

SPECIFICATION FOR APPROVAL

承 認 書

Description : Magnetic Buzzer

Kingstate Part No. : KSSG74B17-3

Customer's Model No. : _____

Specification No. : TKS-5089

Number Of The Edition : 1.1

CUSTOMER'S APPROVED SIGNATURE		



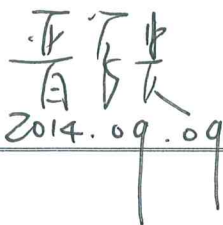
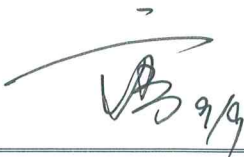
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Approved by	Checked by	Issued by
 2014.09.09	 9/9	Andrew 09/03/14

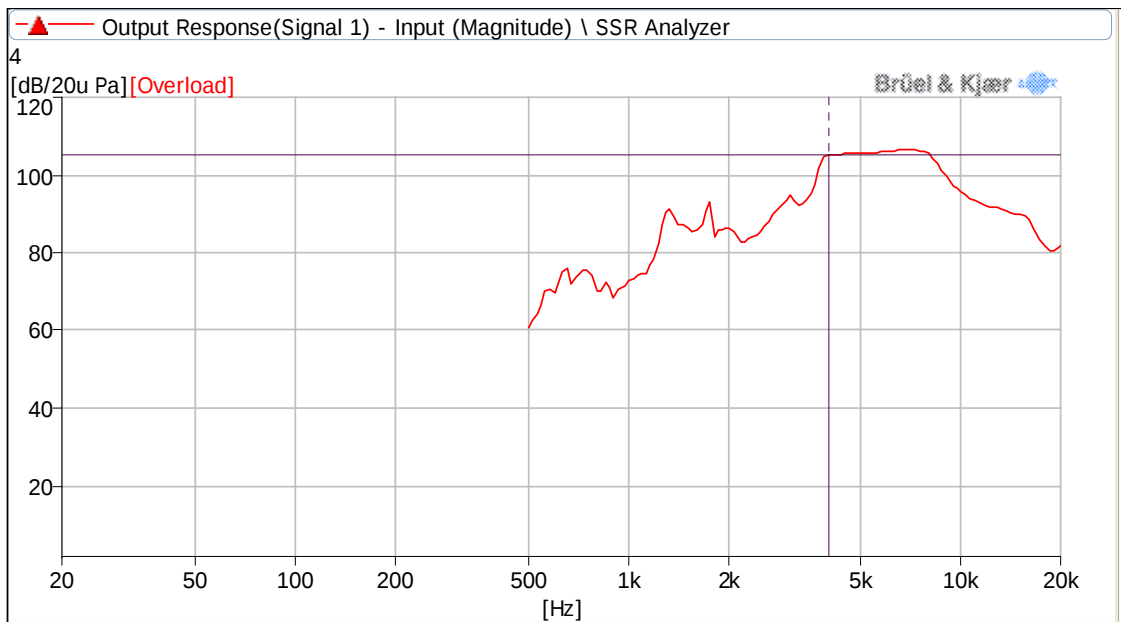
A. SCOPE 範疇

This specification applies magnetic buzzer, **KSSG74B17-3**
此規格書適用於電磁式蜂鳴器， **KSSG74B17-3**

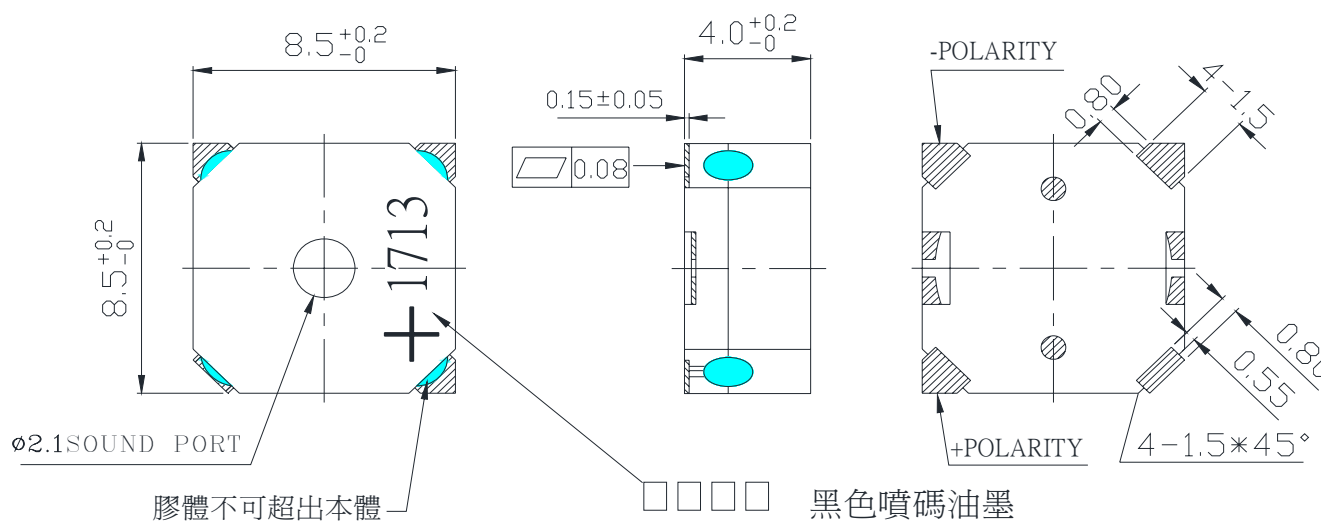
B. SPECIFICATION 規格

No.	Item	Unit	Specification	Condition
1	Rated Voltage 額定電壓	Vo-p	5	
2	Operating Volt. 操作電壓	Vo-p	1 ~ 6	
3	Mean Current 平均耗電流	mA	Max. 150	Applying rated voltage,4000Hz square wave, 1/2duty 施以額定電壓,4000Hz,方波, 50%負載
4	Coil Resistance 直流阻抗	Ω	13 ± 3	
5	Sound Output 輸出音壓	dBA	Min.100	Distance at 10cm (A-weight). Applying rated voltage 4000Hz,square wave, 1/2duty 在 10 公分處,施以額定電壓,4000Hz,方波, 50%負載,測試噪聲計型號:TES 1357
6	Rated Frequency 額定頻率	Hz	4000	
7	Operating Temp. 操作溫度	℃	-20 ~ +70	
8	Storage Temp. 儲存溫度	℃	-40 ~ +85	
9	Dimension 尺寸	mm	L8.5 x W8.5 x H4.0	See attached drawing. 請參照外觀尺寸圖
10	Weight 重量	gram	0.8	
11	Material 材質		L.C.P (Black)	
12	Terminal 端子		Tin Plated Brass(Sn)	thickness of tin layer ≥ 5.1um 锡层厚度 ≥ 5.1um
13	Environmental Protection Regulation 環保法規		HSF	

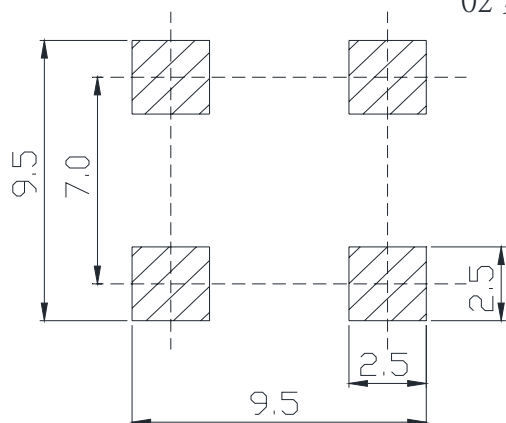
C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線



D. APPEARANCE DRAWING 外觀尺寸圖



建議焊盤區域尺寸



Tol: ± 0.5

Unit: mm

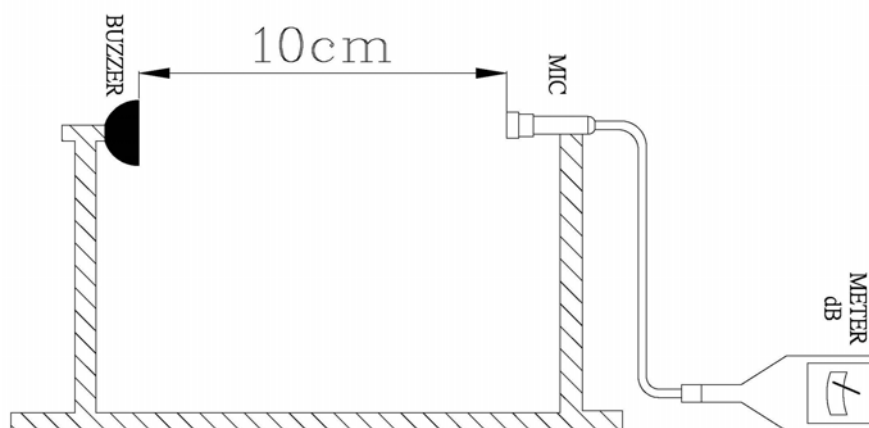
週期
01 第一週
02 第二週
...

年份
13---2013
14---2014
...

黑色噴碼油墨



E. MEASUREMENT METHOD 測量方式



F. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test condition	Evaluation standard
1	Solderability 焊錫附著性	Lead terminals are immersed in solder bath of $+270\pm5^{\circ}\text{C}$ for 3 ± 1 second. 端子置於錫膏內, 錫膏溫度: $+270\pm5^{\circ}\text{C}$. 焊接時間: 3 ± 1 秒.	95% surface of lead pads must be covered with fresh solder and should be pore-free. 錫膏須覆蓋端子上方 95%, 且表面無氣孔等不良
2	Soldering Heat Resistance 焊錫耐熱性	The product is followed the reflow temperature curve to test its reflow thermostability. 產品依照迴焊溫度曲線測試迴焊耐熱性.	No interference in operation 操作上無任何不良
3	Terminal Mechanical Strength 端子強度	Lead pads shall be soldered on the pc board, and the force 9.8N (1.0kg) shall be applied behind the part for 10 seconds. 將端子焊在 PC 板上後, 對單體施以 9.8N(1.0kg)拉力 10 秒.	No damage and cutting off 端子不鬆動, 不脫落.
4	Soldering Pull Strength 漆包線焊接拉力	soldering pull strength $\geq 0.2\text{N}$ 漆包線焊接拉力 $\geq 0.2\text{N}$	Enamelled wire has no crack and welding spot has no fall off. 漆包線不斷裂, 焊點不脫落
5	Case Pressure 外殼壓力測試	Straight Force on case while pressure is 49N(5.0Kg) period 10 secs. 外殼正面施以 49N(5.0Kg)壓力, 10 秒	Case has no deformation, broken and do not damaged electrical characteristics 外殼無變形、破損及不損害特性
6	Vibration 振動測試	Buzzer shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours. 振動週波數 10~55HZ、全振幅 1.5mm 於 X.Y.Z 3 個方向, 各 2 小時.	After the test the part shall meet specifications with-out any damage in appearance and the SPL should be in $\pm 10\text{dBA}$ compared with initial one. 經測試後, 單體除音壓外, 外觀及電氣特性須符合規格. 輸出音壓變化量須 $\pm 10\text{dBA}$ 內.
7	Drop test 跌落試驗	Put the buzzer to the drop fixture with the height of 1.5m and do test according to the following requirements. 1. Drop two times for each surface.(2*6) 2. Drop one time for each side.(1*12) 3. Drop two times for each corner.(2*8) 將蜂鳴器置於跌落裝置中, 高度 1.5 米, 按照下面要求進行跌落試驗 1. 每個面跌落兩次(2*6) 2. 每個邊跌落一次(1*12) 3. 每個角跌落兩次(2*8)	

G. ENVIRONMENT TEST 環境測試

No.	Item	Test condition	Evaluation standard
1	High temp. test 高溫測試	After being placed in a chamber at $+85^{\circ}\text{C}$ for 96 hours. 置於 $+85^{\circ}\text{C}$ 環境中 96 小時	After the test the part shall meet specifications with-out any damage in appearance and the SPL should be in $\pm 10\text{dBA}$ compared with initial one. 經測試後, 單體除音壓外, 外觀及電氣特性須符合規格. 輸出音壓變化量須 $\pm 10\text{dBA}$ 內.
2	Low temp. test 低溫測試	After being placed in a chamber at -40°C for 96 hours. 置於 -40°C 環境中 96 小時	
3	Temp. cycle test 溫度循環實驗	Use two boxes method. Put into one box of -40°C for 1hr and then put to the other box of 70°C for 1hr. The max switching time is 20s and cycle for 24 times. 採用兩箱法, 在 -40°C 中放置一小時, 取出在 70°C 中放置一小時, 轉換時間最大 20 秒, 循環 24 次。	

4	Salt Spray Test 盐雾试验	1. Samples should meet the minimum demand and the most typical surface should be exposed. 被測樣品最低的要求，將最典型的表面暴露在外 2. Before the salt spray test the sample should be pretreated for two hours in the temp. of 35°C. 樣品在鹽霧測試前在35°C進行2個小時的預處理 3. Supply no electricity to the buzzer during the test. Put the typical configuration which is used in the simulative market in the test case. Put the buzzers independently so that the spray has no influence to each other and make sure no corrosion drop from one to another. 測試時蜂鳴器不上電，模擬市場使用的典型配置安放在實驗箱中，蜂鳴器之間保持獨立，自由沉定的鹽霧不互相影響，還要避免腐蝕物質從一個樣品掉落到另外一個樣品 4. Samples should be exposed in the salty environment for 8 hours. 樣品暴露在鹽霧環境條件中，持續進行8小時 5. After the test wipe the salty water from samples and put them in the room temperature for 16 hours. Then sweep the substances on the surface by soft brush. Use flowing water of no more than 35°C to clean samples from salty water and put them in room temperature for 16 hours. 試驗結束後，樣品取出后用抹布擦乾淨表面鹽水，在常溫條件下恢復16h,用軟毛刷將表面物質輕輕掃掉；部件樣品取出后用不高於35°C的流動溫水清洗樣品以除去樣品表面殘留的鹽霧溶液。在常溫條件下恢復16小時 6. Do visual check after the cleaning work. 清理完畢後樣品進行外觀檢查	蜂鳴器外觀無明顯變化，如銹蝕、變色、及鍍層剝落等現象 NO obvious changes on the surface such as rusting, change colors and exfoliation of clad layer.
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H. RELIABILITY TEST 信賴性測試

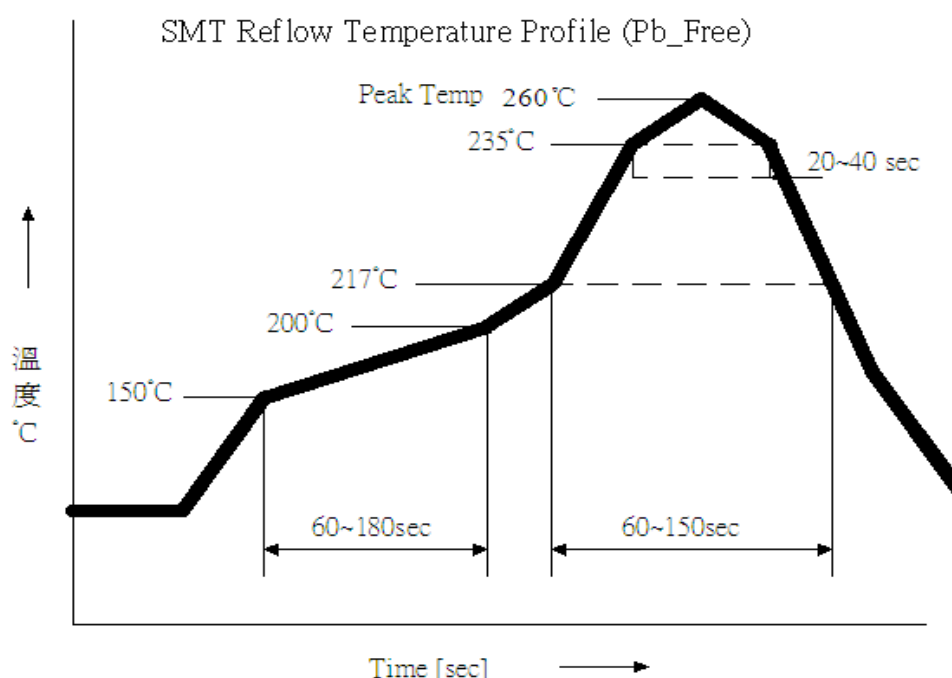
No.	Item	Test condition	Evaluation standard
1	Long-term high temp. and humi. 長期高溫高濕	Set the test temp. to 55°C and humidity to 95%RH. Give the buzzer a rated power drive signal for 120hrs 試驗溫度 55°C，濕度 95%RH，蜂鳴器饋以額定功率的驅動信號，進行 120 小時。	After the test the part shall meet specifications with-out any degradation in appearance and performance except SPL.

2	Long-term temp. cycle 長期溫度循環	Give the buzzer a rated power drive signal. The temp. range is -20°C~55°C and temp. variability is 10°C/min with 30min staying both at -20°C and 55°C. Cycle for 78 times. After the test, recover for 2hrs in room temp. 蜂鳴器饋以額定功率的驅動信號，溫度變化範圍-20°C~55°C，溫變率 10°C/min，在-20°C和 55°C各停留 30min，共循環 78 次，試驗完畢，常溫下恢復 2h。	after 4 hours at +25°C. the SPL should be in ± 10 dBa compared with initial one. 經測試後，靜置於+25°C（室溫）環境中 4 小時後，單體除音壓外，外觀及電氣特性須符合規格。輸出音壓變化量須在 ± 10 dBa內。
3	Load test 負載試驗	Give the buzzer a rated power drive signal and put it in the 55°C environment for 24hrs lasting working. And then put it in the -10°C environment for 24hrs lasting working. And then put it in the room temp. for 120hrs lasting working. 饋給蜂鳴器額定功率的驅動信號，置於 55°C的環境中，持續工作 24 小時，然後置於-10°C的環境中，持續工作 24 小時，再置於常溫中，持續工作 120 小時。	
4	Alternative temp. and humi. test 交變濕熱試驗	Give the buzzer a rated power drive signal. Raise the humidity of the test box to 95% within 1hr and keep the temp. stay at 25°C. Raise its temp. to 55°C within 3hrs and keep the humidity at 95% for 9hrs. Reduce its temp. to 25°C within 3hrs and remain the humidity for 9hrs and. Cycle for 2times 饋給蜂鳴器額定功率的驅動信號，試驗箱濕度在 1 小時內升到 95%，溫度保持在 25°C；將試驗箱溫度在 3 小時內升到 55°C，濕度保持在 95%不變，保持 9 小時；將試驗箱溫度在 3 小時內降到 25°C，濕度保持不變，保持 9 小時。循環 2 次。	
5	DC voltage test 直流電壓試驗	Give +6VDC for 1hr to the terminals. 端子間施加直流電壓+6VDC，1hour。	There are can't have smoke or fire. 不能出現冒煙起火等現象

TEST CONDITION.

Standard Test Condition	:	a) Temperature : +5 ~ +35°C	b) Humidity : 45-85%	c) Pressure : 860-1060mbar
一般測試條件	:	a) 溫度 : +5 ~ +35°C	b) 濕度 : 45-85%	c) 氣壓 : 860-1060mbar
Judgment Test Condition	:	a) Temperature : +25 $\pm$ 2°C	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
爭議時測試條件	:	a) 溫度 : +25 $\pm$ 2°C	b) 濕度 : 60-70%	c) 氣壓 : 860-1060mbar

I. Recommended Temperature Profile For Reflow Oven 建議迴焊爐溫度曲線

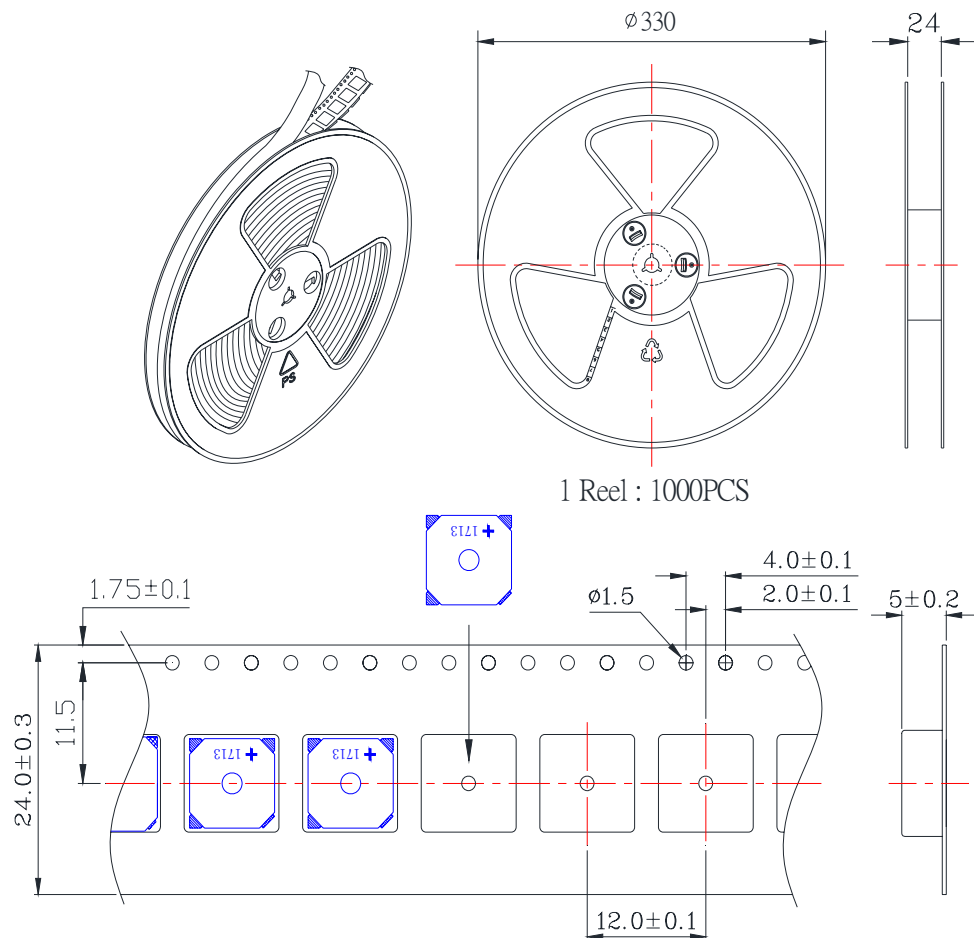


*Reflow can't over 3times. 迴流焊次數不超過 3 次

J. OQC & PACKING STANDARD 出货检验&包装规格

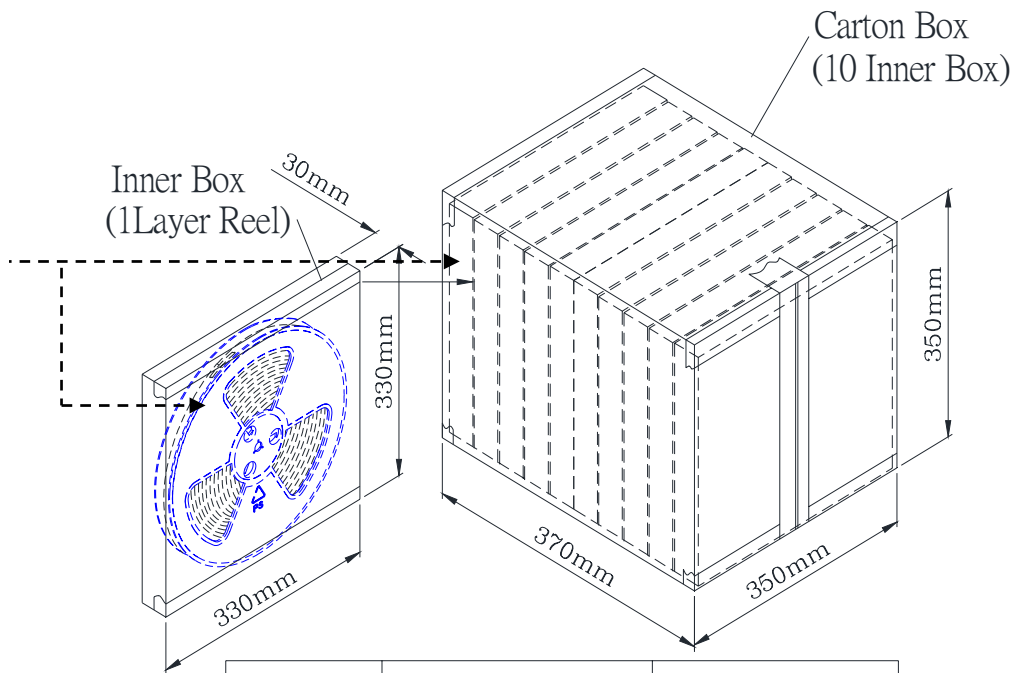
Excepet conventional test items during OQC ,the thickness of the tin layer($\geq 5.1\mu\text{m}$) should also be tested.
Sample 10pcs for each lot and after baking in 240°C for 5mins test if all the parameters meet the SPEC.

出貨檢驗除常規檢測項目以外，另需檢測产品镀锡层厚度 $\geq 5.1\mu\text{m}$ 。
每批次出貨抽取 10PCS 过 240 度 5 分钟的高温烘烤后，檢測所有參數須符合規格書。



Lot No.	XXXXXXXXXX
Model No.	XXXXXXXXXX
Quantity.	XXXX Pcs
Date:	DD MM YY
	
 KINGSTATE ELECTRONICS CORP.	

* The label stuck on inner boxes and the outer of carton.



Inner Box	330mmx330mmx30mm	1x1000PCS=1000PCS
Carton Box	350mmx350mmx370mm	10x1000PCS=10,000PCS

客人月份標籤樣式



月份字体大小为94.2pt, 字体为“Baskerville Old Face”

“年”字体大小为21.5pt, 字体为“文鼎中黑简体”

4J