RF Exposure Evaluation Report

Application No.:	SHCR2410002189BA
FCC ID:	2BE24E2000
Applicant:	JIANGSU JIANGHUAI ENGINE CO., LTD
Address of Applicant:	No.58 Xiwang South Road, Economy developmental district, Yancheng, Jiangsu, China
Manufacturer:	JIANGSU JIANGHUAI ENGINE CO., LTD
Address of Manufacturer:	No.58 Xiwang South Road, Economy developmental district, Yancheng, Jiangsu, China
Factory:	JIANGSU JIANGHUAI ENGINE CO., LTD
Address of Factory:	No.58 Xiwang South Road, Economy developmental district, Yancheng, Jiangsu, China
Equipment Under Test (EUT):	
EUT Name:	2KW portable energy storage power supply
Model No.:	E2000
Standard(s) :	47 CFR PART 1, Subpart I, Section 1.1310 FCC Rules 47 CFR §2.1091 KDB 680106 D01 RF Exposure Wireless Charging Apps v04
Date of Receipt:	2024-10-31
Date of Test:	2024-11-01 to 2024-11-21
Date of Issue:	2024-11-22
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2024-11-22	/

Authorized for issue by:				
Tested By		Wade Zhang		
		Wade Zhang/Project Engineer		
Approved By		Parlam Zhan		
		Parlam Zhan / Reviewer		

2 Contents

3 General Information

3.1 Details of E.U.T.

Power supply: AC120V 60Hz (DC51.1V Li-ion Battery)
Wireless Charging: 15W Max
Operation frequency: 110kHz to 205kHz
Modulation type: Load modulation
Antenna type: Inductive Loop Coil Antenna

3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Resistance load	-	-	-
Mobile phone	XIAOMI	XIAOMI 14	-

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.
Note:
1. SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal frequency, antenna gain, cable loss, etc) is provided by the applicant. (if applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (if applicable).
3. Sample source: sent by customer.

3.4 Test Facility

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

- **A2LA (Certificate No. 6332.01)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

- **FCC (Designation Number: CN1301)**

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

- **ISED (CAB Identifier: CN0020)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.
Company Number: 8617A

- **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-13868, C-14336, 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	Cal. Due date
1	Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2022-05-25	2025-05-24
2	Electromagnetic Field Probe	Narda	EHP-200AC	SHEM0907	2024-04-10	2025-04-09
3	Test software	Narda	EHP-200TS	N/A	N/A	N/A

5 Test Results

5.1 RF Exposure test

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

Measurement Distance: 10 cm for surrounding the device and 10 cm for above the top surface.

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).

5.2 E.U.T. Operation

5.2.1 Operating Environment

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

5.2.2 EUT Operation:

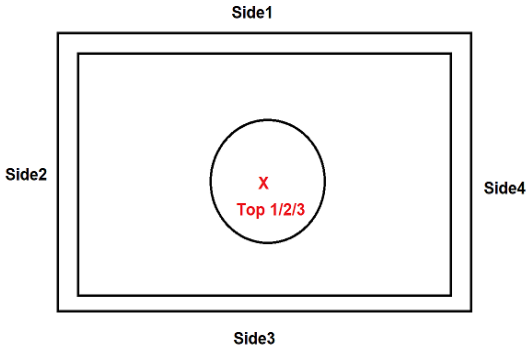
5.2.3 Simulation Load Mode

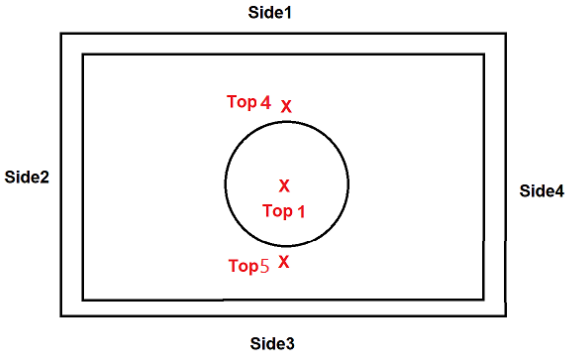
Test mode 00: Wireless Output(The load shall be set at full, half, empty load (15W/7.5W/0W)
01: Wireless Output(The mobile phone shall be set at 85% charge state, 50% charge state, 15% charge state.

Measurement Data:

Average 1**:** Test 3 times at the same location, taking the average value = (Top1+Top2+Top3)/3

Average 2: Average different points on the same surface = (Top1+Top4+Top5)/3





Test mode 00: Load:

Electric Field

Test Distance (cm)	Test Position		Test Data (V/m)			Limit (V/m)	Result
			Full Load	Half Load	Empty Load		
10	Side	1	1.312	0.491	0.396	614 50% Limit	Pass
		2	1.341	0.498	0.299		Pass
		3	0.913	0.371	0.297		Pass
		4	0.915	0.382	0.301		Pass
	Top	1	3.027	2.473	0.655		Pass
		2	2.139	2.104	2.091		Pass
		3	2.091	2.132	2.095		Pass
		4	2.086	2.133	2.111		Pass
		5	2.097	2.118	2.101		Pass
	Top Average	1+2+3	2.426	2.236	1.655		Pass
		1+4+5	2.437	2.248	1.677		Pass

Magnetic Field

Test Distance (cm)	Test Position		Test Data (A/m)			Limit (A/m)	Result
			Full Load	Half Load	Empty Load		
10	Side	1	0.111	0.057	0.026	1.63	Pass
		2	0.073	0.056	0.023		Pass
		3	0.081	0.037	0.027		Pass
		4	0.071	0.057	0.034		Pass
	Top	1	0.995	0.803	0.702		Pass
		2	0.952	0.815	0.532		Pass
		3	0.941	0.796	0.513		Pass
		4	0.683	0.524	0.491		Pass
		5	0.683	0.535	0.485		Pass
	Top Average	1+2+3	0.963	0.805	0.582		Pass
		1+4+5	0.787	0.621	0.559		Pass
20	Top1	1	0.454	0.251	0.071	50% Limit	Pass

Test mode 01: Mobile Phone:

Electric Field Emissions

Test Distance (cm)	Test Position		Test Data (V/m)			Limit (V/m)	Result
			85%	50%	15%		
10	Side	1	1.375	0.514	0.379	614 50% Limit	Pass
		2	1.295	0.506	0.307		Pass
		3	0.921	0.358	0.301		Pass
		4	0.926	0.366	0.331		Pass
	Top	1	3.058	2.463	0.686		Pass
		2	2.112	2.101	2.023		Pass
		3	2.163	2.135	2.111		Pass
		4	2.108	2.012	1.983		Pass
		5	2.157	2.106	2.045		Pass
	Top Average	1+2+3	2.444	2.233	1.607		Pass
		1+4+5	2.441	2.194	1.571		Pass

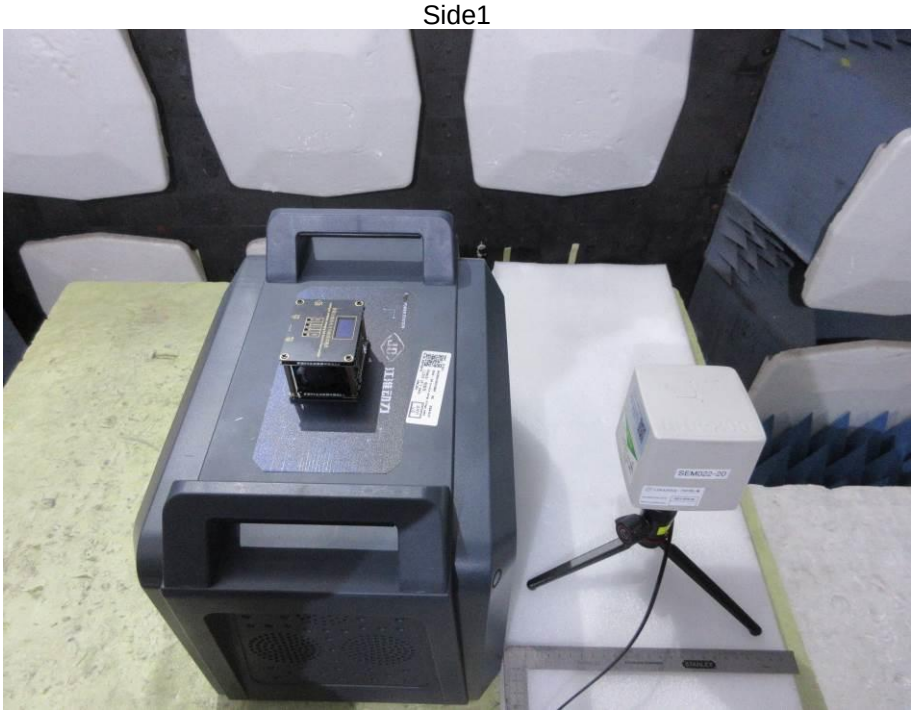
Magnetic Field

Test Distance (cm)	Test Position		Test Data (A/m)			Limit (A/m)	Result
			85%	50%	15%		
10	Side	1	0.105	0.066	0.034	1.63	Pass
		2	0.091	0.071	0.055		Pass
		3	0.073	0.046	0.021		Pass
		4	0.087	0.053	0.026		Pass
	Top	1	1.022	0.825	0.634		Pass
		2	0.952	0.791	0.582		Pass
		3	0.903	0.758	0.523		Pass
		4	0.732	0.615	0.479		Pass
		5	0.646	0.569	0.485		Pass
	Top Average	1+2+3	0.959	0.791	0.580		Pass
		1+4+5	0.800	0.670	0.533		Pass
20	Top1	1	0.429	0.252	0.031	50% Limit	Pass

6 Test Photo

Top

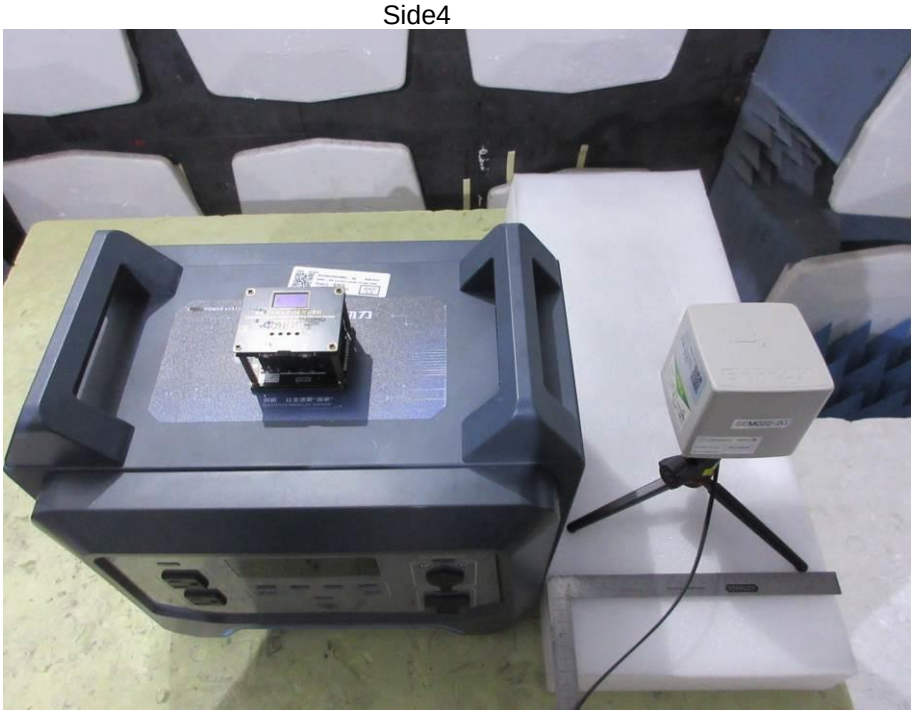
Side1



Side2

Side3

Side4



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