High Voltage Differential Probes

- P5200 • P5205 • P5210

**Features & Benefits**
- Bandwidths Up to 100 MHz
- Up to 5,600 V Differential (DC + pk AC)
- Up to 2,200 V Common (RMS)
- Overrange Indicator
- Safety Certified
- Switchable Attenuation
- Switchable Bandwidth Limit

**Applications**
- Floating Measurements
- Switching Power Supply Design
- Motor Drive Design
- Electronic Ballast Design
- CRT Display Design
- Power Converter Design and Service
- Power Device Evaluation

The P5200 can be used with any oscilloscope and enables users to safely make measurements of floating circuits with their oscilloscope grounded. The P5200 Active Differential Probe converts floating signals to low-voltage ground-referenced signals that can be displayed safely and easily on any ground-referenced oscilloscope.

**WARNING:** For safe operation, do not use the P5200 High Voltage Differential Probe with oscilloscopes that have floating inputs (isolated inputs), such as the Tektronix TPS2000 Series oscilloscopes and THS700 Series oscilloscopes. The P5200 High Voltage Differential Probe requires an oscilloscope or other measurement instrument with grounded inputs.

The P5210 is a Differential Probe that is capable of measuring floating voltages up to 5,600 V (DC + pk AC) safely and has a bandwidth up to 50 MHz. It is supplied with two sizes of hook tips and has an...
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overrange visual and audible indicator which warns the user when they are exceeding the linear range of the probe. It can be used with Tektronix TEKPROBE™ interface oscilloscopes directly or with any oscilloscope with the use of the 1103 TEKPROBE® Power Supply. The P5205 is a 100 MHz Active Differential Probe capable of measuring fast rise times of signals in floating circuits. This 1,300 V differential probe can measure safely voltages in IGBT circuits such as motor drives or power converters. It is specifically designed to operate on Tektronix oscilloscopes with TEKPROBE interface.

Characteristics

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<th>Specifications</th>
<th>P5200</th>
<th>P5205</th>
<th>P5210</th>
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<tr>
<td>Bandwidth (-3 dB)</td>
<td>25 MHz</td>
<td>100 MHz</td>
<td>50 MHz</td>
</tr>
<tr>
<td>Differential Mode Voltage (RMS or DC)</td>
<td>1000 V CAT II</td>
<td>1000 V CAT II</td>
<td>4400 V CAT II</td>
</tr>
<tr>
<td>Differential Mode Voltage (Peak)*1</td>
<td>1300 V</td>
<td>1300 V</td>
<td>5600 V</td>
</tr>
<tr>
<td>Common Mode Voltage (RMS or DC + PK AC)</td>
<td>1000 V CAT II</td>
<td>1000 V CAT II</td>
<td>2200 V CAT III</td>
</tr>
<tr>
<td>Attenuation (switchable)</td>
<td>50X500X</td>
<td>50X500X</td>
<td>100X1000X</td>
</tr>
<tr>
<td>CMRR at 60 Hz/1 MHz (typical)</td>
<td>80 dB/50 dB</td>
<td>80 dB/50 dB</td>
<td>80 dB/50 dB</td>
</tr>
<tr>
<td>Input R (each input)</td>
<td>4 MΩ</td>
<td>4 MΩ</td>
<td>8 MΩ</td>
</tr>
<tr>
<td>Input C (each input)</td>
<td>7 pF</td>
<td>7 pF</td>
<td>7 pF</td>
</tr>
<tr>
<td>Power Source</td>
<td>AC wall adapter</td>
<td>TEKPROBE Power Supply</td>
<td>TEKPROBE Power Supply</td>
</tr>
<tr>
<td>Safety (all)</td>
<td>UL3111-1/CSA1010.1/CSA1010.2.031/IEC61010-2-031/EN61010-2-031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compatible Products</td>
<td>All*3</td>
<td>TDS400/500/600/700/ TDS3000B/5000B/6000B<em>2/7000B</em>2/ CSA7000B*2 and 11000 Series</td>
<td>TDS400/500/600/700/ TDS3000B/5000B/6000B<em>2/7000B</em>2/ CSA7000B*2 and 11000 Series</td>
</tr>
</tbody>
</table>

*1 The RMS value of the waveform shall not exceed the Common Mode Voltage (RMS) for either lead.


*3 WARNING: For safe operation, do not use the P5200 High Voltage Differential Probe with oscilloscopes that have floating inputs (isolated inputs), such as the Tektronix TPS2000 series oscilloscopes and THS700 series oscilloscopes. The P5200 High Voltage Differential Probe requires an oscilloscope or other measurement instrument with grounded inputs.
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Ordering Information

P5200
Active Differential Probe.
Includes: 2 crocodile clips; 2 plunger clips; 9 V DC power supply; manual (070-9018-01). Please specify power cord when ordering.

Power Plug Options (P5200 Only)

P5205
Active Differential Probe.
Includes: 2 each plunger clamps; 2 each crocodile clips; 2 each extender leads; 2 each lead adapters; 2 each plunger hook clips; soft case; manual (070-9472-01).

P5210
Active Differential Probe.
Includes: 2 each large hook clips; 2 each small hook clips; 2 each probe heads; soft case; manual (070-9841-01).

Service
- Cpt. C3 – Calibration Service 3 Years.
- Cpt. C5 – Calibration Service 5 Years.
- Cpt. R5 – Repair Service 5 Years.

Accessory Pack (P5200, P5205)
Order 020-2106-00.
Includes: 2 each plunger clamps; 2 each crocodile clips.

Accessory Pack (P5205, P5210 only)
Order 020-2195-00.
Includes: 2 each large hook clips; 2 each small hook clips; 2 each probe heads.

Soft case
Order 016-1461-00.

Power Supply (P5205, P5210 only)