SMD Speaker

18×18×5.9 mm

CS18S059YO8

Revision

Date	Version	Status	Changes	Approver
2024/4/1	V0.1	Draft	Initial release	AX

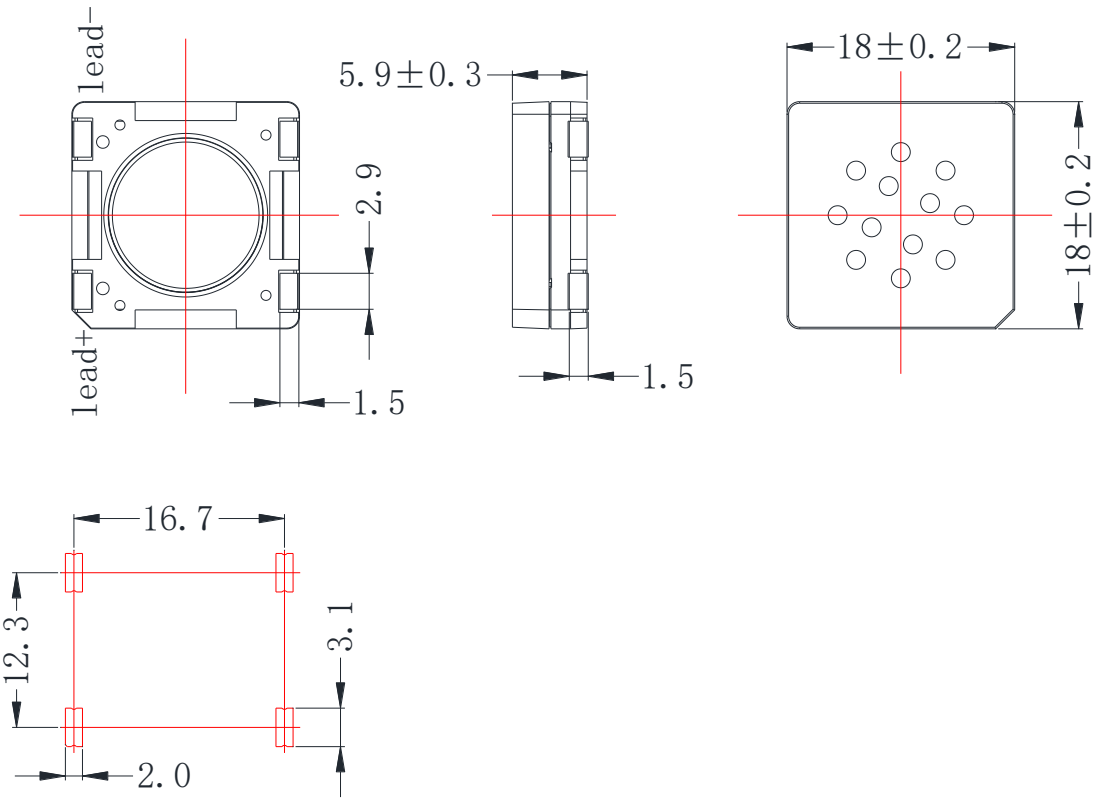
Parameter	Conditions/Description	Values	Units
Rated Input Power		0.8	W
Max Input Power		1.5	W
Impedance		8±15%	Ω
Sound Pressure Level (S.P.L.)	at 1.0K Hz in 0.8W/0.1M average (0dB SPL=20μPa)	96±3	dB
Resonant Frequency (Fo)	at 2.0 V	950±20%	Hz
Frequency Range	Output S.P.L. -10dB	Fo~20K	Hz
Distortion	at 2K Hz, input 1.0W,	< 10%	-
Magnet	SMCO	9.4*1.6	mm
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 5K Hz	2.53	V
Polarity	cone will move forward with positive dc current to"+" terminal		
Weight		3.5	g
Operating Temperature		-40~+105	℃
Storage Temperature		-40~+105	℃
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



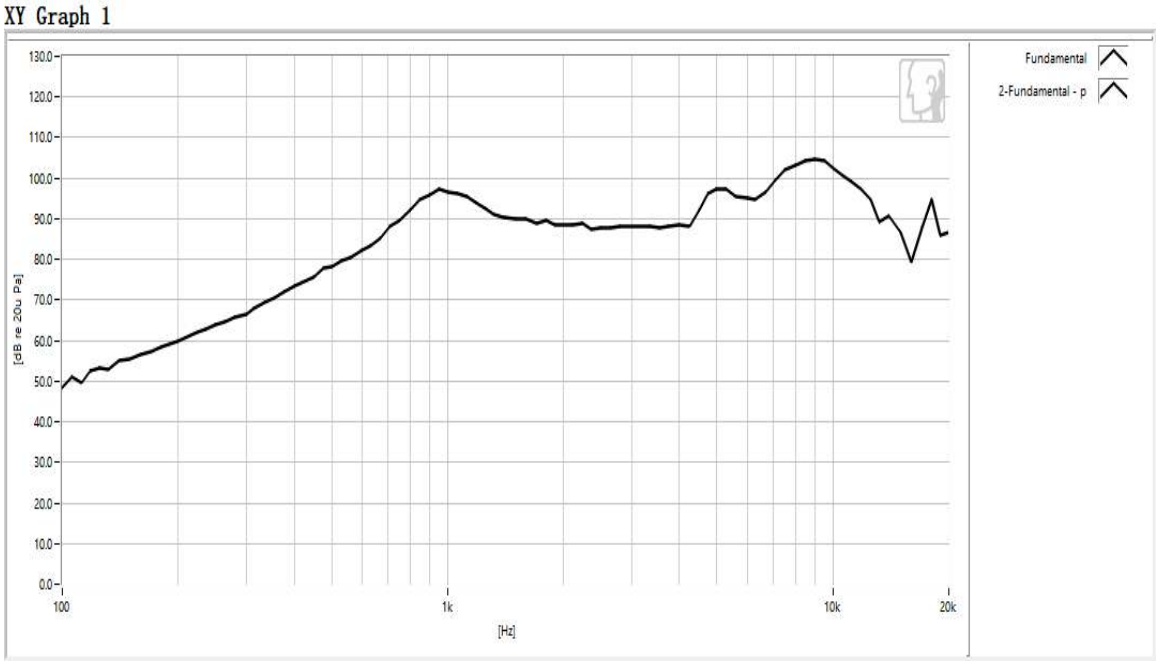
CONSTRUCTION DETAIL

NO.	PART NAME	Q'TY	MATERIAL	REMARK
1	CAP	1	LCP	
2	Diaphragm	1	PI	
3	VOICE COIL	1	Cu	
4	Plate	1	SPCC	
5	Magnet	1	SMCO	
6	PCB Terminal	1	Cu	
7	Frame	1	LCP	
8	LEADS	1	PLATE WITH SN	

RESPONSE CURVES

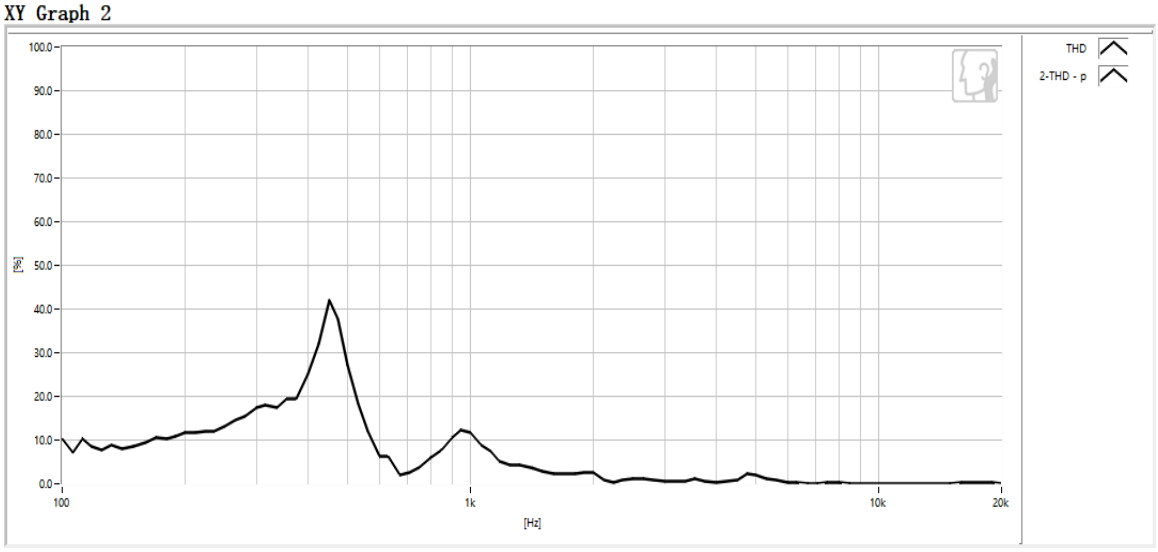
Frequency Response Curve

Test condition: 1.0W/0.1M,

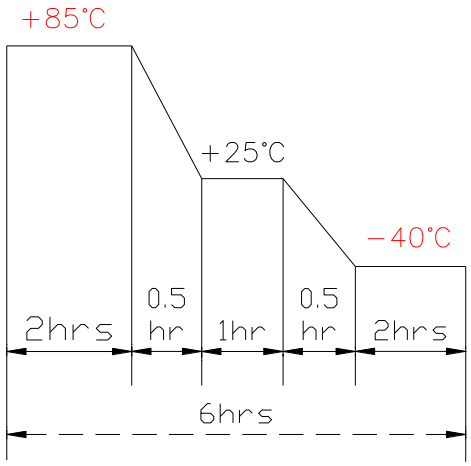


Total Harmonic Distortion Curve

Test condition: 0.1W/0.1M



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	+ 85 ± 2 °C Humidity Random for 96 Hours. (GB/T 9397—200X)
3	Low Temperature Operation and Storage	− 40 ± 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

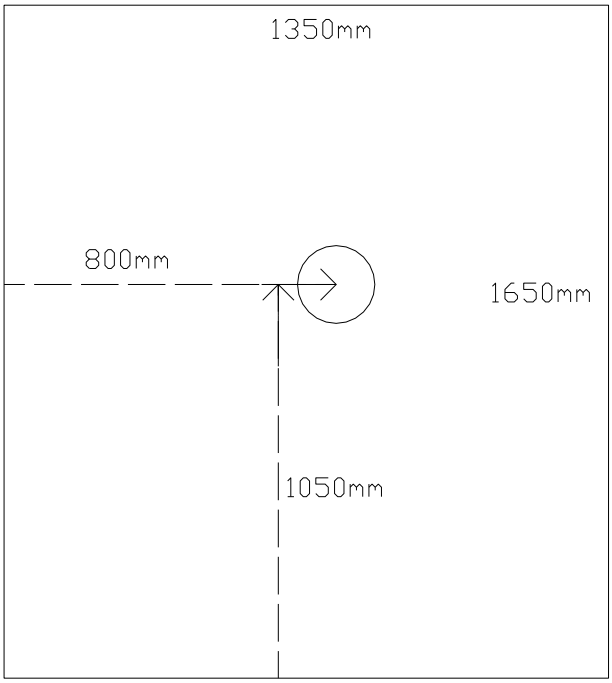
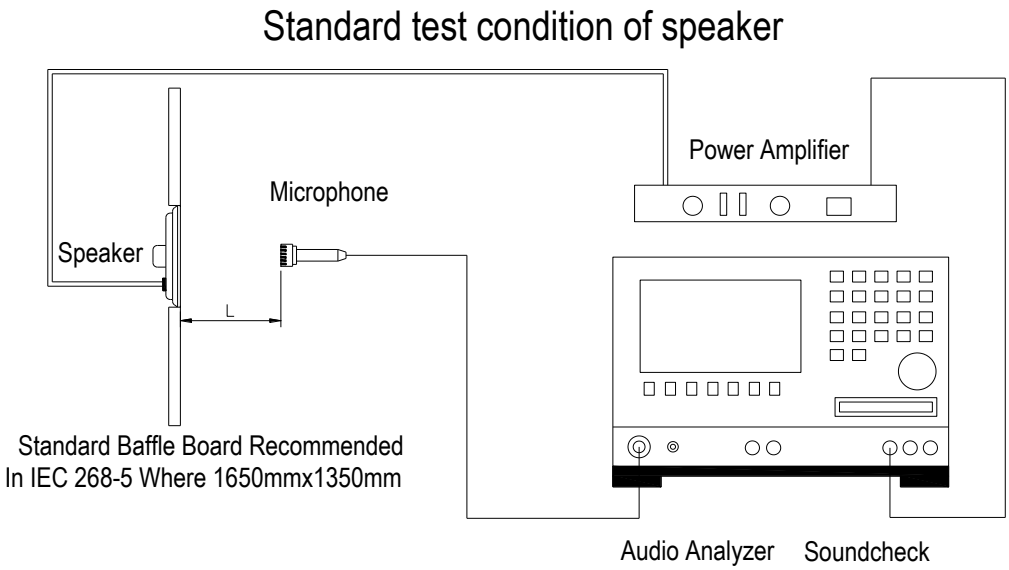


Fig. 1 Block Diagram for Measurement Method



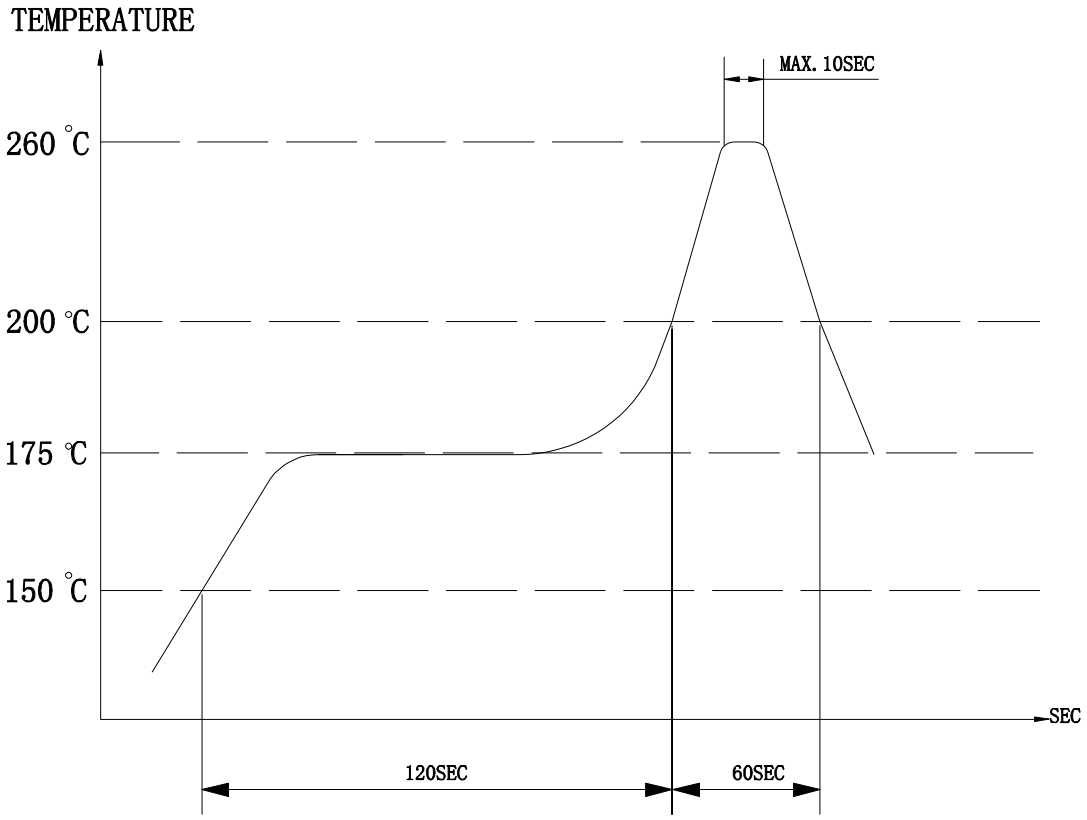
L=10cm

Fig. 2 Speaker Test Condition

SOLDER PROFILE

(1) Recommended reflow soldering condition is as follows (Reflow soldering is twice)

Note: It is requested that reflow soldering should be executed after heat of product goes down to normal.

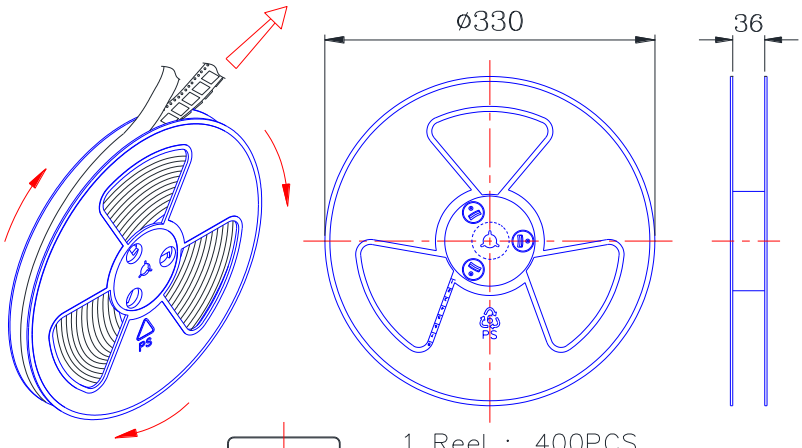


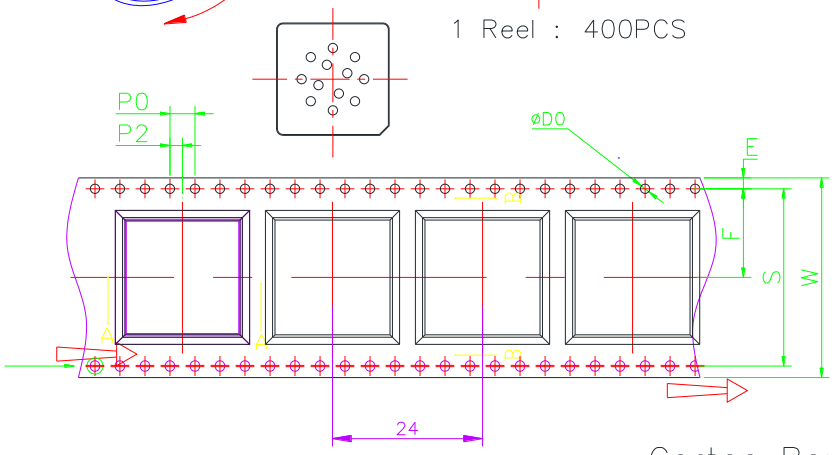
Heat resistant line (Used when heat resistant reliability test is performed)

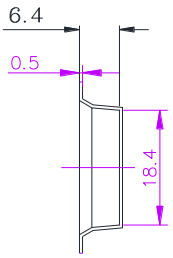
(2) Manual soldering

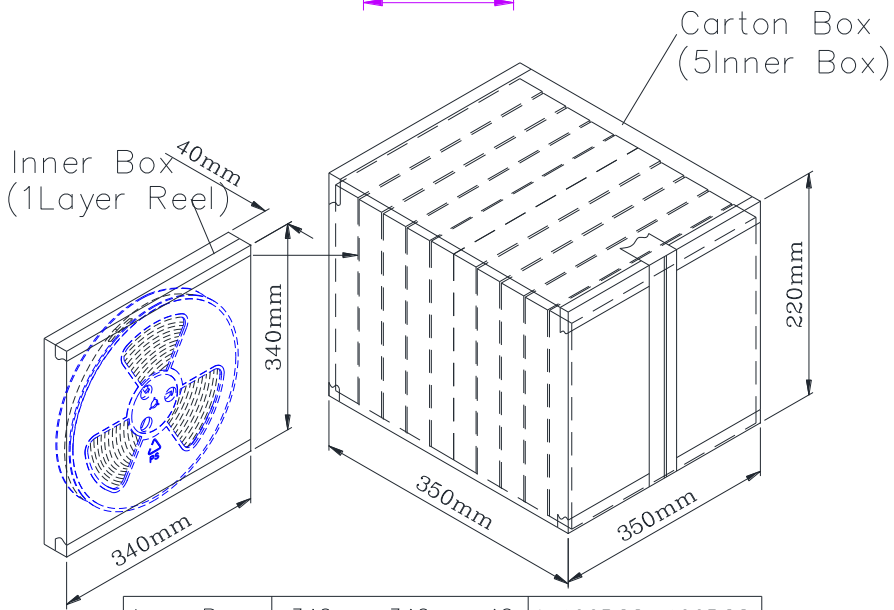
Manual soldering temperature 350℃ within 5 seconds.

PACKAGING









Inner Box	340mmx340mmx40mm	1x400PCS=400PCS
Carton Box	350mmx350mmx220mm	5x400PCS=2,000PCS