

RECOMMENDED SOLDER PROFILES

This document is intended as a reference for solder profiles for SEI 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

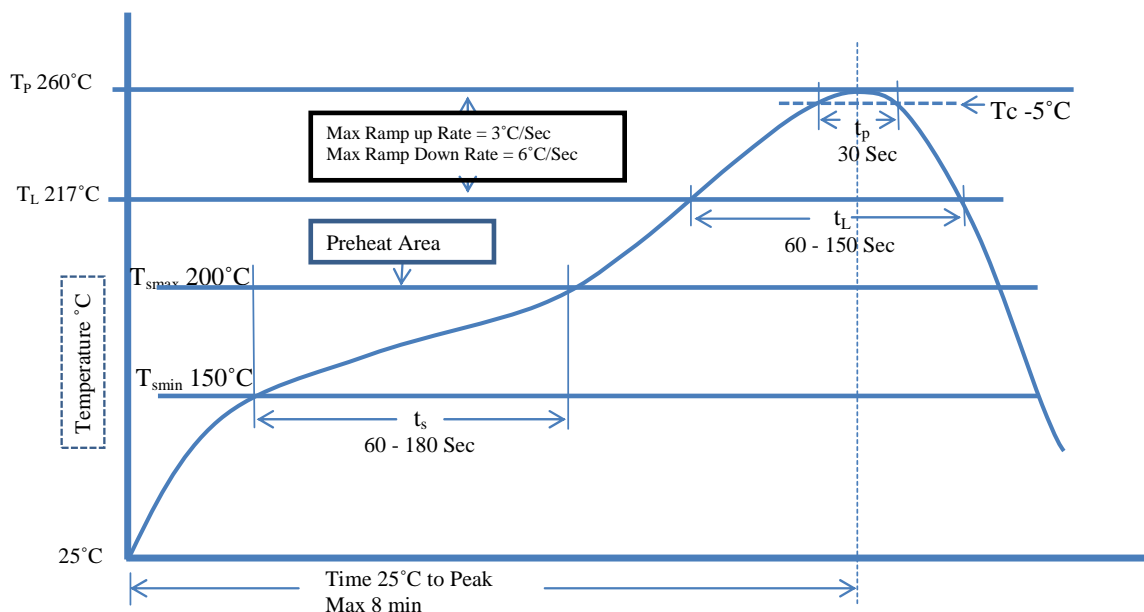
Soldering iron recommended temperatures: 330°C to 350°C with minimum duration.

Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 sec.	70 sec.	60 sec.
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	250°C	240°C
Dwell Time @ Max.	10 sec.	5 sec.	-
Ramp DN (deg. C/sec)	NA	NA	NA

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

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

Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 sec.	70 sec.	60 sec.
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	240°C	225°C
Dwell Time @ Max.	4 sec.	3 sec.	-
Ramp DN (deg. C/sec)	NA	4°C / sec.	NA

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

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

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