



PUIaudio



Data Sheet

AI-1440-TWT-12V-R

Features:

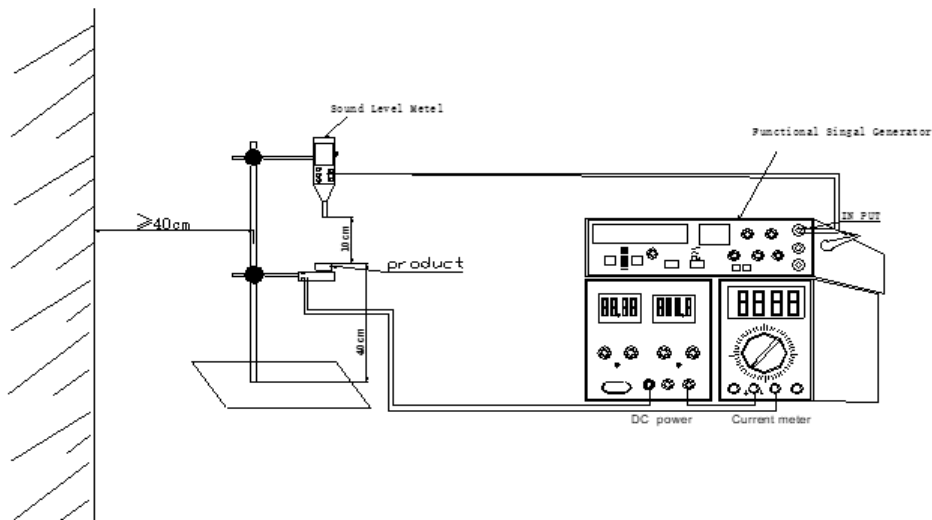
- Piezo Indicator
- 12VDC rated, 4000Hz
- Top-Firing Thru-Hole Type
- Wave Solder and Wash allowed

Specifications

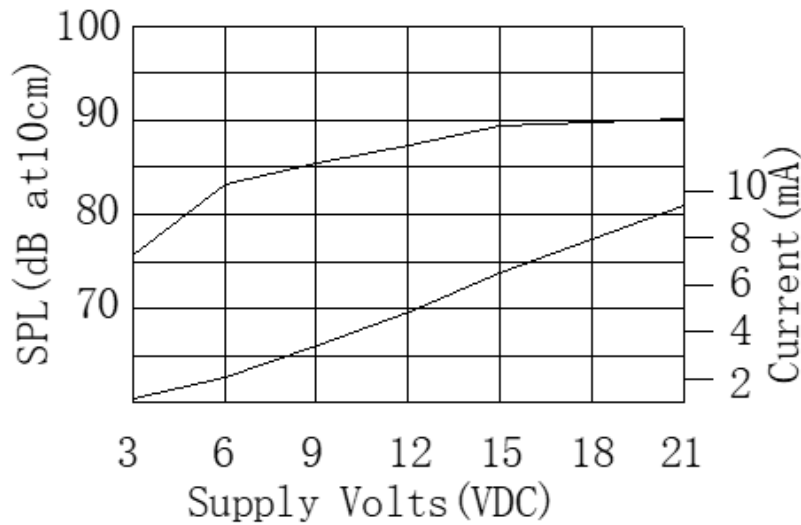
Parameters	Values	Units
Rated Voltage	12	VDC
Operating Voltage Range	3 ~ 16	VDC
Current Draw at Rated Voltage	7 (Max.)	mA
Minimum SPL @ 10cm	80	dBA
Resonant Frequency	4,000 ± 500	Hz
Tone or Pulse Rate	Continuous	-
Housing Material	PBT	-
Terminal Material	Sn Plated Red Copper(DSn)	-
Weight	1	Grams
Acceptable Soldering Methods	Hand Solder, Wave Solder	-
Environmental Compliances	RoHS/REACH	7c-1
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, 12VDC)



Typical SPL vs Input Voltage

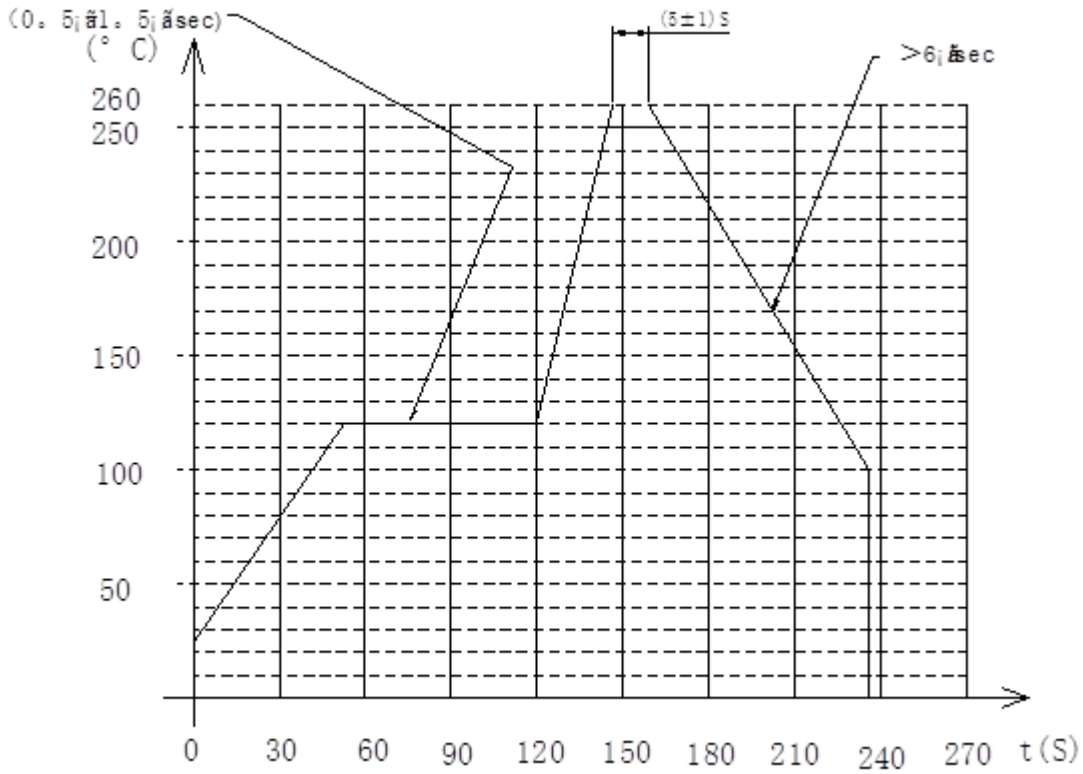


Reliability Testing

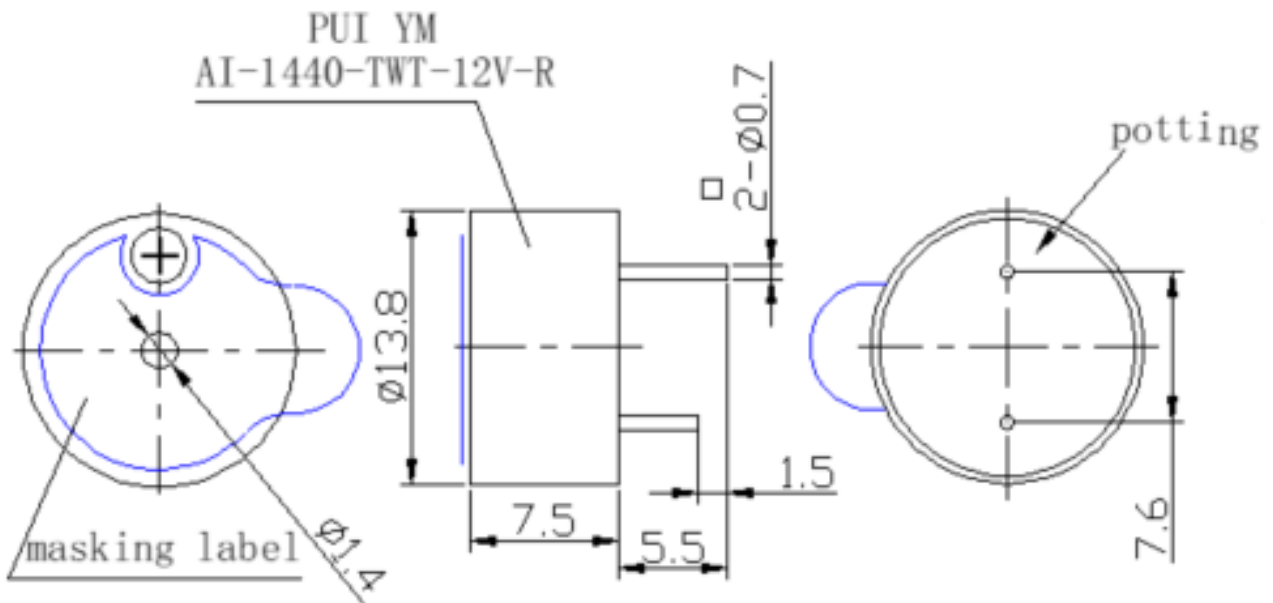
Type of Test	Test Specifications
High Temperature Test	Storage in $+80^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 hours, then expose to the room temperature for 2 hours without applying power.
Low Temperature Test	Storage in $-30^{\circ}\text{C} \pm 2^{\circ}\text{C}$ test box for 96 hours, 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>Amplitude: 1.5mm Time : 1min/axis</p> <p>Make this test for the directions of X, Y, Z for 2 hours each (total 6 hours)</p>
Solderability Test	Solder Temp 260C for 3 seconds.
Drop Test	Free drop a unit from the height 70cm to the surface of 10mm thick board, three directions (X, Y, Z).
Load Test	If applicable, state the conditions of the load test

Part shall pass tests within SPL of $\pm 5\text{dB}$.

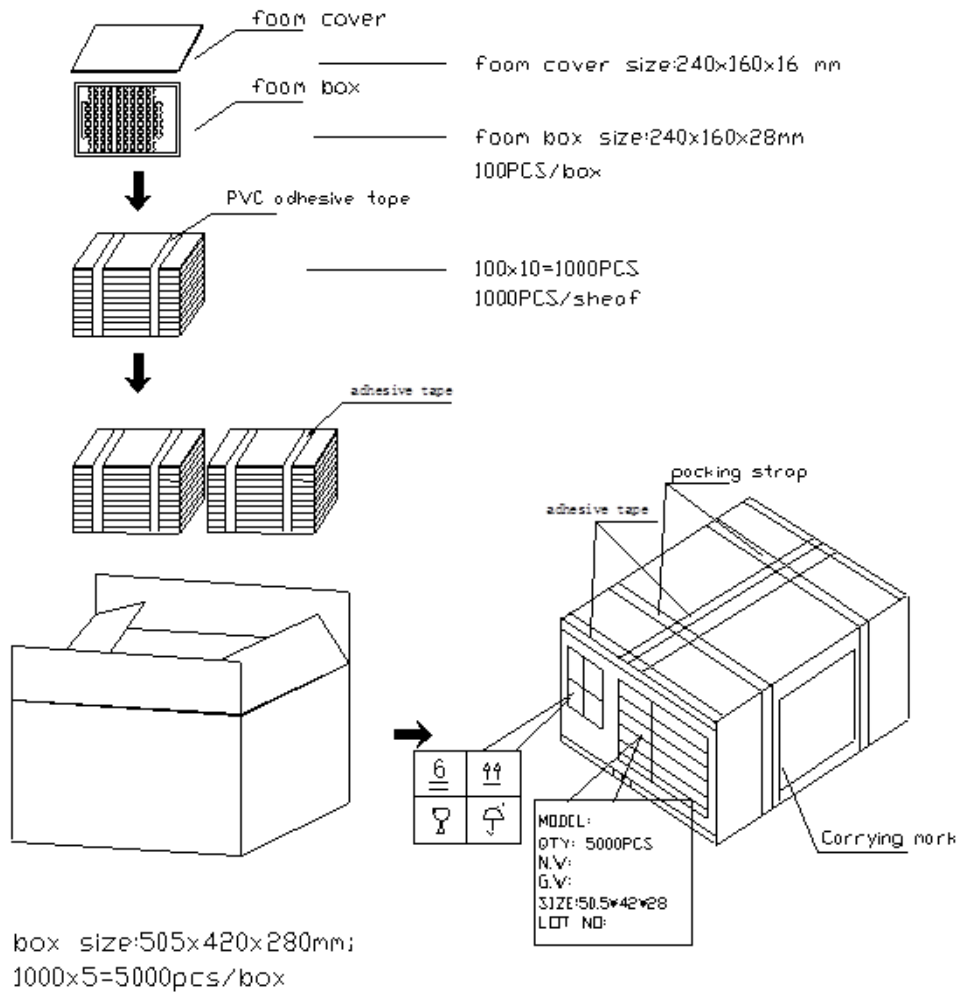
Wave Soldering Profile



Dimensions



Packaging



Specifications Revisions

Revision	Description	Date	Approved
-	RELEASED FROM ENGINEERING	08/19/2004	-
A	REVISED ROHS STATEMENT	05/27/2005	BR
B	REVISED DIMENSION SIZE AND STYLE	11/28/2005	BR
C	REVISED TERMINAL MATERIAL	03/20/2006	BR
D	REVISED TO INVENTOR 3D TEMPLATE	10/09/2007	BR
E	Update Spec Format, Add details for Reliability, Packaging, etc.	06/25/2024	ML
F	Change housing material from Noryl to PBT with lot 24L and newer, Revise Temperature Ranges	11/14/2024	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.