TEKTRONIX

TDP3500

The Tektronix TDP3500 is a 3.5 GHz active differential oscilloscope probe designed for high-speed digital design, testing, and debugging. Utilizing the TekVPI interface, it connects directly to compatible Tektronix oscilloscopes for automatic scaling and power.

SPECIFICATIONS

General

Interfaces	TekVPI

Physical

Power Supply	Powered directly by host oscilloscope via TekVPI interface
Operating Temperature	0 °C to +40 °C °C
Dimensions (W×H×D)	Comp. box: 41 mm × 26 mm × 107 mm; Probe head: 4.9 mm × 7.8 mm × 56.6 mm mm
Weight	0.146 kg kg

Electrical Characteristics

Bandwidth	3.5 GHz
Rise Time (10% to 90%)	< 140 ps
Attenuation Ratio	5X, 50X
DC Gain Accuracy	±2%
Propagation Delay	5.4 ns (typical)

Input Characteristics

Input Resistance (Differential)	100 kΩ
Input Resistance (Common Mode)	50 kΩ
Input Capacitance (Differential)	< 0.3 pF
Input Capacitance (Common Mode)	< 0.6 pF
Linear Dynamic Range	±2 V (5X), ±15 V (50X)
Common Mode Input Range	±15 V
Input Offset Range	±1 V (5X), ±15 V (50X)
Maximum Non-Destructive Input Voltage	±30 V (DC + peak AC)

Physical & Mechanical Properties

Cable Length	1.2 m (4 ft)

Environmental Specifications

Non-Operating Temperature Range	-40 °C to +71 °C
Operating Altitude	Up to 3,000 m (9,843 ft)
Non-Operating Altitude	Up to 12,192 m (40,000 ft)

Standard Accessories & Ordering Options

Standard Accessories	Y-lead adapter, solder-in tips, microgator clips, ground leads, color-coding bands, carrying case

Performance

Common Mode Rejection Ratio (1 MHz)	>55 dB
Common Mode Rejection Ratio (100 MHz)	>50 dB
Common Mode Rejection Ratio (1 GHz)	>30 dB
Common Mode Rejection Ratio (3.5 GHz)	>25 dB
Probe-only Noise (5X attenuation)	<2 mV RMS
Probe-only Noise (25X attenuation)	<6 mV RMS (50X attenuation)
Rise Time (20% to 80%)	< 80 ps (typical)
Input Coupling	DC
Common Mode Rejection Ratio (50 Hz)	> 60 dB (typical)

Environmental

Operating Humidity	5% to 95% RH up to +30 °C; 5% to 85% RH above +30 °C up to +40 °C
Non-Operating Humidity	5% to 95% RH up to +30 °C; 5% to 85% RH above +30 °C up to +60 °C
Pollution Degree	2

Compliance

Safety Compliance	UL 61010-031, CAN/CSA-C22.2 No. 61010-031, IEC 61010-031

Compatibility

Host Compatibility	Tektronix oscilloscopes with TekVPI interface

TECHNOLOGY

Active Differential Oscilloscope Probe

APPLICATIONS

High-speed digital system design, characterization, and debugging; serial data compliance testing; differential signaling measurements

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