

Data Sheet

AS01808AO-SC18-WP-R

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:

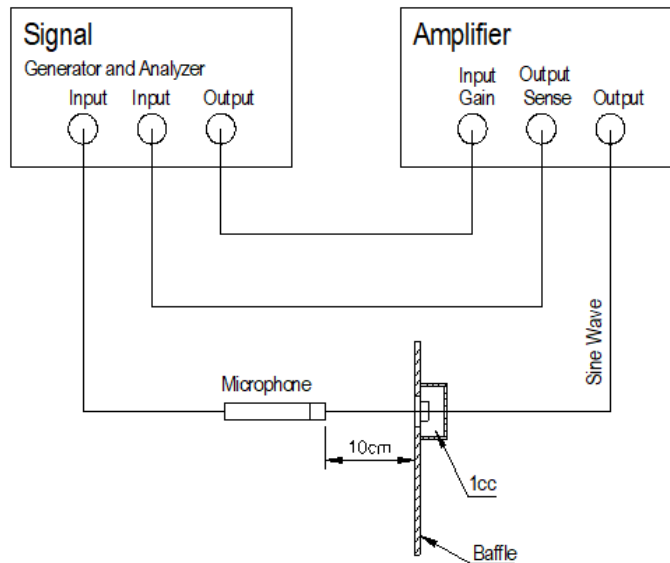
- PEEK diaphragm for flat frequency response
- 96 dB output (2.83V @ 10cm)
- High-energy triple magnet neodymium motor
- Double-sided tape for easy mounting
- Dustproof and waterproof IP65-rated face

Specifications

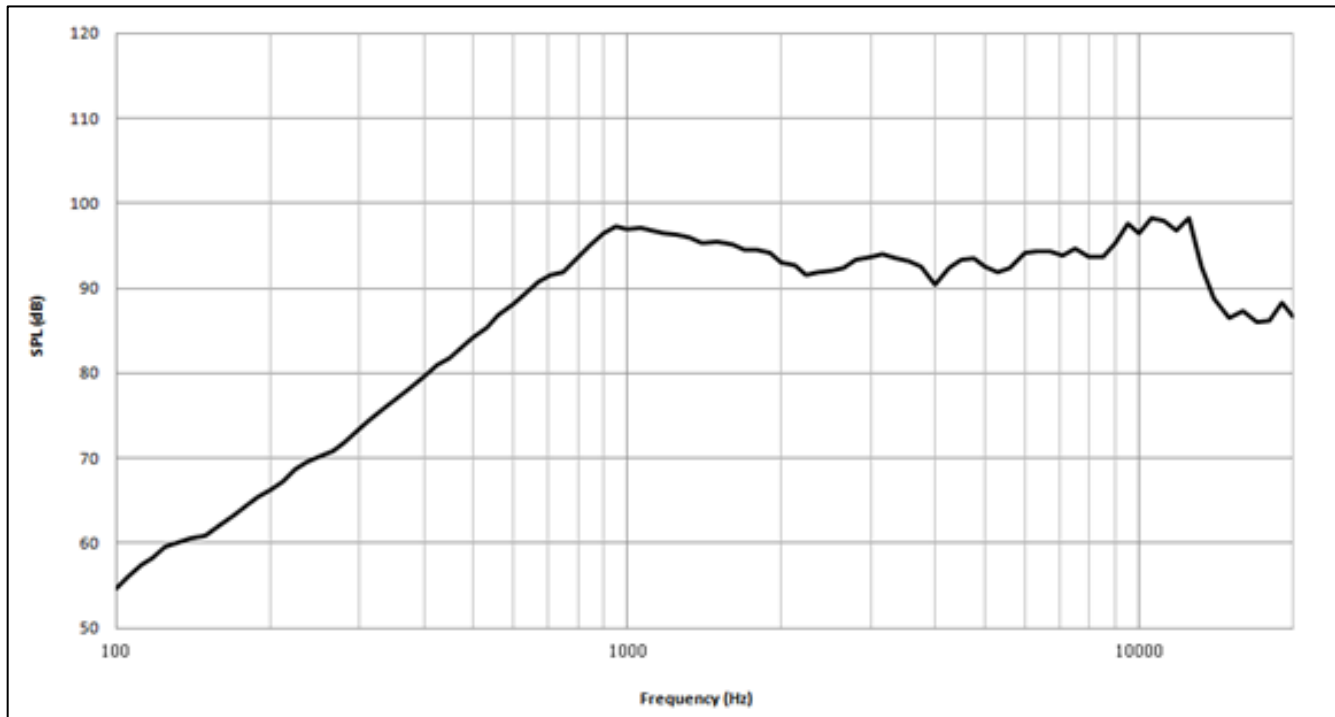
Parameters	Values	Units
Rated Input Power	1	Watts
Max Input Power	1.2	Watts
Impedance	$8 \pm 15\%$	Ohms
Sensitivity (SPL @ 2.83V/10cm) Avg 0.8, 1.0, 1.2, 1.5 kHz in 1cc enclosure	96 ± 3	dB
Resonant Frequency (free air)	$420 \pm 20\%$	Hz
Frequency Range	Fo ~ 15,000	Hz
Frame Material	PPA	-
Magnet Material	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%)

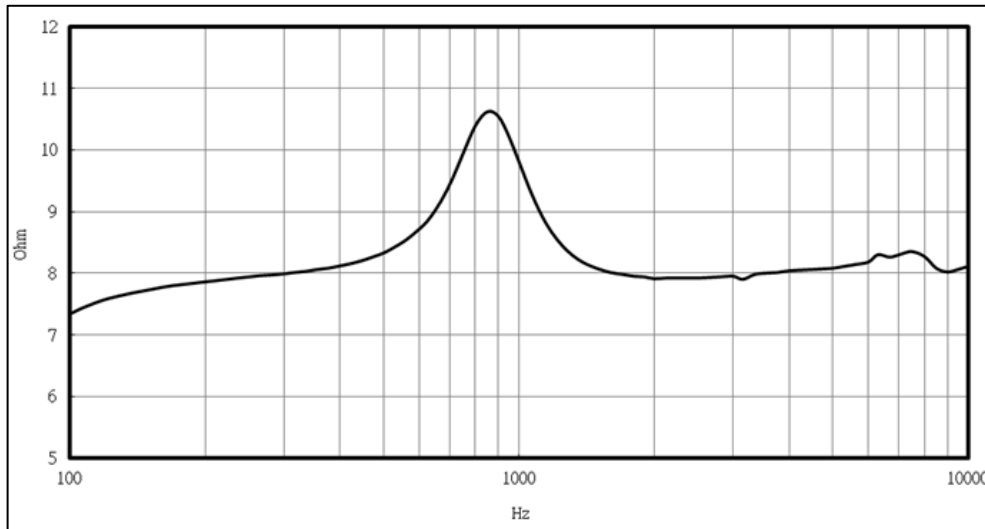
Speaker Measurement Circuit



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



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

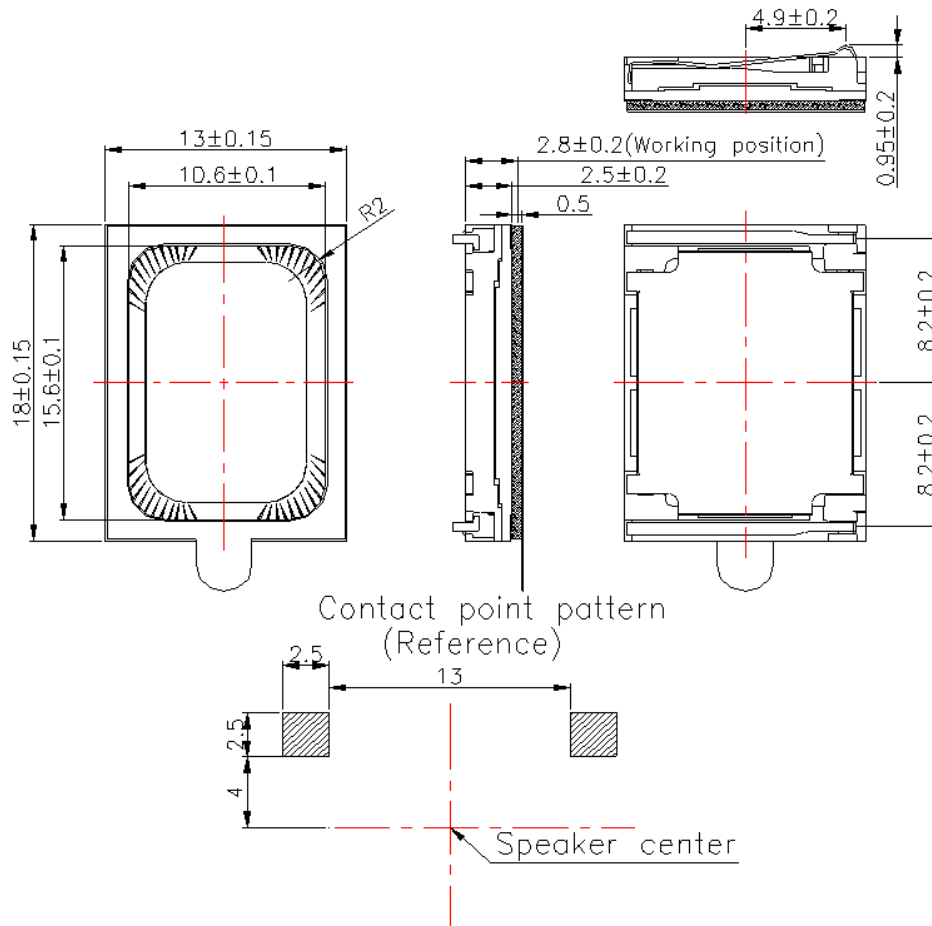


Reliability Testing

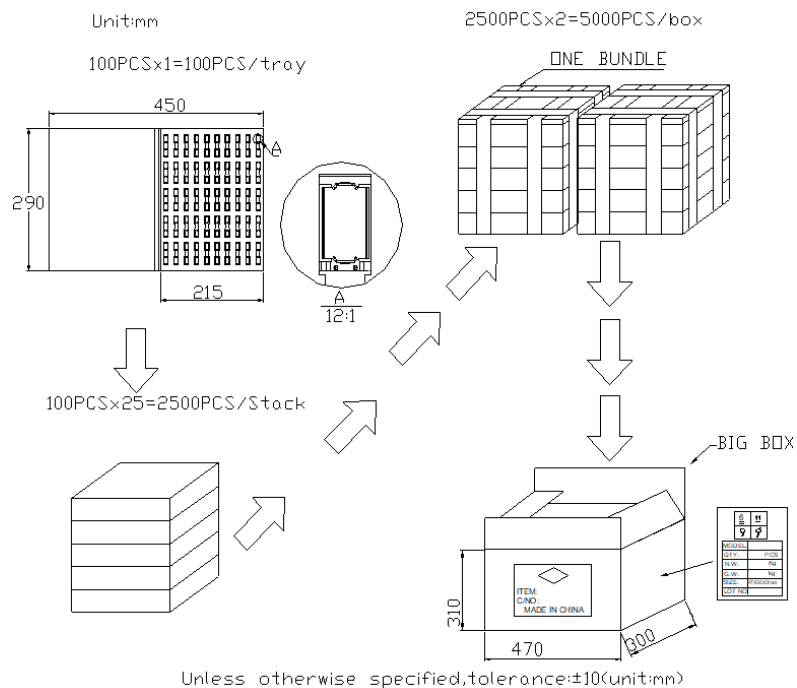
Type of Test	Test Specifications
High Temperature Test	96 hours at +85°C ± 3°C followed by two hours in normal room temperature
Low Temperature Test	96 hours at -40°C ± 3°C followed by two hours in normal room temperature
Humidity Test	96 hours at +55°C ± 3°C with relative humidity at 95% in accordance 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



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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