

Solder Reflow profile for Lead-Free packages. Package Peak Reflow Temperatures

Reflow Conditions	Pkg. Thickness $\geq 2.5\text{mm}$ or Pkg. Volume $\geq 350\text{mm}^3$	Pkg. Thickness $< 2.5\text{mm}$ and Pkg. Volume $< 350\text{mm}^3$
Pb Free	Convection $245 \pm 0/-5^\circ\text{C}$	Convection $250 \pm 0/-5^\circ\text{C}$

1. Package volume excludes external terminals (balls, bumps, lands, leads) and or non-integral heat sinks.

Classification Reflow Profiles

Profile Feature	Pb-Free Assembly	
	Large Body	Small Body
Average ramp-up rate (T_L to T_P)	3°C/second max.	
Preheat		
Temperature Min (T_{smin})	150°C	
Temperature Max (T_{smax})	200°C	
Time (min to max) (t_s)	60-180 seconds	
T_{smax} to T_L		
Ramp-up Rate	3°C/second max	
Time maintained above:		
Temperature (T_L)	217°C	
Time (t_L)	60-150 seconds	
Peak Temperature (T_P)	$245 \pm 0/-5^\circ$	$250 \pm 0/-5^\circ\text{C}$
Time within 5°C of actual Peak Temperature (t_p)	10-30 seconds	20-40 seconds
Ramp-down	6°C/second max.	
Time 25°C to Peak Temperature	8 minutes max.	

Profile

