

SMD2018 Series

**Features**

- Smaller size saves board space and cost
- Resettable circuit protection
- Fast time-to-trip
- Low resistance
- Surface mount packaging for automated assembly
- Lead-free and compliant with the European Union RoHS Directive 2002/95/EC

**Application**

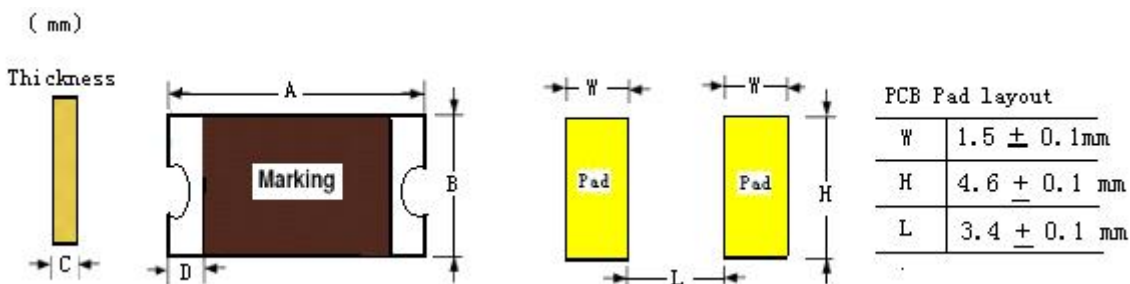
Polymer Resettable Fuse for over-current, over-temperature and short-circuit protection

- Computer motherboards
- IEEE1394 Ports
- USB hub, ports and peripherals
- Phones
- Data communication
- Modems/ Ethernet/LAN

**General Description**

Polymer resettable fuse are made of polymeric PTC materials which is a matrix of polymer containing dispersed conductive particles. Generally, the device has a very low resistance. If an over-current happened, as a response to the damage current, the resistance will immediately increase to very high, reducing the current of the circuit to a safe value that the loading can carry. Once fault to the circuit is weed out and power is recuperated, the polymer will deflate itself , the device will reset and is ready for normal operation.

**Product Dimensions (mm)**



型号	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min
SMD2018-030	4.72	5.44	4.22	4.93	0.60	1.10	0.30	0.25
SMD2018-050	4.72	5.44	4.22	4.93	0.60	1.10	0.30	0.25
SMD2018-100	4.72	5.44	4.22	4.93	0.45	0.80	0.30	0.25
SMD2018-100-33	4.72	5.44	4.22	4.93	0.45	0.80	0.30	0.25
SMD2018-150	4.72	5.44	4.22	4.93	0.45	0.80	0.30	0.25
SMD2018-200	4.72	5.44	4.22	4.93	0.45	0.80	0.30	0.25

### Electrical Characteristics

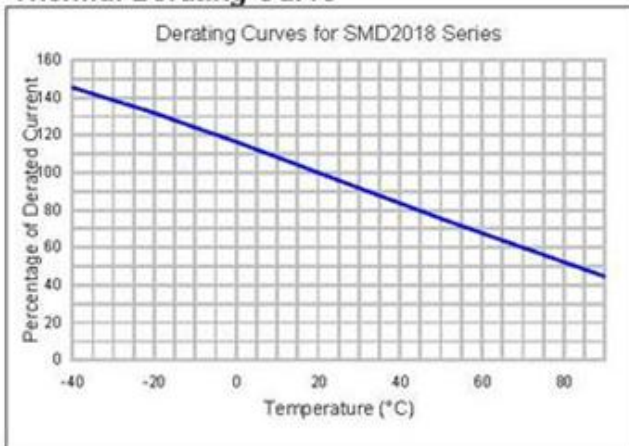
Model	V <sub>max</sub> (Vdc)	I <sub>max</sub> (A)	I <sub>hold</sub> @25°C (A)	I <sub>trip</sub> @ 25°C (A)	Pd Max (W)	Max Time to trip		Resistance	
						Current (A)	Time (Sec)	R <sub>1min</sub> (Ω)	R <sub>1max</sub> (Ω)
SMD2018-030	60.0	100	0.30	0.60	0.9	1.5	3.0	0.50	2.30
SMD2018-050	60.0	100	0.55	1.20	1.0	2.5	3.0	0.20	1.00
SMD2018-100	15.0	100	1.10	2.2	1.1	8.0	0.4	0.06	0.36
SMD2018-100-33V	33.0	100	1.10	2.2	1.1	8.0	0.4	0.06	0.36
SMD2018-150	15.0	100	1.50	3.0	1.1	8.0	0.8	0.05	0.17
SMD2018-200	10.0	100	2.00	4.0	1.1	8.0	2.4	0.03	0.10

### Thermal Derating

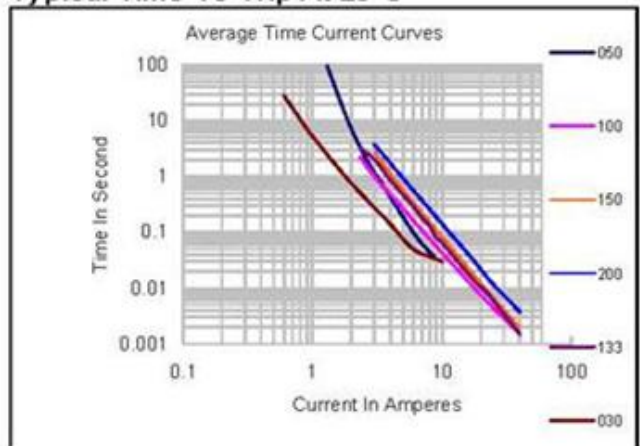
model	Operating temperature(°C) /hold current (A)									
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C	
SMD2018-030	0.48	0.42	0.35	0.30	0.24	0.21	0.17	0.15	0.10	
SMD2018-050	0.87	0.77	0.67	0.55	0.46	0.41	0.36	0.31	0.23	
SMD2018-100	1.71	1.52	1.32	1.10	0.94	0.84	0.74	0.64	0.50	
SMD2018-100-33V	1.71	1.52	1.32	1.10	0.94	0.84	0.74	0.64	0.50	
SMD2018-150	2.38	2.10	1.82	1.50	1.27	1.13	0.99	0.85	0.64	
SMD2018-200	2.95	2.65	2.35	2.00	1.74	1.59	1.44	1.29	1.06	

### I<sub>H</sub>/T-chart

Thermal Derating Curve



Typical Time-To-Trip At 25°C

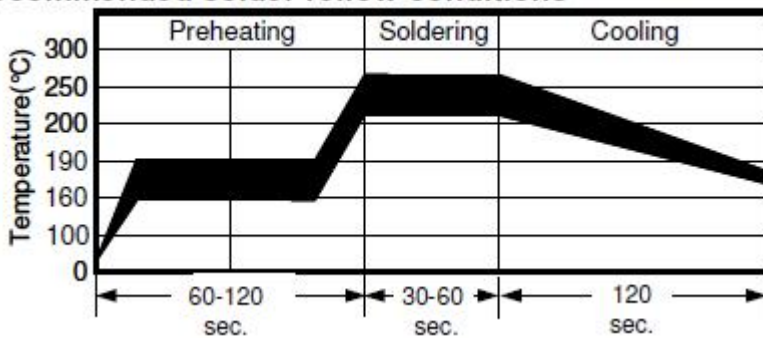


## Test Procedures and Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	$R_{min} \leq R \leq R_{1max}$
Time to Trip	$V_{max}$ , 25°C, In still air @ 25°C	$T \leq \text{max. time to trip (seconds)}$
Hold Current	30 min. at $I_H$ , In still air @ 25°C	No trip
Trip Cycle Life	$V_{max}$ , $I_{max}$ , 100 cycles, In still air @ 25°C	No arcing or burning
Trip Endurance	$V_{max}$ , 1 hours, In still air @ 25°C	No arcing or burning

## Solder Reflow Conditions

### Recommended solder reflow conditions



## Order— Name Information



### 包装信息:

SMD2018 Series : $I_H$ : 030~050 1500PCS /  $I_H$ :100~200 2500PCS/

## 基本术语说明

- $I_H$ : Maximum current of PPTC not working in 25 °C static Air Environment
- $I_T$ : Minimum current required for PPTC Action in 25 °C Air Environment
- $T_{trip}$ : Maximum operating time at 25 °C air environment at 5 times  $I_H$
- $V_{max}$ : Maximum operating Voltage of PPTC
- $I_{max}$ : Maximum withstand current of PPTC in Circuit
- $R_{min}$ : Minimum Zero Power Resistance of PPTC at 25 °C
- $R_{1max}$ : After one normal operation, place for 1 hour, at 25 °C, the maximum power resistance of PPTC