Dynamic Speaker

34×11×4.0 mm

CR3411S040BN4

Revision

Date	Version	Status	Changes	Approver
2019/9/17	V0.1	Draft	Initial release	AX
2020/5/13	V0.2	Draft	Update testing condition	AX
2020/6/24	V0.3	Draft	Add free air testing result & update package information	AX
2021/4/9	V0.4	Draft	Add overshoot parameter	AX

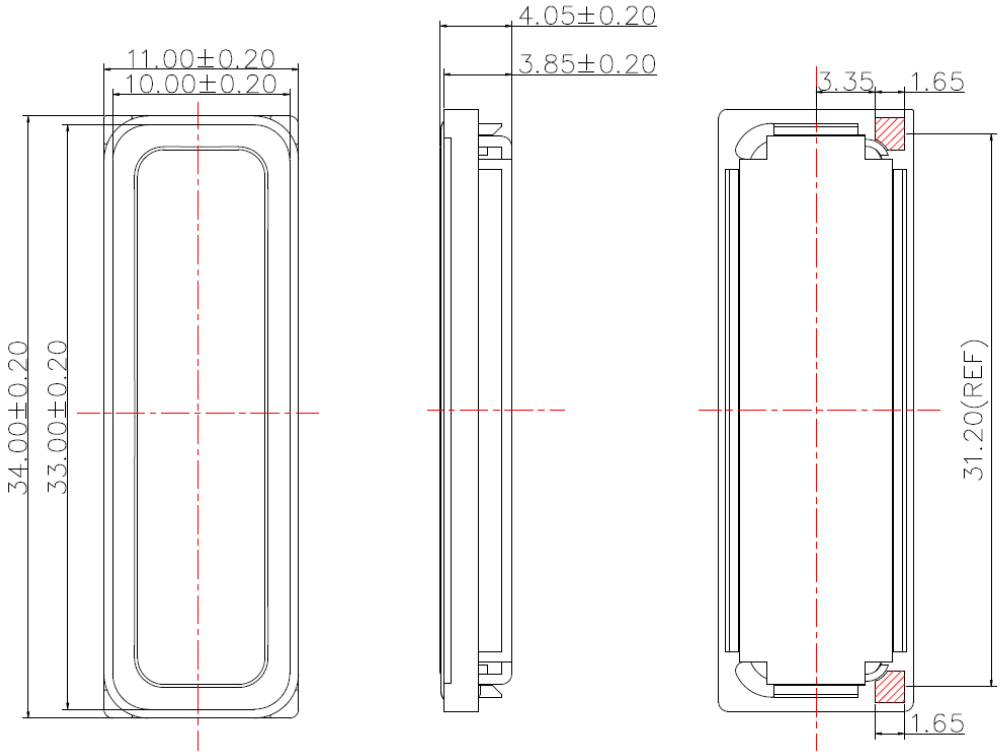
Parameter	Conditions/Description	Values	Units
Rated Input Power	In 5cc box	2.0	W
	In Free air	0.1	W
Max Input Power	In 5cc box	3.0	W
	In Free air	0.2	W
Impedance		4±15%	Ω
Sound Pressure Level (S.P.L.)	at 2.0KHz in2.0V/0.1M average IN 5CC BOX(0dB SPL=20μPa)	93±3	dB
	at 2.0KHz in0.632V/0.1M average IN Free air(0dB SPL=20μPa)	83±3	dB
Resonant Frequency (Fo)	IN 5CC BOX	500±20%	Hz
	IN Free air	300±20%	Hz
Frequency Range	Output S.P.L. -10dB	Fo~20K	Hz
Distortion	at 1K Hz, input 2.0W, IN 5CC BOX	< 10%	-
Magnet	NdFeB		mm
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 5K Hz IN 5CC BOX	2.83	V
Polarity	cone will move forward with positive dc current to"+" terminal		
Weight			g
Operating Temperature		-25~+60	℃
Storage Temperature		-25~+60	℃
Waterproof		N/A	

Above Measuring condition under temperature : 15~35℃ R.H. 25 ~75%.86 kPa to 106 kPa (860 mbar to 1 060 mbar According to standard GB/T 9397—200X and IEC 60268-1

MECHANICAL DRAWING

Units: mm

Tolerance: ±0.5mm

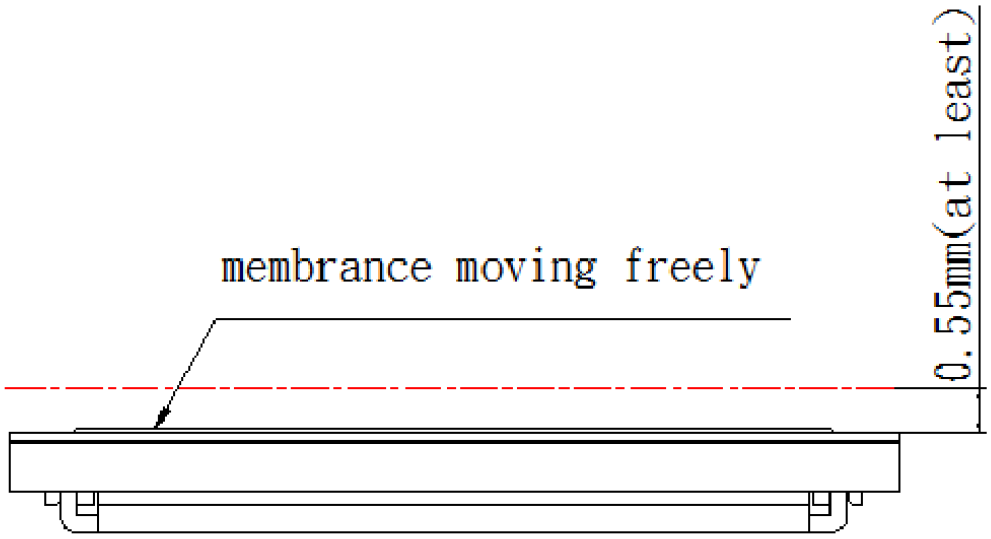


CONSTRUCTION DETAIL

No.	Part Name	Materia	Qty.	Treatment	Remark
1	Frame	Plastic+ Steel	1		
2	Front cover	Copper	1		
3	Diaphragm	Polymer	1		
4	Magnet	Nd-Fe-B	1		
5	Inner pole plate	Steel	1		
6	Outer pole shoe	Steel	1		
7	Voice coil	Copper	1		
8	Leaf spring pad	Steel	2		

Overshoot Parameter

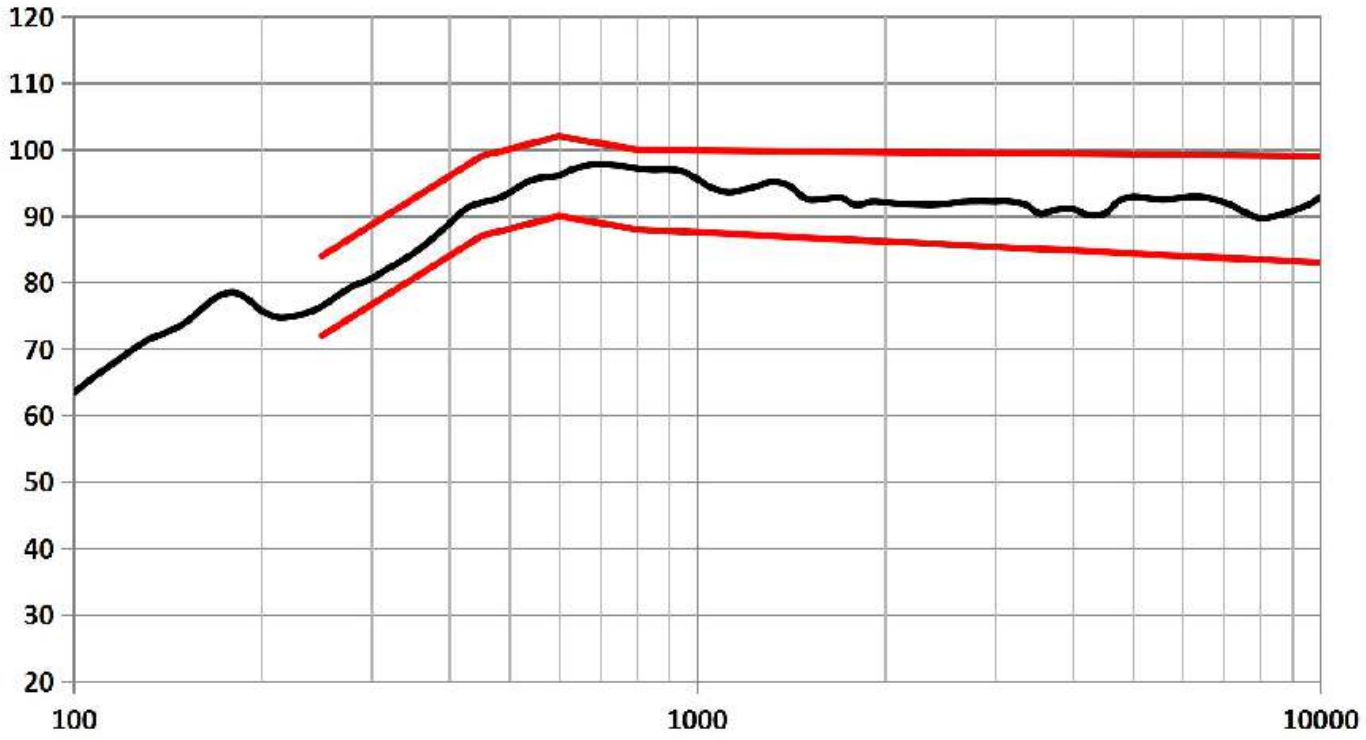
Keep clearance in front of the speaker, at least leave 0.55mm for membrane moving freely.



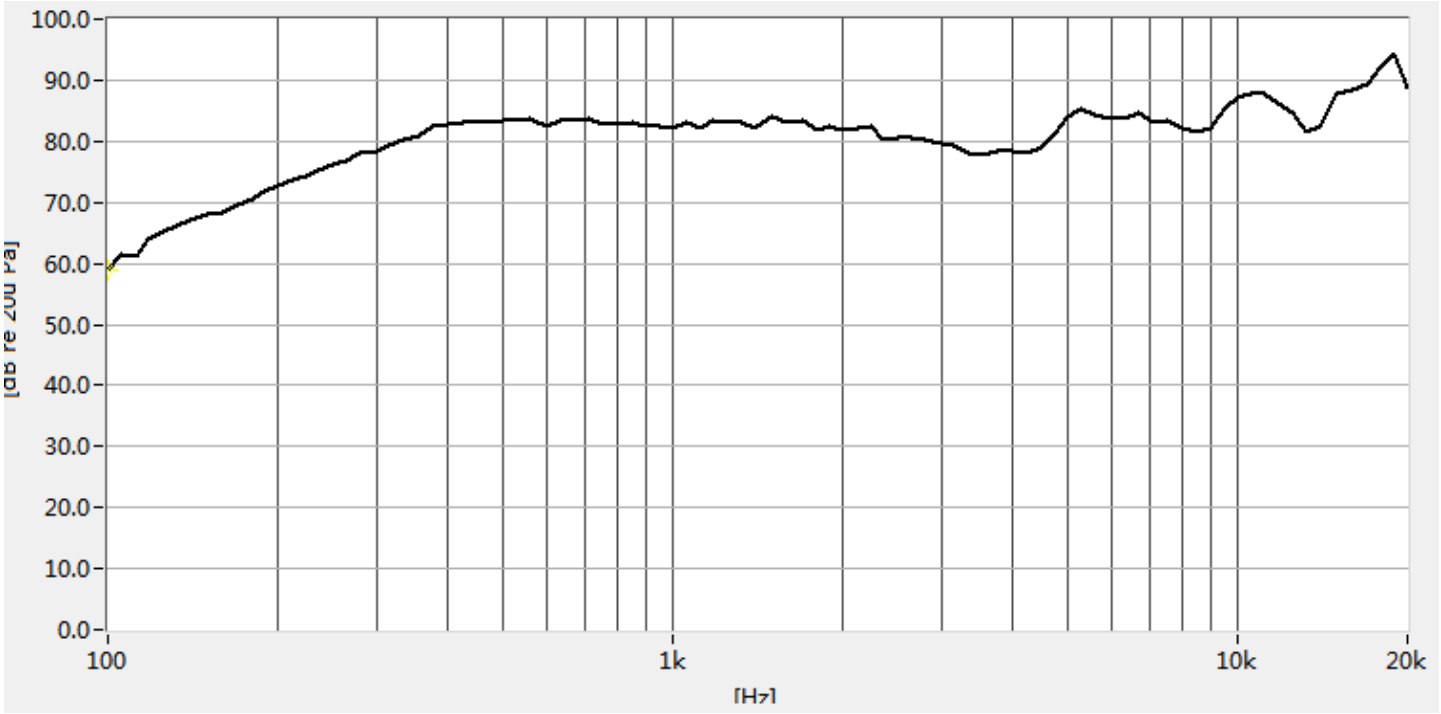
RESPONSE CURVES

Frequency Response Curve

Test condition: 2.0V/0.1M, in 5CCBOX

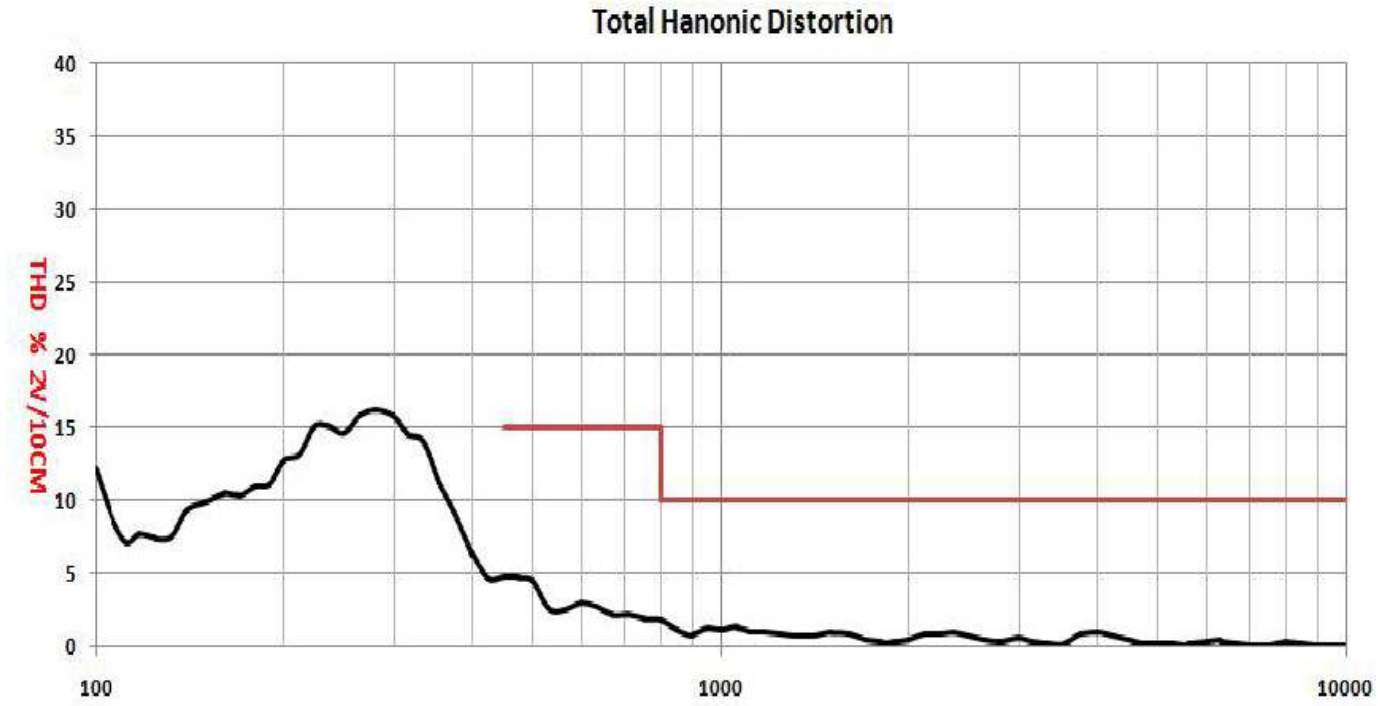


Test condition: 0.632V/0.1M, in Free air

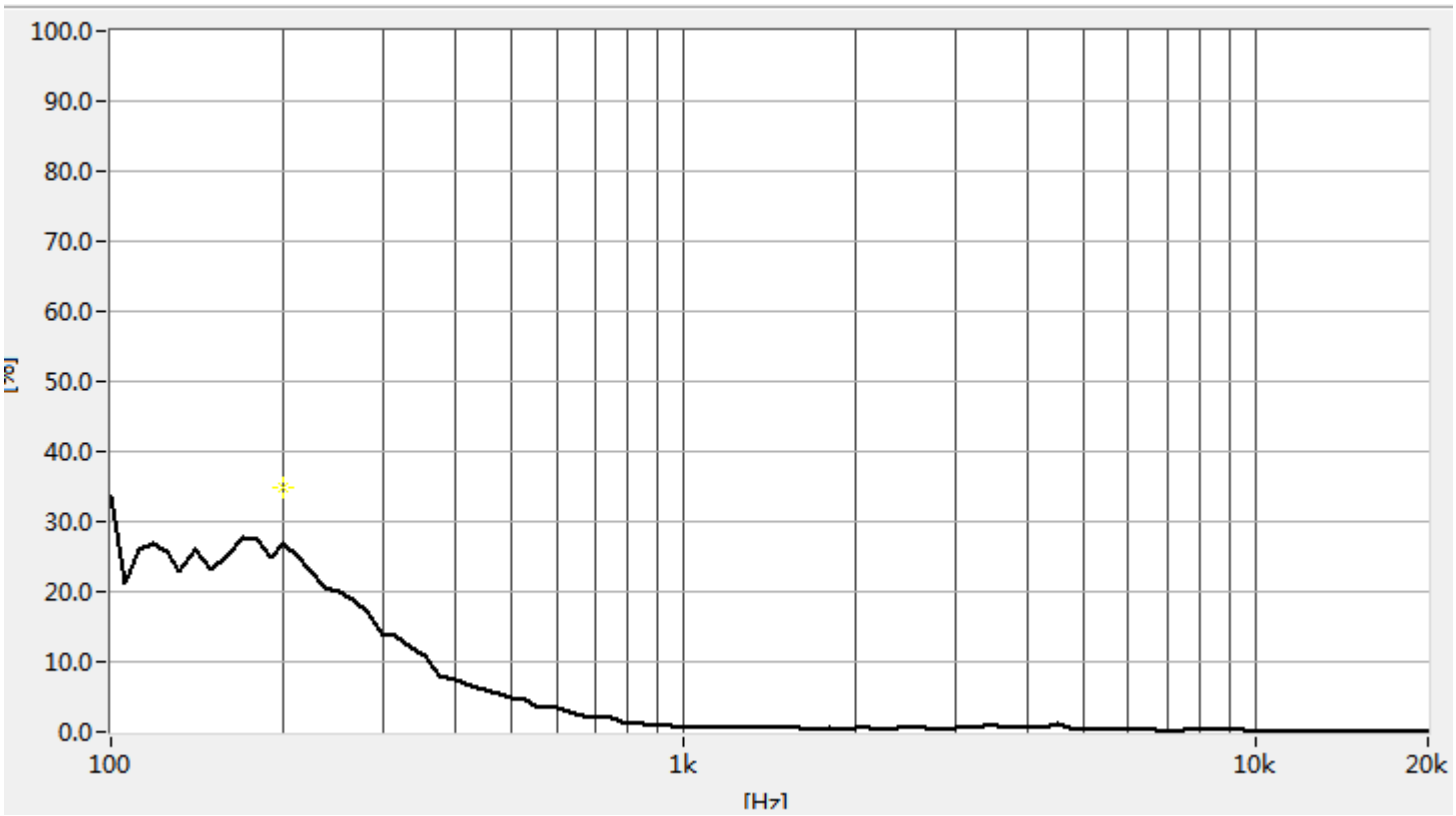


Total Harmonic Distortion Curve

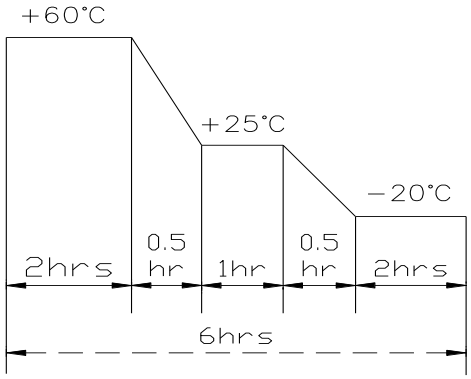
Test condition: 2.0V/0.1M, in 5CCBOX



Test condition: 0.632V/0.1M, in Free air



RELIABLITY 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 Operation and Storage	+ 60 ± 2 °C Humidity Random for 96 Hours. (GB/T 9397—200X)
3	Low Temperature Operation and Storage	− 25 ± 2 °C Humidity Random for 96 Hours. (GB/T 9397—200X)
4	Humidity Test	+40℃±2℃ Relative Humidity(RH)90~95% 48 Hours
5	Temp Cycle	The part shall be subjected 4cycles. One cycle shall be 6 hours and consist of (GB5170.18-87) 
6	Vibration Test	Frequency 30 ± 15 Hz, Amplitude 1.5 mm for 3 Hours. (GB11606.8-89)
7	Drop Test	75 CM free falling on Concrete floor, 10 times. (GB2423. 8-81)
8	Load test	Must perform normal with program White-Noise source at Rated Power for 96 Hours(GB/T 9397—200X)
9	Termination Strength	Apply 3.0N(0.306kg) to each terminal in horizontal direction for 30 seconds; Apply 2.0N(0.204kg) to each terminal in vertical direction for 30 seconds;

MEASURING METHOD

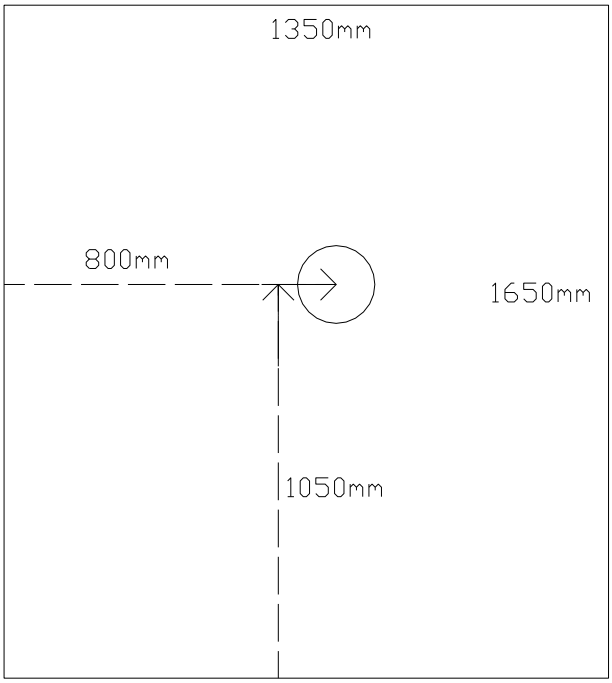
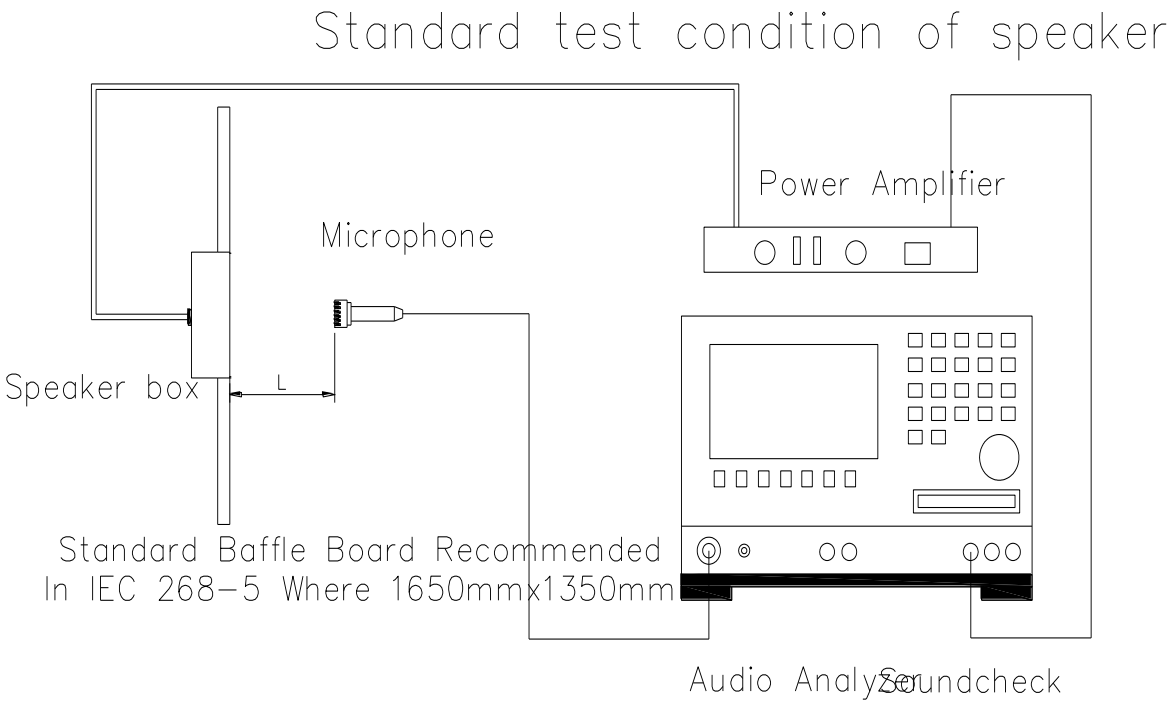


Fig. 1 Block Diagram for Measurement Method



L=10cm

Fig. 2 Speaker Test Condition

PACKAGING

Storage conditions:
Speakers should be well packed.
The temperature should be as stable as possible and between -10° C and +40° C.
The relative humidity should be below 90%.
There should be no acid or other harmful gases in the surrounding air (GB/T 9397—200X)