KEYSIGHT TECHNOLOGIES (AGILENT HP)

R347B

The Keysight (Agilent) R347B is a high-performance R-band waveguide noise source operating in the 26.5 to 40 GHz frequency range. Designed to enable precise and convenient noise figure and gain measurements on millimeter-wave devices, the R347B features exceptional Excess Noise Ratio (ENR) stability over time, minimizing calibration frequency and ensuring repeatable test results. Its solid-state design and low SWR offer excellent reliability for advanced RF and microwave laboratory testing.

SPECIFICATIONS

General

Interfaces	BNC (female) drive input

Physical

Power Supply	+28 V ± 1 V (pulsed from noise figure analyzer/source)
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	41 mm × 41 mm × 135 mm mm
Weight	0.18 kg

RF Performance

Frequency Range	26.5 to 40.0 GHz
Waveguide Band	R-band
Excess Noise Ratio (ENR)	5 to 13 dB
Maximum SWR	1.35 (source ON or OFF)
Waveguide Size	WR-28
Waveguide Flange	UG-599/U (compatible with MIL-F-3922/54-003)

Electrical & Drive

Drive Voltage (Source On)	+28 V ± 1 V

Environmental

Storage Temperature Range	-55 to +75 °C
Maximum Operating Altitude	4,570 m (15,000 ft)
Maximum Storage Altitude	15,240 m (50,000 ft)
Operating Humidity	Up to 95% RH at 40 °C

Calibration

Recommended Calibration Interval	1 year
Calibrated Frequency Points	26.5 to 40 GHz in 1 GHz steps

Performance

Calibration Frequency Intervals	1 GHz steps
Nominal ENR	5 to 13 dB

Connectivity

Bias Connector	BNC (f)

Compatibility

Compatible Instruments	Keysight NFA series noise figure analyzers, legacy HP 8970B noise figure meter

TECHNOLOGY

Solid-state diode

APPLICATIONS

Noise figure and gain measurements of millimeter-wave components