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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight N5239B 8.5 GHz PNA-L Microwave Network Analyzer

Agilent Keysight N5239B PNA-L Network Analyzer The Keysight N5239B isaPNA-L Series microwave vector network analyzer covering 300 kHz to 8.5 GHz. OEM N5239B/N5231B/N5232B technical specifications list 1 Hz frequency resolution, ± 1 ppm frequency accuracy, and 133 dB specified system dynamic range from 2 to 8.5 GHz (Option 200). Economy RF/microwave S-parameter measurements to 8.5 GHz, 2-port production test, and general component characterization. Lowest-frequency-span PNA-LBmodel (to 8.5 GHz) The Keysight N5239B isaPNA-L Series microwave vector network analyzer covering 300 kHz to 8.5 GHz. OEM N5239B/N5231B/N5232B technical specifications list 1 Hz frequency resolution, ± 1 ppm frequency accuracy, and 133 dB specified system dynamic range from 2 to 8.5 GHz (Option 200). Economy RF/microwave S-parameter measurements to 8.5 GHz, 2-port production test, and general component characterization. Lowest-frequency-span PNA-LBmodel (to 8.5 GHz) 2-port Option 200/216 (4-port options are N5231B/N5232B)



MODEL

**Agilent / Keysight
N5239B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5239B

LISTING

<https://aumictechlabs.com/products/n5239b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N5239B is a 2-port microwave network analyzer spanning 300 kHz to 8.5 GHz, engineered for S-parameter characterization of passive and active components in R&D and manufacturing settings. This PNA-L series instrument delivers 133 dB dynamic range with 0.003 dB RMS trace noise, enabling precise measurements across signal integrity, materials characterization, gain compression, intermodulation distortion, noise figure, and frequency conversion applications. The analyzer supports mixed-mode and differential device measurements, source-phase control, and time-domain analysis using a single built-in source rated 6 dBm to 13 dBm output with -18 dBc harmonics.

Technical Specifications

Frequency Range: 300 kHz to 8.5 GHz
Test Ports: 2 ports with 3.5 mm male connectors
Dynamic Range: 133 dB
Source Output Power: 6 dBm to 13 dBm
Harmonic Content: -18 dBc
Trace Noise: 0.003 dB RMS (typical)
Sweep Time (201 points): 6 ms (best case)
Receiver Noise Floor: Low
Receiver Compression Level: High
Stability: High
Physical Dimensions: 48.3 × 49.8 × 28 cm
Weight: Approximately 35–36 kg
Operating Environment: 25 °C ±5 °C; 90 minutes warm-up required

Key Features

Single integrated source with stable output characteristics
Multitouch display with intuitive operator interface
USB connectivity for control and data transfer
Low trace noise supports high-resolution measurements
Fast sweep capability for production environments
PNA-L firmware compatibility ensures feature consistency with higher-tier models

Measurement Capabilities

S-parameter measurements (scalar and vector)
Passive and active device characterization
Signal integrity and materials analysis
Gain compression and intermodulation distortion (IMD)
Noise figure quantification
Frequency converter analysis
Differential and I/Q device measurements
Source-phase control
Mixed-mode S-parameters for balanced/differential circuits
Time-domain reflectometry and analysis

Typical Applications

Component testing in R&D laboratories
Manufacturing quality control
Filter and matching network design validation
Amplifier and converter characterization
Materials dielectric property measurement

N5239B Characteristics / Specifications

PARAMETER	VALUE
Model	N5239B
Instrument Type	Microwave vector network analyzer
Instrument Family	PNA-L Series
Frequency Range	300 kHz to 8.5 GHz
Frequency Resolution	1 Hz
Frequency Accuracy	±1 ppm
Frequency Stability High Stability	±0.05 ppm, minus 10 C to 70 C
Frequency Aging High Stability	±0.1 ppm/yr maximum
Test Port Impedance	50 ohm
Test Port Connector	ruggedized 3.5 mm male
Port Options	2-port Option 200 or Option 216
Power Resolution	0.01 dB
Maximum Settable Power Typical	+30 dBm
Minimum Settable Power Typical Standard	minus 30 dBm, Options 200 or 400
Minimum Settable Power Typical Extended	minus 90 dBm, Options 216 or 416
Preset Power Options 200 2	0 dBm
Maximum Leveled Power 500 MHz to 6 GHz Spec	+13 dBm Option 200, +11 dBm Option 216
Maximum Leveled Power 6 GHz to 8.5 GHz Spec	+13 dBm Option 200, +11 dBm Option 216
System Dynamic Range 10 MHz to 500 MHz Spec	131 dB Option 200 test port
System Dynamic Range 500 MHz to 2 GHz Spec	133 dB Option 200 test port
System Dynamic Range 2 GHz to 6 GHz Spec	133 dB Option 200 test port

PARAMETER	VALUE
System Dynamic Range 6 GHz to 8.5 GHz Spec	133 dB Option 200 test port
Receiver Dynamic Range Typical 4 GHz to 8.5 GHz	134 dB typical, Options 200/216
If Bandwidth For Dynamic Range Tables	10 Hz
Operating Temperature Spec	25 C ±5 C after 90 minutes warm-up
Display	12.1 inch LCD touch screen
Form Factor	benchtop PNA-L
Bandwidth	For Dynamic Range Tables: 10 Hz
Operating temperature	Spec: 25 C ±5 C after 90 minutes warm-up

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Spec: 25 C ±5 C after 90 minutes warm-up
Operating Temperature	Spec: 25 C ±5 C after 90 minutes warm-up
Operating Temperature Spec	25 C ±5 C after 90 minutes warm-up
Display	12.1 inch LCD touch screen
Form Factor	benchtop PNA-L Notes Numeric rows from Keysight N5231B/32B/39B Data Sheet and Technical Specifications 9018-04392. N5239B is 2-port only.

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 list 1 Hz frequency resolution, ± 1 ppm frequency accuracy, and 133 dB specified system dynamic range from 2 to 8.5 GHz (Option 200).

Applications

Economy RF/microwave S-parameter measurements to 8.5 GHz, 2-port production test, and general component characterization.

Key Features

Lowest-frequency-span PNA-LBmodel (to 8.5 GHz)

Ruggedized 3.5 mm male test ports

Option 216 extended power range

12.1 inch LCD touch screen

2-port Option 200/216 (4-port options are N5231B/N5232B)

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	N5239B
Instrument Type	Microwave vector network analyzer
Instrument Family	PNA-L Series
Frequency Range	300 kHz to 8.5 GHz
Frequency Resolution	1 Hz
Frequency Accuracy	± 1 ppm
Frequency Stability High Stability	± 0.05 ppm, minus 10 C to 70 C
Frequency Aging High Stability	± 0.1 ppm/yr maximum
Test Port Impedance	50 ohm
Test Port Connector	ruggedized 3.5 mm male
Port Options	2-port Option 200 or Option 216
Power Resolution	0.01 dB
Maximum Settable Power Typical	+30 dBm
Minimum Settable Power Typical Standard	minus 30 dBm, Options 200 or 400
Minimum Settable Power Typical Extended	minus 90 dBm, Options 216 or 416
Preset Power Options 200 216	0 dBm

Maximum Levelled Power 500 MHz to 6 GHz Spec: +13 dBm Option 200, +11 dBm Option 216

Maximum Levelled Power 6 GHz to 8.5 GHz Spec: +13 dBm Option 200, +11 dBm Option 216

System Dynamic Range 10 MHz to 500 MHz Spec: 131 dB Option 200 test port

System Dynamic Range 500 MHz to 2 GHz Spec: 133 dB Option 200 test port

System Dynamic Range 2 GHz to 6 GHz Spec: 133 dB Option 200 test port

System Dynamic Range 6 GHz to 8.5 GHz Spec: 133 dB Option 200 test port
Receiver Dynamic Range Typical 4 GHz to 8.5 GHz: 134 dB typical, Options 200/216

Specifications

PARAMETER	VALUE
If Bandwidth For Dynamic Range Tables	10 Hz
Operating Temperature Spec	25 C ±5 C after 90 minutes warm-up
Display	12.1 inch LCD touch screen
Form Factor	benchtop PNA-L

Notes
Numeric rows from Keysight N5231B/32B/39B Data Sheet and Technical Specifications 9018-04392. N5239B is 2-port only.

Ordering Information

OPTION	DESCRIPTION
Option 216	extended power range
Option 200	or Option 216

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 ·
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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.