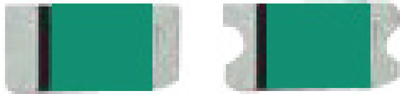
Resettable Fuse



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
Temperature Range : -40°C to +85°C

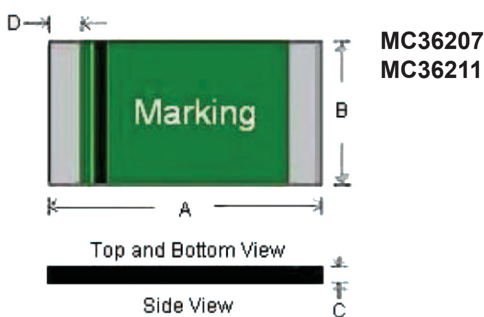
Electrical Characteristics (23°C)

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	
0.2	0.4	30	10	0.4	8	0.1	0.6	2.5	MC36207
0.35	0.75	16	40				0.3	1.2	MC36211
0.75	1.5	6	100	0.6		0.2	0.09	0.29	MC36216
1	1.8					0.3	0.055	0.21	MC36221
1.1	2.2			0.8			0.04	0.18	MC36222
1.50	3					1	0.03	0.12	MC36229

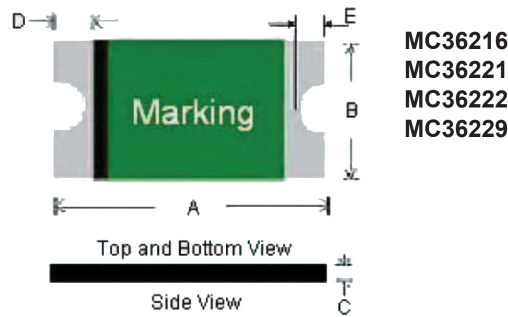
I_H = Hold current-maximum current at which the device will not trip at 23°C still air
I_T = Trip current-minimum current at which the device will always trip at 23°C still air
V_{MAX} = Maximum voltage device can withstand without damage at its rated current (I maximum)
I_{MAX} = Maximum fault current 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

FSMD Product Dimensions



MC36207
MC36211

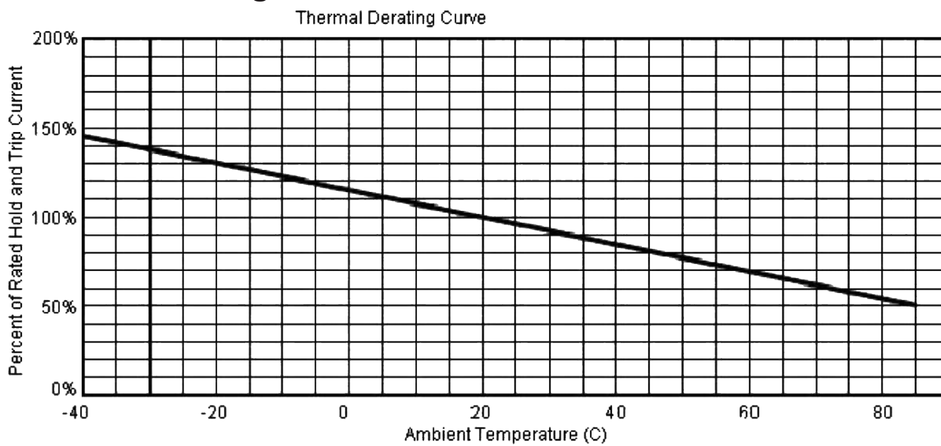


MC36216
MC36221
MC36222
MC36229

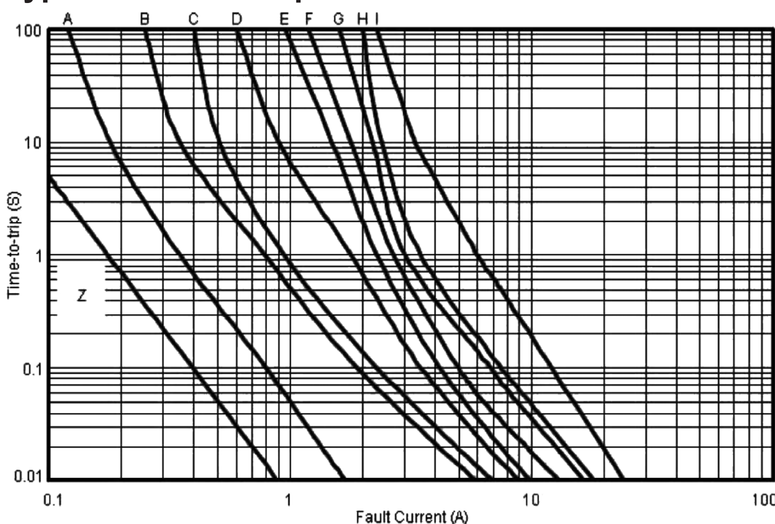
<table>
<tr><th colspan="2">A</th><th colspan="2">B</th><th colspan="2">C</th><th colspan="2">D</th><th colspan="2">E</th><th rowspan="2">Part Number</th></tr>
<tr><th>Min.</th><th>Max.</th><th>Min.</th><th>Max.</th><th>Min.</th><th>Max.</th><th>Min.</th><th>Max.</th><th>Min.</th><th>Max.</th></tr>
<tr><td rowspan="6">3</td><td rowspan="6">3.5</td><td rowspan="6">1.5</td><td rowspan="6">1.8</td><td rowspan="5">0.45</td><td rowspan="2">0.75</td><td rowspan="2">0.1</td><td rowspan="6">0.75</td><td rowspan="2">-</td><td rowspan="2">-</td><td>MC36207</td></tr>
<tr><td>MC36211</td></tr>
<tr><td>1.25</td><td rowspan="4">0.25</td><td rowspan="4">0.1</td><td rowspan="4">0.45</td><td>MC36216</td></tr>
<tr><td rowspan="2">1</td><td>MC36221</td></tr>
<tr><td>MC36222</td></tr>
<tr><td>0.8</td><td>1.4</td><td>MC36229</td></tr>
</table>

Dimensions : Millimetres

Thermal Derating Curve



Typical Time-To-Trip at 23°C



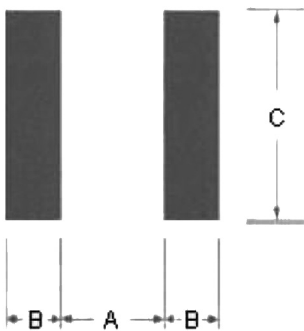
B=MC36207
C=MC36211
E=MC36216
F=MC36221
G=MC36222
H=MC36229

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 1206 Series	2	1	1.9

Dimensions : Millimetres

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Tsmax to Tp)	3°C/second maximum
Preheat : Temperature Minimum (Tsmin) Temperature Maximum (Tsmax) Time (tsmin to tsmax)	 150°C 200°C 60-180 seconds
Time maintained above: Temperature(TL) Time (tL)	 217°C 60-150 seconds
Peak/Classification Temperature(Tp)	260°C
Time within 5°C of actual Peak Temperature (tp)	20-40 seconds
Ramp-Down Rate :	6°C/second maximum
Time 25°C to Peak Temperature :	8 minutes maximum

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 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.