

RF EXPOSURE Test Report

Report No. : MTi260321001-0108E3

Date of issue : 2026-06-25

**Applicant : SHENZHEN POWEROAK NEWENER CO.,
LTD**

Product : Portable Power Station

Model(s) : Elite 100 mini

FCC ID : 2AYT3-EL100MINI

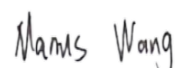
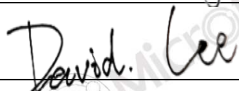
Shenzhen Microtest Co., Ltd.

TEST REPORT

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Table of contents

1	RF EXPOSURE EVALUATION	4
2	Measurement Result	5

Test Result Certification		
Applicant	SHENZHEN POWEROAK NEWENER CO., LTD	
Applicant Address	F19, BLD No.1, Kaider, Tongsha Rd No.168, Xili Street, Nanshan, Shenzhen, China	
Manufacturer	SHENZHEN POWEROAK NEWENER CO., LTD	
Manufacturer Address	F19, BLD No.1, Kaider, Tongsha Rd No.168, Xili Street, Nanshan, Shenzhen, China	
Factory	Huizhou PowerOak Innovation Co., Ltd	
Factory Address	(No.1 Workshop) Longsheng 5th Road, Laoshe Village, Dayawan West Zone, Huizhou, Guangdong, China	
Product description		
Product name	Portable Power Station	
Trademark	BLUETTI	
Model name	Elite 100 mini	
Series Model(s)	N/A	
Standards	47 CFR Part 2.1091	
Test method	KDB 447498 D01 v06	
Testing Information		
Date of test	2026-05-13 to 2026-06-24	
Test Result	Pass	
Prepared by:	Manus Wang	
Reviewed by:	David Lee	
Approved by:	Lewis Lian	

1 RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

2 Measurement Result

BLE:

Operation Frequency: 2402-2480MHz,
Power density limited: 1mW/ cm²

Antenna Type: Rod-shaped antenna

Antenna gain: 3.37dBi

R=20cm

$mW=10^{(dBm/10)}$

Antenna gain Numeric= $10^{(dBi/10)}=10^{(3.37/10)}=2.17$

BLE:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain			
				(dBm)	(dBm)	(mW)	(dBi)	Numeric	(mW/cm ²)
2402	GFSK-1M	10.55	10±1	11	12.59	3.37	2.17	0.0054	1
2440		11.04	11±1	12	15.85	3.37	2.17	0.0069	1
2480		10.64	10±1	11	12.59	3.37	2.17	0.0054	1
2402	GFSK-2M	10.66	10±1	11	12.59	3.37	2.17	0.0054	1
2440		11.09	11±1	12	15.85	3.37	2.17	0.0069	1
2480		10.74	10±1	11	12.59	3.37	2.17	0.0054	1
2402	GFSK-125K	10.36	10±1	11	12.59	3.37	2.17	0.0054	1
2440		10.76	10±1	11	12.59	3.37	2.17	0.0054	1
2480		10.39	10±1	11	12.59	3.37	2.17	0.0054	1
2402	GFSK-500K	10.34	10±1	11	12.59	3.37	2.17	0.0054	1
2440		10.89	10±1	11	12.59	3.37	2.17	0.0054	1
2480		10.49	10±1	11	12.59	3.37	2.17	0.0054	1

2.4G WIFI:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz, WIFI 802.11n HT40/AX40: 2422-2452MHz,
Power density limited: 1mW/ cm²

Antenna Type: Rod-shaped antenna

Antenna gain: 3.37dBi

R=20cm

$mW=10^{(dBm/10)}$

Antenna gain Numeric= $10^{(dBi/10)}=10^{(3.37/10)}=2.17$

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm ²)	(mW/cm ²)
				(dBm)	(mW)	Numeric		
2412	802.11b	18.33	18±1	19	79.433	3.37	0.03433	1
2437		18.50	18±1	19	79.433	3.37	0.03433	1
2462		17.68	17±1	18	63.096	3.37	0.02727	1
2412	802.11g	19.72	19±1	20	100.000	3.37	0.04322	1
2437		20.42	20±1	21	125.893	3.37	0.05442	1
2462		19.54	19±1	20	100.000	3.37	0.04322	1
2412	802.11n H20	18.59	18±1	19	79.433	3.37	0.03433	1
2437		19.04	19±1	20	100.000	3.37	0.04322	1
2462		18.21	18±1	19	79.433	3.37	0.03433	1
2422	802.11n H40	18.03	18±1	19	79.433	3.37	0.03433	1
2437		18.06	18±1	19	79.433	3.37	0.03433	1
2452		17.46	17±1	18	63.096	3.37	0.02727	1

Conclusion:**SIMULTANEOUS TRANSMISSIONS**

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE. To comply with the MPE, the fraction of the MPE in terms of E2, H2 (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity. In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

Simultaneous transmit:

Operating Band	The MPE ratio
BLE	0.0069
2.4G WIFI	0.05442

So the simultaneous transmitting antenna pairs as below:

BR&EDR +2.4G WIFI + 5G WIFI = 0.0069+0.05442 = 0.06132

For the max result: $0.06132 \leq 1.0$, No SAR is required.

Statement

1. This report is invalid without the seal and signature of the laboratory.
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***** END OF REPORT *****