

TEKTRONIX

P5205A

The Tektronix P5205A is a 100 MHz high-voltage active differential probe designed for safe measurements on high-voltage circuits. It converts high-voltage differential floating signals to low-voltage signals referenced to ground, suitable for display on any oscilloscope. Featuring the TekProbe BNC interface, it seamlessly integrates with compatible Tektronix oscilloscopes to automatically scale measurements.

SPECIFICATIONS

General

Interfaces	TekProbe BNC
Standard Accessories	2 hook clips (AC280-FL), 2 pincer clips (AC283-FL), 2 alligator clips (AC285-FL), 2 extension cables (196-3523-00)

Physical

Power Supply	Powered directly by oscilloscopes with the TekProbe interface, or via the 1103 power supply
Operating Temperature	0 to +50 °C
Weight	< 0.185 kg kg
Probe Head Dimensions	111 mm x 22 mm x 14 mm
Compensation Box Dimensions	107 mm x 40 mm x 26 mm

Electrical Performance

Bandwidth (-3 dB)	100 MHz
Rise Time (10% to 90%)	<3.5 ns
Attenuation Ratios	50X, 500X
DC Attenuation Accuracy	±2%
Maximum Differential Voltage (500X)	±1300 V (DC + pk AC)
Maximum Differential Voltage (50X)	±130 V (DC + pk AC)
Maximum Common Mode Voltage	±1300 V (DC + pk AC), 1000 V RMS CAT II
Maximum Input Voltage-to-Earth	1000 V RMS CAT II
Input Resistance (Between Inputs)	10 MΩ
Input Resistance (Each Input to Ground)	5 MΩ
Input Capacitance (Between Inputs)	4 pF
Input Capacitance (Each Input to Ground)	8 pF
Propagation Delay	17 ns (typical)
Overrange Indicator	Audible beep and visual LED

Common Mode Rejection Ratio (CMRR)

CMRR at 60 Hz	>80 dB
CMRR at 100 kHz	>50 dB
CMRR at 1 MHz	>30 dB

Output and Interface Specifications

Interface Type	TekProbe BNC
Output Termination Impedance	50 Ω (scope input must be set to 50 Ω)

Environmental Specifications

Non-Operating Temperature Range	-40 °C to +75 °C
Operating Humidity Range	Up to 90% RH at +30 °C (non-condensing)
Operating Altitude	Up to 3,000 m (10,000 ft)
Non-Operating Altitude	Up to 15,240 m (50,000 ft)

Safety and Compliance

Safety Standards Certification	UL61010-1, CAN/CSA-C22.2 No. 61010-1, EN 61010-1, IEC 61010-1
Pollution Degree Rating	2

Physical Characteristics

Cable Length	1.3 m
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Performance

System Noise (Referred to Input)	<10 mVrms (50X attenuation), <80 mVrms (500X attenuation)
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User Interface

Controls and Indicators	Attenuation selection button (50X/500X), Overrange LED indicator, Attenuation status LEDs
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TECHNOLOGY

Active Differential

APPLICATIONS

Power conversion, motor drive design, electronic ballast testing, UPS systems, and power supply design

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