

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E4417A

The Keysight (Agilent/HP) E4417A is a high-performance, dual-channel EPM-P series power meter designed for precise peak, average, peak-to-average ratio, and time-gated power measurements. Delivering a 20 MSa/s continuous sampling rate, it provides reliable single-shot and continuous measurements on wide-bandwidth complex signals when paired with E9320 series peak and average power sensors. It features extensive backward compatibility with existing standard and CW sensors, and is equipped with multiple pre-defined configurations for common wireless communication formats.

SPECIFICATIONS

General

Interfaces	GPIB, RS-232, RS-422
Display	LCD with LED backlight
Warm-up Time	30 minutes

Physical

Operating Temperature	0 to 55 °C
Dimensions (W×H×D)	212.6 x 88.5 x 348.3 mm mm
Weight	4.1 kg kg

Measurement Characteristics

Number of Channels	2
Compatible Sensors	E9320 peak and average, E-series CW, E9300 average, 8480 series
Measurement Modes	Peak, Average, Peak-to-Average Ratio, Time-Gated, Free Run
Frequency Range	9 kHz to 110 GHz (sensor dependent)
Power Range	-70 to +44 dBm (sensor dependent)
Sampling Rate	20 MSa/s continuous
Display Resolution (Logarithmic)	1.0, 0.1, 0.01, 0.001 dB selectable
Display Resolution (Linear)	1 to 4 significant digits selectable
Offset Range	±100 dB in 0.001 dB increments
Pre-defined Wireless Configurations	GSM, EDGE, NADC, iDEN, Bluetooth, IS-95 CDMA, W-CDMA, cdma2000
Single Sensor Dynamic Range (E9320 Normal Mode)	Up to 70 dB
Single Sensor Dynamic Range (E9320 Average Only Mode)	Up to 85 dB
Single Sensor Dynamic Range (E-series CW)	90 dB maximum
Single Sensor Dynamic Range (E9300)	80 dB maximum
Single Sensor Dynamic Range (8480 Series)	50 dB maximum

Time-Domain and Peak Specifications

Video Bandwidth	5 MHz (with E9320 sensors)
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Trigger Specifications

Trigger Sources	Internal (with E9320 sensors), External, Continuous (Free Run)
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Interfaces and Connectivity

Trigger Input Connector	BNC (female), rear panel
Trigger Output Connector	BNC (female), rear panel
Analog Recorder Output Connector	BNC (female), rear panel

Power Reference Calibration

Power Reference Output Level	1.00 mW (0.0 dBm)
Power Reference Frequency	50 MHz nominal
Reference Connector Type	Type-N (female), 50 Ω

Power

Power Consumption	50 VA maximum
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Performance

Measurement Speed (GPIB)	Up to 1000 readings/s
Time Gates	4 independent time gates per channel
Power Reference Uncertainty	± 1.2% (worst case, 1 year)

Triggering

Trigger Delay Range	0 to 400 ms (1 µs resolution)
Trigger Holdoff Range	1 µs to 400 ms (1 µs resolution)

Inputs & Outputs

Analog Output Voltage Range	0 to 1 V (into 1 kΩ load)
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Measurement Features

Channel Math Functions	A/B, B/A, A-B, B-A and relative ratio
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Software & Control

Instrument State Storage	10 registers (Save/Recall)
Remote Programming Language	SCPI

Trigger

Trigger Input Logic	TTL compatible
Trigger Output Logic	TTL compatible

Compliance

Electromagnetic Compatibility	EN 55011 / CISPR 11 Group 1 Class A
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TECHNOLOGY

RF / Microwave

APPLICATIONS

Peak and Average 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.