



# FCC RF Test Report

**APPLICANT** : Sony Mobile Communications Inc  
**EQUIPMENT** : PDA Phone  
**BRAND NAME** : Sony  
**TYPE NAME** : PM-0782-BV  
**FCC ID** : PY7-PM0782  
**STANDARD** : 47 CFR Part 2, 22(H), 27  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Dec. 04, 2014 and completely tested on Mar. 07, 2015. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be 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.

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Reviewed by: Joseph Lin / Supervisor

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Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

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## TABLE OF CONTENTS

|                                                              |           |
|--------------------------------------------------------------|-----------|
| <b>REVISION HISTORY .....</b>                                | <b>3</b>  |
| <b>SUMMARY OF TEST RESULT .....</b>                          | <b>4</b>  |
| <b>1 GENERAL DESCRIPTION .....</b>                           | <b>5</b>  |
| 1.1 Applicant .....                                          | 5         |
| 1.2 Manufacturer .....                                       | 5         |
| 1.3 Product Feature of Equipment Under Test.....             | 5         |
| 1.4 Product Specification subjective to this standard .....  | 7         |
| 1.5 Modification of EUT .....                                | 7         |
| 1.6 Testing Location .....                                   | 8         |
| 1.7 Applicable Standards.....                                | 8         |
| <b>2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST .....</b>    | <b>9</b>  |
| 2.1 Test Mode .....                                          | 9         |
| 2.2 Connection Diagram of Test System.....                   | 10        |
| 2.3 Support Unit used in test configuration and system ..... | 10        |
| <b>3 CONDUCTED TEST ITEMS .....</b>                          | <b>11</b> |
| 3.1 Measuring Instruments .....                              | 11        |
| 3.2 Test Setup .....                                         | 11        |
| 3.3 Test Result of Conducted Test .....                      | 11        |
| 3.4 Conducted Output Power .....                             | 11        |
| <b>4 RADIATED TEST ITEMS .....</b>                           | <b>12</b> |
| 4.1 Measuring Instruments .....                              | 12        |
| 4.2 Test Setup .....                                         | 12        |
| 4.3 Test Result of Radiated Test .....                       | 12        |
| 4.4 Radiated Spurious Emission .....                         | 13        |
| <b>5 LIST OF MEASURING EQUIPMENT .....</b>                   | <b>14</b> |
| <b>6 UNCERTAINTY OF EVALUATION .....</b>                     | <b>16</b> |
| <b>APPENDIX A. TEST RESULTS OF CONDUCTED TEST</b>            |           |
| <b>APPENDIX B. TEST RESULTS OF RADIATED TEST</b>             |           |
| <b>APPENDIX C. TEST SETUP PHOTOGRAPHS</b>                    |           |



## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FG4D0469B  | Rev. 01 | Initial issue of report | Mar. 16, 2015 |
|            |         |                         |               |
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|            |         |                         |               |

**SUMMARY OF TEST RESULT**

| Report Section | FCC Rule                | Description                            | Limit                                  | Result | Remark                                     |
|----------------|-------------------------|----------------------------------------|----------------------------------------|--------|--------------------------------------------|
| 3.4            | §2.1046                 | Conducted Output Power                 | Reporting Only                         | PASS   | -                                          |
| 4.4            | §2.1053<br>§22.917(a)   | Radiated Spurious Emission<br>(Band 5) | $< 43 + 10 \log_{10}(P[\text{Watts}])$ | PASS   | Under limit<br>13.65 dB at<br>7596.000 MHz |
|                | §2.1053<br>§27.53(m)(4) | Radiated Spurious Emission<br>(Band 7) | $< 55 + 10 \log_{10}(P[\text{Watts}])$ |        |                                            |



# 1 General Description

## 1.1 Applicant

Sony Mobile Communications Inc  
Nya Vattentorget 22188 Lund/Sweden

## 1.2 Manufacturer

Sony Mobile Communications Inc  
Nya Vattentorget 22188 Lund/Sweden

## 1.3 Product Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is PDA Phone supporting, GSM / WCDMA / LTE, Wi-Fi 2.4GHz 802.11b/g/n, 5GHz 802.11a/n, Bluetooth with FM Receiver, GPS, ANT+, and NFC features, and below is details of information.

| Product Feature               |                                                           |
|-------------------------------|-----------------------------------------------------------|
| Equipment                     | PDA Phone                                                 |
| Brand Name                    | Sony                                                      |
| Type Name                     | PM-0782-BV                                                |
| FCC ID                        | PY7-PM0782                                                |
| GSM Operating Band(s)         | GSM 850/900/1800/1900MHz                                  |
| GPRS / EGPRS Multi Slot Class | GPRS Class 33, EGPRS Class 33                             |
| WCDMA Operating Band(s)       | FDD Band I / II / V / VIII                                |
| WCDMA Rel. Version            | Rel. 8                                                    |
| LTE Operating Band(s)         | FDD Band I / III / V / VII / VIII / XXVIII<br>TDD Band XL |
| LTE Rel. Version              | Rel. 10                                                   |
| Wi-Fi Specification           | 802.11b/g/n HT20<br>802.11a/n HT20 / HT40                 |
| Bluetooth Version             | v3.0 + EDR / v4.0-LE                                      |
| NFC Specification             | ISO14443A / ISO14443B / Felica / ISO15693                 |
| ANT+                          | ANT+                                                      |
| Power Supply                  | Battery / AC Adapter / Car Charger                        |

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



| EUT Information List   |            |             |            |                            |
|------------------------|------------|-------------|------------|----------------------------|
| IMEI                   | HW Version | SW Version  | S/N        | Performed Test Item        |
| IMEI : 004402454018262 | AP         | 26.1.A.0.79 | YT9110HS8D | RF conducted measurement   |
|                        |            |             |            | Radiated Spurious Emission |

| Accessory List |                       |
|----------------|-----------------------|
| AC Adapter     | Model No. : EP800     |
|                | Type No. : AC-0030-US |
|                | S/N : 3114W44203166   |
| Battery        | Model No. : Bellis    |
| Earphone       | Model No. : MH410c    |
|                | Type No. : AG-1100    |
|                | S/N : 12431A1A00118E8 |
| USB Cable      | Model No. : EC450     |
|                | Type No. : AI-0700    |
|                | S/N : 142412DF3337518 |



## 1.4 Product Specification subjective to this standard

| Product Specification subjective to this standard |                                                                                       |
|---------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                               | LTE Band 5 : 824.7 MHz ~ 848.3 MHz<br>LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz            |
| <b>Rx Frequency</b>                               | LTE Band 5 : 869.7 MHz ~ 893.3 MHz<br>LTE Band 7 : 2622.5MHz ~ 2687.5 MHz             |
| <b>Bandwidth</b>                                  | LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz<br>LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz |
| <b>Maximum Output Power to Antenna</b>            | LTE Band 5 : 24.74 dBm<br>LTE Band 7 : 21.90 dBm                                      |
| <b>Type of Modulation</b>                         | QPSK / 16QAM                                                                          |

## 1.5 Modification of EUT

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

## 1.6 Testing 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.

|                    |                                                                                                                                                                  |           |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                                                                       |           |
| Test Site Location | 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 |           |
| Test Site No.      | Sporton Site No.                                                                                                                                                 |           |
|                    | TH02-HY                                                                                                                                                          | 03CH10-HY |

## 1.7 Applicable Standards

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

- ♦ 47 CFR Part 2, 22(H), 27
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

### Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



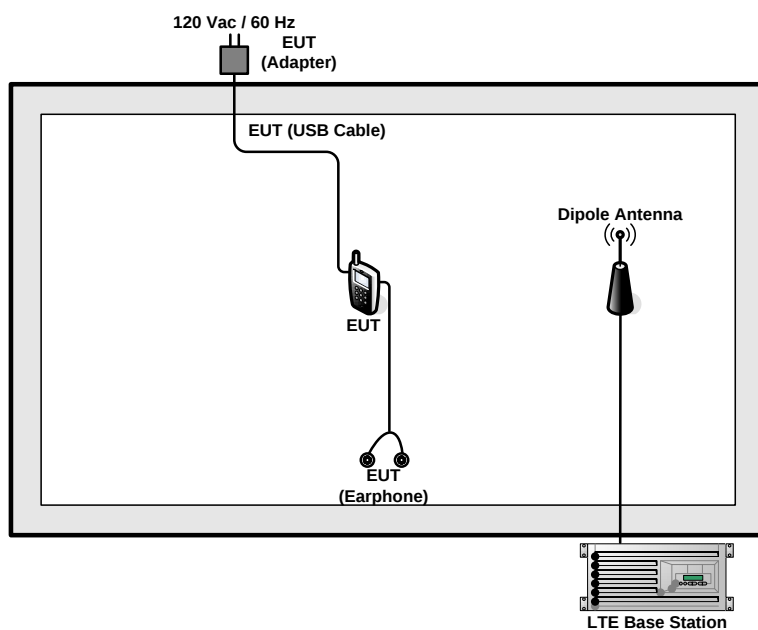
## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

| Test Items        | Band                                                                                                                                                                                                                                                                                                                                                                               | Bandwidth (MHz) |   |   |    |    |    | Modulation |       | RB # |      |      | Test Channel |   |   |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---|---|----|----|----|------------|-------|------|------|------|--------------|---|---|
|                   |                                                                                                                                                                                                                                                                                                                                                                                    | 1.4             | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 1    | Half | Full | L            | M | H |
| Max. Output       | 5                                                                                                                                                                                                                                                                                                                                                                                  | ✓               | ✓ | ✓ | ✓  | -  | -  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
| Power             | 7                                                                                                                                                                                                                                                                                                                                                                                  | -               | - | ✓ | ✓  | ✓  | ✓  | ✓          | ✓     | ✓    | ✓    | ✓    | ✓            | ✓ | ✓ |
| Radiated          | 5                                                                                                                                                                                                                                                                                                                                                                                  |                 |   | ✓ |    | -  | -  | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
| Spurious Emission | 7                                                                                                                                                                                                                                                                                                                                                                                  | -               | - | ✓ |    |    |    | ✓          |       | ✓    |      |      | ✓            | ✓ | ✓ |
| Note              | 1. The mark “✓” means that this configuration is chosen for testing<br>2. The mark “-” means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. |                 |   |   |    |    |    |            |       |      |      |      |              |   |   |

## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration and system

| Item | Equipment        | Trade Name | Model No. | FCC ID | Data Cable | Power Cord        |
|------|------------------|------------|-----------|--------|------------|-------------------|
| 1.   | LTE Base Station | Anritsu    | MT8820C   | N/A    | N/A        | Unshielded, 1.8 m |

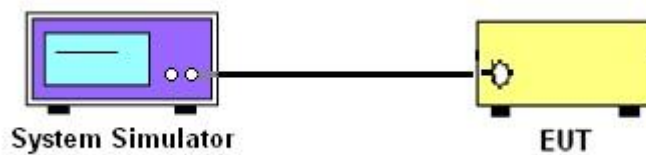
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.2 Test Setup

##### 3.2.1 Conducted Output Power



#### 3.3 Test Result of Conducted Test

Please refer to Appendix A.

#### 3.4 Conducted Output Power

##### 3.4.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

##### 3.4.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

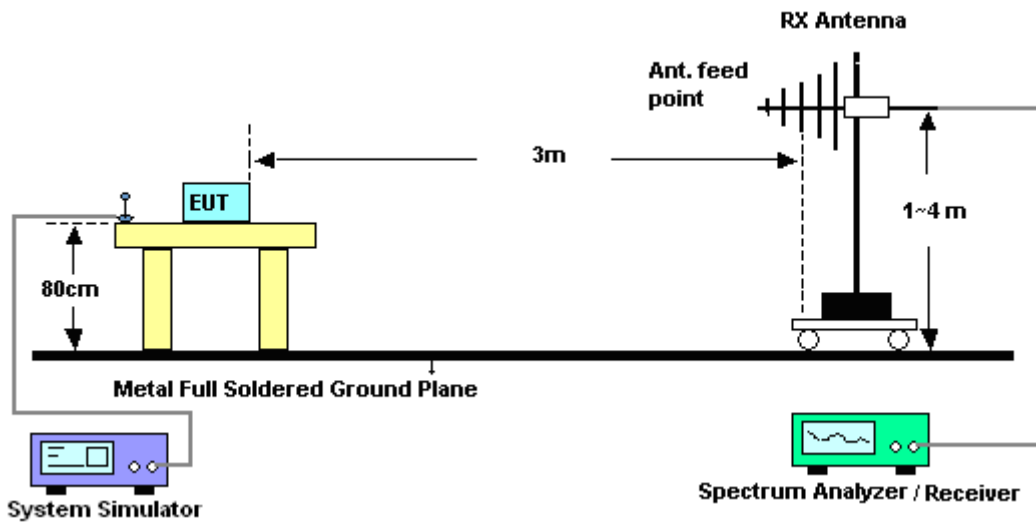
## 4 Radiated Test Items

### 4.1 Measuring Instruments

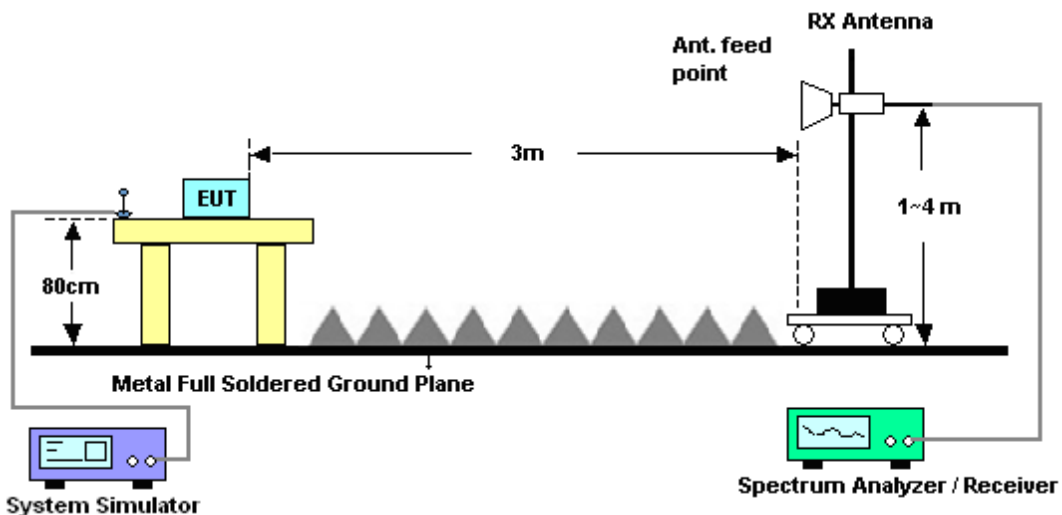
See list of measuring instruments of this test report.

### 4.2 Test Setup

#### 4.2.1 For radiated test from 30MHz to 1GHz



#### 4.2.2 For radiated test above 1GHz



### 4.3 Test Result of Radiated Test

Please refer to Appendix B.

## 4.4 Radiated Spurious Emission

### 4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### 4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-C-2004 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)  
 $= -13$ dBm.

For Band 7:

The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)

12. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
13. ERP (dBm) = EIRP - 2.15



## 5 List of Measuring Equipment

| Instrument               | Manufacturer    | Model No.           | Serial No.               | Characteristics               | Calibration Date | Test Date     | Due Date      | Remark                |
|--------------------------|-----------------|---------------------|--------------------------|-------------------------------|------------------|---------------|---------------|-----------------------|
| Spectrum Analyzer        | Rohde & Schwarz | FSP40               | 100055                   | 9kHz~40GHz                    | Jun. 09, 2014    | Mar. 07, 2015 | Jun. 08, 2015 | Conducted (TH02-HY)   |
| Thermal Chamber          | Ten Billion     | TTH-D3SP            | TBN-930701               | N/A                           | Jul. 17, 2014    | Mar. 07, 2015 | Jul. 16, 2015 | Conducted (TH02-HY)   |
| LTE Base Station         | Anritsu         | MT8820C             | 6201026480               | 30MHz~2.7GHz SISO             | Jan. 08, 2015    | Mar. 07, 2015 | Jan. 07, 2016 | Conducted (TH02-HY)   |
| Hygrometer               | Testo           | 608-H1              | 34897199                 | N/A                           | May. 06, 2014    | Mar. 07, 2015 | May. 05, 2015 | Conducted (TH02-HY)   |
| RF cable                 | WOKEN           | S05                 | S05-130708-038           | N/A                           | Jan. 21, 2015    | Mar. 07, 2015 | Jan. 20, 2016 | Conducted (TH02-HY)   |
| Preamplifier             | Keysight        | 83017A              | MY53270078               | 1GHz~26.5GHz                  | Nov. 20, 2014    | Feb. 05, 2015 | Nov. 19, 2015 | Radiation (03CH10-HY) |
| Amplifier                | SONOMA          | 310N                | 187311                   | 0.1MHz~1000MHz                | Nov. 24, 2014    | Feb. 05, 2015 | Nov. 23, 2015 | Radiation (03CH10-HY) |
| Preamplifier             | MITEQ           | JS44-18004000-33-8P | 1840917                  | 18GHz ~ 40GHz                 | Jun. 09, 2014    | Feb. 05, 2015 | Jun. 08, 2015 | Radiation (03CH10-HY) |
| Bilog Antenna            | TESEQ           | CBL 6111D           | 35413                    | 30MHz~1GHz                    | Oct. 24, 2014    | Feb. 05, 2015 | Oct. 23, 2015 | Radiation (03CH10-HY) |
| Double Ridged Guide Horn | SCHWARZBECK     | BBHA 9120D          | 9120D-1325               | 1GHz ~ 18GHz                  | Oct. 03, 2014    | Feb. 05, 2015 | Oct. 02, 2015 | Radiation (03CH10-HY) |
| Horn Antenna             | SCHWARZBECK     | BBHA 9170           | BBHA9170584              | 18GHz- 40GHz                  | Nov. 03, 2014    | Feb. 05, 2015 | Nov. 02, 2015 | Radiation (03CH10-HY) |
| Spectrum Analyzer        | Keysight        | N9010A              | MY54200485               | 10Hz ~ 44GHz                  | Oct. 14, 2014    | Feb. 05, 2015 | Oct. 13, 2015 | Radiation (03CH10-HY) |
| EMI Test Receiver        | Keysight        | N9038A              | MY54130085               | 20Hz ~ 26.5GHz                | Nov. 05, 2014    | Feb. 05, 2015 | Nov. 04, 2015 | Radiation (03CH10-HY) |
| Controller               | EMEC            | EM 1000             | N/A                      | Control Turn table & Ant Mast | N/A              | Feb. 05, 2015 | N/A           | Radiation (03CH10-HY) |
| Turn Table               | EMEC            | TT 2200             | N/A                      | 0-360 degree                  | N/A              | Feb. 05, 2015 | N/A           | Radiation (03CH10-HY) |
| Antenna Mast             | EMEC            | AM-BS-4500-B        | N/A                      | 1~4m                          | N/A              | Feb. 05, 2015 | N/A           | Radiation (03CH10-HY) |
| Hygrometer               | TECPEL          | DTM-303B            | TP140320                 | N/A                           | Nov. 17, 2014    | Feb. 05, 2015 | Nov. 16, 2015 | Radiation (03CH10-HY) |
| RF Cable                 | HUBER + SUHNER  | SUCOFLEX 104        | MY24956/4<br>MY24952/4MY | 25GHz~40GHz                   | Nov. 06, 2014    | Feb. 05, 2015 | Nov. 05, 2015 | Radiation (03CH10-HY) |
| RF Cable                 | HUBER + SUHNER  | SUCOFLEX 104        | MY24956/4<br>MY24952/4MY | 30MHz~1GHz                    | Nov. 06, 2014    | Feb. 05, 2015 | Nov. 05, 2015 | Radiation (03CH10-HY) |
| RF Cable                 | HUBER + SUHNER  | SUCOFLEX 104        | MY24956/4<br>MY24952/4MY | 1GHz~25GHz                    | Nov. 06, 2014    | Feb. 05, 2015 | Nov. 05, 2015 | Radiation (03CH10-HY) |
| Notch Filter             | Wainwright      | WRCG 824/849/814    | SN35                     | 850                           | Oct. 01, 2014    | Feb. 05, 2015 | Sep. 30, 2015 | Radiation (03CH10-HY) |



| Instrument    | Manufacturer              | Model No.                | Serial No.             | Characteristics | Calibration Date | Test Date     | Due Date      | Remark                   |
|---------------|---------------------------|--------------------------|------------------------|-----------------|------------------|---------------|---------------|--------------------------|
| Notch Filter  | Wainwright                | WRCT2500/<br>2570-10/40- | SN1 R                  | LTE Band7       | Oct. 01, 2014    | Feb. 05, 2015 | Sep. 30, 2015 | Radiation<br>(03CH10-HY) |
| Filter        | Microwave<br>Circuits     | H1G013G1                 | SN477215               | 1GHz HPF        | Oct. 01, 2014    | Feb. 05, 2015 | Sep. 30, 2015 | Radiation<br>(03CH10-HY) |
| Filter        | Wainwright<br>Instruments | WLKS1200-<br>8SS         | SN3                    | 1.2GHz LPF      | Oct. 01, 2014    | Feb. 05, 2015 | Sep. 30, 2015 | Radiation<br>(03CH10-HY) |
| Filter        | Microwave<br>Circuits     | H3G018G1                 | SN477220               | 3GHz HPF        | Oct. 01, 2014    | Feb. 05, 2015 | Sep. 30, 2015 | Radiation<br>(03CH10-HY) |
| Test Software | Audix                     | E3                       | Version<br>6.2009-8-24 | N/A             | N/A              | Feb. 05, 2015 | N/A           | Radiation<br>(03CH10-HY) |



## 6 Uncertainty of Evaluation

### 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% ( $U = 2Uc(y)$ ) | 4.90 |
|-------------------------------------------------------------------------|------|



## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power)

| LTE Band 5 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 1.4                                    | 1       | 0         | QPSK   | 24.36  | 24.21  | 24.07   |
| 1.4                                    | 1       | 2         |        | 24.43  | 24.34  | 24.25   |
| 1.4                                    | 1       | 5         |        | 24.35  | 24.11  | 24.12   |
| 1.4                                    | 3       | 0         |        | 24.44  | 24.31  | 24.19   |
| 1.4                                    | 3       | 1         |        | 24.40  | 24.41  | 24.14   |
| 1.4                                    | 3       | 2         |        | 24.39  | 24.20  | 24.15   |
| 1.4                                    | 6       | 0         |        | 23.26  | 23.31  | 23.26   |
| 1.4                                    | 1       | 0         | 16-QAM | 23.88  | 23.48  | 23.18   |
| 1.4                                    | 1       | 2         |        | 23.79  | 23.36  | 23.16   |
| 1.4                                    | 1       | 5         |        | 23.75  | 22.98  | 23.04   |
| 1.4                                    | 3       | 0         |        | 23.58  | 23.23  | 23.14   |
| 1.4                                    | 3       | 1         |        | 23.62  | 23.37  | 23.13   |
| 1.4                                    | 3       | 2         |        | 23.67  | 23.43  | 23.02   |
| 1.4                                    | 6       | 0         |        | 22.39  | 22.33  | 22.25   |
| 3                                      | 1       | 0         | QPSK   | 24.47  | 24.30  | 24.28   |
| 3                                      | 1       | 7         |        | 24.55  | 24.55  | 24.43   |
| 3                                      | 1       | 14        |        | 24.30  | 24.47  | 24.41   |
| 3                                      | 8       | 0         |        | 23.68  | 23.61  | 23.45   |
| 3                                      | 8       | 4         |        | 23.65  | 23.53  | 23.41   |
| 3                                      | 8       | 7         |        | 23.64  | 23.57  | 23.47   |
| 3                                      | 15      | 0         |        | 23.54  | 23.47  | 23.27   |
| 3                                      | 1       | 0         | 16-QAM | 23.58  | 23.13  | 23.11   |
| 3                                      | 1       | 7         |        | 23.56  | 23.85  | 23.90   |
| 3                                      | 1       | 14        |        | 23.70  | 23.76  | 23.94   |
| 3                                      | 8       | 0         |        | 22.74  | 22.42  | 22.62   |
| 3                                      | 8       | 4         |        | 22.77  | 22.34  | 22.55   |
| 3                                      | 8       | 7         |        | 22.68  | 22.42  | 22.70   |
| 3                                      | 15      | 0         |        | 22.72  | 22.64  | 22.48   |



| LTE Band 5 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 5                                      | 1       | 0         | QPSK   | 24.50  | 24.21  | 24.29   |
| 5                                      | 1       | 12        |        | 24.71  | 24.72  | 24.55   |
| 5                                      | 1       | 24        |        | 24.40  | 24.22  | 24.09   |
| 5                                      | 12      | 0         |        | 23.54  | 23.47  | 23.38   |
| 5                                      | 12      | 6         |        | 23.59  | 23.61  | 23.44   |
| 5                                      | 12      | 11        |        | 23.56  | 23.48  | 23.43   |
| 5                                      | 25      | 0         |        | 23.53  | 23.48  | 23.42   |
| 5                                      | 1       | 0         | 16-QAM | 23.63  | 23.70  | 23.89   |
| 5                                      | 1       | 12        |        | 23.97  | 23.79  | 23.57   |
| 5                                      | 1       | 24        |        | 23.71  | 23.45  | 23.38   |
| 5                                      | 12      | 0         |        | 22.53  | 22.56  | 22.35   |
| 5                                      | 12      | 6         |        | 22.29  | 22.53  | 22.38   |
| 5                                      | 12      | 11        |        | 22.57  | 22.53  | 22.45   |
| 5                                      | 25      | 0         |        | 22.66  | 22.59  | 22.40   |
| 10                                     | 1       | 0         | QPSK   | 24.52  | 24.57  | 24.32   |
| 10                                     | 1       | 24        |        | 24.74  | 24.67  | 24.26   |
| 10                                     | 1       | 49        |        | 24.48  | 24.39  | 24.24   |
| 10                                     | 25      | 0         |        | 23.68  | 23.52  | 23.50   |
| 10                                     | 25      | 12        |        | 23.58  | 23.44  | 23.44   |
| 10                                     | 25      | 24        |        | 23.58  | 23.45  | 23.35   |
| 10                                     | 50      | 0         |        | 23.57  | 23.51  | 23.42   |
| 10                                     | 1       | 0         | 16-QAM | 23.96  | 23.38  | 23.66   |
| 10                                     | 1       | 24        |        | 23.92  | 23.29  | 23.38   |
| 10                                     | 1       | 49        |        | 23.98  | 23.78  | 23.22   |
| 10                                     | 25      | 0         |        | 22.76  | 22.57  | 22.63   |
| 10                                     | 25      | 12        |        | 22.64  | 22.66  | 22.49   |
| 10                                     | 25      | 24        |        | 22.73  | 22.51  | 22.36   |
| 10                                     | 50      | 0         |        | 22.40  | 22.51  | 22.27   |



| LTE Band 7 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 5                                      | 1       | 0         | QPSK   | 21.46  | 21.28  | 21.50   |
| 5                                      | 1       | 12        |        | 21.43  | 21.43  | 21.80   |
| 5                                      | 1       | 24        |        | 21.33  | 21.25  | 21.28   |
| 5                                      | 12      | 0         |        | 20.56  | 20.46  | 20.48   |
| 5                                      | 12      | 6         |        | 20.46  | 20.53  | 20.48   |
| 5                                      | 12      | 11        |        | 20.45  | 20.42  | 20.46   |
| 5                                      | 25      | 0         |        | 20.43  | 20.41  | 20.45   |
| 5                                      | 1       | 0         | 16-QAM | 21.20  | 21.07  | 20.81   |
| 5                                      | 1       | 12        |        | 20.72  | 20.49  | 20.83   |
| 5                                      | 1       | 24        |        | 20.54  | 20.33  | 20.89   |
| 5                                      | 12      | 0         |        | 19.48  | 19.30  | 19.55   |
| 5                                      | 12      | 6         |        | 19.40  | 19.34  | 19.52   |
| 5                                      | 12      | 11        |        | 19.39  | 19.37  | 19.20   |
| 5                                      | 25      | 0         |        | 19.52  | 19.48  | 19.61   |
| 10                                     | 1       | 0         | QPSK   | 21.63  | 21.45  | 21.56   |
| 10                                     | 1       | 24        |        | 21.45  | 21.29  | 21.51   |
| 10                                     | 1       | 49        |        | 21.26  | 21.32  | 21.38   |
| 10                                     | 25      | 0         |        | 20.42  | 20.53  | 20.53   |
| 10                                     | 25      | 12        |        | 20.33  | 20.39  | 20.49   |
| 10                                     | 25      | 24        |        | 20.31  | 20.39  | 20.46   |
| 10                                     | 50      | 0         |        | 20.33  | 20.43  | 20.51   |
| 10                                     | 1       | 0         | 16-QAM | 21.05  | 20.48  | 20.80   |
| 10                                     | 1       | 24        |        | 21.02  | 20.67  | 20.53   |
| 10                                     | 1       | 49        |        | 20.58  | 20.09  | 20.52   |
| 10                                     | 25      | 0         |        | 19.36  | 19.52  | 19.71   |
| 10                                     | 25      | 12        |        | 19.51  | 19.47  | 19.62   |
| 10                                     | 25      | 24        |        | 19.38  | 19.60  | 19.70   |
| 10                                     | 50      | 0         |        | 19.14  | 19.39  | 19.45   |



| LTE Band 7 Maximum Average Power [dBm] |         |           |        |        |        |         |
|----------------------------------------|---------|-----------|--------|--------|--------|---------|
| BW [MHz]                               | RB Size | RB Offset | Mod    | Lowest | Middle | Highest |
| 15                                     | 1       | 0         | QPSK   | 21.60  | 21.58  | 21.69   |
| 15                                     | 1       | 37        |        | 21.26  | 21.35  | 21.66   |
| 15                                     | 1       | 74        |        | 21.13  | 21.17  | 21.42   |
| 15                                     | 36      | 0         |        | 20.47  | 20.45  | 20.42   |
| 15                                     | 36      | 18        |        | 20.32  | 20.37  | 20.40   |
| 15                                     | 36      | 37        |        | 20.36  | 20.29  | 20.36   |
| 15                                     | 75      | 0         |        | 20.26  | 20.43  | 20.49   |
| 15                                     | 1       | 0         | 16-QAM | 21.23  | 20.91  | 21.11   |
| 15                                     | 1       | 37        |        | 21.33  | 20.59  | 20.98   |
| 15                                     | 1       | 74        |        | 21.04  | 20.53  | 20.87   |
| 15                                     | 36      | 0         |        | 19.29  | 19.48  | 19.41   |
| 15                                     | 36      | 18        |        | 19.14  | 19.40  | 19.55   |
| 15                                     | 36      | 37        |        | 19.19  | 19.22  | 19.47   |
| 15                                     | 75      | 0         |        | 19.28  | 19.36  | 19.50   |
| 20                                     | 1       | 0         | QPSK   | 21.53  | 21.90  | 21.58   |
| 20                                     | 1       | 49        |        | 21.75  | 21.88  | 21.39   |
| 20                                     | 1       | 99        |        | 21.21  | 21.81  | 21.28   |
| 20                                     | 50      | 0         |        | 20.53  | 20.69  | 20.51   |
| 20                                     | 50      | 24        |        | 20.52  | 20.54  | 20.48   |
| 20                                     | 50      | 49        |        | 20.46  | 20.44  | 20.44   |
| 20                                     | 100     | 0         |        | 20.58  | 20.55  | 20.56   |
| 20                                     | 1       | 0         | 16-QAM | 21.23  | 20.69  | 20.85   |
| 20                                     | 1       | 49        |        | 21.17  | 20.58  | 20.89   |
| 20                                     | 1       | 99        |        | 21.11  | 20.52  | 20.67   |
| 20                                     | 50      | 0         |        | 19.31  | 19.61  | 19.52   |
| 20                                     | 50      | 24        |        | 19.31  | 19.66  | 19.49   |
| 20                                     | 50      | 49        |        | 19.32  | 19.59  | 19.56   |
| 20                                     | 100     | 0         |        | 19.44  | 19.55  | 19.57   |



## Appendix B. Test Results of Radiated Test

### Radiated Spurious Emission

| LTE Band 5 / 5MHz / QPSK / RB Size 1 Offset 0 |                      |                |                  |                         |                         |                          |                            |                             |                       |
|-----------------------------------------------|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel                                       | Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest                                        | 1651                 | -55.05         | -13              | -42.05                  | -64.66                  | -56.8                    | 0.98                       | 4.88                        | H                     |
|                                               | 2476                 | -59.41         | -13              | -46.41                  | -72.72                  | -61.3                    | 1.28                       | 5.33                        | H                     |
|                                               | 3301                 | -56.77         | -13              | -43.77                  | -73.4                   | -60.2                    | 1.54                       | 7.12                        | H                     |
|                                               | 1651                 | -62.74         | -13              | -49.74                  | -70.12                  | -64.49                   | 0.98                       | 4.88                        | V                     |
|                                               | 2476                 | -58.22         | -13              | -45.22                  | -74.2                   | -60.11                   | 1.28                       | 5.33                        | V                     |
|                                               | 3301                 | -59.47         | -13              | -46.47                  | -75.02                  | -62.9                    | 1.54                       | 7.12                        | V                     |
| Middle                                        | 1672                 | -55.62         | -13              | -42.62                  | -65.07                  | -57.3                    | 0.99                       | 4.82                        | H                     |
|                                               | 2506                 | -43.64         | -13              | -30.64                  | -56.55                  | -45.6                    | 1.29                       | 5.40                        | H                     |
|                                               | 3340                 | -56.41         | -13              | -43.41                  | -72.33                  | -60                      | 1.55                       | 7.30                        | H                     |
|                                               | 1672                 | -62.82         | -13              | -49.82                  | -69.98                  | -64.5                    | 0.99                       | 4.82                        | V                     |
|                                               | 2506                 | -45.64         | -13              | -32.64                  | -60.78                  | -47.6                    | 1.29                       | 5.40                        | V                     |
|                                               | 3340                 | -58.81         | -13              | -45.81                  | -73.49                  | -62.4                    | 1.55                       | 7.30                        | V                     |
| Highest                                       | 1693                 | -54.49         | -13              | -41.49                  | -63.86                  | -56.1                    | 1.00                       | 4.76                        | H                     |
|                                               | 2536                 | -57.22         | -13              | -44.22                  | -71.22                  | -59.2                    | 1.30                       | 5.43                        | H                     |
|                                               | 3379                 | -59.05         | -13              | -46.05                  | -75.46                  | -62.8                    | 1.57                       | 7.47                        | H                     |
|                                               | 1693                 | -59.39         | -13              | -46.39                  | -67.74                  | -61                      | 1.00                       | 4.76                        | V                     |
|                                               | 2536                 | -59.52         | -13              | -46.52                  | -74.76                  | -61.5                    | 1.30                       | 5.43                        | V                     |
|                                               | 3379                 | -60.45         | -13              | -47.45                  | -76.05                  | -64.2                    | 1.57                       | 7.47                        | V                     |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



| LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0 |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|-----------------------------------------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel                                       | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest                                        | 5004                 | -46.73          | -25              | -21.73                  | -69.44                  | -54.09                   | 2.34                       | 9.70                        | H                     |
|                                               | 7500                 | -42.44          | -25              | -17.44                  | -71.13                  | -51.81                   | 2.43                       | 11.80                       | H                     |
|                                               | 10008                | -45.81          | -25              | -20.81                  | -77.35                  | -55.32                   | 2.70                       | 12.20                       | H                     |
|                                               | 5004                 | -47.72          | -25              | -22.72                  | -69.05                  | -55.08                   | 2.34                       | 9.70                        | V                     |
|                                               | 7500                 | -41.67          | -25              | -16.67                  | -69.89                  | -51.04                   | 2.43                       | 11.80                       | V                     |
|                                               | 10008                | -44.70          | -25              | -19.70                  | -74.48                  | -54.21                   | 2.70                       | 12.20                       | V                     |
| Middle                                        | 5064                 | -50.36          | -25              | -25.36                  | -73.06                  | -57.69                   | 2.37                       | 9.70                        | H                     |
|                                               | 7596                 | -41.66          | -25              | -16.66                  | -69.79                  | -51.12                   | 2.40                       | 11.86                       | H                     |
|                                               | 10132                | -44.95          | -25              | -19.95                  | -76.44                  | -54.51                   | 2.70                       | 12.25                       | H                     |
|                                               | 5064                 | -50.48          | -25              | -25.48                  | -71.84                  | -57.81                   | 2.37                       | 9.70                        | V                     |
|                                               | 7596                 | -38.65          | -25              | -13.65                  | -66.31                  | -48.11                   | 2.40                       | 11.86                       | V                     |
|                                               | 10132                | -44.80          | -25              | -19.80                  | -74.9                   | -54.36                   | 2.70                       | 12.25                       | V                     |
| Highest                                       | 5136                 | -51.53          | -25              | -26.53                  | -74.08                  | -58.81                   | 2.42                       | 9.70                        | H                     |
|                                               | 7692                 | -43.76          | -25              | -18.76                  | -72.05                  | -53.31                   | 2.37                       | 11.92                       | H                     |
|                                               | 10260                | -44.80          | -25              | -19.80                  | -76.41                  | -54.41                   | 2.69                       | 12.30                       | H                     |
|                                               | 5136                 | -51.74          | -25              | -26.74                  | -73.35                  | -59.02                   | 2.42                       | 9.70                        | V                     |
|                                               | 7692                 | -41.56          | -25              | -16.56                  | -69.31                  | -51.11                   | 2.37                       | 11.92                       | V                     |
|                                               | 10260                | -42.02          | -25              | -17.02                  | -72.49                  | -51.63                   | 2.69                       | 12.30                       | V                     |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.