TEKTRONIX

TDS540A

The Tektronix TDS540A is a professional-grade 4-channel digital storage oscilloscope offering 500 MHz bandwidth. It features advanced acquisition technologies, including a HiRes mode for enhanced vertical resolution and noise reduction on low-frequency signals.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2)
Display	7-inch monochrome CRT

Physical

Power Supply	90 - 250 VAC RMS, 45 - 440 Hz, 300 W max
Operating Temperature	+5 °C to +50 °C °C
Dimensions (W×H×D)	362 × 193 × 472 mm

Vertical System

Number of Channels	4
Analog Bandwidth	500 MHz
Input Impedance	1 MΩ || 10 pF, or 50 Ω
Input Coupling	AC, DC, GND
Sensitivity Range (V/div)	1 mV/div to 10 V/div (1 MΩ); 1 mV/div to 1 V/div (50 Ω)
Maximum Input Voltage	400 V (DC + peak AC) at 1 MΩ; 5 V RMS at 50 Ω
Hardware Bandwidth Limits	20 MHz, 100 MHz
Vertical Position Range	±5 divisions
Channel-to-Channel Isolation	>100:1 at 100 MHz; >30:1 at rated bandwidth
Rise Time	≤700 ps

Horizontal System

Time Bases	Main, Delayed
Timebase Range	500 ps/div to 10 s/div
Timebase Accuracy	±25 ppm over any ≥ 1 ms interval
Delay Time Range	16 ns to 250 s

Acquisition System

Maximum Real-Time Sample Rate	500 MS/s (up to 1 GS/s on 1 channel)
Maximum Record Length	50,000 points per channel
High Resolution Mode	HiRes (Vertical resolution improvement and noise reduction on low-frequency signals, e.g. 12 bits at 50 µs/div and slower)
Sample Rate (2 Channels)	500 MS/s
Sample Rate (4 Channels)	250 MS/s

Trigger System

Main Trigger Modes	Auto, Normal, Single Sequence
Trigger Coupling Options	AC, DC, HF Rej, LF Rej, Noise Rej

Interfaces and Storage

Mass Storage Media	3.5-inch Floppy Disk Drive

Waveform Processing

Automatic Measurements	25 standard parameters

Power System

Maximum Power Consumption	300 W

General Specifications

Warm-up Time	20 minutes
Calibration Interval	1 year

Accessories

Included Standard Probes	4 x P6139A (500 MHz, 10X)

TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

High-performance electronic test, circuit debugging, and signal analysis