



常州市嘉传电子有限公司

Changzhou Jiachuan Electronics Co., Ltd.

SPECIFICATION FOR APPROVAL

产品规格承认书

JC-MIC4022-UNI01 单指向驻极体咪头 / Unidirectional Electret Condenser Microphone

Item 项目	Information 信息
Customer 客户	
Customer P/N 客户料号	
Supplier 供应商	常州市嘉传电子有限公司 Changzhou Jiachuan Electronics Co., Ltd.
Jiachuan P/N 嘉传型号	JC-MIC4022-UNI01
Description 产品名称	单指向驻极体咪头 / Unidirectional Electret Condenser Microphone
Main Specification 主要规格	Ø4.0×2.2mm -36~-66±3dB 1.5V ≤0.68kΩ 100~10000Hz S/N ≥58dBA
Revision 版本	A0

Approval / 签核

Prepared 制作	Checked 审核	Approved 批准	Company Seal 公司印章
李明珠	王敏娜	黄继桥	

Customer Confirmation / 客户确认

Signature / 签字 : _____ Date / 日期 : _____



常州市嘉传电子有限公司

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PRODUCT SPECIFICATION / 产品规格内容

Model No.: JC-MIC4022-UNI01 Revision: A0

1. Scope / 适用范围

This specification applies electret condenser microphone. / 本规格适用于驻极体电容咪头。

2. Test Condition / 测试条件

RL=0.68k Ω VS=1.5V TEMP=25°C $\pm$ 2°C Related Humidity=65 $\pm$ 5%

3. Electrical & Acoustic Specifications / 电气与声学规格

No.	Item / 项目	Symbol	Unit	Specification	Condition
1	Directivity / 指向性			Uni-directional	
2	Sensitivity / 灵敏度	S	dB	-36~-66 $\pm$ 3	f=1kHz, 1Pa; 0dB=1V/Pa
3	Standard operating voltage / 标准工作电压	Vs	V	1.5	
4	Output impedance / 输出阻抗	Zout	k Ω	$\leq$ 0.68	f=1kHz, 1Pa
5	Frequency / 频率范围		Hz	100~10,000	
6	Max operating voltage / 最大工作电压		V	10	
7	Sensitivity reduction / 灵敏度降低	Δ S-Vs	dB	-3	f=1kHz, 1Pa; Vs=3.0VDC to 1.5VDC
8	Max. current consumption / 最大消耗电流	IDSS	mA	$\leq$ 0.5	
9	Signal to noise ratio / 信噪比	S/N	dBA	$\geq$ 58	f=1kHz, P in=1Pa
10	Max input sound level / 最大输入声压级	SPL	dB	110	
11	Operation temp. / 工作温度		°C	-30~+70	
12	Storage temp. / 储存温度		°C	-40~+85	
13	Dimension / 外形尺寸		mm	ϕ 4.0 $\times$ H2.2	See appearance drawing
14	Terminal / 端子			Terminal	See appearance drawing

Sensitivity notation follows Pa reference. Source note: -60dB (0dB=1V/ μ bar) = -40dB (1V/Pa).

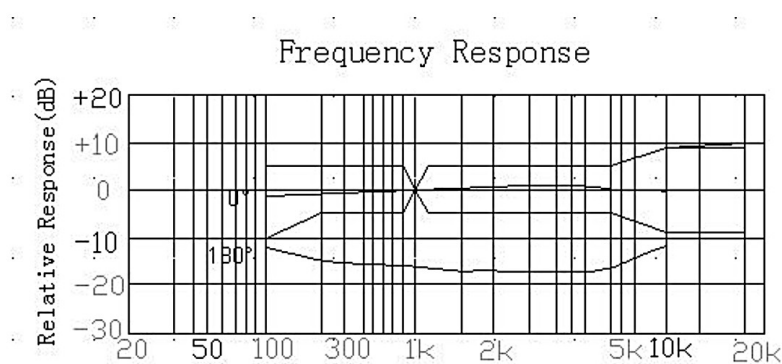


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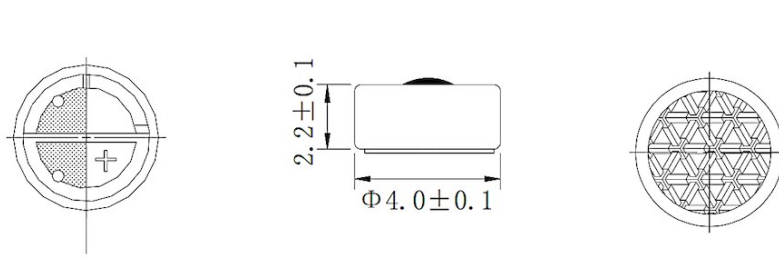
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4. Typical Frequency Response Curve / 典型频率响应曲线

单指向

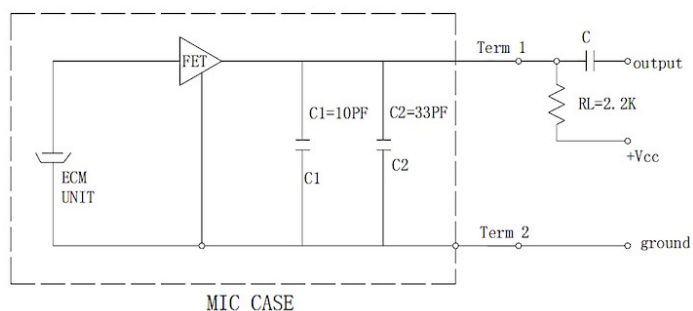


5. Appearance Drawing / 外形尺寸图

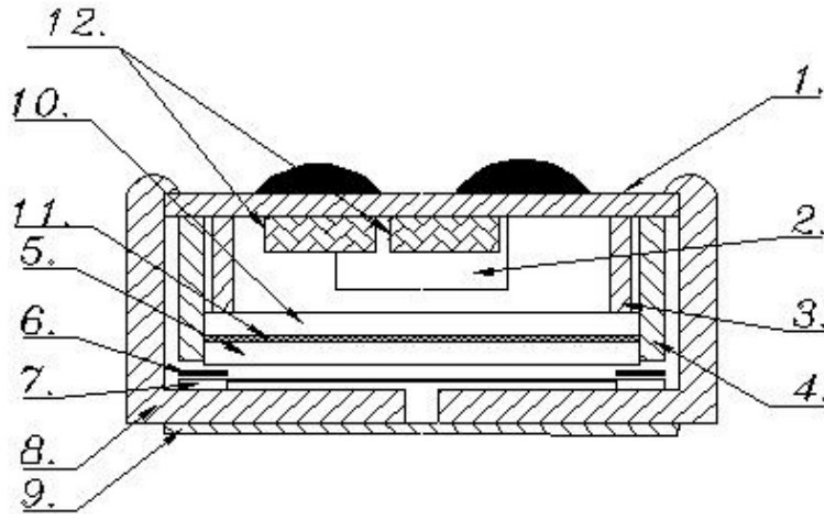


6. Measurement Circuit / 测量电路

MEASUREMENT CIRCUIT



7. Exploded Drawing / 结构分解图



No.	名称 (中文)	Description (English)	No.	名称 (中文)	Description (English)
1	PCB	PCB	7	背板膜	Back plate film
2	FET	FET	8	外壳	Case
3	金环	Metal ring	9	防水网	Waterproof mesh
4	塑环腔体	Plastic cavity	10	板	Electrode plate
5	背极板	Back plate	11	阻尼网	Damping mesh
6	垫片	Spacer sheet	12	电容	Capacitor

8. Reliability Test / 可靠性试验

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

Test Item / 试验项目	Condition / 条件
5-1 Vibration / 振动试验	10Hz~55Hz; Amplitude: 1.52mm; Change of Frequency: 1 octave/min; 2 hours in each of 3 axes
5-2 Dry Heat / 高温试验	+80 $\pm$ 5 $^\circ\text{C}$ for 96 hours
5-3 Dry Cold / 低温试验	-40 $\pm$ 5 $^\circ\text{C}$ for 96 hours
5-4 Damp Heat / 高温高湿试验	90%~95%RH, +60 $\pm$ 5 $^\circ\text{C}$ for 96 hours
5-5 Temperature cycles / 温度循环试验	-20 $^\circ\text{C}$ (2h) $\rightarrow$ 25 $^\circ\text{C}$ (1h) $\rightarrow$ 70 $^\circ\text{C}$ (2h) $\rightarrow$ 25 $^\circ\text{C}$ (1h) $\rightarrow$ -20 $^\circ\text{C}$ (2h), $\times 10$ cycles
5-6 Packing drop test / 跌落试验	Height: 1m; Procedure: 10 times from each of 3 axes
5-7 Temperature impact test / 温度冲击试验	-20 $^\circ\text{C}$ 30min $\rightarrow$ 70 $^\circ\text{C}$ 30min, $\times 10$ cycles
5-8 Electrostatic shock test / 静电冲击试验	4000V(contact), 10000V(air), $\times 10$ axes



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9. Operating & Storage Temperature / 工作与储存温度

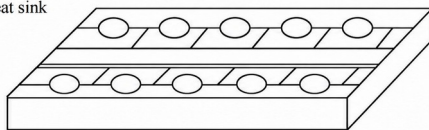
Operation Temperature / 工作温度	-30°C~70°C
Storage Temperature / 储存温度	-40°C~85°C

10. Soldering Condition / 焊接条件

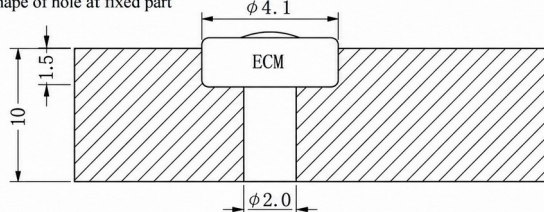
No.	Requirement / 要求
7-1	The soldering copper of a type of 90W shall be applied / 使用 90W 烙铁。
7-2	The temperature of the working surface of the soldering copper shall be $320\pm 10^{\circ}\text{C}$ / 电烙铁表面温度 $320\pm 10^{\circ}\text{C}$ 。
7-3	ECM shall be soldered fixed on the metal block (heat sink) which has the higher radiation effects; said heat sink shall contact with ECM.
7-4	Time for each terminal shall be 2~3 sec. / 每个端子焊接时间 2~3 秒。
7-5	The pinhole after soldering shall be avoided. / 焊接后不能出现针孔。
7-6	ECM may easily be destroyed by static electricity; grounding countermeasures for soldering iron, worktable and human body shall be executed.

11. Heat Sink / 散热板

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

12. Packaging / 包装方式

按客户要求包装。 / Packaging according to customer requirements.