

SPECIFICATION FOR APPROVAL

承 認 書

Description : Electret Condenser Microphone

Kingstate Part No. : KEEG1542PBL-A

Customer's Model No. : _____

Specification No. : MKD-7098

Number Of The Edition : 1.4

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



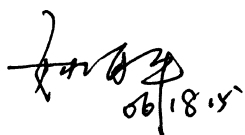
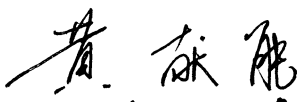
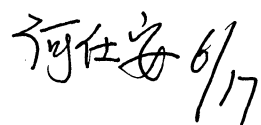
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|---|--|---|
|  06/18/15 |  2015-6-18 |  6/17 |

A. SCOPE 範疇

This specification applies electret condenser microphone, **KEEG1542PBL-A**

此規格書適用於電容式麥克風 **KEEG1542PBL-A**

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 | $\Delta S-Vs$ | 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 | dB | 58 | 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 4.0 x 1.5 | See appearance drawing 請參照外觀尺寸圖 |
| 13 | Weight (MAX) 重量 | | gram | 0.10 | |
| 14 | Material 材質 | | | Brass 黃銅 (Plating Au 鍍化金) | |
| 15 | Terminal 端子 | | | Pin type (Plating Au 鍍化金) | See appearance drawing 請參照外觀尺寸圖 |
| 16 | Environmental Protection Regulation 環保法規 | | | HSF | |

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.

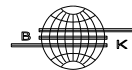
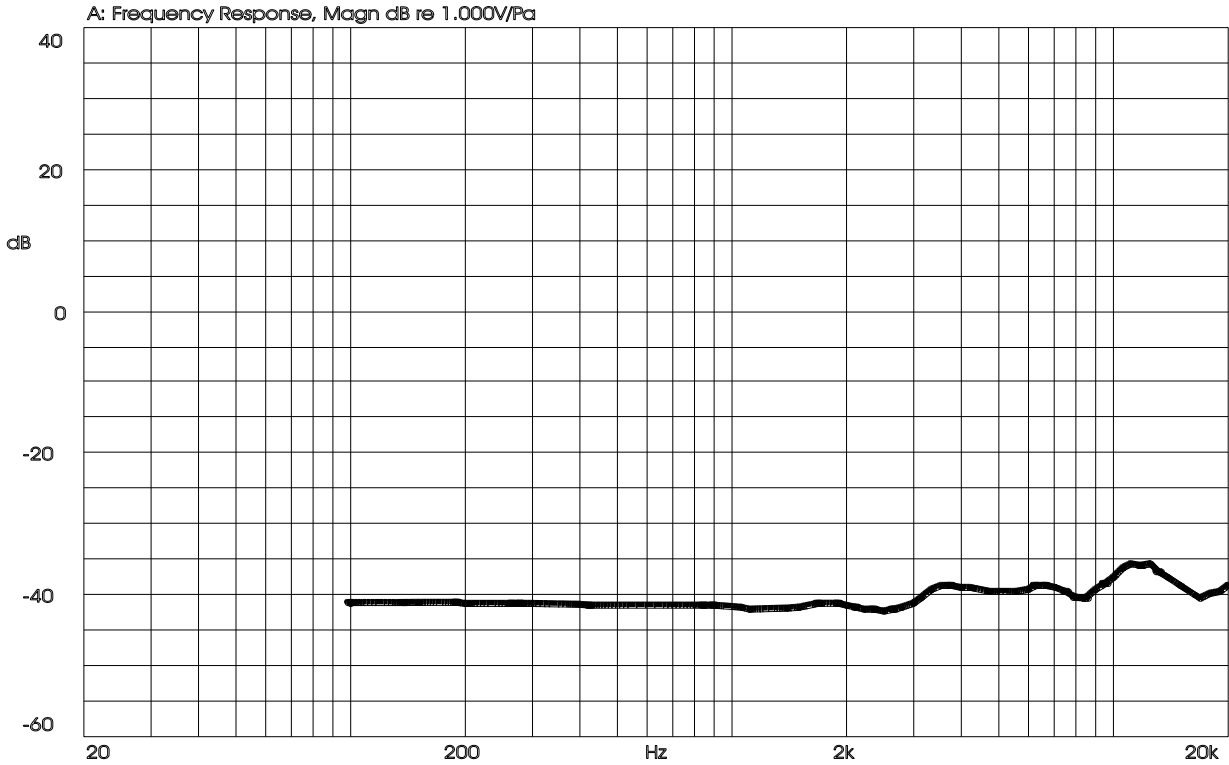
Example: -60dB (0dB=1V/ubar) = -40dB (1V/Pa)

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.

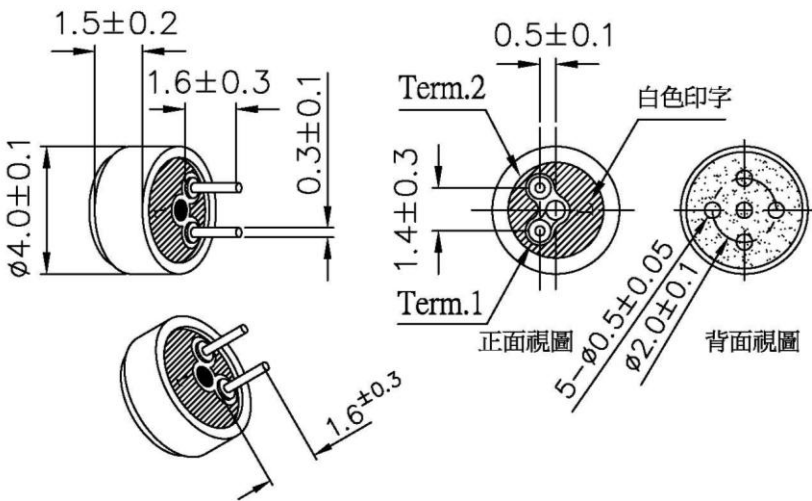


D. APPEARANCE DRAWING

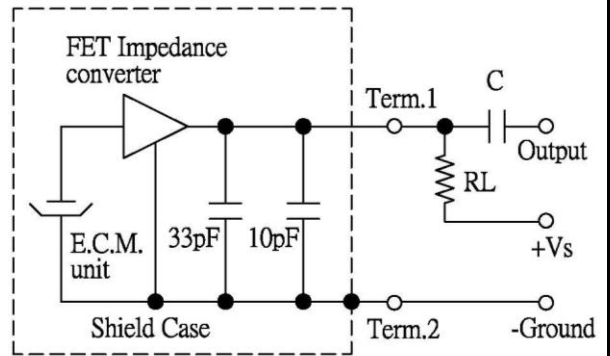
外觀尺寸圖

E. MEASUREMENT CIRCUIT

測量線路



Unit:mm



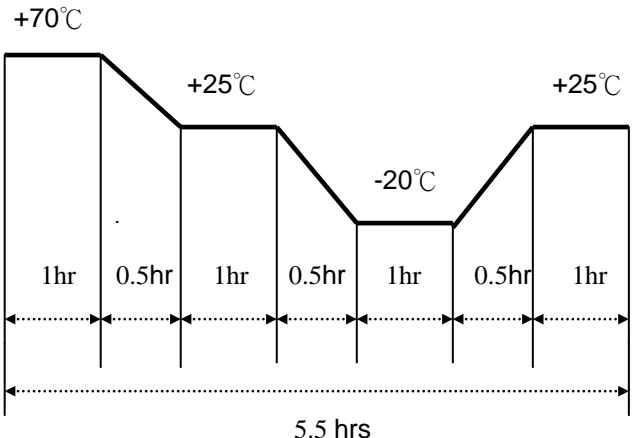
Schematic Diagram

RL=2.2KΩ

F. MECHANICAL CHARACTERISTICS 機械特性

| No. | Item | Test condition | Evaluation standard |
|-----|--------------------------------------|--|--|
| 1 | Soldering Heat Resistance 焊錫耐熱性 | Lead terminal are immersed in soldering bath of $+270\pm 5^{\circ}\text{C}$ for 2 ± 0.5 second. 端子部份浸入以 $+270\pm 5^{\circ}\text{C}$ 焊錫槽中 2 ± 0.5 秒。 | No interference in operation 操作無任何不良 |
| 2 | Terminal Mechanical Strength 端子強度 | Apply the terminal with 4.9N(0.5kg) strength for 30 second. 對端子施以 4.9N(0.5kg) 力量 30 秒。 | No damage and cutting off 端子不鬆動, 不脫落 |
| 3 | Vibration Test 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. 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 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. 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 $\pm 3\text{dB}$. |

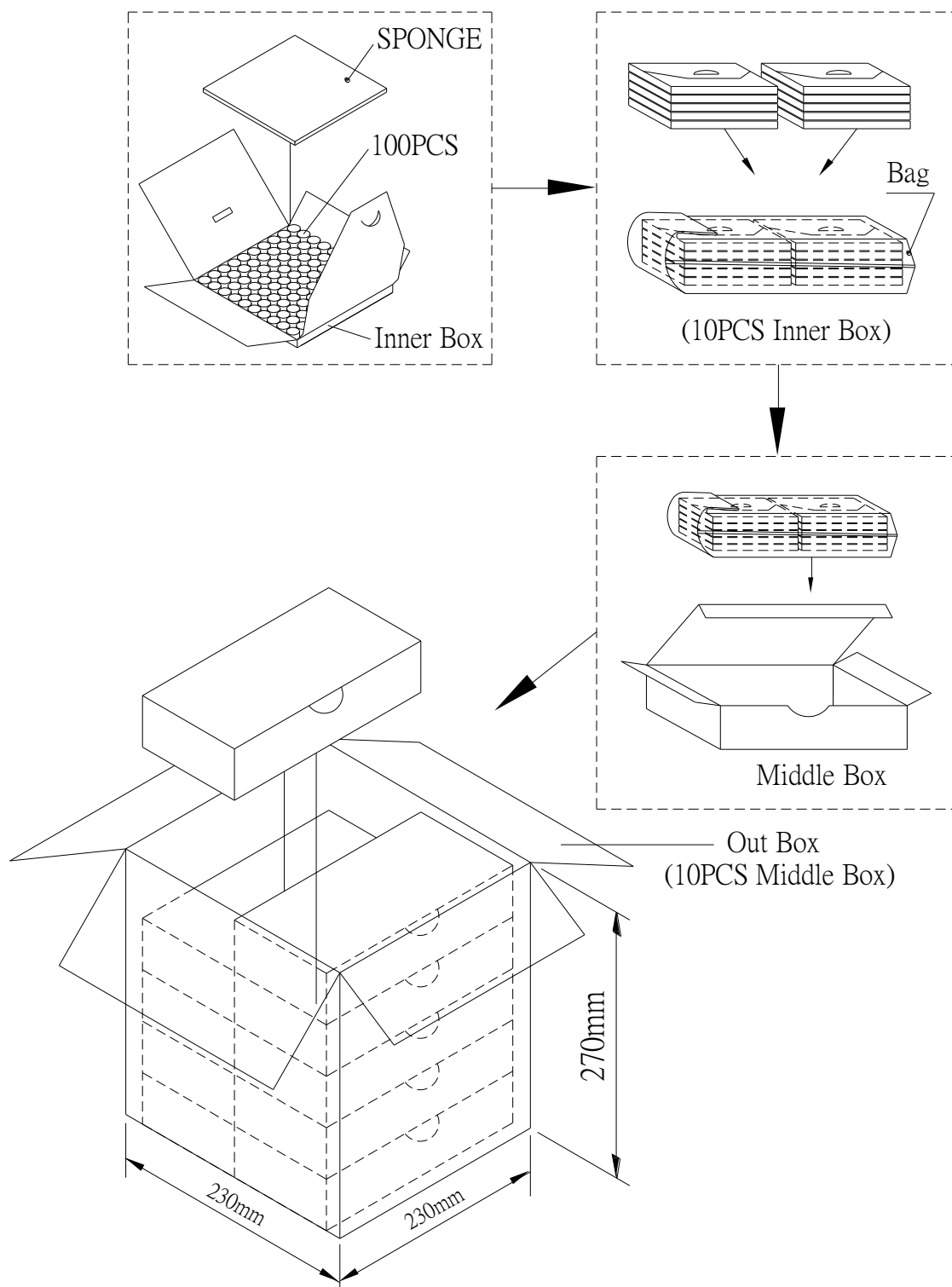
G. ENVIRONMENTAL TEST 環境試驗

| 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:  | |

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 |