

# SPECIFICATION

## FOR APPROVAL

Customer : \_\_\_\_\_

Description : \_\_\_\_\_ Magnetic Transducer \_\_\_\_\_

Universal Model No. : \_\_\_\_\_ EBP.12.1,5.2,8.U.BF \_\_\_\_\_

Customer's Model No. : \_\_\_\_\_

ISSUE	CHECK	APPROVAL	CUSTOMER
ZhangQiYuan 06/13/08	ShiCong 06/13/08	WangXueWen 06/13/08	

Compro Electronic GmbH

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## 1. ELECTRICAL AND ACOUSTICAL SPECIFICATION

	Item	Unit	Specifications
1-1	Rated Voltage ( Square Wave )	V	1.5
1-2	Operating Voltage	V	1-3
1-3	* Rated Current ( Max )	mA	30
1-4	* Min Sound Output at 10cm	dB	85
1-5	* Resonant Frequency	Hz	2048
1-6	Coil Resistance	$\Omega$	16 $\pm$ 4
1-7	Operating Temperature	$^{\circ}$ C	-30~+75
1-8	Storage Temperature	$^{\circ}$ C	-40~+85
1-9	Weight	g	2
1-10	Housing Material	NORYL	
1-11	Lead Pin Material	Red Copper ( DSn )	

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

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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 240 hours , 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 240 hours , 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 style="text-align: center;"> <math>-30^{\circ}\text{C}</math>      <math>+20^{\circ}\text{C}</math>      <math>+80^{\circ}\text{C}</math>      <math>+20^{\circ}\text{C}</math>              30min      15min      30min      15min           </p> <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 style="text-align: center;">             9.3g              0.3g              10      55 Hz           </p> <p style="text-align: right;">             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	<p>Soldering temp.: <math>260\pm 5^{\circ}\text{C}</math></p> <p>Heat applying time: <math>3\pm 0.5\text{sec}</math>.</p>

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 ~ 35°C

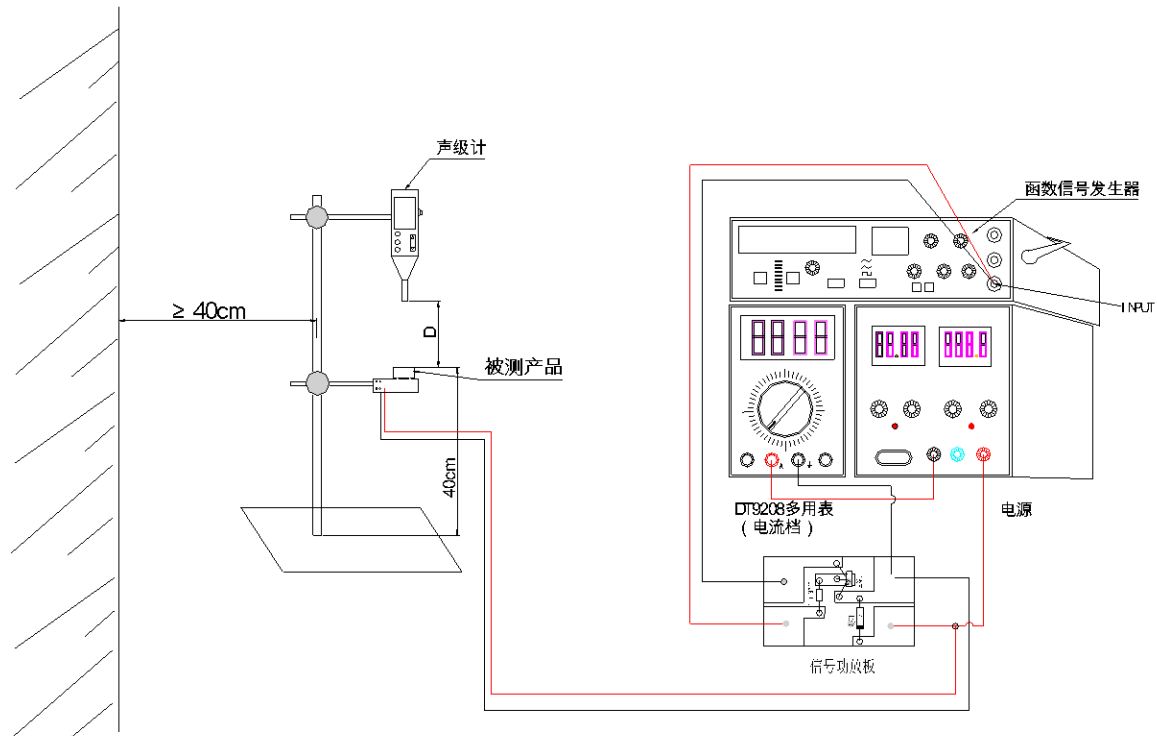
Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

#### 3-2. Standard Test Fixture

1. rated Voltage (Square wave): 12V

2. Resonant Frequency: 4500Hz



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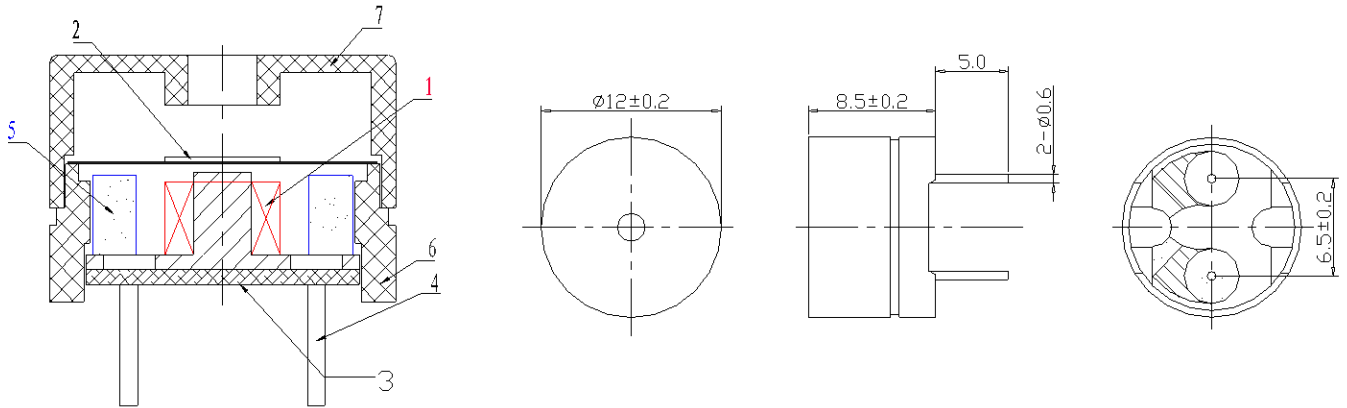
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### 5.DIMENSIONS

Unless otherwise specified, tolerance:  $\pm 0.5$  (unit: mm)



Cadmium(Cd)/Cadmium Compounds	$\leq 100$ ppm
Lead ( Pb ) / Lead Compounds	$\leq 800$ ppm
Mercury ( Hg ) Mercury Compounds	$\leq 800$ ppm
Hexavalent-Chromium ( Cr6+ ) Compounds	$\leq 800$ ppm
PBB	$\leq 800$ ppm
PBDE	$\leq 800$ ppm

1 ) All parts must be meet to ROHS.

2 ) Wave solder allowed , wash not allowed.

7	Housing	1	Noryl	
6	Housing	1	Noryl	
5	Core	1	Ferrite	
4	PIN	2	Red Copper	
3	PCB	1	Exopy	
2	Diaphragm	1	Iron	
1	Coil Part	1	Copper And Iron	
Part No.	Part Name	Q'TY	Material	Remark

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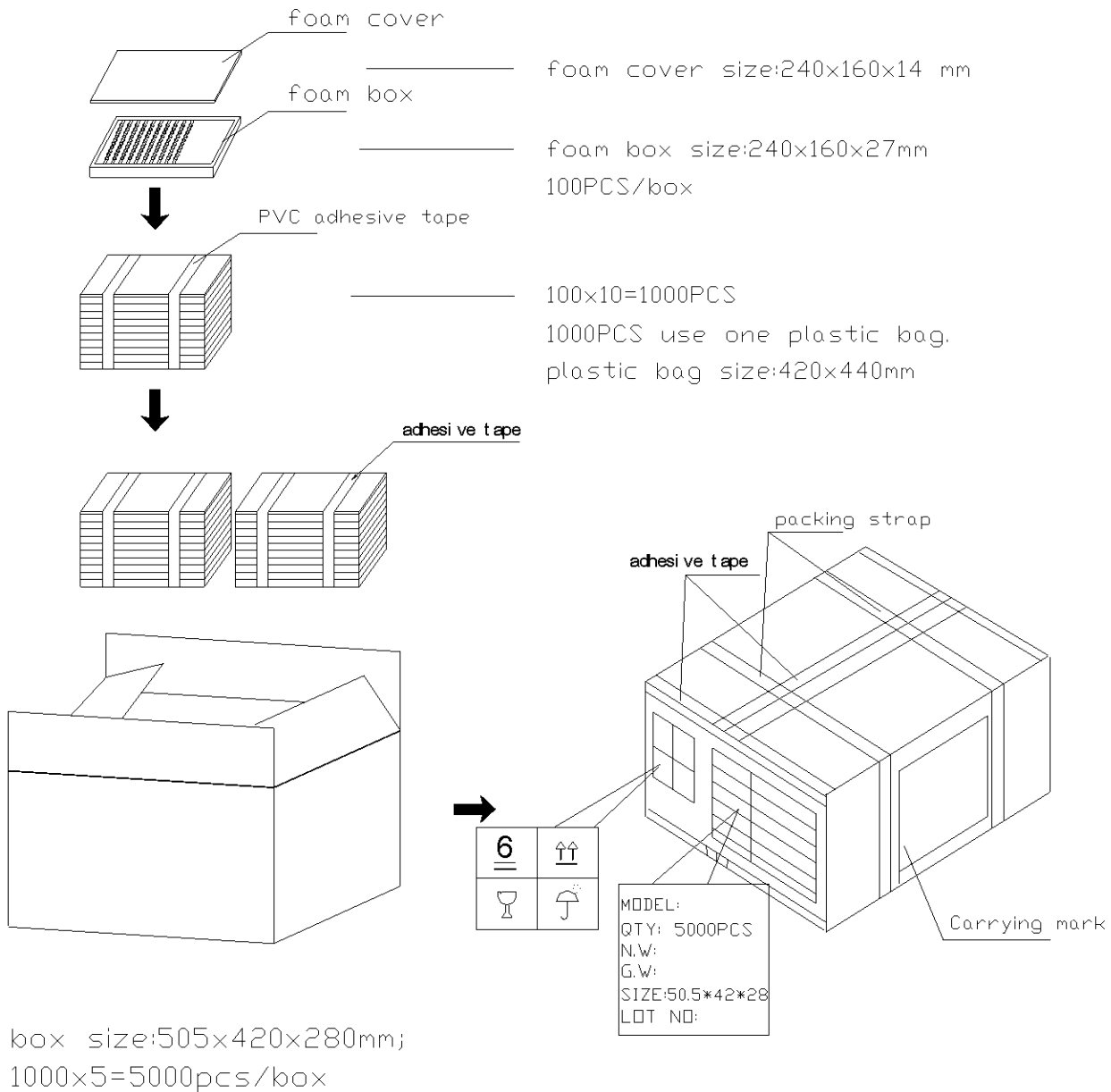
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### 7.PACKING



		07/07/07	TangYuJing	ShiCong	WangXueWen
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