

**MESSRS.**

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**SPECIFICATION FOR APPROVAL****承 認 书**

<b>Product</b>	<b>DYNAMIC SPEAKER</b>
<b>Part No.</b>	<b>HDK-2808AB-6C (RoHS)</b>
<b>Customer Approval</b>	

<b>Approved By</b>	<b>Checked By</b>	<b>Made By</b>
王台平 MAY-05-2014	曹丽萍 MAY-05-2014	LILY MAY-05-2014

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EDITION:1.1

**1. Specification**
**HDK-2808AB-6C(RoHS)**

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 28 mm	
03	Rated Input Power	2.0W	
04	Max. Input Powe	2.5W	
05	Impedance	8 ohm $\pm$ 15% at 1500Hz.	
06	Resonance Frequency (Fo)	750Hz $\pm$ 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	92dB (0.5W / 0.1m) $\pm$ 3 dB	at AVE 0.8, 1.0, 1.5, 2.0KHz.
08	Frequency Range	Fo – 10KHz	
09	Total Harmonics Distortion	Max10% at 1 KHz,2.5W.	
10	Voice Coil	Diameter 10.25 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet $\Phi$ 9.5 x 1.5 mm	
12	Weight	5.0g $\pm$ 0.2g	
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 4.0V 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	

## 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

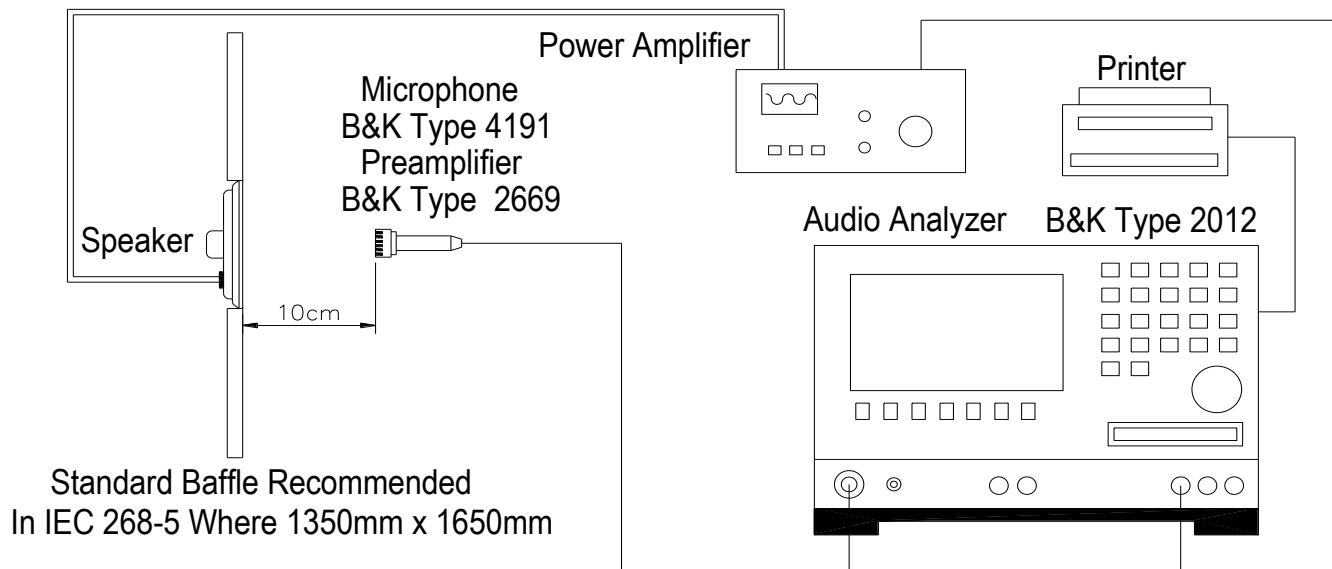
1.Input Power : 0.5W(2.0V)

2.Zero Level : -dB

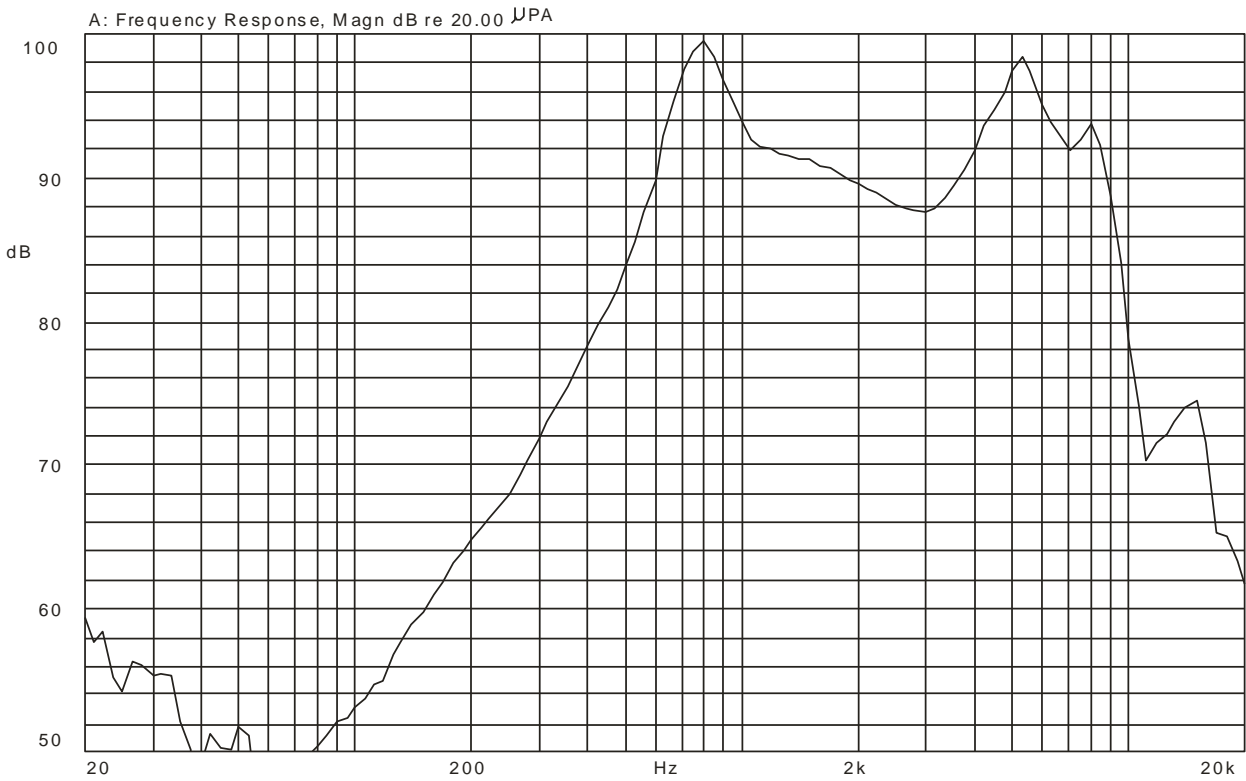
3.Mode : SPEAKER

4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



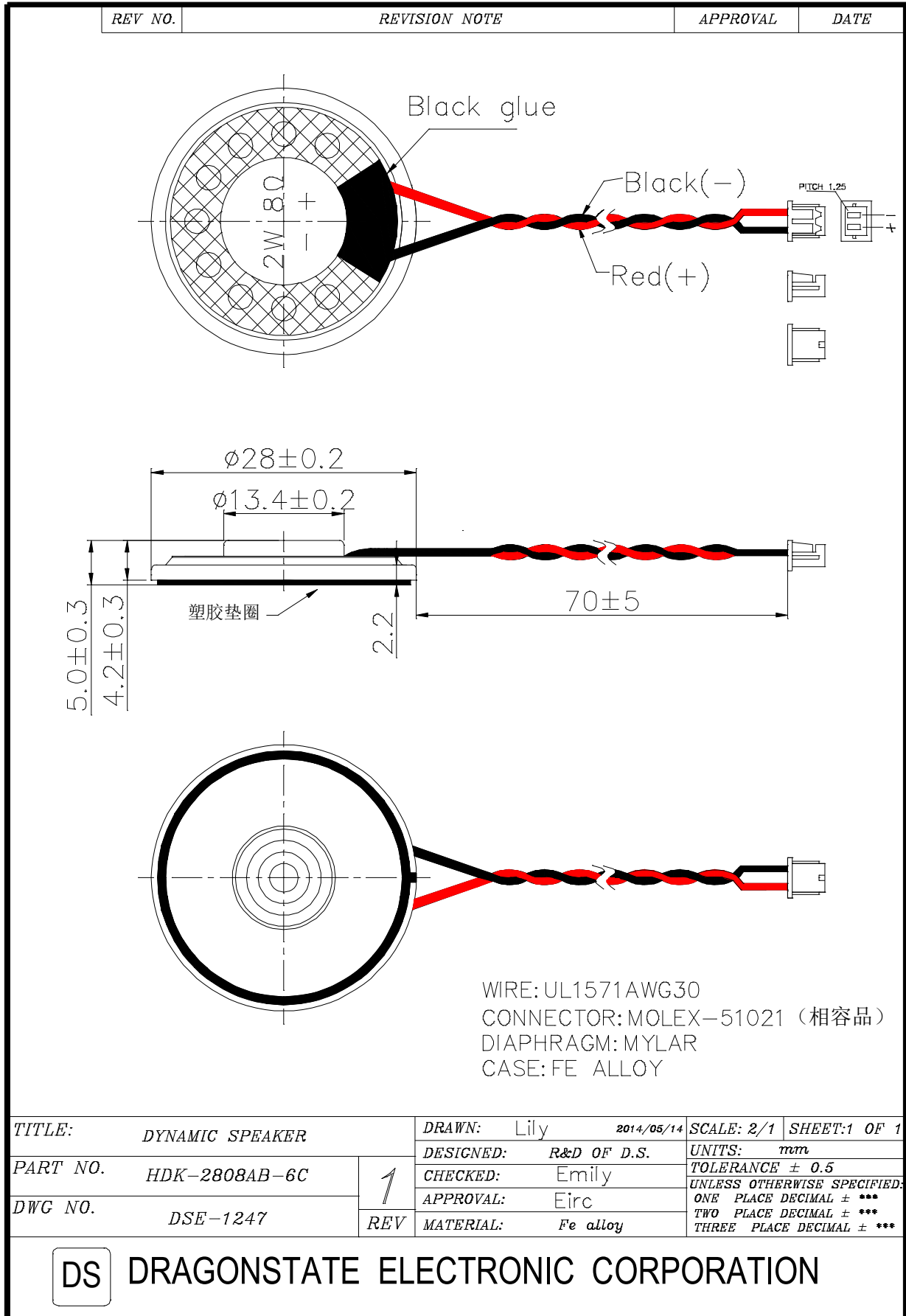
### 2-3. Frequency Response Curve



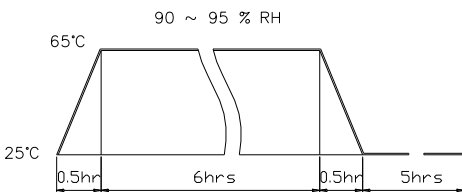
Mode: SSR



### 3.Dimension



#### 4. Reliability Test

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 $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 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: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ , 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.

#### Soldering Condition

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

Soldering time **2** seconds.



*Dragonstate Electronic Corporation*