

SIGLENT Releases ODP6000B Series Optically Isolated Voltage Probes

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Driven by the increasing demand for highly reliable test equipment in fields such as semiconductors, new energy systems, and materials characterization, SIGLENT introduces the ODP6000B Series Optically Isolated Voltage Probes. The ODP6000B Series provides reliable solutions for testing floating high-voltage signals, third-generation semiconductor power devices, and new energy inverters.



High Bandwidth

Featuring bandwidth options of 500 MHz and 1 GHz, the ODP6000B Series utilizes advanced fiber optic transmission technology. Through electrical-optical-electrical conversion, it achieves complete electrical isolation between signal input and output, delivering ultra-high Common-Mode Rejection Ratio (CMRR). This makes it exceptionally suitable for testing switch-mode power supplies, motor drives, new energy inverters, and variable frequency drives. Particularly in high-frequency circuit testing involving third-generation semiconductors like Gallium Nitride (GaN) and Silicon Carbide (SiC), the ODP6000B excels at suppressing high-frequency common-mode noise, enabling precise measurement results.

High Performance

Compared to conventional probes, optically isolated probes offer superior CMRR and isolation voltage. They achieve an outstanding CMRR of up to 160 dB when measuring low-frequency DC signals, and maintain a robust 70 dB CMRR even at 1 GHz. This ensures effective suppression of common-mode interference across both low and high frequencies. Additionally, these probes provide an isolation voltage rating as high as ± 60 kV, enabling safe electrical isolation during floating high-voltage signal testing and protecting both engineers and test equipment from hazardous high-voltage circuits.

Wide Measurement Range

When testing high-voltage or high-power circuits, the ODP6000B Series, combined with various attenuators, can measure a wide range of voltage signals from millivolts to kilovolts without compromising signal-to-noise ratio. This exceptional versatility provides an efficient solution for testing wide-bandgap (WBG) semiconductor circuits.

ODP6000B Series Electrical Specifications

	ODP6050B	ODP6100B
Bandwidth	500 MHz	1 GHz
Rise time	≤ 0.7 ns	≤ 0.4 ns
Terminal load	50 Ω	50 Ω
Output voltage range	± 0.5 V	± 0.5 V
DC accuracy	$\leq \pm 1\%$	$\leq \pm 1\%$
Isolation voltage (DC + Peak AC)	± 60 kV	
CMRR typical values (using standard attenuators)	DC-10 MHz: 160 dB 10 MHz-100 MHz: 110 dB 100 MHz-300 MHz: 100 dB 300 MHz-500 MHz: 90 dB	
ODP6000B standard 50X/1000X/2000X/5000X attenuator	500 MHz-800 MHz: 80 dB 800 MHz-1000 MHz: 70 dB	
Power supply method	Front end: battery powered, with a working time of approximately 8 hours and a standby time of approximately 30 days Rear end: USB 5 V/2 A	
Auto calibration	Yes	
Optical fiber length	Around 2 m	



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