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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight N5231B PNA-L Microwave Network Analyzer, 13.5 GHz

Agilent Keysight N5231B PNA-L Network Analyzer The Keysight N5231B isaPNA-L Series microwave vector network analyzer covering 300 kHz to 13.5 GHz. OEM N5239B/N5231B/N5232B technical specifications list 1 Hz frequency resolution, ± 1 ppm frequency accuracy, and 133 dB specified system dynamic range from 500 MHz to 2 GHz (Option 200). Economy microwave S-parameter measurements to 13.5 GHz, 2-port or 4-port production test, and general RF component characterization. PNA-L integrated VNA with one synthesized source The Keysight N5231B isaPNA-L Series microwave vector network analyzer covering 300 kHz to 13.5 GHz. OEM N5239B/N5231B/N5232B technical specifications list 1 Hz frequency resolution, ± 1 ppm frequency accuracy, and 133 dB specified system dynamic range from 500 MHz to 2 GHz (Option 200). Economy microwave S-parameter measurements to 13.5 GHz, 2-port or 4-port production test, and general RF component characterization. PNA-L integrated VNA with one synthesized source Option 216/416 adds front-panel jumpers and source attenuators



MODEL

**Agilent / Keysight
N5231B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5231B

LISTING

<https://aumictechlabs.com/products/n5231b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N5231B PNA-L is a benchtop microwave network analyzer delivering S-parameter measurements from 300 kHz to 13.5 GHz. Available in 2-port or 4-port configurations, this instrument balances cost and performance for R&D and manufacturing environments across telecom, wireless LAN, aerospace, and defense sectors.

Technical Specifications
Frequency Range: 300 kHz to 13.5 GHz
Ports: 2-port or 4-port options
Dynamic Range: Up to 133 dB
Harmonics: -18 dBc
Physical: 24 × 20 × 16 inches; 50 lbs benchtop form factor
Display: Multi-touch interface with intuitive navigation

Key Features
Standard test set with configurable front-panel jumpers and source attenuators (extended power range options)
SCPI command programming interface
Core firmware shared across PNA series for operational consistency
Hardware upgrade path from N52xxA to N52xxB models
Firmware upgrade support

Typical Applications
Passive and active device characterization
S-parameter and signal integrity measurements
Materials characterization and filter design
Amplifier and RF component testing

Compatibility & Integration
Specialized measurement capabilities via optional software packages:
S93007A: Automatic fixture removal
S93010A: Time domain analysis
S93015A: Dynamic uncertainty for S-parameter measurements
S93029A: Noise figure and noise power characterization

Hardware configurations include 2-port base (Option 200), 2-port with extended power range (Option 216), 4-port base (Option 400), and 4-port with extended power range (Option 416).

N5231B Characteristics / Specifications

PARAMETER	VALUE
Model	N5231B
Instrument Type	Microwave vector network analyzer
Instrument Family	PNA-L Series
Frequency Range	300 kHz to 13.5 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 200/216; 4-port Option 400/416
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
Preset Power Option 4	minus 5 dBm
Maximum Leveled Power 10 MHz to 500 MHz Spec	+13 dBm Option 200, +11 dBm Option 216
Maximum Leveled Power 500 MHz to 6 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

PARAMETER	VALUE
System Dynamic Range 2 GHz to 6 GHz Spec	133 dB Option 200 test port
Receiver Dynamic Range Typical 10 MHz to 500 MHz	132 dB typical, Options 200/216
Corrected Directivity 500 MHz to 2 GHz	48 dB with 85052B calibration kit
If Bandwidth For Dynamic Range Tables	10 Hz
Operating Temperature Spec	25 C $\pm$ 5 C after 90 minutes warm-up
Display	12.1 inch LCD touch screen
Remote Interfaces	USB LAN GPIB class PNA-L family
Form Factor	benchtop PNA-L
Bandwidth	For Dynamic Range Tables: 10 Hz
Operating temperature	Spec: 25 C $\pm$ 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
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Operating Temperature Spec	25 C ±5 C after 90 minutes warm-up
Display	12.1 inch LCD touch screen
Remote Interfaces	USB LAN GPIB class PNA-L family
Form Factor	benchtop PNA-L Notes Numeric rows from Keysight N5231B/32B/39B Data Sheet and Technical Specifications 9018-04392. Four-port Options 400/416 apply to N5231B and N5232B.

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 500 MHz to 2 GHz (Option 200).

Applications

Economy microwave S-parameter measurements to 13.5 GHz, 2-port or 4-port production test, and general RF component characterization.

Key Features

PNA-L integrated VNA with one synthesized source

12.1 inch LCD touch screen

Ruggedized 3.5 mm male test ports

Option 216/416 adds front-panel jumpers and source attenuators

USB interfaces and solid-state drive

Technical Specifications

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PARAMETER	VALUE
Model	N5231B
Instrument Type	Microwave vector network analyzer
Instrument Family	PNA-L Series
Frequency Range	300 kHz to 13.5 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 200/216; 4-port Option 400/416
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
Preset Power Option 400	minus 5 dBm
Preset Power Option 416	minus 8 dBm

Maximum Leveled Power 10 MHz to 500 MHz Spec: +13 dBm Option 200, +11 dBm Option 216

Maximum Leveled Power 500 MHz to 6 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
Receiver Dynamic Range Typical 10 MHz to 500 MHz: 132 dB typical, Options 200/216

Specifications

PARAMETER	VALUE
Corrected Directivity 500 MHz to 2 GHz	48 dB with 85052B calibration kit
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
Remote Interfaces	USB LAN GPIB class PNA-L family
Form Factor	benchtop PNA-L

Notes
Numeric rows from Keysight N5231B/32B/39B Data Sheet and Technical Specifications 9018-04392. Four-port Options 400/416 apply to N5231B and N5232B.

Ordering Information

OPTION	DESCRIPTION
Option 216	Maximum Leveled Power 500 MHz to 6 GHz Spec: +13 dBm Option 200, +11 dBm Option 216
Option 200	test port

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.