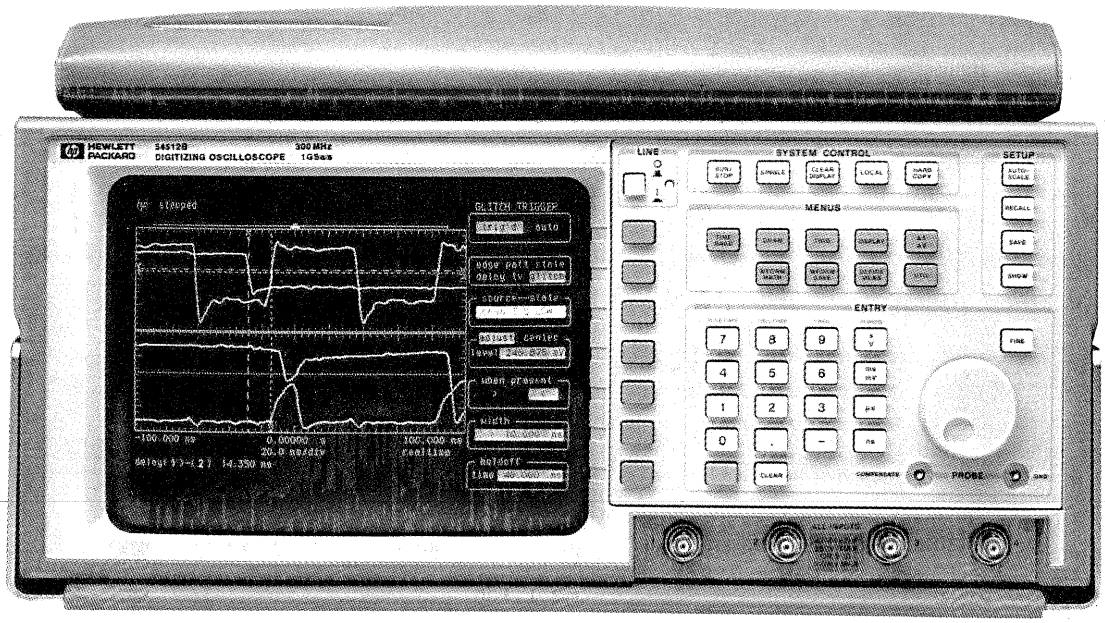
OSCILLOSCOPES

General-Purpose Oscilloscopes

HP 54501A, 54503A, 54504A, 54505B, 54506B, 54510B, 54512B



HP 54501A, 54503A, 54504A, 54505B, 54506B, 54510B, 54512B

NEW

DESIGNED FOR HP-IB SYSTEMS

HP 54500 Family of Digitizing Oscilloscopes

The HP 54500 Series of digitizing oscilloscopes offers you the performance you need at a price you can afford. The HP 54500 Series has features and functions that were previously available only in considerably higher-priced instruments. Like HP's other digitizing oscilloscopes, the HP 54500 Series offers features such as autoscale, pushbutton hard copy, automatic measurements, nonvolatile setup and waveform memories, and full HP-IB programmability. In addition, the new HP 54505B, 54506B, 54510B, and 54512B add features to help you get your job done quickly.

Reduce Hardware Design and Troubleshooting Time with HP 54500 Series Oscilloscopes

These powerful oscilloscopes speed hardware design and debugging with performance to match your needs. HP's advanced logic triggering is a standard feature in the HP 54500 family. Use it to trigger on a wide variety of user-specified conditions. Trigger on edge, pattern, state, or trigger after delay to capture such elusive events as timing violations or transient bus phenomena. Some of the products within the HP 54500 family (see the table below) also offer glitch triggering to isolate and trigger on a glitch as narrow as 1.75 ns. To pinpoint infrequent events and determine their cause, use HP's advanced logic triggering in conjunction with up to four channels to quickly isolate anomalies. Triggering on an anomaly will allow you to probe other points within the system during the failure condition t understand the cause of the problem quickly.

Characterize Your Signals Accurately

Speed your characterization by using the automatic measurin capabilities offered by the HP 54500 family of oscilloscopes. You hav a choice of 17 measurements based on standard or user-definabl thresholds. Use measurement statistics to continuously display th maximum, minimum, and mean value for each measurement. Als available for characterization are the automask generator and wave form compare mode (see the table below). Put a reference wave-form onscreen and have the scope build a pass-fail mask around it, with test tolerance that you specify. Use the compare mode to test in coming waveforms against the mask. If the signal fails, the scope wil store the failed waveform, with a time-date stamp, to either interna memory or an external printer or plotter. The fast Fourier transform (FFTs) available on the new HP 54505B, 54506B, 54510B, and 54512E oscilloscopes are also useful tools for characterizing signals. With th high sample rate of these oscilloscopes, you can now analyze you signal by using a single-shot FFT.

If you are characterizing several events separated in time, th sequential single-shot capability allows you to capture the pulse without dead time in between. You can then analyze the pulse individually or all together in normal, averaged, or envelope mode.

The HP 54500 Series of Digitizing Oscilloscopes

	HP 54501A	HP 54503A	HP 54504A	HP 54505B/HP 54506B	HP 54510B/HP 54512B
Bandwidth					
Repetitive	100 MHz	500 MHz	400 MHz	300 MHz	300 MHz
Single shot	1 MHz	2 MHz	50 MHz	125 MHz	250 MHz
Sample rate	10 MSa/s	20 MSa/s	200 MSa/s	500 MSa/s	1 GSa/s
No. of channels	4 (2+2)	4	2	2/4	2/4
Memory/channel	501 samples	501 samples	2001 samples	8001 samples	8001 samples
Dual timebase window	Yes	Yes	Yes	No	No
Pan and zoom	No	No	No	Yes	Yes
Advanced logic trigger	Yes	Yes	Yes	Yes	Yes
Glitch trigger	No	No	No	Yes	Yes
Measurement limit test	Yes	Yes	Yes	Yes	Yes
Mask generator	No	No	No	Yes	Yes
Waveform compare	No	No	No	Yes	Yes
Sequential single shot	No	No	No	Yes	Yes
Automatic hard copy	Yes	Yes	Yes	Yes	Yes
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