

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E9325A

The Keysight E9325A is a high-performance peak and average diode power sensor designed for use with EPM-P and P-Series power meters. It covers a frequency range of 50 MHz to 18 GHz and features a 300 kHz video bandwidth, making it ideal for time-gated measurements on TDMA wireless systems including GSM, EDGE, and NADC.

SPECIFICATIONS

General

Interfaces	Proprietary sensor cable interface to host power meter
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Physical

Power Supply	Powered by host power meter via sensor cable
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	150 mm x 38 mm x 30 mm mm
Weight	0.18 kg kg
Shipping Weight	0.55 kg (1.2 lb)

Frequency and Power Specifications

Frequency Range	50 MHz to 18 GHz
Minimum Operating Frequency	50 MHz
Maximum Operating Frequency	18 GHz
Power Measurement Range (Average Mode)	-65 dBm to +20 dBm
Power Measurement Range (Normal Mode)	-50 dBm to +20 dBm
Maximum Continuous Power	+23 dBm (200 mW) average
Maximum Peak Power	+30 dBm (1 W) peak for < 10 μs
Maximum Allowed DC Voltage	5 V

RF Impedance and Impedance Matching

Nominal Impedance	50 Ω
SWR (50 MHz to 2 GHz)	1.12
SWR (2 GHz to 10 GHz)	1.16
SWR (10 GHz to 16 GHz)	1.23
SWR (16 GHz to 18 GHz)	1.28
RF Connector Type	Precision Type-N (male)

Dynamic and Pulse Characteristics

Video Bandwidth (High Setting)	300 kHz
Video Bandwidth (Medium Setting)	100 kHz
Video Bandwidth (Low Setting)	30 kHz
Rise/Fall Time (High Bandwidth Setting)	< 0.9 μ s
Rise/Fall Time (Medium Bandwidth Setting)	< 3.2 μ s
Rise/Fall Time (Low Bandwidth Setting)	< 10 μ s
Measurement Speed	Up to 1000 corrected readings per second (via GPIB)

Measurement Accuracy and Uncertainty

Zero Drift (Normal Mode)	1.5 nW
Zero Drift (Average Only Mode)	< $\pm$ 60 pW
Measurement Noise (Normal Mode)	< 6 nW (free run acquisition)
Measurement Noise (Average Only Mode)	< 165 pW

Calibration and Compatibility

EEPROM Calibration Memory	Stores calibration factors, linearity, temperature, and bandwidth correction
Compatible Power Meters	Keysight EPM-P series (E4416A, E4417A) and P-Series (N1911A, N1912A)

Environmental Conditions

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

Accuracy & Calibration

Calibration Factor Uncertainty (50 MHz)	1.8% (at 25 °C $\pm$ 5 °C)
Calibration Factor Uncertainty (0.1 GHz to 2 GHz)	1.8% (at 25 °C $\pm$ 5 °C)
Calibration Factor Uncertainty (2 GHz to 10 GHz)	2.4% (at 25 °C $\pm$ 5 °C)
Calibration Factor Uncertainty (10 GHz to 16 GHz)	2.4% (at 25 °C $\pm$ 5 °C)
Calibration Factor Uncertainty (16 GHz to 18 GHz)	2.6% (at 25 °C $\pm$ 5 °C)
Linearity (Average Only Mode, -65 to -10 dBm)	$\pm$ 3.0% (at 25 °C $\pm$ 5 °C)
Linearity (Average Only Mode, -10 to +20 dBm)	$\pm$ 4.5% (at 25 °C $\pm$ 5 °C)
Linearity (Normal Mode, -50 to -10 dBm, Peak)	$\pm$ 4.0% (at 25 °C $\pm$ 5 °C)
Linearity (Normal Mode, -10 to +20 dBm, Average)	$\pm$ 5.0% (at 25 °C $\pm$ 5 °C)
Linearity (Normal Mode, -10 to +20 dBm, Peak)	$\pm$ 4.5% (at 25 °C $\pm$ 5 °C)

System Connectivity

Compatible Sensor Cables	E9288A (1.5 m), E9288B (3 m), E9288C (10 m)
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Power Specifications

Power Measurement Range (Normal Mode, Low Bandwidth)	-50 dBm to +20 dBm
Power Measurement Range (Normal Mode, Medium Bandwidth)	-45 dBm to +20 dBm
Power Measurement Range (Normal Mode, High Bandwidth)	-40 dBm to +20 dBm
Maximum Peak Power Duration	< 1 μ s

Accuracy & Noise

Zero Set (Normal Mode, Low Bandwidth)	5.0 nW
Zero Set (Normal Mode, Medium Bandwidth)	12.5 nW
Zero Set (Normal Mode, High Bandwidth)	25.0 nW
Zero Set (Average Only Mode)	0.5 nW

Operation

Sensor Warm-up Time	30 minutes
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Environmental

Maximum Operating Altitude	4,600 m (15,000 ft)
Maximum Non-Operating Altitude	15,240 m (50,000 ft)
Storage Humidity Range	Up to 90% RH at 65 °C (non-condensing)

Compliance

EMC Compliance	IEC 61326-1 / EN 61326-1, CISPR 11 / EN 55011 Group 1 Class A
Safety Standards	IEC 61010-1 / EN 61010-1, CSA C22.2 No. 61010-1

TECHNOLOGY

Diode Power Sensor

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.