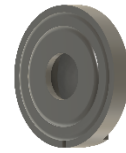




PUIaudio



Data Sheet

AR01032MR-3

This compact dynamic receiver is engineered for high-performance audio and communication applications, delivering clear and balanced sound across a wide 20 Hz–20 kHz frequency range. Featuring high sensitivity, a lightweight construction, and premium materials including an NdFeB magnet and PEEK+PU diaphragm, it provides reliable audio output and excellent durability for portable and embedded audio devices.

Features:

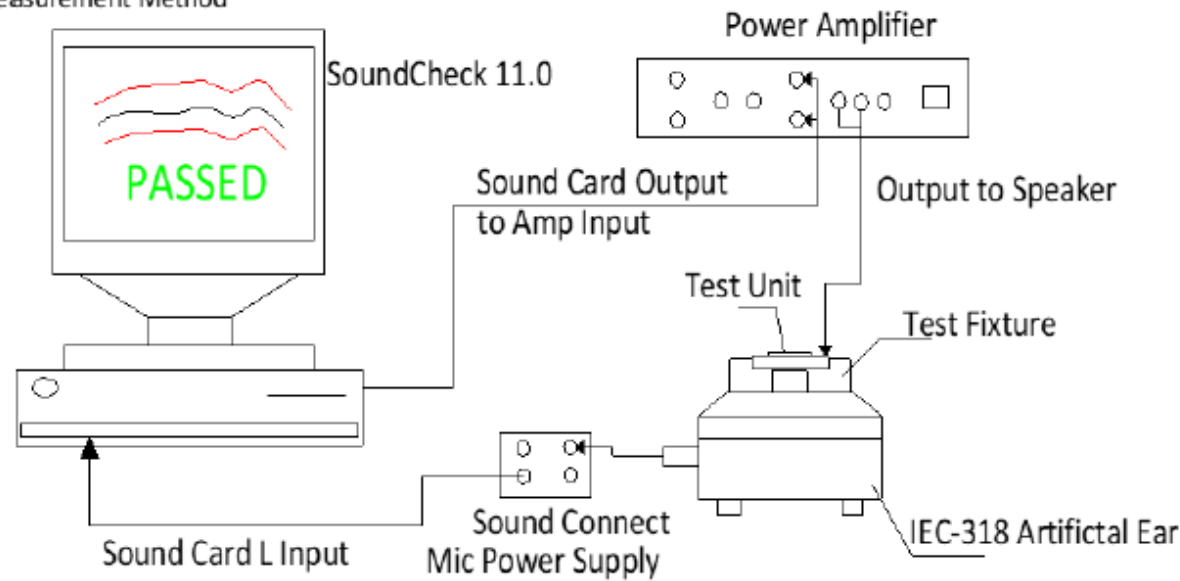
- High Sensitivity & Efficient Output: 121.8 dB SPL at 3mW provides strong acoustic performance while requiring minimal power consumption.
- Wide Frequency Response: Covers 20 Hz to 20 kHz for full-spectrum sound reproduction suitable for voice, music, and multimedia applications.
- Target Application: Communication Device and Consumer Electronics Headphones (Daily commute, clear voice calls, entertainment).
- Acoustic Design: Multi-hole tuning bracket optimized for solid low-to-mid frequencies and higher efficiency.

Specifications

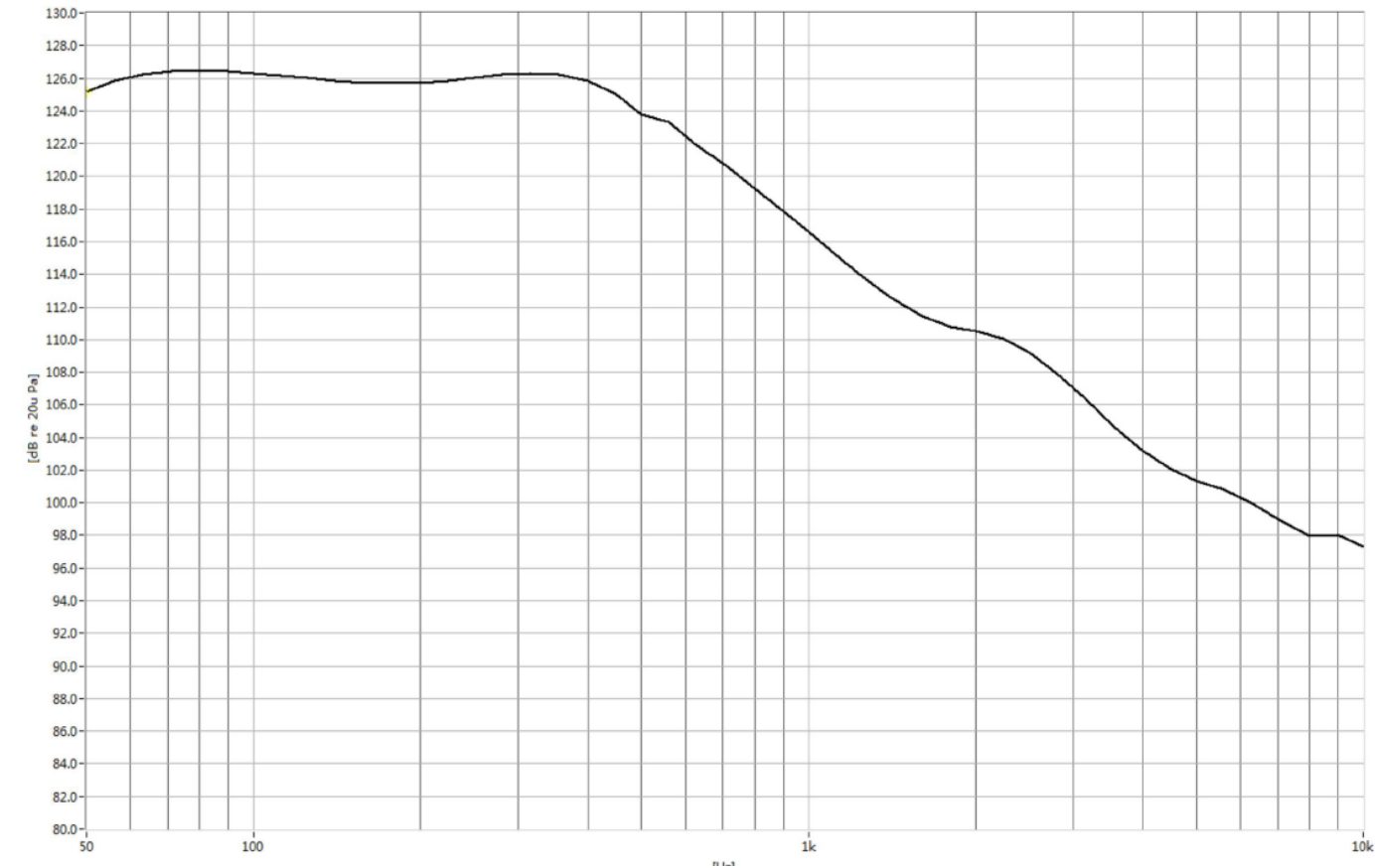
Parameters	Values	Units
Rated Input Power	3	mW
Maximum Input Power	5	mW
Impedance	$32 \pm 15\%$	Ohms
Sensitivity (SPL) f = 1kHz P _{DRIVE} = 1mW	117.0 $\pm$ 1.5	dB
Resonant Frequency	122 $\pm$ 20%	Hz
Frequency Range	20 $\leq$ f $\leq$ 20,000	Hz
Maximum Distortion f = 1kHz P _{DRIVE} = 3mW	3	%
Buzz, Rattle, etc.	Should not be audible with 350 mV sine wave from 50 Hz to 5 kHz	-
Polarity	When positive voltage is applied to the positive terminal, the diaphragm will move outward	-
Frame Material	A3 Metal	-
Magnet Material	NdFeB	-
Diaphragm Material	PEEK + PU	-
Weight	0.7	gr
Operating Temperature	-20 $\leq$ T ₀ $\leq$ 55	°C
Storage Temperature	-20 $\leq$ T _s $\leq$ 60	°C
Environmental Compliances	ROHS/REACH	-

Measurement Method (measured with mV, Temperature: 25 ~ 35°C, Relative Humidity: 25%~75%)

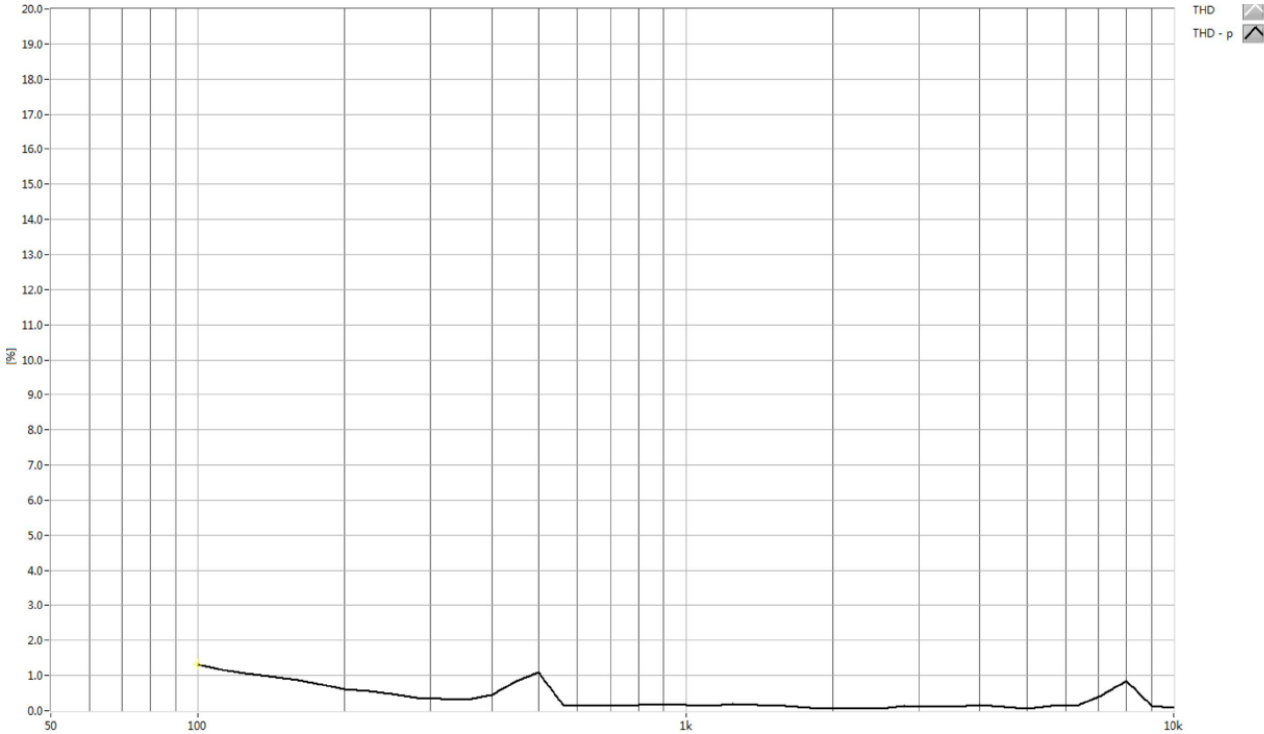
1. Measurement Method



Frequency Response (measured at 1mW)



THD

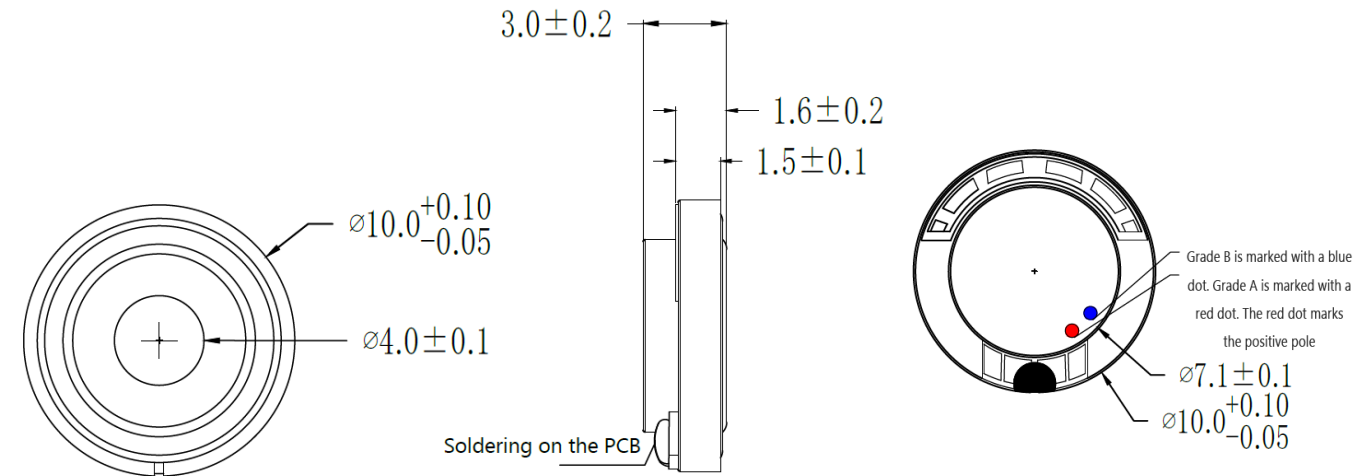


Reliability Testing

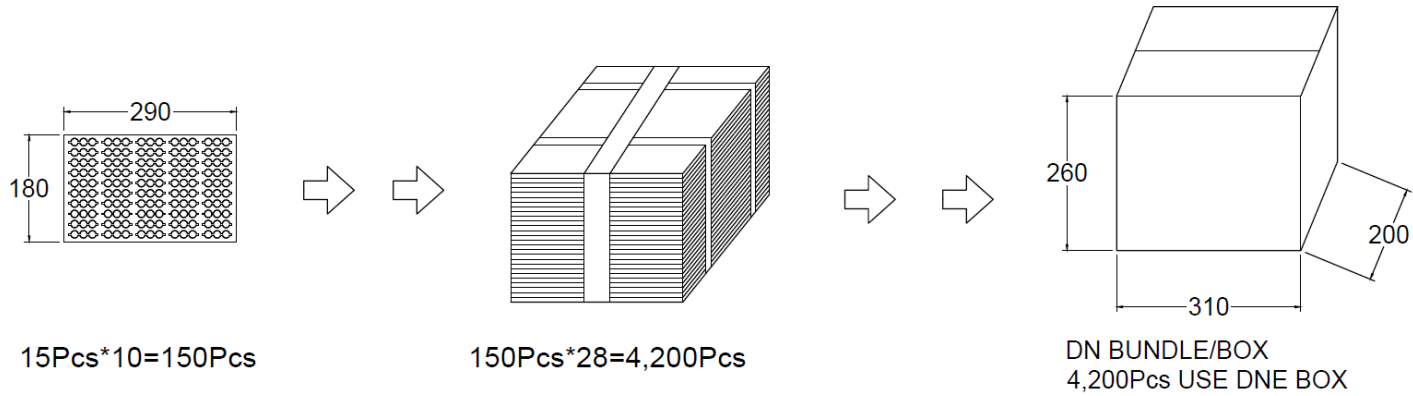
Type of Test	Test Specifications
High Temperature Test	48 hours at +60°C ± 2°C
Low Temperature Test	48 hours at -20°C ± 2°C
Humidity Test	24 hours at +50°C ± 2°C with relative humidity at 90%-95% relative humidity
Temperature Cycle Testing	The part shall be subjected to 15 cycles. One cycle shall consist of: 50°C+1°C/0.5h→20°C for 0.5h→-20°Cfor 0.5h→20°C for 0.5h
Vibration Test	Frequency 15 ~ 55 Hz, Amplitude 1.5 mm for 2 hours
Drop Test	Drop the product onto a concrete floor from a height of 100 cm at an impact angle of 75° ± 2°

After each test, the speaker’s SPL shall be ±4 dB of the original SPL after 1 hour of recovery.

Dimensions



Packaging



Specifications Revisions			
Revision	Description	Date	Approved
A	Released from Engineering	3/21/2025	JD
B	Updated SPL, Height, Tolerance, and Packaging	7/21/2026	KH

- Note:
- Unless otherwise specified:
 - All dimensions are in millimeters.
 - Default tolerances are $\pm 0.5\text{mm}$ and angles are $\pm 3^\circ$.
 - Specifications subject to change or withdrawal without notice.