



Application:	All high-density boards
Product Features:	Small surface mount, Solid state Faster time to trip than standard SMD devices Lower resistance than standard SMD devices
Operation Current:	140mA~1.6A
Maximum Voltage:	6V~60V
Temperature Range:	-40°C to 85°C
Agency Recognition:	UL, TÜV

## Electrical Characteristics (23°C)

Part Number	Hold Current IH, A	Trip Current IT, A	Rated Voltage VMAX, Vdc	Maximum Current IMAX, A	Typical Power Pd, W	Max Time to Trip		Resistance Tolerance	
						Current Amp	Time Sec	RMIN ohms	R1MAX ohms
SMD1812-014-60	0.14	0.30	60	10	0.8	8.0	<0.02	1.50	6.50
SMD1812-020-30	0.20	0.40	30	10	0.8	8.0	0.02	0.80	5.00
SMD1812-035-16	0.35	0.70	16	40	0.8	8.0	0.10	0.32	1.50
SMD1812-050-16	0.50	1.00	16	40	0.8	8.0	0.15	0.15	1.00
SMD1812-075-16	0.75	1.50	16	40	0.8	8.0	0.02	0.11	0.45
SMD1812-110-6	1.10	2.20	6	40	0.8	8.0	0.30	0.04	0.21
SMD1812-110-16	1.10	1.95	16	40	0.8	8.0	0.50	0.04	0.18
SMD1812-150-6	1.50	3.00	6	40	0.8	8.0	0.50	0.04	0.11
SMD1812-160-6	1.60	3.20	6	40	0.8	8.0	<0.50	0.03	0.10
SMD1812-200-8	2.00	3.50	8	40	0.8	8.0	2	0.02	0.07

IH=Hold current-maximum current at which the device will not trip at 23°C still air.

IT=Trip current-minimum current at which the device will always trip at 23°C still air.

V MAX=Maximum voltage device can withstand without damage at its rated current.

I MAX= Maximum fault current device can withstand without damage at rated voltage (V max).

Pd=Typical power dissipated from device when in the tripped state in 23°C still air environment.

RMIN=Minimum device resistance at 23°C.

R1MAX=Maximum device resistance at 23°C, 1 hour after tripping .

Termination pad characteristics

Termination pad materials: Tin-plated copper

## SMD1812 Product Dimensions (Millimeters)

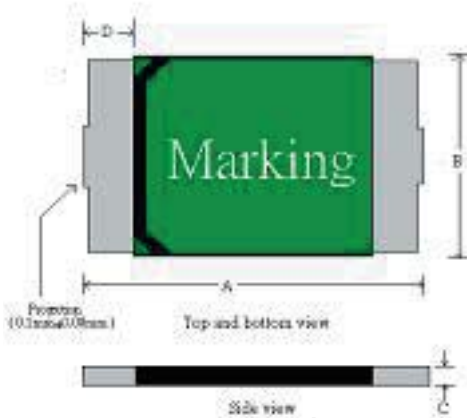


Figure 1

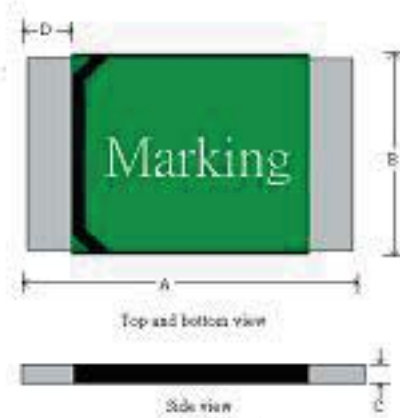
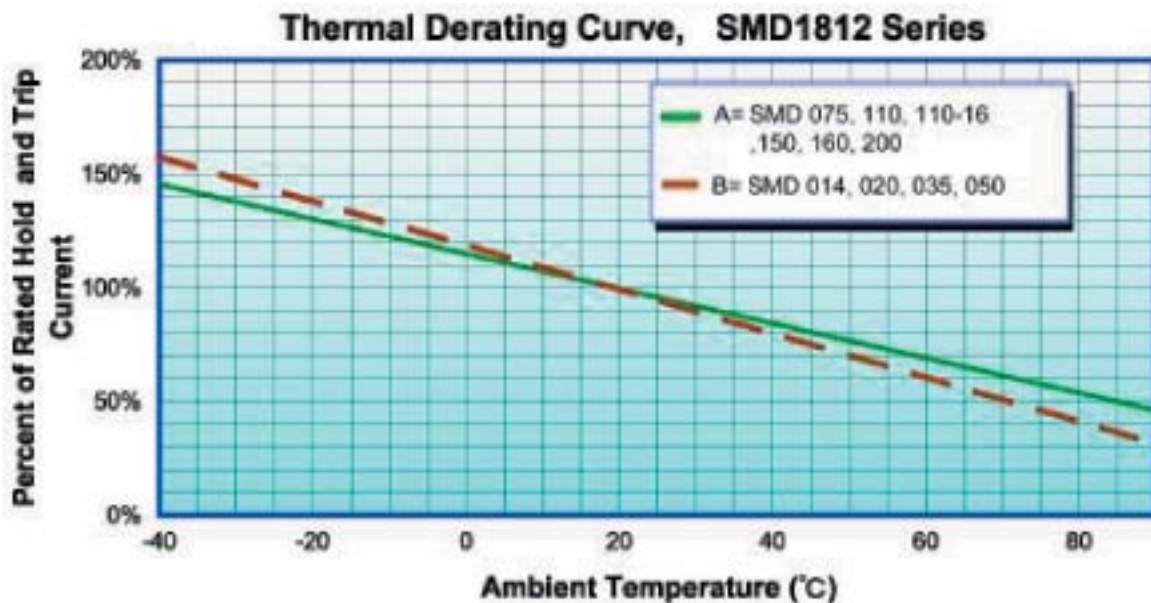


Figure 2

Part Number	Figure	A		B		C		D
		Min	Max	Min	Max	Min	Max	Min
SMD1812-014-60	1	4.37	4.73	3.07	3.41	0.60	0.90	0.3
SMD1812-020-30	1	4.37	4.73	3.07	3.41	0.60	0.90	0.3
SMD1812-035-16	1	4.37	4.73	3.07	3.41	0.40	0.70	0.3
SMD1812-050-16	1	4.37	4.73	3.07	3.41	0.35	0.65	0.3
SMD1812-075-16	1 or 2	4.37	4.73	3.07	3.41	0.35	0.65	0.3
SMD1812-110-6	1 or 2	4.37	4.73	3.07	3.41	0.25	0.65	0.3
SMD1812-110-16	2	4.37	4.73	3.07	3.41	0.25	0.55	0.3
SMD1812-150-6	2	4.37	4.73	3.07	3.41	0.25	0.55	0.3
SMD1812-160-6	2	4.37	4.73	3.07	3.41	0.25	0.90	0.3
SMD1812-200-6	2	4.37	4.73	3.07	3.41	0.50	0.90	0.3

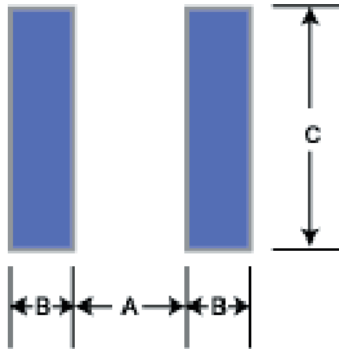
## Thermal Derating Curve





## Pad Layouts, Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each SMD1812 device



Pad dimensions (millimeters)			
Device	A	B	C
	Nominal	Nominal	Nominal
SMD1812-014-60	3.45	1.78	3.50
SMD1812-020-30	3.45	1.78	3.50
SMD1812-035-16	3.45	1.78	3.50
SMD1812-050-16	3.45	1.78	3.50
SMD1812-075-16	3.45	1.78	3.50
SMD1812-110-6	3.45	1.78	3.50
SMD1812-110-16	3.45	1.78	3.50
SMD1812-150-6	3.45	1.78	3.50
SMD1812-160-6	3.45	1.78	3.50
SMD1812-200-6	3.45	1.78	3.50

## Solder reflow

Due to "Lead Free" nature, up to 40 seconds Dwelling time for the soldering zone is strongly recommend .

1. Recommended reflow methods; IR, vapor phase oven, hot air oven.
2. The SMD1812 Series are suitable for use with wave-solder application methods.
3. Recommended maximum paste thickness is 0.25mm.
4. Devices can be cleaned using standard industry methods and solvents.

### CAUTION:

If reflow temperatures exceed the recommended Profile, devices may not meet the performance requirements.

### Rework:

Use standard industry practices.

