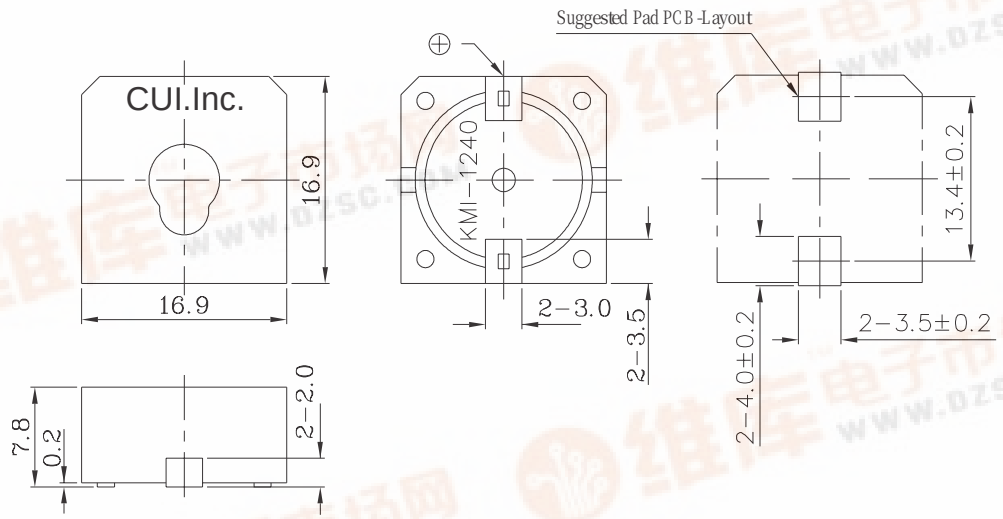
RoHS

Specifications

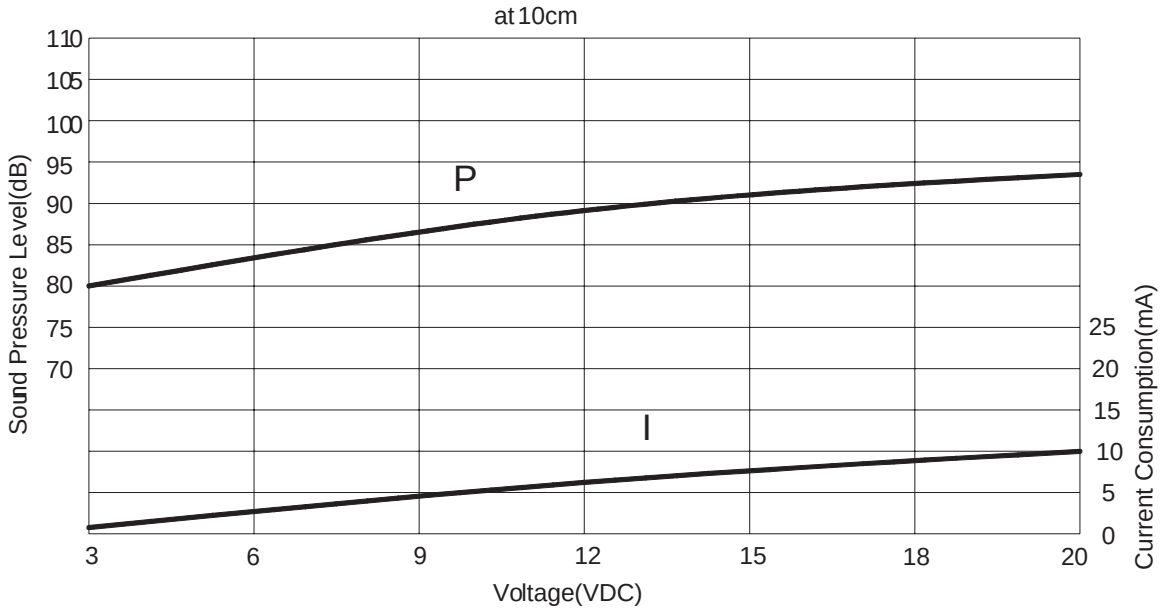
Resonant frequency	4.0 KHz ± 0.5	
Operating voltage	3 ~ 20 V dc	
Current consumption	8 mA max.	at 12 V dc
Sound pressure level	83 db min.	at 10 cm / 12 V dc
Rated voltage	12 V dc	
Tone	Continuous	
Operating temperature	-30 ~ +70° C	
Storage temperature	-40 ~ +80° C	
Dimensions	L16.9 x W16.9 x H7.8 mm	
Weight	2.6 g max.	
Material	PPS UL-94 V-0 (Black)	
Terminal	SMD type (Au Plating)	
RoHS	yes	

Appearance Drawing

Tolerance: ±0.5

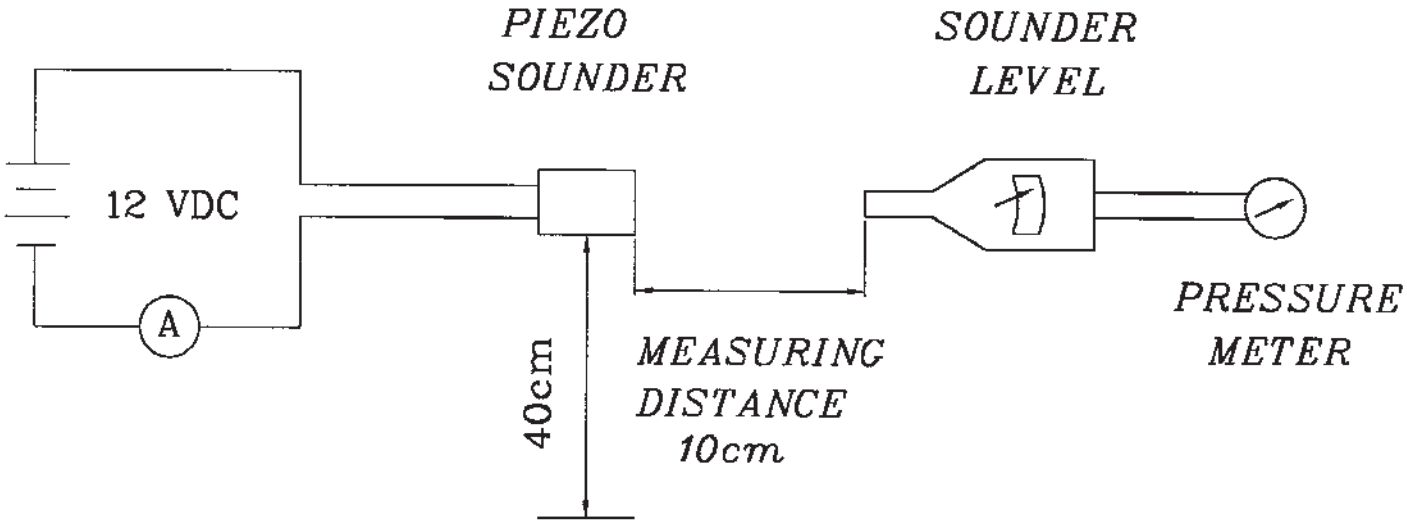


Voltage: Sound Pressure Level / Voltage: Current Consumption



Measurement Method

S.P.L. Measuring Circuit

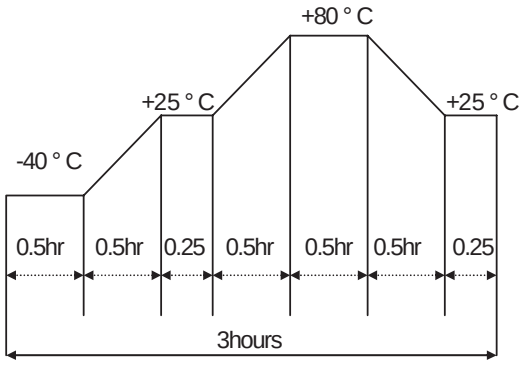


Mic : RION S.P.L meter UC30 or equivalent
S.G : Hewlett Packard 33120A Function Generator or equivalent

Mechanical Characteristics

Item	Test Condition	Evaluation Standard
Solderability	Lead terminals are immersed in solder bath of 270 ±5°C for 3 ±1 seconds.	95% of the surface must be covered with fresh solder.
Soldering Heat Resistance	The product follows the reflow temperature curve to test its reflow thermo stability.	No interference in operation.
Terminal Mechanical Strength	Lead pads should be soldered onto the pc board and the force of 9.8N (1.0kg) should be applied behind the part for 10 seconds.	No damage or cutting off.
Vibration	The buzzer should 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 within ±10% of the initial measurements. The SPL should be within ±10dB compared with the initial measurement.
Drop Test	The part should 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 +80°C for 240 hours.	The buzzer will be measured after being placed at +25°C for 4 hours. The value of the oscillation frequency/current consumption should be within ±10% compared to the initial measurements. The SPL should be within ±10dB compared to the initial measurements.
Low temp. test	After being placed in a chamber at -40°C for 240 hours.	
Humidity test	After being placed in a chamber at +40°C and 90±5% relative humidity for 240 hours.	
Temp. cycle test	The part should be subjected to 5 cycles. One cycle should consist of: 	

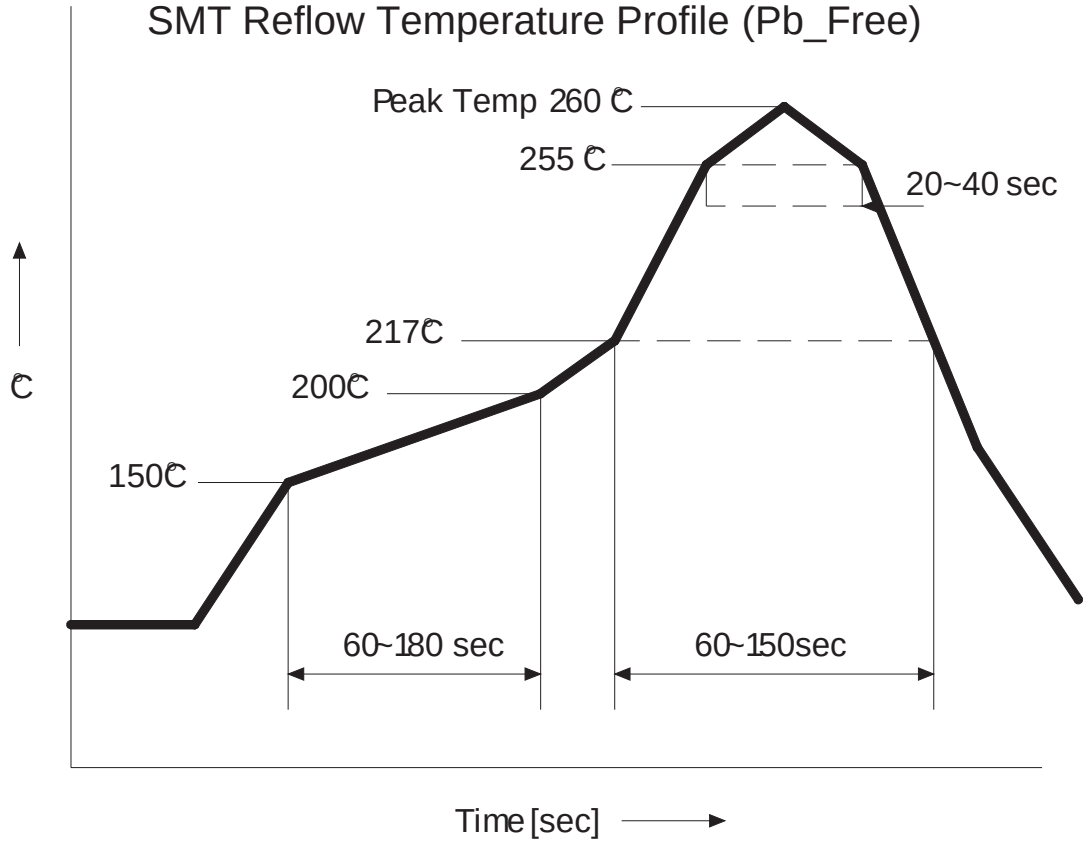
Reliability Test

Item	Test Condition	Evaluation Standard
Operating (Life Test)	1. Continuous life test: The part will be subjected to 48 hours of continuous operation at +55°C with 12 V dc applied. 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 12 V dc applied.	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 ±10dB compared to the initial measurements.

Test Conditions

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

Recommended Temperature Profile for Reflow Oven



Packaging