

MESSRS.

SPECIFICATION FOR APPROVAL

承 认 书

Product	WATERPROOF TYPE SPEAKER
Part No.	HDK-1308DA-10C (RoHS)
Customer Approval	

Approved By	Checked By	Made By
王台平 SEP-30-2016	曹丽萍 SEP-30-2016	LILY SEP-30-2016

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EDITION:1. 1

1. Specification

HDK-1308DA-10C (RoHS)

ITEM		SPECIFICATION	
01	Type	Dynamic speaker	
02	Dimension	External diameter 13.0 mm	
03	Rated Input Power	0.5W	
04	Max. Input Power	0.8W for 1 minute	
05	Impedance	8 ohm \pm 15% at 2000Hz.	
06	Resonance Frequency (Fo)	1100Hz \pm 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	90dB (0.5W / 0.1m) \pm 3 dB	at AVE 0.8K, 1.0K, 1.2K , 1.5KHz.
08	Frequency Range	Fo - 8KHz	
09	Total Harmonics Distortion	Max 8 % at 1 KHz, 0.5W.	
10	Voice Coil	Diameter 7.4 mm	
11	Dustproof and waterproof	IP67	
12	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 6.8x 0.7mm	
13	Weight	1.5g \pm 5%	
14	Appearance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.	
15	Operation Test	Must be normal at program source - 0.5W	
16	Buzz, Rattle, etc.	Should not be audible at 2.0V sine Wave between Fo to 20KHz	
17	Polarity	When positive voltage is applied to the terminal marked (+), diaphragm should move to the front.	
18	Terminal Strength	Capable of withstand 1kg load for 30 seconds without resulting in any damage or rejection.	
19	Temperature	Operating temperature: -40°C to +95°C Storage temperature: -40°C to +95°C	

2-1 .Test Condition

Standard

Temperature : 15 ~ 35℃

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

Judgement

Temperature : 20±3℃

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

2-2 . Standard Test Fixture

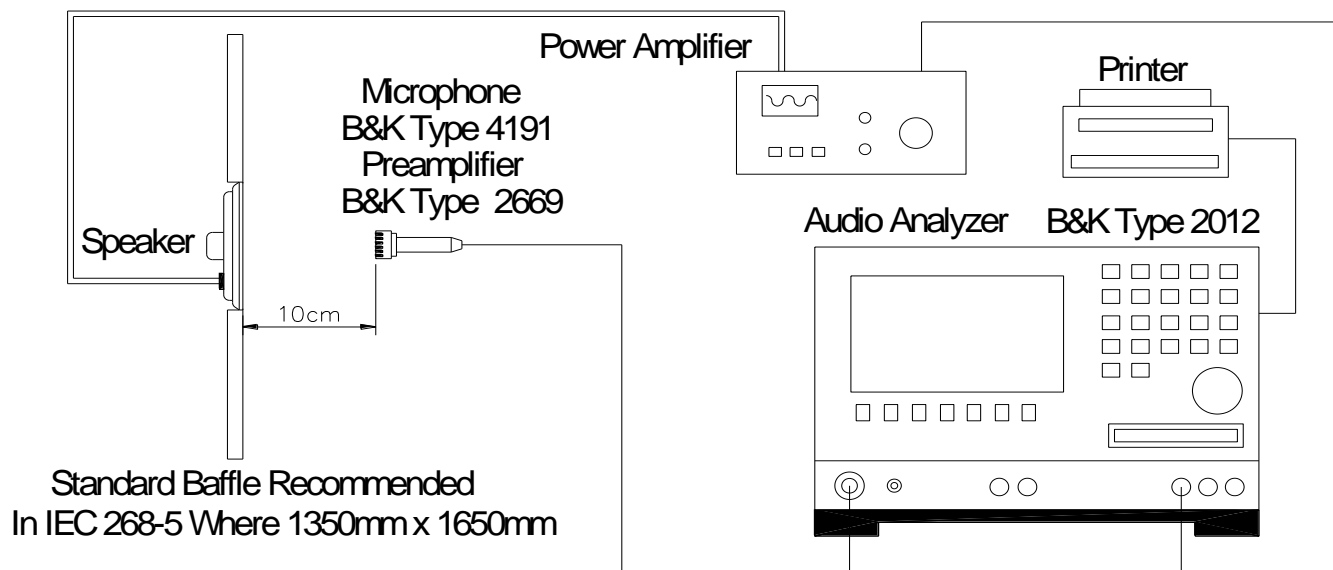
1. Input Power : 0.5W (2.0V)

2. Zero Level : -dB

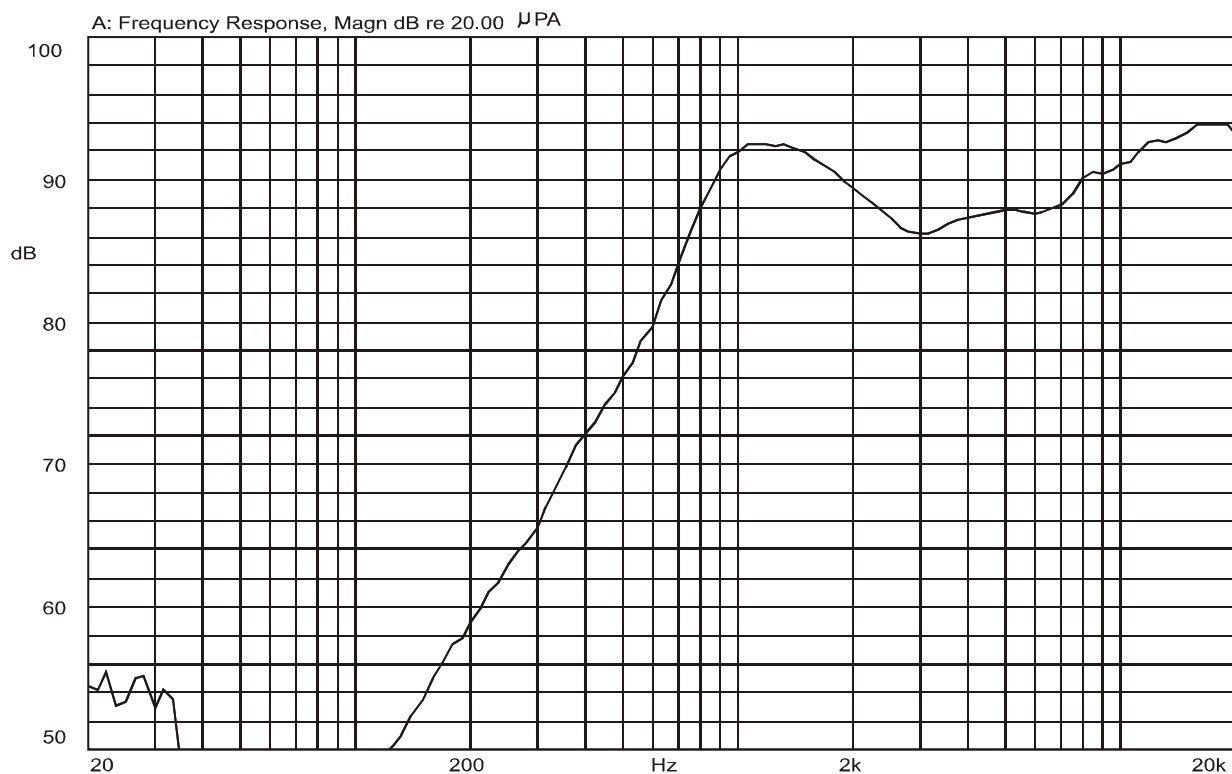
3. Mode : SPEAKER

4. potentiometer Range : 50dB

5. Sweep Time : 0.5sec



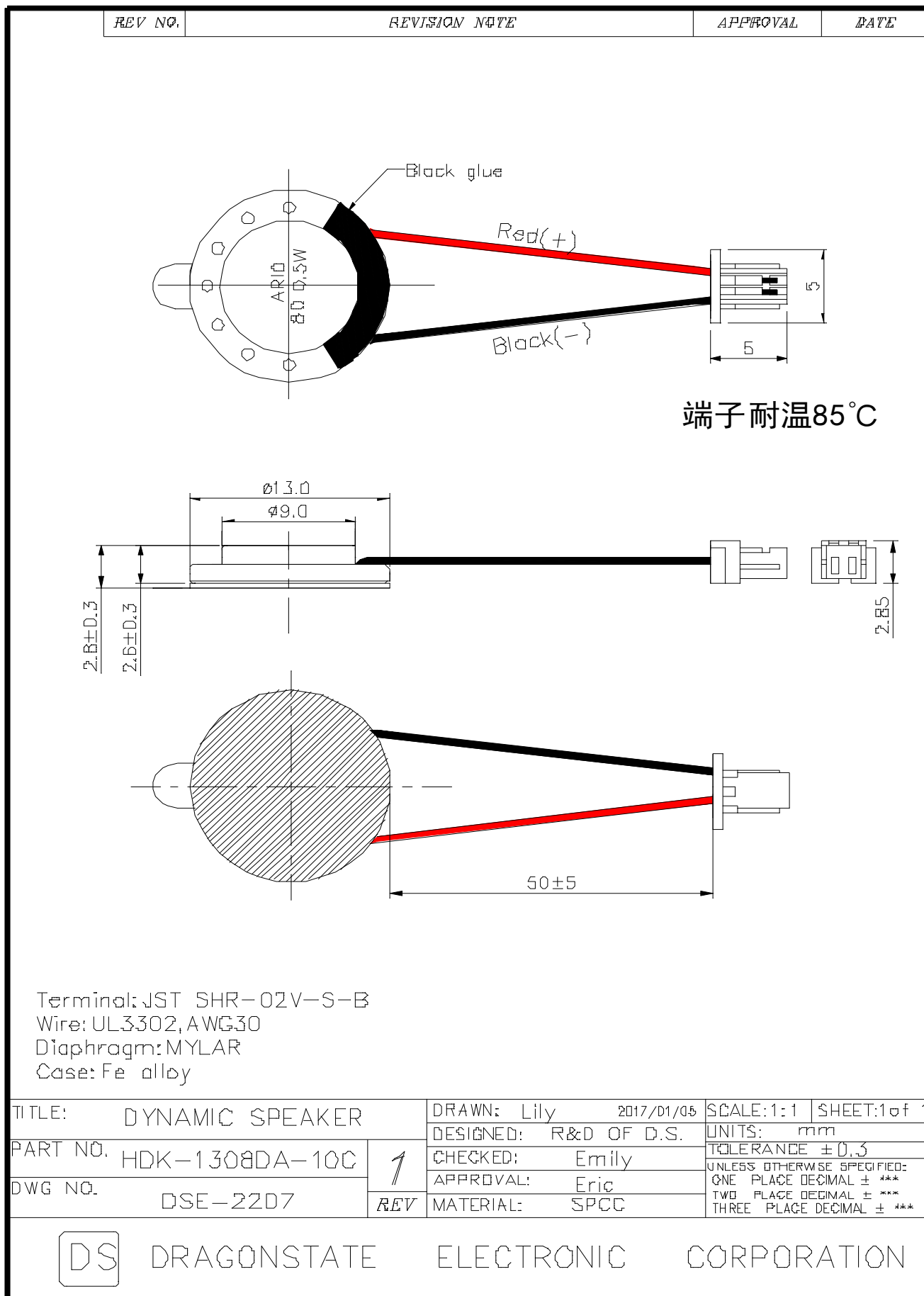
2-3. Frequency Response Curve



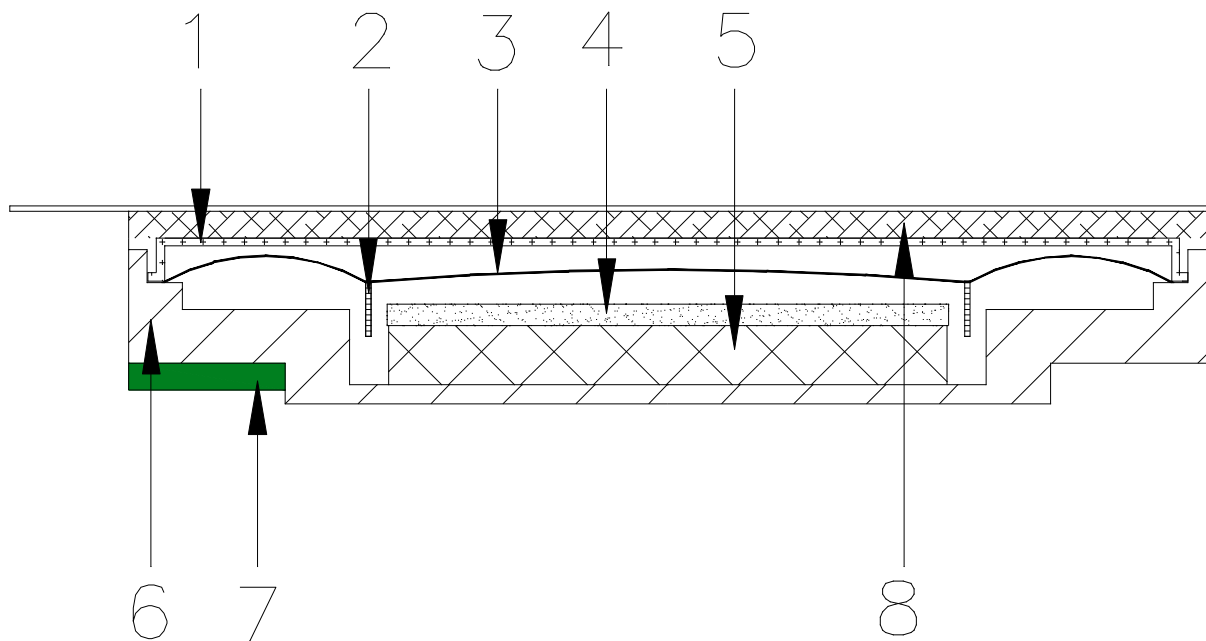
Mode: SSR



3. Dimension

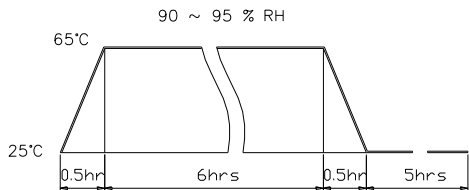


4. Material and Structure



NO	PART NAME	MATERIAL	Q`TY
1	CAP	SUS304	1
2	VOICE COIL	COPPER	1
3	DIAPHRAGM	PEI	1
4	PLATE	SPCC	1
5	MAGNET	Nd-Fe-B	1
6	FRAME	SPCC	1
7	TERMINAL	JST SHR-02V-S-B+UL3302 AWG30	1
8	GASKET	ADHESIVE	1

5. Reliability Test



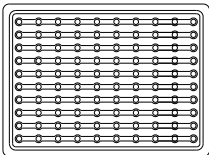
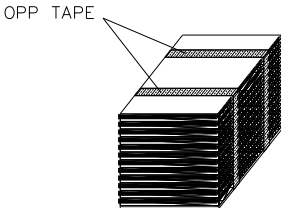

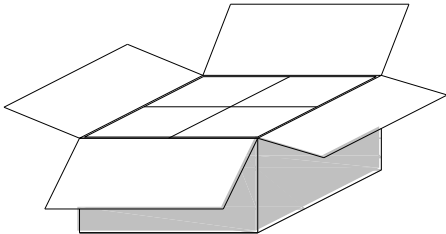
Items.		Specifications
01	High temp. Test	Keep 96 hours at $+95^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
02	Low temp. Test	Keep 96 hours at $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
03	Humidity 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: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$, temperature: $+95^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 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.
12	Protection against liquids	Protected against 30 minutes of immersion under 1M pressure
Criterion: After these test , the change of S.P.L shall be within ± 3 dB .		

Soldering Condition

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

Soldering time **2** seconds.

6. Packing

REV NO.	REVISION NOTE	APPROVAL	DATE
	 <p>HARD BOARD 225*165*10</p>		
			
	 <p>PE PAD 225*165*10 Q'TY=100 PCS</p>		
	 <p>OPP TAPE</p> <p>PE PAD 225*165*120 Q'TY=1000 PCS</p>		
			
	 <p>Total: 1000*10=10000pcs Box size: (LXWXH) mm: 490*360*350</p>		
单位: mm			
TITLE: Packing		DRAWN: Lily 2009/05/16	
PART NO.		DESIGNED: R&D OF D.S.	
		CHECKED: Emily	
DWG NO.		APPROVAL: Eric	
		MATERIAL:	
<div style="border: 1px solid black; padding: 5px; display: inline-block;">DS</div> <div style="display: inline-block; vertical-align: middle;"> DRAGONSTATE ELECTRONIC CORPORATION </div>		SCALE: 2:1	
		SHEET: 1 of 1	
		UNITS: mm	
		TOLERANCE	
		20~11	± 0.3
		10~5	± 0.2
		<4	± 0.1