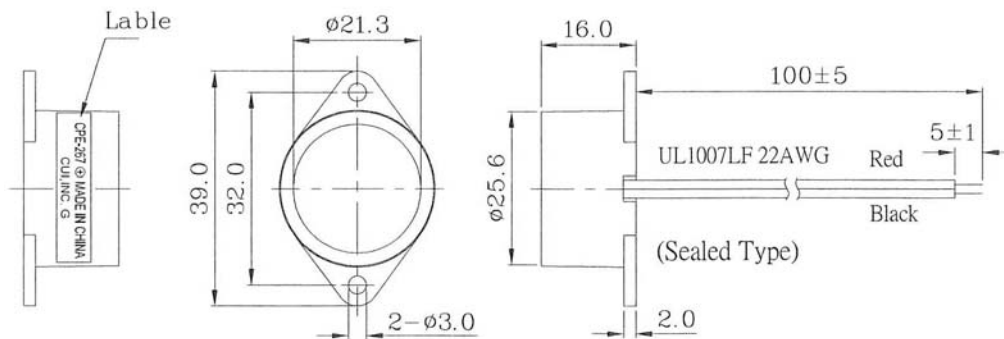
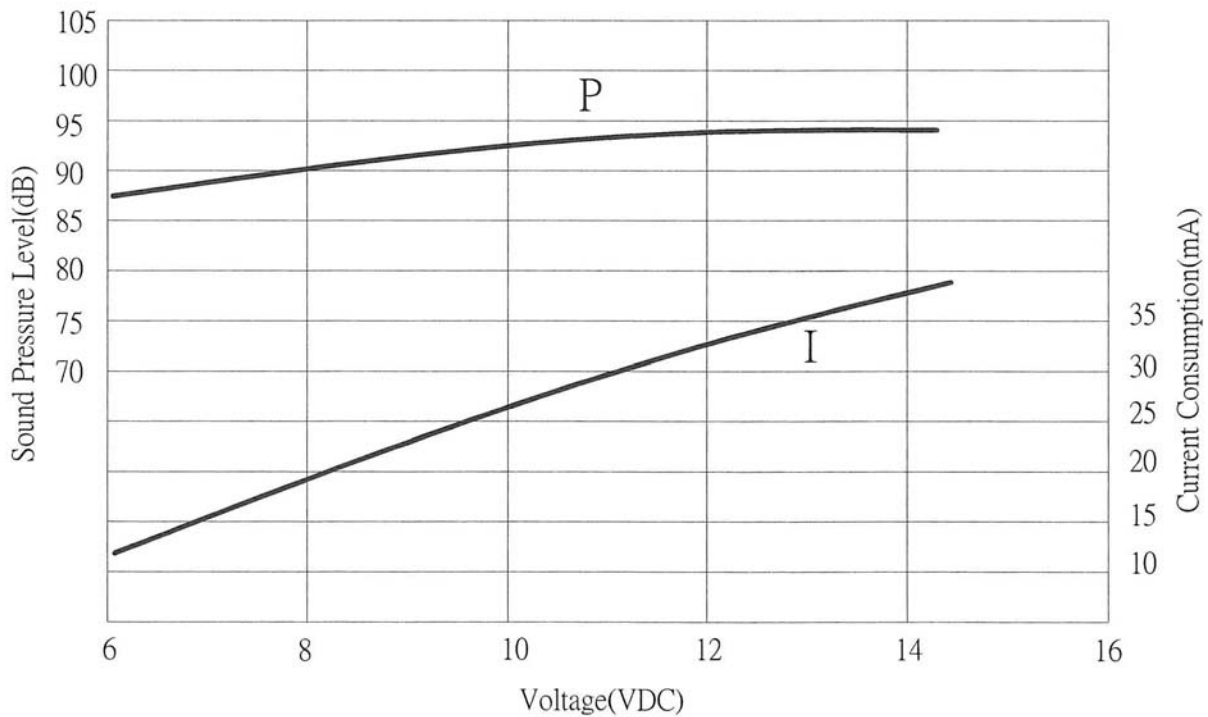
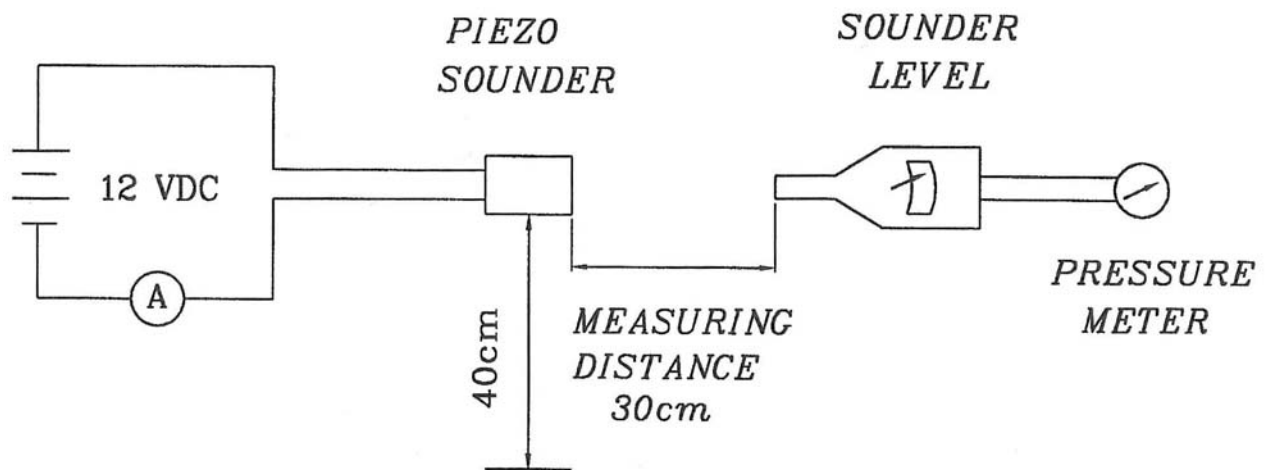



**Specifications**

Resonant frequency	2.8 KHz $\pm$ 0.5	
Operating voltage	6 ~ 14 V dc	
Current consumption	35 mA max.	at 12 V dc
Sound pressure level	85 db min.	at 30 cm / 12 V dc
Rated voltage	12 V dc	
Tone	Continuous	
Operating temperature	-30 ~ +85° C	
Storage temperature	-40 ~ +95° C	
Dimensions	$\phi$ 25.0 x H16.0 mm	
Weight	41 g max.	
Material	ABS UL-94 1/16" HB High Heat (Black)	
Terminal	Wire type	
RoHS	yes	

**Appearance Drawing**

 Tolerance:  $\pm$ 0.5


**Voltage: Sound Pressure Level / Voltage: Current Consumption**

**Measurement Method**

**S.P.L. Measuring Circuit**

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

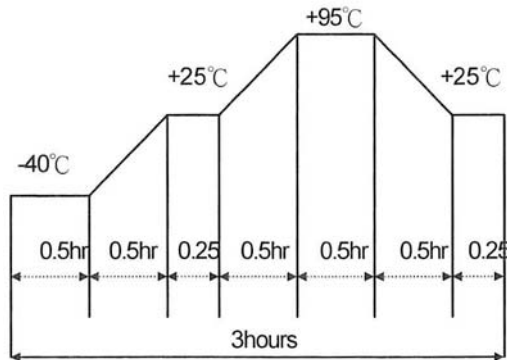
S.G.: Hewlett Packard 3310A Function Generator or equivalent

**Mechanical Characteristics**

Item	Test Condition	Evaluation Standard
Solderability (Connector Excepted)	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $270 \pm 5^{\circ}\text{C}$ for $3 \pm 0.5$ seconds.	90% min. stripped wires should be wet with solder. (Except the edge of the terminal)
Lead Wire Pull Strength	The pull force should be applied to double lead wire: Horizontal 3.0N (0.306kg) for 30 seconds Vertical 2.0N (0.204kg) for 30 seconds	No damage or cutting off.
Vibration	The buzzer shall be measured after applying a vibration amplitude of 1.5 mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours.	The value of oscillation frequency/current consumption should be $\pm 10\%$ of the initial measurements. The SPL should be within $\pm 10\text{dB}$ compared with the initial measurement.
Drop Test	The part will be dropped from a height of 75 cm onto a 40 mm thick wooden board 3 times in 3 axes (X, Y, Z) for a total of 9 drops.	

**Environment Test**

Item	Test Condition	Evaluation Standard
High temp. test	After being placed in a chamber at $+95^{\circ}\text{C}$ for 240 hours.	The buzzer will be measured after being placed at $+25^{\circ}\text{C}$ for 4 hours. The value of the oscillation frequency/current consumption should be $\pm 10\%$ compared to the initial measurements. The SPL should be within $\pm 10\text{dB}$ compared to the initial measurements.
Low temp. test	After being placed in a chamber at $-40^{\circ}\text{C}$ for 240 hours.	
Humidity test	After being placed in a chamber at $+40^{\circ}\text{C}$ and $90 \pm 5\%$ relative humidity for 240 hours.	
Temp. cycle test	The part shall be subjected to 5 cycles. One cycle will consist of:	



The diagram illustrates a temperature cycle test profile. It starts at  $-40^{\circ}\text{C}$  for 0.5 hours. Then, it ramps up to  $+25^{\circ}\text{C}$  over 0.5 hours. It remains at  $+25^{\circ}\text{C}$  for 0.25 hours. Next, it ramps up to  $+95^{\circ}\text{C}$  over 0.5 hours. It remains at  $+95^{\circ}\text{C}$  for 0.5 hours. Then, it ramps down to  $+25^{\circ}\text{C}$  over 0.5 hours. Finally, it remains at  $+25^{\circ}\text{C}$  for 0.25 hours. The total duration of one cycle is 3 hours.



**Reliability Test**

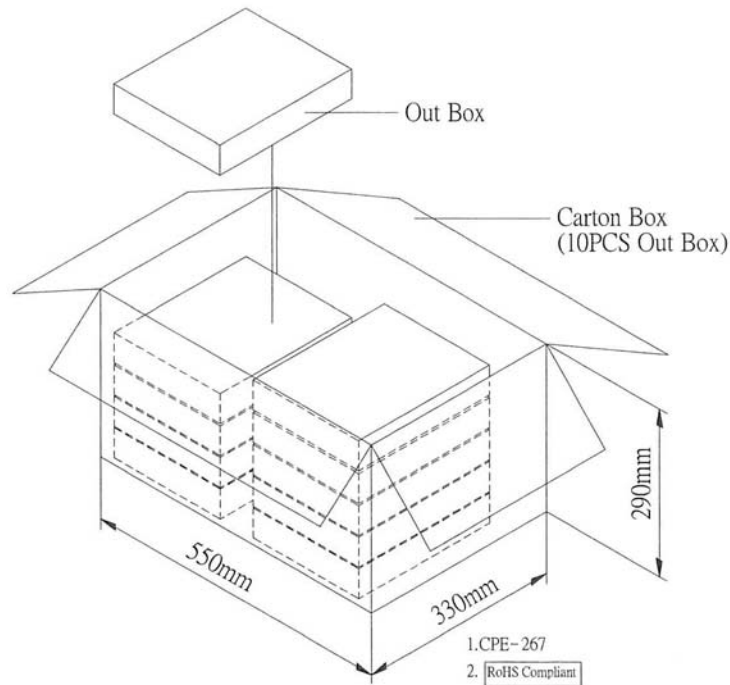
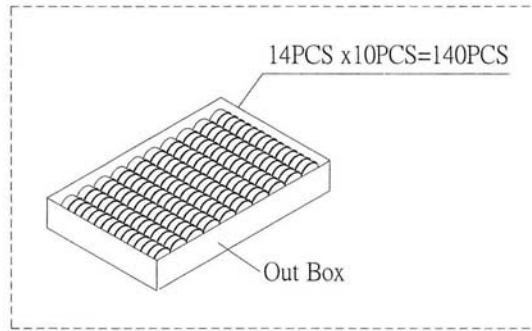
<b>Item</b>	<b>Test Condition</b>	<b>Evaluation Standard</b>
Operating (Life Test)	<p>1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied.</p> <p>2. Intermittent life test: A duty cycle of 1 minute on, 1 minute off, a minimum of 5,000 times at room temp (+25 ±2°C) with rated voltage applied.</p>	The buzzer will be measured after being placed at +25°C for 4 hours. The value of the oscillation frequency/current consumption should be ±10% compared to the initial measurements. The SPL should be within ±13dB compared to the initial measurements.

**Test Conditions**

Standard Test Condition	a) Temperature: +5 ~ +35°C	b) Humidity: 45 - 85%	c) Pressure: 860-1060 mbar
Judgement Test Condition	a) Temperature: +25 ±2°C	b) Humidity: 60 - 70%	c) Pressure: 860-1060 mbar



**Packaging**



Out Box	310mmx248mmx49mm	1x140PCS=140PCS
Carton Box	550mmx330mmx290mm	100PCSx10=1,400PCS