

MESSRS.**SPECIFICATION FOR APPROVAL****承 認 书**

Product	WATERPROOF TYPE SPEAKER
Part No.	HDK-1808AA-8P(RoHS)
Customer	
Customer Part No.	

Approved By	Checked By	Made By
王台平 AUG-16-2016	曹丽萍 AUG-16-2016	LILY AUG-16-2016

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1.Specification

HDK-1808AA-8P(RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 18 mm	
03	Rated Input Power	1.5W	
04	Max. Input Power	1.8W for 1 minute	
05	Impedance	8 ohm \pm 15% at 1500Hz.	
06	Resonance Frequency (Fo)	1200Hz \pm 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	90dB(0.5W/0.1m) \pm 3 dB	at AVE 1.0K 1.2K 1.5K 2.0KHz
08	Frequency Range	Fo – 20KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz,1.0W.	
10	Voice Coil	Diameter 10.25 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 9.7 x 1.3 mm	
12	Weight	2.8g \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 – 1.5W	
15	Buzz, Rattle, etc.	Should not be audible at 3.46V 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℃	

2-1. Test Condition

STANDARD

Temperature : 15 ~ 35℃

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

BASIC

Temperature : 20±3℃

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

2-2. Standard Test Fixture

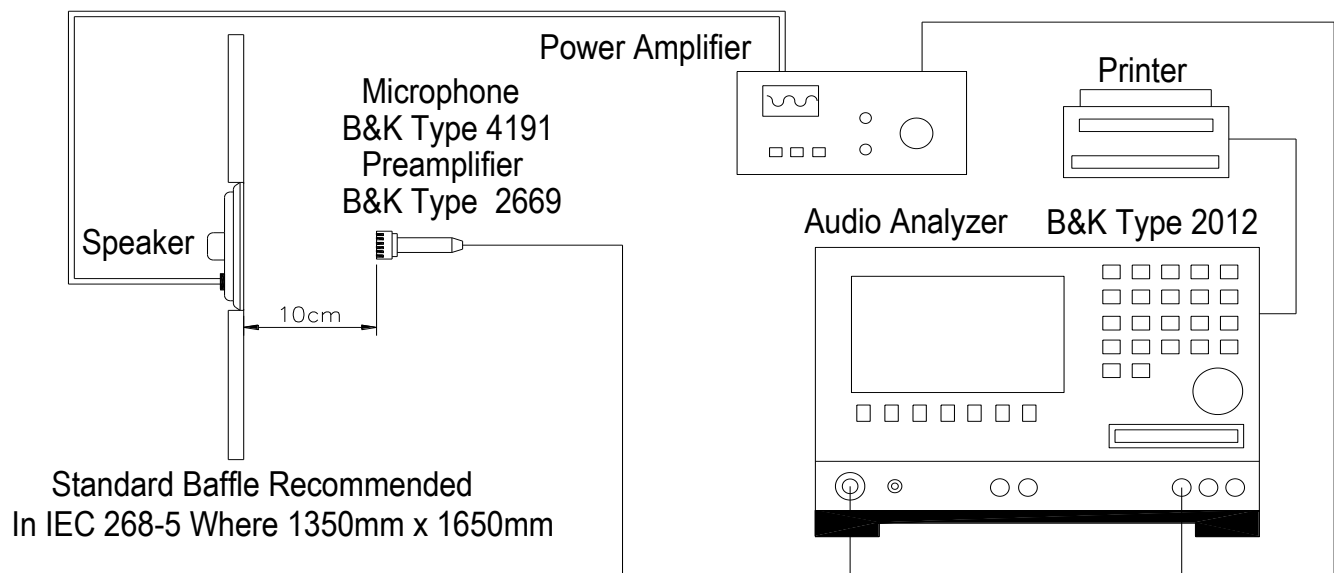
1. Input Power : 0.5W (2.0V)

2. Zero Level : -dB

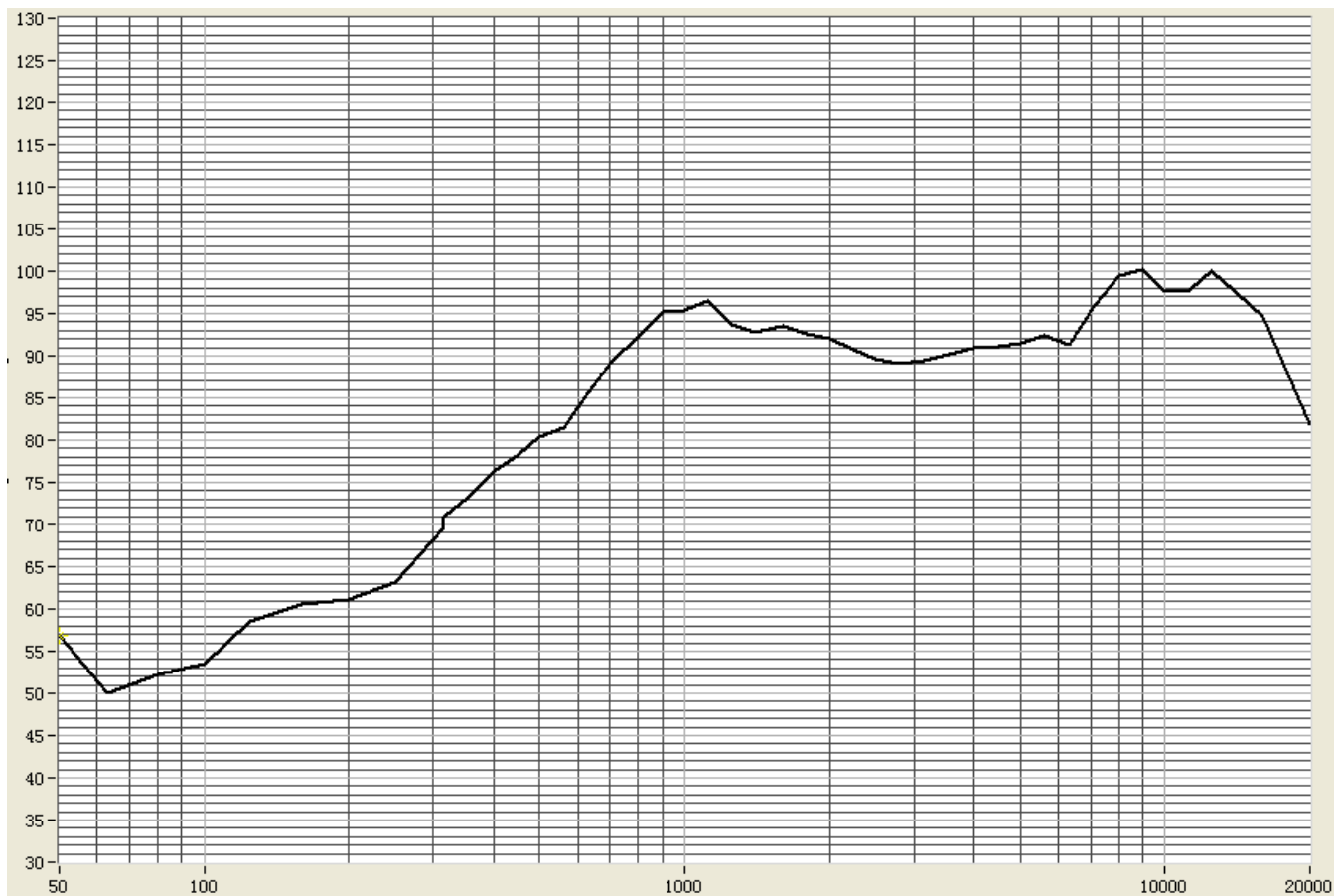
3. Mode : SPEAKER

4. potentiometer Range : 50dB

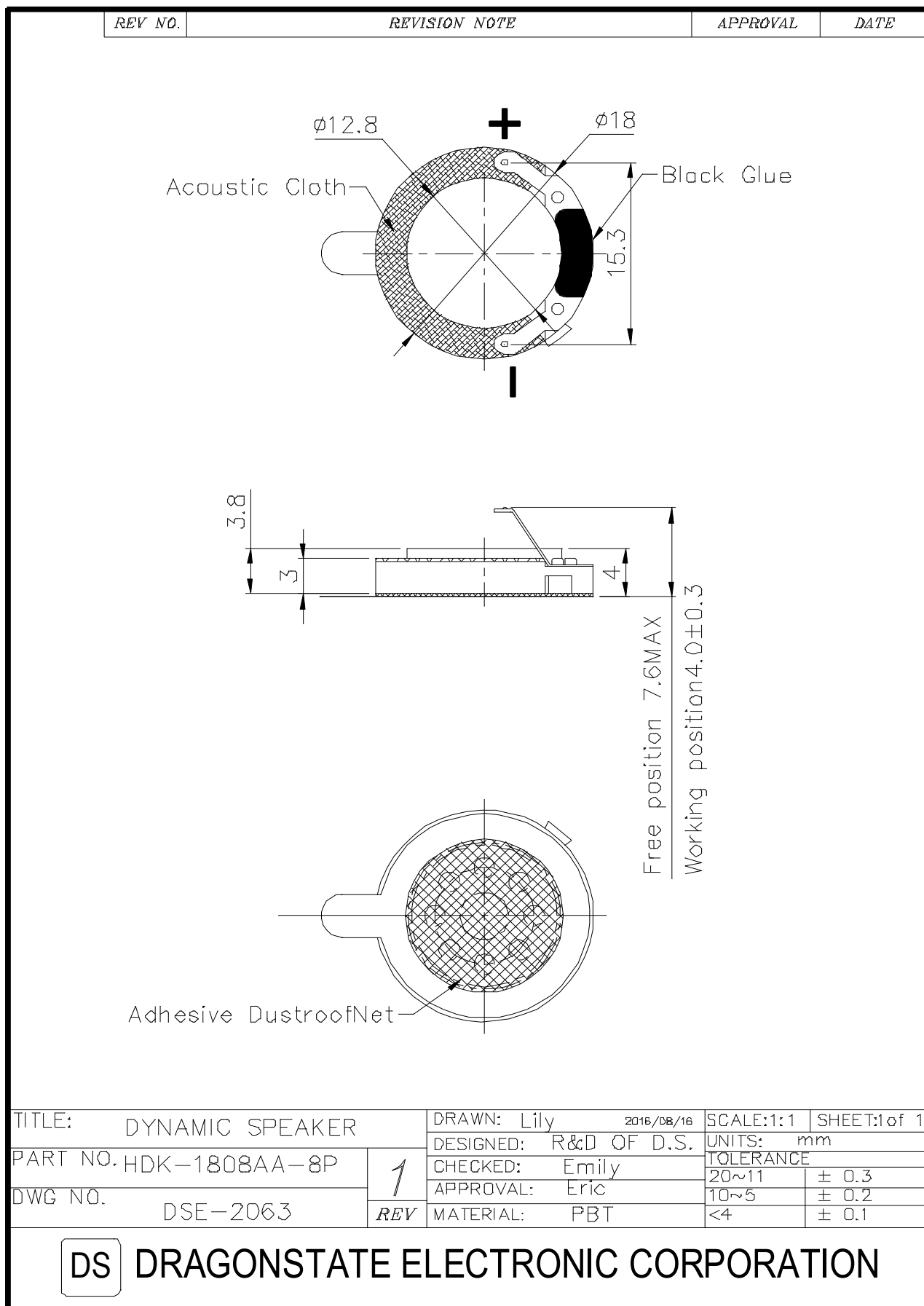
5. Sweep Time : 0.5sec



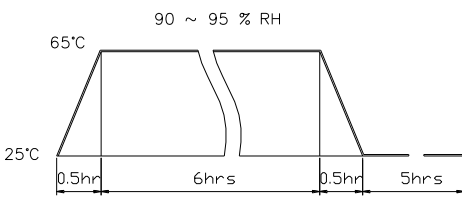
2-3.Frequency Response Curve



3. Dimension




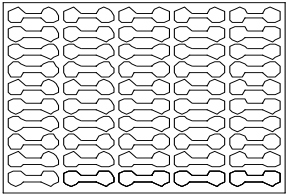
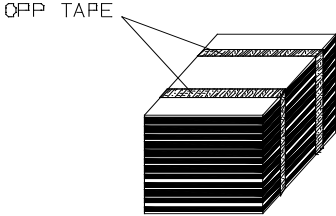
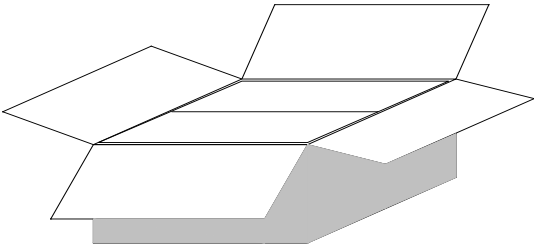
4. RELIABILITY TESTS

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	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.
12	Protection against liquids	Protected against 2 hours of immersion under 3M pressure
Criterion: After these test , the change of S.P.L shall be within ± 3 dB .		

SOLDERING CONDITION

Recommend using constant branding iron in 15 ~ 30W, and in temperature range $350 \pm 10^{\circ}\text{C}$. Soldering time not over 3 seconds.

5. Packing

REV NO.	REVISION NOTE	APPROVAL	DATE
<div>  <p>Cover(325*245*5mm) Material: Paper</p> </div>			
<div>  <p>Box(325*245*13mm) 100pcs Material: Paper+Epe</p> </div>			
<div>  <p>Middle(325*245*155mm) 1000pcs(10*100pcs) Material: Paper+Epe</p> </div>			
<div>  <p>Outer Box(490*360*350mm) 4000pcs(4*1000pcs) Material: Paper</p> </div>			
<p>单位: mm</p>			
TITLE: packing		DRAWN: Lily	2015/09/25
PART NO.	1	DESIGNED: R&D QF D.S.	UNITS: mm
		CHECKED: Emily	TOLERANCE
		APPROVAL: Eric	20~11 ± 0.3
DWG NO.	REV	MATERIAL: ***	10~5 ± 0.2
			<4 ± 0.1



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