

SigOFIT Optical-fiber Isolated Probe MOIP Series

- ▶ Bandwidth: 100MHz-1GHz
- ▶ Differential Voltage Range: $\pm 6250V$
- ▶ Common Mode Voltage: 85kVpk
- ▶ CMRR: Up to 180dB
- ▶ DC Gain Accuracy: 1%
- ▶ Interface: Universal BNC



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Basic Operation and Precautions

Shenzhen Micsig Technology Co., Ltd.

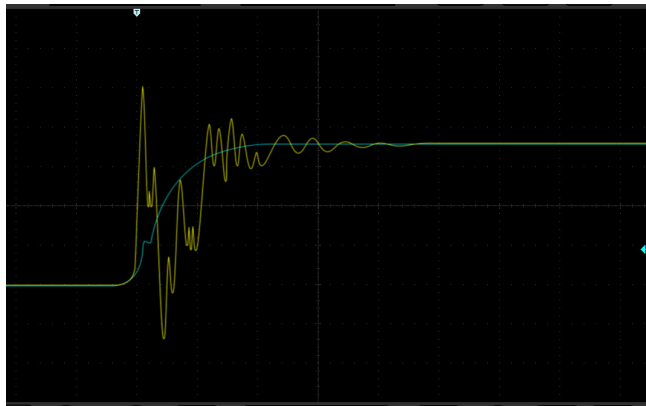
www.micsig.com



Micsig Website

Product Overview & Key Features

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



■ Differential Probe
 ■ SigOFIT Optical-fiber Isolated Probe

Present True Signal

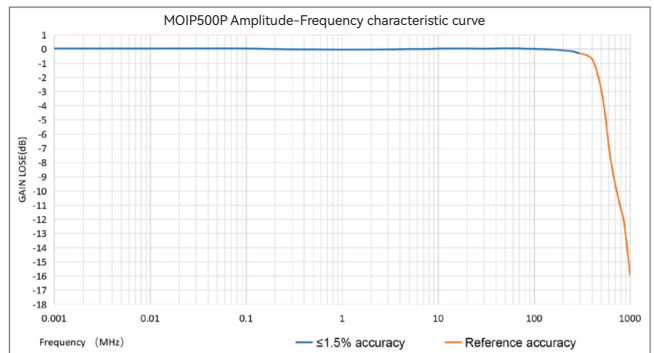
- SigOFIT probe delivers highest CMRR: over 128dB at 100MHz, up to 108dB at 1GHz. It's the ultimate referee of signal fidelity measured by other voltage probes.

Best Probe for Third-Gen Semiconductor

- Device like SiC and GaN can switch high voltages in a few nanoseconds, containing very high-energy high-frequency harmonics. Even at the highest bandwidth, the SigOFIT probe still have over 100dB CMRR in max. bandwidth, perfectly suppress oscillation caused by high-frequency common-mode noise, it's the best choice for third-generation semiconductor test and measurement.

Highest Accuracy

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



Support the switching between 0dB and 20dB

- The SigOFIT optical isolation probe can be switched between 0dB (1X) and 20dB (100mX). 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

Safe to Test Gallium Nitride (GaN)

- The test leads of SigOFIT probe are short and with coaxial cable transmission, the input capacitance is as low as 1pF minimum, very safe to test GaN.

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.

Compact & Simple

- Smaller size than traditional differential probes, more accurate probe tips, makes it much easier and flexible to use.

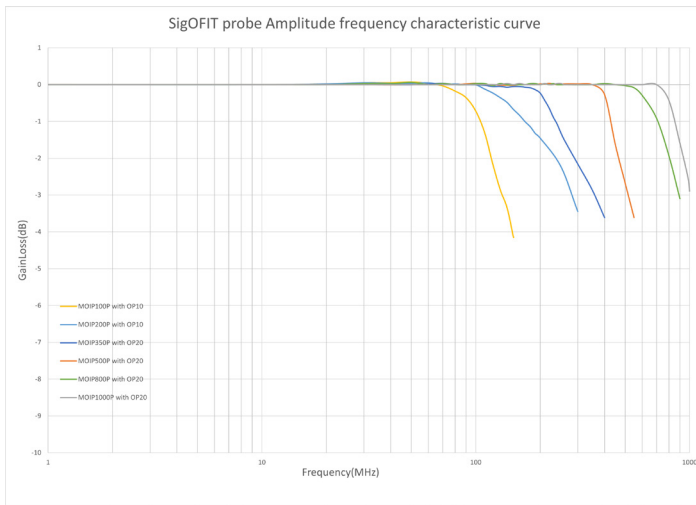
Efficient & Affordable

- Fastest response, can be tested immediately after power-on, Auto Calibration in less than 1 second, ensures accurate signal output in real time.

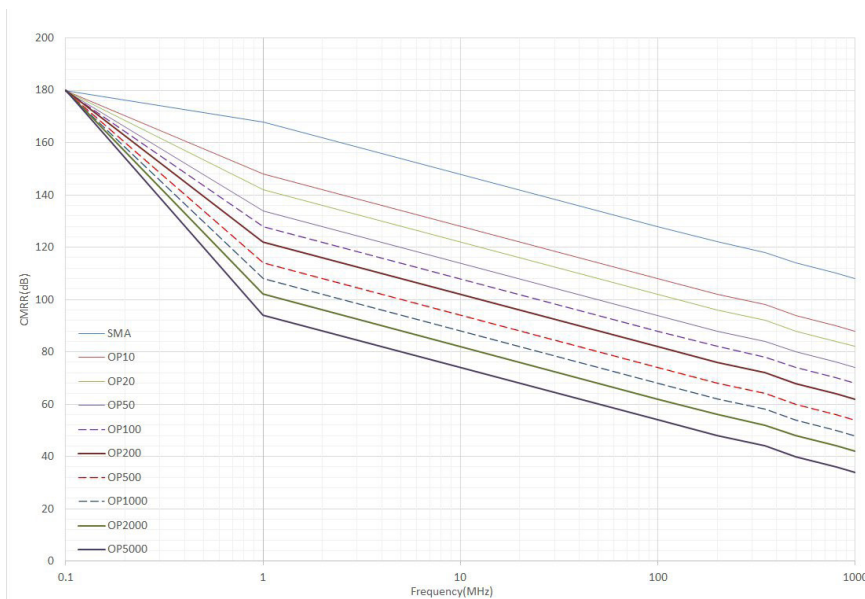


Specifications

Model	MOIP100P	MOIP200P	MOIP350P	MOIP500P	MOIP800P	MOIP1000P
Bandwidth	100MHz	200MHz	350MHz	500MHz	800MHz	1GHz
Rise time	$\leq 3.5ns$	$\leq 1.75ns$	$\leq 1ns$	$\leq 700ps$	$\leq 438ps$	$\leq 350ps$
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), $\pm 25V$ 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: 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), $\pm 25V$ OP2000(MCX), $\pm 1000V$ Optional: OP20(MMCX), $\pm 10V$ OP100(MMCX), $\pm 50V$ OP5000(MCX), $\pm 2500V$ OP10000(LCX), $\pm 5000V$		
Noise	$<0.45mVrms$			$<0.45mVrms$		
DC Gain Accuracy	1%					
Common Mode Voltage Range	85kVpk					
Power Supply	DC 12V					
Fiber cable length	2m (Customizable)					
Interface	Universal BNC					



▲ 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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