



## PRODUCT SPECIFICATION

Product Name: Piezo Buzzer

Part Number: MSPS23C29P15V12

Document No: \_\_\_\_\_

Date: 2021.5.26

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### 1.ELECTRICAL AND ACOUSTICAL SPECIFICATION



# MANORSHI ELECTRONICS CO.,LTD

NO.	Item	Unit	Specifications
1-1	Rated Voltage	VDC	12
1-2	Operating Voltage	VDC	3-20
1-3	* Rated Current (Max)	mA	15
1-4	* Min Sound Output at 30cm	dB	85
1-5	* Resonant Frequency	Hz	2900±500
1-6	Tone Nature		Single
1-7	Operating Temperature	°C	-30~+70
1-8	Storage Temperature	°C	-40~+85
1-9	Weight	g	6
1-10	Housing Material		Black Noryl
1-11	Lead Pin Material		Red Copper (DSn)

\* Value Applying at Rated Voltage(DC)

## 2.ENVIRONMENTAL TEST

No.	Item	Specifications
2-1	Storage in High temp.	Storage in +85 °C ± 2 °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 -40 °C ± 2 °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 °C ± 2 °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 70cm to the surface of 10mm thick board ,three directions(X,Y,Z).
2-7	Solderability test	Soldering temp.:260±5°C Heat applying time: 3±0.5sec.

PASS CRITERION :

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

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

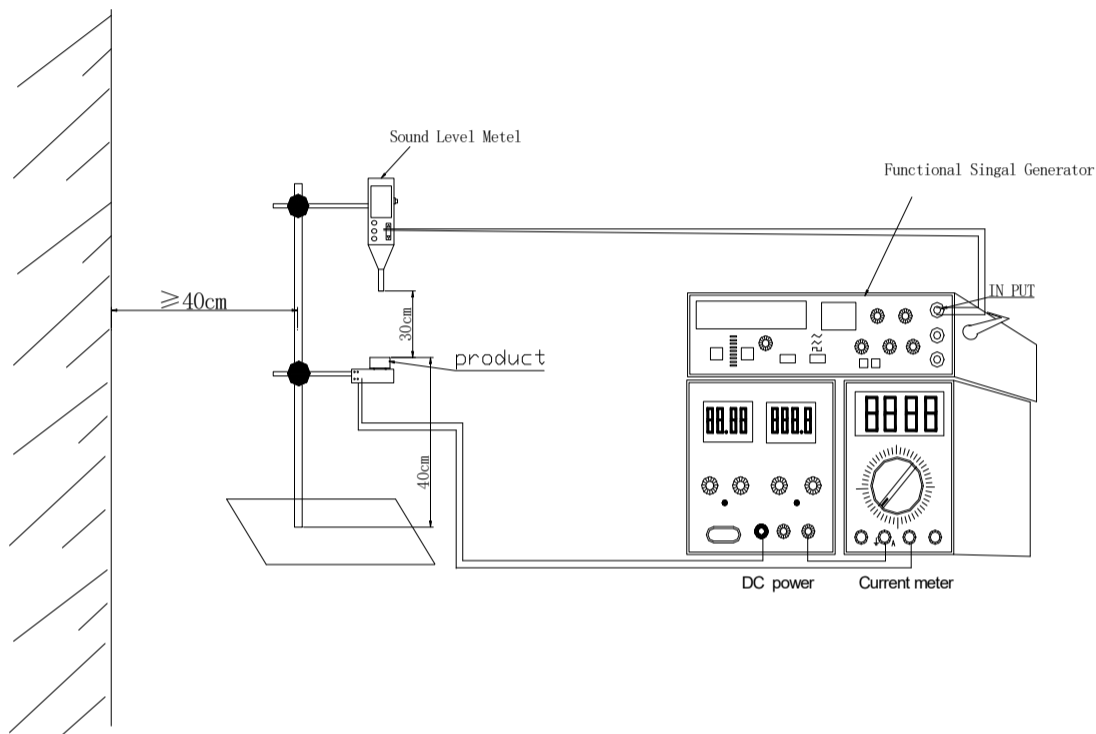
Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

## 3-2 . Standard Test Fixture

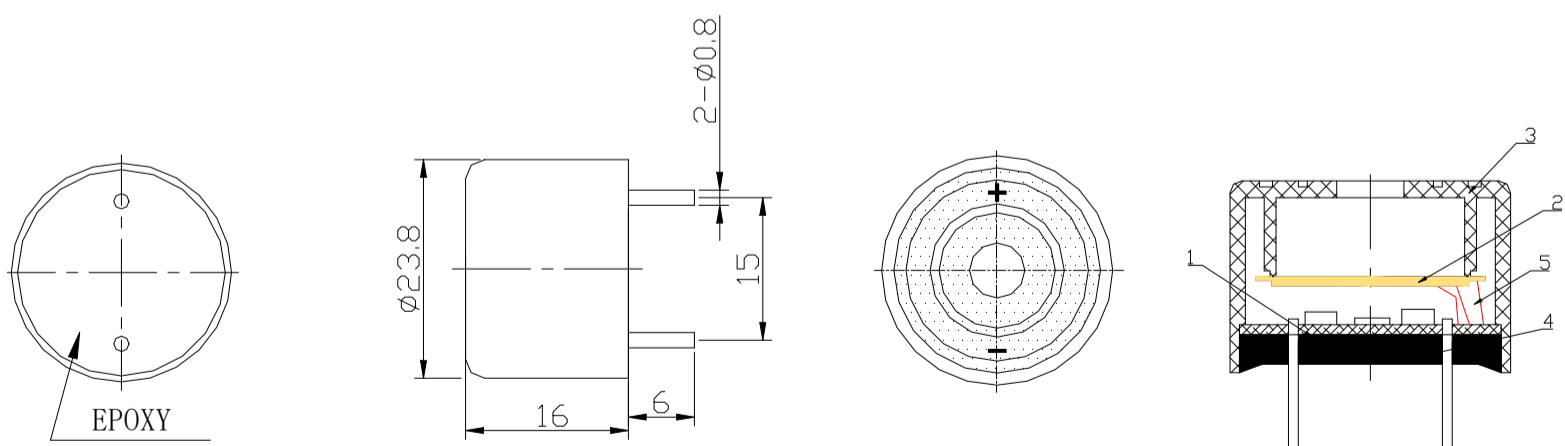
3-2-1.Rated Voltage: 12VDC

3-2-2.Resonant Frequency:  $2900\text{Hz} \pm 500$



## 4.DIMENSIONS

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



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

5	Lead Wire	3		
4	Potting		Epoxy	
3	Housing	1	Black Noryl	
2	Piezo element	1	Brass	
1	PCB	1	Epoxy Board	
Part No.	Part Name	Q'TY	Material	Remark

## 5.PACKING

