

# KLS ELECTRONIC CO., LTD

## SPECIFICATION FOR APPROVAL

# 承 认 书

Description : Piezo Buzzer

Vender's Part No. : L-KLS3-PB-25\*7-3P-B

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

Serial No. : \_\_\_\_\_

Version No. : 1.1

### CUSTOMER'S APPROVED SIGNATURE

CUSTOMER'S APPROVED SIGNATURE		

### A. SCOPE

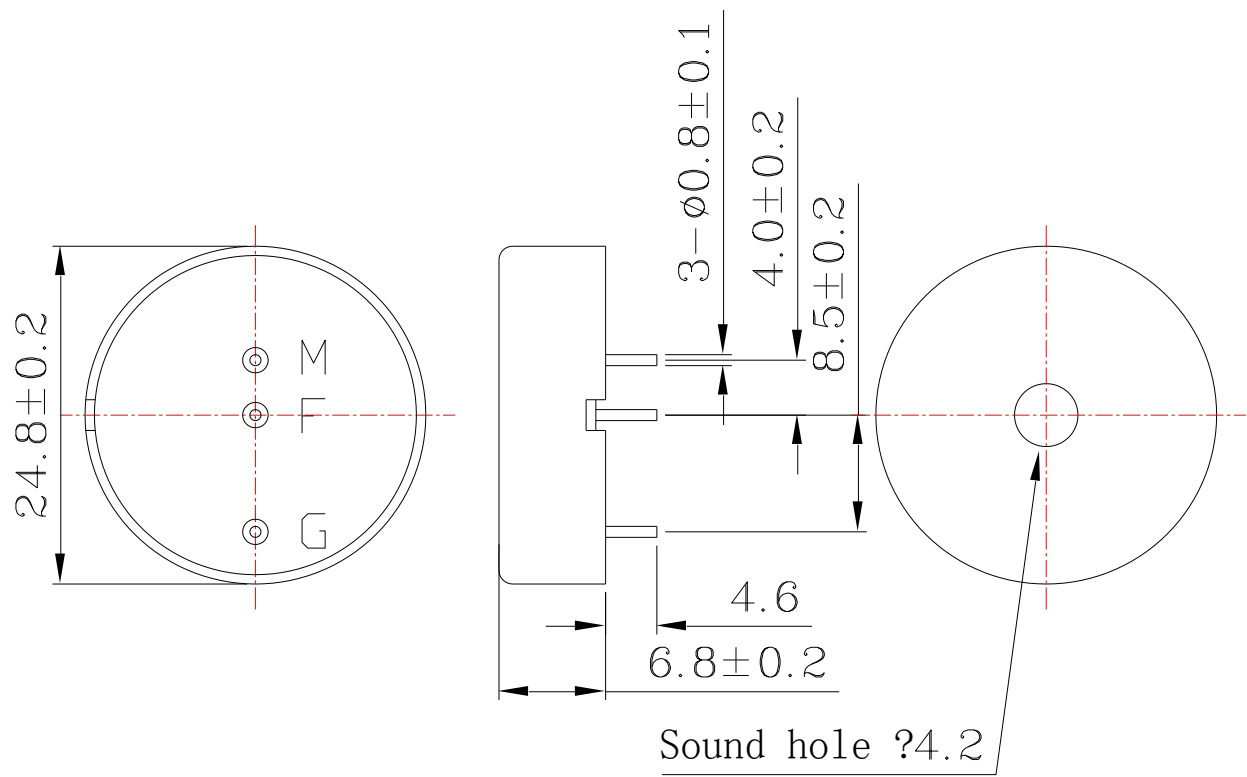
This specification applies piezo buzzer, **L-KLS3-PB-25\*7-3P-B**

### B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	KHz	4.0±0.5	
2	Operating Voltage	VDC	3 ~30	
3	Rated Voltage	VDC	12	
4	Current Consumption	mA	MAX. 20	
5	Sound Pressure Level	dB	MIN. 85	at 10cm at Rated Voltage

6	Tone Nature		Continuous	
7	Operating Temperature	°C	-30 ~ +100	
8	Storage Temperature	°C	-30 ~ +100	
9	Dimension	mm	Φ24.8 x H6.8	See appearance drawing
10	Weight (MAX)	gram	6	
11	Housing Material		PPO(Black)	
12	Leading Pin		Tin Plating (Sn)	See appearance drawing
13	Environmental Protection Regulation		RoHS	

**C. APPEARANCE DRAWING**



**Tol : ± 0.5      Unit: mm**

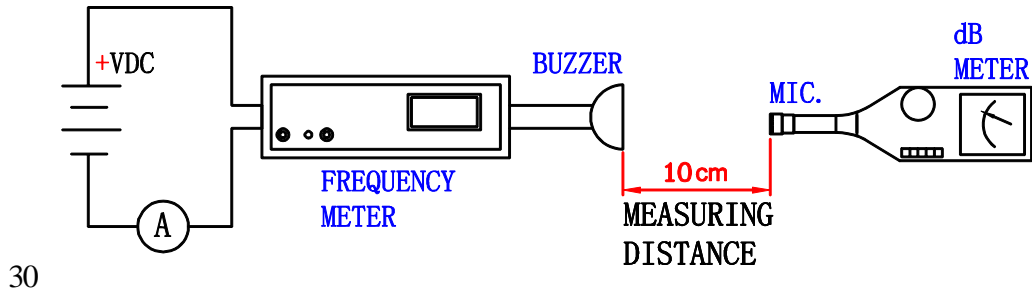
## D. TESTING METHOD

### Standard Measurement conditions

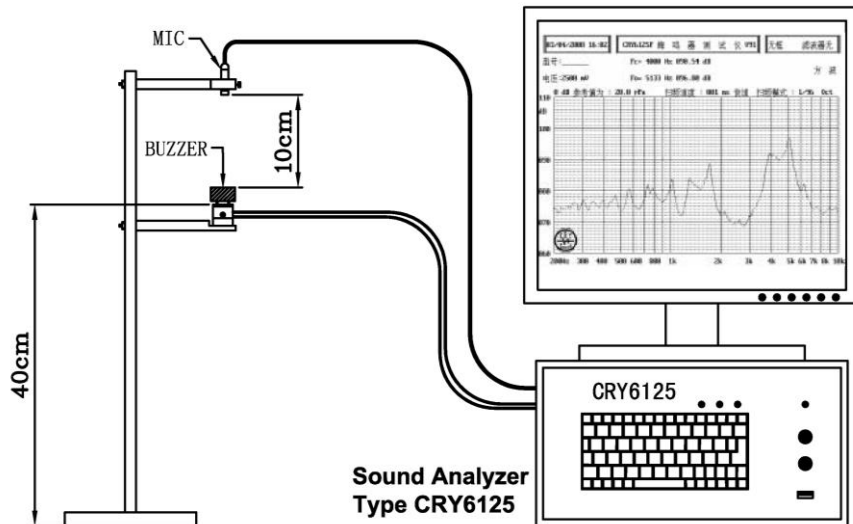
Temperature:  $25 \pm 2^\circ\text{C}$  Humidity: 45-65%

### Acoustic Characteristics:

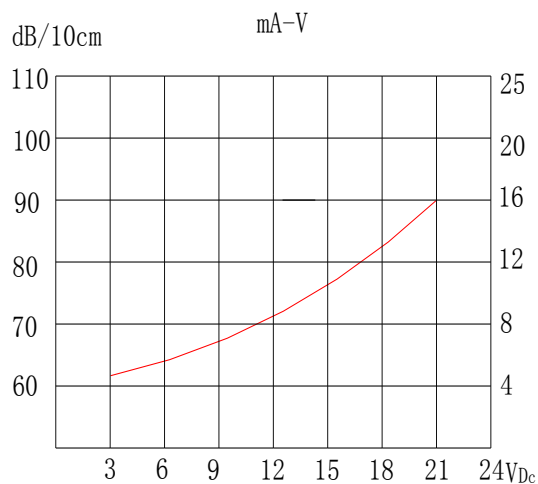
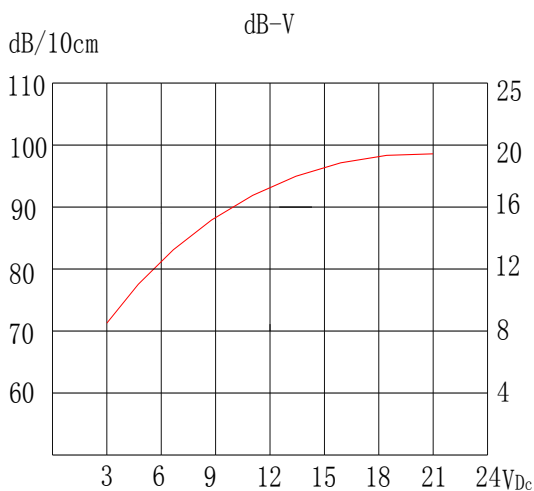
The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



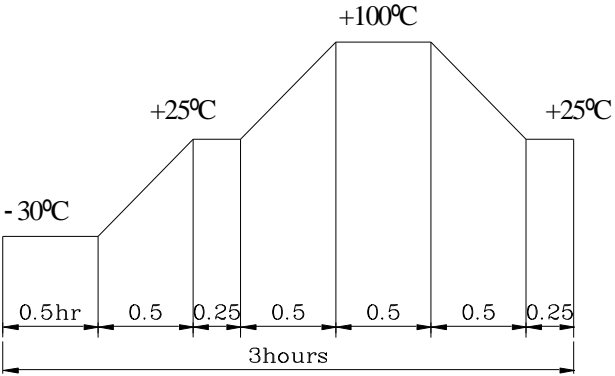
In the measuring test, buzzer is placed as follows:



## E. VOLTAGE / CURRENT / SOUND PRESSURE CHARACTERISTICS



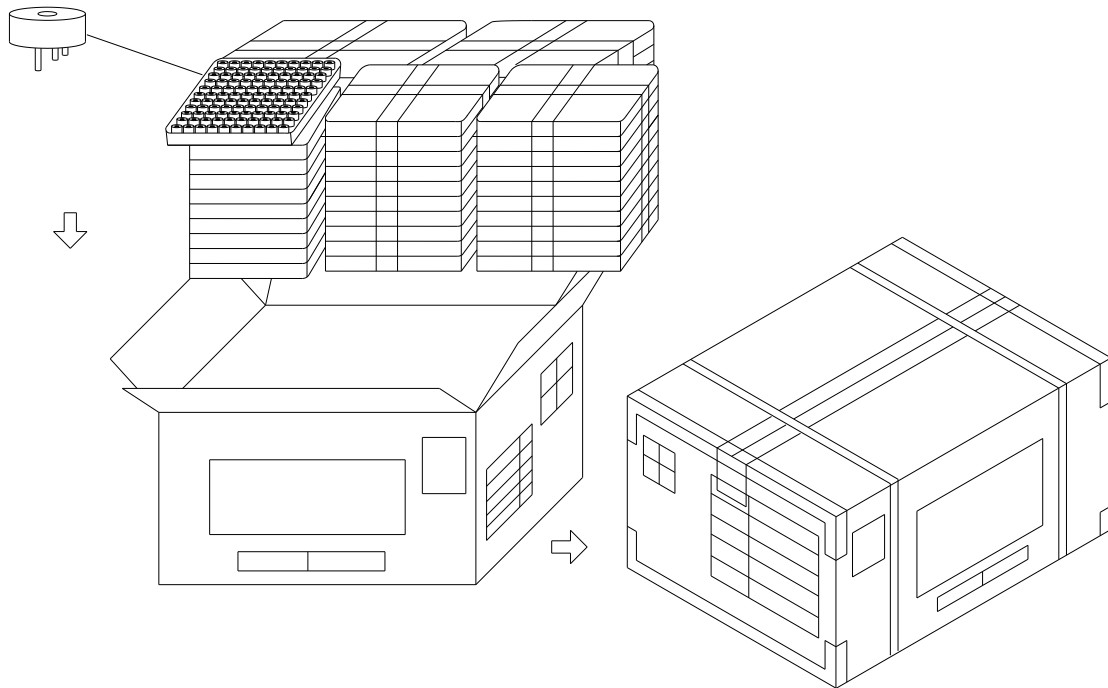
## F. RELIABILITY TEST

NO.	ITEM	TEST CONDITION AND REQUIREMENT
1	High Temperature Test (Storage)	After being placed in a chamber with 100±2 °C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: ±10dB.
2	Low Temperature Test (Storage)	After being Placed in a chamber with -30±2 °C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: ±10dB.
3	Humidity Test	After being Placed in a chamber with 90-95% R.H. at 40±2 °C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: ±10dB.
4	Temperature Cycle Test	The part shall be subjected to 5 cycles. One cycle shall be consist of :  <p>The diagram shows a temperature cycle profile over a 3-hour period. It starts at -30°C for 0.5 hours, then ramps up to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, ramps up to +100°C in 0.5 hours, holds at +100°C for 0.5 hours, ramps down to +25°C in 0.5 hours, holds at +25°C for 0.25 hours, and finally ramps down to -30°C in 0.5 hours. The total duration is 3 hours.</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: ±10dB.
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: ±10dB.
7	Solderability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +300±5 °C for 3±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 ~ +35°C	b) Humidity : 45-85%	c) Pressure : 860-1060mbar
一般测试条件	:	a) 温度 : +5 ~ +35°C	b) 湿度 : 45-85%	c) 气压 : 860-1060mbar
Judgment Test Condition	:	a) Temperature : +25 ± 2°C	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
争议时测试条件	:	a) 温度 : +25 ± 2°C	b) 湿度 : 60-70%	c) 气压 : 860-1060mbar

## G. PACKING STANDARD



PIEZO TRANSDUCER  
QTY: 1600PCS  
VOLUME: 51×25.5×26CM

## H Drive circuit

