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**Data Sheet**
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KEYSIGHT / AGILENT

# Keysight (Agilent) 346A

Keysight (Agilent) 346A Noise Source, 10 MHz to 18 GHz The Keysight/Agilent/HP 346A isabroadband avalanche-diode noise source covering 10 MHz to 18 GHz with low ENR (typically ~5–7 dB / 4.5–6.5 dB range). Low SWR and very small ON-to-OFF reflection-coefficient change minimize noise-figure uncertainty on reflection-sensitive DUTs such as amplifiers and mixers. Individually calibrated ENR tables support NFA and classic 8970B loading. Noise-figure meter calibration; LNA/receiver NF and gain characterization; general RF NF measurements where low ENR reduces mismatch error. The Keysight/Agilent/HP 346A isabroadband avalanche-diode noise source covering 10 MHz to 18 GHz with low ENR (typically ~5–7 dB / 4.5–6.5 dB range). Low SWR and very small ON-to-OFF reflection-coefficient change minimize noise-figure uncertainty on reflection-sensitive DUTs such as amplifiers and mixers. Individually calibrated ENR tables support NFA and classic 8970B loading. Noise-figure meter calibration; LNA/receiver NF and gain characterization; general RF NF measurements where low ENR reduces mismatch error.


| MODEL | CALIBRATION |
|---|---|
| Keysight / Agilent 346A | Available on request |
| **CONDITION** | **STATUS** |
| Used | In stock |
| **RFQ / SKU** | **LISTING** |
| 346A | https://aumictechlabs.com/products/346a-2/ |

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

## This unit

The Keysight 346A is a broadband noise source engineered for precise noise figure measurements spanning 10 MHz to 18 GHz. It delivers a stable, individually calibrated noise output with nominal 6 dB excess noise ratio (ENR), making it the standard choice for noise figure meter

calibration and amplifier noise characterization. The instrument minimizes measurement uncertainty through controlled reflection characteristics and 50 Ohm output impedance.Technical Specifications Frequency Range: 10 MHz to 18 GHz Excess Noise Ratio (ENR): 6 dB nominal (4.5 to 6.5 dB range, 5 to 7 dB limits) VSWR: Less than 1.3:1 Reflection Coefficient Change (ON to OFF): Less than 0.01 Output Impedance: 50 Ohms Power Requirement: +28 VDC, 100 mA Dimensions: 21 mm W × 30 mm D × 140 mm H (0.8 in × 1.2 in × 5.5 in)Key Features Individually calibrated ENR data at discrete frequencies supplied with each unit Calibration data optimized for direct loading into NFA Series analyzers Separate reflection coefficient characterization (ON and OFF states) included Multiple output connector options: 3.5 mm male (standard), Type-N male (Option 001), APC-7 (Option 002), Type-N female (Option 004) BNC female bias input connectorTypical Applications Noise figure meter calibration and verification Low-noise amplifier characterization Receiver noise performance analysis System-level noise figure validationCompatibility & Integration Works directly with Keysight NFA Series Noise Figure Analyzers, ESA-E Series, PNA-X, PSA Series, X-Series (PXA, MXA, EXA, CXA), and the 8970B Noise Figure Meter.

## Features & description

From manufacturer datasheet

### Features

• Frequency range: 10 MHz to 18 GHz • ENR limits: 5 to 7 dB; ENR range typically 4.5 to 6.5 dB; ~5–6 dB nominal class • Maximum SWR (ON and OFF): 1.3 (10–30 MHz); 1.15 (30 MHz–5 GHz); 1.25 (5–18 GHz) • Reflection coefficient (Rho) examples: 0.13 (0.01–0.03 GHz); 0.07 (0.03–5 GHz); 0.11 (5–18 GHz) • ON-to-OFF reflection change: <0.01 class (346A design goal for sensitive DUTs) • Impedance: 50 Ω nominal • Power required: 28 ±1 Vdc (≈60 mA peak / 30 mA average ON, family table); BNC (f) bias • RF connector (standard): APC-3.5 (male); options Type-N (m) Opt 001, APC-7 Opt 002, Type-N (f) Opt 004 • ENR variation with temperature: <0.01 dB/°C (30 MHz–26.5 GHz family statement) • Switching speed (repetitive): turn-on <20 µs; turn-off <80 µs • Size: ~21 × 140 × 31 mm; weight ~0.1 kg (3.5 oz) • Compatible with Keysight NFA, X-Series, PNA-X, ESA-E, 8970B and related NF instruments

## 346A Characteristics / Specifications

| PARAMETER | VALUE |
|---|---|
| **Model** | 346A |
| **Manufacturer** | Keysight Technologies (Agilent / HP) |
| **Instrument Type** | Noise Source |
| **Family** | 346 Series |
| **Alias** | 346A; Agilent 346A; HP 346A RF / ENR 10 MHz–18 GHz; ENR ~5–7 dB; low SWR; +28 V bias Operational Notes Prefer Keysight 346A/B/C operating manual 9018-01420. Use the unit's printed/loaded ENR calibration table. Related: 346B (~15 dB to 18 GHz), 346C (to 26.5 GHz). |
| **Frequency range** | 10 MHz to 18 GHz |
| **ENR limits** | 5 to 7 dB; ENR range typically 4.5 to 6.5 dB; ~5–6 dB nominal class |
| **Maximum SWR (ON and OFF)** | 1.3 (10–30 MHz); 1.15 (30 MHz–5 GHz); 1.25 (5–18 GHz) |
| **Reflection coefficient (Rho) examples** | 0.13 (0.01–0.03 GHz); 0.07 (0.03–5 GHz); 0.11 (5–18 GHz) |
| **ON-to-OFF reflection change** | <0.01 class (346A design goal for sensitive DUTs) |
| **Impedance** | 50 Ω nominal |
| **Power required** | 28 ±1 Vdc (≈60 mA peak / 30 mA average ON, family table); BNC (f) bias |
| **RF connector (standard)** | APC-3.5 (male); options Type-N (m) Opt 001, APC-7 Opt 002, Type-N (f) Opt 004 |
| **ENR variation with temperature** | <0.01 dB/°C (30 MHz–26.5 GHz family statement) |
| **Switching speed (repetitive)** | turn-on <20 µs; turn-off <80 µs |
| **Size** | ~21 × 140 × 31 mm; weight ~0.1 kg (3.5 oz) |

## 346A Specifications

| PARAMETER | VALUE |
| --- | --- |
| **Applications** | Noise-figure meter calibration; LNA/receiver NF and gain characterization; general RF NF measurements where low ENR reduces mismatch error. |
| **Key Features** | - Frequency range: 10 MHz to 18 GHz |
| **Technical Specifications** | Model: 346A |
| **RF / ENR** | 10 MHz–18 GHz; ENR ~5–7 dB; low SWR; +28 V bias |

# 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** | 346A |
| **Manufacturer** | Keysight Technologies (Agilent / HP) |
| **Instrument Type** | Noise Source |
| **Family** | 346 Series |
| **Alias** | 346A; Agilent 346A; HP 346A |

RF / ENR
10 MHz–18 GHz; ENR ~5–7 dB; low SWR; +28 V bias

Operational Notes
Prefer Keysight 346A/B/C operating manual 9018-01420. Use the unit’s printed/loaded ENR calibration table.
Related: 346B (~15 dB to 18 GHz), 346C (to 26.5 GHz).

## 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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