

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8904A

The HP / Agilent / Keysight 8904A is a multifunction synthesizer utilizing 12-bit Direct Digital Synthesis (DDS) to provide highly accurate signals. It is capable of generating sine waves up to 600 kHz and square, ramp, and triangle waves up to 50 kHz. The unit can be configured with up to four internal channels and two physical outputs, supporting complex modulation schemes including AM, FM, phase modulation, DSBSC, and pulse modulation, as well as specialized modes like DTMF and unit-to-unit phase synchronization.

SPECIFICATIONS

General

Interfaces	HP-IB (IEEE-488)
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Physical

Operating Temperature	0 to +50 °C °C
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Frequency Characteristics

Waveforms Supported	Sine, square, ramp, triangle
Frequency Range (Sine)	DC to 600 kHz
Frequency Range (Square)	DC to 50 kHz
Frequency Range (Triangle)	DC to 50 kHz
Frequency Range (Ramp)	DC to 50 kHz

Amplitude and DC Offset Characteristics

Output Channels	1 or 2 (configuration dependent)
Internal Synthesizer Channels	1 to 4 (configuration dependent)

Modulation Characteristics

Modulation Types	AM, FM, Phase Modulation (Φ -M), DSBSC, Pulse
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Phase and Multi-Channel Performance

Phase Synchronization	Unit-to-unit synchronization
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Frequency

Frequency Resolution	0.1 Hz
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Outputs

Output Impedance	50 Ω
Maximum Output Level	10 Vp-p (into 50 Ω)
Output Connector	BNC

Performance

Phase Resolution	0.1°
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Waveforms

White Noise Generation	Available with Option 001
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Options & Configurations

Option 001	Adds 3 internal synthesizer channels (4 total), internal modulation, and white noise
Option 002	Adds a second independent output channel (Channel B)
Option 003	Adds fast frequency hopping and digital modulation capabilities

TECHNOLOGY

Direct Digital Synthesis (DDS)

APPLICATIONS

Multifunction signal generation, baseband test, telecommunications (DTMF)

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