

Description: piezo audio indicator

Date: 2/06/2007

Unit: mm

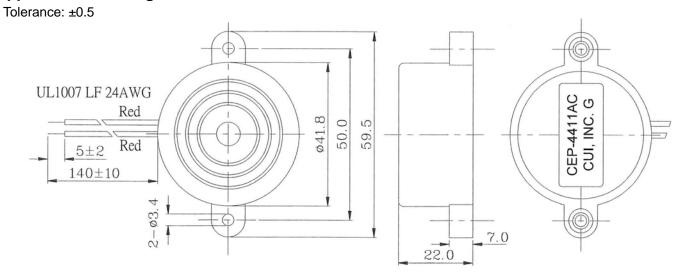
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# **Specifications**

| Resonant frequency    | 2.8 ± 0.5 KHz                        |                      |  |
|-----------------------|--------------------------------------|----------------------|--|
| Operating voltage     | 30 ~ 120.0 V ac/V dc                 | non-polarized        |  |
| Current consumption   | 7 mA max.                            | at 110 V ac          |  |
| Sound pressure level  | 88 db min.                           | at 30 cm / 110 V ac  |  |
| Rated Voltage         | 110 V ac                             |                      |  |
| Tone                  | Continuous                           |                      |  |
| Operating tempurature | -20 ~ +60° C                         |                      |  |
| Storage tempurature   | -30 ~ +70° C                         |                      |  |
| Dimensions            | ø41.8 x H22.0 mm                     | See attached drawing |  |
| Weight                | 22.2 g max.                          |                      |  |
| Material              | ABS UL-94 1/16" HB High Heat (Black) |                      |  |
| Terminal              | Wire type                            | See attached drawing |  |
| RoHS                  | yes                                  |                      |  |
|                       |                                      |                      |  |

# **Appearance Drawing**



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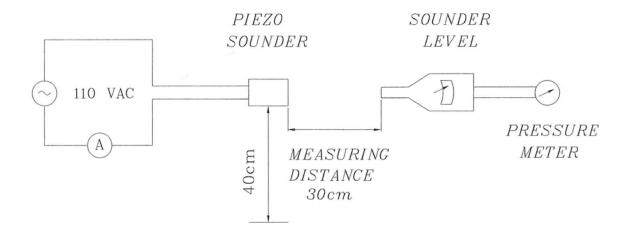


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### **Measurement Method**



S.P.L. Measuring Circuit

Mic: RION S.P.L. meter UC 30 or equivalent

S.G.: Hewlett Packard 33120A Function Generator or equivalent

#### Mechanical Characteristics

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

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### **Environment Test**

| Item             | Test Condition   | Evaluation Standard  |
|------------------|--|--|
| High temp. test  | After being placed in a chamber at +70°C for 240 hours.  |  |
| Low temp. test   | After being placed in a chamber at -30°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. |
| 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:  +70°C  -30°C  0.5hr  0.5hr  0.5hr  0.5hr  0.5hr  3hours |  |

**Reliability Test** 

| Item                  | Test Condition                               | <b>Evaluation Standard</b>        |
|-----------------------|--|-----------------------------------|
| Operating (Life Test) | Continuous life test:                        | The buzzer will be measured after |
|                       | The part will be subjected to 48 hours of    | being placed at +25°C for 4       |
|                       | continuous operation at +45°C with rated     | hours. The value of the           |
|                       | voltage applied.                             | oscillation frequency/current     |
|                       |  | consumption should be ±10%        |
|                       | 2. Intermittent life test:                   | compared to the initial           |
|                       | A duty cycle of 1 minute on, 1 minute off, a | measurements. The SPL should      |
|                       | minimum of 5,000 times at room temp          | be ±10dB compared to the initial  |
|                       | (+25±2°C) with rated voltage applied.        | 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 |

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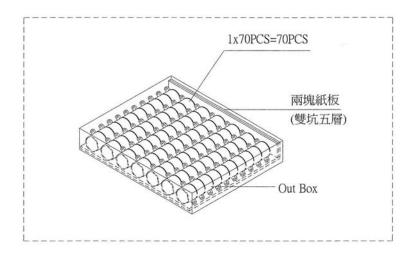


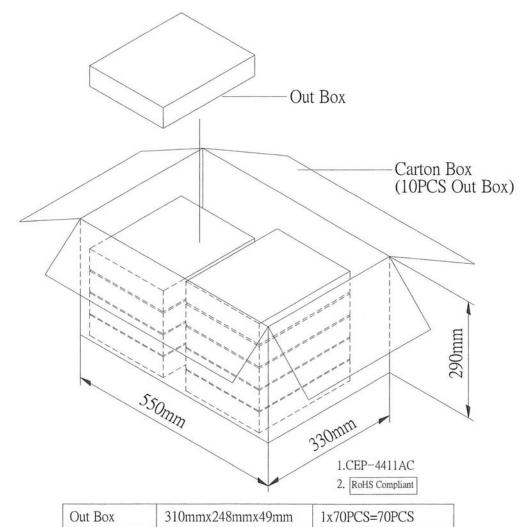
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## **Packaging**





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70PCSx10=700PCS

550mmx330mmx290mm

Carton Box