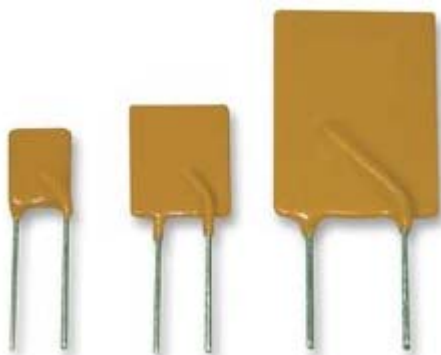


SMT PTC Resettable Fuse



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	: 0.10 to 1.6 A.
Maximum voltage	: 6 to 60 V.
Temperature range	: -40°C to 85°C.

Electrical Characteristics (23°C)

Hold Current	Trip Current	Rated Voltage	Maximum Current	Typical Power	Max Time to Trip		Resistance		Part Number
					Current	Time	R _{Min}	R _{1Max}	
I _H , A	I _T , A	V _{Max} , V dc	I _{Max} , A	P _d , W	Amp.	s	Ω	Ω	
0.1	0.3	60	10	0.8	8	0.02	1.6	15	MC36204
0.35	0.7	16	40			0.1	0.32	1.5	MC36209
0.75	1.5	24		1		0.2	0.11	0.29	MC36218
		33						0.4	MC36219
1.1	1.95	16	100	0.8		0.5	0.04	0.18	MC36224
	2.2	24					1	0.06	0.2
1.25	2.5	6		0.8		0.4	0.05	0.14	MC36226
1.5	3	8				1	0.5	0.04	0.11
		12		0.12					MC36231
		24		1.5			0.12	MC36232	
1.6	3.2	8		0.8		0.5	0.03	0.1	MC36233
		12				1			MC36234
		16		MC36235					
1.25	2.5	-	40	1.5		2	-	0.25	MC36227

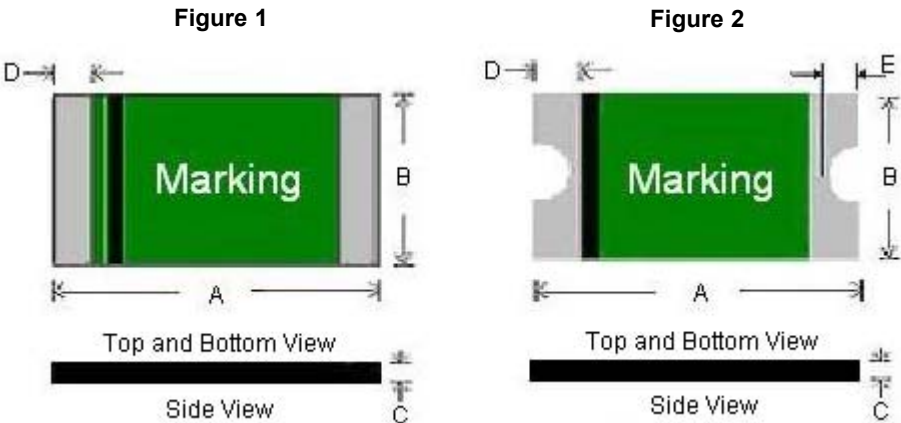
Dimensions : Millimetres

SMT PTC Resettable Fuse



- 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_{max}).
- I_{Max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).
- P_d = 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 s.
- Termination pad characteristics
- Termination pad materials: Pure tin.

FSMD Product Dimensions (Millimetres)



Dimensions Table

A		B		C		D		E		Figure	Part Number
Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum		
4.37	4.73	3.07	3.41	0.6	0.9	0.3	0.95	-	-	1	MC36204
				0.4	0.7			-	-		MC36209
				0.8	1.55	0.25		0.25	0.65	2	MC36218
											MC36219
				0.25	0.9	0.3		-	-	1	MC36224
				0.8	1.3	0.25		0.25	0.65	2	MC36225
				0.25	0.55	0.3		-	-	1	MC36226
								-	-		MC36228
				0.6	1.1	0.25		0.25	0.65	2	MC36231
					1.55					MC36232	
0.25	0.9	0.3	-	-	1	MC36233					
0.6	1.35	0.25	0.25	0.65	2	MC36234					
						MC36235					
-	7.98	-	5.44	-	1.15	-	-	-	-	1	MC36227

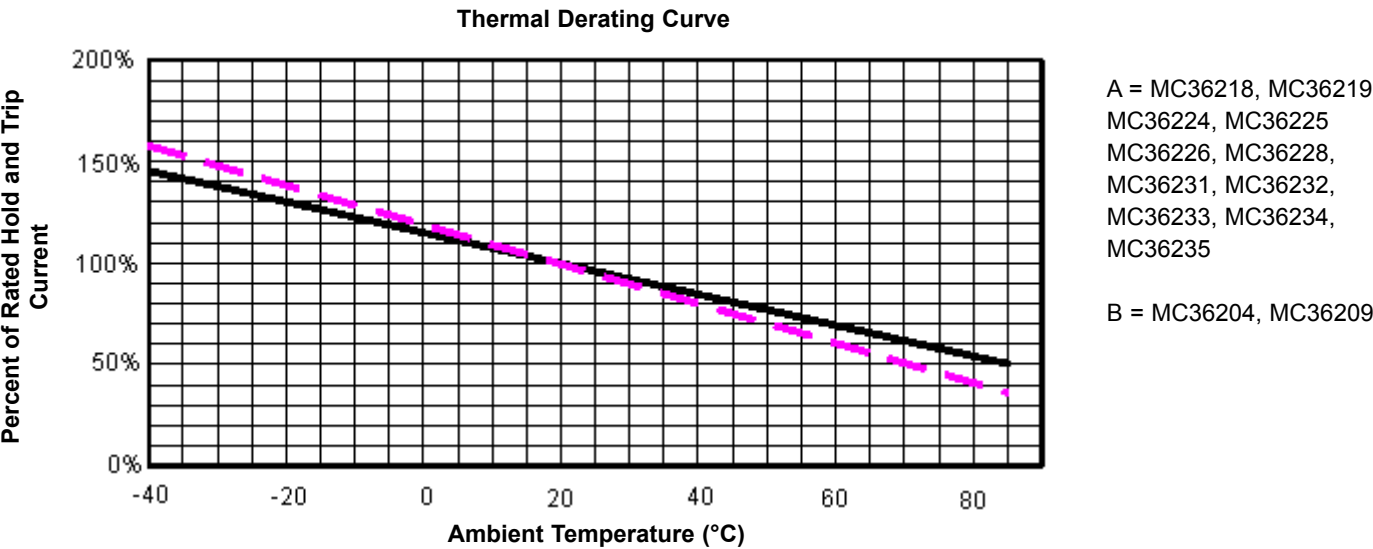
Dimensions : Millimetres



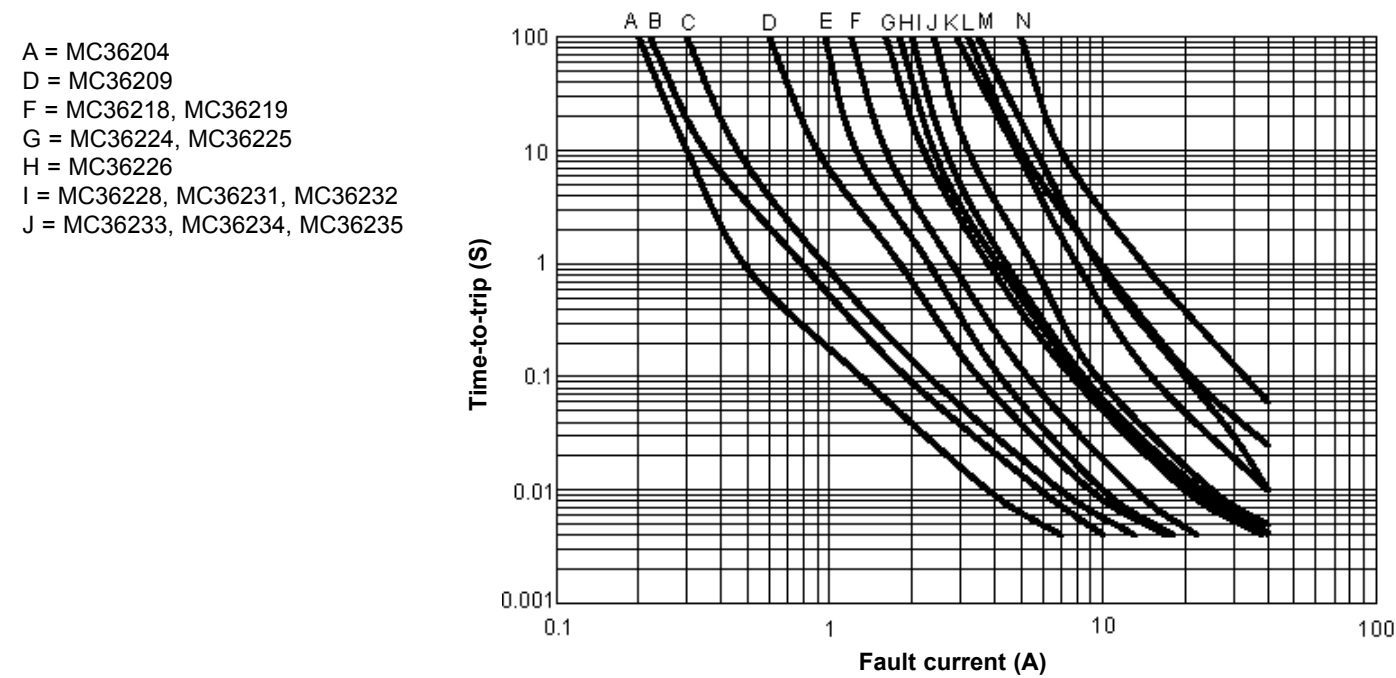
SMT PTC Resettable Fuse



Thermal Derating Curve



Typical Time-To-Trip at 23°C



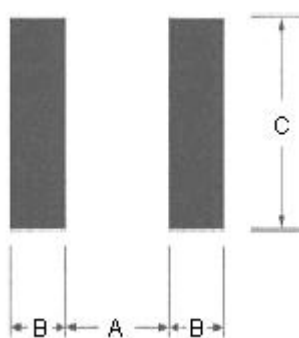
Material Specification

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.



Pad Dimensions

A Nominal	B Nominal	C Nominal
3.45	1.78	3.50

Dimensions : Millimetres

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (T_s max to T_p)	3°C / s max
Preheat: Temperature Min (T_s min) Temperature Max (T_s max) Time (t_s min to t_s max)	150°C 200°C 60-180 s
Time maintained above: Temperature(T_L) Time (t_L)	217°C 60-150 s
Peak / Classification Temperature(T_p):	260°C
Time within 5°C of actual Peak: Temperature (t_p)	20-40 s
Ramp-Down Rate:	6°C / s 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 > 0.25 mm.
2. Devices can be cleaned using standard methods and aqueous solvent.
3. Rework use standard industry practices.
4. Storage environment : < 30°C / 60% RH.

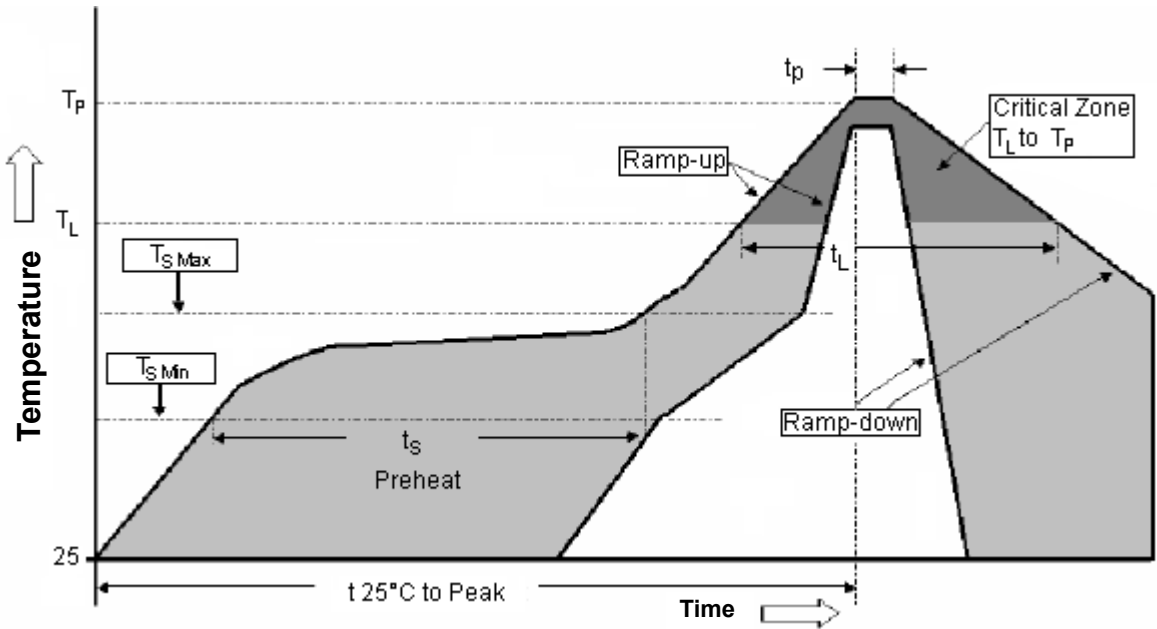
Caution:

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.

SMT PTC Resettable Fuse



Reflow Profile



Part Number Table

Description	Part Number
Resettable Fuse, SMD, 0.1 A	MC36204
Resettable Fuse, SMD, 0.35 A	MC36209
Resettable Fuse, SMD, 0.75 A	MC36218
Resettable Fuse, SMD, 0.75 A	MC36219
Resettable Fuse, SMD, 1.1 A	MC36224
Resettable Fuse, SMD, 1.1 A	MC36225
Resettable Fuse, SMD, 1.25 A	MC36226
Resettable Fuse, SMD, 1.5 A	MC36228
Resettable Fuse, SMD, 1.5 A	MC36231
Resettable Fuse, SMD, 1.5 A	MC36232
Resettable Fuse, SMD, 1.6 A	MC36233
Resettable Fuse, SMD, 1.6 A	MC36234
Resettable Fuse, SMD, 1.6 A	MC36235
Resettable Fuse, SMD, 1.25 A	MC36227

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