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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 33250A Function / Arbitrary Waveform Generator, 80 MHz

HP Agilent Keysight 33250A 80 MHz Function Arbitrary Waveform Generator The Agilent/Keysight 33250A is an 80 MHz DDS function/arbitrary waveform generator with 12-bit 200 MSa/s arb memory to 64K points, variable-edge pulses to 50 MHz, and standard AM/FM/FSK, sweep, and burst. Keysight datasheet 5968-8807 lists sine/square to 80 MHz, frequency accuracy 2 ppm (1 year, 18 C to 28 C), and amplitude 10 mVpp to 10 Vpp into 50 Ω . Bench and system stimulus for analog mixed-signal design, pulse and digital timing tests, arbitrary waveform playback, and synchronized multi-unit setups via 10 MHz reference I/O. The Agilent/Keysight 33250A is an 80 MHz DDS function/arbitrary waveform generator with 12-bit 200 MSa/s arb memory to 64K points, variable-edge pulses to 50 MHz, and standard AM/FM/FSK, sweep, and burst. Keysight datasheet 5968-8807 lists sine/square to 80 MHz, frequency accuracy 2 ppm (1 year, 18 C to 28 C), and amplitude 10 mVpp to 10 Vpp into 50 Ω . Bench and system stimulus for analog mixed-signal design, pulse and digital timing tests, arbitrary waveform playback, and synchronized multi-unit setups via 10 MHz reference I/O.



MODEL

**HP / Agilent
33250A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

33250A

LISTING

<https://aumictechlabs.com/products/33250a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 33250A is an 80 MHz Function/Arbitrary Waveform Generator delivering direct digital synthesis with 1 μ Hz frequency resolution and exceptional signal purity. This instrument generates standard waveforms - sine, square, ramp, triangle, $\sin(x)/x$, noise, and DC - across its full bandwidth, with pulse outputs up to 50 MHz featuring sub-8 ns rise/fall times. Arbitrary waveform generation operates at 200 MSa/s with 12-bit vertical resolution and 64K-point memory depth; up to four arbitrary waveforms can be stored in non-volatile memory with user-defined names.

Technical Specifications

Frequency & Timebase

Sine wave: 1 μ Hz to 80 MHz

Square wave: Up to 80 MHz

Pulse waveforms: Up to 50 MHz with variable edge time and pulse width

Frequency resolution: 1 μ Hz

Timebase accuracy: 2 ppm (TCXO)

Arbitrary Waveforms

12-bit vertical resolution

200 MSa/s sample rate

64K-point memory per waveform

Four storable waveforms in non-volatile memory

Signal Output

Amplitude: 10 mVpp to 10 Vpp (into 50 Ω)

Amplitude accuracy: $\pm 1\%$ of setting ± 1 mVpp (at 1 kHz, >10 mVpp, Autorange On)

Output impedance: 50 Ω

Offset: ± 5 Vpk AC + DC

Signal Quality

Harmonic distortion (DC–1 MHz): $\leq 0.2\% + 0.1$ mVrms for >3 Vpp

Harmonic distortion (DC–20 kHz): $< 0.2\% + 0.1$ mVrms for ≤ 3 Vpp

Phase noise (30 kHz band, at 10 MHz): Specified

Modulation & Control

AM, FM, FSK modulation with external modulation input

Linear or logarithmic sweep with programmable frequency marker

Programmable burst count and gating

External trigger/FSK/Burst Gate input; trigger and sync outputs

Key Features

GPIB and RS-232 interfaces with full SCPI programmability

External 10 MHz reference clock input and reference output

Color graphical display with graph mode

Compact form factor: 104 mm H $\times$ 255 mm W $\times$ 374 mm D; 11 lb

Universal power: 100–240 VAC, 50–60 Hz

Typical Applications

Precision signal generation for RF and analog circuit characterization, prototype validation, and system testing requiring low-distortion waveforms and arbitrary signal synthesis.

Compatibility & Integration

Includes Keysight IntuiLink software support. External clock synchronization and modulation inputs enable integration with automated test systems and instrument racks.

33250A Characteristics / Specifications

PARAMETER	VALUE
Sine Frequency Range	1 uHz to 80 MHz
Square Frequency Range	1 uHz to 80 MHz
Pulse Frequency Range	500 uHz to 50 MHz
Arbitrary Frequency Range	1 uHz to 25 MHz
Ramp Frequency Range	1 uHz to 1 MHz
White Noise Bandwidth	50 MHz
Frequency Resolution	1 uHz (pulse 5 digits)
Frequency Accuracy 1 Year 18 to 28 C	2 ppm
Frequency Accuracy 0 to 55 C	3 ppm
Arbitrary Waveform Length	1 to 64K points
Arbitrary Amplitude Resolution	12 bits including sign
Arbitrary Sample Rate	200 MSa/s
Arbitrary Filter Bandwidth	50 MHz
Square Rise Fall Time	less than 8 ns
Pulse Period Range	20.00 ns to 2000.0 s
Pulse Width Range	8.0 ns to 1999.9 s
Pulse Edge Time Range	5.00 ns to 1.00 ms
Amplitude Into 50 Ohm	10 mVpp to 10 Vpp
Amplitude Into Open Circuit	20 mVpp to 20 Vpp
Amplitude Accuracy At 1 kHz	±1% of setting ±1 mVpp
Sine Flatness Relative 1 kHz Below 10 MHz	±1% (0.1 dB)
Sine Flatness 10 to 50 MHz	±2% (0.2 dB)
Sine Flatness 50 to 80 MHz	±5% (0.4 dB)
Offset Into 50 Ohm	±5 Vpk ac + dc
Output Impedance	50 ohm typical fixed

PARAMETER	VALUE
AM Modulation Depth	0.0 to 120.0%
FM Peak Deviation	DC to 80 MHz
Sweep Time	1 ms to 500 s
Burst Count	1 to 1000000 cycles or infinite
Power Consumption	140 VA
Operating Temperature	0 to 55 C
Bench Dimensions WxHxD	254 × 104 × 374 mm
Weight	4.6 kg
Interfaces	IEEE-488 and RS-232
Warmup Time	1 hour
Calibration Interval	1 year
Bandwidth	50 MHz

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 55 C
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Bench Dimensions WxHxD	254 × 104 × 374 mm
Weight	4.6 kg
Interfaces	IEEE-488 and RS-232
Warmup Time	1 hour
Calibration Interval	1 year Notes Specifications from Keysight 33250A Function/Arbitrary Waveform Generator data sheet 5968-8807EN. Footnotes on harmonic floors, edge times at high frequency, and burst limits above 25 MHz apply as published.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Specifications	

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Sine Flatness 10 to 50 MHz	±2% (0.2 dB)
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.