Operation steps

1) Connect to the oscilloscope: Set the oscilloscope input impedance to 1MΩ, connect the probe BNC end to oscilloscope (make sure the oscilloscope is properly grounded);
2) Power the probe: Use standard adapter to power the probe. Indicator light turns green after power on;
3) Connect the DUT: make sure that the coil plug is inserted in place and the wire or pin under test passes through the appropriate position of the coil.
4) Power up the DUT.
5) After test, disconnect the circuit first, then unplug the coil.
6) Disconnect probe power.

Warranty

1) Micsig warrants the main body of this current probe for 1 year. During the warranty period, Micsig will be responsible for free maintenance for anyfailure caused by the quality of the product under normal use.
2) Under the following circumstances, Micsig will refuse to provide maintenance services or charge for a fee:

a.No packaging or anti-counterfeiting label.
b.Anti-counterfeit label has been altered or blurred beyond recognition.
c.Unauthorized disassembly, such as: changing wires, dismantling internal components, etc.
d. No sales voucher or the content of sales voucher does not match the product.

Safety Precautions

※ Please use within safe voltage range.
※ The equipment connected to the probe must be reliably grounded.
※ The outer skin of the Rogowski coil should be inspected before use. If it is damaged,stop using it.
※ Before connecting the probe to the circuit under test, make sure the circuit undertest is turned off.
※ Please use the adapter that comes standard with the probe.

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Quick Guide

Rogowski AC Current Probe -- RCP series

Overview

Micsig RCP series Rogowski current probe measures AC currents up to 6000Apk, max. bandwidth up to 30 MHz, withstand voltage is up to 1kVrms, nearly zero insertion impedance, greatly minimized the interference to the DUT. A 1.6mm thin, flexible, clip-around Rogowski coil allow user easily pass through pin leg of TO-220 semiconductor devices. With 2% accuracy (typical) , accurately measures high-frequency and high-current signals like double-pulse dynamic test, monitor semiconductor switch current.

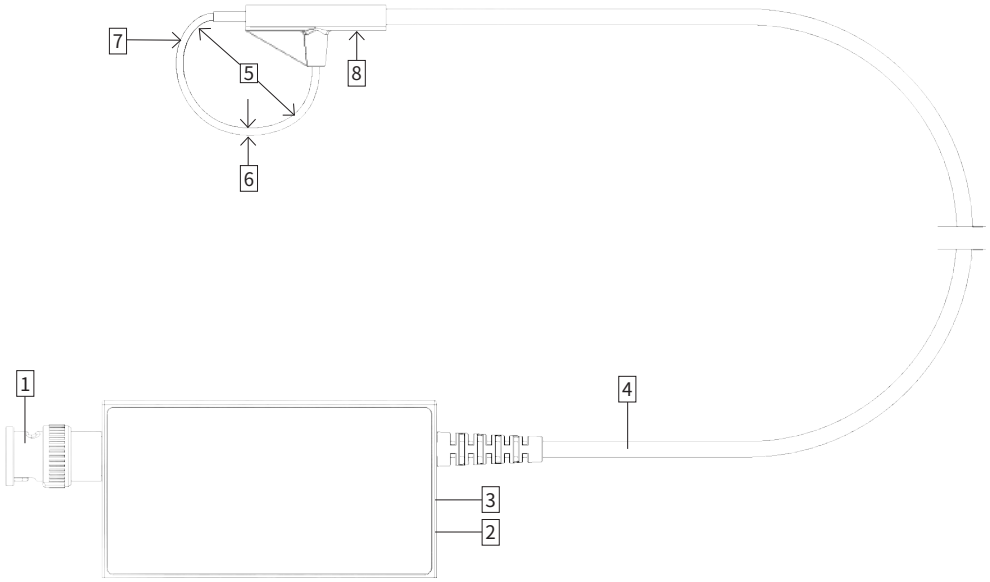
Standard BNC interface to use on any oscilloscope, most compact flexible design easily solved the hard-to-reach part issue, coil diameter support customzied made to meet more test requirements.

Specifications

Model	RCP60XS	RCP300XS	RCP600XS	RCP1200XS	RCP3000XS	RCP6000XS
Bandwidth	85Hz - 30MHz	10Hz-30MHz	10Hz-30MHz	12Hz - 30MHz	3Hz - 30MHz	2Hz - 30MHz
Rise time	⩽ 11.6ns	⩽ 11.6ns	⩽ 11.6ns	⩽ 11.6ns	⩽ 11.6ns	⩽ 11.6ns
Peak current	60Apk	300Apk	600Apk	1200Apk	3000Apk	6000Apk
Output sensitivity	100mV/A(10x)	20mV/A(50X)	10mV/A(100X)	5mV/A(200X)	2mV/A(500X)	1mV/A（1000X）
Accuracy (typical)	2%	2%	2%	2%	2%	2%
Output noise	＜ 20mVpp	＜ 18mVpp	＜ 12mVpp	＜ 5mVpp	＜ 5mVpp	＜ 5mVpp
Peak di/dt	4kA/μs	20kA/μs	40kA/μs	70kA/μs	70kA/μs	70kA/μs
Droop	65%/ms	9%/ms	6%/ms	3%/ms	2%/ms	2%/ms
Delay time	26.2ns	22.4ns	20ns	20.8ns	20ns	20ns
Effect of conductor position	Within ±1% (deviation from center part)					
Offset voltage	＜ ±1mV					
Peak coil isolation voltage	AC 1kVrms (1 min) (50Hz/60Hz) (Rogowski coil part only)					
Measurable conductor diameter	⩽ 20mm					
Power supply	DC 12V					
Integrator size	70*40*17mm					
Wire length (integrator to Rogowski coil)	1.5m（customizable）					
Coil inner diameter	25mm（customizable）					
Coil circumference	80mm（customizable）					
Coil cross-section diameter	Appx. 1.6mm					
Output impedance	1MΩ					
Interface	Universal BNC					
CE standard	EN IEC 61010-2-032					
EMC standard	EN IEC 61326-1:2021，EN IEC 61326-2-1:2021，EN IEC 61000-3-2:2019+A1:2021，EN 61000-3-3:2013+A1:2019+A2:2021					
Environment						
Working temperature	Base unit: 0°C - 55°C Coil: -20°C - 125°C					
Storage temperature	-30°C -70°C					
Working humidity	⩽ 85%RH					
Storage humidity	⩽ 90%RH					

Appearance

The RCP series current probe are composed of two parts: Integrator and Rogowski coil.



1. **Output:** Standard BNC, compatible with all BNC oscilloscopes.
2. **Power supply:** DC 12V, adapter
3. **Power indicator:** Turn Green after powered on.
4. **Cable length:** 1.5m， from integrator to coil, customizable.
5. **Rogowski coil inner diameter:** 25mm, measures wires within 20mm in diameter.
6. **Rogowski coil cross-section diameter:** 1.6mm
7. **Rogowski coil circumference:** 80mm, customizable.
8. **Current direction:** When the current flows in the marked direction, the output is positive, otherwise it is negative.

Precautions

※ to ensure accuracy, the wire being measured should be positionedas much as possible between X and Y in the right diagram, where X is the center of coil and Y is the midpoint of the coil circumference.

※ try to stay away from strong magnetic field interference sources asmuch as possible to avoid measurement errors.

※ the coil can be placed around the wire being measured to measurethe interference signals in the surrounding area, to determinewhether there is strong interference nearby.