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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight N5242A PNA-X Microwave Network Analyzer, 10 MHz to 26.5 GHz

Agilent N5242A PNA-X Microwave Network Analyzer The Agilent N5242A PNA-X is a nonlinear microwave network analyzer platform combining S-parameters with advanced active-device measurements. OEM PNA-X documentation emphasizes integrated sources/receivers, pulse capability, and application suites for amplifiers, mixers, and converters. Nonlinear amplifier characterization, mixer/converter measurements, pulsed RF device test, and advanced microwave R&D network analysis. Instrument Family: Agilent N5242A PNA-X network analyzer

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MODEL

**Agilent / Keysight
N5242A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N5242A

LISTING

<https://aumictechlabs.com/products/n5242a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N5242A PNA-X is a 10 MHz to 26.5 GHz microwave network analyzer engineered for characterization of active and passive components across R&D and production environments. It consolidates multiple test instruments into a single connection point, eliminating complex external setups. The instrument delivers up to 132 dB system dynamic range with trace noise as low as 0.002 dB rms, enabling precise measurements of S-parameters, noise figure, gain compression, and intermodulation distortion.

Technical Specifications

Frequency Range: 10 MHz to 26.5 GHz

Port Configurations: 2-port standard test set (Option 200) 2-port with internal second source, combiner, and mechanical switches (Option 224) 4-port with internal dual-source and configurable test set (Option 400)

Dynamic Range & Sensitivity: System dynamic range: 132 dB Receiver dynamic range: 130 dB General dynamic range: 127 dB Noise floor: -114 dBm at 10 Hz IFBW Trace noise: 0.002 dB rms at 1 kHz IF bandwidth; 0.005 dB rms at 100 kHz IFBW

Output Power & Harmonic Performance: Maximum output power: +18 dBm Source harmonics: < -60 dBc Power sweep range: 38 dB

Measurement Accuracy: Dynamic accuracy: 0.1 dB compression at +13 dBm input power to receiver

Key Features

- Built-in dual sources with internal signal-routing switches
- S-parameter measurement capability (CW and pulsed modes)
- Noise figure characterization (Option 029 for source-corrected measurements)
- Gain compression and intermodulation/harmonic distortion analysis
- Nonlinear waveform and X-parameter characterization (Option 510/514)
- Time-domain and pulsed-RF measurement modes
- Frequency offset measurements (Option 080)
- Frequency converter measurements (Option 083)
- Spectrum analyzer functionality (Option 090)
- Automatic fixture removal (Option 007)

Typical Applications

- Active and passive microwave device characterization
- Power amplifier and low-noise amplifier testing
- Nonlinear device behavior analysis
- Component validation in R&D and manufacturing quality control

Compatibility & Integration

The analyzer accepts 2-port and 4-port configurations with optional internal components including pulse modulators, signal combiners, and mechanical switching matrices. Multiple application modules extend core measurement functionality across noise, conversion, gain compression, and spectrum analysis domains.

N5242A Characteristics / Specifications

PARAMETER	VALUE
Instrument Family	Agilent N5242A PNAXnetwork analyzer
Measurement Type	S parameter plus nonlinear PNAXapplications
Frequency Coverage Class	Microwave PNAXband by option
Port Count Class	Multiport capable PNAXtest set
Dynamic Range Class	High dynamic range PNAXreceivers
Trace Noise Class	Low trace noise architecture
IF Bandwidth Selections	Wide IFBW range
Calibration Support	Advanced multiport and fixture cal
Source Architecture	Integrated PNAXsources
Display	Embedded PNAXgraphical interface
Remote Interfaces	LAN GPIB
Sweep Modes	Linear segment power and pulsed class sweeps
Connector Class	Precision microwave ports by option
Form Factor	PNAXbenchtop chassis
Application Suite	Noise figure IMDXparameters mixer class
Pulse Capability	Pulsed RF measurement path class
Upgrade Path	Hardware and software option upgradeable
Impedance	50 ohms nominal
Operating Temperature Class	Standard lab environment
Series Family	Agilent PNAXN524x
Nonlinear Measurement Role	Active device characterization
Receiver Architecture	Multiple PNAXreceivers
Bandwidth	Selections: Wide IFBW range
Operating temperature	Class: Standard lab environment

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: Standard lab environment
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Series Family	Agilent PNAXN524x
Nonlinear Measurement Role	Active device characterization
Receiver Architecture	Multiple PNAXreceivers Notes From Agilent/Keysight N5242A PNA-X family documentation. Nonlinear and pulse application limits depend on installed hardware options; confirm option list before quoting.

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	
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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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.