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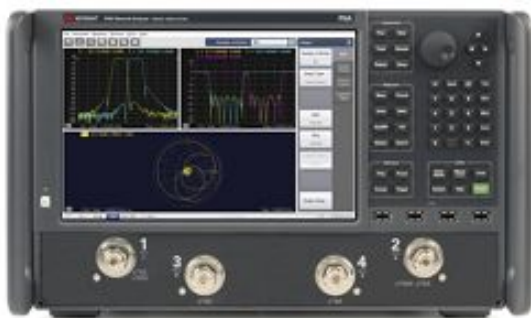
Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight N5224B 43.5 GHz PNA Microwave Network Analyzer

Agilent Keysight N5224B PNA Series Network Analyzer The Keysight N5224B isaPNA Series microwave vector network analyzer covering 10 MHz to 43.5 GHz standard, or 900 Hz to 43.5 GHz with LFE options. OEM N5224B/N5225B technical specifications list 1 Hz frequency resolution, ± 1 ppm frequency accuracy, and ruggedized 2.4 mm male test ports. S-parameter characterization of microwave and millimeter-wave components to 43.5 GHz, calibration with 2.4 mm kits, and production VNA measurements. Integrated synthesized VNA with built-in S-parameter test set The Keysight N5224B isaPNA Series microwave vector network analyzer covering 10 MHz to 43.5 GHz standard, or 900 Hz to 43.5 GHz with LFE options. OEM N5224B/N5225B technical specifications list 1 Hz frequency resolution, ± 1 ppm frequency accuracy, and ruggedized 2.4 mm male test ports. S-parameter characterization of microwave and millimeter-wave components to 43.5 GHz, calibration with 2.4 mm kits, and production VNA measurements. Integrated synthesized VNA with built-in S-parameter test set 12.1 inch LCD touch screen and solid-state drive



MODEL

**Agilent / Keysight
N5224B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5224B

LISTING

<https://aumictechlabs.com/products/n5224b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N5224B is a 43.5 GHz PNA Microwave Network Analyzer engineered for characterization of microwave components and active devices including amplifiers, mixers, and frequency converters. The instrument integrates internal signal sources, receivers, pulse modulators, and flexible switching to enable both linear and nonlinear measurements on a single DUT connection.

Technical Specifications

Frequency Range: 900 Hz to 43.5 GHz (10 MHz to 43.5 GHz)

Ports: Available in 2-port and 4-port configurations. 2-port models feature single-source capability; 4-port models support dual-source operation.

Dynamic Performance: Dynamic range: Up to 134 dB at 20 GHz test port

Trace noise: As low as 0.002 dB rms at 1 kHz bandwidth

Measurement speed: 3.6 to 23 μ sec/point

Frequency stability: Less than 0.03 dB/°C

Source output power: +13 dBm at 1 GHz; +11 dBm at 67 GHz

Harmonic level: -60 dBc

Physical: Approximately 50 lbs; 70 × 51 × 60 cm

Key Features

Pulsed S-Parameters: Built-in pulse modulators and generators enable pulsed measurements with optional hardware (Option 021, S93025B, or S93026B)

Multi-Touch Display: Intuitive interface for accelerated component characterization

Measurement Capability: Supports gain compression, intermodulation distortion, source-phase control, and differential/I/Q device testing

Calibration Options: Commercial calibration with test data; ISO 17025 and ANSI Z540 compliant certification available

Typical Applications

Gain compression analysis, intermodulation distortion measurement, source-phase control characterization, and differential and I/Q device evaluation.

Compatibility & Integration

The N5224B supports modular expansion through software applications (fixture removal, IMD measurement) and hardware options. Configuration variants include N5224B-200 (2-port) and N5224B-400 (4-port with second source).

N5224B Characteristics / Specifications

PARAMETER	VALUE
Model	N5224B
Instrument Type	Microwave vector network analyzer
Instrument Family	PNA Series
Frequency Range Standard	10 MHz to 43.5 GHz
Frequency Range LFE Options	900 Hz to 43.5 GHz (typical 500 Hz to 900 Hz)
Frequency Resolution	1 Hz
Frequency Accuracy	±1 ppm
Test Port Impedance	50 ohm
Test Port Connector	ruggedized 2.4 mm male
Port Options	2-port Option 200 class or 4-port Option 400 class
Power Resolution	0.01 dB
Maximum Leveled Power 10 MHz to 50 MHz Spec	+12 dBm, Options 200 or 400
Maximum Leveled Power 50 MHz to 16 GHz Spec	+13 dBm, Options 200 or 400
Maximum Leveled Power 35 GHz to 43.5 GHz Spec	+10 dBm, Options 200 or 400
Power Level Accuracy 10 MHz to 50 MHz Spec	±1.5 dB at nominal power, all options
Power Level Accuracy 26.5 GHz to 43.5 GHz Spec	±2.2 dB at nominal power, all options
Receiver Dynamic Range Typical 10 MHz to 50 MHz	90 dB typical, Option 200 or 400
Receiver Dynamic Range Typical 1 GHz to 10 GHz	130 dB typical, Option 200 or 400
Receiver Dynamic Range Typical 10 GHz to 26.5 GHz	132 dB typical, Option 200 or 400
Receiver Dynamic Range Typical 40 GHz to 43.5 GHz	124 dB typical, Option 200 or 400

PARAMETER	VALUE
System Dynamic Range 10 MHz to 50 MHz Spec	87 dB class Option 200/400 tables
Power Sweep Range 10 MHz to 50 MHz Spec	37 dB, Options 200 or 400
Power Sweep Range 50 MHz to 16 GHz Spec	38 dB, Options 200 or 400
If Bandwidth For Dynamic Range Tables	10 Hz
Display	12.1 inch LCD touch screen
Remote Interfaces	USB LAN GPIB
Operating Temperature Spec	25 C $\pm$ 5 C for warranted specs unless stated
Warm Up Time	90 minutes after turn-on for warranted specs
Form Factor	benchtop PNA
Bandwidth	For Dynamic Range Tables: 10 Hz
Operating temperature	Spec: 25 C $\pm$ 5 C for warranted specs unless stated

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Spec: 25 C ±5 C for warranted specs unless stated
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Operating Temperature Spec	25 C ±5 C for warranted specs unless stated
Warm Up Time	90 minutes after turn-on for warranted specs
Form Factor	benchtop PNA Notes Numeric rows from Keysight N5224B/N5225B PNA Network Analyzer Technical Specifications with synthesizer revision 6 or earlier. Warranted specs apply at 25 C ±5 C after 90 minutes warm-up unless stated. Dynamic-range tables are at 10 Hz IF bandwidth with isolation averaging factor of 8.

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 ruggedized 2.4 mm male test ports.

Applications

S-parameter characterization of microwave and millimeter-wave components to 43.5 GHz, calibration with 2.4 mm kits, and production VNA measurements.

Key Features

Integrated synthesized VNA with built-in S-parameter test set

12.1 inch LCD touch screen and solid-state drive

USB LAN GPIB remote IO

Two-port or four-port option architectures

Low frequency extension hardware options to 900 Hz

Ruggedized 2.4 mm male test ports

Option 200/400 standard test sets with extended-power 217/219/417/419 variants

Technical Specifications

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PARAMETER	VALUE
Model	N5224B
Instrument Type	Microwave vector network analyzer
Instrument Family	PNA Series
Frequency Range Standard	10 MHz to 43.5 GHz
Frequency Range LFE Options	900 Hz to 43.5 GHz (typical 500 Hz to 900 Hz)
Frequency Resolution	1 Hz
Frequency Accuracy	± 1 ppm
Test Port Impedance	50 ohm
Test Port Connector	ruggedized 2.4 mm male
Port Options	2-port Option 200 class or 4-port Option 400 class
Power Resolution	0.01 dB

Maximum Leveled Power 10 MHz to 50 MHz Spec: +12 dBm, Options 200 or 400

Maximum Leveled Power 50 MHz to 16 GHz Spec: +13 dBm, Options 200 or 400

Maximum Leveled Power 35 GHz to 43.5 GHz Spec: +10 dBm, Options 200 or 400

Power Level Accuracy 10 MHz to 50 MHz Spec: ± 1.5 dB at nominal power, all options

Power Level Accuracy 26.5 GHz to 43.5 GHz Spec: ± 2.2 dB at nominal power, all options

Receiver Dynamic Range Typical 10 MHz to 50 MHz: 90 dB typical, Option 200 or 400

Receiver Dynamic Range Typical 1 GHz to 10 GHz: 130 dB typical, Option 200 or 400

Receiver Dynamic Range Typical 10 GHz to 26.5 GHz: 132 dB typical, Option 200 or 400

Receiver Dynamic Range Typical 40 GHz to 43.5 GHz: 124 dB typical, Option 200 or 400

System Dynamic Range 10 MHz to 50 MHz Spec: 87 dB class Option 200/400 tables

Power Sweep Range 10 MHz to 50 MHz Spec: 37 dB, Options 200 or 400

Power Sweep Range 50 MHz to 16 GHz Spec: 38 dB, Options 200 or 400

Specifications

PARAMETER	VALUE
If Bandwidth For Dynamic Range Tables	10 Hz
Display	12.1 inch LCD touch screen
Remote Interfaces	USB LAN GPIB
Operating Temperature Spec	25 C $\pm$ 5 C for warranted specs unless stated
Warm Up Time	90 minutes after turn-on for warranted specs
Form Factor	benchtop PNA

Notes

Numeric rows from Keysight N5224B/N5225B PNA Network Analyzer Technical Specifications with synthesizer revision 6 or earlier. Warranted specs apply at 25 C $\pm$ 5 C after 90 minutes warm-up unless stated. Dynamic-range tables are at 10 Hz IF bandwidth with isolation averaging factor of 8.

Ordering Information

OPTION	DESCRIPTION
Option 200	class or 4-port Option 400 class

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.