

# DC Coupled Current Probe

## ► TCP202



## ► Features & Benefits

Easy Current Measurements

Probe Connects Directly to TDS Scope Through TEKPROBE™ BNC Interface

Split Core Construction for Easy Circuit Connection

DC to 50 MHz Bandwidth

15 Amps DC + Peak AC Current

50 Amps Peak Pulse Current

500 x 10<sup>-6</sup> Ampere-Sec Product

Safety Certified

## ► Applications

Motor Drives

Switching Power Supplies

Disk Drive

Electronic Ballasts

Inverters

Avionics

## ► TCP202.

### TCP202 DC Coupled Current Probe

When combined with a Tektronix TDS oscilloscope, the TCP202 enables users to make direct readout DC and AC current measurements, resulting in accurately displayed and recorded measurements.

The TCP202 is a general-purpose probe for displaying and measuring current in electronic circuits. It is ideal for power supply and motor drive design and for device testing.

## DC Coupled Current Probe

► TCP202

### ► Characteristics

**Bandwidth** – DC to 50 MHz.

**Max DC + Peak AC Current** – 15 A.

**Max Peak Pulse Current** – 50 A.

**Minimum Sensitivity** – 10 mA/div.

**DC Accuracy** –

±1% (with probe calibrator).

±3% (without probe calibrator).

**Max Bare Wire Voltage** – 300 V (CAT I).

### Typical Characteristics

**Insertion Impedance** –

0.002 Ω at 1 kHz.

0.1 Ω at 5 MHz.

**Propagation Delay** – 17 ns.

**Max Conductor Diameter** – 3.8 mm (0.15 in.).

**Electrostatic Immunity** – (per IEC 801-2) >8 kV.

**Ampere-Sec Product** – 500 x 10<sup>-6</sup> Amp\*Sec.

**Rise Time** – ≤7.0 ns.

### Physical Characteristics

**Weight** – 0.19 kg (0.44 lbs.).

**Cable Length** – 2.2 m (7.2 ft.).

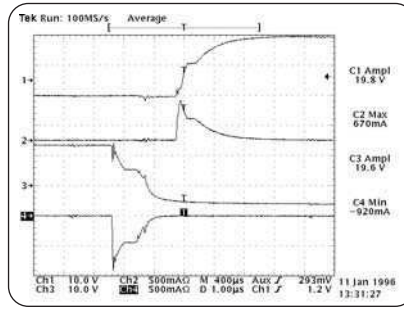
**Power Requirements** – TCP202 is powered by the TDS oscilloscope via the TEKPROBE™ interface.

### Safety

UL 3111-1, CSA1010.1, EN61010-1, IEC61010-1, EN61010-2-032, IEC61010-2-032.

### Recommended Oscilloscopes

TDS520B; TDS520C; TDS520D; TDS540B; TDS540C; TDS540D; TDS580C; TDS580D; TDS654C; TDS680C; TDS684C; TDS694C; TDS724A; TDS724C; TDS724D; TDS744A (S/N B040100 or higher); TDS754A; TDS754C; TDS754D; TDS784A (S/N B040100 or higher); TDS784C; TDS784D; TDS794D; TDS3000 Series; TDS3000B Series; TDS5000 Series; TDS5000B Series with TCA-BNC adapter; TDS6000 Series; TDS6000B Series with TCA-BNC adapter; TDS7000 Series; TDS7000B Series with TCA-BNC adapter. For TCP202 operation with other TDS400, TDS500, TDS600 and TDS700 Series oscilloscopes, the scale factor will be correct but measurement will be indicated as V instead of A.



### Increase the accuracy of your current measurements

The accuracy of the TCP202 AC/DC current probe is normally 3%. However, the accuracy may be improved to 1% when the probe is calibrated on certain TDS oscilloscope models using the optional Calibrator P/N 015-0672-50. This improved accuracy is available on the TDS Oscilloscopes Series TDS500, TDS600 and TDS700, however the optional calibrator is only functional with the TDS500, TDS600 or TDS700 Series oscilloscope calibrator pins.

### ► Ordering Information

#### TCP202

DC Coupled Current Probe.

**Includes:** Instruction manual (070-9542-xx), reference manual (070-9543-xx).

#### Recommended Accessories

**Probe Calibrator** – (015-0672-50) Use with TDS510A, TDS520B, TDS520C, TDS520D, TDS540B, TDS540C, TDS540D, TDS580D, TDS654C, TDS680C, TDS684C, TDS694C, TDS724A, TDS724C, TDS724D, TDS754A, TDS754C, TDS754D, TDS784A, TDS784C, TDS784D, TDS794D for improved accuracy.

#### Related Products

**1103** – TEKPROBE® Power Supply (for scopes without TEKPROBE BNC interfaces).

**ADA400A** – Differential Preamplifier.

**P5205** – High Voltage Differential Probe.

**P5210** – High Voltage Differential Probe.

### Contact Tektronix:

**ASEAN / Australasia / Pakistan** (65) 6356 3900

**Austria** +43 2236 8092 262

**Belgium** +32 (2) 715 89 70

**Brazil & South America** 55 (11) 3741-8360

**Canada** 1 (800) 661-5625

**Central Europe & Greece** +43 2236 8092 301

**Denmark** +45 44 850 700

**Finland** +358 (9) 4783 400

**France & North Africa** +33 (0) 1 69 86 80 34

**Germany** +49 (221) 94 77 400

**Hong Kong** (852) 2585-6688

**India** (91) 80-22275577

**Italy** +39 (02) 25086 1

**Japan** 81 (3) 6714-3010

**Mexico, Central America & Caribbean** 52 (55) 56666-333

**The Netherlands** +31 (0) 23 569 5555

**Norway** +47 22 07 07 00

**People's Republic of China** 86 (10) 6235 1230

**Poland** +48 (0) 22 521 53 40

**Republic of Korea** 82 (2) 528-5299

**Russia, CIS & The Baltics** +358 (9) 4783 400

**South Africa** +27 11 254 8360

**Spain** +34 (91) 372 6055

**Sweden** +46 8 477 6503/4

**Taiwan** 886 (2) 2722-9622

**United Kingdom & Eire** +44 (0) 1344 392400

**USA** 1 (800) 426-2200

**USA (Export Sales)** 1 (503) 627-1916

For other areas contact Tektronix, Inc. at: 1 (503) 627-7111

Last Update March 01, 2004

Our most up-to-date product information is available at:  
[www.tektronix.com](http://www.tektronix.com)

Product(s) are manufactured  
in ISO registered facilities.



Copyright © 2004, Tektronix, Inc. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.

08/04 DV/WOW

51W-10736-4

**Tektronix**  
Enabling Innovation