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# SPECIFICATION FOR APPROVAL

## Speaker

Part Number	OWS-121733TA-8
Note	This item was compliance with the following requirements: 1. RoHS directive 2. REACH
Customer P/N	

Ole Wolff	Signature / Date	Prepared	Checked	Approved
		YanRui 2020.1.16		

Customer	Signature / Date	Confirmation		

### REVISION NOTES:

Date	Rev.	Description of Revision
2020.1.16	00	Initial Release

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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: -20 °C ~ 70 °C

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

## 4. MECHANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.4

NET WEIGHT: approx 2.1g

## 5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

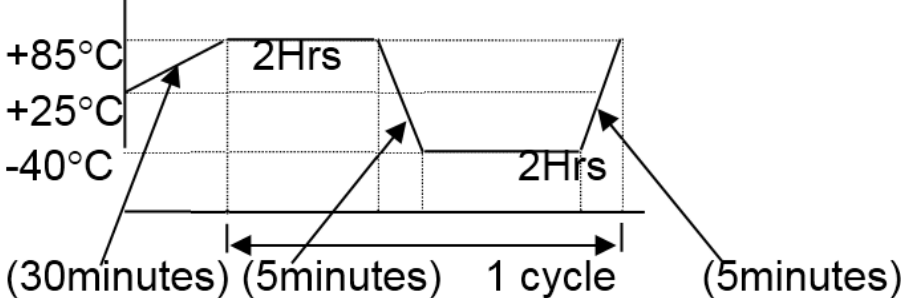
1	IMPEDANCE	$8 \pm 15\% \Omega$
2	SOUND PRESSURE LEVEL	99±3 dB(1W/10cm, in 1cc box) at 0.8,1.0,1.5,2.0KHz average, MEASUREMENT AS SHOWN IN FIGURE.1
3	FREQUENCY RESPONSE CURVE	SHOW IN FIGURE 2
4	RESONANCE FREQUENCY	1000 ±20% Hz in 1cc box at 2.83Vrms
5	TOTAL HARMONIC DISTORTION (THD)	SHOW IN FIGURE 3 < 10% at 2KHz
6	BUZZ & RATTLE	DYNAMIC SPEAKER MUST BE FREE AUDIBLE NOISE AT 2.83Vrms, SINE WAVE BETWEEN 200Hz AND 2KHz FREQUENCY RANGE(in 1cc box).
7	INPUT POWER	(Nom./Max.): 1 W / 1.2W

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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.

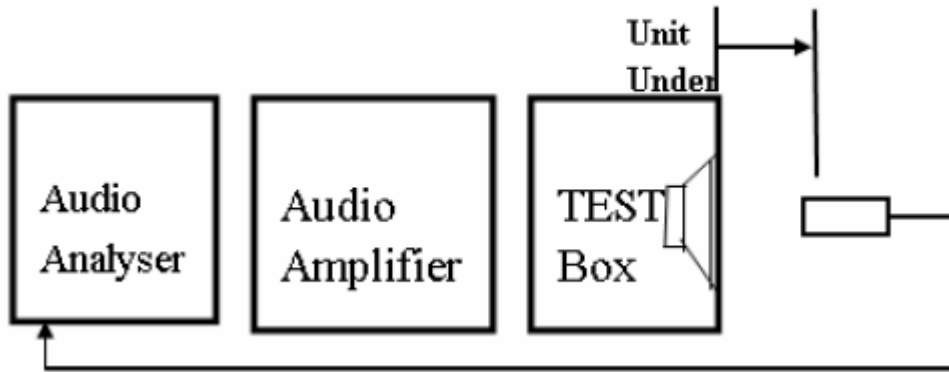
No.	ITEMS	TEST CONDITION
1.	High temp. Test	Temperature: $+85\text{ }^{\circ}\text{C} \pm 3^{\circ}\text{C}$ Duration: 96 hours
2.	Low temp. Test	Temperature: $-40\text{ }^{\circ}\text{C} \pm 3^{\circ}\text{C}$ Duration: 96 hours
3.	Humidity Test	Temperature: $+40\text{ }^{\circ}\text{C} \pm 3^{\circ}\text{C}$ Relative Humidity: 90-95% RH Duration: 96 hours (recovery 6 hours)
4.	Thermal cycle test.	<p>Temperature: <math>-40^{\circ}\text{C} \pm 3^{\circ}\text{C}</math>      <math>+85^{\circ}\text{C} \pm 3^{\circ}\text{C}</math>  Duration: 2 hour      2 hour  Cycle: 12cycles (recovery 2hours)</p>  <p>(30minutes) (5minutes) 1 cycle (5minutes)</p>
5.	Vibration Test	Frequency: 10 ~ 55 ~ 10Hz Oct/min Amplitude: 1.5mm Duration: 2hours in each 3axes
6.	Drop Test	Height: 1.5m Mounted in a 100g fixture, drop samples 1.5m 2 drops on side(2*6), , 2 drops on each corner(2*4). Total 20 drops
7.	Load test	Input power: 1W, White noise 96hours in 1cc box.
8.	Terminal Strength	Load: 1.0 Kg Duration: 15sec.(Shall be normal)

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## 7. ELECTRICAL CHARACTERISTICS MEASUREMENT (FIGURE.1)

### MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER



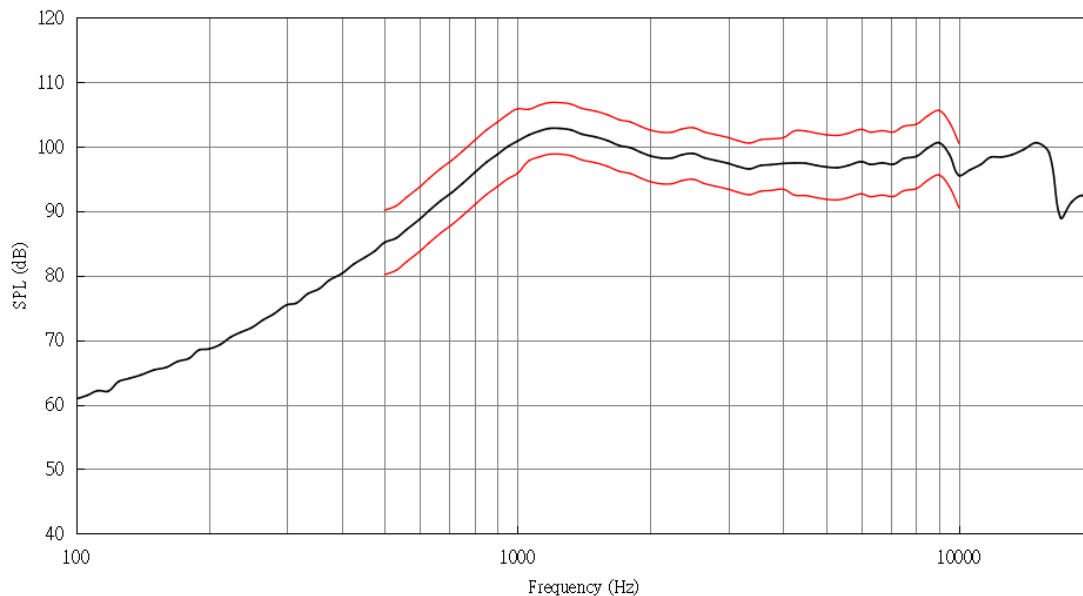
### MEASURING EQUIPMENT

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(FIGURE.2)

2.83Vrms /10cm in 1cc BOX

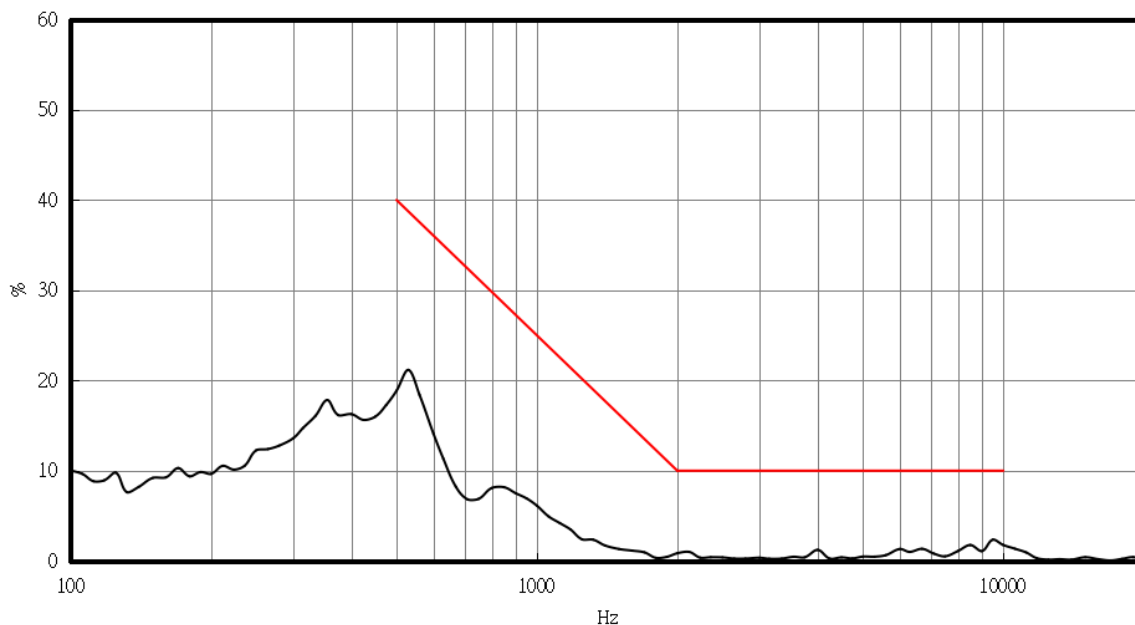


Hz	500~1000	1060~4000	4250~10000
dB	±5	±4	±5

### 9. S

### TANDARD THD CURVE (FIGURE.3)

2.83Vrms /10cm in 1cc BOX



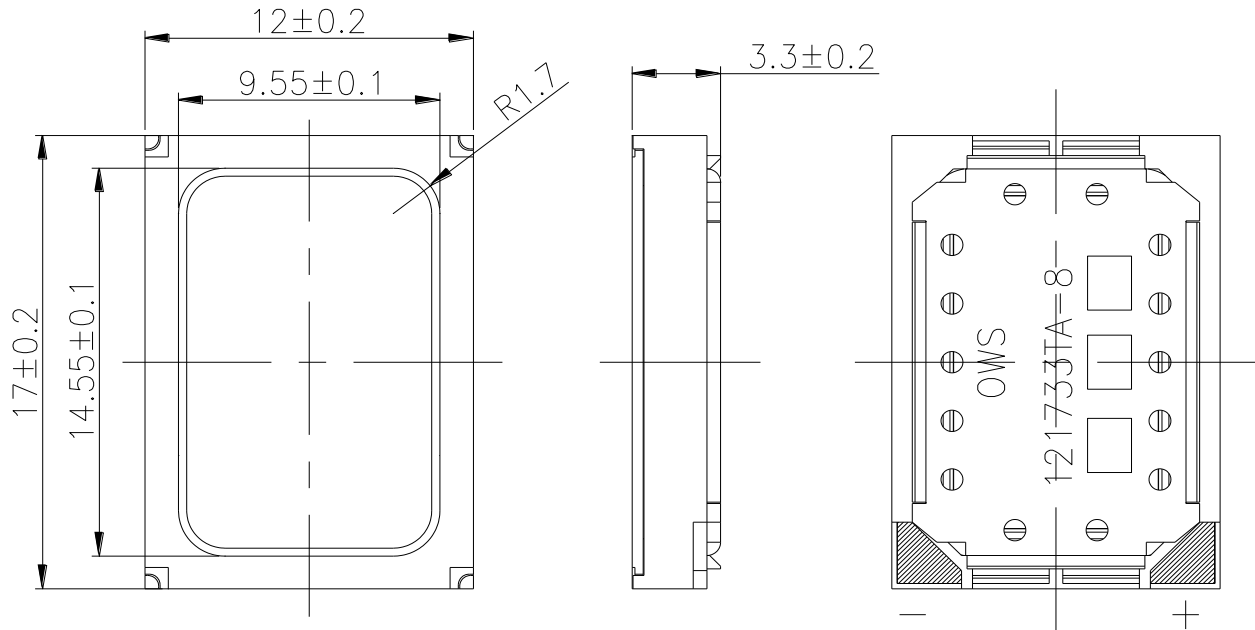
Hz	500	2000	10000
THD	40	10	10

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## 10. OUTVIEW (FIGURE.4)

Unless otherwise specified, tolerance:  $\pm 0.2$  (unit: mm)

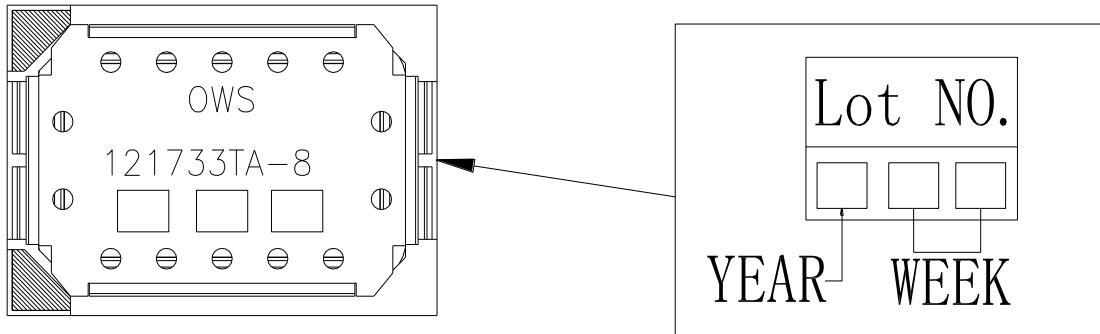
## 11.



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**MARKING(FIGURE.5)**



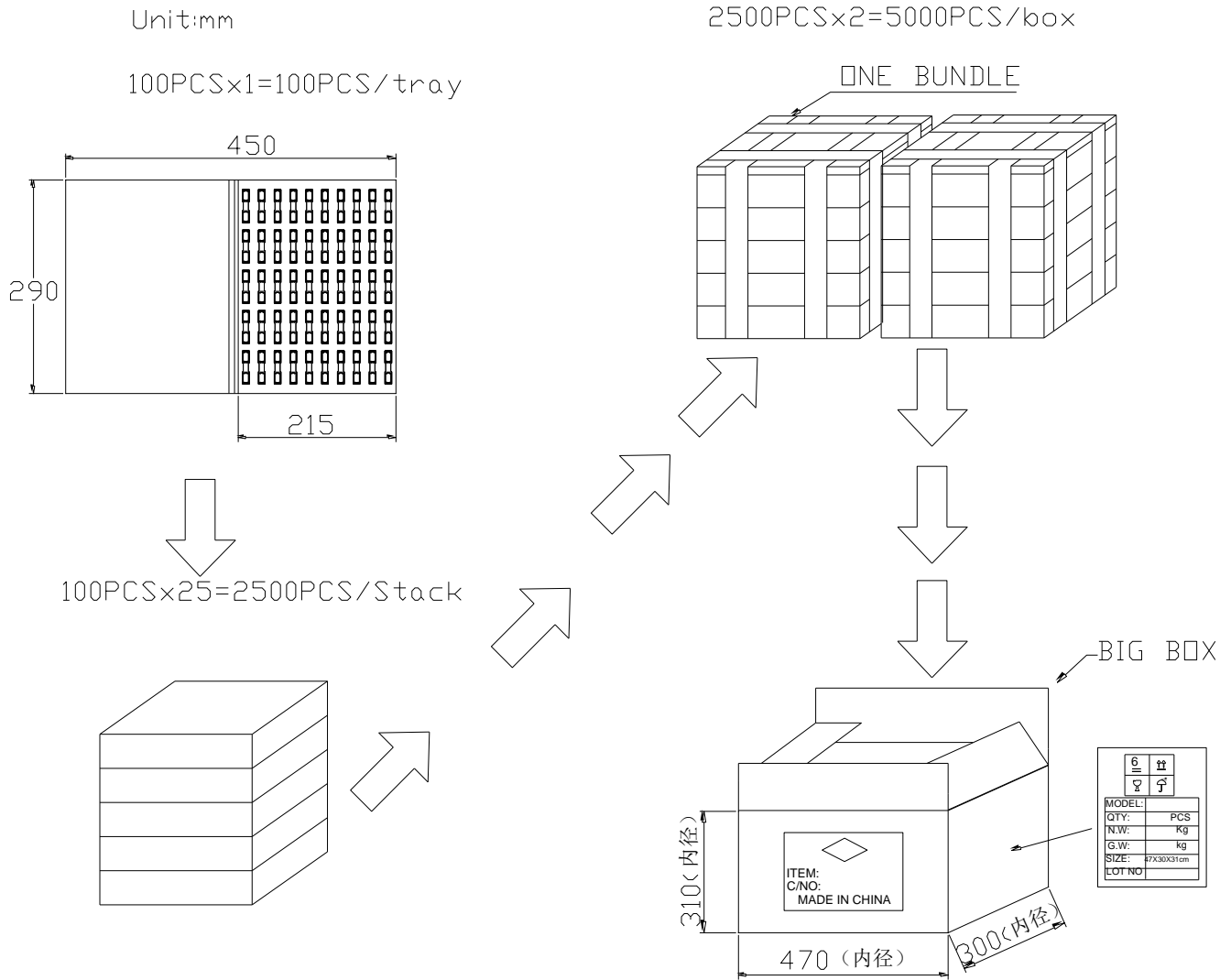
YEAR		WEEK	
year	marking	week	marking
2015	5	6	06
2016	6	↓	↓
2017	7		
2018	8		
		50	50
		51	51
		52	52
		53	53

↑

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## 12. PACKING(Figure.6)



Unless otherwise specified, tolerance: ±10(unit:mm)

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