

## SOCAY Radial PTC Polymer Resettable Fuse PTCs SC60-185CZ0D For Circuit Protection

Our Product Introduction

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### Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL,REACH,RoHS,ISO
- Model Number: SC60-185CZ0D
- Minimum Order Quantity: 5000PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



### Product Specification

- Component Name: PPTC Resettable Fuse
- Package: Radial Lead
- I Hold: 1.85A
- I Trip: 3.7A
- V Max: 60Vdc
- I Max: 40A
- P Dtyp.: 2.1W
- Current: 9.25A
- Time: 12.6S
- R Min: 0.08Ω
- R Max: 0.12Ω
- R1 Max: 0.2Ω
- Highlight: Circuit Protection Polymer Resettable Fuse



## Product Description

### SOCAY Radial PTC Polymer Resettable Fuse PTCs SC60-185CZ0D For Circuit Protection

**PPTC Resettable Fuse DATASHEET: [SC60-185CZ0D\\_v96.2.pdf](#)**

#### Product Description:

One of the key features of this Radial Lead PPTC Resettable Fuse is its ability to trip at a maximum current of 40A, providing ample protection against overcurrent events. Additionally, this fuse has a holding current range of 1.8A to 3.7A, allowing it to operate within a wide range of current demands.

Designed as a resettable fuse, this product is capable of automatically resetting itself after a fault condition has been cleared, eliminating the need for manual replacement. This makes it an ideal choice for applications requiring long-term reliability and minimal maintenance. Overall, the Radial Lead PPTC Resettable Fuse is a reliable and efficient solution for overcurrent protection in various applications. Its multifuse design, radial lead construction, and ability to reset itself after a fault condition make it an ideal choice for electronics manufacturers looking for a dependable and low-maintenance overcurrent protection solution.

#### Features:

The working principle of PPTC is as follows: when an abnormal current passes through PPTC, the heat generated ( $I^2R$ ) causes the polymer matrix material to expand, and the conductive particles wrapped around the outside of the polymer matrix material are separated, thus cutting off the conductive channel of PPTC and causing the resistance of PPTC to rise, thus reducing the abnormal current. Upon the cessation of the abnormal overcurrent, the PPTC polymer matrix material contracts to its original shape, thereby reconnecting the conductive particles. The conductive channel then returns to its original low-resistance state.

##### Features

- ◆ RoHS Compliant and Halogen-Free
- ◆ Radial leaded Devices
- ◆ Cured, flame retardant epoxy polymer insulating material meets UL94V-0 requirements
- ◆ Operation Current: 1.85A, Maximum Voltage: 60Vdc, Operating Temperature: -40°C to +85°C

#### Technical Parameters:

I hold	1.85A
I trip	3.70A
V max	60.0Vdc
I max	40.0A
P dtyp.	2.10W
Maximum Time To Trip Current	9.25A
Maximum Time To Trip Time	12.6S
R min	0.08Ω
R max	0.12Ω
R1 max	0.2Ω

Electrical Parameters										
Part Number	I <sub>hold</sub> (A)	I <sub>trip</sub> (A)	V <sub>max</sub> (Vdc)	I <sub>max</sub> (A)	P <sub>avg</sub> (W)	Maximum Time To Trip		Resistance		
						Current (A)	Time (S)	R <sub>min</sub> (Ω)	R <sub>max</sub> (Ω)	R1 <sub>max</sub> (Ω)
SC60-185CZ0D	1.85	3.70	60	40	2.10	9.25	12.6	0.08	0.12	0.20

I<sub>hold</sub> = Hold current: maximum current at which the device will not trip at 25°C still air.  
 I<sub>trip</sub> = Trip current: minimum current at which the device will always trip at 25°C still air.  
 V<sub>max</sub> = Maximum voltage device can withstand without damage at rated current.  
 I<sub>max</sub> = Maximum fault current device can withstand without damage at rated voltage.  
 T<sub>trip</sub> = Maximum time to trip(s) at assigned current.  
 P<sub>typ</sub> = Typical power dissipation: typical amount of power dissipated by the device when in state air environment.  
 R<sub>min</sub> = Minimum device resistance at 25°C prior to tripping.  
 R<sub>max</sub> = Maximum device resistance at 25°C prior to tripping.  
 R1<sub>max</sub> = 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 <sub>hold</sub> (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%

## Applications:

The Radial Lead PPTC Resettable Fuse is designed for use in applications where space is limited. The SC60-185CZ0D has a low profile and a small footprint, making it ideal for use in compact electronic devices such as mobile phones, tablets, and portable audio players. The radial lead design also makes it easy to install and solder onto circuit boards.

The PPTC Resettable Fuse is designed to provide reliable protection against overcurrent faults. It has a low resistance in the normal state, which helps to minimize power loss and improve system efficiency. When an overcurrent fault occurs, the resistance of the PPTC Resettable Fuse increases rapidly, effectively limiting the current to a safe level.

The SC60-185CZ0D has a R min of 0.08 Ohms and a maximum voltage rating of 60V DC. It is also available with a wide range of current ratings, making it suitable for use in applications with different current demands. The PPTC Resettable Fuse is also RoHS compliant, ensuring that it meets international environmental standards.

The SC60-185CZ0D Leaded PPTC Resettable Fuse is suitable for a variety of applications and scenarios, including power supplies, battery chargers, portable devices, and other electronics. Its compact size, low resistance, and radial lead design make it easy to install and use, while its reliable overcurrent protection helps to ensure the safety and longevity of electronic devices.

## FAQ:

**Q: What is the brand name of this resettable fuse?**  
 A: The brand name is SOCAP.

**Q: What is the model number of this resettable fuse?**  
 A: The model number is SC60-185CZ0D.

**Q: Where is this resettable fuse manufactured?**  
 A: It is manufactured in Shenzhen, Guangdong, China.

**Q: What is the maximum voltage rating of this resettable fuse?**  
 A: The maximum voltage rating is 60 volts.

**Q: What is the maximum current rating of this resettable fuse?**  
 A: The maximum current rating is 40 amperes.

 **Shenzhen Socay Electronics Co., Ltd.**

 +8618126201429
  sylvia@socay.com
  socaydiode.com

4/F, Block C, HeHengXing Science & Technology Park, 19 MinQing Road, LongHua District, Shenzhen City,  
 Guangdong Province, China