

# RF EXPOSURE Test Report

**Report No.** : MTi250409017-0104E3  
**Date of Issue** : 2025-05-09  
**Applicant** : BLUETTI POWER INC  
**Product** : Portable Power Station  
**Model(s)** : Elite 200 V2  
**FCC ID** : 2BOXS-ELITE200V2

**Shenzhen Microtest Co., Ltd.**

# TEST REPORT

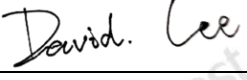
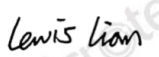
Report No.: MTi250409017-0104E3

## Table of contents

|          |                                    |          |
|----------|------------------------------------|----------|
| <b>1</b> | <b>RF EXPOSURE EVALUATION.....</b> | <b>4</b> |
| <b>2</b> | <b>Measurement Result.....</b>     | <b>5</b> |

## TEST REPORT

Report No.: MTi250409017-0104E3

|                                  |                                                                                                                                       |                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Test Result Certification</b> |                                                                                                                                       |                                                                                       |
| Applicant                        | BLUETTI POWER INC                                                                                                                     |                                                                                       |
| Applicant Address                | 6185 S VALLEY VIEW BLVD STE D LAS VEGAS 89118                                                                                         |                                                                                       |
| Manufacturer                     | PT POWEROAK ENERGY INDONESIA                                                                                                          |                                                                                       |
| Manufacturer Address             | Horizon Industrial Park Type A Lot 07, Sungai Pelunggut Village, Sagulung District, Batam City 29439 Riau Islands Province, Indonesia |                                                                                       |
| <b>Product description</b>       |                                                                                                                                       |                                                                                       |
| Product name                     | Portable Power Station                                                                                                                |                                                                                       |
| Trademark                        | BLUETTI                                                                                                                               |                                                                                       |
| Model name                       | Elite 200 V2                                                                                                                          |                                                                                       |
| Series Model(s)                  | N/A                                                                                                                                   |                                                                                       |
| Standards                        | 47 CFR Part 2.1091                                                                                                                    |                                                                                       |
| Test method                      | KDB 447498 D01 v06                                                                                                                    |                                                                                       |
| <b>Testing Information</b>       |                                                                                                                                       |                                                                                       |
| Date of test                     | 2025-04-22 to 2025-04-25                                                                                                              |                                                                                       |
| Test Result                      | Pass                                                                                                                                  |                                                                                       |
| Prepared by                      | James Qin                                                                                                                             |  |
| Reviewed by                      | David Lee                                                                                                                             |  |
| Approved by                      | Leon Chen                                                                                                                             |  |

## 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 <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposure</b>         |                               |                               |                                     |                          |
| 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                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 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

### 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/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

$\pi$  = 3.1415926

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

$P_d$  the limit of MPE, 1mW/cm<sup>2</sup>. 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/ cm<sup>2</sup>

### 2.4GWiFi:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

802.11n HT40: 2422-2452MHz,

Power density limited: 1mW/ cm<sup>2</sup>

Antenna Type: PCB 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    |         | (mW/cm <sup>2</sup> ) | (mW/cm <sup>2</sup> ) |
|                     |            |                 |                     | (dBm)         | (mW)   | (dBi)   | Numeric |                       |                       |
| 2402                | BLE-1M     | 11.70           | 11±1                | 12            | 15.849 | 3.37    | 2.17    | 0.0069                | 1                     |
| 2440                |            | 12.20           | 12±1                | 13            | 19.953 | 3.37    | 2.17    | 0.0086                | 1                     |
| 2480                |            | 12.00           | 12±1                | 13            | 19.953 | 3.37    | 2.17    | 0.0086                | 1                     |
| 2402                | BLE-2M     | 11.56           | 11±1                | 12            | 15.849 | 3.37    | 2.17    | 0.0069                | 1                     |
| 2440                |            | 12.07           | 12±1                | 13            | 19.953 | 3.37    | 2.17    | 0.0086                | 1                     |
| 2480                |            | 12.01           | 12±1                | 13            | 19.953 | 3.37    | 2.17    | 0.0086                | 1                     |
| 2402                | BLE-125K   | 12.99           | 12±1                | 13            | 19.953 | 3.37    | 2.17    | 0.0086                | 1                     |
| 2440                |            | 13.44           | 13±1                | 14            | 25.119 | 3.37    | 2.17    | 0.0109                | 1                     |
| 2480                |            | 13.17           | 13±1                | 14            | 25.119 | 3.37    | 2.17    | 0.0109                | 1                     |
| 2402                | BLE-500K   | 13.16           | 13±1                | 14            | 25.119 | 3.37    | 2.17    | 0.0109                | 1                     |
| 2440                |            | 13.68           | 13±1                | 14            | 25.119 | 3.37    | 2.17    | 0.0109                | 1                     |
| 2480                |            | 13.15           | 13±1                | 14            | 25.119 | 3.37    | 2.17    | 0.0109                | 1                     |

## 2.4GWiFi:

| 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 <sup>2</sup> ) | (mW/cm <sup>2</sup> ) |
|                     |             |                 |               | (dBm)         | (mW)   | Numeric |                                    |                       |
| 2412                | 802.11b     | 17.99           | 17±1          | 18            | 63.096 | 2.17    | 0.02727                            | 1                     |
| 2437                |             | 18.29           | 18±1          | 19            | 79.433 | 2.17    | 0.03433                            | 1                     |
| 2462                |             | 18.15           | 18±1          | 19            | 79.433 | 2.17    | 0.03433                            | 1                     |
| 2412                | 802.11g     | 16.32           | 16±1          | 17            | 50.119 | 2.17    | 0.02166                            | 1                     |
| 2437                |             | 16.79           | 16±1          | 17            | 50.119 | 2.17    | 0.02166                            | 1                     |
| 2462                |             | 16.44           | 16±1          | 17            | 50.119 | 2.17    | 0.02166                            | 1                     |
| 2412                | 802.11n H20 | 15.25           | 15±1          | 16            | 39.811 | 2.17    | 0.01721                            | 1                     |
| 2437                |             | 15.78           | 15±1          | 16            | 39.811 | 2.17    | 0.01721                            | 1                     |
| 2462                |             | 15.49           | 15±1          | 16            | 39.811 | 2.17    | 0.01721                            | 1                     |
| 2422                | 802.11n H40 | 14.27           | 14±1          | 15            | 31.623 | 2.17    | 0.01367                            | 1                     |
| 2437                |             | 14.57           | 14±1          | 15            | 31.623 | 2.17    | 0.01367                            | 1                     |
| 2452                |             | 14.46           | 14±1          | 15            | 31.623 | 2.17    | 0.01367                            | 1                     |

## Conclusion:

Simultaneous transmit:

BLE+2.4G WIFI =0.0109+0.03433=0.04523

For the max result:  $0.04523 \leq 1.0$  SAR, No SAR is required.

## Statement

1. This report is invalid without the seal and signature of the laboratory.
2. The test results of this report are only responsible for the samples submitted. Client shall be responsible for representativeness of the sample and authenticity of the material.
3. The report shall not be partially reproduced without the written consent of the Laboratory.
4. This report is invalid if transferred, altered or tampered with in any form without authorization.
5. The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.
6. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

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