



# FCC RF Test Report

APPLICANT : Zebra Technologies Corporation  
EQUIPMENT : Enterprise Tablet  
BRAND NAME : Zebra  
MODEL NAME : ET55BT  
FCC ID : UZ7ET55BT  
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)  
CLASSIFICATION : PCS Licensed Transmitter (PCB)

This is a partial report which is included the Conducted Output Power, Effective Radiated Power, Effective Isotropic Radiated Power, and Radiated Spurious Emission test items. The product was received on Jun. 01, 2016 and testing was completed on Jul. 07, 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 / TIA / EIA-603-D-2010 and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



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FCC ID : UZ7ET55BT

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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FG660115A  | Rev. 01 | Initial issue of report | Aug. 04, 2016 |
|            |         |                         |               |
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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   | -                                          |
|                | §22.913(a)(2)                                    | Effective Radiated Power             | < 7 Watts              | PASS   | -                                          |
|                | §24.232(c)                                       | Equivalent Isotropic Radiated Power  | < 2 Watts              | PASS   | -                                          |
|                | §27.50(d)(4)                                     | Equivalent Isotropic Radiated Power  | < 1 Watts              | PASS   | -                                          |
| 4.4            | §2.1053<br>§22.917(a)<br>§24.238(a)<br>§27.53(h) | Field Strength of Spurious Radiation | < 43+10log10(P[Watts]) | PASS   | Under limit<br>22.70 dB at<br>5640.000 MHz |



# 1 General Description

## 1.1 Applicant

**Zebra Technologies Corporation**  
1 Zebra Plaza, Holtsville, NY 11742

## 1.2 Manufacturer

**Zebra Technologies Corporation**  
1 Zebra Plaza, Holtsville, NY 11742

## 1.3 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                             |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | Enterprise Tablet                                                                                                           |
| Brand Name                      | Zebra                                                                                                                       |
| Model Name                      | ET55BT                                                                                                                      |
| FCC ID                          | UZ7ET55BT                                                                                                                   |
| Integrated the WWAN Module      | Brand Name: Sierra<br>Model Name: EM7355<br>FCC ID: N7NEM7355                                                               |
| EUT supports Radios application | CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/NFC<br>WLAN 11a/b/g/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80<br>Bluetooth v4.0 EDR/LE |
| HW Version                      | DV1                                                                                                                         |
| SW Version                      | 5.1.1                                                                                                                       |
| FW Version                      | SWI9X15C_05.05.58.00                                                                                                        |
| MFD                             | 31-Mar-16                                                                                                                   |
| EUT Stage                       | Identical Prototype                                                                                                         |

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

## 1.4 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                     | <b>GSM/GPRS/EDGE:</b><br>850: 824.2 MHz ~ 848.8 MHz<br>1900: 1850.2 MHz ~ 1909.8MHz<br><b>WCDMA:</b><br>Band V: 826.4 MHz ~ 846.6 MHz<br>Band II: 1852.4 MHz ~ 1907.6 MHz<br>Band IV: 1712.4 MHz ~ 1752.6 MHz<br><b>CDMA2000:</b><br>BC0: 824.70 MHz ~ 848.31 MHz<br>BC1: 1851.25 MHz ~ 1908.75 MHz  |
| <b>Rx Frequency</b>                     | <b>GSM/GPRS/EDGE:</b><br>850: 869.2 MHz ~ 893.8 MHz<br>1900: 1930.2 MHz ~ 1989.8 MHz<br><b>WCDMA:</b><br>Band V: 871.4 MHz ~ 891.6 MHz<br>Band II: 1932.4 MHz ~ 1987.6 MHz<br>Band IV: 2112.4 MHz ~ 2152.6 MHz<br><b>CDMA2000:</b><br>BC0: 869.70 MHz ~ 893.31 MHz<br>BC1: 1931.25 MHz ~ 1988.75 MHz |
| <b>Maximum Output Power to Antenna</b>  | <b>GSM/GPRS/EDGE:</b><br>850: 32.21 dBm<br>1900: 29.87 dBm<br><b>WCDMA:</b><br>Band V: 23.01 dBm<br>Band II: 23.02 dBm<br>Band IV: 22.99 dBm<br><b>CDMA2000:</b><br>BC0: 23.69 dBm<br>BC1: 23.77 dBm                                                                                                 |
| <b>Antenna Type</b>                     | Main Ant. : Flexible internal Antenna<br>Aux. Ant : Flexible internal Antenna                                                                                                                                                                                                                        |
| <b>Antenna Gain</b>                     | GSM 850 : 0.87 dBi<br>GSM 1900 : 0.68 dBi<br>WCDMA Band II : 0.68 dBi<br>WCDMA Band IV : 1.13 dBi<br>WCDMA Band V : 0.87 dBi<br>CDMA BC0 : 0.81 dBi<br>CDMA BC1 : 0.57 dBi                                                                                                                           |

| Standards-related Product Specification |                                                                                                                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of Modulation                      | GSM: GMSK<br>GPRS: GMSK<br>EDGE: GMSK / 8PSK<br>WCDMA: QPSK (Uplink)<br>HSDPA: 64QAM (Downlink)<br>HSUPA: QPSK (Uplink)<br>CDMA2000 1xRTT: QPSK<br>CDMA2000 1xEV-DO: QPSK/8PSK |

## 1.5 Modification of EUT

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

## 1.6 Maximum ERP/E IRP Power

| FCC Rule | System                      | Type of Modulation | Maximum ERP/EIRP (W) |
|----------|-----------------------------|--------------------|----------------------|
| Part 22  | GSM850 GPRS class 8         | GMSK               | 1.2388               |
| Part 22  | GSM850 EDGE class 8         | 8PSK               | 0.3926               |
| Part 22  | WCDMA Band V RMC 12.2Kbps   | QPSK               | 0.1489               |
| Part 22  | CDMA2000 BC0 1xRTT          | QPSK               | 0.1718               |
| Part 22  | CDMA2000 BC0 1xEV-DO Rev. A | QPSK               | 0.1675               |
| Part 24  | GSM1900 GPRS class 8        | GMSK               | 1.1350               |
| Part 24  | GSM1900 EDGE class 8        | 8PSK               | 0.4266               |
| Part 24  | WCDMA Band II RMC 12.2Kbps  | QPSK               | 0.2344               |
| Part 24  | CDMA2000 BC1 1xRTT          | QPSK               | 0.2716               |
| Part 24  | CDMA2000 BC1 1xEV-DO Rev. A | QPSK               | 0.2661               |
| Part 27  | WCDMA Band IV RMC 12.2Kbps  | QPSK               | 0.2582               |

## 1.7 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.

|                           |                                                                                                                                                                  |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>                                                                                                                                          |
|                           | TH05-HY                                                                                                                                                          |

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





## **1.8 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), 24(E), 27(L)
- ♦ ANSI / TIA / EIA-603-D-2010
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

**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 were performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

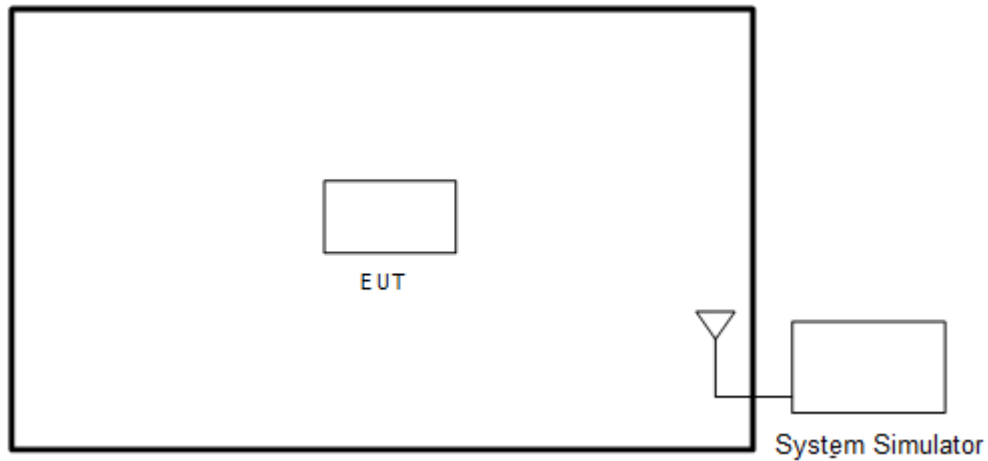
1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V and CDMA BC0
2. 30 MHz to 18000 MHz for WCDMA Band IV.
3. 30 MHz to 19000 MHz for GSM1900 and WCDMA Band II and CDMA BC1.

All modes and data rates and positions were investigated.

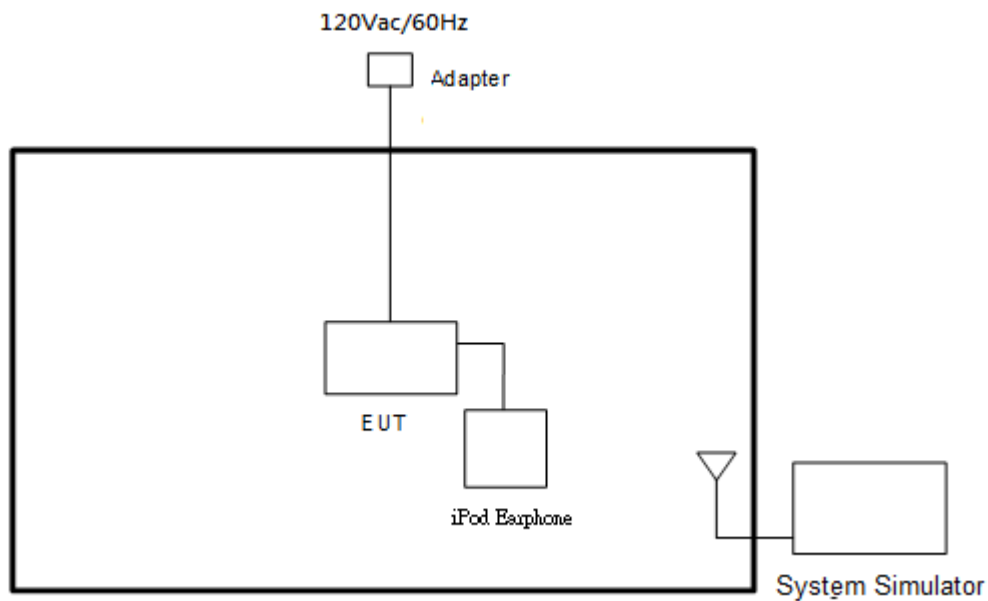
| Test Modes           |                                                                                                    |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Band                 | Radiated TCs                                                                                       | Conducted TCs                                                                                      |
| <b>GSM 850</b>       | <ul style="list-style-type: none"> <li>■ GPRS class 8 Link</li> <li>■ EDGE class 8 Link</li> </ul> | <ul style="list-style-type: none"> <li>■ GPRS class 8 Link</li> <li>■ EDGE class 8 Link</li> </ul> |
| <b>GSM 1900</b>      | <ul style="list-style-type: none"> <li>■ GPRS class 8 Link</li> <li>■ EDGE class 8 Link</li> </ul> | <ul style="list-style-type: none"> <li>■ GPRS class 8 Link</li> <li>■ EDGE class 8 Link</li> </ul> |
| <b>WCDMA Band V</b>  | <ul style="list-style-type: none"> <li>■ RMC 12.2Kbps Link</li> </ul>                              | <ul style="list-style-type: none"> <li>■ RMC 12.2Kbps Link</li> </ul>                              |
| <b>WCDMA Band II</b> | <ul style="list-style-type: none"> <li>■ RMC 12.2Kbps Link</li> </ul>                              | <ul style="list-style-type: none"> <li>■ RMC 12.2Kbps Link</li> </ul>                              |
| <b>WCDMA Band IV</b> | <ul style="list-style-type: none"> <li>■ RMC 12.2Kbps Link</li> </ul>                              | <ul style="list-style-type: none"> <li>■ RMC 12.2Kbps Link</li> </ul>                              |
| <b>CDMA BC0</b>      | <ul style="list-style-type: none"> <li>■ 1xRTT Link</li> </ul>                                     | <ul style="list-style-type: none"> <li>■ 1xRTT Link</li> </ul>                                     |
| <b>CDMA BC1</b>      | <ul style="list-style-type: none"> <li>■ 1xRTT Link</li> </ul>                                     | <ul style="list-style-type: none"> <li>■ 1xRTT Link</li> </ul>                                     |

## 2.2 Connection Diagram of Test System

<Y Plane without Accessory>



<Y Plane with Accessory>



## 2.3 Support Unit used in test configuration

| Item | Equipment        | Trade Name | Model No. | FCC ID       | Data Cable        | Power Cord        |
|------|------------------|------------|-----------|--------------|-------------------|-------------------|
| 1.   | System Simulator | R&S        | CMU 200   | N/A          | N/A               | Unshielded, 1.8 m |
| 2.   | iPod Earphone    | Apple      | N/A       | Verification | Unshielded, 1.0 m | N/A               |

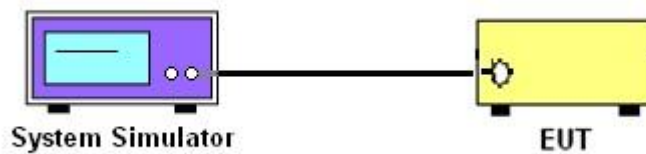
### 3 Conducted Test Result

#### 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 and ERP/EIRP**

#### **3.4.1 Description of the Conducted Output Power and ERP/EIRP**

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

The ERP of mobile transmitters must not exceed 7 Watts for GSM850 and WCDMA Band V.

The EIRP of mobile transmitters must not exceed 2 Watts for GSM1900 and WCDMA Band II.

The EIRP of mobile transmitters must not exceed 1 Watts for WCDMA Band IV.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$ ,  $ERP = EIRP - 2.15$ , where

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

$L_C$  = signal attenuation in the connecting cable between the transmitter and antenna in dB

#### **3.4.2 Test Procedures**

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

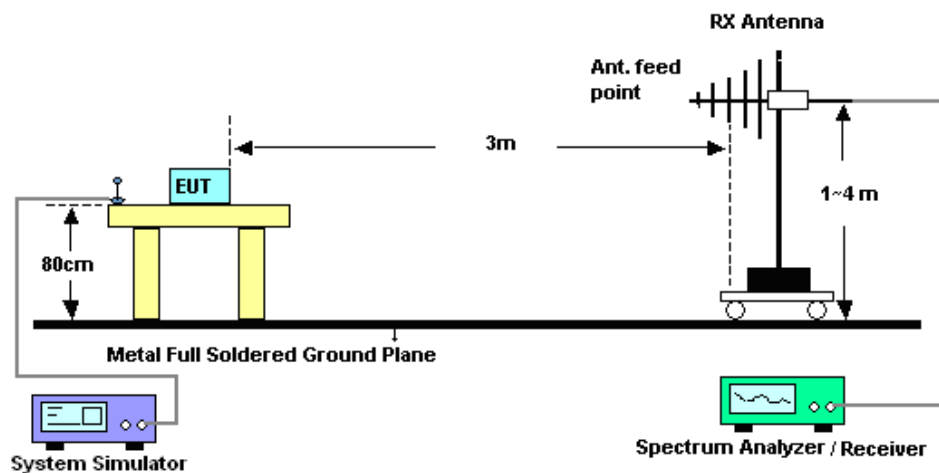
## 4 Radiated Test Items

### 4.1 Measuring Instruments

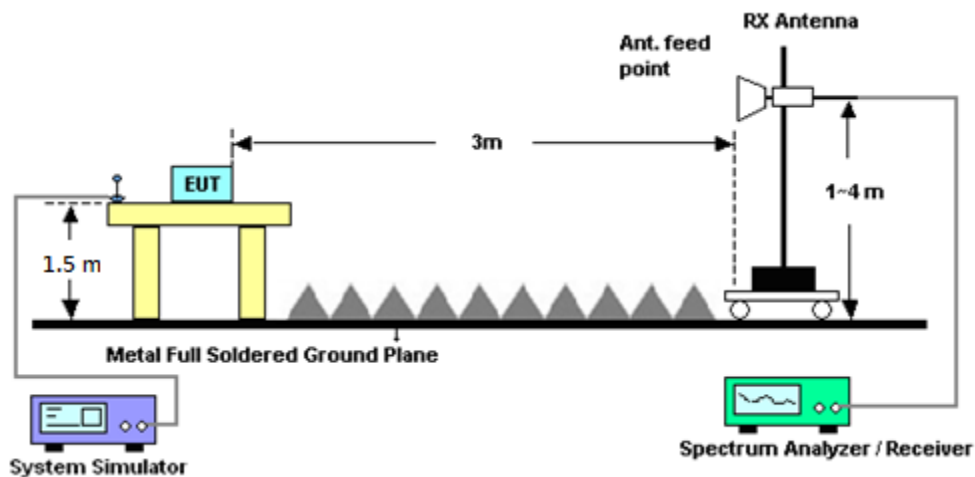
See list of measuring instruments of this test report.

### 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 Field Strength of Spurious Radiation Measurement

### 4.4.1 Description of Field Strength of Spurious Radiated Measurement

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. 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 D01 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz above the 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 for the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking 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.  $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
12.  $ERP \text{ (dBm)} = EIRP - 2.15$
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$   
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$   
 $= -13\text{dBm}.$



## 5 List of Measuring Equipment

| Instrument                      | Manufacturer    | Model No.                  | Serial No.  | Characteristics | Calibration Date | Test Date                       | Due Date      | Remark                   |
|---------------------------------|-----------------|----------------------------|-------------|-----------------|------------------|---------------------------------|---------------|--------------------------|
| Amplifier                       | SONOMA          | 310N                       | 187311      | 9kHz~1GHz       | Nov. 16, 2015    | Jun. 28, 2016~<br>Jul. 07, 2016 | Nov. 15, 2016 | Radiation<br>(03CH10-HY) |
| Bilog Antenna                   | TESEQ           | CBL 6111D                  | 35413       | 30MHz~1GHz      | Jan. 13, 2016    | Jun. 28, 2016~<br>Jul. 07, 2016 | Jan. 12, 2017 | Radiation<br>(03CH10-HY) |
| Horn Antenna                    | SCHWARZBEC<br>K | BBHA 9120 D                | 9120D-1325  | 1GHz ~ 18GHz    | Sep. 30, 2015    | Jun. 28, 2016~<br>Jul. 07, 2016 | Sep. 29, 2016 | Radiation<br>(03CH10-HY) |
| Preamplifier                    | Keysight        | 83017A                     | MY53270078  | 1GHz~26.5GHz    | Nov. 13, 2015    | Jun. 28, 2016~<br>Jul. 07, 2016 | Nov. 12, 2016 | Radiation<br>(03CH10-HY) |
| Preamplifier                    | MITEQ           | AMF-7D-0010<br>1800-30-10P | 1902246     | 1GHz~18GHz      | Nov. 16, 2015    | Jun. 28, 2016~<br>Jul. 07, 2016 | Nov. 15, 2016 | Radiation<br>(03CH10-HY) |
| Spectrum Analyzer               | Keysight        | N9010A                     | MY54200485  | 10Hz ~ 44GHz    | Oct. 15, 2015    | Jun. 28, 2016~<br>Jul. 07, 2016 | Oct. 14, 2016 | Radiation<br>(03CH10-HY) |
| Antenna Mast                    | EMEC            | AM-BS-4500-B               | N/A         | 1~4m            | N/A              | Jun. 28, 2016~<br>Jul. 07, 2016 | N/A           | Radiation<br>(03CH10-HY) |
| Turn Table                      | EMEC            | TT 2200                    | N/A         | 0~360 Degree    | N/A              | Jun. 28, 2016~<br>Jul. 07, 2016 | N/A           | Radiation<br>(03CH10-HY) |
| SHF-EHF Horn Antenna            | SCHWARZBEC<br>K | BBHA 9170                  | BBHA9170576 | 18GHz ~ 40GHz   | Apr. 15, 2016    | Jun. 28, 2016~<br>Jul. 07, 2016 | Apr. 14, 2017 | Radiation<br>(03CH10-HY) |
| SHF-EHF Horn Antenna            | SCHWARZBEC<br>K | BBHA 9170                  | BBHA9170584 | 18GHz- 40GHz    | Nov. 02, 2015    | Jun. 28, 2016~<br>Jul. 07, 2016 | Nov. 01, 2016 | Radiation<br>(03CH10-HY) |
| Double Ridge Horn Antenna       | EMCO            | 3117                       | 00066583    | 1GHz~18GHz      | Jul. 20, 2015    | Jun. 28, 2016~<br>Jul. 07, 2016 | Jul. 19, 2016 | Radiation<br>(03CH10-HY) |
| Wireless Communication Test Set | Agilent         | E5515C                     | MY50266977  | GSM/WCDMA       | May. 10, 2016    | Jun. 30, 2016                   | May. 09, 2017 | Conducted<br>(TH05-HY)   |





## 6 Uncertainty of Evaluation

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

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.50 |
|-------------------------------------------------------------------------|------|

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

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.20 |
|-------------------------------------------------------------------------|------|



## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power)

| Conducted Power (*Unit: dBm) |        |       |       |         |        |        |
|------------------------------|--------|-------|-------|---------|--------|--------|
| Band                         | GSM850 |       |       | GSM1900 |        |        |
| Channel                      | 128    | 189   | 251   | 512     | 661    | 810    |
| Frequency                    | 824.2  | 836.4 | 848.8 | 1850.2  | 1880.0 | 1909.8 |
| GPRS class 8                 | 32.21  | 32.09 | 32.00 | 29.87   | 29.62  | 29.85  |
| GPRS class 10                | 32.01  | 31.99 | 31.92 | 29.71   | 29.51  | 29.79  |
| EGPRS class 8                | 27.16  | 27.14 | 27.22 | 25.62   | 25.60  | 25.58  |
| EGPRS class 10               | 27.14  | 27.10 | 27.18 | 25.56   | 25.53  | 25.51  |
| EGPRS class 11               | 27.01  | 26.95 | 27.05 | 25.55   | 25.52  | 25.50  |
| EGPRS class 12               | 26.80  | 26.78 | 26.87 | 25.44   | 25.40  | 25.38  |

| Conducted Power (*Unit: dBm) |              |       |       |               |       |        |               |        |        |
|------------------------------|--------------|-------|-------|---------------|-------|--------|---------------|--------|--------|
| Band                         | WCDMA Band V |       |       | WCDMA Band II |       |        | WCDMA Band IV |        |        |
| Channel                      | 4132         | 4182  | 4233  | 9262          | 9400  | 9538   | 1312          | 1413   | 1513   |
| Frequency                    | 826.4        | 836.4 | 846.6 | 1852.4        | 1880  | 1907.6 | 1712.4        | 1732.6 | 1752.6 |
| RMC 12.2K                    | 23.01        | 22.84 | 22.81 | 22.89         | 22.95 | 23.02  | 22.99         | 22.95  | 22.92  |
| HSDPA Subtest-1              | 22.55        | 22.41 | 22.36 | 22.57         | 22.50 | 22.64  | 22.50         | 22.45  | 22.42  |
| HSDPA Subtest-2              | 22.63        | 22.52 | 22.45 | 22.56         | 22.60 | 22.67  | 22.51         | 22.44  | 22.43  |
| HSDPA Subtest-3              | 22.11        | 22.09 | 21.92 | 22.07         | 22.12 | 22.24  | 22.05         | 22.00  | 21.97  |
| HSDPA Subtest-4              | 22.15        | 22.14 | 21.97 | 22.12         | 22.16 | 22.30  | 22.07         | 22.02  | 22.01  |
| HSUPA Subtest-1              | 22.17        | 22.14 | 22.05 | 22.42         | 22.49 | 22.76  | 22.08         | 22.04  | 22.00  |
| HSUPA Subtest-2              | 21.02        | 21.07 | 20.90 | 21.23         | 21.29 | 21.19  | 20.92         | 20.91  | 20.86  |
| HSUPA Subtest-3              | 21.34        | 21.24 | 21.17 | 21.38         | 21.55 | 21.77  | 21.46         | 21.20  | 21.05  |
| HSUPA Subtest-4              | 21.56        | 21.33 | 20.89 | 21.42         | 21.51 | 21.83  | 21.55         | 21.25  | 21.02  |
| HSUPA Subtest-5              | 22.57        | 22.55 | 22.32 | 22.55         | 22.57 | 22.74  | 22.42         | 22.22  | 22.12  |



| Conducted Power (*Unit: dBm) |               |        |        |               |       |         |
|------------------------------|---------------|--------|--------|---------------|-------|---------|
| Band                         | CDMA 2000 BC0 |        |        | CDMA 2000 BC1 |       |         |
| Channel                      | 1013          | 384    | 777    | 25            | 600   | 1175    |
| Frequency                    | 824.7         | 836.52 | 848.31 | 1851.25       | 1880  | 1908.75 |
| 1xRTT RC1 SO55               | 23.66         | 23.46  | 23.34  | 23.58         | 23.65 | 23.71   |
| 1xRTT RC3 SO55               | 23.67         | 23.48  | 23.37  | 23.64         | 23.69 | 23.72   |
| 1xRTT RC3 SO32<br>(+ F-SCH)  | 23.69         | 23.51  | 23.38  | 23.63         | 23.71 | 23.77   |
| 1xRTT RC3 SO32<br>(+SCH)     | 23.65         | 23.48  | 23.41  | 23.65         | 23.73 | 23.70   |
| 1xEVDO RTAP<br>153.6Kbps     | 23.49         | 23.47  | 23.39  | 23.54         | 23.57 | 23.68   |
| 1xEVDO RETAP<br>4096Bits     | 23.58         | 23.46  | 23.36  | 23.52         | 23.59 | 23.67   |

## Appendix B. Test Results of Radiated Test

### ERP/EIRP

| Channel | Mode                | Conducted   |               | ERP      |        |
|---------|---------------------|-------------|---------------|----------|--------|
|         |                     | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest  | GSM850              | 32.21       | 1.6634        | 30.93    | 1.2388 |
| Middle  | GPRS class 8        | 32.09       | 1.6181        | 30.81    | 1.2050 |
| Highest | (GT - LC = 0.87 dB) | 32.00       | 1.5849        | 30.72    | 1.1803 |
| Lowest  | GSM850              | 27.16       | 0.5200        | 25.88    | 0.3873 |
| Middle  | EDGE class 8        | 27.14       | 0.5176        | 25.86    | 0.3855 |
| Highest | (GT - LC = 0.87 dB) | 27.22       | 0.5272        | 25.94    | 0.3926 |
| Lowest  | WCDMA Band V        | 23.01       | 0.2000        | 21.73    | 0.1489 |
| Middle  | RMC 12.2Kbps        | 22.84       | 0.1923        | 21.56    | 0.1432 |
| Highest | (GT - LC = 0.87 dB) | 22.81       | 0.1910        | 21.53    | 0.1422 |
| Lowest  | CDMA BC0            | 23.69       | 0.2339        | 22.35    | 0.1718 |
| Middle  | 1xRTT               | 23.51       | 0.2244        | 22.17    | 0.1648 |
| Highest | (GT - LC = 0.81 dB) | 23.38       | 0.2178        | 22.04    | 0.1600 |
| Lowest  | CDMA BC0            | 23.58       | 0.2280        | 22.24    | 0.1675 |
| Middle  | 1xEV-DO             | 23.46       | 0.2218        | 22.12    | 0.1629 |
| Highest | (GT - LC = 0.81 dB) | 23.36       | 0.2168        | 22.02    | 0.1592 |
| Limit   | ERP < 7W            | Result      |               | PASS     |        |

| Channel | Mode                | Conducted   |               | EIRP      |         |
|---------|---------------------|-------------|---------------|-----------|---------|
|         |                     | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest  | GSM1900             | 29.87       | 0.9705        | 30.55     | 1.1350  |
| Middle  | GPRS class 8        | 29.62       | 0.9162        | 30.30     | 1.0715  |
| Highest | (GT - LC = 0.68 dB) | 29.85       | 0.9661        | 30.53     | 1.1298  |
| Lowest  | GSM1900             | 25.62       | 0.3648        | 26.30     | 0.4266  |
| Middle  | EDGE class 8        | 25.60       | 0.3631        | 26.28     | 0.4246  |
| Highest | (GT - LC = 0.68 dB) | 25.58       | 0.3614        | 26.26     | 0.4227  |
| Lowest  | WCDMA Band II       | 22.89       | 0.1945        | 23.57     | 0.2275  |
| Middle  | RMC 12.2Kbps        | 22.95       | 0.1972        | 23.63     | 0.2307  |
| Highest | (GT - LC = 0.68 dB) | 23.02       | 0.2004        | 23.70     | 0.2344  |
| Lowest  | CDMA BC1            | 23.63       | 0.2307        | 24.20     | 0.2630  |
| Middle  | 1xRTT               | 23.71       | 0.2350        | 24.28     | 0.2679  |
| Highest | (GT - LC = 0.57 dB) | 23.77       | 0.2382        | 24.34     | 0.2716  |
| Lowest  | CDMA BC1            | 23.54       | 0.2259        | 24.11     | 0.2576  |
| Middle  | 1xEV-DO             | 23.57       | 0.2275        | 24.14     | 0.2594  |
| Highest | (GT - LC = 0.57 dB) | 23.68       | 0.2333        | 24.25     | 0.2661  |
| Limit   | EIRP < 2W           | Result      |               | PASS      |         |

| Channel | Mode                | Conducted   |               | EIRP      |         |
|---------|---------------------|-------------|---------------|-----------|---------|
|         |                     | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest  | WCDMA Band IV       | 22.99       | 0.1991        | 24.12     | 0.2582  |
| Middle  | RMC 12.2Kbps        | 22.95       | 0.1972        | 24.08     | 0.2559  |
| Highest | (GT - LC = 1.13 dB) | 22.92       | 0.1959        | 24.05     | 0.2541  |
| Limit   | EIRP < 1W           | Result      |               | PASS      |         |

**Radiated Spurious Emission**

| GSM850 (GPRS class 8) |                      |                |                  |                         |                         |                          |                            |                             |                       |
|-----------------------|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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                | 1648                 | -55.37         | -13              | -42.37                  | -65.09                  | -57.13                   | 0.98                       | 4.89                        | H                     |
|                       | 2472                 | -55.01         | -13              | -42.01                  | -68.7                   | -56.89                   | 1.28                       | 5.32                        | H                     |
|                       | 3296                 | -53.23         | -13              | -40.23                  | -69.21                  | -56.64                   | 1.54                       | 7.10                        | H                     |
|                       | 1648                 | -56.34         | -13              | -43.34                  | -65.96                  | -58.1                    | 0.98                       | 4.89                        | V                     |
|                       | 2472                 | -55.85         | -13              | -42.85                  | -69.58                  | -57.73                   | 1.28                       | 5.32                        | V                     |
|                       | 3296                 | -53.94         | -13              | -40.94                  | -69.86                  | -57.35                   | 1.54                       | 7.10                        | V                     |
| Middle                | 1672                 | -58.47         | -13              | -45.47                  | -68.32                  | -60.15                   | 0.99                       | 4.82                        | H                     |
|                       | 2512                 | -55.47         | -13              | -42.47                  | -69.31                  | -57.44                   | 1.29                       | 5.41                        | H                     |
|                       | 3344                 | -52.57         | -13              | -39.57                  | -68.61                  | -56.18                   | 1.56                       | 7.31                        | H                     |
|                       | 1672                 | -58.25         | -13              | -45.25                  | -68.04                  | -59.93                   | 0.99                       | 4.82                        | V                     |
|                       | 2512                 | -54.80         | -13              | -41.80                  | -68.66                  | -56.77                   | 1.29                       | 5.41                        | V                     |
|                       | 3344                 | -53.66         | -13              | -40.66                  | -69.71                  | -57.27                   | 1.56                       | 7.31                        | V                     |
| Highest               | 1696                 | -58.08         | -13              | -45.08                  | -68.03                  | -59.68                   | 1.00                       | 4.75                        | H                     |
|                       | 2544                 | -55.60         | -13              | -42.60                  | -69.57                  | -57.58                   | 1.30                       | 5.44                        | H                     |
|                       | 3392                 | -52.64         | -13              | -39.64                  | -68.75                  | -56.44                   | 1.57                       | 7.52                        | H                     |
|                       | 1696                 | -57.40         | -13              | -44.40                  | -67.26                  | -59                      | 1.00                       | 4.75                        | V                     |
|                       | 2544                 | -55.43         | -13              | -42.43                  | -69.38                  | -57.41                   | 1.30                       | 5.44                        | V                     |
|                       | 3392                 | -53.48         | -13              | -40.48                  | -69.68                  | -57.28                   | 1.57                       | 7.52                        | V                     |

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



| GSM850 (EDGE class 8) |                      |                |                  |                         |                         |                          |                            |                             |                       |
|-----------------------|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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                | 1648                 | -57.50         | -13              | -44.50                  | -67.22                  | -59.26                   | 0.98                       | 4.89                        | H                     |
|                       | 2472                 | -55.12         | -13              | -42.12                  | -68.85                  | -57                      | 1.28                       | 5.32                        | H                     |
|                       | 3296                 | -53.59         | -13              | -40.59                  | -69.56                  | -57                      | 1.54                       | 7.10                        | H                     |
|                       | 1648                 | -56.88         | -13              | -43.88                  | -66.54                  | -58.64                   | 0.98                       | 4.89                        | V                     |
|                       | 2472                 | -54.66         | -13              | -41.66                  | -68.39                  | -56.54                   | 1.28                       | 5.32                        | V                     |
|                       | 3296                 | -54.24         | -13              | -41.24                  | -70.16                  | -57.65                   | 1.54                       | 7.10                        | V                     |
| Middle                | 1672                 | -57.90         | -13              | -44.90                  | -67.75                  | -59.58                   | 0.99                       | 4.82                        | H                     |
|                       | 2512                 | -54.85         | -13              | -41.85                  | -68.69                  | -56.82                   | 1.29                       | 5.41                        | H                     |
|                       | 3344                 | -53.44         | -13              | -40.44                  | -69.48                  | -57.05                   | 1.56                       | 7.31                        | H                     |
|                       | 1672                 | -57.32         | -13              | -44.32                  | -67.17                  | -59                      | 0.99                       | 4.82                        | V                     |
|                       | 2512                 | -55.03         | -13              | -42.03                  | -68.96                  | -57                      | 1.29                       | 5.41                        | V                     |
|                       | 3344                 | -54.00         | -13              | -41.00                  | -70.05                  | -57.61                   | 1.56                       | 7.31                        | V                     |
| Highest               | 1696                 | -57.61         | -13              | -44.61                  | -67.55                  | -59.21                   | 1.00                       | 4.75                        | H                     |
|                       | 2544                 | -55.57         | -13              | -42.57                  | -69.54                  | -57.55                   | 1.30                       | 5.44                        | H                     |
|                       | 3392                 | -53.76         | -13              | -40.76                  | -69.86                  | -57.56                   | 1.57                       | 7.52                        | H                     |
|                       | 1696                 | -56.40         | -13              | -43.40                  | -66.27                  | -58                      | 1.00                       | 4.75                        | V                     |
|                       | 2544                 | -55.45         | -13              | -42.45                  | -69.41                  | -57.43                   | 1.30                       | 5.44                        | V                     |
|                       | 3392                 | -53.95         | -13              | -40.95                  | -70.11                  | -57.75                   | 1.57                       | 7.52                        | V                     |

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



| GSM1900 (GPRS class 8) |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|------------------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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                 | 3709.5               | -48.44          | -13              | -35.44                  | -65.29                  | -55.02                   | 1.67                       | 8.25                        | H                     |
|                        | 5557.5               | -44.75          | -13              | -31.75                  | -67.38                  | -51.81                   | 2.66                       | 9.72                        | H                     |
|                        | 7410                 | -49.99          | -13              | -36.99                  | -77.1                   | -59.15                   | 2.46                       | 11.62                       | H                     |
|                        | 3709.5               | -47.01          | -13              | -34.01                  | -64.02                  | -53.59                   | 1.67                       | 8.25                        | V                     |
|                        | 5557.5               | -36.45          | -13              | -23.45                  | -58.93                  | -43.51                   | 2.66                       | 9.72                        | V                     |
|                        | 7410                 | -50.05          | -13              | -37.05                  | -77.15                  | -59.21                   | 2.46                       | 11.62                       | V                     |
| Middle                 | 3775.5               | -51.83          | -13              | -38.83                  | -68.89                  | -58.47                   | 1.69                       | 8.33                        | H                     |
|                        | 5640                 | -44.36          | -13              | -31.36                  | -67.14                  | -51.41                   | 2.71                       | 9.76                        | H                     |
|                        | 7521                 | -49.01          | -13              | -36.01                  | -76.34                  | -58.4                    | 2.42                       | 11.81                       | H                     |
|                        | 3775.5               | -42.97          | -13              | -29.97                  | -60.15                  | -49.61                   | 1.69                       | 8.33                        | V                     |
|                        | 5640                 | -35.70          | -13              | -22.70                  | -58.32                  | -42.75                   | 2.71                       | 9.76                        | V                     |
|                        | 7521                 | -48.14          | -13              | -35.14                  | -75.58                  | -57.53                   | 2.42                       | 11.81                       | V                     |
| Highest                | 3825                 | -48.55          | -13              | -35.55                  | -65.77                  | -55.23                   | 1.71                       | 8.39                        | H                     |
|                        | 5739                 | -47.69          | -13              | -34.69                  | -70.63                  | -54.72                   | 2.76                       | 9.80                        | H                     |
|                        | 7636.5               | -49.36          | -13              | -36.36                  | -76.8                   | -58.86                   | 2.39                       | 11.88                       | H                     |
|                        | 3825                 | -41.68          | -13              | -28.68                  | -58.99                  | -48.36                   | 1.71                       | 8.39                        | V                     |
|                        | 5739                 | -38.25          | -13              | -25.25                  | -61.06                  | -45.28                   | 2.76                       | 9.80                        | V                     |
|                        | 7636.5               | -48.36          | -13              | -35.36                  | -75.87                  | -57.86                   | 2.39                       | 11.88                       | V                     |

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



| GSM1900 (EDGE class 8) |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|------------------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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                 | 3709.5               | -48.68          | -13              | -35.68                  | -65.53                  | -55.26                   | 1.67                       | 8.25                        | H                     |
|                        | 5557.5               | -43.93          | -13              | -30.93                  | -66.56                  | -50.99                   | 2.66                       | 9.72                        | H                     |
|                        | 7410                 | -50.19          | -13              | -37.19                  | -77.3                   | -59.35                   | 2.46                       | 11.62                       | H                     |
|                        | 3709.5               | -46.33          | -13              | -33.33                  | -63.34                  | -52.91                   | 1.67                       | 8.25                        | V                     |
|                        | 5557.5               | -35.71          | -13              | -22.71                  | -58.17                  | -42.77                   | 2.66                       | 9.72                        | V                     |
|                        | 7410                 | -49.82          | -13              | -36.82                  | -76.98                  | -58.98                   | 2.46                       | 11.62                       | V                     |
| Middle                 | 3775.5               | -53.33          | -13              | -40.33                  | -70.39                  | -59.97                   | 1.69                       | 8.33                        | H                     |
|                        | 5640                 | -44.81          | -13              | -31.81                  | -67.59                  | -51.86                   | 2.71                       | 9.76                        | H                     |
|                        | 7521                 | -49.36          | -13              | -36.36                  | -76.69                  | -58.75                   | 2.42                       | 11.81                       | H                     |
|                        | 3775.5               | -43.16          | -13              | -30.16                  | -60.34                  | -49.8                    | 1.69                       | 8.33                        | V                     |
|                        | 5640                 | -36.21          | -13              | -23.21                  | -58.83                  | -43.26                   | 2.71                       | 9.76                        | V                     |
|                        | 7521                 | -48.88          | -13              | -35.88                  | -76.32                  | -58.27                   | 2.42                       | 11.81                       | V                     |
| Highest                | 3825                 | -48.60          | -13              | -35.60                  | -65.82                  | -55.28                   | 1.71                       | 8.39                        | H                     |
|                        | 5739                 | -45.82          | -13              | -32.82                  | -68.73                  | -52.85                   | 2.76                       | 9.80                        | H                     |
|                        | 7636.5               | -49.28          | -13              | -36.28                  | -76.72                  | -58.78                   | 2.39                       | 11.88                       | H                     |
|                        | 3825                 | -42.32          | -13              | -29.32                  | -59.66                  | -49                      | 1.71                       | 8.39                        | V                     |
|                        | 5739                 | -37.51          | -13              | -24.51                  | -60.32                  | -44.54                   | 2.76                       | 9.80                        | V                     |
|                        | 7636.5               | -47.81          | -13              | -34.81                  | -75.32                  | -57.31                   | 2.39                       | 11.88                       | V                     |

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





| WCDMA Band V(RMC 12.2Kbps) |                      |                |                  |                         |                         |                          |                            |                             |                       |
|----------------------------|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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                     | 1656                 | -49.75         | -13              | -36.75                  | -59.55                  | -51.48                   | 0.98                       | 4.86                        | H                     |
|                            | 2488                 | -54.38         | -13              | -41.38                  | -68.15                  | -56.31                   | 1.29                       | 5.36                        | H                     |
|                            | 3312                 | -53.91         | -13              | -40.91                  | -69.92                  | -57.39                   | 1.55                       | 7.17                        | H                     |
|                            | 1656                 | -51.51         | -13              | -38.51                  | -61.25                  | -53.24                   | 0.98                       | 4.86                        | V                     |
|                            | 2488                 | -54.81         | -13              | -41.81                  | -68.62                  | -56.74                   | 1.29                       | 5.36                        | V                     |
|                            | 3312                 | -51.11         | -13              | -38.11                  | -67.08                  | -54.59                   | 1.55                       | 7.17                        | V                     |
| Middle                     | 1672                 | -50.32         | -13              | -37.32                  | -60.19                  | -52                      | 0.99                       | 4.82                        | H                     |
|                            | 2512                 | -54.44         | -13              | -41.44                  | -68.27                  | -56.41                   | 1.29                       | 5.41                        | H                     |
|                            | 3344                 | -52.92         | -13              | -39.92                  | -68.96                  | -56.53                   | 1.56                       | 7.31                        | H                     |
|                            | 1672                 | -50.96         | -13              | -37.96                  | -60.75                  | -52.64                   | 0.99                       | 4.82                        | V                     |
|                            | 2512                 | -52.97         | -13              | -39.97                  | -66.8                   | -54.94                   | 1.29                       | 5.41                        | V                     |
|                            | 3344                 | -49.03         | -13              | -36.03                  | -65.08                  | -52.64                   | 1.56                       | 7.31                        | V                     |
| Highest                    | 1696                 | -51.12         | -13              | -38.12                  | -61.06                  | -52.72                   | 1.00                       | 4.75                        | H                     |
|                            | 2544                 | -54.31         | -13              | -41.31                  | -68.28                  | -56.29                   | 1.30                       | 5.44                        | H                     |
|                            | 3392                 | -53.83         | -13              | -40.83                  | -69.93                  | -57.63                   | 1.57                       | 7.52                        | H                     |
|                            | 1696                 | -52.13         | -13              | -39.13                  | -62.01                  | -53.73                   | 1.00                       | 4.75                        | V                     |
|                            | 2544                 | -52.02         | -13              | -39.02                  | -66.02                  | -54                      | 1.30                       | 5.44                        | V                     |
|                            | 3392                 | -48.62         | -13              | -35.62                  | -64.85                  | -52.42                   | 1.57                       | 7.52                        | V                     |

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



| WCDMA Band II(RMC 12.2Kbps) |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|-----------------------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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                      | 3709.5               | -50.29          | -13              | -37.29                  | -67.14                  | -56.87                   | 1.67                       | 8.25                        | H                     |
|                             | 5574                 | -44.85          | -13              | -31.85                  | -67.52                  | -51.91                   | 2.67                       | 9.73                        | H                     |
|                             | 7419                 | -49.93          | -13              | -36.93                  | -77.08                  | -59.11                   | 2.46                       | 11.64                       | H                     |
|                             | 3709.5               | -43.58          | -13              | -30.58                  | -60.59                  | -50.16                   | 1.67                       | 8.25                        | V                     |
|                             | 5574                 | -36.04          | -13              | -23.04                  | -58.44                  | -43.1                    | 2.67                       | 9.73                        | V                     |
|                             | 7419                 | -49.75          | -13              | -36.75                  | -76.96                  | -58.93                   | 2.46                       | 11.64                       | V                     |
| Middle                      | 3759                 | -51.15          | -13              | -38.15                  | -68.16                  | -57.78                   | 1.69                       | 8.31                        | H                     |
|                             | 5656.5               | -46.63          | -13              | -33.63                  | -69.43                  | -53.68                   | 2.71                       | 9.76                        | H                     |
|                             | 7518                 | -49.58          | -13              | -36.58                  | -76.91                  | -58.97                   | 2.42                       | 11.81                       | H                     |
|                             | 3759                 | -41.36          | -13              | -28.36                  | -76.16                  | -47.99                   | 1.69                       | 8.31                        | V                     |
|                             | 5656.5               | -38.58          | -13              | -25.58                  | -77.43                  | -45.63                   | 2.71                       | 9.76                        | V                     |
|                             | 7518                 | -48.89          | -13              | -35.89                  | -77.38                  | -58.28                   | 2.42                       | 11.81                       | V                     |
| Highest                     | 3816                 | -49.12          | -13              | -36.12                  | -66.33                  | -55.8                    | 1.70                       | 8.38                        | H                     |
|                             | 5724                 | -44.56          | -13              | -31.56                  | -67.48                  | -51.6                    | 2.75                       | 9.79                        | H                     |
|                             | 7636.5               | -49.60          | -13              | -36.60                  | -76.94                  | -59.1                    | 2.39                       | 11.88                       | H                     |
|                             | 3816                 | -42.08          | -13              | -29.08                  | -59.38                  | -48.76                   | 1.70                       | 8.38                        | V                     |
|                             | 5724                 | -35.71          | -13              | -22.71                  | -58.49                  | -42.75                   | 2.75                       | 9.79                        | V                     |
|                             | 7636.5               | -49.11          | -13              | -36.11                  | -76.63                  | -58.61                   | 2.39                       | 11.88                       | V                     |

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



| WCDMA Band IV(RMC 12.2Kbps) |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|-----------------------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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                      | 3426                 | -52.67          | -13              | -39.67                  | -68.76                  | -58.76                   | 1.58                       | 7.67                        | H                     |
|                             | 5136                 | -49.67          | -13              | -36.67                  | -71.19                  | -56.95                   | 2.42                       | 9.70                        | H                     |
|                             | 6852                 | -45.51          | -13              | -32.51                  | -71.27                  | -53.49                   | 2.64                       | 10.62                       | H                     |
|                             | 3426                 | -52.73          | -13              | -39.73                  | -69.06                  | -58.82                   | 1.58                       | 7.67                        | V                     |
|                             | 5136                 | -50.20          | -13              | -37.20                  | -71.82                  | -57.48                   | 2.42                       | 9.70                        | V                     |
|                             | 6852                 | -44.63          | -13              | -31.63                  | -70.24                  | -52.61                   | 2.64                       | 10.62                       | V                     |
| Middle                      | 3468                 | -57.63          | -13              | -44.63                  | -73.85                  | -63.89                   | 1.59                       | 7.86                        | H                     |
|                             | 5197                 | -54.09          | -13              | -41.09                  | -75.77                  | -61.34                   | 2.45                       | 9.70                        | H                     |
|                             | 6930                 | -51.24          | -13              | -38.24                  | -77.27                  | -59.34                   | 2.61                       | 10.72                       | H                     |
|                             | 3468                 | -56.28          | -13              | -43.28                  | -72.71                  | -62.54                   | 1.59                       | 7.86                        | V                     |
|                             | 5197                 | -52.90          | -13              | -39.90                  | -74.69                  | -60.15                   | 2.45                       | 9.70                        | V                     |
|                             | 6930                 | -51.68          | -13              | -38.68                  | -77.45                  | -59.78                   | 2.61                       | 10.72                       | V                     |
| Highest                     | 3504                 | -52.66          | -13              | -39.66                  | -68.93                  | -59.06                   | 1.61                       | 8.00                        | H                     |
|                             | 5257                 | -50.03          | -13              | -37.03                  | -71.82                  | -57.24                   | 2.49                       | 9.70                        | H                     |
|                             | 7010                 | -43.64          | -13              | -30.64                  | -69.89                  | -51.87                   | 2.59                       | 10.82                       | H                     |
|                             | 3504                 | -53.62          | -13              | -40.62                  | -70.14                  | -60.02                   | 1.61                       | 8.00                        | V                     |
|                             | 5257                 | -48.77          | -13              | -35.77                  | -70.6                   | -55.98                   | 2.49                       | 9.70                        | V                     |
|                             | 7010                 | -44.58          | -13              | -31.58                  | -70.55                  | -52.81                   | 2.59                       | 10.82                       | V                     |

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



| CDMA BC0(1xRTT) |                      |                |                  |                         |                         |                          |                            |                             |                       |
|-----------------|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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          | 1648                 | -48.88         | -13              | -35.88                  | -58.6                   | -50.64                   | 0.98                       | 4.89                        | H                     |
|                 | 2472                 | -55.91         | -13              | -42.91                  | -69.6                   | -57.79                   | 1.28                       | 5.32                        | H                     |
|                 | 3296                 | -53.47         | -13              | -40.47                  | -69.45                  | -56.88                   | 1.54                       | 7.10                        | H                     |
|                 | 1648                 | -49.41         | -13              | -36.41                  | -59.07                  | -51.17                   | 0.98                       | 4.89                        | V                     |
|                 | 2472                 | -55.28         | -13              | -42.28                  | -69.01                  | -57.16                   | 1.28                       | 5.32                        | V                     |
|                 | 3296                 | -49.59         | -13              | -36.59                  | -65.55                  | -53                      | 1.54                       | 7.10                        | V                     |
| Middle          | 1672                 | -48.06         | -13              | -35.06                  | -57.91                  | -49.74                   | 0.99                       | 4.82                        | H                     |
|                 | 2512                 | -52.65         | -13              | -39.65                  | -66.49                  | -54.62                   | 1.29                       | 5.41                        | H                     |
|                 | 3344                 | -52.92         | -13              | -39.92                  | -68.97                  | -56.53                   | 1.56                       | 7.31                        | H                     |
|                 | 1672                 | -47.70         | -13              | -34.70                  | -57.49                  | -49.38                   | 0.99                       | 4.82                        | V                     |
|                 | 2512                 | -49.95         | -13              | -36.95                  | -63.81                  | -51.92                   | 1.29                       | 5.41                        | V                     |
|                 | 3344                 | -44.57         | -13              | -31.57                  | -60.62                  | -48.18                   | 1.56                       | 7.31                        | V                     |
| Highest         | 1696                 | -49.97         | -13              | -36.97                  | -59.91                  | -51.57                   | 1.00                       | 4.75                        | H                     |
|                 | 2544                 | -53.32         | -13              | -40.32                  | -67.29                  | -55.3                    | 1.30                       | 5.44                        | H                     |
|                 | 3392                 | -51.33         | -13              | -38.33                  | -67.43                  | -55.13                   | 1.57                       | 7.52                        | H                     |
|                 | 1696                 | -50.14         | -13              | -37.14                  | -60.02                  | -51.74                   | 1.00                       | 4.75                        | V                     |
|                 | 2544                 | -49.42         | -13              | -36.42                  | -63.38                  | -51.4                    | 1.30                       | 5.44                        | V                     |
|                 | 3392                 | -45.15         | -13              | -32.15                  | -61.35                  | -48.95                   | 1.57                       | 7.52                        | V                     |

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



| CDMA BC1(1xRTT) |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|-----------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| 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          | 3709.5               | -59.22          | -13              | -46.22                  | -76.07                  | -65.8                    | 1.67                       | 8.25                        | H                     |
|                 | 5557.5               | -55.23          | -13              | -42.23                  | -77.86                  | -62.29                   | 2.66                       | 9.72                        | H                     |
|                 | 7410                 | -50.47          | -13              | -37.47                  | -77.58                  | -59.63                   | 2.46                       | 11.62                       | H                     |
|                 | 3709.5               | -59.01          | -13              | -46.01                  | -76.02                  | -65.59                   | 1.67                       | 8.25                        | V                     |
|                 | 5557.5               | -55.21          | -13              | -42.21                  | -77.67                  | -62.27                   | 2.66                       | 9.72                        | V                     |
|                 | 7410                 | -50.41          | -13              | -37.41                  | -77.57                  | -59.57                   | 2.46                       | 11.62                       | V                     |
| Middle          | 3762                 | -59.02          | -13              | -46.02                  | -76.03                  | -65.65                   | 1.69                       | 8.31                        | H                     |
|                 | 5640                 | -54.35          | -13              | -41.35                  | -77.13                  | -61.4                    | 2.71                       | 9.76                        | H                     |
|                 | 7521                 | -49.91          | -13              | -36.91                  | -77.24                  | -59.3                    | 2.42                       | 11.81                       | H                     |
|                 | 3762                 | -57.45          | -13              | -44.45                  | -74.59                  | -64.08                   | 1.69                       | 8.31                        | V                     |
|                 | 5640                 | -54.20          | -13              | -41.20                  | -76.82                  | -61.25                   | 2.71                       | 9.76                        | V                     |
|                 | 7521                 | -49.49          | -13              | -36.49                  | -76.93                  | -58.88                   | 2.42                       | 11.81                       | V                     |
| Highest         | 3816                 | -52.64          | -13              | -39.64                  | -69.85                  | -59.32                   | 1.70                       | 8.38                        | H                     |
|                 | 5724                 | -48.09          | -13              | -35.09                  | -71.01                  | -55.13                   | 2.75                       | 9.79                        | H                     |
|                 | 7636.5               | -43.25          | -13              | -30.25                  | -70.69                  | -52.75                   | 2.39                       | 11.88                       | H                     |
|                 | 3816                 | -51.72          | -13              | -38.72                  | -69.02                  | -58.4                    | 1.70                       | 8.38                        | V                     |
|                 | 5724                 | -48.17          | -13              | -35.17                  | -70.97                  | -55.21                   | 2.75                       | 9.79                        | V                     |
|                 | 7636.5               | -42.30          | -13              | -29.30                  | -69.82                  | -51.8                    | 2.39                       | 11.88                       | V                     |

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