

KEYSIGHT TECHNOLOGIES (AGILENT HP)

83650B

The Keysight (Agilent/HP) 83650B is a high-performance synthesized swept-signal generator providing broadband frequency coverage from 10 MHz to 50 GHz. Combining the precision and accuracy of a synthesized source with the speed and versatility of an analog sweep oscillator, the 83650B is designed for demanding RF and microwave test and measurement applications. It delivers excellent spectral purity—including low single-sideband phase noise and exceptional harmonic performance—alongside comprehensive sweep capabilities, internal AM, FM, and pulse modulation, and up to +10 dBm of calibrated output power.

SPECIFICATIONS

General

Interfaces	GPIB
Output Impedance	50 Ω

Physical

Power Supply	100/120/220/240 Vac ($\pm 10\%$), 48 to 66 Hz; 400 VA max
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	425 × 178 × 648 mm
Weight	27 kg

Frequency Specifications

Frequency Range	10 MHz to 50 GHz
Frequency Resolution	1 kHz (Standard) / 1 Hz (Option 008)
Internal Reference Frequency	10 MHz

Spectral Purity

SSB Phase Noise (10 kHz offset)	< -80 dBc/Hz @ 10 GHz
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Modulation Specifications

Supported Modulation Types	Pulse, Amplitude (AM), Frequency (FM)
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Connectivity and Interfaces

RF Output Connector Type	2.4 mm (male)
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Options and Configurations

Step Attenuator Option	Option 001 (extends minimum power to -110 dBm)
High Resolution Option	Option 008 (1 Hz frequency resolution)

Performance

Power Leveling Modes	Internal, External Detector, External Power Meter
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Environmental

Storage Temperature	-40 °C to +75 °C
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Modulation

Pulse Modulation On/Off Ratio	> 80 dB
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Power Requirements

Power Consumption	400 VA maximum
AC Line Voltage	100 / 120 / 220 / 240 VAC
AC Line Frequency	48 to 66 Hz (up to 400 Hz at 100/120 VAC)

TECHNOLOGY

Synthesized Sweeper

APPLICATIONS

RF and Microwave Test & Measurement

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.