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Data Sheet

August 5, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) N4001A

Keysight (Agilent) N4001A SNS Series Noise Source, 10 MHz to 18 GHz, Nominal ENR 15 dB

The Keysight N4001A is an SNS Series smart noise source covering 10 MHz to 18 GHz with nominal ENR about 15 dB (specified ENR range 14–16 dB). General-purpose Y-factor noise-figure measurements for DUTs up to about 30 dB NF. Electronically stored ENR downloads automatically to compatible NFA / X-Series analyzers; on-board temperature sensing. APC 3.5 (m) standard; Type-N (m) Option 001. General-purpose NF measurement to ~30 dB; automated Y-factor with NFA/X-Series; production RF NF test. The Keysight N4001A is an SNS Series smart noise source covering 10 MHz to 18 GHz with nominal ENR about 15 dB (specified ENR range 14–16 dB). General-purpose Y-factor noise-figure measurements for DUTs up to about 30 dB NF. Electronically stored ENR downloads automatically to compatible NFA / X-Series analyzers; on-board temperature sensing. APC 3.5 (m) standard; Type-N (m) Option 001. General-purpose NF measurement to ~30 dB; automated Y-factor with NFA/X-Series; production RF NF test.

**MODEL****Keysight / Agilent
N4001A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****N4001A****LISTING**<https://aumictechlabs.com/products/n4001a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight N4001A is an SNS Series Smart Noise Source engineered for precision noise figure measurements spanning 10 MHz to 18 GHz. This instrument delivers a nominal excess noise ratio (ENR) of 15 dB with tight control (14–16 dB range), making it ideal for characterizing RF

components including receivers and amplifiers. The N4001A automates calibration workflows through electronic ENR data storage and automatic download to compatible Keysight analyzers, eliminating manual entry and reducing setup errors.

Technical Specifications

Frequency Range: 10 MHz to 18 GHz
Nominal ENR: 15 dB (range: 14–16 dB)
Impedance: 50 Ω nominal
Maximum Reverse Power: 1 W
Operating Temperature: 0 °C to 55 °C
Connector: APC 3.5(m) standard; Type-N(m) optional (Option 001)
Dimensions: 112 × 38 × 30 mm
Weight: 0.160 kg

Key Features

Automatic ENR Download: Electronic calibration data transfers directly to NFA Series Noise Figure Analyzers and X-Series signal analyzers, eliminating manual calibration entry

Internal Temperature Compensation: Built-in temperature sensing applies real-time compensation to calibration data, tightening measurement uncertainty across operating range

Electronically Stored Calibration: ENR calibration coefficients embedded in the noise source reduce user error and streamline deployment

Low Reflection Coefficient: Designed for general-purpose noise figure applications with predictable return loss

Measurement Capability: Accurately resolves noise figures up to 30 dB

Typical Applications The N4001A is suited for noise figure characterization of low-noise amplifiers, receiver front-ends, and RF components where stable, repeatable noise injection is required. Temperature-compensated ENR ensures consistent accuracy across laboratory and field environments.

Compatibility & Integration The N4001A integrates with Keysight NFA Series Noise Figure Analyzers and X-Series signal analyzers (PXA, MXA, EXA, CXA models). Interconnection requires a compatible SNS cable: 11730A (1.5 m), 11730B (3.0 m), or 11730C (6.1 m). The 11730A is provided as standard.

Features & description

From manufacturer datasheet

Features

- Frequency: 10 MHz to 18 GHz
- ENR: nominal 15 dB; range 14–16 dB
- Auto ENR download to NFA / X-Series
- Temperature sensing for compensation
- Connectors: APC 3.5 (m) standard; Type-N (m) Option 001
- Compatible SNS cable (11730A class) required

N4001A Characteristics / Specifications

PARAMETER	VALUE
Model	N4001A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	SNS Series Smart Noise Source
Family	SNS Series (N4000A / N4001A / N4002A)
Alias	N4001A; Agilent N4001A RF
Frequency Range	10 MHz to 18 GHz
ENR Range	14 to 16 dB (nominal ~15 dB)
Suitable DUT NF	up to about 30 dB SWR / Reflection (max) 0.01–1.5 GHz: < 1.15:1 (ρ 0.07) 1.5–3.0 GHz: < 1.15:1 (ρ 0.07) 3.0–7.0 GHz: < 1.20:1 (ρ 0.09) 7.0–18.0 GHz: < 1.25:1 (ρ 0.11) ENR Uncertainty (characteristic, Option A1R class) 0.01–1.5 GHz: ±0.14 dB 1.5–3.0 GHz: ±0.13 dB 3.0–7.0 GHz: ±0.13 dB 7.0–18.0 GHz: ±0.16 dB
Frequency	10 MHz to 18 GHz
ENR	nominal 15 dB; range 14–16 dB
Connectors	APC 3.5 (m) standard; Type-N (m) Option 001

N4001A Specifications

PARAMETER	VALUE
Applications	General-purpose NF measurement to ~30 dB; automated Y-factor with NFA/X-Series; production RF NF test.
Key Features	- Frequency: 10 MHz to 18 GHz
Technical Specifications	Model: N4001A
SWR / Reflection (max)	0.01–1.5 GHz: < 1.15:1 (p 0.07)
Operational Notes	N4000A is the 6 dB ENR low-NF sibling; N4002A extends to 26.5 GHz. Prefer Keysight SNS Technical Overview 5988-0081EN.

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	N4001A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	SNS Series Smart Noise Source
Family	SNS Series (N4000A / N4001A / N4002A)
Alias	N4001A; Agilent N4001A

RF

Specifications

PARAMETER	VALUE
Frequency Range	10 MHz to 18 GHz
ENR Range	14 to 16 dB (nominal ~15 dB)
Suitable DUT NF	up to about 30 dB

SWR / Reflection (max)

0.01–1.5 GHz: < 1.15:1 (ρ 0.07)

1.5–3.0 GHz: < 1.15:1 (ρ 0.07)

3.0–7.0 GHz: < 1.20:1 (ρ 0.09)

7.0–18.0 GHz: < 1.25:1 (ρ 0.11)

ENR Uncertainty (characteristic, Option A1R class)

0.01–1.5 GHz: ±0.14 dB

1.5–3.0 GHz: ±0.13 dB

3.0–7.0 GHz: ±0.13 dB

7.0–18.0 GHz: ±0.16 dB

Operational Notes

N4000A is the 6 dB ENR low-NF sibling; N4002A extends to 26.5 GHz. Prefer Keysight SNS Technical Overview 5988-0081EN.

Ordering Information

OPTION	DESCRIPTION
Option 001	Compatible SNS cable (11730A class) required

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