



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:	50mA~0.75A
Maximum Voltage:	6V~60V
Temperature Range:	-40°C to 85°C
Agency Recognition:	UL, C-UL, TÜV

### Electrical Characteristics (23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Maximum Current	Typical Power	Max Time to Trip		Resistance Tolerance	
	IH, A	IT, A	VMAX, Vdc	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
								ohms	ohms
SMD1210-005-60	0.05	0.15	60	10	0.60	0.25	1.50	3.60	50.00
SMD1210-010-60	0.10	0.25	60	10	0.60	0.50	1.50	1.60	15.00
SMD1210-020-30	0.20	0.40	30	10	0.60	8.00	0.02	0.80	5.00
SMD1210-035-20	0.35	0.70	20	40	0.60	8.00	0.20	0.32	1.30
SMD1210-050-16	0.50	1.00	16	40	0.60	8.00	0.10	0.25	0.90
SMD1210-075-8	0.75	1.50	8	40	0.60	8.00	0.10	0.13	0.40

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.

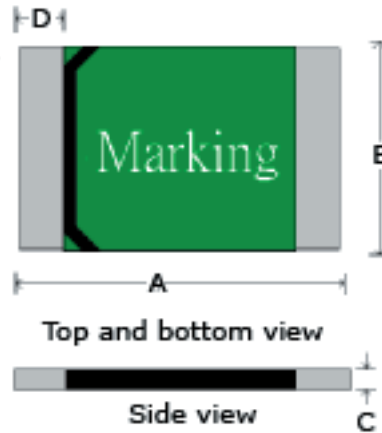
RMIN=Minimum device resistance at 23°C.

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

Termination pad characteristics

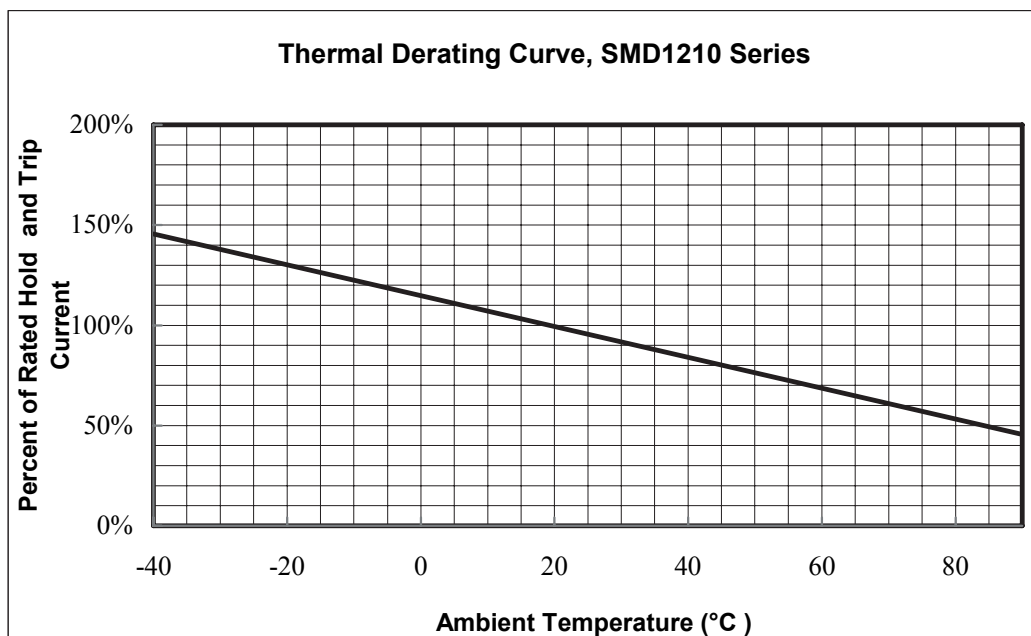
Termination pad materials: Tin-plated copper

## SMD1210 Product Dimensions (Millimeters)



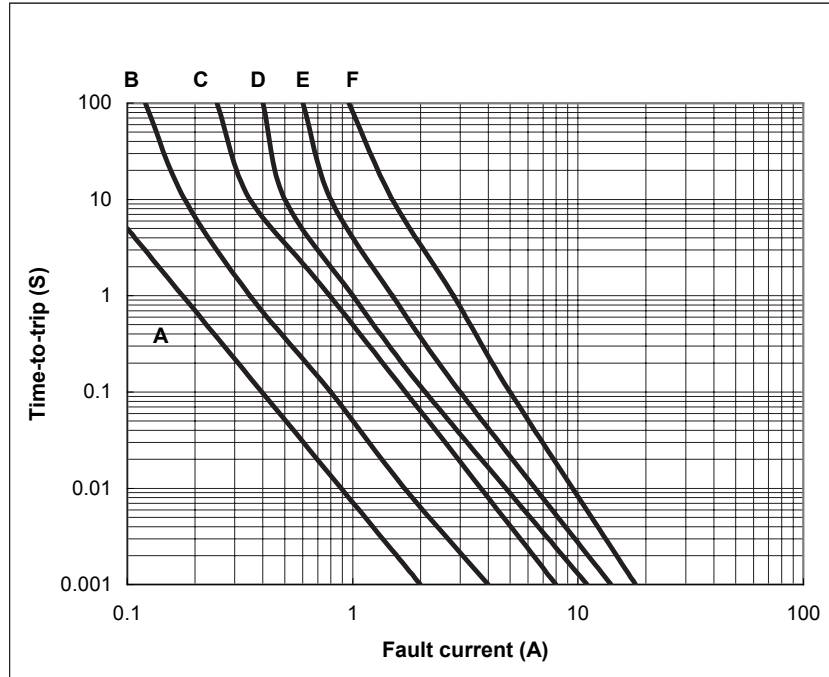
Part Number	A		B		C		D
	Min	Max	Min	Max	Min	Max	Min
SMD1210-005-60	3.00	3.43	2.35	2.80	0.60	1.15	0.25
SMD1210-010-60	3.00	3.43	2.35	2.80	0.60	1.15	0.25
SMD1210-020-30	3.00	3.43	2.35	2.80	0.40	0.85	0.25
SMD1210-035-16	3.00	3.43	2.35	2.80	0.40	0.80	0.25
SMD1210-050-16	3.00	3.43	2.35	2.80	0.30	0.75	0.25
SMD1210-075-8	3.00	3.43	2.35	2.80	0.30	0.70	0.25

## Thermal Derating Curve

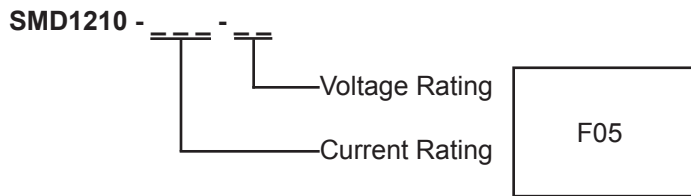


### Typical Time-To-Trip at 23°C

- A = SMD1210-005-60
- B = SMD1210-010-60
- C = SMD1210-020-30
- D = SMD1210-035-16
- E = SMD1210-050-16
- F = SMD1210-075-8

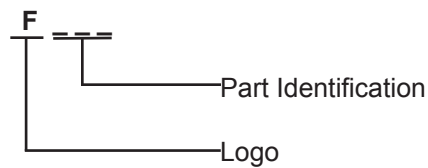


### Part Numbering System



Example

### Part Marking System



- F05 = SMD1210-005-60
- F10 = SMD1210-010-60
- F20 = SMD1210-020-30
- F35 = SMD1210-035-16
- F50 = SMD1210-050-16
- F75 = SMD1210-075-8

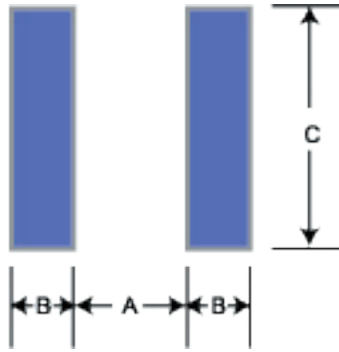
### Standard Package

P/N	Pcs /Bag	Reel/Tape
SMD1210-005-60	-----	4K
SMD1210-010-60	-----	4K
SMD1210-020-30	-----	4K
SMD1210-035-16	-----	4K
SMD1210-050-16	-----	4K
SMD1210-075-8	-----	4K

- 1- Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
- 2 -PPTC device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip are not anticipated.
- 3- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance.

## Pad Layouts, Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each SMD1210 device



Pad dimensions (millimeters)			
Device	A	B	C
	Nominal	Nominal	Nominal
SMD1210-005-60	2.00	1.00	2.80
SMD1210-010-60	2.00	1.00	2.80
SMD1210-020-30	2.00	1.00	2.80
SMD1210-035-16	2.00	1.00	2.80
SMD1210-050-16	2.00	1.00	2.80
SMD1210-075-8	2.00	1.00	2.80

## 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 SMD1210 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.

