SPECIFICATION

Customer：

Applied To：

Product Name：SMD Buzzer

Model Name：KSM5020F03-K1308

Drawing No.：OEM-K1308

Green Level：□ Sn-Pb ■RoHS □ RoHS and HF

Signature of Approval

Signature of KINGWEI

Approved by	Checked by	Issued by	Date

KINGWEI®
PROFESSIONAL ACOUSTIC COMPONENT FROM KINGWEI

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CONTENTS

1. Scope

This product specification is applied to the piezoelectric sounder in alarmsystems. Please contact us when using this product for any other applications than described in the above.
本規格書適用於壓電式聲響器，通常它用在系統中做報警或提示的聲響器用，如果將該產品用於其他領域，請與我們取得聯繫。

2. General

2.1 Out-Diameter ： Ø 5X5 mm
外徑： Ø 5X5 mm
2.2 Height ： 1.9 mm
高度：1.9 mm
2.3 Weight ：0.6 g
重量：0.6 克
2.4 Operating Temperature range： -20～+70 ℃ without loss of function
工作溫度：-20～+70℃
2.5 Store Temperature range：-30～+80℃ without loss of function
儲藏溫度：-30～+80℃

3.Electrical and Acoustic Characteristics.

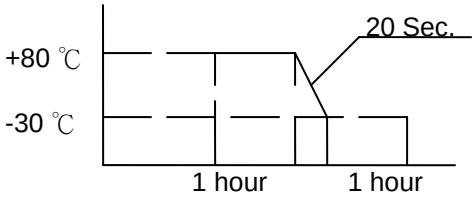
Test condition : 15 ~ 35 ℃, 25% ~ 85% RH, 860~1060 mbar
測試條件：15～35 ℃, 25%～85%RH , 860～1060mbar

	Items 項目	Specification 規格
1	Rated Voltage 額定電壓	3 Vp-p Square Wave
2	Operating Voltage 工作電壓	2.0 ~ 4.0 Vp-p Square Wave
3	Max.Rated Current 額定電流	110mA at 4KHz / 3Vp-p Square Wave
4	Resonant Frequency 諧振頻率	4± 0.5KHz
5	Min.Sound Pressure Level 額定聲壓	75dB at 4KHz / 3Vp-p Square Wave/10cm
6	Coil Resistance 阻抗	12± 3Ω
7	Case Material/Color 殼體材質/顏色	LCP / BLACK
8	Leading Pin	Tin Plated Brass(Sn)

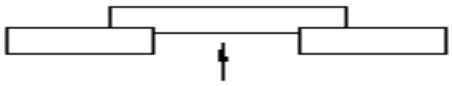
4. Reliability Test

After test(1~7item), the transducr S.P.L . difference shall be within ± 10dB, and the appearance not exist any change to be harmful to normal operation(e.g. cracks, rusts, damages and especially distortion).

在1-7項試驗後，聲響器的聲壓變化值在± 10dB之內，外觀無變化（例如：開裂、生銹、損傷、變形等現象）.

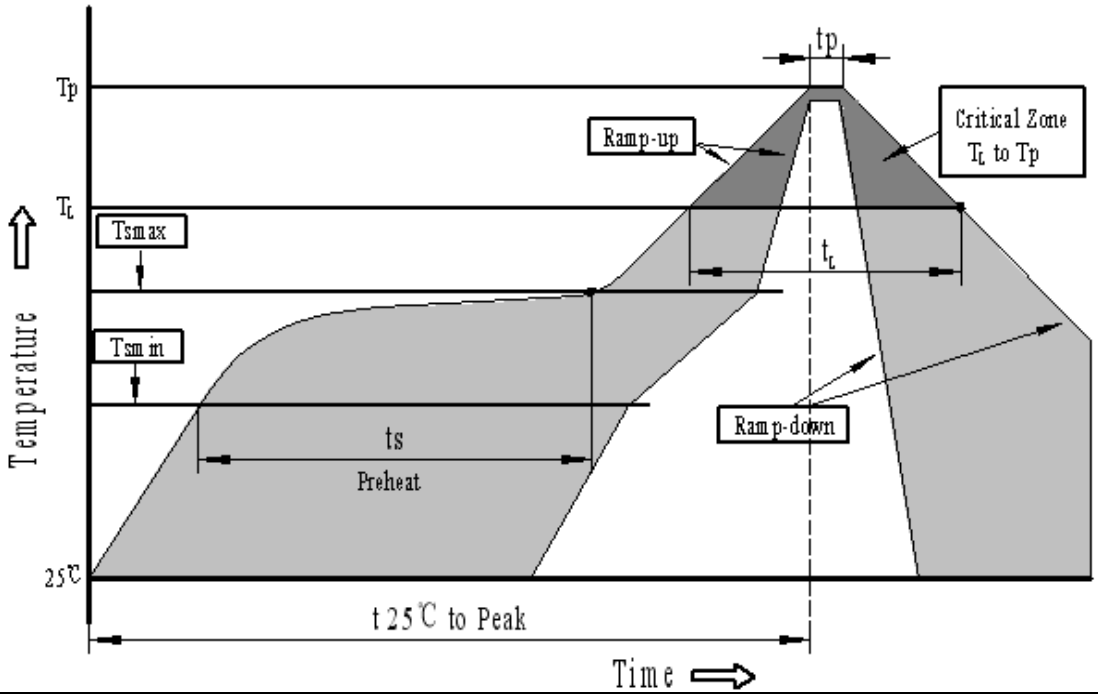
	Item	Specification
1	High Temperature Test 高溫試驗	After being woked in a chamber with +80± 2℃ for 2h and then being placed in natural condition for 2h, sounder shall be measured. 將產品置於+80± 2 ℃試驗箱中，先工作 2小時，然後在正常大氣壓條件下恢復2小時後，進行測量
2	Low Temperature Test 低溫試驗	First being worked in a chamber with -30± 2℃ for 2h and then being placed in a chamber with -30± 2 ℃ for 16h, finally being placed in natural condtion for 2h, sounder shall be measured. 將產品置於-30± 2 ℃試驗箱中，先工作 2小時，再放置16小時，然後在正常大氣壓條件下恢復2小時後，進行測量
3	Humidity Test 潮濕試驗	After being placed in a chamber with 90 to 95%R.H. at +40± 2 ℃ for 2 h and then being placed in natural condition for 2h , sounder shall be measured. 將產品置於濕度為90～95%R.H ，溫度為+40℃ 試驗箱中 2 小時，然後在正常大氣壓條件下恢復2小時後，進行測量
4	Thermal Shock Test 熱衝擊試驗	After being worked in a chamber at +80 ℃ for 1 hour, then sounder shall be placed in a chamber at -30℃ for 1 hour(1 cycle is the below diagram). After 6 above cycles, sounder shall be measured after being placed in natural condition for 1 hour. 將產品置於+80± 2 ℃ 試驗箱中，先工作1小時，然後將產品置於-30± 2 ℃試驗箱中，再工作1小時，經過6個迴圈後，在正常大氣壓條件下恢復1小時，進行測量 

4. Reliability Test

	Item	Specification
5	Vibration Resistance 振動試驗	Sounder shall be measured after being applied vibration of amplitude of 1.5mm with 10 to30Hz band of vibration frequency to each of 3 perpendicular directions for 2 hour. 振幅為1.5mm，頻率為10～30Hz，三個不同軸方向各振動2小時，試驗後進行測量.
6	Drop Test 跌落試驗	Sounder packed in the carton are dropped in six direction from the height of 80cm to the concrete floor. 跌落高度80cm,6 個不同方向整箱跌落到水泥地，試驗後進行測量.
7	Lead pull 拉力試驗	The part shall be pushed with a force of 9.8N for 10±1 seconds behind the part. 使用9.8N力量將零件向上方拉維持10±1秒鐘。 

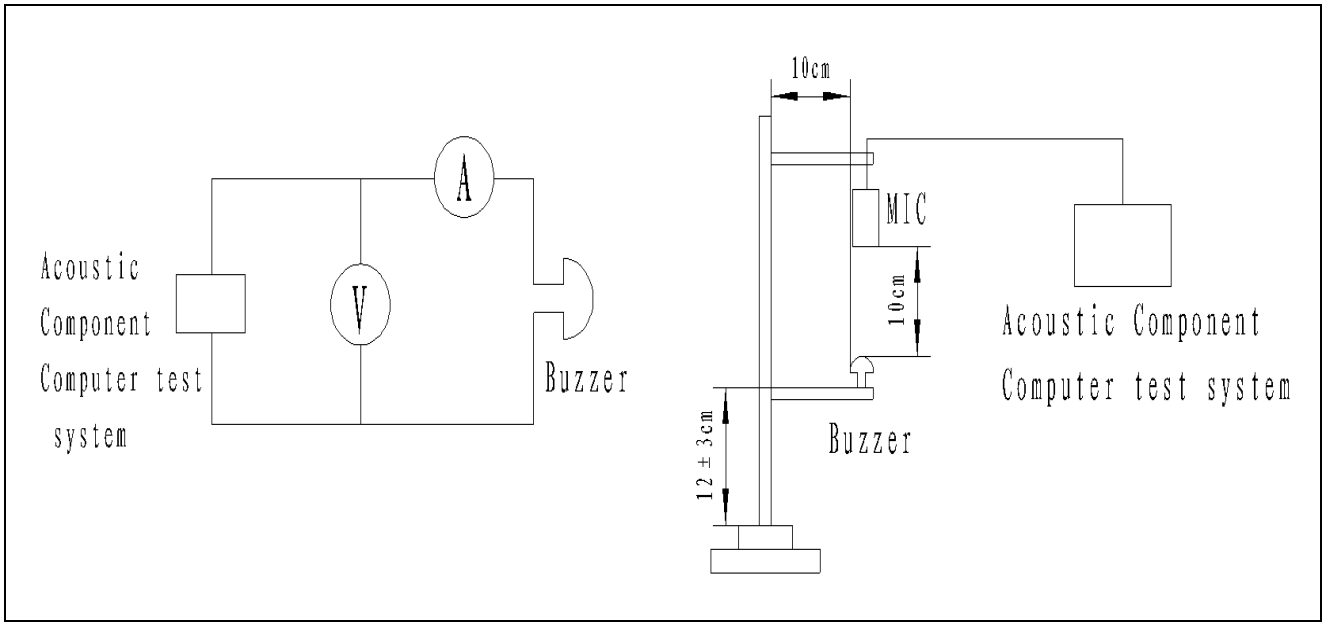
4-1. Soldering Condition

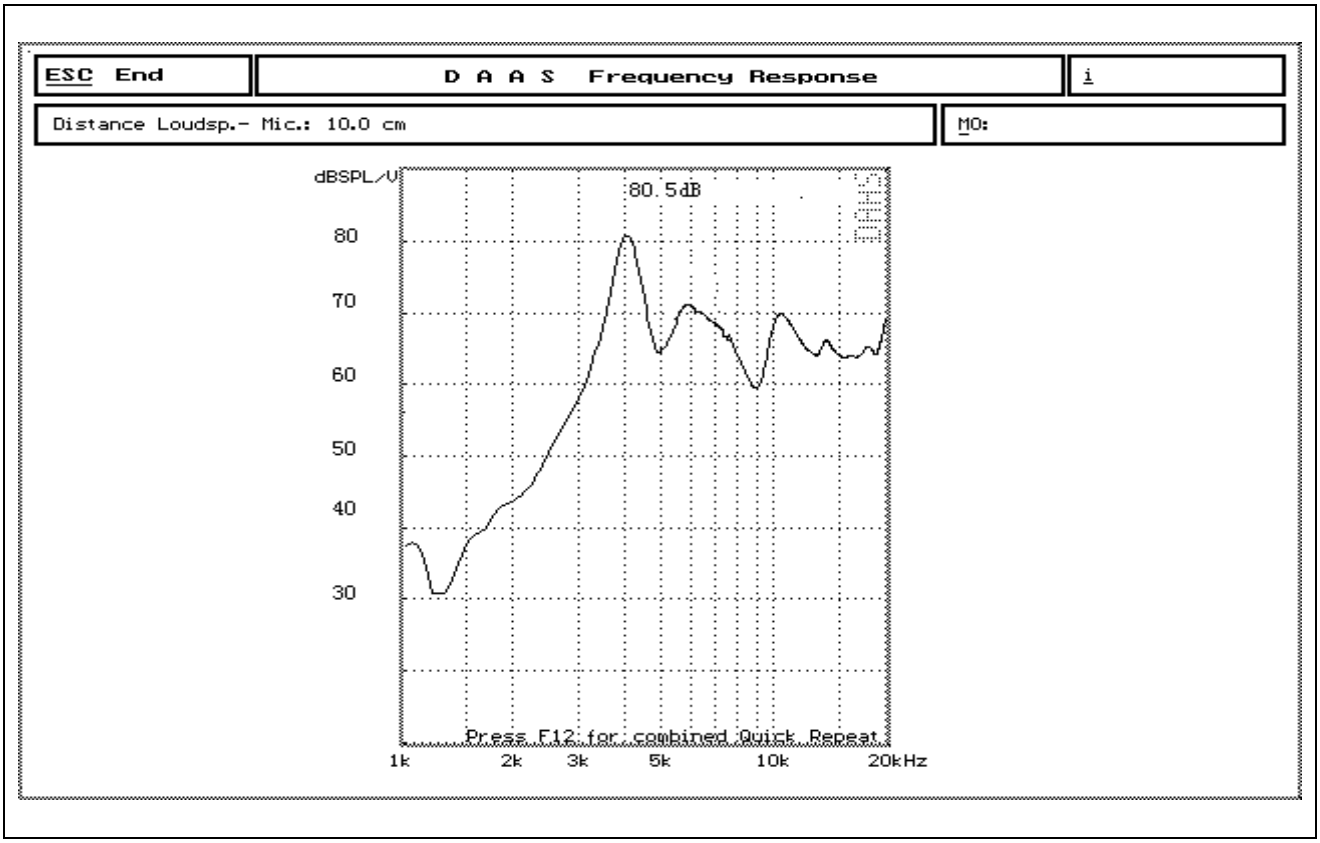
Recommendable reflow soldering condition is as follows



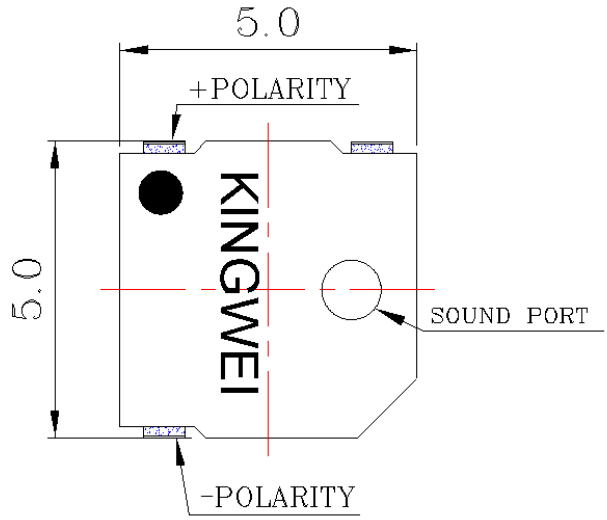
Profile Feature	Pb-Free Assembly	Time maintained above:	
Average ramp-up rate(T_L to Tp)	3℃/second max.	- Temperature(T_L)	217℃
Preheat		-Time(T_L)	60～150 seconds
-Temperature Min.(Ts_{min})	150℃	Peak temperature(Tp)	250℃+0/-5℃
-Temperature Min.(Ts_{max})	200℃	Time within 5℃of actual Peak temperature (tp)	6 seconds max.
-Temperature Min.(ts)	60～180 seconds	Ramp-down Rate	6℃/second max.
Ts_{max} to T_L		Time 25℃ to Peak Temperature	8 minutes max.
-Ramp-up Rate	3℃/second max.	Time maintained above:	

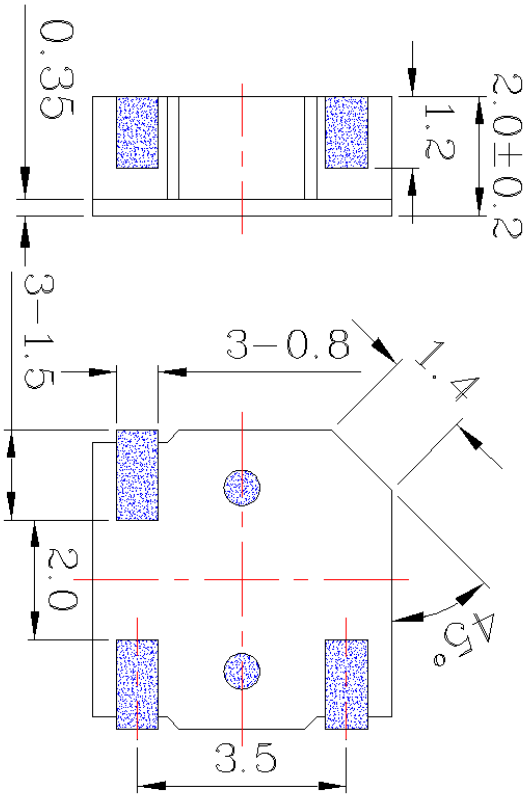
5. Measurement Block Diagram & Response curve



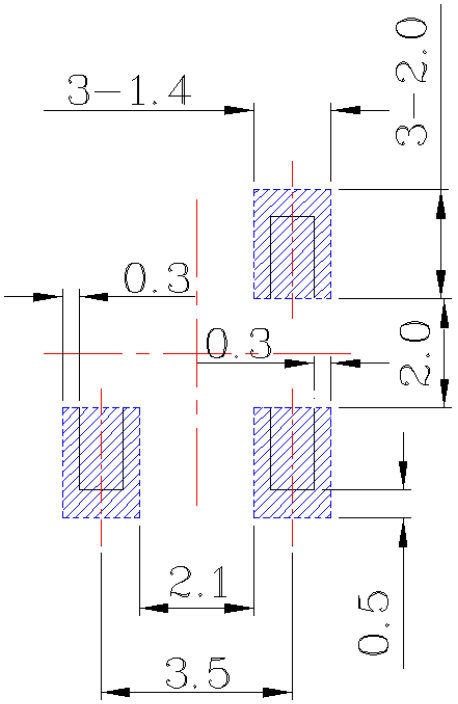


6. Dimensions

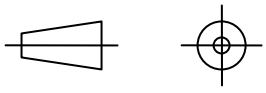




layout recommended PAD

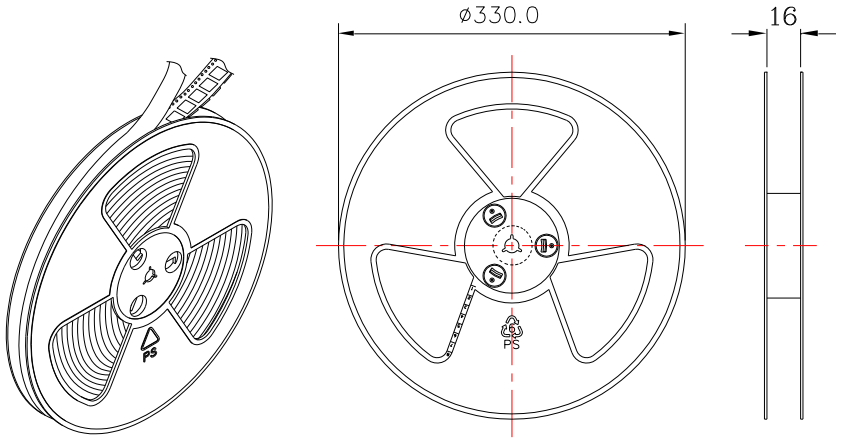


FIRST ANGLE PROJECTION

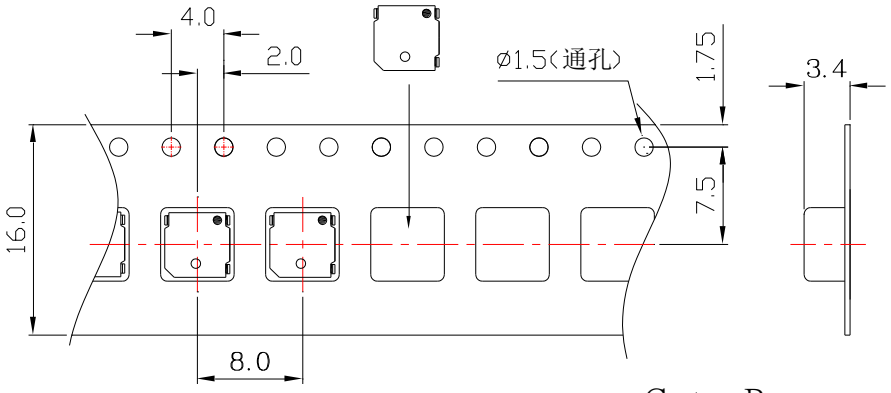


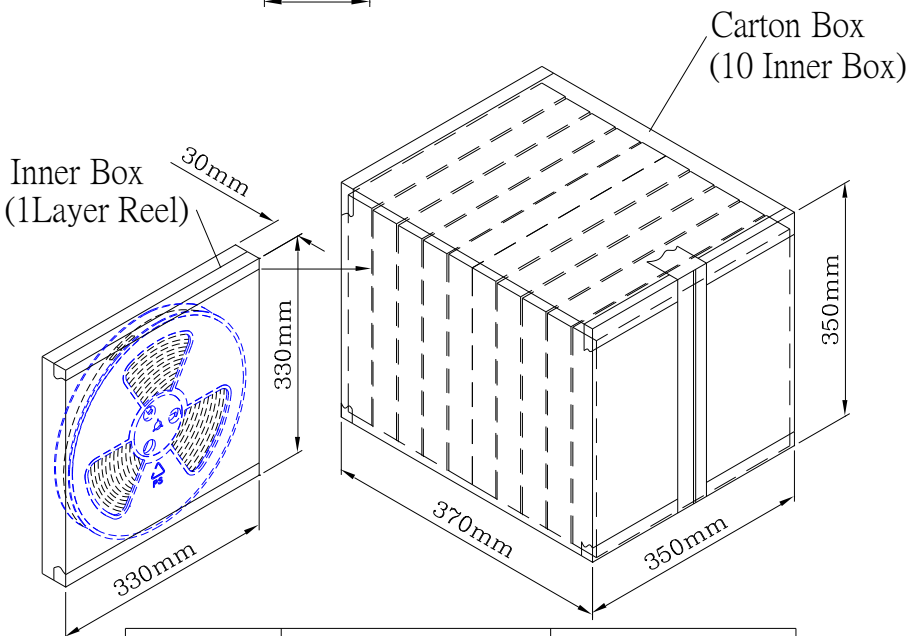
UNIT : mm
Tolerance : ±0.5

7. Packing



1 Reel : 2500PCS





Inner Box	330mmx330mmx30mm	1x2500PCS=2500PCS
Carton Box	350mmx350mmx370mm	10x2500PCS=25,000PCS

8. Revision

Rev. No.	DATE	PAGE	DESCRIPTION	SIGN
1.0	2009.10.22	/	primary	
1.1	2013.08.16	/	更新	