Reflow soldering profile

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Soldering information
COMPANY PUBLIC

1 Recommended reflow soldering profile

The below temperature profile for moisture sensitivity characterization is based on the IPC/JEDEC joint industry standard: J-STD-020D-01. The shown data is for devices with a package thickness < 2.5 mm and a package volume < 350 mm³.

Table 1. Limiting values

Profile Feature	SnPb eutectic assembly	Pb-free assembly
Average ramp-up rate (T_{Smax} to T_p)	3 °C/s maximum	3 °C/s maximum
Preheat		
Temperature minimum T_{Smin})	100 °C	150 °C
Temperature maximum (T_{Smax})	150 °C	200 °C
Time (t_{Smin} to t_{Smax})	60 s to 120 s	60 s to 120 s
Time maintained above		
Temperature (T_L)	183 °C	217 °C
Time (t_L)	60 s to 150 s	60 s to 150 s
Peak/classification temperature (T_p)	235 °C	260 °C
Number of allowed reflow cycles	3	3
Time within 5 °C of actual peak temperature (t_p)	10 s to 30 s	20 s to 40 s
Ramp-down rate	6 °C/s maximum	6 °C/s maximum
Time 25 °C to peak temperature	6 minutes maximum	8 minutes maximum

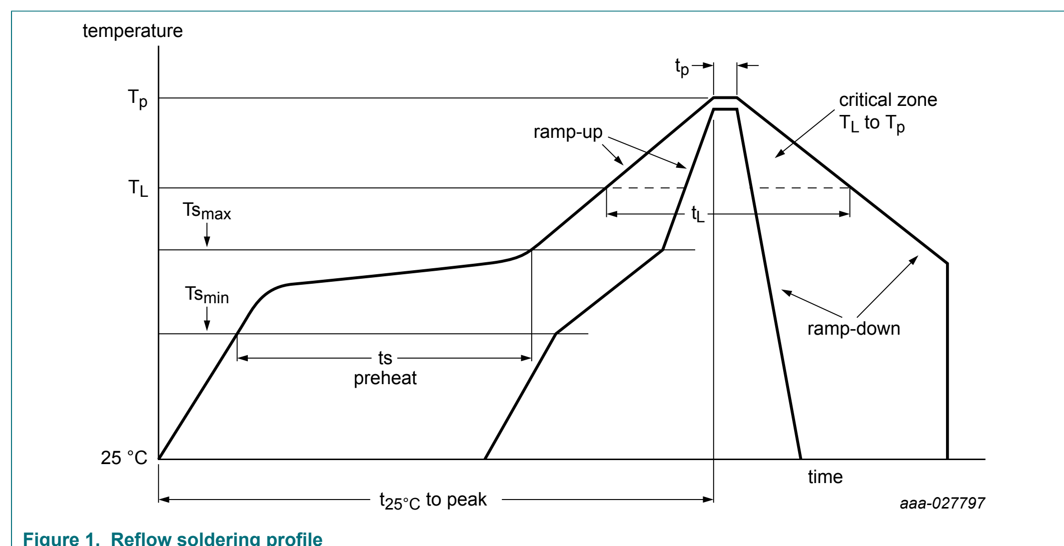

Figure 1. Reflow soldering profile

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