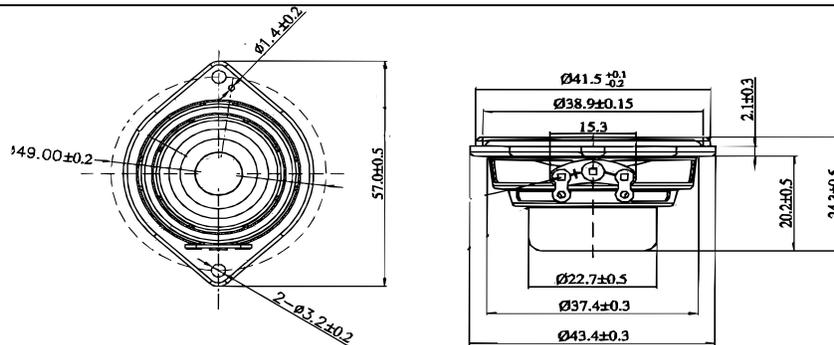


# Specification

## Part Number: TS121038

**Description: Loudspeaker (Size: D43mm x H24.3mm)**

**RoHS Compliant**

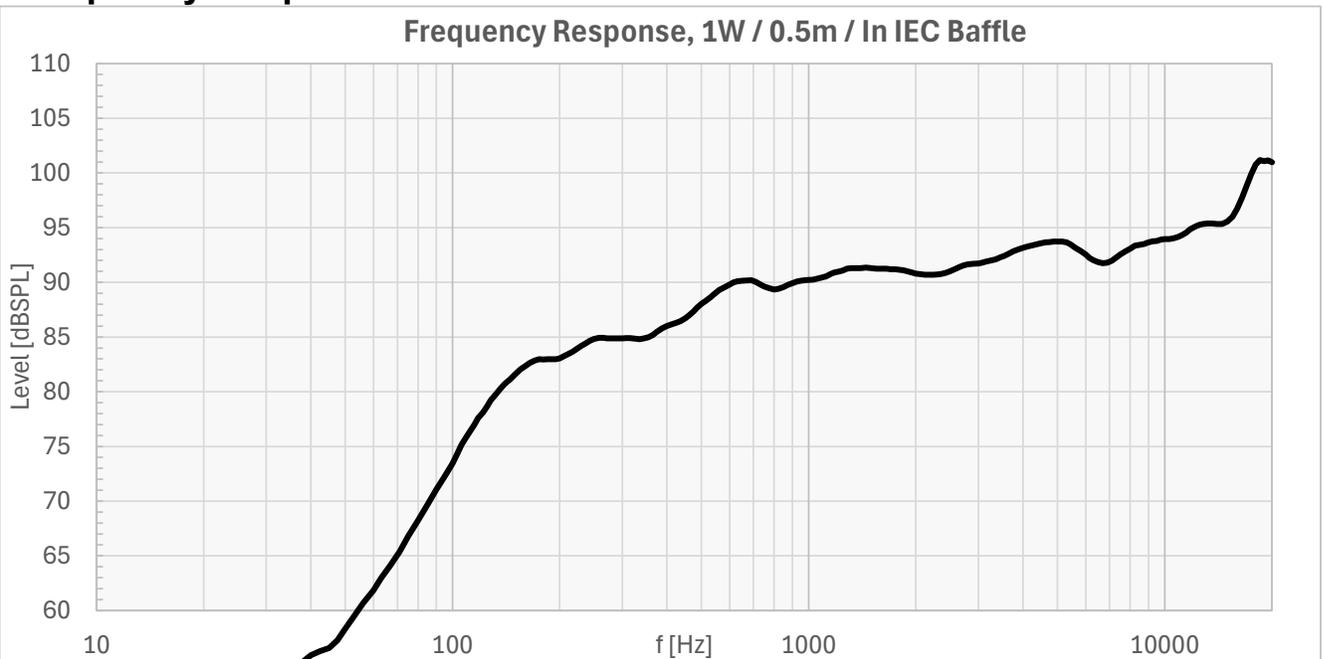


Revision	Date	Comments
A	March 15, 2024	Released for Production

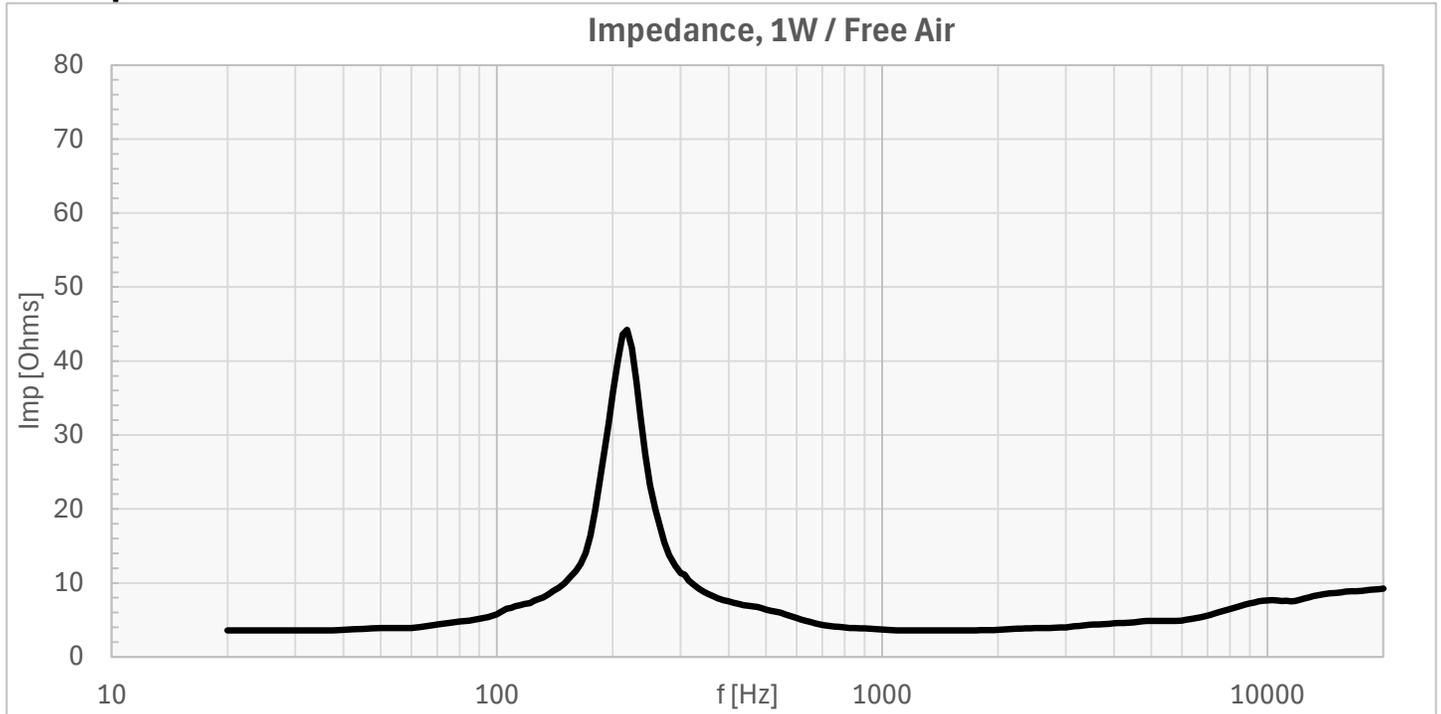
<b>1</b>	<b>General</b>	
1.1	Scope	This specification defines all design requirements for the TS121038 loudspeaker.
1.2	Test Conditions	Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are 5°C~35°C, 25%~85%RH , 860~1060HPA

<b>2</b>	<b>Acoustic and Electrical Specifications</b>		
2.1	Nominal Impedance	4Ω	
2.2	DC Resistance	3.6±0.25Ω	
2.3	Resonance Frequency	210±32Hz	At 1.0V
2.4	Output SPL	90±3dB SPL	1W (2V) / 0.5m / 800, 1000, 1250, 1600 Hz Avg
2.5	Rated Input Power	5W	4.47V
2.6	Frequency Response and Deviation	150Hz~20kHz	Output SPL - 10dB
2.7	Buzz and Rattle	No audible buzz or rattle	Sine Wave Sweep at 4.47V / 100Hz~2kHz
2.8	Distortion	5% Max	At 1W (2.0V) / 300Hz~10kHz
2.9	Polarity	When a positive DC current is applied to the voice coil terminal marked +, the diaphragm shall move forward	

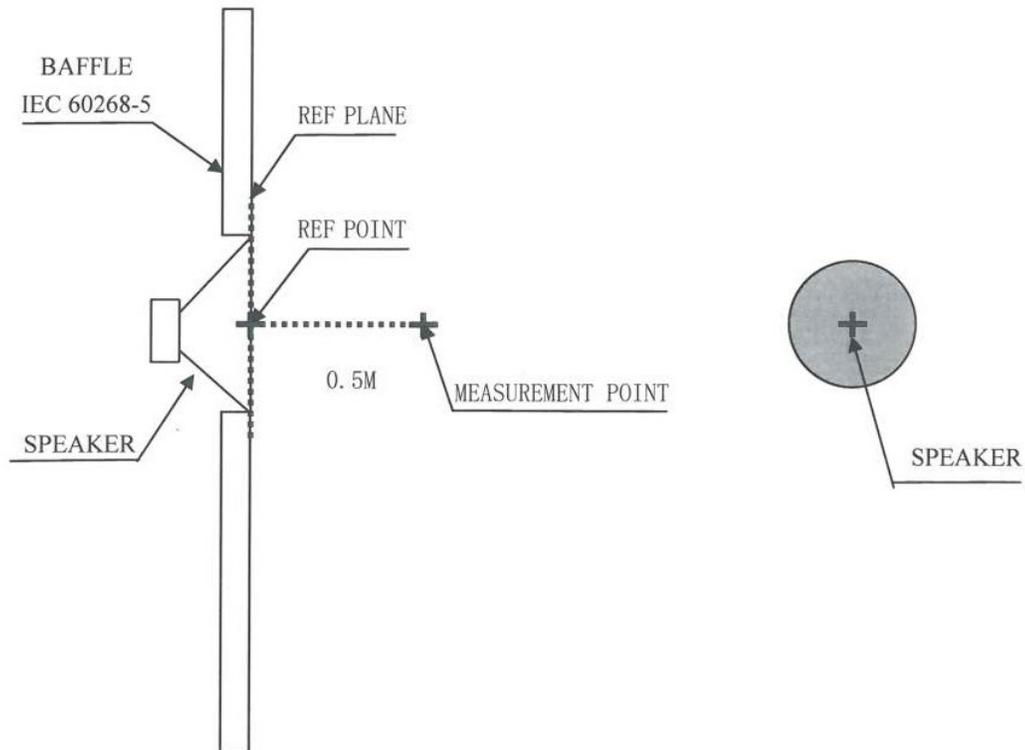
### 3.1 Frequency Response



### 3.2 Impedance

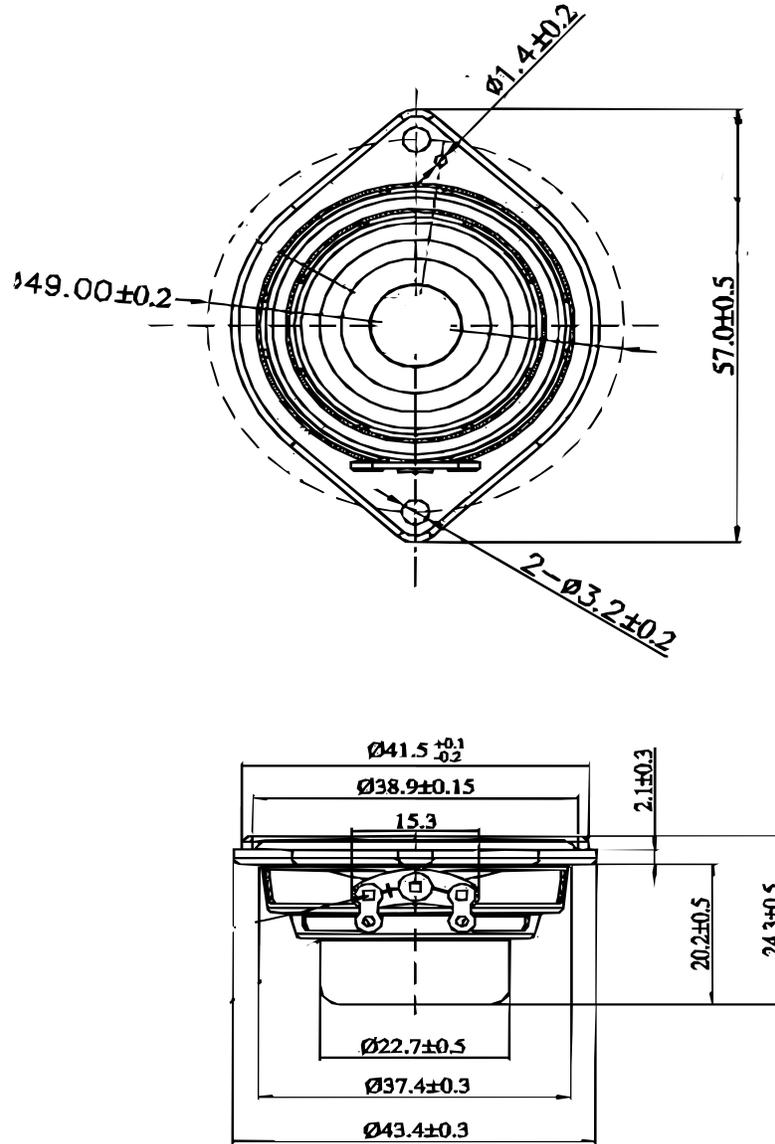


### 3.3 Measurement Setup



<b>4</b>	<b>Environmental Characteristics</b>	
4.1	Sweep Test	No buzz or extraneous noises Test Signal: 4.47Vrms (5W) Sine wave 100Hz~2kHz in free air
4.2	Power Test	EIA Pink Noise with 60Hz HP, 100 hours
4.3	High Temperature Test	96 hours in test chamber at $+70\pm 2^{\circ}\text{C}$ , 20~25%RH, then removed and stored at room temperature for 2 hours
4.4	Cold Temperature Test	96 hours in test chamber at $-40\pm 3^{\circ}\text{C}$ , then removed and stored at room temperature for 2 hours
4.5	Humidity Test	96 hours in test chamber at $+50\pm 2^{\circ}\text{C}$ , 91~95%RH, then removed and stored at room temperature for 2 hours

## 5 Mechanical Drawing



Tolerance (unless labeled):  $\pm 0.3\text{mm}$