



常州市凯丽金电子有限公司---微型贴片电声元器件专业生产商



KELIKING ELECTRONIC-----Micro SMD Buzzer Professional manufacturer

SPECIFICATION FOR APPROVAL

承 認 書

Description : SMD Buzzer

Kingstate Part No : KLJ-1230

Customer's Model No :

Specification No : KLJ-1230

Number Of The Edidion : 3.1

CUSTOMER'S APPROVED SIGNATURE		



KELIKING
凯丽金



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Approved by	Checked by	Lssued by

A.SCOPE 範疇

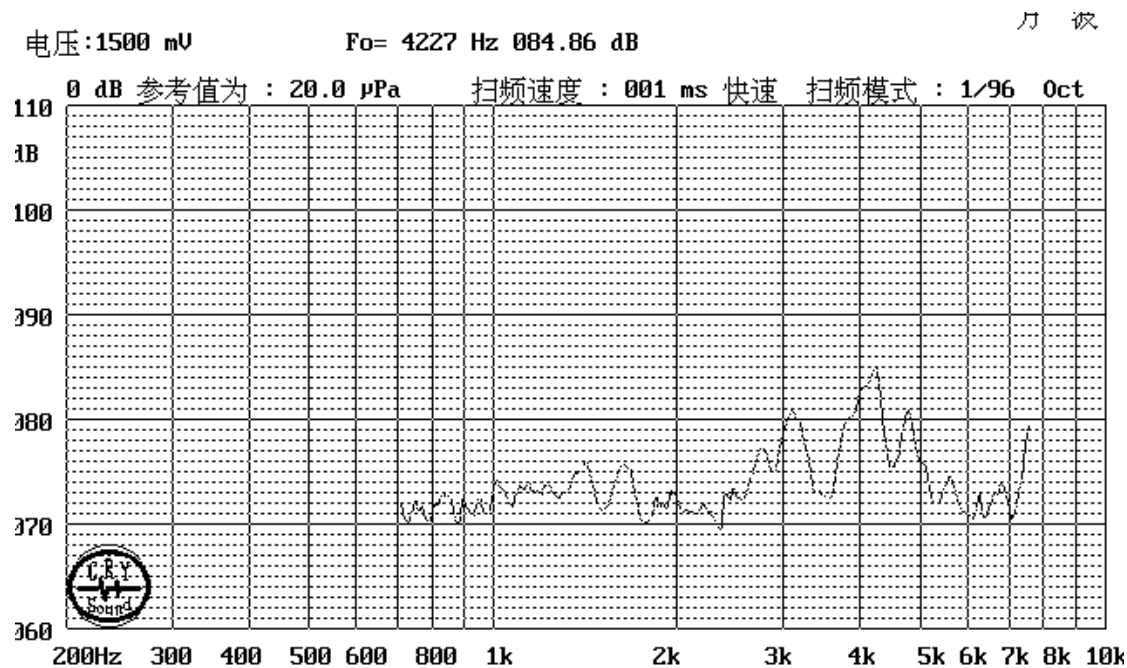
This specification applies SMD Piezo buzzer.KLJ-1230



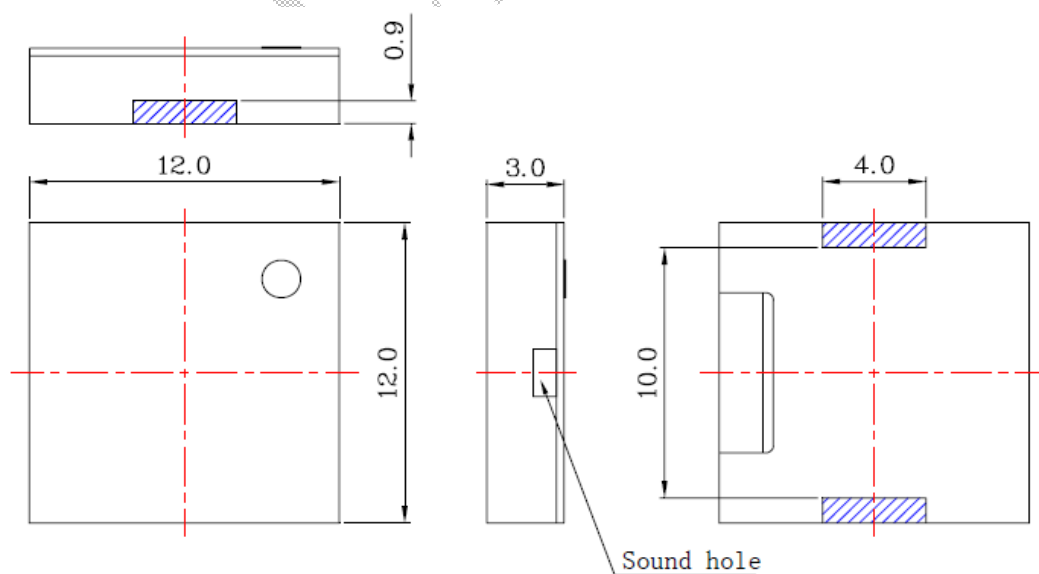
B.SPECIFICATION 规格

NO.	Item	Unit	Specification	Condition
1	Operating Voltage 工作電壓	Vp-p	Max20Vp-p	
2	Rated Voltage 操作電壓	Vp-p	3	
3	Mean Current 平均耗電流	mA	1	Applying rated voltage. 4100HZ squar wave. 1/2duty 施以額定電壓.4100HZ.方波.50%負載
4	Capacitance at 1KHz 電容量	pF	12000±30%	
5	Sound Output 輸出音壓	dB	Min.83	Distance at 10cm (A-weight). Applying rated voltage 4100HZ.square wave.1/2duty 在 10cm 處，施以額定電壓。4100HZ.方波.50%負載
6	Rated Frequency 額定頻率	HZ	4100	
7	Operating Temp 操作溫度	℃	-35 ~+80	
8	Storage Temp 儲存溫度	℃	-45 ~+85	
9	Dimension 尺寸	mm	L12×W12×H3	See attached drawing. 請參照外觀尺寸圖
10	Weight 重量	gram	0.6	
11	Material 材質		L.C.P (Black)	
12	Terminal 端子		SMD type (鍍全錫/Plating Sn)	See attached drawing. 請參照外觀尺寸圖
13	Environmental Protection Regulation 環保法規		RoHS	
14	Storage life 保存期限	month	6	6 months preservation at room temp.(25±3℃). Humidity30% 在室溫下 25±3℃. 濕度 30%以下可保存 6 個月

C.TYPLCAL FREQUENCY RESPONSE CURVE 頻率響應曲線



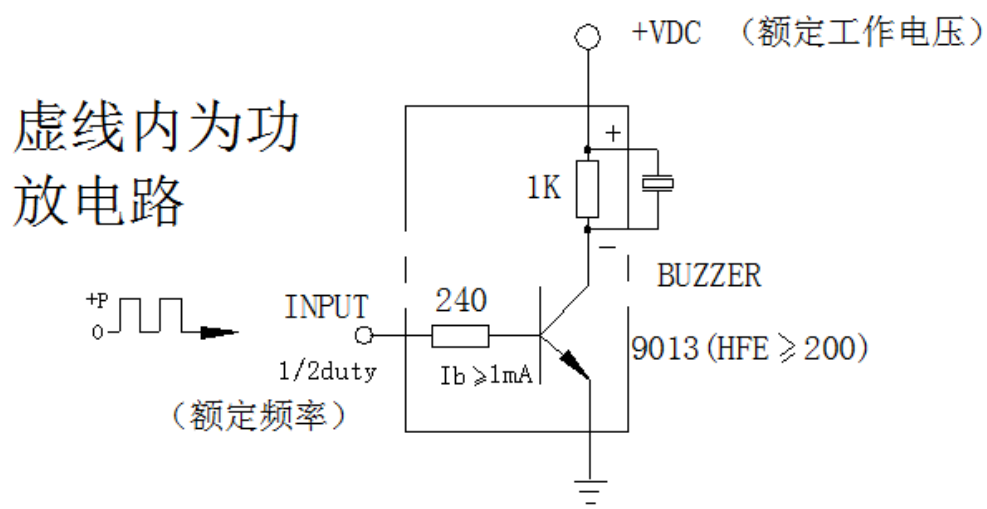
D.APPEARANCE DRAWING 外觀尺寸圖



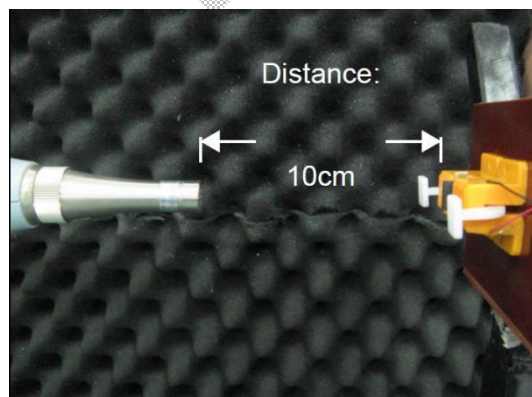
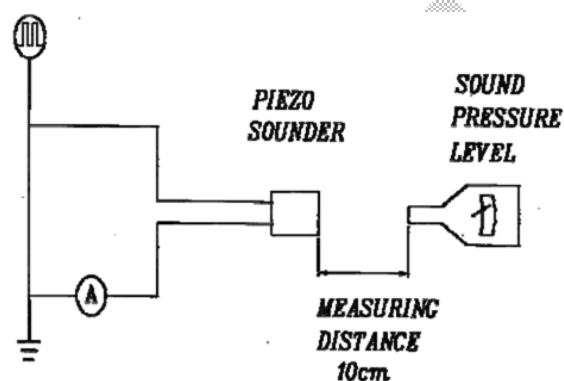
Tol:±0.3

Unit:mm

E.MEASUREMENT METHOD 測量方式



F.INSPECTION FIXTURE 測試架





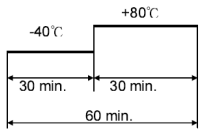
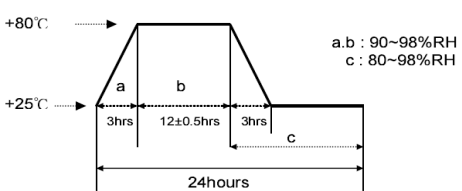
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G.MECHANICAL CHARACTERISTICS 機械特性

NO.	Item	Test condition	Evaluation standard
1	Solderability 焊錫附著性	Lead terminals are immersed in solder bath of $+260\pm 5^{\circ}\text{C}$ for 3 ± 1 Second. 端子置於錫膏內. 錫膏溫度: $+260\pm 5^{\circ}\text{C}$. 焊接時間: 3 ± 1 秒	95% surface of lead pads must be covered with fresh solder 錫膏需覆蓋端子上方 95%
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 操作上无任何不良
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 板上后, 對單體施以 9.8N (1.0kg) 拉力 10 秒	No damage and cutting of 端子不松动, 不脫落
4	Vibration 震動測試	Buzzer shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55hz band of vibration frequency to each of 3per-pendicular directions for 6 hours 震動週波數 10~55HZ. 全振幅 1.5mm 于 X.Y.Z 3 個方向. 各 6 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 經測試后, 单体除音壓外觀及电气特性須符合規格, 輸出音壓变化量須 $\pm 10\text{dBA}$ 內
5	Drop test 落下測試	The part only shall be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes(X.Y.Z).(a total of 9 times). 單體從 75 公分高處.X.Y.Z. 3 個方向. 各 3 回. 落于 40mm 厚木板上.	

H.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 $+80^{\circ}\text{C}$ for 48 hours. 置於 $+80^{\circ}\text{C}$ 環境中 48 小時	After the test the part shall meet specifications with-out any degradation in appearance and performance except SPL. After 4 hours at $+25^{\circ}\text{C}$. the SPL should be in $\pm 10\text{dBA}$ compared with initial one 經測試后, 靜置於 $+25^{\circ}\text{C}$ (室溫) 環境中 4 小時, 单体除音壓外, 外觀及电气特性須符合規格, 輸出音壓变化量需在 $\pm 10\text{dBA}$ 內
2	Low temp test 低溫測試	After being placed in a chamber at -40°C for 48 hours. 置於 -40°C 環境中 48 小時	
3	Therman Shock 熱沖擊實驗	The part shall be subjected to 10 cycles. One cycle shall consist of: 對单体施以熱沖擊實驗 10 次循環. 其循環內容如圖示 	
4	Temp./Humidity Cycle 溫度/濕度循環測試	The part shall be subjected to 10 cycles. One cycle shall be 24 hours and consist of 单体承受溫度/濕度循環測試 10 次. 其循環內容如圖示 	

I.RELIABILITY TEST 信赖性测试

No.	Item	Test condition	Evaluation standard
1	Operating life test 寿命测试	<p>1. Ordinary temperature 室温寿命测试 The part shall be subjected to 100 hours at room temperature with 3.0V.4000HZ applied (+25±10℃) 下, 输入 3.0V. 4000HZ 连续操作 100 小时</p> <p>2. High temperature 高温寿命测试 The part shall be subjected to 50 hours at +55℃ with 3.0V. 4000HZ applied 在+55℃环境下, 输入 3.0V. 4000HZ 连续操作 50 小时</p> <p>3. Low temperature 低温寿命测试 The part shall be subjected to 50 hours at -30℃ with 3.0V. 4000HZ applied 在-30℃环境下, 输入 3.0V. 4000HZ 连续操作 50 小时</p>	<p>After the test the part shall meet Specifications with-out any degradation in appearance and Performance except. SPL. after 4 hours at +25℃. the SPL. should be in ±10dBA compared with initial one.</p> <p>经测试后, 静置于+25℃(室温)环境中 4 小时后, 单体除音压外, 外觀及电气特性须符合规格, 輸出音壓变化量需在±10dBA 内</p>

TEST CONDITION.

Standard Test Condition : a) Temperature:+5~+35℃ b) Humidity:45~85% c) Pressure:860~1060mbar

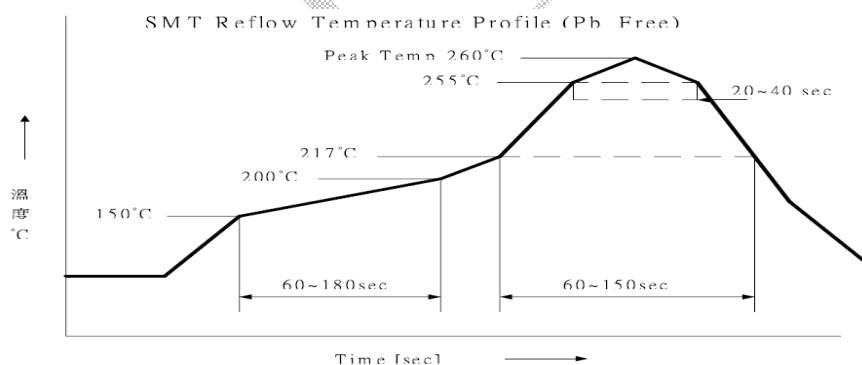
一般测试条件 : a) 温度: +5~+35℃ b) 湿度:45~85% c) 气压: 860~1060mbar

Judament Test Condition: a) Temperature:+25±2℃ b) Humidity:60~70% c) Pressure:860~1060mbar

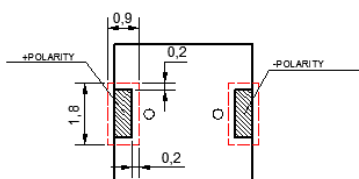
爭議时测试条件 : a) 温度: +25±2℃ b) 湿度: 60~70% c) 气压: 860~1060mbar

J.Recommended Temperature Profile For Reflow Oven 建議回焊爐溫度曲线

焊接区温度设置在 245 度左右



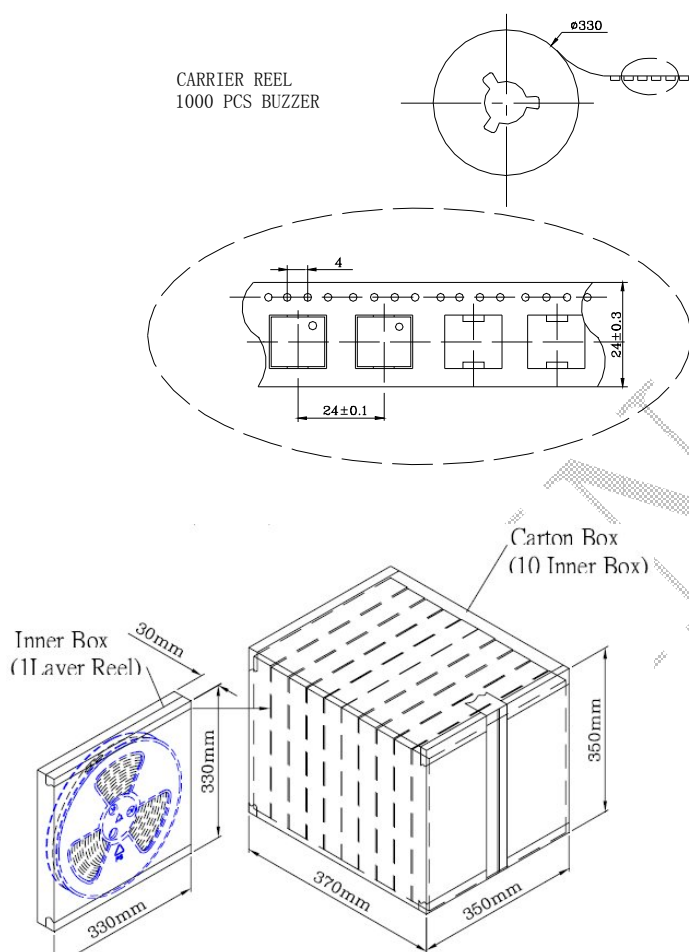
K.Recommended land pattern 建議基板設計尺寸圖



PIN package Vertical view, Connection between positive electrode of PIN package and positive electrode of product

此图为 PCB 板封装俯视图, PCB 封装的正负极和产品的正负极相对应

L.PACKING STANDARD 包装规格



Inner Box	330mmx330mmx30mm	1X1000PCS=1000PCS
Carton Box	370mmx370mmx350mm	10X1000PCS=10000PCS