

RECOMMENDED REFLOW SOLDERING PROFILE FOR PLASTIC SURFACE MOUNT PACKAGES

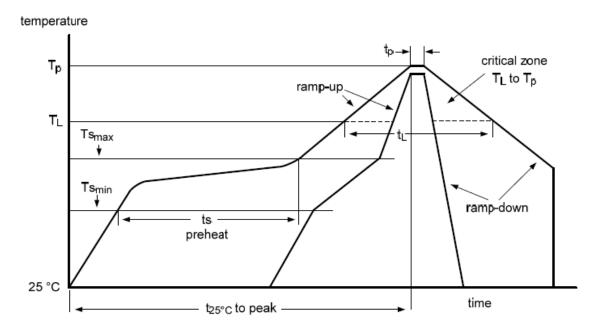
Tak Cheong's SOD/SOT devices are in surface mount flat lead plastic package technology, it is important that the board soldering profile follow the suggested guidelines outlined in this document.

This document is intended to inform uses (board assembly operations) to use Reflow Soldering process for Tak Cheong plastic surface mount devices.

REFLOW SOLDERING PROFILE

Once the device is placed on the PCB by proper board mounting process, a standard surface mount reflow process is recommended to be used to mount the part. The below reflow conditions & temperature profile is based on the IPC/JEDEC joint industry standard: J-STD-020D.1.

| Profile Feature | SnPb eutectic assembly | Pb-free assembly |
|---|----------------------------|----------------------------|
| Average ramp-up rate (T _L to T _P) | 3°C/sec maximum | 3°C/sec maximum |
| Preheat Temperature minimum (T _{smin}) | 100°C | 150℃ |
| Temperature maximum (T_{smax}) Time $(t_{smin}$ to $t_{smax})$ | 150°C 60 sec to 120 sec | 200°C 60 sec to 120 sec |
| Liquidous Temperature (T _L) | 183℃ | 217℃ |
| Time maintained above T _L (t _L) | 60 sec to 150 sec | 60 sec to 150 sec |
| Peak package body temperature (T _P) | 235°C maximum | 260°C maximum |
| Time within 5°C of actual peak temperature (T _P) | 20 sec maximum | 30 sec maximum |
| Ramp-down rate (T _P to T _L) | 6°C/sec maximum | 6°C/sec maximum |
| Time 25°C to peak temperature | 6 minutes maximum | 8 minutes maximum |
| Number of allowed reflow cycles | 3 | 3 |



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