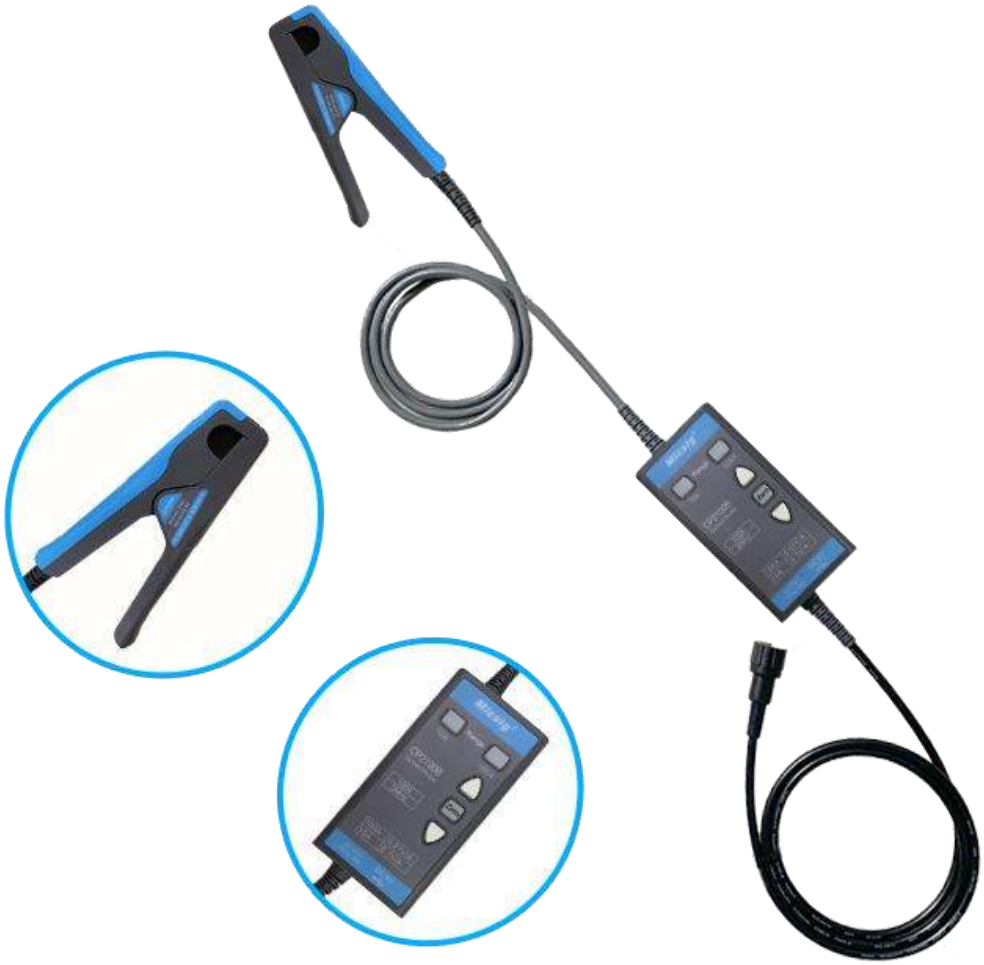
Micsig®

AC/DC Current Probes

CP2100A/CP2100B



Shenzhen Micsig Instruments Co., Ltd.

Version	Modified content	Release time
1.0	First edition	2019.05
1.1	Parameter modification	2019.12

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Safety Precautions

1. Product introduction
2. Appearance
3. Specifications
4. Instructions
5. Maintain

Safety Precautions

- **The measurable circuit should be CAT II 600V or below**
- **Do not measure bare conductors**
- **Do not touch the measured conductor and sensor head during measurement**
- **Do not use in a humid environment**
- **Do not touch the instrument or the measured object with wet hands**
- **Please use this product within the range allowed by the end-user**
- **Please use this product as required**
- **Please ground this product through the USB power cord**

1. Product Introduction

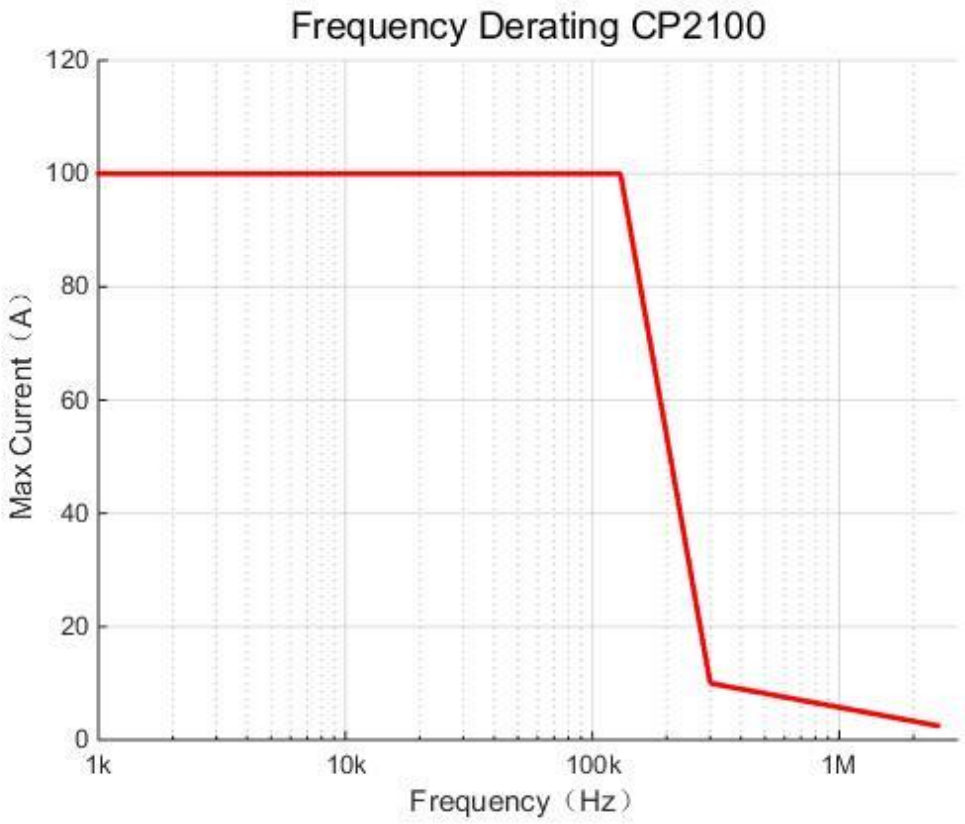
The CP2100 series is a current probe that can measure both DC and AC. It adopts split design and has small and beautiful appearance. It uses a standard BNC interface and is suitable for oscilloscopes. It can also be used for multimeters via connector. The maximum current can be measured to 100Apk (70Arms); it has 2 models: CP2100A and CP2100B, CP2100A can measure bandwidth to DC 800KHz, CP2100B can measure bandwidth to DC 2.5MHz; 2 optional measuring ranges: 10A and 100A. Automatic and manual zero adjustment, powered by USB, no additional power supply, making measurement more convenient. Often used in motor drives, industrial frequency, inverters, power supplies, avionics and other fields.

2. Appearance

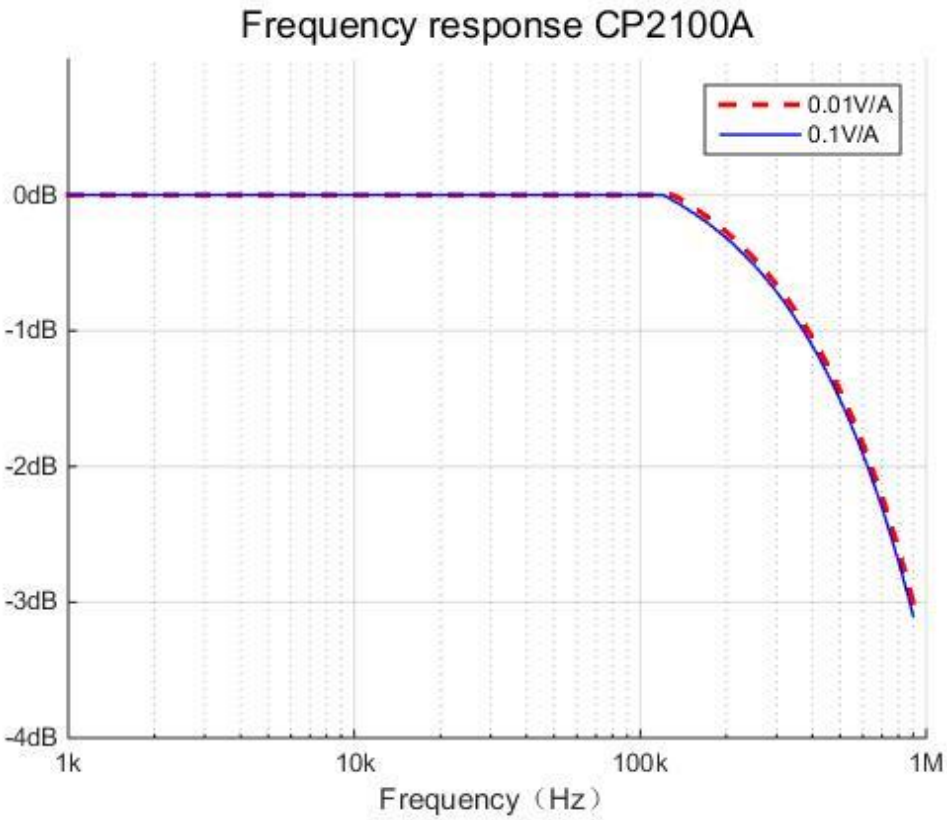


3. Specifications

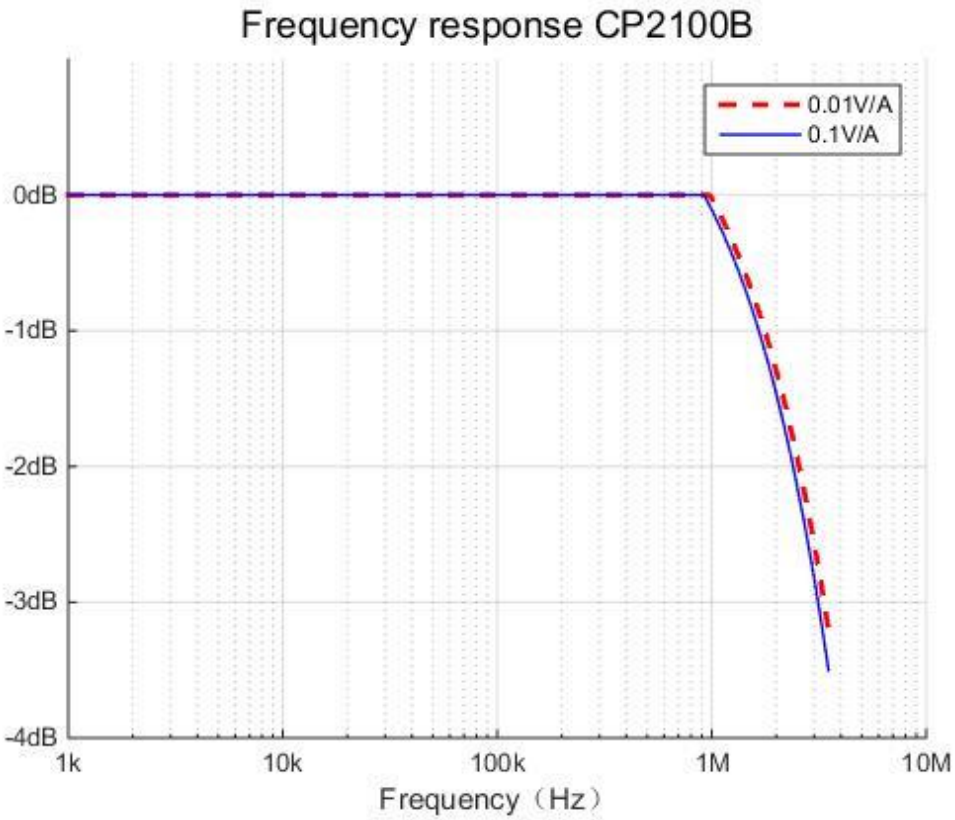
Model	CP2100A	CP2100B
Bandwidth	DC~800KHz	DC~2.5MHz
Rise time	≤437.5ns	≤140ns
Range	10A/100A	
Output sensitivity	0.1V/A（10A） 0.01V/A（100A）	
DC accuracy (typical)	3%±50mA（10A） 4%±50mA（100A，500mA~40Apk） 15%（100A，40Apk~100Apk）	
Signal delay	＜150ns（10A） ＜200ns（100A）	
DC linearity (typical)	typical on page 6	
Measuring range	50mA~10Apk（10A） 1A~100Apk（100A）	
Maximum measuring current	100Apk，70.7Arms（DC+ACpk） 200Apk-pk，70.7Arms（AC）	
Maximum working voltage	CAT III 300V CAT II 600V	
Maximum floating voltage	CAT III 300V CAT II 600V	
Maximum conductor diameter	13mm	
Overload indication	The buzzer sounds long and the button light flashes	
Supplied power	DC 5V	
Probe head size	11*6.1*2.5cm	
Control box size	10.8*5.6*2.6cm	
Length	228cm	
Weight	290g	
Package weight	1000g	
Package dimensions	29.5*23.6*5.7cm	
Operating temperature	0~50°C	
Storage temperature	-20℃~80℃	
Operating humidity	5%~95%(0~40℃, No condensation) 5%~65%(40℃~50℃, No condensation)	
Operating altitude	≤3000m	
Storage altitude	≤12000m	



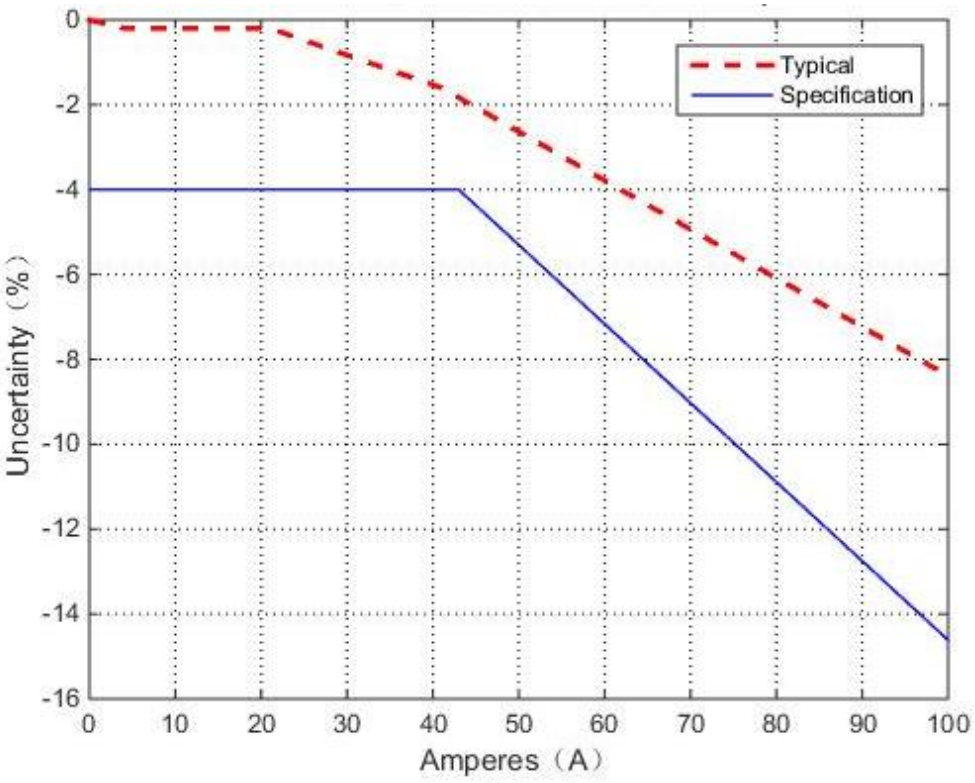
Maximum current VS Frequency curve



Amplitude-frequency characteristic curve-CP2100A



Amplitude-frequency characteristic curve-CP2100B



DC signal linearity (0.01V/A)

4. Instructions

1、Connect the BNC of the current probe to the oscilloscope (or other instruments), and connect the USB cable to power the current probe;
2、Select the appropriate range on the probe according to current range, the corresponding button light will turn Green;
3、Adjust the oscilloscope settings: input impedance 1MΩ; select probe to Current or display as A；Set attenuation factor for corresponding channel，range 100A（0.01V/A） set to 100X， range 10A（0.1V/A）set to 10X；
4、Press Automatic zero adjustment button to realize zero adjustment of the probe，after success，the buzzer “beep” one time；if “beep” three times，indicating that the zero adjustment has failed；Manual zero adjustment is also possible； the external magnetic field may have a slight influence on the DC zero position of the probe， do not move it in a large range after the zero adjustment is completed;
5、Open the jaws to clamp the conductor under test according to the direction indicated by the clamp head. Note: If the measured current flows in the opposite direction to the clamp head, the output will be negative;
6、Adjust the oscilloscope to get the best waveform;

Note: When the current exceeds the range, the buzzer will beep for a long time and the button light will flash.

5. Maintenance

During the warranty period of the product (one-year) and under normal use, the company will be responsible for free repairs due to fault caused by the quality of the product itself, and the product must not been disassembled and repaired without Micsig permission.

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

In order to ensure the performance of the product, it is recommended to check or calibrate once a year.

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