Shenzhen Toby Technology Co., Ltd.

Report No.: TBR-C-202202-0060-33

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RF Exposure Evaluation FCC ID: 2A4PQ-AP-SS-005

1. Client Information

Applicant : ALLPOWERS Industrial International Limited					
Address : Floor 1-4, Building No.2, No.182 Kaiyuan Avenue, Huangpu Distri Guangzhou, China					
Manufacturer :		ALLPOWERS Industrial International Limited			
Address	•	Floor 1-4, Building No.2, No.182 Kaiyuan Avenue, Huangpu District, Guangzhou, China			

2. General Description of EUT

EUT Name		Portable Power Station						
Model(s)		AP-SS-005, AP-SS-005-USFBA-NEW, AP-SS-005-BLA-New AP-SS-005-BLA-USNEW, GRD-AP-SS-005-BLA-USNEW AP-SS-005-BLA-CA, AP-SS-005-BLA-US AP-SS-288WH-US, AP-SS-288WH-CA AP-SS-005-372WH, WHF-AP-SS-005-BLA-USNEW WHF-AP-SS-005-BLA-NEW, AP-SS-011 AP-SS-011-BLA-US, AP-SS-011-BLA-CA AP-SS-011-BLA-NEW-US, AP-SS-011-BLA-NEW-CA AP-SS-011-BLA-USFBA, AP-SS-4000W-US AP-SS-4000W-NEW-US						
Sample ID		202202-0060_02-01#	202202-0060_02-01#					
Model Difference			entical in the same PCB layout and y difference is that names.					
		Operation Frequency:	110KHz-205KHz					
Product Description		Modulation Type:	ASK					
Boompaon	88.00	Antenna:	Coil Antenna					
Power Supply	5	Input: AC 110-240V Car charger: 12-20V, 5A						

TB-RF-074-1. 0

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Accessories

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solar energy:16.6-24V
Output:
AC 110-240 V
USB-C: 5V, 3A
USB: 5V, 7.2A,
Cigarette lighter: 12V,10A
Wireless Charging: 5W(Max)

Software Version : ---Hardware Version : Please refer to the User's Manual
Port(S)

Note: More test information about the EUT please refer the RF Test Report.

: HUAWEI Mate 40 Pro



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RF Exposure Considerations

1. Measuring Standard

KDB 680106 D01 RF Exposure Wireless Charging App v03.

2. Requirements

According to the item 5.2 of KDB 680106 D01v03: Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation:

- (1) Power transfer frequency is less than 1 MHz.
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.

Limits For Maximum Permissible Exposure (MPE)

	Bull to the second			AND AND AND						
Frequency range (MHz)	Electric field strength (V/m)	Power density (mW/cm²)	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	1	1	f/300	6						
1500-100,000	/	/	5	6						
	(B) Limits for Genera	Population/Uncontrolle	ed 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	/	1	f/1500	30						
1500-100,000	/	1	1.0	30						
	-		•	•						

F=frequency in MHz

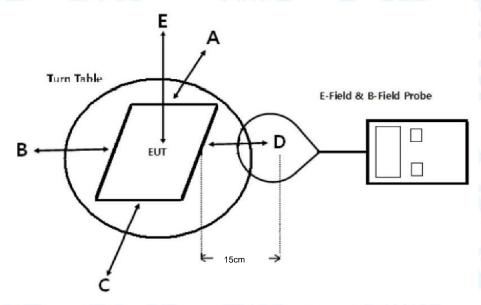
^{*=}Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).



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3. Test Setup



Note: The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface.

4.Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- 4) The EUT was measured according to the dictates of KDB 680106 D01 v03.

Remark:

The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

5. Test Equipment List

Equipment Manufacturer		Model No.	Serial No.	Last Cal.	Cal. Due Date
Magnetic field meter	NARDA	ELT-400	EE030	Sep. 10, 2021	Sep. 09, 2022

6. Deviation From Test Standard

No deviation

7. Mode of operation during the test / Test peripherals used

Test Modes:							
TM1	AC/DC Adapter + EUT + Mobile Phone (Battery Status: <1%)	record					
TM2	AC/DC Adapter + EUT + Mobile Phone (Battery Status: <50%)	record					
TM3	AC/DC Adapter + EUT + Mobile Phone (Battery Status: <99%)	record					



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8. Test Result

E-Filed Strength at 15 cm from the edges surrounding the EUT and 15 cm above the top surface

u	.00	A A A A Bass							
	Charain a	F	Measured E-Field Strength Values (V/m)					E-Field	E-Field
Charging Battery	Frequency Range		Te	Strength	Strength				
	Level	(MHz)	۸	В	С	D	Е	50% Limits	Limits
	Levei	(IVIFIZ)	А	Б	C	D		(V/m)	(V/m)
	99%	116.5	42.611	43.348	61.451	43.732	47.131	307.0	614.0
	50%	116.5	46.734	42.972	49.374	47.123	42.972	307.0	614.0
	1%	116.5	61.076	49.384	42.962	34.671	41.843	307.0	614.0

Note: V/m= A/m *377

H-Filed Strength at 15 cm from the edges surrounding the EUT and 15 cm above the top surface

Charging		Frequenc	Measured H-Field Strength Values (A/m)					H-Field	H-Field
Battery						Strength	Strength		
Level	unit	y Range (MHz)	Α	В	С	D	E	50% Limits	Limits
Level		(1711 12)	Α	Ь	C	D		(A/m)	(A/m)
99%	uT	116.5	0.1414	0.1432	0.2031	0.142	0.1562		9-13
99%	A/m	116.5	0.112	0.111	0.164	0.113	0.127	0.815	1.63
50%	uT	116.5	0.155	0.1423	0.1631	0.1556	0.1424	THIS SERVICE	
50%	A/m	116.5	0.126	0.112	0.133	0.126	0.114	0.815	1.63
1%	uT	116.5	0.2028	0.1635	0.1425	0.1151	0.1383		17.17.7
1%	A/m	116.5	0.167	0.132	0.115	0.095	0.112	0.815	1.63

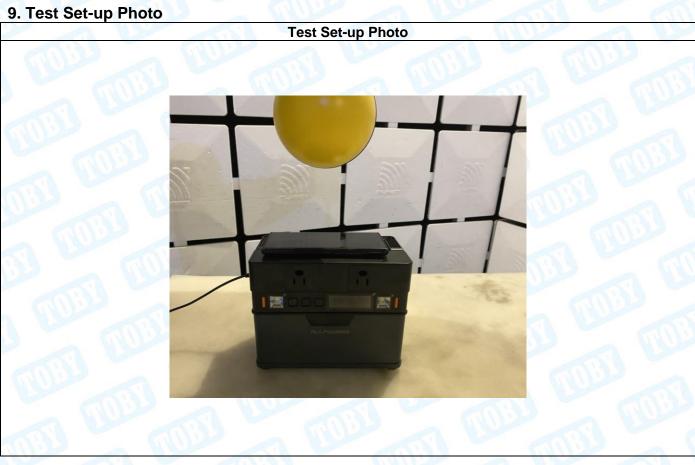
H-Field Strength at 20cm from the top surface of the EUT

Charging		Frequency	Measured H-Field Strength	FCC H-Field Strength	FCC H-Field
Battery	Unit	Range	Values (A/m)	50% Limits	Strength Limits
Level		(MHz)	Test Position E	(A/m)	(A/m)
99%	uT	116.5	0.1336		A M. Commercial
99%	A/m	116.5	0.103	0.815	1.63
50%	uT	116.5	0.1227	-6/1/12	-
50%	A/m	116.5	0.096	0.815	1.63
1%	uT	116.5	0.1375	1100	HILL
1%	A/m	116.5	0.15	0.815	1.63

Note: A/m=uT/1.25



TOBY



----END OF REPORT----