ICS Innovation LLC

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
W1-DCT5W/L

REPORT NUMBER:
190102002SHA-002

ISSUE DATE:
Apr. 2, 2019

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Report no.: 190102002SHA-002

Applicant:	ICS Innovation LLC
Address of Applicant:	1581 Franklin Ave Mineola NY,11501
Manufacturer:	ICS Innovation LLC
Address of Manufacturer:	1581 Franklin Ave Mineola NY,11501
FCC ID:	2ASAO-EZWL01CN

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

TESTED, PREPARED AND CHECKED BY :	REVIEWED AND APPROVED BY :
Project Engineer Henry Lu Shenzhen UnionTrust Quality and Technology Co., Ltd.	Reviewer Daniel Zhao Intertek Testing Services Shanghai

TEST REPORT

Revision History

Report No.	Version	Description	Issued Date
190102002SHA-002	Rev. 01	Initial issue of report	Apr. 2, 2019

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Wireless Charger
Type/Model:	W1-DCT5W/L
Description of EUT:	N/A
Rating:	Power the by AC adapter
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Operating Frequency Range:	110 KHz to 205 KHz
Antenna Type:	Coil antenna
Sample received date:	January 16, 2019
Date of test:	January 16, 2019 to January 22, 2019

1.2 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab Registration code No.: 2042B-1
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	NVLAP Accreditation Lab NVLAP LAB CODE: 200849-0
	A2LA Accreditation Lab Certificate Number: 3309.02

Tests were sub-contracted.

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China 518109

Telephone: +86 (0) 755 2823 0888

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The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L9069

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC/EN 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

IC-Registration No.: 21600-1

The 3m Semi-anechoic chamber of Shenzhen UnionTrust Quality and Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 21600-1.

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A2LA-Lab Certificate No.: 4312.01

Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC Accredited Lab.

Designation Number: CN1194

Test Firm Registration Number: 259480

1.3 Instrument list

Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	Broadband Field meter	STT	SEM-600	D-1044	May 29, 2018	May 28, 2019
☒	Probe	STT	LF-04	I-1044	May 29, 2018	May 28, 2019
☒	Probe holder	STT	TR-01	N/A	N/A	N/A
☒	Optical fiber line	STT	L=5M	N/A	N/A	N/A

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2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

According to §1.1307(b)(1), 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 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 Times $\|E\|^2$, $\|H\|^2$ 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
1500-100000	/	/	5	6

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 Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500	/	/	f/1500	30
1,500-100,000	/	/	1.0	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density.

2.2

Enabled the EUT to transmit and receive data continue

a. The field strength of both E-field and H-field was measured at 15 cm surrounding the device and 20 cm above the top surface using the equipment list above for determining compliance with the MPE requirements of FCC Part 1.1310.

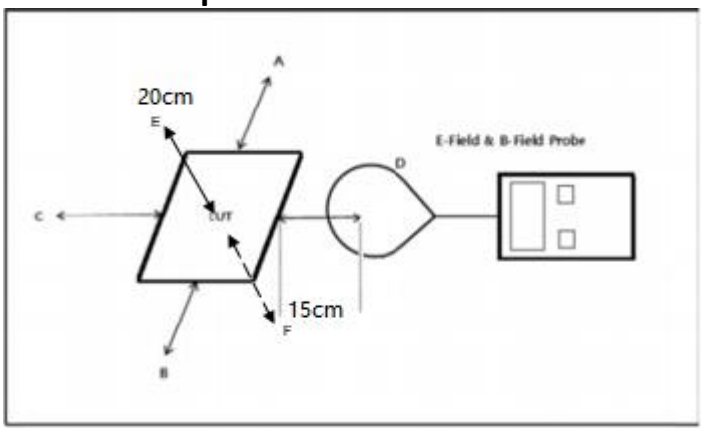
b. The RF power density was measured with the battery at 3 different charge conditions: battery at less than 1 % , battery at 50% charger, battery at 99% charger,.

c. Maximum E-field and H-field measurements were made 15cm from each side of the EUT. Along the side of the EUT and still 15cm away from the edge of the EU T, the field probes were positioned at the location where there is maximum field strength. The maximum E-field and H-field is reported below.

d. This device uses a wireless charging circuit for power transfer operating at the frequency of X

kHz. Thus, the 300 kHz limits were used: E-field Limit = 614 (V/m); H-field limit = 1.63 (A/m).

2.3 Test setup



Note

The RF exposure test is performed in the shield room

The test distance is between the edge of the charger and the geometric center of probe

The aggregate at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated.

2.4 TEST DATA

E-Field Strength

Test Mode	Battery status	Probe Position A (V/m)	Probe Position B (V/m)	Probe Position C (V/m)	Probe Position D (V/m)	Probe Position E (V/m)	Probe Position F (V/m)	Limits (V/m)
Mode 1	<1% Battery status	0.64	0.45	0.64	0.55	1.21	0.68	614
Mode 2	50% Battery status	0.66	0.49	0.66	0.55	1.24	0.75	614
Mode 3	99% Battery status	0.69	0.66	0.59	0.57	1.14	0.75	614

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H-Field Strength

Test Mode	Battery status	Probe Position A (A/m)	Probe Position B (A/m)	Probe Position C (A/m)	Probe Position D (A/m)	Probe Position E (A/m)	Probe Position F (A/m)	Limits (A/m)
Mode 1	<1% Battery status	0.0363	0.0359	0.0343	0.0361	0.0166	0.0131	1.63
Mode 2	50% Battery status	0.0359	0.0362	0.0348	0.0367	0.0171	0.0139	1.63
Mode 3	99% Battery status	0.0368	0.0366	0.0345	0.0372	0.0169	0.0142	1.63

Remark:

The device meets the mobile RF exposure limit at a 15cm and 20cm separation distance as specified in &2.1091 of the FCC Rules.

All simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Appendix I: Photograph of test setup

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

Appendix II: Photograph of equipment under test

Refer to Appendix 2 for EUT external and internal photos.

********** END **********