

SPECIFICATION

受 控

Customer:

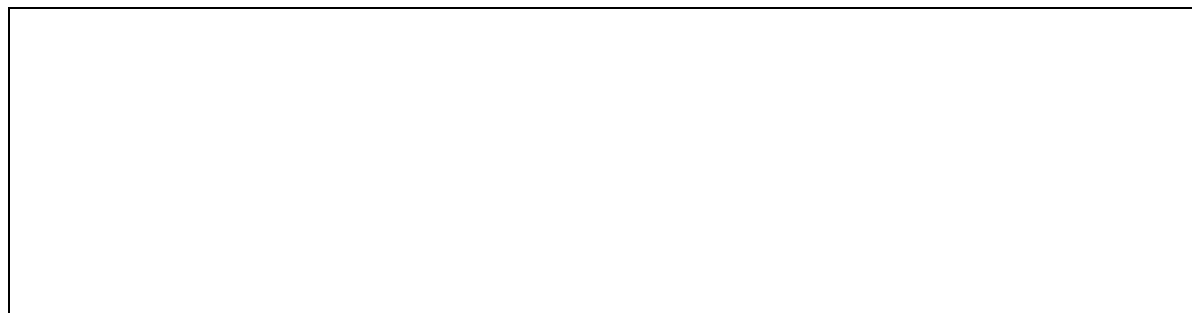
Applied To:

Product Name: Piezo Buzzer

Model Name: KPI-G1410B

Drawing No.: KP3.842.021R

Compliance with ROHS (本品符合 ROHS 指令)



Signature of KEPO

Issued by	Checked by	Approved by	Date
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1.1	2018.09.10	7/8	壳体高度由 7.8mm 更改为 8.3mm	
1.0	2018.03.10		primary	
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Revision 履历表				

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1. Scope 范围

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

本规格书适用于压电式蜂鸣器，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. General 概要

- 2.1 Out-Diameter 外径.....Ø14mm
- 2.2 Height 高度.....8.3mm
- 2.3 Weight 重量.....2g
- 2.4 Case Material/Color 壳体材料/颜色.....PBT/Black

3. Maximum Rating 额定极限条件

	Item	Specification
3.1	Maximum Input Voltage 最大输入电压	1.5~16VDC
3.2	Operating Temperature Range 工作温度范围	-20 ~ +80℃
3.3	Storage Temperature Range 储藏温度范围	-30 ~ +85℃

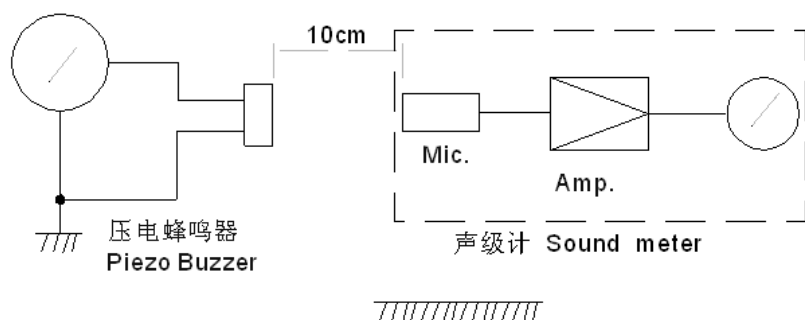
4. Electrical Characteristics 电性能

	Item	Specification
4.1	Sound Pressure Level 声压	≥85dB at 12VDC/10CM
4.2	Resonant Frequency 频率	4.3±0.5KHz
4.3	Max .Rated Curent 额定电流	8mA at 12VDC
4.4	Tone Nature 音调	Continuous

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5. Measuring Method 测试方法

5.1 S.P.L. Measuring Circuit 声压测试线路



声级计: ND10 或等同品

Sound meter: ND10 or equivalent

S.G. : DF1731SL3A 稳压电源或等同品

S.G. : DF1731SL3A DC Power Supply or equivalent

Input Signal 输入信号: 12VDC

Test distance 测试距离: 10cm

5.2 Measuring Condition 测试环境

Part shall be measured under a condition (Temperature :+5 to +35 °C ,Humidity :45 to 85%R.H.)unless the standard condition (Temperature :+25±3°C,Humidity :60±10%R.H.) is regulated measure.

温度+25±3℃，湿度 60±10%R.H.标准测试状态,在没有疑问的场合,可以在温度+5~+35℃,湿度 45~85%R.H.的范围内测试.

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6. Physical Characteristics 机械性能			
	Item	Test Condition	Specification
6.1	Shock 碰撞试验	Sounder shall be measured after being applied shock(490m/s^2 ;) for each three mutually perpendicular directions to each of 3 times by half sine wave. 峰值加速度 490m/s^2 ;, 半正弦波,XYZ 三个方向各 3 次冲击实验后,测试声响器.	The measured value shall meet Table 1.
6.2	Vibration Resistant 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 hours. 振动频率 10~55 Hz,1.5mm 全振幅,XYZ 三个方向各 2 小时试验后,测试声响器.	
6.3	Soldering Heat Resistance 焊接性	Lead terminal are immersed up to 1.5mm from sounder's body in solder bath of $+300\pm 5^\circ\text{C}$ for 3 ± 0.5 seconds or $\pm 260\pm 5^\circ\text{C}$ for 10 ± 1 seconds, and then sounder shall be measured after being placed in natural condition for 4 hours 将声响器的插针插入(插至距声响器壳体 1.5mm 处为止) $+300\pm 5^\circ\text{C}$ 的焊锡槽 3 ± 0.5 秒或 $+260\pm 5^\circ\text{C}$ 的焊锡槽 10 ± 1 秒,然后在常温中放置 4 小时后,测试声响器.	
6.4	Solderability 可焊性	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+260\pm 5^\circ\text{C}$ for 3 ± 0.5 seconds. 先将声响器的插针浸入松香液 5 秒钟,然后浸入 $+260\pm 5^\circ\text{C}$ 熔融的锡槽中 3 ± 0.5 秒.	90% min. lead terminals shall be wet with solder.(Except the edge of terminal) 插针表面 90%以上被焊锡润湿.(插针的段面除外)
6.5	Terminal Strength Pulling 插针强度	The force 10 seconds of 9.8N is applied to each terminal in axial direction. 分别在每个插针的轴向施加 9.8 牛顿的静荷重 10 秒.	No visible damage and cutting off 插针没有断开和可见的损伤

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7. Environmental Characteristics 环境性能

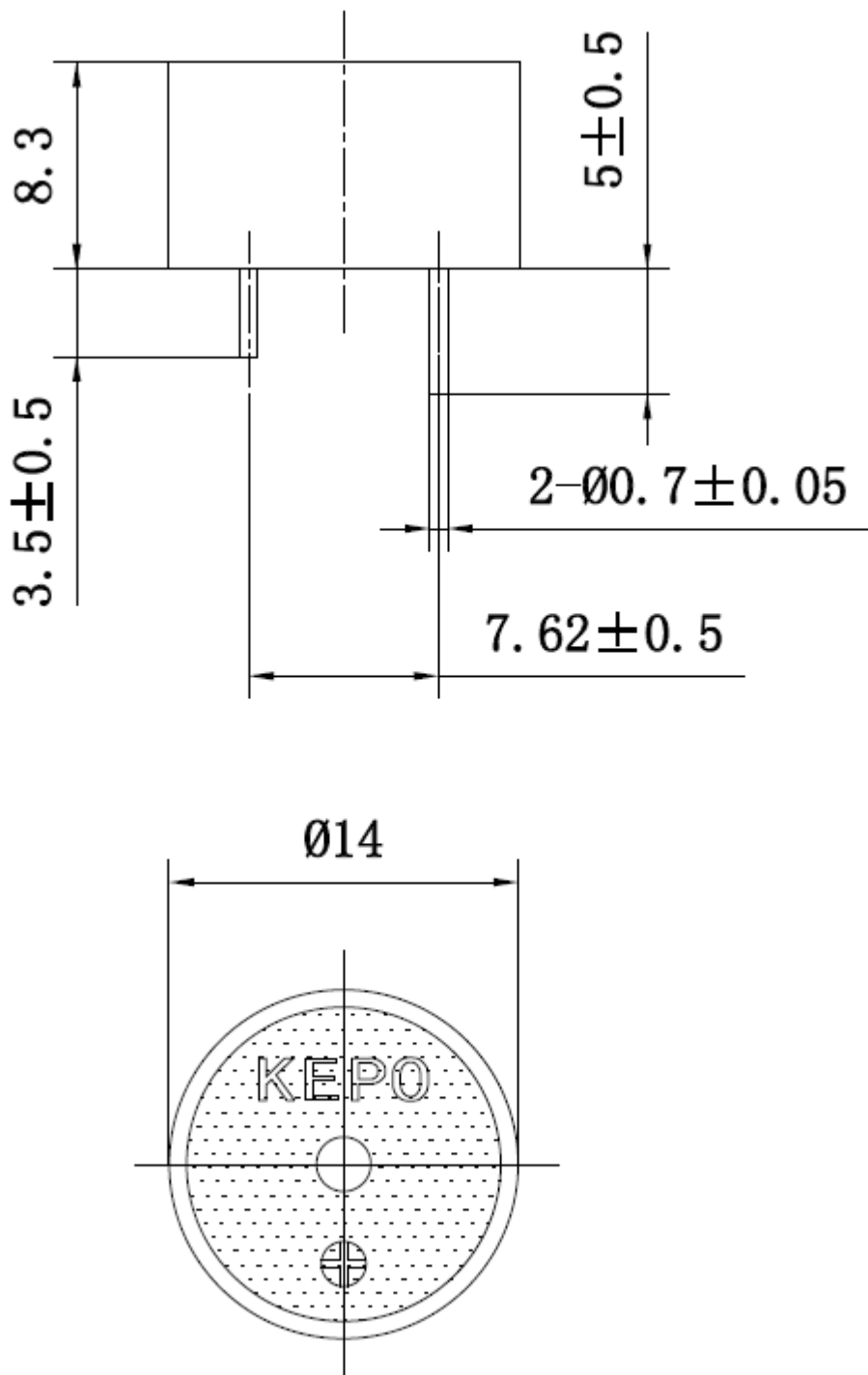
	Item	Test Condition	Specification
7.1	Dry Heat Test (Storage) 最高存储温度试验	After being placed in a chamber with $+85 \pm 2^{\circ}\text{C}$ for 240 hours and then being placed in natural condition for 4 hours, diaphragm shall be measured. 在 $+85 \pm 2^{\circ}\text{C}$ 的条件下放置 240 小时，再在常温下放置 4 小时，测试其数据。	The measured value shall meet Table 1. 测试数据符合表 1
7.2	Cold Test (Storage) 最低存储温度试验	After being placed in a chamber with $-30 \pm 2^{\circ}\text{C}$ for 240 hours and then being placed in natural condition for 4 hours, diaphragm shall be measured. 在 $-30 \pm 2^{\circ}\text{C}$ 的条件下放置 240 小时，再在常温下放置 4 小时，测试其数据。	
7.3	Humidity 湿度试验	After being placed in a chamber with 90 to 95%R.H. at $+40 \pm 2^{\circ}\text{C}$ for 240 hours and then being placed in natural condition for 4 hours, diaphragm shall be measured. 在湿度为 90~95%R.H, 温度为 $+40 \pm 2^{\circ}\text{C}$ 的条件下放置 240 小时，再在常温下放置 4 小时，测试其数据。	
7.4	Temperature Cycle 温度循环试验	After being placed in a chamber at $-30 \pm 2^{\circ}\text{C}$ for 30 minutes, sounder shall be placed at room temperature($+20^{\circ}\text{C}$). After 15 minutes at this temperature, sounder shall be placed in a chamber at $+85 \pm 2^{\circ}\text{C}$. After 30 minutes at this temperature, sounder shall be returned to room temperature ($+20^{\circ}\text{C}$) for 15 minutes. After 5 above cycles, sounder shall be measured after being placed in natural condition for 4 hours. 先放置于温度 $-30 \pm 2^{\circ}\text{C}$ 的制冷箱内 30 分钟，然后放置于室温($+20^{\circ}\text{C}$)15 分钟后，放置于 $+85 \pm 2^{\circ}\text{C}$ 的烘箱内 30 分钟，再放置于室温($+20^{\circ}\text{C}$)15 分钟。 经过以上循环 5 次,在常温下放置 4 小时后，测试声响器。	

Table 1. 表 1

	Item	Specification after test
1	Sound Pressure Level 声压	Initial Value $\pm 10\text{dB}$ 初始值 $\pm 10\text{dB}$

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8. Dimensions 尺寸



FIRST ANGLE PROJECTION ;

Tolerance: ± 0.5

UNIT: mm

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. Packaging Standard 包装标准

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.

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.

10. Cautions 警告

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).

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.

- (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. Cautions for Use 注意事项

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

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.

11.2 Please pay attention to protect operating circuit from surge voltage provided by something of force such as failing, shock and temperature changing.

请注意保护工作电路不会因失误,跌落和温度变化而产生浪涌电压.

11.3 Please pay attention never to be applied DC voltage to piezo sounder.

请注意永远不要给压电声响器施加直流电压.

11.4 Washing of the component is not acceptable. Because it is not sealed.

该声响器不适合洗涤,因为它不密封.

11.5 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 3 seconds.

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