

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E4407B

The Keysight (formerly Agilent / HP) E4407B is a 26.5 GHz mid-performance spectrum analyzer belonging to the ESA-E Series. Designed for general-purpose RF and microwave measurements in both laboratory and field environments, it offers a standard frequency range of 9 kHz to 26.5 GHz (extendable down to 100 Hz with optional configuration). Key features include an overall amplitude accuracy of ± 0.4 dB, a 10 MHz analysis bandwidth, and a highly sensitive displayed average noise level (DANL) of -167 dBm when utilizing the internal preamplifier.

SPECIFICATIONS

General

Calibration Cycle	1 year
EMC/EMI Compliance	CISPR Pub 11 Group 1 Class A

Physical

Power Supply	90 to 132 V (47-440 Hz) / 195 to 250 V (47-66 Hz); < 300 W
Operating Temperature	0 to 55 °C
Dimensions (W×H×D)	416 × 222 × 409 mm
Weight	17.1 kg

Frequency Specifications

Frequency Range	9 kHz to 26.5 GHz (100 Hz to 26.5 GHz with Option UKB)
Phase Noise @ 10 kHz Offset	≤ -90 dBc/Hz (1 GHz carrier)
Sweep Time Range	1 ms to 4000 s (Span > 0 Hz), 50 μ s to 4000 s (Zero Span)

Amplitude Specifications

Absolute Amplitude Accuracy	± 0.4 dB overall
Maximum Safe Continuous CW Power	+30 dBm (1 W)
Input Attenuator Range	0 to 65 dB in 5 dB steps

Inputs and Outputs

Front Panel RF Input Connector	APC-3.5 mm (male)
RF Input Impedance	50 Ω

General and Environmental

Warm-up Time	5 minutes to guaranteed measurement accuracy
Storage Temperature Range	-40 to +75 °C

Frequency

Span Range	0 Hz (zero span), 100 Hz to 26.5 GHz
Timebase Aging Rate (Standard)	$\pm 2 \times 10^{-6}$ / year
Timebase Aging Rate (Option 1D5)	$\pm 1 \times 10^{-7}$ / year

Inputs & Outputs

Timebase Reference Input/Output	10 MHz
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Amplitude

Amplitude Reference Signal	50 MHz, -20 dBm
Reference Level Range	-149.9 dBm to +30 dBm
Amplitude Units	dBm, dBmV, dBμV, V, W
Standard Detectors	Normal, positive peak, sample, negative peak
Log Scale Fidelity	± 0.3 dB (0 to -60 dB from reference level)
Residual Responses	<-90 dBm (0 dB attenuation, 50 Ω load)

Options & Enhancements

Tracking Generator Frequency (Option 1DN)	9 kHz to 3.0 GHz
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Frequency Performance

Phase Noise @ 100 kHz Offset	≤ -113 dBc/Hz (typical ≤ -117 dBc/Hz)
Phase Noise @ 1 MHz Offset	≤ -119 dBc/Hz (typical ≤ -127 dBc/Hz)

Sweep Specifications

Sweep Points	401
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Options & Configurations

Time-Gated Spectrum Analysis	Available via Option 1D6
DSP and Fast ADC	Available via Option B7D

TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

RF & Microwave test, general purpose spectrum analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.