

Radial Lead Resettable Polymer PTCs

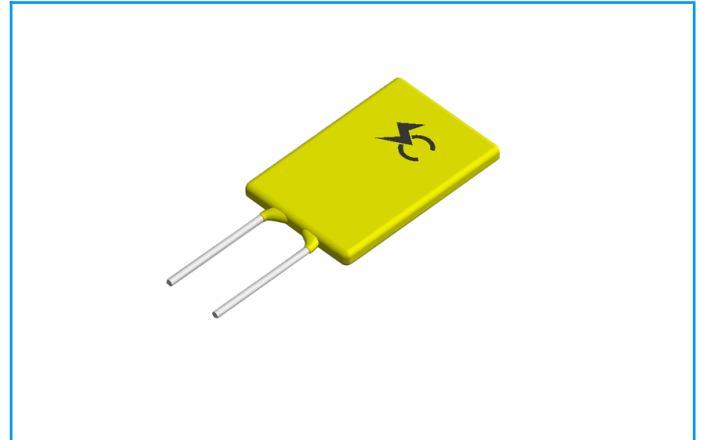
SC16-500SZ0D

Features

- u RoHS Compliant and Halogen-Free
- u Radial leaded Devices
- u Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- u Operation Current: 5.00A, Maximum Voltage: 16Vdc, Operating Temperature: -40°C to +85°C

Applications

- u USB hubs, ports and peripherals
- u Power ports
- u IEEE1394 ports
- u Motor protection
- u Automotive application
- u Computers and peripherals
- u 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)
SC16-500SZ0D	5.00	10.00	16	40	2.60	25.0	3.6	0.015	0.025	0.040

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.

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.

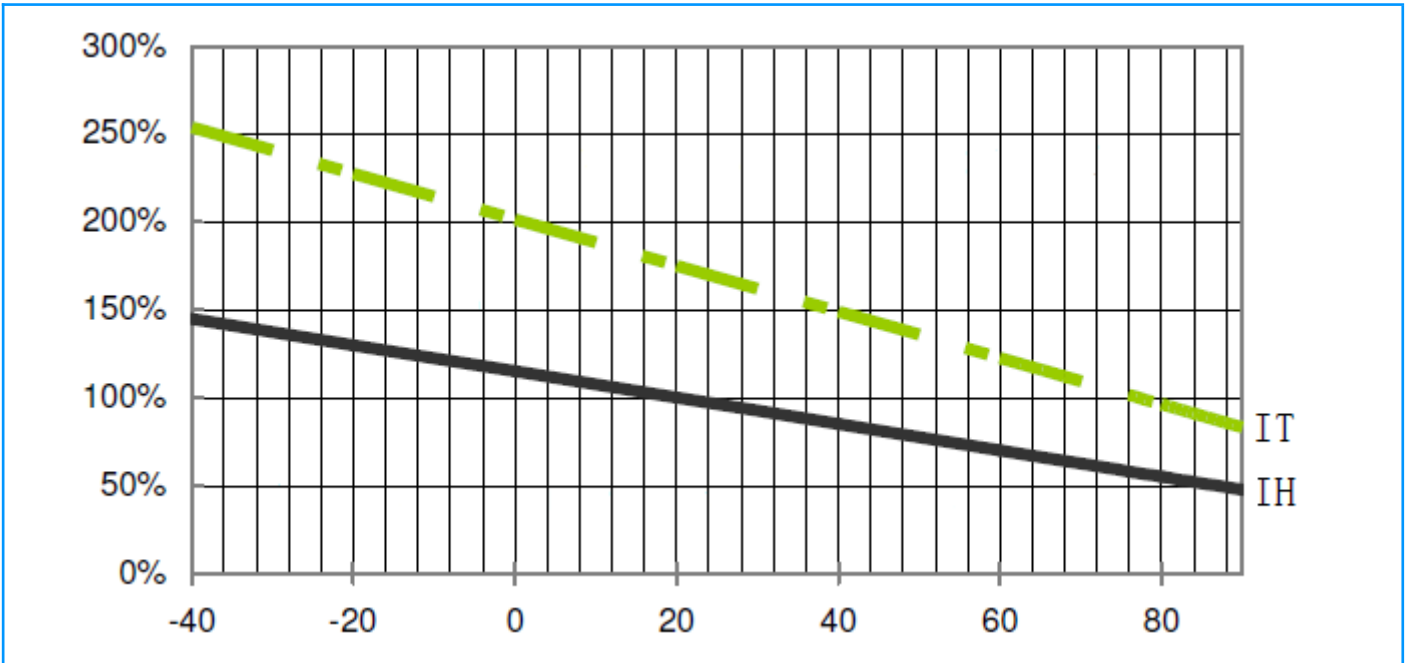
Temperature Derating Chart - I_{hold} (A)

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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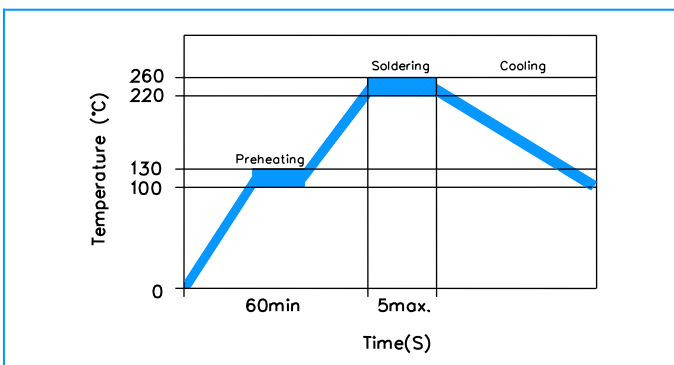
Temperature Derating Curve



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

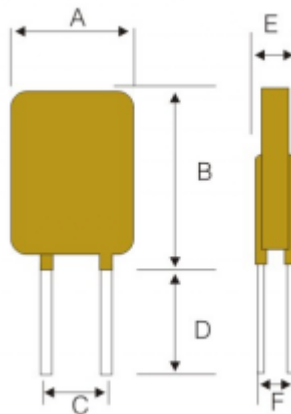
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Physical Specifications

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)
SC16-500SZ0D	10.4	14.3	5.1	7.6	3.0	1.2	Φ0.80

Packaging Quantity

Part Number	Quantity (pcs/reel)
SC16-500SZ0D	1000