


MESSRS.

SPECIFICATION FOR APPROVAL

承 認 書

Product	DYNAMIC SPEAKER
Part No.	AK-2808BB-18 (RoHS)
Customer Approval	
Customer Project	

Approved By	Checked By	Made By
		



Advanced Acoustic Technology Corporation
笠翔科技 // 常州笠翔电子有限公司



ISO 9001 Certified
ISO 14001 Certified
QS9000 Certified

Head Company / 2F, No.207, Sec. 6, Chung Shan N. Rd., Taipei, Taiwan
Tel: +886-2-8866-5255 Fax: +886-2-8866-5250

大陸總公司 / 中國江蘇省常州市新北區龍虎塘工業園新苑四路 89 號
Tel: +86-519-8511-2382 Fax: +86-519-8510-0908

[http:// www.aatc.com.tw](http://www.aatc.com.tw) www.aatc.com.cn

EDITION:1.1

1.SPECIFICATION

AK-2808BB-18 (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 28 mm	
03	Rated Input Power	2.0 W	
04	Max. Input Power	2.2 W for 1 minute.	
05	Impedance	8 ohm \pm 15% at 2 KHz	
06	Resonance Frequency (Fo)	650 Hz \pm 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	76 dB(W/m) \pm 3 dB	at AVE 1.0 、 1.2 、 1.5 、 2.0 KHz.
		96 dB (2.0W/0.1m) \pm 3 dB	
08	Frequency Range	Fo – 20K Hz	
09	Total Harmonics Distortion	Less than 10 % at 1 KHz, 1.0V	
10	Voice Coil	Diameter 13.5 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 12.5 x 1.5mm	
12	Weight	7.4g \pm 0.5g	
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 2.0W	
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 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	

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 : 2.0W(4.0V)

2.Zero Level : -dB

3.Mode : SPEAKER

4.potentiometer Range : 50dB

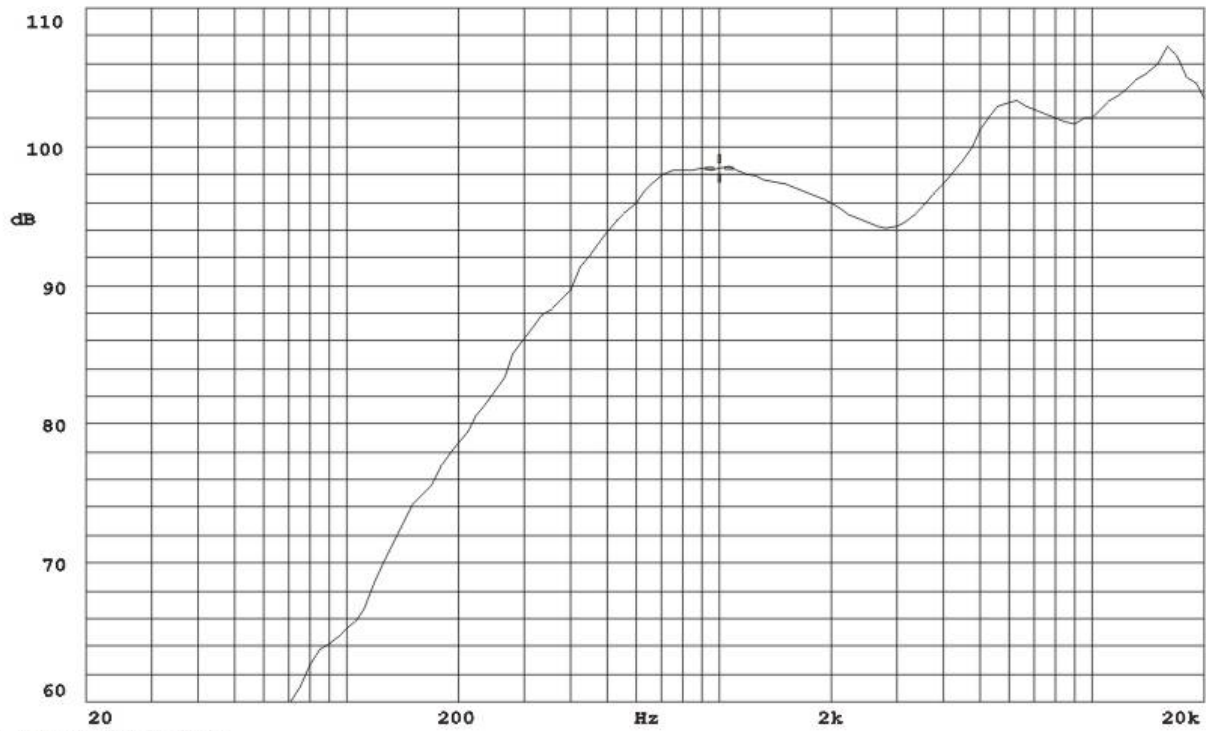
5.Sweep Time : 0.5sec



2-3. Frequency Response Curve

X:1.0000kHz *Y:98.48dB ZA:Live Curve SSR Fund.

A: Frequency Response, Magn dB re 20.00 μ PA



04-MAR-2009 14:48:09

Mode: SPEAKER

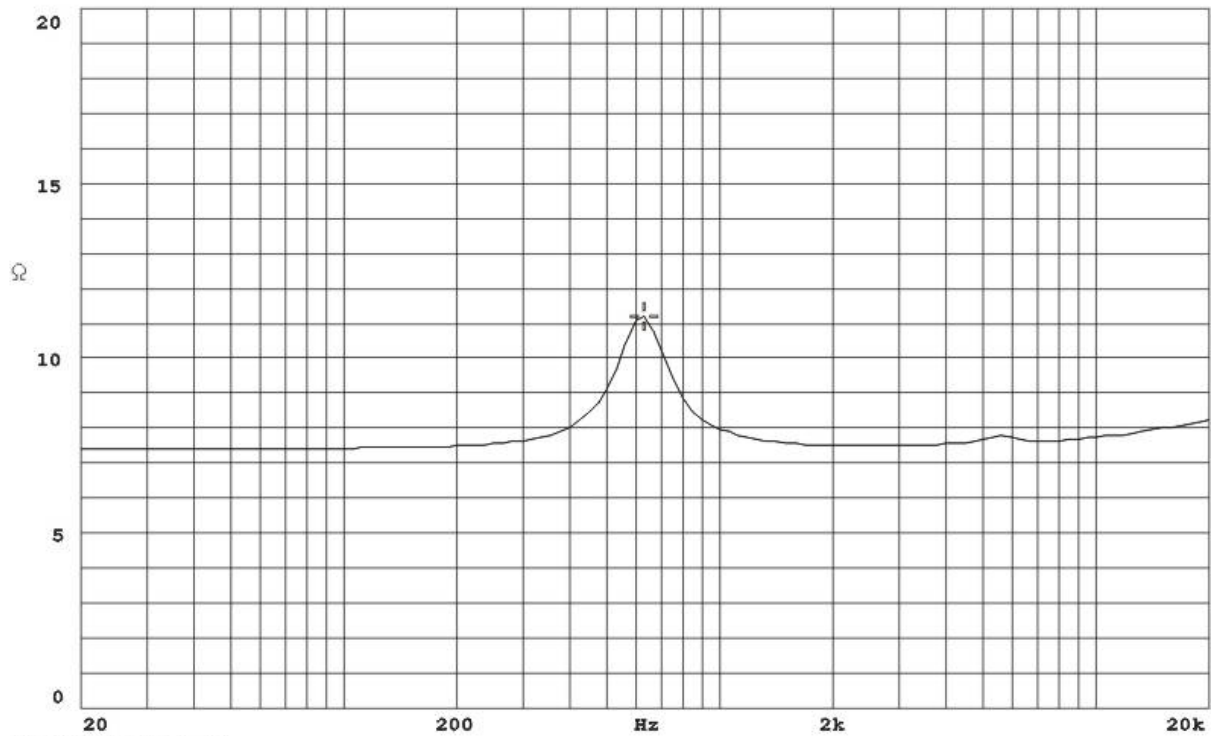


2-4. Impedance Curve

IMPEDANCE MEASUREMENTS: Measurement of Impedance $Z(j\omega)$

X:630.00Hz Y:11.19 Ω ZA:Live Curve Impedance

A: Impedance, Magn [Ω]

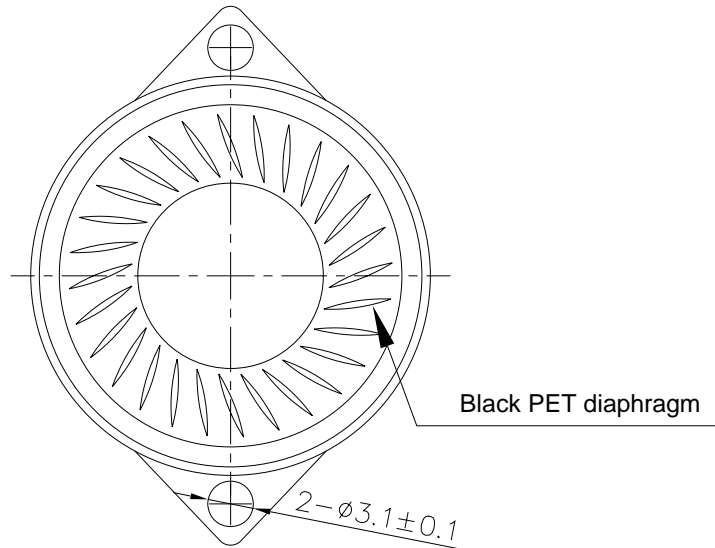
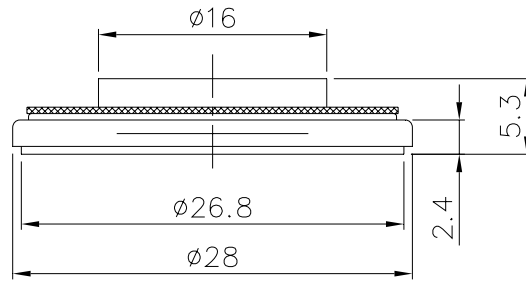
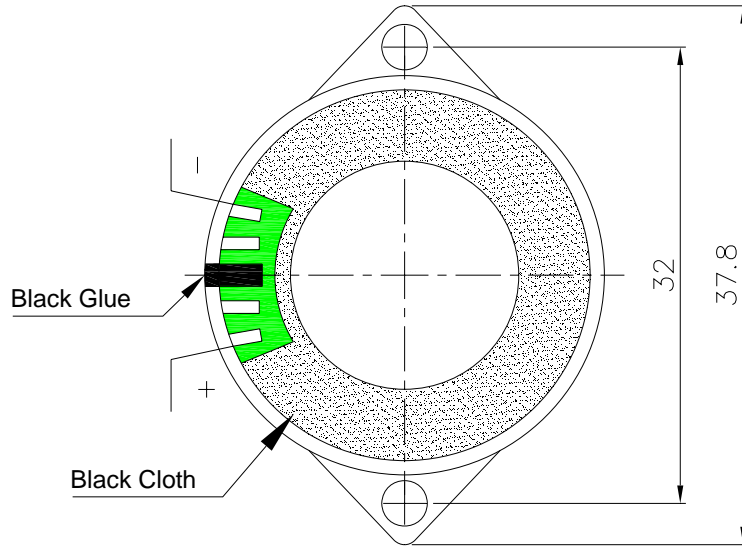


04-MAR-2009 15:13:09

Mode: Z (j ω)



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



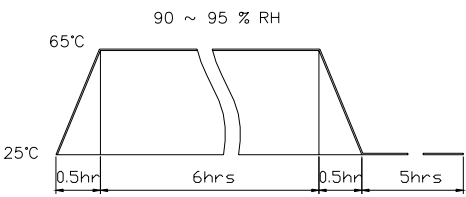
RoHS

TITLE:	DYNAMIC SPEAKER	DRAWN:	Jason	2009/03/04	SCALE:	2:1	SHEET:	1 of 1
PART NO.	AK-2808BB-18	DESIGNED:	R&D OF AAT		UNITS:	mm		
DWG NO.	AK-09030401	CHECKED:			TOLERANCE	± 0.3		
		APPROVAL:			UNLESS OTHERWISE SPECIFIED:	ONE PLACE DECIMAL \pm ***		
		MATERIAL:	*****		TWO PLACE DECIMAL \pm ***			
		REV	1		THREE PLACE DECIMAL \pm ***			



苙翔科技股份有限公司
ADVANCED ACOUSTIC TECHNOLOGY CORPORATION

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 $+60^{\circ}\text{C}\pm 3^{\circ}\text{C}$ 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	Load 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>		

SOLDERING CONDITION

Recommend using constant branding iron in 30W, and in temperature range $350\pm 10^{\circ}\text{C}$.

Soldering time 2 seconds.