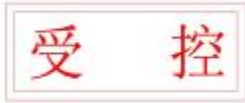



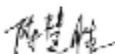
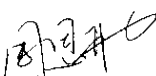
# SPECIFICATION



Customer : QUARTZ-1  
Applied To :  
Product Name : MIC  
Model Name : KPCM-G60H50-56dB-1065  
Drawing No. : KIC1065

Signature of Appronal

Signature of KEPO

| Approved by   | Checkde by  | Issued by  | Date |
|---|---|--|------|
|  |  |  |      |



宁波凯普电子有限公司  
Ningbo Kepo Electronics Co.,Ltd.

宁波东钱湖镇东钱湖工业区宝源路 25 号  
TEL:+86-574-88370330 FAX:+86-574-88370329

No.25 Baoyuan road Dongqian Lake, Industry Area, Dongqian town,Ningbo City,  
China(Post Code:315121)  
[Sales@chinaacoustic.com](mailto:Sales@chinaacoustic.com) [www.chinaacoustic.com](http://www.chinaacoustic.com)

|                                     |              |         |
|-------------------------------------|--------------|---------|
| <b>Specification for Microphone</b> | Page         | 2/8     |
|                                     | Revision No. | 1.0     |
| Model No. : KPCM-G60H50-56dB-1065   | Drawing No.  | KIC1065 |

## CONTENTS

- 1. Scope
- 1.范围
- 2. General
- 2.概要
- 3. Electrical and Acoustic Characteristics.
- 3.电声参数
- 4. Mechanical characteristics and environmental test
- 4.机械特性和环境试验
- 5. Measurement Block Diagram & Response curve
- 5.测试图和曲线图
- 6. Dimensions
- 6.尺寸图
- 7. Packing
- 7.包装
- 8. Revision
- 8.履历表

|                                   |  |              |         |
|-----------------------------------|--|--------------|---------|
| Specification for Microphone      |  | Page         | 3/8     |
|                                   |  | Revision No. | 1.0     |
| Model No. : KPCM-G60H50-56dB-1065 |  | Drawing No.  | KIC1065 |

## 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 : 5 mm  
2.2. 高度 : 5 mm  
2.3 Weight : ≤0.3g  
2.3 重量 : ≤0.3g  
2.4 Operating Temperature range: '-20 ~+70℃ without loss of function  
2.4 工作温度: -20 ~+70℃  
2.5 Store Temperature range: '-20~+70℃ without loss of function  
2.5 储存温度: -20~+70℃

## 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 ~ 1060mbar

| No | Items  | Symbol | Unit  | Specification            | Condition                        |
|----|--|--------|-------|--------------------------|----------------------------------|
| 1  | Directivity<br>指向性                           |        |       | Omni-directional<br>全指向性 |                                  |
| 2  | Sensitivity<br>灵敏度                           | S      | dB    | -56dB±3                  | 0dB=1V/ubar, 1KHz                |
| 3  | Standard Operation Voltage<br>标准操作电压         | Vs     | V.D.C | 4.5                      |                                  |
| 4  | Output impedance<br>输出阻抗                     | Zout   | KΩ    | 2.2                      | f=1KHz, 1ubar                    |
| 5  | Max operating voltage<br>最大操作电压              |        | V.D.C | 10                       |                                  |
| 6  | Sensitivity reduction<br>减压灵敏度               | ΔS-Vs  | dB    | -3                       | f=1KHz, 1ubar<br>Vs=4.5-1.5V.D.C |
| 7  | Frequency<br>频率                              | f      | Hz    | 100-10,000               |                                  |
| 8  | Max. Current Consumption<br>最大耗电流            | IDss   | mA    | 0.5                      | Vs=4.5V, RL=2.2KΩ                |
| 9  | Signal to noise ration<br>讯号对比杂音             | S/N    | dBA   | 58                       | f=1KHz, 1ubar A weighted         |
| 10 | Material<br>材质                               |        |       | AL<br>铝                  |                                  |
| 11 | Terminal<br>端子                               |        |       |                          | See appearance drawing 请参照外观尺寸图  |
| 12 | Environmental Protection Regulations<br>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

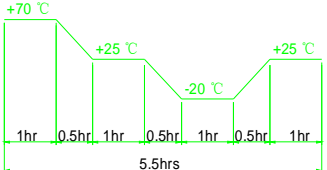
例如:-60dB(0dB=1V/ubar)=-40dB(1V/Pa)

|                                     |  |              |         |
|-------------------------------------|--|--------------|---------|
| <b>Specification for Microphone</b> |  | Page         | 4/8     |
|                                     |  | Revision No. | 1.0     |
| Model No. : KPCM-G60H50-56dB-1065   |  | Drawing No.  | KIC1065 |

### 4.1 Mechanical Characteristics 机械特性

| No. | Item   | Test Condition  | Evaluation standard  |
|-----|--|---|--|
| 1   | Solderability<br>焊锡附着性<br>(Connector excepted)<br>端子类不适合此项 | Strippd wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder both of +270±5℃ for 3±0.5 seconds.<br>裸线部分侵入松香溶液5秒后, 再侵入+270±5℃ 熔融焊锡槽3±0.5  | 90% minstripped wires shall be wet with solder .(Except the edge of terminal).<br>侵入裸线部分附着焊锡90%以上。(末端断面不算) |
| 2   | Lead Wire Pull Stength<br>线材拉力                             | The pull force shall be applied to double lead wire:Horizontal 4.9N (0.5kg) for 30 seconds.<br>双线材水平方向施以4.9N (0.5kg)的力量30秒。   | No damage and cutting off.<br>线材不松动, 不脱落   |
| 3   | Vibration<br>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 for2 hour.<br>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 ±3dB<br>测试其灵敏度须与原测试值的差异不超过±3dB                                |
| 4   | Drop test<br>跌落试验  | The microphone unit without packaged mst be subjected to each 3 drops a three axis from the heigh of 1 meter to 20mm thick wodden board. 未包装麦克风单体从1公尺高处, X.Y.X 3个方向, 各3回, 落于20mm厚木板上。                                       |  |

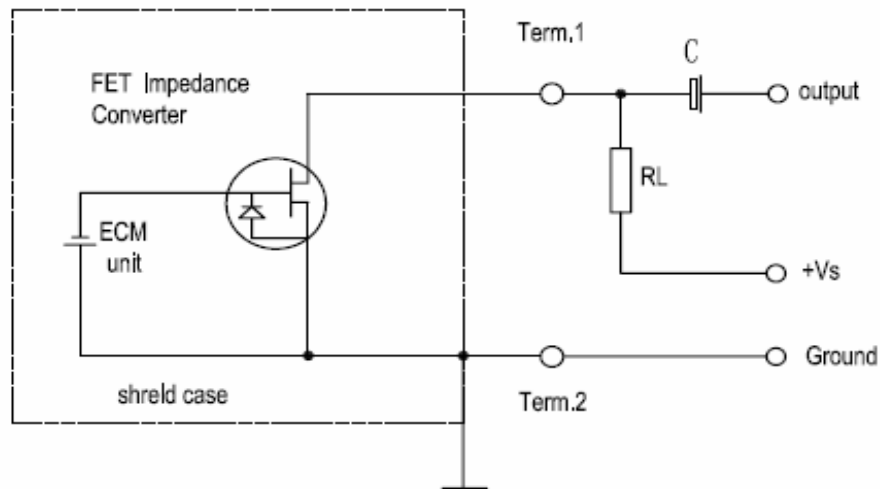
### 4.2 Environmental test 环境试验

| No. | Item                             | Test Condition   | Evaluation standard   |
|-----|----------------------------------|--|---|
| 1   | High temperature test<br>高温测试    | After being placed in a chamber at +70 ℃ for 72 hours.<br>置于+70 ℃ 环境中72小时.   | After any tests,the sensitivity to be within ±3dB of initial sensitivity after6 hours of conditioning at +25 ℃<br>经测试后麦克风, 须静置于+25 ℃ (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±3dB |
| 2   | Low temperature test<br>低温试验     | After being placed in a chamber at -20 ℃ for 72 hours. 置于-20 ℃环境中72小时.   |   |
| 3   | Humidity Test<br>相对湿度试验          | After being placed in a chamber at +40 ℃ and 90±5% relative humidity for 240 hours.<br>置于+40 ℃ , 相对湿度90±5%环境中240小时.  |   |
| 4   | Temperature cycle test<br>温度循环测试 | The part shall be subjected to 10 cycles.One cycle shall be consist of :<br>单<br>体承受温度循环测试10次, 其循环内容如图示<br> |   |

## 5. Measurement Block Diagram & Response curve 测试图和曲线图

### 5.1 Measurement Block Diagram 测试图

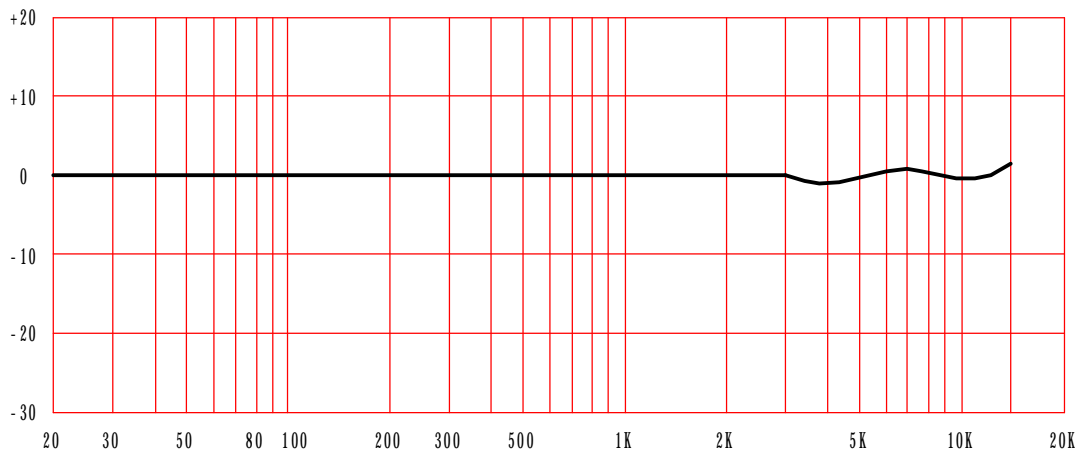
Schematic Diagram  $V_s = 4.5V$  ;  $R_1 = 2.2K\Omega$



### 5.2 Response curve 曲线图

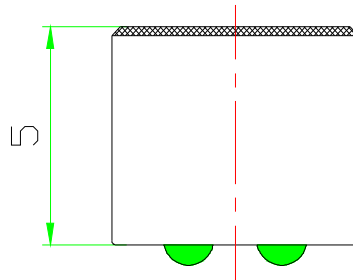
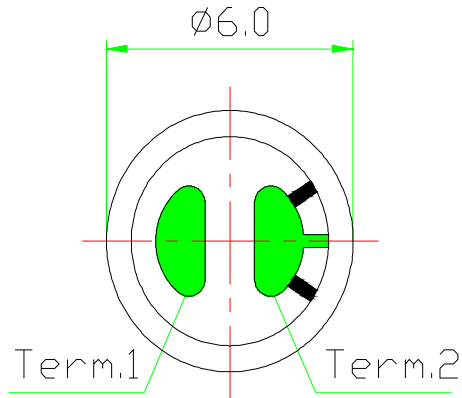
#### Frequency Response

Typical Frequency Response Curve



|                                     |              |         |
|-------------------------------------|--------------|---------|
| <b>Specification for Microphone</b> | Page         | 6/8     |
|                                     | Revision No. | 1.0     |
| Model No. : KPCM-G60H50-56dB-1065   | Drawing No.  | KIC1065 |

## 6. Dimensions 尺寸图

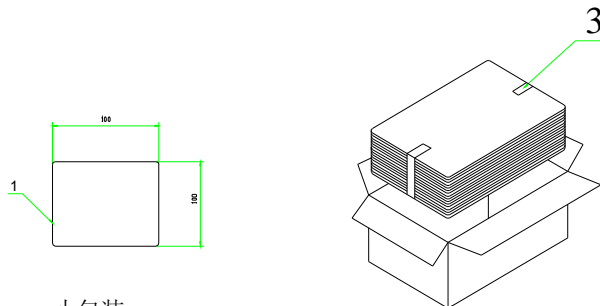


FIRST ANGLE PROJECTION

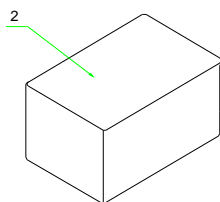
UNIT : mm  
 Tolerance :  $\pm 0.2$

|                                     |              |         |
|-------------------------------------|--------------|---------|
| <b>Specification for Microphone</b> | Page         | 7/8     |
|                                     | Revision No. | 1.0     |
| Model No. : KPCM-G60H50-56dB-1065   | Drawing No.  | KIC1065 |

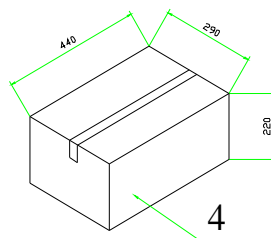
## 7. Packing 包装



小包装  
Inner Box  
62X62X6  
100Pcs



中包装  
Middle Box  
126×66×43  
1000PCS



外包装  
Outer Box  
230X230X270  
30000PCS

