

MESSRS.

SPECIFICATION FOR APPROVAL

承 认 书

Product	DYNAMIC SPEAKER
Part No.	AK-1608EA-4-LF
Customer Approval	

Approved By	Checked By	Made By



常 州 立 翔 电 子 有 限 公 司

ADVANCED ACOUSTIC TECHNOLOGY CORP.



ISO 9001 Certified

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EDITION:1.1

1.SPECIFICATION

AK-1608EA-4-LF

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 16 mm	
03	Rated Input Power	1.0W (Long Time)	
04	Max. Input Power	1.2W (Short Time)	
05	Impedance	8 ohm \pm 20% at 1000Hz.	
06	Resonance Frequency (Fo)	800Hz \pm 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	85dB(1W/m) \pm 3 dB	at AVE 1.5K 2.0 2.5K 3.0KHz.
		91dB (1W / 0.1m) \pm 3 dB	
08	Frequency Range	Fo – 20KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz, 1.0W.	
10	Voice Coil	Diameter Φ 8.35 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 7.9 x 1.2 mm	
12	Weight	1.6g \pm 0.3g	
13	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
14	Operation Test	Must be normal at program source – 1.0W	
15	Buzz, Rattle, etc.	Should not be audible at 2.83V sine Wave between Fo to 20KHz	
16	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
17	Terminal Strength	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.	
18	Temperature	Operating temperature: -20°C to +60°C	
		Storage temperature: -30°C to +70°C	

1. MEASURING METHOD

2-1 .Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

JUDGEMENT

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

2-2 . Standard Test Fixture

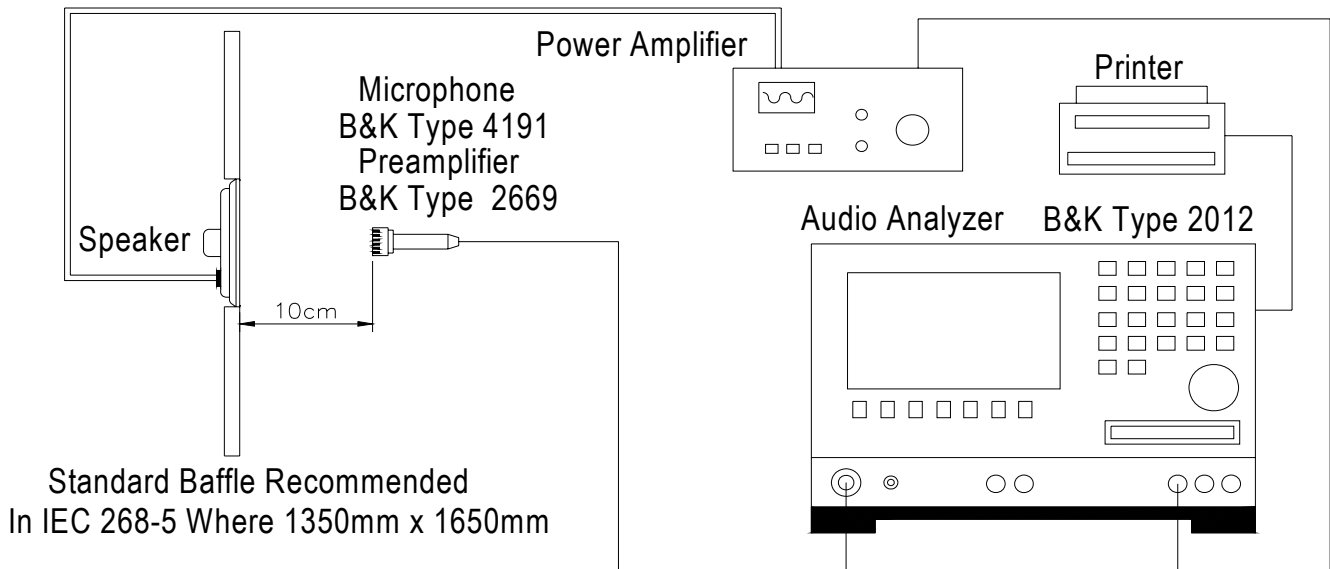
1.Input Power : 1.0W (2.83V)

2.Zero Level : -dB

3.Mode : SPEAKER

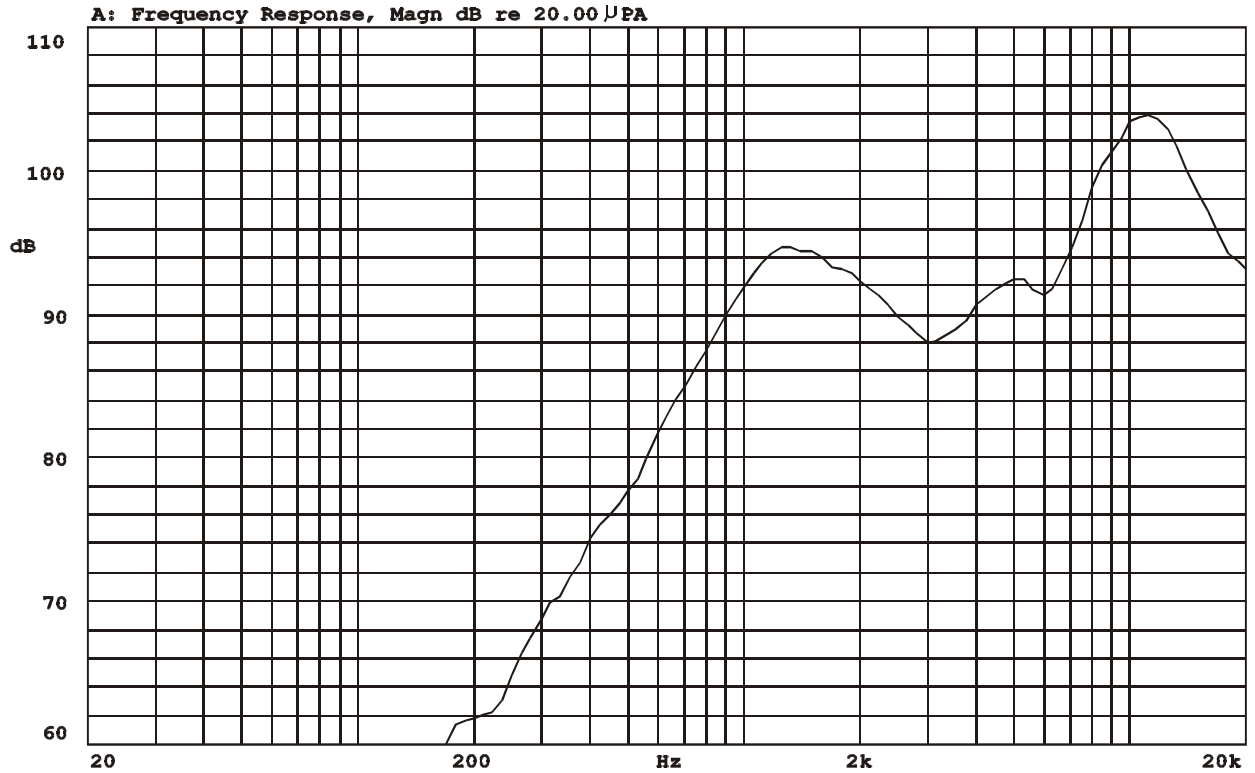
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



2-3. Frequency Response Curve

X:3.0000kHz *Y:88.04dB ZA:Live Curve SSR Fund.

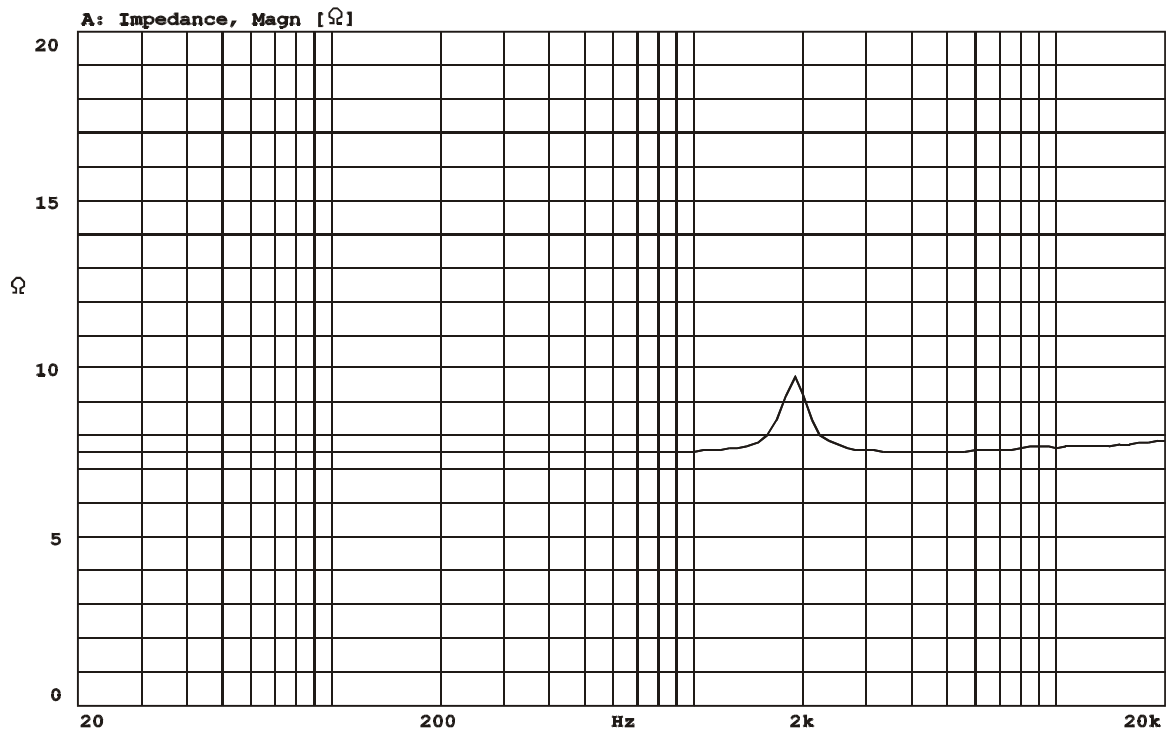


Mode: SPEAKER



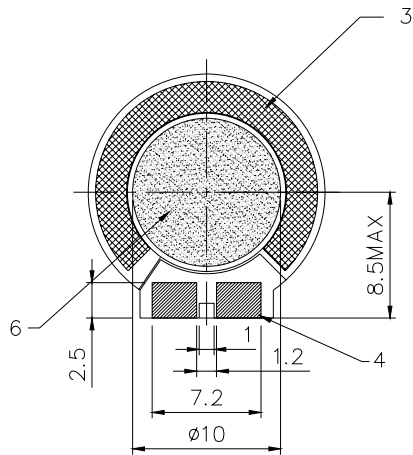
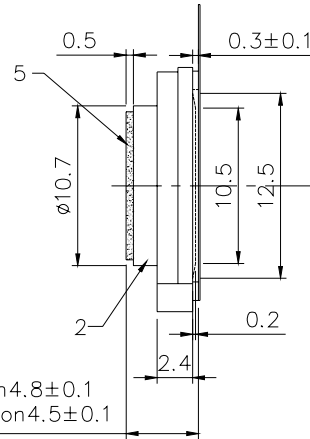
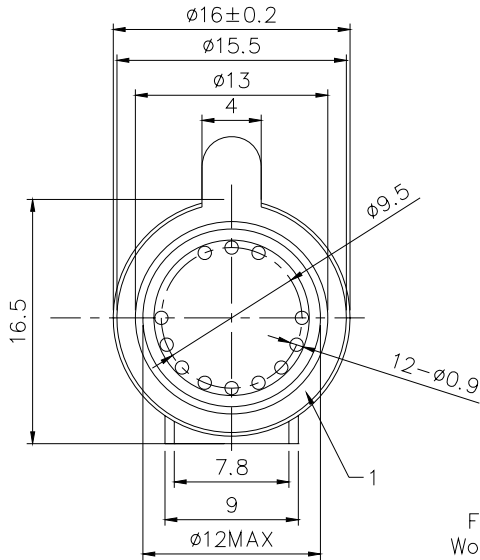
2-4. Impedance Curve

IMPEDANCE MEASUREMENTS: Measurement of Impedance $Z(j\omega)$
ZA:Live Curve Impedance Ω



Mode: $Z(j\omega)$





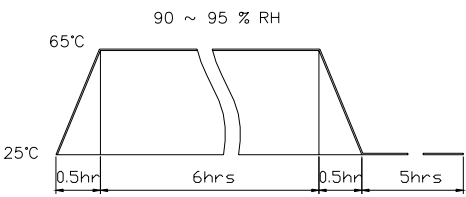
- 1. CAP
- 2. Frame
- 3. Screen
- 4. PCB
- 5. Sponge+Adhesive
- 6. Sponge

镀金工艺：挂镀（吊镀）
 镀金厚度：0.15~0.35μ
 振膜材料：MYLAR

TITLE: <i>DYNAMIC SPEAKER</i>		DRAWN: <i>Lily</i> 2006-04-25	SCALE: ***	SHEET: 1 of 1
PART NO. <i>AK-1608EA-4-LF</i>		DESIGNED: R&D OF AAT	UNITS: mm	
DWG NO.		CHECKED:	TOLERANCE ± 0.3mm	
		APPROVAL:	UNLESS OTHERWISE SPECIFIED:	
		MATERIAL: ***	ONE PLACE DECIMAL ± ***	
REV 1			TWO PLACE DECIMAL ± ***	
			THREE PLACE DECIMAL ± ***	



2. RELIABILITY TESTS

Items.	Specifications
01 High temp. Test	Keep 96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02 Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03 Humidity test	Keep 96 hours at $+60^{\circ}\text{C}\pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04 Temp./Humidity cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of;</p> 
05 Thermal cycle test.	Low temperature: $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$, temperature: $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$, cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
06 Vibration	10~200~10Hz sin-wave sweep 15min. 5G(constant) X,Y, Z 3 direction. 2 hours each, total 6 hours.
07 Fix drop test	Fix on jig. Then drop from 152cm height to the concrete floor X,y, z 6 direction. 5 times each, total 30 times.
08 Free drop test	Free drop from 100cm height to the concrete floor X,y, z 6 direction. 1 times each, total 6 times.
09 Rated Power test	Rated Power white noise is applied for 240 hours
10 Max Power test	Max power 1 min on – 2 min off 10 cycles.
11 Terminal strength test	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.
<p>Criterion:</p> <p>After these test , the change of S.P.L shall be within ± 3 dB .</p>	