

TEKTRONIX

TDS3014

The Tektronix TDS3014 is a 100 MHz, 4-channel Digital Phosphor Oscilloscope (DPO) from the TDS3000 series, combining high-speed acquisition with standard analysis tools. It features a sample rate of up to 1.25 GS/s, 9-bit vertical resolution, and a standard Centronics parallel port, with optional expansion modules for RS-232, GPIB, LAN, and VGA output.

SPECIFICATIONS

General

Interfaces	Centronics (Parallel) standard; GPIB, RS-232, LAN, VGA optional via communication modules
Display	6.4 in (162.6 mm) active matrix color TFT LCD, 640 x 480 pixels (VGA)
Warm-up Time	20 minutes

Physical

Power Supply	100 V to 240 V AC ($\pm 10\%$), 47 to 440 Hz (100 to 120 V), 47 to 63 Hz (115 to 240 V), 75 W max; optional battery operation
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	375 mm × 176 mm × 149 mm mm
Weight	3.2 kg

Vertical System

Number of Channels	4
Analog Bandwidth	100 MHz
Calculated Rise Time	3.5 ns
Hardware Bandwidth Limits	20 MHz
Input Coupling	AC, DC, GND
Input Impedance (1 M Ω)	1 M Ω $\pm$ 1% in parallel with 13 pF $\pm$ 2 pF
Input Impedance (50 Ω)	50 Ω $\pm$ 1%
Input Sensitivity (1 M Ω)	1 mV/div to 10 V/div
Input Sensitivity (50 Ω)	1 mV/div to 1 V/div
Vertical Resolution	9 bits
Maximum Input Voltage (1 M Ω)	150 V RMS CAT I, derate at 20 dB/decade above 100 kHz to 13 V peak at 3 MHz
Maximum Input Voltage (50 Ω)	5 V RMS
DC Gain Accuracy	$\pm 2\%$ ($\pm 3\%$ for 1 mV/div and 2 mV/div)
Channel-to-Channel Isolation	$\geq 100:1$ at 100 MHz
Position Range	± 5 divisions

Horizontal System

Time Base Range	4 ns/div to 10 s/div
Time Base Accuracy	±20 ppm
Maximum Sample Rate	1.25 GS/s
Record Length	10k points per channel

Trigger System

Trigger Modes	Auto, Normal, Single Sequence
Trigger Coupling	AC, DC, HF Reject, LF Reject, Noise Reject
Trigger Sources	CH1, CH2, CH3, CH4, AC Line
Edge Triggering	Conventional level-driven trigger on any channel
Video Triggering	Trigger on NTSC, PAL, SECAM
Logic Triggering	Pattern, State (AND, OR, NAND, NOR)
Pulse Triggering	Glitch, Width, Runt, Slew Rate
Trigger Level Range	Internal: ±8 divisions from screen center
Trigger Level Accuracy (Typical)	±(0.2 div + 5% of setting) for signals with rise/fall times ≥ 20 ns
Trigger Sensitivity (DC Coupled)	Internal: 0.35 div from DC to 50 MHz, increasing to 1 div at 100 MHz

Acquisition Modes

Sample Mode	Standard acquisition mode
Peak Detect Mode	High-frequency and random glitch capture (down to 1 ns)
Envelope Mode	Min/max values acquired over one or more acquisitions
Average Mode	Averages selectable from 2 to 512 waveforms
Waveform Capture Rate	Up to 3,600 wfms/s (continuous)

Waveform Measurements and Math

Automatic Measurements	21 automatic measurements with statistics
Fast Fourier Transform (FFT)	Standard (with Rectangular, Hanning, Hamming, Blackman-Harris windows)

Storage

Floppy Disk Drive	Built-in 3.5 in. 1.44 MB floppy disk drive
Internal Setup Storage	10 front-panel setups
Internal Waveform Storage	4 reference waveforms (10k points each)

Environmental Parameters

Non-Operating Temperature	-20 °C to +60 °C
Operating Humidity	Up to 95% RH at or below +30 °C; up to 45% RH up to +50 °C
Operating Altitude	Up to 3,000 m (10,000 ft)
Non-Operating Altitude	Up to 15,000 m (50,000 ft)

Regulatory & Standards Compliance

Safety Certifications	UL3111-1, CSA1010.1, EN61010-1
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Power & Battery

Max Power Consumption	75 W
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Acquisition

Roll Mode Range	40 ms/div to 10 s/div
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Display & Controls

Graticules	Full, Grid, Crosshair, Frame
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Triggering

Trigger Holdoff Range	250 ns to 8 s
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Power

Line Voltage Range	90 V to 250 V AC
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Environmental

Cooling Clearance	50 mm (2 in) required on left side and rear
Acoustic Noise	< 37 dBA (typical)
Vibration (Operating)	0.31 GRMS, 5 to 500 Hz
Vibration (Non-Operating)	2.46 GRMS, 5 to 500 Hz
Shock (Operating)	50 G, 11 ms, half-sine

TECHNOLOGY

Digital Phosphor Oscilloscope (DPO)

APPLICATIONS

Electronic design, debug, and troubleshooting

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