

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8753E

The Keysight (formerly Agilent / Hewlett-Packard) 8753E is an industry-standard RF vector network analyzer operating from 30 kHz to 3 GHz (up to 6 GHz with Option 006). It features a built-in synthesized source, an integrated S-parameter test set, and two independent measurement channels. With a wide dynamic range of up to 110 dB, extensive calibration methods including TRL/LRM, and the ability to display up to four parameters simultaneously, the 8753E is ideal for comprehensive characterization of RF components and frequency-translating devices.

SPECIFICATIONS

General

Interfaces	Parallel, Serial (RS-232), DIN Keyboard, HP-IB (GPIB)
Display	Color LCD

Physical

Power Supply	100/120/220/240 VAC $\pm$ 10%, 48-66 Hz, 280 VA max
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	425 × 222 × 508 mm
Weight	21 kg kg
Standard Test Port Connectors	7 mm precision (with standard built-in 50 Ω test set)

General System Specifications

Frequency Range	30 kHz to 3 GHz (standard) / 30 kHz to 6 GHz (with Option 006)
Frequency Resolution	1 Hz
System Impedance	50 Ω (standard) / 75 Ω (optional)
System Dynamic Range	110 dB @ 3 GHz (standard) / 105 dB @ 6 GHz (with Option 006)

Test Port Source Characteristics

Output Power Range	Up to 10 mW / +10 dBm (standard) / 100 mW / +20 dBm (with Option 011)
Sweep Types	Linear-frequency, log-frequency, list-frequency, CW, and power sweep

Test Port Receiver Characteristics

Number of Receivers	3 tuned receivers (allowing independent power or simultaneous ratio measurements)
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Measurement Capabilities & Software

Number of Measurement Channels	2 independent measurement channels
Number of Display Windows	Up to 4 parameters simultaneously (split-screen or overlay)
Display Formats	Magnitude, phase, group-delay, Smith-chart, polar, SWR, time-domain
Internal Storage Capacity	Built-in 3.5-inch floppy disk drive
Calibration Methods	Comprehensive calibration including adapter-removal and TRL/LRM

Interfaces and Connectors

Parallel Port / Print Interface	Parallel port (supports printers/plotters, also functions as a general I/O bus with TTL inputs/outputs)
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Options and Upgrades

Frequency Extension Option	Option 006 (Extends frequency range to 6 GHz)
Delete Test Set Option	Option 011 (Deletes built-in test set, increases output power to 100 mW)
Harmonic Measurement Option	Option 002 (Adds swept harmonic measurements for 2nd and 3rd harmonic distortion)

Performance

Number of Data Points	3 to 1601
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Environmental

Storage Temperature	-40 °C to +70 °C
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Options

Time Domain Capability Option	Option 010
Configurable Test Set Option	Option 014
75 Ohm Impedance Option	Option 075
High Stability Frequency Reference Option	Option 1D5

Measurement Capabilities

Measured Parameters	S11, S21, S12, S22 (with standard integrated test set)
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Source Characteristics

Frequency Accuracy	±10 ppm (standard)
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Power

AC Input Voltage	100 / 120 / 220 / 240 VAC
AC Input Frequency	48 to 66 Hz
Maximum Power Consumption	280 VA

Data Storage

Removable Storage	Built-in 3.5-inch DOS-compatible floppy disk drive
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Data Management

Data Export Formats	Touchstone, CITIfile, ASCII
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Interfaces

External Video Output	VGA (15-pin mini D-Sub)
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TECHNOLOGY

Vector Network Analysis

APPLICATIONS

RF Component Characterization, Mixer Testing, Harmonic Measurements

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