GT MAGNETIC BUZZER
Acoustic Product Specification

Product Number: GT-111P

Release | Revision: D/2018

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

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>1.5</td>
<td>Vo-p</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>Vo-p</td>
<td>1.0 ~ 3.0</td>
<td></td>
</tr>
<tr>
<td>Mean Current</td>
<td>mA</td>
<td>15 Max.</td>
<td>At rated voltage, 2048Hz square wave, ½ duty</td>
</tr>
<tr>
<td>Coil Resistance</td>
<td>Ω</td>
<td>50±7</td>
<td></td>
</tr>
<tr>
<td>Sound Output</td>
<td>dB</td>
<td>80</td>
<td>At 10cm(A-weight free air), at rated voltage 2048Hz, square wave, ½ duty</td>
</tr>
<tr>
<td>Rated Frequency</td>
<td>Hz</td>
<td>2048</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 12.0×H8.5</td>
<td>See attached drawing</td>
</tr>
<tr>
<td>Weight</td>
<td>gram</td>
<td>2.0</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 Sn)</td>
<td>See attached drawing</td>
</tr>
</tbody>
</table>

Environmental Protection Regulation
RoHS

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 terminals are immersed in the solder bath at +260±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.</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 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 5 cycles. Each cycle shall consist of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Thermal Shock Diagram" /></td>
<td></td>
</tr>
<tr>
<td>Temp./Humidity Cycle</td>
<td>The part shall be subjected to 5 cycles. One cycle shall be 24 hours and consist of:</td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Temp./Humidity Cycle Diagram" /></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 1.5V, 2048Hz 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 1.5V, 2048Hz 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 wave temperature of 235°C ~ 250°C maximum of 10 seconds.

---

Measurement Test Circuit

Inspection Fixture
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
**GT MAGNETIC BUZZER**

Acoustic Product Specification

**Product Number:** GT-111P

**Release | Revision:** D/2018

**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

---

**Dimensions**

Tolerance: ±0.5 (unit: mm)

---

<table>
<thead>
<tr>
<th>No.</th>
<th>Part Name</th>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cover</td>
<td>PPO</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Diaphragm</td>
<td>Iron</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Base</td>
<td>PPO</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Magnet</td>
<td>NdFeB</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Coil</td>
<td>Copper</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Core</td>
<td>Iron</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>PCB</td>
<td>Epoxy Glass Fiber Cloth + Copper</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>PIN</td>
<td>Copper</td>
<td>2</td>
</tr>
</tbody>
</table>
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 Box | L x W x H (mm) | Pieces
---|---|---
Foam Tray | 240 x 160 x 30 | 1 x 100PCS = 100PCS
Plastic Bag |  | 10 x 100PCS = 1,000PCS
Carton Box | 520 x 420 x 280 | 5 x 1,000PCS = 5,000PCS