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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 8591EM

The HP/Agilent 8591EM isastand-alone 8590 EM Series EMC precompliance analyzer covering 9 kHz to 1.8 GHz. OEM 8590 C/E/L/Q and EM Series documentation lists EMI analysis and spectrum-analyzer modes in one portable instrument, with built-in amplitude correction and limit lines. Radiated and conducted EMI precompliance; precompliance on products with clock frequencies up to 108 MHz; general-purpose spectrum analysis without changing instruments. Dual EMI and spectrum-analyzer operating modes Built-in measurement routines for automated EMC scans Acoustic Noise Pressure: less than 37.5 dBA Form Factor: portable EMC analyzer based on 8590 E-series Tracking Generator Option Family: Optional tracking generator Option 010, 100 kHz to 1.8 GHz Rf Output Frequency Range Option 010 Family: 100 kHz to 1.8 GHz on 8591EM; 9 kHz to 2.9 GHz on 8593EM/8595EM/8596EM Option 010 table

MODEL **Agilent / Keysight 8591EM**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **8591EM**	LISTING **https://aumictechlabs.com/products/8591em-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8591EM is a portable EMI analyzer that combines spectrum analyzer and EMI receiver functionality for pre-compliance testing and electromagnetic interference diagnostics. Built on the Agilent 8590 E-series platform, this stand-alone instrument automates EMC precompliance measurements without requiring external computers or software. It measures and stores up to 239 signals across specified frequency ranges, applies limit-line comparisons against

two regulatory standards plus user-defined margins, and executes predefined CISPR band routines with correct video and resolution bandwidths.Technical Specifications Frequency Performance Frequency range: 9 kHz to 1.8 GHz DC-coupled operation: 9 kHz to 1.8 GHz AC-coupled operation: 1 MHz to 1.8 GHz Frequency sweep time: 20 µs to 100 s (span 0 Hz, >1 kHz) Standard frequency accuracy: 7.5 ppm; optional precision reference improves to 1×10^{-8} Frequency stability with precision reference: 1×10^{-8} Amplitude Characteristics Displayed average noise level: approximately -115 dBm (–115 to –113 dBm) Amplitude range: -115 dBm to +137 dBµV Maximum safe input: +30 dBm average continuous (attenuator ≥10 dB), +30 dBm peak pulse, 25 Vdc Reference level range: -115 to +30 dBm (50 Ω) Calibrated amplitude range: +30 to +130 dBm (with Option 130) Calibrated on-screen display: 70 dB dynamic range Resolution and Bandwidth Resolution bandwidths: 1 kHz to 3 MHz standard; optional 30 Hz to 3 MHz (1, 3, 10 sequence) EMI bandwidths: 200 Hz, 9 kHz, 120 kHz, 1 MHz (6 dB); narrow bandwidths (30, 100, 200 EMI, 300 Hz) available on optional circuit card Video bandwidth: 1 Hz to 1 MHz (1, 3, 10 sequence) RBW switching uncertainty: ±0.4 dB (3 kHz to 3 MHz); ±0.5 dB (1 kHz)Key Features Dual-mode operation: EMI analysis and spectrum analysis Automated signal detection and documentation up to 239 signals per measurement session Dual limit-line display for regulatory compliance comparison CISPR band setup automation with integrated bandwidth correction Amplitude correction built-in Supports products with clock frequencies to 108 MHzTypical Applications EMC pre-compliance testing Diagnostic EMI measurements Radiated and conducted emissions screening Product development and troubleshootingCompatibility & Integration The 8591EM operates as a fully autonomous platform, eliminating dependency on external software or host computers for automated EMI workflows.

Features & description

From manufacturer datasheet

Built-in measurement routines for automated EMC scans

Limit-line displays and transducer-factor corrections Optional tracking generator Option 010, 100 kHz to 1.8 GHz Portable 8590 EM architecture (no external automation computer required) Technical Specifications Model: 8591EM Instrument Type: EMC precompliance analyzer Series Family: HP 8590 EM Series Frequency Range: 9 kHz to 1.8 GHz Emi Analysis Mode: built-in automated EMC precompliance (no external PC required) Spectrum Analysis Mode: full-function 8590 E-series spectrum analyzer via mode key Amplitude Correction: built-in correction for antenna, amplifier, and cable losses Limit Lines: limit-line displays for EMI masks Span Accuracy Span ≤10 MHz Times N: ±2% of span Span Accuracy Span Greater 10 MHz Times N: ±3% of span Residual Fm 1 Khz Rbw 8591 Class: ≤250 Hz pk-pk in 100 ms (8591E family table) Operating Temperature: 0 C to 55 C Storage Temperature: minus 40 C to +75 C Line Voltage: 90 to 132 or 198 to 264 V rms class E-series sheet Line Frequency: 47 to 66 Hz Power Consumption: less than 500 VA class E-series sheet Acoustic Noise Pressure: less than 37.5 dBA Zero Span: 0 Hz supported Remote Interface: HP-IB Form Factor: portable EMC analyzer based on 8590 E-series Tracking Generator Option Family: Optional tracking generator Option 010, 100 kHz to 1.8 GHz

8591EM Characteristics / Specifications

PARAMETER	VALUE
Model	8591EM
Instrument Type	EMC precompliance analyzer
Series Family	HP 8590 EM Series
Frequency Range	9 kHz to 1.8 GHz
Emi Analysis Mode	built-in automated EMC precompliance (no external PC required)
Spectrum Analysis Mode	full-function 8590 E-series spectrum analyzer via mode key
Amplitude Correction	built-in correction for antenna, amplifier, and cable losses
Limit Lines	limit-line displays for EMI masks
Span Accuracy Span Greater 10 MHz Times N	±3% of span
Residual Fm 1 Khz Rbw 8591 Class	≤250 Hz pk-pk in 100 ms (8591E family table)
Operating Temperature	0 C to 55 C
Storage Temperature	minus 40 C to +75 C
Line Voltage	90 to 132 or 198 to 264 V rms class E-series sheet
Line Frequency	47 to 66 Hz
Power Consumption	less than 500 VA class E-series sheet
Acoustic Noise Pressure	less than 37.5 dBA
Zero Span	0 Hz supported
Remote Interface	HP-IB
Form Factor	portable EMC analyzer based on 8590 E-series
Tracking Generator Option Family	Optional tracking generator Option 010, 100 kHz to 1.8 GHz
Rf Output Frequency Range Option 010 Family	100 kHz to 1.8 GHz on 8591EM; 9 kHz to 2.9 GHz on 8593EM/8595EM/8596EM Option 010 table
Resolution Readout	four digits or 20 Hz times N, whichever greater
System Related Sidebands Offset Greater 30 Khz	≤ minus 65 dBc + 20 logNclass E-series

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 C to +75 C
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Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

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Notes
Frequency span from Agilent 8590 C/E/L/Q and EM Series model table. Shared residual-FM, span-accuracy, environmental, and power rows from HP 8590 E-Series Portable Spectrum Analyzers product specifications (EM series is based on the E-series platform). Expand the exact EM verification-guide column before denser upload of detector/CISPR tables.

Ordering Information

OPTION	DESCRIPTION
Option 010	Family: 100 kHz to 1.8 GHz on 8591EM; 9 kHz to 2.9 GHz on 8593EM/8595EM/8596EM Option 010 table

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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