


Aumictech

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 83751B High Power Synthesized Sweeper, 2 – 20 GHz

HP / Agilent 83751B High-Power Synthesized Sweeper, 2–20 GHz The HP / Agilent 83751B is a high-power synthesized microwave sweeper covering 2 GHz to 20 GHz with up to +17 dBm leveled output (+16 dBm below 2 GHz on related family notes). It provides CW and swept RF for scalar network analysis, component test, and general microwave stimulus, with SCPI / IEEE-488.2 programming and compatibility with Agilent 8757 scalar analyzers. The HP / Agilent 83751B is a high-power synthesized microwave sweeper covering 2 GHz to 20 GHz with up to +17 dBm leveled output (+16 dBm below 2 GHz on related family notes). It provides CW and swept RF for scalar network analysis, component test, and general microwave stimulus, with SCPI / IEEE-488.2 programming and compatibility with Agilent 8757 scalar analyzers.



MODEL

**HP / Agilent
83751B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83751B

LISTING

<https://aumictechlabs.com/products/83751b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 83751B is a high-power synthesized sweeper delivering precise signal generation across 2 GHz to 20 GHz. Built for RF and microwave component testing, it combines synthesized accuracy with high-speed swept performance in a benchtop instrument. The 83751B supports continuous analog and digital stepped sweeps, multiple modulation modes, and flexible output configurations, making it suitable for R&D and production test environments requiring repeatable,

phase-coherent measurements. Technical Specifications Frequency Performance Frequency range: 2 GHz to 20 GHz Output impedance: 50 ohms Output connector: APC-3.5mm male (standard); Type-N optional (Option 1E1); rear panel output available (Option 1E4) Output Power Maximum leveled power: +16 dBm (below 2 GHz), +17 dBm (2 GHz and above) Harmonics: -20 dBc With Option 1E1 step attenuator: Maximum leveled power reduced by 1 dB Power sweep range: 25 dB Modulation Pulse: 60 dB on/off ratio; 15 ns rise/fall (0.5–2 GHz), 100 ns rise/50 ns fall (2–20 GHz); internal generator 1–65 μ s width and period; 2 μ s minimum leveled width AM: 1 dB/V sensitivity, >100 kHz bandwidth (3 dB), 22 dB depth, 3.5 kohms input impedance FM: DC to 10 MHz rates; ± 75 MHz deviation (DC–100 Hz), ± 7 MHz (100 Hz–1 MHz), ± 5 MHz (1–2 MHz), ± 1 MHz (2–10 MHz); -6 or -20 MHz/V sensitivity; 1 kohm input impedance Sweep Modes Continuous wave, stepped, ramp, power, marker, and alternate sweep Broadband and narrowband operation Reference 10 MHz reference output: 0 dBm nominal, 50 ohms (BNC female, rear panel) Key Features Synthesized frequency generation for superior stability and accuracy Internal pulse generator with 1 μ s resolution AM depth of 22 dB; FM deviation up to ± 75 MHz at low modulation rates Flexible sweep architecture with marker and alternate modes Optional step attenuator and alternative connectors Typical Applications Component characterization and scalar network analysis Swept frequency testing of RF filters, amplifiers, and antennas Modulation performance validation Benchtop R&D and manufacturing test Compatibility & Integration Standard 50 ohm interface; 10 MHz reference clock synchronization available via rear panel. Step attenuator option and connector variants support diverse test configurations.

Features & description

From manufacturer datasheet

Features

- Frequency range 2–20 GHz (high-powerBmodel)
- Max leveled power +17 dBm (>2 GHz); +16 dBm class below 2 GHz
- Optional 1E1 step attenuator to –80 dBm settable
- Optional 1E5 high-stability time base
- SCPI programming; 8350B mnemonic compatibility
- RF connector options: 3.5 mm or Type-N (1ED)

Applications

- Scalar network analysis stimulus (8757A/C/D/E)
- Microwave component and amplifier drive
- Swept and CW source for ATE
- Noise-figure and general RF bench stimulus (system dependent)

83751B Characteristics / Specifications

PARAMETER	VALUE
Model	83751B
Manufacturer	Hewlett-Packard / Agilent
Instrument Type	High-Power Synthesized Sweeper
Frequency Range	2 GHz to 20 GHz
Power Reduction with Opt 1E	reduce max by 1 dB
Minimum Settable Power	−10 dBm
Minimum Settable Power with Opt 1E	−80 dBm
Power Resolution Settable	0.01 dB
Power Accuracy Typical Class	±1.5 dB (levels > −75 dBm)
Flatness Typical Class	±1.3 dB (levels > −75 dBm)
Power Sweep Range	25 dB/sweep
Power Slope Range	0 to ±2 dB/GHz, 25 dB max
Harmonics at Max Leveled Power	−20 dBc (B models)
Subharmonics	None
Residual FM CW	1 kHz RMS (0.05–15 kHz BW)
Phase Noise Typical	< −75 dBc/Hz at 10 GHz, 10 kHz offset
Internal Reference	10 MHz
Standard Timebase Stability	±10 × 10 ^{−6}
External AM DepthBModels	22 dB (−5 to +17 dBm)
RF Output Connector Standard	3.5 mm (Opt 1ED Type-N)
Operating Temperature	0 °C to 55 °C
Weight Net	16 kg (35 lb)
Size	133 × 425 × 483 mm (5.25 × 16.75 × 19 in)
Scalar Analyzer Compatibility	8757A/C/D/E
Programming	SCPI (IEEE 488.2); 8350B mnemonics Notes Specs from Agilent 83751A/B and 83752A/B Synthesized Sweepers data sheet. Confirm

PARAMETER**VALUE**

installed options (1E1, 1E4, 1E5, 1ED/1EF) and connector type on the unit.

RF connector options

3.5 mm or Type-N (1ED)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 °C to 55 °C
Operating Temperature	0 °C to 55 °C
Weight Net	16 kg (35 lb)
Size	133 × 425 × 483 mm (5.25 × 16.75 × 19 in)
Scalar Analyzer Compatibility	8757A/C/D/E
Programming	SCPI (IEEE 488.2); 8350B mnemonics Notes Specs from Agilent 83751A/B and 83752A/B Synthesized Sweepers data sheet. Confirm installed options (1E1, 1E4, 1E5, 1ED/1EF) and connector type on the unit.

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	
Specifications	
PARAMETER	VALUE
Model	83751B
Manufacturer	Hewlett-Packard / Agilent
Instrument Type	High-Power Synthesized Sweeper
Frequency Range	2 GHz to 20 GHz
Max Leveled Power >2 GHz: +17 dBm	
Max Leveled Power <2 GHz: +16 dBm	
Specifications	
PARAMETER	VALUE
Power Reduction with Opt 1E1	reduce max by 1 dB
Minimum Settable Power	-10 dBm
Minimum Settable Power with Opt 1E1	-80 dBm
Power Resolution Settable	0.01 dB
Power Accuracy Typical Class	±1.5 dB (levels > -75 dBm)
Flatness Typical Class	±1.3 dB (levels > -75 dBm)
Power Sweep Range	25 dB/sweep
Power Slope Range	0 to ±2 dB/GHz, 25 dB max
Harmonics at Max Leveled Power	-20 dBc (B models)
Subharmonics	None
Non-Harmonic Spurious: -50 dBc	
Specifications	
PARAMETER	VALUE
Residual FM CW	1 kHz RMS (0.05-15 kHz BW)
Phase Noise Typical	< -75 dBc/Hz at 10 GHz, 10 kHz offset
Internal Reference	10 MHz
Standard Timebase Stability	±10 × 10 ⁻⁶

High-Stability Opt 1E5 Aging: 5×10^{-10} /day; 1×10^{-7} /year

Specifications

PARAMETER	VALUE
External AM DepthBModels	22 dB (−5 to +17 dBm)
RF Output Connector Standard	3.5 mm (Opt 1ED Type-N)
Operating Temperature	0 °C to 55 °C
Weight Net	16 kg (35 lb)
Size	133 × 425 × 483 mm (5.25 × 16.75 × 19 in)
Scalar Analyzer Compatibility	8757A/C/D/E
Programming	SCPI (IEEE 488.2); 8350B mnemonics

Notes
Specs from Agilent 83751A/B and 83752A/B Synthesized Sweepers data sheet. Confirm installed options (1E1, 1E4, 1E5, 1ED/1EF) and connector type 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
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.