# GT MAGNETIC BUZZER

## Acoustic Product Specification

**Product Number:** GT-0950RP3

## CONTENTS

- Page 1: Specifications
- Page 2: Mechanical Characteristics
- Page 3: Environment Test
- Page 4: Reliability Test
- Page 5: Recommended Temperature Profile
- Page 6: Measurement Test Circuit
- Page 7: Inspection Fixture
- Page 8: Frequency Response Curve
- Page 9: Dimensions
- Page 10: Packing

---

## Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Specification</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Voltage</td>
<td>Vo-p</td>
<td>5.0</td>
<td>Vo-p</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>Vo-p</td>
<td>4.0 ~ 6.0</td>
<td>At rated voltage, 3200Hz square wave, ½ duty</td>
</tr>
<tr>
<td>Mean Current</td>
<td>mA</td>
<td>80 Max.</td>
<td></td>
</tr>
<tr>
<td>Coil Resistance</td>
<td>Ω</td>
<td>30 ±15%</td>
<td></td>
</tr>
<tr>
<td>Sound Output</td>
<td>dB</td>
<td>89</td>
<td>At 10cm(A-weight free air), at rated voltage 3200Hz, square wave, ½ duty</td>
</tr>
<tr>
<td>Rated Frequency</td>
<td>Hz</td>
<td>3200</td>
<td></td>
</tr>
<tr>
<td>Operating Temp</td>
<td>°C</td>
<td>-20 ~ +60</td>
<td></td>
</tr>
<tr>
<td>Storage Temp</td>
<td>°C</td>
<td>-30 ~ +70</td>
<td></td>
</tr>
<tr>
<td>Dimension</td>
<td>mm</td>
<td>φ 9.0×H4.3</td>
<td>See attached drawing</td>
</tr>
<tr>
<td>Weight</td>
<td>gram</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td></td>
<td>PPO (Black)</td>
<td></td>
</tr>
<tr>
<td>Terminal</td>
<td></td>
<td>Pin type (Plating Au)</td>
<td>See attached drawing</td>
</tr>
<tr>
<td>Environmental Protection Regulation</td>
<td></td>
<td>RoHS</td>
<td></td>
</tr>
</tbody>
</table>

## Test condition

**Temperature:** 25±2°C  **Related humidity:** 65±5%  **Air pressure:** 86 - 106KPa

## Mechanical Characteristics

<table>
<thead>
<tr>
<th>Item</th>
<th>Test condition</th>
<th>Evaluation standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solderability</td>
<td>Lead terminal are immersed in rosin for 5 seconds and then immersed in the solder bath at +250±5°C for 3±1 seconds.</td>
<td>90% min. lead terminals shall be wet with solder. No interference in operation.</td>
</tr>
<tr>
<td>Soldering Heat Resistance</td>
<td>The product follows the reflow temperature curve to test its reflow thermal stability.</td>
<td></td>
</tr>
<tr>
<td>Terminal Mechanical Strength</td>
<td>The force of 9.8N is applied to each terminal in axial direction for 10 seconds.</td>
<td>No damage and cutting off.</td>
</tr>
<tr>
<td>Vibration</td>
<td>The part shall be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3G). The vibration test shall consist of 2 hours per axis in each 3 axes (X,Y,Z). Total 6 hours.</td>
<td>After the test, the part shall meet specifications without any damage in appearance and performance except SPL. The SPL should be in ±10dBA compared with initial one.</td>
</tr>
<tr>
<td>Drop Test</td>
<td>The part is dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes (X,Y,Z). Total of 9 times.</td>
<td></td>
</tr>
</tbody>
</table>
Environment Test

<table>
<thead>
<tr>
<th>Item</th>
<th>Test condition</th>
<th>Evaluation standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Temp. Test</td>
<td>The part is placed in a chamber at +70°C for 96 hours.</td>
<td>After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25°C, the SPL should be in ±10dBA compared with initial one.</td>
</tr>
<tr>
<td>Low Temp. Test</td>
<td>The part is placed in a chamber at -30°C for 96 hours.</td>
<td></td>
</tr>
<tr>
<td>Thermal Shock</td>
<td>The part shall be subjected to 10 cycles. Each cycle shall consist of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-30°C → +70°C → 30min → 30min → 60min</td>
<td></td>
</tr>
<tr>
<td>Temp./Humidity Cycle</td>
<td>The part shall be subjected to 10 cycles. One cycle shall be 24 hours and consist of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+70°C → +25°C → 12±0.5hrs → a → b → c → 24hrs → 3hrs</td>
<td></td>
</tr>
</tbody>
</table>

Reliability Test

<table>
<thead>
<tr>
<th>Item</th>
<th>Test condition</th>
<th>Evaluation standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Life Test</td>
<td>Ordinary Temperature The part shall be subjected to 96 hours of continuous operation at +25±10°C.</td>
<td>After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25°C, the SPL should be in ±10dBA compared with initial one.</td>
</tr>
<tr>
<td></td>
<td>High Temperature The part shall be subjected to 72 hours of continuous operation at +60°C at 5.0V, 3200Hz applied.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low Temperature The part shall be subjected to 72 hours of continuous operation at -20°C at 5.0V, 3200Hz applied.</td>
<td></td>
</tr>
</tbody>
</table>

Standard test condition:

- a) Temperature: +5--+35°C
- b) Humidity: 45~85%
- c) Pressure: 86~106KPa
Recommended wave soldering condition is as follows:

**Note 1:** It is requested that reflow soldering should be executed after heat of product goes down to normal temperature.

**Note 2:** Peak reflow temperature of 250°C maximum of 10 seconds, with a maximum duration of 40-60 seconds between 220°C and 250°C.

---

### Measurement Test Circuit

![Measurement Test Circuit Diagram]

S.P.L Measuring Circuit

Input Signal: 5.0 Vp-p, square wave, ½ duty, 3200Hz

---

### Inspection Fixture

![Inspection Fixture Diagram]

BUZZER

Sound Level Meter TES1350A

---

Note: This document contains the technical specifications for the electromagnetic buzzer.
CONTENTS
This document contains the technical specifications for the electromagnetic buzzer.

Page 1
Specifications
Mechanical Characteristics

Page 2
Environment Test
Reliability Test

Page 3
Recommended Temperature Profile
Measurement Test Circuit
Inspection Fixture

Page 4
Frequency Response Curve

Page 5
Dimensions

Page 6
Packing
This document contains the technical specifications for the electromagnetic buzzer.

**CONTENTS**

- **Page 1**: Specifications
  - Mechanical Characteristics
- **Page 2**: Environment Test
  - Reliability Test
- **Page 3**: Recommended Temperature Profile
  - Measurement Test Circuit
  - Inspection Fixture
- **Page 4**: Frequency Response Curve
- **Page 5**: Dimensions
- **Page 6**: Packing

---

**No.** | **Part Name** | **Material** | **Quantity**
---|---|---|---
1 | Case | PPO | 1
2 | Diaphragm | Ferrum | 1
3 | Case | PPO | 1
4 | Magnet Ring | NdFeB | 1
5 | Coil | Copper | 1
6 | Core | Ferrum | 1
7 | PCB | Epoxy Glass Fiber Cloth + Copper | 1
8 | PIN | Copper | 2

Tolerance: ±0.5 (unit: mm)
CONTENTS
This document contains the technical specifications for the electromagnetic buzzer.

Page 1
Specifications
Mechanical Characteristics

Page 2
Environment Test
Reliability Test

Page 3
Recommended Temperature Profile
Measurement Test Circuit
Inspection Fixture

Page 4
Frequency Response Curve

Page 5
Dimensions

Page 6
Packing

Packing

<table>
<thead>
<tr>
<th>Packing Box</th>
<th>L x W x H (mm)</th>
<th>Pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tray</td>
<td>190 x 190 x 25</td>
<td>100</td>
</tr>
<tr>
<td>Inner cartons</td>
<td>210 x 210 x 220</td>
<td>1,500</td>
</tr>
<tr>
<td>Outer cartons</td>
<td>430 x 430 x 250</td>
<td>6,000</td>
</tr>
</tbody>
</table>