

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8481B

The Keysight 8481B (formerly Agilent / HP) is a high-power coaxial thermocouple RF power sensor designed for measuring average power from 10 MHz to 18 GHz. Equipped with an integrated 30 dB attenuator, the 8481B reliably measures power levels from 0 dBm to +44 dBm (1 mW to 25 W). It delivers low SWR to minimize mismatch uncertainty and is compatible with Keysight EPM, EPM-P, and P-series power meters, as well as legacy 43X and VXI power meters.

SPECIFICATIONS

General

Interfaces	None (analog connection to host power meter via standard 11730A cable)
Display	None (uses host power meter display)

Physical

Power Supply	Powered directly by the host power meter
Operating Temperature	0 to 55 °C °C
Weight	0.8 kg

RF Performance Specifications

Frequency Range	10 MHz to 18 GHz
Power Measurement Range (dBm)	0 to +44 dBm
Power Measurement Range (Watts)	1 mW to 25 W
Maximum Continuous Input Power (CW)	30 W average to 35 °C, derated linearly to 25 W average at 55 °C
Maximum Peak Input Power	500 W
Nominal Impedance	50 Ω
Sensor Technology Type	Thermocouple with integrated 30 dB attenuator

Measurement Accuracy and Sensitivity

Zero Set (Noise)	±50 μW
Zero Drift	±10 μW (within 1 hour at constant temperature)

Calibration and Reference Standards

Internal EEPROM Calibration Table Support	No (calibration factors printed on label for manual entry)
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Mechanical & Connector Specifications

RF Input Connector Type	N-type (male)
Integral Cable Length	None (requires separate 11730A-series cable)

Physical Characteristics

Weight (Net)	0.8 kg
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Environmental and Compliance Specifications

Operating Temperature Range	0 to 55 °C
Storage Temperature Range	-40 to +75 °C

System Compatibility & Options

Compatible Power Meters	Keysight EPM, EPM-P, P-series, E1416A VXI, discontinued 70100A, and discontinued 43X series
Required Sensor Cable	Keysight 11730A (or other 11730 series cables)

RF Attenuator

Attenuator Value	30 dB
Attenuator Power Rating	25 W average

Performance

Measurement Noise	< 110 µW
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Calibration

Calibration Reference Frequency	50 MHz
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TECHNOLOGY

Thermocouple

APPLICATIONS

RF 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.