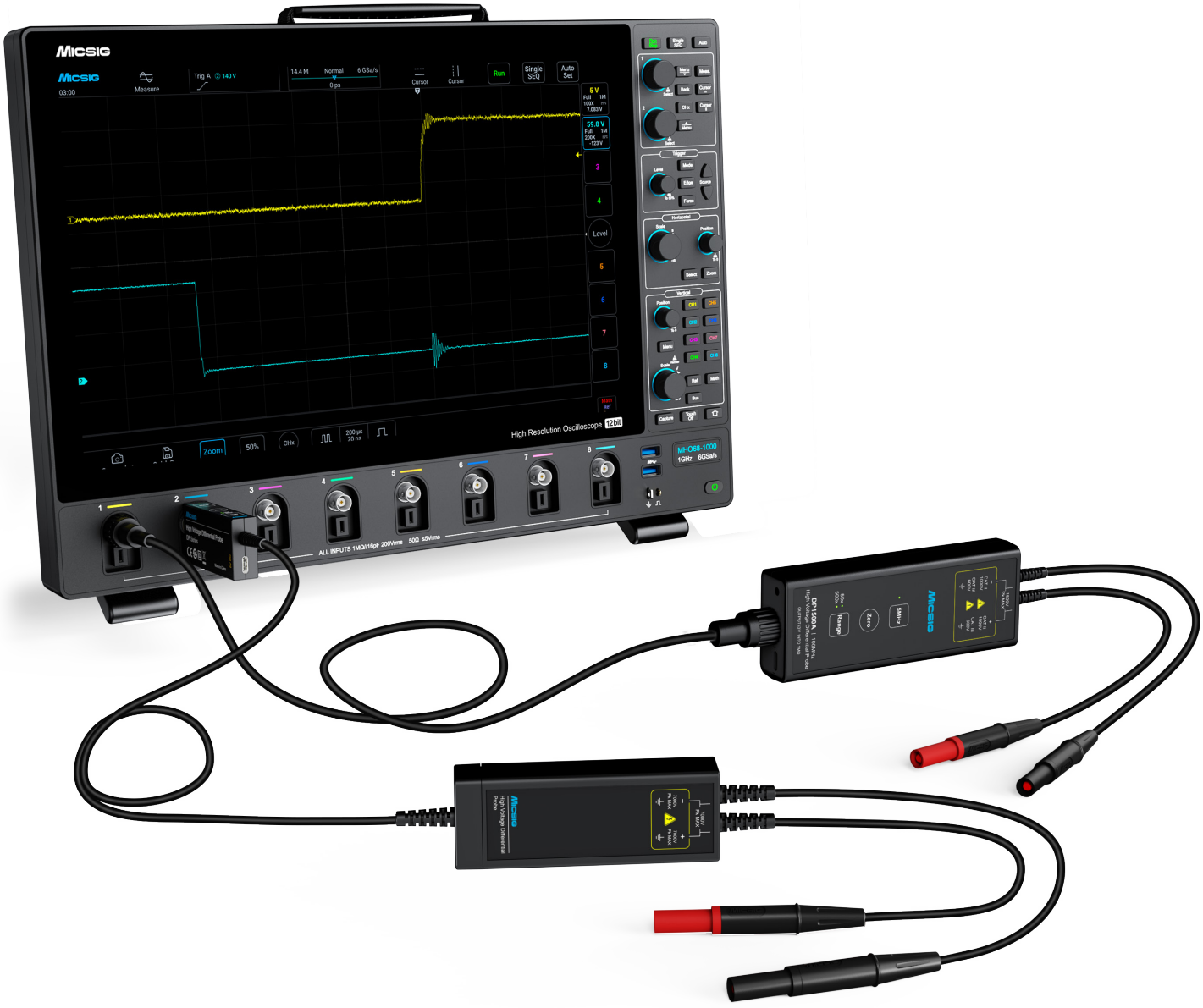
MICSIG 麦科信

High-Voltage Differential Probe

DP series



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Product Overview

The Micsig DP Series High-Voltage Differential Probes offer selectable bandwidths ranging from 100MHz to 500MHz, with a maximum differential input voltage of 7000Vpk.A standard BNC interface ensures compatibility with most of oscilloscope brands. With a compact thin design, the probes save workspace and feature one-click auto-zeroing for quick setup. High-impedance design and low input capacitance design minimize loading effects and improve measurement accuracy.

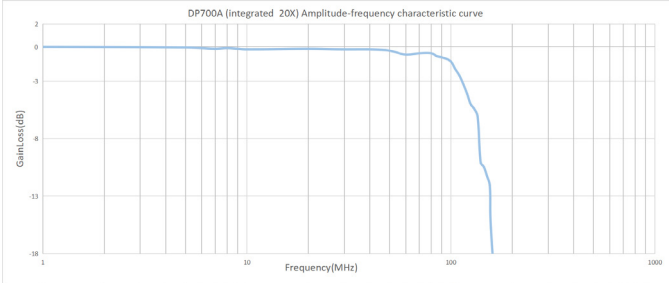
With a dual-range design, it provides the best signal-to-noise ratio for different test voltages. Featuring a high-impedance design and low input capacitance design, it minimizes the loading effect, and the measurement accuracy is as high as ±1%. Moreover, it has excellent amplitude-frequency characteristics and industry-leading common-mode rejection ratio.

The 5MHz bandwidth limiting function can effectively suppress high-frequency noise , enabling accurate and high-speed measurement of differential voltage signals.Ideal for EV power systems, solar inverters, switching power supplies, and floating or isolated high-voltage signal testing.

Product Features

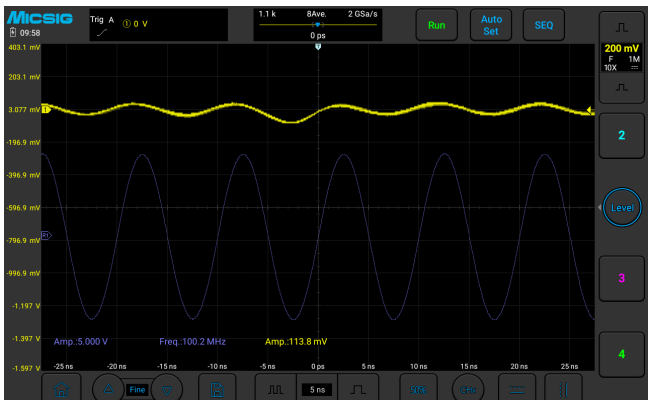
Excellent Amplitude Frequency Characteristics

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.

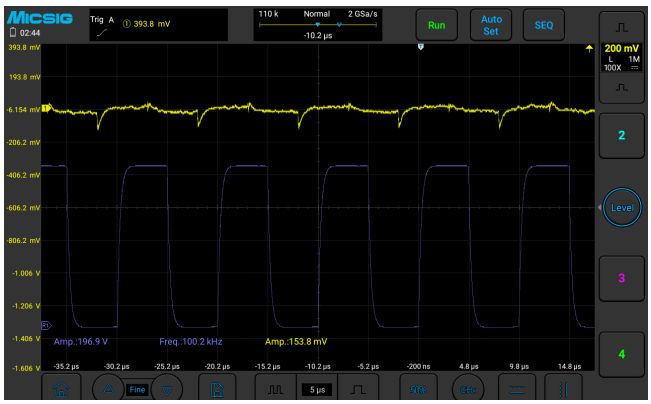


Higher Accuracy and CMRR

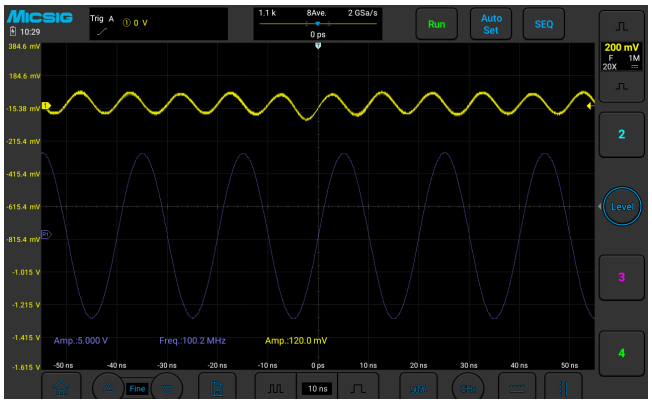
DP series has high input impedance and low input capacitance, minimized load effect, greatly improved the accuracy of the differential signal. High common mode rejection capability, able to meet floating measurements of high common mode voltage at high frequencies.



DP700, @100MHz, 5V, output common mode signal amplitude 113.8mV, CMRR is -32dB



DP700, @100KHz, 196.9V, output common mode signal amplitude 153.8mV, CMRR > -62dB

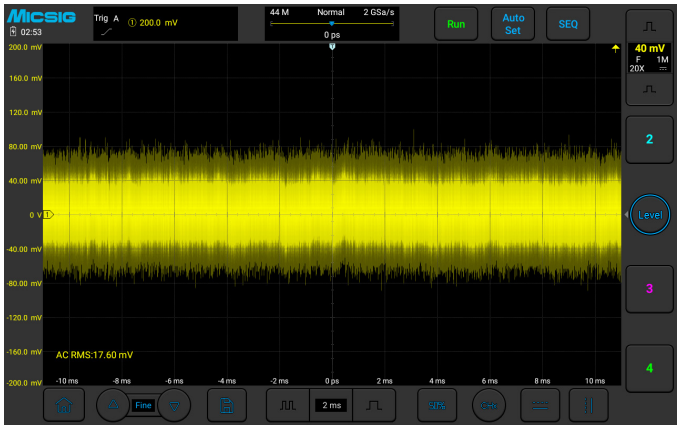


DP700A, @100MHz, 5V, output common mode signal amplitude 120mV, CMRR is -32dB

DP700A, @100KHz, 198.2V, output common mode signal amplitude 144.6mV, CMRR > -62dB

Lower Noise Floor

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



DP700, @20X, full bandwidth (100MHz) , noise floor: 17.6mVrms

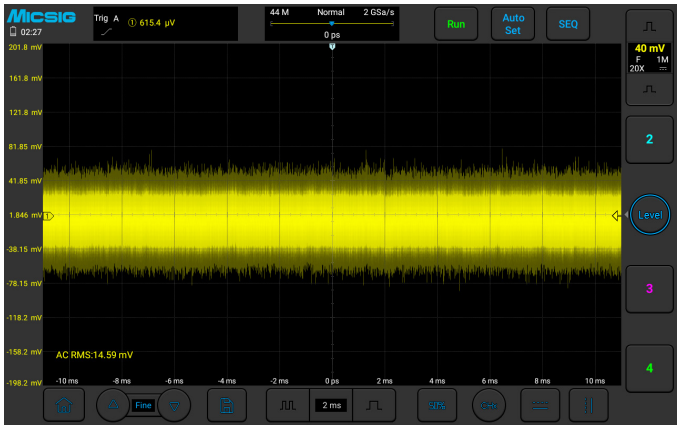
5MHz Bandwidth Limit

(*Available on 100-200MHz bandwidth only)

When measuring FET switching frequency in most switching power supplies, it could effectively eliminates high frequency noise.

BNC Interface

Standard BNC interface, compatible with most of oscilloscopes brands.



DP700A, @20X, full bandwidth (100MHz) , noise floor: 14.59mVrms

Dual-Range Selection

Improves signal-to-noise ratio, meet more test requirements.One-click instant zeroing, supports overload alarm, and range power-off memory.

Stronger Anti-Interference Ability

Built-in strong metal shielding (split design), more durable, and have stronger anti-interference ability.

Specifications (Split design)

Model	DP700	DP702	DP1500	DP1502	DP3000	DP3002	DP7000	DP7002
Bandwidth	100MHz	200MHz	100MHz	200MHz	100MHz	200MHz	100MHz	200MHz
Max. input differential voltage (DC+AC PK)	70V（20X） 700V（200X）		150V（50X） 1500V（500X）		300V（50X） 3000V（500X）		700V（100X） 7000V（1000X）	
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: 50X: ≤ 63mVrms 500X: ≤ 200mVrms 5MHz bandwidth limit: 50X: ≤ 25mVrms 500X: ≤ 150mVrms		Full bandwidth: 100X: ≤ 125mVrms 1000X: ≤ 400mVrms 5MHz bandwidth limit: 100X: ≤ 50mVrms 1000X: ≤ 300mVrms	
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	11.2ns(20X) 12.2ns(200X)		11.99ns(50X) 12.27ns(500X)		12.1ns(50X) 11.5ns(500X)		12.2ns(100X) 12.3ns(1000X)	
Input impedance	5MΩ/2pF(differential) 2.5MΩ/4pF(each input to ground)		16MΩ / 1.5pF (differential) 8MΩ / 3pF(each input to ground)		20MΩ/1.2 pF(differential) 10MΩ/2.4pF(each input to ground)		60MΩ/0.78pF(differential) 30MΩ/1.6pF(each input to ground)	
Output impedance	1MΩ		1MΩ		1MΩ		1MΩ	

*The previous model DP10007 has been upgraded to DP700.
*The previous model DP10013 has been upgraded to DP1500.
*The previous model DP20003 has been upgraded to DP3000.
Note: These models have not only been upgraded in performance (see parameter table), but also in appearance, which has been newly designed and made more compact and exquisite. When placing orders, please handle them according to the new model numbers.

Model	DP703	DP705	DP1503	DP1505	DP3003	DP3005
Bandwidth	300MHz	500MHz	300MHz	500MHz	300MHz	500MHz
Max. input differential voltage (DC+AC PK)	70V（20X） 700V（200X）		150V（50X） 1500V（500X）		300V（100X） 3000V（1000X）	
Noise	20X: ≤ 125mVrms 200X: ≤ 140mVrms		50X: ≤ 250mVrms 500X: ≤ 300mVrms		100X: ≤ 500mVrms 1000X: ≤ 600mVrms	
CMRR	DC: >-80dB 100kHz: >-60dB 20MHz: >-40dB		DC: >-80dB 100kHz: >-60dB 20MHz: >-40dB		DC: >-80dB 100kHz: >-60dB 20MHz: >-40dB	
Delay time	10.83ns (20X) 11.56ns (200X)		11ns (50X) 9.8ns (500X)		10.83ns (100X) 10.93ns (1000X)	
Input impedance	4MΩ/1.175pF (differential) 2MΩ/2.35pF (each input to ground)		20MΩ/1.175pF (differential) 10MΩ/2.35pF (each input to ground)		20MΩ/1.175 pF (differential) 10MΩ/2.35pF (each input to ground)	
Output impedance	50Ω		50Ω		50Ω	

Parameters	
Accuracy	±2%
Power supply	DC 5V
Overload indication	LED flash, buzzer
Dimension	control module: L: 91mm W: 33mm H: 15mm Signal box: L: 100mm W: 36mm H: 20mm
Input cable length	28cm
Output cable length	135cm
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 (Split design)

Model	Standard Accessories
High Voltage Differential Probe DP Series	Main unit*1
	Alligator clip*1 pair
	Expandable IC clip*1 pair
	Input extension cable*1 pair
	Power adapter*1
	USB Type-C cable*1
	Quick Guide*1

Specifications (Integrated design)

Model	DP700A	DP700A Pro	DP1500A	DP1500A Pro	DP3000A	DP3000A Pro
Bandwidth	100MHz	100MHz	100MHz	100MHz	100MHz	100MHz
Accuracy	±2%	±1%	±2%	±1%	±2%	±1%
Max. input differential voltage (DC+AC PK)	70V (20X) 700V (200X)		150V (50X) 1500V (500X)		300V (100X) 3000V (1000X)	
Noise	Full bandwidth: 20X: ≤ 20mVrms 200X: ≤ 90mVrms		Full bandwidth: 50X: ≤ 50mVrms 500X: ≤ 200mVrms		Full bandwidth: 100X: ≤ 100mVrms 1000X: ≤ 500mVrms	
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	
Delay time	11.7ns (20X) 11.7ns (200X)		12.5ns (50X) 12.1ns (500X)		11.7ns (100X) 11.5ns (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)	
Output impedance	1MΩ		1MΩ		1MΩ	

Parameters	
Accuracy	±1%，±2%
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 (Integrated design)

Model	Standard Accessories
High Voltage Differential Probe DP Series	Main unit*1
	Alligator clip*1 pair
	Extendable Hook Plier*1 pair
	Input extension cable*1 pair
	Power adapter*1
	USB Type-C cable*1
	Quick Guide*1

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