

# TEST REPORT

<b>FCC ID.</b> .....	2AYT3-APEX300
<b>Test Report No.</b> .....	TCT250307E023
<b>Date of issue</b> .....	Mar. 23, 2025
<b>Testing laboratory</b> .....	SHENZHEN TONGCE TESTING LAB
<b>Testing location/ address:</b>	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
<b>Applicant's name</b> .....	SHENZHEN POWEROAK NEWENER CO., LTD
<b>Address</b> .....	F19, BLD No.1, Kaidaer Tongsha Rd No.168, Xili Street, Nanshan, Shenzhen, China
<b>Manufacturer's name</b> .....	SHENZHEN POWEROAK NEWENER CO., LTD
<b>Address</b> .....	F19, BLD No.1, Kaidaer Tongsha Rd No.168, Xili Street, Nanshan, Shenzhen, China
<b>Standard(s)</b> .....	FCC CFR Title 47 Part 1.1307 FCC CFR Title 47 Part 2.1093 KDB 447498 D01 V06
<b>Product Name</b> .....	Portable Power Station
<b>Trade Mark</b> .....	BLUETTI
<b>Model/Type reference</b> .....	Apex 300
<b>Rating(s)</b> .....	Refer to EUT description of page 3
<b>Date of receipt of test item</b> .....	Mar. 07, 2025
<b>Date (s) of performance of test</b> .....	Mar. 07, 2025 ~ May 23, 2025
<b>Tested by (+signature)</b> .....	Aaron MO
<b>Check by (+signature)</b> .....	Beryl ZHAO
<b>Approved by (+signature)</b> :	Tomsin



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## 1. General Product Information

### 1.1. EUT description

<b>Product Name</b> .....	Portable Power Station
<b>Model/Type reference</b> .....	Apex 300
<b>Hardware Version</b> .....	V2.0
<b>Software Version</b> .....	2174-05 DSP
<b>Sample Number</b> .....	TCT250307E005-0101
<b>Operation Frequency</b> .....	For BLE: 2402MHz~2480MHz For WIFI: 2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20)) 2422MHz~2452MHz (802.11n(HT40))
<b>Modulation Type</b> .....	For BLE: GFSK For WIFI: 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing (OFDM)
<b>Antenna Type</b> .....	PCB Antenna
<b>Antenna Gain</b> .....	3.37dBi
<b>Rating(s)</b> .....	Battery Capacity: DC 51.2V, 54Ah, 2764.8Wh AC Input: AC 120V, 50/60Hz, 15A Max. AC IN/OUT Port: AC 120V/208V or AC 120V/240V 50/60Hz, 50A Max. DC/PV Port: DC 12V-60V, 20A, 1200W each port AC Total Output Power (Discharge Only):3840W AC Total Output Power (Bypass Mode):12000W Output (Voltage Selector:120V): 5-20R: AC 120V 50/60Hz, 20A Max. each port TT-30R: AC 120V 50/60Hz, 30A Max. 14-50R (Discharge Only): AC 120V 50/60Hz, 32A Max. 14-50R (Bypass Mode): AC 120V 50/60Hz, 50A Max. Output (Voltage Selector: 240V) 5-20R: AC 120V 50/60Hz, 16A Max. each port (Every Two Ports: 1920W Max) TT-30R: AC 120V 50/60Hz, 16A Max. 14-50R (Discharge Only): AC 120V/240V 50/60Hz, 16A Max. 14-50R (Bypass Mode): AC 120V/240V 50/60Hz, 50A Max. AC IN/OUT Port: AC 120V/208V or AC 120V/240V 50/60Hz, 16A Max. Battery Expansion Port: DC 51.2V, 90A Max.

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

Item	Normal condition
Temperature	+25°C
Voltage	DC 51.2V
Humidity	56%
Atmospheric Pressure:	1008 mbar
Test Mode:	
Transmitting Mode:	Keep the EUT in continuous transmitting by select channel

### 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
/	/	/	/	/

**Note:**

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

### 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. Limit

According to §1.1310, the limit is as follow,

TABLE 1 TO § 1.1310(e)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE  
(MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(i) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE				
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
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) 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 <sup>2</sup> )	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

*f = frequency in MHz. \* = Plane-wave equivalent power density.*

## 5. Test Results and Measurement Data

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Remark: 1) **For BLE:** The maximum output power for antenna is 9.91dBm(9.79mW) at 2480MHz, 3.37dBi antenna gain(with 2.17 numeric antenna gain.)  
**For WIFI:** The maximum output power for antenna is 18.96dBm(78.70mW) at 2412MHz, 3.37dBi antenna gain(with 2.17 numeric antenna gain.)

2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

### Calculation

$$\text{Given } E = \sqrt{\frac{30 \times P \times G}{d}} \quad \& \quad S = \frac{E^2}{3770}$$

Where  
*E* = Field Strength in Volts / meter  
*P* = Power in Watts  
*G*=Numeric antenna gain  
*d*=Distance in meters  
*S*=Power Density in milliwatts / square centimeter

Substituting the MPE safe distance using *d*=20cm into above equation.  
Yields:  $S=0.000199*P*G$

Mode	Power (dBm)	Power (mW)	numeric antenna gain	Power density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
<b>BLE</b>	9.91	9.79	2.17	0.00423	1.00	PASS
<b>WIFI</b>	18.96	78.70	2.17	0.03399	1.00	

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