

TEKTRONIX

TCP312

The Tektronix TCP312 is a high-performance AC/DC current probe designed for use with the TCPA300 amplifier. Offering a wide bandwidth from DC to 100 MHz and a maximum continuous current measurement capability of 30 A, it is well-suited for high-frequency measurements in power electronics, automotive systems, and semiconductor development.

SPECIFICATIONS

General

Interfaces	Proprietary probe interface (connects to TCPA300)
Probe Type	AC/DC Current Probe
Sensor Type	Split-core Hall-effect and Transformer

Physical

Power Supply	Powered via the TCPA300 amplifier
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	16 mm × 32 mm × 200 mm (Probe Head) mm

Electrical & Performance

Bandwidth	DC to 100 MHz
Rise Time	≤ 3.5 ns
Maximum Continuous DC Current	30 A
Maximum RMS Current	30 A
Maximum Peak Pulse Current	50 A
Minimum Sensitivity	1 mA (on oscilloscope with TCPA300)
DC Accuracy	±3% of reading (with TCPA300)
Maximum Amp-Second Product	11.2 A*µs
Insertion Impedance at 1 MHz	0.08 Ω
Insertion Impedance at 10 MHz	0.15 Ω
Insertion Impedance at 50 MHz	0.27 Ω
Insertion Impedance at 100 MHz	0.7 Ω
RMS Noise	≤ 250 µA
Propagation Delay	17 ns

Voltage & Safety Ratings

Maximum Bare Wire Voltage	150 V CAT II
Maximum Insulated Wire Voltage	300 V CAT II
Pollution Degree	2

System Compatibility & Interface

Compatible Amplifier	TCPA300
----------------------	---------

Physical & Mechanical

Maximum Conductor Diameter	5.0 mm (0.2 inches)
Cable Length	1.5 m (5 feet)
Probe Head Width	1.6 cm (0.6 inches)
Probe Head Height	3.2 cm (1.3 inches)
Probe Head Length	20.0 cm (7.9 inches)

Environmental

Non-Operating Temperature Range	-40 °C to +75 °C
Operating Humidity	5% to 95% RH (up to +30 °C), 5% to 85% RH (+30 °C to +50 °C)
Operating Vibration	0.31 g RMS (5 Hz to 500 Hz)
Non-Operating Vibration	2.46 g RMS (5 Hz to 500 Hz)

Electrical Characteristics

Input Coupling	AC, DC
----------------	--------

Connectivity

Interface Connector	Proprietary 12-pin (mates directly with TCPA300)
---------------------	--

Compliance

Safety Standards	UL61010-1, UL61010-2-032, CAN/CSA-C22.2 No. 61010-1, CAN/CSA-C22.2 No. 61010-2-032, EN 61010-1, EN 61010-2-032, IEC 61010-1, IEC 61010-2-032
------------------	--

Performance

Temperature Coefficient (Output Drift)	≤0.25 mA/°C
--	-------------

TECHNOLOGY

Split-core AC/DC current measurement

APPLICATIONS

Oscilloscope current measurement

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