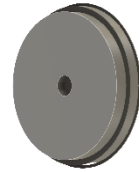




PUIaudio



Data Sheet

AR01416MR

Features:

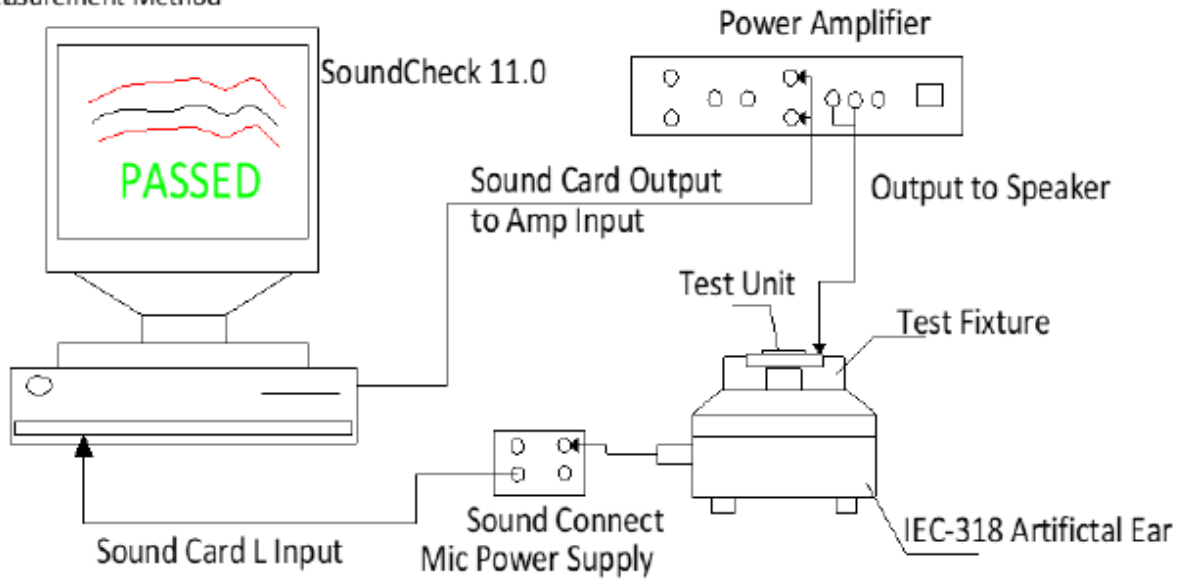
- Low 3.6mm height
- High 125 dB output with 800mV in Artificial Ear (1cm)
- High 50mW max input power

Specifications

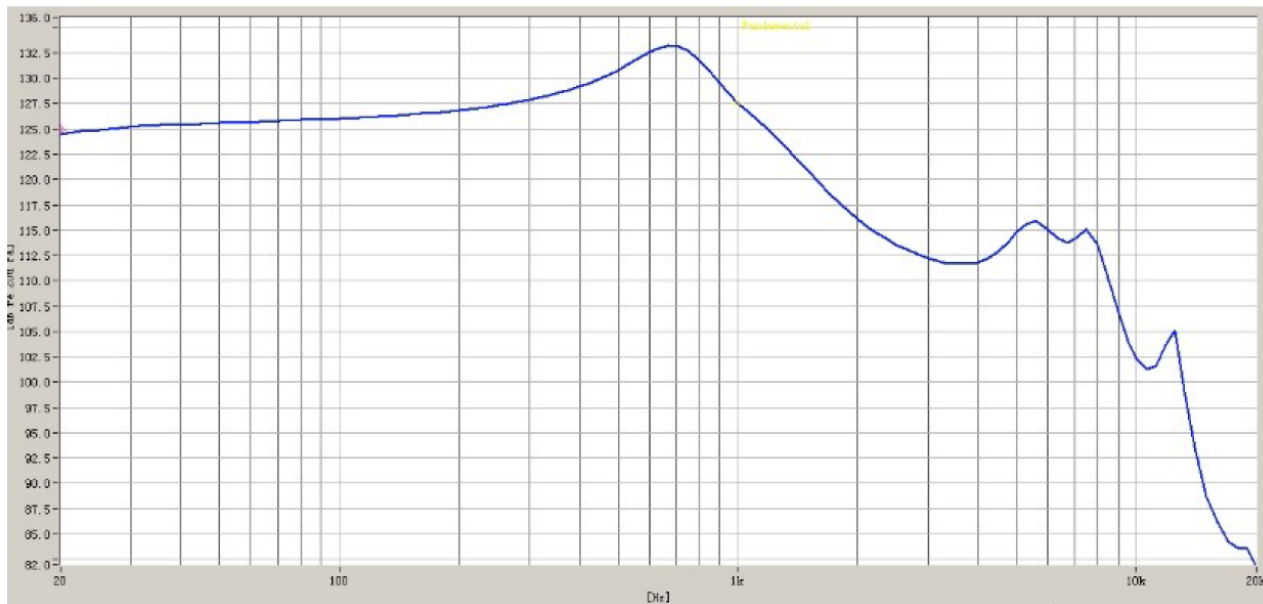
Parameters	Values	Units
Rated Input Power	30	mWatts
Max Input Power	50	mWatts
Impedance	16 ± 15%	Ohms
Sensitivity (SPL @ 1kHz, 1mV)	125 ± 1.5	dB Pa/V
Resonant Frequency	120 ± 20%	Hz
Frequency Range	20 ~ 20,000	Hz
Distortion (@ 1000 Hz/ 30mW)	3% Max	-
Frame Material	A3 Metal	-
Magnet Material	NdFeB	-
Diaphragm Material	PU + Paper	-
Weight	1.5	Grams
Environmental Compliances	ROHS/REACH	-
Buzz, Rattle, etc.	Should not be audible with 690 mV sine wave from 50 Hz to 4 kHz	-
Polarity	When positive voltage is applied to the positive terminal, the diaphragm will move outward	-
Operating Temperature	-20 ~ +60	°C
Storage Temperature	-20 ~ +60	°C

Measurement Method (measured with 1mV, Temperature: 25 ~ 35°C, Relative Humidity: 25%~75%)

1. Measurement Method



Frequency Response (measured at 1mV)

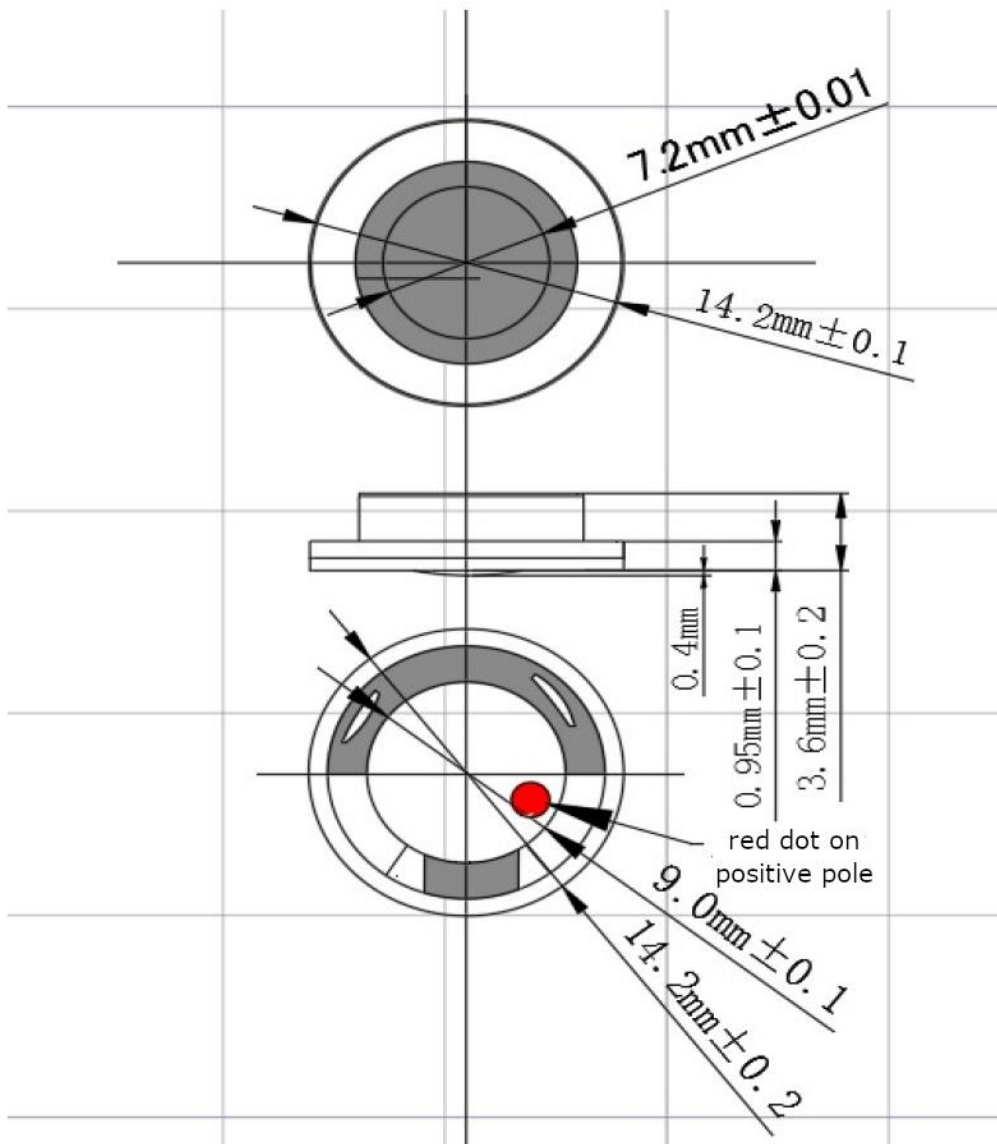


Reliability Testing

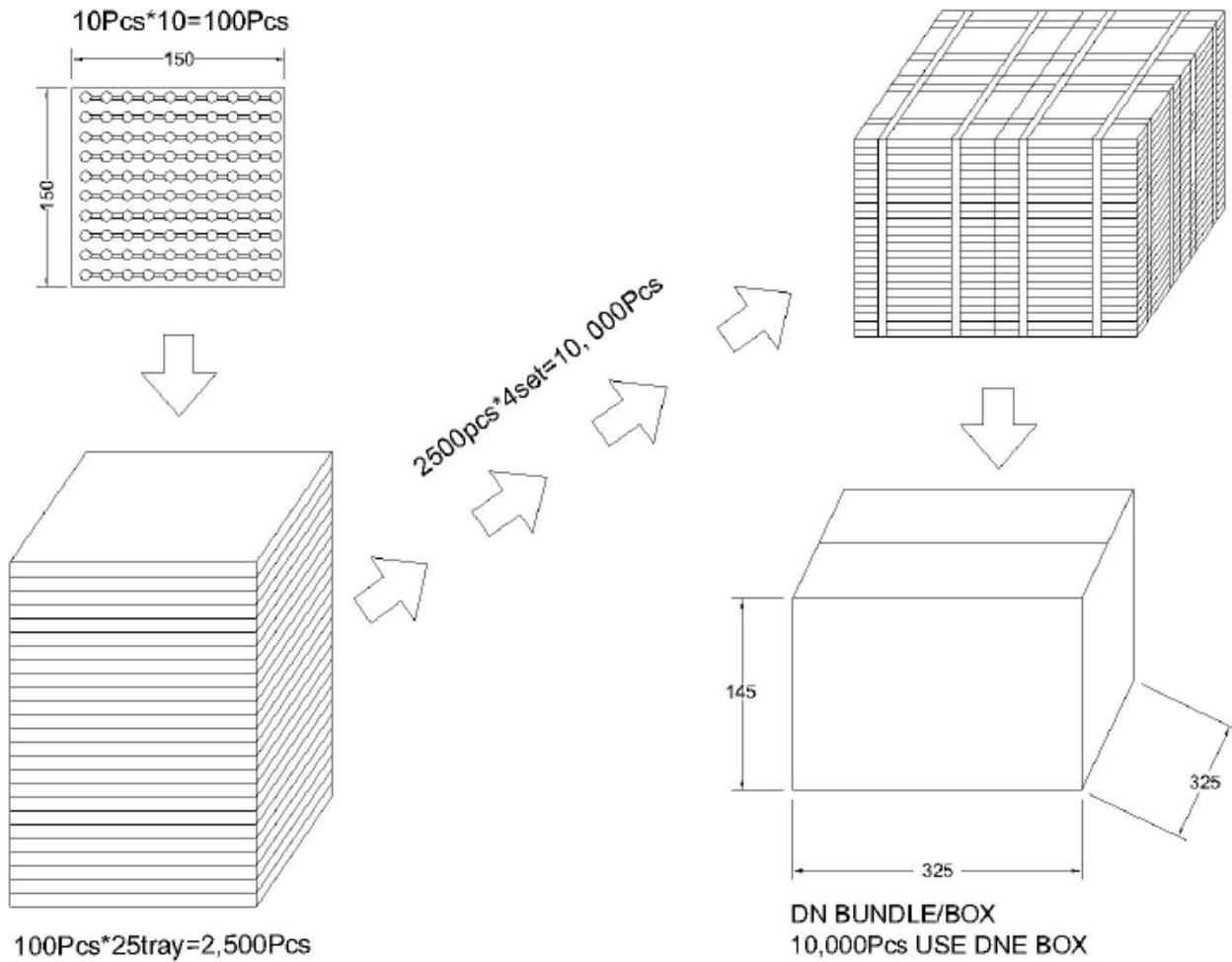
Type of Test	Test Specifications
High Temperature Test	48 hours at +60°C ± 2°C
Low Temperature Test	48 hours at -20°C ± 2°C
Humidity Test	24 hours at +50°C ± 2°C with relative humidity at 90~95% relative humidity
Temperature Cycle Testing	The part shall be subjected to 15 cycles. One cycle shall be 2 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 15~55 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

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.

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