

MESSRS.

SPECIFICATION FOR APPROVAL

承 认 书

Product	DYNAMIC SPEAKER
Part No.	HDK-3008BB-BOX(RoHS)
Customer	
Customer Part No.	

Approved By	Checked By	Made By
王台平 JAN-06-2014	曹丽萍 JAN-06-2014	LILY JAN-06-2014

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

EDITION:1.1

File Name:

1. SPECIFICATION

HDK-3008BB-BOX (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 30 mm	
03	Rated Input Power	2.2W	
04	Max. Input Power	2.3W	
05	Impedance	8 ohm $\pm$ 15% at 1500Hz.	
06	Resonance Frequency (Fo)	1000Hz $\pm$ 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	100dB(1.0W/0.1m) $\pm$ 3 dB	at AVE0.8K,1.0K,1.5K,2.0KHz.
08	Frequency Range	Fo – 20KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz,2.2W.	
10	Voice Coil	Diameter 13.3 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 12.6 x 1.6 mm	
12	Weight	13.8g $\pm$ 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 – 2.2W	
15	Buzz, Rattle, etc.	Should not be audible at 4.2V 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°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

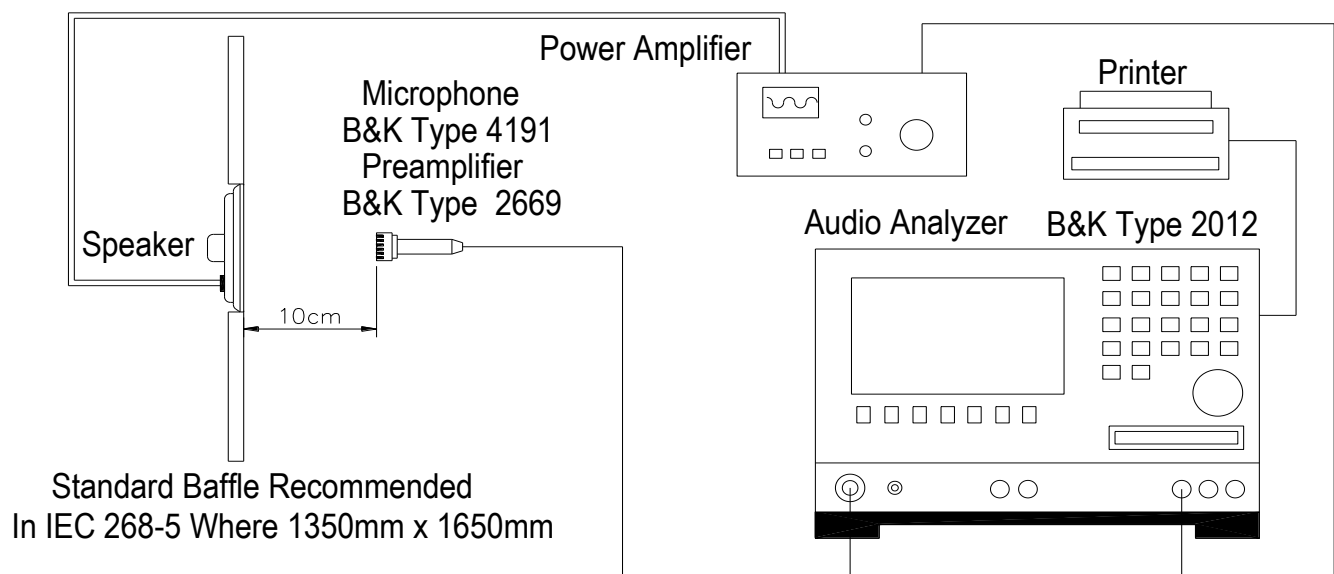
1.Input Power : 1.0W (2.83V)

2.Zero Level : -dB

3.Mode : SPEAKER

4.potentiometer Range : 50dB

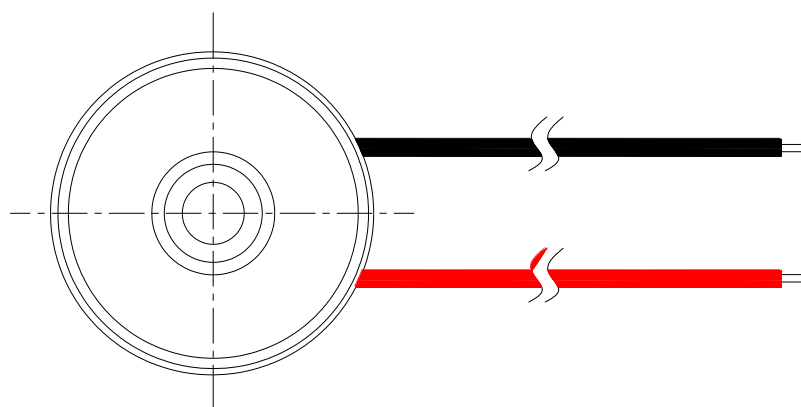
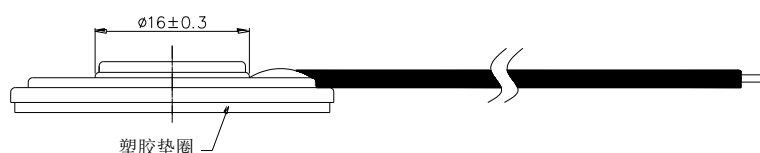
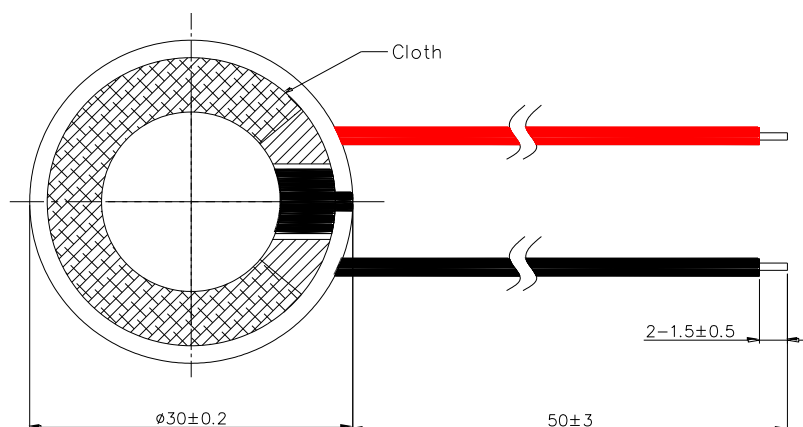
5.Sweep Time : 0.5sec



Frequency Response Curve



REV NO.	REVISION NOTE	APPROVAL	DATE
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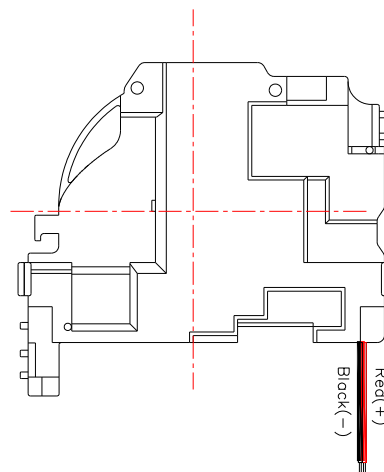
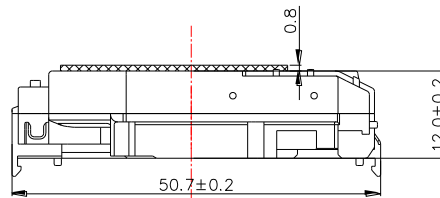
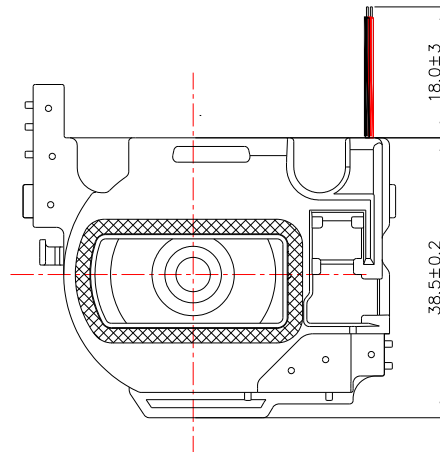
Diaphragm: Black Mylar
Case: Fe alloy
wire: UL1571AWG32

TITLE: MULTI FUNCTION SPEAKER		DRAWN: Lily	2014/01/06	SCALE: 2:1	SHEET: 1 of 1
PART NO. HDK-3008BB-BOX	1	DESIGNED: R & D OF D.S.		UNITS: mm	
DWG NO. DTF-1030		CHECKED:		TOLERANCE ± 0.20	
		APPROVAL:		UNLESS OTHERWISE SPECIFIED:	
	REV	MATERIAL: Fe alloy		ONE PLACE DECIMAL $\pm$ ***	
				TWO PLACE DECIMAL $\pm$ ***	
				THREE PLACE DECIMAL $\pm$ ***	

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REV NO.	REVISION NOTE	APPROVAL	DATE
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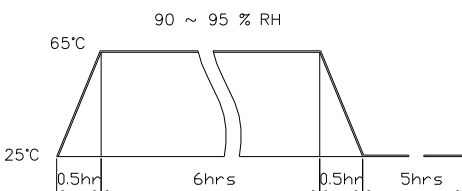
WIRE: UL1571WAG32

TITLE:	DYNAMIC SPEAKER	DRAWN:	Lily	2014/01/05	SCALE: 1/1	SHEET: 1 OF 1
PART NO.	HDK-3008BB-BOX	DESIGNED:	R&D OF D.S.		UNITS:	mm
DWG NO.	DSE-1672	CHECKED:	Emily		TOLERANCE	± 0.5
		APPROVAL:	Eric		UNLESS OTHERWISE SPECIFIED:	
		MATERIAL:	ABS		ONE PLACE DECIMAL	± ***
					TWO PLACE DECIMAL	± ***
					THREE PLACE DECIMAL	± ***

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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	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 $\pm 3 \text{ dB}$.		

SOLDERING CONDITION

Recommend using constant branding iron in **15 ~ 30W**, and in temperature range **350°C**.
Soldering time not over **3** seconds.