

## 5. Operation Steps

- 1) **Power the probe:** Use standard USB-C cable to connect the differential probe to USB port of the oscilloscope;
- 2) **Connect to oscilloscope:** Connect the BNC end of the probe to oscilloscope channel (make sure the oscilloscope is grounded);
- 3) **Select Range:** Select appropriate voltage range according to the measured signal;
- 4) **Connect the DUT:** Use test clips or hooks to connect the DUT, if an over-voltage alarm occurs, disconnect the power supply and the circuit immediately;
- 5) **Set the oscilloscope:** Set the input impedance to 50Ω, adjust to proper waveform.

## 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;

### Shenzhen Micsig Technology Co., Ltd.

Tel: +86-755-88600880 Email: sales@micsig.com

Add: A106, Huafeng Robot Industrial Park, Hangcheng Rd, Bao'an, Shenzhen, Guangdong, China, 518126

# Micsig

## Quick Guide

### High Voltage Differential Probe -- MDP series

**Bandwidth: 300MHz / 400MHz / 500MHz**

#### 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.

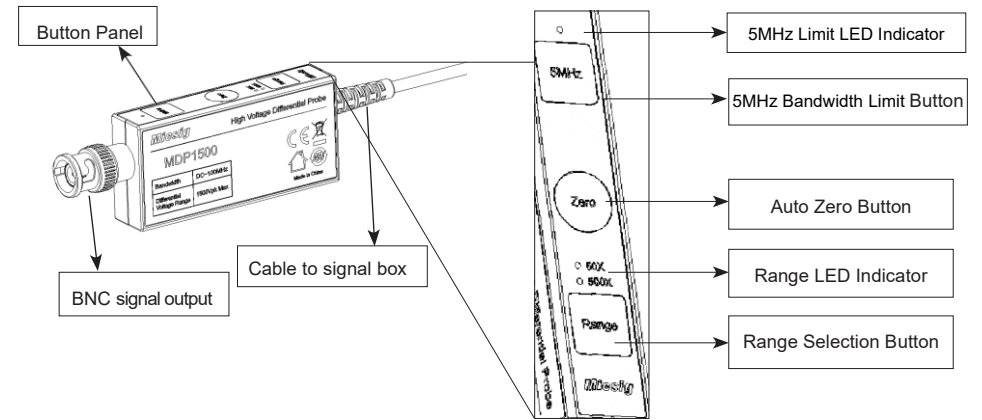


## 2. Characteristics

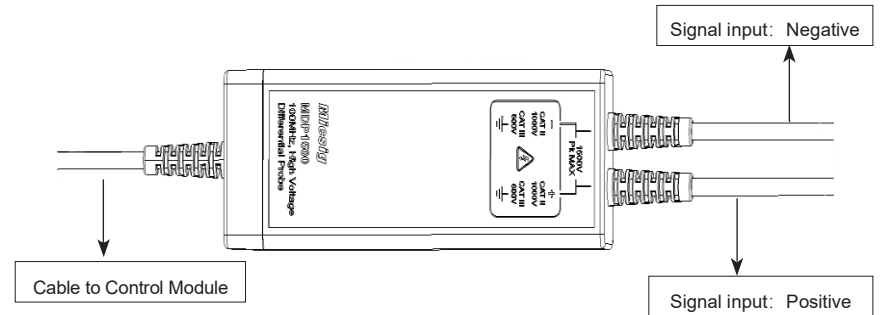
Model	MDP703	MDP704	MDP705	MDP1503	MDP1504	MDP1505	MDP3003	MDP3004	MDP3005
Bandwidth	300MHz	400MHz	500MHz	300MHz	400MHz	500MHz	300MHz	400MHz	500MHz
Rise time	≤3.5ns	≤2.33ns	≤1.75ns	≤3.5ns	≤2.33ns	≤1.75ns	≤3.5ns	≤2.33ns	≤1.75ns
Attenuation	20X / 200X			50X / 500X			100X / 1000X		
Accuracy	±2%			±2%			±2%		
Max. input 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	<b>Full Bandwidth:</b> 20X: ≤ 22mVrms 200X: ≤ 80mVrms <b>5MHz bandwidth limit:</b> 20X: ≤ 8mVrms 200X: ≤ 70mVrms			<b>Full Bandwidth:</b> 50X: ≤ 45mVrms 500X: ≤ 200mVrms <b>5MHz bandwidth limit:</b> 50X: ≤ 20mVrms 500X: ≤ 175mVrms			<b>Full Bandwidth:</b> 100X: ≤ 90mVrms 1000X: ≤ 400mVrms <b>5MHz bandwidth limit:</b> 100X: ≤ 40mVrms 1000X: ≤ 350mVrms		
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	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) The bandwidth of the oscilloscope should be no less than the bandwidth of the probe, channel input impedance should be 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.