



Data Sheet

AS01608MS-SC9-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 eight ohm 16mm x 9mm **AS01608MS-SC9-WP-R** speaker is designed for high fidelity audio reproduction in the thinnest size possible—only 2.5mm thick! Spring contacts allow for easy electrical connection.

#### Features:

- PEEK diaphragm for flat frequency response
- 89 dB output (2.37V @ 10cm)
- High-energy neodymium motor
- Only 2.5 mm thick
- Dustproof and waterproof IP67-rated face

#### Specifications

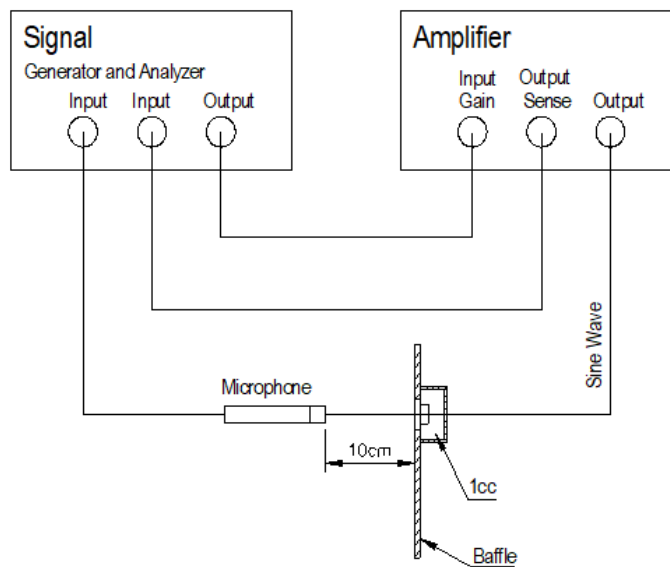
Parameters	Values	Units
Rated Input Power	0.7	Watts
Max Input Power	1	Watts
Impedance	8 ±15%	Ohms
Sensitivity (SPL @ 2.37V/10cm) Average of 0.8, 1.0, 1.5, and 2.0 kHz in 1cc enclosure	89 ± 3	dB
Resonant Frequency (in 1cc enclosure)	850 ± 20%	Hz
Frequency Range	500 ~ 20,000	Hz
Frame Material	PPA	-
Magnet Material	NdFeB	-
Weight	1.3	Grams
Environmental Protection Rating	IP67	-

## Specifications (continued)

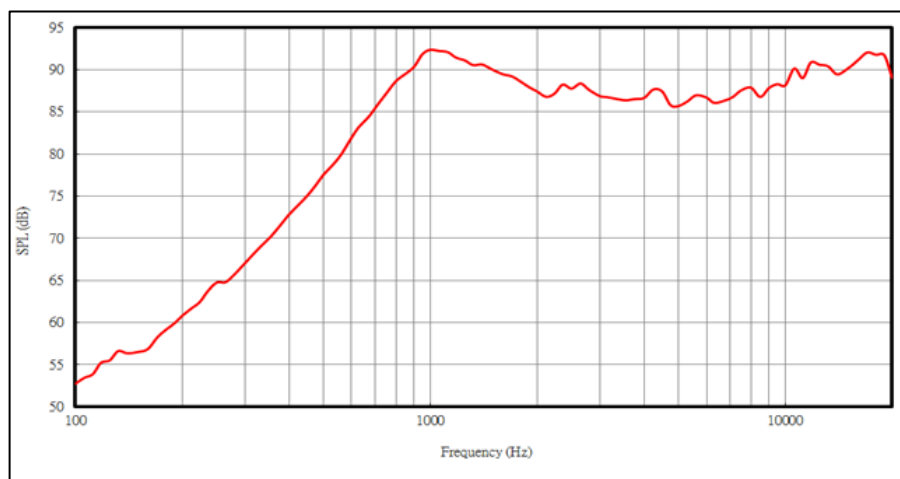
Buzz, Rattle, etc.	Should not be audible with 2.37V sine sweep from 850 Hz to 10 kHz installed in a 1cc enclosure	-
Polarity	When positive voltage is applied to the positive terminal, the diaphragm will move outward	-
Storage Temperature	-40 ~ +85	°C
Operating Temperature	-20 ~ +70	°C

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

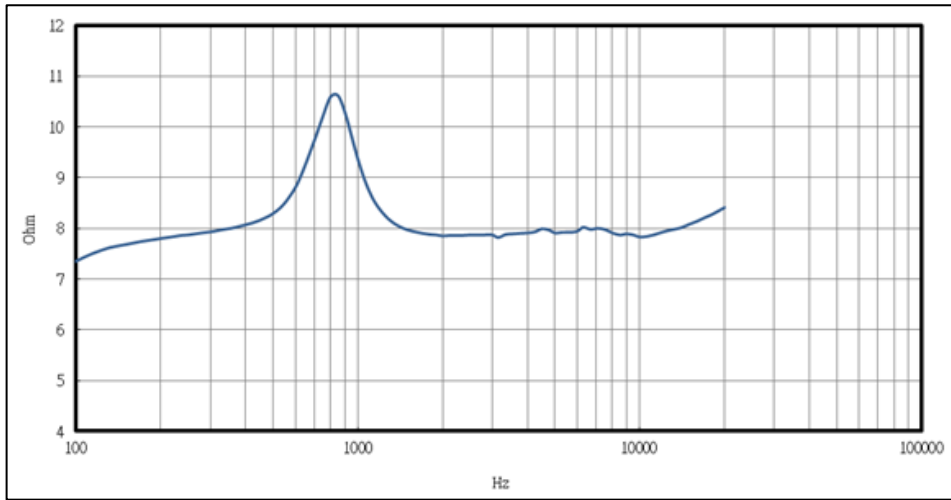
### Speaker Measurement Circuit



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



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

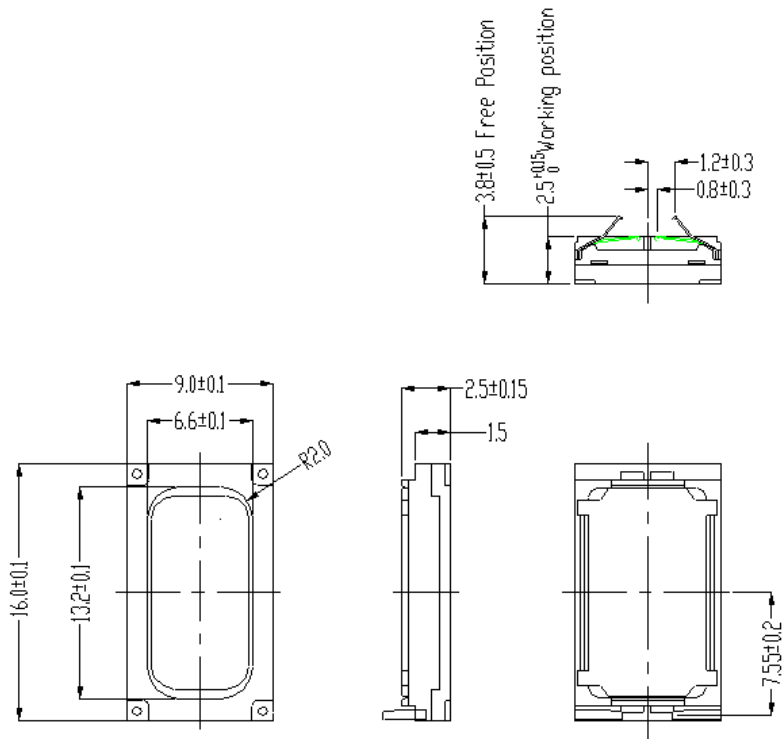


## Reliability Testing

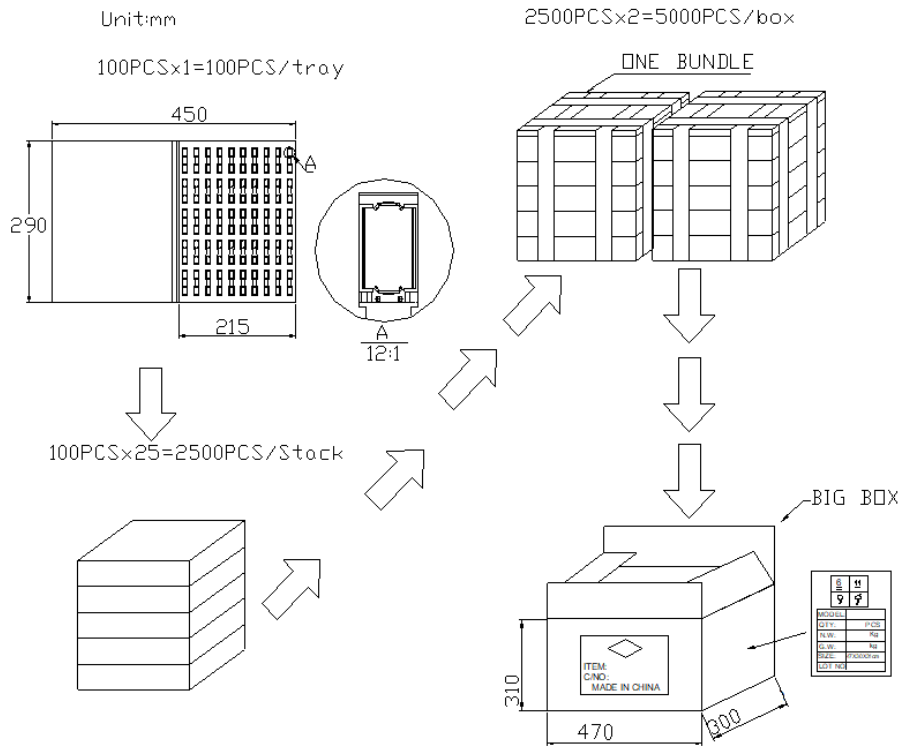
Type of Test	Test Specifications
High Temperature Test	96 hours at +85°C ± 3°C followed by three hours in normal room temperature
Low Temperature Test	96 hours at -40°C ± 3°C followed by three hours in normal room temperature
Humidity Test	96 hours at +55°C ± 3°C with relative humidity at 95% in accordance 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: +85°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; input shall be simulated program signal (per IEC 268-1) with crest factor of 1.8 to 2.2 in rated frequency range for a period of 1 second. And the test shall be repeated 60 times with intervals of 1 min. Refer to IEC 268-5.

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

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



## Packaging



Unless otherwise specified, tolerance:±10(unit:mm)

**Specifications Revisions**

<b>Revision</b>	<b>Description</b>	<b>Date</b>
-	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.

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