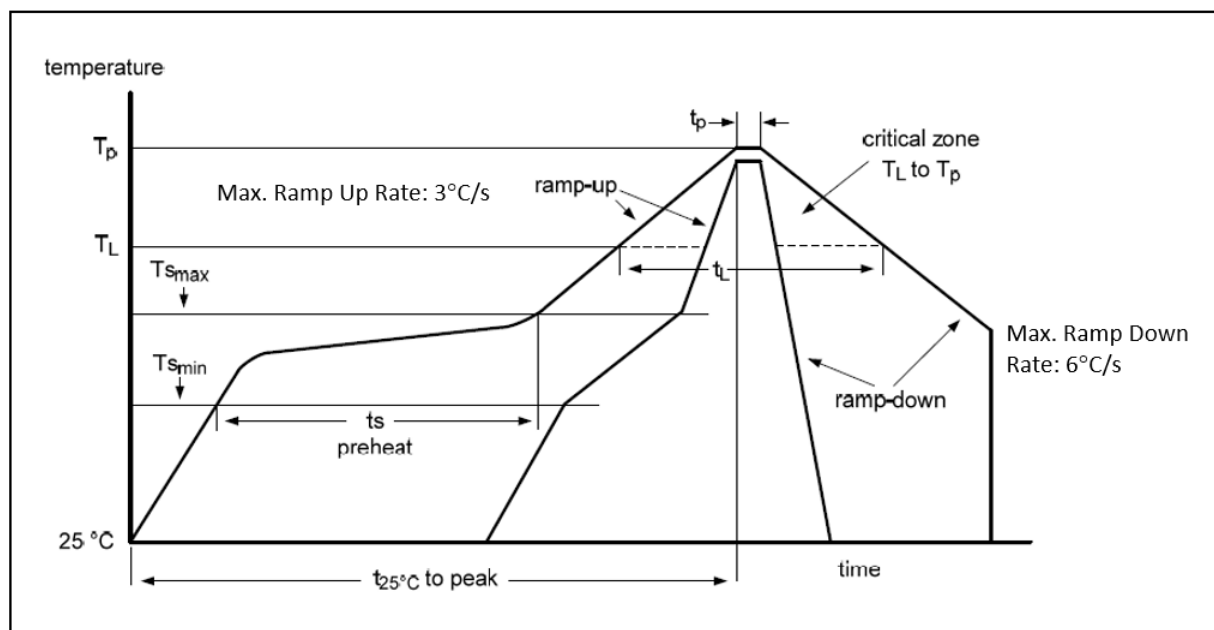


IPC/JEDEC Joint Industry Standard (J-STD-020D-01)

| Profile Step | SnPb Eutectic Assembly | Pb-Free Assembly |
|--|--|--|
| Preheat Temperature Minimum (T_{SMIN}) Temperature Maximum (T_{SMAX}) | 100°C 150°C | 100°C 200°C |
| Soak Time (T_{SMIN} to T_{SMAX}) | 60s to 150s | 60s to 150s |
| Ramp Up Rate From T_{SMAX} to T_P From 25°C to T_P | 3°C/s (max) 6 minutes (max) | 3°C/s (max) 8 minutes (max) |
| Ramp Down Rate | 6°C/s (max) | 6°C/s (max) |
| Reflow Liquidous Temperature (T_L) Time Above T_L Time Within 5°C of Actual Peak Temperature Peak Package Body Temperature (T_P) Number of Allowed Reflow Cycles | 183°C 60s to 150s 10s to 30s 235°C 3 | 217°C 80s to 150s 20s to 40s 260°C 3 |

Reflow Soldering Profile



The Stages Used in a Solder Profile

Preheat Stage – brings the assembly from 25°C to 150°C/200°C and evaporates solvents from the solder paste. The temperature ramp up rate is around 3°C/s (max).

Thermal Soak Stage – allows the temperature assembly to achieve equilibrium at a level near the melting point of solder. During this period the solder paste volatiles are removed, and the flux is activated.

Reflow Stage – the assembly is brought to the temperature sufficient to produce reflow of the solder where the solder changes from a solid to a liquid around 183°C on the curve.

Cool Down Stage – this is the final stage, and refers to the period after reflow where the temperature is decreasing and is below the solder liquidous once again. Cool down/ramp down rate should be around 6°C/s (max).

Revision History

| Revision | Date | Change Summary |
|----------|------------|-----------------|
| 1.0 | 04/20/2020 | Initial Release |