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SPECIFICATION FOR APPROVAL

Speaker

Part Number	OWS-4065T-4C
Note	This item was compliance with the following requirements: 1. RoHS directive 2. REACH
Customer P/N	

Ole Wolff	Signature / Date	Prepared	Checked	Approved
		TANQIANFENG 2021.10.11		

Customer	Signature / Date	Confirmation		

REVISION NOTES:

Date	Rev.	Description of Revision
2019.07.03	00	Initial Release
2020.07.08	01	Change Test condition
2021.10.11	02	Update THD limit

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1. SCOPE

THIS SPECIFICATION IS APPLIED FOR A DYNAMIC SPEAKER.

2. TEST CONDITIONS

TEMPERATURE : 15°C ~ 35°C

HUMIDITY : 45%~85% (R.H.)

ATMOSPHERE : 860 ~ 1060 hPa

3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -40° C ~ 85° C

STORAGE TEMPERATURE RANGE: -40° C ~ 85° C

4. MECHANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.3

NET WEIGHT: approx 15.2g

5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1	Resonance Frequency	420± 20% Hz/1V
2	Impedance	4± 15%Ω 1KHz/1V
3	Sensitivity	118±3 dB(2.5W/20mm) AT AVG.(0.5,0.6,1.0,1.2)KHz
4	Input Power	(Nom./Max.): 2.5 W /3.0W
5	Effective Frequency Range	F0~10KHz
6	Total Harmonic Distortion (THD)	< 10% at 710~ 7.1KHz,2.5W
7	Buzz & Rattle	3.16V F0~10KHz
8	Magnet	NdFeB φ 13.5 x2.1t mm

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6. RELIABILITY TEST REQUIREMENTS.

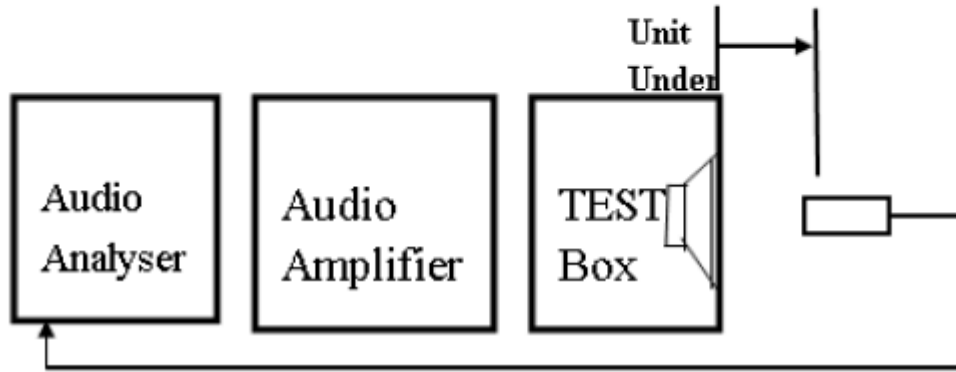
After any following tests the S.P.L should not deviate more than $\pm 3\text{dB}$ from initial value.		
No.	ITEMS	TEST CONDITION
1.	High Temp. Test	Keep 96 hours at $+85^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
2.	Low Temp. Test	Keep 96 hours at $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 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: $-40 \pm 3^{\circ}\text{C}$, High temperature: $+85 \pm 3^{\circ}\text{C}$, cycle: 1 hour/cycle, total 5 cycles.
5.	Vibration Test	10~55~10Hz sin-wave sweep 15min. 5G(constant); X, Y, Z 3 direction, 2 hours each, total 6 hours.
6.	Drop Test	Free drop a unit from 100cm height to 20mm thick board. 6 directions, total 6 times.
7.	Load Test	Rated Power white noise is applied for 96 hours
8.	Max Power Test	Max Power 1min on, 2min off, 10cycles.
9.	Terminal strength Test	Capable of withstand 1kg load for 15seconds without resulting in any damage or rejection

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7. MEASUREMENT CIRCUIT (FIG.1)

MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER ↓

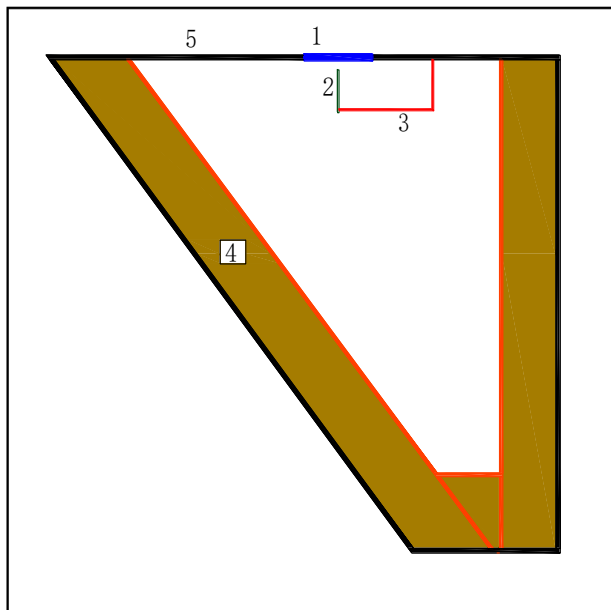


MEASURING EQUIPMENT ↓

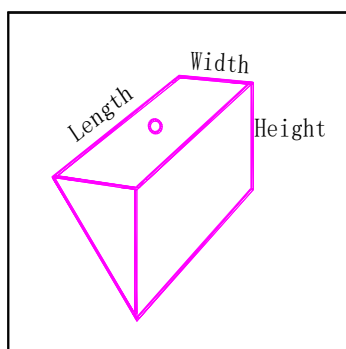
NO. ↓	EQUIPMENT ↓	REMARKS ↓
1.0 ↓	UNIT UNDER TEST ↓	SPEAKER ↓
2.0 ↓	TEST BOX ↓	OLE WOLFF STANDARD BOX ↓
3.0 ↓	AUDIO POWER AMPLIFIER ↓	CRATE AUDIO SPA300 ↓
4.0 ↓	ANALYZER ↓	LISTEN SOUNDCHECK ↓

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Dimension of test box
Length:97cm
Width:46cm
Height:68cm
Foam thickness:8cm
Wood wall are 1.8cm thickness.

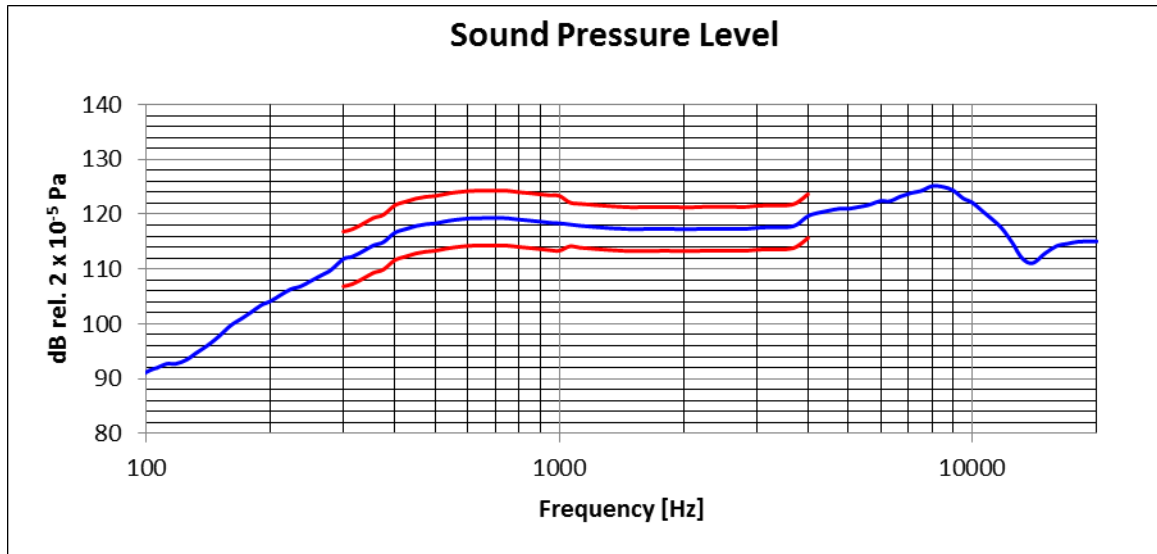


NO.	EQUIPMENT	REMARKS
1	TEST JIG	FIG. 1A
2	MICROPHONE	1/2 INCH MICROPHONE
3	MICROPHONE HOLDER	
4	DAMPING MATERIAL	FOAM RUBBER
5	BOX	WOOD
6	TEST DISTARCE MEASURED FROM FRONT OF SPEAKER FRAME TO FRONT OF TEST MICROPHONE	20mm

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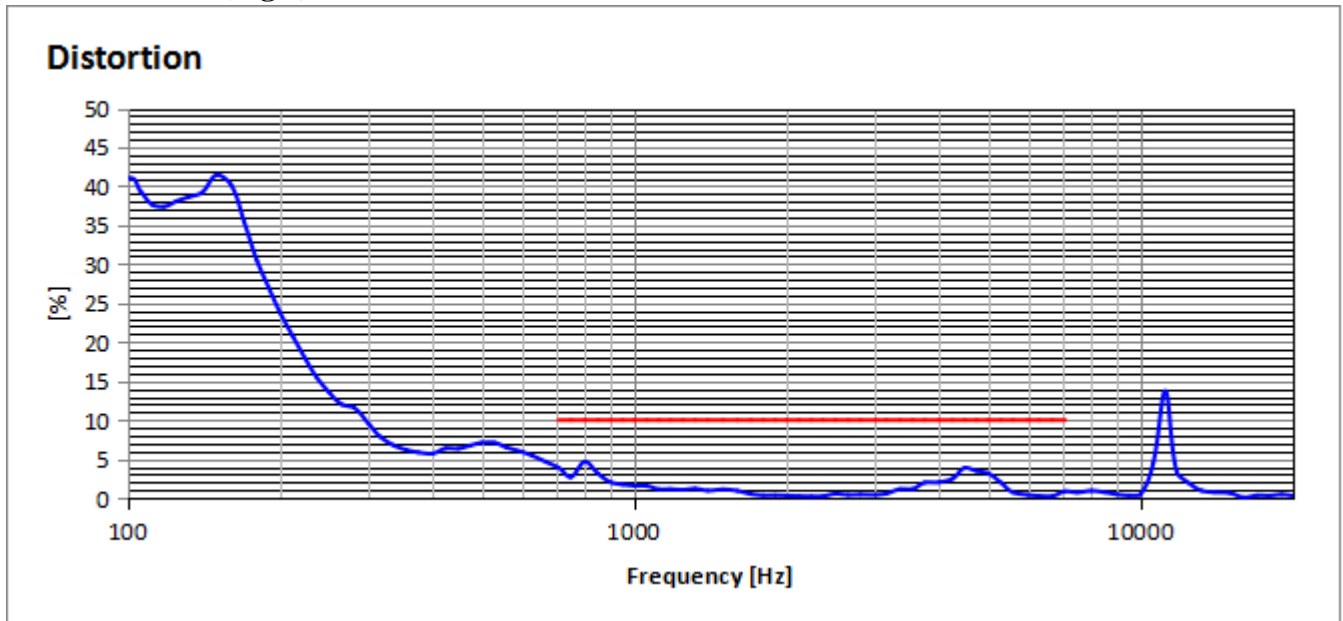
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8. STANDARD FREQUENCY RESPONSE CURVE(Fig.2)



Hz	300~1000	1060~4000
dB	±5	±4

9. THD CURVE(Fig.3)



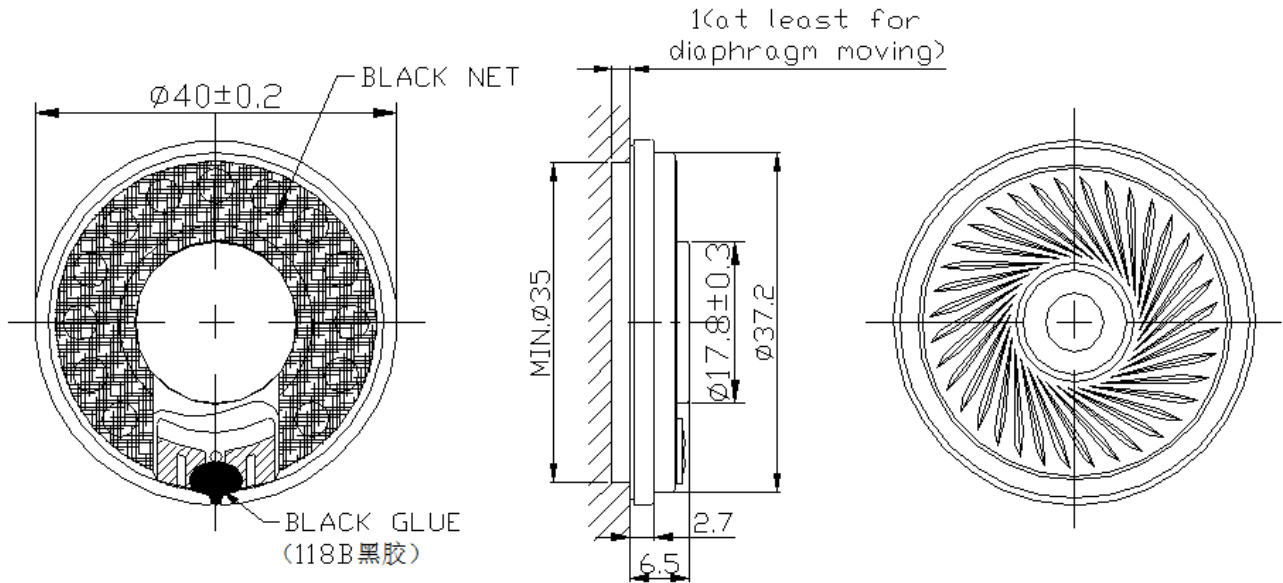
Hz	710~7100
THD	≤10%

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10.OUTVIEW (Fig.4)

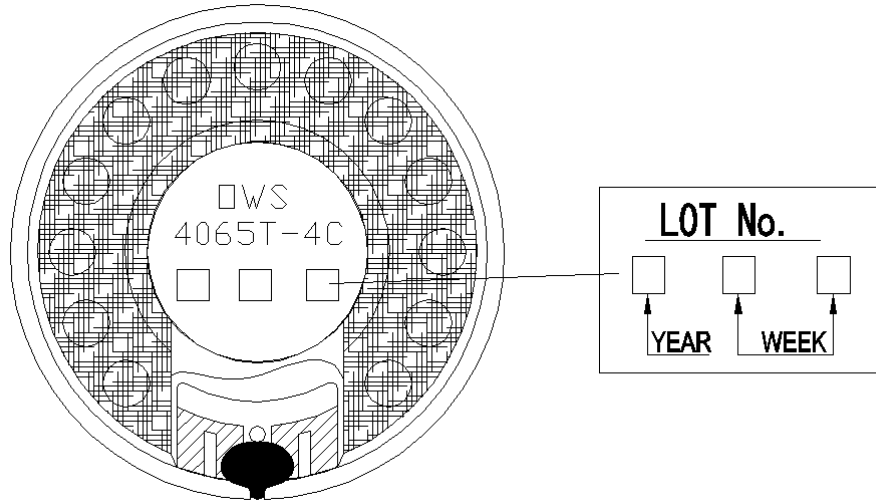
Unless otherwise specified,tolerance:±0.3(unit:mm)



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11.MARKING (Fig.5)

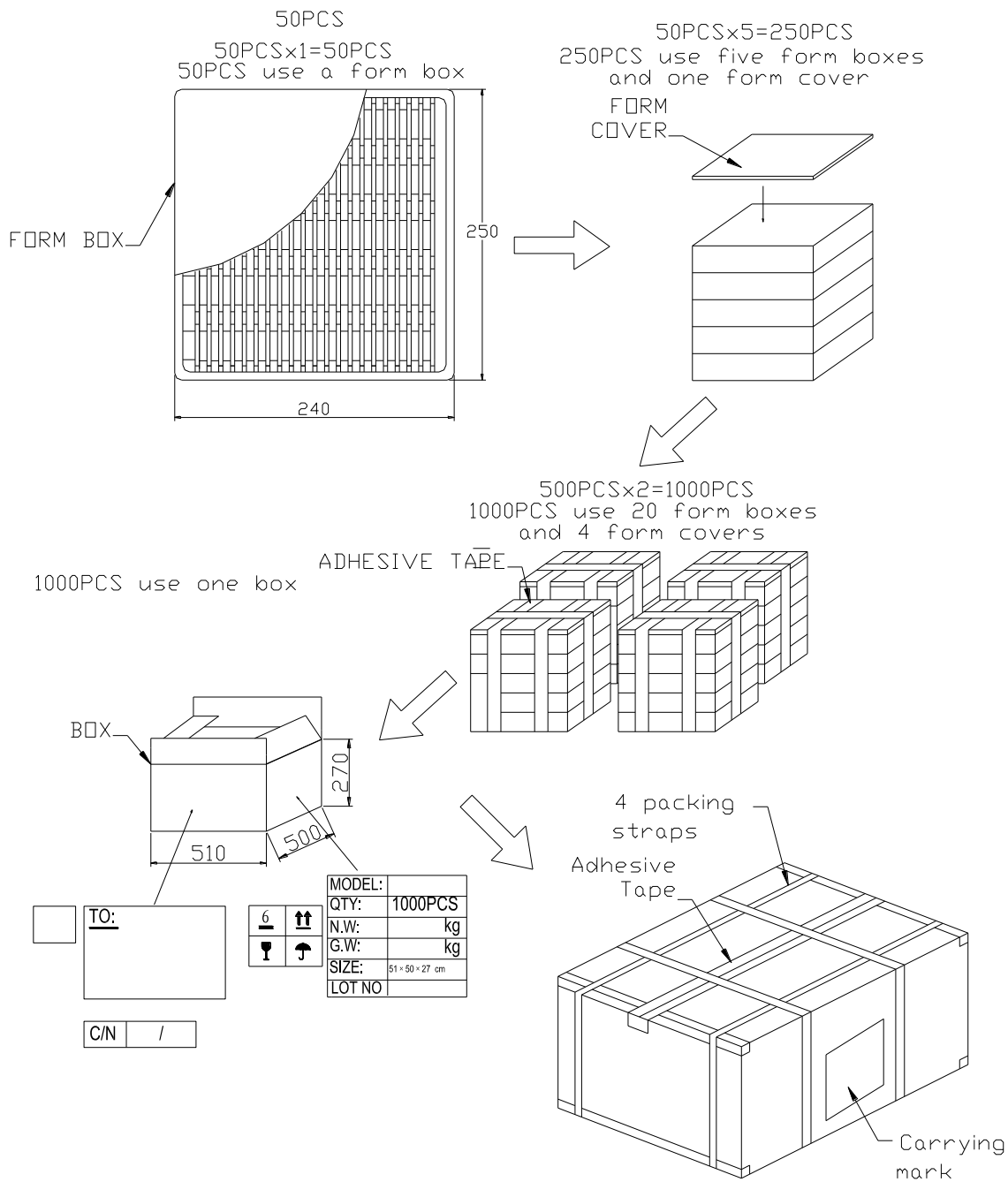


YEAR		WEEK	
year	marking	week	marking
2015	5	1	01
2016	6	2	02
2017	7	3	03
2018	8	4	04
2019	9	5	05
2020	0	↓	↓
2021	1		
2022	2		
		50	50
		51	51
		52	52
		53	53

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12. PACKING(Fig.6)



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