

MPE REPORT

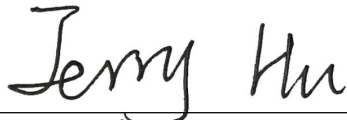
Applicant:	Power System Electronic Technology Co., Ltd.		
Address:	No.1 Shangbian Road, Puxin Industrial District, Shipai Town, Dongguan City, Guangdong, China		
Manufacturer:	Power System Electronic Technology Co., Ltd.		
Address:	No.1 Shangbian Road, Puxin Industrial District, Shipai Town, Dongguan City, Guangdong, China		
Factory:	Power System Electronic Technology Co., Ltd.		
Address:	No.1 Shangbian Road, Puxin Industrial District, Shipai Town, Dongguan City, Guangdong, China		
E.U.T.:	OUTRIDER 18 POWER BANK		
Model Number:	21110		
Trade mark:	GOAL ZERO		
FCC ID:	2AQTM-21110		
Date of Receipt:	Mar. 26, 2024	Date of Test:	Mar. 26 - April 2, 2024
Test Specification:	FCC Part 1(1.1310) and Part 2(2.1093) KDB 680106 D01 RF Exposure Wireless Charging App v04		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		
Prepared by:	Approved & Authorized Signer:		
			
Jerry Hu/ Engineer	Frank Shen/ Manager		
	Issue Date: August 13, 2024		
This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Dongguan Lepont Service Co., Ltd.			

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Revision History of This Test Report

Report Number	Description	Issued Date
LP24010026C01-04-01	Initial Issue	2024-8-13

1. GENERAL PRODUCT INFORMATION

1.1. PRODUCT FUNCTION

Refer to Technical Construction Form and User Manual.

1.2. EUT TECHNICAL DESCRIPTION

Product Name:	OUTRIDER 18 POWER BANK
Model No.:	21110
Test Model No:	21110
Difference:	N/A
Serial No.:	N/A
Test sample(s) ID:	LP24010026C01-S001
Sample(s) Status	Engineer sample
Hardware:	YX-PCB463C
Software:	RC589
Operation frequency:	115-205KHz
Modulation Type:	FSK
Antenna Type:	Inductive Loop Antenna with 10 Turns
Antenna Gain :	0dBi
Wireless Charging:	wireless output : 5W/7.5W/10W/15W
Rating:	Input: TYPE-C: 5V3A ; 9V2A; 12V1.5A Output: TYPE-C:5V3A ; 9V2.22A; 12V1.67A
Power Supply:	☒ DC 5-12V for ADAPTER ☒ Adapter supply: Model: GP-209-WHT-NA-BULK Input:100-240VAC, 50/60Hz, 0.5A Max. Output: 5V3A, 9V2A, 12V1.5A
Note: for more details, please refer to the User' s manual of the EUT.	

1.3. DESCRIPTION OF TEST MODES

All the test modes were carried out with the EUT in normal operation, the final test mode of the EUT was the worst test mode for emission test, which was shown in this report and defined as:

Mode:	TEST MODE DESCRIPTION
1	Charging + Wireless Charging Output: 5W
2	Full Load + Wireless Output: Type-C:5V2A+5W
3	Wireless Output: 15W
4	Wireless Output: 10W
5	Wireless Output: 7.5W
6	Wireless Output: 5W
Note: 1. Product folding has been evaluated for use. 2. All test modes were pre - tested, but we only recorded the worst case in this report. The worst case is Mode 3 3. All voltage inputs have been tested, with only the worst voltage recorded.	

1.4. DESCRIPTION OF SUPPORT DEVICE

No.	Equipment	Trade name	Model	S/N	Input/ Output
1.	Intelligent wireless charging full function test module	YZB	/	/	15W,MAX
2.	Mobile Phone	XIAOMI	Mi 11	6F7DFA8A	50W Max.
3.					
4.					

2. TEST STANDARDS AND SITES

2.1. DESCRIPTION OF STANDARDS AND RESULTS

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard & Limits	Results
MPE	FCC Part 1(1.1310) and Part 2(2.1093) KDB 680106 D01 RF Exposure Wireless Charging App v04	Pass
Note: N/A is an abbreviation for Not Applicable.		

2.2. LIST OF TEST AND MEASUREMENT INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Interval
Electric and Magnetic Field Probe - Analyzer	SPEAG	MAGPy- 8H3D+ED3 V2	3061	Jan. 24, 2024	1 Year

2.3. TEST FACILITY

EMC Lab. : The Laboratory has been assessed and proved to be in compliance with CNAS/CL01
The Certificate Registration Number is L10100.
The Laboratory has been assessed and proved to be in compliance with A2LA
The Certificate Registration Number is 6901.01
FCC Designation No.: CN1351
Test Firm Registration No.: 397428
ISED CAB identifier: CN0151
Test Firm Registration No.: 20133

Test Location : Dongguan Lepont Testing Service Co., Ltd.

Address : Room 102, Building 11, No.7, Houjie Science And Technology Avenue, Houjie, Dongguan, Guangdong, China

3. RF EXPOSURE

3.1. MEASURING STANDARD

FCC Part 1(1.1310) and Part 2(2.1093)

3.2. REQUIREMENTS

Three different categories of transmitters are defined by the FCC in OET Bulletin 65. These categories are fixed installation, mobile, and portable and are defined as follows:

- **Fixed Installations:** fixed location means that the device, including its antenna, is physically secured at a permanent location and is not able to be easily moved to another location. Additionally, distance to humans from the antenna is maintained to at least 2 meters.
- **Mobile Devices:** a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to be generally used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structures and the body of the user or nearby persons. Transmitters designed to be used by consumers or workers that can be easily re-located, such as a wireless modem operating in a laptop computer, are considered mobile devices if they meet the 20 centimeter separation requirement. The FCC rules for evaluating mobile devices for RF compliance are found in 47 CFR §2.1091.
- **Portable Devices:** a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user. Portable device requirements are found in Section 2.1093 of the FCC's Rules (47 CFR§2.1093).
- The FCC also categorizes the use of the device as based upon the user's awareness and ability to exercise control over his or her exposure. The two categories defined are Occupational/ Controlled Exposure and General Population/Uncontrolled Exposure. These two categories are defined as follows:
 - **Occupational/Controlled Exposure:** In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Awareness of the potential for RF exposure in a workplace or similar environment can be provided through specific training as part of a RF safety program. If appropriate, warning signs and labels can also be used to establish such awareness by providing prominent information on the risk of potential exposure and instructions on methods to minimize such exposure risks.
 - **General Population/Uncontrolled Exposure:** The general population / uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

3.3. TEST CONFIGURATION

For mobile exposure conditions:

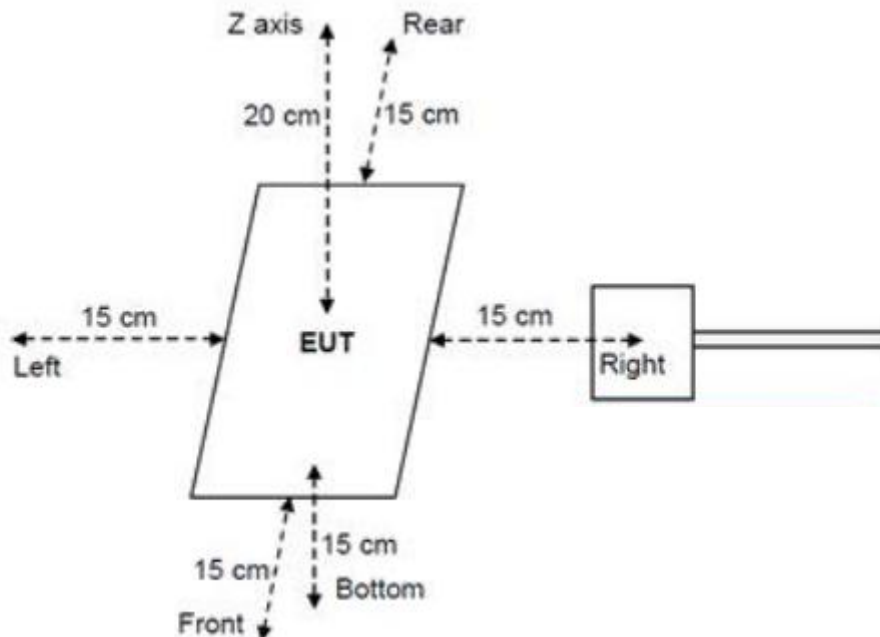
- a. The RF exposure test was performed in an echoic chamber
- b. E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the EUT and 20 cm above the top surface of the primary/client pair.
- c. The highest emission level was recorded and compared with limit.
- d. The EUT was measured according to the dictates of KDB 680106 v04

For portable exposure conditions:

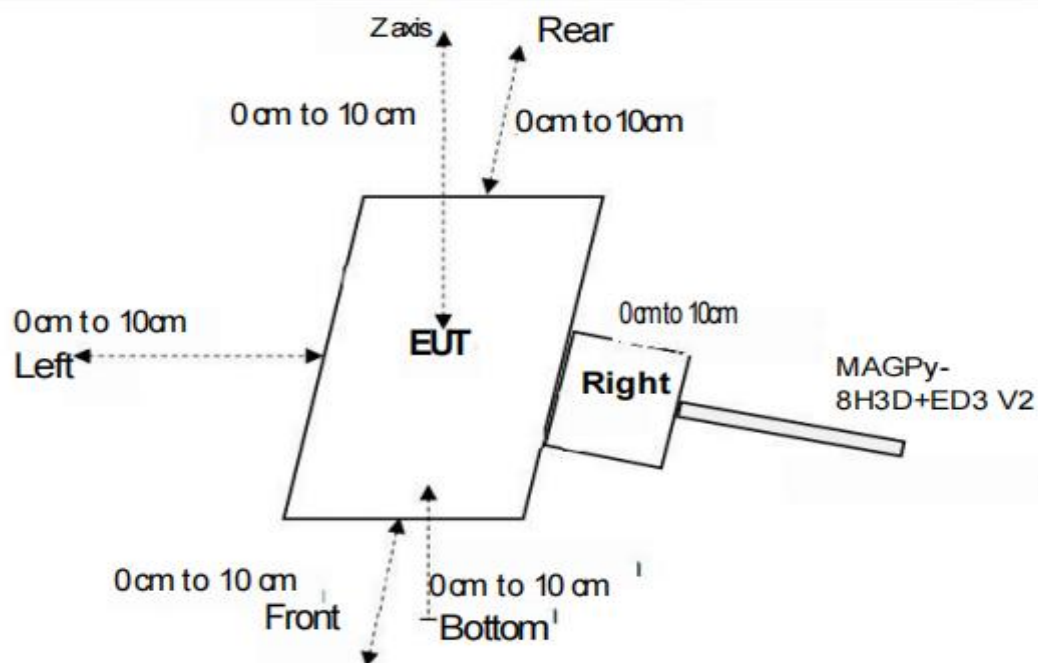
- a. The RF exposure test was performed in an echoic chamber.
 - b. E and H-field measurements should be made with the probe at 0 cm for all side of the EUT.
 - c. The highest emission level was recorded and compared with limit
- For portable exposure conditions. Perform H-field measurements for each edge/top surface of the host/client pair at every 2 cm, starting from as close as possible out to 10 cm

3.4. BLOCK DIAGRAM OF TEST SETUP

For mobile exposure conditions:



For portable exposure conditions:



3.5. LIMITS

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

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

3.6. MEASURING RESULTS

a) Power transfer frequency is less than 1 MHz.

Yes, The device operates in the frequency 115KHz-205KHz.

b) Output power from each primary coil is less than or equal to 15 watts.

Yes, The maximum output power of the primary coil is Max 15W≤15W.

c) The transfer system includes one single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

Yes, the transfer system includes only single primary coils.

d) Client device is placed directly in contact with the transmitter.

Yes, Client device is placed directly in contact with the transmitter.

e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

No, EUT includes portable conditions

f) The aggregate H-Field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

No, E-field and H-field measurements are performed using a probe at 0 cm of the surface of all synchronous emission coils for EUT, See the test result in item 3.7

For portable exposure condition:

Note: operating modes with client device (1 %, 50%, 99% battery status of client device) have been test only show the data of worst case of 50% battery status of client device.

Test condition 1: Mode 3 (The following test data represents only the worst mode)

Test distance: 0cm

3.7. TEST DATA:**Test Mode: Mode 3(50% Load)**

Electric Field Emissions		
Test Position	Measure Value (V/m)	Limit(V/m)
Top	2.21	614
Left	2.24	614
Right	1.89	614
Rear	1.57	614
Front	1.48	614
Bottom	1.29	614
Magnetic Field Emissions		
Test Position	Measure Value (A/m)	Limit(A/m)
Top	0.0753	1.63
Left	0.0784	1.63
Right	0.0621	1.63
Rear	0.0636	1.63
Front	0.0649	1.63
Bottom	0.0725	1.63

Test Mode: Mode 3(1% Load)

Electric Field Emissions		
Test Position	Measure Value (V/m)	Limit(V/m)
Top	1.73	614
Left	1.57	614
Right	1.41	614
Rear	1.36	614
Front	1.41	614
Bottom	1.29	614
Magnetic Field Emissions		
Test Position	Measure Value (A/m)	Limit(A/m)
Top	0.0128	1.63
Left	0.0121	1.63
Right	0.0130	1.63
Rear	0.0133	1.63
Front	0.0149	1.63
Bottom	0.0151	1.63

Test Photo



----- END OF REPORT -----

