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Data Sheet

August 1, 2026

AGILENT

HP Agilent 83751A Synthesized Sweeper

HP / Agilent 83751A Synthesized Sweeper, 2 to 20 GHz The HP / Agilent 83751A is a fully synthesized sweep generator covering 2 GHz to 20 GHz. It provides CW, stepped, and ramp (analog phase-locked) sweep modes with 1 Hz CW resolution, combining synthesized accuracy with analog sweep speed for scalar and general microwave stimulus. The 83751A is the standard-power model; the 83751B is the high-power sibling. Programming supports SCPI and HP 8350 mnemonics for drop-in replacement of older 8350-based systems, and the source is designed for use with 8757-series scalar analyzers. The HP / Agilent 83751A is a fully synthesized sweep generator covering 2 GHz to 20 GHz. It provides CW, stepped, and ramp (analog phase-locked) sweep modes with 1 Hz CW resolution, combining synthesized accuracy with analog sweep speed for scalar and general microwave stimulus. The 83751A is the standard-power model; the 83751B is the high-power sibling. Programming supports SCPI and HP 8350 mnemonics for drop-in replacement of older 8350-based systems, and the source is designed for use with 8757-series scalar analyzers. Scalar network analysis with 8757-series analyzers; broadband component characterization from 2 to 20 GHz; narrowband device testing requiring frequency stability; ATE stimulus; general synthesized CW and swept microwave signal generation.

No photo

MODEL

Agilent 83751A

CALIBRATION

**N/A — off-catalog
OEM datasheet**

CONDITION

**See OEM
documentation**

STATUS

**Not listed on
Aumictech
inventory**

RFQ / SKU

83751A

LISTING

**Off-catalog — OEM dat
asheet only**

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

Features & description

From manufacturer datasheet

Features

- Frequency range 2 GHz to 20 GHz
- Fully synthesized CW, stepped, and ramp sweep
- Maximum leveled power +10 dBm (25 +/-5 C)
- Minimum settable power -15 dBm; -85 dBm with Option 1E1 step attenuator
- Frequency resolution 1 Hz (CW); 1 kHz ramp display resolution
- Markers, power sweep, user flatness correction
- Pulse, AM, FM, and internal 1 kHz / 27.8 kHz square-wave modulation
- GPIB with SCPI and HP 8350 mnemonic compatibility
- Compatible with 8757 scalar analyzers

83751A Characteristics / Specifications

PARAMETER	VALUE
Model	83751A
Manufacturer	Hewlett-Packard / Agilent / Keysight
Instrument Type	Synthesized sweeper
Frequency Range	2 GHz to 20 GHz
CW Resolution	1 Hz
CW Switching Time	70 ms maximum
Stepped Sweep	2 to 1601 points; resolution settable 1 Hz; switching about 7 ms + 8 ms/GHz step
Ramp Sweep Time	10 ms to 100 s; up to 400 MHz/ms max
Timebase	Standard +/-10 ppm; Option 1E5 aging 5e-10/day, 1e-7/year RF Output
Minimum Settable Power	-15 dBm; -85 dBm with Option 1E1
Power Resolution	0.01 dB settable
Source Match	less than 1.7:1 SWR, internally leveled (typical)
RF Connector	Precision 3.5 mm male standard; Option 1ED Type-N; Option 1E4 rear panel Spectral Purity (at max leveled power, A models)
Harmonics	about -45 dBc (1.5 to 20 GHz); about -30 dBc (10 MHz to 1.5 GHz on related 83752A tables where applicable)
Pulse on/off	60 dB; rise/fall about 100 ns rise / 50 ns fall (2-20 GHz)
Internal square wave	1.0 kHz and 27.8 kHz (scalar mode) AM and FM modes per 83751/83752 datasheet General
Dimensions	133 × 425 × 483 mm (5.25 × 16.75 × 19 in) class
Weight	Net about 16 kg (35 lb) class
Power	90-132 VAC or 198-264 VAC; about 400 VA max
Operating Temperature	0 to 55 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 55 C
Operating Temperature	0 to 55 C

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	83751A
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Instrument Type	Synthesized sweeper
Frequency Range	2 GHz to 20 GHz
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Timebase	Standard +/-10 ppm; Option 1E5 aging 5e-10/day, 1e-7/year
RF Output	
Maximum Leveled Power (25 +/-5 C): +10 dBm (reduce about 1 dB with Option 1E1)	
Minimum Settable Power: -15 dBm; -85 dBm with Option 1E1	
Power Resolution: 0.01 dB settable	
Power Accuracy (levels greater than -10 dBm, A models): about +/-1.0 dB	
Flatness (levels greater than -10 dBm, A models): about +/-0.7 dB	
Source Match: less than 1.7:1 SWR, internally leveled (typical)	
RF Connector: Precision 3.5 mm male standard; Option 1ED Type-N; Option 1E4 rear panel	
Spectral Purity (at max leveled power, A models)	
Harmonics: about -45 dBc (1.5 to 20 GHz); about -30 dBc (10 MHz to 1.5 GHz on related 83752A tables where applicable)	
Non-harmonic spurious: -50 dBc class (conditions per datasheet)	
Modulation	
Pulse on/off: 60 dB; rise/fall about 100 ns rise / 50 ns fall (2-20 GHz)	
Internal square wave: 1.0 kHz and 27.8 kHz (scalar mode)	
AM and FM modes per 83751/83752 datasheet	
General	
Specifications	
PARAMETER	VALUE
Dimensions	133 x 425 x 483 mm (5.25 x 16.75 x 19 in) class
Weight	Net about 16 kg (35 lb) class
Power	90-132 VAC or 198-264 VAC; about 400 VA max
Operating Temperature	0 to 55 C

Warm-up: 30 minutes from cold start

Common Options

1E1 70 dB step attenuator; 1E4 rear RF output; 1E5 high-stability timebase; 1EE mm-wave source module interface; 1ED Type-N; 1EF 3.5 mm

Family Context

83751A: 2-20 GHz, +10 dBm

83751B: 2-20 GHz, high power (+17 dBm class)

83752A/B: 10 MHz to 20 GHz (standard / high power)

Operational Notes

Perform peak function as required before applying specifications. Allow band-switch settling near 2 GHz when using related broadband models. Do not confuse 83751A with high-power 83751B output ratings.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: N/A — off-catalog OEM datasheet. See OEM documentation · Not listed on Aumictech inventory.

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.