

Specification for Transducer	Page	2/10
	Revision No.	1.4
	Drawing No.	OEM5591R
Model No. : SPT-G1210-K5591		

CONTENTS

1. Scope
范围
2. General
概要
3. Electrical and Acoustic Characteristics.
电声参数
4. Reliability Test
可靠性试验
5. Measurement Block Diagram & Response curve
测试图和曲线图
6. Structure
结构
7. Dimensions
尺寸
8. Packing
包装
9. Revision
履历表

Specification for Transducer	Page	3/10
	Revision No.	1.4
	Drawing No.	OEM5591R
Model No. : SPT-G1210-K5591		

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: 12x12 mm

外径: 12x12 mm

2.2 Height : 3.0 mm

高度: 3.0 mm

2.3 Weight: 0.7 g

重量: 0.7克

2.4 Operating Temperature range:

-40~+85°C without loss of function

工作温度: -40~+85°C

2.5 Store Temperature range:

-40~+85°C without loss of function

储藏温度: -40~+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

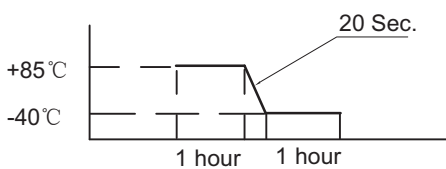
	Items 项目	Specification 规格
1	Rated Voltage 额定电压	3Vp-p Square Wave
2	Max.Allowable Voltage 最大输入电压	20Vp-p Square Wave
3	Rated Frequency 额定频率	4.0KHz
4	Min.Sound Pressure Level 声压	75dB at 4.0KHz/3Vp-p Square Wave/10cm
5	Capacitance at 100Hz 电容量 (at 100Hz)	16000pF ± 30%
6	Case Material/Color 壳体材质/颜色	LCP (BLACK)

Specification for Transducer	Page	4/10
	Revision No.	1.4
	Drawing No.	OEM5591R
Model No. : SPT-G1210-K5591		

4. Reliability Test

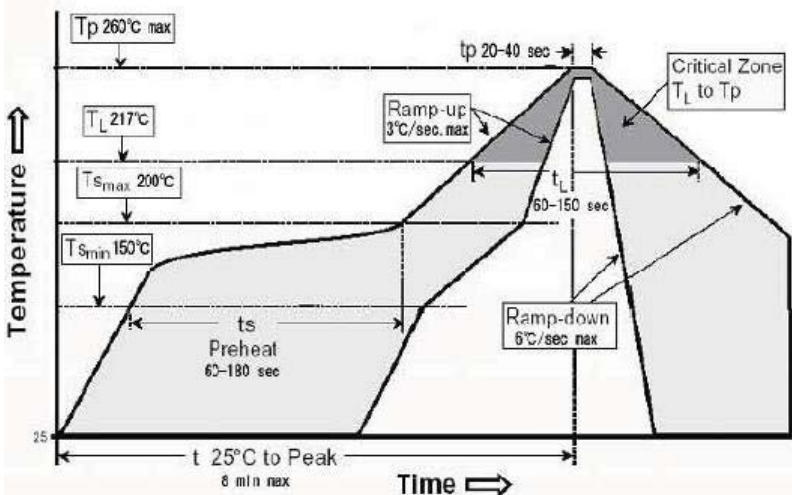
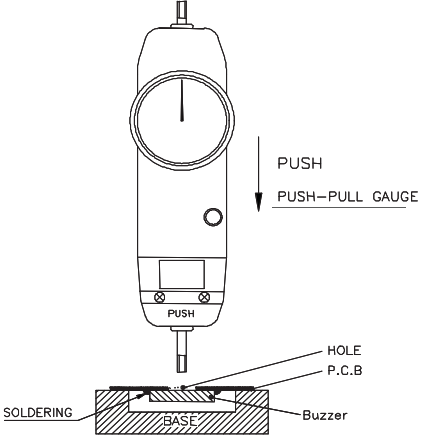
After test(1~9item), the transducer S.P.L. difference shall be within $\pm 10\text{dB}$, and the appearance not exist any change to be harmful to normal operation(e.g. cracks,rusts,damages and especially distortion).

在1-9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 $+85\pm 2\text{ }^\circ\text{C}$ for 96h and then being placed in natural condition for 2h, sounder shall be measured.</p> <p>将产品置于 $+85\pm 2\text{ }^\circ\text{C}$ 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 $-40\pm 2\text{ }^\circ\text{C}$ for 96h, then being placed in natural condition for 2h, sounder shall be measured.</p> <p>将产品置于 $-40\pm 2\text{ }^\circ\text{C}$ 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 $+40\pm 2\text{ }^\circ\text{C}$ 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 $40\pm 2\text{ }^\circ\text{C}$ 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 $+85\text{ }^\circ\text{C}$ for 1 hour, then sounder shall be placed in a chamber at $-40\text{ }^\circ\text{C}$ 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 $+85\pm 2\text{ }^\circ\text{C}$ 试验箱中，先工作1小时，然后将产品置于 $-40\pm 2\text{ }^\circ\text{C}$ 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 starts at $+85\text{ }^\circ\text{C}$ with a 1-hour dwell period. A ramp with a 20-second duration leads to $-40\text{ }^\circ\text{C}$, where there is another 1-hour dwell period. This cycle repeats six times.</p>
5	Vibration Resistance 振动试验	<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 hour.</p> <p>振幅为 1.5mm，频率为 10-30Hz，三个不同轴方向各振动2小时，试验后进行测量。</p>

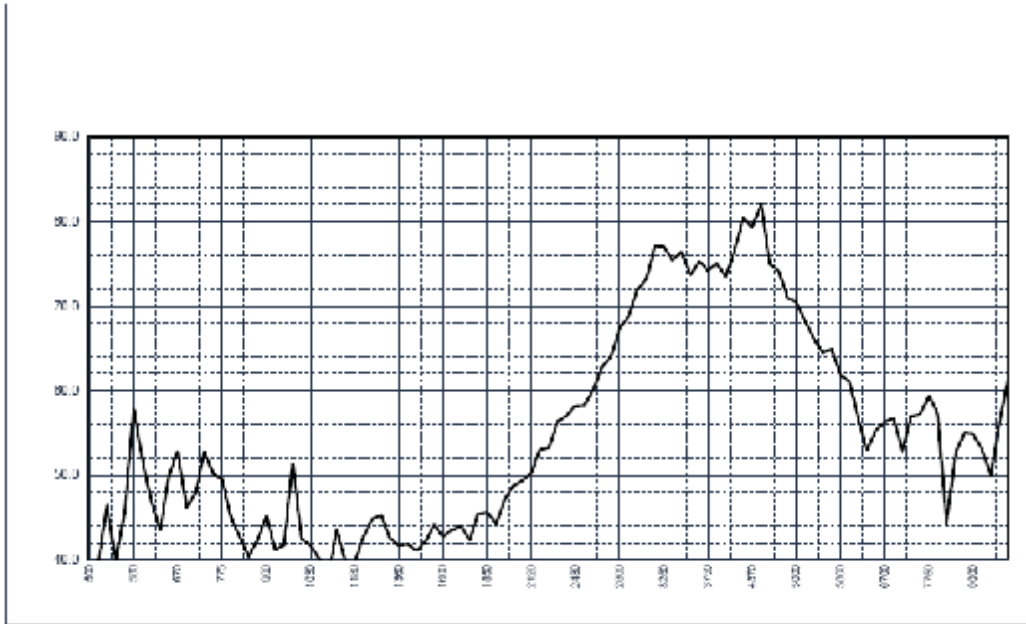
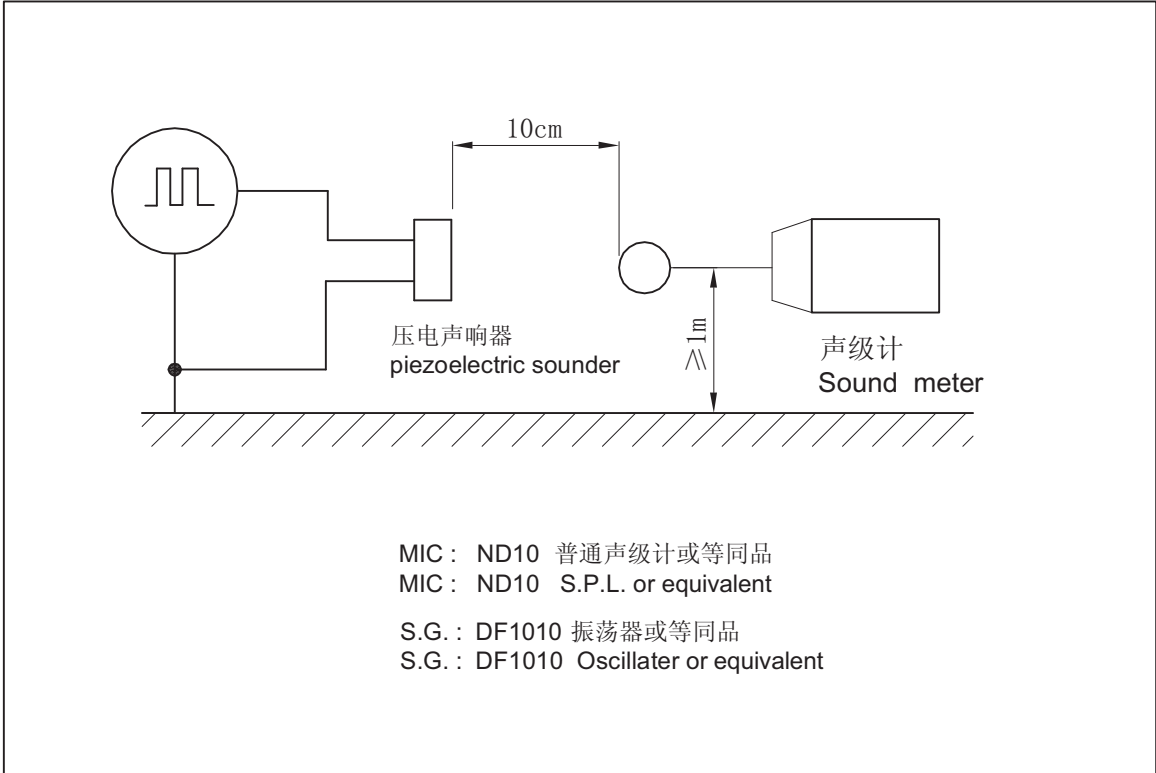
Model No. : SPT-G1210-K5591	Specification for Transducer	Page	5/10
		Revision No.	1.4
		Drawing No.	OEM5591R

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 $+230\pm 5^\circ\text{C}$ for 3 ± 0.5 seconds.</p> <p>焊片浸入松香5秒, 然后再浸入$+230\pm 5^\circ\text{C}$的锡炉中3 ± 0.5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 260°C, with a maximum duration of 60 sec. between 220°C and 260°C</p>  <p>The graph shows a temperature profile over time. The y-axis is Temperature and the x-axis is Time. Key parameters include: T_p 260°C max (Peak Temperature), T_L 217°C (Liquidus Temperature), T_{Smax} 200°C (Soldering Maximum Temperature), T_{Smin} 150°C (Soldering Minimum Temperature), t_p 20-40 sec (Peak Duration), Ramp-up 3°C/sec max, Ramp-down 6°C/sec max, t_L 60-150 sec (Liquidus Duration), t_s Preheat 60-180 sec (Soak Time), and t 25°C to Peak 8 min max (Total Time).</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. The buzzer is pushed down by a push-pull gauge. The buzzer is soldered to a hole in a P.C.B. The base is labeled 'BASE' and the soldering is labeled 'SOLDERING'. The push-pull gauge is labeled 'PUSH-PULL GAUGE' and the buzzer is labeled 'Buzzer'.</p>

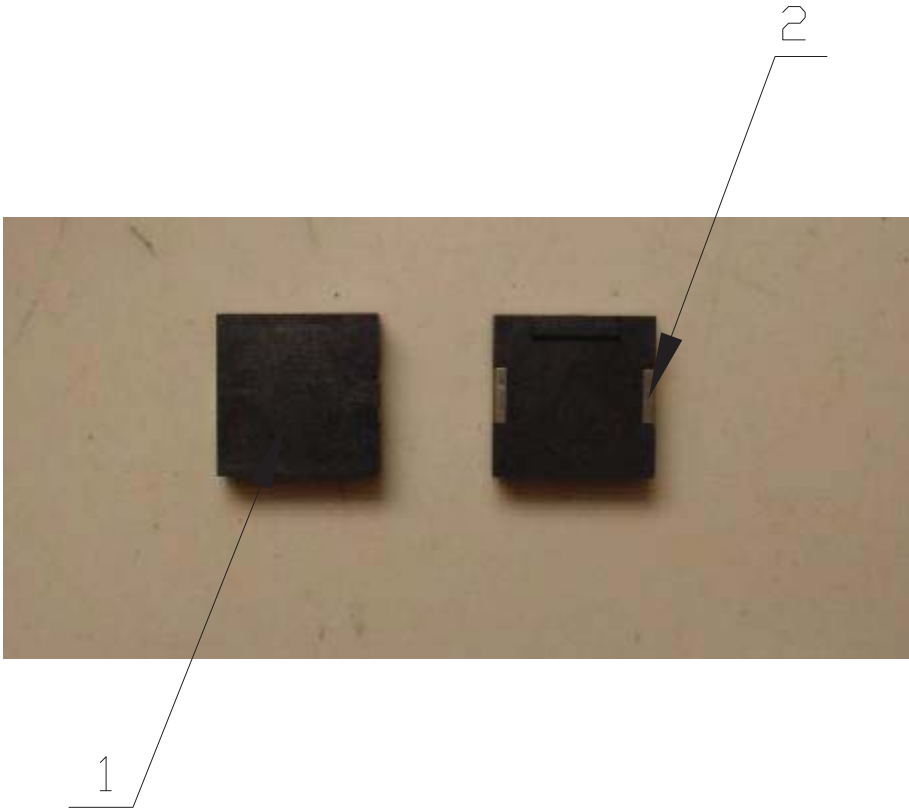
Specification for Transducer	Page	6/10
	Revision No.	1.4
Model No. : SPT-G1210-K5591	Drawing No.	OEM5591R

5. Measurement Block Diagram & Response curve



Specification for Transducer	Page	7/10
	Revision No.	1.4
Model No. : SPT-G1210-K5591	Drawing No.	OEM5591R

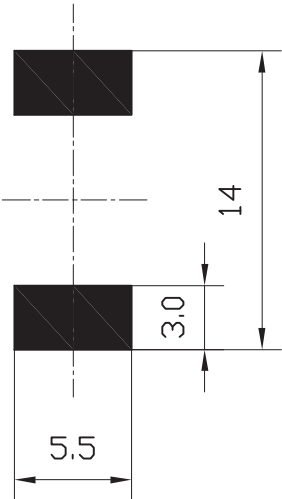
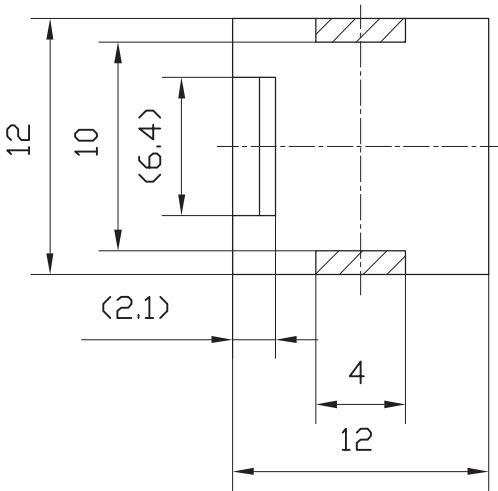
6. Structure



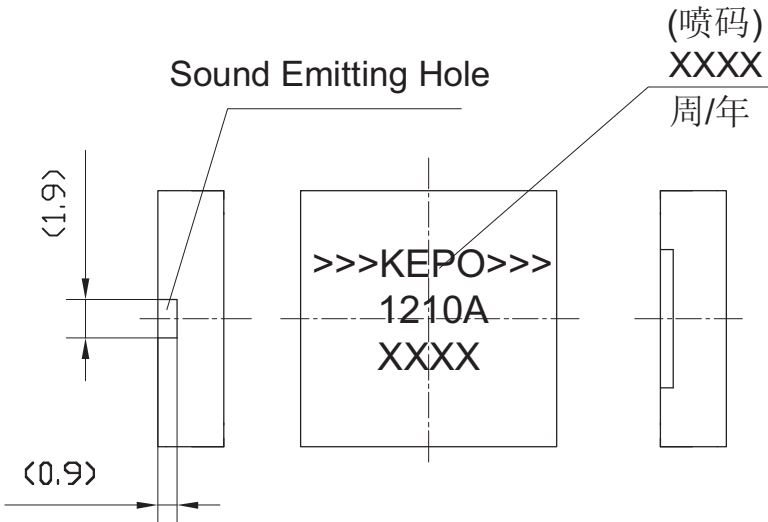
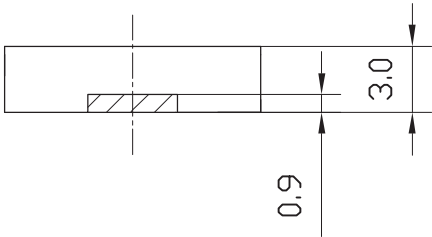
2	weld silce 焊片	2		
1	Case 壳体	1	LCP (BLACK)	
No.	Part Name 型号	Q'TY 数量	Material 材质	Remarks 备注

Specification for Transducer Model No. : SPT-G1210-K5591	Page	8/10
	Revision No.	1.4
	Drawing No.	OEM5591R

7. Dimensions



RECOMMENDED
SMD FOOT PATTERN



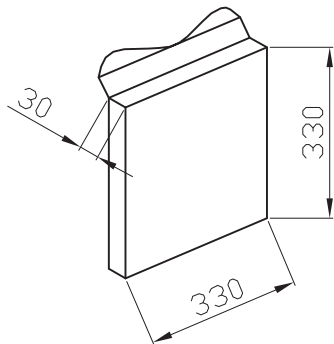
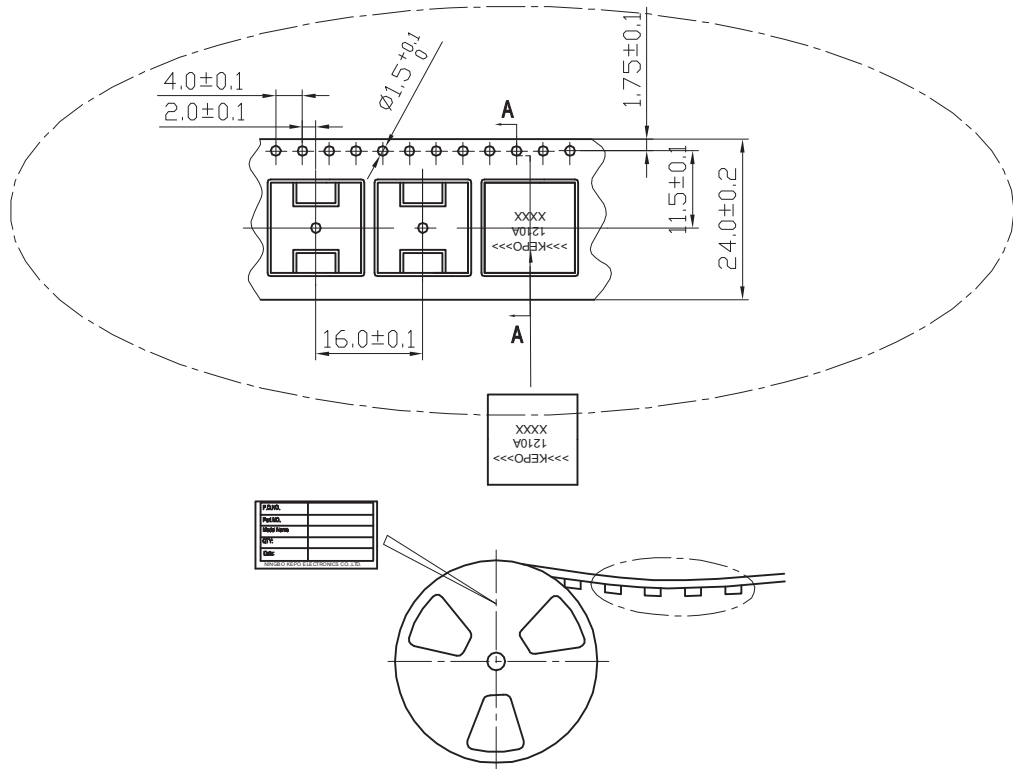
FIRST ANGLE PROJECTION



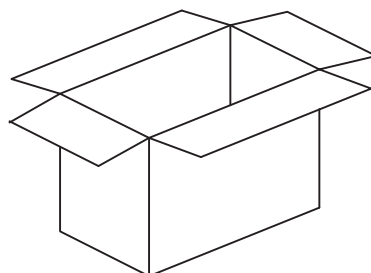
UNIT : mm
Tolerance : ±0.2

Specification for Transducer Model No. : SPT-G1210-K5591	Page	9/10
	Revision No.	1.4
	Drawing No.	OEM5591R

8. Packing



QTY: 1000Pcs
 SIZE:330 x30 x330mm
 N.W.: 0.6KG
 G.W.: 0.95KG



QTY: 3000Pcs
 SIZE:345x130x345mm
 N.W.: 6KG
 G.W.: 10.5KG

注：QC PASS标贴和RoHS标贴和物料标贴都贴于内外箱包装

Specification for Transducer Model No. : SPT-G1210-K5591	Page	10/10
	Revision No.	1.4
	Drawing No.	OEM5591R

9. Revision

Rev. No.	DATE	PAGE	DESCRIPTION	SIGN
1.0	2009.12.22	/	primary	
1.1	2012.02.02	8	Add lettering	
1.2	2012.06.25	9	Add label	
1.3	2012.07.11	9	Change the way of packing	
1.4	2012.11.15	8	Add lettering	