



Dynamic loudspeaker

9x16x3 mm

Solder pads

CR1609S030BN8

Revision

Date	Version	Status	Changes	Approver
2018/02/13	V0.1	Draft	First release	LC

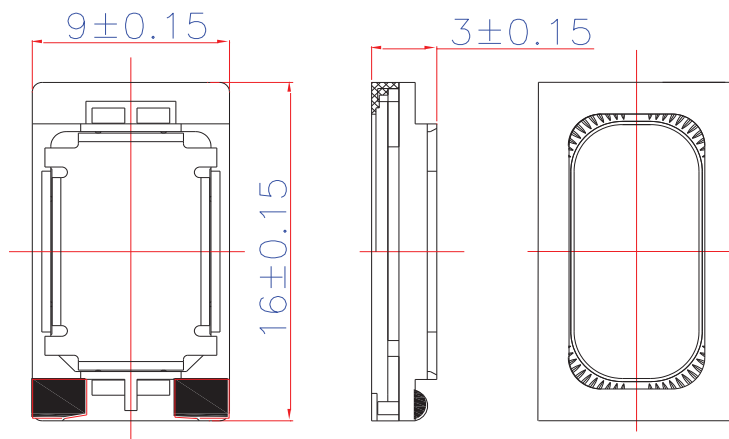
SPECIFICATIONS

Parameter	Conditions/Description	Values	Units
Rated Input Power	in 1cc closed box	0.5	W
Max Input Power	in 1cc closed box	0.8	W
Rated Impedance	at 1.5K Hz , 1V input	8±15%	Ω
Sound Pressure Level (S.P.L.)	0.5W/0.1M at 2.0K Hz , in 1cc closed box	87±3	dB
Resonant Frequency (Fo)	in free air	700±20%	Hz
	in 1.0cc closed box	950±20%	Hz
Frequency Range		Fo~10K	Hz
Distortion	at 1K Hz, input 0.5W, in 1cc box	< 15%	-
Magnet	NdFeB		
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 20 kHz, in free air	0.89	V
Polarity	cone will move forward with positive dc current to “+” terminal		
Weight		1.5	g
Operating Temperature		-20~+60	°C
Storage Temperature		-30~+70	°C

Notes: All specifications measured at 5~35°C, humidity at 45~85%, under 86~106 kPa pressure, unless otherwise noted.

MECHANICAL DRAWING

Units: mm

Tolerance: $\pm 0.15\text{mm}$ 

CONSTRUCTION DETAIL

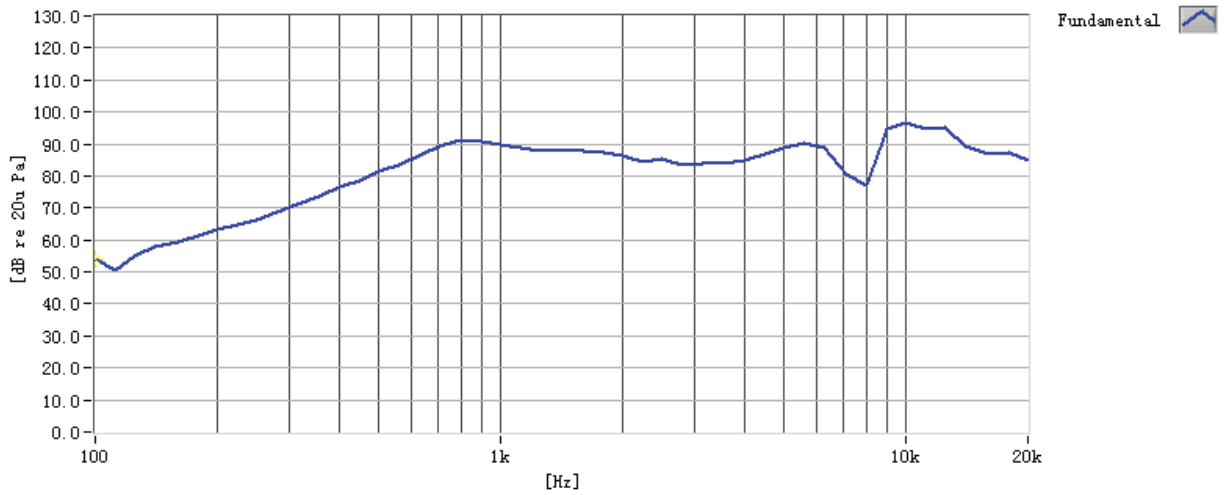
PART NO.	PART NAME	Q'TY	MATERIAL	REMARK
1	Diaphragm	1	Peek	
2	Voice coil	1	Copper wire	
3	Plate	1	SPCC	
4	Magnet	1	NdFeB	
5	Frame	1	Plastic	

RESPONSE CURVES

Frequency Response Curve

Test condition: 0.5W/0.1M, in 1cc closed box

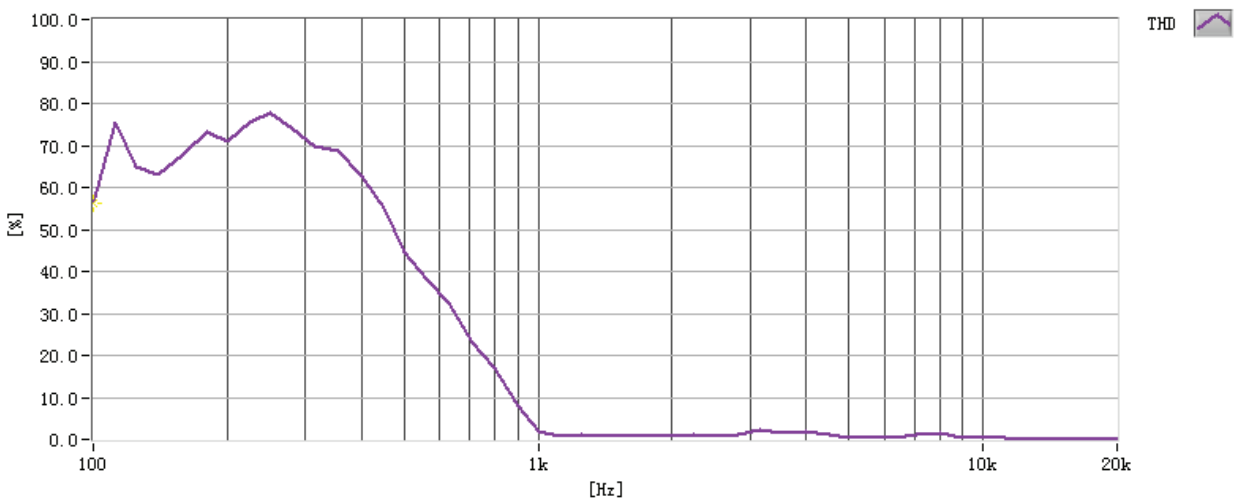
XY Graph 12



Total Harmonic Distortion Curve

Test condition: 0.5W/0.1M, in 1cc closed box

XY Graph 13



RELIABILITY TEST

1	Reliability Test Performance	After any following test, parts should conform to original performance within ± 3 dB tested with Rated Power, after 6 hours of recovery period.
2	High Temperature Test	96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$
3	Low Temperature Test	96 hours at $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$
4	Humidity Test	96 hours at $+30^{\circ}\text{C}\pm 3^{\circ}\text{C}$, 92-95% RH
5	Temp./Humidity Cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 6 hours and consist of</p> <p>The graph illustrates a temperature and humidity cycle. The temperature starts at 25°C, rises to 65°C in 0.5 hours, stays at 65°C for 6 hours, and then falls back to 25°C in 0.5 hours. The humidity is 90-95% RH during the 6-hour high-temperature plateau. After the 0.5-hour cooling period, there is a 5-hour recovery period at 25°C.</p>
6	Vibration Test	<p>Frequency: 10~55~10Hz Oct/min Amplitude: 1.5mm</p> <p>Duration: 2 hours each of 3 perpendicular directions</p>
7	Drop Test	Drop the speaker contained in normal box onto the surface of 40mm thick board 10 times from the height of 75cm
8	Operation Life Test	Must perform normal with program Pink-Noise source at Rated Power for 96 Hours
9	Termination Strength	<p>Apply 3.0N(0.306kg) to each terminal in horizontal direction for 30 seconds;</p> <p>Apply 2.0N(0.204kg) to each terminal in vertical direction for 30 seconds;</p>

MEASURING METHOD

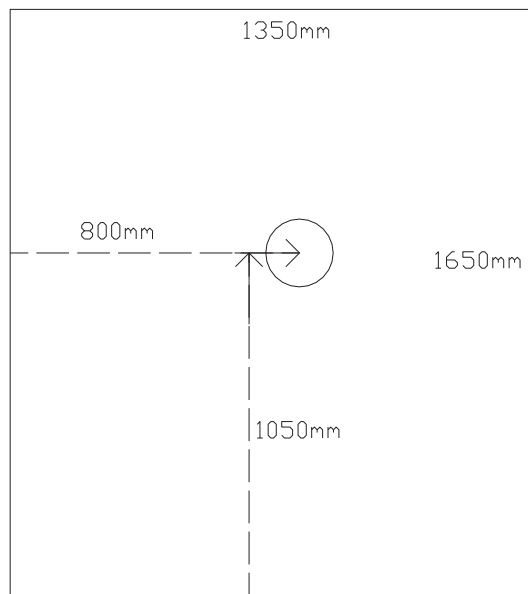


Fig. 1 Block Diagram for Measurement Method

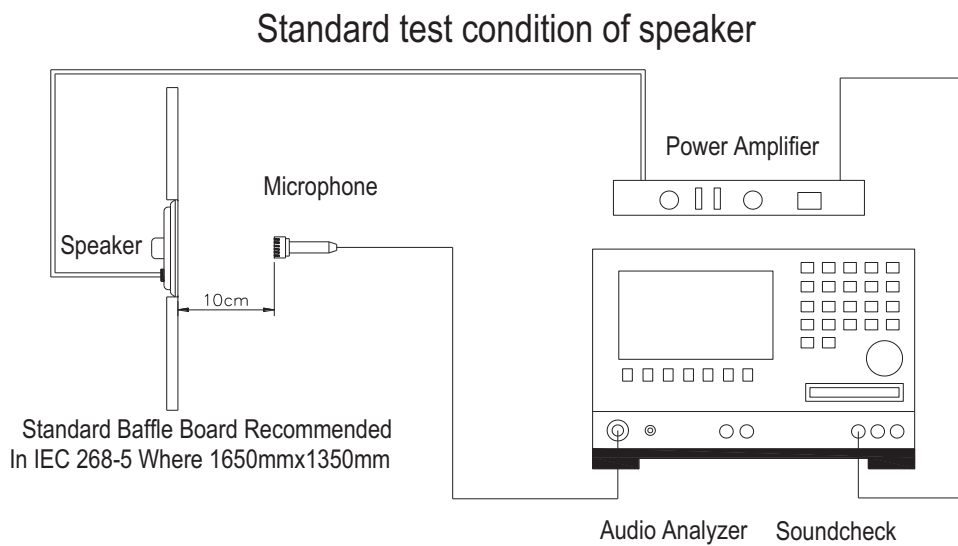


Fig. 2 Speaker Test Condition

PACKAGING

units: mm

100pcs of speaker in each tray

20 trays in one carton

Total: 2000 pcs / 1 carton

Gross Weight: 4 KGS

Net Weight: 2 KGS

