



soberton inc.

# PB PIEZO AUDIO BUZZER

Acoustic Product Specification

Product Number: PB-3214NL



Release | Revision: B/2018

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## Specifications

Item	Unit	Specification	Condition
Rated Voltage	VDC	12.0	
Operating Volt	VDC	3.0 ~ 24.0	
Mean Current	mA	15 Max.	At 12.0 VDC
Sound Output	dBa	90	At 30cm/12.0 VDC
Resonant Frequency	Hz	3700 ±500	
Operating Temp	°C	-20 ~ +60	
Storage Temp	°C	-20 ~ +70	
Dimension	mm	32.0 × 14.0	WIRE 150mm UL1007 / AWG26#
Weight	gram	8	
Material		ABS (black)	
Terminal		Wire type	See attached drawing
Environmental Protection Regulation		RoHS	

### Test condition:

Temperature: +25±2 °C    Related humidity: 65±5%

## Mechanical Characteristics

Item	Test condition	Evaluation standard
Lead Wire Pull Strength	The pull force will be applied to double lead wire : Horizontal: 3.0N(0.306kg) for 30 seconds. Vertical: 2.0N(0.204kg) for 30 seconds.	No damage and cutting off
Vibration	Buzzer will be measured after being applied vibration of amplitude of 1.5mm with 10Hz to 55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours.	The value of oscillation frequency/ current consumption would be in ±10% compared with initial ones.
Drop test	The part only will be dropped from a height of 70cm onto a 40mm thick wooden board 3 times in 3 axes(X,Y,Z). A total of 9 times.	The SPL would be in ±10dB compared with initial one.



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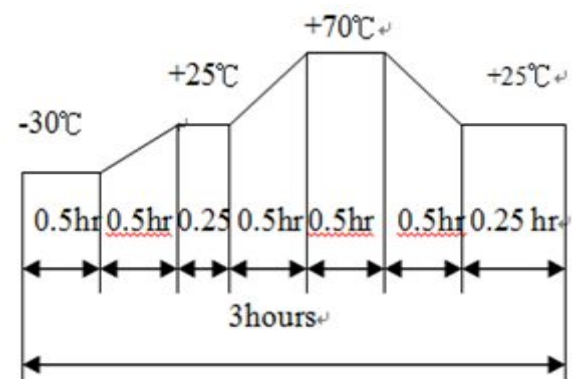
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## Environment Test

Item	Test condition	Evaluation standard
High temp. test	After being placed in a chamber at +70°C for 96 hours	Being placed for 4 hours at +25°C, buzzer will be measured.
Low temp. test	After being placed in a chamber at -30°C for 96 hours	The value of oscillation, frequency / current consumption would be in ±10% compared with initial ones.
Humidity test	After being placed in a chamber at +70°C and 90±5% relative humidity for 96 hours	The SPL would be in ±10dB compared with initial one.

Temp cycle test  
The part will be subjected to 5 cycles.  
One cycle shall consist of:



## Reliability Test

Item	Test condition	Evaluation standard
Operating life test	<b>1. Continuous life test</b> 48 hours continuous operation at +55°C with maximum rated voltage applied <b>2. Intermittent life test</b> A duty cycle of 1 minute on, 1 minutes off, a minimum of 1000 times at +25±2°C and maximum rated voltage applied	After test, the part will meet specifications without any degradation in appearance and performance except SPL, after 4 hours at +25°C.  The SPL would be in±10dBA compared with initial one.

### Standard test condition:

- a) Temperature: +5~+35°C
- b) Humidity: 45~85%
- c) Pressure: 860~1060mbar



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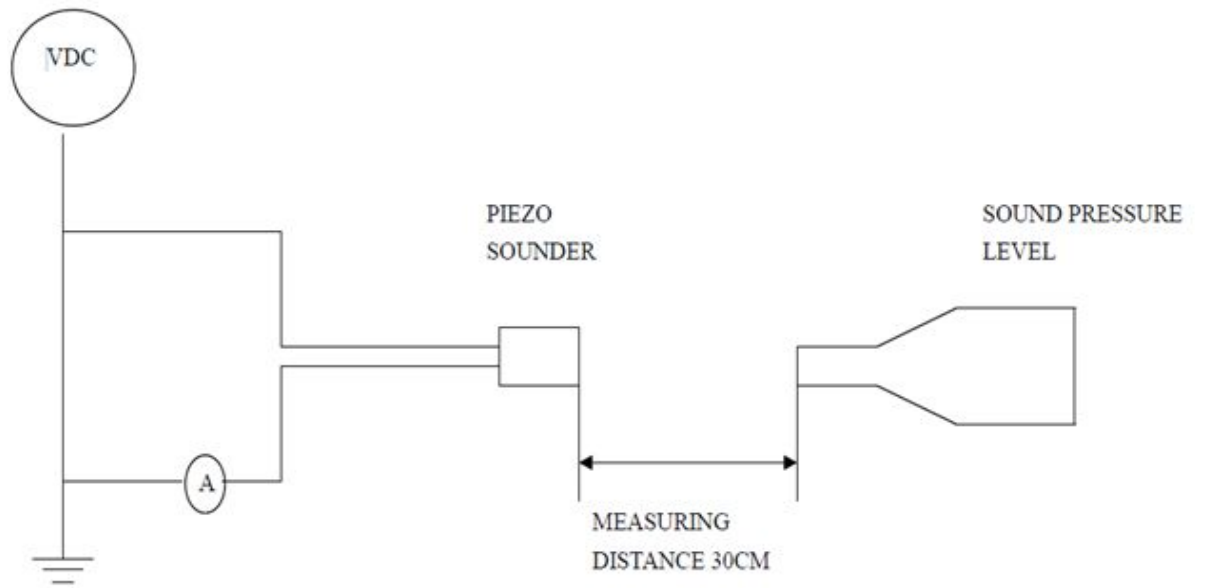
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## Measuring Method (Speaker Mode)

### S.P.L Measuring Circuit

Input Signal: 12.0 VDC



MIC: RION S.P.L meter UC30 or equivalent



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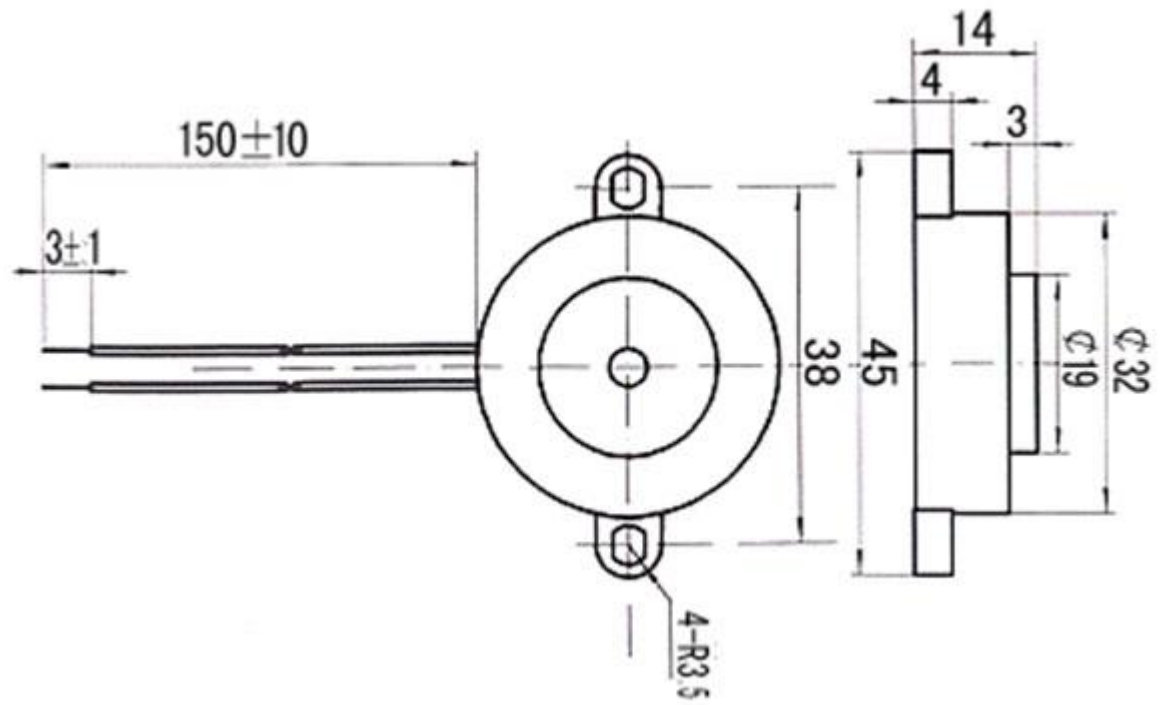
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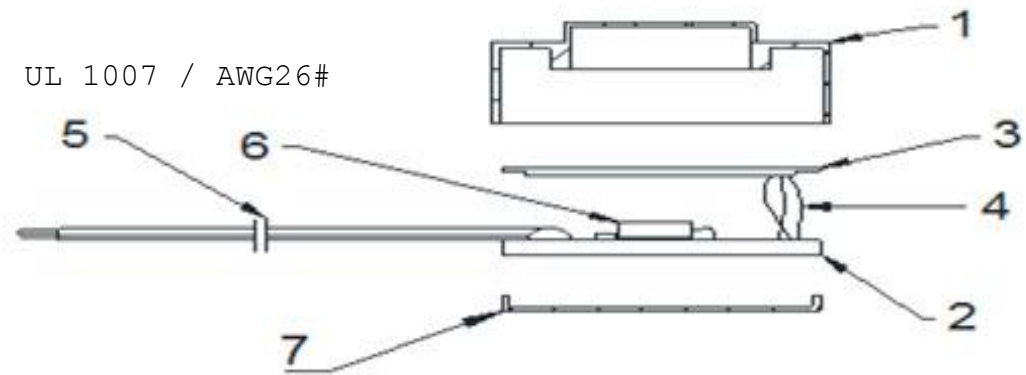
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## Dimensions

Tolerance:  $\pm 0.5$  (unit: mm)



UL 1007 / AWG26#



No.	Part Name	Material	Quantity
1	Case	ABS	1
2	PCB	Epoxy	1
3	Piezo	Brass + Ceramic	1
4	Wire	Copper	3
5	Wire	UL 1007 AWG26#	2
6	Transistor	Epoxy + Copper	
7	Cover	ABS	1



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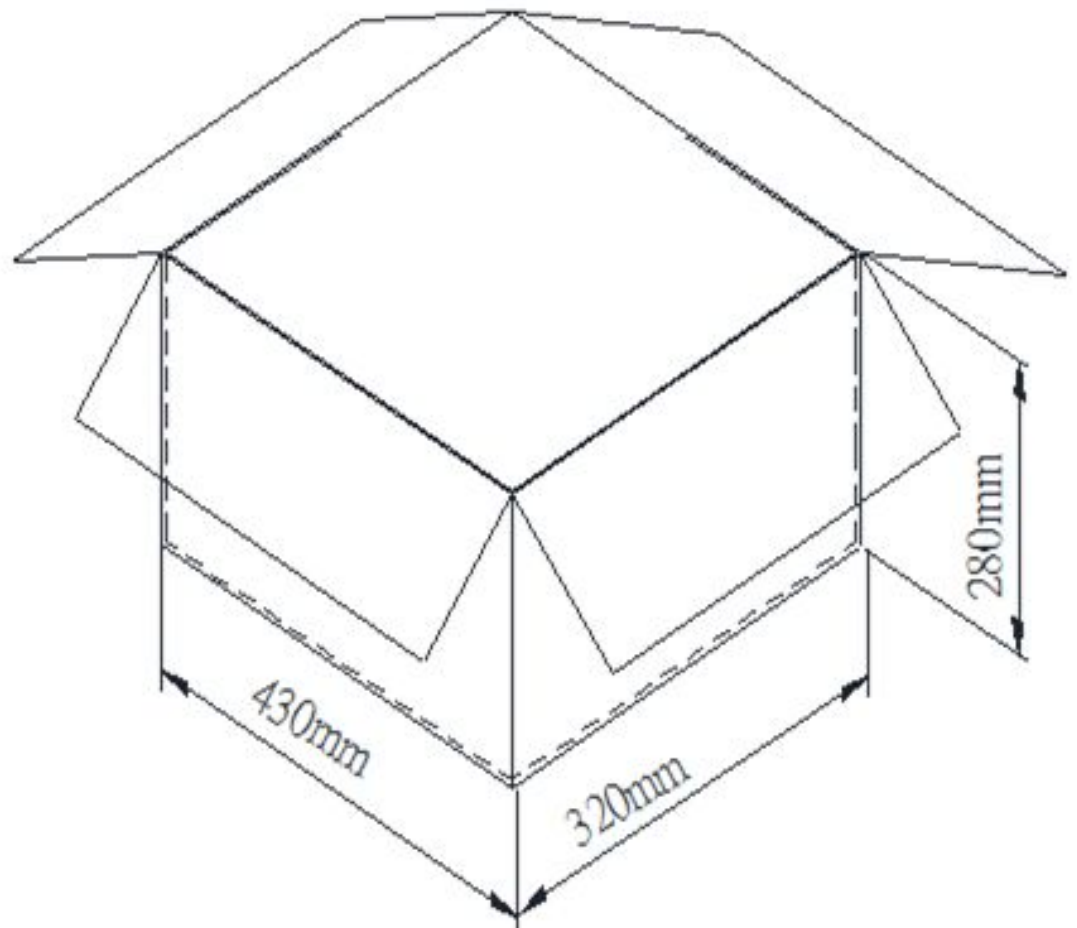
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## Details

	Size (mm)	Quantity (pcs)
Carton	430 x 320 x 280	1000