


Preventing Potential RF Burns/Electric Shock

WARNING



Minimum clearance requirement for making measurements

As these probes support high frequency / high voltage common mode measurements, it is crucial to observe clearance requirements to ensure isolation from hazardous input voltages.

You must remain at least 1 meter away from all sides of the probe's sensor head and probe tip cable whenever the probe is connected to an energized test circuit.

Safety Warnings and Cautions


WARNING

If the probe assembly is used in a manner not specified by the manufacturer, the protection provided by it may be impaired.

WARNING

Use of controls or adjustments or performance of procedures other than those specified in the documentation may result in hazardous radiation exposure.

WARNING



The probe inputs are safely rated to a maximum of input voltage as mentioned on page 2. Do not apply voltages greater than these ratings between either input and ground.

WARNING

Do not attempt internal service or adjustment. These probes are not serviceable. If the probe is defective, it should be made inoperative and returned to the Keysight sales office.


WARNING

Periodically inspect the probe wires and cables. Do not operate with visible/suspected damage. If you suspect a damage, have it inspected by a Keysight authorized service personnel.

WARNING

Before connecting the probe's output connector to a channel input of the oscilloscope, ensure that the oscilloscope is properly grounded.

Laser Certification



LASER

1

These probes are Class 1 laser system under “Normal Use” conditions and comply with IEC 60825-1:2014 standards for laser systems.

Assembled in Colorado Springs, Colorado USA.

WARNING

Do not attempt to remove any coverings from the sensor head and cable or disassemble the product. These probes are equipped with laser sources. Exposing these sources can put you at the risk of laser radiation exposure.

Safety and Regulatory Symbols

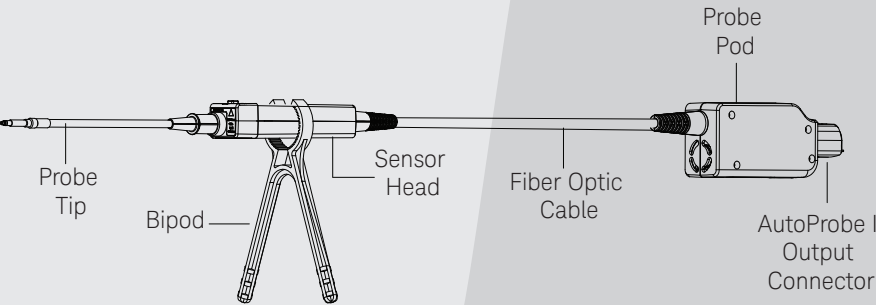
	The product is marked with this symbol when it is necessary for the user to refer to the instructions in the documentation.
	Warning High Voltage - Possibility of electric shock
	These probes are Electrostatic Discharge (ESD) sensitive devices, particularly at the probe amplifier. Follow standard ESD precautions when handling these.
	The crossed out wheeled bin symbol indicates that separate collection for waste electric and electronic equipment (WEEE) is required, as obligated by the EU DIRECTIVE and other National legislation. Please refer to keysight.com/go/takeback to understand your Trade in options with Keysight in addition to product takeback instructions.
	This symbol indicates the Environmental Protection Use Period (EPUP) for the product's toxic substances for the China RoHS requirements.
 <div>CAN ICES/NMB-001(A) ISM GRP 1-A ccr.keysight@keysight.com</div>	The CE mark is a registered trademark of the European Community. ISM GRP 1-A denotes the instrument is an Industrial Scientific and Medical Group 1 Class A product. ICES/NMB-001 indicates product compliance with the Canadian Interference-Causing Equipment Standard.
MAINS ISOLATED	IEC Measurement Category MAINS ISOLATED is for measurements performed on circuits not directly connected to mains.
	KC certification mark to demonstrate compliance with the South Korean EMC requirements. South Korean Class A EMC declaration: This equipment is Class A suitable for professional use and is for use in electromagnetic environments outside of the home.
	A registered trademark of the Spectrum Management Agency of Australia. This signifies compliance with the Australia EMC Framework regulations under the terms of the Radio Communication Act of 1992.
	This mark denotes compliance with the essential requirements of the following applicable UK regulations: <ul style="list-style-type: none">- Electromagnetic Compatibility Regulations 2016 No. 1091 (as amended)- Electrical Equipment (Safety) Regulations 2016 No. 1101 (as amended)- The Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment Regulations 2012 No. 3032 (as amended)

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Colorado Springs, CO 80907

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PS0004A/6A/8A Optically Isolated Differential Probes



Probes Documentation

Download the PS0004A/6A/8A probes user guide from the product page at <https://www.keysight.com/find/PS0008A>. Related documentation is also available in Keysight’s Probe Resource Center (PRC) accessible from <https://www.keysight.com/find/PRC>.

Compatible Oscilloscopes

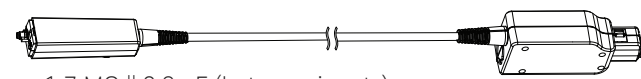
- Keysight Infiniium/InfiniiVision oscilloscopes with 50 Ω AutoProbe I interfaces:
- > EXR-Series and MXR-Series Infiniium oscilloscopes (with Infiniium software 11.61 or higher)
 - > HD304MSO/HD302MSO oscilloscopes (with InfiniiVision software 10.10 or higher)

Refer to the user guide to get a complete list of compatible oscilloscopes and adapters (if required) to connect the probe to the oscilloscope.



PS0004A/6A/8A Probes and Accessories

Probe Models



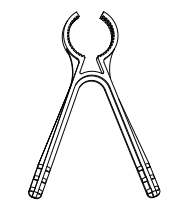
- PS0004A 350 MHz
- PS0006A 700 MHz
- PS0008A 1 GHz

1.7 MΩ || 0.9 pF (between inputs)
850 kΩ || 1.5 pF (each side to ground)

(Refer to the user's guide for the complete set of product specifications.)

Standard Accessories

PS0013-64701 Bipod Probe Positioner (Qty 1)



SMA Wrench 8710-2466 (Qty 1)

The usage of the Bipod probe positioner is recommended to:


- enable precise probe positioning while making high frequency / high voltage common mode measurements.
- reduce stress on DUT connection.

PS0017A ±10 V MMCX Probe Tip (Qty 1) 1 GHz, ±250 V, 10 MΩ || 3 pF



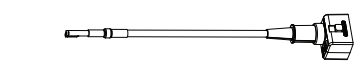
Optional Accessories (can be purchased separately)

MMCX Probe Tips 1 GHz, 10 MΩ || 3 pF




- PS0017A ±10 V
- PS0018A ±30 V
- PS0019A ±250 V

100 mil Pitch Socket Probe Tips 800 MHz, 10 MΩ || 3.5 pF



- PS0022A ±10 V
- PS0023A ±100 V
- PS0025A ±500 V

200 mil Pitch Socket Probe Tips 800 MHz, 40 MΩ || 3.5 pF



- PS0027A ±1000 V
- PS0028A ±2500 V

PS0010A Basic Connectivity Kit

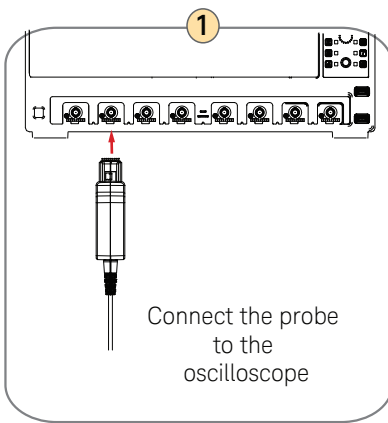
PS0014A Mount for 3D Probe Positioner (for use with N2787A)

PS0015A Probe Deskew and Performance Verification Kit with MMCX

The above electrical ratings are for probe tips only. As these probes are designed to be used with probe tips only, the lower of the electrical rating of the probe and of the tip is applicable for a probe + tip combination.

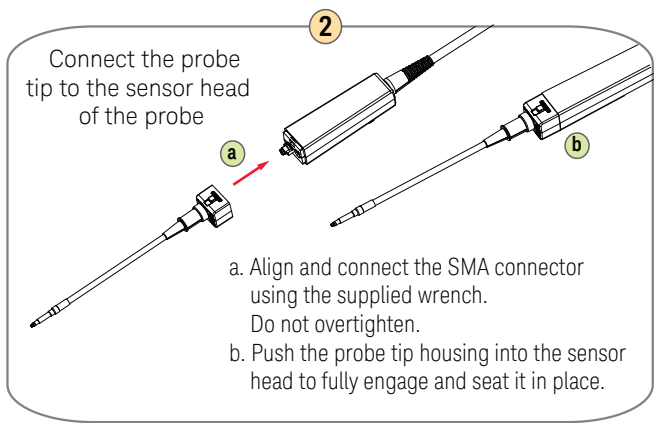
Probe Connection Sequence

1



Connect the probe to the oscilloscope

2




Connect the probe tip to the sensor head of the probe

a. Align and connect the SMA connector using the supplied wrench. Do not overtighten.

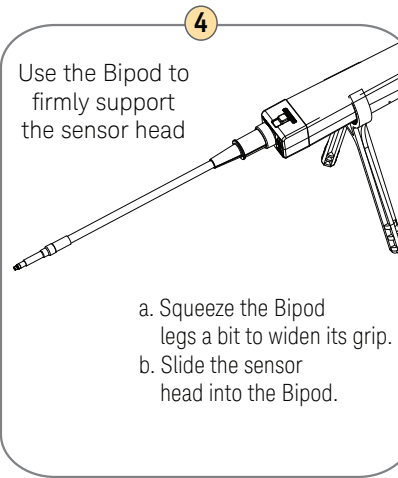
b. Push the probe tip housing into the sensor head to fully engage and seat it in place.

3



Ensure that the test circuit is de-energized

4

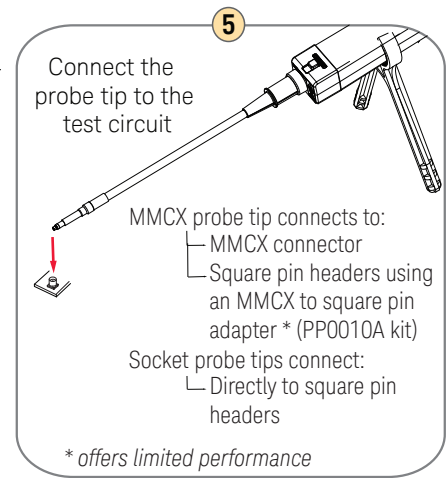


Use the Bipod to firmly support the sensor head

a. Squeeze the Bipod legs a bit to widen its grip.

b. Slide the sensor head into the Bipod.

5



Connect the probe tip to the test circuit

MMCX probe tip connects to:

- MMCX connector
- Square pin headers using an MMCX to square pin adapter * (PP0010A kit)

Socket probe tips connect:

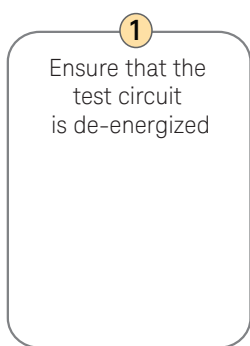
- Directly to square pin headers

* offers limited performance

These probes are NOT intended to be directly connected to DUT. Always use the probe tips (displayed on page 2) to connect these probes to DUT.

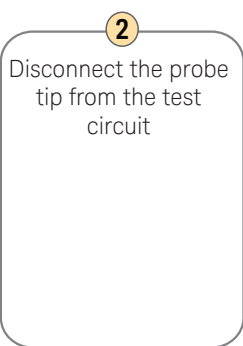
Probe Disconnection Sequence

1



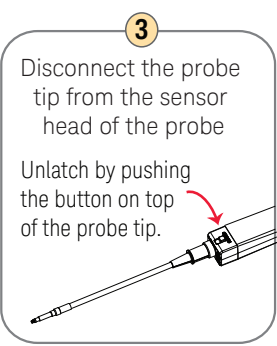
Ensure that the test circuit is de-energized

2



Disconnect the probe tip from the test circuit

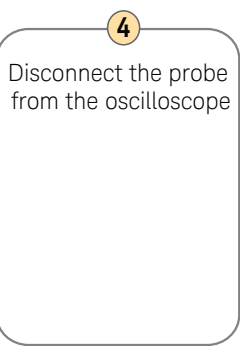
3



Disconnect the probe tip from the sensor head of the probe

Unlatch by pushing the button on top of the probe tip.

4



Disconnect the probe from the oscilloscope

Proper Handling of Probe and Accessories

Do not twist, tightly bend, pull, or kink the probe's fiber optic able to avoid stressing the optical fibers. The minimum bend radius of the cable is 2.5 inches.

CAUTION Do not block the ventilation holes on the fan located on the probe pod.

Cleaning the Probe

1. Disconnect the probe from the oscilloscope and circuit under test.
2. Clean the external parts of the probe with a soft dry cloth or if needed, with one slightly dampened with mild soap and water solution. Do not use too much liquid to avoid damaging sensitive electronic components. Do not attempt to clean internally.
3. Make sure the probe is completely dry before reconnecting it to the oscilloscope.

Physical and Environmental Characteristics

Characteristic	Probe Pod	Sensor Head	Probe Tip
Temperature (operating)	5 °C to +40 °C	0 °C to +55 °C	-40 °C to +85 °C
Altitude (operating)	3,100 m (10,171 ft)	3,100 m (10,171 ft)	3,100 m (10,171 ft)
Humidity (operating)	Up to 80% RH at 40 °C, non-condensing	Up to 85% RH at 55 °C, non-condensing	Up to 85% RH * at 85 °C, non-condensing
Pollution Degree	2	2	2

*Validated to 96 hours continuous exposure

Troubleshooting

- On connection, if the probe is not recognized by the oscilloscope, if the oscilloscope GUI crashes, or if there is no signal displayed on the oscilloscope GUI screen, then perform the following steps:
1. Disconnect the probe from the oscilloscope.
 2. Wait at least 1 minute and then reconnect.
 3. If the probe continues to not work after disconnecting and connecting multiple times, contact Keysight Technologies for repair (visit <https://www.keysight.com/find/assist>).