



PUIaudio



Data Sheet

AR01032MR-4

This compact dynamic receiver is designed for high-performance audio applications, delivering clear and balanced sound across a full 20Hz–20kHz frequency range. With high sensitivity and a lightweight construction, it ensures efficient output and reliable operation in portable and embedded audio devices.

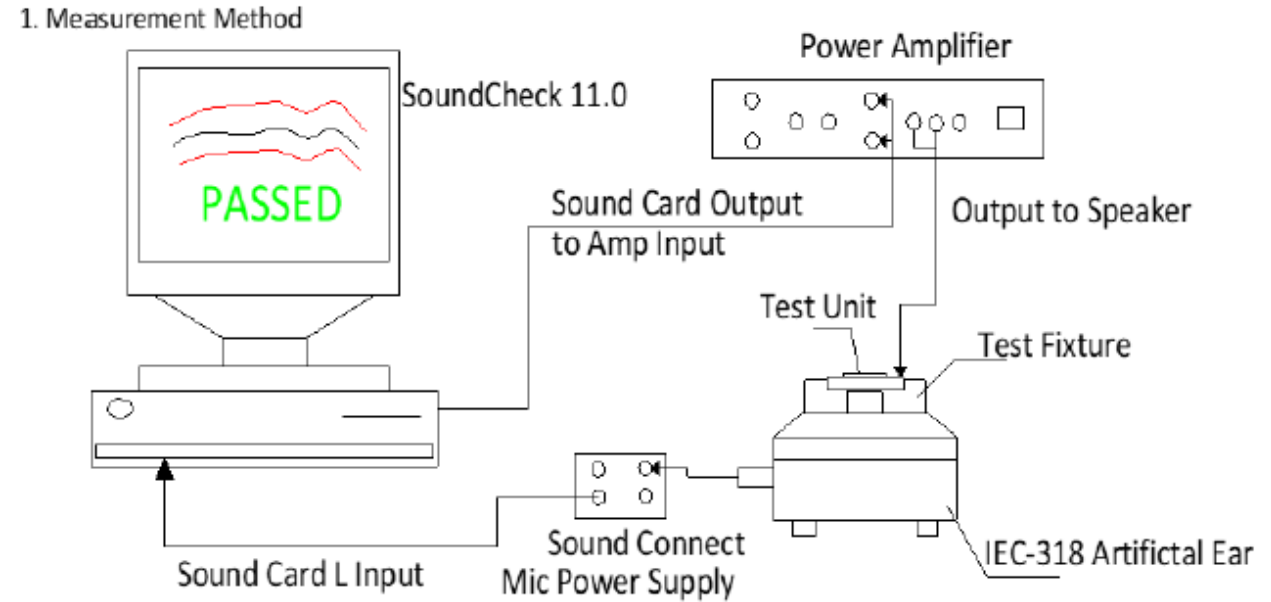
Features

- High Sensitivity & Efficiency: 103 dB SPL (1kHz, 1mW) ensures strong audio output even at low power levels.
- Wide Frequency Response: Covers 20 Hz to 20 kHz for full-spectrum sound reproduction with minimal distortion ($\leq 2\%$).
- Compact & Durable Design: Lightweight (0.7 g) with an A3 metal frame and NdFeB magnet for reliable performance and long-term durability.

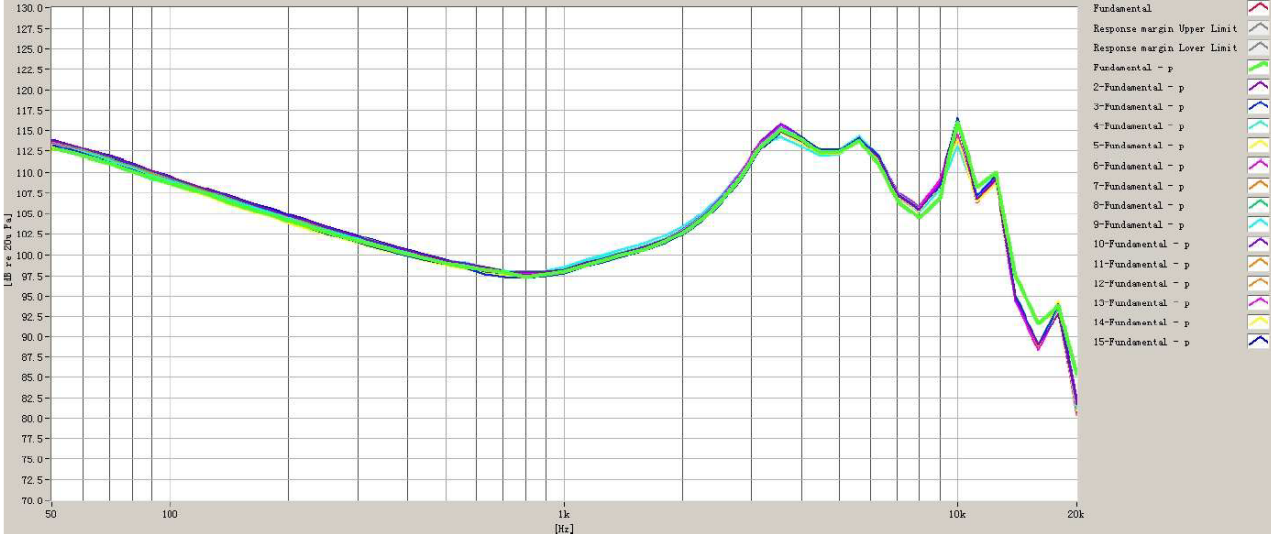
Specifications

Parameters	Values	Units
Rated Input Power	5	mWatts
Maximum Input Power	10	mWatts
Impedance	$32 \pm 15\%$	Ohms
Sensitivity (SPL) f = 1kHz Dissipation = 1mW	103 ± 3	dB
Resonant Frequency	$122 \pm 20\%$	Hz
Frequency Range	$20 \leq f \leq 20,000$	Hz
Maximum Distortion $100 \leq f \leq 10,000$ Hz Dissipation = 3mW	2	%
Buzz, Rattle, etc.	Not audible with $V_{DRIVE} = 350mV_{RMS}$, sinewave, 50 Hz to 4 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	PET	-
Weight	0.7	gr
Operating Temperature	$-20 \leq T_0 \leq 60$	°C
Storage Temperature	$-20 \leq T_s \leq 60$	°C
Environmental Compliances	ROHS/REACH	-

Measurement Method (measured with 350mV, Temperature: 25 ~ 35°C, Relative Humidity: 25%~75%)



Frequency Response (measured at 350mV)

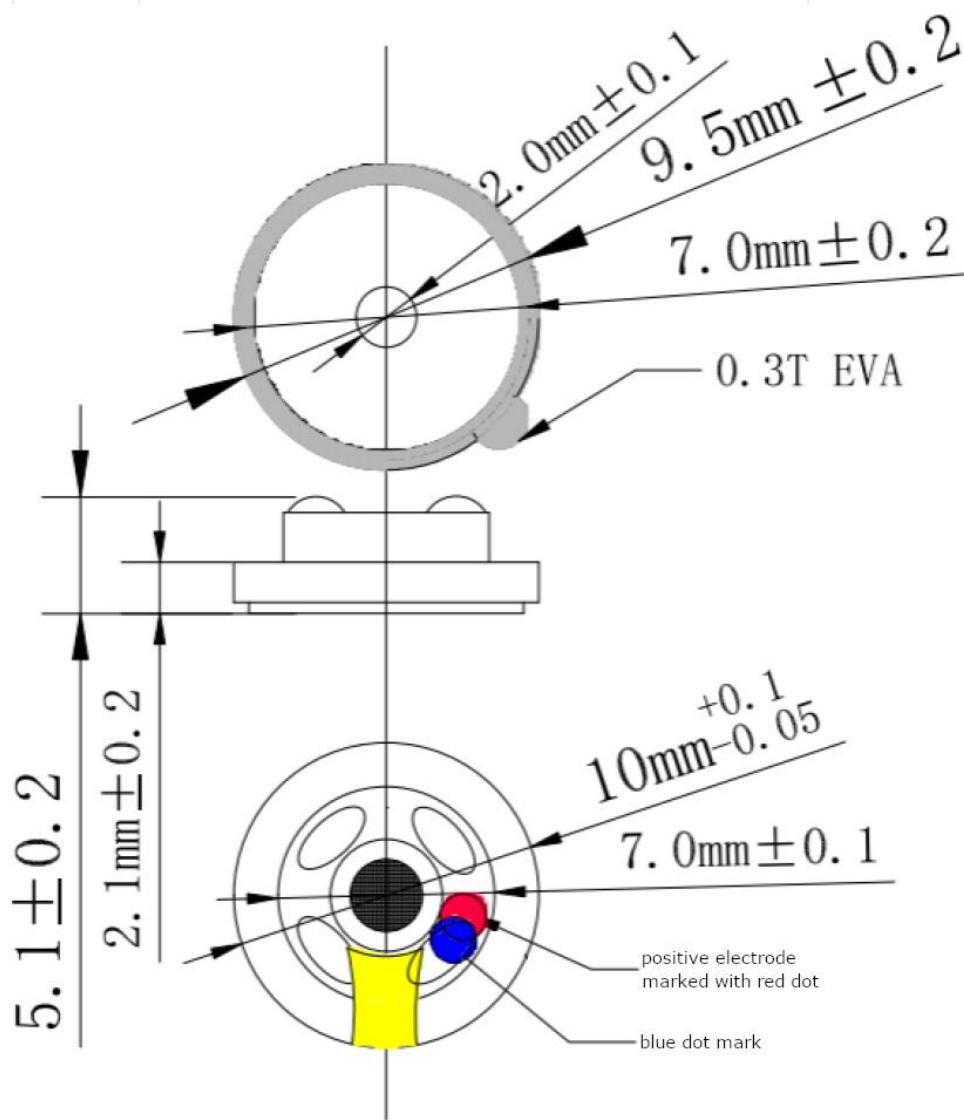


Reliability Testing

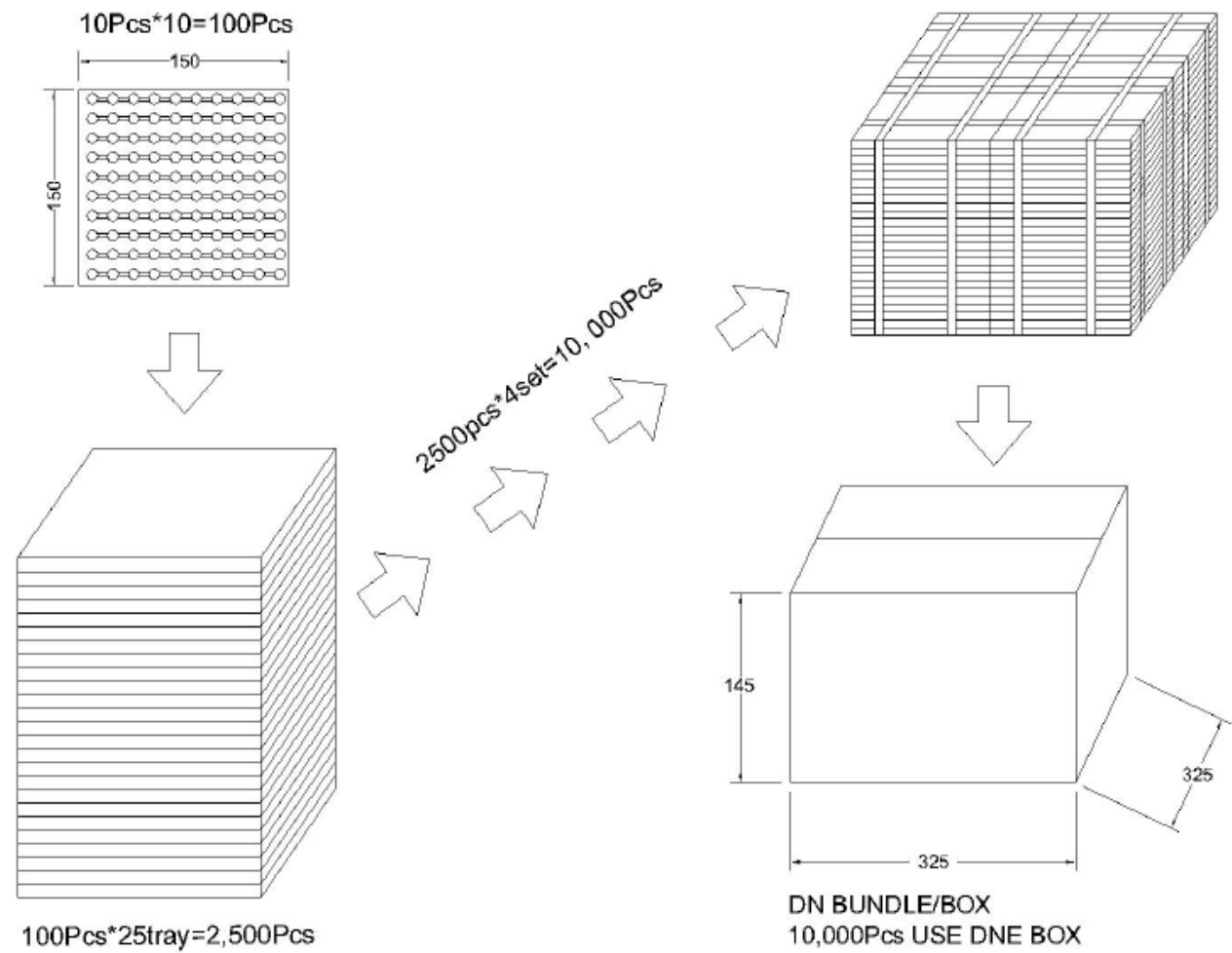
Type of Test	Test Specifications
High Temperature Test	96 hours at +60°C ± 2°C
Low Temperature Test	96 hours at -20°C ± 2°C
Humidity Test	96 hours at +50°C ± 2°C with relative humidity at 90~95% relative humidity
Temperature Cycle Testing	The part shall be subjected to 15 cycles. One cycle shall be 2 hours and consist of: 50°C+1°C/0.5h→20°C/0.5h→-20°C/0.5h→20°C/0.5h
Vibration Test	Frequency 30 ± 15 Hz, Amplitude 1.5 mm for 2 hours
Drop Test	100 cm free fall on concrete floor, 10 times

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	Revised Drawing and Sensitivity	6/13/2025	JD
C	Updated Sensitivity	6/15/2026	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.