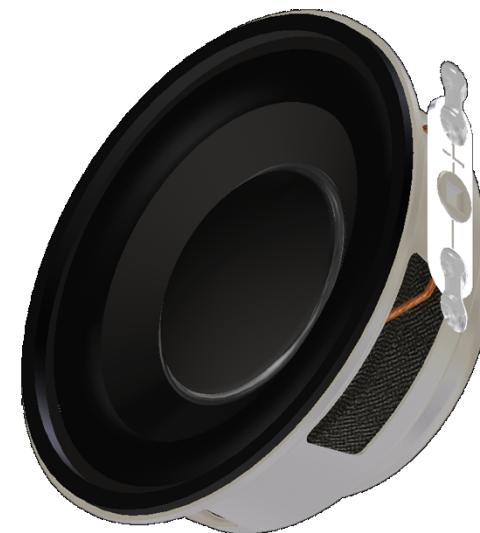


## AS04004PR-R 40mm Speaker

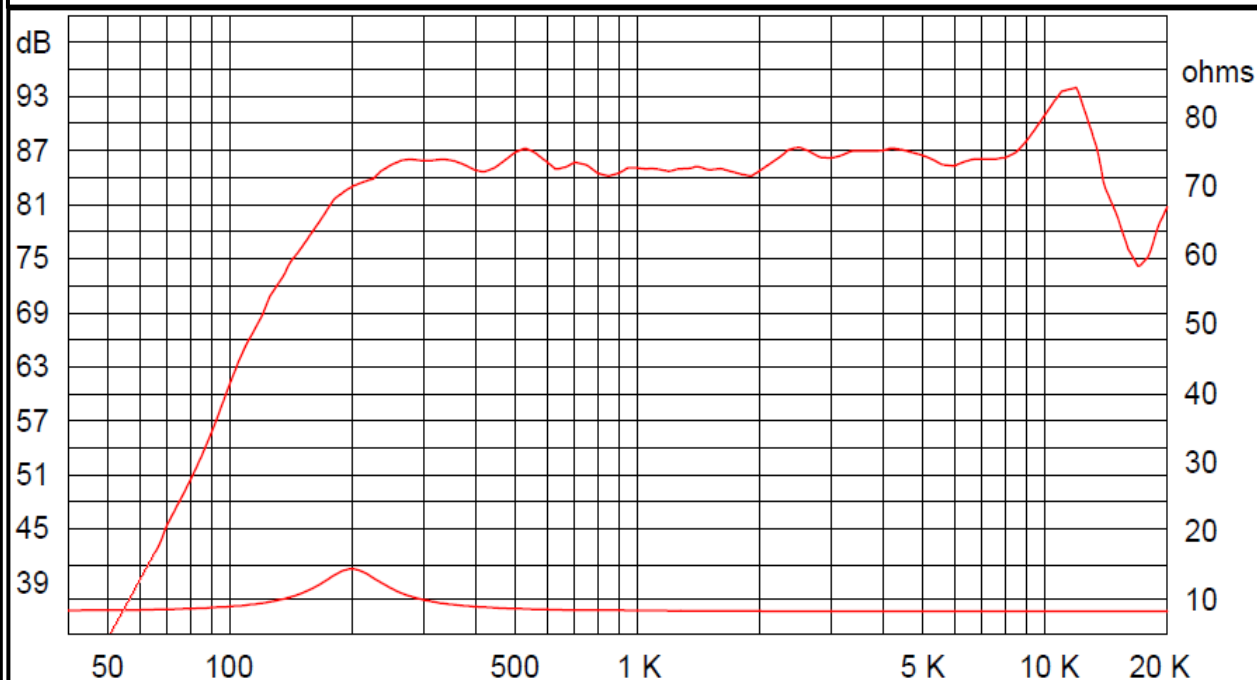
3541 Stop Eight Road • Dayton, Ohio 45414

### Product Overview

- 40mm diameter speaker with Neodymium magnet for 86 dB sensitivity
- 3W continuous, 4W maximum power handling and 4Ω impedance
- Rubber surround and treated paper cone for weather resistance

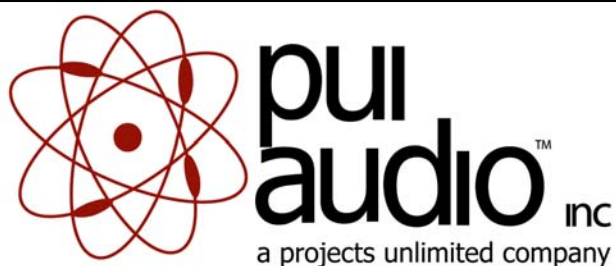


Frequency Response (1W @ 0.5 meters) and Impedance Graph



Audio Products Division





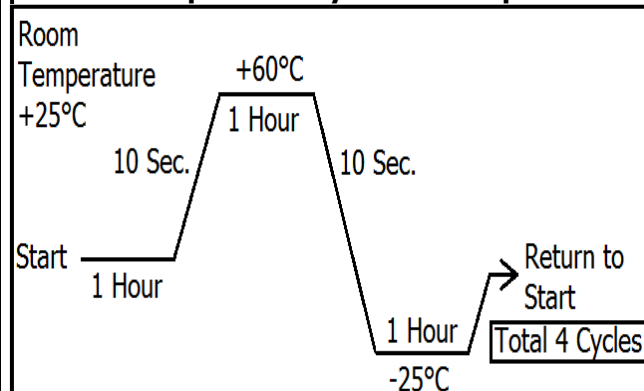
## AS04004PR-R 40mm Speaker

### Mechanical and Environment Testing

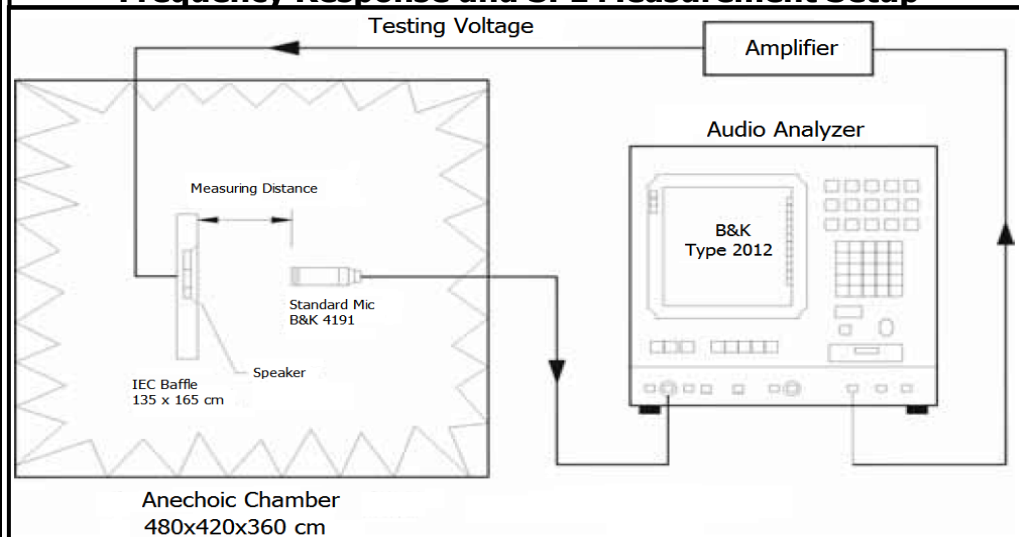
| Test Description  | Test Condition  |
|---|---|
| High Temperature  | 60°C ( $\pm 2^\circ\text{C}$ ) with random humidity for 96 hours              |
| Low Temperature   | -25°C ( $\pm 2^\circ\text{C}$ ) with random humidity for 96 hours             |
| Humidity  | 40°C ( $\pm 2^\circ\text{C}$ ) with 90% to 95% relative humidity for 48 hours |
| Vibration   | 1.5 mm movement modulated at 30 Hz ( $\pm 15$ Hz) for 3 hours                 |
| Drop Test   | 75 cm free fall onto concrete floor, 10 cycles                                |
| After tests, speaker shall rest for 1 hour. SPL shall not deviate $\pm 3$ dB from pre-test measurement. |   |
| Temperature Cycle Test  | -25°C to 60°C, 4 cycles (refer to Temperature Cycle Test Graph)               |

After test, speaker shall rest for 1 hour. SPL shall not deviate  $\pm 3$  dB from pre-test measurement.

### Temperature Cycle Test Graph



### Frequency Response and SPL Measurement Setup



### Thiele-Small Parameters

| Specification         | AS04004PR-R |
|-----------------------|-------------|
| Fo (Hz)               | 199         |
| Qes                   | 1.08        |
| Qms                   | 5.86        |
| Qts                   | 0.91        |
| Vas (W"Vd L           | 134         |
| Sd (mm <sup>2</sup> ) | 922         |
| Mms (mg)              | 900         |
| Xmax (mm)             | 0.8         |
| Re (ohm)              | 4.13        |
| SPL (dB) 1W/1M        | 80.5        |
| BL (T)                | 1.5         |

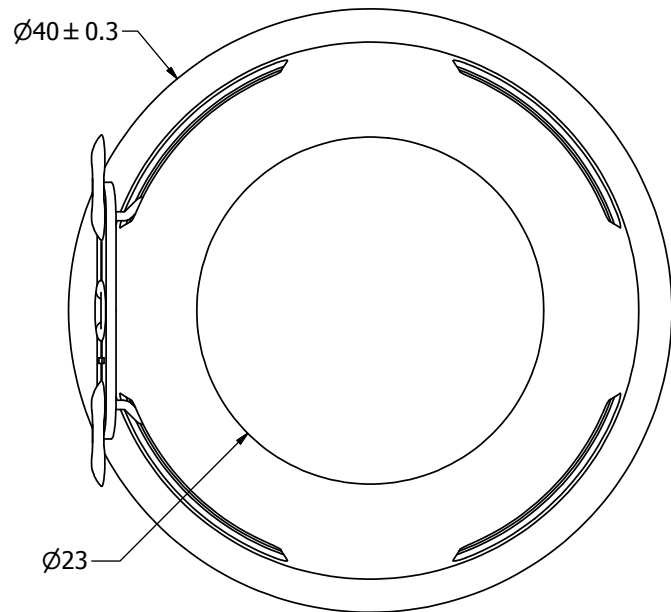
## SPECIFICATIONS

| PARAMETERS  | VALUES         | UNITS |
|---|----------------|-------|
| RATED INPUT POWER                                   | 3              | W     |
| MAX INPUT POWER                                     | 4              | W     |
| IMPEDANCE   | $4 \pm 15\%$   | OHM   |
| OUTPUT SPL @ 1W/0.5M<br>(AT 0.6, 0.8, 1.0, 1.2 kHz) | $86 \pm 3$     | dBa   |
| DISTORTION (MAX.)                                   | 5%             | -     |
| RESONANT FREQUENCY                                  | $180 \pm 20\%$ | Hz    |
| FREQUENCY RANGE                                     | 100 ~ 20,000   | Hz    |
| HOUSING MATERIAL                                    | METAL          | -     |
| CONE MATERIAL                                       | PAPER          | -     |
| MAGNET MATERIAL                                     | RARE EARTH     | -     |
| OPERATING TEMPERATURE                               | -40 ~ +85      | °C    |
| WEIGHT  | 25             | grams |

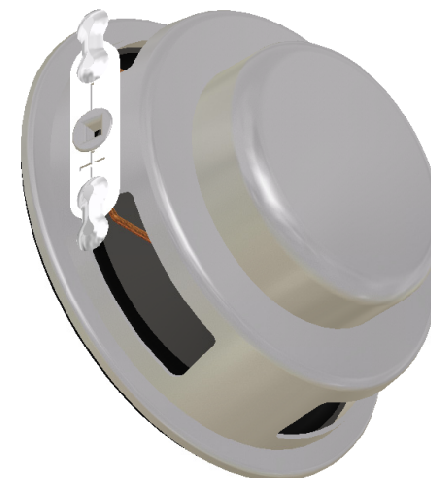
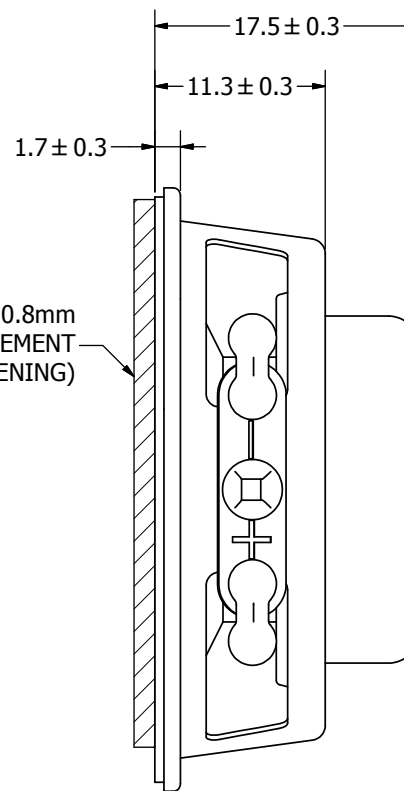
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## REVISION HISTORY

| LTR | DESCRIPTION                              | DATE      | APPROVED |
|-----|--|-----------|----------|
| -   | RELEASED FROM ENGINEERING                | 5/4/2010  |          |
| A   | REVISED TO INVENTOR 3-D DRAWING TEMPLATE | 6/15/2010 | B.R.     |




ALLOW AT LEAST 0.8mm  
FOR DIAPHRAGM MOVEMENT  
( $\phi 35.6$  BAFFLE OPENING)



## NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
3. THIS PART IS RoHS 2002/95/EC COMPLIANT.

|  |   |             |          |            |             |             |              |                |
|--|---|-------------|----------|------------|-------------|-------------|--------------|----------------|
| UNLESS OTHERWISE SPECIFIED:<br><br>DIMENSIONS ARE IN MILLIMETERS,<br><br>TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°. | SIZE<br><br>A3  | Designed by | Date     | Checked by | Date        | Approved by | Date         | Drawn Date     |
|  |   | J.D.        | 5/4/2010 | C.W.       | 5/4/2010    | B.R.        | 5/4/2010     | 6/15/2010      |
|  |  <b>pui audio</b><br><small>A Division of Projects Unlimited</small> |             |          |            | AS04004PR-R |             |              |                |
| AS04004PR-R.idw  |   | Speaker     |          |            |             |             | Edition<br>- | Sheet<br>1 / 1 |

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