

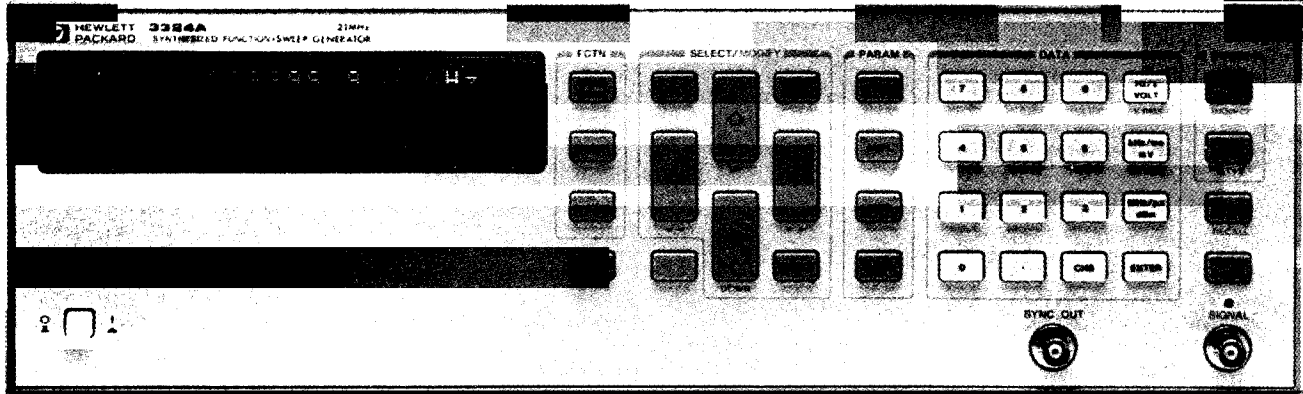
Function Generators & Waveform Synthesizers

168

1 MHz to 21 MHz Synthesized Function/Sweep Generator

HP 3324A

- Multi-interval sweep
- Master/slave capability
- $\pm 719.9^\circ$ variable phase
- Additional 60 MHz output
- Outputs and HP-IB isolated
- HP 3325B software-compatible



HP 3324A

HP 3324A Synthesized Function/Sweep Generator¹



The HP 3324A provides synthesizer performance and multi-segment sweep at a moderate price for applications such as speed sensors. Additionally, multi-phase signals can be set up because variable-phase and master/slave capabilities can be used together.

Brief Specifications (50 Ω Load, 0° to 55°C)

For detailed specifications, please request Data Sheet 5952-9678 Synthesized Function/Sweep Generator HP 3324A

Frequency and Waveforms

1 MHz to: 11 kHz (triangle, ramps), 11 MHz (square), 21 MHz (sine), 60 MHz (auxiliary 0 dBm output)

Accuracy: 5 ppm

Stability: 5 ppm, Option 001; 0.1 ppm

Resolution: 1 mHz (0.1 Hz above 1 MHz)

Main Output (50 Ω source)

Amplitude: 1 mV to 10 V in eight 1-3-10 sequence ranges

Offset: 5 V; voltages double into open

Accuracy: 0.2 dB/2% typical

Resolution: 4 digits

Phase: 719.9° relative to start phase; 0.1° resolution

Sine Wave Characteristics

Phase Noise: -50 dB

Spurious: -55 dB

Harmonics: -60 dBc (< 200 kHz), -40 dBc (< 2 MHz); -30 dBc (< 15 MHz), -25 dBc (< 20 MHz)

Square Wave Characteristics

Transitions: < 20 ns

Overshoot/Ringing: < 5%

Duty Cycle: 50% fixed

Triangle/Ramp Characteristics

Linearity: 0.05%

Sweep Capabilities

Cycling: Single or continuous

Modes: Multi-interval, multi-marker

Sweeps: Linear (up, down, constant, tone), log up

Intervals: 50, sequence length 100 (in multi-interval mode)

Markers: One per interval (9 in multi-marker mode)

Sweep Time: Programmable up to 100.00 s

Auxiliary Outputs

Sync: 50 Ω source, 1.2 Vp-p square wave, same phase as main output

Auxiliary 0 dBm Output: 50 Ω source, square wave

Z-Axis Drive Output: Sweep-time ramp, 10 Vp-p, 10 k Ω source

Z-Axis Output: TTL blanking signal during sweep return, 10 mA sink

Sweep Marker Output: TTL pulse at selected marker frequency

1 MHz Reference Output: 0 dBm, 50 Ω source

Reference Input

For phase-locking connect the HP 3324A to an external frequency reference, signal 0 dBm to 20 dBm into 50 Ω .

Option 002, High Voltage Output

Amplitude: 4 mVp-p to 40 Vp-p into 500 Ω

Frequency: 1 mHz to 1 MHz

Options 003 and 004, Automatic Phase Calibration

Calibration: Refers slave phase to master. Interconnect cables are supplied. If there are two or more slaves, a VHF switch HP 59307A is required. Master/slaving does not apply to sweep mode.

General Specifications

Power: 100/120/220/240 V, 48 to 66 Hz, max. 100 VA

Size: 425.5 mm W x 132.6 mm H x 497.8 mm D (16.75 in x 5.25 in x 19.625 in)

Weight: Net, 11 kg; shipping, 16.5 kg

Ordering Information

	Price
HP 3324A Synthesized Function/Sweep Generator	\$6,950
Opt 001 High Stability Frequency Reference	+\$1,020
Opt 002 High Voltage Output	+\$408
Opt 003 Automatic Phase Calibration, Slave	+\$663
Opt 004 Automatic Phase Calibration, Master	+\$408
Opt 907 Front Handle Kit (5062-3989)	+\$57
Opt 908 Rack Flange Kit (5062-3977)	+\$35
Opt 909 Rack Flange and Handle Combination Kit (5062-3983)	+\$86
Extended warranty options (see page 584) available on request	
Opt 1 BP MIL-STD-45622A Calibration	+\$469
Opt 915 Service Manual	+\$114
Opt 916 Additional Users' Guide	+\$32
Opt UK6 Commercial Calibration Certificate	+\$208

For more information, visit our website: <http://www.hp.com/go/dvt>