

## Synthesized Swept Signal and CW Generator Family, 10 MHz to 50 GHz (or 110 GHz)

HP 8360B Series Synthesized Swept Signal Generator, HP 8360L Series Synthesized Swept CW Generator

- +20 dBm (HP 83624B) to -110 dBm (Option 001) calibrated output power
- -50 dBc harmonics <26.5 GHz typical
- SSB phase noise < -80 dBc at 10 GHz and 10 kHz offset
- Complete analog sweeper
- 1Hz frequency resolution (Option 008)
- Pulse, amplitude and frequency modulation (HP 8360B series only)



The HP 8360B/L series for the winning combination of precision, versatility and flexibility



### HP 8360B/L Synthesized Swept Signal and CW Generator Series

The HP 8360 family consists of the general-purpose B-model series and the L-model (without modulation) series. They combine the excellent frequency resolution, level control, signal purity, and modulation capabilities you expect of a high-performance synthesized signal generator with the speed and convenience of a sweep oscillator. They are ideal for the demanding requirements of signal simulation, local oscillator, and stimulus/response component or subsystem test applications.

The HP 8360 family offer a choice of models to meet a variety of application requirements. Ultra-broadband frequency coverage for 10 MHz to 50 GHz is available in coax using a 2.4-mm precision connector. High-power models with up to +20 dBm are also available. The HP 8360 can also be customized with 1 Hz frequency resolution, fast pulse, a synthesized internal modulation generator, and a blank front panel for automated test applications.

#### Flexible and Upgradeable for Growth

The HP 8360 is designed to facilitate future growth. The hardkey and softkey front-panel design offers easily-accessible functions that are simple to use. Softkey flexibility and modular architecture provide upgrade capability, while retaining system compatibility. The family delivers the cost-effective and state-of-the-art performance you need today, while protecting your investment in the future.

#### Pulse, Scan, Amplitude, and Frequency Modulation (HP 8360B series only)

High-performance pulse modulators with >80 dB on/off ratio, and rise/fall times < 10 ns (Option 006), make the HP 8360B suitable for the most demanding pulse modulation applications.

In addition to its linear AM mode (100%/V), the HP 8360B offers a scan modulation mode (10 dB/V). Both modes have dc-coupled amplitude modulation capability with a 3 dB bandwidth of 100 kHz, and 99.7% (50 dB) of modulation depth. Pulse and amplitude modulation capabilities can be used independently and simultaneously.

The HP 8360B also offers dc-coupled frequency modulation capabilities with rates up to 8 MHz.

### Specifications Summary

#### Frequency

- Range (by model):
- HP 83620B 10 MHz to 20 GHz
  - HP 83622B 2 GHz to 20 GHz
  - HP 83623B 10 MHz to 20 GHz (high power)
  - HP 83624B 2 GHz to 20 GHz (high power)
  - HP 83630B 10 MHz to 26.5 GHz
  - HP 83640B 10 MHz to 40 GHz
  - HP 83650B 10 MHz to 50 GHz
  - HP 83623L 10 MHz to 20 GHz
  - HP 83630L 10 MHz to 26.5 GHz
  - HP 83640L 10 MHz to 40 GHz
  - HP 83650L 10 MHz to 50 GHz

Resolution: 1 kHz (Option 008 1 Hz)

Internal 10 MHz Time Base

Aging Rate:  $5 \times 10^{-10}$ /day,  $1 \times 10^{-7}$ /year

#### RF Output

##### Output Power

Maximum Levelled (dBm)	Option 006 Standard	(B models only)
HP 83620B, 83622B	+13	+13
HP 83623B	+17	+17
HP 83623L	+15	Not applicable
HP 83624B	+20	+17
HP 83630B/L		
Output Frequencies <20 GHz	+13	+13
Output Frequencies ≥20 GHz	+10	+10
HP 83640B/L		
Output Frequencies <26.5 GHz	+10	+10
Output Frequencies ≥26.5 GHz	+6	+6
HP 83650B/L		
Output Frequencies <26.5 GHz	+10	+10
Output Frequencies ≥26.5 GHz and <40 GHz	+5	+5
Output Frequencies ≥40 GHz	+2.5	+2.5

##### Minimum Settable Output Power

- Standard: -20 dBm
- Option 001: -110 dBm
- Resolution: 0.02 dB

##### RF Output Connector

Nominal output impedance 50 ohms (precision 3.5-mm male on 20 and 26.5 GHz models, 2.4-mm male on 40 and 50 GHz models, front panel)

#### Spectral Purity

##### Spurious Signals (dBc) Harmonics

Output Frequencies	83620B 83622B	83623B 83624B	83623L	83630B/L	83640B/L 83650B/L
< 2.0 GHz					
Standard	-30	-25 <sup>1</sup>	-25 <sup>1</sup>	-30	-30 <sup>1</sup>
Option 006	-30 <sup>1</sup>	-25 <sup>1</sup>		-30 <sup>1</sup>	-30 <sup>1</sup>
≥ 2.0 GHz and < 26.5 GHz					
Standard	-50	-25	-45	-50	-50
Option 006	-60	-60		-60	-50
≥ 26.5 GHz					
Standard					-40
Option 006					-40

##### Subharmonics

Output Frequencies	83620B 83622B	83623B 83624B	83623L	83630B/L	83640B/L 83650B/L
< 7 GHz	None	None	None	None	None
≥ 7 and ≤ 20 GHz	-50	-50	-50	-50	-50
≥ 20 GHz and ≤ 40 GHz				-50	-40 <sup>2</sup>
> 40 GHz				-35 <sup>2</sup>	

<sup>1</sup>Specification is -20 dBc below 50 MHz.

<sup>2</sup>Specifications typical below 0 dBm.