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## SPECIFICATION FOR APPROVAL

### Receiver unit

<b>Part Number</b>	<b>OWR-0860T-16</b>
<b>Note</b>	<b>This item was compliance with the following requirements:</b> <b>1. RoHS directive</b> <b>2. REACH</b>
<b>Customer P/N</b>	

<b>Ole Wolff</b>	<b>Signature / Date</b>	<b>Prepared</b>	<b>Checked</b>	<b>Approved</b>
		张亚平 2017.08.15	Nathan Chen 2017.08.15	 2017.08.15

<b>Customer</b>	<b>Signature / Date</b>	<b>Confirmation</b>		

#### REVISION NOTES:

Date	Rev.	Description of Revision
2016.04.18	00	Initial Release
2016.04.19	01	Changed SPL grouping info and updated weight tolerance on P.2
2016.06.29	02	Corrected FR curve, changed FR and THD mask; driver drawing updated.
2016.07.06	03	Updated FR and THD mask.
2016.12.01	04	Added center value of FR, added group marking.
2017.08.10	05	Change SPL grouping information in P2, add 2 dimensions in P6, and update the FR limits.
2017.08.15	06	Change SPL definition at 1KHz, and change f0 center value back to 3100Hz.

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## 1. SCOPE

THIS SPECIFICATION IS APPLIED FOR RECEIVER UNIT FOR AN EARPHONE.

## 2. TEST CONDITIONS

TEMPERATURE : 18° ~ 22°C

HUMIDITY : 60° ~ 70°C (R.H.)

ATMOSPHERE : 860 ~ 1060 hPa

## 3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -20° ~ 55°C

STORAGE TEMPERATURE RANGE: -25° ~ 60°C

## 4. MECHANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE 3.

UNIT WEIGHT : 0.7g +/-0.2g

## 5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1.	IMPEDANCE	16 Ω ± 15% (at 126mV 1KHz)
2.A	SOUND PRESSURE LEVEL	99.7dB ± 3 dB at 1mW/2CC Coupler @ 1000Hz
2.B	SPL - SPECIAL SORTING at 200Hz	Group A: 103 ~ 104.99dB dot marking = Red Group B: 105 ~ 106.99dB dot marking = Blue Group C: 107 ~ 108.99dB dot marking = Yellow Group D: 109 ~ 110dB dot marking = White
3.	RESONANCE FREQUENCY	3100Hz ± 15%
4.	FREQUENCY RANGE	20Hz ~ 20 KHz. Figure 2.
5.	RATED INPUT POWER	(Nominal /Maximum): 5mW / 10mW, 0.28V / 0.4V
6.	DISTORTION	Please see below under point: FREQUENCY RESPONSE & THD CURVES (FIG. 2)
7.	BUZZ AND RATTLES	MUST BE NORMAL BY SINE WAVE FROM 50Hz TO 10kHz. Rated input power 5mW(0.28V). Hearing test, speaker is in vertical position in free air.

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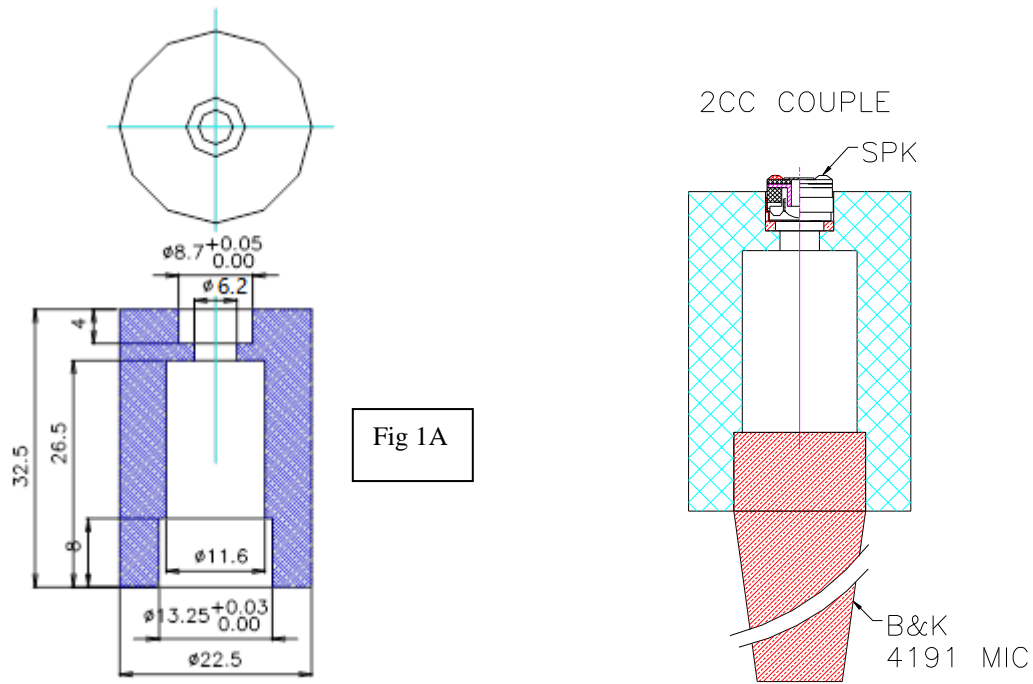
## 6 QUALIFICATION TESTS

- AFTER TEST Sensitivity difference at 1.0 KHz shall be with $\pm 3$ dB from initial value.
- LOAD TEST Signal test : White noise Power test : 5m W (0.28V) Duration : 96 Hrs
- HIGH TEMPERATURE TEST High temperature : $55^{\circ}\text{C} \pm 3^{\circ}\text{C}$ Duration : 96 Hours then left 6 hours in a room
- LOW TEMPERATURE TEST Low temperature : $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$ Duration : 96 Hours then left 6 hours in a room
- HUMIDITY TEST Temperature : $40 \pm 2^{\circ}\text{C}$ Humidity : 90 % (R.H.) Duration : 96 Hours then left 6 hours in a room
- VIBRATION TEST Vibration : 10 ~ 55 Hz / min Amplitude : 1.5 mm Duration : 1 hour each plan
- DROP TEST Height : 1m Drop face : Hardwood Floor Duration : 10 cycles
- TEMPERATURE CYCLE TEST Temperature : $-20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (2 hours) $\leftrightarrow$ $+ 55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (2 hours) Cycles : 5 cycles
Maximum power test 10 mWatts (at least 10 minutes without damage but not guarantee for no rattling)

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**7 MEASUREMENT METHOD FOR DYMANIC SPEAKER (FIG. 1)**

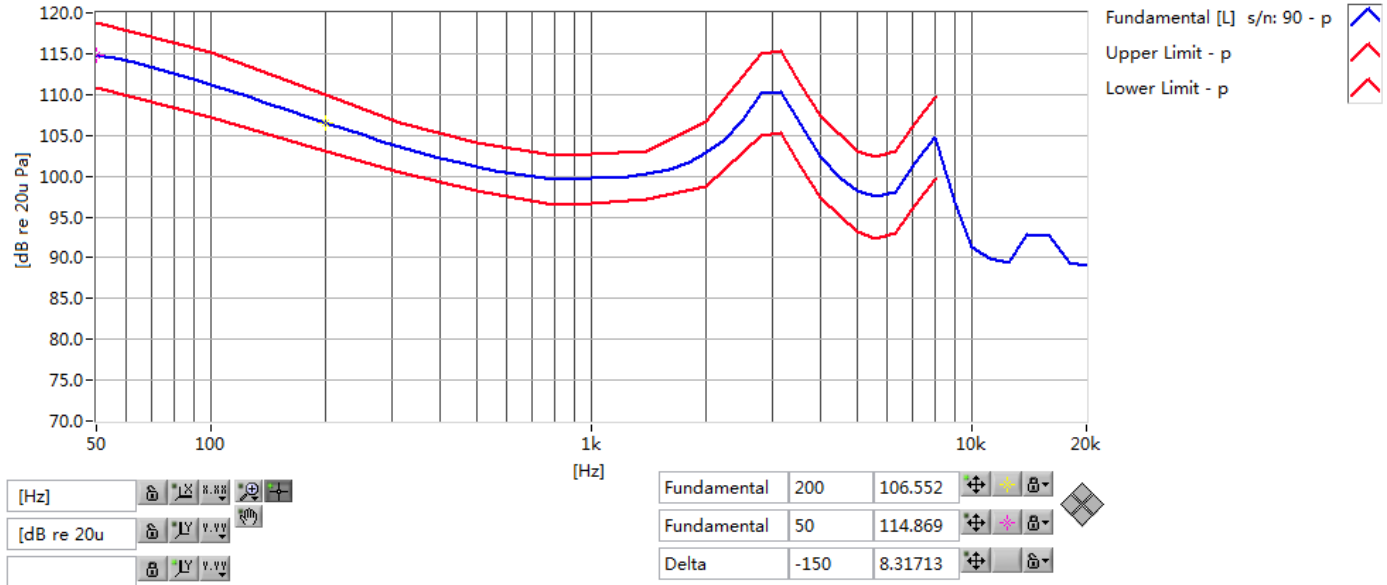


NO	EQUIPMENT	REMARKS
1.	TEST JIG	FIG. 1A
2.	MICROPHONE	½ INCH Microphone
3.	MICROPHONE HOLDER	
4.	DAMPING MATERIAL	FOAM RUBBER
5.	BOX	
6.	Test distance measured from front of speaker frame to front of test microphone	2CC Coupler

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### 8. FREQUENCY RESPONSE & THD CURVES (FIG. 2)

XY Graph 1



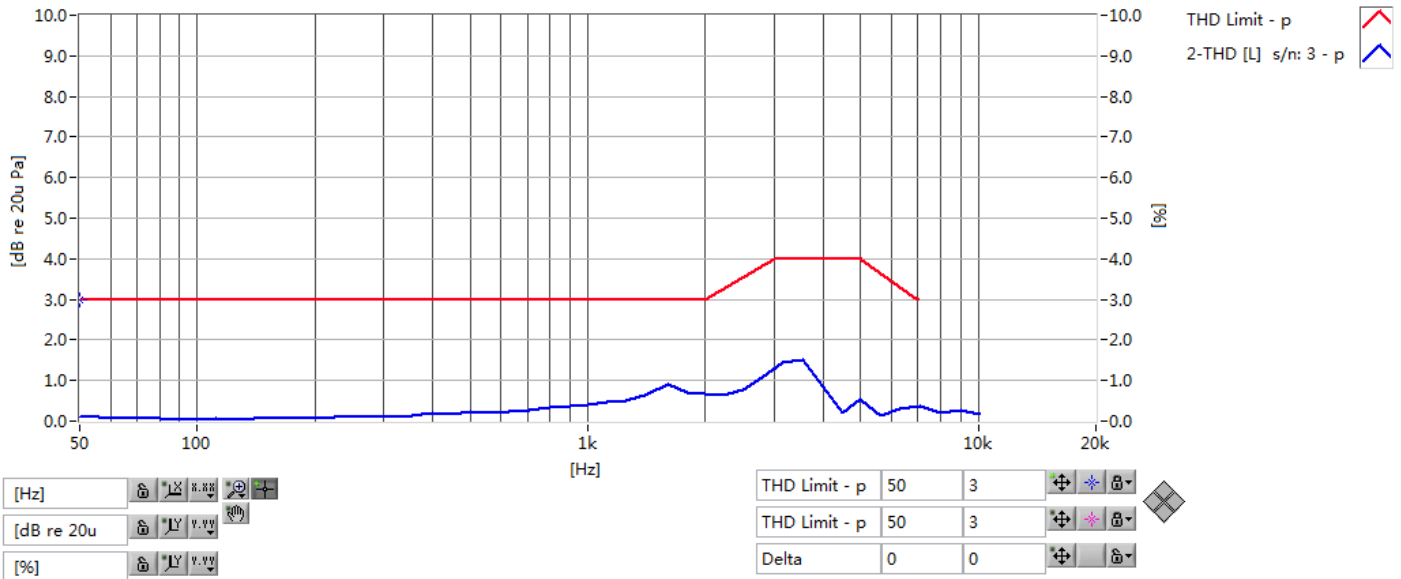
FR mask

Frequency	50	100	200	315	500	800	1k	1.4k	2k	Hz
Center value	114.9	111.2	106.5	103.6	101.2	99.6	<b>99.7</b>	100.2	102.8	dB
Upper Limits	4	4	3.5	3	3	3	3	3	4	dB
Lower Limits	-4	-4	-3.5	-3	-3	-3	-3	-3	-4	dB

Frequency	2.8k	3.15k	3.55k	4k	5k	5.6k	6.3k	7.1k	8k	Hz
Center value	110.1	110.4	106.3	102.4	98.2	97.4	98.1	101.6	104.7	dB
Upper Limits	5	5	5	5	5	5	5	6	6	dB
Lower Limits	-5	-5	-5	-5	-5	-5	-5	-6	-6	dB

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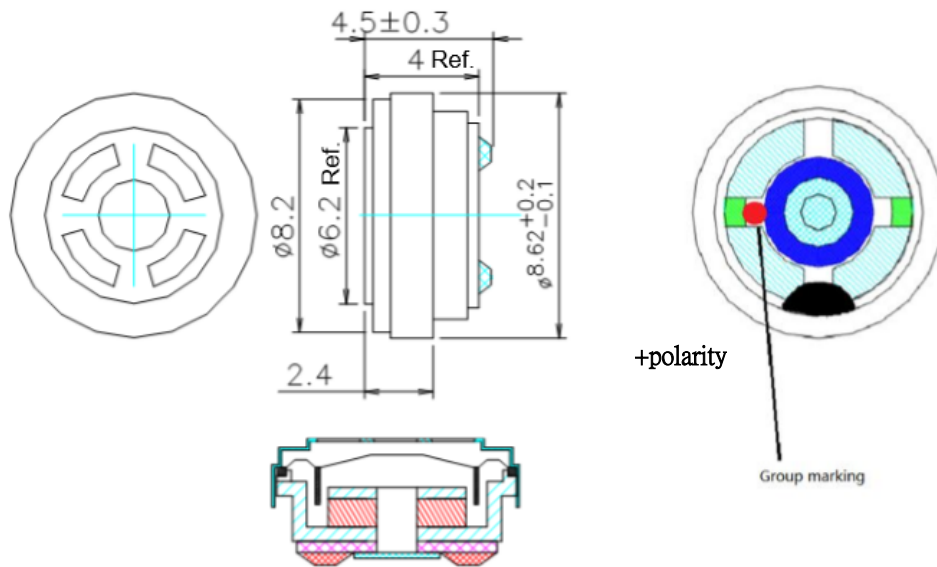
XY Graph 1



THD mask

Frequency	50	2k	3k	5k	7k	Hz
Upper limit	3	3	4	4	3	%

## 9. DIMENSIONS (FIG. 3)



Unit: mm, tolerances: +/-0.3mm.

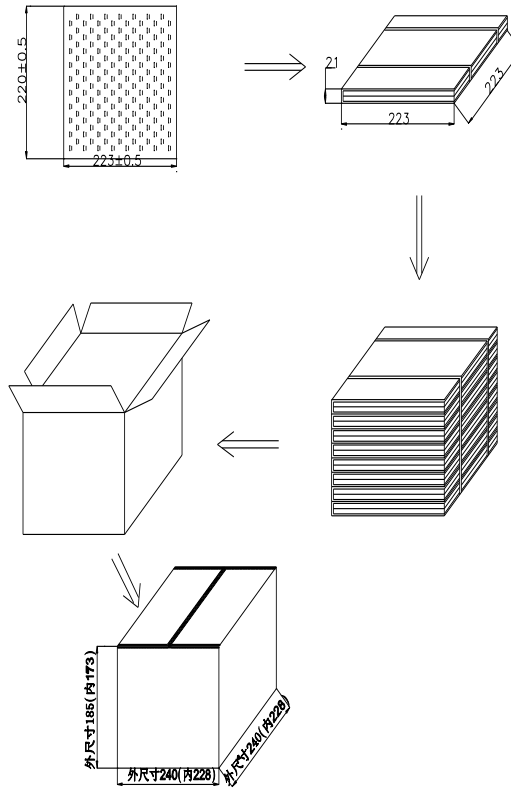
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## 10. PACKAGING (FIG.4)

### PACKAGING

1. Foam tray: 220 x 220 x 18mm  
100 pcs per layer--- 25 layers/Box
2. Box : 230 x 230 x 205 mm  
Total: 2500pcs/ Carton box
3. Paper board: 220 x 220 x 3mm



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