

# SPECIFICATION

Customer : QUARTZ-1

受 控

Applied To :

Product Name : Piezo Transducer

Model Name : SPT-G1872-K3592


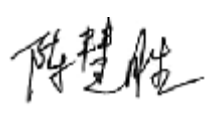

Drawing No. : OEM3592R

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: 18.4 mm

外径: 18.4 mm

2.2 Height : 7.2mm

高度: 7.2mm

2.3 Weight: 2.0g

重量: 2.0克

2.4 Operating Temperature range:

-20~+70°C without loss of function

工作温度: -20~+70°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

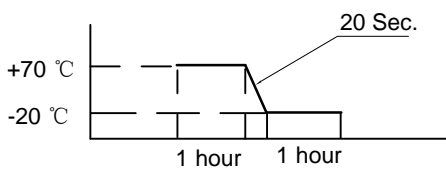
	Items 项目	Specification 规格
1	Rated Voltage 额定电压	3.6Vp-p Square Wave
2	Max.Allowable Voltage 最大输入电压	30Vp-p Square Wave
3	Rated Frequency 额定频率	2.0KHz
4	Min.Sound Pressure Level 额定声压	Min 75dB at 2KHz/3.6Vp-p Square Wave/10cm
5	Capacitance at 100Hz 电容量 (at 100Hz)	28000pF± 30%
6	Case Material/Color 壳体材质/颜色	PPS/BLACK

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## 4. Reliability Test

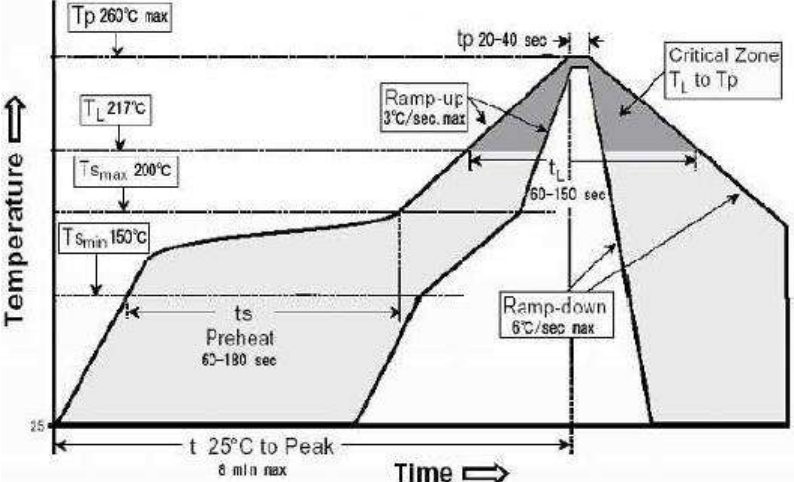
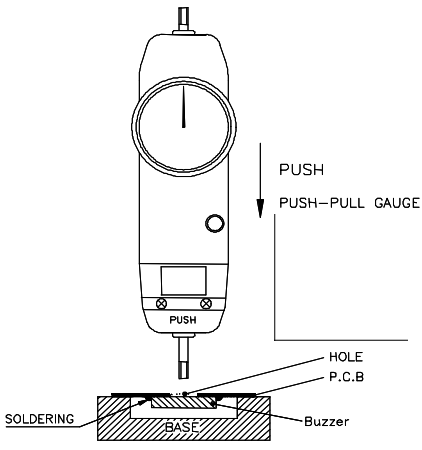
After test(1~9item), the transducer S.P.L. difference shall be within  $\pm 10\text{dB}$ , and the appearance not exist any change to be harmful to normal operation(e.g. cracks,rusts,damages and especially distortion).

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 <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 48 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 48 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>+70\text{ }^\circ\text{C}</math> for 1 hour, then sounder shall be placed in a chamber at <math>-20\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>+70\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> 
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>

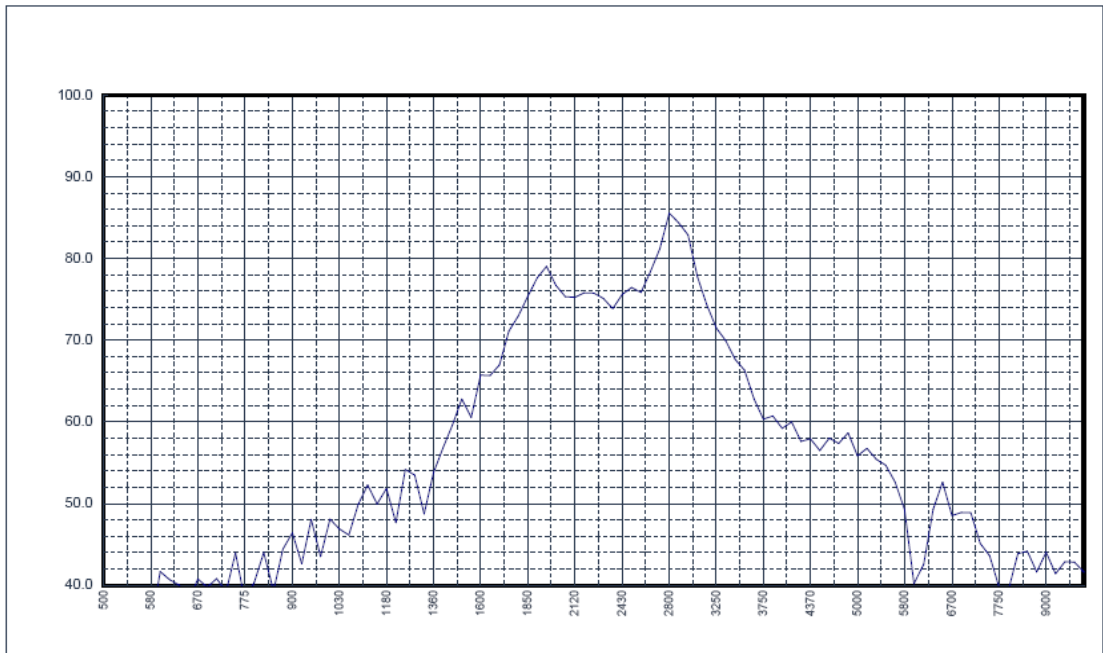
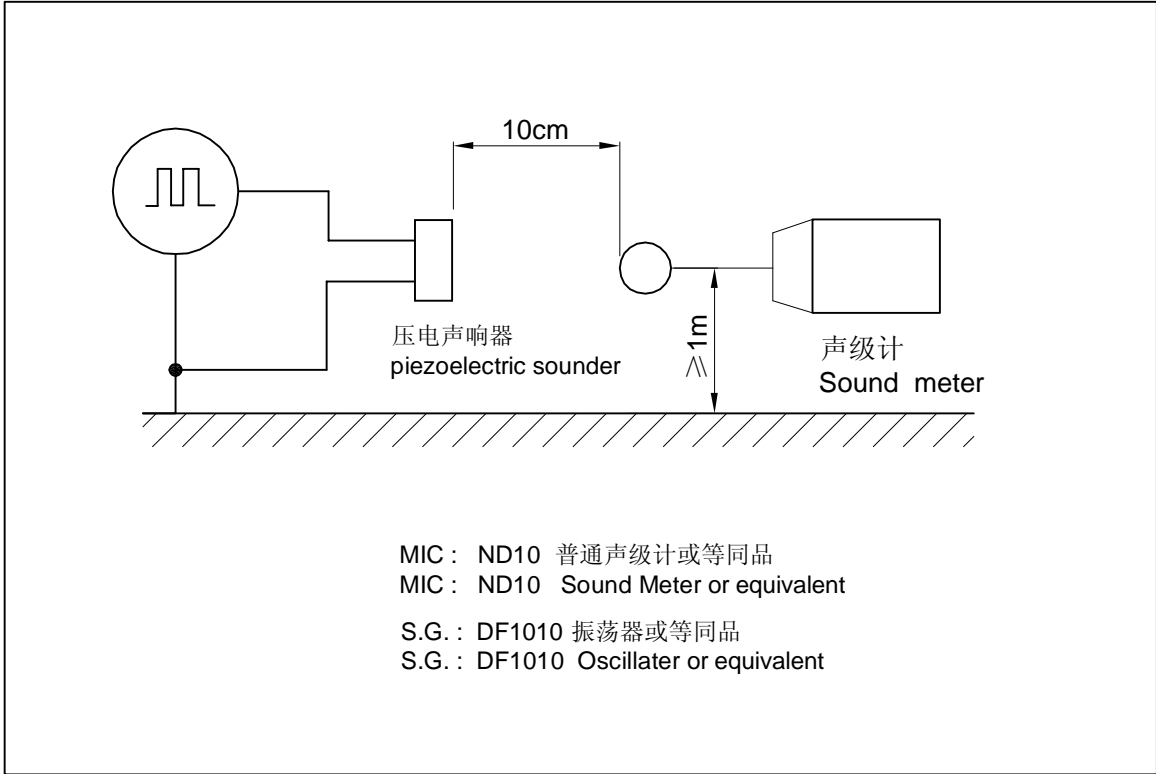
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#### 4. Reliability Test

	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>+235\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>+235\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 Melting Temperature), <math>T_{Smin}</math> 150°C (Solder Solidification Temperature), <math>t_p</math> 20-40 sec (Peak Duration), Ramp-up 3°C/sec max, Ramp-down 6°C/sec max, <math>t_L</math> 60-150 sec (Liquidus Duration), Critical Zone <math>T_L</math> to <math>T_p</math>, Preheat 60-180 sec, <math>t_{25^{\circ}\text{C}}</math> 25°C to Peak 8 min max.</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 shows a vertical push-pull gauge being used to apply force to a buzzer component. The buzzer is mounted on a PCB with a hole. The gauge is labeled 'PUSH' and 'PUSH-PULL GAUGE'. The buzzer is labeled 'Buzzer' and 'HOLE P.C.B.'. The soldering is labeled 'SOLDERING' and the base is labeled 'BASE'.</p>

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## 5. Measurement Block Diagram & Response curve



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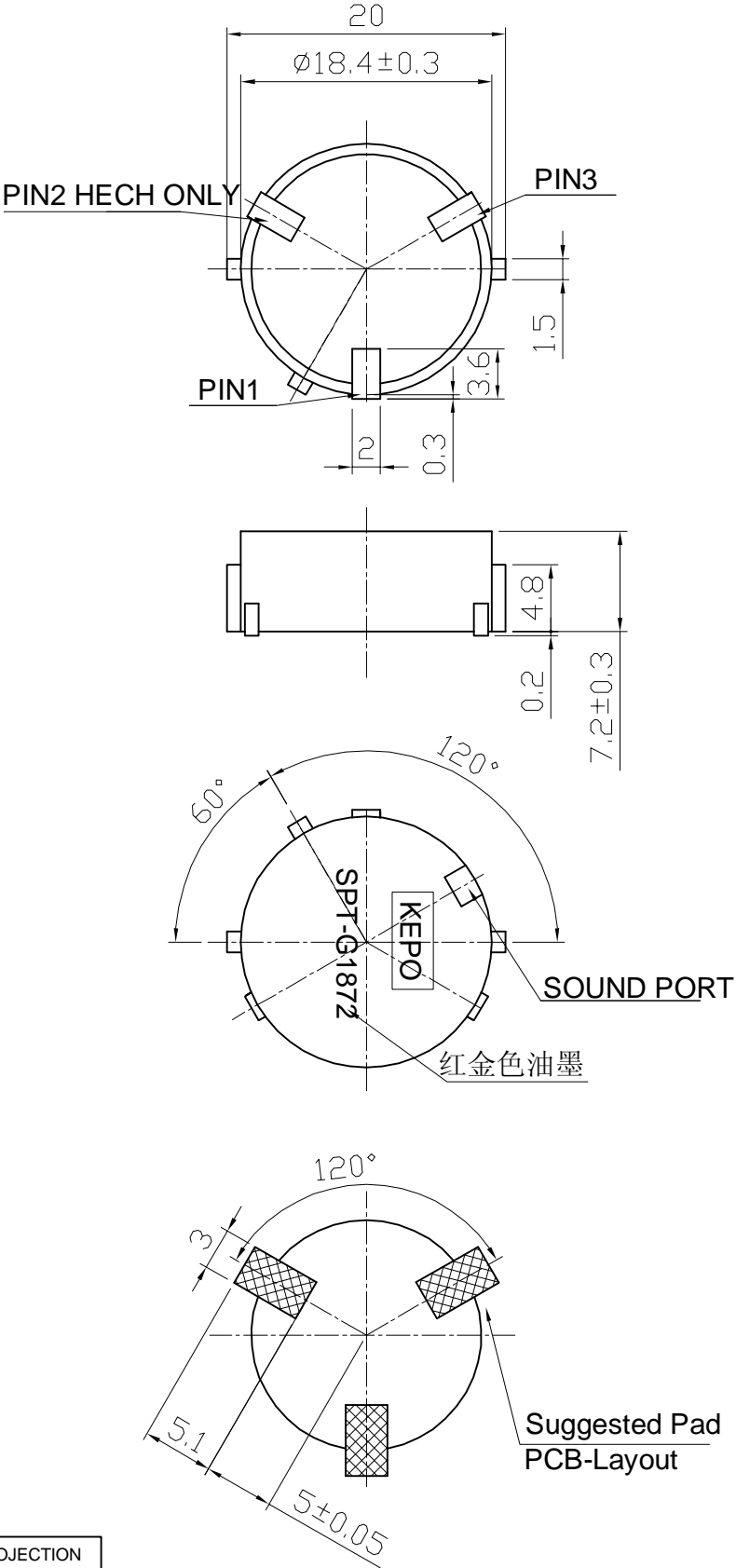
## 6. Structure



2	pin 焊片	3		
1	Case 壳体	1	PPS/BLACK	
No.	Part Name 型号	Q'TY 数量	Material 材质	Remarks 备注

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### 7. Dimensions



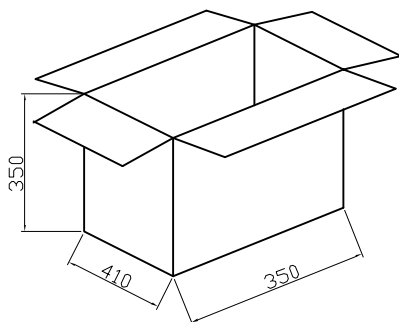
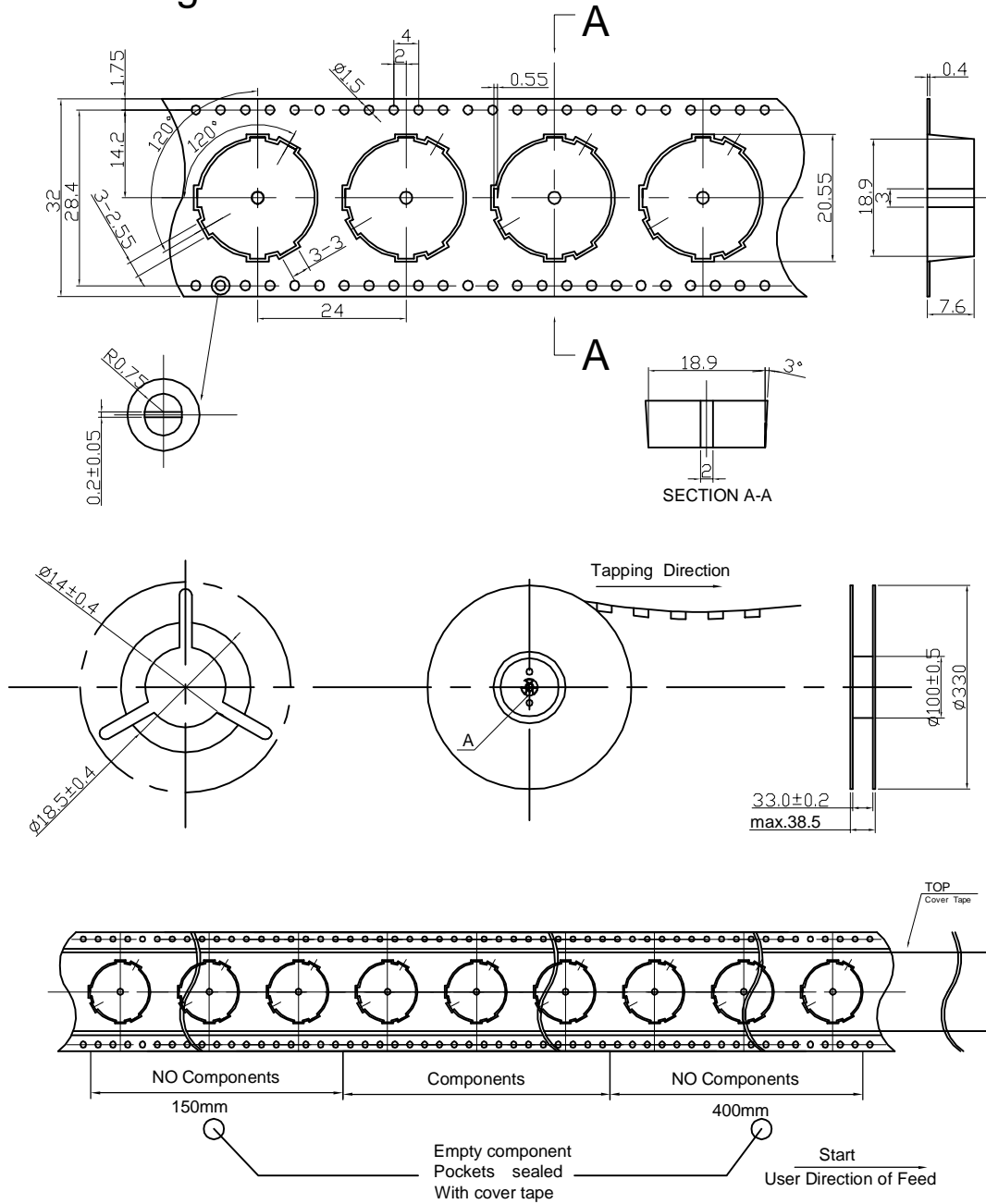
FIRST ANGLE PROJECTION

UNIT : mm  
Tolerance :  $\pm 0.5$



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## 8. Packing



### NOTES:

- 1.360 PCS per coil
  - 2.Total 10 coil per carton
  - 3.Total 3600 PCS carton
  - 4.Volume:350X410X350
- NET WEIGHT:7.2KG  
GROSS WEIGHT:10KG

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**9. Revision**

Rev. No.	DATE	PAGE	DESCRIPTION	SIGN
1.0	2009.02.22	/	primary	