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Data Sheet

August 13, 2026

AGILENT

Agilent 33522A Function / Arbitrary Waveform Generator, 30 MHz

Interfaces standard: LAN LXI Class C; USB 2.0 Option 010: OCXO ultra high stability timebase Ramp nonlinearity typical: less than 0.05 percent (5 to 95 percent amplitude) Specs from Agilent 33521A/33522A datasheet 5990-5914EN. Confirm Options 002, 010, and 400 on the unit. Agilent 33522A 30 MHz Dual Channel Function and Arbitrary Waveform Generator The Agilent/Keysight 33522A is a two channel 30 MHz function and arbitrary waveform generator with true point by point alias protected arbitrary waveforms, 250 MSa/s 16 bit sampling, less than 40 ps jitter, and less than 0.04 percent THD. It supports dual channel coupling, full modulation suite, sequencing, and LXI Class C LAN/USB control with optional GPIB and OCXO timebase. Dual channel mixed signal and embedded stimulus; DTMF two tone telephony test; pacemaker and medical device dual signal timing tests; arbitrary waveform production ATE with 1 MSa per channel standard memory.



MODEL

Agilent 33522A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

33522A

LISTING

<https://aumictechlabs.com/products/33522a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent 33522A is a dual-channel function and arbitrary waveform generator operating to 30 MHz, designed for applications demanding high signal fidelity and precise waveform generation.

It delivers point-by-point arbitrary waveform capability with 250 MSa/s sampling at 16-bit resolution, enabling accurate representation of user-defined signals across 1 MSa/channel standard memory (16 MSa/channel optional). The instrument achieves jitter below 40 ps and total harmonic distortion below 0.04%, ensuring signal integrity for critical measurements.

Technical Specifications
Bandwidth: 30 MHz (sine, square, pulse) Channels: 2 with phase-adjustable outputs Frequency Range: 1 μ Hz to 30 MHz Sampling Rate: 250 MSa/s Resolution: 16-bit Jitter: < 40 ps THD: < 0.04% Arbitrary Waveform Memory: 1 MSa/channel standard; 16 MSa/channel optional (Option 002) Output: Up to 20 Vp-p Timebase: TCXO standard; OCXO optional (Option 010) Synchronization Output: TTL signal (0–5 V)

Key Features Waveform types include sine, square, pulse, ramp, triangle, Gaussian noise, PRBS, and DC + arbitrary FM and AM modulation capabilities Burst and sweep modes supported Frequency and amplitude coupling, differential, or combined output configurations Waveform sequencing capability Large color graphical display for intuitive operation TCXO timebase with optional ultra-high stability OCXO upgrade

Typical Applications Ideal for complex testing scenarios requiring dual-channel signal generation with low jitter performance. Suited for validation of audio systems, sensor simulation, power electronics characterization, and educational instrumentation where arbitrary waveforms and precise frequency control are essential.

Compatibility & Integration Connectivity: USB 2.0 (front-panel Type-A for storage; rear-panel Type-B for PC) and 10/100 Base-T Ethernet with LXI-C compliance. Optional GPIB interface available (Option 400). Software: BenchVue-enabled for PC control; optional BenchLink Waveform Builder Pro for advanced waveform creation and manipulation. Built-in web interface enables remote operation via browser. Supports SCPI command strings for automated test system integration. Physical: 4 × 10 × 12 inches; 10 lbs.

33522A Characteristics / Specifications

PARAMETER	VALUE
Model	33522A
Manufacturer	Agilent / Keysight
Instrument Type	Function and Arbitrary Waveform Generator
Alias	33522A; Agilent 33522A; Keysight 33522A
Channel count	2
Sine frequency range	1 uHz to 30 MHz
Square pulse frequency range	1 uHz to 30 MHz
Frequency resolution	1 uHz
Sample rate	1 uSa/s to 250 MSa/s
Arbitrary voltage resolution	16 bits
Arbitrary memory standard	1 MSa per channel
Arbitrary memory Option 0	16 MSa per channel
Arbitrary bandwidth filter off	40 MHz nominal
Arbitrary jitter filter off	less than 40 ps rms typical
THD sine typical	less than 0.04 percent (20 Hz to 20 kHz)
Amplitude range 50 ohm load	1 mVpp to 10 Vpp
Amplitude accuracy	plus/minus 1 percent of setting plus 1 mVpp at 1 kHz
Output impedance nominal	50 ohms
Frequency accuracy 1 year	plus/minus 1 ppm of setting plus 15 pHz
Square rise time nominal	8.4 ns fixed
Pulse width minimum	16 ns at 100 ps resolution
PRBS bit rate	1 Mbps to 50 Mbps
Sequence length	1 to 512 steps per channel
Operating modes	continuous; modulate; sweep; burst; output gate
Modulation types	AM; FM; PM; FSK; BPSK; PWM; Sum

PARAMETER	VALUE
Interfaces standard	LAN LXI Class C; USB 2.0
Interfaces Option 4	GPIB
Ramp frequency range	1 uHz to 200 kHz
Ramp nonlinearity typical	less than 0.05 percent (5 to 95 percent amplitude) Notes Specs from Agilent 33521A/33522A datasheet 5990-5914EN. Confirm Options 002, 010, and 400 on the unit.
Bandwidth	filter off: 40 MHz nominal
Rise Time	nominal: 8.4 ns fixed

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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Arbitrary bandwidth filter off	40 MHz nominal
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Modulation types	AM; FM; PM; FSK; BPSK; PWM; Sum
Interfaces standard	LAN LXI Class C; USB 2.0

PARAMETER	VALUE
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Interfaces Option 400

GPIB

Option 010: OCXO ultra high stability timebase

Ramp frequency range: 1 uHz to 200 kHz

Ramp nonlinearity typical: less than 0.05 percent (5 to 95 percent amplitude)

Notes

Specs from Agilent 33521A/33522A datasheet 5990-5914EN. Confirm Options 002, 010, and 400 on the unit.

Ordering Information

OPTION	DESCRIPTION
Option 002	to 16 MSa

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.