



# FCC RF Test Report

APPLICANT : Sony Mobile Communications Inc.  
EQUIPMENT : GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII  
a/b/g/n/ac, ANT+, and NFC  
BRAND NAME : Sony  
FCC ID : PY7-PM0900  
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E)  
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jul. 16, 2015 and testing was completed on Aug. 18, 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 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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## REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION             | ISSUED DATE   |
|------------|---------|-------------------------|---------------|
| FG571610A  | Rev. 01 | Initial issue of report | Aug. 31, 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   | -                                          |
| 3.5            | §24.232(d)                          | Peak-to-Average Ratio                         | < 13 dB                | PASS   | -                                          |
| 3.6            | §2.1049<br>§22.917(b)<br>§24.238(b) | Occupied Bandwidth                            | Reporting Only         | PASS   | -                                          |
| 3.7            | §2.1051<br>§22.917(a)<br>§24.238(a) | Band Edge Measurement                         | < 43+10log10(P[Watts]) | PASS   | -                                          |
| 3.8            | §2.1051<br>§22.917(a)<br>§24.238(a) | Conducted Emission                            | < 43+10log10(P[Watts]) | PASS   | -                                          |
| 3.9            | §2.1055<br>§22.355                  | Frequency Stability for Temperature & Voltage | < 2.5 ppm for Part 22  | PASS   | -                                          |
|                | §2.1055<br>§24.235                  |                                               | Within Authorized Band |        |                                            |
| 4.4            | §22.913(a)(2)                       | Effective Radiated Power                      | < 7 Watts              | PASS   | -                                          |
|                | §24.232(c)                          | Equivalent Isotropic Radiated Power           | < 2 Watts              | PASS   | -                                          |
| 4.5            | §2.1053<br>§22.917(a)<br>§24.238(a) | Field Strength of Spurious Radiation          | < 43+10log10(P[Watts]) | PASS   | Under limit<br>34.56 dB at<br>7627.000 MHz |



# 1 General Description

## 1.1 Applicant

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

## 1.2 Manufacturer

Sony Mobile Communications Inc.  
1-8-15 Konan, Minato-ku, Tokyo, 108-0075, Japan

## 1.3 Product Feature of Equipment Under Test

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

| Product Specification subjective to this standard |                  |
|---------------------------------------------------|------------------|
| Antenna Type                                      | Monopole Antenna |

| EUT Information List |            |              |            |                                             |
|----------------------|------------|--------------|------------|---------------------------------------------|
| IMEI                 | HW Version | SW Version   | S/N        | Performed Test Item                         |
| 004402455306161      | A          | 32.0.A.0.323 | CB5A273T51 | RF conducted measurement                    |
| 004402455306435      |            |              | CB5A273T8B | Radiated Spurious Emission<br>ERP/EIRP Test |

| Accessory List |                       |
|----------------|-----------------------|
| AC Adapter     | Model No. : UCH20     |
|                | Type No. : AC-0061-US |
|                | S/N : 5815W22500089   |
| Earphone       | Model No. : MDR-NC31E |
|                | Type No. : AG-1110    |
| USB Cable      | Model No. : UCB11     |
|                | Type No. : AI-0120    |
|                | S/N : 1522A733000210  |

### Note:

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



## 1.4 Modification of EUT

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

## 1.5 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

| FCC Rule | System                     | Type of Modulation | Maximum ERP/EIRP (W) | Frequency Tolerance (ppm) | Emission Designator |
|----------|----------------------------|--------------------|----------------------|---------------------------|---------------------|
| Part 22  | GSM850 GPRS class 8        | GMSK               | 0.4909               | 0.0096 ppm                | 247KGXW             |
| Part 22  | GSM850 EDGE class 8        | 8PSK               | 0.1671               | 0.0060 ppm                | 244KG7W             |
| Part 22  | WCDMA Band V RMC 12.2Kbps  | QPSK               | 0.0824               | 0.0120 ppm                | 4M16F9W             |
| Part 24  | GSM1900 GPRS class 8       | GMSK               | 0.3767               | 0.0080 ppm                | 245KGXW             |
| Part 24  | GSM1900 EDGE class 8       | 8PSK               | 0.2089               | 0.0144 ppm                | 248KG7W             |
| Part 24  | WCDMA Band II RMC 12.2Kbps | QPSK               | 0.0718               | 0.0085 ppm                | 4M16F9W             |

## 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.                                                                                                                                                 |
|                    | TH03-HY                                                                                                                                                          |

|                    |                                                                                                                                        |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                                             |
| Test Site Location | 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 |
| Test Site No.      | Sporton Site No.                                                                                                                       |
|                    | 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), 24(E)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

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

## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

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.
2. 30 MHz to 19000 MHz for GSM1900 and WCDMA Band II.

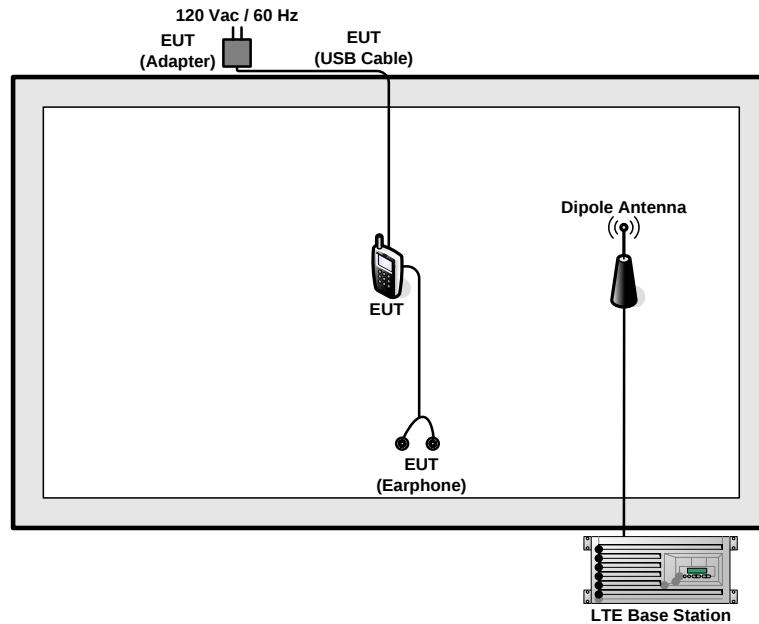
All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

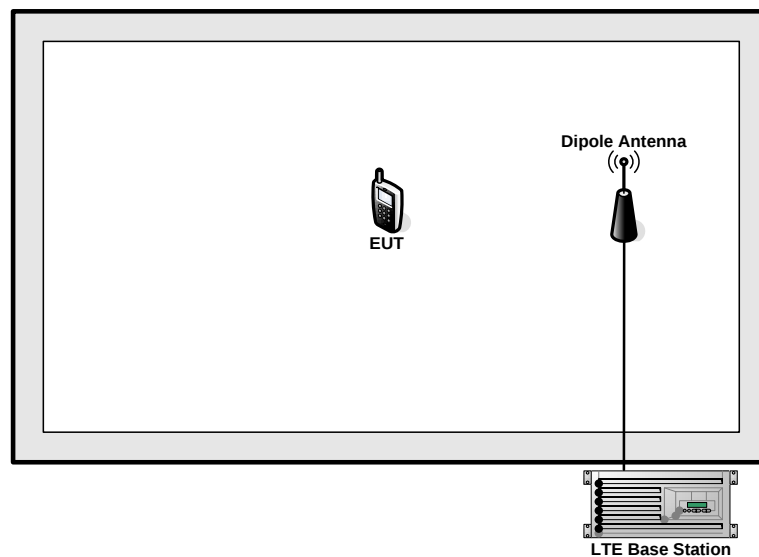
| Test Modes    |                     |                     |
|---------------|---------------------|---------------------|
| Band          | Radiated TCs        | Conducted TCs       |
| GSM 850       | ■ GPRS class 8 Link | ■ GPRS class 8 Link |
|               | ■ EDGE class 8 Link | ■ EDGE class 8 Link |
| GSM 1900      | ■ GPRS class 8 Link | ■ GPRS class 8 Link |
|               | ■ EDGE class 8 Link | ■ EDGE class 8 Link |
| WCDMA Band V  | ■ RMC 12.2Kbps Link | ■ RMC 12.2Kbps Link |
| WCDMA Band II | ■ RMC 12.2Kbps Link | ■ RMC 12.2Kbps Link |

## 2.2 Connection Diagram of Test System

### <EUT with Adapter and Earphone>



### <EUT without Adapter and Earphone>



## 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 |

## 2.4 Measurement Results Explanation Example

### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

The following shows an offset computation example with RF cable loss 4.2 dB and a 10dB attenuator.

Example :

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)}\end{aligned}$$

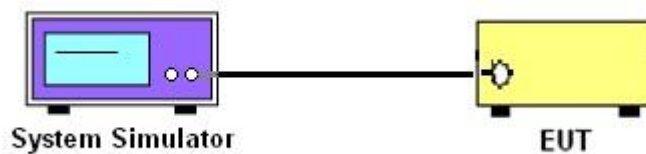
### 3 Conducted Test Result

#### 3.1 Measuring Instruments

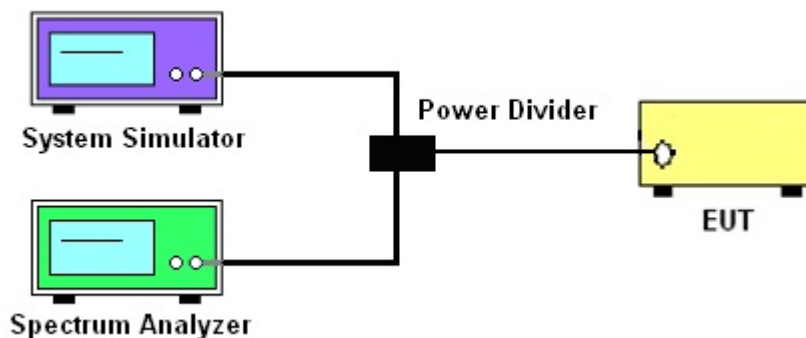
See list of measuring instruments of this test report.

#### 3.2 Test Setup

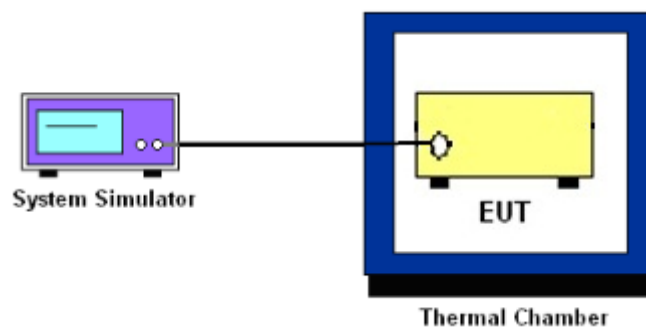
##### 3.2.1 Conducted Output Power



##### 3.2.2 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



##### 3.2.3 Frequency Stability



### 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**

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.

#### **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.

### **3.5 Peak-to-Average Ratio**

#### **3.5.1 Description of the PAR Measurement**

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

#### **3.5.2 Test Procedures**

1. The testing follows FCC KDB 971168 D01 v02r02 Section 5.7.1.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. Set EUT to transmit at maximum output power.
4. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
5. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.



## **3.6 99% Occupied Bandwidth and 26dB Bandwidth Measurement**

### **3.6.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement**

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The emission bandwidth is defined as the width of the signal between two points, located at the two sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

### **3.6.2 Test Procedures**

1. The testing follows FCC KDB 971168 D01 v02r02 Section 4.2.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of the EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The 99% occupied bandwidth were measured, set RBW= 1% of span, VBW= 3\*RBW, sample detector, trace maximum hold.
5. The 26dB bandwidth were measured, set RBW= 1% of EBW, VBW= 3\*RBW, peak detector, trace maximum hold.



## **3.7 Conducted Band Edge**

### **3.7.1 Description of Conducted Band Edge Measurement**

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

### **3.7.2 Test Procedures**

1. The testing follows FCC KDB 971168 D01 v02r02 Section 6.0.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator.  
The path loss was compensated to the results for each measurement.
4. The band edges of low and high channels for the highest RF powers were measured.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. 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)  
 $= -13\text{dBm}$ .

### 3.8 Conducted Spurious Emission

#### 3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

#### 3.8.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v02r02 Section 6.0.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. 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)  
= -13dBm.

### 3.9 Frequency Stability

#### 3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

#### 3.9.2 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 D01 v02r02 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  steps up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

#### 3.9.3 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 D01 v02r02 Section 9.0.
2. The EUT was placed in a temperature chamber at  $25\pm 5^{\circ}\text{C}$  and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

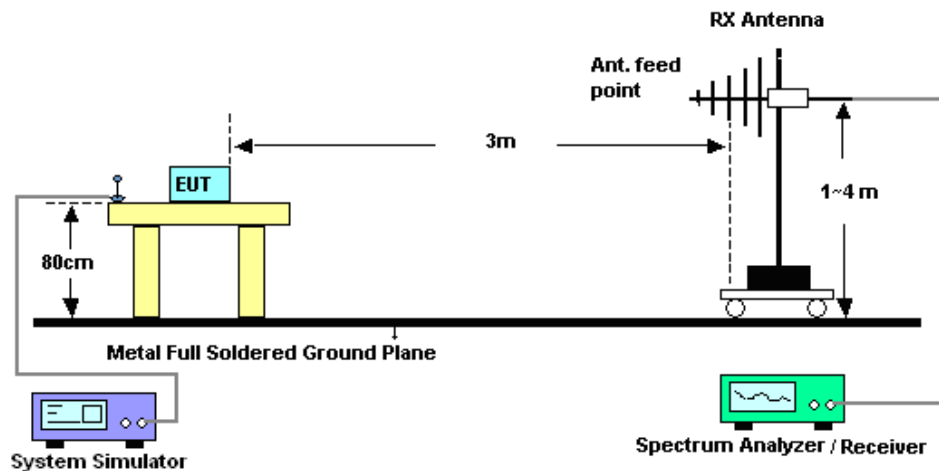
## 4 Radiated Test Items

### 4.1 Measuring Instruments

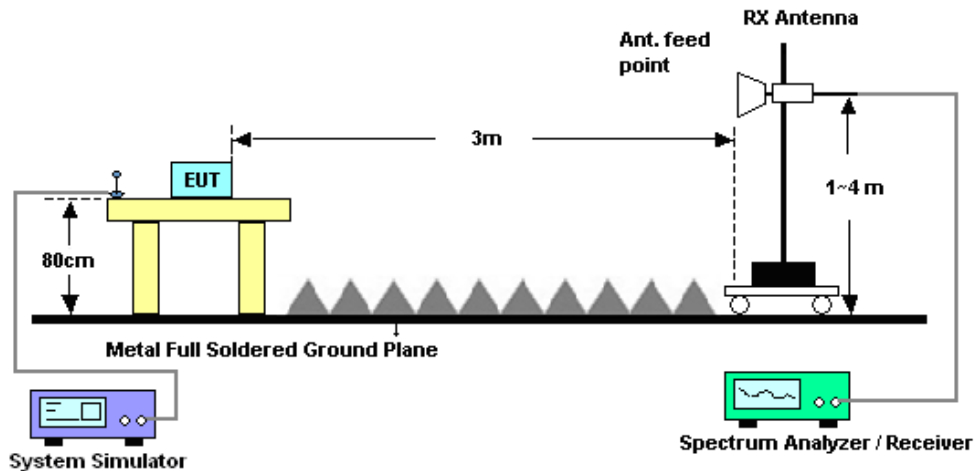
See list of measuring instruments of this test report.

### 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 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

### 4.4.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-C-2004, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. The ERP of mobile transmitters must not exceed 7 Watts (Cellular Band) and the EIRP of mobile transmitters are limited to 2 Watts (PCS Band).

### 4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v02r02 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-C-2004 Section 2.2.17.
2. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor,  $EIRP = LVL + \text{Correction factor}$  and  $ERP = EIRP - 2.15$ . Take the record of the output power at substitution antenna.



|              | GSM/GPRS/EDGE | WCDMA/HSPA |
|--------------|---------------|------------|
| SPAN         | 500kHz        | 10MHz      |
| RBW          | 10kHz         | 100kHz     |
| VBW          | 30kHz         | 300kHz     |
| Detector     | RMS           | RMS        |
| Trace        | Average       | Average    |
| Average Type | Power         | Power      |
| Sweep Count  | 100           | 100        |

## 4.5 Field Strength of Spurious Radiation Measurement

### 4.5.1 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.

### 4.5.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v02r02 Section 5.8 and ANSI / TIA-603-C-2004 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table 0.8 meters 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                |
|---------------------|-----------------|---------------------|-------------------------------------|-------------------------------|------------------|-------------------------------|---------------|-----------------------|
| Spectrum Analyzer   | Rohde & Schwarz | FSP30               | 101329                              | 9kHz~30GHz                    | Jun. 24, 2015    | Jul. 23, 2015                 | Jun. 23, 2016 | Conducted (TH03-HY)   |
| Hygrometer          | Testo           | 608-H1              | 34893241                            | N/A                           | May 04, 2015     | Jul. 23, 2015                 | May 03, 2016  | Conduction (TH03-HY)  |
| Temperature Chamber | ESPEC           | SU-641              | 92013721                            | -30 ~70 degree                | Dec. 01, 2014    | Jul. 23, 2015                 | Nov. 30, 2015 | Conducted (TH03-HY)   |
| RF cable            | WOKEN           | S05                 | S05-130708-22                       | N/A                           | Jan. 21, 2015    | Jul. 23, 2015                 | Jan. 20, 2016 | Conducted (TH03-HY)   |
| Preamplifier        | MITEQ           | JS44-18004000-33-8P | 1840917                             | 18GHz ~ 40GHz                 | Jun. 02, 2015    | Aug. 06, 2015 ~ Aug. 18, 2015 | Jun. 01, 2016 | Radiation (03CH10-HY) |
| Horn Antenna        | SCHWARZBECK     | BBHA 9170           | BBHA9170584                         | 18GHz- 40GHz                  | Nov. 03, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 02, 2015 | Radiation (03CH10-HY) |
| Amplifier           | SONOMA          | 310N                | 187311                              | 9kHz~1GHz                     | Nov. 24, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 23, 2015 | Radiation (03CH10-HY) |
| Bilog Antenna       | TESEQ           | CBL 6111D           | 35413                               | 30MHz~1GHz                    | Oct. 24, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Oct. 23, 2015 | Radiation (03CH10-HY) |
| EMI Test Receiver   | Keysight        | N9038A              | MY54130085                          | 20Hz ~ 8.4GHz                 | Nov. 05, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 04, 2015 | Radiation (03CH10-HY) |
| Horn Antenna        | SCHWARZBECK     | BBHA 9120 D         | 9120D-1325                          | 1GHz ~ 18GHz                  | Oct. 03, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Oct. 02, 2015 | Radiation (03CH10-HY) |
| Preamplifier        | Keysight        | 83017A              | MY53270078                          | 1GHz~26.5GHz                  | Nov. 20, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 19, 2015 | Radiation (03CH10-HY) |
| Spectrum Analyzer   | Keysight        | N9010A              | MY54200485                          | 10Hz ~ 44GHZ                  | Oct. 14, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Oct. 13, 2015 | Radiation (03CH10-HY) |
| Controller          | EMEC            | EM 1000             | N/A                                 | Control Turn table & Ant Mast | N/A              | Aug. 06, 2015 ~ Aug. 18, 2015 | N/A           | Radiation (03CH10-HY) |
| Antenna Mast        | EMEC            | AM-BS-4500-B        | N/A                                 | 1~4m                          | N/A              | Aug. 06, 2015 ~ Aug. 18, 2015 | N/A           | Radiation (03CH10-HY) |
| Turn Table          | EMEC            | TT 2200             | N/A                                 | 0-360 degree                  | N/A              | Aug. 06, 2015 ~ Aug. 18, 2015 | N/A           | Radiation (03CH10-HY) |
| Hygrometer          | TECPEL          | DTM-303B            | TP140320                            | N/A                           | Nov. 17, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 16, 2015 | Radiation (03CH10-HY) |
| RF Cable            | HUBER + SUHNER  | SUCOFLEX 104        | MY24956/4<br>MY24952/4<br>MY28386/4 | 25GHz~40GHz                   | Nov. 06, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 05, 2015 | Radiation (03CH10-HY) |
| RF Cable            | HUBER + SUHNER  | SUCOFLEX 104        | MY24956/4<br>MY24952/4<br>MY28386/4 | 30MHz~1GHz                    | Nov. 06, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 05, 2015 | Radiation (03CH10-HY) |
| RF Cable            | HUBER + SUHNER  | SUCOFLEX 104        | MY249564<br>MY249524<br>MY283864    | 1GHz~25GHz                    | Nov. 06, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Nov. 05, 2015 | Radiation (03CH10-HY) |
| Test Software       | N/A             | E3                  | 6.2009-8-24                         | N/A                           | N/A              | Aug. 06, 2015 ~ Aug. 18, 2015 | N/A           | Radiation (03CH10-HY) |



| Instrument   | Manufacturer | Model No.             | Serial No. | Characteristics | Calibration Date | Test Date                     | Due Date      | Remark                |
|--------------|--------------|-----------------------|------------|-----------------|------------------|-------------------------------|---------------|-----------------------|
| Filter       | Wainwright   | WLKS1200-8 SS         | SN3        | 1.2G Low Pass   | Oct. 01, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Sep. 30, 2015 | Radiation (03CH10-HY) |
| Filter       | Wainwright   | WHK1.5/15G-10SS       | SN32       | 1.5G High Pass  | Oct. 01, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Sep. 30, 2015 | Radiation (03CH10-HY) |
| Filter       | Microwave    | H3G018G1              | SN477220   | 3.0G High Pass  | Oct. 01, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Sep. 30, 2015 | Radiation (03CH10-HY) |
| Notch Filter | Wainwright   | WRCG824/84 9-40/8SS   | SN35       | CDMA 850        | Oct. 01, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Sep. 30, 2015 | Radiation (03CH10-HY) |
| Notch Filter | Wainwright   | WRCT1850/1 910-40/8SS | SN21       | 1900            | Oct. 01, 2014    | Aug. 06, 2015 ~ Aug. 18, 2015 | Sep. 30, 2015 | Radiation (03CH10-HY) |



## 6 Uncertainty of Evaluation

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

|                                                                          |     |
|--------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ ) | 4.9 |
|--------------------------------------------------------------------------|-----|



## 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 |
| GSM                          | 31.52  | 31.53 | 31.56 | 28.21   | 28.28  | 28.19  |
| GPRS class 8                 | 31.60  | 31.59 | 31.61 | 28.24   | 28.30  | 28.27  |
| GPRS class 10                | 30.07  | 30.07 | 29.99 | 24.97   | 25.06  | 25.09  |
| GPRS class 11                | 28.01  | 28.00 | 28.02 | 23.02   | 23.11  | 23.04  |
| GPRS class 12                | 26.73  | 26.69 | 26.61 | 21.51   | 21.57  | 21.51  |
| EGPRS class 8                | 27.32  | 27.26 | 27.20 | 26.23   | 26.32  | 26.24  |
| EGPRS class 10               | 25.99  | 25.95 | 25.89 | 24.82   | 24.89  | 24.83  |
| EGPRS class 11               | 24.23  | 24.12 | 24.13 | 22.79   | 22.84  | 22.79  |
| EGPRS class 12               | 23.36  | 23.27 | 23.22 | 20.20   | 20.25  | 20.26  |

| Conducted Power (*Unit: dBm) |              |       |       |               |       |        |
|------------------------------|--------------|-------|-------|---------------|-------|--------|
| Band                         | WCDMA Band V |       |       | WCDMA Band II |       |        |
| Channel                      | 4132         | 4182  | 4233  | 9262          | 9400  | 9538   |
| Frequency                    | 826.4        | 836.4 | 846.6 | 1852.4        | 1880  | 1907.6 |
| RMC 12.2K                    | 24.21        | 24.30 | 24.32 | 20.95         | 21.07 | 21.03  |
| HSDPA Subtest-1              | 22.71        | 22.78 | 22.79 | 19.97         | 20.10 | 20.05  |
| HSDPA Subtest-2              | 22.73        | 22.83 | 22.84 | 20.01         | 20.13 | 20.09  |
| HSDPA Subtest-3              | 22.21        | 22.30 | 22.30 | 19.45         | 19.59 | 19.54  |
| HSDPA Subtest-4              | 22.21        | 22.29 | 22.28 | 19.44         | 19.55 | 19.54  |
| HSUPA Subtest-1              | 21.40        | 21.52 | 21.52 | 18.29         | 18.39 | 18.32  |
| HSUPA Subtest-2              | 21.70        | 21.78 | 21.77 | 18.68         | 18.80 | 18.72  |
| HSUPA Subtest-3              | 21.08        | 21.17 | 21.16 | 18.95         | 19.08 | 19.02  |
| HSUPA Subtest-4              | 21.97        | 22.08 | 22.07 | 18.97         | 19.08 | 19.03  |
| HSUPA Subtest-5              | 22.69        | 22.81 | 22.78 | 19.94         | 20.07 | 20.01  |



## A1. GSM

### Peak-to-Average Ratio

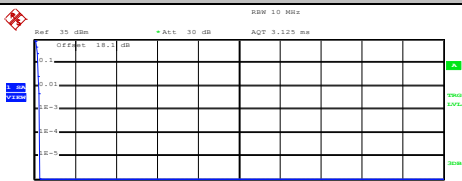
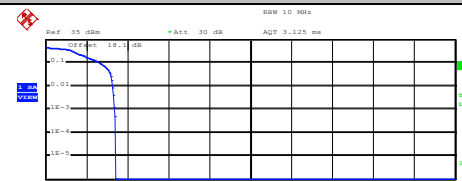
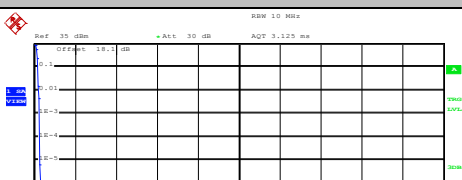
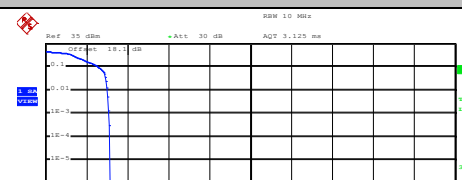
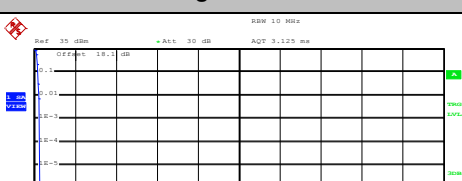
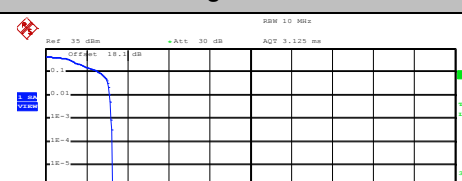
| Mode       | GSM850       |              | Limit: 13dB |
|------------|--------------|--------------|-------------|
| Mod.       | GPRS class 8 | EDGE class 8 | Result      |
| Lowest CH  | 0.24         | 3.48         | PASS        |
| Middle CH  | 0.24         | 3.00         |             |
| Highest CH | 0.24         | 3.20         |             |

| Mode       | GSM1900      |              | Limit: 13dB |
|------------|--------------|--------------|-------------|
| Mod.       | GPRS class 8 | EDGE class 8 | Result      |
| Lowest CH  | 0.28         | 3.36         | PASS        |
| Middle CH  | 0.28         | 3.08         |             |
| Highest CH | 0.28         | 3.20         |             |



| GSM850 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                           |  | GSM850 (EDGE class 8)                                                                                                                                                                                                                                                                                                                                           |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                  |  | Lowest Channel                                                                                                                                                                                                                                                                                                                                                  |  |
| <p>Ref: 35 dBm    Att: 30 dB    AGT 3.125 ms</p> <p>Center 824.2 MHz    2 dB/    Mean Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 29.61 dBm<br/>Peak 29.89 dBm<br/>Crest 0.28 dB</p> <p>10 % 0.20 dB<br/>1 % 0.24 dB<br/>.1 % 0.24 dB<br/>.01 % 0.28 dB</p> <p>Date: 23.JUL.2015 10:00:07</p> |  | <p>Ref: 35 dBm    Att: 30 dB    AGT 3.125 ms</p> <p>Center 824.2 MHz    2 dB/    Mean Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 25.30 dBm<br/>Peak 28.83 dBm<br/>Crest 3.53 dB</p> <p>10 % 2.76 dB<br/>1 % 3.40 dB<br/>.1 % 3.48 dB<br/>.01 % 3.56 dB</p> <p>Date: 23.JUL.2015 10:10:13</p> |  |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                  |  | Middle Channel                                                                                                                                                                                                                                                                                                                                                  |  |
| <p>Ref: 35 dBm    Att: 30 dB    AGT 3.125 ms</p> <p>Center 835.4 MHz    2 dB/    Mean Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 29.92 dBm<br/>Peak 30.17 dBm<br/>Crest 0.26 dB</p> <p>10 % 0.20 dB<br/>1 % 0.20 dB<br/>.1 % 0.24 dB<br/>.01 % 0.28 dB</p> <p>Date: 23.JUL.2015 10:00:18</p> |  | <p>Ref: 35 dBm    Att: 30 dB    AGT 3.125 ms</p> <p>Center 835.4 MHz    2 dB/    Mean Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 26.09 dBm<br/>Peak 29.12 dBm<br/>Crest 3.02 dB</p> <p>10 % 2.60 dB<br/>1 % 2.92 dB<br/>.1 % 3.00 dB<br/>.01 % 3.04 dB</p> <p>Date: 23.JUL.2015 10:10:24</p> |  |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                 |  | Highest Channel                                                                                                                                                                                                                                                                                                                                                 |  |
| <p>Ref: 35 dBm    Att: 30 dB    AGT 3.125 ms</p> <p>Center 848.8 MHz    2 dB/    Mean Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 29.93 dBm<br/>Peak 30.17 dBm<br/>Crest 0.24 dB</p> <p>10 % 0.16 dB<br/>1 % 0.20 dB<br/>.1 % 0.24 dB<br/>.01 % 0.28 dB</p> <p>Date: 23.JUL.2015 10:00:28</p> |  | <p>Ref: 35 dBm    Att: 30 dB    AGT 3.125 ms</p> <p>Center 848.8 MHz    2 dB/    Mean Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 25.90 dBm<br/>Peak 29.12 dBm<br/>Crest 3.22 dB</p> <p>10 % 2.64 dB<br/>1 % 3.12 dB<br/>.1 % 3.20 dB<br/>.01 % 3.24 dB</p> <p>Date: 23.JUL.2015 10:10:35</p> |  |

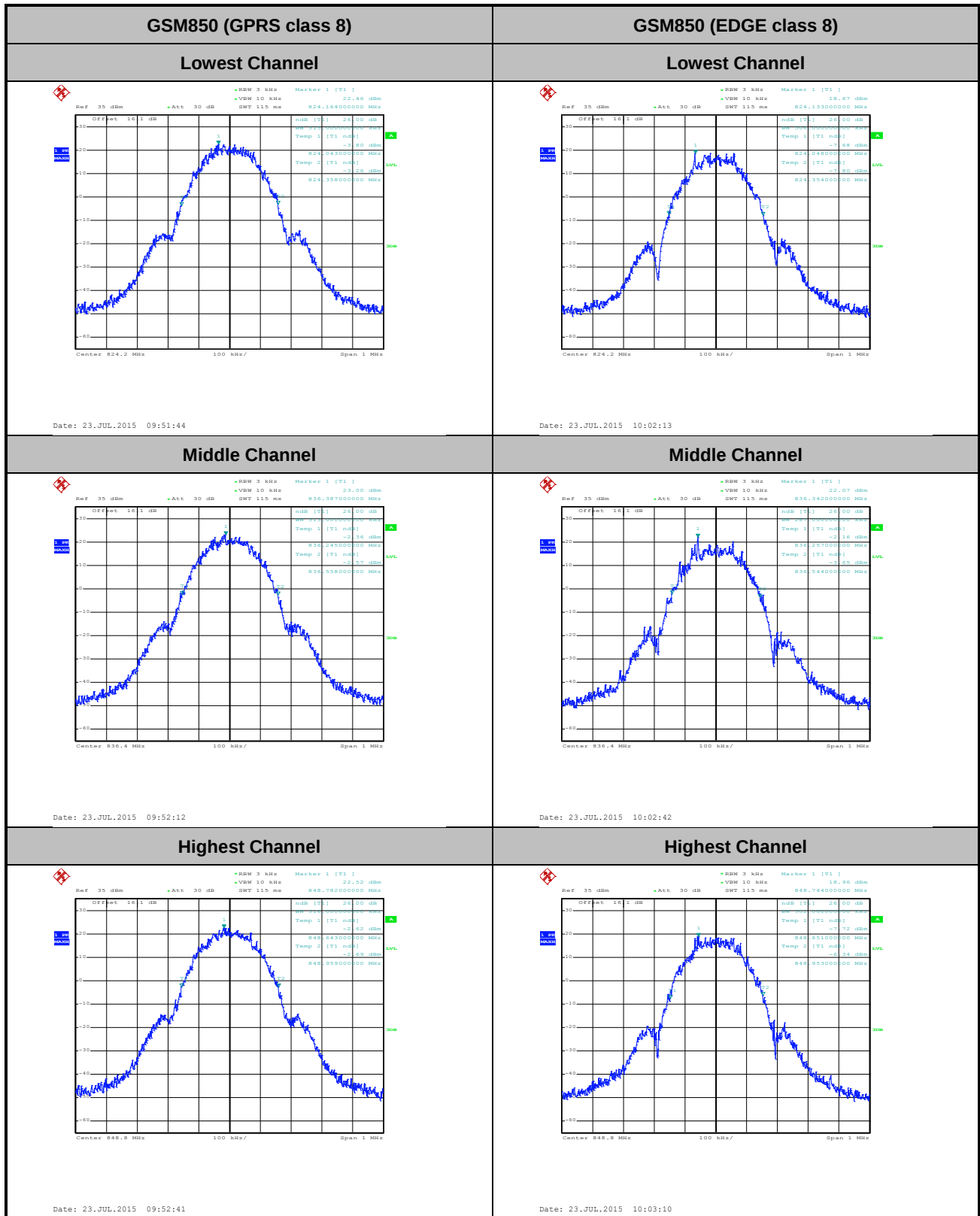


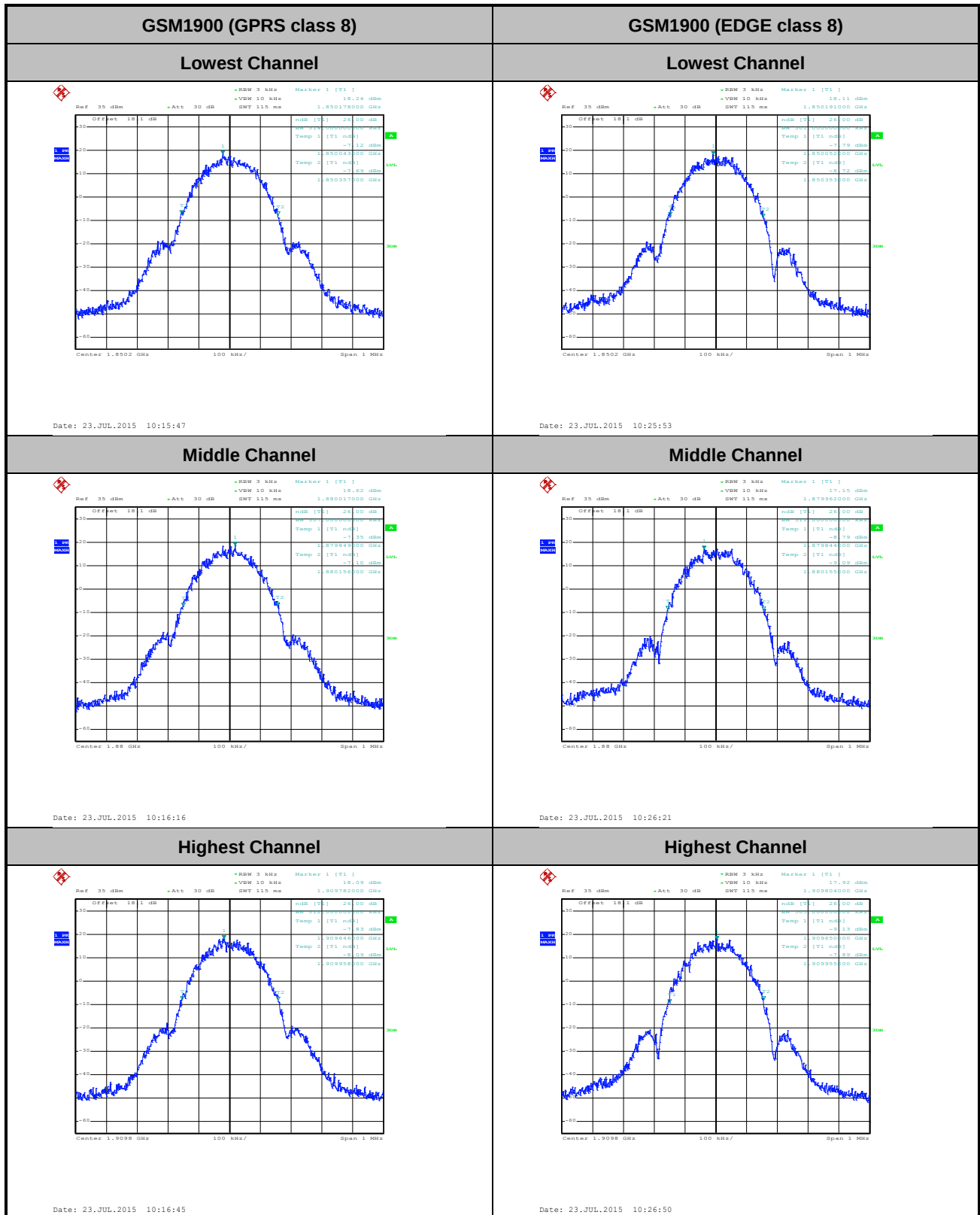
| GSM1900 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                       |  | GSM1900 (EDGE class 8)                                                                                                                                                                                                                                                                                                                                        |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                               |  | Lowest Channel                                                                                                                                                                                                                                                                                                                                                |  |
|  <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 25.17 dBm</p> <p>Peak 25.45 dBm</p> <p>Crest 0.27 dB</p> <p>10 % 0.20 dB</p> <p>1 % 0.24 dB</p> <p>.1 % 0.28 dB</p> <p>.01 % 0.28 dB</p> <p>Date: 23.JUL.2015 10:24:17</p>   |  |  <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 24.84 dBm</p> <p>Peak 28.27 dBm</p> <p>Crest 3.43 dB</p> <p>10 % 2.68 dB</p> <p>1 % 3.28 dB</p> <p>.1 % 3.36 dB</p> <p>.01 % 3.44 dB</p> <p>Date: 23.JUL.2015 10:34:25</p>   |  |
| Middle Channel                                                                                                                                                                                                                                                                                                                                               |  | Middle Channel                                                                                                                                                                                                                                                                                                                                                |  |
|  <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 25.05 dBm</p> <p>Peak 25.38 dBm</p> <p>Crest 0.33 dB</p> <p>10 % 0.20 dB</p> <p>1 % 0.24 dB</p> <p>.1 % 0.28 dB</p> <p>.01 % 0.28 dB</p> <p>Date: 23.JUL.2015 10:24:28</p>  |  |  <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 24.69 dBm</p> <p>Peak 27.85 dBm</p> <p>Crest 3.15 dB</p> <p>10 % 2.60 dB</p> <p>1 % 3.00 dB</p> <p>.1 % 3.08 dB</p> <p>.01 % 3.16 dB</p> <p>Date: 23.JUL.2015 10:34:37</p>  |  |
| Highest Channel                                                                                                                                                                                                                                                                                                                                              |  | Highest Channel                                                                                                                                                                                                                                                                                                                                               |  |
|  <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 25.05 dBm</p> <p>Peak 25.31 dBm</p> <p>Crest 0.25 dB</p> <p>10 % 0.20 dB</p> <p>1 % 0.24 dB</p> <p>.1 % 0.28 dB</p> <p>.01 % 0.28 dB</p> <p>Date: 23.JUL.2015 10:24:41</p> |  |  <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 24.73 dBm</p> <p>Peak 27.99 dBm</p> <p>Crest 3.26 dB</p> <p>10 % 2.60 dB</p> <p>1 % 3.12 dB</p> <p>.1 % 3.20 dB</p> <p>.01 % 3.28 dB</p> <p>Date: 23.JUL.2015 10:34:52</p> |  |

**26dB Bandwidth**

| Mode       | GSM850       |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.32         | 0.31         |
| Middle CH  | 0.31         | 0.29         |
| Highest CH | 0.32         | 0.30         |

| Mode       | GSM1900      |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.31         | 0.30         |
| Middle CH  | 0.31         | 0.31         |
| Highest CH | 0.31         | 0.31         |

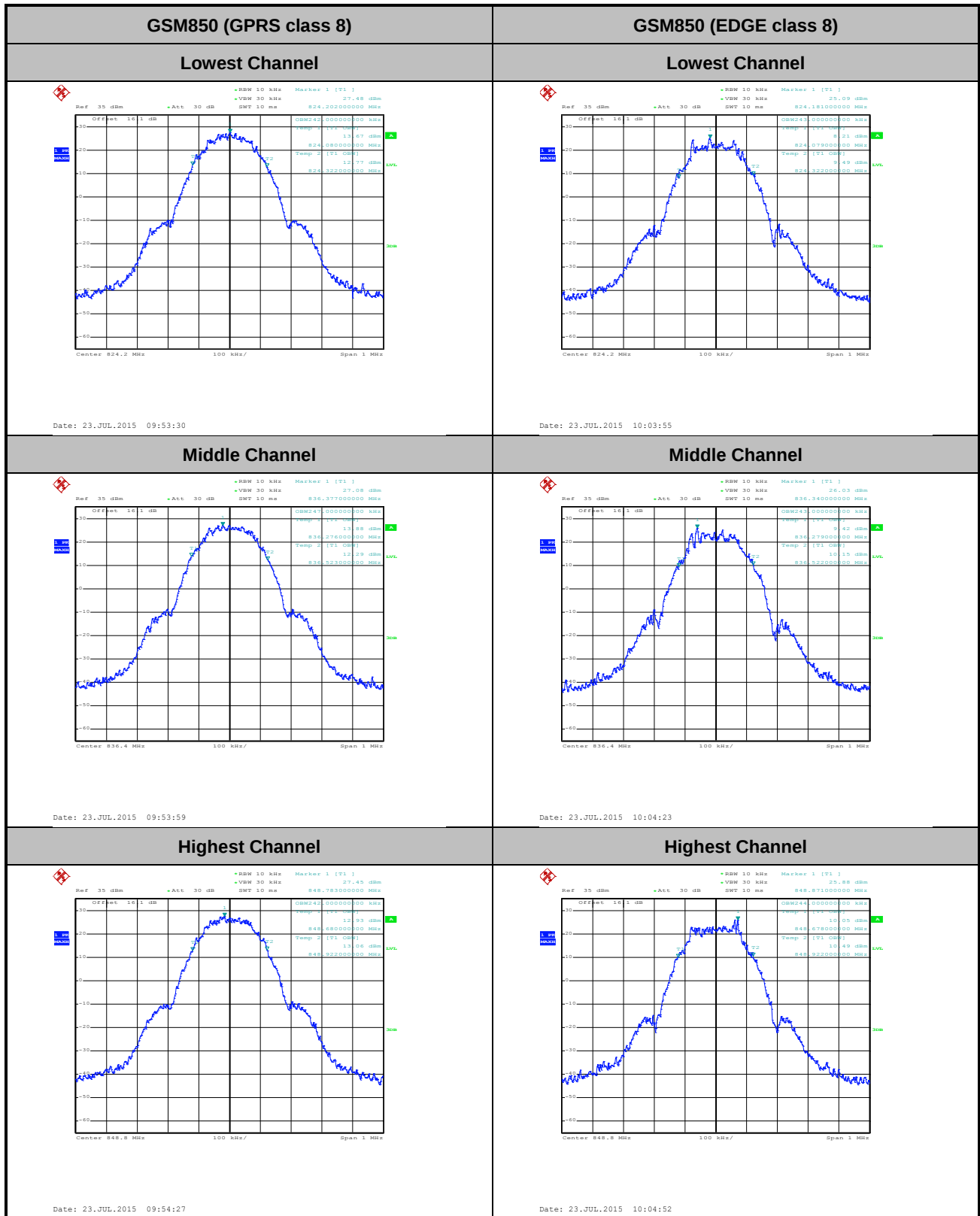


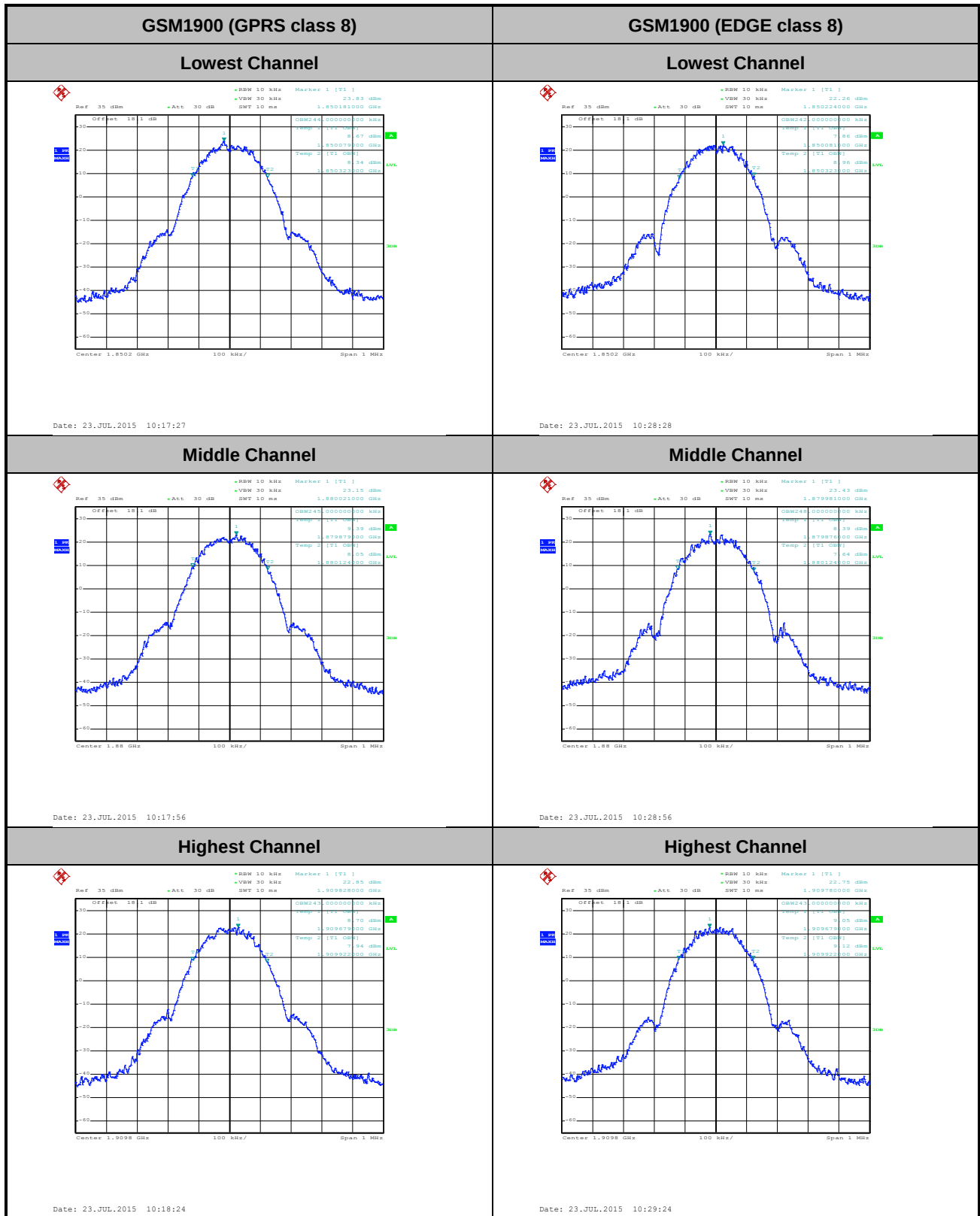


**Occupied Bandwidth**

| Mode       | GSM850       |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.24         | 0.24         |
| Middle CH  | 0.25         | 0.24         |
| Highest CH | 0.24         | 0.24         |

| Mode       | GSM1900      |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.24         | 0.24         |
| Middle CH  | 0.25         | 0.25         |
| Highest CH | 0.24         | 0.24         |



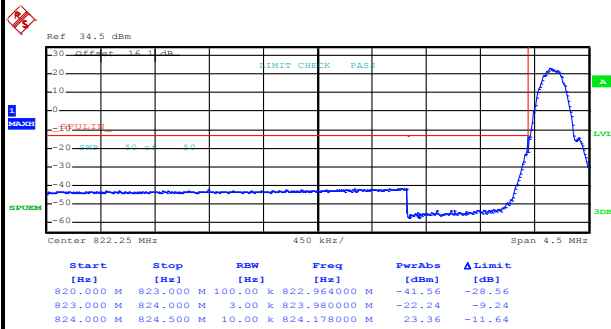




## Conducted Band Edge

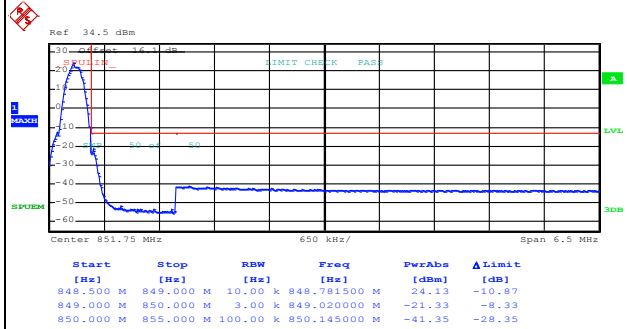
## GSM850 (GPRS class 8)

## Lowest Band Edge



Date: 23.JUL.2015 09:56:12

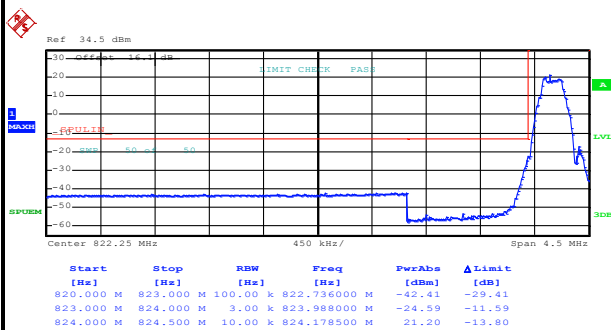
## Highest Band Edge



Date: 23.JUL.2015 09:57:39

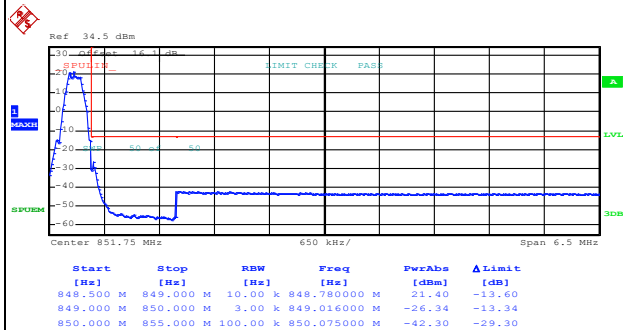
## GSM850 (EDGE class 8)

## Lowest Band Edge



Date: 23.JUL.2015 10:06:33

## Highest Band Edge

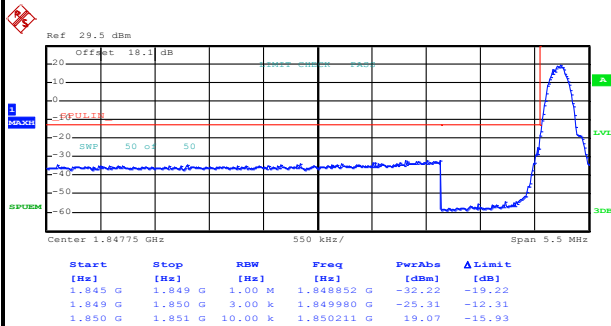


Date: 23.JUL.2015 10:08:00



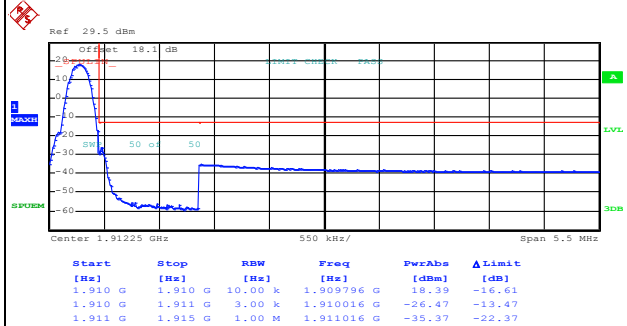
## GSM1900 (GPRS class 8)

## Lowest Band Edge



Date: 23.JUL.2015 10:20:30

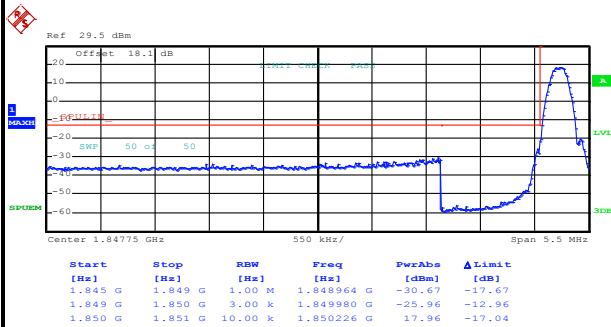
## Highest Band Edge



Date: 23.JUL.2015 10:21:57

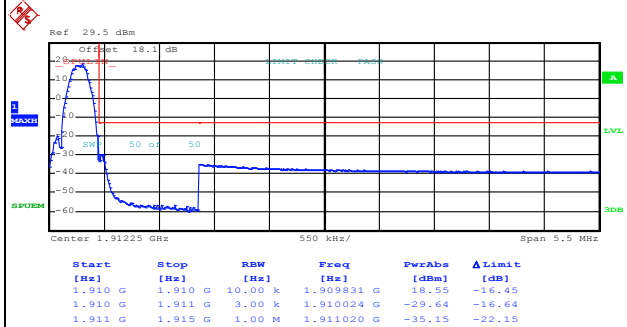
## GSM1900 (EDGE class 8)

## Lowest Band Edge



Date: 23.JUL.2015 10:31:01

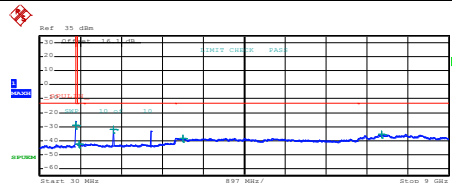
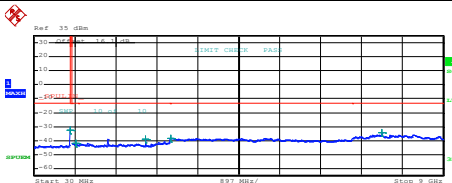
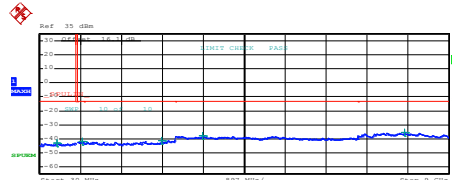
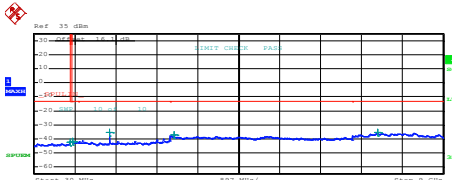
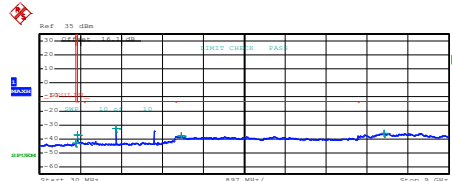
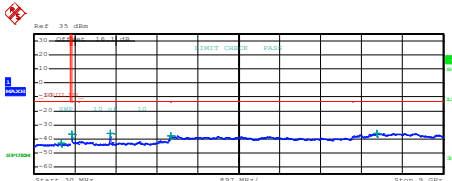
## Highest Band Edge

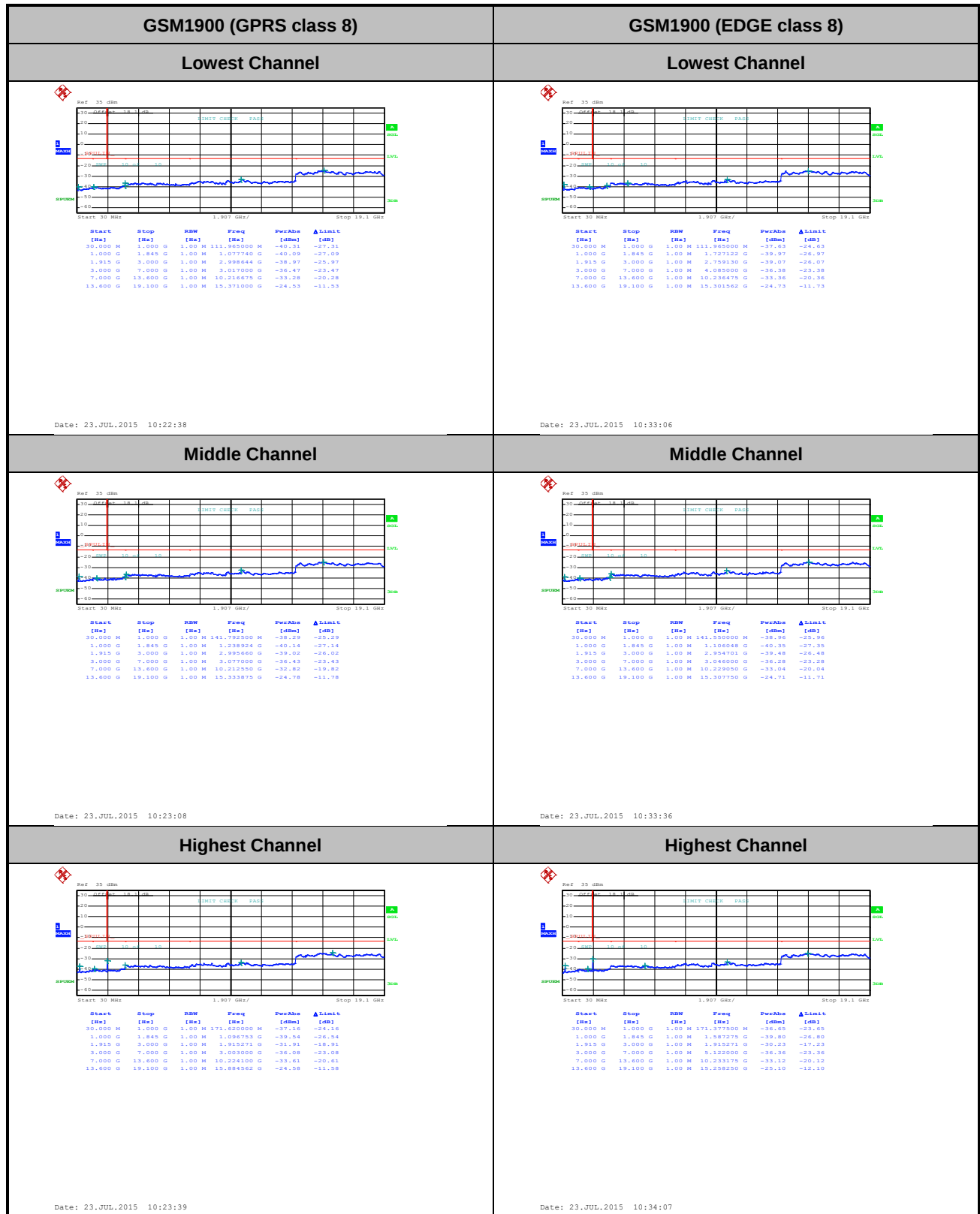


Date: 23.JUL.2015 10:32:28



## Conducted Spurious Emission

| GSM850 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             | GSM850 (EDGE class 8) |            |             |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------|------------|-------------|-------------|-------------|--------|---------|------|------------|--------|--------|---------|-------|------|------------|--------|--------|-------|-------|------|----------|--------|--------|-------|-------|------|----------|--------|--------|-------|-------|------|----------|--------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|----------|------------|-------------|-------------|--------|---------|------|------------|--------|--------|---------|-------|------|------------|--------|--------|-------|-------|------|----------|--------|--------|-------|-------|------|----------|--------|--------|-------|-------|------|----------|--------|--------|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             | Lowest Channel        |            |             |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
|  <table><tr><th>Start [MHz]</th><th>Stop [MHz]</th><th>RBW [Hz]</th><th>Freq [MHz]</th><th>Power [dBm]</th><th>Limit [dBm]</th></tr><tr><td>30.000</td><td>820.000</td><td>1.00</td><td>813.802500</td><td>-29.22</td><td>-16.22</td></tr><tr><td>850.000</td><td>1.000</td><td>1.00</td><td>888.603752</td><td>-42.28</td><td>-29.28</td></tr><tr><td>1.000</td><td>3.000</td><td>1.00</td><td>1.648500</td><td>-31.80</td><td>-18.80</td></tr><tr><td>3.000</td><td>7.000</td><td>1.00</td><td>3.169000</td><td>-38.37</td><td>-25.37</td></tr><tr><td>7.000</td><td>9.000</td><td>1.00</td><td>7.529500</td><td>-35.18</td><td>-22.18</td></tr></table> <p>Date: 23.JUL.2015 09:58:15</p>   | Start [MHz] | Stop [MHz]            | RBW [Hz]   | Freq [MHz]  | Power [dBm] | Limit [dBm] | 30.000 | 820.000 | 1.00 | 813.802500 | -29.22 | -16.22 | 850.000 | 1.000 | 1.00 | 888.603752 | -42.28 | -29.28 | 1.000 | 3.000 | 1.00 | 1.648500 | -31.80 | -18.80 | 3.000 | 7.000 | 1.00 | 3.169000 | -38.37 | -25.37 | 7.000 | 9.000 | 1.00 | 7.529500 | -35.18 | -22.18 |  <table><tr><th>Start [MHz]</th><th>Stop [MHz]</th><th>RBW [Hz]</th><th>Freq [MHz]</th><th>Power [dBm]</th><th>Limit [dBm]</th></tr><tr><td>30.000</td><td>820.000</td><td>1.00</td><td>813.802500</td><td>-32.77</td><td>-19.77</td></tr><tr><td>850.000</td><td>1.000</td><td>1.00</td><td>951.098757</td><td>-41.70</td><td>-28.70</td></tr><tr><td>1.000</td><td>3.000</td><td>1.00</td><td>2.473000</td><td>-38.84</td><td>-25.84</td></tr><tr><td>3.000</td><td>7.000</td><td>1.00</td><td>3.020000</td><td>-38.26</td><td>-25.26</td></tr><tr><td>7.000</td><td>9.000</td><td>1.00</td><td>7.652000</td><td>-34.43</td><td>-21.43</td></tr></table> <p>Date: 23.JUL.2015 10:08:49</p>   | Start [MHz] | Stop [MHz] | RBW [Hz] | Freq [MHz] | Power [dBm] | Limit [dBm] | 30.000 | 820.000 | 1.00 | 813.802500 | -32.77 | -19.77 | 850.000 | 1.000 | 1.00 | 951.098757 | -41.70 | -28.70 | 1.000 | 3.000 | 1.00 | 2.473000 | -38.84 | -25.84 | 3.000 | 7.000 | 1.00 | 3.020000 | -38.26 | -25.26 | 7.000 | 9.000 | 1.00 | 7.652000 | -34.43 | -21.43 |
| Start [MHz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stop [MHz]  | RBW [Hz]              | Freq [MHz] | Power [dBm] | Limit [dBm] |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 30.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 820.000     | 1.00                  | 813.802500 | -29.22      | -16.22      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 850.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.000       | 1.00                  | 888.603752 | -42.28      | -29.28      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.000       | 1.00                  | 1.648500   | -31.80      | -18.80      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 3.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7.000       | 1.00                  | 3.169000   | -38.37      | -25.37      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 7.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9.000       | 1.00                  | 7.529500   | -35.18      | -22.18      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| Start [MHz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stop [MHz]  | RBW [Hz]              | Freq [MHz] | Power [dBm] | Limit [dBm] |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 30.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 820.000     | 1.00                  | 813.802500 | -32.77      | -19.77      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 850.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.000       | 1.00                  | 951.098757 | -41.70      | -28.70      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.000       | 1.00                  | 2.473000   | -38.84      | -25.84      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 3.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7.000       | 1.00                  | 3.020000   | -38.26      | -25.26      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 7.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9.000       | 1.00                  | 7.652000   | -34.43      | -21.43      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             | Middle Channel        |            |             |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
|  <table><tr><th>Start [MHz]</th><th>Stop [MHz]</th><th>RBW [Hz]</th><th>Freq [MHz]</th><th>Power [dBm]</th><th>Limit [dBm]</th></tr><tr><td>30.000</td><td>820.000</td><td>1.00</td><td>406.432500</td><td>-43.04</td><td>-30.04</td></tr><tr><td>850.000</td><td>1.000</td><td>1.00</td><td>968.426258</td><td>-42.07</td><td>-29.07</td></tr><tr><td>1.000</td><td>3.000</td><td>1.00</td><td>2.706000</td><td>-41.50</td><td>-28.50</td></tr><tr><td>3.000</td><td>7.000</td><td>1.00</td><td>3.595000</td><td>-37.99</td><td>-24.99</td></tr><tr><td>7.000</td><td>9.000</td><td>1.00</td><td>8.039500</td><td>-35.36</td><td>-22.36</td></tr></table> <p>Date: 23.JUL.2015 09:58:45</p>  | Start [MHz] | Stop [MHz]            | RBW [Hz]   | Freq [MHz]  | Power [dBm] | Limit [dBm] | 30.000 | 820.000 | 1.00 | 406.432500 | -43.04 | -30.04 | 850.000 | 1.000 | 1.00 | 968.426258 | -42.07 | -29.07 | 1.000 | 3.000 | 1.00 | 2.706000 | -41.50 | -28.50 | 3.000 | 7.000 | 1.00 | 3.595000 | -37.99 | -24.99 | 7.000 | 9.000 | 1.00 | 8.039500 | -35.36 | -22.36 |  <table><tr><th>Start [MHz]</th><th>Stop [MHz]</th><th>RBW [Hz]</th><th>Freq [MHz]</th><th>Power [dBm]</th><th>Limit [dBm]</th></tr><tr><td>30.000</td><td>820.000</td><td>1.00</td><td>817.235000</td><td>-42.53</td><td>-29.53</td></tr><tr><td>850.000</td><td>1.000</td><td>1.00</td><td>881.426252</td><td>-41.92</td><td>-28.92</td></tr><tr><td>1.000</td><td>3.000</td><td>1.00</td><td>1.673000</td><td>-35.57</td><td>-22.57</td></tr><tr><td>3.000</td><td>7.000</td><td>1.00</td><td>3.091000</td><td>-37.51</td><td>-24.51</td></tr><tr><td>7.000</td><td>9.000</td><td>1.00</td><td>7.546500</td><td>-35.23</td><td>-22.23</td></tr></table> <p>Date: 23.JUL.2015 10:09:19</p>  | Start [MHz] | Stop [MHz] | RBW [Hz] | Freq [MHz] | Power [dBm] | Limit [dBm] | 30.000 | 820.000 | 1.00 | 817.235000 | -42.53 | -29.53 | 850.000 | 1.000 | 1.00 | 881.426252 | -41.92 | -28.92 | 1.000 | 3.000 | 1.00 | 1.673000 | -35.57 | -22.57 | 3.000 | 7.000 | 1.00 | 3.091000 | -37.51 | -24.51 | 7.000 | 9.000 | 1.00 | 7.546500 | -35.23 | -22.23 |
| Start [MHz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stop [MHz]  | RBW [Hz]              | Freq [MHz] | Power [dBm] | Limit [dBm] |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 30.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 820.000     | 1.00                  | 406.432500 | -43.04      | -30.04      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 850.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.000       | 1.00                  | 968.426258 | -42.07      | -29.07      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.000       | 1.00                  | 2.706000   | -41.50      | -28.50      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 3.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7.000       | 1.00                  | 3.595000   | -37.99      | -24.99      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 7.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9.000       | 1.00                  | 8.039500   | -35.36      | -22.36      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| Start [MHz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stop [MHz]  | RBW [Hz]              | Freq [MHz] | Power [dBm] | Limit [dBm] |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 30.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 820.000     | 1.00                  | 817.235000 | -42.53      | -29.53      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 850.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.000       | 1.00                  | 881.426252 | -41.92      | -28.92      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.000       | 1.00                  | 1.673000   | -35.57      | -22.57      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 3.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7.000       | 1.00                  | 3.091000   | -37.51      | -24.51      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 7.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9.000       | 1.00                  | 7.546500   | -35.23      | -22.23      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | Highest Channel       |            |             |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
|  <table><tr><th>Start [MHz]</th><th>Stop [MHz]</th><th>RBW [Hz]</th><th>Freq [MHz]</th><th>Power [dBm]</th><th>Limit [dBm]</th></tr><tr><td>30.000</td><td>820.000</td><td>1.00</td><td>813.482500</td><td>-43.03</td><td>-30.03</td></tr><tr><td>850.000</td><td>1.000</td><td>1.00</td><td>855.036250</td><td>-37.02</td><td>-24.02</td></tr><tr><td>1.000</td><td>3.000</td><td>1.00</td><td>1.697500</td><td>-32.46</td><td>-19.46</td></tr><tr><td>3.000</td><td>7.000</td><td>1.00</td><td>3.125000</td><td>-37.79</td><td>-24.79</td></tr><tr><td>7.000</td><td>9.000</td><td>1.00</td><td>7.587000</td><td>-35.81</td><td>-22.81</td></tr></table> <p>Date: 23.JUL.2015 09:59:15</p> | Start [MHz] | Stop [MHz]            | RBW [Hz]   | Freq [MHz]  | Power [dBm] | Limit [dBm] | 30.000 | 820.000 | 1.00 | 813.482500 | -43.03 | -30.03 | 850.000 | 1.000 | 1.00 | 855.036250 | -37.02 | -24.02 | 1.000 | 3.000 | 1.00 | 1.697500 | -32.46 | -19.46 | 3.000 | 7.000 | 1.00 | 3.125000 | -37.79 | -24.79 | 7.000 | 9.000 | 1.00 | 7.587000 | -35.81 | -22.81 |  <table><tr><th>Start [MHz]</th><th>Stop [MHz]</th><th>RBW [Hz]</th><th>Freq [MHz]</th><th>Power [dBm]</th><th>Limit [dBm]</th></tr><tr><td>30.000</td><td>820.000</td><td>1.00</td><td>816.189500</td><td>-43.15</td><td>-30.15</td></tr><tr><td>850.000</td><td>1.000</td><td>1.00</td><td>855.036250</td><td>-36.60</td><td>-23.60</td></tr><tr><td>1.000</td><td>3.000</td><td>1.00</td><td>1.697500</td><td>-36.09</td><td>-23.09</td></tr><tr><td>3.000</td><td>7.000</td><td>1.00</td><td>3.029000</td><td>-38.00</td><td>-25.00</td></tr><tr><td>7.000</td><td>9.000</td><td>1.00</td><td>7.554500</td><td>-35.80</td><td>-22.80</td></tr></table> <p>Date: 23.JUL.2015 10:09:49</p> | Start [MHz] | Stop [MHz] | RBW [Hz] | Freq [MHz] | Power [dBm] | Limit [dBm] | 30.000 | 820.000 | 1.00 | 816.189500 | -43.15 | -30.15 | 850.000 | 1.000 | 1.00 | 855.036250 | -36.60 | -23.60 | 1.000 | 3.000 | 1.00 | 1.697500 | -36.09 | -23.09 | 3.000 | 7.000 | 1.00 | 3.029000 | -38.00 | -25.00 | 7.000 | 9.000 | 1.00 | 7.554500 | -35.80 | -22.80 |
| Start [MHz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stop [MHz]  | RBW [Hz]              | Freq [MHz] | Power [dBm] | Limit [dBm] |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 30.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 820.000     | 1.00                  | 813.482500 | -43.03      | -30.03      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 850.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.000       | 1.00                  | 855.036250 | -37.02      | -24.02      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.000       | 1.00                  | 1.697500   | -32.46      | -19.46      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 3.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7.000       | 1.00                  | 3.125000   | -37.79      | -24.79      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 7.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9.000       | 1.00                  | 7.587000   | -35.81      | -22.81      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| Start [MHz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Stop [MHz]  | RBW [Hz]              | Freq [MHz] | Power [dBm] | Limit [dBm] |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 30.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 820.000     | 1.00                  | 816.189500 | -43.15      | -30.15      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 850.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1.000       | 1.00                  | 855.036250 | -36.60      | -23.60      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.000       | 1.00                  | 1.697500   | -36.09      | -23.09      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 3.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7.000       | 1.00                  | 3.029000   | -38.00      | -25.00      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |
| 7.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 9.000       | 1.00                  | 7.554500   | -35.80      | -22.80      |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |          |            |             |             |        |         |      |            |        |        |         |       |      |            |        |        |       |       |      |          |        |        |       |       |      |          |        |        |       |       |      |          |        |        |



**Frequency Stability**

| Test Conditions  | Middle Channel    | GSM850<br>(GPRS class 8) | GSM850<br>(EDGE class 8) | Limit<br>2.5ppm |
|------------------|-------------------|--------------------------|--------------------------|-----------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)          |                          | Result          |
| 50               | Normal Voltage    | 0.0012                   | 0.0012                   | PASS            |
| 40               | Normal Voltage    | 0.0036                   | 0.0036                   |                 |
| 30               | Normal Voltage    | 0.0024                   | 0.0012                   |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000                   | 0.0000                   |                 |
| 10               | Normal Voltage    | 0.0084                   | 0.0036                   |                 |
| 0                | Normal Voltage    | 0.0060                   | 0.0024                   |                 |
| -10              | Normal Voltage    | 0.0024                   | 0.0048                   |                 |
| -20              | Normal Voltage    | 0.0084                   | 0.0036                   |                 |
| -30              | Normal Voltage    | 0.0060                   | 0.0012                   |                 |
| 20               | Maximum Voltage   | 0.0096                   | 0.0024                   |                 |
| 20               | Normal Voltage    | 0.0048                   | 0.0060                   |                 |
| 20               | Battery End Point | 0.0012                   | 0.0048                   |                 |

| Test Conditions  | Middle Channel    | GSM1900<br>(GPRS class 8) | GSM1900<br>(EDGE class 8) | Limit<br>Note 2. |
|------------------|-------------------|---------------------------|---------------------------|------------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)           |                           | Result           |
| 50               | Normal Voltage    | 0.0064                    | 0.0112                    | PASS             |
| 40               | Normal Voltage    | 0.0080                    | 0.0138                    |                  |
| 30               | Normal Voltage    | 0.0048                    | 0.0144                    |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                    | 0.0000                    |                  |
| 10               | Normal Voltage    | 0.0016                    | 0.0101                    |                  |
| 0                | Normal Voltage    | 0.0005                    | 0.0064                    |                  |
| -10              | Normal Voltage    | 0.0032                    | 0.0053                    |                  |
| -20              | Normal Voltage    | 0.0011                    | 0.0090                    |                  |
| -30              | Normal Voltage    | 0.0005                    | 0.0074                    |                  |
| 20               | Maximum Voltage   | 0.0021                    | 0.0048                    |                  |
| 20               | Normal Voltage    | 0.0000                    | 0.0069                    |                  |
| 20               | Battery End Point | 0.0011                    | 0.0096                    |                  |

**Note:**

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block.

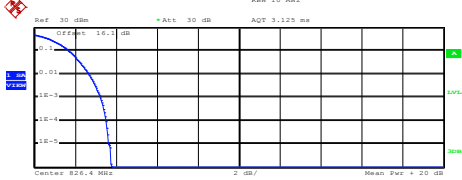
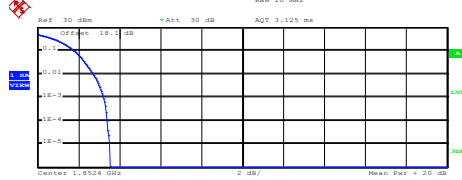
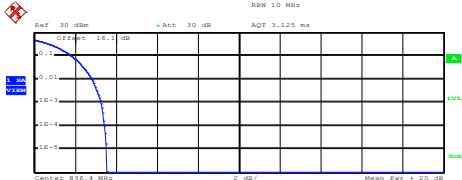
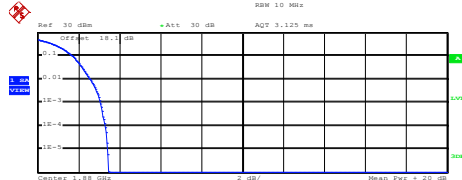
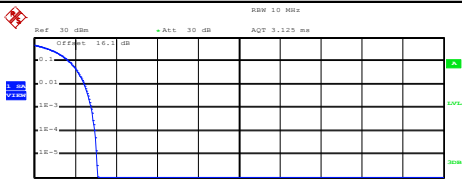
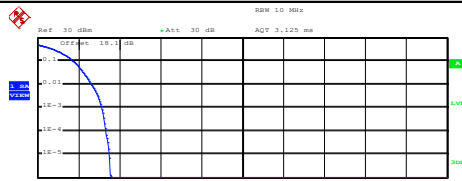


## A2. WCDMA

### Peak-to-Average Ratio

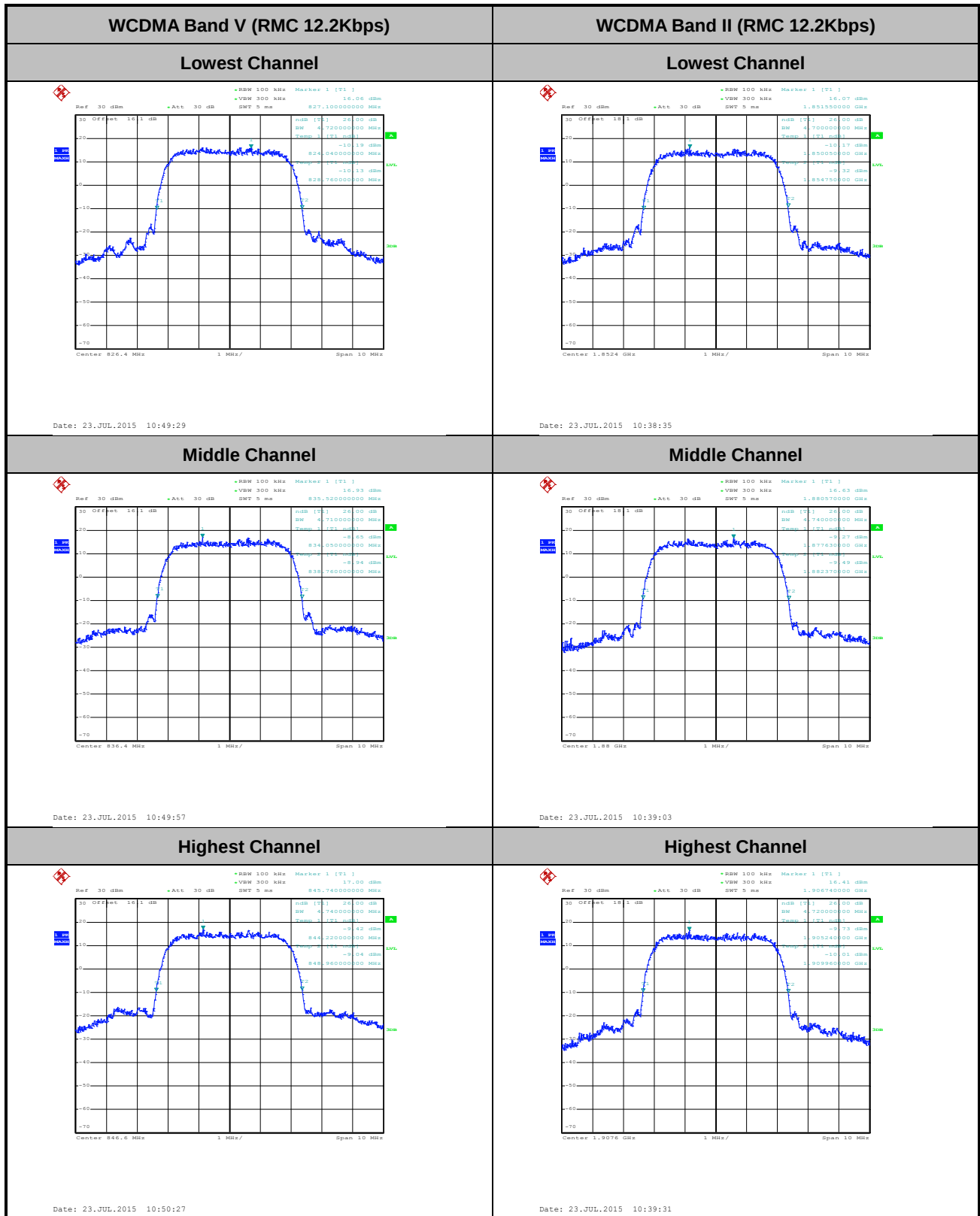
| Mode       | WCDMA Band V | WCDMA Band II | Limit: 13dB |
|------------|--------------|---------------|-------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | Result      |
| Lowest CH  | 3.24         | 3.24          | PASS        |
| Middle CH  | 3.28         | 3.08          |             |
| Highest CH | 2.80         | 3.16          |             |



| WCDMA Band V (RMC 12.2Kbps)                                                                                                                                                                                                                                                                                                                                                                                                                          | WCDMA Band II (RMC 12.2Kbps)                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                       | Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|  <p>Ref: 30 dBm    Att: 30 dB    AQT: 3.125 ms<br/>Center: 826.4 MHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)<br/>Trace 1<br/>Mean: 20.92 dBm<br/>Peak: 24.68 dBm<br/>Crest: 3.76 dB</p> <p>10 %: 1.72 dB<br/>1 %: 2.68 dB<br/>.1 %: 3.24 dB<br/>.01 %: 3.52 dB</p> <p>Date: 23.JUL.2015 10:58:54</p>   |  <p>Ref: 30 dBm    Att: 30 dB    AQT: 3.125 ms<br/>Center: 1.8524 GHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)<br/>Trace 1<br/>Mean: 20.14 dBm<br/>Peak: 23.69 dBm<br/>Crest: 3.55 dB</p> <p>10 %: 1.80 dB<br/>1 %: 2.72 dB<br/>.1 %: 3.24 dB<br/>.01 %: 3.40 dB</p> <p>Date: 23.JUL.2015 10:46:18</p>   |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                       | Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|  <p>Ref: 30 dBm    Att: 30 dB    AQT: 3.125 ms<br/>Center: 830.4 MHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)<br/>Trace 1<br/>Mean: 20.86 dBm<br/>Peak: 24.40 dBm<br/>Crest: 3.53 dB</p> <p>10 %: 1.84 dB<br/>1 %: 2.84 dB<br/>.1 %: 3.28 dB<br/>.01 %: 3.44 dB</p> <p>Date: 23.JUL.2015 10:59:04</p>  |  <p>Ref: 30 dBm    Att: 30 dB    AQT: 3.125 ms<br/>Center: 1.85 GHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)<br/>Trace 1<br/>Mean: 20.78 dBm<br/>Peak: 24.26 dBm<br/>Crest: 3.48 dB</p> <p>10 %: 1.72 dB<br/>1 %: 2.56 dB<br/>.1 %: 3.08 dB<br/>.01 %: 3.32 dB</p> <p>Date: 23.JUL.2015 10:46:26</p>    |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                      | Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|  <p>Ref: 30 dBm    Att: 30 dB    AQT: 3.125 ms<br/>Center: 846.6 MHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)<br/>Trace 1<br/>Mean: 20.89 dBm<br/>Peak: 23.97 dBm<br/>Crest: 3.09 dB</p> <p>10 %: 1.68 dB<br/>1 %: 2.44 dB<br/>.1 %: 2.80 dB<br/>.01 %: 2.96 dB</p> <p>Date: 23.JUL.2015 10:59:14</p> |  <p>Ref: 30 dBm    Att: 30 dB    AQT: 3.125 ms<br/>Center: 1.9076 GHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)<br/>Trace 1<br/>Mean: 20.34 dBm<br/>Peak: 23.90 dBm<br/>Crest: 3.56 dB</p> <p>10 %: 1.76 dB<br/>1 %: 2.64 dB<br/>.1 %: 3.16 dB<br/>.01 %: 3.32 dB</p> <p>Date: 23.JUL.2015 10:46:36</p> |

**26dB Bandwidth**

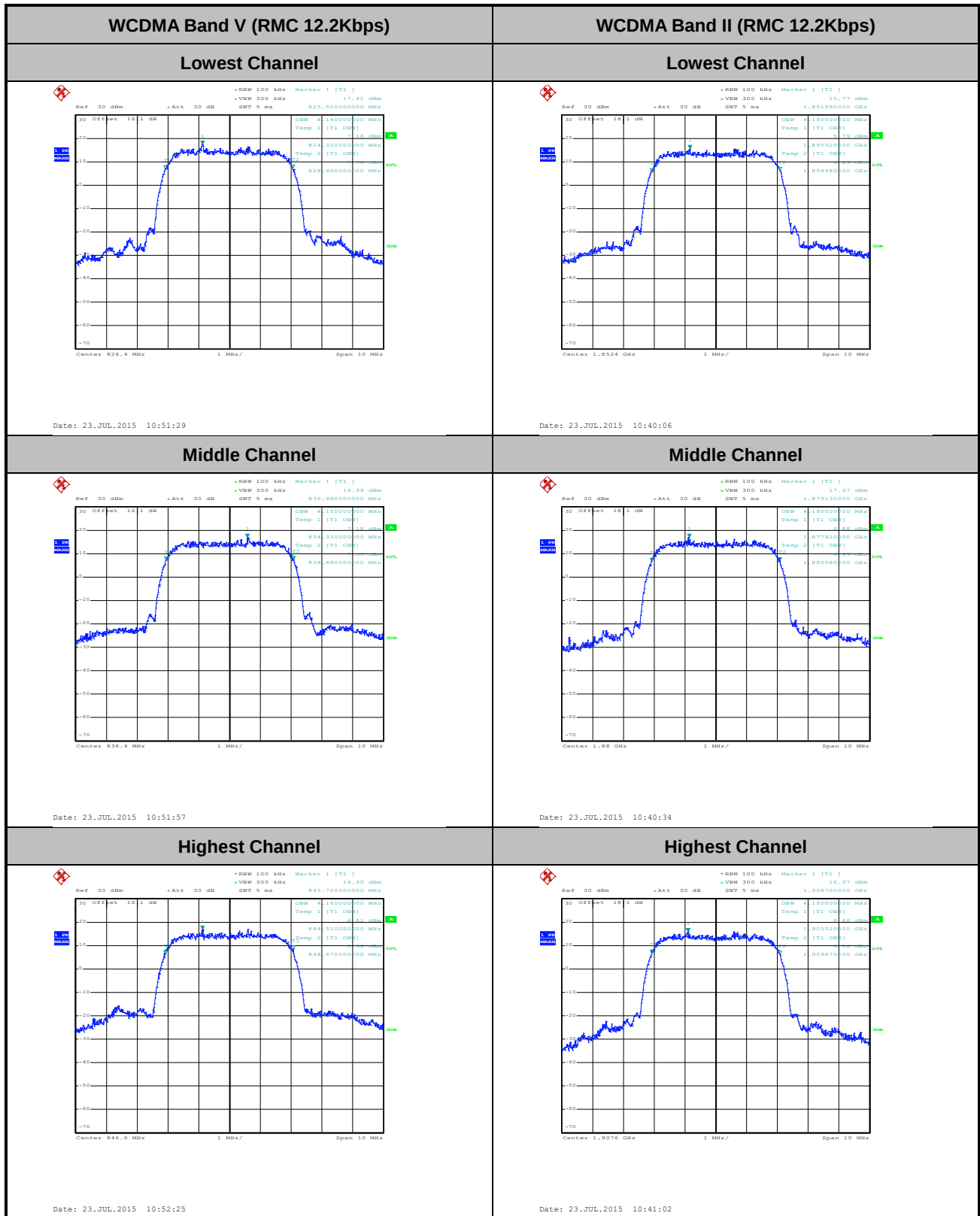
| Mode       | WCDMA Band V | WCDMA Band II |
|------------|--------------|---------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  |
| Lowest CH  | 4.72         | 4.70          |
| Middle CH  | 4.71         | 4.74          |
| Highest CH | 4.74         | 4.72          |

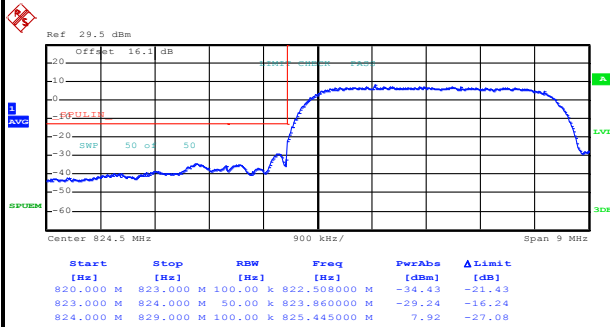




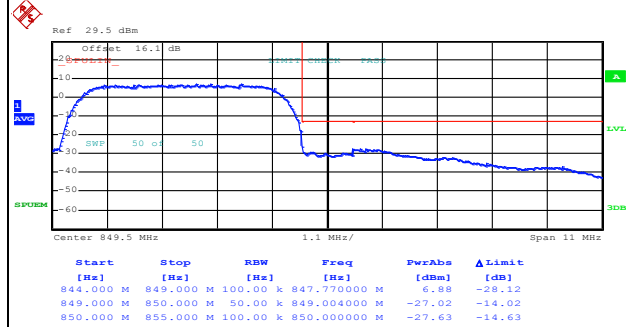
Occupied Bandwidth

| Mode       | WCDMA Band V | WCDMA Band II |
|------------|--------------|---------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  |
| Lowest CH  | 4.14         | 4.16          |
| Middle CH  | 4.15         | 4.16          |
| Highest CH | 4.16         | 4.15          |

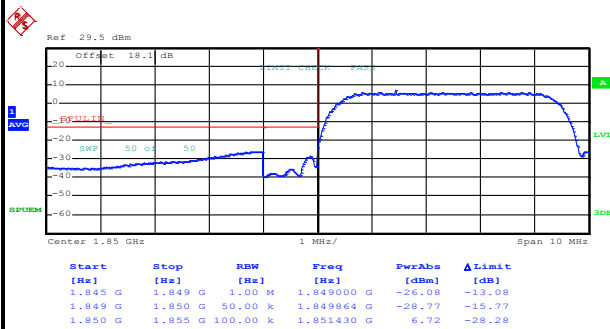


**Conducted Band Edge****WCDMA Band V (RMC 12.2Kbps)****Lowest Band Edge**

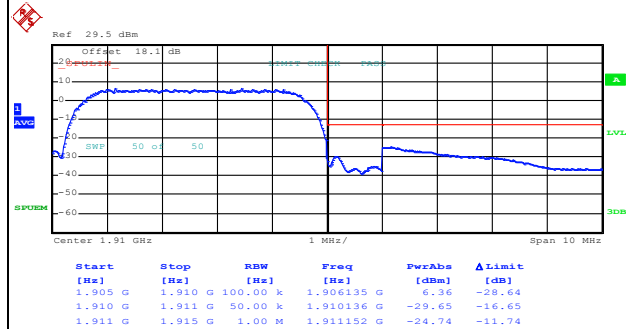
Date: 23.JUL.2015 10:54:28

**Highest Band Edge**

Date: 23.JUL.2015 10:55:55

**WCDMA Band II (RMC 12.2Kbps)****Lowest Band Edge**

Date: 23.JUL.2015 10:42:33

**Highest Band Edge**

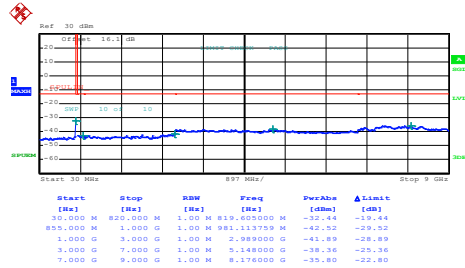
Date: 23.JUL.2015 10:44:00



## Conducted Spurious Emission

## WCDMA Band V (RMC 12.2Kbps)

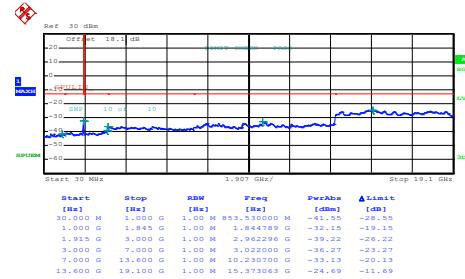
## Lowest Channel



Date: 23.JUL.2015 10:56:59

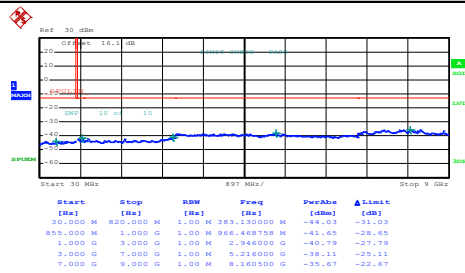
## WCDMA Band II (RMC 12.2Kbps)

## Lowest Channel



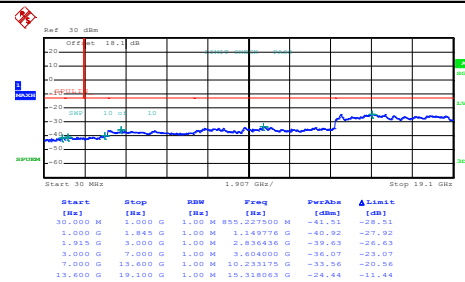
Date: 23.JUL.2015 10:44:48

## Middle Channel



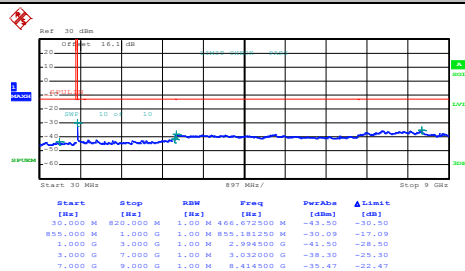
Date: 23.JUL.2015 10:57:29

## Middle Channel



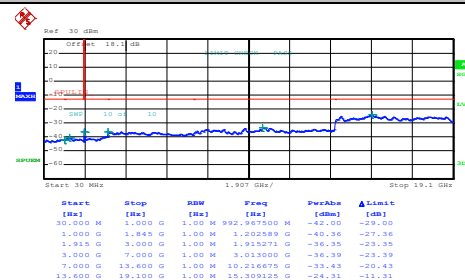
Date: 23.JUL.2015 10:45:18

## Highest Channel



Date: 23.JUL.2015 10:57:58

## Highest Channel



Date: 23.JUL.2015 10:45:48

**Frequency Stability**

| Test Conditions  | Middle Channel    | WCDMA Band V<br>(RMC 12.2Kbps) | Limit<br>2.5ppm |
|------------------|-------------------|--------------------------------|-----------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)                | Result          |
| 50               | Normal Voltage    | 0.0012                         | PASS            |
| 40               | Normal Voltage    | 0.0036                         |                 |
| 30               | Normal Voltage    | 0.0096                         |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000                         |                 |
| 10               | Normal Voltage    | 0.0084                         |                 |
| 0                | Normal Voltage    | 0.0108                         |                 |
| -10              | Normal Voltage    | 0.0012                         |                 |
| -20              | Normal Voltage    | 0.0048                         |                 |
| -30              | Normal Voltage    | 0.0024                         |                 |
| 20               | Maximum Voltage   | 0.0120                         |                 |
| 20               | Normal Voltage    | 0.0096                         |                 |
| 20               | Battery End Point | 0.0072                         |                 |

| Test Conditions  | Middle Channel    | WCDMA Band II<br>(RMC 12.2Kbps) | Limit<br>Note 2. |
|------------------|-------------------|---------------------------------|------------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)                 | Result           |
| 50               | Normal Voltage    | 0.0027                          | PASS             |
| 40               | Normal Voltage    | 0.0037                          |                  |
| 30               | Normal Voltage    | 0.0005                          |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |                  |
| 10               | Normal Voltage    | 0.0064                          |                  |
| 0                | Normal Voltage    | 0.0085                          |                  |
| -10              | Normal Voltage    | 0.0074                          |                  |
| -20              | Normal Voltage    | 0.0059                          |                  |
| -30              | Normal Voltage    | 0.0080                          |                  |
| 20               | Maximum Voltage   | 0.0032                          |                  |
| 20               | Normal Voltage    | 0.0069                          |                  |
| 20               | Battery End Point | 0.0021                          |                  |

**Note:**

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block.



## Appendix B. Test Results of Radiated Test

### ERP/EIRP

| Channel | Mode                         | Horizontal |        | Vertical |        |
|---------|------------------------------|------------|--------|----------|--------|
|         |                              | ERP(dBm)   | ERP(W) | ERP(dBm) | ERP(W) |
| Lowest  | GSM850<br>GPRS class 8       | 26.91      | 0.4909 | 17.67    | 0.0585 |
| Middle  |                              | 26.38      | 0.4345 | 17.72    | 0.0592 |
| Highest |                              | 25.68      | 0.3698 | 17.27    | 0.0533 |
| Lowest  | GSM850<br>EDGE class 8       | 22.23      | 0.1671 | 13.37    | 0.0217 |
| Middle  |                              | 21.98      | 0.1578 | 12.86    | 0.0193 |
| Highest |                              | 22.03      | 0.1596 | 12.76    | 0.0189 |
| Lowest  | WCDMA Band V<br>RMC 12.2Kbps | 19.06      | 0.0805 | 9.96     | 0.0099 |
| Middle  |                              | 19.16      | 0.0824 | 10.47    | 0.0111 |
| Highest |                              | 18.99      | 0.0793 | 10.58    | 0.0114 |
| Limit   | ERP < 7W                     | Result     |        | PASS     |        |

| Channel | Mode                          | Horizontal |         | Vertical  |         |
|---------|-------------------------------|------------|---------|-----------|---------|
|         |                               | EIRP(dBm)  | EIRP(W) | EIRP(dBm) | EIRP(W) |
| Lowest  | GSM1900<br>GPRS class 8       | 25.10      | 0.3236  | 24.04     | 0.2535  |
| Middle  |                               | 24.87      | 0.3069  | 24.59     | 0.2877  |
| Highest |                               | 25.76      | 0.3767  | 25.00     | 0.3162  |
| Lowest  | GSM1900<br>EDGE class 8       | 22.58      | 0.1811  | 21.96     | 0.1570  |
| Middle  |                               | 22.45      | 0.1758  | 21.93     | 0.1560  |
| Highest |                               | 23.20      | 0.2089  | 22.81     | 0.1910  |
| Lowest  | WCDMA Band II<br>RMC 12.2Kbps | 17.38      | 0.0547  | 16.46     | 0.0443  |
| Middle  |                               | 17.59      | 0.0574  | 17.31     | 0.0538  |
| Highest |                               | 18.56      | 0.0718  | 17.86     | 0.0611  |
| Limit   | EIRP < 2W                     | 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                 | -61.16         | -13              | -48.16                  | -70.58                  | -62.92                   | 0.98                       | 4.89                        | H                     |
|                       | 2472                 | -55.37         | -13              | -42.37                  | -70.2                   | -57.25                   | 1.28                       | 5.32                        | H                     |
|                       | 3296                 | -59.40         | -13              | -46.40                  | -75.94                  | -62.81                   | 1.54                       | 7.10                        | H                     |
|                       | 1648                 | -61.30         | -13              | -48.30                  | -68.71                  | -63.06                   | 0.98                       | 4.89                        | V                     |
|                       | 2472                 | -53.50         | -13              | -40.50                  | -68.84                  | -55.38                   | 1.28                       | 5.32                        | V                     |
|                       | 3296                 | -60.48         | -13              | -47.48                  | -76.29                  | -63.89                   | 1.54                       | 7.10                        | V                     |
| Middle                | 1672                 | -60.33         | -13              | -47.33                  | -69.46                  | -62.01                   | 0.99                       | 4.82                        | H                     |
|                       | 2512                 | -54.02         | -13              | -41.02                  | -67.21                  | -55.99                   | 1.29                       | 5.41                        | H                     |
|                       | 3344                 | -59.63         | -13              | -46.63                  | -75.73                  | -63.24                   | 1.56                       | 7.31                        | H                     |
|                       | 1672                 | -59.87         | -13              | -46.87                  | -66.87                  | -61.55                   | 0.99                       | 4.82                        | V                     |
|                       | 2512                 | -49.72         | -13              | -36.72                  | -64.84                  | -51.69                   | 1.29                       | 5.41                        | V                     |
|                       | 3344                 | -60.20         | -13              | -47.20                  | -75.73                  | -63.81                   | 1.56                       | 7.31                        | V                     |
| Highest               | 1696                 | -63.08         | -13              | -50.08                  | -72.55                  | -64.68                   | 1.00                       | 4.75                        | H                     |
|                       | 2544                 | -59.17         | -13              | -46.17                  | -72.8                   | -61.15                   | 1.30                       | 5.44                        | H                     |
|                       | 3392                 | -59.93         | -13              | -46.93                  | -76.14                  | -63.73                   | 1.57                       | 7.52                        | H                     |
|                       | 1696                 | -63.61         | -13              | -50.61                  | -71.3                   | -65.21                   | 1.00                       | 4.75                        | V                     |
|                       | 2544                 | -55.91         | -13              | -42.91                  | -71.23                  | -57.89                   | 1.30                       | 5.44                        | V                     |
|                       | 3392                 | -60.51         | -13              | -47.51                  | -76.23                  | -64.31                   | 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                 | -64.37         | -13              | -51.37                  | -73.85                  | -66.13                   | 0.98                       | 4.89                        | H                     |
|                       | 2472                 | -61.20         | -13              | -48.20                  | -74.14                  | -63.08                   | 1.28                       | 5.32                        | H                     |
|                       | 3296                 | -59.79         | -13              | -46.79                  | -76.2                   | -63.2                    | 1.54                       | 7.10                        | H                     |
|                       | 1648                 | -64.95         | -13              | -51.95                  | -72.39                  | -66.71                   | 0.98                       | 4.89                        | V                     |
|                       | 2472                 | -58.65         | -13              | -45.65                  | -73.63                  | -60.53                   | 1.28                       | 5.32                        | V                     |
|                       | 3296                 | -60.91         | -13              | -47.91                  | -76.23                  | -64.32                   | 1.54                       | 7.10                        | V                     |
| Middle                | 1672                 | -64.67         | -13              | -51.67                  | -73.93                  | -66.35                   | 0.99                       | 4.82                        | H                     |
|                       | 2512                 | -61.72         | -13              | -48.72                  | -74.88                  | -63.69                   | 1.29                       | 5.41                        | H                     |
|                       | 3344                 | -59.80         | -13              | -46.80                  | -76.03                  | -63.41                   | 1.56                       | 7.31                        | H                     |
|                       | 1672                 | -66.72         | -13              | -53.72                  | -73.83                  | -68.4                    | 0.99                       | 4.82                        | V                     |
|                       | 2512                 | -58.87         | -13              | -45.87                  | -73.99                  | -60.84                   | 1.29                       | 5.41                        | V                     |
|                       | 3344                 | -59.85         | -13              | -46.85                  | -76.01                  | -63.46                   | 1.56                       | 7.31                        | V                     |
| Highest               | 1696                 | -64.85         | -13              | -51.85                  | -74.18                  | -66.45                   | 1.00                       | 4.75                        | H                     |
|                       | 2544                 | -61.83         | -13              | -48.83                  | -75.35                  | -63.81                   | 1.30                       | 5.44                        | H                     |
|                       | 3392                 | -59.98         | -13              | -46.98                  | -76.24                  | -63.78                   | 1.57                       | 7.52                        | H                     |
|                       | 1696                 | -65.64         | -13              | -52.64                  | -73.26                  | -67.24                   | 1.00                       | 4.75                        | V                     |
|                       | 2544                 | -61.66         | -13              | -48.66                  | -75                     | -63.64                   | 1.30                       | 5.44                        | V                     |
|                       | 3392                 | -61.58         | -13              | -48.58                  | -76.09                  | -65.38                   | 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                 | 3700                 | -55.58          | -13              | -42.58                  | -74.2                   | -62.15                   | 1.67                       | 8.24                        | H                     |
|                        | 5548                 | -53.01          | -13              | -40.01                  | -76.66                  | -60.08                   | 2.65                       | 9.72                        | H                     |
|                        | 7403                 | -47.67          | -13              | -34.67                  | -76.39                  | -56.82                   | 2.46                       | 11.61                       | H                     |
|                        | 3700                 | -55.67          | -13              | -42.67                  | -74.09                  | -62.24                   | 1.67                       | 8.24                        | V                     |
|                        | 5548                 | -54.34          | -13              | -41.34                  | -76.66                  | -61.41                   | 2.65                       | 9.72                        | V                     |
|                        | 7403                 | -48.28          | -13              | -35.28                  | -76.36                  | -57.43                   | 2.46                       | 11.61                       | V                     |
| Middle                 | 3763                 | -54.91          | -13              | -41.91                  | -74.22                  | -61.54                   | 1.69                       | 8.32                        | H                     |
|                        | 5639                 | -51.63          | -13              | -38.63                  | -75.39                  | -58.68                   | 2.71                       | 9.76                        | H                     |
|                        | 7522                 | -47.87          | -13              | -34.87                  | -76.39                  | -57.26                   | 2.42                       | 11.81                       | H                     |
|                        | 3763                 | -55.61          | -13              | -42.61                  | -74.12                  | -62.24                   | 1.69                       | 8.32                        | V                     |
|                        | 5639                 | -53.00          | -13              | -40.00                  | -75.18                  | -60.05                   | 2.71                       | 9.76                        | V                     |
|                        | 7522                 | -48.49          | -13              | -35.49                  | -76.58                  | -57.88                   | 2.42                       | 11.81                       | V                     |
| Highest                | 3819                 | -54.57          | -13              | -41.57                  | -74.03                  | -61.25                   | 1.70                       | 8.38                        | H                     |
|                        | 5730                 | -51.78          | -13              | -38.78                  | -75.74                  | -58.81                   | 2.76                       | 9.79                        | H                     |
|                        | 7641                 | -47.91          | -13              | -34.91                  | -76.43                  | -57.41                   | 2.38                       | 11.88                       | H                     |
|                        | 3819                 | -55.54          | -13              | -42.54                  | -74.16                  | -62.22                   | 1.70                       | 8.38                        | V                     |
|                        | 5730                 | -52.23          | -13              | -39.23                  | -75.3                   | -59.26                   | 2.76                       | 9.79                        | V                     |
|                        | 7641                 | -48.18          | -13              | -35.18                  | -76.12                  | -57.68                   | 2.38                       | 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                 | 3700                 | -55.80          | -13              | -42.80                  | -74.26                  | -62.37                   | 1.67                       | 8.24                        | H                     |
|                        | 5548                 | -52.64          | -13              | -39.64                  | -76.43                  | -59.71                   | 2.65                       | 9.72                        | H                     |
|                        | 7403                 | -47.77          | -13              | -34.77                  | -76.46                  | -56.92                   | 2.46                       | 11.61                       | H                     |
|                        | 3700                 | -55.64          | -13              | -42.64                  | -74.03                  | -62.21                   | 1.67                       | 8.24                        | V                     |
|                        | 5548                 | -54.74          | -13              | -41.74                  | -76.73                  | -61.81                   | 2.65                       | 9.72                        | V                     |
|                        | 7403                 | -48.47          | -13              | -35.47                  | -76.49                  | -57.62                   | 2.46                       | 11.61                       | V                     |
| Middle                 | 3763                 | -54.88          | -13              | -41.88                  | -74.02                  | -61.51                   | 1.69                       | 8.32                        | H                     |
|                        | 5639                 | -52.01          | -13              | -39.01                  | -75.63                  | -59.06                   | 2.71                       | 9.76                        | H                     |
|                        | 7522                 | -47.93          | -13              | -34.93                  | -76.42                  | -57.32                   | 2.42                       | 11.81                       | H                     |
|                        | 3763                 | -55.76          | -13              | -42.76                  | -74.25                  | -62.39                   | 1.69                       | 8.32                        | V                     |
|                        | 5639                 | -53.47          | -13              | -40.47                  | -75.54                  | -60.52                   | 2.71                       | 9.76                        | V                     |
|                        | 7522                 | -48.25          | -13              | -35.25                  | -76.65                  | -57.64                   | 2.42                       | 11.81                       | V                     |
| Highest                | 3819                 | -54.71          | -13              | -41.71                  | -74.18                  | -61.39                   | 1.70                       | 8.38                        | H                     |
|                        | 5730                 | -51.74          | -13              | -38.74                  | -75.66                  | -58.77                   | 2.76                       | 9.79                        | H                     |
|                        | 7641                 | -47.81          | -13              | -34.81                  | -76.25                  | -57.31                   | 2.38                       | 11.88                       | H                     |
|                        | 3819                 | -55.21          | -13              | -42.21                  | -73.81                  | -61.89                   | 1.70                       | 8.38                        | V                     |
|                        | 5730                 | -51.88          | -13              | -38.88                  | -75.64                  | -58.91                   | 2.76                       | 9.79                        | V                     |
|                        | 7641                 | -48.18          | -13              | -35.18                  | -76.03                  | -57.68                   | 2.38                       | 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                 | -64.45         | -13              | -51.45                  | -73.79                  | -66.18                   | 0.98                       | 4.86                        | H                     |
|                             | 2480                 | -61.98         | -13              | -48.98                  | -75.04                  | -63.89                   | 1.28                       | 5.34                        | H                     |
|                             | 3304                 | -59.90         | -13              | -46.90                  | -76.52                  | -63.34                   | 1.54                       | 7.14                        | H                     |
|                             | 1656                 | -66.66         | -13              | -53.66                  | -73.89                  | -68.39                   | 0.98                       | 4.86                        | V                     |
|                             | 2480                 | -60.24         | -13              | -47.24                  | -75.31                  | -62.15                   | 1.28                       | 5.34                        | V                     |
|                             | 3304                 | -61.56         | -13              | -48.56                  | -76.73                  | -65                      | 1.54                       | 7.14                        | V                     |
| Middle                      | 1672                 | -63.88         | -13              | -50.88                  | -73.34                  | -65.56                   | 0.99                       | 4.82                        | H                     |
|                             | 2512                 | -61.94         | -13              | -48.94                  | -75.19                  | -63.91                   | 1.29                       | 5.41                        | H                     |
|                             | 3344                 | -59.54         | -13              | -46.54                  | -76                     | -63.15                   | 1.56                       | 7.31                        | H                     |
|                             | 1672                 | -66.73         | -13              | -53.73                  | -73.86                  | -68.41                   | 0.99                       | 4.82                        | V                     |
|                             | 2512                 | -59.64         | -13              | -46.64                  | -74.9                   | -61.61                   | 1.29                       | 5.41                        | V                     |
|                             | 3344                 | -60.96         | -13              | -47.96                  | -76.13                  | -64.57                   | 1.56                       | 7.31                        | V                     |
| Highest                     | 1696                 | -64.55         | -13              | -51.55                  | -73.84                  | -66.15                   | 1.00                       | 4.75                        | H                     |
|                             | 2536                 | -61.99         | -13              | -48.99                  | -75.4                   | -63.97                   | 1.30                       | 5.43                        | H                     |
|                             | 3384                 | -59.77         | -13              | -46.77                  | -76.1                   | -63.54                   | 1.57                       | 7.49                        | H                     |
|                             | 1696                 | -66.29         | -13              | -53.29                  | -74.05                  | -67.89                   | 1.00                       | 4.75                        | V                     |
|                             | 2536                 | -60.04         | -13              | -47.04                  | -75.24                  | -62.02                   | 1.30                       | 5.43                        | V                     |
|                             | 3384                 | -59.95         | -13              | -46.95                  | -75.57                  | -63.72                   | 1.57                       | 7.49                        | 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                       | 3707                 | -55.88          | -13              | -42.88                  | -74.31                  | -62.46                   | 1.67                       | 8.25                        | H                     |
|                              | 5555                 | -52.28          | -13              | -39.28                  | -75.93                  | -59.35                   | 2.66                       | 9.72                        | H                     |
|                              | 7410                 | -47.84          | -13              | -34.84                  | -76.29                  | -57                      | 2.46                       | 11.62                       | H                     |
|                              | 3707                 | -54.99          | -13              | -41.99                  | -73.78                  | -61.57                   | 1.67                       | 8.25                        | V                     |
|                              | 5555                 | -54.17          | -13              | -41.17                  | -76.17                  | -61.24                   | 2.66                       | 9.72                        | V                     |
|                              | 7410                 | -47.95          | -13              | -34.95                  | -75.95                  | -57.11                   | 2.46                       | 11.62                       | V                     |
| Middle                       | 3763                 | -55.18          | -13              | -42.18                  | -74.14                  | -61.81                   | 1.69                       | 8.32                        | H                     |
|                              | 5639                 | -51.91          | -13              | -38.91                  | -75.85                  | -58.96                   | 2.71                       | 9.76                        | H                     |
|                              | 7522                 | -47.95          | -13              | -34.95                  | -76.49                  | -57.34                   | 2.42                       | 11.81                       | H                     |
|                              | 3763                 | -55.99          | -13              | -42.99                  | -74.36                  | -62.62                   | 1.69                       | 8.32                        | V                     |
|                              | 5639                 | -53.73          | -13              | -40.73                  | -75.83                  | -60.78                   | 2.71                       | 9.76                        | V                     |
|                              | 7522                 | -48.36          | -13              | -35.36                  | -76.28                  | -57.75                   | 2.42                       | 11.81                       | V                     |
| Highest                      | 3812                 | -54.90          | -13              | -41.90                  | -74.15                  | -61.57                   | 1.70                       | 8.37                        | H                     |
|                              | 5723                 | -51.78          | -13              | -38.78                  | -75.8                   | -58.82                   | 2.75                       | 9.79                        | H                     |
|                              | 7627                 | -47.56          | -13              | -34.56                  | -75.83                  | -57.05                   | 2.39                       | 11.88                       | H                     |
|                              | 3812                 | -55.70          | -13              | -42.70                  | -74.2                   | -62.37                   | 1.70                       | 8.37                        | V                     |
|                              | 5723                 | -52.63          | -13              | -39.63                  | -75.67                  | -59.67                   | 2.75                       | 9.79                        | V                     |
|                              | 7627                 | -48.04          | -13              | -35.04                  | -75.89                  | -57.53                   | 2.39                       | 11.88                       | V                     |

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