

5. Operation Steps

- 1) Power the probe: Connect the probe to the oscilloscope USB via USB-C cable;
- 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 signal;
- 4) Connect the DUT: Use clips or hooks to connect the DUT, if an over-voltage alarm occurs, disconnect the power supply and the circuit immediately;
- 5) Set on the oscilloscope.

*Note: Try not to use extension leads when measuring, it could bring more noise floor. If must use the extension leads, please twist the leads together to reduce noise, and the input frequency should not exceed 5MHz. If it exceeds 5MHz, the output will have a certain error.

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;

Micsig

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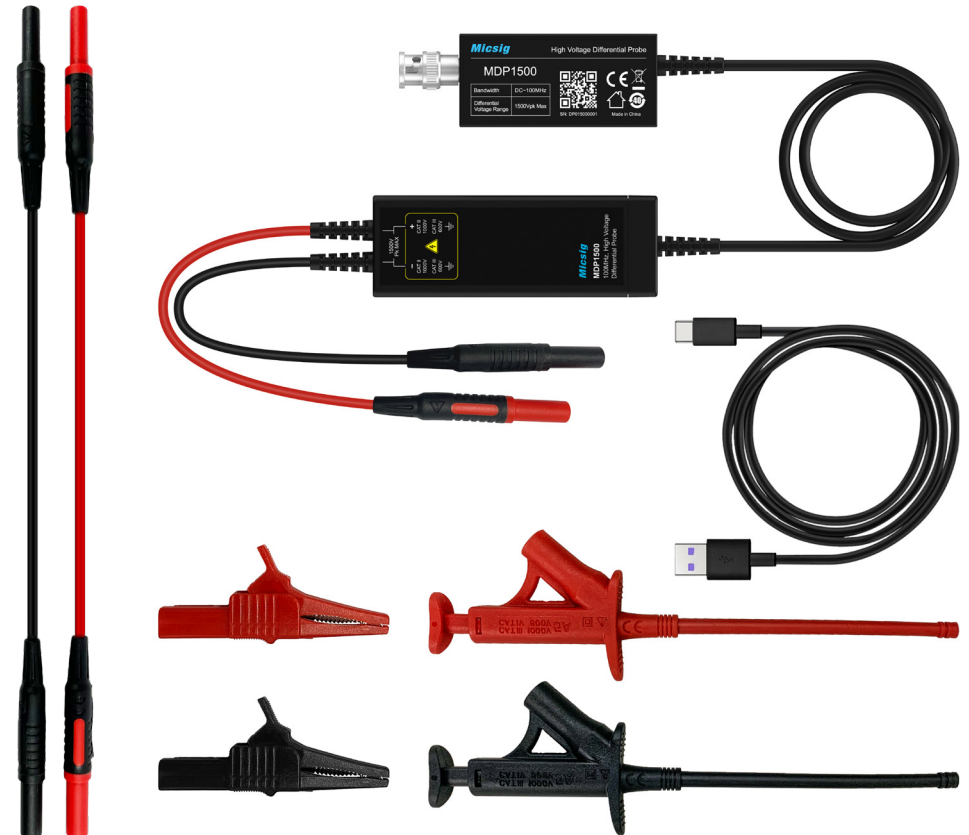
Quick Guide

High Voltage Differential Probe -- MDP series

Bandwidth: 100MHz / 150MHz / 200MHz

1. Overview

Originated from Micsig's cutting-edge SigOFIT™ technology, the MDP series highvoltage 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.



* Extension leads, twist together can lower noise

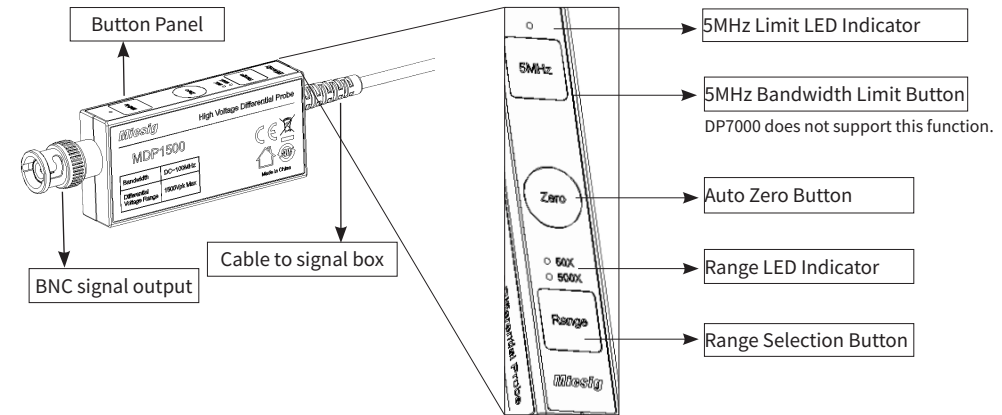
2. Characteristics

Model	MDP700	MDP701	MDP702	MDP1500	MDP1501	MDP1502	MDP3000	MDP3001	MDP3002	DP7000
Bandwidth	100MHz	150MHz	200MHz	100MHz	150MHz	200MHz	100MHz	150MHz	200MHz	100MHz
Rise time	≤ 3.5ns	≤ 2.33ns	≤ 1.75ns	≤ 3.5ns	≤ 2.33ns	≤ 1.75ns	≤ 3.5ns	≤ 2.33ns	≤ 1.75ns	≤ 3.5ns
Attenuation	20X / 200X		50X / 500X		100X / 1000X		100X / 1000X		100X / 1000X	
Accuracy	±2%		±2%		±2%		±2%		±2%	
Max. input Differential Voltage (DC+AC PK)	70V (20X) 700V (200X)		150V (50X) 1500V (500X)		300V (100X) 3000V (1000X)		700V (100X) 7000V (1000X)		700V (100X) 7000V (1000X)	
Max. Voltage to ground	600V (CAT I) 450V (CAT II)		1000V (CAT II) 600V (CAT III)		1000V (CAT III)		7000Vpk		7000Vpk	
Noise	Full Bandwidth: 20X: ≤ 22mVrms 200X: ≤ 80mVrms 5MHz bandwidth limit: 20X: ≤ 8mVrms 200X: ≤ 70mVrms		Full Bandwidth: 50X: ≤ 45mVrms 500X: ≤ 200mVrms 5MHz bandwidth limit: 50X: ≤ 20mVrms 500X: ≤ 175mVrms		Full Bandwidth: 100X: ≤ 90mVrms 1000X: ≤ 400mVrms 5MHz bandwidth limit: 100X: ≤ 40mVrms 1000X: ≤ 350mVrms		Full Bandwidth: 100X: ≤ 86mVrms 1000X: ≤ 205mVrms		Full Bandwidth: 100X: ≤ 86mVrms 1000X: ≤ 205mVrms	
CMRR	DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB		DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB		DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB		DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB		DC : >-80dB 100kHz: >-60dB 10MHz: >-30dB 100MHz: >-26dB	
Delay	11.99ns(20X) 12.27ns(200X)		11.99ns(50X) 12.27ns(500X)		11.99ns(100X) 12.27ns(1000X)		11.2ns(100X) 10.65ns(1000X)		11.2ns(100X) 10.65ns(1000X)	
Input impedance	16MΩ/1.5pF(differential) 8MΩ/3pF(each input to ground)		16 MΩ/1.5pF(differential) 8MΩ/3pF(each input to ground)		20MΩ/1.5 pF(differential) 10MΩ/3pF(each input to ground)		60MΩ / 0.78pF(differential) 30MΩ / 1.6pF(each input to ground)		60MΩ / 0.78pF(differential) 30MΩ / 1.6pF(each input to ground)	
Output voltage	≤ 3.5V		≤ 3V		≤ 3V		≤ 7V		≤ 7V	
Power			2W		2W		5W		5W	
Power supply			USB Type-C / Standard adapter		USB Type-C / Standard adapter		Standard adapter		Standard adapter	
Overrange			LED flashes, Buzzer beeps		LED flashes, Buzzer beeps		LED flashes, Buzzer beeps		LED flashes, Buzzer beeps	
Dimensions			Control module: L*W*H: 91 *33 *15 /mm Signal box: L*W*H: 100 * 36 * 20 /mm		Control module: L*W*H: 91 *33 *15 /mm Signal box: L*W*H: 100 * 36 * 20 /mm		Control module: L*W*H: 91 *33 *15 /mm Signal box: L*W*H: 100 * 36 * 20 /mm		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)		Approx. 8 cm (Input); Approx. 120cm (Output)		Approx. 8 cm (Input); Approx. 120cm (Output)		Approx. 8 cm (Input); Approx. 120cm (Output)	
Temperature			Operating: 0°C ~ 40 °C Non-operating: -30 °C ~ 70 °C		Operating: 0°C ~ 40 °C Non-operating: -30 °C ~ 70 °C		Operating: 0°C ~ 40 °C Non-operating: -30 °C ~ 70 °C		Operating: 0°C ~ 40 °C Non-operating: -30 °C ~ 70 °C	
Humidity			Operating: 5 ~ 85% RH (0°C ~ 40 °C) Non-operating: 5% ~ 85% RH (≤ 40 °C) ; 5% ~ 45% RH (40 °C ~70 °C)		Operating: 5 ~ 85% RH (0°C ~ 40 °C) Non-operating: 5% ~ 85% RH (≤ 40 °C) ; 5% ~ 45% RH (40 °C ~70 °C)		Operating: 5 ~ 85% RH (0°C ~ 40 °C) Non-operating: 5% ~ 85% RH (≤ 40 °C) ; 5% ~ 45% RH (40 °C ~70 °C)		Operating: 5 ~ 85% RH (0°C ~ 40 °C) Non-operating: 5% ~ 85% RH (≤ 40 °C) ; 5% ~ 45% RH (40 °C ~70 °C)	

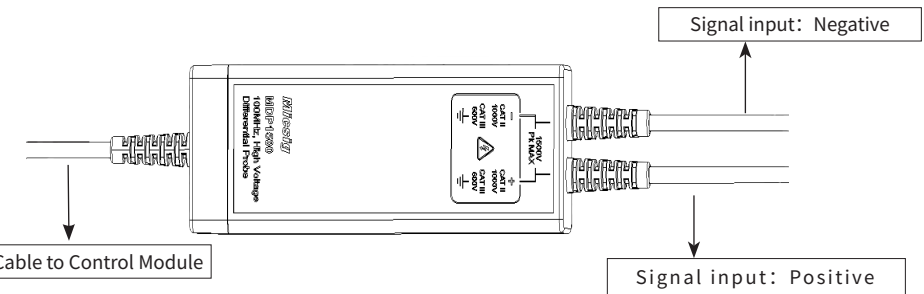
3. Panel Description

MDP differential probe mainly consists of control module and signal box.

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 Overvoltage warning, please switch to higher range.