

Radial Lead Resettable Polymer PTCs

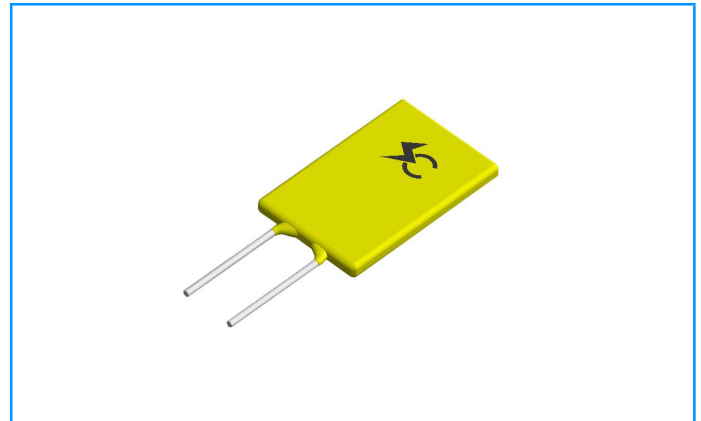
SC16-1000SZ0A

Features

- ◆ RoHS Compliant and Halogen-Free
- ◆ Radial leaded Devices
- ◆ Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- ◆ Operation Current: 10.00A, 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)
SC16-1000SZ0A	10.0	17.0	16	100	3.6	30	15	4.0	10.0	12.5

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 trip 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.

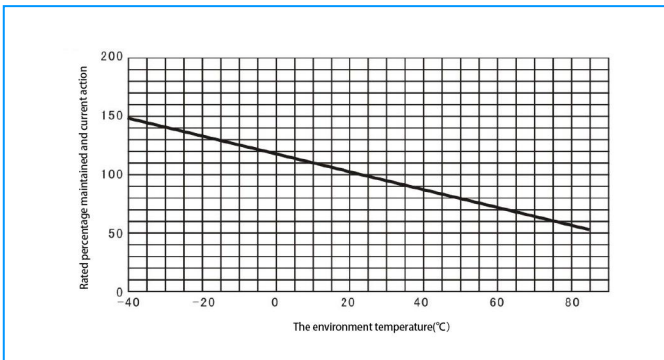
R_{max} = Maximum device resistance at 25°C prior to tripping.

R1_{max} = Maximum resistance of device at 25°C measured one hour after tripping.

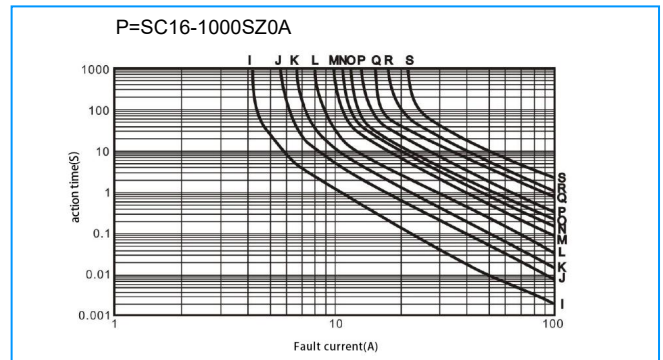
Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

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)								
SC16-1000SZ0A	14.7	13.3	12.0	10.0	8.70	8.00	7.00	6.30	4.70

Average Time Current Curves



Temperature Rerating Curve



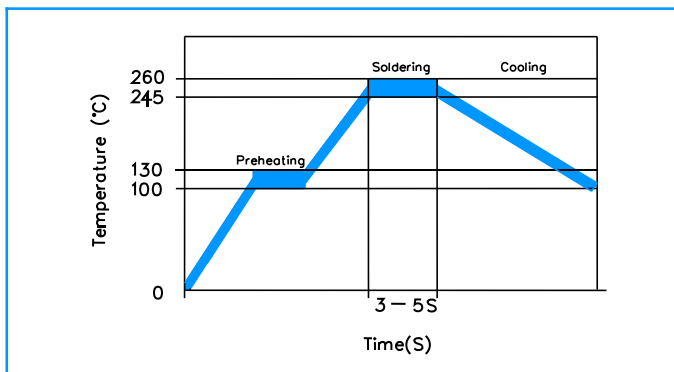
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Test Procedures and Requirements

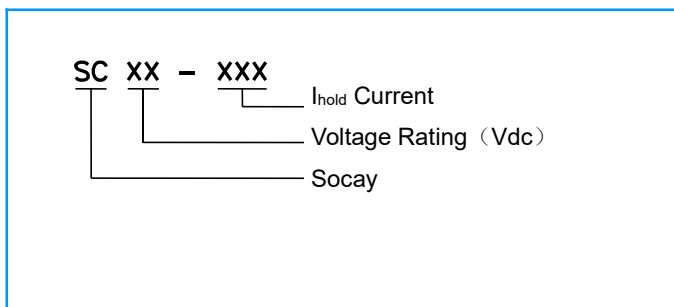
Test Item	Test Conditions	Accept/Reject Criteria
Resistance	In still air @25°C	$R_{min} \leq R \leq R_{max}$
Hold Current	60 min, @ I_{hold}	No trip
Time to Trip	Specified current, V_{max} , @25°C	$T \leq$ Maximum Time To Trip
Frequency Current Withstand	V_{max} / I_{max} , 15 minute	Resistance change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

Soldering Parameters

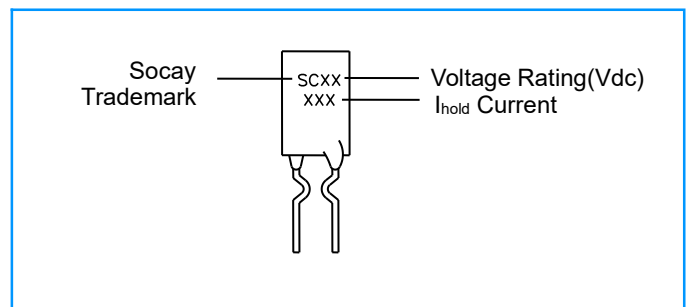


Pre-Heating Zone	Refer to the condition recommended by the manufacturer. Max. ramping rate should not exceed 4°C/Sec
Soldering Zone	Max. solder temperature should not exceed 260°C
Cooling Zone	Cooling by natural convection in air

Part Numbering



Part Marking



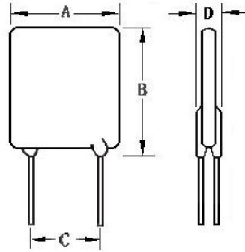
Packaging and Storage

Part Number	Quantity
SC16-1000SZ0A	200 Pcs

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SC16-1000SZ0A

Dimensions Unit:(mm)



Part Number	Dimensions (mm)				Lead Material
	A (Max)	B (Max)	C	D (Max)	Tinned Metal (mm)
SC16-1000SZ0A	18.5	24.5	10.2±0.5	3.0	0.8

Warning



◆ **Mechanical Stress**

PPTC devices will undergo a thermal expansion during fault condition. If PPTC devices are installed or placed in an application ,where the space between PPTC devices and the surrounding materials (e.g., covering materials, packaging materials, encapsulate materials and the like) is insufficient, it will cause an inhibiting effect upon the thermal expansion. Pressing, twisting, bending and other kinds of mechanical stress will also adversely affect the performance of the PPTC devices, and shall not be used or applied.

◆ **Chemical Pollutants**

Silicone-based oils, oils, solvents, gels, electrolytes, fuels, acids, and the like will adversely affect the properties of PPTC devices, and shall not be used or applied.

◆ **Electronic and Thermal Effect**

PPTC devices are secondary protection devices and are used solely for sporadic, accidental over-current or over-temperature error condition, and shall NOT be used if or when constant or repeated fault conditions (such fault conditions may be caused by,among others, incorrect pin-connection of a connector) or over-extensive trip events may occur.

PPTC devices are different from fuses and, when a fault condition occurs, will go into high-resistance state and do not open circuit, in which case the voltage at such PPTC devices may reach a hazardous level.

Operation over the maximum rating or other forms of improper use may cause failure, arcing, flame and/or other damage to the PPTC devices.

Conductive material contamination, such as metal particle, may induce shortage, flame or arcing.

Due to the inductance, the operation circuits may generate a circuit voltage (Ldi/dt) above the rated voltage of PPTC devices, which shall not be used under such circumstances.

◆ **General**

Customers shall evaluate and test the properties of PPTC devices independently to verify and ensure that their individual applications will be met.

The performance of PPTC devices will be adversely affected if they are improperly used under electronic, thermal and/or mechanical procedures and/or conditions non-conformant to those recommended by manufacturer.

Customers shall be responsible for determining whether it is necessary to have back-up, failsafe and/or fool-proof protection To avoid or minimize damage that may result from extra-ordinary, irregular function or failure of PPTC devices.

Any and all responsibilities and liabilities are disclaimed if any item under this notice of warning is not complied with.