



# PUIaudio



## Data Sheet

AI-1027-TWT-3V-R

### Features:

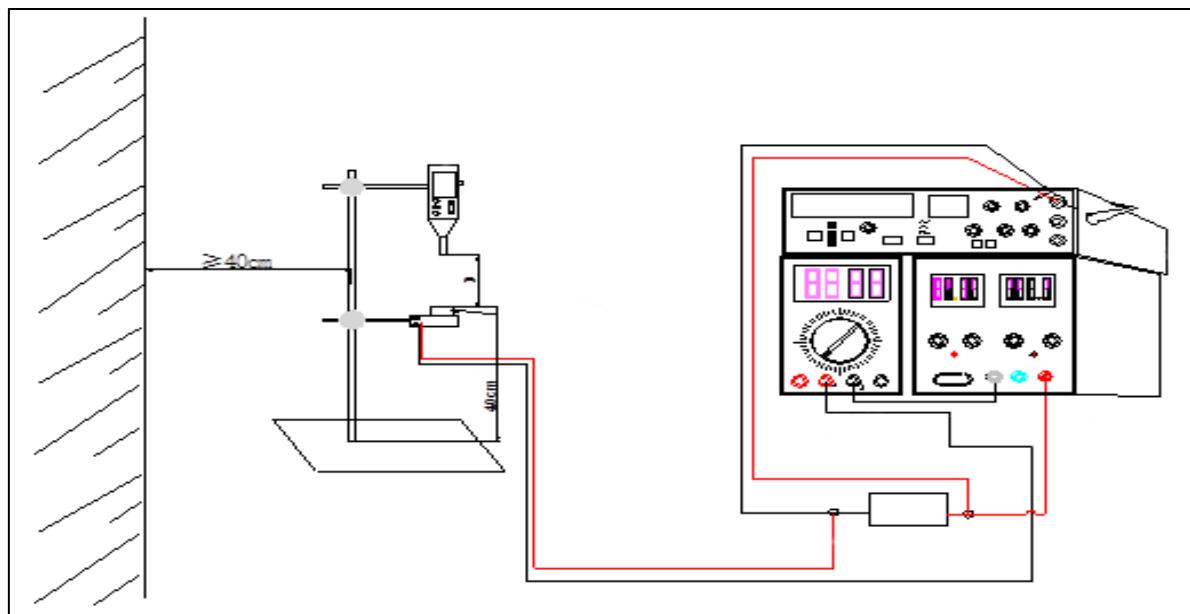
- Top-firing, thru-hole magnetic indicator
- 3 V<sub>DC</sub>, 2700 Hz resonant frequency
- Wave solder and Wash allowed

### Specifications

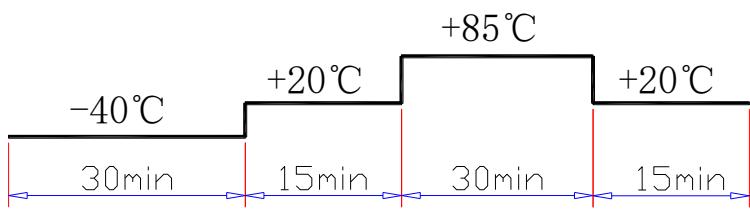
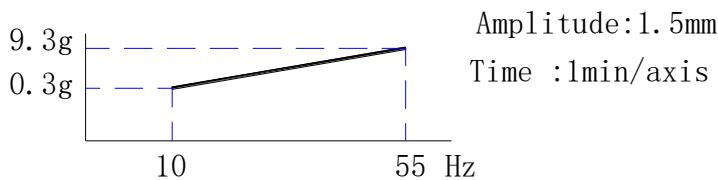
| Parameters                    | Values                   | Units           |
|-------------------------------|--------------------------|-----------------|
| Rated Voltage                 | 3                        | V <sub>DC</sub> |
| Operating Voltage Range       | 2 ~ 5                    | V <sub>DC</sub> |
| Current Draw at Rated Voltage | 30                       | mA              |
| Minimum SPL @ 10cm            | 80                       | dBA             |
| Resonant Frequency            | 2,700 ± 300              | Hz              |
| Tone or Pulse Rate            | Continuous               | -               |
| Housing Material              | PBT                      | -               |
| Terminal Material             | SN Plated Red Copper     | -               |
| Weight                        | 1.0                      | Grams           |
| Acceptable Soldering Methods  | Hand Solder, Wave Solder | -               |
| Environmental Compliances     | RoHS/REACH               | -               |
| Storage Temperature           | -40 ~ +85                | °C              |
| Operating Temperature         | -30 ~ +70                | °C              |

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

Standard test fixture (Voltage: 3 V<sub>DC</sub>; Resonant Frequency: 2,700Hz)

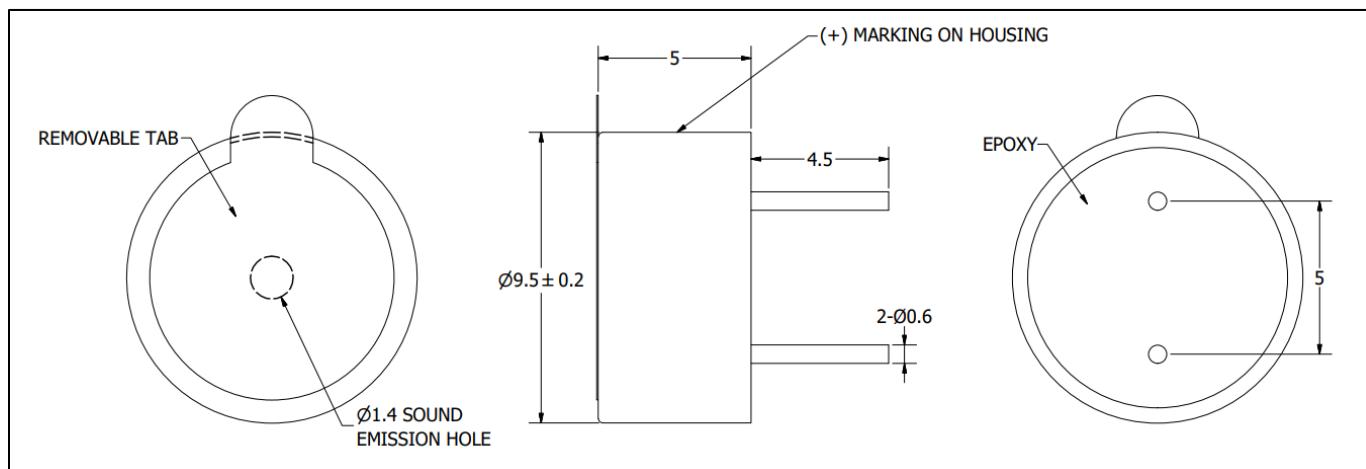


## Reliability Testing

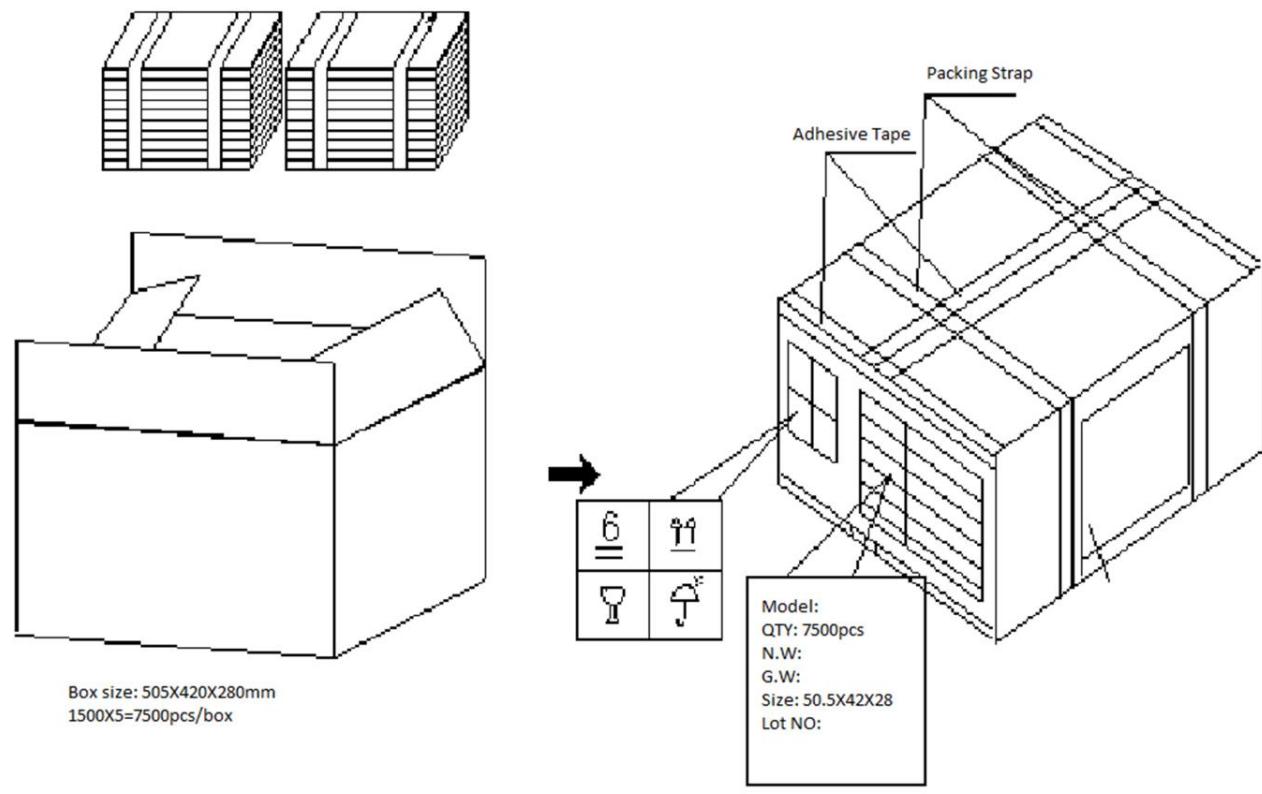
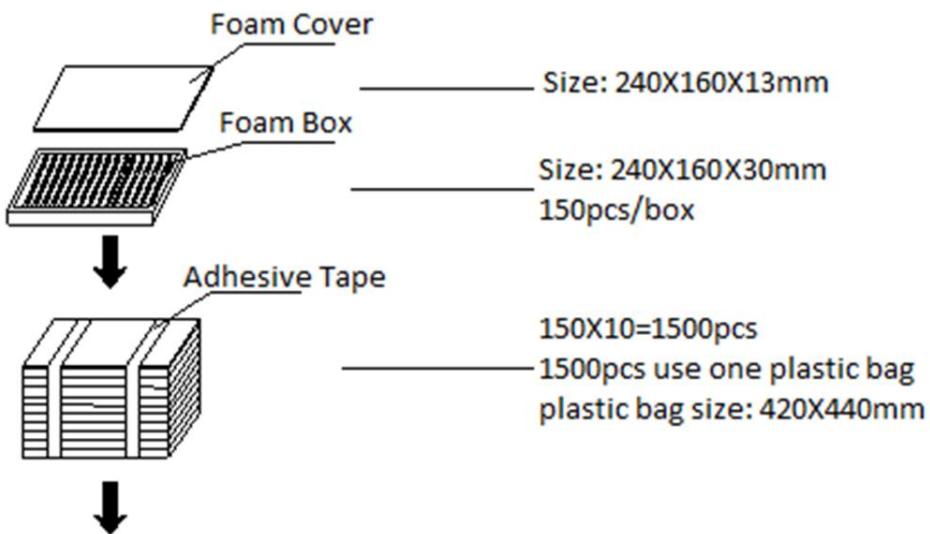
| Type of Test              | Test Specifications   |
|---------------------------|---|
| High Temperature Test     | 96 hours at $+85 \pm 2^\circ\text{C}$ , then rest at room temperature for 2 hours without applying power  |
| Low Temperature Test      | 96 hours at $-40 \pm 2^\circ\text{C}$ , then rest at room temperature for 2 hours without applying power  |
| Humidity Test             | 24 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<br/>+20°C<br/>-40°C<br/>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<br/>Time : 1min/axis<br/>9.3g 0.3g 10 55 Hz</p>  |
| Drop Test                 | Drop from 100cm onto the surface of a 1cm thick board   |

After these tests, the change in SPL should be within  $\pm 5\text{dB}$

## Dimensions



## Packaging



**Specifications Revisions**

| <b>Revision</b> | <b>Description</b>  | <b>Date</b> | <b>Approved</b> |
|-----------------|---|-------------|-----------------|
| -               | RELEASED FROM ENGINEERING   | 04/29/2005  | -               |
| A               | ADDED POSITIVE TERMINAL LOCATION  | 11/03/2006  | BR              |
| B               | REMOVE PRODUCT LABELING   | 08/07/2008  | BR              |
| C               | REVISED TO 3D DRAWING TEMPLATE  | 11/09/2008  | BR              |
| D               | REMOVED POLARITY INDICATION FROM WASH TAB AND UPDATED HOUSING MATERIAL TO PBT | 10/21/2015  | BR              |
| E               | ADJUST RESONANT FREQUENCY TOLERANCE TO 300HZ                                  | 09/13/2017  | ML              |
| F               | REVISED OPERATING TEMPERATURE   | 02/14/2020  | ML              |
| G               | 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.