

RF TEST REPORT

Test item : Wireless Charging Pad
Model No. : WCP-700
Order No. : 1101-00048
Date of receipt : 2011-01-12
Test duration : 2011-02-25 ~ 2011-04-01
2011-05-24
Date of issue : 2011-05-24
Use of report : FCC Original Grant

Applicant : LG Electronics USA.
1000 Sylvan Avenue Englewood Cliffs, NJ 07632

Test laboratory : Digital EMC Co., Ltd.
683-3, Yubang-Dong, Cheoin-Gu, Yongin-Si, Kyunggi-Do, 449-080, Korea

Test specification : FCC Part 15 Subpart C
Test environment : See appended test report
Test result : ☒ Pass ☐ Fail

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 DIGITAL EMC CO., LTD.

Tested by:

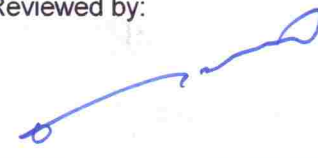
Witnessed by:

Reviewed by:



Engineer
S.K. Ryu

N/A



Manager
W.J. Lee

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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	Wireless Charging Pad
Equipment model name	WCP-700
Equipment add model name	N/A
Equipment serial no.	Identical prototype
Power	AC-DC Adaptor: AC 120V 60Hz
Antenna type	Internal Loop Antenna(Circular coil)

1.2 Ancillary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
Adapter	WCA-D01WT	TA0Z0000034	LG Electronics	-
-	-	-	-	-

2. Information about test items

2.1 Operating mode

Operating Mode 1 (OP 1)	Charging and communication mode (Charging and DATA packet communication)
Operating Mode 2 (OP 2)	Analog ping mode (Transmitting a very short pulse to find a client device)

2.2 Test mode

This device has been tested below conditions:

Charging current	TM-A-X Series	TM-B-X Series
0mA	TM-A-X-0	TM-B-X-0
100mA	TM-A-X-1	TM-B-X-1
200mA	TM-A-X-2	TM-B-X-2
300mA	TM-A-X-3	TM-B-X-3
400mA	TM-A-X-4	TM-B-X-4
500mA	TM-A-X-5	TM-B-X-5
600mA	TM-A-X-6	TM-B-X-6
700mA	TM-A-X-7	TM-B-X-7
800mA	TM-A-X-8	TM-B-X-8
900mA	TM-A-X-9	TM-B-X-9
1000mA	TM-A-X-10	TM-B-X-10

Note 1.: "X" = Positions of Jig board on the DUT(Refer to test setup photo.)
(C = Center, T = Top, B= Bottom, L = Left, R= Right)

2.3 Auxiliary equipment

Equipment	Model No.	Serial No.	Manufacturer	Note
Jig Board (rectangular coil)	FULTON	N/A	LG Electronics Inc.	REV09

Note: This Jig board was supported by manufacturer.

And they declared that the Jig board will be installed in mobile phones for charging the phone.

2.4 Tested environment

Temperature	: 22 ~ 24 °C
Relative humidity content	: 32 ~ 35 % R.H.
Details of power supply	: AC 120V 60Hz

2.5 EMI Suppression Device(s)/Modifications

EMI suppression device(s) added and/or modifications made during testing

→ Refer to "Cover Letter(Modification)_BEJWCP700.pdf" file.

3. Test Report

3.1 Summary of tests

FCC Part Section(s)	Parameter	Test Condition	Status Note 1
I. Test Items			
2.1049	20 dB Bandwidth	Radiated	C
15.209	Radiated Emission		C
15.207	AC Conducted Emissions	AC Line Conducted	C
Note 1: C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable			

The sample was tested according to the following specification:
ANSI C-63.4-2003

3.2 Transmitter requirements

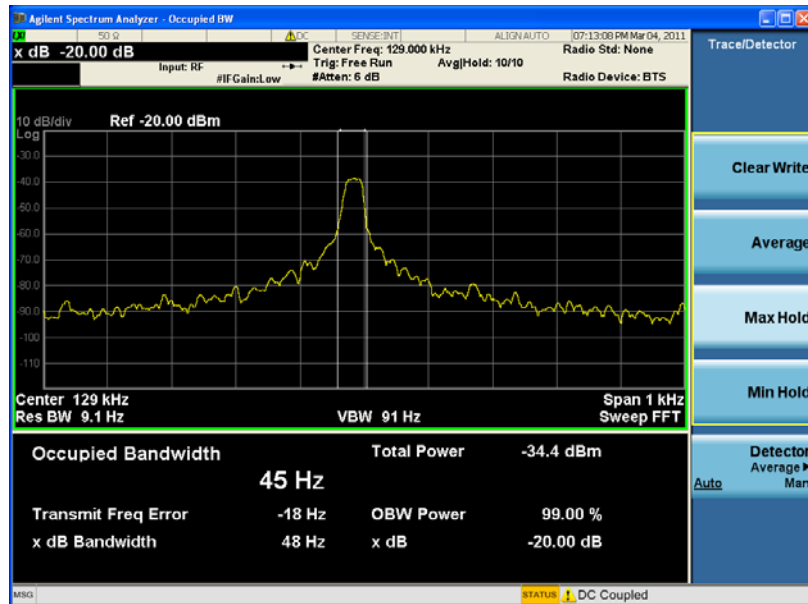
3.2.1 20dB Bandwidth Measurement

- Procedure:

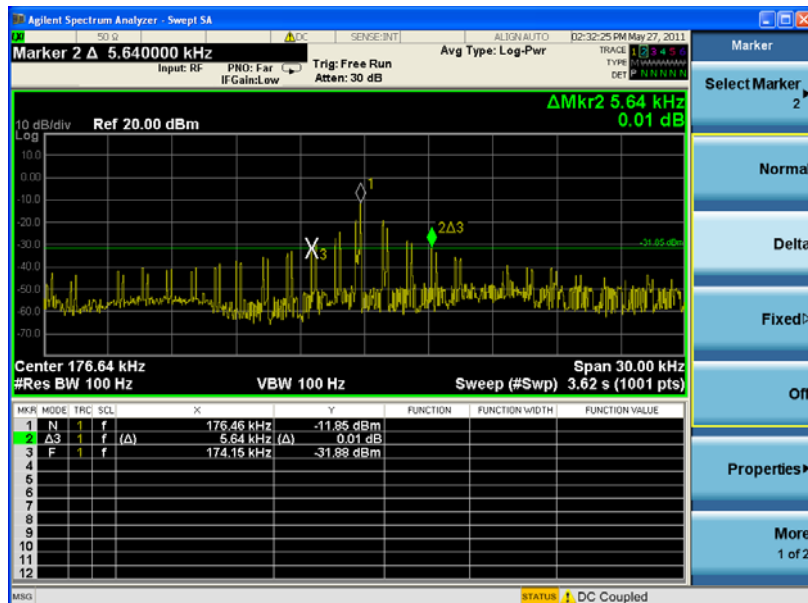
The 20dB Bandwidth is measured with a spectrum analyzer connected via a receiving antenna placed near the EUT while the EUT is operating.

- Measurement Data:

- Operating Mode 1



- Operating Mode 2



3.2.2 Radiated Emissions

- Limit: FCC Part 15.209(a):

Frequency [MHz]	Field Strength [uV/m]	Measurement Distance [Meters]
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

- Procedure: ANCI C63.4

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. During performing radiated emission below 1 GHz, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 GHz, the EUT was set 3 meter away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

- Measurement Data: Comply (refer to the next page)

- Measurement Data:Measurement Distance : 3 Meters

Operating Mode	Test Mode	Note.2	Frequency [MHz]	Detector Mode	ANT Pol	Reading [dBuV]	T.F [dB/m]	Distance factor	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
OP 1	TM-A-L-1	F	0.118	PK	N/A	68.62	11.41	80.00	0.03	26.17	26.14
OP 1	TM-A-T-1	F	0.128	PK	N/A	68.72	11.34	80.00	0.06	25.46	25.40
OP 1	TM-A-C-5	F	0.207	PK	N/A	49.44	10.79	80.00	-19.77	21.28	41.05
OP 1	TM-A-T-1	S	0.510	PK	N/A	65.40	-12.90	40.00	12.50	33.45	20.95
OP 1	TM-A-T-1	S	0.850	PK	N/A	58.30	-12.60	40.00	5.70	29.02	23.32
OP 1	TM-A-T-1	S	42.436	QP	Hor	43.80	-7.80	0.00	36.00	40.00	4.00
OP 1	TM-A-T-1	S	127.933	QP	Hor	41.20	-10.00	0.00	31.20	43.50	12.30
OP 1	TM-A-T-1	S	247.629	QP	Hor	40.10	-8.80	0.00	31.30	46.00	14.70
OP 2	TM-A-T-1	*F	0.117	PK	N/A	46.24	11.41	80.00	-22.35	26.24	48.59
OP 2	TM-A-T-1	*S	18.435	PK	N/A	25.37	8.61	40.00	-6.02	29.54	35.56

Note 1. Distance Factor(DF)For 300m: $40 \cdot \log(300/3) = 80\text{dB}$ For 30m: $40 \cdot \log(30/3) = 40\text{dB}$ **Note 2.** “ F ” = Fundamental

“ S ” = Spurious

“ * ” = Noise Floor

Note 3. No other spurious and harmonic emissions were reported greater than listed emissions above table.**Note 4.** Sample calculation $T.F = AF + CL - AG$ $/ \quad \text{Field Strength} = \text{Reading} + T.F + DF$

Margin = Limit – Field Strength

Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain

3.2.3 AC Line Conducted Emissions

- Minimum Standard: FCC Part 15.207

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

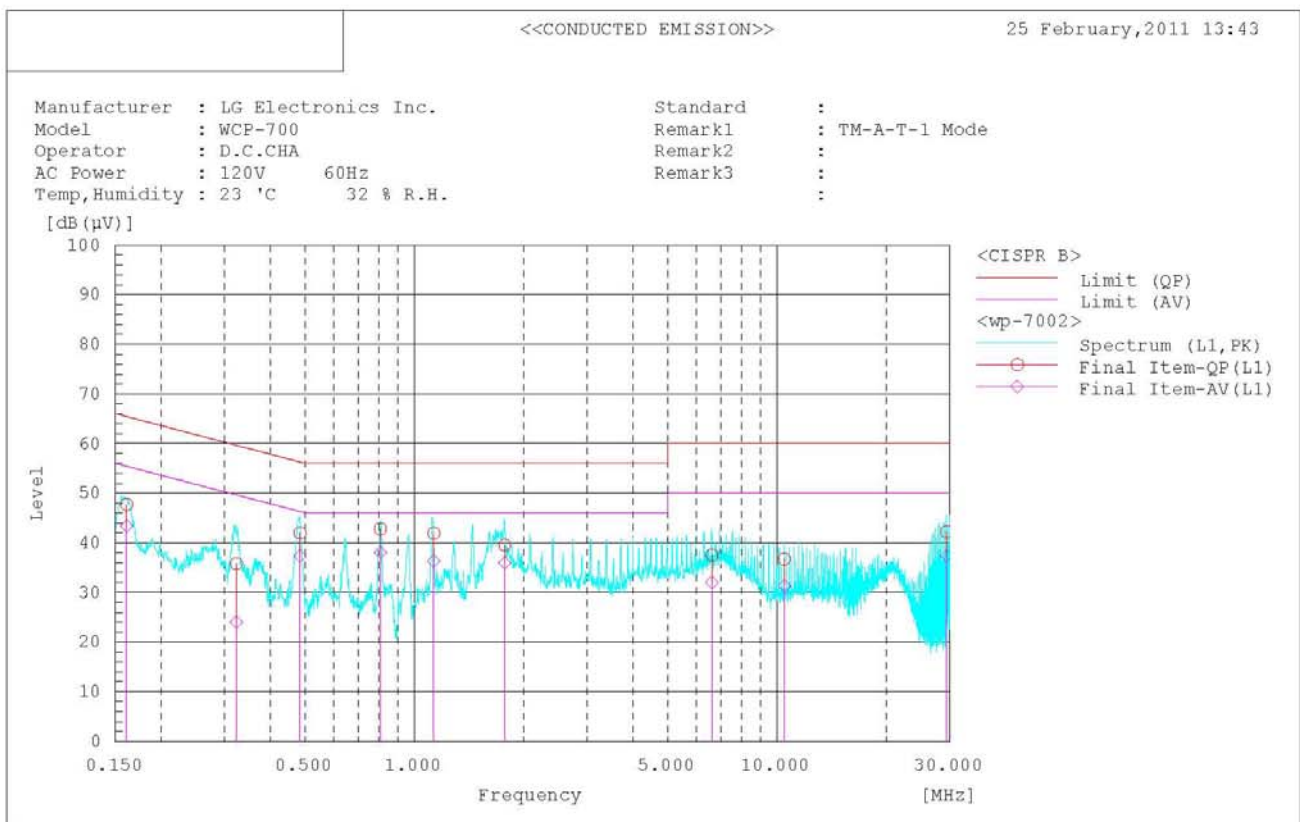
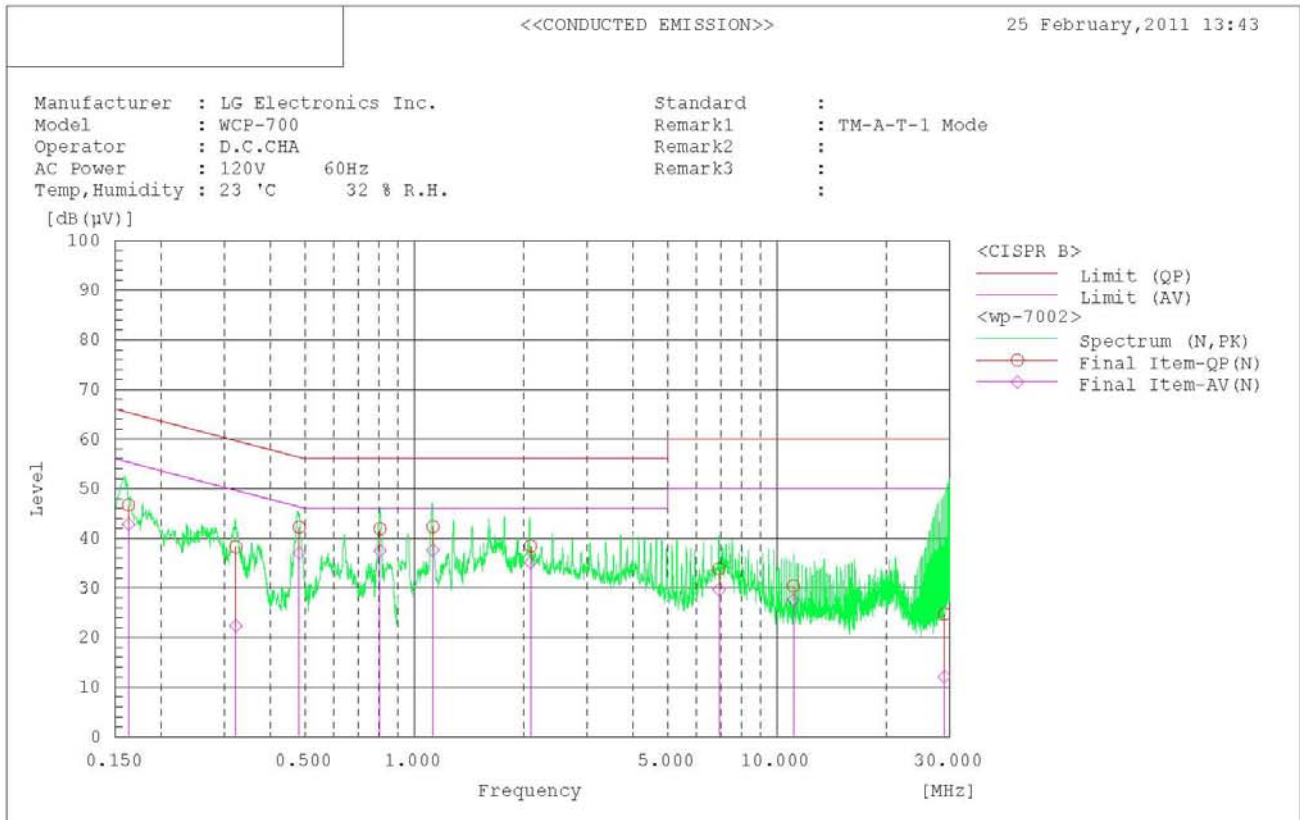
* Decreases with the logarithm of the frequency

- Procedure:

1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

- Measurement Data: **Comply** (refer to the next page)

- Measurement Data(Graph): Operating mode 1



- Measurement Data(List) : Operating mode 1

```
*****
                                  <<CONDUCTED EMISSION>>
                                  25 February, 2011 13:43

Standard      :
Manufacturer   : LG Electronics Inc.
Model          : WCF-700
Operator       : D.C.CHA
AC Power       : 120V      60Hz
Temp, Humidity : 23 °C    32 % R.H.
Remark1        : TM-A-T-1 Mode
Remark2        :
Remark3        :
*****

Final Result

--- N Phase ---
No.  Frequency  Reading  Reading  c.f  Result  Result  Limit  Limit  Margin  Margin  Remark
      [MHz]      QP      AV      [dB]  [dB(μV)] [dB(μV)] [dB(μV)] [dB(μV)] [dB]  [dB]
1     0.163      46.6      42.7    0.1   46.7     42.8    65.3    55.3    18.6    12.5
2     0.322      38.2      22.2    0.1   38.3     22.3    59.7    49.7    21.4    27.4
3     0.481      42.1      36.9    0.1   42.2     37.0    56.3    46.3    14.1     9.3
4     0.804      41.8      37.4    0.1   41.9     37.5    56.0    46.0    14.1     8.5
5     1.125      42.2      37.5    0.1   42.3     37.6    56.0    46.0    13.7     8.4
6     2.091      38.2      34.9    0.2   38.4     35.1    56.0    46.0    17.6    10.9
7     6.917      33.4      29.2    0.4   33.8     29.6    60.0    50.0    26.2    20.4
8    11.101      29.8      27.0    0.6   30.4     27.6    60.0    50.0    29.6    22.4
9    28.932      22.9      10.3    1.8   24.7     12.1    60.0    50.0    35.3    37.9

--- L1 Phase ---
No.  Frequency  Reading  Reading  c.f  Result  Result  Limit  Limit  Margin  Margin  Remark
      [MHz]      QP      AV      [dB]  [dB(μV)] [dB(μV)] [dB(μV)] [dB(μV)] [dB]  [dB]
1     0.161      47.4      43.1    0.3   47.7     43.4    65.4    55.4    17.7    12.0
2     0.323      35.5      23.7    0.3   35.8     24.0    59.6    49.6    23.8    25.6
3     0.484      41.7      37.0    0.3   42.0     37.3    56.3    46.3    14.3     9.0
4     0.806      42.5      37.7    0.3   42.8     38.0    56.0    46.0    13.2     8.0
5     1.132      41.6      36.0    0.3   41.9     36.3    56.0    46.0    14.1     9.7
6     1.775      39.2      35.7    0.3   39.5     36.0    56.0    46.0    16.5    10.0
7     6.616      37.0      31.5    0.5   37.5     32.0    60.0    50.0    22.5    18.0
8    10.485      36.0      30.6    0.7   36.7     31.3    60.0    50.0    23.3    18.7
9    29.355      40.5      35.7    1.7   42.2     37.4    60.0    50.0    17.8    12.6
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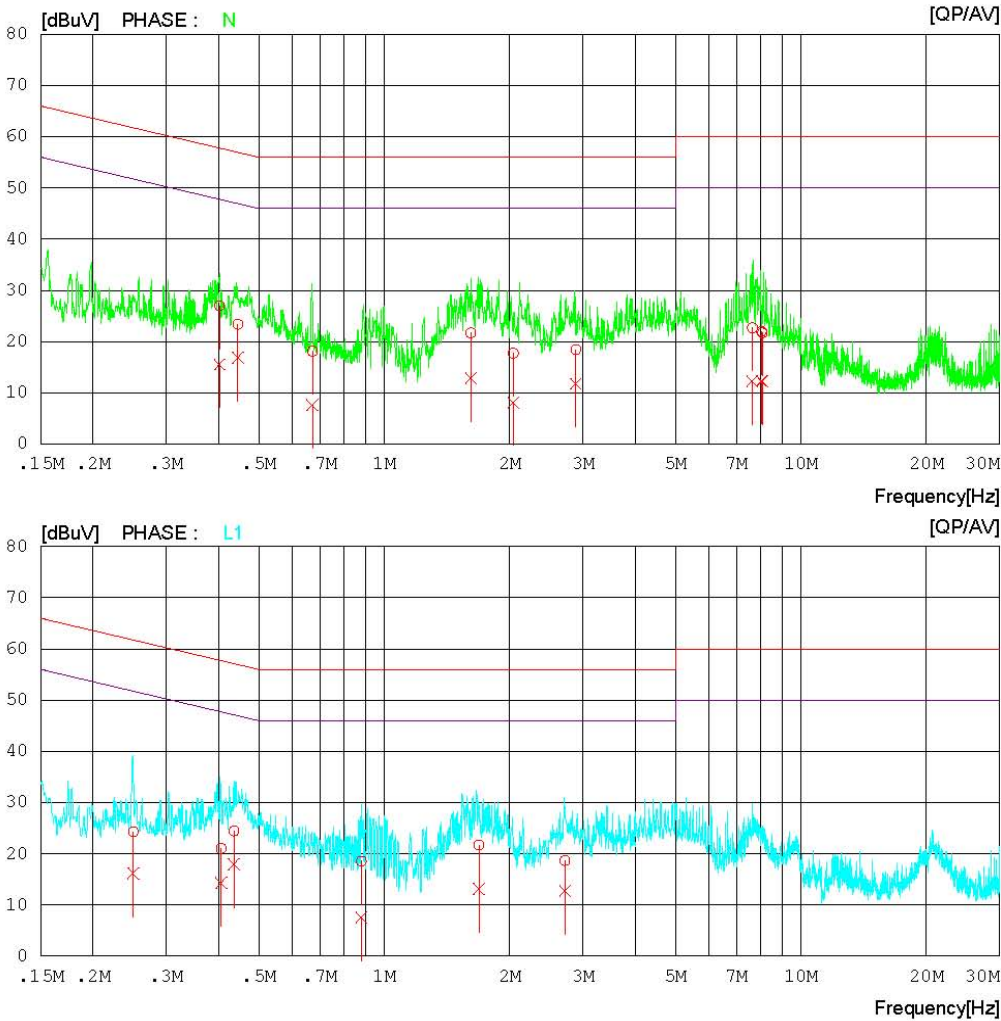
- Measurement Data(Graph) : Operating mode 2



Results of Conducted Emission

Digital EMC
Date : 2011/05/24

Model No.	: WCP-700	Reference No.	:
Type	: Wireless Charging pad	Power Supply	: 120V 60Hz
Serial No.	: N/A	Temp/Humi.	: 24° C 33%
Test Condition	: Analog Ping mode	Operator	: S. K. Ryu
Memo	:		
LIMIT : CISPR22_B QP			
CISPR22_B AV			



- Measurement Data(List) : Operating mode 2

Results of Conducted EmissionDigital EMC
Date : 2011/05/24

Model No.	: WCP-700	Reference No.	:
Type	: Wireless Charging pad	Power Supply	: 120V 60Hz
Serial No.	: N/A	Temp/Humi.	: 24°C 33%
Test Condition	: Analog Ping mode	Operator	: S. K. Ryu

Memo :

LIMIT : CISPR22_B QP
CISPR22_B AV

NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.40248	26.9	15.4	0.1	27.0	15.5	57.8	47.8	30.8	32.3	N
2	0.44528	23.3	16.8	0.1	23.4	16.9	57.0	47.0	33.6	30.1	N
3	0.67250	17.9	7.4	0.2	18.1	7.6	56.0	46.0	37.9	38.4	N
4	1.61300	21.5	12.7	0.2	21.7	12.9	56.0	46.0	34.3	33.1	N
5	2.04000	17.5	7.9	0.2	17.7	8.1	56.0	46.0	38.3	37.9	N
6	2.88100	18.2	11.6	0.2	18.4	11.8	56.0	46.0	37.6	34.2	N
7	7.64200	22.3	11.9	0.4	22.7	12.3	60.0	50.0	37.3	37.7	N
8	8.07850	21.3	11.9	0.4	21.7	12.3	60.0	50.0	38.3	37.7	N
9	8.04300	21.6	11.9	0.4	22.0	12.3	60.0	50.0	38.0	37.7	N
10	0.24976	24.2	16.1	0.1	24.3	16.2	61.8	51.8	37.5	35.6	L1
11	0.40598	21.0	14.2	0.1	21.1	14.3	57.7	47.7	36.6	33.4	L1
12	0.43565	24.4	17.9	0.1	24.5	18.0	57.1	47.1	32.6	29.1	L1
13	0.88116	18.4	7.3	0.2	18.6	7.5	56.0	46.0	37.4	38.5	L1
14	1.68700	21.5	12.9	0.2	21.7	13.1	56.0	46.0	34.3	32.9	L1
15	2.71350	18.5	12.5	0.2	18.7	12.7	56.0	46.0	37.3	33.3	L1

APPENDIX I

TEST EQUIPMENT FOR TESTS

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment.

	Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
☐	Spectrum Analyzer	Agilent	E4440A	10/09/30	11/09/30	MY45304199
☐	Spectrum Analyzer	Rohde Schwarz	FSQ26	11/01/11	12/01/11	200445
☐	Spectrum analyzer	Agilent	E4404B	11/03/08	12/03/08	US41061134
☐	Spectrum Analyzer(RE)	H.P	8563E	10/10/04	11/10/04	3551A04634
☒	MXA Signal Analyzer	Agilent Technologies, Inc	N9020A	11/01/07	12/01/07	MY49100833
☐	Power Meter	H.P	EPM-442A	10/07/01	11/07/01	GB37170413
☐	Power Sensor	H.P	8481A	10/07/01	11/07/01	3318A96332
☐	Power Divider	Agilent	11636B	10/10/05	11/10/05	56471
☐	4-Way Power Divider	ET Industries	D-0526-4	10/12/24	11/12/24	210195001
☐	Power Splitter	Anritsu	K241B	10/10/05	11/10/05	020611
☐	Power Splitter	Anritsu	K241B	10/07/01	11/07/01	017060
☐	Power Splitters & Dividers	Aeroflex/Weinschel	1594	11/02/21	12/02/21	1177
☐	Frequency Counter	H.P	5342A	10/07/01	11/07/01	2119A04450
☐	TEMP & HUMIDITY Chamber	JISCO	KR-100/J-RHC2	10/10/04	11/10/04	30604493/021031
☒	Digital Multimeter	H.P	34401A	11/03/07	12/03/07	3146A13475, US36122178
☐	Multifunction Synthesizer	HP	8904A	10/10/11	11/10/11	3633A08404
☐	Signal Generator	Rohde Schwarz	SMR20	11/03/08	12/03/08	101251
☐	Signal Generator	H.P	ESG-3000A	10/07/01	11/07/01	US37230529
☐	Vector Signal Generator	Rohde Schwarz	SMJ100A	11/01/11	12/01/11	100148
☐	Vector Signal Generator	Rohde Schwarz	SMBV100A	11/01/11	12/01/11	255571
☐	Audio Analyzer	H.P	8903B	10/07/02	11/07/02	3011A09448
☐	Modulation Analyzer	H.P	8901B	10/07/01	11/07/01	3028A03029
☐	8960 Series 10 Wireless Comms. Test Set	Agilent	E5515C	11/03/07	12/03/07	GB43461134
☐	Universal Radio communication Tester	Rohde Schwarz	CMU200	11/03/07	12/03/07	106760
☐	Bluetooth Tester	TESCOM	TC-3000B	10/07/01	11/07/01	3000B000268
☐	Thermo hygrometer	BODYCOM	BJ5478	11/01/13	12/01/13	090205-3
☒	Thermo hygrometer	BODYCOM	BJ5478	11/01/13	12/01/13	090205-2
☐	Thermo hygrometer	BODYCOM	BJ5478	11/01/13	12/01/13	090205-4
☐	AC Power supply	DAEKWANG	5KVA	11/03/08	12/03/08	20060321-1
☐	DC Power Supply	HP	6622A	11/03/07	12/03/07	3448A03760
☐	DC Power Supply	HP	6633A	11/03/07	12/03/07	3524A06634
☐	DC Power Supply	Protek	PWS-3010D	10/10/04	11/10/04	4072702
☐	BAND Reject Filter	Microwave Circuits	N0308372	10/10/05	11/10/05	3125-01DC0352
☐	BAND Reject Filter	Wainwright	WRCG1750	10/10/05	11/10/05	2
☐	High-Pass Filter	ANRITSU	MP526D	10/10/04	11/10/04	M27756
☐	High-pass filter	Wainwright	WHNX2.1	N/A	N/A	1
☐	High-pass filter	Wainwright	WHNX3.0	N/A	N/A	9
☐	High-pass filter	Wainwright	WHNX5.0	N/A	N/A	8

	Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
☐	High-Pass Filter	Wainwright	WHKX8.5	N/A	N/A	1
☐	High-Pass Filter	Wainwright	D82346	N/A	N/A	9
☐	Tunable Notch Filter	Wainwright	WRCT800.0 /960.0-0.2/40-8SSK	N/A	N/A	32
☐	Tunable Notch Filter	Wainwright	WRCD1700.0 /2000.0-0.2/40-10SSK	N/A	N/A	53
☐	Tunable Notch Filter	Wainwright	WRCT1900.0/ 2200.0-5/40-10SSK	N/A	N/A	30
☐	HORN ANT	ETS	3115	10/10/04	11/10/04	21097
☐	HORN ANT	ETS	3115	10/07/14	11/07/14	6419
☐	HORN ANT	A.H.Systems	SAS-574	09/06/10	11/06/10	154
☐	HORN ANT	A.H.Systems	SAS-574	09/06/10	11/06/10	155
☐	HORN ANT	SCHWARZBECK	BBHA9120A	10/04/13	12/04/13	322
☐	Dipole Antenna	Schwarzbeck	VHA9103	10/11/29	11/11/29	2116
☐	Dipole Antenna	Schwarzbeck	VHA9103	10/11/29	11/11/29	2117
☐	Dipole Antenna	Schwarzbeck	UHA9105	10/11/29	11/11/29	2261
☐	Dipole Antenna	Schwarzbeck	UHA9105	10/11/29	11/11/29	2262
☒	LOOP Antenna	ETS	6502	10/11/29	11/11/29	3471
☐	Coaxial Fixed Attenuators	Agilent	8491B	10/07/01	11/07/01	MY39260700
☒	Attenuator (3dB)	WEINSCHTEL	56-3	10/10/05	11/10/05	Y2342
☐	Attenuator (3dB)	WEINSCHTEL	56-3	10/10/05	11/10/05	Y2370
☐	Attenuator (10dB)	WEINSCHTEL	23-10-34	10/10/01	11/10/01	BP4386
☐	Attenuator (10dB)	WEINSCHTEL	23-10-34	11/01/11	12/01/11	BP4387
☐	Attenuator (10dB)	WEINSCHTEL	86-10-11	10/10/05	11/10/05	446
☐	Attenuator (10dB)	WEINSCHTEL	86-10-11	10/10/05	11/10/05	408
☐	Attenuator (20dB)	WEINSCHTEL	86-20-11	10/10/05	11/10/05	432
☐	Attenuator (30dB)	JFW	50FH-030-300	11/03/07	12/03/07	060320-1
☐	Attenuator (40dB)	WEINSCHTEL	57-40-33	10/10/01	11/10/01	NN837
☐	Termination	H.P	HP-909D	10/07/02	11/07/02	02750
☐	Termination	H.P	HP-909D	10/07/02	11/07/02	02702
☐	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0088CAN	10/07/01	11/07/01	788
☐	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0185CAN	10/07/01	11/07/01	790
☐	Type N Coaxial CIRCULATOR	NOVA MICROWAVE	0215CAN	10/07/01	11/07/01	112
☐	Amplifier (30dB)	Agilent	8449B	11/03/07	12/03/07	3008A01590
☐	Amplifier (30dB)	H.P	8449B	11/03/07	12/03/07	3008A00370
☐	Amplifier	EMPOWER	BBS3Q7ELU	10/10/04	11/10/04	1020
☐	RF Power Amplifier	OPHIRRF	5069F	10/07/01	11/07/01	1006
☒	EMI TEST RECEIVER	R&S	ESU	11/01/20	12/01/20	100014
☒	BILOG ANTENNA	SCHAFFNER	CBL6112B	10/07/14	11/07/14	2737
☒	Amplifier (22dB)	H.P	8447E	11/01/11	12/01/11	2945A02865
☒	EMI TEST RECEIVER	R&S	ESCI	11/03/08	12/03/08	100364

	Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
☐	BICONICAL ANT.	Schwarzbeck	VHA 9103	10/11/29	11/11/29	91032789
☐	LOG-PERIODIC ANT.	Schwarzbeck	UHALP9108A1	10/11/29	12/11/29	1098
☐	BICONICAL ANT.	Schwarzbeck	VHA 9103	10/12/21	12/12/21	91031946
☐	LOG-PERIODIC ANT.	Schwarzbeck	UHALP9108A1	10/07/07	11/07/07	0590
☐	Low Noise Pre Amplifier	TSJ	MLA-100K01-B01-2	11/03/07	12/03/07	1252741
☐	Low Noise Pre Amplifier	TSJ	MLA-00108-B02-36	11/01/11	12/01/11	1518831
☐	Amplifier (25dB)	Agilent	8447D	11/03/07	12/03/07	2944A10144
☐	Amplifier (25dB)	Agilent	8447D	10/07/01	11/07/01	2648A04922
☒	Spectrum Analyzer(CE)	H.P	8591E	11/03/07	12/03/07	3649A05889
☒	LISN	Kyoritsu	KNW-407	11/01/11	12/01/11	8-317-8
☒	LISN	Kyoritsu	KNW-242	10/07/02	11/07/02	8-654-15
☒	LISN	R&S	ESH2-Z5	10/10/01	11/10/01	828739006
☒	CVCF	NF Electronic	4420	11/03/08	12/03/08	304935/337980
☒	CVCF	NF Electronic	4420	11/03/08	12/03/08	3049354420023
☒	50 ohm Terminator	HME	CT-01	11/01/11	12/01/11	N/A
☒	RFI/FIELD Intensity Meter	Kyoritsu	KNM-2402	10/07/02	11/07/02	4N-170-3
☒	EMI TEST RECEIVER	R&S	ESCI	11/03/08	12/03/08	100364
☐	Wideband Radio Communication Tester	R&S	CMW500	10/10/21	11/10/21	100988