



Features

- Surface Mount Devices
- Lead free device
- Size 3.2*2.5mm/0.12*0.10 inch
- Surface Mount packaging for automated assembly

Applications

- Almost anywhere there is a low voltage power supply, up to 60V and a load to be protected, including:
- Computer mother board, Modem.
 - Telecommunication equipments.

SMD1210 Series

Dongguan REOMAX Electronics Co., Ltd.

Performance Specification

Model	Marking	V _{max} (Vdc)	I _{max} (A)	I _{hold} @25°C (A)	I _{trip} @25°C (A)	P _d Typ. (W)	Maximum Time To Trip		Resistance		Agency Approval	
							Current (A)	Time (Sec)	R _{i min} (Ω)	R _{1 max} (Ω)	UL	TUV
SMD1210-005	α A	30	100	0.05	0.15	0.6	0.25	1.50	2.800	50.000		
SMD1210-005-60V	α A	60	100	0.05	0.15	0.6	0.25	1.50	2.800	50.000		
SMD1210-010	α B	30	100	0.10	0.30	0.6	0.50	0.60	0.800	15.000		
SMD1210-010-60V	α B	60	100	0.10	0.30	0.6	0.50	0.60	0.800	15.000	✓	
SMD1210-020	α C	30	100	0.20	0.40	0.6	8.0	0.02	0.400	5.000		
SMD1210-020-60V	α C	60	100	0.20	0.40	0.6	8.0	0.02	0.400	5.000		
SMD1210-025	α C	30	100	0.25	0.50	0.6	8.0	0.02	0.400	4.500		
SMD1210-025-60V	α C	60	100	0.25	0.50	0.6	8.0	0.02	0.400	4.500		
SMD1210-035	α D	6	100	0.35	0.75	0.6	8.0	0.20	0.200	1.300	✓	
SMD1210-035-13.2V	α D	13.2	100	0.35	0.75	0.6	8.0	0.20	0.200	1.300		
SMD1210-035-16V	α D	16	100	0.35	0.75	0.6	8.0	0.20	0.200	1.300		
SMD1210-035-24V	α D	24	100	0.35	0.75	0.6	8.0	0.20	0.200	1.300		
SMD1210-050-6V	α F	6	100	0.50	1.00	0.6	8.0	0.10	0.180	0.900	✓	
SMD1210-050	α F	13.2	100	0.50	1.00	0.6	8.0	0.10	0.180	0.900	✓	
SMD1210-050-16V	α F	16	100	0.50	1.00	0.6	8.0	0.10	0.180	0.900		
SMD1210-050-24V	α F	24	100	0.50	1.00	0.6	8.0	0.10	0.180	0.900		
SMD1210-075	α G	6	100	0.75	1.50	0.6	8.0	0.10	0.070	0.400	✓	
SMD1210-075-13.2V	α G	13.2	100	0.75	1.50	0.6	8.0	0.10	0.070	0.400		
SMD1210-075-16V	α G	16	100	0.75	1.50	0.6	8.0	0.10	0.070	0.400		
SMD1210-075-24V	α G	24	100	0.75	1.50	0.6	8.0	0.10	0.070	0.400		
SMD1210-100	α H	6	100	1.00	2.00	0.6	8.0	0.30	0.050	0.230		
SMD1210-100-13.2V	α H	13.2	100	1.00	2.00	0.6	8.0	0.30	0.050	0.230		
SMD1210-100-16V	α H	16	100	1.00	2.00	0.6	8.0	0.30	0.050	0.230		
SMD1210-110	α H	6	100	1.10	2.20	0.6	8.0	0.30	0.050	0.210	✓	
SMD1210-110-13.2V	α H	13.2	100	1.10	2.20	0.6	8.0	0.30	0.050	0.210		
SMD1210-110-16V	α H	16	100	1.10	2.20	0.6	8.0	0.30	0.050	0.210		
SMD1210-150	α L	6	100	1.50	3.00	0.6	8.0	0.50	0.030	0.110	✓	
SMD1210-150-13.2V	α L	13.2	100	1.50	3.00	0.6	8.0	0.50	0.030	0.110		
SMD1210-175	α N	6	100	1.75	3.50	0.8	8.0	0.60	0.020	0.080		
SMD1210-175-13.2V	α N	13.2	100	1.75	3.50	0.8	8.0	0.60	0.020	0.080		
SMD1210-200	α S	6	100	2.00	4.00	0.8	8.0	1.00	0.015	0.070		

Ihold = Hold Current. Maximum current device will not trip in 25°C still air.
Itrip = Trip Current. Minimum current at which the device will always trip in 25°C still air.
Vmax = Maximum operating voltage device can withstand without damage at rated current (Imax).
Imax = Maximum fault current device can withstand without damage at rated voltage (Vmax).
Pd = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.
Rimin/max = Minimum/Maximum device resistance prior to tripping at 25°C.
R1_{max} = 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
Passive aging	+85°C, 1000 hrs.
Humidity aging	+85°C, 85% R.H. , 168 hours
Thermal shock	+85°C to -40°C, 20 times
Resistance to solvent	MIL-STD-202,Method 215
Vibration	MIL-STD-202,Method 201
Ambient operating conditions : - 40 °C to +85 °C	
Maximum surface temperature of the device in the tripped state is 125 °C	
In case of special use, please contact our engineer	

Agency Approvals :



E201504(Alpha-Top)/E319079(Sea&Land)

Regulation/Standard:



2015/863/EU



EN14582



SMD1210 Series

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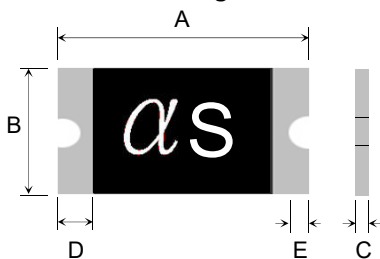
I_{hold} Versus Temperature

Model	Maximum ambient operating temperature (T _{mao}) vs. hold current (I _{hold})								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD1210-005	0.08	0.07	0.06	0.05	0.04	0.04	0.03	0.03	0.02
SMD1210-010	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.05	0.03
SMD1210-020	0.29	0.26	0.22	0.20	0.16	0.14	0.13	0.11	0.08
SMD1210-025	0.34	0.31	0.28	0.25	0.21	0.19	0.17	0.15	0.12
SMD1210-035	0.47	0.45	0.40	0.35	0.33	0.28	0.24	0.21	0.18
SMD1210-050	0.76	0.67	0.58	0.50	0.43	0.40	0.36	0.32	0.28
SMD1210-075	1.00	0.97	0.86	0.75	0.64	0.59	0.54	0.48	0.40
SMD1210-100	1.54	1.35	1.18	1.00	0.76	0.67	0.53	0.45	0.31
SMD1210-110	1.69	1.48	1.29	1.10	0.88	0.76	0.65	0.57	0.43
SMD1210-150	2.13	1.92	1.71	1.50	1.26	1.14	1.01	0.89	0.71
SMD1210-175	2.54	2.30	2.02	1.75	1.47	1.33	1.18	1.05	0.86
SMD1210-200	2.90	2.63	2.31	2.00	1.68	1.52	1.35	1.20	0.98

Construction And Dimension (Unit:mm)

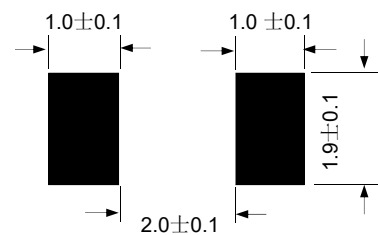
Model	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
SMD1210-005	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-005-60V	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-010	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-010-60V	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-020	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-020-60V	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-025	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-025-60V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-035	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-035-13.2V	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-035-16V	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-035-24V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-050	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-050-16V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-050-24V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-075	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-075-13.2V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-075-16V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-075-24V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-100	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-100-13.2V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-100-16V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-110	3.00	3.43	2.35	2.80	0.40	0.90	0.30	0.10
SMD1210-110-13.2V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-110-16V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-150	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-150-13.2V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-175	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-175-13.2V	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10
SMD1210-200	3.00	3.43	2.35	2.80	0.50	1.20	0.30	0.10

Dimensions & Marking



α = Trademark
S = Part identification

Recommended Pad Layout (mm)





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Termination Pad Characteristics

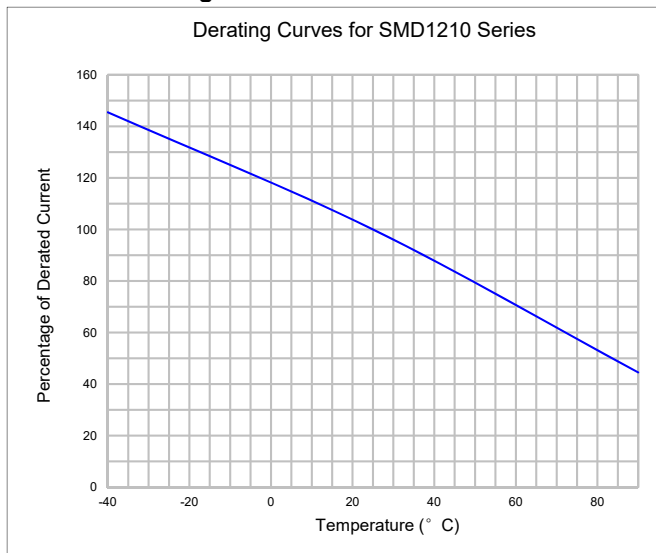
Terminal pad materials : Gold-Plated Nickel-Copper or Tin-plated Nickel-Copper

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

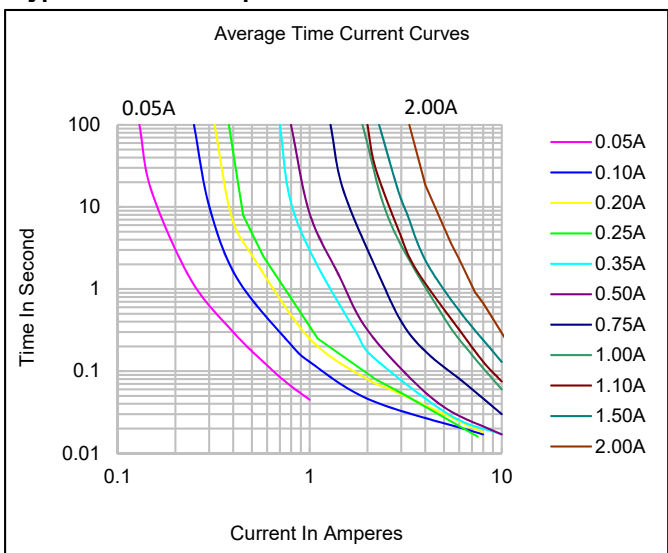
Rework

Use standard industry practices, the removal device must be replaced with a fresh one.

Thermal Derating Curve



Typical Time-To-Trip At 25°C



WARNING:

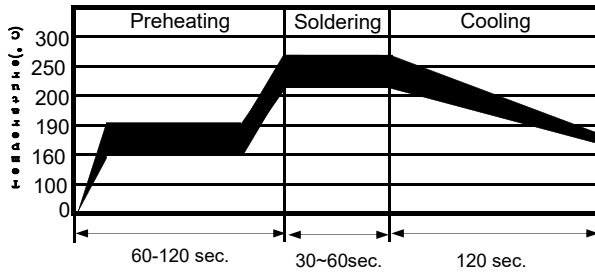
- Use PPTC beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- PPTC are intended for protection against occasional over current or over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- Use PPTC with a large inductance in circuit will generate a circuit voltage ($L di/dt$) above the rated voltage of the PPTC.
- Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.
- Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices. PPTC SMD can be cleaned by standard methods.
- Requests that customers comply with our recommended solder pad layouts and recommended reflow profile. Improper board layouts or reflow profile could negatively impact solderability performance of our devices.



SMD1210 Series

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Recommended Solder Reflow Conditions

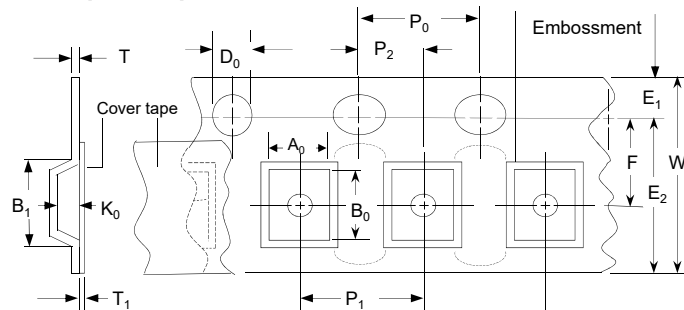


- Recommended reflow methods : IR, vapor phase oven, hot air oven.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Recommended maximum paste thickness is 0.15 mm (0.006 inch).
- Devices can be cleaned using standard method and solvents.
- Note : If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.
- Reflow welding is recommended to be completed once.
- According to the standard industry practice, if there is rework, it must be replaced with a new dismantling device.

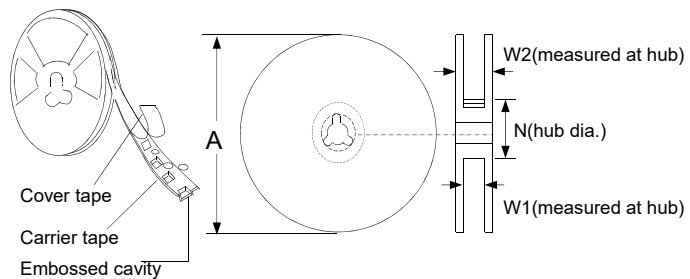
Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-2
W	8.0 ± 0.20
P0	4.0 ± 0.10
P1	4.0 ± 0.10
P2	2.0 ± 0.10
A0	2.82 ± 0.10
B0	3.52 ± 0.10
B1max.	4.35
D0	1.5 + 0.1, -0.0
F	7.5 ± 0.05
E1	1.75 ± 0.10
E2min.	6.25
Tmax.	0.6
T1max.	0.1
K0	0.90 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	50
W1	8.4 + 1.5, -0.0
W2max.	22.4

EIA Tape Component Dimensions



EIA Reel



Storage And Handling

- Storage conditions : 40°C max, 70% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

Order Information

Packaging

SMD1210	050	Tape & Reel Quantity
Product name	Hold	SMD1210-050, 075 4000pcs
Size 3225 mm / 1210 inch	Current	Others 4,500 pcs/reel
SMD : surface mount device	0.50A	

Devices taped with reference to EIA481 standard.