

MESSRS.

SPECIFICATION FOR APPROVAL**承 認 书**

Product	DYNAMIC SPEAKER
Part No.	HDK-151008RA-2C1 (RoHS)
Customer Approval	

Approved By	Checked By	Made By
王台平 OCT-29-2015	曹丽萍 OCT-29-2015	LILY OCT-29-2015

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

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EDITION:1.1

1.SPECIFICATION

HDK-151008RA-2C1 (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 15×10 mm	
03	Rated Input Power	0.7W	
04	Max. Input Power	0.8W for 1 minute	
05	Impedance	8 ohm \pm 15% at 1500Hz.	
06	Resonance Frequency (Fo)	1080Hz \pm 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	92dB (0.7W / 0.1m) \pm 3 dB	at AVE 1.0 1.2 1.5 2.0 KHz.
08	Frequency Range	Fo – 20KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz,0.7W.	
10	Voice Coil	Diameter 5.7 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 5.6 x 1.4mm	
12	Weight	1.3g \pm 0.2g	
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 – 0.7W	
15	Buzz, Rattle, etc.	Should not be audible at 2.37 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°C to +60°C Storage temperature: -30°C to +70°C	

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

Standard Test Fixture

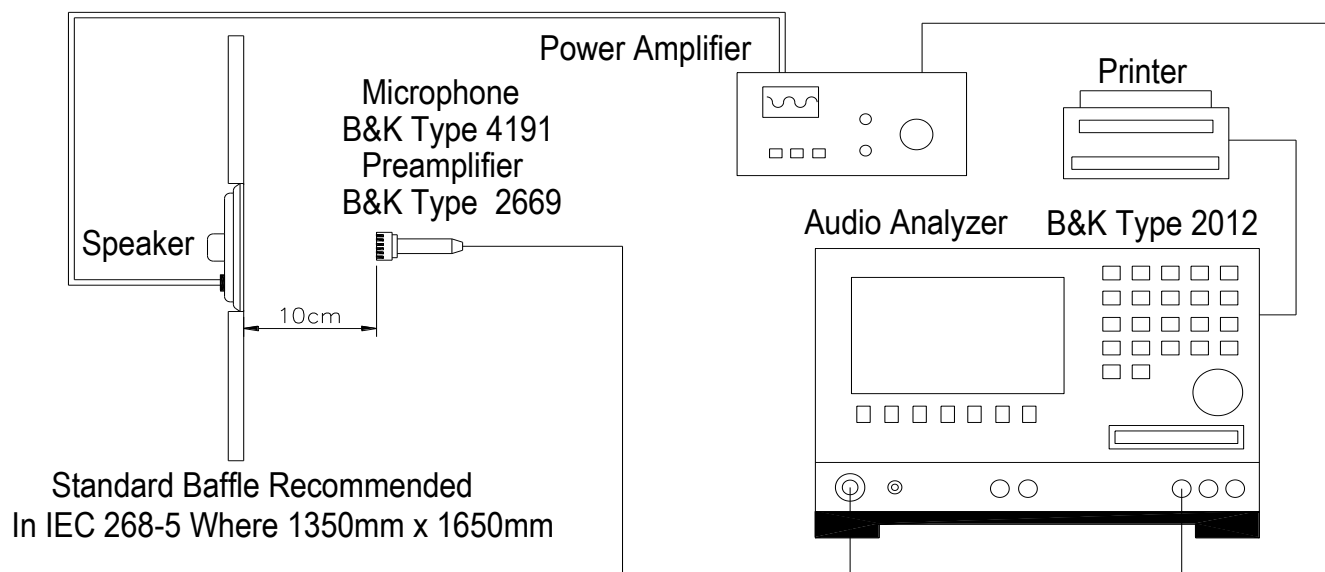
1.Input Power : 0.7W (2.37V)

2.Zero Level : -dB

3.Mode : SPEAKER

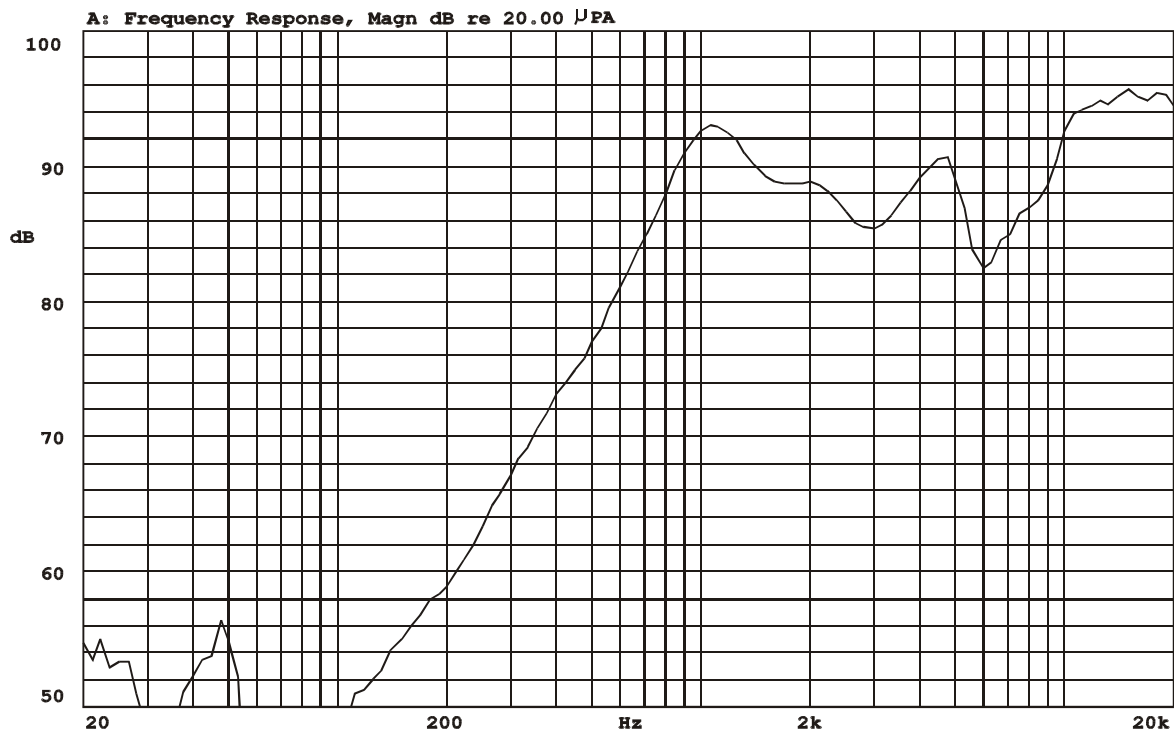
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



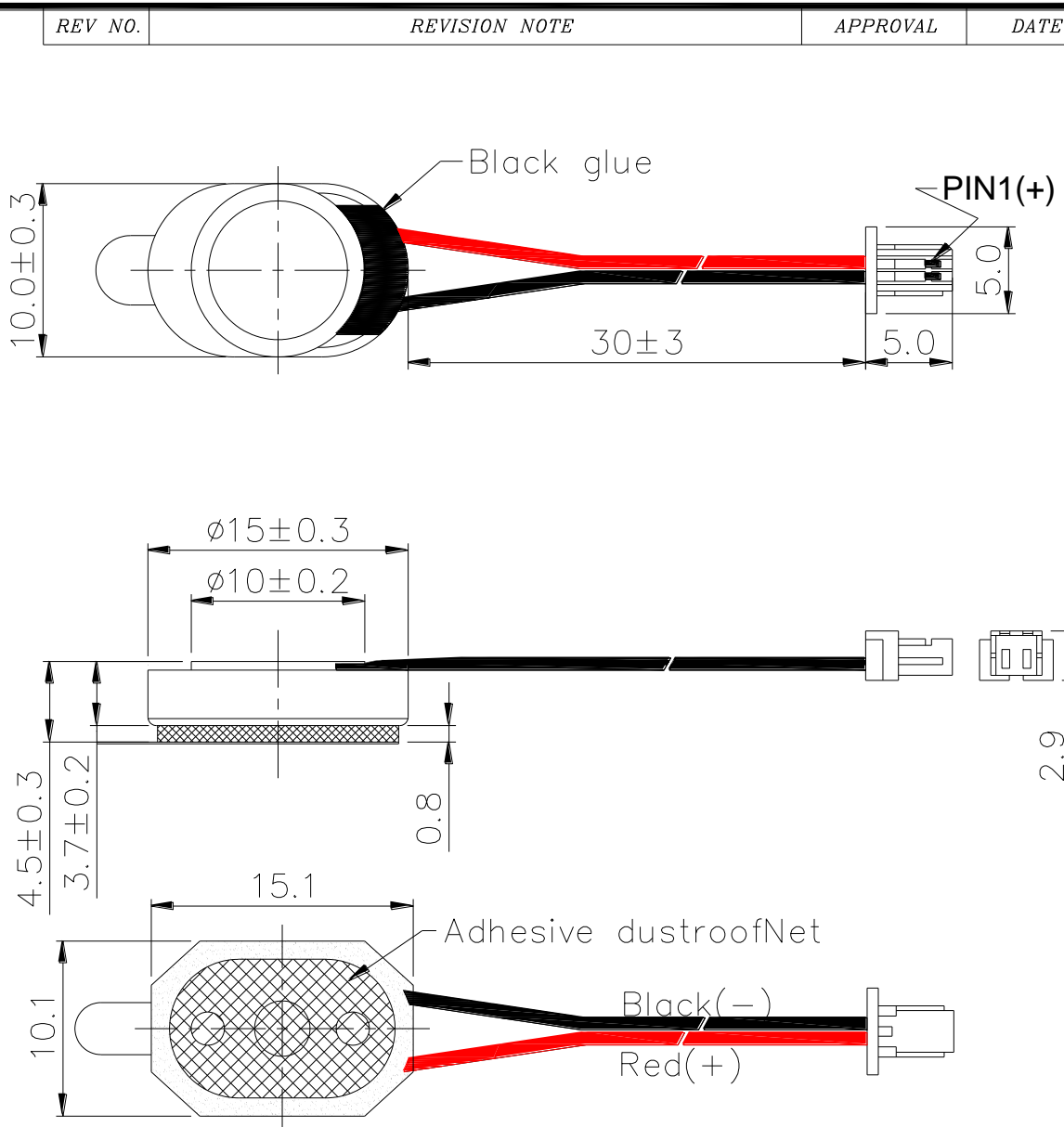
Frequency Response Curve

X:2.5000kHz *Y:86.61dB ZA:1.0000 SSR Fund.



Mode: SSR





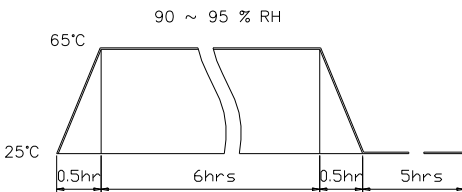
Case: PBT
Wires: UL1571,30AWG
Terminal: JST Pitch1.0
SHR-02V-S-B
Diaphragm: MYLAR

TITLE: DYNAMIC SPEAKER		DRAWN: Lily	2015/10/29	SCALE: ***	SHEET: 1 of 1
PART NO. HDK-151008RA-2C1	1	DESIGNED: R&D OF D.S.	UNITS: mm		
DWG NO. DSE-1868		CHECKED: Emily	TOLERANCE ± 0.2		
		APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED:		
	REV	MATERIAL: PBT	ONE PLACE DECIMAL \pm ***		
			TWO PLACE DECIMAL \pm ***		
			THREE PLACE DECIMAL \pm ***		

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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 $\pm 3 \text{ dB}$.		

SOLDERING CONDITION

Recommend using constant branding iron in **30W**, and in temperature range **$350\pm 10^{\circ}\text{C}$** .

Soldering time **2** seconds.