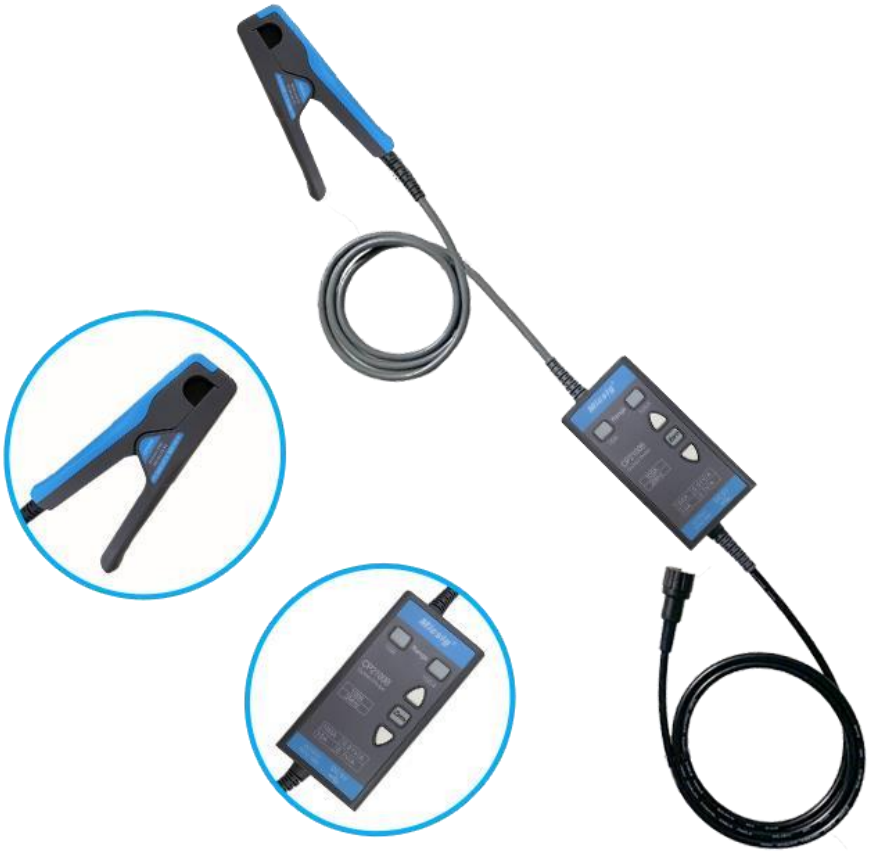
Micsig AC/DC Current Probes CP2100 Series User Manual

Applies to

CP2100A/CP2100B



Safety Precautions

- The measuring circuit should be CAT II 600V or below.
- Do not measure bare conductor.
- Do not touch the conductor under test and the sensor head while measuring.
- Do not operate in wet/damp conditions.
- Do not touch the instrument or the object under test with wet hands.
- Please use this product within the scope permitted by the terminal.
- Please use this product as required.
- Please ground the product through the USB power cable.

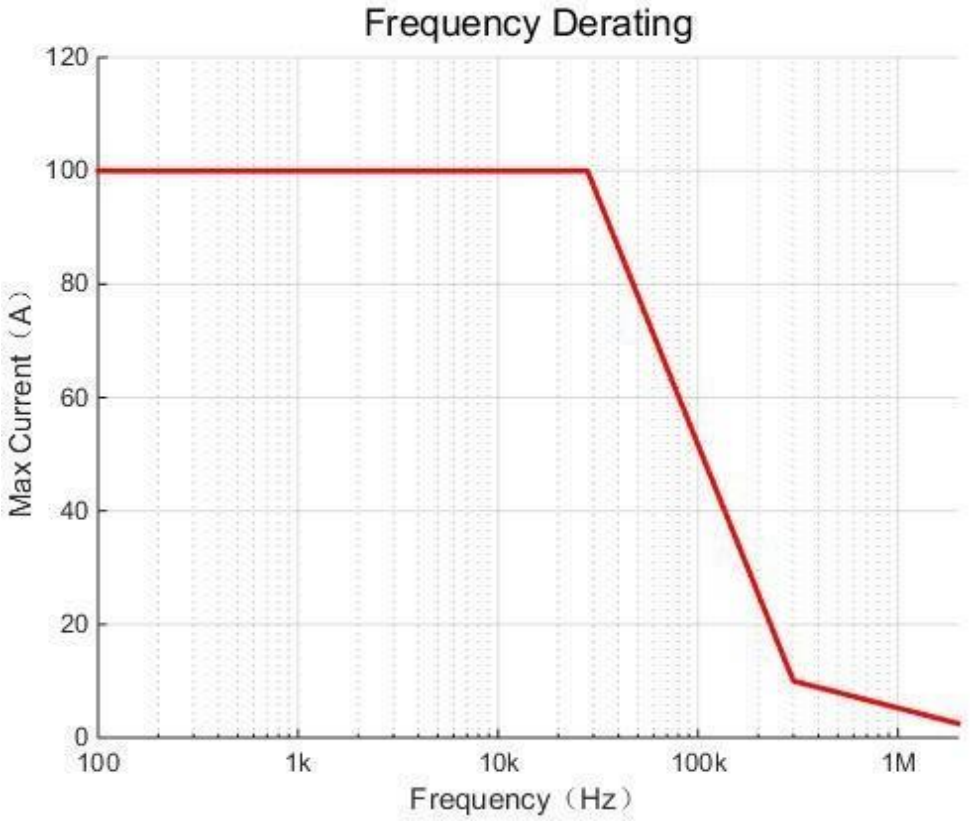
1. Introduction

The CP2100 series is a current probe that can measure both DC and AC. It is a split-type design that is small and beautiful. It uses a standard BNC interface for oscilloscopes or a multi-connector for adapters. The maximum current that can be measured is 100Apk
(70Arms); it is divided into 2 models, CP2100A measurable bandwidth range is DC~800KHz, CP2100B measurable bandwidth range is DC~2.5MHz,The CP2100 series current probe has two optional ranges: 10A and 100A . With automatic and manual zero adjustment, USB power supply, no additional power supply, making measurement more convenient. Often used in motor drive, power frequency, inverter, power supply, avionics and other fields.

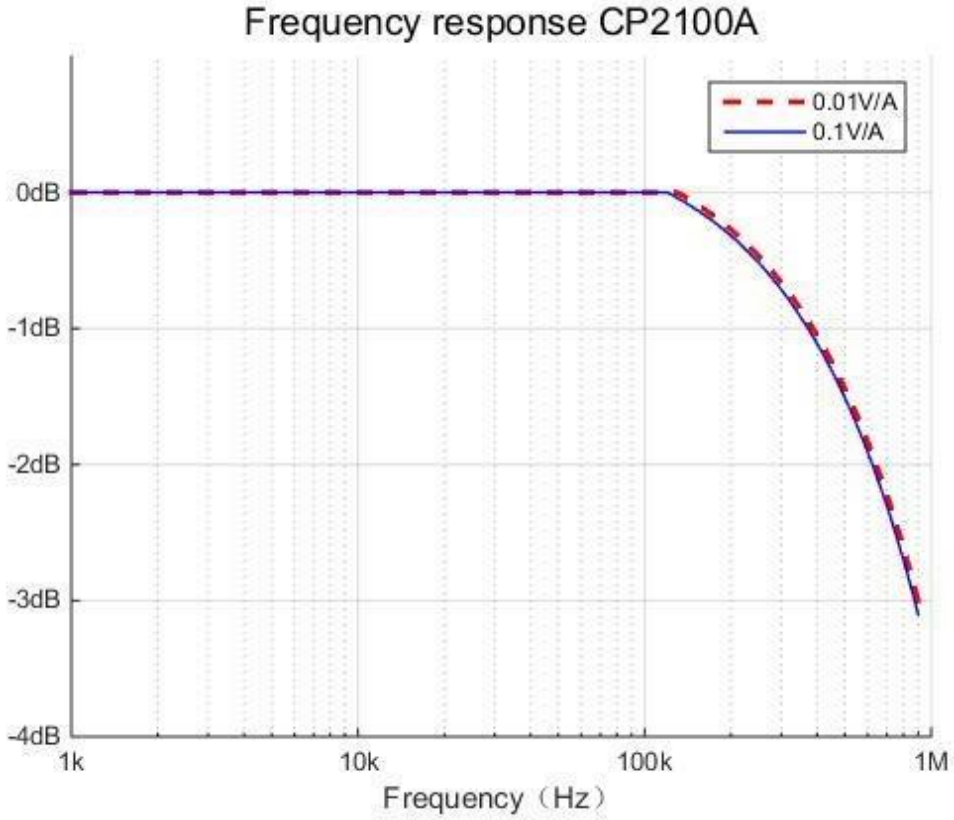
2. Appearance

2. Specifications

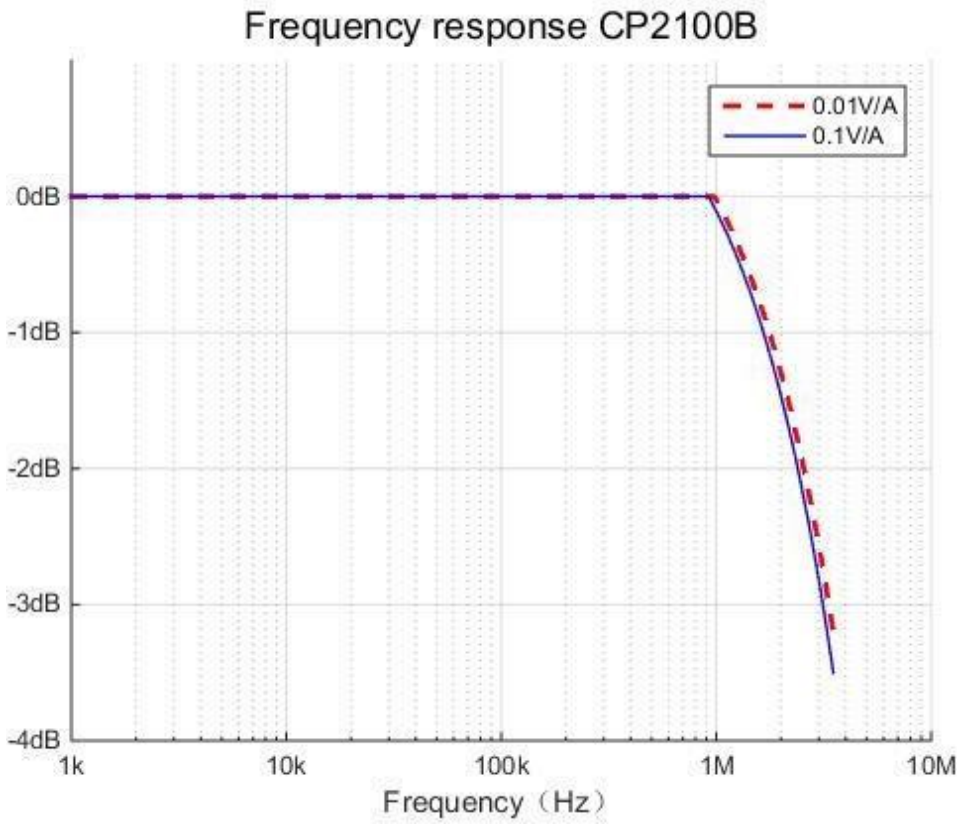
Parameter	CP2100A	CP2100B
Bandwidth	DC~800KHz	DC~2.5MHz
Rise time	≤583ns	≤175ns
Ranges	10A/100A	
Output sensitivity	0.1V/A (10A) 0.01V/A (100A)	
DC accuarcy(typical)	3%±50mA (10A) 4%±50mA (100A, 500mA~40Apk) 15% (100A, 40Apk~100Apk)	
Signal delay	<150ns (10A) <200ns (100A)	
DC signal linearity (typical)	DC signal linearity, typical on page 6	
Measuring range	50mA~10Apk (10A) 1A~100Apk (100A)	
Maximum measurable current	100Apk, 70.7Arms (DC+ACpk) 200Apk-pk, 70.7Arms (AC)	
Maximum working voltage	CAT III 300V CAT II 600V	
Maximum float voltage	CAT III 300V CAT II 600V	
Maximum conductor diameter	13mm	
Overload indication	The buzzer beeping, the button light flashing	
Power supply	DC 5V	
Probe head size	11*6.1*2.5cm	
Control box size	10.8*5.6*2.6cm	
Length	228cm	
Weight	290g	
Single package weight	1000g	
Single package size	29.5*23.6*5.7cm	
Operating Temperature	0℃ ~50℃	
Storage Temperature	-20℃ ~80℃	
Operating Humidity	5%~95% (0℃ ~40℃, No condensation) 5%~65% (40℃ ~50℃, No condensation)	
Operating Altitude	≤3000m	
Storage Altitude	≤12000m	



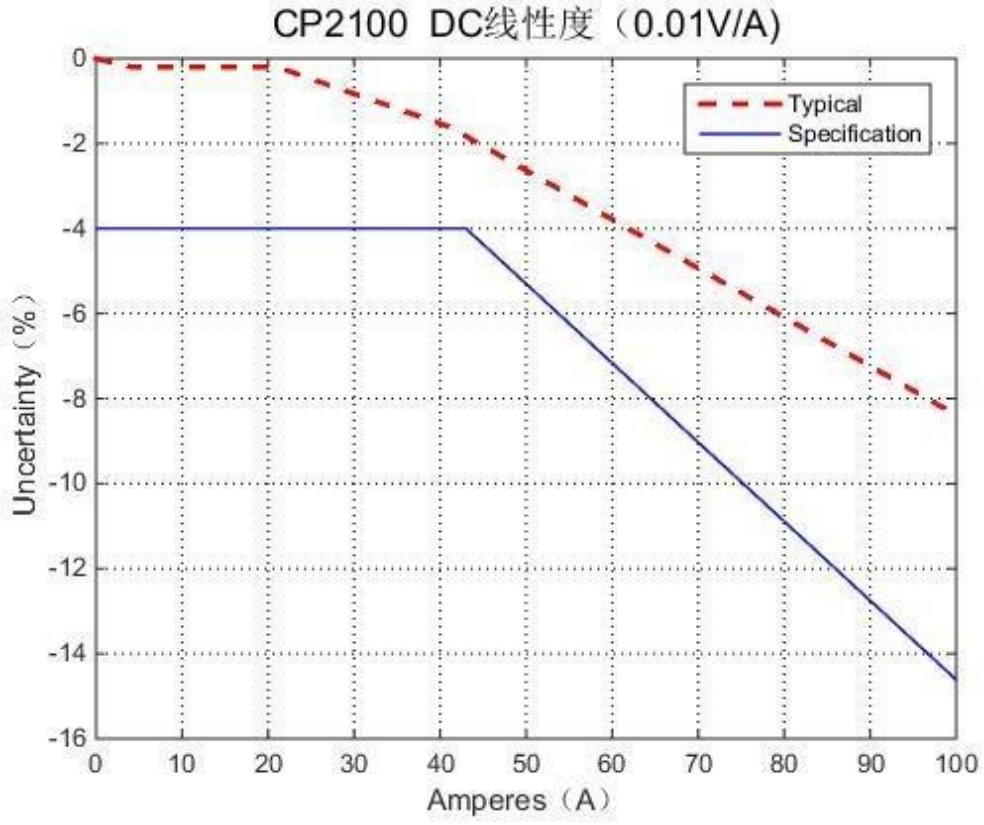
Maximum current versus frequency



Amplitude-frequency characteristic curve -CP2100A



Amplitude-frequency characteristic curve -CP2100B



DC signal linearity

3. Instructions:

1.Connect the BNC of the current probe to the oscilloscope (or other instrument) and connect the USB cable to power the current probe.
2.According to the current, select the appropriate range on the probe, the corresponding button light turns green.
3.Adjust the oscilloscope settings: input impedance 1MΩ; Select current or set display unit as A; Set the probe attenuation multiplier of the corresponding channel. If the probe is 100A(0.01V/A), the oscilloscope should be 100X, if the probe is 10A(0.1V/A), oscilloscope is 10X.
4.Press the auto zero button to realize the auto zero adjustment of the probe. After the zero adjustment is successful, the buzzer will beep for once. Otherwise, the “beep” sound will be 3, indicating that the zero adjustment fails; The external magnetic field may have a slight influence on the DC zero of the probe. After the zero adjustment is completed, please do not move it in a large range.
5. Open the clamp of the current probe to clamp the conductor under test according to the direction indicated by the clamp head. Note: If the measured current flow direction is opposite to the direction indicated by the clamp head, the output is negative.
6. Adjust the oscilloscope to get the best waveform.
Note: When the current exceeds the range, the buzzer will sound for a long time and the button light will flash.

5. Maintenance

During the product warranty period and under normal use, the company will be responsible for free maintenance due to the failure of the product itself due to quality problems.

Please keep the product as dry, clean and tidy. If there is dirt, use a soft cloth or sponge with alcohol to remove dirt. Do not use water.

In order to ensure the performance of the product, it is recommended to conduct an inspection or calibration once a year.

Version	Modify content	release time
1.0	First release	2019.05

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