

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

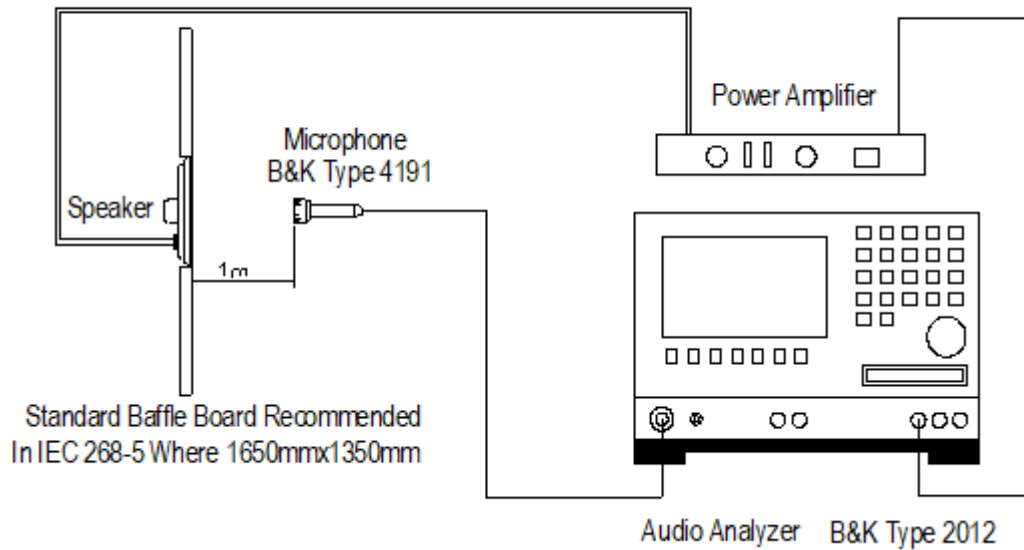
| Parameters | Values | Units |
|--|---------------|-------|
| Rated Input Power | 10 | Watts |
| Max Input Power | 20 | Watts |
| Impedance | 8 ± 15% | Ohms |
| Sensitivity (SPL @ 1W/1m) Avg. at 2, 4, 8, and 16 kHz | 78 ± 3 | dB |
| Resonant Frequency (in free air) | 230±20% | Hz |
| Frequency Range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

Specifications (continued)

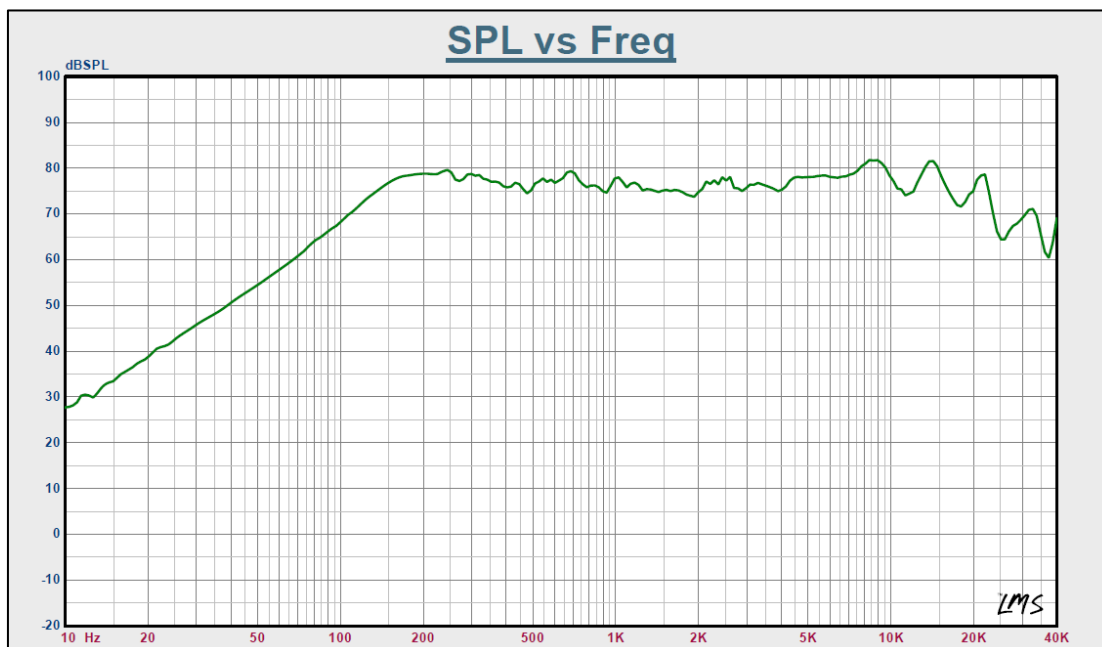
| | | |
|-----------------------|--|----|
| Buzz, Rattle, etc. | Should not be audible with 8.95V sine wave from 200 Hz to 20 kHz | - |
| Polarity | When positive voltage is applied to the positive terminal, the diaphragm will move outward | - |
| Storage Temperature | -20 ~ +60 | °C |
| Operating Temperature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

Measurement Method

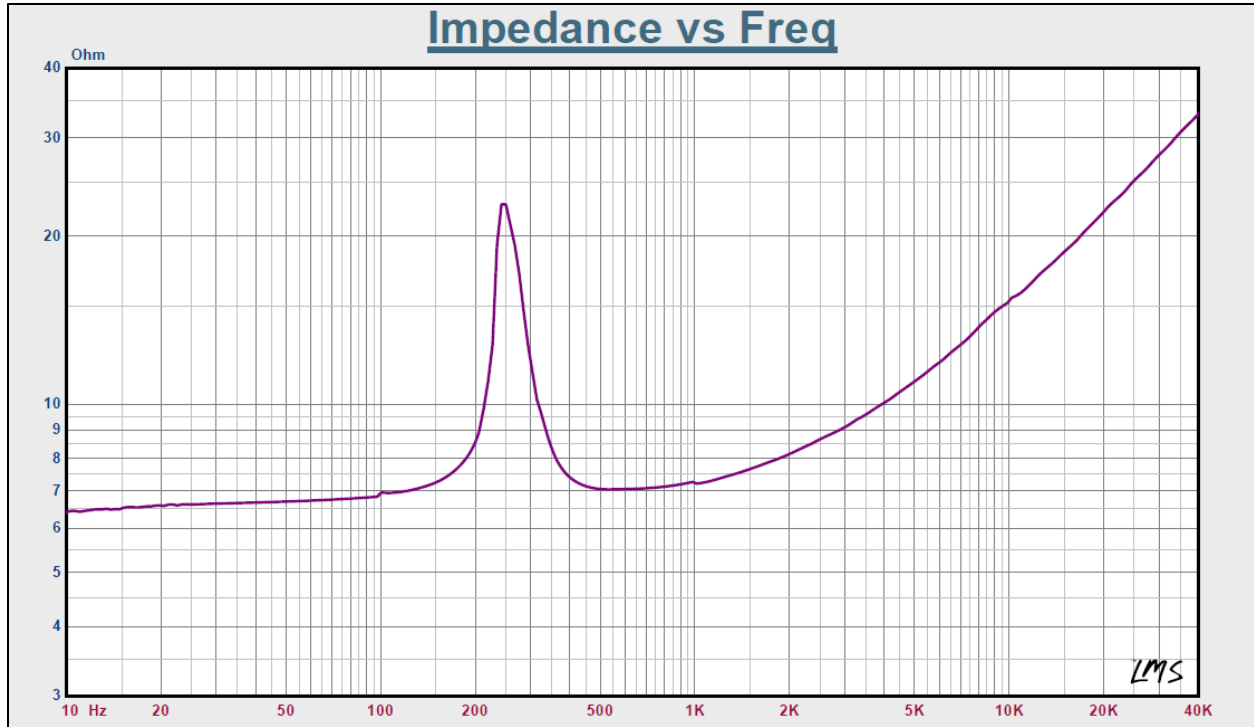
Standard test condition of speaker



Frequency Response (measured with 2.83V @ 1m)



Impedance Response

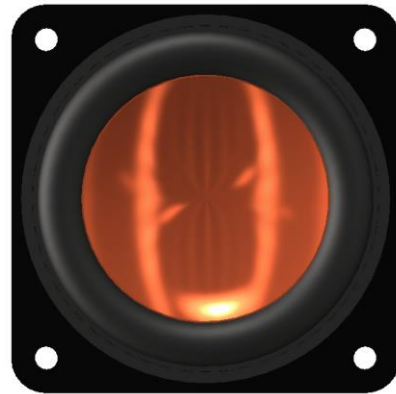
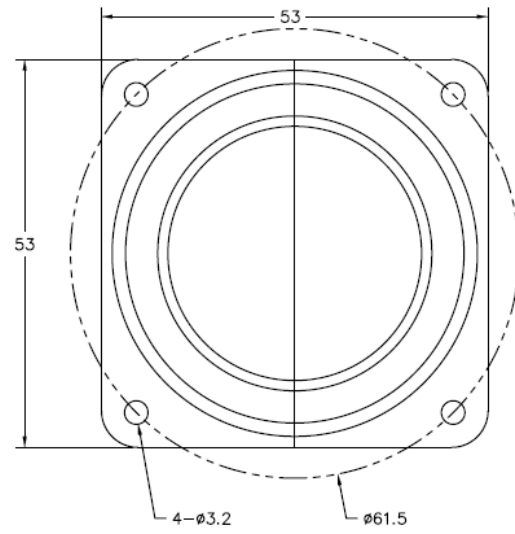
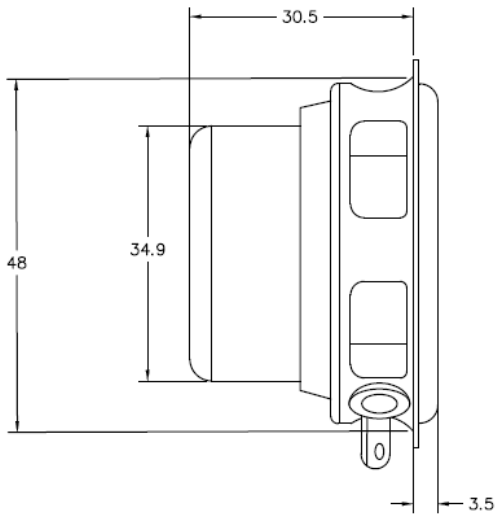


Reliability Testing

| 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

| Revision | Description | Date |
|-----------------|---------------------------|-------------|
| - | 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.