

KEYSIGHT TECHNOLOGIES (AGILENT HP)

DSO5052A

The Keysight Agilent DSO5052A is a high-performance 500 MHz, 2-channel portable oscilloscope belonging to the 5000 Series. Powered by third-generation MegaZoom III technology, it delivers a high real-time sample rate of up to 4 GSa/s, a deep 1 Mpts acquisition memory, and a fast update rate of up to 100,000 waveforms per second. Equipped with a high-definition 6.3-inch XGA display and complete standard connectivity, including LAN, USB, and GPIB, the DSO5052A provides exceptional signal visibility and system integration for professional test and measurement requirements.

SPECIFICATIONS

General

Display	6.3-inch color TFT QVGA LCD, 320 x 240 resolution, with 256 levels of intensity grading
Command Language Compatibility	SCPI

Key Performance Specifications

Analog Bandwidth	500 MHz
Analog Channels	2
Real-Time Sample Rate (Single-Channel)	4 GSa/s
Real-Time Sample Rate (Half-Channel)	4 GSa/s
Real-Time Sample Rate (Dual-Channel)	2 GSa/s
Max Memory Depth (Single-Channel)	1 Mpts
Max Memory Depth (Half-Channel)	1 Mpts
Max Memory Depth (Dual-Channel)	500 kpts
Waveform Update Rate	Up to 100,000 waveforms/sec

Vertical System - Analog Channels

Input Coupling	AC, DC
Vertical Resolution	8 bits
DC Vertical Gain Accuracy	±2.0% of full scale
Hardware Bandwidth Limits	20 MHz (selectable)

Horizontal System

Horizontal Modes	Main, Zoom, Roll, XY
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Acquisition System

Acquisition Modes	Normal, Peak Detect, Averaging, High Resolution
Peak Detect Resolution	250 ps

Trigger System

Trigger Sources	Ch 1, Ch 2, Line, External
Trigger Modes	Auto, Normal, Single
Trigger Coupling	AC, DC, LF Reject, HF Reject, Noise Reject
Edge Triggering	Rising, falling, or alternating edges on any source channel
Serial Protocol Triggering Options	Not supported

Measurements and Analysis

Automatic Voltage Measurements	Peak-to-Peak, Maximum, Minimum, Amplitude, Top, Base, Average, RMS, Overshoot, Preshoot
Automatic Time Measurements	Period, Frequency, Positive Width, Negative Width, Duty Cycle, Rise Time, Fall Time, Delay, Phase
Cursor Measurements	Manually position Y1, Y2, X1, X2; Track waveform measurements
FFT Window Functions	Hanning, Flat Top, Rectangular, Blackman-Harris

Connectivity and Interfaces

USB Host Ports	2 (1 front panel, 1 rear panel)
USB Device Port	1 (rear panel for PC connection)
LAN Port (LXI Class)	10/100Base-TX, LXI Class C compliant
External Trigger Input	Standard BNC on front panel
Auxiliary Output	Triggers on hardware pass/fail or trigger Out
Web Browser Interface	Built-in web server for remote control and data capture

Power and Environmental

Storage Temperature	-40 °C to +70 °C
Operating Humidity	Up to 95% RH at +40 °C

Triggering

Integrated Frequency Counter	5-digit, on any trigger source (except TV/Video)
Trigger Level Range	Internal: ± 6 divisions from screen center; External: ± 8 V

Power

AC Input Voltage Range	100 - 240 V AC ($\pm 10\%$)
AC Input Frequency Range	50/60 Hz (100 - 240 V AC), 400 Hz (100 - 120 V AC)

Display

Display Color Depth / Intensity	256 levels of intensity
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Measurements

Frequency Counter Resolution	5 digits
Measurement Statistics	Min, max, mean, standard deviation, and count

Safety & Compliance

Overvoltage Category	CAT I 300 Vrms (400 Vpk), CAT II 300 Vrms
Pollution Degree	Pollution Degree 2
EMC Compliance	IEC 61326-1, EN 61326-1, CISPR 11/EN 55011 Group 1 Class A

User Interface

Built-in Help Languages	English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Simplified Chinese, Spanish, Traditional Chinese
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TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Electronic hardware design, troubleshooting, educational labs, manufacturing test, and embedded systems analysis

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