

SPECIFICATION FOR APPROVAL

承 認 書

Description : Piezo Audio Indicator

Kingstate Part No. : KPEG522

Customer's Model No. : _____

Specification No. : PKD-7293

Number Of The Edition : 1.2

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

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

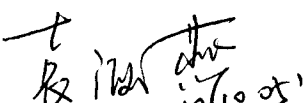


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| Approved by | Checked by | Issued by |
|---|--------------|------------------|
|  | 周新 10/10/05' | JIR 10/10/05' |



A. SCOPE 範疇

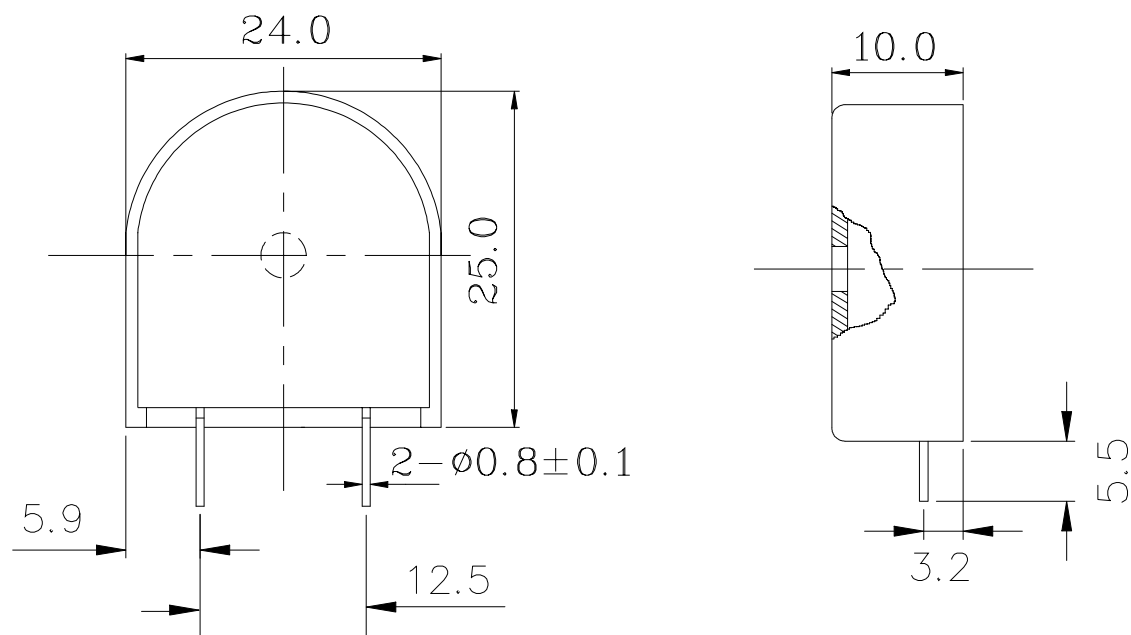
This specification applies piezo audio indicator, **KPEG522**

此規格書適用於壓電式蜂鳴器, **KPEG522**

B. SPECIFICATION 規格

| No. | Item | Unit | Specification | Condition |
|-----|--|------|------------------------------|------------------------------------|
| 1 | Resonant frequency 共振頻率 | KHz | 3.2±0.5 | |
| 2 | Operating Volt. range 操作電壓範圍 | VDC | 3 ~ 20 | |
| 3 | Current consumption 消耗電流 | mA | MAX 10 | at 12VDC |
| 4 | Sound pressure level 輸出音壓 | dB | MIN 75 | at 30cm/12VDC |
| 5 | Rated Voltage 額定電壓 | VDC | 12 | |
| 6 | Tone 聲音 | | Continuous 直音 | |
| 7 | Operating temp. 操作溫度 | | -30 ~ +115 | |
| 8 | Storage temp. 儲存溫度 | | -40 ~ +125 | |
| 9 | Dimension 尺寸 | mm | L25.0 x W24.0 x H10.0 | See appearance drawing 請參照外觀尺寸圖 |
| 10 | Weight (MAX) 重量 | gram | 3.7 | |
| 11 | Material 材質 | | PC 10% GLAS (BLACK) | |
| 12 | Terminal 端子 | | Pin type (鍍化金/Plating Au) | See appearance drawing 請參照外觀尺寸圖 |
| 13 | Environmental Protection Regulation 環保法規 | | RoHS | |

C. APPEARANCE DRAWING 外觀尺寸圖

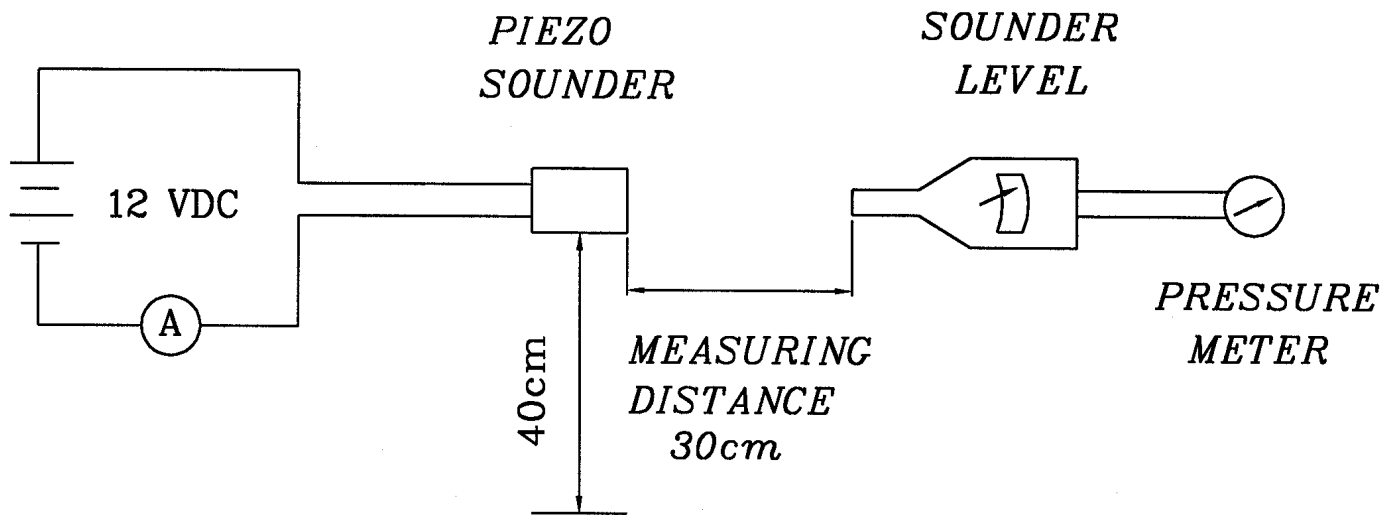


Tol : ± 0.5

Unit : mm

D. MEASURING METHOD 測量方法

S.P.L. Measuring Circuit 音壓測試接線圖

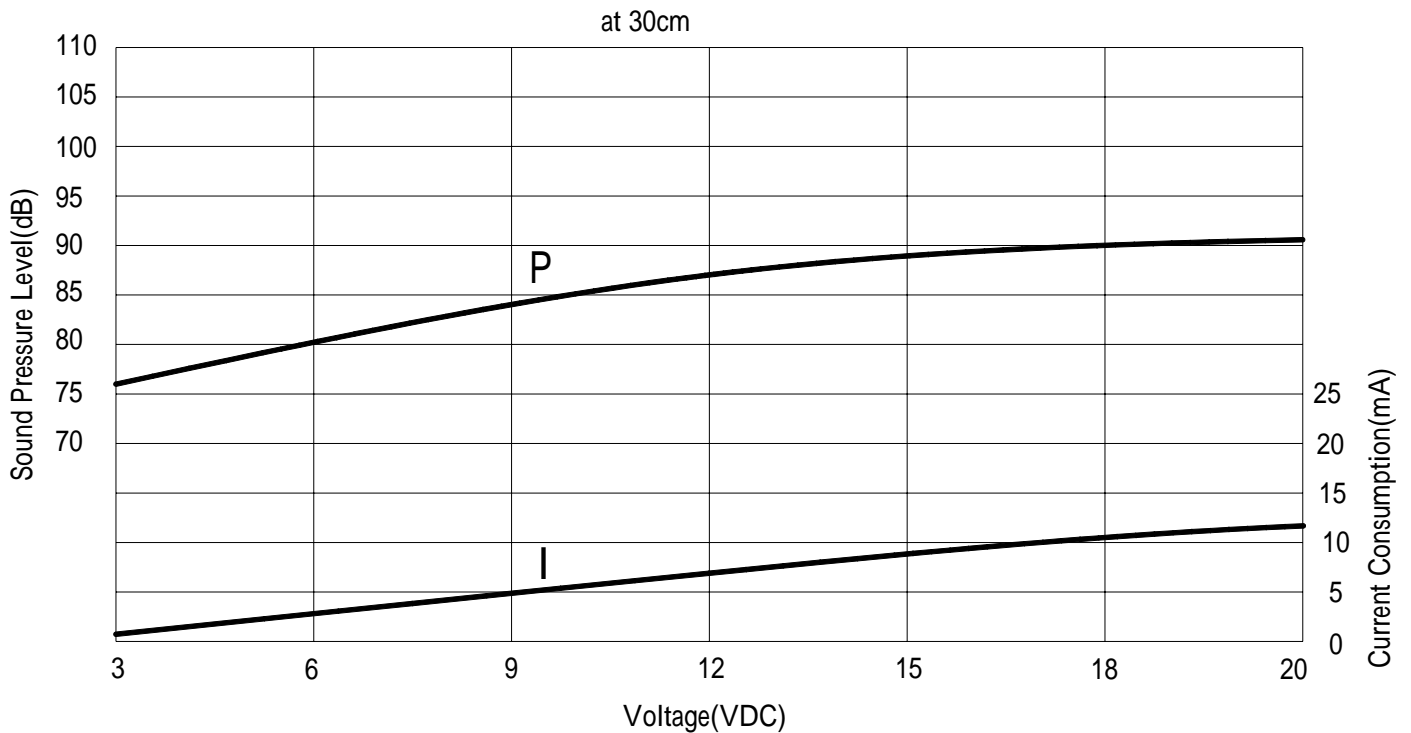


Mic : RION S.P.L meter UC30 or equivalent

Mic : RION 噪音計 UC30 或同等品

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

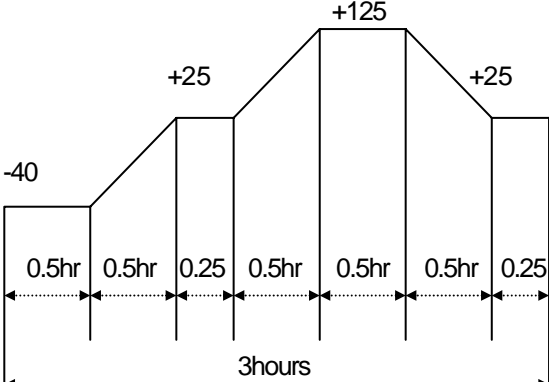
CHARACTERISTICS 電壓與音壓/電壓與耗電流之特性



F. MECHANICAL CHARACTERISTICS 機械特性

| No | Item | Test Condition | Evaluation standard |
|----|------------------------------------|---|---|
| 1 | Solder ability 焊錫附著性 | Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of +230±5 for 3±0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入+230±5 溶錫焊錫槽中 3±0.5 秒。 | 90% min. stripped wires shall be wet with solder.(Except the edge of terminal) 浸入裸線部份附著焊錫 90%以上。(末端斷面不算) |
| 2 | Soldering Heat Resistance 焊錫耐熱性 | Stripped wires are immersed up to 1.5mm from insulation in solder bath of +300±5 for 3±0.5 seconds or +260±5 for 10±1 seconds, and then sounder shall be measured after being placed in natural condition for 4 hours. 距絕緣體 1.5mm 的位置,浸入+300±5 的焊錫槽 3±0.5 秒,或+260±5 的焊錫槽 10±1 秒。 | No interference in operation. 操作上無任何不良。 |
| 3 | Terminal Strength Pulling 端子強度 | The force 10 seconds of 300g is applied to each terminal in axial direction. 各端子的軸方向施以 300g 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 perpendicular directions for 2 hours. 振動加波數 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 ±10dB compared with initial one. |
| 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,落於 40mm 厚木板上。 | 諧振頻率與消耗電流變化量須在 ±10%內。輸出音壓變化量須在 ±10dB 內。 |
| 6 | Inside lead wire pull test 內線強度 | The force 10 seconds of 400g is applied to each terminal in axial direction. 各線材的軸方向施以 400g 的力量 10 秒。 | No damage and cutting off. 線材不鬆動,不脫落。 |
| 7 | Strength Pulling A,B 蓋拉力實驗 | The force 1 minutes of 5kg at room temp.(+25±5) is applied to A,B case in 室溫(+25±5)條件下,A,B 蓋須承受 5kg 力量 1 分鐘。 | No damage and cutting off. A,B 蓋不變形,不脫落。 |

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 +125 for 240 hours 置於+125 環境中 240 小時 | Being placed for 4 hours at +25 , buzzer shall be measured. The value of oscillation frequency/ current consumption should be in ±10% compared with initial ones .The SPL should be in ±10dB compared with initial one. 經測試後, 靜置於+25 (室溫) 環境中 4 小時後,諧振頻率與消耗電流變化量須在±10%內。輸出音壓變化量須在±10dB 內。 |
| 2 | Low temp. test 低溫測試 | After being placed in a chamber at -40 for 240 hours 置於-40 環境中 240 小時 | |
| 3 | Humidity test 相對濕度測試 | After being placed in a chamber at +40 and 90±5% relative humidity for 240 hours 置於+40 , 相對濕度 90±5% 環境中 240 小時 | |
| 4 | Temp. cycle test 溫度循環測試 | 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 :  | |

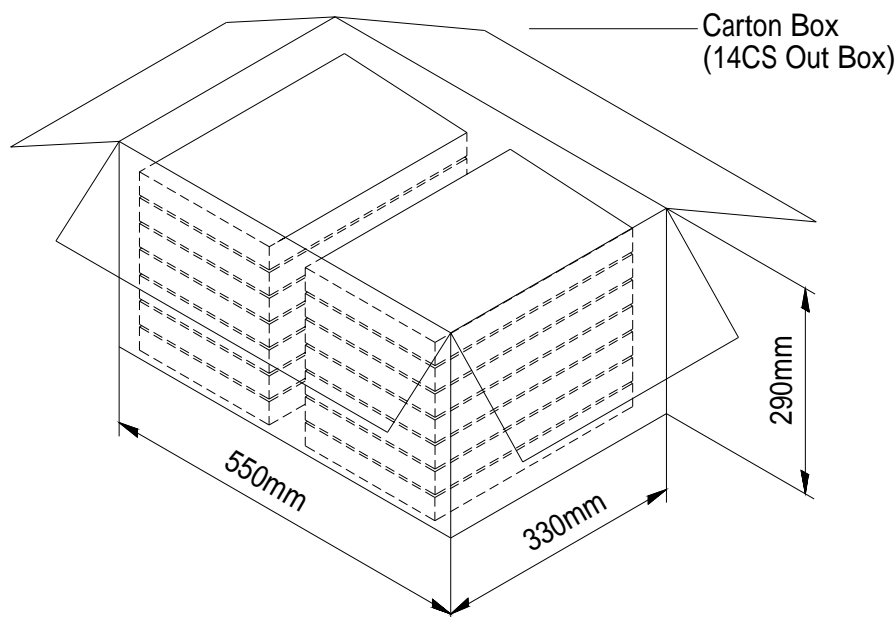
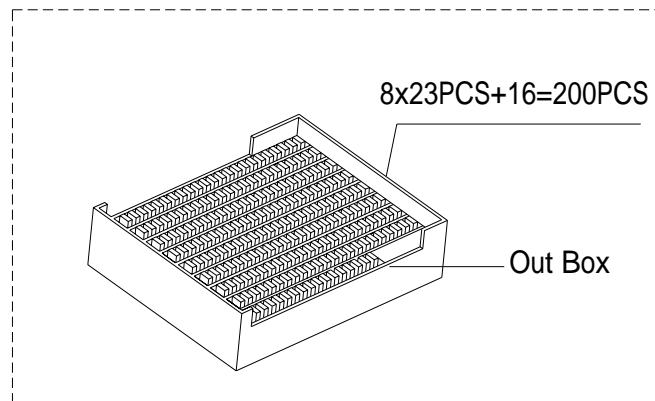
H. RELIABILITY TEST 信賴性測試

| No. | Item | Test condition | Evaluation standard |
|-----|-----------------------------|--|--|
| 1 | Operating life test 壽命測試 | 1. Continuous life test 高溫壽命測試(連續) 2 hours continuous operation at +105 with 15V applied. 在+105 環境下,以 15V 電壓連續操作 2 小時。 2. Intermittent life test 室溫壽命測試(間歇) A duty cycle of 1 minute on, 5 minutes off, a minimum of 10000 times at room temp. (+25 ±2) and maximum rated voltage applied. 在室溫下(+25 ±2), 以最大額定電壓操作, 通電 1 分鐘斷電 5 分鐘, 測試 10000 次循環。 | Being placed for 4 hours at +25 , buzzer shall be measured. The value of oscillation frequency/ current consumption should be in ±10% compared with initial ones .The SPL should be in ±10dB compared with initial one. 經測試後, 靜置於+25 (室溫) 環境中 4 小時後, 諧振頻率與消耗電流變化量須在±10%內. 輸出音壓變化量須在±10dB 內。 |

TEST CONDITION.

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

I. PACKING STANDARD 包裝規格



| | | |
|------------|-------------------|--------------------|
| Out Box | 310mmx248mmx40mm | 1x200PCS=200PCS |
| Carton Box | 550mmx330mmx290mm | 200PCSx14=2,800PCS |