

High-voltage Differential Probes

P5200 • P5205 • P5210 Data Sheet



P5205

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



P5200

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.

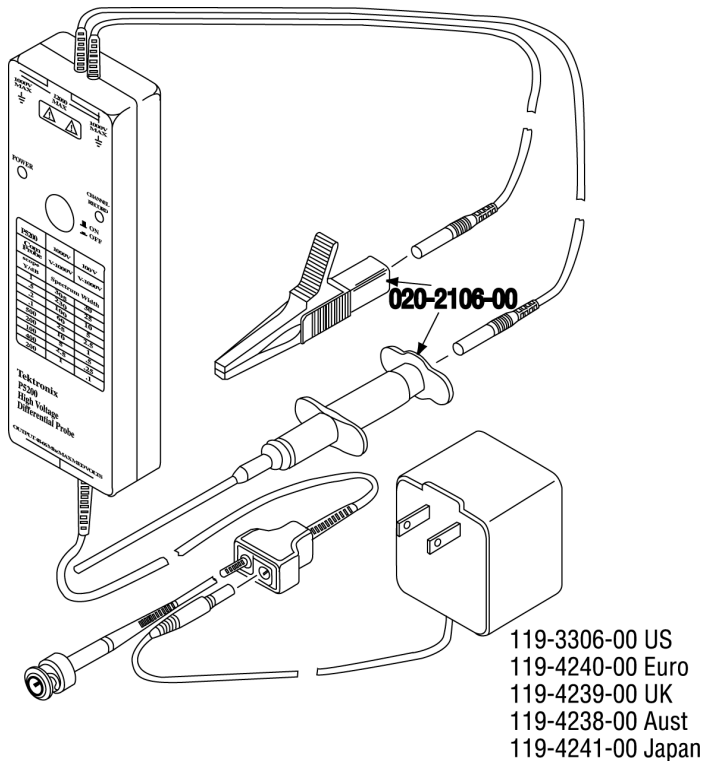
WARNING: For safe operation, do not use the P5200 High-voltage Differential Probe with oscilloscopes that have floating inputs (isolated inputs), such as the Tektronix TPS2000 Series oscilloscopes and THS700 Series oscilloscopes. The P5200 High-voltage Differential Probe requires an oscilloscope or other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



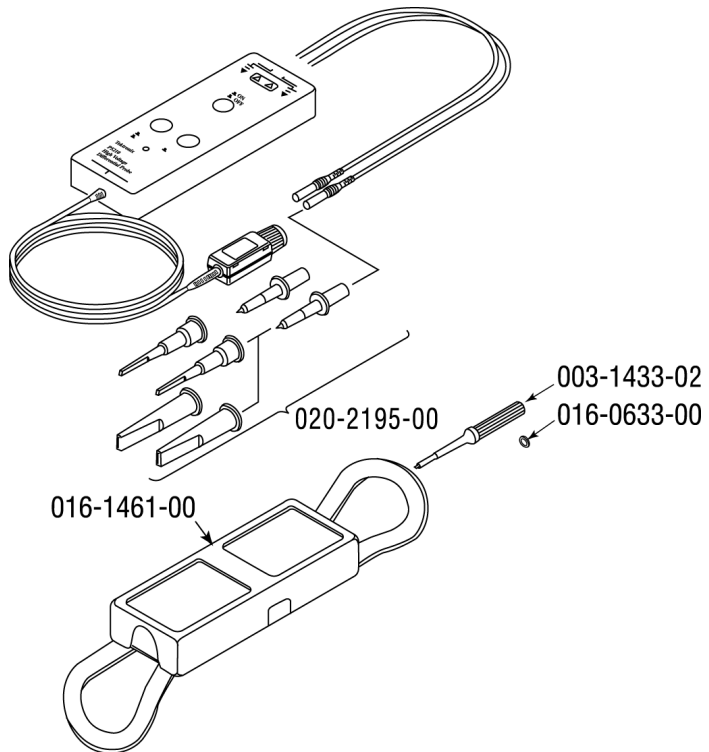
P5210

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 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.

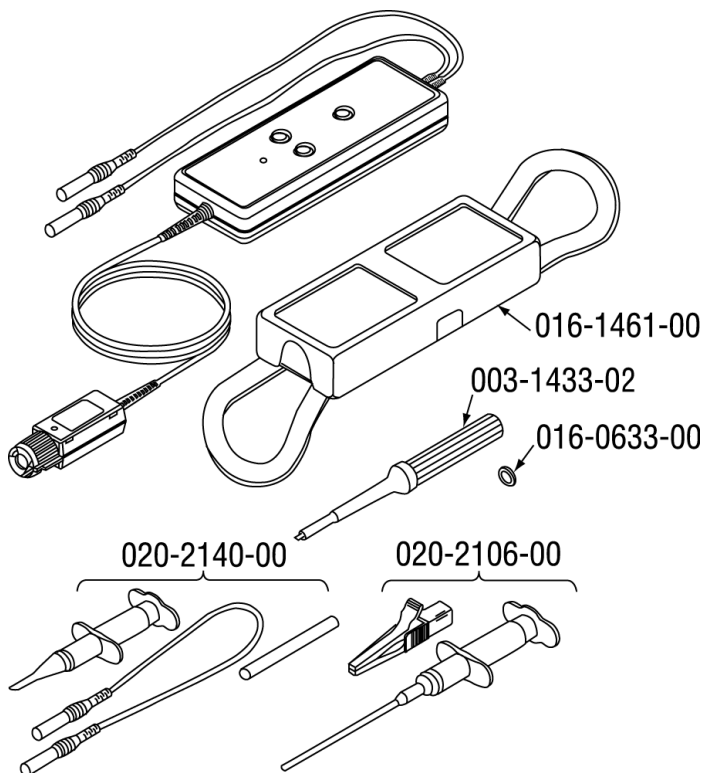
The P5205 is a 100 MHz Active Differential Probe capable of measuring fast rise times of signals in floating circuits. This 1,300 V differential probe can **safely** measure voltages in IGBT circuits such as motor drives or power converters. It is specifically designed to operate on Tektronix oscilloscopes with TEKPROBE® interface.



P5200



P5210



P5205

Characteristics

Characteristic	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)*1 (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*3	TDS400/500/600/700/ TDS3000B/5000B/6000B*2/7000B*2/ CSA7000B*2 and 11000 Series	TDS400/500/600/700/ TDS3000B/5000B/6000B*2/7000B*2/ CSA7000B*2 and 11000 Series

*1 The RMS value of the waveform shall not exceed the Common Mode Voltage (RMS) for either lead.

*2 TDS7154B, TDS7254B, TDS7404B, TDS6404, TDS6604, CSA7154, and CSA7404B require a TCA-1MEG Buffer Amplifier.

*3 **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.

Ordering Information

P5200

Active Differential Probe.

Includes: 2 crocodile clips; 2 plunger clips; 9 VDC 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 – Australian Plug, 240 V, 50 Hz.

Opt. A5 – Switzerland Plug, 220 V, 50 Hz.

Opt. A6 – Japanese Plug, 100 V, 110/120 Volt, 60 Hz.

See Power Sources page for additional description.

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-xx.

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

Accessory pack (P5200, P5205)

Order 020-2140-xx.

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

Accessory Pack (P5210)

Order 020-2195-xx.

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

Soft case

Order 016-1461-xx.

Power Supply (P5205, P5210 only)

TEKPROBE® Power Supply. Order 1103.



Product(s) are manufactured in ISO registered facilities.

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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



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