

Performance Specification

Model	Vmax (V dc)	Imax (A)	I hold @25C (A)	I trip @25C (A)	Pd Typ. (W)	Max time to Trip		Resistance	
						Current (A)	Time (Sec)	R i min (Ohm)	R i max (Ohm)
1812Z010-30	30.0	100	0.10	0.30	0.8	0.5	1.50	0.750	15.000
1812Z014-60	60.0	100	0.14	0.34	0.8	1.5	0.15	0.650	6.000
1812Z020-30	30.0	100	0.20	0.40	0.8	8.0	0.02	0.350	5.000
1812Z030-30	30.0	100	0.30	0.60	0.8	8.0	0.10	0.250	3.000
1812Z050-15	15.0	100	0.50	1.00	0.8	8.0	0.15	0.150	1.000
1812Z050-33	33.0	100	0.50	1.00	0.8	8.0	0.15	0.150	1.000
1812Z050-60	60.0	100	0.50	1.00	0.8	8.0	0.15	0.150	1.400
1812Z075-13,2	13.2	100	0.75	1.50	0.8	8.0	0.20	0.090	0.450
1812Z110-08	8.0	100	1.10	2.20	0.8	8.0	0.30	0.050	0.250
1812Z125-16	16.0	100	1.25	2.50	0.8	8.0	0.40	0.050	0.140
1812Z150-08	8.0	100	1.50	3.00	0.8	8.0	0.50	0.040	0.160
1812Z150-16	16.0	100	1.50	3.00	0.8	8.0	0.50	0.040	0.160
1812Z160-08	8.0	100	1.6	2.80	0.8	8.0	1.00	0.030	0.130
1812Z200-08	8.0	100	2.00	4.00	0.8	8.0	2.00	0.020	0.100
1812Z260-08	8.0	100	2.60	5.00	0.8	8.0	2.50	0.015	0.050
1812Z300-08	8.0	100	3.00	5.00	0.8	8.0	4.00	0.012	0.040
1812Z350-06	6.0	100	3.50	6.00	2.0	10.0	4.00	0.008	0.030

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.

V max = Maximum operating voltage device can withstand without damage at rated current (Imax).

I max = Maximum fault current device can withstand without damage at rated voltage (V max).

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

Ri min/max = Minimum/Maximum device resistance prior to tripping at 25°C.

R1max = Maximum device resistance is measured one hour post reflow.

CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

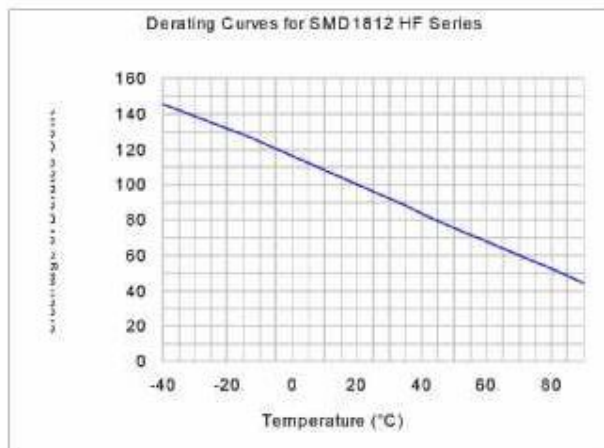
Environmental Specifications

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		

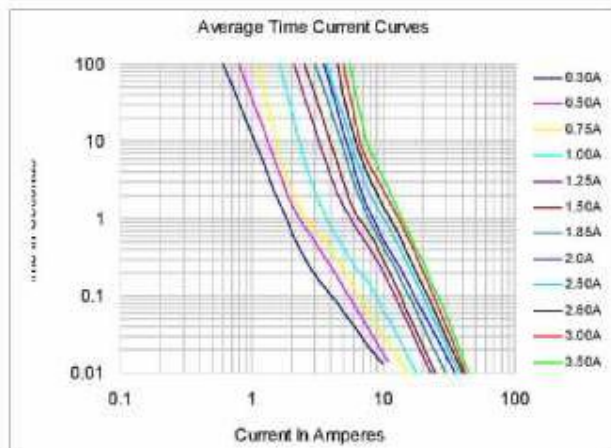
Thermal Derating Chart

Recommended Hold Current (A) at Ambient Temperature (C)									
Model	Ambient Operation Temperature								
	-40C	-20C	0C	25C	40C	50C	60C	70C	85C
1812Z010-30	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.05	0.03
1812Z014-60	0.23	0.19	0.17	0.14	0.12	0.10	0.09	0.08	0.06
1812Z020-30	0.29	0.26	0.23	0.20	0.17	0.15	0.14	0.12	0.10
1812Z030-30	0.44	0.39	0.35	0.30	0.26	0.23	0.21	0.18	0.15
1812Z050	0.59	0.57	0.55	0.50	0.45	0.43	0.35	0.30	0.23
1812Z075-13,2	1.10	0.99	0.87	0.75	0.63	0.57	0.49	0.45	0.35
1812Z110-08	1.60	1.45	1.28	1.10	0.92	0.83	0.71	0.66	0.52
1812Z125-16	2.00	1.75	1.52	1.25	1.00	0.95	0.90	0.75	0.53
1812Z150-08	2.30	2.05	1.77	1.50	1.23	1.09	0.95	0.82	0.61
1812Z150-16	2.28	2.03	1.75	1.50	1.21	1.07	0.93	0.79	0.58
1812Z160-08	2.10	1.96	1.88	1.60	1.26	1.12	0.98	0.84	0.63
1812Z200-08	2.88	2.61	2.25	2.00	1.80	1.66	1.45	1.09	0.80
1812Z260-08	3.90	3.42	2.96	2.60	2.33	2.07	1.94	1.35	1.00
1812Z300-08	4.15	3.76	3.46	3.00	2.55	2.28	2.01	1.61	1.33
1812Z350-06	4.84	4.39	4.04	3.50	2.98	2.66	2.35	1.88	1.55

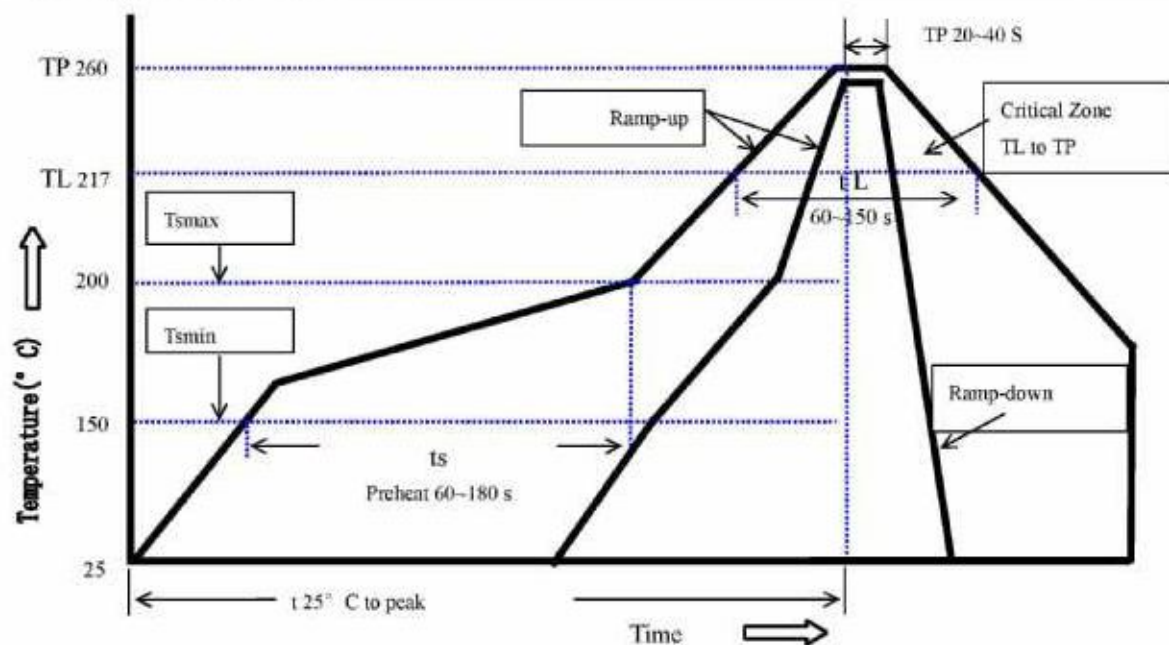
Thermal Derating Curve



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
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

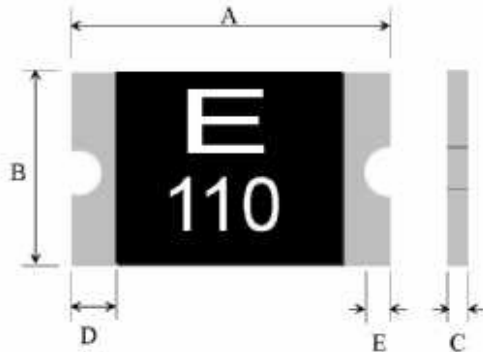
Recommended maximum paste thickness is 0.25mm

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
1812Z010-30	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25
1812Z014-60	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25
1812Z020-30	4.37	4.73	3.07	3.41	0.50	1.30	0.30	0.25
1812Z030-30	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25
1812Z050-15	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
1812Z050-33	4.37	4.73	3.07	3.41	0.70	1.30	0.30	0.25
1812Z050-60	4.37	4.73	3.07	3.41	1.10	1.80	0.30	0.25
1812Z075-13,2	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
1812Z110-08	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
1812Z125-16	4.37	4.73	3.07	3.41	0.60	1.30	0.30	0.25
1812Z150-08	4.37	4.73	3.07	3.41	0.40	1.20	0.30	0.25
1812Z150-16	4.37	4.73	3.07	3.41	0.40	1.20	0.30	0.25
1812Z160-08	4.37	4.73	3.07	3.41	0.40	1.20	0.30	0.25
1812Z200-08	4.37	4.73	3.07	3.41	0.50	1.30	0.30	0.25
1812Z260-08	4.37	4.73	3.07	3.41	0.50	1.50	0.30	0.25
1812Z300-08	4.37	4.73	3.07	3.41	0.50	1.50	0.30	0.25
1812Z350-06	4.37	4.73	3.07	3.41	0.50	1.50	0.30	0.25

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.