

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 8656B Synthesized Signal Generator, 0.1 to 990 MHz

HP Agilent 8656B Synthesized Signal Generator The HP 8656B is a synthesized RF signal generator covering 100 kHz to 990 MHz with 10 Hz resolution and leveled output typically from +13 to -127 dBm class. OEM catalog specifications detail AM and FM modulation, electronic attenuator leveling, reverse-power protection, and HP-IB remote programming for production RF stimulus. Receiver testing to 990 MHz, general-purpose CW and modulated RF source work, and automated production stimulus with HP-IB control. The HP 8656B is a synthesized RF signal generator covering 100 kHz to 990 MHz with 10 Hz resolution and leveled output typically from +13 to -127 dBm class. OEM catalog specifications detail AM and FM modulation, electronic attenuator leveling, reverse-power protection, and HP-IB remote programming for production RF stimulus. Receiver testing to 990 MHz, general-purpose CW and modulated RF source work, and automated production stimulus with HP-IB control. AM and FM modulation with internal/external sources



MODEL

**Agilent / Keysight
8656B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8656B

LISTING

<https://aumictechlabs.com/products/8656b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8656B is a programmable synthesized signal generator delivering stable, low-distortion RF signals from 0.1 MHz to 990 MHz. Built for manufacturing test, R&D, and field

service environments, it combines precise frequency control with flexible modulation and remote programmability via HP-IB interface.

Technical Specifications

Frequency & Timing

Frequency range: 0.1 to 990 MHz (underrange capability to 10 kHz) Frequency resolution: 10 Hz Frequency switching speed: <35 ms Internal reference aging: 2 ppm/year High stability timebase (Option 001): 1.5×10^{-8} /day Output Power Level range: +13 dBm to -127 dBm Level accuracy: ± 1.0 dB Level resolution: 0.1 dB SWR: -5 dBm; <1.5 (levels <-5 dBm) Reverse power protection: 25 W

Modulation

AM and FM modulation supported Internal modulation rates: 400 Hz, 1 kHz External modulation bandwidth: DC to 50 kHz (DC coupled); 20 Hz to 50 kHz (AC coupled) FM distortion: <1.5% (all specified deviations, DC to 100 kHz); typically 1 kHz; <0.5% (internal rates, ≥ 3 kHz peak deviation) Incidental AM: <0.1% (center frequency ≥ 500 kHz, peak deviation <20 kHz, internal rates) Simultaneous and mixed modulation modes from internal and external sources

Signal Quality

SSB phase noise: -126 to -114 dBc

Key Features

100 non-volatile save/recall registers for front panel settings Full HP-IB remote programming with standard functions (SHO, AH1, TO, L2, SRO, RL1, PP0, DC1, DTO, CO, E1) Selectable AC power: 100/120/220/240 VAC ($\pm 5\%$, -10%), 48-440 Hz; 125 VA max Operating temperature: 0 to +55°C RF leakage: <1.0 μ V (two-turn 2.5 cm loop at 2.5 cm from front surface)

Physical Dimensions: 133H $\times$ 425W $\times$ 520D mm Net weight: 18.1 kg

8656B Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	100 kHz to 990 MHz
Frequency Underrange	10 kHz with uncalibrated output
Frequency Resolution	10 Hz
Output Level Flatness 100 kHz to 990 MHz at 0 dBm	+/-1.0 dB
FM Peak Deviation 0.1 to 123.5 MHz	99 kHz or 4000 x rate
FM Peak Deviation 123.5 to 247 MHz	50 kHz or 1000 x rate
FM Peak Deviation 247 to 494 MHz	99 kHz or 2000 x rate
FM Peak Deviation 494 to 990 MHz	99 kHz or 4000 x rate
AM Depth Indicator Accuracy Internal Rates	+/-5% of reading class
Incidental AM Class	less than 1% under stated FM conditions
Timebase Aging Rate Class	+/-2 ppm/year after 45 days
External Reference Input	1, 5, or 10 MHz (+/-0.002%), >=0.15 Vrms into 50 ohm
Power Requirements	100/120/220/240 Vac; +5%/-10%; 48 to 440 Hz; 125 VA maximum
Net Weight	18.2 kg (40 lb)
Shipping Weight	23.6 kg (52 lb)
Dimensions	133 H x 425 W x 520 mmD Operating Temperature: 0 to +55 C
HP IB Functions	SH0, AH1, T0, L2, SR0, RL1, PP0, DC1, DT0, C0, E1
RF Leakage Loop Test	less than 1.0 uV induced in 2.5 cm loop at 2.5 cm
Output Impedance	nominally 50 ohms
Modulation	AM and FM
Output Level Range Class	+13 to -127 dBm class literature
Frequency Display	8.5 digit LED display class
Reverse Power Protection	yes electronic attenuator protection
Internal Timebase Frequency Class	10 MHz / 50 MHz references on sheet

PARAMETER

VALUE

Incidental Phase Modulation Class

specified under AM/FM conditions on full sheet

Operating temperature

0 to +55 C

8656B Specifications

PARAMETER	VALUE
HP Agilent 8656B Synthesized Signal Generator	Overview
Applications	Receiver testing to 990 MHz, general-purpose CW and modulated RF source work, and automated production stimulus with HP-IB control.
Key Features	100 kHz to 990 MHz synthesized coverage
Electronic attenuator with reverse power protection	HP-IB remote programming
Technical Specifications	Frequency Range: 100 kHz to 990 MHz

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to +55 C
Operating Temperature	0 to +55 C
HP IB Functions	SH0, AH1, T0, L2, SR0, RL1, PP0, DC1, DT0, C0, E1
RF Leakage Loop Test	less than 1.0 uV induced in 2.5 cm loop at 2.5 cm
Output Impedance	nominally 50 ohms
Modulation	AM and FM
Output Level Range Class	+13 to -127 dBm class literature
Frequency Display	8.5 digit LED display class
Reverse Power Protection	yes electronic attenuator protection
Internal Timebase Frequency Class	10 MHz / 50 MHz references on sheet
Incidental Phase Modulation Class	specified under AM/FM conditions on full sheet Notes From HP 8656B signal generator datasheet/catalog pages. Exact maximum leveled power and SSB phase-noise tables vary by revision; confirm on the unit nameplate and full OEM sheet.

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 detail AM and FM modulation, electronic attenuator leveling, reverse-power protection, and HP-IB remote programming for production RF stimulus.	
Applications	
Receiver testing to 990 MHz, general-purpose CW and modulated RF source work, and automated production stimulus with HP-IB control.	
Key Features	
100 kHz to 990 MHz synthesized coverage	
10 Hz frequency resolution	
AM and FM modulation with internal/external sources	
Electronic attenuator with reverse power protection	
HP-IB remote programming	
Technical Specifications	
Specifications	
PARAMETER	VALUE
FM Peak Deviation 0.1 to 123.5 MHz	99 kHz or 4000 x rate
FM Peak Deviation 123.5 to 247 MHz	50 kHz or 1000 x rate
FM Peak Deviation 247 to 494 MHz	99 kHz or 2000 x rate
FM Peak Deviation 494 to 990 MHz	99 kHz or 4000 x rate
AM Depth Indicator Accuracy Internal Rates	+/-5% of reading class
Incidental AM Class	less than 1% under stated FM conditions
Timebase Aging Rate Class	+/-2 ppm/year after 45 days
External Reference Input	1, 5, or 10 MHz (+/-0.002%), >=0.15 Vrms into 50 ohm
Power Requirements	100/120/220/240 Vac; +5%/-10%; 48 to 440 Hz; 125 VA maximum
Net Weight	18.2 kg (40 lb)
Shipping Weight	23.6 kg (52 lb)
Dimensions	133 H x 425 W x 520 mm D
Operating Temperature	0 to +55 C
HP IB Functions	SH0, AH1, T0, L2, SR0, RL1, PP0, DC1, DT0, C0, E1
RF Leakage Loop Test	less than 1.0 uV induced in 2.5 cm loop at 2.5 cm
Output Impedance	nominally 50 ohms
Modulation	AM and FM
Output Level Range Class	+13 to -127 dBm class literature
Frequency Display	8.5 digit LED display class

PARAMETER	VALUE
Reverse Power Protection	yes electronic attenuator protection
Internal Timebase Frequency Class	10 MHz / 50 MHz references on sheet
Incidental Phase Modulation Class	specified under AM/FM conditions on full sheet

Technical Specifications

PARAMETER	VALUE
Frequency Range	100 kHz to 990 MHz
Frequency Underrange	10 kHz with uncalibrated output
Frequency Resolution	10 Hz

Output Level Flatness 100 kHz to 990 MHz at 0 dBm: +/-1.0 dB

Specifications

PARAMETER	VALUE
FM Peak Deviation 0.1 to 123.5 MHz	99 kHz or 4000 x rate
FM Peak Deviation 123.5 to 247 MHz	50 kHz or 1000 x rate
FM Peak Deviation 247 to 494 MHz	99 kHz or 2000 x rate
FM Peak Deviation 494 to 990 MHz	99 kHz or 4000 x rate
AM Depth Indicator Accuracy Internal Rates	+/-5% of reading class
Incidental AM Class	less than 1% under stated FM conditions
Timebase Aging Rate Class	+/-2 ppm/year after 45 days
External Reference Input	1, 5, or 10 MHz (+/-0.002%), >=0.15 Vrms into 50 ohm
Power Requirements	100/120/220/240 Vac; +5%/-10%; 48 to 440 Hz; 125 VA maximum
Net Weight	18.2 kg (40 lb)
Shipping Weight	23.6 kg (52 lb)
Dimensions	133 H x 425 W x 520 mm0Operating Temperature: 0 to +55 C
HP IB Functions	SH0, AH1, T0, L2, SR0, RL1, PP0, DC1, DT0, C0, E1
RF Leakage Loop Test	less than 1.0 uV induced in 2.5 cm loop at 2.5 cm
Output Impedance	nominally 50 ohms
Modulation	AM and FM
Output Level Range Class	+13 to -127 dBm class literature
Frequency Display	8.5 digit LED display class
Reverse Power Protection	yes electronic attenuator protection
Internal Timebase Frequency Class	10 MHz / 50 MHz references on sheet

PARAMETER	VALUE
-----------	-------

Incidental Phase Modulation Class	specified under AM/FM conditions on full sheet
--	--

Notes

From HP 8656B signal generator datasheet/catalog pages. Exact maximum leveled power and SSB phase-noise tables vary by revision; confirm on the unit nameplate and full OEM sheet.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.