

RF EXPOSURE REPORT

Test item : UMa Wireless Charger
Model No. : C6F76AC001
Order No. : DEMC1407-03093
Date of receipt : 2014-07-25
Date of issue : 2014-09-22
Use of report : FCC Original Grant

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Test specification : FCC Part 1.1310

Test environment : See appended test report

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of DT&C Co., Ltd.

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Test Report Version

Test Report No.	Date	Description
DRTFCC1409-1205	Sep. 22, 2014	Initial issue

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1. Equipment information

1.1 Equipment description

FCC Equipment Class	Part 15 Low Power Transmitter Below 1705 kHz (DCD)
Equipment type	UMa Wireless Charger
Equipment model name	C6F76AC001
Equipment add model name	C6F76AC010
Equipment serial no.	Identical prototype
Frequency range	110 ~ 205 kHz
Output power	Max : 5 W
Power	DC 12V
Antenna type	Coil Antenna X 3ea ^{Note}

Note: This device has 3 coil antennas but only one antenna is used for transmitting at a time after selection of the best coil antenna,

1.2 Support equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
Wireless Charging Cover	MWC-R511T	0943	M.Cloud	-

Note: The supporting equipments were supported by manufacturer.

2. Information about test items

2.1 Test Configuration and Mode

•Test configuration

The field strength of both E-field and H-field were measured at 10 cm using RF exposure survey meter with E-field and H-field probes for determining compliance with the MPE requirements of FCC Part 1.1310

During measurements, the wireless charging pad (EUT) was wirelessly charging a battery housed inside a portable handset and was loaded with the client device using the resistor as described below summary table for test modes and conditions.

The RF power density was measured with the battery at 2 different charge conditions: battery at almost 0 % and 50 % status, 3 resistive load conditions: 300 mA, 500 mA, 1000 mA (Max. charging current with 5 Ω resistor).

These testing were performed at test configuration as test setup diagram on clause 3 of this test report.

EUT was placed on a non-conductive turntable, and the portable handset with charging cover for charging a battery or client device with resistive load for drawing various load current.

This device uses a wireless charging circuit for power transfer operating at the frequency of 110 KHz ~ 205 KHz.

Thus, the 300 KHz RF exposure limits were used as below table.

•Test mode

This device has been tested in all the configuration of charging mode in each coil antennas.

Test Mode	Charging Current	Support Equipment
1	100mA	Wireless Charging Cover (M/N: MWC-R511T)
2	500mA	
3	1000mA(Max)	

• Limit

	Frequency	E-Field limit	H-Field limit
FCC Part 1.1310	300 KHz ~ 3MHz	614 V/m	1.63 A/m

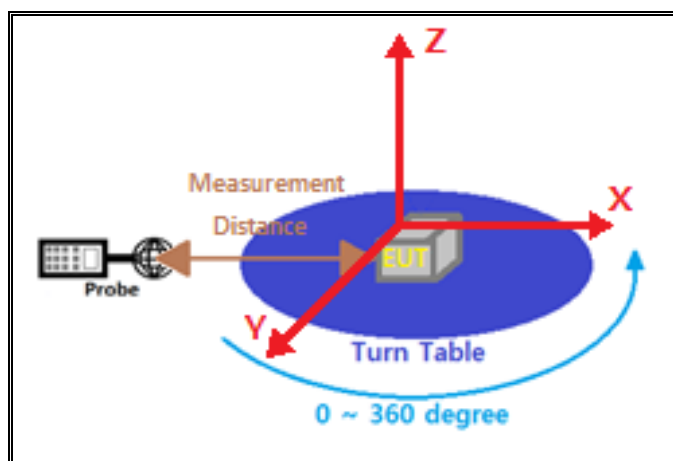
2.2 Tested environment

Temperature	: 22 ~ 23°C
Relative humidity content	: 36 ~ 38 % R.H.
Details of power supply	: DC 12 V

3. E and H field strength

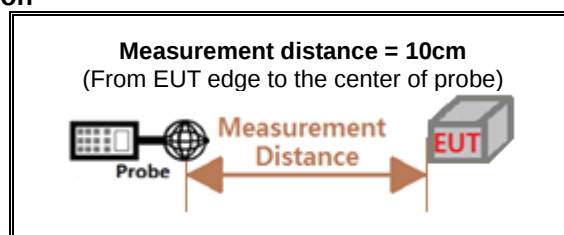
For RF exposure purposes, the E and H field strengths are measured separately with E and H probes and meters at different locations surrounding the test setup.

▪ Test setup diagram



Note: For desktop charger like this device, Z-axis were not tested since top and bottom side of the desktop charger shall be separated far from the human body in actual usage condition.

▪ Measurement distance information



▪ Measurement procedure

These testing were performed at test configuration as above diagram.

EUT was placed on a turntable, and the measurement probe was placed at a measurement distance of 10 cm from the EUT, the turn table was rotated 360 degrees to capture the highest signal.

▪ Test equipment list

	Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next. Cal.Date (yy/mm/dd)	S/N
☒	Magnetic Field Meter	Holaday Industries	HI-3627	14/01/09	16/01/09	23776
☒	Electric Field Meter	Combinova	EFM200	14/01/20	16/01/20	185(N2443)
-	-	-	-	-	-	-

▪ Measurement data:

Coil1

Tested Frequency	Result								Limit	
	E-field(V/m)				H-field(A/m)				E-field(V/m)	H-field(A/m)
	0	90	180	270	0	90	180	270		
Lowest	4.22	5.74	6.49	4.24	0.48	0.20	0.13	0.20	614	1.63
Middle	4.28	5.12	5.03	3.92	0.44	0.26	0.20	0.24		
Highest	4.90	5.11	7.13	5.68	0.32	0.15	0.15	0.16		

Note : The worst case data were reported.