

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

Product	DYNAMIC SPEAKER
Part No.	HDK-2308AB-4C1 (RoHS)
Customer Approval	

Approved By	Checked By	Made By
王台平 NOV-27-2012	曹丽萍 NOV-27-2012	LILY NOV-27-2012

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

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EDITION:1.1

1. SPECIFICATION
HDK-2308AB-4C1 (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 23 mm	
03	Rated Input Power	0.8W (Long Time)	
04	Max. Input Power	1.0W for 1 minute	
05	Impedance	8 ohm ± 15% at 1500Hz.	
06	Resonance Frequency (Fo)	850Hz ± 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	89dB(0.1W/0.1m) ± 3 dB	at AVE1.0K,1.2K,1.5K,2.0 KHz.
		96dB (0.8W / 0.1m) ± 3 dB	
08	Frequency Range	Fo – 20KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz,0.8W.	
10	Voice Coil	Diameter 10.25 mm	
11	Magnet	Rare earth permanent (Nd-Fe-B) magnet Ø9.5 x 1.5 mm	
12	Weight	3.5g ± 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 – 0.8W	
15	Buzz, Rattle, etc.	Should not be audible at 2.53V 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

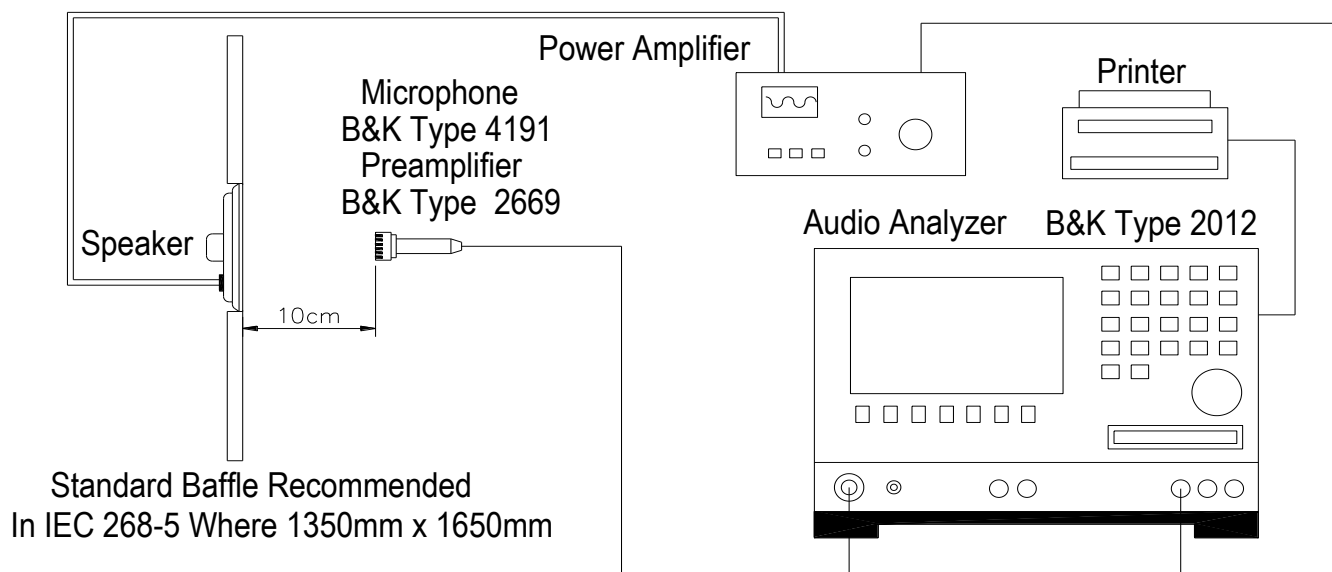
1.Input Power : 0.8W (2.53V)

2.Zero Level : -dB

3.Mode : SPEAKER

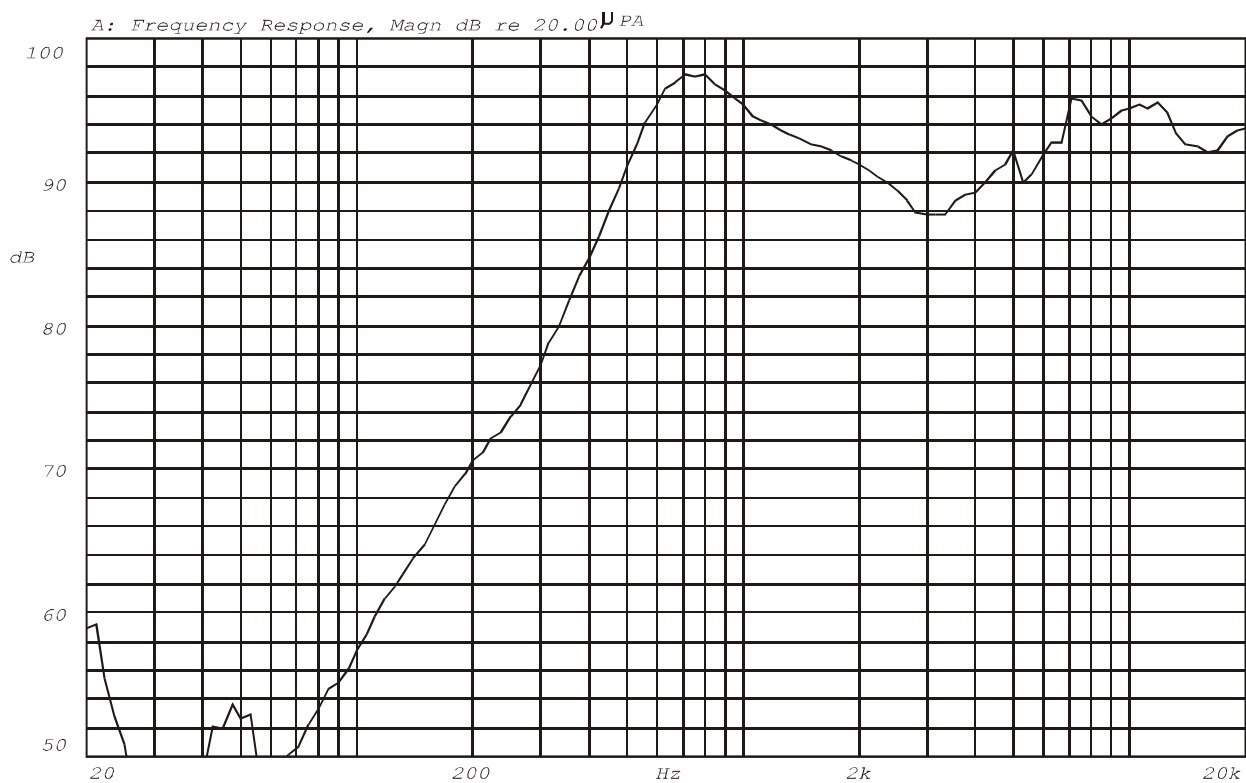
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec



Frequency Response Curve

X:1.5000kHz *Y:92.69dB ZA:Live Curve SSR Fund.



Mode: SSR

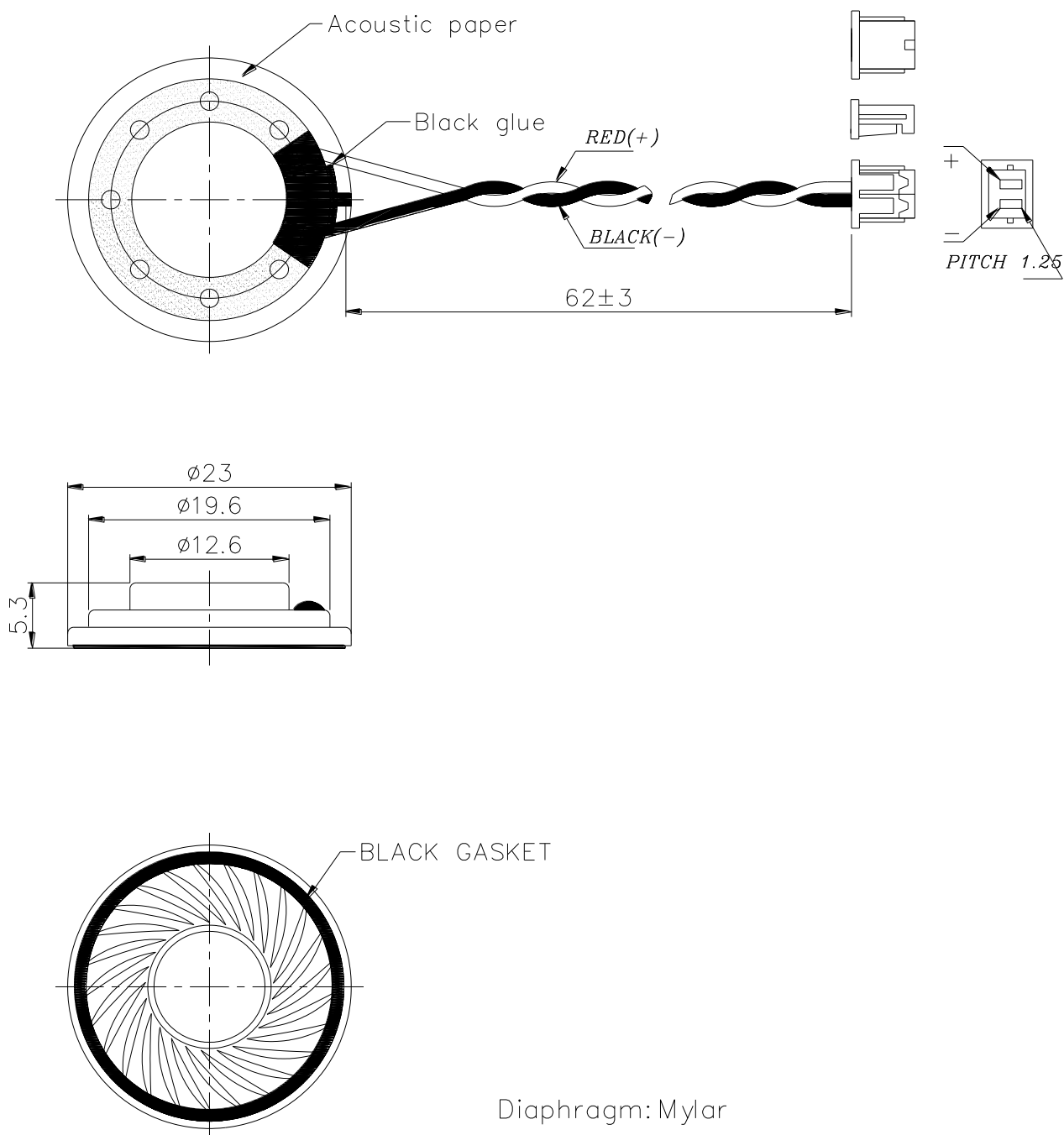


REV NO.

REVISION NOTE

APPROVAL

DATE



Diaphragm: Mylar

Case: FeAlloy

Wires: UL1571,30AWG

Terminal: MOLEX-51021-0200 Capable

TITLE: DYNAMIC SPEAKER

DRAWN: Lily

2012/11/27

SCALE: 1:1

SHEET: 1 of 1

PART NO. HDK-2308AB-4C1

DESIGNED: R&D OF D.S.

UNITS: mm

CHECKED: Emily

TOLERANCE ± 0.2

APPROVAL: Eric

UNLESS OTHERWISE SPECIFIED:

ONE PLACE DECIMAL ± ***

DWG NO. DSE-1102

REV

MATERIAL: SPCC

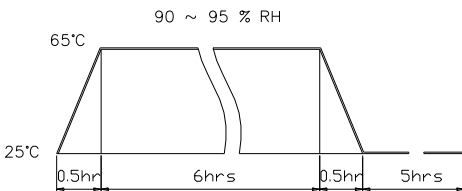
TWO PLACE DECIMAL ± ***

THREE PLACE DECIMAL ± ***

DS

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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.