



# PUI audio



Data Sheet

AS04504AS

The **AS04504AS** is designed for applications that require robust low-frequency response and low THD in compact designs.

## Features:

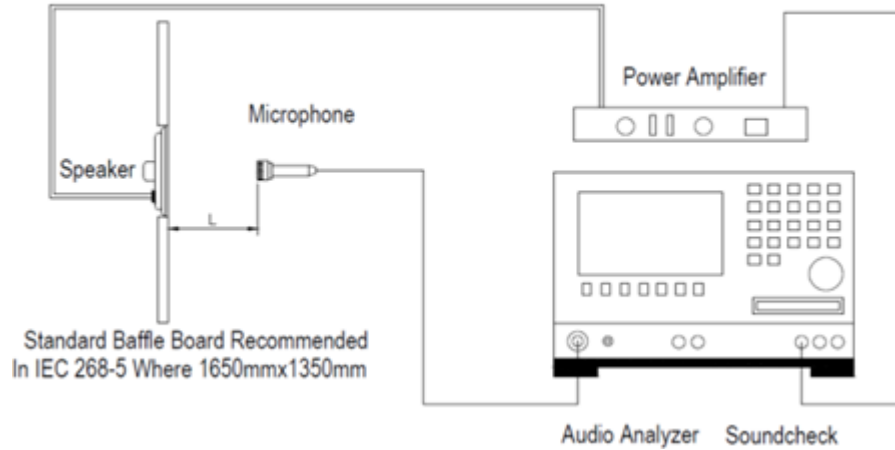
- 83dB SPL: 1W dissipation, distance = 0.5m
- 6W continuous dissipation
- 140Hz free-air resonance
- 45mm x 45mm x 15.05mm dimensions

## Specifications

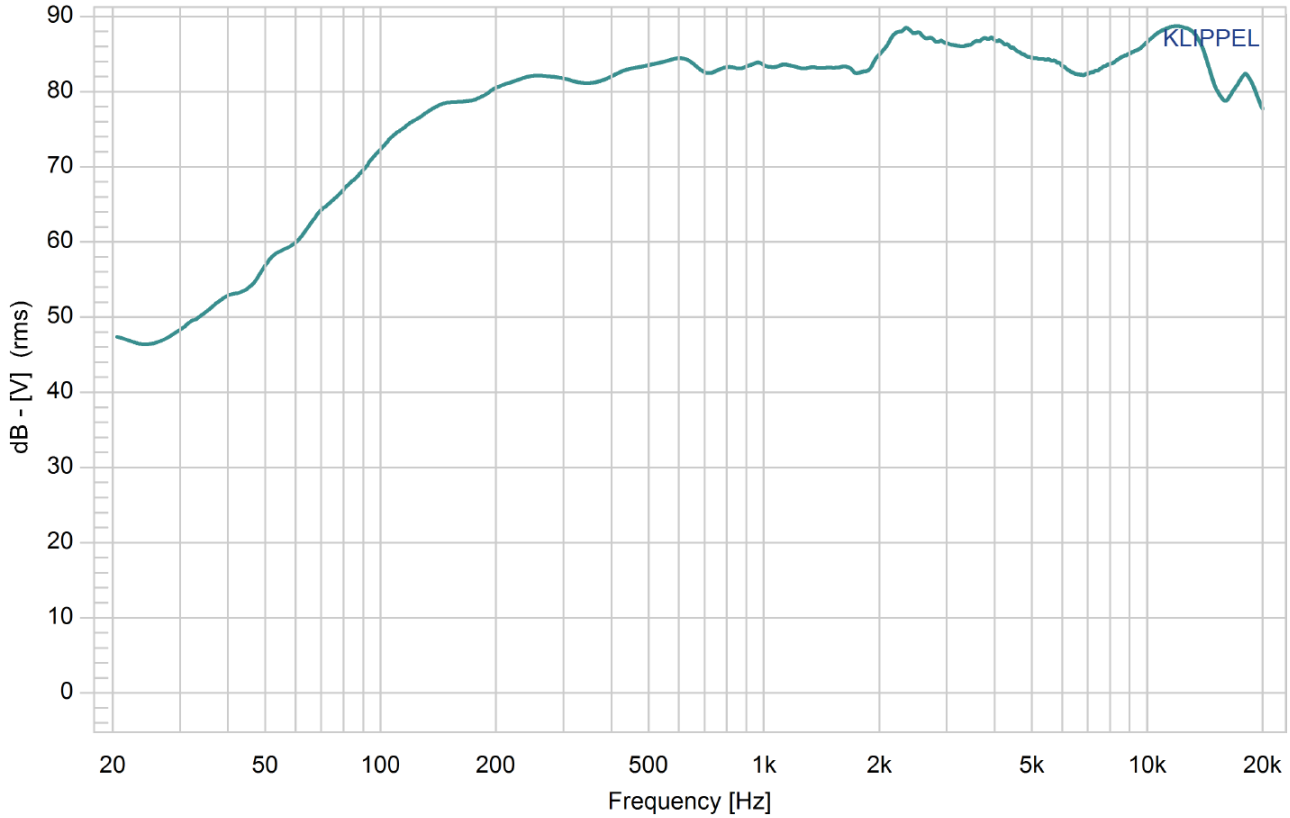
Parameters	Values	Units
Rated Input Power	6.0	Watts
Maximum Input Power	7.0	Watts
Impedance	4 ±15%	Ohms
Sensitivity (SPL @ 2kHz) P <sub>DRIVE</sub> = 1.0W, distance = 0.5m f = ave. 0.8kHz, 1kHz, 1.2kHz, 1.5kHz	83 ±3	dB
Resonant Frequency (f <sub>0</sub> )	140 ±20%	Hz
Frequency Range (-10 dB)	f <sub>0</sub> ≤ f ≤ 20,000	Hz
Total Harmonic Distortion (THD) f = 1 kHz, P <sub>DRIVE</sub> = 1.0W	≤ 5	%
Frame Material	PBT + 15% GF	-
Magnet Material	NdFeB	-
Diaphragm Material	Rubber + Aluminum	-
Weight	36.8	gm
Buzz, Rattle, etc.	Not audible with P <sub>DRIVE</sub> = 6.0W, sine wave	-
Polarity	Applying positive dc current to "+" terminal moves diaphragm forward	-
Operating Temperature Range	-25 ≤ T <sub>O</sub> ≤ 50	°C
Storage Temperature Range	-25 ≤ T <sub>S</sub> ≤ 60	°C
Environmental Compliance	RoHS/REACH	-

## Measurement Method (measured with $P_{DRIVE} = 1.0$ , distance = 0.5m)

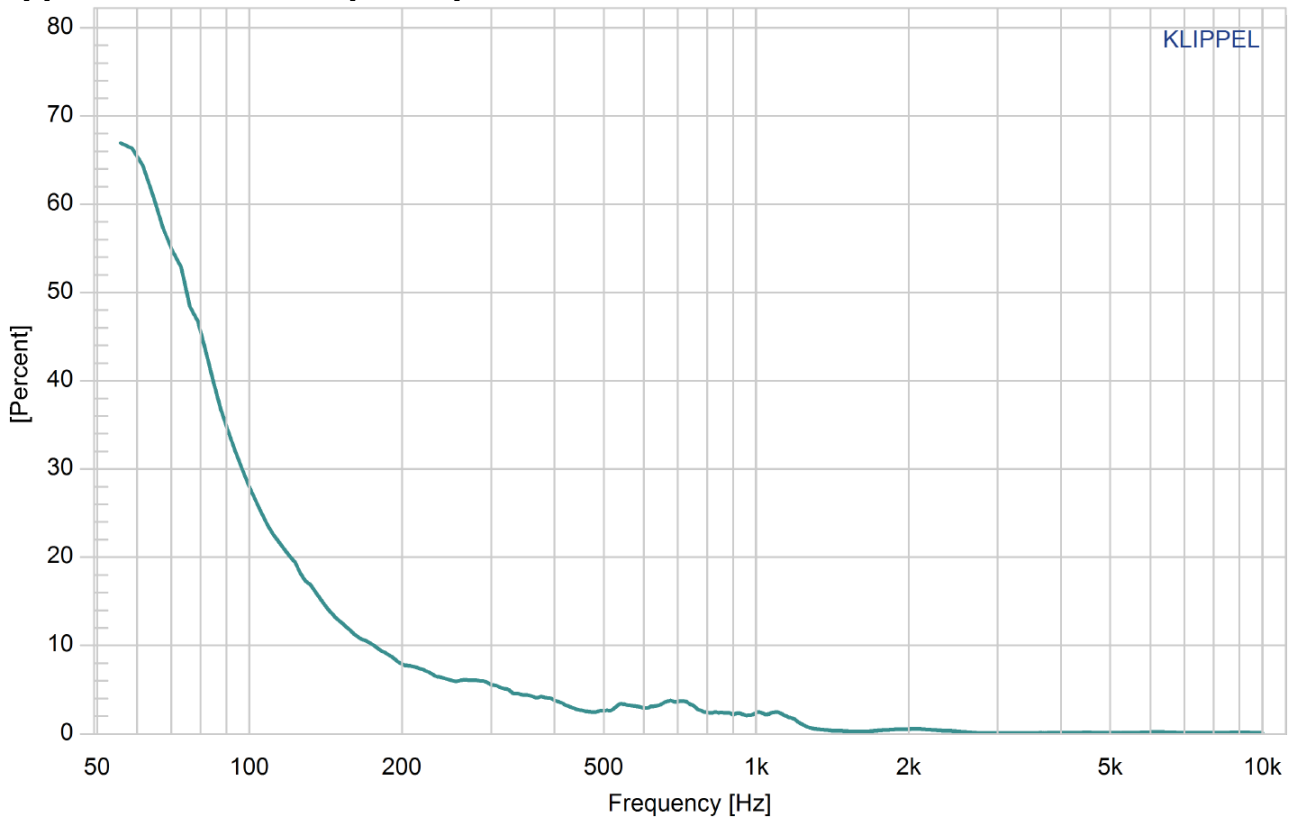
### Standard test condition of speaker



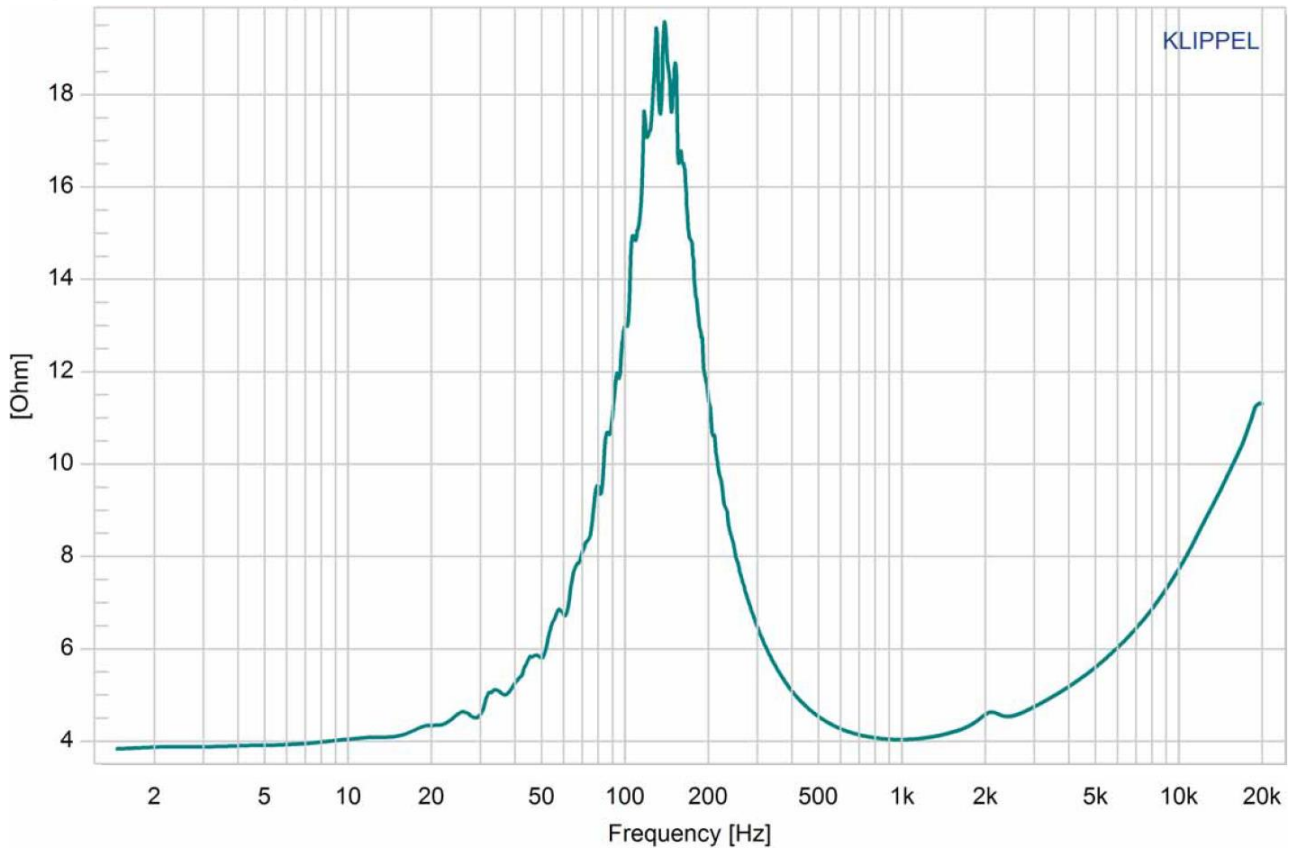
## Typical Frequency Response ( $P_{DRIVE} = 1.0W$ , distance = 0.5m)



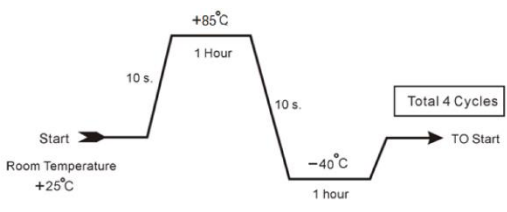
### Typical THD vs. Frequency ( $P_{DRIVE} = 1.0W$ )



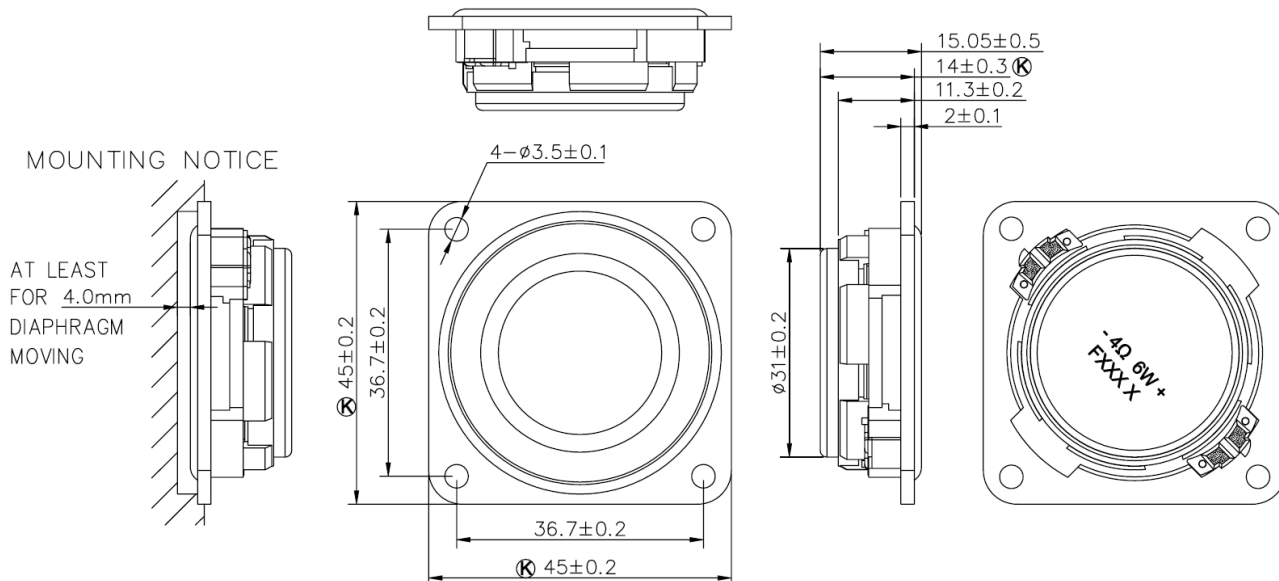
### Impedance Response



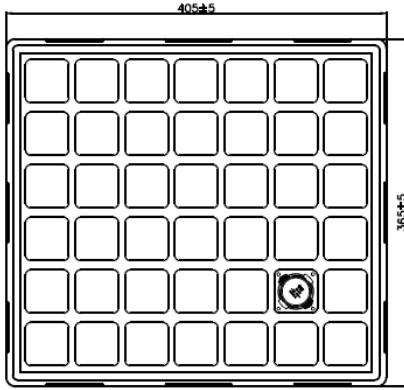
## Reliability Testing

Type of Test	Test Specifications	Judgement
High Temperature Test GB2423.2-81	96 hours at +85°C ± 2°C followed by one hour in normal room temperature	SPL shall not deviate by ±3dB. Resonant frequency shall not deviate by ±50Hz. (compared with pre-test measurement)
Low Temperature Test GB2423.1-81	96 hours at -40°C ± 2°C followed by one hour in normal room temperature	
Humidity Test GB5170.18-87	96 hours at +40°C ± 2°C with relative humidity between 90% and 95% followed by 6 hours in normal room temperature	
Temperature Cycle Testing GB5170.18-87		SPL shall not deviate by ±4dB. Resonant frequency shall not deviate by ±80Hz. (compared with pre-test measurement)
Vibration Test GB11606.8-89	Frequency 30±15 Hz, Amplitude 1.5 mm for 3 Hours	SPL shall not deviate by ±3dB. (compared with pre-test measurement)
Drop Test GB2423.8-81	75 cm free falling on concrete floor, 10 times.	
Load Test GB/T12060.5-2011	Speaker should not fail after applying 20Hz ~ 20kHz pink noise with HPF rated power input (RMS), 96 hours.	

## Dimensions (Measured in mm. Tolerance = ±0.2mm.)



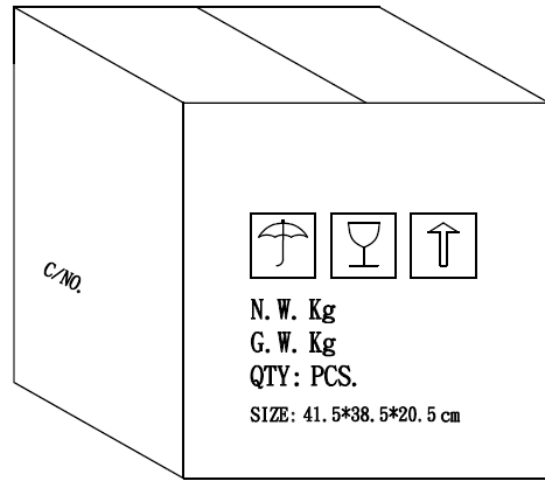
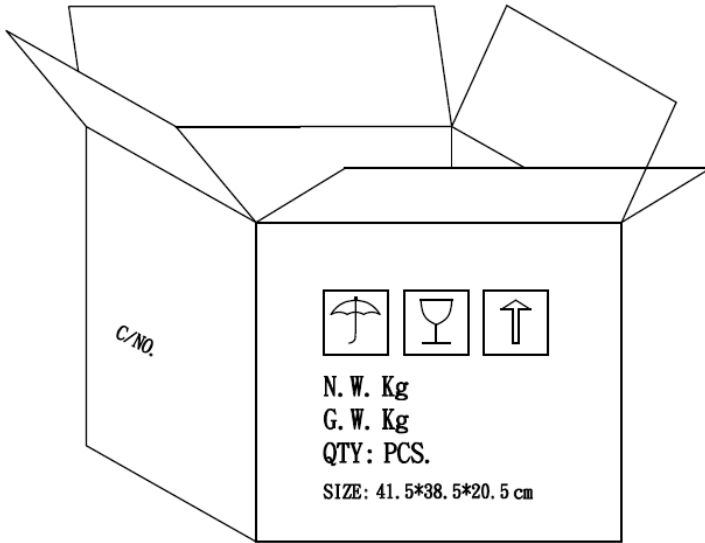
## Packaging



### NOTE

42 PCS per Layer  
Total 8 Layer per box  
Total 336 PCS per box  
41.5\*38.5\*20.5 cm  
G. W.: 9KG  
HF+ROHS 2

RA45-4C-42-NH-PET



## Measurement & Standard Reference

Abstract from GB/T 9396-1996 and IEC 268-5:1989: methods of measurement for main characteristics of loudspeakers.

### 5.1 Rated sine voltage.

A sinusoidal signal voltage specified by the manufacturer which makes the speaker work continuously in the rated frequency range, without causing electrical or mechanical damage to the speaker. The continuous voltage time is 1 hour.

### 5.2 Rated sine power.

The rated sine power corresponding with the rated sine voltage defined by:  $U_s^2/R$ , where  $U_s$  indicates the rated sine voltage and  $R$  indicates the rated impedance of the speaker.

### 5.3 Rated noise power.

The rated sine power corresponding with the rated sine voltage defined by:  $U_n^2/R$ , where  $U_n$  indicates the rated sine voltage and  $R$  indicates the rated impedance of the speaker.

**Specifications Revisions**

<b>Revision</b>	<b>Description</b>	<b>Date</b>	<b>Approved</b>
A	Datasheet released from Engineering	04/24/2024	KH

Notes:

- 1. Unless otherwise specified:
  - A. All dimensions are in millimeters.
  - B. Default tolerances are  $\pm 0.2\text{mm}$  and angles are  $\pm 3^\circ$ .
- 2. Specifications subject to change or withdrawal without notice.