

TEST REPORT

FCC ID	2AYT3-PIONEERNA
Test Report No.....	TCT250612E047
Date of issue.....	Jul. 28, 2025
Testing laboratory	SHENZHEN TONGCE TESTING LAB
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
Applicant's name.....	SHENZHEN POWEROAK NEWENER CO., LTD
Address.....	F19, BLD No.1, Kaidaer Tongsha Rd No.168, Xili Street, Nanshan, Shenzhen, China
Manufacturer's name ...	SHENZHEN POWEROAK NEWENER CO., LTD
Address.....	F19, BLD No.1, Kaidaer Tongsha Rd No.168, Xili Street, Nanshan, Shenzhen, China
Standard(s)	FCC CFR Title 47 Part 1.1310 KDB 680106 D01 RF Exposure Wireless Charging App v04
Product Name.....	Portable Power Station
Trade Mark	BLUETTI
Model/Type reference.....	Pioneer Na
Rating(s).....	Refer to EUT description of page 3
Date of receipt of test item	Jun. 12, 2025
Date (s) of performance of test.....	Jun. 12, 2025 ~ Jul. 28, 2025
Tested by (+signature) ...	Yannie ZHONG
Check by (+signature)....	Beryl ZHAO
Approved by (+signature):	Tomsin

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1. General Product Information

1.1. EUT description

Product Name	Portable Power Station
Model/Type reference	Pioneer Na
Hardware Version	V4.0
Software Version	2190-10
Sample Number	TCT250612E030-0101
Operation Frequency	110.26kHz ~ 145.90kHz
Output power	5W/7.5W/10W/15W
Modulation Technology	Load modulation
Antenna Type	Inductive loop coil Antenna
Rating(s)	<p>Battery Capacity: DC 30V, 30Ah, 900Wh</p> <p>AC Input: AC 120V, 50/60Hz, 15A Max.</p> <p>DC/PV Input: DC 12V-60V, 10A, 500W Max.</p> <p>AC Output: AC 120V, 50/60Hz, 1500W/1500VA Max.</p> <p>USB-A*2 Output: DC 5V, 3A, 15W Total (Two groups)</p> <p>USB-C Output: DC 5/9/12/15/20V, 3A/ DC 20V, 5A (With E-Marker chip built in)</p> <p>Wireless Charging Output: 5/7.5/10/15W</p> <p>Cigarette Lighter Port Output: DC 12V, 10A</p> <p>AC & DC Output: 1500W Total</p>

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

None

2. General Information

2.1. Test environment and mode

Operating Environment:

Temperature:	24.8 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar

Test Mode:

Mode 1	Wireless Output(15W)
The sample was placed 0.8m for the measurement below above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case (Z axis) are shown in Test Results of the following pages.	

2.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
Load	/	/	/	/

3. Facilities and Accreditations

3.1. Facilities

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

- FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- A2LA-No.: 4320.01

SHENZHEN TONGCE TESTING LAB

The testing lab has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

3.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4. Test Results and Measurement Data

4.1. Requirements

According to the item 5 of KDB 680106 D01 RF Exposure Wireless Charging App v04:

Inductive wireless power transfer applications with supporting field strength results and meeting all of the following requirements are not required to submit a KDB inquiry for devices approved using SDoc or a PAG for equipment approved using certification to address RF exposure compliance. However, the responsible party is required to keep a copy of the test report in accordance with KDB 865664 D02. A copy of the test report is to be submitted with the application if the device is approved using certification.

- (1) Power transfer frequency is less than 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 placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (6) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit.

Limits For Maximum Permissible Exposure (MPE)

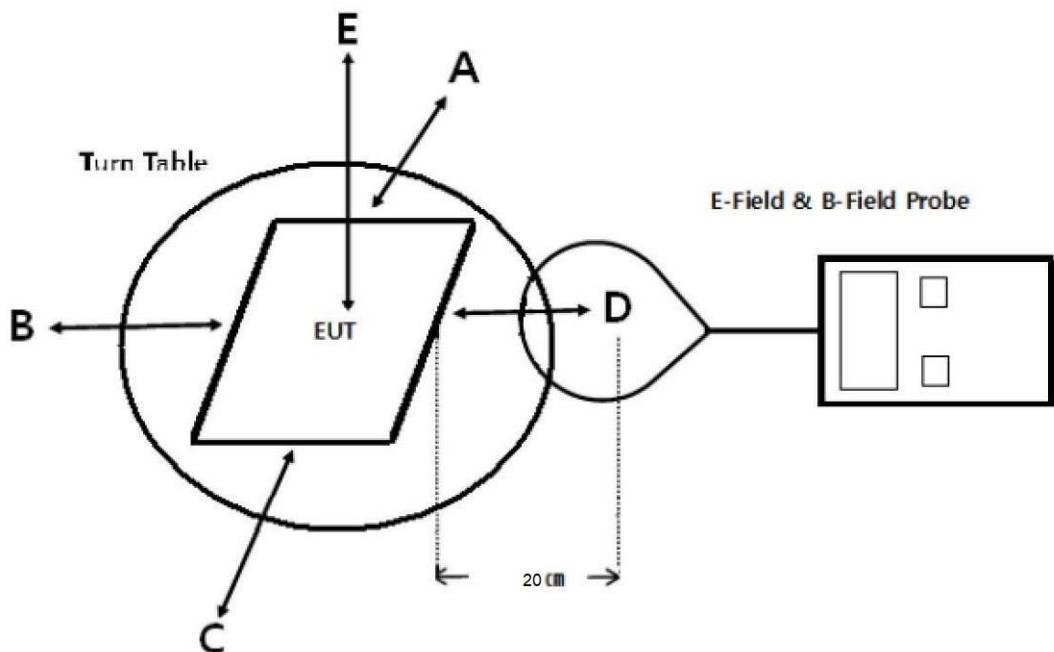
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	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).

4.2. Test Setup



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 20cm measured from the center of the probe(s) to the edge of the device.

4.3. Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at 20 cm surrounding the device.
- 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.
- 4) The EUT was measured according to the dictates of KDB 680106 D01 Wireless Power Transfer v04

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

4.4. Test Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Date of Cal.	Due Date
Electric and Magnetic Field Analyzer	Narda	EHP-200A	180ZX20511	Jul. 01, 2025	Jun. 30, 2026

4.5. Test Result

E-Filed Strength 20 cm surrounding the device and the EUT (V/m)

Frequency Range (KHz)	Operation condition	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limits Test (V/m)	Limits Test (V/m)
110.26 ~ 145.90	Full load	1.26	1.27	1.22	1.19	1.28	307	614
110.26 ~ 145.90	Half load	1.24	1.21	1.20	1.15	1.19	307	614
110.26 ~ 145.90	No load	1.20	1.18	1.25	1.12	1.16	307	614

H-Filed Strength 20 cm surrounding the device and the EUT (A/m)

Frequency Range (KHz)	Operation condition	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limits Test (A/m)	Limits Test ((A/m)
110.26 ~ 145.90	Full load	0.007	0.008	0.002	0.015	0.018	0.815	1.63
110.26 ~ 145.90	Half load	0.012	0.01	0.013	0.015	0.021	0.815	1.63
110.26 ~ 145.90	No load	0.011	0.02	0.014	0.019	0.031	0.815	1.63

According to KDB 680106 D01 RF Exposure Wireless Charging App v04 section 5, satisfy the following conditions.

Requirement of KDB 680106 D01	Yes/No	Description
Power transfer frequency is below 1MHz	Yes	The device operate in the frequency range 110.26 kHz ~ 145.90kHz
Output power from each transmitting element (e.g., coil) is less than or equal to 15 watts	Yes	The maximum output power of the primary coil is 15W.
A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)	Yes	Client device is placed in physical contact with the transmitter.
Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions)	Yes	Mobile exposure conditions only
The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1.	Yes	The E-field and H-field strengths meet the requirements
For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested	Yes	All the modes were tested

4.6. Test Set-up Photo

Please refer to document Appendix No.: TCT250612E030-A

*******END OF REPORT*******