

# SPECIFICATION FOR APPROVAL

**Customer :**

**Description :** Piezo Audio Transducer

**Soberton Part No. :** PT-1707

**Date :** 2010-12-08

**Customer Model No. :**

<b>Date of Approval</b>	
<b>Authorization Signature</b>	



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<b>Approved</b>	<b>Checked</b>	<b>Issue</b>
Ryan	Elroy	Emily
10/12/08	10/12/08	10/12/08

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## 1. ELECTRICAL AND ACOUSTICAL SPECIFICATION

	Item	Unit	Specifications
1-1	Rated Voltage ( Square Wave )	Vp-p	5
1-2	Operating Voltage	Vp-p	1-30
1-3	* Rated Current ( Max )	mA	1
1-4	* Min Sound Output at 4.0kHz/10cm	dB	85
1-5	* Resonant Frequency	Hz	4000±500
1-6	Capacitance at 120Hz	pF	15000±30%
1-7	Operating Temperature	°C	-20~+70
1-8	Storage Temperature	°C	-30~+80
1-9	Weight	g	1
1-10	Housing Material	Black Noryl	
1-11	Lead Pin Material	Phosphor Bronze ( DSn )	
1-12	Tone Nature	Single	

\* Value Applying at Rated Voltage ( resonant frequency , 1/2 duty , square wave )

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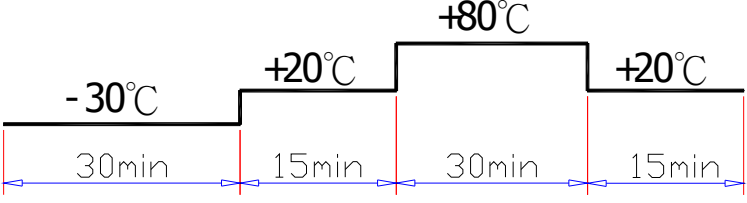
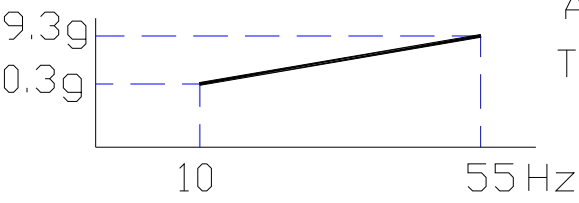
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## 2.ENVIRONMENTAL TEST

Item	Specifications
2-1 Storage in High temp.	Storage in $+80^{\circ}\text{C}\pm 2^{\circ}\text{C}$ test box for 240hours , then expose to the room temperature for 2 hours without applying power.
2-2 Storage in Lower temp.	Storage in $-30^{\circ}\text{C}\pm 2^{\circ}\text{C}$ test box for 240hours , then expose to the room temperature for 2 hours without applying power.
2-3 Storage in Humidity	Storage in $+40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 90-95%RH test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
2-4 Thermal cycle test.	 <p>Make this test for 5 cycles without applying power, then expose to the room temperature for 2 hours.</p>
2-5 Vibration test	 <p>Amplitude:1.5mm Time :1min/axis</p> <p>Make this test for the directions of X,Y, Z for 2 hours each (total 6 hours).</p>
2-6 Drop test	Free drop a unit from the height 100cm to the surface of 10mm thick board ,three directions(X,Y,Z).
2-7 Solderability test	Soldering temp.: $260\pm 5^{\circ}\text{C}$ Heat applying time: $3\pm 0.5\text{sec}$ .

### PASS CRITERION :

After these tests , the change of S.P.L shall be within  $\pm 5$  dB .

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## 3.MEASURING METHOD(BUZZER MODE)

### 3-1 .Test Condition

#### 3-1-1.STANDARD

Temperature :  $25 \pm 3^{\circ}\text{C}$

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

#### 3-1-2.JUDGEMENT

Temperature :  $15 \sim 35^{\circ}\text{C}$

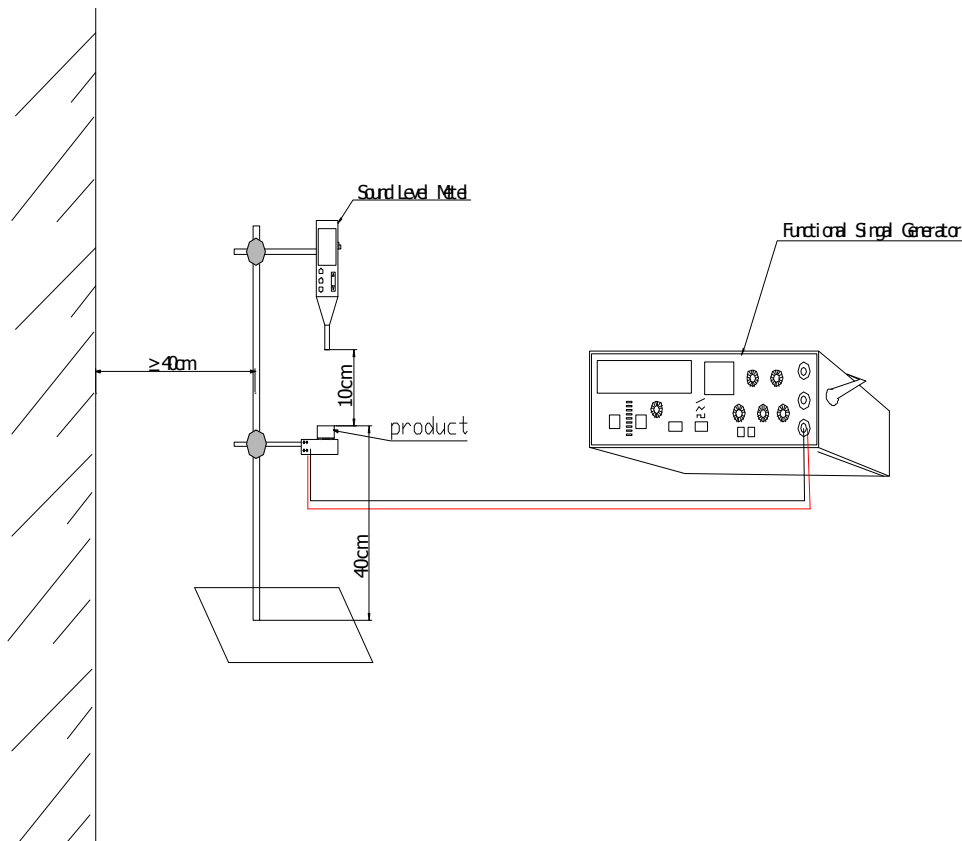
Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

### 3-2 . Standard Test Fixture

1.rated Voltage(Square wave): 5V

2.Resonant Frequency:4000Hz



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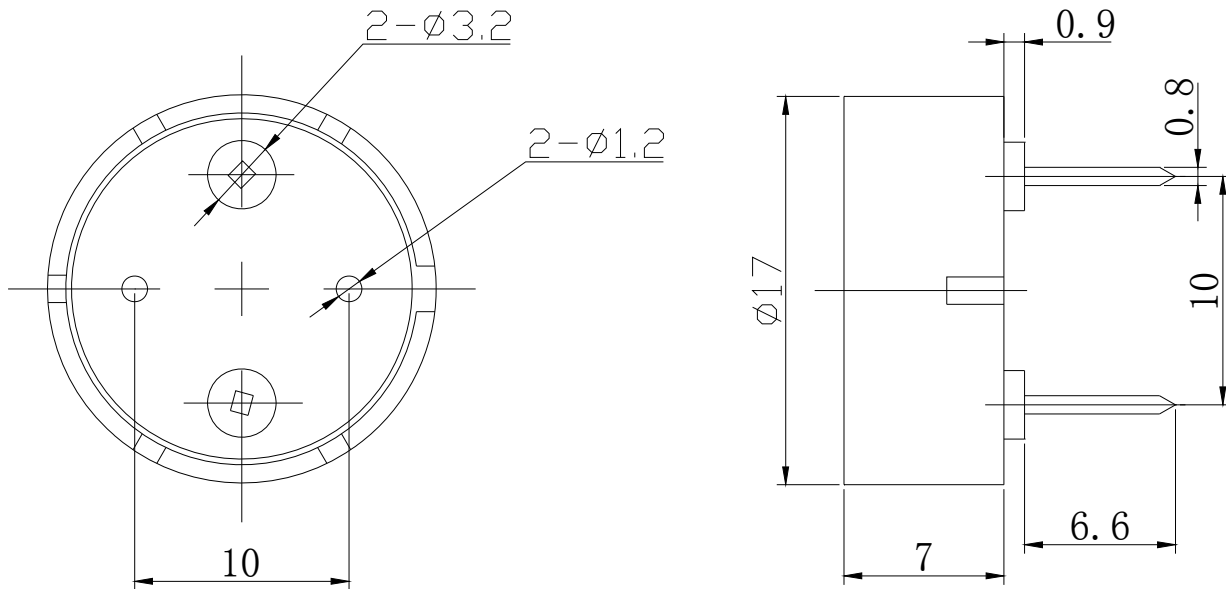
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## 4.DIMENSIONS

Unless otherwise specified, tolerance:±0.5(unit: mm)



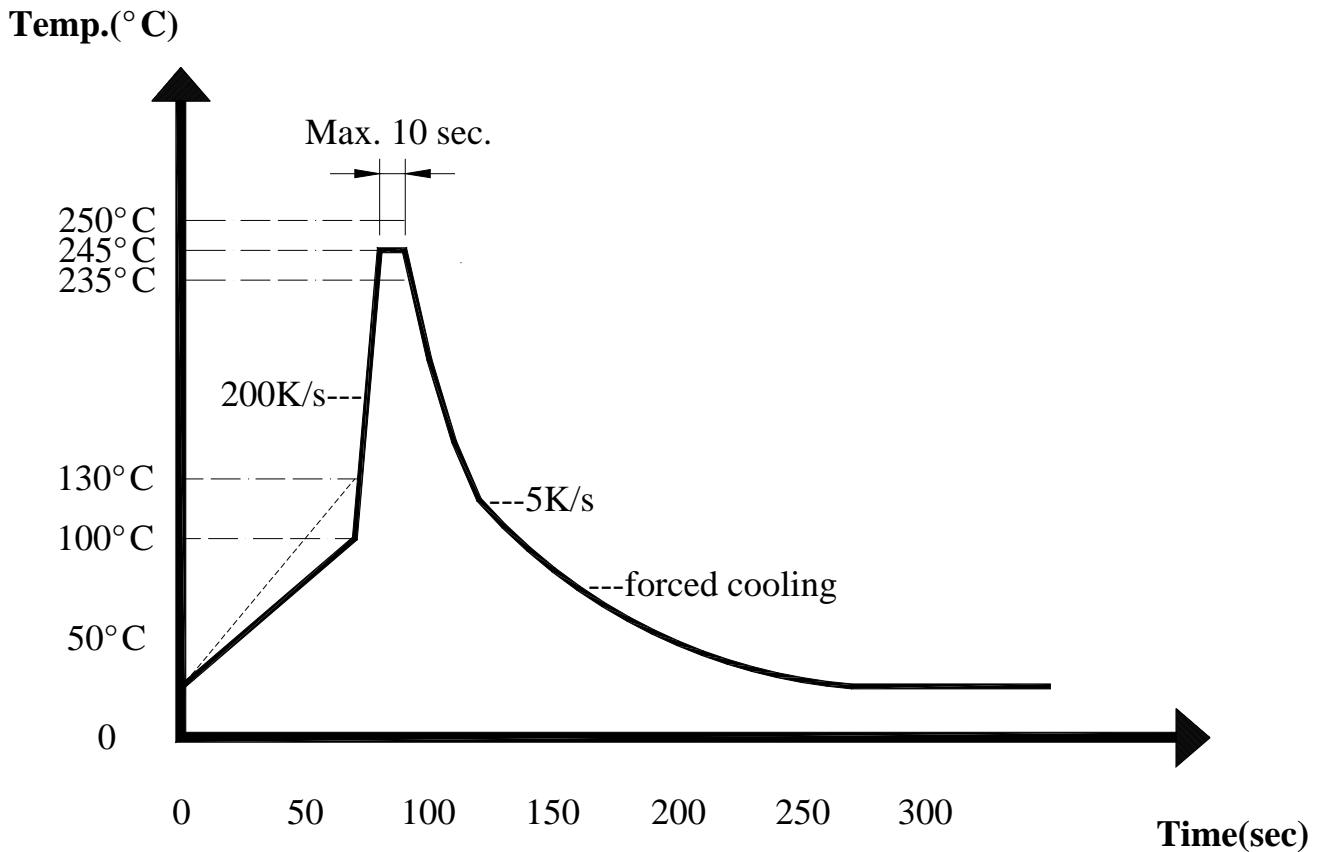
- 1) All parts must meet to ROHS.
- 2) Wave solder allowed , wash not allowed.

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4	Cover	1	Black Norvl	
3	Pin	2	Phosphor Bronze (DSn)	
2	Piezo element	1	Copper / Nickel	
1	Housing	1	Black Norvl	
Part No.	Part Name	Q'TY	Material	Remark

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## 6. WAVE SOLDER CURVE

### \* Wave Soldering profile of lead-free



Recommendable wave soldering condition is as follows.

Note 1: It is requested that wave soldering should be executed after heat of product goes down to normal temperature.

Note 2: Peak wave temperature of 235°C ~ 250°C maximum of 10 sec. .

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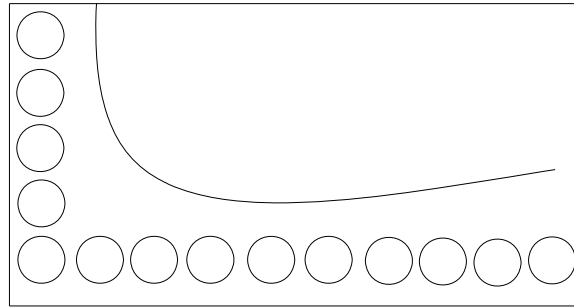
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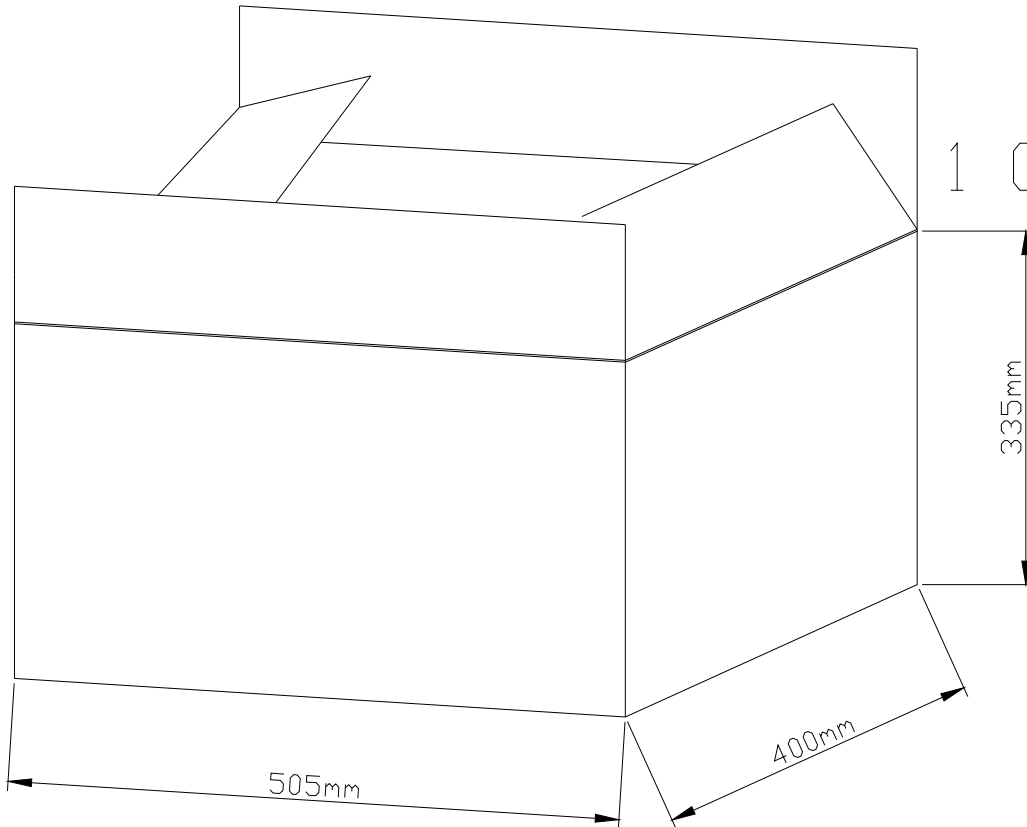
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## 7.PACKING



1 Layer

1 Layer 50pcs



1 Carton

1 Carton 3500pcs

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