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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 83650L Synthesized Swept-CW Generator, 10 MHz to 50 GHz

HP / Agilent 83650L Synthesized Swept CW Generator 10 MHz to 50 GHz The HP/Agilent 83650L is the CW-oriented 8360L-series companion to the 83650B, covering 10 MHz to 50 GHz without the B-series pulse/AM/FM modulation hardware. Maximum leveled power matches the 83650B/L column: +10 dBm below 26.5 GHz, +5 dBm from 26.5 to less than 40 GHz, and +2.5 dBm at or above 40 GHz. Resolution is 1 kHz standard (1 Hz Option 008). CW and swept microwave stimulus to 50 GHz where modulation is not required; LO substitution; automated levelled CW ATE. The HP/Agilent 83650L is the CW-oriented 8360L-series companion to the 83650B, covering 10 MHz to 50 GHz without the B-series pulse/AM/FM modulation hardware. Maximum leveled power matches the 83650B/L column: +10 dBm below 26.5 GHz, +5 dBm from 26.5 to less than 40 GHz, and +2.5 dBm at or above 40 GHz. Resolution is 1 kHz standard (1 Hz Option 008). CW and swept microwave stimulus to 50 GHz where modulation is not required; LO substitution; automated levelled CW ATE.



MODEL

**HP / Agilent
83650L**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83650L

LISTING

<https://aumictechlabs.com/products/83650L-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 83650L is a synthesized swept-CW generator delivering precise RF and microwave signal generation from 10 MHz to 50 GHz. It combines the accuracy of a synthesized

source with sweep flexibility, enabling complex stimulus/response testing across aerospace, defense, and communications applications. Technical Specifications Frequency Performance Operating range: 10 MHz to 50 GHz Resolution: 1 kHz standard (1 Hz with Option 008) Switching time: 10 ms typical without attenuator change; 15 ms + (step size/1 GHz) × 5 ms for frequency band steps; 5 ms with narrow steps SSB phase noise: < -80 dBc/Hz at 10 GHz, 10 kHz offset Harmonics: -50 dBc typical below 26.5 GHz Aging rate: 5×10^{-10} /day Output Power Calibrated output: +2.5 dBm Maximum: 10 dBm below 26 GHz; 2.5 dBm above 40 GHz Leveled output reduction: 1.5 dB to 20 GHz; 2 dB above 20 GHz; 2.5 dB above 40 GHz Standard minimum: -20 dBm With Option 001 attenuator: -110 dBm minimum Level resolution: 0.02 dB Sweep Capabilities Modes: CW, step, list, manual, ramp, and analog power sweep Step/list points: 2 to 801 per table Dwell time: 100 μ s to 3.2 s Triggers: Auto, external, single, or GPIB Key Features 1 kHz frequency resolution enables fine-grain tuning for precision characterization User flatness correction accommodates operational modes (CW, step, list, manual, and ramp sweep) Multiple sweep modes support diverse test scenarios from transient response to frequency-dependent behavior Output level specifications maintain accuracy across 15 °C to 35 °C operating window Modulation options compatible with Agilent 8360B series; pulse modulation available above 400 MHz Typical Applications Component and subsystem characterization in RF/microwave design Frequency response and gain flatness measurement Stimulus/response testing for amplifiers and filters Aerospace and defense signal simulation Communications system validation Compatibility & Integration GPIB trigger support enables automated test sequencing. AC power supply requires proper line voltage selector and grounding via three-prong cord. Cabinet installation demands unrestricted convection; ambient temperature must remain 4 °C below instrument maximum for every 100 watts cabinet dissipation.

Features & description

From manufacturer datasheet

Features

- 10 MHz to 50 GHz synthesized swept CW generator
- Same power table as 83650B without modulation options
- Option 001 to -110 dBm; Option 008 1 Hz
- Step/list/ramp sweep modes shared with 8360 family
- Use 83650B if pulse/AM/FM required

83650L Characteristics / Specifications

PARAMETER	VALUE
Model	83650L
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized swept CW generator
Family	8360L
Frequency Range	10 MHz to 50 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution Option 0	1 Hz
Timebase Aging Rate	5e-10 per day; 1e-7 per year
Maximum Leveled Power Below 26.5 GHz	+10 dBm
Maximum Leveled Power 26.5 To Less Than 40 GHz	+5 dBm
Maximum Leveled Power At Or Above 40 GHz	+2.5 dBm
Minimum Settable Power Standard	-20 dBm
Minimum Settable Power Option 0	-110 dBm
Power Resolution	0.02 dB
Power Switching Time Without Attenuator Change Typical	10 ms
Power Accuracy Greater Than Minus 10 dBm 2 To 20 GHz	plus/minus 0.7 dB
Power Accuracy Greater Than Minus 10 dBm 20 To 40 GHz	plus/minus 0.9 dB
Power Accuracy Greater Than Minus 10 dBm Above 40 GHz	plus/minus 1.7 dB
Flatness Greater Than Minus 10 dBm 2 To 20 GHz	plus/minus 0.6 dB
Flatness Greater Than Minus 10 dBm 20 To 40 GHz	plus/minus 0.8 dB

PARAMETER	VALUE
Flatness Greater Than Minus 10 dBm Above 40 GHz	plus/minus 1.5 dB
User Flatness Points Per Table	2 to 801
User Flatness Tables	up to 8
CW Switching Time Across Band	50 ms maximum
Step List Points	2 to 801 (step); 1 to 801 (list)
Dwell Time Step List	100 us to 3.2 s
Ramp Sweep Time	10 ms to 100 s; 300 MHz/ms maximum rate
Harmonics 2 To 26.5 GHz Standard	-50 dBc
Harmonics At Or Above 26.5 GHz Standard	-40 dBc
Modulation Hardware	none (L series); use 83650B for pulse/AM/FM
Related Modulated Sibling	83650B
Related Narrower CW	83640L to 40 GHz
Alias	HP 83650L; Agilent 83650L; Keysight 83650L

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	83650L
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized swept CW generator
Family	8360L
Frequency Range	10 MHz to 50 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution Option 008	1 Hz
Timebase Aging Rate	5e-10 per day; 1e-7 per year
Maximum Levelled Power Below 26.5 GHz	+10 dBm
Maximum Levelled Power 26.5 To Less Than 40 GHz: +5 dBm Maximum Levelled Power At Or Above 40 GHz: +2.5 dBm Minimum Settable Power Standard: -20 dBm Minimum Settable Power Option 001: -110 dBm Option 001 Max Power Reduction To 20 GHz: 1.5 dB Option 001 Max Power Reduction Above 20 GHz: 2 dB Option 001 Max Power Reduction Above 40 GHz: 2.5 dB Power Resolution: 0.02 dB Power Switching Time Without Attenuator Change Typical: 10 ms Power Accuracy Greater Than Minus 10 dBm 2 To 20 GHz: plus/minus 0.7 dB Power Accuracy Greater Than Minus 10 dBm 20 To 40 GHz: plus/minus 0.9 dB Power Accuracy Greater Than Minus 10 dBm Above 40 GHz: plus/minus 1.7 dB Flatness Greater Than Minus 10 dBm 2 To 20 GHz: plus/minus 0.6 dB Flatness Greater Than Minus 10 dBm 20 To 40 GHz: plus/minus 0.8 dB Flatness Greater Than Minus 10 dBm Above 40 GHz: plus/minus 1.5 dB	
Specifications	
PARAMETER	VALUE
User Flatness Points Per Table	2 to 801
User Flatness Tables	up to 8
CW Switching Time Across Band	50 ms maximum
Step List Points	2 to 801 (step); 1 to 801 (list)
Dwell Time Step List	100 us to 3.2 s
Ramp Sweep Time	10 ms to 100 s; 300 MHz/ms maximum rate

PARAMETER	VALUE
Harmonics 2 To 26.5 GHz Standard	-50 dBc
Harmonics At Or Above 26.5 GHz Standard	-40 dBc
Modulation Hardware	none (L series); use 83650B for pulse/AM/FM
Related Modulated Sibling	83650B
Related Narrower CW	83640L to 40 GHz
Alias	HP 83650L; Agilent 83650L; Keysight 83650L

Notes

Rows from Agilent 8360B/L series data sheet 83650B/L column. L-series units omit Option 006 pulse hardware; do not apply B-series modulation rows to this CW generator.

Ordering Information

OPTION	DESCRIPTION
Option 001	to -110 dBm; Option 008 1 Hz
Option 006	pulse hardware; do not apply B-series modulation 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

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.