PolySwitch® PTC Devices

Overcurrent (over-temperature) Protection Device

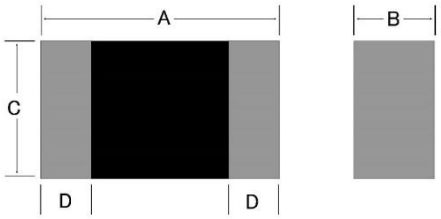
PRODUCT: zeptoSMDC0011F

DOCUMENT: SCD29564
REV LETTER: A
REV DATE: APRIL 8, 2020

Specification Status: Released

MAXIMUM ELECTRICAL RATING

Voltage: $13V_{DC}$
Imax: 82mA



Notes:

- Termination Finish: NiAu
- Drawing not to scale
- Marking: N/A



PRODUCT DIMENSIONS:

	A		B	C		D	
	MIN	MAX	MAX	MIN	MAX	MIN	MAX
mm:	0.55	0.65	0.40	0.40	0.50	0.10	0.25
in:	(0.022)	(0.026)	(0.016)	(0.016)	(0.020)	(0.004)	(0.010)

PERFORMANCE RATINGS:

INITIAL RESISTANCE		POST PROCESS RESISTANCE*		TIME TO TRIP**	TRIP TEMPERATURE	HOLD CURRENT**
ohms@25°C		ohms@ -20°C	ohms@60°C	ms@80mA	°C	mA
MIN	MAX	MIN	MAX	MAX	TYP	@25°C
10	80	68	290	20	125	11

* With LOCTITE ECCOBOND UF 3915, curing condition: 140degC/20mins, resistance is measured 12hours post coating curing process

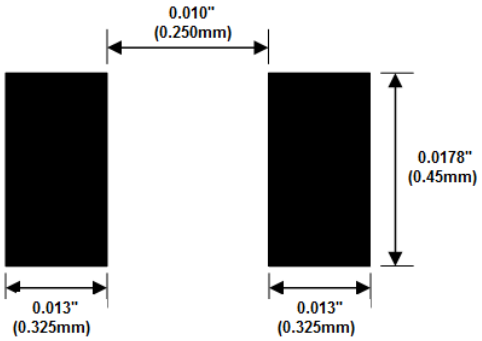
** Values specified were determined using PCB's with 0.004"X1.0ounce copper traces

Precedence: This specification takes precedence over documents referenced herein.
Effectivity: Reference documents shall be the issue in effect on the date of invitation for bid.

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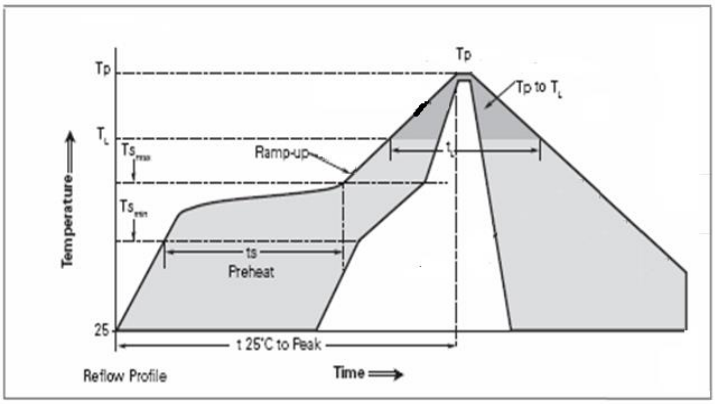
SOLDER REFLOW RECOMMENDATIONS:

Recommended pad layout



Recommended reflow profile

Profile Feature	Pb-Free Assembly
Peak/Classification temperature (Tp)	240°C
Preheat • Temperature min. (T_{Smin}) • Temperature max. (T_{Smax}) • Time (t_{Smin} to t_{Smax})	 130°C 180°C 90-110s
Time maintained above: • Temperature (T_L) • Time (t_L)	 217°C 60-70s
Ramp time	35~45s
Time 25°C to peak temperature	300s max.
Ramp down rate	2~4°C/s
Maximum ramp up rate (T_{Smax} to T_L)	≦2°C/s
Dry Zone Rate	1~3°C/s
Time within 3°C of actual peak temperature (tp)	35s



Notes:

- All temperature refers to topside of the package, measured on the package body surface.
- If reflow temperature exceeds the recommended profile, devices may not meet the performance requirements.
- Recommended reflow methods: IR, vapor phase oven, hot air oven.
- Customer should validate that the solder paste amount and reflow recommendations to meet its application.
- Devices can be cleaned using standard industry methods and aqueous solvents.
- Devices can be reworked using the standard industry practices (Avoid contact to the device).

OPEARTION AND STORAGE CONDITON:

Operation temperature range: -20°C to 60°C
Recommended storage condition: 40°C max, 70% R.H. max; Devices many not meet specified ratings if recommended storage conditions are exceeded.

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MATERIALS INFORMATION:

ROHS Compliant	ELV Compliant	Pb-Free	Halogen Free*
Directive 2011/65/EU Compliant	Directive 2002/95/EC Compliant	Pb	HF

* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm.

WARNING:

- Electrical performance of the device can differ according to installation conditions. Users should independently evaluate the suitability of the device under the actual application conditions.
- Operation beyond maximum ratings may result in device damage.
- Exposure to silicon-based oils, solvents, electrolytes, acids, or similar materials can adversely affect device performance.
- The device undergoes thermal expansion during fault conditions. It should be provided with adequate space to allow expansion and should be protected against mechanical stress
- Consult with Littelfuse if the device will experience thermal process other than reflow onto PCB board, such as molding or hand soldering.

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