

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8564EC

The Keysight Agilent HP 8564EC is a high-performance portable spectrum analyzer with a frequency range of 9 kHz to 40 GHz. Combining the rugged portability of the legacy 8560 series with a modern, high-contrast color active matrix LCD display, the 8564EC provides outstanding phase noise, sensitivity, and dynamic range alongside standard time-gated measurements and fast digital resolution bandwidths.

SPECIFICATIONS

Physical

Operating Temperature	0 °C to +55 °C °C
Weight	17.3 kg kg

Frequency Specifications

Frequency Range	9 kHz to 40 GHz
Frequency Span Accuracy	±1% of span
Internal Reference Frequency Aging Rate	< 1 × 10 ⁻⁷ / year (with standard oven reference)
Internal Reference Frequency Temperature Stability	< ±1 × 10 ⁻⁸ (0 °C to 55 °C)
Phase Noise (10 kHz Offset)	<-113 dBc/Hz @ 1 GHz carrier
Phase Noise (100 kHz Offset)	<-117 dBc/Hz @ 1 GHz carrier
Resolution Bandwidth (RBW) Range	1 Hz to 2 MHz (in 1, 3, 10 sequence)
Resolution Bandwidth Selectivity (60 dB / 3 dB Ratio)	< 5:1 (1 Hz to 100 Hz), < 15:1 (300 Hz to 2 MHz)
Video Bandwidth (VBW) Range	1 Hz to 3 MHz (in 1, 3, 10 sequence)
Preselector Band 1 Range	2.75 GHz to 6.46 GHz
Preselector Band 2 Range	5.86 GHz to 13.0 GHz
Preselector Band 3 Range	12.4 GHz to 26.8 GHz
Preselector Band 4 Range	26.5 GHz to 40.0 GHz

Amplitude Specifications

Measurement Range	DANL to +30 dBm
Maximum Safe RF Input Power	+30 dBm (1 W) continuous
Maximum DC Input Voltage	0 Vdc (DC coupled)
Input Attenuator Range	0 to 70 dB
Input Attenuator Steps	10 dB
1 dB Gain Compression Point (10 MHz to 2.9 GHz)	-5 dBm
Amplitude Calibration Accuracy	±0.3 dB @ 300 MHz

Sweep & Triggering

Sweep Time Range (Span > 0 Hz)	50 ms to 100 s
Sweep Time Range (Zero Span)	50 μ s to 6000 s
Sweep Trigger Sources	Free Run, Line, External, Video

Inputs & Outputs

RF Input Connector Type	2.4 mm male
RF Input Impedance	50 ohms (nominal)
RF Input VSWR (< 2.9 GHz)	< 1.5:1 (with $\geq$ 10 dB attenuation)
External Reference Input Frequency	10 MHz
Reference Output Frequency	10 MHz
1st LO Output Connector	SMA female
1st LO Output Level	+14.5 to +18.5 dBm
2nd IF Input Connector	SMA female
2nd IF Input Frequency	310.7 MHz
Sweep Output Connector	BNC female (rear panel)
Video Output Connector	BNC female (rear panel)
External Trigger Input Connector	BNC female (rear panel)

Environmental & Compliance

Warm-up Time	5 minutes from standby
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Options & Accessories

Option 006	30 Hz Low-Frequency Extension
Option 908	Rackmount kit without handles
Option 909	Rackmount kit with handles

Frequency Response

Frequency Response (Flatness, Band 4)	$\pm$ 3.0 dB (26.5 to 40.0 GHz)
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Input Specifications

Maximum Safe Peak RF Input Power	100 W (<10 μ s pulse width, <1% duty cycle, with $\geq$ 10 dB attenuation)
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Front Panel Outputs

Calibrator Output Frequency	300 MHz
Calibrator Output Level	-10 dBm
Probe Power Output	+15 VDC, -12.6 VDC at 150 mA max

Rear Panel Inputs/Outputs

Sweep Output Level	0 to 10 V ramp
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Power Requirements

AC Power Voltage	115 VAC nominal (90 to 140 VAC) / 230 VAC nominal (180 to 250 VAC)
AC Power Frequency	47 Hz to 440 Hz (115 VAC), 47 Hz to 66 Hz (230 VAC)

Phase Noise

Phase Noise (30 kHz Offset)	<= -113 dBc/Hz @ 1 GHz carrier
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Options

Digital RBW and Oven Ref Deletion (Option 103)	Deletes 1 Hz to 100 Hz digital RBWs and 1D5 oven reference
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TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

RF and Microwave Signal 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.