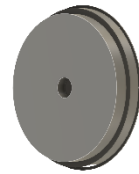




PUIaudio



Data Sheet

AR01416MR

Features:

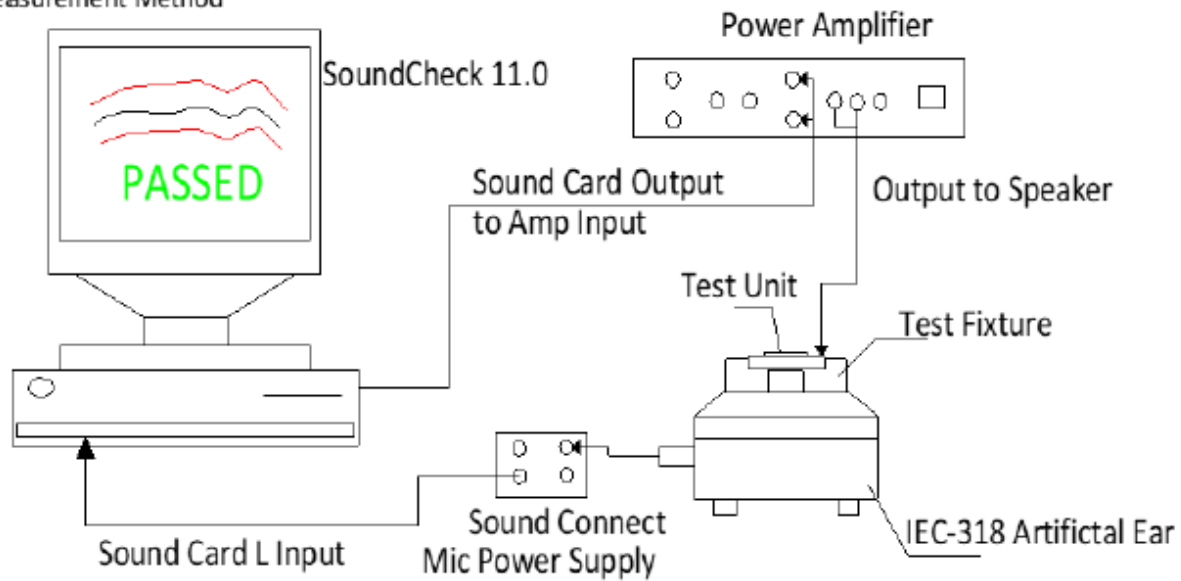
- Low 3.6mm height
- High 125 dB output with 800mV in Artificial Ear (1cm)
- High 50mW max input power

Specifications

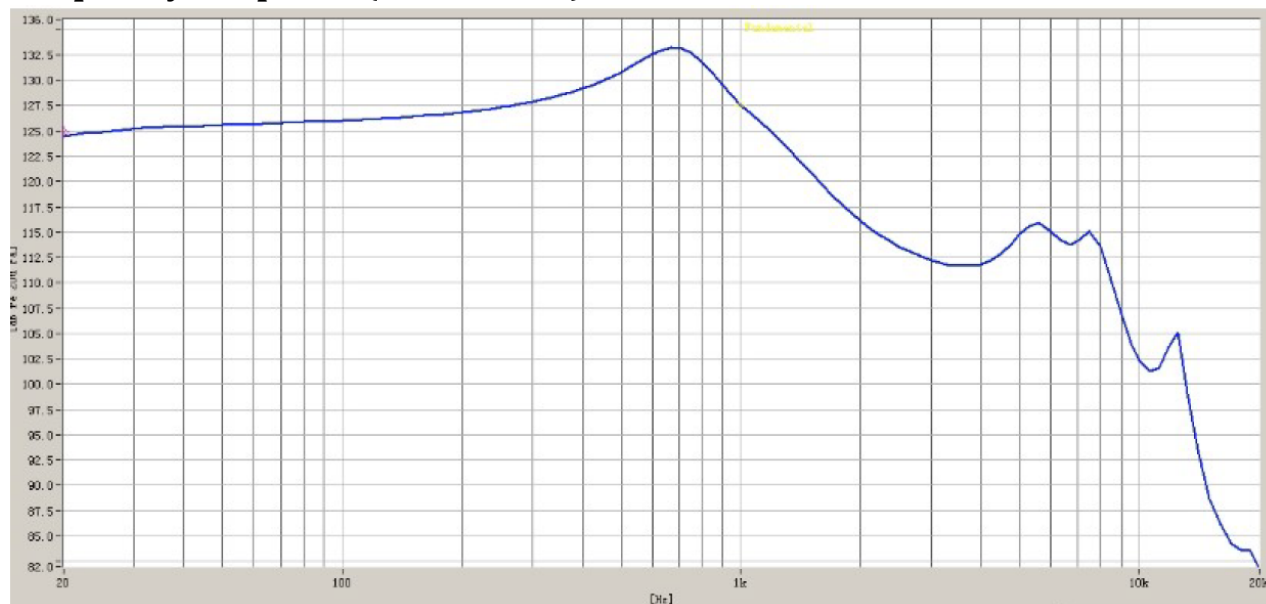
Parameters	Values	Units
Rated Input Power	30	mWatts
Max Input Power	50	mWatts
Impedance	$16 \pm 15\%$	Ohms
Sensitivity (SPL @ 1kHz, 1mV)	125 ± 1.5	dB Pa/V
Resonant Frequency	$120 \pm 20\%$	Hz
Frequency Range	20 ~ 20,000	Hz
Distortion (@ 1000 Hz/ 30mW)	3% Max	-
Frame Material	A3 Metal	-
Magnet Material	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)

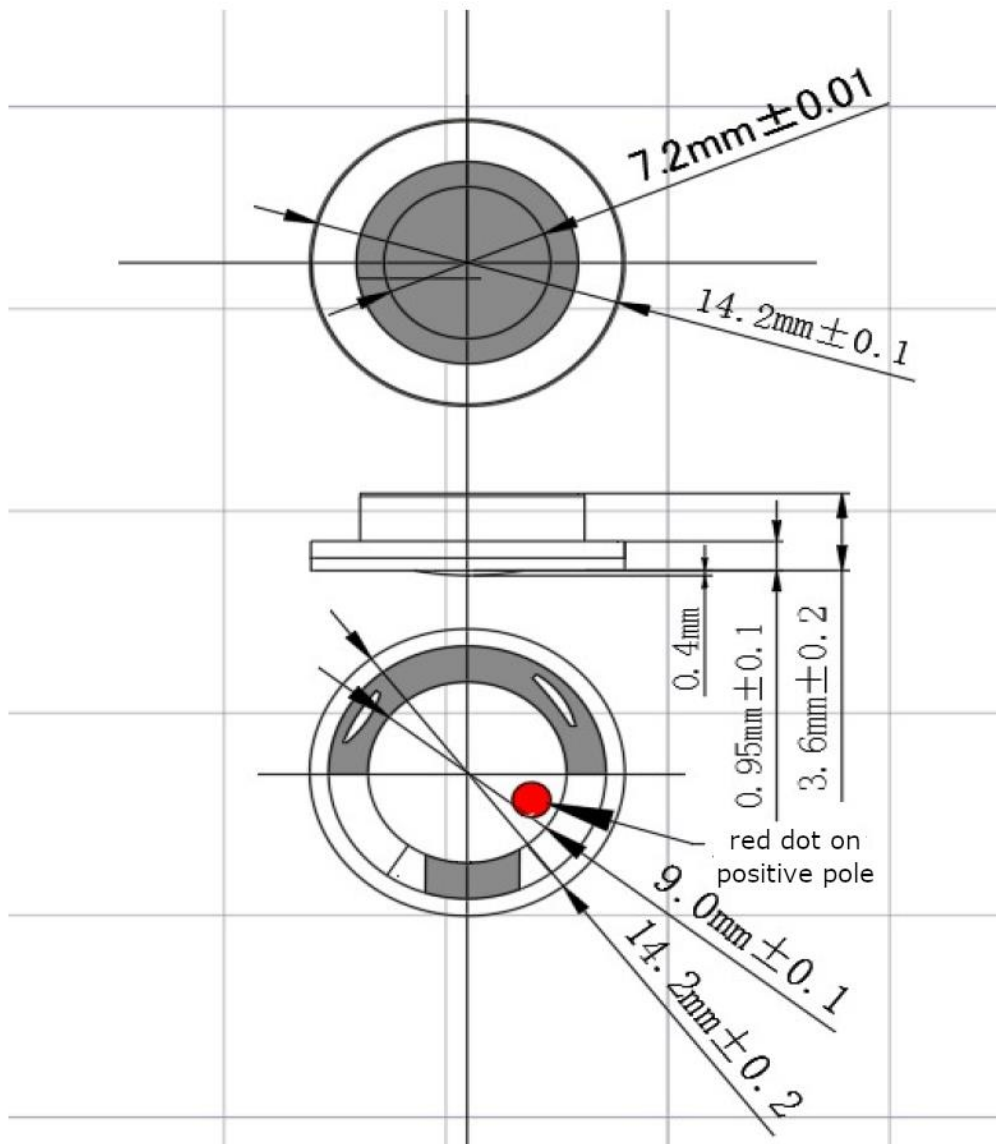


Reliability Testing

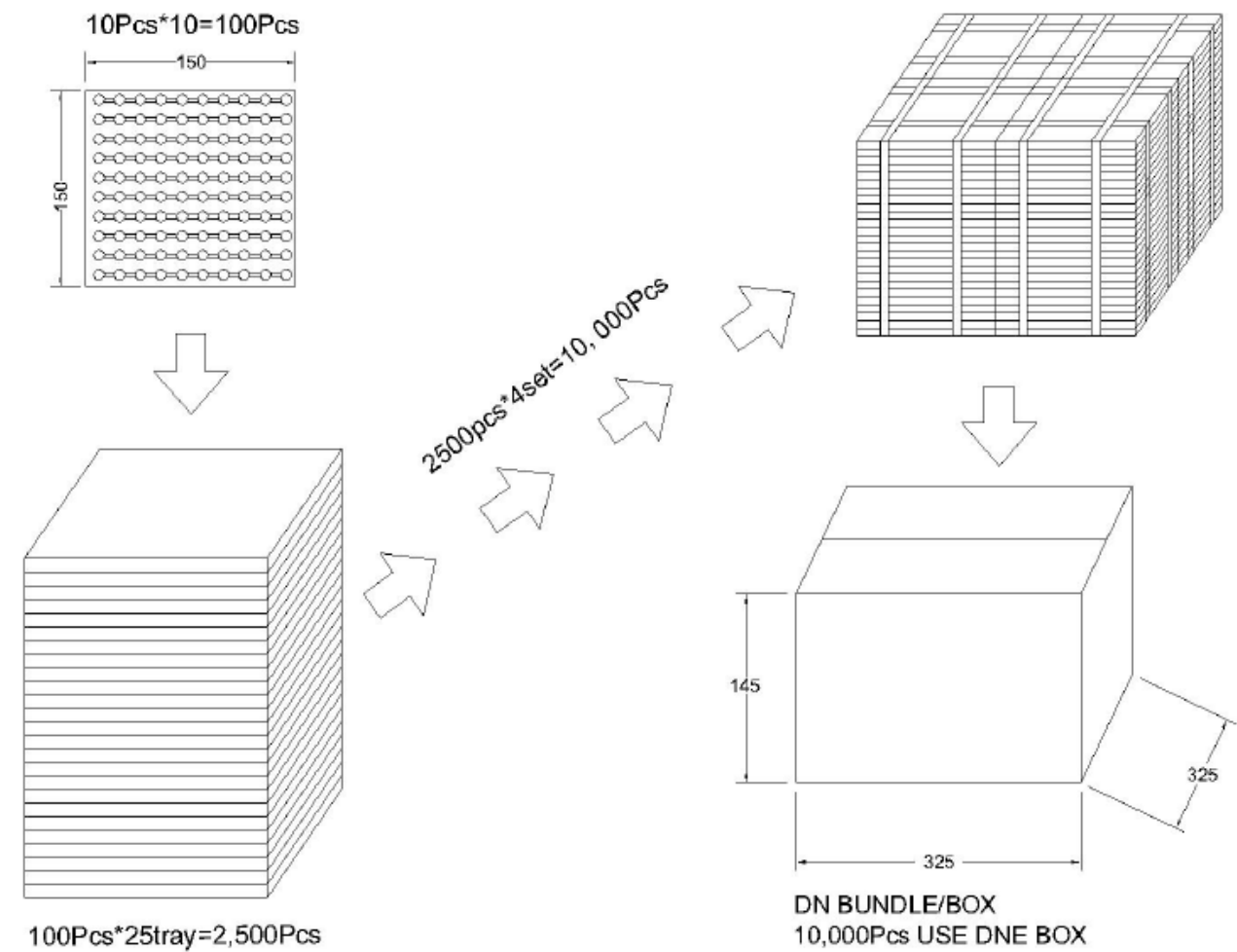
Type of Test	Test Specifications
High Temperature Test	48 hours at $+60^{\circ}\text{C} \pm 2^{\circ}\text{C}$
Low Temperature Test	48 hours at $-20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
Humidity Test	24 hours at $+50^{\circ}\text{C} \pm 2^{\circ}\text{C}$ with relative humidity at 90~95% relative humidity
Temperature Cycle Testing	The part shall be subjected to 15 cycles. One cycle shall be 2 hours and consist of: $50^{\circ}\text{C}+1^{\circ}\text{C}/0.5\text{h} \rightarrow 20^{\circ}\text{C}/0.5\text{h} \rightarrow -20^{\circ}\text{C}/0.5\text{h} \rightarrow 20^{\circ}\text{C}/0.5\text{h}$
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:
- 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.