



Dynamic Loudspeaker

53×53×30 mm

CO53S30DN4

Revision

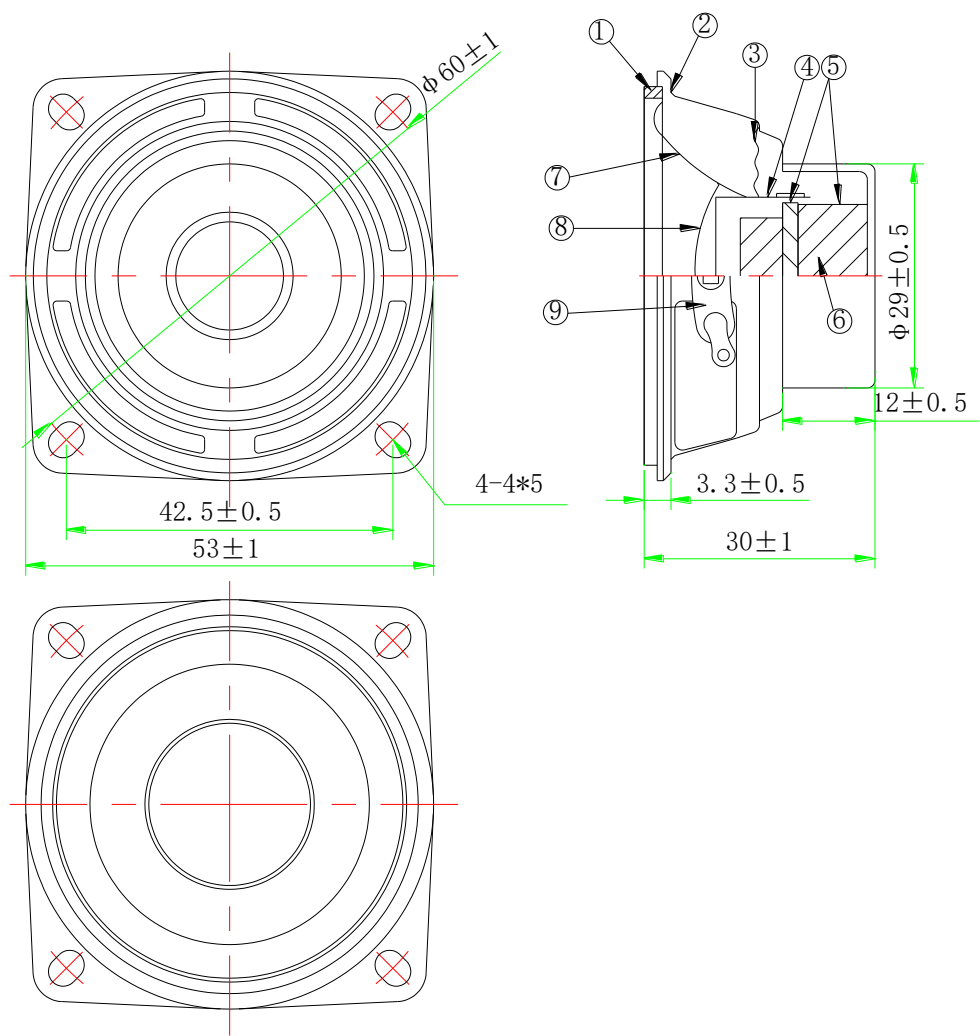
Date	Version	Status	Changes	Approver
2021/06/02	V0.1	Draft	First release	AX

Parameter	Conditions/Description	Values	Units
Rated Input Power		10.0	W
Max Input Power		15.0	W
Impedance		4±15%	Ω
Sound Pressure Level (S.P.L.)	at 0.8K 1.0K 1.2K 1.5KHz in 0.1W/0.1M average (0dB SPL=20μPa)	91±3	dB
Resonant Frequency (Fo)	at 1.0 V	180±20%	Hz
Frequency Range	Output S.P.L. -10dB	Fo~20K	Hz
Distortion	at 1K Hz, input 0.1W,	< 10%	-
Magnet	NdFeB	Φ18.5*5.5+Φ15*5	mm
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 5K Hz	6.32	V
Polarity	cone will move forward with positive dc current to "+" terminal		
Weight		75±8%	g
Operating Temperature		-25~+60	°C
Storage Temperature		-25~+60	°C
Waterproof		N/A	

Above Measuring condition under temperature : 15~35°C 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: $\pm 0.5\text{mm}$



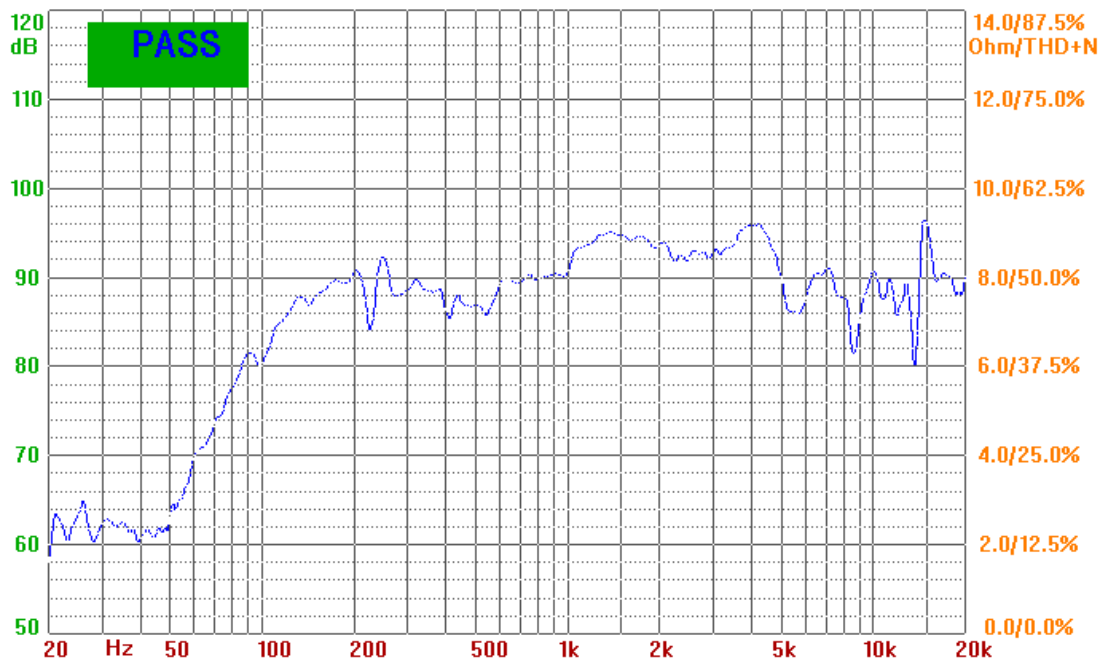
CONSTRUCTION DETAIL

NO	零件 Component	材质 Material
1	压边 Gasket	泡沫 Foam
2	盆架 Frame	冷轧钢板 SPCC
3	弹波 Damper	布 Cloth
4	音圈 Voice coil	胶管+铜 KSV+Cu
5	磁铁 Magnet	汝铁硼 NdFeB
6	极片 Plate	冷轧钢板 SPCC
7	鼓纸 Cone	PU 边纸盆 PU+Paper
8	帽子 Dust cap	纸 Paper
9	接线板 Terminals	纸板+铁 Paper+steel

RESPONSE CURVES

Frequency Response Curve

Test condition: 0.1W/0.1M,



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 Operation and Storage	$+ 60 \pm 2$ °C Humidity Random for 96 Hours. (GB/T 9397—200X)
3	Low Temperature Operation and Storage	$- 25 \pm 2$ °C Humidity Random for 96 Hours. (GB/T 9397—200X)
4	Humidity Test	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 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) The diagram illustrates a temperature cycle profile. It starts at $+60^{\circ}\text{C}$ for 2 hours, then transitions (0.5 hr) to $+25^{\circ}\text{C}$ for 1 hour, then transitions (0.5 hr) to -20°C for 2 hours. The total cycle duration is 6 hours.
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

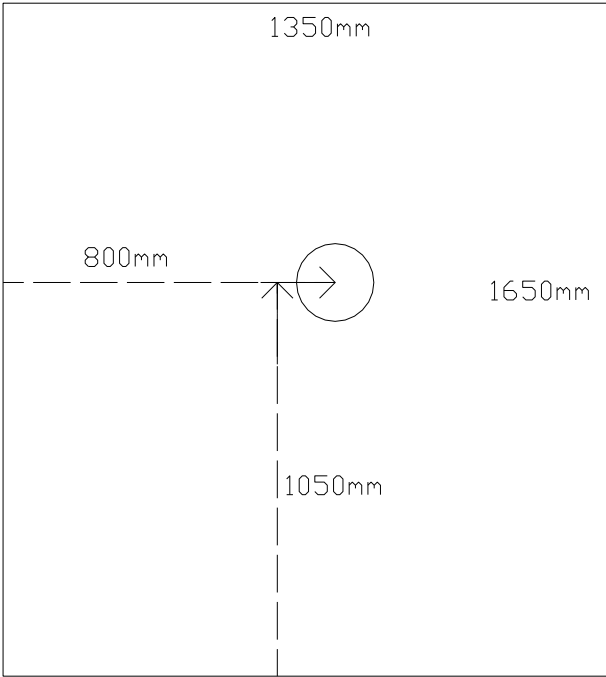
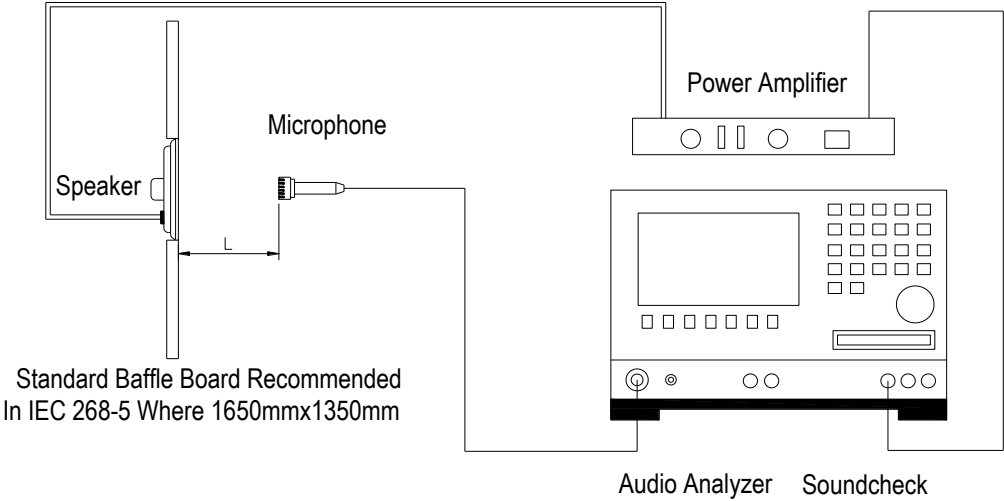


Fig. 1 Block Diagram for Measurement Method

Standard test condition of speaker



L=10cm

Fig. 2 Speaker Test Condition

PACKAGING

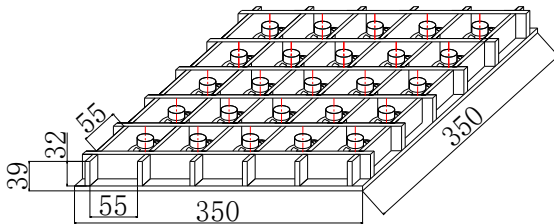
Storage conditions:

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)



1. Each clapboard 25pcs,
each carton 6 clapboards,
150 pcs/carton
N.W: 11.3 KG, G.W: 13.3 KG
2. Corrugated paper: 350*350 mm 2 pcs
3. Carton box size: 370*370*270 mm 1 pcs

