

# SPECIFICATION FOR APPROVAL

## 承 認 書

Description : Electret Condenser Microphone

Kingstate Part No. : KECG2742CBL-A

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

Specification No. : MKD-7218

Number Of The Edition : 1.2

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



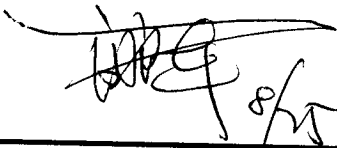
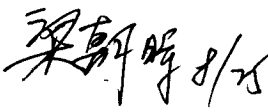
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| Approved by                                                                              | Checked by                                                                               | Issued by        |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------|
|  8/25 |  8/25 | Qin<br>08/25/06' |

## A. SCOPE 範疇

This specification applies electret condenser microphone, **KECG2742CBL-A**

此規格書適用於電容式麥克風 **KECG2742CBL-A**

## B. SPECIFICATION 規格

| No. | Item                                           | Symbol | Unit   | Specification          | Condition                                |
|-----|------------------------------------------------|--------|--------|------------------------|------------------------------------------|
| 1   | Directivity<br>方向性                             |        |        | Omnidirectional<br>全指向 |                                          |
| 2   | Sensitivity<br>靈敏度                             | S      | dB     | -42 ± 3                | f=1KHz, 1Pa<br>0dB=1V/Pa                 |
| 3   | Standard operating voltage<br>標準操作電壓           | Vs     | V D.C. | 2                      |                                          |
| 4   | Output impedance<br>輸出阻抗                       | Zout   | KΩ     | 2.2                    | f=1KHz, 1Pa                              |
| 5   | Max operating voltage<br>最大操作電壓                |        | V D.C. | 10                     |                                          |
| 6   | Sensitivity reduction<br>減電壓靈敏度                | △S-Vs  | dB     | -3                     | f=1KHz, 1Pa<br>Vs=2.0V D.C. to 1.5V D.C. |
| 7   | Frequency<br>頻率                                | f      | Hz     | 100 ~ 20,000           |                                          |
| 8   | Max. current consumption<br>最大耗電流              | IDSS   | mA     | 0.5                    | Vs=2.0V D.C. RL=2.2KΩ                    |
| 9   | Signal to noise ration<br>訊號對雜音比               | S/N    | dBA    | 58                     | f=1KHz, 1Pa<br>A weighted                |
| 10  | Operation temp.<br>操作溫度                        |        | °C     | -20 ~ +70              |                                          |
| 11  | Storage temp.<br>儲存溫度                          |        | °C     | -20 ~ +70              |                                          |
| 12  | Dimension<br>尺寸                                |        | mm     | φ 6.0 x 2.7            | See appearance drawing<br>請參照外觀尺寸圖       |
| 13  | Weight (MAX)<br>重量                             |        | gram   | 0.30                   |                                          |
| 14  | Material<br>材質                                 |        |        | AL<br>鋁                |                                          |
| 15  | Terminal<br>端子                                 |        |        | Contact type           | See appearance drawing<br>請參照外觀尺寸圖       |
| 16  | Environmental Protection<br>Regulation<br>環保法規 |        |        | RoHS                   |                                          |

We use "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C.(International Electro technical Commission).The Sensitivity of "Pa" will increase 20dB comparing with "ubar" indication.

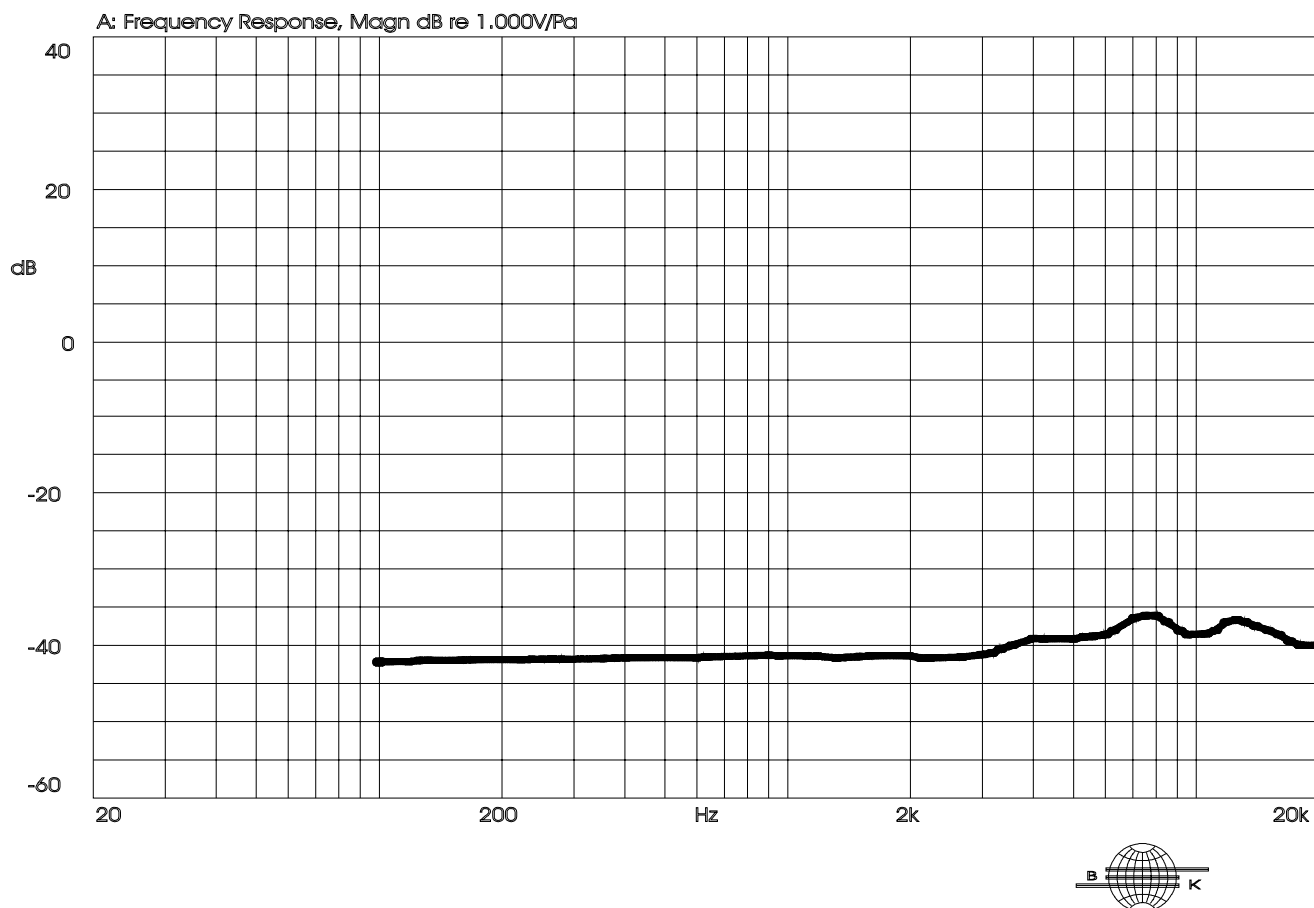
Example: -60dB (0dB=1V/ubar) = -40dB (1V/Pa)

依I.E.C.(國際電子協會)建議,以"Pa"為靈敏度標示單位比"ubar" 靈敏度標示單位增加20dB

例如: -60dB (0dB=1V/ubar) = -40dB (1V/Pa)

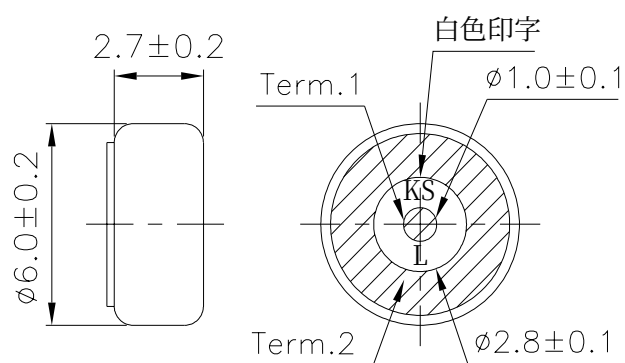
## C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線

X:1.0000kHz \*Y:-42.00dB ZA:Live Curve SSR Fund.



## D. APPEARANCE DRAWING

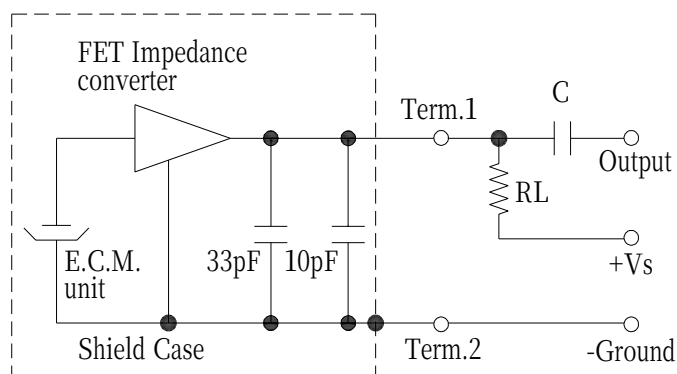
外觀尺寸圖



Unit: mm

## E. MEASUREMENT CIRCUIT

測量線路



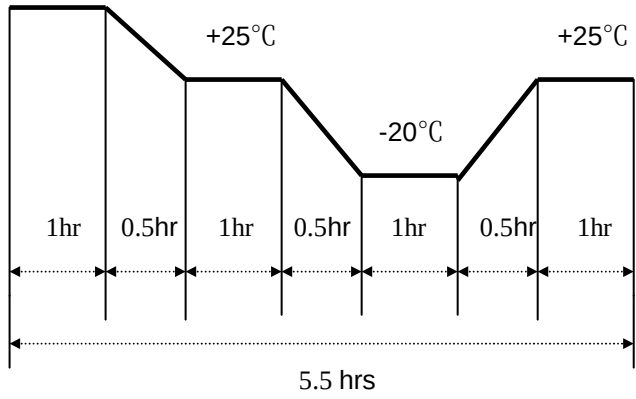
Schematic Diagram

RL=2.2K $\Omega$

## F. MECHANICAL CHARACTERISTICS 機械特性

| No. | Item                   | Test condition                                                                                                                                                                                                                   | Evaluation standard                                                                                     |
|-----|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1   | Vibration Test<br>振動測試 | The part 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 any tests, the sensitivity to be within $\pm 3\text{dB}$<br>測試其靈敏度須與原測試值的差異不超過 $\pm 3\text{dB}$ . |
| 2   | Drop Test<br>落下測試      | The part unit without packaged must be subjected to each 3 drops at three axes from the height of 1 meter to 20 mm thick wooden board.<br>未包裝麥克風單體從 1 公尺高處, X.Y.Z.3 個方向, 各 3 回, 落於 20mm 厚木板上.                                    |                                                                                                         |

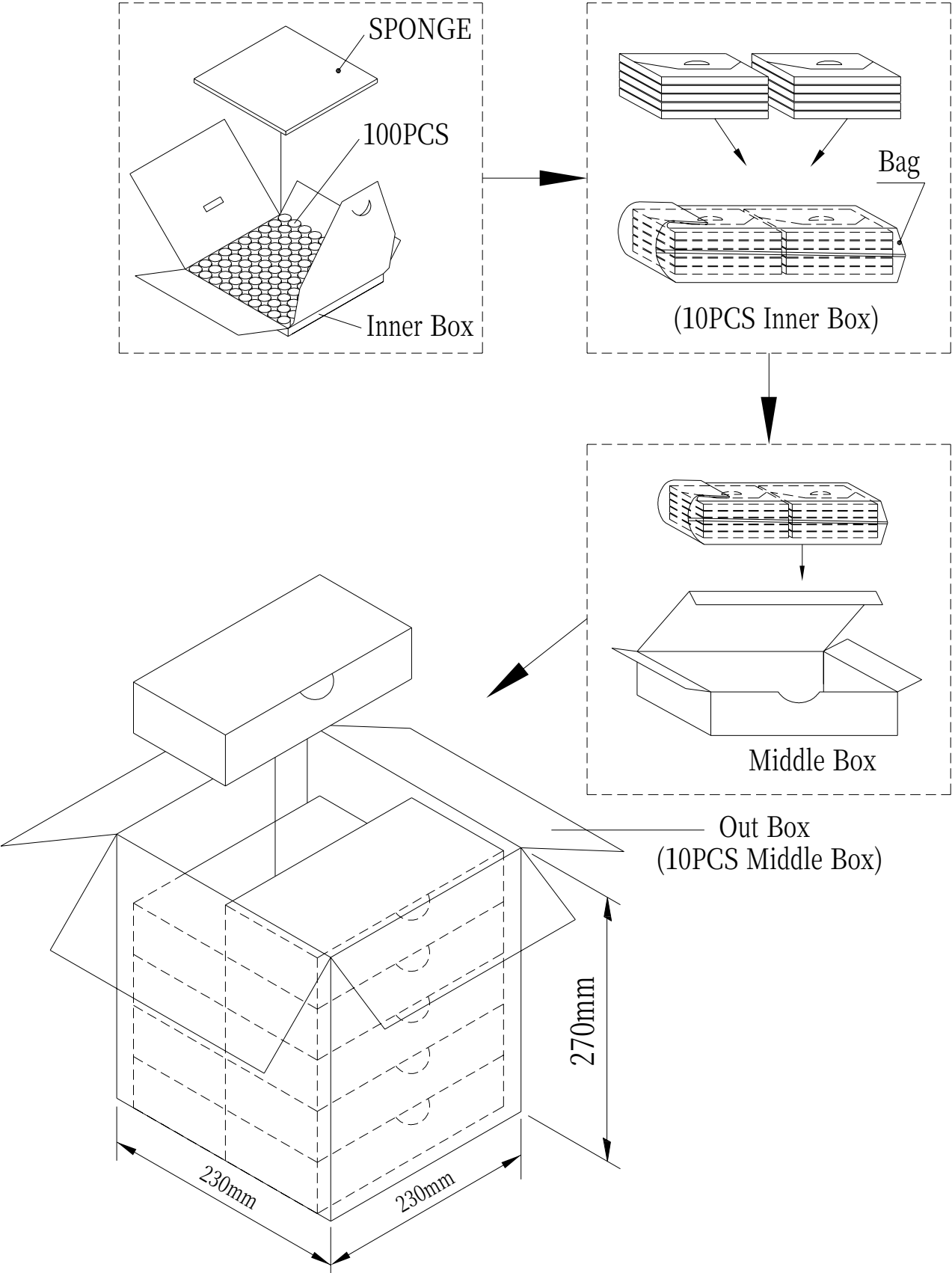
## G. ENVIRONMENTAL TEST 環境試驗

| No. | Item                       | Test conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Evaluation standard                                                                                                                                                                                                                     |
|-----|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | High temp. test<br>高溫測試    | After being placed in a chamber at $+70^{\circ}\text{C}$ for 72 hours.<br>置於 $+70^{\circ}\text{C}$ 環境中 72 小時                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | After any tests, the sensitivity to be within $\pm 3\text{dB}$ of initial sensitivity after 6 hours of conditioning at $+25^{\circ}\text{C}$<br>經測試後麥克風, 須靜置於 $+25^{\circ}\text{C}$ (室溫) 環境中 6 小時後, 測試其靈敏度須與原測試值的差異不超過 $\pm 3\text{dB}$ |
| 2   | Low temp. test<br>低溫測試     | After being placed in a chamber at $-20^{\circ}\text{C}$ for 72 hours.<br>置於 $-20^{\circ}\text{C}$ 環境中 72 小時                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                         |
| 3   | Humidity test<br>相對濕度測試    | After being placed in a chamber at $+40^{\circ}\text{C}$ and $90\pm 5\%$ relative humidity for 240 hours.<br>置於 $+40^{\circ}\text{C}$ , 相對濕度 $90\pm 5\%$ 環境中 240 小時                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                         |
| 4   | Temp. cycle test<br>溫度循環測試 | <p>The part shall be subjected to 10 cycles. One cycle shall consist of :</p> <p>單體承受溫度循環測試 10 次, 其循環內容如圖示:</p>  <p>The diagram illustrates a temperature cycle test profile. It starts at <math>+70^{\circ}\text{C}</math> for 1 hour, then ramps down to <math>+25^{\circ}\text{C}</math> over 0.5 hours. It remains at <math>+25^{\circ}\text{C}</math> for 1 hour, then ramps down to <math>-20^{\circ}\text{C}</math> over 0.5 hours. It remains at <math>-20^{\circ}\text{C}</math> for 1 hour, then ramps up to <math>+25^{\circ}\text{C}</math> over 0.5 hours, and finally remains at <math>+25^{\circ}\text{C}</math> for 1 hour. The total duration of one cycle is 5.5 hours.</p> |                                                                                                                                                                                                                                         |

### TEST CONDITION.

|                          |                                                |                      |                            |
|--------------------------|------------------------------------------------|----------------------|----------------------------|
| Standard Test Condition  | a) Temperature : $+5 \sim +35^{\circ}\text{C}$ | b) Humidity : 45-85% | c) Pressure : 860-1060mbar |
| 一般測試條件                   | a) 溫度 : $+5 \sim +35^{\circ}\text{C}$          | b) 濕度 : 45-85%       | c) 氣壓 : 860-1060mbar       |
| Judgement Test Condition | a) Temperature : $+25 \pm 2^{\circ}\text{C}$   | b) Humidity : 60-70% | c) Pressure : 860-1060mbar |
| 爭議時測試條件                  | a) 溫度 : $+25 \pm 2^{\circ}\text{C}$            | b) 濕度 : 60-70%       | c) 氣壓 : 860-1060mbar       |

H. PACKING STANDARD 包裝規格



|            |                   |                       |
|------------|-------------------|-----------------------|
| Inner Box  | 100mmx100mmx8mm   | 1x100PCS=100PCS       |
| Middle Box | 205mmx106mmx52mm  | 100PCSx10=1,000PCS    |
| Out Box    | 230mmx230mmx270mm | 1,000PCSx10=10,000PCS |