

# 規格承認書

PECIFICATION FOR APPROVAL

客 戶

CUSTOMER : \_\_\_\_\_

項 目

ITEM : 双指向/降噪型驻极体电容咪头（ECM）

型 號

TYPE : GMI6027N-2C52DB

描述

DESCRIPTION :  $\phi$  6.0 x 2.7 MM 2V -52 dB  $\leq$ 2.2K  $\Omega$  S/N:  $\geq$ 58 dBA

客戶料號

CUSTOMER NO. : C530284

規 格 書 號

SPECIFICATION NO.: \_\_\_\_\_

版 本

EDITION NO. : V1.2

日 期

DATE : 2025-8-11

## 客戶承認

### CUSTOMER CONFIRM AND SIGN

| 檢查<br>TESTED BY | 審核<br>CHECKED BY | 承認<br>APPROVED BY |
|-----------------|------------------|-------------------|
|                 |                  |                   |

## 東莞市贏海電子有限公司

### DONGUAN INGHAI ELECTRONICS CO.,LTD

| 製作<br>ISSUED BY | 審查<br>CHECKED BY | 確認<br>APPROVED BY |
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## A. SCOPE

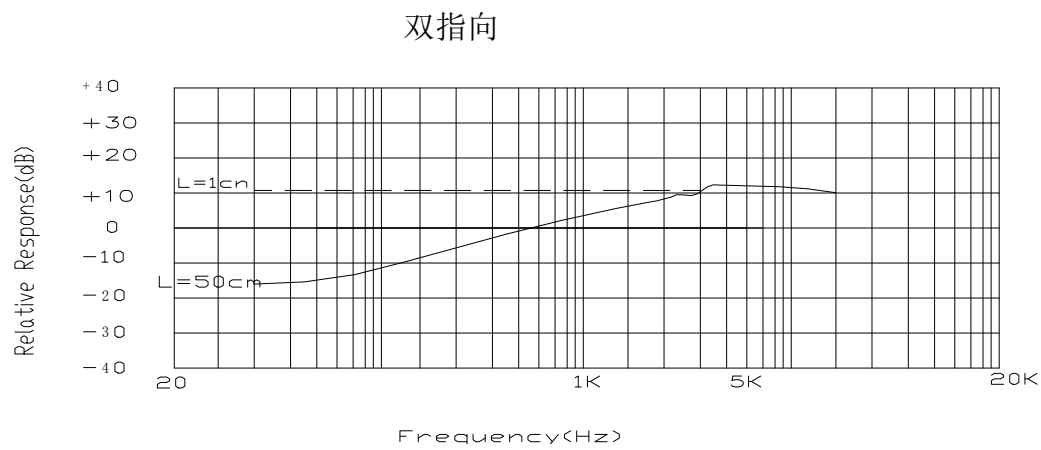
This specification applies electret condenser microphone, GMI6027N-2C52DB

## B. SPECIFICATION

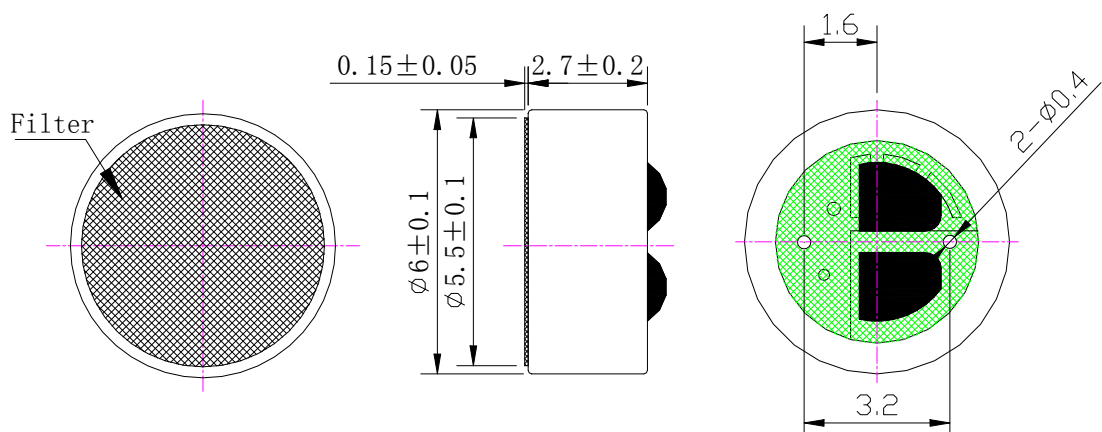
■Test condition:  $R_L=2.2K\Omega$   $V_S=2V$   $TEMP=20^{\circ}C\pm 2^{\circ}C$  Related humidity= $65\pm 5\%$

| No. | Item                       | Symbol                          | Unit        | Specification         | Condition                                       |
|-----|----------------------------|---------------------------------|-------------|-----------------------|-------------------------------------------------|
| 1   | Directivity                |                                 |             | Noise-Cancelling      |                                                 |
| 2   | Sensitivity                | <b>S</b>                        | dB          | -52 $\pm$ 3           | f=1KHz, 0dB=1V/ $\mu$ bar                       |
| 3   | Standard operating voltage | <b>V<sub>s</sub></b>            | V           | 2V                    |                                                 |
| 4   | Output impedance           | <b>Z<sub>out</sub></b>          | K $\Omega$  | $\leq 2.2$            | f=1KHz, 1Pa                                     |
| 5   | Frequency                  |                                 | Hz          | 50-16,000             |                                                 |
| 6   | Max operating voltage      |                                 | V .         | 10                    |                                                 |
| 7   | Sensitivity reduction      | $\Delta$ <b>S-V<sub>s</sub></b> | dB          | -3                    | f=1KHz, 1Pa<br>V <sub>s</sub> =1.5VDC to 3.0VDC |
| 8   | Max. current consumption   | <b>I<sub>DSS</sub></b>          | mA          | $\leq 0.5$            |                                                 |
| 9   | Signal to noise ration     | <b>S/N</b>                      | dBA         | $\geq 58$             | f=1KHz, P <sub>in</sub> =1Pa                    |
| 10  | Max input sound level      | <b>SPL</b>                      | dB          | 110                   |                                                 |
| 11  | Operation temp.            |                                 | $^{\circ}C$ | -20 ~+70              |                                                 |
| 12  | Storage temp.              |                                 | $^{\circ}C$ | -40 ~+80              |                                                 |
| 13  | Dimension                  |                                 | mm          | $\phi 6.0 \times 2.7$ | See appearance drawing                          |
| 14  | Terminal                   |                                 |             | Terminal              | See appearance drawing                          |

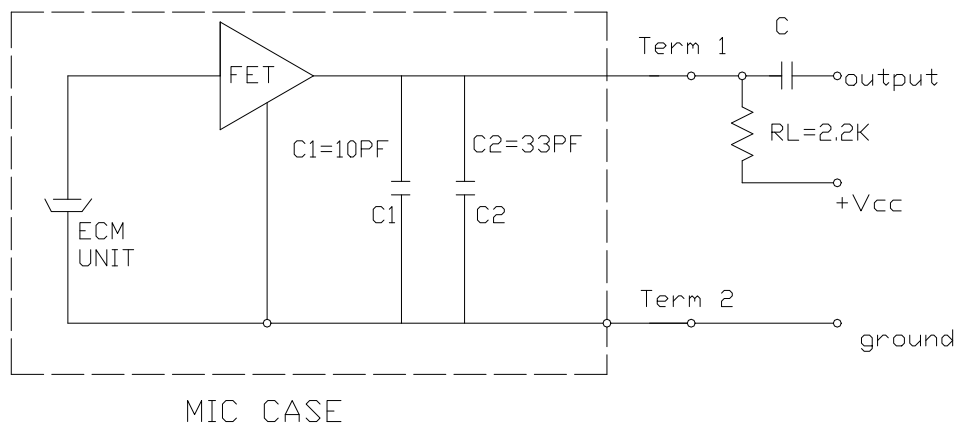
C.TYPICAL FREQUENCY RESPONSE CURVE



D. APPEARANCE DRAWING



E. MEASUREMENT CIRCUIT



## F. 可靠性试验 Reliability Test

经过以下所有试验在 20℃的条件下放置 3 小时后,麦克风的灵敏度与试验前比较变化在 3dB 以内

After any following tests, the sensitivity of the microphone to be within  $\pm 3\text{dB}$  of initial sensitivity after 3hours of conditioning at 20℃

|                                        |                                                                                                                                 |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 5-1 振动试验<br>Vibration                  | 周波数 1/Frequency1:10Hz~55Hz<br>振幅/Amplitude:1.52mm<br>变化/Change of Frequency:1 octave/min<br>3 方向,各 2 小时/hours in each of 3 axes |
| 5-2 高温试验<br>Dry Heat                   | +80 $\pm$ 5℃ for 96 hours                                                                                                       |
| 5-3 低温试验<br>Dry Cold                   | -40 $\pm$ 5℃ for 96 hours                                                                                                       |
| 5-4 高温高湿试验<br>Damp Heat                | 90%~95%RH, +70 $\pm$ 5℃ for 96 hours                                                                                            |
| 5-5 温度循环试验<br>Temperature cycles       | -20℃ $\longleftrightarrow$ 25℃ $\longleftrightarrow$ 70℃<br>(2h) (1h) (2h) (1h) (2h) $\times$ 10 cycles                         |
| 5-6 跌落试验<br>Packing drop test          | Height:1m<br>顺序:三个面各跌 10 次<br>Procedure:10 times from each of 3 axes                                                            |
| 5-7 温度冲击试验<br>Temperature impact test  | -20℃ $\longleftrightarrow$ 70℃<br>30min 30s 30min $\times$ 10 cycles                                                            |
| 5-8 静电冲击试验<br>Electrostatic shock test | 6000V(contact), 15000V(air) $\times$ 10 axes                                                                                    |
| 备注 Note                                |                                                                                                                                 |
| 6-1 工作温度范围<br>Operation Temperature    | -20℃~70℃                                                                                                                        |
| 6-2 储存温度范围<br>Storage Temperature      | -40℃~80℃                                                                                                                        |

## G. 焊接条件

### Soldering Condition

7-1 焊接使用 90W 的烙铁。

The soldering copper of a type of 90W shall be applied

焊接条件

Soldering Condition.

7-2 电烙铁表面温度 320 $\pm$ 10℃

The temperature of the working surface of the soldering copper shall be 320 $\pm$ 10℃

7-3 焊接时把麦克风嵌入散热能力强的金属块内。

ECM shall be soldered fixed on the metal block(heat sink)which has the higher radiation effects said heat sink

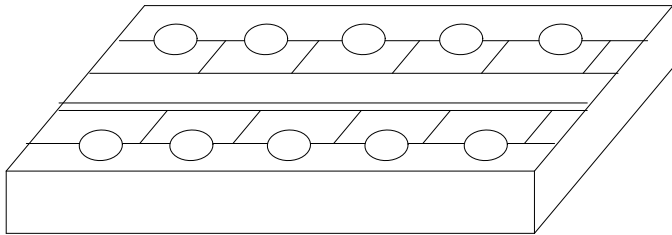
Shall contact with of ECM.

7-4 焊接时间控制在 2~3 秒内。  
time for each terminal shall be 2~3 sec.

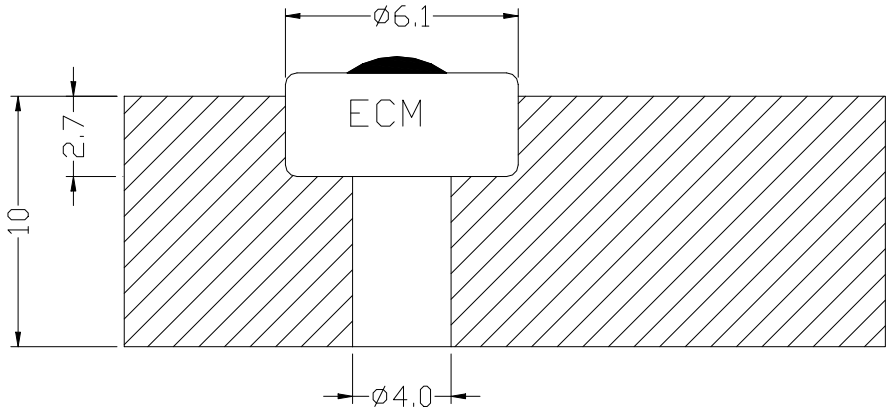
7-5 焊接后不能出现针孔。  
The pinhole after soldering shall be avoided.

7-6 静电容易破坏麦克风必须采取措施避免（电烙铁接地，戴静电环等。）  
ECM may easily destroyed by the static electricity and the countermeasure for eliminating the static electricity (the ground for soldering copper, for worktable and for human body) shall be executed.

7-7 散热板形状 Shape of heat sink



7-8 固定部孔形状 Shape of hole at fixed part



unit:mm