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MICSIG MOIP200P Optically Isolated Probe

Specifications

- **Model:** MOIP100P, MOIP200P

- **Bandwidth:** 100MHz, 200MHz
- **Rise Time:** MOIP100P: 3.5ns, MOIP200P: 1.75ns
- **CMRR:** DC: 180dB, 100MHz: 128dB, 200MHz: 122dB

Product Usage Instructions

- Ensure the input impedance of the oscilloscope is set to 50 Ohms.
- If there is a large deviation in measurement, press the Cali. key for calibration without disconnecting the test connection.
- When measuring, solder directly to the test point using an MCX or MMCX jack without using leads for accurate results

Overview

Based on exclusive SigOFITTM technology, the SigOFIT optical-fiber isolated probe has extremely high CMRR and isolation voltage, helping to unveil the whole truth of the signal within the bandwidth.

WARNING

- DO NOT block the heat dissipation port on the back of the Optical-Electrical converter, otherwise, the probe may be overheated and damaged.
- DO NOT excessively bend the fiber cable. Avoid tight radius (8cm) bends, crushing, crimping, twisting, pulling, or otherwise stressing the cable.
- When disassembling and moving the probe, please hold the converter body by hand; do not lift or drag the cable.

Characteristics

Model	MOIP100P	MOIP200P	MOIP350P	MOIP500P	MOIP800P	MOIP1000P
Bandwidth	100MHz	200MHz	350MHz	500MHz	800MHz	1GHz
Rise Time	⩽ 3.5ns	⩽ 1.75ns	⩽ 1ns	⩽ 700ps	⩽ 438ps	⩽ 350ps
CMRR	DC: 180dB 100MHz: 128dB	DC: 180dB 200MHz: 122dB	DC: 180dB 350MHz: 118dB	DC: 180dB 500MHz: 114dB	DC: 180dB 800MHz: 110dB	DC: 180dB 1GHz: 108dB
Differential Voltage Range	**Standard:** **OP20(MMCX), ±25V** Optional: OP50(MMCX), ±62.5V OP200(MCX), ±250V OP1000(MCX), ±1250V OP2000(MCX), ±2500V OP5000(LCX), ±6250V		**Standard:** **OP20(MMCX), ±25V** **OP1000(MCX), ±1250V** Optional: OP50(MMCX), ±62.5V OP200(MCX), ±250V OP2000(MCX), ±2500V OP5000(LCX), ±6250V	**Standard:** **OP50(MMCX), ±25V** **OP2000(MCX), ±1000V** Optional: OP20(MMCX), ±10V OP100(MMCX), ±50V OP5000(MCX), ±2500V OP10000(LCX), ±5000V	
Noise	<0.45mVrms					
DC Gain Accuracy	1%					
Common Mode Voltage Range	85kVpk					
Power supply	DC 12V					
Interface	Universal BNC					

Jack and coaxial lead

The attenuating tip and Jack, coaxial lead are only suitable for measuring circuits not directly connected to the mains supply, and are not rated for CAT II, III, or IV.

Accessory name	Voltage range	Non-destructive voltage (Max.)
MCX jack	±2500V	< 3000Vpp
MMCX jack	±62.5V	< 300Vpp
MCX coaxial lead	±2500V	< 3000Vpp
MMCX coaxial lead	±62.5V	< 300Vpp
LCX coaxial lead	±6250V	< 8000Vpp

Button Descriptions

Cali. button:

- Press to calibrate in 1 second, no need to disconnect the circuit, one sound means success, three sounds mean failure.

Gain button

- Press to switch between 0dB(1X) and 20dB(100mX). Select the appropriate gear according to the test range, which can effectively improve the signal-to-noise ratio. Please refer to the SigOFIT probe User Manual for the specific test range.

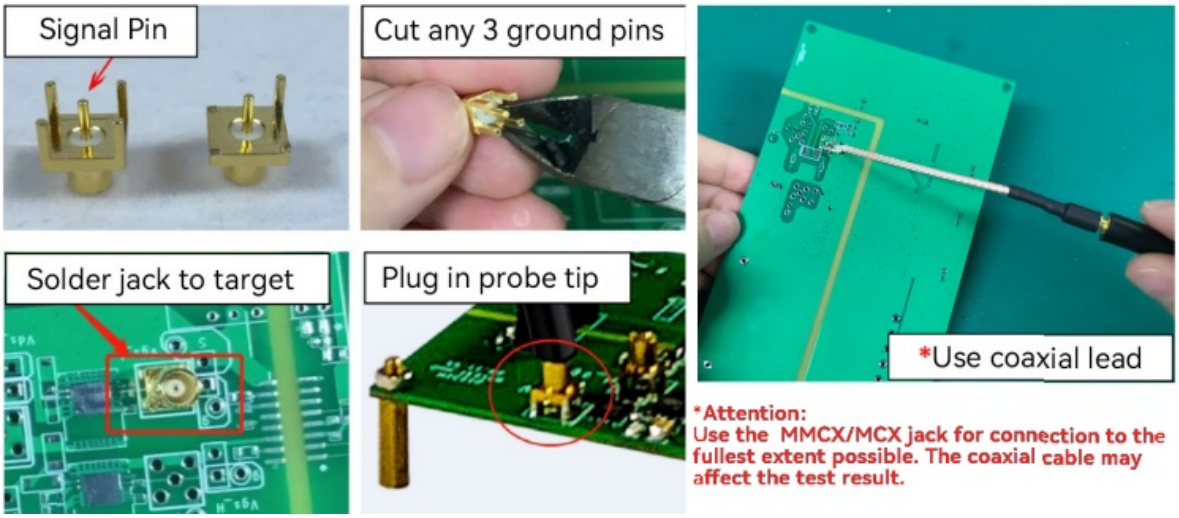
INSTALLATION INSTRUCTIONS

Main Steps

1. Solder the MMCX/MCX jack or coaxial lead to the test board

   Notice

   1. When testing VGS signal, the signal pin (in the middle) of the MMCX/MCX jack must be connected to the G-end of the MOSFET.
   2. Solder the MMCX/MCX jack directly to the test point, try NOT to use extension lead, it may bring unsatisfactory test results.
   3. For easy soldering, suggest cutting three of the four ground pins around the base, just keep one.
   4. Under the condition permitting, try to use the MMCX/MCX jack as much as possible. The coaxial cable may affect the test result.



2. Connect the Optical-fiber Isolated Probe to the oscilloscope.
3. Set the oscilloscope input impedance to 50Ω, set the corresponding attenuation ratio and delay time on the oscilloscope.
4. Connect the attenuating tip to the Electrical–Optical (E-O) converter.

Power probe with standard Type-C charger

5. Power the SigOFIT probe by connecting the USB-C cable to the O-E Converter using a standard charger.
6. Plug in the attenuating tip to the MMCX/MCX jack. When you hear a “click”, it means that the connection is successful.
7. Power ON the test board.
8. Adjust the oscilloscope settings and proceed normal test.

In addition to the above instructions, Micsig also provides a rich variety of attenuator connection interfaces with the object under test, offering you multiple convenient and efficient measurement methods. Welcome to contact our sales or agents for consultation

Precaution

If a large deviation between the measurement result and the expectation is found:

- Please pay attention to check whether the input impedance of the oscilloscope is set to 50Ω.
- Try to press the Cali. key for calibration (no need to disconnect the test connection).
- When measuring, the MCX or MMCX jack should be used to solder directly to the test point as much as possible, and no leads should be used; otherwise, it will have a great impact on the test result.

Over-voltage Warning:

- When the “Gain” button flashes and you hear a rapid “DiDiDiDi..” buzzer sound, indicating an overvoltage warning, please select a suitable attenuating tip.

Overheating Warning:

- When hearing a“DiDi” sound every 2 seconds, it means the temperature of the

Optical-Electrical (O-E) converter is overheated, Please check whether the dissipation port is blocked

Warranty

Optical-fiber Isolated Probe main body warranty for 1 year (extendable with extra charge). The SigOFIT probe contains high-quality components and should be treated with care. Damage to the fiber optic cable is NOT covered by the warranty.
Standard accessories are NOT covered in the main body warranty.

Micsig provides one-on-one, exclusive technical support service. During the warranty period, Micsig will be responsible for providing free maintenance for any malfunctions caused by quality issues within the normal use of the product that have not been disassembled or repaired. The warranty will be invalid in the following cases, but repair services can be provided, free of labor costs, and only parts fees will be charged:

- Any damage to accessories caused by improper use, maintenance, or storage by consumers.
- Damage caused by force majeure factors, such as natural disasters.

Micsig will refuse to provide repair services or provide paid repair services in the following situations:

- Unauthorized dismantling, such as changing wires, dismantling internal components, etc.
- No sales voucher or the content of the sales voucher does not match the product.

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Scan to watch Basic Operation and Precautions

FAQ

- **Q:** What should I do if I encounter an over-voltage warning?
- **A**: When the Gain button flashes and a rapid buzzer sound is heard, select a suitable attenuating tip to address the over-voltage warning.
- **Q:** How can I prevent the probe from overheating?
- **A:** To prevent overheating, ensure that the dissipation port on the back of the Optical-Electrical converter is not blocked and check for any obstructions.

Documents / Resources

	MICSIG MOIP200P Optically Isolated Probe [pdf] User Guide MOIP200P Optically Isolated Probe, MOIP200P, Optically Isolated Probe, Isolated Probe

References

- User Manual

Isolated Probe, Micsig, MOIP200P, MOIP200P Optically Isolated Probe, Optically Isolated Probe

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