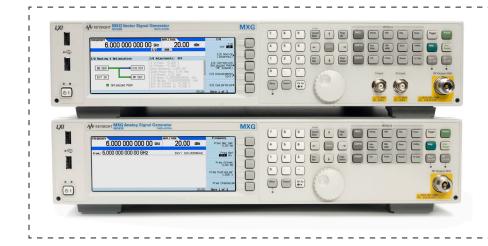Product Fact Sheet

Keysight MXG X-Series Signal Generators N5181B Analog/N5182B Vector

Frequency ranges: 9 kHz to 3 or 6 GHz

Generate true performance

The pure and precise N5181B, N5182B MXG X-Series RF analog and vector signal generators are fine-tuned to deliver the highest levels of performance to push your devices to their limits.

The MXG is designed to keep pace with your ongoing search for greater performance. In consumer wireless, military communications or radar, performance gains can help you mitigate interference, accelerate data throughput or enhance receiver sensitivity.

Ideal for:

- R&D test
- Receiver test
- Component test

Take your devices and designs to the limit

On the path to better performance, the pure and precise MXG X-Series signal generators are fine-tuned to be your "golden transmitter" in R&D.

Use the MXG to test radar receiver sensitivity, characterize ADC or mixer SNR, or find receiver out-of-band rejection capability. You'll get excellent results with industry-leading phase noise of –146 dBm at 1 GHz and spurious performance of –96 dBc at 1 GHz.

With EVM of less than 0.4 percent (802.11ac and LTE) and factory-equalized 160 MHz RF bandwidth with flatness of less than ± 0.2 dB, the MXG enables testing and characterization of multicarrier power amplifiers or wideband receivers and components, such as those used in 802.11ac WLAN designs.

Discover X-Series signal generation

To know your device's behavior, you'll take many paths. That's the idea behind Keysight Technologies, Inc. X-Series signal generators. They produce the signals you need—from simple to complex, from clean to impaired—to test your design within and beyond its limits.

Industry-leading performance

From 9 kHz to 6 GHz, the analog and vector MXG and EXG signal generators deliver unmatched performance in five key categories: phase noise and spectral purity, bandwidth, EVM, ACPR, and output power.

Advanced signal creation

Perform advanced receiver testing compatible with the latest standards using the MXG or EXG and Signal Studio software: define signal parameters, transfer them to the instrument and use closed loop or interactive control during signal generation.

Lower cost-of-ownership

X-Series signal generators are designed for high reliability and simplified service. One key example is the self-maintenance strategy: if onsite repairs are ever needed, they can be completed in less than two hours with our refurbished-parts exchange program.

Summary of key specifications

Phase noise @ 1 GHz, 20 kHz offset	−146 dBc/Hz
Spurious @ 1 GHz	−96 dBc
Output power @ 1 GHz	+27 dBm
ACPR W-CDMA 64 DPCH (vector)	−73 dBc
EVM 802.11ac/LTE (vector)	0.4 percent
Bandwidth (vector)	160 MHz
Arbitrary waveform memory (vector)	1024 MSa

Accessories

Option number	Description
1CM010A	Rack mount flange kit
1CN006A	Handle kit - two front handles
1CP004A	Rack mount flange and handle kit
1CR012A	Rack slide kit
AXT	Hard transit case

Frequency range options

Option number	Description (not upgradeable)
503	9 kHz to 3 GHz
506	9 kHz to 6 GHz

Hardware and software options

Option number	Description (upgradeable)
006	Instrument security and removable memory card
1EA	High output power
656	ARB baseband generator (80 MHz RF bandwidth, 64 Msa)
657	Upgrade baseband generator to 160 MHz RF bandwidth
660	Upgrade baseband generator with real-time capability
UNT	AM, FM, phase modulation
UNV	Enhanced dynamic range
UNW	Narrow pulse modulation
UNX	Low phase noise
UNY	Enhanced low phase noise
UNZ	Fast switching

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