

TEKTRONIX

TDS540C

The Tektronix TDS540C is a 4-channel, 500 MHz digital oscilloscope featuring monochrome InstaVu™ acquisition technology. Engineered for complex high-speed debugging and circuit analysis, it offers a maximum real-time sample rate of 2 GS/s, high waveform capture rates up to 400,000 wfms/s, and a vertical gain accuracy of $\pm 1\%$. With 29 built-in automatic measurements, advanced triggering options, and a standard 3.5-inch floppy drive, the TDS540C provides a robust and reliable platform for characterization of electronic designs.

SPECIFICATIONS

General

Display	7-inch monochrome CRT
Warm-Up Period	20 minutes
Calibration Interval	1 year

Physical

Power Supply	90 to 250 V RMS, 45 to 440 Hz, < 300 W
Operating Temperature	0 to +50 °C °C

Vertical System

Number of Channels	4
Analog Bandwidth	500 MHz
Calculated Rise Time	700 ps
Vertical Sensitivity Range	1 mV/div to 10 V/div
Vertical Gain Accuracy	$\pm 1\%$
Input Coupling	AC, DC, GND
Input Impedance	1 M Ω in parallel with 10 pF, or 50 Ω (selectable)
Maximum Input Voltage	1 M Ω : ± 400 V (DC + peak AC); 50 Ω : 5 V RMS
Offset Range	± 1 V (1 to 99.5 mV/div), ± 10 V (100 mV to 995 mV/div), ± 100 V (1 to 10 V/div)
Channel-to-Channel Isolation	$\geq 100:1$ at 100 MHz
Vertical Position Range	± 5 divisions

Horizontal System and Acquisition

Timebase Range	500 ps/div to 10 s/div
Timebase Delay Time Range	16 ns to 250 s
Timebase Accuracy	±25 ppm
Real-Time Sample Rate	1 GS/s max (1 or 2 channels), 500 MS/s (3 or 4 channels)
Maximum Record Length	50,000 points per channel (standard), up to 500,000 points (Option 1M)
Waveform Update Rate	400,000 waveforms/s (InstaVu acquisition mode)

Trigger System

Trigger Modes	Auto, Normal, Single
Trigger Sources	Ch 1, Ch 2, Ch 3, Ch 4, AC Line
Trigger Coupling	AC, DC, HF Reject, LF Reject, Noise Reject
Trigger Holdoff Range	250 ns to 12 s
Trigger Sensitivity	0.35 div at 50 MHz, 1.0 div at 500 MHz
Trigger Level Range	±12 divisions from center screen

Display Characteristics

Graticule Options	Full, Grid, Crosshair, Frame
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Connectivity and Interfaces

GPIB Interface	IEEE-488.2 GPIB port standard
RS-232 Serial Port	Available via Option 13
Centronics Parallel Port	Available via Option 13
VGA Video Output	DB-15 female connector for external monitor
Probe Compensator Output	0.5 V into $\geq 1\text{ M}\Omega$, 1 kHz square wave

Power Specifications

Input Voltage Range	90 to 250 V RMS
Line Frequency Range	45 to 440 Hz
Power Consumption	< 300 W

Display

CRT Diagonal Size	7 in (178 mm)
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Acquisition

Maximum Record Length (Standard)	50,000 points per channel
Maximum Record Length (Option 1M)	500,000 points (option-dependent)

Storage & Interface Options

Internal Storage (Setups)	10 setups
Internal Storage (Reference Waveforms)	4 reference waveforms

Accessories

Standard Probes Included	4× P6139A 10X Passive Probes
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Storage

Floppy Disk Format	3.5 in, 1.44 MB or 720 KB, MS-DOS compatible
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TECHNOLOGY

Digital Phosphor / InstaVu DSO

APPLICATIONS

Electronic design debugging, high-speed transient capture, and circuit characterization

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