

SPECIFICATION FOR APPROVAL

承 認 書

Description : Micro Dynamic Box

Kingstate Part No. : KDSG3525008R-BOX

Customer's Model No. : _____

Specification No. : DOD-S372

Number Of The Edition : 1.3

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

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KINGSTATE

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| 王 育 貞 2017. 11. 08 | 劉 振 華 (11/8/17) | Sawen 11/08/17' |

A. SCOPE 範疇

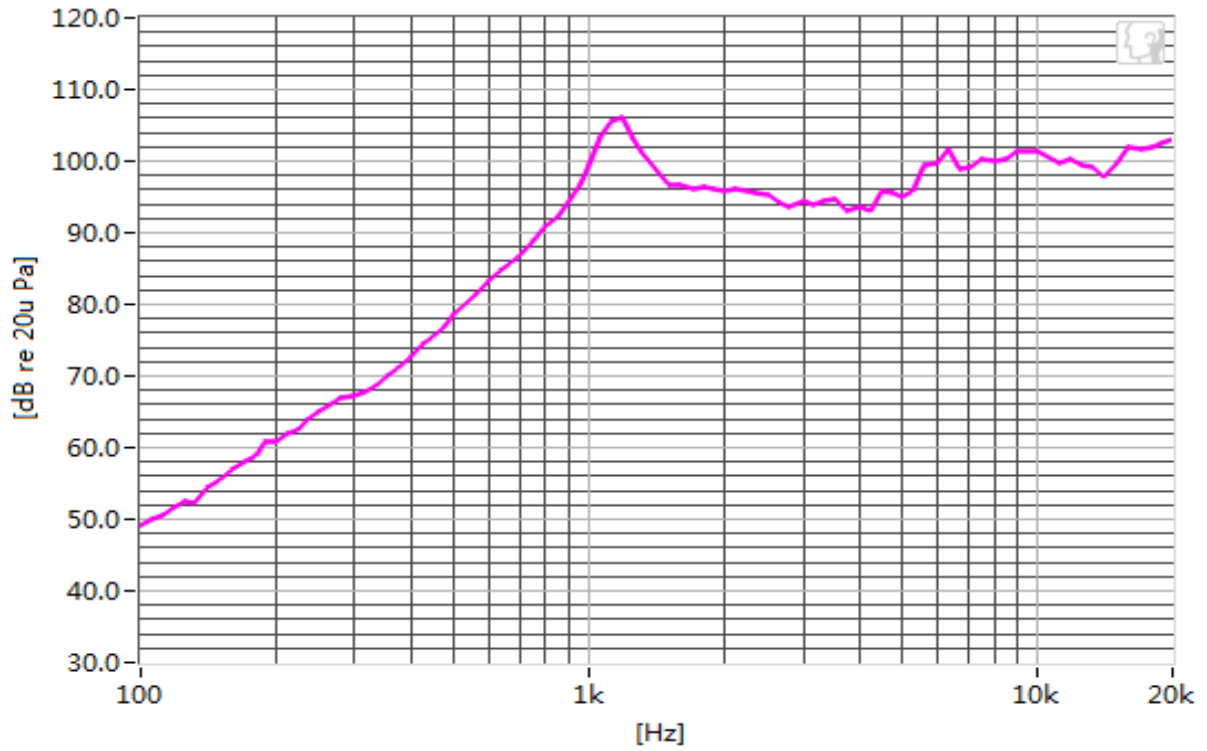
This specification applies box, **KDSG3525008R-BOX**

此規格書適用於音箱, **KDSG3525008R-BOX**

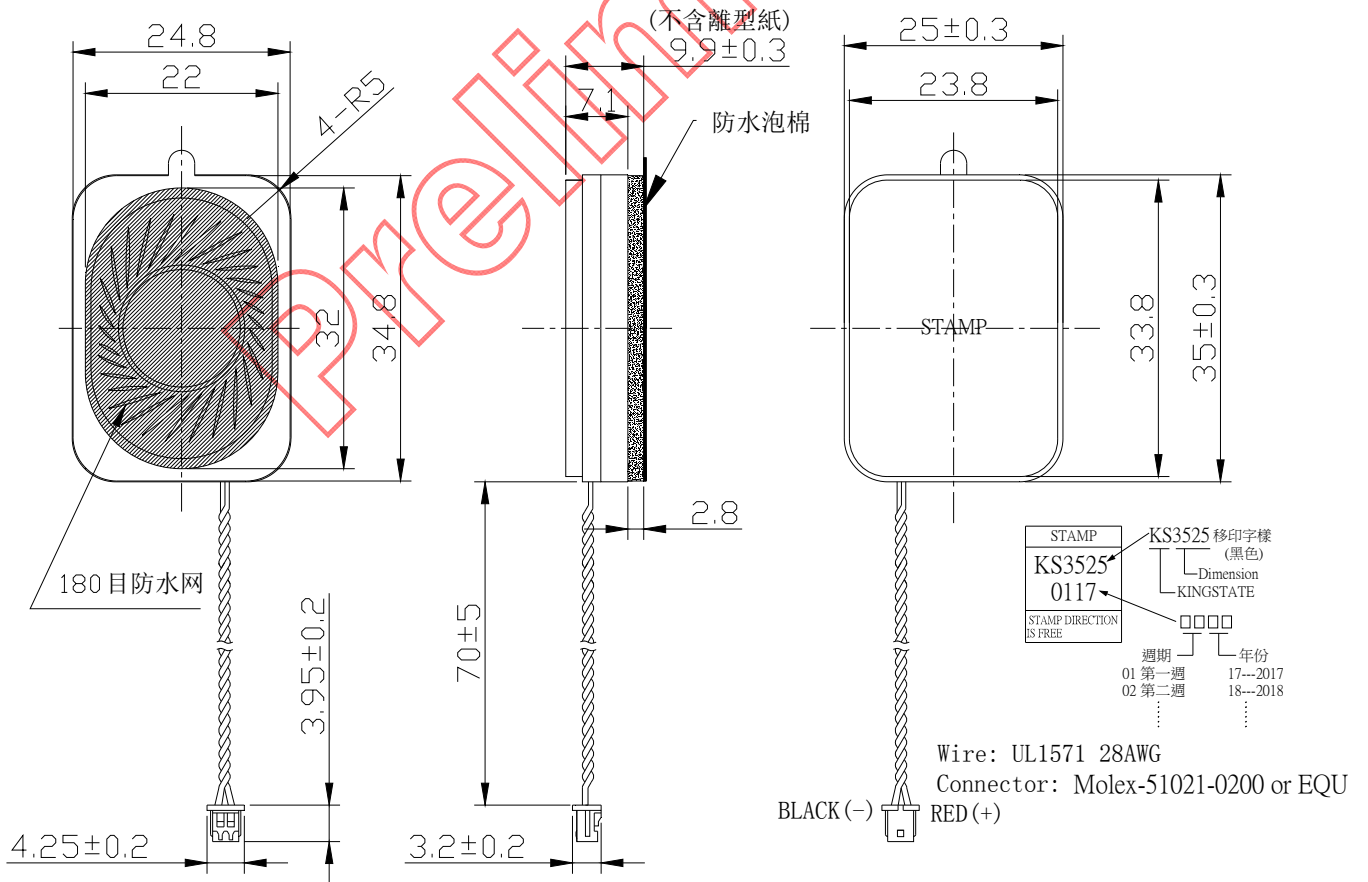
B. SPECIFICATION 規格

| No. | Item | Symbol | Unit | Specification | Condition |
|-----|---|----------|-------|---|--|
| 1 | Dimension 尺寸 | | mm | 35*25*9.9 | |
| 2 | Power Rating 功率 | | W | Rated. 1.5/ MAX.2.0 | Maximum Power:IEC-60268-5 Filter 60s ON/120s Off 10 Cycles(Room Temp) |
| 3 | Impedance 阻抗 | Ω | ohm | $8 \pm 15\%$ | At 2.0KHz |
| 4 | Resonance Frequency 低音諧振 | Fo | Hz | $1000 \pm 20\%$ Hz | At 1.0V |
| 5 | Output S.P.L. 音壓位準 | | dB | $94 \pm 3\text{dB}(1\text{W}/10\text{cm})$ | At 2.0K,3.0K 4.0K,5.0KHz (Average figures) |
| 6 | Frequency Rang 有效頻寬 | | Hz | F0---20K | Average SPL - 10db |
| 7 | Distortion 失真 | | % | 10% Max. | At 2KHz,1W |
| 8 | Diaphragm 振膜 | | | N/A | PET |
| 9 | Magnet 磁石 | | mm | N/A | Nd-Fe-B |
| 10 | Flux Density 磁通密度 | | Gauss | N/A | |
| 11 | Operating temp. 操作溫度 | | °C | -20 ~ +55 | |
| 12 | Storage temp. 儲存溫度 | | °C | -30 ~ +70 | |
| 13 | Buzze & Rattle 異常音 | | | | Not be audible at 3.46V sine wave between From Fo~20K 輸入 3.46V 正弦波從 Fo 到 20K 之間無異常音 |
| 14 | Piece weight/Out Box weight 單重 / 箱重 | | gram | 7.5/ | |
| 15 | Material 材質 | | | ABS 777D | |
| 16 | Polarity 極性 | | | Diaphragm shall move Forward when Apply a Positive DC. Current to the "+" | |
| 17 | Environmental Protection Regulation 環保法規 | | | RoHS2.0 | |
| 18 | Waterproof Grade 防水等級 | | | IP67 | Mylar side |

C. SPEAKER CHARACTERISTICS 頻率響應曲線



D. APPEARANCE DRAWING 外觀尺寸圖

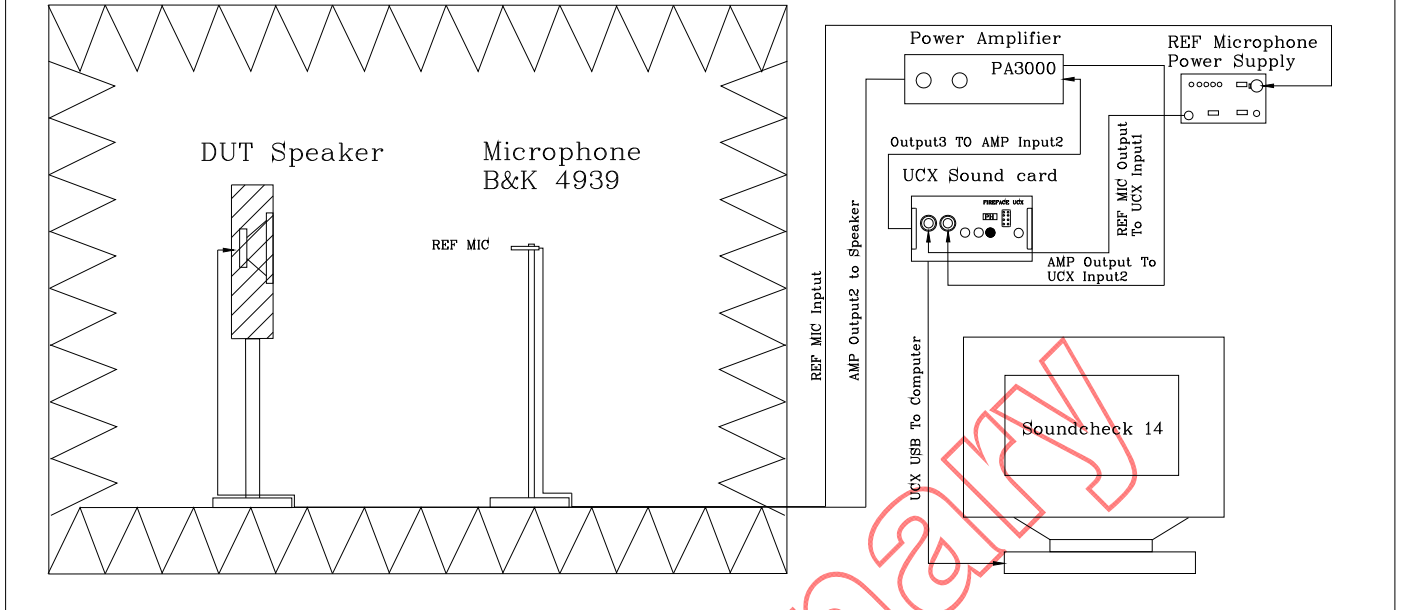


Tol: ±0.2

Unit: mm

E. MEASUREMENT CIRCUIT 測量線路

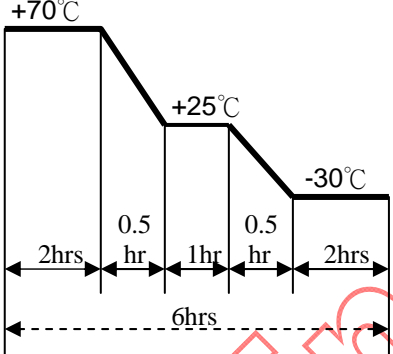
Speaker Testing framework diagram



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±5°C for 3±0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入+270±5°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 3.0N(0.306kg) for 30 seconds. Vertical 2.0N(0.204kg) for 30 seconds. 雙線材水平方向施以 3.0N(0.306kg) 的力量, 垂直方向施以 2.0N(0.204kg) 的力量,各 30 秒. | No damage and cutting off 線材不鬆動, 不脫落. |
| 3 | Vibration Test 振動測試 | Speaker 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. | No obstacle to be harmful to normal operation; damages, cracks, rusts and distortions. Should not be audible at 3.46V sine wave between |
| 4 | Drop Test 落下測試 | Drop the speakers contained in normal box onto the board 40mm thick 10 times from the height of 75cm 將揚聲器置於盒中, 自 75 公分高度落在 40mm 木板上共 10 次. | Fo ~20KHz. 測試後無任何障礙防礙正常操作.輸入 3.46V 正弦波從 Fo 到 20KHz 之間無異常音. |

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°C for 96hours 置於+70°C環境中 96 小時 | Being placed for 6 hours at +25°C, speaker shall be measured. No obstacle to be harmful to normal operation; damages, cracks, rusts, etc. Should not be audible at 3.46V sine wave between Fo to 20K. Fo should meet initial one. S.P.L. deviation of unit should be within ±3dB 經測試後, 靜置於+25°C (室溫)環境中 6 小時後, 測試後無任何障礙防礙正常操作. 輸入 3.46V 正弦波從 Fo 到 20K 之間無異常音. Fo 與原規格值相同, 輸出音壓變化量在±3dB 內. |
| 2 | Low temp. Test 低溫測試 | After being placed in a chamber at -30°C for 96hours. 置於-30°C環境中 96 小時 | |
| 3 | Humidity test 相對濕度測試 | After being placed in a chamber at +40°C and 90~95% RH relative humidity for 96hours. 置於+40°C, 相對濕度 90~95%環境中 96 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 信賴性試驗

| No. | Item | Test conditions | Evaluation standard |
|-----|-------------------|--|--|
| 1 | Load test 連續負荷 | 1.5W White noise is applied for 96 hours, at room temp product. 在室溫下, 輸入功率 1.5W, 白雜音連續操作 96 小時. | Being placed for 1 hours at +25°C, speaker shall be measured. No obstacle to be harmful to normal operation; damages, cracks, rusts, etc. Should not be audible at 3.46V sine wave between Fo to 20K. Fo should meet initial one. S.P.L. deviation of unit should be within ±3dB 經測試後, 靜置於+25°C (室溫)環境中 1 小時後, 測試後無任何障礙防礙正常操作. 輸入 3.46V 正弦波從 Fo 到 20K 之間無異常音. Fo 與原規格值相同, 輸出音壓變化量在±3dB 內. |

TEST CONDITION.

| | | | |
|---------------------------|------------------------------|----------------------|----------------------------|
| Standard Test Condition : | a) Temperature : +15 ~ +35°C | b) Humidity : 45-85% | c) Pressure : 860-1060mbar |
| 一般測試條件 : | a) 溫度 : +15 ~ +35°C | b) 濕度 : 45-85% | c) 氣壓 : 860-1060mbar |
| Judgement Test Condition | a) Temperature : +20 ± 3°C | b) Humidity : 60-70% | c) Pressure : 860-1060mbar |
| 爭議時測試條件: | a) 溫度 : +20 ± 3°C | b) 濕度 : 60-70% | c) 氣壓 : 860-1060mbar |

I.PACKING STANDARD 包裝規格

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number. There shall be no mechanical damage on products during transportation and/or in storage.

外箱須標示最小包裝單位，並註明產品型號、數量及檢驗批號，必須是物品儲藏或運輸過程中可防止造成損傷的包裝。

TBD

Preliminary