



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



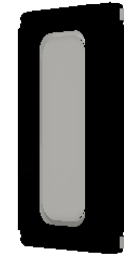
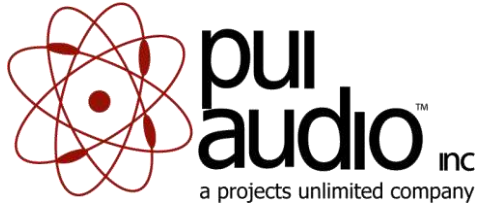
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## Data Sheet

AR01232MS-SC12-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 32 ohm 12mm x 6mm **AR01232MS-SC12-WP-R** receiver is designed for high fidelity audio reproduction in near-phone and headphone applications. Spring contacts and a 2mm thickness make mounting easy, even in the thinnest applications.

### Features:

- Custom-molded poly cone designed for voice articulation
- High 116 dB output with 800mV in Artificial Ear (1cm)
- High energy neodymium motor
- Only 2 mm thick
- Dustproof and waterproof IP67-rated face

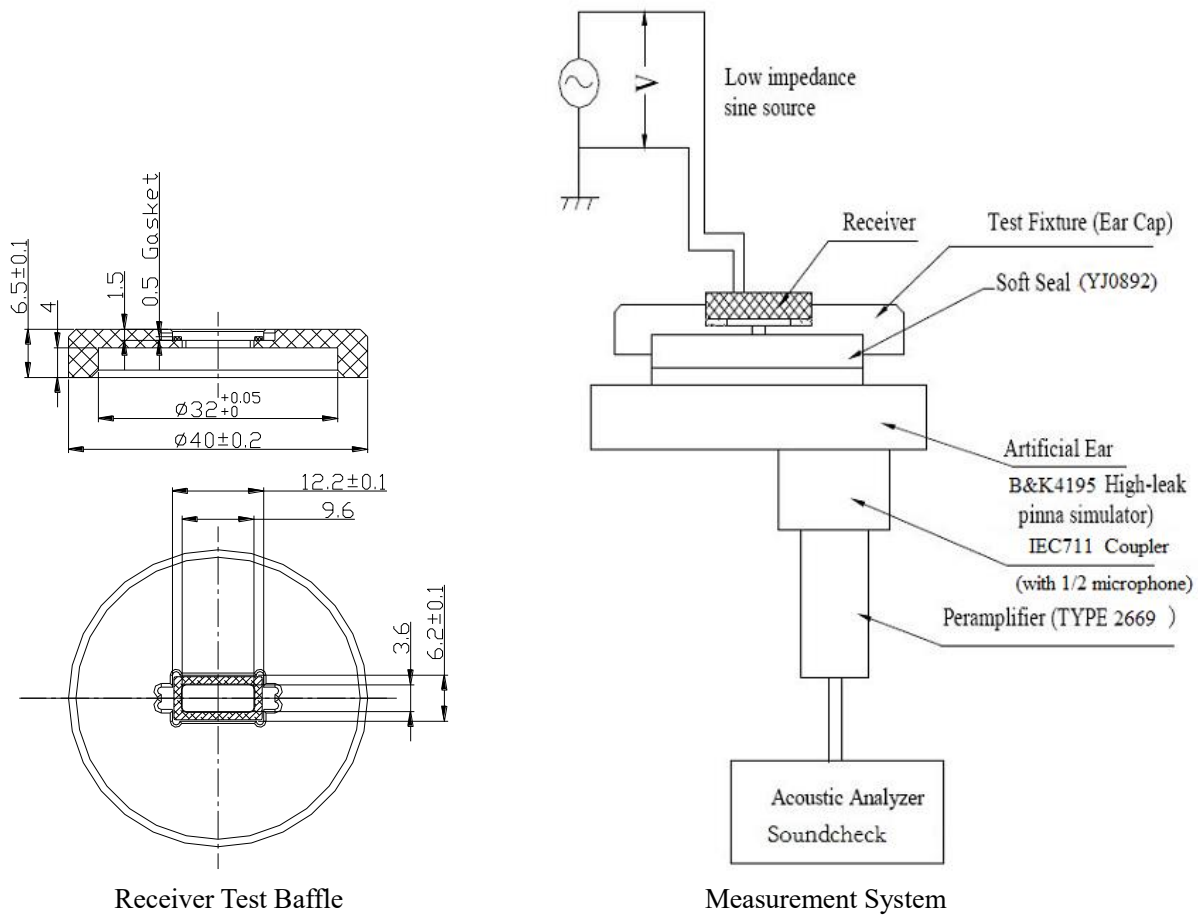
### Specifications

| Parameters                                           | Values      | Units   |
|------------------------------------------------------|-------------|---------|
| Rated Input Power                                    | 20          | mWatts  |
| Max Input Power                                      | 30          | mWatts  |
| Impedance                                            | 32 ± 15%    | Ohms    |
| Sensitivity (SPL @ 1kHz)<br>800mV in Type 3.2 HL Ear | 116 ± 3     | dB Pa/V |
| Resonant Frequency<br>(800mV in free air)            | 450 ± 20%   | Hz      |
| Frequency Range                                      | 300 ~ 7,000 | Hz      |
| Frame Material                                       | PPA         | -       |
| Magnet Material                                      | NdFeB       | -       |
| Weight                                               | 0.4         | Grams   |
| Environmental Protection Rating                      | IP67        | -       |

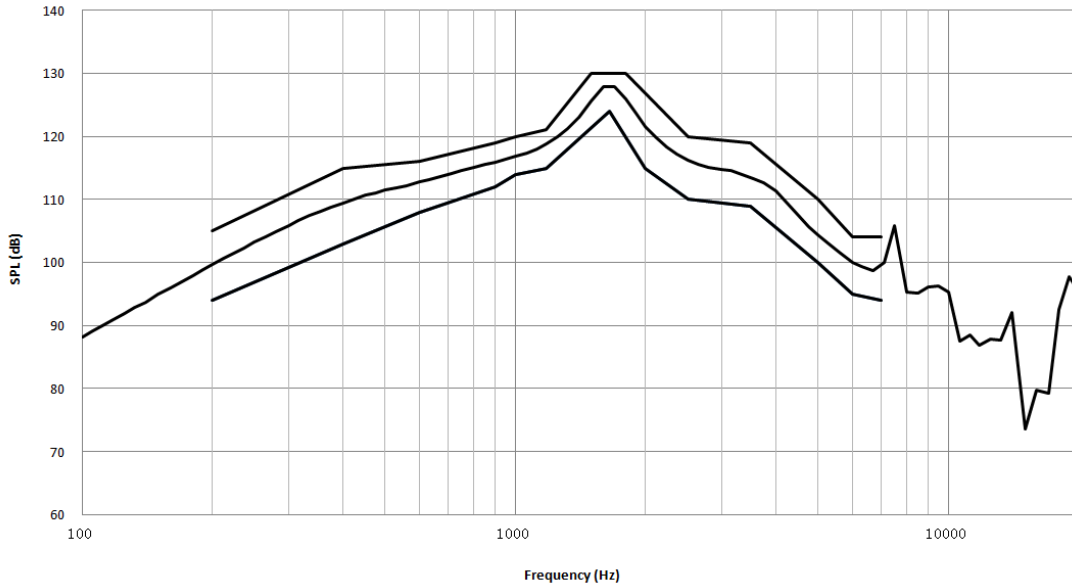
## Specifications (continued)

|                       |                                                                                            |    |
|-----------------------|--------------------------------------------------------------------------------------------|----|
| Buzz, Rattle, etc.    | Should not be audible with 20mW sine wave from 300 Hz to 7 kHz                             | -  |
| Polarity              | When positive voltage is applied to the positive terminal, the diaphragm will move outward | -  |
| Operating Temperature | -40 ~ +80                                                                                  | °C |

## Measurement Method (measured with 800mV, Temperature: 15 ~ 35°C, Relative Humidity: 45%~85%)

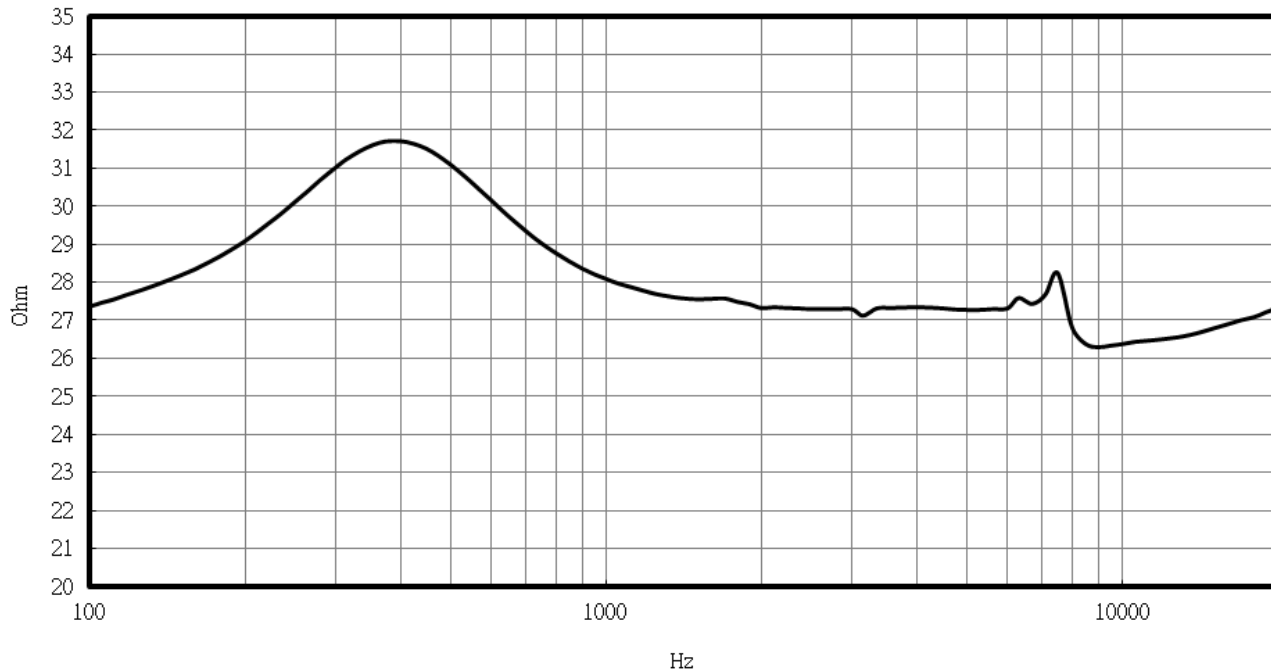


## Frequency Response (measured at 800 mV in Type 3.2HL Ear)



| Frequency (Hz) | Lower limit (dB) | Frequency (Hz) | Upper limit (dB) |
|----------------|------------------|----------------|------------------|
| 200            | 94               | 200            | 105              |
| 400            | 103              | 400            | 115              |
| 600            | 108              | 600            | 116              |
| 900            | 112              | 900            | 119              |
| 1000           | 114              | 1000           | 120              |
| 1180           | 115              | 1180           | 121              |
| 1650           | 124              | 1500           | 130              |
| 2000           | 115              | 1800           | 130              |
| 2500           | 110              | 2500           | 120              |
| 3500           | 109              | 3500           | 119              |
| 5000           | 100              | 5000           | 110              |
| 6000           | 95               | 6000           | 104              |
| 7000           | 94               | 7000           | 104              |

## Impedance Response (measured at 800 mV in Type 3.2HL Ear)

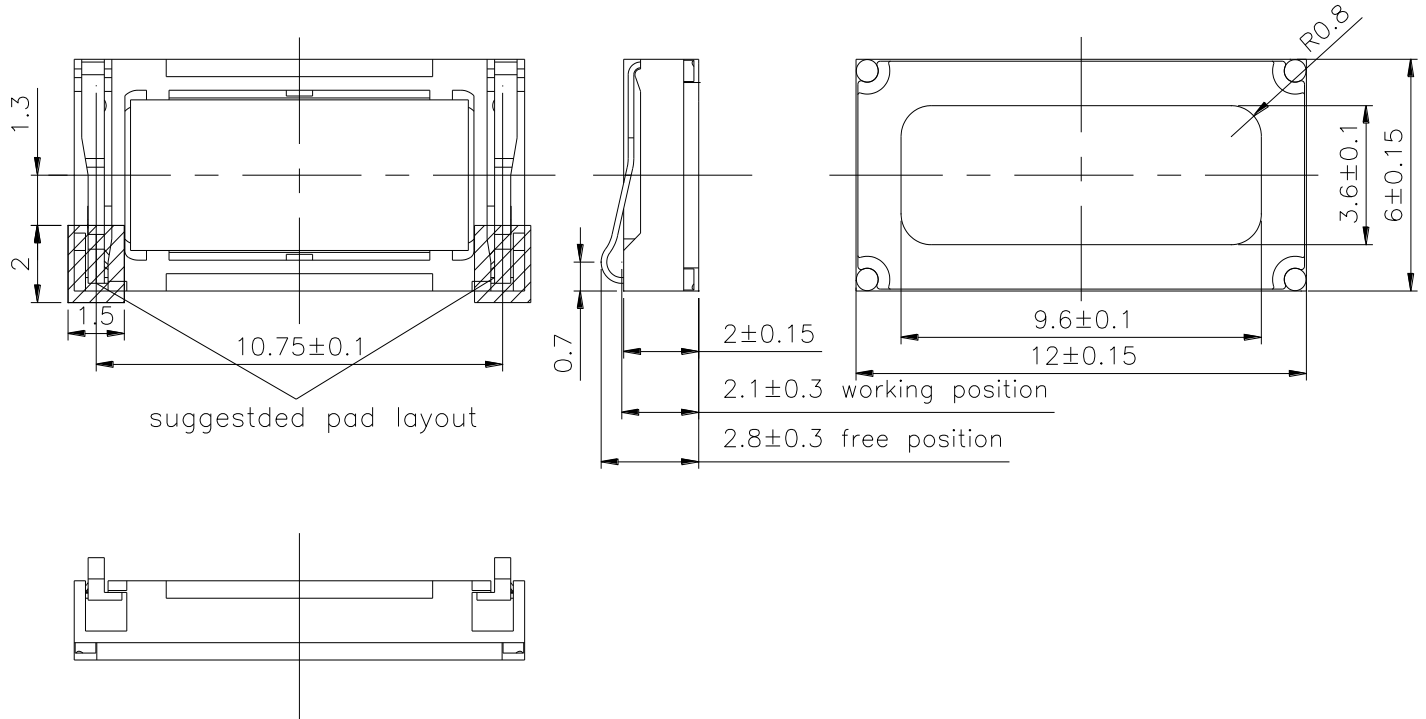


## Reliability Testing

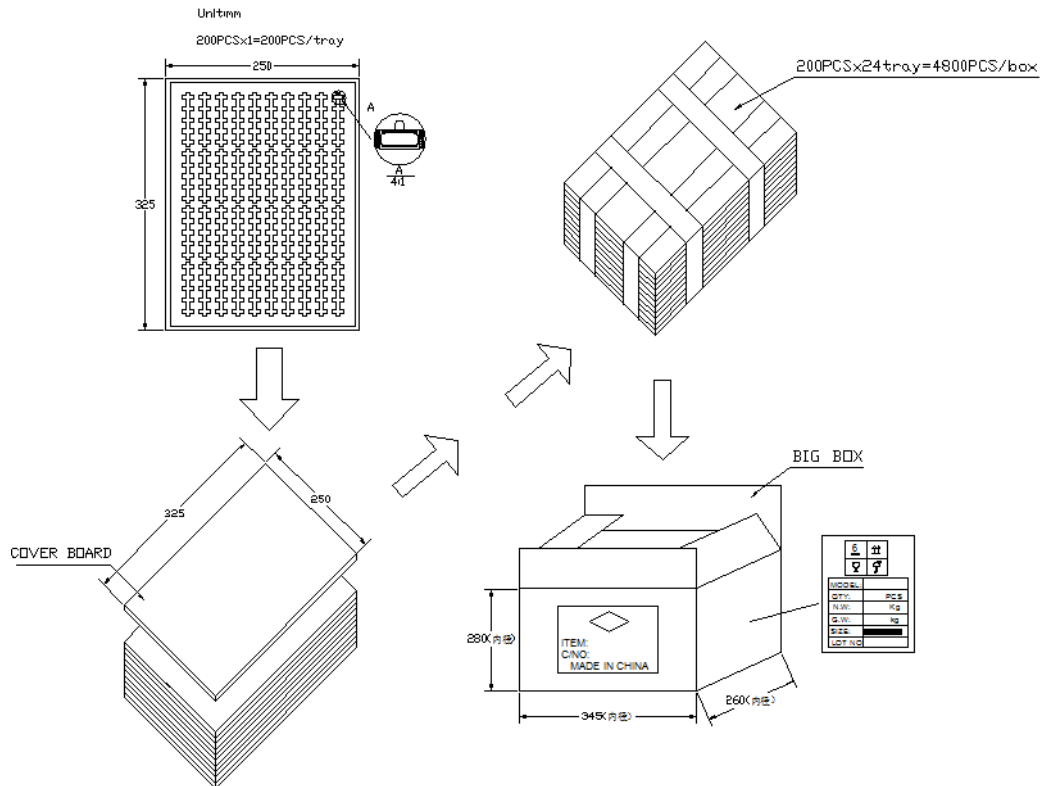
| Type of Test                 | Test Specifications                                                                                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High Temperature Test        | 96 hours at +80°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 95% followed by 3 hours in normal room temperature                                                            |
| Temperature Cycle Testing    | The part shall be subjected to 5 cycles using the following procedure:<br>Low temperature: -40°C±3°C<br>High temperature: +80°C±3°C<br>Cycle: 1 hour/cycle each |
| Vibration Test               | 10 to 55 to 10 Hz sine sweep, 15 minutes per cycle @ 5G constant.<br>2 hours in each axis X, Y, and Z.                                                          |
| Drop Test                    | Drop the speakers onto a 20mm thick board 10 times from a height of 100cm, once each side                                                                       |
| Load Test and Max Power Test | White noise is applied at the speakers rated power for 96 hours at room temperature; max power is applied for 1 minute on, 2 minutes off; 10 cycles.            |

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

**Dimensions** (Positive is the right spring contact in the suggested pad layout drawing)



**Packaging**



**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.