



Part No: CEM-1212S

Description: magnetic buzzer


Date: 6/12/2006

Unit: mm

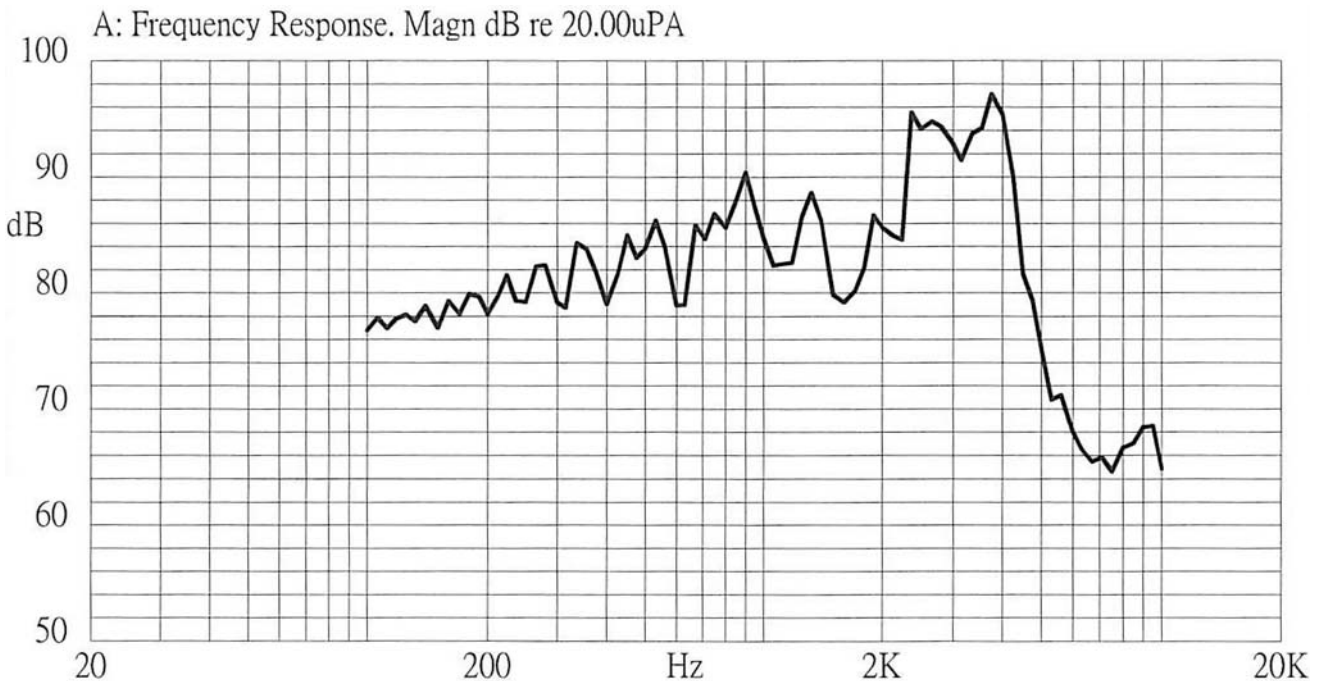
Page No: 1 of 5



### Specifications

|                       |                          |   |
|-----------------------|--------------------------|---|
| Rated voltage         | 12.0 Vo-p                |              |
| Operating voltage     | 6.0 - 16.0 Vo-p          |   |
| Mean current          | 40 mA max.               |   |
| Coil resistance       | 140 ±21 Ohm              | Applying rated voltage, 2400 Hz square wave, 1/2 duty   |
| Sound output          | Min. 85 (Typical 92) dBA | Distance at 10cm (A-weight free air). Applying rated voltage of 2400 Hz, square wave, 1/2 duty. |
| Rated frequency       | 2,400 Hz                 |   |
| Operating temperature | -20 ~ +60° C             |   |
| Storage temperature   | -30 ~ +70° C             |   |
| Dimensions            | ø12.0 x H9.5 mm          |   |
| Weight                | 1.6 g                    |   |
| Material              | PBT (Black)              |   |
| Terminal              | Pin type (Au Plating)    |   |
| RoHS                  | yes                      |   |

### Frequency Response Curve





Part No: CEM-1212S

Description: magnetic buzzer

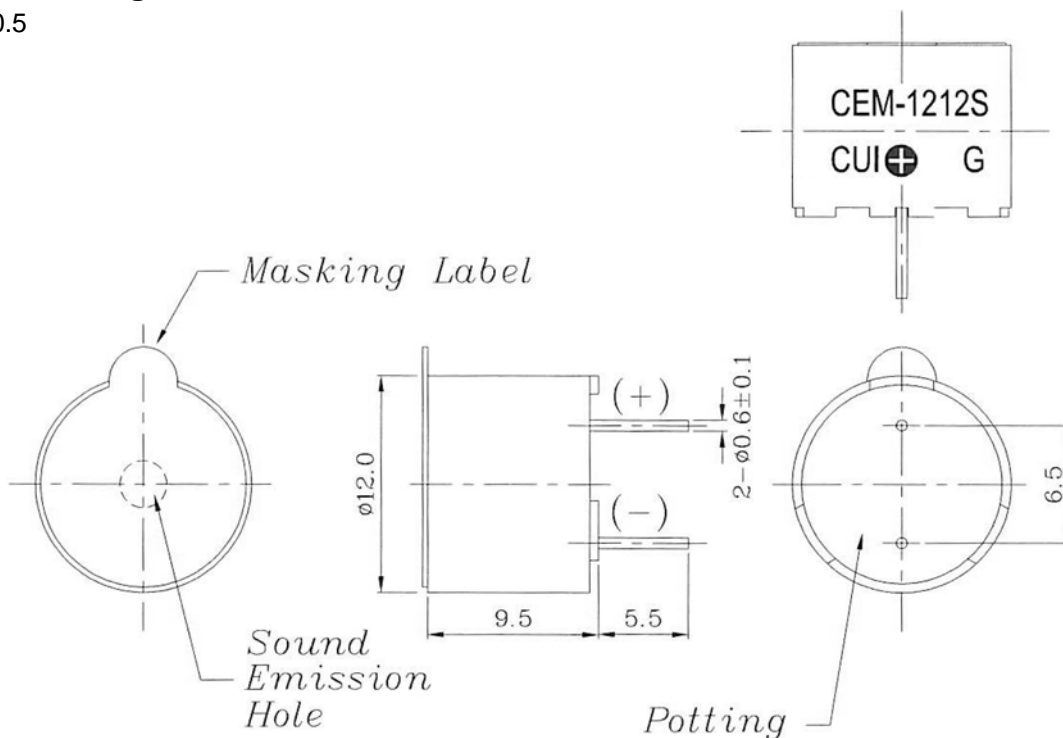
Date: 6/12/2006

Unit: mm

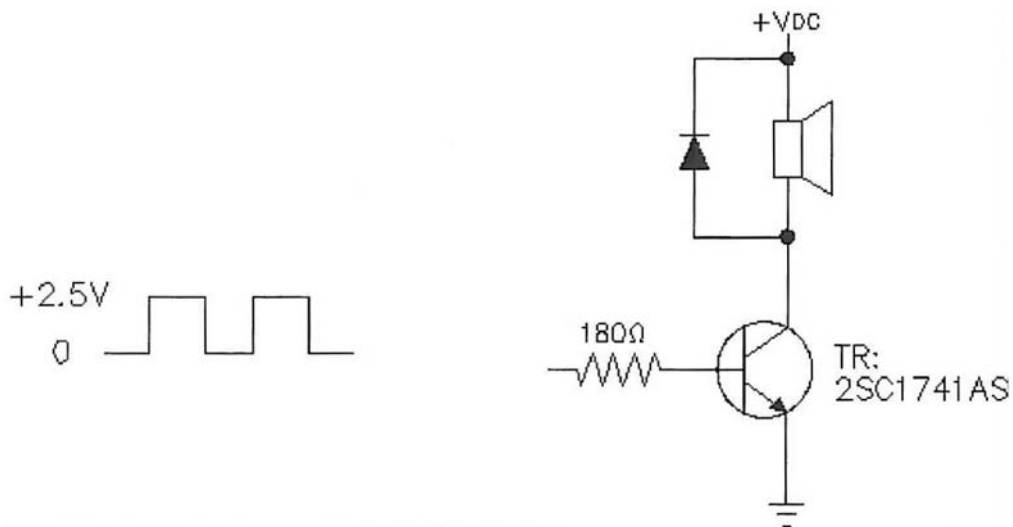
Page No: 2 of 5

### Appearance Drawing

Tolerance:  $\pm 0.5$



### Measurement Method





Part No: CEM-1212S

Description: magnetic buzzer

Date: 6/12/2006

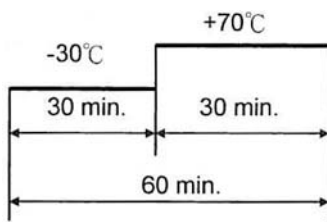
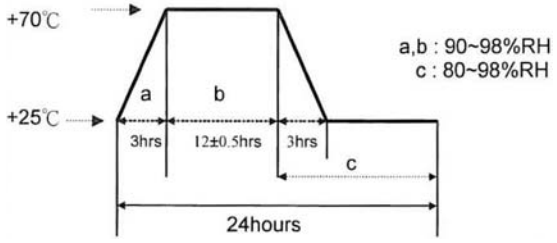
Unit: mm

Page No: 3 of 5

**Mechanical Characteristics**

| Item                         | Test Condition   | Evaluation Standard   |
|------------------------------|--|---|
| Solderability                | Lead terminals are immersed in rosin for 5 seconds and then in a solder bath of +270 ±5°C for 3 ±1 seconds.  | 90% min. of the lead terminals must be wet with fresh solder. (Except the edge of the terminal)   |
| Soldering Heat Resistance    | Lead terminals are immersed up to 1.5mm from the buzzer's body in a solder bath of +260 ±5°C for 3 ±1 seconds.   | No in interference in operation.  |
| Terminal Mechanical Strength | The force of 9.8 N (1.0 kg) will be applied to each terminal in each axial direction for 10 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. | After the test, the part will meet specifications without any damage to the appearance and the SPL should be within ±10 dBA of the initial SPL. |
| Drop Test                    | The part is to 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      | The part will be subjected to +70°C for 96 hours.  | After the test, the part shall meet specifications without any damage to the appearance or performance and the SPL should be within ±10 dBA of the initial SPL. |
| Low temp. test       | The part will be subjected to -30°C for 96 hours   |   |
| Thermal shock        | The part will be subjected to 10 cycles. One cycle will consist of:<br>   |   |
| Temp./Humidity cycle | The part shall be subjected to 10 cycles. One cycle will consist of:<br> |   |



**CUI INC**

**Part No: CEM-1212S**

**Description: magnetic buzzer**

**Date: 6/12/2006**

**Unit: mm**

**Page No: 4 of 5**

**Reliability Tests**

| <b>Item</b>           | <b>Test Condition</b>  | <b>Evaluation Standard</b>  |
|-----------------------|--|---|
| Operating (Life Test) | 1. Continuous life test:<br>The part will be subjected to 72 hours at +45°C with 12 V, 2400 Hz applied.<br><br>2. Intermittent life test:<br>A duty cycle of 1 minute on, 1 minutes off, a minimum of 10,000 times at room temp (+25±10°C) with 12 V, 2400 Hz applied. | After the test, the part shall meet specifications without any damage to the appearance. After 4 hours at +25°C, the SPL should be within ±10 dBA of the initial SPL. |

**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 |



Part No: CEM-1212S

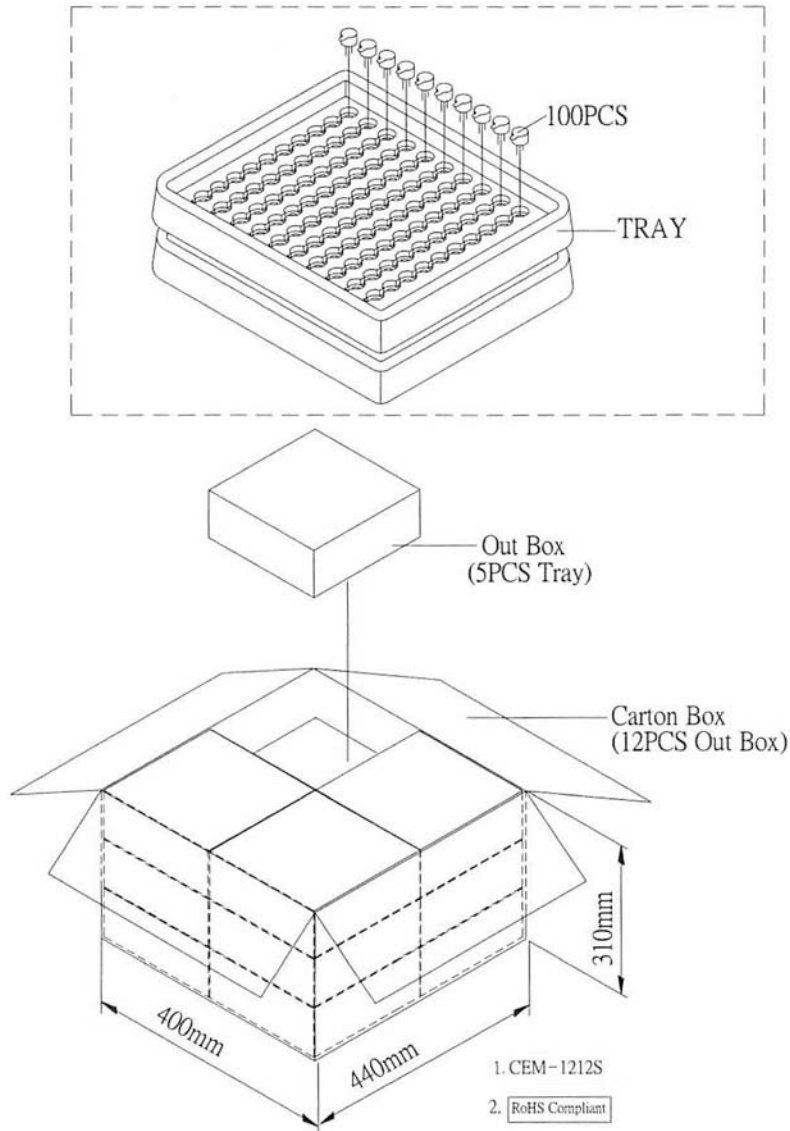
Description: magnetic buzzer

Date: 6/12/2006

Unit: mm

Page No: 5 of 5

Packaging



|            |                   |                      |
|------------|-------------------|----------------------|
| Tray       | 184mmx184mmx23mm  | 1x100PCS=100PCS      |
| Out Box    | 200mmx190mmx100mm | 5LAYERx100PCS=500PCS |
| Carton Box | 440mmx400mmx310mm | 500PCSx12=6000PCS    |