



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

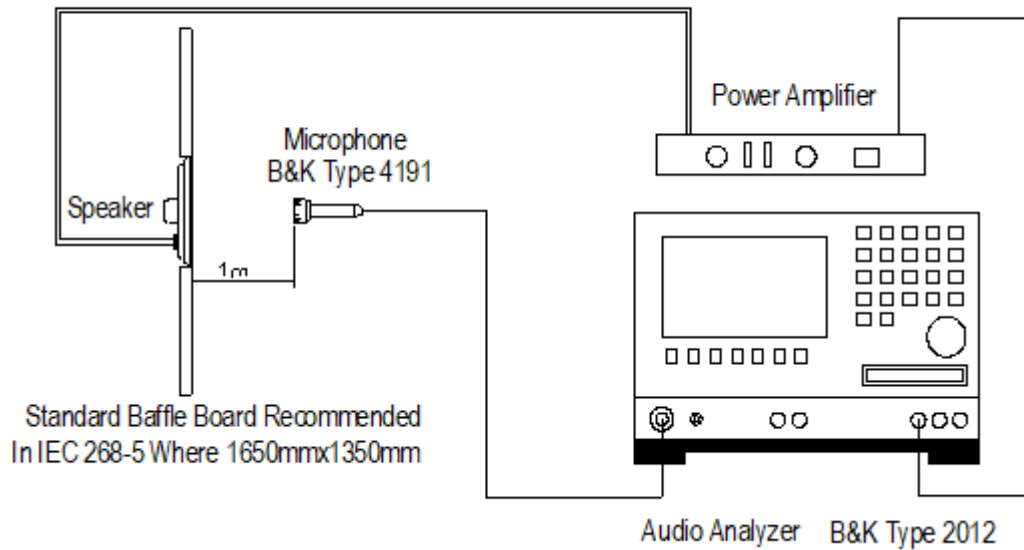
Parameters	Values	Units
Rated Input Power	10	Watts
Max Input Power	20	Watts
Impedance	$8 \pm 15\%$	Ohms
Sensitivity (SPL @ 1W/1m) Avg. at 2, 4, 8, and 16 kHz	78 ± 3	dB
Resonant Frequency (in free air)	$230 \pm 20\%$	Hz
Frequency Range (-10 dB)	100 ~ 40,000	Hz
Frame Material	Stamped Steel	-
Magnet Material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

Specifications (continued)

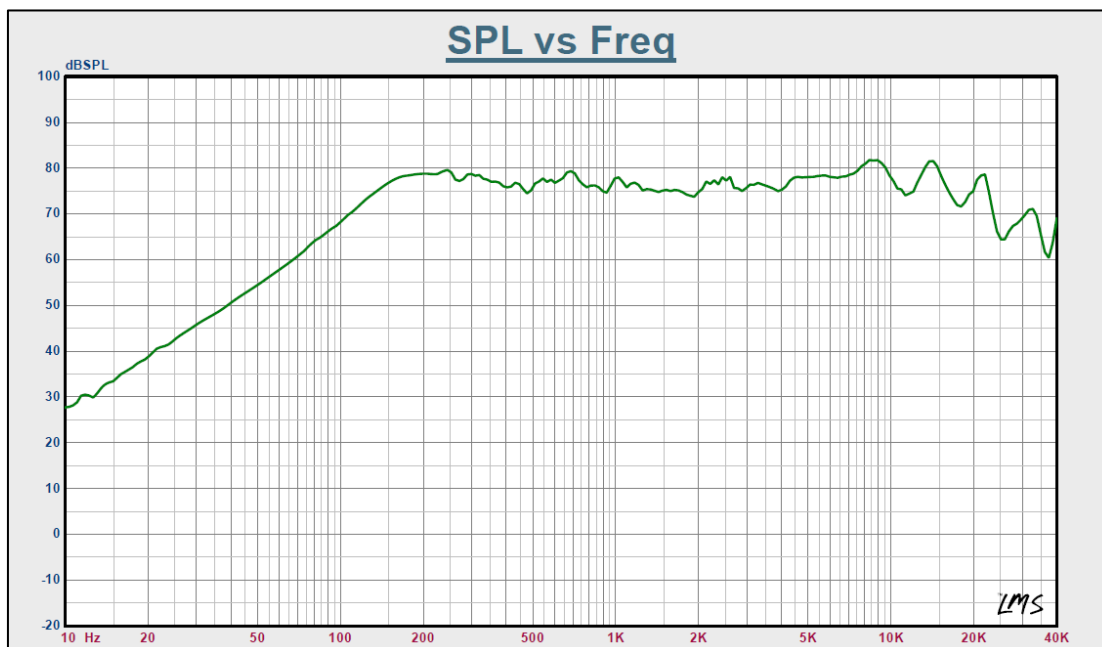
Buzz, Rattle, etc.	Should not be audible with 8.95V sine wave from 200 Hz to 20 kHz	-
Polarity	When positive voltage is applied to the positive terminal, the diaphragm will move outward	-
Storage Temperature	-20 ~ +60	°C
Operating Temperature	-20 ~ +60	°C

Measurement Method

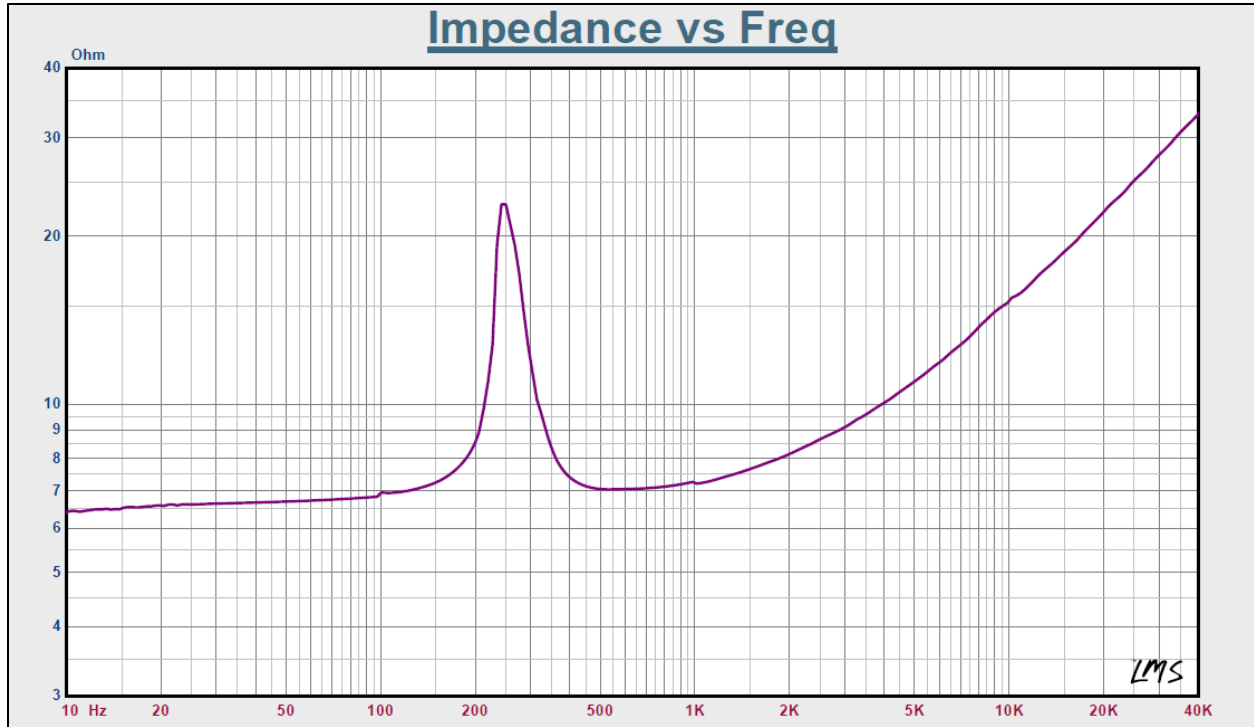
Standard test condition of speaker



Frequency Response (measured with 2.83V @ 1m)



Impedance Response

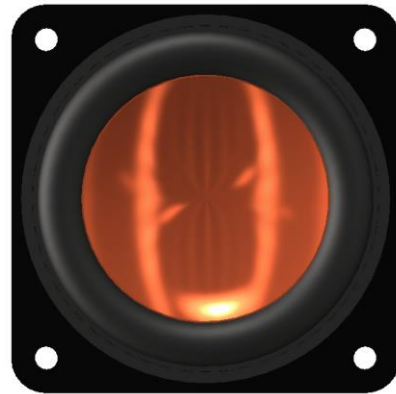
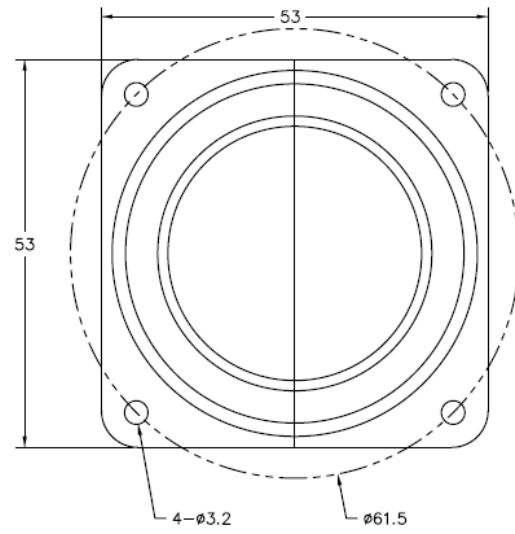
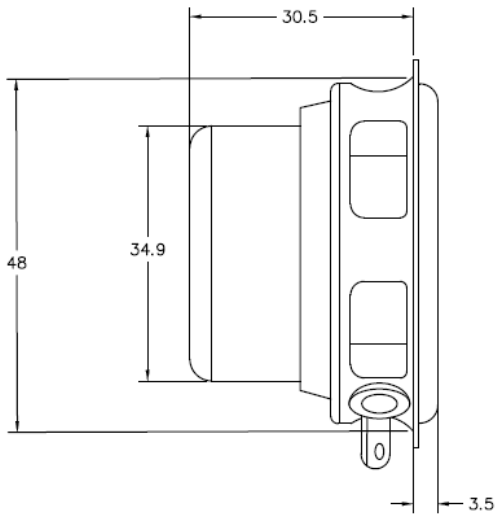


Reliability Testing

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

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.