



Part No: CEM-1612

Description: magnetic buzzer

Date: 9/13/2006

Unit: mm

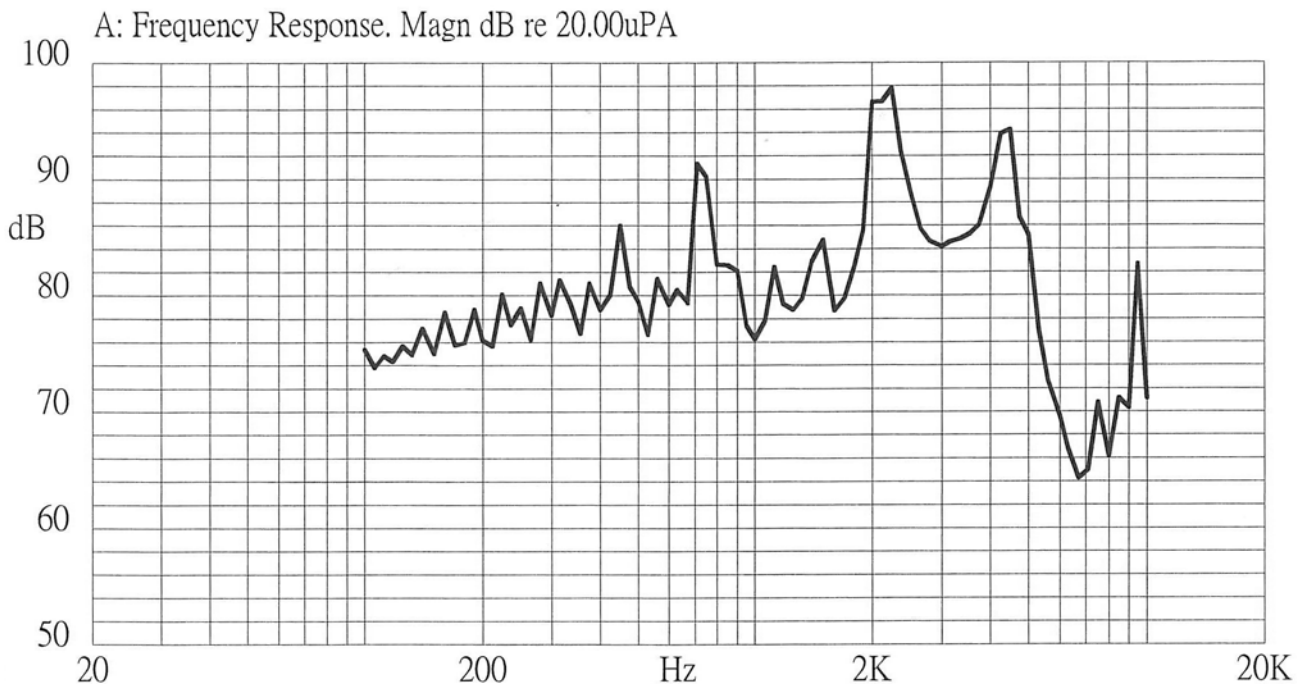
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Specifications

| | | |
|-----------------------|--------------------------|---|
| Rated voltage | 12 Vo-p | |
| Operating voltage | 6.0 - 18.0 Vo-p | |
| Mean current | 40 mA max. | |
| Coil resistance | 115.0 ±17.0 Ω | Applying rated voltage, 2048 Hz square wave, ½ duty |
| Sound output | Min. 85 (Typical 97) dBA | Distance at 10cm (A-weight free air). Applying rated voltage of 2048 Hz, square wave, ½ duty. |
| Rated frequency | 2,048 Hz | |
| Operating temperature | -20 ~ +60° C | |
| Storage temperature | -30 ~ +70° C | |
| Dimensions | ø16.0 x H14.0 mm | See attached drawing |
| Weight | 4.6 g | |
| Material | PPO (Black) | |
| Terminal | Pin type (Au Plating) | See attached drawing |
| RoHS | yes | |

Frequency Response Curve





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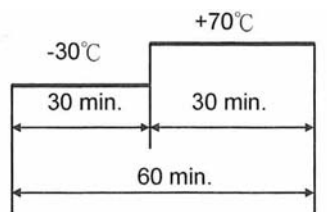
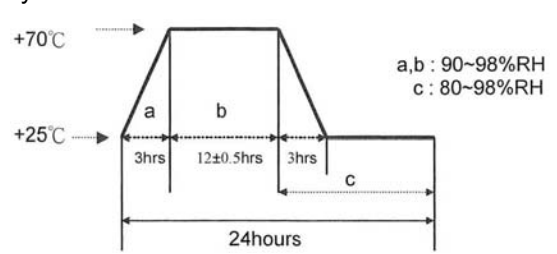
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Mechanical Characteristics

| 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. lead terminals should be wet with solder. (Except the edge of the terminal.) |
| Soldering Heat Resistance | Lead terminals are immersed up to 1.5 mm from the buzzer's body in solder bath of 260 ±5°C for 3 ±1 seconds. | No in interference in operation. |
| Terminal Mechanical Strength | Apply a force of 9.8 N (1.0 kg) to each terminal 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 the SPL should be within ±10 dBA of 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 should meet specifications without any damage to the appearance or performance except SPL. After 4 hours at 25°C, the SPL should be within ±10 dBA of the initial measurement. |
| 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:  | |
| Temp./Humidity cycle | The part shall be subjected to 10 cycles. One cycle will be 24 hours and consist of:  | |

**Part No: CEM-1612****Date: 9/13/2006****Unit: mm****Description: magnetic buzzer****Page No: 4 of 5****Reliability Tests**

| Item | Test Condition | Evaluation Standard |
|-----------------------|---|--|
| Operating (Life Test) | <p>1. Continuous life test: The part will be subjected to 72 hours at 45°C with 12 V, 2048 Hz applied.</p> <p>2. Intermittent life test: A duty cycle of 1 minute on, 1 minute off, a minimum of 10,000 times at room temp. (+25 ±10°C) with 12 V, 2048 Hz applied.</p> | <p>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.</p> |

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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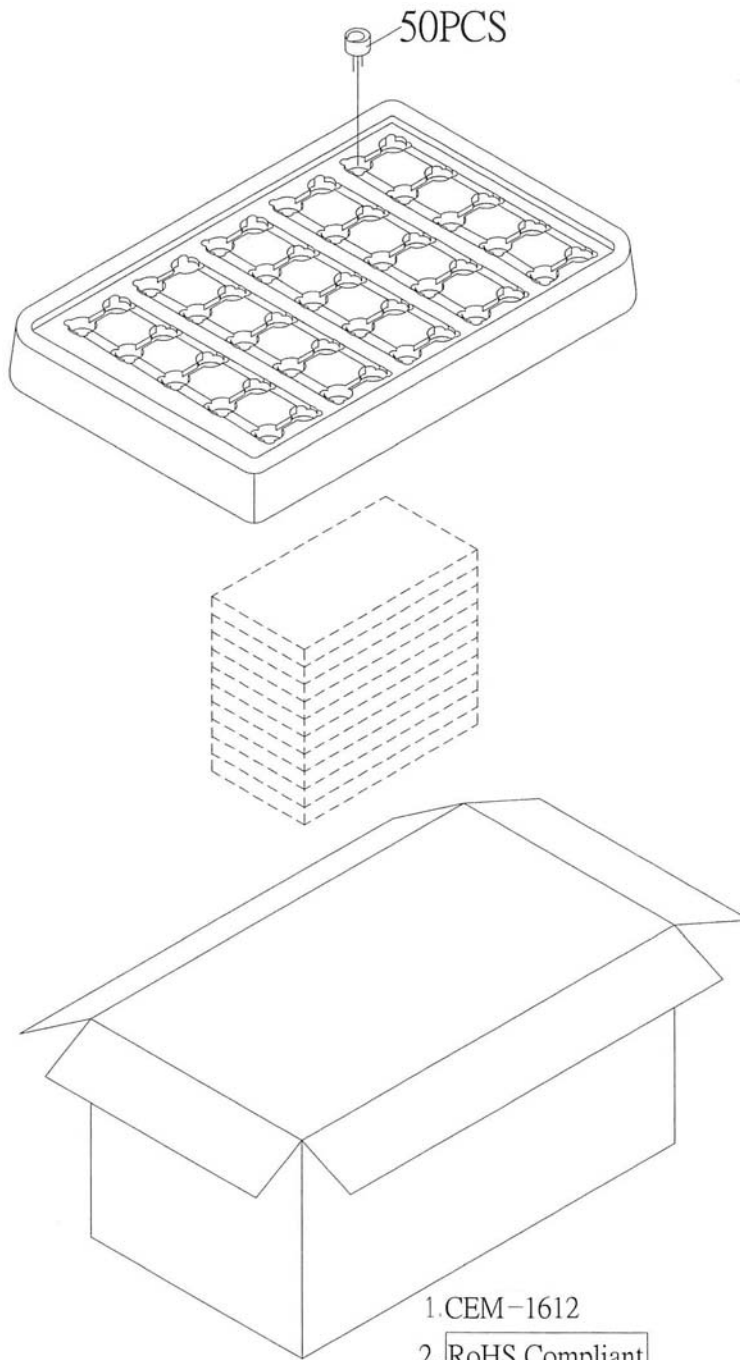
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Packaging



| | | |
|--|-------------------|------------------|
| | 320mmx170mmx28mm | 1x50PCS=50PCS |
| | 340mmx190mmx310mm | 10x50PCS=500PCS |
| | 690mmx390mmx350mm | 4x500PCS=2000PCS |