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Data Sheet

August 6, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) 33521B Waveform Generator, 30 MHz, 1-Channel with Arb

Keysight (Agilent) 33521B Waveform Generator, 30 MHz, 1-Channel with Arb The Keysight 33521B is a 33500B-series Trueform function/arbitrary waveform generator: 30 MHz, 1 channel, with arbitrary waveforms. 250 MSa/s, 16-bit resolution, 1 MSa/channel standard memory (16 MSa with Option MEM). Trueform point-by-point arb (alias-protected). Jitter <40 ps; THD <0.04%. Amplitude 1 mVpp to 10 Vpp into 50 Ω. USB, LAN (LXI-C), optional GPIB; optional OCXO. General-purpose function/arb stimulus; mixed-signal and embedded test; education and R&D. The Keysight 33521B is a 33500B-series Trueform function/arbitrary waveform generator: 30 MHz, 1 channel, with arbitrary waveforms. 250 MSa/s, 16-bit resolution, 1 MSa/channel standard memory (16 MSa with Option MEM). Trueform point-by-point arb (alias-protected). Jitter <40 ps; THD <0.04%. Amplitude 1 mVpp to 10 Vpp into 50 Ω. USB, LAN (LXI-C), optional GPIB; optional OCXO. General-purpose function/arb stimulus; mixed-signal and embedded test; education and R&D.



MODEL

**Keysight / Agilent
33521B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

33521B

LISTING

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 33521B is a single-channel, 30 MHz waveform generator delivering high-fidelity signal generation through Trueform technology. This benchtop instrument generates standard

waveforms, arbitrary signals, and modulated outputs with harmonic distortion and jitter performance. The 250 MSa/s sampling rate and 16-bit resolution enable precise, repeatable signal creation for design validation, circuit characterization, and research applications.

Technical Specifications
Bandwidth: 30 MHz
Channels: 1
Sampling Rate: 250 MSa/s
Resolution: 16-bit
Amplitude Range: 1 mVpp to 10 Vpp
Waveform Memory: 1 MSa/channel standard; 16 MSa/channel with Option MEM
Rise/Fall Time: 8.4 ns
Harmonic Distortion: 5× lower than DDS technology (sine waves)
Jitter Performance: 10× lower than DDS for pulses up to 30 MHz

Key Features
Standard Waveforms: Sine, square, ramp, pulse, triangle, Gaussian noise, PRBS, and DC. Seventeen built-in waveforms included.
Arbitrary Waveform Generation: Point-by-point creation with multi-segment sequencing. Non-aliasing technology maintains accuracy across all rates. Built-in ARB waveforms include cardiac, exponential fall/rise, Gaussian pulse, haversine, Lorentz, D-Lorentz, negative ramp, and sinc.
Modulation Capabilities: AM, FM, PM, FSK, BPSK, PWM, and sum (carrier + modulation). Modulation frequency up to the carrier frequency.
Signal Combining: Dual-tone multifrequency generation without dual-channel hardware. On two-channel models, sum and combine up to four signals.
Noise Generation: Variable bandwidth noise control for frequency content shaping.

Interfaces & Control
LAN (LXI-C), USB, GPIB
Built-in web browser for remote LAN operation
Front-panel USB thumb drive port
Large color graphical display for parameter setup and waveform viewing
BenchVue-enabled for PC-based control and automated test development
Optional 33503A BenchLink Waveform Builder Pro for advanced waveform design

Typical Applications
Electronic design validation, analog and mixed-signal circuit testing, educational research, prototype characterization, and signal integrity studies.

Features & description

From manufacturer datasheet

Features

• Bandwidth: 30 MHz sine/square/pulse • Channels: 1 with arb • Sample rate: 250 MSa/s; 16-bit • Arb memory: 1 MSa (16 MSa Option MEM) • Jitter: <40 ps; THD: <0.04% • Amplitude: 1 mVpp–10 Vpp into 50 Ω • Modulation: AM, FM, PM, FSK, BPSK, PWM, Sum • Modes: continuous, modulate, sweep, burst, output gate • Waveforms: sine, square, ramp, pulse, triangle, noise, PRBS, DC + built-in arbs • Options: MEM, SEC, OCX

33521B Characteristics / Specifications

PARAMETER	VALUE
Model	33521B
Manufacturer	Keysight Technologies
Instrument Type	Function/Arbitrary Waveform Generator
Family	33500B Trueform
Alias	33521B Frequency / Arb 1 μ Hz–30 MHz; 250 MSa/s; 16-bit; 1 MSa (16 MSa opt) Operational Notes Prefer Keysight 33500B/33600A datasheet. Related 33522B is 2-channel.
Bandwidth	30 MHz sine/square/pulse
Channels	1 with arb
Sample rate	250 MSa/s; 16-bit
Arb memory	1 MSa (16 MSa Option MEM)
Jitter	<40 ps; THD: <0.04%
Amplitude	1 mVpp–10 Vpp into 50 Ω
Modulation	AM, FM, PM, FSK, BPSK, PWM, Sum
Modes	continuous, modulate, sweep, burst, output gate
Waveforms	sine, square, ramp, pulse, triangle, noise, PRBS, DC + built-in arbs
Options	MEM, SEC, OCX

33521B Specifications

PARAMETER	VALUE
Key Features	- Bandwidth: 30 MHz sine/square/pulse
Technical Specifications	Model: 33521B
Frequency / Arb	1 µHz–30 MHz; 250 MSa/s; 16-bit; 1 MSa (16 MSa opt)
Operational Notes	Prefer Keysight 33500B/33600A datasheet. Related 33522B is 2-channel.

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	33521B
Manufacturer	Keysight Technologies
Instrument Type	Function/Arbitrary Waveform Generator
Family	33500B Trueform
Alias	33521B

Frequency / Arb

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

Operational Notes

Prefer Keysight 33500B/33600A datasheet. Related 33522B is 2-channel.

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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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.