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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 8711B 1.3GHz RF Network Analyzer

HP 8711B RF Economy Network Analyzer 300 kHz to 1.3 GHz The HP 8711B is an economy RF network analyzer covering 300 kHz to 1.3 GHz for scalar transmission and reflection measurements with built-in source and narrowband/broadband receivers. It shares the 871xB family measurement-port and source architecture with the 8712B (same span) while the 8713B/8714B extend to 3.0 GHz. After user calibration at 25 plus/minus 5 C, residual directivity is 40 dB and reflection source match is 20 dB. Filter and amplifier production tuning to 1.3 GHz; cable and antenna scalar checks; CATV amplifier slope/flatness; automated transmission/reflection ATE via HP-IB and IBASIC. The HP 8711B is an economy RF network analyzer covering 300 kHz to 1.3 GHz for scalar transmission and reflection measurements with built-in source and narrowband/broadband receivers. It shares the 871xB family measurement-port and source architecture with the 8712B (same span) while the 8713B/8714B extend to 3.0 GHz. After user calibration at 25 plus/minus 5 C, residual directivity is 40 dB and reflection source match is 20 dB. Filter and amplifier production tuning to 1.3 GHz; cable and antenna scalar checks; CATV amplifier slope/flatness; automated transmission/reflection ATE via HP-IB and IBASIC.



MODEL

HP / Agilent 8711B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8711B

LISTING

<https://aumictechlabs.com/products/8711b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 8711B is a 1.3 GHz RF network analyzer engineered for characterization of RF components across development and manufacturing environments. It delivers swept frequency measurement from 300 kHz to 1.3 GHz with 1 Hz resolution through an integrated synthesized source and transmission/reflection test set. The instrument provides dual independent display channels capable of simultaneous measurements on rectangular, polar, and Smith chart formats, including complex impedance and SWR readings.

Technical Specifications

Frequency
Performance Frequency range: 300 kHz to 1.3 GHz Frequency resolution: 1 Hz Sweep speed: 50 ms per sweep or faster Source output power: 0 dBm to +16 dBm

Measurement Capabilities
S-parameter measurement: Up to 14 S-parameters (four-port DUT with Option K40 RF Switching Test Set) Measured parameters: Insertion loss, delay, power, SWR Detection modes: Narrowband and broadband System dynamic range: Greater than 100 dB (narrowband mode) Directivity correction: Up to 40 dB Source match correction: Up to 20 dB Time-domain analysis: Fault location and structural return loss available with Option 100 AM delay measurement: Optional capability for group delay in frequency-translating devices (Option 1DA for 50 Ohm, Option 1DB for 75 Ohm)

Receiver Architecture
Two independent display channels with multi-mode receivers Digital signal processing for broadband device characterization

Key Features
Single-connection swept frequency testing eliminates multiple setups Narrowband mode achieves dynamic range exceeding 100 dB for high-rejection device measurement Dual display channels enable concurrent parameter observation Multiple chart formats optimize data presentation for different measurement types Microprocessor control and digital signal processing maximize measurement speed

Typical Applications
Component characterization, filter and amplifier testing, impedance matching analysis, transmission line fault location, frequency response measurement across RF bands.

Compatibility & Integration
HP-IB (GPIB) interface for external computer control Parallel Centronics interface Internal 3.5-inch floppy disk drive (LIF/DOS format)

Features & description

From manufacturer datasheet

Features

- Integrated source plus narrowband and broadband detectors
- Two display channels; eight markers per channel; limit-line pass/fail
- Built-in disk drive; Centronics RS-232C and HP-IB; SCPI IEEE 488.2
- Option 1E1 step attenuator; Option 1EC 75 ohm ports
- IBASIC for on-instrument automation

8711B Characteristics / Specifications

PARAMETER	VALUE
Model	8711B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	RF economy network analyzer
Family	8711B 8712B 8713B 8714B
Alias	HP 8711B; Agilent 8711B; Keysight 8711B
Frequency Range	300 kHz to 1.3 GHz
Frequency Resolution	1 Hz
Frequency Stability Typical	plus/minus 5 ppm 0 C to 55 C
Frequency Accuracy At 25 Plus Minus 5 C	plus/minus 5 ppm
Frequency Accuracy Line Change	less than 1 Hz at 10 percent line voltage change
Directivity After Calibration	40 dB
Source Match Reflection After Calibration	20 dB
Source Match Transmission Typical	14 dB
Load Match Typical	18 dB
Source Harmonics Below 1 MHz	less than -20 dBc
Source Harmonics Above 1 MHz	less than -30 dBc
Output Power Resolution	0.01 dB
Level Accuracy Standard	plus/minus 1.0 dB
Level Accuracy Option 1EC	plus/minus 1.5 dB
Level Accuracy Option 1E	plus/minus 2.0 dB
Level Accuracy Option 1EC And 1E	plus/minus 3.0 dB
Max Test Port Power No Options At Or Below 1 GHz	+16 dBm
Max Test Port Power No Options Above 1 GHz	+13 dBm

PARAMETER	VALUE
Min Test Port Power No Options At Or Below 1 GHz	0 dBm
Min Test Port Power No Options Above 1 GHz	0 dBm
Receiver Narrowband Range	300 kHz to 1.3 GHz
Receiver Broadband Range	0.10 to 1.3 GHz
Narrowband Dynamic Range 50 Ohm Above 5 MHz	greater than 100 dB (+10 to -90 dBm)
Narrowband Dynamic Range 50 Ohm Below 5 MHz	greater than 60 dB (+10 to -50 dBm)
Broadband Dynamic Range 50 Ohm	greater than 66 dB (+16 to -50 dBm)
Max Input Narrowband 0.5 dB Compression	+10 dBm
Max Input Broadband 0.55 dB Compression	+16 dBm
Damage Level	+23 dBm; plus/minus 25 VDC
Phase Noise Typical At 10 kHz Offset	-70 dBc/Hz
Residual AM In 100 kHz BW	less than -50 dBc
Residual FM 30 Hz To 15 kHz Peak Peak	less than 1.5 kHz
Absolute Power Accuracy Typical Broadband	plus/minus 0.5 dB
Display Resolution	0.01 dB per division
Marker Reference Level Range	plus/minus 500 dB
Internal Nonvolatile Storage	400 Kbytes up to 100 instrument states
Remote Interface	HP-IB IEEE 488.2 and SCPI
Related Higher Span Sibling	8713B 300 kHz to 3.0 GHz

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Model	8711B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	RF economy network analyzer
Family	8711B 8712B 8713B 8714B
Alias	HP 8711B; Agilent 8711B; Keysight 8711B
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Frequency Resolution	1 Hz
Frequency Stability Typical	plus/minus 5 ppm 0 C to 55 C
Frequency Accuracy At 25 Plus Minus 5 C: plus/minus 5 ppm	
Specifications	
PARAMETER	VALUE
Frequency Accuracy Line Change	less than 1 Hz at 10 percent line voltage change
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Source Harmonics Above 1 MHz	less than -30 dBc
Output Power Resolution	0.01 dB
Level Accuracy Standard	plus/minus 1.0 dB
Level Accuracy Option 1EC	plus/minus 1.5 dB
Level Accuracy Option 1E1	plus/minus 2.0 dB
Level Accuracy Option 1EC And 1E1	plus/minus 3.0 dB
Max Test Port Power No Options At Or Below 1 GHz: +16 dBm	
Max Test Port Power No Options Above 1 GHz: +13 dBm	
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Receiver Broadband Range: 0.10 to 1.3 GHz
Narrowband Dynamic Range 50 Ohm Above 5 MHz: greater than 100 dB (+10 to -90 dBm)
Narrowband Dynamic Range 50 Ohm Below 5 MHz: greater than 60 dB (+10 to -50 dBm)

Specifications

PARAMETER	VALUE
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Max Input Narrowband 0.5 dB Compression	+10 dBm
Max Input Broadband 0.55 dB Compression	+16 dBm
Damage Level	+23 dBm; plus/minus 25 VDC
Phase Noise Typical At 10 kHz Offset	-70 dBc/Hz
Residual AM In 100 kHz BW	less than -50 dBc

Residual FM 30 Hz To 15 kHz Peak Peak: less than 1.5 kHz

Specifications

PARAMETER	VALUE
Absolute Power Accuracy Typical Broadband	plus/minus 0.5 dB
Display Resolution	0.01 dB per division
Marker Reference Level Range	plus/minus 500 dB
Internal Nonvolatile Storage	400 Kbytes up to 100 instrument states
Remote Interface	HP-IB IEEE 488.2 and SCPI
Related Higher Span Sibling	8713B 300 kHz to 3.0 GHz

Notes
Specs from HP 8711B/8713B RF Economy Scalar Network Analyzers Technical Specifications and 8711B/12B/13B/14B service guide residual-system tables. Power tables list 8711B/12B column; confirm Option 1E1/1EC/1DA/1DB and 50 versus 75 ohm ports on the unit.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.