



TDS 510A

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Digitizing Oscilloscope

TDS 510A

This product is discontinued.

CHARACTERISTICS

Vertical System

Bandwidth - 500 MHz. *¹

Channels - Four.

Waveform Capture Rate - 150 waveforms/s.

Max Sample Rate -

1 and 2 Channels: 500 MS/s.

4 Channels: 250 Ms/s.

Sensitivity - 1 mV to 10 V/div.

Position Range - ± 5 divisions.

Offset -

1 to 99.5 mV/div: ± 1 V.

100 to 995 mV/div: ± 10 V.

1 to 10 V/div: ± 100 V.

DC Gain Accuracy - $\pm 1\%$.

Vertical Resolution - 8-Bits.

Analog Bandwidth Selections - 20 MHz, 100 MHz, and Full.

Input Coupling - AC, DC, or GND.

Input Impedance Selections -

1 megaohm in parallel with 10 pF, or 50 Ohm (AC and DC coupling).

Maximum Input Voltage - 300 V CAT II; ± 400 V (peak). Derate at 20 dB/decade above 1 MHz. 1 megaohm or GND coupled.

Channel Isolation - $> 100:1$ at 100 MHz; $> 30:1$ at BW for any two channels with equal V/div settings.

AC Coupled LF Limit -

AC 1 megaohm coupled: ≤ 10 Hz.

AC 50 Ohm coupled: ≤ 200 kHz.

*¹ 500 MHz typical at probe tip with P6139A probe.

Time Base System

Time Bases - Main, Delayed.

Time/Div Range - 500 ps to 10 s/div.

Time Base Accuracy - ± 25 ppm over any interval ≥ 1 ms.

Record Length - 50 K points.

Pre-Trigger Position - 0 to 100% of record.

Acquisition System

Acquisition Modes - Sample, Single Sequence, Average, Envelope, Hi-Res, Peak Detect.

Trigger System

Trigger Types - Edge (Main and Delayed), Pulse (Width, Glitch, and Runt), Logic (Pattern and State), Video - Opt. 05 (NTSC, PAL, HDTV, FlexFormatTM).

Main Trigger Modes - Auto, Normal, Single.

Delay Trigger Modes - Delay by time, events, or events and time.

Storage

Waveforms - Four full 50 K point records.

Setups - 10 front-panel setups.

Display System

Monitor - 7 in., 640 x 480, monochrome.

Waveform Style - Dots or vectors, infinite and variable persistence.

Display Formats - YT, XY Zoom, Fit to Screen.

Automatic Measurements

Period	Frequency
High	Low
+Width	-Width

Maximum Rise	Minimum Fall
Peak to Peak	Amplitude
+Duty Cycle	-Duty Cycle
+Overshoot	-Overshoot
Propagation Delay	Burst Width
Mean	Cycle Mean
RMS	Cycle RMS
Area	Cycle Area
Phase	

Advanced Waveform Functions - FFT, Differentiation, Integration (Option 2F), Limit Testing.

Cursor Measurements - Absolute, Delta; volts, time, frequency. NTSC IRE units and line number with video trigger (Option 05).

Waveform Functions - Interpolation (sin(x)/x or linear), Average, Envelope, Autosetup.

Outputs

VGA Out - Monochrome.

RS-232 and Centronics - Opt. 13.

Hardcopy Formats - Epson, Thinkjet, Deskjet, Laserjet, PostScript, TIFF, PCX, BMP, DPU411/412, HPGL, Interleaf.

Power - 90 to 250 V RMS, 45 to 440 Hz, 300 W maximum.

Physical Characteristics

Dimensions	mm	in.
Height	193	7.6
Width	445	17.5
Depth	432	17
Weight	kg	lbs.
Net	14.1	31

Safety Certification

UL and CSA-certified.

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