

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E7402A

The Keysight (formerly Agilent) E7402A is an EMC precompliance spectrum analyzer in the E7400 A-Series, designed to provide fast, accurate, and cost-effective electromagnetic interference (EMI) diagnostics and measurements. Covering a frequency range from 9 kHz to 3.0 GHz (extendable down to 100 Hz), the E7402A features built-in preamplifiers, CISPR-compliant resolution bandwidths, and dedicated detectors for comprehensive radiated and conducted emission testing.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), RS-232, Parallel (Centronics), VGA Monitor Output
Display	16.8 cm (6.6 in) TFT Color LCD, 640 x 480 resolution

Physical

Power Supply	90 to 132 V rms (47 to 440 Hz), 195 to 250 V rms (47 to 66 Hz), < 300 W power consumption
Operating Temperature	0 °C to +55 °C °C
Dimensions (W×H×D)	373 mm × 222 mm × 409 mm mm
Weight	17.1 kg kg

Frequency Specifications

Frequency Range	9 kHz to 3.0 GHz (100 Hz to 3.0 GHz with Option UKB)
Warm-up Time	5 minutes
Frequency Reference Accuracy	$\pm 2 \times 10^{-6}$ / year (standard); $\pm 1 \times 10^{-7}$ / year (with Option 1D5)
Frequency Span Range	0 Hz (zero span), 100 Hz to 3.0 GHz

Resolution & Video Bandwidth (RBW/VBW)

Resolution Bandwidths (3 dB)	1 kHz to 5 MHz in 1-3-10 sequence (10 Hz to 300 Hz with Option 1DR)
EMI Bandwidths (6 dB)	200 Hz, 9 kHz, 120 kHz, 1 MHz (CISPR 16-1 compliant)
Video Bandwidths (VBW)	10 Hz to 3 MHz (1 Hz to 3 MHz with Option 1DR)

Amplitude & Sensitivity Specifications

Maximum Safe RF Input Level	+30 dBm (1 W) with ≥ 15 dB input attenuation
Input Attenuator Range	0 to 60 dB in 5 dB steps
Amplitude Measurement Range	DANL to +30 dBm

Measurement Capabilities & Detectors

Detector Modes	Peak, Negative Peak, Sample, RMS, Average, Quasi-Peak, EMI Average
Amplitude Corrections	Antenna, Cable, LISN, and User-defined Correction Factors
Limit Lines	Multi-limit testing with Margin visual/audible alarms
AM/FM Demodulation	Standard, with built-in speaker and headphone jack

Inputs, Outputs & Interfaces

RF Input Connector	Type-N female, 50 ohms nominal
Calibration Output (Cal Out)	50 MHz, -20 dBm (nominal), BNC female

System & Data Storage

Removable Media Drive	3.5 inch, 1.44 MB floppy disk drive
Programming Language Support	SCPI and IVI COM driver
Software Compatibility	Keysight E7415A EMI measurement software, Benchlink Web Remote

Options and Accessories

Built-in Preamplifier	Standard (1 MHz to 3.0 GHz)
Tracking Generator Option	Option 1DN (50 ohms, 9 kHz to 1.5 GHz)
Time-Gated Spectrum Analysis Option	Option 1D6

Environmental and Compliance

Storage Temperature	-40 °C to +75 °C
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Sweep

Sweep Time (Span > 0 Hz)	1 ms to 4000 s
Sweep Time (Zero Span)	12.5 µs to 6000 s

Noise & Distortion

Second Harmonic Distortion	<-75 dBc (+45 dBm SHI) for 10 MHz to 1.5 GHz (with -30 dBm at mixer)
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Amplitude Accuracy

Absolute Amplitude Accuracy	±0.4 dB (at 50 MHz)
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Power

Power Consumption	< 150 W
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Storage

Internal Storage Capacity	Up to 200 states or traces
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Frequency

Low Frequency Extension (Option UKB)	Down to 100 Hz
Standard Resolution Bandwidths (3 dB)	1 kHz to 5 MHz (in 1-3-10 sequence)
Optional Narrow Resolution Bandwidths (Option 1DR)	10 Hz, 30 Hz, 100 Hz, 300 Hz

Amplitude & Sensitivity

Input Impedance (Standard)	50 ohms
Input Impedance (Option 1DP)	75 ohms
Reference Level Range	-149.9 dBm to +30 dBm
Calibration Output Frequency	50 MHz
Calibration Output Level	-20 dBm

Inputs & Outputs

Standard Remote Interfaces	GPIB, RS-232, Parallel (Centronics)
VGA Monitor Output	15-pin D-sub, VGA compatible

Tracking Generator

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

Operating Humidity	Up to 95% RH (non-condensing)
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TECHNOLOGY

Superheterodyne Spectrum Analyzer / EMI Receiver

APPLICATIONS

EMI/EMC Precompliance Testing & RF Diagnostics

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