

TEST REPORT

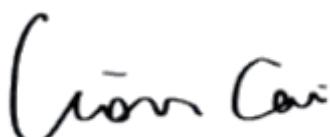
Application No.: BTEK241227139A02-T02
Applicant: Huizhou Huada Technology Co.,Ltd
Address of Applicant: 3rd Floor, Building 2, Xinhe Avenue No.18th ,Dayawan West District, Huizhou City, Guangdong Province, China
Manufacturer: Huizhou Huada Technology Co.,Ltd
Address of Manufacturer: 3rd Floor, Building 2, Xinhe Avenue No.18th ,Dayawan West District, Huizhou City, Guangdong Province, China

Equipment Under Test (EUT):

EUT Name: LiFePO4 Battery Pack
Test Model.: H51100-5KW
Adding Model(s): HD-51.2-100
Trade Mark: HUADA
FCC ID: 2BNGLH51100-5KW
Standard(s) : 47 CFR Part 2 Subpart J Section 2.1091
447498 D01 General RF Exposure Guidance v06
Date of Receipt Sample(s): 2025-01-03
Date of Test: 2025-01-06 to 2025-02-13
Date of Issue: 2025-02-14

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



Lion Cai/ Approved & Authorized
EMC Laboratory Manager



Revision Record			
Version	Issue Date	Revisions	Remarks
V0	2025-02-14	Initial	Valid

Authorized for issue by			
		Karl Liu	
		<hr/> Karl Liu / File Editor	
		June Li	
		<hr/> 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:	MODEL:1100W4820T INPUT:100-240VAC~ 50-60HZ OUTPUT:58.4V20A LiFePO4 Battery Pack Battery Model: H51100-5KW Battery Type: LiFePO4 Nominal Voltage : 51.2V Nominal Capacity: 105AH Charge Voltage: 58.4V Plominal energy 5376Wh Continuous Discharge Current 200A
Frequency Range:	2402MHz to 2480MHz
Bluetooth Version:	V5.2 BLE
Modulation Type:	GFSK
Number of Channels:	40
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Sample No.:	BTEK241227139A02-1-1/2
Model(s) Difference Statement	<input type="checkbox"/> Single Model.
	<input checked="" type="checkbox"/> Multi-Models: H51100-5KW, HD-51.2-100 Only the model H51100-5KW 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: $Pd = (Pout * G) / (4 * \pi * r^2)$

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-S8	4.76	5	0.0008	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 -

