

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N8975B

The Keysight N8975B is a high-performance Noise Figure Analyzer (NFA) designed to make fast, accurate, and repeatable noise figure and gain measurements up to 26.5 GHz. Part of Keysight's advanced test equipment portfolio, it features an intuitive multi-touch interface and supports a wide range of noise sources, including the smart noise source (SNS) series, making it ideal for characterization of amplifiers, frequency converters, and entire receiver systems.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), LAN (1000Base-T), USB 2.0, USB 3.0, DisplayPort, VGA
Display	10.6-inch (270 mm) multi-touch capacitive LCD, 1280 × 768 resolution
Warm-up Time	45 minutes

Physical

Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	426 mm × 177 mm × 366 mm mm
Weight	15.5 kg kg

Frequency Specifications

Frequency Range	10 MHz to 26.5 GHz
Frequency Resolution	1 Hz
Sweep Points Range	1 to 4001

Noise Figure and Gain Performance

Noise Figure Instrument Uncertainty	±0.02 dB
Noise Figure Resolution	0.01 dB
Gain Measurement Range	-20 to +40 dB
Gain Instrument Uncertainty	±0.15 dB
Gain Resolution	0.01 dB
Noise Temperature Range	0 to 999,990 K
Y-Factor Range	0 to 99 dB

RF Input and Port Characteristics

RF Input Impedance	50 Ω (nominal)
RF Input Connector Type	3.5 mm
Maximum RF Input Power	+15 dBm

Noise Source Drive and Calibration

Noise Source Drive Voltage	28.0 V ± 0.1 V
Noise Source Drive Port	BNC (female)
Smart Noise Source (SNS) Support	Yes, via front-panel 11-pin multi-pin connector
Compatible Noise Sources	Keysight 346 Series, Keysight N4000A/1A/2A SNS Series
Loss Compensation Tables	Yes (Before and After DUT)

Measurement Configuration and Processing

IF Bandwidth Settings	4 MHz, 2 MHz, 1 MHz, 400 kHz, 200 kHz, 100 kHz
Sideband Selection	LSB, USB, DSB

System Connectivity and Control

External LO Support	Yes, compatible with Keysight MXG, EXG, and PSG signal generators
External Reference Input	10 MHz (BNC female)
External Reference Output	10 MHz (BNC female)
Trigger Ports	Trigger In (BNC female), Trigger Out (BNC female)
SCPI Compatibility	Yes
HP 8970B Emulation Mode	Yes

Display and User Interface

Simultaneous Measurement Traces	4
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Power and Physical Characteristics

Rackmount Height Units	4U
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Environmental and Compliance

Storage Temperature Range	-40 to +70 °C
Operating Humidity Limits	Up to 95% RH
Recommended Calibration Cycle	1 Year

Inputs & Outputs

Smart Noise Source (SNS) Connector	Front panel 11-pin connector
Noise Source Drive Connector	BNC female
External Reference Input Connector	BNC female, 50 ohm (nominal)
External Reference Output Connector	BNC female, 50 ohm (nominal)
Trigger Input Connector	BNC female
Trigger Output Connector	BNC female

Power & Safety

Power Consumption	350 W maximum
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Compliance

EMC Compliance	Complies with European EMC Directive 2014/30/EU, IEC/EN 61326-1, CISPR 11 Class A
Safety Compliance	Complies with European Low Voltage Directive 2014/35/EU, IEC/EN 61010-1

Power Requirements

AC Input Voltage	100 to 120 V AC / 220 to 240 V AC
AC Input Frequency	50/60 Hz (all voltages), 400 Hz (100 to 120 V AC)

Interfaces

Rear Panel USB Ports	4 x USB 2.0 Type-A
LAN Interface Speed	10/100/1000 Mbps (1000Base-T)
Video Output Ports	1 x DisplayPort, 1 x DVI-I

System Configuration

Storage Drive Type	Removable Solid-State Drive (SSD)
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Environmental

Operating Altitude	Up to 3,000 meters (9,843 feet)
Storage Altitude	Up to 4,572 meters (15,000 feet)

User Interface

Display Screen Size	10.6-inch (269 mm) diagonal
Display Screen Type	Capacitive multi-touch color LCD

TECHNOLOGY

Noise Figure Analyzer

APPLICATIONS

Noise figure and gain characterization of RF/microwave components and systems

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