





## SPECIFICATIONS

MODEL NO  
OBO-40204F-01

PART NAME  
DYNAMIC SPEAKER

SHEET  
2OF8

MODEL NO : OBO-40204F-01

Features:Conformity RoHS Directive(2011/65/EU) Requests.

### 1. SPK General Specifications

Items	Spec.
Weight	Approx90 Gram
Nominal Impedance	4 Ohm $\pm$ 15% At 1000Hz. At 1V
Power Rating	Normal 5W.Maximum 8W.
Lowest Resond Frequency	1000 $\pm$ 150Hz
Output Sound Pressure Level (S.P.L)	84 $\pm$ 3 dB/1W/1M 90 $\pm$ 3 dB/5W/1M Average at 1000Hz.
Frequency Response Range	300~12000Hz Average SPL-20dB
Distortion	10%Max 1000Hz/1W/5W
Abnormal Sound Test	Must be Normal Tested by 4.48Volts. Sine Wave.
Polarity	Diaphragm shall move Forward when Apply a Positive DC Current to the "+" or "Marked" Terminal.
Operating Temperature	-40 $^{\circ}$ C TO +100 $^{\circ}$ C
Storage Temperature	-40 $^{\circ}$ C TO +100 $^{\circ}$ C

### 2. BuzzerGeneral Specifications

	Items	Spec.
1.1	Sound Pressure Level	85dB $\pm$ 3 dB Min/3M/27VPP
1.2	Oscillating Frequency	4 $\pm$ 0.5KHz
1.3	Current Consumption	8mA Max./27VPP
1.4	Tone	Continuous Tone
1.5	Operating Voltage	27VPP
1.6	Case Material	PC (UL 94V-0)
1.7	Operating Temp. Range	-40 $^{\circ}$ C TO +100 $^{\circ}$ C
1.8	Storage Temp. Range	-40 $^{\circ}$ C TO +100 $^{\circ}$ C



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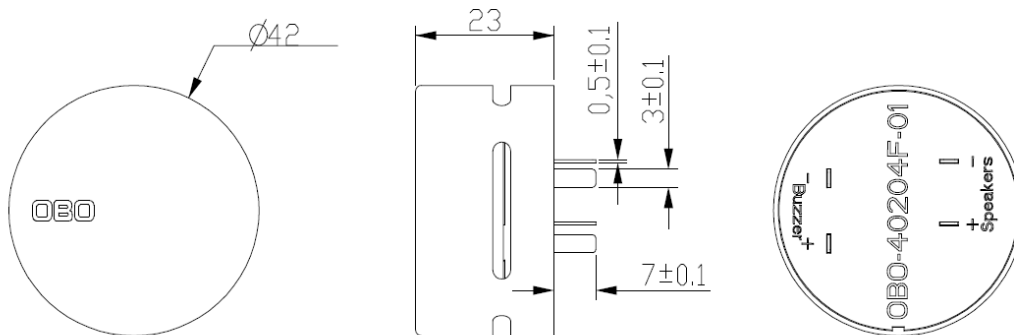
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## Environmental Test

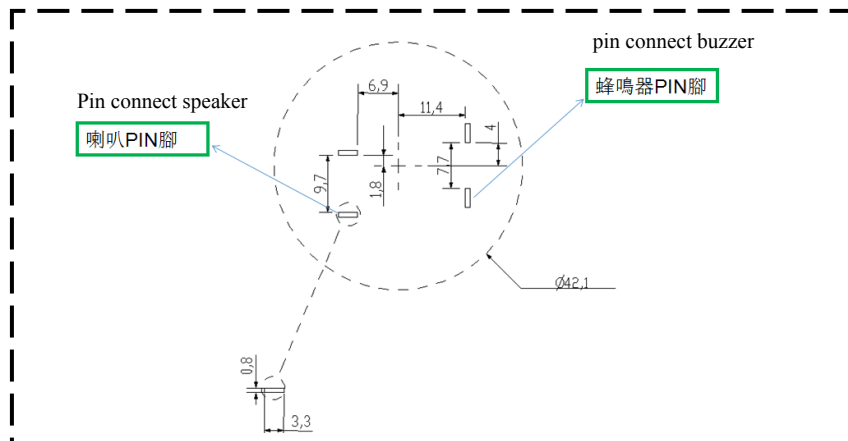
Humidity Test	Temperature: $+40^{\circ}\text{C} \pm 3^{\circ}\text{C}$
	Relative Humidity: 90% ~ 95%
	Duration: 96 Hours Duration of recovery: 6 Hours
Temperature Cycle Test	Low Temperature: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$
	High Temperature: $+100^{\circ}\text{C} \pm 3^{\circ}\text{C}$
	Duration of recovery: 1 Hour
	Duration of Transfer Time: Less Than 5 to 7 Minutes
	Duration of Exposure: 1 Hour Cycle: 5 Cycles
Load Test	Pink Noise With Weighted Filter 4.48 Volts.(RSM) 96 Hrs 20~20000Hz Frequency Response
Drop Test	75cm Free Falling On Counter Floor, 10 Times.
Vibration Test	Frequency $30 \pm 15$ Hz, Amplitude 1.5 mm for 2 Hours per axis(x. y. z axis)

## 3. Appearance Drawing

3.1 DIMENSIONS Unit: mm Tolerance:  $\pm 0.5$

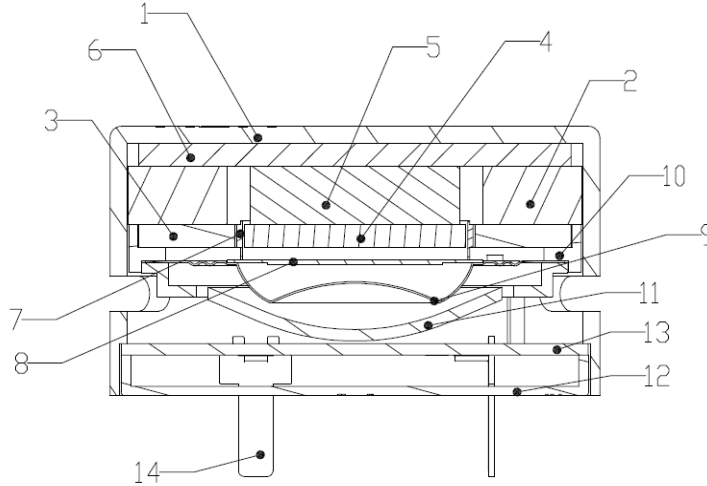


## 3.2 Installation



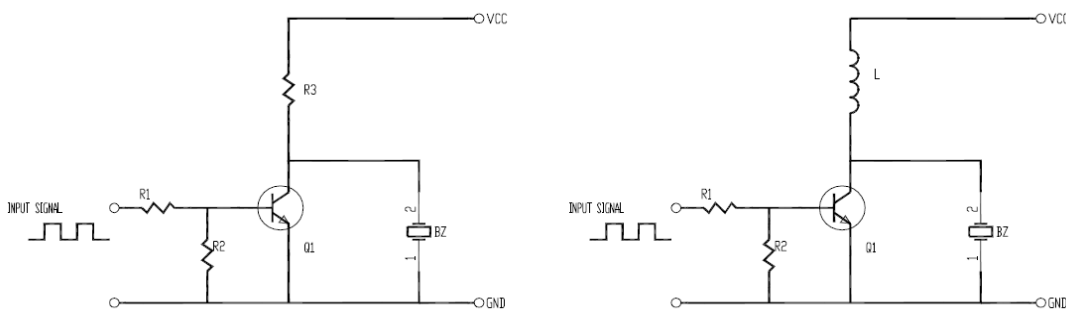
Unit: mm Tolerance:  $\pm 0.1$

**3.3 Speaker & Buzzer Construction**



14	PIN	PE015	4
13	PCB	HB94V0	1
12	Lower cover	PC (UL 94V-0)	1
11	Horn cover	PC (UL 94V-0)	1
10	Bracket	PC (UL 94V-0)	1
9	DIAPHRAGM	Resin	1
8	Buzzer	ceramics	1
7	VOICE COIL	KSV	1
6	WASHER 1	SPCC	1
5	MAGNET 2	NdFeB	1
4	WASHER 3	SPCC	1
3	WASHER 2	SPCC	1
2	MAGNET 1	Fe3O4	1
1	Under cover	PC (UL 94V-0)	1
NO	PART NAME	MATERIAL	Q'TY

**3.4 Recommended Driving**

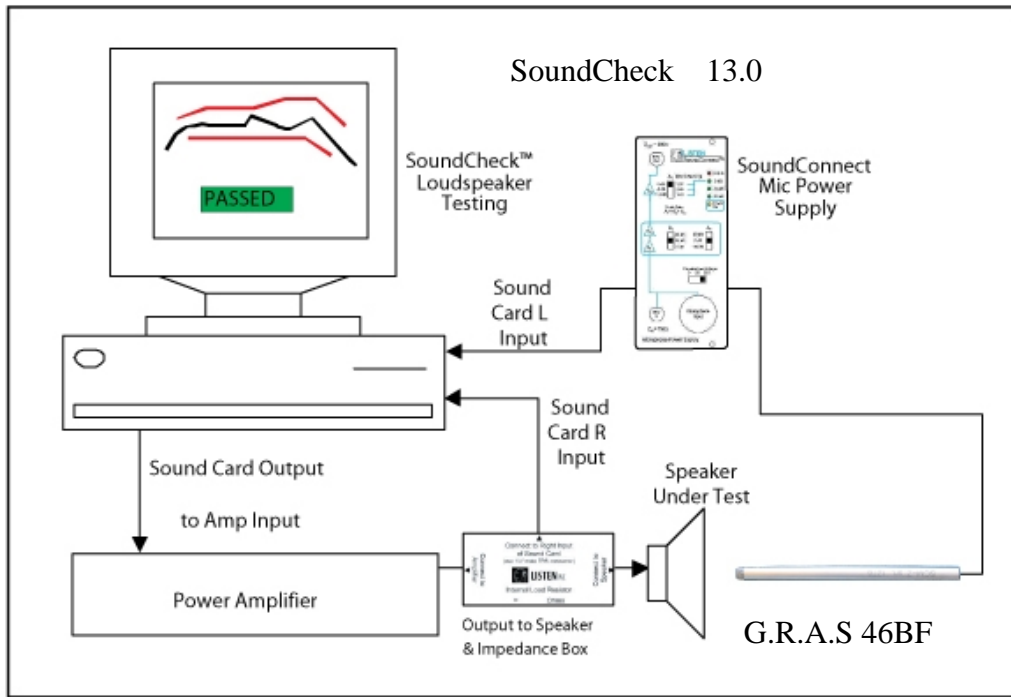


**4. Test Method**

4.1 Measurement Diagram

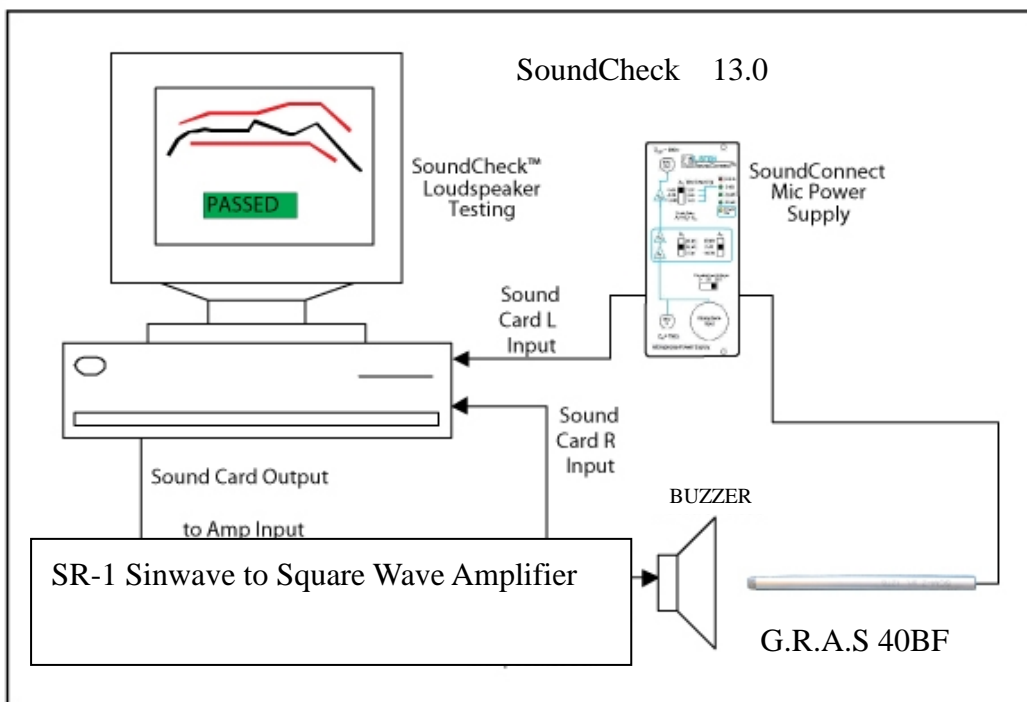
Electroacoustic

SPK Testing Adapter

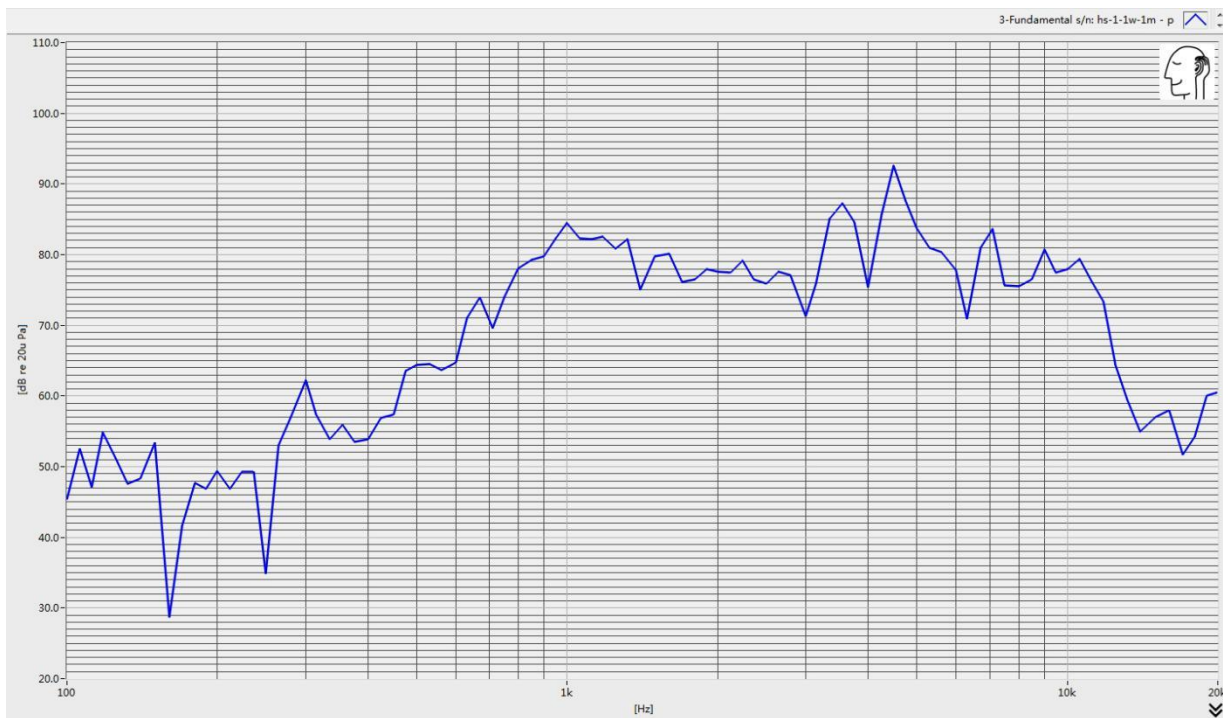


**5. Electroacoustic**

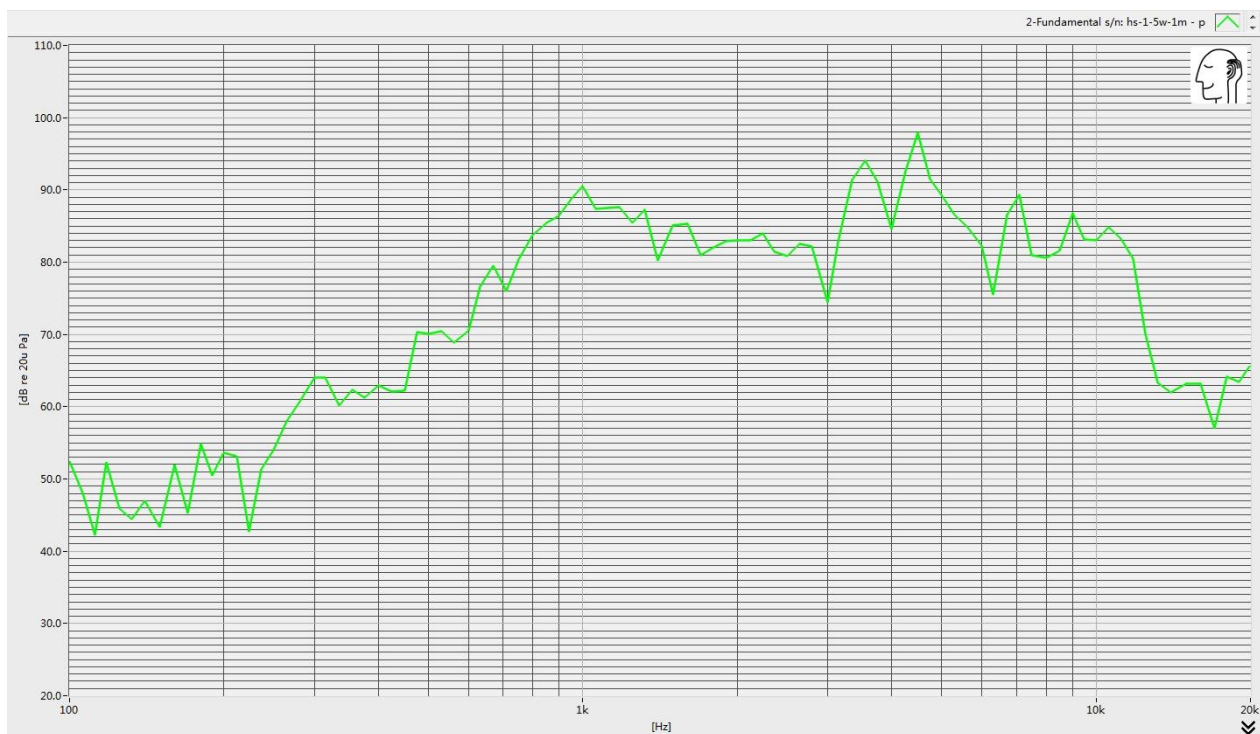
BuzzerTesting Adapter



### 5.1 SPK curve-1w1m



### 5.2 SPK curve-5w1m





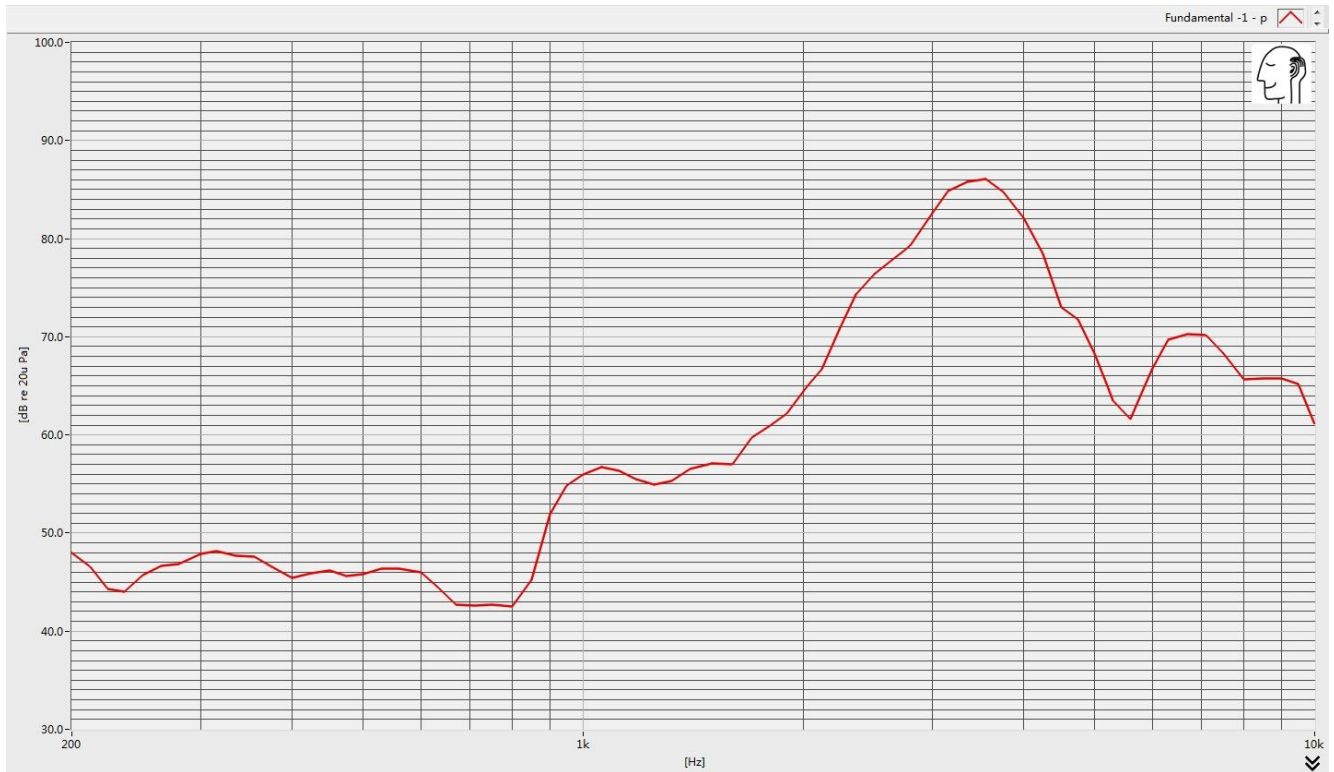
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## 5.3 Buzzercurve- 27Vpp/3m



**6.PACKAGING**

