

Radial Lead Resettable Polymer PTCs

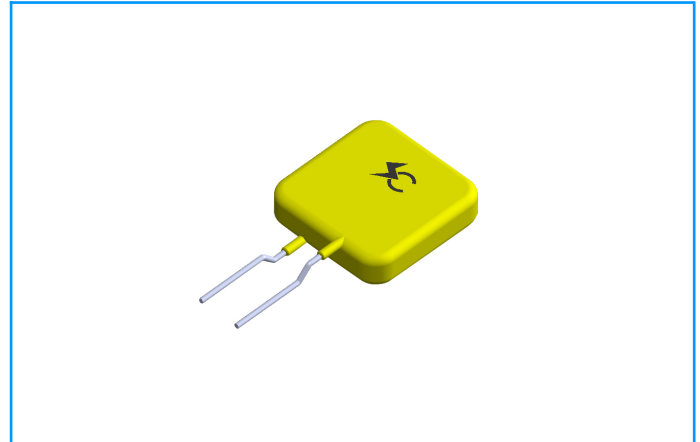
SC250-120SW0B

Features

- Radial leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- Bulk packaging, or tape and reel available on most models
- RoHS compliant and lead-free

Applications

- AC220V over-current protection
- Power ports
- Customer Premises Equipment(CPE)



Electrical Parameters

Part Number	I _{hold} (A)	I _{trip} (A)	V _{max interrupt} (V)	I _{max} (A)	P _{d Max} (W)	Maximum Time To Trip		Nominal Resistance		
						Current (A)	Time (S)	R _{min} (Ω)	R _{max} (Ω)	R _{1max} (Ω)
SC250-120SW0B	0.12	0.24	250	3	1.0	1.0	2.0	6	11	16

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.

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

Thermal Derating Chart – I_{hold} (A)

Part Number	Maximum Ambient Operation Temperature									
	-40°C	-20°C	0°C	25°C	30°C	40°C	50°C	60°C	70°C	85°C
SC250-120SW0B	148%	132%	117%	100%	91%	85%	77%	68%	61%	45%

Environmental Specifications

Test Item	Test Conditions	Resistance Change
Passive aging	+85°C, 1000hrs	±8% typical
Humidity aging	+85°C, 85%R.H.1000hrs	±8% typical
Thermal shock	+125°C to -55°C, 10times	±12% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change

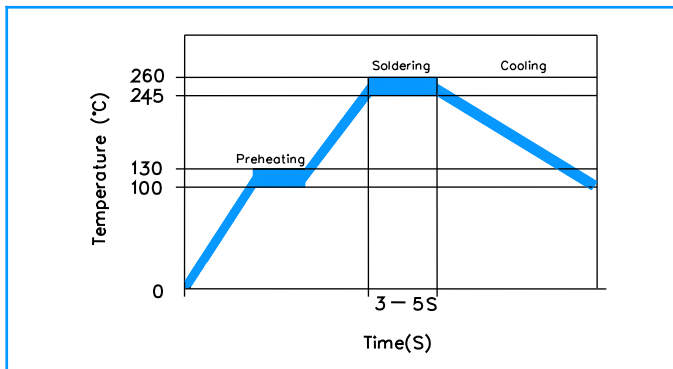
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Solder Reflow Conditions

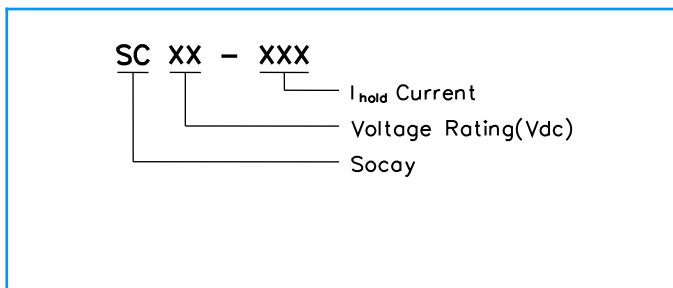
Parameter		Value
Wave Soldering	Soldering Temperature	260°C~270°C
	Soldering Time	≤3secs
	Soldering Position	Resettable fuse wire and the bottom ≥ 6mm
Manual Soldering	Soldering Temperature	250°C~280°C
	Soldering Time	≤3secs
	Soldering Position	Resettable fuse wire and the bottom ≥ 6mm

Soldering Parameters

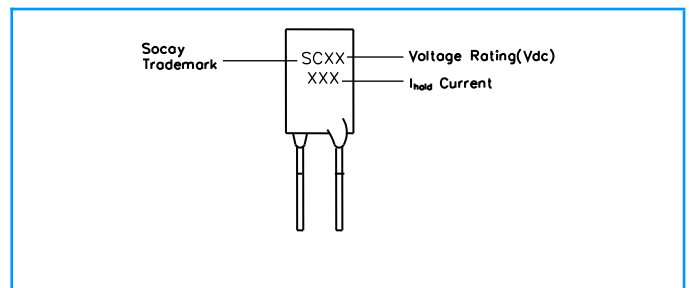


Pre-Heating Zone	Refer to the condition recommended by the manufacturer. Max. ramping rate should not exceed 4°C/Sec
Soldering Zone	Max. solder temperature should not exceed 260°C
Cooling Zone	Cooling by natural convection in air

Part Numbering



Part Marking



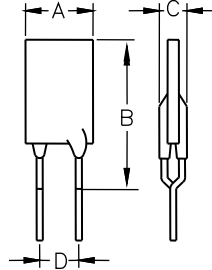
Packaging and Storage

Part Number	Quantity
SC250-120SW0B	1000PCS/Bag

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Dimensions



Part Number	Dimensions (mm)				Lead Material
	A (Max)	B (Max)	C (Max)	D (Typ)	Tinned Metal (mm)
SC250-120SW0B	7.0	12.6	4.5	5.1	22 AWG/Φ0.6

Note: Dimensions A, B, C is the maximum size, D values are typical tolerance of $\pm 0.75\text{mm}$.

Warning



- ⚠ This product should not be used in an application where the maximum interrupt voltage or maximum interrupt current in a fault condition, Operation beyond the maximum rating or improper use may result in device damage and possible electrical arcing and flame.
- ⚠ A PPTC device is not a fuse, It is a nonlinear thermistor that limits current, Because under a fault condition all PPTC devices go into a high resistance state but not open circuit hazardous voltage may be present at PPTC.
- ⚠ The devices are intended for protection against occasional over-current or over-temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events.
- ⚠ In most application, power must be removed and the fault condition cleared in order to reset a PPTC device.
- ⚠ PPTC devices are not recommended to be installed in applications where the device is constrained such that its PPTC properties are inhibited, for example in rigid potting materials or Add devices surface coating, Bundled devices ontology, which lack adequate clearance to accommodate device expansion.
- ⚠ Contamination on of the PPTC material with certain silicone-based oils or some aggressive solvents can adversely impact the performance of the devices. For example, Organic solvents to cleaning.