



Part No: CEP-1172

Date: 6/25/2007

Unit: mm

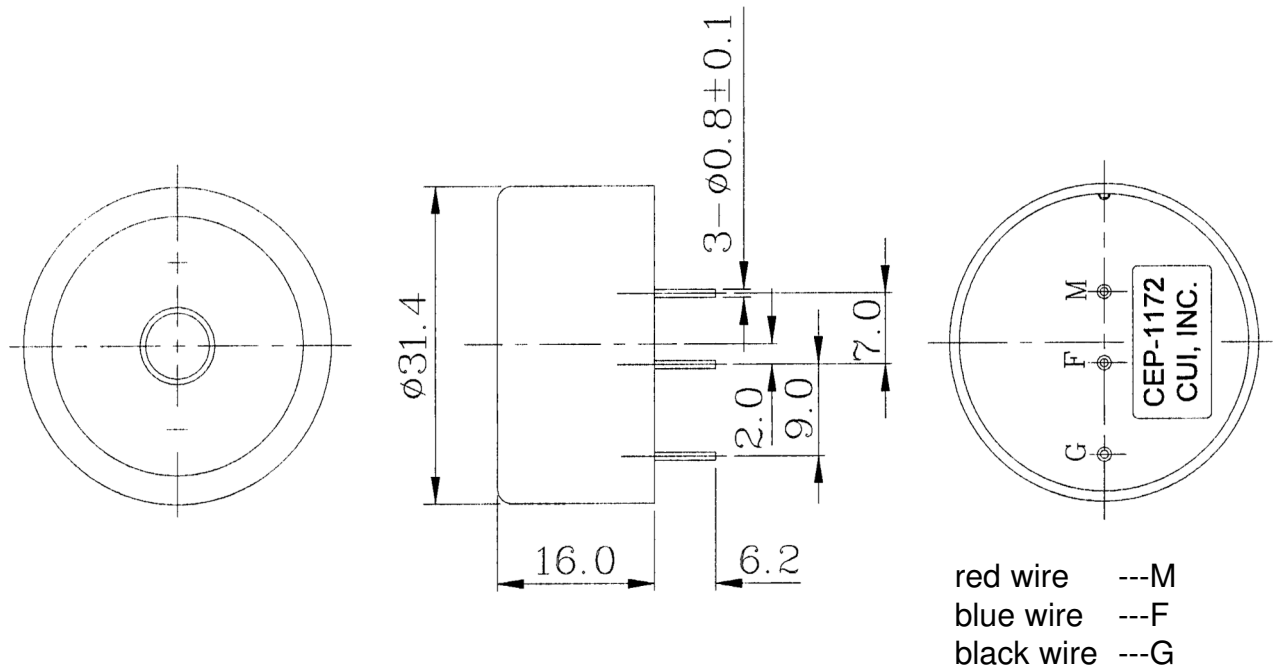
Description: piezo audio transducer

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## Specifications

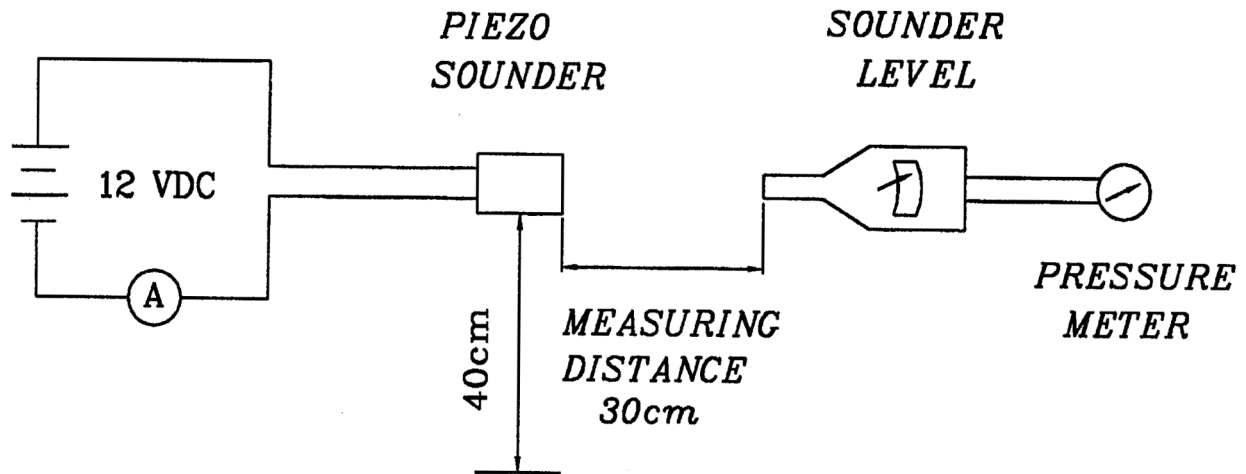
Resonant frequency	3.3 KHz $\pm$ 0.5	
Operating voltage	3 ~ 28 V dc	
Current consumption	7 mA max.	at 12 V dc
Sound pressure level	81 db min.	at 30 cm / 12 V dc
Rated voltage	12 V dc	
Operating temperature	-30 ~ +85° C	
Storage temperature	-40 ~ +95° C	
Dimensions	$\phi$ 31.4 x H16.0 mm	
Weight	6.7 g max.	
Material	ABS UL-94 1/16" HB (Black)	
Terminal	PIN type	
RoHS	no	

## Appearance Drawing

Tolerance:  $\pm$ 0.5

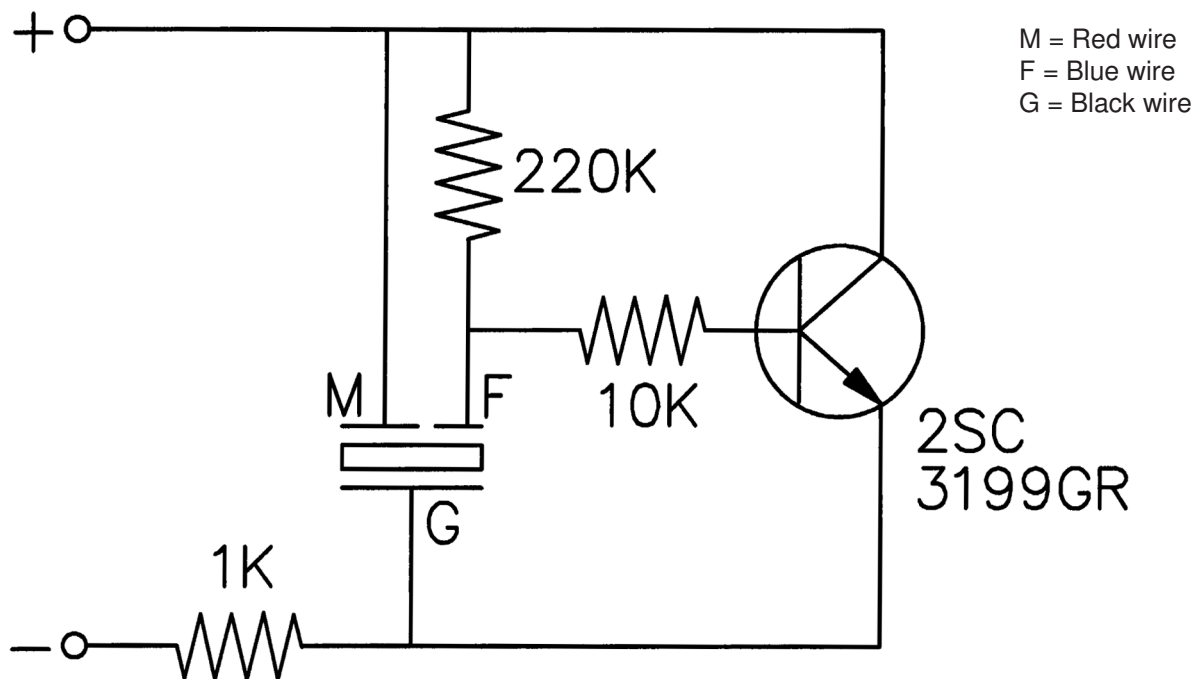
**Measurement Method**

1. S.P.L. Measuring Circuit



Mic : RION S.PL meter UC30 or equivalent

2. The current consumption and the sound pressure level are measured by using the recommend driving circuit shown as below (one example)





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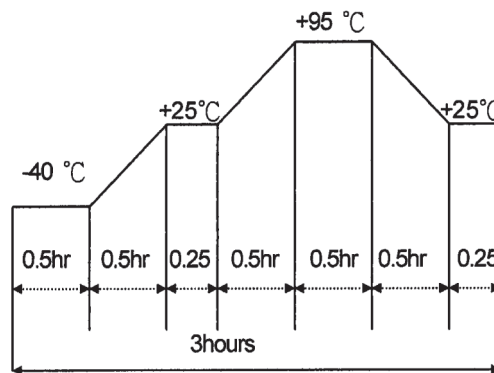
## Mechanical Characteristics

Item	Test Condition	Evaluation Standard
Solderability <sup>1</sup>	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in a solder bath of $+230 \pm 5^\circ\text{C}$ for $3 \pm 0.5$ seconds.	90% min. of the stripped wires will be wet with solder. (Except the edge of the terminal)
Soldering Heat Resistance	Lead terminals are immersed up to 1.5mm from insulation in solder bath of $300 \pm 5^\circ\text{C}$ or $260 \pm 5^\circ\text{C}$ for $10 \pm 1$ seconds.	No interference in operation.
Terminal Mechanical Strength	The force of 9.8N is applied to each terminal in each axial direction for 10 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.	

Notes: 1. Not recommended for wave soldering

## 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:	





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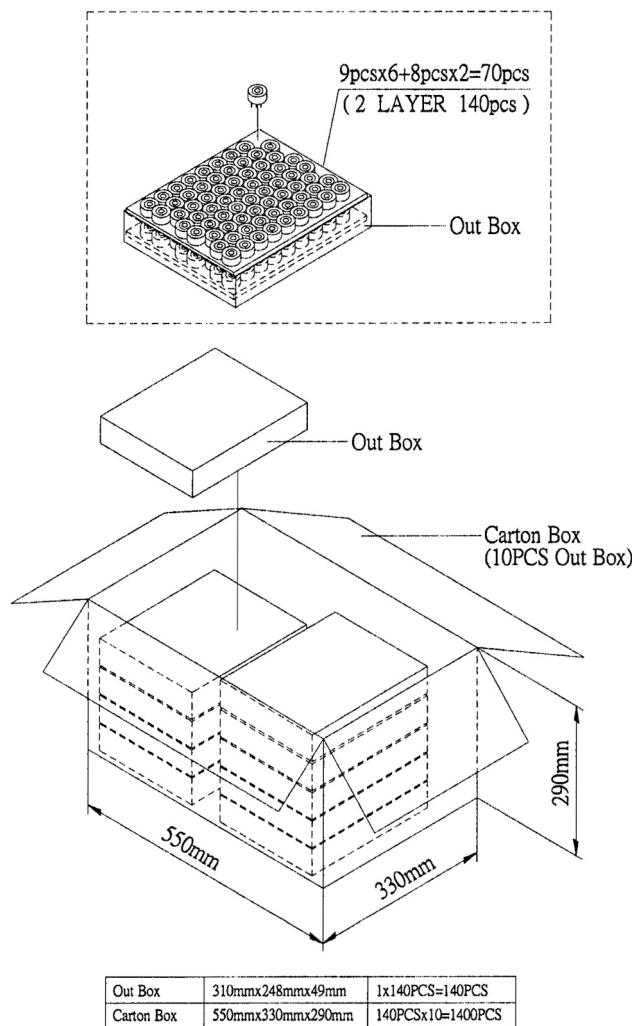
### Reliability Test

Item	Test Condition	Evaluation Standard
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>	<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 ±10dB compared to the initial measurements.</p>

### 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

### Measurement Method



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренеспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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