

# Radial Lead Resettable Polymer PTCs

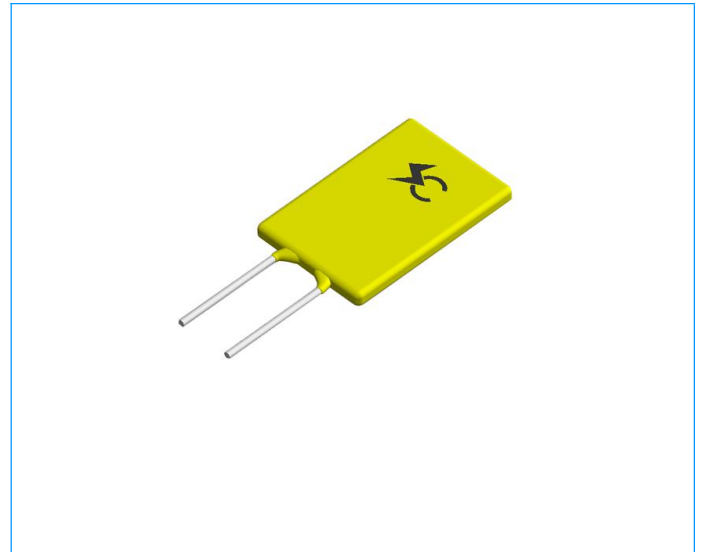
## SC135-2500SZ0D

### Features

- ◆ RoHS Compliant and Halogen-Free
- ◆ Radial leaded Devices
- ◆ Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- ◆ Operation Current: 2.5 A, Maximum Voltage: 120 Vdc, 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>1max</sub> (Ω) |
| SC135-2500SZ0D | 2.5                   | 5.0                   | 120                    | 20                   | 6.5                   | 12.5                 | 30       | 0.09                 | 0.24                  |

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.

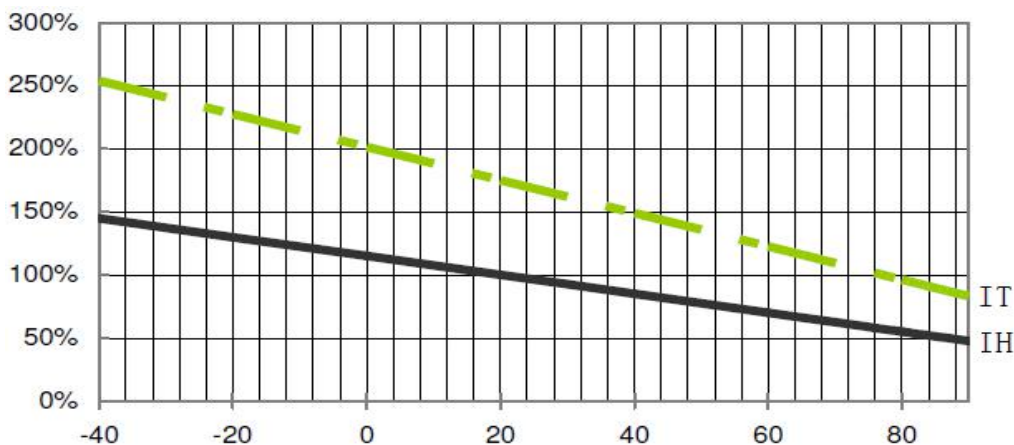
R<sub>min</sub>= Minimum device resistance at 25°C prior to tripping.

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 Curve



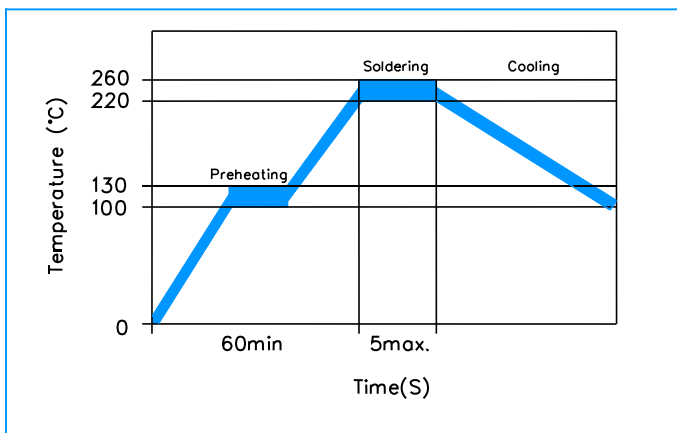
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## SC135-2500SZ0D

### 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  |

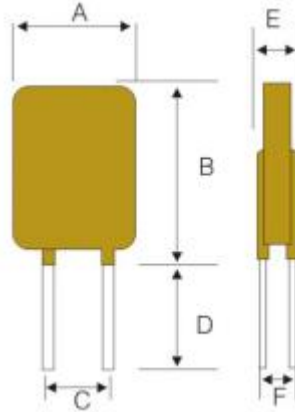
### Physical Specifications

|                                  |   |
|----------------------------------|---|
| <b>Lead Material</b>             | 0.03-1.85A Tin-plated Copper clad steel<br>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                               |

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### SC135-2500SZ0D

#### Dimensions



| Part Number    | Dimensions (mm) |         |         |         |         |         |
|----------------|-----------------|---------|---------|---------|---------|---------|
|                | A (Max)         | B (Max) | C (Typ) | D (Min) | E (Max) | F (Typ) |
| SC135-2500SZ0D | 22.5            | 31.0    | 10.2    | 7.6     | 4.1     | /       |

#### Packaging Quantity

| Part Number    | Quantity (pcs/reel) |
|----------------|---------------------|
| SC135-2500SZ0D | 200                 |