

## SPECIFICATION FOR APPROVAL

**CUSTOMER'S APPROVAL CHOP**

Approval's condition: \_\_\_\_\_

Approved date: \_\_\_\_\_

KINDLY RETURN A SET WITH YOUR COMPANY'S OFFICIAL STAMP  
ON APPROVAL OF THIS ITEM

**CUSTOMER'S NAME :** \_\_\_\_\_

**CUSTOMER'S MODEL NO :** \_\_\_\_\_

**CUSTOMER'S PART NO. :** \_\_\_\_\_

**DESCRIPTION :** PTC thermistor for overcurrent protection

**Semitel'S MODEL NO. :** **SCT100D**

**VERSION :** **A**

**DATE :** **2016.9.29**

**Attachments:**

- Product specification
- Sample Qty.:

Prepared By	Checked By	Approved By
Hebe 2016/9/29	Liang 2016/9/29	Alan 2016/9/29

Semitel International Ltd.	TEL: 886-2-86922121      FAX: 886-2-26483379
<a href="http://www.semitelint.com">www.semitelint.com</a>	12F, No.183, Sec.1, Datong Rd., Xizhi Dist., New Taipei City 22145, Taiwan



### 1. Application scope

This product of the Positive Temperature Coefficient (PTC) is used for overcurrent protection. It is always applied in telecommunications.

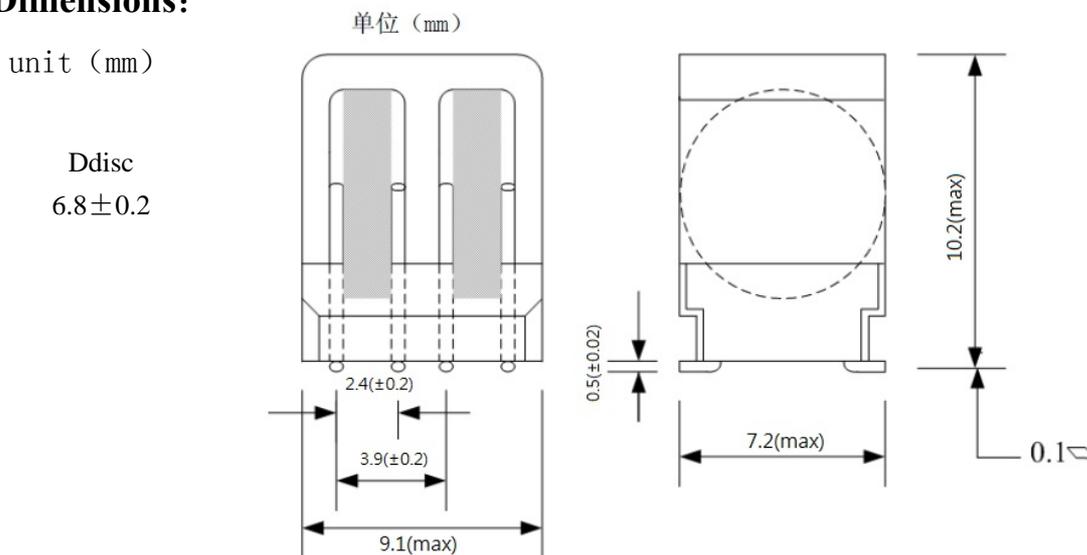
### 2. Cross-reference

YD/741-2002 Positive Temperature Coefficient (PTC) thermistor for overcurrent protection in telecommunications.

### 3. Mark

Marking change from	SCT	
SCT 100D to S10D	100D	S10D

### 4. Dimensions:



### 5. Housing material

criteria: UL94 - V0  
material: PPS

### 6. Environmental characteristics

Environment Temperature: 0 ~ +70℃  
≤95%HR (25℃)  
86 ~ 106Kpa;

Semitel'S MODEL NO. :	SCT100D	CUSTOMER'S MODEL NO.:	
VERSION :	A	CUSTOMER'S PART NO. :	
DATE :	2016-9-29		

## 7. Electrical Characteristics:

No.	Parameter	Test Condition		Requirement	
1	Rated Resistance ( $R_n$ )	25±2°C		10±20%Ω Resistance matching in housing 1.0Ω	
2	No-operating Current Characteristic	25± 2°C, DC60V, on 150mA, electrify 1h		Low resistance &  ΔR/Rn ≤50% ; Rn refers to rated zero-power resistance	
3	operating Current	25± 2°C, DC60V, on 360mA		≤5min	
4	Response time	Initial current (A)	Limit current (A)	Max Operating Time (s)	
		1A	0.5A		≤3.8s
		0.5A	0.25A		≤25.0s
5	Surge current withstanding	25 ± 2 °C, Short Circuit Current Ripple: 10/1000μs, Min shut-down circuit voltage: 1.0KV, Short-circuit peak current: 25A, Alternation time :3min, cycle 30times		(R <sub>2</sub> -R <sub>1</sub> ) /R <sub>1</sub>  ≤20% R <sub>1</sub> :the resistance before test R <sub>2</sub> :the resistance after test	
6	Ac life	Ac 250V, initial current 1.0A, on 60s, Off 600s, cycle: 20 times		(R <sub>2</sub> -R <sub>1</sub> ) /R <sub>1</sub>  ≤20% R <sub>1</sub> :the resistance before test R <sub>2</sub> :the resistance after test	
7	Overvoltage Withstanding	Ac 250V, initial current 1.0A,electrify 15min,once		(R <sub>2</sub> -R <sub>1</sub> ) /R <sub>1</sub>  ≤20% R <sub>1</sub> :the resistance before test R <sub>2</sub> :the resistance after test	
8	Fail Mode	AC250V,RL=0,electrify 15min , once		Circuit disconnected or High resistance is allowed ;Low resistance or fire is not allowed.	

Notice :

- 1 .Before the test, all the test samples should be tested under the temperature condition of 25 ± 2°C and be kept for 30min under such temperature before test.
2. After the test of Capability of surge current resistance, capability of a.c current resistance, capability of voltage resistance , invalidation mode test, the samples should be kept under temperature condition of 25 ± 2°C for 2 hours, and then test its resistance.

<b>Semitel'S MODEL NO. :</b>	SCT100D	<b>CUSTOMER'S MODEL NO.:</b>	
<b>VERSION :</b>	A	<b>CUSTOMER'S PART NO. :</b>	
<b>DATE :</b>	2016-9-29		

## 8. Environment test

No.	Item	Test condition	Requirement
1	Intensity of the down-lead	Add the axial stress on the down-lead of the sample gradually until 4.9N and last for 10s, then measure the value of its resistance.	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test
2	Solderability	Solder bath: temperature 235°C , Immerging time is $2 \pm 0.5s$ .	Tinning must be well after testing.
3	Resistance of soldering heat	Solder bath: the temperature 350°C , immerging time is $3.5 \pm 0.5s$ , measure the value of its resistance	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test
4	Vibration	Rivet the sample on the test board. Increase the frequency from 10HZ to 55HZ within one minute. Make sure the displacement of swing is 0.75mm. Vibrate along two directions of X/Y respectively for 45minute.Measure the value of its resistance.	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test
5	Shock	Rivet the sample on the Collision Stand. Keep the acceleration at 100 m/s <sup>2</sup> for 11ms. Vibrate the samples along two directions of X/Y respectively by the frequency of 60~80 time per minute and collide them for 1000 times. Measure the value of its resistance.	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test
6	Damp heat, steady state	Put the sample in the temperature of 40°C and humidity of 90%-95% and keep for 48hrs, Measure the value of its resistance.	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test
7	High Temperature	Put the sample under the temperature of 70°C and last for 2 h, Measure the value of its resistance.	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test
8	Low Temperature	Put the sample under the temperature of 0°C and last for 2 h. Measure the value of its resistance.	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test
9	Change of the temperature	Put the sample under the temperature of 0°C 、 high temperature 70°C , exposing for 30min, transfer for 2minute, circulate for 5 times, then measure the value of their resistance.	$  (R2-R1) / R1  \leq 20\%$ R1:the resistance before test R2:the resistance after test

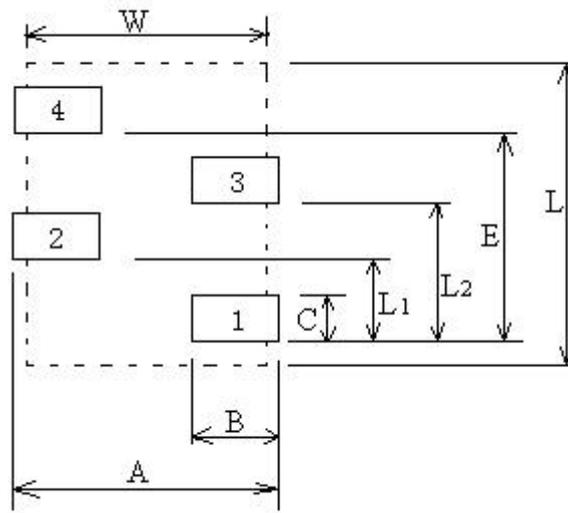
Notice :

The samples shall be put under normal pressure and  $25 \pm 2^\circ\text{C}$  for 2h after the test. And then check the value of its resistance.

<b>Semitel'S MODEL NO. :</b>	SCT100D	<b>CUSTOMER'S MODEL NO.:</b>	
<b>VERSION :</b>	A	<b>CUSTOMER'S PART NO. :</b>	
<b>DATE :</b>	2016-9-29		

### 9. Ecommended solder pad layout

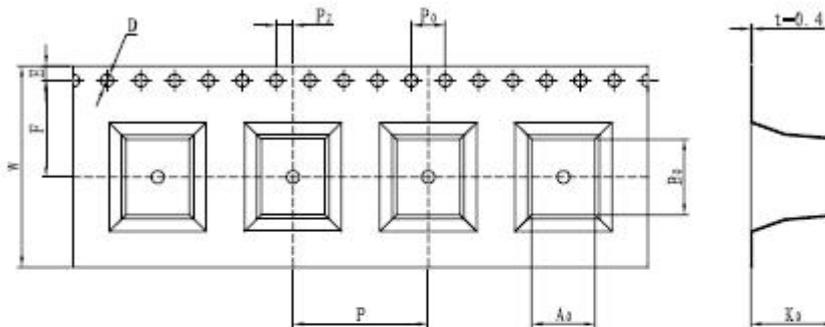
unit (mm).



L	w	L1	L2	A	B	C	E
Max.9.1	Max.7.2	2.4	3.9	8.2	3.2	2.0	6.3

### 10. Packaging

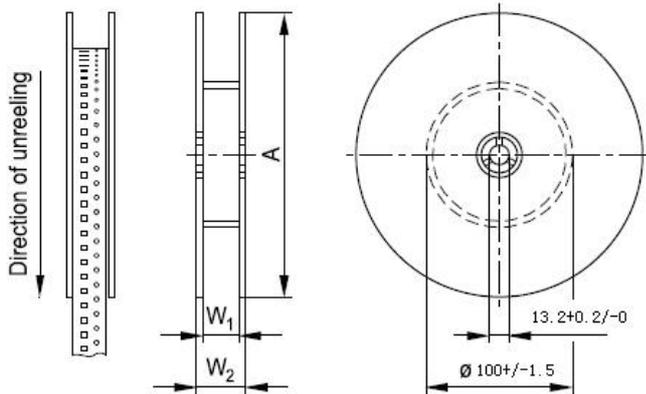
Blister tape, 400PCS/reel in.



尺寸	W	A0	B0	K0	t
	24±0.5	7.5±0.2	9.0±0.2	10.0±0.2	0.5±0.15
尺寸	D	P2	P0	F	E
	1.5	2.0	4.0	11.5	1.75

Semitel'S MODEL NO. :	SCT100D	CUSTOMER'S MODEL NO.:	
VERSION :	A	CUSTOMER'S PART NO. :	
DATE :	2016-9-29		

**Reel packing for 24-mm tape**



**24-mm tape**

Dimension	330 -mm reel
A	330 -2/+0
W <sub>1</sub>	24.4 min.
W <sub>2</sub>	30.4 max.

**11. Storage**

The production should be in the environment of good ventilation. The indoor temperature is -10°C ~ +55°C, and the relative humidity ≅ 85% (at 25°C), without acid, alkali and other harmful impurity.

Storage period: 1 years

**12. Transportation**

Packing products adapts modern transportation vehicle.

**13. Introductions**

13.1 We should inform customer in advance and get approval if there is any change in any design, process, materials and other aspects which will might impact on device performance.

13.2 It must be recognized by Development Department before updating the Specification.

13.3 Power of interpretation for this specification belongs to Development Department.

13.4 If there is any controversy between both sides of supplier and demander, this specification is arbitration.

13.5 To ensure that both sides of supplier and demander communicate and solve the questions quickly, please inform our company as soon as you have any doubt to the specification.

13.6 Please send back the specification after your receive it. The address is on the cover of this specification. If you place the purchase order without passing back, it's deemed to have your confirmed to this specification.

<b>Semitel'S MODEL NO. :</b>	SCT100D	<b>CUSTOMER'S MODEL NO.:</b>	
<b>VERSION :</b>	A	<b>CUSTOMER'S PART NO. :</b>	
<b>DATE :</b>	2016-9-29		