

**Aumictech**

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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 83711B Synthesized CW Generator, 1 GHz to 20 GHz

HP / Agilent 83711B Synthesized CW Generator 1 GHz to 20 GHz The HP/Agilent 83711B is the 1 GHz to 20 GHz synthesized CW generator in the 8370B family. It is the CW counterpart of the 83731B signal generator: same synthesis and power tables, without pulse/AM/FM hardware. Resolution is 1 kHz (1 Hz Option 1E8). Minimum leveled power is -4 dBm, or -110 dBm with Option 1E1. CW LO and stimulus from 1 to 20 GHz; noise-figure source with 8970B; ATE where 10 MHz coverage is not required (use 83712B for 10 MHz start). The HP/Agilent 83711B is the 1 GHz to 20 GHz synthesized CW generator in the 8370B family. It is the CW counterpart of the 83731B signal generator: same synthesis and power tables, without pulse/AM/FM hardware. Resolution is 1 kHz (1 Hz Option 1E8). Minimum leveled power is -4 dBm, or -110 dBm with Option 1E1. CW LO and stimulus from 1 to 20 GHz; noise-figure source with 8970B; ATE where 10 MHz coverage is not required (use 83712B for 10 MHz start).



MODEL

**HP / Agilent
83711B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83711B

LISTING

<https://aumictechlabs.com/products/83711b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 83711B is a synthesized continuous wave generator delivering stable, accurate microwave signals from 1 GHz to 20 GHz. Built for component and system characterization, it serves wireless communications, radar, and microwave test environments where signal purity and

leveling precision are essential. Technical Specifications Frequency & Resolution Frequency range: 1 GHz to 20 GHz Frequency resolution: 1 kHz (1 Hz with Option 1E8) Time base stability: ± 0.01 ppm (standard); high-stability option available Output Power Maximum leveled output: +11 dBm (1–18 GHz, standard); +10 dBm (18–20 GHz, standard) Minimum leveled output: -4 dBm (standard); -110 dBm (with Option 1E1) Output level accuracy: ± 1.0 dB from -4 dBm to maximum at 50 MHz–20 GHz Output resolution: 0.01 dB Output flatness: ± 0.5 dB at levels ≥ -90 dBm Spectral Purity Harmonics: < -50 dBc at levels $< +6$ dBm Spurious: < -60 dBc Sub-harmonics: None SSB phase noise range: -107 to -65 dBc, with floor < -140 dBc/Hz below 500 MHz Modulation Capabilities Pulse mode: up to 3 MHz repetition rate, 80 dB on/off ratio Amplitude modulation: > 60 dB logarithmic depth; incidental AM $< 5\%$ Frequency/phase modulation: $\pm 10\%$ accuracy at 100 kHz; $< 1\%$ harmonic distortion at 1 MHz peak deviation FM/ Φ M input impedance: 600 Ω nominal Key Features Fundamental oscillators with switched low-pass filters for < -55 dBc harmonic suppression Multimode pulse generator: internal free-run, triggered, doublet, and gated burst modes Simultaneous AM, FM/ Φ M, and pulse modulation capability 0.01 dB output level resolution for fine-grained power control Typical Applications Microwave component testing, system-level validation, RF subsystem characterization, and radar signal simulation requiring high spectral purity and precise leveling over extended frequency spans. Compatibility & Integration SCPI command interface for automated test systems and instrument control.

Features & description

From manufacturer datasheet

Features

- CW generator 1.0 to 20 GHz (no modulation; use 83731B if pulse/AM/FM needed)
- Harmonics less than -50 dBc at levels below +6 dBm
- Option 1E5 high-stability timebase aging less than $1.5\text{e-}9$ per day after 24 h
- User flatness 2 to 401 points, up to 4 tables
- Type-N precision RF, or 3.5 mm Option 1E9
- SCPI IEEE 488.2 and 8673 emulation

83711B Characteristics / Specifications

PARAMETER	VALUE
Model	83711B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized CW generator
Family	8370B
Alias	HP 83711B; Agilent 83711B; Keysight 83711B
Frequency Range	1.0 GHz to 20 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution Option 1E	1 Hz
Standard Aging After 72 h	less than 1.0e-8 per day at 25 plus/minus 10 C
Frequency Switching Any Step	less than 50 ms to within 1 kHz
Frequency Switching Under 1 GHz Step	less than 35 ms to within 1 kHz (not across 10 GHz band switch)
Minimum Leveled Power	-4 dBm
Minimum Leveled Power Option 1E	-110 dBm
Display Power Resolution	0.01 dB
Max Leveled 1 to 18 GHz Standard	+11 dBm
Max Leveled 1 to 18 GHz Option 1E	+10 dBm
Max Leveled 18 to 20 GHz Standard	+10 dBm
Max Leveled 18 to 20 GHz Option 1E	+8 dBm
Power Accuracy 50 MHz to 20 GHz At Max Leveled	plus/minus 1.0 dB
Flatness Power At Or Above minus 90 dBm	plus/minus 0.5 dB
Level Switching Time	less than 17 ms without attenuator range change
Attenuator Range Changes	-1 dBm, -11 dBm, -21 dBm, etc. (83711B/83712B)
Output SWR Nominal	less than 2.0:1
Harmonics At Levels Below plus 6 dBm	less than -50 dBc (83711B/83712B)

PARAMETER	VALUE
Nonharmonic Spurious At Or Above 3 kHz	less than -60 dBc
Subharmonics	none
SSB Phase Noise 1 to 2 GHz at 10 kHz Offset	-92 dBc/Hz
SSB Phase Noise 10 to 20 GHz at 10 kHz Offset	-76 dBc/Hz
Residual FM At 1 GHz 50 Hz to 15 kHz	less than 15 Hz
User Flatness Points Per Table	2 to 401
User Flatness Tables	up to 4
RF Connector Standard	TypeNprecision
RF Connector Option 1E	3.5 mm precision
Reference Input	10 MHz plus/minus 100 Hz, 0 to 10 dBm
Reference Output Nominal	+3 dBm
Mains	90 to 132 V 48 to 440 Hz; 198 to 264 V 48 to 66 Hz; 260 VA maximum
Size	133 mmHx 426 mmWx 498 mmDNet Weight: less than 16 kg (35 lb)
Operating Temperature	0 C to 55 C
Related 10 MHz CW	83712B
Related Signal Generator	83731B same span with modulation

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 55 C
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Related 10 MHz CW	83712B
Related Signal Generator	83731B same span with modulation Notes Specs from Agilent 83711B/83712B/83731B/83732B data sheet 5963-6615E. This file is the 1 GHz-start CW generator. Confirm Option 1E1/1E5/1E8/1E9. Do not apply 83731B pulse/AM/FM rows.

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	83711B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized CW generator
Family	8370B
Alias	HP 83711B; Agilent 83711B; Keysight 83711B
Frequency Range	1.0 GHz to 20 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution Option 1E8	1 Hz
Option 1E5 Aging After 24 h: less than 1.5e-9 per day Option 1E5 Temperature: less than 1e-7 over 0 to 55 C	
Specifications	
PARAMETER	VALUE
Standard Aging After 72 h	less than 1.0e-8 per day at 25 plus/minus 10 C
Frequency Switching Any Step	less than 50 ms to within 1 kHz
Frequency Switching Under 1 GHz Step	less than 35 ms to within 1 kHz (not across 10 GHz band switch)
Minimum Levelled Power	-4 dBm
Minimum Levelled Power Option 1E1	-110 dBm
Display Power Resolution	0.01 dB
Max Levelled 1 to 18 GHz Standard	+11 dBm
Max Levelled 1 to 18 GHz Option 1E1: +10 dBm Max Levelled 18 to 20 GHz Standard: +10 dBm Max Levelled 18 to 20 GHz Option 1E1: +8 dBm Power Accuracy 50 MHz to 20 GHz At Max Levelled: plus/minus 1.0 dB Flatness Power At Or Above minus 90 dBm: plus/minus 0.5 dB	
Specifications	
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Level Switching Time	less than 17 ms without attenuator range change

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Attenuator Range Changes	-1 dBm, -11 dBm, -21 dBm, etc. (83711B/83712B)
Output SWR Nominal	less than 2.0:1
Harmonics At Levels Below plus 6 dBm	less than -50 dBc (83711B/83712B)
Nonharmonic Spurious At Or Above 3 kHz	less than -60 dBc
Subharmonics	none

SSB Phase Noise 1 to 2 GHz at 10 kHz Offset: -92 dBc/Hz
SSB Phase Noise 10 to 20 GHz at 10 kHz Offset: -76 dBc/Hz
Residual FM At 1 GHz 50 Hz to 15 kHz: less than 15 Hz

Specifications

PARAMETER	VALUE
User Flatness Points Per Table	2 to 401
User Flatness Tables	up to 4
RF Connector Standard	TypeNprecision
RF Connector Option 1E9	3.5 mm precision
Reference Input	10 MHz plus/minus 100 Hz, 0 to 10 dBm
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Mains	90 to 132 V 48 to 440 Hz; 198 to 264 V 48 to 66 Hz; 260 VA maximum
Size	133 mmHx 426 mmWx 498 mmDNet Weight: less than 16 kg (35 lb)
Operating Temperature	0 C to 55 C
Related 10 MHz CW	83712B
Related Signal Generator	83731B same span with modulation

Notes

Specs from Agilent 83711B/83712B/83731B/83732B data sheet 5963-6615E. This file is the 1 GHz-start CW generator. Confirm Option 1E1/1E5/1E8/1E9. Do not apply 83731B pulse/AM/FM rows.

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

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NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
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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.