

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8713B

The Keysight Technologies (formerly Agilent HP) 8713B is an RF Economy Scalar Network Analyzer designed for fast, accurate transmission and reflection measurements over a frequency range of 300 kHz to 3.0 GHz. Featuring an integrated synthesized source, transmission/reflection test set, and both narrowband and broadband detection, the 8713B provides a versatile, cost-effective solution for RF component testing. A high-speed, 50-millisecond real-time sweep allows instantaneous tuning feedback, while its internal 3.5-inch disk drive facilitates convenient storage of measurement setups and data.

SPECIFICATIONS

General

Display	9-inch monochrome CRT
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Physical

Power Supply	90 to 132 V AC / 198 to 264 V AC (auto-sensing), 47 to 63 Hz, 300 W maximum
Operating Temperature	0°C to 55°C °C
Dimensions (W×H×D)	425 mm × 178 mm × 508 mm mm
Weight	20.5 kg

Source Specifications

Frequency Range	300 kHz to 3.0 GHz
Frequency Resolution	1 Hz
Frequency Accuracy (Standard)	±5 ppm at 25°C ± 5°C
Frequency Stability (Standard)	±5 ppm/year
Output Power Range (Standard, 50 Ohm)	-15 to +10 dBm
Output Power Range (With Option 1E1)	-60 to +10 dBm
Output Power Range (Option 1EC, 75 Ohm)	-15 to +10 dBm
Output Power Resolution	0.01 dB
Power Flatness	±1.0 dB
Output Impedance (Standard)	50 Ω
Harmonics (at +10 dBm)	< -30 dBc
Non-Harmonic Spurious (at +10 dBm)	< -30 dBc

Receiver Specifications

Narrowband Dynamic Range	100 dB
Broadband Dynamic Range	66 dB
Maximum Input Level (Narrowband)	0 dBm
Maximum Input Level (Broadband)	16 dBm
Receiver Damage Level	+20 dBm (or ± 25 V DC)
Average Noise Floor (Narrowband)	-100 dBm
Average Noise Floor (Broadband)	-50 dBm

Measurement Capabilities & Sweep

Sweep Time (Minimum for 201 Points)	50 ms
Limit Line Testing	Up to 18 segments per channel with pass/fail indicators
Trace Math Capabilities	A/R, B/R, A-B, B-A, normalization

Data Storage

Internal Disk Drive	3.5-inch floppy disk drive supporting LIF and DOS formats
Supported File Formats	LIF, DOS, HP-GL, ASCII
State Storage Registers	Up to 10 internal registers

Connectors & Interfaces

RF Port Connector Type (Standard)	Type-N (female), 50 Ω
External Trigger Input	BNC female
External Reference Input	10 MHz, BNC female
Internal Reference Output	10 MHz, BNC female

Physical & Environmental Characteristics

Altitude Limits (Operating)	Up to 4,600 meters (15,000 feet)
Safety Certifications	CSA, EN61010-1
EMC/EMI Compliance	CISPR 11, EN 55011 Class A

Options & Accessories

Option 1EC	75 Ohm Impedance
Option 1D5	High Stability Frequency Reference ($< \pm 0.05$ ppm/year aging rate, $< \pm 0.05$ ppm temperature stability)
Option 1DA	Adds 50 Ohm Fault Location and Structural Return Loss (SRL) measurements
Option 1E1	60 dB Step Attenuator
Option 101	AM Delay Measurement Capability

Options

Option 1C2	Instrument BASIC (IBASIC) capability
Option 1DB	Adds 75 Ohm Fault Location and Structural Return Loss (SRL) measurements

Rear Panel Connectors

Auxiliary Input	Rear-panel BNC female, -10 V to +10 V range
User TTL I/O Port	8-bit input/output, 25-pin D-sub connector
Video Output	VGA compatible, 15-pin D-sub connector
External Keyboard Port	Front-panel DIN connector, compatible with PC/AT style keyboards
Limit Test Output	BNC female, TTL open-collector output (pass/fail status)

Source

Sweep Trigger Sources	Free Run, External, Manual, GPIB
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Programming & Control

Command Language	SCPI (Standard Commands for Programmable Instruments)
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Receiver Performance

Internal Bridge Directivity (50 Ω)	40 dB (300 kHz to 1.3 GHz)
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Source Performance

High-Stability Reference Aging Rate (Option 1D5)	< ±0.05 ppm/year
High-Stability Reference Temperature Stability (Option 1D5)	< ±0.05 ppm (0 °C to 55 °C)

Environmental Specifications

Storage Altitude Limit	15,240 m (50,000 ft)
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TECHNOLOGY

Scalar Network Analysis

APPLICATIONS

RF Component Testing and Tuning

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