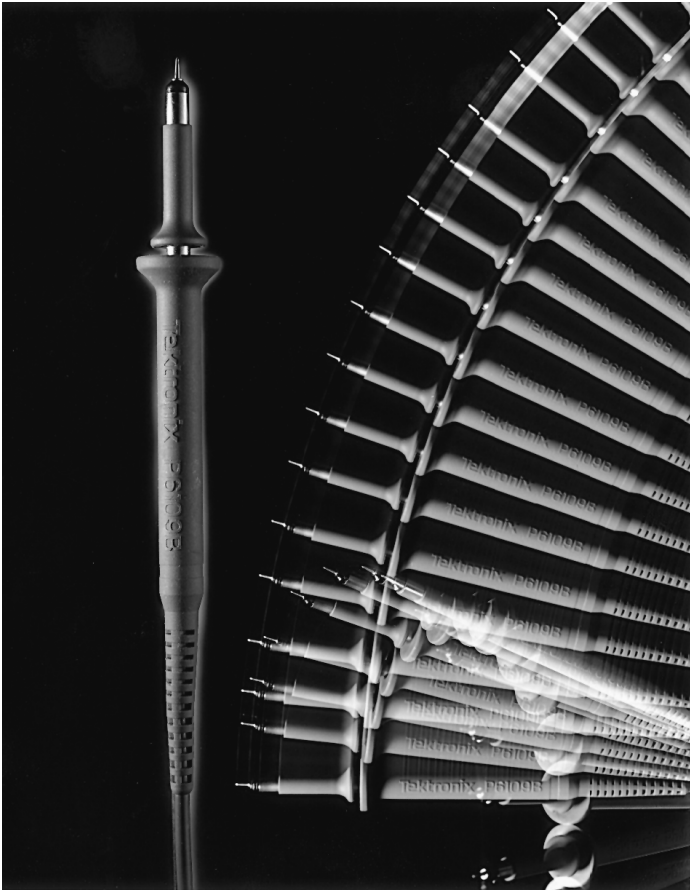


# Passive Voltage Probes

## P3010 P6101B Datasheet



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

### Key features

- 1 M $\Omega$  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.

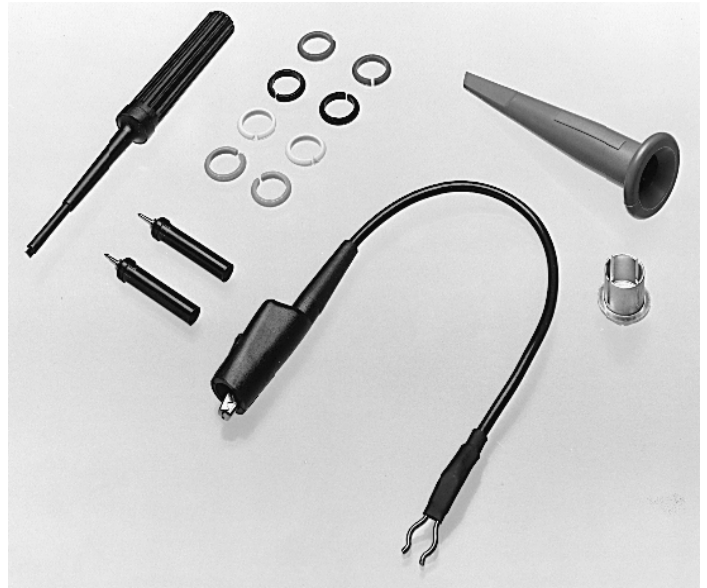
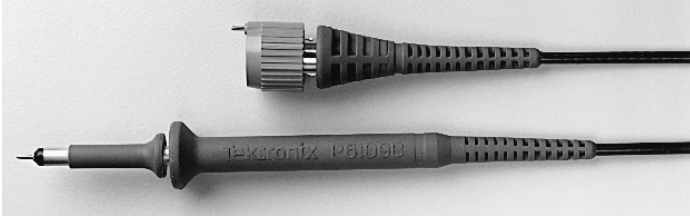
These probes are encased in a resilient, molded rubber body that is virtually indestructible. They are lighter in weight, more comfortable to hold, and more reliable than modular probe styles. The probes' replaceable tips are designed to withstand up to 20 pounds of force. Patented integral strain relief 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.

## Datasheet

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 M $\Omega$	10 M $\Omega$
Input capacitance (Typical)	100 pF	13 pF
Input RMS	300 V <sub>RMS</sub> CAT II	150 V <sub>RMS</sub> CAT I & II <sup>1</sup> 300 V <sub>RMS</sub> CAT III <sup>2</sup>
Readout		X

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

<sup>2</sup> 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 range<sup>3</sup>**

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

**Humidity<sup>4</sup>**

<b>P6101B</b>	95% to 97% Relative Humidity, 30 °C to 60 °C (86 °F to 140 °F)
<b>P3010</b>	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**

<b>P6101B</b>	1X, 15 MHz Passive Voltage Probe.
<b>P3010</b>	10X, 100 MHz Passive Voltage Probe.

**Standard accessories****Accessories**

<b>016-0633-xx</b>	Marker band set, 2 each of 5 colors
<b>013-0107-xx</b>	Retractable hook tip
<b>196-3120-xx</b>	6 in. ground lead
<b>131-4997-xx</b>	Replacement probe tips, pkg of 2
<b>013-0277-xx</b>	BNC-to-probe tip adapter
<b>003-1433-xx</b>	Adjustment tool
<b>070-7819-xx</b>	Manual (P6101B)
<b>071-0466-xx</b>	Manual (P3010)
-	Storage pouch

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

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

## Datasheet

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

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