



Loudspeaker

53.0 × 53.0 × 25.0 mm

CS53L25DN4

Revision

Date	Version	Status	Changes	Approver
2018/12/25	V0.1	Draft	First release	AX

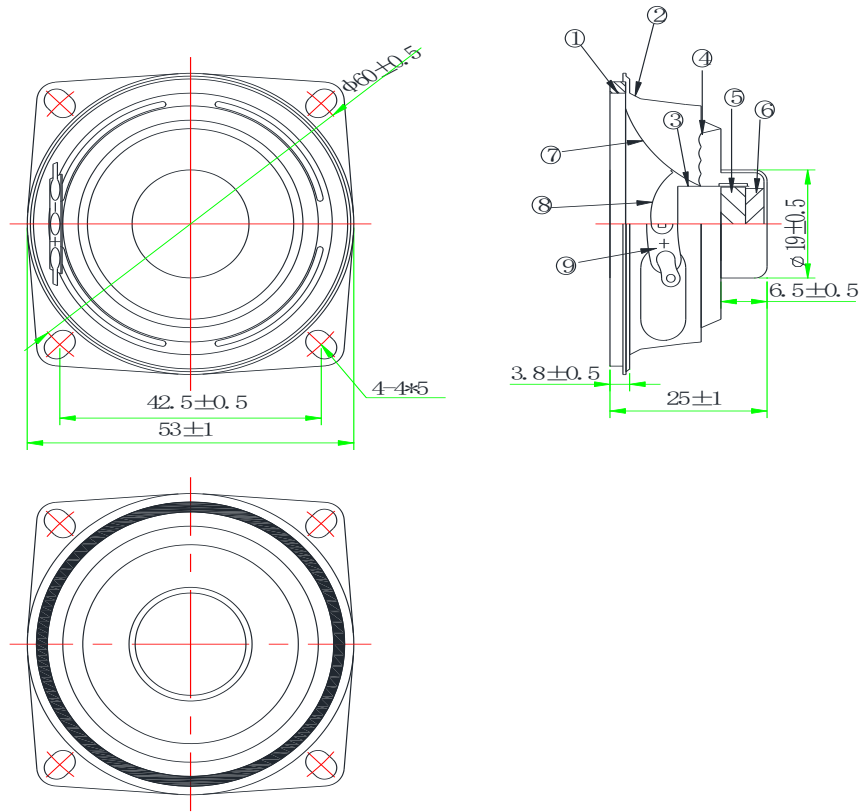
SPECIFICATIONS

Parameter	Conditions/Description	Values	Units
Rated Input Power		3.0	W
Max Input Power		5.0	W
Rated Impedance	at 2.0 kHz	4±15%	Ω
Sound Pressure Level (S.P.L.)	at 0.6K 0.8K 1.0K 1.2K Hz in 0.1W/0.1M average (0dB SPL=20μPa)	87±3	dB
Resonant Frequency (Fo)	at 1.0 V	320±20%	Hz
Frequency Range	Output S.P.L. -10dB	Fo~20K	Hz
Distortion	at 1K Hz, input 1W,	< 5%	-
Magnet	NdFeB	Φ18*4.5	mm
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 4K Hz	3.45	V
Polarity	cone will move forward with positive dc current to "+" terminal		
Weight		47g±8%	g
Operating Temperature		-20~+60	°C
Storage Temperature		-30~+70	°C
Waterproof Rating		N/A	

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: $\pm 0.5\text{mm}$ 

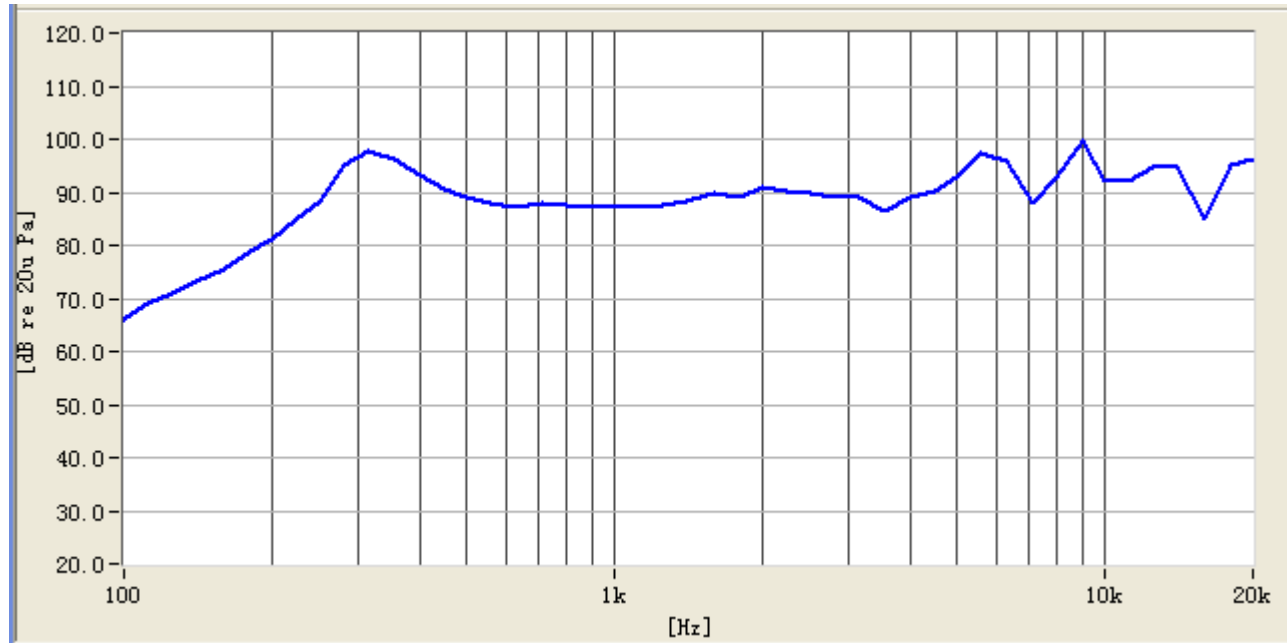
CONSTRUCTION DETAIL

PART NO.	PART NAME	Q'TY	MATERIAL	REMARK
1	Gasket	1	Paper	
2	Diaphragm	1	Foam-edge+paper	
3	VOICE COIL	1	KSV+Cu	
4	Plate	1	SPCC	
5	Magnet	1	NdFeB	
6	PCB Terminal	1	Paper+steel	
7	Frame	1	Spcc	
8	CAP	1	paper	

RESPONSE CURVES

Frequency Response Curve

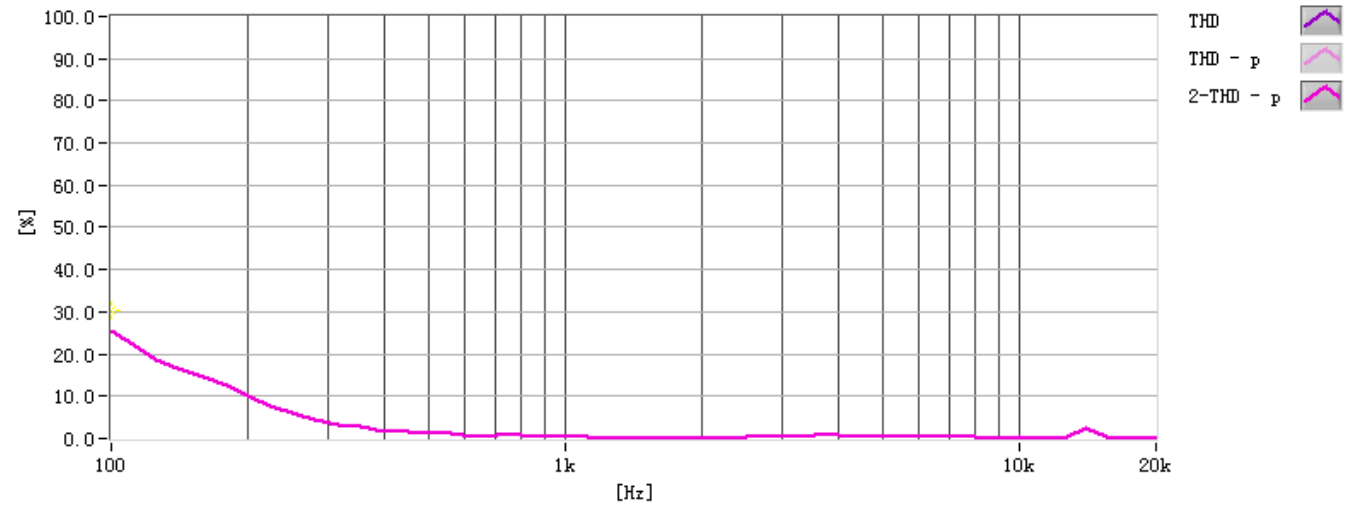
Test condition:0.1W/0.1M,



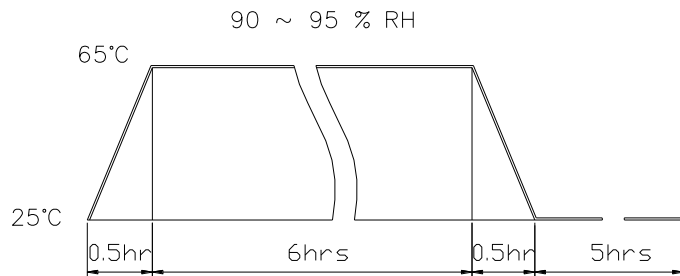
Total Harmonic Distortion Curve

Test condition: 0.1W/0.1M,

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	The part shall be subjected 5 cycles. One cycle shall be 6 hours and consist of  The graph illustrates a temperature and humidity cycle. The temperature starts at 25°C, ramps up to 65°C over 0.5 hours, stays at 65°C for 6 hours, and then ramps down to 25°C over 0.5 hours. The humidity is 90% to 95% RH during the 6-hour high-temperature plateau. The total cycle time is 7 hours.
6	Vibration Test	Frequency: 10~55~10Hz Oct/min Amplitude: 1.5mm Duration: 2 hours each of 3 perpendicular directions
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 White-Noise source at Rated Power for 96 Hours
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

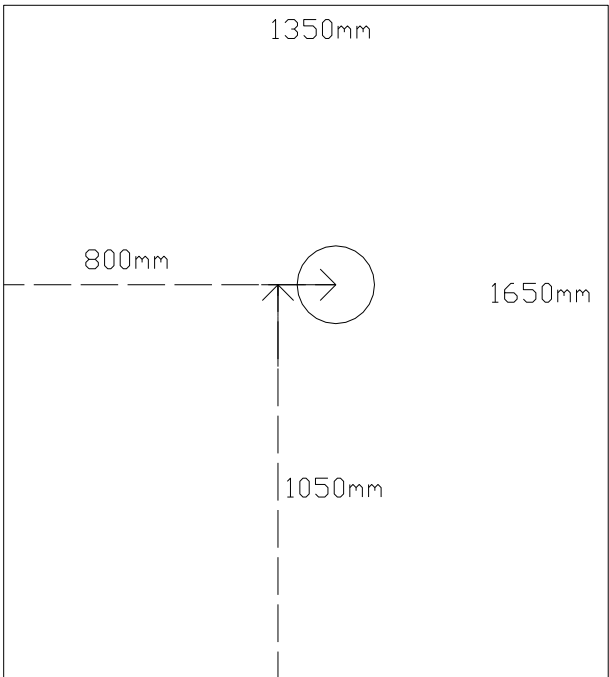
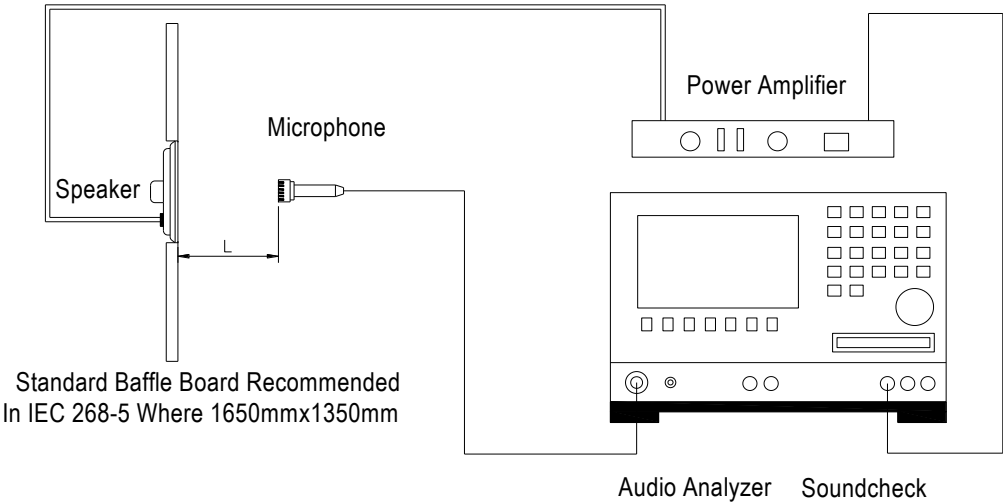


Fig. 1 Block Diagram for Measurement Method

Standard test condition of speaker

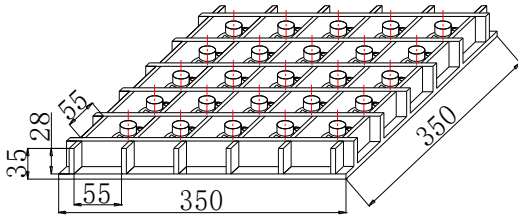


L=10cm

Fig. 2 Speaker Test Condition

PACKAGING

units: mm



1. Each clapboard 25pcs,
each carton 10 clapboards,
250pcs/carton
N.W: 11.5 KG, G.W:13.5 KG
2. Corrugated paper: 350*350mm 2 pcs
3. Carton box size: 370*370*380mm 1 pcs

