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# SPECIFICATION FOR APPROVAL

Product	DYNAMIC SPEAKER
Part No.	AS-1642E08-A3W1
Customer Approval	

Approved By	Checked By	Made By



A & B Components

<http://www.speaker-tw.com>

# 1.CHARACTER DATA

AS-1642E08-A3W1

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 $\Phi$ 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

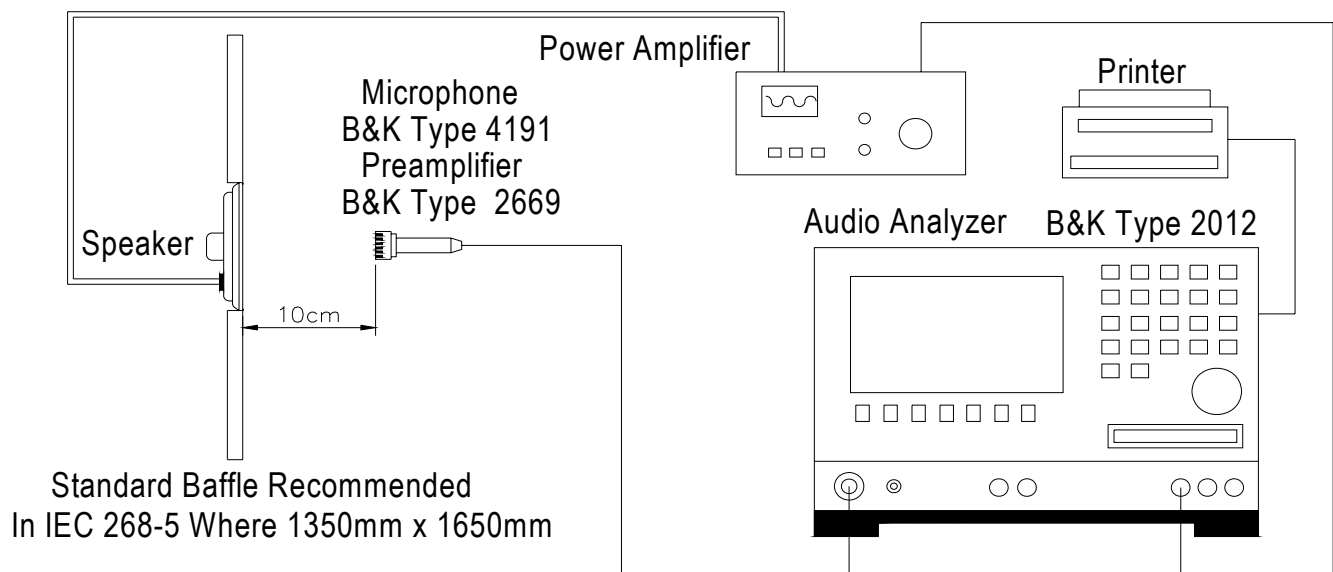
1.Input Power : 0.5W ( 2.0V )

2.Zero Level : -dB

3.Mode : SPEAKER

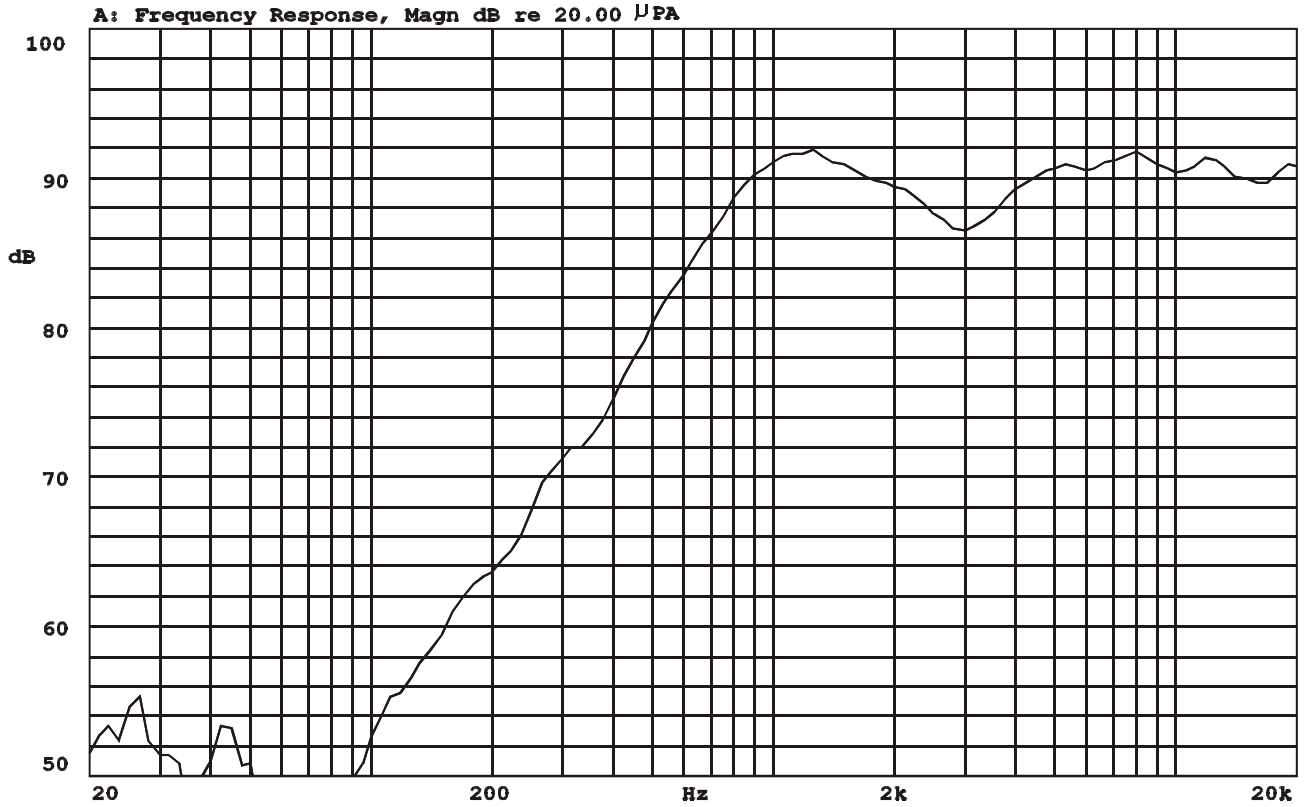
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



# Frequency Response Curve

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

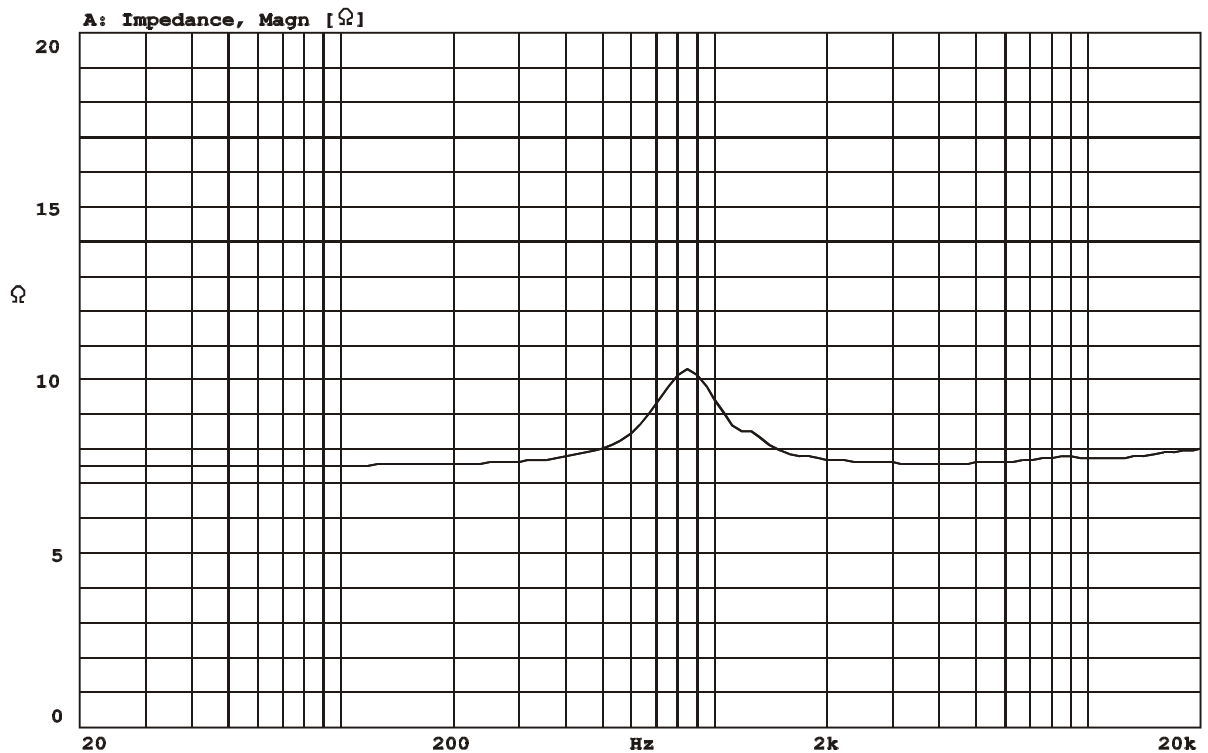


Mode: SSR



# Impedance Curve

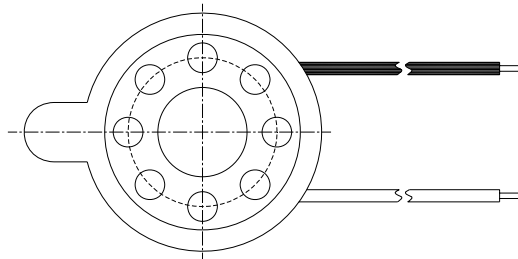
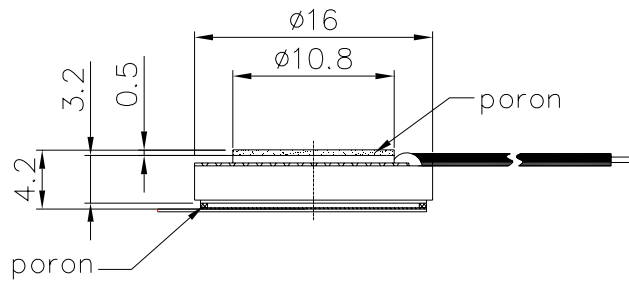
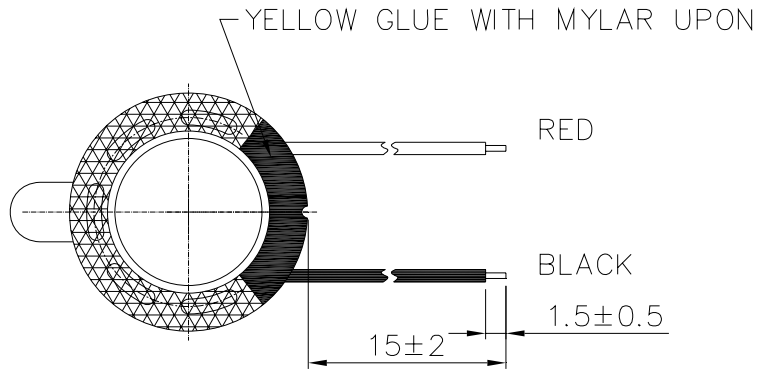
IMPEDANCE MEASUREMENTS: Measurement of Impedance  $Z(j\omega)$   
ZA:Live Curve Impedance  $\Omega$



Mode:  $Z(j\omega)$



REV NO.	REVISION NOTE	APPROVAL	DATE
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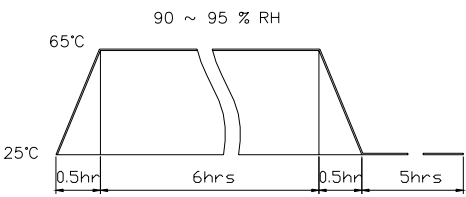


WIRE: UL1571 #32

TITLE:	DYNAMIC SPEAKER	DRAWN:	Richard 2006-07-24	SCALE:	***	SHEET:	1 of 1
PART NO.	AS-1642E08-A3W1	DESIGNED:	R&D DEP.	UNITS:	mm	TOLERANCE	± 0.2
DWG NO.	DSE-1078	1	CHECKED:	UNLESS OTHERWISE SPECIFIED:			
			APPROVAL:	ONE PLACE DECIMAL ± ***			
			MATERIAL:	TWO PLACE DECIMAL ± ***			
		REV		THREE PLACE DECIMAL ± ***			

A & B Components

## 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 <math>\pm 3</math> dB .</p>	