



# 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-PM0920  
**STANDARD** : FCC 47 CFR FCC Part 15 Subpart B  
**CLASSIFICATION** : FCC CLASS B PERSONAL COMPUTERS AND  
PERIPHERALS

The product was received on Oct. 07, 2015 and testing was completed on Jan. 23, 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.

*Louis Wu*

Reviewed by: Louis Wu / Manager

*Jones Tsai*

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.**



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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION   | ISSUED DATE   |
|------------|---------|---|---------------|
| FC500716   | Rev. 01 | Initial issue of report   | Jan. 14, 2016 |
| FC500716   | Rev. 02 | Adding the 9kHz ~ 30MHz worst case data of Radiated Emission Measurement. | Jan. 25, 2016 |
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### 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<br>7.60 dB at 0.158 MHz   |
| 3.2            | 15.109   | Radiated Emission     | < 15.109 limits | PASS   | Under limit<br>4.36 dB at 862.800 MHz |



## **1. General Description**

### **1.1. Applicant**

**Sony Mobile Communications Inc.**  
Nya Vattentorget, 22188 Lund, Sweden

### **1.2. Manufacturer**

**Sony Mobile Communications Inc.**  
1-8-15 Konan, Minato-ku, Tokyo, 108-0075, 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 |  |
|---|--|
| <b>Antenna Type</b>                               | WWAN: Coupling type (LDS) Antenna<br>WLAN: PIFA Antenna<br>Bluetooth: PIFA Antenna<br>GPS: PIFA Antenna<br>NFC: Loop Antenna |

| EUT Information List |            |             |            |  |
|----------------------|------------|-------------|------------|--|
| IMEI                 | HW Version | SW Version  | S/N        | Performed Test Item                              |
| 004402455535215      | A          | 33.2.A.0.19 | RQ3000D4J1 | Radiated Spurious Emission<br>Conducted Emission |

| Accessory List      |                                |
|---------------------|--------------------------------|
| <b>AC Adapter 1</b> | Model No. : UCH20              |
|                     | Type No. : AC-0060-US          |
|                     | S/N : 1215W48600011            |
| <b>AC Adapter 2</b> | Model No. : UCH20              |
|                     | Type No. : AC-0061-US          |
|                     | S/N : 3515W45302513            |
| <b>Battery 1</b>    | Model No. : LIS1618ERPC        |
| <b>Battery 2</b>    | Model No. : GB-S10-385871-010H |
| <b>Earphone</b>     | Model No. : MH410c             |
|                     | Type No. : AG-1100             |
|                     | S/N : 1541A8170036EC2          |
| <b>USB Cable 1</b>  | Model No. : EC803              |
|                     | Type No. : AI-0404             |
|                     | S/N : 153812AA503376C          |
| <b>USB Cable 2</b>  | Model No. : UCB16              |
|                     | Type No. : AI-0142             |
|                     | S/N : N/A                      |

**Note:**

1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test.
3. 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,<br>Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>  |                       |
|                           | CO05-HY  | 03CH06-HY ; 03CH07-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 (9kHz 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"/> |

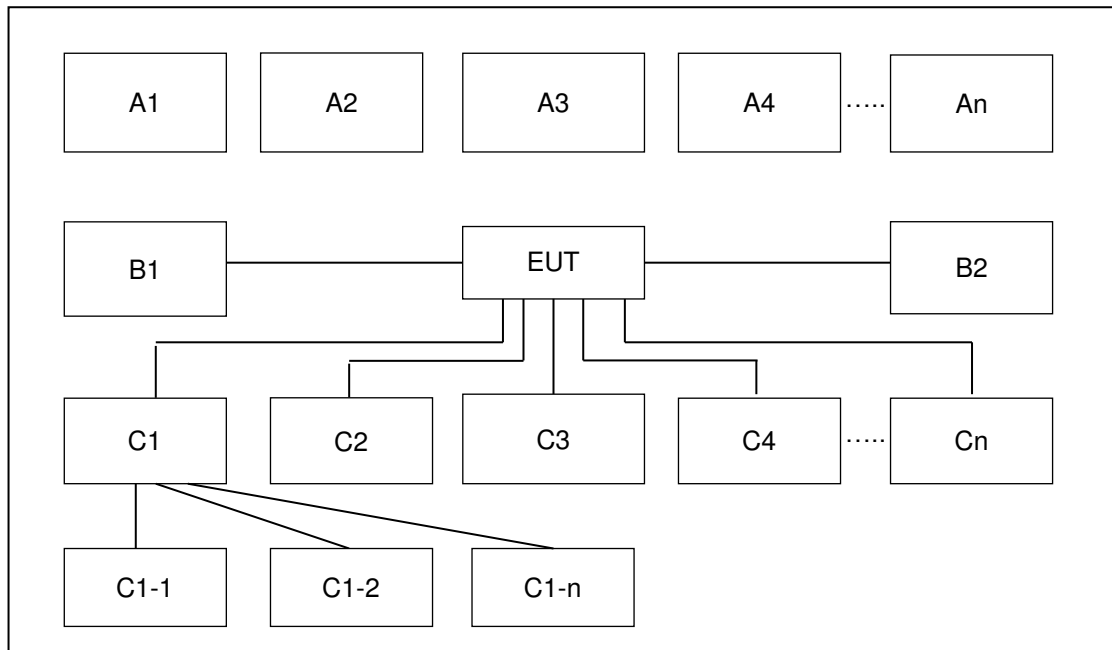
The data application (each file size is greater than 30Mbytes) is continuously transferred between the EUT and Notebook connected via USB cable, while GSM, WLAN, and Bluetooth and GPS idle.

**Abbreviations:**

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



## 2.2. Connection Diagram of Test System



| Conduction Test Setup |                    |                                   |           |   |   |   |   |   |   |
|-----------------------|--------------------|-----------------------------------|-----------|---|---|---|---|---|---|
| No.                   | Wireless Station   | Connection Type                   | Test Mode |   |   |   |   |   |   |
|                       |                    |                                   | 1         | 2 | 3 | - | - | - | - |
| A1                    | Bluetooth Earphone | Bluetooth                         | X         | X | X |   |   |   |   |
| A2                    | System Simulator   | GSM/UMTS/CDMA/<br>WCDMA/LTE       | X         | X | X |   |   |   |   |
| A3                    | GPS Station        | GPS                               | X         |   | X |   |   |   |   |
| A4                    | AP router          | WiFi                              | X         | X | X |   |   |   |   |
| A5                    | NFC Card           | NFC                               |           | 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                  | AP router          | RJ-45 Cable to C1                 | X         | X | X |   |   |   |   |
| C2                    | Earphone           | Earphone jack                     | X         | X | X |   |   |   |   |
| C3                    | SD card            | SD I/O interface<br>without Cable | X         | X | X |   |   |   |   |



| Radiation Test Setup |                   |                                |           |   |   |   |   |   |   |
|----------------------|-------------------|--------------------------------|-----------|---|---|---|---|---|---|
| No.                  | Wireless Station  | Connection Type                | Test Mode |   |   |   |   |   |   |
|                      |                   |                                | 1         | 2 | 3 | - | - | - | - |
| A1                   | BT Earphone       | Bluetooth                      | X         | X | X |   |   |   |   |
| A2                   | System Simulator  | GSM                            | X         | X | X |   |   |   |   |
| A3                   | GPS Station       | GPS                            | X         |   |   |   |   |   |   |
| A4                   | AP router         | WiFi                           | X         | X | X |   |   |   |   |
| A5                   | NFC Card          | NFC                            |           | 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/<br>Contains FCC ID:<br>QDS-BRCM1054 | N/A               | AC I/P:<br>Unshielded, 1.2 m<br>DC O/P:<br>Shielded, 1.8 m |
| 7.   | SD Card            | SanDisk      | MicroSD HC     | FCC DoC                                      | N/A               | N/A  |
| 8.   | NFC Card           | Metro Taipei | Easy Card      | N/A  | N/A               | N/A  |
| 9.   | iPod               | Apple        | A1285          | FCC DoC                                      | Shielded, 1.0 m   | N/A  |
| 10.  | 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<br>(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.

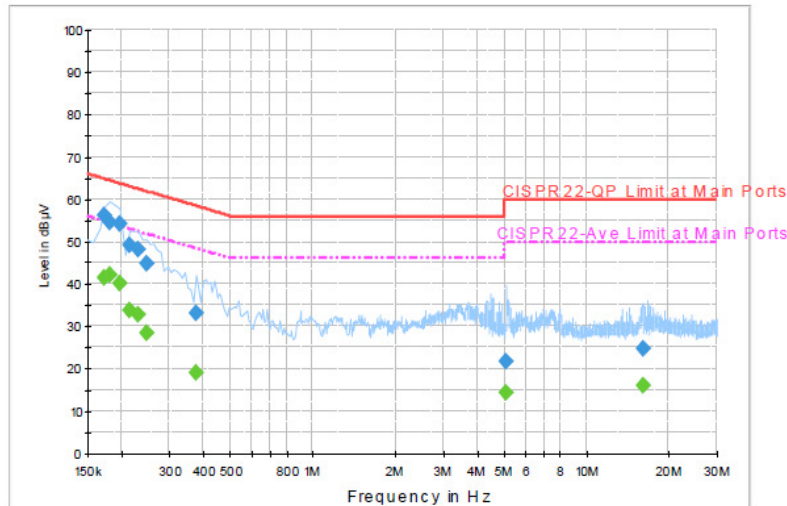
### 3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

|                 |   |                     |         |
|-----------------|---|---------------------|---------|
| Test Mode :     | Mode 1  | Temperature :       | 22~23°C |
| Test Engineer : | Derreck Chen  | Relative Humidity : | 52~55%  |
| Test Voltage :  | 120Vac / 60Hz   | Phase :             | Line    |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1 |                     |         |



Final Result : Quasi-Peak

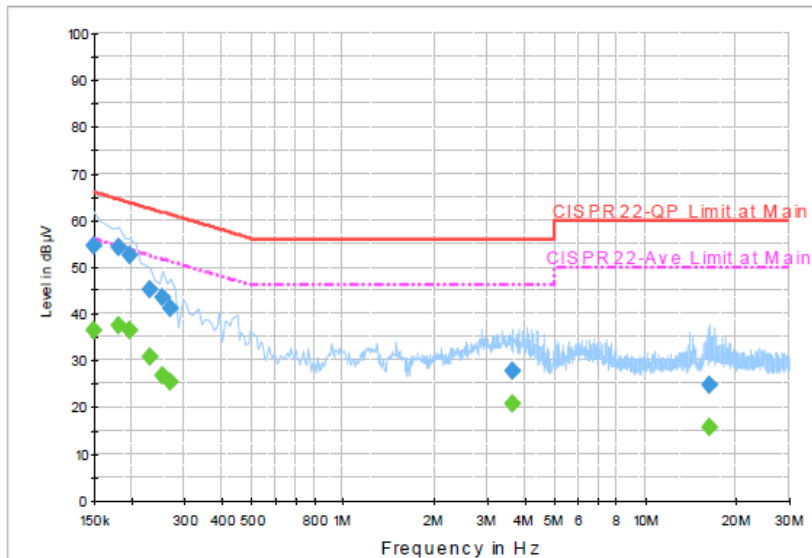
| Frequency (MHz) | Quasi-Peak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|-------------------|--------|------|------------|-------------|--------------|
| 0.174000        | 56.2              | Off    | L1   | 19.5       | 8.6         | 64.8         |
| 0.182000        | 54.6              | Off    | L1   | 19.5       | 9.8         | 64.4         |
| 0.198000        | 54.3              | Off    | L1   | 19.4       | 9.4         | 63.7         |
| 0.214000        | 49.1              | Off    | L1   | 19.5       | 13.9        | 63.0         |
| 0.230000        | 48.2              | Off    | L1   | 19.5       | 14.2        | 62.4         |
| 0.246000        | 44.7              | Off    | L1   | 19.5       | 17.2        | 61.9         |
| 0.374000        | 33.3              | Off    | L1   | 19.6       | 25.1        | 58.4         |
| 5.094000        | 21.9              | Off    | L1   | 19.7       | 38.1        | 60.0         |
| 16.142000       | 24.6              | Off    | L1   | 19.9       | 35.4        | 60.0         |

Final Result : Average

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.174000        | 41.3           | Off    | L1   | 19.5       | 13.5        | 54.8         |
| 0.182000        | 42.3           | Off    | L1   | 19.5       | 12.1        | 54.4         |
| 0.198000        | 40.0           | Off    | L1   | 19.4       | 13.7        | 53.7         |
| 0.214000        | 33.9           | Off    | L1   | 19.5       | 19.1        | 53.0         |
| 0.230000        | 32.8           | Off    | L1   | 19.5       | 19.6        | 52.4         |
| 0.246000        | 28.3           | Off    | L1   | 19.5       | 23.6        | 51.9         |
| 0.374000        | 19.2           | Off    | L1   | 19.6       | 29.2        | 48.4         |
| 5.094000        | 14.3           | Off    | L1   | 19.7       | 35.7        | 50.0         |
| 16.142000       | 16.1           | Off    | L1   | 19.9       | 33.9        | 50.0         |



|                 |   |                     |         |
|-----------------|---|---------------------|---------|
| Test Mode :     | Mode 1  | Temperature :       | 22~23°C |
| Test Engineer : | Derreck Chen  | Relative Humidity : | 52~55%  |
| Test Voltage :  | 120Vac / 60Hz   | Phase :             | Neutral |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1 |                     |         |



**Final Result : Quasi-Peak**

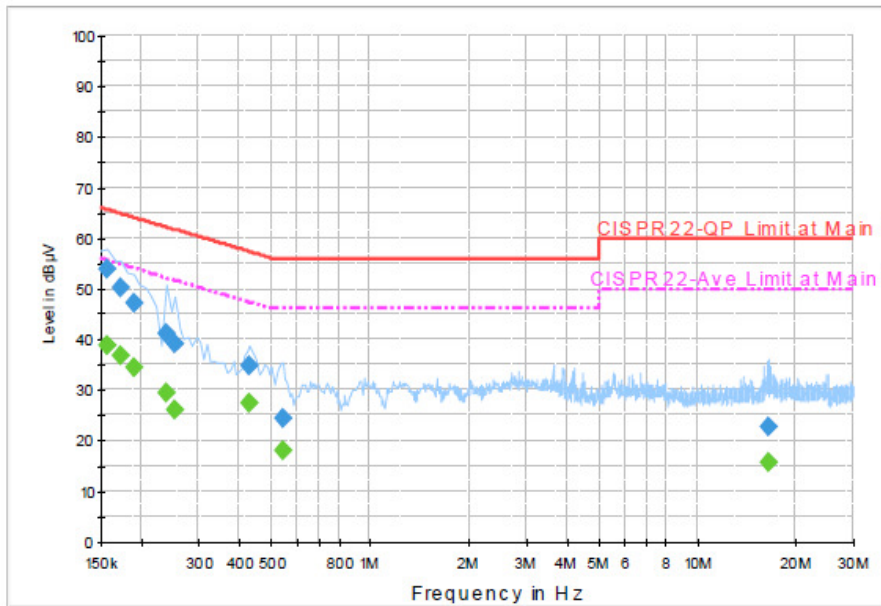
| Frequency (MHz) | Quasi-Peak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|-------------------|--------|------|------------|-------------|--------------|
| 0.150000        | 54.6              | Off    | N    | 19.5       | 11.4        | 66.0         |
| 0.182000        | 54.1              | Off    | N    | 19.5       | 10.3        | 64.4         |
| 0.198000        | 52.5              | Off    | N    | 19.4       | 11.2        | 63.7         |
| 0.230000        | 45.2              | Off    | N    | 19.5       | 17.2        | 62.4         |
| 0.254000        | 43.5              | Off    | N    | 19.6       | 18.1        | 61.6         |
| 0.270000        | 41.2              | Off    | N    | 19.5       | 19.9        | 61.1         |
| 3.630000        | 27.9              | Off    | N    | 19.7       | 28.1        | 56.0         |
| 16.302000       | 24.6              | Off    | N    | 19.9       | 35.4        | 60.0         |

**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.150000        | 36.4           | Off    | N    | 19.5       | 19.6        | 56.0         |
| 0.182000        | 37.6           | Off    | N    | 19.5       | 16.8        | 54.4         |
| 0.198000        | 36.6           | Off    | N    | 19.4       | 17.1        | 53.7         |
| 0.230000        | 30.8           | Off    | N    | 19.5       | 21.6        | 52.4         |
| 0.254000        | 26.9           | Off    | N    | 19.6       | 24.7        | 51.6         |
| 0.270000        | 25.5           | Off    | N    | 19.5       | 25.6        | 51.1         |
| 3.630000        | 20.9           | Off    | N    | 19.7       | 25.1        | 46.0         |
| 16.302000       | 15.6           | Off    | N    | 19.9       | 34.4        | 50.0         |



|                 |   |                     |         |
|-----------------|---|---------------------|---------|
| Test Mode :     | Mode 2  | Temperature :       | 22~23°C |
| Test Engineer : | Derreck Chen  | Relative Humidity : | 52~55%  |
| Test Voltage :  | 120Vac / 60Hz   | Phase :             | Line    |
| Function Type : | Data Link with Notebook (with USB Cable 1) + 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        | 53.7              | Off    | L1   | 19.5       | 11.9        | 65.6         |
| 0.174000        | 50.1              | Off    | L1   | 19.5       | 14.7        | 64.8         |
| 0.190000        | 47.1              | Off    | L1   | 19.5       | 16.9        | 64.0         |
| 0.238000        | 41.2              | Off    | L1   | 19.5       | 21.0        | 62.2         |
| 0.254000        | 39.1              | Off    | L1   | 19.6       | 22.5        | 61.6         |
| 0.430000        | 34.6              | Off    | L1   | 19.5       | 22.7        | 57.3         |
| 0.542000        | 24.3              | Off    | L1   | 19.5       | 31.7        | 56.0         |
| 16.614000       | 22.8              | Off    | L1   | 19.9       | 37.2        | 60.0         |

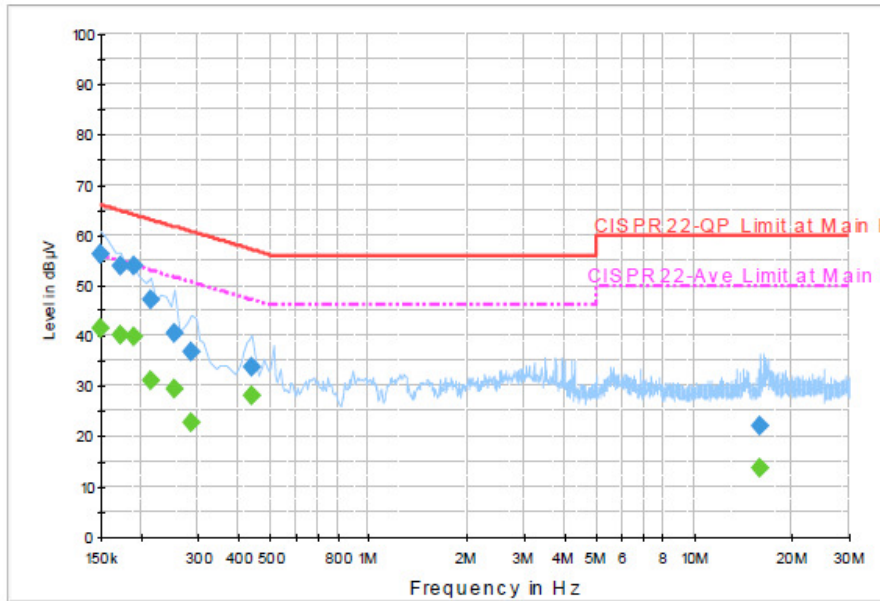
**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.158000        | 38.8           | Off    | L1   | 19.5       | 16.8        | 55.6         |
| 0.174000        | 36.8           | Off    | L1   | 19.5       | 18.0        | 54.8         |
| 0.190000        | 34.5           | Off    | L1   | 19.5       | 19.5        | 54.0         |
| 0.238000        | 29.6           | Off    | L1   | 19.5       | 22.6        | 52.2         |
| 0.254000        | 25.9           | Off    | L1   | 19.6       | 25.7        | 51.6         |
| 0.430000        | 27.6           | Off    | L1   | 19.5       | 19.7        | 47.3         |
| 0.542000        | 18.1           | Off    | L1   | 19.5       | 27.9        | 46.0         |
| 16.614000       | 15.8           | Off    | L1   | 19.9       | 34.2        | 50.0         |





|                 |   |                     |         |
|-----------------|---|---------------------|---------|
| Test Mode :     | Mode 2  | Temperature :       | 22~23°C |
| Test Engineer : | Derreck Chen  | Relative Humidity : | 52~55%  |
| Test Voltage :  | 120Vac / 60Hz   | Phase :             | Neutral |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1 |                     |         |



**Final Result : Quasi-Peak**

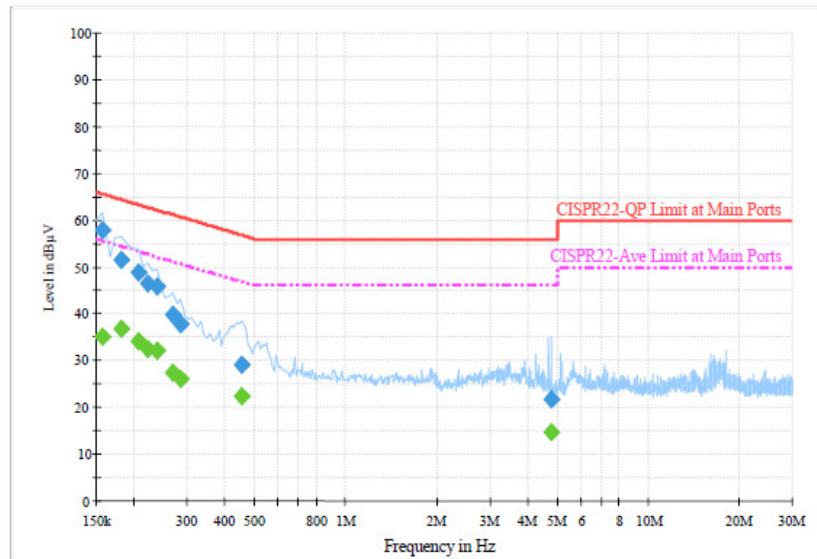
| Frequency (MHz) | Quasi-Peak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|-------------------|--------|------|------------|-------------|--------------|
| 0.150000        | 56.3              | Off    | N    | 19.5       | 9.7         | 66.0         |
| 0.174000        | 53.7              | Off    | N    | 19.5       | 11.1        | 64.8         |
| 0.190000        | 54.0              | Off    | N    | 19.5       | 10.0        | 64.0         |
| 0.214000        | 47.0              | Off    | N    | 19.5       | 16.0        | 63.0         |
| 0.254000        | 40.3              | Off    | N    | 19.6       | 21.3        | 61.6         |
| 0.286000        | 36.8              | Off    | N    | 19.5       | 23.8        | 60.6         |
| 0.438000        | 33.9              | Off    | N    | 19.5       | 23.2        | 57.1         |
| 16.054000       | 22.1              | Off    | N    | 19.9       | 37.9        | 60.0         |

**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.150000        | 41.6           | Off    | N    | 19.5       | 14.4        | 56.0         |
| 0.174000        | 40.2           | Off    | N    | 19.5       | 14.6        | 54.8         |
| 0.190000        | 39.9           | Off    | N    | 19.5       | 14.1        | 54.0         |
| 0.214000        | 31.2           | Off    | N    | 19.5       | 21.8        | 53.0         |
| 0.254000        | 29.5           | Off    | N    | 19.6       | 22.1        | 51.6         |
| 0.286000        | 22.7           | Off    | N    | 19.5       | 27.9        | 50.6         |
| 0.438000        | 28.0           | Off    | N    | 19.5       | 19.1        | 47.1         |
| 16.054000       | 13.6           | Off    | N    | 19.9       | 36.4        | 50.0         |



|                 |   |                     |         |
|-----------------|---|---------------------|---------|
| Test Mode :     | Mode 3  | Temperature :       | 22~23°C |
| Test Engineer : | Derreck Chen  | Relative Humidity : | 52~55%  |
| Test Voltage :  | 120Vac / 60Hz   | Phase :             | Line    |
| Function Type : | Data Link with Notebook (with USB Cable 2) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 2 |                     |         |



**Final Result : Quasi-Peak**

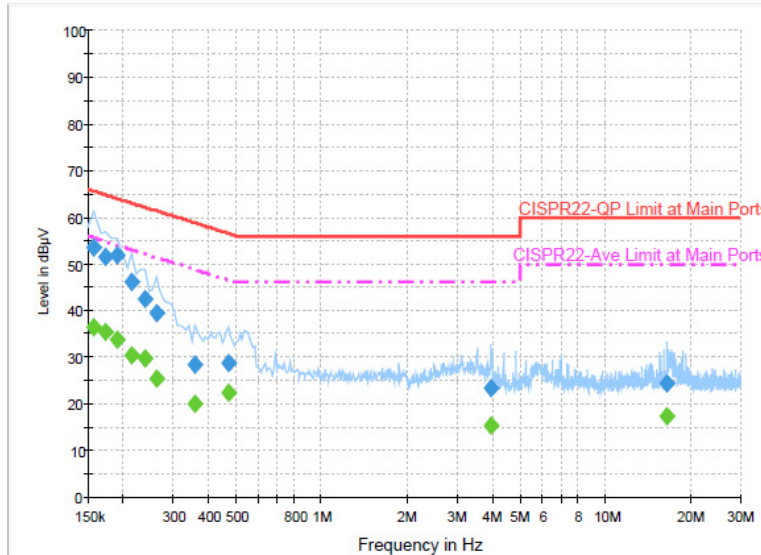
| Frequency (MHz) | Quasi-Peak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|-------------------|--------|------|------------|-------------|--------------|
| 0.158000        | 58.0              | Off    | L1   | 19.6       | 7.6         | 65.6         |
| 0.182000        | 51.5              | Off    | L1   | 19.6       | 12.9        | 64.4         |
| 0.206000        | 48.8              | Off    | L1   | 19.6       | 14.6        | 63.4         |
| 0.222000        | 46.5              | Off    | L1   | 19.7       | 16.2        | 62.7         |
| 0.238000        | 45.8              | Off    | L1   | 19.6       | 16.4        | 62.2         |
| 0.270000        | 39.9              | Off    | L1   | 19.6       | 21.2        | 61.1         |
| 0.286000        | 37.8              | Off    | L1   | 19.6       | 22.8        | 60.6         |
| 0.454000        | 29.2              | Off    | L1   | 19.6       | 27.6        | 56.8         |
| 4.782000        | 21.7              | Off    | L1   | 19.7       | 34.3        | 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         |
| 0.182000        | 36.8           | Off    | L1   | 19.6       | 17.6        | 54.4         |
| 0.206000        | 34.1           | Off    | L1   | 19.6       | 19.3        | 53.4         |
| 0.222000        | 32.5           | Off    | L1   | 19.7       | 20.2        | 52.7         |
| 0.238000        | 32.1           | Off    | L1   | 19.6       | 20.1        | 52.2         |
| 0.270000        | 27.3           | Off    | L1   | 19.6       | 23.8        | 51.1         |
| 0.286000        | 26.1           | Off    | L1   | 19.6       | 24.5        | 50.6         |
| 0.454000        | 22.4           | Off    | L1   | 19.6       | 24.4        | 46.8         |
| 4.782000        | 14.7           | Off    | L1   | 19.7       | 31.3        | 46.0         |



|                 |   |                     |         |
|-----------------|---|---------------------|---------|
| Test Mode :     | Mode 3  | Temperature :       | 22~23°C |
| Test Engineer : | Derreck Chen  | Relative Humidity : | 52~55%  |
| Test Voltage :  | 120Vac / 60Hz   | Phase :             | Neutral |
| Function Type : | Data Link with Notebook (with USB Cable 2) + 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        | 53.4              | Off    | N    | 19.6       | 12.2        | 65.6         |
| 0.174000        | 51.7              | Off    | N    | 19.6       | 13.1        | 64.8         |
| 0.190000        | 51.9              | Off    | N    | 19.6       | 12.1        | 64.0         |
| 0.214000        | 46.2              | Off    | N    | 19.6       | 16.8        | 63.0         |
| 0.238000        | 42.4              | Off    | N    | 19.6       | 19.8        | 62.2         |
| 0.262000        | 39.4              | Off    | N    | 19.6       | 22.0        | 61.4         |
| 0.358000        | 28.6              | Off    | N    | 19.6       | 30.2        | 58.8         |
| 0.470000        | 28.7              | Off    | N    | 19.6       | 27.8        | 56.5         |
| 3.958000        | 23.5              | Off    | N    | 19.6       | 32.5        | 56.0         |
| 16.542000       | 24.5              | Off    | N    | 19.8       | 35.5        | 60.0         |

**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|--------|------|------------|-------------|--------------|
| 0.158000        | 36.6           | Off    | N    | 19.6       | 19.0        | 55.6         |
| 0.174000        | 35.5           | Off    | N    | 19.6       | 19.3        | 54.8         |
| 0.190000        | 33.6           | Off    | N    | 19.6       | 20.4        | 54.0         |
| 0.214000        | 30.4           | Off    | N    | 19.6       | 22.6        | 53.0         |
| 0.238000        | 29.6           | Off    | N    | 19.6       | 22.6        | 52.2         |
| 0.262000        | 25.3           | Off    | N    | 19.6       | 26.1        | 51.4         |
| 0.358000        | 20.1           | Off    | N    | 19.6       | 28.7        | 48.8         |
| 0.470000        | 22.3           | Off    | N    | 19.6       | 24.2        | 46.5         |
| 3.958000        | 15.2           | Off    | N    | 19.6       | 30.8        | 46.0         |
| 16.542000       | 17.5           | Off    | N    | 19.8       | 32.5        | 50.0         |



### 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) |
|-----------------|-----------------------------------|-------------------------------|
| 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                             |

For below 30MHz

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBµV) + distance extrapolation factor.

#### 3.2.2. Measuring Instruments

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

#### 3.1.6 Measuring Instrument Setting

The following table is the setting of receiver.

| Receiver Parameter             | Setting             |
|--------------------------------|---------------------|
| Attenuation                    | Auto                |
| Frequency Range: 9kHz~150kHz   | RBW 200Hz for QP    |
| Frequency Range: 150kHz~30MHz  | RBW 9kHz for QP     |
| Frequency Range: 30MHz~1000MHz | RBW 120kHz for Peak |

**Note:** The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.



### **3.2.3. Test Procedures**

**<For below 30MHz>**

1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied 0.8 meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (0.8 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Average and CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. Antenna Requirements

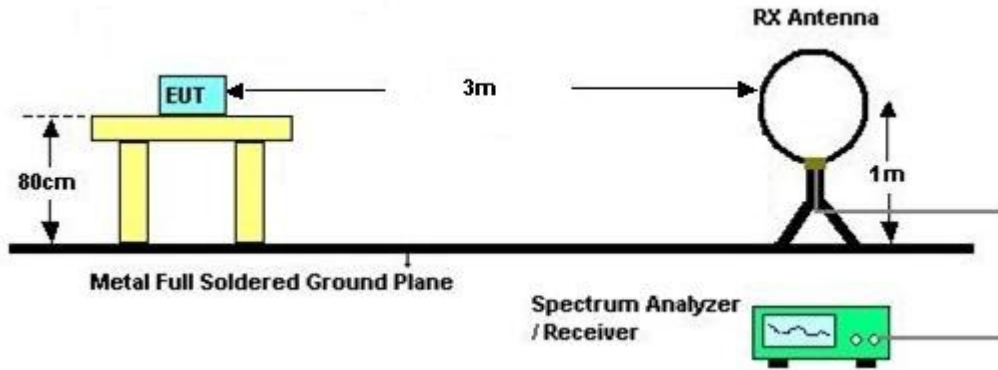


**<For 30MHz to 1GHz and above 1GHz>**

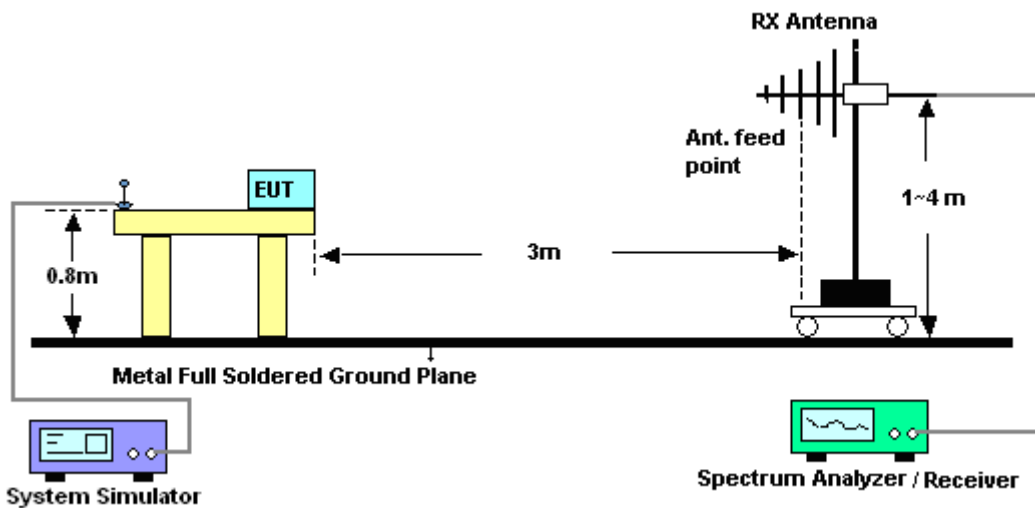
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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 (dB $\mu$ V/m) = 20 log Emission level ( $\mu$ V/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

### 3.2.4. Test Setup of Radiated Emission

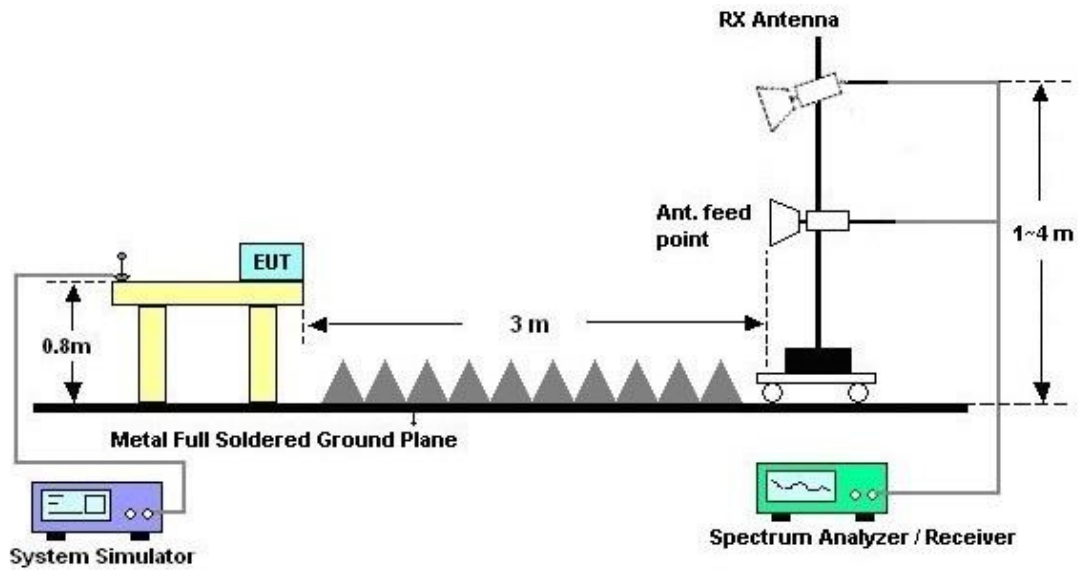
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

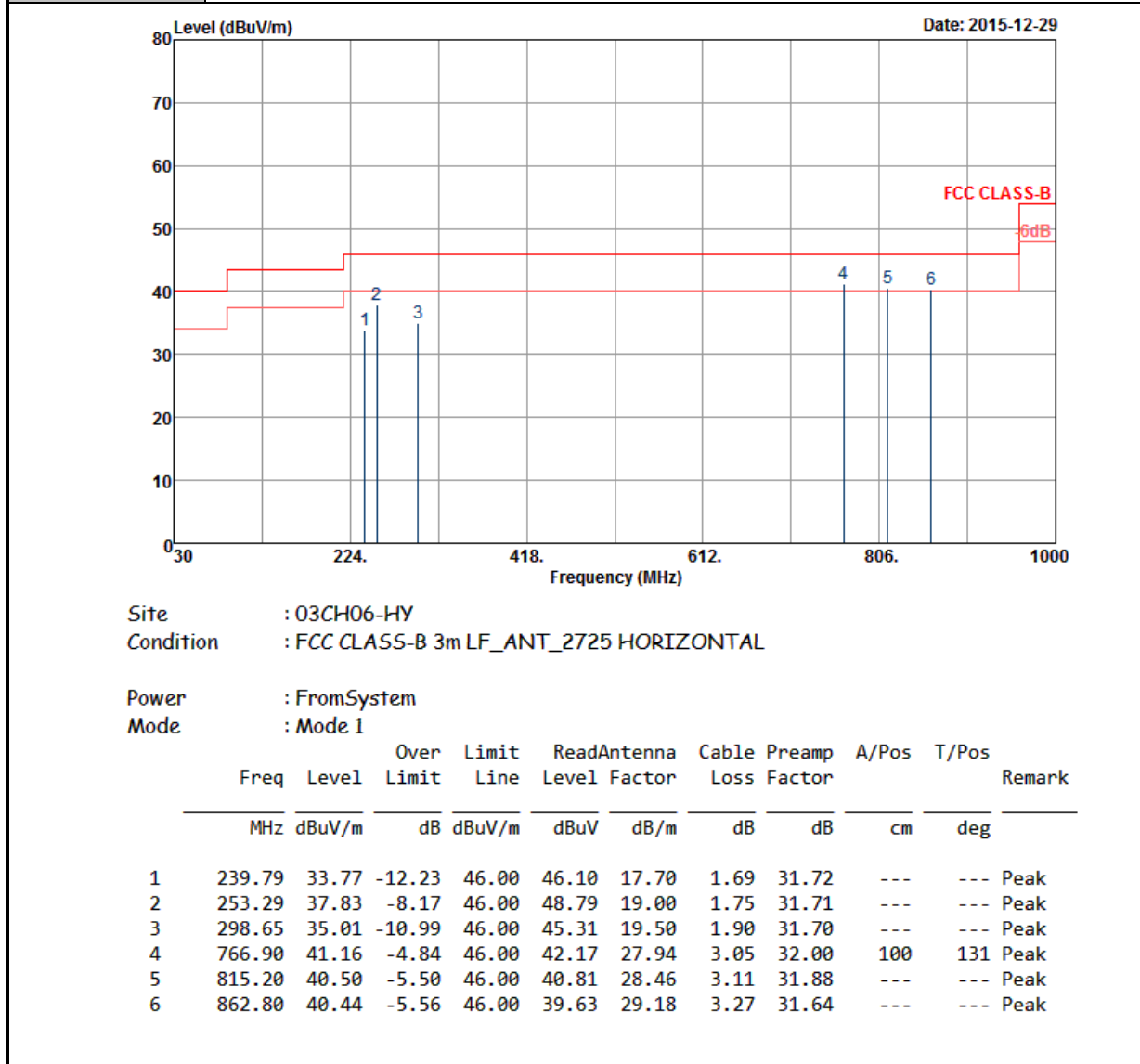






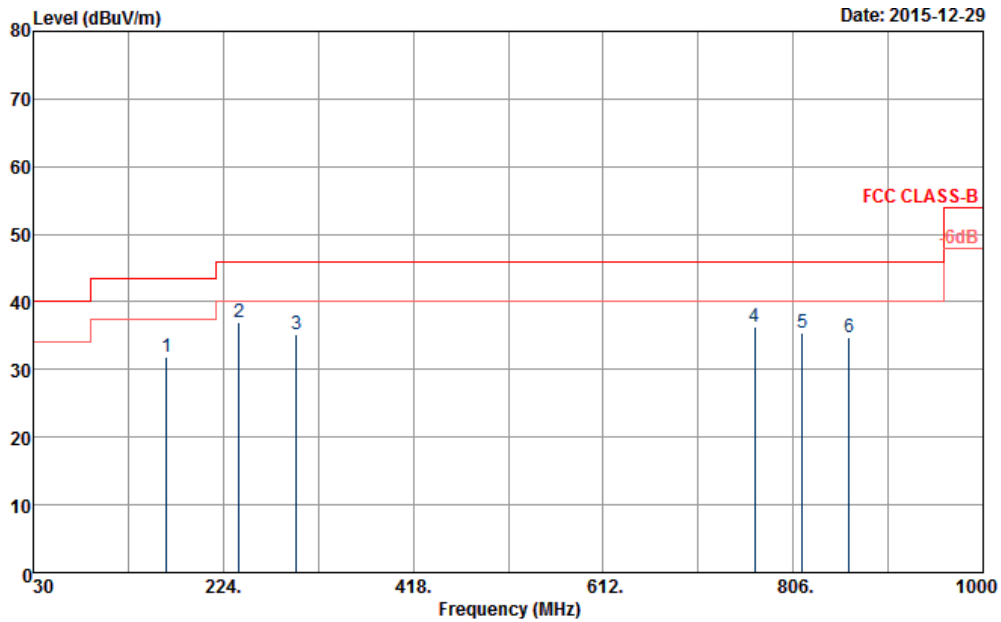
3.2.5. Test Result of Radiated Emission

|                 |   |                     |            |
|-----------------|---|---------------------|------------|
| Test Mode :     | Mode 1  | Temperature :       | 20~23°C    |
| Test Engineer : | Donny Pang  | Relative Humidity : | 50~53%     |
| Test Distance : | 3m  | Polarization :      | Horizontal |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1 |                     |            |





|                 |   |                     |          |
|-----------------|---|---------------------|----------|
| Test Mode :     | Mode 1  | Temperature :       | 20~23°C  |
| Test Engineer : | Donny Pang  | Relative Humidity : | 50~53%   |
| Test Distance : | 3m  | Polarization :      | Vertical |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (2.4GHz) Idle + GPS Rx + Earphone + Battery 1 |                     |          |



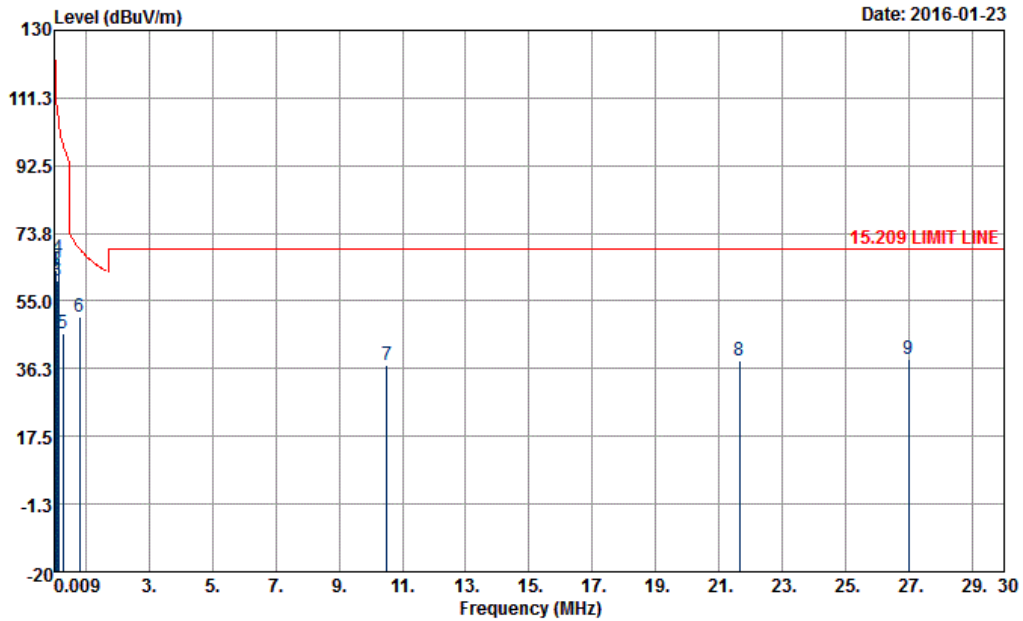
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF\_ANT\_2725 VERTICAL

Power : FromSystem  
 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 | 165.81 | 31.96  | -11.54     | 43.50      | 45.96             | 16.16          | 1.57       | 31.73         | ---   | ---   | Peak   |
| 2 | 240.06 | 37.01  | -8.99      | 46.00      | 49.25             | 17.79          | 1.69       | 31.72         | 100   | 164   | Peak   |
| 3 | 298.65 | 35.21  | -10.79     | 46.00      | 45.51             | 19.50          | 1.90       | 31.70         | ---   | ---   | Peak   |
| 4 | 766.90 | 36.35  | -9.65      | 46.00      | 37.36             | 27.94          | 3.05       | 32.00         | ---   | ---   | Peak   |
| 5 | 815.20 | 35.44  | -10.56     | 46.00      | 35.75             | 28.46          | 3.11       | 31.88         | ---   | ---   | Peak   |
| 6 | 862.80 | 34.77  | -11.23     | 46.00      | 33.96             | 29.18          | 3.27       | 31.64         | ---   | ---   | Peak   |



|                 |   |                     |            |
|-----------------|---|---------------------|------------|
| Test Mode :     | Mode 2  | Temperature :       | 20~23°C    |
| Test Engineer : | Donny Pang  | Relative Humidity : | 50~53%     |
| Test Distance : | 3m  | Polarization :      | Horizontal |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1 |                     |            |



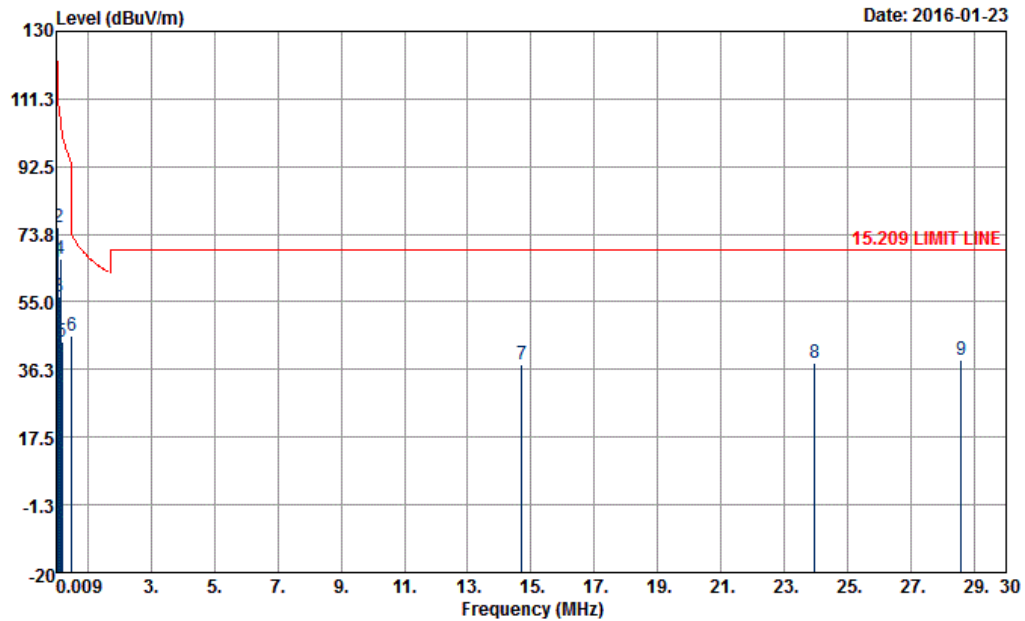
Site : 03CH07-HY  
 Condition : 15.209 LIMIT LINE 3m LOOP\_ANT(H) HORIZONTAL

Mode : 2

|   | 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 | 0.01  | 63.10  | -61.97 | 125.07 | 41.83       | 20.25 | 1.02   | 0.00  | ---   | ---    | Average |
| 2 | 0.06  | 63.49  | -47.89 | 111.38 | 42.43       | 20.04 | 1.02   | 0.00  | ---   | ---    | Average |
| 3 | 0.10  | 60.43  | -47.57 | 108.00 | 39.42       | 19.99 | 1.02   | 0.00  | ---   | ---    | QP      |
| 4 | 0.13  | 66.86  | -38.50 | 105.36 | 45.87       | 19.97 | 1.02   | 0.00  | ---   | ---    | Average |
| 5 | 0.28  | 45.87  | -52.71 | 98.58  | 24.93       | 19.92 | 1.02   | 0.00  | ---   | ---    | Average |
| 6 | 0.81  | 50.73  | -18.75 | 69.48  | 29.81       | 19.90 | 1.02   | 0.00  | 100   | 256    | QP      |
| 7 | 10.52 | 37.19  | -32.31 | 69.50  | 16.14       | 20.03 | 1.02   | 0.00  | ---   | ---    | QP      |
| 8 | 21.63 | 38.50  | -31.00 | 69.50  | 16.20       | 20.53 | 1.77   | 0.00  | ---   | ---    | QP      |
| 9 | 26.98 | 39.08  | -30.42 | 69.50  | 16.68       | 20.63 | 1.77   | 0.00  | ---   | ---    | QP      |



|                 |   |                     |          |
|-----------------|---|---------------------|----------|
| Test Mode :     | Mode 2  | Temperature :       | 20~23°C  |
| Test Engineer : | Donny Pang  | Relative Humidity : | 50~53%   |
| Test Distance : | 3m  | Polarization :      | Vertical |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1 |                     |          |



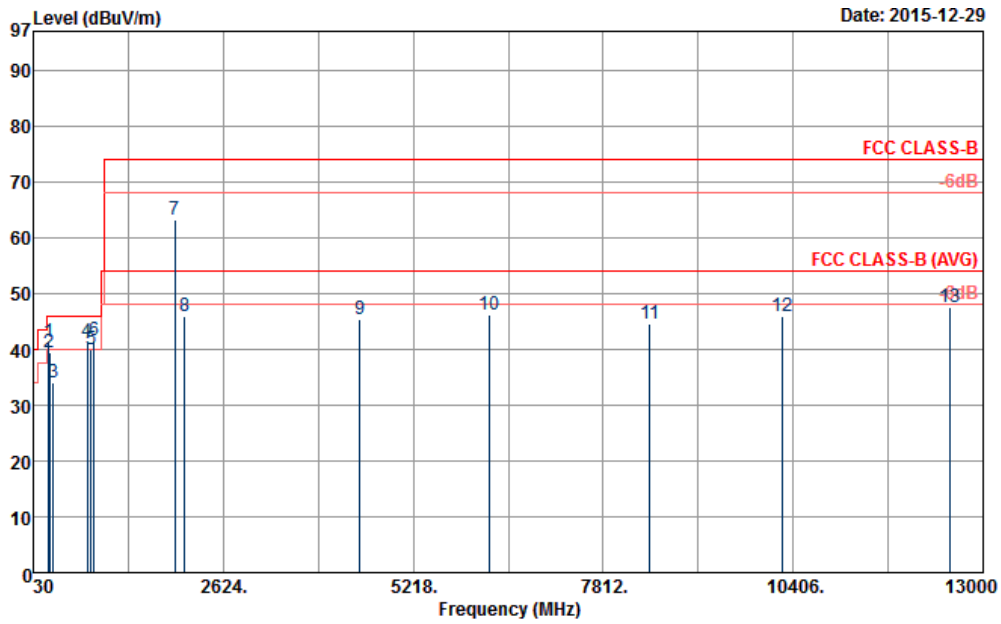
Site : 03CH07-HY  
 Condition : 15.209 LIMIT LINE 3m LOOP\_ANT(V) VERTICAL

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 | 0.01  | 66.22  | -58.88     | 125.10     | 44.95             | 20.25          | 1.02       | 0.00          | ---   | ---   | Average |
| 2 | 0.06  | 75.68  | -35.70     | 111.38     | 54.62             | 20.04          | 1.02       | 0.00          | ---   | ---   | Average |
| 3 | 0.10  | 56.32  | -51.70     | 108.02     | 35.31             | 19.99          | 1.02       | 0.00          | ---   | ---   | QP      |
| 4 | 0.13  | 67.03  | -38.33     | 105.36     | 46.04             | 19.97          | 1.02       | 0.00          | ---   | ---   | Average |
| 5 | 0.19  | 44.00  | -57.85     | 101.85     | 23.05             | 19.93          | 1.02       | 0.00          | ---   | ---   | Average |
| 6 | 0.51  | 45.75  | -27.79     | 73.54      | 24.83             | 19.90          | 1.02       | 0.00          | 100   | 59    | QP      |
| 7 | 14.70 | 37.79  | -31.71     | 69.50      | 16.72             | 20.05          | 1.02       | 0.00          | ---   | ---   | QP      |
| 8 | 23.95 | 37.89  | -31.61     | 69.50      | 15.55             | 20.57          | 1.77       | 0.00          | ---   | ---   | QP      |
| 9 | 28.58 | 38.74  | -30.76     | 69.50      | 16.42             | 20.55          | 1.77       | 0.00          | ---   | ---   | QP      |



|                 |   |                     |            |
|-----------------|---|---------------------|------------|
| Test Mode :     | Mode 2  | Temperature :       | 20~23°C    |
| Test Engineer : | Donny Pang  | Relative Humidity : | 50~53%     |
| Test Distance : | 3m  | Polarization :      | Horizontal |
| Function Type : | Data Link with Notebook (with USB Cable 1) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1 |                     |            |
| Remark :        | #7 is system simulator signal which can be ignored.   |                     |            |



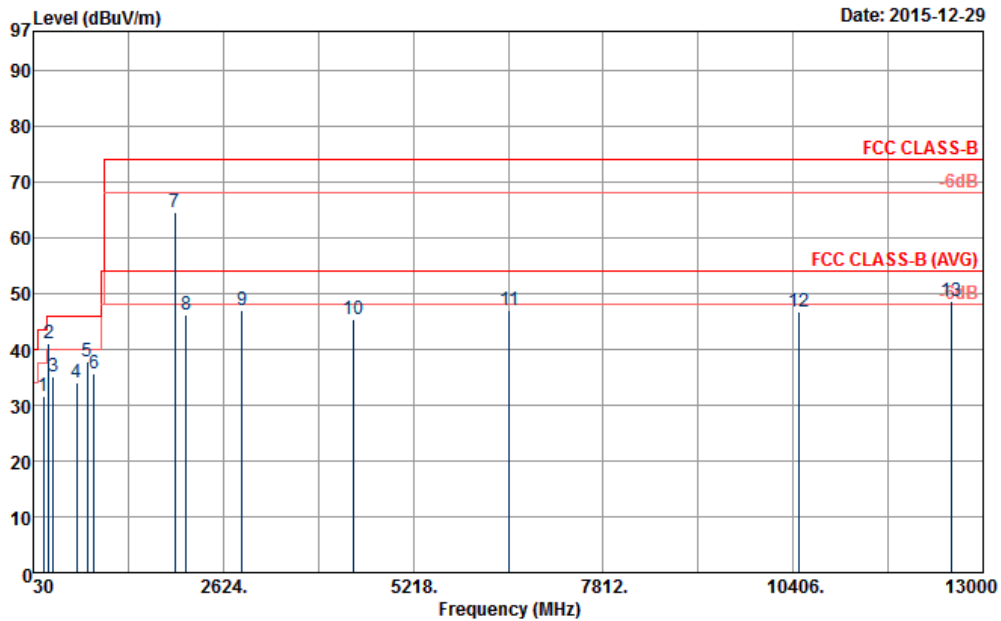
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m HF-ANT\_583\_150810 HORIZONTAL

Power : FromSystem  
 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  | 240.06   | 41.40  | -4.60      | 46.00      | 53.64             | 17.79          | 1.69       | 31.72         | ---   | ---   | Peak   |
| 2  | 253.56   | 39.33  | -6.67      | 46.00      | 50.29             | 19.00          | 1.75       | 31.71         | ---   | ---   | Peak   |
| 3  | 298.65   | 33.96  | -12.04     | 46.00      | 44.26             | 19.50          | 1.90       | 31.70         | ---   | ---   | Peak   |
| 4  | 766.90   | 41.35  | -4.65      | 46.00      | 42.36             | 27.94          | 3.05       | 32.00         | ---   | ---   | Peak   |
| 5  | 815.20   | 40.10  | -5.90      | 46.00      | 40.41             | 28.46          | 3.11       | 31.88         | ---   | ---   | Peak   |
| 6  | 862.80   | 41.64  | -4.36      | 46.00      | 40.83             | 29.18          | 3.27       | 31.64         | 100   | 297   | Peak   |
| 7  | 1960.00  | 63.17  |            |            | 86.27             | 31.30          | 6.10       | 60.50         | ---   | ---   | Peak   |
| 8  | 2098.00  | 45.93  | -28.07     | 74.00      | 68.36             | 31.80          | 6.27       | 60.50         | ---   | ---   | Peak   |
| 9  | 4484.00  | 45.43  | -28.57     | 74.00      | 62.60             | 34.47          | 9.57       | 61.21         | ---   | ---   | Peak   |
| 10 | 6250.00  | 46.20  | -27.80     | 74.00      | 59.18             | 35.55          | 11.62      | 60.15         | ---   | ---   | Peak   |
| 11 | 8448.00  | 44.45  | -29.55     | 74.00      | 54.89             | 35.71          | 13.27      | 59.42         | ---   | ---   | Peak   |
| 12 | 10252.00 | 45.99  | -28.01     | 74.00      | 54.58             | 37.30          | 14.96      | 60.85         | ---   | ---   | Peak   |
| 13 | 12554.00 | 47.56  | -26.44     | 74.00      | 51.43             | 39.31          | 16.59      | 59.77         | 100   | 217   | Peak   |



|                        |   |                            |          |
|------------------------|---|----------------------------|----------|
| <b>Test Mode :</b>     | Mode 2  | <b>Temperature :</b>       | 20~23°C  |
| <b>Test Engineer :</b> | Donny Pang  | <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 1) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 1 |                            |          |
| <b>Remark :</b>        | #7 is system simulator signal which can be ignored.   |                            |          |



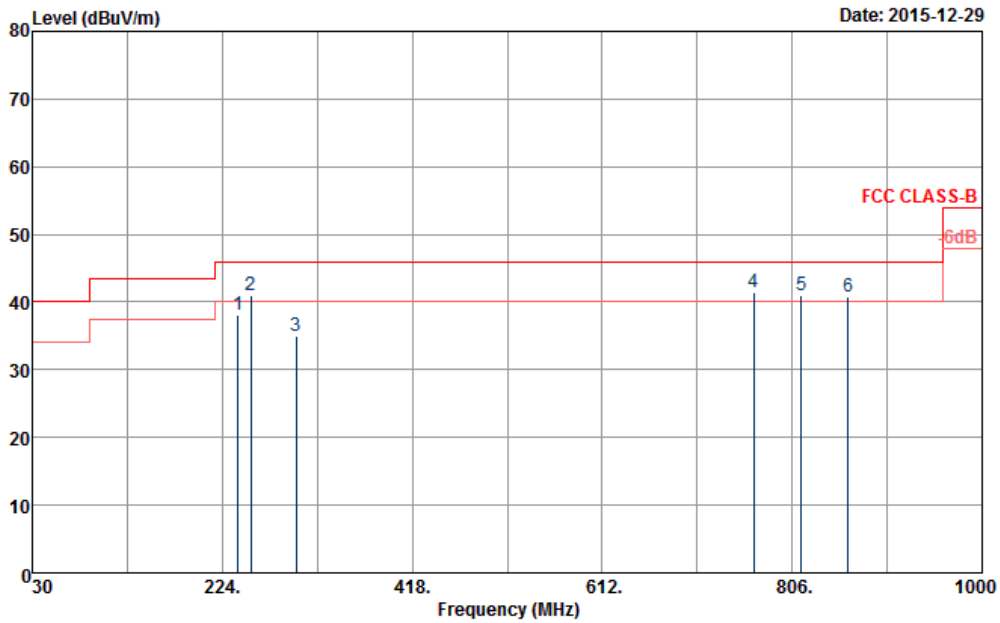
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m HF-ANT\_583\_150810 VERTICAL

Power : FromSystem  
 Mode : Mode 2

|    | Freq     | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Loss | Preamp Factor | A/Pos | T/Pos | Remark |      |
|----|----------|--------|------------|------------|-------------------|------------|---------------|-------|-------|--------|------|
|    | MHz      | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m       | dB            | dB    | cm    | deg    |      |
| 1  | 165.54   | 31.57  | -11.93     | 43.50      | 45.57             | 16.16      | 1.57          | 31.73 | ---   | ---    | Peak |
| 2  | 240.06   | 40.98  | -5.02      | 46.00      | 53.22             | 17.79      | 1.69          | 31.72 | 100   | 199    | Peak |
| 3  | 299.73   | 35.05  | -10.95     | 46.00      | 45.34             | 19.50      | 1.91          | 31.70 | ---   | ---    | Peak |
| 4  | 620.60   | 34.07  | -11.93     | 46.00      | 37.58             | 25.81      | 2.78          | 32.10 | ---   | ---    | Peak |
| 5  | 766.90   | 37.72  | -8.28      | 46.00      | 38.73             | 27.94      | 3.05          | 32.00 | ---   | ---    | Peak |
| 6  | 862.80   | 35.68  | -10.32     | 46.00      | 34.87             | 29.18      | 3.27          | 31.64 | ---   | ---    | Peak |
| 7  | 1960.00  | 64.54  |            |            | 87.64             | 31.30      | 6.10          | 60.50 | ---   | ---    | Peak |
| 8  | 2120.00  | 46.27  | -27.73     | 74.00      | 68.63             | 31.82      | 6.32          | 60.50 | ---   | ---    | Peak |
| 9  | 2882.00  | 47.02  | -26.98     | 74.00      | 67.74             | 32.66      | 7.43          | 60.81 | ---   | ---    | Peak |
| 10 | 4408.00  | 45.44  | -28.56     | 74.00      | 62.99             | 34.30      | 9.41          | 61.26 | ---   | ---    | Peak |
| 11 | 6534.00  | 47.12  | -26.88     | 74.00      | 59.98             | 35.80      | 11.73         | 60.39 | ---   | ---    | Peak |
| 12 | 10480.00 | 46.76  | -27.24     | 74.00      | 54.62             | 37.58      | 15.18         | 60.62 | ---   | ---    | Peak |
| 13 | 12568.00 | 48.73  | -25.27     | 74.00      | 52.60             | 39.31      | 16.59         | 59.77 | 100   | 139    | Peak |



|                 |   |                     |            |
|-----------------|---|---------------------|------------|
| Test Mode :     | Mode 3  | Temperature :       | 20~23°C    |
| Test Engineer : | Donny Pang  | Relative Humidity : | 50~53%     |
| Test Distance : | 3m  | Polarization :      | Horizontal |
| Function Type : | Data Link with Notebook (with USB Cable 2) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 2 |                     |            |



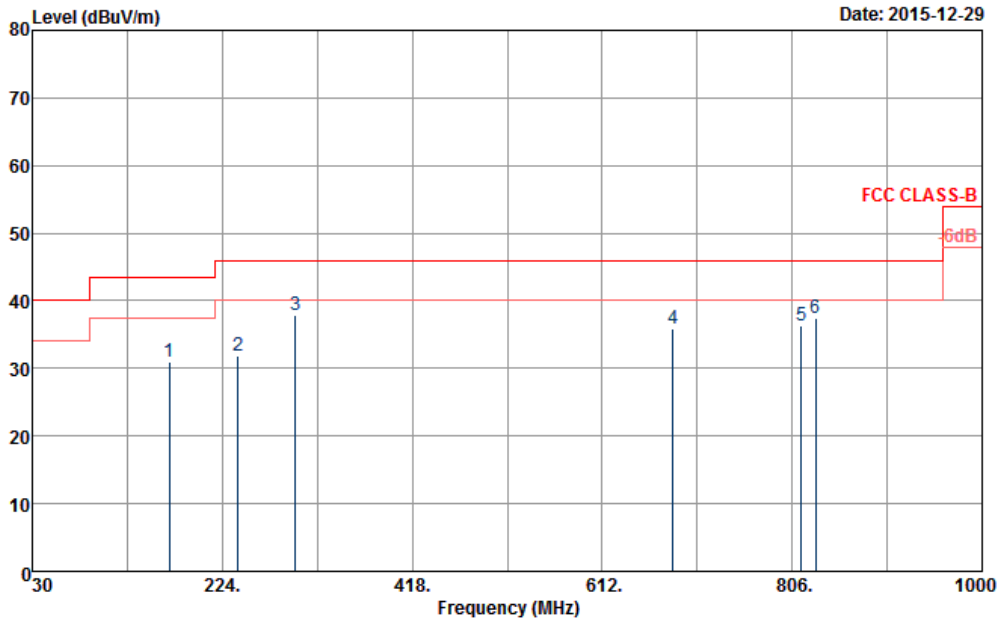
Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF\_ANT\_2725 HORIZONTAL

Power : FromSystem  
 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 | 240.06 | 38.15  | -7.85      | 46.00      | 50.39             | 17.79          | 1.69       | 31.72         | ---   | ---   | Peak   |
| 2 | 253.56 | 40.91  | -5.09      | 46.00      | 51.87             | 19.00          | 1.75       | 31.71         | ---   | ---   | Peak   |
| 3 | 299.73 | 34.95  | -11.05     | 46.00      | 45.24             | 19.50          | 1.91       | 31.70         | ---   | ---   | Peak   |
| 4 | 766.90 | 41.37  | -4.63      | 46.00      | 42.38             | 27.94          | 3.05       | 32.00         | 100   | 121   | Peak   |
| 5 | 815.20 | 41.02  | -4.98      | 46.00      | 41.33             | 28.46          | 3.11       | 31.88         | ---   | ---   | Peak   |
| 6 | 862.80 | 40.88  | -5.12      | 46.00      | 40.07             | 29.18          | 3.27       | 31.64         | ---   | ---   | Peak   |



|                 |   |                     |          |
|-----------------|---|---------------------|----------|
| Test Mode :     | Mode 3  | Temperature :       | 20~23°C  |
| Test Engineer : | Donny Pang  | Relative Humidity : | 50~53%   |
| Test Distance : | 3m  | Polarization :      | Vertical |
| Function Type : | Data Link with Notebook (with USB Cable 2) + WLAN (5GHz) Idle + NFC On + Earphone + Battery 2 |                     |          |



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

Power : FromSystem  
 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 | 169.86 | 30.91  | -12.59     | 43.50      | 45.21             | 15.80          | 1.63       | 31.73         | ---   | ---   | Peak   |
| 2 | 240.06 | 31.92  | -14.08     | 46.00      | 44.16             | 17.79          | 1.69       | 31.72         | ---   | ---   | Peak   |
| 3 | 298.65 | 37.84  | -8.16      | 46.00      | 48.14             | 19.50          | 1.90       | 31.70         | 100   | 219   | Peak   |
| 4 | 684.30 | 35.80  | -10.20     | 46.00      | 38.51             | 26.52          | 2.86       | 32.09         | ---   | ---   | Peak   |
| 5 | 815.20 | 36.22  | -9.78      | 46.00      | 36.53             | 28.46          | 3.11       | 31.88         | ---   | ---   | Peak   |
| 6 | 829.90 | 37.41  | -8.59      | 46.00      | 37.31             | 28.75          | 3.16       | 31.81         | ---   | ---   | Peak   |





## 9. 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              | Nov. 03, 2015 ~ Dec. 31, 2015 | N/A           | Conduction (CO05-HY)  |
| EMI Test Receiver              | Rohde & Schwarz | ESCI 7                     | 100724                          | 9kHz ~ 7GHz                   | Aug. 26, 2015    | Nov. 03, 2015 ~ Dec. 31, 2015 | Aug. 25, 2016 | Conduction (CO05-HY)  |
| Hygrometer                     | Testo           | 608-H1                     | 34913912                        | N/A                           | Apr. 20, 2015    | Nov. 03, 2015 ~ Dec. 31, 2015 | Apr. 19, 2016 | Conduction (CO05-HY)  |
| LISN                           | Rohde & Schwarz | ENV216                     | 100080                          | 9kHz~30MHz                    | Dec. 02, 2014    | Nov. 03, 2015 ~ Nov. 30, 2015 | Dec. 01, 2015 | Conduction (CO05-HY)  |
| LISN                           | Rohde & Schwarz | ENV216                     | 100080                          | 9kHz~30MHz                    | Dec. 02, 2015    | Dec. 03, 2015 ~ Dec. 31, 2015 | Dec. 01, 2016 | Conduction (CO05-HY)  |
| LISN (for auxiliary equipment) | Rohde & Schwarz | ENV216                     | 100081                          | 9kHz~30MHz                    | Dec. 08, 2014    | Nov. 03, 2015 ~ Nov. 30, 2015 | Dec. 07, 2015 | Conduction (CO05-HY)  |
| LISN (for auxiliary equipment) | Rohde & Schwarz | ENV216                     | 100081                          | 9kHz~30MHz                    | Dec. 14, 2015    | Dec. 14, 2015 ~ Dec. 31, 2015 | Dec. 13, 2016 | Conduction (CO05-HY)  |
| LF Cable                       | HUBER + SUHNER  | RG-214/U                   | LF01                            | N/A                           | Jan. 07, 2015    | Nov. 03, 2015 ~ Dec. 31, 2015 | Jan. 06, 2016 | Conduction (CO05-HY)  |
| Test Software                  | R & S           | EMC32                      | 8.40.0                          | N/A                           | N/A              | Nov. 03, 2015 ~ Dec. 31, 2015 | N/A           | Conduction (CO05-HY)  |
| Bilog Antenna                  | Schaffner       | CBL6111C                   | 2725                            | 30MHz~1GHz                    | Nov. 17, 2015    | Dec. 29, 2015                 | Nov. 16, 2016 | Radiation (03CH06-HY) |
| Double Ridge Horn Antenna      | EMCO            | 3117                       | 00066583                        | 1GHz~18GHz                    | Jul. 20, 2015    | Dec. 29, 2015                 | Jul. 19, 2016 | Radiation (03CH06-HY) |
| EMI Test Receiver              | Rohde & Schwarz | ESU26                      | 100472                          | 20Hz~26.5GHz                  | Jan. 19, 2015    | Dec. 29, 2015                 | Jan. 18, 2016 | Radiation (03CH06-HY) |
| Preamplifier                   | SONOMA          | 310N                       | 186713                          | 9kHz~1GHz                     | Apr. 20, 2015    | Dec. 29, 2015                 | Apr. 19, 2016 | Radiation (03CH06-HY) |
| Preamplifier                   | MITEQ           | AMF-7D-0010<br>1800-30-10P | 1850117                         | 1GHz ~ 18GHz                  | Jul. 01, 2015    | Dec. 29, 2015                 | Jun. 30, 2016 | Radiation (03CH06-HY) |
| Controller                     | INN-CO          | EM1000                     | 060782                          | Control Turn table & Ant Mast | N/A              | Dec. 29, 2015                 | N/A           | Radiation (03CH06-HY) |
| Antenna Mast                   | MF              | MF-7802                    | MF78020821<br>2                 | 1m~4m                         | N/A              | Dec. 29, 2015                 | N/A           | Radiation (03CH06-HY) |
| Turn Table                     | INN-CO          | DS2000                     | 420/650/00                      | 0-360 degree                  | N/A              | Dec. 29, 2015                 | N/A           | Radiation (03CH06-HY) |
| Hygrometer                     | WISEWIND        | 410                        | BU5004                          | N/A                           | May 04, 2015     | Dec. 29, 2015                 | May 03, 2016  | Radiation (03CH06-HY) |
| RF Cable                       | HUBER + SUHNER  | RG_142_B/U                 | NA                              | 30MHz ~ 1GHz                  | Nov. 26, 2015    | Dec. 29, 2015                 | Nov. 25, 2016 | Radiation (03CH06-HY) |
| RF Cable                       | Infinet         | LL142                      | Infinet<br>CA3601-3601<br>-1000 | 1GHz ~ 26.5GHz                | Nov. 26, 2015    | Dec. 29, 2015                 | Nov. 25, 2016 | Radiation (03CH06-HY) |
| Test Software                  | Audix           | E3                         | 6.2009-8-24                     | N/A                           | N/A              | Dec. 29, 2015                 | N/A           | Radiation (03CH06-HY) |



| Instrument        | Manufacturer    | Model No.     | Serial No. | Characteristics    | Calibration Date | Test Date     | Due Date      | Remark                |
|-------------------|-----------------|---------------|------------|--------------------|------------------|---------------|---------------|-----------------------|
| Hygrometer        | Testo           | 608-H1        | 34897197   | N/A                | May 04, 2015     | Jan. 23, 2015 | May 03, 2016  | Radiation (03CH07-HY) |
| Loop Antenna      | TESEQ           | HLA6120       | 31244      | 9 kHz~30 MHz       | Feb. 02 ,2015    | Jan. 23, 2015 | Feb. 01, 2016 | Radiation (03CH07-HY) |
| Signal Analyzer   | Rohde & Schwarz | FSV 30        | 101749     | 10Hz~30GHz         | Mar. 10, 2015    | Jan. 23, 2015 | Mar. 09, 2016 | Radiation (03CH07-HY) |
| RF Cable          | HUBER + SUHNER  | SUCOFLEX 104  | MY84209521 | 9kHz~1GHz          | Dec. 03, 2015    | Jan. 23, 2015 | Dec. 02, 2016 | Radiation (03CH07-HY) |
| Controller        | ChainTek        | Chaintek 3000 | N/A        | Control Turn table | N/A              | Jan. 23, 2015 | N/A           | Radiation (03CH07-HY) |
| Turn Table        | ChainTek        | Chaintek 3000 | N/A        | 0~360 degree       | N/A              | Jan. 23, 2015 | N/A           | Radiation (03CH07-HY) |
| EMI Test Receiver | Rohde & Schwarz | ESCI 7        | 100724     | 9kHz~7GHz          | Aug. 26, 2015    | Jan. 23, 2015 | Aug. 25, 2016 | Radiation (03CH07-HY) |



## 10. 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 |
|---|------|

### Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)

|   |      |
|---|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.70 |
|---|------|

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

|   |      |
|---|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.00 |
|---|------|