FCC EMI TEST REPORT

Equipment	**:**	**Headset**
Model Name	**:**	**2Q6P100**
Applicant	**:**	**HTC Corporation** **No.88, Sec. 3, Zhongxing Rd., Xindian Dist., New Taipei City 231, Taiwan (R.O.C.)**
Manufacturer	**:**	**HTC Corporation** **No.23, Xinghua Rd., Taoyuan District, Taoyuan City, Taiwan 330**
Standard	**:**	**FCC 47 CFR FCC Part 15 Subpart B**

The product was received on Jan. 22, 2019 and testing was started from Feb. 19, 2019 and completed on Mar. 15, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Jones Tsai

Approved by: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FC912242	01	Initial issue of report	Mar. 29, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.107	AC Conducted Emission	Pass	Under limit 14.71 dB at 3.338 MHz
3.2	15.109	Radiated Emission	Pass	Under limit 3.08 dB at 144.210 MHz for Quasi-Peak

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Louis Wu

Report Producer: Maggie Chiang

1. General Description

1.1. Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac, Wi-Fi 5GHz 802.11a/n/ac, and 2.4GHz Proprietary Radio

Product Specification subjective to this standard	
Antenna Type	WLAN: <Ant. 1>: PCB Antenna <Ant. 2>: PCB Antenna Bluetooth: PCB Antenna 2.4GHz Proprietary Radio: PCB Antenna

1.2. Modification of EUT

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

1.3. Test Location

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	CO05-HY

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH10-HY

FCC Designation No. TW1093 and TW1098

1.4. Applicable Standards

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

- FCC 47 CFR FCC Part 15 Subpart B
- ANSI C63.4-2014

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

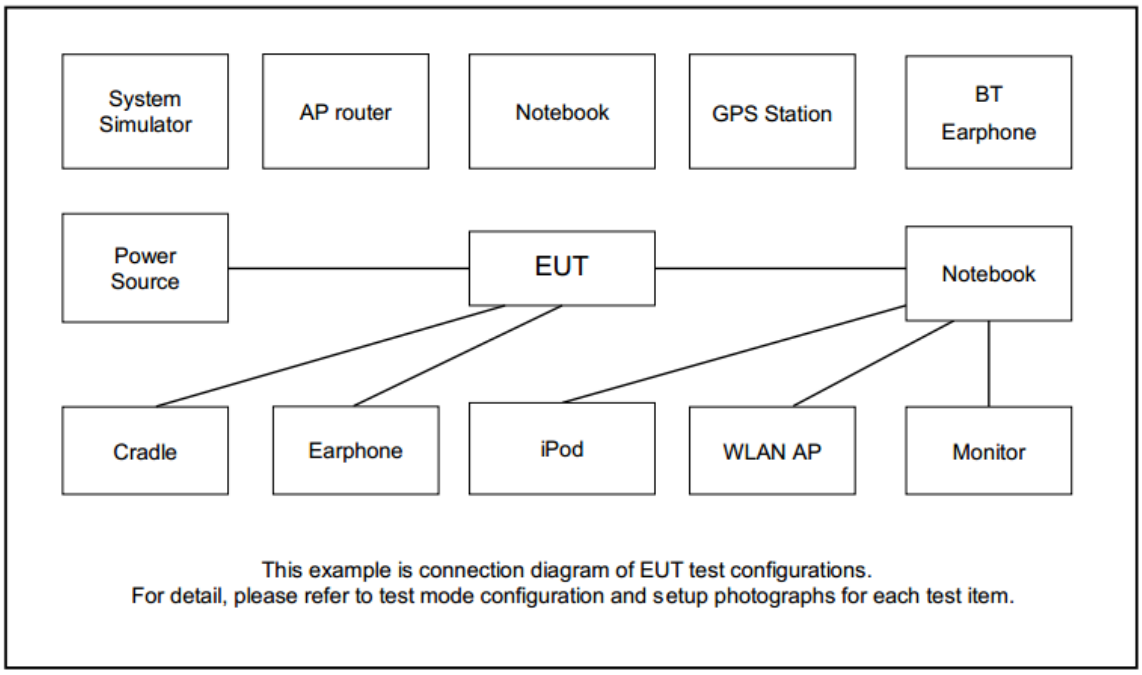
2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Idle + Bluetooth Idle + MPEG4 (Color Bar) + Speaker + Controller Power on (2.4GHz RF Link) + USB Cable 1 (Charging from Adapter) Mode 2 : WLAN (2.4GHz) Idle + Bluetooth Idle + H-Pattern + Earphone + Controller Power off (2.4GHz RF Idle) + USB Cable 1 (Data Link with Notebook) Mode 3 : WLAN (2.4GHz) Idle + Bluetooth Idle + MPEG4 (Color Bar) + Speaker + Controller Power on (2.4GHz RF Link) + USB Cable 2 (Charging from Adapter) Mode 4 : WLAN (2.4GHz) Idle + Bluetooth Idle + MPEG4 (Color Bar) + Speaker + Controller Power on (2.4GHz RF Link) + USB Cable 2 (Data Link with Notebook)
Radiated Emissions	Mode 1 : WLAN (2.4GHz) Idle + Bluetooth Idle + MPEG4 (Color Bar) + Speaker + Controller Power on (2.4GHz RF Link) + USB Cable 1 (Charging from Adapter) Mode 2 : WLAN (2.4GHz) Idle + Bluetooth Idle + H-Pattern + Earphone + Controller Power off (2.4GHz RF Idle) + USB Cable 1 (Data Link with Notebook) Mode 3 : WLAN (2.4GHz) Idle + Bluetooth Idle + H-Pattern + Earphone + Controller Power off (2.4GHz RF Idle) + USB Cable 2 (Charging from Adapter) Mode 4 : WLAN (2.4GHz) Idle + Bluetooth Idle + H-Pattern + Earphone + Controller Power off (2.4GHz RF Idle) + USB Cable 2 (Data Link with Notebook)
Remark: 1. The worst case of AC is mode 1; only the test data of this mode was reported. 2. The worst case of RE is mode 2; only the test data of this mode was reported. 3. Data Link with Notebook means data application transferred mode between EUT and Notebook.	

2.2. Connection Diagram of Test System



2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
2.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
3.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A
4.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
5.	Notebook	ASUS	P2430U	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	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
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
8.	Controller	hTC	2Q6M200	N/A	N/A	N/A
9.	Mobile Phone	SONY	N/A	N/A	N/A	N/A
10.	Mobile Phone	ASUS	X00QD	FCC DoC	N/A	N/A

2.4. EUT Operation Test Setup

The EUT was attached to the Mobile Phone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Data application is transferred between Laptop and EUT via USB cable.
2. Execute Video player to play MPEG4 (Color Bar) files.
3. Execute “H Pattern” to show H Pattern on the Monitor.
4. The EUT link with VIVE Controller via “2.4GHz Proprietary Radio” function.

3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 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.

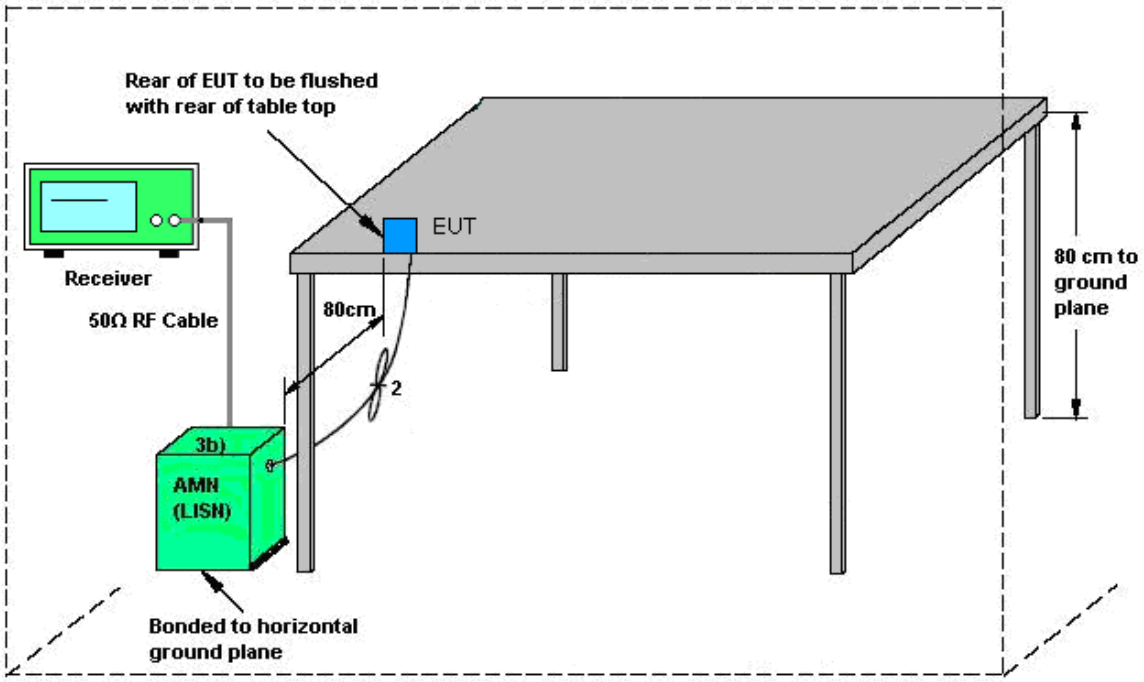
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 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 (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.1.4 Test Setup



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

3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.2.2. Measuring Instruments

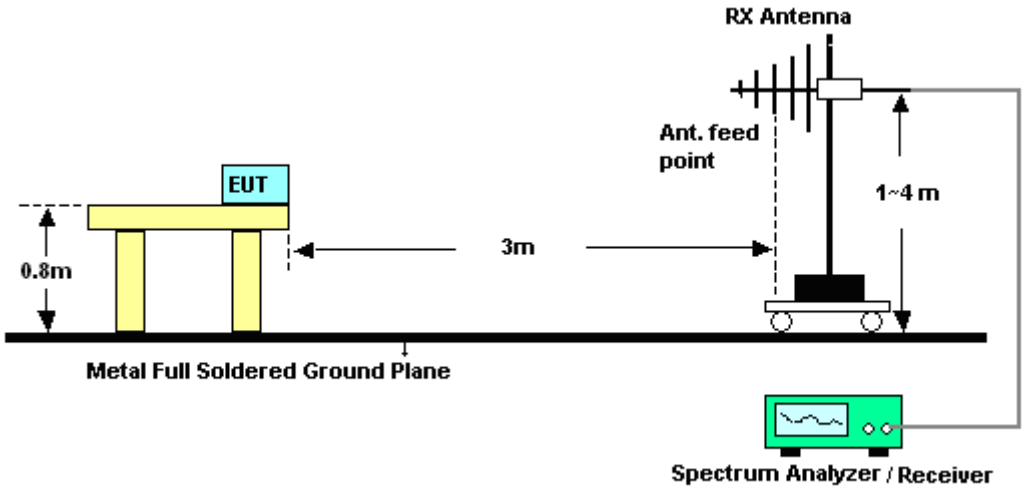
Refer a test equipment and calibration data table in this test report.

3.2.3. Test Procedures

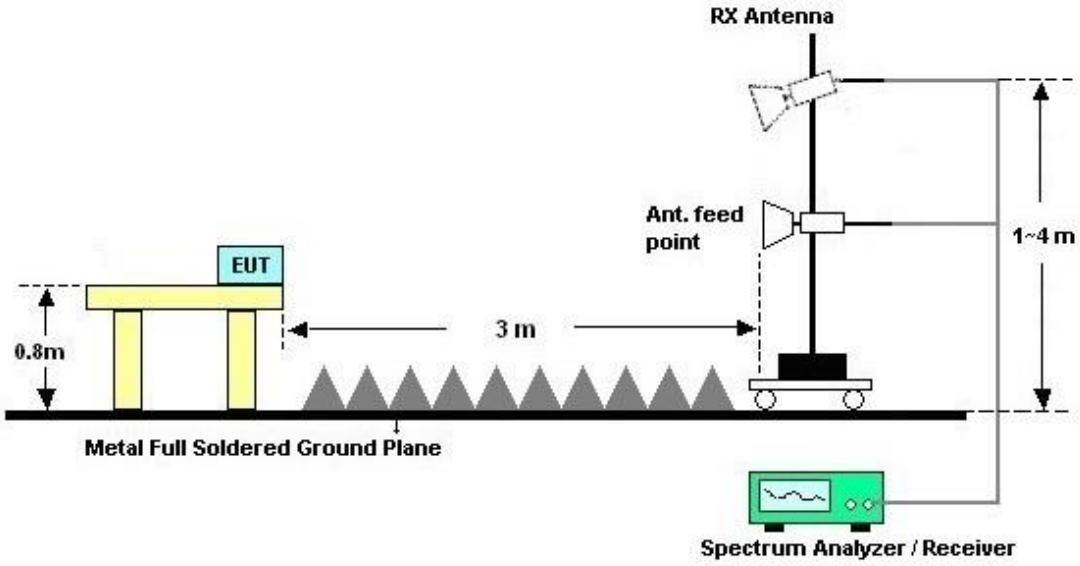
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dBμV/m) = 20 log Emission level (μV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.2.5. Test Result of Radiated Emission

Please refer to Appendix B.

4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Feb. 19, 2019~ Mar. 14, 2019	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Nov. 12, 2018	Feb. 19, 2019~ Mar. 14, 2019	Nov. 11, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 14, 2018	Feb. 19, 2019~ Mar. 14, 2019	Nov. 13, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 09, 2018	Feb. 19, 2019~ Mar. 14, 2019	Nov. 08, 2019	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Feb. 19, 2019~ Mar. 14, 2019	N/A	Conduction (CO05-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Sep. 14, 2018	Feb. 19, 2019~ Mar. 14, 2019	Sep. 13, 2019	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Nov. 08, 2018	Feb. 19, 2019~ Mar. 14, 2019	Nov. 07, 2019	Conduction (CO05-HY)
ISN	TESEQ	ISN T8-Cat6	38909	N/A	Jan. 30, 2019	Feb. 19, 2019~ Mar. 14, 2019	Jan. 29, 2020	Conduction (CO05-HY)
ISN Cable	Woken	RG-400	N/A	N/A	Dec. 31, 2018	Feb. 19, 2019~ Mar. 14, 2019	Dec. 30, 2019	Conduction (CO05-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Oct. 23, 2018	Feb. 20, 2019~ Mar. 15, 2019	Oct. 22, 2019	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35413&02	30MHz~1GHz	Feb. 12, 2019	Feb. 20, 2019~ Mar. 15, 2019	Feb. 11, 2020	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1325	1GHz ~ 18GHz	Oct. 02, 2018	Feb. 20, 2019~ Mar. 15, 2019	Oct. 01, 2019	Radiation (03CH10-HY)
Preamplifier	Jet-Power	JAP00101800-30-10P	160118550004	1GHz~18GHz	Apr. 17, 2018	Feb. 20, 2019~ Mar. 15, 2019	Apr. 16, 2019	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz ~ 44GHz	Nov. 02, 2018	Feb. 20, 2019~ Mar. 15, 2019	Nov. 01, 2019	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Feb. 20, 2019~ Mar. 15, 2019	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Feb. 20, 2019~ Mar. 15, 2019	N/A	Radiation (03CH10-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Feb. 20, 2019~ Mar. 15, 2019	N/A	Radiation (03CH10-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20Hz ~ 8.4GHz	Nov. 01, 2018	Feb. 20, 2019~ Mar. 15, 2019	Oct. 31, 2019	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4PE, MY11693/4PE, MY2855/2	30M-1G	Nov. 08, 2018	Feb. 20, 2019~ Mar. 15, 2019	Nov. 07, 2019	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4PE, MY11693/4PE, MY2855/2	1G-18G	Nov. 08, 2018	Feb. 20, 2019~ Mar. 15, 2019	Nov. 07, 2019	Radiation (03CH10-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))	**2.2**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.6**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.9**

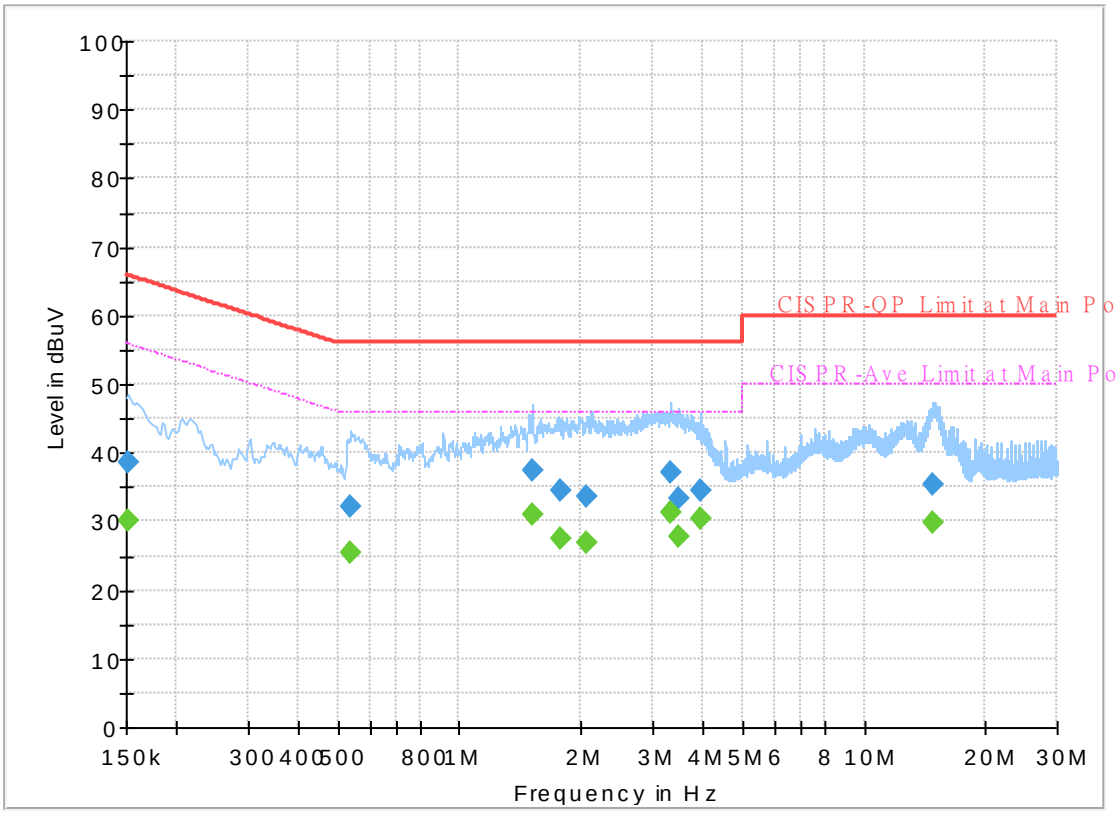
Appendix A. AC Conducted Emission Test Results

Test Engineer :	Jimmy Chang	**Temperature :**	24~26℃
		Relative Humidity :	51~53%

EUT Information

Report NO :	912242
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



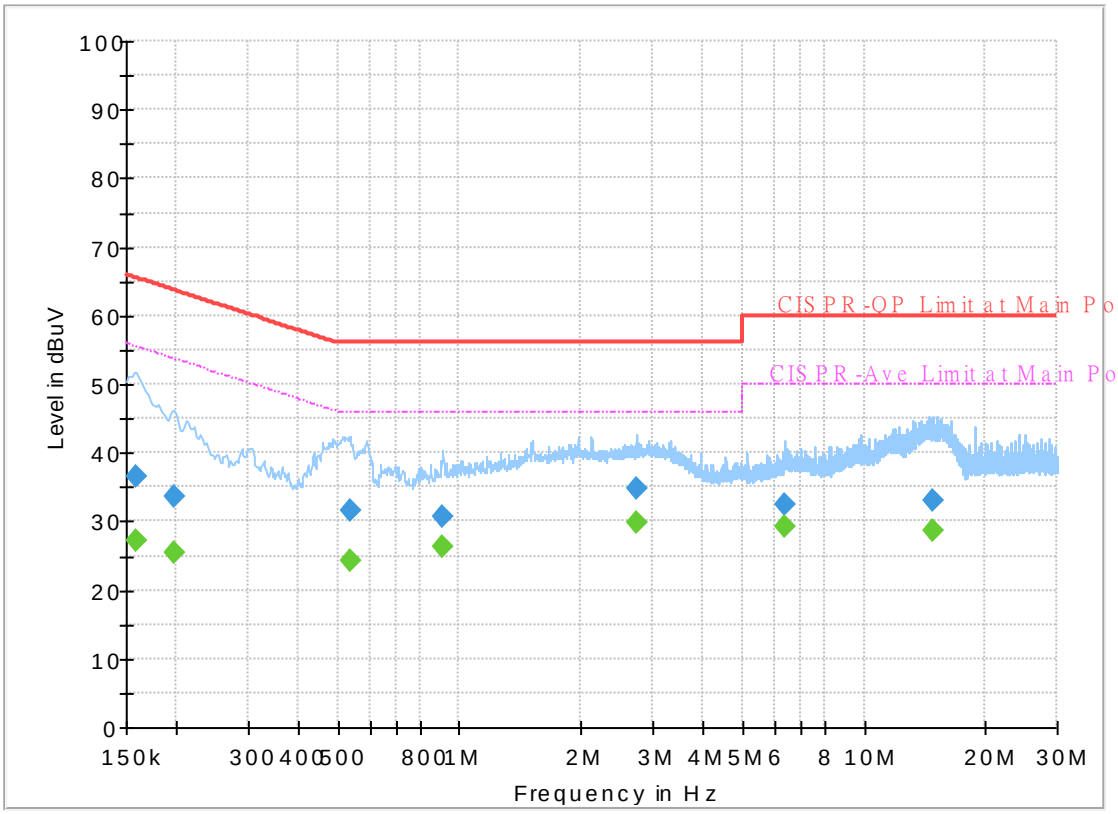
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	30.01	55.88	25.87	L1	OFF	19.5
0.152250	38.61	---	65.88	27.27	L1	OFF	19.5
0.539250	---	25.44	46.00	20.56	L1	OFF	19.5
0.539250	32.05	---	56.00	23.95	L1	OFF	19.5
1.515750	---	31.10	46.00	14.90	L1	OFF	19.6
1.515750	37.35	---	56.00	18.65	L1	OFF	19.6
1.788000	---	27.51	46.00	18.49	L1	OFF	19.6
1.788000	34.56	---	56.00	21.44	L1	OFF	19.6
2.062500	---	26.91	46.00	19.09	L1	OFF	19.4
2.062500	33.55	---	56.00	22.45	L1	OFF	19.4
3.338250	---	31.29	46.00	14.71	L1	OFF	19.7
3.338250	37.08	---	56.00	18.92	L1	OFF	19.7
3.493500	---	27.72	46.00	18.28	L1	OFF	19.7
3.493500	33.27	---	56.00	22.73	L1	OFF	19.7
3.943500	---	30.45	46.00	15.55	L1	OFF	19.7
3.943500	34.47	---	56.00	21.53	L1	OFF	19.7
14.806500	---	29.78	50.00	20.22	L1	OFF	20.1
14.806500	35.24	---	60.00	24.76	L1	OFF	20.1

EUT Information

Report NO :	912242
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

Full Spectrum

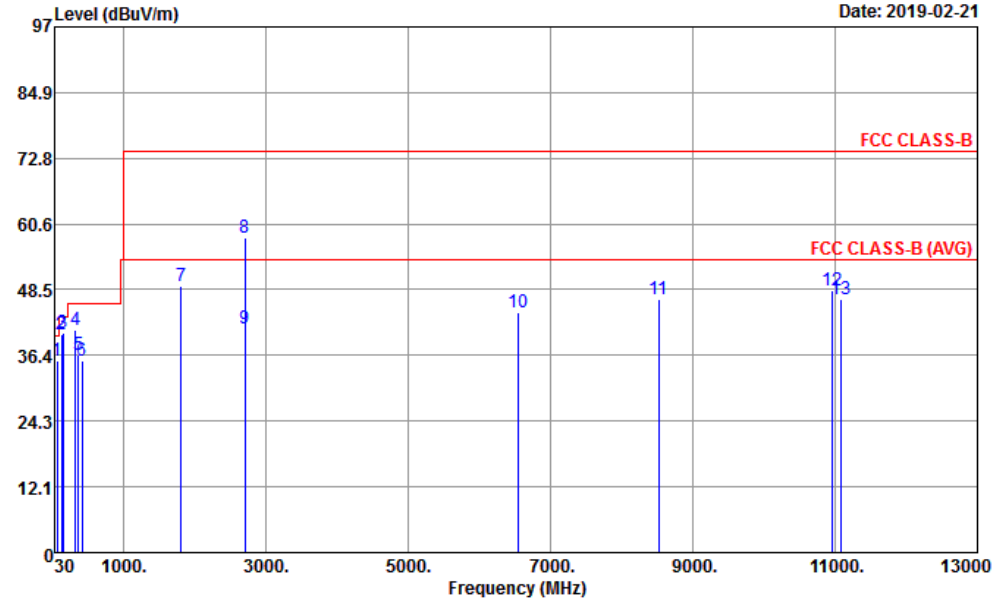


Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	27.27	55.52	28.25	N	OFF	19.5
0.159000	36.54	---	65.52	28.98	N	OFF	19.5
0.197250	---	25.37	53.73	28.36	N	OFF	19.5
0.197250	33.59	---	63.73	30.14	N	OFF	19.5
0.537000	---	24.16	46.00	21.84	N	OFF	19.5
0.537000	31.69	---	56.00	24.31	N	OFF	19.5
0.906000	---	26.37	46.00	19.63	N	OFF	19.6
0.906000	30.65	---	56.00	25.35	N	OFF	19.6
2.728500	---	29.84	46.00	16.16	N	OFF	19.6
2.728500	34.84	---	56.00	21.16	N	OFF	19.6
6.371250	---	29.28	50.00	20.72	N	OFF	19.8
6.371250	32.48	---	60.00	27.52	N	OFF	19.8
14.815500	---	28.55	50.00	21.45	N	OFF	20.1
14.815500	32.90	---	60.00	27.10	N	OFF	20.1

Appendix B. Radiated Emission Test Result

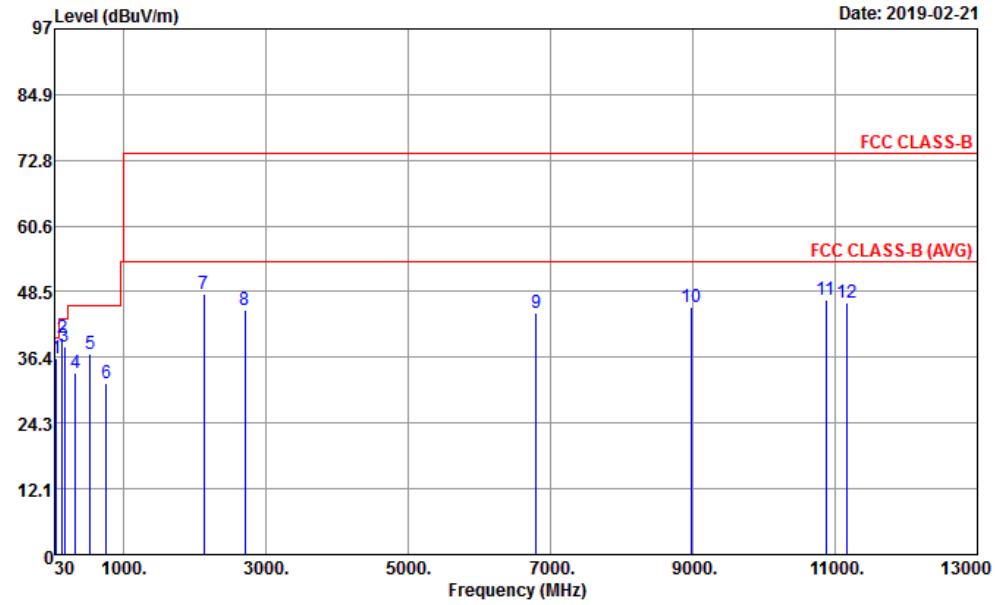
Test Engineer :	Daniel Lee	**Temperature :**	20~23°C
		Relative Humidity :	50~53%
Test Distance :	3m	**Polarization :**	Horizontal



Site : 03CH10-HY
Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL
Project : 912242
Power : From System
Mode : 2
: NB to SD

	Freq	Level	Over Limit	Limit Line	Read 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	62.40	35.46	-4.54	40.00	55.64	11.78	0.77	32.73	---	---	Peak
2	127.74	40.25	-3.25	43.50	54.16	17.53	1.21	32.65	250	20	QP
3	144.21	40.42	-3.08	43.50	54.46	17.28	1.31	32.63	208	59	QP
4	321.00	41.01	-4.99	46.00	52.22	19.44	1.96	32.61	---	---	Peak
5	367.20	36.49	-9.51	46.00	46.28	20.74	2.09	32.62	---	---	Peak
6	421.10	35.48	-10.52	46.00	43.17	22.60	2.33	32.62	---	---	Peak
7	1804.00	49.07	-24.93	74.00	80.12	25.10	5.55	61.70	---	---	Peak
8	2708.00	58.15	-15.85	74.00	85.10	27.63	7.26	61.84	105	196	Peak
9	2708.00	41.25	-12.75	54.00	68.20	27.63	7.26	61.84	105	196	Average
10	6548.00	44.30	-29.70	74.00	62.89	34.30	10.17	63.06	---	---	Peak
11	8522.00	46.69	-27.31	74.00	62.45	36.89	11.48	64.13	---	---	Peak
12	10962.00	48.41	-25.59	74.00	59.01	40.06	13.19	63.85	---	---	Peak
13	11074.00	46.62	-27.38	74.00	57.42	39.73	13.28	63.81	---	---	Peak

Test Engineer :	Daniel Lee	Temperature :	20~23°C
		Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Vertical



Site : 03CH10-HY
Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL
Project : 912242
Power : From System
Mode : 2
: NB to SD

	Freq	Level	Over Limit	Limit Line	Read 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	54.57	36.17	-3.83	40.00	55.70	12.53	0.68	32.74	---	---	Peak
2	143.13	40.03	-3.47	43.50	53.98	17.39	1.30	32.64	100	138	QP
3	164.73	38.33	-5.17	43.50	53.56	16.03	1.36	32.62	---	---	Peak
4	321.70	33.39	-12.61	46.00	44.57	19.47	1.96	32.61	---	---	Peak
5	531.70	36.92	-9.08	46.00	42.98	24.00	2.61	32.67	---	---	Peak
6	756.40	31.50	-14.50	46.00	32.48	28.30	3.18	32.46	---	---	Peak
7	2130.00	48.14	-25.86	74.00	76.39	27.16	6.32	61.73	100	0	Peak
8	2706.00	45.07	-28.93	74.00	72.03	27.62	7.26	61.84	---	---	Peak
9	6798.00	44.47	-29.53	74.00	62.75	34.59	10.49	63.36	---	---	Peak
10	8982.00	45.67	-28.33	74.00	61.15	37.36	11.84	64.68	---	---	Peak
11	10866.00	47.01	-26.99	74.00	57.88	39.97	13.12	63.96	---	---	Peak
12	11172.00	46.59	-27.41	74.00	57.61	39.46	13.35	63.83	---	---	Peak

———THE END———