

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

Product	DYNAMIC SPEAKER
Part No.	HDK-3008BB-3C2 (RoHS)
Customer Part No.	2218

Approved By	Checked By	Made By
王台平 OCT-09-2023	曹丽萍 OCT-09-2023	LILY OCT-09-2023

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

中国江苏省常州市新区电子园新四路 36 号

Tel: +86-519-85110078. 86-519-85106698, Fax: +86-519-85101081

1. Specification
HDK-3008BB-3C2 (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 30 mm	
03	Rated Input Power	0.5W	
04	Max. Input Power	1.0W for 1 minute	
05	Impedance	8 ohm $\pm$ 15% at 1500Hz.	
06	Resonance Frequency (Fo)	800Hz $\pm$ 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	99dB(1.0W/0.1m) $\pm$ 3 dB	at AVE 0.8, 1.0, 1.5, 2.0KHz
08	Frequency Range	Fo – 5KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz, 0.5 W.	
10	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
11	Operation Test	Must be normal at program source – 0.5W	
12	Buzz, Rattle, etc.	Should not be audible at 2.0V sine Wave between 300 to 5KHz	
13	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
14	Terminal Strength	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.	
15	Temperature	Operating temperature: -20°C to +65°C Storage temperature: -30°C to +65°C	

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

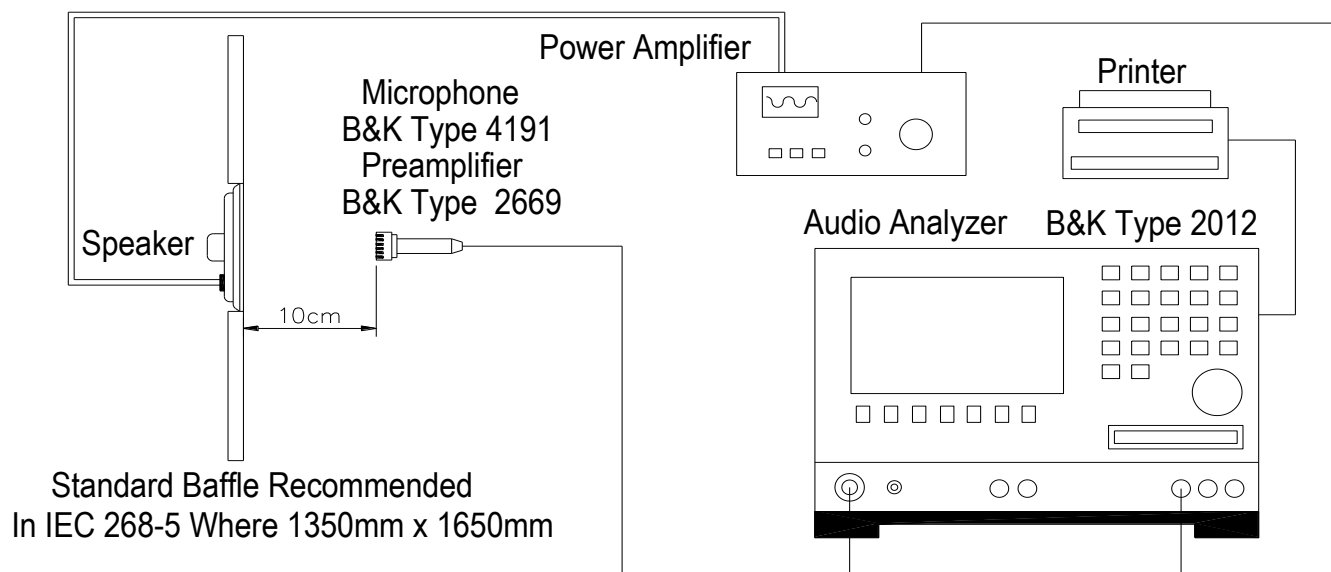
1.Input Power : 0.5W (2.0V)

2.Zero Level : -dB

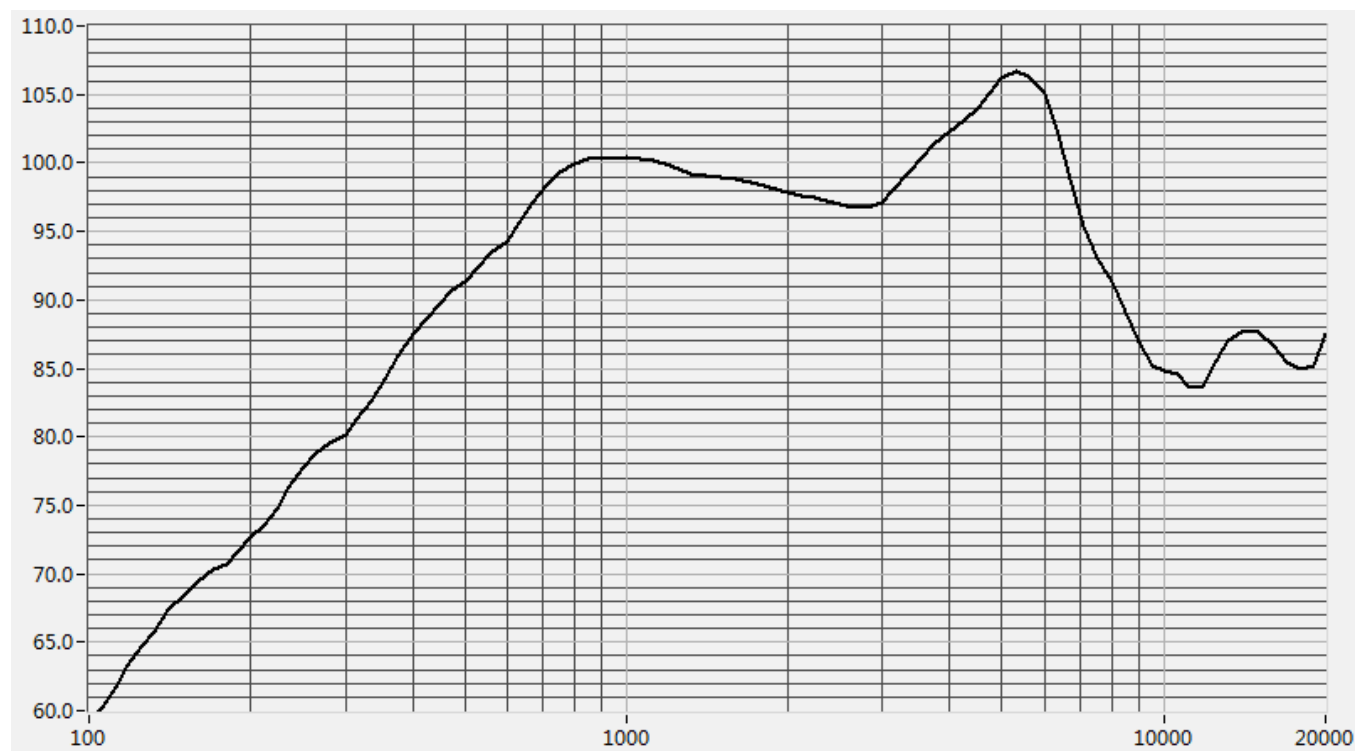
3.Mode : SPEAKER

4.potentiometer Range : 50dB

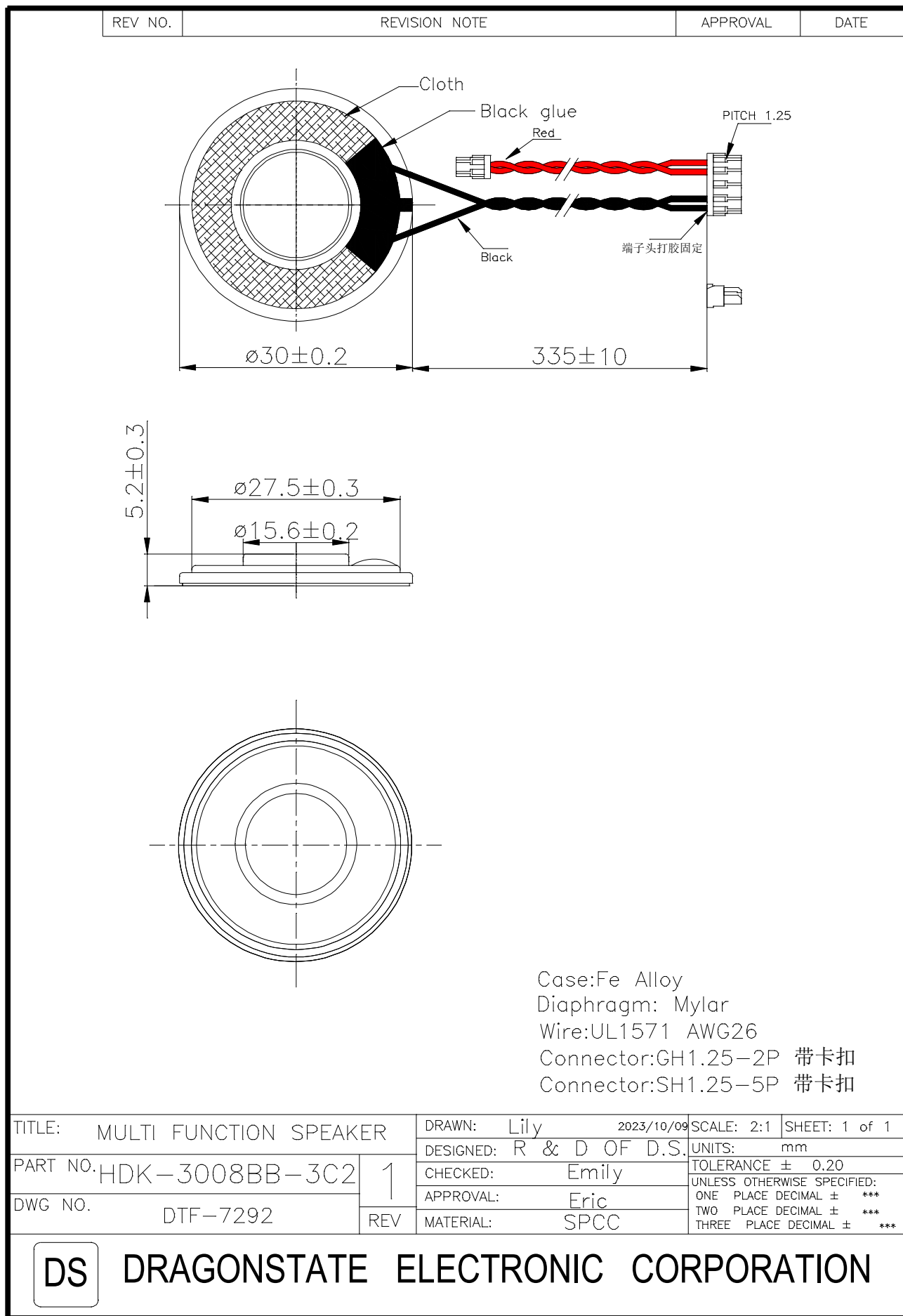
5.Sweep Time : 0.5sec



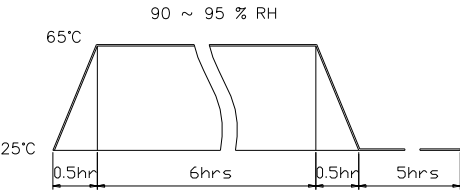
2-3. Frequency Response Curve



3.Dimension



4. Reliability Test

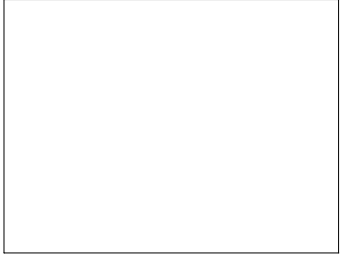
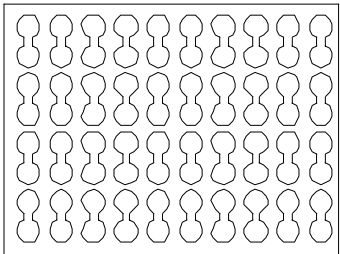
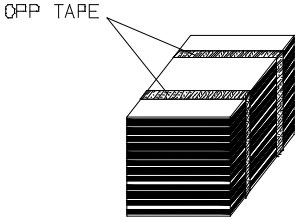
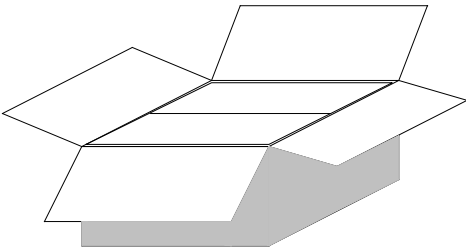
Items.		Specifications
01	High temp. Test	Keep 96 hours at $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C}\pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	Humidity 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	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: $+70^{\circ}\text{C}\pm 3^{\circ}\text{C}$, 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(345*285*5mm) Material: Eps		
	 Box(345*285*16mm) 80pcs Material: Eps		
	 Middle(345*285*160mm) 800pcs Material: Eps		
	 Outer Box(510*390*405mm) 3200pcs Material: Paper		
单位: mm			
TITLE: packing		DRAWN: Lily 2014/06/09	
PART NO.		DESIGNED: R&D OF D.S.	
DWC NO.		CHECKED: Emily	
1 REV		APPROVAL: Eric	
		MATERIAL: ***	
		SCALE: 2:1	SHEET: 1 of 1
		UNITS: mm	
		TOLERANCE	
		20~11	± 0.3
		10~5	± 0.2
		<4	± 0.1
DS DRAGONSTATE ELECTRONIC CORPORATION			