

## »Performance Specification

Model	I-hold	I-trip	Vmax	Imax	Pd typ	Max. Time to trip		R0 min	R1max
						Current	Time		
						(A)	(Sec.)		
SMD2018-030/60N	0.30	0.60	60.00	40.00	1.40	1.50	3.00	0.50	2.30
SMD2018-050/60N	0.50	1.00	60.00	40.00	1.40	2.50	5.00	0.20	1.00
SMD2018-075/33N	0.75	1.50	33.00	40.00	1.40	8.00	0.50	0.11	0.63
SMD2018-075/60N	0.75	1.50	60.00	40.00	1.40	8.00	0.50	0.11	0.63
SMD2018-100/15N	1.00	2.00	15.00	40.00	1.40	8.00	0.50	0.06	0.36
SMD2018-100/33N	1.00	2.00	33.00	40.00	1.40	8.00	0.50	0.06	0.36
SMD2018-150/15N	1.50	3.00	15.00	40.00	1.40	8.00	1.00	0.05	0.17
SMD2018-150/33N	1.50	3.00	33.00	40.00	1.40	8.00	1.00	0.05	0.17
SMD2018-200/12N	2.00	4.00	12.00	40.00	1.40	8.00	3.00	0.03	0.10
SMD2018-200/16N	2.00	4.00	16.00	40.00	1.40	8.00	3.00	0.03	0.10
SMD2018-200/24N	2.00	4.00	24.00	40.00	1.40	8.00	3.00	0.03	0.10
SMD2018-260/24N	2.60	5.20	24.00	40.00	1.60	8.00	5.00	0.020	0.075
SMD2018-300/16N	3.00	6.00	16.00	40.00	1.60	8.00	10.00	0.015	0.050
SMD2018-350/12N	3.50	7.00	12.00	40.00	1.60	8.00	10.00	0.010	0.040

I-hold: Holding Current: maximum current at which the device will not trip in 25°C still air.

I-trip: Tripping Current: minimum current at which the device will trip in 25°C still air.

Vmax: Maximum voltage device can withstand without damage at rated current(Imax).

I max: Maximum fault current device can withstand without damage at rated voltage(Vmax).

Pd typ: Typical power dissipated from device when in the tripped state at 25°C still air.

R0 min: Minimum resistance of device in initial (un-soldered) state.

R1 max: Maximum resistance of device at 25°C measured one hour after tripping or reflow soldering of 260°C for 20 sec.

»Environmental Specifications

Operating Temperature	-40 °C to +85 °C
Maximum Device Surface Temperature in Tripped State	125°C
Passive Aging	+85 °C, 1000 hours ; ±5 % typical resistance change
Humidity Aging	+85 °C, 85 % R.H. 1000 hours; ±5 % typical resistance change
Thermal Shock	MIL-STD-202, Method 107; +85 °C to -40 °C, 20 times;-30 % typical resistance change
Solvent Resistance	MIL-STD-202, Method 215 ; No change
Vibration	MIL-STD-883, Method 2007, Condition A; No change
Moisture Sensivity Level	Level 1, J-STD-020
Storage Conditions	+40 °C Max. 70% RH Max. Packed in original packaging.

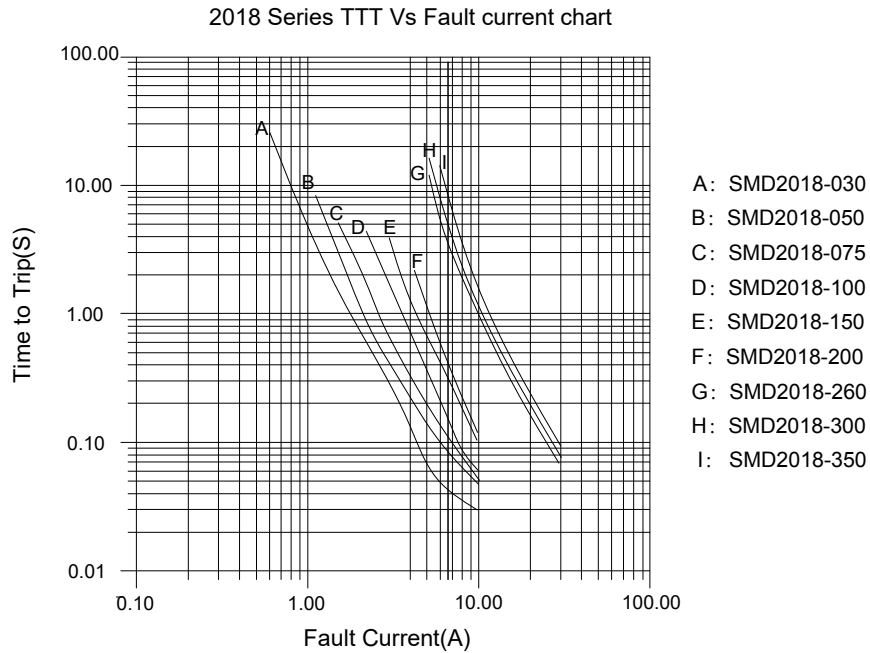
»Test Procedures And Requirements

No.	Test	Test Conditions	Accept/Reject Criteria
1	R0 min	Resistance measurement at 25°C	R0min ≤ R ≤ R1max
2	R1 max	Resistance measurement one hour after post trip	R0min ≤ R ≤ R1max
3	I-hold	Hold rated current 1800 second without trip, @ 25°C	No trip
4	I-trip	Device must trip within 900 second under rated current, @25°C	Trip
5	Max. time to trip	At specified current, 25°C	T ≤ max. time to trip (seconds)
6	Trip Cycle Life	Vmax, Imax, 100 cycles	No arcing or burning
7	Trip Endurance	Vmax, Imax 24 hours	No arcing or burning
8	Solderability	ANSI/J-STD-002	95 % min. coverage

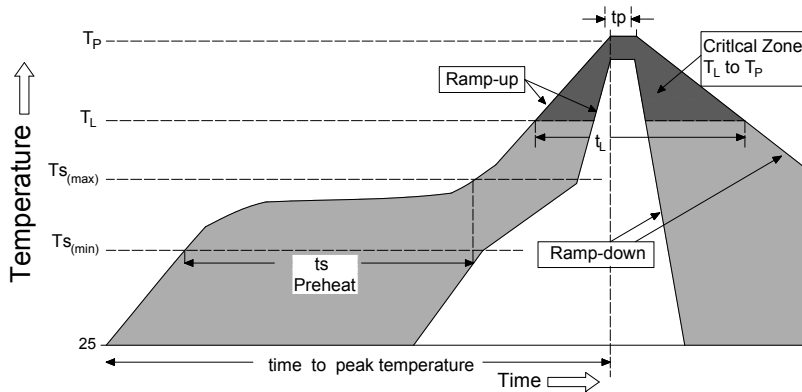
»Thermal Derating Chart Recommended Hold Current(A) at Ambient Temperature(°C)

Model	Ambient Operating Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD2018-030/60N	0.45	0.40	0.35	0.30	0.25	0.23	0.20	0.18	0.14
SMD2018-050/60N	0.93	0.80	0.65	0.50	0.42	0.38	0.33	0.30	0.23
SMD2018-075/33N	1.05	0.95	0.85	0.75	0.60	0.55	0.45	0.40	0.30
SMD2018-075/60N	1.05	0.95	0.85	0.75	0.60	0.55	0.45	0.40	0.30
SMD2018-100/15N	1.66	1.47	1.29	1.00	0.91	0.83	0.73	0.64	0.50
SMD2018-100/33N	1.66	1.47	1.29	1.00	0.91	0.83	0.73	0.64	0.50
SMD2018-150/15N	2.26	2.00	1.76	1.50	1.24	1.13	1.00	0.87	0.68
SMD2018-150/33N	2.26	2.00	1.76	1.50	1.24	1.13	1.00	0.87	0.68
SMD2018-200/12N	2.80	2.50	2.19	2.00	1.84	1.74	1.50	1.34	1.14
SMD2018-200/16N	2.80	2.50	2.19	2.00	1.84	1.74	1.50	1.34	1.14
SMD2018-200/24N	2.80	2.50	2.19	2.00	1.84	1.74	1.50	1.34	1.14
SMD2018-260/24N	3.82	3.46	3.06	2.60	2.24	2.03	1.82	1.60	1.26
SMD2018-300/16N	4.40	3.96	3.52	3.00	2.65	2.43	2.20	1.96	1.59
SMD2018-350/12N	5.13	4.62	4.11	3.50	3.09	2.84	2.57	2.29	1.86

»Typical time to trip at 25°C



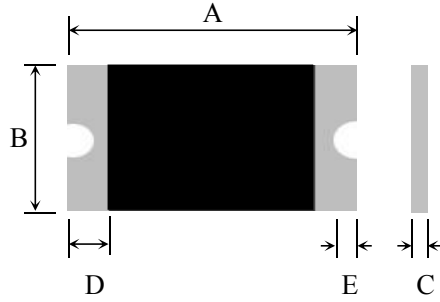
»Soldering Parameters



Profile Feature		Pb-Free Assembly
Average Ramp-Up Rate (Ts <sub>(max)</sub> to T <sub>P</sub> )		3°C/second max
Pre Heat:	Temperature Min (Ts <sub>(min)</sub> )	150°C
	Temperature Max (Ts <sub>(max)</sub> )	200°C
	Time (Min to Max) (t <sub>s</sub> )	60 – 180 secs
Time Maintained Above:	Temperature (T <sub>L</sub> )	217°C
	Temperature (t <sub>L</sub> )	60 – 150 seconds
Peak / Classification Temperature (T <sub>P</sub> )		260 <sup>+0/-5</sup> °C
Time within 5°C of actual peak Temperature (t <sub>p</sub> )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T <sub>P</sub> )		8 minutes Max.

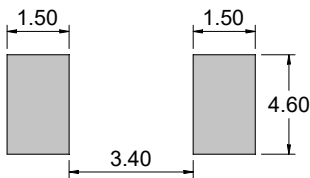
- ◆All temperature refer to topside of thepackage, measured on the package body surface
- ◆If reflow temperature exceeds the recommended profile,devices may not meet the performance requirements
- ◆Recommended reflow methods: IR,vapor phase oven,hot air oven,,N2 environment for lead
- ◆Recommended maximum paste thickness is 0.25mm (0.010inch)
- ◆Devices can be cleaned using standard industry methods and solvents

»Physical Dimensions(mm)



Model	A		B		C		D		E
	Min	Max	Min	Max	Min	Max	Min	Max	Min
SMD2018-030/60N	5.05	5.45	4.05	4.45	0.65	1.15	0.30	1.50	0.25
SMD2018-050/60N	5.05	5.45	4.05	4.45	0.65	1.15	0.30	1.50	0.25
SMD2018-075/33N	5.05	5.45	4.05	4.45	0.35	0.85	0.30	1.50	0.25
SMD2018-075/60N	5.05	5.45	4.05	4.45	0.65	1.15	0.30	1.50	0.25
SMD2018-100/15N	5.05	5.45	4.05	4.45	0.35	0.85	0.30	1.50	0.25
SMD2018-100/33N	5.05	5.45	4.05	4.45	0.35	0.85	0.30	1.50	0.25
SMD2018-150/15N	5.05	5.45	4.05	4.45	0.35	0.85	0.30	1.50	0.25
SMD2018-150/33N	5.05	5.45	4.05	4.45	0.65	1.15	0.30	1.50	0.25
SMD2018-200/12N	5.05	5.45	4.05	4.45	0.35	0.85	0.30	1.50	0.25
SMD2018-200/16N	5.05	5.45	4.05	4.45	0.35	0.85	0.30	1.50	0.25
SMD2018-200/24N	5.05	5.45	4.05	4.45	0.65	1.15	0.30	1.50	0.25
SMD2018-260/24N	5.05	5.45	4.05	4.45	0.85	1.35	0.30	1.50	0.25
SMD2018-300/16N	5.05	5.45	4.05	4.45	0.65	1.15	0.30	1.50	0.25
SMD2018-350/12N	5.05	5.45	4.05	4.45	0.65	1.15	0.30	1.50	0.25

»Recommended Pad Layout (mm)&Physical Specifications



Terminal Material	Tin-Plated Nickel-Copper (Solder Material: Matte Tin (Sn))
Lead Solderability	Meets EIA Specification RS186-9E, ANSI/J-STD-002 Category 3.

»Tape And Reel Specifications (mm)&Packaging quantity

TAPE SPECIFICATIONS: EIA-481-1 (mm)			
Item	SMD2018-075/33N	SMD2018-100/15N	SMD2018-030/60N
	SMD2018-100/33N	SMD2018-150/15N	SMD2018-075/60N
	SMD2018-200/12N	SMD2018-200/16N	SMD2018-200/24N
			SMD2018-260/24N
			SMD2018-300/16N
			SMD2018-350/12N
W	12.0±0.10		12.0±0.10
F	5.50±0.05		5.50±0.05
E1	1.75±0.10		1.75±0.10
D0	1.55±0.05		1.55±0.05
D1	1.50 min		1.50 min
P0	4.0±0.10		4.0±0.10
P1	8.0±0.10		8.0±0.10
P2	2.0±0.05		2.0±0.05
A0	4.61±0.10		4.61±0.10
B0	5.62±0.10		5.62±0.10
T	0.25±0.05		0.25±0.05
K0	0.78±0.10		1.35±0.10
Leader	390mm		390mm
Trailer	160mm		160mm
Q'ty	2500pcs/Reel		1500pcs/Reel

REEL DIMENSIONS: EIA-481-1 (mm)	
C	Ø178±1.0
D	Ø60.2±0.5
W	9.0±1.5
H	11.0±0.5

