

Resettable Fuse



Specifications:

Applications	: All high-density boards
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 to 2A
Max. Voltage	: 6V to 60V
Temperature Range	: -40°C to +85°C

Electrical Characteristics (23°C)

Hold Current	Trip Current	Rated Voltage	Max. Current	Typical Power	Max. Time to Trip		Resistance		Part Number
					Current	Time	R Min.	R1 Max.	
I_H , A	I_T , A	V Max., V DC	I Max., A	Pd, W	Amp	Sec	ohms	ohms	
0.05	0.15	60	10	0.6	0.25	3	3.6	50	MC36203
0.1	0.25				0.5	1.5	1.6	15	MC36205
0.2	0.4	30	0.1		8	0.02	0.8	5	MC36208
0.35	0.7	16				0.2	0.32	1.3	MC36212
0.5	1		8	40	0.8	0.1	0.25	0.9	MC36214
0.75	1.5	0.13					0.4	MC36217	
1.1	2.2	6	100	0.8	0.3	0.06	0.21	MC36223	
1.5	3	6			0.8	0.5	0.04	0.11	MC36230
1.75	4		0.6	0.02		0.08	MC36236		
2			1	0.015		0.07	MC36239		

- I_H = Hold current-maximum current at which the device will not trip at 23°C still air
- I_T = Trip current-minimum current at which the device will always trip at 23°C still air
- V_{MAX} = Maximum voltage device can withstand without damage at its rated current (I maximum)
- I_{MAX} = Maximum fault current device can withstand without damage at rated voltage (V maximum)
- Pd = Typical power dissipated-type amount of power dissipated by the device when in the tripped state in 23°C still air environment
- R_{MIN} = Minimum device resistance at 23°C prior to tripping
- $R1_{MAX}$ = Maximum device resistance at 23°C measured 1 hour after tripping or reflow soldering of 260°C for 20 seconds

Termination pad characteristics
 Termination pad materials : Pure Tin



Resettable Fuse



Production Dimensions

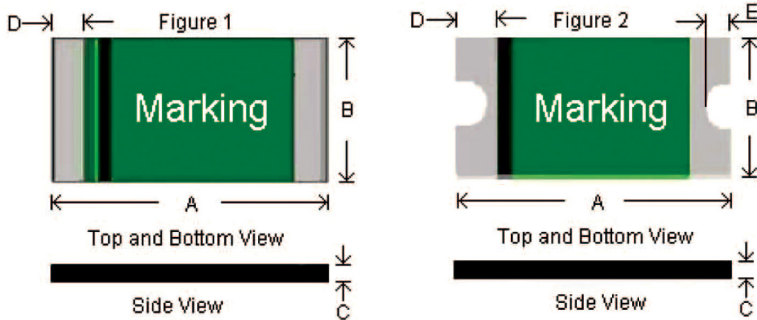
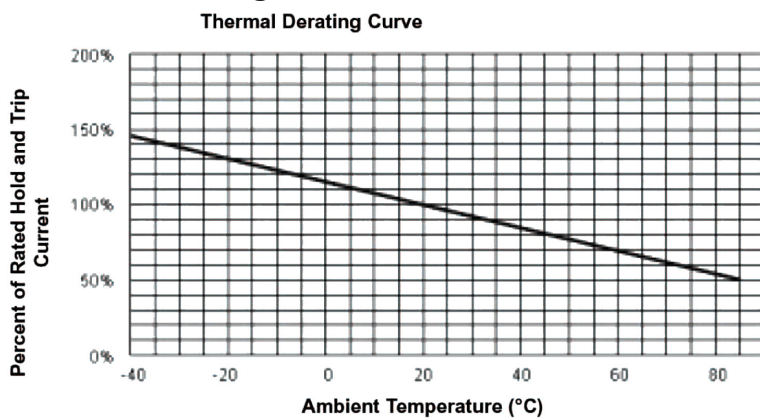


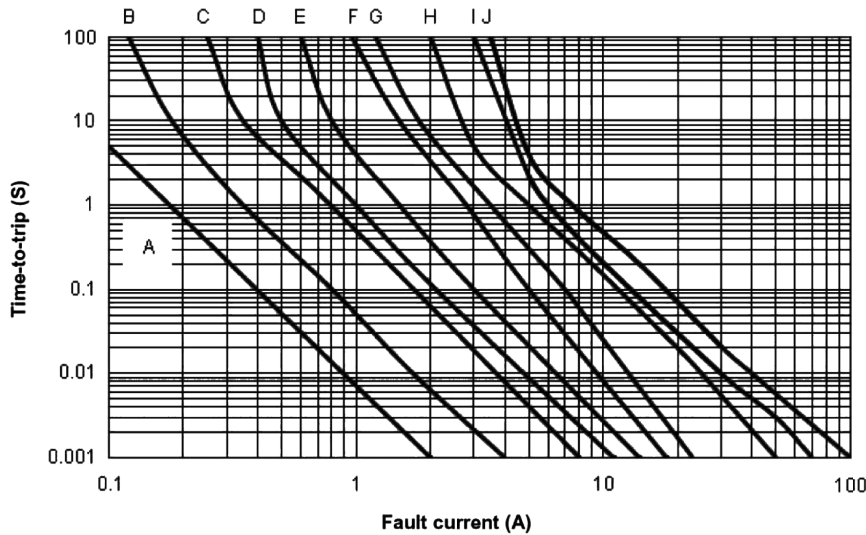
Figure	A		B		C		D		E		Part Number
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	3	3.43	2.35	2.8	0.6	1.15	0.25	0.75	-	-	MC36203
						1.15					MC36205
					0.4	0.85					MC36208
						0.8					MC36212
					0.3	0.75					MC36214
					0.3	0.7					MC36217
2	3	3.43	2.35	2.8	0.6	1	0.25	0.75	0.1	0.45	MC36223
					0.5	0.9					MC36230
					0.8	1.4					MC36236
											MC36239

Dimensions : Millimetres

Thermal Derating Curve



Typical Time-To-Trip at 23°C



- A=MC36203
- B=MC36205
- C=MC36208
- D=MC36212
- E=MC36214
- F=MC36217
- G=MC36223
- H=MC36230
- I=MC36236
- J=MC36239

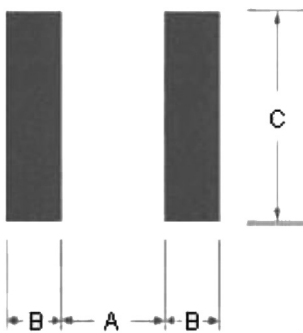
Material Specification

Terminal Pad Material : Pure Tin

Soldering Characteristics : Meets EIA specification RS 186-9E, ANSI/J-std-002 Category 3

Pad Layouts, Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each FSMD1812 device



Device	A Nominal	B Nominal	C Nominal
All 0805 Series	1.2	1	1.5

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Ts maximum to Tp)	3°C/second maximum
Preheat:	
Temperature Minimum (Ts minimum)	150°C
Temperature Maximum (Ts maximum)	200°C
Time (ts minimum to ts maximum)	60 to 180 seconds

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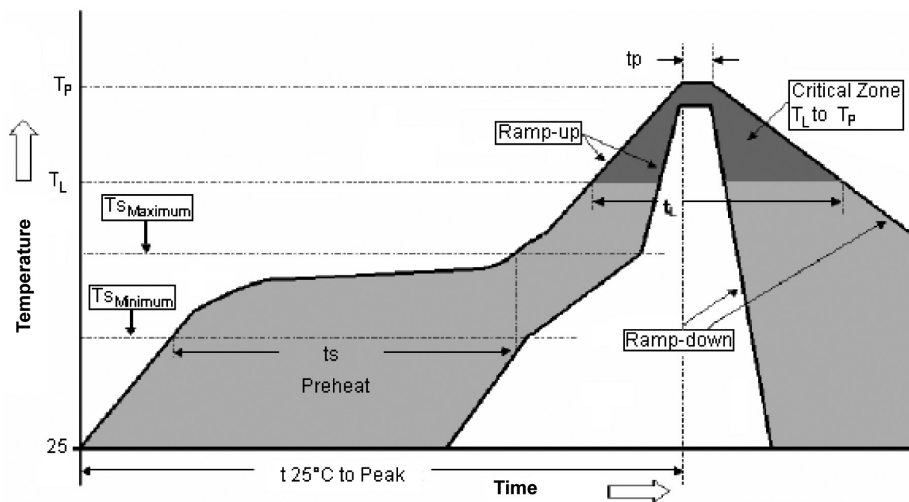
Solder Reflow:

Due to "Lead Free" nature, Temperature and Dwelling time for the soldering 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.



Part Number Table

Description	Part Number
Surface Mountable PTC Resettable Fuse	MC36203
	MC36205
	MC36208
	MC36212
	MC36214
	MC36217
	MC36223
	MC36230
	MC36236
MC36239	

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