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SPECIFICATION FOR APPROVAL

Receiver

Part Number	OWR-5088TA-32
Note	This item is in compliance with the following requirements: 1. RoHS directive 2. REACH
Customer P/N	

		Prepared	Checked	Approved
Ole Wolff	Signature / Date	Paul Cao 2021.12.14		Nathan Chen 2021.12.14

		Confirmation
Customer	Signature / Date	

REVISION NOTES:

Date	Rev.	Description of Revision
2021.08.06	00	Initial Release
2021.09.30	01	Changed the FR limit on P7.
2021.12.14	02	Changed the test setup from free field to IEC60318 coupler.

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1. SCOPE

THIS SPECIFICATION IS APPLIED FOR A DYNAMIC RECEIVER FOR HEADPHONE.

2. TEST CONDITIONS

TEMPERATURE : 24°C ~ 27°C

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

ATMOSPHERE : 860 ~ 1060 hPa

3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -25° C ~ 60° C

STORAGE TEMPERATURE RANGE: -25° C ~ 60° C

4. MECHANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.6

NET WEIGHT: 14.5g+/-10%

5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1	Impedance	34Ω ± 15% at 1kHz with 0.58V/10mW。
2	Resonance frequency in free field(reference only)	90Hz with input 0.58V/10mW.(temperature 24 -27 °C)
3	Frequency response in IEC60318	Typical performance as shown in Fig.4. (temperature 24 -27 °C)
4	Total harmonic distortion in IEC60318	THD as shown in Fig.5 (temperature 24 -27 °C)
5	Sound pressure Level in IEC60318	113±3dB at 1kHz with input 0.184V/1mW (0dB=20μPa) Measure setup as shown in Fig.4 Binning: Bin A: 114dB~116 dB, dot mark =Red; Bin B: 112dB~113.99dB, dot mark =Blue; Bin C: 110dB~111.99dB, dot mark = white;
6	Input power	(Nom./Max.): 30mW /50mW
7	Rub & buzz	Speaker must be free of audible noise at 1V sine wave between 50Hz-10kHz

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6. RELIABILITY TEST REQUIREMENTS

Sensitivity difference at 1000Hz shall be within $\pm 3\text{dB}$ from initial value after each test.

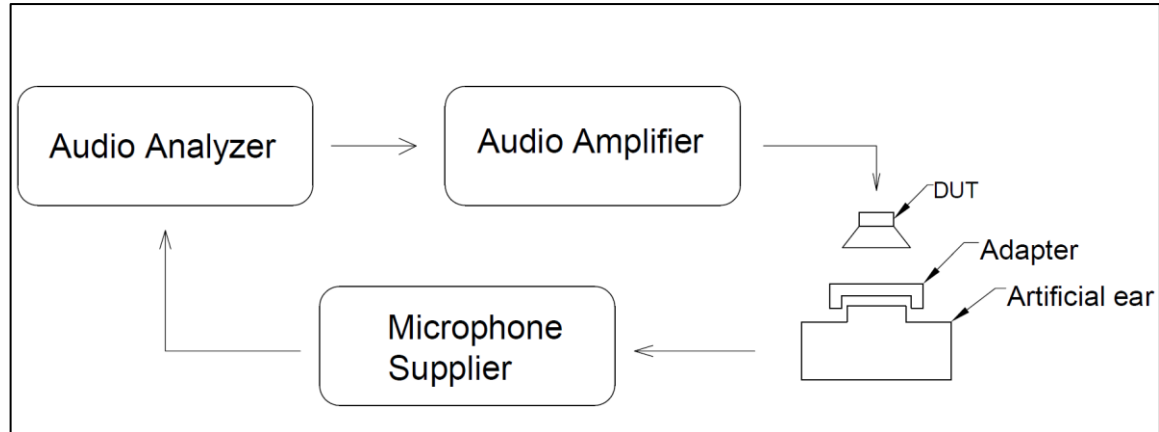
No.	ITEMS	TEST CONDITION	
1	HIGH TEMPERATURE TEST STORAGE	Temperature	$60 \pm 3^\circ \text{C}$
		Duration	96hrs
2	LOW TEMPERATURE TEST STORAGE	Temperature	$-25 \pm 3^\circ \text{C}$
		Duration	96hrs
3	HIGH TEMPERATURE HUMIDITY TEST	Temperature	$40 \pm 3^\circ \text{C}$
		Humidity	90%--95%(RH)
		Duration	96hrs
4	DROP TEST	Height	With protector grill 0.75m to concrete
		Total times	10 times
5	TEMPERATURE CYCLE TEST	Temperature	$-25 \pm 3^\circ \text{C} \leftrightarrow 60 \pm 3^\circ \text{C}$
		Duration	2hours, 5mins, 2hours
		Cycles	5 cycles
6	SHORT TERM MAX INPUT TEST	Test signal and Temperature	Pink noise / 25°C
		Test input power	0.05W/1.3Vrms
		Cycles	1sec On, 1min Off, 60cycles
7	LONG TERM MAX INPUT TEST	Test signal and Temperature	Pink noise / 25°C
		Test input power	0.05W/1.3Vrms
		Cycles	1min On/ 2min Off, 10cycles
8	RATED POWER TEST	Test signal and Temperature	Pink Noise / 25°C
		Test input power	0.03W/1.0Vrms
		Duration	96hrs

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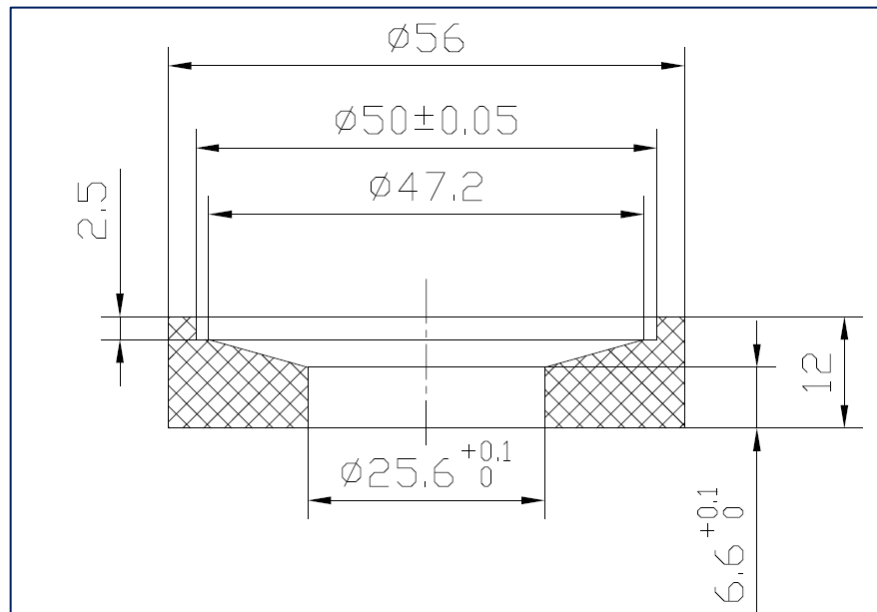
7. TEST SET UP AND TEST JIG.

7.1 MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER (Fig.1)



NO	EQUIPMENT	REMARKS
1	DUT	Receiver
2	Adapter	As shown on Fig.2
3	Audio Analyzer	LISTEN SOUNDCHECK
4	Audio Amplifier	QSC GX3
5	Artificial ear	GRAS 43AA
6	Microphone supplier	GRAS 12AX

7.2 TEST JIG(Fig.2)



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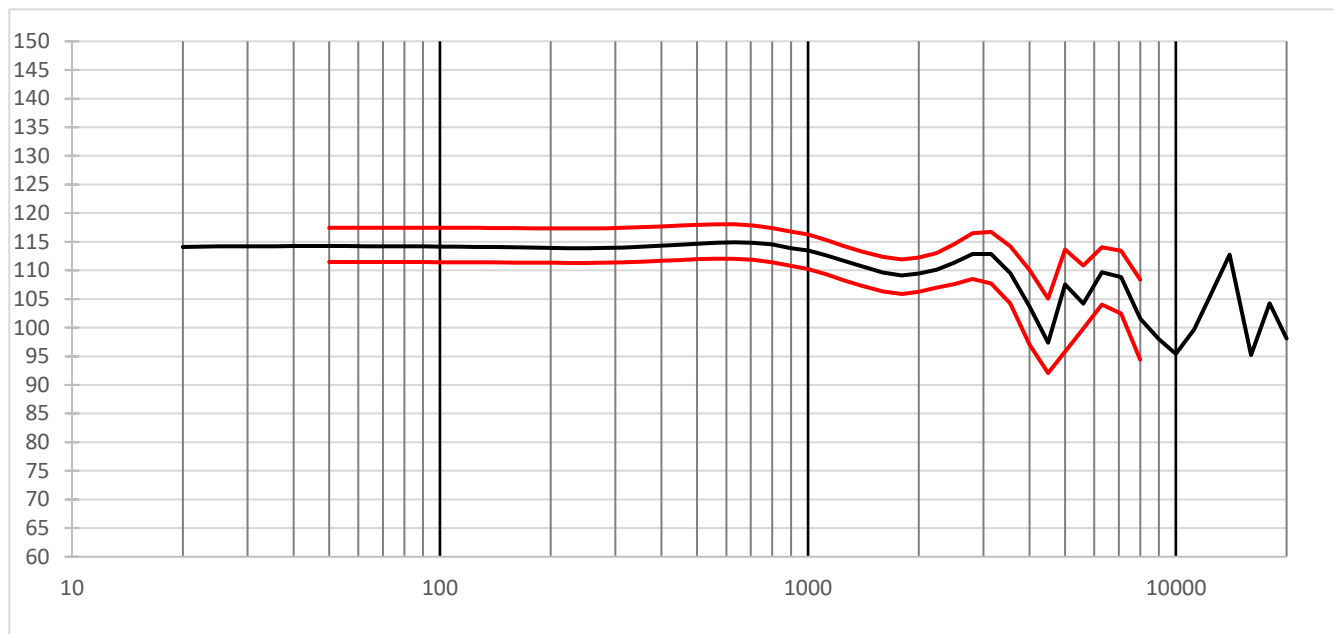
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8. STANDARD FREQUENCY RESPONSE CURVE & STANDARD THD.

8.1 test input 0.184V, in IEC60318 coupler with 1/6 Oct.(Fig.4)

The following tolerance is offset value. Mask is absolute value based on the golden sample offset.

Soundcheck stimulus step size 8mm cycles and 5ms min duration



FR mask

F.POINT	50	56	63	71	80	90	100	112	125	140	160	180	200	224	250	280	Hz
Upper limit	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	dB
Lower limit	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	dB

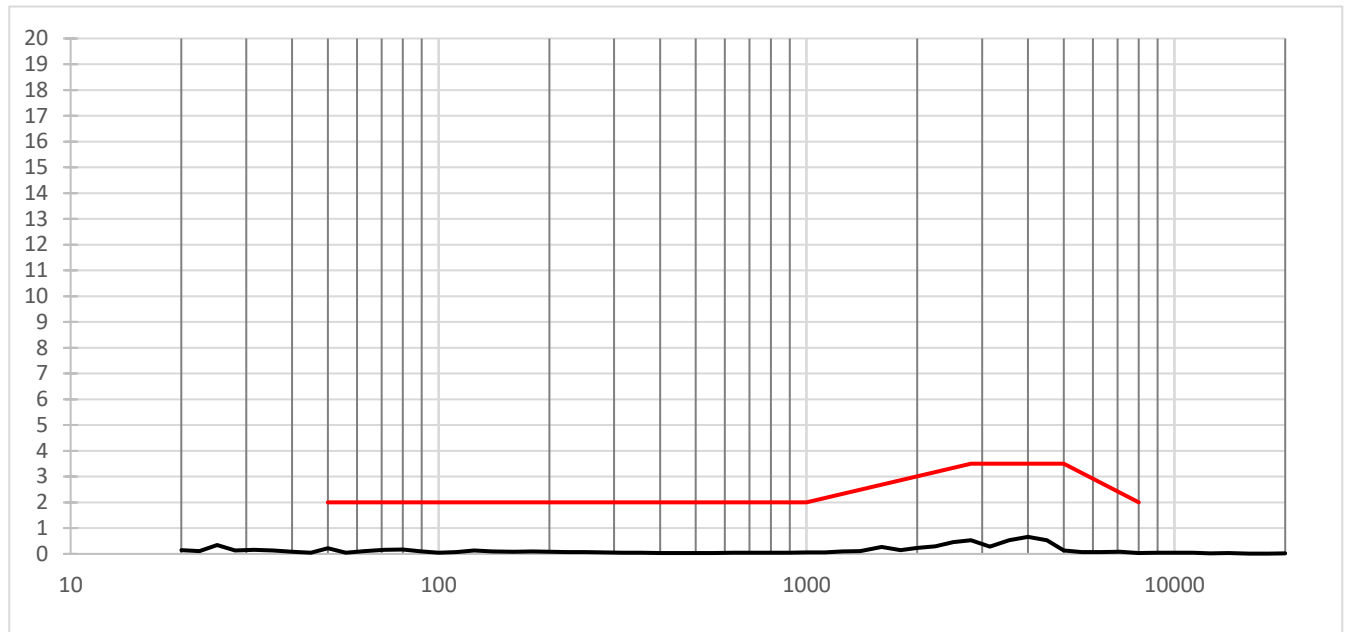
F.POINT	315	400	450	500	560	630	710	800	900	1000	1120	1250	1400	1600	1800	2000	Hz
Upper limit	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	dB
Lower limit	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	dB

F.POINT	2240	2500	2800	3150	3550	4000	4500	5000	5600	6300	7100	8000	Hz
Upper limit	3	3.5	4	4	4.5	6	7	6	6	5	5	7	dB
Lower limit	-3	-3.5	-4	-5	-5.5	-7	-6		-5	-5	-6	-7	dB

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THD mask(Fig.5)



F.POINT	50	1000	2000	2800	5000	8000	Hz
Upper limit	2	2	2	3.5	3.5	2	%

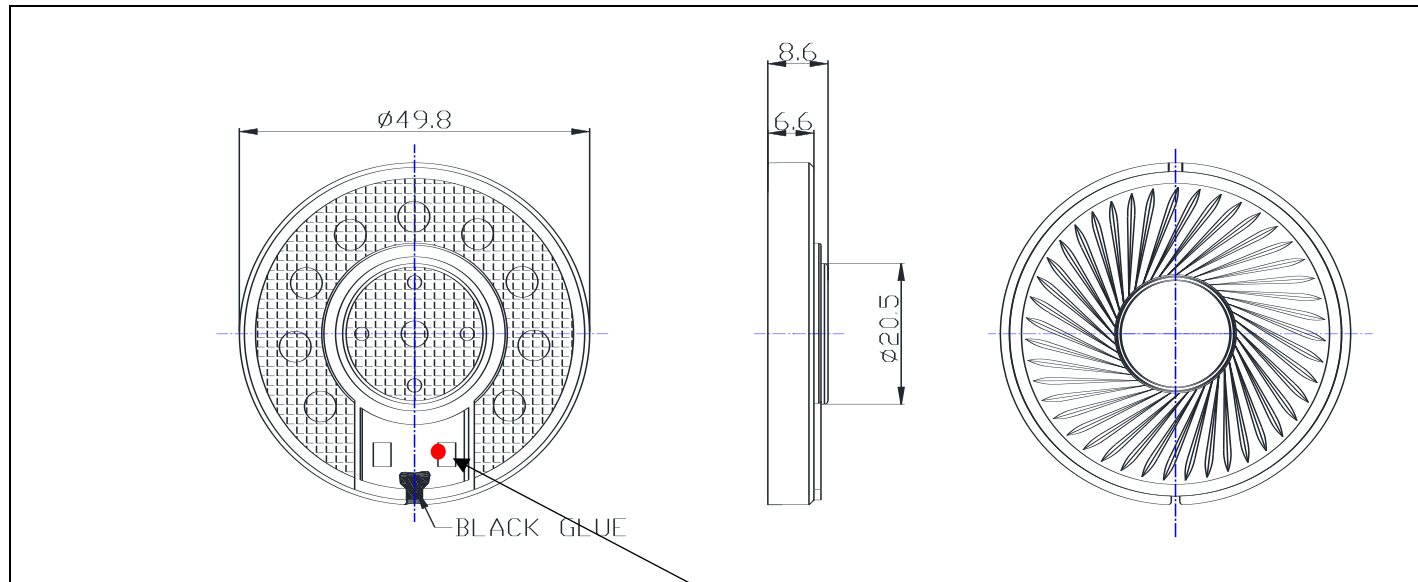
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10. DIMENSION (Fig.6)

Unit: mm

Tolerance: +/-0.3

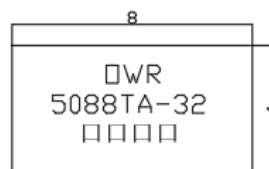
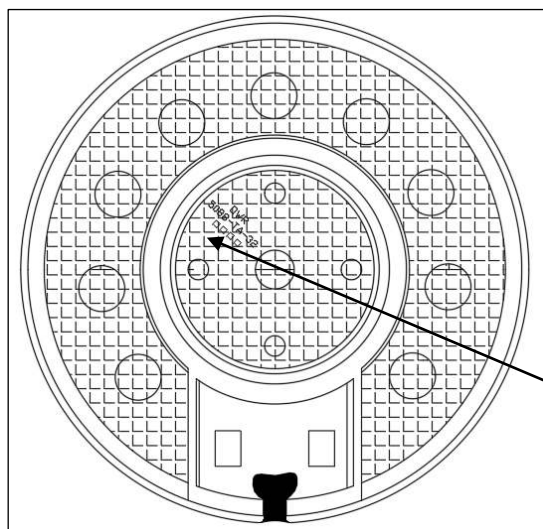


Binning Marking:
Bin A = Red dot,
Bin B = Blue dot,
Bin C = White dot.

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11. MARKING (Fig.7)

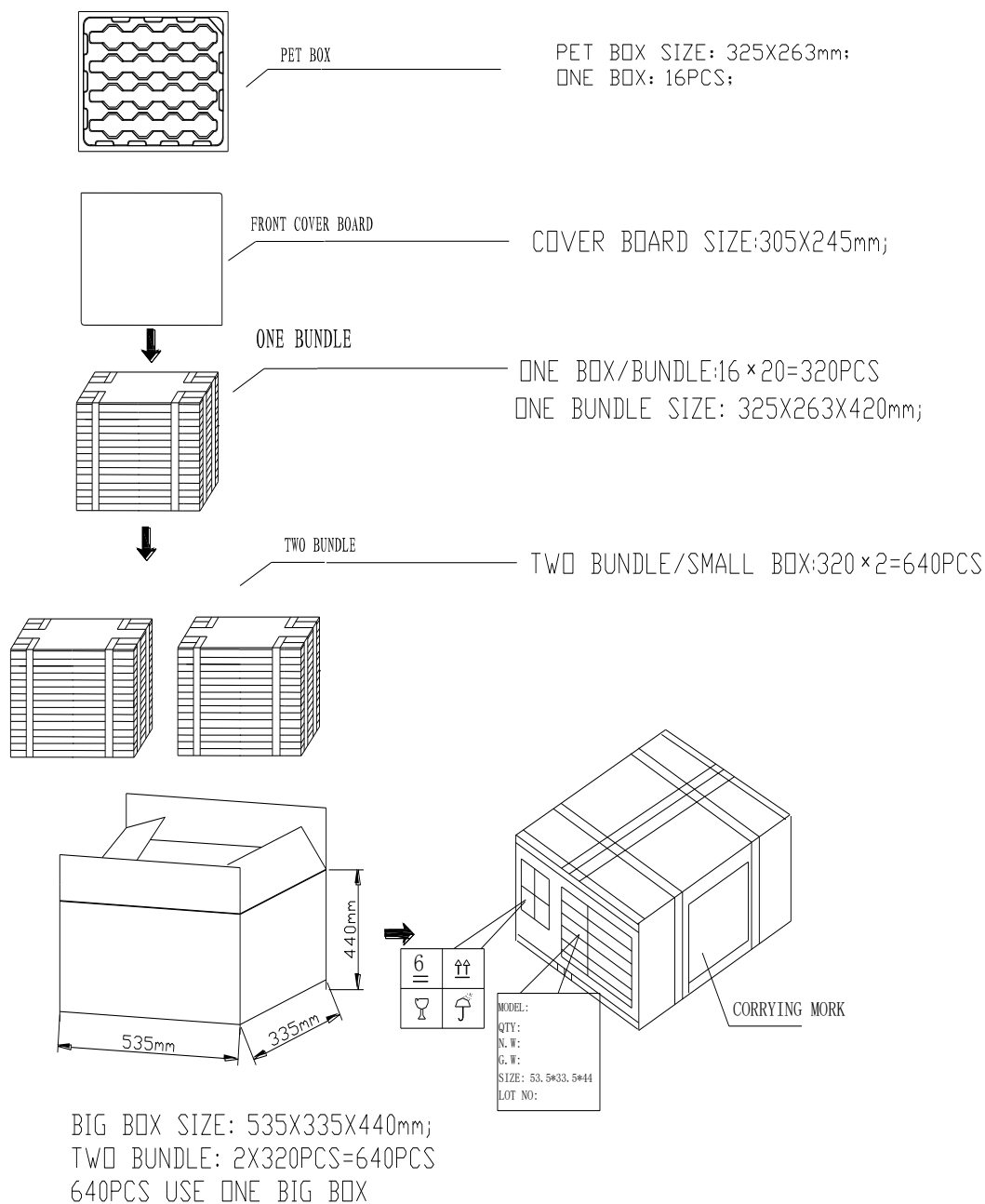


YEAR		WEEK	
Year	marking	week	marking
2019	9	1	01
2020	0	2	02
2021	1	3	03
2022	2		
		52	52

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12. PACKING (Fig.8)



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