

FCC Test Report

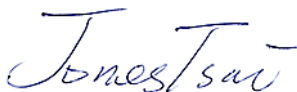
APPLICANT : Chiaro Technology Ltd
EQUIPMENT : Elvie
BRAND NAME : Chiaro
MODEL NUMBER : EL02
FCC ID : 2AEHI-EL0215
STANDARD : FCC Part 15 Subpart C §15.209
CLASSIFICATION : Part 15 Low Power Transmitter Below 1705 kHz (DCD)

The product was received on May 23, 2015 and completely tested on Jun. 26, 2015. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 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.

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SPORTON INTERNATIONAL INC.

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FCC ID : 2AEHI-EL0215

Page Number : 1 of 39

Report Issued Date : Jul. 23, 2015

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APPENDIX A. SETUP PHOTOGRAPHS



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049	20 dB Bandwidth	-	PASS	-
3.1	-	99% Bandwidth	-	PASS	-
3.2	15.207	AC Conducted Emission	FCC Part 15.207(a)	PASS	Under limit 6.40 dB at 0.190 MHz
3.3	15.209	Radiated Emission	FCC Part 15.209(a)	PASS	Under limit 10.51 dB at 101.280 MHz

1. General Description

1.1. Applicant

Chiaro Technology Ltd

2nd Floor, 5-9 Hatton Wall, London, United Kingdom, EC1N 8HX

1.2. Manufacturer

FU GANG ELECTRONIC (KUNSHAN) CO., LTD

NO. 6 Zheng Wei West Road, Jin Xi Town, Kun Shan City, Jiang Su Province, 215324, China

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Elvie
Brand Name	Chiaro
Model Name	EL02
FCC ID	2AEHI-EL0215
EUT supports Radios application	WPC
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4. Feature of Equipment Under Test

Product Feature & Specification	
Tx Frequency Range	110 ~ 205 KHz
Antenna Type	Wire Antenna
Type of Modulation	ASK

1.5. Modification of EUT

No modifications are made to the EUT during all test items.

1.6. Test Site

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

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: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		
	TH02-HY	CO05-HY	03CH07-HY

Note: The test site complies with ANSI C63.4 2009 requirement.

1.7. 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 C63.10-2009

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 C63.10-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

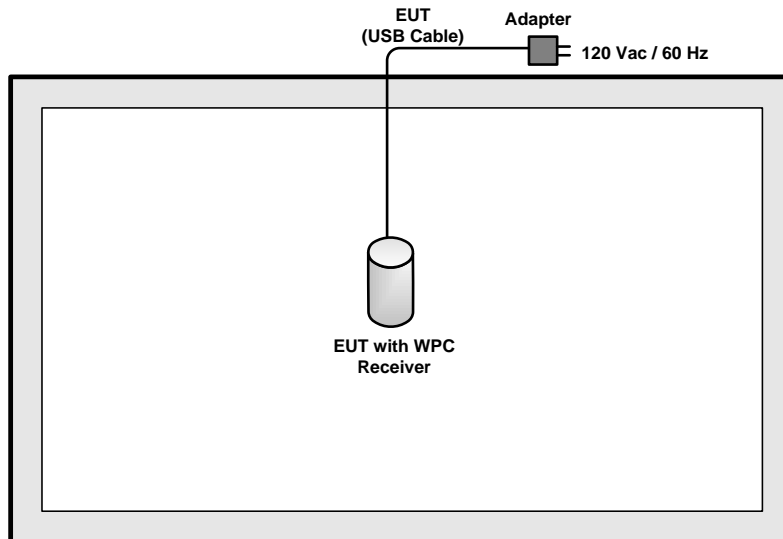
Frequency range investigated: radiation (9 kHz to 1000 MHz)

Test Items	Function Type
AC Conducted Emission	Mode 1 : EUT + WPC Charging from Notebook
Radiated Emissions	Mode 1 : WPC

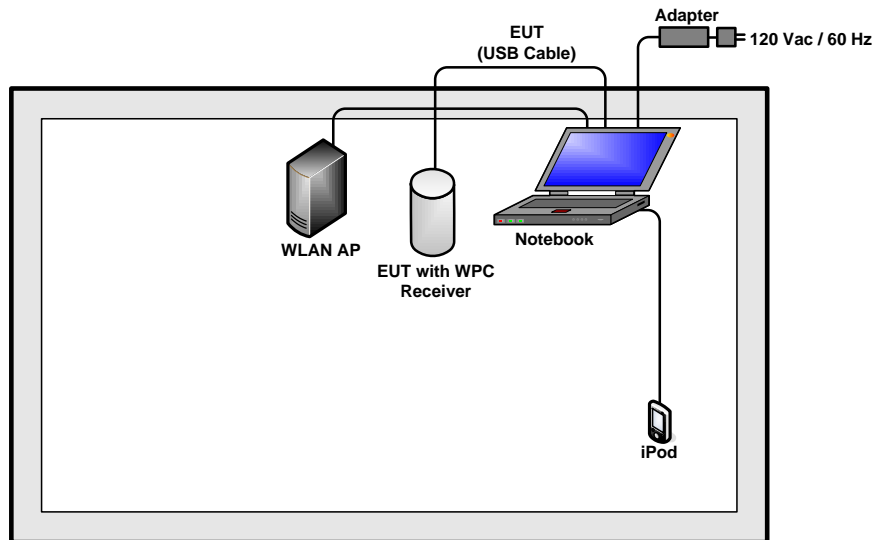
Note: KDB 680106 "Client Device Considerations" was considered and evaluation performed as applicable to this device. EUT is working in charging mode with the inductive charger. The inductive back cover (receiving hardware) is non-removable, is part of the phone.

2.2. Connection Diagram of Test System

<WPC Tx Mode>



<AC Conducted Emission Mode>



Remark: WPC Receiver was in the EUT during tests.



2.3. Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-865L	KA2IR865LA1	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
4.	Adapter	Sony	EP800	N/A	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

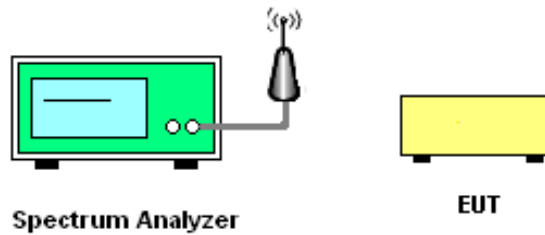
The measuring equipment is listed in the section 4 of this test report.

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%	132.75 kHz	23.25 kHz
Battery at 50% charge	128.50 kHz	23.00 kHz
Battery near 100% charge	127.50 kHz	23.25 kHz

3.1.4 Test Setup



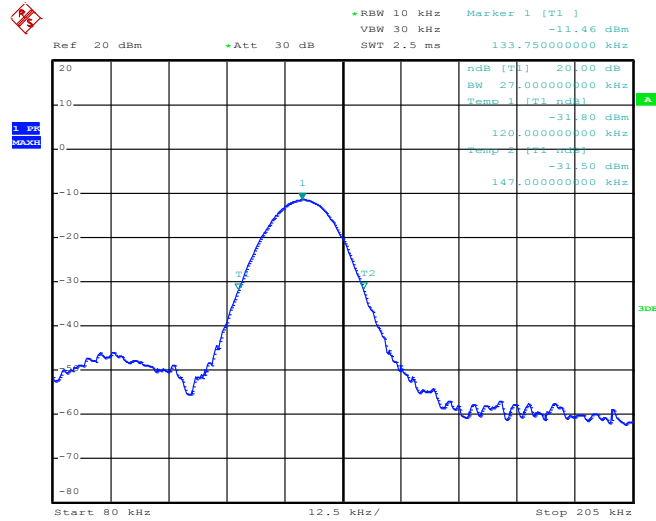


3.1.5 Test Result of 20dB and 99% Bandwidth

Test Engineer :	Derek Hsu	Temperature :	23~24°C
		Relative Humidity :	52~54%

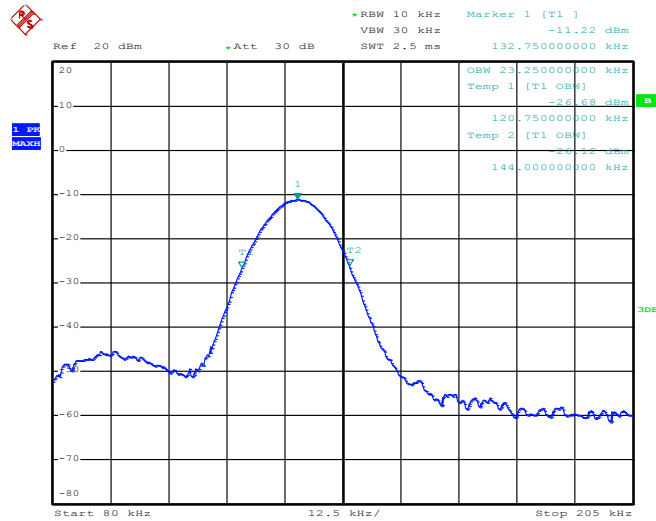
Battery at 0%

20 dB Bandwidth Plot



Date: 4.JUN.2015 09:02:50

99% Occupied Bandwidth Plot

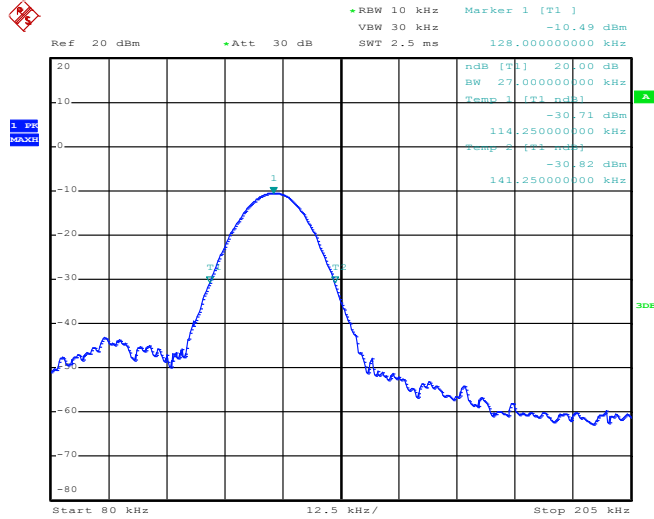


Date: 4.JUN.2015 08:59:57



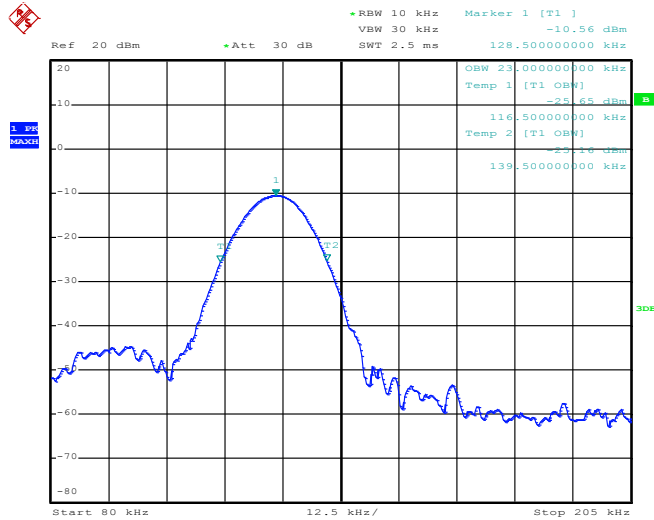
Battery at 50% Charge

20 dB Bandwidth Plot



Date: 4.JUN.2015 10:37:17

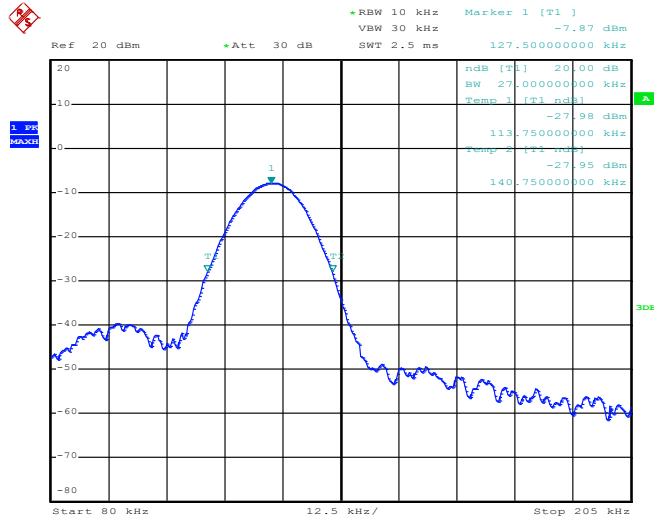
99% Occupied Bandwidth Plot



Date: 4.JUN.2015 10:37:51

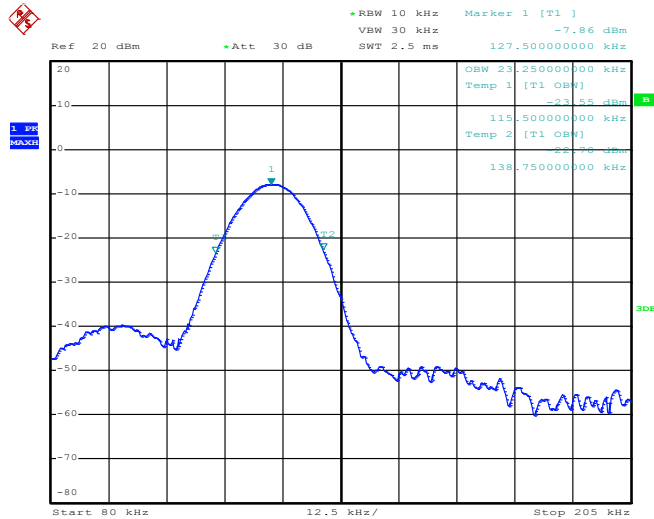


Battery Near 100% Charge
20 dB Bandwidth Plot



Date: 3.JUN.2015 18:09:45

99% Occupied Bandwidth Plot



Date: 3.JUN.2015 18:10:24

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.

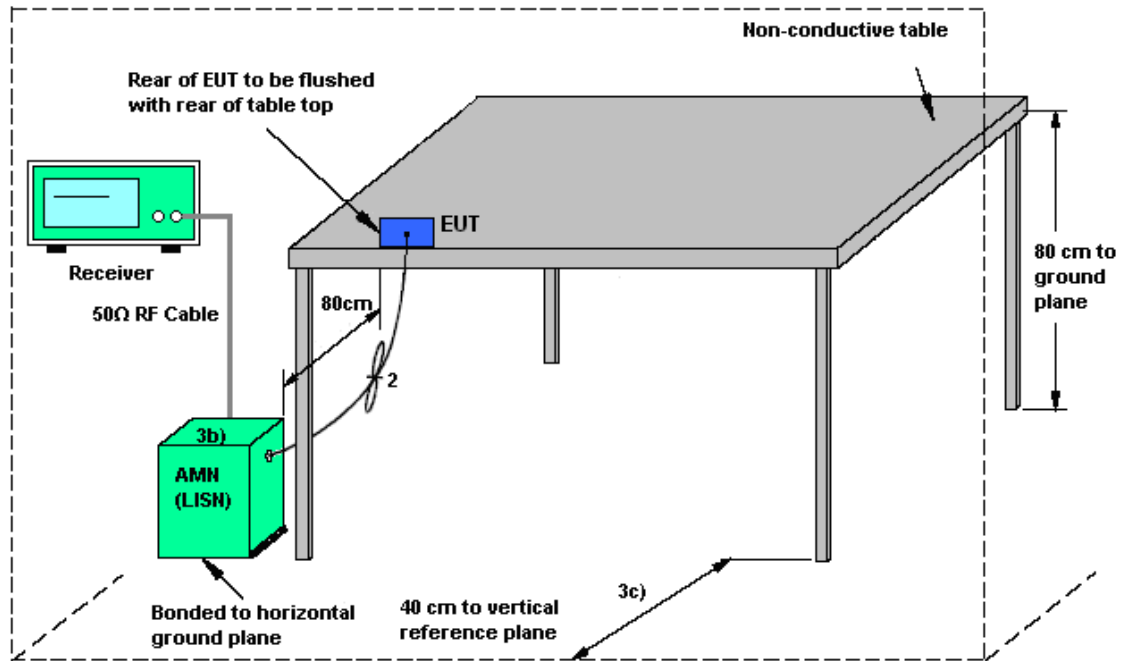
3.2.2. Measuring Instruments

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.

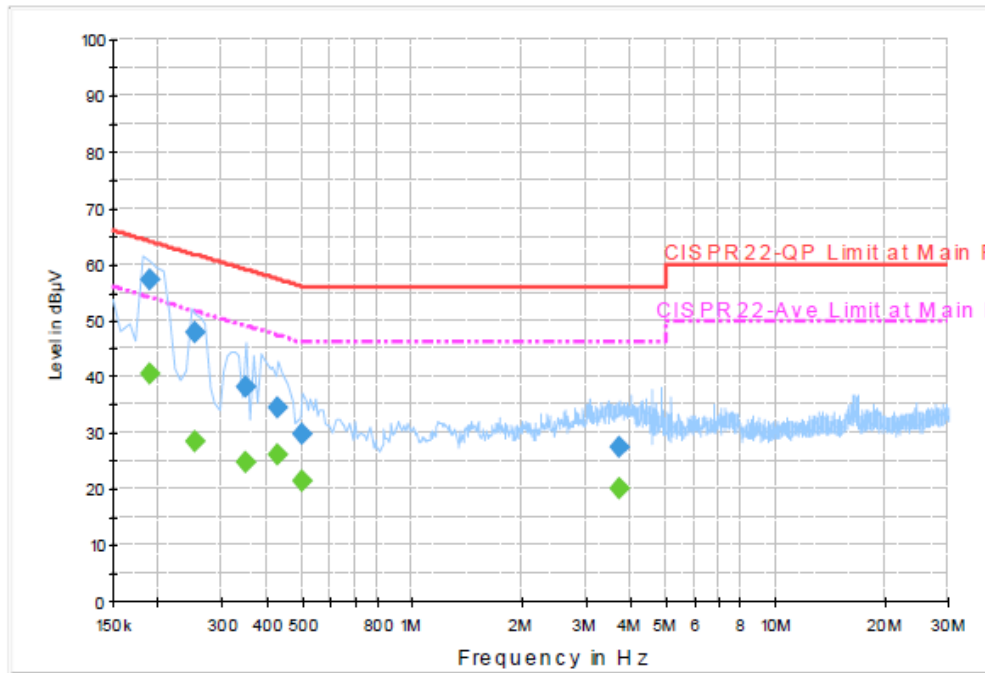
3.2.4. Test Setup



AMN = Artificial mains network (LISN)
 AE = Associated equipment
 EUT = Equipment under test
 ISN = Impedance stabilization network

3.2.5. Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	59~60%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	EUT + WPC Charging from Notebook		



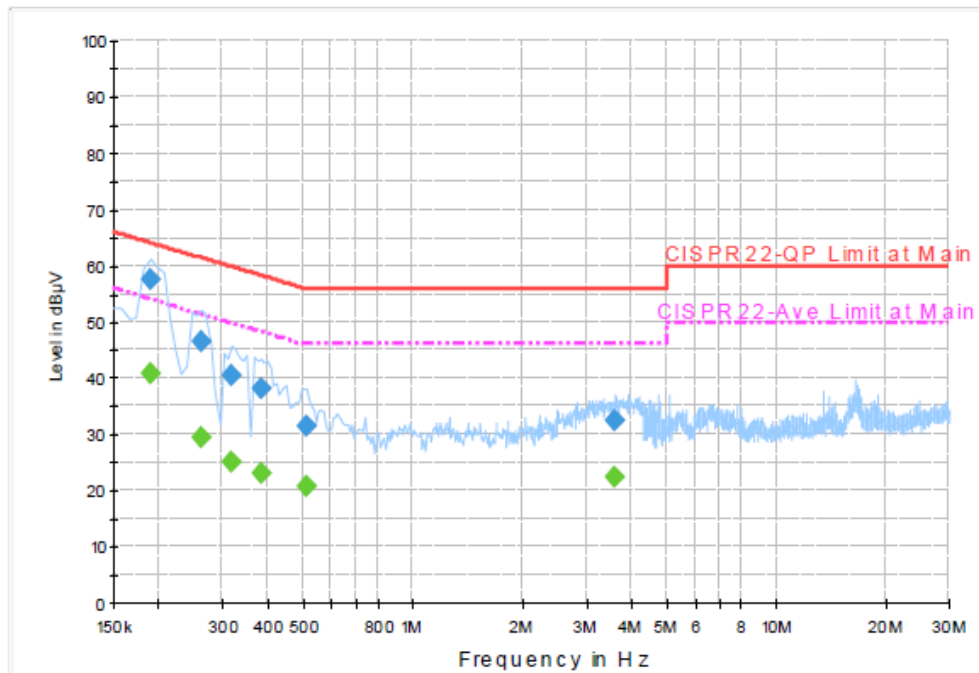
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	57.1	Off	L1	19.5	6.9	64.0
0.254000	47.8	Off	L1	19.4	13.8	61.6
0.350000	38.1	Off	L1	19.5	20.9	59.0
0.430000	34.6	Off	L1	19.5	22.7	57.3
0.502000	29.8	Off	L1	19.4	26.2	56.0
3.734000	27.3	Off	L1	19.7	28.7	56.0

Final Result 2 : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	40.4	Off	L1	19.5	13.6	54.0
0.254000	28.3	Off	L1	19.4	23.3	51.6
0.350000	24.8	Off	L1	19.5	24.2	49.0
0.430000	26.0	Off	L1	19.5	21.3	47.3
0.502000	21.2	Off	L1	19.4	24.8	46.0
3.734000	20.1	Off	L1	19.7	25.9	46.0

Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	59~60%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	EUT + WPC Charging from Notebook		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	57.6	Off	N	19.5	6.4	64.0
0.262000	46.4	Off	N	19.5	15.0	61.4
0.318000	40.5	Off	N	19.5	19.3	59.8
0.382000	38.1	Off	N	19.5	20.1	58.2
0.510000	31.6	Off	N	19.5	24.4	56.0
3.622000	32.3	Off	N	19.7	23.7	56.0

Final Result 2 : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	40.7	Off	N	19.5	13.3	54.0
0.262000	29.5	Off	N	19.5	21.9	51.4
0.318000	25.1	Off	N	19.5	24.7	49.8
0.382000	23.2	Off	N	19.5	25.0	48.2
0.510000	20.8	Off	N	19.5	25.2	46.0
3.622000	22.2	Off	N	19.7	23.8	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

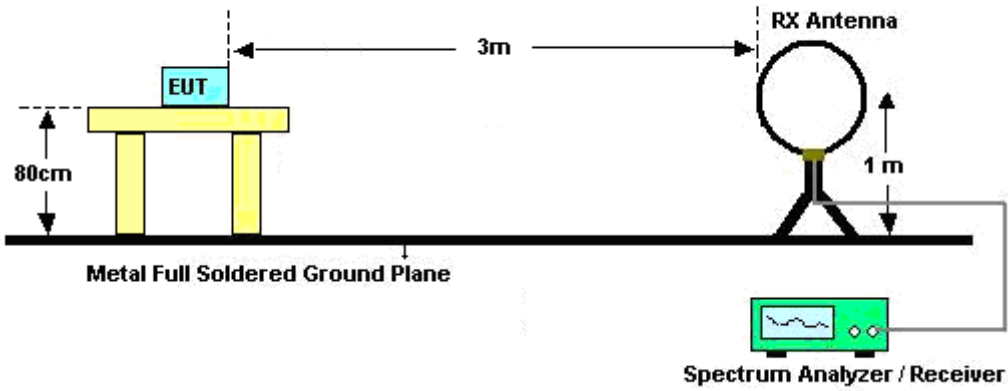
The measuring equipment is listed in the section 4 of this test report.

3.3.3. Test Procedures

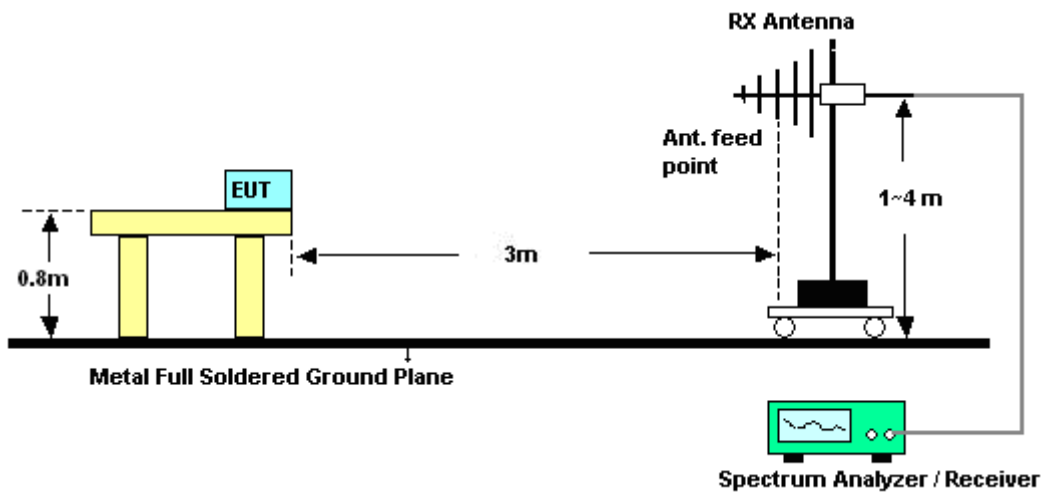
Follow the guidelines in ANSI C63.10-2009 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

3.3.4. Test Setup of Radiated Emission

For radiated emissions below 30MHz



For radiated emissions above 30MHz

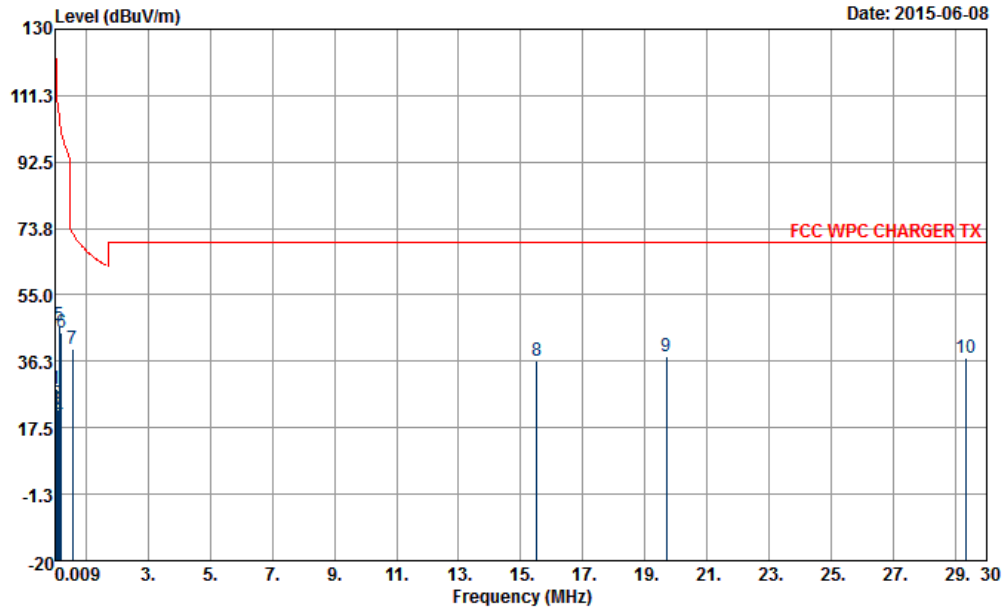




3.3.5. Test Result of Radiated Emission (9kHz ~ 30MHz)

<Battery at 0%>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

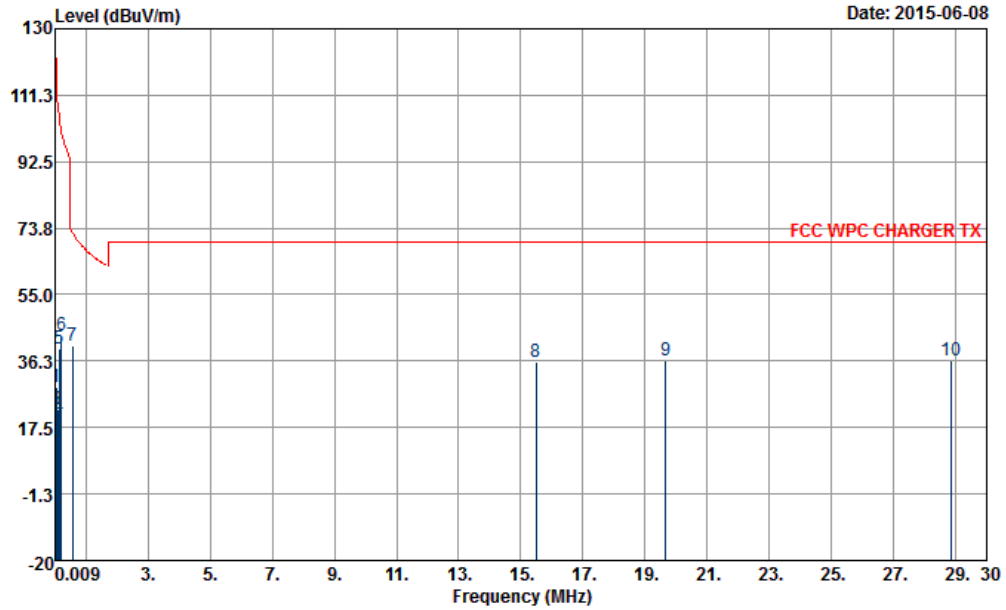


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(H) HORIZONTAL

: 9kHz to 30MHz										
Freq	Level	Over	Limit	Limit	ReadAntenna	Cable	A/Pos	T/Pos	Remark	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg		
1	0.04	28.26	-86.66	114.92	7.89	20.08	0.29	---	---	Average
2	0.08	24.09	-85.86	109.95	3.79	20.01	0.29	---	---	Average
3	0.10	22.81	-84.86	107.67	2.56	19.96	0.29	---	---	QP
4	0.12	20.62	-85.43	106.05	0.39	19.94	0.29	---	---	Average
5	0.13	46.47	-58.86	105.33	26.24	19.94	0.29	---	---	Average
6	0.21	44.55	-56.44	100.99	24.36	19.90	0.29	---	---	Average
7	0.57	39.63	-32.93	72.56	19.44	19.88	0.31	---	---	QP
8	15.52	36.40	-33.60	70.00	15.93	20.06	0.41	---	---	QP
9	19.70	37.77	-32.23	70.00	16.93	20.41	0.43	100	0	QP
10	29.33	37.26	-32.74	70.00	16.24	20.51	0.51	---	---	QP



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



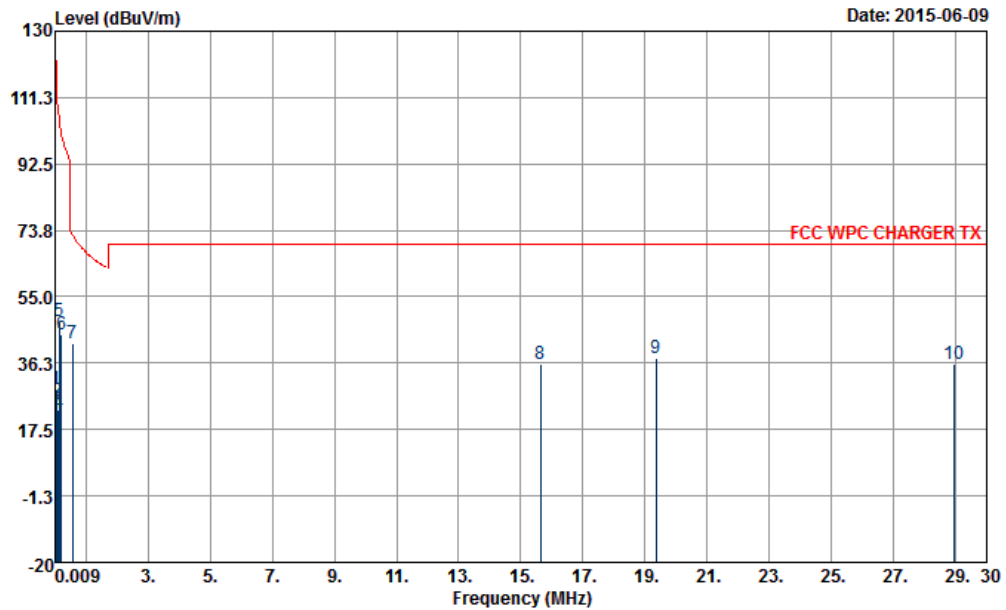
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(V) VERTICAL

: 9kHz to 30MHz										
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.04	29.07	-85.87	114.94	8.66	20.12	0.29	---	---	Average
2	0.08	22.82	-87.14	109.96	2.50	20.03	0.29	---	---	Average
3	0.10	22.59	-85.06	107.65	2.31	19.99	0.29	---	---	QP
4	0.12	20.69	-85.52	106.21	0.44	19.96	0.29	---	---	Average
5	0.13	39.66	-65.71	105.37	19.41	19.96	0.29	---	---	Average
6	0.22	43.70	-57.22	100.92	23.48	19.93	0.29	---	---	Average
7	0.58	40.57	-31.76	72.33	20.36	19.90	0.31	100	0	QP
8	15.50	36.07	-33.93	70.00	16.00	19.66	0.41	---	---	QP
9	19.65	36.38	-33.62	70.00	16.06	19.89	0.43	---	---	QP
10	28.84	36.30	-33.70	70.00	15.81	19.98	0.51	---	---	QP



<Battery at 50% Charge>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

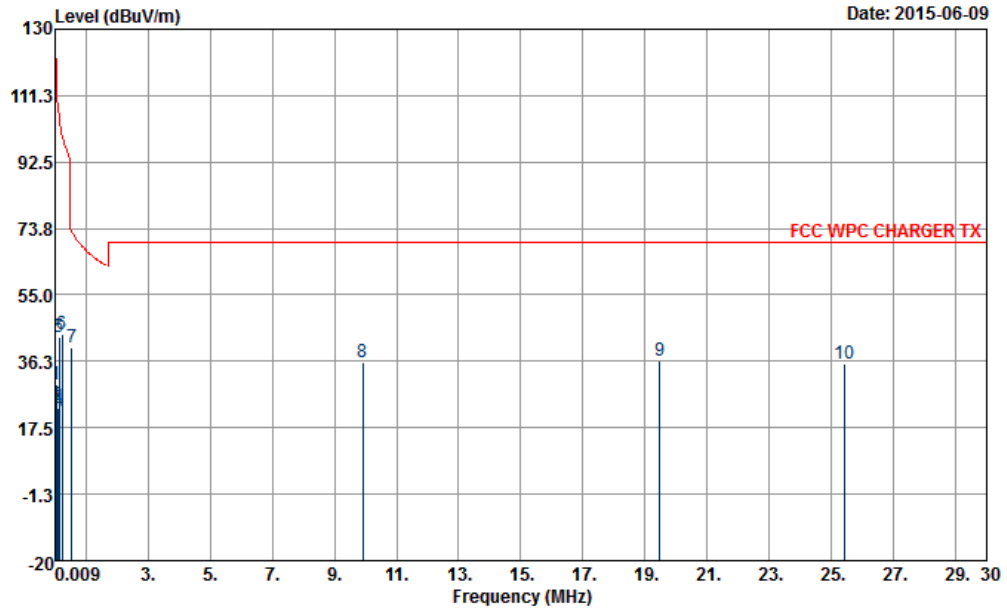


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(H) HORIZONTAL

: 9kHz to 30MHz									
Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.04	28.71	-86.16	114.87	8.34	20.08	0.29	---	Average
2	0.08	25.64	-84.27	109.91	5.34	20.01	0.29	---	Average
3	0.10	22.90	-84.59	107.49	2.65	19.96	0.29	---	QP
4	0.13	22.10	-83.46	105.56	1.87	19.94	0.29	---	Average
5	0.13	48.20	-56.98	105.18	27.97	19.94	0.29	---	Average
6	0.22	44.55	-56.37	100.92	24.36	19.90	0.29	---	Average
7	0.57	41.86	-30.70	72.56	21.67	19.88	0.31	100	0 QP
8	15.65	36.10	-33.90	70.00	15.63	20.06	0.41	---	QP
9	19.36	37.74	-32.26	70.00	16.95	20.36	0.43	---	QP
10	28.94	35.94	-34.06	70.00	14.86	20.57	0.51	---	QP



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



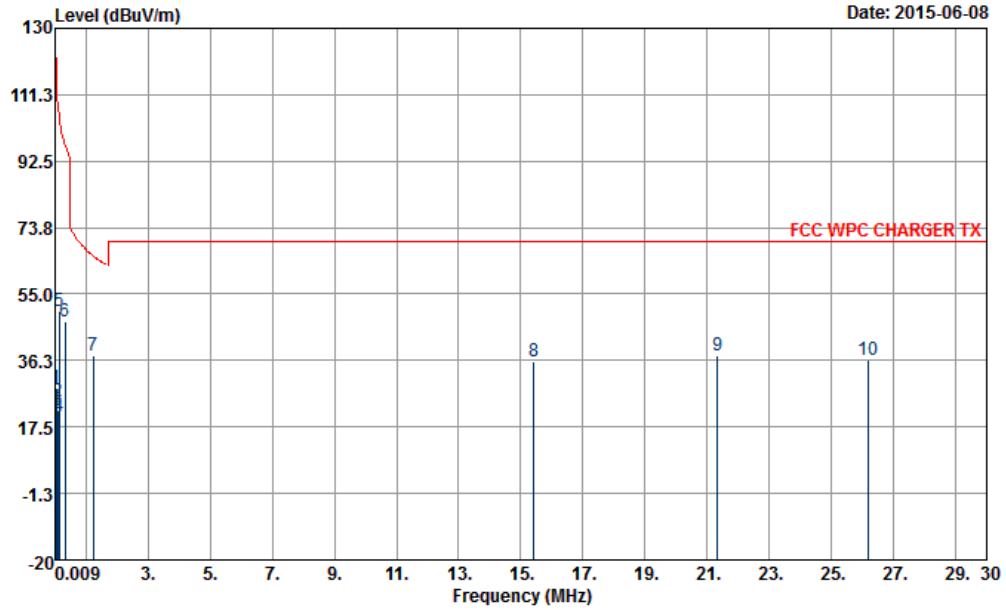
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(V) VERTICAL

: 9kHz to 30MHz										
1	2	3	4	5	6	7	8	9	10	Remark
MHz	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	A/Pos	T/Pos		
	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg		
0.04	29.67	-85.26	114.93	9.26	20.12	0.29	---	---	---	Average
0.07	23.69	-87.22	110.91	3.37	20.03	0.29	---	---	---	Average
0.10	22.91	-84.81	107.72	2.63	19.99	0.29	---	---	---	QP
0.13	22.10	-83.46	105.56	1.85	19.96	0.29	---	---	---	Average
0.13	43.20	-61.97	105.17	22.95	19.96	0.29	---	---	---	Average
0.22	43.80	-56.78	100.58	23.58	19.93	0.29	---	---	---	Average
0.55	40.13	-32.67	72.80	19.92	19.90	0.31	100	---	---	0 QP
9.90	36.09	-33.91	70.00	15.89	19.81	0.39	---	---	---	QP
19.47	36.61	-33.39	70.00	16.31	19.87	0.43	---	---	---	QP
25.42	35.67	-34.33	70.00	15.14	20.08	0.45	---	---	---	QP



<Battery Near 100% Charge>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

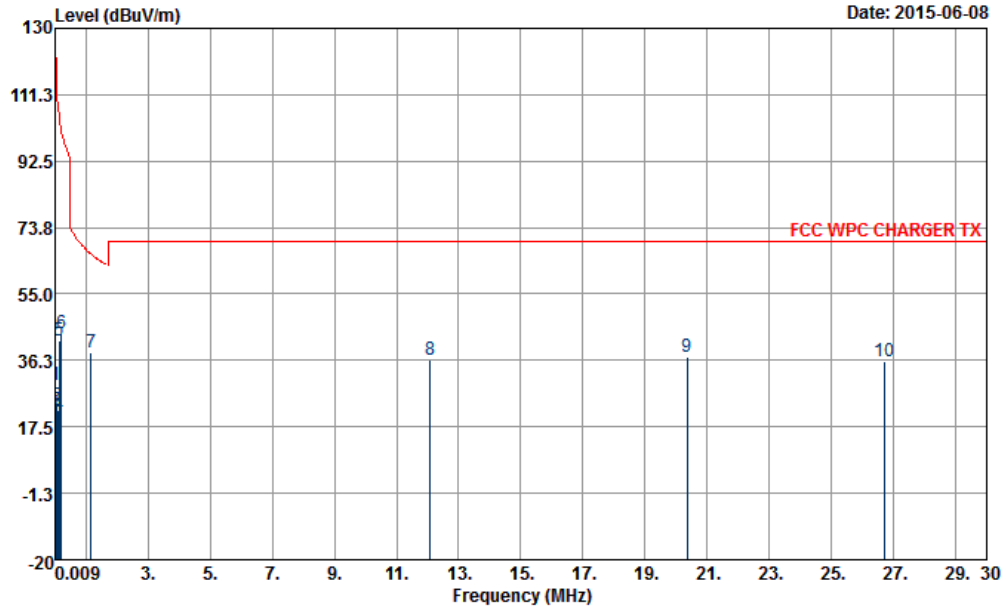


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(H) HORIZONTAL

: 9kHz to 30MHz										
	Freq	Level	Over	Limit	ReadAntenna	Cable	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.04	28.67	-86.27	114.94	8.30	20.08	0.29	---	---	Average
2	0.08	24.76	-85.20	109.96	4.46	20.01	0.29	---	---	Average
3	0.10	22.30	-85.35	107.65	2.05	19.96	0.29	---	---	QP
4	0.12	20.73	-85.03	105.76	0.50	19.94	0.29	---	---	Average
5	0.13	50.01	-55.24	105.25	29.78	19.94	0.29	---	---	Average
6	0.32	47.14	-50.39	97.53	26.96	19.89	0.29	---	---	Average
7	1.23	37.67	-28.11	65.78	17.46	19.90	0.31	100	0	QP
8	15.42	35.89	-34.11	70.00	15.42	20.06	0.41	---	---	QP
9	21.33	37.84	-32.16	70.00	16.86	20.55	0.43	---	---	QP
10	26.17	36.26	-33.74	70.00	15.11	20.68	0.47	---	---	QP



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(V) VERTICAL

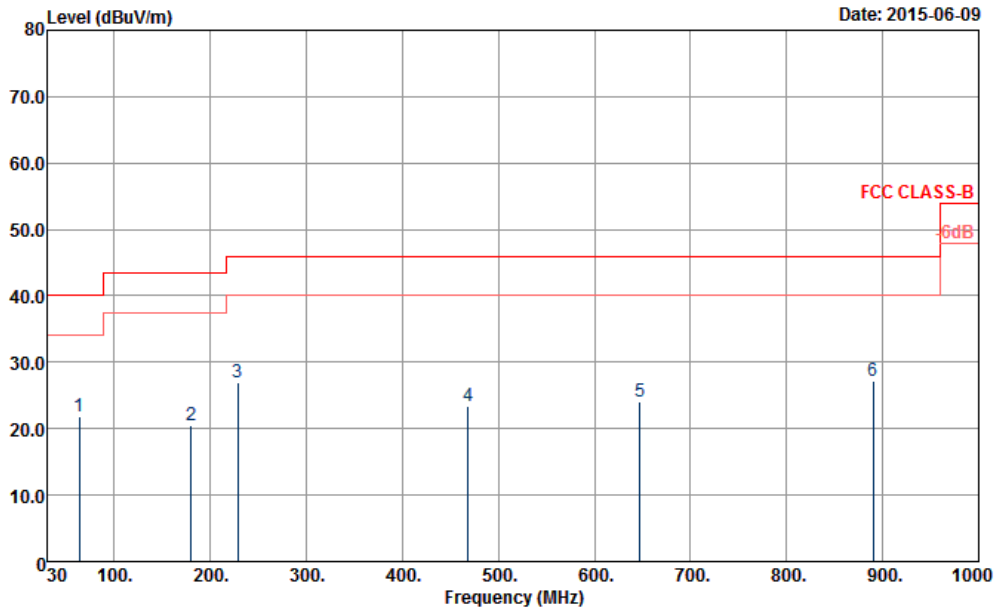
: 9kHz to 30MHz										
Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg		
1	0.01	29.23	-95.74	124.97	8.68	20.26	0.29	---	---	Average
2	0.07	23.27	-87.63	110.90	2.95	20.03	0.29	---	---	Average
3	0.10	22.17	-85.49	107.66	1.89	19.99	0.29	---	---	QP
4	0.13	21.08	-84.40	105.48	0.83	19.96	0.29	---	---	Average
5	0.13	41.97	-63.23	105.20	21.72	19.96	0.29	---	---	Average
6	0.21	43.78	-57.21	100.99	23.56	19.93	0.29	---	---	Average
7	1.17	38.60	-27.67	66.27	18.37	19.92	0.31	100	0	QP
8	12.08	36.37	-33.63	70.00	16.18	19.79	0.40	---	---	QP
9	20.35	37.11	-32.89	70.00	16.72	19.96	0.43	---	---	QP
10	26.70	35.93	-34.07	70.00	15.36	20.09	0.48	---	---	QP



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

<Battery at 0%>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

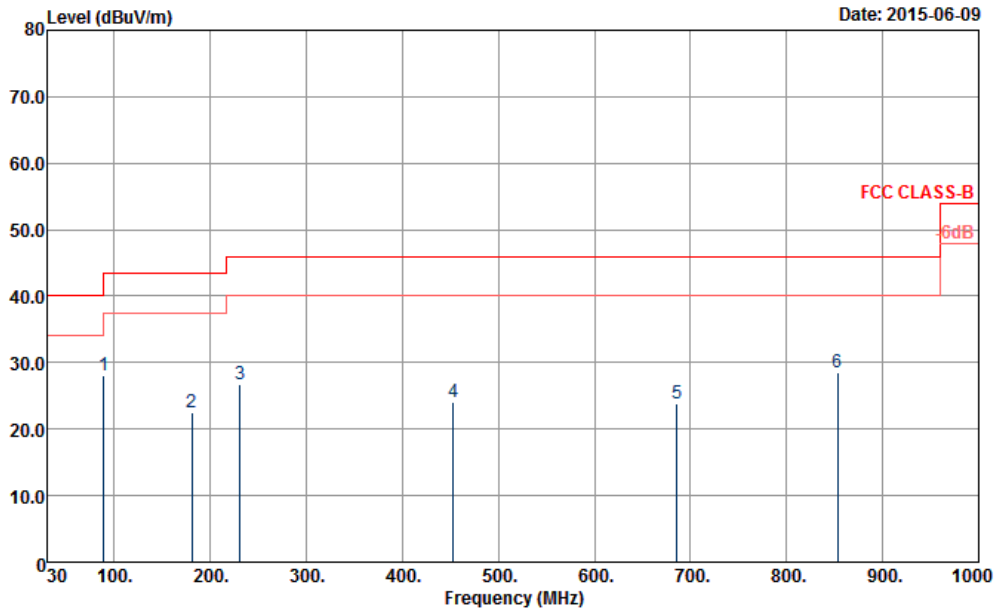


Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(131102) HORIZONTAL

: 30MHz to 1GHz											
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	63.75	21.73	-18.27	40.00	44.89	6.00	2.06	31.22	100		0 Peak
2	179.85	20.42	-23.08	43.50	39.74	8.97	2.61	30.90	---	---	Peak
3	228.72	26.95	-19.05	46.00	44.97	10.02	2.96	31.00	---	---	Peak
4	468.70	23.38	-22.62	46.00	32.93	17.48	3.77	30.80	---	---	Peak
5	647.20	24.06	-21.94	46.00	29.95	20.40	4.22	30.51	---	---	Peak
6	890.10	27.10	-18.90	46.00	29.86	22.90	4.66	30.32	---	---	Peak



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



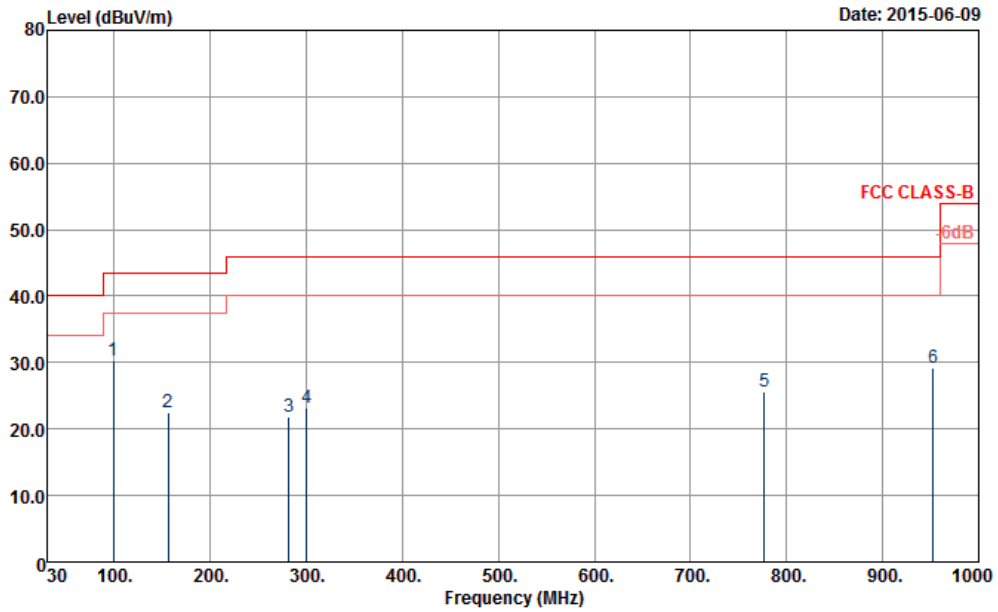
Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(131102) VERTICAL

: 30MHz to 1GHz										
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	88.86	28.14	-15.36	43.50	48.60	8.58	2.06	31.10	100	0 Peak
2	180.39	22.40	-21.10	43.50	41.71	8.90	2.69	30.90	---	--- Peak
3	230.88	26.65	-19.35	46.00	44.47	10.22	2.96	31.00	---	--- Peak
4	452.60	24.07	-21.93	46.00	33.87	17.33	3.63	30.76	---	--- Peak
5	685.70	23.91	-22.09	46.00	29.49	20.50	4.35	30.43	---	--- Peak
6	853.00	28.45	-17.55	46.00	30.87	23.27	4.70	30.39	---	--- Peak



<Battery at 50% Charge>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

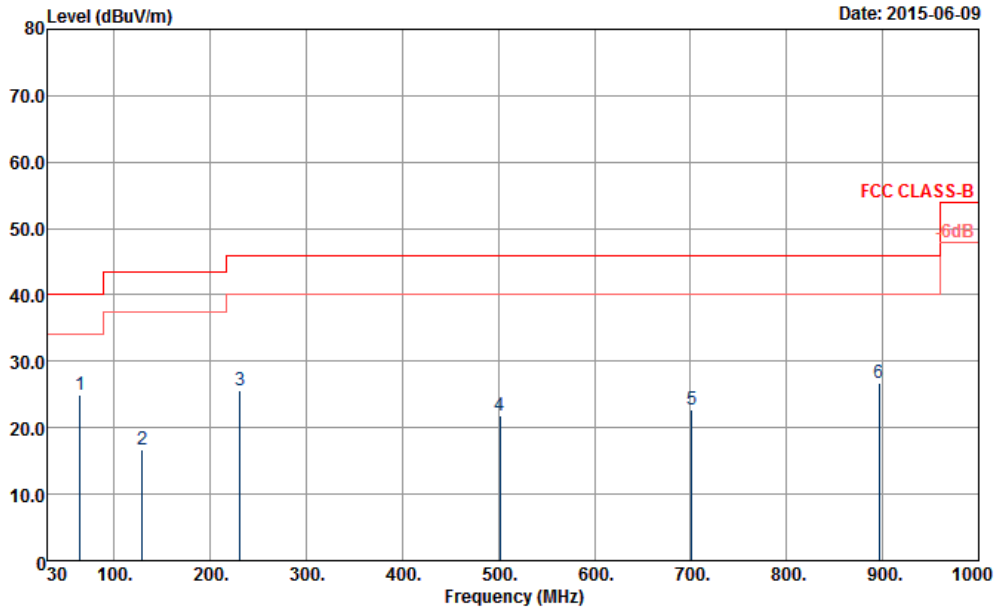


Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(131102) HORIZONTAL

: 30MHz to 1GHz											
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	98.85	30.28	-13.22	43.50	49.16	10.16	2.06	31.10	100	0	Peak
2	156.36	22.50	-21.00	43.50	40.40	10.66	2.61	31.17	---	---	Peak
3	281.64	21.74	-24.26	46.00	36.67	12.83	3.16	30.92	---	---	Peak
4	300.00	23.13	-22.87	46.00	37.77	13.20	3.16	31.00	---	---	Peak
5	776.70	25.62	-20.38	46.00	29.46	22.03	4.48	30.35	---	---	Peak
6	952.40	29.29	-16.71	46.00	30.26	24.48	4.94	30.39	---	---	Peak



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



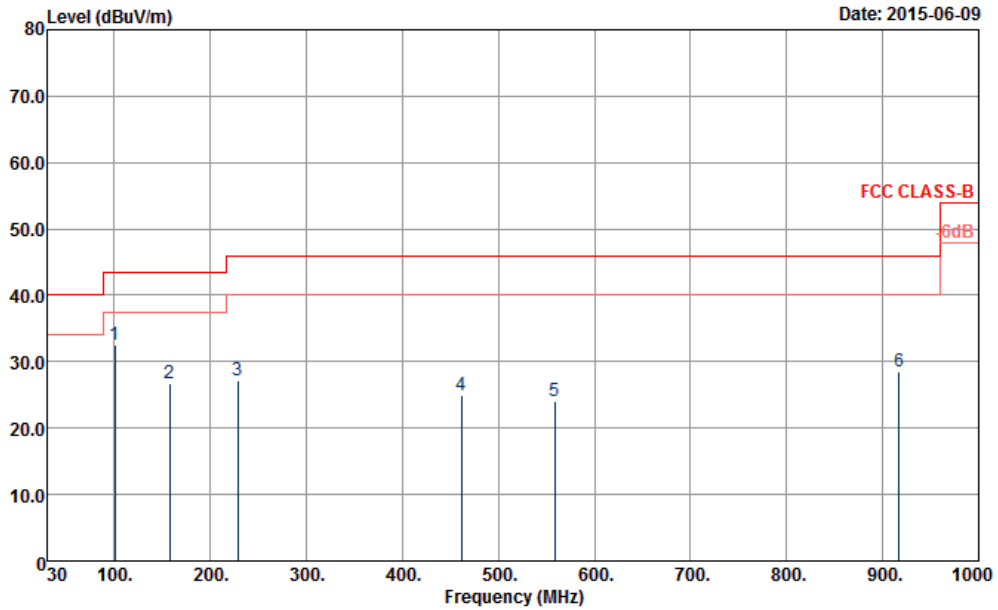
Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(131102) VERTICAL

: 30MHz to 1GHz											
Peak	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	64.29	25.04	-14.96	40.00	48.20	6.00	2.06	31.22	100	0	Peak
2	129.36	16.81	-26.69	43.50	33.61	11.92	2.38	31.10	---	---	Peak
3	231.15	25.59	-20.41	46.00	43.41	10.22	2.96	31.00	---	---	Peak
4	501.60	21.74	-24.26	46.00	30.45	18.01	3.89	30.61	---	---	Peak
5	701.10	22.76	-23.24	46.00	28.11	20.64	4.41	30.40	---	---	Peak
6	896.40	26.66	-19.34	46.00	29.23	23.08	4.66	30.31	---	---	Peak



<Battery Near 100% Charge>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

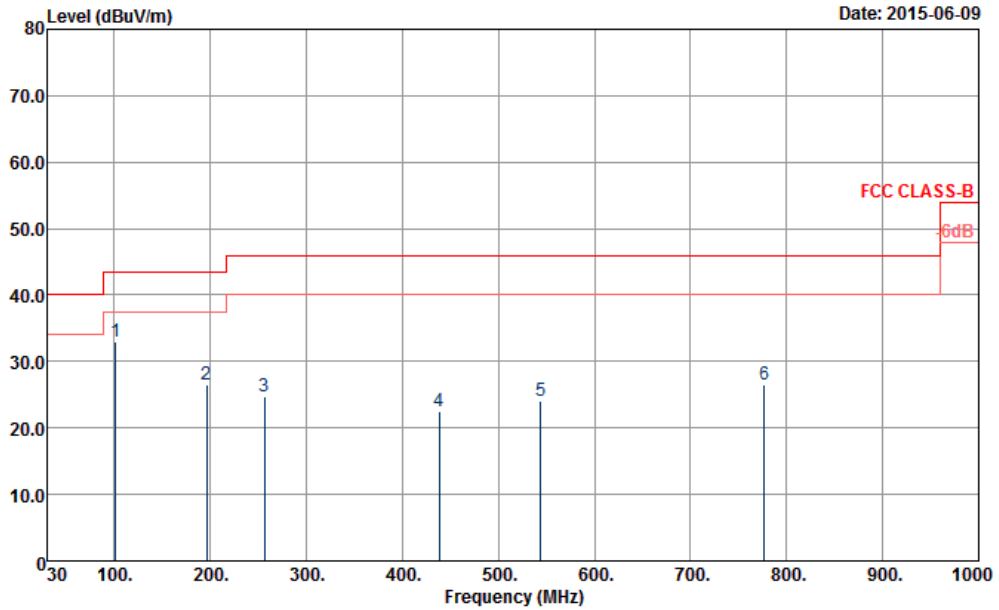


Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(131102) HORIZONTAL

: 30MHz to 1GHz											
Freq	Level	Over	Limit	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	100.74	32.56	-10.94	43.50	50.87	10.42	2.38	31.11	100	0	Peak
2	157.98	26.72	-16.78	43.50	44.71	10.58	2.61	31.18	---	---	Peak
3	228.18	27.19	-18.81	46.00	45.29	9.94	2.96	31.00	---	---	Peak
4	461.70	25.02	-20.98	46.00	34.63	17.42	3.77	30.80	---	---	Peak
5	558.30	24.07	-21.93	46.00	30.85	19.98	4.01	30.77	---	---	Peak
6	917.40	28.54	-17.46	46.00	30.21	23.86	4.80	30.33	---	---	Peak



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m LF-ANT(131102) VERTICAL

: 30MHz to 1GHz

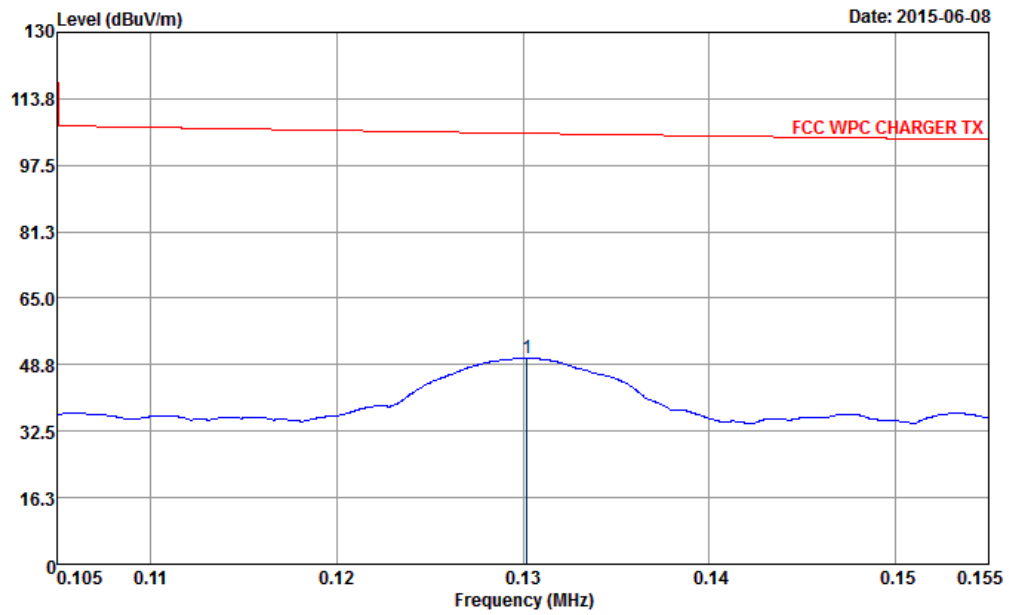
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	101.28	32.99	-10.51	43.50	51.30	10.42	2.38	31.11	100	0	Peak
2	196.05	26.50	-17.00	43.50	45.93	8.98	2.69	31.10	---	---	Peak
3	256.26	24.75	-21.25	46.00	39.43	13.36	2.96	31.00	---	---	Peak
4	438.60	22.62	-23.38	46.00	32.72	16.98	3.63	30.71	---	---	Peak
5	544.30	24.05	-21.95	46.00	31.74	19.08	4.01	30.78	---	---	Peak
6	776.70	26.56	-19.44	46.00	30.40	22.03	4.48	30.35	---	---	Peak



3.3.7 Test Result of Field Strength of Fundamental Emissions

<Battery at 0%>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

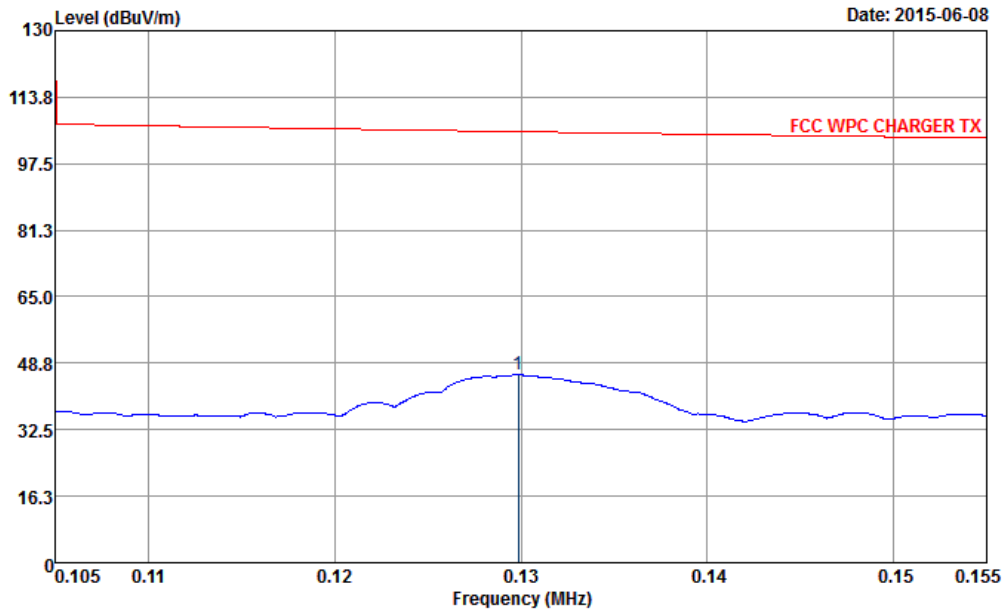


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(H) HORIZONTAL

Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	A/Pos	T/Pos	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.13	50.30	-55.01	105.31	30.07	19.94	0.29	100	0 QP



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



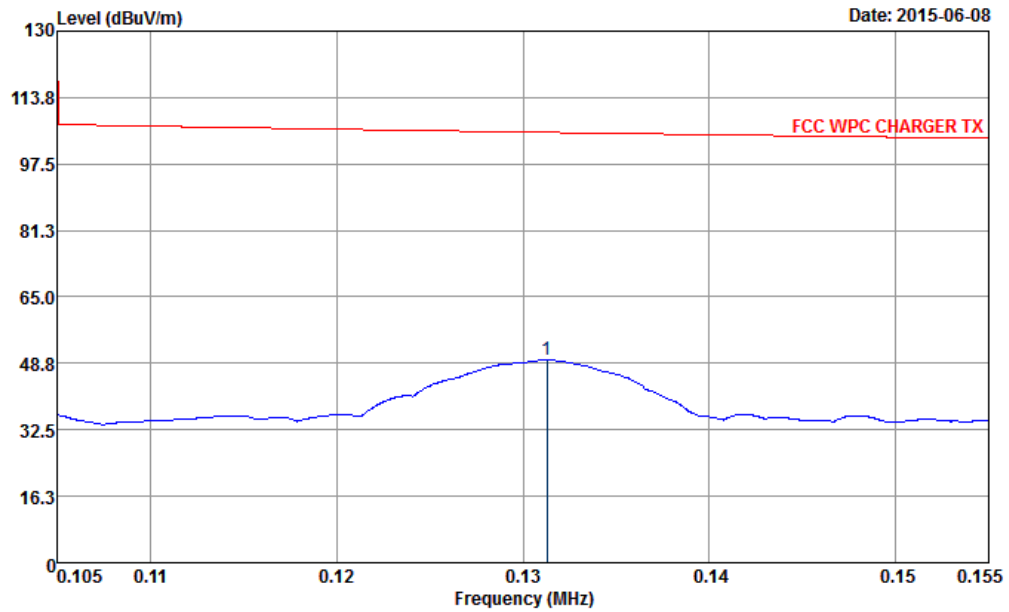
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(V) VERTICAL

1	0.13	45.83	-59.51	105.34	25.58	19.96	0.29	100	267	QP
---	------	-------	--------	--------	-------	-------	------	-----	-----	----



<Battery at 50% Charge>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

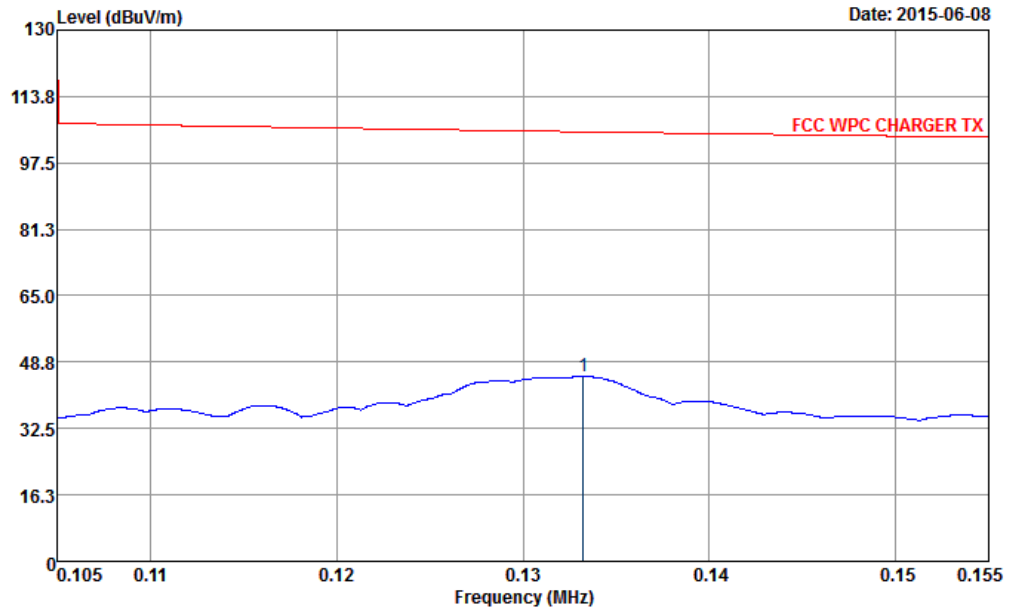


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(H) HORIZONTAL

1	0.13	49.52	-55.72	105.24	29.29	19.94	0.29	100	0	QP
---	------	-------	--------	--------	-------	-------	------	-----	---	----



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



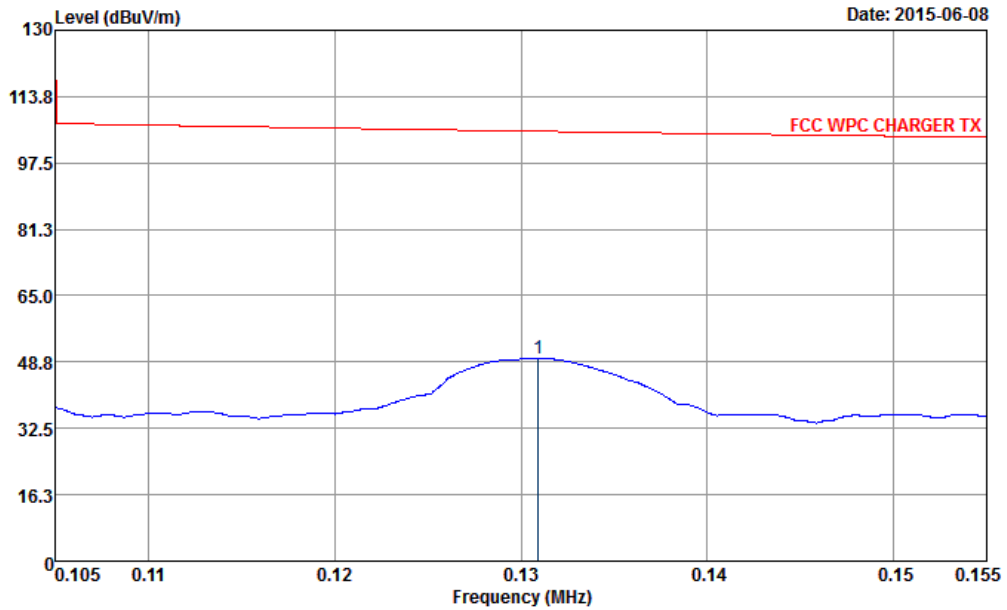
Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(V) VERTICAL

Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	A/Pos	T/Pos	Remark	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	0.13	45.22	-59.89	105.11	24.97	19.96	0.29	100	244 QP



<Battery Near 100% Charge>

Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WPC		

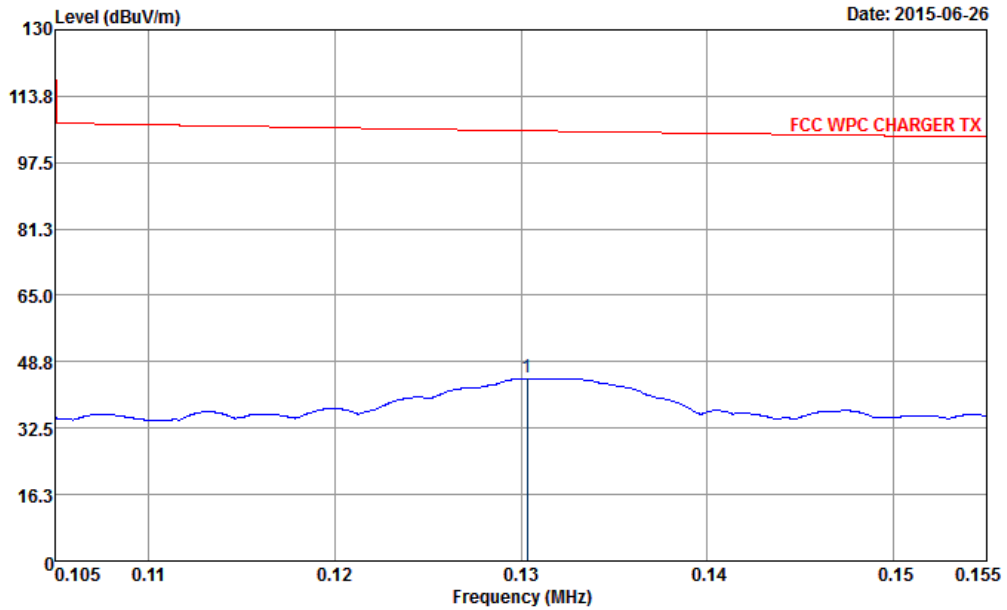


Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(H) HORIZONTAL

1	0.13	49.64	-55.62	105.26	29.41	19.94	0.29	100	0	QP
---	------	-------	--------	--------	-------	-------	------	-----	---	----



Test Mode :	Mode 1	Temperature :	21~23°C
Test Engineer :	Eric Shih	Relative Humidity :	48~50%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WPC		



Site : 03CH07-HY
 Condition : FCC WPC CHARGER TX 3m LOOP_ANT_140728(V) VERTICAL

1	0.13	44.73	-60.57	105.30	24.48	19.96	0.29	100	236	QP
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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. 09, 2014	Jun. 03, 2015~ Jun. 04, 2015	Jun. 08, 2015	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz - 2.75GHz	Dec. 01, 2014	May 27, 2015	Nov. 30, 2015	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz-30MHz	Dec. 02, 2014	May 27, 2015	Dec. 01, 2015	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 27, 2015	N/A	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz-30MHz	Dec. 08, 2014	May 27, 2015	Dec. 07, 2015	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2015	May 27, 2015	Jan. 01, 2016	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Sep. 27, 2014	Jun. 08, 2015 ~ Jun. 26, 2015	Sep. 26, 2015	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz-30 MHz	Jul. 28, 2014	Jun. 08, 2015 ~ Jun. 26, 2015	Jul. 27, 2015	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1000MHz	Mar. 12, 2015	Jun. 08, 2015 ~ Jun. 26, 2015	Mar. 11, 2016	Radiation (03CH07-HY)
Signal Analyzer	Rohde & Schwarz	FSV 30	101749	10Hz-30GHz	Mar. 10, 2015	Jun. 08, 2015 ~ Jun. 26, 2015	Mar. 09, 2016	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m-4m	N/A	Jun. 08, 2015 ~ Jun. 26, 2015	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0-360 degree	N/A	Jun. 08, 2015 ~ Jun. 26, 2015	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% ($U = 2Uc(y)$)	5.2
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