

SPECIFICATION FOR APPROVAL

承認書

Description : Piezo Audio Indicator

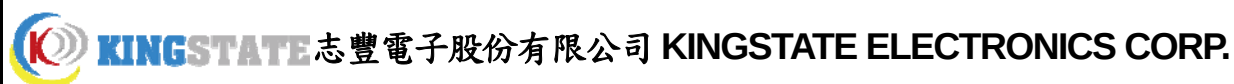
Kingstate Part No. : KMIG2240

Customer's Model No. : _____

Specification No. : POD-5284

Number Of The Edition : 1.1

CUSTOMER'S APPROVED SIGNATURE		



Address : 10F, No. 69-11, Sec. 2, Chung Cheng E. Rd., Tamshui County, Taipei Hsien, Taiwan, R.O.C.

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<http://www.kingstate.com.tw>

Approved by	Checked by	Issued by
		<i>Cathy</i> <i>2015/03/08</i>

[警告] 此產品請勿反向施加電壓驅動，否則易造成不可預期損壞。

[WARNING] Don not add power source reversely, or the product will be damaged completely.

A. SCOPE 範疇

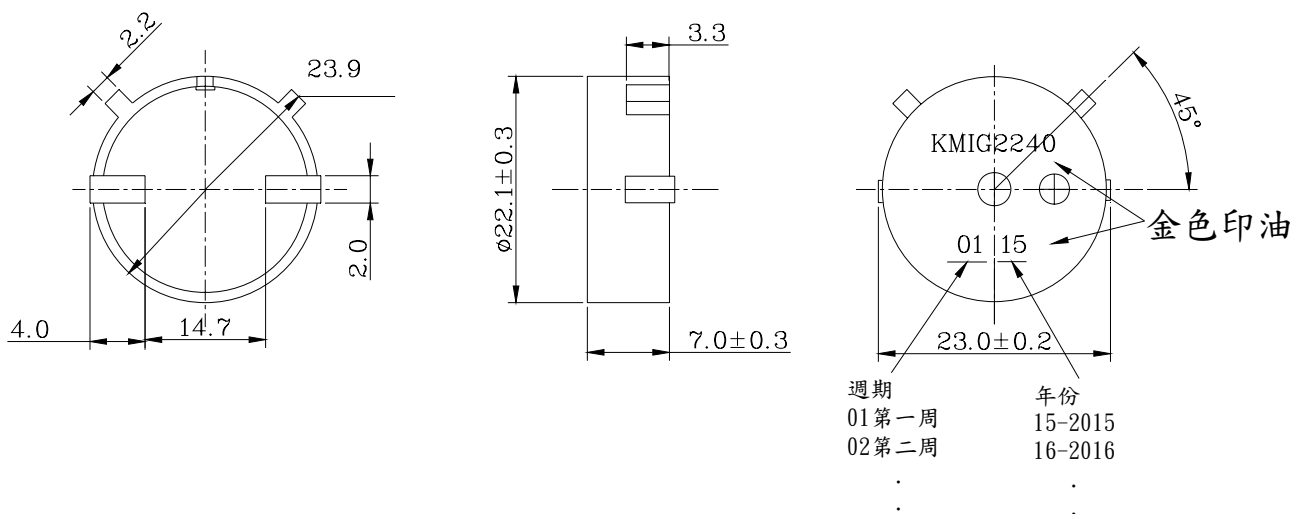
This specification applies piezo audio indicator, **KMIG2240**

此規格書適用於壓電式蜂鳴器, **KMIG2240**

B. SPECIFICATION 規格

No.	Item	Unit	Specification	Condition
1	Resonant frequency 共振頻率	KHz	4.0±0.5	
2	Operating Volt. range 操作電壓範圍	VDC	3~ 16	
3	Current consumption 消耗電流	mA	MAX 12	at 12VDC
4	Sound pressure level 輸出音壓	dB	MIN 95	at 10cm/12VDC
5	Rated Voltage 額定電壓	VDC	12	
6	Tone 聲音		Continuous 直音	
7	Operating temp. 操作溫度	℃	-40 ~ +85	
8	Storage temp. 儲存溫度	℃	-40 ~ +90	
9	Dimension 尺寸	mm	φ22 x H6.0	See appearance drawing 請參照外觀尺寸圖
10	Weight (MAX) 重量	gram	3.0	
11	Material 材質		PPS (BLACK)	
12	Terminal 端子		Pin type (鍍化錫/ Plating Tin)	See appearance drawing 請參照外觀尺寸圖
13	Environmental Protection Regulation 環保法規		HSF	

C. APPEARANCE DRAWING 外觀尺寸圖

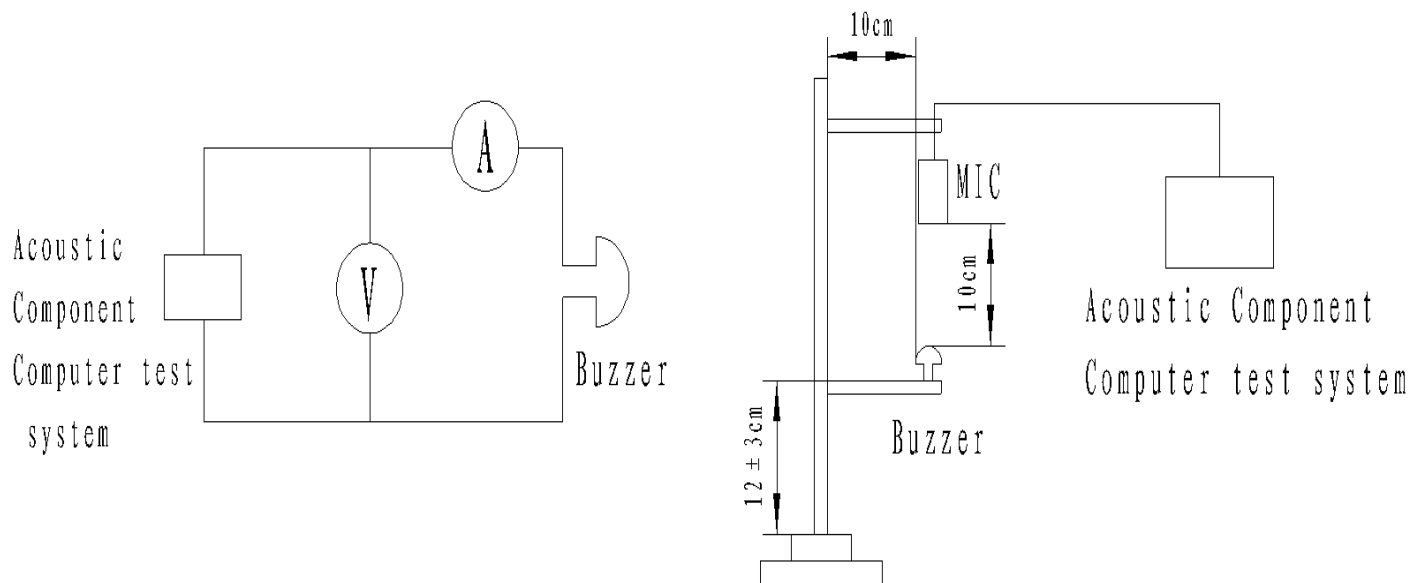


Tol : ± 0.5

Unit : mm

D. MEASURING METHOD 測量方法

S.P.L. Measuring Circuit 音壓測試接線圖

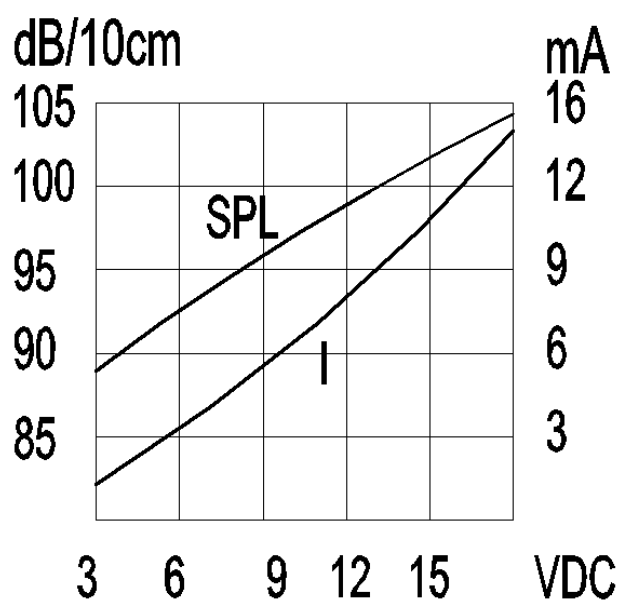


Mic : RION S.P.L meter UC30 or equivalent

Mic : RION 噪音計 UC30 或同等品

E. VOLTAGE: SOUND PRESSURE LEVEL / VOLTAGE: CURRENT CONSUMPTION

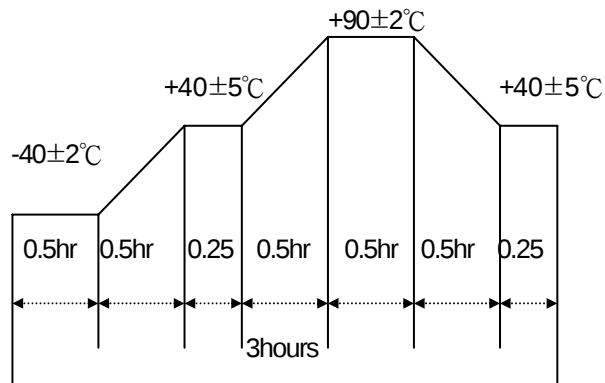
CHARACTERISTICS 電壓與音壓/電壓與耗電流之特性



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 rosin for 5 seconds and then immersed in solder bath of $+270\pm5^{\circ}\text{C}$ for 3 ± 1 seconds. 端子部份浸入松香溶液 5 秒後,再浸入 $+270\pm5^{\circ}\text{C}$ 熔融焊錫槽中 3 ± 1 秒.	90% min. lead terminals shall be wet with solder. (Except the edge of terminal) 浸入端子部份附著焊錫 90%以上.(末端斷面不算)
2	Soldering Heat Resistance 焊錫耐熱性	Lead terminal are immersed up to 1.5mm from sounder's body in solder bath of $+300\pm5^{\circ}\text{C}$ for 3 ± 0.5 seconds or $+260\pm5^{\circ}\text{C}$ for 10 ± 1 seconds. 距離端子根部 1.5mm 的位置,浸入 $+300\pm5^{\circ}\text{C}$ 的焊錫槽 3 ± 0.5 秒,或 $+260\pm5^{\circ}\text{C}$ 的焊錫槽 10 ± 1 秒.	No interference in operation 操作上無任何不良.
3	Terminal Mechanical Strength 端子強度	The force 10 seconds of 9.8N (1.0kg) is applied to each terminal in axial direction. 各端子的軸方向施以 9.8N (1.0kg)的力量 10 秒.	No damage and cutting off 端子不鬆動, 不脫落.
4	Vibration 振動試驗	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.	The value of oscillation frequency/ current consumption should be in 10% compared with initial ones .The SPL should be in $\pm 10\text{dB}$ compared with initial one.
5	Drop test 落下測試	The part only shall be dropped from a height of 70cm onto a 10mm thick wooden board 3 times in 3 axes (X.Y.Z). (a total of 9 times). 單體從 70 公分高處, X.Y.Z.3 個方向,各 3 回,落於 10mm 厚木板上.	諧振頻率與消耗電流變化量須在 $\pm 10\%$ 內. 輸出音壓變化量須在 $\pm 10\text{dB}$ 內.

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 $+90^{\circ}\text{C}$ for 120 hours 置於 $+90^{\circ}\text{C}$ 環境中 120 小時	Being placed for 4 hours at $+25^{\circ}\text{C}$, buzzer shall be measured. The value of oscillation frequency/ current consumption should be in $\pm 10\%$ compared with initial ones .The SPL should be in $\pm 10\text{dB}$ compared with initial one. 經測試後, 靜置於 $+25^{\circ}\text{C}$ (室溫) 環境中 4 小時後,諧振頻率與消耗電流變化量須在 $\pm 10\%$ 內. 輸出音壓變化量須在 $\pm 10\text{dB}$ 內.
2	Low temp. test 低溫測試	After being placed in a chamber with -40°C for 120 hours 置於 -40°C 環境中 120 小時	
3	Humidity test 相對濕度測試	After being placed in a chamber at $+40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ and 90~95% relative humidity for 120 hours 置於 $+40^{\circ}\text{C}\pm 2^{\circ}\text{C}$, 相對濕度 90~95% 環境中 120 小時	
4	Temp. cycle test 溫度循環試驗	The part shall be subjected to 5 cycles. One cycle shall be consist of : 單體承受溫度循環測試 5 次,其循環內容如圖示: 	

H. RELIABILITY TEST 信賴性測試

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

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

- NOTES:
- 1. 300pcs/tray
 - 2. 10 trays/carton
 - 3. 3000pcs/carton in total
 - 4. Volume:600*355*360mm