

Recommended Soldering Profiles

Wave Soldering

- For Through Hole Packages, only the leads of the device are immersed in the wave solder.
- For specified Surface Mount Packages, the entire device is immersed in the wave solder. See *Table 1*.

		Wave Solder
Ramp Up °C/sec	Maximum	6° C/sec
	Recommended	4° C/sec (Note 1)
	Minimum	(Note 2)
ΔT (Note 3)	Maximum	135° C
	Recommended	120° C
	Minimum	110° C
Solder Temperature	Maximum	260° C
	Recommended	240° C
	Minimum	(Note 2)
Dwell Time Max.	Maximum	4 seconds
	Recommended	3 seconds
	Minimum	(Note 2)
Ramp Down °C/sec	Maximum	No Information
	Recommended	4° C/sec (Note 1)
	Minimum	No Information

Note 1: Will vary depending on board density, geometry, and package type.

Note 2: Will vary depending on package types, and board density.

Note 3: ΔT is the temperature differential between the final preheat stage and the soldering stage. Temperature is measured at the component lead area.

TABLE 1. Surface mount packages for Wave Solder Immersion.

Package Type	Lead Count							
	3	4	5	6	8	14	16	20
SC-70			X					
SOT-23	X		X	X				
SOT-223		X	X					
SOIC - NARROW					X	X	X	
SOIC - WIDE						X	X	X

Note 4: All other packages and lead types are not recommended.

Note 5: Precision analog devices that may be sensitive to thermal mechanical stresses are not recommended for wave solder immersion.

IR / IR Convection / Vapor Phase Reflow - Surface Mount

		Convection / IR	Vapor Phase
Ramp Up °C/sec	Maximum	4° C/sec	24° C/sec
	Recommended	2° C/sec (Note 6)	2° C/sec (Note 6)
	Minimum	(Note 6)	(Note 6)
Dwell Time ≥183 °C	Maximum	150 seconds	85 seconds
	Recommended	75 seconds (Note 6)	75 seconds (Note 6)
	Minimum	60 seconds (Note 6)	(Note 6)
Peak Temperature (Note 8)	Maximum	240° C (Note 7)	219° C
	Recommended	220° C (Note 6)	215° C
	Minimum	(Note 6)	(Note 6)
Dwell Time Max. (within 5° C of peak temperature)	Maximum	20 seconds	75 seconds
	Recommended	15 seconds	70 seconds
	Minimum	10 seconds	(Note 6)
Ramp Down °C/sec	Maximum	4° C/sec	4° C/sec
	Recommended	2° C/sec	2° C/sec
	Minimum	(Note 6)	(Note 6)

Note 6: Will vary depending on board density, geometry, and package type.

Note 7: For ceramic packages the maximum is 250° C.

Note 8: All temperatures measured at the component lead area.

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