



Part No: CEM-1201(42)

Description: magnetic buzzer


Date: 9/06/2006

Unit: mm

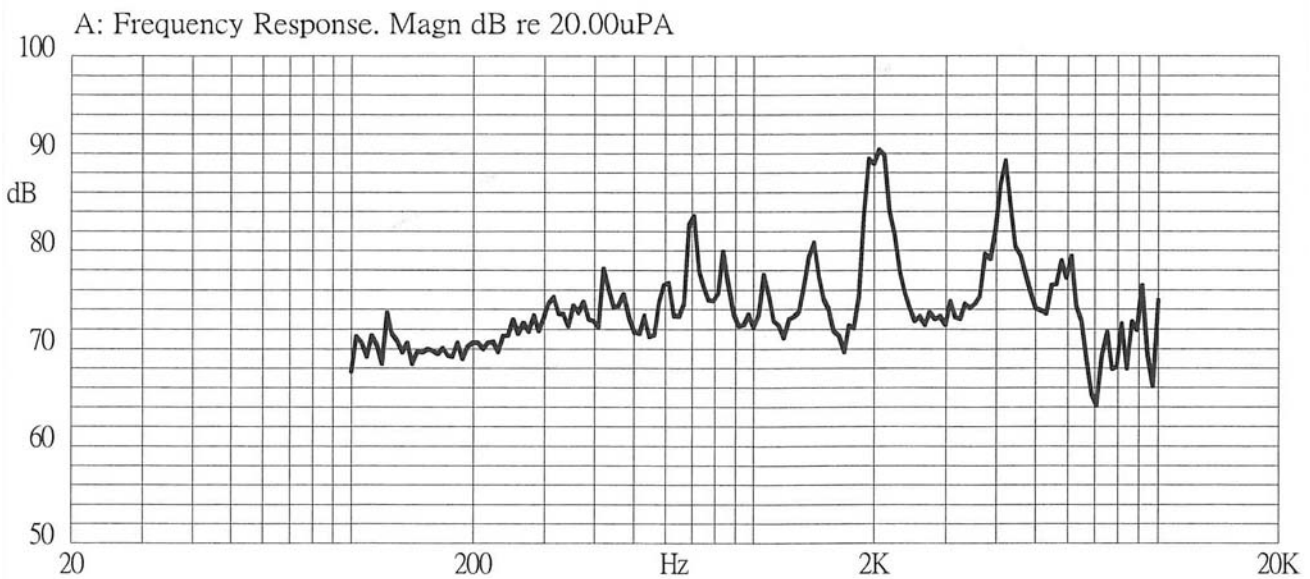
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### Specifications

|                       |                          |  |
|-----------------------|--------------------------|--|
| Rated voltage         | 1.5 Vo-p                 |                 |
| Operating voltage     | 1.0 - 2.0 Vo-p           |  |
| Mean current          | 20 mA max.               |  |
| Coil resistance       | 42 ±6.3 Ω                | Applying rated voltage, 2048 Hz square wave, 1/2 duty  |
| Sound output          | Min. 85 (Typical 90) dBA | Distance at 10cm (A-weight free air).<br>Applying rated voltage of 2048 Hz, square wave, 1/2 duty. |
| Rated frequency       | 2,048 Hz                 |  |
| Operating temperature | -20 ~ +60° C             |  |
| Storage temperature   | -30 ~ +70° C             |  |
| Dimensions            | ø12.0 x H8.5 mm          | See attached drawing   |
| Weight                | 1.4 g                    |  |
| Material              | PPO (Black)              |  |
| Terminal              | Pin type (Au Plating)    | See attached drawing   |
| RoHS                  | yes                      |  |

### Frequency Response Curve





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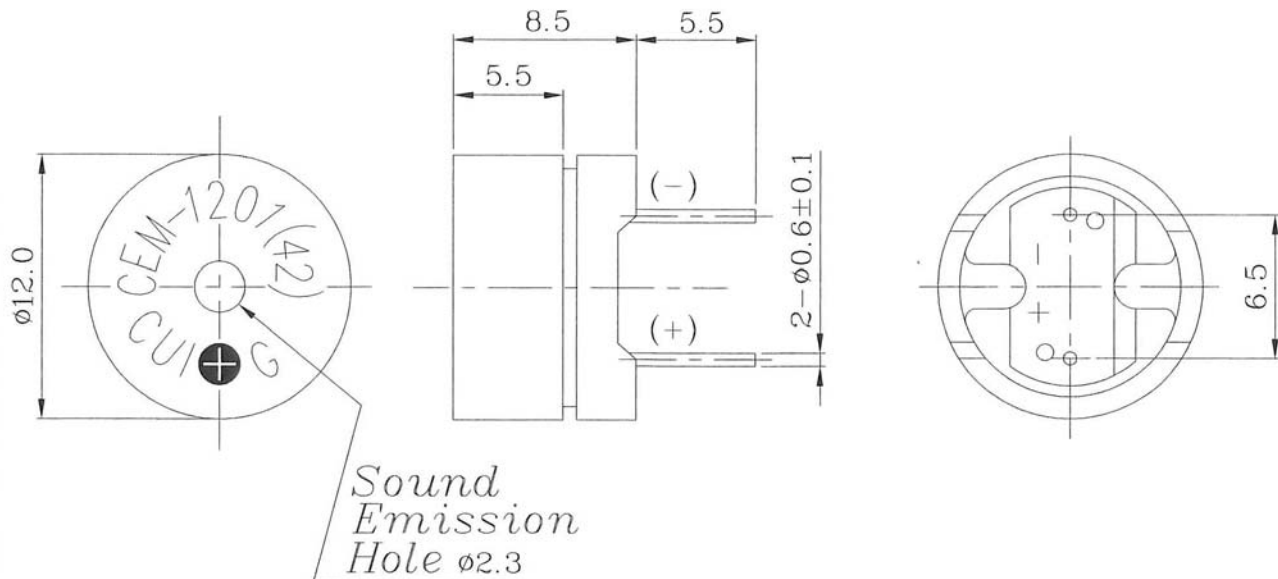
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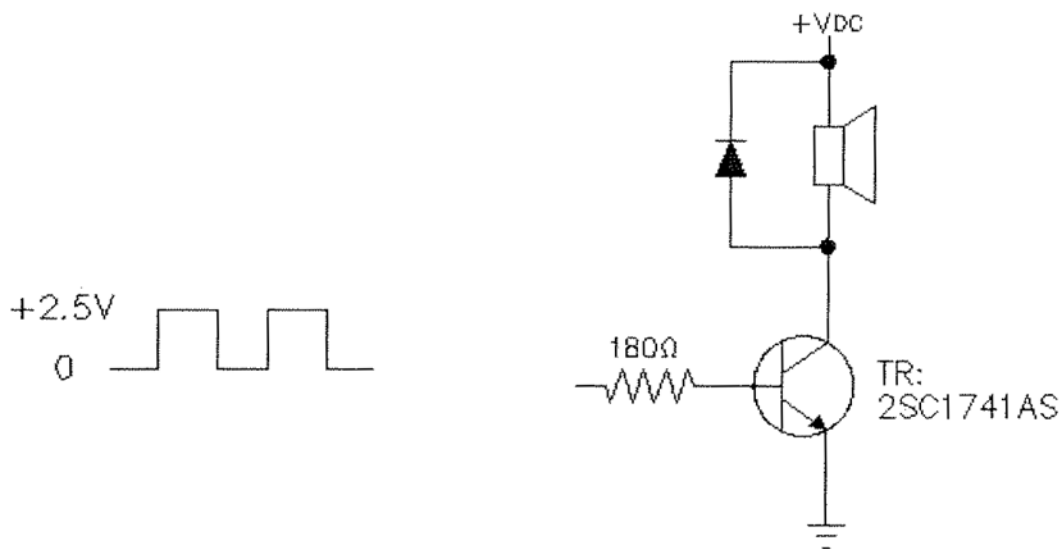
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### Appearance Drawing

Tolerance:  $\pm 0.5$



### Measurement Method





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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% surface of lead terminals should be wet with 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 | Apply force of 9.8 N (1.0 kg) to the terminal for 10 seconds in each axial direction.   | No damage or cutting off.  |
| Vibration                    | The buzzer will be measured after applying a vibration amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours. | After the test, the part should meet specifications without any damage to the appearance and performance. The SPL should be within ±10 dBA when compared to the initial measurement. |
| 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.  |  |

Notes: 1. Not recommended for wave soldering

**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 except SPL. After 4 hours at +25°C, 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: <div style="text-align: center;"> </div>  |  |
| Temp./Humidity cycle | The part shall be subjected to 10 cycles. One cycle will consist of: <div style="text-align: center;"> </div> |  |



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**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 1.5 V, 2048 Hz applied.<br><br>2. Intermittent life test:<br>A duty cycle of 1 minute on, 1 minute off, a minimum of 10,000 times at room temp. (+25±10°C) with 1.5 V, 2048 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 |



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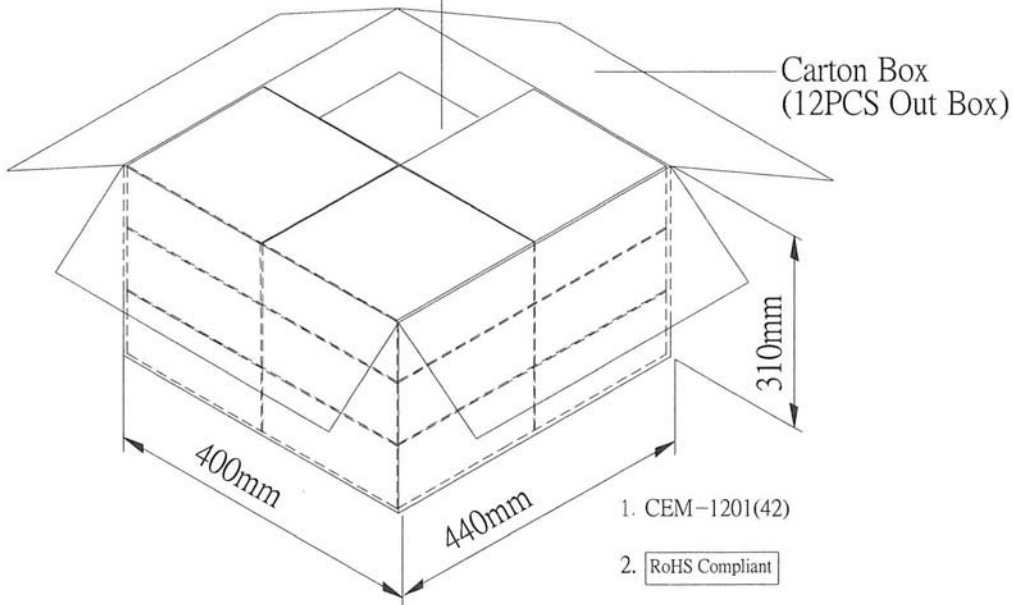
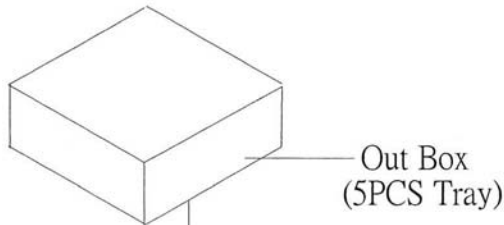
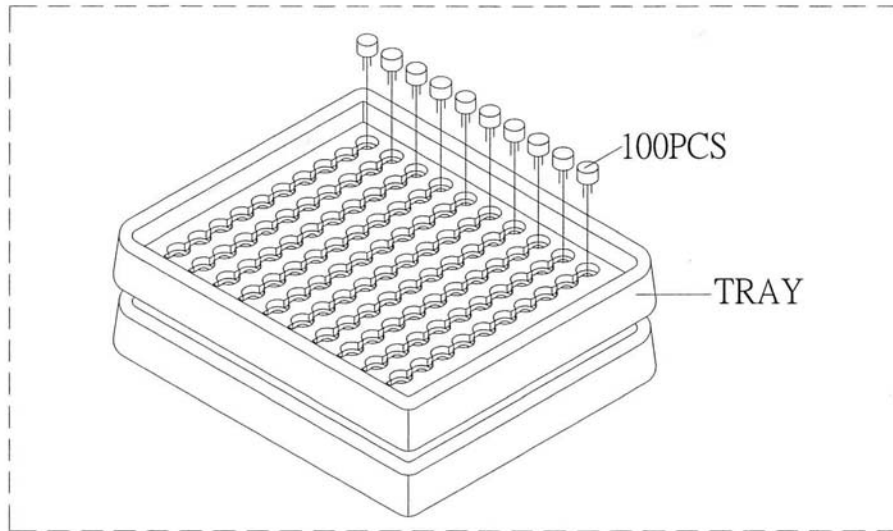
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**Packaging**



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