Data Sheet	AS01606MS-SP16-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 16mm x 9mm **AS01606MS-SP16-WP-R** speaker is designed for high fidelity audio reproduction in the thinnest size possible—only 3mm thick! Solder pads allow for lead wire connection.

Features:

- PEEK diaphragm for flat frequency response
- 91 dB output (2.37V @ 10cm)
- High-energy neodymium motor
- Only 3 mm thick
- Dustproof and waterproof IP67-rated face

Specifications

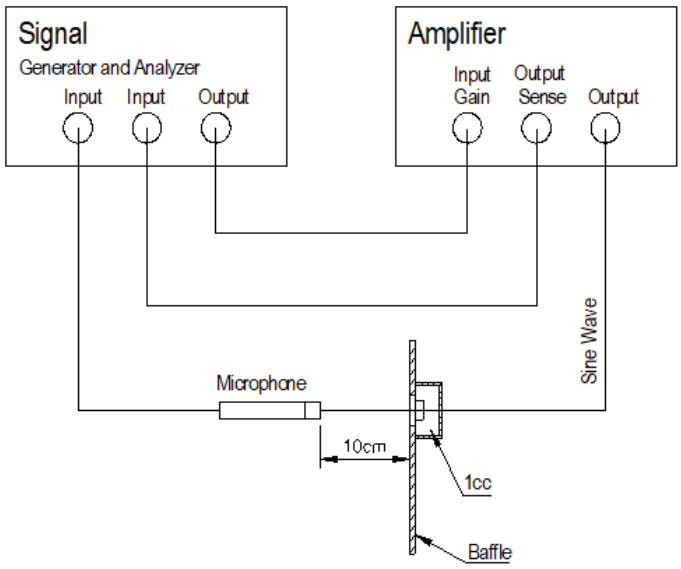
Parameters	Values	Units
Rated Input Power	0.94	Watts
Max Input Power	1.2	Watts
Impedance	6 ± 20%	Ohms
Sensitivity (SPL @ 2.37V/10cm) At 2 kHz	91 ± 3	dB
Resonant Frequency (in 1cc enclosure)	850 ± 20%	Hz
Frequency Range	500 ~ 20,000	Hz
Frame Material	PPA	-
Magnet Material	NdFeB	-
Weight	1.2	Grams
Environmental Protection Rating	IP67	-

Specifications (continued)

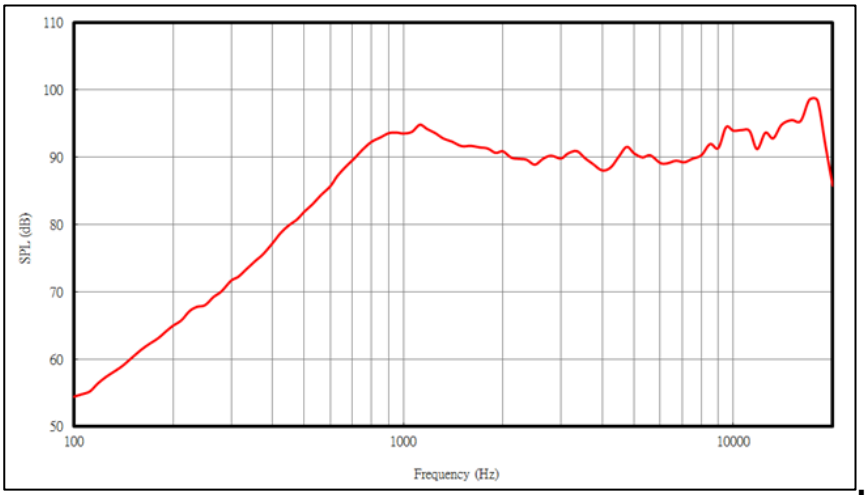
Buzz, Rattle, etc.	Should not be audible with 2.37V sine sweep from 500 Hz to 10 kHz installed in a 1cc enclosure	-
Polarity	When positive voltage is applied to the positive terminal, the diaphragm will move outward	-
Storage Temperature	-40 ~ +70	°C
Operating Temperature	-20 ~ +60	°C

Measurement Method **(measured with 2.37V, Temperature: 15 ~ 35°C, Relative Humidity: 45%~85%)**

Speaker Measurement Circuit

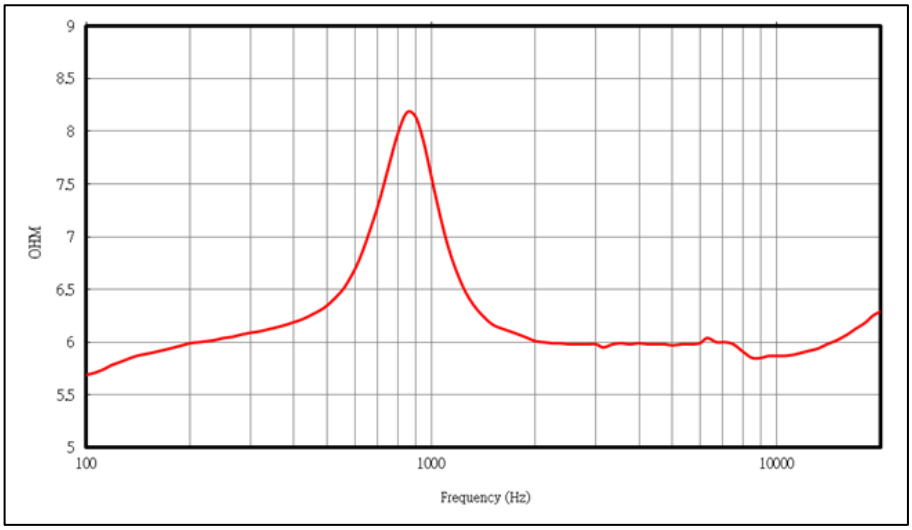


Frequency Response **(measured with 2.37V @ 10cm in 1cc enclosure)**



PUI Audio, Inc. A Projects Unlimited Company, 3541 Stop Eight Road, Dayton, OH 45414
Tel: (937) 415-5901 Fax: (937) 415-5925

Impedance Response (Measured with speaker in a 1cc enclosure)

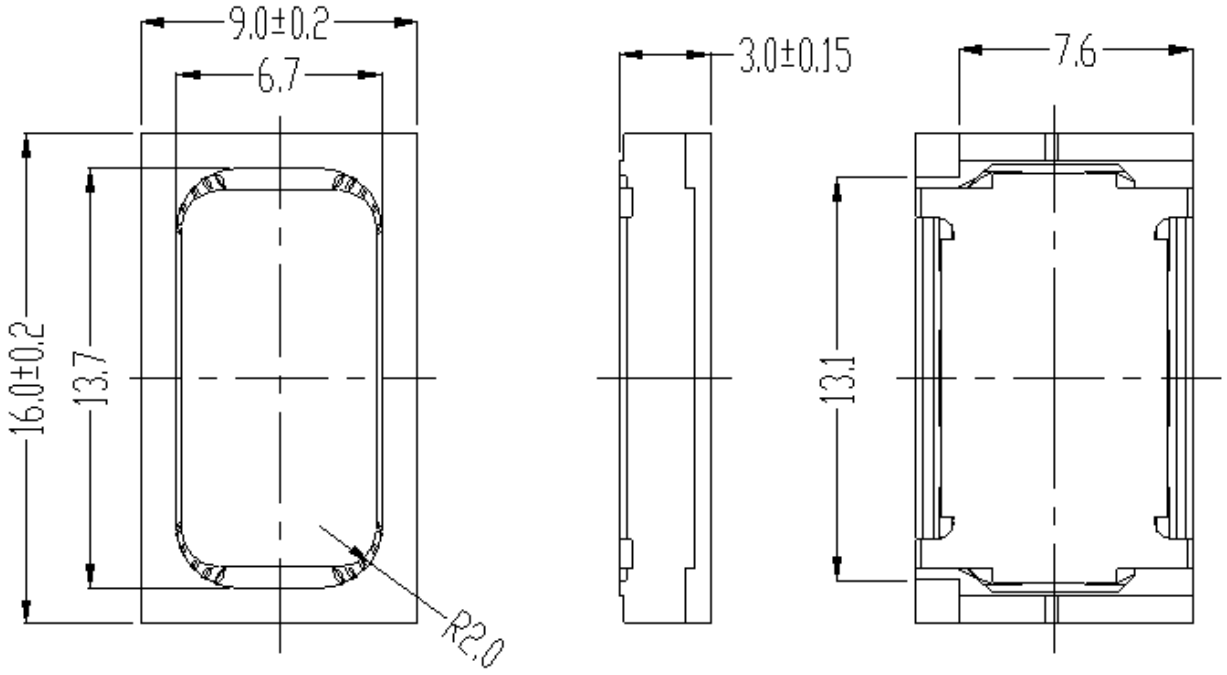


Reliability Testing

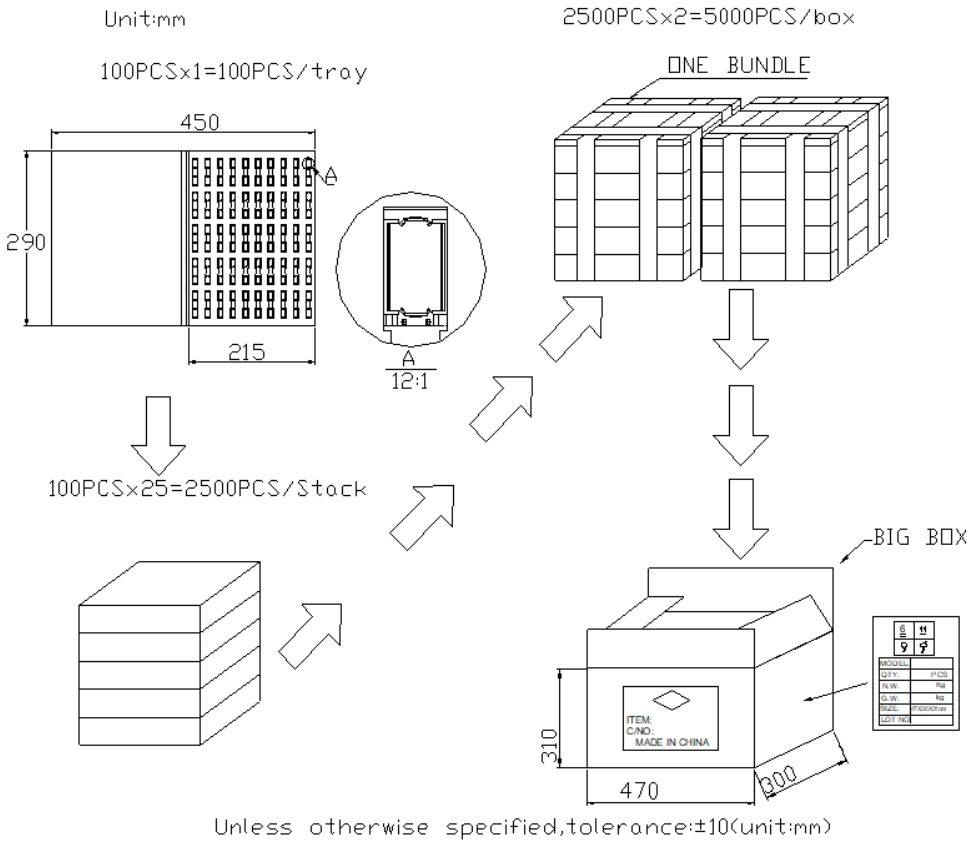
Type of Test	Test Specifications
High Temperature Test	96 hours at +70°C ± 3°C followed by three hours in normal room temperature
Low Temperature Test	96 hours at -40°C ± 3°C followed by three hours in normal room temperature
Humidity Test	96 hours at +55°C ± 3°C with relative humidity at 95% in accordance with IEC 68-2-67.
Temperature Cycle Testing	The part shall be subjected to 20 cycles using the following procedure: Low temperature: -40°C±3°C High temperature:+70°C±3°C Cycle: 30 mins at High, 10 seconds High to Low, 30 mins at Low, 10 seconds 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 150g fixture, drop fixture 1.5 meters, twice per side and twice for each corner
Load Test	DUTs shall be tested under each specified climatic condition for a continuous period of 100 hours at rated noise power. Speakers mounted in a 1cc back cavity; simulated program signal (IEC 268-1) with crest factor of 1.8~2.2 in rated frequency range; high pass 12dB/oct or steeper, cut off at 850 Hz. Refer to IEC 268-5.

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

Dimensions (Bottom solder pad is positive on the far right drawing below)



Packaging



PUI Audio, Inc. A Projects Unlimited Company, 3541 Stop Eight Road, Dayton, OH 45414
Tel: (937) 415-5901 Fax: (937) 415-5925