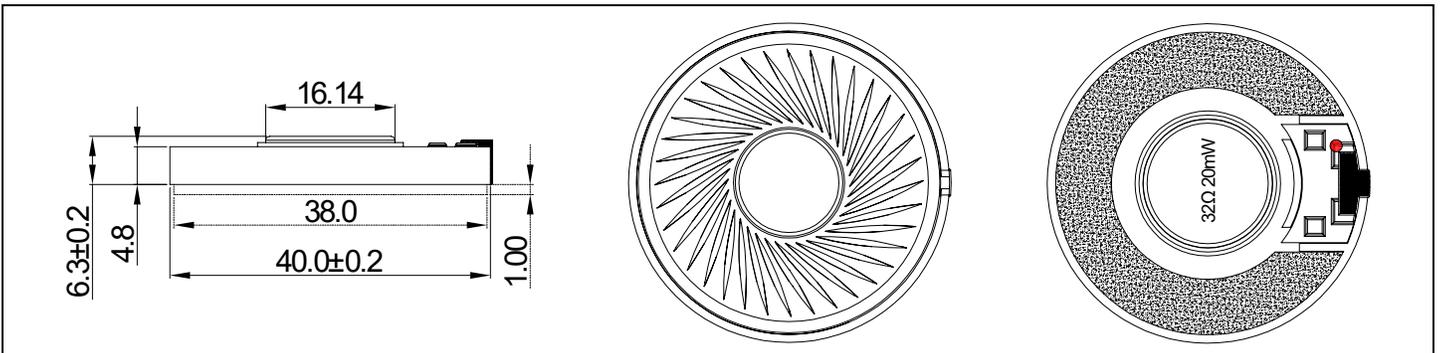


Specification

Part Number: TS121042

Description: Receiver (Size: D40mm x H6.3mm)

RoHS Compliant



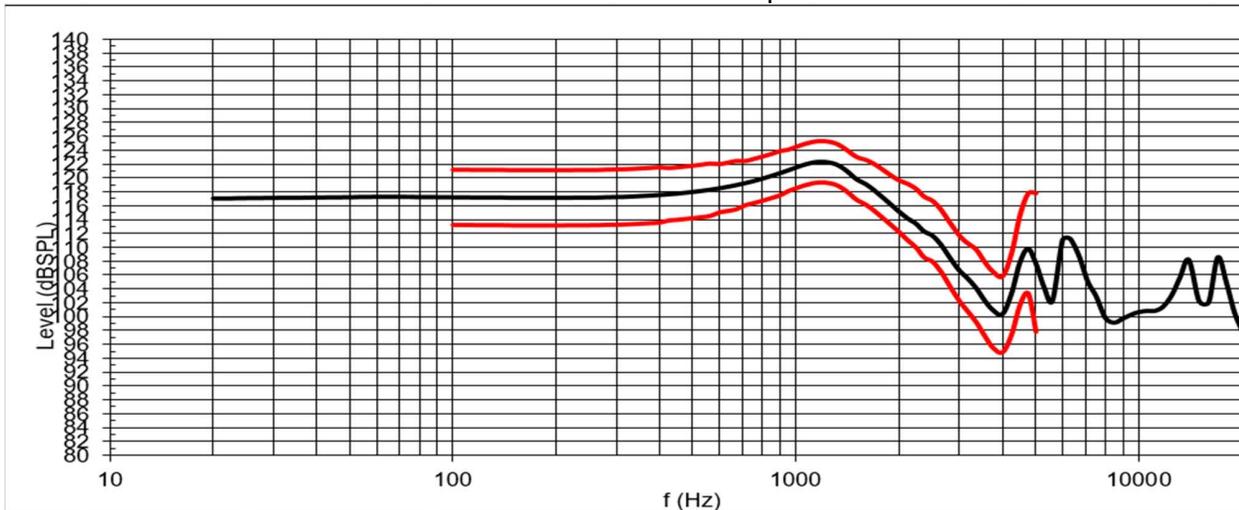
Revision	Date	Comments
A	February 8, 2024	Released for Production

1	General	
1.1	Scope	This specification defines all design requirements for the TS121042 receiver.
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

2	Acoustic and Electrical Specifications		
2.1	Nominal Impedance	33±4.95Ω (±15%)	At 1kHz / 178mV
2.2	DC Resistance	32±4.8Ω (±15%)	
2.3	Resonance Frequency	100±20Hz	At 178mV
2.4	Output SPL	121±3dB SPL	1mW (178mV) / IEC 318 / 1kHz
2.5	Rated Input Power	20mW	0.8V
2.6	Max Input Power	50mW	1.26V
2.7	Buzz and Rattle	No audible buzz or rattle	Sine Wave Sweep at 0.8V / 50Hz~2kHz
2.8	Distortion	3% Max	At 1mW (178mV) / 1kHz
2.9	Polarity	When a positive DC current is applied to the voice coil terminal marked +, the diaphragm shall move forward	

3 Frequency Response

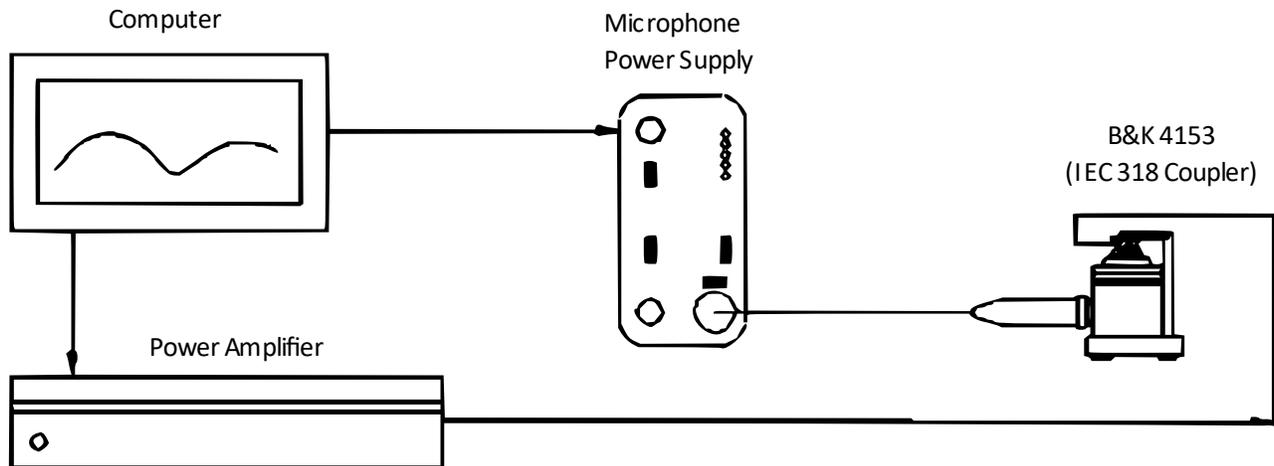
178mV / IEC318 Coupler



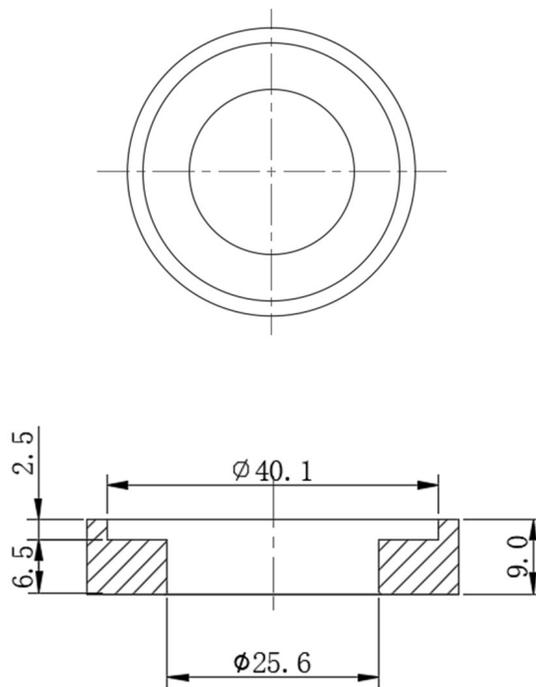
f [Hz]	Lower Limit [dB]	Upper Limit [dB]
100	-7	1
400	-7	1
1000	-3	3
1200	-3	3
1400	-4	2
2200	-14	-2
3300	-20	-8
3800	-20.5	
5000	-21	-1

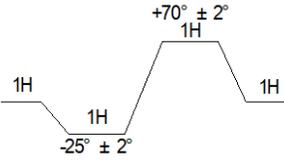
4 Test Setup

4.1 Measuring Circuit

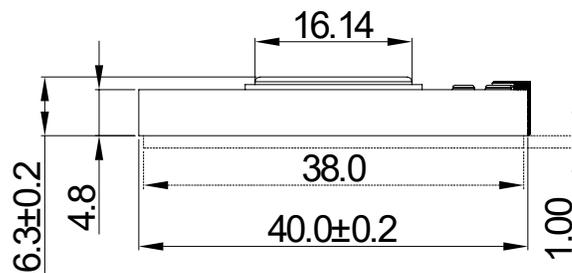
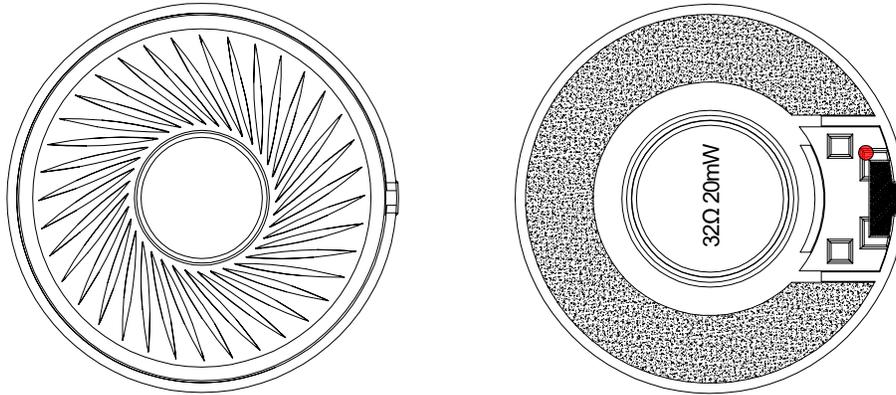


4.2 Test Fixture



4 Environmental Characteristics		
4.1	Results after test	Sensitivity difference shall be within 2dB and there should not be any obstacles that could be harmful to normal operation, including: damage, cracks, rust, distortion, etc.
4.2	Load Test	White Noise, 20mW, 96 Hours, 2 hours at room temperature
4.3	High Temperature Test	96 hours in test chamber at $+60\pm 2^{\circ}\text{C}$, 20~25%RH, then removed and stored at room temperature for 2 hours
4.4	Cold Temperature Test	96 hours in test chamber at $-25\pm 3^{\circ}\text{C}$, then removed and stored at room temperature for 2 hours
4.5	Humidity Test	96 hours in test chamber at $+40\pm 2^{\circ}\text{C}$, 90~95%RH, then removed and stored at room temperature for 2 hours
4.6	Temperature Cycle Test	<p>1 cycle: Low Temperature $-25\pm 2^{\circ}\text{C}$ for 1 hour, High Temperature $+60\pm 2^{\circ}\text{C}$ for 1 hour</p>  <p>5 cycles total, then removed and stored at room temperature for 2 hours</p>
4.7	Drop Test	Driver unit with cover protector; Dropped from a height of 0.75m on a concrete surface in 3 directions each with 3 cycles
4.8	Vibration Durability (Pack)	X, Y, Z axes; 10~55~10Hz / 1 minute; Amplitude 3.5mm; Endurance: 2 hours each direction

5 Mechanical Drawing



Tolerance (unless labeled): $\pm 0.2\text{mm}$
1.0mm clearance recommended in front of diaphragm