

# SPECIFICATION FOR APPROVAL

## 規 格 書

Customer (客戶名稱): \_\_\_\_\_

Customer P/N(客戶番號): \_\_\_\_\_

Our P/N (本廠番號): FS32MS0420-H5.1

Approval Date(日期): 2019.12.26

Environment Request(環境標準):

Non-RoHS (非 RoHS 標準)

RoHS (RoHS 標準)

REACH (REACH 標準)

Others (其他)

CUSTOMER'S APPROVED SIGNATURE

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|           | DESINGER | CHECKED | APPROVED |
|-----------|----------|---------|----------|
| SIGNATURE |          |         |          |
| DATE      |          |         |          |

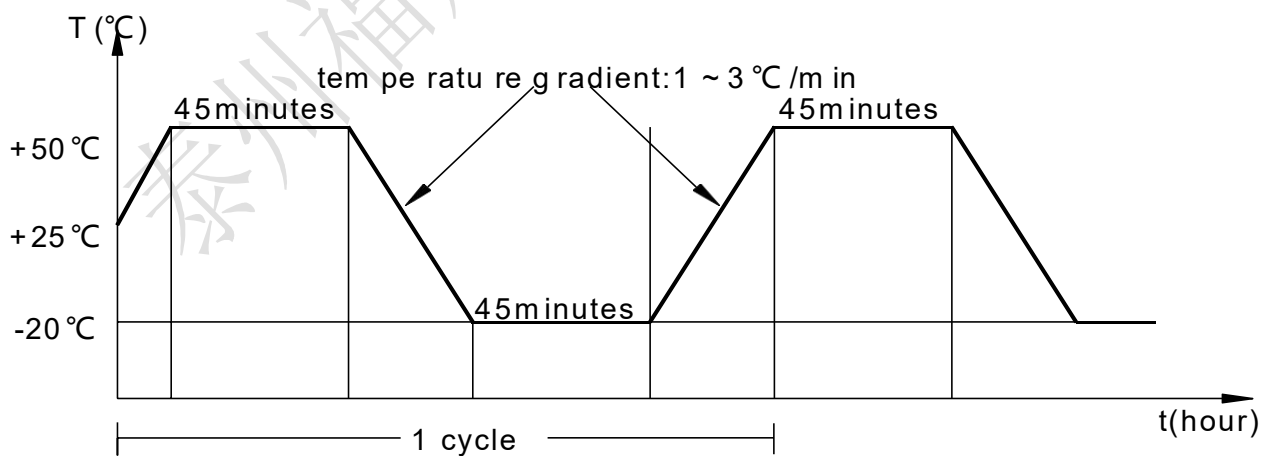


## Speaker Specification

|          |                                  |  |   |                     |
|----------|----------------------------------|--|---|---------------------|
| Part No. | Customer No<br>顧客型號              |  | Customer code<br>顧客編號                                   |                     |
|          | Our Part No<br>本廠編號              | FS32MS0420-H5.1  |   | Revision<br>版本<br>A |
| No.      | Item<br>項目                       | Specification<br>規格  | Testing Condition<br>測試條件                               |                     |
| 1.       | Rated Imp<br>共稱阻抗                | 4ohm±15%   | At 2kHz   |                     |
| 2.       | Resonance Freq<br>最低共振周波數        | 650Hz±20%  | Without Baffle  |                     |
| 3.       | Output S.P.L.<br>出力音壓            | 89±3dB   | At 0.1m 0.1w 0.8,1.0,1.2,1.5KHz<br>Average              |                     |
| 4.       | Rated Power<br>定格入力              | at 2.0W  | at 2.83 Vrms  |                     |
| 5.       | Max Power<br>最大入力                | at 2.5W  | at 3.16Vrms   |                     |
| 6.       | Frequency Range<br>實效頻寬          | FO----6kHz   |   |                     |
| 7.       | Operation<br>可靠性試驗               | Must Be Normal at<br>Rated Frequency Range                                   | Program Source 2.0<br>W FO 10kHz                        |                     |
| 8.       | Buzzes & Rattles<br>異常音試驗        | Should not be audible buzz<br>and rattle at Rated<br>Frequency Range<br>無異常聲 | Sine Wave Between (正弦波入力)<br>at 2.83 Vrms / FO----10kHz |                     |
| 9.       | T H D<br>失真                      | 10% Max  | Rated Power Input 1000Hz                                |                     |
| 10.      | Magnet<br>磁鐵                     | NdFeB  |   |                     |
| 11.      | Operating<br>Temperature<br>動作溫度 | -20°C to +50°C   |   |                     |
| 12.      | Storage<br>Temperature<br>儲存溫度   | -30°C to +60°C   |   |                     |
| 13.      | Weight<br>重量                     | / g/PC   |   |                     |

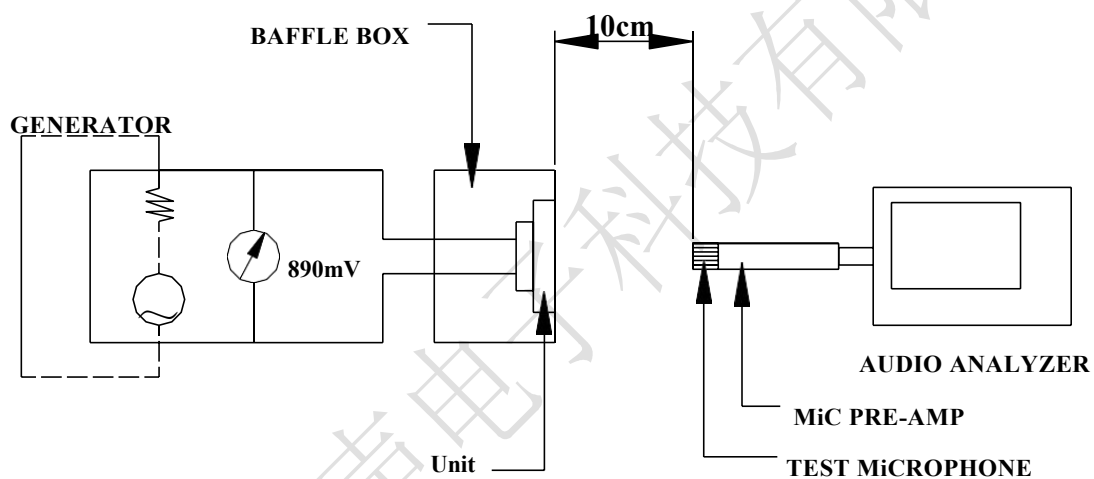
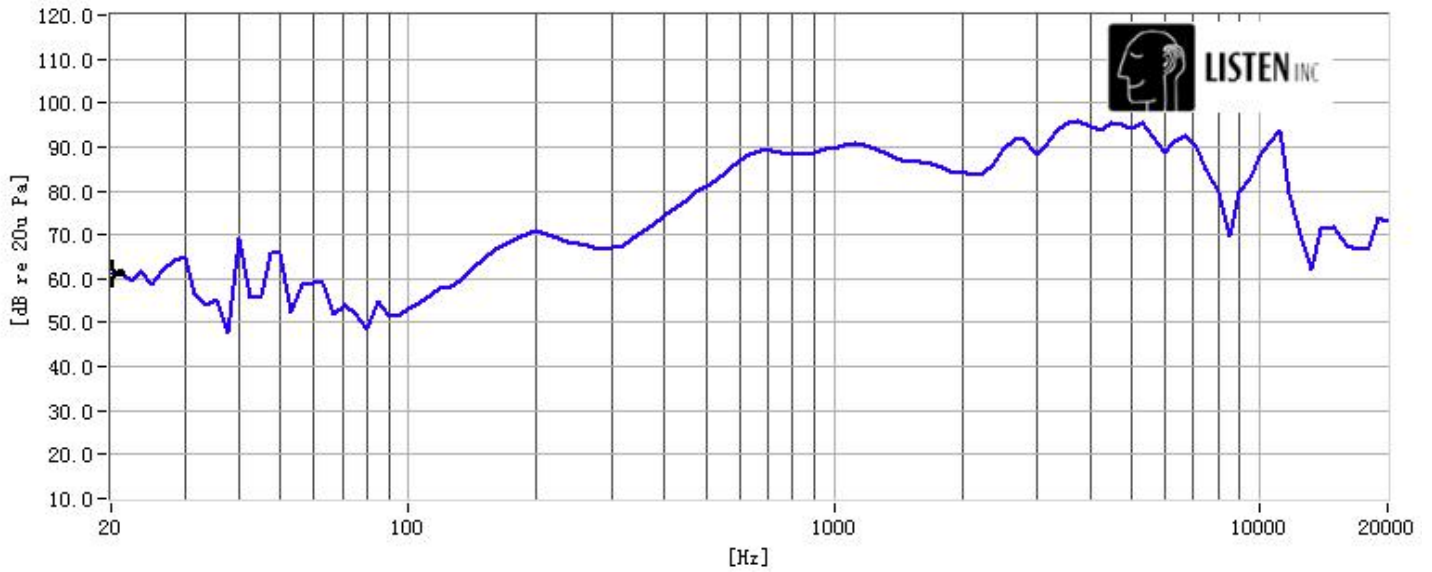
|     |   |   |
|-----|---|---|
| 14. | Cold Test<br>耐寒試驗                               | Must be normal after having been in a test chamber for 96 hours at the condition of $-20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and then left 2 hours in a room.<br>( $-20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , 96 小時試驗室溫兩小時後, 無異常)                                 |
| 15. | Heat Test<br>耐熱試驗                               | Must be normal after having been in a test chamber for 96 hours at the condition of $+50^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 90~95% R.H and then left 2 hours in a room.<br>( $+50^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 90~95% R.H 96 小時試驗常溫 2 小時後, 無異常的不良)        |
| 16. | Load Test<br>連續負荷試驗                             | Must be normal after load test :white noise 1W 96 hours. At rated frequency range<br>(白噪音 2 W 連續 96 小時試驗後無異常的不良)  |
| 17  | Short Term<br>Maximum Power<br>test<br>瞬間最大功率測試 | Test for 1 hour under maximum power. Input shall be white noise in rated frequency response. And the signal will be 1 second on, 59 seconds off, total 60 cycles at rated frequency range, Must be normal after the test<br>(白噪音 2.5W, 1 秒開 59 秒關, 連續 60 迴圈, 試驗後無異常之不良) |
| 18. | <del>Polarity</del><br>極性                       | When a DC source ' s "+" polarity is attached to speaker's "+" polarity, "-" polarity is attached speaker's "-" polarity, the membrane will move forward. Red wire is "+" and the black wire is "-".<br>(接線板由側為正極, 左側為負極)   |
| 19. | Drop Test<br>跌落試驗                               | Drop the speakers contained in normal box onto a board 5mm thick 2 times from a height of 1.0m . Must be normal after the test<br>(在厚 5mm 的木板上從 1.0m 的高度跌落 2 次, 無異常不良)  |
| 20. | Terminal strength<br>端子強度                       | A static load of 5.0N shall be applied to the terminals for 10s in any direction between terminal block and frame and between terminal block and fasten terminal. Must be normal after the test<br>(端子板和支架或焊片任一方向上 5.0N 的力 10s 無異常)                                     |

### Temperature Cycle Test(5 cycle)



## Frequency Response

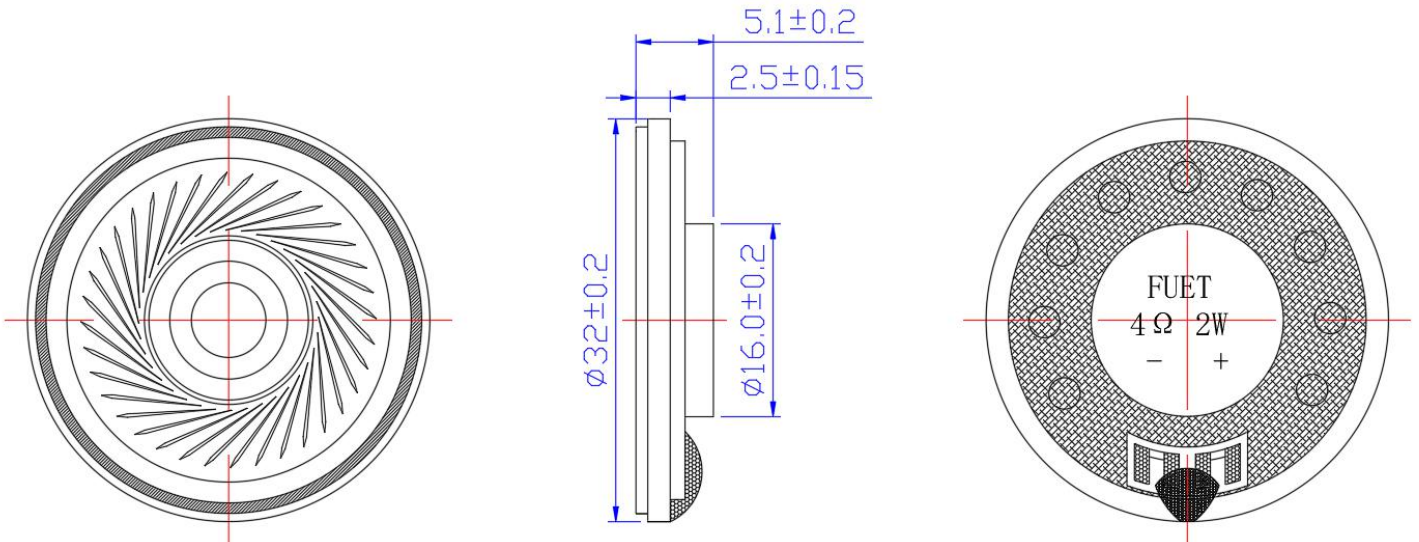
### 频响曲线



### Noise Testing

| Testing Method 測試方法                  |   |
|--------------------------------------|---|
| Item 步驟                              | Testing Condition 測試條件  |
| 1. Testing voltage<br>測試電壓           | 2.83Vrms  |
| 2. Testing Frequency Range<br>測試頻率範圍 | From FO to 10kHz  |
| 3. Testing speed<br>掃描速度             | $S \geq 0.8s/Cycle$   |
| 4. Operation<br>測試方法                 | The distance from speaker to tester's ear is 30cm<br>距離測試者耳朵 30cm 處監聽, 聲音清純無異常音為 OK |

### Product Outside View



Remark:

| PART NO. | PART NAME 名稱  | MATERIAL 材質 |
|----------|---------------|-------------|
| 1        | Frame 支架      | SPCC        |
| 2        | Plate 華司      | SPCC        |
| 3        | Magnet 磁鐵     | Nd Fe B     |
| 4        | Voice Coil 音圈 | Copper+Cu   |
| 5        | Terminal 接線板  | Glass Epoxy |
| 6        | Diaphragm 音膜  | PET         |

Note: Accord with RoHS2.0 standard