SigOFIT Optical-fiber Isolated Probe
MOIP Series

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

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Basic Operation and Precuations

Shenzhen Micsig Technology Co., Ltd.

www.micsig.com

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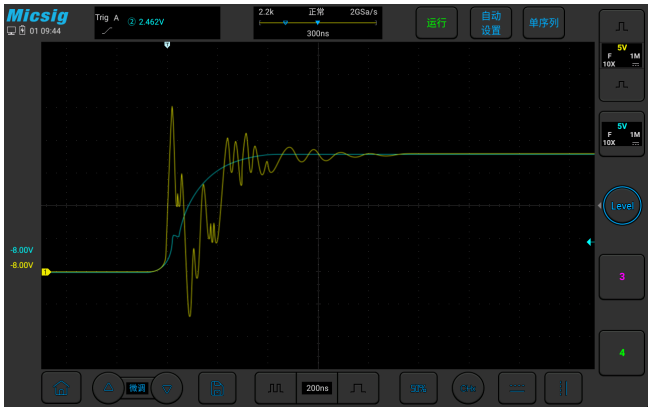
Product Overview & Key Features

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

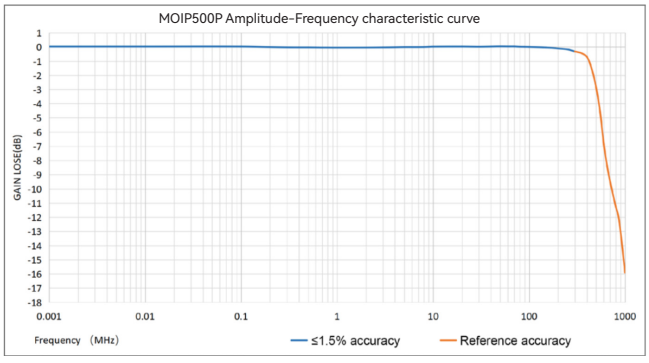
- SigOFIT probe delivers highest CMRR: over 128dB at 100MHz, up to 108dB at 1GHz. It's the ultimate referee of signal fidelity measured by other voltage probes.

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≤1%, while noise ≤ 0.45mVrms. 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 ±0.01V to ±6250V, achieving full-range output and very high signal-to-noise ratio.

Compact & Simple

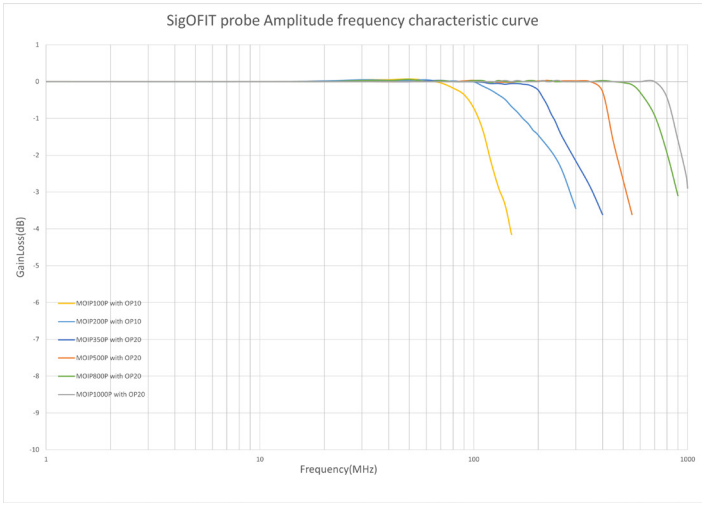
- Smaller size than traditional differential probes, more accurate probe tips, makes it much easier and flexible to use.

Efficient & Affordable

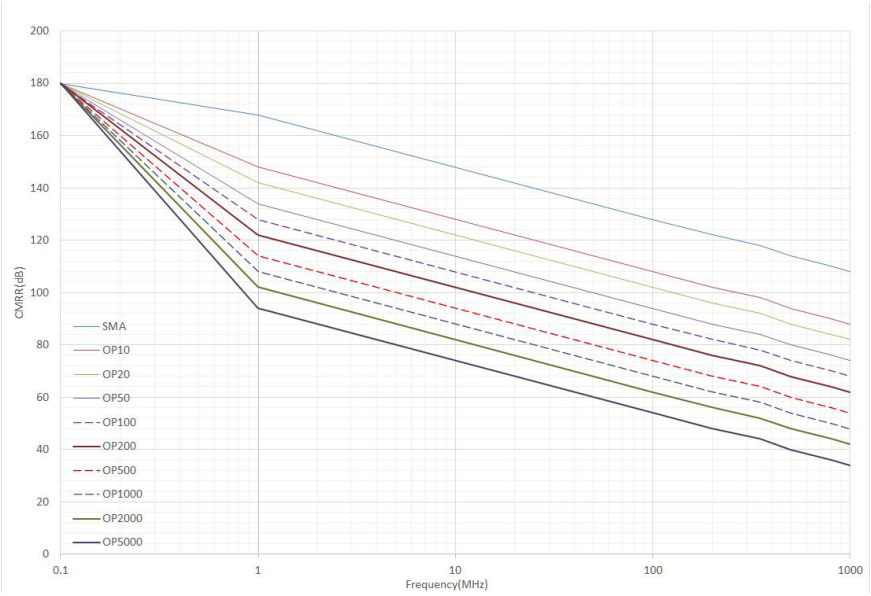
- Fastest response, can be tested immediately after power-on, Auto Calibration in less than 1 second, ensures accurate signal output in real time.

Specifications

Model	MOIP100P	MOIP200P	MOIP350P	MOIP500P	MOIP800P	MOIP1000P
Bandwidth	100MHz	200MHz	350MHz	500MHz	800MHz	1GHz
Rise time	≤ 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(MMMCX), ±62.5V OP200(MCX), ±250V OP1000(MCX), ±1250V OP2000(MCX), ±2500V OP5000(LCX), ±6250V		Standard: OP20(MMCX), ±25V OP1000(MCX), ±1250V Optional: OP50(MMMCX), ±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			<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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