

Radial Lead Resettable Polymer PTCs

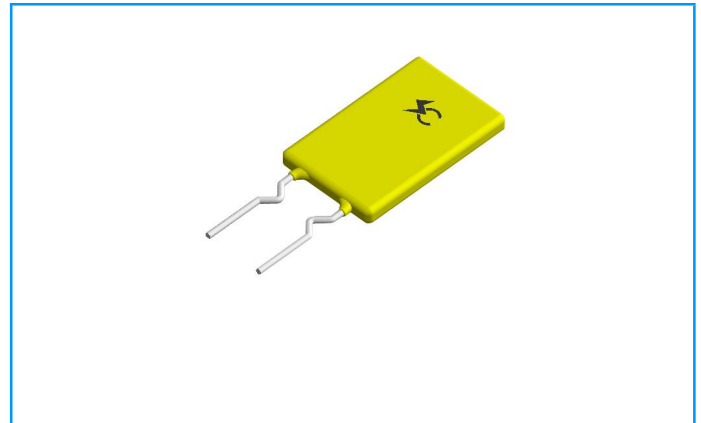
SC16-090SW0A

Features

- ◆ RoHS Compliant and Halogen-Free
- ◆ Radial leaded Devices
- ◆ Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- ◆ Operation Current: 0.90A, Maximum Voltage:16Vdc, Operating Temperature: -40°C to +85°C

Applications

- ◆ Computers and peripherals
- ◆ Power ports
- ◆ General electronics



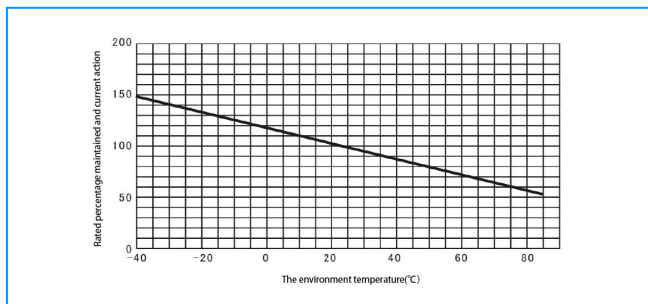
Electrical Parameters

| 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} (mΩ) | R _{max} (mΩ) | R1 _{max} (mΩ) |
| SC16-090SW0A | 0.90 | 1.80 | 16 | 40 | 0.60 | 2.70 | 10 | 90 | 180 | 270 |

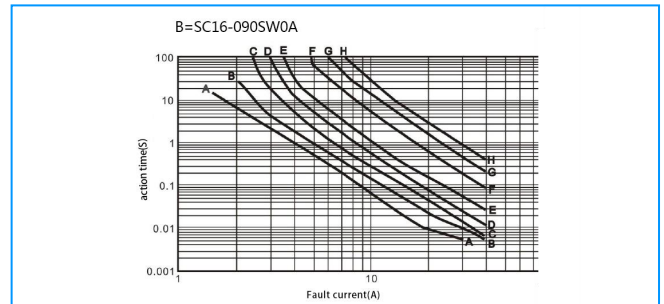
I_{hold}= Hold current: maximum current at which the device will not trip at 25°C still air.
 I_{trip}= Trip current: minimum current at which the device will always at 25°C still air.
 V_{max}= Maximum voltage device can withstand without damage at rated current.
 I_{max}= Maximum fault current device 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.
 R1_{max}= 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.

| Part Number | Maximum Ambient Operation Temperature | | | | | | | | |
|--------------|---------------------------------------|-------|------|------|------|------|------|------|------|
| | -40°C | -20°C | 0°C | 25°C | 40°C | 50°C | 60°C | 70°C | 85°C |
| | Hold Current (A) | | | | | | | | |
| SC16-090SW0A | 1.31 | 1.17 | 1.04 | 0.90 | 0.75 | 0.69 | 0.61 | 0.55 | 0.47 |

Average Time Current Curves



Temperature Rerating Curve



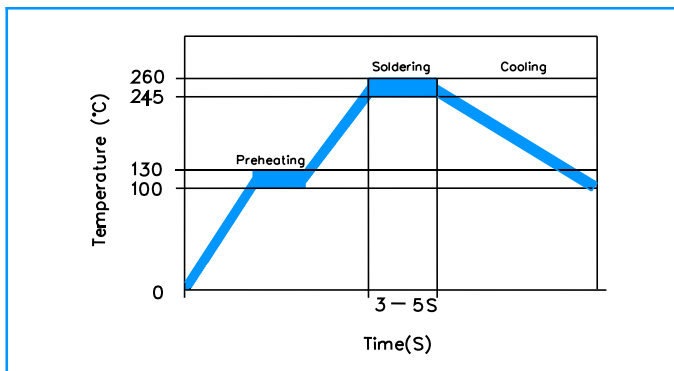
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Test Procedures and Requirements

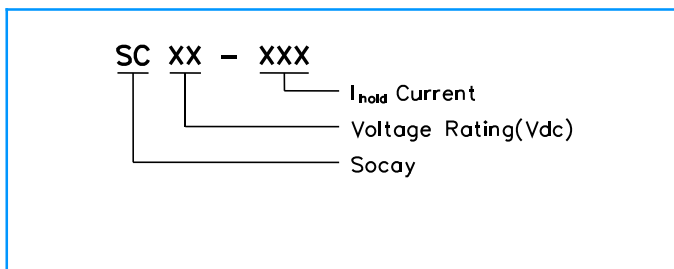
| Test Item | Test Conditions | Accept/Reject Criteria |
|-----------------------------|--------------------------------------|-------------------------------------|
| Resistance | In still air @25°C | $R_{min} \leq R \leq R_{max}$ |
| Hold Current | 60 min, @ I_{hold} | No trip |
| Time to Trip | Specified current, V_{max} , @25°C | $T \leq$ Maximum Time To Trip |
| Frequency Current Withstand | V_{max} / I_{max} , 15 minute | Resistance change rate: $\leq 50\%$ |
| Trip Endurance | V_{max} / I_{max} , 24 hours | No arcing or burning |

Soldering Parameters

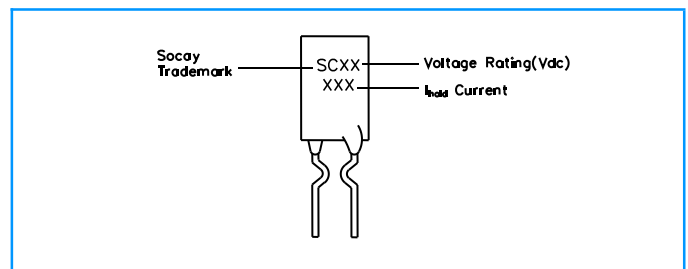


| | |
|-------------------------|---|
| Pre-Heating Zone | Refer to the condition recommended by the manufacturer. Max. ramping rate should not exceed 4°C/Sec |
| Soldering Zone | Max. solder temperature should not exceed 260°C |
| Cooling Zone | Cooling by natural convection in air |

Part Numbering



Part Marking



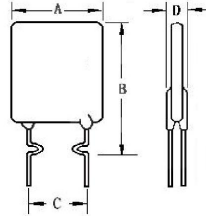
Packaging and Storage

| Part Number | Quantity |
|--------------|----------------------------|
| SC16-090SW0A | 1000Pcs/Bag or 2000Pcs/Box |

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Dimensions



| Part Number | Dimensions (mm) | | | | Lead Material |
|--------------|-----------------|---------|---------|---------|-------------------|
| | A (Max) | B (Max) | C | D (Max) | Tinned Metal (mm) |
| SC16-090SW0A | 6.5 | 11.5 | 5.1±0.5 | 3.0 | 24 AWG/Φ0.5 |