



Roborock 样品签样封面

RR Part No.: _____

Part 名称 : _____

供应商 : _____

MPN: _____

研发限量样 ☐ 数量_____

量 产 样 ☐

限 度 样 ☐ 限度原因说明_____

研发 : _____ 时间 : _____

ID : _____ 时间 : _____

研发质量 : _____ 时间 : _____

SQM : _____ 时间 : _____

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

Product	DYNAMIC SPEAKER
Part No.	HDK-3608BB-15C5 (RoHS)
Customer Approval	3.02.0017

Approved By	Checked By	Made By
王台平 JUL-09-2021	曹丽萍 JUL-09-2021	LILY JUL-09-2021

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

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EDITION:1.1

[illegible]

1.Specification

HDK-3608BB-15C5 (RoHS)

ITEM		SPECIFICATIONS	
01	Type	Dynamic speaker	
02	Dimension	External diameter 36 mm	
03	Rated Input Power	1.0W	
04	Max. Input Power	1.2W for 1 minute	
05	Impedance	8 ohm $\pm$ 15% at 1500Hz.	
06	Resonance Frequency (Fo)	480Hz $\pm$ 20% at Fo, 1V	
07	Sensitivity (S.P.L.)	90dB (0.1W / 0.1m) $\pm$ 3dB	at AVE 0.6K,0.8K,1.0K,1.2KHz.
08	Frequency Range	Fo – 20KHz	
09	Dustproof and waterproof	IPX4	
10	Total Harmonics Distortion	Max 5 % at 1 KHz,0.1W.	
11	Voice Coil	Diameter 13.3 mm	
12	Magnet	Rare earth permanent (Nd-Fe-B) magnet Φ 12.5 x 1.5 mm	
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 –1.0W	
15	Buzz, Rattle, etc.	Should not be audible at 2.83V 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

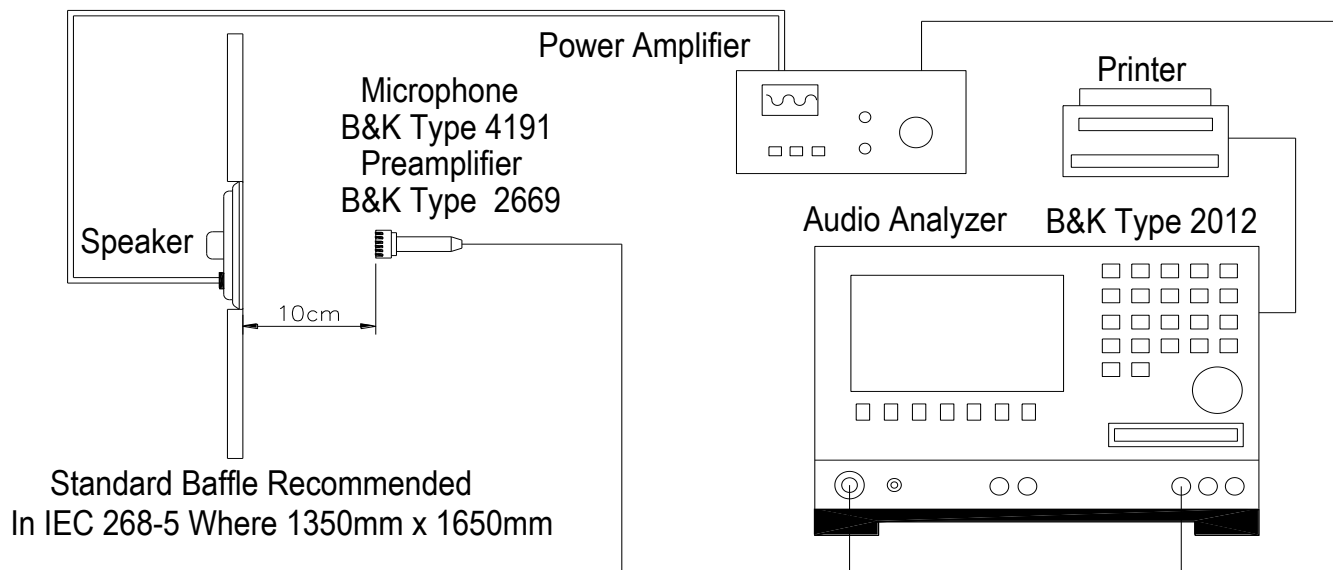
1. Input Power : 0.1W (0.89V)

2. Zero Level : -dB

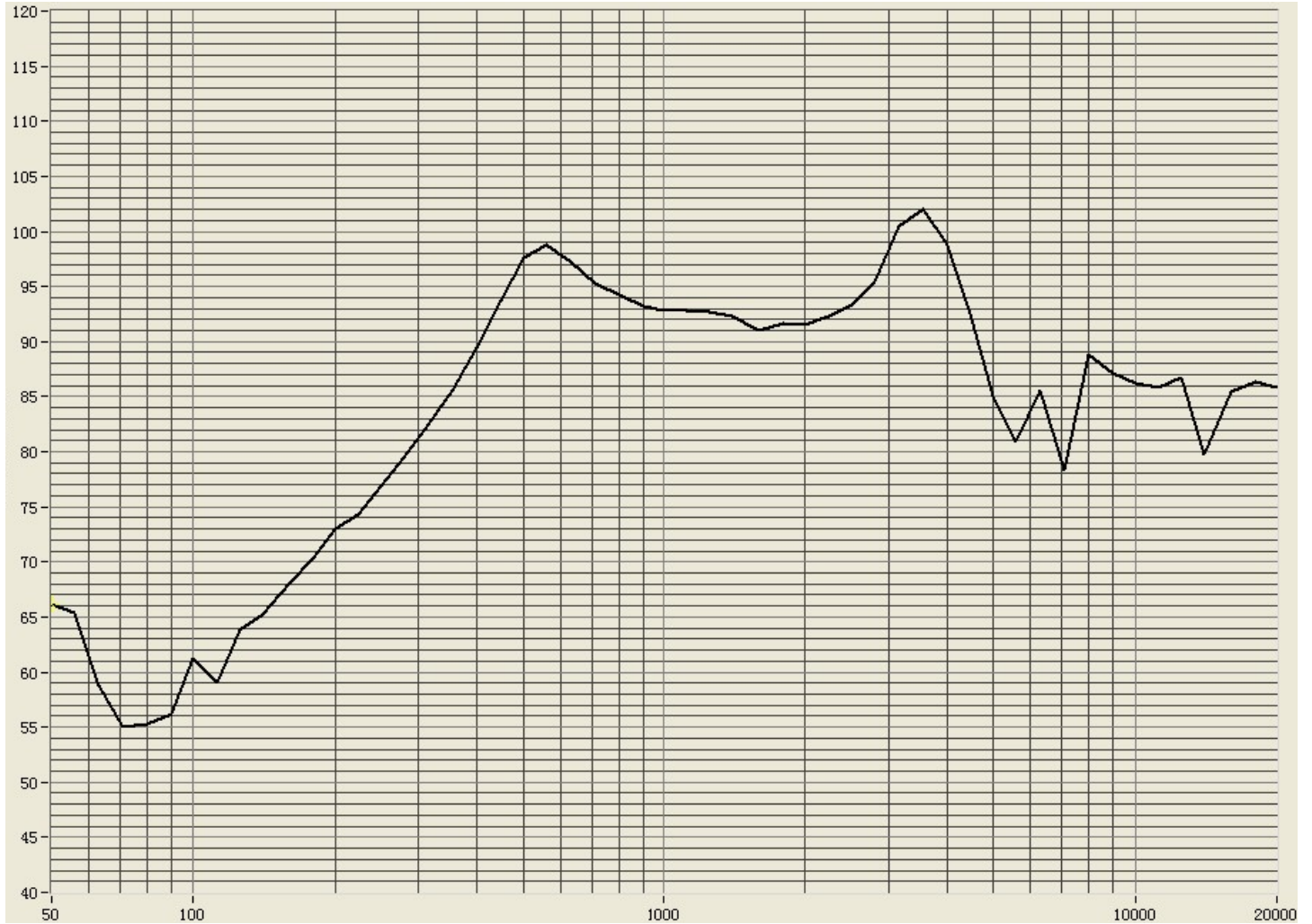
3. Mode : SPEAKER

4. potentiometer Range : 50dB

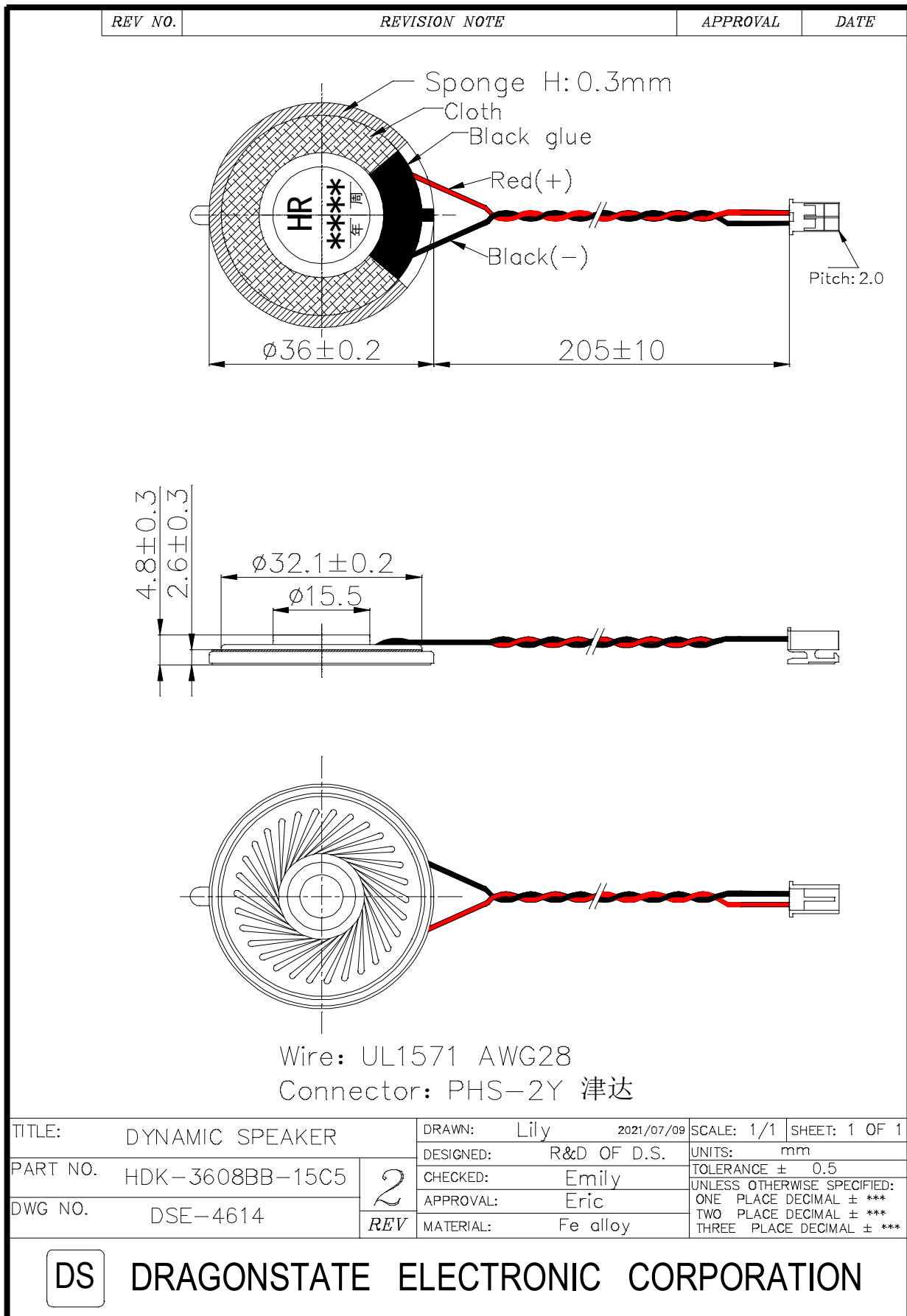
5. Sweep Time : 0.5sec



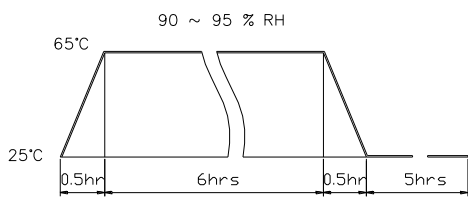
2-3.Frequency Response Curve



3.Dimension



4. Reliability Test

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 $+40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 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 ± 3 dB .

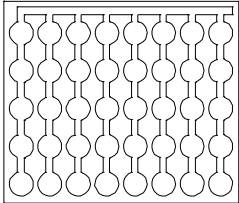
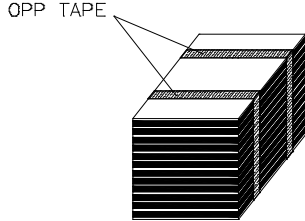
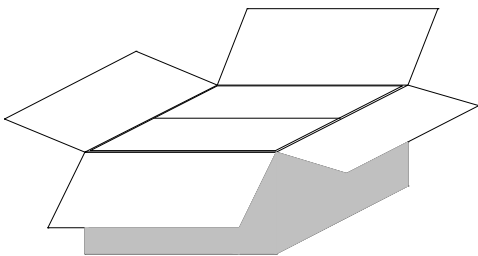
For trail products and samples, random 10pcs test. For MP products, test cycle is 6 month.

SOLDERING CONDITION

Recommend using constant branding iron in **15 ~ 30W**, and in temperature range **$350 \pm 10^{\circ}\text{C}$** .

Soldering time not over **3** seconds.

5.Packing

REV NO.	REVISION NOTE	APPROVAL	DATE
 ↓  ↓  ↓  Cover(355*305*12mm) Material: Eps Box(355*305*18mm) 40pcs Material: Eps Middle(355*305*180mm) 400pcs(10*40pcs) Material: Eps Outer Box(650*390*405mm) 1600pcs(4*400pcs) Material: Paper			
单位: mm			
TITLE: packing		DRAWN: Lily 2018/12/06	
PART NO. 1 DWG NO. REV		SCALE: 2:1	
		SHEET: 1 of 1	
		DESIGNED: R&D OF D.S.	
		UNITS: mm	
		CHECKED: Emily	
		TOLERANCE	
		APPROVAL: Eric	
		20~11 ± 0.3	
		10~5 ± 0.2	
		MATERIAL: ***	
		<4 ± 0.1	
DS DRAGONSTATE ELECTRONIC CORPORATION			

内标签

PN:

 QUANTITY:

 MPN:


 规格型号:
 常州华龙电子有限公司

内包装



外箱标签

Roborock PN:		RoHS 标签
供应商名称:	1. 1. 100	
制造商名称:	常州华龙电子有限公司	
MPN:		PASS 章
规格描述:		
批次号:		
生产日期:		二维码 (Roborock PN, 供应商代码, MPN, 生产日期, 批次号, 订单编号, 数量 QTY, 特殊用途)
出货日期:		
订单编号:		
数量 QTY:		
QR CODE 二维码包含信息规则 (最大 128 位):		
Roborock PN: 预留 10 位, 在 Roborock 系统中的料号 (包含料号中的间隔 “.” 点符号), 如 1.01.0001, 多余位留空;		
供应商代码: 在 Roborock 系统中的代码 (包含中间的间隔 “.” 点符号), 共 7 位;		
MPN: 预留 15 位, 多余位留空; 无此信息可以留空;		
生产日期: 预留 8 位, 日期格式 20180601; 周别格式 1803, 18 年第 3 周; 多余位留空;		
批次号: 预留 20 位, 多余位留空; 无此信息可以留空;		
订单编号: 预留 15 位; 多余位留空;		
数量 QTY: 预留 7 位; 如 1234567; 多余位留空;		
特殊用途: 预留 4 位; 如用于试产、验证、特采等; 无此信息留空;		
二维码内容格式: Roborock PN, 供应商代码, MPN, 生产日期, 批次号, 订单编号, 数量 QTY, 特殊用途 (共计 93 位, 中间务必用英文 “,” 隔开)		