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Data Sheet

August 6, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) 33521A Function / Arbitrary Waveform Generator, 30 MHz

Keysight (Agilent) 33521A Function / Arbitrary Waveform Generator, 30 MHz The Keysight/Agilent 33521A is a 1-channel 30 MHz Trueform function/arbitrary waveform generator (33500A series predecessor to 33521B). 250 MSa/s, 16-bit sampling; up to 1 MSa arb memory (16 MSa with Option 002). Jitter <40 ps; THD 0.04% class. Amplitude 1 mVpp–10 Vpp into 50 Ω. LAN (LXI-C) and USB standard; optional GPIB (400) and OCXO (010). General-purpose function and arbitrary stimulus; education; R&D bench. The Keysight/Agilent 33521A is a 1-channel 30 MHz Trueform function/arbitrary waveform generator (33500A series predecessor to 33521B). 250 MSa/s, 16-bit sampling; up to 1 MSa arb memory (16 MSa with Option 002). Jitter <40 ps; THD 0.04% class. Amplitude 1 mVpp–10 Vpp into 50 Ω. LAN (LXI-C) and USB standard; optional GPIB (400) and OCXO (010). General-purpose function and arbitrary stimulus; education; R&D bench.



MODEL

**Keysight / Agilent
33521A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

33521A

LISTING

<https://aumictechlabs.com/products/33521a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight 33521A is a single-channel, 30 MHz function and arbitrary waveform generator engineered for electronic design verification, equipment testing, and educational laboratory work. It delivers high-fidelity signal generation with sub-40 ps jitter and <0.04% total harmonic

distortion, enabling accurate characterization of analog circuits and RF components. The instrument generates standard waveforms - sine, square, pulse, triangle/ramp, noise, and PRBS - plus user-defined arbitrary waveforms at 16-bit resolution and 250 MSa/s sampling. Advanced modulation capabilities include AM, FM, PM, FSK, PWM, and BPSK, with support for sweep, burst, and two-tone signal generation. A large color graphical display provides real-time waveform visualization and parameter editing, while an embedded waveform editor enables rapid signal customization. Optional BenchLink Waveform Builder Pro software extends design flexibility for complex user-defined signals.

Technical Specifications
Bandwidth: 30 MHz sine, square, pulse
Jitter: <40 ps
Total Harmonic Distortion: <0.04%
Sampling Rate: 250 MSa/s
Vertical Resolution: 16-bit
Arbitrary Waveform Memory: 1 MSa standard; 16 MSa optional
Output Impedance: 50 Ω
nominal Filter Bandwidth (-3 dB): 40 MHz (filter off); $0.27 \times$ sample rate (normal); $0.13 \times$ sample rate (step)
Timebase: TCXO standard; OCXO optional
Output Isolation: ± 42 Vpk maximum on isolated connector shells

Key Features
True point-by-point arbitrary waveforms with sequencing
Alias protection for signal accuracy
Modulation modes: AM, FM, PM, FSK, PWM, BPSK, Sum Two-tone signal generation for DTMF testing
Color graphical display with simultaneous parameter setup and waveform editing
Embedded waveform editor

Typical Applications
Analog circuit design and validation
Component and subsystem testing
Educational signal generation
Modulation analysis and testing
Pulse and timing characterization

Compatibility & Integration
USB, LAN (LXI-C compliant)
Optional GPIB interface
Operating temperature: 0 °C to 55 °C
Mass: 3.2 kg

Features & description

From manufacturer datasheet

Features

- Frequency: 1 μ Hz to 30 MHz (sine/square) • Channels: 1 • Arb: 16-bit, 250 MSa/s; 1 MSa (16 MSa Opt 002) • Jitter: <40 ps; THD: $\sim$ 0.04% • Amplitude: 1 mVpp to 10 Vpp into 50 Ω ; accuracy $\pm$ 1% offset $\pm$ 0.25% amplitude $\pm$ 2 mV class • Frequency accuracy: $\pm$ 1 ppm $\pm$ 15 pHz class (TCXO) • Modulation: AM, FM, PM, FSK, BPSK, PWM, Sum • Modes: continuous, modulate, sweep, burst, output gate • Pulse edges: independently variable $\sim$ 8.4 ns to 1 μ s class • Interfaces: LAN, USB; optional GPIB

33521A Characteristics / Specifications

PARAMETER	VALUE
Model	33521A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Function/Arbitrary Waveform Generator
Family	33500A
Alias	33521A Frequency / Arb 30 MHz; 250 MSa/s; 16-bit; 1 MSa (16 MSa opt) Operational Notes
Frequency	1 μ Hz to 30 MHz (sine/square)
Channels	1
Arb	16-bit, 250 MSa/s; 1 MSa (16 MSa Opt 002)
Jitter	<40 ps; THD: ~0.04%
Amplitude	1 mVpp to 10 Vpp into 50 Ω ; accuracy $\pm 1\%$ offset $\pm 0.25\%$ amplitude ± 2 mV class
Frequency accuracy	± 1 ppm ± 15 pHz class (TCXO)
Modulation	AM, FM, PM, FSK, BPSK, PWM, Sum
Modes	continuous, modulate, sweep, burst, output gate
Pulse edges	independently variable ~8.4 ns to 1 μ s class
Interfaces	LAN, USB; optional GPIB

33521A Specifications

PARAMETER	VALUE
Key Features	- Frequency: 1 μHz to 30 MHz (sine/square)
Technical Specifications	Model: 33521A
Frequency / Arb	30 MHz; 250 MSa/s; 16-bit; 1 MSa (16 MSa opt)
Operational Notes	Prefer Keysight datasheet 5990-5914. Successor Trueform B-series: 33521B.

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

Specifications

PARAMETER	VALUE
Model	33521A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Function/Arbitrary Waveform Generator
Family	33500A
Alias	33521A

Frequency / Arb

30 MHz; 250 MSa/s; 16-bit; 1 MSa (16 MSa opt)

Operational Notes

Prefer Keysight datasheet 5990-5914. Successor Trueform B-series: 33521B.

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.