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Data Sheet

August 31, 2026

HP / AGILENT

HP / Agilent 54504A 400 MHz digitizing oscilloscope, 2 ch.

The HP 54504A is a member of the 54500 family of portable digitizing oscilloscopes. OEM family literature specifies 400 MHz repetitive and 50 MHz single-shot class performance with 2 channels and full HP-IB digitizing features. Bench and portable digital/analog debugging, automated production test with HP-IB, and single-shot or repetitive capture depending on model strengths. Autoscaling and automatic pulse-parameter measurements Vertical Sensitivity Range Class: 1 mV/div to 5 V/div family Power Requirements Family: 115/230 Vac, 48 to 66 Hz, 350 VA maximum Shipping Weight: Approximately 20 kg (44 lb) Size: 194.3 mmHx 422.3 mmWx 355.6 mmD Includes Probes Typical: Two probes per OEM ordering text Specs from HP 54500 family digitizing oscilloscope catalog datasheet pages for 54504A.



MODEL

**HP / Agilent
54504A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

54504A

LISTING

<https://aumictechlabs.com/products/54504a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 54504A is a 400 MHz, 2-channel digitizing oscilloscope engineered for electronic test and measurement applications requiring high-speed waveform acquisition and analysis. Dual 200 MSa/s digitizers deliver 400 MHz bandwidth in repetitive mode and 50 MHz single-shot bandwidth, with advanced triggering, automatic waveform measurements, and dual timebase

windowing. Full HP-IB programmability enables seamless integration into automated test systems.

Technical Specifications
Bandwidth: 400 MHz (repetitive), 50 MHz (single-shot) Channels: 2
Sample Rate: 200 MSa/s A/D Resolution: 8-bit Vertical Sensitivity: 1 mV to 5 V/div (1-2-5 sequence) Input Impedance: 1 M Ω or 50 Ω , switchable Time Base: 1 ns/div to 5 s/div (1-2-5 sequence); dual timebase windowing Triggering: Advanced logic, TV, ECL/TTL presets; 14.0 ns minimum internal pulse width, 2.8 ns external External Trigger Input: 1 M Ω or 50 Ω switchable impedance Memory: 4 nonvolatile setup memories, 4 nonvolatile waveform memories, 2 volatile pixel memories Display: CRT Power: 115/230 VAC, 48–66 Hz, 200 W maximum Operating Temperature: Valid ± 10 °C from calibration temperature; 2.5 MHz/°C bandwidth reduction above +35 °C; 0.08%/°C vertical gain drift Dimensions: 194.3 mm H $\times$ 422.3 mm W $\times$ 355.6 mm D Weight: 10 kg net, 20 kg shipping

Key Features Automatic waveform parameter and pulse measurements Automatic limit testing Pre-trigger display capability Pushbutton hardcopy output Four nonvolatile setups and waveform storage

Typical Applications Designed for repetitive signal analysis, single-shot transient capture, and automated test environments requiring high sampling rates and flexible trigger configurations.

Compatibility & Integration Full HP-IB programmability facilitates integration into ATE systems. Supplied with two HP 10430A 10:1 10 M Ω probes. Optional rackmount kit and alternative probe configurations available.

54504A Characteristics / Specifications

PARAMETER	VALUE
Repetitive Bandwidth	400 MHz
Single Shot Bandwidth	50 MHz
Sample Rate	200 MSa/s
Number of Channels	2
Vertical Sensitivity Range Class	1 mV/div to 5 V/div family
Vertical Gain Accuracy DC Class	±1.25% of full scale family (±1.5% on 54501A)
Vertical Resolution	8 bits (±0.4%); 10 bits via HP-IB with averaging
Bandwidth Limit	dc to 30 MHz switchable
AC Coupled Lower 3 dB Frequency	10 Hz
LF Reject Lower 3 dB Frequency	450 Hz
Time Base Range Class	1 ns/div to 5 s/div family (model-dependent minimum)
Dual Time Base Windowing	Yes except 54510A uses pan/zoom
Autoscale	Yes
Automatic Measurements	Yes
Hard Copy Output	Pushbutton supported
HP IB Interface	Built-in
Maximum Sample Rate	200 MSa/s
Record Length Class	Family digitizing memory depths
Input Coupling	ac, dc
Power Requirements Family	115/230 Vac, 48 to 66 Hz, 350 VA maximum
Net Weight	Approximately 10 kg (22 lb)
Shipping Weight	Approximately 20 kg (44 lb)
Size	194.3 mmHx 422.3 mmWx 355.6 mmDIncludes Probes Typical: Two probes per OEM ordering text
Bandwidth	400 MHz

54504A Specifications

PARAMETER	VALUE
Agilent 54504A Digitizing Oscilloscope	Overview
Technical Specifications	Repetitive Bandwidth: 400 MHz
Notes	Specs from HP 54500 family digitizing oscilloscope catalog datasheet pages for 54504A.

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.

performance with 2 channels and full HP-IB digitizing features.

Applications

Bench and portable digital/analog debugging, automated production test with HP-IB, and single-shot or repetitive capture depending on model strengths.

Key Features

Autoscaling and automatic pulse-parameter measurements

Advanced logic and TV triggering

Measurement limit testing

Nonvolatile setup and waveform memories

Full HP-IB programmability

Portable approximately 22 lb chassis

Technical Specifications

Technical Specifications

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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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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.