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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight ESA-NFA Series N4002A Kit

HP Agilent Keysight N4002A SNS Series Noise Source 10 MHz to 26.5 GHz ENR 15 dB The Keysight N4002A is an SNS Series noise source covering 10 MHz to 26.5 GHz with ENR range 12 to 17 dB (nominal 15 dB) and APC-3.5 (m) connector. OEM SNS technical overview 5988-0081EN and operating guide list maximum SWR, reflection coefficient, and characteristic ENR uncertainty by band, plus temperature-compensated ENR download to NFA. Noise-figure measurements of amplifiers, converters, and receivers up to 26.5 GHz with DUT noise figures to 30 dB. The Keysight N4002A is an SNS Series noise source covering 10 MHz to 26.5 GHz with ENR range 12 to 17 dB (nominal 15 dB) and APC-3.5 (m) connector. OEM SNS technical overview 5988-0081EN and operating guide list maximum SWR, reflection coefficient, and characteristic ENR uncertainty by band, plus temperature-compensated ENR download to NFA. Noise-figure measurements of amplifiers, converters, and receivers up to 26.5 GHz with DUT noise figures to 30 dB. Electronic ENR storage and automatic download to NFA



MODEL	CALIBRATION
Agilent / Keysight N4002A	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
N4002A	https://aumictechlabs.com/products/n4002a-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The N4002A is a Smart Noise Source (SNS) Series noise figure application kit engineered to extend the measurement capabilities of ESA, NFA, and X-Series spectrum analyzers. It delivers precise noise figure characterization for devices up to 30 dB across a broad frequency spectrum,

with integrated intelligence that reduces setup time and minimizes measurement uncertainty through automatic calibration data management and real-time temperature compensation.

Technical Specifications

Frequency Range: 10 MHz to 26.5 GHz

Excess Noise Ratio (ENR): 15 dB nominal; 12 to 17 dB range

Noise Figure Measurement Capability: Up to 30 dB DUT noise figure

Input/Output Connector: APC 3.5 (mm) standard; Type-N available (Option 001)

VSWR: 1.35:1

Operating Temperature Range: 0 to 55°C

Key Features

Smart Noise Source Technology

Electronic ENR calibration data storage eliminates manual entry and associated user error. Automatic ENR data download to compatible analyzers accelerates measurement setup.

Integrated Temperature Sensing

On-board temperature measurement enables real-time compensation of ENR calibration data, tightening measurement accuracy across operating conditions.

Direct Analyzer Integration

Native compatibility with ESA and NFA series analyzers; extended support for PXA, MXA, EXA, and CXA signal analyzers through standard SNS cable interface.

Typical Applications

Low-noise amplifier (LNA) characterization and acceptance testing

RF receiver chain noise figure verification

Broadband amplifier noise performance validation from microwave through millimeter-wave frequencies

Compatibility & Integration

The N4002A operates with ESA and NFA series spectrum analyzers as primary platforms. Extended compatibility encompasses Keysight X-Series signal analyzers (PXA, MXA, EXA, CXA). Operation requires an SNS cable assembly (e.g., 11730A). Complete operating and service documentation, along with RF and microwave noise figure application notes, are available for the SNS Series product family.

N4002A Characteristics / Specifications

PARAMETER	VALUE
Model	N4002A
Instrument Type	SNS Series noise source
Frequency Range	10 MHz to 26.5 GHz
Enr Range	12 to 17 dB
Nominal Enr	15 dB
Output Connector	APC 3.5 male
Maximum Swr 0p01 To 7p0 Ghz	less than 1.22 to 1
Maximum Swr 7p0 To 18p0 Ghz	less than 1.25 to 1
Maximum Swr 18p0 To 26p5 Ghz	less than 1.35 to 1
Reflection Coefficient 0p01 To 7p0 Ghz	0.10
Reflection Coefficient 7p0 To 18p0 Ghz	0.11
Reflection Coefficient 18p0 To 26p5 Ghz	0.15
Enr Uncertainty 0p01 To 1p5 Ghz	plus or minus 0.15 dB characteristic
Enr Uncertainty 1p5 To 3p0 Ghz	plus or minus 0.13 dB characteristic
Enr Uncertainty 3p0 To 7p0 Ghz	plus or minus 0.13 dB characteristic
Enr Uncertainty 7p0 To 18p0 Ghz	plus or minus 0.15 dB characteristic
Enr Uncertainty 18p0 To 26p5 Ghz	plus or minus 0.22 dB characteristic
Enr Variation With Temperature	less than 0.01 dB perCfrom 30 MHz to 26.5 GHz
Temperature Sensor Range	0 to 55 C
Temperature Sensor Resolution	0.25 C
Temperature Sensor Accuracy At 25 C	plus or minus 1 C
Net Weight	0.160 kg (5.64 oz)
Dimensions	112 × 38 × 30 mm
Dut Noise Figure Class	up to 30 dB
Related 18 Ghz High Enr	N4001A 14 to 16 dB

PARAMETER	VALUE
Related 18 Ghz Low Enr	N4000A 4.5 to 6.5 dB

N4002A Specifications

PARAMETER	VALUE
Applications	Noise-figure measurements of amplifiers, converters, and receivers up to 26.5 GHz with DUT noise figures to 30 dB.
Temperature sensing for compensated measurements	APC 3.5 male output as standard
Technical Specifications	Model: N4002A

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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Model	N4002A
Instrument Type	SNS Series noise source
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Reflection Coefficient 7p0 To 18p0 Ghz	0.11
Reflection Coefficient 18p0 To 26p5 Ghz	0.15
Enr Uncertainty 0p01 To 1p5 Ghz	plus or minus 0.15 dB characteristic
Enr Uncertainty 1p5 To 3p0 Ghz	plus or minus 0.13 dB characteristic
Enr Uncertainty 3p0 To 7p0 Ghz	plus or minus 0.13 dB characteristic
Enr Uncertainty 7p0 To 18p0 Ghz	plus or minus 0.15 dB characteristic
Enr Uncertainty 18p0 To 26p5 Ghz	plus or minus 0.22 dB characteristic
Enr Variation With Temperature	less than 0.01 dB perCfrom 30 MHz to 26.5 GHz
Temperature Sensor Range	0 to 55 C
Temperature Sensor Resolution	0.25 C
Temperature Sensor Accuracy At 25 C	plus or minus 1 C
Net Weight	0.160 kg (5.64 oz)
Dimensions	112 x 38 x 30 mm
Dut Noise Figure Class	up to 30 dB
Related 18 Ghz High Enr	N4001A 14 to 16 dB
Related 18 Ghz Low Enr	N4000A 4.5 to 6.5 dB

Notes

From Keysight SNS Series N4000A/N4001A/N4002A technical overview 5988-0081EN and SNS operating/service guide specification tables. ENR uncertainty rows are OEM characteristic values (90 percent of instruments, 90 percent confidence).

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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<https://aumictechlabs.com>

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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.