



# PUI audio



Data Sheet

AT-1438-TWT-R

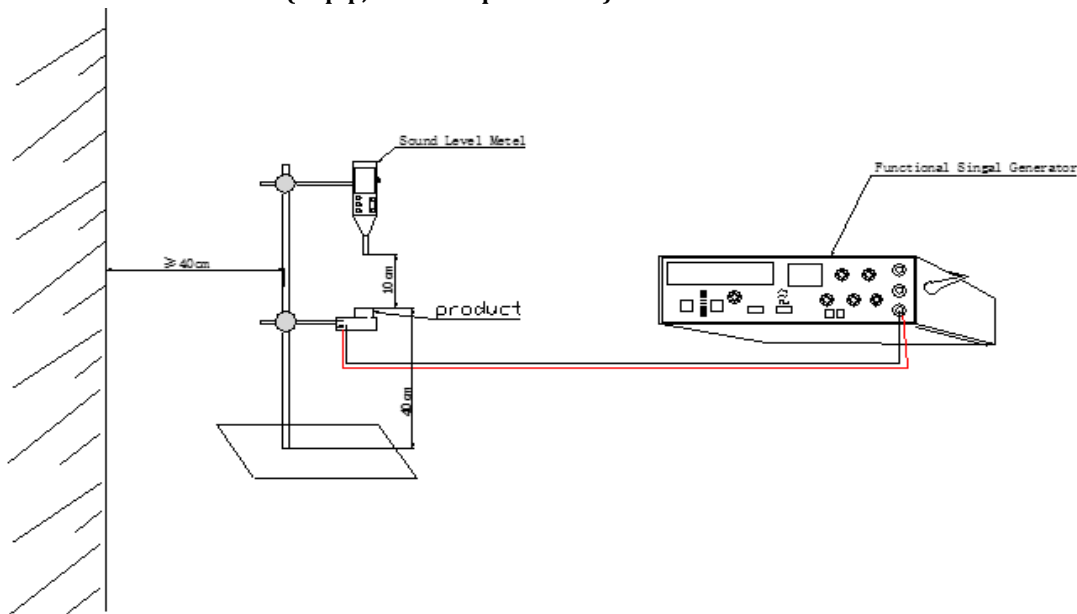
## Features:

- Piezo Transducer
- 5Vp-p rated, 3800Hz
- Wave Solder and Wash Allowed

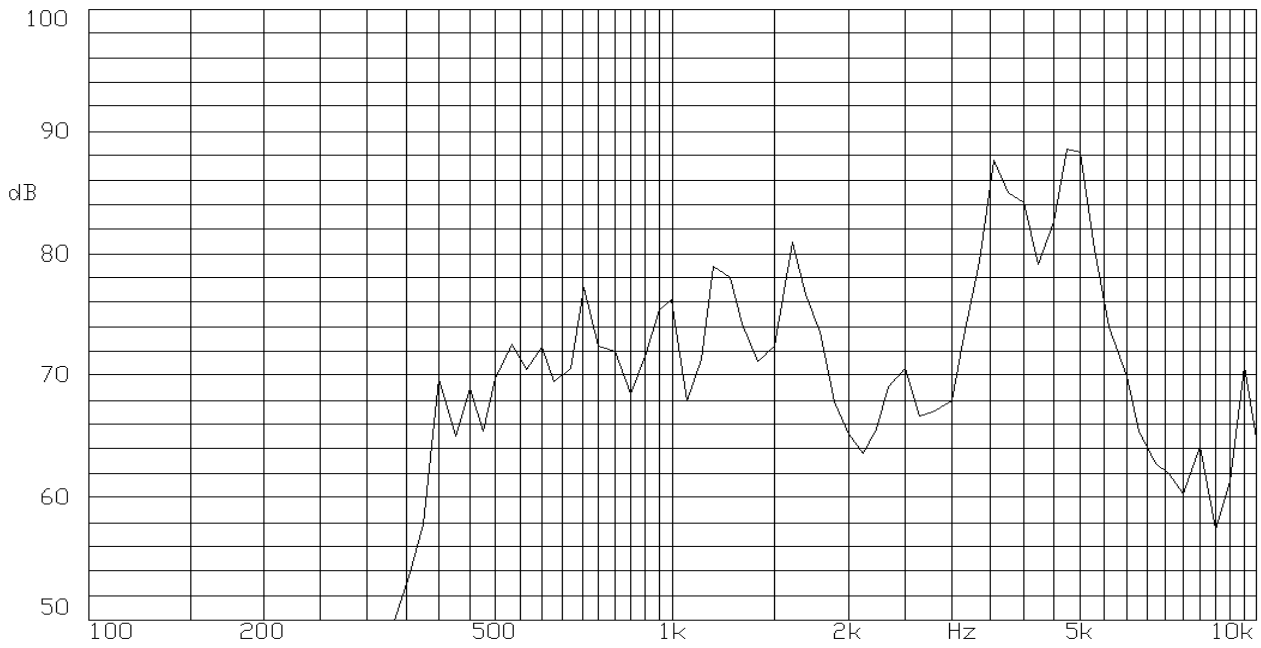
## Specifications

Parameters	Values	Units
Rated Voltage	5	Vp-p
Operating Voltage Range	1 ~ 20	Vp-p
Current Draw at Rated Voltage	1(Max.)	mA
Capacitance at 120Hz	13,000 ± 30%	pF
Minimum SPL @ 10cm	80	dBA
Resonant Frequency	3,800 ± 300	Hz
Housing Material	Noryl	-
Terminal Material	Sn Plated Copper	-
Weight	1	Grams
Acceptable Soldering Methods	Hand Solder, Wave Solder	-
Environmental Compliances	ROHS/REACH	Exemption 7c-1
Moisture Sensitivity Level	-	-
Storage Temperature	-40 ~ +85	°C
Operating Temperature	-40 ~ +70	°C

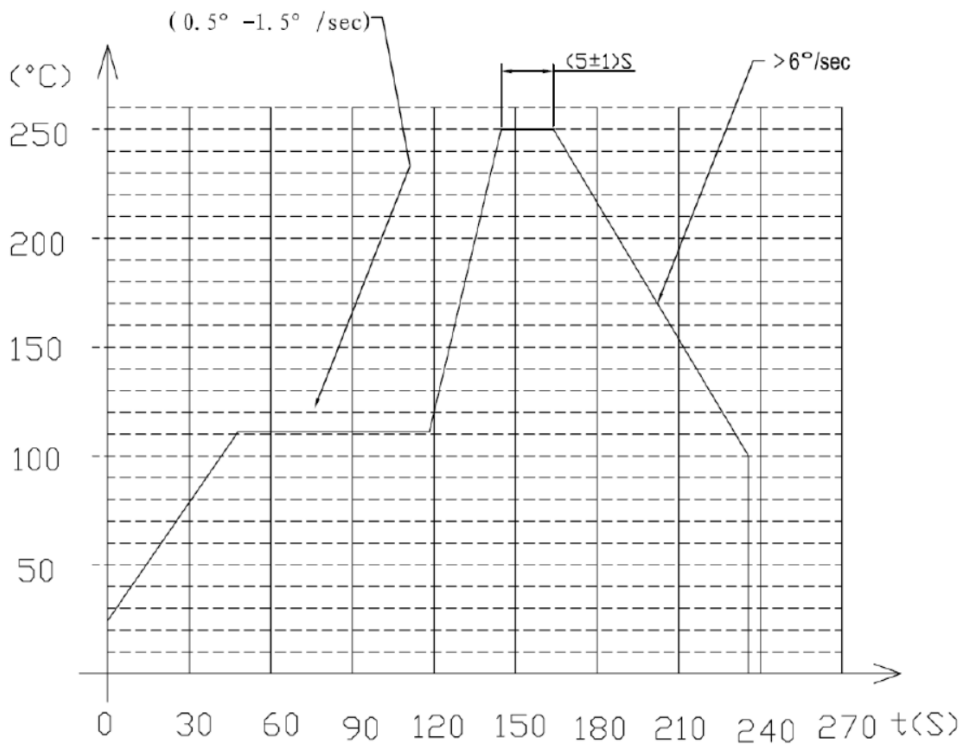
## Measurement Method (5Vp-p, 3800Hz square wave)



### Typical Frequency Response (5Vpp, 3800Hz, 10cm)



### Recommended Wave Soldering Procedure

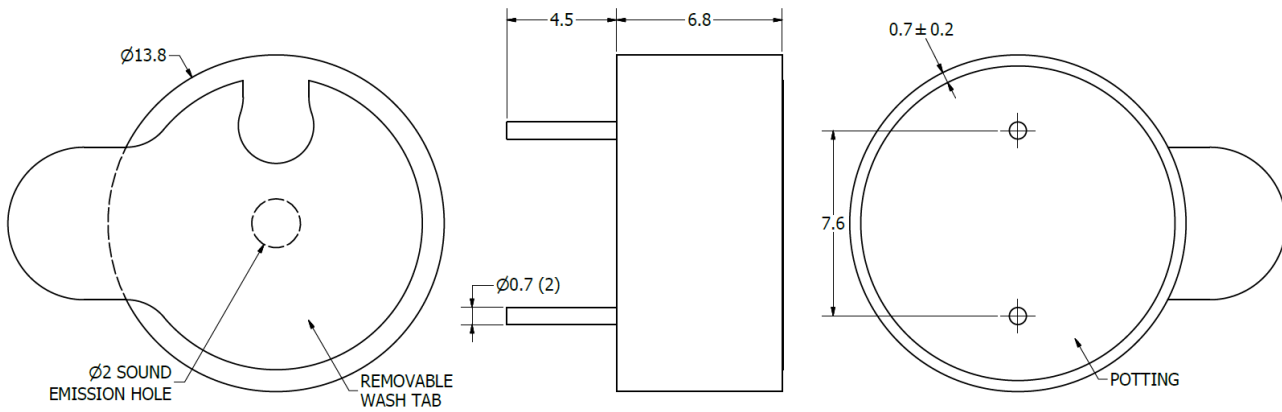


## Reliability Testing

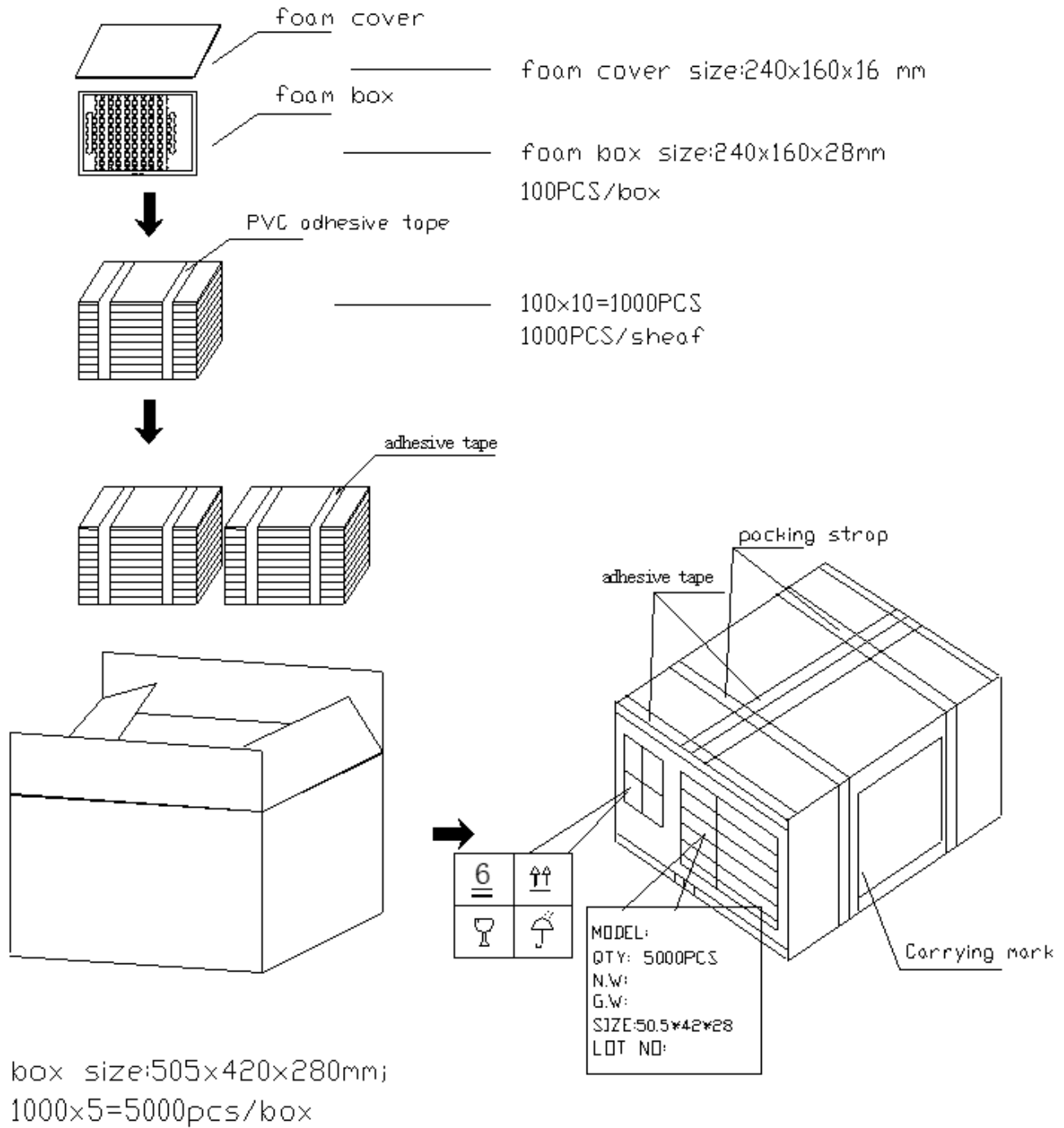
Type of Test	Test Specifications
High Temperature Test	Storage in $+70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
Low Temperature Test	Storage in $-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
Humidity Test	Storage in $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 90-95%RH test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
Temperature Cycle Testing	<p>Make this test for 5 cycles without applying power, then expose to the room temperature for 2 hours.</p>
Vibration Test	<p>Make this test for the directions of X,Y, Z for 2 hours each (total 6 hours).</p>
Drop Test	Free drop a unit from the height 70cm to the surface of 10mm thick board ,three directions(X,Y,Z).

**Parts pass after tests and SPL within  $\pm 5\text{dB}$**

## Dimensions



## Packaging



### Specification Revisions

Revision	Description	Date	Approved
-	RELEASED FROM ENGINEERING	08/17/2004	-
A	REMOVED LEAD FREE, ADDED RoHS NOTE	08/10/2005	-
B	REVISED TERMINAL MATERIAL	01/24/2006	BR
C	REVISED HOUSING MATERIAL	11/13/2006	BR
D	ADDED LABEL & POLARITY MARKING	11/22/2006	BR
E	REVISED TO INVENTOR 3D DRAWING TEMPLATE	04/16/2008	BR
F	REVISED TO REMOVE POLARITY & UPDATED RoHS STATEMENT	03/02/2017	MV
G	ADDED WAVE SOLDER NOTE	01/25/2019	ML
H	REVISED TEMPERATURE SPECIFICATIONS AND FREQUENCY TOLERANCE	02/27/2020	MV
I	Update Spec Format, Add Details for Packaging, Reliability, etc.	10/09/2024	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.
3. Wave solder acceptable.