

**PART NUMBER:** CEP-1123

**DESCRIPTION:** piezo audio transducer

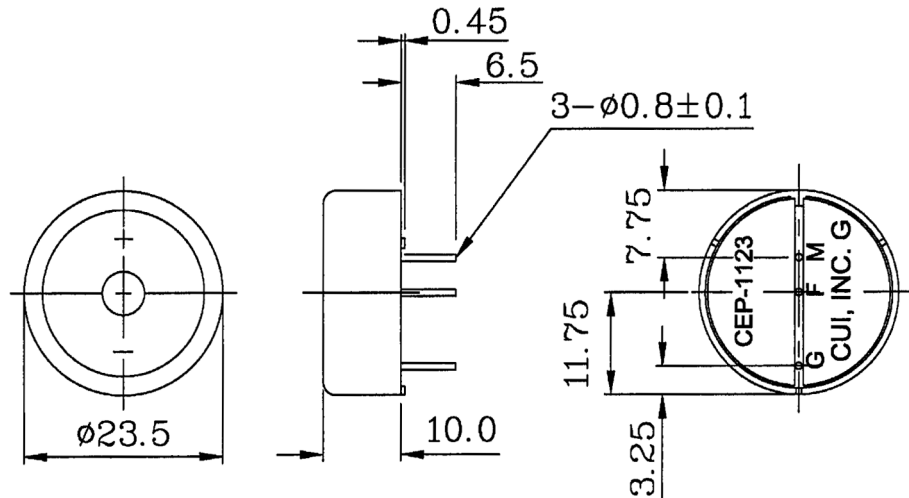


**Specifications**

|                       |                                      |
|-----------------------|--------------------------------------|
| Resonant frequency    | 3.2 ±0.5 KHz                         |
| Operating voltage     | 3~28 V dc max.                       |
| Current consumption   | 7 mA max. at 12 V dc                 |
| Sound pressure level  | 74 db min. at 30 cm / 12 V dc        |
| Rated voltage         | 12 V dc                              |
| Operating temperature | -30 ~ +85° C                         |
| Storage temperature   | -40 ~ +95° C                         |
| Dimensions            | ø23.5 x H10.0 mm                     |
| Weight                | 3.0 g max.                           |
| Material              | ABS UL-94 1/16" HB High Heat (Black) |
| Terminal              | Pin type (Sn Plating)                |
| RoHS                  | yes                                  |

**Appearance Drawing**

Tolerance: ±0.5



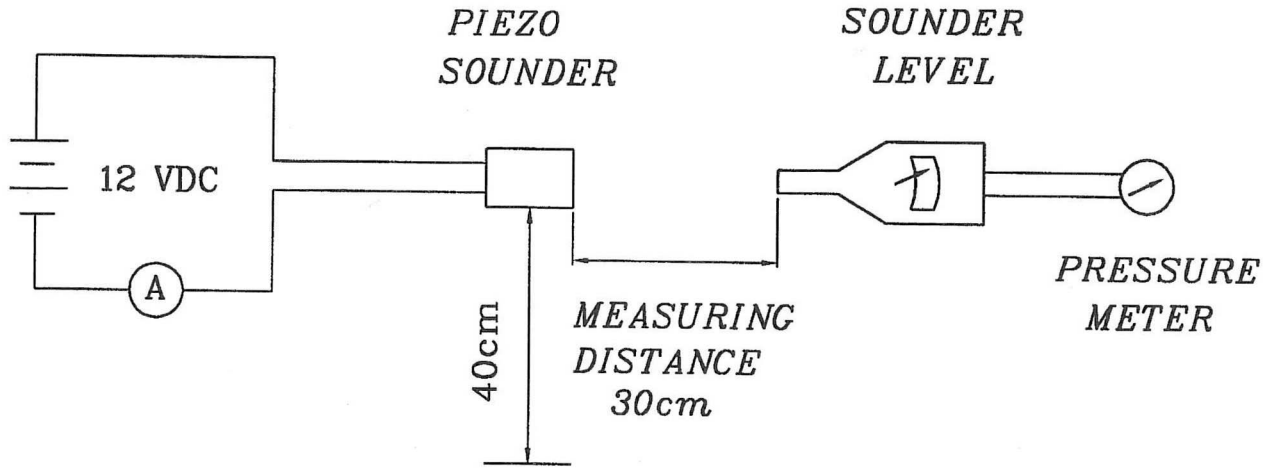
red wire ---M  
blue wire ---F  
black wire ---G

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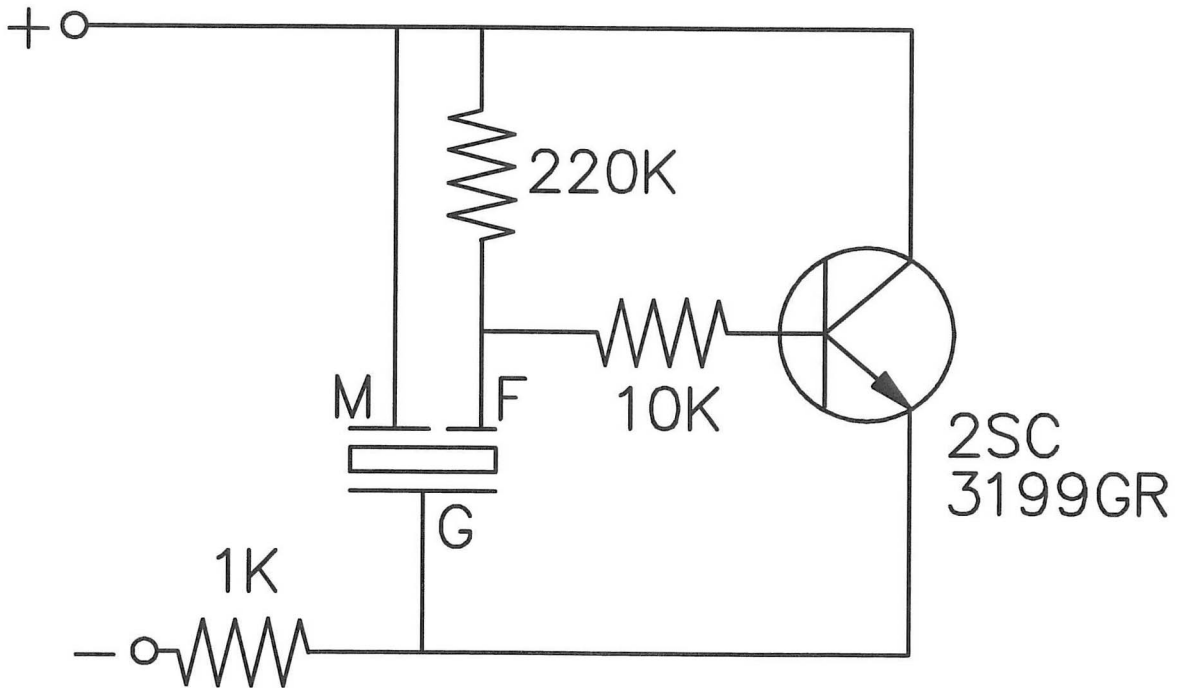
### Measurement Method

1) S.P.L. Measuring Circuit



Mic: RION UC 30 or equivalent

2) The current consumption and the S.P.L. are measured by using the recommended driving circuit as shown below.





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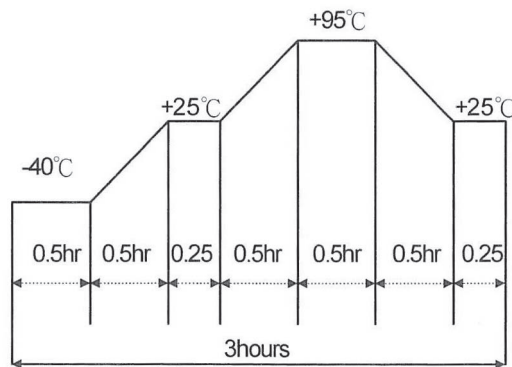
**Mechanical Characteristics**

| Item                         | Test Condition   | Evaluation Standard  |
|------------------------------|--|--|
| Solderability <sup>1</sup>   | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of 270 ±5°C for 3 ±1 seconds.  | 90% min. of the lead terminals will be wet with solder. (Except the edge of the terminal)  |
| Soldering Heat Resistance    | Lead terminals are immersed up to 1.5mm from buzzer's body in solder bath of 300 ±5°C for 3 ±0.5 or 260 ±5°C for 10 ±1 seconds.  | No interference in operation.  |
| Terminal Mechanical Strength | For 10 seconds, the force of 9.8N (1.0kg) is applied to each terminal in axial direction.  | 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 ±10% of the initial measurements. The SPL should be within ±10dB 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°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 ±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 shall be subjected to 5 cycles. One cycle will consist of:                 |   |



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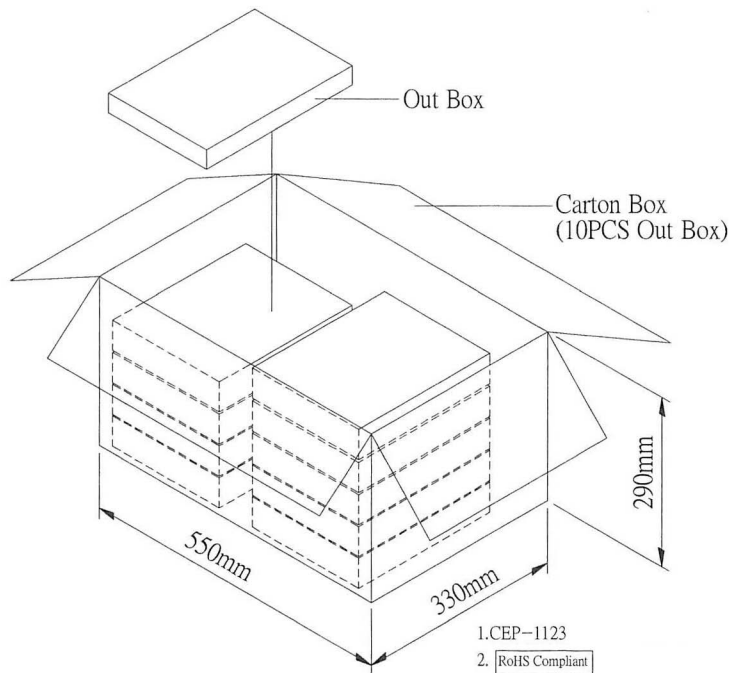
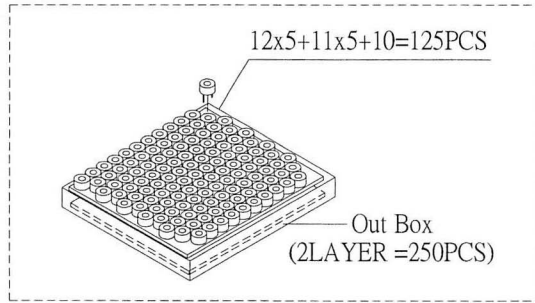
| Item                  | Test Condition  | Evaluation Standard   |
|-----------------------|---|---|
| Operating (Life Test) | <p>1. Continuous life test:<br/>The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied.</p> <p>2. Intermittent life test:<br/>A duty 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 ±10dB 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 |

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**Packaging**

**DESCRIPTION:** piezo audio transducer



|            |                   |                    |
|------------|-------------------|--------------------|
| Out Box    | 310mmx248mmx49mm  | 2x125PCS=250PCS    |
| Carton Box | 550mmx330mmx290mm | 250PCSx10=2,500PCS |