

KEYSIGHT TECHNOLOGIES (AGILENT HP)

DSO6054L

The Keysight (formerly Agilent) DSO6054L is a 500 MHz, 4-channel low-profile digital storage oscilloscope designed to provide high-performance measurements in a compact 1U-high rackmount form factor. Optimized for automated test and manufacturing environments, it offers up to 4 GSa/s real-time sample rates, 8 Mpts of standard acquisition memory, and complete LXI Class C compliance. The unit is headless (without a built-in screen), designed for remote configuration via its graphical Web browser interface or for local connection to an external monitor via its standard XGA video output port. It is 100% software-compatible with the portable InfiniiVision 6000A Series oscilloscopes.

SPECIFICATIONS

General

Interfaces	USB (Host and Device), LAN, GPIB, External Trigger Input, XGA Video Output
Display	None (headless, external monitor support via XGA port or remote graphical Web interface)
Cooling	Forced air (side-to-side venting)

Physical

Power Supply	100 - 240 V AC, 50/60 Hz, automatic selection
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	437 mm × 43.6 mm × 269 mm mm
Weight	4.1 kg kg
Rack Height	1U (43.6 mm)

Vertical System - Analog Channels

Analog Bandwidth (-3 dB)	500 MHz
Number of Input Channels	4
Input Impedance	1 MΩ ± 1% (13 pF), 50 Ω ± 1.5%
Input Coupling	AC, DC
Vertical Resolution	8-bit
Input Sensitivity Range	2 mV/div to 5 V/div (1 MΩ), 2 mV/div to 1 V/div (50 Ω)
Maximum Input Voltage	CAT I 300 Vrms, 400 Vpk (1 MΩ); 5 Vrms (50 Ω)
Hardware Bandwidth Limits	20 MHz (selectable)
DC Gain Accuracy	±2.0% of full scale

Horizontal System

Timebase Range	500 ps/div to 50 s/div
Timebase Accuracy	±15 ppm
Channel-to-Channel Deskew Range	±100 ns

Acquisition System

Maximum Real-Time Sample Rate	4 GSa/s (interleaved), 2 GSa/s (per channel)
Maximum Record Length (Memory Depth)	8 Mpts (interleaved), 4 Mpts (per channel)
Waveform Capture Rate	Up to 100,000 waveforms/sec
Acquisition Modes	Normal, Average, Peak Detect, High Resolution

Trigger System

Trigger Sources	Channel 1, 2, 3, 4, External, Line
Trigger Modes	Auto, Normal, Single
Trigger Coupling	AC, DC, LF Reject, HF Reject, Noise Reject
Trigger Holdoff Range	60 ns to 10 s
Standard Trigger Types	Edge, Pulse Width, Pattern, TV/Video, Duration, Sequence
Advanced / Protocol Triggering Options	I ² C, SPI, CAN, LIN, RS-232/UART, I ² S, MIL-STD 1553 (with options)
Trigger Output High Level	≥ 2.5 V into open circuit, ≥ 1.0 V into 50 Ω
Trigger Output Low Level	≤ 0.5 V
Trigger Output Source Impedance	~ 50 Ω

Waveform Measurements and Analysis

Automatic Measurements	Voltage (peak-to-peak, max, min, amplitude, top, base, overshoot, undershoot, average, RMS), Time (frequency, period, rise time, fall time, positive width, negative width, duty cycle)
Waveform Math Operators	Addition, Subtraction, Multiplication, FFT
FFT Window Types	Hanning, Flat Top, Rectangular, Blackman-Harris

Display and User Interface

Waveform Display Formats	YT, XY
Remote User Interface	Built-in graphical Web browser control (Java-enabled)

Connectivity and Interfaces

USB Host Ports	2 x USB 2.0 Host (1 front, 1 rear)
USB Device Port	1 x USB 2.0 Device (rear panel)
LAN Interface (LXI)	10/100Base-T (LXI Class C compliant)
GPIB Interface	Standard IEEE-488
Video Output Port	XGA (15-pin D-sub)
External Trigger Input	Yes (rear panel)

Power Specifications

Power Consumption	120 VA maximum
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Environmental and Compliance

Storage Temperature Range	-40 °C to +70 °C
Operating Humidity	95% RH at 40 °C
Operating Altitude	Up to 4,600 m (15,000 ft)
Electromagnetic Compatibility (EMC)	IEC 61326-1, EN 61326-1
Safety Certifications	UL61010-1, CSA C22.2 No. 61010-1, IEC 61010-1

Physical Characteristics

Form Factor	1U Rackmount
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Vertical System

Channel-to-Channel Isolation	> 40 dB (100:1) from DC to 500 MHz
Calculated Rise Time	700 ps

Frequency Reference

10 MHz Reference Input Amplitude	180 mVrms to 1.5 Vrms
10 MHz Reference Input Impedance	50 Ω
10 MHz Reference Input Frequency Accuracy	10 MHz ± 5 ppm
10 MHz Reference Output Amplitude	≥ 360 mVrms into 50 Ω

Standards and Connectivity

LXI Compliance	LXI Class C
Remote Programming Commands	SCPI, IEEE 488.2

Environmental

Operating Vibration	0.3 g(rms), 5 Hz to 500 Hz
Non-operating Vibration	2.41 g(rms), 5 Hz to 500 Hz
Non-operating Shock	30 g, half-sine, 11 ms duration
Acoustic Noise	38 dBA at front panel

TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Automated Test, Manufacturing Test, System Integration, Design Verification

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.