

Recommended Solder Profiles

RECOMMENDED SOLDER PROFILES

This document is intended as a reference for solder profiles for Stackpole resistive components. These profiles should be compatible with most soldering processes. These are only recommendations. Actual numbers will depend on board density, geometry, packages used, etc., especially those cells labeled with “*”.

100% Matte Tin / RoHS Compliant Terminations

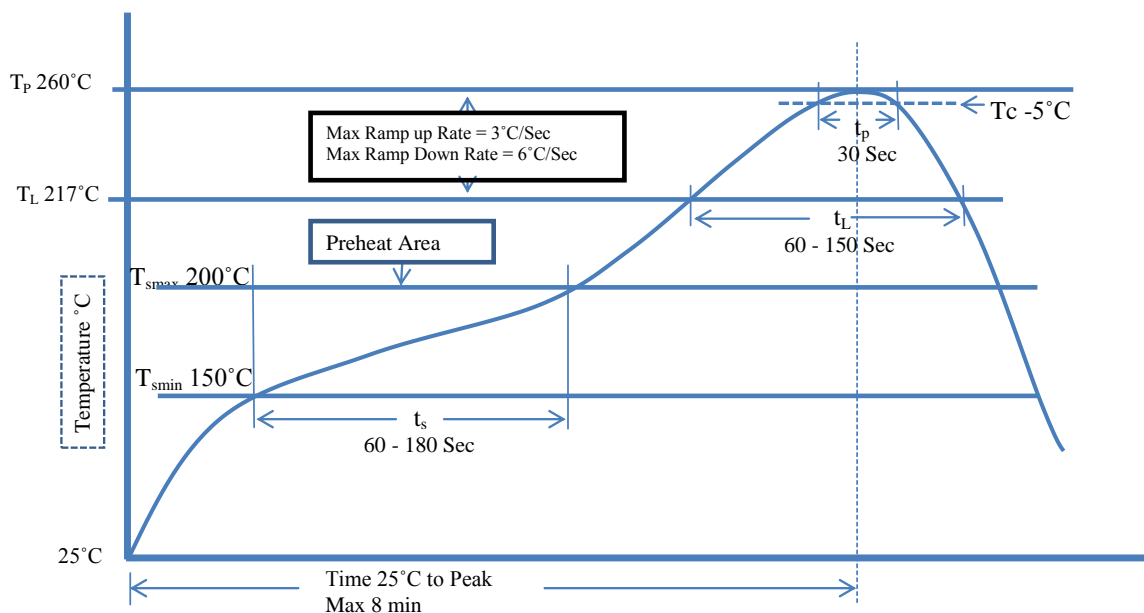
Soldering iron recommended temperatures: 330°C to 350°C with minimum duration.
Maximum number of reflow cycles: 3.

Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 seconds	70 seconds	60 seconds
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	250°C	240°C
Dwell Time at Max.	10 seconds	5 seconds	*
Ramp DN (°C/sec)	N/A	N/A	N/A

Temperature Diff. = Defference between final preheat stage and soldering stage.

Convection / IR Reflow Soldering			
Description	Maximum	Recommended	Minimum
Ramp Up (°C/sec)	3°C/sec	2°C/sec	*
Dwell Time > 217°C	150 seconds	90 seconds	60 seconds
Solder Temp.	260°C	245°C	*
Dwell Time at Max.	30 seconds	15 seconds	10 seconds
Ramp DN (°C/sec)	6°C/sec	3°C/sec	*

Recommended Lead Free Chip Resistor Reflow Profile



Recommended Solder Profiles

Sn-Pb Terminations

Soldering iron recommended temperatures: 330°C to 350°C with minimum duration.
Maximum number of reflow cycles: 3.

Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 seconds	70 seconds	60 seconds
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	240°C	225°C
Dwell Time at Max.	4 seconds	3 seconds	*
Ramp DN (°C/sec)	N/A	4°C/sec	N/A

Temperature Diff. = Defference between final preheat stage and soldering stage.

Convection / IR Reflow Soldering			
Description	Maximum	Recommended	Minimum
Ramp Up (°C/sec)	3°C/sec	2°C/sec	*
Dwell Time > 180°C	150 seconds	90 seconds	60 seconds
Solder Temp.	260°C	225°C	*
Dwell Time at Max.	20 seconds	15 seconds	10 seconds
Ramp DN (°C/sec)	4°C/sec	2°C/sec	*

Vapor Phase Soldering			
Description	Maximum	Recommended	Minimum
Ramp Up (°C/sec)	4°C/sec	2°C/sec	*
Dwell Time > 183°C	85 seconds	75 seconds	*
Solder Temp.	220°C	215°C	*
Dwell Time at Max.	75 seconds	70 seconds	*
Ramp DN (°C/sec)	4°C/sec	2°C/sec	*

For further information, please contact Kory Schroeder, Director of Marketing,
at kschroeder@seielect.com or 919-875-2495.