



# PUIaudio



Data Sheet

AS04004PO-WR-R

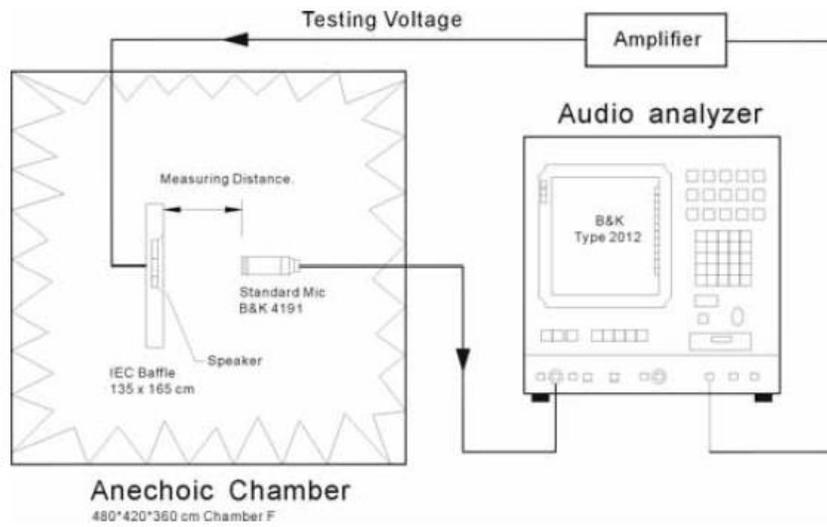
## Features:

- 40mm x 28.4mm x 13mm oval shape
- 4Ω impedance, 2W rated input power
- Water resistant coating

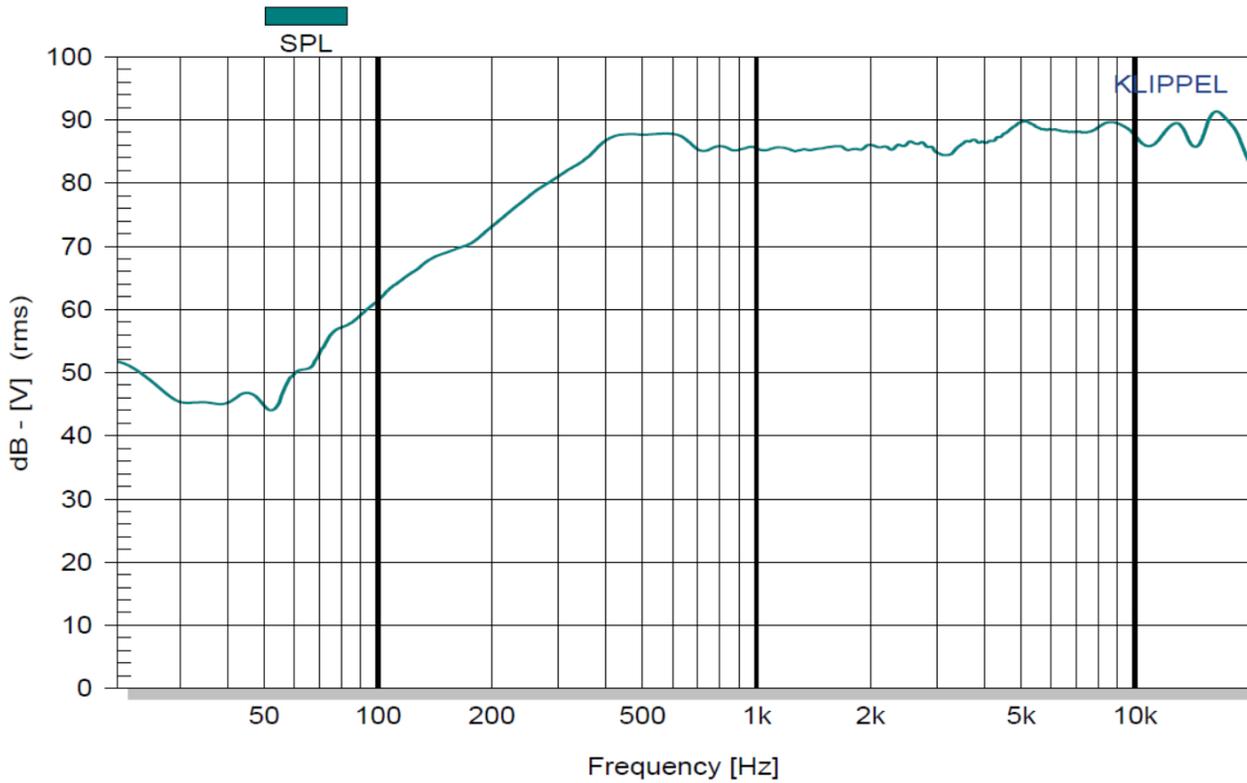
## Specifications

Parameters	Values	Units
Rated Input Power	2	Watts
Max Input Power	4	Watts
Impedance	4 ± 15%	Ohms
Output SPL at 1W/50cm (Avg. 0.8, 1.0, 1.2, 1.5kHz)	85 ± 3	dB
Resonant Frequency (Without Baffle)	370 ± 20%	Hz
Frequency Range	F <sub>o</sub> ~ 20,000	Hz
THD	< 5%	-
Frame Material	ABS	-
Magnet Material	NdFeB	-
Diaphragm Material	Treated Paper	-
Weight	16.5	Grams
Acceptable Soldering Methods	Hand Solder	-
Polarity	Cone will move forward with positive (+) DC current applied to positive terminal	-
Storage Temperature	-40 ~ +80	°C
Operating Temperature	-40 ~ +80	°C
Environmental Compliances	ROHS/REACH	-

## Measurement Method

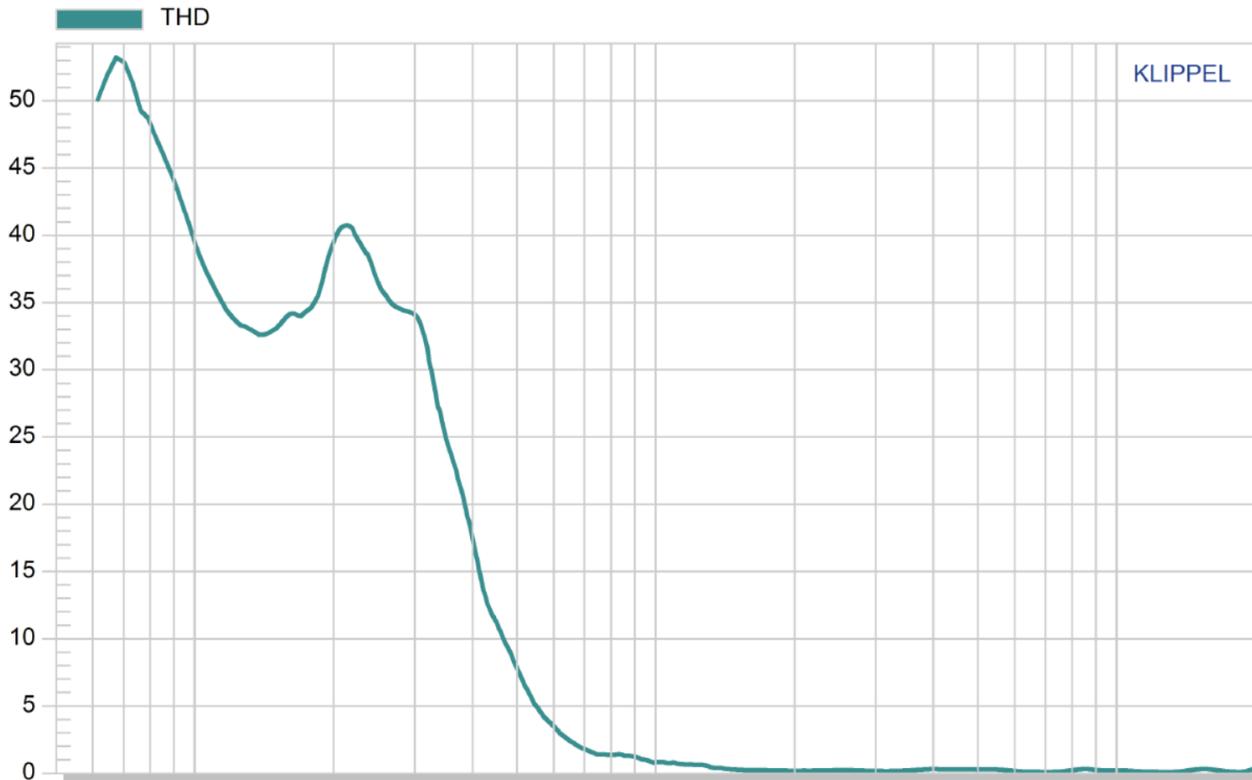


## Typical Frequency Response (Measured at 50cm, 1W)



## Typical THD Response

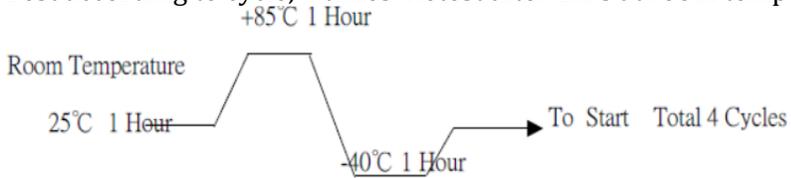
1W / 0.5M



## Typical Thiele-Small Parameters (based on Golden Sample, up to 20% variance is normal)

Specification	Value	Description
Re	4.2 $\Omega$	DC resistance
Le	0.028 mH	Inductance @ 10 kHz
Fs	400 Hz	Resonant Frequency
Mms	0.324 g	Moving Mass
Bl	1.179 Tm	Magnet Force Factor
Qms	9.998	Mechanical Q-factor
Qes	3.448	Electrical Q-factor
Qts	2.564	Total Q-factor
Vas	12.9K	Equivalent Air Volume of Suspension
Xmax	1.0mm	One-Way Voice Coil Travel

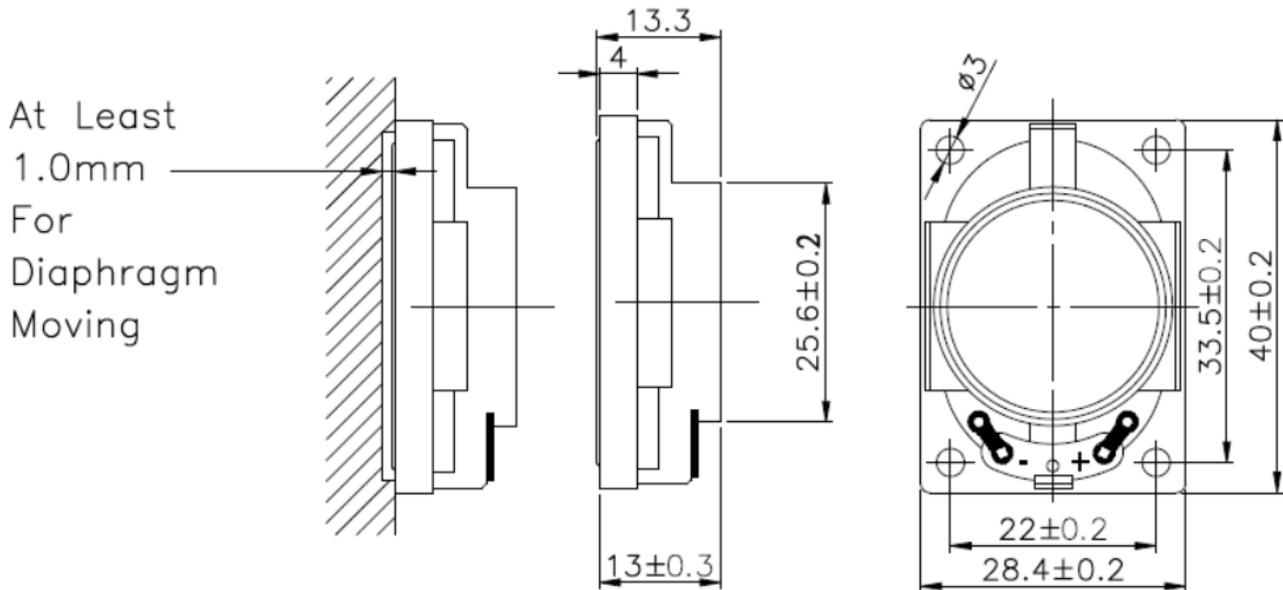
## Reliability Testing

Type of Test	Test Specifications
High Temperature Test	Test for 96hrs at 85C, retest after 2hrs at room temp
Low Temperature Test	Test for 96hrs at -40C, retest after 2hrs at room temp
Humidity Test	Test for 96hrs at 40C, RH 90-95%. Retest after 2hrs at room temp
Temperature Cycle Testing	Test according to cycle, 4 times. Retest after 2hrs at room temp 
Vibration Test	Amplitude Vibration by 1.5mm, 30Hz. Check XYZ axle 1hr.
Drop Test	Drop from height of 0.75m, 10 times. Retest and check appearance
Load Test	Apply pink noise for 96hrs at rated power (2W). Recheck SPL.

After any of the above tests, part should conform to the original performance within  $\pm 3\text{dB}$ .

## Dimensions (Positive terminal indicated by “+” marking)

### MOUNTING NOTICE



## Packaging

- **30pcs Tray**
- **330pcs Mstr Carton 38.5x32.5x27.5cm**

### Specifications Revisions

Revision	Description	Date
-	RELEASED FROM ENGINEERING	12/07/2005
A	Added Mounting Hole Dimension	12/18/2007
B	Revised Max Input Power	07/18/2008
C	Revised Operating Temperature	10/14/2008
D	Revised to Inventor 3D Template	11/08/2008
E	Added Note 5	08/11/2011
F	Fix Polarity, Update ROHS Status Notes	03/05/2015
G	Adjust Resonant Frequency Range to read Fo	05/03/2017
H	Revised SPL to 85dB	09/18/2023

Note:

- Unless otherwise specified:
  - All dimensions are in millimeters.
  - Default tolerances are  $\pm 0.5\text{mm}$  and angles are  $\pm 3^\circ$ .
- Specifications subject to change or withdrawal without notice.
- Speaker face has been treated for water resistance.
- This part is ROHS 2015/863/EU compliant.
- Base Speaker AS04004PO-R.