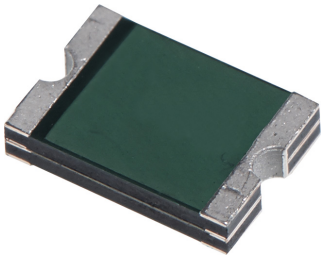
Surface Mountable PTC Resettable Fuse 2920

multicomp PRO

RoHS Compliant



Applications

All high density boards.

Features

- Surface Mountable
- Solid State
- Faster Time to Trip
- Operation Current: 0.3A to 7A
- Maximum Voltage: 6V to 60V DC
- -40°C to +85°C Temperature Range
- Halogen Free

Electrical Characteristics

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typical Power	Max. Time to Trip		Resistance	
	I_H (A)	I_T (A)	V_{MAX} (V DC)	$I_{MAX.}$ (A)	Pd (W)	Current (A)	Time (Sec)	$R_{MIN.}$ (Ω)	$R1_{MAX.}$ (Ω)
MC011386	0.75	1.5	60	100	1.5	8	0.3	0.18	1
MC011387	1.1	2.2	60	100	1.5	8	0.5	0.09	0.41
MC011388	2	4	24	100	1.5	8	5	0.035	0.12
MC011389	2.6	5.2	6	100	1.5	8	20	0.02	0.075
MC011390	2.6	5.2	24	100	1.5	8	20	0.02	0.075
MC011391	3	5.2	6	100	1.5	8	25	0.01	0.048
MC011392	3	5.2	15	100	1.5	8	20	0.01	0.048
MC011393	3	5.2	24	100	1.5	8	20	0.01	0.048
MC011394	3.3	5.5	24	100	1.5	8	20	0.01	0.048
MC011395	4	8	16	100	1.5	20	4	0.01	0.04
MC011396	5	10	16	100	1.5	20	5	0.005	0.025

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 it rated current.($I_{MAX.}$)

I_{MAX} = Maximum fault current device can withstand without damage at rated voltage. ($V_{MAX.}$)

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 materials: Pure Tin

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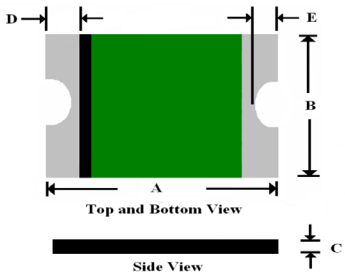
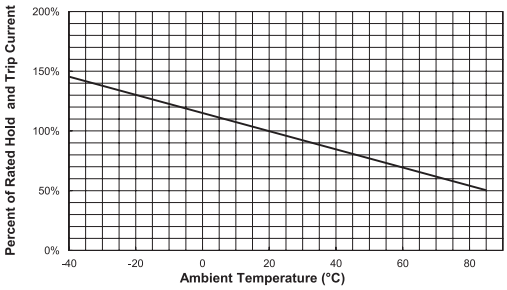
Dimensions



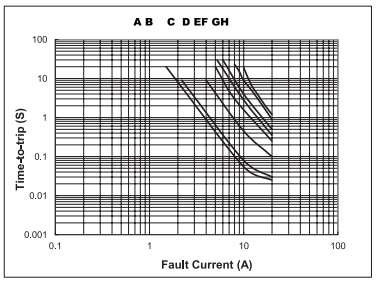
Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
MC011386	6.73	7.98	4.8	5.44	0.6	1.15	0.5	1.2	0.5	0.9
MC011387	6.73	7.98	4.8	5.44	0.4	1.7	0.5	1.2	0.5	0.9
MC011388	6.73	7.98	4.8	5.44	0.2	0.8	0.5	1.2	0.5	0.9
MC011389	6.73	7.98	4.8	5.44	0.3	0.9	0.5	1.2	0.5	0.9
MC011390	6.73	7.98	4.8	5.44	0.65	1.15	0.5	1.2	0.5	0.9
MC011391	6.73	7.98	4.8	5.44	0.4	0.9	0.5	1.2	0.5	0.9
MC011392	6.73	7.98	4.8	5.44	0.4	1.15	0.5	1.2	0.5	0.9
MC011393	6.73	7.98	4.8	5.44	0.65	1.15	0.5	1.2	0.5	0.9
MC011394	6.73	7.98	4.8	5.44	0.65	1.15	0.5	1.2	0.5	0.9
MC011395	6.73	7.98	4.8	5.44	0.4	1.5	0.5	1.2	0.5	0.9
MC011396	6.73	7.98	4.8	5.44	0.4	1.5	0.5	1.2	0.5	0.9

Dimensions : Millimetres

Thermal Derating Curve



Typical Time-To-Trip at 23°C



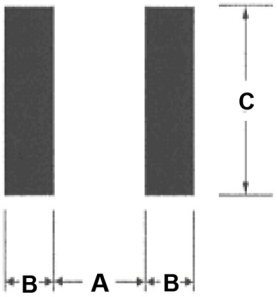
A = MC011386
B = MC011387
C = MC011388
D = MC011389
D = MC011390
E = MC011391
E = MC011392
E = MC011393
F = MC011394
G = MC011395
H = MC011396

Material Specifications

- Terminal Pad Material: Pure Tin
- Soldering Characteristics: Meets EIA specifications 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
5.1mm	2.3mm	5.6mm

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Tsmax to Tp)	3°C / second max.
Preheat: Temperature Min (Tsmin) Temperature Max (Tsmax) Time (tsmin to tsmax)	 150°C 200°C 60 - 180 seconds
Time Maintained Above: Temperature $T_{(L)}$ Time $t_{(L)}$	 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 max.
Time 25°C to Peak Temperature:	8 minutes max.

Note: 1. All temperature refers to the package; measured on the package body surface.

Solder Reflow:

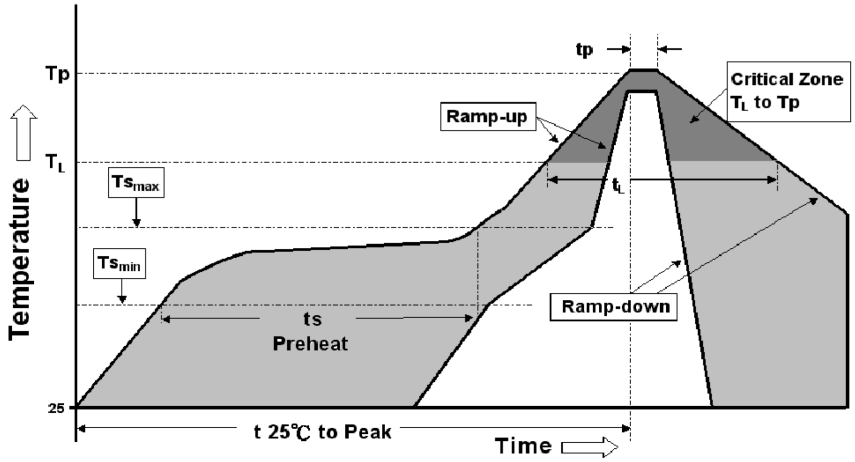
Due to “Lead Free” nature, Temperature and Dwelling time for the soldering zone is higher than those for Regular. This may cause damage to other components.

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



Part Number Table

Description	Part Number
PTC Resettable Fuse, 0.75A, 60V DC, 2920	MC011386
PTC Resettable Fuse, 1.1A, 60V DC, 2920	MC011387
PTC Resettable Fuse, 2A, 24V DC, 2920	MC011388
PTC Resettable Fuse, 2.6A, 6V DC, 2920	MC011389
PTC Resettable Fuse, 2.6A, 24V DC, 2920	MC011390
PTC Resettable Fuse, 3A, 6V DC, 2920	MC011391
PTC Resettable Fuse, 3A, 15V DC, 2920	MC011392
PTC Resettable Fuse, 3A, 24V DC, 2920	MC011393
PTC Resettable Fuse, 3.3A, 24V DC, 2920	MC011394
PTC Resettable Fuse, 4A, 16V DC, 2920	MC011395
PTC Resettable Fuse, 5A, 16V DC, 2920	MC011396