

# SPECIFICATION


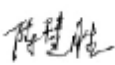
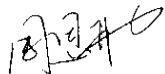
受 控

Customer : Quartz-1  
Applied To :  
Product Name : MIC  
Model Name : KPCM- G60H22P- 50DB- 1211-  
Yellow  
Drawing No. : KIC1211

Signature of Appronal

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Signature of KEPO

Approved by	Checkde by	Issued by	Date
			2010.12.21



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## 1. Scope 范围

This specification applies electret condenser microphone.  
此规格书适用于电容式麦克风.

## 2. General 概要

- 2.1 Out- Diameter : 6 mm  
2.1. 外径 : 6 mm
- 2.2 Height : 2.2 mm  
2.2. 高度 : 2.2 mm
- 2.3 Weight : ≤0.3 g  
2.3 重量 : ≤0.3 g
- 2.4 Operating Temperature range: '- 20 ~ +70 °C without loss of function  
2.4 工作温度: - 20 ~ +70 °C
- 2.5 Store Temperature range: '- 40 ~ +85 °C without loss of function  
2.5 储存温度: - 40 ~ +85 °C

## 3. Electrical and Acoustic Characteristics. 电声参数

Test condition : 15 ~ 35 °C, 45% ~ 85% RH, 860 ~ 1060 mbar  
测试条件 : 15 ~ 35 °C, 45% ~ 85% RH, 860 ~ 1060 mbar

No	Items	Symbol	Unit	Specification	Condition
1	Directivity 指向性			Omni- directional 全指向性	
2	Sensitivity 灵敏度	S	dB	- 50dB±3	0dB=1V/ubar, 1KHz
3	Standard Operation Voltage 标准操作电压	Vs	V. D. C	4.5	
4	Output impedance 输出阻抗	Zout	KΩ	2.2	f=1KHz, 1ubar
5	Max operating voltage 最大操作电压		V. D. C	10	
6	Sensitivity reduction 减压灵敏度	ΔS- Vs	dB	- 3	f=1KHz, 1ubar Vs=4.5- 1.5V. D. C
7	Frequency 频率	f	Hz	100- 16,000	
8	Max. Current Consumption 最大耗电流	IDss	mA	0.5	Vs=4.5V, RL=2.2KΩ
9	Signal to noise ration 讯号对比杂音	S/N	dBA	60	f=1KHz, 1ubar A weighted
10	Material 材质			AL 铝	
11	Terminal 端子				See appearance drawing 请参照外观尺寸图
12	Environmental Protection Regulations 环保法规			RoHS	

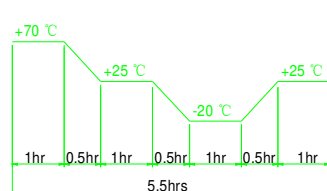
We use "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C (International Electro technical Commission). The Sensitivity of "Pa" will increase 20dB comparing with "ubar" indication.  
Example : - 60dB(0dB=1v/ubar)=- 40dB(1v/ Pa)  
依I.E.C.(国际电子协会) 建议, 以"Pa"为灵敏度标示单位比"ubar"灵敏度标示单位增加20dB  
例如:- 60dB(0dB=1V/ubar)=- 40dB(1V/ Pa)

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#### 4.1 Mechanical Characteristics 机械特性

No.	Item	Test Condition	Evaluation standard
1	Solderability 焊锡附着性 (Connector excepted) 端子类不适合此项	Striped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder both of $+270\pm 5^{\circ}\text{C}$ for $3\pm 0.5$ seconds. 裸线部分浸入松香溶液5秒后, 再浸入 $+270\pm 5^{\circ}\text{C}$ 熔融焊锡槽 $3\pm 0.5$	90% minstripped wires shall be wet with solder . (Except the edge of terminal). 浸入裸线部分附着焊锡90%以上。(末端断面不算)
2	Lead Wire Pull Strength 线材拉力	The pull force shall be applied to double lead wire: Horizontal 4.9N (0.5kg) for 30 seconds. 双线材水平方向施以4.9N (0.5kg)的力量30秒。	No damage and cutting off. 线材不松动, 不脱落
3	Vibration 振动试验	Sounder shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hour. 振幅为1.5mm, 频率为10- 50Hz, 三个不同轴方向各振动2小时, 试验后进行测量。	After any tests, the sensitivity to be within $\pm 3\text{dB}$ 测试其灵敏度须与原测试值的差异不超过 $\pm 3\text{dB}$
4	Drop test 跌落试验	The microphone unit without packaged must be subjected to each 3 drops a three axis from the height of 1 meter to 20mm thick wooden board. 未包装麦克风单体从1公尺高处, X.Y.Z 3个方向, 各3回, 落于20mm厚木板上。	

#### 4.2 Environmental test 环境试验

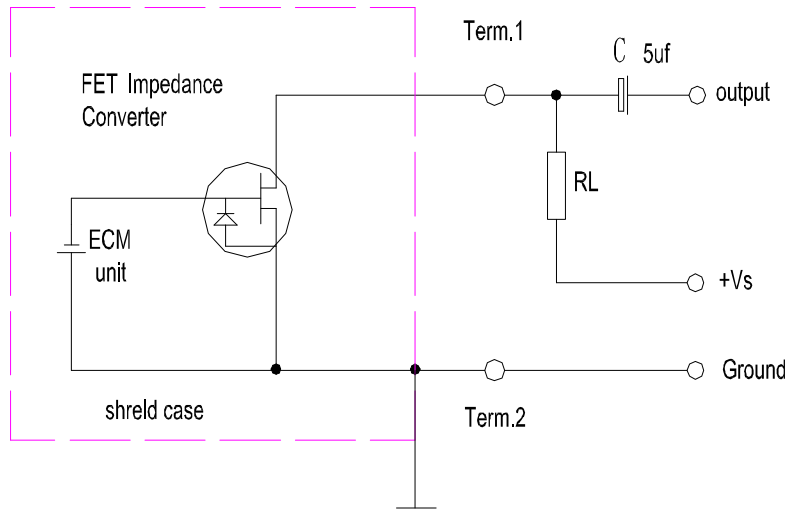
No.	Item	Test Condition	Evaluation standard
1	High temperature test 高温测试	After being placed in a chamber at $+70^{\circ}\text{C}$ for 72 hours. $+70^{\circ}\text{C}$ 环境中72小时。	After any tests, the sensitivity to be within $\pm 3\text{dB}$ of initial sensitivity after 6 hours of conditioning at $+25^{\circ}\text{C}$ 经测试后麦克风, 须静置于 $+25^{\circ}\text{C}$ (室温) 环境中6小时后, 测试其灵敏度须与原测试值的差异不超过 $\pm 3\text{dB}$
2	Low temperature test 低温试验	After being placed in a chamber at $-20^{\circ}\text{C}$ for 72 hours. 置于 $-20^{\circ}\text{C}$ 环境中72小时。	
3	Humidity Test 相对湿度试验	After being placed in a chamber at $+40^{\circ}\text{C}$ and 90 $\pm 5\%$ relative humidity for 240 hours. $+40^{\circ}\text{C}$ , 相对湿度 $90\pm 5\%$ 环境中240小时。	
4	Temperature cycle test 温度循环测试	The part shall be subjected to 10 cycles. One cycle shall be consist of: 单件承受温度循环测试10次, 其循环内容如图示 	

**5. Measurement Block Diagram & Response curve**

**测试图和曲线图**

**5.1 Measurement Block Diagram 测试图**

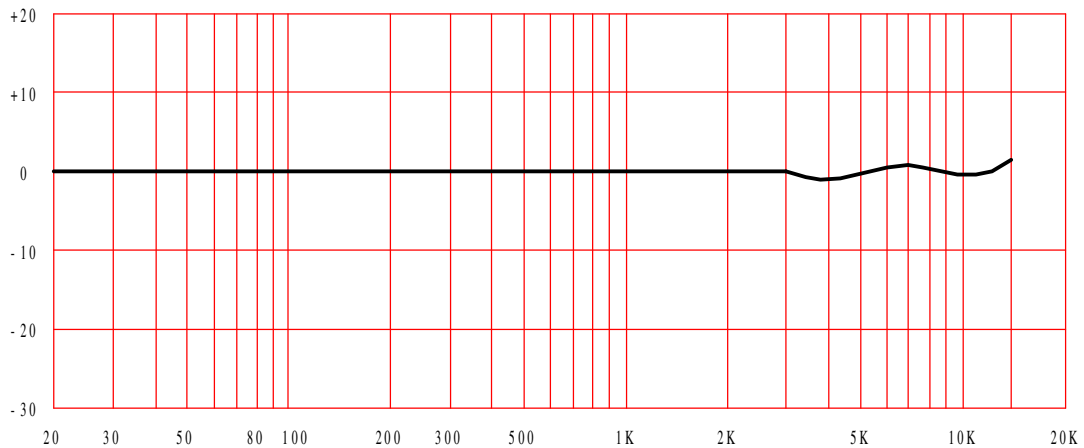
Schematic Diagram  $V_s=4.5V$  ;  $R_1=2.2k\Omega$ : $C=5\mu f$



**5.2 Response curve 曲线图**

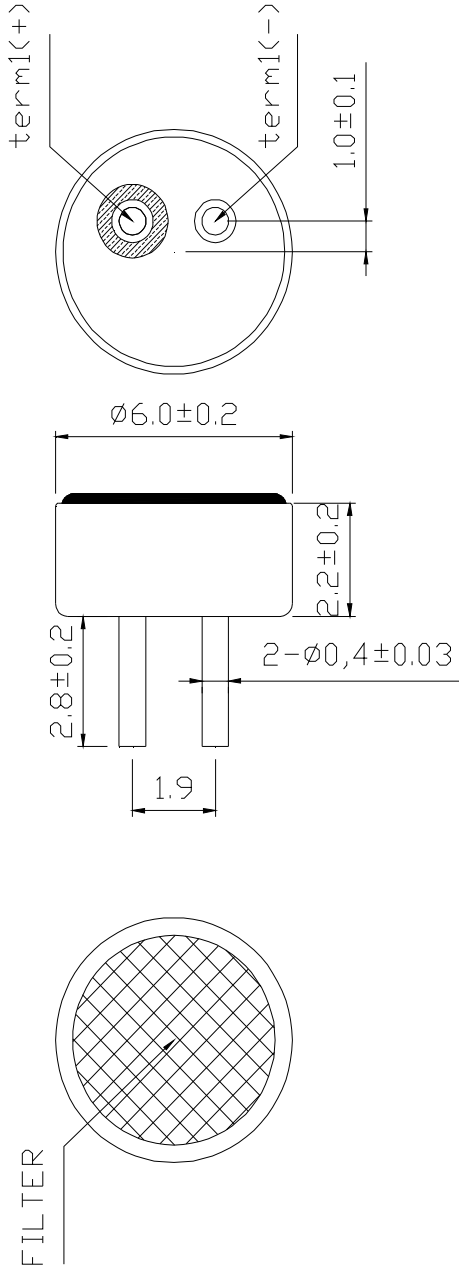
**Frequency Response**

Typical Frequency Response Curve



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**6. Dimensions 尺寸图**

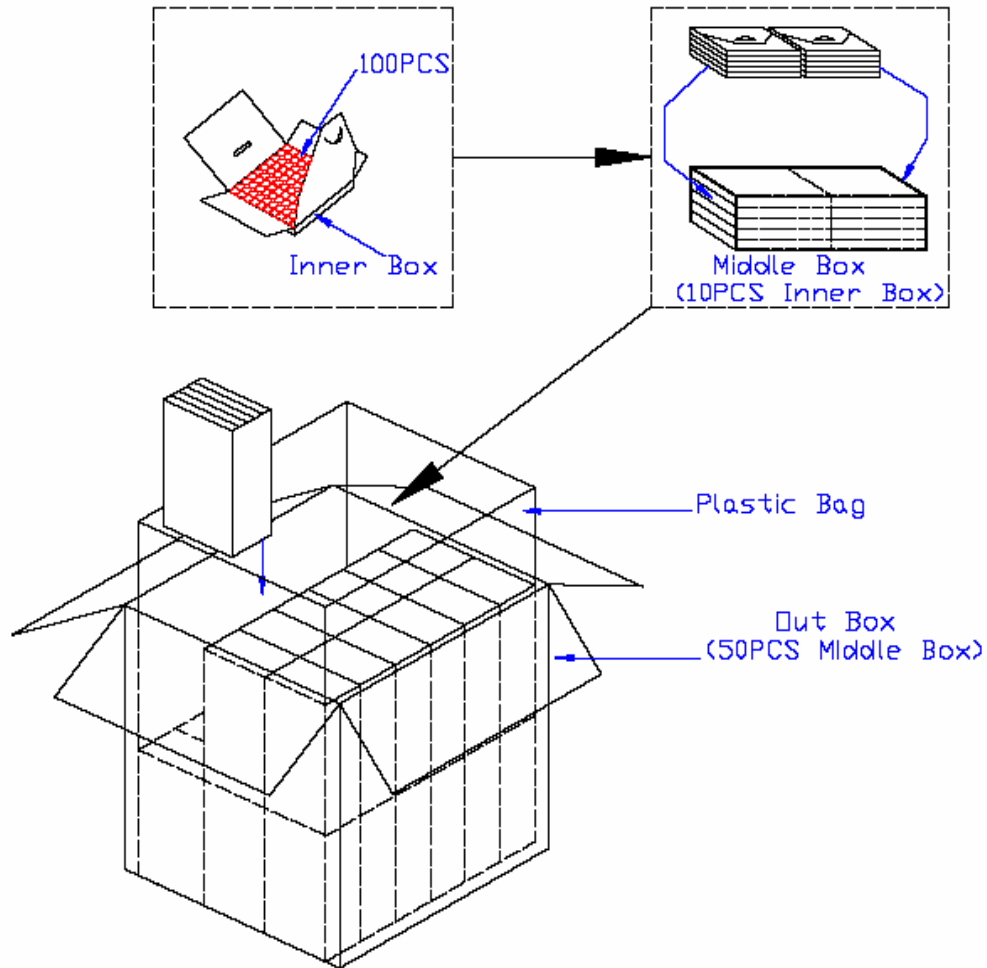


FIRST ANGLE PROJECTION

UNIT : mm  
Tolerance :  $\pm 0.2$

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## 7. Packing 包装



Inner Box	61mm × 61mm × 4mm	100PCS × 1 = 100PCS
Middle Box	124mm × 63mm × 21mm	100PCS × 10 = 1000PCS
Out Box	230mm × 230mm × 270mm	1000PCS × 50 = 50000PCS

