

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E4416A

The Keysight (formerly Agilent/HP) E4416A is a high-performance single-channel EPM-P series peak and average power meter. Designed for complex modulation formats, it provides a 20 MSa/s continuous sampling rate for reliable single-shot and time-gated measurements. When paired with E9320 series peak and average power sensors, it delivers up to 5 MHz of video bandwidth and extensive statistical analysis capabilities, making it ideal for characterizing broadband wireless and radar signals.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), RS-232/422
Display	High-resolution LCD with backlighting

Physical

Power Supply	100 to 240 VAC, 50/60/400 Hz, 50 VA max
Operating Temperature	0 to 55 °C
Dimensions (W×H×D)	212.6 × 88.5 × 348.3 mm
Weight	4.0 kg

Measurement Capabilities

Number of Channels	1
Frequency Range	9 kHz to 110 GHz (sensor dependent)
Power Range	-70 to +44 dBm (sensor dependent)
Measurement Modes	Peak, average, peak-to-average ratio, time-gated, free run
Supported Sensor Series	E9320, E9300, E-series CW, 8480 series
Number of Time Gates	4
E9320 Series Dynamic Range	70 dB maximum (normal mode); 85 dB maximum (average only mode)
E9300 Series Dynamic Range	80 dB maximum
E-series CW Dynamic Range	90 dB maximum
8480 Series Dynamic Range	50 dB maximum

Accuracy and Calibration

1 mW Reference Power Level	1.000 mW (0.0 dBm)
1 mW Reference Frequency	50 MHz
1 mW Reference Connector	Type-N (female)

Video and Timing Characteristics

Sample Rate	20 MSa/s
Maximum Video Bandwidth	5 MHz (with E932x sensors)

Display Characteristics

Display Resolution (Logarithmic)	Selectable 1.0, 0.1, 0.01, 0.001 dB
Display Resolution (Linear)	1 to 4 significant digits
Offset Range	±100 dB in 0.001 dB increments

Rear Panel Inputs and Outputs

Trigger Input Connector Type	BNC (female)
Trigger Output Connector Type	BNC (female)
Analog Recorder Output Connector	BNC (female)

Physical Specifications

Rackmount Unit (RU) Size	2U (Half-rack width)
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Performance

Measurement Speed	Up to 1,000 readings/s (fast mode over GPIB)
Instrumentation Accuracy (Logarithmic)	± 0.02 dB (Average mode)
Instrumentation Accuracy (Linear)	± 0.5% (Average mode)

Measurement & Control

Averaging Settings	1 to 1024
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Triggering

Internal Triggering	Yes
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Power & Environmental

Power Consumption	50 VA max
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Inputs & Outputs

Rear Panel Connectivity (Option 002)	Rear-panel sensor input and rear-panel reference
Rear Panel Connectivity (Option 003)	Rear-panel sensor input and reference calibrator
Analog Recorder Output Voltage	0 to 1 Vdc (into ≥ 1 kΩ)
Analog Recorder Output Impedance	1 kΩ

Software & Control

Programming Compatibility	SCPI, HP 437B, Agilent EPM series
Supported Standards	IEEE 488.2

Environmental

Storage Temperature	-20 °C to +70 °C
Maximum Operating Altitude	3,000 m (9,840 ft)
Maximum Storage Altitude	15,240 m (50,000 ft)

TECHNOLOGY

RF & Microwave Power Measurement

APPLICATIONS

Wireless communications test, radar pulse measurement, component test

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