KEYSIGHT TECHNOLOGIES (AGILENT HP)

N5172B

The Keysight (Agilent) N5172B EXG X-Series RF Vector Signal Generator is optimized for manufacturing test, providing accurate and reliable signals for basic parametric testing of components and functional verification of receivers. It delivers industry-leading adjacent channel power ratio (ACPR), error vector magnitude (EVM), and output power in a compact two rack-unit (2U) size.

SPECIFICATIONS

Frequency

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

Output

Phase Noise	-122 dBc/Hz (at 1 GHz, 20 kHz offset)

Modulation

Modulation	AM, FM, Phase (ØM), Narrow Pulse, I/Q (ASK, FSK, MSK, PSK, QAM, custom I/Q)
Sweep Modes	Step, List
Pulse Modulation On/Off Ratio	> 80 dB
AM Depth	0 to 100%

General

Interfaces	1000BaseT LAN, LXI, USB 2.0, GPIB
Recommended Calibration Cycle	3 years

Physical

Power Supply	100-120 VAC (50/60/400 Hz), 220-240 VAC (50/60 Hz)

Frequency Specifications

Frequency Range	9 kHz to 3 GHz or 6 GHz (configuration dependent)

Spectral Purity

SSB Phase Noise (20 kHz offset)	-122 dBc/Hz (at 1 GHz)
Harmonics	-35 dBc (at 1 GHz)
Non-harmonics (Spurious)	-72 dBc (at 1 GHz)

Internal Baseband Generator

Baseband Generator Bandwidth	120 MHz
Baseband Generator Modes	Waveform playback and real-time

Vector / I/Q Modulation

Adjacent Channel Power Ratio (ACPR)	≤ -73 dBc (W-CDMA 64 DPCH)
Error Vector Magnitude (EVM)	< 0.4% (80 MHz 802.11ac)

Analog and Pulse Modulation

AM Rate	DC to 50 kHz
Pulse Width (Minimum)	20 ns (narrow pulse)

Connectivity and Interfaces

LAN (LXI) Port	1000BaseT LAN, LXI
USB Ports	USB 2.0 (compatible with Agilent USB power sensors)
GPIB (IEEE-488) Port	Standard

Software and Automation

Real-time Baseband Generation Supported Formats	LTE, HSPA+, WLAN, GNSS, DVB, and more
Command Compatibility (SCPI)	SCPI, backward compatible with ESG, MXG, PSG, and 8648x signal generators

Physical and Compliance

Rack Unit (RU) Size	2U (two rack-unit height)

Configuration Options

Frequency Options	Option 503 (9 kHz to 3 GHz), Option 506 (9 kHz to 6 GHz)

Output Protection

Maximum DC Voltage at RF Output	50 VDC

Baseband Generator

Internal Baseband Generator DAC Resolution	16-bit

Environmental

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

Output Level

Amplitude Resolution	0.01 dB

Frequency Reference

External Reference Input Frequency	10 MHz (standard); 1 to 50 MHz (with Option 1ER)
Reference Output Frequency	10 MHz

TECHNOLOGY

RF Vector Signal Generation

APPLICATIONS

Manufacturing test, receiver functional verification, component parametric testing