

KEYSIGHT TECHNOLOGIES (AGILENT HP)

R8486A

The Keysight R8486A is a high-performance thermocouple waveguide power sensor designed for accurate average power measurements in the Ka-band (26.5 GHz to 40 GHz). It features an exceptionally low SWR of 1.40 to minimize mismatch uncertainty, a 50 MHz calibration port for precise traceability to NIST standards, and broad compatibility with Keysight's EPM, EPM-P, and P-series power meters, as well as legacy systems like the 43X series.

SPECIFICATIONS

General

Interfaces	Proprietary 12-pin connector (for connection to power meter via sensor cable)
Display	None (uses host power meter display)
Compatible Sensor Cables	Keysight 11730 series

Physical

Power Supply	Powered directly by the connected power meter via sensor cable
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	38 mm × 49 mm × 121 mm mm
Weight	0.31 kg kg

Measurement Ranges & Power Specifications

Frequency Range Minimum	26.5 GHz
Frequency Range Maximum	40 GHz
Power Measurement Range Minimum	-30 dBm
Power Measurement Range Maximum	+20 dBm
Power Measurement Range	-30 dBm to +20 dBm (1 µW to 100 mW)

Sensor Technology & Architecture

Sensor Detection Type	Thermocouple
Measurement Modes Supported	Average Power

RF Port Characteristics

RF Connector Type	Waveguide flange, UG-599/U
Waveguide Size	WR-28
Maximum SWR	1.40

Accuracy, Calibration & Noise

Calibration Port	50 MHz reference calibration port
Calibration Traceability	US National Institute of Standards and Technology (NIST)

Meter Compatibility & System Integration

Compatible Power Meters	EPM, EPM-P, P-series, E1416A VXI, discontinued 70100A, discontinued 43X series (e.g., 435B, 436A, 437B, 438A)
-------------------------	---

Maximum Ratings

Maximum Continuous Input Power	300 mW (+25 dBm)
Maximum Peak Input Power	15 W (for pulse width < 10 μs)

RF Interface

Waveguide Flange Type	UG-599/U
-----------------------	----------

Environmental

Storage Temperature Range	-55 to +75 °C
Operating Humidity	Up to 95% RH at 40 °C (non-condensing)

Inputs & Outputs

Calibration Port Connector	APC-3.5 (male)
----------------------------	----------------

Calibration

Calibration Port Reference Frequency	50 MHz
--------------------------------------	--------

TECHNOLOGY

Thermocouple

APPLICATIONS

RF & 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.