



PUIaudio



Data Sheet

AI-1450-TWT-WP-R

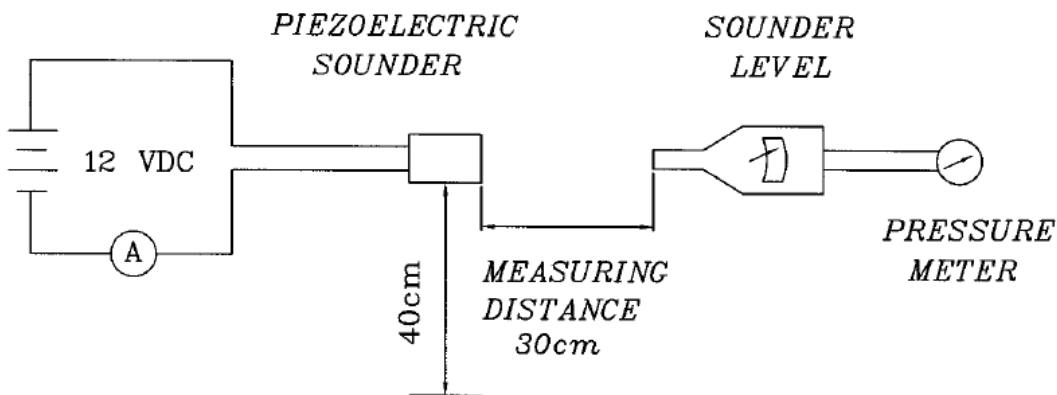
Features:

- 12VDC rated, 5kHz
- Top-Firing Thru-Hole Type
- IP67 Rated
- Wave Solder and Wash Allowed

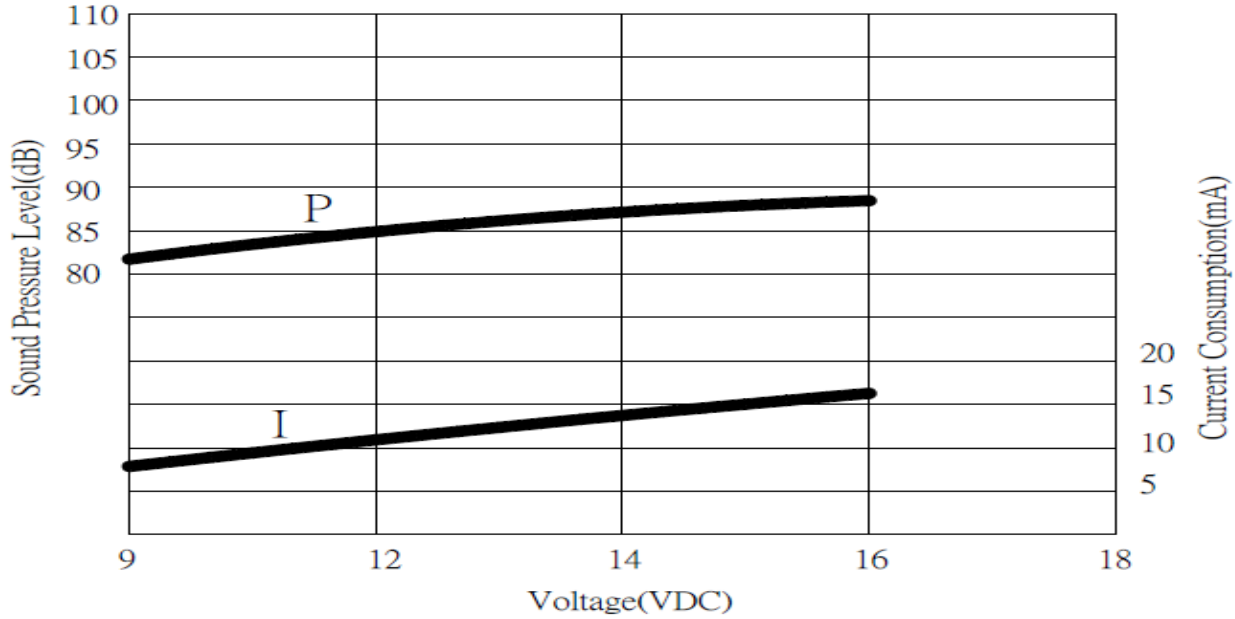
Specifications

Parameters	Values	Units
Rated Voltage	12	VDC
Operating Voltage Range	9 ~ 16	VDC
Current Draw at Rated Voltage	35(Max.)	mA
Minimum SPL @ 30cm	80	dBA
Resonant Frequency	5,000 ± 500	Hz
Tone or Pulse Rate	Continuous	-
Housing Material	PBT	-
Terminal Material	Au Plated Copper	-
Weight	2.46	Grams
Acceptable Soldering Methods	Hand Solder	-
Environmental Compliances	RoHS/REACH	7c-1
Operating Temperature	-30 ~ +85	°C
Storage Temperature	-40 ~ +95	°C
IP Rating	IP67	-

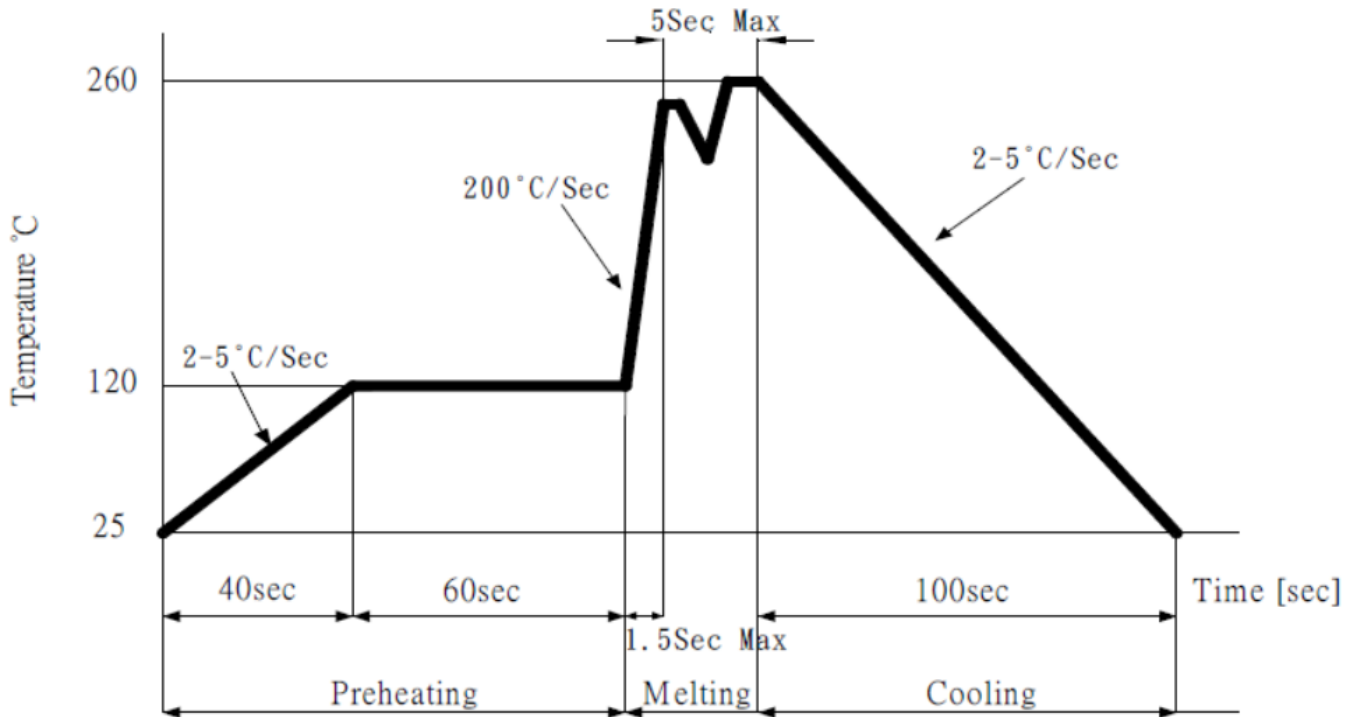
Measurement Method



Typical SPL vs Input Voltage



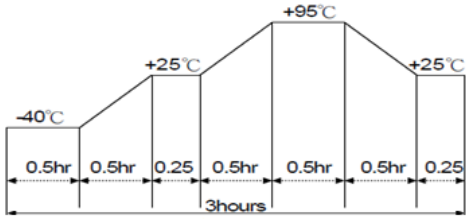
Recommended Wave Solder Profile



*Manual Soldering Temperature 350°C ± 10°C, soldering time within 5 seconds.

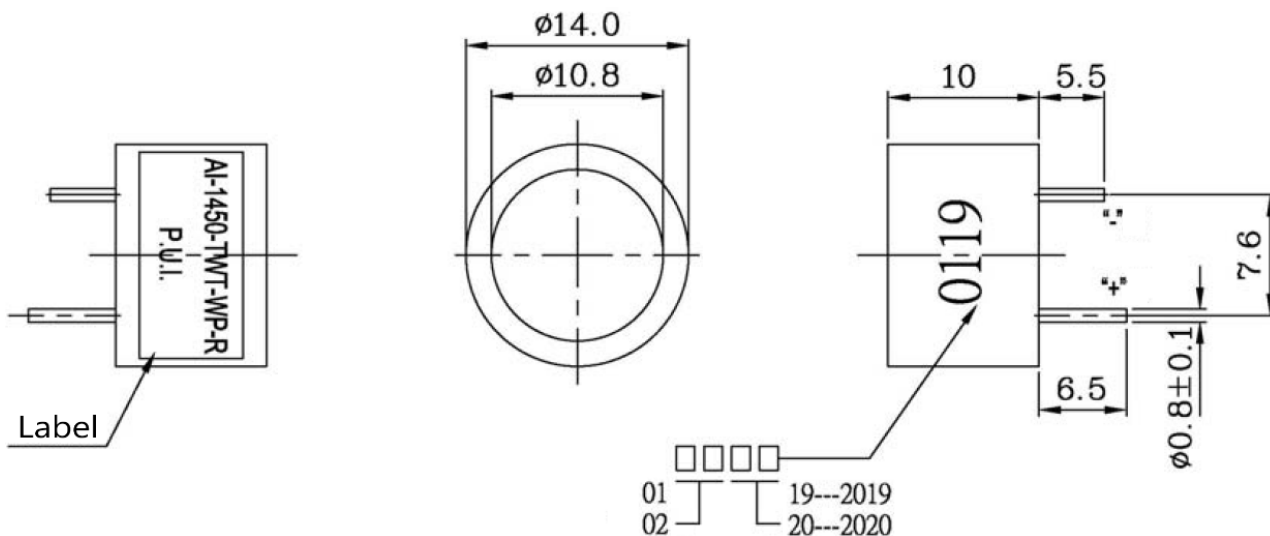
*Washing Allowed – Keep pressure to a minimum, as the force could damage the thin outer piezo disc.

Reliability Testing

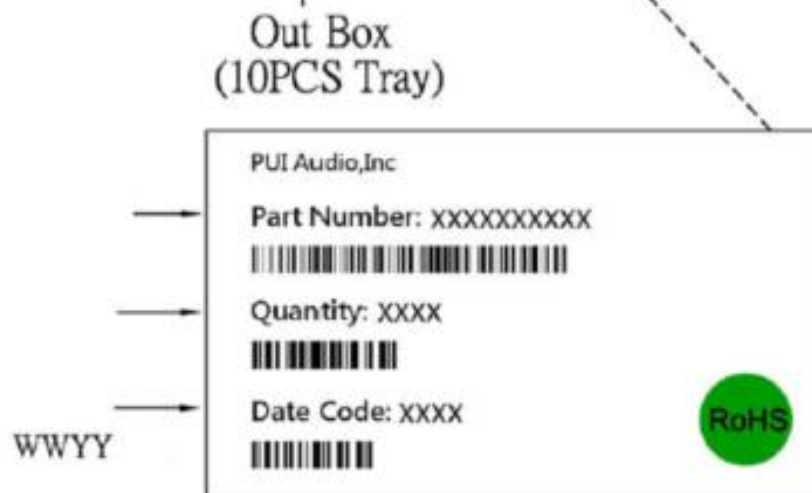
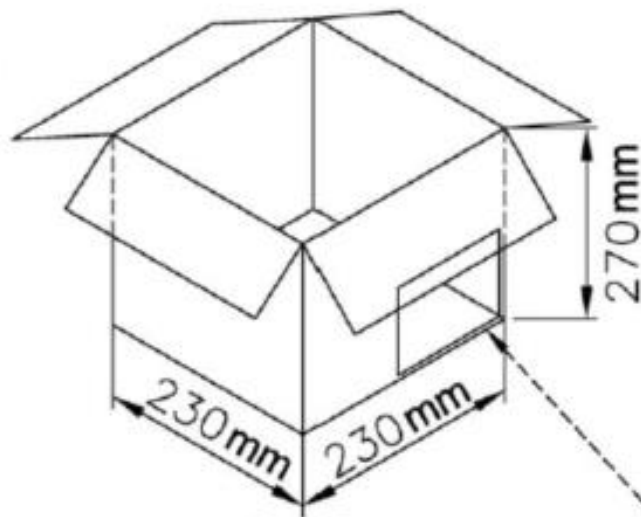
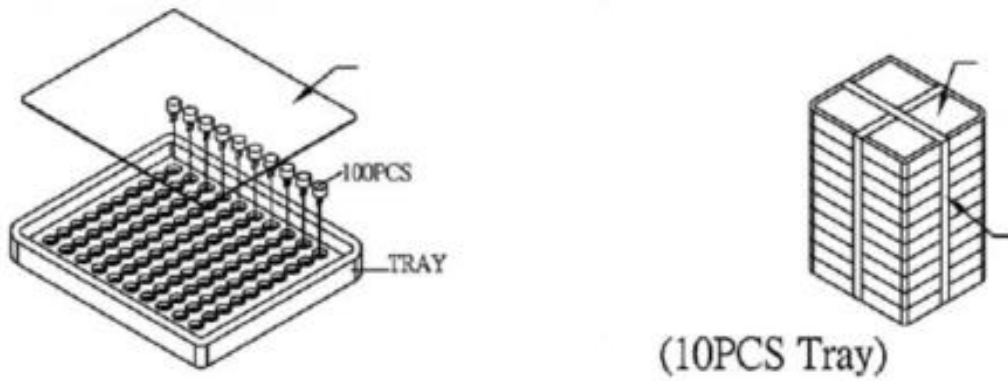
Type of Test	Test Specifications
High Temperature Test	Test chamber for 240 hours at +95°C, then rested at room temperature for 4 hours.
Low Temperature Test	Test chamber for 240 hours at -40°C, then rested at room temperature for 4 hours.
Humidity Test	Test chamber for 240 hours at +40°C with relative humidity at 90±5%, then rested at room temperature for 4 hours.
Temperature Cycle Testing	 <p>Test repeated 5 times, then rest at room temperature for 4 hours.</p>
Vibration Test	1.5mm amplitude vibration with 10~55Hz band of vibration frequency for 2 hours. Repeat test in X, Y, Z directions (total 6 hours).
Solderability Test	Lead terminals immersed in rosin for 5 seconds, then in solder bath of +270±5°C for 3±1 seconds.
Drop Test	Free drop a unit from the height 75cm to the surface of 40mm thick board, three times. Repeat test in X, Y, Z directions (total 9 times).
Load Test	Apply rated voltage for 48 hours continuously at +70°C. Apply a duty cycle of 1 minute on, 1 minute off 5000 times minimum, at rated voltage and room temperature (+25±3°C).

Measurements should be ±10% compared with initial after testing. SPL should be ±10 dB.

Dimensions



Packaging



Specifications Revisions

Revision	Description	Date	Approved
A	RELEASED FROM ENGINEERING	07/06/2021	-
B	REVISED TEMPERATURE RATINGS	11/19/2021	-
C	Add Wave Solder and Wash detail	06/27/2024	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.