

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N5182A

The Keysight (formerly Agilent) N5182A MXG is a highly reliable RF vector signal generator optimized for manufacturing cellular communications and wireless connectivity components. Designed in a compact 2RU form factor, it offers fast frequency and amplitude switching, industry-leading ACLR performance, and scalable RF and baseband configurations.

SPECIFICATIONS

Frequency

Minimum Frequency	100 kHz Hz
Maximum Frequency	3 or 6 GHz (configuration dependent) Hz
Frequency Resolution	0.01 Hz
Phase Offset Resolution	0.1°

Output

Maximum Output Power	+13 dBm (standard, ≤ 3 GHz) / +23 dBm (with Option UNB) dBm
Output Power Range	-110 to +13 dBm (standard, ≤ 3 GHz)
Phase Noise	-121 dBc/Hz (typical at 1 GHz carrier, 20 kHz offset)

Modulation

Modulation	AM, FM, PM, Pulse, Digital I/Q
Sweep Modes	Step, List

General

Reference Oscillator	10 MHz
Interfaces	LAN (100Base-T, LXI Class C), GPIB, USB 2.0

Physical

Power Supply	100-240 VAC, 50/60 Hz
Dimensions (W×H×D)	426 × 88 × 432 mm

Frequency Characteristics

Frequency Range Options	100 kHz to 3 GHz (Option 503) or 6 GHz (Option 506)
Frequency Switching Speed (SCPI)	< 1.2 ms
Frequency Switching Speed (List Mode)	< 900 μs (simultaneous frequency, amplitude, and waveform)
Internal Reference Frequency	10 MHz

Amplitude and Output Power

Absolute Level Accuracy	± 0.6 dB (typical, standard, ≤ 3 GHz)
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Spectral Purity

Harmonics	< -30 dBc (typical)
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I/Q Modulation

I/Q Inputs (External)	50 Ω (BNC female)
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Baseband Generator (Internal)

Sample Rate	Up to 125 MSa/s (with Option 654)
Modulation Bandwidth (RF)	Up to 100 MHz (with Option 654)
Waveform Playback Memory	Up to 64 MSa (with Option 019)

Digital Modulation Performance

Supported Communication Standards	W-CDMA, HSDPA/HSUPA, WiMAX, cdma2000 & 1xEV-DO, GSM/EDGE, WLAN, TD-SCDMA (via Signal Studio)
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Connectivity and Interfaces

RF Output Connector Type	Type-N (female)
RF Output Impedance	50 Ω
Supported Command Sets (SCPI)	SCPI

Physical and Power

Rackmount Size	2RU
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Maintenance

Calibration Time	< 1 hour (simplified self-maintenance)
Repair Time	30 minutes (using field-replaceable assemblies)

Performance

Amplitude Resolution	0.01 dB
Amplitude Switching Speed (List Mode)	$\leq 900 \mu\text{s}$

RF Output

Reverse Power Protection	50 W
Maximum DC Voltage	50 VDC

Baseband Generator

Baseband DAC Resolution	16 bits
Baseband Sample Rate Options	30 MSa/s (Opt 651), 60 MSa/s (Opt 652), 125 MSa/s (Opt 654)

Triggering

Trigger Modes	Free run, trigger key, external, timer, bus
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Environmental

Operating Temperature	0 to 55 $^{\circ}\text{C}$
Maximum Operating Altitude	4600 meters (15,000 feet)

Power

Power Consumption	250 W maximum
AC Input Voltage	100 to 120 VAC / 220 to 240 VAC

Compliance

LXI Compliance	LXI Class C
EMC Compliance	IEC/EN 61326-1, CISPR 11 Group 1 Class A
Safety Compliance	IEC/EN 61010-1

TECHNOLOGY

Vector Signal Generation

APPLICATIONS

Cellular Component Manufacturing, Wireless Connectivity Testing, RF and Baseband Test

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