

SPECIFICATION FOR APPROVAL

承 認 書

Description : Electret Condenser Microphone
Kingstate Part No. : KECG2742WBL-25L
Customer's Model No. : _____
Specification No. : MKD-7690
Number Of The Edition : 1.1

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

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

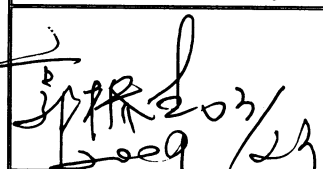
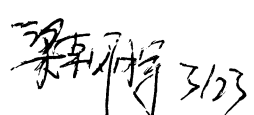


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| Approved by | Checked by | Issued by |
|---|---|-------------------|
|  |  | Chen 03/23/09' |

A. SCOPE 範疇

This specification applies electret condenser microphone, **KECG2742WBL-25L**

此規格書適用於電容式麥克風 **KECG2742WBL-25L**

B. SPECIFICATION 規格

| No. | Item | Symbol | Unit | Specification | Condition |
|-----|--|----------------------|--------|------------------------|---|
| 1 | Directivity 方向性 | | | Omnidirectional 全指向 | |
| 2 | Sensitivity 靈敏度 | S | dB | -42 ± 3 | f=1KHz, 1Pa 0dB=1V/Pa |
| 3 | Standard operating voltage 標準操作電壓 | Vs | V D.C. | 2 | |
| 4 | Output impedance 輸出阻抗 | Zout | KΩ | 2.2 | f=1KHZ, 1Pa |
| 5 | Max operating voltage 最大操作電壓 | | V D.C. | 10 | |
| 6 | Sensitivity reduction 減電壓靈敏度 | Δ S-Vs | dB | -3 | f=1KHz, 1Pa Vs=2.0V D.C. to 1.5V D.C. |
| 7 | Frequency 頻率 | f | Hz | 100 ~ 20,000 | |
| 8 | Max. current consumption 最大耗電流 | Idss | mA | 0.5 | Vs=2.0V D.C. RL=2.2KΩ |
| 9 | Signal to noise ration 訊號對雜音比 | S/N | dBA | 57 | f=1KHz, 1Pa A weighted |
| 10 | Operation temp. 操作溫度 | | °C | -20 ~ +70 | |
| 11 | Storage temp. 儲存溫度 | | °C | -20 ~ +70 | |
| 12 | Dimension 尺寸 | | mm | φ 6.0 x 2.7 | See appearance drawing 請參照外觀尺寸圖 |
| 13 | Weight (MAX) 重量 | | gram | 0.22 | |
| 14 | Material 材質 | | | AL 鋁 | |
| 15 | Terminal 端子 | | | Wire Type | See appearance drawing 請參照外觀尺寸圖 (Hand Soldering Only) |
| 16 | Environmental Protection Regulation 環保法規 | | | RoHS | |
| 17 | Dustproof and waterproof level 防塵、防水等級 | | | IP57 | IEC standard 529 edition 2.0(1989) IEC 標準 529 第二版(1989) |

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.

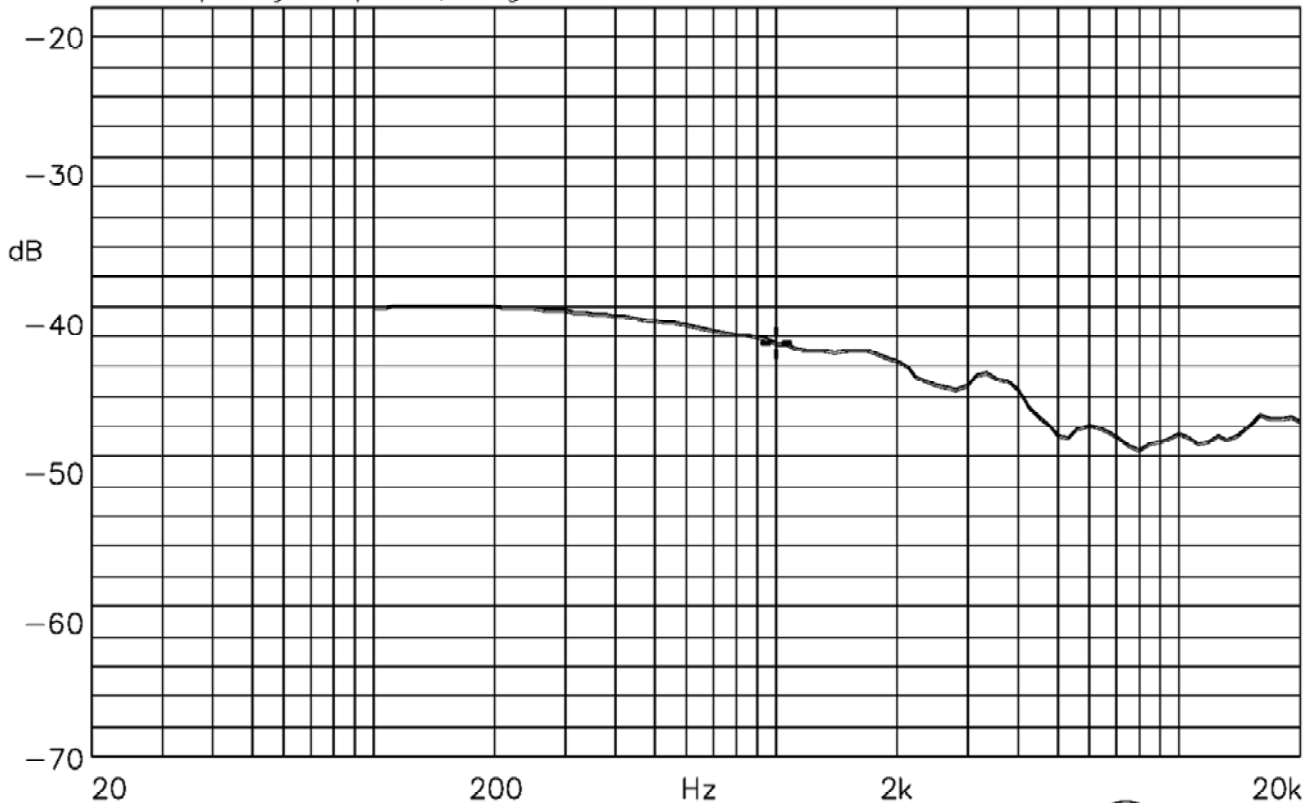
Example: -60dB (0dB=1V/ubar) = -40dB (1V/Pa)

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: -42.36dB ZA: Live Curve SSR Fund.
 A: Frequency Response, Magn dB re 1.000



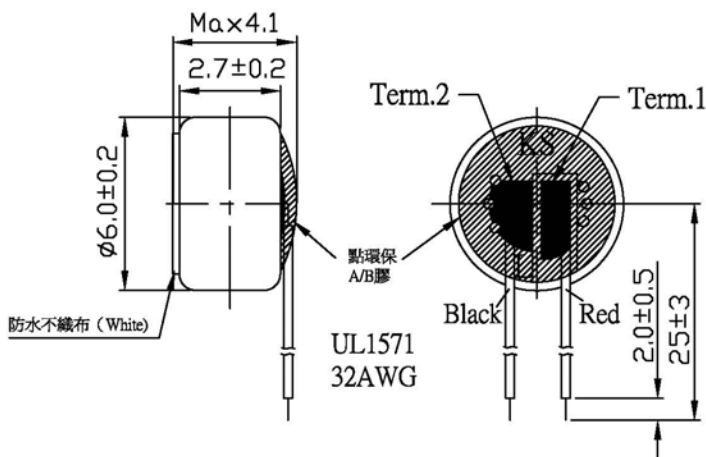
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Mode: SSR



D. APPEARANCE DRAWING

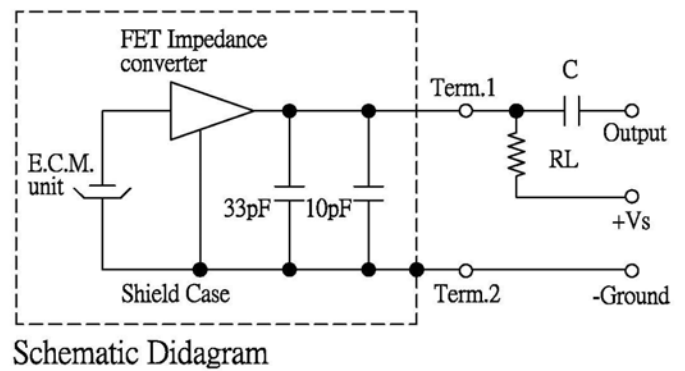
外觀尺寸圖



Unit:mm

E. MEASUREMENT CIRCUIT

測量線路



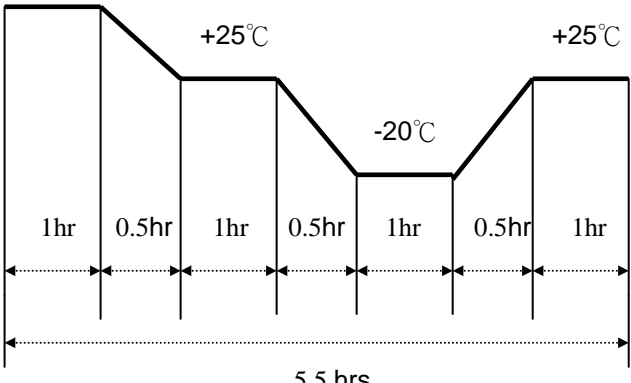
Schematic Diagram

RL=2.2KΩ

F. MECHANICAL CHARACTERISTICS 機械特性

| No. | Item | Test Condition | Evaluation standard |
|-----|--|---|---|
| 1 | Solderability 焊錫附著性 (Connector excepted) 端子類不適用此項 | Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of $+270\pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入 $+270\pm 5^{\circ}\text{C}$ 熔融焊錫槽 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 | Lead Wire Pull Strength 線材拉力 | The pull force shall be applied to double lead wire : Horizontal 4.9N(0.5kg) for 30 seconds. 雙線材水平方向施以 4.9N(0.5kg)的力量 30 秒. | No damage and cutting off. 線材不鬆動,不脫落. |
| 3 | 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. | After any tests, the sensitivity to be within $\pm 3\text{dB}$ |
| 4 | Drop test 落下測試 | The microphone 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. 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. | 測試其靈敏度須與原測試值的差異不超過 $\pm 3\text{dB}$. |

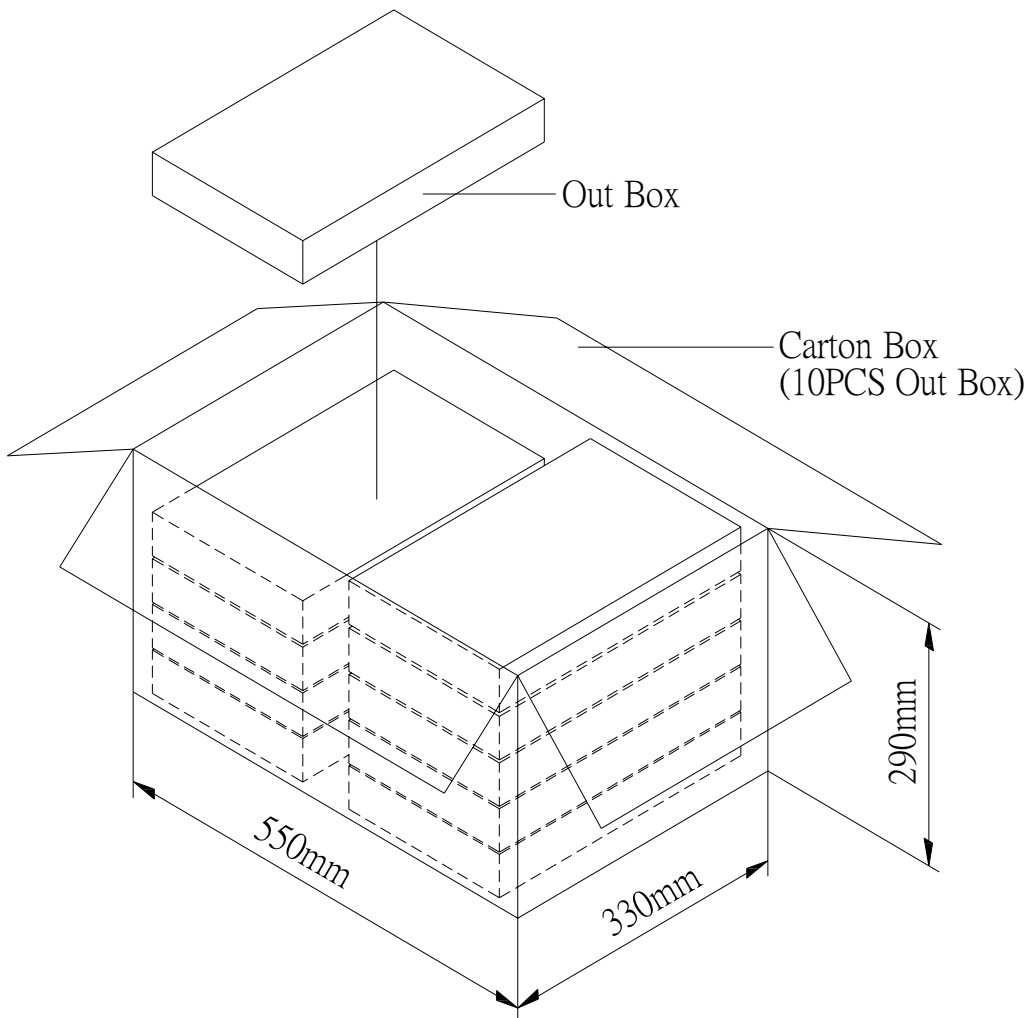
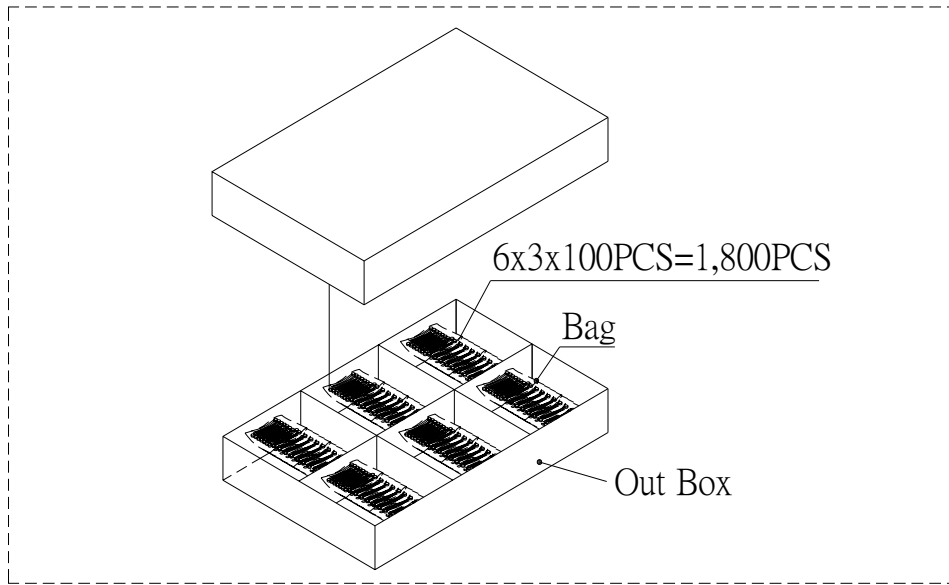
G. ENVIRONMENTAL TEST 環境試驗

| No. | Item | Test conditions | Evaluation standard |
|-----|----------------------------|--|--|
| 1 | High temp. test 高溫測試 | After being placed in a chamber at $+70^{\circ}\text{C}$ for 72 hours. 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 $+25^{\circ}\text{C}$ 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 低溫測試 | After being placed in a chamber at -20°C for 72 hours. 置於 -20°C 環境中 72 小時 | |
| 3 | Humidity test 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. 置於 $+40^{\circ}\text{C}$, 相對濕度 $90\pm 5\%$ 環境中 240 小時 | |
| 4 | Temp. cycle test 溫度循環測試 | The part shall be subjected to 10 cycles. One cycle shall be consist of : 單體承受溫度循環測試 10 次,其循環內容如圖示:  +70°C +25°C -20°C +25°C 1hr 0.5hr 1hr 0.5hr 1hr 0.5hr 1hr 5.5 hrs | |

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



| | | |
|------------|-------------------|-----------------------|
| Out Box | 310mmx248mmx49mm | 1x1,800PCS=1,800PCS |
| Carton Box | 550mmx330mmx290mm | 1,800PCSx10=18,000PCS |