MESSRS.

SPECIFICATION FOR APPROVAL

Product	**DYNAMIC SPEAKER**
Part No.	**ADK-2008EB-27A-LF (RoHS)**
Customer Approval	

Approved By	Checked By	Made By
ERIC WANG OCT-24-2006	KITTY DING OCT-24-2006	LILY ZHAO OCT-24-2006

KOYO ELECTRONICS COMPANY LIMITED

1.CHARACTER DATA

ADK-2008EB-27A-LF

	ITEM	SPECIFICATIONS	
01	**Type**	Dynamic speaker	
02	**Dimension**	External diameter 20 mm	
03	**Rated Input Power**	1.0W (Long Time)	
04	**Max. Input Powe**	1.2W (Short Time)	
05	**Impedance**	8 ohm ± 15% at 1500Hz.	
06	**Resonance Frequency (Fo)**	800Hz ± 20% at Fo, 1V	
07	**Sensitivity (S.P.L.)**	74dB(W/m) ± 3 dB	at AVE 1.0 – 1.8 KHz.
		93dB (1.0W / 0.1m) ± 3 dB	
08	**Frequency Range**	Fo – 20KHz	
09	**Total Harmonics Distortion**	Max 8 % at 1 KHz,1.0W.	
10	**Voice Coil**	Diameter 8.95 mm	
11	**Magnet**	Rare earth permanent (Nd-Fe-B) magnet Φ8.2 x 1.0 mm	
12	**Weight**	2.2g ± 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 – 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℃ to +60℃ Storage temperature: -30℃ to +70℃	

1. MEASURING METHOD

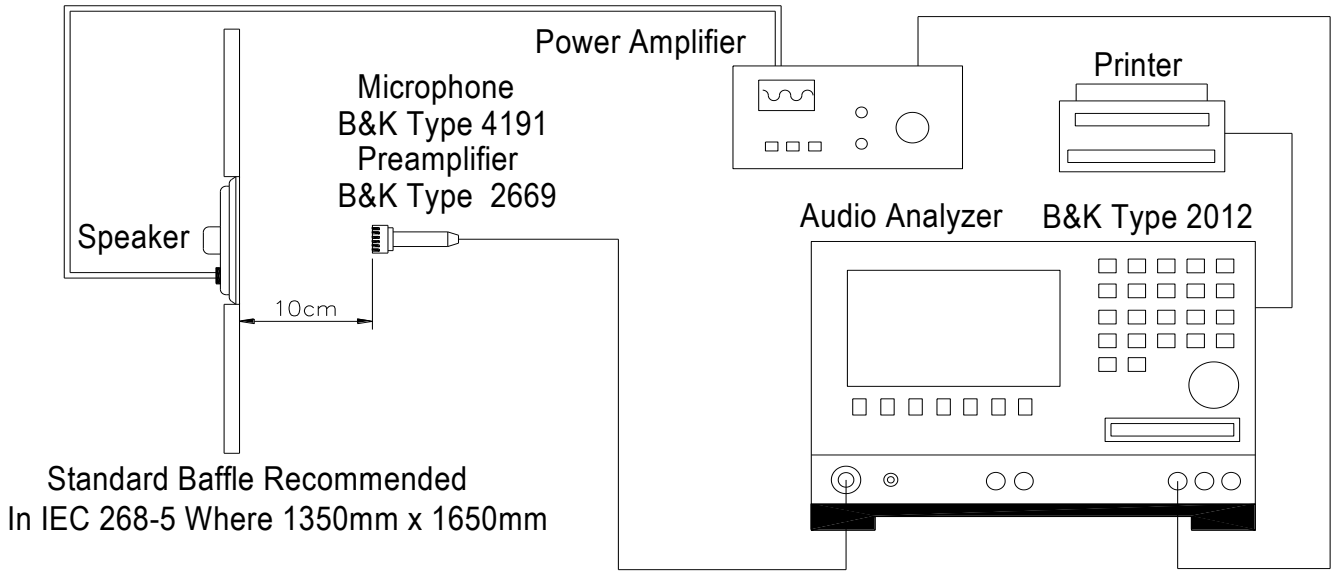
2-1 .Test Condition

STANDARD
Temperature : 15 ~ 35℃
Relative humidity : 45% ~ 85%,
Atmospheric pressure : 860mbar to 1060mbar.

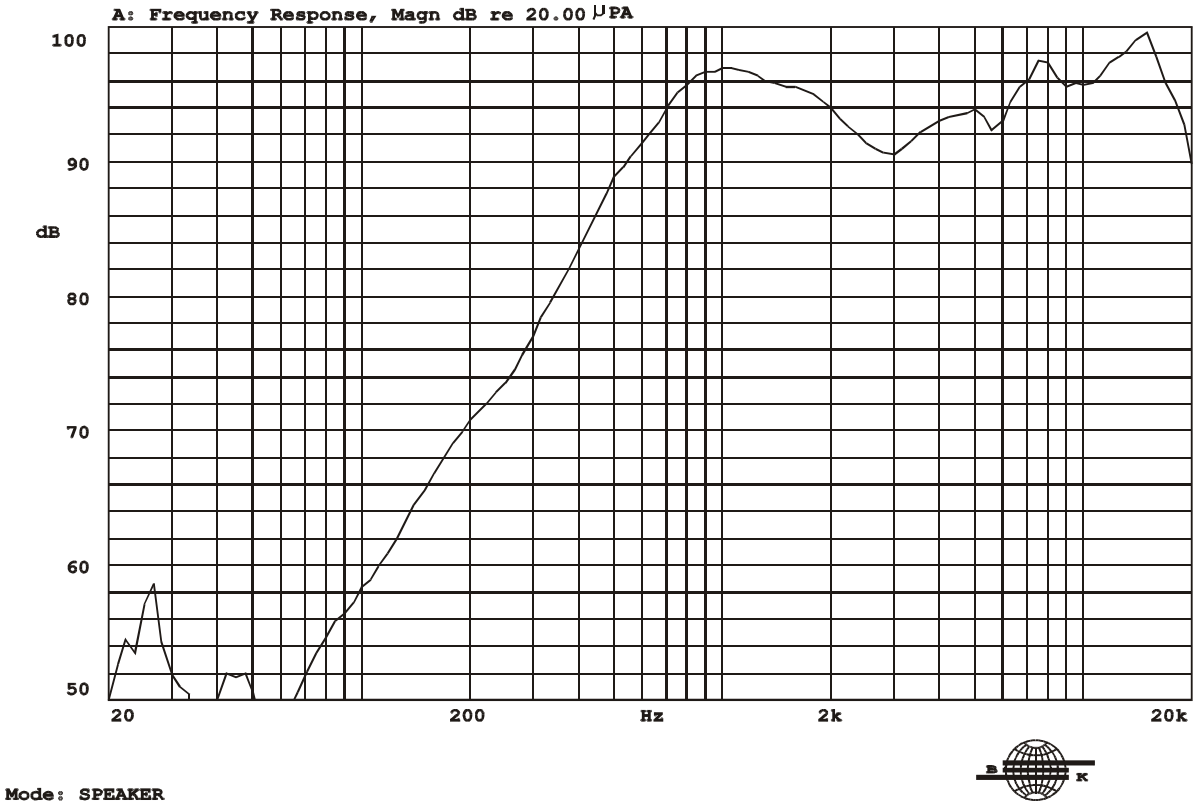
JUDGEMENT
Temperature : 20±3℃
Relative humidity : 60% ~ 70%,
Atmospheric pressure : 860mbar to 1060mbar

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

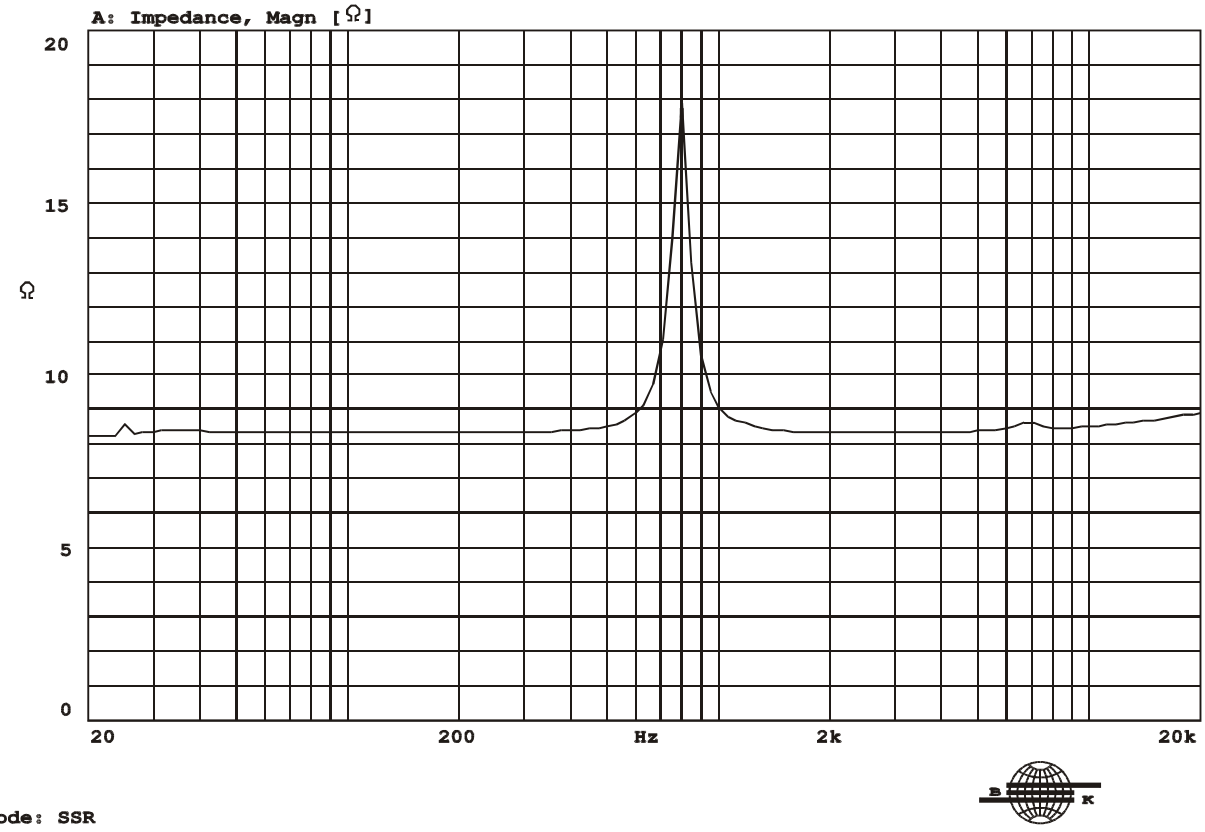


2-3. Frequency Response Curve

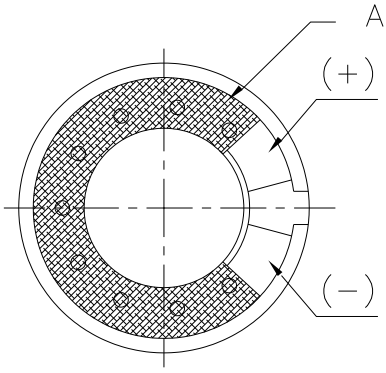


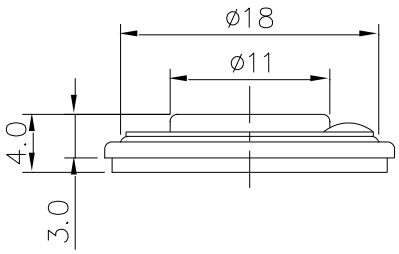
2-4.Impedance Curve

IMPEDANCE MEASUREMENTS: Measurement of Impedance Z(jw)
ZA:Live Curve Impedance Ω

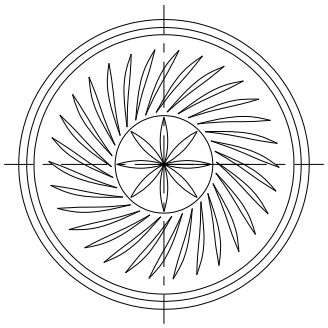


REV NO.	REVISION NOTE	APPROVAL	DATE





The speaker which meet waterproof standard IP 65 for Protection from a jet of water from all direction.



TITLE: DYNAMIC SPEAKER		DRAWN: Lily 2006/10/24	SCALE: 2:1	SHEET: 1of 1
		DESIGNED: R&D OF AAT	UNITS: mm	
PART NO. ADK−2008EB−27A−LF	1	CHECKED:	TOLERANCE ± 0.2	
		APPROVAL:	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
DWG NO. DSE−1195	REV	MATERIAL: IRON		

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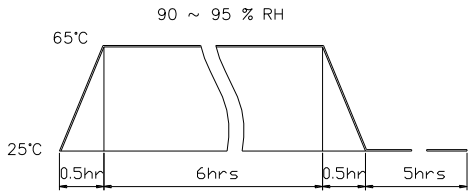
2. RELIABLITY TESTS

Items.		Specifications
01	**High temp. Test**	Keep 96 hours at +70℃±3℃ and leave 3 hours in normal temperature and then check
02	**Low temp. Test**	Keep 96 hours at -20℃±3℃ and leave 3 hours in normal temperature and then check
03	**Humidity test**	Keep 96 hours at + 60℃±3℃ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	**Temp./Humidity cycle**	The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of; 
05	**Thermal cycle test.**	Low temperature: -40℃±3℃, temperature:+70℃±3℃, 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	**DC voltage test**	DC3.46V for 1 hour.
10	**Load test**	Rated Power white noise is applied for 96 hours
11	**Max Power test**	Max power 1 min on – 1 min off 10 cycles.
12	**Terminal strength test**	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.

SOLDERING CONDITION

Recommend using constant branding iron in **30W**, and in temperature range **350±10°C**.
Soldering time **2** seconds.