TEKTRONIX

TCP305

The Tektronix TCP305 is a high-performance AC/DC current probe designed for use with the TCPA300 amplifier, delivering a 50 MHz bandwidth and up to 50 A of continuous current measurement capability.

SPECIFICATIONS

General

Interfaces	TCPA300 custom probe interface
Compatibility	TCPA300 Amplifier

Physical

Power Supply	Powered directly by the TCPA300 amplifier
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	200 mm × 16 mm × 32 mm (probe head) mm
Weight	0.27 kg kg

Electrical Performance

Bandwidth	DC to 50 MHz
Rise Time	≤ 7 ns
DC Accuracy	±3% of reading (with TCPA300)
Propagation Delay	17 ns

Current Measurement

Maximum Continuous Current	50 A (DC + peak AC)
Maximum RMS Current	35.4 A
Maximum Peak Pulse Current	100 A
Minimum Sensitivity	5 mA (on TCPA300)
Amp-Second Product	500 A·µs
Insertion Impedance at 1 MHz	0.02 Ω
Insertion Impedance at 10 MHz	0.12 Ω
Insertion Impedance at 50 MHz	0.40 Ω

Physical & Mechanical

Maximum Conductor Diameter	5 mm (0.2 in)
Cable Length	1.5 m (5 ft)

Environmental & Safety

Maximum Bare-Wire Voltage	150 V CAT II
Maximum Insulated-Wire Voltage	300 V CAT II
Storage Temperature Range	-40 °C to +75 °C
Operating Humidity Range	5% to 95% RH (to +30 °C), 5% to 85% RH (+30 °C to +50 °C)

Performance

RMS Noise	≤1.25 mA RMS

Environmental

Maximum Operating Altitude	2000 m
Maximum Non-Operating Altitude	12192 m
Operating Vibration	0.31 g RMS (5 Hz to 500 Hz)
Non-Operating Vibration	2.46 g RMS (5 Hz to 500 Hz)
Operating Shock	30 g (11 ms, half-sine)
Non-Operating Shock	50 g (11 ms, half-sine)

Compliance

Safety Compliance	UL3111-1, CSA1010.1, EN61010-1, IEC61010-2-032

Technical Features

Sensor Type	Split-core Hall-effect and transformer
Coupling	AC, DC

Control & Interface

Degauss and Autozero	Supported (initiated via TCPA300 amplifier)

Power Supply

Power Source	Powered directly by TCPA300 amplifier

TECHNOLOGY

Split-core Hall effect and transformer AC/DC current sensing

APPLICATIONS

Power supply design, motor drive analysis, and electronic design troubleshooting

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