

TEST REPORT

Application No.: BTEK250721106A01-T01
Applicant: Dyness Digital Energy Technology Co.,LTD
Address of Applicant: Building 5, No.688 Liupu Road, Guoxiang Street,Wuzhong District, Suzhou City, Jiangsu Province
Manufacturer: Dyness SZ Energy Storage Technology Co., LTD
Address of Manufacturer: 501D13, Zhongshen Garden Group Building, No.2010 Caitian Road,Futian Street, Futian District, Shenzhen

Equipment Under Test (EUT):
EUT Name: Lithium Iron Phosphate Battery
Test Model.: AR1.2-BT
Adding Model(s): AR1.2-MINI BT
Trade Mark: Dyness
FCC ID: 2BPRZ-12V100
Standard(s) : 47 CFR Part 2 Subpart J Section 2.1091
447498 D01 General RF Exposure Guidance v06
Date of Receipt Sample(s): 2025-07-22
Date of Test: 2025-07-23 to 2025-08-14
Date of Issue: 2025-08-15

| | |
|---------------------|--------------|
| Test Result: | Pass* |
|---------------------|--------------|

* In the configuration tested, the EUT complied with the standards specified above.

Alex. Wang

Alex Wang / Approved & Authorized
EMC Laboratory Manager



| Revision Record | | | |
|-----------------|------------|-----------|---------|
| Version | Issue Date | Revisions | Remarks |
| V0 | 2025-08-15 | Initial | Valid |
| | | | |
| | | | |

| | | | |
|-------------------------|--|---|--|
| Authorized for issue by | | | |
| | |  | |
| | | <hr/> | |
| | | Karl Liu / File Editor | |
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| | | June Li/Reviewer | |

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.



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3 General Information

3.1 Details of E.U.T.

| | |
|-------------------------------|---|
| Power supply: | DC 12.8V=100Ah 1280Wh |
| Frequency Range: | 2402MHz to 2480MHz |
| Bluetooth Version: | V5.1 BLE |
| Modulation Type: | GFSK |
| Channel Spacing: | 2MHz |
| Data Rate: | 1Mbps/2Mbps |
| Number of Channels: | 40 |
| Antenna Type: | PCB Antenna |
| Antenna Gain: | 0dBi |
| Sample No.: | BTEK250721106A01E-01 |
| Model(s) Difference Statement | <input type="checkbox"/> Single Model. |
| | <input checked="" type="checkbox"/> Multi-Models:AR1.2-BT,AR1.2-MINI BT Only the model AR1.2-BT, was tested. According to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions of other models are identical for the above models, with only difference on Model No |

3.2 Description of Support Units

| Description | Manufacturer | Model No. | Serial No. |
|-------------|--------------|-----------|------------|
| / | / | / | / |

3.3 Test Location

All tests were performed at:

Shenzhen BANTEK Testing Co., Ltd.,

A5&A6, Building B1&B2, No.45 Gangtou Road, Bogang Community, Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518103

Tel:0755-2334 4200

Fax: 0755-2334 4200

FCC Registration Number: 264293

Designation Number: CN1356

No tests were sub-contracted.

3.4 Deviation from Standards

None

3.5 Abnormalities from Standard Conditions

None



4 Test Requirement

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

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

Friis transmission formula: $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

Pd = power density in mW/cm², **Pout** = output power to antenna in mW;

G = gain of antenna in linear scale, **Pi** = 3.1416;

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

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

4.1 Assessment Result

☒ Passed ☐ Not Applicable

| Frequency (MHz) | Type | Conducted Power (dBm) | Maximum Tune-up (dBm) | Power Density (mW/cm ²) | Limit (mW/cm ²) | Result |
|-----------------|--------|-----------------------|-----------------------|-------------------------------------|-----------------------------|--------|
| 2402 | BLE-2M | 2.97 | 3 | 0.62 | 1.0000 | Pass |

Note: 1. The exposure evaluation safety distance is 20cm.

2. Only show the worst case in the test report.

- End of the Report -

