

Data Sheet

AS01506MS-SP11-WP-R

PUI Audio’s **Mobile Series** line of speakers and receivers is designed for cutting-edge applications such as smart watches and pendants, Wi-Fi enabled security devices and action cameras, mobile radios and smart phones, as well as IoT devices. Each **Mobile Series** product features an IP67-rated face for protection against dust and water ingress.

The six ohm 15mm x 11mm **AS01506MS-SP11-WP-R** speaker is designed for high fidelity audio reproduction in the thinnest size possible. Solder pads allow for lead wire connection.

Features:

- PEEK diaphragm for flat frequency response
- 92 dB output (2V @ 10cm)
- High-energy neodymium motor
- Only 3 mm thick
- Dustproof and waterproof IP67-rated face

Specifications

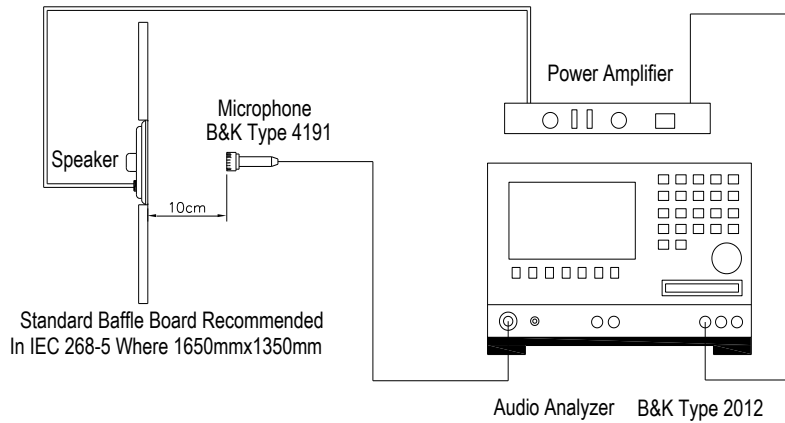
| Parameters | Values | Units |
|---|-----------------------|-------|
| Rated Input Power | 0.7 | Watts |
| Max Input Power | 1 | Watts |
| Impedance | 6 ± 15% | Ohms |
| Sensitivity (SPL @ 2V/10cm) Average 0.8, 1.0, 1.5, 2.0 kHz | 92 ± 3 | dB |
| Resonant Frequency (free air/in 1cc enclosure) | 600 ± 20% / 900 ± 20% | Hz |
| Frequency Range | 600 ~ 20,000 | Hz |
| Frame Material | PPA | - |
| Magnet Material | NdFeB | - |
| Weight | 1.5 | Grams |
| Environmental Protection Rating | IP67 | - |

Specifications (continued)

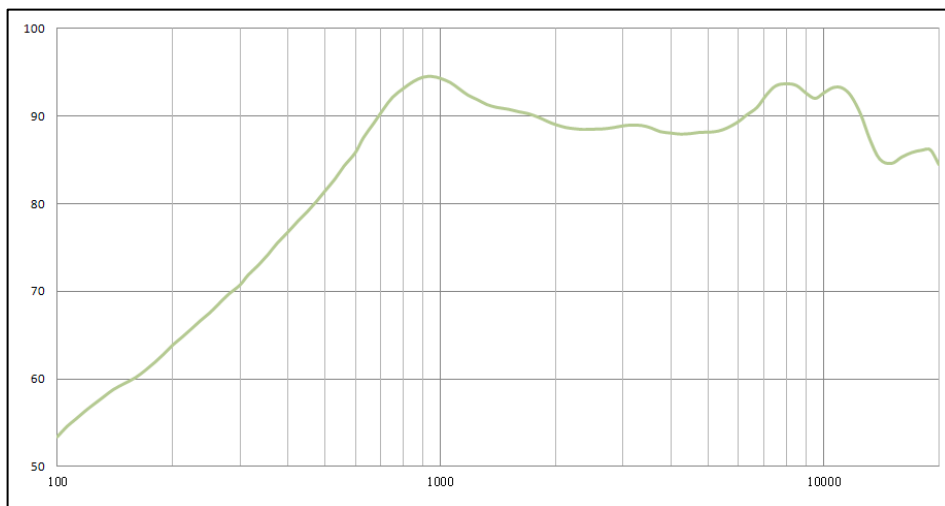
| | | |
|-----------------------|--|----|
| Buzz, Rattle, etc. | Should not be audible with 2V sine wave from 300 Hz to 3.4 kHz in 1cc enclosure | - |
| Polarity | When positive voltage is applied to the positive terminal, the diaphragm will move outward | - |
| Storage Temperature | -40 ~ +85 | °C |
| Operating Temperature | -20 ~ +70 | °C |

Measurement Method (measured with 2.45V, Temperature: 15 ~ 35°C, Relative Humidity: 25%~70%)

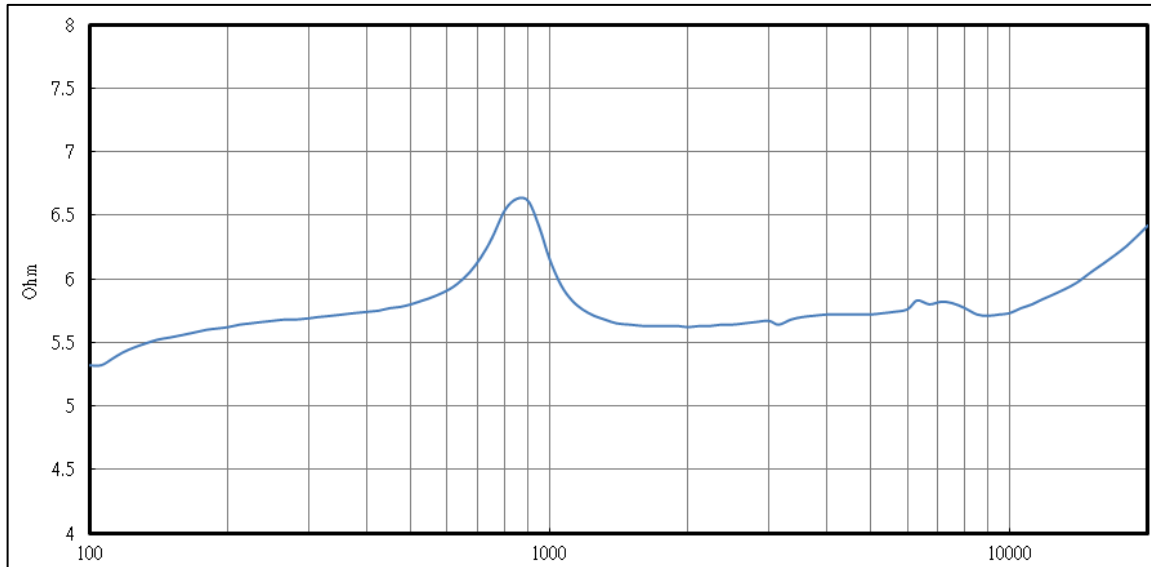
Standard test condition of speaker



Frequency Response (measured with 2V @ 10cm in 1cc enclosure)



Impedance Response (measured in 1cc enclosure)

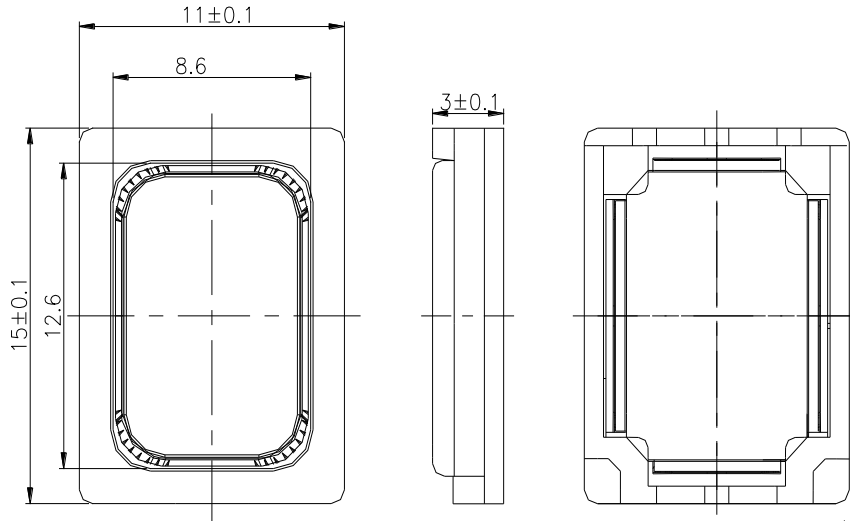


Reliability Testing

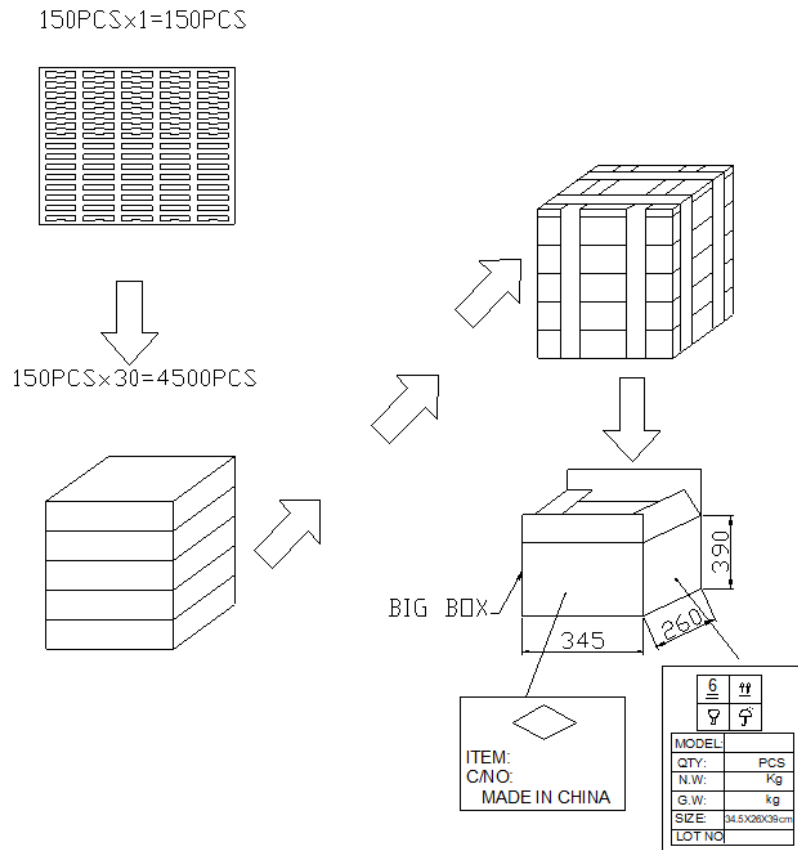
| Type of Test | Test Specifications |
|---------------------------|--|
| High Temperature Test | 96 hours at +85°C ± 3°C followed by three hours in normal room temperature |
| Low Temperature Test | 96 hours at -40°C ± 3°C followed by three hours in normal room temperature |
| Humidity Test | 96 hours 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: -40°C±3°C High temperature: +85°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. |
| Drop Test | Mount speaker to 100g fixture, drop fixture 1.5 meters, twice per side and twice for each corner |
| Load Test | White noise is applied at the speakers rated power for 96 hours at room temperature with speaker in 1cc enclosure. |

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

Dimensions (Right contact is positive on the far right drawing below)



Packaging



Specifications Revisions

| Revision | Description | Date |
|-----------------|---------------------------|-------------|
| - | Released from Engineering | 11/20/2017 |

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.