

Radial Lead Resettable Polymer PTCs

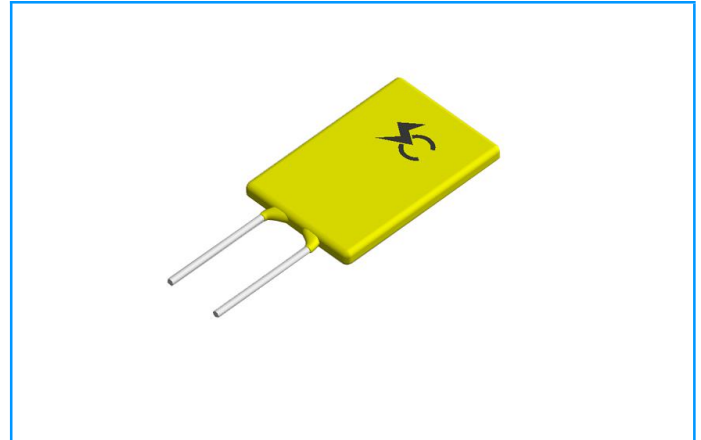
SC16-300SZ0D

Features

- ◆ RoHS Compliant and Halogen-Free
- ◆ Radial leaded Devices
- ◆ Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- ◆ Operation Current: 3.00A, Maximum Voltage: 16Vdc, Operating Temperature: -40°C to +85°C

Applications

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



Electrical Parameters

| Part Number | I _{hold} (A) | I _{trip} (A) | V _{max} (Vdc) | I _{max} (A) | P _{dtyp} (W) | Maximum Time To Trip | | Resistance | | |
|--------------|-----------------------|-----------------------|------------------------|----------------------|-----------------------|----------------------|----------|----------------------|----------------------|-----------------------|
| | | | | | | Current (A) | Time (S) | R _{min} (Ω) | R _{max} (Ω) | R _{1max} (Ω) |
| SC16-300SZ0D | 3.00 | 6.00 | 16 | 40 | 2.30 | 15.0 | 2.0 | 0.038 | 0.070 | 0.110 |

I_{hold}= Hold current: maximum current at which the device will not trip at 25°C still air.

I_{trip}= Trip current: minimum current at which the device will always at 25°C still air.

V_{max}= Maximum voltage device can withstand without damage at rated current.

I_{max}= Maximum fault current device can withstand without damage at rated voltage.

T_{trip}=Maximum time to trip(s) at assigned current.

P_{dtyp}= Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

R_{min}= Minimum device resistance at 25°C prior to tripping.

R_{max}= Maximum device resistance at 25°C prior to tripping.

R_{1max}= 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.

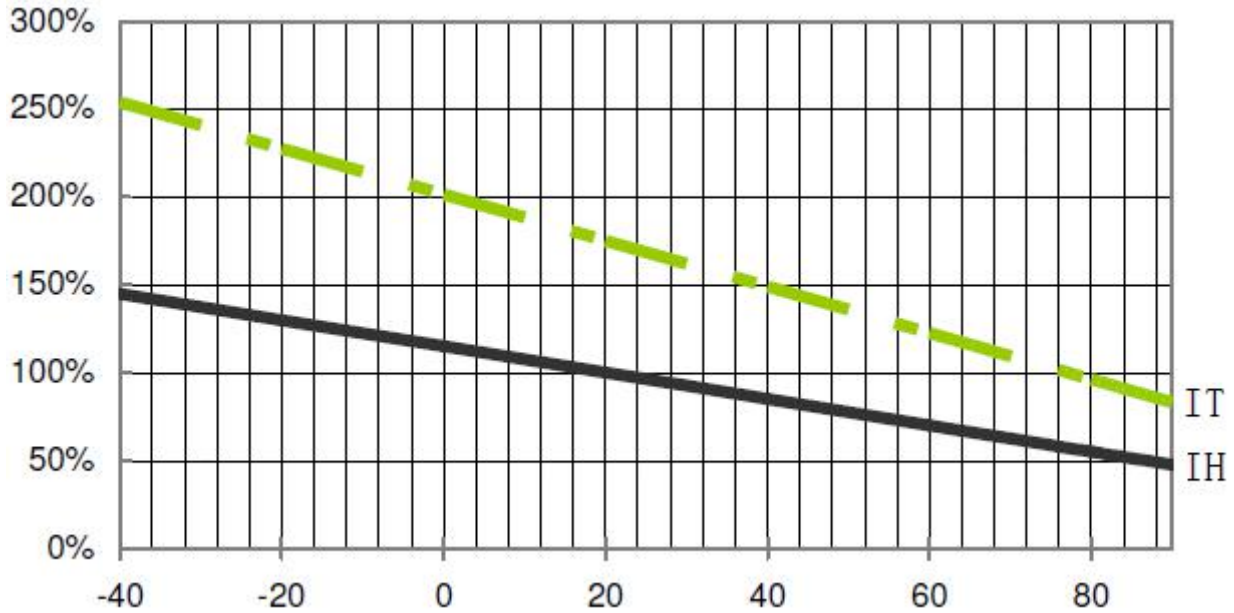
Temperature Derating Chart - I_{hold} (A)

| 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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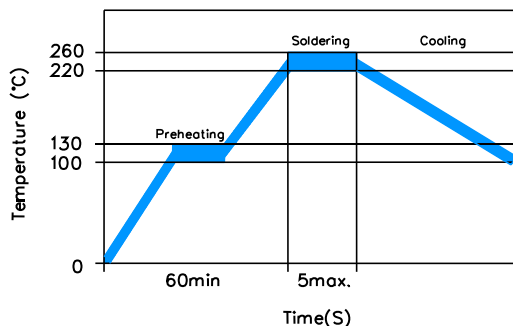
Temperature Derating Curve



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



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

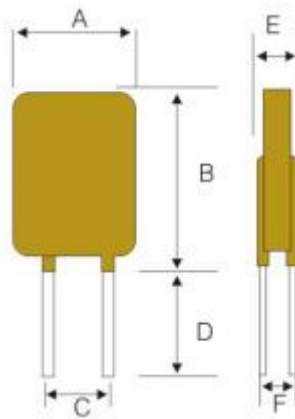
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Physical Specifications

| | |
|----------------------------------|---|
| Lead Material | 0.03-1.85A Tin-plated Copper clad steel 2.50-5.00A Tin-plated Copper |
| Soldering Characteristics | Solder ability per MIL-STD-202, Method 208E |
| Insulating Material | Cured, flame retardant epoxy polymer meets UL 94V-0 requirements. |
| Device Labeling | 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) |
| SC16-300SZ0D | 7.1 | 11.0 | 5.1 | 7.6 | 3.0 | 1.2 | Φ0.80 |

Packaging Quantity

| Part Number | Quantity (pcs/reel) |
|--------------|---------------------|
| SC16-300SZ0D | 1000 |