

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N5171B

The Keysight (formerly Agilent) N5171B EXG X-Series is a high-performance RF analog signal generator optimized for manufacturing test. It delivers excellent level accuracy, fast simultaneous switching of frequency and power, and robust output power to compensate for test system losses. Available with frequency range options up to 6 GHz, it provides comprehensive analog modulation capabilities, including AM, FM, phase modulation, and narrow pulse generation, all in a compact 2U form factor.

SPECIFICATIONS

Frequency

Minimum Frequency	9 kHz Hz
Maximum Frequency	6 GHz (option dependent) Hz
Frequency Resolution	0.01 Hz

Output

Maximum Output Power	+21 dBm dBm
Output Power Range	-144 dBm to +21 dBm
Phase Noise	-122 dBc/Hz at 1 GHz carrier, 20 kHz offset
Output Impedance	50 Ω (nominal)
Amplitude Resolution	0.01 dB

Modulation

Modulation	AM, FM, PM, Pulse
Sweep Modes	Step, List
AM Depth	0 to 100%
AM Resolution	0.1%
Pulse On/Off Ratio	> 80 dB (with Option UNW)

General

Reference Oscillator	10 MHz
Interfaces	1000BaseT LAN, USB 2.0, GPIB, LXI
Multifunction Generator	10 MHz multifunction generator and LF out
Backward Compatibility	Compatible with all ESG, MXG, PSG, and 8648x signal generators
Recommended Calibration Cycle	3 years

Physical

Power Supply	100/120 VAC at 50/60/400 Hz; 220/240 VAC at 50/60 Hz
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Frequency Specifications

Frequency Range Options	9 kHz to 1, 3, or 6 GHz
Switching Speed (List Mode)	800 μs

Amplitude Specifications

Output Power (at 1 GHz)	+21 dBm
Minimum Settable Power	-144 dBm
Electronic Attenuator	Standard (specified power to 3 GHz with electronic attenuator)

Spectral Purity

SSB Phase Noise (20 kHz offset)	-122 dBc/Hz (at 1 GHz)
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Analog Modulation (AM/FM/PM)

FM Maximum Deviation	10 MHz (at 1 GHz)
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Pulse Modulation

Minimum Pulse Width	20 ns (narrow pulse)
Internal Pulse Generator Modes	Pulse train generator

Connectivity and Interfaces

Remote Control Interfaces	SCPI, IVI-COM, MATLAB drivers
Power Sensor Compatibility	Agilent USB power sensor compatible with embedded display and SCPI control

Physical and Power Specifications

Height	2 rack-units (2U)
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Environmental

Operating Temperature	0 to 55 °C
Storage Temperature	-40 to 70 °C

Outputs

RF Output Connector	Type-N (female)
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TECHNOLOGY

RF Analog Signal Generation

APPLICATIONS

Manufacturing Test, Component Parametric Testing, Receiver Calibration

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