

5. Operation Steps

- 1) **Power the probe:** Use standard USB-C cable to connect the differential probe to USB port of the oscilloscope;
- 2) **Twist the leads:** Twist the input leads together as much as possible could eliminate noise and improve high frequency response ability;
- 3) **Connect to oscilloscope:** Connect the BNC end of the probe to oscilloscope channel (make sure the oscilloscope is grounded);
- 4) **Select Range:** Select appropriate voltage range according to the measured signal;
- 5) **Connect the DUT:** Use test clips or hooks to connect the DUT, if an overvoltage alarm occurs, disconnect the power supply and the circuit immediately;
- 6) **Set the oscilloscope.**

6. Warranty

- 1) Micsig warrants the main body of this differential probe for 1 year. During the warranty period, Micsig will be responsible for free maintenance for any failure caused by the quality of the product under normal use.
- 2) Under the following circumstances, Micsig will refuse to provide maintenance services or charge for a fee:
 - a. No packaging or anti-counterfeiting label.
 - b. Anti-counterfeit label has been altered or blurred beyond recognition.
 - c. Unauthorized disassembly, such as: changing wires, dismantling internal components, etc.
 - d. No sales voucher or the content of sales voucher does not match the product.

7. Safety Precautions

- 1) Non-professionals do not open the product casing;
- 2) Do not use while case is open;
- 3) Do not touch any bare metal while testing;
- 4) Disconnect the power supply and circuit immediately when over range;
- 5) Do not use in flammable and explosive environments;

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Micsig

High Voltage Differential Probe MDP Series

User Guide

1. Overview

Originated from Micsig's cutting-edge SigOFIT™ technology, the MDP series high-voltage differential probe has very low noise floor, excellent amplitude-frequency characteristics and industry-leading common mode rejection capability, allow users to test high-frequency and high-voltage signals with ease.

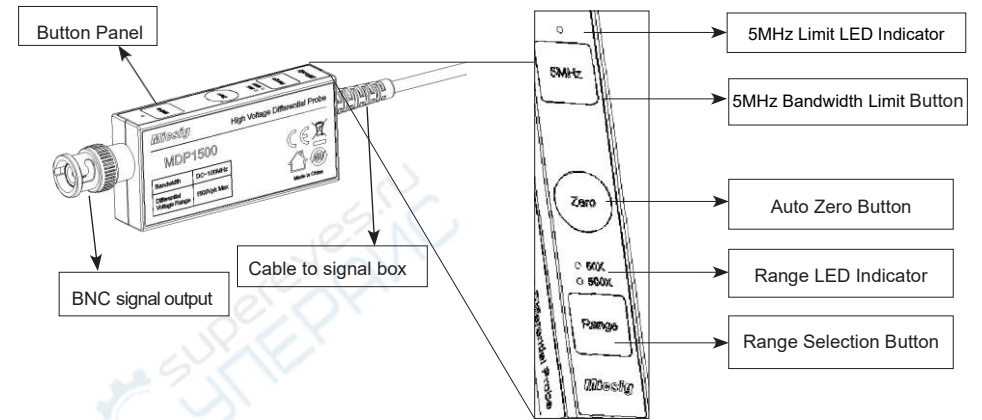


2. Characteristics

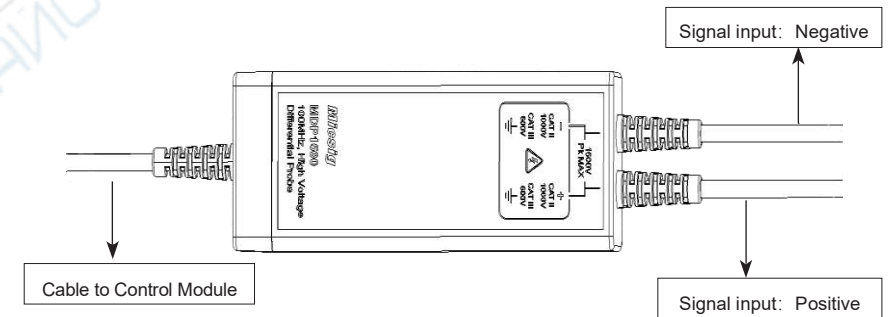
Model	MDP700	MDP701	MDP1500	MDP1501	MDP3000	MDP3001
Bandwidth	100MHz	150MHz	100MHz	150MHz	100MHz	150MHz
Rise time	≤3.5ns	≤2.33ns	≤3.5ns	≤2.33ns	≤3.5ns	≤2.33ns
Attenuation	20X / 200X		50X / 500X		100X / 1000X	
Accuracy	±2%		±2%		±2%	
Max. Differential Voltage (DC+AC PK)	70V (20X) 700V (200X)		150V (50X) 1500V (500X)		300V (100X) 3000V (1000X)	
Max. Voltage to ground	CAT I 600V CAT II 450V		CAT II 1000V CAT III 600V		CAT III 1000V	
Noise	Full Bandwidth: 20X: ≤ 0.9mVrms 200X: ≤ 0.4mVrms 5MHz bandwidth limit: 20X: ≤ 0.4mVrms 200X: ≤ 0.35mVrms	Full Bandwidth: 50X: ≤ 0.9mVrms 500X: ≤ 0.4mVrms 5MHz bandwidth limit: 50X: ≤ 0.4mVrms 500X: ≤ 0.35mVrms	Full Bandwidth: 100X: ≤ 0.9mVrms 1000X: ≤ 0.4mVrms 5MHz bandwidth limit: 100X: ≤ 0.4mVrms 1000X: ≤ 0.35mVrms			
CMRR	DC: >-80dB; 100kHz: >-60dB 10MHz: >-30dB; 100MHz: >-26dB					
Input impedance	16MΩ/1.5pF(differential) 8MΩ/3pF(each input to ground)	16MΩ/1.5pF(differential) 8MΩ/3pF(each input to ground)	20MΩ/1.5pF(differential) 10MΩ/3pF(each input to ground)			
Delay	11.99ns(20X) 12.27ns(200X)	11.99ns(50X) 12.27ns(500X)	11.99ns(100X) 12.27ns(1000X)			
Output voltage	≤3V					
Power supply	2W, USB Type-C					
Overrange	LED flashes, Buzzer beeps					
Dimensions	Control module: L*W*H: 91 *33 *15 /mm Signal box: L*W*H: 100 * 36 * 20 /mm					
Cable length	Approx. 8 cm (Input); Approx. 120cm (Output)					
Temperature	Operating: 0℃ ~ 40 ℃ Non-operating: -30 ℃ ~ 70 ℃					
Humidity	Operating: 5 ~ 85% RH (0℃ ~ 40 ℃) Non-operating: 5% ~ 85% RH (≤40 ℃) ; 5% ~ 45% RH (40 ℃ ~70 ℃)					

3. Panel Description

● Control Module



● Signal Box



4. Precautions

1) Calibrate the probe before use:

Short-circuit the input ends, power on, press “Zero” button, 5MHz LED light flashes, after hearing a “Di” sound, means calibration succeeded; if hearing “Di Di Di” sound, means calibration failed, needs to be calibrated again;

2) Recommend to use on ≥ 100MHz bandwidth oscilloscope, and input impedance ≥ 1MΩ.

3) Recommend to use after 10 mins warm-up to get more accurate result.

4) When Range LED indicator flashes and beeps rapidly, indicating Over-voltage warning, please switch to higher range.