ROHS

承　認　書

SPECIFICATION FOR APPROVAL

CUSTOMER:	鹿鸣
CUSTOMER P/N	
PART NO:	BCRHB127B-330M
DESCRIPTION:	SMD POWER INDUCTORS
PRODUCTS NO:	
PRODUCTS REV:	1
DATE:	2018-7-13

PURCHASER CONFIRMED		
REMARK		

PROVIDER ENGINEER DEPT.		
APPROVAL BY	CHECK BY	DRAWN BY
	Yasir	***chenlinli***

CHENG
TAIPEI OFF ICE

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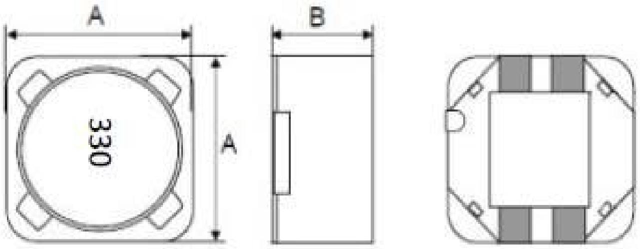
ROHS Compliant

TEST DATA

DIMENSION&ELECTRIC CHARACTER

CUSTOMER:	鹿鸣	PART NO.:	
DESCRIPTION:	SMD INDUCTOR	SERIES NO:	BCRHB127B-330M

1.SHAPE & DIMENSION (UNIT:mm)

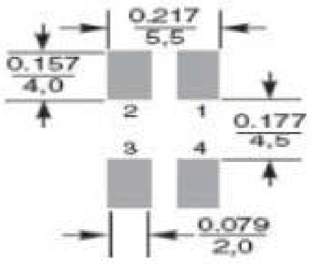


UNIT:mm

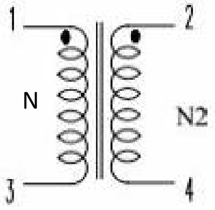
A	12.5MAX
B	8.5MAX

2.RECOMMEND LAND PATTERN DIMENSIONS

PAD LAYOUT(MM):



ELECREICAL SCHEMATIC:



N1、N2双线并绕

3.SEPCIFICATIONS

ELECREICAL SPECIFICATION

MEAS. ITEM	SPEC.	TEST FREQ.	CONDITIONS
L1	33.0 µH ± 25%	100KHz/0.25V	Ta=25℃ ，Idc=0A
Isat-1	3.00 A Max.	100KHz/0.25V	△L/L≧-30%
DCR-1	136.0 mΩ Max.		Ta=25℃
L2	33.0 µH ± 25%	100KHz/0.25V	Ta=25℃ ，Idc=0A
Isat-2	3.00 A Max.	100KHz/0.25V	△L/L≧-30%
DCR-2	136.0 mΩ Max.		Ta=25℃

(1). All test data is referenced to 25℃ ambient.

(2). Operating Tenperature Rangr-30℃ to +100℃.

(3). DC current(3.24A)that will cause an approximate△T of 40℃.

(4). DC current(5.0A)that will cause Lo to drop approximately 30%.

(5). The part temperature(ambient+temp rise)should not exceed 100℃ under worst case operating conditions.Circuit design,component placement,PWB trace size and thickness,airflow and other cooling provisions all affect the part temperature part temperature should be verified in the end appliation.

APPROVED BY: CHECKED BY: Yasir DRAWN BY: chenlinli

Rohs Compliant

KUNSHAN CHENG YANG ELECTRONICSCO.,LTDP
TEST DATA FOR PREPRODUCTION SAMPLE

B.O.M（物料清單）

品名(Part No.):BCRHB127B-330M

序号 NO.	项目名称 Project name	型号及规格 Type and specification	制造商 manufacturers	环保要求 EN. QU
1	磁芯(DRUM CORE)	TW40A DR10*7*6.2 STD	天文	RoHS
2	磁环(RING CORE)	TW25A RI12.2*6.6*10.8T（无倒脚）	天文	RoHS
3	BASE	SC-DR9.8-6(LS-B008-1)	硕诚(联诚备用)	RoHS
4	线材（WIRE）	P180G1-0.35mm/21.5*2TS	益利素勤	RoHS
5	胶水(GLUE)	S-9001-6G	惠利	RoHS
6		TPG-X	骐富	RoHS
7	锡条(SOLDER)	107H	千岛	RoHS
8	墨水(INK)	精工油墨	精工	RoHS

APPROVED BY	CHECKED BY	PREPARED BY
	Yasir	chenlinli

Packaging(包装)

A：330mm

B：90mm

C：30.4mm

D：24.4mm

F：11.5mm

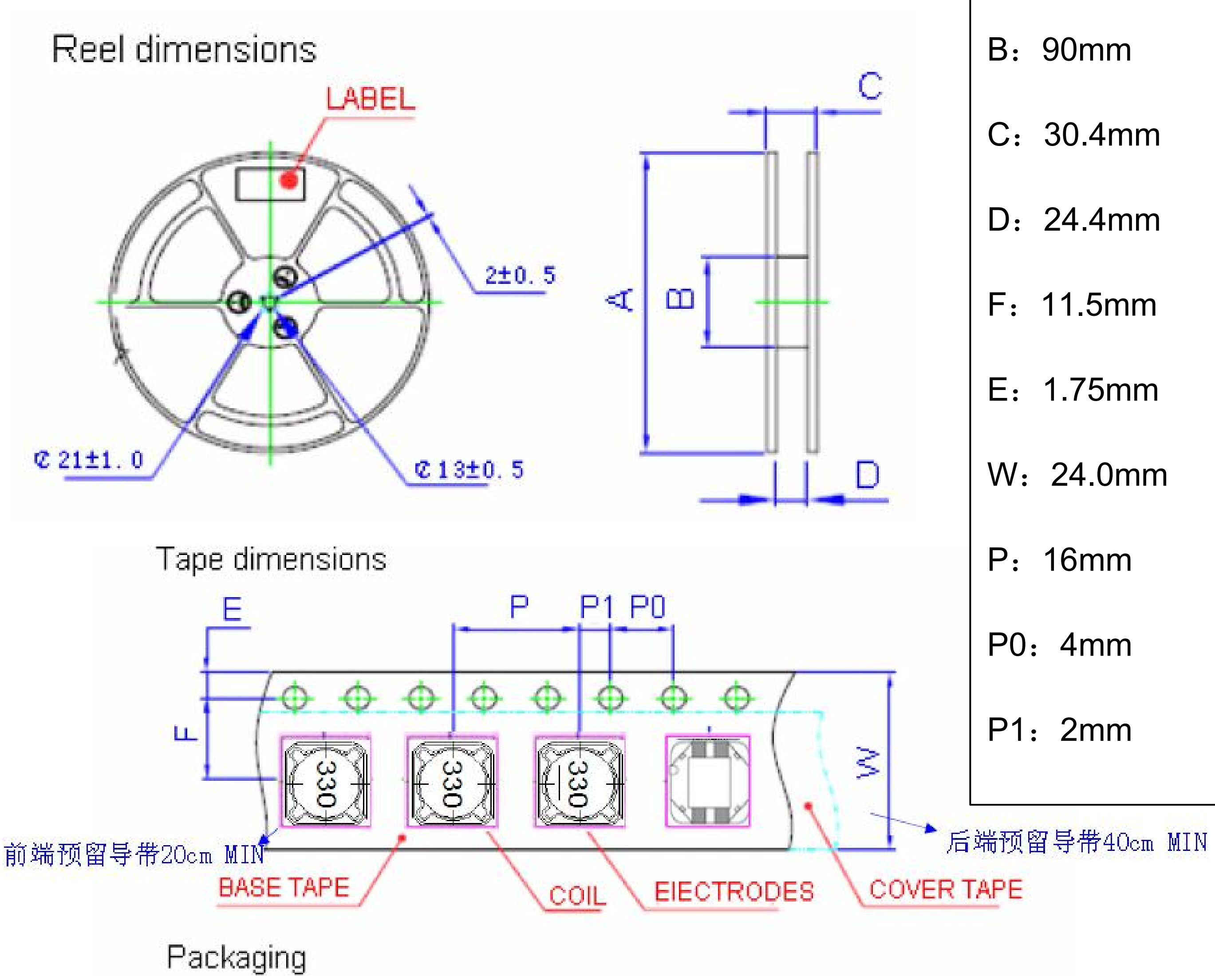
E：1.75mm

W：24.0mm

P：16mm

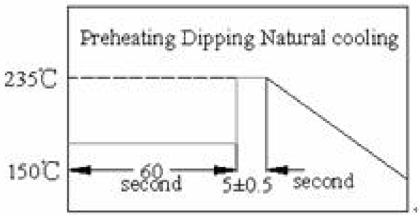
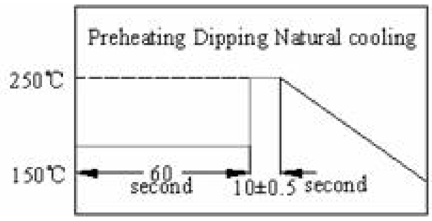
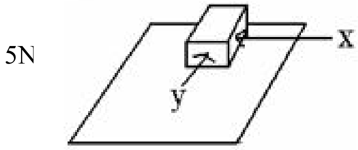
P0：4mm

P1：2mm



NO	一卷	每箱	整箱
QUANTITY	500PCS	4卷	2000pcs

APPROVED BY	CHECKED BY	PREPARED BY
Zhoujiaming	Yasir	chenlinli

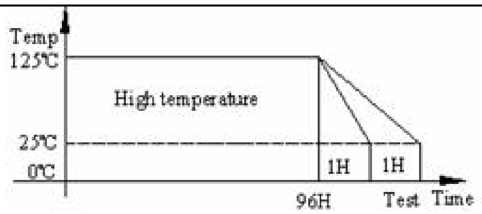
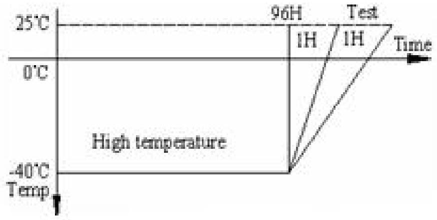
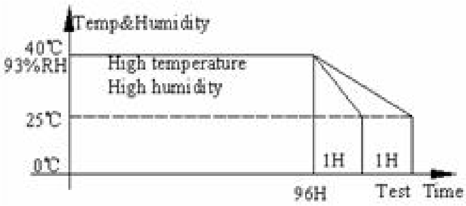
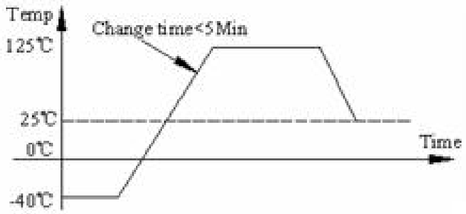
■GENERAL CHARACTERISTICS	page. 1
Operation Temperature	-40℃ to +125℃ (Includes temperature when the coil is heated)
External Appearance	On visual inspection, the coil has no external defects.
Solder Ability Test	More than 90% of terminal electrode should be covered with solder. l After fluxing, component shall be dipped in a mel dipped in a melted. Solder:bath at 235℃±5℃ for 5 ± 0.5senonds 
Heat endurance of Soldering	1.Components should have not evidence of electrical and mechanical damage. 2.Inductance: within±10% of initial value. 3.Impedance: within±10% of initial value. ●Preheat:150±5℃ 60seconds. ●Solder temperature: 250±5℃. ●Flux: rosin. ●Dip time:10±0.5seconds. 
Terminal Strength	After soldering of X,Y withstanding at below conditions .The terminal should not Peel off. (Refer to figure at below) 
Insulating Resistance	Over 100MΩ at 100V D.C. between coil and core.
Dielectric Strength	No dielectric breakdown at 30V D.C. for 1 minute between coil and core.
VibrationTest	Inductance deviation within +10% after vibration for 1 hour. In each of three orientations at sweep vibration(10-~55-~10HZ)with 1.5mmP-P amplitudes
Drop test	Inductance deviation within +10% after being dropped once with 981m/s2 (100G) shock Attitude upon a rubber block method shock testing machine, in three different orientations

ν Application Notice/Handling

1. Storage Conditions
To maintain the solder ability of terminal electrodes:
(1) Temperature and humidity conditions: less than 40℃ and 70% RH.
(2) Products should be used within 6 months.
(3) The packaging material should be kept where no chlorine or sulfur exists in the air.

2. Handling
(1) Do not touch the electrodes(soldering terminals)with fingers as this may lead to deterioration of solderability.
(2) The use of tweezers or vacuum pick-ups is strongly recommended for individual components.
(3) Bulk handling should ensure that abrasion and mechanical shock are minimized.

■GENERAL CHARACTERISTICS page. 2

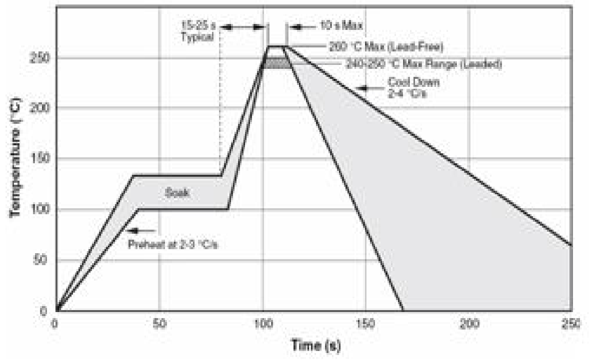
TEST	Required Characteristics	Test Method/Condition
High Temperature StorageTest Reference documents: MIL-STD-202G Method108A	1. No case deformation or change in appearance 2. ΔL/L≦10% 3. ΔQ/Q≦30% 4. ΔDCR/DCR≦10%	 Temperature:125℃±2℃ Time:96±2 hours. Tested not less than 1 hour, nor more than 2 hours at room.
Low Temperature Storage Test Reference documents: IEC 68-2-1A 6.1 6.2	1. No case deformation or change in appearance 2. ΔL/L≦10% 3. ΔQ/Q≦30% 4. ΔDCR/DCR≦10%	 Temperature:-40℃±2℃ Time:96±2 hours. Tested not less than 1 hour, nor more than 2 hours at room.
Humidity Test Reference documents: MIL-STD-202G Method103B	1. No case deformation or change in appearance 2. ΔL/L≦10% 3. ΔQ/Q≦30% 4. ΔDCR/DCR≦10%	 1. Dry oven at a temperature of 40℃±2℃ for 96hours 2. Measurements At the end of this period 3. Exposure: Temperature: 40℃±2℃. Humidity:93±2hoyrs. 4. Tested while the chamber. 5. Tested not less than 1 hour. Nor more than 2 hours at room temperature.
Thermal Shock Test Reference documents: MIL-STD-202G Method107G	1. No case deformation or change in appearance 2. ΔL/L≦10% 3. ΔQ/Q≦30% 4. ΔDCR/DCR≦10%	 First–40℃ for 30 Minutes, last 125℃ for 30 Minutes as 1 cycle. Go through 20 cycles.

■Application Notice/Handling

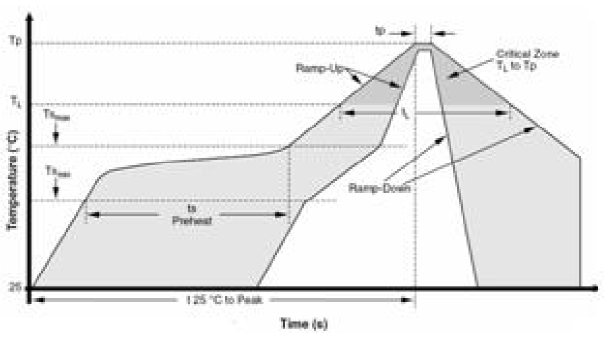
(1) Temperature and humidity conditions : less than 40℃ and 70% RH.
(2) Products should be used within 6 months.
(3) The packaging material should be kept where no chlorine or sulfur exists in the air.
(4) Do not touch the electrodes (soldering terminals) with fingers as this may lead to deterioration of solder ability
(5) The use of tweezers or vacuum pick-ups is strongly recommended for individual components.
(6) Bulk handling should ensure that abrasion and mechanical shock are minimized.

■THE CONDITION OF REFLOW(RECOMMENDATION)

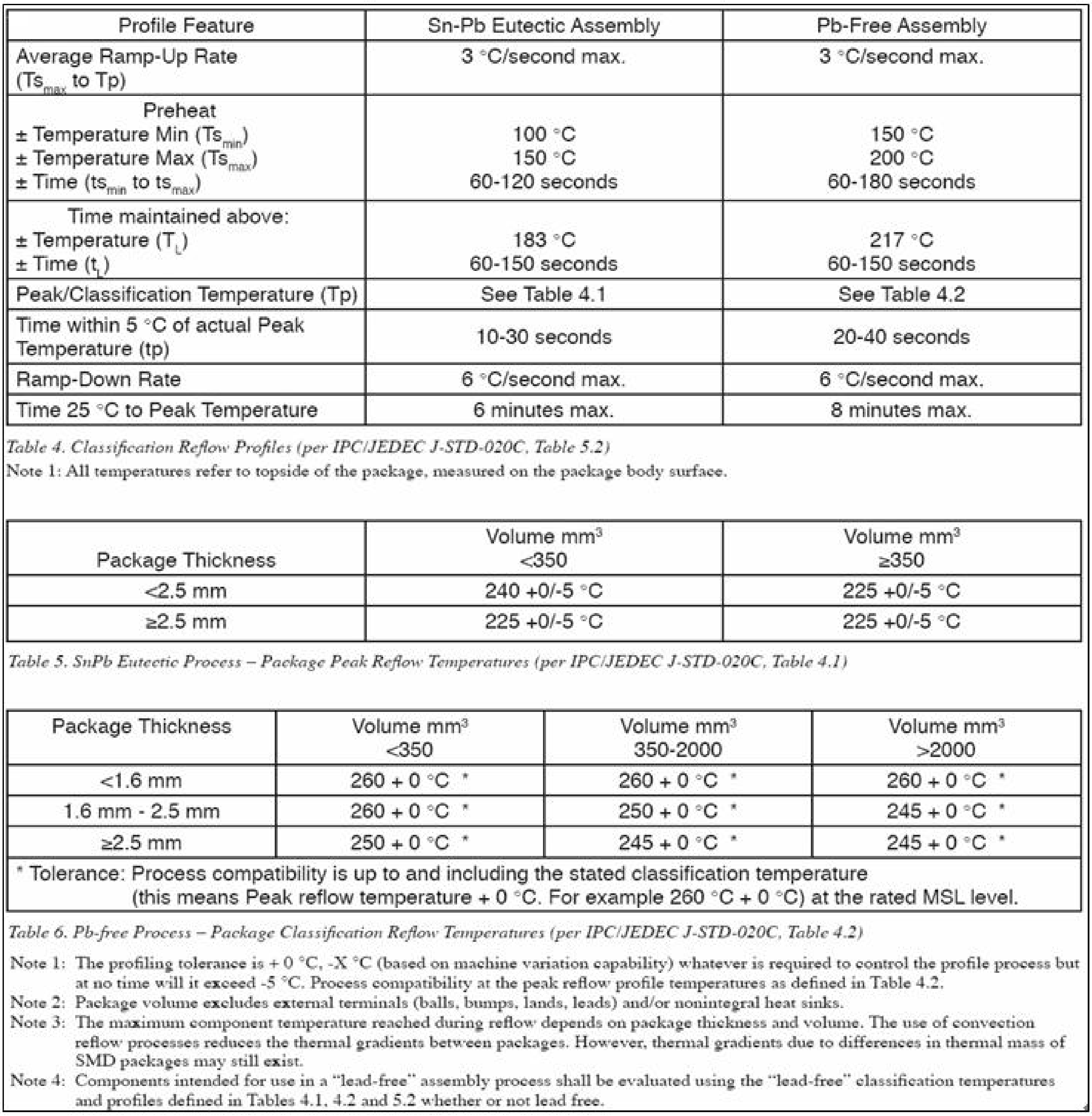
TYPICAL WAVE SOLDER PROFILE FOR LEADED AND LEAD -FREE THROUGH-HOLE PACKAGES



TYPICAL IR REFLOW PROFILE FOR LEADED AND LEAD -FREE SURFACE MOUNT PACKAGES



IPC/JEDEC J-STD-020C, Figure 5-1



Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average Ramp-Up Rate (Ts_{max} to Tp)	3 °C/second max.	3 °C/second max.
Preheat ± Temperature Min (Ts_{min}) ± Temperature Max (Ts_{max}) ± Time (ts_{min} to ts_{max})	 100 °C 150 °C 60-120 seconds	 150 °C 200 °C 60-180 seconds
Time maintained above: ± Temperature (T_L) ± Time (t_L)	 183 °C 60-150 seconds	 217 °C 60-150 seconds
Peak/Classification Temperature (Tp)	See Table 4.1	See Table 4.2
Time within 5 °C of actual Peak Temperature (tp)	10-30 seconds	20-40 seconds
Ramp-Down Rate	6 °C/second max.	6 °C/second max.
Time 25 °C to Peak Temperature	6 minutes max.	8 minutes max.

Table 4. Classification Reflow Profiles (per IPC/JEDEC J-STD-020C, Table 5.2)

Note 1: All temperatures refer to topside of the package, measured on the package body surface.

Package Thickness	Volume mm^3 <350	Volume mm^3 ≥350
<2.5 mm	240 +0/-5 °C	225 +0/-5 °C
≥2.5 mm	225 +0/-5 °C	225 +0/-5 °C

Table 5. SnPb Eutectic Process – Package Peak Reflow Temperatures (per IPC/JEDEC J-STD-020C, Table 4.1)

Package Thickness	Volume mm^3 <350	Volume mm^3 350-2000	Volume mm^3 >2000
<1.6 mm	260 + 0 °C *	260 + 0 °C *	260 + 0 °C *
1.6 mm - 2.5 mm	260 + 0 °C *	250 + 0 °C *	245 + 0 °C *
≥2.5 mm	250 + 0 °C *	245 + 0 °C *	245 + 0 °C *
* Tolerance: Process compatibility is up to and including the stated classification temperature (this means Peak reflow temperature + 0 °C. For example 260 °C + 0 °C) at the rated MSL level.			

Table 6. Pb-free Process – Package Classification Reflow Temperatures (per IPC/JEDEC J-STD-020C, Table 4.2)

Note 1: The profiling tolerance is + 0 °C, -X °C (based on machine variation capability) whatever is required to control the profile process but at no time will it exceed -5 °C. Process compatibility at the peak reflow profile temperatures as defined in Table 4.2.

Note 2: Package volume excludes external terminals (balls, bumps, lands, leads) and/or nonintegral heat sinks.

Note 3: The maximum component temperature reached during reflow depends on package thickness and volume. The use of convection reflow processes reduces the thermal gradients between packages. However, thermal gradients due to differences in thermal mass of SMD packages may still exist.

Note 4: Components intended for use in a "lead-free" assembly process shall be evaluated using the "lead-free" classification temperatures and profiles defined in Tables 4.1, 4.2 and 5.2 whether or not lead free.