MESSRS.

SPECIFICATION FOR APPROVAL
承 认 书

Product	**DYNAMIC SPEAKER**
Part No.	**HDK-241508AA-2W(RoHS)**
Customer	
Customer Part No.	

Approved By	Checked By	Made By
王台平 MAR-08-2017	曹丽萍 MAR-08-2017	LILY MAR-08-2017

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EDITION:1.1

File Name:

1.Specification

HDK-241508AA-2W(RoHS)

ITEM		SPECIFICATIONS	
01	**Type**	Dynamic speaker	
02	**Dimension**	External diameter 24×15 mm	
03	**Rated Input Power**	0.8W	
04	**Max. Input Power**	1.0W for 1 minute	
05	**Impedance**	8 ohm ± 15% at 2000Hz 1.0V	
06	**Resonance Frequency (Fo)**	800Hz ± 20% at Fo 1V	
07	**Sensitivity (S.P.L.)**	93dB (0.5W / 0.1m) ± 3 dB	at AVE 1.0K,1.2K,1.5K,2.0KHz.
08	**Frequency Range**	Fo – 20KHz	
09	**Total Harmonics Distortion**	Max 8 % at 1 KHz,0.8W.	
10	**Voice Coil**	Diameter 8.5 mm	
11	**Magnet**	Rare earth permanent (Nd-Fe-B) magnet Φ8.0 x 1.0 mm	
12	**Weight**	1.8g ± 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℃ 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

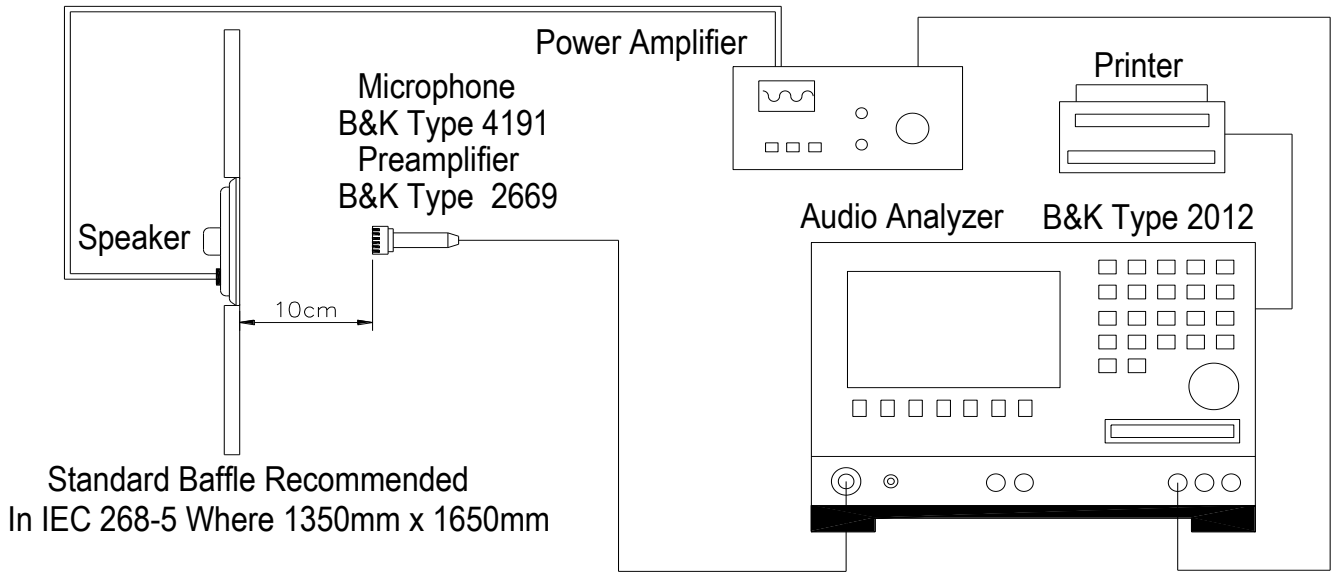
1.Input Power : 0.5W (2.0V)

2.Zero Level : -dB

3.Mode : SPEAKER

4.potentiometer Range : 50dB

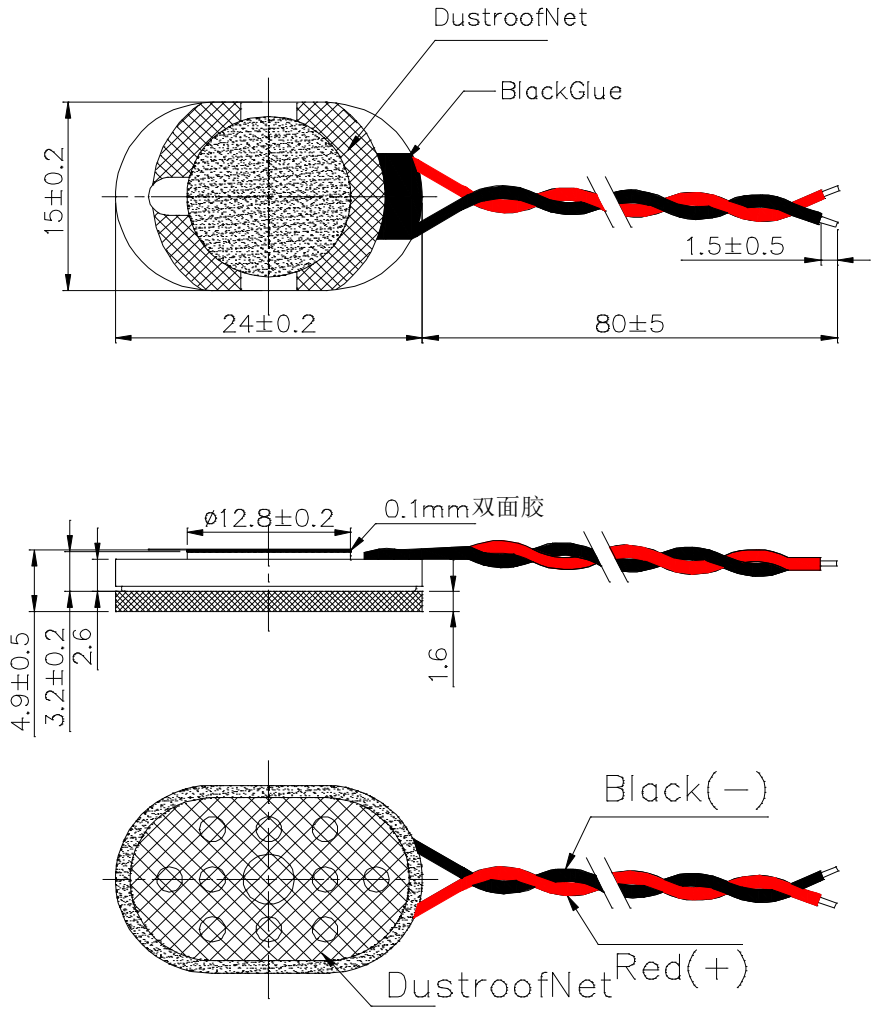
5.Sweep Time : 0.5sec



2-3.Frequency Response Curve

3.Dimension

REV NO.	REVISION NOTE	APPROVAL	DATE



Wire: UL1571 AWG30 OD: 0.7
Diaphragm: mylar
Case: PBT

TITLE:	DYNAMIC SPEAKER		DRAWN: Lily 2017/03/08	SCALE: 1/1	SHEET: 1 OF 1
PART NO.	HDK−241508AA−2W	1	DESIGNED: R&D OF DS	UNITS: mm	
DWG NO.	DSE−2047	REV	CHECKED: Emily	TOLERANCE ± 0.3	
			APPROVAL: Eric	UNLESS OTHERWISE SPECIFIED: ONE PLACE DECIMAL ± *** TWO PLACE DECIMAL ± *** THREE PLACE DECIMAL ± ***	
			MATERIAL: PBT		

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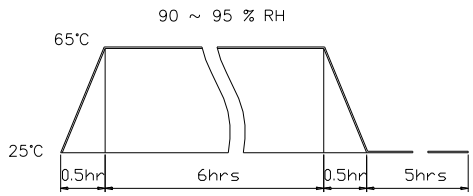
4.Reliablity Test

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:+70℃±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 .		

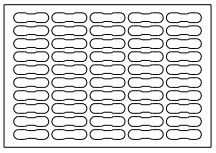
Soldering Condition

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

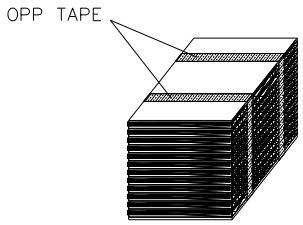
5.Packing

REV NO.	REVISION NOTE	APPROVAL	DATE

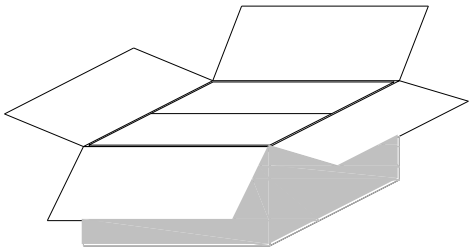
Cover(320*220*5mm)
Material: Eps



Box(320*220*13.5mm)
100pcs
Material: Eps



Middle(320*220*140mm)
1000pcs
Material: Eps



Outer Box(360*270*280mm)
2000pcs
Material: Paper

单位：mm

TITLE: packing	DRAWN: Lily 2015/4/23	SCALE: 2:1	SHEET: 1 of 1
PART NO.	DESIGNED: R&D OF D.S.	UNITS: mm	
	CHECKED: Emily	TOLERANCE	
DWG NO.	APPROVAL: Eric	20~11	± 0.3
1 REV	MATERIAL: ***	10~5	± 0.2
		<4	± 0.1

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