

## Radial Lead Resettable Polymer PTCs

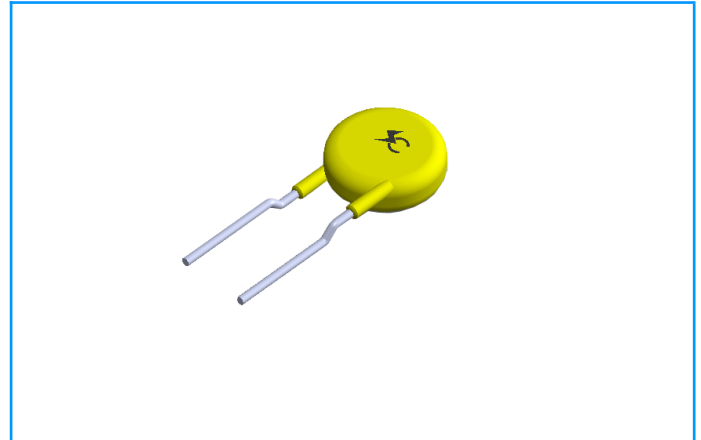
### SC250-050CW0D

#### Features

- RoHS Compliant and Halogen-Free
- Radial leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- Operation Current: 0.05A, Maximum Voltage: 220Vdc, Operating Temperature: -40°C to +85°C

#### Applications

- USB hubs, ports and peripherals
- Power ports
- IEEE1394 ports
- Motor protection
- Automotive application
- Computers and peripherals
- General electronics



#### Electrical Parameters

Part Number	I <sub>hold</sub> (A)	I <sub>trip</sub> (A)	V <sub>max</sub> (Vdc)	I <sub>max</sub> (A)	P <sub>dtyp</sub> (W)	Maximum Time To Trip		Resistance		
						Current (A)	Time (S)	R <sub>min</sub> (Ω)	R <sub>max</sub> (Ω)	R <sub>1max</sub> (Ω)
SC250-050CW0D	0.05	0.10	220	3.0	1.0	0.25	8.0	24.0	55.0	86.0

I<sub>hold</sub>= Hold current: maximum current at which the device will not trip at 25°C still air.

I<sub>trip</sub>= Trip current: minimum current at which the device will always at 25°C still air.

V<sub>max</sub>= Maximum voltage device can withstand without damage at rated current.

I<sub>max</sub>= Maximum fault current device can withstand without damage at rated voltage.

T<sub>trip</sub>=Maximum time to trip(s) at assigned current.

P<sub>dtyp</sub>= Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

R<sub>min</sub>= Minimum device resistance at 25°C prior to tripping.

R<sub>max</sub>= Maximum device resistance at 25°C prior to tripping.

R<sub>1max</sub>= Maximum resistance of device at 25°C measured one hour after tripping.

Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

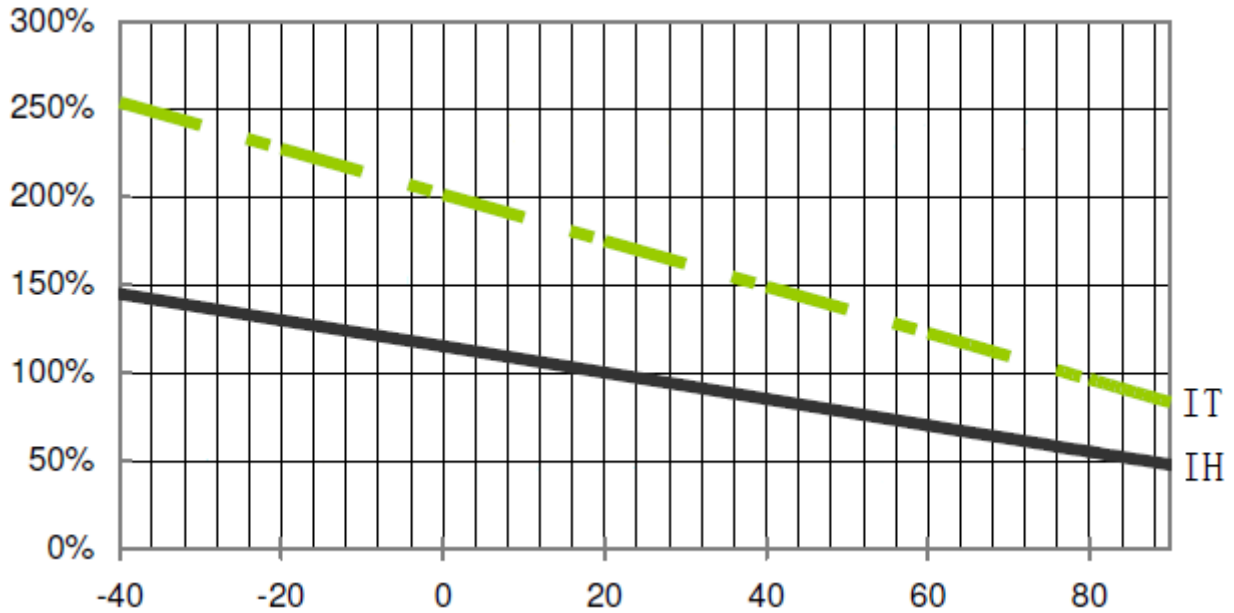
#### Temperature Derating Chart - I<sub>hold</sub> (A)

Ambient Operation Temperature	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
Percentage Reduction	145%	130%	120%	100%	95%	88%	80%	71%	66%	56%

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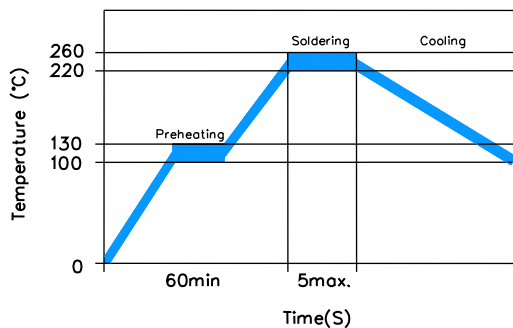
### Temperature Derating Curve



### Test Procedures and Requirement

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @25±2°C	$R_{min} \leq R \leq R_{max}$
Hold Current	60 min, at $I_{hold}$ , In still air @25±2°C	No trip
Time to Trip	Specified current, $V_{max}$ , @25±2°C	$T \leq \text{Maximum Time To Trip}$
Trip Cycle Life	$V_{max}$ , $I_{max}$ , 100 cycles	No arcing or burning
Trip Endurance	$V_{max}$ , 24hours	No arcing or burning

### Soldering Parameters



<b>Pre-Heating Zone</b>	Refer to the condition recommended by the manufacturer. Max. ramping rate should not exceed 4°C/Sec
<b>Soldering Zone</b>	Max. solder temperature should not exceed 260°C
<b>Cooling Zone</b>	Cooling by natural convection in air

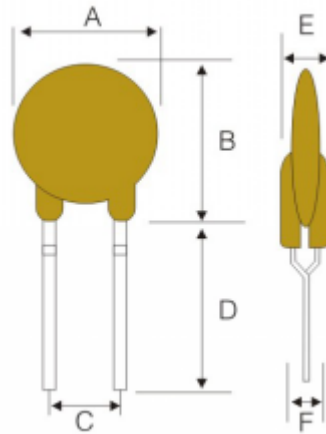
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#### Physical Specifications

<b>Lead Material</b>	0.03-1.85A Tin-plated Copper clad steel 2.50-5.00A Tin-plated Copper
<b>Soldering Characteristics</b>	Solder ability per MIL-STD-202, Method 208E
<b>Insulating Material</b>	Cured, flame retardant epoxy polymer meets UL 94V-0 requirements.
<b>Device Labeling</b>	Marked with 'SC', voltage, current rating

#### Dimensions



Part Number	Dimensions (mm)						Lead Material
	A (Max)	B (Max)	C (Typ)	D (Min)	E (Max)	F (Typ)	Tinned Metal (mm)
SC250-050CW0D	6.2	10.8	5.1	7.6	4.0	/	Φ0.60

#### Packaging Quantity

Part Number	Quantity (pcs/reel)
SC250-050CW0D	1000