

MESSRS.

SPECIFICATION FOR APPROVAL

承 认 书

Product	DYNAMIC SPEAKER
Part No.	AK-1608EA-3W1-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.CHARACTER DATA

AK-1608EA-3W1-LF

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 16 mm	
03	Rated Input Power	0.5W (Long Time)	
04	Max. Input Power	0.8W (Short Time)	
05	Impedance	8 ohm \pm 15% at 1500Hz.	
06	Resonance Frequency (Fo)	850Hz \pm 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	83dB(0.1W/0.1m) \pm 3 dB	at AVE 1.5K 2.0K 2.5K 3.0KHz.
		88dB (0.5W / 0.1m) \pm 3 dB	
08	Frequency Range	Fo – 20KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz,0.5W.	
10	Voice Coil	Diameter 8.35 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 7.9 x 1.1 mm	
12	Weight	1.0g \pm 5%g	
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 – 0.5W	
15	Buzz, Rattle, etc.	Should not be audible at 2.0V 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	

Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

BASIC

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

Standard Test Fixture

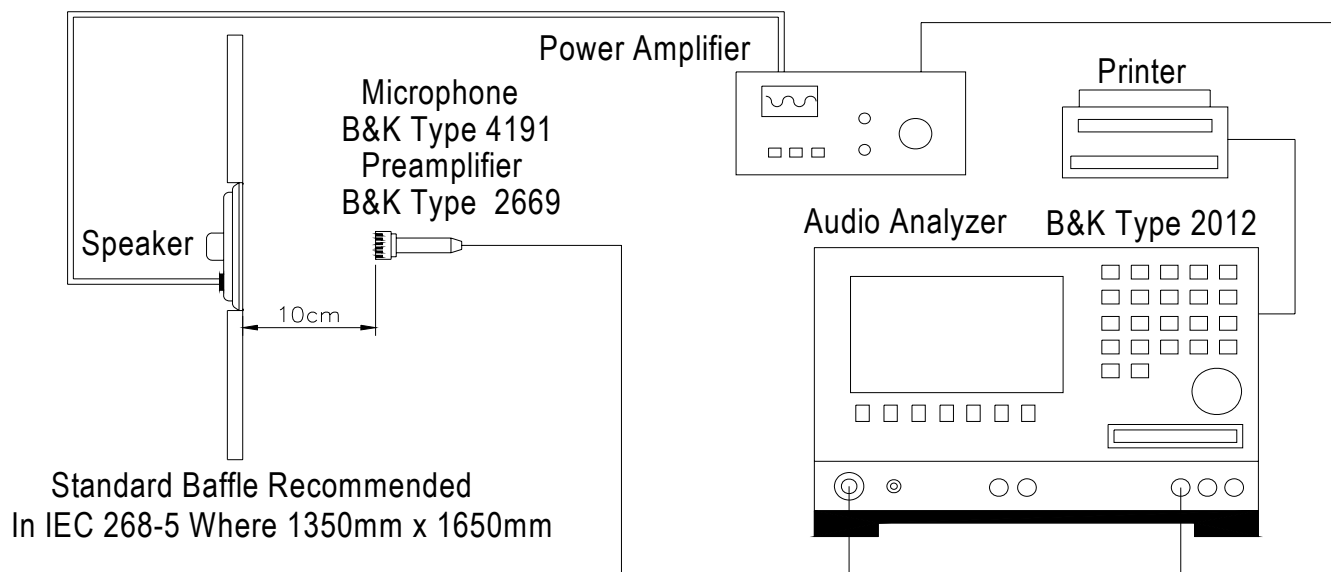
1. Input Power : 0.5W (2.0V)

2. Zero Level : -dB

3. Mode : SPEAKER

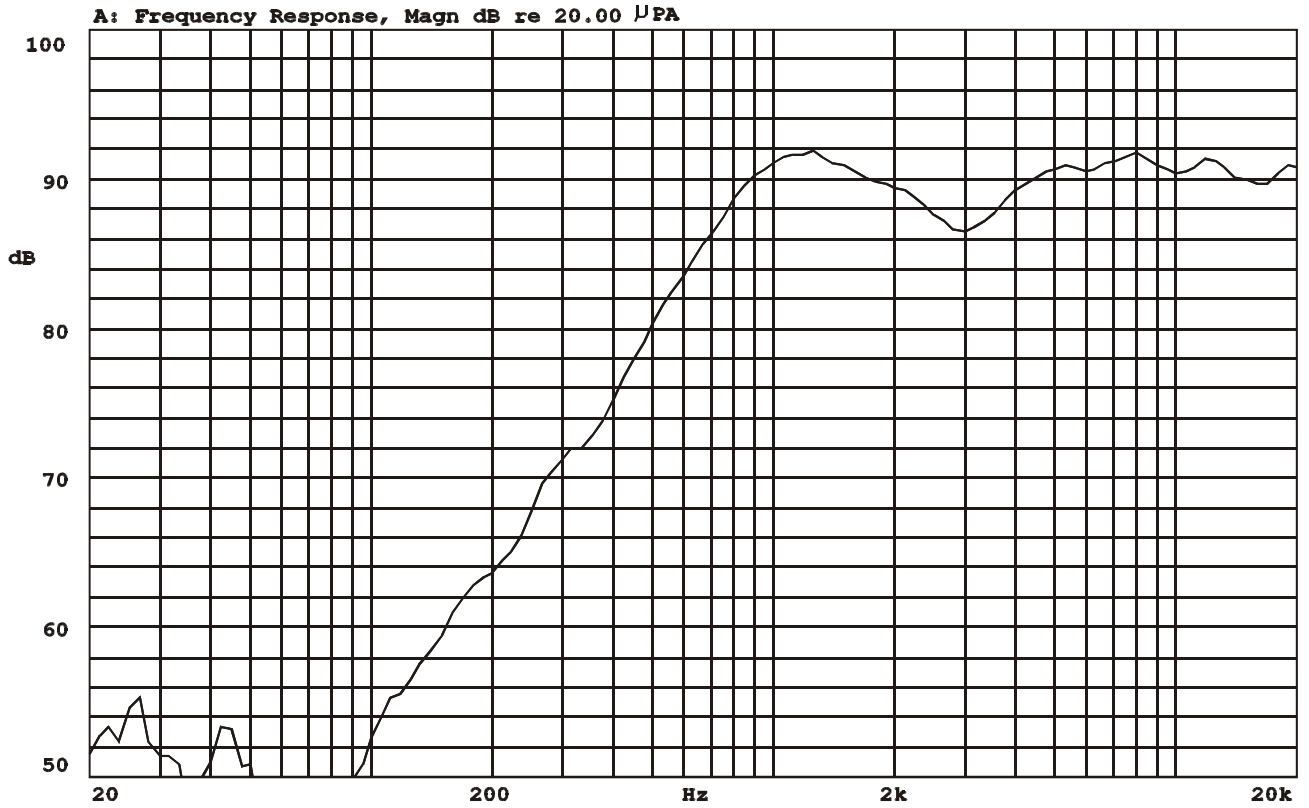
4. potentiometer Range : 50dB

5. Sweep Time : 0.5sec



Frequency Response Curve

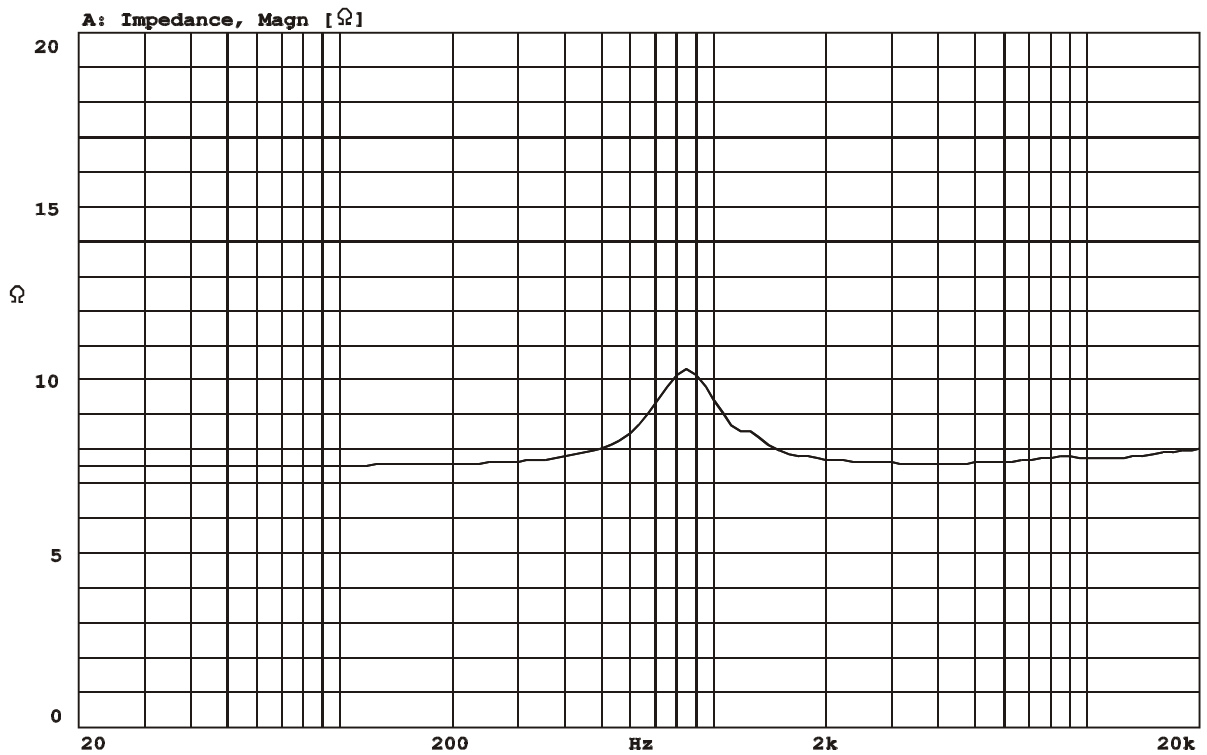
X:1.0600kHz *Y:91.44dB ZA:Live Curve SSR Fund.



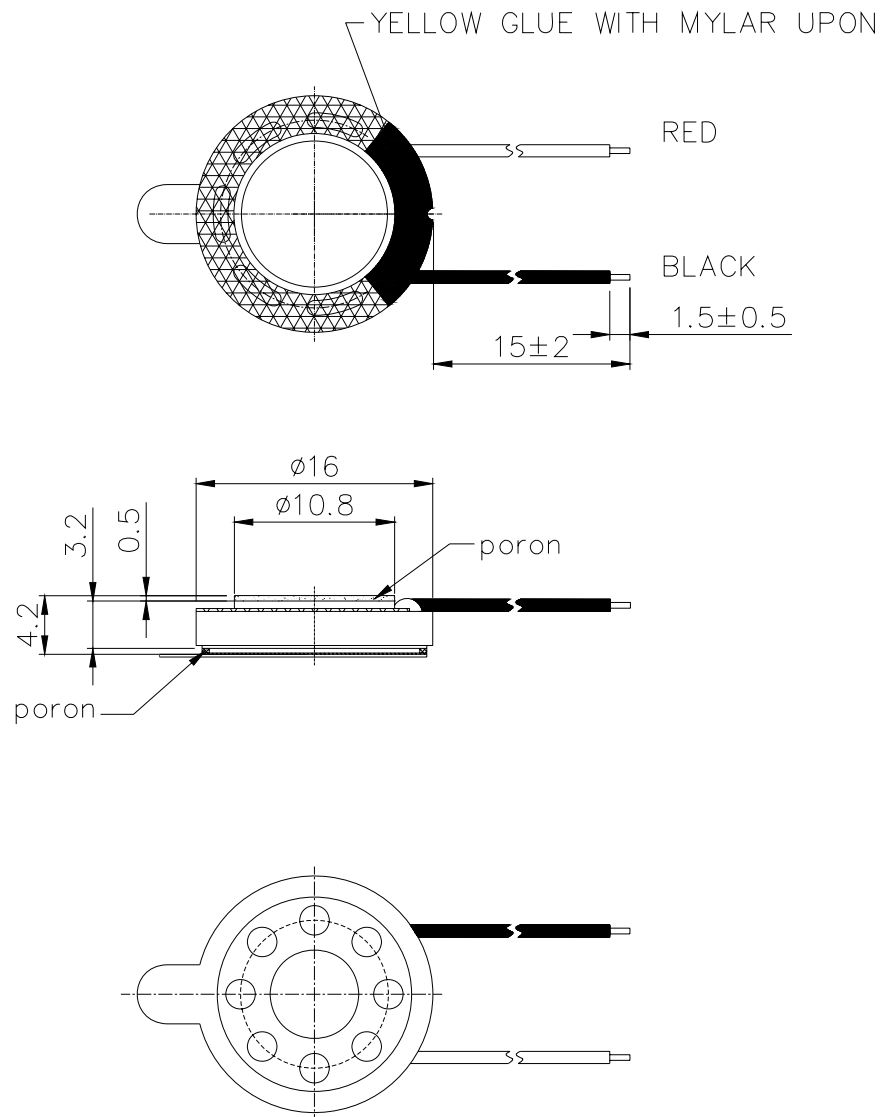
Mode: SSR

Impedance Curve

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



Mode: $Z(j\omega)$



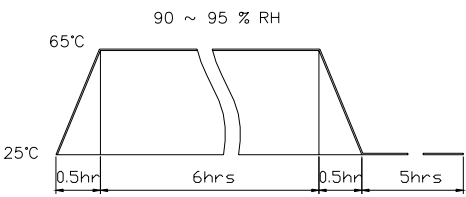
WIRE: UL1571 #32

TITLE: DYNAMIC SPEAKER		DRAWN: Lily	2006-07-24	SCALE: ***	SHEET: 1 of 1
PART NO. AK-1608EA-3W1-LF		DESIGNED: R&D OF AAT		UNITS: mm	
DWG NO. DSE-1078		CHECKED:		TOLERANCE ± 0.2	
		APPROVAL:		UNLESS OTHERWISE SPECIFIED:	
		MATERIAL: ***		ONE PLACE DECIMAL ± ***	
				TWO PLACE DECIMAL ± ***	
				THREE PLACE DECIMAL ± ***	



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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 96 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>		