



# SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

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Report No.: SHEM180500385202  
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## Human Exposure Report

**Application No.:** SHEM1805003852CR  
**FCC ID:** 2AP9U-Z01  
**Applicant:** Hanergy Mobile Energy Holding Group Limited  
**Address of Applicant:** Room 107, The 2<sup>nd</sup> Building, Olympic Street Office Area, Chaoyang District, Beijing  
**Manufacturer:** Hanergy Mobile Energy Holding Group Limited  
**Address of Manufacturer:** Room 107, The 2<sup>nd</sup> Building, Olympic Street Office Area, Chaoyang District, Beijing  
**Factory:** Hanergy Mobile Energy Holding Group Limited  
**Address of Factory:** Room 107, The 2<sup>nd</sup> Building, Olympic Street Office Area, Chaoyang District, Beijing  
**Equipment Under Test (EUT):**  
**EUT Name:** Hanerbank  
**Model No.:** HZ-G012011C  
**Standards:** 47 CFR PART 1, Subpart I, Section 1.1310  
**Date of Receipt:** 2018-05-21  
**Date of Test:** 2018-06-20 to 2018-06-26  
**Date of Issue:** 2018-06-26

<b>Test Result :</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.



Parlam Zhan  
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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Revision Record			
Version	Description	Date	Remark
00	Original	2018-06-25	/

<b>Authorized for issue by:</b>			
			
	<hr/>		
	<b>Vincent Zhu /Project Engineer</b>		
			
	<hr/>		
	<b>Parlam /Reviewer</b>		



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### 3 General Information

#### 3.1 Details of E.U.T.

Battery:	Built-in lithium-ion rechargeable battery 2960mAh
Charger input:	5V-2.1A(I) 5V-2A(PI)
USB Output:	DC 5V, 2.1A
Wireless Output:	DC 5V, 1A
Operation frequency:	110-205 kHz
Antenna type:	Inductive Loop Coil Antenna
Remark:	Tests were conducted in three loads and the worst case is reported only.

#### 3.2 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Serial No.
Load	provided by client	5Ω (DC 5V/1A)	N/A
		10Ω (DC 5V/0.5A)	
		100Ω(DC 5V/ 0A)	
Mobile Phone	Apple	Iphone X	N/A

#### 3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.



### 3.4 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 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.

- **NVLAP (Certificate No. 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

- **FCC –Designation Number: CN5033**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

Designation Number: CN5033. Test Firm Registration Number: 479755.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-12221, G-10830 respectively.

### 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 Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ST	N/A	SHEM078-2	2017-07-20	2020-07-21
2	Electromagnetic Field Probe	WANDEL & GOLTERMANN	EMR-20	SHEM0907	2018-04-10	2019-04-11



## 5 Test Results

### 5.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310  
 Measurement Distance: 15 cm for surrounding the device and 20 cm for above the top surface.  
 Test voltage DC 5V  
 Limit:

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

### E.U.T. Operation

#### Operating Environment:

Temperature: 24.0 °C      Humidity: 52% RH      Atmospheric Pressure: 1015 mbar

#### EUT Operation:

This device has been tested the worst status(AC input) of full load and the device has been tested with mobile phone at zero charge, intermediate charge, and full charge.



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## Measurement Data:

1: When use three type load to test, the worst case is Output Voltage=DC 5V; The max output power =5W;Calculation of resistor value=5Ω (DC 5V/1A)

### Electric Field Emissions

Test Position	Operating Frequency	Test Distance (cm)	Probe Measure Result (V/m)	Limit (V/m)	50% Limit (V/m)
Side 1	120KHz	15	5.21	614	307
Side 2	120KHz	15	5.09	614	307
Side 3	120KHz	15	4.97	614	307
Side 4	120KHz	15	4.88	614	307
Top	120KHz	20	6.95	614	307
Bottom	120KHz	15	5.32	614	307

### Magnetic Field Emissions

Test Position	Operating Frequency	Test Distance (cm)	Probe Measure Result (A/m)	Limit (A/m)	50% Limit (A/m)
Side 1	120KHz	15	0.0812	1.63	0.815
Side 2	120KHz	15	0.0796	1.63	0.815
Side 3	120KHz	15	0.0783	1.63	0.815
Side 4	120KHz	15	0.0768	1.63	0.815
Top	120KHz	20	0.1791	1.63	0.815
Bottom	120KHz	15	0.1274	1.63	0.815





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**2:Mobile phone has been charge at zero charge, intermediate charge, and full charge.  
The Maximum value has been recorded in the below table.**

## Electric Field Emissions

Test Position	Operating Frequency	Test Distance (cm)	Probe Measure Result(V/m)			Limit(V/m)/ 50%Limit(V/m)
			zero charge	intermediate charge	full charge	
Side 1	117kHz	15	4.86	5.07	4.33	614/307
Side 2	117kHz	15	4.51	4.92	4.29	614/307
Side 3	117kHz	15	4.37	5.77	4.52	614/307
Side 4	117kHz	15	4.28	4.53	4.15	614/307
Top	117kHz	20	6.26	6.33	6.01	614/307
Bottom	117kHz	15	5.87	5.64	5.77	614/307

## Magnetic Field Emissions

Test Position	Operating Frequency	Test Distance (cm)	Probe Measure Result(A/m)			Limit(A/m)/ 50%Limit(A/m)
			zero charge	intermediate charge	full charge	
Side 1	117kHz	15	0.0526	0.0742	0.0586	1.63/0.815
Side 2	117kHz	15	0.0508	0.0648	0.0553	1.63/0.815
Side 3	117kHz	15	0.0486	0.0861	0.0602	1.63/0.815
Side 4	117kHz	15	0.0472	0.0697	0.0543	1.63/0.815
Top	117kHz	20	0.1361	0.1432	0.1153	1.63/0.815
Bottom	117kHz	15	0.987	0.926	0.01086	1.63/0.815

## 6 Photographs

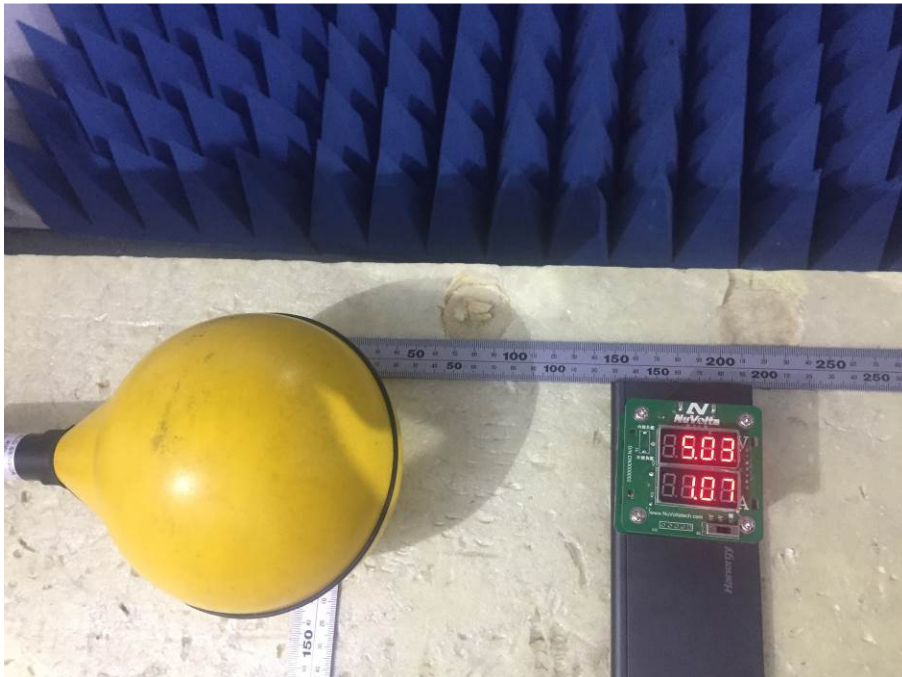
### 6.1 Test photos

Test with 5  $\Omega$  load

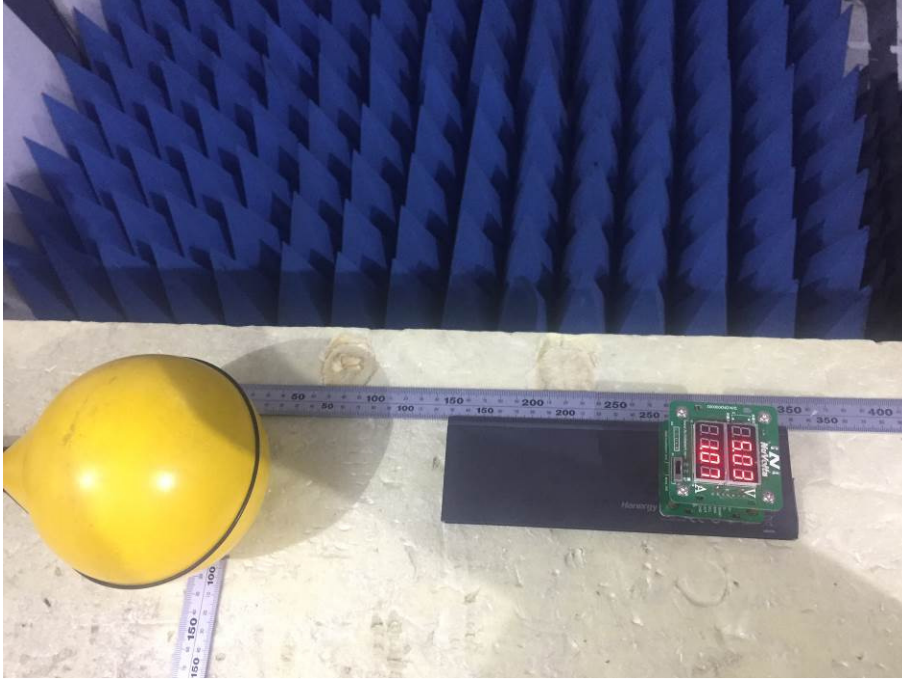
Side 1



Side 2



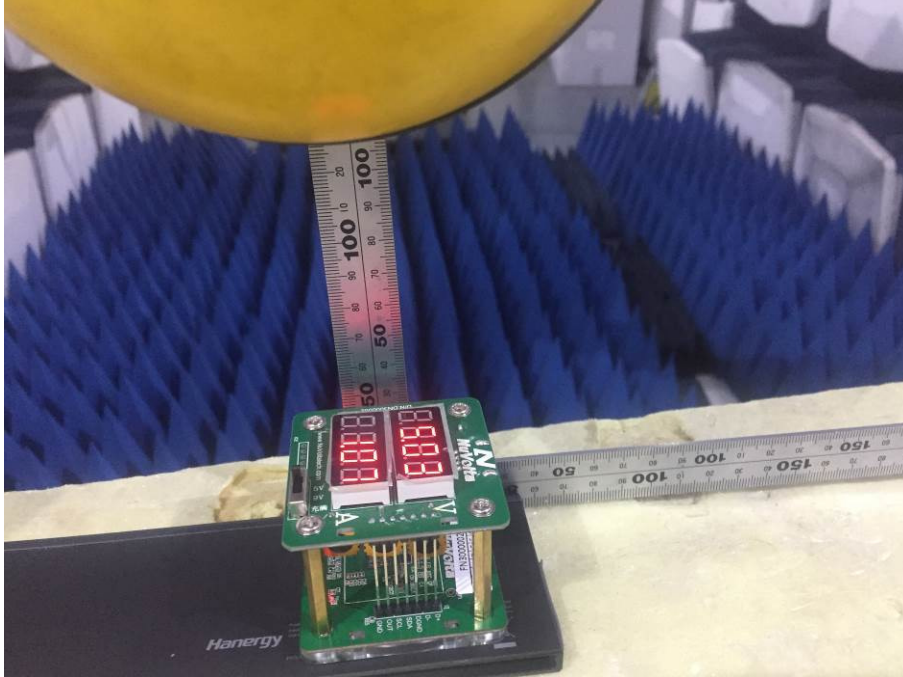
Side 3



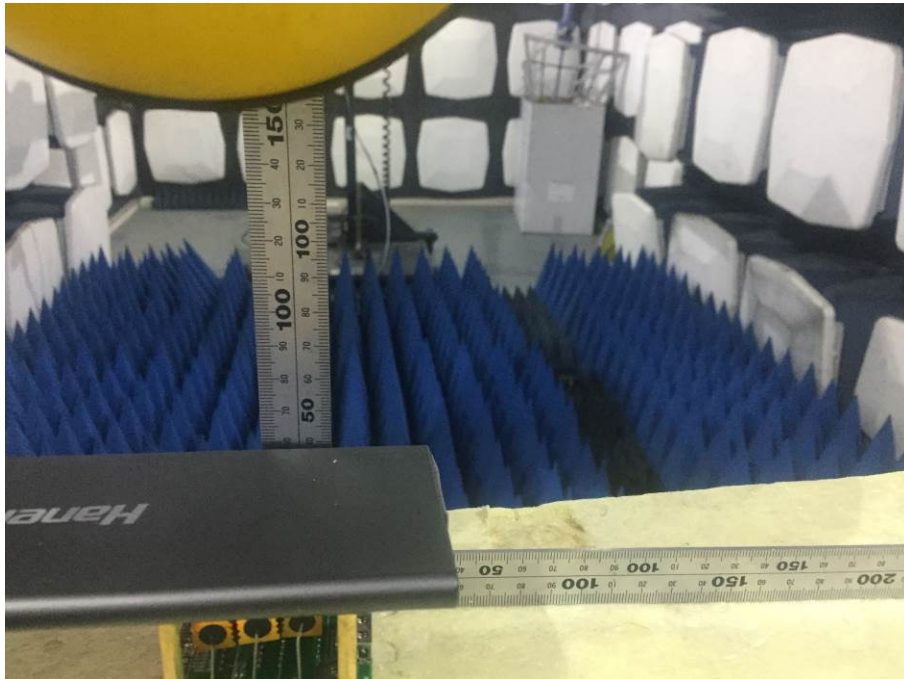
Side 4



Top



Bottom



**- End of the Report -**