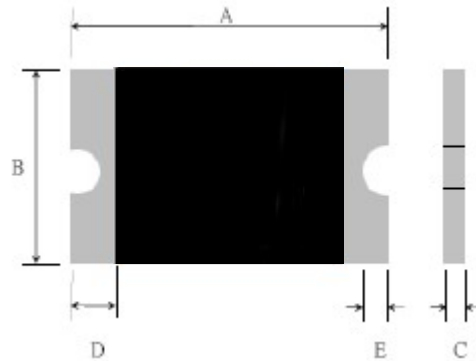


**TERMINAL PAD SOLDERABILITY:**

Meets EIA Specification RS186-9E  
And ANSI/J-STD-002 Category 3.


**TERMINAL PAD MATERIALS:**

Tin-Plated Nickel-Copper  
Lead-Free, ROHS Compliant

**TABLE I. DIMENSIONS:**

Unit: mm

Model	A		B		C		D	E
	Min	Max	Min	Max	Min	Max	Min	Min
mSMD1812-020	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25

**TABLE II. PERFORMANCE RATINGS:**

Model	Vmax	I <sub>max</sub>	I <sub>hold@25</sub> °C	I <sub>trip@25</sub> °C	P <sub>d</sub> Typ.	Maximum Time TO Trip		Resistance		
	(Vdc)	(A)	(A)	(A)	(W)	Current (A)	Time (Sec)	R <sub>imin</sub> (Ω)	R <sub>ityp</sub> (Ω)	R <sub>imax</sub> (Ω)
mSMD1812-020	30.0	100	0.20	0.40	0.8	8.0	0.02	0.350	0.800	5.000

## Note:

I<sub>hold</sub>=Hold current:maximum current device will pass without tripping in 23°C still air.

I<sub>trip</sub>=Trip current:minimum current at which the device will trip in 23°C still air.

V<sub>max</sub>=Maximum voltage device can withstand without damage at rated current (I<sub>max</sub>).

I<sub>max</sub>=Maximum fault current device can withstand without damage at rated voltage (V<sub>max</sub>).

P<sub>d</sub>=Power dissipated from device when in the tripped state at 23°C still air.

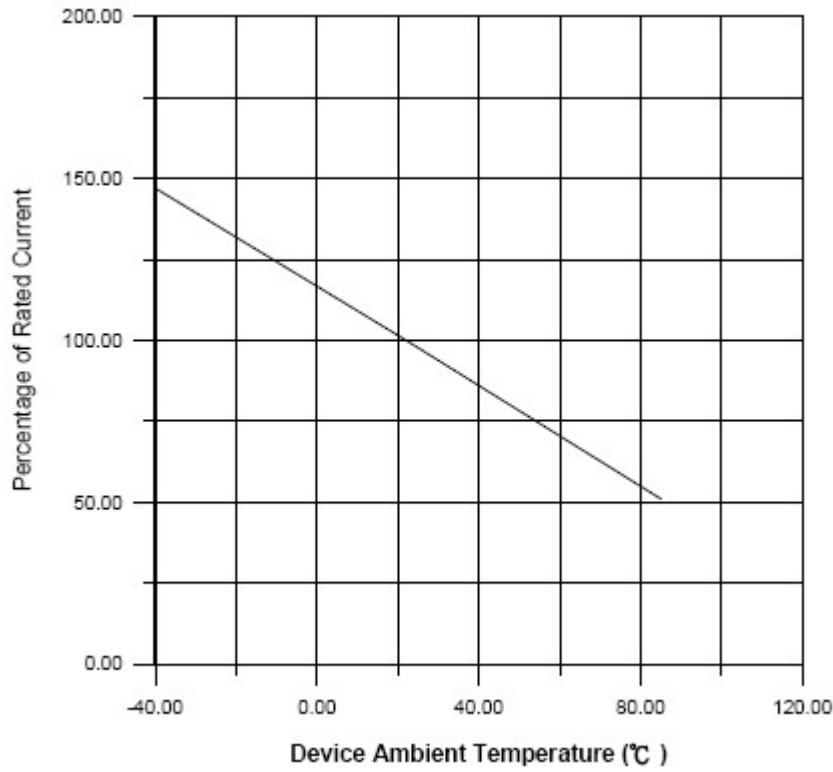
R<sub>imin</sub>=Minimum resistance of device in initial (un-soldered) state.

R<sub>imax</sub>=Maximum resistance of device at 23°C measured one hour after tripping or reflow soldering of 260°C for 20sec.

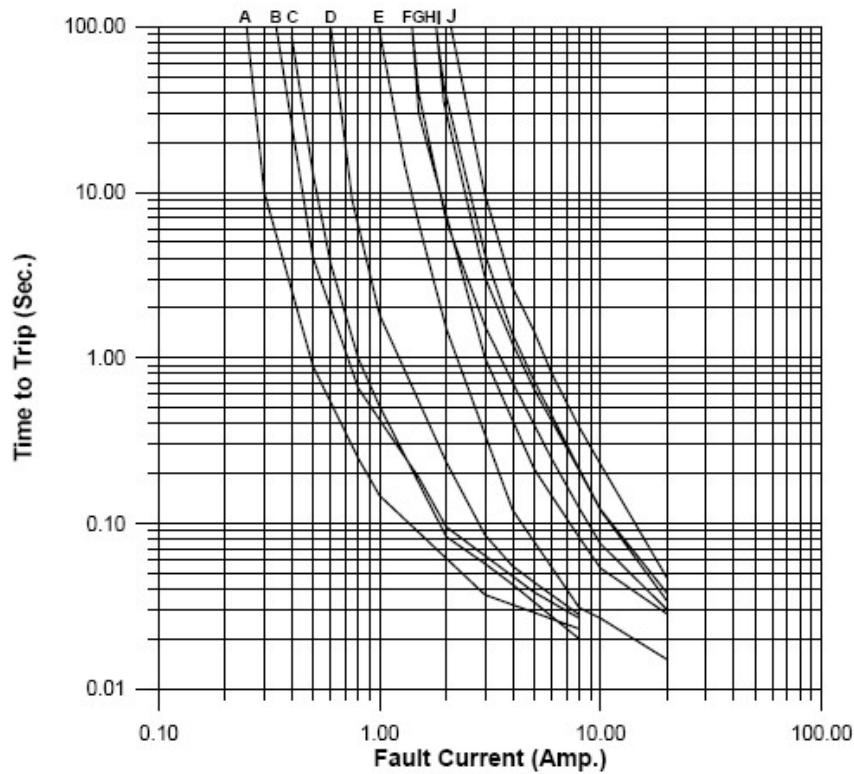
**THERMAL DERATING CHART FOR SMD1812 SERIES-IHOLD(Amps)  
RECOMMENDED DATA**

Model	Ambient Operation Temperature								
	-40°C	-20°C	0°C	23°C	40°C	50°C	60°C	70°C	85°C
mSMD1812-020	0.29	0.26	0.23	0.20	0.17	0.15	0.14	0.12	0.10

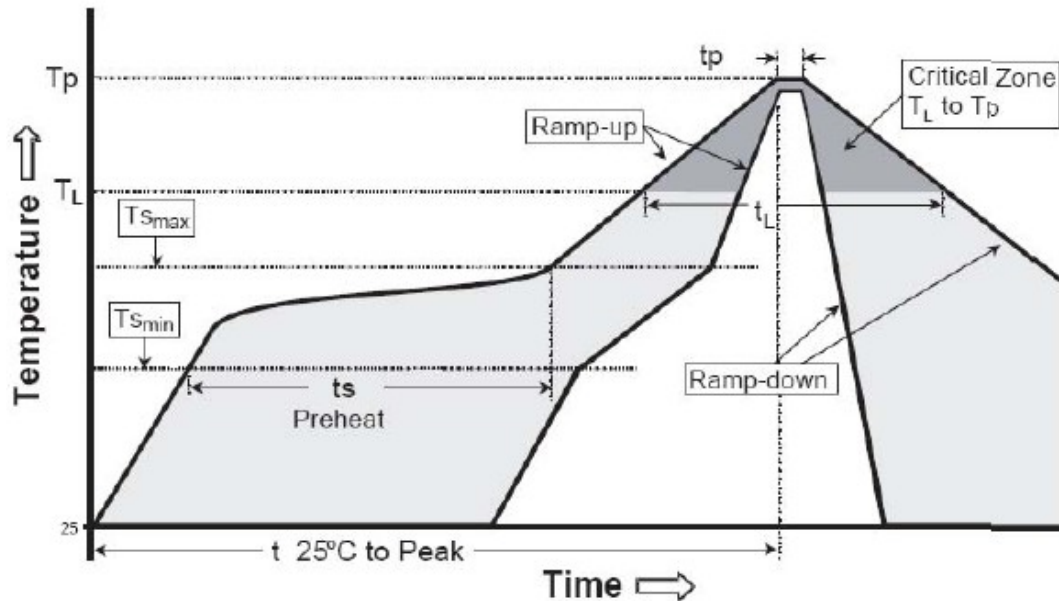
**THERMAL DERATING CURVE FOR SMD1812 SERIES**



**AVERAGE TIME-CURRENT CURVE FOR SMD1812 SERIES**



- A-SMD1812-010R
- B-SMD1812-014R
- C-SMD1812-020R
- D-SMD1812-035R
- E-SMD1812-050R
- F-SMD1812-075R
- G-SMD1812-075R
- H-SMD1812-110R
- I-SMD1812-110R
- J-SMD1812-150R

**SOLDER REFLOW**

**RECOMMENDED CONCITIONS**

Profile Feature	Pd-Free Assembly
Average Ramp-Up Rate( $T_{smax}$ to $T_p$ )	3°C/second max
Preheat —Temperature Min( $T_{smin}$ ) —Temperature Max( $T_{smax}$ ) —Time( $T_{smin}$ to $T_{smax}$ )	150°C 200°C 60-180seconds
Time maintained above: —Temperature( $T_L$ ) —Time( $t_L$ )	217°C 60-150seconds
Peak Temperature( $T_p$ )	260°C
Time within 5°C of actual Peak Temperature( $t_p$ )	20-40seconds
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8minutes max.
Storage Condition	0°C~35°C, ≤70%RH

Note: 1.All temperature refer to topside of the package, measured on the package body surface.  
2.If reflow temperature exceed the recommended profile, devices

**PACKAGING**

Part Number	Component Package	Quantity
mSMD1812-020	1812	1500