Recommended Soldering Profiles

ABSTRACT

For maximum convection or convection/IR reflow conditions see JEDEC J-STD-020.

1 Wave Soldering

1. For Through Hole Packages, only the leads of the device are immersed in the wave solder.
2. 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**(1)
	Minimum	(2)
ΔT(3)	Maximum	135° C
	Recommended	**120° C**
	Minimum	110° C
Solder Temperature	Maximum	260° C
	Recommended	**240° C**
	Minimum	(2)
Dwell Time Max.	Maximum	4 seconds
	Recommended	**3 seconds**
	Minimum	(2)
Ramp Down °C/sec	Maximum	No Information
	Recommended	**4° C/sec**(1)
	Minimum	No Information

(1) Will vary depending on board density, geometry, and package type.
(2) Will vary depending on package types, and board density.
(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(1)(2)

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

(1) All other packages and lead types are not recommended.
(2) Precision analog devices that may be sensitive to thermal mechanical stresses are not recommended for wave solder immersion.

2 Convection and Convection/IR Reflow

For maximum convection or convection/IR reflow conditions see JEDEC J-STD-020.

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