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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 8683B Signal Generator

Operating Context: communications, radar, and EW field maintenance Architecture: portable microwave generator Calibration Note: exact leveled dBm range belongs on the 8683B catalog specification table/certificate Remote Interface Class: front panel (HP-IB not listed on the portable 8683/84 family blurb) Architecture: portable microwave generator Calibration Note: exact leveled dBm range belongs on the 8683B catalog specification table/certificate Remote Interface Class: front panel (HP-IB not listed on the portable 8683/84 family blurb) Times 2 Band: optional high-band doubler path



MODEL

**Agilent / Keysight
8683B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8683B

LISTING

[https://aumictechlabs.c
om/products/8683b-2/](https://aumictechlabs.com/products/8683b-2/)

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8683B is a portable signal generator engineered for benchtop and field maintenance environments. It delivers signal generation across the 2.3 GHz to 6.5 GHz band with comprehensive modulation support including AM, FM, and pulse modulation. This instrument is well-suited for testing communications, radar, and electronic warfare systems. Though obsolete and no longer manufactured by Keysight, technical support remains available. Technical Specifications Frequency and Output Frequency range: 2.3 GHz to 6.5 GHz Frequency resolution: 5 MHz Output power: +10 dBm to -130 dBm (leveled into 50 Ω) Level accuracy: ± 2.5 dB from maximum to -110 dBm; +3.5 dB to -120 dBm Typical level accuracy at -100 dBm: -10 dBm): +1.0 dB Harmonics (<18 GHz, 10 dBm): <25 dBc Modulation AM depth: 0 to 70% (1 kHz) AM distortion

(THD): <10% at 40% depth, 1 kHz rate Incidental AM: <6% (rate <100 kHz, peak deviation <1 MHz) FM deviation: ± 5 MHz (main band) FM rates (3 dB BW): DC to 10 MHz (DC coupled); 100 Hz to 10 MHz (AC coupled) FM distortion: <5% at 100 kHz rate, <1 MHz peak deviation Incidental FM: 100 ns RF pulse rise/fall time: 80 dB Maximum pulse repetition frequency: >1 MHz Phase Noise Single-sideband phase noise (10 kHz offset): <-72 dBc/Hz (8683B) Physical and Operational Dimensions: 145 mm H $\times$ 457 mm W $\times$ 472 mm D Weight: 17.9 kg (net); 23.4 kg (shipping) Display: 4-digit LED Frequency switching speed: <20 μ s (typical) Key Features Internal pulse generator with 7 adjustable width ranges Dual modulation input capability (internal and external AM, FM, pulse) Phase lock input with -5 MHz/V typical sensitivity 4-digit LED display for parameter readout Option 003 for 400 Hz line operation Typical Applications Communications system testing Radar and countermeasure validation Electronic warfare receiver evaluation Field maintenance and troubleshooting Compatibility & Integration External modulation inputs accept AM, FM, and pulse signals. Phase lock capability allows synchronization with external frequency references. Dual-band configurations available through Option 001.

Features & description

From manufacturer datasheet

Built-in pulse generator 10 Hz to 1 MHz in 5 ranges

AM 0 to 70 percent at 1 kHz rate FM 5 MHz main band (10 MHz in times-2 band) Optional plus 10 dBm in times-2 band Option 001 Technical Specifications Instrument Type: Portable microwave signal generator Series Family: HP Agilent 8683B/8683D/8684B/8684D Frequency Range: 2.3 to 6.5 GHz Frequency Resolution: 5 MHz Frequency Display: 4-digit LED Harmonics: less than minus 25 dBc below 18 GHz at 10 dBm (unspecified in times-2 band) AM Depth: 0 to 70 percent at 1 kHz rate FM Deviation Main Band: 5 MHz FM Deviation Times 2 Band: 10 MHz Pulse Modulation Rate: 10 Hz to 1 MHz in 5 ranges Output Impedance: 50 ohm Form Factor: rugged portable benchtop Option 001: plus 10 dBm in times-2 band Option 002: reverse power protection (except Dmodels) Option 003: 400 Hz line operation Option 913: rack mounting flange kit Modulation Types: AM, FM, and pulse Built In Pulse Generator: yes Operating Context: communications, radar, and EW field maintenance Display Class: LED frequency Architecture: portable microwave generator Brand Lineage: HP / Agilent Related 8683D: 2.3 to 13 GHz Related 8684B: 5.4 to 12.5 GHz Related 8684D: 5.4 to 18 GHz Calibration Note: exact leveled dBm range belongs on the 8683B catalog specification table/certificate

8683B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Portable microwave signal generator
Series Family	HP Agilent 8683B/8683D/8684B/8684D
Frequency Range	2.3 to 6.5 GHz
Frequency Resolution	5 MHz
Frequency Display	4-digit LED
Harmonics	less than minus 25 dBc below 18 GHz at 10 dBm (unspecified in times-2 band)
AM Depth	0 to 70 percent at 1 kHz rate
FM Deviation Main Band	5 MHz
FM Deviation Times 2 Band	10 MHz
Pulse Modulation Rate	10 Hz to 1 MHz in 5 ranges
Output Impedance	50 ohm
Form Factor	rugged portable benchtop
Modulation Types	AM, FM, and pulse
Built In Pulse Generator	yes
Operating Context	communications, radar, and EW field maintenance
Display Class	LED frequency
Architecture	portable microwave generator
Brand Lineage	HP / Agilent
Related 8683D	2.3 to 13 GHz
Related 8684B	5.4 to 12.5 GHz
Related 8684D	5.4 to 18 GHz
Calibration Note	exact leveled dBm range belongs on the 8683B catalog specification table/certificate
Remote Interface Class	front panel (HP-IB not listed on the portable 8683/84 family blurb)
Line Options	400 Hz with Option 003

PARAMETER

VALUE

Pulse Ranges

5

Times 2 Band

optional high-band doubler path

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
Instrument Type	Portable microwave signal generator
Series Family	HP Agilent 8683B/8683D/8684B/8684D
Frequency Range	2.3 to 6.5 GHz
Frequency Resolution	5 MHz
Frequency Display	4-digit LED
Harmonics	less than minus 25 dBc below 18 GHz at 10 dBm (unspecified in times-2 band)
AM Depth	0 to 70 percent at 1 kHz rate
FM Deviation Main Band	5 MHz
FM Deviation Times 2 Band	10 MHz
Pulse Modulation Rate	10 Hz to 1 MHz in 5 ranges
Output Impedance	50 ohm
Form Factor	rugged portable benchtop
Option 001: plus 10 dBm in times-2 band	
Option 002: reverse power protection (exceptDmodels)	
Option 003: 400 Hz line operation	
Option 913: rack mounting flange kit	
Specifications	
PARAMETER	VALUE
Modulation Types	AM, FM, and pulse
Built In Pulse Generator	yes
Operating Context	communications, radar, and EW field maintenance
Display Class	LED frequency
Architecture	portable microwave generator
Brand Lineage	HP / Agilent
Related 8683D	2.3 to 13 GHz
Related 8684B	5.4 to 12.5 GHz

PARAMETER	VALUE
Related 8684D	5.4 to 18 GHz
Calibration Note	exact leveled dBm range belongs on the 8683B catalog specification table/certificate
Remote Interface Class	front panel (HP-IB not listed on the portable 8683/84 family blurb)
Line Options	400 Hz with Option 003
Pulse Ranges	5
Times 2 Band	optional high-band doubler path

Notes

Numeric rows from HP/Agilent 8683 and 8684 portable microwave signal generator family descriptions (8683B 2.3 to 6.5 GHz, 5 MHz resolution, AM 0 to 70 percent, FM 5/10 MHz, pulse 10 Hz to 1 MHz). Finer power-level tables belong on the OEM catalog specification page.

Ordering Information

OPTION	DESCRIPTION
Option 001	Technical Specifications
Option 003	Pulse Ranges: 5

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

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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.