Speaker

SS0158-30057-90D

Description



This speaker is designed to convert electrical signals into sound waves. It is commonly used in electronic devices such as smartphones, laptops, and portable speakers to produce audio output. The speaker consists of a diaphragm that vibrates in response to the electrical signals, creating sound waves that are amplified by the speaker's enclosure.

Applications

- Electronic devices
- Industrial and commercial equipment
- Home appliances
- Toys and games
- Sound effects
- Audio Alerts
- Warning Signals
- Audio Feedback

Electrical And Acoustical Specification.

Item	Description
Rated Input Power.	1.5 W
Max Input Power.	2.0 W
Rated Impedance.	8Ω ± 15%
Sound Pressure Level. (S.P.L)	90dB(0.1w/0.1m) ± 3 dB at AVE 0.8K 1.0K 1.2K 1.5K Hz
Resonance Frequency (Fo).	550±20%Hz
Frequency Range.	F0~20kHz.
Distortion	Less than 5% at 1KHz input 0.1 W
Magnet	1 pcs Rare earth permanent (NdFeB) magnet Φ12.5*1.5 mm
Buzz, Rattle, etc.	Should not be audible at 3.1 sine Wave between Fo to 20 KHz

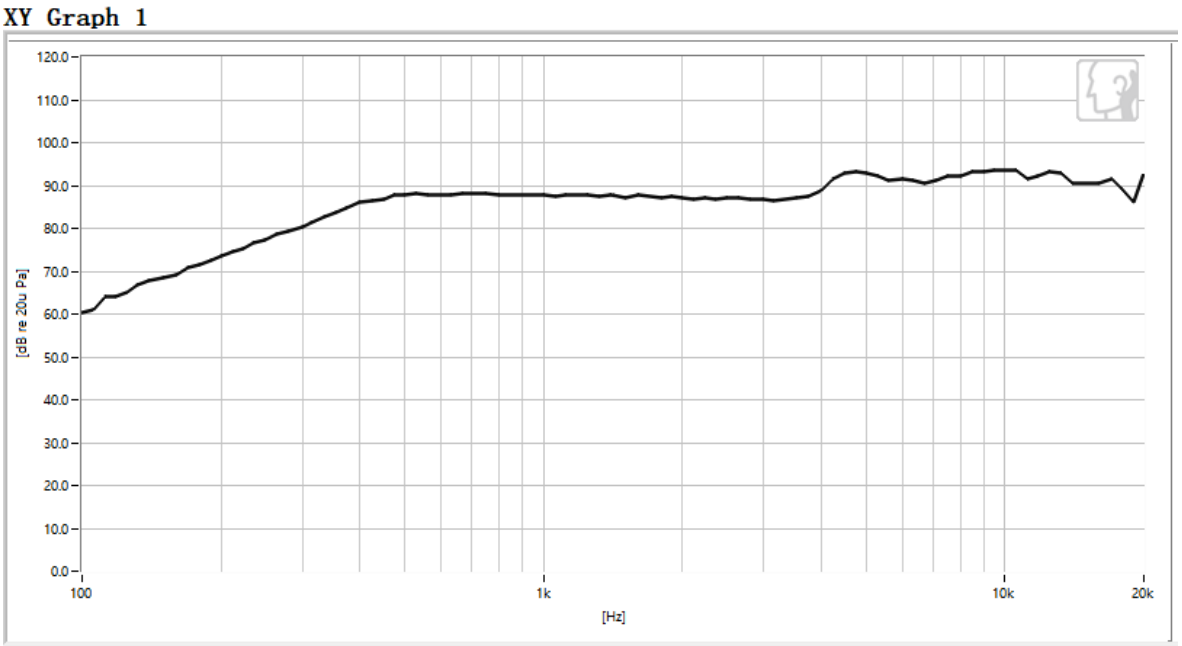
Speaker
SS0158-30057-90D

Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.
Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.
Protection Class	IP67 (Front side)
Temperature	Operating temperature: -30℃ to +70℃ Storage temperature: -40℃ to +80℃

Frequency Response

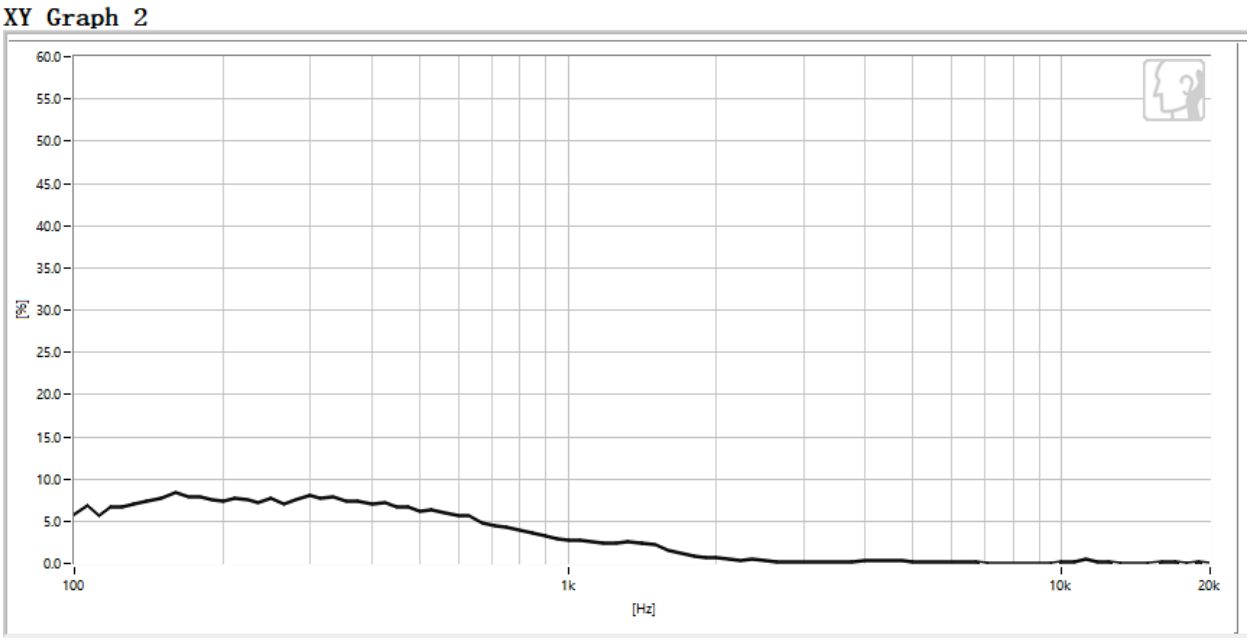
The swept sine-wave frequency response of a Loud speaker should ideally not deviate more than indicated per figure below. Test condition: 0.1W/0.1M

Frequency Response Curve

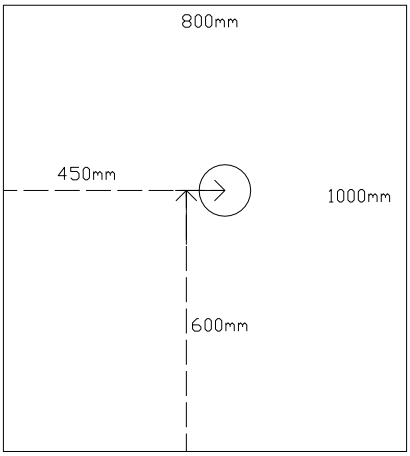


Speaker
SS0158-30057-90D

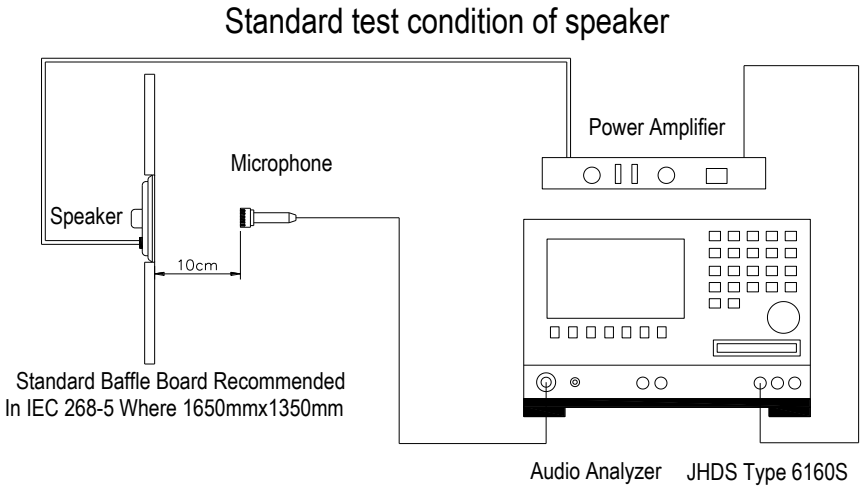
Total Harmonic Distortion Curve



Measuring Method

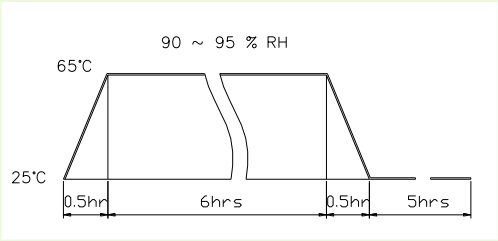


Block Diagram For Measurement M



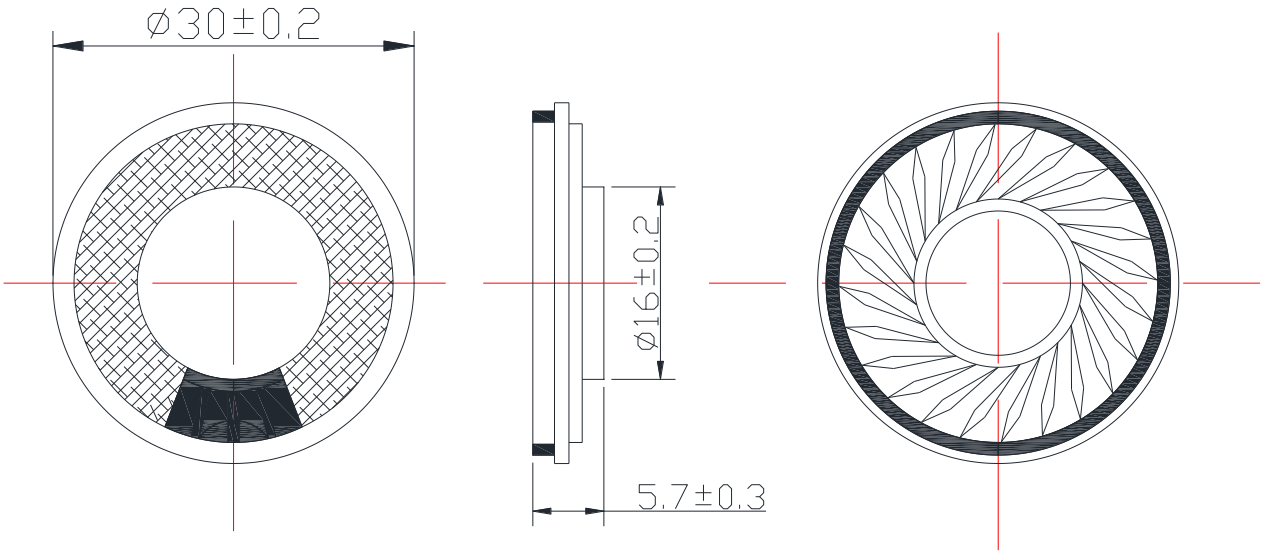
Speaker
SS0158-30057-90D

Environment test

Item	Test condition
High temp. Preservation	Exposure to 70℃ ±3℃ for 96 hours and leave 6 hours in normal temperature and then check.
Low temp. Preservation	Exposure to -30℃ ±3℃ for 96 hours and leave 6 hours in normal temperature and then check.
Humidity test	Exposure to +40℃ ±3℃, relative humidity 92-95% for 96 hours and leave 3 hours in normal temperature and then check.
Temp./Humidity cycle	The part shall be subjected 5 cycles. One cycle shall be 6 hours and consist of; 
Vibration Test	10-55-10Hz Sinewave，Sweep 15min. 5G (Constant) X,Y,Z 3 Direction 2 hours each, total 6hours。
Free drop Test	Drop the speakers contained in normal box onto the board 40 mm thick 10 times from height of 75 cm
Load test	Rate power Pink noise is applied 96 hours at room temperature
Lead wire pull strenght	The pull force shall be applied to double lead wire: Horizontal 3.0 N (0.306 kg) for 30 seconds Vertical 2.0 N (0.204 kg) for 30 seconds
Criterion	After these test, the change of S.P.L. Shall be within ±3 dB

Speaker
SS0158-30057-90D

Dimensions



Unit:mm Tol:±0.5

PART NO.	PART NAME	Q'TY	MATERIAL
1	Gasket	1	ABS
2	Diaphragm	1	PEI
3	VOICE COIL	1	Paper+Cu
4	Plate	1	SPCC
5	Magnet	1	NdFeB
6	PCB Terminal	1	FR4
7	Frame	1	Spcc
The material need to meet GU-001			

Speaker
SS0158-30057-90D

Ordering information

Ordering can be done via www.summit-electronics.com or via info@summit-electronics.com. Please contact us for more information. Customisation of the product is available on request.

Technical support

For all product questions please contact us via info@summit-electronics.com

Document revision

Rev	Date	Changes
V01.00	24-05-2024	First issue of document