

TEKTRONIX

80E04

The Tektronix 80E04 is a high-performance, 2-channel electrical sampling module featuring Time Domain Reflectometry (TDR) capabilities. Designed for use with Tektronix Digital Serial Analyzers and Communications Signal Analyzers, it provides a 20 GHz analog bandwidth and a rapid TDR step rise time, making it ideal for impedance characterization, crosstalk analysis, and high-speed signal integrity measurements.

SPECIFICATIONS

General

Interfaces	Proprietary 80-pin mainframe interface, 2x 3.5 mm female RF connectors
Display	None (uses host mainframe display)
Standard Accessories	Two SMA 50 Ω terminations, two SMA shorts, anti-static wrist strap, calibration certificate

Physical

Power Supply	Powered directly by the host mainframe
Operating Temperature	10 °C to 40 °C °C
Dimensions (W×H×D)	79 mm × 25 mm × 135 mm mm
Weight	0.4 kg kg

Signal Acquisition (Vertical System)

Number of Channels	2
Analog Bandwidth	20 GHz
Calculated Rise Time (10% to 90%)	17.5 ps
Calculated Rise Time (20% to 80%)	12.0 ps
RMS Noise (Typical)	600 μ V
RMS Noise (Maximum)	1.2 mV
Dynamic Range	1.0 V p-p
Offset Range	$\pm$ 1.6 V
Vertical Scale Range	1 mV/div to 100 mV/div
DC Gain Accuracy	$\pm$ 1.0% of full scale

TDR / TDT Step Generator

TDR Channels	2
TDR Step Rise Time (10% to 90%, Typical)	28 ps
TDR Step Rise Time (10% to 90%, Maximum)	35 ps
TDR Step Amplitude	250 mV (nominal, each channel)
Step Polarity Configurations	Positive or negative (selectable independently per channel)
TDR Step Repetition Rate	25 kHz to 300 kHz (selectable)
TDT Capability	Supported (using dual-channel configuration)

Input Characteristics & Port Specifications

Input Connector Type	3.5 mm female
Input Impedance	50 Ω ± 1 Ω
Maximum Non-destructive Input Voltage	±2.0 V (DC + peak AC)

Host Mainframe Compatibility & Control

Compatible Mainframes	Tektronix DSA8300, DSA8200, CSA8200, CSA8000, TDS8200, TDS8000
Slot Width Requirement	1 slot

Physical Characteristics

Width	79 mm
Height	25 mm
Depth	135 mm

Environmental & Compliance

Operating Temperature Range	10 °C to 40 °C
Non-Operating Temperature Range	-22 °C to 60 °C
Operating Humidity Range	20% to 80% RH (non-condensing)

TDR Performance

TDR Step Aberrations (First 300 ps)	+10%, -5% or less (typical)
TDR Step Aberrations (300 ps to 5 ns)	±3% or less (typical)
TDR Step Aberrations (After 5 ns)	±1% or less (typical)

Horizontal System

Horizontal Deskew Range	±250 ps
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Electrical Characteristics

DC Input Resistance Tolerance	±0.5 Ω
Channel-to-Channel Isolation	≥60 dB at 10 GHz, ≥50 dB at 20 GHz (typical)

Environmental

Maximum Operating Altitude	3000 m
Maximum Non-Operating Altitude	12190 m
Operating Vibration	0.33 GRMS (5 Hz to 500 Hz)
Non-Operating Vibration	2.24 GRMS (5 Hz to 500 Hz)

Vertical System

Maximum Operating Input Voltage	1.0 V p-p
DC Input Resistance	50 Ω ± 0.5 Ω

TDR System

TDR Step Source Impedance	50 Ω ± 1 Ω
TDR Step Delay Range	-500 ps to +1000 ps

TECHNOLOGY

Electrical Sampling & Time Domain Reflectometry (TDR)

APPLICATIONS

High-speed interconnect characterization, differential impedance measurements, and signal integrity testing

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