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PRELIMINARY SPECIFICATION

Receiver

Part Number	OWR-4007T-32C
Note	This item was compliance with the following requirements: 1. RoHS directive 2. REACH
Customer P/N	

Ole Wolff	Signature / Date	Prepared	Checked	Approved
		Ena Wang 2021.11.04	Nathan Chen 2021.11.04	Ryan Li 2021.11.04

Customer	Signature / Date	Confirmation

REVISION NOTES:

Date	Rev.	Description of Revision
2021.09.09	00	Initial version; Use the crease-resistant diaphragm.
2021.11.04	01	Corrected the marking information on page 7.

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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 TEMPERATUR RANGE: -25° C ~ 60° C

4. MECANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.8

NET WEIGHT: 12.3g+/-10%

5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1	Impedance on IEC 318	36Ω ± 10% at 100Hz with 0.190V/1mW			
2	Sound Pressure Level on IEC318 coupler	117.6±3 dB at 100Hz and 117.0±3 dB at 1000Hz with input 0.190V/1mW (0dB=20μPa) Measure setup as shown in Fig.1			
		Group	100Hz	1000Hz	Dot mark
		A1	120.6~119.11dB	120.0 ~118.51dB	PURPLE
		A2	120.6~119.11dB	118.5~115.5dB	SLIVERY
		A3	120.6~119.11dB	115.49~114.0dB	WHITE
		B1	119.1~116.1dB	120.0 ~118.51dB	RED
		B2	119.1~116.1dB	118.5~115.5dB	BLUE
		B3	119.1~116.1dB	115.49~114.0dB	YELLOW
		C1	116.09~114.6dB	120.0 ~118.51dB	GREEN
		C2	116.09~114.6dB	118.5~115.5dB	BLACK
C3	116.09~114.6dB	115.49~114.0dB	GOLD		
3	Resonance frequency on IEC 318 coupler	3100±15%Hz with input 0.190V/1mW			
4	Frequency response on IEC 318 coupler	Typical performance as shown in Fig.3. (Test input 0.190V/1mW)			
5	Total Harmonic Distortion on IEC 318 coupler	THD as shown in Fig.3 (Test input 0.190/1mW)			
6	Input Power	(Nom./Max.): 0.01W /0.03W			
7	Rub & Buzz	Speaker must be free of audible noise at 0.6v 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. The measurement shall be done after minimum 1hour and maximum 2 hours with conditioning of $24^{\circ}\text{C} \sim 27^{\circ}\text{C}$.

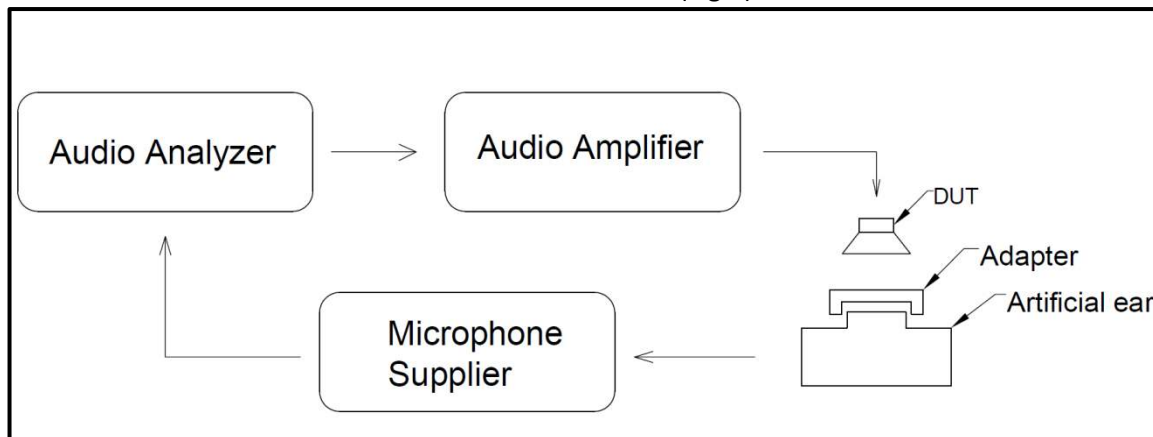
No.	ITEMS	TEST CONDITION	
1	HIGH TEMPERATURE TEST STORAGE	Temperature	$60 \pm 3^{\circ}\text{C}$
		Duration	96hrs
2	LOW TEMPERATURE TEST STORAGE	Temperature	$-25 \pm 3^{\circ}\text{C}$
		Duration	96hrs
3	HIGH TEMPERATURE HUMIDITY TEST	Temperature	$40 \pm 3^{\circ}\text{C}$
		Humidity	90%--95%(RH)
		Duration	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	0.03W/1.04Vrms
		Cycles	1sec On, 1min Off, 60cycles
7	LONG TERM MAX INPUT TEST	Test signal and Temperature	Pink noise / 25°C
		Test input power	0.03W/1.04Vrms
		Cycles	1min On/ 2min Off, 10 cycles
8	RATED POWER TEST	Test signal and Temperature	Pink Noise / 25°C
		Test input power	0.01W/0.6Vrms
		Duration	96hrs

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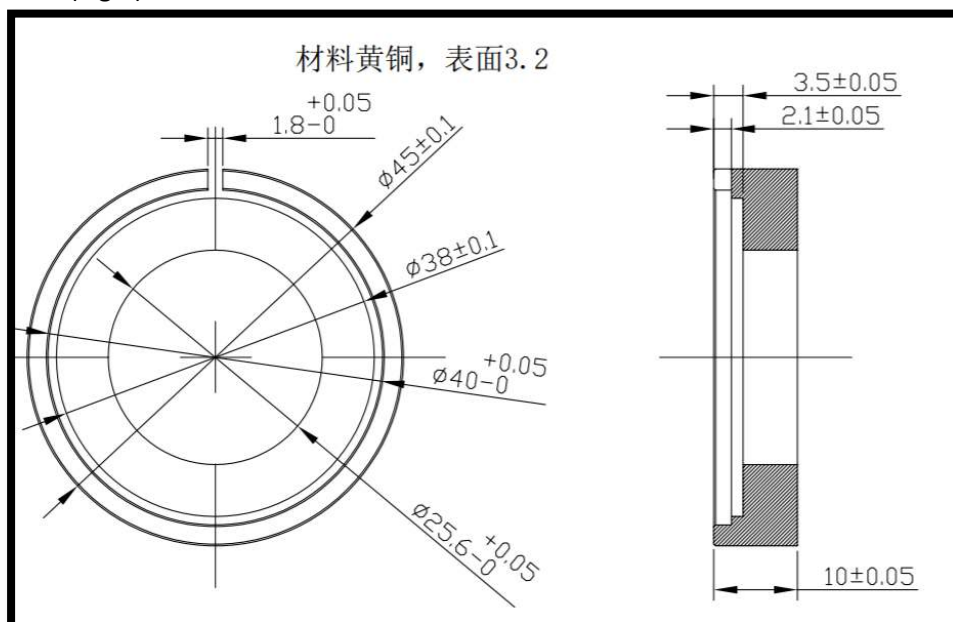
7. TEST SETUP AND TEST JIG FOR IEC318 COUPLER

7.1 IEC 318 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	LEM DPA300
5	Artificial ear	GRAS 43AA
6	Microphone supplier	GRAS 12AX

7.2 IEC 318 TEST JIG (Fig.2)



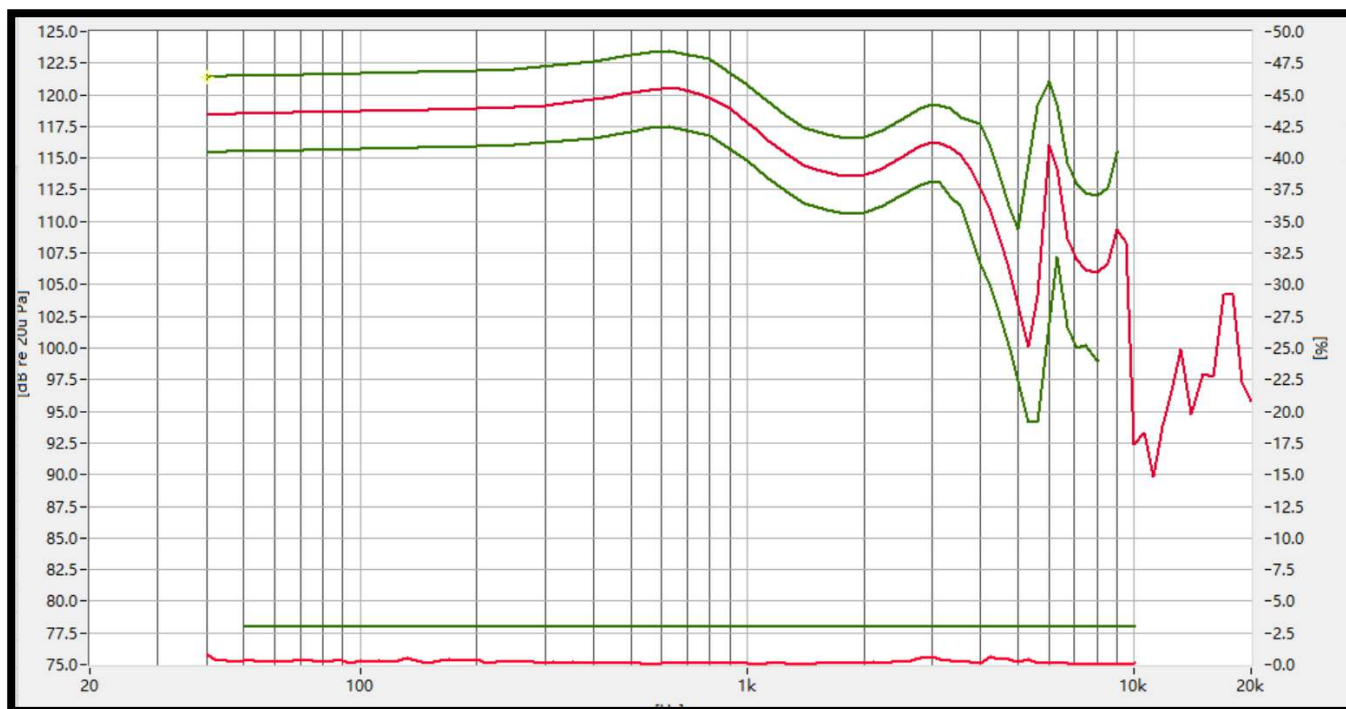
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8. Standard Frequency Response Curve & Standard THD (Fig.3)

Test input 0.190V (IEC 318), 1/12oct. Soundcheck stimulus step size 8 min cycles and 5ms min duration.

The following tolerances are offset values. Limit is absolute value based on the golden sample offset.



FR limit

F.POINT	40	45	56	63	71	80	100	200	250	400	500	560	630	800	Hz
Upper limit	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	dB

F.POINT	1000	1120	1250	1400	1600	1800	2k	2.24k	2.5k	2.8k	3k	3.15k	3.35k	3.55k	Hz
Upper limit	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	-4	-4	dB

F.POINT	4k	4.25k	4.5k	4.75k	5k	5.3k	5.6k	6k	6.3k	6.7k	7.1k	7.5k	8k	8.5k	Hz
Upper limit	5	5	5	5	6	-	15	5	5	6	6	6	6	6	dB
Lower limit	-6	-7	-8	-8	-7	-6	-10	-	-7	-7	-7	-6	-7	-	dB

F.POINT	9k	Hz
Upper limit	6	dB
Lower limit	-	dB

THD limit

F.POINT	50	100	180	500	1k	10k	Hz
Upper limit	3	3	3	3	3	3	%

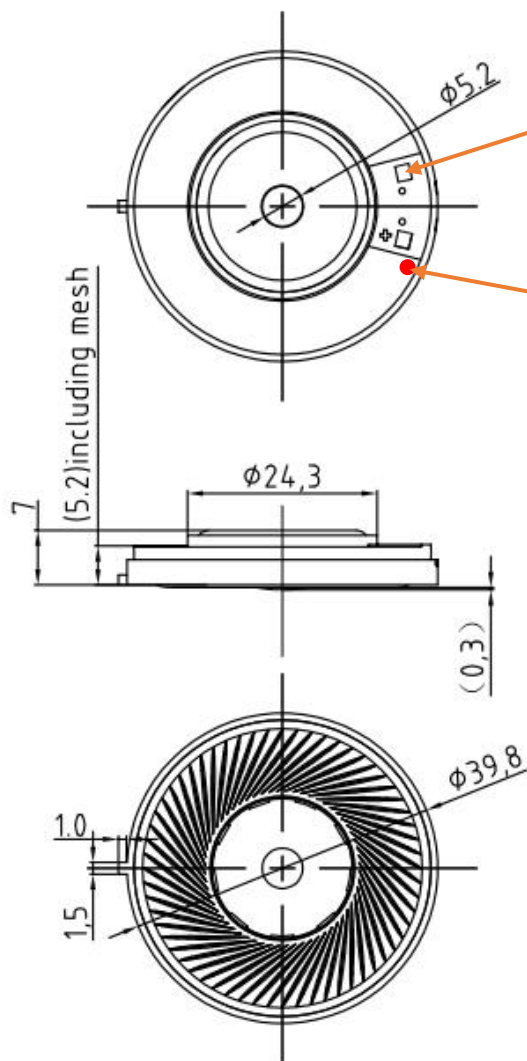
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9.DIMENSION (Fig.4)

Unit: mm

Tolerance: +/-0.2



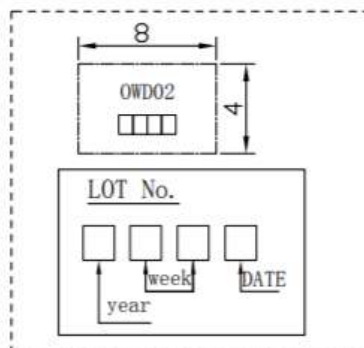
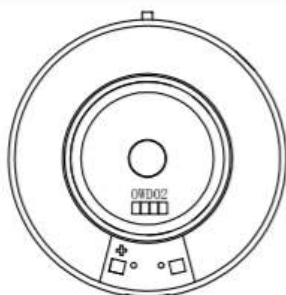
Soldering temperature 370-390° C
Soldering duration less than 2.5s

Binning Marking:
Bin A1 = Purple dot,
Bin A2 = Silver dot,
Bin A3 = White dot,
Bin B1 = Red dot,
Bin B2 = Blue dot,
Bin B3 = Yellow dot,
Bin C1 = Green dot,
Bin C2 = Black dot,
Bin C3 = Gold dot,

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10. Marking (Fig.5)

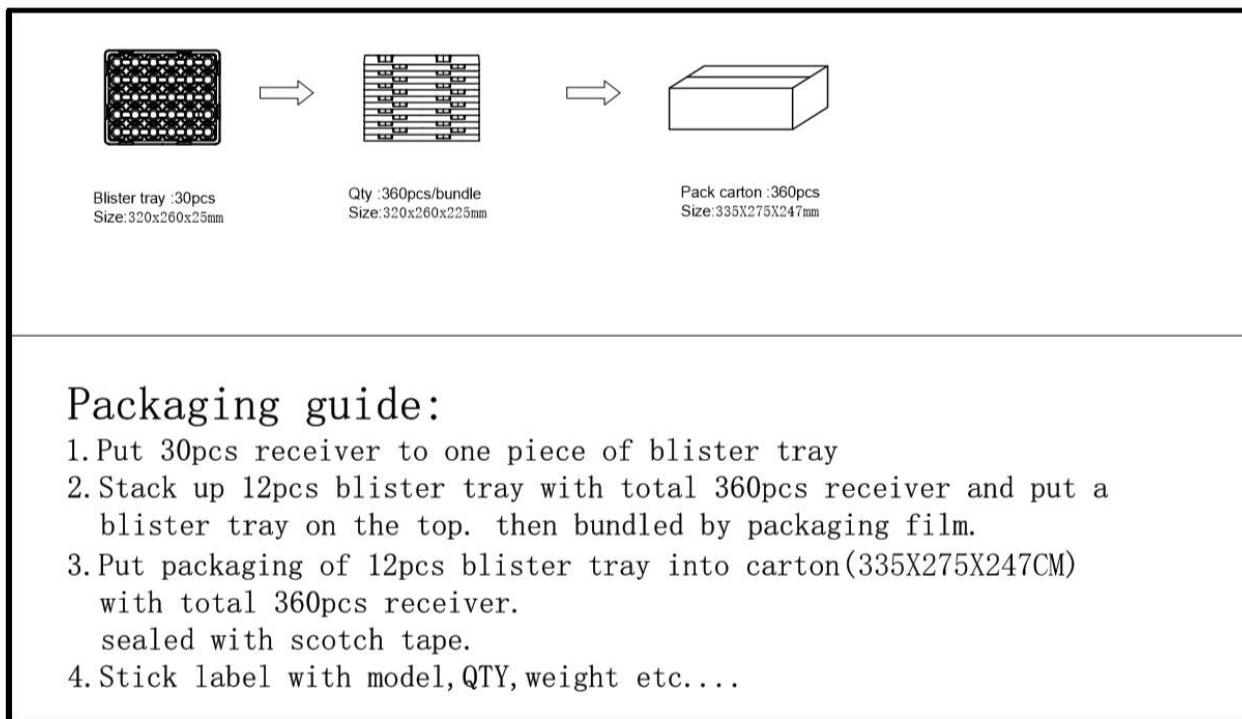


YEAR		WEEK		DATE	
year	marking	week	marking	date	marking
2020	0	1	01	MON	1
2021	1	2	02	TUE	2
2022	2	3	03	WED	3
2023	3	↓	↓	↓	↓
		52	52	SUN	7

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11.Packing (Fig.7)



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