

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

Product	DYNAMIC SPEAKER
Part No.	HDK-151108ZA-4C4 (RoHS)
Customer	
Customer Part No.	

Approved By	Checked By	Made By
王台平 AUG-04-2015	曹丽萍 AUG-04-2015	LILY AUG-04-2015

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1. SPECIFICATION
HDK-151108ZA-4C4(RoHS)

ITEM		SPECIFICATIONS
01	Type	Dynamic speaker
02	Dimension	External diameter 15*11 mm
03	Rated Input Power	0.5W In 1cc Box
04	Max. Input Power	1.0W In 1cc Box For 1 Minute
05	Impedance	8 ohm \pm 15% at 2KHz.
06	Resonance Frequency (Fo)	500Hz \pm 20% (in free air)
	Resonance Frequency (Fo)	850Hz \pm 20% (in 1cc air)
07	Sensitivity (S.P.L.)	87 \pm 3 dB /0.5W/0.1m at 2.0KHz
08	Frequency Range	Fo – 20KHz
09	Total Harmonics Distortion	Max 10% at 1 KHz,0.5W.
10	Voice Coil	10.9*6.9*1.2/mm
11	Magnet	10.6*6.6*1.2 (Nd-Fe-B) /mm
12	Weight	1.5g \pm 5%g
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 – 0.5W
15	Buzz, Rattle, etc.	Must be normal at sine wave 0.89Vrms (in free air) /2.0Vrms(in 1.0cc box) from 200~3400Hz
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 $^{\circ}$ C to +70 $^{\circ}$ C Storage temperature: -20 $^{\circ}$ C to +70 $^{\circ}$ C

Test Condition

STANDARD

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

Standard Test Fixture

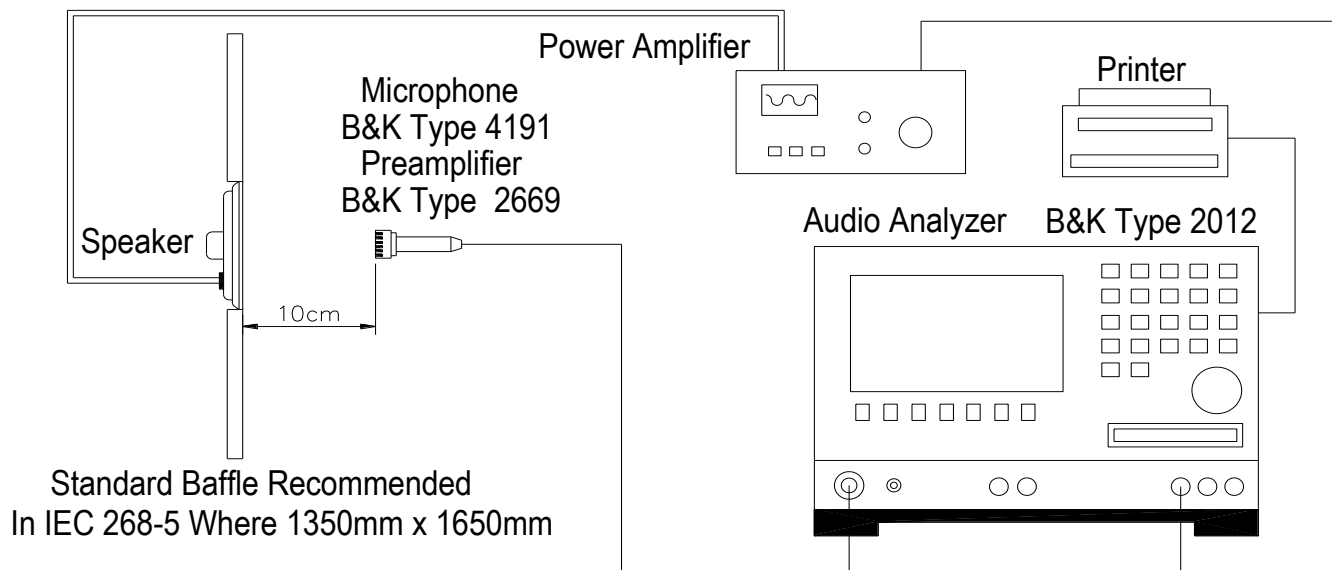
1.Input Power : 0.5W (2.0V)

2.Zero Level : -dB

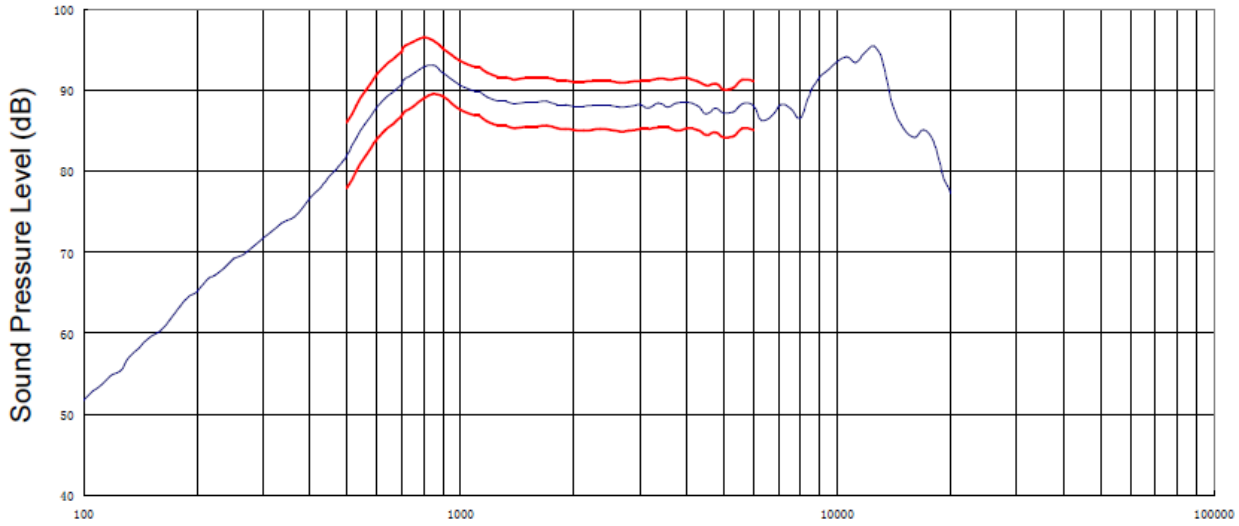
3.Mode : SPEAKER

4.potentiometer Range : 50dB

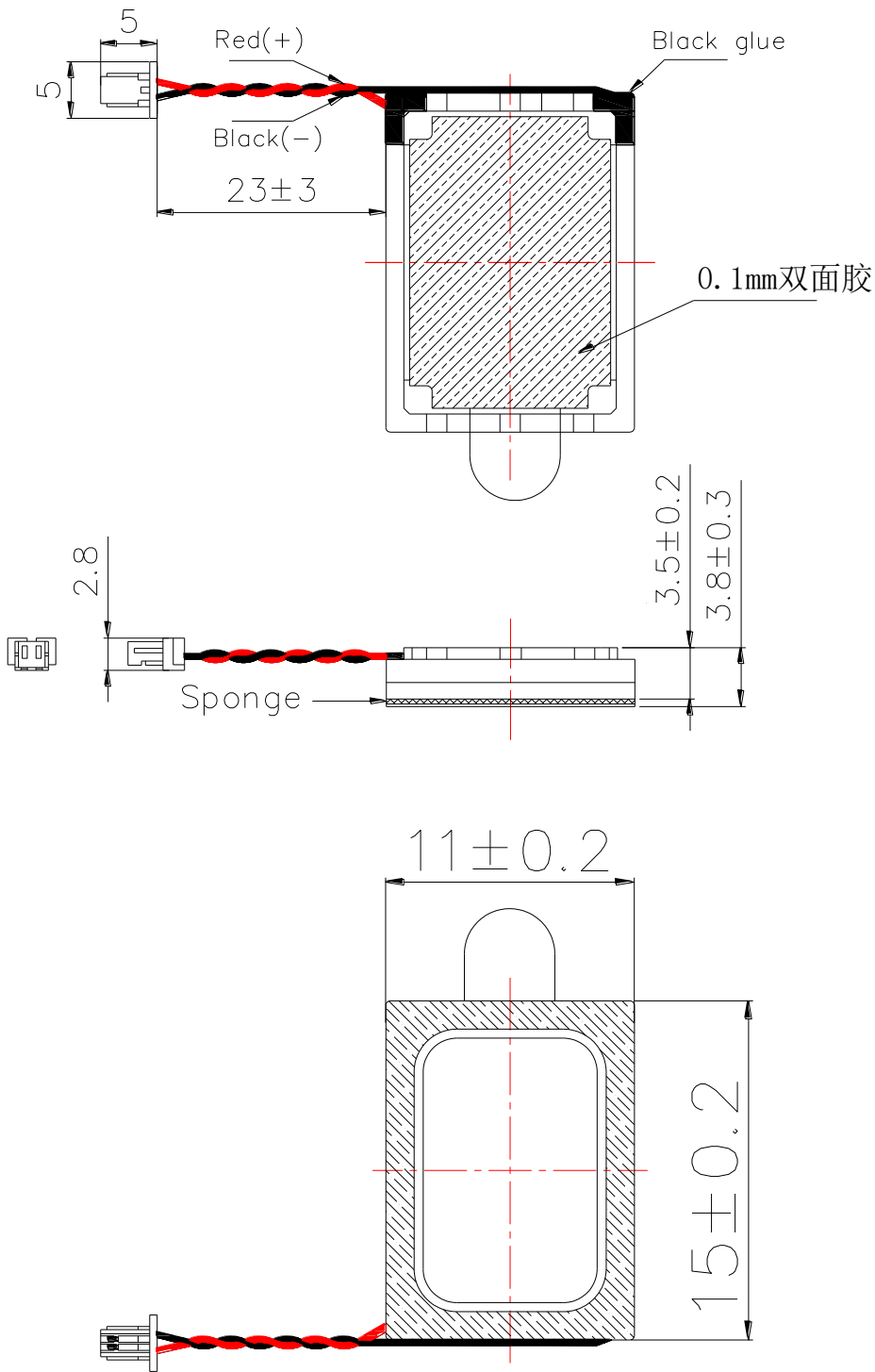
5.Sweep Time : 0.5sec



Frequency Response Curve



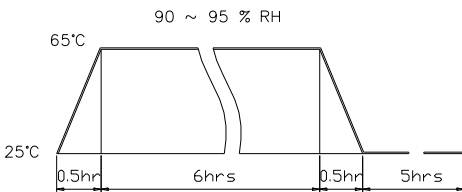
REV NO.	REVISION NOTE	APPROVAL	DATE
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Terminal: JST SHR-02V-S-B
 Wires: UL1571, 30AWG

TITLE: DYNAMIC SPEAKER		DRAWN: Lily	2015/08/04	SCALE: 2/1	SHEET: 1 OF 1
PART NO. HDK-151108ZA-4C4		DESIGNED: R&D OF D.S.	UNITS: mm		
DWG NO. DSE-1512		CHECKED: Emily	TOLERANCE ± 0.2		
		APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED:		
REV 1		MATERIAL: PBT	ONE PLACE DECIMAL \pm ***		
			TWO PLACE DECIMAL \pm ***		
			THREE PLACE DECIMAL \pm ***		

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 $-20^{\circ}\text{C}\pm 3^{\circ}\text{C}$ 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	<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	Free drop test	Free drop from 100cm height to the concrete floor X, y, z 6 direction. 1 times each, total 6 times.
08	Rated Power test	Rated Power white noise is applied for 96 hours (in Pink noise in 1cc box)
09	Max Power test	Max power 1 min on – 2 min off 10 cycles.