

# SPECIFICATION

Customer : QUARTZ-1

Applied To :

Product Name : Piezo Transducer

Model Name : SPT-G1701-K3562

Drawing No. : OEM3562R

Compliance with ROHS(本品符合ROHS指令)

Signature of Approval

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Signature of KEPO

Approved by	Checked by	Issued by	Date

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## 1. Scope

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声响器，通常它用在系统中做报警或提示的声响器用，如果将该产品用于其它领域，请与我们联系。

## 2. General

2.1 Out-Diameter: Ø17 mm

外径: Ø17 mm

2.2 Height : 6 mm

高度: 6 mm

2.3 Weight: 2 g

重量: 2克

2.4 Operating Temperature range:

-20~+75°C without loss of function

工作温度: -20~+75°C

2.5 Store Temperature range:

-30~+85°C without loss of function

储藏温度: -30~+85°C

## 3. Electrical and Acoustic Characteristics.

Test condition : 15 ~ 35 °C, 25% ~ 85% RH, 860~1060 mbar

测试条件: 15~35 °C, 25%~85%RH, 860~1060mbar

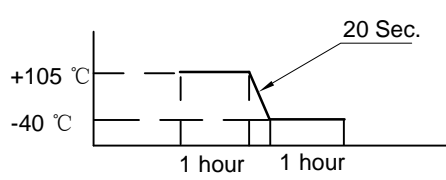
	Items 项目	Specification 规格
1	Rated Voltage 额定电压	12Vp-p Square Wave
2	Max.Allowable Voltage 最大输入电压	30Vp-p Square Wave
3	Resonant Frequency 谐振频率	4.0± 0.5KHz
4	Min.Sound Pressure Level 额定声压	90dB at 12Vp-p/4.0KHz/10cm
5	Capacitance at 100Hz 电容量 (at 100Hz)	15000pF± 30%
6	Case Material/Color 壳体材质/颜色	PPS/黑色

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## 4. Reliability Test

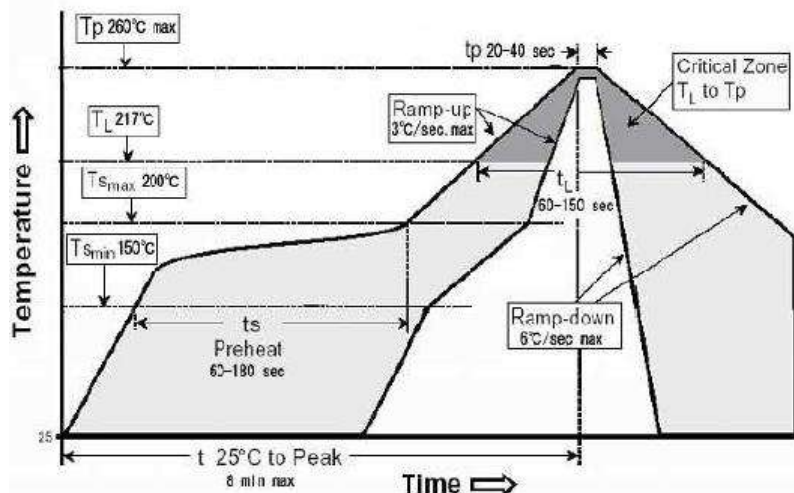
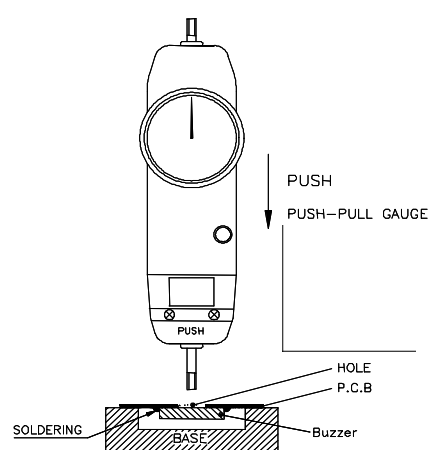
After test(1~7item), the transducer S.P.L. difference shall be within  $\pm 10\text{dB}$ , and the appearance not exist any change to be harmful to normal operation(e.g. cracks,rusts,damages and especially distortion).

在1-7项试验后，声响器的声压变化值在 $\pm 10\text{dB}$ 之内，外观无变化（例如：无开裂、生锈、损伤、变形等现象）。

	Item	Specification
1	High Temperature Test 高温试验	<p>After being placed in a chamber with <math>+85\pm 2\text{ }^\circ\text{C}</math> for 96h and then being placed in natural condition for 2h, sounder shall be measured.</p> <p>将产品置于 <math>+85\pm 2\text{ }^\circ\text{C}</math> 试验箱内放置96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 placed in a chamber with <math>-40\pm 2\text{ }^\circ\text{C}</math> for 96h, then being placed in natural condition for 2h, sounder shall be measured.</p> <p>将产品置于 <math>-40\pm 2\text{ }^\circ\text{C}</math> 试验箱96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 2h , 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>+85\text{ }^\circ\text{C}</math> for 1 hour, then sounder shall be placed in a chamber at <math>-40\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>+85\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>-40\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>  <p>The diagram illustrates a thermal shock cycle. It shows a temperature profile starting at <math>+105\text{ }^\circ\text{C}</math>, which is held constant for 1 hour. A ramp with a slope of 20 Sec. indicates the transition to <math>-40\text{ }^\circ\text{C}</math>, which is also held constant for 1 hour. This cycle repeats 6 times.</p>

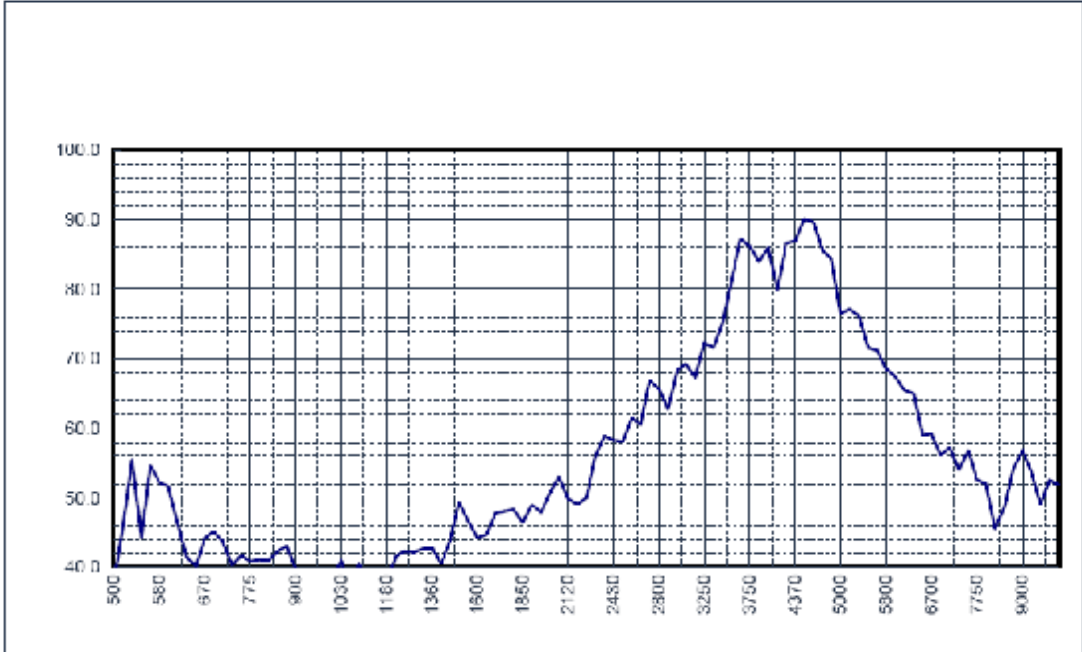
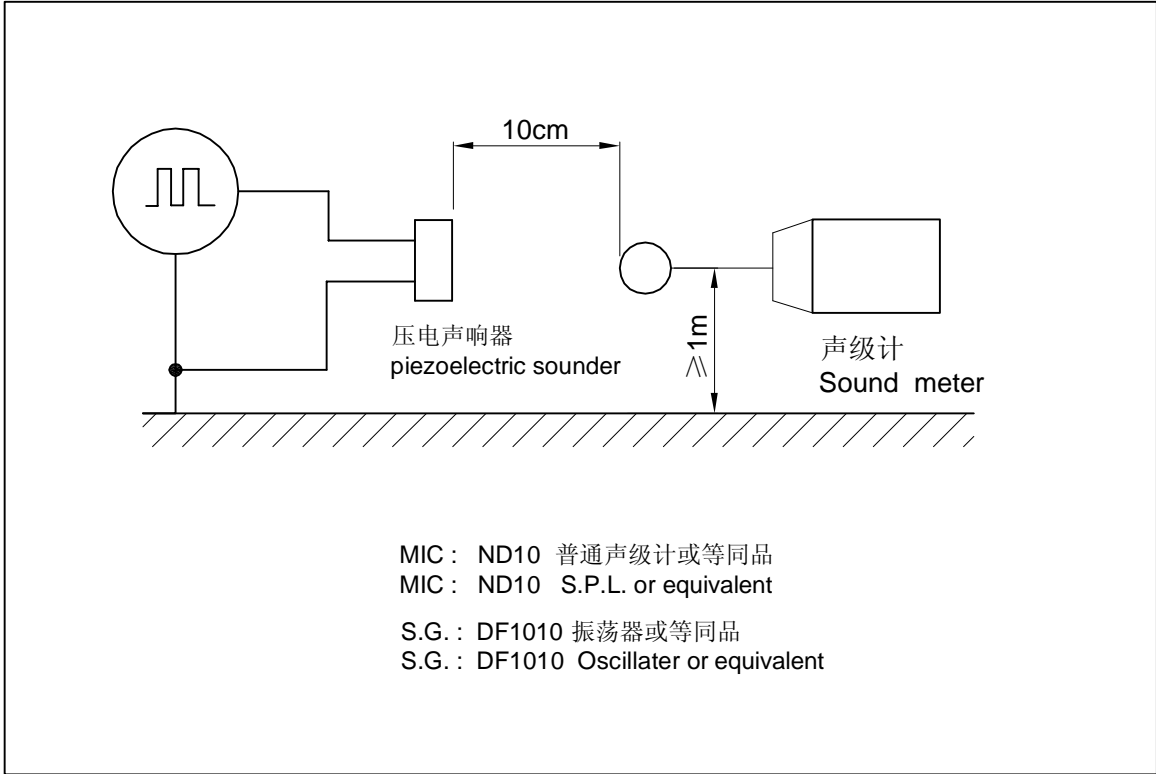
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#### 4. Reliability Test

	Item	Specification
6	Drop Test 跌落试验	<p>Sounder packed in the carton are dropped in six direction from the height of 80cm to the concrete floor.</p> <p>跌落高度80cm,6个不同方向整箱跌落到水泥地, 试验后进行测量.</p>
7	可焊性试验 Solderability	<p>Lead terminals are immersed in rosin for 5 seconds and the immersed in solder bath of <math>+230\pm 5^{\circ}\text{C}</math> for <math>3\pm 0.5</math> seconds.</p> <p>焊片浸入松香5秒, 然后再浸入<math>+230\pm 5^{\circ}\text{C}</math>的锡炉中<math>3\pm 0.5</math>秒, 插针表面应覆盖一层光滑明亮的焊料.</p>
8	Reflow Soldering 回流焊接	<p>Recommendable reflow soldering condition is as follows.</p> <p>Note 1; It is requested that reflow soldering should be executed after heat of product goes down to normal temperature.</p> <p>Note 2; Peak reflow temperature of <math>260^{\circ}\text{C}</math>, with a maximum duration of 60 sec. between <math>220^{\circ}\text{C}</math> and <math>260^{\circ}\text{C}</math></p>  <p>The graph shows a temperature profile over time. The y-axis is Temperature and the x-axis is Time. Key parameters include: <math>T_p</math> 260°C max (peak temperature), <math>T_L</math> 217°C (liquidus temperature), <math>T_{Smax}</math> 200°C (solder maximum temperature), <math>T_{Smin}</math> 150°C (solder minimum temperature), <math>t_p</math> 20-40 sec (peak dwell time), Ramp-up 3°C/sec max, Ramp-down 6°C/sec max, <math>t_L</math> 60-150 sec (time above liquidus), Preheat 60-180 sec, and <math>t</math> 25°C to Peak 8 min max (total time to peak).</p>
9	Pad Test 焊片强度测试	<p>Pad Tensile Strength Test Condition, In the pad direction, push the buzzer for 10 sec. with tensile strength of 1.0kg, Refer to the following.</p> <p>用1.0kg强度, 垂直压蜂鸣器10秒, 如下图所示.</p>  <p>The diagram illustrates the test setup. A buzzer is mounted on a base. A hole in the P.C.B. is used to push the buzzer. A push-pull gauge is used to apply a downward force (PUSH) to the buzzer. Labels include: PUSH, PUSH-PULL GAUGE, HOLE, P.C.B., Buzzer, and SOLDERING.</p>

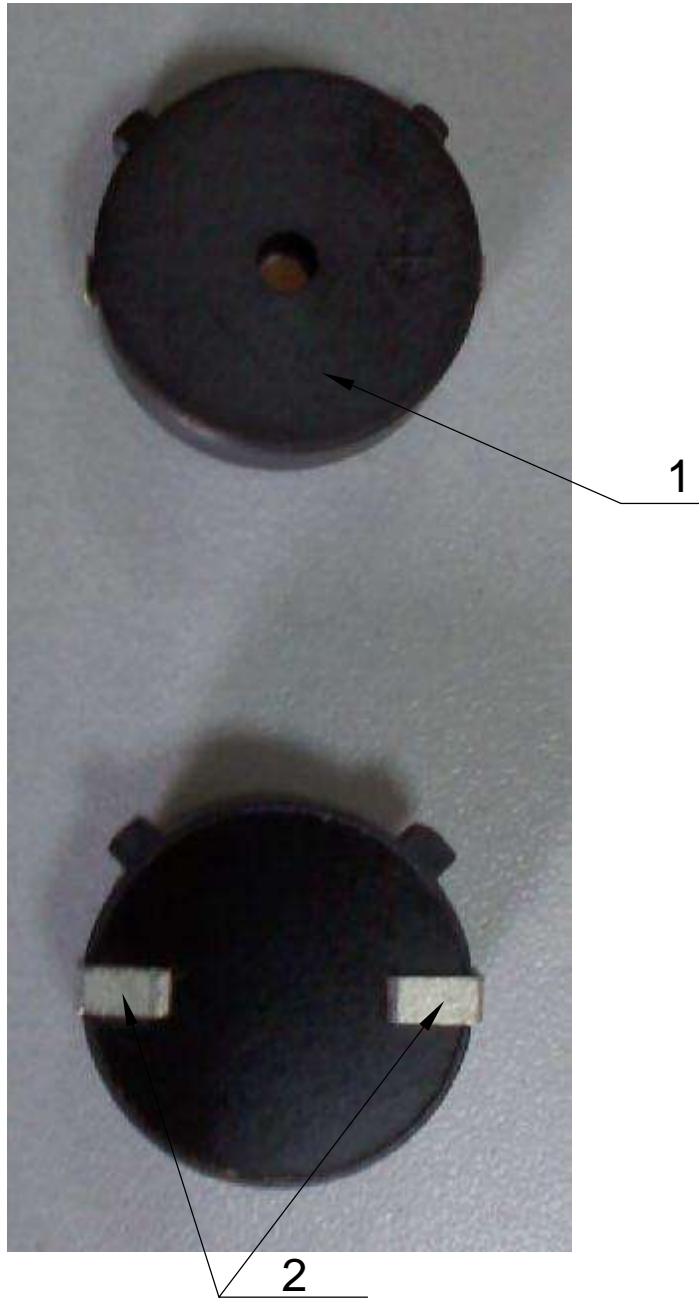
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### 5. Measurement Block Diagram & Response curve



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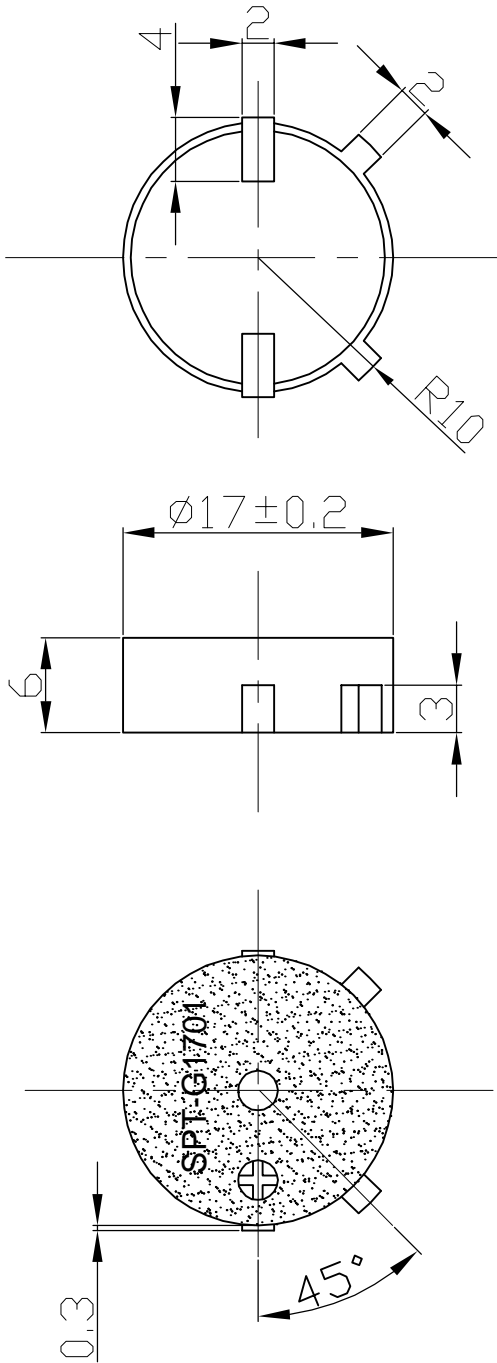
## 6. Structure



2	weld silce 焊片	2		
1	Case 壳体	1	PPS	
No.	Part Name 型号	Q'TY 数量	Material 材质	Remarks 备注

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### 7. Dimensions



FIRST ANGLE PROJECTION

UNIT : mm  
Tolerance : ±0.5



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## 8. Packing

