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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 8642M Synthesized signal generator, up to 2GHz

Agilent HP Keysight 8642M Synthesized Signal Generator 100 kHz to 2000 MHz The HP/Agilent 8642M is the military SG-1207/U class synthesized signal generator spanning 100 kHz to 2000 MHz. Calibration bulletin TB 9-6625-2182-35 lists frequency accuracy plus or minus 10 ppm, RF output greater than +15 dBm to minus 140 dBm, and AM/FM/pulse modulation capability aligned with the commercial 8642 synthesizer family. Receiver and communications tests to 2 GHz, military calibration of SG-1207/U generators, and leveled RF stimulus with AM FM and pulse modulation. The HP/Agilent 8642M is the military SG-1207/U class synthesized signal generator spanning 100 kHz to 2000 MHz. Calibration bulletin TB 9-6625-2182-35 lists frequency accuracy plus or minus 10 ppm, RF output greater than +15 dBm to minus 140 dBm, and AM/FM/pulse modulation capability aligned with the commercial 8642 synthesizer family. Receiver and communications tests to 2 GHz, military calibration of SG-1207/U generators, and leveled RF stimulus with AM FM and pulse modulation. 1 Hz frequency resolution class across the band



MODEL

**Agilent / Keysight
8642M**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8642M

LISTING

<https://aumictechlabs.com/products/8642m-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8642M is a synthesized signal generator delivering RF signal generation across the 100 kHz to 2 GHz frequency band. Engineered for receiver testing, component characterization, and local oscillator applications, it combines precise frequency control with excellent spectral purity. The instrument provides output levels from +15 dBm to -140 dBm with 0.1 dB resolution and 1 Hz frequency resolution. Its low phase noise and stable frequency reference make it suitable for both laboratory benchtop operation and integration into automated test equipment systems.

Technical Specifications

Frequency Performance

Frequency range: 100 kHz to 2 GHz

Frequency resolution: 1 Hz (0.1 Hz with special function)

Display accuracy: ± 2 ppm (15°C to 35°C); ± 10 ppm (0°C to 50°C)

Frequency stability: ± 2 ppm/year aging rate (standard)

Option 001 stability: +15 dBm

VSWR: <1.5:1 (up to 1 GHz); <2.5:1 (above 1 GHz)

Reverse power protection: 50 watts, 50 volts (up to 1 GHz); 25 watts, 50 volts (above 1 GHz)

RF connector: Female Type N

Spectral Purity

SSB phase noise at 20 kHz offset: -127 dBc/Hz (up to 132.1875 MHz); -134 dBc/Hz (132.1875 MHz to 1057.5 MHz); -125 dBc/Hz (above 1057.5 MHz)

Noise floor: <-135 dBc/Hz (up to 132.1875 MHz); <-140 dBc/Hz (up to 1057.5 MHz)

Key Features

1 Hz frequency resolution enables fine-tuned signal calibration

Exceptional phase noise performance across the 2 GHz range

Precise output level control with 0.1 dB steps

Low aging rate and temperature coefficient for stable long-term operation

50 Ω output impedance with reverse power protection

Typical Applications

Receiver sensitivity and selectivity testing

RF component characterization and validation

Local oscillator simulation for downconverter evaluation

Automated test system integration

Compatibility & Integration

Female Type N output connector supports standard 50 Ω RF test cables and adapters. Suitable for benchtop and rack-mounted ATE configurations.

8642M Characteristics / Specifications

PARAMETER	VALUE
Model	8642M
Instrument Type	synthesized signal generator
Military Designation Class	SG-1207/U
Frequency Range	100 kHz to 2000 MHz
Frequency Accuracy	plus or minus 10 ppm
Time Stability	plus or minus 0.05 ppm per hour
Line Stability	plus or minus 0.05 ppm for 10 percent line change
Frequency Resolution Class	1 Hz at all frequencies
Rf Output Maximum Class	greater than +15 dBm
Rf Output Minimum	minus 140 dBm
Level Resolution Class Family	0.1 dB class on commercial 8642 sheets
Absolute Level Accuracy Class Family	plus or minus 1 dB class at levels greater than or equal to minus 127 dBm
Output Impedance	50 ohm nominal
Modulation Modes	amplitude frequency and pulse
Internal Modulation Oscillator Class Family	20 Hz to 100 kHz on 8642A/B sheets
Harmonics Class Family	minus 30 dBc class at outputs less than or equal to +10 dBm
Nonharmonics Class Family	minus 100 dBc class for offsets greater than 10 kHz
Ssb Phase Noise Class Family	minus 134 dBc/Hz class at 20 kHz from 1000 MHz on 8642A table
Residual Am Class Family	less than 0.01 percent AM rms 0.3 to 3 kHz BW
Operating Temperature Class Family	0 C to 55 C
Line Power Class Family	100 120 220 or 240 V; 48 to 440 Hz; 300 VA max class
Dimensions Class Family	425 mmWx 133 mmHx 617 mmDNet Weight Class Family: about 32.7 kg (71.5 lb)
Remote Interface Class	HP-IB IEEE-488
Calibration Bulletin	TB 9-6625-2182-35

PARAMETER	VALUE
Operating temperature	Class Family: 0 C to 55 C

8642M Specifications

PARAMETER	VALUE
Key Features	Synthesized coverage to 2000 MHz
AM FM and pulse modulation modes	Remote programming of frequency level and modulation
Technical Specifications	Model: 8642M

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
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Calibration Bulletin	TB 9-6625-2182-35 Notes Frequency range accuracy stability and RF level span from US Army TB 9-6625-2182-35 for SG-1207/U (HP 8642M). Spectral purity size weight and modulation oscillator class rows from overlapping HP 8642A/B commercial data sheet tables.

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	
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Notes

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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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<https://aumictechlabs.com>

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.