

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 83623B High Power Swept-Signal Generator, 0.01 â€" 20 GHz, +17 dBm calibrated output

HP / Agilent 83623B High Power Synthesized Swept Signal Generator 10 MHz to 20 GHz The HP/Agilent 83623B is the high-power 10 MHz to 20 GHz member of the 8360B family, with +17 dBm maximum leveled output (standard and Option 006). Indirect synthesis, 1 kHz resolution (1 Hz Option 008), and full B-series pulse/AM/FM modulation support high-drive mixer, amplifier, and receiver test. Harmonics below 2 GHz are specified at -25 dBc class; 2 to 26.5 GHz standard harmonics are -25 dBc, improving to -60 dBc with Option 006. The HP/Agilent 83623B is the high-power 10 MHz to 20 GHz member of the 8360B family, with +17 dBm maximum leveled output (standard and Option 006). Indirect synthesis, 1 kHz resolution (1 Hz Option 008), and full B-series pulse/AM/FM modulation support high-drive mixer, amplifier, and receiver test. Harmonics below 2 GHz are specified at -25 dBc class; 2 to 26.5 GHz standard harmonics are -25 dBc, improving to -60 dBc with Option 006. High-drive amplifier and mixer stimulus; receiver overload and margin test; two-tone and scan-modulation work; automated microwave production test with user flatness correction.



MODEL

**HP / Agilent
83623B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83623B

LISTING

<https://aumictechlabs.com/products/83623b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 83623B is a synthesized swept-signal generator delivering calibrated output power of +17 dBm across 0.01 to 20 GHz. Built for precision signal generation in test and development environments, this instrument combines frequency accuracy with dynamic sweep capability and exceptional spectral purity. Its leveled output performance remains stable across temperature variations, while harmonic suppression and low phase noise support demanding measurement and simulation tasks across RF and microwave bands.

Technical Specifications

Frequency & Output Power Frequency range: 0.01 to 20 GHz Calibrated output power: +17 dBm Maximum leveled output power: +17 dBm Output power range: -20 dBm to maximum available power (adjustable via step attenuator) Minimum settable output power (with Option 001): -110 dBm Leveled output stability: Less than 2 dB degradation over 35 °C to 55 °C temperature range Frequency resolution: 1 kHz (standard); 1 Hz (Option 008) Signal Quality Harmonics: Typically -50 dBc below 20 GHz; at least 25 dB below carrier from 2.0 to 20 GHz Phase noise (SSB): <-80 dBc at 10 GHz, 10 kHz offset; -76 dBc typical at 20 GHz, 10 kHz offset Spurious signals: Typically -60 dBc from 10 MHz to 80 dB on/off ratio; rise/fall times <10 ns (Option 006); 15 ns minimum pulse width; 5 ns timing accuracy AM capability: 99.7% modulation depth (50 dB); 100 kHz bandwidth, DC-coupled FM capability: ± 8 MHz maximum deviation (locked); 8 MHz modulation rate, DC-coupled Internal modulation generator (Option 002): Sine (1 Hz to 1 MHz), square/triangle/ramp (1 Hz to 100 kHz), noise waveforms; 0.1% depth/deviation resolution

Key Features Synthesized architecture ensures frequency accuracy and stability across full operating range Leveled output maintains consistent power delivery with minimal temperature sensitivity Low phase noise supports precision measurement and dynamic testing applications Multiple sweep modes enable flexible signal simulation and characterization Optional attenuator extends dynamic range to -110 dBm

Typical Applications Component and subsystem characterization from DC/RF to microwave frequencies Receiver sensitivity and selectivity testing Harmonic and intermodulation distortion analysis Pulse and modulated signal generation for radar and communications testing Frequency sweep and ramp modulation studies

Compatibility & Integration The 83623B operates as a standalone instrument with optional modules for extended functionality. Option 001 adds step attenuator capability; Option 002 integrates internal modulation waveform generation; Option 006 provides sub-10 ns pulse rise/fall times; Option 008 enables 1 Hz frequency resolution.

Features & description

From manufacturer datasheet

Features

- High-power 8360B (+17 dBm leveled) versus +13 dBm on 83620B/83622B
- Same 10 MHz to 20 GHz span as 83620B with higher drive
- Step, list, and ramp sweep; 2 to 801 step points
- Optional 110 dB-class step attenuator (Option 001) to -110 dBm settable
- Pulse on/off 80 dB at ALC levels 0 dBm and above (20 C to 55 C) on 83623B/83624B
- Precision 3.5 mm male RF; Type-N adapter supplied

83623B Characteristics / Specifications

PARAMETER	VALUE
Model	83623B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	High power synthesized swept signal generator
Family	8360B Series
Alias	HP 83623B; Agilent 83623B; Keysight 83623B
Frequency Range	10 MHz to 20 GHz (high power)
Standard Frequency Resolution	1 kHz
Timebase Aging Rate	5e-10 per day; 1e-7 per year
Maximum Leveled Power	+17 dBm (standard and Option 006)
Minimum Settable Power Standard	-20 dBm
Minimum Settable Power Option 0	-110 dBm
Power Resolution	0.02 dB
Power Switching Time Typical	10 ms without attenuator change
Power Accuracy Above plus 10 dBm Below 2 GHz	plus/minus 1.2 dB
Power Accuracy Above minus 10 dBm 2 to 20 GHz	plus/minus 0.7 dB
Harmonics Below 2 GHz Standard	-25 dBc
Harmonics 2 to 26.5 GHz Standard	-25 dBc
Harmonics With Option 006 2 to 26.5 GHz	-60 dBc
Subharmonics Below 7 GHz	none
Subharmonics 7 to 20 GHz	-50 dBc
Phase Noise 13.5 to 20 GHz at 10 kHz Offset	-76 dBc/Hz
CW Switching Within Band	15 ms plus 5 ms per GHz step
CW Switching Maximum Or Band Cross	50 ms

PARAMETER	VALUE
Step Sweep Points	2 to 801
List Mode Points	1 to 801
Dwell Time	100 us to 3.2 s
Ramp Sweep Time	10 ms to 100 s; 300 MHz/ms maximum rate
Analog Power Sweep Range	-20 dBm to maximum available power
Pulse On Off Ratio	80 dB (ALC 0 dBm and above; 20 C to 55 C on this model)
Pulse Rise Fall Standard	25 ns
Pulse Rise Fall Option 0	10 ns
Video Feedthrough 2 GHz And Above	1 percent class
FM Locked Maximum Deviation	plus/minus 8 MHz
AM Linear Sensitivity	100 percent per volt
Scan Exponential Sensitivity	10 dB per volt
Source Match Typical Below 20 GHz	1.6:1 SWR internally leveled
RF Connector	precision 3.5 mm male
Net Weight	27 kg (60 lb)
Dimensions	178 mmHx 425 mmWx 648 mmDMains: 48 to 66 Hz; 115 V or 230 V; 400 VA maximum
Operating Temperature	0 C to 55 C
Leveled Power Temperature Window	0 C to 35 C (spec); typically less than 2 dB degrade 35 C to 55 C
Warm Up Operation	30 minutes from cold start
Related Lower Power	83620B +13 dBm same span
RelatedLSeries	83623L +15 dBm, no pulse options

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 55 C
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Related Lower Power	83620B +13 dBm same span
RelatedLSeries	83623L +15 dBm, no pulse options Notes Specs from Agilent 8360B/L data sheet 5964-6162E 83623B high-power column. Pulse on/off on 83623B/83624B applies at ALC 0 dBm and above and degrades 5 dB below 20 C. Distinct from 83623L (CW-only, +15 dBm, Option 006 not applicable).

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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Instrument Type	High power synthesized swept signal generator
Family	8360B Series
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Standard Frequency Resolution	1 kHz
Option 008 Frequency Resolution: 1 Hz	
Specifications	
PARAMETER	VALUE
Timebase Aging Rate	5e-10 per day; 1e-7 per year
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Minimum Settable Power Standard	-20 dBm
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Harmonics Below 2 GHz Standard: -25 dBc	
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Phase Noise 13.5 to 20 GHz at 10 kHz Offset: -76 dBc/Hz	
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FM Locked Maximum Deviation	plus/minus 8 MHz
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Notes

Specs from Agilent 8360B/L data sheet 5964-6162E 83623B high-power column. Pulse on/off on 83623B/83624B applies at ALC 0 dBm and above and degrades 5 dB below 20 C. Distinct from 83623L (CW-only, +15 dBm, Option 006 not applicable).

Ordering Information

OPTION	DESCRIPTION
Option 008	Frequency Resolution: 1 Hz
Option 006	2 to 26.5 GHz: -60 dBc

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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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.