

Passive Voltage Probes

P3010 P6101B Datasheet



The P3010 and P6101B probes are designed to complement the Tektronix family of portable DSO and ART instruments.

Notice to EU customers

This product is not updated to comply with the RoHS 2 Directive 2011/65/EU and will not be shipped to the EU. Customers may be able to purchase products from inventory that were placed on the EU market prior to July 22, 2017 until supplies are depleted. Tektronix is committed to helping you with your solution needs. Please contact your local sales representative for further assistance or to determine if alternative product(s) are available. Tektronix will continue service to the end of worldwide support life.

Key features

- 1 M Ω inputs
- P6101B
 - 1X, 15 MHz, 300 V CAT II
 - Readout
- P3010
 - 10X, 100 MHz
- Molded passive voltage probes
- Single-piece, molded rubber body
- Lightweight ergonomic design
- 10-times improvement in durability
- HYBRID/SMT circuitry on multi-layer circuit board for improved performance and reliability
- New stronger, replaceable probe tip
- Safety certification
 - UL3111-2-031, CSA1010.2.031, EN61010-2-031, IEC61010-2-031
- 1-year unconditional guarantee
- Miniature probe tip compatible with a wide range of Tektronix accessories and adapters
- Mixture of high, medium, and low-frequency general-purpose relative measurements
 - Engineering and Design
 - Service
 - Manufacturing

P3010 P6101B passive voltage probes

Passive voltage probes are the most commonly used oscilloscope probe. Other specialty probes expand the range and functionality of an oscilloscope as a measurement system; but a general-purpose, passive voltage probe, is the working end of the oscilloscope, a tool used every day by engineers and technicians.

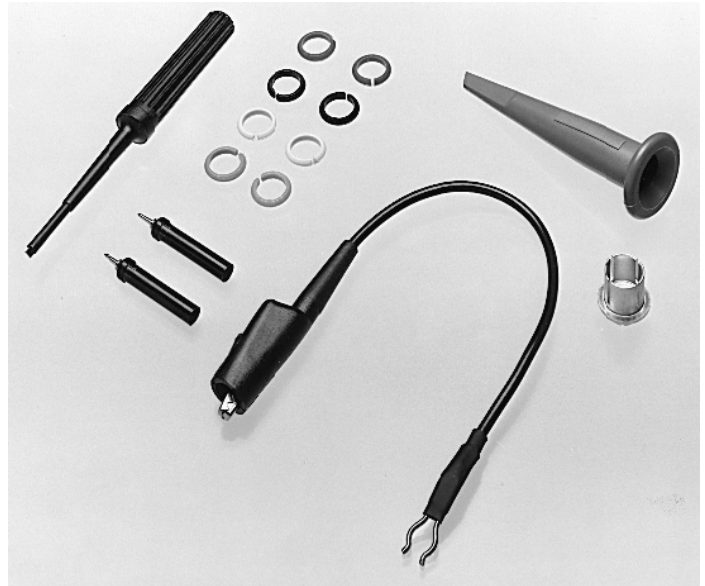
Two years of customer research, design innovation, and an exhaustive test program resulted in a most remarkable family of oscilloscope probes. This family of passive voltage probes is specifically designed for Tektronix analog and digital portable oscilloscopes. The 1X and 10X switchable probes combine the same high-quality electrical performance that customers expect from Tektronix with a new rugged mechanical design.

These probes are encased in a resilient, molded rubber body that is virtually indestructible. They are lighter in weight, more comfortable to hold, and more reliable than modular probe styles. The probes' replaceable tips are designed to withstand up to 20 pounds of force. Patented integral strain relief allows complete freedom of movement while providing superior cable flex. Each probe has received UL safety certification and meets MIL-T-28800, Class 3, environment specifications - something portable oscilloscope users will appreciate.

The P3010, and P6101B probes are designed to complement the Tektronix family of portable DSO and ART instruments. The core of each probe's performance is supplied by a Tektronix HYBRID/SMT device.

The instrumentation experience possessed by Tektronix provides an extra margin of quality and reliability to the molded probes that is not commonly available to probe manufacturers. These molded probes have been designed and tested to support the overall system performance and measurement quality that Tektronix oscilloscopes guarantee.

Through the introduction of the molded probes, Tektronix has set a new standard for passive voltage probe styling, performance, and durability.



Specifications

All specifications apply to all models unless noted otherwise.

Model overview

	P6101B	P3010
Attenuation	1X	10X
Bandwidth	15 MHz	100 MHz
Comp. range (Typical)	N.A.	10 pF to 15 pF
System input resistance	1 MΩ	10 MΩ
Input capacitance (Typical)	100 pF	13 pF
Input RMS	300 V _{RMS} CAT II	300 V _{RMS} CAT I & II ¹ 150 V _{RMS} CAT III ²
Readout		X

¹ 500 V peak, duty factor < 35%, pulse width < 100 ms

² 250 V peak, duty factor < 35%, pulse width < 100 ms

Physical characteristics

Cable length	2 m (6.56 ft)
Net weight (including accessories)	< 320 g (0.7 lb)

EMC, environment, and safety

Temperature range³

P6101B	-15 °C to +65 °C (5 °F to 149 °F) Operating
	-62 °C to +85 °C (-80 °F to 185 °F) Nonoperating
P3010	-15 °C to +55 °C (5 °F to 131 °F) Operating
	-62 °C to +85 °C (-80 °F to 185 °F) Nonoperating

Humidity⁴

P6101B	95% to 97% Relative Humidity, 30 °C to 60 °C (86 °F to 140 °F)
P3010	95% to 97% Relative Humidity, 30 °C to 55 °C (86 °F to 131 °F)

Altitude	<3000 m (9842 ft), Operating
	<15, 240 m (50, 000 ft), Nonoperating

Ordering information

Models

P6101B	1X, 15 MHz Passive Voltage Probe.
P3010	10X, 100 MHz Passive Voltage Probe.

Standard accessories

Accessories

016-0633-xx	Marker band set, 2 each of 5 colors
013-0107-xx	Retractable hook tip
196-3120-xx	6 in. ground lead
013-0277-xx	BNC-to-probe tip adapter
003-1433-xx	Adjustment tool
070-7819-xx	Manual (P6101B)
071-0466-xx	Manual (P3010)
-	Storage pouch

³ Tektronix Standard 062-2847-00, class 3. Refer to MIL-E-16400F, paragraphs 4.5.9 through 4.5.9.5.1, class 4.

⁴ Tektronix Standard 062-2847-00, class 3. Refer to MIL-E-16400F, paragraphs 4.5.9 through 4.5.9.5.1, class 4.

Recommended oscilloscopes

P6101B	All oscilloscopes
P3010	TDS3000

Warranty

One-year warranty covering all parts and labor.

Recommended accessories

Please see 5 mm Probe Accessories (miniature) probe system at <http://www.tek.com/datasheet/probe-accessories-2>



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

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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.tek.com.

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