308 Constitution Drive
Menlo Park, CA USA
www.circuitprotection.com

PolySwitch® PTC Devices

Overcurrent Protection Device

PRODUCT: nanoSMD270LR-2

DOCUMENT: SCD28284
REV LETTER: F
REV DATE: AUGUST 13, 2014

Specification Status: Released

Maximum Electrical Rating

Voltage: 6.0V_{DC}
Short Circuit Current: 50A

Notes:
1. Termination Finish: NiAu
2. Drawing not to scale
3. For battery application only

Marking:
L

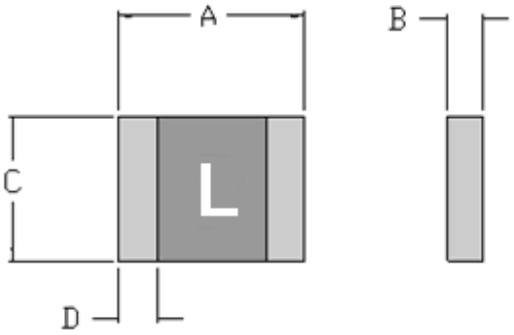


TABLE I. DIMENSIONS:

	A		B		C		D	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
mm:	3.00	3.43	0.50	1.00	1.37	1.85	0.25	0.75
in:	(0.118)	(0.135)	(0.019)	(0.039)	(0.054)	(0.073)	(0.010)	(0.030)

TABLE II. PERFORMANCE RATINGS:

CURRENT RATINGS**						TIME TO TRIP**	RESISTANCE VALUES		TRIPPED-STATE POWER DISSIPATION**
AMPERES AT 0°C		AMPERES AT 20°C		AMPERES AT 60°C		SECONDS AT 20°C, 8.0A	OHMS AT 20°C		WATTS AT 20°C, 6.0V
HOLD	TRIP	HOLD	TRIP	HOLD	TRIP	MAX	MIN	MAX*	MAX
3.0	7.5	2.7	6.3	1.6	4.5	5.0	.005	.018	1.0

*Maximum resistance is measured 24 hours after reflow.
**Values specified were determined using PCB's with 0.105" x 1.0 ounce copper traces.

Agency Recognition:	UL, CSA, TÜV
Reference Document:	PS300
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.
CAUTION:	Operation beyond the rated voltage or current may result in rupture, electrical arcing or flame.

Materials Information

ROHS Compliant
Directive 2002/95/EC Compliant

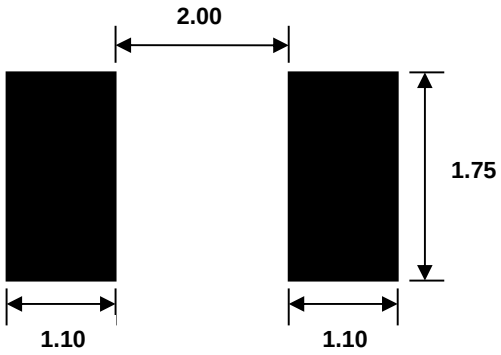
ELV Compliant
Directive 2000/53/EC Compliant

Pb-Free

Halogen Free*
HF

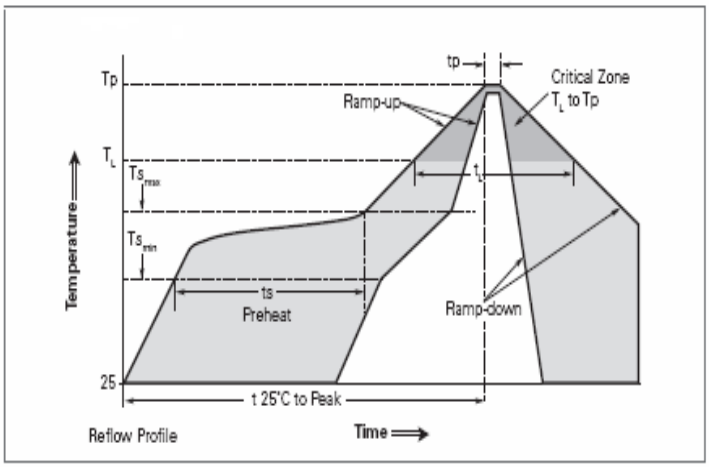
* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm.

Recommended pad layout (mm.)



Recommended reflow profile

Profile Feature	Pb-Free Assembly
Average ramp up rate (Ts_{max} to Tp)	3°C/s max.
Preheat • Temperature min. (Ts_{min}) • Temperature max. (Ts_{max}) • Time (ts_{min} to ts_{max})	 150°C 200°C 60-120s
Time maintained above: • Temperature (T_L) • Time (t_L)	 217°C 60-150s
Peak/Classification temperature (Tp)	260°C
Time within 5°C of actual peak temperature (tp)	30s max.
Ramp down rate	2°C/s max.
Time 25°C to peak temperature	8 mins max.



Note: All temperatures refer to top side of the package, measured on the package body surface.

Solder reflow recommendation

- Recommended reflow methods: IR, hot air and Nitrogen
- Recommended maximum solder paste thickness: 0.25mm
- Recommended minimum stencil thickness: 0.1mm
- Devices can be cleaned using standard methods and aqueous solvents.
- TE believes the optimum conditions for forming acceptable solder fillets occur when a reasonable amount of solder paste is placed underneath each device's termination. As such, we request that customers comply with our recommended solder pad layouts.
- Customer should validate that the solder paste amount and reflow recommendations meet its application.
- TE requests that customer board layouts refrain from placing raised features (e.g. vias, nomenclature, traces, etc.) underneath PolySwitch devices. It is possible that raised features could negatively impact solderability performance of our devices.