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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 83640B Synthesized Swept-Signal Generator, 0.01" 40 GHz, +10 dBm calibrated output

HP / Agilent 83640B Synthesized Swept Signal Generator 10 MHz to 40 GHz The HP/Agilent 83640B is the 10 MHz to 40 GHz full-feature synthesized swept-signal generator in the 8360B family (pulse, AM, FM, and scan modulation). Maximum leveled power is +10 dBm below 26.5 GHz and +6 dBm at 26.5 GHz and above. Standard frequency resolution is 1 kHz (1 Hz Option 008). Option 001 step attenuator extends minimum settable power to -110 dBm. Broadband CW and swept stimulus to 40 GHz; component and receiver test; pulsed/AM/FM modulated microwave ATE; mm-wave driver with suitable multipliers. The HP/Agilent 83640B is the 10 MHz to 40 GHz full-feature synthesized swept-signal generator in the 8360B family (pulse, AM, FM, and scan modulation). Maximum leveled power is +10 dBm below 26.5 GHz and +6 dBm at 26.5 GHz and above. Standard frequency resolution is 1 kHz (1 Hz Option 008). Option 001 step attenuator extends minimum settable power to -110 dBm. Broadband CW and swept stimulus to 40 GHz; component and receiver test; pulsed/AM/FM modulated microwave ATE; mm-wave driver with suitable multipliers.



MODEL

**HP / Agilent
83640B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83640B

LISTING

<https://aumictechlabs.com/products/83640b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 83640B is a synthesized swept-signal generator delivering precision frequency synthesis across 0.01 GHz to 40 GHz with +10 dBm calibrated output power. Built on indirect synthesis architecture, this instrument achieves superior single-sideband phase noise performance while maintaining broad spectral coverage. The 83640B supports multiple operational modes CW, step sweep, list mode, manual sweep, ramp sweep, and analog sweep variants - alongside modulation capabilities including pulse, AM, and FM. Frequency resolution reaches 1 Hz with Option 008, stepping down to 1 kHz standard. Output power ranges from -20 dBm to +10 dBm leveled; Option 001 extends the range to -110 dBm minimum. Switching time of 10 ms typical (without attenuator change) enables rapid frequency transitions. Temperature stability holds 0.01 dB/°C for output power. This generator is engineered for radar system characterization, wireless communication testing, and microwave circuit validation where signal purity and dynamic range matter. Technical Specifications Frequency Range: 0.01 GHz to 40 GHz Calibrated Output Power: +10 dBm Output Power Range (Levelled): -20 dBm to +10 dBm; -110 dBm to +10 dBm with Option 001 Single-Sideband Phase Noise: Typically -80 dBc at 10 GHz, 10 kHz offset Harmonics: Typically -50 dBc below 26.5 GHz; -40 dBc minimum above 26.5 GHz Frequency 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 Temperature Stability (Output Power): 0.01 dB/°C typical Source Match (Internally Levelled): 1.6:1 SWR <20 GHz; 1.8:1 SWR <40 GHz; 2.0:1 SWR <50 GHz Key Features Indirect synthesis for low-noise performance across the band Modulation support: pulse, AM (DC to 250 kHz, 3 dB), FM Pulse modulation for frequencies ≥400 MHz; internal pulse generator included Option 002 adds 30 ns delay and ±5 ns pulse compression for external pulse inputs External ALC (Automatic Level Control) supported Power meter mode at 0.7 Hz nominal Operating temperature range: 0 °C to 55 °C Typical Applications Radar system testing and characterization Wireless communication signal validation Microwave circuit design and verification Compatibility & Integration Multiple sweep modes and modulation types enable integration into automated test systems and manual measurement setups. Option 001 step attenuator expands dynamic range to -110 dBm minimum output.

Features & description

From manufacturer datasheet

Features

- 10 MHz to 40 GHz synthesized swept signal generator
- Max leveled +10 dBm (less than 26.5 GHz); +6 dBm (at or above 26.5 GHz)
- Pulse, AM, FM, scan modulation (B series)
- Option 001 to -110 dBm; Option 008 1 Hz resolution
- User flatness 2 to 801 points; up to 8 tables

83640B Characteristics / Specifications

PARAMETER	VALUE
Model	83640B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized swept signal generator
Family	8360B
Frequency Range	10 MHz to 40 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution Option 0	1 Hz
Timebase Aging Rate	5e-10 per day; 1e-7 per year
Timebase Temperature Typical	1e-10 perCMaximum Leveled Power Below 26.5 GHz: +10 dBm
Maximum Leveled Power At Or Above 26.5 GHz	+6 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
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
User Flatness Points Per Table	2 to 801
User Flatness Tables	up to 8
CW Switching Time Within Band	15 ms plus (step size/1 GHz) times 5 ms
CW Switching Time Across Band	50 ms maximum

PARAMETER	VALUE
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
Related CW Only Sibling	83640L
Related Wider Span	83650B to 50 GHz
Alias	HP 83640B; Agilent 83640B; Keysight 83640B

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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PARAMETER	VALUE
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Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Synthesized swept signal generator
Family	8360B
Frequency Range	10 MHz to 40 GHz
Frequency Resolution Standard	1 kHz
Frequency Resolution Option 008	1 Hz
Timebase Aging Rate	5e-10 per day; 1e-7 per year
Timebase Temperature Typical	1e-10 perCMaximum Levelled Power Below 26.5 GHz: +10 dBm
Maximum Levelled Power At Or Above 26.5 GHz: +6 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	
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	
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	
Specifications	
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User Flatness Points Per Table	2 to 801
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PARAMETER	VALUE
Harmonics At Or Above 26.5 GHz Standard	-40 dBc
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Notes

Rows from Agilent 8360B/L series data sheet for the 83640B column. Confirm Option 001/006/008 and RF connector on the unit.

Ordering Information

OPTION	DESCRIPTION
Option 001	step attenuator extends minimum settable power to -110 dBm.

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 ·
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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.