

# 規格承認書

PECIFICATION FOR APPROVAL

客戶

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

項目

ITEM : 驻极体电容咪头 (ECM) \_\_\_\_\_

型號

TYPE : GMI6027P-58DB \_\_\_\_\_

描述

DESCRIPTION :  $\phi 6.0 \times 2.7 \text{ MM}$  -58dB 2.0V (DC)  $\leq 2.2\text{K}\Omega$  S/N:  $\geq 58 \text{ dBA}$  \_\_\_\_\_

客戶料號

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

規格書號

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

版本

EDITION NO. : V1.1 \_\_\_\_\_

日期

DATE : 2025-8-11 \_\_\_\_\_

## 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, GMI6027P-58DB

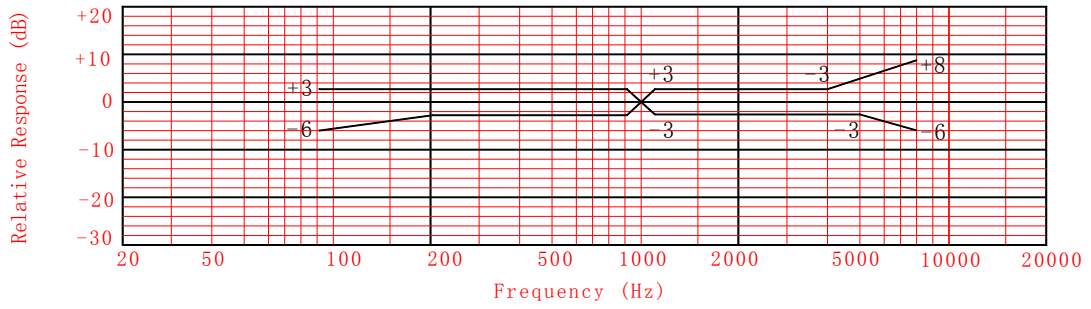
## B. SPECIFICATION

■Test condition:  $RL=2.2K\Omega$   $VS=2.0V$   $TEMP=25^{\circ}C\pm 2^{\circ}C$  Related humidity= $65\pm 5\%$

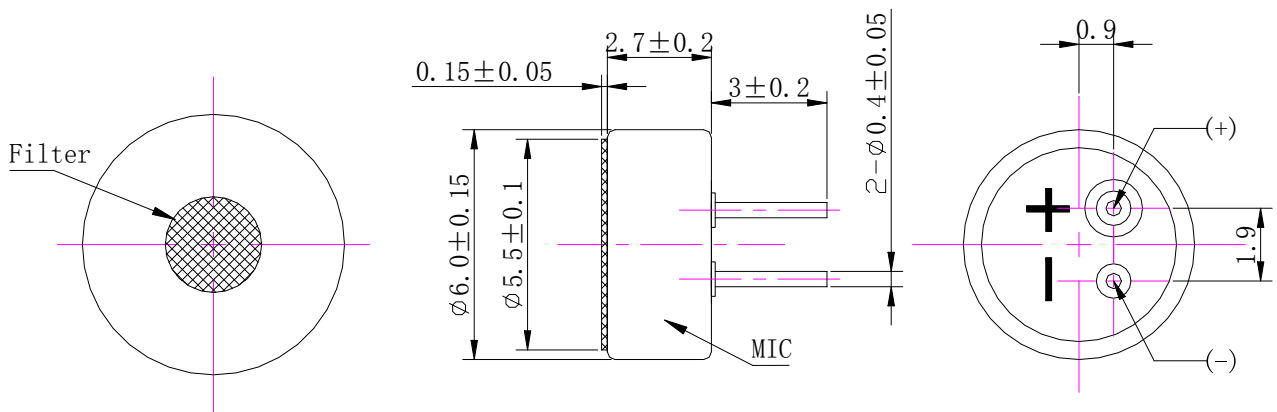
No.	Item	Symbol	Unit	Specification	Condition
1	Directivity			Omnidirectional	
2	Sensitivity	<b>S</b>	dB	-58±3	f=1KHz, 1Pa 0dB=1V/Pa
3	Standard operating voltage	<b>Vs</b>	V	2.0	
4	Output impedance	<b>Zout</b>	K $\Omega$	≤2.2	f=1KHz, 1Pa
5	Frequency		Hz	100-10000	
6	Max operating voltage		V .	10	
7	Sensitivity reduction	$\Delta$ <b>S-Vs</b>	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	≥60	f=1KHz, P in=1Pa
10	Max. Sound Pressure Level	<b>S.P.L</b>	dB	110	
11	Operation temp.		°C	-10 ~+60	
12	Storage temp.		°C	-20 ~+70	
13	Dimension		mm	φ6.0 x 2.7	See appearance drawing
14	Terminal			Terminal	See appearance drawing

### C. TYPICAL FREQUENCY RESPONSE CURVE

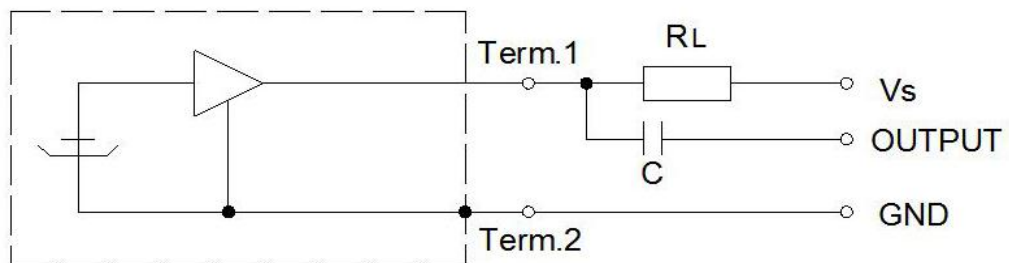
全指向性



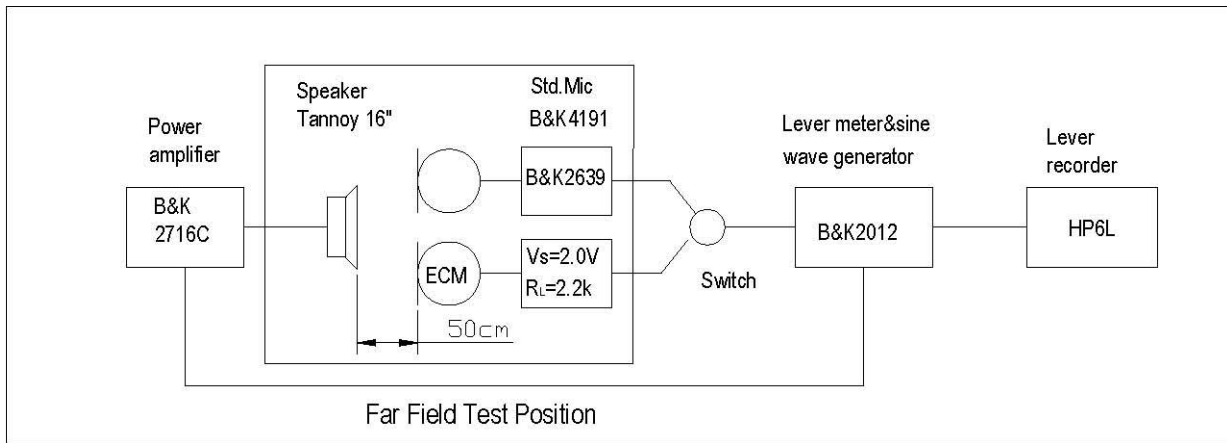
### D. APPEARANCE DRAWING



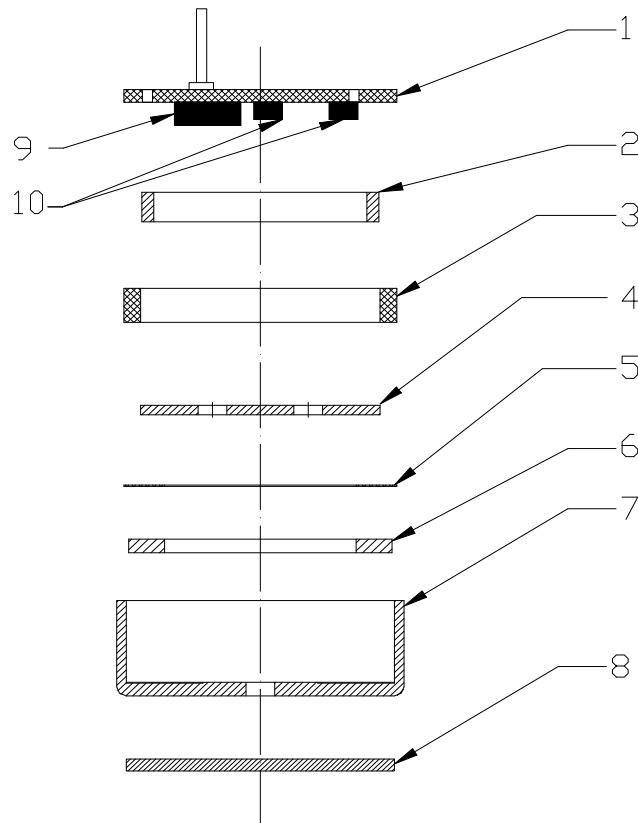
### E. MEASUREMENT CIRCUIT



## Test Setup Drawing



## F. Explode Drawing



NO.	PARTS
1	PCB
2	Connector
3	Holder
4	Back plate
5	Spacer
6	Film (FEP)
7	Outer most shell (Al)
8	Protection fleece
9	FET
10	Capacitance

<b>G. Reliability Test</b>	
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 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	+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, +60 $\pm$ 5℃ for 96 hours
5-5 温度循环试验 Temperature cycles	-20℃ $\longleftrightarrow$ 25℃ $\longleftrightarrow$ 70℃ (2h) (1h) (2h) (1h) (2h) x 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℃ $\longleftrightarrow$ 70℃ 30min 30s 30min x 10 cycles
5-8 静电冲击试验 Electrostatic shock test	6000V(contact), 15000V(air) x 10 axes
备注 Note	
6-1 工作温度范围 Operation Temperature	-30℃~70℃
6-2 储存温度范围 Storage Temperature	-40℃~85℃
<b>H. Soldering Condition</b>	
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.

