

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8565E

The Keysight (formerly Agilent/HP) 8565E is a high-performance portable millimeter-wave spectrum analyzer offering continuous sweep and measurement capabilities from 30 Hz to 50 GHz using a single coaxial connection. It provides precision benchtop performance, including a precision timebase, exceptional phase noise, and fast digital resolution bandwidths down to 1 Hz, all within a MIL-T-28800 ruggedized enclosure designed to withstand harsh environmental conditions.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488)
Warm-up Time	5 minutes (to meet specifications)

Physical

Power Supply	115 VAC (+10/-25%, 47-440 Hz) / 230 VAC (+10/-15%, 47-66 Hz); 180 W max
Operating Temperature	-10 to +55 °C

Frequency Specifications

Frequency Range	30 Hz to 50 GHz
Preselection	Preselected above 2.75 GHz
Sweep Capability	Continuous 30 Hz to 50 GHz sweep
Resolution Bandwidth (RBW) Range	1 Hz to 2 MHz
Digital Resolution Bandwidths	1, 3, 10, 30, and 100 Hz
Video Bandwidth (VBW) Range	1 Hz to 3 MHz
Marker Frequency Counter Resolution	1 Hz
Phase Noise (1 GHz Carrier)	-113 dBc/Hz @ 10 kHz offset
Internal Reference Frequency	10 MHz

Sweep Specifications

Sweep Time Range (Span > 0 Hz)	50 ms to 100 s
Sweep Time Range (Zero Span)	50 μ s to 100 s

Amplitude Specifications

Maximum Safe Input Power	+30 dBm (1 W) continuous
Input Attenuator Range	0 to 70 dB in 10 dB steps

Inputs and Outputs

RF Input Connector	2.4 mm (male)
RF Input Impedance	50 Ω

Signal Processing & Display

Standard Measurements

Adjacent-channel power (ACP), channel power, carrier power, occupied bandwidth percentage, time-gated measurements

Environmental and Compliance

Ruggedness Standard

MIL-T-28800 Class 3

Amplitude

Amplitude Units

dBm, dBmV, dBμV, Volts, Watts

Detector Modes

Normal, Peak, Negative Peak, Sample

Calibration Output Frequency

300 MHz ±(300 MHz × frequency reference accuracy)

Calibration Output Level

-10 dBm ±0.3 dB

Sweep

Sweep Trigger Modes

Free run, Line, External, Video

Inputs & Outputs

10 MHz Reference Output Level

0 dBm nominal

External Reference Input Frequency

10 MHz

External Reference Input Level

-10 to +10 dBm

IF Output Frequency

310.7 MHz

Performance

Measurement Range

DANL to +30 dBm

Log Amplitude Scale

1, 2, 5, 10, and 15 dB/div

Frequency

Frequency Reference Aging

$< 1 \times 10^{-7}$ / year

Marker Frequency Resolution

Span / 600

Display & Traces

Number of Trace Points

600

Sweep Capability

Sweep Time Accuracy (Span > 0 Hz)

±10%

Sweep Time Accuracy (Zero Span)

±1% (sweep time ≥ 30 ms), ±0.1% (sweep time < 30 ms)

Environmental

Storage Temperature

-40 °C to +75 °C

TECHNOLOGY

Superheterodyne Spectrum Analysis

APPLICATIONS

Microwave and Millimeter-Wave Test, Digital Radio, Adjacent-Channel Power (ACP) Testing, Occupied Bandwidth, Phase Noise Measurements

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