

FCC Test Report

APPLICANT : ASUSTeK COMPUTER INC.
EQUIPMENT : Wireless Charger
BRAND NAME : ASUS
MODEL NAME : PW100
MARKETING NAME : PW100 Wireless Charging Stand
FCC ID : MSQPW100
STANDARD : FCC Part 15 Subpart C §15.209
CLASSIFICATION : Part 15 Low Power Transmitter Below
1705 kHz(DCD)

The product was received on Oct. 15, 2013 and completely tested on Nov. 01, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR3O1513	Rev. 01	Initial issue of report	Oct. 29, 2013
FR3O1513	Rev. 02	Update report for revising 20dB and 99% Bandwidth in section 3.1.5 and radiated emission measurement in section 3.3.5, 3.3.6, and 3.3.7	Nov. 01, 2013



SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	2.1049	-	20 dB Bandwidth	-	PASS	-
3.1	-	RSS-Gen 4.6.1	99% Bandwidth	-	PASS	-
3.2	15.207	Gen 7.2.5	AC Conducted Emission	FCC Part 15.207(a) IC RSS-Gen, Table 2	PASS	Under limit 10.1 dB at 0.158 MHz
3.3	15.209	RSS-210 Section 2.6	Radiated Emission	FCC Part 15.209(a) IC RSS-Gen, Section 7.2.4	PASS	Under limit 5.93 dB at 1.690 MHz for Quasi-Peak

1. General Description

1.1. Applicant

ASUSTeK COMPUTER INC.

4F., 150 Li-Te Rd., Peitou, Taipei, Taiwan

1.2. Manufacturer

DONGGUAN PRIMAX ELECTRONICS & TELECOMMUNICATION PRODUCTS LTD.

Er Village, Liuwu District, Shekkit Town, Dongguan City, Guangdong Province, China

1.3. Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Wireless Charger
Brand Name	ASUS
Model Number	PW100
Marketing Name	PW100 Wireless Charging Stand
FCC ID	MSQPW100
Tx Frequency	112 kHz ~ 205 kHz
Antenna Type	Loop Antenna
EUT Stage	Production Unit

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The measurements of the minimum and the maximum frequency were 113.25 kHz and 177 kHz during the test.

1.4. Test Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH07-HY	722060/4086B-1

1.5. Modification of EUT

During test, a ferrite core was attached to the USB cable of the EUT.

1.6. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.209
- ANSI C63.4-2003
- IC RSS-Gen Issue 3
- IC RSS-210 Issue 8

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2. Test Configuration of Equipment Under Test

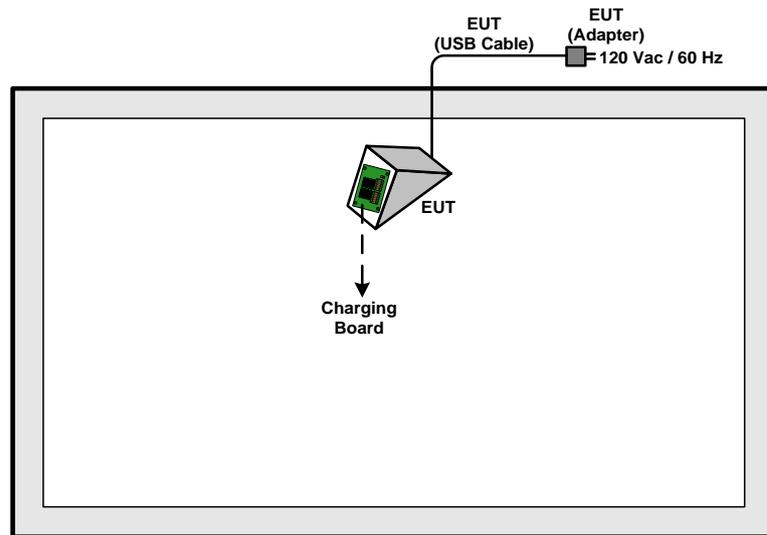
2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

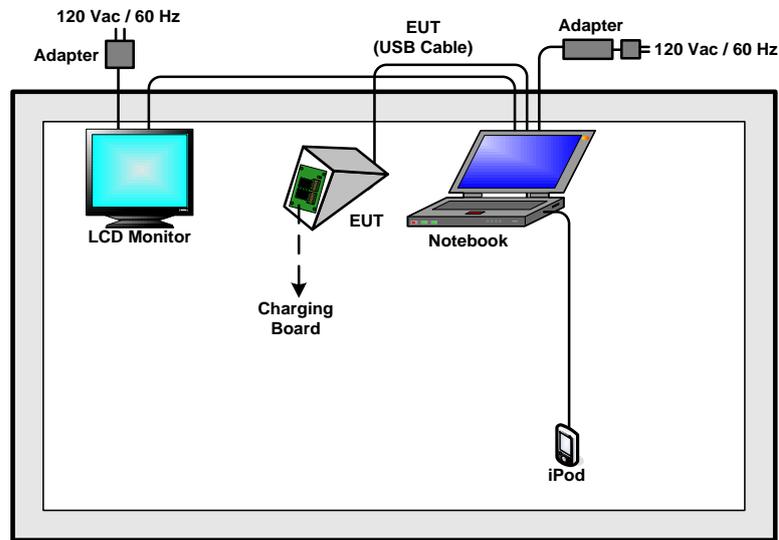
Frequency range investigated: radiation (9 kHz to 1000 MHz)

Test Items	Function Type
AC Conducted Emission	Mode 1 : WPC Tx + USB Cable (Charging from Adapter 1) <Fig. 1> Mode 2 : WPC Tx + USB Cable (Charging from Adapter 2) <Fig. 1> Mode 3 : WPC Tx + USB Cable (Charging from Notebook) <Fig. 2>
Radiated Emission	Mode 1 : WPC Tx + USB Cable (Charging from Adapter 1) <Fig. 3> Mode 2 : WPC Tx + USB Cable (Charging from Adapter 2) <Fig. 3> Mode 3 : WPC Tx + USB Cable (Charging from Notebook) <Fig. 4>
Remark:	
1. The worst case of AC is mode 3; only the test data of this mode was reported.	
2. The worst case of RE is mode 3; only the test data of this mode was reported.	

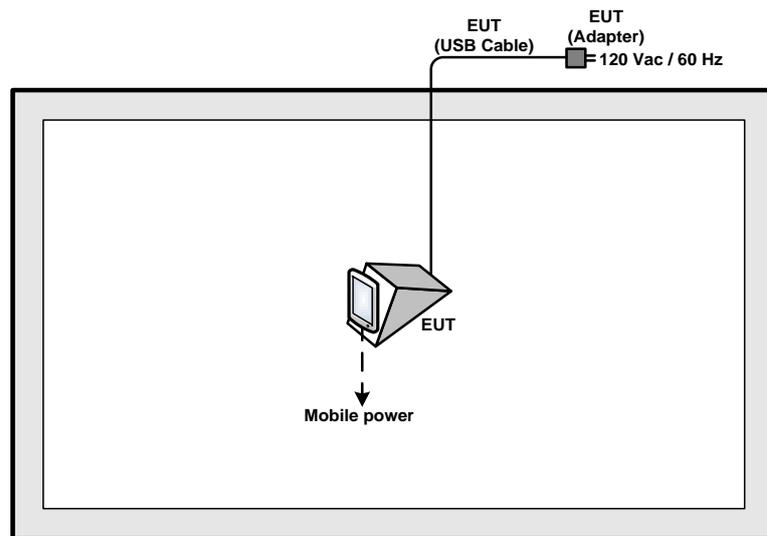
2.2. Connection Diagram of Test System



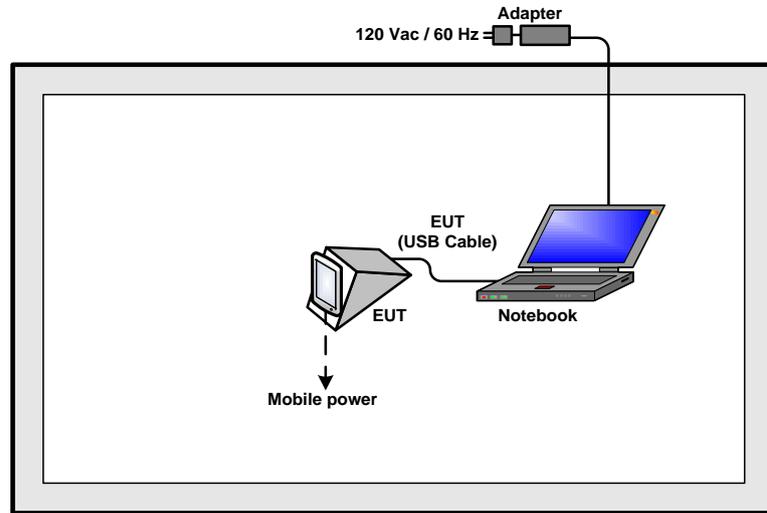
<Fig. 1>



<Fig. 2>



<Fig. 3>



<Fig. 4>

2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
2.	Notebook	DELL	Laititude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	DELL	Inspiron N4110(10127233945)	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	LCD Monitor	DELL	U2410	FCC Doc	Unshielded, 1.6 m	Unshielded, 1.8 m
5.	Charging Board	ASUS	010	N/A	N/A	N/A
6.	Mobile Power	Panasonic	QE-PL201	FCC DoC	N/A	N/A

3. Test Result

3.1. 20dB and 99% Bandwidth Measurement

3.1.1 Limit of 20dB and 99% Bandwidth

Reporting only

3.1.2 Measuring Instruments

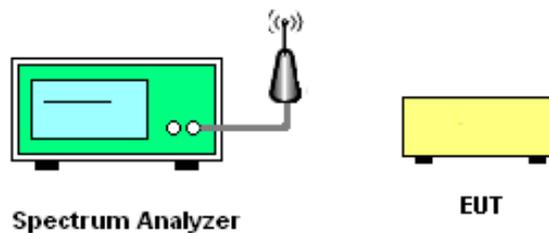
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The 20dB bandwidth is measured with a spectrum analyzer connected via a receiver antenna placed near the EUT while wirelessly charging a charging board.
2. Use the following spectrum analyzer settings for 99 % Bandwidth measurement.
For 99% Bandwidth measurement, the RBW=10kHz, and VBW = 30kHz. Sweep = auto;
3. Measure and record the results in the test report.

Mode	Frequency	Occupied Bandwidth
Battery at 0%	113.50 kHz	22.75 kHz
Battery at 50% charge	135.07 kHz	23.52 kHz
Battery near 100% charge	177.07 kHz	22.47 kHz

3.1.4 Test Setup



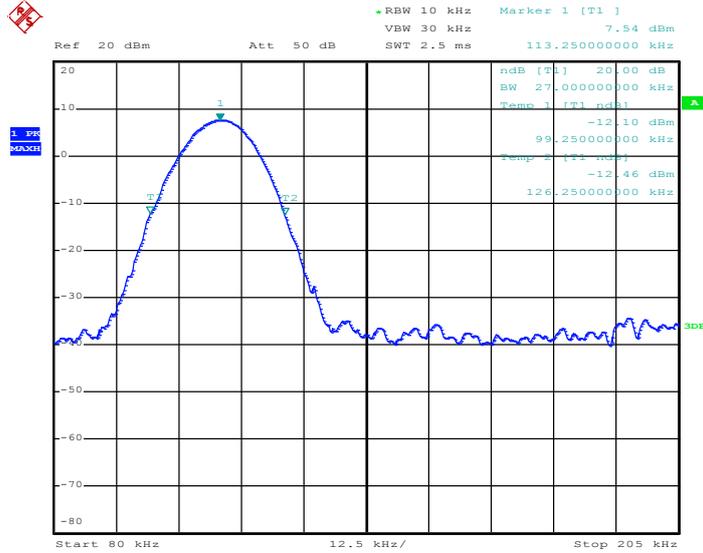


3.1.5 Test Result of 20dB and 99% Bandwidth

Test Engineer :	Bill Guo	Temperature :	22~25°C
		Relative Humidity :	50~53%

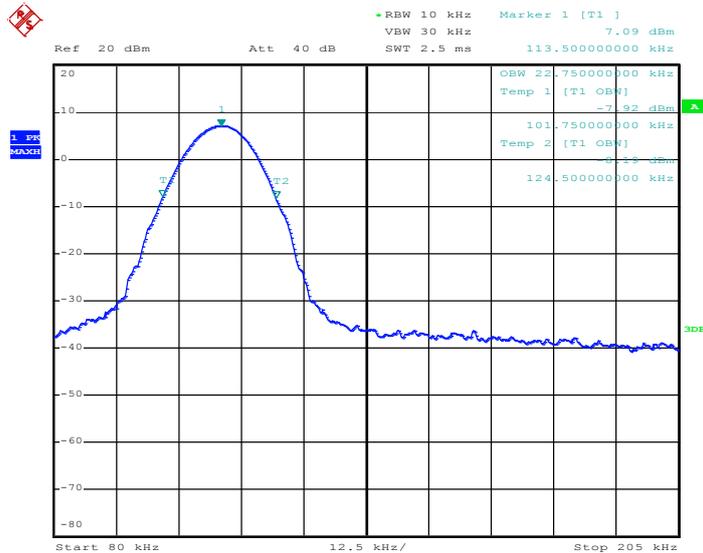
Battery at 0%

20 dB Bandwidth Plot



Date: 1.NOV.2013 10:09:23

99% Occupied Bandwidth Plot

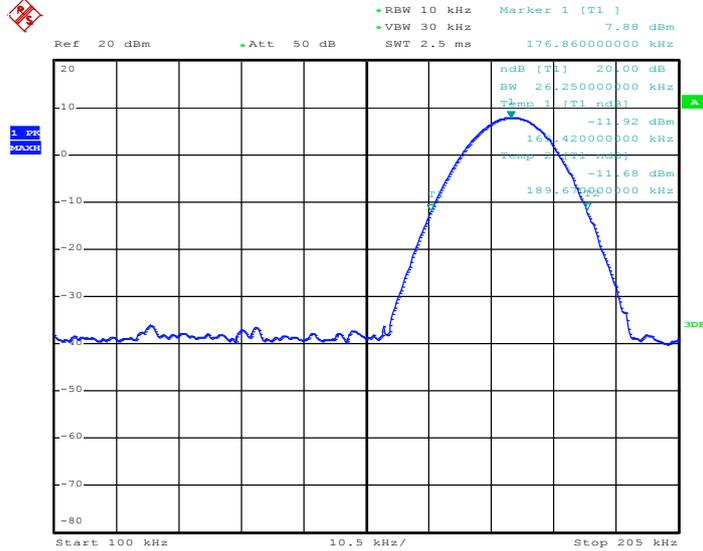


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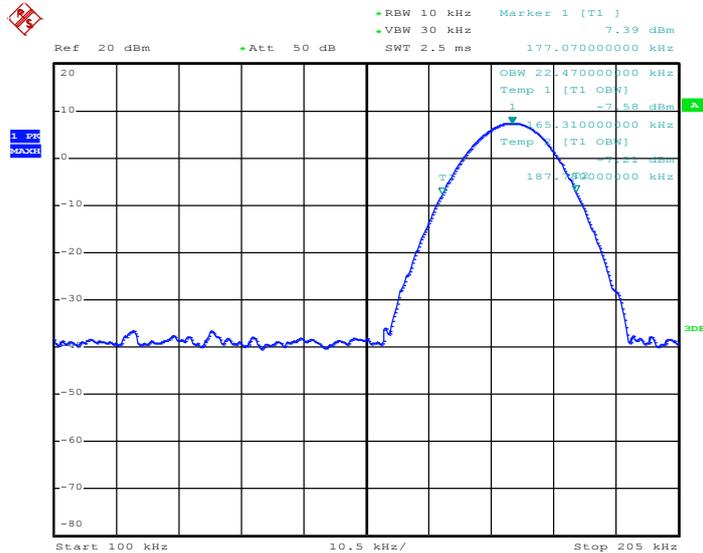
Battery near 100% charge

20 dB Bandwidth Plot



Date: 23.OCT.2013 20:13:31

99% Occupied Bandwidth Plot



Date: 23.OCT.2013 20:06:46

3.2. Test of AC Conducted Emission Measurement

3.2.1. Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (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.

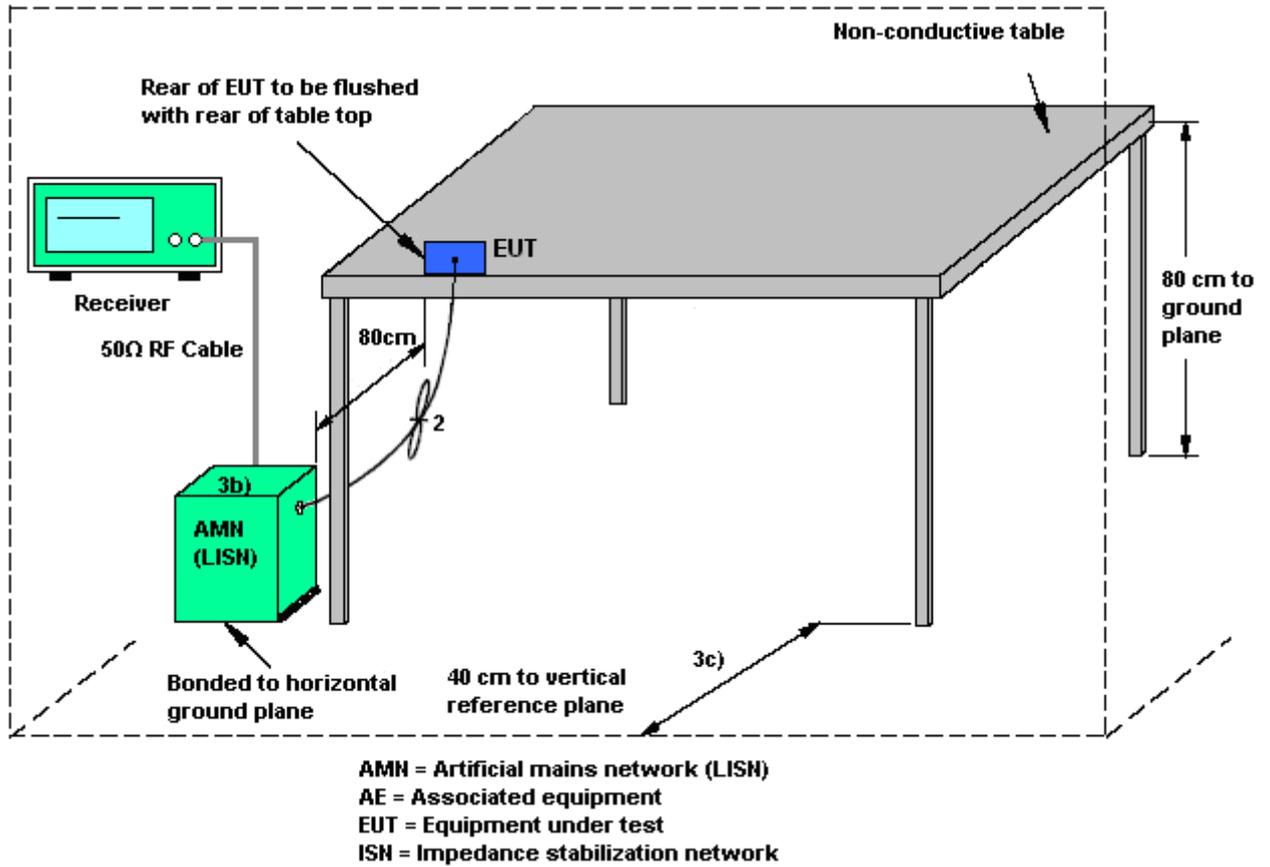
3.2.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedure

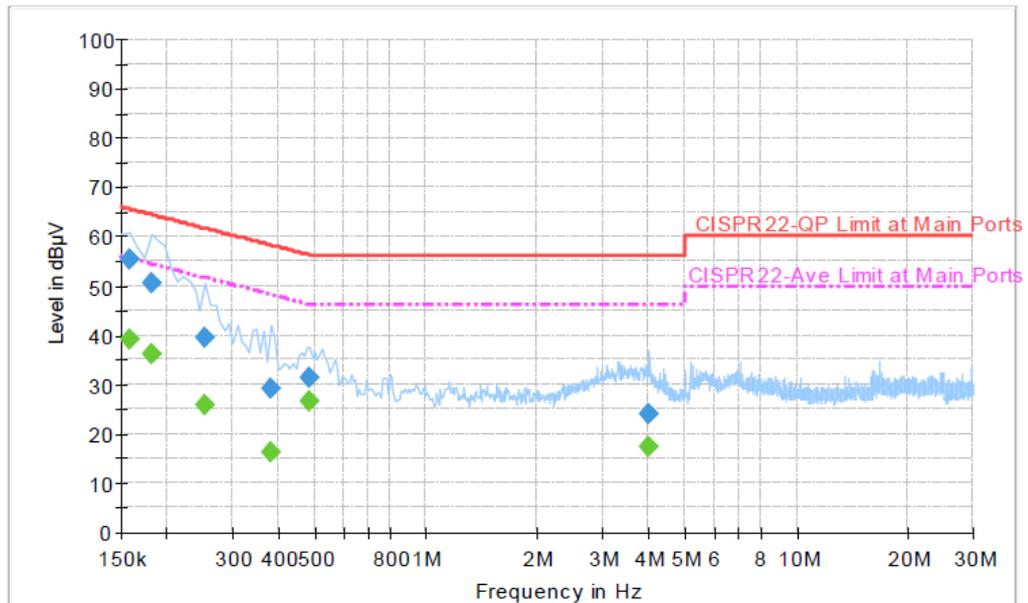
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.2.4. Test Setup



3.2.5. Test Result of AC Conducted Emission

Test Mode :	Mode 3	Temperature :	20~22°C
Test Engineer :	Cosmo Shu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



Final Result : QuasiPeak

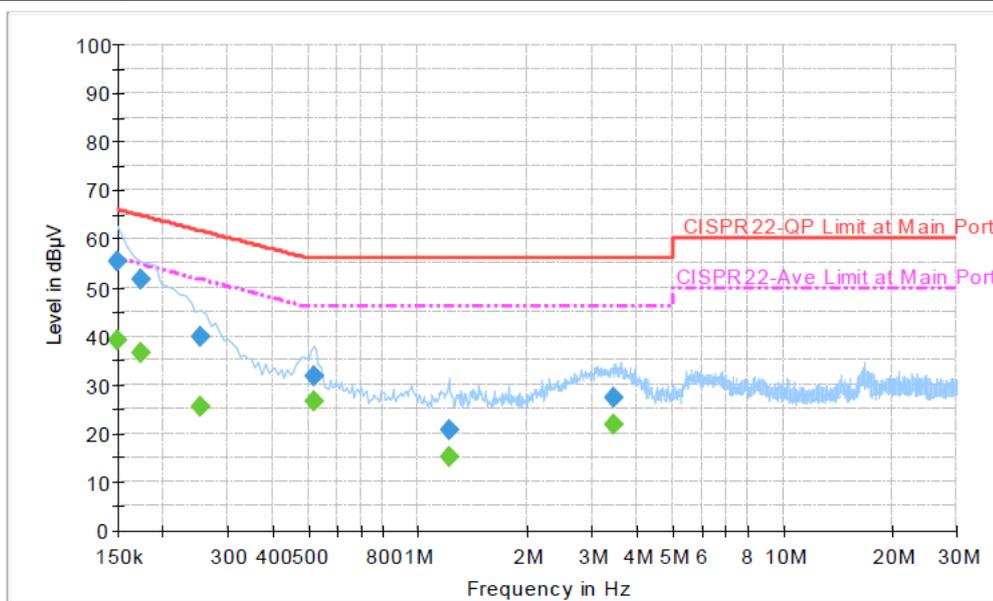
Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	55.5	Off	L1	19.3	10.1	65.6
0.182000	50.5	Off	L1	19.4	13.9	64.4
0.254000	39.6	Off	L1	19.5	22.0	61.6
0.382000	29.0	Off	L1	19.4	29.2	58.2
0.486000	31.3	Off	L1	19.4	24.9	56.2
4.014000	24.0	Off	L1	19.6	32.0	56.0

Final Result 2 : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	39.0	Off	L1	19.3	16.6	55.6
0.182000	36.2	Off	L1	19.4	18.2	54.4
0.254000	25.8	Off	L1	19.5	25.8	51.6
0.382000	16.1	Off	L1	19.4	32.1	48.2
0.486000	26.4	Off	L1	19.4	19.8	46.2
4.014000	17.3	Off	L1	19.6	28.7	46.0



Test Mode :	Mode 3	Temperature :	20~22°C
Test Engineer :	Cosmo Shu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	55.2	Off	N	19.4	10.8	66.0
0.174000	51.5	Off	N	19.4	13.3	64.8
0.254000	39.7	Off	N	19.5	21.9	61.6
0.518000	31.7	Off	N	19.4	24.3	56.0
1.214000	20.6	Off	N	19.5	35.4	56.0
3.454000	27.2	Off	N	19.6	28.8	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	39.3	Off	N	19.4	16.7	56.0
0.174000	36.4	Off	N	19.4	18.4	54.8
0.254000	25.4	Off	N	19.5	26.2	51.6
0.518000	26.6	Off	N	19.4	19.4	46.0
1.214000	15.3	Off	N	19.5	30.7	46.0
3.454000	21.9	Off	N	19.6	24.1	46.0

3.3. Test of Radiated Emission Measurement

3.3.1. Limit of Radiated Emission

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.3.2. Measuring Instruments

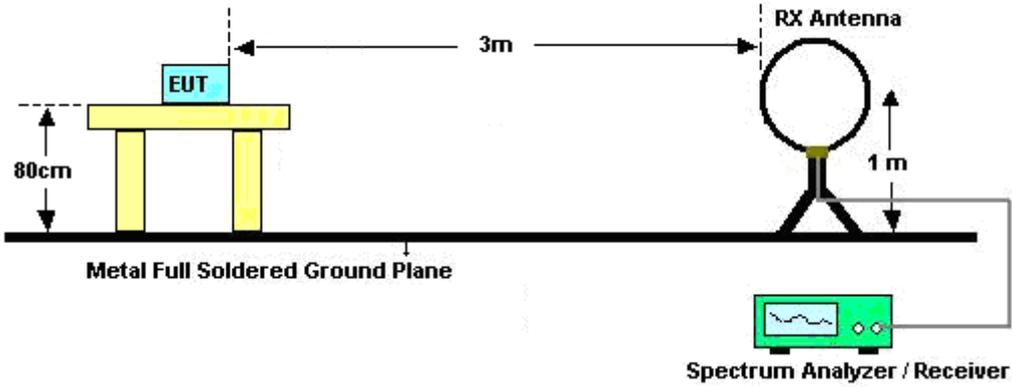
The measuring equipment is listed in the section 4 of this test report.

3.3.3. Test Procedures

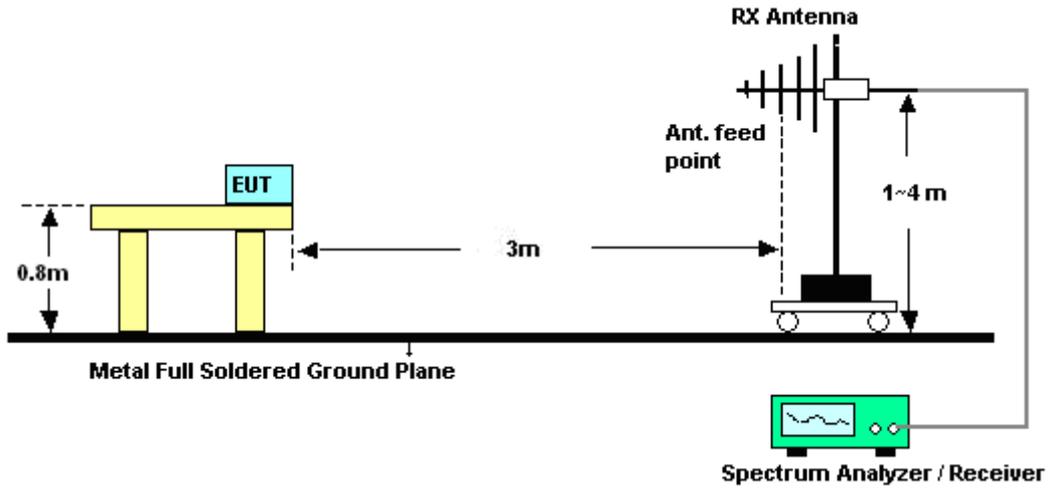
Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

3.3.4. Test Setup of Radiated Emission

For radiated emissions below 30MHz



For radiated emissions above 30MHz

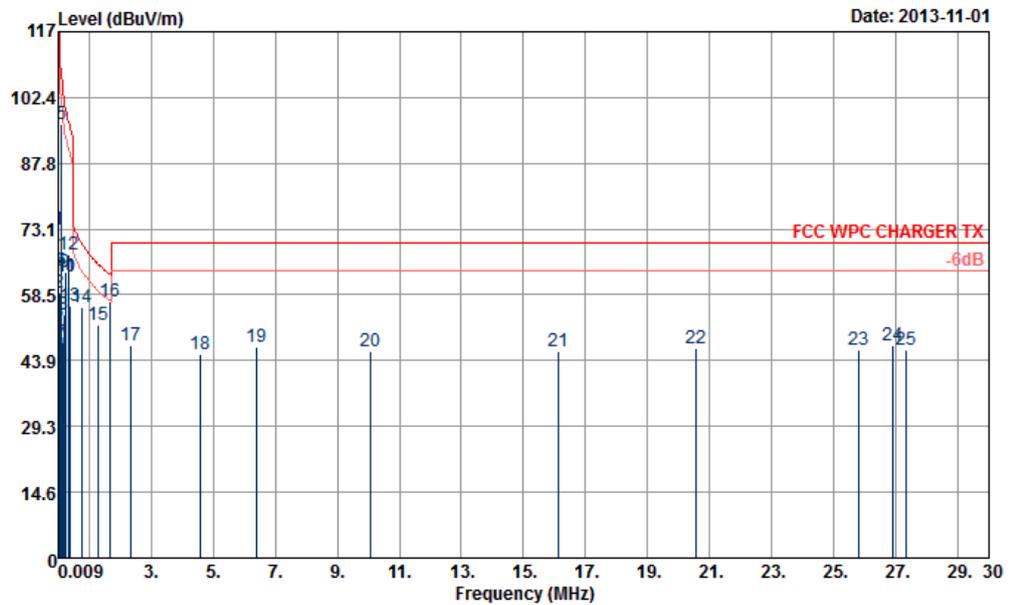




3.3.5. Test Result of Radiated Emission (9kHz ~ 30MHz)

<Battery at 0%>

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		
Remark	#5 is transmitter's fundamental signal.		

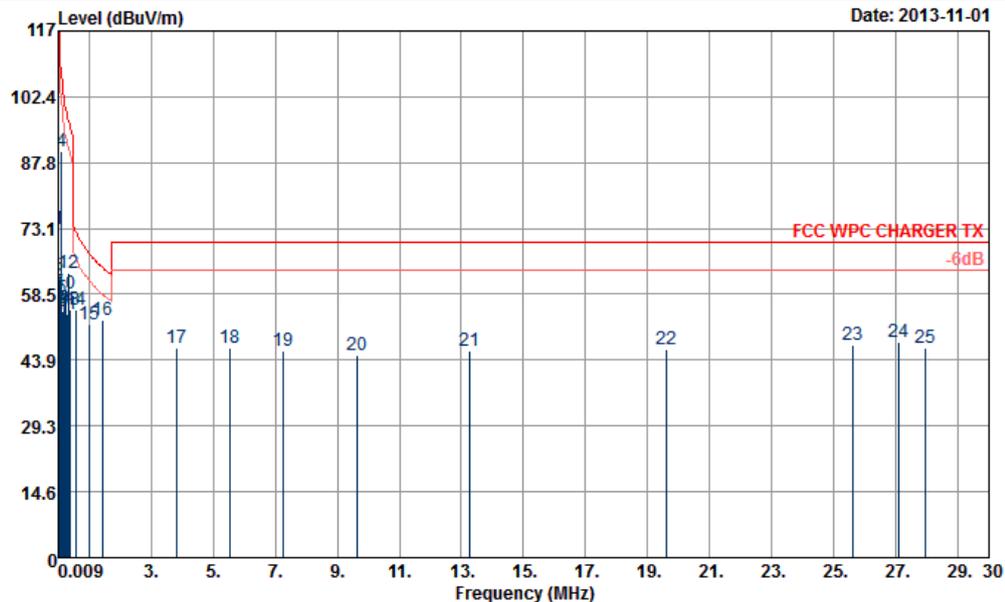


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-H HORIZONTAL
 Project : FR 301513

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	0.02	73.08	-49.42	122.50	52.53	20.26	0.29	0.00	---	Average
2	0.04	59.08	-57.62	116.70	38.62	20.17	0.29	0.00	---	Average
3	0.05	52.54	-61.37	113.91	32.08	20.17	0.29	0.00	---	Average
4	0.10	45.06	-62.67	107.73	24.70	20.07	0.29	0.00	---	QP
5	0.11	96.58	-10.01	106.59	76.22	20.07	0.29	0.00	---	Average
6	0.13	63.99	-41.46	105.45	43.64	20.06	0.29	0.00	---	Average
7	0.15	47.93	-56.40	104.33	27.60	20.04	0.29	0.00	---	Average
8	0.18	54.08	-48.56	102.64	33.76	20.03	0.29	0.00	---	Average
9	0.23	63.50	-37.03	100.53	43.19	20.02	0.29	0.00	---	Average
10	0.24	62.50	-37.50	100.00	42.20	20.01	0.29	0.00	---	Average
11	0.26	62.51	-36.91	99.42	42.21	20.01	0.29	0.00	---	Average
12	0.34	67.55	-29.50	97.05	47.26	20.00	0.29	0.00	---	Average
13	0.38	56.10	-39.82	95.92	35.81	20.00	0.29	0.00	---	Average
14	0.79	55.87	-13.79	69.66	35.56	20.00	0.31	0.00	---	QP
15	1.28	51.92	-13.56	65.48	31.60	20.01	0.31	0.00	---	QP
16	1.69	57.11	-5.93	63.04	36.76	20.02	0.33	0.00	100	5 QP
17	2.35	47.28	-22.72	70.00	26.92	20.03	0.33	0.00	---	QP
18	4.57	45.42	-24.58	70.00	25.07	19.99	0.36	0.00	---	QP
19	6.40	46.83	-23.17	70.00	26.59	19.88	0.36	0.00	---	QP
20	10.09	45.82	-24.18	70.00	25.67	19.76	0.39	0.00	---	QP
21	16.13	45.84	-24.16	70.00	25.64	19.79	0.41	0.00	---	QP
22	20.55	46.54	-23.46	70.00	25.92	20.19	0.43	0.00	---	QP
23	25.79	46.41	-23.59	70.00	25.55	20.39	0.47	0.00	---	QP
24	26.92	47.34	-22.66	70.00	26.47	20.39	0.48	0.00	---	QP
25	27.35	46.26	-23.74	70.00	25.41	20.37	0.48	0.00	---	QP



Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		
Remark	#4 is transmitter's fundamental signal.		



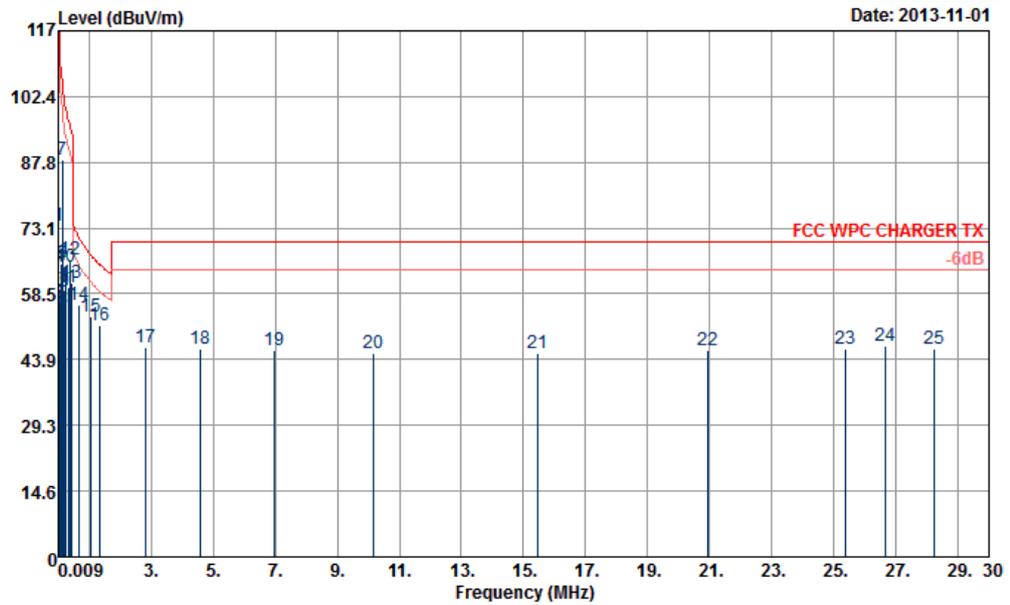
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-V VERTICAL
 Project : FR 3O1513

Line	Freq MHz	Level dBUV/m	Over Limit dB	Limit Line dBUV/m	Read Level dBUV	Antenna Factor dB/m	Cable Loss dB	Preamp Factor dB	A/Pos cm	T/Pos deg	Remark
1	0.02	72.90	-49.60	122.50	52.35	20.26	0.29	0.00	---	---	Average
2	0.04	61.73	-54.97	116.70	41.27	20.17	0.29	0.00	---	---	Average
3	0.04	59.07	-55.88	114.95	38.61	20.17	0.29	0.00	---	---	Average
4	0.11	90.21	-16.35	106.56	69.85	20.07	0.29	0.00	---	---	Average
5	0.12	57.63	-48.14	105.77	37.28	20.06	0.29	0.00	---	---	Average
6	0.14	43.10	-61.84	104.94	22.75	20.06	0.29	0.00	---	---	Average
7	0.15	45.17	-59.16	104.33	24.84	20.04	0.29	0.00	---	---	Average
8	0.17	54.90	-48.24	103.14	34.57	20.04	0.29	0.00	---	---	Average
9	0.20	55.43	-45.98	101.41	35.12	20.02	0.29	0.00	---	---	Average
10	0.23	58.69	-41.62	100.31	38.38	20.02	0.29	0.00	---	---	Average
11	0.30	54.06	-43.95	98.01	33.76	20.01	0.29	0.00	---	---	Average
12	0.34	63.37	-33.69	97.06	43.08	20.00	0.29	0.00	---	---	Average
13	0.41	54.93	-40.36	95.29	34.64	20.00	0.29	0.00	---	---	Average
14	0.56	55.13	-17.50	72.63	34.83	19.99	0.31	0.00	---	---	QP
15	1.00	51.75	-15.84	67.59	31.44	20.00	0.31	0.00	---	---	QP
16	1.44	52.69	-11.75	64.44	32.37	20.01	0.31	0.00	100	251	QP
17	3.80	46.74	-23.26	70.00	26.38	20.01	0.35	0.00	---	---	QP
18	5.53	46.61	-23.39	70.00	26.32	19.93	0.36	0.00	---	---	QP
19	7.25	45.80	-24.20	70.00	25.60	19.83	0.37	0.00	---	---	QP
20	9.63	45.12	-24.88	70.00	24.98	19.75	0.39	0.00	---	---	QP
21	13.25	46.00	-24.00	70.00	25.85	19.75	0.40	0.00	---	---	QP
22	19.61	46.19	-23.81	70.00	25.66	20.10	0.43	0.00	---	---	QP
23	25.59	47.31	-22.69	70.00	26.45	20.39	0.47	0.00	---	---	QP
24	27.10	47.99	-22.01	70.00	27.13	20.38	0.48	0.00	---	---	QP
25	27.96	46.74	-23.26	70.00	25.90	20.34	0.50	0.00	---	---	QP



< Battery at 50% charge >

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		
Remark	#7 is transmitter's fundamental signal.		

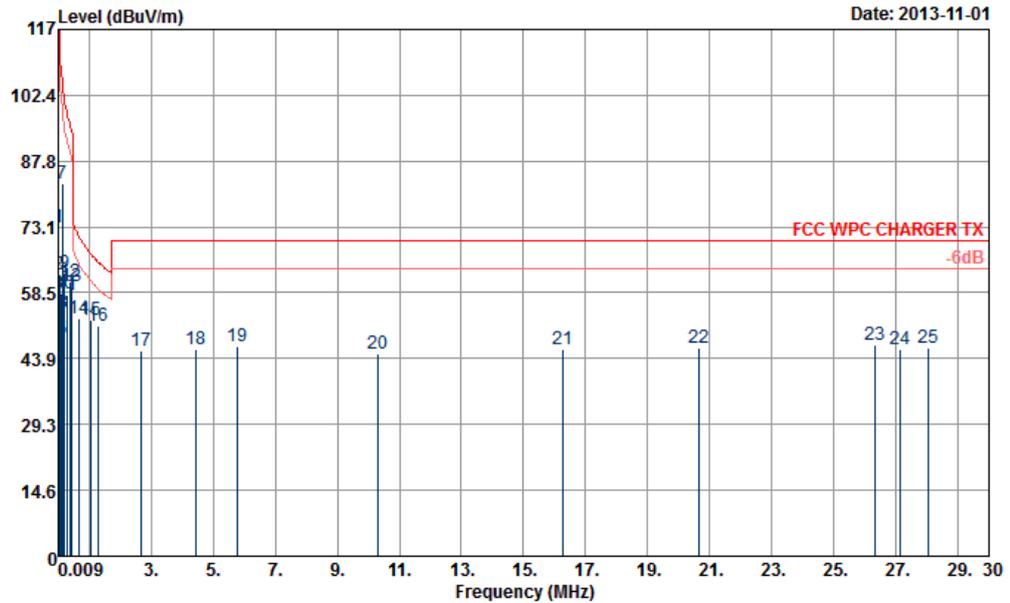


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-H HORIZONTAL
 Project : FR 3O1513

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	0.02	73.69	-48.81	122.50	53.14	20.26	0.29	0.00	---	Average
2	0.04	56.65	-60.05	116.70	36.19	20.17	0.29	0.00	---	Average
3	0.04	56.36	-58.59	114.95	35.90	20.17	0.29	0.00	---	Average
4	0.11	64.99	-41.61	106.60	44.63	20.07	0.29	0.00	---	Average
5	0.12	65.21	-41.18	106.39	44.86	20.06	0.29	0.00	---	Average
6	0.13	47.80	-57.62	105.42	27.45	20.06	0.29	0.00	---	Average
7	0.14	88.48	-16.42	104.90	68.13	20.06	0.29	0.00	---	Average
8	0.17	55.01	-48.21	103.22	34.68	20.04	0.29	0.00	---	Average
9	0.21	58.93	-42.20	101.13	38.62	20.02	0.29	0.00	---	Average
10	0.23	64.40	-35.95	100.35	44.09	20.02	0.29	0.00	---	Average
11	0.33	59.93	-37.37	97.30	39.64	20.00	0.29	0.00	---	Average
12	0.41	66.17	-29.18	95.35	45.88	20.00	0.29	0.00	---	Average
13	0.43	61.00	-33.84	94.84	40.71	20.00	0.29	0.00	---	Average
14	0.68	56.20	-14.73	70.93	35.90	19.99	0.31	0.00	---	QP
15	1.07	53.47	-13.56	67.03	33.16	20.00	0.31	0.00	100	24 QP
16	1.33	51.46	-13.65	65.11	31.14	20.01	0.31	0.00	---	QP
17	2.82	46.73	-23.27	70.00	26.36	20.03	0.34	0.00	---	QP
18	4.59	46.15	-23.85	70.00	25.80	19.99	0.36	0.00	---	QP
19	6.98	46.07	-23.93	70.00	25.85	19.85	0.37	0.00	---	QP
20	10.18	45.41	-24.59	70.00	25.26	19.76	0.39	0.00	---	QP
21	15.45	45.22	-24.78	70.00	25.03	19.78	0.41	0.00	---	QP
22	20.94	46.10	-23.90	70.00	25.44	20.23	0.43	0.00	---	QP
23	25.36	46.15	-23.85	70.00	25.32	20.38	0.45	0.00	---	QP
24	26.66	47.00	-23.00	70.00	26.13	20.39	0.48	0.00	---	QP
25	28.23	46.20	-23.80	70.00	25.38	20.32	0.50	0.00	---	QP



Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		
Remark	#7 is transmitter's fundamental signal.		



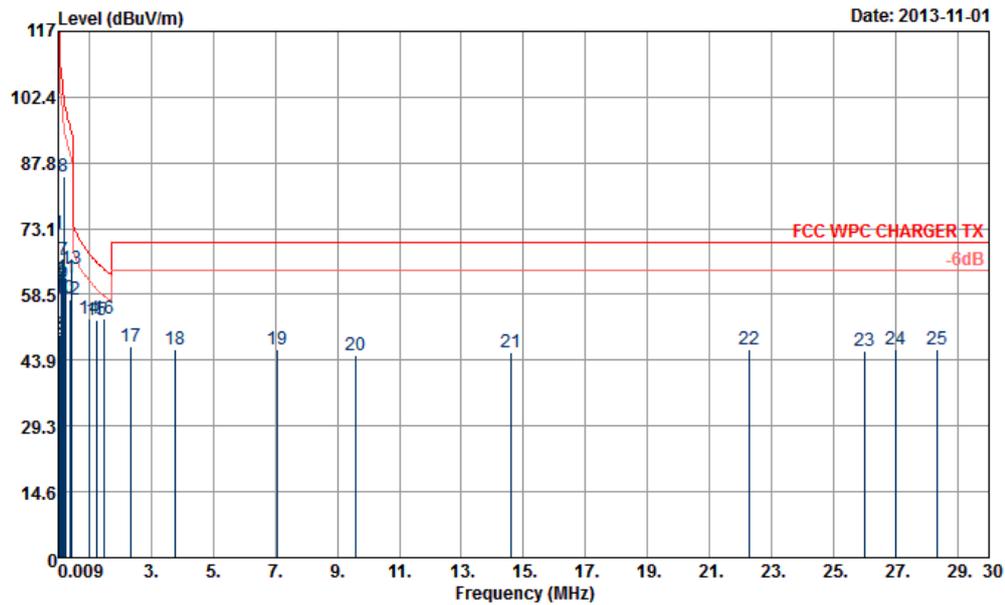
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-V VERTICAL
 Project : FR 301513

	Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	0.02	72.88	-49.62	122.50	52.33	20.26	0.29	0.00	---	---	Average
2	0.04	62.49	-54.21	116.70	42.03	20.17	0.29	0.00	---	---	Average
3	0.05	58.18	-55.73	113.91	37.72	20.17	0.29	0.00	---	---	Average
4	0.12	58.47	-47.80	106.27	38.12	20.06	0.29	0.00	---	---	Average
5	0.12	48.10	-57.80	105.90	27.75	20.06	0.29	0.00	---	---	Average
6	0.13	47.94	-57.30	105.24	27.59	20.06	0.29	0.00	---	---	Average
7	0.14	82.93	-21.96	104.89	62.58	20.06	0.29	0.00	---	---	Average
8	0.17	54.07	-48.69	102.76	33.75	20.03	0.29	0.00	---	---	Average
9	0.22	62.96	-37.94	100.90	42.65	20.02	0.29	0.00	---	---	Average
10	0.22	58.19	-42.57	100.76	37.88	20.02	0.29	0.00	---	---	Average
11	0.30	57.89	-40.27	98.16	37.59	20.01	0.29	0.00	---	---	Average
12	0.41	60.96	-34.40	95.36	40.67	20.00	0.29	0.00	---	---	Average
13	0.44	60.07	-34.62	94.69	39.78	20.00	0.29	0.00	---	---	Average
14	0.66	52.83	-18.37	71.20	32.53	19.99	0.31	0.00	---	---	QP
15	1.08	52.40	-14.56	66.96	32.09	20.00	0.31	0.00	---	---	QP
16	1.28	51.33	-14.12	65.45	31.01	20.01	0.31	0.00	100	231	QP
17	2.69	45.72	-24.28	70.00	25.35	20.03	0.34	0.00	---	---	QP
18	4.47	46.11	-23.89	70.00	25.77	19.99	0.35	0.00	---	---	QP
19	5.76	46.46	-23.54	70.00	26.18	19.92	0.36	0.00	---	---	QP
20	10.30	45.00	-25.00	70.00	24.85	19.76	0.39	0.00	---	---	QP
21	16.28	45.91	-24.09	70.00	25.71	19.79	0.41	0.00	---	---	QP
22	20.65	46.40	-23.60	70.00	25.77	20.20	0.43	0.00	---	---	QP
23	26.33	46.77	-23.23	70.00	25.90	20.40	0.47	0.00	---	---	QP
24	27.12	45.86	-24.14	70.00	25.00	20.38	0.48	0.00	---	---	QP
25	28.06	46.32	-23.68	70.00	25.49	20.33	0.50	0.00	---	---	QP



< Battery near 100% charge >

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		
Remark	#8 is transmitter's fundamental signal.		

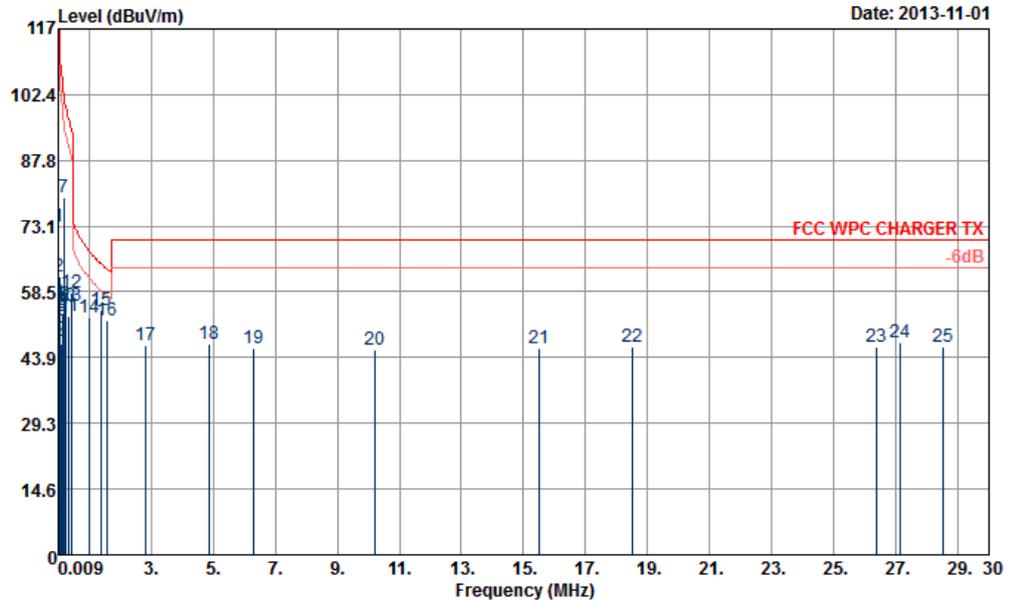


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-H HORIZONTAL
 Project : FR 301513

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	0.02	71.91	-52.04	123.95	51.36	20.26	0.29	0.00	---	Average
2	0.02	48.64	-72.46	121.10	28.09	20.26	0.29	0.00	---	Average
3	0.04	49.42	-65.81	115.23	28.96	20.17	0.29	0.00	---	Average
4	0.11	62.14	-44.40	106.54	41.78	20.07	0.29	0.00	---	Average
5	0.14	59.00	-45.53	104.53	38.65	20.06	0.29	0.00	---	Average
6	0.14	59.48	-44.94	104.42	39.15	20.04	0.29	0.00	---	Average
7	0.16	66.28	-37.19	103.47	45.95	20.04	0.29	0.00	---	Average
8	0.18	84.85	-17.81	102.66	64.53	20.03	0.29	0.00	---	Average
9	0.19	61.01	-40.80	101.81	40.69	20.03	0.29	0.00	---	Average
10	0.22	57.83	-42.92	100.75	37.52	20.02	0.29	0.00	---	Average
11	0.26	62.36	-37.10	99.46	42.06	20.01	0.29	0.00	---	Average
12	0.38	57.20	-38.89	96.09	36.91	20.00	0.29	0.00	---	Average
13	0.42	64.17	-31.05	95.22	43.88	20.00	0.29	0.00	---	Average
14	1.03	53.06	-14.31	67.37	32.75	20.00	0.31	0.00	---	QP
15	1.25	52.64	-13.04	65.68	32.32	20.01	0.31	0.00	---	QP
16	1.47	53.07	-11.17	64.24	32.75	20.01	0.31	0.00	100	74 QP
17	2.35	47.00	-23.00	70.00	26.64	20.03	0.33	0.00	---	QP
18	3.75	46.13	-23.87	70.00	25.77	20.01	0.35	0.00	---	QP
19	7.08	46.17	-23.83	70.00	25.96	19.84	0.37	0.00	---	QP
20	9.60	45.08	-24.92	70.00	24.94	19.75	0.39	0.00	---	QP
21	14.60	45.47	-24.53	70.00	25.31	19.75	0.41	0.00	---	QP
22	22.28	46.14	-23.86	70.00	25.39	20.31	0.44	0.00	---	QP
23	25.98	45.81	-24.19	70.00	24.94	20.40	0.47	0.00	---	QP
24	26.99	46.31	-23.69	70.00	25.44	20.39	0.48	0.00	---	QP
25	28.32	46.41	-23.59	70.00	25.60	20.31	0.50	0.00	---	QP



Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		
Remark	#7 is transmitter's fundamental signal.		



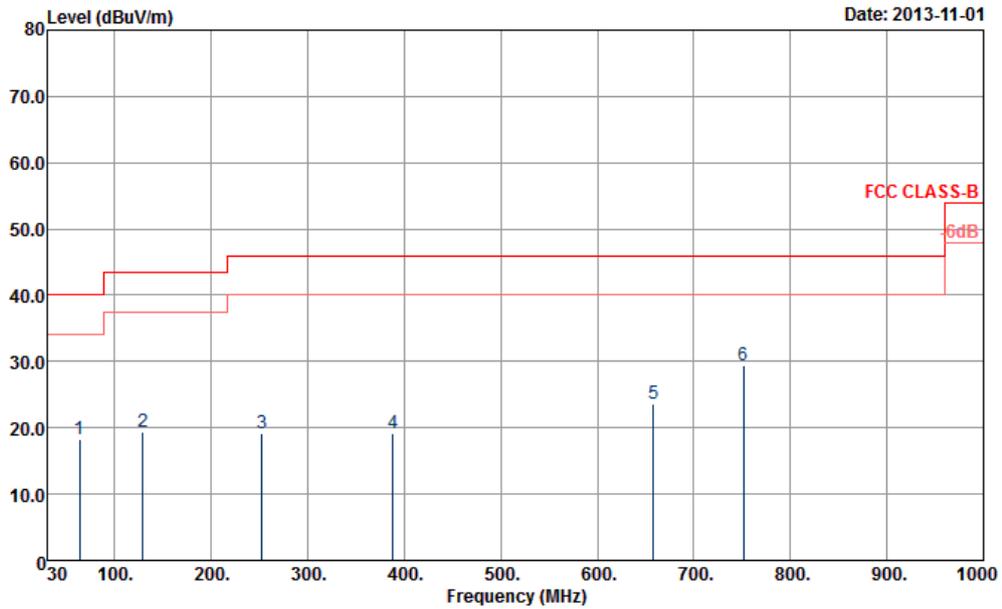
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-V VERTICAL
 Project : FR 3O1513

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	0.02	72.88	-49.62	122.50	52.33	20.26	0.29	0.00	---	Average
2	0.04	61.77	-54.91	116.68	41.31	20.17	0.29	0.00	---	Average
3	0.05	56.51	-57.40	113.91	36.05	20.17	0.29	0.00	---	Average
4	0.11	47.04	-59.39	106.43	26.69	20.06	0.29	0.00	---	Average
5	0.13	50.57	-54.73	105.30	30.22	20.06	0.29	0.00	---	Average
6	0.14	53.67	-50.87	104.54	33.32	20.06	0.29	0.00	---	Average
7	0.18	79.41	-23.24	102.65	59.09	20.03	0.29	0.00	---	Average
8	0.20	54.52	-47.20	101.72	34.20	20.03	0.29	0.00	---	Average
9	0.22	55.69	-45.20	100.89	35.38	20.02	0.29	0.00	---	Average
10	0.23	55.39	-44.91	100.30	35.08	20.02	0.29	0.00	---	Average
11	0.34	53.16	-43.73	96.89	32.87	20.00	0.29	0.00	---	Average
12	0.42	58.41	-36.77	95.18	38.12	20.00	0.29	0.00	---	Average
13	0.45	55.36	-39.14	94.50	35.07	20.00	0.29	0.00	---	Average
14	1.02	52.64	-14.79	67.43	32.33	20.00	0.31	0.00	---	QP
15	1.37	54.28	-10.58	64.86	33.96	20.01	0.31	0.00	---	QP
16	1.60	52.04	-11.49	63.53	31.70	20.01	0.33	0.00	100	264 QP
17	2.83	46.47	-23.53	70.00	26.10	20.03	0.34	0.00	---	QP
18	4.89	46.88	-23.12	70.00	26.55	19.97	0.36	0.00	---	QP
19	6.31	46.08	-23.92	70.00	25.84	19.88	0.36	0.00	---	QP
20	10.21	45.50	-24.50	70.00	25.35	19.76	0.39	0.00	---	QP
21	15.51	45.83	-24.17	70.00	25.64	19.78	0.41	0.00	---	QP
22	18.49	46.32	-23.68	70.00	25.94	19.96	0.42	0.00	---	QP
23	26.40	46.36	-23.64	70.00	25.49	20.40	0.47	0.00	---	QP
24	27.12	47.35	-22.65	70.00	26.49	20.38	0.48	0.00	---	QP
25	28.52	46.35	-23.65	70.00	25.55	20.29	0.51	0.00	---	QP

3.3.6 Test Result of Radiated Emission (30MHz ~ 1000MHz)

< Battery at 0% >

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		

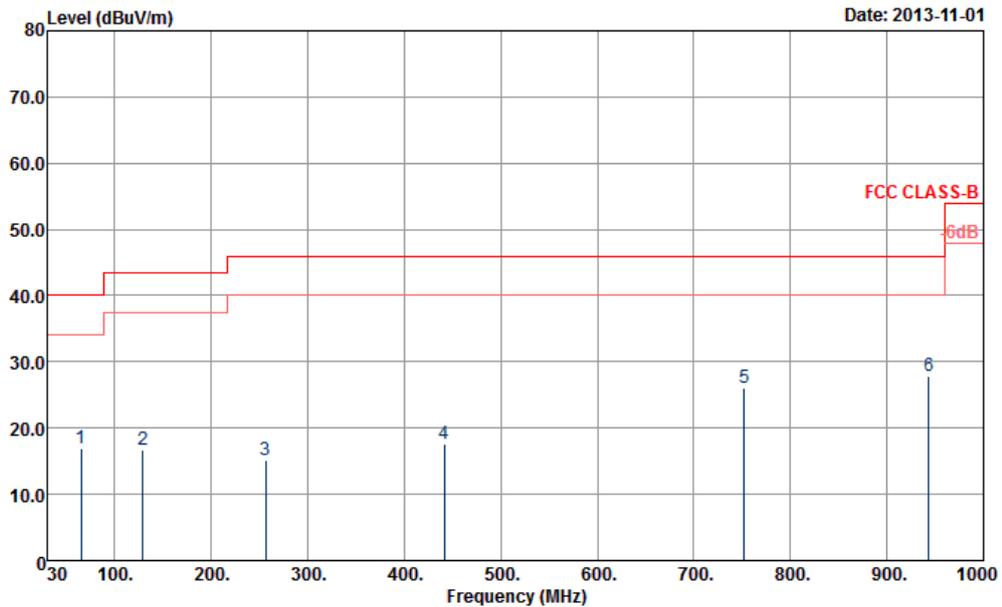


Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(111116) HORIZONTAL
 Project : FR 3O1513

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	63.75	18.38	-21.62	40.00	42.63	6.18	0.79	31.22	---	---	Peak
2	129.09	19.37	-24.13	43.50	37.71	11.62	1.14	31.10	---	---	Peak
3	252.48	19.11	-26.89	46.00	35.94	12.63	1.54	31.00	---	---	Peak
4	388.20	19.21	-26.79	46.00	32.36	15.69	2.12	30.96	---	---	Peak
5	658.40	23.66	-22.34	46.00	31.01	20.27	2.86	30.48	---	---	Peak
6	751.50	29.33	-16.67	46.00	35.30	21.37	3.06	30.40	135	52	Peak



Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



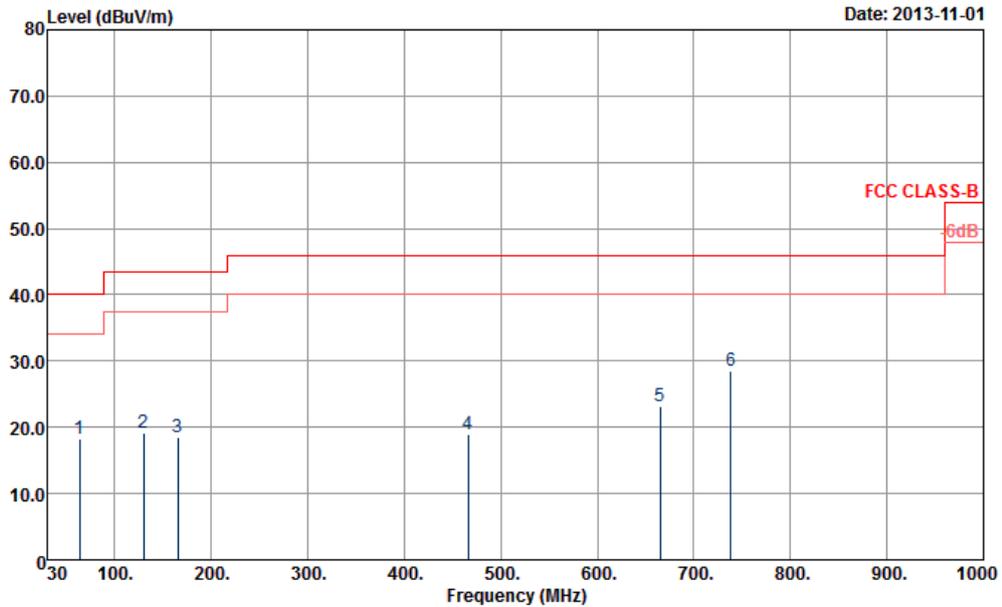
Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(111116) VERTICAL
 Project : FR 3O1513

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	65.10	16.92	-23.08	40.00	41.12	6.20	0.80	31.20	---	---	Peak
2	128.82	16.81	-26.69	43.50	35.15	11.62	1.14	31.10	---	---	Peak
3	256.26	15.07	-30.93	46.00	31.82	12.68	1.57	31.00	---	---	Peak
4	441.40	17.67	-28.33	46.00	29.22	16.87	2.28	30.70	---	---	Peak
5	752.20	26.00	-20.00	46.00	31.95	21.39	3.06	30.40	---	---	Peak
6	943.30	27.76	-18.24	46.00	30.94	23.76	3.45	30.39	128	67	Peak



< Battery at 50% charge >

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		

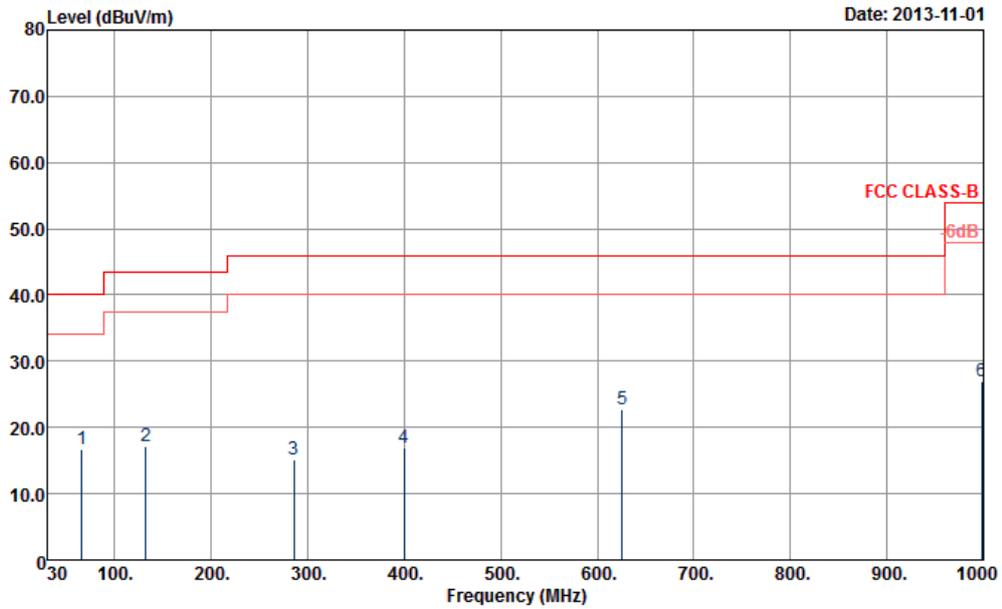


Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(111116) HORIZONTAL
 Project : FR 301513

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	63.48	18.31	-21.69	40.00	42.58	6.18	0.79	31.24	---	Peak
2	129.63	19.14	-24.36	43.50	37.49	11.60	1.15	31.10	---	Peak
3	165.54	18.39	-25.11	43.50	38.37	9.94	1.23	31.15	---	Peak
4	465.90	18.92	-27.08	46.00	30.01	17.37	2.34	30.80	---	Peak
5	664.70	23.24	-22.76	46.00	30.53	20.31	2.87	30.47	---	Peak
6	738.20	28.52	-17.48	46.00	34.72	21.17	3.03	30.40	128	30 Peak



Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



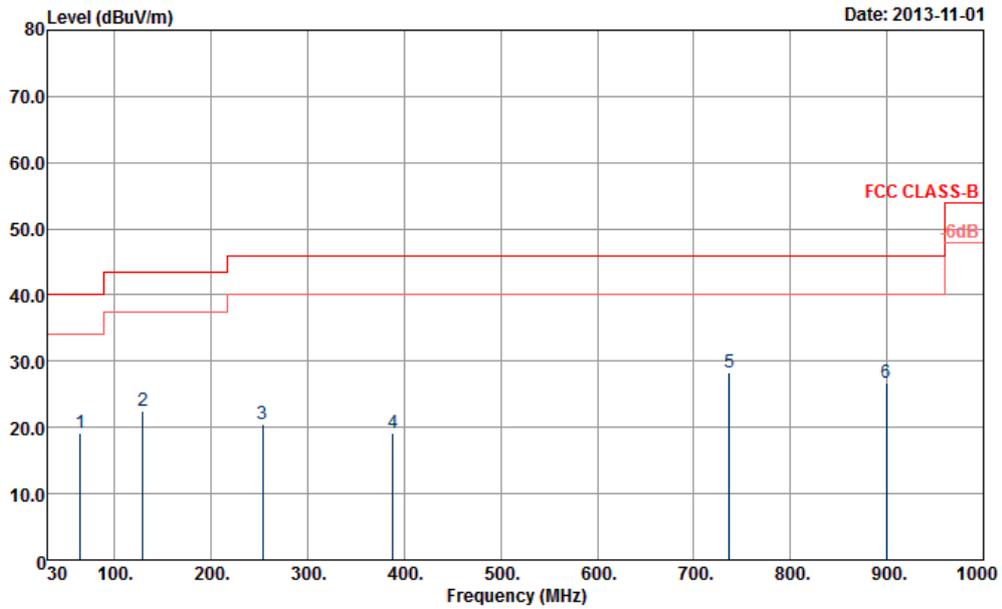
Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(111116) VERTICAL
 Project : FR 301513

Peak	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	66.18	16.65	-23.35	40.00	40.84	6.22	0.81	31.22	---	---	Peak
2	131.79	17.25	-26.25	43.50	35.63	11.56	1.16	31.10	---	---	Peak
3	285.96	15.12	-30.88	46.00	31.36	13.11	1.67	31.02	---	---	Peak
4	400.10	17.04	-28.96	46.00	29.78	16.02	2.14	30.90	---	---	Peak
5	625.50	22.78	-23.22	46.00	30.56	20.00	2.77	30.55	114	52	Peak
6	997.90	26.90	-27.10	54.00	29.03	24.57	3.51	30.21	---	---	Peak



< Battery near 100% charge >

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		

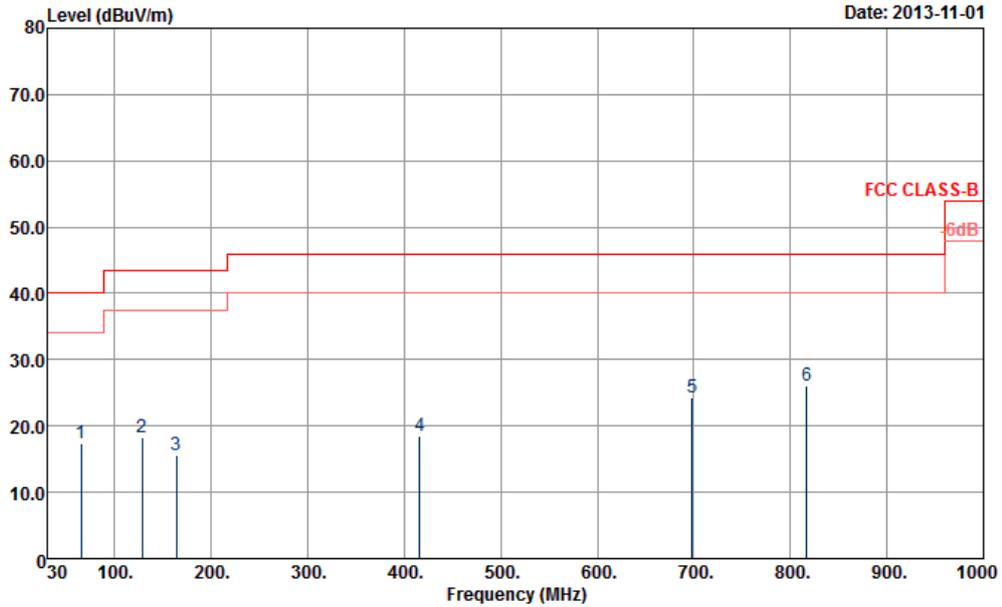


Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(111116) HORIZONTAL
 Project : FR 3O1513

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	64.02	19.23	-20.77	40.00	43.48	6.18	0.79 31.22	---	---	Peak
2	128.82	22.46	-21.04	43.50	40.80	11.62	1.14 31.10	---	---	Peak
3	253.56	20.54	-25.46	46.00	37.35	12.64	1.55 31.00	---	---	Peak
4	388.20	19.08	-26.92	46.00	32.23	15.69	2.12 30.96	105	57	Peak
5	736.80	28.32	-17.68	46.00	34.54	21.15	3.03 30.40	---	---	Peak
6	899.20	26.78	-19.22	46.00	30.65	23.09	3.34 30.30	---	---	Peak



Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(111116) VERTICAL
 Project : FR 301513

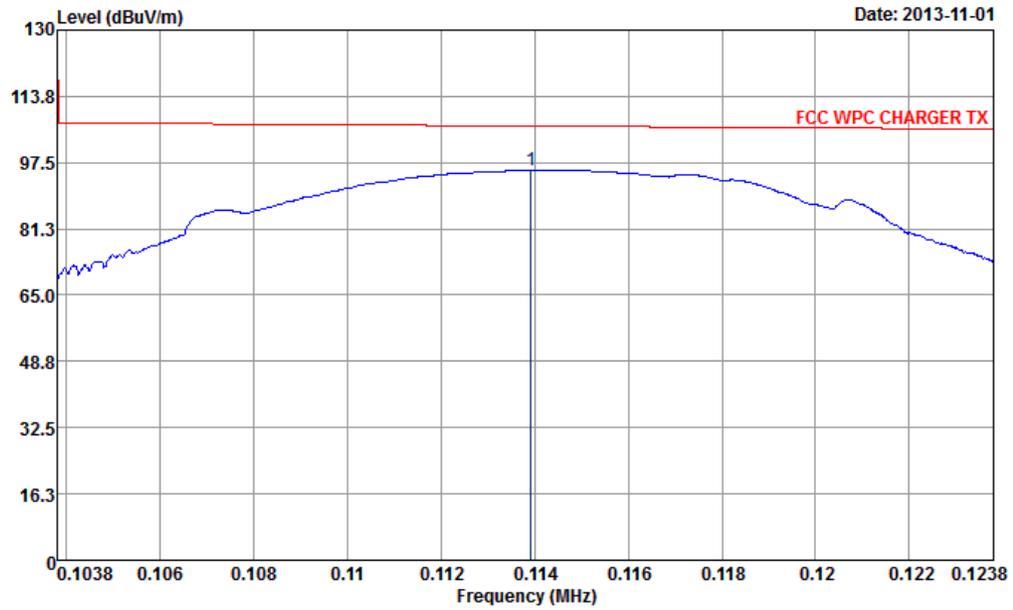
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	65.37	17.41	-22.59	40.00	41.61	6.20	0.80	31.20	---	---	Peak
2	128.28	18.19	-25.31	43.50	36.51	11.64	1.14	31.10	---	---	Peak
3	163.65	15.51	-27.99	43.50	35.32	10.13	1.22	31.16	---	---	Peak
4	416.20	18.59	-27.41	46.00	30.87	16.34	2.20	30.82	---	---	Peak
5	698.30	24.18	-21.82	46.00	31.06	20.58	2.94	30.40	---	---	Peak
6	816.60	25.99	-20.01	46.00	30.87	22.27	3.18	30.33	142	46	Peak



3.3.7 Test Result of Field Strength of Fundamental Emissions

<Battery at 0%>

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



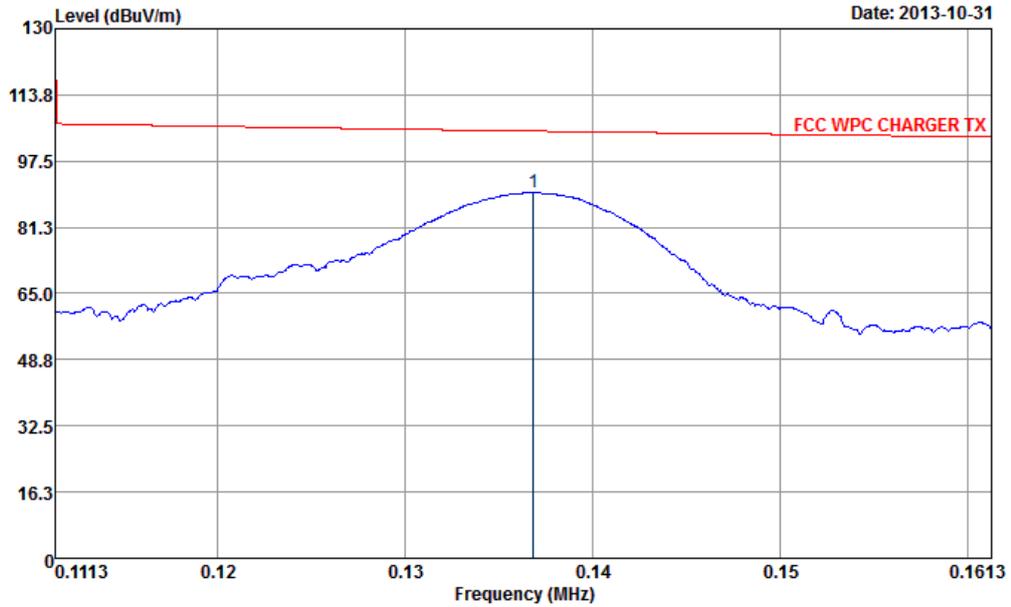
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-H HORIZONTAL
 Project : FR 3O1513

1	0.11	95.66	-10.81	106.47	75.30	20.07	0.29	0.00	100	354	Average
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<Battery at 50% charge>

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



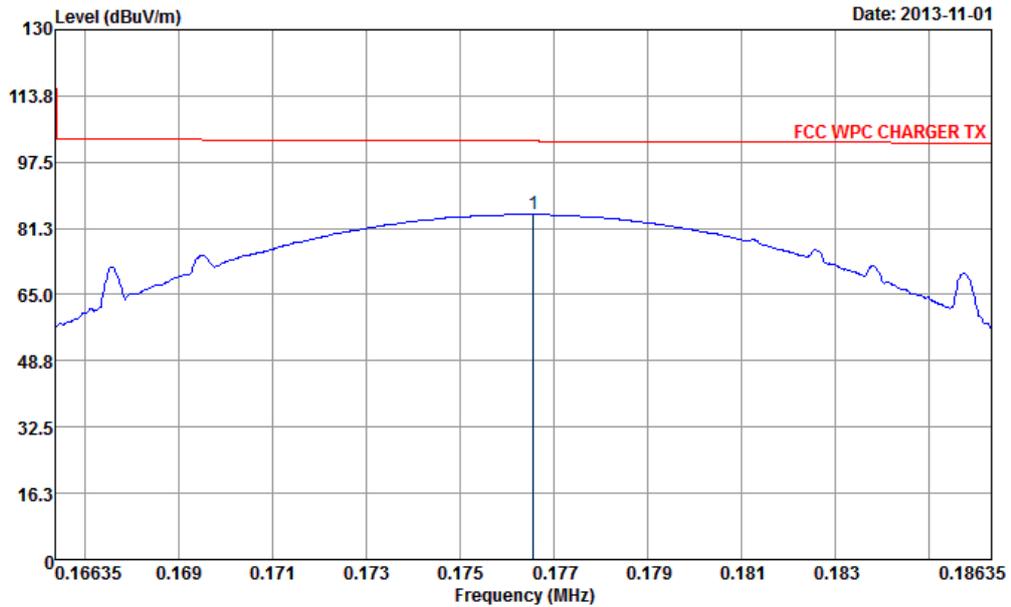
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-H HORIZONTAL
 Project : FR 301513

1	0.14	89.76	-15.12	104.88	69.41	20.06	0.29	0.00	100	19	Average
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< Battery near 100% charge >

Test Mode :	Mode 3	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC Tx + USB Cable (Charging from Notebook)		



Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m NFC FACTOR(120912)-H HORIZONTAL
 Project : FR 301513

1	0.18	84.70	-17.97	102.67	64.38	20.03	0.29	0.00	100	350	Average
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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Oct. 23, 2013~ Nov. 01, 2013	Jun. 06, 2014	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 13, 2012	Oct. 16, 2013	Nov. 12, 2013	Conduction (CO05-HY)
Two-LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2012	Oct. 16, 2013	Dec. 11, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 06, 2012	Oct. 16, 2013	Dec. 05, 2013	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Oct. 16, 2013	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 06, 2013	Oct. 31, 2013~ Nov. 01, 2013	Sep. 05, 2014	Radiation (03CH07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9kHz~30GHz	Nov. 30, 2012	Oct. 31, 2013~ Nov. 01, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/00 01	9 kHz~30 MHz	Jul. 03, 2012	Oct. 31, 2013~ Nov. 01, 2013	Jul. 03, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 10, 2013	Oct. 31, 2013~ Nov. 01, 2013	Oct. 09, 2014	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30MHz~1GHz	Feb. 26, 2013	Oct. 31, 2013~ Nov. 01, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Oct. 31, 2013~ Nov. 01, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Oct. 31, 2013~ Nov. 01, 2013	N/A	Radiation (03CH07-HY)



5. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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