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Data Sheet

August 3, 2026

KEYSIGHT

Keysight 33612A 80MHz Waveform Generator

Keysight 33612A 80 MHz Waveform Generator The Keysight 33612A is a two-channel 80 MHz Trueform waveform generator in the 33600A Series. It provides low jitter (~1 ps class), low THD, standard 4 MSa arb memory per channel (64 MSa with Option MEM), and sample rates from 1 μ Sa/s to 660 MSa/s. Optional IQP baseband IQ player is available on 2-channel models. Dual-channel precision function/arb generation; IQ baseband playback (with IQP); low-jitter clocking and modulation for mixed-signal design validation. The Keysight 33612A is a two-channel 80 MHz Trueform waveform generator in the 33600A Series. It provides low jitter (~1 ps class), low THD, standard 4 MSa arb memory per channel (64 MSa with Option MEM), and sample rates from 1 μ Sa/s to 660 MSa/s. Optional IQP baseband IQ player is available on 2-channel models. Dual-channel precision function/arb generation; IQ baseband playback (with IQP); low-jitter clocking and modulation for mixed-signal design validation.



MODEL

Keysight 33612A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

33612A

LISTING

<https://aumictechlabs.com/products/33612a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight 33612A is a dual-channel, 80 MHz arbitrary/function waveform generator engineered for precision signal generation in demanding test and design environments. Built on Trueform technology, it delivers superior signal integrity with 5 $\times$ lower harmonic distortion (THD <0.03%), sub-picosecond jitter (1 ps), and exceptional timing accuracy. The instrument generates standard waveforms - sine, square, ramp, pulse, triangle, Gaussian noise, PRBS, and DC -

alongside arbitrary waveforms including Cardiac, Exponential Fall/Rise, Gaussian Pulse, Haversine, Lorentz, D-Lorentz, Negative Ramp, and Sinc profiles.

Technical Specifications
Bandwidth: 80 MHz (sine wave) Channels: 2 Frequency Range: 1 μ Hz to 80 MHz Amplitude: 1 mVpp to 10 Vpp Arbitrary Waveform Sampling Rate: 1 GSa/s or 660 MSa/s Vertical Resolution: 14-bit Waveform Memory: 4 MSa/channel standard; 64 MSa/channel optional upgrade Jitter (Sine/Pulse): <1 ps; 10 $\times$ lower jitter up to 20 MHz Harmonic Distortion (Sine): <0.03% THD Pulse Generation: Up to 80 MHz with <1 ps jitter; up to 100 MHz capable Timebase: TCXO standard; OCXO high-stability option available

Key Features Trueform pulse generation eliminates overshoot and ringing for cleaner waveforms Waveform sequencing with multi-segment support for complex signal patterns Modulation modes: AM, FM, PM, FSK, BPSK, PWM, and Sum (carrier + modulation) Sweep capabilities: linear, logarithmic, and frequency list modes Burst operation: counted and gated burst modes Baseband IQ signal generation (standard on dual-channel arbitrary models) PRBS generation for communication and test protocols

Waveform Creation & Editing Front-panel waveform editor for direct instrument programming Oscilloscope waveform capture and download MATLAB and Excel waveform import BenchVue software integration with included Basic app and optional PathWave license

Compatibility & Integration BenchVue-enabled for automated test control and instrument management

Features & description

From manufacturer datasheet

Features

• Bandwidth: 80 MHz; 2 channels • Trueform technology; edge jitter < 1 ps class • Arb memory: 4 MSa/channel standard; 64 MSa with Option MEM • Sample rate: 1 μ Sa/s to 660 MSa/s • Optional IQP IQ player (33612A/33622A) • Options: MEM, OCX, SEC, GPIB

33612A Characteristics / Specifications

PARAMETER	VALUE
Model	33612A
Manufacturer	Keysight Technologies
Instrument Type	Waveform / Arbitrary Waveform Generator (Trueform)
Family	33600A Series
Alias	33612A; Keysight 33612A Bandwidth and Channels
Maximum Frequency	80 MHz
Number of Channels	2
Sample Rate	1 μ Sa/s to 660 MSa/s, 1 μ Sa/s resolution
Waveform Length	32 Sa to 4 MSa/channel (64 MSa with Option MEM)
Sequence Steps	512 per channel
User Arb	multi-segment sequencing Signal Fidelity
Edge Jitter	< 1 ps (Trueform literature)
THD	Trueform class ~0.03% (see 33600A datasheet tables by VOUT)
MEM	64 MSa/channel; OCX: oven reference; SEC: NISPOM; IQP: IQ player; GPIB upgrade Operational Notes Sibling of 33611A (1-ch 80 MHz). Prefer Keysight 33600A datasheet 5991-3272 for full tables.
Bandwidth	80 MHz; 2 channels
Arb memory	4 MSa/channel standard; 64 MSa with Option MEM
Options	MEM, OCX, SEC, GPIB

33612A Specifications

PARAMETER	VALUE
Keysight 33612A 80 MHz Waveform Generator	Overview
Key Features	- Bandwidth: 80 MHz; 2 channels
Technical Specifications	Model: 33612A
Bandwidth and Channels	Maximum Frequency: 80 MHz
Sample Rate and Memory	Sample Rate: 1 μSa/s to 660 MSa/s, 1 μSa/s resolution
Signal Fidelity	Edge Jitter: < 1 ps (Trueform literature)
Modulation	AM, FM, PM, FSK, BPSK, PWM, Sum; FM deviation to 40 MHz (33611A/12A)
Operational Notes	Sibling of 33611A (1-ch 80 MHz). Prefer Keysight 33600A datasheet 5991-3272 for full tables.

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	33612A
Manufacturer	Keysight Technologies
Instrument Type	Waveform / Arbitrary Waveform Generator (Trueform)
Family	33600A Series
Alias	33612A; Keysight 33612A

Bandwidth and Channels

Maximum Frequency: 80 MHz

Number of Channels: 2

Sine ($V_{OUT} \leq 8 \text{ Vpp}$): 1 μHz to 80 MHz, 1 μHz resolution

Sample Rate and Memory

Specifications

PARAMETER	VALUE
Sample Rate	1 μSa/s to 660 MSa/s, 1 μSa/s resolution
Waveform Length	32 Sa to 4 MSa/channel (64 MSa with Option MEM)
Sequence Steps	512 per channel
User Arb	multi-segment sequencing

Signal Fidelity

Edge Jitter: < 1 ps (Trueform literature)

THD: Trueform class ~0.03% (see 33600A datasheet tables by VOUT)

Amplitude Flatness (rel. 1 kHz, examples): 60–80 MHz ± 0.30 dB (1 Vpp) / ± 0.40 dB (>1 Vpp)

Modulation

AM, FM, PM, FSK, BPSK, PWM, Sum; FM deviation to 40 MHz (33611A/12A)

Options

MEM: 64 MSa/channel; OCX: oven reference; SEC: NISPOM; IQP: IQ player; GPIB upgrade

Operational Notes

Sibling of 33611A (1-ch 80 MHz). Prefer Keysight 33600A datasheet 5991-3272 for full tables.

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.