

 Report No.: 18360WC30008702
 FCC ID: 2BBM4-JV600
 Page 1 of 11

# FCC Test Report

Applicant

Chongqing Radiance Energy Technology Co.,Ltd.

Address

No.27-3 Feng Sheng Road, Jiu Long Po District, Chongqing City,China.

Product Name : Portable Power Station

Report Date

Jul. 19, 2023



#### Shenzhen Anbotek Compliance Laboratory Limited

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#### Code:AB-RF-05-b





Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600 Page 2 of 11

# Contents

	eneral Information	5
	1.2. Description of Device (EUT)	.5
	1.3. Auxiliary Equipment Used During Test	. 6
	1.4. Test Equipment List	6
	1.5. Measurement Uncertainty	. 6
	1.6. Description of Test Facility	.7
2. Me	easurement and Result	.8
P	2.1. Requirements	8
K	2.2. Test Setup	.9
49to	2.3. Test Procedure	.9
. eV	2.4. Test Result	.9
APP	ENDIX I TEST SETUP PHOTOGRAPH	11
APP	ENDIX II EXTERNAL PHOTOGRAPH	11
APP	ENDIX III INTERNAL PHOTOGRAPH	11

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#### Code:AB-RF-05-b





Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600

Page 3 of 11

# TEST REPORT

Applicant	: Chongqing Radiance Energy Technology Co.,Ltd.
Manufacturer	: Chongqing Radiance Energy Technology Co.,Ltd.
Product Name	: Portable Power Station
Model No.	: PPS600-515-120
Trade Mark	JOYVOLT
Rating(s)	: Please refer to page 6

Test Standard(s):FCC Part 1.1310, 1.1307(b)Test Method(s)::KDB680106 D01 RF Exposure Wireless Charging Apps v03

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 1.1307 & KDB680106 D01 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt Date of Test

Prepared By

Approved & Authorized Signer

Jun. 07, 2023 Jun. 07~ 17, 2023

Tu Tu Hong

(TuTu Hong)

(Kingkong Jin)

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# Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600 Page 4 of 11

# **Revision History**

Report Version	Description	Issued Date
R00	Original Issue.	Jul. 19, 2023
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#### Code:AB-RF-05-b





# Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600

Page 5 of 11

# 1. General Information

### 1.1. Client Information

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Applicant	:	Chongqing Radiance Energy Technology Co.,Ltd.
Address	:	No.27-3 Feng Sheng Road, Jiu Long Po District, Chongqing City,China.
Manufacturer	:	Chongqing Radiance Energy Technology Co.,Ltd.
Address	:	No.27-3 Feng Sheng Road, Jiu Long Po District, Chongqing City,China.
Factory	:	Chongqing Radiance Energy Technology Co.,Ltd.
Address	:	No.27-3 Feng Sheng Road, Jiu Long Po District, Chongqing City,China.

### 1.2. Description of Device (EUT)

Product Name	:	Portable Power Station
Model No.	:	PPS600-515-120
Trade Mark	:	JOYVOLT Anborek Anborek Anborek Anborek Anborek
Test Power Supply	:	DC 22.2V Battery inside
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter	:	Model: HKA10020050-0A6 Input: 100-240V~60/50Hz, 1.8A Output: 20.0V 5.0A, 100.0W
<b>RF Specification</b>		
Operation Frequency	:	110.1-205kHz
Modulation Type	:	FSK house house house house house
Antenna Type	:	Inductive loop coil Antenna
Antenna Gain(Peak)	:	0 dBi (Provided by customer)
<b>Remark:</b> 1) For a more or the User's Manual.	e det	ailed features description, please refer to the manufacturer's specifications

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# Anbotek Product Safety

# Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600

Rating:

#### Product Name: Portable Power Station

Model: PPS600-515-120 Capacity: 515Wh 22.2V 23.2Ah

USB-C Output: 65W 5V-3A, 9V-3A, 12V-3A, 15V-3A, 20V-3.25A

USB-Output: USB-A(x3) 5V~2.4A USB-A Fast Charge :5V~3A, 9V~2A, 12V~1.5A 18W max

AC Output(x2): 600W 120VAC 60Hz

Charging temperature: 42.8°F-104°F(6°C-40°C) DC Total output: 259W AC output: 600W



#### CAUTION!

#### ON!

Risk of Electric Shock, Do not remove over, No user serviceable parts inside. Refer servicing to qualified service personnel. Risk of Injury to Persons. Do not use this product if the power cord or the battery cables are damaged in any way. This device is not intended for use in a commercial repair facility.

Page 6 of 11

JOYVOLT

#### WARNING!

Do not overcharge the internal battery.See Instruction Manual, Do not smoke,strike a match, or cause a spark in the vicinity of the power pack. Only charge the internal battery in a well ventilated area. Risk of Electric Shock and Risk of Fire,

#### DANGER!

This device is intended to be used indoors only. Do not use outdoors. FCC ID: 2BBM4-JV600

### 1.3. Auxiliary Equipment Used During Test

Description	Rating(s)
Wireless charging load	Manufacturer: Shenzhen Ouju Technology Co., Ltd.
ntek Anbotek Anbo	M/N: CD2577
both botek Anboth	Power: 5W/7.5W/10W/15W

#### 1.4. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1 T	Electric and Magnetic field	NARDA	EHP-200A	180ZX10202	Oct. 17, 2022	1 Year
botek.	Analyzer	Hek Anbore		Anboten	Anbo	botek

#### 1.5. Measurement Uncertainty

	Magnetic Field Reading(A/m)	:	+/-0.04282(A/m)	Anbotek Anbotek	Anbo.	Anbotek	Anbote.
Ň	Electric Field Reading(V/m)	:	+/-0.03679(V/m)	Anbotek	Anbotek	Anbor-	An

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#### Code:AB-RF-05-b





### Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600 Pa

Page 7 of 11

### 1.6. Description of Test Facility

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

#### FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, 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. 184111.

#### ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

#### Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China. 518102

#### Shenzhen Anbotek Compliance Laboratory Limited

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### Code:AB-RF-05-b





## Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600 Page 8 of 12

# 2. Measurement and Result

#### 2.1. Requirements

According to the item 5.b) of KDB 680106 D01v03:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

- 1) Power transfer frequency is less that 1 MHz
- 2) Output power from each primary coil is less than or equal to 15 watts.
- 3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils
- 4) Client device is inserted in or placed directly in contact with the transmitter
- 5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)
- 6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
	(A) Limits for Occ	cupational/Controlled Ex	posures	
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	1	1	f/300	6
1500-100,000	1	1	5	6
	(B) Limits for Genera	l Population/Uncontrolle	ed Exposure	
0 2 1 34	614	1.63	*(100)	30

Limits For Maximum Permissible Exposure (MPE)

	•	· ·	-	-
	(B) Limits for Genera	l Population/Uncontrolle	ed Exposure	
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	1	1	f/1500	30
1500-100,000	1	1	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).

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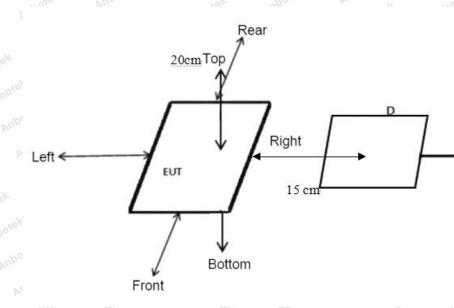
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Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600 Page 9 of

2.2. Test Setup



Note: Measurements should be made at 15 cm surrounding the EUT and 20cm above the top surface of the EUT.

#### 2.3. Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at required test distance which is between the edge of the charger and the geometric center of probe.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points

(A, B, C, D, E) were completed.(A is the right, B is the back, C is the left, D is the front, and E is the top.)

4) The EUT was measured according to the dictates of KDB 680106 D01 v03.

Remark; The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

#### 2.4. Test Result

- 2.4.1. Equipment Approval Considerations item 5.b of KDB 680106 D01 v03.
- 1) Power transfer frequency is less that 1 MHz
- The device operate in the frequency range 110.1-205kHz.
- 2) Output power from each primary coil is less than 15 wattsThe maximum output power of the primary coil is 10W.
- 3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling

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#### Code:AB-RF-05-b



## Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600 Page 10 of 11

only between individual pairs of coils

- The transfer system including a charging system with only single primary coils is to detect and allow only between individual pairs of coils.

- 4) Client device is inserted in or placed directly in contact with the transmitter
- Client device is placed directly in contact with the transmitter.
- 5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)The EUT is a Mobile exposure conditions
- 6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
  Conducted the measurement with the required distance and the test results please refer to the section 2.4.

2.4.2. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310
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Temperature:	22.5°C	Relative Humidity:	49 %
Pressure:	1012 hPa	Test Voltage:	DC 22.2V Battery inside

E-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Battery power	Frequency Range (kHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
1%	110.1-205	0.44	0.53	0.48	0.49	0.61	307	614
50%	110.1-205	1.39	1.83	1.32	1.45	1.62	307	614
99%	110.1-205	2.48	2.88	2.49	2.44	2.90	307	614
Stand-by	110.1-205	0.42	0.57	0.41	0.40	0.54	307	614

H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Battery power	Frequency Range (kHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (A/m)
1%	110.1-205	0.03	<sup>ek</sup> 0.05 m <sup>*</sup>	0.05	0.04	0.05	0.815	1.63
50%	110.1-205	0.35	0.44	0.34	0.34	0.51	0.815	1.63
99%	110.1-205	0.43	0.61	0.50	0.32	0.31	0.815	1.63
Stand-by	110.1-205	0.50	0.32	0.42	<sup>ok</sup> 0.54 m <sup>b</sup>	0.40	0.815	1.63

Note: All the situation(full load, half load and empty load) has been tested,only the worst situation (full load 10W) was recorded in the report.

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#### Code:AB-RF-05-b





Report No.: 18360WC30008702 FCC ID: 2BBM4-JV600

Page 11 of 11

# **APPENDIX I -- TEST SETUP PHOTOGRAPH**

Please refer to separated files Appendix I -- Test Setup Photograph\_MPE

# **APPENDIX II -- EXTERNAL PHOTOGRAPH**

Please refer to separated files Appendix II -- External Photograph

# **APPENDIX III -- INTERNAL PHOTOGRAPH**

Please refer to separated files Appendix III -- Internal Photograph

----- End of Report -----

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