CUI INC

**Part No: CEP-2272A**

**Description: piezo audio indicator**

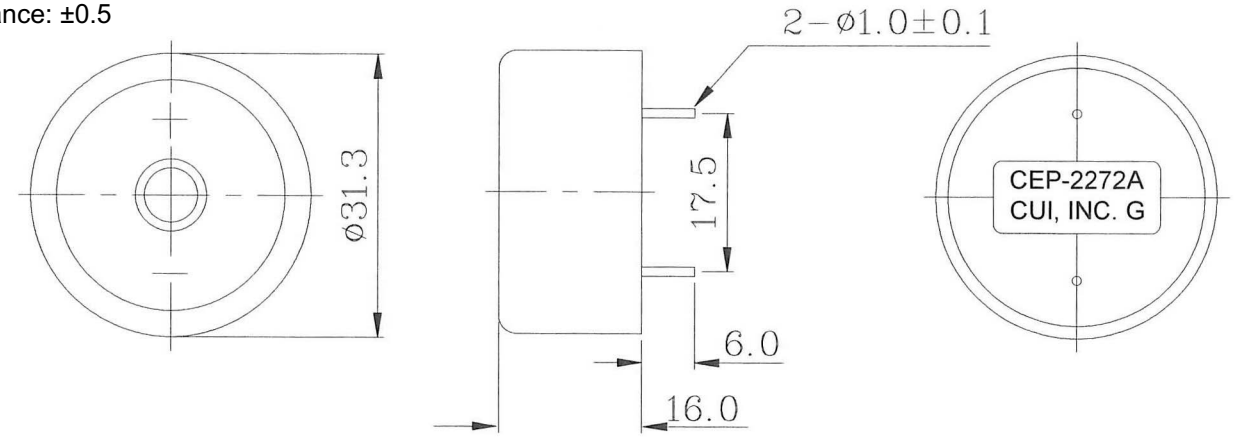
**Date: 10/2010**
**Unit: mm**


## Specifications

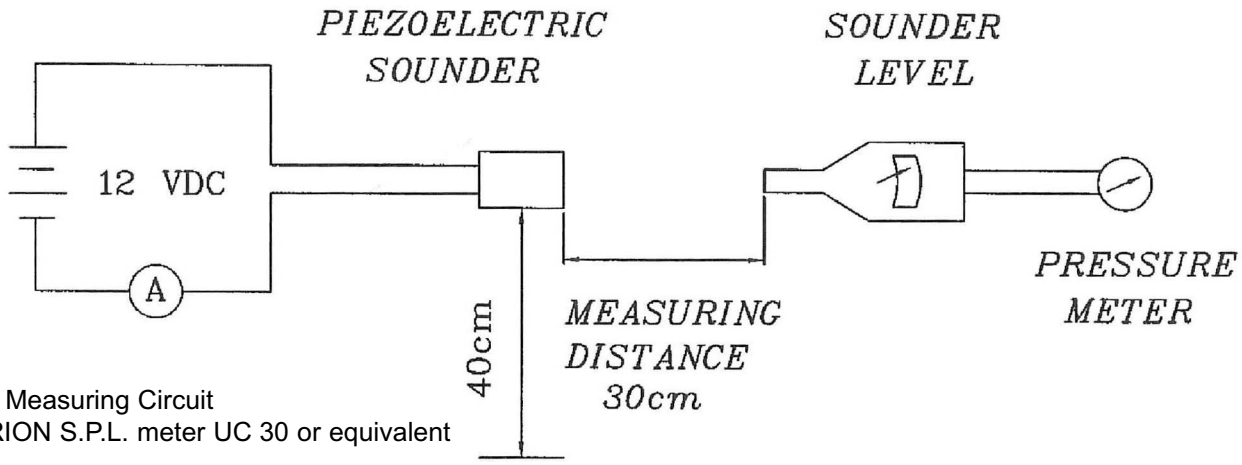
| | | |
|---|---|---|
| Resonant frequency | 3.5 ± 0.5 KHz | |
| Operating voltage | 3.0 ~ 20.0 V dc | |
| Current consumption | 10 mA max. | at 12 V dc |
| Sound pressure level | 93 db min. | at 30 cm / 12 V dc |
| Rated Voltage | 12 V dc | |
| Tone | Continuous | |
| Operating tempurature | -30 ~ +85° C | |
| Storage tempurature | -40 ~ +95° C | |
| Dimensions | ø31.3 x H16.0 mm | See attached drawing |
| Weight | 7.0 g max. | |
| Material | ABS UL-94 1/16” HB (Black) | |
| Terminal | Pin type (Sn Plating) | See attached drawing |
| RoHS | yes | |

## Appearance Drawing

Tolerance: ±0.5




## Measurement Method



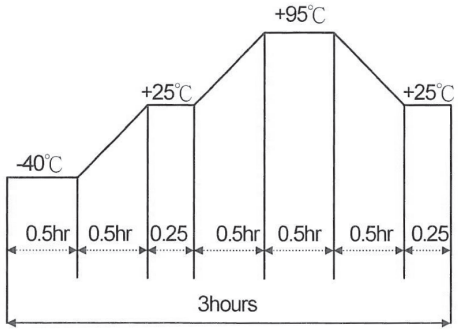

S.P.L. Measuring Circuit
Mic: RION S.P.L. meter UC 30 or equivalent

## Mechanical Characteristics

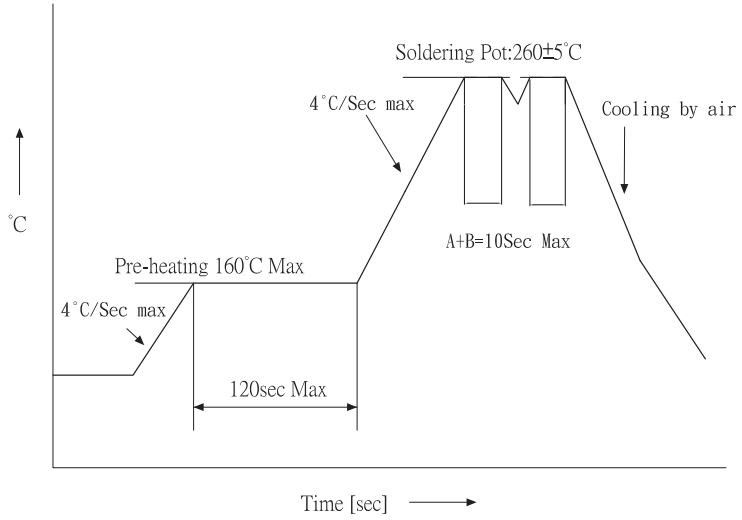
| Item | Test Condition | Evaluation Standard |
|---|---|---|
| Solderability[1] | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +270 ±5°C for 3 ±1 seconds. | 90% min. of the lead terminals will be wet with solder. (Except the edge of the terminal) |
| Soldering 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 seconds 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 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. | |

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 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 shall be subjected to 5 cycles. One cycle will consist of:   | |

## Wave Solder Profile



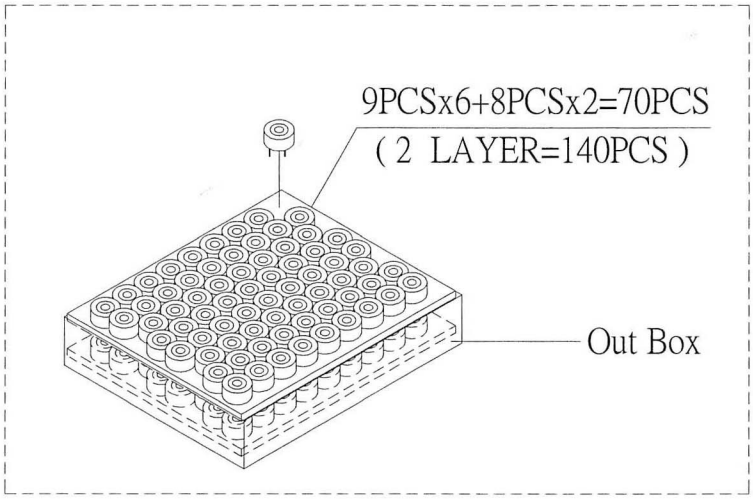

## Reliability Test

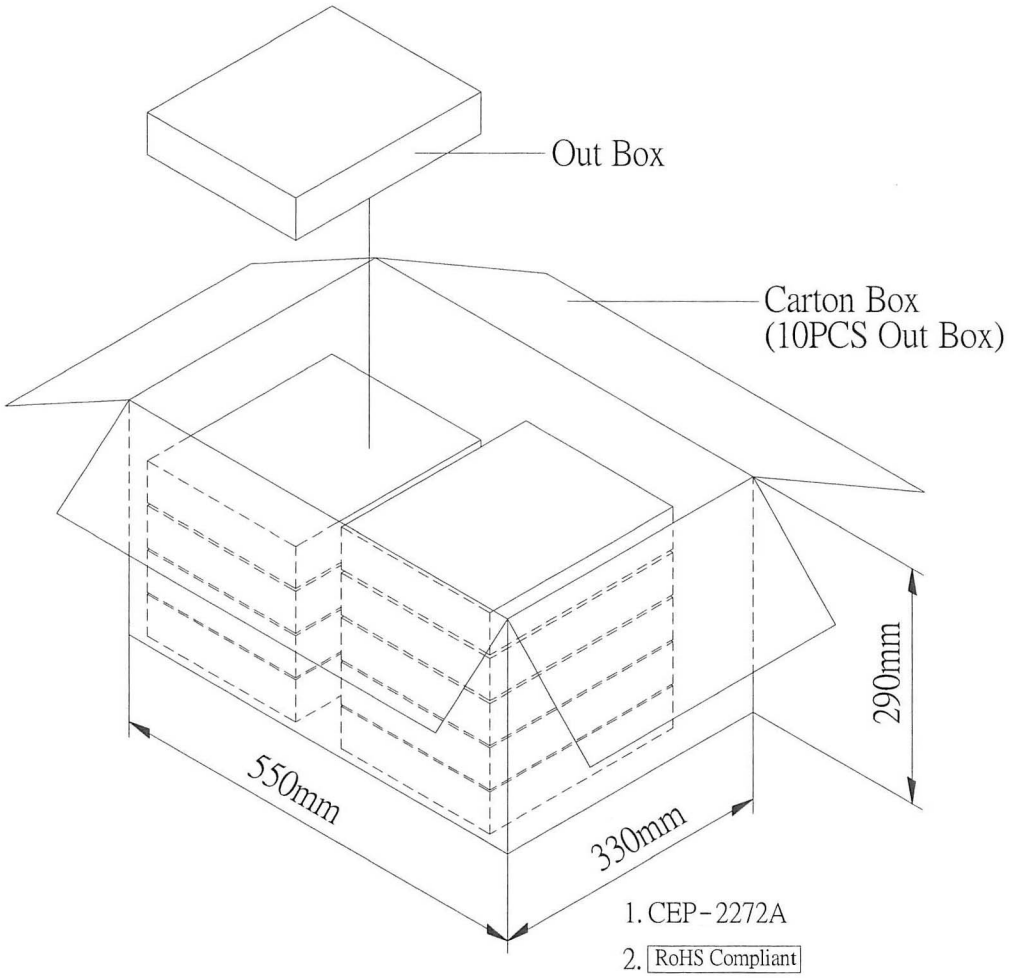
| Item | Test Condition | Evaluation Standard |
|---|---|---|
| Operating (Life Test) | 1. Continuous life test:<br>The part will be subjected to 48 hours of continuous operation at +70°C with rated voltage applied.<br><br>2. Intermittent life test:<br>A duty cycle of 1 minute on, 1 minute off, a minimum of 5,000 times at room temp (+25±2°C) with rated voltage applied. | 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 ±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 |

## Packaging




| | | |
|---|---|---|
| Out Box | 310mmx248mmx49mm | 1x140PCS=140PCS |
| Carton Box | 550mmx330mmx290mm | 140PCSx10=1,400PCS |