

深圳市多迈电子有限公司

多迈电子

SMD PPTC自恢复保险丝

DOC.NO.:
DMSMD2018R050SF

INDIVIDUAL SPECIFICATION SHEET

Product Name: SMD PPTC (自恢复保险丝)

Part Number: DMSMD2018R050SF

Revision: A



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Rev.	Effective Date	Changed Contents
A	2018-11-29	New Release

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Performance Specification

Model	V _{max} (V dc)	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 _{1max} (Ω)
SMD2018R050SF	60	100	0.55	1.20	1.0	2.5	3.00	0.200	1.000

V_{max} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P_d = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

R_{i min}/max = Minimum/Maximum device resistance prior to tripping at 25°C.

R_{1max} = 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 Approval and Environmental Compliance

Agency	File Number	Regulation	Standard
UL	pending		2002/95/EC
TUV	pending		EN14582

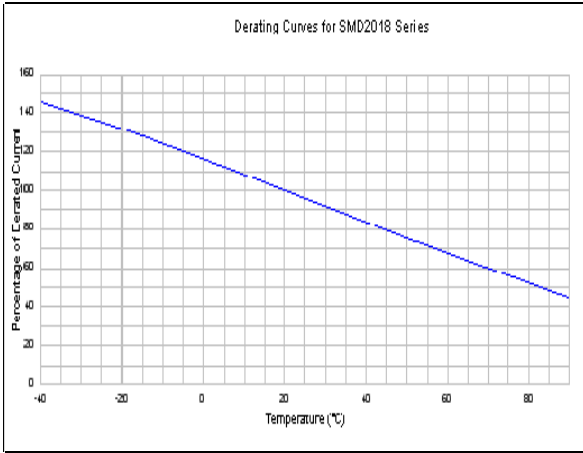
Thermal Derating Chart

Recommended Hold Current(A) at Ambient Temperature(°C)

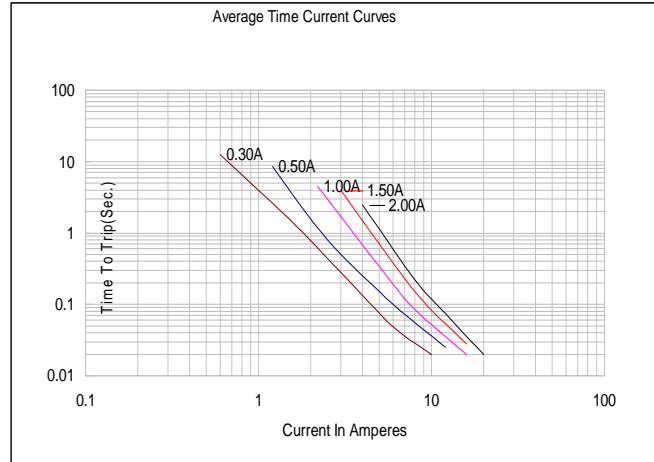
Model	Ambient Operation Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD2018R050SF	0.87	0.77	0.67	0.55	0.46	0.41	0.36	0.31	0.23

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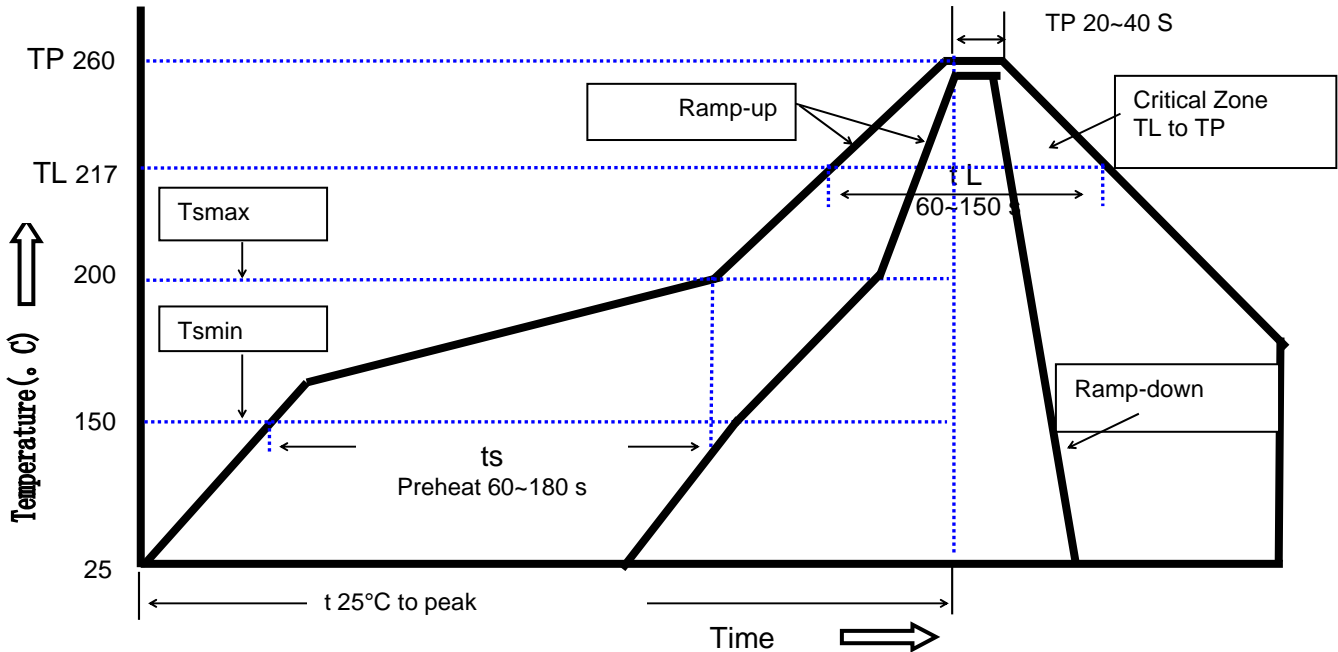
Thermal Derating Curve



Average Time-Current Curve



Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts max to T p)	3°C/second max.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~35°C,30%~60%RH

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Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free

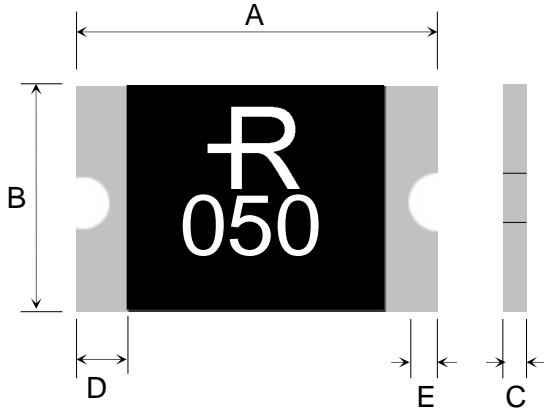
Recommended maximum paste thickness is 0.25mm

Devices can be cleaned using standard industry methods and solvents.

Note 1: All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Physical Dimensions(mm.)



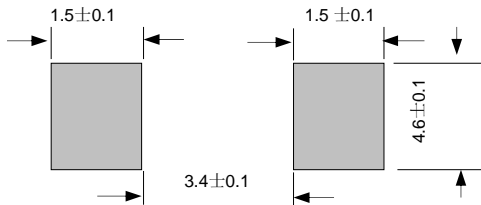
Model	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
SMD2018R050SF	4.72	5.44	4.22	4.93	0.50	1.20	0.30	0.25

Termination Pad Characteristics

Terminal pad materials: Tin-plated Nickel-Copper

Terminal pad solder ability: Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

Recommended Pad Layout (mm.)



Packaging Quantity

Part Number	Quantity
SMD2018R030.050SF	1500 pcs/reel
The others	2500 pcs/reel

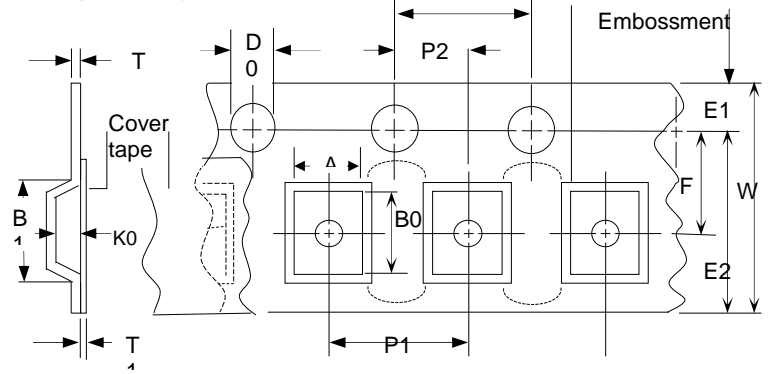
Tape & reel packaging per EIA481-1

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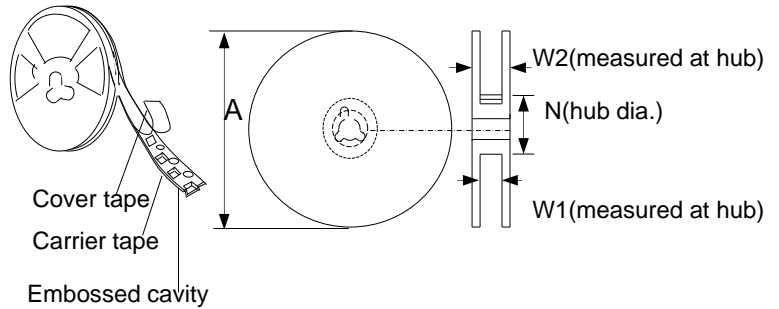
Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-1
W	12.0 ± 0.2
P0	4.0 ± 0.10
P1	8.0 ± 0.10
P2	2.0 ± 0.05
A0	4.40 ± 0.10
B0	5.50 ± 0.10
B1max.	8.20
D0	1.50 + 0.1, -0
F	5.5 ± 0.05
E1	1.75 ± 0.10
E2min.	10.25
T	0.6
T1max.	0.1
K0	1.36 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	50
W1	12.4 ± 0.5
W2	18.4 ± 0.5

EIA Tape Component Dimensions P0



EIA Reel Dimensions



Storage And Handling

· Storage conditions: 35°C max,
30%~60% R.H.

· Devices may not meet specified performance

if storage conditions are exceeded.

Part Number System

SMD 2018 R 050 S F □□ V

