

## SMD2018-150

### Performance Specification

Model	$V_{max}$ (Vdc)	$I_{max}$ (A)	$I_{hold}$ @25°C (A)	$I_{trip}$ @25°C (A)	$P_d$ Typ. (W)	Maximum Time To Trip		Resistance	
						Current (A)	Time (Sec)	$R_{i_{min}}$ (Ω)	$R_{i_{max}}$ (Ω)
SMD2018-150	15	100	1.50	3.00	1.1	8.0	0.80	0.050	0.170

**I<sub>hold</sub>** = Hold Current. Maximum current device will not trip in 25°C still air.

**I<sub>trip</sub>** = Trip Current. Minimum current at which the device will always trip in 25°C still air.

**V<sub>max</sub>** = Maximum operating voltage device can withstand without damage at rated current ( $I_{max}$ ).

**I<sub>max</sub>** = Maximum fault current device can withstand without damage at rated voltage ( $V_{max}$ ).

**P<sub>d</sub>** = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

**R<sub>i\_{min}/max</sub>** = Minimum/Maximum device resistance prior to tripping at 25°C.

**R<sub>1\_{max}</sub>** = Maximum device resistance is measured one hour post reflow.

**CAUTION** : Operation beyond the specified ratings may result in damage and possible arcing and flame.

### Environmental Specifications

Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hrs.	±5% typical
Humidity aging	+85°C, 85% R.H. , 168 hours	±5% typical
Thermal shock	+85°C to -40°C, 20 times	±33% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change
Ambient operating conditions : - 40 °C to +85 °C		
Maximum surface temperature of the device in the tripped state is 125 °C		

### AGENCY APPROVALS :

UL pending

### Regulation/Standard:



2002/95/EC

EN14582

### $I_{hold}$ Versus Temperature

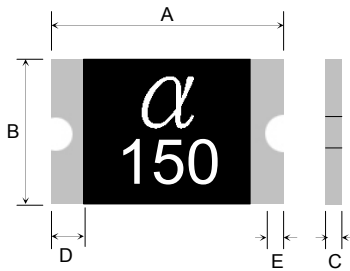
Model	Maximum ambient operating temperature ( $T_{max}$ ) vs. hold current ( $I_{hold}$ )								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD2018-150	2.38	2.10	1.82	1.50	1.27	1.13	0.99	0.85	0.64

# SMD2018-150

## Construction And Dimension (Unit:mm)

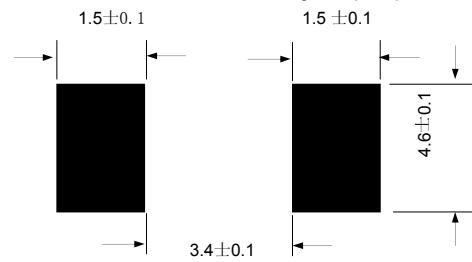
Model	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
SMD2018-150	4.72	5.44	4.22	4.93	0.45	0.80	0.30

### Dimensions & Marking



α = Trademark  
150 = Hold current

### Recommended Pad Layout (mm)



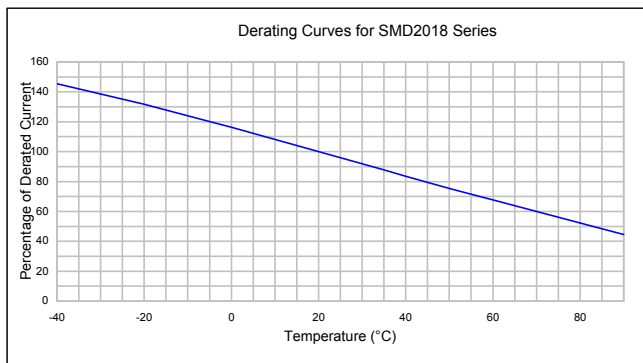
### Termination Pad Characteristics

Terminal pad materials : Tin-plated Nickel-Copper  
Terminal pad solderability : Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

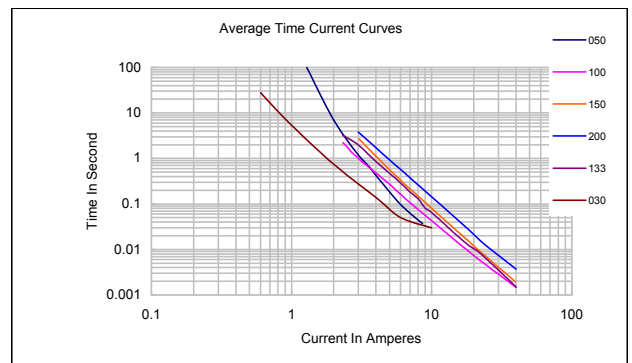
### Rework

Use standard industry practices, the removal device must be replaced with a fresh one.

### Thermal Derating Curve



### Typical Time-To-Trip At 25°C

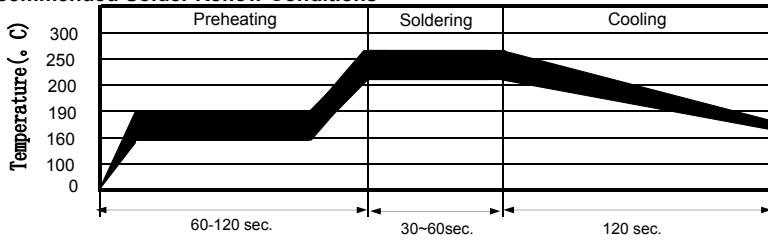


### WARNING:

- Use PPTC beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- PPTC 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 are anticipated.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- Use PPTC with a large inductance in circuit will generate a circuit voltage (L di/dt) above the rated voltage of the PPTC.
- Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.
- Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices. PPTC SMD can be cleaned by standard methods.
- Requests that customers comply with our recommended solder pad layouts and recommended reflow profile. Improper board layouts or reflow profile could negatively impact solderability performance of our devices.

# SMD2018-150

## Recommended Solder Reflow Conditions

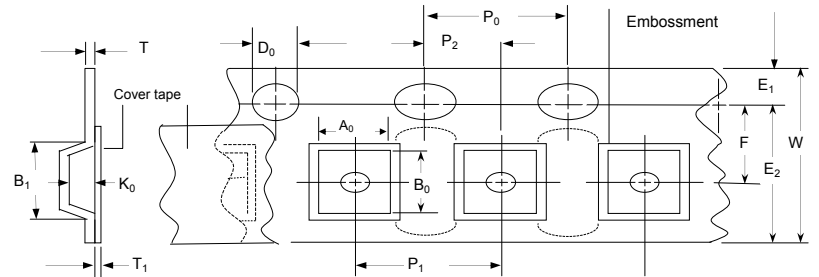


- Recommended reflow methods : IR, vapor phase oven, hot air oven.
  - Devices are not designed to be wave soldered to the bottom side of the board.
  - Recommended maximum paste thickness is 0.25 mm (0.010 inch).
  - Devices can be cleaned using standard method and solvents.
- Note : If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

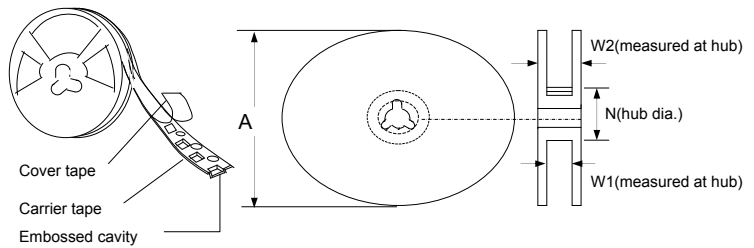
## Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-2
W	12.0 ± 0.20
P <sub>0</sub>	4.0 ± 0.10
P <sub>1</sub>	8.0 ± 0.10
P <sub>2</sub>	2.0 ± 0.05
A <sub>0</sub>	4.40 ± 0.10
B <sub>0</sub>	5.50 ± 0.10
B <sub>1</sub> max.	8.2
D <sub>0</sub>	1.5 + 0.1, -0.0
F	5.5 ± 0.05
E <sub>1</sub>	1.75 ± 0.10
E <sub>2</sub> min.	10.25
Tmax.	0.6
T <sub>1</sub> max.	0.1
K <sub>0</sub>	1.36 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	50
W <sub>1</sub>	12.4 + 2.0, -0.0
W <sub>2</sub> max.	18.4

## EIA Tape Component Dimensions



## EIA Reel Dimensions



## Storage And Handling

- Storage conditions : 40°C max, 70% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

## Order Information

## Packaging

SMD2018	150	Tape & Reel Quantity
Product name	Hold	2,500 pcs/reel
Size 5045mm/2018 inch	Current	
SMD : surface mount device	1.50A	