

KEYSIGHT TECHNOLOGIES (AGILENT HP)

54600A

The Keysight Technologies (formerly Hewlett-Packard) 54600A is a classic 100 MHz, 2-channel digitizing oscilloscope designed to provide the analog feel and real-time responsiveness of a traditional CRT scope combined with the benefits of digital acquisition, storage, and measurement.

SPECIFICATIONS

General

Interfaces	None standard; HP-IB (GPIB), RS-232, and Centronics parallel interfaces available via optional plug-in modules
Display	7-inch monochrome raster CRT

Physical

Power Supply	100 - 240 VAC ($\pm 10\%$), 48 - 440 Hz, 120 VA maximum
Operating Temperature	0 to +55 °C °C
Dimensions (W×H×D)	322 mm × 172 mm × 417 mm mm
Weight	6.2 kg kg

Vertical System

Analog Bandwidth	100 MHz
Number of Channels	2
Rise Time	3.5 ns
Vertical Resolution (ADC)	8 bits
Input Impedance	1 M Ω ~13 pF
Input Coupling	AC, DC, GND
Vertical Sensitivity Range	2 mV/div to 5 V/div
Maximum Input Voltage	400 V (DC + peak AC)
DC Gain Accuracy	$\pm 1.5\%$ of full scale
Probe Attenuation Settings	1:1, 10:1, 100:1
Input Capacitance	13 pF

Horizontal System

Maximum Real-Time Sampling Rate	20 MSa/s
Maximum Single-Shot Bandwidth	2 MHz
Maximum Record Length	4,000 points per channel
Time Base Range	2 ns/div to 5 s/div
Time Base Accuracy	$\pm 0.01\%$

Trigger System

Trigger Sources	Channel 1, Channel 2, Line, External
Trigger Modes	Auto, Auto Level, Normal, Single
Trigger Coupling	AC, DC, LF Reject, HF Reject, Noise Reject
External Trigger Input Impedance	1 M Ω ~13 pF
Trigger Sensitivity (Internal)	0.3 div (DC to 10 MHz), 1.0 div (DC to 100 MHz)
Trigger Sensitivity (External)	40 mV (DC to 10 MHz), 100 mV (DC to 100 MHz)
External Trigger Maximum Input Voltage	± 400 V (DC + peak AC)
External Trigger Range	± 1.6 V or ± 16 V
External Trigger Input Capacitance	13 pF

Acquisition System

Acquisition Modes	Normal, Peak Detect, Average
Peak Detect Minimum Pulse Width	50 ns
Averaging Factor Range	8 to 256

Waveform Measurements and Analysis

Automatic Measurements	V _{pp} , V _{max} , V _{min} , V _{top} , V _{base} , V _{avg} , V _{rms} , Frequency, Period, Duty Cycle, Rise Time, Fall Time, Width
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Physical Characteristics

Form Factor	Benchtop
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Hardware & Features

Probe Compensator Output	Approx. 5 V at approx. 1.2 kHz
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Environmental

Non-operating Temperature	-40 °C to +70 °C
Maximum Operating Altitude	4,500 m
Maximum Non-operating Altitude	15,240 m
Operating Humidity	95% RH at 40 °C

Waveform Measurements

Waveform Math	Channel 1 + Channel 2, Channel 1 - Channel 2
Cursor Measurements	Voltage, Time, 1/Time (Frequency)

Storage

Setup Storage	16 nonvolatile front-panel setups
Trace Storage	2 nonvolatile traces

Display Modes

XY Mode	Supported (Channel 1 vs Channel 2)
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TECHNOLOGY

Digitizing Oscilloscope

APPLICATIONS

Electronic Design, Signal Analysis, Troubleshooting, Education

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