TEKTRONIX

SD24

The Tektronix SD24 is a dual-channel Time Domain Reflectometry (TDR) and Sampling Head designed for use with high-performance Tektronix mainframes such as the CSA803 and 11801 series. It features a 20 GHz typical equivalent bandwidth, dual step generators with independent polarity control, and precise signal acquisition capabilities for high-speed differential and common-mode testing.

SPECIFICATIONS

General

Interfaces	Direct plug-in host mainframe interface
Display	None (uses mainframe display)
Warm-up Time	20 minutes

Physical

Power Supply	Powered by host mainframe
Operating Temperature	0 °C to +50 °C °C
Weight	0.155 kg kg

Channel & Input Configuration

Number of Channels	2 (independent acquisition and TDR step generation)
Input Connector Type	Precision 3.5 mm
Nominal Input Impedance	50 Ω
Input Impedance Tolerance	±0.5 Ω
Front Panel Controls	Channel Select button per channel

Bandwidth & Signal Fidelity

Equivalent Electrical Bandwidth	20 GHz (typical)
Acquisition Rise Time	17.5 ps or less
Displayed TDR Incident Rise Time	28 ps (typical)
Reflected TDR Rise Time	35 ps or less

Vertical & Electrical Specifications

RMS Noise (without smoothing)	750 µVrms (typical)
RMS Noise (with smoothing)	350 µVrms (typical)
Dynamic Range	1 Vp-p within a ±1.6 V offset range
Dot Transient Response Accuracy	±5% for signals up to 0.5 Vp-p (after calibration at operating temperature)
Dot Transient Response Adjustment Range	Adjustable to unity for signals up to 1.0 Vp-p
Maximum Safe Input Voltage	±2.0 V (DC + AC peak)

TDR Step Generator Specifications

TDR Step Amplitude	250 mV nominal
TDR Step Polarity	Independent, switchable positive or negative
Time Coincidence Between TDR Steps	Adjustable to less than 1 ps
TDR Aberrations (10 ns to 20 ps before step)	±3% or less
TDR Aberrations (<300 ps after step)	+10%, -5% or less
TDR Aberrations (300 ps to 5 ns after step)	±3% or less
TDR Aberrations (Elsewhere)	±1% or less

Physical & Mainframe Compatibility

Compatible Host Mainframes	Tektronix CSA803, CSA803C, 11801, 11801A, 11801B, 11801C
Hot-Swap Capability	No (power down host mainframe before installing or removing)

Environmental

Non-Operating Temperature Range	-40 °C to +75 °C
Operating Altitude Limit	4,500 m (15,000 ft)
Non-Operating Altitude Limit	15,000 m (50,000 ft)

TDR Performance

TDR Pulse Repetition Rate	200 kHz

Performance

Channel-to-Channel Isolation	>= 34 dB at 10 GHz, >= 20 dB at 20 GHz

TECHNOLOGY

Sampling Oscilloscope Head

APPLICATIONS

Time Domain Reflectometry (TDR), crosstalk characterization, differential and common-mode signal analysis

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