

MESSRS.

SPECIFICATION FOR APPROVAL**承 認 书**

Product	DYNAMIC SPEAKER
Part No.	HDK-2808BB-7 (RoHS)
Customer Approval	

Approved By	Checked By	Made By
王台平 OCT-31-2018	曹丽萍 OCT-31-2018	LILY OCT-31-2018

常 州 华 龙 电 子 有 限 公 司**DRAGONSTATE ELECTRONIC CORPORATION**

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EDITION:1.1

1. Specification
HDK-2808BB-7 (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 28 mm	
03	Rated Input Power	1.0W	
04	Max. Input Power	1.5W for 1 minute	
05	Impedance	8 ohm ± 15% at 1000Hz.	
06	Resonance Frequency (Fo)	650Hz ± 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	90dB (0.1W / 0.1m) ± 3 dB	at AVE 0.8K,1.0K,1.2K,1.5KHz
		97dB (1.0W / 0.1m) ± 3 dB	
08	Frequency Range	Fo – 5KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz,1.0W.	
10	Voice Coil	Diameter 13.3 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet ϕ12.6x1.8 mm	
12	Weight	7.0g ± 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℃	

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

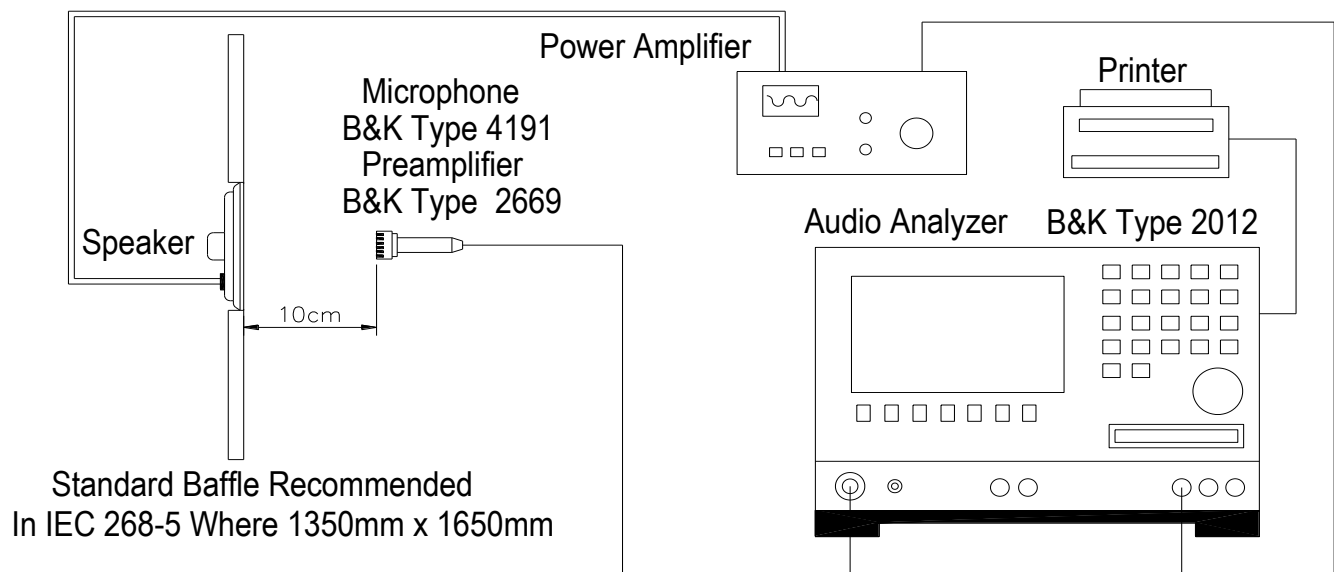
1. Input Power : 1.0W (2.83V)

2. Zero Level : -dB

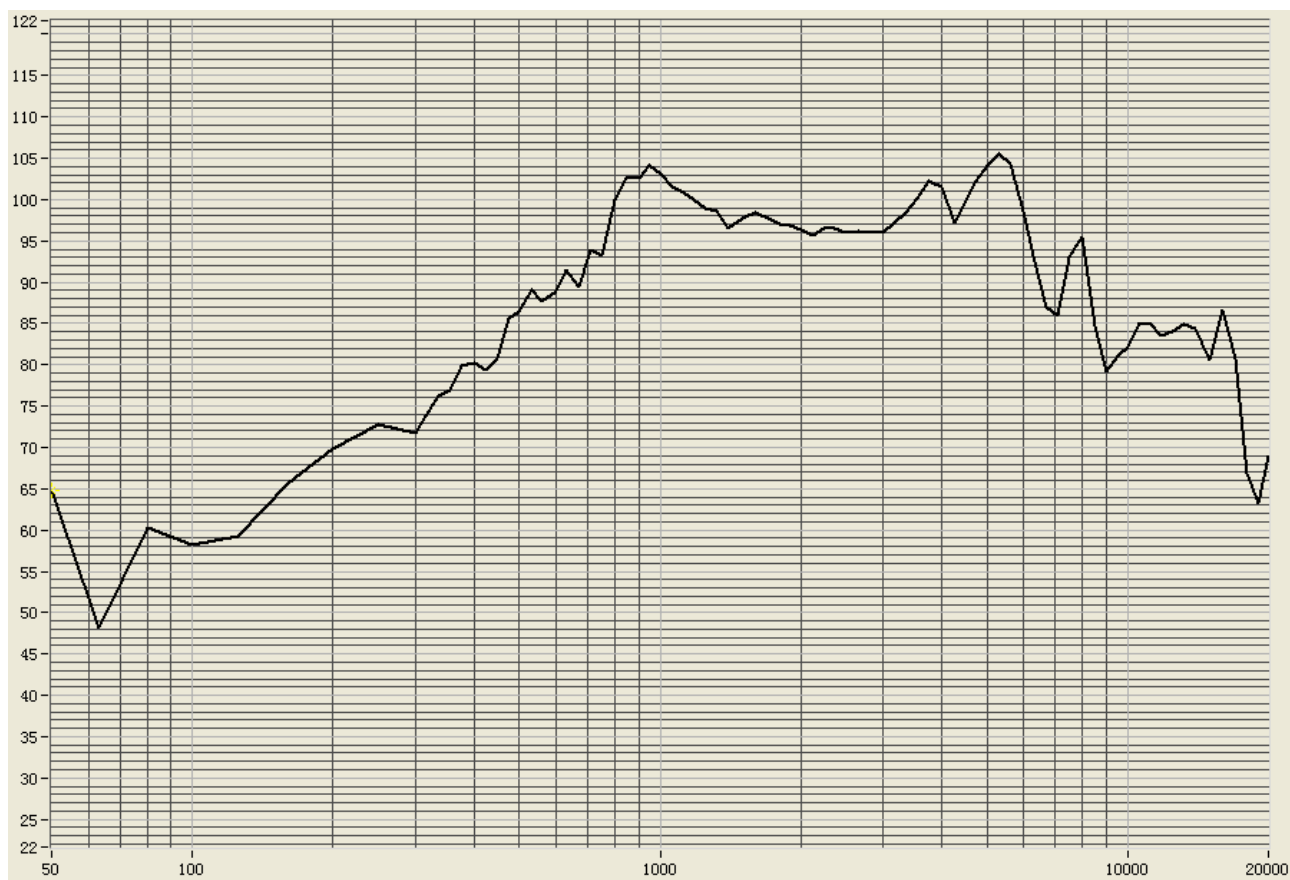
3. Mode : SPEAKER

4. potentiometer Range : 50dB

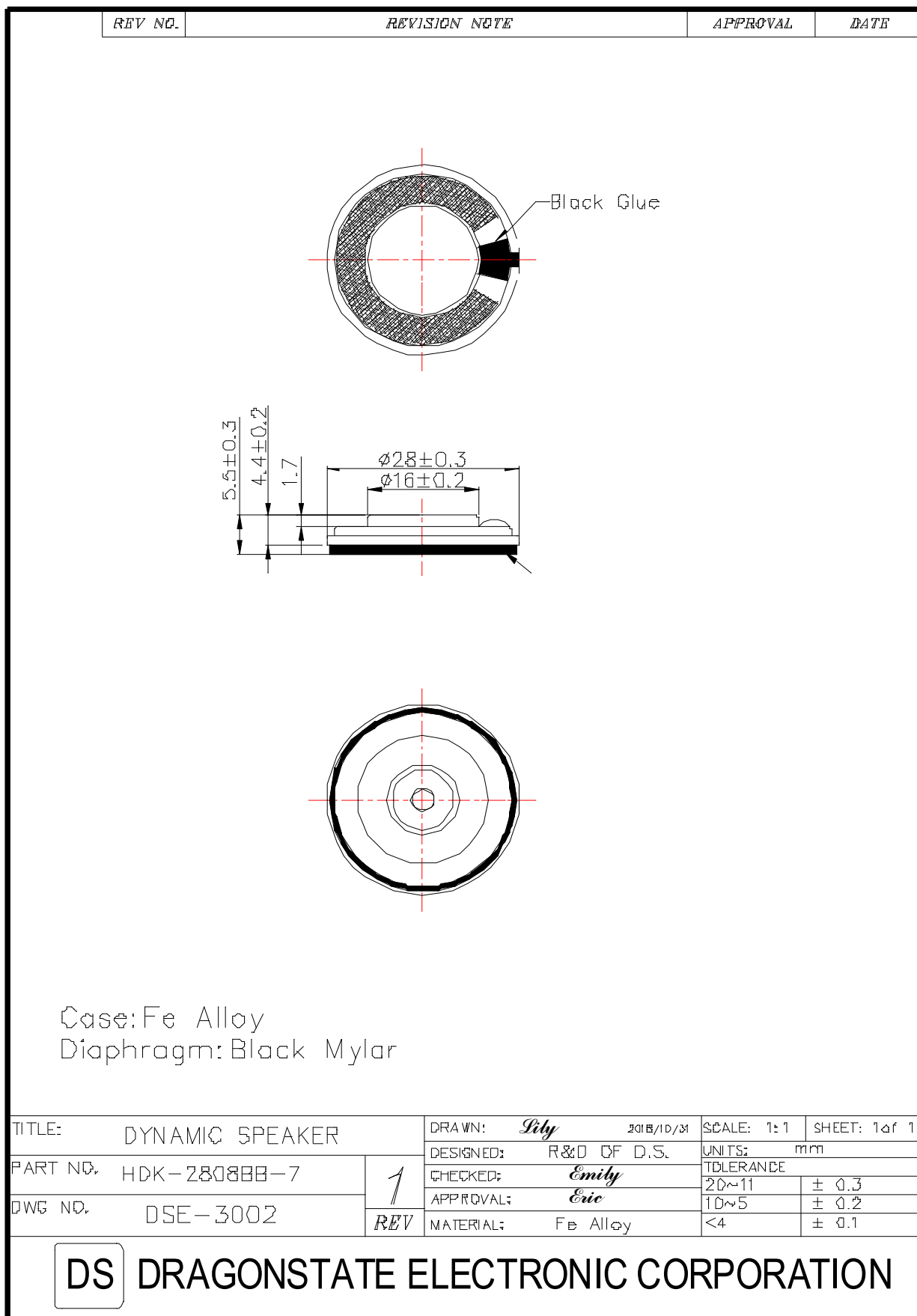
5. Sweep Time : 0.5sec



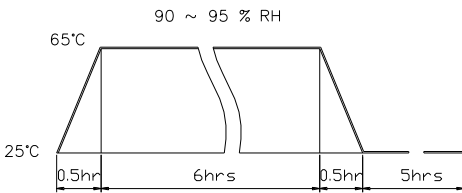
2-3. Frequency Response Curve



3.Dimension



4. Reliability Tests


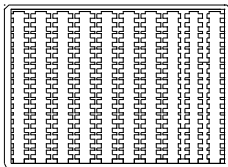
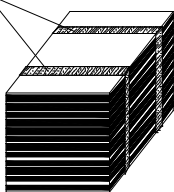
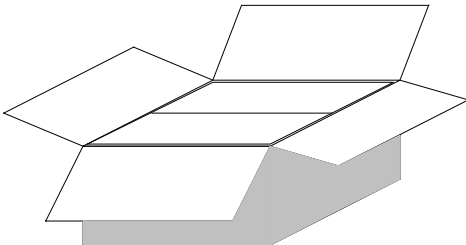
Items.		Specifications
01	High temp. Test	Keep 96 hours at $+70^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	Humidity 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.
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
			
	Cover(375*275*12mm) Material: Eps		
	↓		
			
	Box(375*275*48mm) 200pcs Material: Eps		
	OPP TAPE 		
	Middle(375*275*260mm) 1000pcs(5*200pcs) Material: Eps		
	↓		
			
	Outer Box(570*390*260mm) 2000pcs(2*1000pcs) Material: Paper		
	单位: mm		
TITLE: packing		DRAWN: Lily 2013/12/05	
PART NO.		DESIGNED: R&D OF D.S.	SCALE: 2:1
1		CHECKED: Emily	SHEET: 1 of 1
		APPROVAL: Eric	UNITS: mm
DWG NO.		MATERIAL: ***	TOLERANCE
REV		<4	20~11 ± 0.3
			10~5 ± 0.2
			± 0.1
<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">DS</div> DRAGONSTATE ELECTRONIC CORPORATION			