



# PUIaudio



Data Sheet AI-1223-TWT-12V-3-R

## Features:

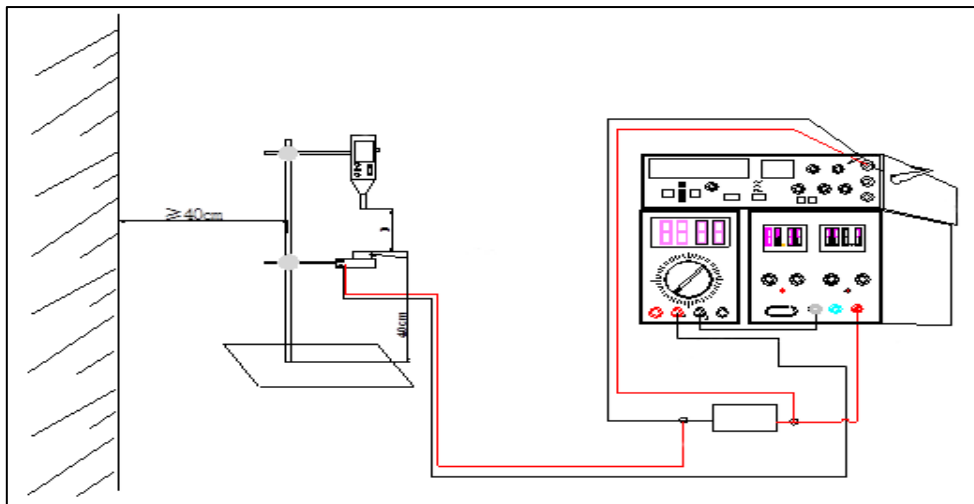
- Top-firing, thru-hole magnetic indicator
- 12 V<sub>DC</sub>, 2300 Hz resonant frequency
- Wave solder and wash allowed

## Specifications

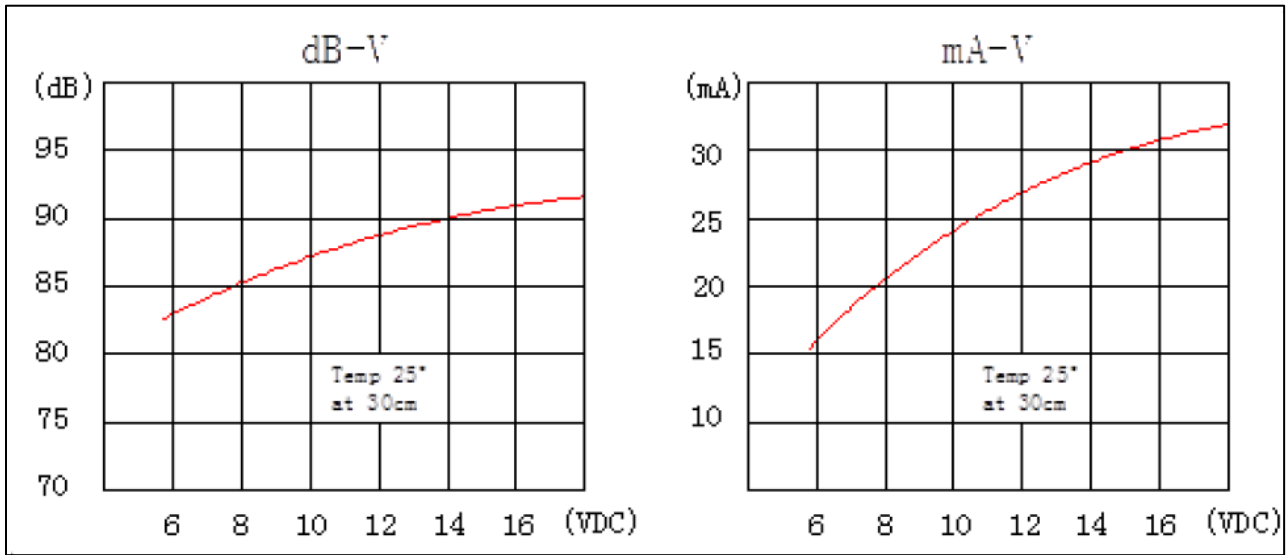
Parameters	Values	Units
Rated Voltage	12	VDC
Operating Voltage Range	6 ~ 16	VDC
Current Draw at Rated Voltage	30	mA
Minimum SPL @ 10cm	85	dBa
Resonant Frequency	2,300 ±300	Hz
Tone or Pulse Rate	Continuous Tone	-
Housing Material	PBT	-
Terminal Material	Gold-plated Brass	-
Weight	2	Grams
Acceptable Soldering Methods	Hand Solder, Wave Solder	
Environmental Compliances	RoHS/REACH	-
Storage Temperature	-30 ~ +80	°C
Operating Temperature	-20 ~ +70	°C

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

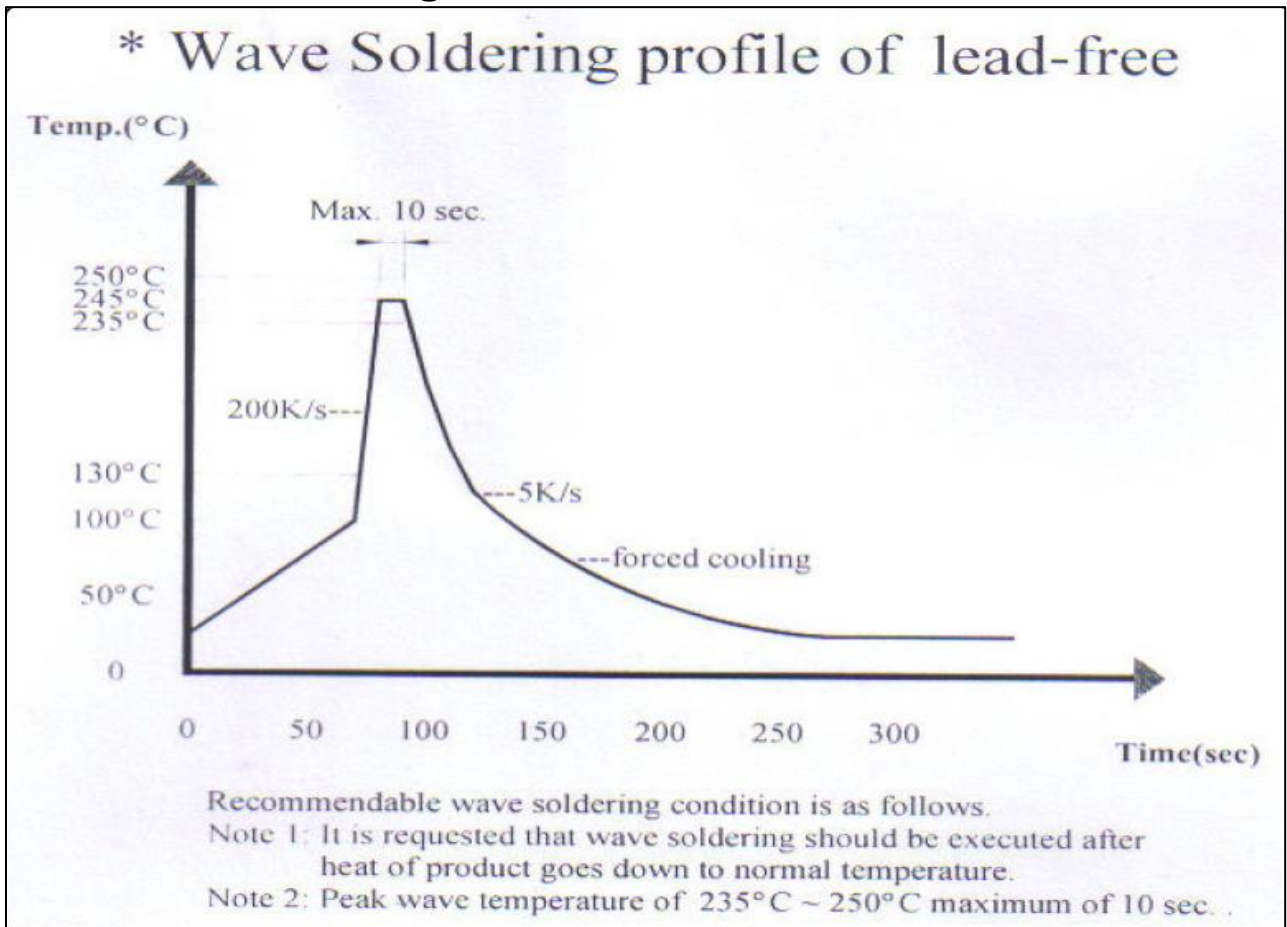
Standard test fixture (Distance: 10cm; Voltage: 12V<sub>DC</sub>)



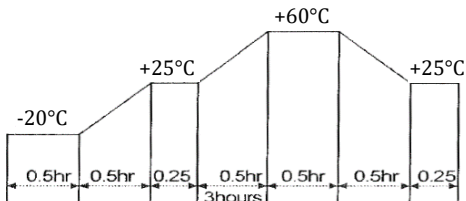
## Typical Frequency Response



## Recommended Soldering Profile



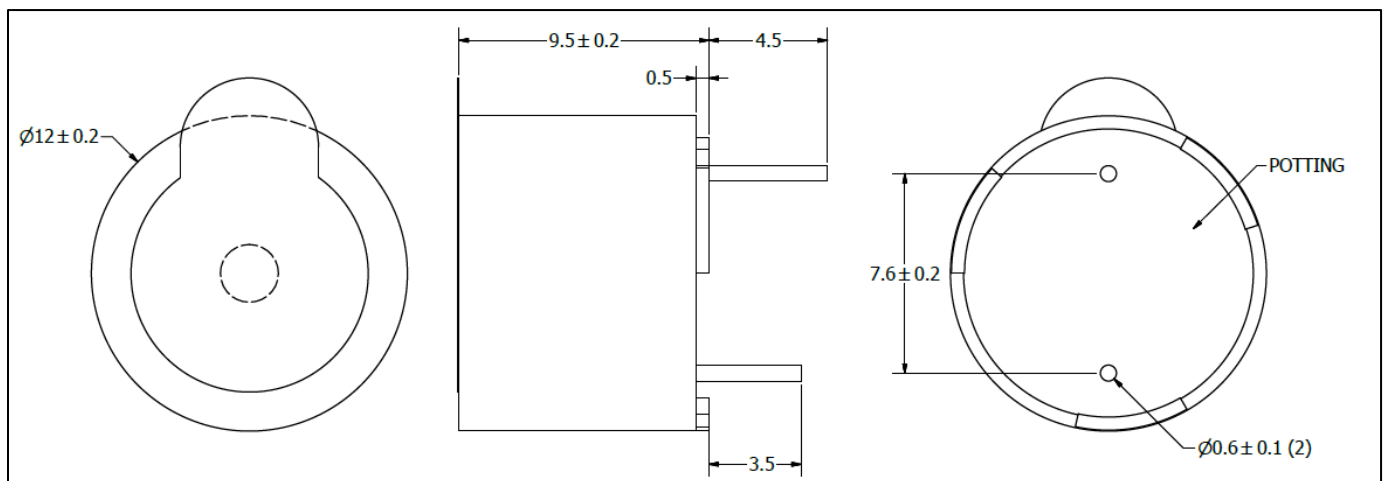
## Reliability Testing

Type of Test	Test Specifications
High Temperature Test	Placed in chamber at $+80\pm 2^{\circ}\text{C}$ for 96 hours, then rested at room temperature for 2 hours.
Low Temperature Test	Placed in chamber at $-30\pm 2^{\circ}\text{C}$ for 96 hours, then rested at room temperature for 2 hours.
Humidity Test	Placed in chamber at $+40\pm 2^{\circ}\text{C}$ & 90~95% RH for 96 hours, then rested at room temperature for 2 hours.
Temperature Cycle Testing	 <p>Part subjected to 5 cycles of test, then rested at <math>+25^{\circ}\text{C}</math> for 4 hours.</p>
Solderability Test	Lead terminals immersed in rosin for 5 seconds, then immersed in solder bath of $+300\pm 5^{\circ}\text{C}$ for $3\pm 1$ seconds.
Terminal Strength Test	9.8N (1.0kg) force applied to each terminal for 10 seconds in each axial direction.
Vibration Test	Vibration applied with amplitude of 1.5mm and 10 ~ 55Hz band of vibration frequency to each direction (X, Y, Z) for 2 hours each (6 hours total).
Drop Test	Free drop a unit from the height 75cm on to the surface of a 4cm thick hard wood board in any direction, 6 times.
Load Test	If applicable, state the conditions of the load test

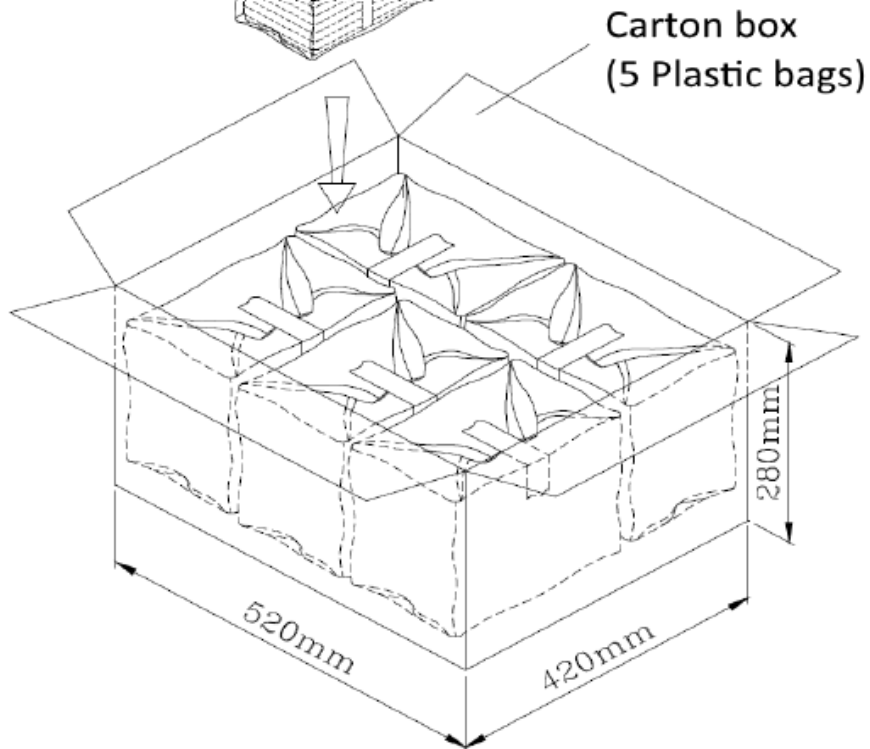
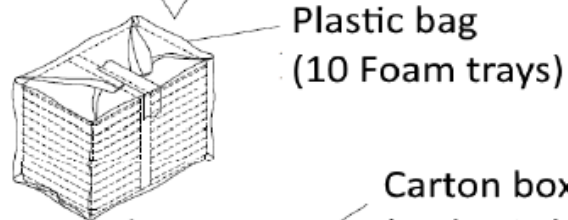
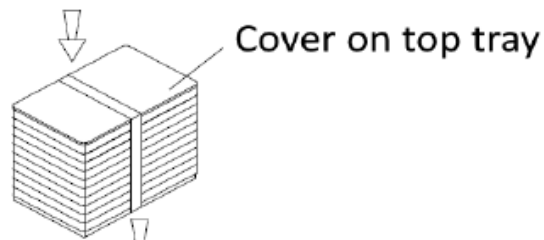
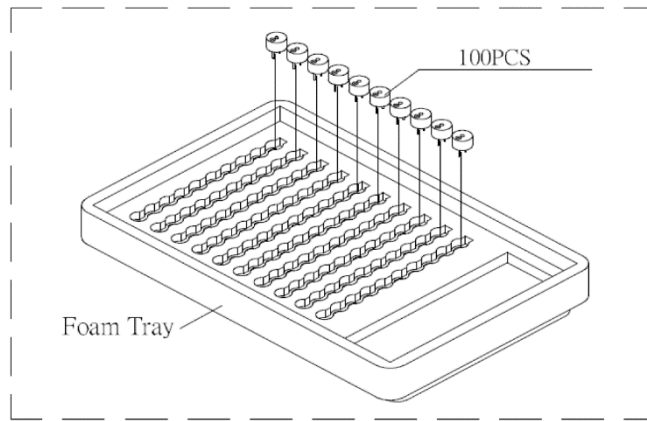
**90% of lead terminals shall be wet with solder after solderability test.**

**Parts pass after tests, values shall be within  $\pm 10\%$  of original ones. SPL shall be within  $\pm 10\text{dB}$ .**

## Dimensions (4.5mm pin is +, polarity also indicated on wash tab)



## Packaging



Foam Tray	240mmx160mmx30mm	1x100PCS=100PCS
Plastic Bag		10x100PCS=1000PCS
Carton Box	520mmx420mmx280mm	5x1000PCS=5,000PCS

**Specifications Revisions**

<b>Revision</b>	<b>Description</b>	<b>Date</b>	<b>Approved</b>
-	RELEASED FROM ENGINEERING	06/25/2014	-
A	REVISED OPERATING VOLTAGE RANGE	03/16/2021	-
B	REVISED WAVE SOLDER PROFILE AND TEMPERATURE CYCLING TEST	05/23/2024	JD

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.