

TEKTRONIX

TPS2024

The Tektronix TPS2024 is a 200 MHz, 4-channel digital storage oscilloscope featuring isolated channels and battery power, specifically designed for making safe floating and differential measurements in demanding environments.

SPECIFICATIONS

General

Interfaces	RS-232, Centronics Parallel, CompactFlash (Type I/II)
Display	5.7 inch (145 mm) color active-matrix TFT LCD, 320 x 240 pixels
Warranty	3 years (excluding probes and accessories)

Physical

Power Supply	90 V to 250 V AC (45 Hz to 66 Hz) or battery power (up to 2 rechargeable Li-ion batteries)
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	336 mm × 161 mm × 130 mm mm
Weight	2.7 kg

Vertical System

Analog Bandwidth (-3 dB)	200 MHz
Calculated Rise Time (10% to 90%)	1.75 ns
Number of Input Channels	4 (IsolatedChannel)
Input Coupling	AC, DC, GND
Input Impedance	1 MΩ ± 2% in parallel with 20 pF ± 3 pF
Input Sensitivity Range	2 mV/div to 5 V/div
Vertical Resolution	8-bit
Maximum Input Voltage	300 VRMS CAT II (BNC signal to shell)
Maximum Float Voltage	600 VRMS CAT II (BNC shell to earth ground)
DC Gain Accuracy	±3%
Hardware Bandwidth Limits	20 MHz
Vertical Scale Range	2 mV/div to 5 V/div
Channel-to-Channel Isolation	≥ 100:1 at 100 MHz (with equal vertical scale settings)
AC Coupling Low-Frequency Limit	<10 Hz at -3 dB (using 1X probe)
Linear Dynamic Range	±5 divisions from screen center

Horizontal System

Timebase Range	2.5 ns/div to 50 s/div
Timebase Accuracy	±50 ppm

Acquisition System

Maximum Real-Time Sample Rate	2.0 GS/s (on all channels)
Maximum Record Length	2.5k points per channel
Acquisition Modes	Sample, Peak Detect, Average, Single Sequence

Trigger System

Trigger Sources	Channel 1, Channel 2, Channel 3, Channel 4, Line
Trigger Modes	Auto, Normal, Single Sequence
Trigger Types	Edge, Pulse Width, Video
Trigger Holdoff Range	500 ns to 10 s
Trigger Sensitivity (Edge, DC Coupled)	1.0 div from DC to 10 MHz; 1.5 div from 10 MHz to 200 MHz
Video Trigger Formats	NTSC, PAL, SECAM

Waveform Measurements and Analysis

Automatic Measurements	11 (Period, Frequency, +Width, -Width, Rise Time, Fall Time, Max, Min, Peak-to-Peak, Mean, Cycle RMS)
Waveform Math Operators	Addition, Subtraction, Multiplication, FFT
FFT Window Types	Hanning, Flat Top, Rectangular

Power Specifications

Power Consumption	40 W maximum
Battery Operation	Up to 8 hours with 2 batteries installed (hot-swappable)
Battery Type	TPSBAT rechargeable Lithium-Ion

Environmental and Compliance

Storage Temperature Range	-40 °C to +71 °C
Operating Humidity	Up to 90% RH at or below +30 °C
Operating Altitude	Up to 3,000 m

Physical Characteristics

Weight with One Battery	3.2 kg
Weight with Two Batteries	3.7 kg

Channel Isolation

Number of Isolated Channels	4
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Performance

Common Mode Rejection Ratio (CMRR)	100:1 at 60 Hz, 20:1 at 50 MHz (with P2220 probe)
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Storage

Front-Panel Setup Storage	10 setups
Waveform Storage (Internal)	4 waveforms
Removable Storage Type	CompactFlash (Type I, up to 2 GB)

Probe Compensator

Probe Compensator Output Voltage	5.0 V into $\geq 1\text{ M}\Omega$ load
Probe Compensator Output Frequency	1 kHz

Software

Optional Application Software	TPS2PWR1 Power Measurement and Analysis Software
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Power

Battery Run Time	Up to 4 hours per battery (up to 8 hours with two batteries)
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Safety & Compliance

Overvoltage Category	CAT II 300 V (BNC inputs)
Pollution Degree	Pollution Degree 2

TECHNOLOGY

Digital Storage Oscilloscope

APPLICATIONS

Power electronic design, industrial troubleshooting, and floating measurements

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