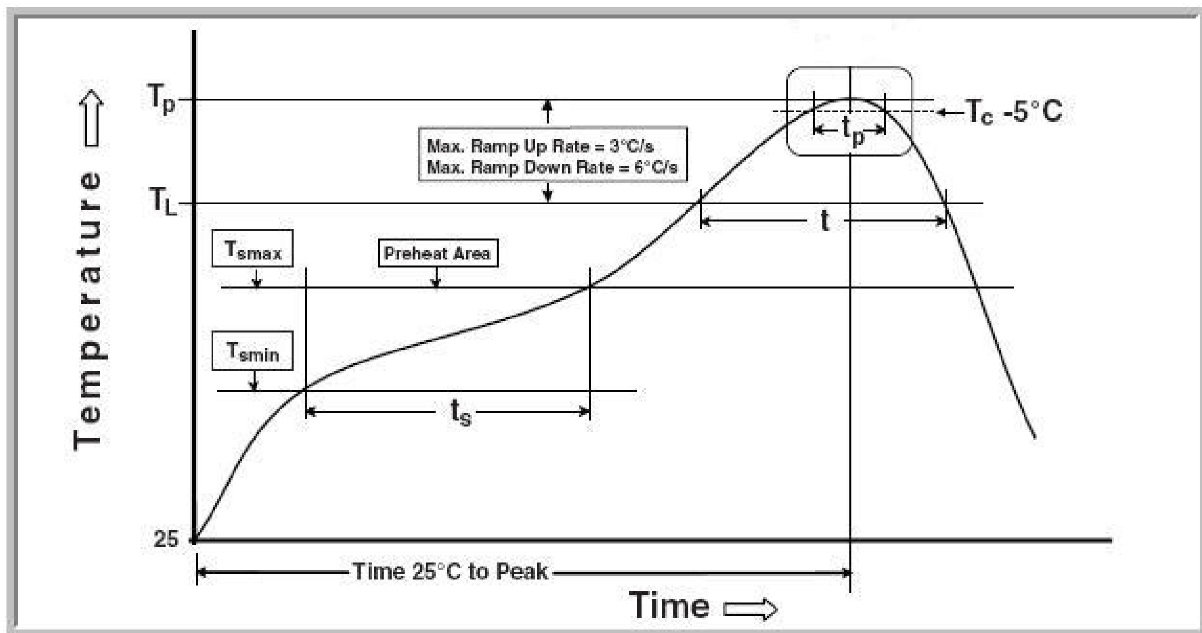
Solder profile for lead free Reflow Process

Figure 1 Classification Reflow Profile for SMT components



refer to IPC/JEDEC J-STD-020E

Table 1 Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (T_{Smax} to T_P)	3℃ / second max.
Preheat Temperature Min (T_{Smin}) Temperature Max (T_{Smax}) Time (t_{Smin} to t_{Smax})	 150℃ 200℃ 60-120 seconds
Time maintained above Temperature (T_L) Time (t_L)	 217℃ 60-150 seconds
Peak/Classification Temperature (T_P)	See Table 2
Time within 5℃ of the specified Peak Temperature (t_P)	20-30 seconds (WE-GF: 10sec; T_P=245℃)
Ramp-Down Rate (T_P to T_L)	6℃ / second max.
Time 25℃ to Peak Temperature	8 minutes max.

refer to IPC/JEDEC J-STD-020E

Table 2 Package Classification Reflow Temperature

Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
< 1,6 mm	260℃	260℃	260℃
1,6 mm – 2,5 mm	260℃	250℃	245℃
> 2,5 mm	250℃	245℃	245℃

refer to IPC/JEDEC J-STD-020E

Note: All temperatures refer to topside of the package, measured on the package body surface
Recommended for all parts which are marked with the RoHS logo not otherwise specified in the latest revision of the product specification

Solder profile for Wave Soldering Process

Figure 2 Classification wave soldering profile for THT components

T [°C]
SnPb: 235-260°C
SnAgCu: 250-260°C
300
250
230
150
130
120
100
Max. 10 sec, max. 5 sec each wave
First wave
Second wave
AT < 150
typical
- 3,5 K/s typisch
- 2 K/s
- 5 K/s
60 70 85 120 180 240 t[sec]

refer to EN61760-1:2006

Checked	approved	Name	Revision	Date
Supervisor Lab	Head of Total Quality Management	TF	10	06.07.2017
i.A.	i.A.	TF	9	16.09.2015
		TF	8	19.04.2013