

MPE REPORT

Applicant: OPUS ONE Inc.

Address of Applicant: 3rd FL, 4-7 of 243beon-gil, Unjung-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Rep of KOREA. (ZIP. 13477)

Equipment Under Test (EUT)

Product Name: F1 Fast Wireless Auto Slide Car Charger

Model No.: OP-AWCF1GL-BK, OP-AWCF1GL-WH, OP-AWCF1GL-BL, OP-AWCF1GL-PK, OP-AWCF1GL-LT

Trade mark: OPUS ONE

FCC ID: 2A05QOP-AWCF1GL-BK

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.209

Date of sample receipt: 28 Oct., 2019

Date of Test: 29 Oct., to 30 Oct., 2019

Date of report issue: 10 Dec., 2019

Test Result: PASS*

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

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2. Version

Version No.	Date	Description
00	10 Dec., 2019	Original

Tested By:

Carey Chen

Date:

10 Dec., 2019

Test Engineer

Reviewed By:

Winner Zhang

Date:

10 Dec., 2019

Project Engineer

3. General Information

3.1 Client Information

Applicant:	OPUS ONE Inc.
Address:	3rd FL, 4-7 of 243beon-gil, Unjung-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Rep of KOREA. (ZIP. 13477)
Manufacturer:	Shenzhen Mgctech Co.,Ltd.
Address:	4F, Bldg B, No.48-12, Fuchengao Industrial Rd., Pinghu Street, Longgang District, Shenzhen, China.

3.2 General Description of E.U.T.

Product Name:	F1 Fast Wireless Auto Slide Car Charger
Model No.:	OP-AWCF1GL-BK, OP-AWCF1GL-WH, OP-AWCF1GL-BL, OP-AWCF1GL-PK, OP-AWCF1GL-LT
Operation Frequency:	112.30kHz~203.00kHz
Modulation type:	ASK
Antenna Type:	Coil Antenna
Test Sample Condition:	The test samples were provided in good working order with no visible defects.
Power supply:	Input: 5V, 2A / 9V, 1.67A Output: 10W / 7.5W / 5W
Remark:	Model No.: OP-AWCF1GL-BK, OP-AWCF1GL-WH, OP-AWCF1GL-BL, OP-AWCF1GL-PK, OP-AWCF1GL-LT are identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name .

RF exposure evaluation

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

According to KDB 680106 D01 RF Exposure Wireless Charging Apps, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm for devices designed for typical desktop applications. E and H field strength measurements or numerical modelling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device

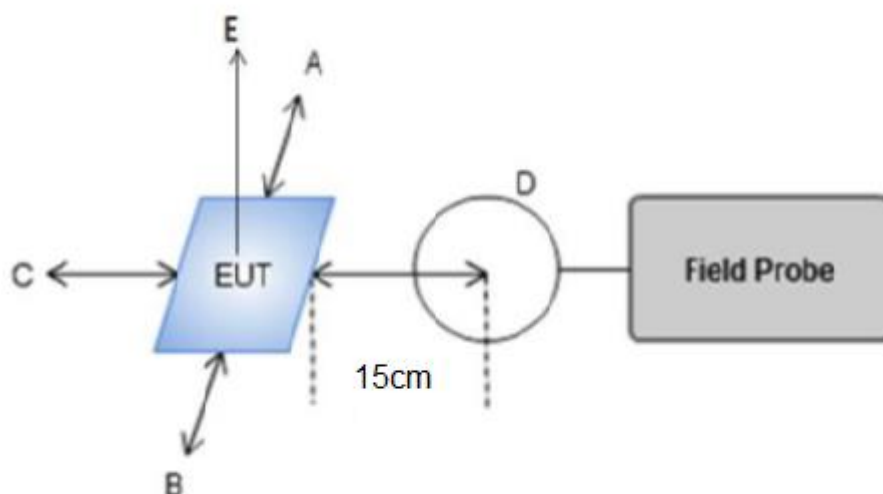
4. Limits For General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW /cm ²)	Averaging Time (minutes)
0.3 ~ 3.0	614	1.63	(100)*	30
3.0 ~ 30	824/f	2.19/f	(180/f ₂)*	30
30 ~ 300	27.5	0.073	0.2	30
300~1500	-	-	f/1500	30
1500~100000	-	-	1.0	30

5. The Equipment List

Instrument	Manufacturer	Model No.	Serial No.	Calibration Until
B-Field Probe	Narda	B-Field Probe 100 cm ²	B-0137	Jun. 19, 2020
Magnetic field meter	Narda	ELT-400	B-0137	Jun. 19, 2020
Broadband field meter	Narda	NBM-550	B-0959	Nov. 18, 2019
B-Field Probe	Narda	EF0391	A-1034	Nov. 18, 2019

6. Test Setup Block



<p>Test procedure:</p>	<p>(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 transfer system includes only 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. (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 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.</p>
<p>Test Result:</p>	<p>Pass</p>

7. MPE EVALUATION RESULTS

Remark: Pre-scan input: 5V and input: 9V of the Power supply, found input: 5V was worse case mode. So the report only reflects the worst mode.

a) 0% charging load mode (for input: 5V, output: empty load)

8. Electric Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (V/m)	50 % of Limit (V/m)	Limit (V/m)
A	15	0.95	307.00	614
B	15	0.89	307.00	614
C	15	0.86	307.00	614
D	15	0.80	307.00	614
E	20	0.75	307.00	614

Magnetic Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (A/m)	50 % of Limit (A/m)	Limit (A/m)
A	15	0.195	0.815	1.63
B	15	0.187	0.815	1.63
C	15	0.182	0.815	1.63
D	15	0.172	0.815	1.63
E	20	0.176	0.815	1.63

b) 50% charging load mode (for input: 5V, output: 5W(5V, 1A))

Electric Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (V/m)	50 % of Limit (V/m)	Limit (V/m)
A	15	1.92	307.00	614
B	15	1.88	307.00	614
C	15	1.83	307.00	614
D	15	1.73	307.00	614
E	20	1.65	307.00	614

Magnetic Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (A/m)	50 % of Limit (A/m)	Limit (A/m)
A	15	0.291	0.815	1.63
B	15	0.285	0.815	1.63
C	15	0.272	0.815	1.63
D	15	0.266	0.815	1.63
E	20	0.284	0.815	1.63

c) 100% charging load mode (for input: 5V, output: 10W(5V, 2A))

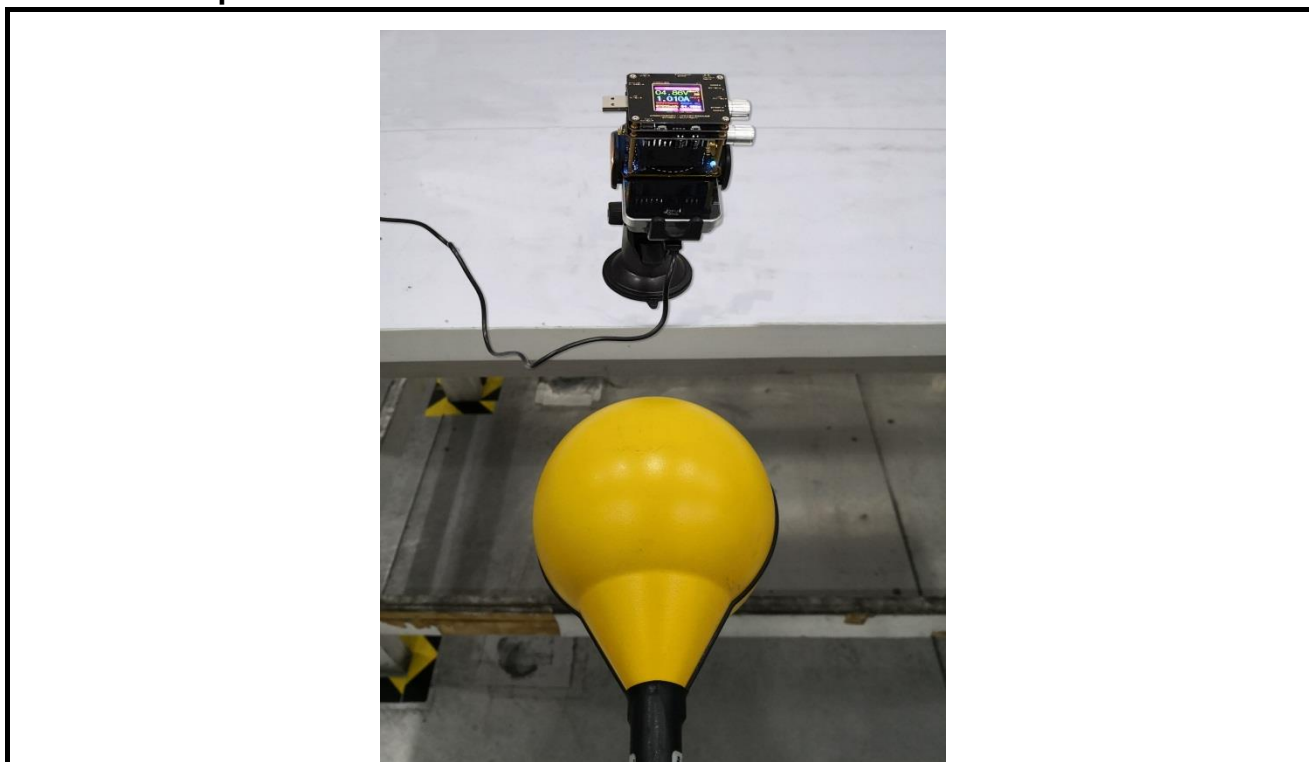
Electric Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (V/m)	50 % of Limit (V/m)	Limit (V/m)
A	15	2.68	307.00	614
B	15	2.48	307.00	614
C	15	2.53	307.00	614
D	15	2.29	307.00	614
E	20	2.55	307.00	614

Magnetic Field Strength Measurement

Measured Side	Distance (cm)	Measured Value (A/m)	50 % of Limit (A/m)	Limit (A/m)
A	15	0.557	0.815	1.63
B	15	0.542	0.815	1.63
C	15	0.553	0.815	1.63
D	15	0.518	0.815	1.63
E	20	0.526	0.815	1.63

6. Test Setup Photos:



-----End of report-----