



# FCC Test Report

**APPLICANT** : Sony Mobile Communications Inc.  
**EQUIPMENT** : GSM/WCDMA/LTE Phone+Bluetooth, DTS/UNII a/b/g/n and NFC  
**BRAND NAME** : Sony  
**FCC ID** : PY7-PM0961  
**STANDARD** : FCC 47 CFR FCC Part 15 Subpart B  
**CLASSIFICATION** : FCC CLASS B PERSONAL COMPUTERS AND PERIPHERALS

The product was received on Jan. 22, 2016 and testing was completed on Feb. 09, 2016. We, SPORTON INTERNATIONAL INC., 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 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: Louis Wu / Manager

Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.



# TABLE OF CONTENTS

**REVISION HISTORY..... 3**

**SUMMARY OF TEST RESULT ..... 4**

**1. GENERAL DESCRIPTION ..... 5**

    1.1. Applicant..... 5

    1.2. Manufacturer ..... 5

    1.3. Product Feature of Equipment Under Test ..... 5

    1.4. Modification of EUT ..... 5

    1.5. Test Location ..... 6

    1.6. Applicable Standards ..... 6

**2. TEST CONFIGURATION OF EQUIPMENT UNDER TEST ..... 7**

    2.1. Test Mode ..... 7

    2.2. Connection Diagram of Test System ..... 8

    2.3. Support Unit used in test configuration and system ..... 9

    2.4. EUT Operation Test Setup ..... 9

**3. TEST RESULT ..... 10**

    3.1. Test of AC Conducted Emission Measurement ..... 10

    3.2. Test of Radiated Emission Measurement ..... 19

**4. LIST OF MEASURING EQUIPMENT ..... 27**

**5. UNCERTAINTY OF EVALUATION ..... 28**





### SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	Under limit 7.80 dB at 0.158 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.60 dB at 253.290 MHz for Quasi-Peak



# 1. General Description

## 1.1. Applicant

Sony Mobile Communications Inc.  
4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

## 1.2. Manufacturer

Sony Mobile Communications Inc.  
4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

## 1.3. Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n, NFC, and GPS

Product Specification subjective to this standard	
Antenna Type	WWAN: Coupling type (LDS) Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna GPS: PIFA Antenna NFC: Loop Antenna

EUT Information List				
IMEI	HW Version	SW Version	S/N	Performed Test Item
004402455890685	A	37.0.A.0.19	RQ3000DQ3N	Radiated Spurious Emission Conducted Emission

Accessory List	
Earphone	Model No. : MH410c
	Type No. : AG-1100
	S/N: 13511E570075F40
USB Cable	Model No. : UCB16
	Type No. : AI-0142
	S/N : N/A

**Note:**

- Above EUT list and accessory list used are electrically identical per declared by manufacturer.
- Above the accessories list are used to exercise the EUT during test.
- For other wireless features of this EUT, test report will be issued separately.

## 1.4. Modification of EUT

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



### 1.5. Test Location

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.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	CO05-HY	03CH06-HY

### 1.6. 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:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. For FCC 15 Subpart B - Unintentional Radiators, device supporting USB interface or similar peripherals (defined as the Section 15.3 (r) Peripheral device) acting as a peripheral for personal computers shall be authorized as "The Class B personal computers and peripherals" per the Section 15.101 (a) Equipment authorization of unintentional radiators.
3. For other Unintentional Radiators features of this EUT, test reports are be issued separately.  
Per the Note of the Section 15.101, when device supports features (USB, FM Radio, digital devices...etc) more than one category of authorization, type of authorization shall be appropriately chosen for FCC 15B compliance rule, and the Section 15.101 (b), only those receivers that operate (tune) within the frequency range of 30-960 MHz, CB receivers and radar detectors are subject to the authorizations shown in paragraph (a) of the Section 15.101. However, receivers indicated as being subject to Declaration of Conformity that are contained within a transceiver, the transmitter portion of which is subject to certification, shall be authorized under the verification procedure.



## 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 (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

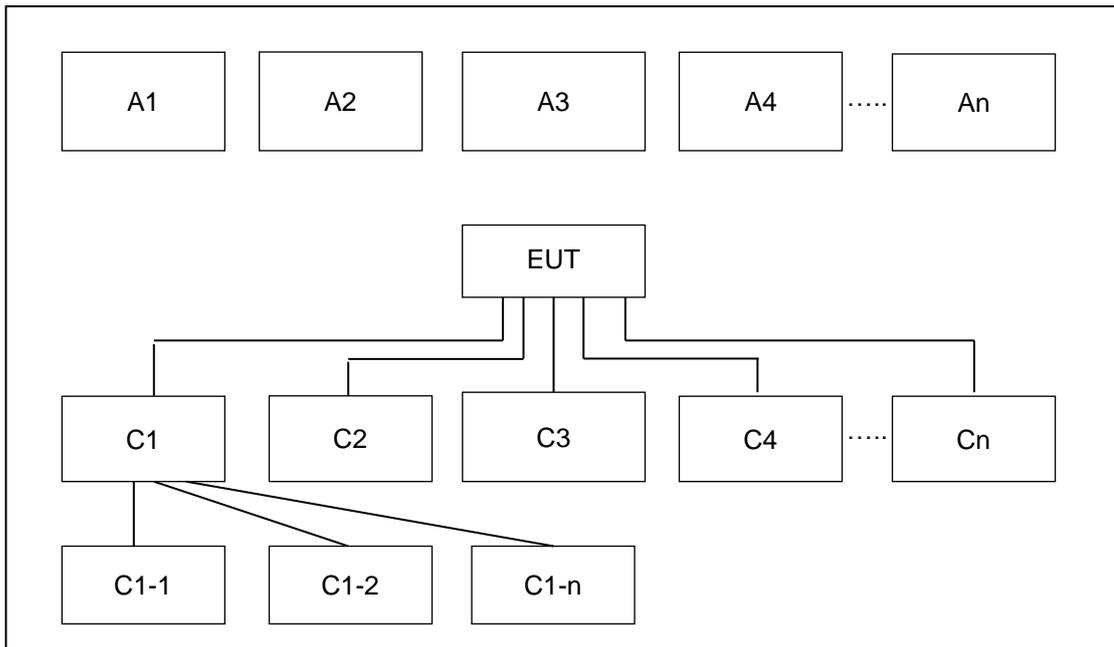
Item	EUT Configuration	Test Condition	
		EMI AC	EMI RE
1.	Data Link with Notebook	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

1. The data application (each file size is greater than 30Mbytes) is continuously transferred between the EUT and Notebook connected via USB cable, while GSM, WLAN, and Bluetooth and GPS idle.
2. After pretest mode 1, 2 and 3, which found mode 1 is the worst case and test frequency above 1GHz of this mode was reported.

**Abbreviations:**

- EMI AC: AC conducted emissions
- EMI RE: EUT radiated emissions

## 2.2. Connection Diagram of Test System



Conduction and Radiation Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	-	-	-	-
A1	Bluetooth Earphone	Bluetooth	X	X	X				
A2	System Simulator	GSM	X	X	X				
A3	GPS Station	GPS	X		X				
A4	WLAN AP	WiFi	X	X	X				
No.	Setup Peripherals	Connection Type	1	2	3	-	-	-	-
C1	Notebook	USB cable	X	X	X				
C1-1	iPod	USB Cable to C1	X	X	X				
C1-2	WLAN AP	RJ-45 Cable to C1	X	X	X				
C2	Earphone	Earphone jack	X	X	X				
C3	SD card	SD I/O interface without cable	X	X	X				



### 2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Sony	SBH20	PY7-RD0010	Unshielded, 0.75m	N/A
5.	WLAN AP	D-Link	DIR-865L	KA2IR865LA1	N/A	Unshielded, 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.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
9.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A

### 2.4. EUT Operation Test Setup

The data application (each file size is greater than 30Mbytes) is continuously transferred between the EUT and Notebook connected via USB cable, while GSM and Bluetooth, WLAN, and GPS idle.



### 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.

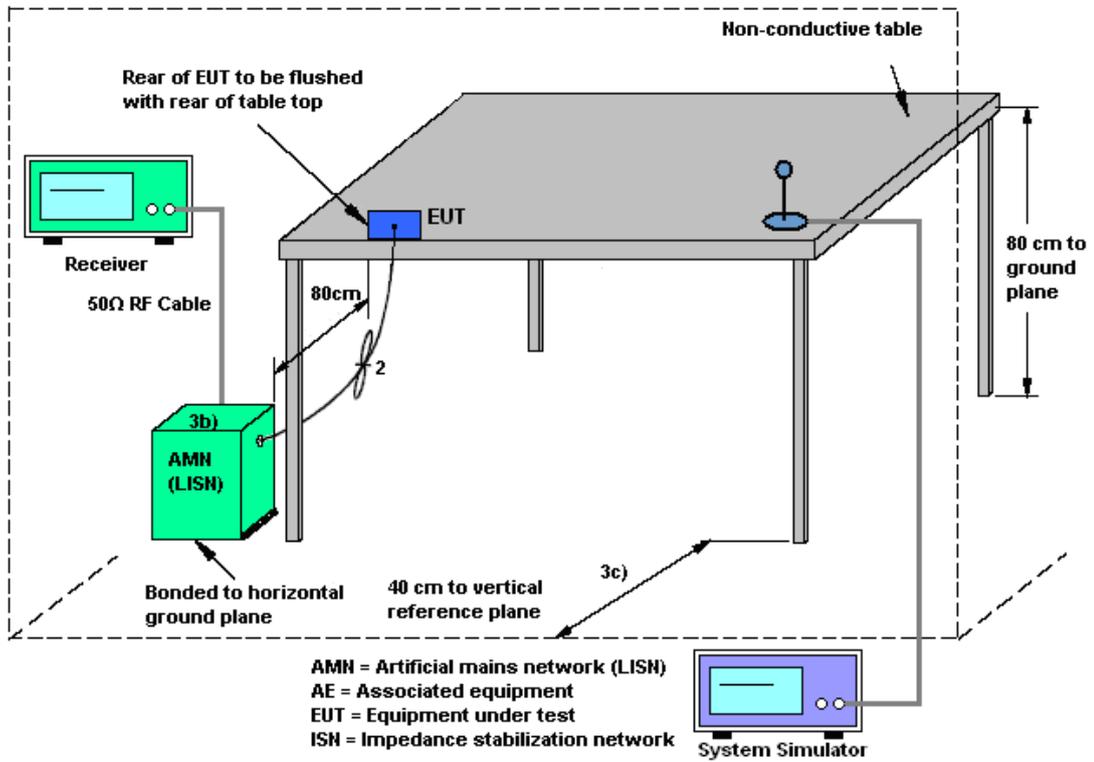
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of 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.

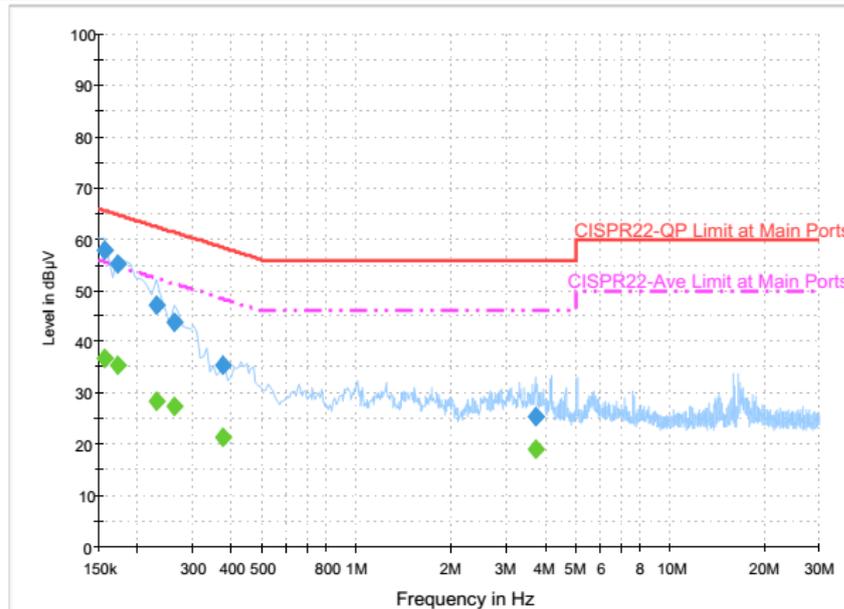
### 3.1.4 Test Setup





### 3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~41%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1		



**Final Result : Quasi-Peak**

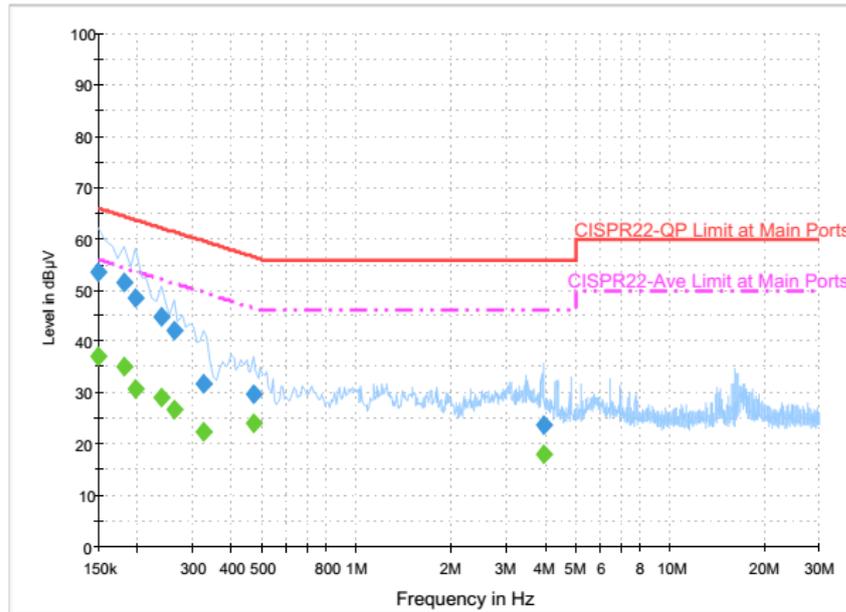
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	57.8	Off	L1	19.6	7.8	65.6
0.174000	55.3	Off	L1	19.6	9.5	64.8
0.230000	47.3	Off	L1	19.6	15.1	62.4
0.262000	43.7	Off	L1	19.6	17.7	61.4
0.374000	35.4	Off	L1	19.6	23.0	58.4
3.718000	25.5	Off	L1	19.7	30.5	56.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	36.6	Off	L1	19.6	19.0	55.6
0.174000	35.5	Off	L1	19.6	19.3	54.8
0.230000	28.5	Off	L1	19.6	23.9	52.4
0.262000	27.3	Off	L1	19.6	24.1	51.4
0.374000	21.4	Off	L1	19.6	27.0	48.4
3.718000	19.2	Off	L1	19.7	26.8	46.0



Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~41%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1		



**Final Result : Quasi-Peak**

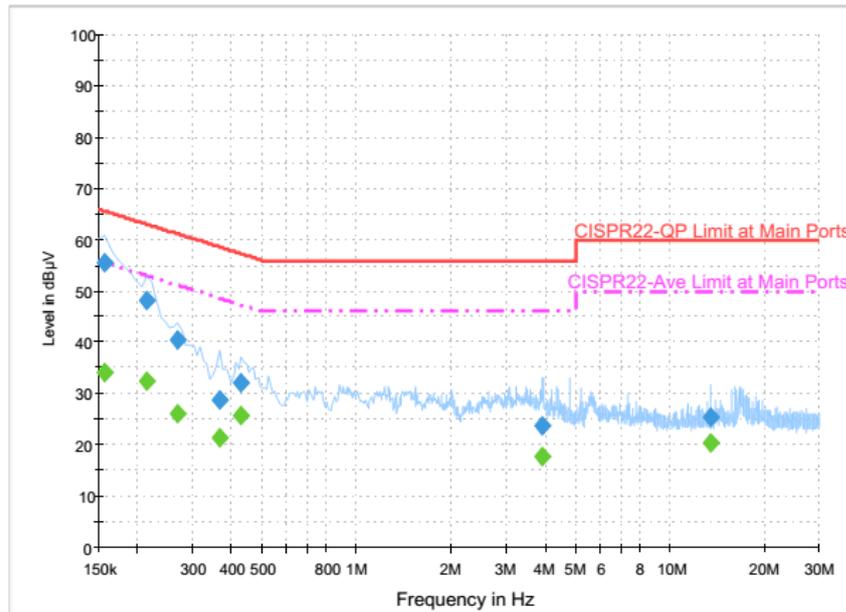
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	53.3	Off	N	19.6	12.7	66.0
0.182000	51.4	Off	N	19.6	13.0	64.4
0.198000	48.4	Off	N	19.7	15.3	63.7
0.238000	44.9	Off	N	19.6	17.3	62.2
0.262000	42.1	Off	N	19.6	19.3	61.4
0.326000	31.7	Off	N	19.6	27.9	59.6
0.470000	29.7	Off	N	19.6	26.8	56.5
3.966000	23.9	Off	N	19.6	32.1	56.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	37.1	Off	N	19.6	18.9	56.0
0.182000	35.2	Off	N	19.6	19.2	54.4
0.198000	30.7	Off	N	19.7	23.0	53.7
0.238000	29.2	Off	N	19.6	23.0	52.2
0.262000	26.7	Off	N	19.6	24.7	51.4
0.326000	22.4	Off	N	19.6	27.2	49.6
0.470000	24.0	Off	N	19.6	22.5	46.5
3.966000	18.2	Off	N	19.6	27.8	46.0



Test Mode :	Mode 2	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~41%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1		



**Final Result : Quasi-Peak**

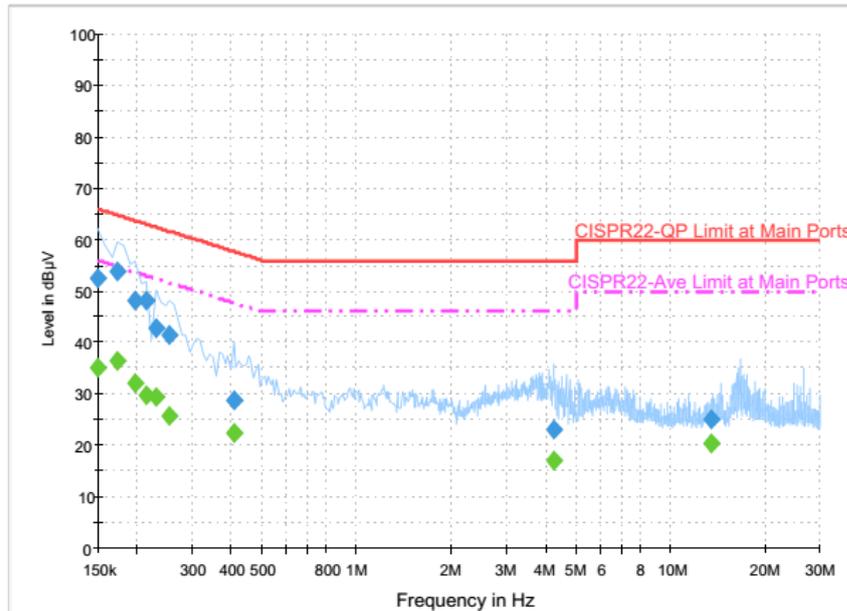
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	55.7	Off	L1	19.6	9.9	65.6
0.214000	48.1	Off	L1	19.6	14.9	63.0
0.270000	40.6	Off	L1	19.6	20.5	61.1
0.366000	28.9	Off	L1	19.6	29.7	58.6
0.430000	32.3	Off	L1	19.6	25.0	57.3
3.918000	23.8	Off	L1	19.7	32.2	56.0
13.558000	25.4	Off	L1	19.8	34.6	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.0	Off	L1	19.6	21.6	55.6
0.214000	32.5	Off	L1	19.6	20.5	53.0
0.270000	26.0	Off	L1	19.6	25.1	51.1
0.366000	21.5	Off	L1	19.6	27.1	48.6
0.430000	25.6	Off	L1	19.6	21.7	47.3
3.918000	17.9	Off	L1	19.7	28.1	46.0
13.558000	20.5	Off	L1	19.8	29.5	50.0



Test Mode :	Mode 2	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~41%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1		

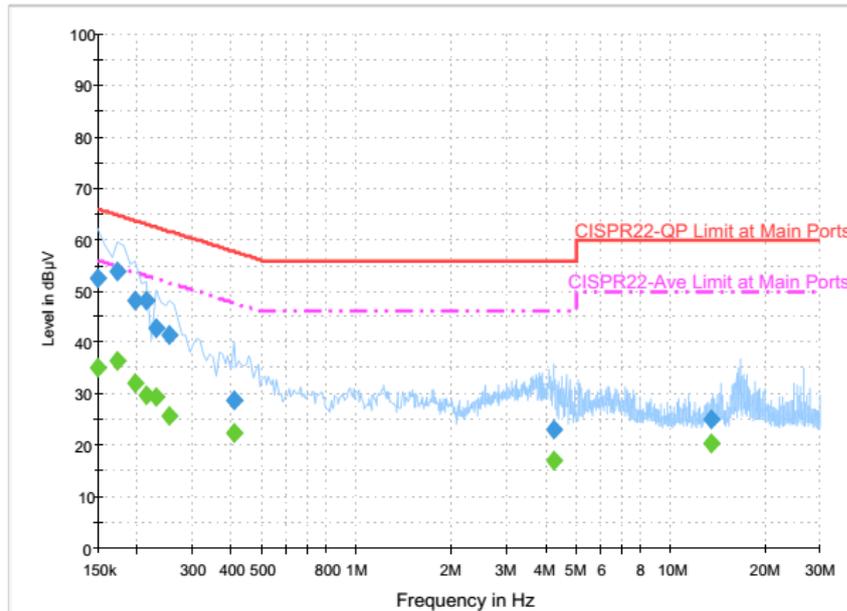


**Final Result : Quasi-Peak**

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	52.4	Off	N	19.6	13.6	66.0
0.174000	53.7	Off	N	19.6	11.1	64.8
0.198000	48.2	Off	N	19.7	15.5	63.7
0.214000	48.1	Off	N	19.6	14.9	63.0
0.230000	42.8	Off	N	19.6	19.6	62.4
0.254000	41.6	Off	N	19.6	20.0	61.6
0.406000	28.7	Off	N	19.6	29.0	57.7
4.246000	23.0	Off	N	19.6	33.0	56.0
13.558000	25.2	Off	N	19.8	34.8	60.0



Test Mode :	Mode 2	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~41%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1		

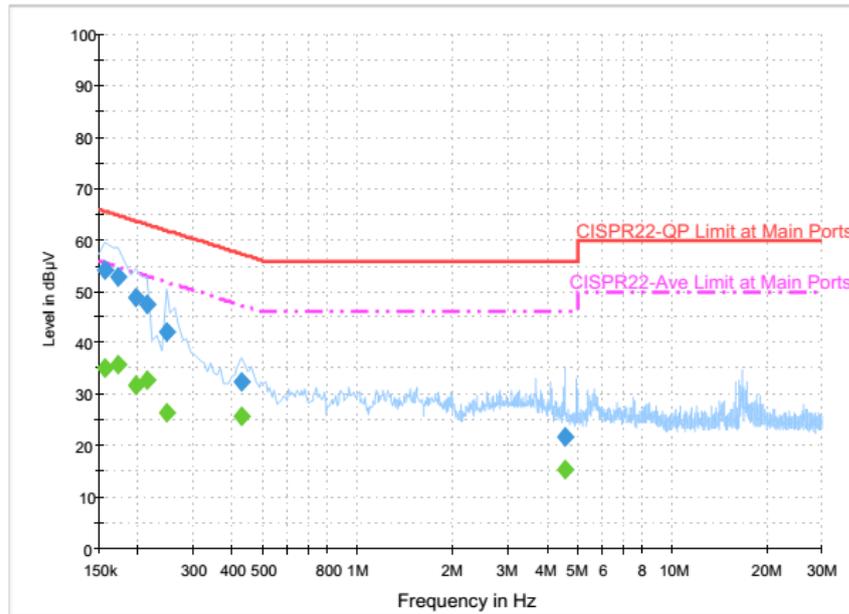


Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	35.3	Off	N	19.6	20.7	56.0
0.174000	36.5	Off	N	19.6	18.3	54.8
0.198000	32.1	Off	N	19.7	21.6	53.7
0.214000	29.9	Off	N	19.6	23.1	53.0
0.230000	29.3	Off	N	19.6	23.1	52.4
0.254000	25.9	Off	N	19.6	25.7	51.6
0.406000	22.4	Off	N	19.6	25.3	47.7
4.246000	17.1	Off	N	19.6	28.9	46.0
13.558000	20.3	Off	N	19.8	29.7	50.0



Test Mode :	Mode 3	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~41%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 2		



**Final Result : Quasi-Peak**

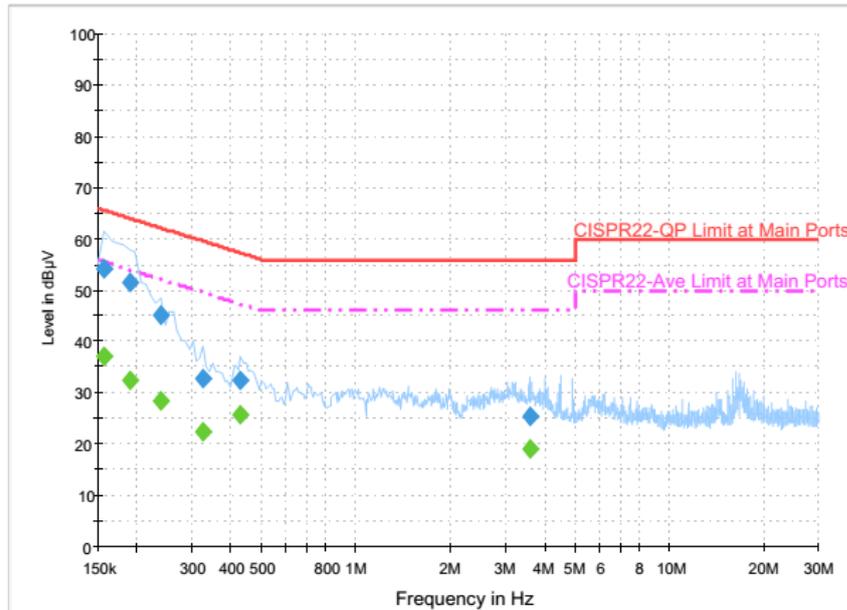
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	54.1	Off	L1	19.6	11.5	65.6
0.174000	52.8	Off	L1	19.6	12.0	64.8
0.198000	48.9	Off	L1	19.6	14.8	63.7
0.214000	47.5	Off	L1	19.6	15.5	63.0
0.246000	42.2	Off	L1	19.6	19.7	61.9
0.430000	32.3	Off	L1	19.6	25.0	57.3
4.590000	21.6	Off	L1	19.7	34.4	56.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	35.2	Off	L1	19.6	20.4	55.6
0.174000	35.9	Off	L1	19.6	18.9	54.8
0.198000	31.9	Off	L1	19.6	21.8	53.7
0.214000	32.8	Off	L1	19.6	20.2	53.0
0.246000	26.3	Off	L1	19.6	25.6	51.9
0.430000	25.8	Off	L1	19.6	21.5	47.3
4.590000	15.5	Off	L1	19.7	30.5	46.0



Test Mode :	Mode 3	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	40~41%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 2		



**Final Result : Quasi-Peak**

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	54.1	Off	N	19.6	11.5	65.6
0.190000	51.6	Off	N	19.6	12.4	64.0
0.238000	45.2	Off	N	19.6	17.0	62.2
0.326000	32.9	Off	N	19.6	26.7	59.6
0.430000	32.4	Off	N	19.6	24.9	57.3
3.598000	25.4	Off	N	19.6	30.6	56.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	37.2	Off	N	19.6	18.4	55.6
0.190000	32.5	Off	N	19.6	21.5	54.0
0.238000	28.4	Off	N	19.6	23.8	52.2
0.326000	22.5	Off	N	19.6	27.1	49.6
0.430000	25.8	Off	N	19.6	21.5	47.3
3.598000	19.1	Off	N	19.6	26.9	46.0



### 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

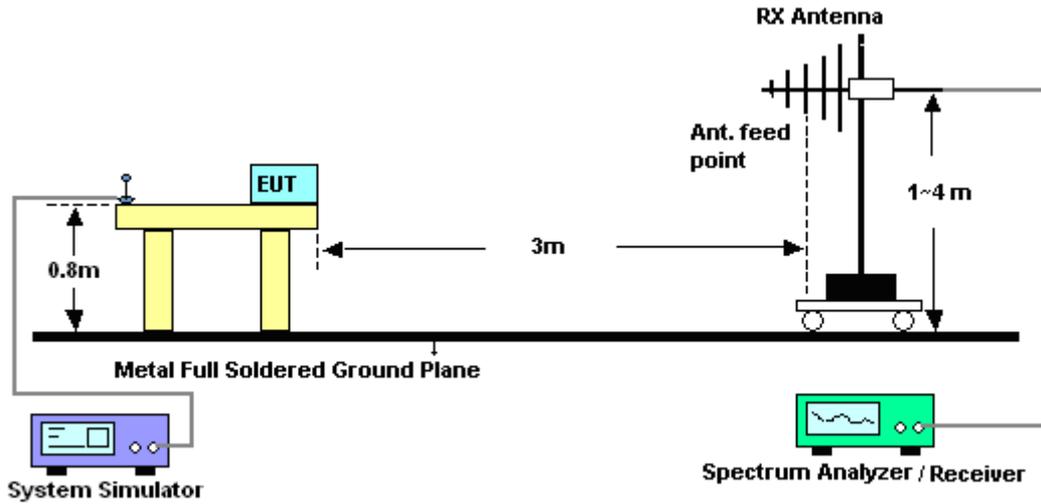
The measuring equipment is listed in the section 4 of this test report.

#### 3.2.3. Test Procedures

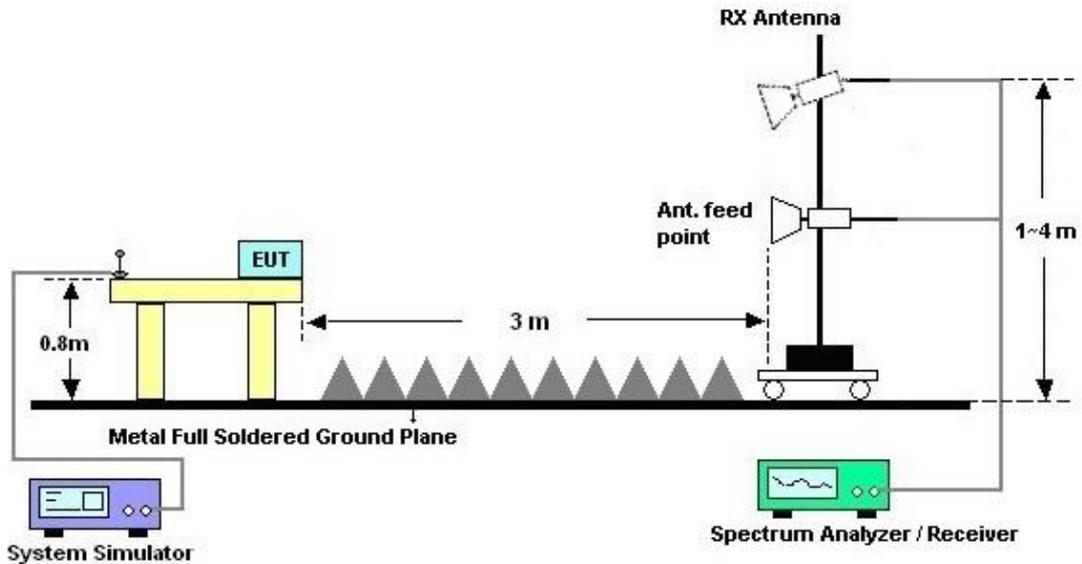
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its 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



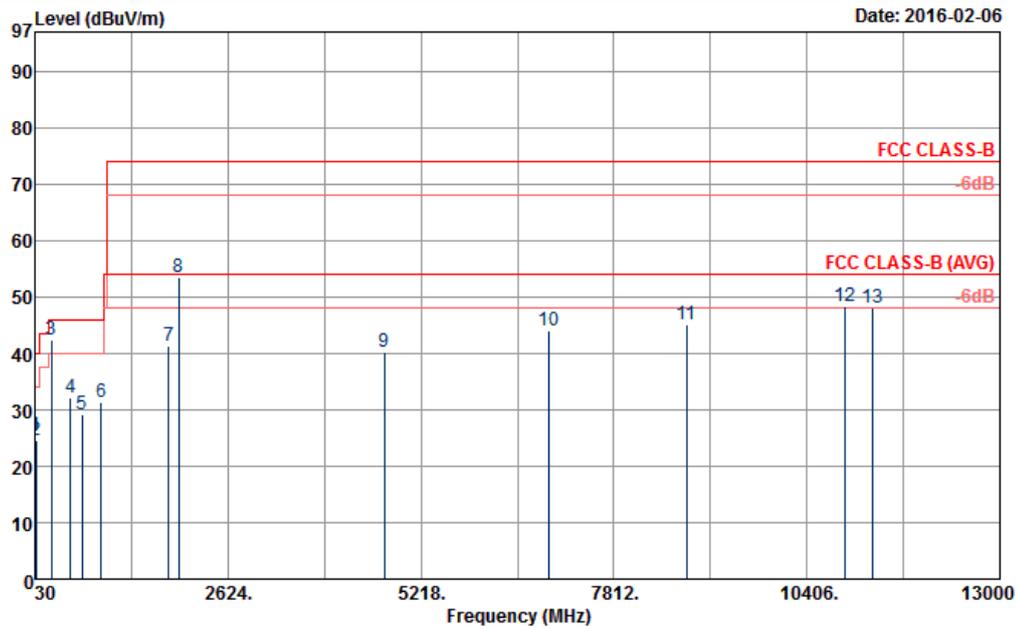
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	20~23°C
Test Engineer :	Daniel Lee and Hayden Wu	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1		
Remark :	#8 is system simulator signal which can be ignored.		



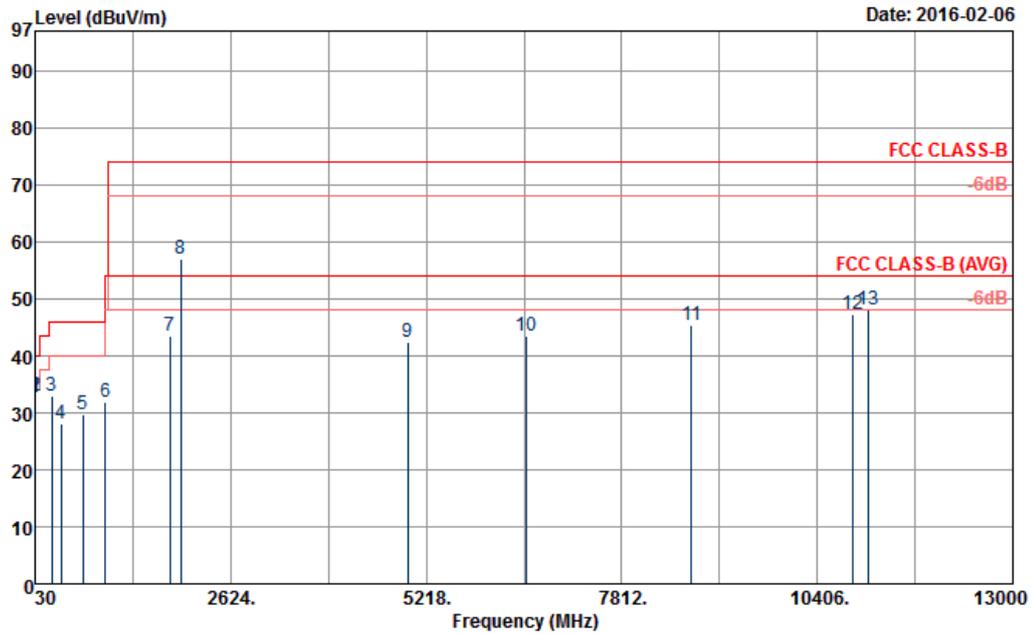
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m 9120D\_1156\_150827 HORIZONTAL  
 Project : 612118-01

Mode : Mode 1

	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	30.54	25.39	-14.61	40.00	30.13	25.14	1.90	31.78	---	---	Peak
2	49.44	24.64	-15.36	40.00	39.30	15.12	2.00	31.78	---	---	Peak
3	253.29	42.40	-3.60	46.00	52.90	19.00	2.21	31.71	101	12	QP
4	506.50	32.11	-13.89	46.00	36.89	24.21	2.93	31.92	---	---	Peak
5	665.40	29.11	-16.89	46.00	31.59	26.28	3.33	32.09	---	---	Peak
6	925.80	31.44	-14.56	46.00	29.37	30.09	3.21	31.23	---	---	Peak
7	1828.00	41.30	-32.70	74.00	69.74	26.07	5.99	60.50	---	---	Peak
8	1960.00	53.51			81.47	26.23	6.31	60.50	---	---	Peak
9	4730.00	40.26	-33.74	74.00	58.59	31.06	10.78	60.17	---	---	Peak
10	6934.00	43.92	-30.08	74.00	57.32	35.13	11.78	60.31	---	---	Peak
11	8784.00	45.15	-28.85	74.00	53.10	37.35	14.61	59.91	---	---	Peak
12	10910.00	48.43	-25.57	74.00	52.42	40.43	14.94	59.36	100	0	Peak
13	11288.00	48.05	-25.95	74.00	50.81	40.33	15.61	58.70	---	---	Peak



<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	20~23°C
<b>Test Engineer :</b>	Daniel Lee and Hayden Wu	<b>Relative Humidity :</b>	50~53%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Vertical
<b>Function Type :</b>	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1		
<b>Remark :</b>	#8 is system simulator signal which can be ignored.		



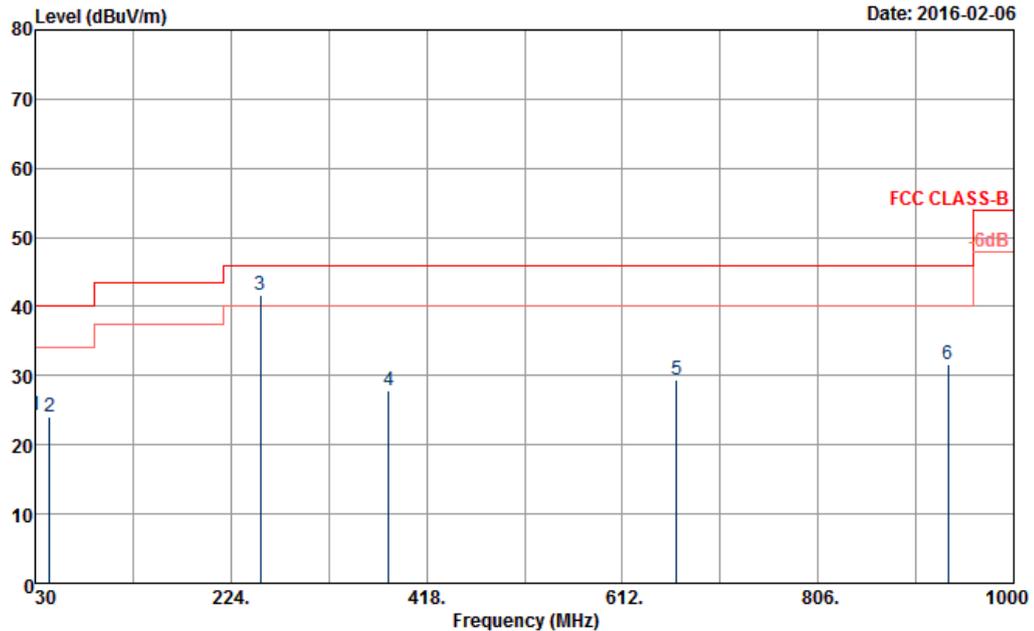
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m 9120D\_1156\_150827 VERTICAL

Power : From System  
 Mode : Mode 1

	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	35.13	32.80	-7.20	40.00	39.76	22.90	1.92	31.78	---	---	Peak
2	39.99	32.83	-7.17	40.00	42.83	20.00	1.78	31.78	100	309	Peak
3	253.29	33.10	-12.90	46.00	43.60	19.00	2.21	31.71	---	---	Peak
4	379.80	28.03	-17.97	46.00	35.57	21.83	2.41	31.78	---	---	Peak
5	666.80	29.70	-16.30	46.00	32.15	26.30	3.34	32.09	---	---	Peak
6	958.70	31.91	-14.09	46.00	29.09	30.70	3.06	30.94	---	---	Peak
7	1818.00	43.37	-30.63	74.00	71.84	26.04	5.99	60.50	---	---	Peak
8	1960.00	56.92			84.88	26.23	6.31	60.50	---	---	Peak
9	4978.00	42.34	-31.66	74.00	58.63	31.47	11.22	58.98	---	---	Peak
10	6540.00	43.54	-30.46	74.00	57.48	34.18	12.27	60.39	---	---	Peak
11	8732.00	45.29	-28.71	74.00	53.49	37.27	14.35	59.82	---	---	Peak
12	10872.00	47.41	-26.59	74.00	51.60	40.40	14.87	59.46	---	---	Peak
13	11092.00	48.07	-25.93	74.00	51.32	40.44	15.27	58.96	100	0	Peak



<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	20~23°C
<b>Test Engineer :</b>	Daniel Lee and Hayden Wu	<b>Relative Humidity :</b>	50~53%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Horizontal
<b>Function Type :</b>	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1		



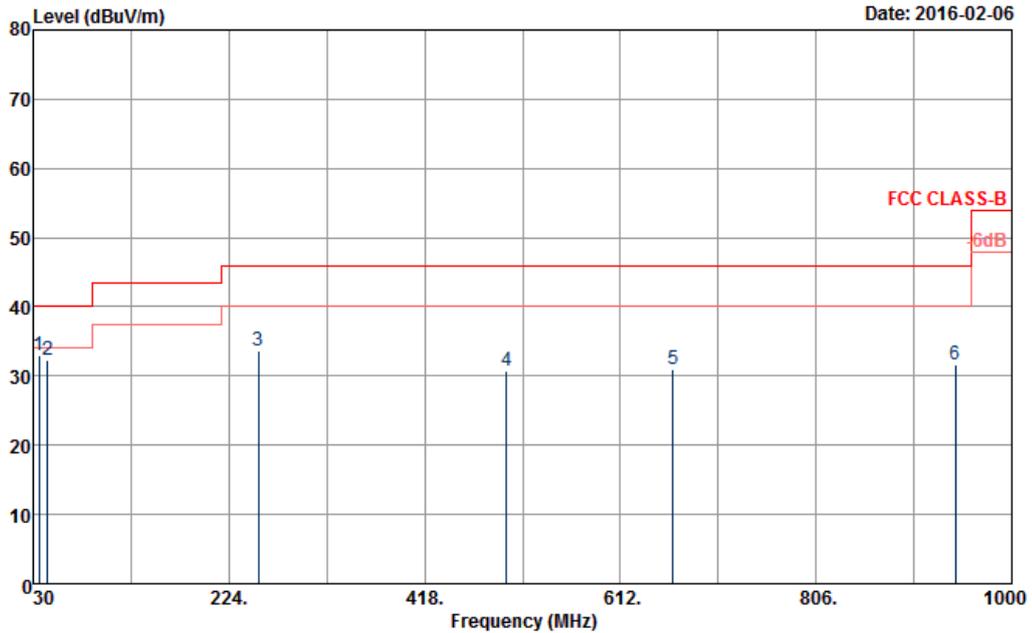
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF\_ANT\_2725 HORIZONTAL

Power : From System  
 Mode : Mode 2

	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	30.00	24.33	-15.67	40.00	28.51	25.70	1.90	31.78	---	---	Peak
2	44.58	24.15	-15.85	40.00	37.02	17.20	1.71	31.78	---	---	Peak
3	253.29	41.70	-4.30	46.00	52.20	19.00	2.21	31.71	126	22	QP
4	380.50	27.87	-18.13	46.00	35.41	21.83	2.41	31.78	---	---	Peak
5	666.10	29.50	-16.50	46.00	31.96	26.30	3.33	32.09	---	---	Peak
6	934.90	31.58	-14.42	46.00	29.26	30.32	3.15	31.15	---	---	Peak



<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	20~23°C
<b>Test Engineer :</b>	Daniel Lee and Hayden Wu	<b>Relative Humidity :</b>	50~53%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Vertical
<b>Function Type :</b>	Data Link with Notebook (with USB Cable) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1		



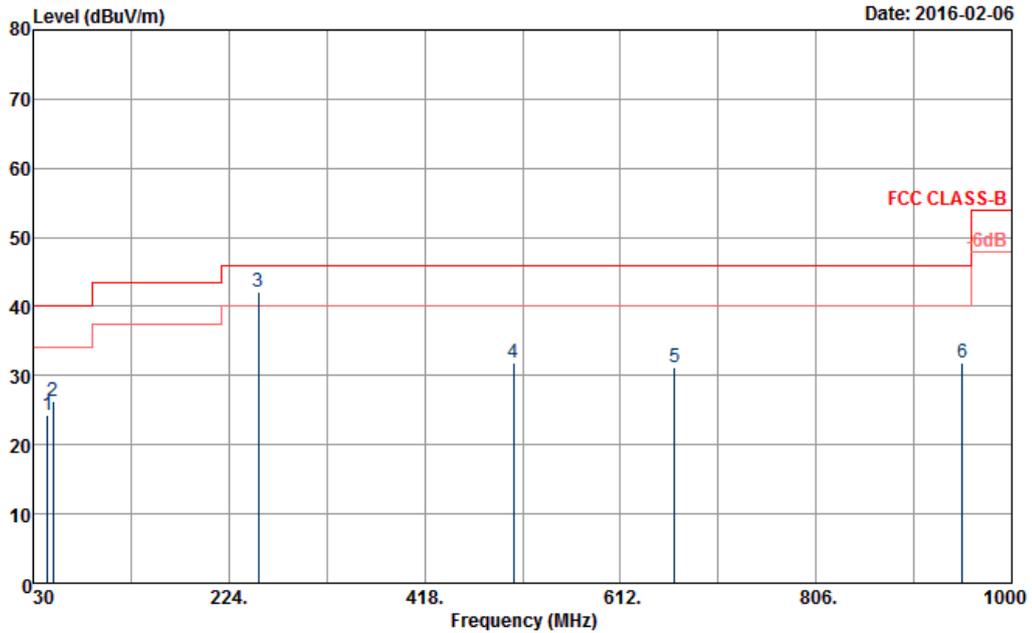
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF\_ANT\_2725 VERTICAL

Power : From System  
 Mode : Mode 2

	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	35.40	32.96	-7.04	40.00	40.50	22.32	1.92	31.78	100	258	Peak
2	44.58	32.28	-7.72	40.00	45.15	17.20	1.71	31.78	---	---	Peak
3	253.56	33.70	-12.30	46.00	44.19	19.00	2.22	31.71	---	---	Peak
4	499.50	30.69	-15.31	46.00	35.62	24.08	2.90	31.91	---	---	Peak
5	664.00	31.01	-14.99	46.00	33.50	26.27	3.33	32.09	---	---	Peak
6	944.00	31.68	-14.32	46.00	29.11	30.55	3.09	31.07	---	---	Peak



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	20~23°C
<b>Test Engineer :</b>	Daniel Lee and Hayden Wu	<b>Relative Humidity :</b>	50~53%
<b>Test Distance :</b>	3m	<b>Polarization :</b>	Horizontal
<b>Function Type :</b>	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 2		



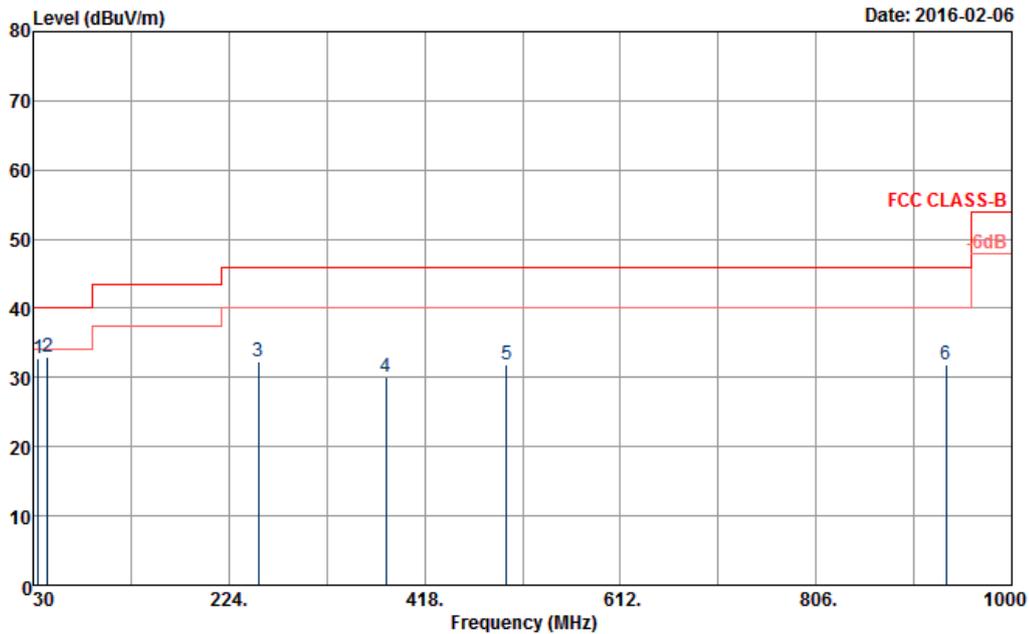
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF\_ANT\_2725 HORIZONTAL

Power : From System  
 Mode : Mode 3

	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	44.58	24.35	-15.65	40.00	37.22	17.20	1.71	31.78	---	---	Peak
2	49.44	26.40	-13.60	40.00	41.06	15.12	2.00	31.78	---	---	Peak
3	253.56	42.20	-3.80	46.00	52.69	19.00	2.22	31.71	112	13	QP
4	506.50	31.83	-14.17	46.00	36.61	24.21	2.93	31.92	---	---	Peak
5	666.10	31.20	-14.80	46.00	33.66	26.30	3.33	32.09	---	---	Peak
6	951.00	31.95	-14.05	46.00	29.21	30.70	3.05	31.01	---	---	Peak



Test Mode :	Mode 3	Temperature :	20~23°C
Test Engineer :	Daniel Lee and Hayden Wu	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Vertical
Function Type :	Data Link with Notebook (with USB Cable) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 2		



Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF\_ANT\_2725 VERTICAL  
 Power : From System  
 Mode : Mode 3

	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	35.13	32.66	-7.34	40.00	39.62	22.90	1.92	31.78	---	---	Peak
2	44.58	33.07	-6.93	40.00	45.94	17.20	1.71	31.78	112	321	Peak
3	253.56	32.21	-13.79	46.00	42.70	19.00	2.22	31.71	---	---	Peak
4	379.80	30.05	-15.95	46.00	37.59	21.83	2.41	31.78	---	---	Peak
5	499.50	31.97	-14.03	46.00	36.90	24.08	2.90	31.91	---	---	Peak
6	934.90	31.89	-14.11	46.00	29.57	30.32	3.15	31.15	---	---	Peak



### 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. 09, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Feb. 09, 2016	Aug. 25, 2016	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Apr. 20, 2015	Feb. 09, 2016	Apr. 19, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Feb. 09, 2016	Dec. 01, 2016	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 14, 2015	Feb. 09, 2016	Dec. 13, 2016	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 06, 2016	Feb. 09, 2016	Jan. 05, 2017	Conduction (CO05-HY)
Test Software	R & S	EMC32	8.40.0	N/A	N/A	Feb. 09, 2016	N/A	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C	2725	30MHz~1GHz	Nov. 17, 2015	Feb. 06, 2016	Nov. 16, 2016	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Jan. 07, 2016	Feb. 06, 2016	Jan. 06, 2017	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1156	1GHz~18GHz	Aug. 21, 2015	Feb. 06, 2016	Aug. 20, 2016	Radiation (03CH06-HY)
Hygrometer	WISEWIND	410	BU5004	N/A	May 04, 2015	Feb. 06, 2016	May 03, 2016	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 20, 2015	Feb. 06, 2016	Apr. 19, 2016	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1850117	1GHz ~ 18GHz	Jul. 01, 2015	Feb. 06, 2016	Jun. 30, 2016	Radiation (03CH06-HY)
Controller	INN-CO	EM1000	060782	Control Turn table & Ant Mast	N/A	Feb. 06, 2016	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF78020821 2	1m~4m	N/A	Feb. 06, 2016	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Feb. 06, 2016	N/A	Radiation (03CH06-HY)
RF Cable	HUBER + SUHNER	RG_142_B/U	NA	30MHz ~ 1GHz	Nov. 26, 2015	Feb. 06, 2016	Nov. 25, 2016	Radiation (03CH06-HY)
RF Cable	Infinet	LL142	Infinet CA3601-3601 -1000	1GHz ~ 26.5GHz	Nov. 26, 2015	Feb. 06, 2016	Nov. 25, 2016	Radiation (03CH06-HY)
Test Software	Audix	E3	6.2009-8-24 (K5) (sporton)	N/A	N/A	Feb. 06, 2016	N/A	Radiation (03CH06-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% ( $U = 2Uc(y)$ )	4.00
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