

Device Test Proposal

MS269xA Signal Analyzer

MS269xA Signal Analyzer MS269xA-020 Vector Signal Generator (Option)

Device Test Proposal



Anritsu Corporation

Discover What's Possible™ MS269xA-E-F-2 Slide 1



MS269xA Signal Analyzer

The MS269xA Signal Analyzer supports multiple functions, such as signal analyzer, vector signal generator, and BER test set.

The following key features help evaluations, especially of amplifier, filter, repeater.

- ★ All-in-One Unit Support for Modulation Signal Output and Spectrum Analysis

 Tx and Rx testing using all-in-one unit with built-in MS269xA-020 Vector Signal Generator
- ★ Excellent Dynamic Range and ACLR Performance Dramatically improved spectrum analyzer dynamic range and vector signal generator ACLR function
- ★ Excellent Total Level Accuracy ± 0.5 dB in 50 Hz to 6 GHz range
- ★ CCDF Function
 Supports CCDF analysis
- ★ Wide Range of Waveform Patterns Vector signal generator option supporting various modulation signals
- ★ Multi-Carrier Signal Generation and Output (MX269004A Multi-Carrier IQproducer)
 Multiple carrier waveform patterns generated at PC and output from vector signal generator

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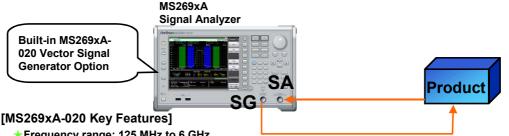
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Built-in Vector Signal Generator (Option)

The MS269xA Signal Analyzer with built-in vector signal generator option (MS2690A-020) supports both signal output and spectrum analysis.

The all-in-one signal generator (SG) and spectrum analyzer (SPA) set simplifies the system and cuts costs.



- ★Frequency range: 125 MHz to 6 GHz
- ★Vector modulation bandwidth: 120 MHz
- ★Absolute level accuracy: ± 0.5 dB
- ★Linearity: ± 0.2 dB typical
- ★Built-in BER measurement function
- *AWGN adding function

Cost Reduction: 20%

(Compared with separate SG and SA)

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Slide 3

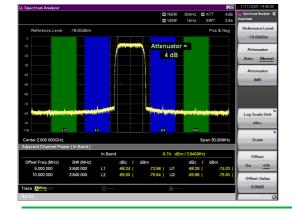


Excellent Dynamic Range and ACLR Performance

High-Performance Spectrum Analyzer

- ◆Average noise level: -155 dBm/Hz (at 2 GHz)
- ♦TOI: +22 dBm
- ♦ACLR: -76 dBc (Theoretical value, W-CDMA, 5 MHz)

Screen: ACLR Performance (Actual data) (W-CDMA, TestModel1 64DPCH, 2 GHz, SG Output -5 dBm)



[Measuring System]

Generator

High-Performance Vector Signal

≤-64 dBc @ 5 MHz offset

≤-67 dBc @ 10 MHz offset ♦Absolute level accuracy: ± 0.5 dB

♦Linearity: ± 0.2 dB typical

♦ACLR Performance (catalog value)

5 MHz -68.2 dBc* 10 MHz -69.8 dBc*

*The data is a measurement example with randomly selected value. We do not guarantee the measurement result

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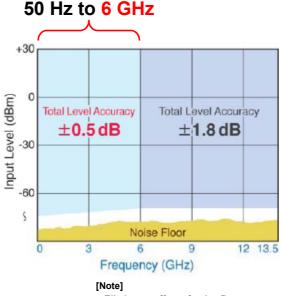
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Excellent Level Accuracy

The MS269xA realizes a total level accuracy of \pm 0.5 dB in the range from 50 Hz to 6 GHz by adopting 6GHz basic frequency band and unique built-in level calibration oscillator.

Yield is improved by the reduced measurement error.



-Eliminates effect of noise floor

-Used only when Uncal does not occur

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CCDF Function

Slide 6

CCDF analysis can be performed for 29.761 MHz max. bandwidth signals. For example, the power amplifier of a W-CDMA BS can be evaluated with four carriers (total 20 MHz bandwidth).

[Operation] Application Switch

> F2: Signal Analyzer

> F5: Trace

> F1: Trace Mode

> F4: CCDF

Screen: CCDF Analysis (W-CDMA, TestModel1 64DPCH, 2 GHz)

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Screen: CCDF Analysis (W-CDMA, TestModel1 64DPCH x 4 Carrier, 2 GHz)



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Wide Range of Waveform Patterns

Standard Waveform Patterns, AWGN Adding Function



Waveform Patterns: W-CDMA, GSM/EDGE AWGN Adding Function:

W-CDMA

WiMAX

Digital combination of AWGN for selected waveform patterns

Anritsu products

Customer's own products



Arbitrary IQ Data

- In C language
- MATLAB
- Microwave Office etc.

Arbitrary Waveform Generation

IQ data can be created using common EDA tools, converted to waveform patterns and output.



CDMA2000 1x/1xEV-DO WLAN (IEEE802.11a/b/g) PDC, PHS, AWGN, GPS Bluetooth®, Broadcasting (ISDB-T/BS/CS/CATV)

Waveform Patterns (Fixed parameters)

*Request separately

IQproducer Option

HSDPA/HSUPA, TDMA

Multi-carrier, Mobile

By using this PC software, arbitrary parameters can be set to generate waveform patterns.

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Multi-Carrier IQproducer

The MX269904A can generate multi-carrier waveform patterns for modulation signals and tone signals for various communications systems.

The Multi-purpose function and W-CDMA (DL) function support easy evaluation using multi-carrier signals.

Screen: W-CDMA 4-carrier output



Screen: Multi-purpose function



Screen: W-CDMA (DL) function



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