

## Lead-free soldering information

- All CamSemi packages are lead-free
- Complies with JEDEC and RoHS standards
- Moisture Sensitivity Level 1 compliant

## Overview

In line with CamSemi's drive for a cleaner environment and in accordance with recent legislation governing the use of lead (Pb) in electronic components, CamSemi has opted to use only Pb-free packages for all its products.

Lead-free soldering requires higher maximum temperatures than standard solder containing lead, so it is suggested that the guidelines detailed below are followed.

This document outlines the basic recommendations for soldering of CamSemi products and is aligned to the JEDEC recommendations (JSTD020C), and the Restriction of Hazardous Substances (RoHS) directive (2002/95/EC).

## General Information

### SMD guidelines:

Currently CamSemi offers two surface-mount package types. The SOT23-6 and SOP-8 are both under 1.6 mm in thickness and less than 350 mm<sup>3</sup> (body volume), which puts them in the maximum reflow temperature bracket of 260° C (ref: JSTD 020C).

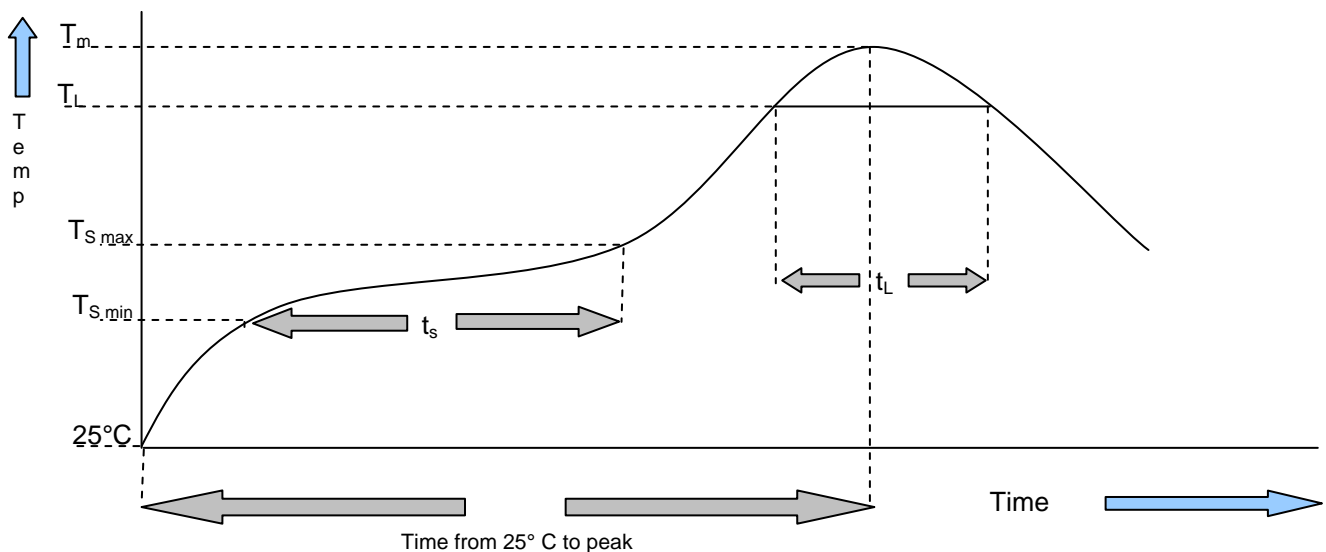
### SOT23 and SOP-8 profile information:

The graph shown below (figure 1) and table (overleaf) detail the qualified solder profile for all CamSemi products. However, specific board/application requirements may cause this profile to deviate slightly and therefore it should only be used as a guide. Please note: CamSemi devices use a pure matt Sn (tin) process for lead finish and should not be used with solder profiles developed for Pb finishes.

### Moisture sensitivity level:

All products have been classified to Moisture Sensitivity level 1 which means under typical ( $\leq 30$  °C/85) RH conditions, floor life time is unlimited.

Figure1: Recommended reflow profile for soldering



Profile	SOT23 (Pb-free) / SOP-8 (Pb-free)
Average ramp-up rate (Ts max Tm)	Maximum of 3° C per second
Peak temperature (Tm)	260° C
Ramp down rate	6° C per second
Total time from 25° C to Tm	8 minutes (max)
Time within 5° C of Tm	20-40 seconds
Time above 217° C (tL)	60-180 seconds
Preheat	
Temperature min (Ts min)	150° C
Temperature max (Ts max)	200° C
Time (ts)	60-180 seconds

## Restriction of Hazardous Substances Considerations

All CamSemi products have been independently tested to ensure compliance to the latest RoHS legislation. For more information and reports please visit [www.camsemi.com/corporate/quality.htm](http://www.camsemi.com/corporate/quality.htm)

## For more Information

Please contact CamSemi's quality department with any further questions on solder reflow specifications.

For details of our channel partners and information on future product, technology or corporate announcements visit [www.camsemi.com](http://www.camsemi.com)

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