

SigOFIT Optical-fiber Isolated Probe

MOIP Series



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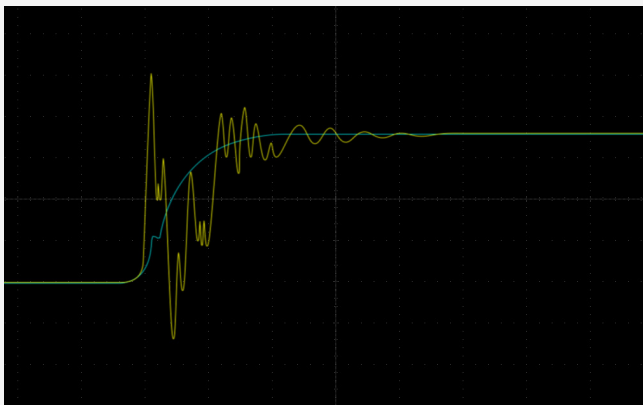
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Product Overview

Built on the exclusive SigOFIT™ leading technology, Micsig MOIP Series Optically Isolated Probes boast an extremely CMRR—still as high as 108dB at the 1GHz frequency band along with an isolation voltage of up to 85kV and a noise floor of less than 0.45mVrms. Its bandwidth ranges from 200MHz to 1GHz, capable of measuring differential mode signals from ±0.01V to ±6250V. It reveals the complete truth of signals within its bandwidth range, serving as the ultimate judge for verifying the authenticity of signals measured by other voltage probes.

Product Features

- Complete electrical isolation with an isolation voltage up to 85 kV
- High CMRR (up to 180 dB)—still as high as 108dB at 1GHz
- Fast response for accurate high-frequency signal measurement
- With different attenuator, support differential signal testing from ±0.01 V to ±6250 V (Other voltage ranges can be customized)
- Bandwidth options from 200 MHz to 1 GHz
- Low noise and excellent EMI immunity
- DC gain accuracy better than 1%
- Optical fiber length 2 m (Custom fiber lengths available)
- Instant calibration with a calibration time of less than 1 second
- Auto zeroing without disconnection.



High Voltage Differential Probe SigOFIT Optical-fiber Isolated Probe

Present True Signal

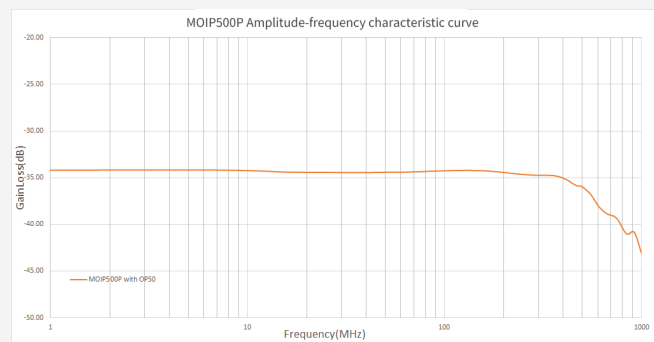
SigOFIT probe delivers highest CMRR: over 128dB at 100MHz, up to 108dB at 1GHz. It's the ultimate referee of signal fidelity measured by other voltage probes.

Best Probe for Third-Gen Semiconductor

Devices like SiC and GaN can switch high voltages in a few nanoseconds and generate very high-energy, high-frequency harmonics. Even at its highest bandwidth, the SigOFIT probe still maintains over 100dB CMRR and perfectly suppresses oscillations caused by high-frequency common-mode noise, making it the best choice for third-generation semiconductor test and measurement.

Highest Accuracy

SigOFIT probe has excellent amplitude-frequency characteristics. DC gain accuracy ≤ 1%, while noise ≤ 0.45mVrms. Zero drift <0.1% (works 5 mins later), gain drift also <1%.





Switching between 0dB and 20dB

SigOFIT optical isolation probe can be switched between 0dB and 20dB. Besides, different attenuators can be replaced to improve the signal-to-noise ratio, so that a single attenuator also has two range gears to improve the signal-to-noise ratio.



20X / 50X / 100X / 200X / 1000X / 2000X / 5000X / 10000X

Key Solution for Wide Semiconductor Testing

The test leads of SigOFIT probe are short and with coaxial cable transmission, the input capacitance is as low as 1pF minimum, making it very safe for testing GaN devices.

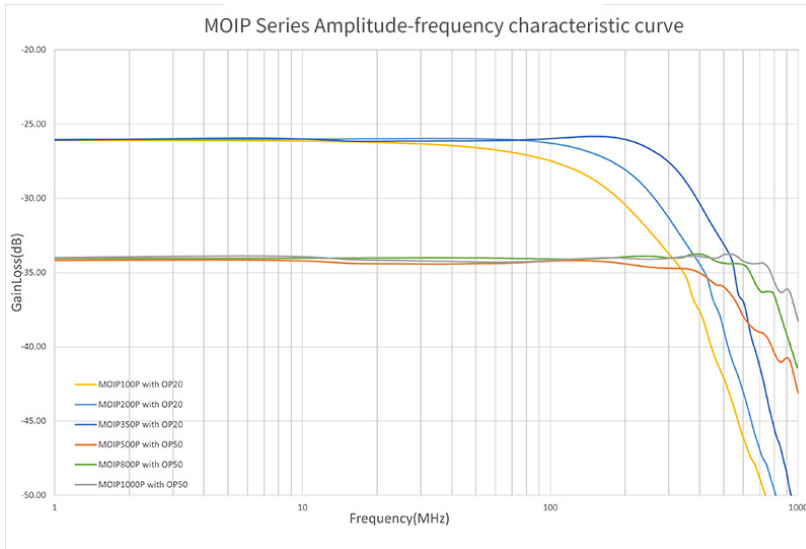
Wide Measurement Range

Unlike traditional differential probes can only test high-voltage signals, the SigOFIT probe can be used with different attenuator tips to test differential mode signals from $\pm 0.01V$ to $\pm 6250V$, achieving full-range output and very high signal-to-noise ratio.

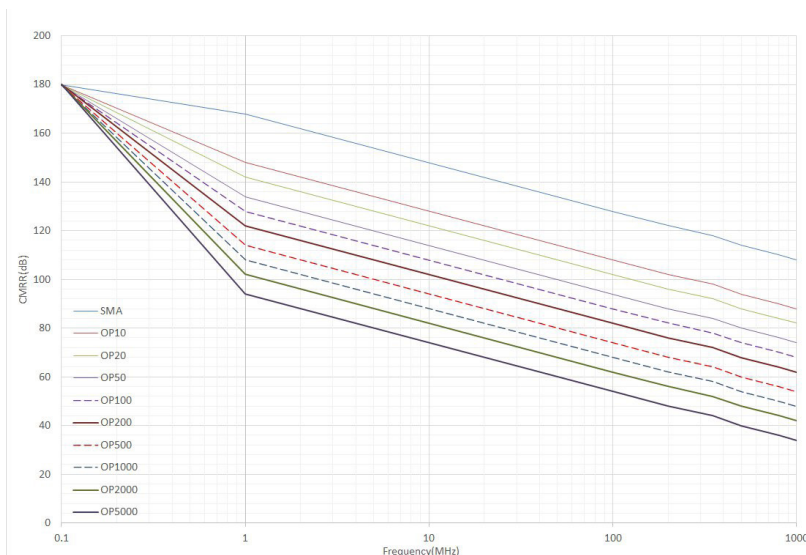
Product Specifications

Model	MOIP200P	MOIP350P	MOIP500P	MOIP1000P
Bandwidth	200MHz	350MHz	500MHz	1GHz
Rise time	$\leq 1.75ns$	$\leq 1ns$	$\leq 700ps$	$\leq 450ps$
CMRR	DC: 180dB 200MHz: 122dB	DC: 180dB 350MHz: 118dB	DC: 180dB 500MHz: 114dB	DC: 180dB 1GHz: 108dB
Differential Voltage Range	Standard: OP20(MMCX), $\pm 25V$ Optional: OP50(MMCX), $\pm 62.5V$ OP200(MCX), $\pm 250V$ OP1000(MCX), $\pm 1250V$ OP2000(MCX), $\pm 2500V$ OP5000(LCX), $\pm 6250V$	Standard: OP20(MMCX), $\pm 25V$ OP1000(MCX), $\pm 1250V$ Optional: OP50(MMCX), $\pm 62.5V$ OP200(MCX), $\pm 250V$ OP2000(MCX), $\pm 2500V$ OP5000(LCX), $\pm 6250V$	Standard: OP50(MMCX), $\pm 25V$ OP5000(MCX), $\pm 2500V$ Optional: OP20(MMCX), $\pm 10V$ OP100(MMCX), $\pm 50V$ OP2000(MCX), $\pm 1000V$ OP10000(LCX), $\pm 5000V$	
Noise	$< 0.45mVrms$			
DC Gain Accuracy	1%			
Common Mode Voltage Range	85kVpk			
Power Supply	DC 12V			
Fiber cable length	2m (Customizable)			
Interface	Universal BNC			

* Fiber length and test voltage range are customizable.



▲ Amplitude-frequency characteristics of different SigOFIT probes



▲ CMRR of different types of attenuators (0dB) at various frequencies.

Applications

- * Design of motor drive, power converter, electronic ballast
- * Design of GaN, SiC, IGBT Half/Full bridge devices
- * Design of inverter, UPS and switching power supply
- * Safety test for high voltage, high bandwidth applications
- * Power device evaluation
- * Current shunt measurements
- * EMI & ESD troubleshooting
- * Floating measurements



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*The final interpretation of this content is vested in Shenzhen Micsig Technologies Co., Ltd. For any updates to relevant information, please follow the official Micsig website (www.micsig.com).