

APPROVAL SHEET

MODEL NO.: _____

CUSTOMER:

CUSTOMER'S APPROVAL:

AUTHORIZED SIGNATURE/STAMP

DATE

MANUFACTURER:

The Fourth Industrial Zone, Luokeng Village, Xiaotie District, Xiaojinkou Town, Huizhou City, Guangdong Province, China

Tel: 0752-7213069/7213070

Fax: 0752-7213065

Submitted by:

Approved by:

Date:

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		认证
							Current (A)	Time (Sec)	R _{i min} (Ω)	R _{1max} (Ω)	UL
SMD0805R005SF	1	15.0	30	0.05	0.15	0.5	0.5	1.50	1.500	18.000	✓
SMD0805R005SF30V	1	30.0	30	0.05	0.15	0.5	0.5	1.50	1.500	18.000	
SMD0805R010SF	1	15.0	30	0.10	0.30	0.5	0.5	1.50	0.750	6.000	✓
SMD0805R010SF30V	1	30.0	30	0.10	0.30	0.5	0.5	1.50	0.750	6.000	
SMD0805R020SF	2	9.0	30	0.20	0.50	0.5	8.0	0.02	0.550	3.500	✓
SMD0805R020SF12V	2	12.0	30	0.20	0.50	0.5	8.0	0.02	0.550	3.500	
SMD0805R020SF16V	2	16.0	30	0.20	0.50	0.5	8.0	0.02	0.550	3.500	
SMD0805R035SF	3	6.0	30	0.35	0.75	0.5	8.0	0.10	0.200	1.200	✓
SMD0805R035SF12v	3	12.0	30	0.35	0.75	0.5	8.0	0.10	0.200	1.200	
SMD0805R035SF13.2v	3	13.2	30	0.35	0.75	0.5	8.0	0.10	0.200	1.200	
SMD0805R035SF16v	3	16.0	30	0.35	0.75	0.5	8.0	0.10	0.200	1.200	
SMD0805R050SF	5	6.0	30	0.50	1.00	0.5	8.0	0.10	0.100	0.850	✓
SMD0805R050SF12v	5	12.0	30	0.50	1.00	0.5	8.0	0.10	0.100	0.850	
SMD0805R050SF16v	5	16.0	30	0.50	1.00	0.5	8.0	0.10	0.100	0.850	
SMD0805R050SF24v	5	24.0	30	0.50	1.00	0.5	8.0	0.10	0.100	0.850	
SMD0805R075SF	7	6.0	35	0.75	1.50	0.6	8.0	0.20	0.070	0.385	✓
SMD0805R075SF12v	7	12.0	35	0.75	1.50	0.6	8.0	0.20	0.070	0.385	
SMD0805R100SF	0	6.0	35	1.00	1.95	0.6	8.0	0.30	0.040	0.230	✓
SMD0805R100SF12v	0	12.0	35	1.00	1.95	0.6	8.0	0.30	0.040	0.230	
SMD0805R110SF	0	6.0	35	1.10	2.20	0.6	8.0	0.30	0.035	0.210	✓
SMD0805R110SF12v	0	12.0	35	1.10	2.20	0.6	8.0	0.30	0.035	0.210	
SMD0805R125SF	12	6.0	35	1.25	2.50	1.5	8.0	0.60	0.025	0.140	✓
SMD0805R150SF	15	6.0	35	1.50	3.00	1.0	8.0	0.50	0.015	0.130	✓

V_{max} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P_d = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

R_{i min/max} = Minimum/Maximum device resistance prior to tripping at 25°C.

R_{1max} = 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

RHuiZhou DaRong Electronic Technology CO.,LTD



SMD0805 HF Series Surface Mount PTC Devices

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

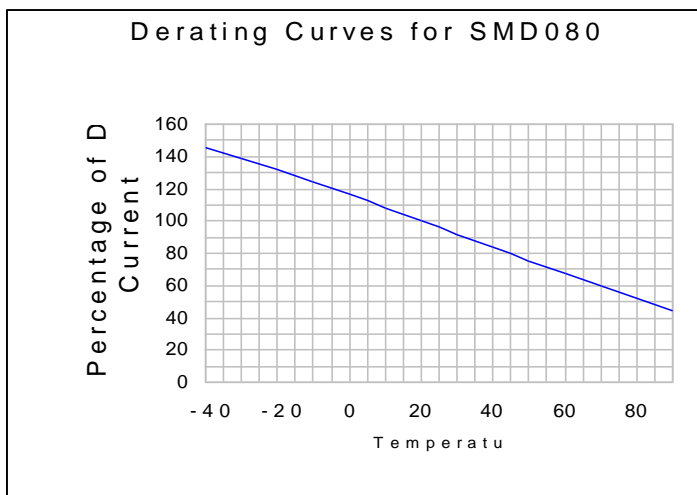
Agency	File Number	Regulation	Standard
UL	E486890		2011/65/EU
TUV	pending		EN14582

Thermal Derating Chart

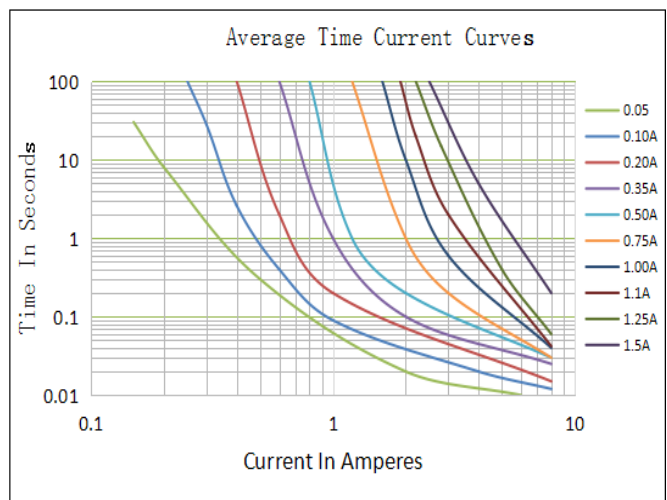
Recommended Hold Current(A) at Ambient Temperature(°C)

Model	Ambient Operation Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD0805R005SF	0.070	0.060	0.055	0.050	0.040	0.035	0.030	0.025	0.015
SMD0805R010SF	0.14	0.12	0.11	0.10	0.08	0.07	0.06	0.05	0.03
SMD0805R020SF	0.28	0.25	0.23	0.20	0.17	0.14	0.12	0.10	0.07
SMD0805R035SF	0.47	0.44	0.39	0.35	0.30	0.27	0.24	0.20	0.14
SMD0805R050SF	0.68	0.62	0.55	0.50	0.40	0.37	0.33	0.29	0.23
SMD0805R075SF	1.00	0.90	0.79	0.75	0.63	0.57	0.53	0.41	0.34
SMD0805R100SF	1.35	1.25	1.15	1.00	0.82	0.74	0.65	0.55	0.42
SMD0805R110SF	1.45	1.35	1.20	1.10	0.92	0.84	0.75	0.65	0.52
SMD0805R125SF	1.65	1.53	1.36	1.25	1.05	0.95	0.85	0.74	0.59
SMD0805R150SF	1.98	1.84	1.63	1.50	1.26	1.14	1.02	0.88	0.71

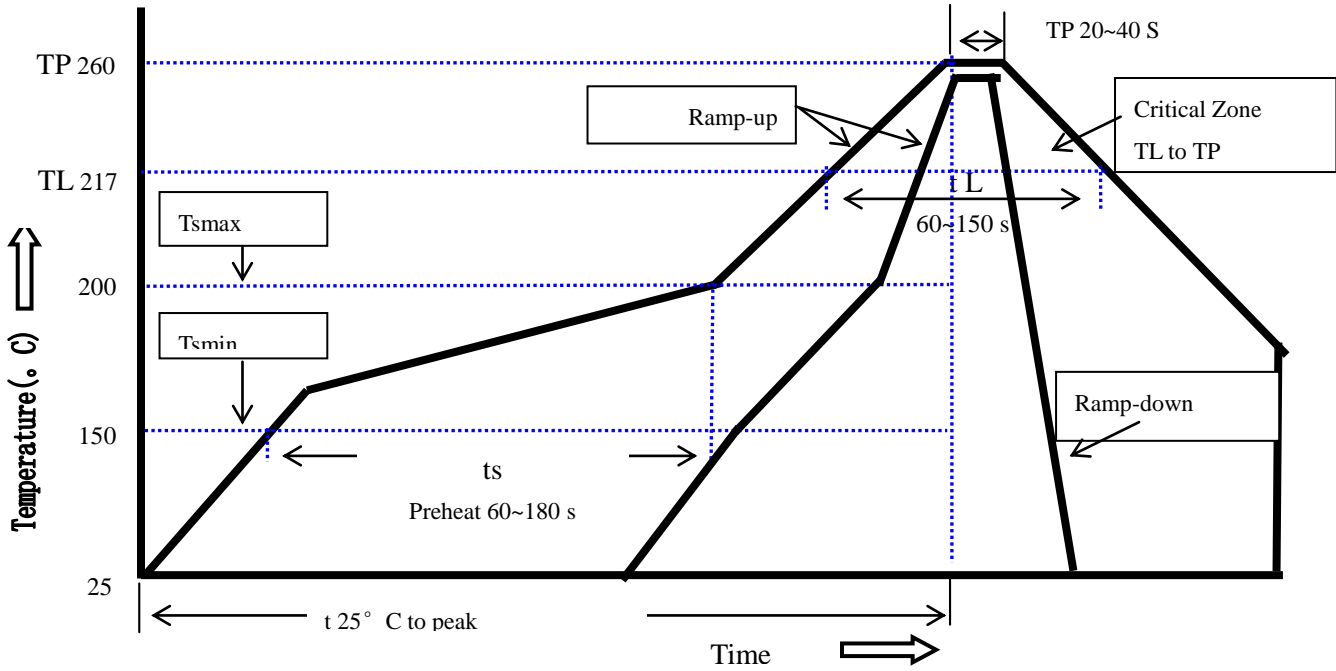
Thermal Derating Curve



Average Time-Current Curve



Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts max to T p)	3°C/second mac.
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
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~30°C,30%-60%RH

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

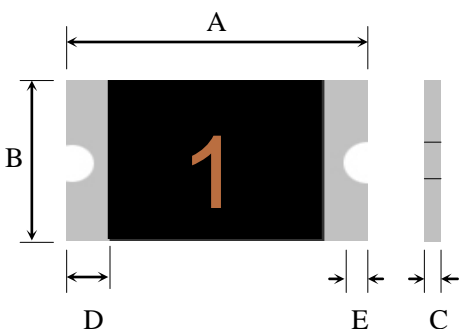
Recommended maximum paste thickness is 0.25mm

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.)



RHuiZhou DaRong Electronic Technology CO.,LTD
SMD0805 HF Series Surface Mount PTC Devices

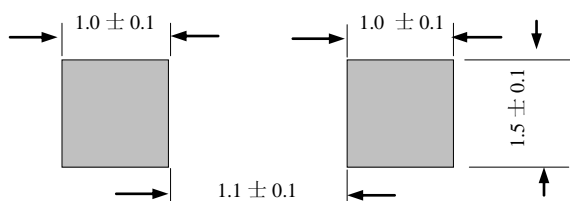
型號	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
SMD0805R005SF	2.00	2.20	1.20	1.50	0.40	0.90	0.20	0.10
SMD0805R005SF30V	2.00	2.20	1.20	1.50	0.40	0.90	0.20	0.10
SMD0805R010SF	2.00	2.20	1.20	1.50	0.40	0.90	0.20	0.10
SMD0805R010SF30V	2.00	2.20	1.20	1.50	0.40	0.90	0.20	0.10
SMD0805R020SF	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R020SF12V	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R020SF16V	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R035SF	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R035SF12v	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R035SF13.2v	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R035SF16v	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R050SF	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R050SF12v	2.00	2.20	1.20	1.50	0.35	0.80	0.20	0.10
SMD0805R050SF16v	2.00	2.20	1.20	1.50	0.50	1.10	0.20	0.10
SMD0805R050SF24v	2.00	2.20	1.20	1.50	0.50	1.10	0.20	0.10
SMD0805R075SF	2.00	2.20	1.20	1.50	0.50	1.00	0.20	0.10
SMD0805R075SF12v	2.00	2.20	1.20	1.50	0.50	1.00	0.20	0.10
SMD0805R100SF	2.00	2.20	1.20	1.50	0.70	1.20	0.20	0.10
SMD0805R100SF12v	2.00	2.20	1.20	1.50	0.70	1.20	0.20	0.10
SMD0805R110SF	2.00	2.20	1.20	1.50	0.70	1.20	0.20	0.10
SMD0805R110SF12v	2.00	2.20	1.20	1.50	0.70	1.20	0.20	0.10
SMD0805R125SF	2.00	2.20	1.20	1.50	0.70	1.50	0.20	0.10
SMD0805R150SF	2.00	2.20	1.20	1.50	0.70	1.50	0.20	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.)



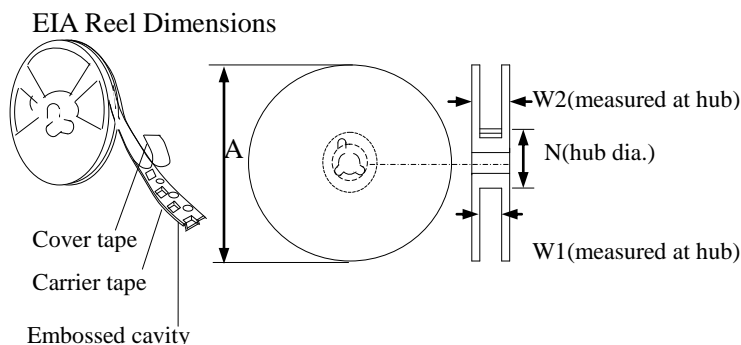
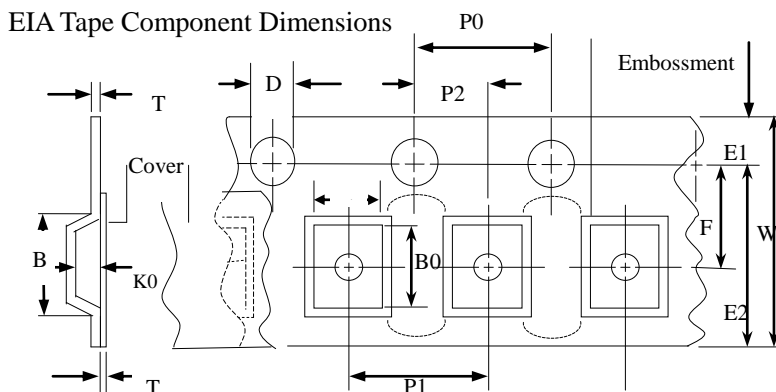
Packaging Quantity

Part Number	Quantity
SMD0805R005.010.020.035.050.SF	5,000 pcs/reel
SMD0805R075.100.110SF	4,000 pcs/reel
SMD0805R125.150SF	3,500 pcs/reel

Tape & reel packaging per EIA481-1

Tape And Reel Specifications (mm)

Governing Specifications		EIA 481-1
W	8.0 ± 0.3	
P0	4.0 ± 0.10	
P1	4.0 ± 0.10	
P2	2.0 ± 0.05	
A0	1.45 ± 0.10	
B0	2.30 ± 0.10	
B1max.	4.35	
D0	1.55 + 0.1, -0	
F	3.5 ± 0.05	
E1	1.75 ± 0.10	
E2min.	6.25	
T	0.25	
T1max.	0.1	
K0	0.74 ± 0.1	
Leader min.	390	
Trailer min.	160	
Reel Dimensions		
A max.	178	
N min.	60	
W1	9.0 ± 0.5	
W2	12.0 ± 0.05	



Storage And Handling

- Storage conditions: 30°C max, 30%-60% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

Part Number System

SMD 0805 R □□□ S F □□ V

