

# 500 MHz Passive Probes

## P6139B • P5050B Data Sheet



### Applications

- Low Power Devices
- Service
- Manufacturing Engineering
- Test Research and Development

The P6139B and P5050B probes are high bandwidth, high impedance 10X passive voltage probes with 10 M $\Omega$  input resistance. These probes feature a small probe head and sharp tip that makes it easier to probe dense circuitry. The P6139B and P5050B share similar electrical specifications but support Tektronix oscilloscopes with different compensation ranges. Reference the *Oscilloscope Probe & Accessory Selector Tool* located at [www.tektronix.com/probes](http://www.tektronix.com/probes) to ensure the correct probe is selected for your oscilloscope.

The P6139B and P5050B provide:

- Outstanding Electrical Performance
- Ruggedness
- Ease of Use

### Features & Benefits

#### Key Performance Specifications

- 500 MHz Probe Bandwidth
- Large Input Impedance at the Probe Tip (10 M $\Omega$ , 8pF)
- 10X Attenuation Factor
- 300 V CAT II Input Voltage

#### Ease-of-Use Features

- Compact Probe Head for Probing Small Geometry Circuit Elements
- Small Probe Body for Enhanced Visibility to the Device-Under-Test
- Replaceable Probe Tip Cartridges
- Large Accessory Set for Versatile Connectivity

#### Connectivity

- P6139B and P5050B feature the TekProbe Interface for Direct BNC Connection for Oscilloscopes with 1 M $\Omega$  Inputs
- Integrated Oscilloscope and Probe Measurement Systems Feature Intelligent Communication that Automatically Scales and Adjusts Units on the Oscilloscope Display

## Characteristics

**Attenuation** – 10X

**Dynamic Range** – 300 V CAT II

**Bandwidth** – 500 MHz

**Input Impedance at the Probe Tip** – 10 M $\Omega$  , 8 pF

**Compensation Range** –

P6139B: 8 pF to 18 pF

P5050B: 16 pF to 22 pF

**Cable Length** – 1.3 m

## Ordering Information

### P6139B

500 MHz General Purpose Passive Probe with TekProbe I Interface

### P5050B

500 MHz General Purpose Passive Probe with TekProbe I Interface

### Standard Accessories

| Description                        | Quantity Included | Reorder Part Number |
|------------------------------------|-------------------|---------------------|
| Rigid tip 3.8mm (P6139B)           | 1                 | 206-0635-00         |
| Rigid tip 3.8mm (P5050B)           | 1                 | 206-0636-00         |
| Long Ground Spring                 | 2                 | 016-2028-00         |
| Alligator Ground (6")              | 1                 | 196-3521-00         |
| Hook Tip (Regular)                 | 1                 | 013-0362-00         |
| IC Cap (universal) 3.8mm (was 3.5) | 1                 | 013-0366-00         |

### Optional Accessories

| Description                                   | Quantity per Package | Order Part Number |
|-----------------------------------------------|----------------------|-------------------|
| Short Ground Spring                           | 2                    | 016-2034-00       |
| Alligator Ground (12")                        | 1                    | 196-3512-00       |
| 6" Clip-on Ground Lead                        | 1                    | 196-3198-00       |
| Hook Tip (Micro)                              | 1                    | 013-0363-00       |
| Microcircuit Test Tip                         | 1                    | 206-0569-00       |
| Wire (32AWG Spool)                            | 1                    | 020-3045-00       |
| BNC to Probe Tip Adapter                      | 1                    | 013-0367-00       |
| PCB to Probe Tip Adapter                      | 1                    | 016-2016-00       |
| Compact Probe Tip<br>Chassis Mount Test Jack. | 1                    | 131-4210-00       |
| Color Bands                                   | 1                    | 016-0633-00       |



Product(s) are manufactured in ISO registered facilities.



Contact Tektronix:

|                                                       |                    |
|-------------------------------------------------------|--------------------|
| ASEAN / Australasia (65)                              | 6356 3900          |
| Austria                                               | 00800 2255 4835*   |
| Balkans, Israel, South Africa and other ISE Countries | +41 52 675 3777    |
| Belgium                                               | 00800 2255 4835*   |
| Brazil                                                | +55 (11) 3759 7600 |
| Canada                                                | 1 800 833 9200     |
| Central East Europe, Ukraine, and the Baltics         | +41 52 675 3777    |
| Central Europe & Greece                               | +41 52 675 3777    |
| Denmark                                               | +45 80 88 1401     |
| Finland                                               | +41 52 675 3777    |
| France                                                | 00800 2255 4835*   |
| Germany                                               | 00800 2255 4835*   |
| Hong Kong                                             | 400 820 5835       |
| India                                                 | 000 800 650 1835   |
| Italy                                                 | 00800 2255 4835*   |
| Japan                                                 | 81 (3) 6714 3010   |
| Luxembourg                                            | +41 52 675 3777    |
| Mexico, Central/South America & Caribbean (52)        | 56 04 50 90        |
| Middle East, Asia, and North Africa                   | +41 52 675 3777    |
| The Netherlands                                       | 00800 2255 4835*   |
| Norway                                                | 800 16098          |
| People's Republic of China                            | 400 820 5835       |
| Poland                                                | +41 52 675 3777    |
| Portugal                                              | 80 08 12370        |
| Republic of Korea                                     | 001 800 8255 2835  |
| Russia & CIS +7 (495)                                 | 7484900            |
| South Africa                                          | +41 52 675 3777    |
| Spain                                                 | 00800 2255 4835*   |
| Sweden                                                | 00800 2255 4835*   |
| Switzerland                                           | 00800 2255 4835*   |
| Taiwan                                                | 886 (2) 2722 9622  |
| United Kingdom & Ireland                              | 00800 2255 4835*   |
| USA                                                   | 1 800 833 9200     |

\* European toll-free number. If not accessible, call: +41 52 675 3777

Updated 25 May 2010

**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)



Copyright © Tektronix, Inc. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks, or registered trademarks of their respective companies.

29 Nov 2010 51W-26150-0

