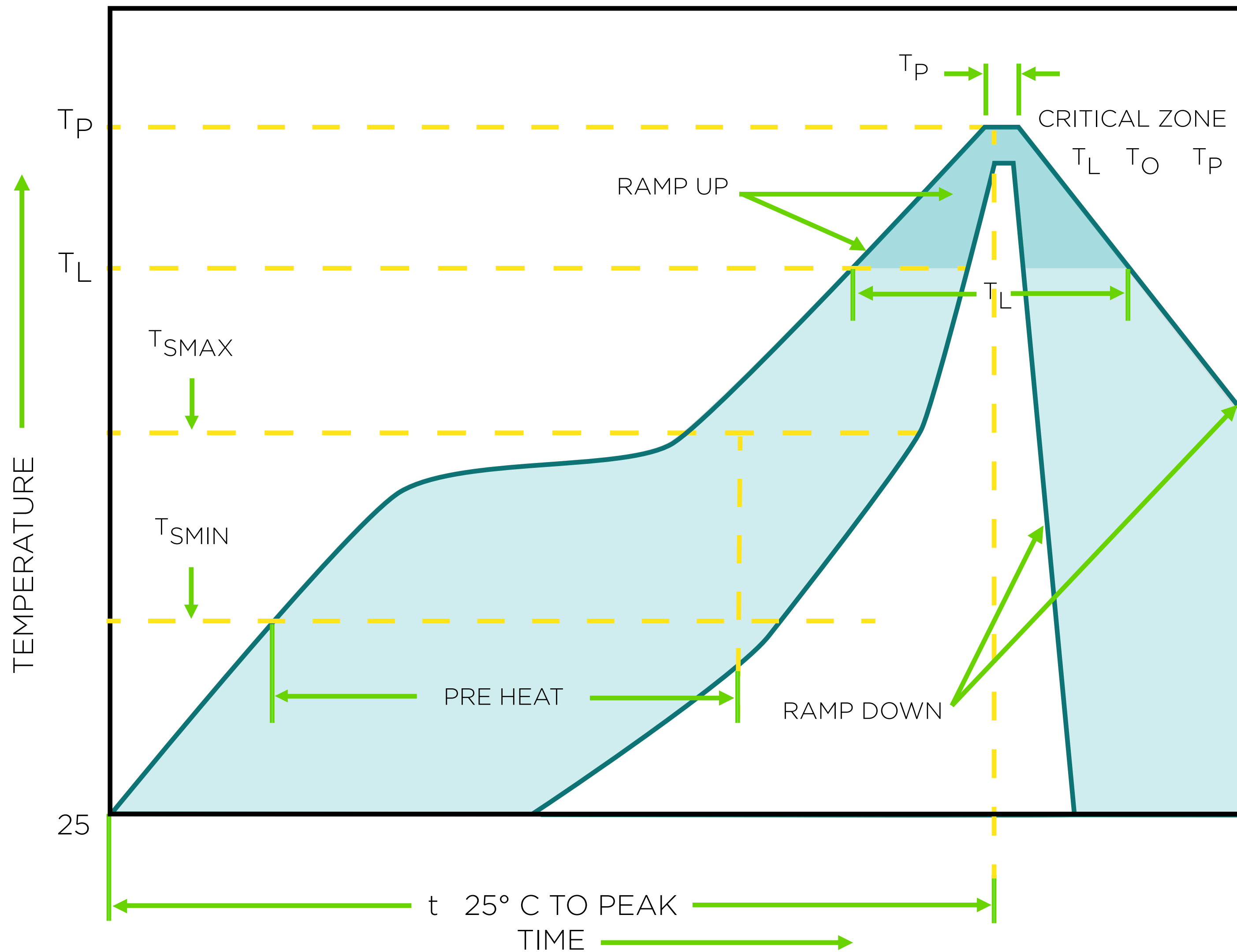
Pulse Electronics POWER

PULSE RECOMMENDED SOLDER REFLOW PROFILE

IR/CONVECTION REFLOW PROFILE (IPC/JEDEC J-STD-020C)



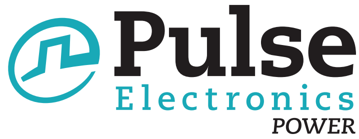


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Table 1: Lead-free reflow profile recommendation (reference IPC/JEDEC J-STD-020C).
NOTE: All of the Pulse SMT power parts are tested using a reflow profile similar to that outlined in the JEDEC-STD-020 specification and are capable of handling up to 260C peak reflow for 5-10seconds.

Reflow Parameter	Lead-Free Assembly
Minimum preheat temperature (Ts MN)	150 degrees C
Maximum preheat temperature (Ts Max)	200 degrees C
Preheat time	60 to 180 seconds
Ts Max to Tl ramp-up rate	3 degrees C per second maximum
Time above temperature Tl (tl)	217 degrees C for 60 to 150 seconds
Peak temperature (Tp)	245-260 degrees C
Time 25 degrees C to Tp	8 minutes maximum
Time within 5 degrees C of peak Tp	20 to 40 seconds
Ramp-down rate	6 degrees C per seconds maximum

Notes for Table 1: Note 1 – All temperatures measured on the package leads.
Note 2 – Attach a thermocouple to the component body surface during profiling to determine difference between body and lead temperature for reference only.

Table 2: Lead-free process peak reflow temperatures. (Temperature tolerance = +0, -5 degrees C).
NOTE: To be used for MSL Classification ONLY

Package thickness	Volume mm3 < 350	Volume mm3 = 350 to 2000	Volume mm3 > 2000
<1.60mm	260 degrees C	260 degrees C	260 degrees C
1.60mm to 2.50mm	260 degrees C	250 degrees C	245 degrees C
>2.50mm	250 degrees C	245 degrees C	245 degrees C