



soberton inc.

GT MAGNETIC BUZZER

Acoustic Product Specification

Product Number: GT-0601A



Release | Revision: A/2018

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Specifications

| Item | Unit | Specification | Condition |
|-------------------------------------|------|---------------|--|
| Rated Voltage | Vo-p | 1.5 | |
| Operating Volt | Vo-p | 1.0 ~ 3.0 | |
| Current Consumption | mA | 80 Max. | At rated voltage 3.0KHz, square wave, 1/2 duty |
| Coil Resistance | Ω | 6 ±1 | |
| Sound Pressure Level | dB | 70 | At 10cm at rated voltage |
| Oscillation Frequency | Hz | 3000 | |
| Operating Temp | °C | -20 ~ +60 | |
| Storage Temp | °C | -30 ~ +70 | |
| Dimension | mm | φ6.6 × H3.5 | See dimension |
| Weight | gram | 0.4 | |
| Housing Material | | PPO(Black) | |
| Terminal | | Pin type | |
| Environmental Protection Regulation | | RoHS | |

Test condition:

Temperature: +25±2 °C Related humidity: 65±5%

Mechanical Characteristics

| Item | Test condition | Evaluation standard |
|------------------------------|---|---|
| Solderability | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath at +250±5°C for 3±1 seconds | 90% min. lead terminals will be wet with solder (Except the edge of terminal) |
| Soldering Heat Resistance | Lead terminals are immersed in soldering bath at +250±5°C for 3±1 second. | No interference in operation. |
| Terminal Mechanical Strength | Apply the terminal with 1Kg strength for 1 minute | No damage and cutting off |
| Vibration | Buzzer will be measured after being applied vibration of amplitude of 1.5mm with 10Hz to 55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours | The value of oscillation frequency current consumption would be in ±10% compared with initial ones. |
| Drop test | The part only will be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes(X,Y,Z). A total of 9 times. | The SPL would be in ±10dB compared with initial one. |



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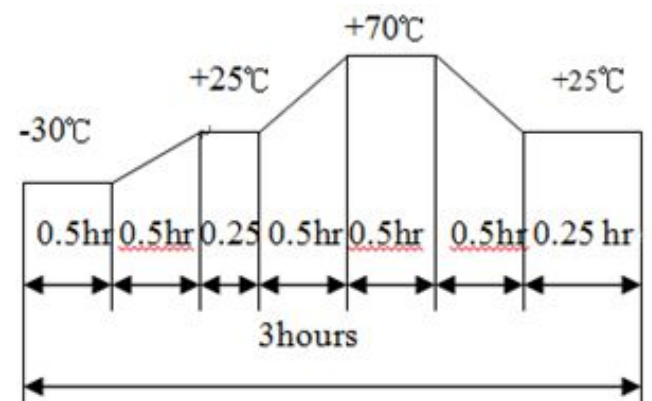
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Environment Test

| Item | Test condition | Evaluation standard |
|-----------------|---|--|
| High temp. test | After being placed in a chamber at +70°C for 96 hours | Being placed for 4 hours at +25°C, buzzer will be measured. |
| Low temp. test | After being placed in a chamber at -30°C for 96 hours | The value of oscillation, frequency / current consumption would be in ±10% compared with initial ones. |
| Humidity test | After being placed in a chamber at +70°C and 90±5% relative humidity for 96 hours | The SPL would be in ±10dB compared with initial one. |

Temp cycle test
The part will be subjected to 5 cycles.
One cycle shall consist of:



Reliability Test

| Item | Test condition | Evaluation standard |
|---------------------|--|---|
| Operating life test | 1. Continuous life test 48 hours continuous operation at +55°C with maximum rated voltage applied | After test, the part will meet specifications without any degradation in appearance and performance except SPL, after 4 hours at +25°C. |
| | 2. Intermittent life test A duty cycle of 1 minute on, 1 minutes off, a minimum of 1000 times at +25±2°C and maximum rated voltage applied | The SPL would be in±10dBA compared with initial one. |

Standard test condition:

- a) Temperature: +5~+35°C
- b) Humidity: 45~85%
- c) Pressure: 860~1060mbar



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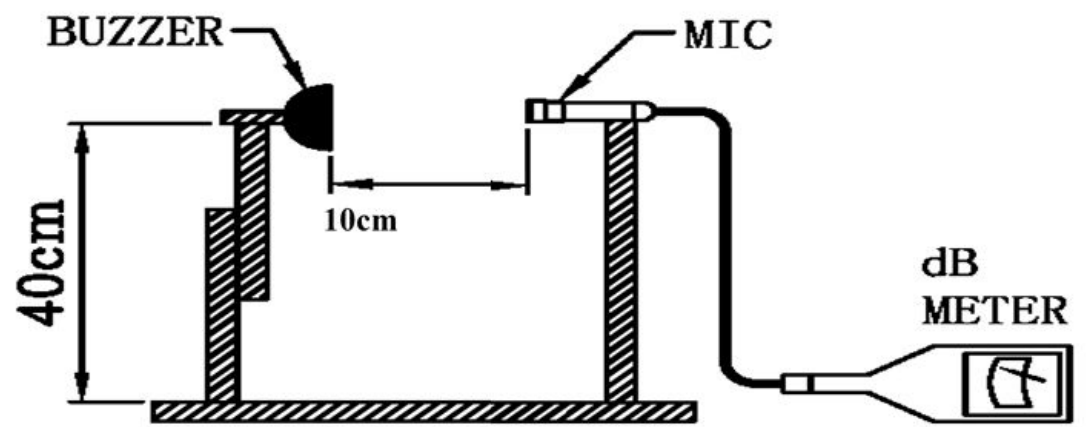
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Measuring Method (Speaker Mode)

S.P.L Measuring Circuit

Input Signal: 1.5Vo-p, 3.0KHz, Square Wave



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

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

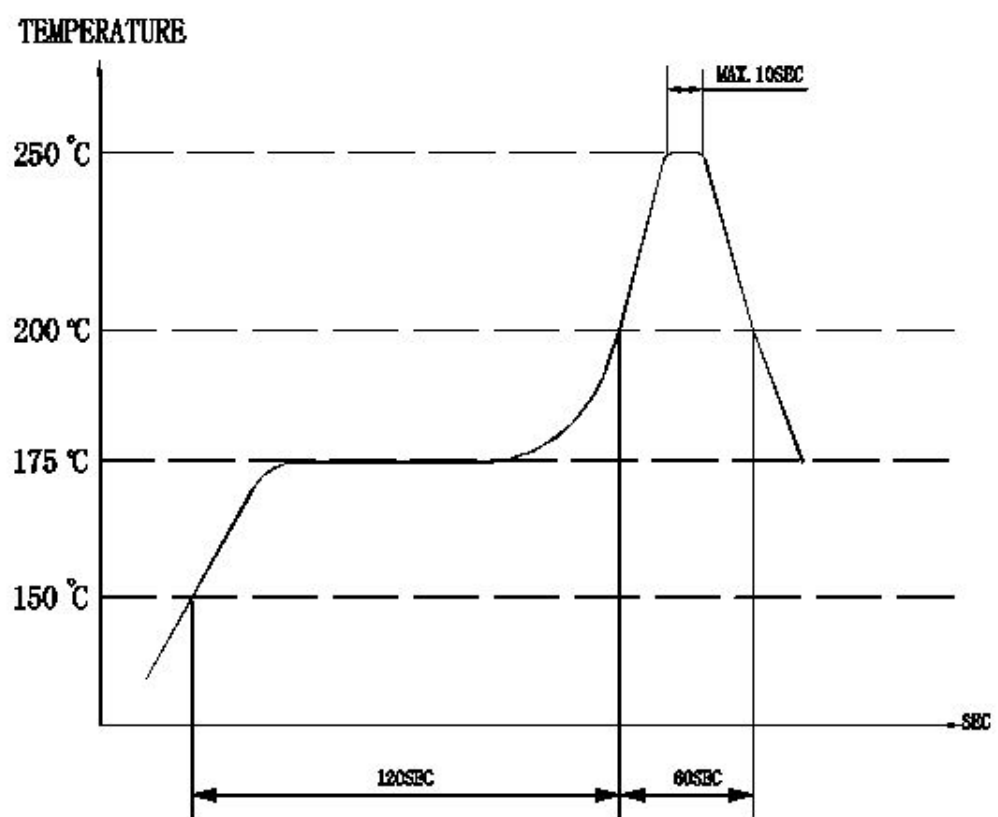
Soldering Condition

S.P.L Measuring Circuit

Recommended reflow soldering condition is as follows

Reflow soldering is twice

Note: It is requested that reflow soldering should be executed after heat of product goes down to normal temperature



Heat resistant line (Use when heat resistant reliability test is performed)

Manual Soldering

Manual soldering temperature 350 °C within 5 sec.



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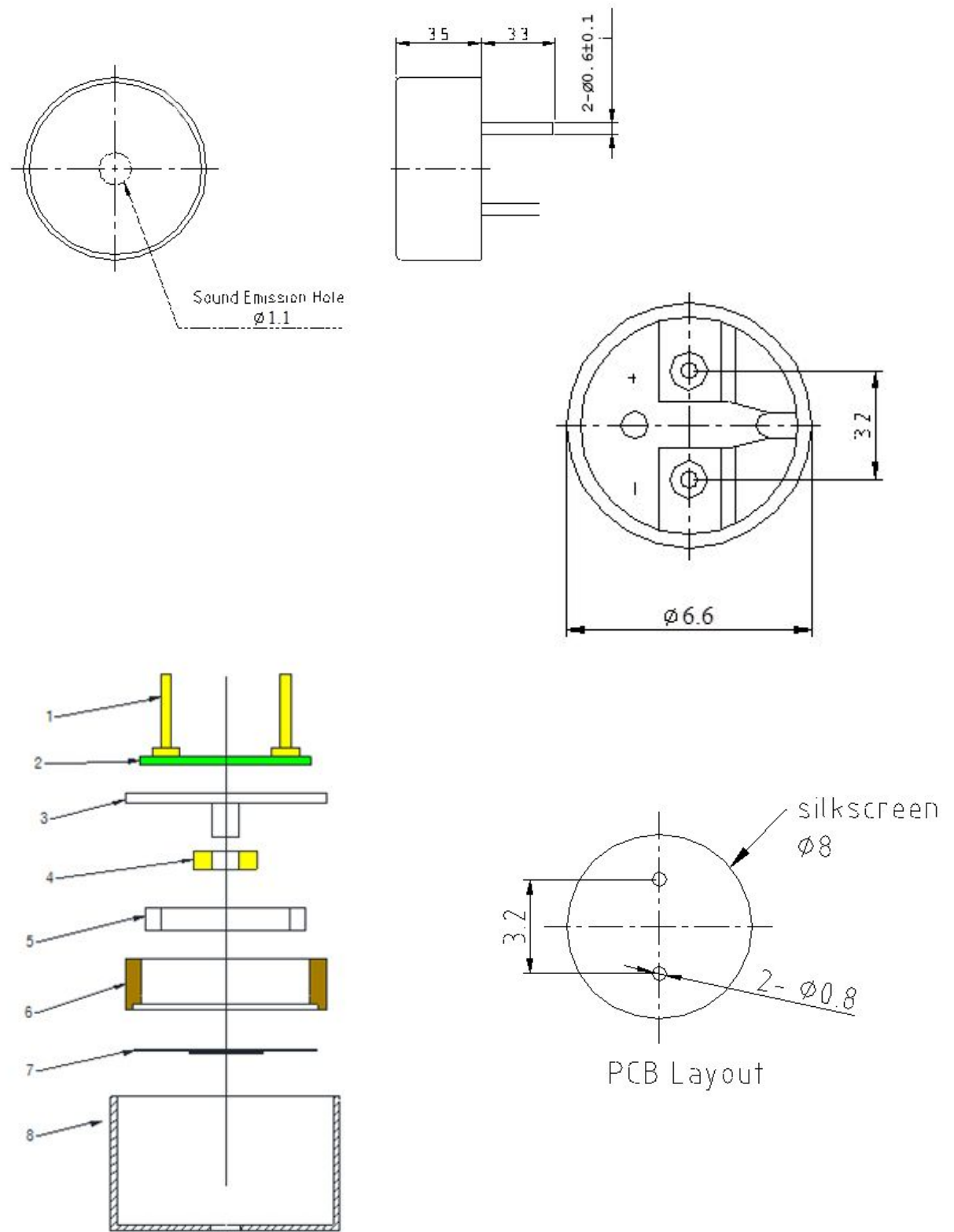
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Dimensions

Tolerance: ± 0.5 (unit: mm)



| No. | Part Name | Material | Quantity |
|-----|---------------|----------------------------------|----------|
| 1 | PIN | Copper | 2 |
| 2 | PCB | Epoxy glass fiber cloth + copper | 1 |
| 3 | Core | Ferrum | 1 |
| 4 | Coil | Copper | 1 |
| 5 | Magnet ring | NdFeB | 1 |
| 6 | Copper collar | Copper | 1 |
| 7 | Diaphragm | Ferrum | 1 |
| 8 | Case | PPO | 1 |



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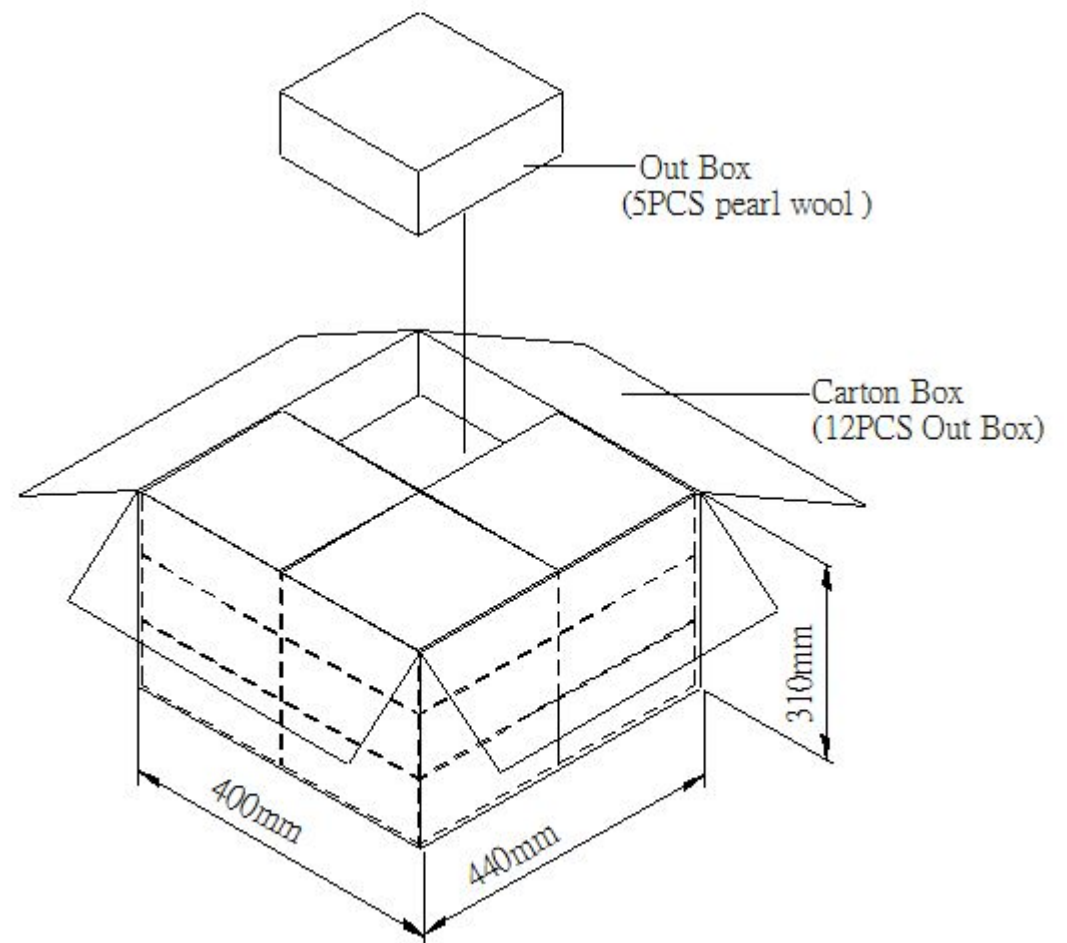
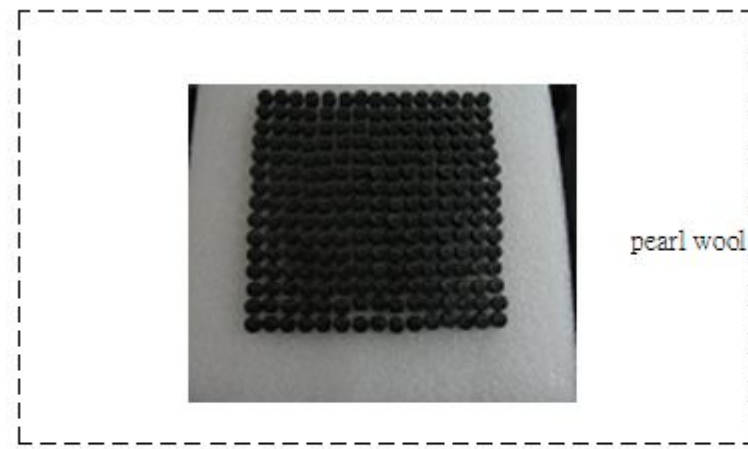
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Details

| | Size (mm) | Quantity (pcs) |
|------------|-----------------|----------------|
| Pearl wool | 184 x 184 x 10 | 225 |
| Small box | 200 x 190 x 100 | 1125 |
| Big box | 440 x 400 x 310 | 13500 |