# Passive Voltage Probes

## TPP1000 • TPP0500 • TPP0502 Data Sheet

## Features & Benefits

### Key Performance Specifications

- 1 GHz and 500 MHz Probe Bandwidth Models
- <4 pF Input Capacitance
- 10X and 2X Attenuation Factor
- 300 V CAT II Input Voltage
- Designed for use with the MSO/DPO4000B and MSO/DPO5000 Series Oscilloscopes

### Ease-of-Use Features

- Compact Probe Head for Probing Small-geometry Circuit Elements
- Small Probe Body for Enhanced Visibility to the Device-Under-Test
- Rigid Tip for Secure Device-Under-Test Connectivity
- Replaceable Probe Tip Cartridges
- Large Accessory Set for Versatile Connectivity

### Connectivity

- Integrated Oscilloscope and Probe Measurement System provides Intelligent Communication that Automatically Scales and Adjusts Units on the Oscilloscope Display to Match the Probe Attenuation
- Built-in AC Compensation Optimizes Signal Path across the Entire Frequency Range

## Applications

- Low-power Devices
- Service
- Manufacturing Engineering Test
- Research and Development

## Accurate High-speed, Passive Probing

The TPP1000 and TPP0500 are high-bandwidth, general-purpose probes from Tektronix that offer breakthrough specifications previously unrealized in this product class. Designed for use with Tektronix MSO/DPO4000B and MSO/DPO5000 Series oscilloscopes, these probes provide up to 1 GHz of analog bandwidth with less than 3.9 pF of capacitive loading.

The extremely low capacitive loading limits adverse affects on your circuits and is more forgiving of longer ground leads. And with the probe's wide bandwidth, you can see the high-frequency components in your signal which is critical for high-speed applications. The TPP1000 and TPP0500 passive voltage probes offer all the benefits of general-purpose probes like high dynamic range, flexible connection options, and robust mechanical design, while providing the performance of active probes.

## Accurate Low-voltage, Passive Probing

The TPP0502 offers the industry's highest bandwidth (500 MHz) and lowest attenuation factor (2X) for making low-voltage measurements such as ripple, a common measurement on the output of power supplies. The low capacitive loading of the TPP0502 means long ground leads can also be used on this probe with minimal impact on measurement quality, providing today's engineer with the flexibility to move around their design without worrying about ground lead length.

Tektronix®

## Characteristics

| Characteristic | Description |
|---|---|
| Attenuation | |
| TPP0500 and TPP1000 | 10X |
| TPP0502 | 2X |
| Dynamic Range | 300 V CAT II |
| Bandwidth | |
| TPP500 and TPP502 | 500 MHz |
| TPP1000 | 1 GHz |
| Input Impedance at the Probe Tip | |
| TPP1000 and TPP0500 | 10 MΩ, <4 pF |
| TPP0502 | 2 MΩ, 12.7 pF |
| Cable Length | 1.3 m |

## Ordering Information

### TPP1000
1 GHz, 10X Attenuation Passive Probe with TekVPI™ Interface.

### TPP0500
500 MHz, 10X Attenuation Passive Probe with TekVPI™ Interface.

### TPP0502
500 MHz, 2X Attenuation Passive Probe with TekVPI™ Interface.

### Standard Accessories

| Description | Quantity Included | Reorder Part Number |
|---|---|---|
| Certificate of Traceable Calibration | 1 | — |
| Rigid Tip 3.8 mm | 1 | 206-0610-00 |
| Flex Ground Spring SHORT 3.8 mm | 2 | 016-2034-00 |
| Long Ground Spring (2 each, 214-5176-00) | 2 | 016-2028-00 |
| Alligator Ground (6 in.) | 1 | 196-3521-00 |
| Hook Tip (Regular) | 1 | 013-0362-00 |
| Hook Tip (Micro) | 1 | 013-0363-00 |
| IC Cap (Universal) 3.8 mm | 1 | 013-0366-00 |

### Optional Accessories

| Description | Quantity per Package | Order Part Number |
|---|---|---|
| Alligator Ground (12 in.) | 1 | 196-3512-00 |
| 6 in. Clip-on Ground Lead (with 0.025 in. pin receptacle) | 1 | 196-3198-01 |
| Microcircuit Test Tip | 1 | 206-0569-00 |
| Wire, 32 AWG | Spool | 020-3045-00 |
| BNC to Probe Tip Adapter | 1 | 013-0367-00 |
| PCB to Probe Tip Adapter, Pack of 10 | 1 | 016-2016-00 |
| Compact Probe Tip Chassis Mount Test Jack | 1 | 131-4210-00 |
| Color Bands (set of 4 color-coded bands) | 1 | 016-0633-00 |
| Tweeker Tool | 1 | 003-1433-02 |

CE

Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.

**Contact Tektronix:**

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

**Austria** 00800 2255 4835*

**Balkans, Israel, South Africa and other ISE Countries** +41 52 675 3777

**Belgium** 00800 2255 4835*

**Brazil** +55 (11) 3759 7627

**Canada** 1 800 833 9200

**Central East Europe and the Baltics** +41 52 675 3777

**Central Europe & Greece** +41 52 675 3777

**Denmark** +45 80 88 1401

**Finland** +41 52 675 3777

**France** 00800 2255 4835*

**Germany** 00800 2255 4835*

**Hong Kong** 400 820 5835

**India** 000 800 650 1835

**Italy** 00800 2255 4835*

**Japan** 81 (3) 6714 3010

**Luxembourg** +41 52 675 3777

**Mexico, Central/South America & Caribbean** 52 (55) 56 04 50 90

**Middle East, Asia, and North Africa** +41 52 675 3777

**The Netherlands** 00800 2255 4835*

**Norway** 800 16098

**People's Republic of China** 400 820 5835

**Poland** +41 52 675 3777

**Portugal** 80 08 12370

**Republic of Korea** 001 800 8255 2835

**Russia & CIS** +7 (495) 7484900

**South Africa** +41 52 675 3777

**Spain** 00800 2255 4835*

**Sweden** 00800 2255 4835*

**Switzerland** 00800 2255 4835*

**Taiwan** 886 (2) 2722 9622

**United Kingdom & Ireland** 00800 2255 4835*

**USA** 1 800 833 9200

* European toll-free number. If not accessible, call: +41 52 675 3777

Updated 10 February 2011

**For Further Information.** Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit **www.tektronix.com**

Copyright © 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.

02 Oct 2011 51W-26151-2

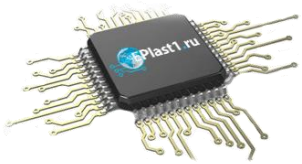
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

**Телефон:** 8 (812) 309 58 32 (многоканальный)
**Факс:** 8 (812) 320-02-42
**Электронная почта:** org@eplast1.ru
**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.