

# FCC Test Report

**APPLICANT** : Yulong Computer Telecommunication  
Scientific (Shenzhen) Co., Ltd.

**EQUIPMENT** : Mobile Phone

**BRAND NAME** : Vodafone Smart 4G/Smartphone  
Android™ by SFR STARADDICT III

**MODEL NAME** : Coolpad 8860U/Coolpad 8861U

**MARKETING NAME** : Vodafone Smart 4G/Smartphone  
Android™ by SFR STARADDICT III

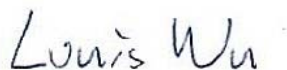
**FCC ID** : R38YL8860U

**STANDARD** : FCC 47 CFR FCC Part 15 Subpart B

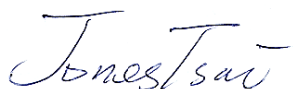
**CLASSIFICATION** : Certification

The product was received on Apr. 04, 2013 and testing was completed on Sep. 04, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown to be compliant with the applicable technical standards.

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



Reviewed by: Louis Wu / Manager



Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL (SHENZHEN) INC.**

**No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.**



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### REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FC340403   | Rev. 01 | Initial issue of report | Sep. 14, 2013 |
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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>9.23 dB at<br>0.190 MHz   |
| 3.2            | 15.109   | Radiated Emission     | < 15.109 limits | PASS   | Under limit<br>7.08 dB at<br>719.670 MHz |

# 1. General Description

## 1.1. Applicant

**Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd.**

Coolpad Information Harbor, 2nd Mengxi Road, Northern Part of Science&Technology Park, Nanshan district, Shenzhen, P.R.China

## 1.2. Manufacturer

**Yulong Computer Telecommunication Scientific (Shenzhen) Co., Ltd.**

Coolpad Information Harbor, 2nd Mengxi Road, Northern Part of Science&Technology Park, Nanshan district, Shenzhen, P.R.China

## 1.3. Feature of Equipment Under Test

| Product Feature                        |                                                                                                                              |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Equipment</b>                       | Mobile Phone                                                                                                                 |
| <b>Brand Name</b>                      | Vodafone Smart 4G/Smartphone Android™ by SFR STARADDICT III                                                                  |
| <b>Model Name</b>                      | Coolpad 8860U/Coolpad 8861U                                                                                                  |
| <b>Marketing Name</b>                  | Vodafone Smart 4G/Smartphone Android™ by SFR STARADDICT III                                                                  |
| <b>FCC ID</b>                          | R38YL8860U                                                                                                                   |
| <b>EUT supports Radios application</b> | GSM/GPRS/EGPRS/LTE/WLAN 802.11abgn HT 20/Bluetooth v3.0 + EDR/Bluetooth v4.0/NFC                                             |
| <b>HW Version</b>                      | T3                                                                                                                           |
| <b>SW Version</b>                      | 082.12.T3.130819.CP8860U (for Vodafone Smart 4G)<br>082.12.T3.130819.CP8861U (for Smartphone Android™ by SFR STARADDICT III) |
| <b>EUT Stage</b>                       | Production Unit                                                                                                              |

**Remark:**

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. There are two types of EUT for this project. The differences between them are summary below:

| Sample List | Function Type | Brand name                                | Model name    |
|-------------|---------------|-------------------------------------------|---------------|
| Sample 1    | With NFC      | Vodafone Smart 4G                         | Coolpad 8860U |
| Sample 2    | With NFC      | Smartphone Android™ by SFR STARADDICT III | Coolpad 8861U |

Sample 1 and sample 2 are identical on hardware. The only difference is for different market purpose. In this report, we use with sample 1 to perform the test.

### 1.4. Product Specification of Equipment Under Test

| Product Specification subjective to this standard |                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                               | GSM1900 : 1850.2 MHz ~ 1909.8MHz<br>LTE Band 7 : 2506.5 MHz ~ 2534.5 MHz<br>and 2562.5 MHz ~ 2567.5 MHz<br>802.11b/g/n: 2412 MHz ~ 2462 MHz<br>802.11a/n: 5180 MHz ~ 5240 MHz; 5745 MHz ~ 5825 MHz<br>Bluetooth: 2402 MHz ~ 2480 MHz<br>NFC : 13.56 MHz                                                                    |
| <b>Rx Frequency</b>                               | GSM1900 : 1930.2 MHz ~ 1989.8 MHz<br>LTE Band 7 : 2626.5MHz ~ 2654.5 MHz<br>and 2666.5 MHz ~ 2697.5 MHz<br>802.11b/g/n: 2412 MHz ~ 2462 MHz<br>802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz ;<br>5500 MHz ~ 5700 MHz; 5745 MHz ~ 5825 MHz<br>Bluetooth: 2402 MHz ~ 2480 MHz<br>GPS : 1.57542 GHz<br>NFC : 13.56 MHz |
| <b>Antenna Type</b>                               | WWAN : PIFA Antenna<br>WLAN : PIFA Antenna<br>Bluetooth : PIFA Antenna<br>GPS : PIFA Antenna<br>NFC : Loop Antenna                                                                                                                                                                                                         |
| <b>Type of Modulation</b>                         | GSM: GMSK<br>GPRS: GMSK<br>EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK<br>LTE: QPSK / 16QAM<br>802.11b : DSSS (DBPSK / DQPSK / CCK)<br>802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>Bluetooth v4.0 : GFSK<br>Bluetooth : GFSK, $\pi/4$ -DQPSK, 8-DPSK<br>GPS : BPSK<br>NFC: ASK                                           |

### 1.5. Modification of EUT

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

### 1.6. Test Site

|                           |                                                                                                                                                            |           |                             |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------|
| <b>Test Site</b>          | SPORTON INTERNATIONAL (SHENZHEN) INC.                                                                                                                      |           |                             |
| <b>Test Site Location</b> | No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.<br>TEL: +86-755- 3320-2398 |           |                             |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                    |           | <b>FCC Registration No.</b> |
|                           | CO01-SZ                                                                                                                                                    | 03CH01-SZ | 831040                      |

### 1.7. Applied 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 C63.4-2003

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

## 2. Test Configuration of Equipment Under Test

### 2.1. Test Mode

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

Frequency range investigated: 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<1G | EMI RE≥1G |
| 1.   | Charging Mode (EUT with adapter)                      | ☒              | ☒         | Note 1    |
| 2.   | Data application transferred mode (EUT with notebook) | ☒              | ☒         | ☒         |

**Abbreviations:**

- EMI AC: AC conducted emissions
- EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz
- EMI RE < 1G: EUT radiated emissions < 1GHz

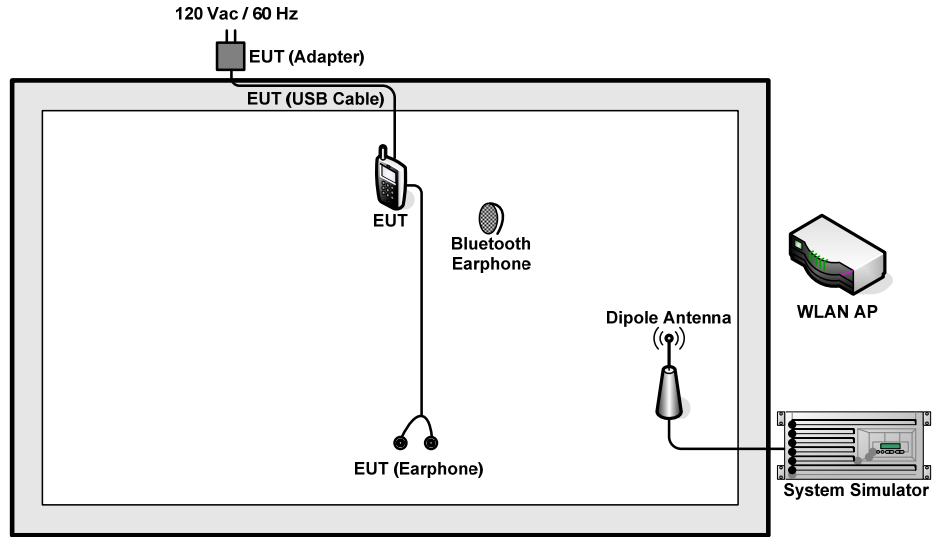
**Note 1:** Testing for this mode is not required or not the worst case.

**Remark:** For signal above 1GHz, the worst case was test item 2.

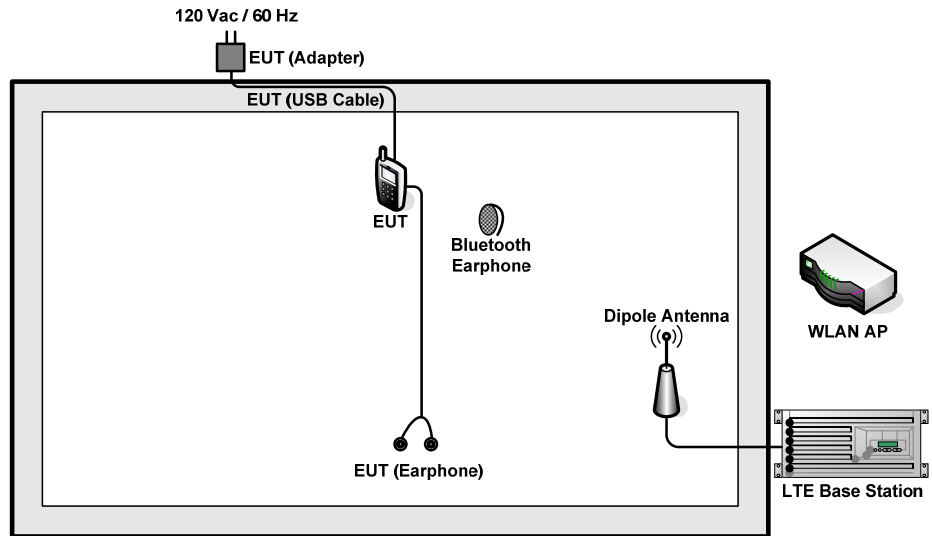


| Test Items                                                                                                                                                                                                                                                                                                                                                                          | EUT Configure Mode | Function Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AC Conducted Emission                                                                                                                                                                                                                                                                                                                                                               | 1/2                | <p>Mode 1: GSM1900 Idle + Bluetooth Idle + WLAN (5GHz) Idle + USB Cable (Charging from Adapter) + Camera + Battery 1 + Earphone&lt;Fig.1&gt;</p> <p>Mode 2: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Charging from Adapter) + MPEG4 + Battery 2 + Earphone&lt;Fig.2&gt;</p> <p>Mode 3: GSM1900 Idle + Bluetooth Idle + WLAN (5GHz) Idle + USB Cable (Charging from Adapter) + NFC on + Battery 1 + Earphone&lt;Fig.1&gt;</p> <p>Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Battery 2 + Earphone&lt;Fig.3&gt;</p> |
| Radiated Emissions < 1GHz                                                                                                                                                                                                                                                                                                                                                           | 1/2                | <p>Mode 1: GSM1900 Idle + Bluetooth Idle + WLAN (5GHz) Idle + USB Cable (Charging from Adapter) + Camera + Battery 1 + Earphone&lt;Fig.1&gt;</p> <p>Mode 2: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Charging from Adapter) + MPEG4 + Battery 2 + Earphone&lt;Fig.2&gt;</p> <p>Mode 3: GSM1900 Idle + Bluetooth Idle + WLAN (5GHz) Idle + USB Cable (Charging from Adapter) + NFC on + Battery 1 + Earphone&lt;Fig.1&gt;</p> <p>Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Battery 2 + Earphone&lt;Fig.3&gt;</p> |
| Radiated Emissions ≥ 1GHz                                                                                                                                                                                                                                                                                                                                                           | 2                  | <p>Mode 1: LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Battery 2 + Earphone&lt;Fig.3&gt;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <p><b>Remark:</b></p> <ol style="list-style-type: none"> <li>The worst case of AC Conducted Emission is mode 4; only the test data of this mode is reported.</li> <li>The worst case of Radiated Emissions &lt; 1G is mode 4; only the test data of this mode is reported.</li> <li>Link with Notebook means data application transferred mode between EUT and Notebook.</li> </ol> |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

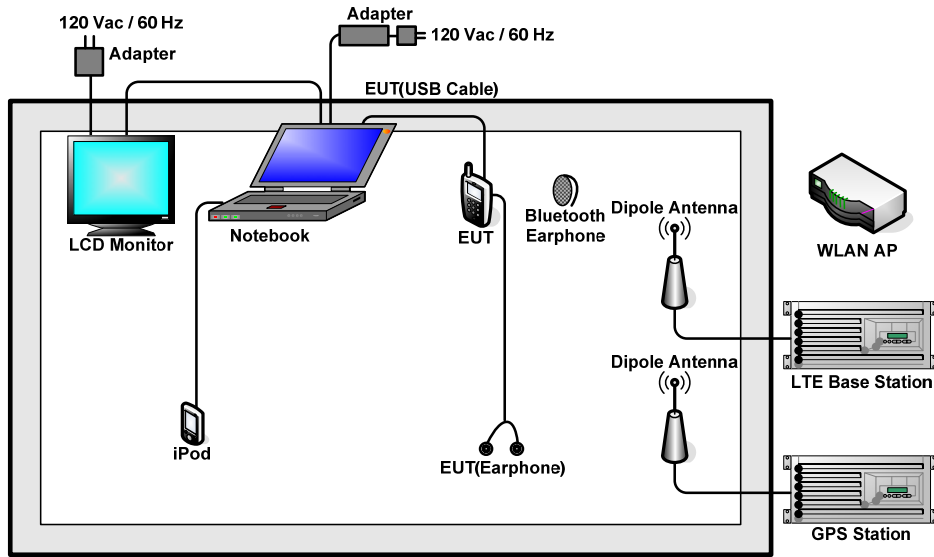
## 2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>



<Fig.3>

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

| Item | Equipment          | Trade Name | Model Name | FCC ID    | Data Cable        | Power Cord                                                 |
|------|--------------------|------------|------------|-----------|-------------------|------------------------------------------------------------|
| 1.   | LTE Base Station   | Anritsu    | MT8820C    | FCC DoC   | Shielded, 1.5 m   | N/A                                                        |
| 2.   | System Simulator   | Agilent    | E5515C     | N/A       | N/A               | Unshielded, 1.8 m                                          |
| 3.   | GPS Station        | T&E        | GS-50      | N/A       | N/A               | Unshielded, 1.8 m                                          |
| 4.   | GPS Station        | ADIVIE     | MP9000     | N/A       | N/A               | Unshielded, 1.8 m                                          |
| 5.   | WLAN AP            | D-Link     | DIR-612    | N/A       | N/A               | Unshielded, 1.8 m                                          |
| 6.   | WLAN AP            | D-Link     | DIR-615    | N/A       | N/A               | Unshielded, 1.8 m                                          |
| 7.   | Bluetooth Earphone | Nokia      | BH-108     | N/A       | N/A               | N/A                                                        |
| 8.   | Bluetooth Earphone | Nokia      | HS-12W     | PYAHS-12W | N/A               | N/A                                                        |
| 9.   | Notebook           | DELL       | P08S       | FCC DoC   | N/A               | AC I/P:<br>Unshielded, 1.8 m<br>DC O/P:<br>Shielded, 1.8 m |
| 10.  | LCD Monitor        | DELL       | 1707FPt    | FCC DoC   | Shielded, 1.2 m   | Unshielded, 1.8 m                                          |
| 11.  | LCD Monitor        | DELL       | IN1940MWB  | FCC DoC   | Shielded, 1.2 m   | Unshielded, 1.8 m                                          |
| 12.  | iPod               | Apple      | MC525 ZP/A | FCC DoC   | Unshielded, 1.0 m | N/A                                                        |

## 2.4. EUT Operation Test Setup

The EUT was in GSM and LTE idle mode during the testing. The EUT was synchronized to the BCCH, and was in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Execute the program, "Winthrax" under WIN7 installed in notebook for files transfer with EUT via USB cable.
2. Turn on GPS function to make the EUT receive continuous signals from GPS station.
3. Execute "Video player" to play MPEG4 files.
4. Turn on camera to capture images.
5. Turn on NFC function.

### 3. Test Result

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

##### 3.1.1 Limits of AC Conducted Emission

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

| Frequency of emission<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.

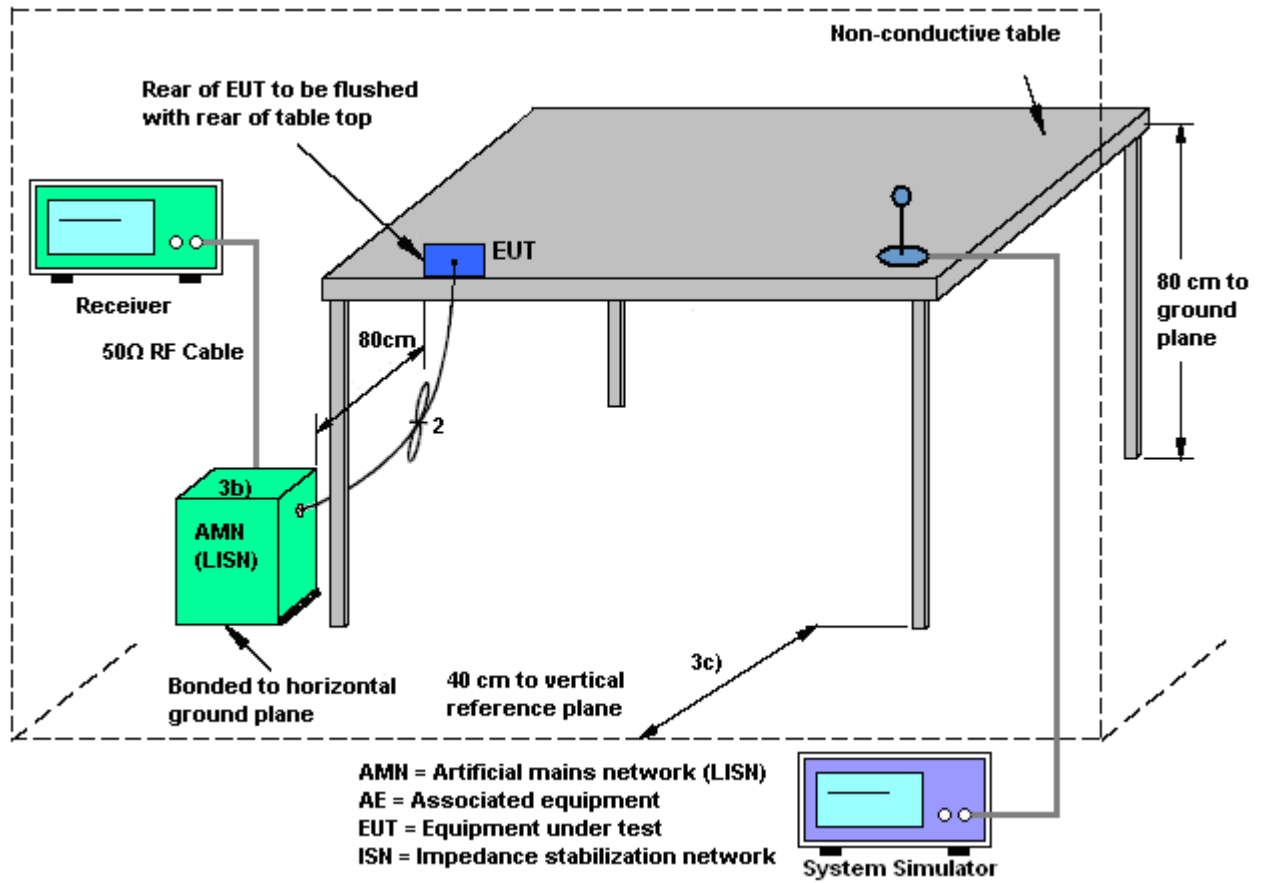
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedure

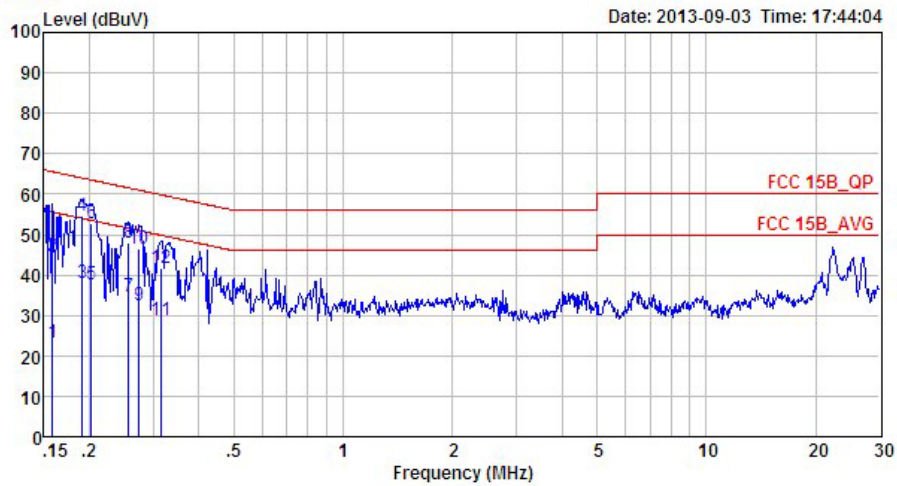
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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 with Maximum Hold Mode.

### 3.1.4 Test Setup



3.1.5 Test Result of AC Conducted Emission

|                 |                                                                                                                             |                     |         |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------|---------|
| Test Mode :     | Mode 4                                                                                                                      | Temperature :       | 22~23°C |
| Test Engineer : | Henry Chen                                                                                                                  | Relative Humidity : | 49~50%  |
| Test Voltage :  | 120Vac / 60Hz                                                                                                               | Phase :             | Line    |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Battery 2 + Earphone |                     |         |



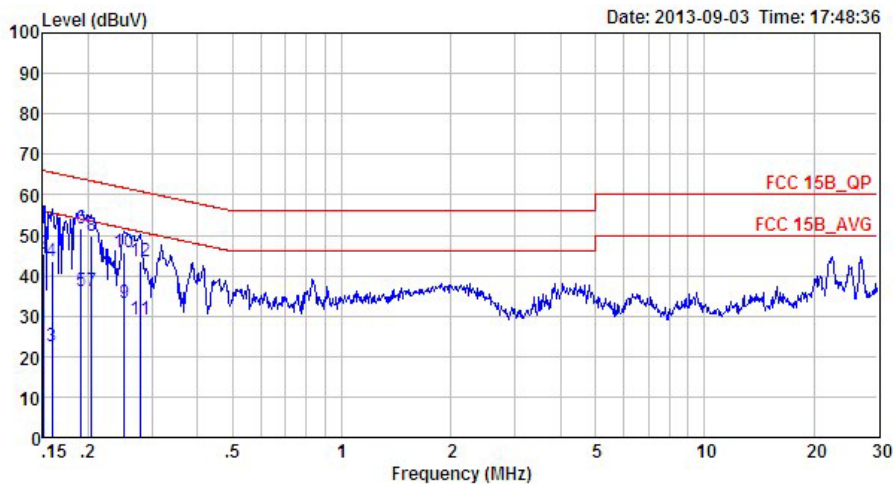
Site : CO01-SZ  
 Condition: FCC 15B\_QP LISN\_L\_20130328 LINE

|     | Freq | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark  |
|-----|------|-------|------------|------------|------------|-------------|------------|---------|
|     | MHz  | dBuV  | dB         | dBuV       | dBuV       | dB          | dB         |         |
| 1   | 0.16 | 23.41 | -32.15     | 55.56      | 13.01      | 0.06        | 10.34      | Average |
| 2   | 0.16 | 44.71 | -20.85     | 65.56      | 34.31      | 0.06        | 10.34      | QP      |
| 3   | 0.19 | 37.85 | -16.13     | 53.98      | 27.50      | 0.07        | 10.28      | Average |
| 4 * | 0.19 | 54.75 | -9.23      | 63.98      | 44.40      | 0.07        | 10.28      | QP      |
| 5   | 0.20 | 37.74 | -15.75     | 53.49      | 27.40      | 0.07        | 10.27      | Average |
| 6   | 0.20 | 52.84 | -10.65     | 63.49      | 42.50      | 0.07        | 10.27      | QP      |
| 7   | 0.26 | 34.81 | -16.75     | 51.56      | 24.50      | 0.09        | 10.22      | Average |
| 8   | 0.26 | 48.11 | -13.45     | 61.56      | 37.80      | 0.09        | 10.22      | QP      |
| 9   | 0.27 | 32.40 | -18.58     | 50.98      | 22.10      | 0.09        | 10.21      | Average |
| 10  | 0.27 | 46.60 | -14.38     | 60.98      | 36.30      | 0.09        | 10.21      | QP      |
| 11  | 0.31 | 28.90 | -20.94     | 49.84      | 18.61      | 0.10        | 10.19      | Average |
| 12  | 0.31 | 41.70 | -18.14     | 59.84      | 31.41      | 0.10        | 10.19      | QP      |





|                 |                                                                                                                             |                     |         |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------|---------|
| Test Mode :     | Mode 4                                                                                                                      | Temperature :       | 22~23°C |
| Test Engineer : | Henry Chen                                                                                                                  | Relative Humidity : | 49~50%  |
| Test Voltage :  | 120Vac / 60Hz                                                                                                               | Phase :             | Neutral |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Battery 2 + Earphone |                     |         |



Site : CO01-SZ  
 Condition: FCC 15B\_QP LISN\_N\_20130328 NEUTRAL

|     | Freq | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark  |
|-----|------|-------|------------|------------|------------|-------------|------------|---------|
|     | MHz  | dBuV  | dB         | dBuV       | dBuV       | dB          | dB         |         |
| 1   | 0.15 | 27.00 | -29.00     | 56.00      | 16.60      | 0.04        | 10.36      | Average |
| 2   | 0.15 | 45.40 | -20.60     | 66.00      | 35.00      | 0.04        | 10.36      | QP      |
| 3   | 0.16 | 22.38 | -33.14     | 55.52      | 12.00      | 0.04        | 10.34      | Average |
| 4   | 0.16 | 43.38 | -22.14     | 65.52      | 33.00      | 0.04        | 10.34      | QP      |
| 5   | 0.19 | 36.12 | -17.86     | 53.98      | 25.80      | 0.04        | 10.28      | Average |
| 6 * | 0.19 | 51.84 | -12.14     | 63.98      | 41.52      | 0.04        | 10.28      | QP      |
| 7   | 0.20 | 36.01 | -17.44     | 53.45      | 25.70      | 0.04        | 10.27      | Average |
| 8   | 0.20 | 49.81 | -13.64     | 63.45      | 39.50      | 0.04        | 10.27      | QP      |
| 9   | 0.25 | 33.36 | -18.33     | 51.69      | 23.10      | 0.04        | 10.22      | Average |
| 10  | 0.25 | 45.86 | -15.83     | 61.69      | 35.60      | 0.04        | 10.22      | QP      |
| 11  | 0.28 | 29.05 | -21.85     | 50.90      | 18.80      | 0.04        | 10.21      | Average |
| 12  | 0.28 | 43.55 | -17.35     | 60.90      | 33.30      | 0.04        | 10.21      | QP      |

## 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

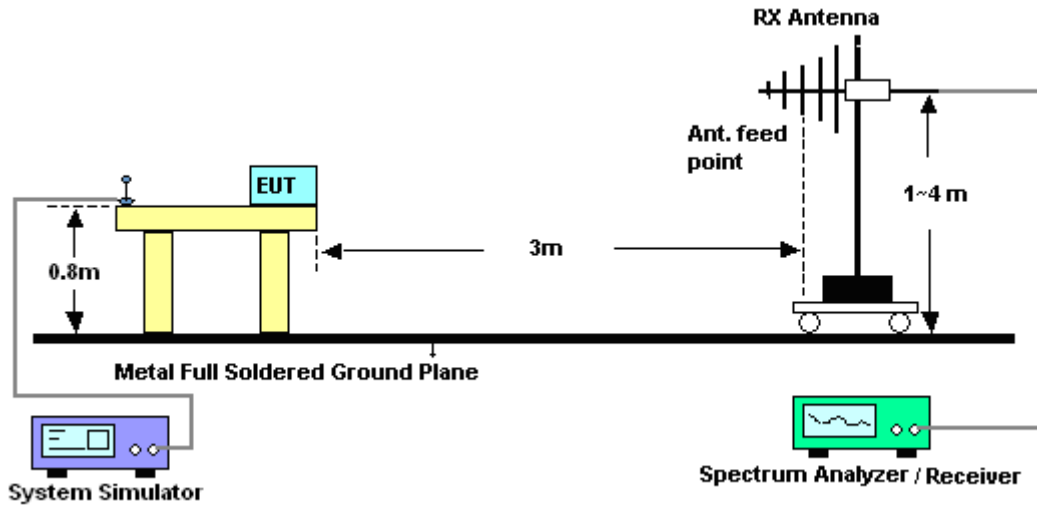
See list of measuring instruments of this test report.

### 3.2.3. Test Procedures

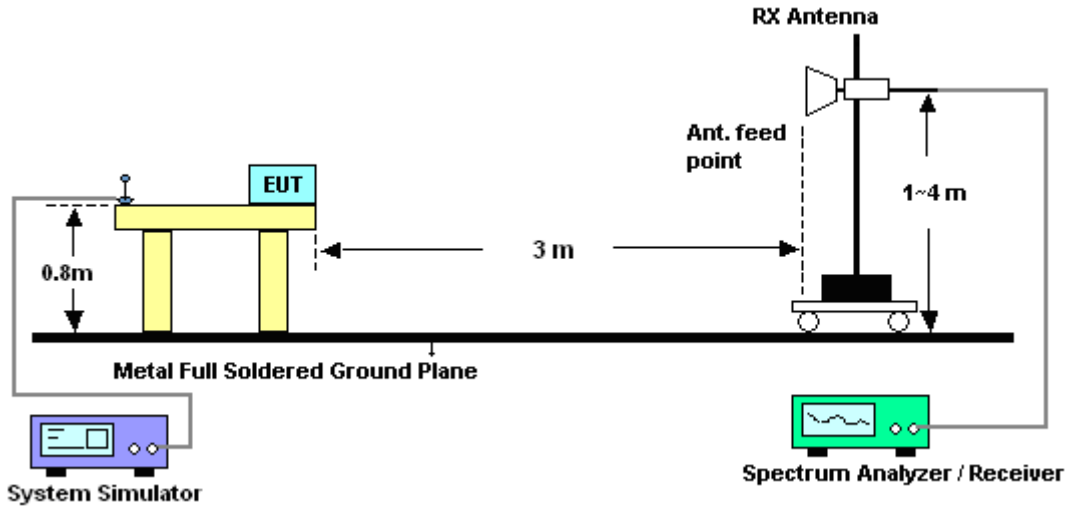
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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.
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 from 30MHz to 1GHz



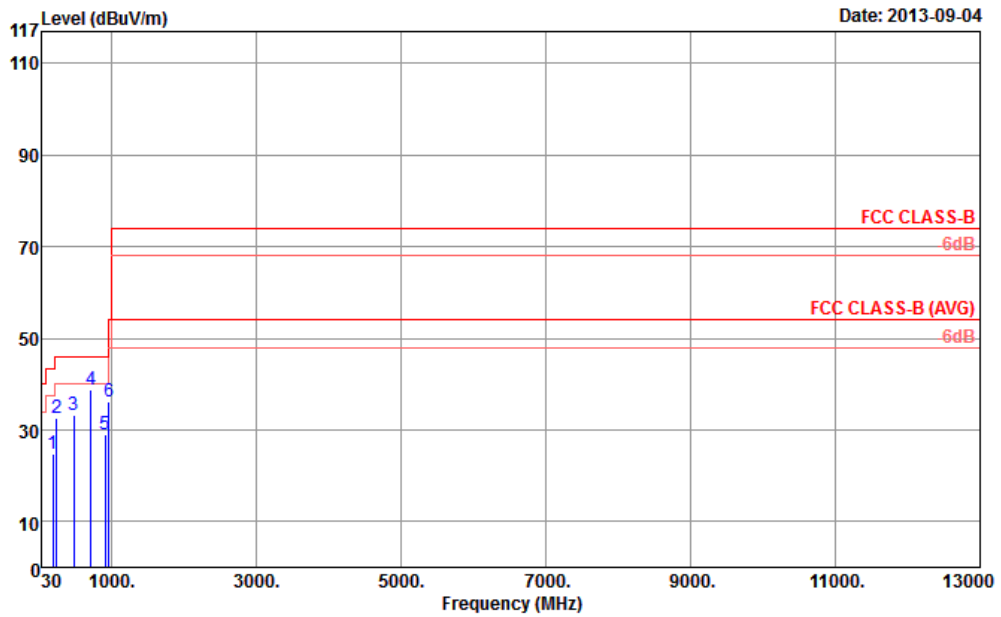
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

|                 |                                                                                                                             |                     |            |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------|------------|
| Test Mode :     | Mode 4                                                                                                                      | Temperature :       | 23~24°C    |
| Test Engineer : | Robin Luo                                                                                                                   | Relative Humidity : | 49~50%     |
| Test Distance : | 3m                                                                                                                          | Polarization :      | Horizontal |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Battery 2 + Earphone |                     |            |

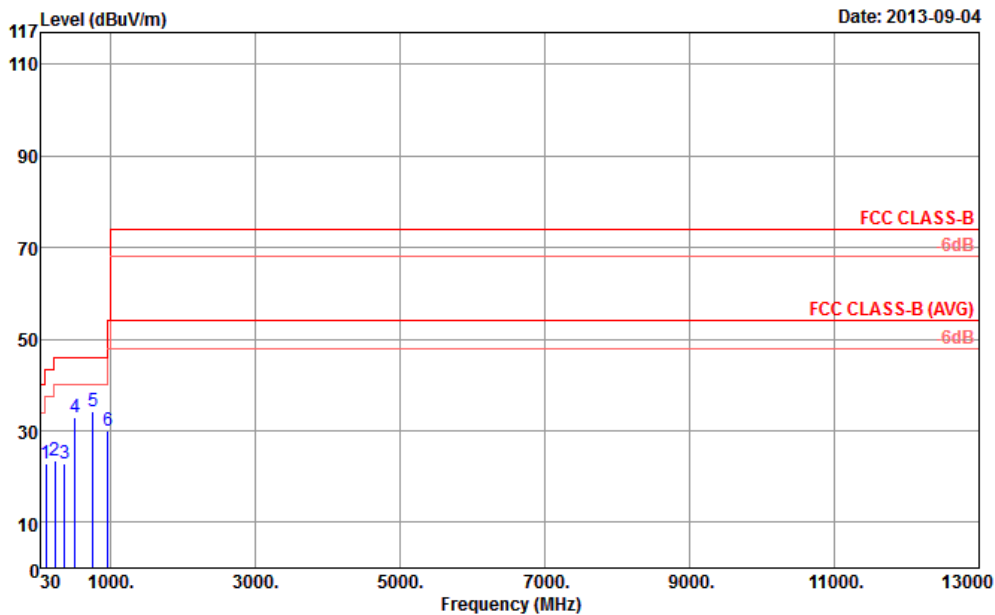


Site : 03CH01-SZ  
 Condition : FCC CLASS-B 3m LF\_ANT\_121103 HORIZONTAL  
 Project : (FC)340403

|     | 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   | 188.11 | 24.88  | -18.62     | 43.50      | 44.16             | 9.45           | 1.64       | 30.37         | ---   | ---   | Peak   |
| 2   | 240.49 | 32.70  | -13.30     | 46.00      | 49.18             | 11.90          | 1.82       | 30.20         | ---   | ---   | Peak   |
| 3   | 480.08 | 33.40  | -12.60     | 46.00      | 43.12             | 17.20          | 2.48       | 29.40         | ---   | ---   | Peak   |
| 4 P | 719.67 | 38.92  | -7.08      | 46.00      | 44.97             | 20.00          | 2.99       | 29.04         | 200   | 0     | Peak   |
| 5   | 908.82 | 29.02  | -16.98     | 46.00      | 32.92             | 21.54          | 3.35       | 28.79         | ---   | ---   | Peak   |
| 6   | 960.23 | 36.23  | -17.77     | 54.00      | 39.72             | 21.80          | 3.43       | 28.72         | ---   | ---   | Peak   |



|                 |                                                                                                                             |                     |          |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------|----------|
| Test Mode :     | Mode 4                                                                                                                      | Temperature :       | 23~24°C  |
| Test Engineer : | Robin Luo                                                                                                                   | Relative Humidity : | 49~50%   |
| Test Distance : | 3m                                                                                                                          | Polarization :      | Vertical |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + USB Cable (Data Link with Notebook) + GPS Rx + Battery 2 + Earphone |                     |          |



Site : 03CH01-SZ  
 Condition : FCC CLASS-B 3m LF\_ANT\_121103 VERTICAL  
 Project : (FC)340403

|     | 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   | 104.69 | 22.67  | -20.83     | 43.50      | 40.23             | 11.80        | 1.29        | 30.65 | ---   | ---    | Peak |
| 2   | 232.73 | 23.62  | -22.38     | 46.00      | 40.83             | 11.20        | 1.81        | 30.22 | ---   | ---    | Peak |
| 3   | 364.65 | 22.68  | -23.32     | 46.00      | 34.89             | 15.38        | 2.19        | 29.78 | ---   | ---    | Peak |
| 4   | 504.33 | 32.98  | -13.02     | 46.00      | 42.15             | 17.62        | 2.54        | 29.33 | ---   | ---    | Peak |
| 5 P | 758.47 | 34.09  | -11.91     | 46.00      | 39.62             | 20.38        | 3.08        | 28.99 | 100   | 360    | Peak |
| 6   | 960.23 | 30.11  | -23.89     | 54.00      | 33.60             | 21.80        | 3.43        | 28.72 | ---   | ---    | Peak |

## 4. List of Measuring Equipment

| Instrument                        | Manufacturer         | Model No.    | Serial No.   | Characteristics        | Calibration Date | Test Date     | Due Date      | Remark                |
|-----------------------------------|----------------------|--------------|--------------|------------------------|------------------|---------------|---------------|-----------------------|
| ESCIO TEST Receiver               | R&S                  | 1142.8007.03 | 100724       | 9kHz~3GHz              | Mar. 28, 2013    | Sep. 03, 2013 | Mar. 27, 2014 | Conduction (CO01-SZ)  |
| AC LISN                           | EMCO                 | 3816/2SH     | 00103912     | 9kHz~30MHz             | Mar. 28, 2013    | Sep. 03, 2013 | Mar. 27, 2014 | Conduction (CO01-SZ)  |
| AC LISN (for auxiliary equipment) | EMCO                 | 3816/2SH     | 00103892     | 9kHz~30MHz             | Mar. 28, 2013    | Sep. 03, 2013 | Mar. 27, 2014 | Conduction (CO01-SZ)  |
| AC Power Source                   | Chroma               | 61602        | 616020000891 | N/A                    | Nov. 20, 2012    | Sep. 03, 2013 | Nov. 19, 2013 | Conduction (CO01-SZ)  |
| Spectrum Analyzer                 | Agilent Technologies | N9038A       | MY52260185   | 20Hz~26.5GHz           | Apr. 04, 2013    | Sep. 04, 2013 | Apr. 03, 2014 | Radiation (03CH01-SZ) |
| Double Ridge Horn Antenna         | ETS Lindgren         | 3117         | 00119436     | 1GHz~18GHz             | Oct. 12, 2012    | Sep. 04, 2013 | Oct. 11, 2013 | Radiation (03CH01-SZ) |
| Bilog Antenna                     | SCHAFFNER            | CBL6112B     | 2614         | 30MHz~2GHz             | Nov. 03, 2012    | Sep. 04, 2013 | Nov. 02, 2013 | Radiation (03CH01-SZ) |
| Amplifier                         | ADVANTEST            | BB525C       | E9007003     | 9kHz-3000MHz GAIN 30db | Mar. 28, 2013    | Sep. 04, 2013 | Mar. 27, 2014 | Radiation (03CH01-SZ) |
| Amplifier                         | Yiai                 | AV3860B      | 04030        | 2GHz~26.5GHz           | Mar. 28, 2013    | Sep. 04, 2013 | Mar. 27, 2014 | Radiation (03CH01-SZ) |
| Turn Table                        | EM Electronice       | EM 1000      | N/A          | 0 ~ 360 degree         | N/A              | Sep. 04, 2013 | N/A           | Radiation (03CH01-SZ) |
| Antenna Mast                      | EM Electronice       | EM 1000      | N/A          | 1 m - 4 m              | N/A              | Sep. 04, 2013 | N/A           | Radiation (03CH01-SZ) |

## 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 |
|-------------------------------------------------------------------------|------|

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

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

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.72 |
|-------------------------------------------------------------------------|------|