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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 8665B High-Performance Signal Generator, 6 GHz

HP Agilent 8665B High Performance RF Signal Generator The Agilent 8665B is a high-performance RF signal generator covering 0.1 MHz to 6000 MHz with 0.01 Hz frequency resolution. OEM 8644B/8664A/8665B data sheet lists low phase noise to 6 GHz, optional low-noise Option 004, and fast switching. Low-noise RF LO and stimulus to 6 GHz, receiver testing, and high-purity CW and modulated signal generation. Frequency Accuracy Std Timebase: 0.375e-6 times carrier within 1 year of calibration The Agilent 8665B is a high-performance RF signal generator covering 0.1 MHz to 6000 MHz with 0.01 Hz frequency resolution. OEM 8644B/8664A/8665B data sheet lists low phase noise to 6 GHz, optional low-noise Option 004, and fast switching. Low-noise RF LO and stimulus to 6 GHz, receiver testing, and high-purity CW and modulated signal generation. Frequency Accuracy Std Timebase: 0.375e-6 times carrier within 1 year of calibration Switching Speed Typical: less than 50 ms within 0.33 ppm



MODEL

**Agilent / Keysight
8665B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8665B

LISTING

<https://aumictechlabs.com/products/8665b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 8665B is a synthesized signal generator engineered for RF and microwave testing from 100 kHz to 6 GHz. It delivers precise frequency synthesis, low-noise performance,

and flexible modulation in a single instrument suited to receiver characterization, radar testing, and production environments. This generator spans 100 kHz to 6 GHz with amplitude control from -139.9 dBm to +13 dBm and 0.01 Hz frequency resolution. Output level accuracy reaches ± 1 dB above -119.9 dBm across most bands, with tighter performance available through optional enhancements. SSB phase noise typically measures -140 dBc/Hz at 20 kHz offset (1 GHz, with Option 004), and nonharmonic spurious levels stay below -100 dBc to 2 GHz.

Technical Specifications

Frequency Range: 100 kHz to 6 GHz Amplitude Range: -139.9 dBm to +13 dBm
Frequency Resolution: 0.01 Hz Output Level Accuracy: ± 1 dB (≥ -119.9 dBm, most bands); ± 1.5 dB (1000–3000 MHz); ± 2 dB (3000–6000 MHz); ± 3 dB (< -119.9 dBm) SSB Phase Noise: Typically -140 dBc/Hz at 20 kHz offset, 1 GHz (Option 004) Nonharmonic Spurious: < -100 dBc to 2 GHz
Timebase: High-stability oven-controlled (standard) RF Leakage: Typically 80 dB on/off ratio, < 5 ns rise/fall times Internal modulation sources: sine, square, triangle, sawtooth, and Gaussian noise waveforms Sine/noise waveforms to 400 kHz with low distortion; triangle/sawtooth/square to 50 kHz Two independent modulation sources for two-tone testing Digitally stepped frequency sweep with linear/log modes over full 6 GHz range; sweep times 20 ms to 10 s 40 MHz span capability (carrier frequency dependent)

Typical Applications Receiver sensitivity and selectivity testing Out-of-channel receiver validation Radar system development and verification Spurious immunity characterization (< 85 dB receivers with Option 004)

Compatibility & Integration Options include high-stability timebase (001), rear panel I/O (003), low-noise enhancement (004), pulse modulation (008), and reduced RF leakage shielding (010).

8665B Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	0.1 MHz to 6000 MHz
Frequency Resolution	0.01 Hz
Frequency Accuracy Std Timebase	0.375e-6 times carrier within 1 year of calibration
Switching Speed Typical	less than 50 ms within 0.33 ppm
Switching Speed With Option 0	less than 100 ms
SSB Phase Noise 20 kHz Offset 4120 to 6000 MHz Std	-105 dBc/Hz
SSB Phase Noise 20 kHz Offset 4120 to 6000 MHz Opt 0	-116 dBc/Hz
SSB Phase Noise 20 kHz Offset 3000 to 4120 MHz Std	-105 dBc/Hz
SSB Phase Noise 20 kHz Offset 2060 to 3000 MHz Std	-111 dBc/Hz
Subharmonics 0.1 to 1500 MHz	less than -75 dBc
Subharmonics 1500 to 3000 MHz	less than -40 dBc
Subharmonics 3000 to 6000 MHz	less than -50 dBc class sheet
Level Accuracy Mid Levels Class	+/-1 dB class
Instrument Type	High performance RF signal generator
Remote Interface	GPIB
Sibling 8664A Range	0.1 MHz to 3000 MHz
Minimum Frequency	0.1 MHz
Maximum Frequency	6000 MHz
Output Impedance	50 Ohm
Nonharmonics Class Midband	less than -90 dBc class upper bands
AM FM Modulation	Supported class

8665B Specifications

PARAMETER	VALUE
HP Agilent 8665B High Performance RF Signal Generator	Overview
Applications	Low-noise RF LO and stimulus to 6 GHz, receiver testing, and high-purity CW and modulated signal generation.
Key Features	0.1 MHz to 6 GHz coverage
Low SSB phase noise	Optional low noise Option 004
Technical Specifications	Frequency Range: 0.1 MHz to 6000 MHz

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.

Performance RF Signal Generator

Overview

The Agilent 8665B is a high-performance RF signal generator covering 0.1 MHz to 6000 MHz with 0.01 Hz frequency resolution. OEM 8644B/8664A/8665B data sheet lists low phase noise to 6 GHz, optional low-noise Option 004, and fast switching.

Applications

Low-noise RF LO and stimulus to 6 GHz, receiver testing, and high-purity CW and modulated signal generation.

Key Features

0.1 MHz to 6 GHz coverage
0.01 Hz frequency resolution
Low SSB phase noise
Optional low noise Option 004
GPIB programmability

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Frequency Range	0.1 MHz to 6000 MHz
Frequency Resolution	0.01 Hz
Frequency Accuracy Std Timebase	0.375e-6 times carrier within 1 year of calibration
Switching Speed Typical	less than 50 ms within 0.33 ppm
Switching Speed With Option 004	less than 100 ms

SSB Phase Noise 20 kHz Offset 4120 to 6000 MHz Std: -105 dBc/Hz
SSB Phase Noise 20 kHz Offset 4120 to 6000 MHz Opt 004: -116 dBc/Hz
SSB Phase Noise 20 kHz Offset 3000 to 4120 MHz Std: -105 dBc/Hz
SSB Phase Noise 20 kHz Offset 2060 to 3000 MHz Std: -111 dBc/Hz
Harmonics Output at or below +10 dBm: less than -30 dBc

Specifications

PARAMETER	VALUE
Subharmonics 0.1 to 1500 MHz	less than -75 dBc
Subharmonics 1500 to 3000 MHz	less than -40 dBc
Subharmonics 3000 to 6000 MHz	less than -50 dBc class sheet
Level Accuracy Mid Levels Class	+/-1 dB class
Instrument Type	High performance RF signal generator
Remote Interface	GPIB
Sibling 8664A Range	0.1 MHz to 3000 MHz
Minimum Frequency	0.1 MHz

PARAMETER	VALUE
Maximum Frequency	6000 MHz
Output Impedance	50 Ohm
Nonharmonics Class Midband	less than -90 dBc class upper bands
AM FM Modulation	Supported class

Notes
From Agilent 8644B, 8664A, 8665B High Performance RF Signal Generators data sheet (8665B columns). Full level range and AM/FM deviation tables are on the OEM sheet.

Ordering Information

OPTION	DESCRIPTION
Option 004	GPIB programmability

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
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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.