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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight N5181A MXG RF Analog Signal Generator, 100 kHz to 6 GHz

Agilent N5181A MXG Analog Signal Generator The Agilent N5181A MXG is an analog RF signal generator with frequency options to 1, 3, or 6 GHz. OEM datasheets list 100 kHz minimum frequency, 0.01 Hz resolution, standard maximum output to plus 13 dBm (plus 11 dBm above 5 GHz), and Option 1EA high-power paths to plus 23 dBm through 3 GHz. Receiver and component stimulus, manufacturing test, and general-purpose CW/analog-modulated RF signal generation to 6 GHz. Max Output Power Standard To 3 GHz: plus 13 dBm The Agilent N5181A MXG is an analog RF signal generator with frequency options to 1, 3, or 6 GHz. OEM datasheets list 100 kHz minimum frequency, 0.01 Hz resolution, standard maximum output to plus 13 dBm (plus 11 dBm above 5 GHz), and Option 1EA high-power paths to plus 23 dBm through 3 GHz. Receiver and component stimulus, manufacturing test, and general-purpose CW/analog-modulated RF signal generation to 6 GHz. Max Output Power Standard To 3 GHz: plus 13 dBm Max Output Power Standard Above 5 GHz: plus 11 dBm



MODEL

**Agilent / Keysight
N5181A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5181A

LISTING

<https://aumictechlabs.com/products/n5181a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent N5181A MXG RF Analog Signal Generator delivers precise reference signals across 100 kHz to 6 GHz for RF component and receiver testing in R&D and manufacturing. This 2RU

benchtop instrument combines high reliability with configurable output power, enabling fast frequency and amplitude switching for demanding production environments. Multiple frequency and power options adapt to specific test requirements without sacrificing performance or rack efficiency.

Technical Specifications

Frequency Range: 100 kHz to 1 GHz (N5181A-501), 100 kHz to 3 GHz (N5181A-503), or 100 kHz to 6 GHz (N5181A-506)

Output Power: +13 dBm standard (up to 3 GHz); Option 1EA delivers +23 dBm @ 1 GHz, +17 dBm (>3–5 GHz), +16 dBm (>5 GHz); Option 1EQ low-power provides -110 dBm minimum, settable to -144 dBm

Phase Noise: ≤ -121 dBc/Hz (typical) at 1 GHz, 20 kHz offset

Amplitude Accuracy (ALC on): ± 0.6 dB (100 kHz–3 GHz), ± 0.7 dB (>3–4 GHz), ± 0.8 dB (>4–6 GHz)

Switching Speed: ≤ 1.2 ms (SCPI), ≤ 900 μ s simultaneous frequency/amplitude (list mode); Option UNZ: ≤ 750 μ s (SCPI), ≤ 500 μ s (list/step sweep)

Harmonics: ≤ -35 dBc @ 1 GHz

Non-Harmonics: ≤ 62 dBc @ 1 GHz

SWR: $\leq 1.7:1$ typical (up to 1.7 GHz and >3–4 GHz); $\leq 1.55:1$ (>1.7–3 GHz); $\leq 1.6:1$ (>4–6 GHz)

Maximum Reverse Power: 2 W nominal up to 6 GHz

Max DC Voltage: 50 VDC nominal

Key Features AM, FM, phase, and pulse modulation

Digital step and list sweep with simultaneous frequency and power switching

Narrow Pulse Modulation (Option UNW) and Pulse Train Generator (Option 320)

Type N (female) RF output connector

Interfaces 100BaseT LAN, USB 2.0, GPIB

LXI-compliant operation (Option ALB for LXI Class B)

SCPI and IVI-COM driver support

Typical Applications RF component validation, receiver performance characterization, production testing, and signal simulation across mobile, satellite, and radar frequency bands.

N5181A Characteristics / Specifications

PARAMETER	VALUE
Frequency Option 5	100 kHz to 1 GHz
Frequency Resolution	0.01 Hz
Minimum Frequency	100 kHz
Max Output Power Standard To 3 GHz	plus 13 dBm
Max Output Power Standard Above 5 GHz	plus 11 dBm
Max Output Power Option 1EA 50 MHz To 3 GHz	plus 23 dBm
Max Output Power Option 1EA 3 To 5 GHz	plus 17 dBm
Amplitude Resolution	0.01 dB
Minimum Output Power Option 1EQ	minus 127 dBm
Step Attenuator	0 to 130 dB in 5 dB steps electronic
RF Connector Impedance	50 ohms nominal
Reference Output Frequency	10 MHz
Reference Output Amplitude	greater than or equal to plus 4 dBm nominal
Internal Reference Aging Nominal	less than plus or minus 1 ppm per year
Temperature Effects Nominal	plus or minus 1 ppm from 0 to 55 C
Switching Speed Standard SCPI Typical	less than or equal to 5 ms
Switching Speed Option UNZ SCPI	less than or equal to 1.15 ms
Step Sweep Points	2 to 65535
List Sweep Points	1 to 3201
Dwell Time Range	100 us to 100 s
Operating Temperature Spec	0 to 55 C after warmup
Form Factor Height Class	2U class 89 mm tall chassis
Operating temperature	Spec: 0 to 55 C after warmup

N5181A Specifications

PARAMETER	VALUE
Agilent N5181A MXG Analog Signal Generator	Overview
Applications	Receiver and component stimulus, manufacturing test, and general-purpose CW/analog-modulated RF signal generation to 6 GHz.
Fast frequency and amplitude switching	Optional high power Option 1EA
Technical Specifications	Frequency Option 501: 100 kHz to 1 GHz

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Spec: 0 to 55 C after warmup
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Operating Temperature Spec	0 to 55 C after warmup
Form Factor Height Class	2U class 89 mm tall chassis Notes From Agilent/Keysight N5181A MXG analog signal generator data sheet. Performance below 250 kHz has serial-number caveats per OEM archive notes.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Frequency Option 501	100 kHz to 1 GHz
Frequency Option 503	100 kHz to 3 GHz
Frequency Option 506	100 kHz to 6 GHz
Frequency Resolution	0.01 Hz
Minimum Frequency	100 kHz
Max Output Power Standard To 3 GHz	plus 13 dBm
Max Output Power Standard Above 5 GHz	plus 11 dBm
Max Output Power Option 1EA 50 MHz To 3 GHz: plus 23 dBm	
Max Output Power Option 1EA 3 To 5 GHz: plus 17 dBm	
Specifications	
PARAMETER	VALUE
Amplitude Resolution	0.01 dB
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Step Attenuator	0 to 130 dB in 5 dB steps electronic
RF Connector Impedance	50 ohms nominal
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Notes

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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.