

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8657A

The Keysight (formerly Agilent HP) 8657A is a robust, synthesized RF signal generator designed for versatile receiver testing. Covering a frequency range from 100 kHz to 1040 MHz, it offers simultaneous and mixed AM and FM modulations, a high-quality solid-state electronic attenuator for enhanced reliability, and excellent spectral purity, making it ideal for both in-channel and out-of-channel test applications.

SPECIFICATIONS

Frequency

Minimum Frequency	100 kHz Hz
Maximum Frequency	1040 MHz Hz

Output

Maximum Output Power	+13 dBm dBm
Output Power Range	+13 to -143.5 dBm
Phase Noise	<-130 dBc/Hz at 20 kHz offset (500 MHz carrier)

General

Interfaces	GPIO (IEEE-488)
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Frequency Specifications

Frequency Switching Speed	< 35 ms
Option 001 Reference Aging Rate	< 5 x 10 ⁻¹⁰ per day
External Reference Input Frequency	1, 2, 5, or 10 MHz

Amplitude and Output

Minimum Output Level	-143.5 dBm
Level Accuracy	±1.0 dB (levels > -127 dBm, typically ±0.5 dB)
Output Impedance	50 ohms
Reverse Power Protection (RF)	50 Watts (from a 50 ohm source)
Reverse Power Protection (DC)	50 VDC
Attenuator Type	All-electronic solid-state attenuator

Spectral Purity

Harmonics	<-30 dBc (for levels < +7 dBm)
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Amplitude Modulation (AM)

AM Depth Range	0 to 99%
AM Resolution	1%

Frequency Modulation (FM)

FM Modulation Frequency Response (3 dB)	DC to 100 kHz (DC-coupled) or 50 Hz to 100 kHz (AC-coupled)
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Internal Modulation Source

Internal Modulation Frequencies	400 Hz and 1000 Hz
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Physical and Environmental

Operating Temperature Range	0 to 55 °C
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RF Output

Level Resolution	0.1 dB
RF Output Connector	Type-N female (front panel standard, rear panel with Option 002)

System Features

Storage Registers	100 non-volatile registers (00 to 99)
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Options

Option 002 Rear Panel Configuration	Moves RF output and modulation input/output connectors to the rear panel
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TECHNOLOGY

Synthesized RF Signal Generator

APPLICATIONS

Receiver testing, RF component characterization, general laboratory use

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