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Report No.: SDEM150800484102
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Human Exposure Report

Application No.: SDEM1508004841CR
Applicant/ Manufacturer: Grohe AG
Address of Applicant/ Manufacturer: Industriepark Edelburg 58675 Hemer Germany
Factory: Arts Electronics Co., Ltd.
Address of Factory: NO.1, SHANGXING LU, SHANGJIAO COMMUNITY, CHANGAN TOWN, DONGGUAN CITY, GUANGDONG PROVINCE, CHINA
Equipment Under Test (EUT):
EUT Name: Wireless shower speaker
Model No.: 26326L00, GS32G/37 ♣
* Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark: Grohe
FCC ID: WFK26326
Standards: 47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt: 2015-08-05
Date of Test: 2015-08-12 to 2015-08-28
Date of Issue: 2015-10-10

Test Result :	Pass*
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* This report is just a test result base on the test method and limit requirement shown in the form on the second page. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Authorized Signature:



Starry Li
EMC Laboratory Project Engineer

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3 General Information

3.1 Details of E.U.T.

Power Supply: Input voltage: AC 120V 60Hz 0.15A
Test voltage: AC 120V 60Hz
Cable: AC cable: 200cm unshielded

3.2 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
Main unit (Bluetooth speaker)	Philips	26270LV0

3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,
No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

- **Industry Canada (IC)**

The 3m Semi-anechoic chambers and the 10m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-2, 4620C-3.

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

4 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2016-05-13
2	Electric Filed Meter	Schaffner	EMC20	EMC068	2016-04-06
3	DC Electronic Load	PRODIGIT	3302F	30802F00533	2015-12-05

5 Test Results

5.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310

Measurement Distance: 10cm

Test voltage: AC 120V 60Hz

Limit:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

5.1.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C Humidity: 55 % RH Atmospheric Pressure: 1010 mbar

EUT Operation:

This device has been tested the worst status of full load and the device has been tested with the device to be charged (Main unit: Bluetooth speaker) at zero charge, intermediate charge, and full charge.

5.1.2 Measurement Data**1:Output Voltage=DC 5V; The max output power =0.75W;Calculation of resistor value=33.3Ω****Electric Field Emissions**

Test Position	Probe Measure Result(V/m)	Limit(V/m)/30% Limit(V/m)
Side 1	6.15	614/184.2
Side 2	5.96	614/184.2
Side 3	5.51	614/184.2
Side 4	6.20	614/184.2
Top	7.42	614/184.2
Bottom	5.90	614/184.2

Magnetic Field Emissions

Test Position	Probe Measure Result(A/m)	Limit(A/m)/30% Limit(A/m)
Side 1	0.0878	1.63/0.489
Side 2	0.0877	1.63/0.489
Side 3	0.0858	1.63/0.489
Side 4	0.0973	1.63/0.489
Top	0.1526	1.63/0.489
Bottom	0.0957	1.63/0.489

2:Main unit has been charge at zero charge, intermediate charge, and full charge.**Electric Field Emissions**

Test Position	Probe Measure Result(V/m)			Limit(V/m)/ 30%Limit(V/m)
	zero charge	intermediate charge	full charge	
Side 1	4.75	4.77	4.98	614/184.2
Side 2	4.85	4.69	4.56	614/184.2
Side 3	4.66	5.75	4.66	614/184.2
Side 4	4.58	4.87	3.99	614/184.2
Top	6.55	6.88	5.98	614/184.2
Bottom	4.48	4.95	4.47	614/184.2

Magnetic Field Emissions

Test Position	Probe Measure Result(A/m)			Limit(A/m)/ 30%Limit(A/m)
	zero charge	intermediate charge	full charge	
Side 1	0.0375	0.0268	0.0198	1.63/0.489
Side 2	0.0248	0.0268	0.0197	1.63/0.489
Side 3	0.0255	0.0298	0.0265	1.63/0.489
Side 4	0.0247	0.0278	0.0218	1.63/0.489
Top	0.0265	0.0296	0.0269	1.63/0.489
Bottom	0.0198	0.0199	0.0197	1.63/0.489

6 Photographs

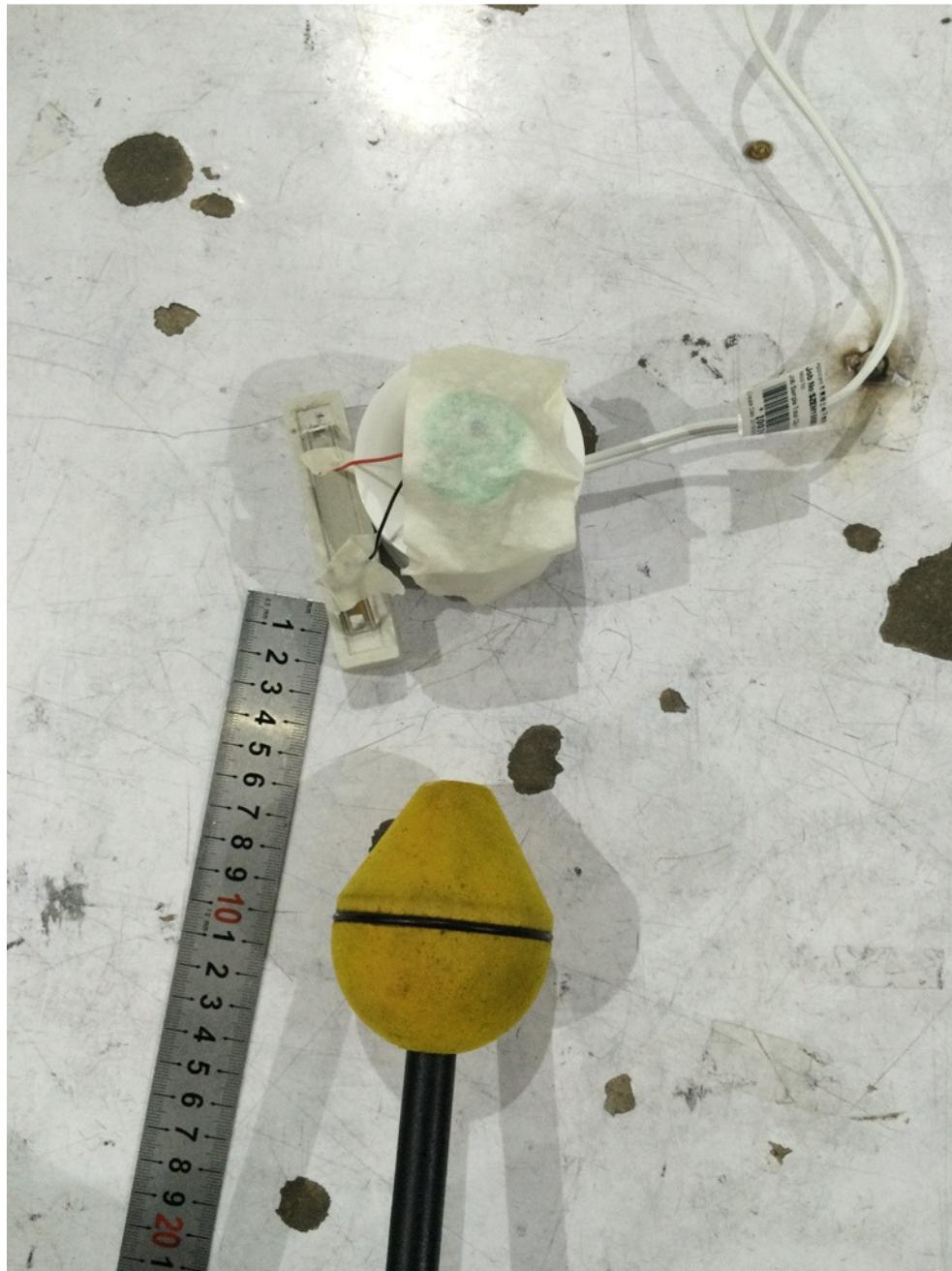
6.1 Test photos

Test with full load

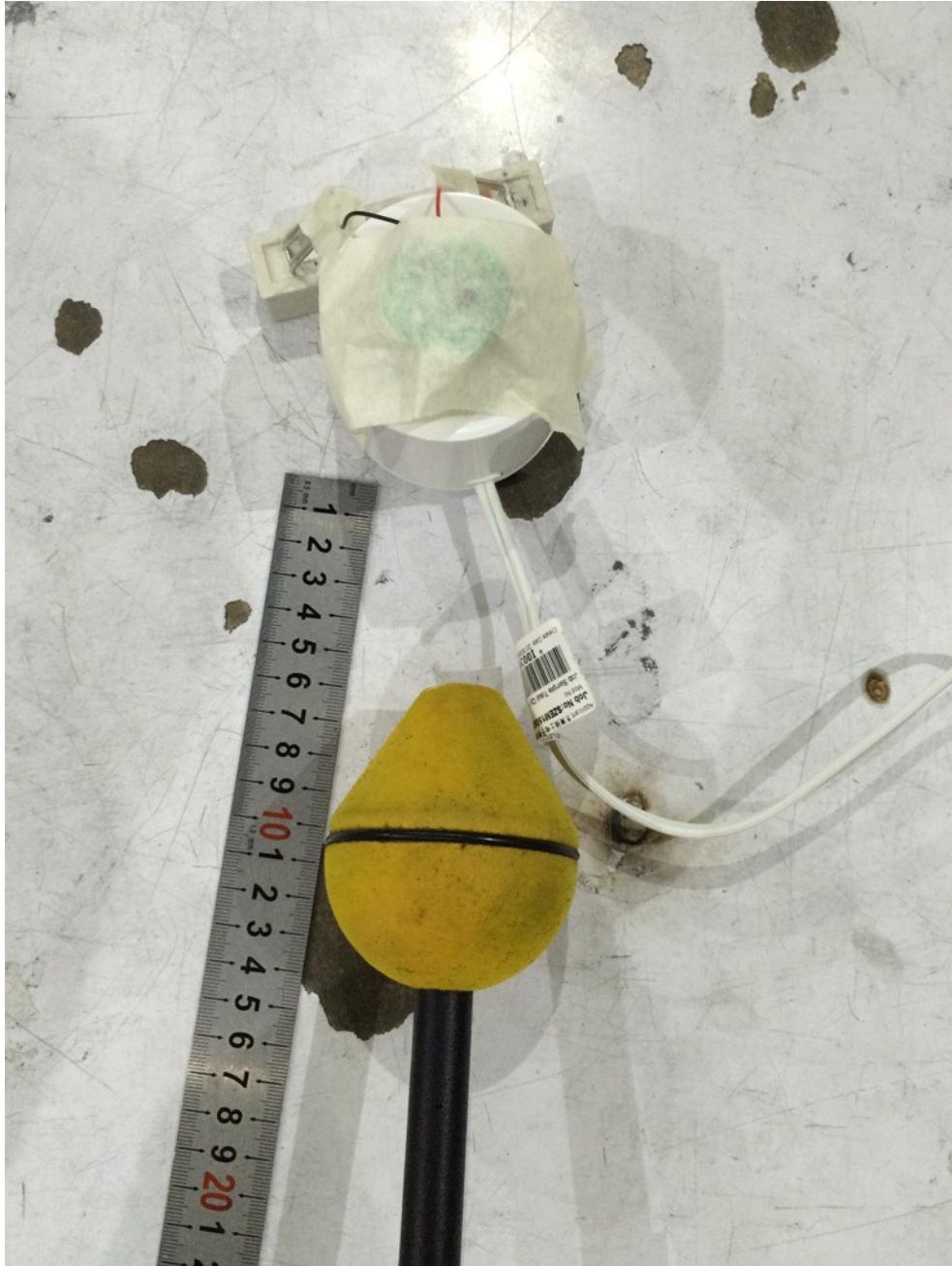
Side 1



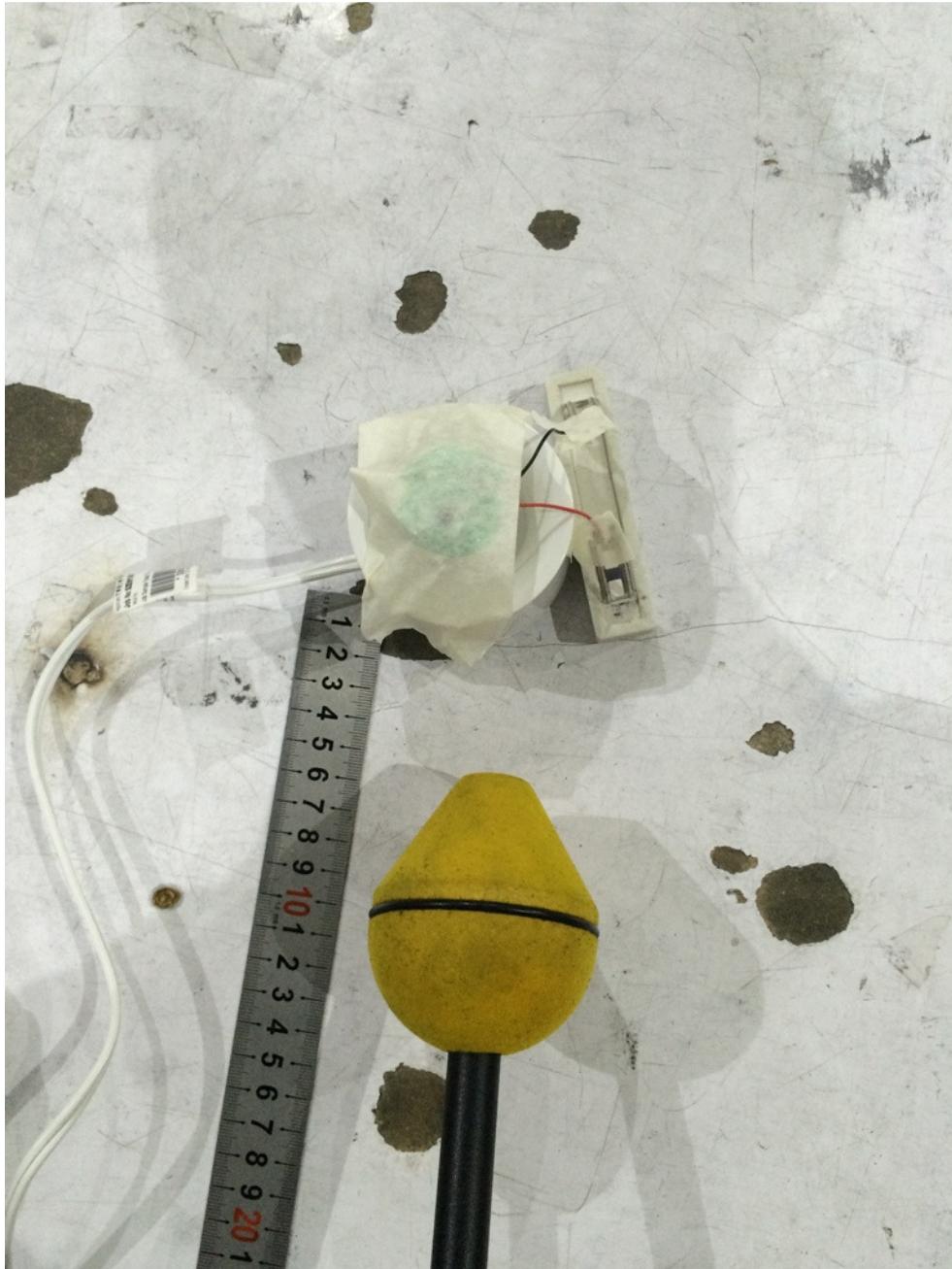
Side 2



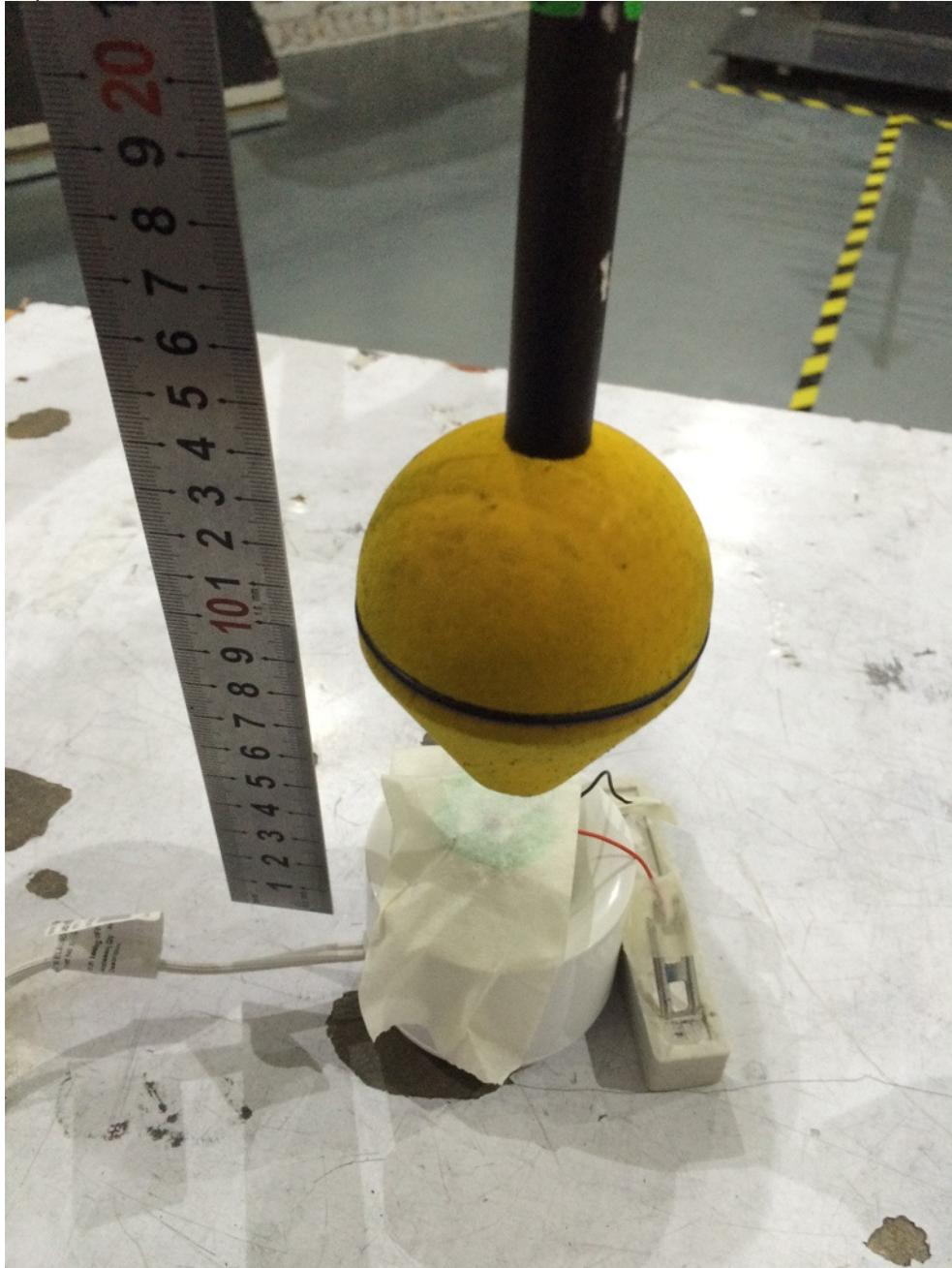
Side 3



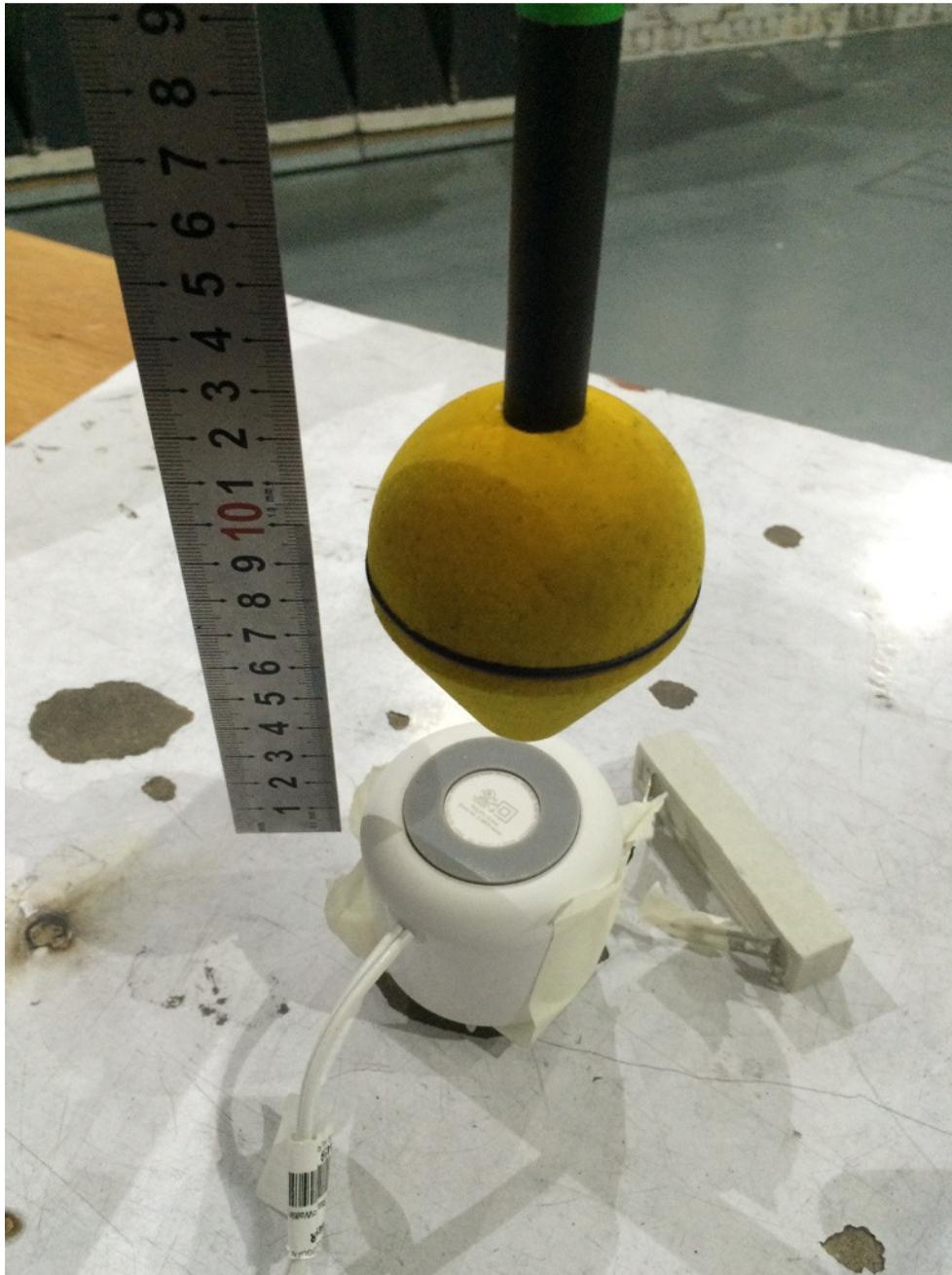
Side 4



Top

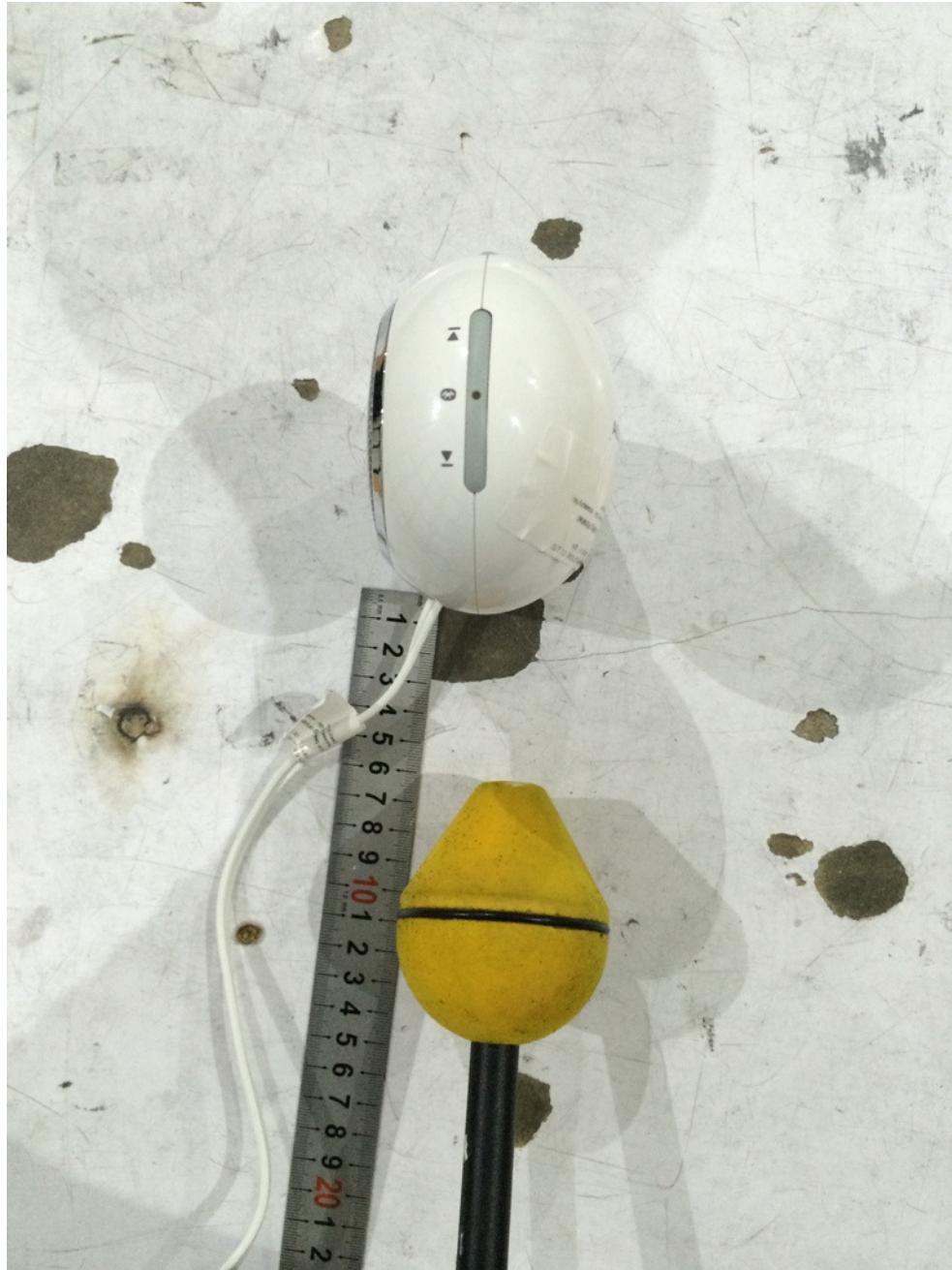


Bottom



Test with main unit at zero charge,intermediate charge,full charge

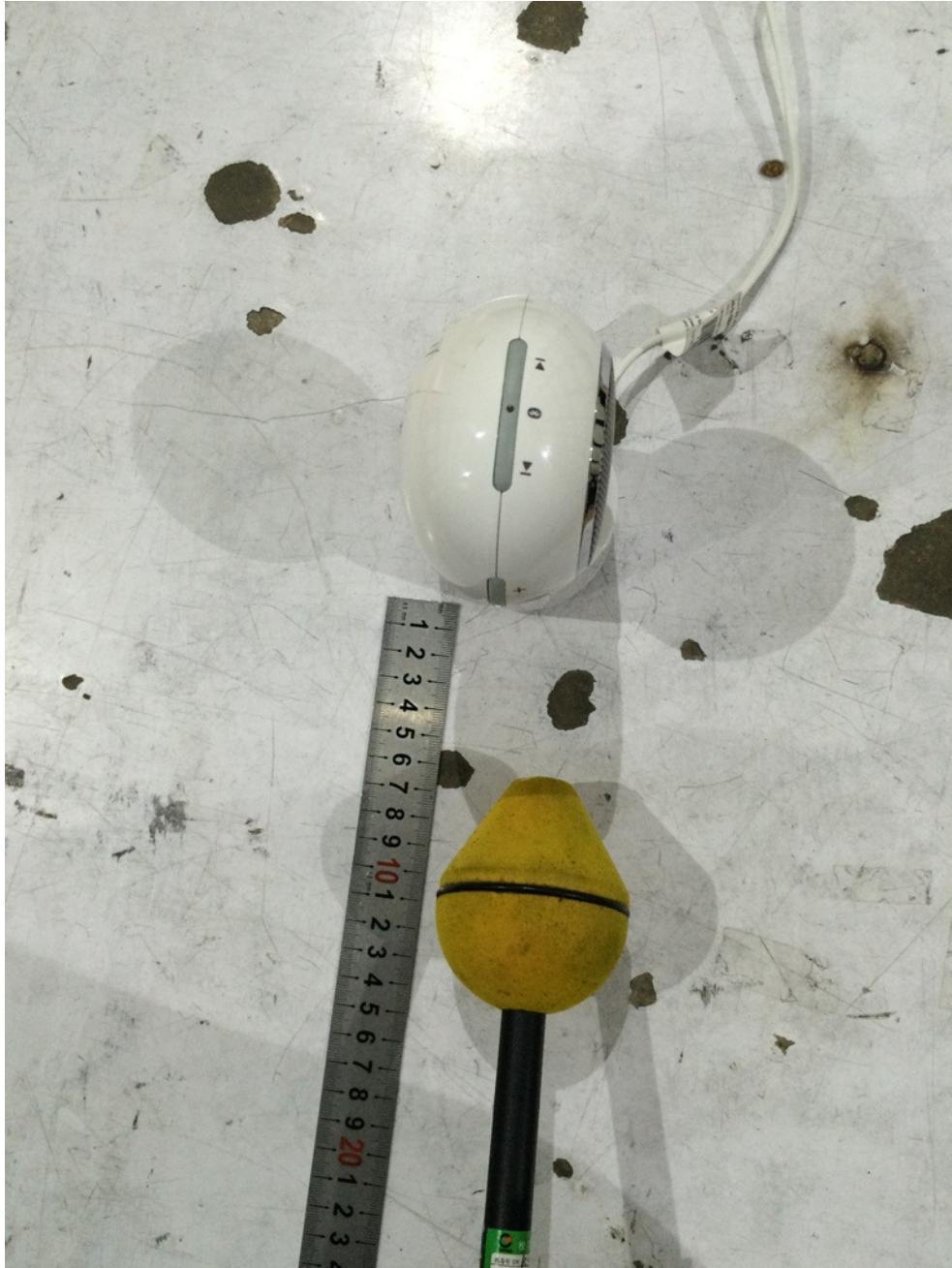
Side 1



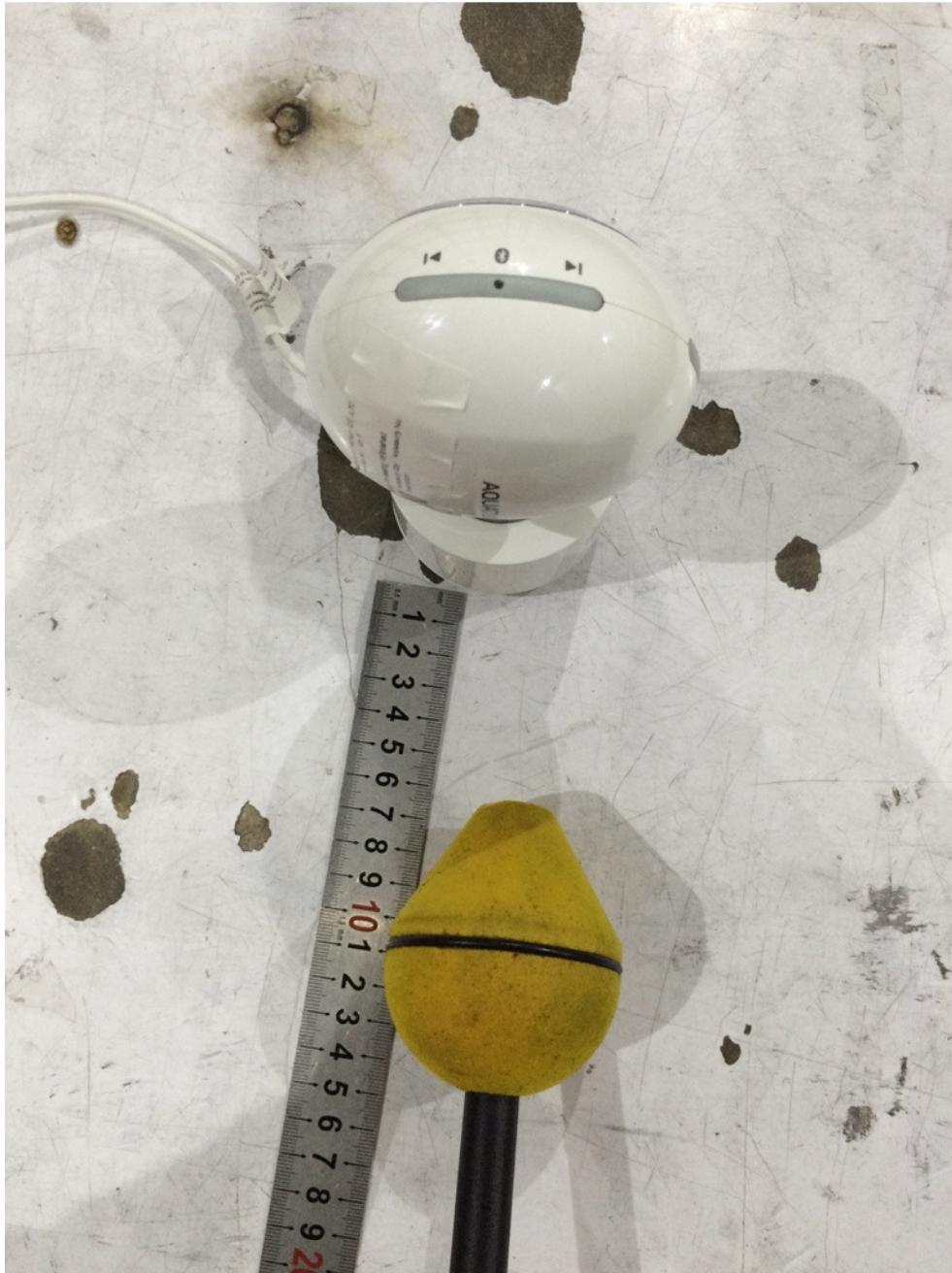
Side 2



Side 3



Side 4



Top



Bottom



6.2 EUT photos





