 = Ta as denominator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
DB2	Select b2 = Tb as denominator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
DE1	Select unity as denominator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
DEN?	Output denominator selection for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
NA1	Select a1 as numerator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
NA2	Select a2 as numerator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
NB1	Select b1 as numerator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
NB2	Select b2 as numerator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
NU1	Select unity as numerator for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
NUM?	Output numerator selection for parameter being defined	USER DEFINED PARAMETERS (Ch 9)
USL	Enter label string for user parameter being defined	USER DEFINED PARAMETERS (Ch 9)
USL?	Output label string for user parameter being defined	USER DEFINED PARAMETERS (Ch 9)
USR1	Measure user parameter 1 on active channel	USER DEFINED PARAMETERS (Ch 9)
USR2	Measure user parameter 2 on active channel	USER DEFINED PARAMETERS (Ch 9)
USR3	Measure user parameter 3 on active channel	USER DEFINED PARAMETERS (Ch 9)
USR4	Measure user parameter 4 on active channel	USER DEFINED PARAMETERS (Ch 9)


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