

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N5241A

The Keysight (Agilent) N5241A is a high-performance microwave vector network analyzer (VNA) belonging to the PNA-X series, designed for advanced measurements on active components. It covers a frequency range of 10 MHz to 13.5 GHz and provides 2-port or 4-port configurations with dual built-in sources. Engineered for outstanding accuracy, stability, and speed, the N5241A integrates multiple measurement applications into a single instrument.

SPECIFICATIONS

General

Display	10.4-inch active matrix color LCD touch screen
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Frequency and Power Specifications

Frequency Range	10 MHz to 13.5 GHz
Frequency Resolution	1 Hz
Number of Test Ports	2 or 4 ports (configuration dependent)
Test Port Impedance	50 Ω (nominal)
Test Port Connectors	3.5 mm male

Measurement Speed and Sweep Capabilities

Number of Measurement Channels	32 channels
Sweep Types	Linear, Log, Power, CW, Segmented
Trigger Modes	Continuous, Single, Group, Hold

Measurement Applications and Calibration

S-Parameter Measurement Capability	Standard
Gain Compression Analysis	Supported (Option 086)
Intermodulation Distortion (IMD) Analysis	Supported (Option 087)
Noise Figure Measurement Capability	Supported (Option 029)
Pulsed-RF Measurement Capability	Supported (Options 021/022/025)
Time Domain Analysis	Supported (Option 010)
Frequency Converter Measurements	Supported (Option 083/084)
Electronic Calibration (ECal) Support	Compatible with Keysight N4690 series and other ECal modules

Hardware Configurations and Options

Internal Pulse Modulators	Yes (option dependent)
Internal Pulse Generators	Yes (option dependent)
Bias Tees Maximum Current	500 mA (nominal)
Bias Tees Maximum Voltage	40 VDC (nominal)

System Architecture and Connectivity

Operating System	Windows (embedded)
External Reference Input	10 MHz (rear panel BNC)
External Reference Output	10 MHz (rear panel BNC)
Display Size	10.4 in (264 mm) diagonal
Display Resolution	1024 x 768 (XGA)
Direct Receiver Access Ports	Optional (requires configurable test set options like 219, 224, 419, or 423)
GPIB Interface Ports	1 x 24-pin D-sub (IEEE 488)
External Trigger Inputs	BNC female (rear panel)
External Trigger Outputs	BNC female (rear panel)

Physical and Power Specifications

Line Voltage Range	100 to 240 V AC
Line Frequency Range	50 to 60 Hz
Chassis Height	267 mm (6U)
Chassis Width	426 mm

Environmental and Compliance

Operating Temperature Range	0 to 40 °C
Storage Temperature Range	-40 to +70 °C
Operating Humidity Range	10% to 90% relative humidity, non-condensing
Maximum Operating Altitude	4,600 m (15,000 ft)

Performance

Source Power Resolution	0.01 dB
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Rear Panel Connectivity

Test Set I/O Connector	D-sub 25-pin female, for controlling external test sets
Handler I/O Port	36-pin Centronics female, parallel interface for automated test equipment

Storage

Storage Drive Type	Removable solid-state drive (SSD) or hard disk drive (HDD) (vintage dependent)
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Hardware Configurations

Hardware Option 200	2-port, single source configuration
Hardware Option 219	2-port, single source with configurable test set, source/receiver attenuators, and bias tees
Hardware Option 224	2-port, dual source with configurable test set, source/receiver attenuators, bias tees, and internal combiner
Hardware Option 400	4-port, dual source configuration
Hardware Option 419	4-port, dual source with configurable test set, source/receiver attenuators, and bias tees

General Performance

Warm-up Time	90 min
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Power Specifications

Maximum Power Consumption	450 W
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Rear Panel Connections

LAN Interface Speed	10/100/1000Base-T Ethernet
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Software Options

Software Option 010	Time Domain
Software Option 080	Frequency Offset

TECHNOLOGY

Microwave Vector Network Analyzer (VNA)

APPLICATIONS

Active device characterization, S-parameters, gain compression, IMD, noise figure, pulsed-RF, and millimeter-wave measurements

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.