

# 規格承認書

PECIFICATION FOR APPROVAL

客戶  
CUSTOMER : 立創  
項目  
ITEM : 单指向驻极体电容咪头 (ECM)  
型號  
TYPE : GMI6050U-2C44DB  
描述  
DESCRIPTION :  $\phi 6.0 \times H5.0 \text{ mm}$  2V 1033 -44dB  $\leq 2.2K \Omega$  S/N:  $\geq 58 \text{ dBA}$   
客戶料號  
CUSTOMER NO. :  
規格書號  
SPECIFICATION NO.:  
版本  
EDITION NO. : V1.2  
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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## A. SCOPE

This specification applies electret condenser microphone, GMI6050U-2C44DB

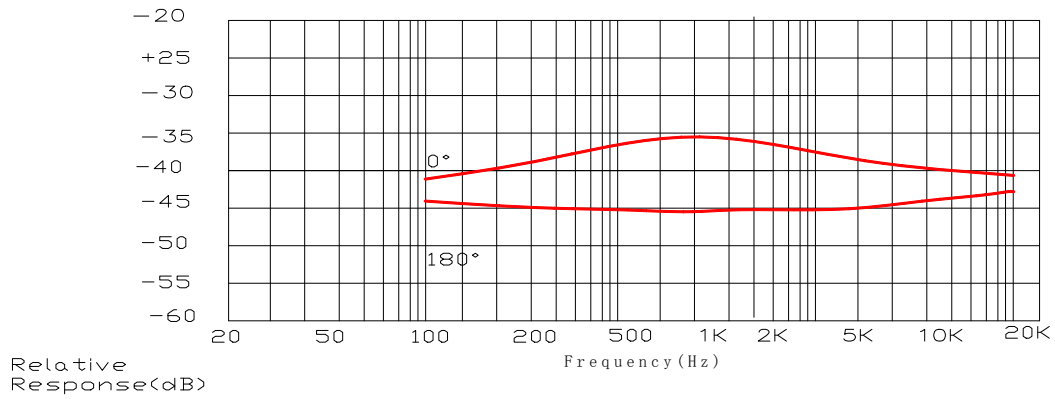
## B. SPECIFICATION

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

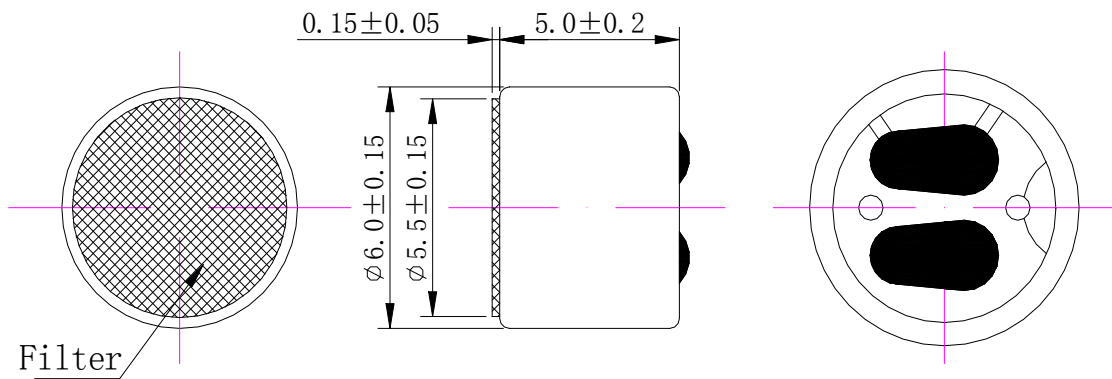
No.	Item	Symbol	Unit	Specification	Condition
1	Directivity			Uni-directional	
2	Sensitivity	<b>S</b>	dB	-44±3	0dB=1V/Pa,1KHz
3	Standard operating voltage	<b>Vs</b>	V	2V	
4	Output impedance	<b>Zout</b>	K $\Omega$	≤2.2	f=1KHz, 1Pa
5	Frequency		Hz	50-16,000	
6	Max operating voltage		V .	10	
7	Sensitivity reduction	$\Delta S-Vs$	dB	-3	f=1KHz, 1Pa Vs=1.5VDC to 3.0VDC
8	Max. current consumption	<b>IDSS</b>	mA	≤0.5	
9	Signal to noise ration	<b>S/N</b>	dBA	≥58	f=1KHz, P in=1Pa
10	Max input sound level	<b>SPL</b>	dB	110	
11	Operation temp.		°C	-20 ~+70	
12	Storage temp.		°C	-40 ~+80	
13	Dimension		mm	$\varphi$ 6.0 x 5.0	See appearance drawing
14	Terminal			Terminal	See appearance drawing

## C. TYPICAL FREQUENCY RESPONSE CURVE

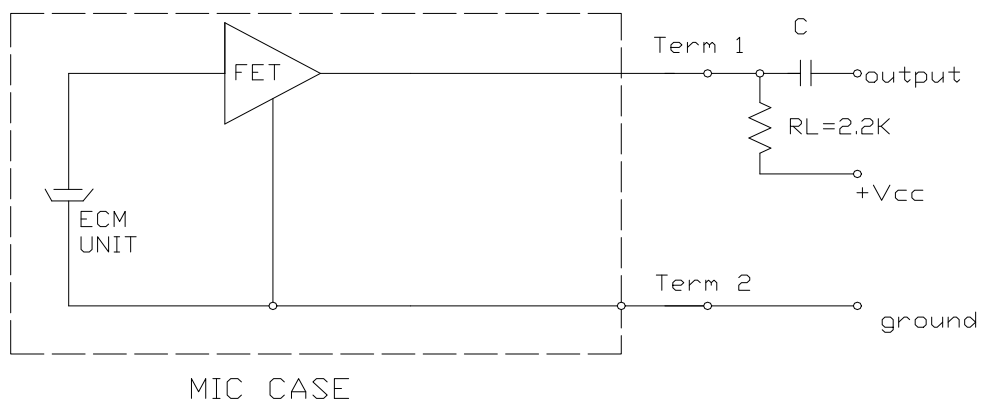
单指向



## D. APPEARANCE DRAWING



## E. MEASUREMENT CIRCUIT



## F. 可靠性试验 Reliability Test

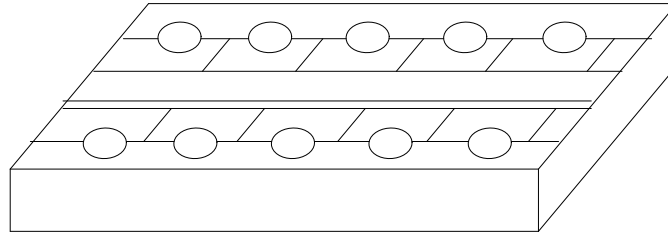
<p>经过以下所有试验在 20℃的条件下放置 3 小时后,麦克风的灵敏度与试验前比较变化在 3dB 以内</p> <p>After any following tests, the sensitivity of the microphone to be within <math>\pm 3\text{dB}</math> of initial sensitivity after 3hours of conditioning at 20℃</p>	
5-1 振动试验 Vibration	<p>周波数 1/Frequency1:10Hz~55Hz</p> <p>振幅/Amplitude:1.52mm</p> <p>变化/Change of Frequency:1 octave/min</p> <p>3 方向,各 2 小时/hours in each of 3 axes</p>
5-2 高温试验 Dry Heat	+80 $\pm$ 5℃ for 96 hours
5-3 低温试验 Dry Cold	-40 $\pm$ 5℃ for 96 hours
5-4 高温高湿试验 Damp Heat	90%~95%RH, +70 $\pm$ 5℃ for 96 hours
5-5 温度循环试验 Temperature cycles	<p>-20℃ <math>\longleftrightarrow</math> 25℃ <math>\longleftrightarrow</math> 70℃</p> <p>(2h) (1h) (2h) (1h) (2h) <math>\times</math> 10 cycles</p>
5-6 跌落试验 Packing drop test	<p>Height:1m</p> <p>顺序:三个面各跌 10 次</p> <p>Procedure:10 times from each of 3 axes</p>
5-7 温度冲击试验 Temperature impact test	<p>-20℃ <math>\longleftrightarrow</math> 70℃</p> <p>30min 30s 30min <math>\times</math> 10 cycles</p>
5-8 静电冲击试验 Electrostatic shock test	6000V(contact), 15000V(air) $\times$ 10 axes
备注 Note	
6-1 工作温度范围 Operation Temperature	-20℃~70℃
6-2 储存温度范围 Storage Temperature	-40℃~80℃
<h2>G. 焊接条件</h2> <h3>Soldering Condition</h3>	
<p>7-1 焊接使用 90W 的烙铁。</p> <p>The soldering copper of a type of 90W shall be applied</p>	
<p>焊接条件</p> <p>Soldering Condition.</p>	
<p>7-2 电烙铁表面温度 320<math>\pm</math>10℃</p> <p>The temperature of the working surface of the soldering copper shall be 320<math>\pm</math>10℃</p>	
<p>7-3 焊接时把麦克风嵌入散热能力强的金属块内。</p> <p>ECM shall be soldered fixed on the metal block(heat sink)which has the higher radiation effects said heat sink</p> <p>Shall contact with of ECM.</p>	

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

