

# SPECIFICATION

受 控

Customer : QUARTZ-1

Applied To :

Product Name : Mechanical Buzzer

Model Name : KPMB-G2215P-K4861




Drawing No. : OEM4861R

Compliance with RoHS(本品符合ROHS指令)

Signature of Approval

--

Signature of KEPO

Approved by	Checked 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)

Specification for Mechanical Buzzer		Page	2/9
Model No. : KPMB-G2215P-K4861		Revision No.	1.0
		Drawing No.	OEM4861R

## CONTENTS

1. Scope  
范围
2. General  
概要
3. Maximum Rating  
额定极限条件
4. Electrical Characteristics  
电性能
5. Measurement Block Diagram & Response Curve  
测试图和曲线图
6. Physical Characteristics  
机械性能
7. Environmental Characteristics  
环境性能
8. Dimensions  
尺寸
9. Packaging Standard  
包装标准
10. Cautions  
警告
11. Cautions for Use  
注意事项
12. Revision  
履历表

Specification for Mechanical Buzzer		Page	3/9
Model No. : KPMB-G2215P-K4861		Revision No.	1.0
		Drawing No.	OEM4861R

## 1. 范围 Scope

This product specification is applied to the Mechanical Buzzer in alarm systems. Please contact us when using this product for any other applications than described in the above.

本规格书适用于机械式蜂鸣器，通常它用在系统中做报警或提示的蜂鸣器用，如果将该产品用于其它领域，请与我们联系。

## 2. 概要 General

2.1 Out-Diameter : 23x16mm

外径: 23x16 mm

2.2 Height : 15mm

高度: 15 mm

2.3 Weight : 10 g.

重量: 10克

2.4 Case Material /Color : ABS/BLACK

壳体材质/颜色: ABS/黑色

2.5 According to the No.7 of RoHS Exemptions, lead-based solder alloys containing 85% by weight or more lead(Sn10Pb90)

根据"欧盟RoHS指令豁免条款"第7条规定,使用了铅含量超过85%的锡铅合金焊料(Sn10Pb90)

## 3. 额定极限条件 Maximum Rating

	项目 Item	规格 Specification
3.1	工作温度范围 Operating Temperature Range	-20 ~ +60°C
3.2	储存温度范围 Storage Temperature Range	-30 ~ +70°C
3.3	额定电压 Rated Voltage	1.5VDC
3.4	工作电压 Operating Voltage	1.3~2VDC

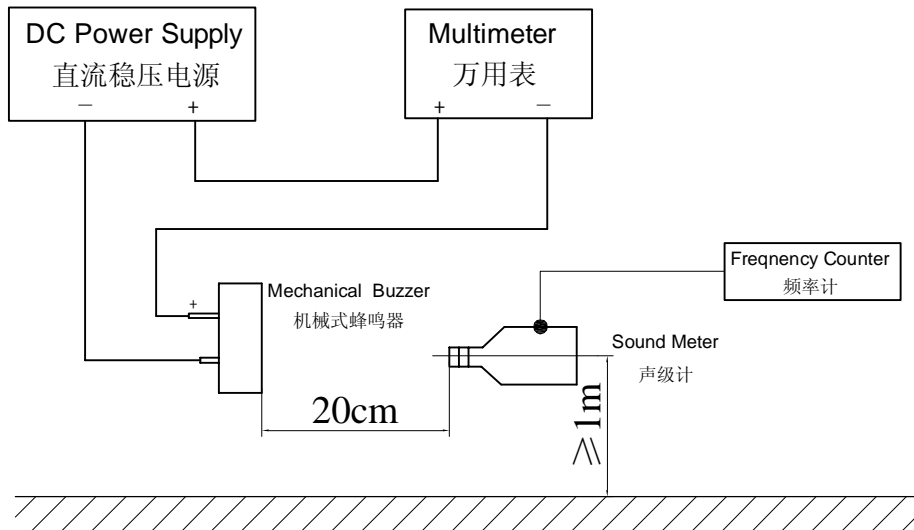
## 4. 电性能 Electrical Characteristics

	项目 Item	规格 Specification
4.1	Max.Rated Current 额定电流	30mA/1.5VDC
4.2	Resonant Frequency 谐振频率	400± 100Hz
4.3	Min.Sound Pressure Level 最小声压	70dB/1.5VDC/20cm

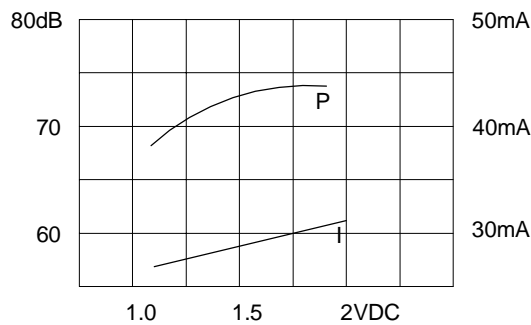
Specification for Mechanical Buzzer	Page	4/9
	Revision No.	1.0
	Drawing No.	OEM4861R
Model No. :	KPMB-G2215P-K4861	

## 5. 测试方法 Measuring Method

### 5.1 声压测试 S.P.L. Measuring



### 5.2 曲线图 Response Curve



### 5.2 测试环境 Measuring Condition

温度 $+25 \pm 3^{\circ}\text{C}$ ，湿度 $60 \pm 10\% \text{R.H.}$ 标准测试状态,在没有疑问的场合,可以在温度 $+5 \sim +35^{\circ}\text{C}$ ,湿度 $45 \sim 85\% \text{R.H.}$ 的范围内测试.

Part shall be measured under a condition (Temperature : $+5$  to  $+35^{\circ}\text{C}$ , Humidity : $45$  to  $85\% \text{R.H.}$ ) unless the standard condition (Temperature : $+25 \pm 3^{\circ}\text{C}$ , Humidity : $60 \pm 10\% \text{R.H.}$ ) is regulated measure.

Specification for Mechanical Buzzer		Page	5/9
Model No. : KPMB-G2215P-K4861		Revision No.	1.0
		Drawing No.	OEM4861R

## 6. 机械性能 Physical Characteristics

	实验项目 Item	实验条件 Test Condition	实验后规格 Specification
6.1	耐冲击性 Shock	<p>峰值加速度 <math>490\text{m/s}^2</math>, 半正弦波, XYZ三个方向各3次冲击实验后, 测试蜂鸣器.</p> <p>Sounder shall be measured after being applied shock(<math>490\text{m/s}^2</math>) for each three mutually perpendicular directions to each of 3 times by half sine wave.</p>	符合表1的要求  The measured value shall meet Table 1.
6.2	耐振动性 Vibration Resistant	<p>振动频率 10~30 Hz, 1.5mm 全振幅, XYZ三个方向各2小时试验后, 测试蜂鸣器.</p> <p>Sounder shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 30Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours.</p>	

Specification for Mechanical Buzzer		Page	6/9
		Revision No.	1.0
Model No. :	KPMB-G2215P-K4861	Drawing No.	OEM4861R

## 7. 环境性能 Environmental Characteristics

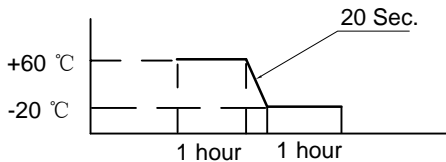
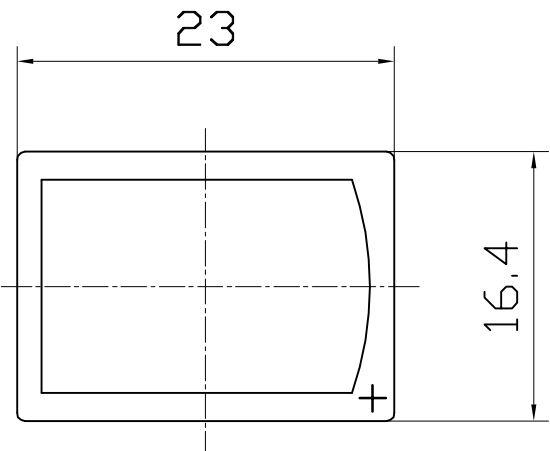
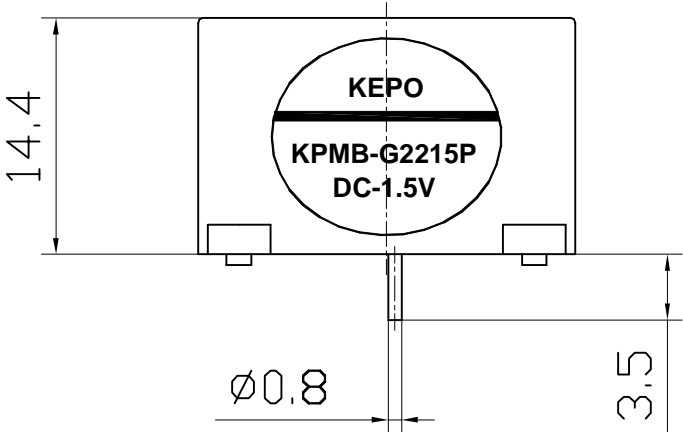
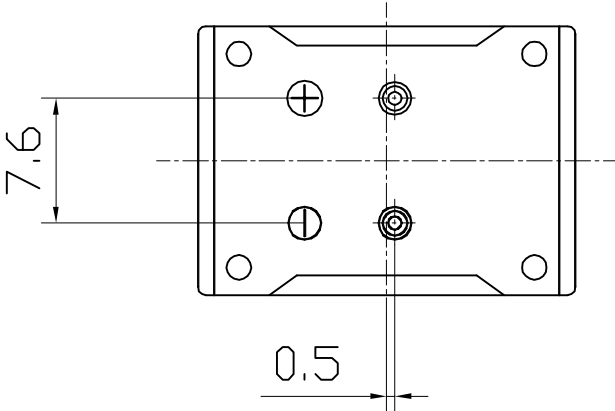
	Item	Specification
1	High Temperature Test 高温试验	<p>After being worked in a chamber with <math>+60\pm 2\text{ }^{\circ}\text{C}</math> for 2h and then being placed in natural condition for 2h, sounder shall be measured.</p> <p>将产品置于 <math>+60\pm 2\text{ }^{\circ}\text{C}</math> 试验箱中, 先工作 2 小时, 然后在正常大气压条件下恢复 2 小时后, 进行测量</p>
2	Low Temperature Test 低温试验	<p>First being worked in a chamber with <math>-20\pm 2\text{ }^{\circ}\text{C}</math> for 2h and then being placed in a chamber with <math>-20\pm 2\text{ }^{\circ}\text{C}</math> for 16h, finally being placed in natural condition for 2h, sounder shall be measured.</p> <p>将产品置于 <math>-20\pm 2\text{ }^{\circ}\text{C}</math> 试验箱中, 先工作 2 小时, 再放置 16 小时, 然后在正常大气压条件下恢复 2 小时后, 进行测量</p>
3	Humidity Test 潮湿试验	<p>After being placed in a chamber with 90 to 95%R.H. at <math>+40\pm 2\text{ }^{\circ}\text{C}</math> for 2 h and then being placed in natural condition for 2 h , sounder shall be measured.</p> <p>将产品置于湿度为 90~95%R.H, 温度为 <math>40\pm 2\text{ }^{\circ}\text{C}</math> 试验箱中 2 小时, 然后在正常大气压条件下恢复 2 小时后, 进行测量</p>
4	Thermal Shock Test 热冲击试验	<p>After being worked in a chamber at <math>+60\pm 2\text{ }^{\circ}\text{C}</math> for 1 hour, then sounder shall be placed in a chamber at <math>-20\pm 2\text{ }^{\circ}\text{C}</math> for 1 hour(1 cycle is the below diagram).</p> <p>After 6 above cycles, sounder shall be measured after being placed in natural condition for 1 hour.</p> <p>将产品置于 <math>60\pm 2\text{ }^{\circ}\text{C}</math> 试验箱中, 先工作 1 小时, 然后将产品置于 <math>-20\pm 2\text{ }^{\circ}\text{C}</math> 试验箱中, 再工作 1 小时, 经过 6 个循环后, 在正常大气压条件下恢复 1 小时, 进行测量</p> 

表 1 Table 1

项 目 Item	试验后变化量 Specification after test
声压级 Sound Pressure Level	初始值 $\pm 10\text{dB}$ Initial Value $\pm 10\text{dB}$

Specification for Mechanical Buzzer		Page	7/9
		Revision No.	1.0
Model No. :	KPMB-G2215P-K4861	Drawing No.	OEM4861R

8. Dimensions



FIRST ANGLE PROJECTION

UNIT : mm  
Tolerance :  $\pm 0.5$

Specification for Mechanical Buzzer		Page	8/9
Model No. :                    KPMB-G2215P-K4861		Revision No.	1.0
		Drawing No.	OEM4861R

## 9. 包装标准      Packaging Standard

产品的外包装是纸箱, 它应该清楚的标明型号, 数量, 出厂检验批号.  
在运输及储存的过程中, 产品必须不会受到机械损伤.

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number.

There shall be no mechanical damage on products during transportation and/or in storage.

## 10. 警告      Cautions

如果产品使用于下列高可靠性的装置时, 请与我们联系, 以免对人的生命, 财产和身体造成损害.

Please contact us before using our products for the undermentioned applications requiring especially high reliability in order to prevent defects which might directly cause damage to other party's life, body or property (listed below).

- (1) Aircraft equipment    飞行设备
- (2) Aerospace equipment    航天设备
- (3) Undersea equipment    潜水设备
- (4) Medical equipment    医疗设备
- (5) Transportation equipment (automobiles, trains, ships)    交通设施
- (6) Traffic signal equipment    交通信号设备
- (7) Disaster prevention/crime prevention equipment    防灾害/防犯罪设备
- (8) Data-processing equipment    数据处理设备
- (9) Applications of similar complexity or reliability requirements comparable to the applications listed in the above    以及与上述相类似或可靠性要求更高的设备

## 11. 注意事项      Cautions for Use

11.1 如果产品所承受的机械应力超过规定的值, 元件可能被破坏.

The component may be damaged if mechanical stress over this specification is applied.

11.2 在使用烙铁的情况下, 应注意烙铁头的温度应该保持在 +350℃ 以下, 并且焊接时间控制在3秒内.

In case of using solder iron for soldering, the top of soldering iron's temperature should be kept less than +350 °C. Moreover the soldering time should be also kept with in 3seconds.



Specification for Mechanical Buzzer		Page	9/9
Model No. : KPMB-G2215P-K4861		Revision No.	1.0
		Drawing No.	OEM4861R

## 12. Revision

Rev. No.	DATE	PAGE	DESCRIPTION	SIGN
1.0	2009.07.30	9	primary	