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

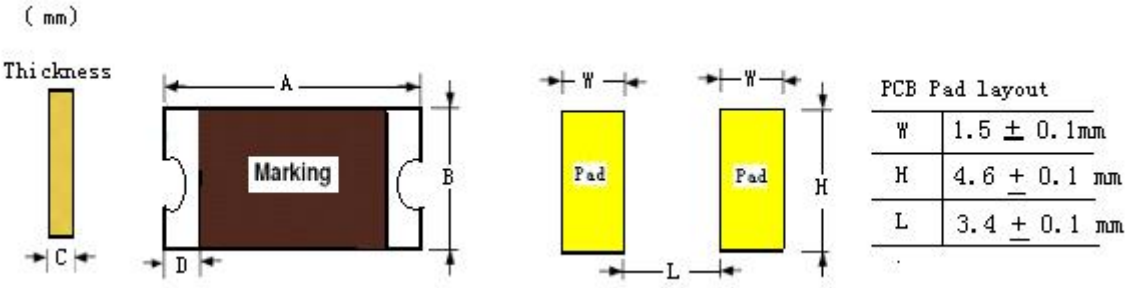
Polymer Resettable Fuse for over-current, over-temperature and short-circuit protection

- 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

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Electrical Characteristics

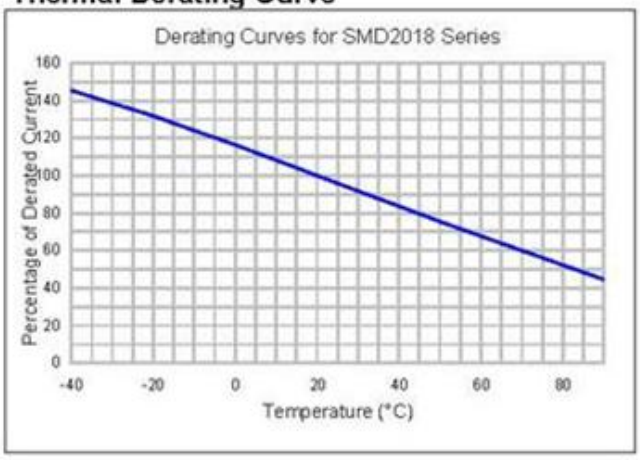
Model	V_{max}(Vdc)	I_{max}(A)	I_{hold} @25℃ (A)	I_{trip} @ 25℃ (A)	Pd Max (W)	Max Time to trip		Resistance	
						Current (A)	Time (Sec)	$R1_{min}$ (Ω)	$R1_{max}$ (Ω)
SMD2018-030	60.0	100	0.30	0.60	0.9	1.5	3.0	0.50	2.30
SMD2018-050	60.0	100	0.55	1.20	1.0	2.5	3.0	0.20	1.00
SMD2018-100	15.0	100	1.10	2.2	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

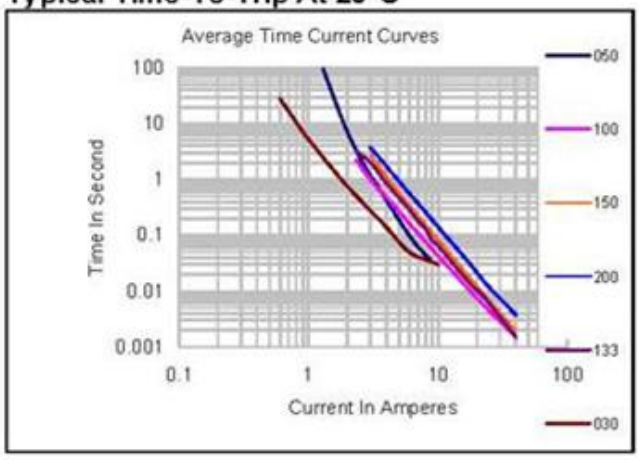
model	Operating temperature(℃) /hold current (A)								
	-40℃	-20℃	0℃	25℃	40℃	50℃	60℃	70℃	85℃
SMD2018-030	0.48	0.42	0.35	0.30	0.24	0.21	0.17	0.15	0.10
SMD2018-050	0.87	0.77	0.67	0.55	0.46	0.41	0.36	0.31	0.23
SMD2018-100	1.71	1.52	1.32	1.10	0.94	0.84	0.74	0.64	0.50
SMD2018-100-33V	1.71	1.52	1.32	1.10	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_H/T-chart

Thermal Derating Curve



Typical Time-To-Trip At 25°C

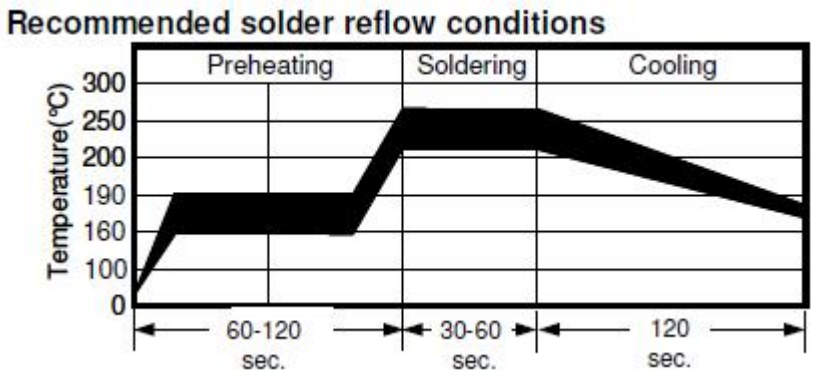


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Test Procedures and Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25℃	Rmin≤R≤R1max
Time to Trip	Vmax, 25℃, In still air @ 25℃	T≤max. time to trip(seconds)
Hold Current	30 min. at I_H, In still air @ 25℃	No trip
Trip Cycle Life	Vmax, Imax, 100 cycles, In still air @ 25℃	No arcing or burning
Trip Endurance	Vmax, 1 hours, In still air @ 25℃	No arcing or burning

Solder Reflow Conditions



Order— Name Information



包装信息：

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

基本术语说明

I_H: Maximum current of PPTC not working in 25 ℃ static Air Environment

I_T: Minimum current required for PPTC Action in 25 ℃ Air Environment

T_{trip}: Maximum operating time at 25 ℃ air environment at 5 times IH

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 ℃

$R1_{max}$: After one normal operation, place for 1 hour, at 25 ℃, the maximum power resistance of PPTC

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