
SPECIFICATION FOR APPROVAL

Product	DYNAMIC SPEAKER
Part No.	AS-9050355Z04-R1T
Customer Approval	

Approved By	Checked By	Made By



A & B Components

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

1. SPECIFICATION

AS-9050355Z04-R1T

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 90 x 50 mm	
03	Rated Input Power	4.0 W	
04	Max. Input Power	5.0 W for 1 minute	
05	Impedance	4Ω± 15% at 0.8 KHz 1V	
06	Resonance Frequency (Fo)	250 Hz ± 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	88 dB(1.0W/0.5M) ± 3 dB	at AVE 0.8, 1.0, 1.2, 1.5 KHz.
		104 dB(4.0W/0.1M) ± 3 dB	
08	Frequency Range	Fo – 10 K Hz	
09	Total Harmonics Distortion	Max 10 % at 1 KHz, 1.5V.	
10	Voice Coil	Diameter 12.8 mm	
11	Magnet	Rare earth permanent (Ferrite) magnet Φ 45 x 22 x 8 mm	
12	Weight	136 g ± 40 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 4.0 W	
15	Buzz, Rattle, etc.	Should not be audible at 4.0 V 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 15 seconds without resulting in any damage or rejection.	
18	Temperature	Operating temperature: -20℃ to +60℃	
		Storage temperature: -30℃ to +70℃	

RoHS

2. 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

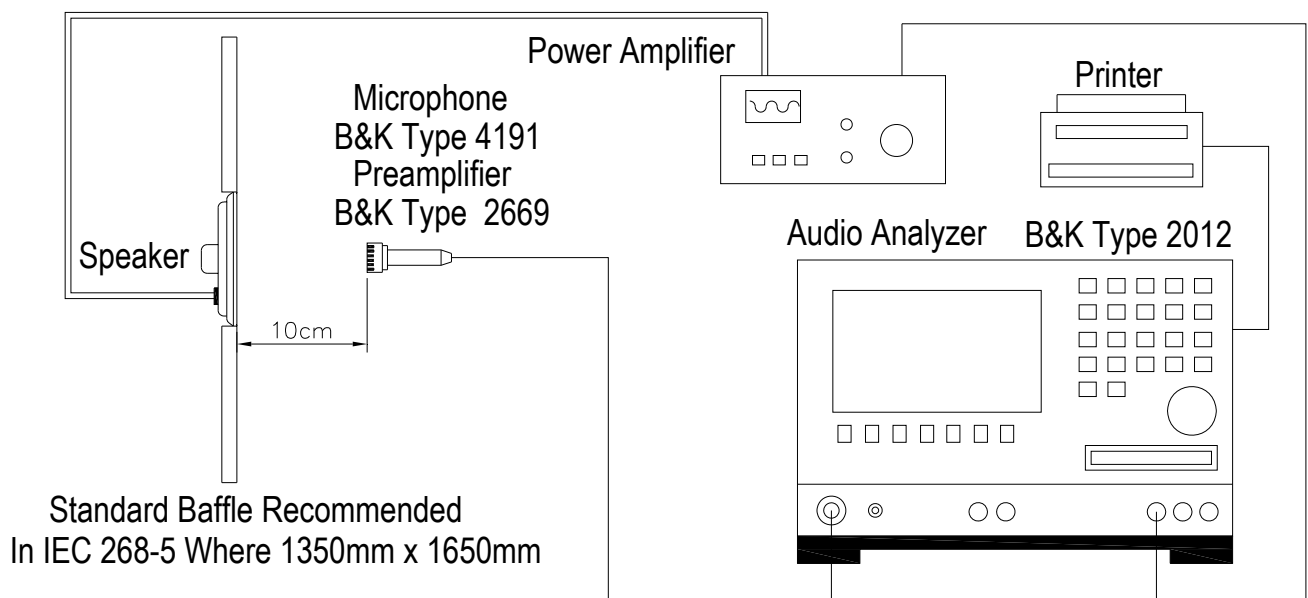
1. Input Power: 4.0 W (4.0 V)

2. Zero Level : -dB

3. Mode: SPEAKER

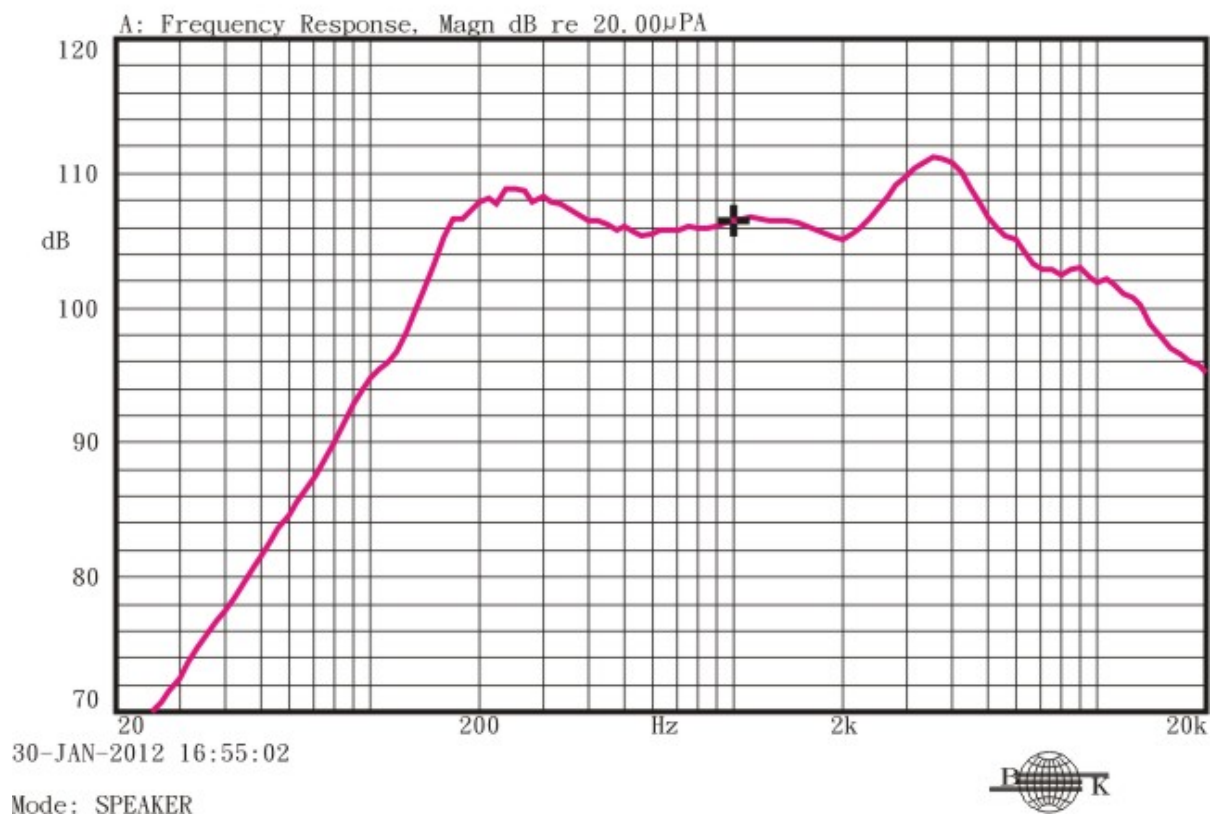
4. Potentiometer Range: 50dB

5. Sweep Time: 0.5sec



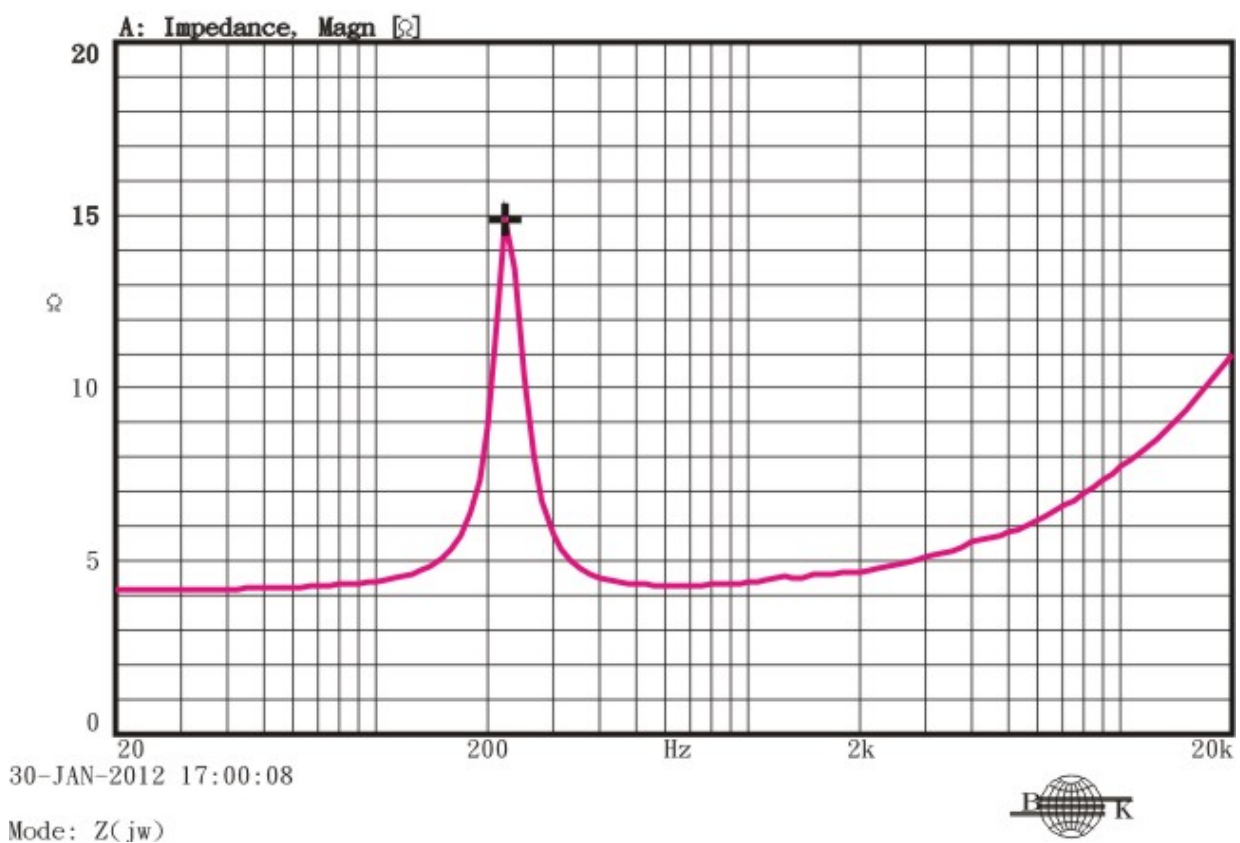
2-3. Frequency Response Curve

X:1.0000kHz *Y:106.56dB ZA:Live Curve SSR Fund.

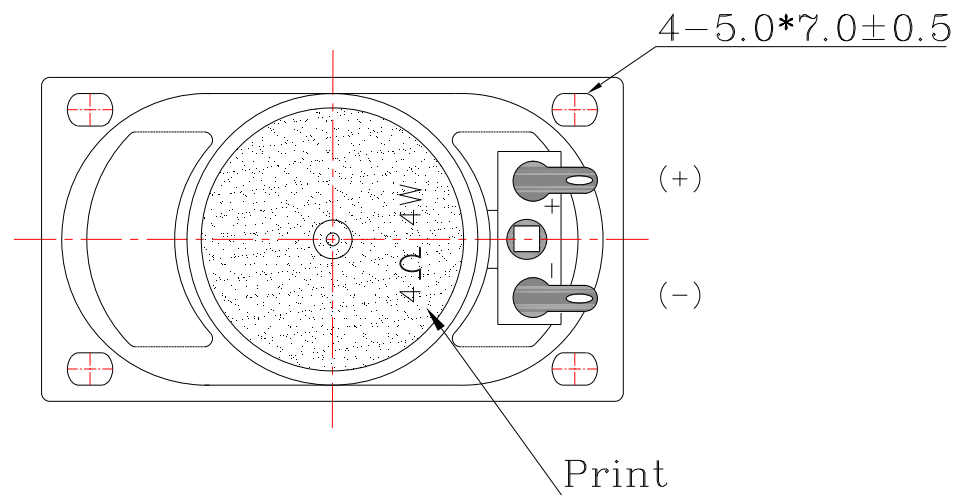
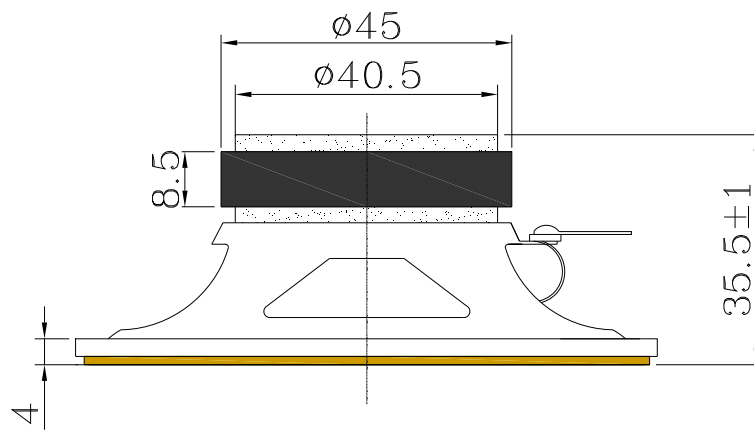
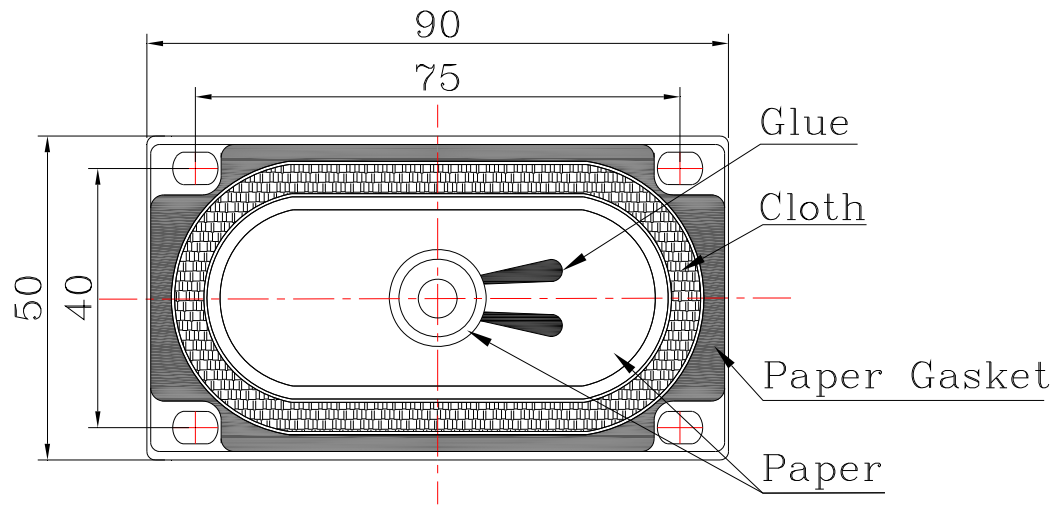


2-4. Impedance Curve

IMPEDANCE MEASUREMENTS: Measurement of Impedance $Z(j\omega)$
X:224.00Hz Y:14.85 Ω ZA:Live Curve Impedance



REV NO.	REVISION NOTE	APPROVAL	DATE
---------	---------------	----------	------



RoHS

TITLE: DYNAMIC SPEAKER		DRAWN: Richard 2012/01/30	SCALE: 2:1	SHEET: 1:1
PART NO. AS-9050355Z04-R1T	1	DESIGNED: R&D Dept.	UNITS: mm	
DWG NO. TV-5090FC-R		CHECKED:	TOLERANCE ± 0.5	
REV		APPROVAL:	UNLESS OTHERWISE SPECIFIED:	
		MATERIAL: ALLOY	ONE PLACE DECIMAL ± ***	
			TWO PLACE DECIMAL ± ***	
			THREE PLACE DECIMAL ± ***	

A & B Components

4. 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 $+40^{\circ}\text{C}\pm 3^{\circ}\text{C}$ relative humidity 90% and leave 3 hours in normal temperature and then checked.
04	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.
05	Vibration	10~55~10Hz sin-wave sweep 15min. 5G(constant) X, Y, Z 3 direction. 2 hours each, total 6 hours.
06	Free drop test	The part only shall be dropped from a height of 70cm onto a 40mm thick wooden board 1 times in 3 Direction each (X.Y.Z). (a total of 3 times).
07	Load test	Rated power white noise is applied for 96 hours
08	Max Power test	Max power 1 min. on - 2 min. off 10 cycles.
09	Terminal strength test	Capable of withstand 1kg load for 15 seconds without resulting in any damage or rejection.
Criterion :		
1. After testing any of the above reliability test items, the change of S.P.L shall be within ± 3 dB.		
2. If you need more information, please contact our technology department, thank you.		

SOLDERING CONDITION

Recommend using constant searing-iron in temperature range $360\pm 5^{\circ}\text{C}$.

Soldering time 2 seconds.