Safe high voltage probe solutions for ground-referenced voltage testing. It is critical to safely and accurately capture real-time signal information from "elevated" or "floating" voltage systems. Our portfolio of high voltage probes provides the safety you need for single-ended, differential or isolated measurements.

Key performance specifications

- **P5100A**
  - DC to 500 MHz
  - 2500 \( V_{\text{Peak}} \), 1000 \( V_{\text{RMS}} \) CAT II
  - 100X with readout coding

- **TPP0850**
  - DC to 800 MHz
  - 2500 \( V_{\text{Peak}} \), 1000 \( V_{\text{RMS}} \) CAT II
  - 50X with readout coding
  - Designed for use with the MSO/DPO5000 and MSO/DPO4000B Series Oscilloscopes

- **P5122**
  - DC to 200 MHz
  - 1000 \( V_{\text{RMS}} \) CAT II when DC-coupled*¹
  - 100 X
  - Floatable up to 600 \( V_{\text{RMS}} \) CAT II
  - For TPS2000 and THS3000 Series Oscilloscopes

- **P5150**
  - DC to 500 MHz
  - 2500 \( V_{\text{Peak}} \), 1000 \( V_{\text{RMS}} \) CAT II
  - 50X
  - Floatable up to 600 \( V_{\text{RMS}} \) CAT II or 300 \( V_{\text{RMS}} \) CAT III
  - For TPS2000 and THS3000 Series Oscilloscopes

- **P6015A**
  - DC to 75 MHz
  - High Voltage - 20 kV DC / 40 kV Peak (100 ms Pulse Width)
  - Optional 1000X readout coding

Applications

- Power supply design
- Design motor drive
- Electronic ballast
- Power semiconductors
- Switch mode control
- UPS systems
- Power converters

**P5100A High-Voltage Probe**

The P5100A is a low input capacitance, high-voltage probe (2.5 kV) designed for higher-frequency applications. The probe can be compensated to match plug-ins and oscilloscopes with nominal input capacitances of 7-30 pF. A variety of screw-on accessories provide easy connection to the device-under-test.

*¹ Effective when using 100X coupling.

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**TPP0850 High-Voltage Probe**

The TPP0850 offers the industry’s highest bandwidth probe (800 MHz) for high-voltage signals (up to 2500 V_{p-p}). This is ideal for testing power semiconductors and switch-mode power supplies, which continue to increase in switching speed to minimize power loss, creating a need for faster rise time, higher bandwidth, and higher voltage probes. The TPP0850 meets this need and can be used with switching transistor circuits operating at 1200 V_{RMS}, above the voltage operating range of standard general-purpose probes. It will also be able to accommodate emerging power applications that will require even faster rise time capabilities.

**P5150 and P5122 IsolatedChannel™ Applications**

In many applications, it is important to be able to isolate the measurement from earth ground and also to isolate the common voltage between channels. The P5150 or P5122, coupled with the TPS2000 and THS3000 Series digital storage oscilloscopes, deliver both the isolation for the measurement from earth ground and full isolation between the channels. The P5150 is the recommended probe for measuring ripple on high-voltage DC supplies. The P5122 probe should not be used on the TPS2000 Series oscilloscopes for AC-coupled measurements on signals with greater than 300 V DC offset.

**P6015A High-Voltage Probe**

For heavy-duty high-performance measurements of voltages over 2.5 kV, the P6015A is the industry standard. You can measure DC voltages up to 20 kV_{RMS} and pulses up to 40 kV (peak, 100 ms duration). The 75 MHz bandwidth enables you to capture fast, high-voltage signals.

The P6015A uses an environmentally safe silicone compound for a dielectric and never needs refilling. Other features include: A 7-49 pF compensation range, small compensation box that fits on adjacent amplifier inputs, and a readout option for use with most Tektronix digital scopes. With the readout option, displayed voltage amplitude values will be the actual signal value rather than understated by a factor of 1,000.

Note: Using the readout version with other than Tektronix digital oscilloscopes may result in an erroneous readout display.
Specifications

All specifications are guaranteed unless noted otherwise. All specifications apply to all models unless noted otherwise.

Model overview

<table>
<thead>
<tr>
<th></th>
<th>P5100A</th>
<th>TPP0850</th>
<th>P5122</th>
<th>P5150</th>
<th>P6015A</th>
<th>P6015A Opt. 1R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal length</td>
<td>2 m</td>
<td>1.3 m</td>
<td>1.2 m</td>
<td>2 m</td>
<td>3 m</td>
<td>3 m</td>
</tr>
<tr>
<td>Attenuation</td>
<td>100X</td>
<td>50X</td>
<td>100X</td>
<td>50X</td>
<td>1000X</td>
<td>1000X</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>500 MHz</td>
<td>800 MHz</td>
<td>200 MHz</td>
<td>500 MHz</td>
<td>75 MHz</td>
<td>75 MHz</td>
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<tr>
<td>Rise time (typ)</td>
<td>&lt;700 ps</td>
<td>&lt;525 ps</td>
<td>2.2 ns</td>
<td>&lt;700 ps</td>
<td>4.0 ns</td>
<td>4.0 ns</td>
</tr>
<tr>
<td>Loading</td>
<td>40 Ω/ 2.5 pF</td>
<td>40 Ω/ 1.8 pF</td>
<td>100 Ω/ 4.0 pF</td>
<td>40 Ω/ 3.8 pF</td>
<td>100 Ω/ 3.0 pF</td>
<td>100 Ω/ 3.0 pF</td>
</tr>
<tr>
<td>Maximum input voltage, DC or RMS</td>
<td>2.5 kV&lt;sub&gt;peak&lt;/sub&gt; 1000 V&lt;sub&gt;RMS&lt;/sub&gt; CAT II</td>
<td>2.5 kV&lt;sub&gt;peak&lt;/sub&gt; 1000 V&lt;sub&gt;RMS&lt;/sub&gt; CAT II</td>
<td>1000 V&lt;sub&gt;RMS&lt;/sub&gt; CAT II</td>
<td>2.5 kV&lt;sub&gt;peak&lt;/sub&gt; 1000 V&lt;sub&gt;RMS&lt;/sub&gt; CAT II</td>
<td>20 kV</td>
<td>20 kV</td>
</tr>
<tr>
<td>Maximum float voltage</td>
<td>N/A</td>
<td>N/A</td>
<td>600 V&lt;sub&gt;RMS&lt;/sub&gt; CAT II</td>
<td>600 V&lt;sub&gt;RMS&lt;/sub&gt; CAT II</td>
<td>300 V&lt;sub&gt;RMS&lt;/sub&gt; CAT III</td>
<td>N/A</td>
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<tr>
<td>Compensation range (pf)</td>
<td>7 to 30</td>
<td>N/A</td>
<td>10 to 22</td>
<td>10 to 25</td>
<td>7 to 49</td>
<td>7 to 49</td>
</tr>
<tr>
<td>Readout</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

EMC environment and safety

P5100A | UL61010-031, EN61010-031, IEC61010-031, CSA61010-031
TPP0850 | UL61010-031, EN61010-031, IEC61010-031, CSA61010-031
P5122 | UL61010-1, UL61010B-2-031, CSA61010-1
P5150 | UL61010-031, EN61010-031, IEC61010-031, CSA61010-031
P6015A | UL3111-1, EN61010-1, IEC61010-2-031, CSA1010.1, CSA1010.2.031
Ordering information

Models

P5100A/TPP0850  100X, High Voltage Probes
Includes: Large hook tip (013-0389-xx), small hook tip (013-0388-xx), 6 in. ground lead (196-3526-xx), 18 in. ground lead (196-3527-xx), ground spring (214-5299-xx), crocodile clip (344-0461-xx), adjustment tool (003-1433-xx), color bands (016-1886-xx), instruction manual.

P5122  100X, High-voltage Probe for TPS2000/B and THS3000 Series Oscilloscopes.
Includes accessory kit (020-3046-xx) Contents: large retractable hook tip, lead with hook tip, lead with crocodile clip, adjustment tool, instruction manual, ground spring.

P5150  50X, High-voltage Probe for TPS2000/B and THS3000 Series Oscilloscopes.
Includes: Large hook tip (013-0389-xx), small hook tip (013-0388-xx), 6 in. ground lead (196-3526-xx), 18 in. ground lead (196-3527-xx), common spring (214-5299-xx), crocodile clip (344-0461-xx), color bands (016-1886-xx), adjustment tool (003-1433-xx), instruction manual.

P6015A  1000X, 3-meter High-voltage Probe.

Recommended accessories (for P5100A, TPP0850, P5150)

- Probe Tip to BNC Adapter  013-0291-xx
- 0.080 in. diameter Spring Tip  206-0060-xx

Warranty
One year parts and labor.

Options

Options (P6015A only)

- Option 1R  3-meter length with readout

Service options (P6015A)

- Opt. C3  Calibration Service 3 Years
- Opt. C5  Calibration Service 5 Years
- Opt. D1  Calibration Data Report
- Opt. D5  Calibration Data Report 5 Years (with Opt. C5)
- Opt. R3  Repair Service 3 Years (including warranty)
- Opt. R5  Repair Service 5 Years (including warranty)
Service options (TPP0850)

Opt. C3 Calibration Service 3 Years
Opt. C5 Calibration Service 5 Years
Opt. D1 Calibration Data Report
Opt. D3 Calibration Data Report 3 Years (with Opt. C3)
Opt. D5 Calibration Data Report 5 Years (with Opt. C5)
Opt. R3 Repair Service 3 Years (including warranty)
Opt. R5 Repair Service 5 Years (including warranty)

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