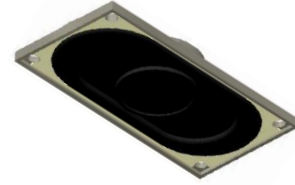




# PUI audio



Data Sheet

AS04008CO-WR-R

## Features:

- 40mm x 20mm x 5.8mm rectangular shape
- 8  $\Omega$  impedance, 2 W rated input power
- Water resistant coating

## Specifications

| Parameters                                           | Values                                                                           | Units        |
|------------------------------------------------------|----------------------------------------------------------------------------------|--------------|
| Rated Input Power                                    | 2                                                                                | Watts        |
| Max Input Power                                      | 3                                                                                | Watts        |
| Impedance                                            | 8 $\pm$ 15%                                                                      | Ohms         |
| Output SPL at 1W/50cm<br>(At 0.8, 1.0, 1.2, 1.5 kHz) | 83 $\pm$ 3                                                                       | dB           |
| Resonant Frequency<br>(Without Baffle)               | 500 $\pm$ 20%                                                                    | Hz           |
| Frequency Range                                      | 200 ~ 20,000                                                                     | Hz           |
| THD (1W, 1kHz input)                                 | < 5%                                                                             | -            |
| Frame Material                                       | Metal                                                                            | -            |
| Magnet Material                                      | NdFeB                                                                            | -            |
| Diaphragm Material                                   | Treated Cloth                                                                    | -            |
| Weight                                               | 7.6                                                                              | Grams        |
| Acceptable Soldering Methods                         | Hand Solder                                                                      | -            |
| Polarity                                             | Cone will move forward with positive (+) DC current applied to positive terminal | -            |
| Storage Temperature                                  | -30 ~ +70                                                                        | $^{\circ}$ C |
| Operating Temperature                                | -20 ~ +60                                                                        | $^{\circ}$ C |
| Environmental Compliances                            | ROHS/REACH                                                                       | -            |

## Measurement Method

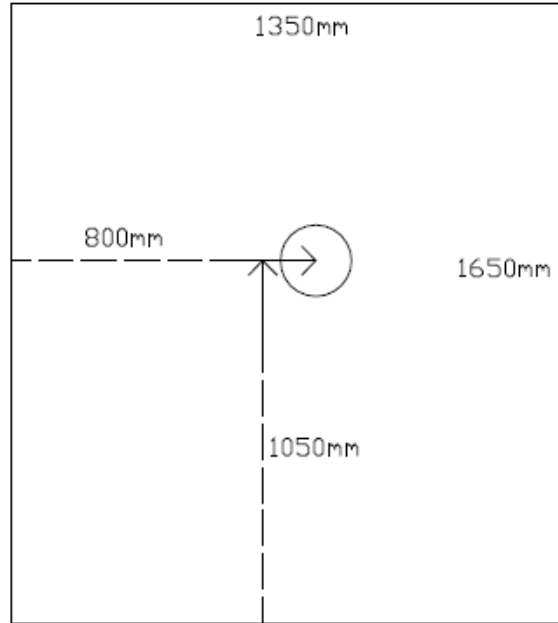
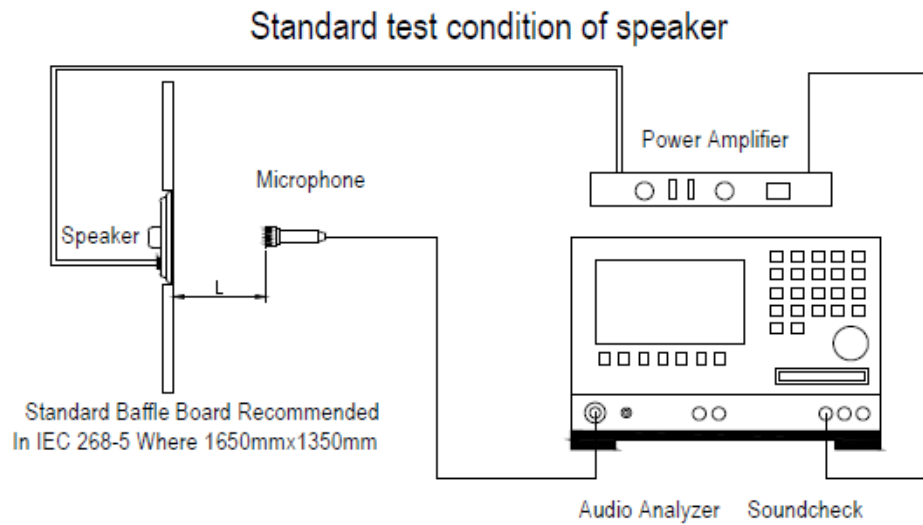
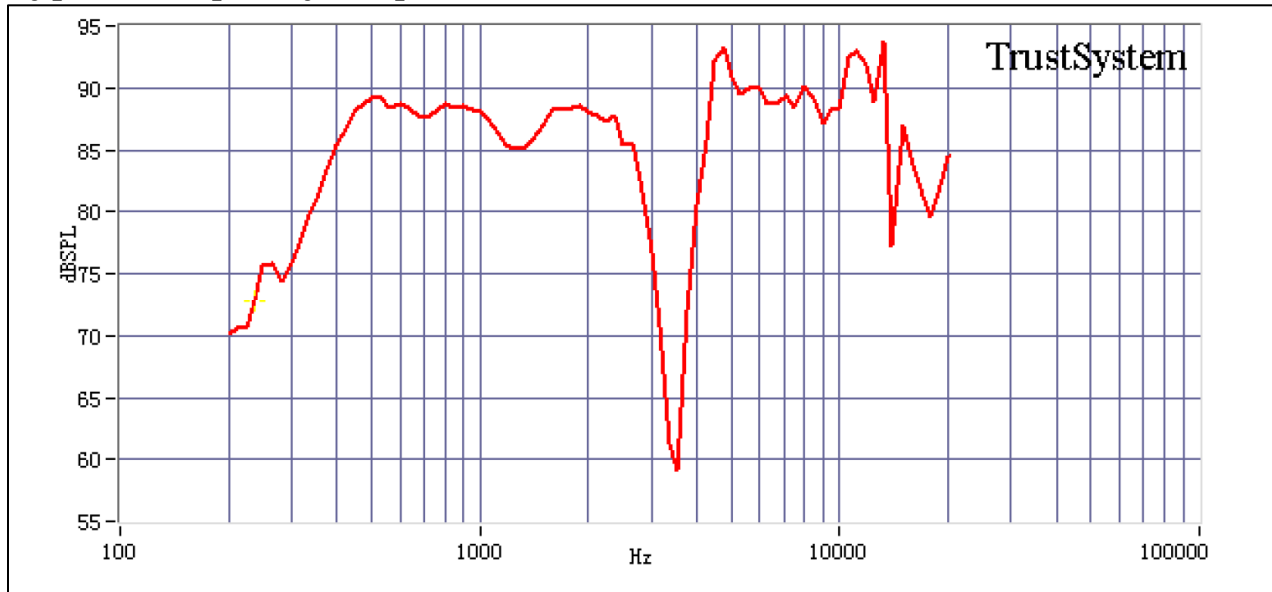


Fig. 1 Block Diagram for Measurement Method



**L=50cm**

## Typical Frequency Response (Measured at 50cm, 1W)



## Typical Thiele-Small Parameters (based on Golden Sample, up to 20% variance is normal)

| Specification | Value        | Description                         |
|---------------|--------------|-------------------------------------|
| Re            | 7.4 $\Omega$ | DC resistance                       |
| Le            |              | Inductance @ 10 kHz                 |
| Fs            | 405.442 Hz   | Resonant Frequency                  |
| Mms           | 110.258 mg   | Moving Mass                         |
| Bl            | 574.293 Tm   | Magnet Force Factor                 |
| Qms           | 3.261        | Mechanical Q-factor                 |
| Qes           | 6.302        | Electrical Q-factor                 |
| Qts           | 2.149        | Total Q-factor                      |
| Vas           | .039798 l    | Equivalent Air Volume of Suspension |
| Xmax          |              | One-Way Voice Coil Travel           |

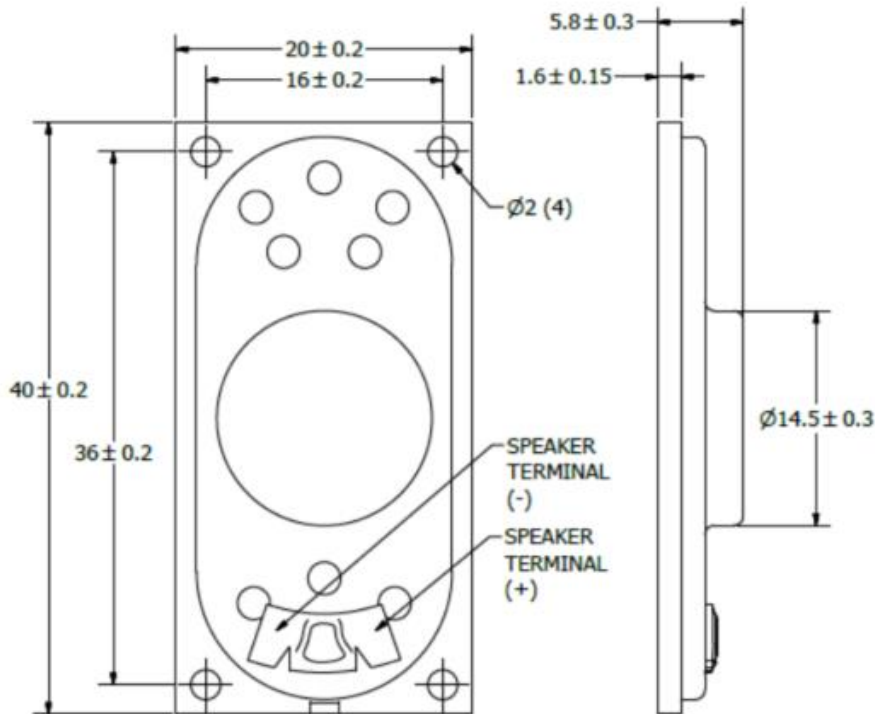
## Reliability Testing

| Type of Test              | Test Specifications                                               |
|---------------------------|-------------------------------------------------------------------|
| High Temperature Test     | 96 hours at +65°C $\pm$ 3°C with random humidity                  |
| Low Temperature Test      | 96 hours at -20°C $\pm$ 3°C with random humidity                  |
| Humidity Test             | 48 hours at +40°C $\pm$ 3°C with relative humidity between 90~95% |
| Temperature Cycle Testing | Part subjected to 5 cycles<br>                                    |

|                        |                                                                                                                |
|------------------------|----------------------------------------------------------------------------------------------------------------|
| Vibration Test         | 30 ± 15 Hz, 1.5mm amplitude vibration applied for 3 hours                                                      |
| Drop Test              | 100cm free fall onto concrete floor, 2 times                                                                   |
| Load Test              | White-noise source at rated power applied for 96 hours                                                         |
| Terminal Strength Test | 3.0N (0.306kg) horizontal force applied for 10 seconds<br>2.0N (0.204kg) vertical force applied for 10 seconds |

**After any of the above tests, part should conform to the original performance within ±3dB with rated power, after a recovery period of 6 hours.**

**Dimensions** (Positive terminal indicated by “+” marking)



**Specifications Revisions**

| Revision | Description                                            | Date       |
|----------|--------------------------------------------------------|------------|
| -        | RELEASED FROM ENGINEERING                              | 2/21/2006  |
| A        | REVISED POWER RATINGS, SPL & FREQ                      | 3/6/2006   |
| B        | REVISED TO INVENTOR 3D DRAWING TEMPLATE                | 12/22/2008 |
| C        | REVISED RESONANT FREQUENCY & ADDED STORAGE TEMPERATURE | 1/11/2022  |

Note:

- Unless otherwise specified:
  - All dimensions are in millimeters.
  - Default tolerances are ±0.5mm and angles are ±3°.
- Specifications subject to change or withdrawal without notice.
- This part is ROHS 2015/863/EU compliant.
- Cone has been treated for water resistance.
- Base speaker PUI# AS04008CO-R