

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8657D

The Keysight (Agilent HP) 8657D is a dedicated RF signal generator designed for testing mobile communication systems under the North American Digital Cellular (NADC) and Japanese Digital Cellular (PDC) standards. Operating across an analog carrier frequency range of 100 kHz to 1030 MHz, the 8657D adds high-accuracy Pi/4 DQPSK digital modulation with an error vector magnitude of less than 3.2% while retaining standard AM, FM, and pulse modulation capabilities. Its exceptional spectral purity and level accuracy make it a staple for receiver characterization.

SPECIFICATIONS

Frequency

Minimum Frequency	100 kHz Hz
Maximum Frequency	1030 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

Reference Oscillator	10 MHz
Interfaces	GPIB (IEEE-488)

Frequency Characteristics

Frequency Range	100 kHz to 1030 MHz
Internal Reference Frequency	10 MHz

Digital & IQ Modulation

Target Standards Support	NADC (North American Digital Cellular), PDC (Japanese Digital Cellular)
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Amplitude & Output Power

Amplitude Range	+13 to -143.5 dBm
Amplitude Resolution	0.1 dB
Reverse Power Protection (RF)	50 W (from 50 ohm source, DC to 1030 MHz)
Output Impedance	50 ohms

Spectral Purity

SSB Phase Noise	<-130 dBc/Hz (at 20 kHz offset, 500 MHz carrier)
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Analog Modulation

AM Depth Range	0 to 99% (output levels <= +7 dBm)
AM Resolution	1%
FM Deviation Range	Up to 99 kHz (carrier frequency dependent)

Internal Modulation Source

Modulation Waveforms	Sine
Modulation Frequencies	400 Hz, 1000 Hz

Connectivity & Rear Panel Interfaces

RF Output Connector	Type-N female
GPIO Interface	IEEE-488

Programming & Control

Save/Recall Memory	100 non-volatile registers
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Modulation Source

Internal Modulation Frequencies	400 Hz and 1 kHz
External Modulation Input Impedance	600 Ω
External Modulation Input Level	1 Vpk for specified depth or deviation

Compliance

EMI / RFI Compliance	MIL-STD-461B RE02 and FTZ 1115
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TECHNOLOGY

RF Signal Generator

APPLICATIONS

NADC and PDC Mobile Communication Testing

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