

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E5080B

The Keysight E5080B ENA is an advanced, high-performance vector network analyzer that combines the flexible capabilities of the ENA series with the software architecture of the PNA series. It supports a wide range of frequencies across multiple configurations, scaling from 9 kHz up to 53 GHz, making it an ideal single-instrument solution for comprehensive R&D and manufacturing tests. Beyond traditional S-parameter measurements, the E5080B offers broad application options including spectrum analysis, pulsed-RF, noise figure, and advanced time-domain analysis.

SPECIFICATIONS

General

Interfaces	USB (Host/Device), LAN (10/100/1000Base-T), GPIB, DisplayPort
Display	12.1-inch WXGA color touchscreen (1280 x 800)
Warm-Up Time	60 minutes

Physical

Power Supply	100 to 240 VAC, 50/60 Hz
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General Characteristics

Number of Ports	2 or 4 (option dependent)
System Impedance	50 Ω
Internal Operating System	Windows 10

Frequency Characteristics

Frequency Range (Low-Frequency Options)	9 kHz to 4.5, 6.5, 9, 14, or 20 GHz (by option)
Frequency Range (High-Frequency Options)	100 kHz to 26.5, 32, 44, or 53 GHz (by option)
Frequency Resolution	1 Hz
Internal Reference Oscillator	10 MHz

Test Port Output (Source)

Internal RF Sources	Single source (2-port), Dual source (4-port) (configuration dependent)
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System Performance

System Dynamic Range	Up to 152 dB (typical, with direct receiver access)
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Measurement Capabilities and Options

Standard Measurements	S-parameters (S11, S21, S12, S22, etc.), absolute power, receiver ratios
Number of Data Points per Sweep	1 to 100,001
Advanced Analysis Options	Spectrum analysis, noise figure, pulsed-RF, time domain, gain compression, mixer/converter measurements (option dependent)
Error Correction	Standard mechanical calibration, Electronic Calibration (ECal), Automatic Fixture Removal (AFR)

Interfaces and Connectivity

External Reference Input	10 MHz, BNC (f)
External Reference Output	10 MHz, BNC (f)
External Trigger Input	BNC (f)
External Trigger Output	BNC (f)

Environmental and Compliance

Recommended Calibration Cycle	1 year
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Physical and Power Specifications

Test Port Connector Type	Type-N (f), 3.5 mm (m), 2.4 mm (m), or 1.85 mm (m) (frequency option dependent)
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Measurement

Sweep Types	Linear frequency, log frequency, segment sweep, power sweep
Display Formats	Log/linear magnitude, phase, group delay, Smith chart, polar, SWR, real, imaginary

Performance

IF Bandwidth Range	1 Hz to 15 MHz
Source Power Resolution	0.01 dB

Physical & General

Data Storage	Removable Solid State Drive (SSD)
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Software & Control

Remote Programming Interfaces	SCPI, LXI Class C, IVI-COM, IVI-C
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Calibration

Supported Calibration Methods	Mechanical SOLT, ECal, Unknown Thru, TRL, LRM
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Advanced Features

Fixture Simulator Functions	Port matching, embedding / de-embedding, impedance conversion, balanced measurements
Trace Math	Data / Memory, Data - Memory, Data * Memory, Data + Memory

Hardware Options

Built-in Bias Tees	Available (configuration dependent)
Internal Second Source	Available (configuration dependent on select 4-port models)
Internal Pulse Modulators	Available (hardware option dependent)

TECHNOLOGY

Vector Network Analyzer

APPLICATIONS

RF and Microwave Component Testing, Amplifier and Mixer Characterization, Antenna Test, High-Speed Digital Interconnect Analysis

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