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**PVP3150 无源探头**

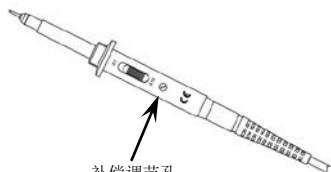
**PVP3150 Passive Probe**

# 调节探头补偿 To Adjust the Probe Compensation

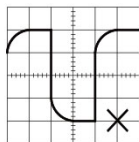
## 频率补偿 Frequency Compensation

使用探头进行测试前，首先检查探头的频率补偿，将其调至与所使用的示波器匹配。一般示波器的前面板上都有一个校准信号输出端，将探头连接至此信号输出端（探头衰减设为10X），令示波器显示测试方波信号。将补偿调节棒插入探头前端的补偿调节孔并顺时针/逆时针转动调节棒直至示波器显示正确补偿的方波（方波上方平整）。

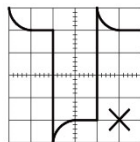
Before taking any measurement using a probe, first check the frequency compensation of the probe and adjust it to match the oscilloscope used. Generally, the oscilloscope provides a calibration signal output terminal at the front panel. Connect the probe (set the probe attenuation to 10X) to the signal output terminal to display a square waveform on the oscilloscope. Insert the adjustment tool into the compensation adjustment hole at the probe head and rotate it clockwise/counterclockwise until the properly compensated square waveform is displayed (flat-top square waveform).



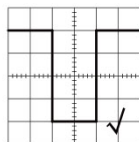
补偿调节孔  
Compensation Adjustment Hole



欠补偿  
Undercompensated



过补偿  
Overcompensated



正确补偿  
Properly Compensated

## 探头指标 Probe Specifications

### 电气规格 Electrical Specifications

带宽 <sup>[1]</sup> Bandwidth	1X: DC to 20 MHz 10X: DC to 150 MHz	输入电阻 Input Resistance	1X: 1 M $\Omega$ $\pm$ 1% @ DC 10X: 10 M $\Omega$ $\pm$ 1% @ DC
上升时间 <sup>[1]</sup> Rise Time	1X: 17.5 ns 10X: 2.3 ns	输入电容 Input Capacitance	1X: 50 pF $\pm$ 20 pF 10X: 10 pF $\pm$ 5 pF
衰减比 Attenuation Ratio	10:1 or 1:1 Switchable	最大额定输入电压 Max. Rated Input Voltage	1X: 150 V <sub>RMS</sub> CAT II 10X: 300 V <sub>RMS</sub> CAT II
补偿范围 Compensation Range	10 pF to 25 pF		

### 机械特性 Mechanical Characteristics

重量（仅探头） Weight (probe only)	About 45 g
探头尺寸 Cable Length	120 $\pm$ 2 cm
探头顶端直径 Probe Tip Diameter	4.8 mm

### 环境指标 Environmental Specifications

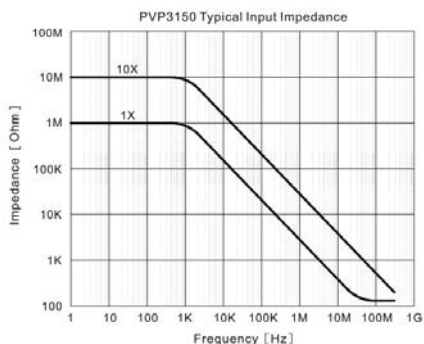
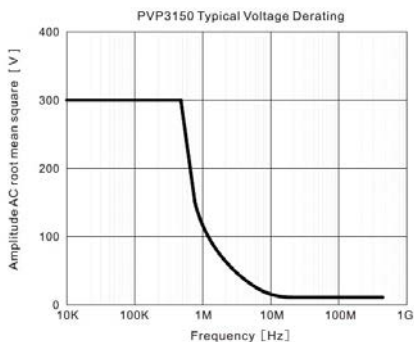
温度 Temperature	Operating: 0°C to +50°C Nonoperating: -20°C to +70°C
海拔高度 Altitude	Operating: 2,000 m Nonoperating: 15,000 m
最大相对湿度 Max. Relative Humidity	80% relative humidity for temperature up to +31°C, decreasing linearly to 40% relative humidity at +50°C
污染等级 Pollution Degree	Pollution Degree 2

注<sup>[1]</sup>：连接至合适的 RIGOL 示波器。

Note<sup>[1]</sup>: Connected to an appropriate RIGOL oscilloscope.

## 电压降额 Voltage Derating

## 输入阻抗 Input Impedance



CAT II IEC 测量类别 II 是指在直接连接到低压设备的电路上进行测量。例如，对家用电器、便携式工具和类似的设备进行测量。



通过双重绝缘或加强绝缘对设备进行完全保护。



使用前请仔细阅读用户手册以避免人身伤害和设备及其所连接设备的损害。为避免危险，请按说明正确使用。



探头与附件（辅助测试）组合的测量等级是它们组合的较低者。



请按照说明书正确使用探头；否则，探头提供的保护将会降低或消失。

IEC measurement category II is for measurements performed on circuits directly connected to low voltage installations. Examples are measurements on household appliances, portable tools and similar equipment.

Equipment fully protected by DOUBLE INSULATION or REINFORCED INSULATION.

Review this user manual carefully to avoid any personal injury or damage to this product and any product connected to it. To avoid potential hazards, use this product only as specified.

The measurement category of a combination of a PROBE ASSEMBLY and an accessory (an auxiliary to the measurement) is the lower of the measurement categories of the PROBE ASSEMBLY and of the accessory. Follow the instructions to use the PROBE ASSEMBLY properly. The improper use of the PROBE ASSEMBLY will impair or ruin its self-owned protection function.

注：产品规格如有变更，恕不另行通知。

Note: Contents of this document are subject to change without notice.

## 联系我们 Contact Us

如您在使用此产品或本手册的过程中有任何问题或需求，可与 **RIGOL** 联系：

If you have any problem or requirement when using our products or this manual, please contact

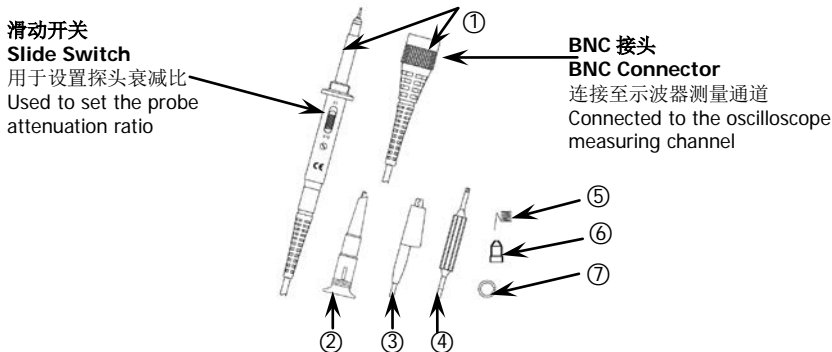
**RIGOL**.

E-mail: [service@rigol.com](mailto:service@rigol.com)

Website: [www.rigol.com](http://www.rigol.com)

## 附件说明 Accessories and Features

PVP3150 系列探头配有附件，使测试更为方便。请在使用前尽量熟悉下列说明，以便更好地使用。  
PVP3150 is provided with several accessories designed to make probing and measurement simpler.  
Please review the following instructions carefully in order to use the product properly.



探头零件清单 Accessory Kit

编号 No.	名称 Name	描述 Description	数量 Quantity	
			两条装 Dual Probes Kit	单条装 One Probe Kit
①	探头 Probe	--	2	1
②	探头钩 Hook Tip	可伸缩的挂钩。Indicates a retractable hook tip.	2	1
③	接地鳄鱼夹 Ground Alligator Clip	用于将探极可靠接地，便于安全操作和读取正确的信号。Ensures the safe grounding of the probe for safe operation and correct signal reading.	2	1
④	补偿调节棒 Adjustment Tool	用于调节探头补偿。Adjusts the probe compensation.	1	1
⑤	接地弹簧 Ground Spring	套在探头前端，用于接地，可改善高频响应。Attaches itself to the probe head for grounding to improve high frequency response.	2	2
⑥	绝缘保护帽 Insulation Cap	遮盖探头前端金属裸露部分，可防止漏电以及确保使用者安全。Covers the exposed metal part of the probe head to avoid electricity leakage and protect the users.	2	1
⑦	标识环 Maker Rings	将色环（黄、粉、浅蓝、深蓝）套置于线上，可方便区分不同通道所用的探头。Attaches itself (yellow, pink, light blue or dark blue) to the probe cable to identify probes used in different channels.	8	8



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