

Current Sensor

Product Series: SCT-CTS

Part number: SCT-CTS/P1

Version: V1.4



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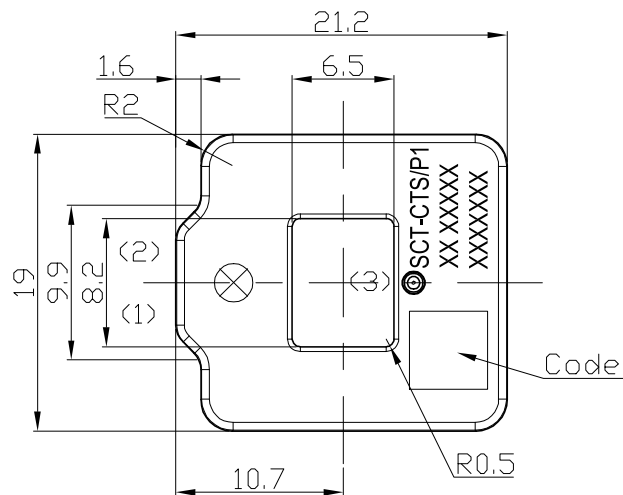
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1. Description

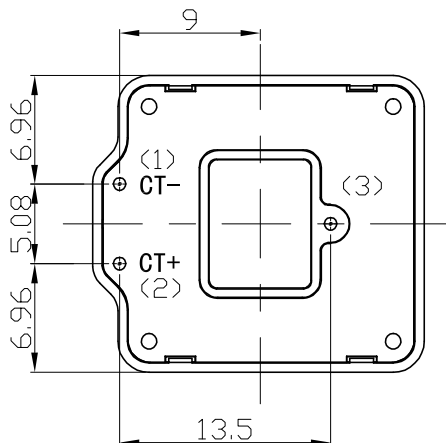
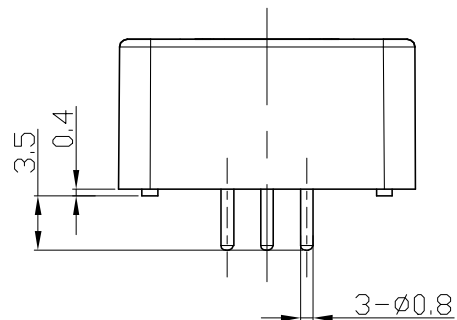
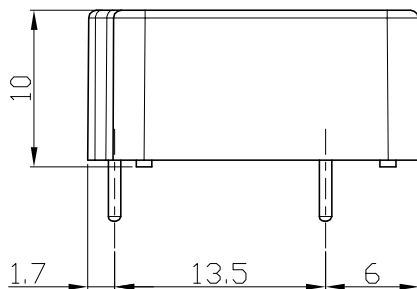
SCT-CTS/P series products built-in arc detection function, can detect the weak high-frequency current signal in the aperture.

2. Dimensions

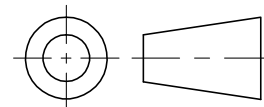


Terminals

(1)	CT-
(2)	CT+
(3)	NC



Material : Fit UL94V-0 & RoHS requirements ;
 General tolerance : ± 0.5
 Unit :mm



Description of Technical Requirements :

1) The dimensions without tolerance are in accordance with GB/T 1804-M ;

3. Performance parameters

NO.	project	terminal	Measured value	The test conditions	Test equipment
1	Rated inductance (uH)		400 uH~500 uH	frequency 100 HZ, voltage 1 V	Automatic Capacitance Bridge Tester or Cap
2	resistance (Ω)		0.4 Ω~1 Ω	need to subtract the internal resistance of the multimeter	multimeter
3	Maximum DC current (A)		50		30DQ
4	Insulation Voltage (kV)		4		GPT-9804 Withstand voltage tester
5	Electrical resistance (kV)		4		GPT-9804 Withstand voltage tester
6	Electrical spacing (mm)		> 5.75		caliper
7	Creepage distance (mm)		> 5.75		caliper
8	noise (dB)		/		DPO2014BTektronix oscilloscope
9	weight (g)	8 g			
10	Number of turns of induction coil	100			

4. Core characteristics

4.1 Core cutoff frequency

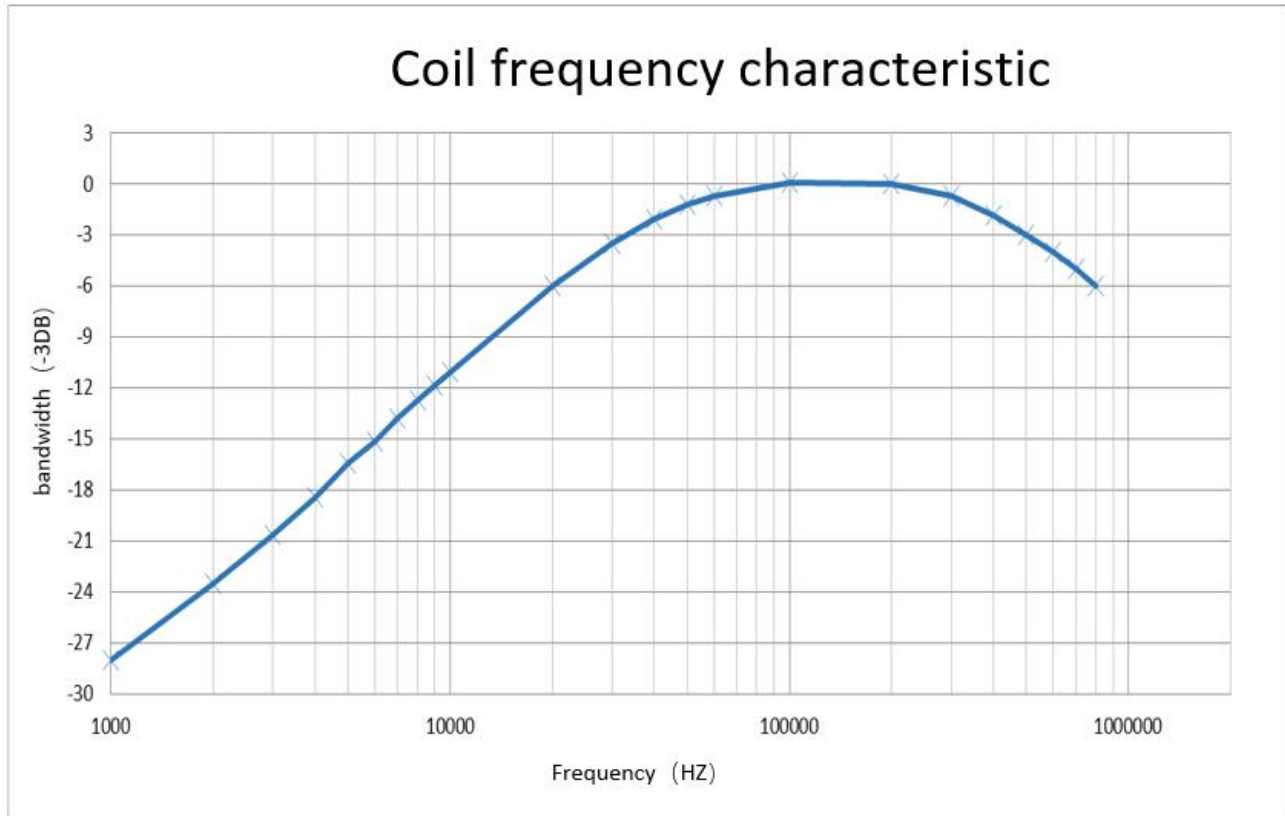


Fig. 1 SCT-CTS/P1 Coil frequency characteristic

Test conditions: the current current of the original side is 10 mA, the sampling resistance is 100 Ohm, and the amplification is 150 times. The output of both ends of the test resistance varies with the current frequency of the original side. The cutoff frequency is calculated according to the volt frequency characteristics.

4.2 Core saturation current

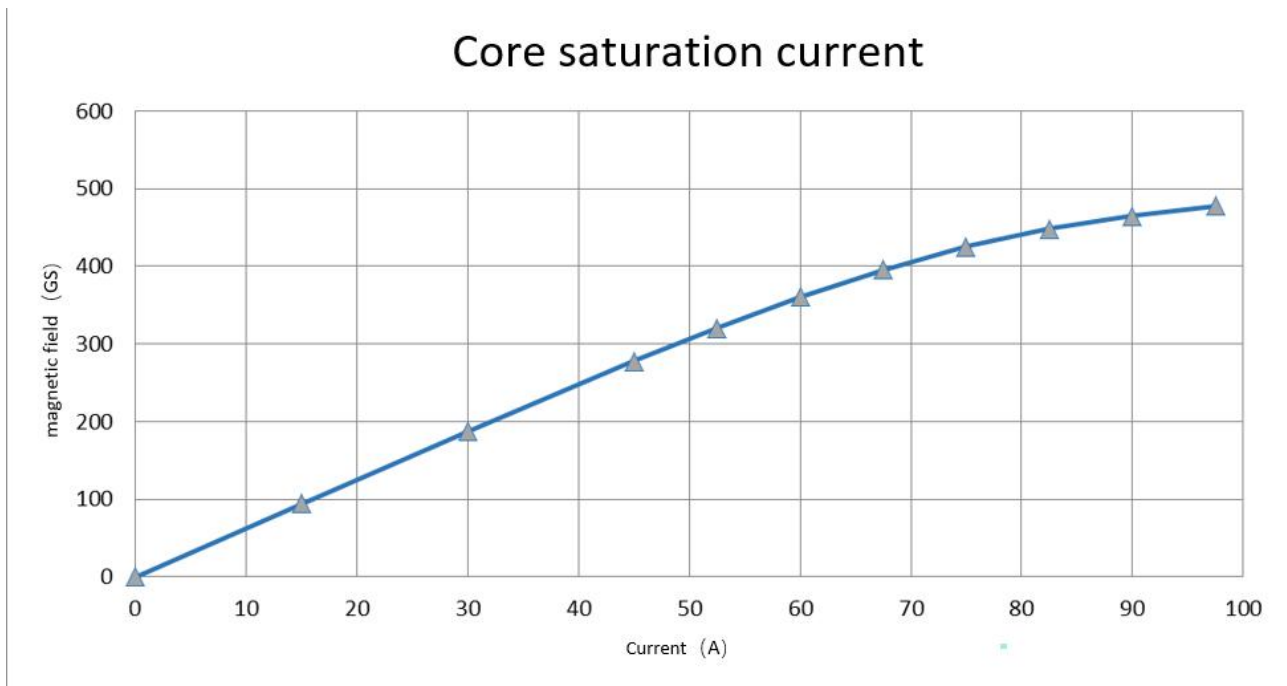
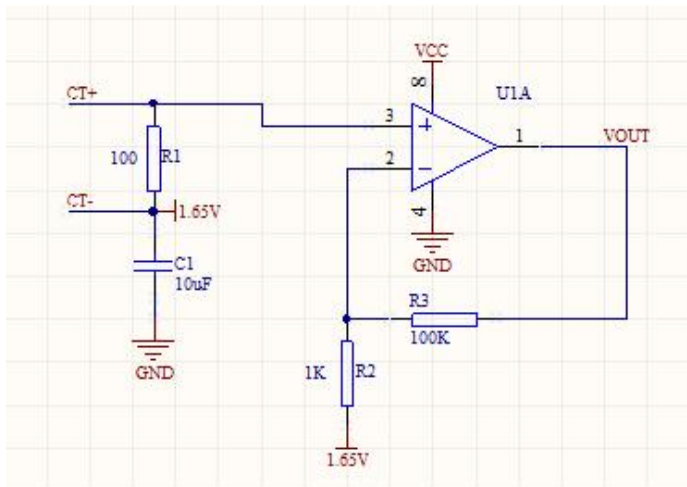


Fig. 2 SCT-CTS/P1 Saturation current curve

Test conditions: The Gauss meter is used to test the slit air gap magnetic field of the magnetic core with the change of current. The saturation magnetic field is 50 A.

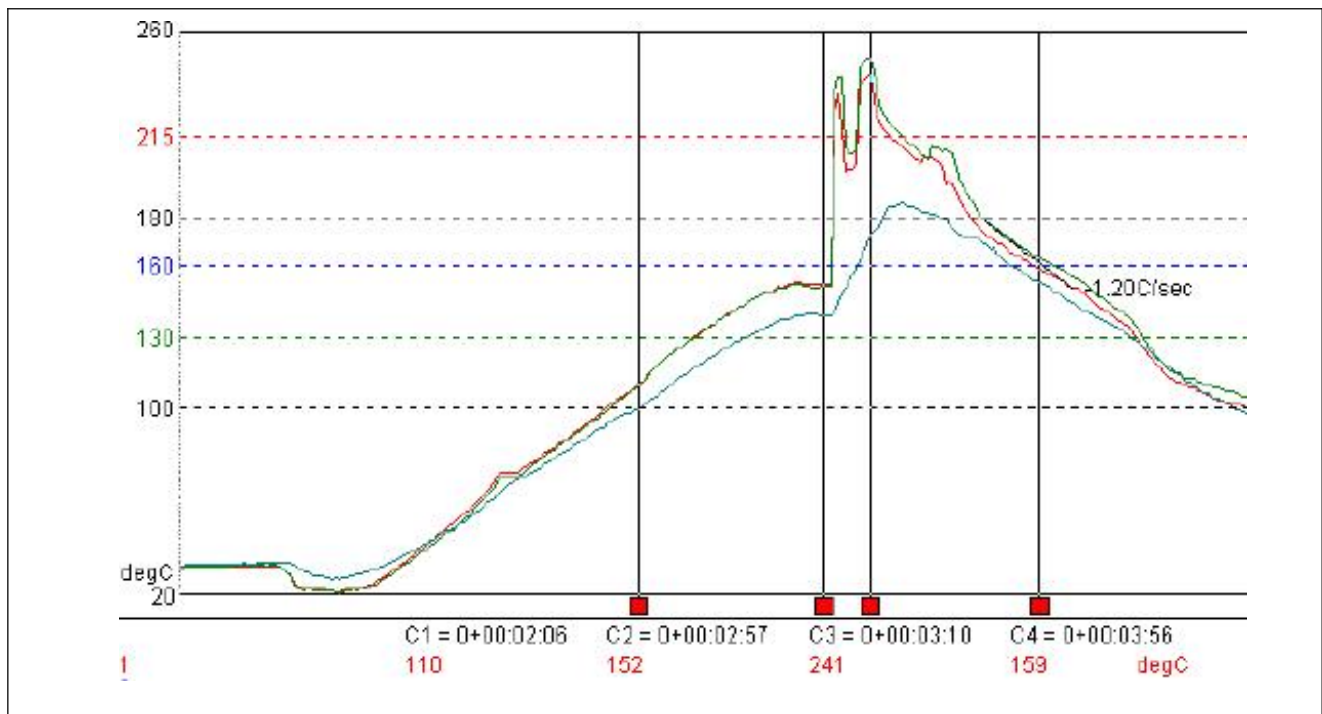
5. Application circuit recommendation



Note: CT+ and CT- are the two ends of the sensor.

6. Welding conditions (devices to be welded must be met)

6.1 Wave soldering welding method



Wave soldering temperature : $255^{\circ}\text{C} \pm 5^{\circ}\text{C}$; Time: no less than 7 seconds.

Wave welding preheating temperature : 100°C - 160°C ; Time: no less than 7 seconds.

文件修订记录

序号	版本号	修订内容	编制	批准	生效日期
1	1.0	初版发行	谢建勇	李敏	2020-11-13
2	1.1	除阳光对外版本	谢建勇	朱海华	2021-2-19
3	1.2	更改阻值范围,去除包装规范,材料明细表以及绕线结构。拉弧传感器改为电流传感器	谢建勇	朱海华	2021-3-12
4	1.3	增加线圈匝数和直流最大电流	谢建勇	朱海华	2021-6-11
5	1.4	英文规格书	谢建勇	朱海华	2022-9-07