



ABN 43 064 478 842

➤ 231 Osborne Avenue Clayton South, VIC 3169  
 PO Box 1548, Clayton South, VIC 3169  
 t 03 9265 7400 f 03 9558 0875  
 freecall 1800 680 680  
[www.tmgtestequipment.com.au](http://www.tmgtestequipment.com.au)

## Test & Measurement

- sales
- rentals
- calibration
- repair
- disposal

## Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

If you click on the “Click-to-Call” logo below, you can call us for FREE!

TMG Corporate Website

TMG Products Website



Click-to-Call  
TMG Now



Product Lifecycle Management System

**Disclaimer:**

All trademarks appearing within this PDF are trademarks of their respective owners.



# High Voltage Differential Probes

► P5200 • P5205 • P5210



## ► Features & Benefits

- Bandwidths Up to 100 MHz
- Up to 5,600 V Differential (DC + pk AC)
- Up to 2,200 V Common (RMS)
- Overrange Indicator
- Safety Certified
- Switchable Attenuation
- Switchable Bandwidth Limit

## ► Applications

- Floating Measurements
- Switching Power Supply Design
- Motor Drive Design
- Electronic Ballast Design
- CRT Display Design
- Power Converter Design and Service
- Power Device Evaluation

► P5205.

The P5200 can be used with any oscilloscope and enables users to **safely** make measurements of floating circuits with their oscilloscope grounded. The P5200 Active Differential Probe converts floating signals to low-voltage ground referenced signals that can be displayed safely and easily on any ground referenced oscilloscope.

**WARNING:** For safe operation, do not use the P5200 High Voltage Differential Probe with oscilloscopes that have floating inputs (isolated inputs), such as the Tektronix TPS2000 Series oscilloscopes and THS700 Series oscilloscopes. The P5200 High Voltage Differential Probe requires an oscilloscope or other measurement instrument with grounded inputs.

The P5210 is a Differential Probe that is capable of measuring floating voltages up to 5,600 V (DC +pk AC) **safely** and has a bandwidth up to 50 MHz. It is supplied with two sizes of hook tips and has an



► P5200.



► P5210.

## High Voltage Differential Probes

► P5200 • P5205 • P5210

overrange visual and audible indicator which warns the user when they are exceeding the linear range of the probe. It can be used with Tektronix TEKPROBE™ interface oscilloscopes directly or with any

oscilloscope with the use of the 1103 TEKPROBE® Power Supply. The P5205 is a 100 MHz Active Differential Probe capable of measuring fast rise times of signals in floating circuits. This 1,300 V

differential probe can measure **safely** voltages in IGBT circuits such as motor drives or power converters. It is specifically designed to operate on Tektronix oscilloscopes with TEKPROBE interface.

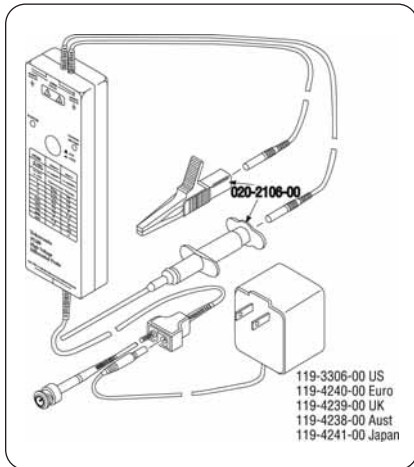
### ► Characteristics

Specifications	P5200	P5205	P5210
Bandwidth (-3 dB)	25 MHz	100 MHz	50 MHz
Differential Mode Voltage (RMS or DC) (between positive and negative input leads)	1000 V CAT II	1000 V CAT II	4400 V
Differential Mode Voltage (Peak) <sup>1</sup> (between positive and negative input leads)	1300 V	1300 V	5600 V
Common Mode Voltage (RMS or DC + Pk AC) (between positive lead and ground or negative lead and ground)	1000 V CAT II 600 V CAT III	1000 V CAT II 600 V CAT III	2200 V CAT II 1000 V CAT III
Attenuation (switchable)	50X/500X	50X/500X	100X/1000X
CMRR at 60 Hz/1 MHz (typical)	80 dB/50 dB	80 dB/50 dB	80 dB/50 dB
Input R (each input)	4 MΩ	4 MΩ	8 MΩ
Input C (each input)	7 pF	7 pF	7 pF
Power Source	AC wall adapter	TEKPROBE Power Supply	TEKPROBE Power Supply
Safety (all)	UL3111-1/CSA1010.1/CSA1010.2.031/IEC61010-2-031/EN61010-2-031		
Compatible Products	All <sup>3</sup>	TDS400/500/600/700/ TDS3000B/5000B/6000B <sup>2</sup> /7000B <sup>2</sup> / CSA7000B <sup>2</sup> and 11000 Series	TDS400/500/600/700/ TDS3000B/5000B/6000B <sup>2</sup> /7000B <sup>2</sup> / CSA7000B <sup>2</sup> and 11000 Series

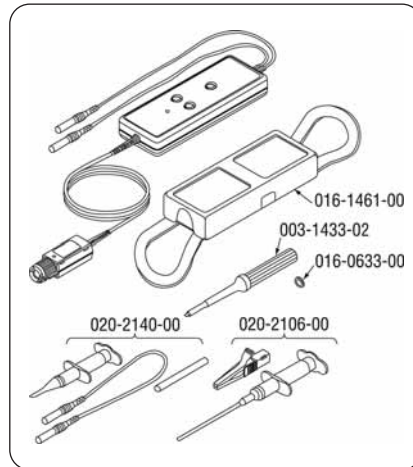
<sup>1</sup> The RMS value of the waveform shall not exceed the Common Mode Voltage (RMS) for either lead.

<sup>2</sup> TDS7154B, TDS7254B, TDS7404B, TDS6404, TDS6604, CSA7154, and CSA7404B require a TCA-1MEG Buffer Amplifier.

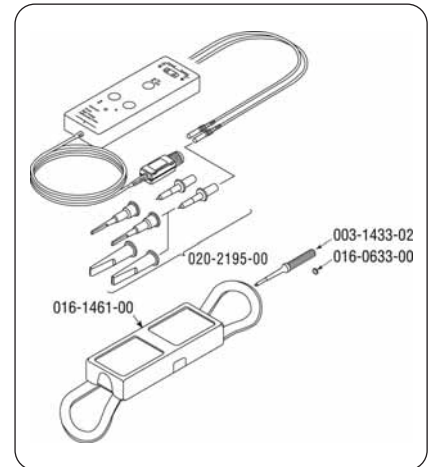
<sup>3</sup> **WARNING:** For safe operation, do not use the P5200 High Voltage Differential Probe with oscilloscopes that have floating inputs (isolated inputs), such as the Tektronix TPS2000 series oscilloscopes and THS700 series oscilloscopes. The P5200 High Voltage Differential Probe requires an oscilloscope or other measurement instrument with grounded inputs.



► P5200.



► P5205.



► P5210.

## ► Ordering Information

### P5200

Active Differential Probe.

**Includes:** 2 crocodile clips; 2 plunger clips; 9 V DC power supply; manual (070-9018-01). Please specify power cord when ordering.

#### Power Plug Options (P5200 Only)

- Opt. A0 – US Plug, 115 V, 60 Hz.
- Opt. A1 – Euro Plug, 220 V, 50 Hz.
- Opt. A2 – UK Plug, 240 V, 50 Hz.
- Opt. A3 – Australia Plug, 240 V, 50 Hz.
- Opt. A5 – Switzerland Plug, 220 V, 50 Hz.
- Opt. A6 – Japan Plug, 100 V, 110/120 Volt, 60 Hz.

### P5205

Active Differential Probe.

**Includes:** 2 each plunger clamps; 2 each crocodile clips; 2 each extender leads; 2 each lead adapters; 2 each plunger hook clips; soft case; manual (070-9472-01).

### P5210

Active Differential Probe.

**Includes:** 2 each large hook clips; 2 each small hook clips; 2 each probe heads; soft case; manual (070-9841-01).

#### Service

- 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.
- Please see the Customer Support page.

#### Accessory Pack (P5200, P5205)

Order 020-2106-00.

**Includes:** 2 each plunger clamps; 2 each crocodile clips.

#### Accessory pack (P5200, P5205)

Order 020-2140-00.

**Includes:** 2 each extender leads; 2 each lead adapters; 2 each plunger hook clips.

#### Accessory Pack (P5210)

Order 020-2195-00.

**Includes:** 2 each large hook clips; 2 each small hook clips; 2 each probe heads.

#### Soft case

Order 016-1461-00.

#### Power Supply (P5205, P5210 only)

TEKPROBE® Power Supply. Order 1103.

## High Voltage Differential Probes

► P5200 • P5205 • P5210

### Contact Tektronix:

ASEAN / Australasia / Pakistan (65) 6356 3900  
Austria +41 52 675 3777  
Balkan, Israel, South Africa and other ISE Countries +41 52 675 3777  
Belgium 07 81 60166  
Brazil & South America 55 (11) 3741-8360  
Canada 1 (800) 661-5625  
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 & North Africa +33 (0) 1 69 86 81 81  
Germany +49 (221) 94 77 400  
Hong Kong (852) 2585-6688  
India (91) 80-22275577  
Italy +39 (02) 25086 1  
Japan 81 (3) 6714-3010  
Luxembourg +44 (0) 1344 392400  
Mexico, Central America & Caribbean 52 (55) 56666-333  
Middle East, Asia and North Africa +41 52 675 3777  
The Netherlands 090 02 021797  
Norway 800 16098  
People's Republic of China 86 (10) 6235 1230  
Poland +41 52 675 3777  
Portugal 80 08 12370  
Republic of Korea 82 (2) 528-5299  
Russia & CIS 7 095 775 1064  
South Africa +27 11 254 8360  
Spain (+34) 901 988 054  
Sweden 020 08 80371  
Switzerland +41 52 675 3777  
Taiwan 886 (2) 2722-9622  
United Kingdom & Eire +44 (0) 1344 392400  
USA 1 (800) 426-2200  
For other areas contact Tektronix, Inc. at: 1 (503) 627-7111  
Updated 15 June 2005

Our most up-to-date product information is available at:  
[www.tektronix.com](http://www.tektronix.com)

Product(s) not available in Europe. Product(s)  
are manufactured in ISO registered facilities.



Copyright © 2005, 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.

8/05 HB/WOW

51W-11195-2

**Tektronix**  
Enabling Innovation

