

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N5162A

The Keysight N5162A MXG ATE vector signal generator is designed specifically for automated test equipment (ATE) environments. Based on the performance of the N5182A MXG, the N5162A eliminates the front-panel display and relocates all connectors to the rear panel to enable secure, space-efficient rack configurations at a reduced price. It features high output power, extremely fast switching speeds, and robust vector modulation capability.

SPECIFICATIONS

Frequency

Minimum Frequency	100 kHz Hz
Maximum Frequency	6 GHz (option dependent) Hz
Frequency Resolution	0.01 Hz
External Reference Input Frequency	10 MHz (standard), 1 to 50 MHz (with Option 1ER)

Output

Maximum Output Power	+23 dBm (typical, up to 3 GHz with high-power option) dBm
Output Power Range	-110 to +13 dBm (standard, electronic attenuator)
Phase Noise	≤ -121 dBc/Hz @ 20 kHz offset, 1 GHz carrier (typical)

Modulation

Modulation	AM, FM, Phase (øM), Pulse, and Vector/Digital I/Q
Sweep Modes	Digital step and list sweep (simultaneous frequency, power, and waveform)
Pulse Modulation On/Off Ratio	> 80 dB (typical)
Digital Modulation Formats	ASK, FSK, MSK, PSK, QAM

General

Reference Oscillator	10 MHz (internal/external)
Interfaces	100BaseT LAN, USB 2.0, GPIB, and LXI Class C
Display	None (streamlined for ATE configurations)

Physical

Power Supply	100 to 240 VAC, 50 to 60 Hz
Dimensions (W×H×D)	2RU (88 mm H x 426 mm W x 489 mm D) mm
Weight	< 11.3 kg kg

Frequency & Sweep Specifications

Frequency Options	100 kHz to 3 GHz (Option 503) or 100 kHz to 6 GHz (Option 506)
Frequency Switching Speed (SCPI Mode)	≤ 1.2 ms
Frequency Switching Speed (List Mode)	≤ 900 μs (simultaneous frequency, amplitude, and waveform switching)
Dwell Time Range	100 μs to 100 s

Vector / Baseband Modulation

Internal Baseband RF Bandwidth	100 MHz
AWG Sample Rate	up to 125 MSa/s
Playback Memory Depth	Up to 64 MSa
Storage Memory Depth	800 MSa
W-CDMA Dynamic Range (1-Carrier)	-73 dBc @ -2 dBm channel power (typical)
W-CDMA Dynamic Range (4-Carrier)	≤ -67 dBc @ -8 dBm channel power (typical)
Baseband Generator Mode	Arbitrary waveform only
Supported Reference Waveforms	WLAN, WiMAX, W-CDMA, cdma2000, GSM, TD-SCDMA, and more

Amplitude & Level Specifications

Standard Output Power	+13 dBm
High Output Power Option	+23 dBm up to 3 GHz (Option 1EA)
Attenuator Type	Electronic (highly-reliable, fast-switching)

Spectral Purity

SSB Phase Noise at 1 GHz	≤ -121 dBc/Hz @ 20 kHz offset (typical)
Harmonics	<-30 dBc (for output power ≤ +10 dBm, ≥ 10 MHz)
Non-harmonics	<-65 dBc (100 kHz to 250 MHz), <-75 dBc (250 to 750 MHz), <-69 dBc (750 MHz to 1.5 GHz), <-63 dBc (1.5 to 3.0 GHz), <-57 dBc (3.0 to 6.0 GHz) at > 10 kHz offset
Sub-harmonics	None (< 3.0 GHz), <-76 dBc (3.0 to 6.0 GHz)

Rear Panel Connectors & Interfaces

RF Output Connector Type	Type-N female, rear panel
LXI Compliance Class	LXI Class-C

System, Control & Programming

Programming Languages	SCPI, Backwards compatible with ESG, PSG, 8648 signal generators, and other vendors' generators
Software Drivers Supported	IVI-COM
Self-Maintenance and Repair	Downtime < 2 hours using field-replaceable assemblies

Physical Characteristics

Form Factor	2RU (Rack Unit)
Connector Configuration	All connectors relocated to the rear panel
Front Panel Configuration	No display and no connectors on the front panel for secure ATE racking

Power

Power Consumption	< 250 W maximum
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Environmental

Operating Temperature Range	0 to 55 °C
Storage Temperature Range	-40 to 70 °C
Operating Humidity	Up to 95% RH at 40 °C (non-condensing)
Operating Altitude	Up to 4,600 meters (15,000 feet)
Acoustic Noise	< 55 dBA (nominal)

RF Output

Nominal Output Impedance	50 Ω
Maximum Reverse Power	50 W (DC to 2 GHz), 25 W (2 to 4 GHz), 20 W (4 to 6 GHz)
Maximum Reverse DC Voltage	50 VDC

Frequency Reference

Standard Internal Reference Aging Rate	± 1 ppm/year
Standard Internal Reference Temperature Stability	± 1 ppm (0 to 55 °C)

Baseband Generator

Baseband DAC Resolution	16-bit
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Amplitude

Level Accuracy	± 0.6 dB (250 kHz to 3.0 GHz), ± 0.8 dB (3.0 to 6.0 GHz) for power levels ≥ -110 dBm
Level Resolution	0.01 dB
Output VSWR	< 1.4:1 (250 kHz to 1.5 GHz), < 1.6:1 (1.5 to 3.0 GHz), < 1.8:1 (3.0 to 6.0 GHz) at levels < 0 dBm

I/Q Modulation

External I/Q Input Impedance	50 Ω (nominal)
External I/Q Full Scale Input	0.5 V (nominal)

TECHNOLOGY

RF Vector Signal Generator

APPLICATIONS

Automated Test Equipment (ATE), production testing of wireless communication devices and components

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.