

SPECIFICATION

FOR

APPROVAL

Customer : _____

Description : Piezo Buzzer _____

ECHO Model No. : B103S4120L _____

ECHO ERP No. : _____

Customer's Model No. : _____

ISSUE	CHECK	APPROVAL	CUSTOMER
CaoBin	Michael Feng	Bosco	
25.10.24	25.10.24	25.10.24	



ECHO ELECTRONICS CO.,LTD

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1. ELECTRICAL AND ACOUSTICAL SPECIFICATION

	Item	Unit	Specifications
1-1	Rated Voltage	VDC	12
1-2	Operating Voltage	VDC	3-28
1-3	*Rated Current (Max)	mA	5
1-4	*Min Sound Output at 10cm	dB	95
1-5	*Resonant Frequency	Hz	4500±500
1-6	Tone Nature		Single
1-7	Operating Temperature	°C	-20~+60
1-8	Storage Temperature	°C	-30~+70
1-9	Weight	g	5
1-10	Housing Material		ABS(Black)
1-11	Lead Wire		UL1007 AWG26(Red & Black)

*Value Applying at Rated Voltage(DC)

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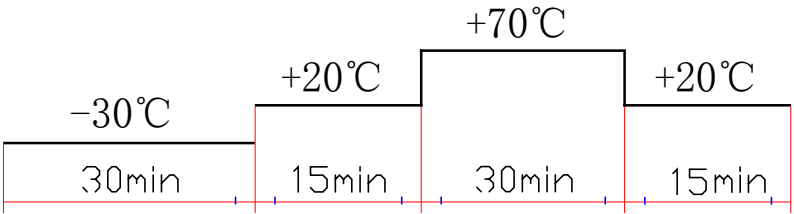
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2. ENVIRONMENTAL TEST

	Item	Specifications
2-1	Storage in High temp.	Storage in $+70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 hours , then expose to the room temperature for 2 hours without applying power.
2-2	Storage in Low temp.	Storage in $-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 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>Make this test for 5 cycles without applying power, then expose to the room temperature for 2 hours.</p>
2-5	Vibration test	Applying the vibration of amplitude 1.5mm and vibration frequency 10 to 55 Hz in each of 3 perpendicular directions for 2 hours.
2-6	Drop test	Free drop a unit from the height 70cm to the surface of 10mm thick board ,three directions(X,Y,Z).

PASS CRITERION :

After these tests , the change of S.P.L shall be within ± 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 : $15 \sim 35^{\circ}\text{C}$

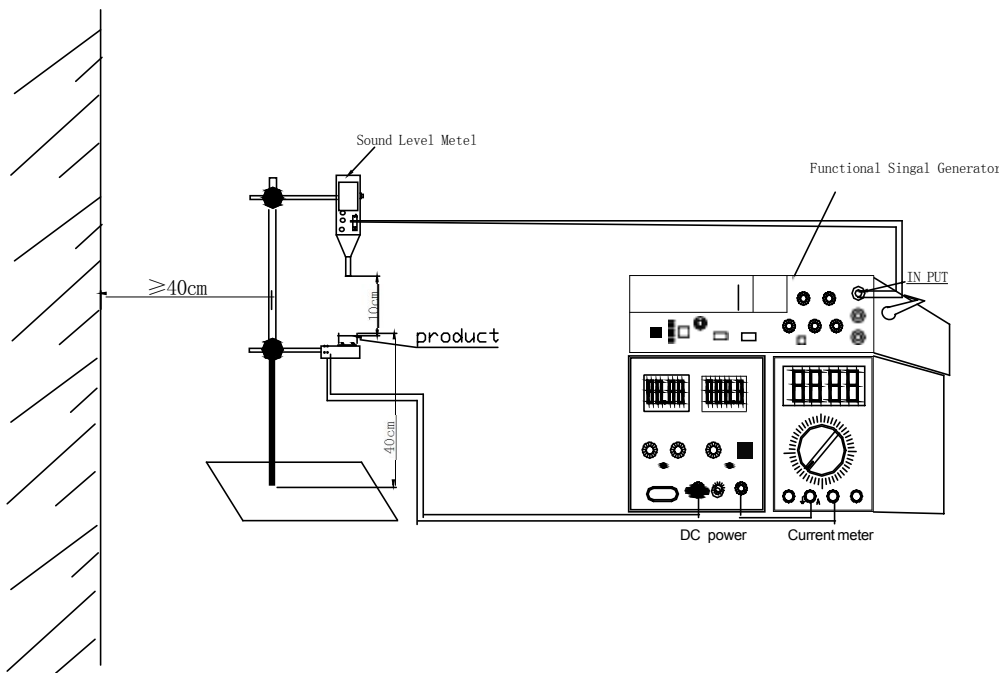
Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

3-2 . Standard Test Fixture

3-2-1. rated Voltage: 12VDC

3-2-2. Resonant Frequency: $4500\text{Hz} \pm 500$



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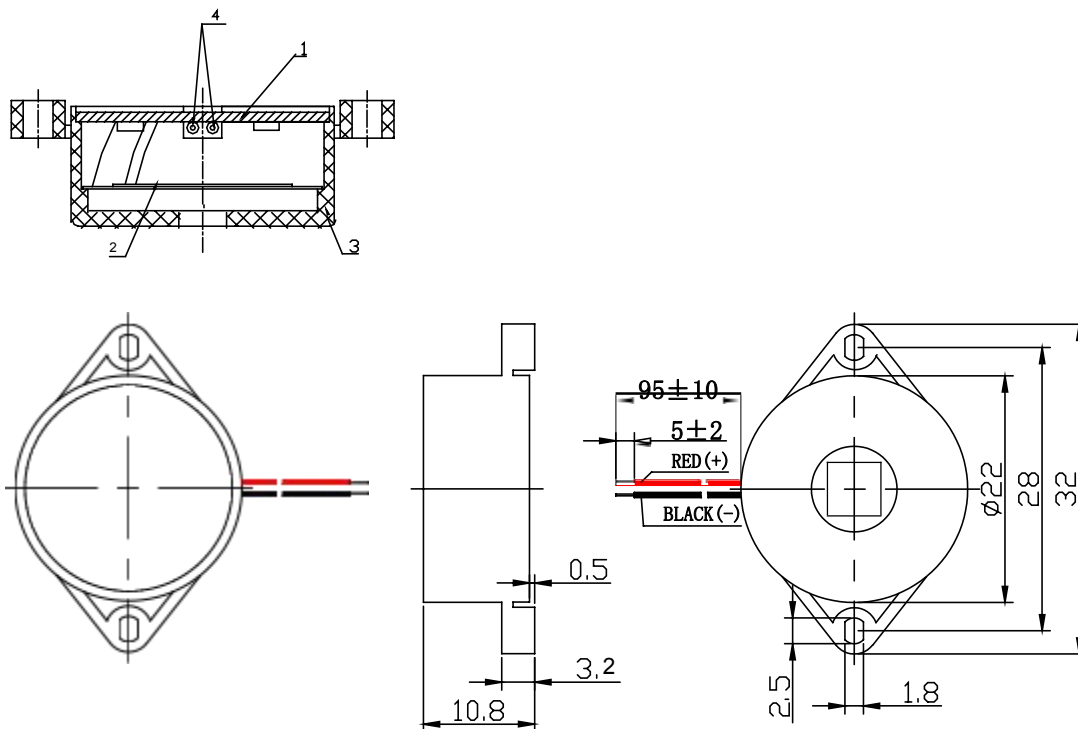
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4. DIMENSIONS

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



- 1) All parts must be meet to ROHS2.0.
- 2) Wave solder and wash not allowed

6				
5				
4	Lead Wire	2	UL1007 AWG26(Red&Black)	
3	Housing	1	Black ABS	
2	Piezo element	1	Brass	
1	PCB	1	Epoxy Board	
Part No.	Part Name	Q'TY	Material	Remark

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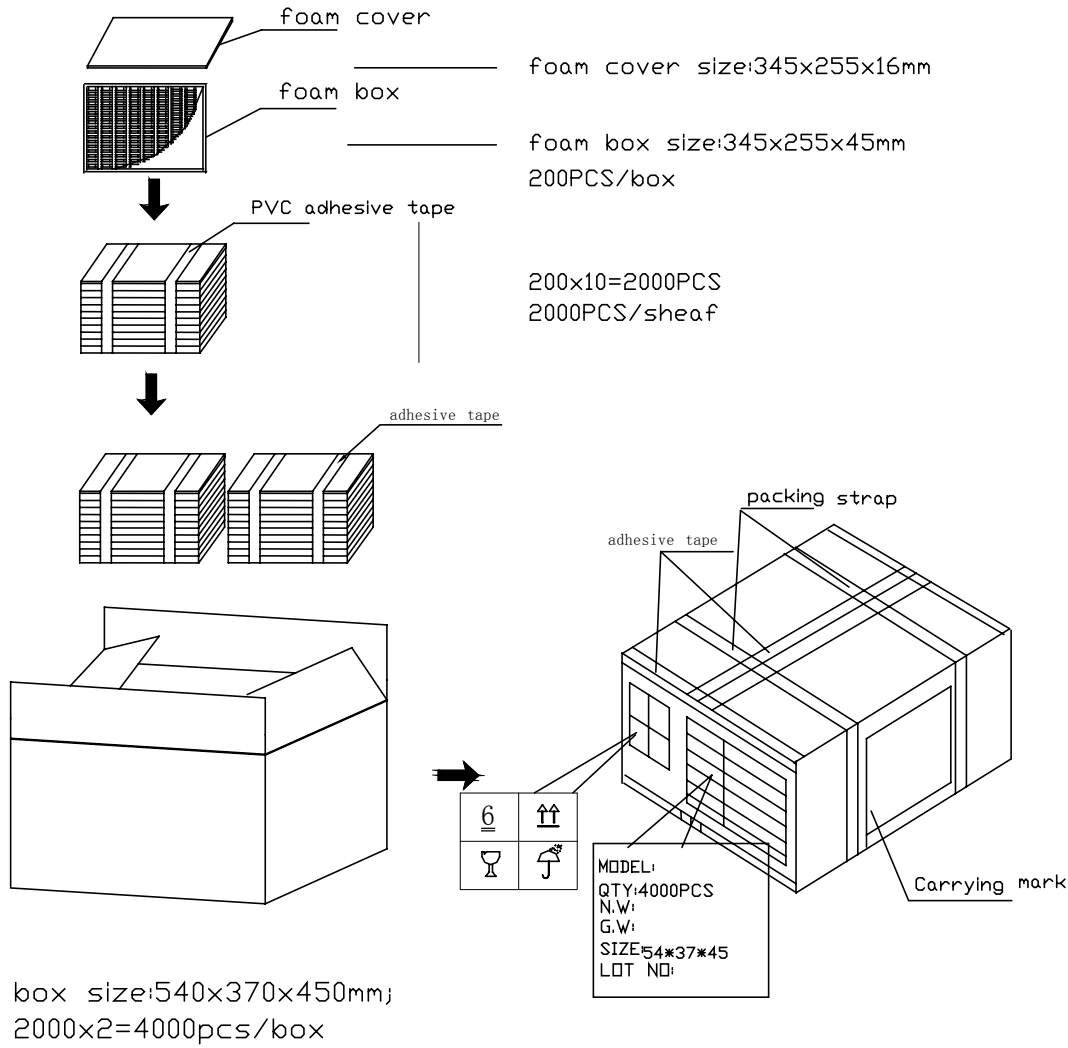
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5. PACKING



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