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SPC-F005.DWG

REVISIONS

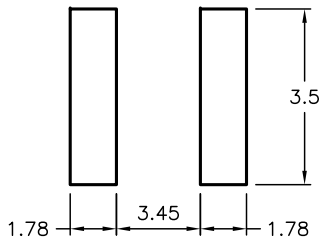
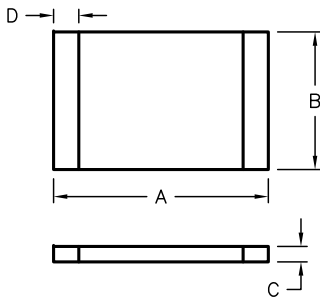
DOC. NO. SPC-F005 • Effective: 7/8/02 • DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
2063	A	RELEASED	JN	08/04/09	JWM	08/06/09	JWM	08/06/09



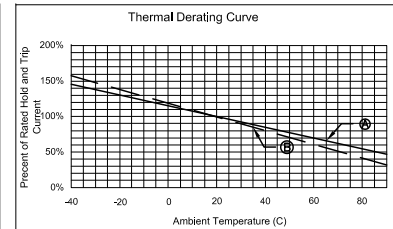
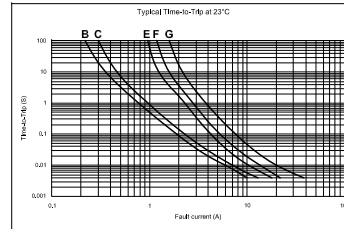
Dimension

Pad Layout



SPECIFICATION

1. Terminal pad Material: Pure Tin
2. Soldering characteristic: Meets EIA specs. RS 186-9E, ANSI/J-std-002 Category 3
3. Operating Current: 100mA~2.0A
4. Maximum Voltage: 6V~60V
5. Temperature Range: -40°C to 85°C



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.

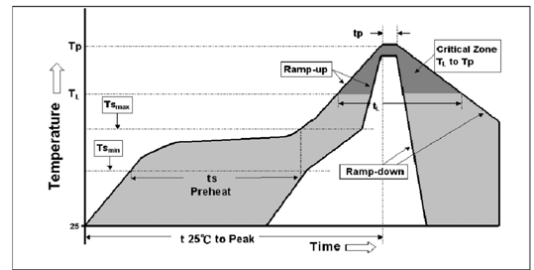
1. Recommended max past thickness > 0.25mm.
2. Devices can be cleaned using standard methods and aqueous solvent.
3. Rework use standard industry practices.
4. Storage Environment : < 30°C / 60%RH

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.

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

Reflow Profile



Mfg. P/N	A		B		C		D	Hold Current	Trip Current	Rated Voltage	Maximum Current	Typical Power	Max Time-to-Trip		Resistance Tolerance		Thermal Derating Curve Option	Time-to-Trip Curve Option
	Min	Max	Min	Max	Min	Max							Min	Max	Current	Time		
MC33187	4.37	4.73	3.07	3.41	0.6	0.9	0.3	0.14	0.3	60	10	0.8	8	0.008	1.2	6.5	Option B	Option B
MC33188	4.37	4.73	3.07	3.41	0.6	0.9	0.3	0.2	0.4	30	10	0.8	8	0.02	0.8	5	Option B	Option C
MC33190	4.37	4.73	3.07	3.41	0.35	0.65	0.3	0.5	1	16	40	0.8	8	0.15	0.15	1	Option B	Option E
MC33193	4.37	4.73	3.07	3.41	0.35	0.65	0.3	0.75	1.5	16	40	0.8	8	0.2	0.11	0.45	Option A	Option F
MC33196	4.37	4.73	3.07	3.41	0.25	0.55	0.3	1.1	2.2	8	100	0.8	8	0.3	0.04	0.21	Option A	Option G

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TOLERANCES:

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Jason Nash	08/06/09
CHECKED BY:	DATE:
JWM	08/06/09
APPROVED BY:	DATE:
JWM	08/06/09

DRAWING TITLE:

Surface Mountable PTC Resettable Fuse

SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	Ta-1192	Ta-1192.dwg	A
SCALE:	U.O.M.: INCHES [mm]	SHEET: 1 OF 1	
NTS			