High-Voltage Differential Probe

DP series



*Image for reference only. Product subject to change.

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Product Overview

Micsig DP Series High-Voltage Differential Probe offers a bandwidth of 100-300 MHz and a maximum input voltage of 7000 Vpk. With a standard BNC interface, they are compatible with oscilloscopes of most brands.

Features include one-button calibration, overload alarm, range power-off memory, dual voltage ranges, and a high-resistance, low-capacitance design to minimize loading. The probe delivers strong amplitude-frequency performance, and a high common-mode rejection ratio.

Command-based programming enables automated testing. 5 MHz bandwidth-limit function helps suppress high-frequency noise, delivering clearer waveforms.

Product Features



Command & Programming Control

The Type-C interface supports data communication, enabling connection to a computer for command control.



5MHz Bandwidth Limit

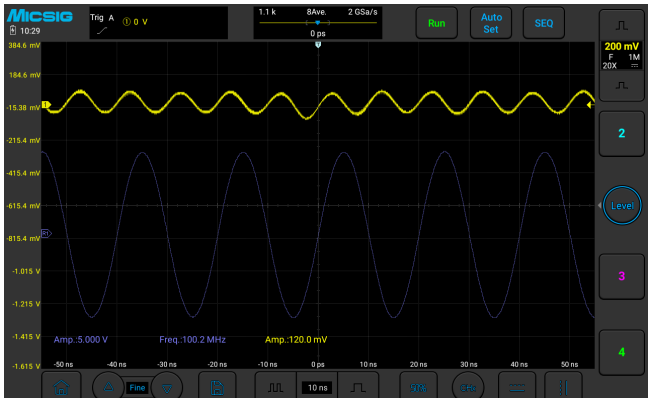
Ideal for measuring switching frequencies of FETs in most power supply applications, effectively filtering out high-frequency noise and interference.

Dual Range Selection

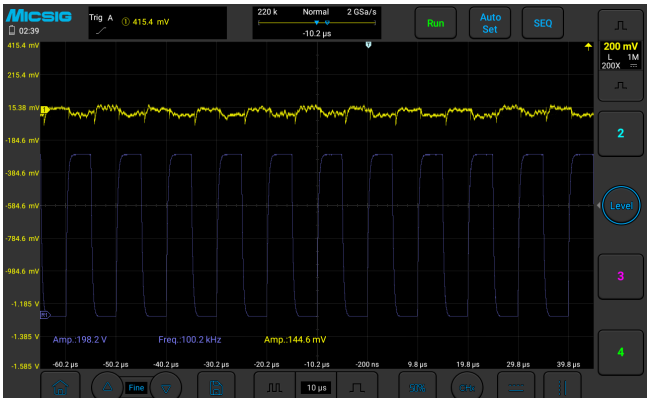
One-button auto zero calibrationand flexible dual-range switching，improving signal-to-noise ratio.

Higher Accuracy and CMRR

DP series has high input impedance and low input capacitance, minimized load effect, greatly improved the accuracy of the differential signal. High common mode rejection capability, able to meet floating measurements of high common mode voltage at high frequencies.



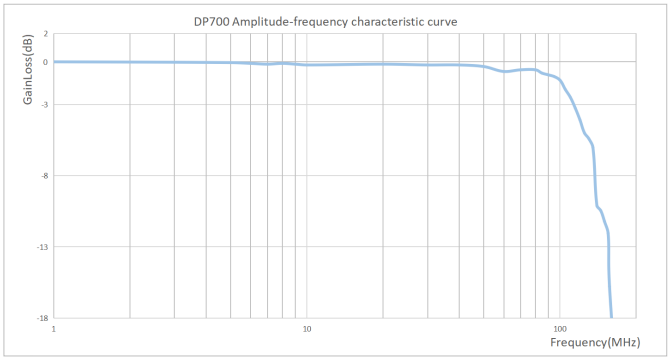
DP700, @100MHz, 5V, output common mode signal amplitude 120mV, CMRR is -32dB

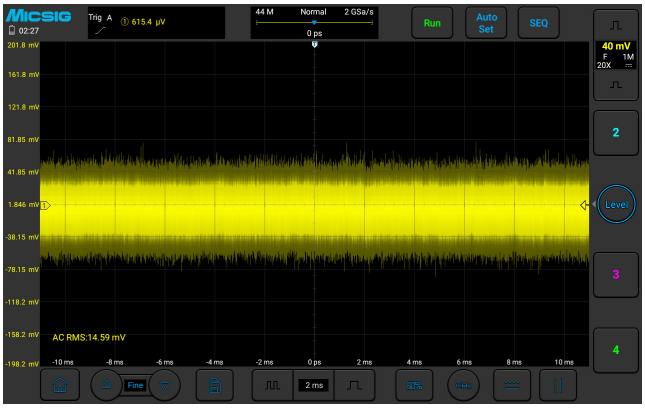


DP700, @100KHz, 198.2V, output common mode signal amplitude 144.6mV, CMRR > -62dB

Excellent Amplitude Frequency Characteristics

DP series features excellent bandwidth flatness. Within 100 MHz bandwidth, the gain/loss variation is small. It maintains the accuracy of signal test even in high-frequency bandwidth.





Lower Noise Floor

The extremely low noise floor enhances the sensitivity of measurement and can accurately measure small signal changes.

Specifications

Model	DP700	DP1500	DP3000	DP7000
Bandwidth	100MHz			
Max. input differential voltage (DC+AC PK)	70V (20X) 700V (200X)	150V (50X) 1500V (500X)	300V (100X) 3000V (1000X)	700V (100X) 7000V (1000X)
Rise time	≤ 3.5ns	≤ 3.5ns	≤ 3.5ns	≤ 3.5ns
Noise	Full bandwidth: 20X: ≤ 20mVrms 200X: ≤ 90mVrms	Full bandwidth: 50X: ≤ 50mVrms 500X: ≤ 200mVrms	Full bandwidth: 100X: ≤ 100mVrms 1000X: ≤ 500mVrms	Full bandwidth: 100X: ≤ 200mVrms 1000X: ≤ 600mVrms
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
Delay time	6.5ns (20X) 3.5ns (200X)	6.2ns (50X) 2.9ns (500X)	3.7ns (100X) 3.2ns (1000X)	4.2ns(100X) 4.1ns(1000X)
Input impedance	6MΩ/1.67pF (differential) 3MΩ/3.3pF (each input to ground)	13.2MΩ/1.67pF (differential) 6.6MΩ/3.3pF (each input to ground)	30MΩ/0.78pF (differential) 15MΩ/1.57pF (each input to ground)	120MΩ/0.78pF (differential) 60MΩ/1.57pF (each input to ground)
Output impedance	1 MΩ			

Model	DP702	DP1502	DP3002	DP7002
Bandwidth	200MHz			
Max. input differential voltage (DC+AC PK)	70V (20X) 700V (200X)	150V (50X) 1500V (500X)	300V (100X) 3000V (1000X)	700V (100X) 7000V (1000X)
Rise time	≤ 2.2ns (typical: 1.8ns)	≤ 2.2ns (typical: 1.8ns)	≤ 2.2ns (typical: 1.8ns)	≤ 2.2ns (typical: 1.8ns)
Noise	Full bandwidth: 20x: ≤ 24mVrms 200x: ≤ 82mVrms	Full bandwidth: 50x: ≤ 50mVrms 500x: ≤ 190mVrms	Full bandwidth: 100x: ≤ 185mVrms 1000x: ≤ 610mVrms	Full bandwidth: 100x: ≤ 210mVrms 1000x: ≤ 560mVrms
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
Delay time	4.3ns (20X) 1.5ns (200X)	6.2ns (50X) 3.4ns (500X)	3.1ns (100X) 2.8ns (1000X)	3.8ns (100X) 3.7ns (1000X)
Input impedance	6MΩ/1.67pF (differential) 3MΩ/3.3pF (each input to ground)	13.2MΩ/1.67pF (differential) 6.6MΩ/3.3pF (each input to ground)	30MΩ/0.35pF (differential) 15MΩ/0.7pF (each input to ground)	120MΩ/0.35pF (differential) 60MΩ/0.7pF (each input to ground)
Output impedance	1 MΩ			

Model	DP703	DP1503	DP3003	DP7003
Bandwidth	300MHz			
Max. input differential voltage (DC+AC PK)	70V (20X) 700V (200X)	150V (50X) 1500V (500X)	300V (100X) 3000V (1000X)	700V (200X) 7000V (2000X)
Rise time	≤ 1.5ns (typical: 1.2ns)	≤ 1.5ns (typical: 1.2ns)	≤ 1.5ns (typical: 1.2ns)	≤ 1.5ns (typical: 1.2ns)
Noise	Full bandwidth: 20x: ≤ 80rms 200x: ≤ 110rms	Full bandwidth: 50x: ≤ 180mVrms 500x: ≤ 205mVrms	Full bandwidth: 100x: ≤ 400mVrms 1000x: ≤ 480mVrms	Full bandwidth: 200x: ≤ 550mVrms 2000x: ≤ 1Vrms
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
Delay time	5.0ns (20X) 5.0ns (200X)	5.2ns (50X) 5.1ns (500X)	5.2ns (100X) 4.1ns (1000X)	5.1ns(200X) 4.1ns(2000X)
Input impedance	6MΩ/1.67pF (differential) 3MΩ/3.3pF (each input to ground)	13.2MΩ/0.78pF (differential) 6.6MΩ/1.57pF (each input to ground)	30MΩ/0.35pF (differential) 15MΩ/0.7pF (each input to ground)	120MΩ/0.35pF (differential) 60MΩ/0.7pF (each input to ground)
Output impedance	50 Ω			

Parameters	
Accuracy (Typical)	±2% (Customizable 1% accuracy)
Power supply	DC 5V
Overload indication	LED flash, buzzer
Dimension	L：13.5cm W：5cm H：2.5cm
Input cable length	31cm
Output cable length	100cm
Temperature	Working：0℃ ~ 40 ℃ Non-working：-30 ℃ ~ 70 ℃
Humidity	Working：5 ~ 85% RH (0℃ ~ 40 ℃) Non-working：5% ~ 85% RH (≤ 40 ℃)；5% ~ 45% RH (40 ℃ ~70 ℃)

Standard Accessories

Model	Standard Accessories
High Voltage Differential Probe DP Series	Main unit*1
	Extendable Hook Pliers*1 Pair
	Alligator Clips*1 Pair
	Input Extension Cables*1 Pair
	Power adapter*1
	BNC Output Lin*1
	USB Line*1
	Quick Guide*1

Optional Accessories	
Suitcase	Shock-Resistant, Vibration-Resistant, Crush-Resistant, Dustproof, Moisture-Proof

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