Passive High Voltage Probes

▶ **P5100 • P5102 • P5120 • P6015A**



▶ P5120.

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 to 30 pF. A variety of screw-on accessories provide easy connection to the device under test.

P5102 & P5120 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 P5102, paired with the THS700 Series handheld digital storage oscilloscopes, and the P5120, coupled with the TPS2000 Series digital storage oscilloscopes, deliver both the isolation for the measurement from earth ground and full isolation between the channels. The 100 MHz P5102 is designed to give you isolated channel performance for up to 1,000 V_{RMS} CAT II when used with the THS700 Series oscilloscopes. The 200 MHz P5120 passive high voltage probe, for use with the TPS2000 Series oscilloscopes, is designed to give you up to 1,000 V_{RMS} CAT II of isolated channel performance. A variety of screw-on adapters are available for easy connection to the device under test.

▶ Features & Benefits

P5100

DC to 250 MHz

1000V 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

P5102

DC to 100 MHz

1,000 V_{RMS} CAT II

Floatable up to 600 V_{RMS} CAT II or 300 V_{RMS} CAT III

10X

For THS700 Series

UL3111-1, EN61010-1, IEC61010-2-031, CSA1010.1, CSA1010.2.031

P5120

DC to 200 MHz

1,000 V_{RMS} CAT II

Floatable up to 600 V_{RMS} CAT II or 300 V_{RMS} CAT III

20X

15 to 25 pF Compensation Range

For TPS2000 Series

UL61010B-2-031, EN61010-2-031, IEC61010-2-031, CSA61010.2.031

P6015A

High Voltage – 20 kV DC/40 kV Peak (100 ms Pulse Width)

High Bandwidth – 75 MHz

Silicone Dielectric

Optional 1,000X Readout Coding

Wide Compensation Range (7 to 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

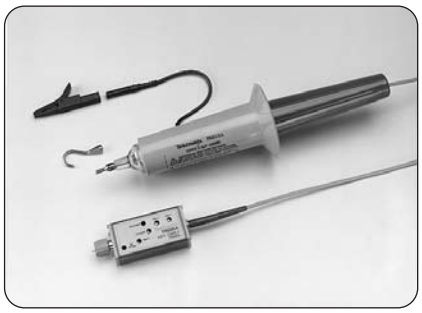
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Enabling Innovation

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 to 49 pF compensation range, a 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 scopes may result in an erroneous readout display.



► P6015A.

▸ Characteristics

▸ P5100/P5102/P5120/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 MΩ/ 2.75 pF	2.5 kV (DC + Pk AC) 1,000 V CAT III	N/A	7 to 30	Yes
P5102	2 m	10X	100 MHz	3.5 ns	5 MΩ/ 11.2 pF	1,000 V_{RMS} CAT II	600 V_{RMS} CAT II	24 to 28	No
P5120	3 m	20X	200 MHz	2.2 ns	5 MΩ/ 11.2 pF	1,000 V_{RMS} CAT II	600 V_{RMS} CAT II, 300 V_{RMS} CAT III	15 to 25	No
P6015A	10 ft.	1000X	75 MHz	4.0 ns	100 MΩ/ 3 pF	20 kV	N/A	7 to 49	No
P6015A Opt. 1R	10 ft.	1000X	75 MHz	4.0 ns	100 MΩ/ 3 pF	20 kV	N/A	7 to 49	Yes
P6015A Opt. 25	25 ft.	1000X	25 MHz	14 ns	100 MΩ/ 4 pF	20 kV	N/A	7 to 49	No
P6015A Opt. 2R	25 ft.	1000X	25 MHz	14 ns	100 MΩ/ 4 pF	20 kV	N/A	7 to 49	Yes

▸ Ordering Information

P5100

100X, 10 ft. High Voltage Probe.

Includes: Cable markers set, 1 each crocodile clip, 1 each adjustment tool, 1 each hooktip (small), 1 each hooktip (large), 1 each 18-inch ground lead, 1 each 6-inch ground lead, instruction manual (070-8151-04).

Recommended Accessories

Probe Tip to BNC Adapter –
Order 013-0291-00.

0.080 in. Diameter Spring Tip –
Order 206-0060-00.

P5102

10X, High Voltage Probe for THS700 Series.

Includes: Large retractable hook tip, small retractable hook tip, 6-inch common lead, 18-inch common lead, large crocodile clip, colored cable markers, adjustment tool, instruction manual (070-9294-00).

P5120

20X, High Voltage Probe for TPS2000 Series.

Includes: Large retractable hook tip, small retractable hook tip, 6-inch common lead, 18-inch common lead, large crocodile clip, colored cable markers, adjustment tool, instruction manual (071-1463-00).

P6015A

1,000X, 10-foot High Voltage Probe.

Includes: Hook probe tip (206-0463-00); banana plug tip (134-0016-00); crocodile clip – plugs onto ground lead (344-0461-00); ground lead (196-3363-00); carrying case (016-1147-00); instruction manual (070-8223-04).

Opt. 1R – 10 ft. with readout.

Opt. 25 – 25 ft. without readout.

Opt. 2R – 25 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 Option C3).

Opt. D5 – Calibration Data Report 5 Years (with Option C5).

Opt. R3 – Repair Service 3 Years.

Opt. R5 – Repair Service 5 Years.

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www.tektronix.com

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