

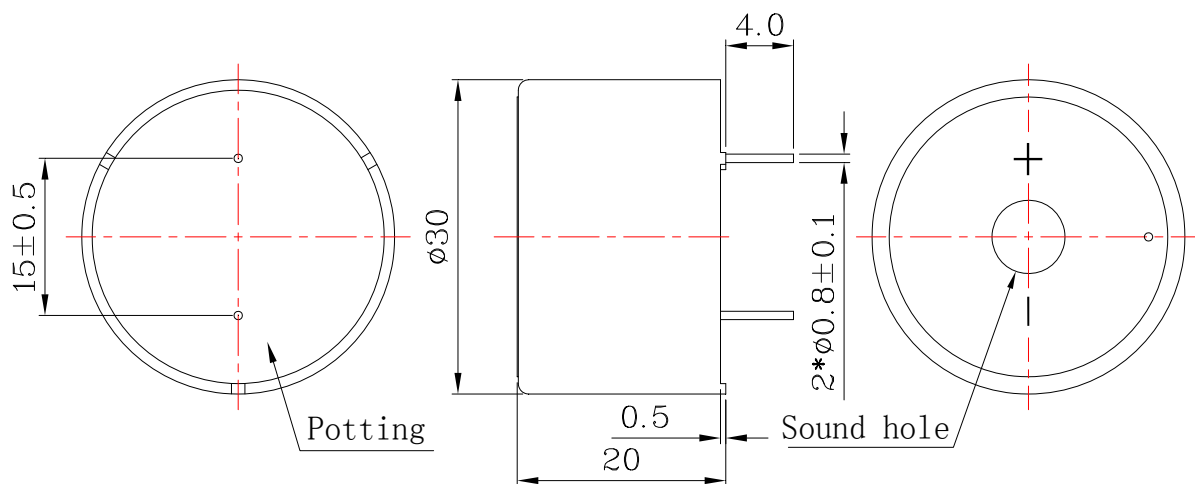
A. SCOPE

This specification applies Internally driven piezo buzzer, **L-KLS3-PB-30*20**

B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	KHz	3.5±0.5	
2	Operating Voltage	VDC	3~20	
3	Rated Voltage	VDC	12	
4	Current Consumption	mA	MAX. 20	at Rated Voltage
5	Sound Pressure Level	dB	MIN. 100	at 30cm at Rated Voltage
6	Tone		Constant	
7	Operating Temperature	°C	-40~ +85	
8	Storage Temperature	°C	-40 ~ 105	
9	Dimension	mm	Φ30.0 x H20.5	See appearance drawing
10	Weight (MAX)	gram	8.0	
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.

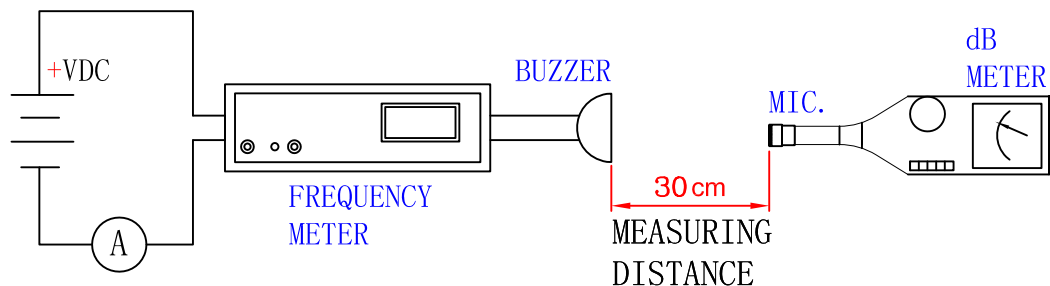
D. TESTING METHOD

Standard Measurement conditions

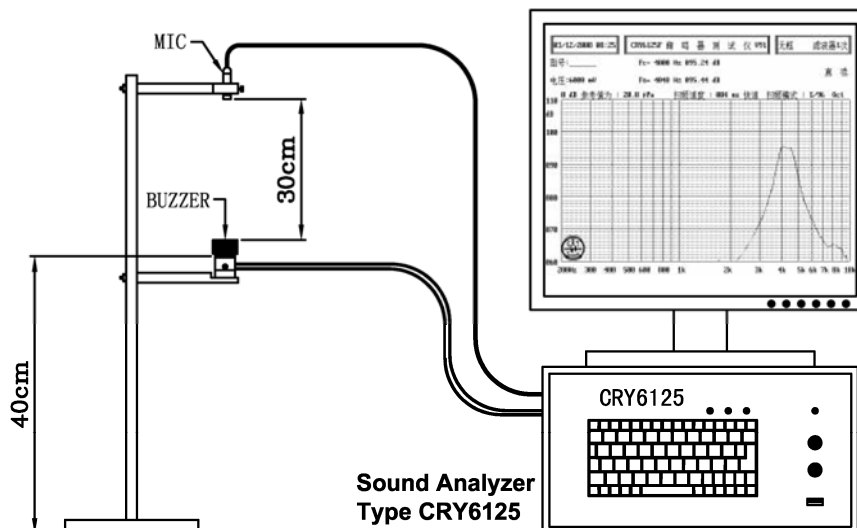
Temperature: $25 \pm 2^\circ\text{C}$ Humidity: 45-65%

Acoustic Characteristics:

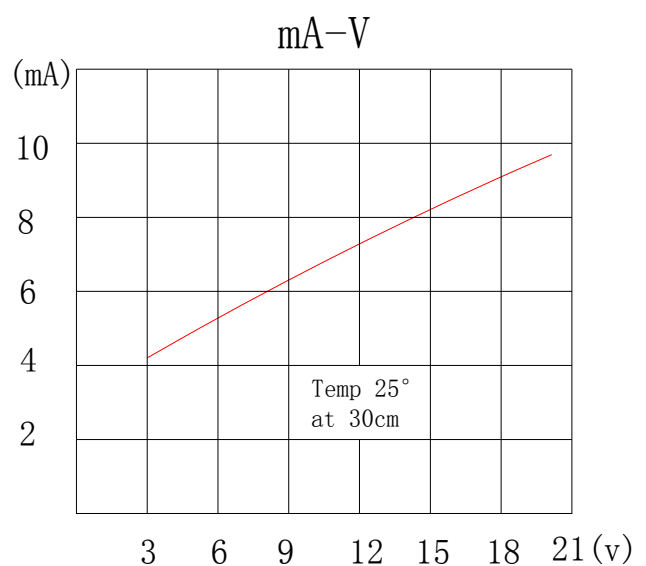
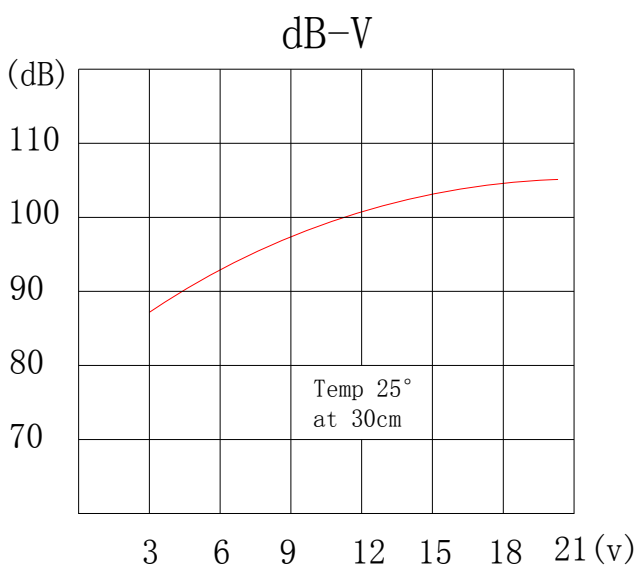
The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



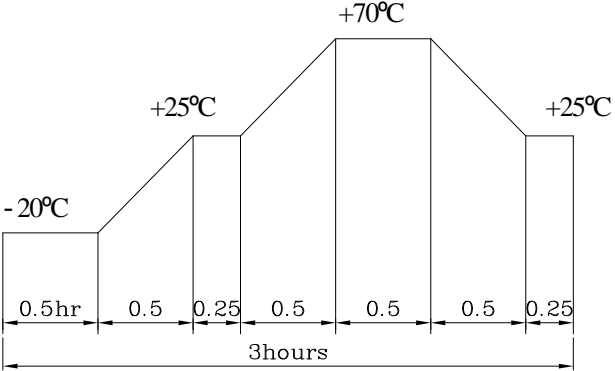
In the measuring test, buzzer is placed as follows:



E. VOLTAGE / CURRENT / SOUND PRESSURE CHARACTERISTICS



F. RELIABILITY TEST

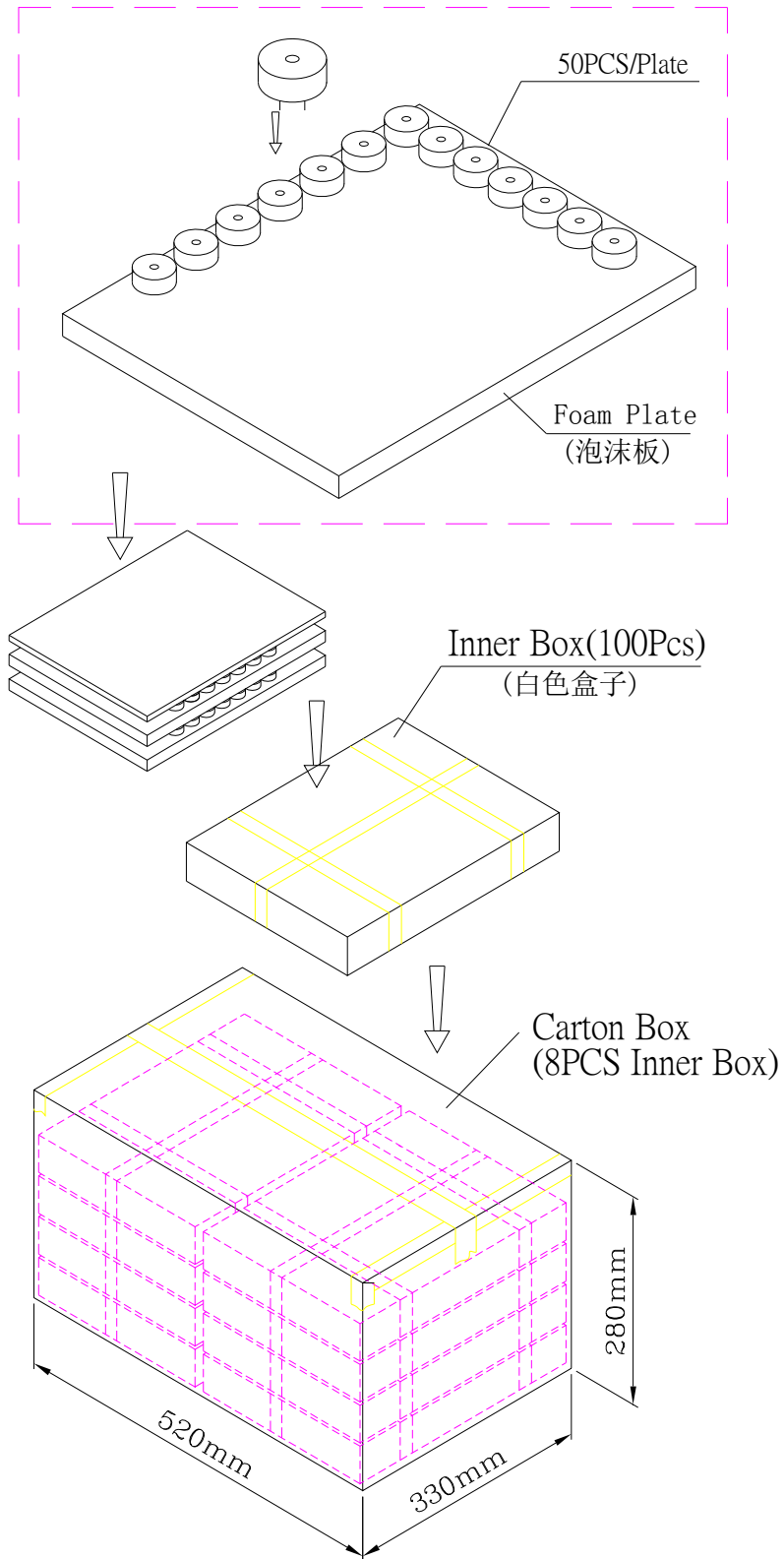
NO.	ITEM	TEST CONDITION AND REQUIREMENT
1	High Temperature Test (Storage)	After being placed in a chamber with $80\pm 2^{\circ}\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\pm 10\text{dB}$.
2	Low Temperature Test (Storage)	After being Placed in a chamber with $-30\pm 2^{\circ}\text{C}$ 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	The part shall be subjected to 5 cycles. One cycle shall be consist of :  <p>The diagram shows a temperature cycle profile over 3 hours. It starts at -20°C for 0.5 hours, then ramps up to $+25^{\circ}\text{C}$ in 0.5 hours, holds at $+25^{\circ}\text{C}$ for 0.25 hours, ramps up to $+70^{\circ}\text{C}$ in 0.5 hours, holds at $+70^{\circ}\text{C}$ for 0.5 hours, ramps down to $+25^{\circ}\text{C}$ in 0.5 hours, holds at $+25^{\circ}\text{C}$ for 0.25 hours, and finally ramps down to -20°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: $\pm 10\text{dB}$.
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 ± 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 Plate		1x50PCS=50PCS
Inner Box	315mmx245mmx50mm	2x50PCS=100PCS
Carton Box	520mmx330mmx280mm	8x100PCS=800PCS