

TEST REPORT

FCC ID: 2AOKOHH-HD-W001

Product: Car Holder with Wireless Charger

Model No.: HH-HD-W001

Additional Model No.: CS-045

Trade Mark: N/A

Report No.: TCT180111E033

Issued Date: Dec. 27, 2017

Issued for:

HUAHAI ELECTRONICS CO., LIMITED

**52B, TangTian South Road, ShiMa, TangXia Town, DongGuan City,
Guangdong Province, 523710, China**

Issued By:

Shenzhen Tongce Testing Lab.

**1B/F., Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District,
Shenzhen, Guangdong, China**

TEL: +86-755-27673339

FAX: +86-755-27673332

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1. Test Certification

Product:	Car Holder with Wireless Charger
Model No.:	HH-HD-W001
Additional Model No.:	CS-045
Trade Mark:	N/A
Applicant:	HUAHAI ELECTRONICS CO., LIMITED
Address:	52B, TangTian South Road, ShiMa, TangXia Town, DongGuan City, Guangdong Province, 523710, China
Manufacturer:	HUAHAI ELECTRONICS CO., LIMITED
Address:	52B, TangTian South Road, ShiMa, TangXia Town, DongGuan City, Guangdong Province, 523710, China
Date of Test:	Dec. 08 – Dec. 27, 2017
Applicable Standards:	FCC Rules and Regulations KDB680106

The above equipment has been tested by Shenzhen Tongce Testing Lab. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:



Date:

Dec. 27, 2017

Beryl Zhao

Reviewed By:



Date:

Dec. 27, 2017

Approved By:

Tomsin

Date:

Dec. 27, 2017

2. Test Result Summary

Requirement	CFR 47 Section	Result
RF EXPOSURE	§1.1307(b)(1) & KDB680106	PASS

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.

3. EUT Description

Product:	Car Holder with Wireless Charger
Model No.:	HH-HD-W001
Additional Model No.:	CS-045
Trade Mark:	N/A
Number of Channel	20 channels
Operation Frequency:	110-205KHz
Modulation Technology:	MSK
Antenna Type:	Coil Antenna
Antenna Gain:	10dBi

Conditions requirement	Answers
Power transfer frequency is less than 1 MHz	After measuring the product the transfer frequency is 110-205KHz
Output power from each primary coil is less than 5 watts	After measuring the product the each primary coil power is 4.5 watts
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	The transfer system includes only single primary coil
Client device is inserted in or placed directly in contact with the transmitter	Client device is placed directly in contact with the transmitter
The maximum coupling surface area of the transmit (charging) device is between 60 cm ² and 400 cm ² .	After measuring the product the maximum coupling surface area of the transmit (charging) device is 100cm ²
Aggregate leakage fields at 10 cm surrounding the device from all simultaneous transmitting coils are demonstrated to be less than 30% of the MPE limit.	After measuring the product the Max E-Filed Strength is 1.21V/m Far less than 30% of the MPE limit.

Operation Frequency each of channel

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	0.110	6	0.135	11	0.160	16	0.185
2	0.115	7	0.140	12	0.165	17	0.190
3	0.120	8	0.145	13	0.170	18	0.195
4	0.125	9	0.150	14	0.175	19	0.200
5	0.130	10	0.155	15	0.180	20	0.205

4. Genera Information

4.1. Test environment and mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations(The value of duty cycle is 98.46%) with Fully-charged battery.
The sample was placed (0.1m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.	

4.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
Adapter	HW-059200CHQ	K68247F5H01734	/	HUAWEI
Mobilephone	honor 9	5JPDU17610004560	/	honor

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

5. Facilities and Accreditations

5.1. Facilities

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

- FCC - Registration No.: 645098

Shenzhen Tongce Testing Lab

The 3m Semi-anechoic chamber has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

The 3m Semi-anechoic chamber of Shenzhen TCT Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

5.2. Location

Shenzhen Tongce Testing Lab

Address: 1B/F., Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District, Shenzhen, Guangdong, China

TEL: +86-755-27673339

5.3. Measurement Uncertainty

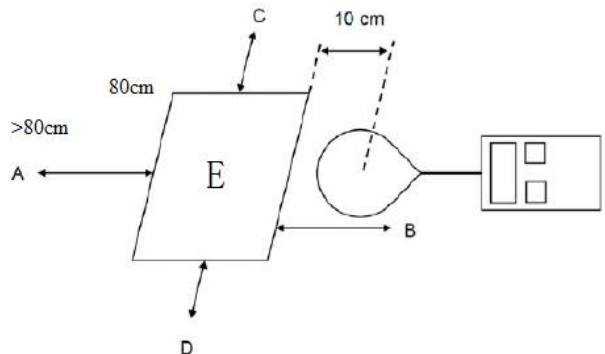
The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	$\pm 2.56\text{dB}$
2	RF power, conducted	$\pm 0.12\text{dB}$
3	Spurious emissions, conducted	$\pm 0.11\text{dB}$
4	All emissions, radiated(<1G)	$\pm 3.92\text{dB}$
5	All emissions, radiated(>1G)	$\pm 4.28\text{dB}$
6	Temperature	$\pm 0.1^{\circ}\text{C}$
7	Humidity	$\pm 1.0\%$

6. Test Results and Measurement Data

6.1. RF EXPOSURE TEST

6.1.1. Test Specification

Test Requirement:	FCC Rules and Regulations KDB680106
Test Method:	§1.1307(b)(1) & KDB680106
Limits:	According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure is calculated. According KDB680106 D01v02: RF Exposure Wireless Charging Apps v02.
Test Setup:	
Test Mode:	Charging + Transmitting Mode
Test Procedure:	<ol style="list-style-type: none"> 1. The RF exposure test was performed on 360 degree turn table in anechoic chamber. 2. The measurement probe was placed at test distance (10cm) which is between the edge 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 680106D01v02.
Test Result:	PASS

6.1.2. Test Instruments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Exposure Level Tester	narda	ELT-400	N-0231	2017.09.29	1 Year
2.	Magnetic field probe 100cm2	narda	ELT probe 100cm2	M0675	2017.09.29	1 Year

6.1.3. Test data

For Full load mode:

E-Filed Strength at 10 cm from the edges surrounding the EUT (V/m)

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
0.110-0.205	1.25	1.16	1.20	1.34	1.21	184.2	614

H-Filed Strength at 10 cm from the edges surrounding the EUT (A/m)

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (V/m)
0.110-0.205	0.27	0.23	0.18	0.17	0.19	0.489	1.63

For No load mode:

E-Filed Strength at 10 cm from the edges surrounding the EUT (V/m)

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (V/m)	Limits Test (V/m)
0.110-0.205	1.16	1.17	1.15	1.14	1.17	184.2	614

H-Filed Strength at 10 cm from the edges surrounding the EUT (A/m)

Frequency Range (MHz)	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Reference Limit (A/m)	Limits Test (V/m)
0.110-0.205	0.18	0.23	0.14	0.13	0.16	0.489	1.63

Appendix A: Photographs of Test Setup

Product: Car Holder with Wireless Charger

Model: HH-HD-W001

For Full load mode



For No load mode



Appendix B: Photographs of EUT

Refer to test report TCT180111E032

*******END OF REPORT*******