

被動式高壓探棒

P5100A • TPP0850 • P5120 • P5122 • P6015A 產品規格表



P5120

特色與優點

P5100A

- 直流至 500 MHz
- 2500 V_{Peak} , 1000 V CAT II
- 太克示波器可直接判斷 100 倍的衰減倍率
- 符合 UL3111-1、EN61010-1、IEC61010-2-031、CSA1010.1、CSA1010.2.031 等安規
- 補償範圍：7 至 30 pF

TPP0850

- 直流至 800 MHz
- 2500 V_{Peak} , 1000 V CAT II
- 太克示波器可直接判斷 50 倍的衰減倍率
- 專門設計供 MSO/DPO5000 和 MSO/DPO4000B 系列示波器使用

P5120

- 用於 TPS2000 系列
- 直流至 200 MHz
- 1000 V_{RMS} CAT II
- 浮動電壓高達 600 V_{RMS} CAT II 或 300 V_{RMS} CAT III
- 漣波量測首選探棒
- 衰減 20 倍
- 補償範圍：15 至 25 pF
- 符合 UL61010B-2-031、EN61010-2-031、IEC61010-2-031、CSA61010.2.031 等安規

P5122

- 僅專用於 TPS2000 系列
- 直流至 200 MHz
- 直流耦合時¹ 為 1000 V_{RMS} CAT II
- 浮動電壓高達 600 V_{RMS} CAT III
- 衰減 100 倍
- 符合 IEC61010-031 安規

P6015A

- 高壓 – 20 kV 直流 / 40 kV 峰值 (100ms 脈波寬度)
- 高頻寬 – 直流至 75 MHz
- 矽樹脂絕緣介質
- 太克示波器可直接判斷 1000 倍的衰減倍率 (選購)
- 寬廣的補償範圍：7 至 49 pF
- 耐用的多用途接地線和鱷魚夾

產品規格表

應用

- 電源供應器設計
- 馬達驅動器設計
- 電子安定器
- 功率半導體
- 交換模式控制
- 不斷電系統
- 電源轉換器

*1 P5122 探棒不能用於 300 V 以上直流偏移訊號的交流耦合量測；P5120 探棒建議用於量測高壓直流電源供應器的漣波。

P5100A 高壓探棒

P5100A 是一支專為較高頻率應用設計的低輸入電容高壓探棒 (2.5 kV)，可以 7-30 pF 的額定輸入電容對插入元件及示波器進行補償，具備多種旋轉式配件可方便連接待測裝置。

TPP0850 高壓探棒

TPP0850 為業界目前量測高壓 (高達 2500 V_{p-p}) 應用中頻寬最高的探棒 (800 MHz)，增加切換速度以減少功耗，是目前功率半導體與交換式電源供應器的設計需求。量測高壓的快速上升時間訊號一直是業界頭痛的問題，TPP0850 的推出是解決這些新興電源應用的良方。

P5120 和 P5122 IsolatedChannel™ 應用

在進行量測時，重要的是能夠隔離接地及通道之間共同電壓所產生的雜訊。P5120 或 P5122 探棒搭配 TPS2000 系列數位儲存示波器，可在進行量測時能同時完全隔離接地及通道之間的雜訊。P5120 探棒建議用於量測高壓直流電源供應器的漣波。P5122 探棒不能用於 300 V 以上直流偏移訊號的交流耦合量測。



P6015A

P6015A 高壓探棒

P6015A 是業界標準耐用的高效能探棒，其電壓量測值超過 2.5 kV。您可以量測高達 20 kV_{RMS} 直流電壓及高達 40 kV 脈衝 (峰值，持續時間 100 ms)，而 75 MHz 頻寬使您能夠擷取快速、高壓訊號。

P6015A 使用對環境無害的矽樹脂絕緣介質，永不需補充。其他功能如下：具 7-49 pF 補償範圍、適用於鄰近放大器輸入的小型補償盒，以及供太克數位示波器使用的讀數選項。有了讀數選項，顯示的電壓振幅值便是實際的訊號值，而不需要手動設定或換算量測值。

附註：使用其他非太克數位示波器讀數版本可能會導致錯誤的讀數顯示。

特性

P5100A/TPP0850/P5120/P5122/P6015A

| 探棒 | 實際長度 | 衰減 | 頻寬 | 上升時間 (典型) | 載入 阻抗 | 最大輸入電壓 DC 或 RMS | 最大浮動電壓 | 補償範圍 (單位 pF) | 讀數 |
|-------------------|--------|--------|---------|--------------|--------------------|---|--|-----------------|----|
| P5100A | 2 公尺 | 100 倍 | 500 MHz | 1.75 ns | 40 MΩ / 1.5 pF | 2.5 kV _{Peak} 1000 V CAT II | 不提供 | 7 至 30 | 是 |
| TPP0850 | 1.3 公尺 | 50 倍 | 800 MHz | < 700 ps | 40 MΩ / 1.5 pF | 2.5 kV _{Peak} 1000 V CAT II | 不提供 | 不提供 | 是 |
| P5120 | 3 公尺 | 20 倍 | 200 MHz | 2.2 ns | 5 MΩ / 11.2 pF | 1000 V _{RMS} CAT II | 600 V _{RMS} CAT II、 300 V _{RMS} CAT III | 15 至 25 | 否 |
| P5122 | 1.2 公尺 | 100 倍 | 200 MHz | 2.2 ns | 100 MΩ / 4.0 pF | 1000 V _{RMS} CAT II | 600 V _{RMS} CAT III | 10 至 22 | 否 |
| P6015A | 3 公尺 | 1000 倍 | 75 MHz | 4.0 ns | 100 MΩ / 3 pF | 20 kV | 不提供 | 7 至 49 | 否 |
| P6015A (選購) 1R | 3 公尺 | 1000 倍 | 75 MHz | 4.0 ns | 100 MΩ / 3 pF | 20 kV | 不提供 | 7 至 49 | 是 |

訂購資訊

P5100A/TPP0850

100 倍高壓探棒 (2 公尺)

包括：纜線標記組、鱷魚夾、調整工具、探鉤探棒頭 (小)、探鉤探棒頭 (大)、18 英寸接地線、6 英寸接地線、使用手冊 (070-8151-04)

建議選購的配件

| 配件 | 說明 |
|-------------|------------------|
| 013-0291-xx | 探棒頭至 BNC 轉接器 |
| 206-0060-xx | 直徑 0.080 英寸彈簧探棒頭 |

P5120

20 倍高壓探棒 (適用於 TPS2000 系列)

包括：大型可伸縮探鉤、小型可伸縮探鉤、6 英寸普通引線、18 英寸普通引線、大鱷魚夾、彩色纜線標記、調整工具、使用手冊 (071-1463-xx)

P5122

100 倍高壓探棒 (適用於 TPS2000 系列)

包括：大型可伸縮探鉤、引線 (配備探鉤)、引線 (配備鱷魚夾)、調整工具、使用手冊

P5120、P5122 建議選購的配件

請參見 P5120、P5122 探棒配件

P6015A

1000 倍高壓探棒 (3 公尺)

包括：探鉤 (206-0463-xx)、香蕉型插頭 (134-0016-xx)、可插入接地線的鱷魚夾 (344-0461-xx)、接地線 (196-3363-xx)、提箱 (016-1147-xx)、使用手冊 (070-8223-xx)

選項 (僅 P6015A)

| 選項 | 說明 |
|-------|---------|
| 選項 1R | 3 公尺長讀數 |

服務 (僅 P6015A)

| 選項 | 說明 |
|-------|----------------------|
| 選項 C3 | 3 年校驗服務 |
| 選項 C5 | 5 年校驗服務 |
| 選項 D1 | 校驗資料報告 |
| 選項 D3 | 3 年校驗資料報告 (需先購選項 C3) |
| 選項 D5 | 5 年校驗資料報告 (需先購選項 C5) |
| 選項 R3 | 3 年維修服務 |
| 選項 R5 | 5 年維修服務 |



所有產品均由 ISO 認證工廠製造。

Passive High-voltage Probes

P5100A • TPP0850 • P5120 • P5122 • P6015A Data Sheet



P5120

Features & Benefits

P5100A

- DC to 500 MHz
- 2500 V_{Peak}, 1000 V CAT II
- 100X with Readout Coding
- UL3111-1, EN61010-1, IEC61010-2-031, CSA1010.1, CSA1010.2.031
- 7 to 30 pF Compensation Range

TPP0850

- DC to 800 MHz
- 2500 V_{Peak}, 1000 V CAT II
- 50X with Readout Coding
- Designed for use with the MSO/DPO5000 and MSO/DPO4000B Series Oscilloscopes

P5120

- For TPS2000 Series
- DC to 200 MHz
- 1000 V_{RMS} CAT II
- Floatable up to 600 V_{RMS} CAT II or 300 V_{RMS} CAT III
- Preferred Probe for Ripple Measurements
- 20X
- 15 to 25 pF Compensation Range
- UL61010B-2-031, EN61010-2-031, IEC61010-2-031, CSA61010.2.031

P5122

- For TPS2000 Series Only
- DC to 200 MHz
- 1000 V_{RMS} CAT II when DC-coupled*1
- Floatable up to 600 V_{RMS} CAT II
- 100X
- IEC61010-031

P6015A

- High Voltage – 20 kV DC / 40 kV Peak (100 ms Pulse Width)
- High Bandwidth – DC to 75 MHz
- Silicone Dielectric
- Optional 1000X Readout Coding
- Wide Compensation Range (7 to 49 pF)
- Heavy-duty Versatile Ground Lead and Alligator Clip

Applications

- Power Supply Design
- Design Motor Drive
- Electronic Ballast
- Power Semiconductors
- Switch Mode Control
- UPS Systems
- Power Converters

*1 The P5122 probe should not be used for AC-coupled measurements on signals with greater than 300 V DC offset. The P5120 is the recommended probe for measuring ripple on high-voltage DC supplies.

P5100A High-voltage Probe

The P5100A is a low input capacitance high-voltage probe (2.5 kV) designed for higher-frequency applications. The probe can be compensated to match plug-ins and oscilloscopes with nominal input capacitances of 7-30 pF. A variety of screw-on accessories provide easy connection to the device-under-test.

TPP0850 High-voltage Probe

The TPP0850 offers the industry's highest bandwidth probe (800 MHz) for high-voltage signals (up to 2500 V_{p-p}). This is ideal for testing power semiconductors and switch-mode power supplies, which continue to increase in switching speed to minimize power loss, creating a need for faster rise time, higher bandwidth, and higher voltage probes. The TPP0850 meets this need and can be used with switching transistor circuits operating at 1200 V_{RMS}, above the voltage operating range of standard general-purpose probes. It will also be able to accommodate emerging power applications that will require even faster rise time capabilities.

P5120 and P5122 IsolatedChannel™

Applications

In many applications, it is important to be able to isolate the measurement from earth ground and also to isolate the common voltage between channels. The P5120 or P5122, coupled with the TPS2000 Series digital



P6015A

storage oscilloscopes, deliver both the isolation for the measurement from earth ground and full isolation between the channels. The P5120 is the recommended probe for measuring ripple on high-voltage DC supplies. The P5122 probe should not be used for AC-coupled measurements on signals with greater than 300 V DC offset.

P6015A High-voltage Probe

For heavy-duty high-performance measurements of voltages over 2.5 kV, the P6015A is the industry standard. You can measure DC voltages up to 20 kV_{RMS} and pulses up to 40 kV (peak, 100 ms duration). The 75 MHz bandwidth enables you to capture fast, high-voltage signals.

The P6015A uses an environmentally safe silicone compound for a dielectric and never needs refilling. Other features include: A 7-49 pF compensation range, small compensation box that fits on adjacent amplifier inputs, and a readout option for use with most Tektronix digital scopes. With the readout option, displayed voltage amplitude values will be the actual signal value rather than understated by a factor of 1,000.

Note: Using the readout version with other than Tektronix digital scopes may result in an erroneous readout display.

Characteristics

P5100A/TPP0850/P5120/P5122/P6015A

| Probe | Nominal Length | Attenuation | Bandwidth | Rise Time (Typical) | Loading | Max. Input V DC or RMS | Max. Float V | Comp. Range in pF | Readout |
|-------------------|----------------|-------------|-----------|---------------------|-------------------------|---|--|-------------------|---------|
| P5100A | 2 m | 100X | 500 MHz | 1.75 ns | 40 M Ω / 1.5 pF | 2.5 kV _{Peak} 1000 V CAT II | N/A | 7 to 30 | Yes |
| TPP0850 | 1.3 m | 50X | 800 MHz | <700 ps | 40 M Ω / 1.5 pF | 2.5 kV _{Peak} 1000 V CAT II | N/A | N/A | Yes |
| P5120 | 3 m | 20X | 200 MHz | 2.2 ns | 5 M Ω / 11.2 pF | 1000 V _{RMS} CAT II | 600 V _{RMS} CAT II, 300 V _{RMS} CAT III | 15 to 25 | No |
| P5122 | 1.2 m | 100X | 200 MHz | 2.2 ns | 100 M Ω / 4.0 pF | 1000 V _{RMS} CAT II | 600 V _{RMS} CAT III | 10 to 22 | No |
| P6015A | 3 m | 1000X | 75 MHz | 4.0 ns | 100 M Ω / 3 pF | 20 kV | N/A | 7 to 49 | No |
| P6015A Opt. 1R | 3 m | 1000X | 75 MHz | 4.0 ns | 100 M Ω / 3 pF | 20 kV | N/A | 7 to 49 | Yes |

Ordering Information

P5100A/TPP0850

100X, 2-meter High-voltage Probe.

Includes: Cable markers set, crocodile clip, adjustment tool, hooktip (small), hooktip (large), 18 in. ground lead, 6 in. ground lead, instruction manual (070-8151-04).

Recommended Accessories

| Accessory | Description |
|-------------|-------------------------------|
| 013-0291-xx | Probe Tip to BNC Adapter |
| 206-0060-xx | 0.080 in. diameter Spring Tip |

P5120

20X, High-voltage Probe for TPS2000 Series.

Includes: Large retractable hook tip, small retractable hook tip, 6 in. common lead, 18 in. common lead, large crocodile clip, colored cable markers, adjustment tool, instruction manual (071-1463-xx).

P5122

100X, High-voltage Probe for TPS2000 Series.

Includes: Large retractable hook tip, lead with hook tip, lead with crocodile clip, adjustment tool, instruction manual.

Recommended Accessories for P5120, P5122

See P5120, P5122 Probe Accessories.

P6015A

1000X, 3-meter High-voltage Probe.

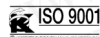
Includes: Hook probe tip (206-0463-xx); banana plug tip (134-0016-xx); crocodile clip – plugs onto ground lead (344-0461-xx); ground lead (196-3363-xx); carrying case (016-1147-xx); instruction manual (070-8223-xx).

Options (P6015A only)

| Option | Description |
|---------|-----------------------------|
| Opt. 1R | 3-meter length with readout |

Service (P6015A only)

| Option | Description |
|---------|--|
| 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 |



Product(s) are manufactured in ISO registered facilities.



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