

# Passive High-voltage Probes

## P5100 • P5120 • P5122 • P6015A Data Sheet



P5120

### Features & Benefits

#### P5100

- DC to 250 MHz
- 1000 V CAT III (2500 V DC + Peak AC)
- 100x with Readout Coding
- UL3111-1, EN61010-1, IEC61010-2-031, CSA1010.1, CSA1010.2.031
- 7 to 30 pF Compensation Range

#### P5120

- DC to 200 MHz
- 1000 V<sub>RMS</sub> CAT II
- Floatable up to 600 V<sub>RMS</sub> CAT II or 300 V<sub>RMS</sub> CAT III
- 20x
- 15 to 25 pF Compensation Range
- For TPS2000 Series
- UL61010B-2-031, EN61010-2-031, IEC61010-2-031, CSA61010.2.031

#### P5122

- DC to 200 MHz
- 1000 V<sub>RMS</sub> CATII
- Floatable up to 600 V<sub>RMS</sub> CATIII
- 100x
- For TPS2000 Series
- IEC61010-031

#### P6015A

- High Voltage – 20 kV DC / 40 kV Peak (100 ms Pulse Width)
- High Bandwidth – 75 MHz
- Silicone Dielectric
- Optional 1000x Readout Coding
- Wide Compensation Range (7-49 pF)
- Heavy-duty Versatile Ground Lead and Alligator Clip

### Applications

- Power Supply Design
- Design Motor Drive
- Electronic Ballast
- Power Semiconductors
- Switch Mode Control
- UPS Systems
- Power Converters

## P5100 High-voltage Probe

The P5100 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.

## P5120 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 P5120 or P5122, coupled with the TPS2000 Series digital storage oscilloscopes, deliver both the isolation for the measurement from earth ground and full isolation between the channels.

## 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<sub>RMS</sub> 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



P6015A

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 scopes may result in an erroneous readout display.

## Characteristics

### P5100/P5120/P5122/P6015A

Probe	Nominal Length	Attenuation	Bandwidth	Rise Time (Typical)	Loading	Max. Input V DC or RMS	Max. Float V	Comp. Range in pF	Readout
P5100	10 ft.	100x	250 MHz	1.75 ns	10 M $\Omega$ / 2.75 pF	2.5 kV (DC + Pk AC) 1000 V CAT III	N/A	7 to 30	Yes
P5120	3 m	20x	200 MHz	2.2 ns	5 M $\Omega$ / 11.2 pF	1000 V <sub>RMS</sub> CAT II	600 V <sub>RMS</sub> CAT II, 300 V <sub>RMS</sub> CAT III	15 to 25	No
P5122	1.2 m	100x	200 MHz	2.2 ns	100 M $\Omega$ / 4.0 pF	1000 V <sub>RMS</sub> CAT II	600 V <sub>RMS</sub> CAT III	10 to 22	No
P6015A	10 ft.	1000x	75 MHz	4.0 ns	100 M $\Omega$ / 3 pF	20 kV	N/A	7 to 49	No
P6015A Opt. 1R	10 ft.	1000x	75 MHz	4.0 ns	100 M $\Omega$ / 3 pF	20 kV	N/A	7 to 49	Yes

## Ordering Information

### P5100

100x, 10 ft. High-voltage Probe.

**Includes:** Cable markers set, crocodile clip, adjustment tool, hooktip (small), hooktip (large), 18 in. ground lead, 6 in. ground lead, instruction manual (070-8151-04).

### Recommended Accessories

**Probe Tip to BNC Adapter** – Order 013-0291-xx.

**0.080 in. Diameter Spring Tip** – Order 206-0060-xx.

### P5120

20x, High-voltage Probe for TPS2000 Series.

**Includes:** Large retractable hook tip, small retractable hook tip, 6 in. common lead, 18 in. common lead, large crocodile clip, colored cable markers, adjustment tool, instruction manual (071-1463-xx).

### P5122

100x, High-voltage Probe for TPS2000 Series.

**Includes:** Large retractable hook tip, lead with hook tip, lead with crocodile clip, adjustment tool, instruction manual.

### Recommended Accessories for P5100, P5120, P5122:

See P5100, P5120, P5122 Probe Accessories.

### P6015A

1000x, 10 ft. High-voltage Probe.

**Includes:** Hook probe tip (206-0463-xx); banana plug tip (134-0016-xx); crocodile clip – plugs onto ground lead (344-0461-xx); ground lead (196-3363-xx); carrying case (016-1147-xx); instruction manual (070-8223-xx).

**Opt. 1R** – 10 ft. with readout.

### Service (P6015 only)

**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.

**Opt. R5** – Repair Service 5 Years.



Product(s) are manufactured in ISO registered facilities.



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**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](http://www.tektronix.com)



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