

TEKTRONIX

TCP303

The Tektronix TCP303 is a professional-grade AC/DC current probe designed specifically for use with the TCPA300 amplifier. It offers a frequency range of DC to 15 MHz and is capable of measuring continuous currents up to 150 A, making it ideal for power supply design, motor drives, and power semiconductor switching analysis.

SPECIFICATIONS

General

Display	None (status displayed on TCPA300 amplifier and compatible oscilloscope)
Product Class	AC/DC Current Probe

Physical

Power Supply	Powered directly by the TCPA300 amplifier
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	41 mm x 68 mm x 268 mm mm
Weight	1.9 kg (including cable and connector) kg

Electrical Performance Specifications

Bandwidth	DC to 15 MHz
Rise Time	≤ 23 ns
Maximum Continuous Current (DC + AC Peak)	150 A
Maximum Peak Pulse Current	500 A
Amp-Second Product	15,000 A·μs
DC Accuracy	±3% of reading (with TCPA300 amplifier, after Autozero/Demag)
Insertion Impedance at 1 MHz	0.01 Ω
Insertion Impedance at 10 MHz	0.08 Ω
Insertion Impedance at 15 MHz	0.15 Ω
Displayed Average Noise Level (RMS)	≤ 2.5 mA RMS (typical)

System Compatibility & Connectivity

Compatible Amplifier Model	TCPA300
Required Output Termination	50 Ω (on oscilloscope via TCPA300 output)
Probe Detection/Scaling Support	Automatic scaling and unit display on compatible Tektronix oscilloscopes via TCPA300 amplifier

Physical and Mechanical Characteristics

Maximum Conductor Diameter	20 mm
Cable Length	2 m
Probe Head Width	41 mm
Probe Head Height	68 mm
Probe Head Length	268 mm
Jaw Type	Split-core

Environmental Conditions

Storage Temperature Range	-40 °C to +75 °C
Operating Altitude	Up to 2000 m
Storage Altitude	Up to 12192 m (40000 ft)
Operating Relative Humidity	5% to 95% (up to +30 °C), 5% to 85% (+30 °C to +50 °C)

Ordering Information & Accessories

Standard Accessories Included	Probe cover, instruction manual, traceable certificate of calibration
Warranty Period	1 Year

Performance

Propagation Delay	40 ns
Scale Factors	5 A/V, 50 A/V (with TCPA300)
Measurement Principle	Split-core Hall-effect and transformer

Safety

Maximum Bare-wire Voltage	None (for use on insulated conductors only)
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Compliance

Safety Certifications	UL3111-2-032, CSA1010.2.032, EN61010-1/A2, EN61010-2-032
EMC Compliance	EN50081-1, EN50082-1, FCC Part 15 Subpart B Class A
Pollution Degree	2

Connectivity

Amplifier Interface Connection	Proprietary 12-pin latching connector
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Environmental

Storage Relative Humidity	5% to 95% (up to +30 °C), 5% to 85% (above +30 °C up to +75 °C)
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TECHNOLOGY

Split-core Hall Effect and Transformer Technology

APPLICATIONS

Oscilloscope Current Measurement

