

KEYSIGHT TECHNOLOGIES (AGILENT HP)

R8486D

The Keysight (Agilent) R8486D waveguide diode power sensor is designed for high-accuracy average power measurements in the Ka-band (26.5 GHz to 40.0 GHz). It features a dynamic range of -70 dBm to -20 dBm, exceptional SWR of 1.40 to minimize mismatch uncertainty, and a built-in 50 MHz calibration port that simplifies setup by eliminating the need for an external 30 dB attenuator.

SPECIFICATIONS

General

Interfaces	UG-599/U waveguide flange, Type-N (male) 50 MHz calibration port, 12-pin sensor cable connector
------------	---

Physical

Power Supply	Powered by compatible power meter via sensor cable
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	48 mm × 38 mm × 113 mm mm
Weight	0.5 kg kg

Frequency & Power Characteristics

Frequency Range	26.5 GHz to 40.0 GHz
Power Measurement Range	-70 to -20 dBm (100 pW to 10 μW)
Maximum Continuous Average Power	100 mW (+20 dBm)
Maximum Peak Power	100 mW (+20 dBm)
Maximum SWR	1.40
Power Linearity	negligible
Frequency Band	Ka-band

Measurement Accuracy & Calibration

Zero Set (EPM / P-Series)	±20 pW
Zero Set (437B / 438A)	±20 pW
Zero Set (435B / 436A)	±200 pW
Zero Drift (1 hour, EPM / P-Series)	±4 pW
Zero Drift (1 hour, 437B / 438A)	±4 pW
Measurement Noise (EPM / P-Series)	< 110 pW
Measurement Noise (437B / 438A)	< 110 pW
Calibration Port Frequency	50 MHz
Calibration Port Nominal Coupling	30 dB
Traceability	NIST traceable

RF Interface & Waveguide Specifications

Waveguide Size	WR-28
EIA Waveguide Designation	WR-28
IEC Waveguide Designation	R320
Waveguide Flange Type	UG-599/U
Flange Compatibility	MIL-F-3922/54-003
Sensor Element Type	Diode
Calibration Port Connector	Type-N (male)

System Compatibility

Compatible Power Meters	Keysight EPM, EPM-P, P-Series, VXI E1416A, 70100A, 435B, 436A, 437B, 438A
Sensor Connector	12-pin multi-conductor male

Environmental & Safety Standards

Storage Temperature Range	-40 to 75 °C
Relative Humidity	95% RH at 40 °C (non-condensing)
Operating Altitude	Up to 4,572 m (15,000 ft)
Storage Altitude	Up to 15,240 m (50,000 ft)
Vibration Standards	Tested to MIL-STD-28800D Class 3

TECHNOLOGY

Diode Power Sensing

APPLICATIONS

RF and Microwave Power Measurement

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