

## Data Sheet

AS05308AS-R

PUI Audio's **Copperhead Series** was conceived to create a family sound across three different speaker sizes: 36mm, 53mm, and 78mm square. Specialized alloy cones are paired with optimized motors to achieve superior frequency response and output, with minimized harmonic distortion.

The eight ohm, 53mm square frame **AS05308AS-R** features a rubber surround, for water and dust resistance, and a vented voice coil former for improved voice coil cooling.

### Features:

- Coated alloy cone for extended frequency response to 40 kHz
- 78 dB output at 1m (98 dB output at 10cm)
- High-energy neodymium motor
- Large 1" diameter voice coil for high power handling
- Easy-to-mount square frame

### Specifications

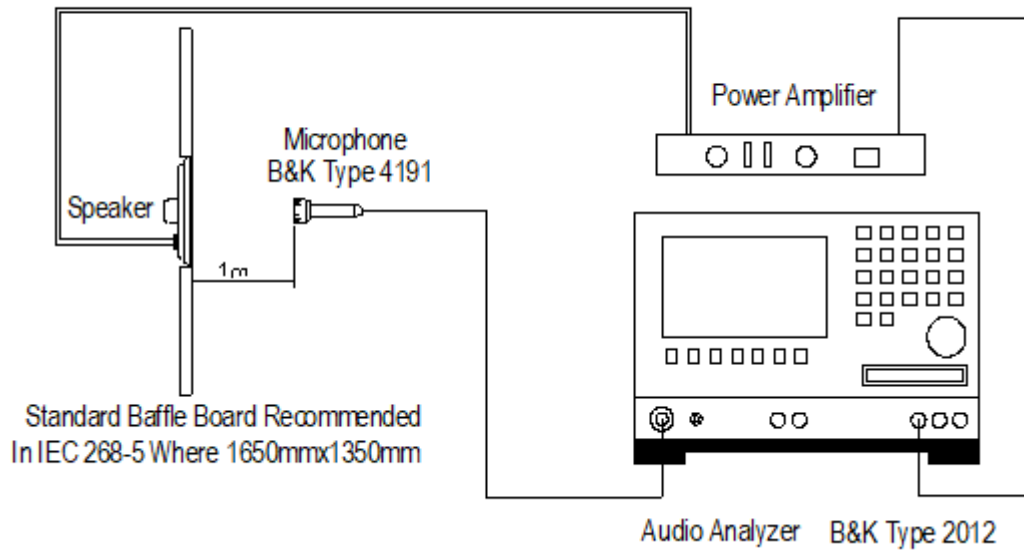
Parameters	Values	Units
Rated Input Power	10	Watts
Max Input Power	20	Watts
Impedance	$8 \pm 15\%$	Ohms
Sensitivity (SPL @ 1W/1m) Avg. at 2, 4, 8, and 16 kHz	$78 \pm 3$	dB
Resonant Frequency (in free air)	$230 \pm 20\%$	Hz
Frequency Range (-10 dB)	100 ~ 40,000	Hz
Frame Material	Stamped Steel	-
Magnet Material	NdFeB	-
Weight	120	Grams

## Specifications (continued)

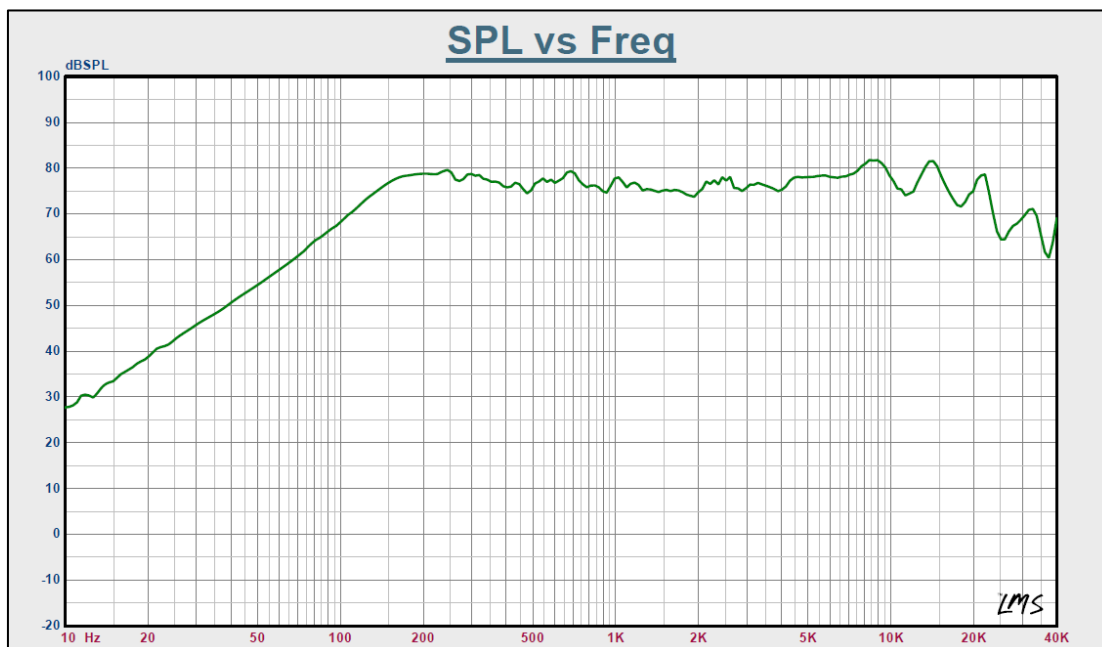
Buzz, Rattle, etc.	Should not be audible with 8.95V sine wave from 200 Hz to 20 kHz	-
Polarity	When positive voltage is applied to the positive terminal, the diaphragm will move outward	-
Storage Temperature	-20 ~ +60	°C
Operating Temperature	-20 ~ +60	°C

## Measurement Method

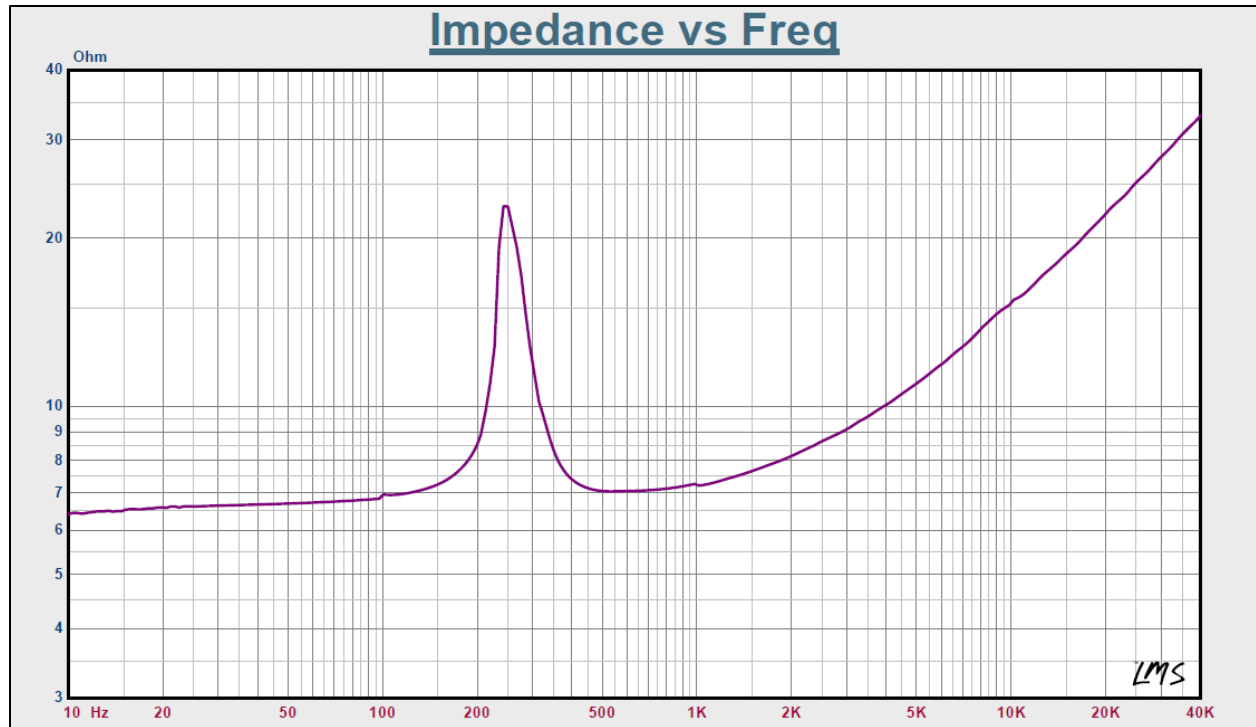
### Standard test condition of speaker



## Frequency Response (measured with 2.83V @ 1m)



## Impedance Response

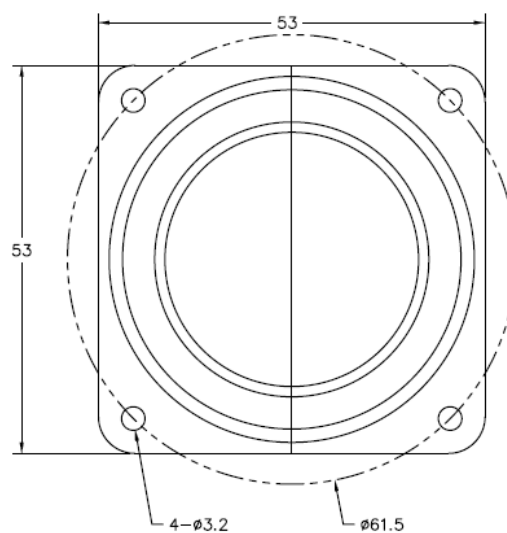
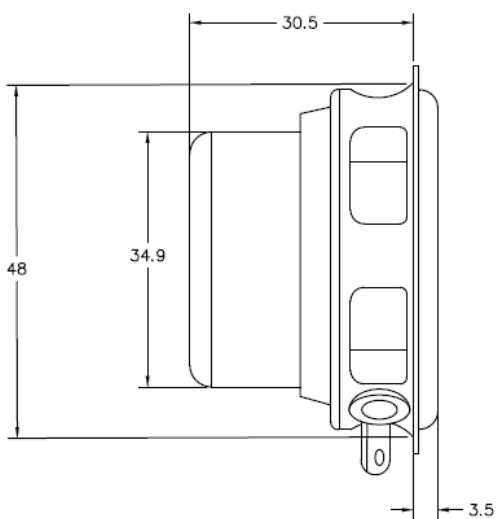


## Reliability Testing

Type of Test	Test Specifications
High Temperature Test	96 hours at +60°C ± 3°C followed by three hours in normal room temperature
Low Temperature Test	96 hours at -20°C ± 3°C followed by three hours in normal room temperature
Humidity Test	96 hours at +40°C ± 3°C with relative humidity at 90%~95% followed by 6 hours in normal room temperature
Temperature Cycle Testing	The part shall be subjected to 12 cycles using the following procedure: Low temperature: -20°C±3°C High temperature: +60°C±3°C Cycle: 2 hours at High, 5 minutes High to Low, 2 hours at Low, 5 minutes Low to High
Vibration Test	10 to 55 to 10 Hz sine sweep, per minute @ 1.5mm amplitude 2 hours in each axis X, Y, and Z.
Load Test	White noise is applied at the speakers rated power for 96 hours at room temperature

**After each test, the speaker's SPL shall be ±3 dB of the original SPL**

## Dimensions (red terminal is positive +)



**Specifications Revisions**

<b>Revision</b>	<b>Description</b>	<b>Date</b>
-	Released from Engineering	5/23/18

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.
3. This part is RoHS 2011/65/EU Compliant.

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