

## Radial Lead Resettable Polymer PTCs

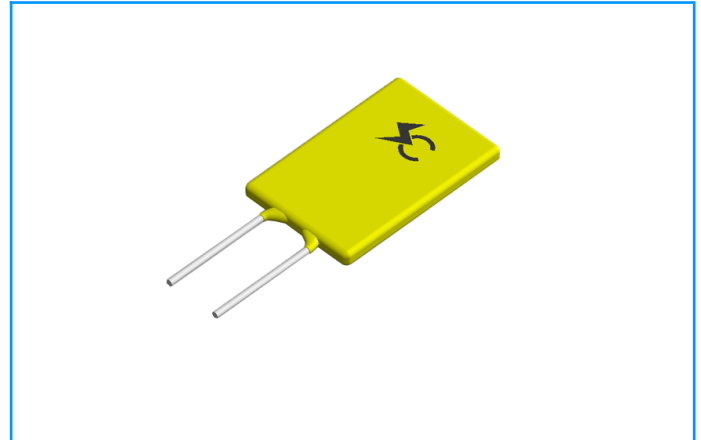
### SC600-500SZ0D

#### Features

- RoHS Compliant and Halogen-Free
- Radial leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- Operation Current: 0.50A, Maximum Voltage: 400Vdc, 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)
SC600-500SZ0D	0.50	1.00	400	3.0	5.0	2.50	15.0	2.5	4.5	7.0

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.

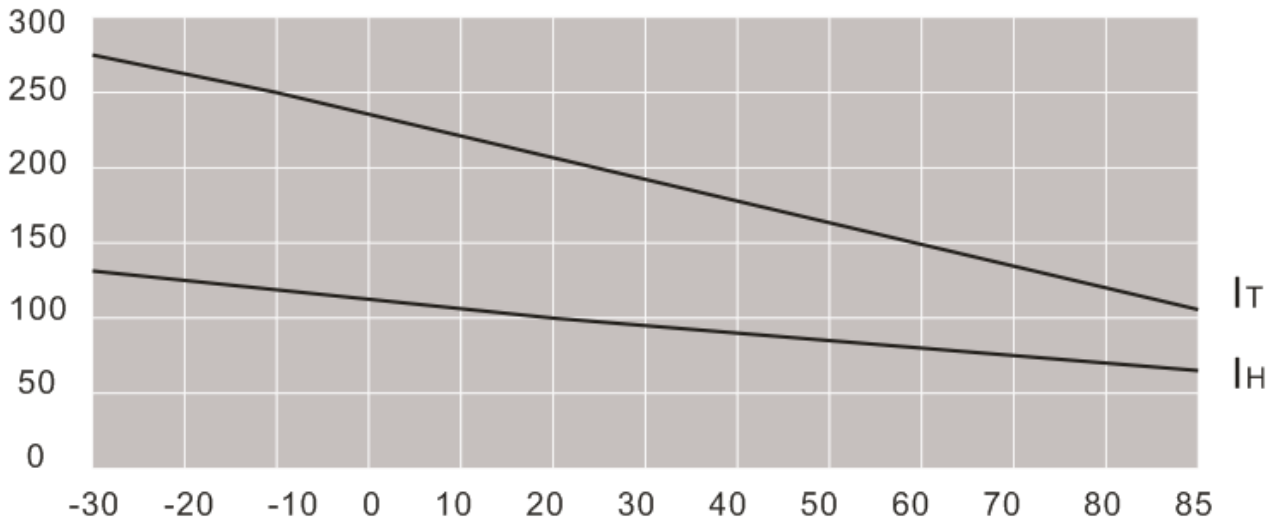
#### Temperature Derating Chart - I<sub>hold</sub> (A)

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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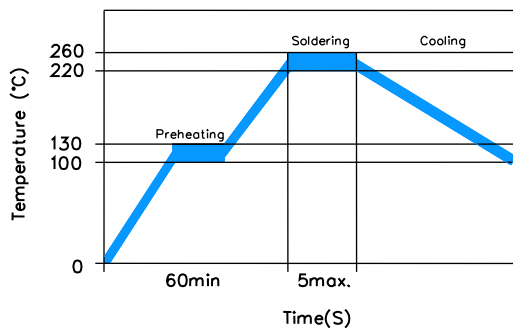
### Temperature Derating Curve



### Test Procedures and Requirement

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ $25 \pm 2^\circ\text{C}$	$R_{\min} \leq R \leq R_{\max}$
Hold Current	60 min, at $I_{\text{hold}}$ , In still air @ $25 \pm 2^\circ\text{C}$	No trip
Time to Trip	Specified current, $V_{\max}$ , @ $25 \pm 2^\circ\text{C}$	$T \leq \text{Maximum Time To Trip}$
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 $4^\circ\text{C}/\text{Sec}$
<b>Soldering Zone</b>	Max. solder temperature should not exceed $260^\circ\text{C}$
<b>Cooling Zone</b>	Cooling by natural convection in air

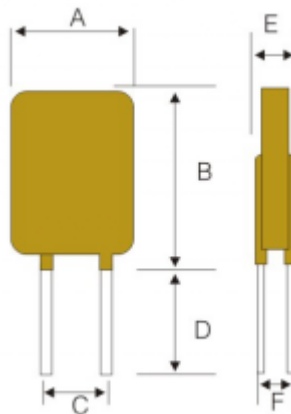
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### SC600-500SZ0D

#### 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)
SC600-500SZ0D	20.2	31.5	10.2	7.6	6.3	/	Φ0.80

#### Packaging Quantity

Part Number	Quantity (pcs/reel)
SC600-500SZ0D	100