

Approval Sheet for Product Specification

PRODUCT NAME: PIEZO BUZZER

CUSTOMER PART NO:

OUR PART NO: RFP40A

(我司型号: RFP40A)

1. This product shall comply with RoHs. (本产品符合 RoHs 指令。)
2. In case of changes, such as mold, manufacturing process, material, appearance, and inspection etc. The same procedure is required. (样品确认后,如模具、制造方法、材料、外观、检验等发生变更的情况下必须事前由双方进行协商。)

Customer Approved (客户承认)

Approved by (批准)	Checked by (复核)	Drafted by (编制)	Date (日期)

SPECIFICATION FOR BUZZER

(蜂鸣器产品规格书)

1. APPLICATION RANGE (应用范围)

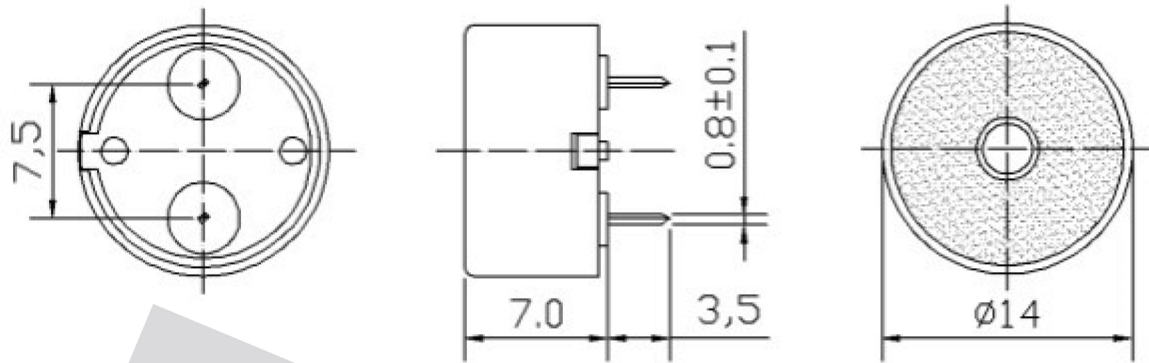
This product specification is applied to the piezoelectric buzzer used for sounder in alarm systems. (产品属于压电蜂鸣器，广泛应用于发声系统)。

2. SPECIFICATIONS (规格)

Standard test condition: Temperature of $25 \pm 3^{\circ}\text{C}$, humidity $60 \pm 10\%$ R.H.

(标准测试条件：温度 $25 \pm 3^{\circ}\text{C}$ ，湿度 $60 \pm 10\%$ R.H)。

型 号	Part Number		RFP40A
谐振频率	Resonance Frequency	Hz	4000 ± 500
声 压	Sound Pressure Level	dB	80min. At 4.0kHz Square wave/5.0V _{p-p} /10cm
自由电容	Free Capacitance	pF	$12,000 \pm 30\%$ at 120Hz
输入电压	Input Voltage	V _{p-p}	30 max. Sine wave
消耗电流	Current Consumption	mA	5.0V _{p-p} 3mA max
工作温度	Operating Temperature	$^{\circ}\text{C}$	$-20 \sim +80$
贮存温度	Storage Temperature	$^{\circ}\text{C}$	$-30 \sim +80$
尺 寸	Dimension		As shown in Figure
基片材料	Plate material		Brass
外壳材料	Case material		PBT
插针材料	Pin material		Phosphor bronze



Unit:mm 未注公差: ±0.3

3. FREQUENCY RESPONSE (频率响应曲线图)

02/22/2012 17:58 CRY6125F 蜂鸣器测试仪 V91 无框 滤波器1次

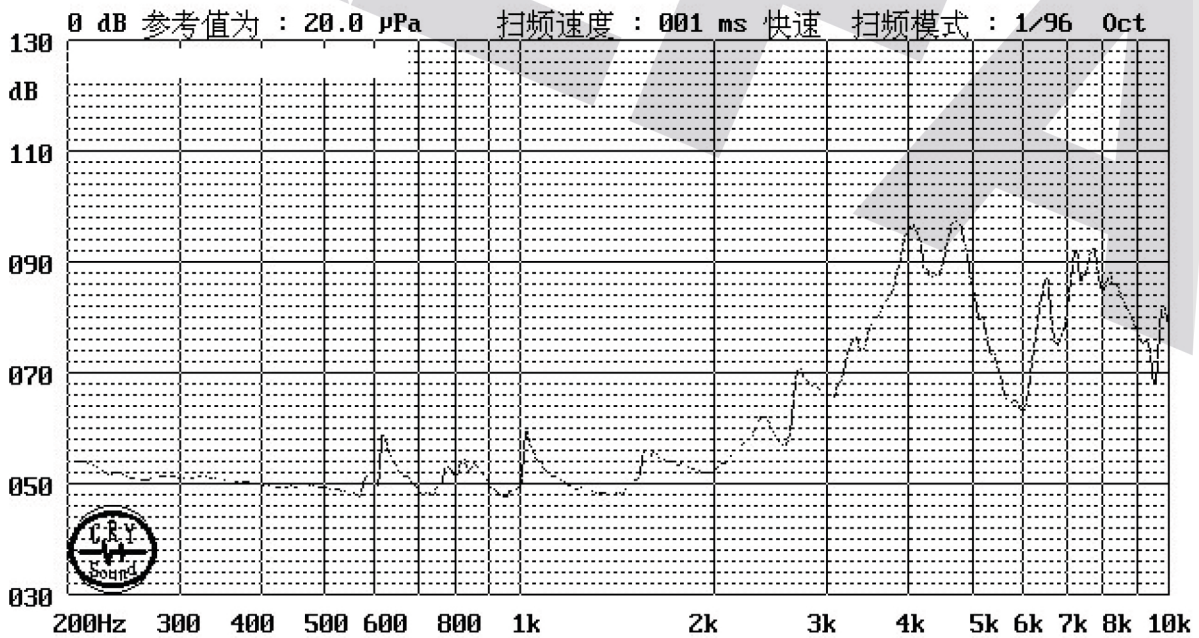
型号:PE-1440-T2

Fc= 4000 Hz 095.66 dB

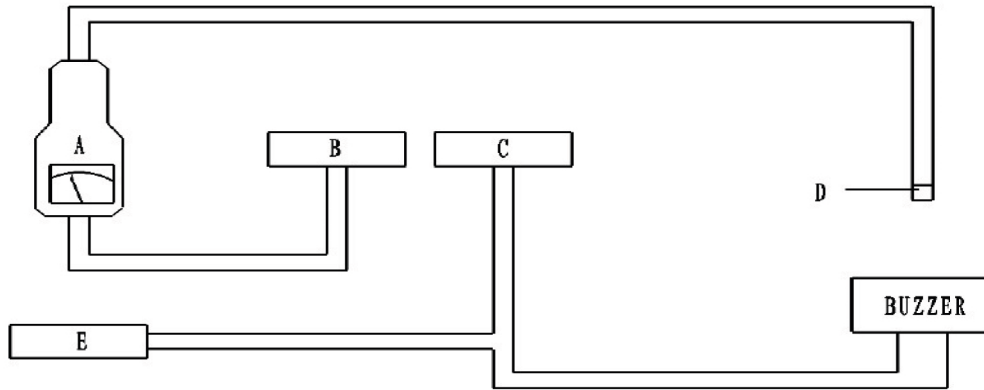
方波

电压:3000 mV

Fo= 4709 Hz 097.47 dB



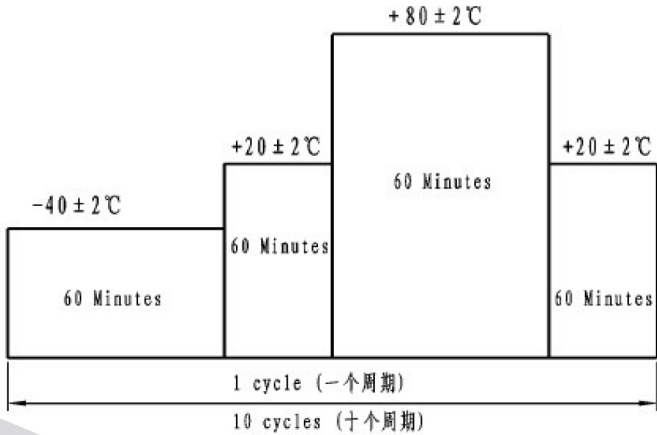
4. SOUND PRESSURE TESTING CIRCUIT DIAGRAM (声压测试线路图)



- A: Sound Pressure Level Meter 声级计
B: Frequency Counter 频率计
C: RC oscillator 驱动电路
D: Sound Pressure Level For Focus 声级计传声话筒
E: Multimeter (Ampere Meter) 信号发声器

5. RELIABILITY TEST (可靠性试验)

序号	ITEM (项目)	METHOD OF TEST (试验方法)	VARIANCE AFTER CONDITIONIN(标准)
1	Dry Heat Test (Storage) 高温储存试验	After being placed in a chamber with $80\pm 2^{\circ}\text{C}$ for 240 hours and then Being placed in natural condition for 4 hours, buzzer shall Be measured. 在 $80\pm 2^{\circ}\text{C}$ 的试验箱里放置 240 小时, 然后在室温下放置 4 小时后测试。	Sound Pressure Level (Specification after test): Initial Value $\pm 10\text{dB}$. 声压 (试验后变化量): 初始值 $\pm 10\text{dB}$ 。
2	Cold Test (Storage) 低温储存试验	After being placed in a chamber with $-40\pm 2^{\circ}\text{C}$ for 240 hours and then Being placed in natural condition or 4 hours, buzzer shall Be measured. 在 $-40\pm 2^{\circ}\text{C}$ 的试验箱里放置 240 小时后, 然后在室温下放置 4 小时后测试。	
3	Humidity Test 耐湿性试验	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, Buzzer shall be measured. 在湿度为 90—95%, 温度为 $40\pm 2^{\circ}\text{C}$ 的温湿箱里放置 240 小时后, 然后在室温下放置 4 小时后测试。	
4	Temperature Cycle Test	Make the test for 5 cycles without applying power as fig then expose to the room temperature for 4 hours.	

	<p>温度循环试验</p>	<p>不接电源按下图做 5 个周期试验，然后在室温下放置 4 小时再测试。</p> 	
<p>5</p>	<p>Vibration Resistant 耐振动性</p>	<p>Buzzer 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 10~55Hz, 振幅为 1.5mm, 朝 X、Y、Z 轴三个方向振动 2 小时后测试。</p>	
<p>6</p>	<p>Drop Test 跌落试验</p>	<p>Drop a product naturally form the height of 1000mm onto the surface of 100mm thick wooden board. Two directions: This is upper and side of the product are to be applied for this drop test tespectively once. 从 1000mm 高度将产品自然跌落在 100mm 厚板上按正、侧面方向各做二次跌落试验，观察此产品能否承受跌落试验。</p>	<p>Sound Pressure Level (Specification after test): Initial Value ± 10dB. 声压 (试验后变化量): 初始值 ± 10dB。</p>

7	Soldering Heat Resistance 耐焊接热试验	Lead terminal are immersed up to 1.5mm from buzzer' s body in solder bath of 260°C for 10 seconds, and then buzzer shall be measured after being placed in natural condition for 4 hours. 将插针端子浸入 260°C的焊料至距离蜂鸣器本体 1.5mm, 持续 10 秒, 然后在室温下放置 4 小时后测试。	
8	Solder ability 可焊性	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of 250°C for 3 seconds. 将插针端子进入松香助焊剂 5 秒, 然后浸入 250°C的焊料中 3 秒。	95%min. lead terminals shall be wet with solder. (Except the edge of terminal) 上锡面积≥95%。
9	Terminal Strength Pulling 端子强度	The force 10 seconds of 9.8N is applied to each terminal in axial direction. 插针端子能承受 9.8N 的负荷 10 秒。	No visible damage and cutting off. 端子没有明显的损伤和断裂、脱落。

6. PACKING INFORMATION (包装信息)

1 盒 (box) =100pcs/板 (pearl cotton vest) ×5 板 (pearl cotton vest) =500pcs

1 箱 (carton) =500pcs/盒 (box) ×20 (box) =10000pcs

