## PolySwitch®
## PTC Devices
**Overcurrent Protection Device**

**PRODUCT: microSMD450LR-2**

DOCUMENT: SCD28608
REV LETTER: D
REV DATE: JULY 26, 2016
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**Littelfuse®**
Expertise Applied | Answers Delivered

Recommended pad layout (mm.)

2.00

2.65

1.00    1.00
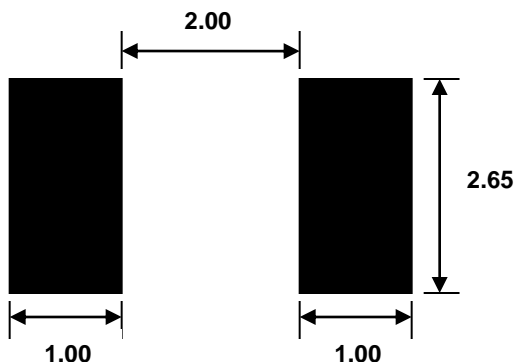
Recommended reflow profile

| 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. |
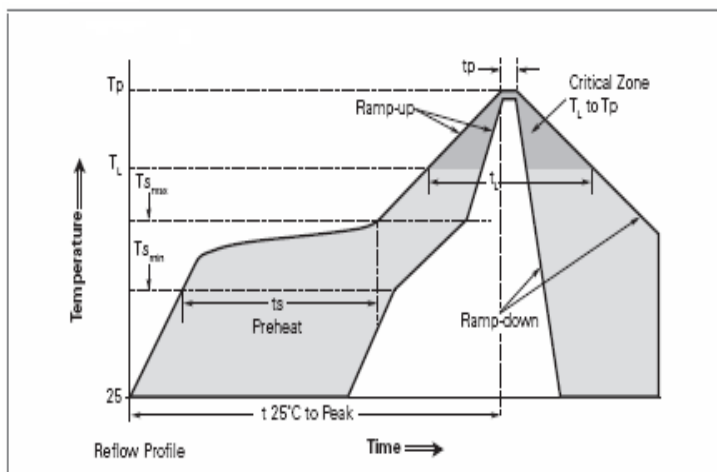


Note: All temperatures refer to top side of the package, measured on the package body surface.

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.
- Littelfuse 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.
- Littelfuse 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.

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