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| Data Sheet | AS01808AO-SC18-WP-R |
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The eight ohm 18mm x 13mm **AS01808AO-SC18-WP-R** speaker is designed for high fidelity audio reproduction in the thinnest size possible—only 2.5mm thick! Spring contacts offer quick electrical connection.

Features:

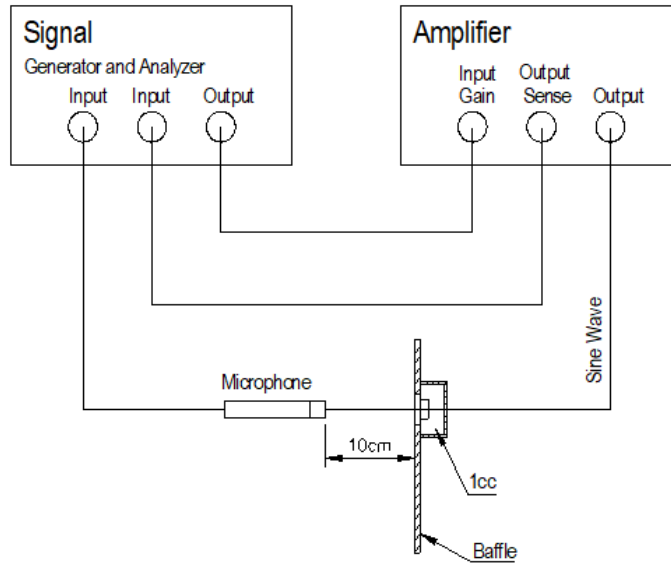
- PEEK diaphragm for flat frequency response
- 96 dB output (2.83V @ 10cm)
- High-energy triple magnet neodymium motor
- Double-sided tape for easy mounting
- Dustproof and waterproof IP65-rated face

Specifications

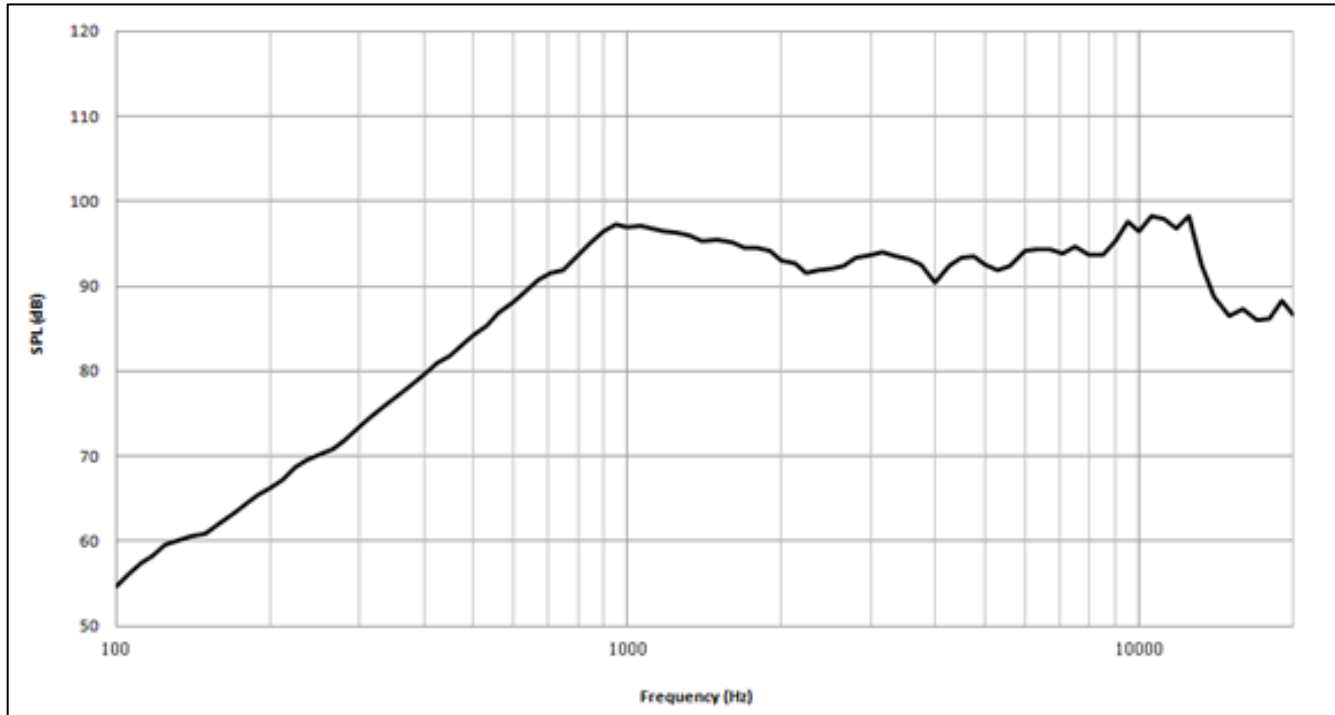
| Parameters | Values | Units |
|---|--|-------|
| Rated Input Power | 1 | Watts |
| Max Input Power | 1.2 | Watts |
| Impedance | 8 ± 15% | Ohms |
| Sensitivity (SPL @ 2.83V/10cm) Avg 0.8, 1.0, 1.2, 1.5 kHz in 1cc enclosure | 96 ± 3 | dB |
| Resonant Frequency (free air) | 420 ± 20% | Hz |
| Frequency Range | Fo ~ 15,000 | Hz |
| Frame Material | PPA | - |
| Magnet Material | NdFeB | - |
| Weight | 1.8 | Grams |
| Environmental Protection Rating | IP65 | - |
| Buzz, Rattle, etc. | Should not be audible with 2.83V sine sweep from 500 Hz to 15 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 2.83V, Temperature: 15 ~ 35°C, Relative Humidity: 45%~85%)

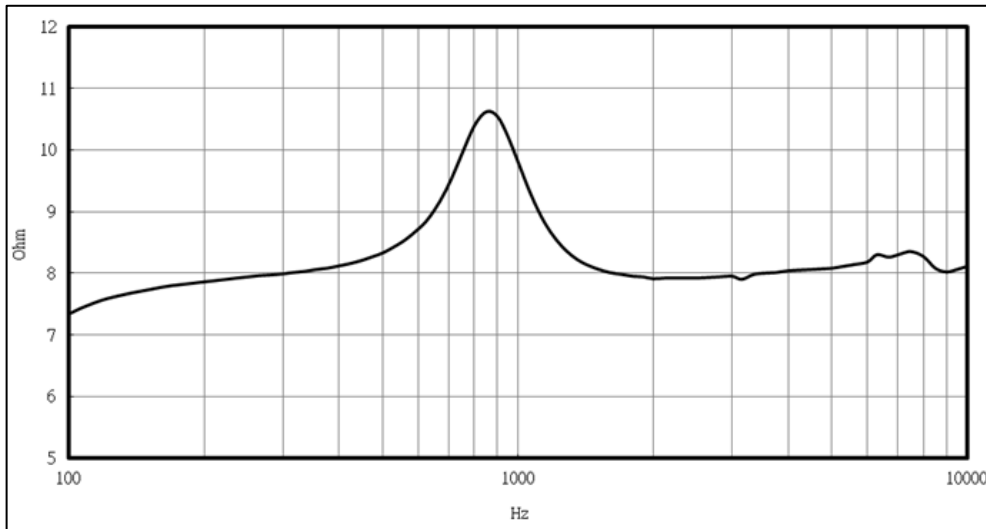
Speaker Measurement Circuit



Frequency Response (measured with 2.83V @ 10cm in 1cc enclosure)



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

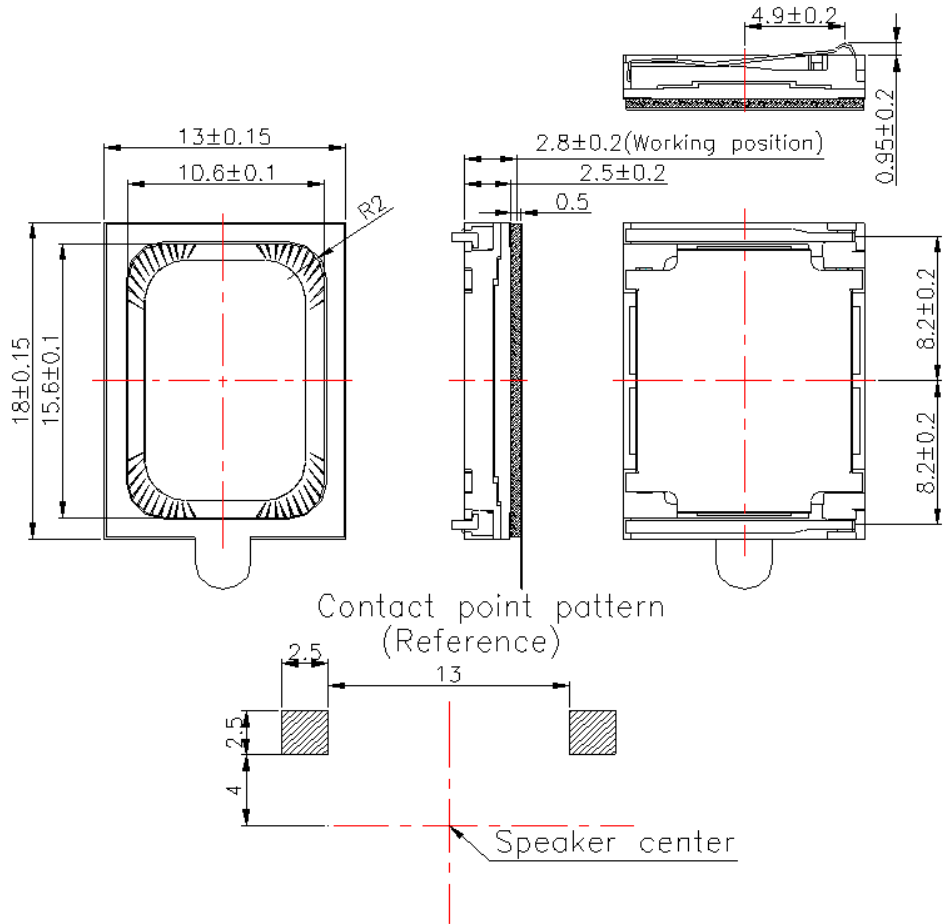


Reliability Testing

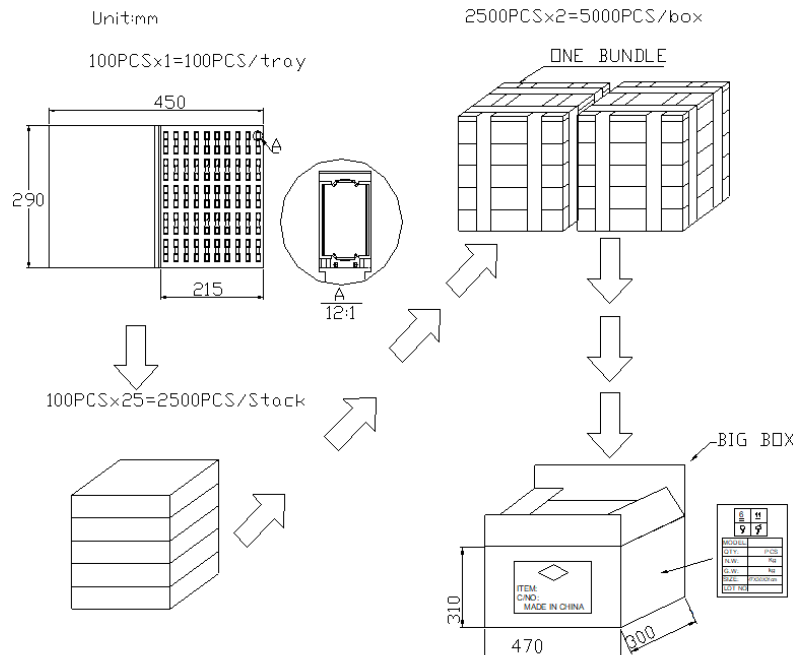
| Type of Test | Test Specifications |
|---------------------------|--|
| High Temperature Test | 96 hours at +85°C ± 3°C followed by two hours in normal room temperature |
| Low Temperature Test | 96 hours at -40°C ± 3°C followed by two hours in normal room temperature |
| Humidity Test | 96 hours at +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 onto marble surface 18 times total |
| Load Test | DUTs shall be tested under each specified climatic condition for a continuous period of 100 hours at rated noise power. Speakers mounted in a 1cc back cavity; simulated program signal (IEC 268-1) with crest factor of 1.8~2.2 in rated frequency range; high pass 12dB/Oct or steeper, cut off at 850Hz. Refer to IEC 268-5 |

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

Dimensions (Bottom contact is positive on the far right drawing below)



Packaging



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

Specifications Revisions

| Revision | Description | Date |
|-----------------|---------------------------|-------------|
| - | Released from Engineering | 10/3/2018 |

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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