

APPROVAL SHEETMODEL NO.: SMD1210R075SF

CUSTOMER:

CUSTOMER'S APPROVAL:

AUTHORIZED SIGNATURE/STAMP

DATE

MANUFACTURER:

Submitted by:

Approved by:

Date:



## SMD1210R075SF Surface Mount PTC Devices

### Performance Specification

Model	Marking	V <sub>max</sub> (V dc)	I <sub>max</sub> (A)	I <sub>hold</sub> @25°C (A)	I <sub>trip</sub> @25°C (A)	P <sub>d</sub> Typ. (W)	Maximum Time To Trip		Resistance	
							Current (A)	Time (Sec)	R <sub>i min</sub> (Ω)	R <sub>1max</sub> (Ω)
SMD1210R075SF	R7	6.0	100	0.75	1.50	0.6	8.0	0.10	0.070	0.400

V<sub>max</sub> = Maximum operating 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>).

I<sub>hold</sub> = Hold Current. Maximum current device will not trip in 25°C still air.

I<sub>trip</sub> = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P<sub>d</sub> = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

R<sub>i min</sub>/max = Minimum/Maximum device resistance prior to tripping at 25°C.



R<sub>1max</sub> = 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	Resistance change
Passive aging	+85°C, 1000 hrs.	±5% typical
Humidity aging	+85°C, 85% R.H. , 168 hours	±5% typical
Thermal shock	+85°C to -40°C, 20 times	±33% typical
Resistance to solvent	MIL-STD-202,Method 215	No change
Vibration	MIL-STD-202,Method 201	No change
Ambient operating conditions : - 40 °C to +85 °C		
Maximum surface temperature of the device in the tripped state is 125 °C		

### Agency Approval and Environmental Compliance

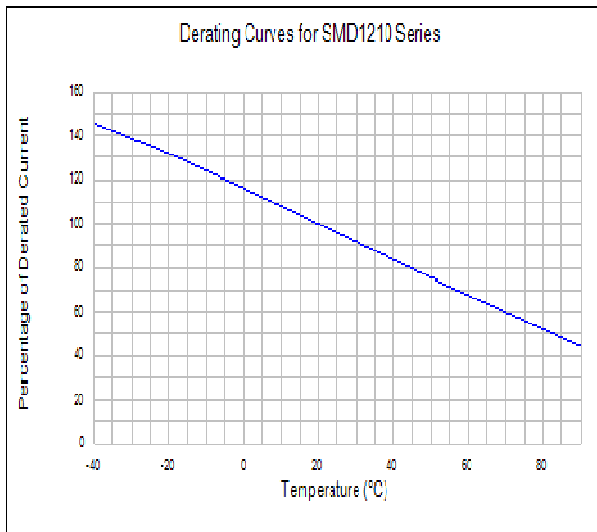
Agency	File Number	Regulation	Standard
UL	pending		2002/95/EC
TUV	pending		EN14582

### Thermal Derating Chart

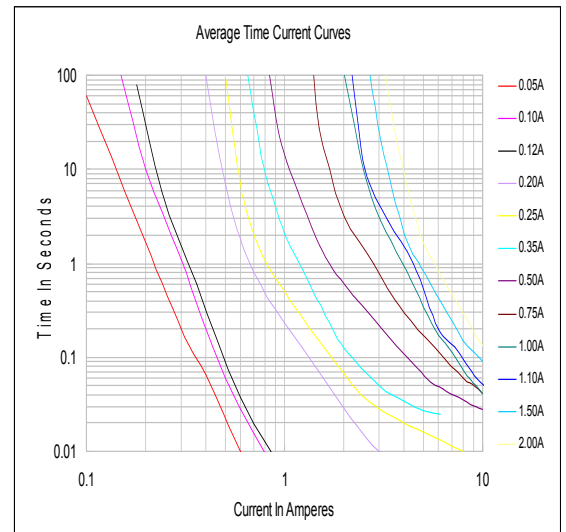
Recommended Hold Current(A) at Ambient Temperature(°C)

Model	Ambient Operation Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD1210R075SF	1.00	0.97	0.86	0.75	0.64	0.59	0.54	0.48	0.40

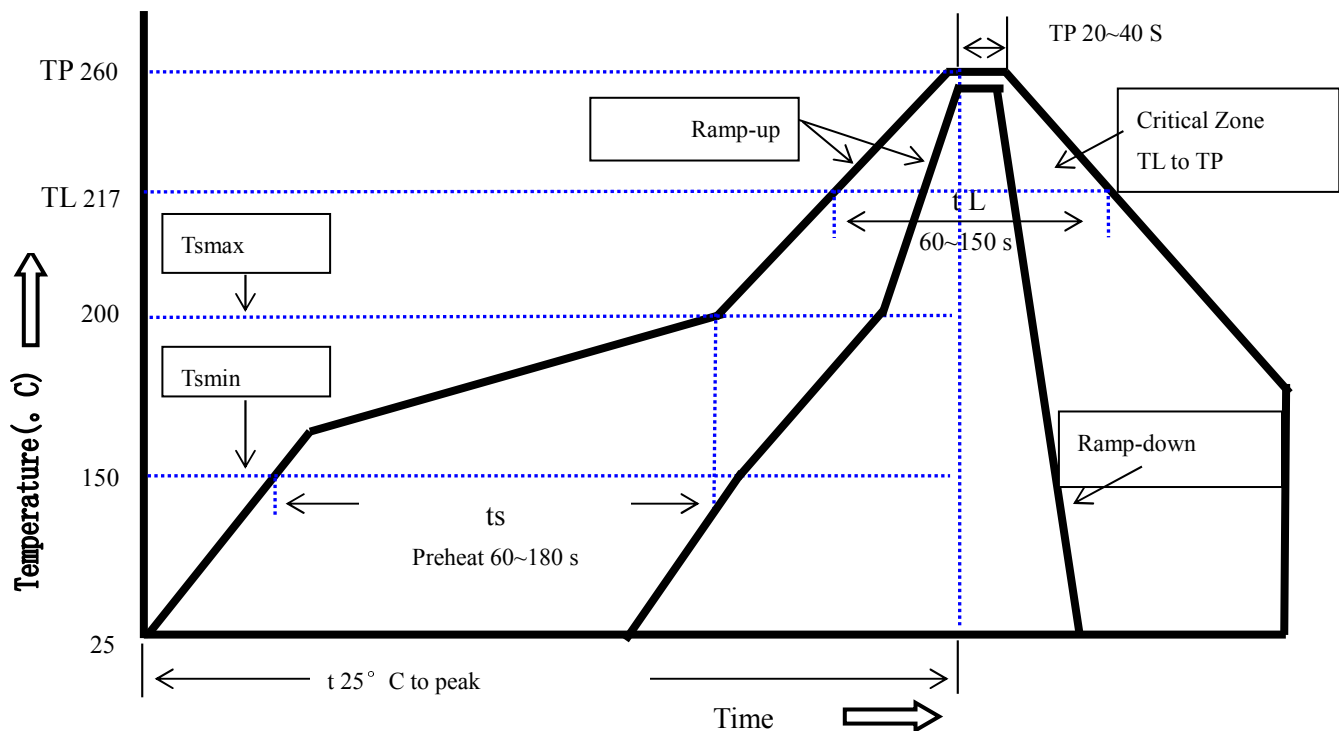
## Thermal Derating Curve



## Average Time-Current Curve



## Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts max to T p)	3°C/second max.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C

## SMD1210R075SF Surface Mount PTC Devices

Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~35°C, ≤70%RH

Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free

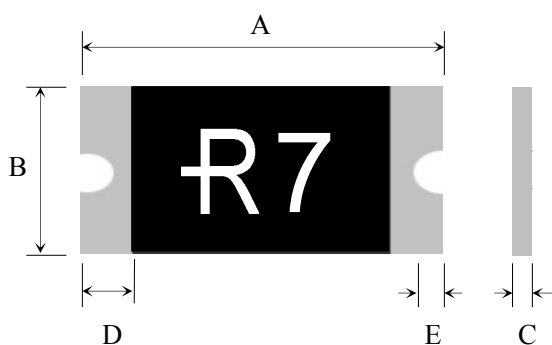
Recommended maximum paste thickness is 0.25mm

Devices can be cleaned using standard industry methods and solvents.

Note 1: All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

### Physical Dimensions(mm.)



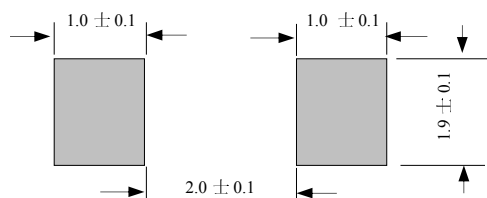
Model	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
SMD1210R075SF	3.00	3.43	2.35	2.80	0.30	0.80	0.30	0.10

#### Termination Pad Characteristics

Terminal pad materials: Tin-plated Nickel-Copper

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

### Recommended Pad Layout (mm.)



### Packaging Quantity

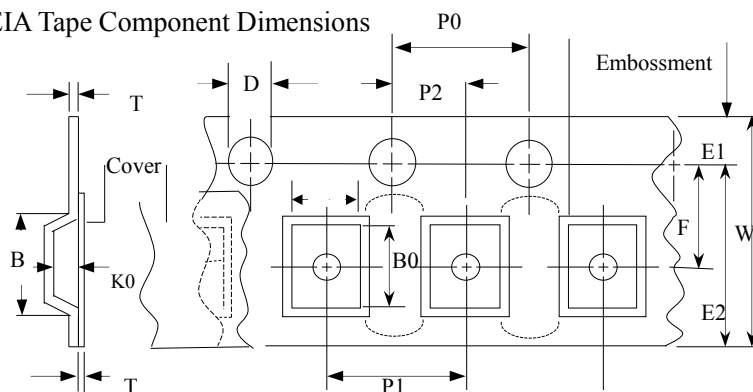
Part Number	Quantity
SMD1210R075SF	4000 pcs/reel

Tape & reel packaging per EIA481-1

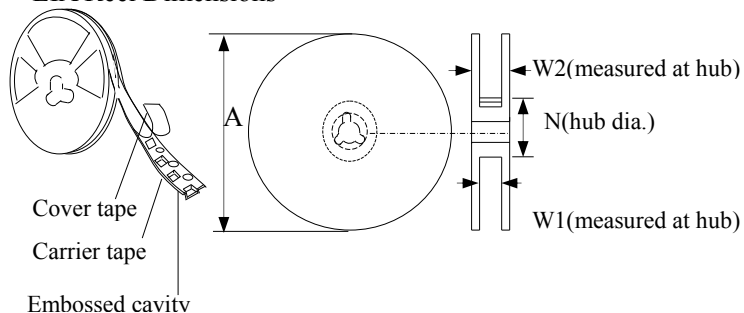
## Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-1
W	$8.15 \pm 0.2$
P0	$4.0 \pm 0.10$
P1	$4.0 \pm 0.10$
P2	$2.0 \pm 0.05$
A0	$2.82 \pm 0.10$
B0	$3.52 \pm 0.10$
B1max.	4.35
D0	$1.50 + 0.1, -0$
F	$3.5 \pm 0.05$
E1	$1.75 \pm 0.10$
E2min.	6.25
T	0.6
T1max.	0.1
K0	$1.04 \pm 0.1$
Leader min.	390
Trailer min.	160
<b>Reel Dimensions</b>	
A max.	178
N min.	60
W1	$9 \pm 0.5$
W2	$12.6 \pm 0.5$

EIA Tape Component Dimensions



EIA Reel Dimensions



## Storage And Handling

- Storage conditions: 35°C max, 70% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

## Part Number System

SMD 1210 R 075 S F □ □ V

special voltage Rating(Optional)

Lead-Free

Tin-plated Nickel-Copper

Holding Current Rating

Da Rong

Device Dimensions: Length/width(Unit:1/100 inch) Size 3225 mm / 1210 inch

Surface Mount Device