

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E9300H

The Keysight (formerly Agilent) E9300H is an E-series diode-attenuator-diode average power sensor designed for high-accuracy RF and microwave power measurements. Operating across a broad frequency range from 10 MHz to 18 GHz, it delivers accurate average power measurements of all modulation formats over a wide 80 dB dynamic range (-50 to +30 dBm). Its extremely low SWR minimizes mismatch errors, and built-in EEPROM calibration factors ensure excellent repeatability without manual entries.

SPECIFICATIONS

General

Interfaces	Bulkhead connector for E9288 series sensor cables
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Physical

Power Supply	Powered directly from the host power meter via sensor cable
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	38 mm × 30 mm × 121 mm mm
Weight	0.18 kg

Measurement Ranges & Power Specifications

Frequency Range Minimum	10 MHz
Frequency Range Maximum	18 GHz
Power Measurement Range Minimum	-50 dBm
Power Measurement Range Maximum	+30 dBm
Dynamic Range	80 dB
Maximum Continuous Input Power	+33 dBm (average)
Maximum Peak Input Power	+33 dBm (<10 microseconds duration)

Sensor Technology & Architecture

Sensor Detection Type	Diode-attenuator-diode topology
Measurement Modes Supported	Average power
Modulation Independence	Bandwidth independent, supports all modulation formats

RF Port Characteristics

Input Impedance	50 Ω nominal
RF Connector Type	Type-N
Connector Sex	Male
Maximum SWR (10 MHz to 8 GHz)	1.15
Maximum SWR (8 GHz to 12.4 GHz)	1.25
Maximum SWR (12.4 GHz to 18 GHz)	1.28

Accuracy, Calibration & Noise

Calibration Factor Storage Type	Internal EEPROM
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Meter Compatibility & System Integration

Compatible Power Meter Models	Keysight EPM (e.g. E4418, E4419), EPM-P, and P-series
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Performance

Zero Set	5 nW
Zero Drift	1.5 nW (within 1 hour at constant temperature)
Measurement Noise	7 nW
Power Linearity (-50 to -10 dBm)	±3.0%
Power Linearity (-10 to +20 dBm)	±4.0%
Power Linearity (+20 to +30 dBm)	±5.0%
Calibration Uncertainty (at 50 MHz)	±1.8% (at 25 °C ± 10 °C)

Environmental

Storage Temperature Range	-55 °C to +75 °C
Operating Humidity	95% RH at 40 °C (non-condensing)
Maximum Operating Altitude	4,600 m (15,000 ft)
Maximum Storage Altitude	15,240 m (50,000 ft)
Vibration Specification	Complies with MIL-T-28800D, Type III, Class 5
Shock Specification	Complies with MIL-T-28800D, Type III, Class 5

Sensor Technology

Sensor Topology	Diode-attenuator-diode
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TECHNOLOGY

Diode-attenuator-diode topology

APPLICATIONS

RF and Microwave Average Power Measurement

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