

# SPECIFICATION FOR APPROVAL

## 承 認 書

Description : Magnetic Buzzer

Kingstate Part No. : KXG1606C

Customer's Model No. : \_\_\_\_\_

Specification No. : TKS-7089

Number Of The Edition : 1.2

| CUSTOMER'S APPROVED SIGNATURE |  |  |
|-------------------------------|--|--|
|                               |  |  |

志豐電子股份有限公司 KINGSTATE ELECTRONICS CORP.

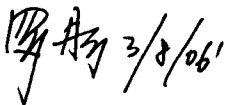



Address: 10F, No. 69-11, Sec. 2, Chung Cheng E. Rd., Tamshui County, Taipei Hsien, Taiwan, R.O.C.

International sales dept.: TEL : 886-2-2809-5651 FAX:886-2-2809-7151

Domestic sales dept.: TEL : 886-2-2809-0668 FAX:886-2-28096748

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

| Approved by   | Checked by  | Issued by        |
|---|---|------------------|
|  3/8/06' |  3/7/06' | Shen<br>3/04/06' |

## A. SCOPE 範疇

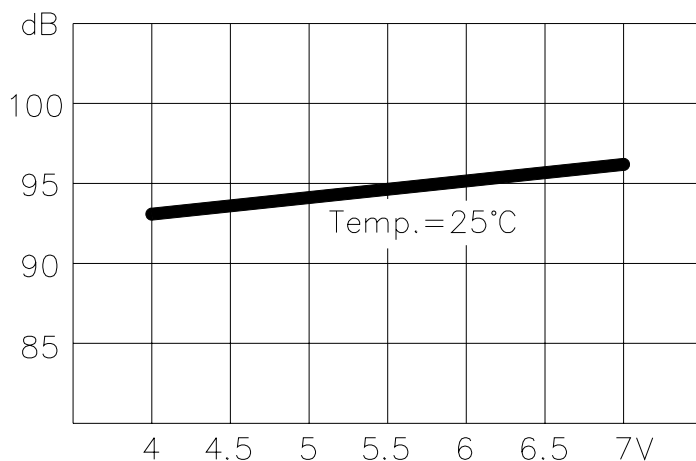
This specification applies magnetic buzzer, **KXG1606C**  
 此規格書適用於電磁式蜂鳴器, **KXG1606C**

## B. SPECIFICATION 規格

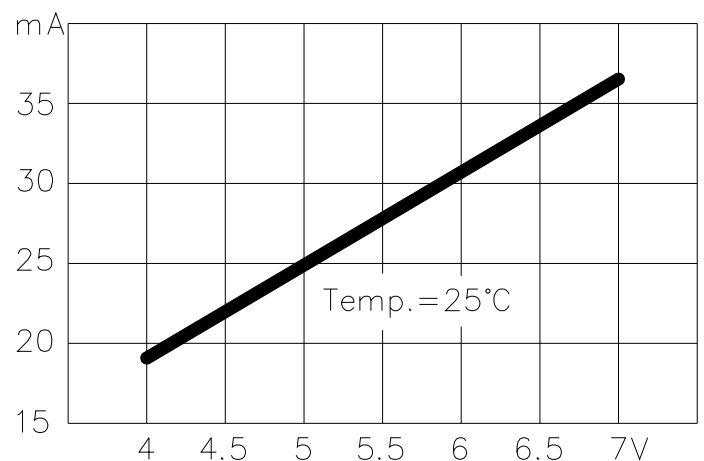
| No. | Item   | Unit            | Specification                | Condition   |
|-----|--|-----------------|------------------------------|---|
| 1   | Rated Voltage<br>額定電壓                          | V <sub>DC</sub> | 6.0                          |   |
| 2   | Operating Volt.<br>操作電壓                        | V <sub>DC</sub> | 4.0~7.0                      |   |
| 3   | Mean Current<br>平均耗電流                          | mA              | Max. 50                      |   |
| 4   | Sound Output<br>輸出音壓                           | dBA             | Min.85<br>(Typical 92)       | Distance at 10cm(A-weight free air).<br>在自由音場 10 公分處. |
| 5   | Resonant Frequency<br>諧振頻率                     | Hz              | 2200 ± 300                   |   |
| 6   | Operating Temp.<br>操作溫度                        |                 | -20 ~ +60                    |   |
| 7   | Storage Temp.<br>儲存溫度                          |                 | -30 ~ +70                    |   |
| 8   | Dimension<br>尺寸                                | mm              | 16.0 × H14.0                 | See attached drawing.<br>請參照外觀尺寸圖                     |
| 9   | Weight<br>重量                                   | gram            | 4.60                         |   |
| 10  | Material<br>材質                                 |                 | PPO (Black)                  |   |
| 11  | Terminal<br>端子                                 |                 | Pin type<br>(鍍化金/Plating Au) | See attached drawing.<br>請參照外觀尺寸圖                     |
| 12  | Environmental<br>Protection Regulation<br>環保法規 |                 | RoHS                         |   |

## C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線

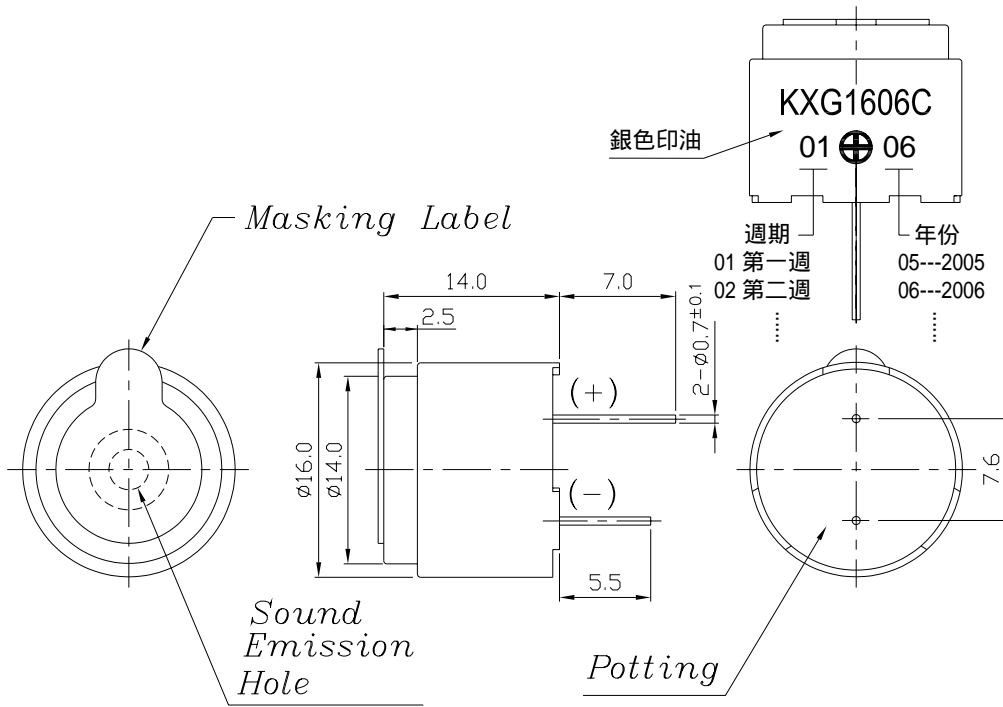
VOLTAGE-SOUND PRESSURE LEVEL



VOLTAGE-CURRENT CONSUMPTION



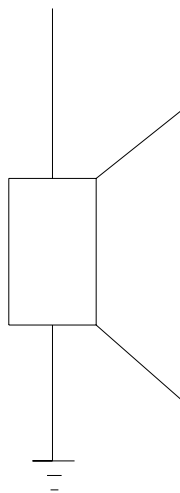
**D. APPEARANCE DRAWING 外觀尺寸圖**



**Tol:  $\pm 0.5$**   
**Unit: mm**

**E. MEASUREMENT METHOD 測量方式**

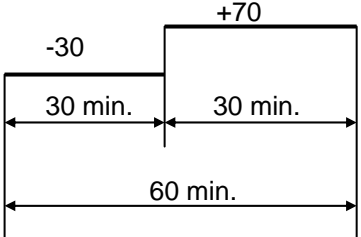
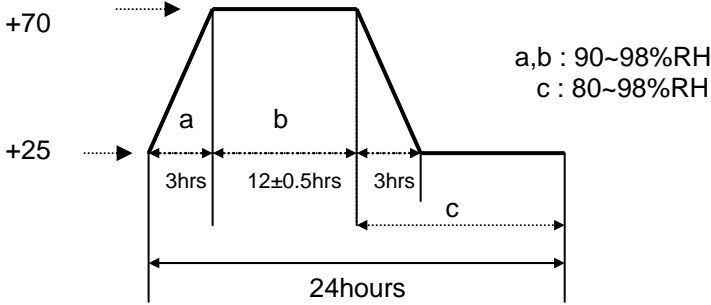
**+V DC**



## F. MECHANICAL CHARACTERISTICS 機械特性

| No. | Item                                 | Test condition  | Evaluation standard  |
|-----|--------------------------------------|---|--|
| 1   | Solderability<br>焊錫附著性               | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+270\pm 5$ for $3\pm 1$ seconds.<br>端子部份浸入松香溶液 5 秒後,再浸入 $+270\pm 5$ 溶融焊錫槽中 $3\pm 1$ 秒.  | 90% min. lead terminals shall be wet with solder. (Except the edge of terminal)<br>浸入端子部份附著焊錫 90%以上.(末端斷面不算)   |
| 2   | Soldering Heat Resistance<br>焊錫耐熱性   | Lead terminal are immersed up to 1.5mm from sounder's body in solder bath of $+260\pm 5$ for $3\pm 1$ seconds.<br>距離端子根部 1.5mm 的位置,浸入 $+260\pm 5$ 的焊錫槽 $3\pm 1$ 秒.  | No interference in operation<br>操作無任何不良  |
| 3   | Terminal Mechanical Strength<br>端子強度 | The force 10 seconds of 9.8N (1.0kg) is applied to each terminal in axial direction.<br>各端子的軸方向施以 9.8N (1.0kg)的力量 10 秒.   | No damage and cutting off<br>端子不鬆動, 不脫落  |
| 4   | Vibration<br>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.<br>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 $\pm 10$ dBA compared with initial one. |
| 5   | Drop test<br>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).<br>單體從 75 公分高處, X.Y.Z.3 個方向,各 3 回,落於 40mm 厚木板上.  | 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 $\pm 10$ dBA 內.   |

## G. ENVIRONMENT TEST 環境測試

| No. | Item                               | Test condition   | Evaluation standard   |
|-----|------------------------------------|--|---|
| 1   | High temp. test<br>高溫測試            | After being placed in a chamber at $+70$ for 96 hours.<br>置於 $+70$ 環境中 96 小時   | After the test the part shall meet specifications with-out any degradation in appearance and performance except SPL. after 4 hours at $+25$ . the SPL should be in $\pm 10$ dBA compared with initial one.<br>經測試後, 靜置於 $+25$ (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 $\pm 10$ dBA 內. |
| 2   | Low temp. test<br>低溫測試             | After being placed in a chamber at $-30$ for 96 hours.<br>置於 $-30$ 環境中 96 小時   |   |
| 3   | Thermal Shock<br>熱衝擊試驗             | The part shall be subjected to 10 cycles. One cycle shall consist of;<br>對單體施以熱衝擊試驗 10 次循環,其循環內容如圖示<br>                   |   |
| 4   | Temp./ Humidity Cycle<br>溫度/溼度循環測試 | The part shall be subjected to 10 cycles. One cycle shall be 24 hours and consist of;<br>單體承受溫度/溼度循環測試 10 次.其循環內容如圖示<br> |   |

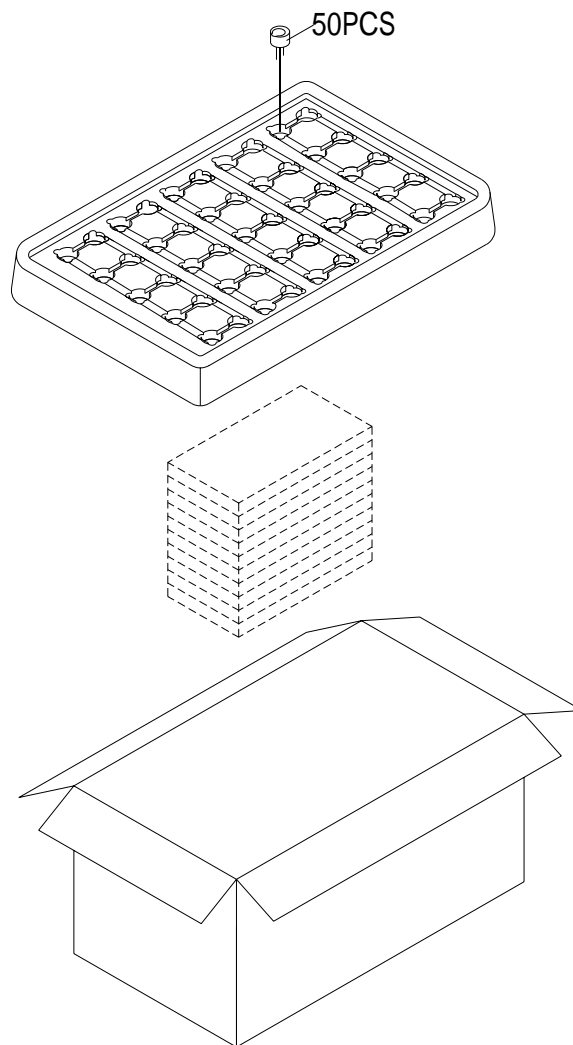
## H. RELIABILITY TEST 信賴性測試

| No. | Item                        | Test condition  | Evaluation standard   |
|-----|-----------------------------|---|---|
| 1   | Operating life test<br>壽命測試 | <p>1. Continuous life test 高溫壽命測試(連續)<br/>The part shall be subjected to 72 hours at +45 with 6.0VDC applied.<br/>在+45 環境下, 輸入 6.0VDC, 連續操作 72 小時.</p> <p>2. Intermittent life test 室溫壽命測試(間歇)<br/>A duty cycle of 1 minute on, 1 minutes off, a minimum of 10000 times at room temp.( +25±10 ) with 6.0VDC applied.<br/>在室溫下(+25±10 ), 輸入 6.0VDC, 通電 1 分鐘/斷電 1 分鐘, 測試 10000 次循環.</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>經測試後, 靜置於+25 (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±10dBA 內</p> |

### TEST CONDITION.

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

## I. PACKING STANDARD 包裝規格



|     |                   |                  |
|-----|-------------------|------------------|
| 吸塑盒 | 320mmx170mmx28mm  | 1x50PCS=50PCS    |
| 小紙箱 | 340mmx190mmx310mm | 10x50PCS=500PCS  |
| 大紙箱 | 690mmx390mmx350mm | 4x500PCS=2000PCS |