

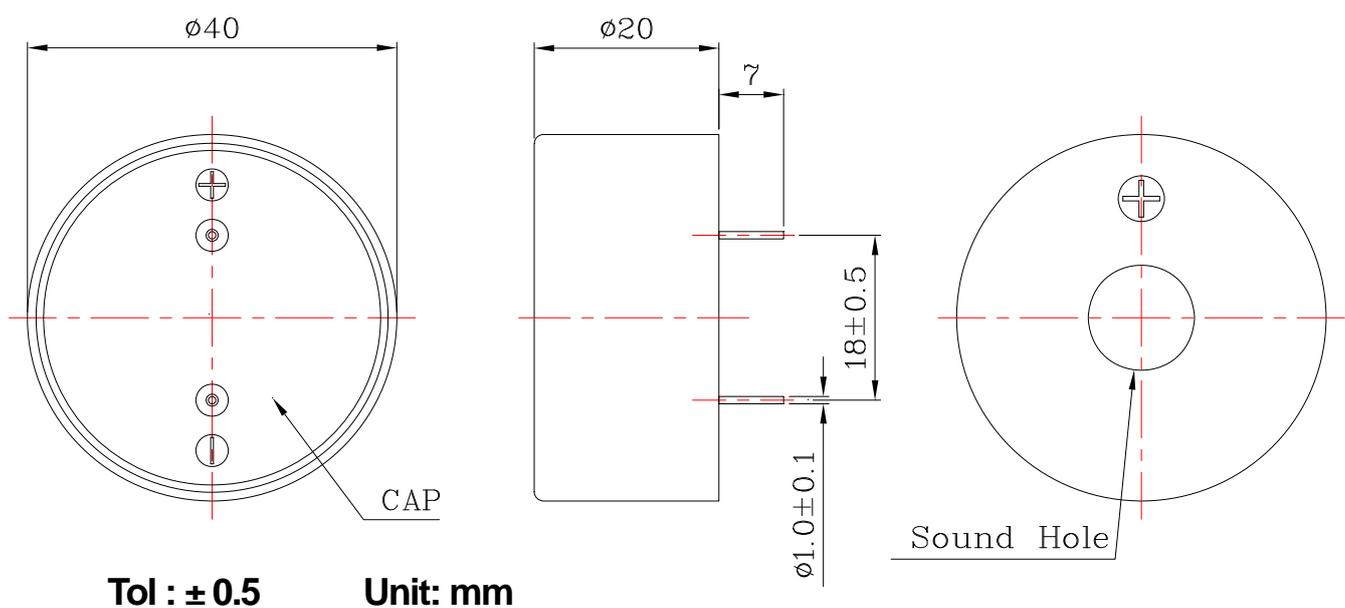
A. SCOPE

This specification applies Internally driven piezo buzzer, **L-KLS3-PB-40*20**

B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Oscillation Frequency	KHz	2.8±0.5	
2	Operating Voltage	VDC	3~20	
3	Rated Voltage	VDC	12	
4	Current Consumption	mA	MAX. 50	at Rated Voltage
5	Sound Pressure Level	dB	MIN. 100	at 100cm at Rated Voltage
6	Tone		Constant	
7	Operating Temperature	°C	-20~ +60	
8	Storage Temperature	°C	-30 ~ +70	
9	Dimension	mm	Φ40 x H20	See appearance drawing
10	Weight (MAX)	gram	13.0	
11	Housing Material		ABS(Black)	
12	Leading Pin		Tin Plated Brass(Sn)	See appearance drawing
13	Environmental Protection Regulation		RoHS	

C. APPEARANCE DRAWING



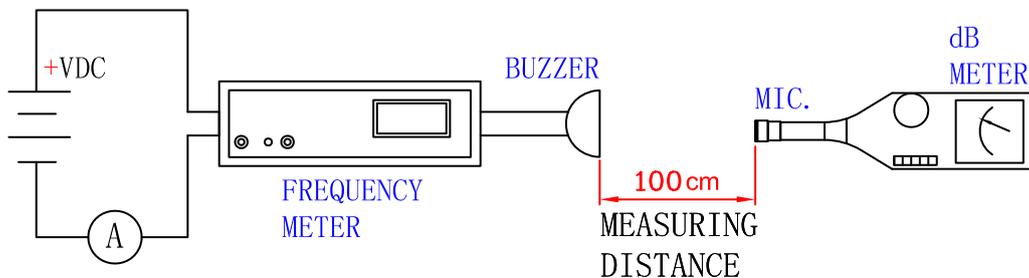
D. TESTING METHOD

Standard Measurement conditions

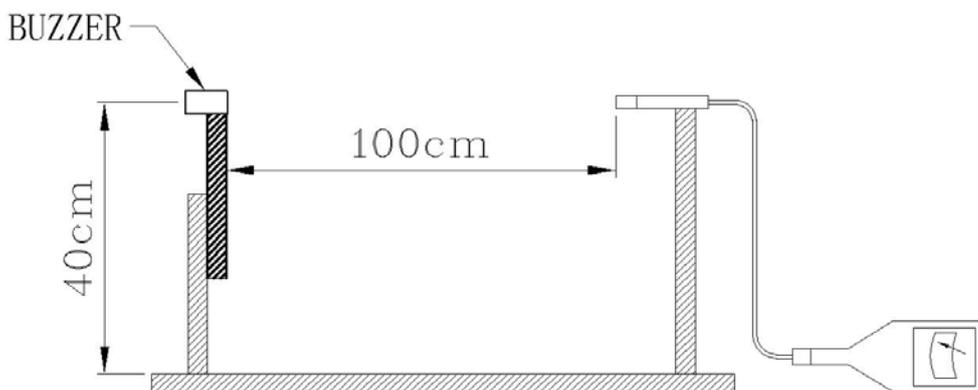
Temperature: $25 \pm 2^\circ\text{C}$ Humidity: 45-65%

Acoustic Characteristics:

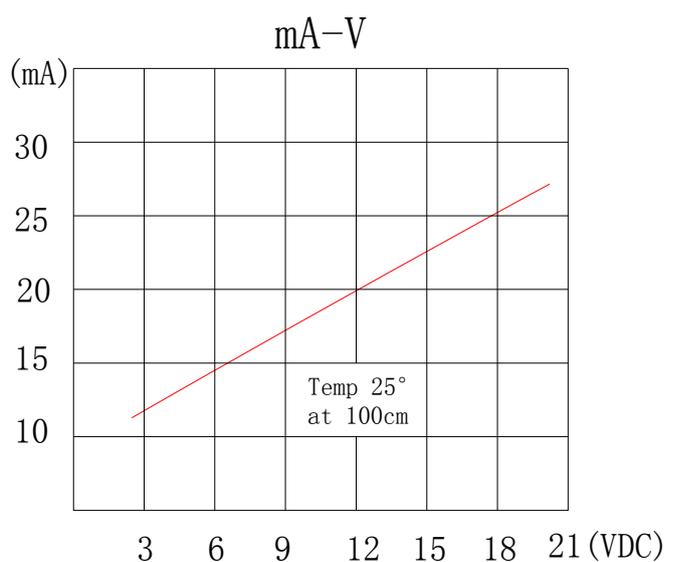
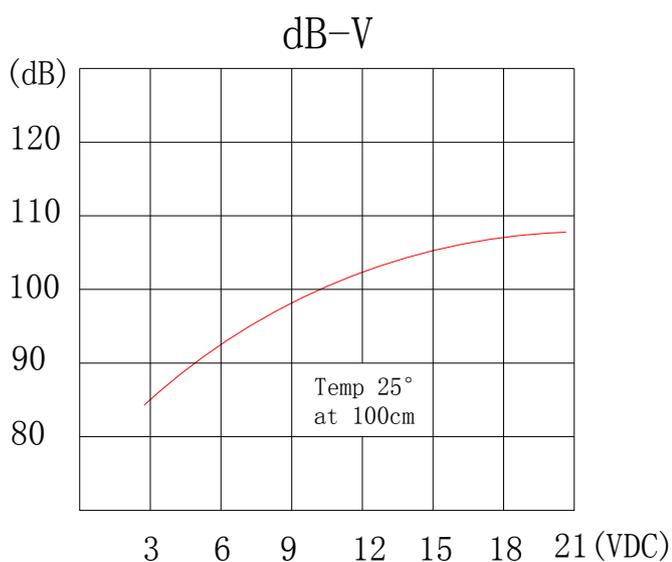
The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



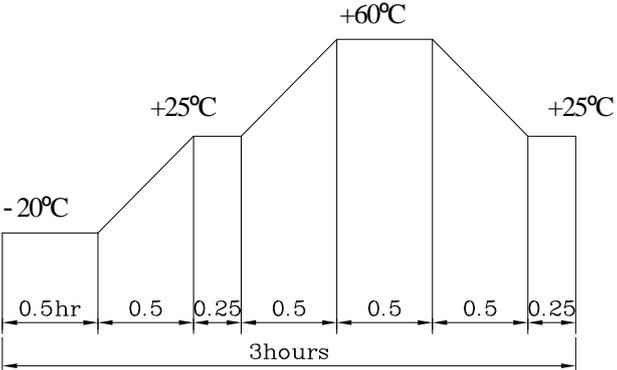
In the measuring test, buzzer is placed as follows:



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 $70\pm 2^{\circ}\text{C}$ 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	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of :</p>  <p>The diagram shows a temperature cycle profile over a 3-hour period. 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 $+60^{\circ}\text{C}$ in 0.5 hours, holds at $+60^{\circ}\text{C}$ 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> <p>Allowable variation of SPL after test: $\pm 10\text{dB}$.</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

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number. There shall be no mechanical damage on products during transportation and/or in storage.

