

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8711B

The Keysight (Agilent HP) 8711B is an RF Economy Scalar Network Analyzer designed for fast, accurate transmission and reflection measurements over a frequency range of 300 kHz to 1.3 GHz. Featuring an integrated synthesized source, transmission/reflection test set, and narrowband/broadband detectors, it provides up to 100 dB of system dynamic range and real-time sweep speeds ideal for characterization of filters, amplifiers, and cables.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), Parallel (Centronics)
Display	9-inch monochrome CRT

Physical

Power Supply	90 to 132 V AC / 198 to 264 V AC, 47 to 63 Hz, 150 VA maximum
Operating Temperature	0 to +55 °C °C
Dimensions (W×H×D)	426 mm × 177 mm × 498 mm mm
Weight	15 kg kg

Frequency

Frequency Range	300 kHz to 1.3 GHz
Frequency Resolution	1 Hz
Frequency Accuracy	±5.0 ppm (at 25 °C)
Sweep Time Minimum	50 ms

Amplitude & Dynamic Range

System Dynamic Range (Narrowband)	100 dB (300 kHz to 1.3 GHz)
Dynamic Range (Broadband)	66 dB

Source Output

Output Power Range	-5 to +10 dBm (standard 50 Ω)
Power Resolution	0.1 dB
Power Flatness	±1.0 dB
Source Type	Synthesized

Storage

Internal Disk Drive	3.5-inch floppy disk drive
Disk Formats Supported	LIF, DOS

System Architecture

Integrated Test Set	Transmission / Reflection (T/R) test set
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Measurement Modes & Functions

Detection Modes	Narrowband and Broadband
Measurement Types	Transmission, Reflection
Optional Capabilities	Fault location and SRL (Option 100), AM delay (Option 101)

Display & User Interface

Number of Displayed Channels	2 independent channels
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Input & Detector Specifications

Standard Input Impedance	50 Ω (75 Ω available with Option 1EC)
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Source

Source Harmonics	< -30 dBc (at +10 dBm)
Non-Harmonic Spurious	< -30 dBc (< 1 MHz), < -45 dBc ($\geq$ 1 MHz)
Phase Noise	< -75 dBc/Hz (at 10 kHz offset)

Receiver & Test Port

RF Port Connector	Type-N female, 50 Ω (standard), 75 Ω (Option 1EC)
Directivity	40 dB (typical)
Source Match	20 dB (typical)
Load Match	20 dB (typical)

Sweep & Acquisition

Sweep Points	3, 11, 26, 51, 101, 201, 401 points
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Markers & Analysis

Markers	8 markers per channel
Limit Lines	Upper and lower limit lines with flat, sloped, or single-point segments

Rear Panel Connections

External Reference Input	BNC female; accepts 1, 2, 5, or 10 MHz ($\pm$ 10 ppm) reference signals from -10 to +10 dBm
External Trigger Input	BNC female; TTL compatible, triggers sweep on negative-going edge
Auxiliary Input	BNC female; $\pm$ 10 V range
Video Output	15-pin D-sub (VGA compatible)
External Keyboard Connector	Front panel 5-pin DIN connector

Frequency (Option 1D5)

High-Stability Frequency Reference Temperature Stability (Option 1D5)	< $\pm$ 0.05 ppm (0 $^{\circ}$ C to 55 $^{\circ}$ C)
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Frequency Reference

Internal Reference Frequency	10 MHz
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Receiver

Maximum RF Input Level	+20 dBm (± 25 Vdc)
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Interfaces & Connectivity

Command Language	SCPI (Standard Commands for Programmable Instruments)
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TECHNOLOGY

Scalar Network Analyzer

APPLICATIONS

RF Component Characterization, Cable Testing, Filter & Amplifier Measurement

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