



PUIaudio



Data Sheet

AI-1027-TWT-5V-R

Features:

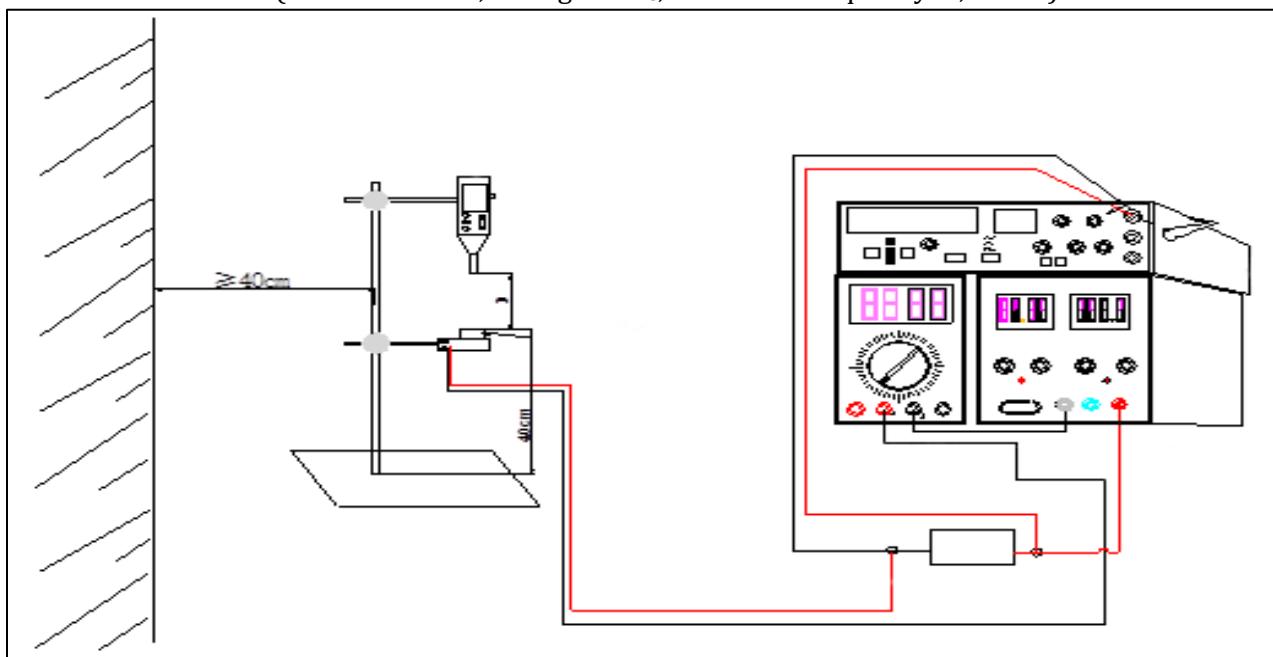
- Top-firing, thru-hole magnetic indicator
- 5 V_{DC}, 2700 Hz resonant frequency
- Wave solder and wash allowed

Specifications

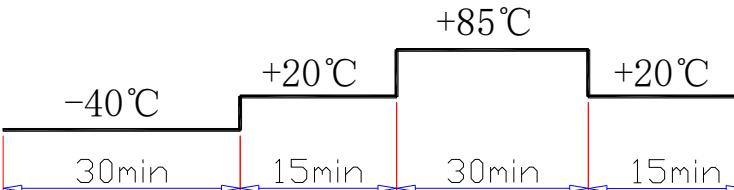
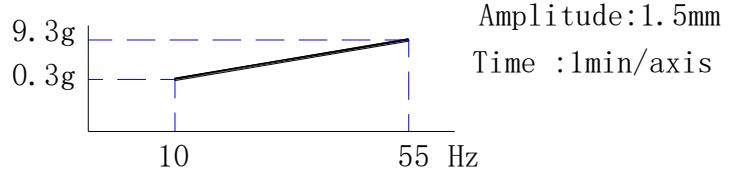
| Parameters | Values | Units |
|-------------------------------|--------------------------|-----------------|
| Rated Voltage | 5 | V _{DC} |
| Operating Voltage Range | 3 ~ 7 | V _{DC} |
| Current Draw at Rated Voltage | 30 | mA |
| Minimum SPL @ 10cm | 80 | dBA |
| Resonant Frequency | 2,700±200 | Hz |
| Tone or Pulse Rate | Continuous | - |
| Housing Material | PBT | - |
| Terminal Material | Sn Plated Brass (DSn) | - |
| Weight | 1 | Grams |
| Acceptable Soldering Methods | Hand Solder, Wave Solder | - |
| Environmental Compliances | RoHS | - |
| Storage Temperature | -40 ~ +85 | °C |
| Operating Temperature | -30 ~ +70 | °C |

Measurement Method (Temperature: 25±3°C; Relative Humidity: 60% ~ 70%)

Standard test fixture (Distance: 10cm; Voltage: 5V_{DC}; Resonant Frequency: 2,700Hz)

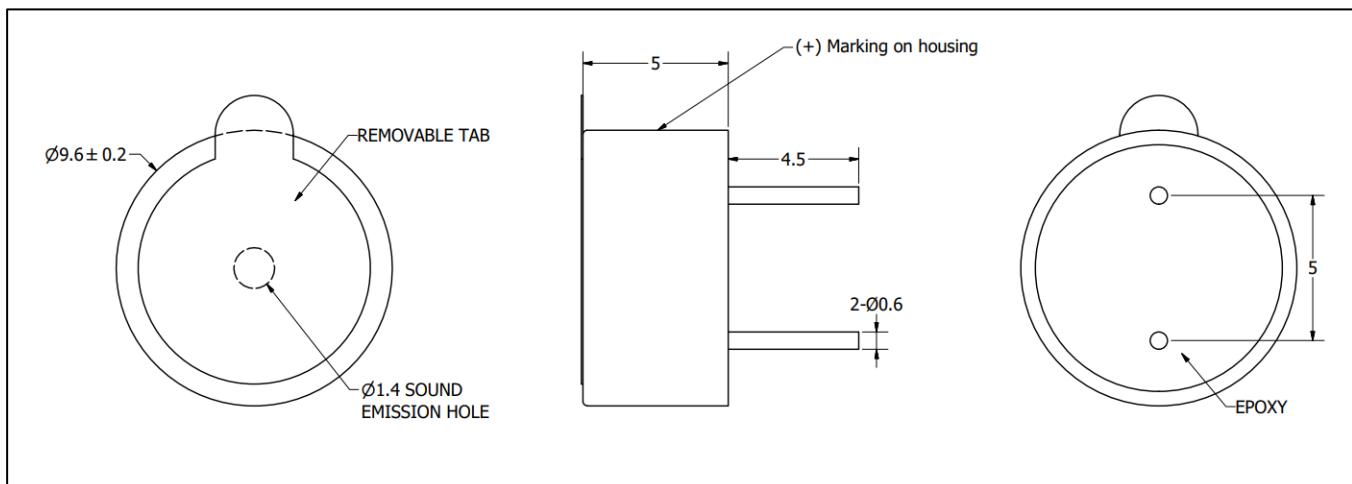


Reliability Testing

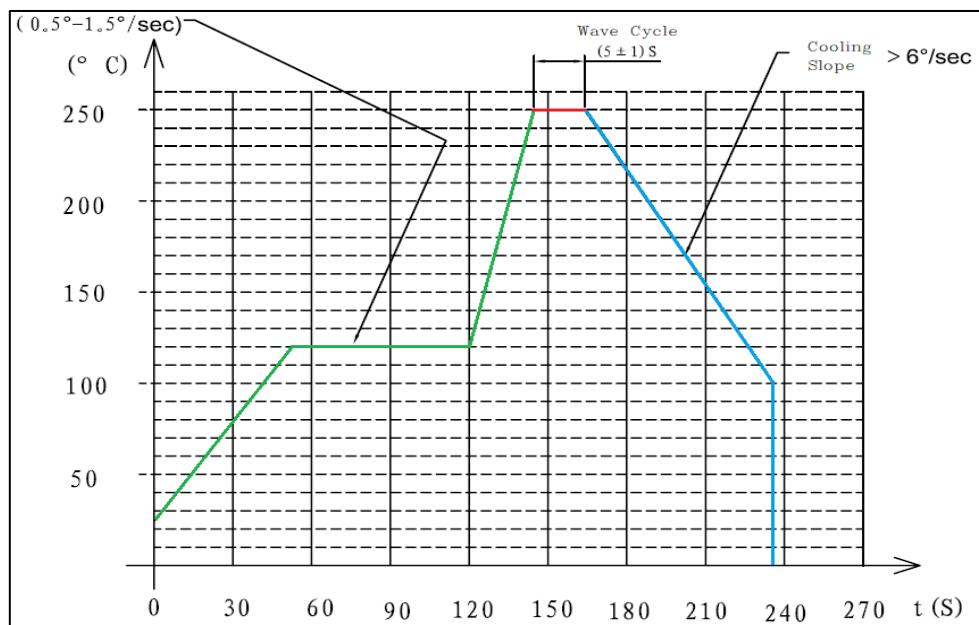
| Type of Test | Test Specifications |
|---------------------------|---|
| High Temperature Test | 96 hours at $+85 \pm 2^\circ\text{C}$, then rest at room temperature for 2 hours without applying power |
| Low Temperature Test | 96 hours at $-40 \pm 2^\circ\text{C}$, then rest at room temperature for 2 hours without applying power |
| Humidity Test | 96 hours at $+80 \pm 2^\circ\text{C}$ with relative humidity at 95% then rest at room temperature for 2 hours without applying power |
| Temperature Cycle Testing |  <p>+85°C -40°C +20°C 30min 15min 30min 15min</p> <p>Test for 5 cycles without applying power then rest at room temperature for 2 hours</p> |
| Vibration Test |  <p>Amplitude: 1.5mm Time : 1min/axis 9.3g 0.3g 10 55 Hz</p> <p>Test each direction for 2 hours (6 hours total)</p> |
| Drop Test | Drop from 100cm onto the surface of a 1cm thick board in each direction (X, Y, Z) |

All parts shall meet specifications after testing. SPL shall be within $\pm 5\text{dB}$.

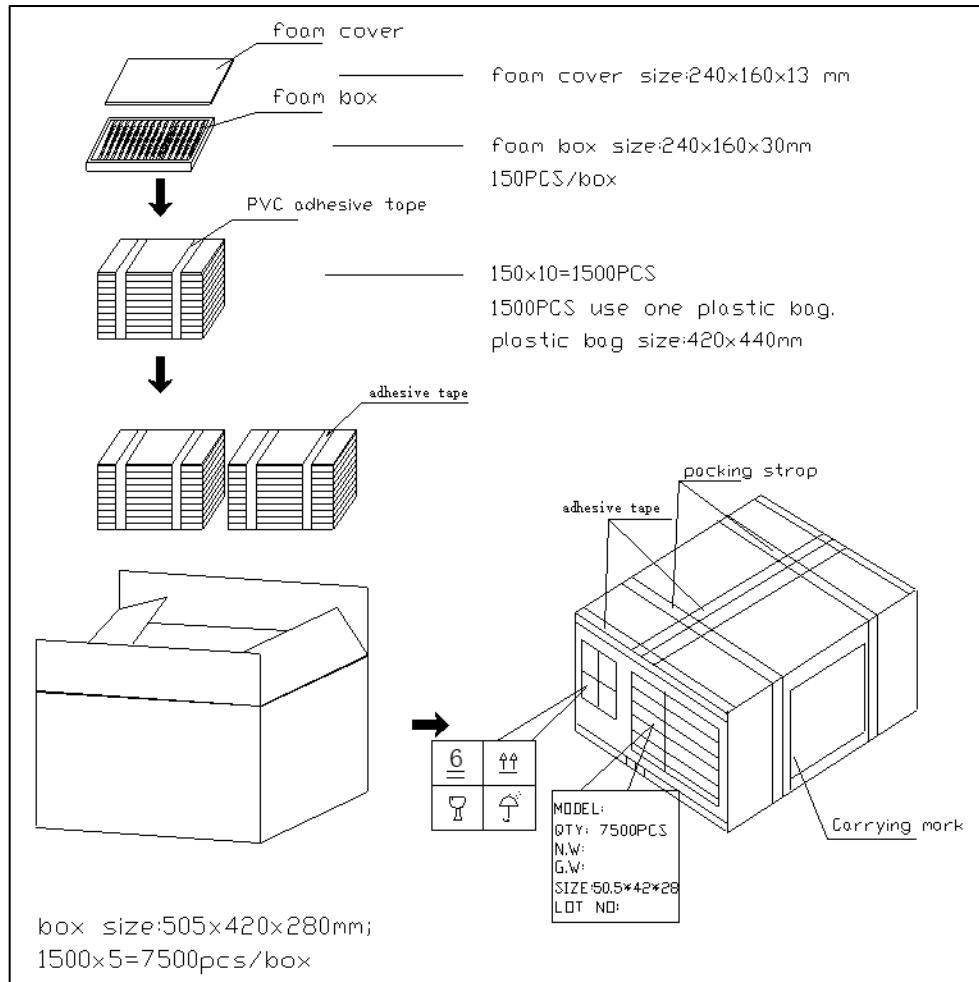
Dimensions



Recommended Wave Solder Profile



Packaging



Specifications Revisions

| Revision | Description | Date | Approved |
|-----------------|---|-------------|-----------------|
| - | RELEASED FROM ENGINEERING | 04/29/2005 | - |
| A | REVISED DIMENSION SIZE AND STYLE | 11/28/2005 | BR |
| B | ADDED POSITIVE TERMINAL LOCATION | 11/03/2006 | BR |
| C | REVISED PART NUMBER ON LABEL | 01/23/2007 | DF |
| D | REMOVED PRODUCT LABELING | 08/07/2008 | BR |
| E | REVISED TO INVENTOR 3D DRAWING TEMPLATE | 10/11/2008 | BR |
| F | REMOVED POLARITY MARKING FROM WASH TAB, UPDATED HOUSING MATERIAL TO PBT | 10/21/2015 | BR |
| G | REVISED OPERATING TEMPERATURE | 02/14/2020 | ML |
| H | Update Spec Format, Add details for packaging, reliability, etc. | 06/18/2024 | ML |

Note:

1. Unless otherwise specified:
 - A. All dimensions are in millimeters.
 - B. Default tolerances are $\pm 0.5\text{mm}$ and angles are $\pm 3^\circ$.
2. Specifications subject to change or withdrawal without notice.