

# **RF EXPOSURE REPORT**

The device described below is tested by Dongguan Nore Testing Center Co., Ltd. to determine the maximum emission levels emanating from the device, the severe levels which the device can endure and E.U.T.'s performance criterion. The test results, data evaluation, test procedures, and equipment of configurations shown in this report were made in accordance with the procedures in ANSI C63.10(2013).

Applicant / 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.	:	Fast Wireless Charger
Brand Name	:	N/A
Model No.	:	F1, PS-393
FCC ID	:	2AQTM-PS393
Measurement Standard	:	47 CFR PART 2, Section 2.1091
Date of Receiver	:	August 27, 2021
Date of Test	:	August 27, 2021 to September 25, 2021
Date of Report	:	September 28, 2021

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

This test report is for the customer shown above and their specific product only. This report applies to above tested sample only and shall not be reproduced in part without written approval of Dongguan Nore Testing Center Co., Ltd.

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# **1. GENERAL INFORMATION**

# **1.1 Product Description for Equipment under Test**

Product Name Main Model Additional Model Model Difference	:	Fast Wireless Charger F1 PS-393 These models have the same circuit schematic, construction, PCB Layout and critical components. The difference is model number only due to trading purpose.
Power Supply	:	Input:DC5V 2A, DC9V 1.67A, Output: 10W (Max)
Adapter	:	N/A
Test voltage	:	AC 120V 60Hz (Only the worst case was record in the report.)
Cable	:	
Software Version Hardware Version	:	Not Stated Not Stated
Note	:	N/A
Remark	:	N/A
Frequency Range	:	110.5-210KHz
Test frequency	:	127.98KHz



### 1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: 2AQTM-PS393 filing to comply with 47 CFR PART 2, Section 2.1091 According to KDB680106 D01v03r01: RF exposure wireless charging apps v03r01.

#### **1.3 Test Facility and Location**

Site Description EMC Lab	:	Listed by CNAS, August 13, 2018 The certificate is valid until August 13, 2024 The Laboratory has been assessed and proved to be in compliance with CNAS/CL01 The Certificate Registration Number is L5795.
		Listed by A2LA, November 01, 2017 The certificate is valid until December 31, 2021 The Laboratory has been assessed and proved to be in compliance with ISO17025 The Certificate Registration Number is 4429.01
		Listed by FCC, November 06, 2017 The Designation Number is CN1214 Test Firm Registration Number: 907417
Name of Firm	:	Listed by Industry Canada, June 08, 2017 The Certificate Registration Number. Is 46405-9743 Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Site Location	:	Building D, Gaosheng Science & Technology Park, Zhouxi Longxi Road, Nancheng District, Dongguan City, Guangdong Province, China



# 2. Measurement Uncertainty

Measurement Uncertainty for a Lecel of Confidedce of 95%, U=2xUc(y)

Magnetic Field Emissions	±0.15dB
Electric Field Emissions	±0.36dB



## 3. Method of measurement

#### 3.1 Applicable standard

According to 1.1307(b)(1), system operating under the provisions of this section shall be operated in amnner that ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

According to part 2.1091(mobile use condition) RF exposure is calculated. According to KDB680106 D01 v03r01: RF exposure wireless charging apps v03r01.

#### 3.2 Test Setup



Remarks: Distance for point E shall be 20cm

#### 3.3 Test procedure

- 1. The RF exposure test was performed on 360 degree turn table in anechoic chamber;
- 2. The measurement probe was placed at test distance 15cm which is between the edge of the charger and 20cm between top of the charger and the geometric centre of probe.
- 3. The turn table was rotated 360d degree to search of highest strength.
- 4. The highest emission level was recorded and compared with limit as soon as measurement of each points (A,B,C,D,E) were completed.
- 5. The EUT were measured according to the dictates of KDB 680106D01v03r01



#### 3.4 Equipment approval considerations

The EUT dose comply with item 5.2 of KDB 680106D01 v03r01

- a, Power transfer frequency is less than 1MHz. YES; the device operated in the frequency range from 110.5-210KHz.
- 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 10W<15W.
- c, 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

YES; The transfer system includes has one source primary coils only.

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

YES; The EUT field strength levels are less than 50% x MPE limits.



## 3.5 E and H field strength Limit

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/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/f2)	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/f2)	30						
30-300	27.5	0.073	0.2	30						
300-1500	/	/	f/1500	30						
1500-100,00	/	/	1.0	30						
F=frequency in MF	lz									
*=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 30	1.1310(use the 300kHz limits for 150kHz: 614V/m,1.63A/m).									



#### **Test Result**

Mobile phone has been charge at zero charge, intermediate charge, and full charge.

#### **Electric Field Emissions**

wireless output 5W								
Operation	Teet	Test	Probe	Limit	50%			
frequency	Position	Distance	zero	intermediate	full	(V/m)	Limit	
		(cm)	charge	charge	charge		(V/m)	
	Side A	15	2.493	2.501	2.504	614	307	
	Side B	15	3.154	3.251	3.254	614	307	
127.98KHz	Side C	15	8.141	8.142	8.143	614	307	
	Side D	15	1.938	1.938	1.941	614	307	
	Side E	20	1.115	1.113	1.111	614	307	

wireless output 10W								
Operation	Teet	Test	Probe	Limit	50%			
frequency	Position	Distance	zero	intermediate	full	(V/m)	Limit	
nequency	FUSICION	(cm)	charge	charge	charge		(V/m)	
	Side A	15	2.503	2.504	2.505	614	307	
	Side B	15	3.253	3.256	3.259	614	307	
127.98KHz	Side C	15	8.142	8.146	8.148	614	307	
	Side D	15	1.942	1.946	1.948	614	307	
	Side E	20	1.111	1.112	1.115	614	307	

#### **Magnetic Field Emissions**

wireless output 5W									
Operation	Teet	Test	Probe	Limit	50%				
frequency	Position	Distance	zero	intermediate	full	(A/m)	Limit		
nequency	1 031001	(cm)	charge	charge	charge		(A/m)		
	Side A	15	0.184	0.185	0.187	1.63	0.815		
	Side B	15	0.198	0.197	0.193	1.63	0.815		
127.98KHz	Side C	15	0.180	0.181	0.182	1.63	0.815		
	Side D	15	0.181	0.182	0.184	1.63	0.815		
	Side E	20	0.188	0.184	0.186	1.63	0.815		

wireless output 10W								
Operation	Teat	Test	Probe	Limit	50%			
frequency	Position	Distance	zero	intermediate	full	(A/m)	Limit	
nequency	1 031001	(cm)	charge	charge	charge		(A/m)	
	Side A	15	0.186	0.187	0.184	1.63	0.815	
	Side B	15	0.196	0.195	0.192	1.63	0.815	
127.98KHz	Side C	15	0.179	0.181	0.181	1.63	0.815	
	Side D	15	0.178	0.180	0.182	1.63	0.815	
	Side E	20	0.182	0.184	0.185	1.63	0.815	



# 3.6 Test equipment list

Description	Manufacturer	Model Number	Serial Number	Calibration Date	Calibration Due Date
Magnetic field probe 100cm2	Narda	ETL Probe 1Hz-400KHz	M-1587	June 28,2021	1 Year
E-Field Probe	Narda	EP-601	611WX70729	Mar. 23, 2021	1 Year



## 3.7 Test Photo





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