

# 規格承認書

PECIFICATION FOR APPROVAL

客戶

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

項目

ITEM : 双指向驻极体电容咪头 (ECM) \_\_\_\_\_

型號

TYPE : GMI6050N-2C30-66DB \_\_\_\_\_

描述

DESCRIPTION :  $\phi 6.0 \times H5.0 \text{ mm}$  焊点降噪 1033 -46~-66dB 2.0V  $\leq 2.2K\Omega$  S/N:  $\geq 58 \text{ dBA}$

客戶料號

CUSTOMER NO. : \_\_\_\_\_

規格書號

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

版本

EDITION NO. : V1.0 \_\_\_\_\_

日期

DATE : 20 \_\_\_\_\_

## 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, GMI6050N-2C46-66DB

## B. SPECIFICATION

■ Test condition:  $RL=0.68K\Omega$   $VS=1.5V$   $TEMP=25^{\circ}C\pm 2^{\circ}C$  Related humidity= $65\pm 5\%$

| No. | Item                       | Symbol        | Unit        | Specification          | Condition                          |
|-----|----------------------------|---------------|-------------|------------------------|------------------------------------|
| 1   | Directivity                |               |             | Uni-directional        |                                    |
| 2   | Sensitivity                | <b>S</b>      | dB          | -46~-66±3              | f=1KHz, 1Pa<br>0dB=1V/Pa           |
| 3   | Standard operating voltage | <b>Vs</b>     | V           | 1.5                    |                                    |
| 4   | Output impedance           | <b>Zout</b>   | K $\Omega$  | $\leq 0.68$            | f=1KHz, 1Pa                        |
| 5   | Frequency                  |               | Hz          | 100-10,000             |                                    |
| 6   | Max operating voltage      |               | V .         | 10                     |                                    |
| 7   | Sensitivity reduction      | $\Delta S-Vs$ | dB          | -3                     | f=1KHz, 1Pa<br>Vs=3.0VDC to 1.5VDC |
| 8   | Max. current consumption   | <b>IDSS</b>   | mA          | $\leq 0.5$             |                                    |
| 9   | Signal to noise ration     | <b>S/N</b>    | dB          | $\geq 58$              | f=1KHz, P in=1Pa                   |
| 10  | Max input sound level      | <b>SPL</b>    | dB          | 110                    |                                    |
| 11  | Operation temp.            |               | $^{\circ}C$ | -30 ~+70               |                                    |
| 12  | Storage temp.              |               | $^{\circ}C$ | -40 ~+85               |                                    |
| 13  | Dimension                  |               | mm          | $\phi 6.0 \times H5.0$ | See appearance drawing             |
| 14  | Terminal                   |               |             | Terminal               | See appearance drawing             |
| 15  | Approvals                  |               |             | RoHs FCC               |                                    |

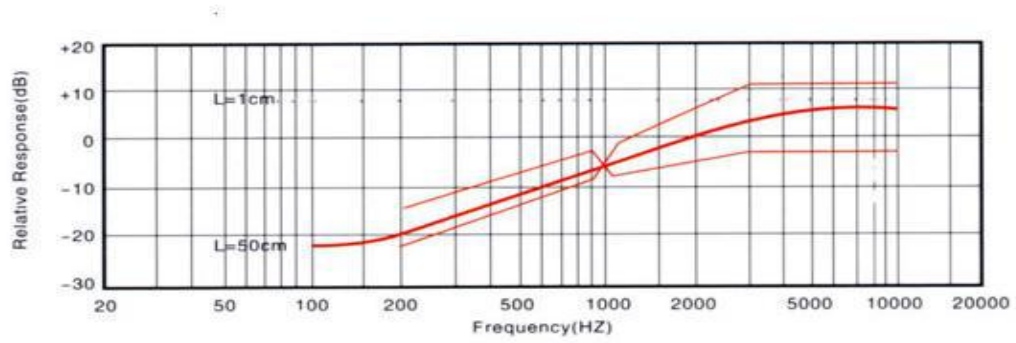
We use “Pascal(Pa)” indication of sensitivity as per the recommendation of I.E.C.(International Electro technical Commission)

The Sensitivity of “Pa” will increase 20dB comparing with “ubar” indication

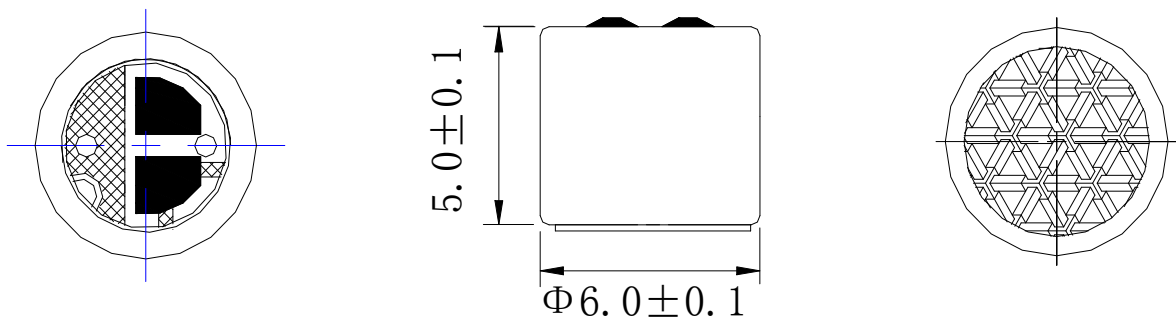
Example: -60dB(0dB=0.1V/ubar) =-40dB(0dB=1V/Pa)

### C. TYPICAL FREQUENCY RESPONSE CURVE

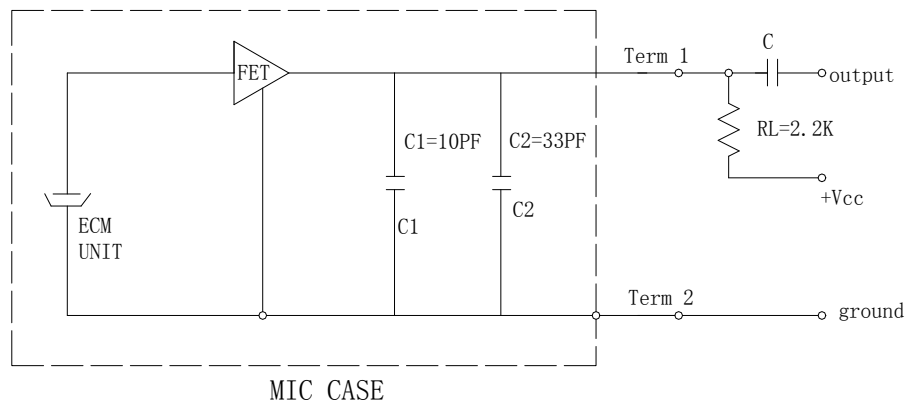
Unidirectional



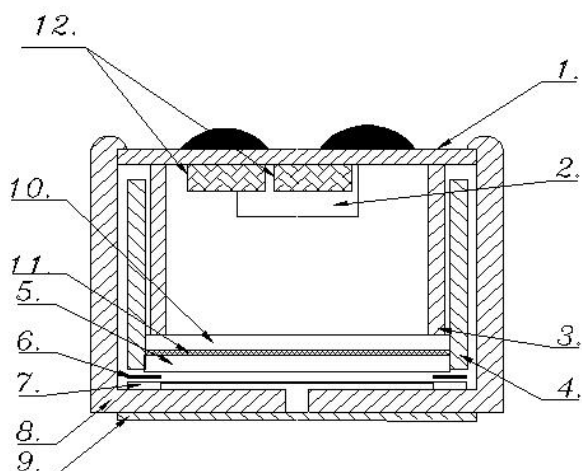
### D. APPEARANCE DRAWING



### E. MEASUREMENT CIRCUIT



### F. Explode Drawing



|   |      |    |      |
|---|------|----|------|
| 1 | PCB  | 7  | 振膜   |
| 2 | FET  | 8  | 外壳   |
| 3 | 金环   | 9  | 防水网  |
| 4 | 塑环腔体 | 10 | 单孔极板 |
| 5 | 极板   | 11 | 阻尼网  |
| 6 | 垫片   | 12 | 电容   |

| <b>G. 可靠性试验 Reliability Test</b>   |   |
|--|---|
| <p>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</p> <p>After any following tests, the sensitivity of the microphone to be within <math>\pm 3\text{dB}</math> of initial sensitivity after 3hours of conditioning at 20℃</p> |   |
| 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, +60 $\pm$ 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   | 4000V(contact), 8000V(air) $\times$ 10 axes   |
| 备注 Note  |   |
| 6-1 工作温度范围<br>Operation Temperature  | -30℃~70℃  |
| 6-2 储存温度范围<br>Storage Temperature  | -40℃~85℃  |

## H. 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  $320 \pm 10^\circ\text{C}$

The temperature of the working surface of the soldering copper shall be  $320 \pm 10^\circ\text{C}$

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.

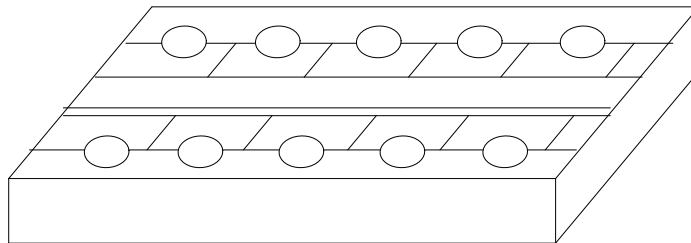
7-5 焊接后不能出现针孔。

The pinhole after soldering shall be avoided.

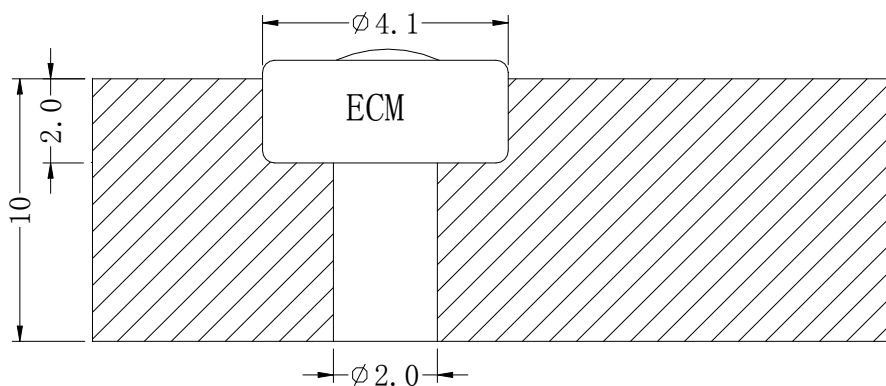
7-6 静电容易破坏麦克风必须采取措施避免（电烙铁接地，戴静电环等。）

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



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