

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

Product	DYNAMIC SPEAKER
Part No.	HDK-201608ZA-8(RoHS)
Customer	
Customer Part No.	

Approved By	Checked By	Made By
王台平 DEC-27-2024	曹丽萍 DEC-27-2024	LILY DEC-27-2024

常州华龙电子有限公司

Chang zhou Dragon State Electronic Co., Ltd

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

EDITION:1.1

2. Specification
HDK-201608ZA-8 (RoHS)

ITEM		SPECIFICATIONS
01	Type	Dynamic speaker with box
02	Dimension	Speaker unit external diameter 20*16 mm
03	Rated Input Power	1.0W in 1.5cc BOX
04	Max. Input Power	1.5W For 1 Minute in 1.5cc Box
05	Rate Impedance	Z:8 ohm \pm 15%
06	Voice coil DC resistance	R:7 ohm \pm 15%
07	Resonance Frequency (Fo)	850 \pm 15%Hz (measured @1.5cc 1.0W)
08	Measured characteristic Sensitivity (S.P.L.)	95 \pm 3dB /1.0W/10cm at 2.0KHz
09	Frequency Range	200 – 20KHz
09	THD	Acccording chapter 3-3-Figure 2
10	Rub & buzz	Should not be audible at 2.83V in box sine Wave between 300 to 5KHz
11	Weight	2.7g \pm 5%g
12	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.
13	Operation Test	Must be normal at program source – 1.0W
14	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.

3.Test Condition

3-1STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

BASIC

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

3-2Standard Test Fixture

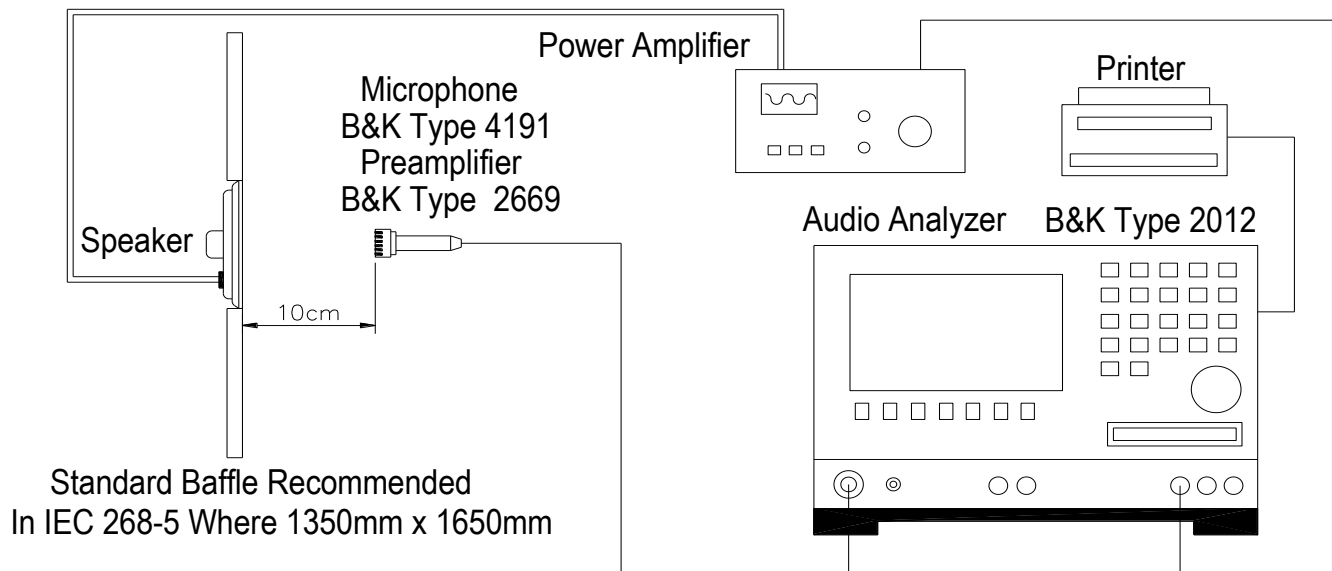
1.Input Power : 1.0W (2.83Vrms)

2.Zero Level : -dB

3.Mode : SPEAKER

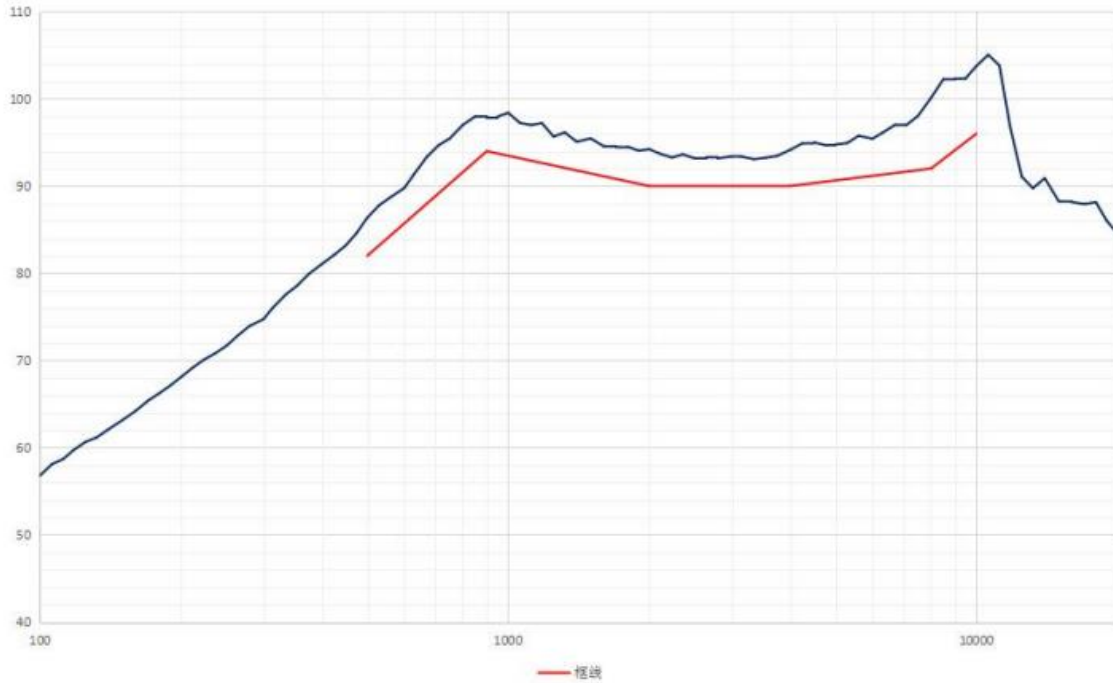
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



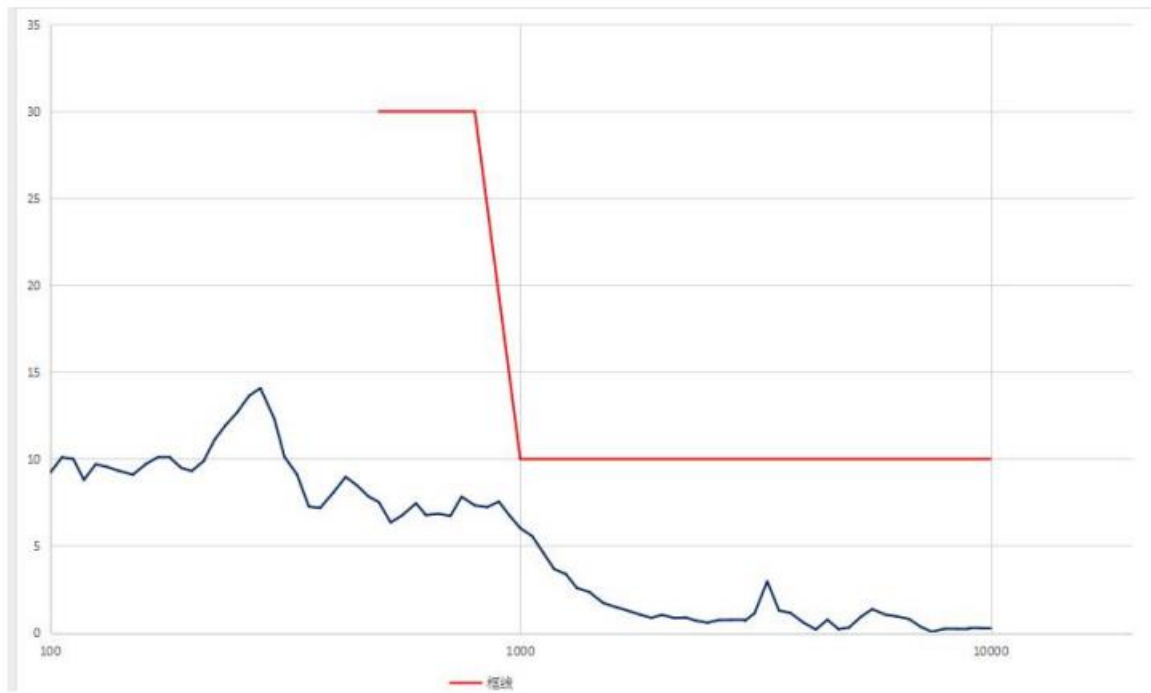
3-3Frequency Response Curve

Figure 1 Typical FR in Tolerance Window



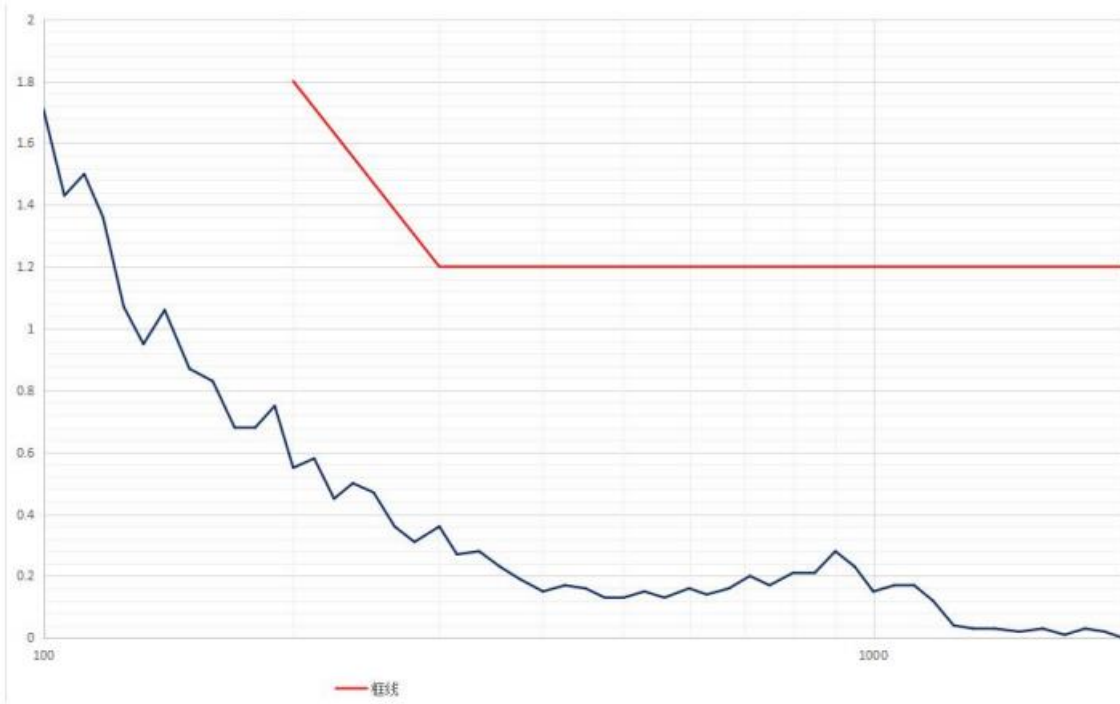
	框线
500	82
900	94
2000	90
4000	90
8000	92
10000	96

Figure 2 Typical THD in Tolerance Window



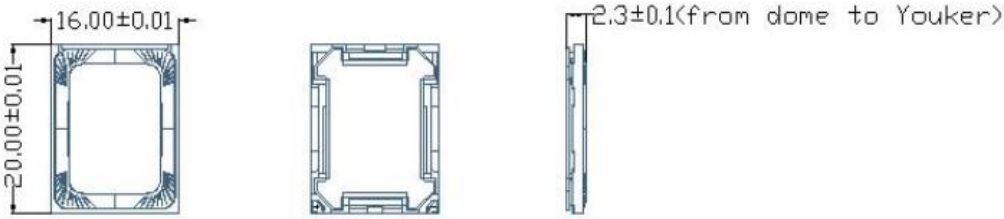

	框线
500	30
800	30
1000	10
10000	10

Figure 3 Typical HOHD Curve

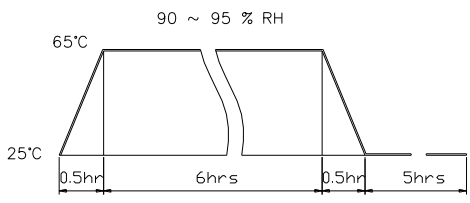


	框线
200	1.8
300	1.2
2000	1.2

4. Dimension

REV NO.	REVISION NOTE	APPROVAL	DATE
			
TITLE: DYNAMIC SPEAKER		DRAWN: Lily	2024/12/27
PART NO. HDK-201608ZA-8		DESIGNED: R&D OF D.S.	SCALE: 2:1
DWG NO. DSE-8218		CHECKED: Emily	SHEET: 1 of 1
		APPROVAL: Eric	UNITS: mm
REV 1		MATERIAL: PBT	TOLERANCE
			20~11 ± 0.3
			10~5 ± 0.2
			<4 ± 0.1
 Changzhou Dragon State Electronic Co., Ltd			

5. Reliability tests

Items.		Specifications
01	High temp. Test	Keep 96 hours at $+85^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 4 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 4 hours in normal temperature and then check
03	Humidity test	Keep 96 hours at $+65^{\circ}\text{C} \pm 3^{\circ}\text{C}$ relative humidity 95% and leave 4 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: $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$, temperature: $+85^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 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 Pink 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.
<p>Criterion: After these test , the change of S.P.L shall be within ± 3 dB .</p>		