

規格承認書

PECIFICATION FOR APPROVAL

客戶
CUSTOMER : 立創
項目
ITEM : 单指向驻极体背积式电容咪头 (ECM)
型號
TYPE : GMI9750UP-2C46DB
描述
DESCRIPTION : $\phi 9.7 \times H5.2\text{mm}$ 背极式插针 1033 -46dB 0.68K 1.5V S/N: ≥ 58 dBA
客戶料號
CUSTOMER NO. :
規格書號
SPECIFICATION NO.:
版本
EDITION NO. : V1.2
日期
DATE : 2019-12-27

客戶承認

CUSTOMER CONFIRM AND SIGN

| 檢查 TESTED BY | 審核 CHECKED BY | 承認 APPROVED BY |
|-----------------|------------------|-------------------|
| | | |

東莞市贏海電子有限公司

DONGUAN INGHAI ELECTRONICS CO.,LTD

| 製作 ISSUED BY | 審查 CHECKED BY | 確認 APPROVED BY |
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| 周明 | 刘承成 | |

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A. SCOPE

This specification applies electret condenser microphone, GMI9750UP-2C46DB

B. SPECIFICATION

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

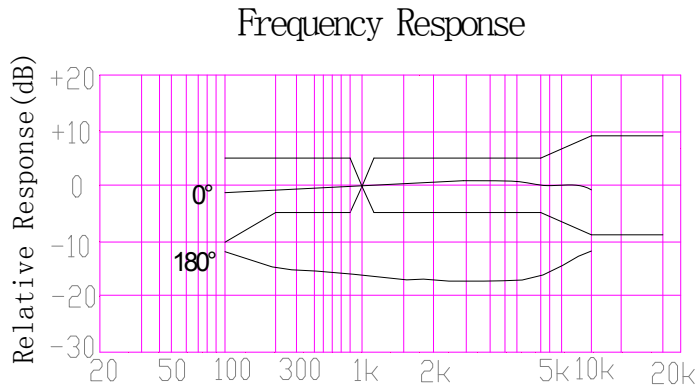
| No. | Item | Symbol | Unit | Specification | Condition |
|-----|----------------------------|---------------|-------------|------------------------|------------------------------------|
| 1 | Directivity | | | Unidirectional | |
| 2 | Sensitivity | S | dB | -46±3 | f=1KHz, 0dB=1V/ Pa |
| 3 | Standard operating voltage | Vs | V | 1.5 | |
| 4 | Output impedance | Zout | K Ω | ≤ 0.68 | f=1KHz, 1Pa |
| 5 | Frequency | | Hz | 100-10,000 | |
| 6 | Max operating voltage | | V . | 1~10 | |
| 7 | Sensitivity reduction | $\Delta S-Vs$ | dB | -3 | f=1KHz, 1Pa vs=3.0VDC to 1.5VDC |
| 8 | Max. current consumption | IDSS | mA | ≤ 0.5 | |
| 9 | Signal to noise ration | S/N | dBA | ≥ 58 | |
| 10 | Max input sound level | SPL | dB | 110 | |
| 11 | Operation temp. | | $^{\circ}C$ | -20 ~+70 | |
| 12 | Storage temp. | | $^{\circ}C$ | -30 ~+80 | |
| 13 | Dimension | | mm | $\phi 9.7 \times H5.0$ | 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=1V/ubar) = -40dB(0dB=1V/Pa)

C. TYPICAL FREQUENCY RESPONSE CURVE

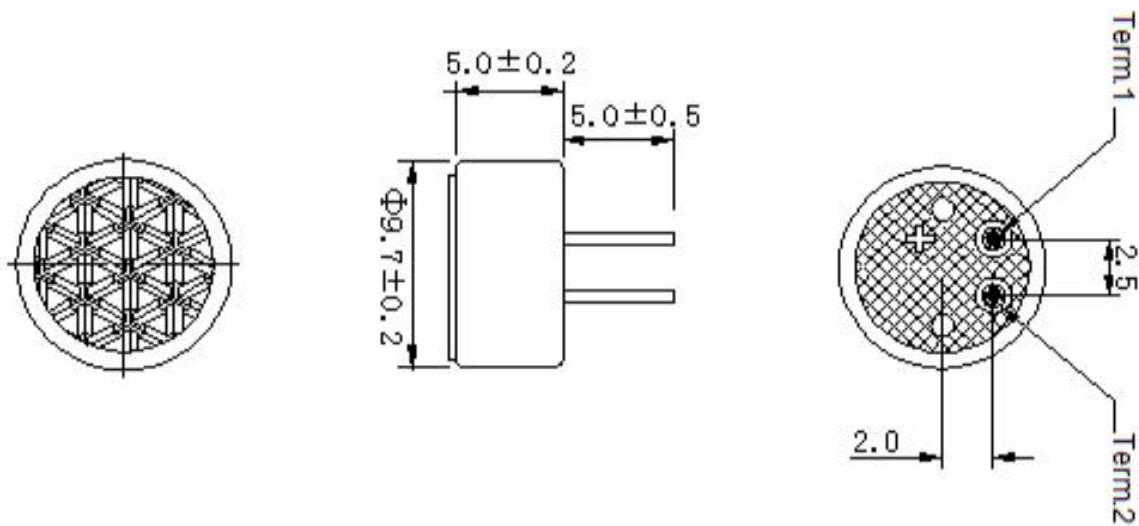


Microphone Response Tolerance Window

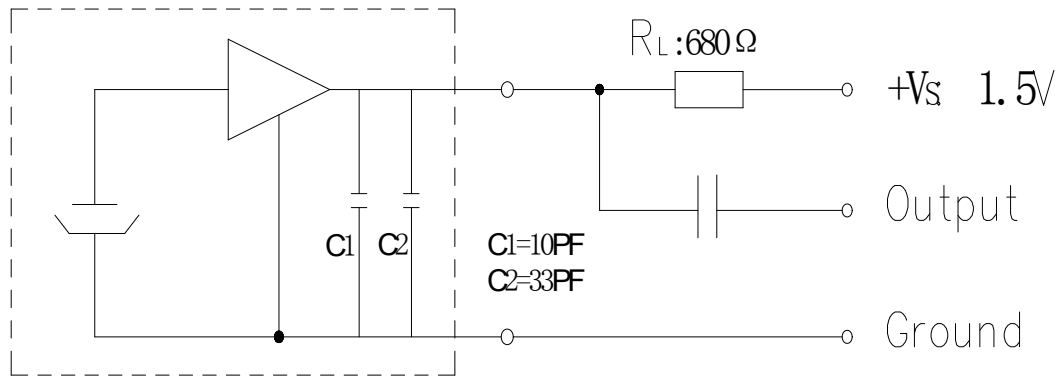
| Frequency (Hz) | Lower Limit (dB) | Upper Limit (dB) |
|----------------|------------------|------------------|
| 100 | -5 | 5 |
| 200 | -5 | 5 |
| 800 | -5 | 5 |
| 1000 | 0 | 0 |
| 1200 | -5 | 5 |
| 2000 | -5 | 5 |
| 5000 | -5 | 5 |
| 10000 | -8 | 8 |

D. APPEARANCE DRAWING

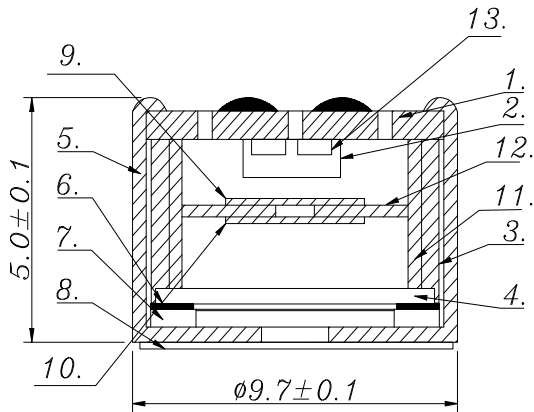
Unit: mm



E. MEASUREMENT CIRCUIT



F.Explode Drawing



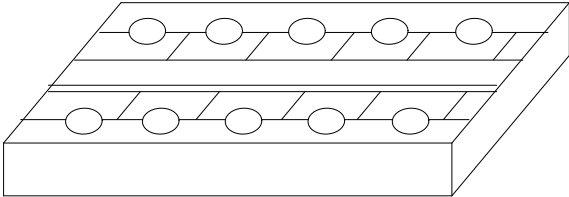
| | | | |
|---|-----|----|------|
| 1 | PCB | 8 | 防尘网 |
| 2 | FET | 9 | 阻尼纸 |
| 3 | 塑环 | 10 | 阻尼纸 |
| 4 | 极板 | 11 | 连接环 |
| 5 | 外壳 | 12 | 单孔极板 |
| 6 | 垫片 | 13 | 电容 |
| 7 | 振膜 | 14 | |

G. 可靠性试验 Reliability Test

经过以下所有试验在 20°C 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°C

| | |
|-----------------------|---|
| 5-1 振动试验 Vibration | 周波数 1/Frequency1:10Hz~55Hz 振幅/Amplitude:1.52mm 变化/Change of Frequency:1 octave/min 3 方向,各 2 小时/hours in each of 3 axes |
| 5-2 高温试验 Dry Heat | +60±5°C for 96 hours |
| 5-3 低温试验 Dry Cold | -20±5°C for 96 hours |

| | |
|--|---|
| 5-4 高温高湿试验 Damp Heat | 90%~95%RH, +60±5°C for 96 hours |
| 5-5 温度循环试验 Temperature cycles | -20°C ↔ 25°C ↔ 60°C (2h) (1h) (2h) (1h) (2h) × 10 cycles |
| 5-6 跌落试验 Packing drop test | Height: 1m 顺序: 三个面各跌 10 次 Procedure: 10 times from each of 3 axes |
| 5-7 温度冲击试验 Temperature impact test | -20°C ↔ 60°C 30min 30s 30min × 10 cycles |
| 5-8 静电冲击试验 Electrostatic shock test | 4000V(contact), 8000V(air) × 10 axes |
| 备注 Note | |
| 6-1 工作温度范围 Operation Temperature | -20°C ~ 60°C |
| 6-2 储存温度范围 Storage Temperature | -30°C ~ 70°C |
| 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±10°C The temperature of the working surface of the soldering copper shall be 320±10°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

