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SPECIFICATION FOR APPROVAL

Speaker Waterproof

Part Number	OWS-434320TA-4A-W
Note	This item was compliance with the following requirements: 1. RoHS directive 2. REACH
Customer P/N	

Ole Wolff	Signature / Date	Prepared	Checked	Approved

Customer	Signature / Date	Confirmation		

REVISION NOTES:

Date	Rev.	Description of Revision
2022.03.01	00	Initial Release

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1. SCOPE

THIS SPECIFICATION IS APPLIED FOR A DYNAMIC SPEAKER.

2. TEST CONDITIONS

TEMPERATURE : 18°C ~ 22°C

HUMIDITY : 65% +/-5% (R.H.)

ATMOSPHERE : 860 ~ 1060 hPa

3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -20° C ~ 60° C

STORAGE TEMPERATUR RANGE: -25° C ~ 70° C

4. MECANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.3

NET WEIGHT: approx 41.2g

5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1	IMPEDANCE	$4 \pm 15\% \Omega$ /1.0KHz/2V
2	SOUND PRESSURE LEVEL	82±3 dB(1.0W/1.0M) AT 1KHZ MEASUREMENT AS SHOWN IN FIGURE.1
3	FREQUENCY RESPONSE	F0~20KHz FIGURE.2
4	RESONANCE FREQUENCY	180± 20% Hz /2.0V
5	TOTAL HARMONIC DISTORTION (THD)	As shown in figure 2.
6	BUZZ & RATTLE	DYNAMIC SPEAKER MUST BE FREE AUDIBLE NOISE AT 4Vrms, SINE WAVE BETWEEN 80 AND 2000Hz FREQUENCY RANGE.
7	MAGNET	NdFeB $\phi 15.5 \times 5$ mm, $\phi 15.5 \times 2$ mm
8	INPUT POWER	(Nom./Max.): 4W / (FO-20KHz)

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6. RELIABILITY TEST REQUIREMENTS.

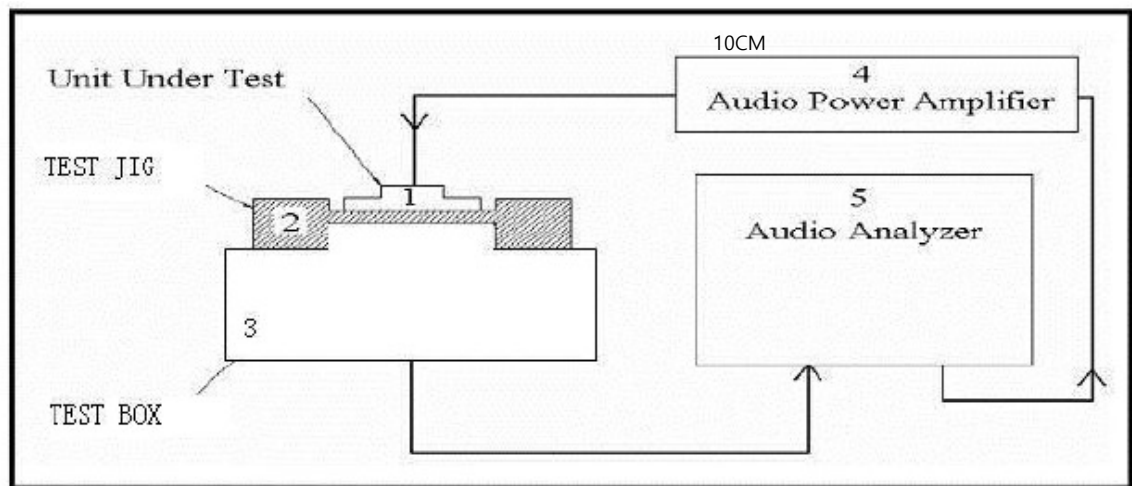
After any following tests the S.P.L should not deviate more than $\pm 3\text{dB}$ from initial value.		
N o.	ITEMS	TEST CONDITION
1.	High Temp. Test	Keep 96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
2.	Low Temp. Test	Keep 96 hours at $-25^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
3.	Humidity Test	Keep 96 hours at $+40^{\circ}\text{C}\pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then check
4.	Thermal cycle Test	Low temperature: $-25^{\circ}\text{C}\pm 3^{\circ}\text{C}$,High temperature: $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$,cycle:1hour/cycle each, total 5 cycles.
5.	Vibration Test	10~55~10Hz sin-wave sweep 15min.5G(constant);X,Y,Z 3 direction,2hours each, total 6 hours.
6.	Drop Test	Free drop from 100cm height to a board of 20mm thick x,y, z 6 direction. 1 times each, total 6 times.
7.	Load Test	Rated Power IEC60268-1 is applied for 96 hours
8.	Max Power Test	Max Power 1min on, 2min off, 10cycles.

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7. ELECTRICAL CHARACTERISTICS MEASUREMENT (FIG.1)

MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER



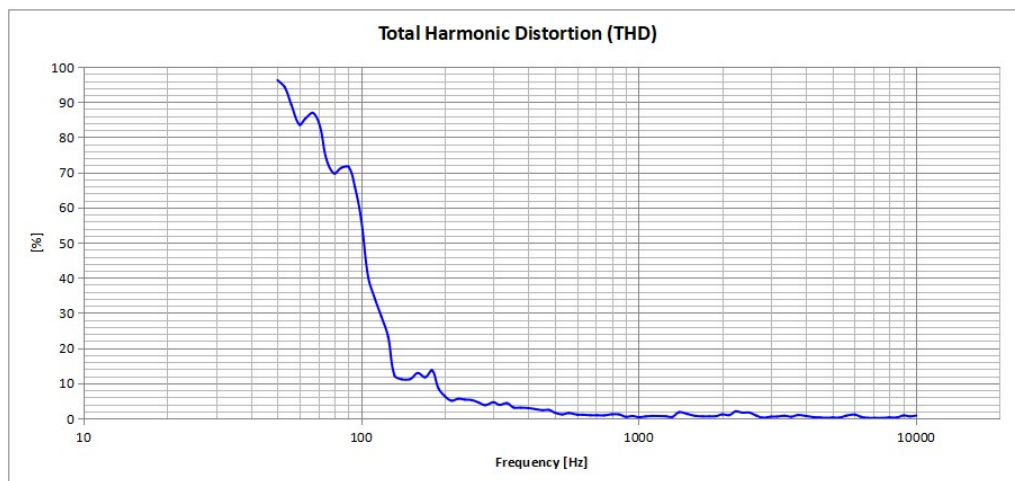
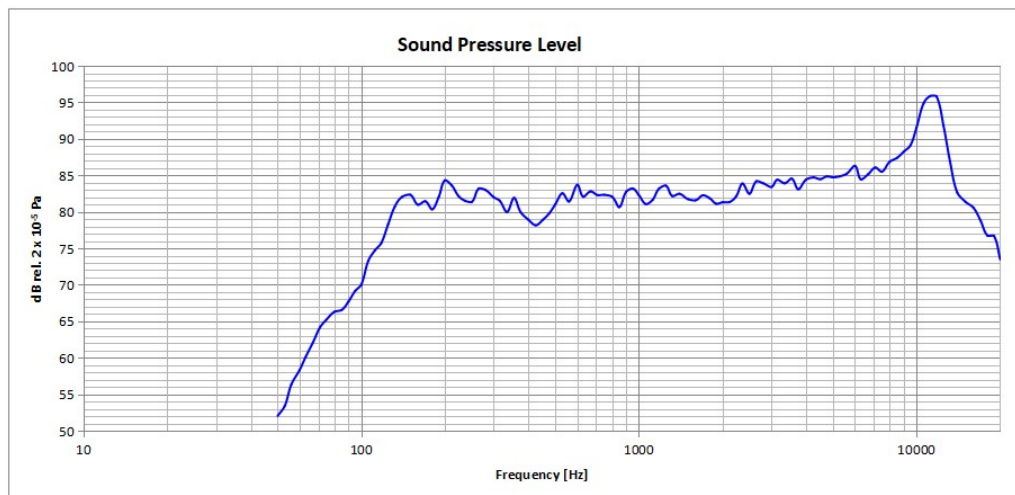
MEASURING EQUIPMENT

NO	EQUIPMENT	REMARKS
1.0	UNIT UNDER TEST	SPEAKER
2.0	TEST BOX	OLE WOLFF STANDARD BOX
3.0	AUDIO POWER AMPLIFIER	CRATE AUDIO SPA300
4.0	ANALYZER	LISTEN SOUNDCHECK

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8. STANDARD FREQUENCY RESPONSE CURVE(Fig.2)

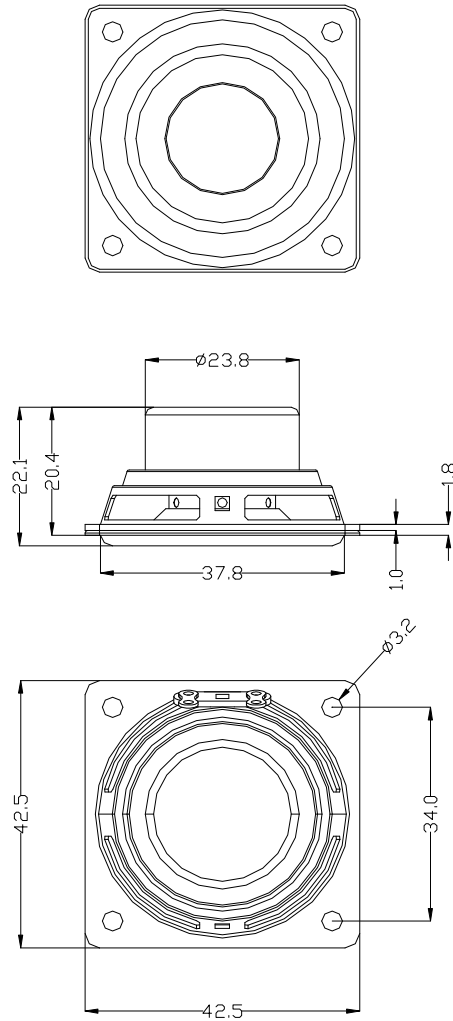


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9.OUTVIEW (Fig.3)

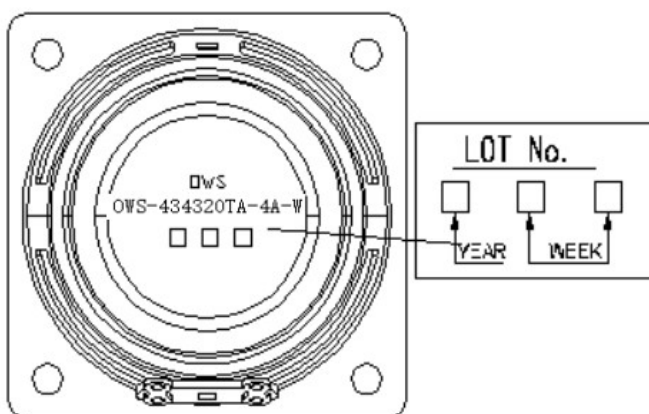
Unless otherwise specified,tolerance:±0.5(unit:mm)



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10. MARKING (Fig.4)



YEAR		WEEK	
year	marking	week	marking
2015	5	1	01
2016	6	2	02
2017	7	3	03
2018	8	4	04
2019	9	5	05
2020	0	↓	↓
2021	1		
2022	2		
		50	50
		51	51
		52	52
		53	53

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· **11.PACKING(Fig.5)**

TBD

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