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Data Sheet
August 13, 2026

HP / AGILENT

HP / Agilent 83712B Synthesized CW Generator, 10 MHz to 20 GHz

HP / Agilent 83712B Synthesized CW Generator 10 MHz to 20 GHz The HP/Agilent 83712B is the 10 MHz to 20 GHz synthesized CW generator in the 8370B family. It shares frequency synthesis, power, and spectral-purity tables with the 83732B signal generator but does not include pulse, AM, FM, or phase-modulation hardware (Options 1E2 and 800 are 83731B/83732B only). Resolution is 1 kHz (1 Hz Option 1E8). Minimum leveled power is -4 dBm, or -110 dBm with Option 1E1. CW microwave stimulus from 10 MHz to 20 GHz; LO substitution; noise-figure source with 8970B Special Function 41.5; ATE where modulation is not required. The HP/Agilent 83712B is the 10 MHz to 20 GHz synthesized CW generator in the 8370B family. It shares frequency synthesis, power, and spectral-purity tables with the 83732B signal generator but does not include pulse, AM, FM, or phase-modulation hardware (Options 1E2 and 800 are 83731B/83732B only). Resolution is 1 kHz (1 Hz Option 1E8). Minimum leveled power is -4 dBm, or -110 dBm with Option 1E1. CW microwave stimulus from 10 MHz to 20 GHz; LO substitution; noise-figure source with 8970B Special Function 41.5; ATE where modulation is not required.

MODEL HP / Agilent 83712B	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU 83712B	LISTING https://aumictechlabs.com/products/83712b-2/

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 83712B is a synthesized continuous wave (CW) generator delivering signals from 10 MHz to 20 GHz with exceptional frequency resolution and output stability. Built on fundamental oscillators and switched low-pass filters, it achieves harmonic suppression below -55 dBc and spurious signal rejection below -60 dBc, making it suitable for aerospace, defense, and communications test environments where signal purity is critical. Technical Specifications Frequency Performance Range: 10 MHz to 20 GHz Resolution: 1 kHz standard; 1 Hz with Option 1E8 Frequency accuracy: +14 dBm above 1 GHz Output range: -4 to +10 dBm (to 18.6 GHz); -4 to +8 dBm (18–20 GHz) Minimum level: -110 dBm with Option 1 Signal Quality Harmonics: <-55 dBc Spurious signals: 3 MHz; pulse level accuracy ±1.0 dB relative to CW; overshoot <10%; maximum leveled output power -0.5 dB; 50 Ω input impedance with TTL drive levels AM/FM/ΦM: Full bandwidth and depth independent of pulse modulation Key Features Step attenuator option (Option 1E1) enables receiver sensitivity and SINAD measurements Rear output connector available (Option C05) SCPI command compatibility for automated test integration Rack mount kits available for system integration Typical Applications Aerospace and defense receiver testing, RF component characterization, communications equipment validation, and sensor development requiring high-purity CW sources with low phase noise. Compatibility & Integration Supports external 10 MHz reference input for enhanced frequency stability and integrates with standard automated test equipment via SCPI programming.

Features & description

From manufacturer datasheet

Features

• CW generator: no pulse/AM/FM (use 83732B if modulation is required) • 10 MHz to 20 GHz versus 83711B which starts at 1 GHz • Harmonics less than -50 dBc at levels below +6 dBm (CW family row) • User flatness 2 to 401 points, up to 4 tables • Option 1E5 high-stability timebase; Option 1E9 3.5 mm RF • SCPI IEEE 488.2 and 8673 emulation

83712B Characteristics / Specifications

PARAMETER	VALUE
Model	83712B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized CW generator
Family	8370B
Alias	HP 83712B; Agilent 83712B; Keysight 83712B
Frequency Range	10 MHz 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
Standard Temperature	less than 5e-6 over 0 to 55 C referenced to 25 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 0.01 to 1 GHz	+13 dBm
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 10 to 50 MHz At Max Leveled	plus/minus 1.3 dB
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

PARAMETER	VALUE
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 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
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 Signal Generator	83732B same span with modulation
Related 1 GHz CW	83711B

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 55 C
Operating Temperature	0 C to 55 C
Related Signal Generator	83732B same span with modulation
Related 1 GHz CW	83711B Notes Specs from Agilent 83711B/83712B/83731B/83732B data sheet 5963-6615E. Harmonic spec for CW models is less than -50 dBc versus less than -55 dBc on 83731B/83732B. Do not apply pulse/AM/FM rows to this CW generator.

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	83712B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized CW generator
Family	8370B
Alias	HP 83712B; Agilent 83712B; Keysight 83712B
Frequency Range	10 MHz 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
Option 1E5 Line Voltage: less than 5e-10 for 10 percent line change

Specifications

PARAMETER	VALUE
Standard Aging After 72 h	less than 1.0e-8 per day at 25 plus/minus 10 C
Standard Temperature	less than 5e-6 over 0 to 55 C referenced to 25 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 1E1	-110 dBm
Display Power Resolution	0.01 dB
Max Leveled 0.01 to 1 GHz	+13 dBm
Max Leveled 1 to 18 GHz Standard	+11 dBm

Max Leveled 1 to 18 GHz Option 1E1: +10 dBm
Max Leveled 18 to 20 GHz Standard: +10 dBm
Max Leveled 18 to 20 GHz Option 1E1: +8 dBm
Power Accuracy 10 to 50 MHz At Max Leveled: plus/minus 1.3 dB
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

Specifications

PARAMETER	VALUE
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)
Nonharmonic Spurious At Or Above 3 kHz	less than -60 dBc
Subharmonics	none

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
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 Signal Generator	83732B same span with modulation
Related 1 GHz CW	83711B

Notes
Specs from Agilent 83711B/83712B/83731B/83732B data sheet 5963-6615E. Harmonic spec for CW models is less than -50 dBc versus less than -55 dBc on 83731B/83732B. Do not apply pulse/AM/FM rows to this CW generator.

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

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