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Data Sheet

August 12, 2026

KEYSIGHT / AGILENT

Keysight / Agilent N5249A PNA-X Microwave Network Analyzer, 8.5 GHz

Alias: N5249A; Keysight N5249A; Agilent N5249A Test port connector: 3.5 mm (m) ruggedized
System dynamic range 500 MHz–3.2 GHz: 124 dB Receiver dynamic range 3.2–8.5 GHz
typical: 130 dB Keysight / Agilent N5249A PNA-X Microwave Network Analyzer The N5249A
isaPNA-X microwave vector network analyzer covering 10 MHz to 8.5 GHz. Integrated S-
parameter test set with one or two synthesized sources, solid-state drive, USB, and 10.4" LCD
touch display. Test ports: 50 Ω ruggedized 3.5 mm (m). Configurable as 2-port (Option 200
class) or 4-port (Option 400 class).



MODEL

**Keysight / Agilent
N5249A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5249A

LISTING

[https://aumictechlabs.c
om/products/n5249a-
2/](https://aumictechlabs.com/products/n5249a-2/)

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N5249A PNA-X is a microwave network analyzer operating from 10 MHz to 8.5 GHz, engineered for linear and nonlinear RF device characterization. This instrument integrates multiple test functions - network analyzer, spectrum analyzer, signal sources, noise figure meter, power meters, and switch matrix - into a single platform, eliminating the need for separate equipment and streamlining test architecture. Technical Specifications Frequency Range: 10 MHz to 8.5 GHz IF Bandwidth: 10 Hz minimum Dynamic Range: System dynamic range defined as maximum

leveled output power minus noise floor. Extended dynamic range available at direct access input (specified source maximum output power minus direct receiver access input noise floor). Receiver dynamic range defined as test port compression at 0.1 dB minus noise floor. Trace Noise: 0.002 dB rms at 1 kHz bandwidth Source Output Power: +13 dBm at 1 GHz

Key Features

- S-parameter measurement in CW and pulsed modes
- Noise figure characterization
- Gain compression and 1 dB compression point analysis
- Intermodulation and harmonic distortion measurement
- Conversion gain/loss quantification
- True-differential stimulus capability
- Nonlinear waveform and X-parameter characterization
- Pulsed-RF measurements with point-in-pulse capability at 20 ns minimum pulse width
- Wideband detection supporting pulse widths as narrow as 100 ns
- Hardware filters and patched spectral-nulling with software IF-gating for narrowband detection
- Pulse I/O connector on rear panel for external equipment synchronization
- Two internal signal sources with integrated signal combiner
- Dedicated S-parameter and noise receivers

Configurable test ports: two-port or four-port options

Typical Applications

- Active device characterization and validation
- Antenna performance testing
- Amplifier and mixer measurement
- Component qualification across microwave frequencies

Compatibility & Integration

Noise figure measurement option (029) requires compatible port configuration options. The instrument supports pulse I/O synchronization for integration with external devices and test setups requiring timing correlation. Note: The N5249A is an obsolete model.

Features & description

From manufacturer datasheet

Features

• Frequency range: 10 MHz to 8.5 GHz • Frequency resolution: 1 Hz • Frequency accuracy: ± 1 ppm • Aging: ± 0.1 ppm/yr maximum (typical class) • Test ports: 50 Ω , ruggedized 3.5 mm (m) • Ports: 2-port (Opt 200) or 4-port (Opt 400) configurations • Display: 10.4" LCD touch screen • System dynamic range Opt 200/400 (spec): 93 dB (10–50 MHz); 103 dB (50–100 MHz); 117 dB (100–500 MHz); 124 dB (500 MHz–3.2 GHz); 127 dB (3.2–8.5 GHz) • Receiver dynamic range (typical, all options): 130 dB class (3.2–8.5 GHz band) • Test port noise floor examples (spec ports 1,3): –80 dBm (10–50 MHz) to –114 dBm (3.2–8.5 GHz) class • Max leveled output power examples (spec ports 1,3): +13 dBm (many low bands); +10 dBm (500 MHz–3.2 GHz); +13 dBm (3.2–8.5 GHz) • Source attenuator (Opt 219 class on N5241/42/49): 65 dB in 5 dB steps • Receiver attenuator (Opt 219 class): 35 dB in 5 dB steps + bias tees • Included accessories class: mouse, keyboard, productivity assistance day (config guide)

Applications

• Broadband S-parameter characterization to 8.5 GHz • Active device / mixer / pulsed measurements with PNA-X application options • Multiport and true-differential work (4-port configs) • ATE and R&D microwave component test

N5249A Characteristics / Specifications

PARAMETER	VALUE
Model	N5249A
Manufacturer	Keysight / Agilent
Instrument Type	PNA-X Microwave Network Analyzer
Alias	N5249A; Keysight N5249A; Agilent N5249A
Frequency range	10 MHz to 8.5 GHz
Frequency resolution	1 Hz
Frequency accuracy	±1 ppm
Test port impedance	50 Ω
Test port connector	3.5 mm (m) ruggedized
System dynamic range	100 MHz: 103 dB
System dynamic range 1	500 MHz: 117 dB
System dynamic range 500 MHz	3.2 GHz: 124 dB
System dynamic range 3.	8.5 GHz: 127 dB
Receiver dynamic range 3.	8.5 GHz typical: 130 dB
Display	10.4 inch LCD touch Notes Specs from Keysight N5241A/42A/49A data sheet and technical specifications / configuration guide. Exact options (200/219/400/419, apps) determine attenuators and apps—confirm on the unit.
Aging	±0.1 ppm/yr maximum (typical class)
Test ports	50 Ω, ruggedized 3.5 mm (m)
Ports	2-port (Opt 200) or 4-port (Opt 400) configurations
System dynamic range Opt 200/400 (spec)	93 dB (10–50 MHz); 103 dB (50–100 MHz); 117 dB (100–500 MHz); 124 dB (500 MHz–3.2 GHz); 127 dB (3.2–8.5 GHz)
Receiver dynamic range (typical, all options)	130 dB class (3.2–8.5 GHz band)
Test port noise floor examples (spec ports 1,3)	–80 dBm (10–50 MHz) to –114 dBm (3.2–8.5 GHz) class

PARAMETER	VALUE
Max leveled output power examples (spec ports 1,3)	+13 dBm (many low bands); +10 dBm (500 MHz–3.2 GHz); +13 dBm (3.2–8.5 GHz)
Source attenuator (Opt 219 class on N5241/42/49)	65 dB in 5 dB steps
Receiver attenuator (Opt 219 class)	35 dB in 5 dB steps + bias tees
Included accessories class	mouse, keyboard, productivity assistance day (config guide)

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

Specifications

PARAMETER	VALUE
Model	N5249A
Manufacturer	Keysight / Agilent
Instrument Type	PNA-X Microwave Network Analyzer
Alias	N5249A; Keysight N5249A; Agilent N5249A

Specifications

PARAMETER	VALUE
Frequency range	10 MHz to 8.5 GHz
Frequency resolution	1 Hz
Frequency accuracy	±1 ppm
Test port impedance	50 Ω
Test port connector	3.5 mm (m) ruggedized

System dynamic range 10–50 MHz: 93 dB

System dynamic range 50–100 MHz: 103 dB

System dynamic range 100–500 MHz: 117 dB

System dynamic range 500 MHz–3.2 GHz: 124 dB

System dynamic range 3.2–8.5 GHz: 127 dB

Receiver dynamic range 3.2–8.5 GHz typical: 130 dB

Display: 10.4 inch LCD touch

Notes

Specs from Keysight N5241A/42A/49A data sheet and technical specifications / configuration guide. Exact options (200/219/400/419, apps) determine attenuators and apps-confirm on the unit.

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

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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.