

SPECIFICATION

Customer :

Applied To :

Product Name : Piezo Transducer

Model Name : SPT-1701

Drawing No. : KP3.840.932

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

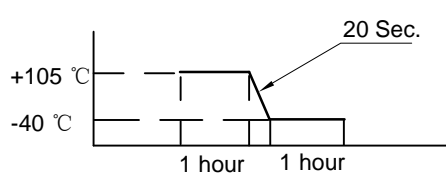
	Items 项目	Specification 规格
1	Rated Voltage 额定电压	12Vp-p Square Wave
2	Max.Allowable Voltage 最大输入电压	30Vp-p Square Wave
3	Resonant Frequency 谐振频率	4.0± 0.5KHz
4	Min.Sound Pressure Level 额定声压	90dB at 4.0KHz/12Vp-p Square Wave/10cm
5	Capacitance at 100Hz 电容量 (at 100Hz)	15000pF± 30%
6	Case Material/Color 壳体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

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4. Reliability Test

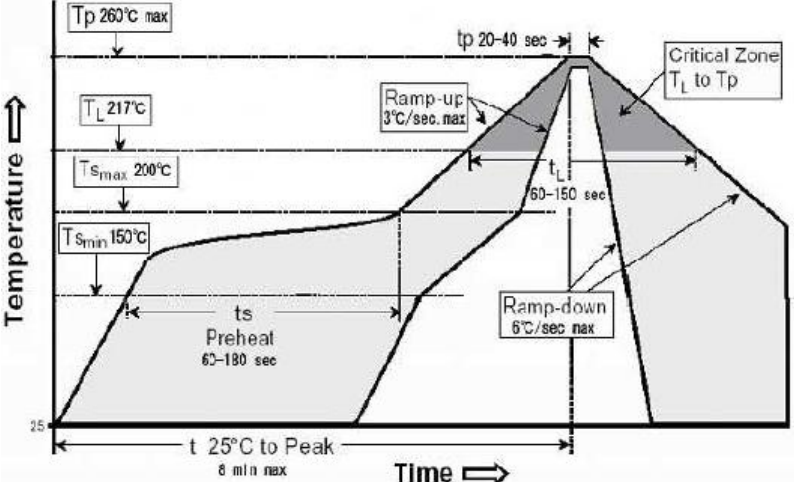
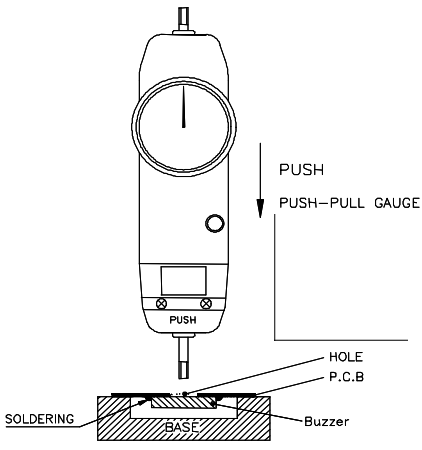
After test(1~7item), the transducer S.P.L. difference shall be within $\pm 10\text{dB}$, and the appearance not exist any change to be harmful to normal operation(e.g. cracks,rusts,damages and especially distortion).

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 $+85\pm 2\text{ }^\circ\text{C}$ 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> 

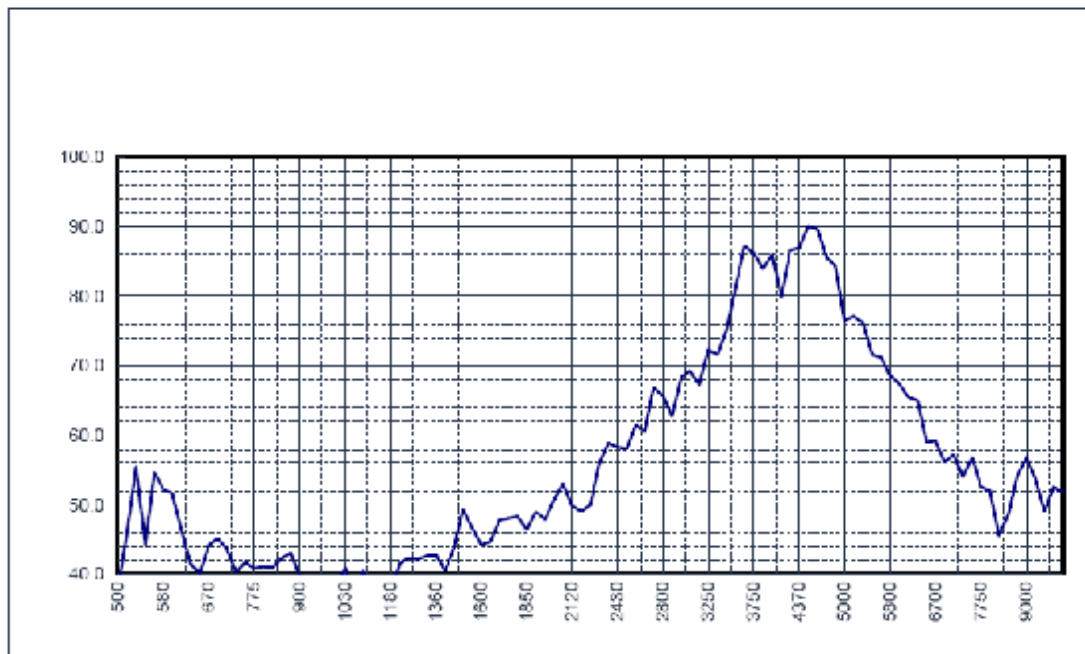
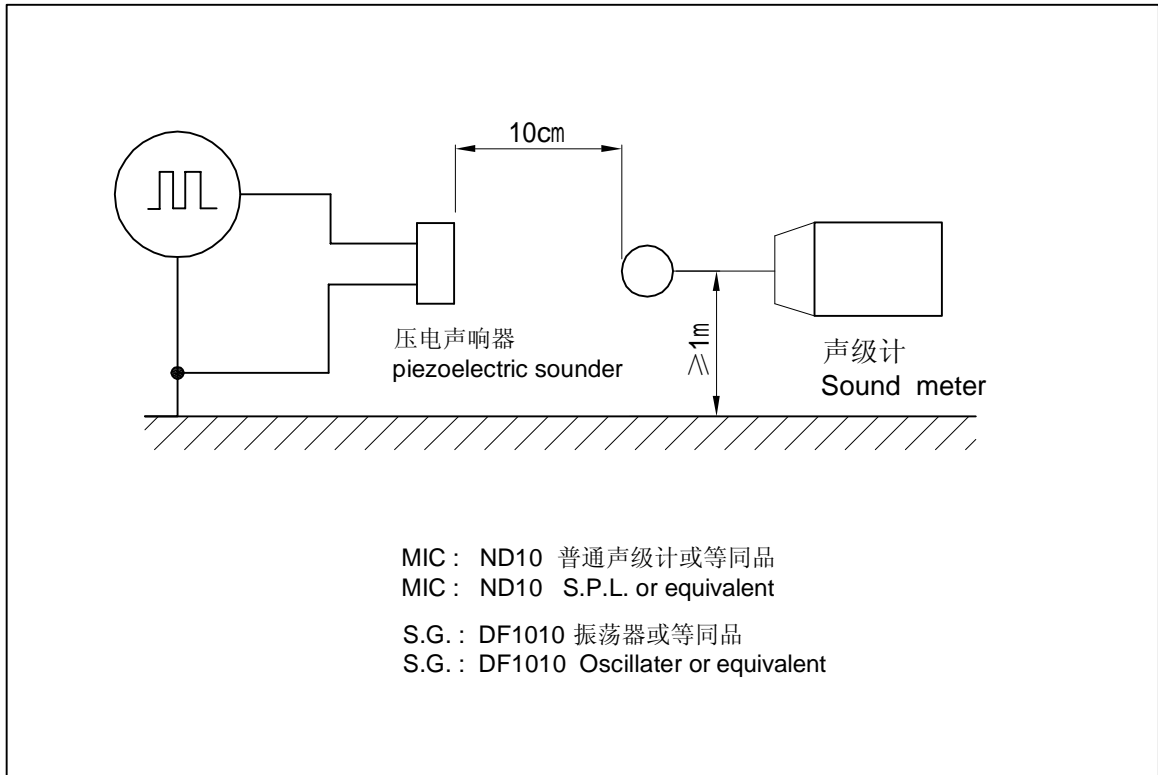
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4. Reliability Test

	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 $+230\pm 5^{\circ}\text{C}$ 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$3\pm 0.5$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 (Solder Melting Temperature), T_{Smin} 150°C (Solder Solidus 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 (Time in Liquidus Zone), Critical Zone T_L to T_p, Preheat 60-180 sec, and t 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 illustrates the test setup. A buzzer is mounted on a P.C.B. pad. A push-pull gauge is used to apply a downward force (labeled 'PUSH') to the buzzer. The buzzer is soldered to the pad, and the base of the buzzer is labeled 'BASE'. The test is performed in the pad direction.</p>

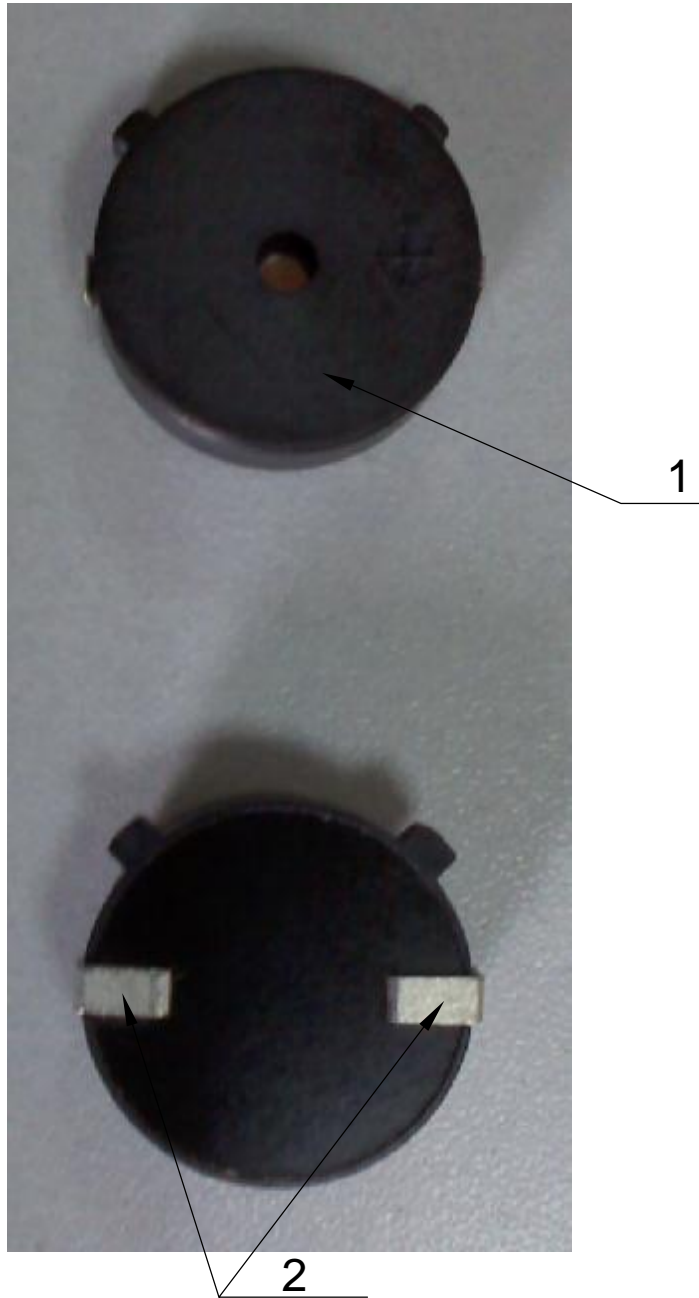
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5. Measurement Block Diagram & Response curve



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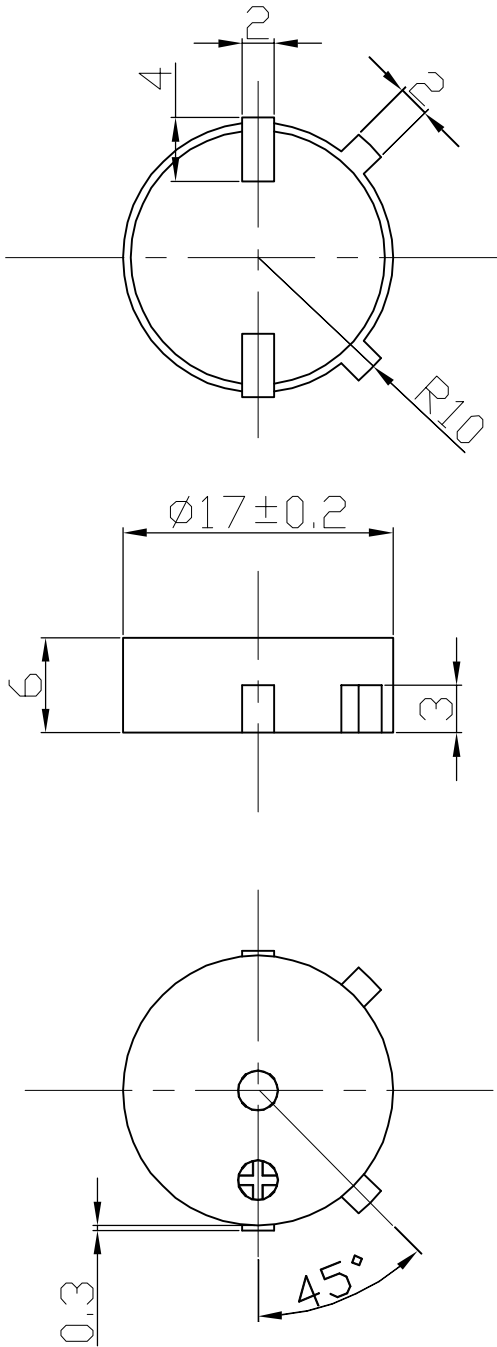
6. Structure



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

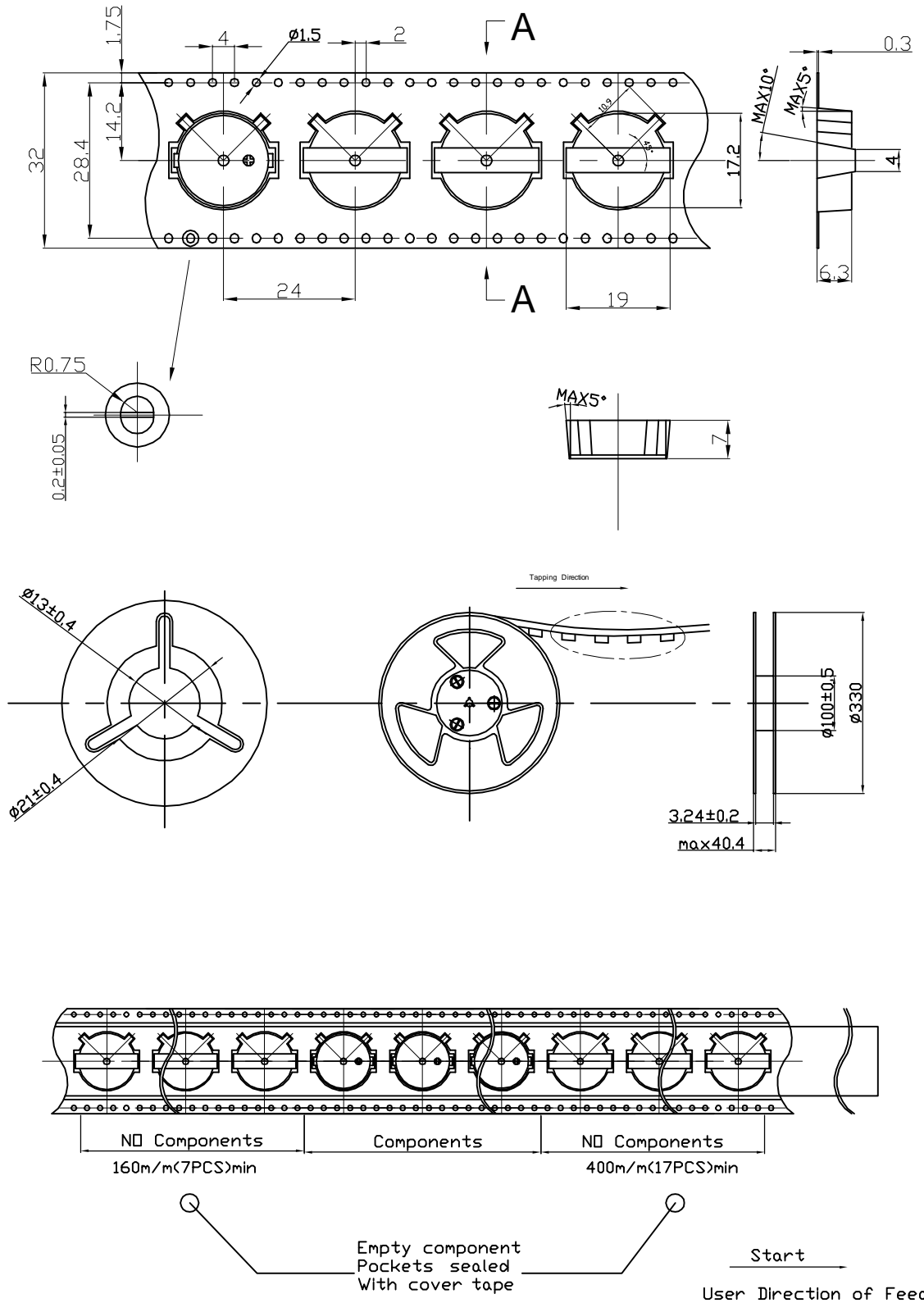


FIRST ANGLE PROJECTION

UNIT : mm
Tolerance : ±0.5

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8. Packing



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9. Revision

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1.0	2009.02.04	/	primary	