

SPECIFICATION FOR APPROVAL

<p>CUSTOMER'S APPROVAL CHOP</p> <p>Approval's condition: _____</p> <p>Approved date: _____</p>
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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

Semitel'S MODEL NO. : _____
SCPTC7.0-50R-20-TR

VERSION: _____
A

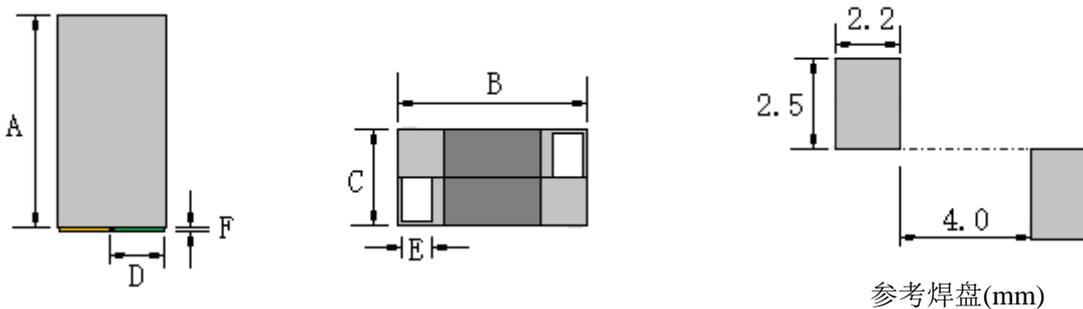
DATE: _____
2021/6/7

- Attachments:**
- Product Specification
 - Sample Qty. :
 - Test Data

Prepared By	Checked By	Approved By
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1. Structure and Dimensions



参考焊盘(mm)

1-1 Size unit: (mm)

	A	B	C	D	E	F
max	9.0	8.9	4.5	2.25	1.85	0.22
min	8.8	8.7	4.3	1.75	1.75	0.20

1-2 Coating material: epoxy

1-3 lead wire: 0.2mm Metal bracket

1-4 Logo: TBD

2. Electrical characteristics

	Item	Test condition	Requirement
2.1	Rated zero power resistance R25	At=25±2 °C, Testing voltage≤1.5V _{DC} ;	30-60Ω
2.2	Non-trip current Int	At=25°C,60Vrms/ Non-trip current , 1H	50mA ΔR/Rn ≤50%
		At=60°C,60Vrms/ Non-trip current , 1H	30mA ΔR/Rn ≤50%
2.3	Operating current It	At =25±2 °C,220Vrms /300S into high resistance	150mA
2.4	Operating time t	Ambient Temperature: 25 ± 2 °C Supply Voltage:220Vrms, Starting current 1.2A	<1.5S
2.5	Curie-temperature(Tc)	2*R25 corresponded to temperature	85°C±7 °C
2.6	Rated voltage		220VAC
2.7	Withstand voltage	Ambient temperature 25 ± 2 °C, initial voltage 220VAC, initial current 1.2A, lasting 1min, slowly rising to 420Vac, lasting 10S	420VAC ΔR/Rn≤±20%

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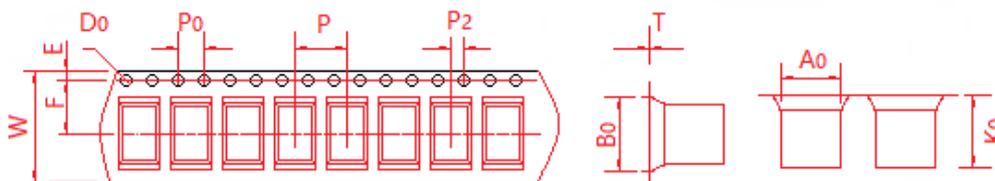
2.8	Impact resistance current capacity	$T=25\pm 2^{\circ}\text{C}$ Short circuit current waveform :100 μs The minimum open circuit voltage: 2.5KV Internal resistance 40 ohms Spacing interval: 60s repeat 5 times. Recovery 4-5 hours under normal temperature	10/700 μs $\Delta R/R_n \leq \pm 20\%$
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3. Reliability

NO.	Item	Requirement	Test measurement
3.1	Appearance	No visible damage, clear marking	Visual testing
3.2	Solderability	At least 95% of terminal electrode covered by new solder	Refer to IEC68-2-20(GB2423.28) Ta Dip each lead into $235\pm 5^{\circ}\text{C}$ solder for 3~5sec to the 5mm above body
3.3	Resistance to solder heat	$ \Delta R/R_n \leq 20\%$ No damage observed	Refer to IEC68-2-20(GB2423.28) Tb Dip each lead into $260\pm 5^{\circ}\text{C}$ solder for $5\pm 1\text{S}$ to 3mm above body. Recheck Rated zero power resistance after 4-5 hours recovery under normal temperature often wet condition.
3.4	Tensile strength of terminal	$ \Delta R/R_n \leq 20\%$ No damage observed	Refer to IEC68-2-21(GB2423.29) Test Ua: Pull force 10N, for 10 sec. Test Ub: Bending 90° , pull force 5N, twice Test Uc: Rotating 180° , twice. Recheck Rated zero power resistance after 4-5 hours recovery under normal temperature often wet condition.
3.5	Flame retardant		Refer to IEC695-2-2

4. Standard Packaging

24mm*330 (12") reel /900pcs



W	A ₀	B ₀	K ₀	P	P ₀	P ₂	F	E	T	D ₀
24.00 ± 0.10	5.10 ± 0.10	9.30 ± 0.10	9.30 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	11.50 ± 0.10	1.75 ± 0.10	0.50 ± 0.05	1.50 ± 0.10

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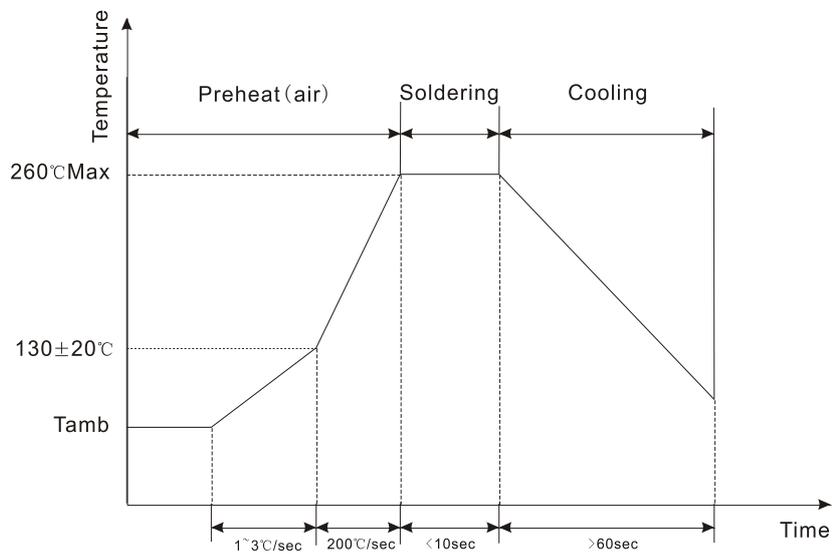
5.Storage Condition of Products

Storage temperature	-40~60℃
Relative humidity	≤95%HR (+40℃)
Barometric pressure	86 ~106Kpa
Vibration frequency	10 Hz ~50Hz~10 Hz
Collision	100m/s ² : 16ms
Other requirement	No acid, alkali and reducing atmosphere

6.Recommended Reworking Conditions With Soldering Iron

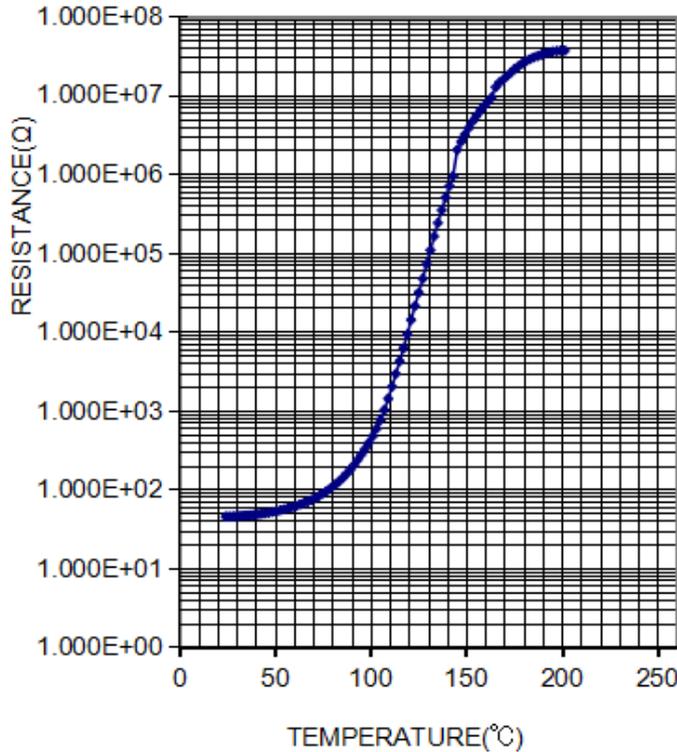
Welding condition	reference craftwork
Soldering iron temperature	360℃(max)
Soldering time	2sec(max)
Distance to coating material	6mm (min)

7.Wave Flow Soldering Profile



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8. Resistance-Temperature Curve



9. Attention & Declaration

- 9.1 PTC thermistor is designed under normal environment, so do not use in following environment
 - A、Corrosiveness or reducibility gas, (Cl₂、H₂S、NH₃、SO_x、Noxetc.)
 - B、volatile gas
 - C、The place which directly contact with water and easy to icing
 - D、The place which is put brine, oil, liquid medicine.
 - E、The place which vibrates badly
- 9.2. In high impedance state, the temperature itself will surpass 120°C, so confirm whether it has influence to other parts.
- 9.3 It is ceramic product; fall will make the components fracture and damage because of excessive extrusion
- 9.4 This specification approval is to assure the quality of each unit, estimate under the situation when the components are fixed to the customer's products.
- 9.5 PTC thermistor is designed according to the appointed function, so do not violate the rule
- 9.6 If there is any doubtful point, please notice our company asap.
- 9.7 If this specification is confirmed by customer, post back according to the cover address, if not, we will treat that the customer has confirmed the specification.

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