



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!



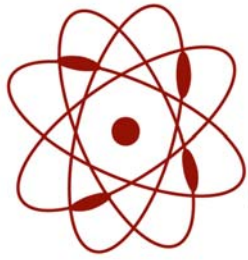
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AS04004PO-2-WR-R
40 x 28.5mm
Water Resistant Speaker

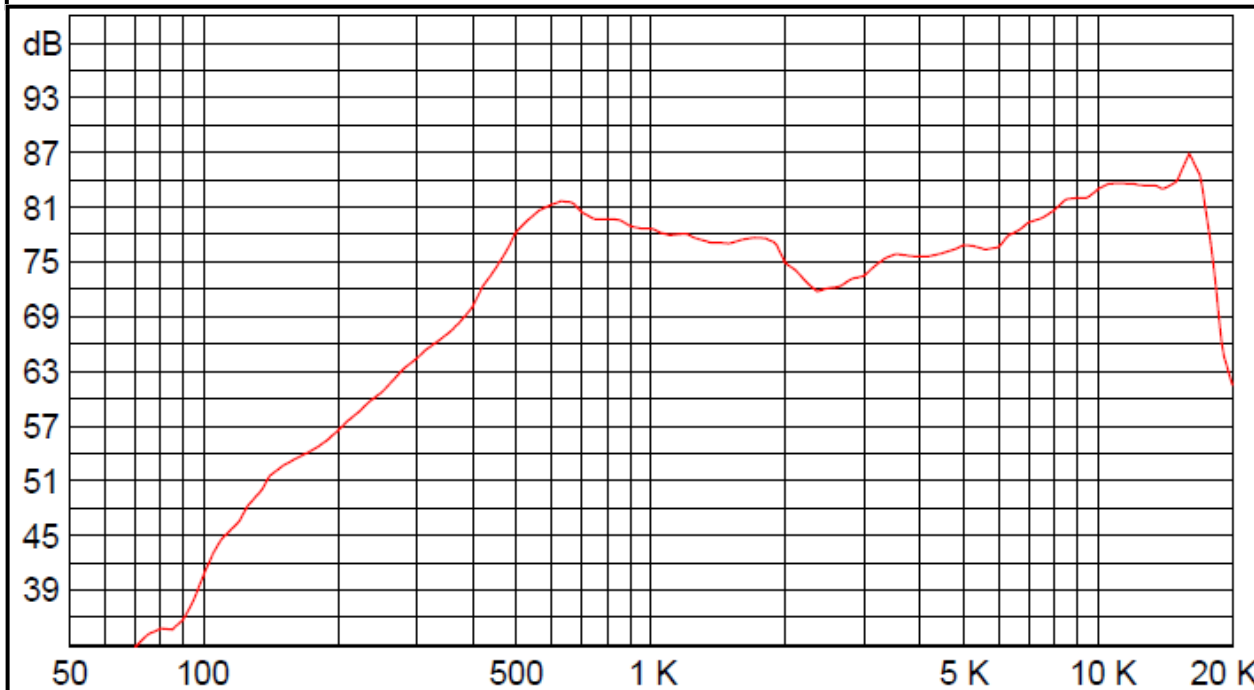


3541 Stop Eight Road • Dayton, Ohio 45414

Product Overview

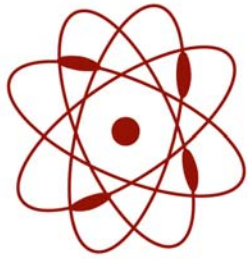
- 40 x 28.5mm oval speaker with Neodymium magnet for 82 dB sensitivity
- 3W continuous, 4W maximum power handling and 4Ω impedance
- Proprietary water resistant cone with natural sounding frequency response

Frequency Response (1W @ 0.5 meters)



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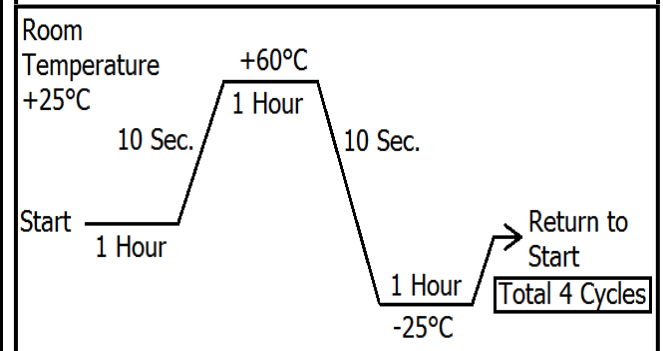
AS04004PO-2-WR-R
40 x 28.5mm
Water Resistant Speaker

Mechanical and Environment Testing

| Test Description | Test Condition |
|------------------------|---|
| High Temperature | 60°C ± 2°C with random humidity for 96 hours |
| Low Temperature | -25°C ± 2°C with random humidity for 96 hours |
| Humidity | 40°C with 90% to 95% relative humidity for 96 hours |
| Vibration | 1.5 mm movement modulated at 10 to 55 Hz for 2 hours |
| Drop Test | 75 cm free fall onto concrete floor, 10 cycles |
| Temperature Cycle Test | -25°C to 60°C, 4 cycles (refer to Temperature Cycle Test Graph) |

After tests, speaker shall rest for 1 hours. SPL shall not deviate ± 4 dB from pre-test measurement.

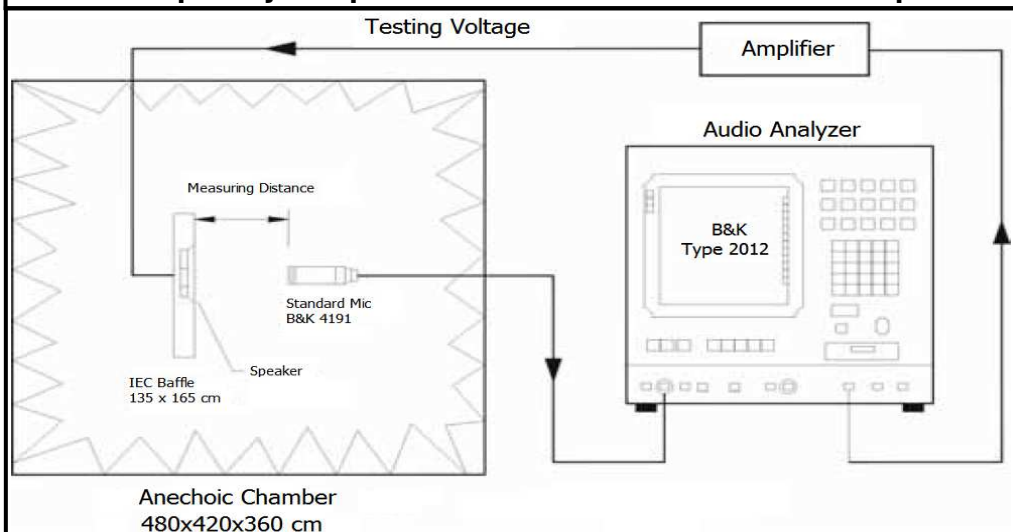
Temperature Cycle Test Graph



Thiele-Small Parameters

| Specification | AS04004PO-2-WR-R |
|-----------------------------|------------------|
| Fo (Hz) | 420 |
| Qes | 4.509 |
| Qms | 4.414 |
| Qts | 2.231 |
| Vas (mm³) | 19.2k |
| Sd (mm²) | 599 |
| Mms (g) | 0.309 |
| Xmax (mm) | 0.6 |
| Re (ohm) | 4.26 |
| SPL (dB) @ 1W/ 1m | 82 |
| BL (T) | 0.925 |

Frequency Response and SPL Measurement Setup



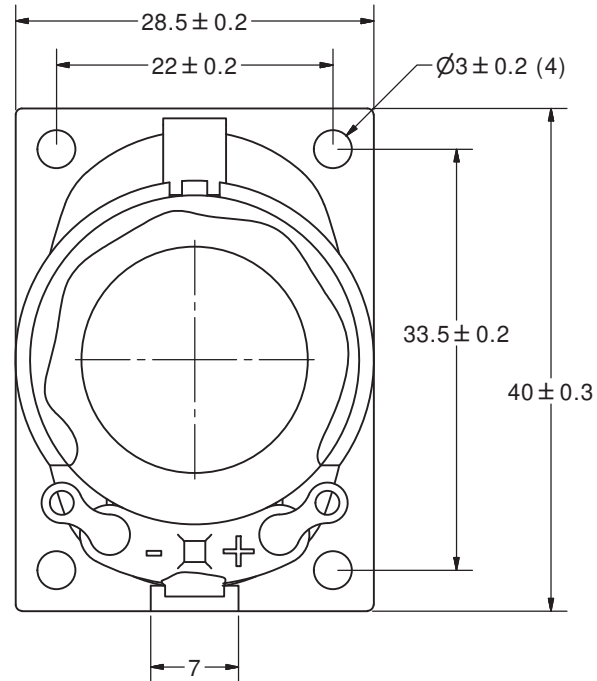
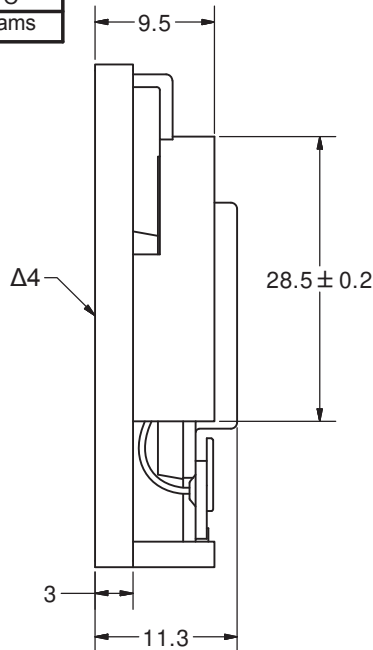
SPECIFICATIONS

| PARAMETERS | VALUES | UNITS |
|---|---------------|-------|
| RATED INPUT POWER | 3 | W |
| MAX INPUT POWER | 4 | W |
| IMPEDANCE | 4 ± 15% | OHM |
| OUTPUT SPL @ 1W/1M (AT 1.0, 1.2, 1.5, 2.0 kHz) | 82 ± 3 | dB |
| DISTORTION (MAX.) | 5% | - |
| RESONANT FREQUENCY | 420 ± 20% | Hz |
| FREQUENCY RANGE | 200 ~ 20,000 | Hz |
| HOUSING MATERIAL | ABS | - |
| CONE MATERIAL | TREATED PAPER | - |
| MAGNET MATERIAL | RARE EARTH | - |
| OPERATING TEMPERATURE | -10 ~ +55 | °C |
| WEIGHT | 11.9 | grams |

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REVISION HISTORY

| LTR | DESCRIPTION | DATE | APPROVED |
|-----|--|-----------|----------|
| - | RELEASED FROM ENGINEERING | 12/7/2005 | |
| A | REVISED TO INVENTOR 3-D DRAWING TEMPLATE | 6/27/2008 | B.R. |
| B | ADDED NOTE 5 | 8/11/2011 | B.R. |



NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS.
- SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
- THIS PART IS RoHS 2002/95/EC COMPLIANT.
- Δ4. CONE HAS BEEN TREATED FOR WATER RESISTANCE.
- BASE SPEAKER PUI# AS04004PO-2-R.

| | | | | | | | | |
|--|----------------------|---|-----------|------------|------------------|-------------|-----------|------------|
| UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS, TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°. | SIZE | Designed by | Date | Checked by | Date | Approved by | Date | Drawn Date |
| | A3 | J.D. | 12/6/2005 | B.R. | 12/6/2005 | E.P. | 12/6/2005 | 6/27/2008 |
| | AS04004PO-2-WR-R.idw |  | | | AS04004PO-2-WR-R | | Speaker | |