

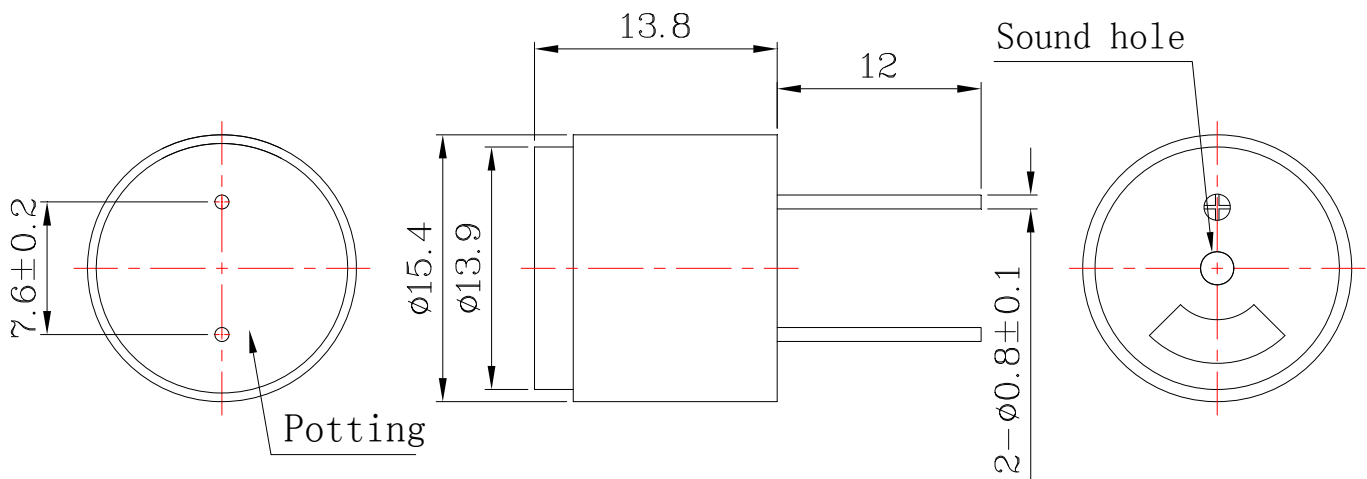
## A. SCOPE

This specification applies Internally driven piezo buzzer, **L-KLS3-PB-16\*14**

## B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	KHz	4.0 ± 0.5	
2	Operating Voltage	V <sub>DC</sub>	3 ~ 16	
3	Rated Voltage	V <sub>DC</sub>	12	
4	Current Consumption	mA	MAX. 20	at Rated Voltage
5	Sound Pressure Level	dB	MIN. 85	at 10cm at Rated Voltage
6	Tone/Pulse Rate		Single	
7	Operating Temperature	°C	-40 ~ +85	
8	Storage Temperature	°C	-40 ~ +105	
9	Dimension	mm	Φ15.4x H13.8	See appearance drawing
10	Weight (MAX)	gram	1.5	
11	Housing Material		PPO( Black )	
12	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing
13	Environmental Protection Regulation		RoHS	

## C. APPEARANCE DRAWING



**Tol : ± 0.5      Unit: mm**



NingBo KLS ELECTRONIC CO.,LTD.

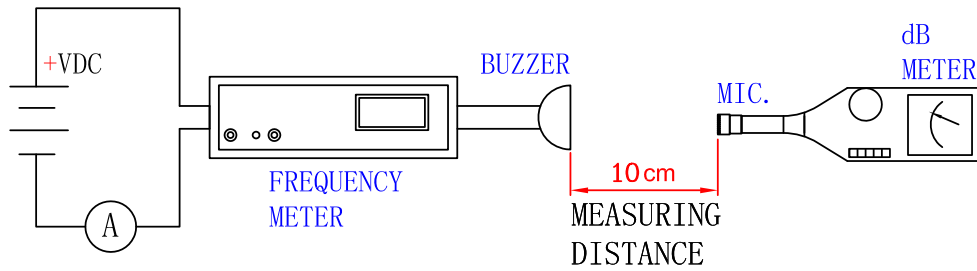
## D. TESTING METHOD

### Standard Measurement conditions

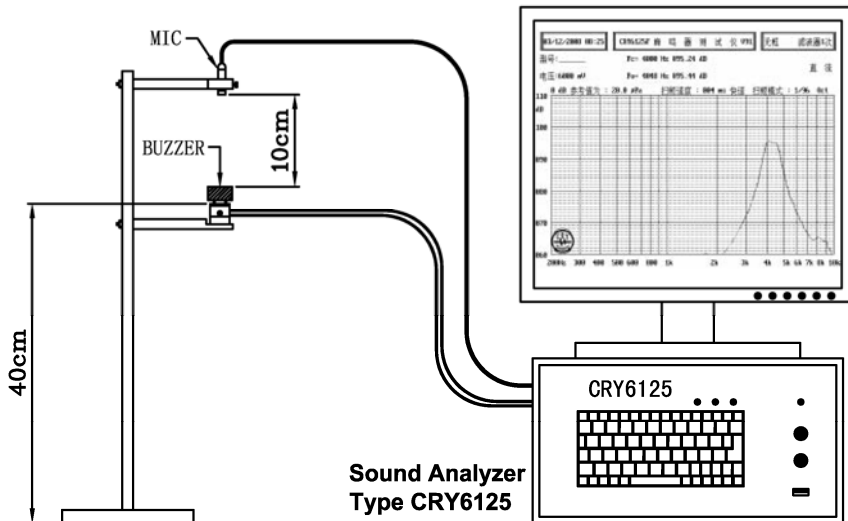
Temperature:  $25 \pm 2^\circ\text{C}$  Humidity: 45-65%

### Acoustic Characteristics:

The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



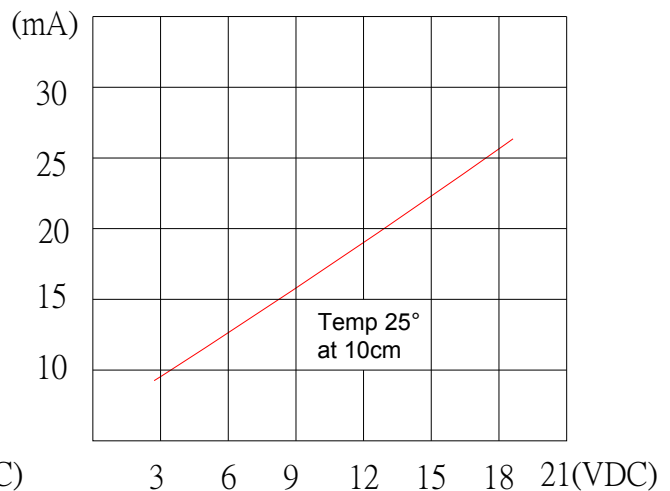
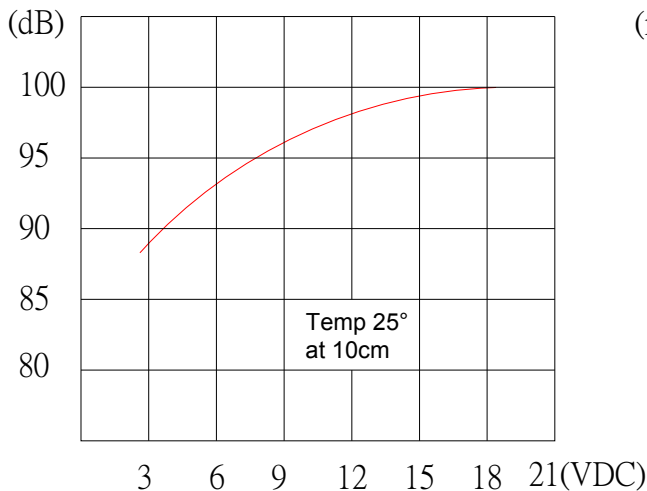
In the measuring test, buzzer is placed as follows:



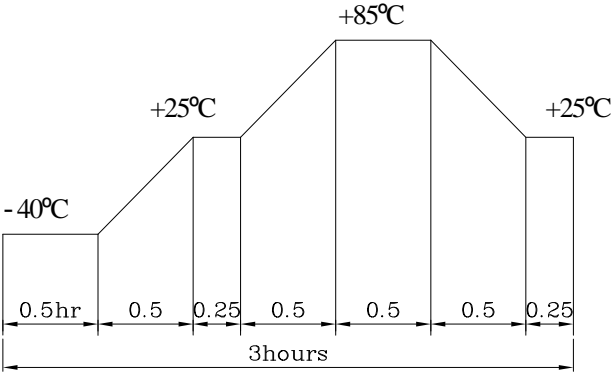
## E. VOLTAGE / CURRENT / SOUND PRESSURE CHARACTERISTICS

dB-V

mA-V



## F. RELIABILITY TEST

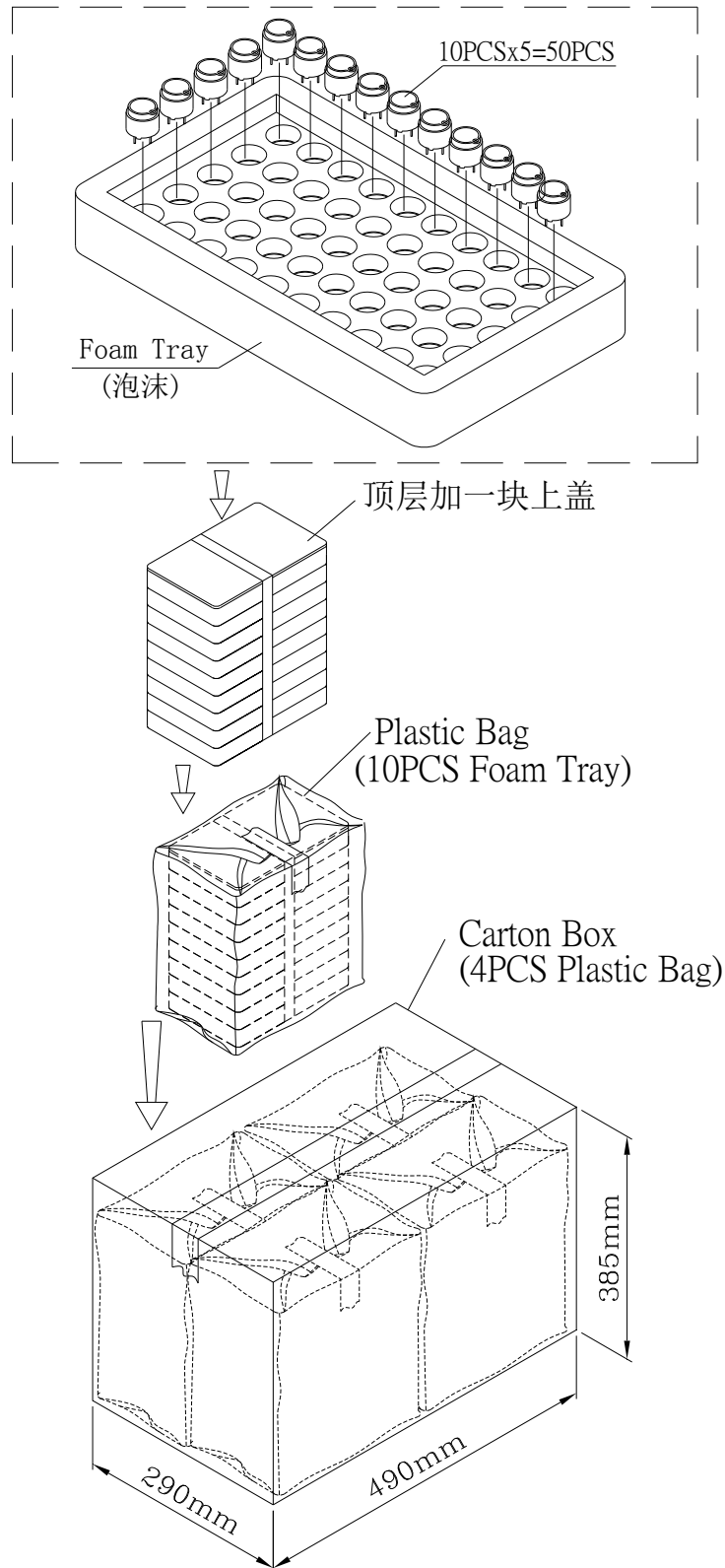
NO.	ITEM	TEST CONDITION AND REQUIREMENT
1	High Temperature Test (Storage)	After being placed in a chamber with $95\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\pm 10\text{dB}$ .
2	Low Temperature Test (Storage)	After being Placed in a chamber with $-50\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\pm 10\text{dB}$ .
3	Humidity Test	After being Placed in a chamber with 90-95% R.H. at $40\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\pm 10\text{dB}$ .
4	Temperature Cycle Test	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of :</p>  <p>Allowable variation of SPL after test: <math>\pm 10\text{dB}</math>.</p>
5	Drop Test	Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm . Allowable variation of SPL after test: $\pm 10\text{dB}$ .
6	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours . Allowable variation of SPL after test: $\pm 10\text{dB}$ .
7	Solderability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+300\pm 5^{\circ}\text{C}$ for $3\pm 1$ seconds . 90% min. lead terminals shall be wet with solder (Except the edge of terminals).
8	Terminal Strength Pulling Test	The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds. No visible damage and cutting off.

### TEST CONDITION.

Standard Test Condition	:	a) Temperature : $+5 \sim +35^{\circ}\text{C}$	b) Humidity : 45-85%	c) Pressure : 860-1060mbar
一般测试条件	:	a) 温度 : $+5 \sim +35^{\circ}\text{C}$	b) 湿度 : 45-85%	c) 气压 : 860-1060mbar
Judgment Test Condition	:	a) Temperature : $+25 \pm 2^{\circ}\text{C}$	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
争议时测试条件	:	a) 温度 : $+25 \pm 2^{\circ}\text{C}$	b) 湿度 : 60-70%	c) 气压 : 860-1060mbar



## G. PACKING STANDARD



Foam Tray	230mmx135mmx35mm	1x50PCS=50PCS
Plastic Bag		10x50PCS=500PCS
Carton Box	490mmx290mmx385mm	4x500PCS=2000PCS