SMD1210 Series

Surface Mount PTC

LEAD FREE
RoSH COMPLIANT

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	
								RMIN	R1MAX
	IH, A	IT, A	VMAX,Vdc	IMAX, A	Pd, W	Current	Time	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

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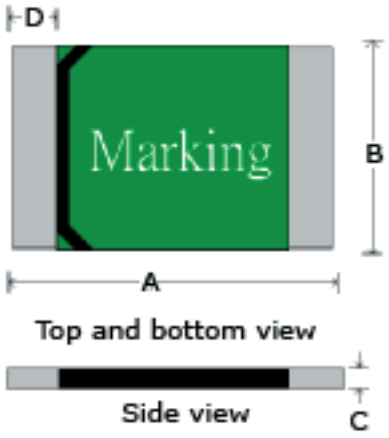
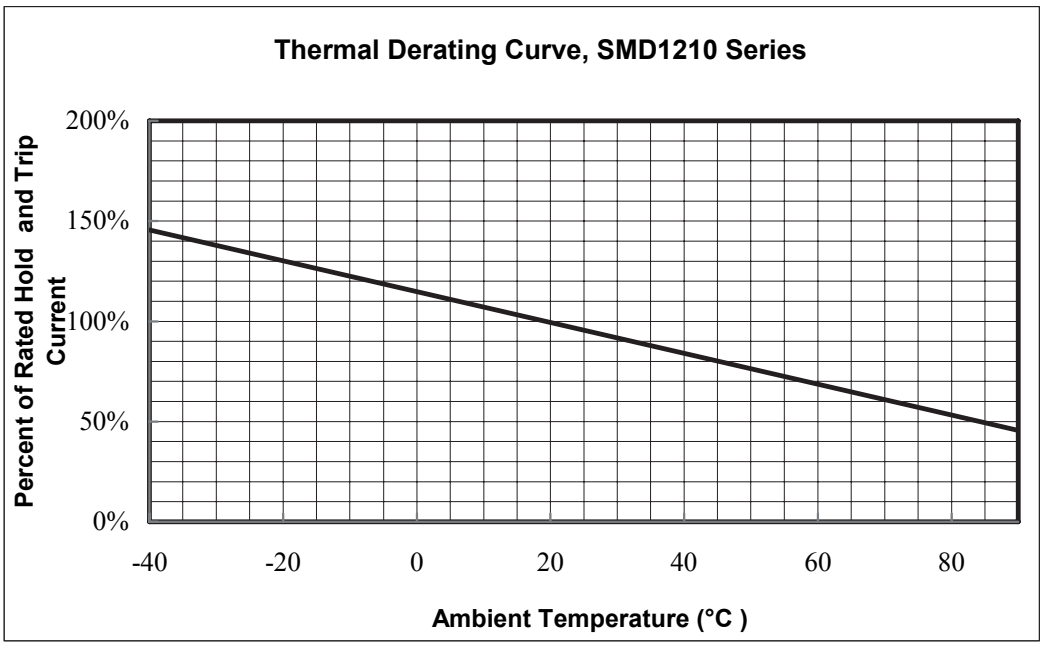
SMD1210 Product Dimensions (Millimeters)



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



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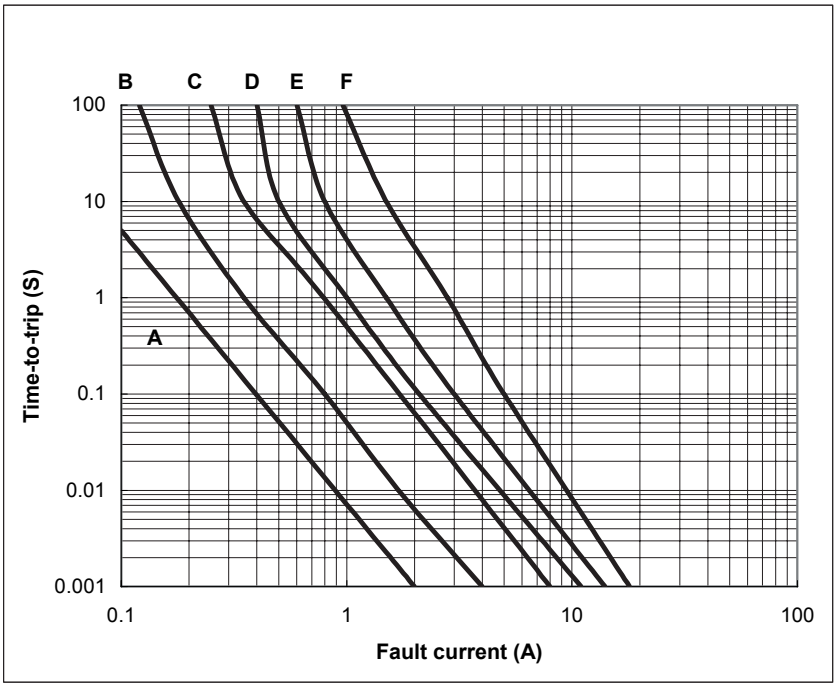
Typical Time-To-Trip at 23°C

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

SMD1210 - _ _ _ - _ _

- _ _ _ — Current Rating
- _ _ — Voltage Rating

F05

Example

Part Marking System

F _ _ _

- _ _ _ — Part Identification
- F — Logo

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

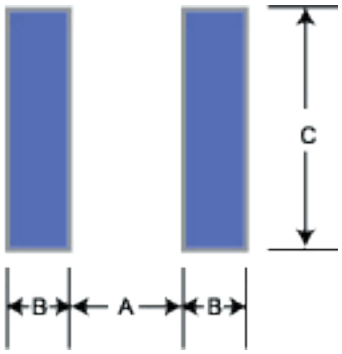
Standard Package

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.