

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

Product	DYNAMIC SPEAKER
Part No.	HDK-3608BB-6C33 (RoHS)
Customer	
Customer Part No.	2422

Approved By	Checked By	Made By
王台平 MAR-18-2024	曹丽萍 MAR-18-2024	LILY MAR-18-2024

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

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History change record

[illegible]

1.Specification

HDK-3608BB-6C33 (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 36 mm	
03	Rated Input Power	1.0W	
04	Max. Input Power	1.2W	
05	Impedance	8 ohm $\pm$ 15%	
06	Resonance Frequency (Fo)	670Hz $\pm$ 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	100dB (1.0W / 0.1m) $\pm$ 3 dB	at AVE0.8K,1.0K,1.2K,1.5KHz.
08	Frequency Range	Fo –10KHz	
09	Total Harmonics Distortion	Max 10 % at 1 KHz,1.0W.	
10	Weight	Xg $\pm$ 0.2g	
11	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
12	Operation Test	Must be normal at program source – 1.0W	
13	Buzz, Rattle, etc.	Should not be audible at 2.83V sine Wave between 300 to 6KHz	
14	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
15	Terminal Strength	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.	
16	Temperature	Operating temperature: -30℃ to +65℃ Storage temperature: -30℃ to +65℃	

2.Test Condition

2.1STANDARD

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

2.2Standard Test Fixture

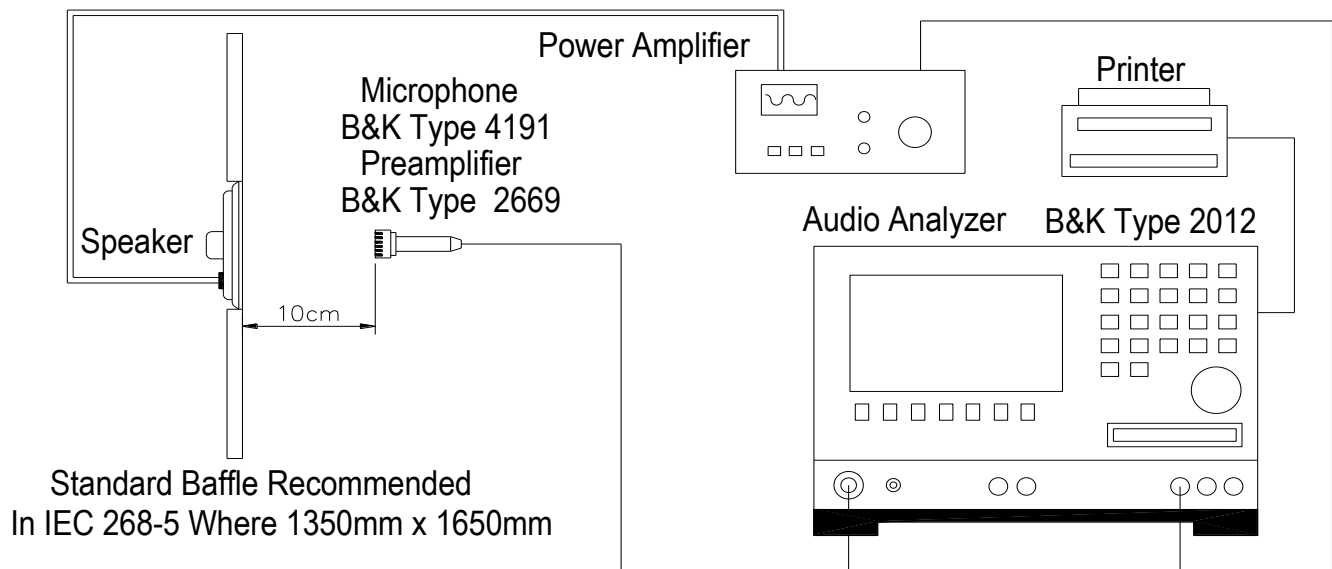
1.Input Power : 1.0W (2.83V)

2.Zero Level : -dB

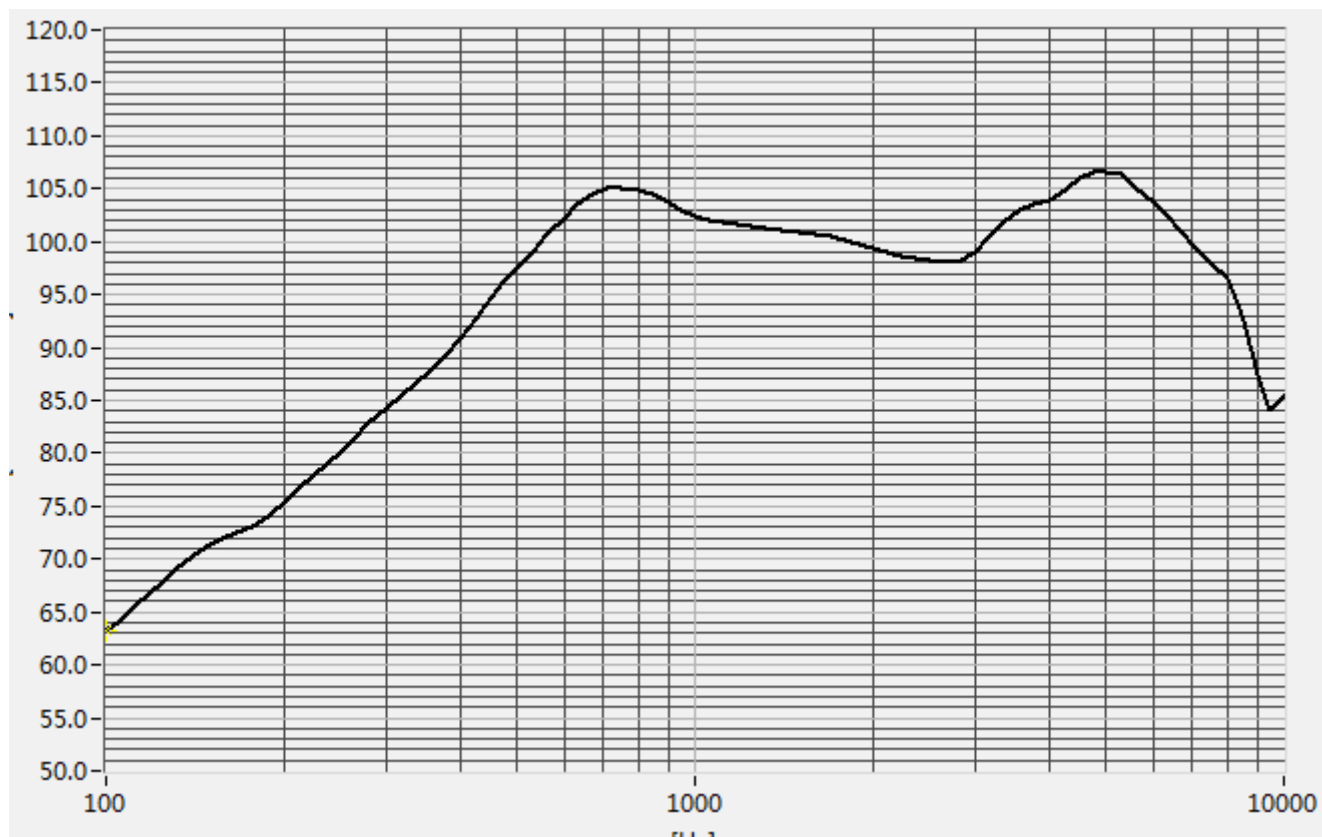
3.Mode : SPEAKER

4.potentiometer Range : 50dB

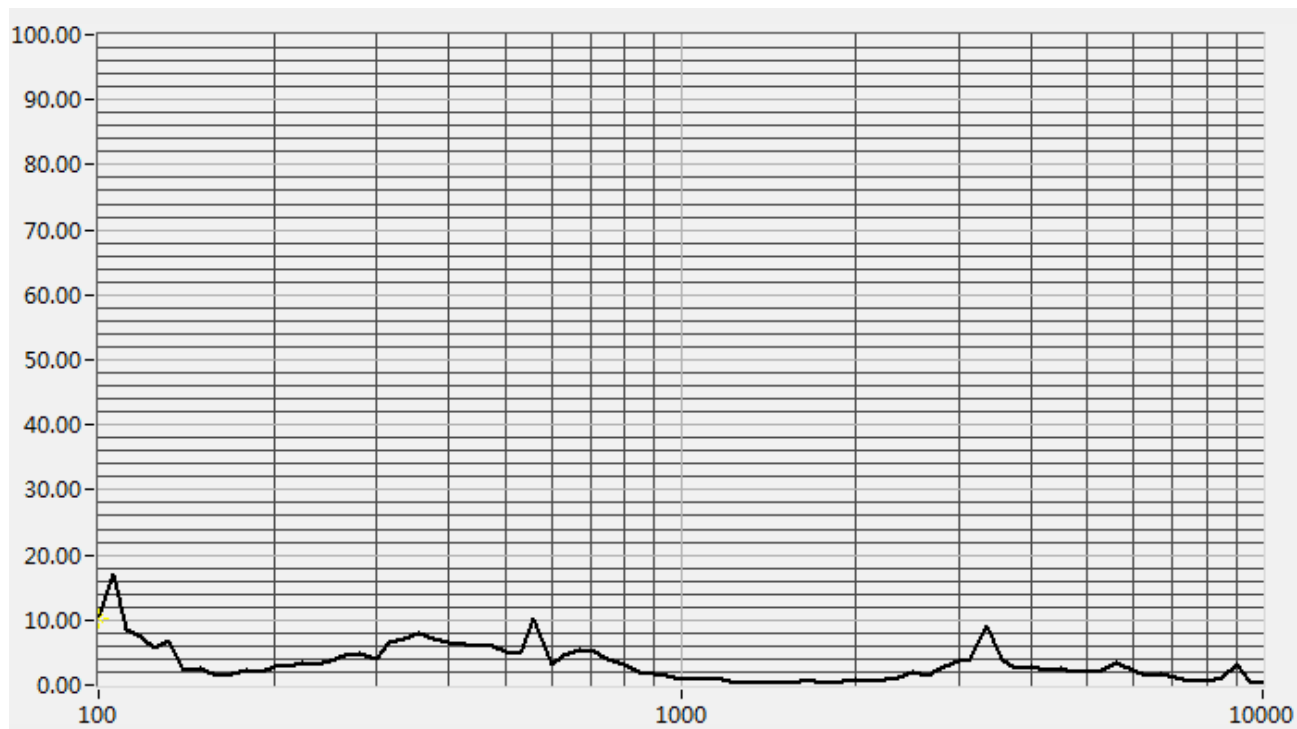
5.Sweep Time : 0.5sec



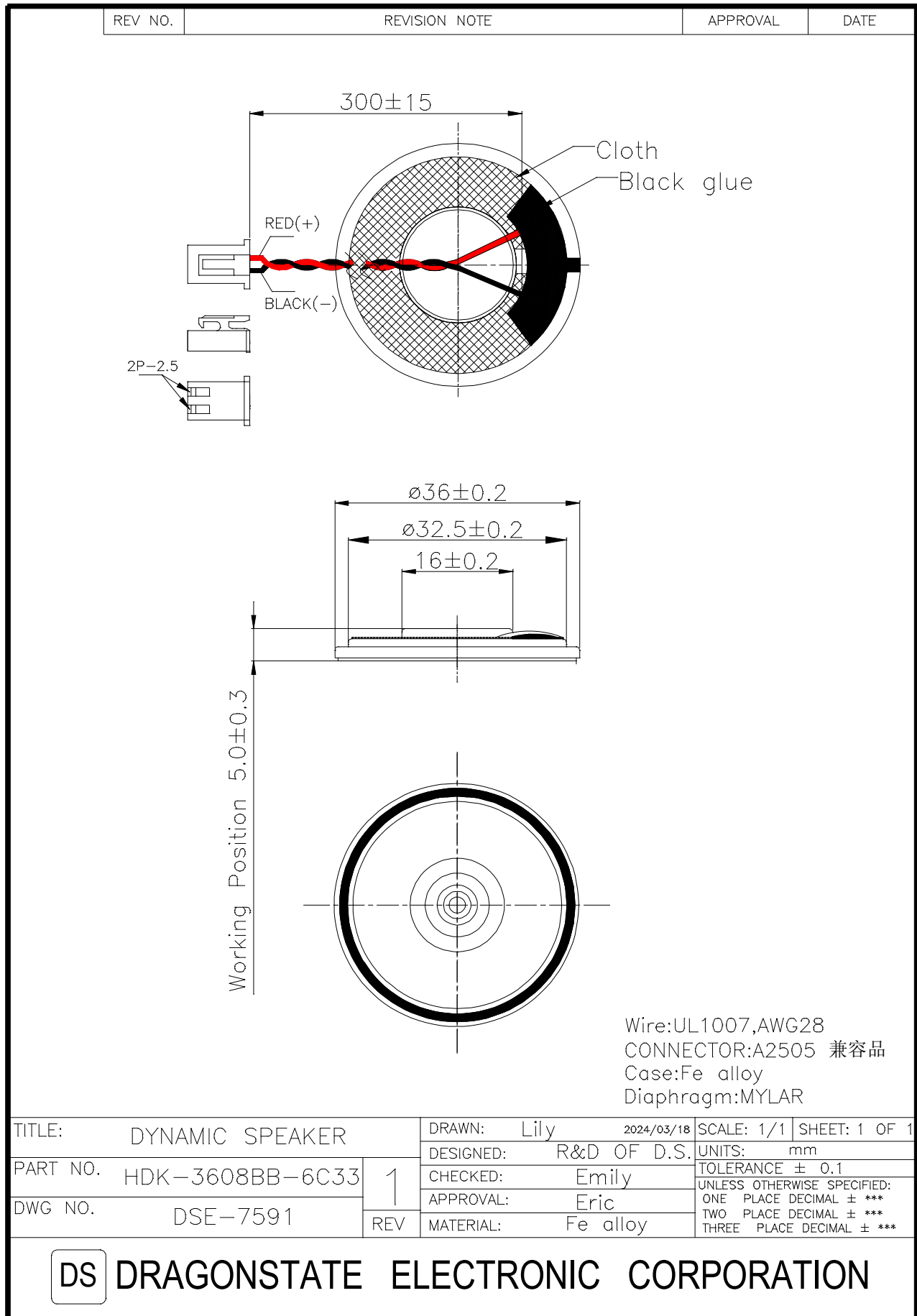
2-3 Frequency Response Curve (1.0W / 0.1m / with Ballet)



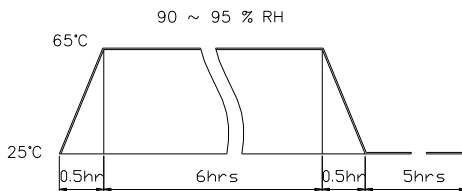
2-4 Distortion curve (1.0W / 0.1m / with Ballet)



3.Dimension



4. Reliability test

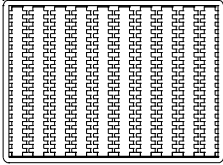
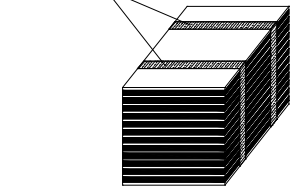
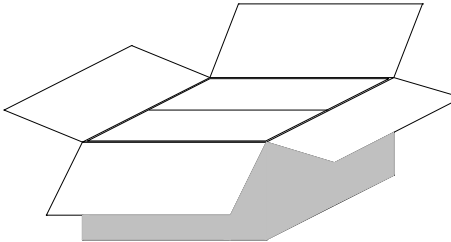
Items.		Specifications
01	High temp. Test	Keep 96 hours at $+60^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	Humidity test	Keep 96 hours at $+40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ relative humidity 95% and leave 3 hours in normal temperature and then checked.
04	Temp./Humidity cycle	The part shall be subjected 5 cycles. One cycle shall be 12 hours and consist of; 
05	Thermal cycle test.	Low temperature: $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$, temperature: $+60^{\circ}\text{C} \pm 3^{\circ}\text{C}$, cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
06	Vibration	10~55~10Hz 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) 100pcs Material:Eps Middle(375*275*260mm) 800pcs(8*100pcs) Material:Eps Outer Box(570*390*260mm) 1600pcs(2*800pcs) Material:Paper			
单位: mm			
TITLE: packing		DRAWN: Lily 2013/12/06	
PART NO.		DESIGNED: R&D OF D.S.	
		CHECKED: Emily	
DWG NO.		APPROVAL: Eric	
		MATERIAL: ***	
DS DRAGONSTATE ELECTRONIC CORPORATION		SCALE: 2:1 SHEET: 1 of 1 UNITS: mm TOLERANCE 20~11 ± 0.3 10~5 ± 0.2 <4 ± 0.1	