Function Generators & Waveform Synthesizers
1 mHz to 21 MHz Synthesized Function/Sweep Generator

- Multi-interval sweep
- Master/slave capability
- ±719.9° variable phase
- Additional 60 MHz output
- Outputs and HP-1B isolated
- HP 3325B software-compatible

HP 3324A Synthesized Function/Sweep Generator

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 (trapezoidal, linear), 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 kHz (0.1 Hz above 1 MHz)

Main Output (50 Ω source)
Amplitude: 1 V 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: 715.9° relative to start phase; 0.1° resolution

Sine Wave Characteristics
Phase Noise: –50 dB
Spurious: –50 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
Mode: 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 kΩ 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 Vp-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 95907A 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

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 $683
Opt 004 Automatic Phase Calibration, Master $408
Opt 097 Front Handle Kit (5062-3999) $35
Opt 088 Rack Flange Kit (5062-3977) $35
Opt 096 Rack Flange and Handle Combination Kit (5062-3983) $88
Extended warranty options (see page 584) available on request
Opt 1 BP MIL-STD-45622A Calibration $469
Opt 015 Service Manual $114
Opt 016 Additional Users’ Guide $32
Opt UK6 Commercial Calibration Certificate $208

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