

**BID**

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# SPECIFICATION

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## SHEET FOR APPROVAL

(Revision: X1)

**CUSTOMER:**

**PRODUCT: DYNAMIC RECEIVER**

**SUPPLIER PART NUMBER: R6C41AP**

**CUSTOMER PART NUMBER:**

**TITLE:  $\phi$  6×H4.1 16 ohms/ROHS/PAD**

	PREPARED	CHECKED	APPROVED	R&D CHOP
SIGNATURE (CHOP)				
DATE				

**CUSTOMER COMMENT:**

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

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## 1. SCOPE

This document contains required, electrical, acoustic, mechanical, package and reliability test requirements.

## 2.Environmental Requirement

This loudspeaker including all components, soldering joints and glue must be halogen free, in ROHS requirements and other banned or restricted substances according to customer's requirements.

## 3.Electrical Requirements

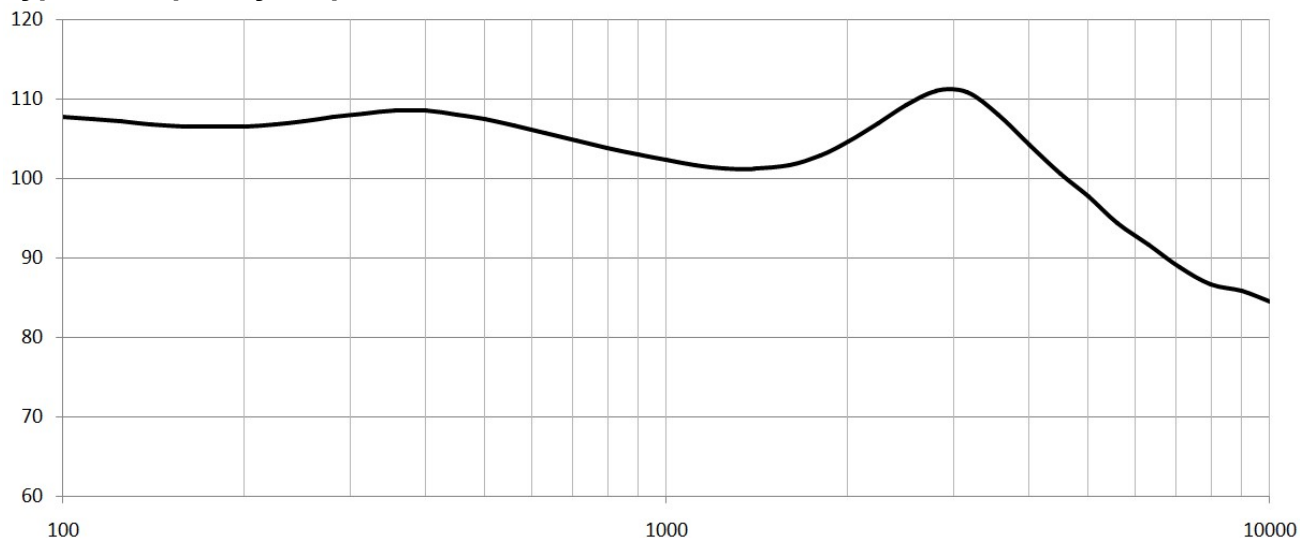
3.1 DC Resistance	15.0±10% ohms
3.2 Rated Impedance	16 Ω ± 10% @ 1KHz, 0.126 Vrms
3.3 Power Rating	2mW
3.4 Short Term Max. Power	5mW

## 4.Acoustical Requirements

4.1 Sound Pressure Level	102±3dB@ 1KHz, 0.126Vrms, IEC318Ear
4.2 Frequency Response	See Figure1

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**Typical frequency response**



**Figure 1**

Frequency(hz)	Upper limits	Lower limits
50-200	3	-3
224-1800	3	-3
2000-2800	3	-3
3150-5000	4	-4
5300-6000	4.5	-4.5
6300-10000	5	-5

**Table1, Test Limit for FR**

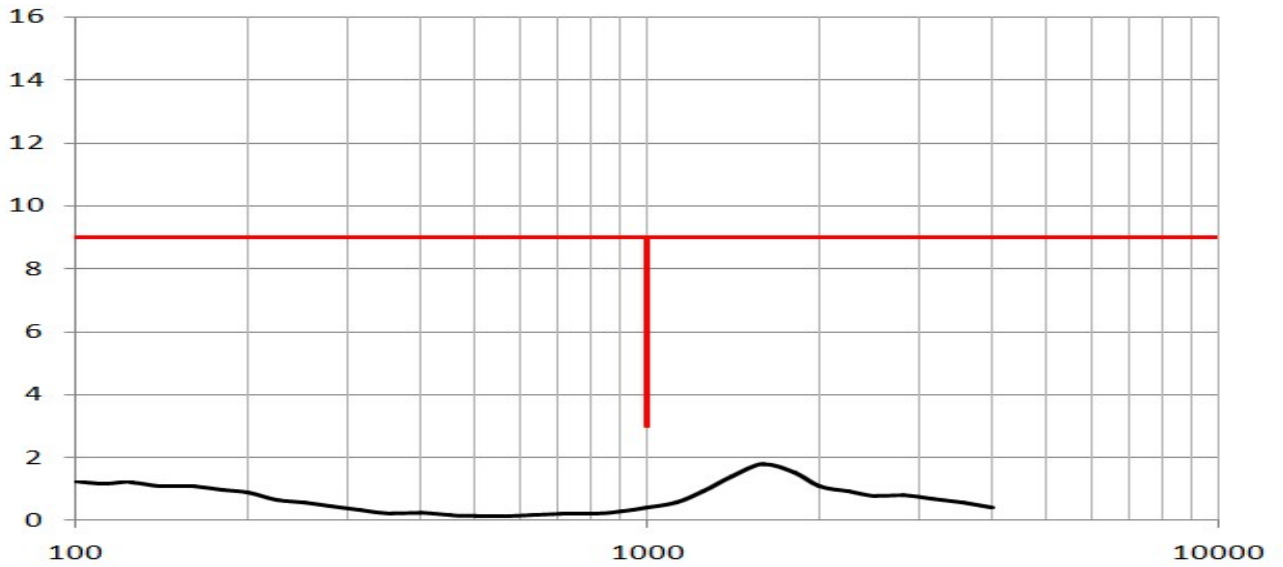
分档设定：以1K hz 102±3db进行分档：

档位	1000hz (SPL)	备注
A	103-105db	因临界值及仪器误差值存在，相邻档位允许串档，串档值最大为 1dB
B	101-103db	
C	99-101db	

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**4.3 Total Harmonic Distortion(THD):**

**Typical THD response(See Figure 2)**



**Figure 2 ,Typical THD Response**

<b>Frequency [hz]</b>	<b>Upper limits[%]</b>
100	9
999	9
1000	3
1001	9
10000	9

**Table2, Test Limit for THD**

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#### **4.4 Rub & Buzz**

A sine sweep among 50-3K Hz at 0.25Vrms will not result in any buzzing or extraneous sound.

#### **5.Polarity Requirements**

When a DC source's "+" polarity is attached to receiver 's "+" polarity,"-"polarity is attached receiver's "-"polarity, the membrane will move forward.

#### **6. Test Climatic Condition**

**Standard Test Condition :**

- a) Temperature : +15 ~ +35°C
- b) Humidity : 45-85%
- c) Pressure : 860-1060mbar

**Judgement Test Condition**

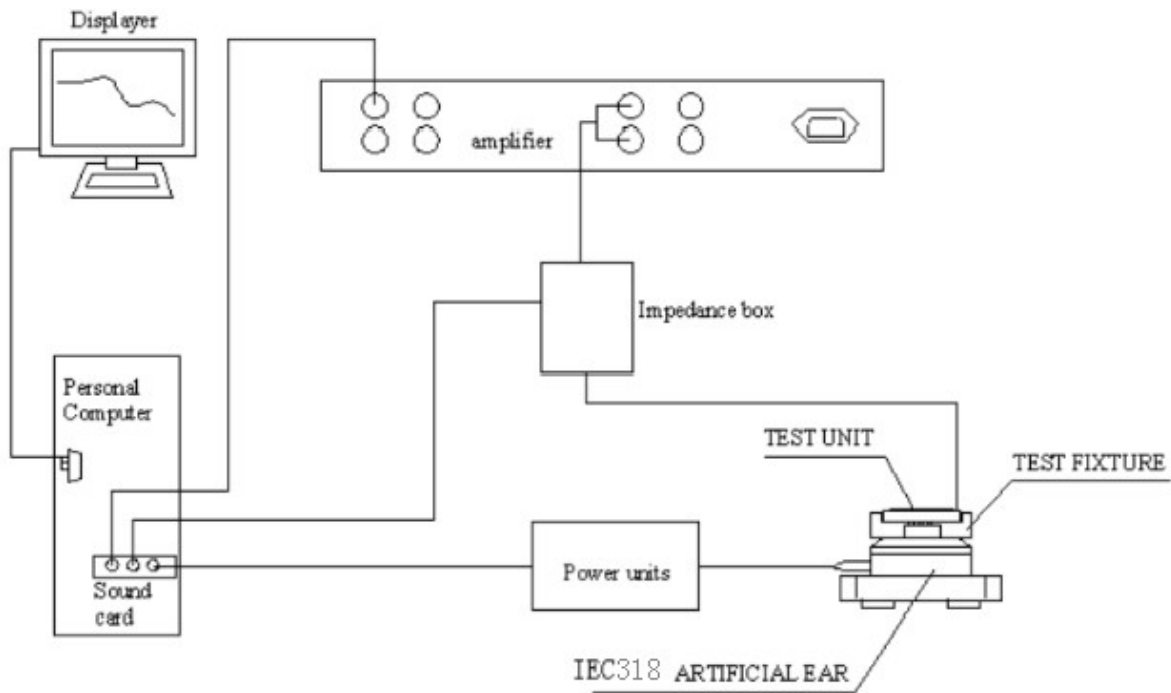
- a) Temperature : +20 ± 3°C
- b) Humidity : 60-70%
- c) Pressure : 860-1060mbar

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**7. Test Method**

**7.1 Sensitivity and Frequency Response Curve:**

The receiver shall be mounted in a fixture. And the recommended acoustic measuring devices are shown below in fixture3. The swept sine-wave frequency range is 20Hz~10kHz.(Input126mVrms).



**Figure3 receiver testing setup**

**8. General Requirements**

**8.1 Operation temperature range: -20°C to +60°C**

**8.2 Storage temperature range: -30°C to +70°C**

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## 9. General Reliability

9	9-1 持续烧机(TTS)	单体喇叭进行 10pcs 的 96H 持续粉白噪音烧机测试, 测试前后比对 SPL 曲线及听音测试; (输入功率:2mW)		1. 测试过程后不能出现无音/杂音/音小等问题; 2. 测试前后 1KHz SPL 对比差异在 3dB 之内, THD 符合我司要求(输入 1mW 测试, SPEC 按照所测机种标准) 3. 机构部分无分离、变形、间隙/段差增大、PCBA 分离、点胶部分开胶
	9-2 振动测试	单体喇叭进行 10Hz-200Hz 的随机振动测试 3H, 测试后进行 SPL 的曲线对比及听音测试; 试验数量: 10pcs		
	9-3 跌落测试	单体喇叭进行 1.0M 的跌落测试 9 次; 3 次/面, 测试后进行 SPL 的曲线对比及听音测试; 试验数量: 10pcs		
	9-4 滚筒测试	1M, 78cycle, 5cycle/min, 10 次检验一次曲线及听音; 测试时用治具固定喇叭; (9pcs/板, 27pcs)		
	9-5 冷热冲击测试	单体喇叭进行 -30℃-65℃ 的循环测试, 低温 30MIN, 高温 30MIN, 共 15 循环; 测试后室温保存 4H 后进行 SPL 的对比及听音测试; (关机状态, 测试数量: 10pcs)		
	9-6 低温工作	单体喇叭进行温度 -20℃ 的测试, 共进行 72H; 白噪音, 输入功率: 2mw; 测试后室温保存 4H 后进行 SPL 的对比及听音测试; 测试数量: 10pcs		
	9-7 高温工作	单体喇叭进行温度 60℃ 的测试, 共进行 72H; 白噪音, 输入功率: 2mw; 测试后室温保存 4H 后进行 SPL 的对比及听音测试; 测试数量: 10pcs		
	9-8 低温存储	单体喇叭进行温度 -20℃ 的测试, 共进行 96H; 测试后室温保存 4H 后进行 SPL 的对比及听音测试, 测试数量: 10pcs		
	9-9 高温存储	单体喇叭进行温度 65℃ 的测试, 共进行 96H; 测试后室温保存 4H 后进行 SPL 的对比及听音测试, 测试数量: 10pcs		
	9-10 盐雾测试	测试时间: 24 小时; 温度: 实验环境温度 30℃; 湿度: 实验环境湿度 >=70%; 实验温度要求: 盐水温度 35℃, 实验箱温度 35℃, 压缩空气温度 47℃; 实验盐水要求: 用 JIS-S-8150 氯化钠溶液浓度 5±1%, 其 PH 值为 6.5-7.2; 测试数量: 5pcs		

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## 10. Mechanical Layout and Dimensions

### 10.1 Mechanical layout for speaker(see Figure 4)

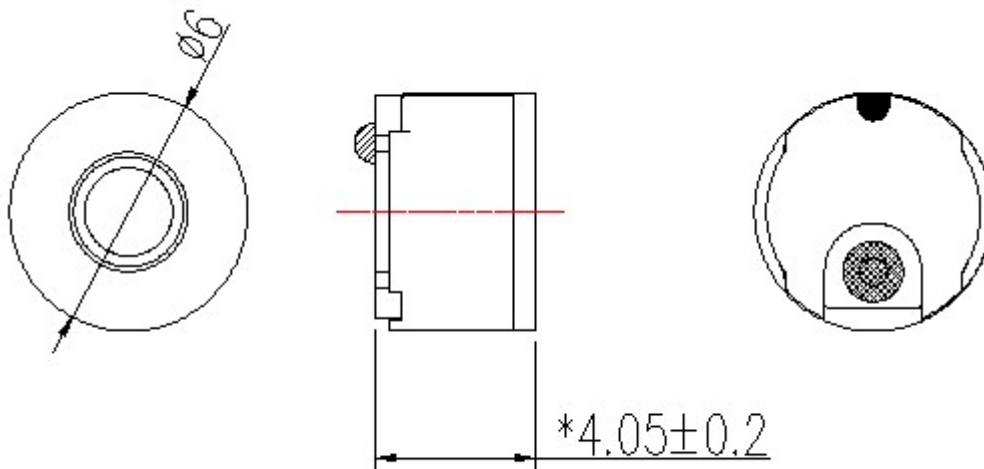


Figure4, Speaker layout profile

Note:1、 General unless otherwise noted :  $\pm 0.2\text{mm}$

11. Package:TBD

12. Application Notes:TBD