

## 1. SCOPE

This specification applies Internally driven piezo buzzer, **L-KLS3-PB-23\*19**

Item		Unit	Specifications
1-1	Rated Voltage	VDC	12
1-2	Operating Voltage	VDC	3-24
1-3	* Rated Current (Max)	mA	15
1-4	* Min Sound Output at 30cm	dB	85
1-5	* Resonant Frequency	Hz	3300±500
1-6	Tone Nature		Constant sound
1-7	Operating Temperature	°C	-40~+85
1-8	Storage Temperature	°C	-40~+105
1-9	Weight	g	6
1-10	Housing Material	ABS (Black)	
1-11	Lead Pin Material	Red Copper (DSn)	

\* Value Applying at Rated Voltage(DC)

## 2. ENVIRONMENTAL TEST

Item		Specifications
2-1	Storage in High temp.	Storage in +70°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 -30°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 100cm 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 .



NingBo KLS ELECTRONIC CO., LTD.

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

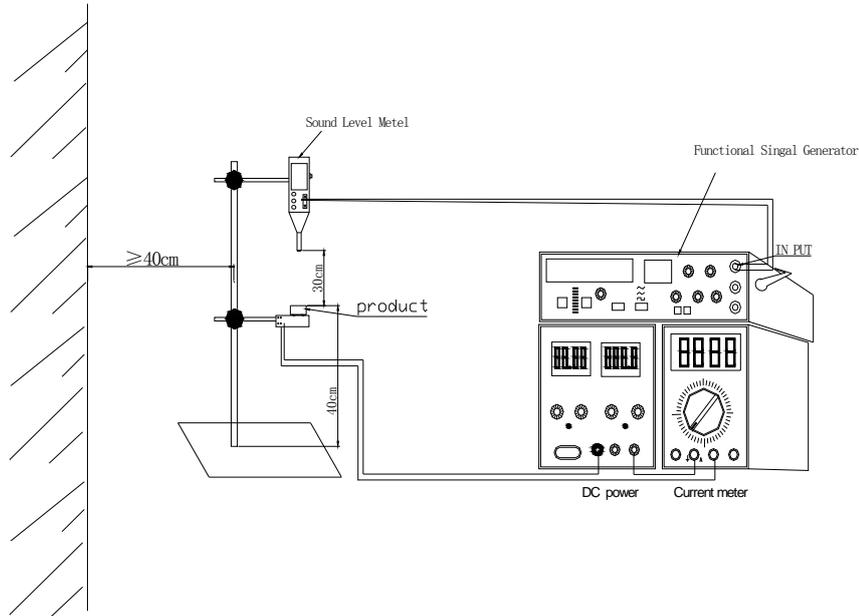
Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

#### 3-2 . Standard Test Fixture

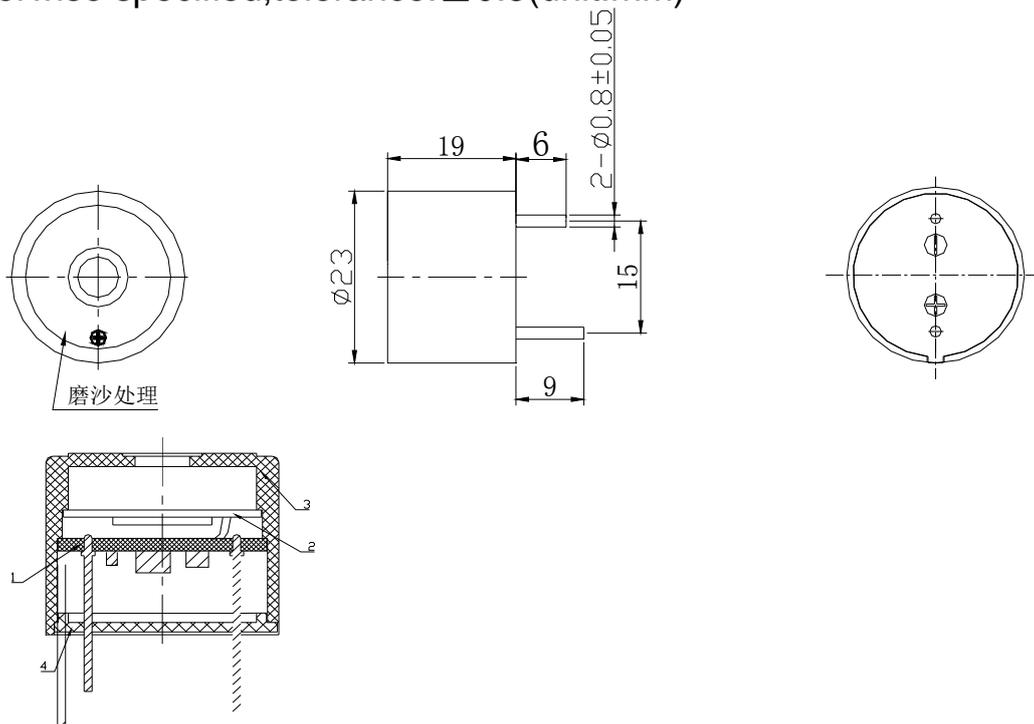
1.rated Voltage: 12V

2.Resonant Frequency:  $3300\text{Hz} \pm 500$



### 4.DIMENSIONS

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



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

4	Cover		BLACK ABS	
3	Housing	1	BLACK ABS	
2	Piezo element	1	Brass	
1	PCB	1	Epoxy Board	
Part No.	Part Name	Q'TY	Material	Remark

## 5.PACKING

