



Part No: CEP-1141

Date: 10/19/2006

Unit: mm

Description: piezo telephone ringer

Page No: 1 of 5

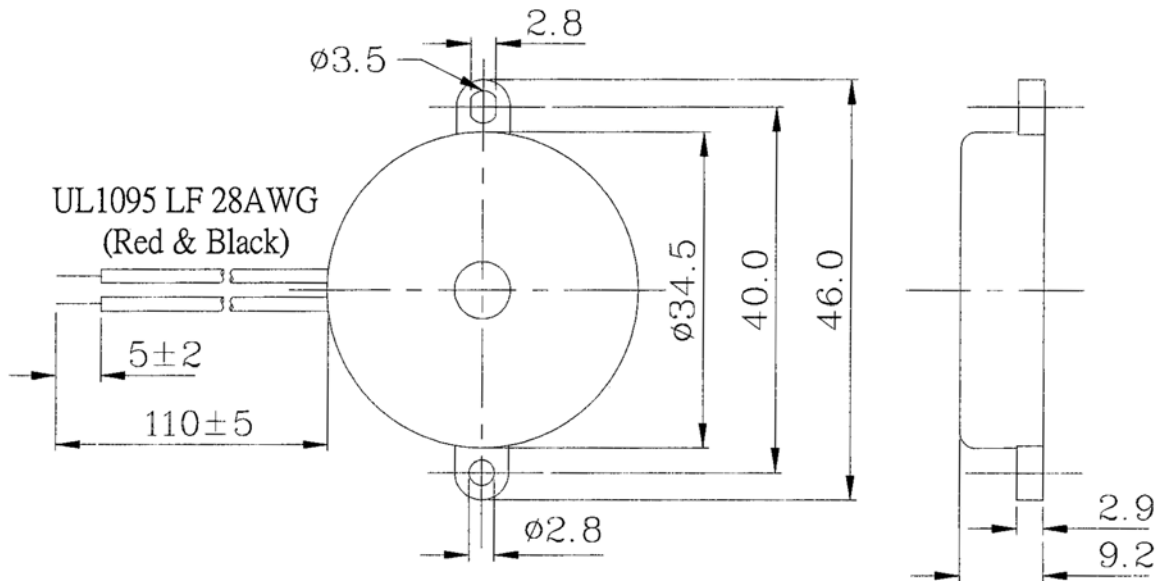


Specifications

| | | |
|------------------------|--------------------------------------|--|
| Operating voltage | 30 Vp-p max. | |
| Current consumption | 9 mA max. | at 10 Vp-p, square wave, 1.1 KHz |
| Sound pressure level | 81 db min. | at 10 cm / 10 Vp-p, square wave, 1.1 KHz |
| Electrostatic capacity | 43,000 pF ±30% | at 120 Hz / 1 V |
| Operating temperature | -30 ~ +85° C | |
| Storage temperature | -40 ~ +95° C | |
| Dimensions | ø34.5 x H9.2 mm | |
| Weight | 5.3 g max. | |
| Material | ABS UL-94 1/16" HB High Heat (Black) | |
| Terminal | Wire type | |
| RoHS | yes | |

Appearance Drawing

Tolerance: ±0.5





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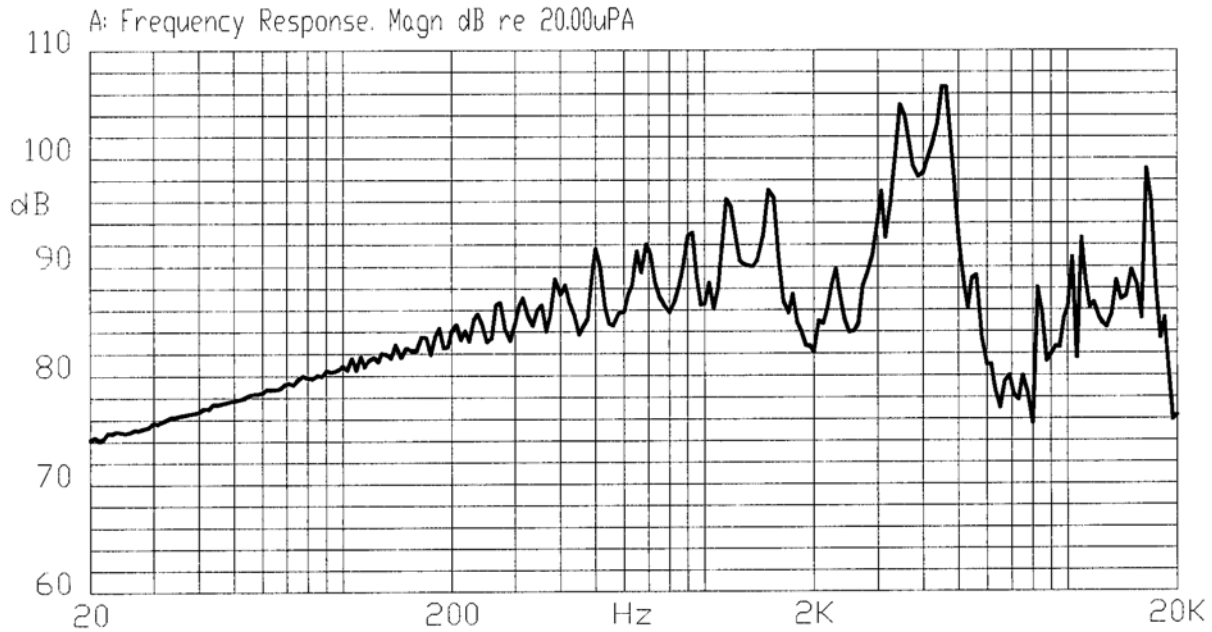
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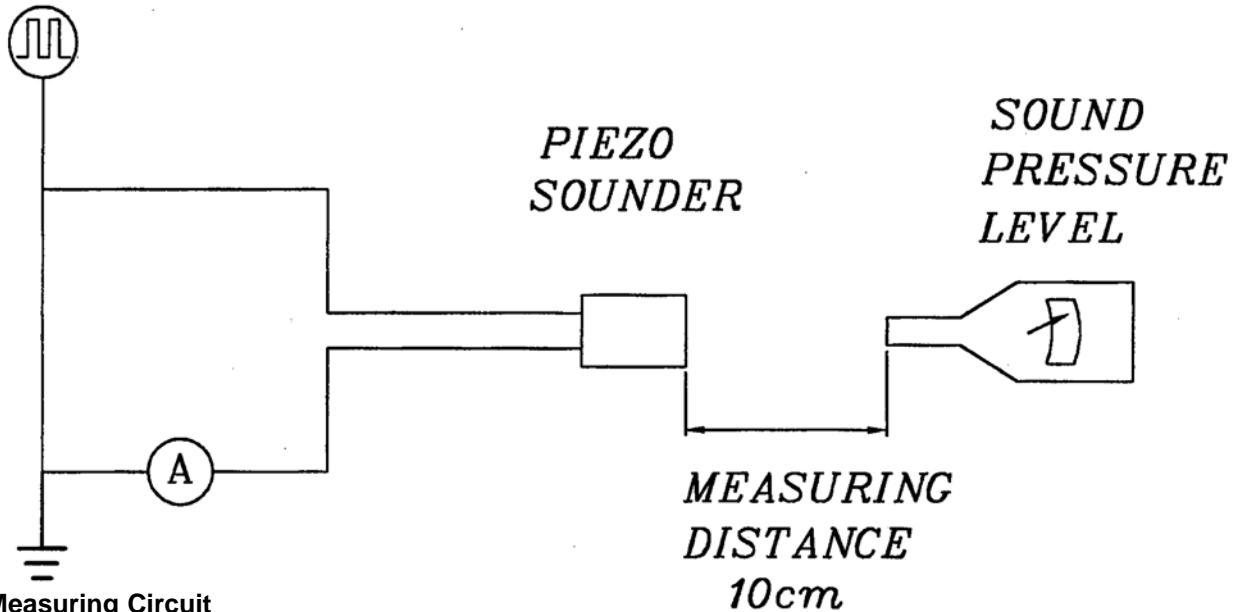
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Page No: 2 of 5

Typical Frequency Response Curve



Measurement Method



S.P.L. Measuring Circuit

Input Signal: 10 Vp-p, 1.1 KHz, Square Wave

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

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



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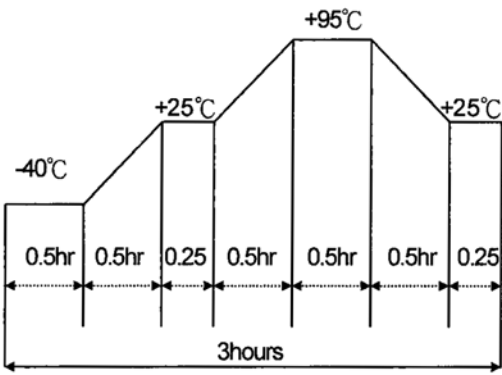
Description: piezo telephone ringer

Page No: 3 of 5

Mechanical Characteristics

| Item | Test Condition | Evaluation Standard |
|---------------------------------------|--|--|
| Solderability (Connector excepted) | Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in a solder bath of +270 ±5°C for 3 ±0.5 seconds. | 90% min. of the stripped wires will be wet with solder. (Except the edge of the terminal) |
| Terminal Mechanical Strength | The pull force should be applied to the 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 will 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 axis (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°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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Page No: 4 of 5

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 +70°C with rated voltage 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 rated voltage 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) 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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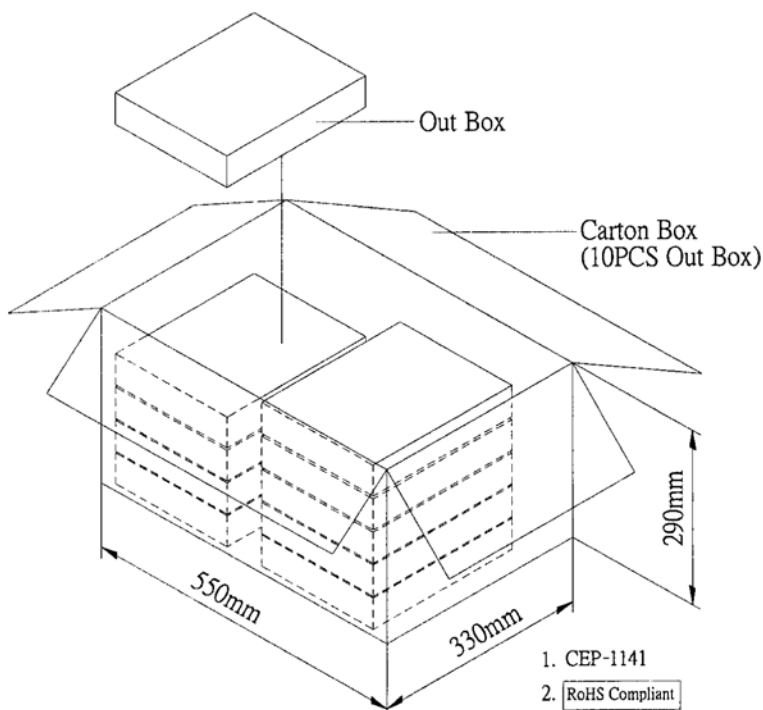
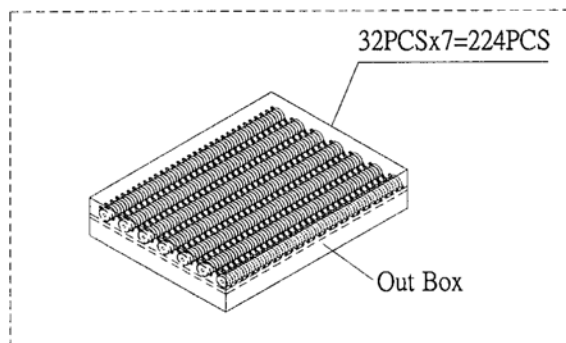
Date: 10/19/2006

Unit: mm

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Page No: 5 of 5

Packaging



| | | |
|------------|-------------------|--------------------|
| Out Box | 310mmx248mmx49mm | 1x224PCS=224PCS |
| Carton Box | 550mmx330mmx290mm | 224PCSx10=2,240PCS |