MESSRS.

SPECIFICATION FOR APPROVAL
承 认 书

Product	**DYNAMIC SPEAKER**
Part No.	**HDK-402008CC-4(RoHS)**
Customer Approval	

Approved By	Checked By	Made By
王台平 SEP-19-2016	曹丽萍 SEP-19-2016	LILY SEP-19-2016

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DRAGONSTATE ELECTRONIC CORPORATION

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EDITION:1.1

1. Specification

HDK-402008CC-4(RoHS)

	ITEM	SPECIFICATIONS	
01	**Type**	Dynamic speaker	
02	**Dimension**	External diameter 40*20 mm	
03	**Rated Input Power**	2.0W	
04	**Max. Input Power**	2.5W for 1 minute	
05	**Impedance**	8 ohm ± 15% at 1000Hz.	
06	**Resonance Frequency (Fo)**	650Hz ± 20% at Fo, 1V	
07	**Sensitivity (S.P.L.)**	85dB (1.0W / 0.5m) ± 3 dB	at AVE0.6K, 0.8K,1.0K,1.2KHz
08	**Frequency Range**	Fo – 10KHz	
09	**Total Harmonics Distortion**	Max 5 % at 1 KHz,2.0W.	
10	**Weight**	10.0g ± 0.3g	
11	**Appearance**	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
12	**Operation Test**	Must be normal at program source – 2.0W	
13	**Buzz, Rattle, etc.**	Should not be audible at 4.0V sine Wave between Fo to 20KHz	
14	**Polarity**	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
15	**Terminal Strength**	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.	
16	**Temperature**	Operating temperature: -20℃ to +60℃ Storage temperature: -30℃ to +70℃	

2-1.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

2-2.Standard Test Fixture

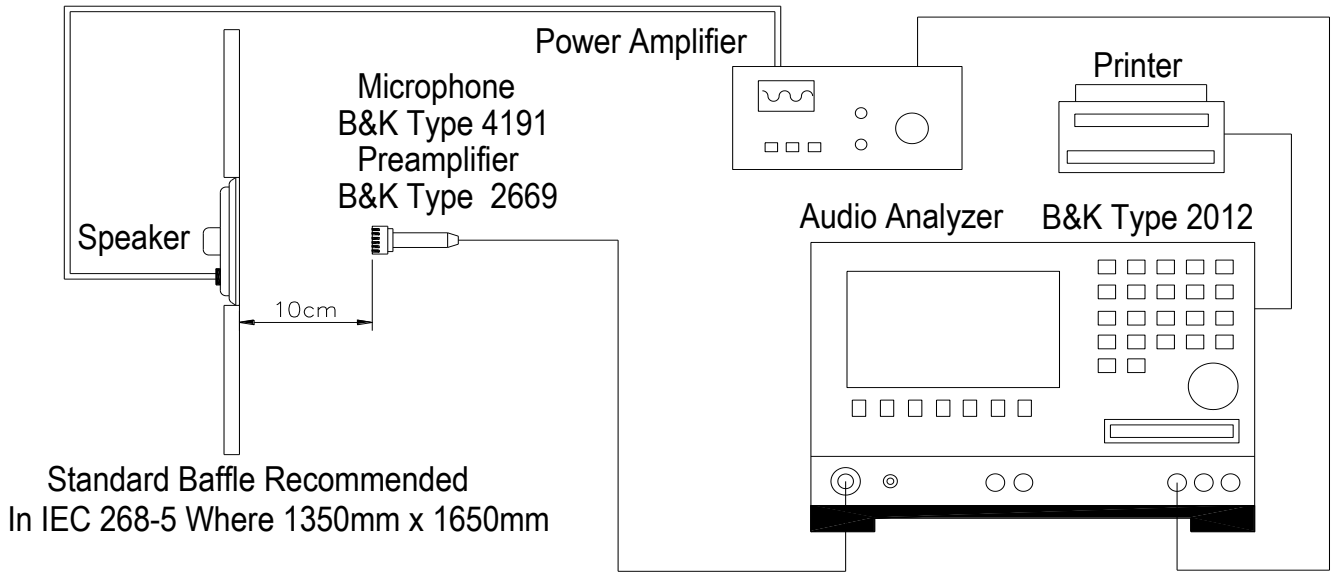
1.Input Power : 0.1W (0.89V)

2.Zero Level : -dB

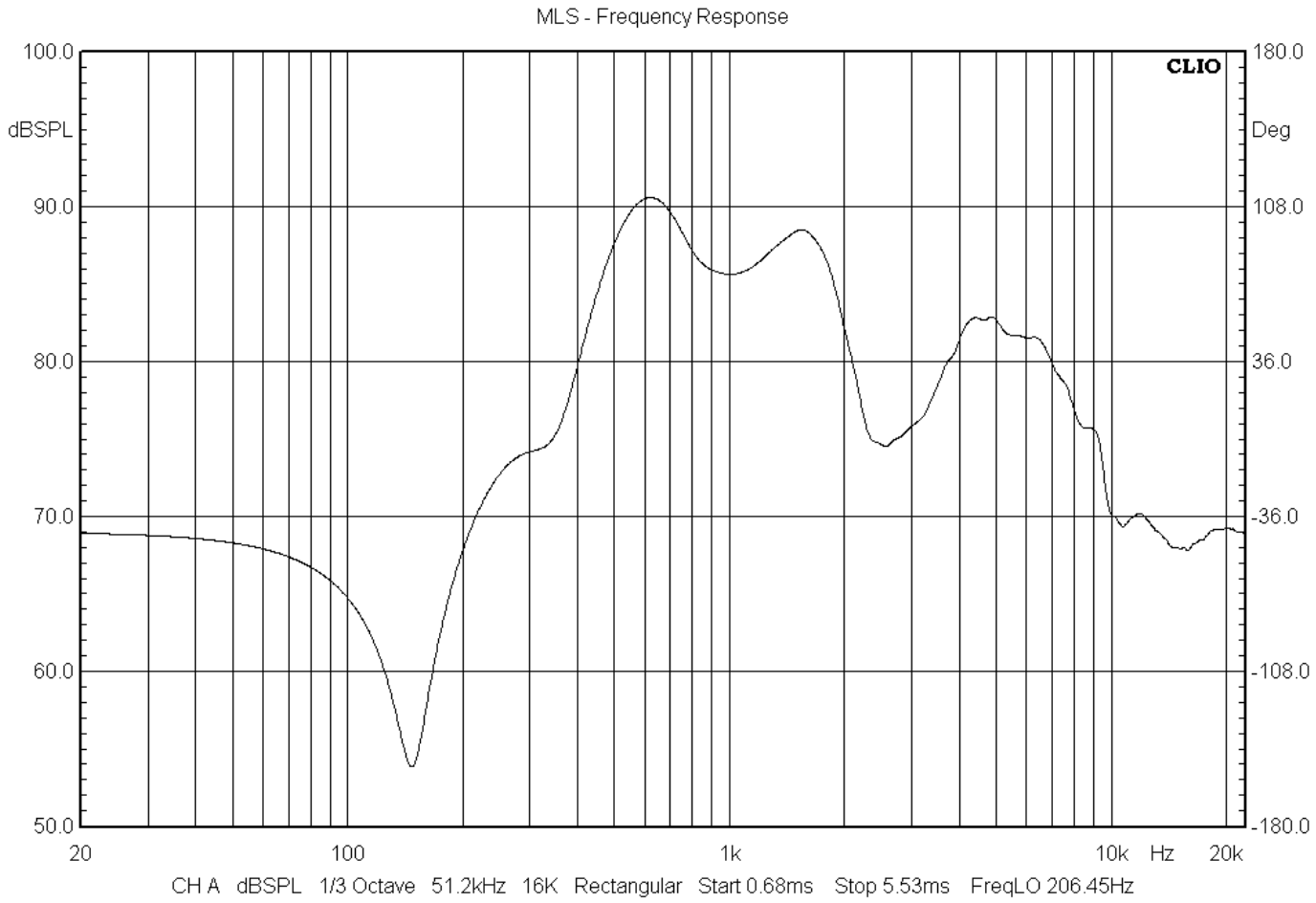
3.Mode : SPEAKER

4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec

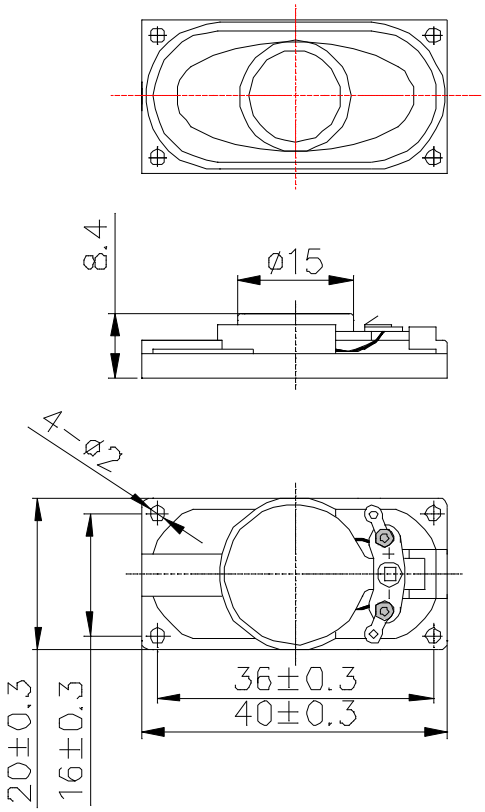


2-3.Frequency Response Curve



3.Dimension

REV NO.	REVISION NOTE	APPROVAL	DATE



6	Cap	1	Paper	
5	Diaphragm	1	Cloth	
4	VOICE COIL	1	Paper Cu	
3	Plate	1	SPCC	
2	Magnet	1	NdFeB	
1	Frame	1	ABS+Spcc	
PART NO.	PART NAME	Q'TY	MATERIAL	REMARK

TITLE: DYNAMIC SPEAKER		DRAWN: Lily 2016/09/19	SCALE: 2:1	SHEET: 1of 1
PART NO. HDK-402008CC-4	1	DESIGNED: R&D OF D.S.	UNITS: mm	
DWG NO. DTS-1510	REV	CHECKED: Emily	TOLERANCE ± 0.2	
		APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
		MATERIAL: *****		

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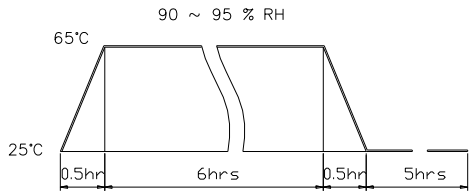
4.Reliablity Test

Items.		Specifications
01	**High temp. Test**	Keep 96 hours at +70℃±3℃ and leave 3 hours in normal temperature and then check
02	**Low temp. Test**	Keep 96 hours at -30℃±3℃ and leave 3 hours in normal temperature and then check
03	**Humidity test**	Keep 96 hours at + 40℃±3℃ 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℃±3℃, temperature:+60℃±3℃, 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 ±3 dB .		

Soldering Condition

Recommend using constant branding iron in 15 ~ 30W, and in temperature range 350±10° C.
Soldering time not over 3 seconds.