



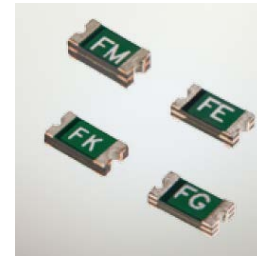
**Product Features:** Small surface mountable, Solid state,  
Faster time to trip than standard SMD devices, Lower  
resistance than standard SMD devices

**Operation Current:** 0.05A~2.00A

**Maximum Voltage:** 6V<sub>DC</sub>~60V<sub>DC</sub>

**Temperature Range :** -40°C to 85°C

**Applications:** All high-density boards



### Electrical Characteristics (23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max Time to Trip		Resistance	
	I <sub>H</sub> , A	I <sub>T</sub> , A	V <sub>MAX</sub> , V <sub>DC</sub>	I <sub>MAX</sub> , A	P <sub>d</sub> , W	Current	Time	R <sub>MIN</sub>	R <sub>1MAX</sub>
						A	Sec	Ohms	Ohms
F1206L005	0.05	0.15	60	100	0.4	0.25	1.50	3.600	50.000
F1206L010	0.10	0.25	60	100	0.4	0.50	1.00	1.600	15.000
F1206L012	0.12	0.39	48	100	0.6	1.00	0.20	1.400	6.500
F1206L016	0.16	0.45	48	100	0.6	1.00	0.30	1.100	5.000
F1206L020	0.20	0.40	30	100	0.4	8.00	0.10	0.600	2.500
F1206L025	0.25	0.50	16	100	0.6	8.00	0.08	0.550	2.300
F1206L025-24	0.25	0.50	24	100	0.6	8.00	0.08	0.550	2.300
F1206L035-16	0.35	0.75	16	100	0.4	8.00	0.10	0.300	1.200
F1206L035-30	0.35	0.75	30	100	0.6	8.00	0.10	0.300	1.200
F1206L050	0.50	1.00	8	100	0.4	8.00	0.10	0.150	0.700
F1206L050-24	0.50	1.00	24	100	0.6	8.00	0.10	0.150	0.750
F1206L075TH	0.75	1.50	8	100	0.6	8.00	0.20	0.090	0.290
F1206L075-16	0.75	1.50	16	100	0.6	8.00	0.20	0.090	0.290
F1206L100	1.00	1.80	6	100	0.6	8.00	0.30	0.055	0.210
F1206L110TH	1.10	2.20	8	100	0.8	8.00	0.30	0.040	0.180
F1206L110-16	1.10	2.20	16	100	0.8	8.00	0.30	0.040	0.180
F1206L150	1.50	3.00	8	100	0.8	8.00	1.00	0.040	0.120
F1206L200	2.00	3.50	6	100	0.8	8.00	1.50	0.018	0.080

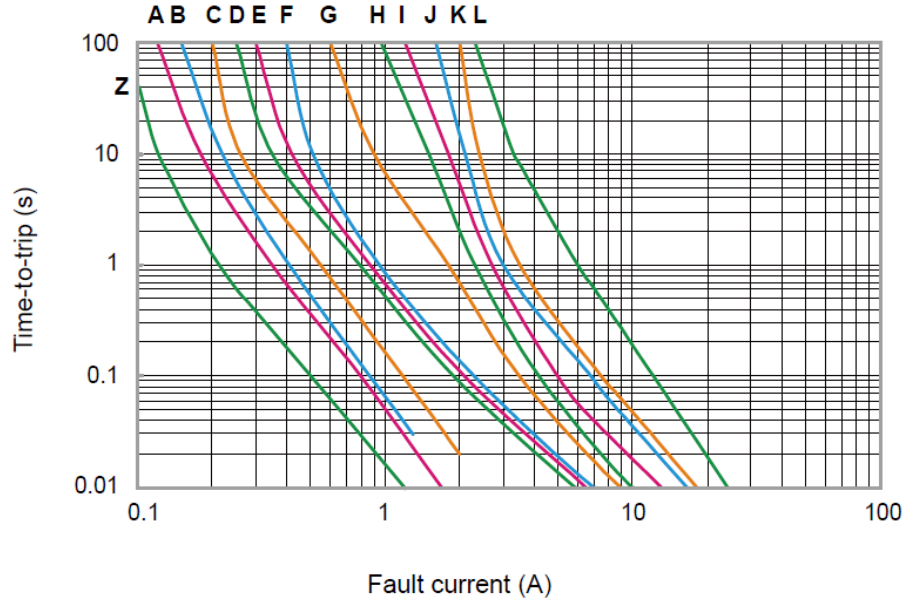
### Thermal Derating for PPTC Device at Various Ambient Temperatures

Temperatures	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
Current Derating %	145%	130%	115%	100%	92%	84%	78%	69%	62%	50%

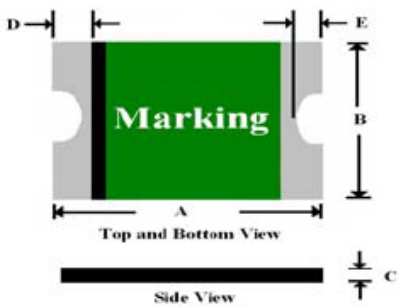


**Typical Time-To-Trip at 23°C**

- Z = F1206L005
- A = F1206L010
- B = F1206L012
- C = F1206L016
- D = F1206L020
- E = F1206L025 /  
F1206L025-24
- F = F1206L035-16 /  
F1206L035-30
- G = F1206L050 /  
F1206L050-24
- H = F1206L075TH /  
F1206L075-16
- I = F1206L100
- J = F1206L110TH /  
F1206L110-16
- K = F1206L150
- L = F1206L200



**Product Dimensions (Millimeters)**

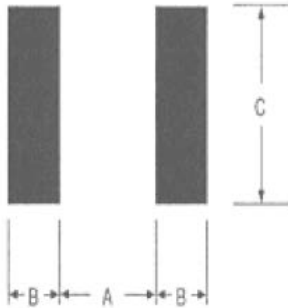


Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
F1206L005	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
F1206L010	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
F1206L012	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
F1206L016	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
F1206L020	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
F1206L025	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
F1206L025-24	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
F1206L035-16	3.00	3.50	1.50	1.80	0.30	0.75	0.10	0.75	0.10	0.45
F1206L035-30	3.00	3.50	1.50	1.80	0.90	1.30	0.25	0.75	0.10	0.45
F1206L050	3.00	3.50	1.50	1.80	0.25	0.55	0.10	0.75	0.10	0.45
F1206L050-24	3.00	3.50	1.50	1.80	0.80	1.20	0.25	0.75	0.10	0.45
F1206L075TH	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
F1206L075-16	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
F1206L100	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
F1206L110TH	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
F1206L110-16	3.00	3.50	1.50	1.80	0.80	1.40	0.25	0.75	0.10	0.45
F1206L150	3.00	3.50	1.50	1.80	0.80	1.40	0.25	0.75	0.10	0.45
F1206L200	3.00	3.50	1.50	1.80	0.85	1.60	0.25	0.75	0.10	0.45



## Pad Layouts, Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each F1206L device



Pad dimensions (millimeters)			
Device	A Nominal	B Nominal	C Nominal
All F1206L Series	2.00	1.00	1.90

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (T <sub>smax</sub> to T <sub>p</sub> )	3°C/second max.
Preheat:	
Temperature Min (T <sub>smin</sub> )	150°C
Temperature Max (T <sub>smax</sub> )	200°C
Time (t <sub>s</sub> T <sub>smin</sub> to T <sub>smax</sub> )	60~180 seconds
Time maintained above:	
Temperature(T <sub>L</sub> )	217°C
Time (t <sub>L</sub> )	60~150 seconds
Peak/Classification Temperature(T <sub>p</sub> ):	260°C
Time within 5°C of actual Peak:	
Temperature (t <sub>p</sub> )	20~40 seconds
Ramp-Down Rate:	6°C/second max.
Time 25°C to Peak Temperature:	8 minutes max.

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

### Solder reflow

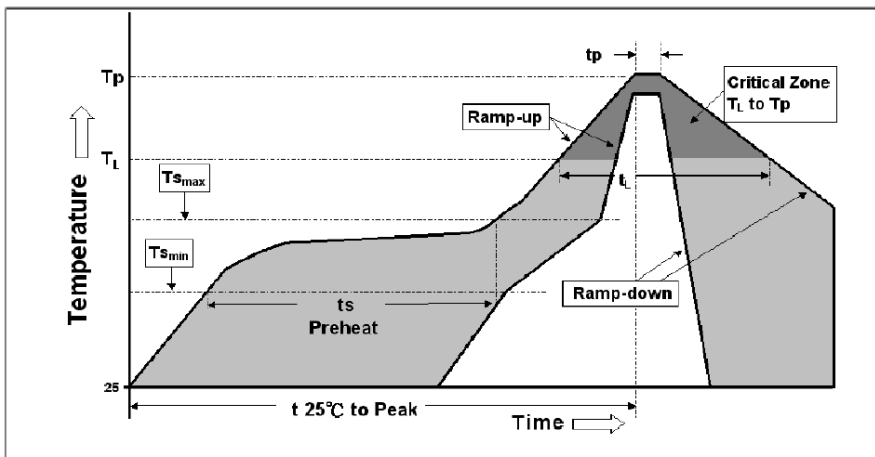
✗ Due to “Lead Free” nature, Temperature and Dwelling time for the soldering zone is higher than those for Regular. This may cause damage to other components.

1. Recommended max past thickness > 0.25mm.
2. Devices can be cleaned using standard methods and aqueous solvent.
3. Rework use standard industry practices.
4. Storage Environment: < 30°C / 60%RH

### Caution:

1. If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.
2. Devices are not designed to be wave soldered to the bottom side of the board.

## Reflow Profile



NOTE: Specification subject to change without notice.