



# FCC RADIO TEST REPORT

FCC ID : 2AUWUFAIRPHONE3  
Equipment : Smart Phone  
Brand Name : Fairphone  
Model Name : Fairphone 3  
Marketing Name : Fairphone 3  
Applicant : FairPhone B.V.  
Jollemanhof 17, 1019 GW, Amsterdam, the Netherlands  
Manufacturer : FairPhone B.V.  
Jollemanhof 17, 1019 GW, Amsterdam, the Netherlands  
Standard : 47 CFR Part 2, 22(H), 24(E), 27(L)

The product was received on Oct. 23, 2019 and testing was started from Nov. 05, 2019 and completed on Dec. 05, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Louis Wu

Approved by: Louis Wu

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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## History of this test report

| Report No. | Version | Description             | Issued Date   |
|------------|---------|-------------------------|---------------|
| FG9O2328A  | 01      | Initial issue of report | Feb. 12, 2020 |
|            |         |                         |               |
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## Summary of Test Result

| Report Clause | Ref Std. Clause                                     | Test Items                                                                                             | Result (PASS/FAIL) | Remark                                     |
|---------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------|
| 3.2           | §2.1046                                             | Conducted Output Power                                                                                 | Pass               | -                                          |
|               | §22.913 (a)(2)                                      | Effective Radiated Power (GSM850) (WCDMA Band V)                                                       |                    |                                            |
|               | §24.232 (c)                                         | Equivalent Isotropic Radiated Power (GSM1900) (WCDMA Band II)                                          |                    |                                            |
|               | §27.50 (d)(4)                                       | Equivalent Isotropic Radiated Power (WCDMA Band IV)                                                    |                    |                                            |
| 3.3           | §24.232 (d)                                         | Peak-to-Average Ratio                                                                                  | Pass               |                                            |
| 3.4           | §2.1049<br>§22.917 (b)<br>§24.238 (b)<br>§27.53 (g) | Occupied Bandwidth (GSM850) (WCDMA Band V) (GSM1900) (WCDMA Band II) (WCDMA Band IV)                   | Pass               | -                                          |
| 3.5           | §2.1051<br>§22.917 (a)<br>§24.238 (a)<br>§27.53 (g) | Band Edge Measurement (GSM850) (WCDMA Band V) (GSM1900) (WCDMA Band II) (WCDMA Band IV)                | Pass               | -                                          |
| 3.6           | §2.1051<br>§22.917 (a)<br>§24.238 (a)<br>§27.53 (g) | Conducted Emission (GSM850) (WCDMA Band V) (GSM1900) (WCDMA Band II) (WCDMA Band IV)                   | Pass               | -                                          |
| 3.7           | §2.1055<br>§22.355<br>§24.235<br>§27.54             | Frequency Stability<br>Temperature & Voltage                                                           | Pass               | -                                          |
| 4.4           | §2.1053<br>§22.917 (a)<br>§24.238 (a)<br>§27.53 (h) | Field Strength of Spurious Radiation (GSM850) (WCDMA Band V) (GSM1900) (WCDMA Band II) (WCDMA Band IV) | Pass               | Under limit<br>25.06 dB at<br>5556.000 MHz |

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

**Reviewed by: Wii Chang**

**Report Producer: Dara Chiu**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, NFC, and GNSS.

| Product Specification subjective to this standard |                                                                                                                                                             |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sample 1                                          | EUT with 1st source                                                                                                                                         |
| Sample 2                                          | EUT with 2nd source                                                                                                                                         |
| Antenna Type                                      | WWAN: PIFA Antenna<br>WLAN: Embedded Inverted-F Antenna<br>Bluetooth: Embedded Inverted-F Antenna<br>GPS / Glonass / BDS: PIFA Antenna<br>NFC: Loop Antenna |

**Remark:** All test items were performed with Sample 1.

## 1.2 Modification of EUT

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



### 1.3 Testing Location

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                   |
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |
| Test Site No.      | <b>Sporton Site No.</b><br>TH03-HY                                                                                    |
| Test Engineer      | Louis Chung                                                                                                           |
| Temperature        | 21~24°C                                                                                                               |
| Relative Humidity  | 51~55%                                                                                                                |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

|                    |                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                                       |
| 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.      | <b>Sporton Site No.</b><br>03CH11-HY                                                                                                      |
| Test Engineer      | Cookie Ku, Fu Chen, and Troye Hsieh                                                                                                       |
| Temperature        | 20.2~26.3°C                                                                                                                               |
| Relative Humidity  | 44.0~68.1%                                                                                                                                |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW0007

### 1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L)
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

**Remark:**

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



## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane for Cellular Band; Y Plane for PCS Band and AWS Band) were recorded in this report.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V
2. 30 MHz to 18000 MHz for WCDMA Band IV
3. 30 MHz to 19100 MHz for GSM1900 and WCDMA Band II

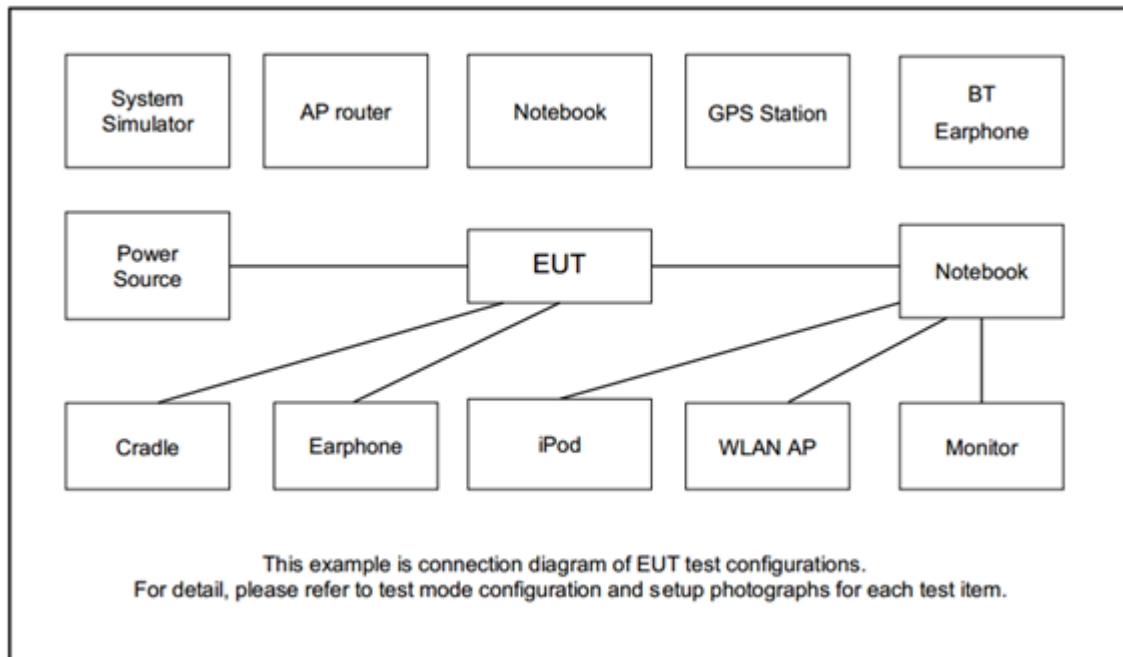
All modes and data rates and positions were investigated.

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

| Test Modes    |                     |                     |
|---------------|---------------------|---------------------|
| Band          | Radiated TCs        | Conducted TCs       |
| GSM850        | ■ GPRS Class 8 Link | ■ GPRS Class 8 Link |
|               | ■ EDGE Class 8 Link | ■ EDGE Class 8 Link |
| GSM1900       | ■ 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 |
| WCDMA Band IV | ■ RMC 12.2Kbps Link | ■ RMC 12.2Kbps Link |

**Remark:** All the radiated test cases were performed with Sample 1 and SIM 1.

## 2.2 Connection Diagram of Test System



## 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.   | AC adapter       | Samsung    | EP-TA20JWS | N/A    | N/A        | N/A               |

## 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:

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

## 2.5 Frequency List of Low/Middle/High Channels

| Frequency List   |                        |        |        |         |
|------------------|------------------------|--------|--------|---------|
| Band             | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| GSM850           | Channel                | 128    | 189    | 251     |
|                  | Frequency              | 824.2  | 836.4  | 848.8   |
| WCDMA<br>Band V  | Channel                | 4132   | 4182   | 4233    |
|                  | Frequency              | 826.4  | 836.4  | 846.6   |
| GSM1900          | Channel                | 512    | 661    | 810     |
|                  | Frequency              | 1850.2 | 1880.0 | 1909.8  |
| WCDMA<br>Band II | Channel                | 9262   | 9400   | 9538    |
|                  | Frequency              | 1852.4 | 1880.0 | 1907.6  |
| WCDMA<br>Band IV | Channel                | 1312   | 1413   | 1513    |
|                  | Frequency              | 1712.4 | 1732.6 | 1752.6  |

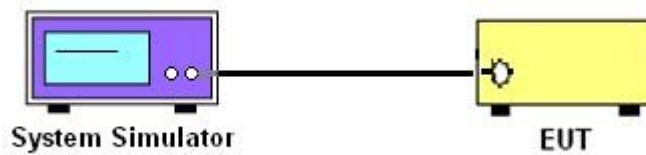
### 3 Conducted Test Result

#### 3.1 Measuring Instruments

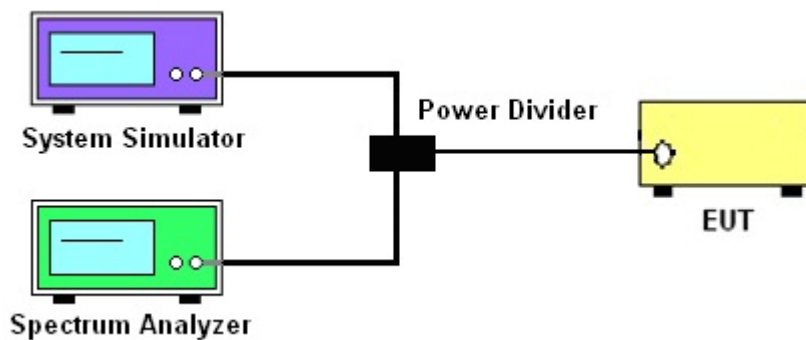
See list of measuring instruments of this test report.

##### 3.1.1 Test Setup

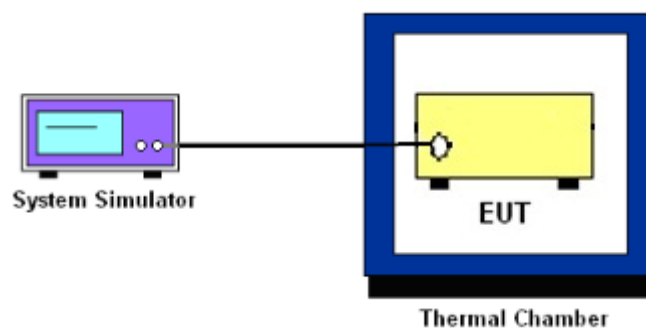
##### 3.1.2 Conducted Output Power



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



##### 3.1.4 Frequency Stability



##### 3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



## **3.2 Conducted Output Power and ERP/EIRP**

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

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

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

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

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

According to KDB 412172 D01 Power Approach,

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

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

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

### **3.2.2 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.



### **3.3 Peak-to-Average Ratio**

#### **3.3.1 Description of the PAR Measurement**

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

#### **3.3.2 Test Procedures**

The testing follows ANSI C63.26-2015 Section 5.2.6

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



### **3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement**

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

The 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 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

#### **3.4.2 Test Procedures**

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.  
(this is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



## **3.5 Conducted Band Edge**

### **3.5.1 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.

### **3.5.2 Test Procedures**

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
2. 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.
3. The band edges of low and high channels for the highest RF powers were measured.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
5. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)

## 3.6 Conducted Spurious Emission

### 3.6.1 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.

### 3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
2. 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.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
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)

### 3.7 Frequency Stability

#### 3.7.1 Description of Frequency Stability Measurement

22.355

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.

24.235 & 27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

#### 3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. 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.
3. 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.

#### 3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at  $20\pm 5^{\circ}\text{C}$  and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

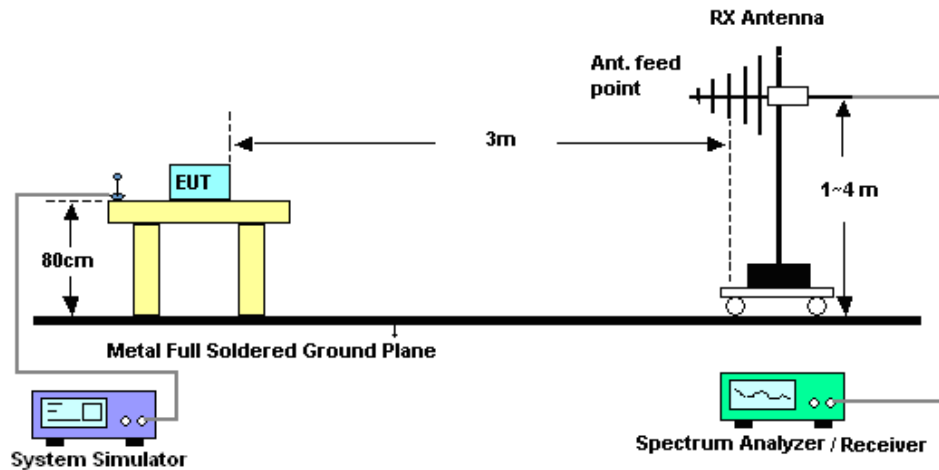
## 4 Radiated Test Items

### 4.1 Measuring Instruments

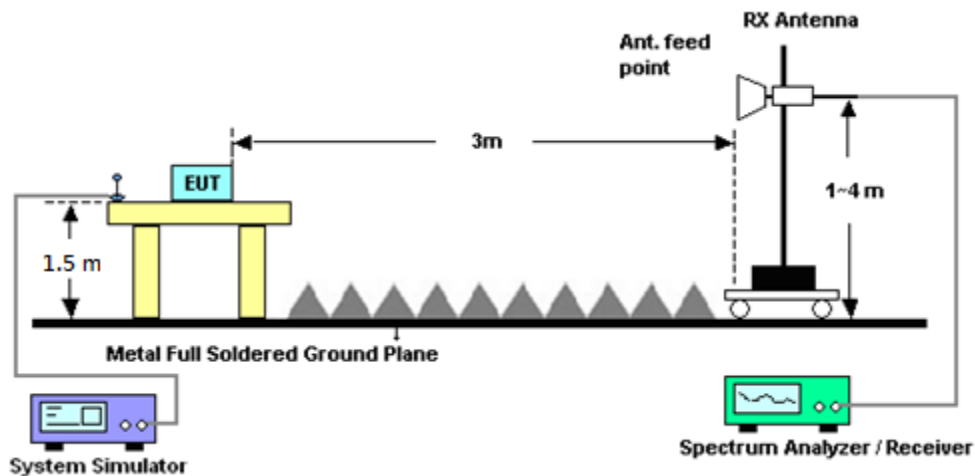
See list of measuring instruments of this test report.

### 4.2 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



### 4.3 Test Result of Radiated Test

Please refer to Appendix B.

## 4.4 Field Strength of Spurious Radiation Measurement

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

The radiated spurious emission was measured by direct field strength method according to ANSI C63.26-2015. 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.

### 4.4.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26-2015 subclause 5.2.7.

1. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz above the ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. When using the direct field strength method and the EUT is manipulated through three different orientations, then the scan height range of the measurement antenna is limited to 2.5 m, or 0.5 m above the top of the EUT, whichever is higher
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)

$E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$

$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log D - 104.8$ ; where D is the measurement distance in meters

$\text{ERP} = \text{EIRP} - 2.15 \text{ (dB)}$ ; where ERP and EIRP are expressed in consistent units.



## 5 List of Measuring Equipment

| Instrument                | Manufacturer    | Model No.                    | Serial No.       | Characteristics               | Calibration Date | Test Date                     | Due Date      | Remark                |
|---------------------------|-----------------|------------------------------|------------------|-------------------------------|------------------|-------------------------------|---------------|-----------------------|
| Preamplifier              | EMEC            | EM18G40G                     | 060715           | 18GHz ~ 40GHz                 | Dec. 06, 2018    | Nov. 05, 2019 ~ Nov. 16, 2019 | Dec. 05, 2019 | Radiation (03CH11-HY) |
| Amplifier                 | SONOMA          | 310N                         | 187312           | 9kHz~1GHz                     | Dec. 04, 2018    | Nov. 05, 2019 ~ Nov. 16, 2019 | Dec. 03, 2019 | Radiation (03CH11-HY) |
| Bilog Antenna             | TESEQ           | CBL 6111D & N-6-06           | 35414 & AT-N0602 | 30MHz~1GHz                    | Oct. 12, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Oct. 11, 2020 | Radiation (03CH11-HY) |
| Horn Antenna              | SCHWARZBECK     | BBHA 9120 D                  | 9120D-1522       | 1GHz ~ 18GHz                  | Sep. 19, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Sep. 18, 2020 | Radiation (03CH11-HY) |
| Horn Antenna              | SCHWARZBECK     | BBHA 9120D                   | 9120D-1212       | 1GHz ~ 18GHz                  | May 14, 2019     | Nov. 05, 2019 ~ Nov. 16, 2019 | May 13, 2020  | Radiation (03CH11-HY) |
| Loop Antenna              | Rohde & Schwarz | HFH2-Z2                      | 100488           | 9 kHz~30 MHz                  | Jan. 07, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Jan. 06, 2020 | Radiation (03CH11-HY) |
| Preamplifier              | Keysight        | 83017A                       | MY53270080       | 1GHz~26.5GHz                  | Nov. 14, 2018    | Nov. 05, 2019 ~ Nov. 16, 2019 | Nov. 13, 2019 | Radiation (03CH11-HY) |
| Preamplifier              | Keysight        | 83017A                       | MY53270080       | 1GHz~26.5GHz                  | Nov. 13, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Nov. 12, 2020 | Radiation (03CH11-HY) |
| Spectrum Analyzer         | Keysight        | N9010A                       | MY54200486       | 10Hz~44GHz                    | Oct. 28, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Oct. 27, 2020 | Radiation (03CH11-HY) |
| Filter                    | Wainwright      | WHKX12-1080-1200-15000-6 OSS | SN2              | 1.2GHz High Pass Filter       | Sep. 15, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Sep. 14, 2020 | Radiation (03CH11-HY) |
| Filter                    | Wainwright      | WHKX12-2700-3000-18000-6 OSS | SN3              | 3GHz High Pass Filter         | Sep. 15, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Sep. 14, 2020 | Radiation (03CH11-HY) |
| Controller                | EMEC            | EM 1000                      | N/A              | Control Turn table & Ant Mast | N/A              | Nov. 05, 2019 ~ Nov. 16, 2019 | N/A           | Radiation (03CH11-HY) |
| Antenna Mast              | EMEC            | AM-BS-4500-B                 | N/A              | 1~4m                          | N/A              | Nov. 05, 2019 ~ Nov. 16, 2019 | N/A           | Radiation (03CH11-HY) |
| Turn Table                | EMEC            | TT 2000                      | N/A              | 0~360 Degree                  | N/A              | Nov. 05, 2019 ~ Nov. 16, 2019 | N/A           | Radiation (03CH11-HY) |
| EMI Test Receiver         | Keysight        | N9038A(MXE)                  | MY55420170       | 20MHz~8.4GHz                  | Mar. 08, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Mar. 07, 2020 | Radiation (03CH11-HY) |
| SHF-EHF Horn Antenna      | SCHWARZBECK     | BBHA 9170                    | BBHA9170584      | 18GHz- 40GHz                  | Dec. 05, 2018    | Nov. 05, 2019 ~ Nov. 16, 2019 | Dec. 04, 2019 | Radiation (03CH11-HY) |
| Software                  | Audix           | E3 6.2009-8-24               | RK-001053        | N/A                           | N/A              | Nov. 05, 2019 ~ Nov. 16, 2019 | N/A           | Radiation (03CH11-HY) |
| Hygrometer                | TECEPEL         | DTN-303B                     | TP140325         | N/A                           | Oct. 25, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Oct. 24, 2020 | Radiation (03CH11-HY) |
| RF Cable                  | HUBER + SUHNER  | SUCOFLEX 104                 | MY9837/4PE       | 9kHz-30MHz                    | Mar. 13, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Mar. 12, 2020 | Radiation (03CH11-HY) |
| RF Cable                  | HUBER + SUHNER  | SUCOFLEX 102                 | MY2859/2         | 30MHz-40GHz                   | Mar. 13, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Mar. 12, 2020 | Radiation (03CH11-HY) |
| RF Cable                  | HUBER + SUHNER  | SUCOFLEX 104                 | MY9837/4PE       | 30M-18G                       | Mar. 13, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Mar. 12, 2020 | Radiation (03CH11-HY) |
| RF Cable                  | HUBER + SUHNER  | SUCOFLEX 102                 | MY4274/2         | 30MHz-40GHz                   | Mar. 13, 2019    | Nov. 05, 2019 ~ Nov. 16, 2019 | Mar. 12, 2020 | Radiation (03CH11-HY) |
| Hygrometer                | Testo           | 608-H1                       | 34893241         | N/A                           | Mar. 06, 2019    | Dec. 05, 2019                 | Mar. 05, 2020 | Conducted (TH03-HY)   |
| Spectrum Analyzer         | Rohde & Schwarz | FSP30                        | 101329           | 9kHz~30GHz                    | Sep. 04, 2019    | Dec. 05, 2019                 | Sep. 03, 2020 | Conducted (TH03-HY)   |
| Temperature Chamber       | ESPEC           | SU-641                       | 92013721         | -30℃ ~70℃                     | Nov. 26, 2019    | Dec. 05, 2019                 | Nov. 25, 2020 | Conducted (TH03-HY)   |
| Programmable Power Supply | GW Instek       | PSS-2005                     | EL890001         | 1V~20V 0.5A~4A                | Oct. 09, 2019    | Dec. 05, 2019                 | Oct. 08, 2020 | Conducted (TH03-HY)   |
| Base Station (Measure)    | Rohde & Schwarz | CMU200                       | 117995           | GSM / GPRS / WCDMA / CDMA     | Aug. 23, 2019    | Dec. 05, 2019                 | Aug. 22, 2020 | Conducted (TH03-HY)   |
| Power Divider             | Warison         | WCOU-0.4-26.5S-20            | #A               | N/A                           | Nov. 06, 2019    | Dec. 05, 2019                 | Nov. 05, 2020 | Conducted (TH03-HY)   |

## 6 Uncertainty of Evaluation

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

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.37 |
|-------------------------------------------------------------------------|------|

### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.67 |
|-------------------------------------------------------------------------|------|

### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.03 |
|-------------------------------------------------------------------------|------|



## 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  | 1909.8 |
| GSM                          | 32.82  | 32.95 | 32.99 | 30.05   | 30.00 | 30.18  |
| GPRS class 8                 | 32.88  | 32.99 | 33.00 | 30.13   | 30.05 | 30.21  |
| GPRS class 10                | 29.14  | 29.25 | 29.27 | 27.20   | 27.20 | 27.10  |
| GPRS class 11                | 27.64  | 27.69 | 27.75 | 25.55   | 25.47 | 25.39  |
| GPRS class 12                | 26.36  | 26.56 | 26.54 | 24.15   | 24.04 | 24.03  |
| EGPRS class 8                | 26.25  | 26.44 | 26.48 | 25.55   | 25.56 | 25.64  |
| EGPRS class 10               | 23.65  | 23.61 | 23.62 | 22.95   | 22.56 | 22.57  |
| EGPRS class 11               | 22.39  | 22.47 | 22.44 | 20.99   | 20.70 | 20.71  |
| EGPRS class 12               | 21.37  | 21.47 | 21.67 | 19.96   | 19.64 | 19.63  |

| 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                    | 22.78        | 22.75 | 22.82 | 21.81         | 21.78 | 21.85  |
| HSDPA Subtest-1              | 21.72        | 21.77 | 21.82 | 20.65         | 20.67 | 20.71  |
| HSDPA Subtest-2              | 21.71        | 21.78 | 21.86 | 20.65         | 20.73 | 20.68  |
| HSDPA Subtest-3              | 21.22        | 21.16 | 21.30 | 20.19         | 20.19 | 20.30  |
| HSDPA Subtest-4              | 21.21        | 21.20 | 21.31 | 20.17         | 20.31 | 20.27  |
| HSUPA Subtest-1              | 21.71        | 21.68 | 21.82 | 20.70         | 20.78 | 20.74  |
| HSUPA Subtest-2              | 19.71        | 19.65 | 19.78 | 18.66         | 18.83 | 18.70  |
| HSUPA Subtest-3              | 20.73        | 20.66 | 20.83 | 19.77         | 19.82 | 19.77  |
| HSUPA Subtest-4              | 19.68        | 19.64 | 19.80 | 18.74         | 18.76 | 18.70  |
| HSUPA Subtest-5              | 21.70        | 21.70 | 21.80 | 20.80         | 20.80 | 20.75  |

| Conducted Power (*Unit: dBm) |               |        |        |
|------------------------------|---------------|--------|--------|
| Band                         | WCDMA Band IV |        |        |
| Channel                      | 1312          | 1413   | 1513   |
| Frequency                    | 1712.4        | 1732.6 | 1752.6 |
| RMC 12.2K                    | 23.15         | 23.12  | 23.14  |
| HSDPA Subtest-1              | 21.94         | 21.99  | 22.04  |
| HSDPA Subtest-2              | 21.92         | 22.03  | 22.07  |
| HSDPA Subtest-3              | 21.56         | 21.52  | 21.59  |
| HSDPA Subtest-4              | 21.55         | 21.54  | 21.61  |
| HSUPA Subtest-1              | 21.93         | 22.11  | 22.02  |
| HSUPA Subtest-2              | 20.05         | 20.02  | 20.00  |
| HSUPA Subtest-3              | 21.06         | 21.04  | 21.00  |
| HSUPA Subtest-4              | 20.04         | 20.00  | 20.01  |
| HSUPA Subtest-5              | 22.10         | 22.00  | 21.60  |

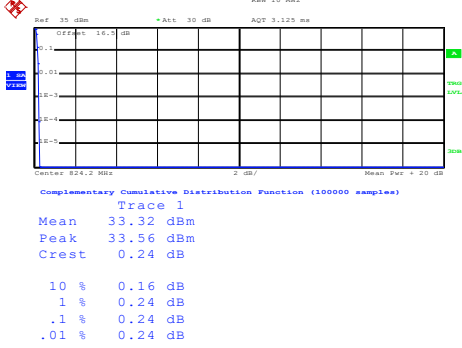
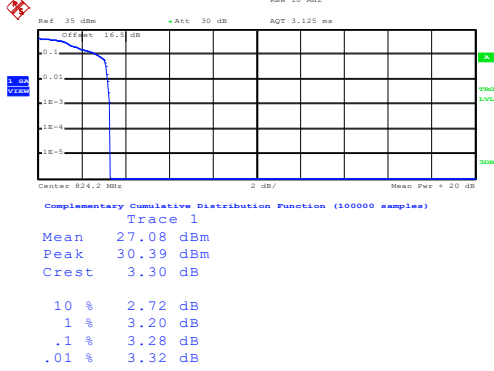
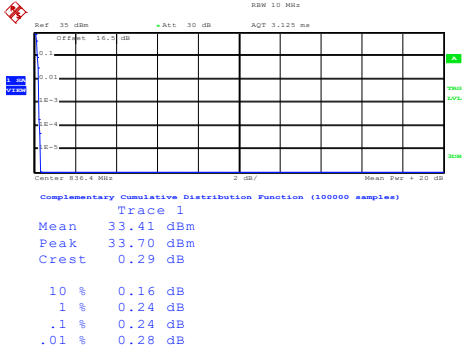
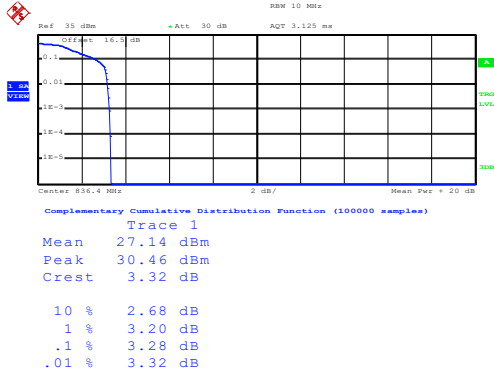
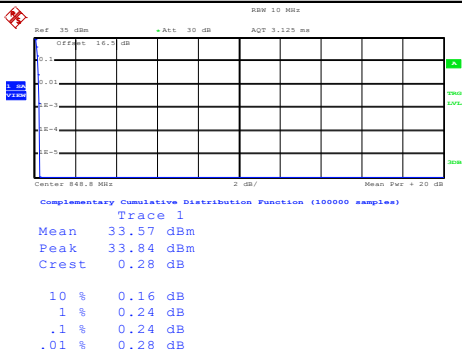
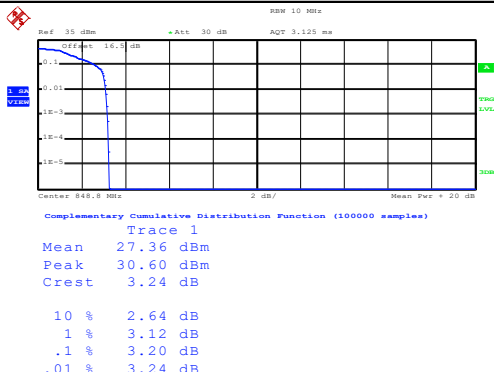


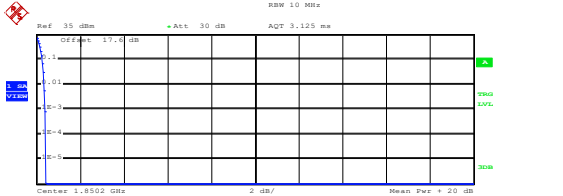
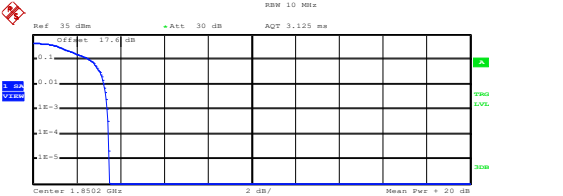
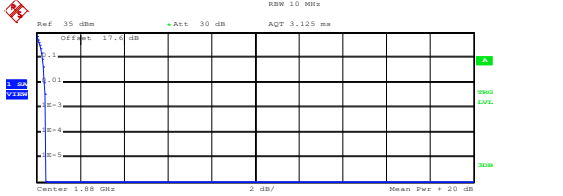
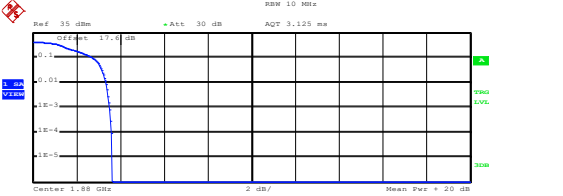
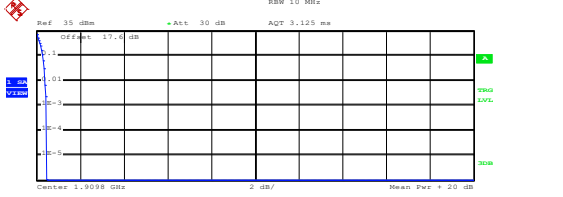
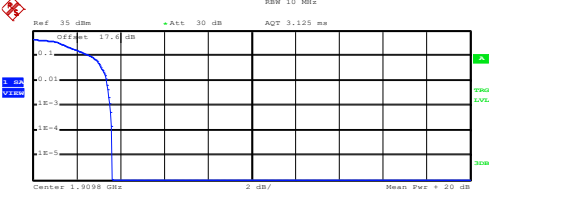
## A2. GSM

### Peak-to-Average Ratio

| Mode       | GSM850       |              | Limit: 13dB |
|------------|--------------|--------------|-------------|
| Mod.       | GPRS class 8 | EDGE class 8 | Result      |
| Lowest CH  | 0.24         | 3.28         | PASS        |
| Middle CH  | 0.24         | 3.28         |             |
| Highest CH | 0.24         | 3.20         |             |
| Mode       | GSM1900      |              | Limit: 13dB |
| Mod.       | GPRS class 8 | EDGE class 8 | Result      |
| Lowest CH  | 0.40         | 3.40         | PASS        |
| Middle CH  | 0.44         | 3.52         |             |
| Highest CH | 0.48         | 3.52         |             |

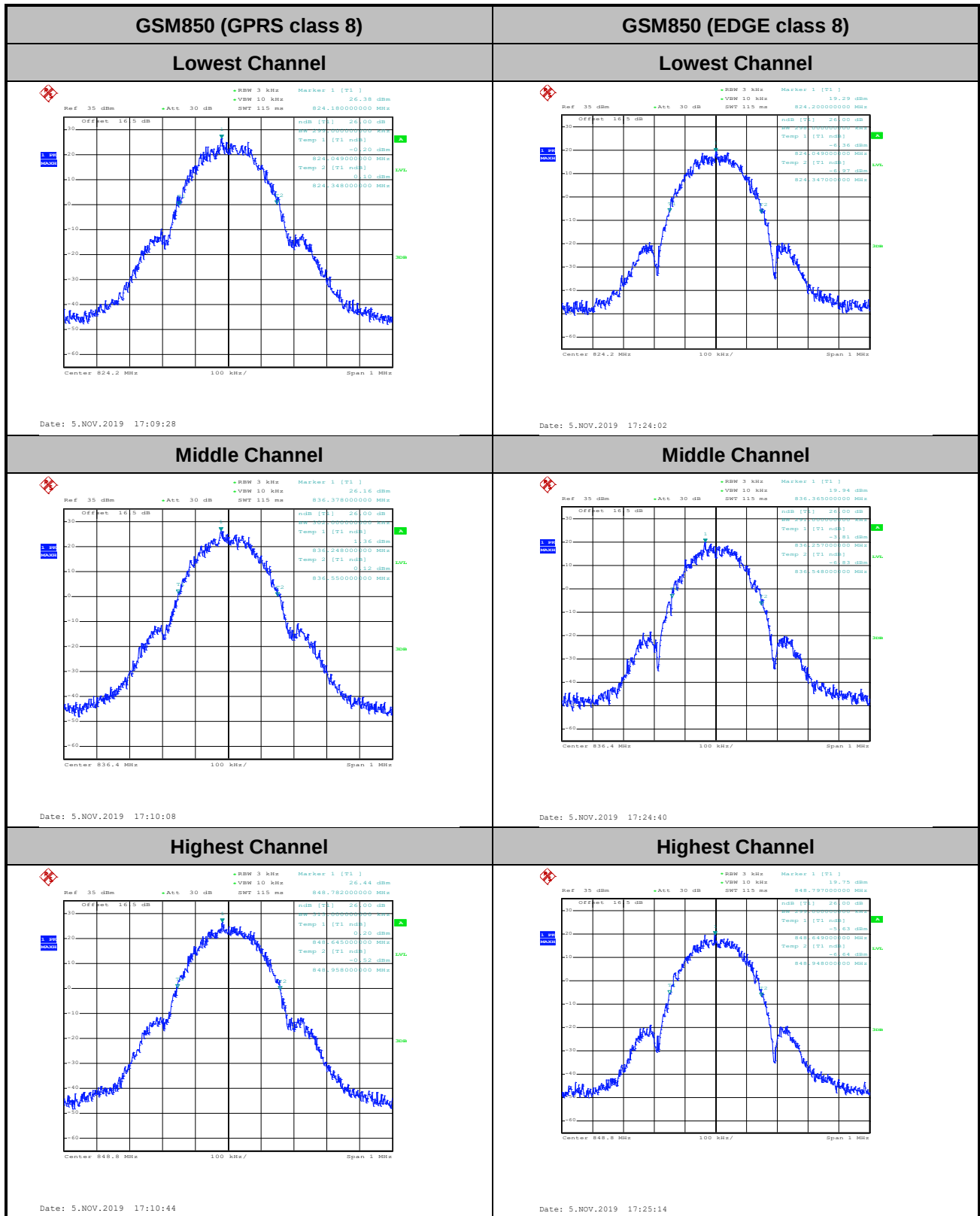


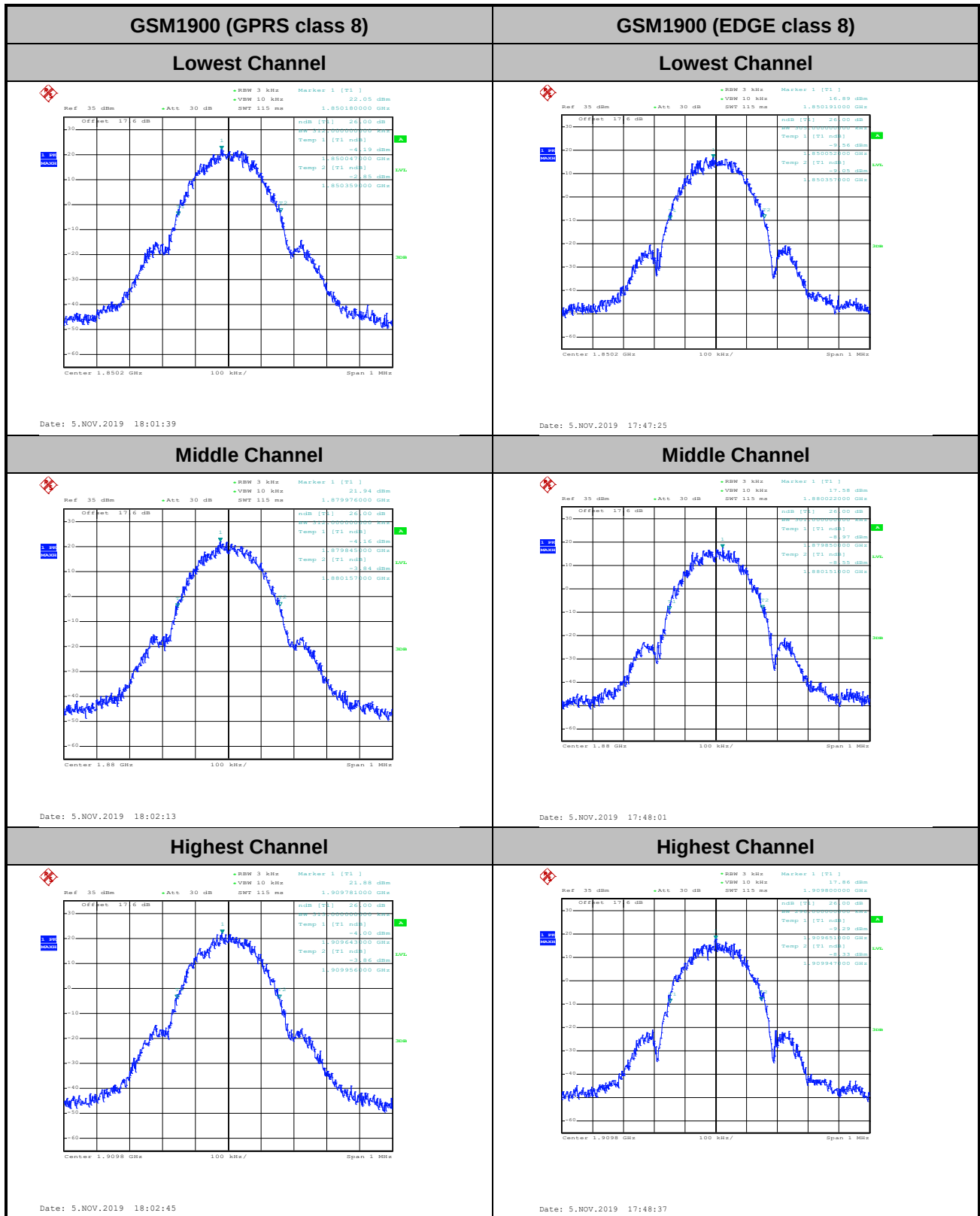
| GSM850 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | GSM850 (EDGE class 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|  <p>Ref: 35 dBm    +Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 824.2 MHz    2 dB/    Mean: Pwr + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 33.32 dBm<br/>Peak: 33.56 dBm<br/>Crest: 0.24 dB</p> <p>10 %: 0.16 dB<br/>1 %: 0.24 dB<br/>.1 %: 0.24 dB<br/>.01 %: 0.24 dB</p> <p>Date: 5.NOV.2019 17:20:13</p>   |  |  <p>Ref: 35 dBm    +Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 824.2 MHz    2 dB/    Mean: Pwr + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 27.08 dBm<br/>Peak: 30.39 dBm<br/>Crest: 3.30 dB</p> <p>10 %: 2.72 dB<br/>1 %: 3.20 dB<br/>.1 %: 3.28 dB<br/>.01 %: 3.32 dB</p> <p>Date: 5.NOV.2019 17:33:57</p>   |  |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|  <p>Ref: 35 dBm    +Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 836.4 MHz    2 dB/    Mean: Pwr + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 33.41 dBm<br/>Peak: 33.70 dBm<br/>Crest: 0.29 dB</p> <p>10 %: 0.16 dB<br/>1 %: 0.24 dB<br/>.1 %: 0.24 dB<br/>.01 %: 0.28 dB</p> <p>Date: 5.NOV.2019 17:20:37</p>  |  |  <p>Ref: 35 dBm    +Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 836.4 MHz    2 dB/    Mean: Pwr + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 27.14 dBm<br/>Peak: 30.46 dBm<br/>Crest: 3.32 dB</p> <p>10 %: 2.68 dB<br/>1 %: 3.20 dB<br/>.1 %: 3.28 dB<br/>.01 %: 3.32 dB</p> <p>Date: 5.NOV.2019 17:34:21</p>  |  |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|  <p>Ref: 35 dBm    +Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 848.8 MHz    2 dB/    Mean: Pwr + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 33.57 dBm<br/>Peak: 33.84 dBm<br/>Crest: 0.28 dB</p> <p>10 %: 0.16 dB<br/>1 %: 0.24 dB<br/>.1 %: 0.24 dB<br/>.01 %: 0.28 dB</p> <p>Date: 5.NOV.2019 17:20:55</p> |  |  <p>Ref: 35 dBm    +Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 848.8 MHz    2 dB/    Mean: Pwr + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 27.36 dBm<br/>Peak: 30.60 dBm<br/>Crest: 3.24 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: 5.NOV.2019 17:34:43</p> |  |

| GSM1900 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                      | GSM1900 (EDGE class 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  <p>Ref: 35 dBm    Att: 30 dB    RBW: 10 MHz    AGT: 3.125 ms</p> <p>Center: 1.8502 GHz    2 dB/    Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 29.74 dBm<br/>Peak: 30.17 dBm<br/>Crest: 0.44 dB</p> <p>10 %: 0.28 dB<br/>1 %: 0.36 dB<br/>.1 %: 0.40 dB<br/>.01 %: 0.44 dB</p> <p>Date: 5.NOV.2019 18:11:30</p>   |  <p>Ref: 35 dBm    Att: 30 dB    RBW: 10 MHz    AGT: 3.125 ms</p> <p>Center: 1.8502 GHz    2 dB/    Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 25.22 dBm<br/>Peak: 28.69 dBm<br/>Crest: 3.48 dB</p> <p>10 %: 2.60 dB<br/>1 %: 3.24 dB<br/>.1 %: 3.40 dB<br/>.01 %: 3.48 dB</p> <p>Date: 5.NOV.2019 17:58:27</p>   |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  <p>Ref: 35 dBm    Att: 30 dB    RBW: 10 MHz    AGT: 3.125 ms</p> <p>Center: 1.88 GHz    2 dB/    Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 29.68 dBm<br/>Peak: 30.10 dBm<br/>Crest: 0.42 dB</p> <p>10 %: 0.28 dB<br/>1 %: 0.36 dB<br/>.1 %: 0.44 dB<br/>.01 %: 0.44 dB</p> <p>Date: 5.NOV.2019 18:11:50</p>    |  <p>Ref: 35 dBm    Att: 30 dB    RBW: 10 MHz    AGT: 3.125 ms</p> <p>Center: 1.88 GHz    2 dB/    Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 24.99 dBm<br/>Peak: 28.62 dBm<br/>Crest: 3.63 dB</p> <p>10 %: 2.72 dB<br/>1 %: 3.36 dB<br/>.1 %: 3.52 dB<br/>.01 %: 3.60 dB</p> <p>Date: 5.NOV.2019 17:58:44</p>    |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|  <p>Ref: 35 dBm    Att: 30 dB    RBW: 10 MHz    AGT: 3.125 ms</p> <p>Center: 1.9098 GHz    2 dB/    Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 29.71 dBm<br/>Peak: 30.17 dBm<br/>Crest: 0.46 dB</p> <p>10 %: 0.28 dB<br/>1 %: 0.40 dB<br/>.1 %: 0.48 dB<br/>.01 %: 0.48 dB</p> <p>Date: 5.NOV.2019 18:12:03</p> |  <p>Ref: 35 dBm    Att: 30 dB    RBW: 10 MHz    AGT: 3.125 ms</p> <p>Center: 1.9098 GHz    2 dB/    Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 24.87 dBm<br/>Peak: 28.48 dBm<br/>Crest: 3.61 dB</p> <p>10 %: 2.64 dB<br/>1 %: 3.36 dB<br/>.1 %: 3.52 dB<br/>.01 %: 3.60 dB</p> <p>Date: 5.NOV.2019 17:59:07</p> |

**26dB Bandwidth**

| Mode       | GSM850       |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 299.00       | 298.00       |
| Middle CH  | 302.00       | 291.00       |
| Highest CH | 313.00       | 299.00       |
| Mode       | GSM1900      |              |
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 312          | 305          |
| Middle CH  | 312          | 301          |
| Highest CH | 313          | 296          |

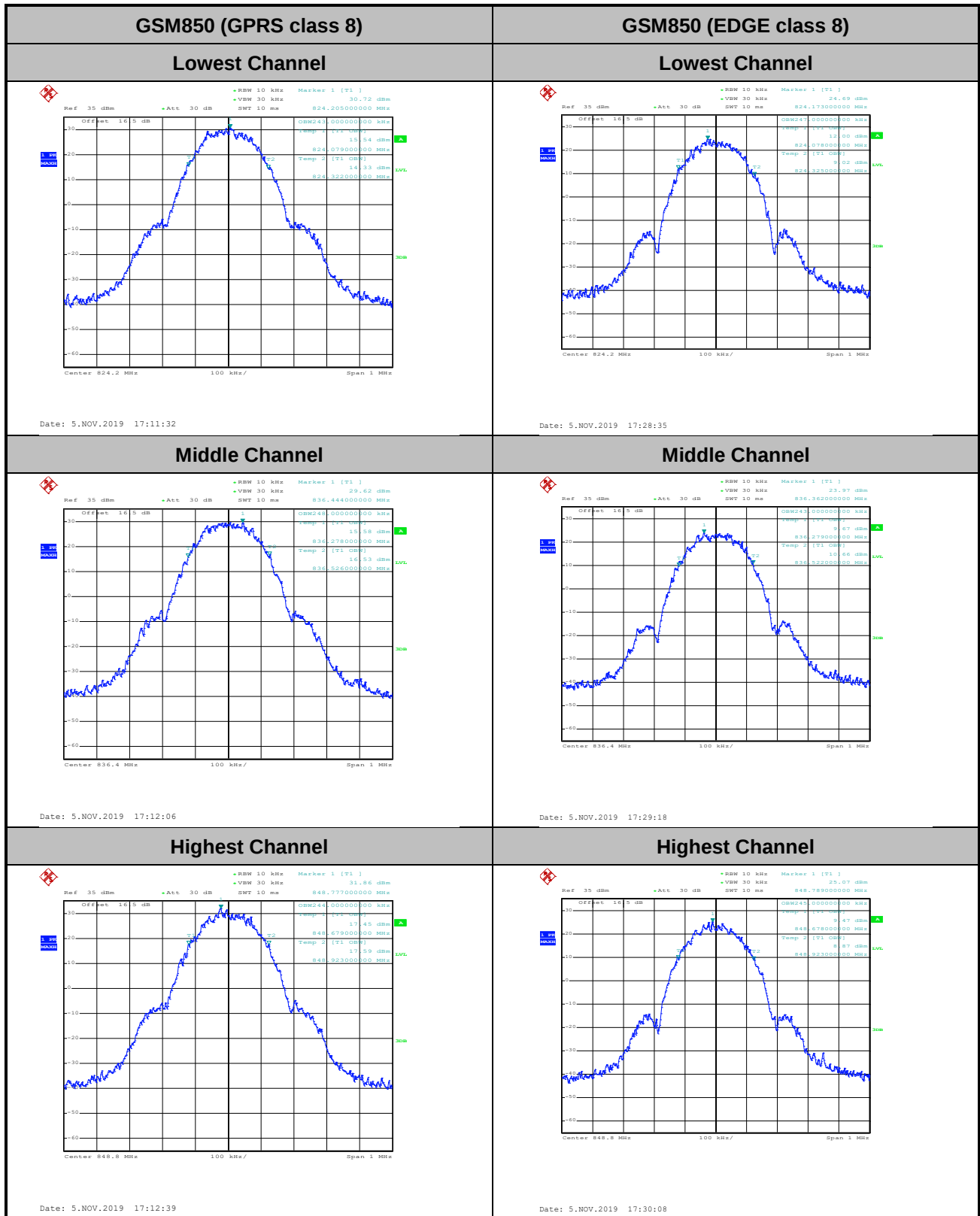


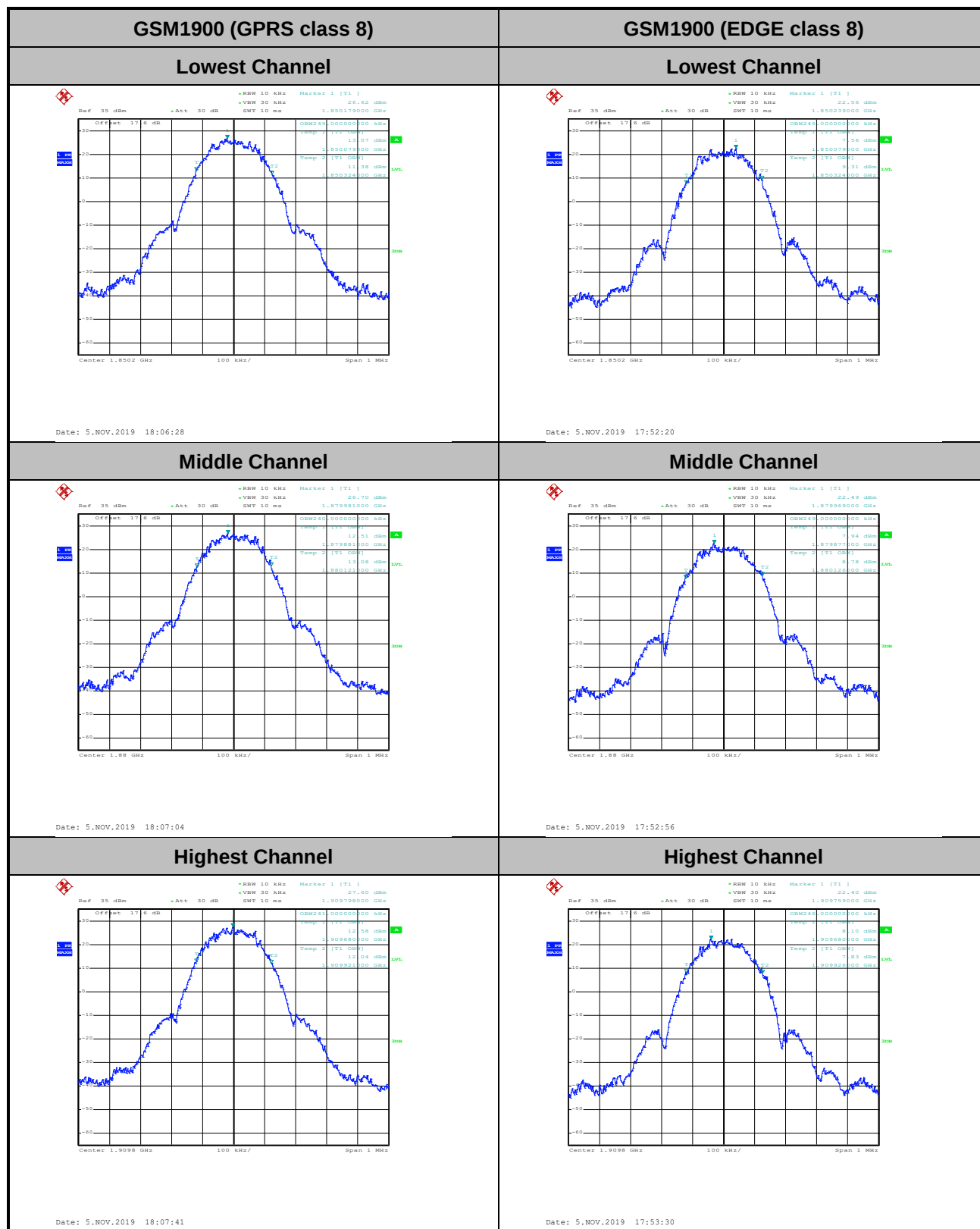


**Occupied Bandwidth**

| Mode       | GSM850       |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 243          | 247          |
| Middle CH  | 248          | 243          |
| Highest CH | 244          | 245          |

| Mode       | GSM1900      |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 245          | 245          |
| Middle CH  | 240          | 249          |
| Highest CH | 241          | 246          |



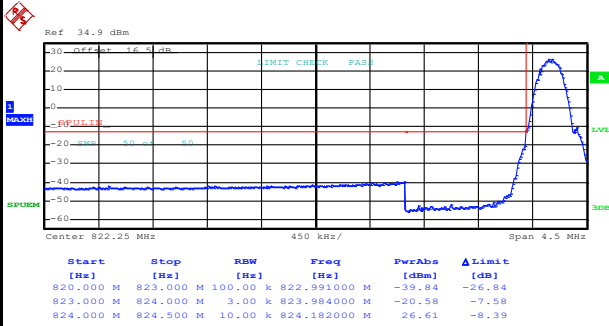




## Conducted Band Edge

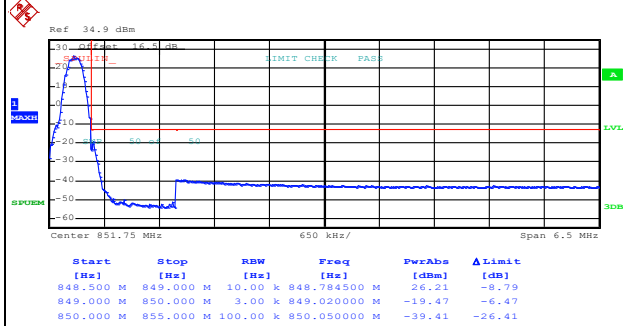
### GSM850 (GPRS class 8)

#### Lowest Band Edge



Date: 5.NOV.2019 17:14:17

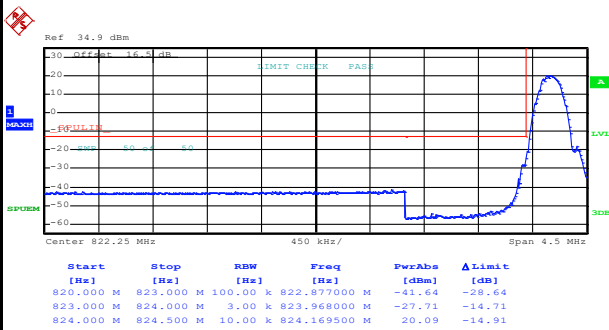
#### Highest Band Edge



Date: 5.NOV.2019 17:16:41

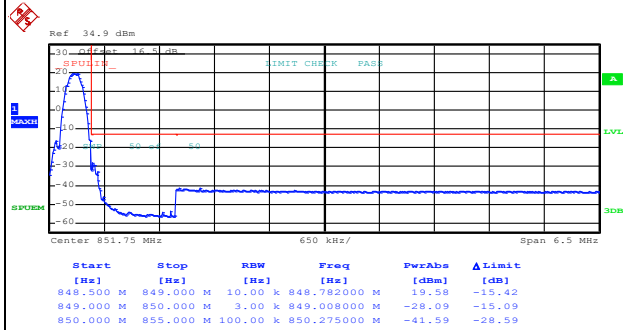
### GSM850 (EDGE class 8)

#### Lowest Band Edge



Date: 5.NOV.2019 17:31:48

#### Highest Band Edge

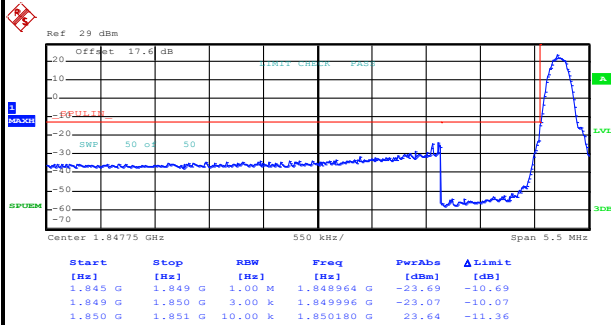


Date: 5.NOV.2019 17:33:26



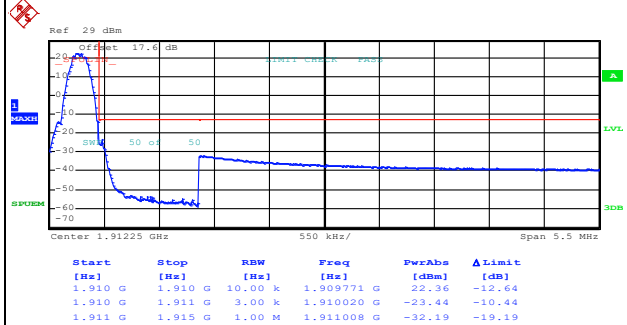
## GSM1900 (GPRS class 8)

## Lowest Band Edge



Date: 5.NOV.2019 18:09:20

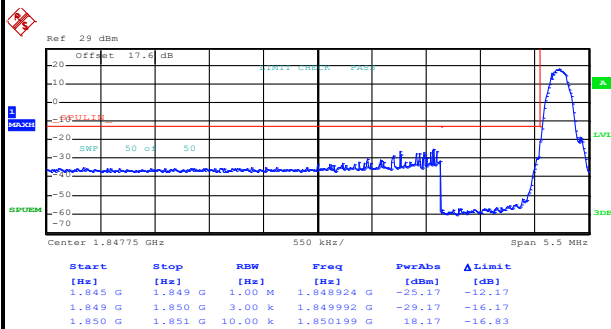
## Highest Band Edge



Date: 5.NOV.2019 18:10:55

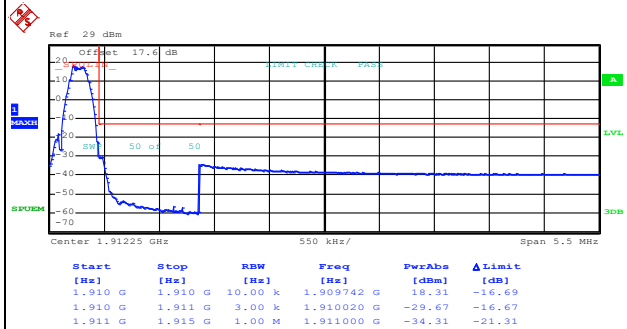
## GSM1900 (EDGE class 8)

## Lowest Band Edge



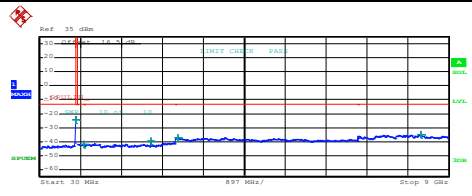
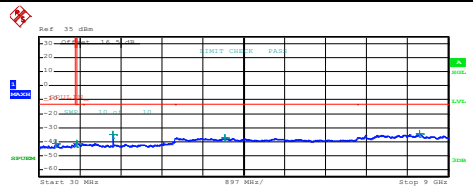
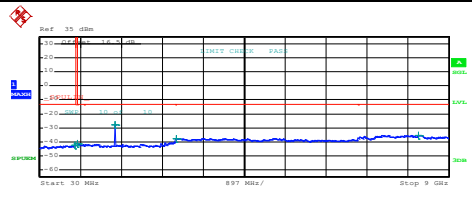
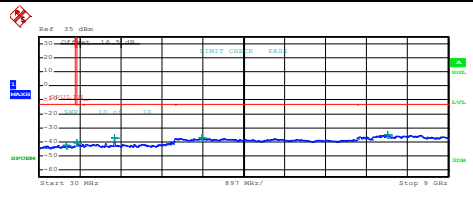
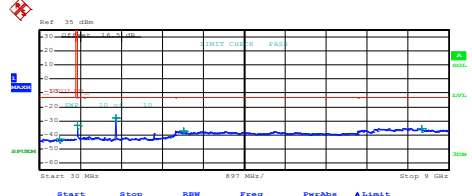
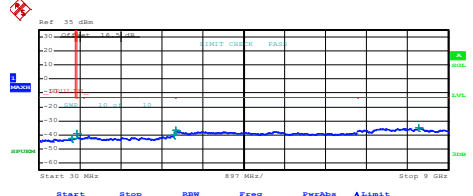
Date: 5.NOV.2019 17:55:18

## Highest Band Edge



Date: 5.NOV.2019 17:57:46

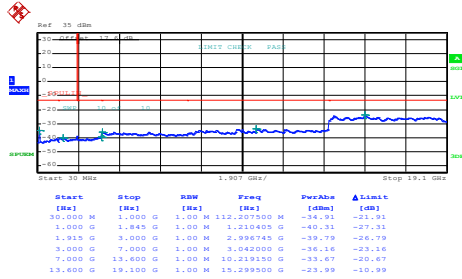
**Conducted Spurious Emission**

| GSM850 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | GSM850 (EDGE class 8) |        |              |        |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------|--------------|--------|--------|--------|------|------|------|------|-------|------|----------|-----------|--------|--------------|--------|--------|-----------|---------|--------|--------------|--------|--------|---------|---------|--------|------------|--------|--------|---------|---------|--------|------------|--------|--------|---------|---------|--------|------------|--------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|-----|------|--------|--------|------|------|------|------|-------|------|----------|-----------|--------|--------------|--------|--------|-----------|---------|--------|--------------|--------|--------|---------|---------|--------|------------|--------|--------|---------|---------|--------|------------|--------|--------|---------|---------|--------|------------|--------|--------|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Lowest Channel        |        |              |        |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| <div><table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>819.802500 M</td><td>-24.57</td><td>-11.57</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>996.338760 M</td><td>-41.67</td><td>-28.67</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>2.473000 G</td><td>-39.27</td><td>-26.27</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.067000 G</td><td>-37.21</td><td>-24.21</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.397000 G</td><td>-35.02</td><td>-22.02</td></tr></table><p>Date: 5.NOV.2019 17:17:51</p></div>   | Start                 | Stop   | RBW          | Freq   | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30.000 M | 820.000 M | 1.00 M | 819.802500 M | -24.57 | -11.57 | 850.000 M | 1.000 G | 1.00 M | 996.338760 M | -41.67 | -28.67 | 1.000 G | 3.000 G | 1.00 M | 2.473000 G | -39.27 | -26.27 | 3.000 G | 7.000 G | 1.00 M | 3.067000 G | -37.21 | -24.21 | 7.000 G | 9.000 G | 1.00 M | 8.397000 G | -35.02 | -22.02 | <div><table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>396.955000 M</td><td>-41.31</td><td>-28.31</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>856.196250 M</td><td>-41.46</td><td>-28.46</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>1.648500 G</td><td>-34.66</td><td>-21.66</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>4.095000 G</td><td>-37.24</td><td>-24.24</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.365000 G</td><td>-34.19</td><td>-21.19</td></tr></table><p>Date: 5.NOV.2019 17:26:08</p></div>   | Start | Stop | RBW | Freq | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30.000 M | 820.000 M | 1.00 M | 396.955000 M | -41.31 | -28.31 | 850.000 M | 1.000 G | 1.00 M | 856.196250 M | -41.46 | -28.46 | 1.000 G | 3.000 G | 1.00 M | 1.648500 G | -34.66 | -21.66 | 3.000 G | 7.000 G | 1.00 M | 4.095000 G | -37.24 | -24.24 | 7.000 G | 9.000 G | 1.00 M | 8.365000 G | -34.19 | -21.19 |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stop                  | RBW    | Freq         | PerAbn | ΔLimit |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | [Hz]                  | [Hz]   | [Hz]         | [dBm]  | [dB]   |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 820.000 M             | 1.00 M | 819.802500 M | -24.57 | -11.57 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 850.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.000 G               | 1.00 M | 996.338760 M | -41.67 | -28.67 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.000 G               | 1.00 M | 2.473000 G   | -39.27 | -26.27 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.000 G               | 1.00 M | 3.067000 G   | -37.21 | -24.21 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9.000 G               | 1.00 M | 8.397000 G   | -35.02 | -22.02 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stop                  | RBW    | Freq         | PerAbn | ΔLimit |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | [Hz]                  | [Hz]   | [Hz]         | [dBm]  | [dB]   |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 820.000 M             | 1.00 M | 396.955000 M | -41.31 | -28.31 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 850.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.000 G               | 1.00 M | 856.196250 M | -41.46 | -28.46 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.000 G               | 1.00 M | 1.648500 G   | -34.66 | -21.66 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.000 G               | 1.00 M | 4.095000 G   | -37.24 | -24.24 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9.000 G               | 1.00 M | 8.365000 G   | -34.19 | -21.19 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Middle Channel        |        |              |        |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| <div><table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>795.707500 M</td><td>-42.34</td><td>-29.34</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>861.813000 M</td><td>-41.60</td><td>-28.60</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>1.673000 G</td><td>-27.87</td><td>-14.87</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.030000 G</td><td>-37.55</td><td>-24.55</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.335000 G</td><td>-35.28</td><td>-22.28</td></tr></table><p>Date: 5.NOV.2019 17:18:44</p></div>  | Start                 | Stop   | RBW          | Freq   | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30.000 M | 820.000 M | 1.00 M | 795.707500 M | -42.34 | -29.34 | 850.000 M | 1.000 G | 1.00 M | 861.813000 M | -41.60 | -28.60 | 1.000 G | 3.000 G | 1.00 M | 1.673000 G | -27.87 | -14.87 | 3.000 G | 7.000 G | 1.00 M | 3.030000 G | -37.55 | -24.55 | 7.000 G | 9.000 G | 1.00 M | 8.335000 G | -35.28 | -22.28 | <div><table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>623.685000 M</td><td>-42.27</td><td>-29.27</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>856.720000 M</td><td>-40.74</td><td>-27.74</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>1.672500 G</td><td>-37.46</td><td>-24.46</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.595000 G</td><td>-37.17</td><td>-24.17</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>7.664500 G</td><td>-35.16</td><td>-22.16</td></tr></table><p>Date: 5.NOV.2019 17:26:59</p></div>  | Start | Stop | RBW | Freq | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30.000 M | 820.000 M | 1.00 M | 623.685000 M | -42.27 | -29.27 | 850.000 M | 1.000 G | 1.00 M | 856.720000 M | -40.74 | -27.74 | 1.000 G | 3.000 G | 1.00 M | 1.672500 G | -37.46 | -24.46 | 3.000 G | 7.000 G | 1.00 M | 3.595000 G | -37.17 | -24.17 | 7.000 G | 9.000 G | 1.00 M | 7.664500 G | -35.16 | -22.16 |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stop                  | RBW    | Freq         | PerAbn | ΔLimit |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | [Hz]                  | [Hz]   | [Hz]         | [dBm]  | [dB]   |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 820.000 M             | 1.00 M | 795.707500 M | -42.34 | -29.34 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 850.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.000 G               | 1.00 M | 861.813000 M | -41.60 | -28.60 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.000 G               | 1.00 M | 1.673000 G   | -27.87 | -14.87 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.000 G               | 1.00 M | 3.030000 G   | -37.55 | -24.55 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9.000 G               | 1.00 M | 8.335000 G   | -35.28 | -22.28 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stop                  | RBW    | Freq         | PerAbn | ΔLimit |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | [Hz]                  | [Hz]   | [Hz]         | [dBm]  | [dB]   |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 820.000 M             | 1.00 M | 623.685000 M | -42.27 | -29.27 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 850.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.000 G               | 1.00 M | 856.720000 M | -40.74 | -27.74 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.000 G               | 1.00 M | 1.672500 G   | -37.46 | -24.46 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.000 G               | 1.00 M | 3.595000 G   | -37.17 | -24.17 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9.000 G               | 1.00 M | 7.664500 G   | -35.16 | -22.16 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Highest Channel       |        |              |        |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| <div><table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>466.672500 M</td><td>-42.81</td><td>-29.81</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>850.036250 M</td><td>-33.25</td><td>-20.25</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>1.698000 G</td><td>-27.93</td><td>-14.93</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.183000 G</td><td>-37.34</td><td>-24.34</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.405000 G</td><td>-35.24</td><td>-22.24</td></tr></table><p>Date: 5.NOV.2019 17:19:37</p></div> | Start                 | Stop   | RBW          | Freq   | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30.000 M | 820.000 M | 1.00 M | 466.672500 M | -42.81 | -29.81 | 850.000 M | 1.000 G | 1.00 M | 850.036250 M | -33.25 | -20.25 | 1.000 G | 3.000 G | 1.00 M | 1.698000 G | -27.93 | -14.93 | 3.000 G | 7.000 G | 1.00 M | 3.183000 G | -37.34 | -24.34 | 7.000 G | 9.000 G | 1.00 M | 8.405000 G | -35.24 | -22.24 | <div><table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>751.685000 M</td><td>-42.45</td><td>-29.45</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>850.108750 M</td><td>-38.95</td><td>-25.95</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>2.995000 G</td><td>-40.30</td><td>-27.30</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.029000 G</td><td>-36.85</td><td>-23.85</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.360000 G</td><td>-34.94</td><td>-21.94</td></tr></table><p>Date: 5.NOV.2019 17:27:54</p></div> | Start | Stop | RBW | Freq | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30.000 M | 820.000 M | 1.00 M | 751.685000 M | -42.45 | -29.45 | 850.000 M | 1.000 G | 1.00 M | 850.108750 M | -38.95 | -25.95 | 1.000 G | 3.000 G | 1.00 M | 2.995000 G | -40.30 | -27.30 | 3.000 G | 7.000 G | 1.00 M | 3.029000 G | -36.85 | -23.85 | 7.000 G | 9.000 G | 1.00 M | 8.360000 G | -34.94 | -21.94 |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stop                  | RBW    | Freq         | PerAbn | ΔLimit |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | [Hz]                  | [Hz]   | [Hz]         | [dBm]  | [dB]   |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 820.000 M             | 1.00 M | 466.672500 M | -42.81 | -29.81 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 850.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.000 G               | 1.00 M | 850.036250 M | -33.25 | -20.25 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.000 G               | 1.00 M | 1.698000 G   | -27.93 | -14.93 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.000 G               | 1.00 M | 3.183000 G   | -37.34 | -24.34 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9.000 G               | 1.00 M | 8.405000 G   | -35.24 | -22.24 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Stop                  | RBW    | Freq         | PerAbn | ΔLimit |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | [Hz]                  | [Hz]   | [Hz]         | [dBm]  | [dB]   |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 820.000 M             | 1.00 M | 751.685000 M | -42.45 | -29.45 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 850.000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.000 G               | 1.00 M | 850.108750 M | -38.95 | -25.95 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.000 G               | 1.00 M | 2.995000 G   | -40.30 | -27.30 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.000 G               | 1.00 M | 3.029000 G   | -36.85 | -23.85 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7.000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9.000 G               | 1.00 M | 8.360000 G   | -34.94 | -21.94 |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |



## GSM1900 (GPRS class 8)

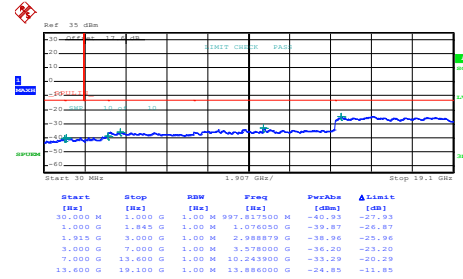
## Lowest Channel



Date: 5.NOV.2019 18:03:42

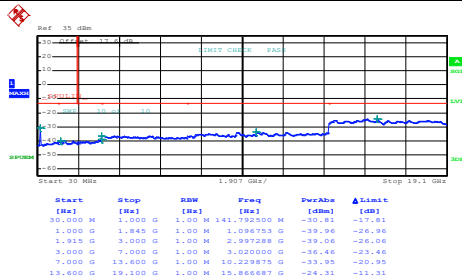
## GSM1900 (EDGE class 8)

## Lowest Channel



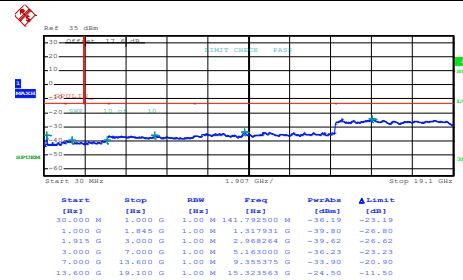
Date: 5.NOV.2019 17:49:38

## Middle Channel



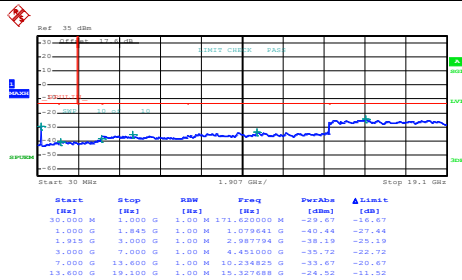
Date: 5.NOV.2019 18:04:34

## Middle Channel



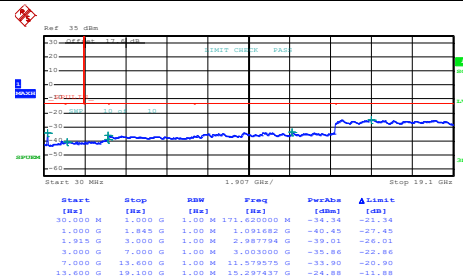
Date: 5.NOV.2019 17:50:32

## Highest Channel



Date: 5.NOV.2019 18:05:28

## Highest Channel



Date: 5.NOV.2019 17:51:33

## 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    | 0.0060                   | 0.0120                   | PASS            |
| 40               | Normal Voltage    | 0.0311                   | 0.0430                   |                 |
| 30               | Normal Voltage    | 0.0311                   | 0.0430                   |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000                   | 0.0000                   |                 |
| 10               | Normal Voltage    | 0.0311                   | 0.0430                   |                 |
| 0                | Normal Voltage    | 0.0311                   | 0.0430                   |                 |
| -10              | Normal Voltage    | 0.0311                   | 0.0430                   |                 |
| -20              | Normal Voltage    | 0.0084                   | 0.0060                   |                 |
| -30              | Normal Voltage    | n/a                      | n/a                      |                 |
| 20               | Maximum Voltage   | 0.0108                   | 0.0108                   |                 |
| 20               | Normal Voltage    | 0.0000                   | 0.0000                   |                 |
| 20               | Battery End Point | 0.0215                   | 0.0120                   |                 |

| 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    | 0.0096                    | 0.0117                    | PASS             |
| 40               | Normal Voltage    | 0.0117                    | 0.0101                    |                  |
| 30               | Normal Voltage    | 0.0053                    | 0.0085                    |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                    | 0.0000                    |                  |
| 10               | Normal Voltage    | 0.0037                    | 0.0090                    |                  |
| 0                | Normal Voltage    | 0.0064                    | 0.0021                    |                  |
| -10              | Normal Voltage    | 0.0106                    | 0.0053                    |                  |
| -20              | Normal Voltage    | 0.0080                    | 0.0064                    |                  |
| -30              | Normal Voltage    | n/a                       | n/a                       |                  |
| 20               | Maximum Voltage   | 0.0080                    | 0.0037                    |                  |
| 20               | Normal Voltage    | 0.0000                    | 0.0000                    |                  |
| 20               | Battery End Point | 0.0059                    | 0.0005                    |                  |

**Note:**

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block.
3. By manufacturer declaration, EUT will automatically inhibit from operating outside the lesser temperature range. (when temperature lower than -20 °C, EUT will be shut down automatically)



### A3. WCDMA

|                              |
|------------------------------|
| <b>Peak-to-Average Ratio</b> |
|------------------------------|

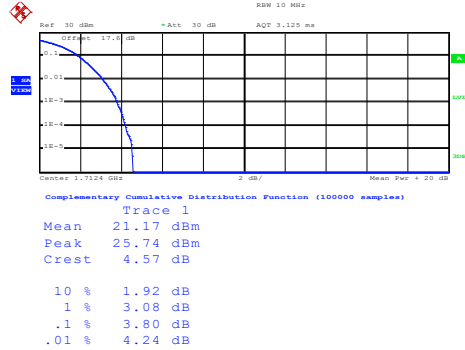
| Mode       | WCDMA Band V | WCDMA Band II | WCDMA Band IV | Limit: 13dB |
|------------|--------------|---------------|---------------|-------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  | Result      |
| Lowest CH  | 3.68         | 3.48          | 3.80          | PASS        |
| Middle CH  | 3.68         | 3.64          | 4.12          |             |
| Highest CH | 3.76         | 3.40          | 3.84          |             |



| WCDMA Band V (RMC 12.2Kbps)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | WCDMA Band II (RMC 12.2Kbps) |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|------|-----------|-------|---------|------|---------|-----|---------|------|---------|-------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|------|-----------|-------|---------|------|---------|-----|---------|------|---------|-------|---------|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Lowest Channel               |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| <p>Ref: 30 dBm, Att: 30 dB, AGT: 3.125 ms, RBW: 10 MHz, Center: 826.4 MHz</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table><tr><td>Mean</td><td>23.23 dBm</td></tr><tr><td>Peak</td><td>27.36 dBm</td></tr><tr><td>Crest</td><td>4.13 dB</td></tr></table> <table><tr><td>10 %</td><td>1.92 dB</td></tr><tr><td>1 %</td><td>3.00 dB</td></tr><tr><td>.1 %</td><td>3.68 dB</td></tr><tr><td>.01 %</td><td>3.92 dB</td></tr></table> <p>Date: 5.NOV.2019 17:04:30</p> | Mean                         | 23.23 dBm | Peak | 27.36 dBm | Crest | 4.13 dB | 10 % | 1.92 dB | 1 % | 3.00 dB | .1 % | 3.68 dB | .01 % | 3.92 dB | <p>Ref: 30 dBm, Att: 30 dB, AGT: 3.125 ms, RBW: 10 MHz, Center: 1.8524 GHz</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table><tr><td>Mean</td><td>22.27 dBm</td></tr><tr><td>Peak</td><td>26.16 dBm</td></tr><tr><td>Crest</td><td>3.89 dB</td></tr></table> <table><tr><td>10 %</td><td>1.84 dB</td></tr><tr><td>1 %</td><td>2.88 dB</td></tr><tr><td>.1 %</td><td>3.48 dB</td></tr><tr><td>.01 %</td><td>3.76 dB</td></tr></table> <p>Date: 4.NOV.2019 19:04:05</p> | Mean | 22.27 dBm | Peak | 26.16 dBm | Crest | 3.89 dB | 10 % | 1.84 dB | 1 % | 2.88 dB | .1 % | 3.48 dB | .01 % | 3.76 dB |
| Mean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 23.23 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Peak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 27.36 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Crest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.13 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.92 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.00 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.68 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.92 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Mean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 22.27 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Peak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 26.16 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Crest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.89 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.84 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.88 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.48 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.76 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Middle Channel               |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| <p>Ref: 30 dBm, Att: 30 dB, AGT: 3.125 ms, RBW: 10 MHz, Center: 836.6 MHz</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table><tr><td>Mean</td><td>22.88 dBm</td></tr><tr><td>Peak</td><td>27.01 dBm</td></tr><tr><td>Crest</td><td>4.13 dB</td></tr></table> <table><tr><td>10 %</td><td>1.92 dB</td></tr><tr><td>1 %</td><td>3.04 dB</td></tr><tr><td>.1 %</td><td>3.68 dB</td></tr><tr><td>.01 %</td><td>3.96 dB</td></tr></table> <p>Date: 5.NOV.2019 17:04:42</p> | Mean                         | 22.88 dBm | Peak | 27.01 dBm | Crest | 4.13 dB | 10 % | 1.92 dB | 1 % | 3.04 dB | .1 % | 3.68 dB | .01 % | 3.96 dB | <p>Ref: 30 dBm, Att: 30 dB, AGT: 3.125 ms, RBW: 10 MHz, Center: 1.85 GHz</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table><tr><td>Mean</td><td>22.01 dBm</td></tr><tr><td>Peak</td><td>26.16 dBm</td></tr><tr><td>Crest</td><td>4.15 dB</td></tr></table> <table><tr><td>10 %</td><td>1.88 dB</td></tr><tr><td>1 %</td><td>3.00 dB</td></tr><tr><td>.1 %</td><td>3.64 dB</td></tr><tr><td>.01 %</td><td>3.96 dB</td></tr></table> <p>Date: 4.NOV.2019 19:04:19</p>   | Mean | 22.01 dBm | Peak | 26.16 dBm | Crest | 4.15 dB | 10 % | 1.88 dB | 1 % | 3.00 dB | .1 % | 3.64 dB | .01 % | 3.96 dB |
| Mean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 22.88 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Peak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 27.01 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Crest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.13 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.92 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.04 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.68 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.96 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Mean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 22.01 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Peak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 26.16 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Crest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.15 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.88 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.00 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.64 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.96 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Highest Channel              |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| <p>Ref: 30 dBm, Att: 30 dB, AGT: 3.125 ms, RBW: 10 MHz, Center: 846.6 MHz</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table><tr><td>Mean</td><td>22.81 dBm</td></tr><tr><td>Peak</td><td>27.08 dBm</td></tr><tr><td>Crest</td><td>4.27 dB</td></tr></table> <table><tr><td>10 %</td><td>1.92 dB</td></tr><tr><td>1 %</td><td>3.04 dB</td></tr><tr><td>.1 %</td><td>3.76 dB</td></tr><tr><td>.01 %</td><td>4.08 dB</td></tr></table> <p>Date: 5.NOV.2019 17:04:53</p> | Mean                         | 22.81 dBm | Peak | 27.08 dBm | Crest | 4.27 dB | 10 % | 1.92 dB | 1 % | 3.04 dB | .1 % | 3.76 dB | .01 % | 4.08 dB | <p>Ref: 30 dBm, Att: 30 dB, AGT: 3.125 ms, RBW: 10 MHz, Center: 1.9076 GHz</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table><tr><td>Mean</td><td>21.99 dBm</td></tr><tr><td>Peak</td><td>25.81 dBm</td></tr><tr><td>Crest</td><td>3.82 dB</td></tr></table> <table><tr><td>10 %</td><td>1.84 dB</td></tr><tr><td>1 %</td><td>2.80 dB</td></tr><tr><td>.1 %</td><td>3.40 dB</td></tr><tr><td>.01 %</td><td>3.68 dB</td></tr></table> <p>Date: 4.NOV.2019 19:04:35</p> | Mean | 21.99 dBm | Peak | 25.81 dBm | Crest | 3.82 dB | 10 % | 1.84 dB | 1 % | 2.80 dB | .1 % | 3.40 dB | .01 % | 3.68 dB |
| Mean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 22.81 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Peak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 27.08 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Crest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.27 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.92 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.04 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.76 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4.08 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Mean                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 21.99 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Peak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25.81 dBm                    |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| Crest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.82 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.84 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.80 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.40 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.68 dB                      |           |      |           |       |         |      |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |           |      |           |       |         |      |         |     |         |      |         |       |         |

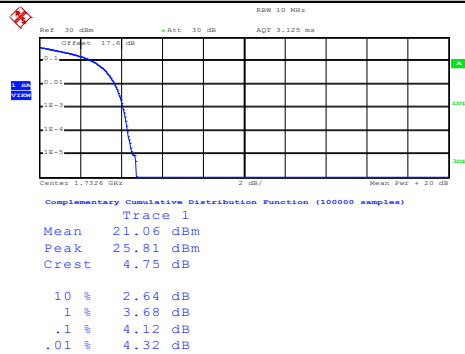
## WCDMA Band IV (RMC 12.2Kbps)

### Lowest Channel



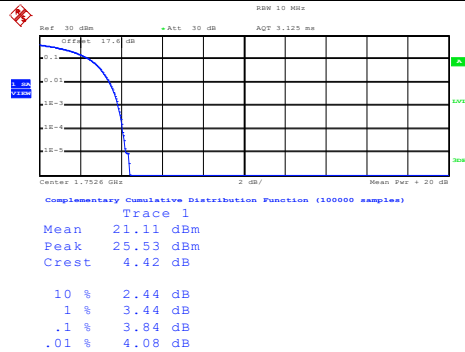
Date: 5.NOV.2019 16:28:26

### Middle Channel



Date: 5.NOV.2019 16:28:43

### Highest Channel



Date: 5.NOV.2019 16:28:58

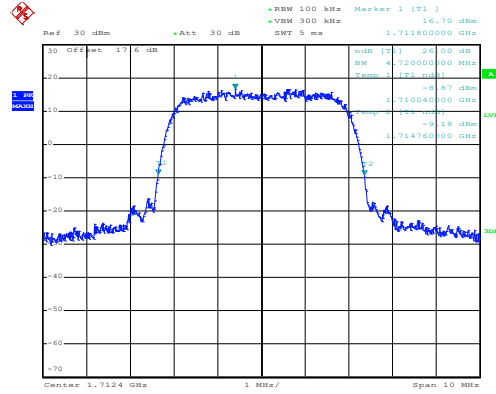
**26dB Bandwidth**

| Mode       | WCDMA Band V | WCDMA Band II | WCDMA Band IV |
|------------|--------------|---------------|---------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  |
| Lowest CH  | 4.69         | 4.7           | 4.72          |
| Middle CH  | 4.69         | 4.72          | 4.7           |
| Highest CH | 4.69         | 4.71          | 4.71          |



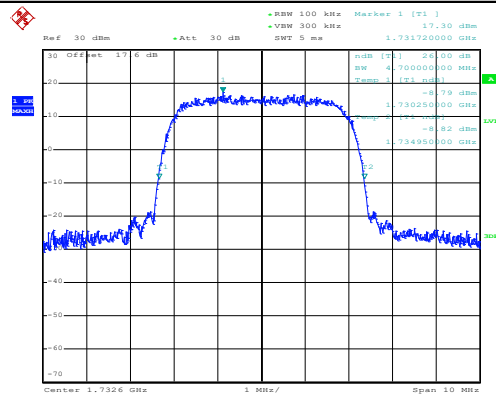
## WCDMA Band IV (RMC 12.2Kbps)

### Lowest Channel



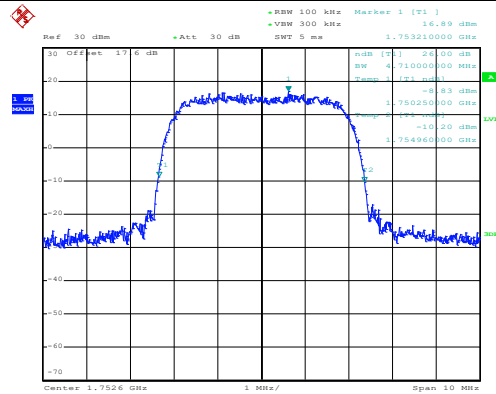
Date: 5.NOV.2019 16:15:03

### Middle Channel



Date: 5.NOV.2019 16:15:36

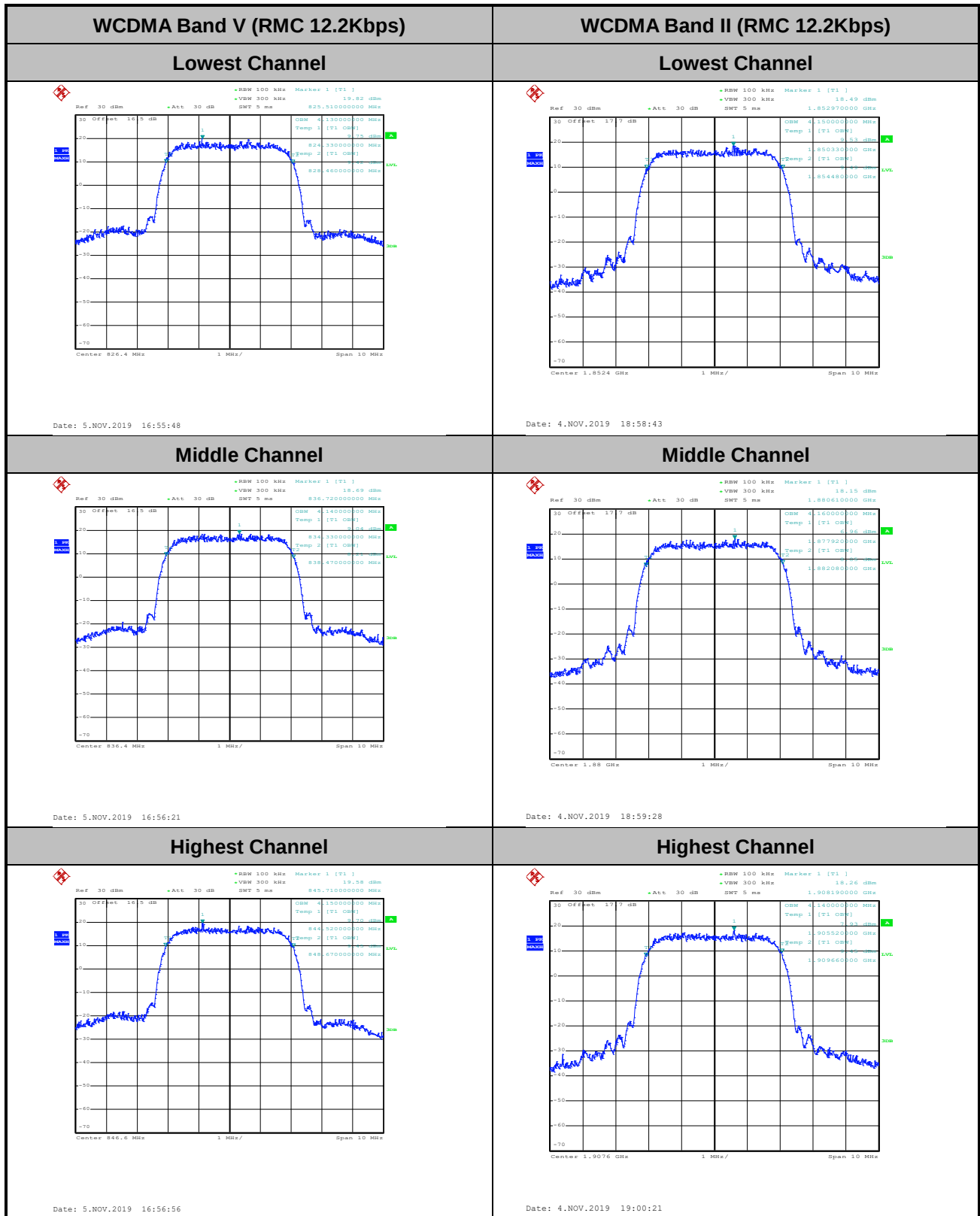
### Highest Channel



Date: 5.NOV.2019 16:16:08

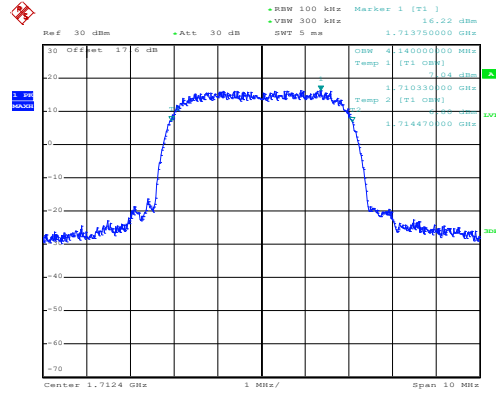
**Occupied Bandwidth**

| Mode       | WCDMA Band V | WCDMA Band II | WCDMA Band IV |
|------------|--------------|---------------|---------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  |
| Lowest CH  | 4.13         | 4.15          | 4.14          |
| Middle CH  | 4.14         | 4.16          | 4.14          |
| Highest CH | 4.15         | 4.14          | 4.13          |



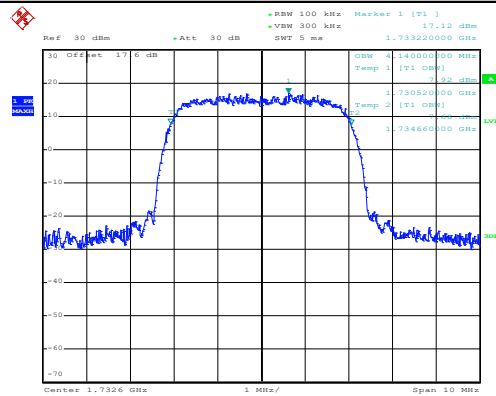
## WCDMA Band IV (RMC 12.2Kbps)

### Lowest Channel



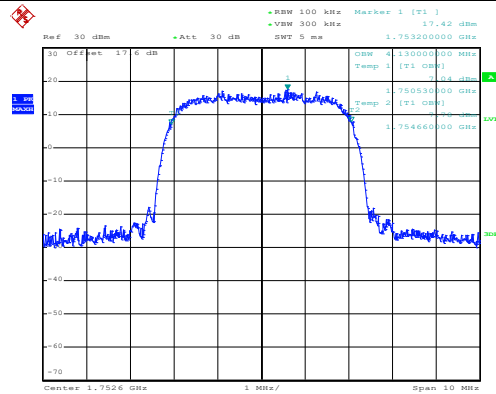
Date: 5.NOV.2019 16:24:08

### Middle Channel



Date: 5.NOV.2019 16:24:41

### Highest Channel



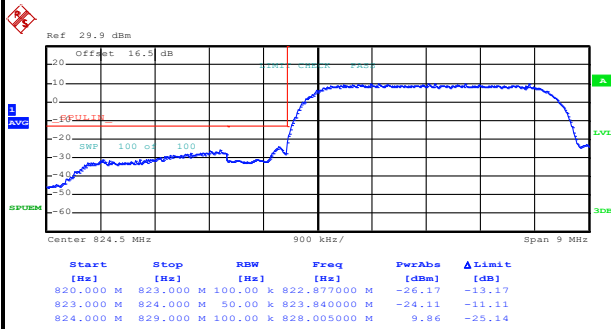
Date: 5.NOV.2019 16:25:14



## Conducted Band Edge

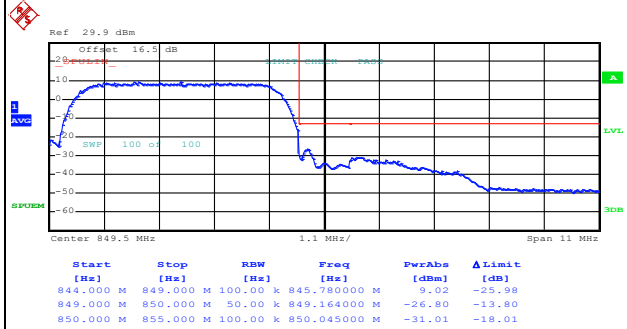
### WCDMA Band V (RMC 12.2Kbps)

#### Lowest Band Edge



Date: 5.NOV.2019 17:00:13

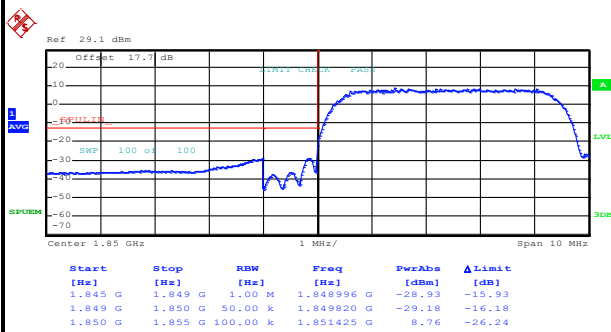
#### Highest Band Edge



Date: 5.NOV.2019 17:03:03

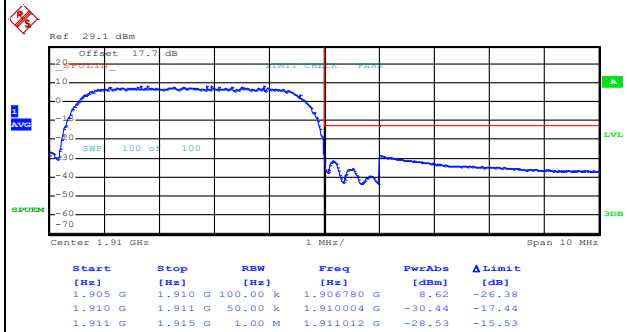
### WCDMA Band II (RMC 12.2Kbps)

#### Lowest Band Edge



Date: 4.NOV.2019 18:54:49

#### Highest Band Edge

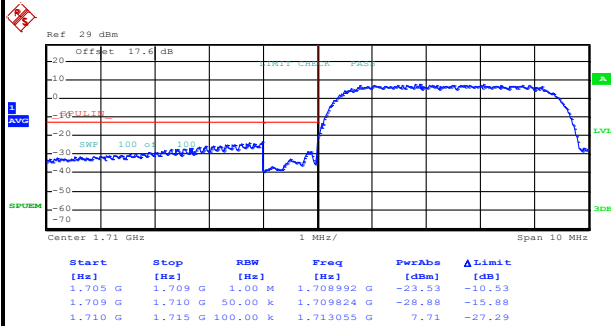


Date: 4.NOV.2019 18:57:58



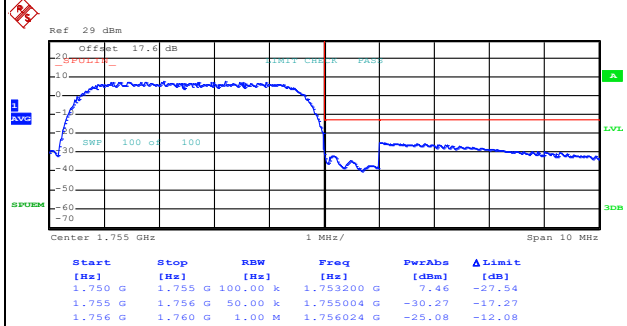
## WCDMA Band IV (RMC 12.2Kbps)

## Lowest Band Edge



Date: 5.NOV.2019 16:18:58

## Highest Band Edge



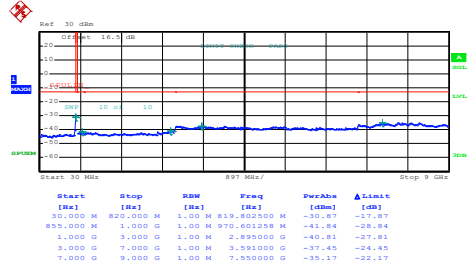
Date: 5.NOV.2019 16:21:50



# Conducted Spurious Emission

## WCDMA Band V (RMC 12.2Kbps)

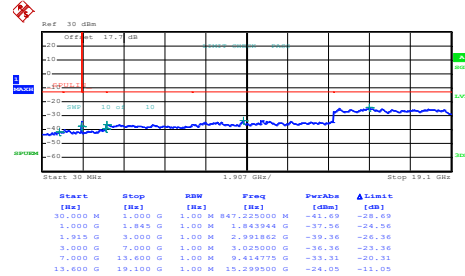
### Lowest Channel



Date: 5.NOV.2019 16:53:25

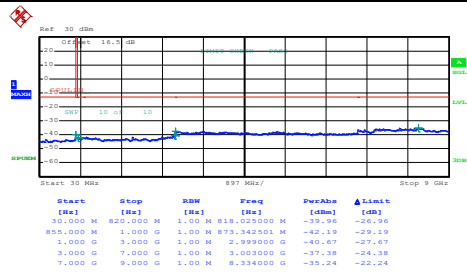
## WCDMA Band II (RMC 12.2Kbps)

### Lowest Channel



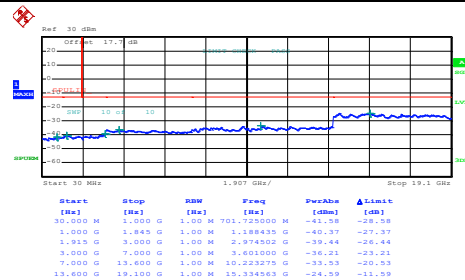
Date: 4.NOV.2019 19:01:31

### Middle Channel



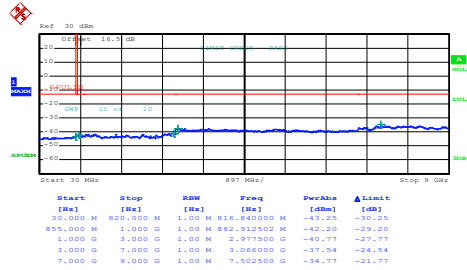
Date: 5.NOV.2019 16:54:16

### Middle Channel



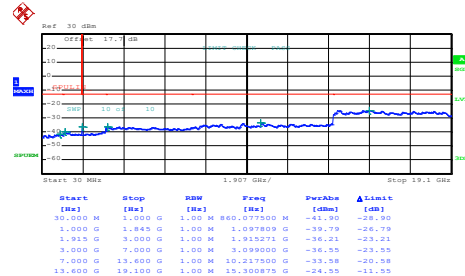
Date: 4.NOV.2019 19:02:34

### Highest Channel



Date: 5.NOV.2019 16:55:08

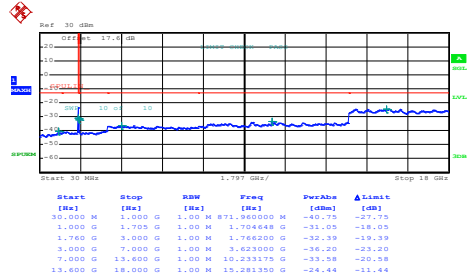
### Highest Channel



Date: 4.NOV.2019 19:03:27

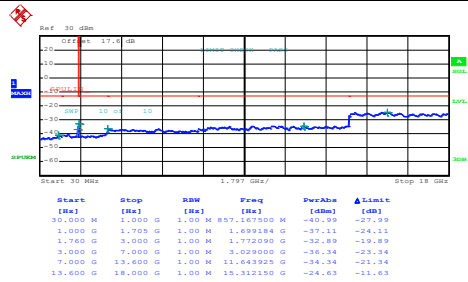
## WCDMA Band IV (RMC 12.2Kbps)

### Lowest Channel



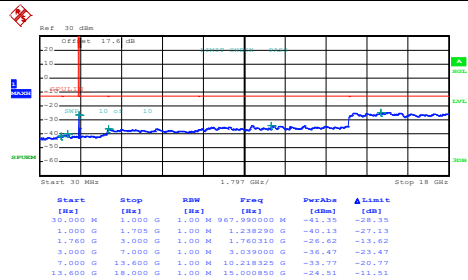
Date: 5.NOV.2019 16:26:17

### Middle Channel



Date: 5.NOV.2019 16:27:08

### Highest Channel



Date: 5.NOV.2019 16:27:59

## 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    | 0.0108                         | PASS            |
| 40               | Normal Voltage    | 0.0120                         |                 |
| 30               | Normal Voltage    | 0.0000                         |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000                         |                 |
| 10               | Normal Voltage    | 0.0012                         |                 |
| 0                | Normal Voltage    | 0.0012                         |                 |
| -10              | Normal Voltage    | 0.0024                         |                 |
| -20              | Normal Voltage    | 0.0036                         |                 |
| -30              | Normal Voltage    | n/a                            |                 |
| 20               | Maximum Voltage   | 0.0132                         |                 |
| 20               | Normal Voltage    | 0.0000                         |                 |
| 20               | Battery End Point | 0.0012                         |                 |

| 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    | 0.0074                          | PASS             |
| 40               | Normal Voltage    | 0.0074                          |                  |
| 30               | Normal Voltage    | 0.0074                          |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |                  |
| 10               | Normal Voltage    | 0.0000                          |                  |
| 0                | Normal Voltage    | 0.0000                          |                  |
| -10              | Normal Voltage    | 0.0005                          |                  |
| -20              | Normal Voltage    | 0.0005                          |                  |
| -30              | Normal Voltage    | n/a                             |                  |
| 20               | Maximum Voltage   | 0.0005                          |                  |
| 20               | Normal Voltage    | 0.0000                          |                  |
| 20               | Battery End Point | 0.0069                          |                  |

| Test Conditions  | Middle Channel    | WCDMA Band IV<br>(RMC 12.2Kbps) | Limit<br>Note 2. |
|------------------|-------------------|---------------------------------|------------------|
| Temperature (°C) | Voltage (Volt)    | Deviation (ppm)                 | Result           |
| 50               | Normal Voltage    | 0.0052                          | PASS             |
| 40               | Normal Voltage    | 0.0069                          |                  |
| 30               | Normal Voltage    | 0.0029                          |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |                  |
| 10               | Normal Voltage    | 0.0017                          |                  |
| 0                | Normal Voltage    | 0.0012                          |                  |
| -10              | Normal Voltage    | 0.0023                          |                  |
| -20              | Normal Voltage    | 0.0035                          |                  |
| -30              | Normal Voltage    | n/a                             |                  |
| 20               | Maximum Voltage   | 0.0006                          |                  |
| 20               | Normal Voltage    | 0.0000                          |                  |
| 20               | Battery End Point | 0.0006                          |                  |

**Note:**

1. Normal Voltage = 3.85V. ; Battery End Point (BEP) = 3.5V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block.
3. By manufacturer declaration, EUT will automatically inhibit from operating outside the lesser temperature range. (when temperature lower than -20 °C, EUT will be shut down automatically)

**Appendix B. Test Results of ERP/EIRP and Radiated Test****ERP/EIRP**

| Channel | Mode                                                | Conducted   |               | ERP      |        |
|---------|-----------------------------------------------------|-------------|---------------|----------|--------|
|         |                                                     | Power (dBm) | Power (Watts) | ERP(dBm) | ERP(W) |
| Lowest  | GSM850<br>GPRS class 8<br>(GT - LC = -2.5 dB)       | 32.88       | 1.9409        | 28.23    | 0.6653 |
| Middle  |                                                     | 32.99       | 1.9907        | 28.34    | 0.6823 |
| Highest |                                                     | 33.00       | 1.9953        | 28.35    | 0.6839 |
| Lowest  | GSM850<br>EDGE class 8<br>(GT - LC = -2.5 dB)       | 26.25       | 0.4217        | 21.60    | 0.1445 |
| Middle  |                                                     | 26.44       | 0.4406        | 21.79    | 0.1510 |
| Highest |                                                     | 26.48       | 0.4446        | 21.83    | 0.1524 |
| Lowest  | WCDMA Band V<br>RMC 12.2Kbps<br>(GT - LC = -2.5 dB) | 22.78       | 0.1897        | 18.13    | 0.0650 |
| Middle  |                                                     | 22.75       | 0.1884        | 18.10    | 0.0646 |
| Highest |                                                     | 22.82       | 0.1914        | 18.17    | 0.0656 |
| Limit   | ERP < 7W                                            | Result      |               | PASS     |        |

| Channel | Mode                                                | Conducted   |               | EIRP      |         |
|---------|-----------------------------------------------------|-------------|---------------|-----------|---------|
|         |                                                     | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest  | GSM1900<br>GPRS class 8<br>(GT - LC = 1.7 dB)       | 30.13       | 1.0304        | 31.83     | 1.5241  |
| Middle  |                                                     | 30.05       | 1.0116        | 31.75     | 1.4962  |
| Highest |                                                     | 30.21       | 1.0495        | 31.91     | 1.5524  |
| Lowest  | GSM1900<br>EDGE class 8<br>(GT - LC = 1.7 dB)       | 25.55       | 0.3589        | 27.25     | 0.5309  |
| Middle  |                                                     | 25.56       | 0.3597        | 27.26     | 0.5321  |
| Highest |                                                     | 25.64       | 0.3664        | 27.34     | 0.5420  |
| Lowest  | WCDMA Band II<br>RMC 12.2Kbps<br>(GT - LC = 1.7 dB) | 21.81       | 0.1517        | 23.51     | 0.2244  |
| Middle  |                                                     | 21.78       | 0.1507        | 23.48     | 0.2228  |
| Highest |                                                     | 21.85       | 0.1531        | 23.55     | 0.2265  |
| Limit   | EIRP < 2W                                           | Result      |               | PASS      |         |

| Channel | Mode                                                | Conducted   |               | EIRP      |         |
|---------|-----------------------------------------------------|-------------|---------------|-----------|---------|
|         |                                                     | Power (dBm) | Power (Watts) | EIRP(dBm) | EIRP(W) |
| Lowest  | WCDMA Band IV<br>RMC 12.2Kbps<br>(GT - LC = 1.7 dB) | 23.15       | 0.2065        | 24.85     | 0.3055  |
| Middle  |                                                     | 23.12       | 0.2051        | 24.82     | 0.3034  |
| Highest |                                                     | 23.14       | 0.2061        | 24.84     | 0.3048  |
| Limit   | EIRP < 1W                                           | Result      |               | PASS      |         |

## Radiated Spurious Emission

### GPRS 850

| GPRS 850 |                                                                                  |                |                         |                  |                          |                               |                        |                            |                       |
|----------|----------------------------------------------------------------------------------|----------------|-------------------------|------------------|--------------------------|-------------------------------|------------------------|----------------------------|-----------------------|
| Channel  | Frequency<br>( MHz )                                                             | ERP<br>( dBm ) | Over<br>Limit<br>( dB ) | Limit<br>( dBm ) | Read<br>Level<br>( dBm ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Polarization<br>(H/V) |
| Lowest   | 1648                                                                             | -46.71         | -33.71                  | -13              | -53.47                   | 25.1                          | 15.87                  | 34.21                      | H                     |
|          | 2472                                                                             | -41.78         | -28.78                  | -13              | -52.55                   | 27.5                          | 16.87                  | 33.6                       | H                     |
|          | 3296                                                                             | -60.17         | -47.17                  | -13              | -72.92                   | 28.42                         | 17.8                   | 33.47                      | H                     |
|          |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|          | 1648                                                                             | -41.97         | -28.97                  | -13              | -48.73                   | 25.1                          | 15.87                  | 34.21                      | V                     |
|          | 2472                                                                             | -39.24         | -26.24                  | -13              | -50.01                   | 27.5                          | 16.87                  | 33.6                       | V                     |
|          | 3296                                                                             | -61.01         | -48.01                  | -13              | -73.76                   | 28.42                         | 17.8                   | 33.47                      | V                     |
|          |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| Middle   | 1672                                                                             | -42.77         | -29.77                  | -13              | -49.61                   | 25.14                         | 15.88                  | 34.18                      | H                     |
|          | 2512                                                                             | -45.82         | -32.82                  | -13              | -56.66                   | 27.5                          | 16.93                  | 33.59                      | H                     |
|          | 3344                                                                             | -61.61         | -48.61                  | -13              | -74.36                   | 28.31                         | 17.89                  | 33.45                      | H                     |
|          |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|          | 1672                                                                             | -42.43         | -29.43                  | -13              | -49.27                   | 25.14                         | 15.88                  | 34.18                      | V                     |
|          | 2512                                                                             | -41.79         | -28.79                  | -13              | -52.63                   | 27.5                          | 16.93                  | 33.59                      | V                     |
|          | 3344                                                                             | -60.37         | -47.37                  | -13              | -73.12                   | 28.31                         | 17.89                  | 33.45                      | V                     |
|          |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| Highest  | 1696                                                                             | -47.17         | -34.17                  | -13              | -54.11                   | 25.19                         | 15.9                   | 34.15                      | H                     |
|          | 2544                                                                             | -44.25         | -31.25                  | -13              | -55.13                   | 27.5                          | 16.97                  | 33.59                      | H                     |
|          | 3392                                                                             | -59.6          | -46.6                   | -13              | -72.53                   | 28.38                         | 17.99                  | 33.44                      | H                     |
|          |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|          | 1696                                                                             | -44.25         | -31.25                  | -13              | -51.19                   | 25.19                         | 15.9                   | 34.15                      | V                     |
|          | 2544                                                                             | -42.94         | -29.94                  | -13              | -53.82                   | 27.5                          | 16.97                  | 33.59                      | V                     |
|          | 3392                                                                             | -59.44         | -46.44                  | -13              | -72.37                   | 28.38                         | 17.99                  | 33.44                      | V                     |
|          |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| Remark   | Spurious emissions within 30-1000MHz were found more than 20dB below limit line. |                |                         |                  |                          |                               |                        |                            |                       |

## EDGE 850

| EDGE 850       |                                                                                  |                |                         |                  |                          |                               |                        |                            |                       |
|----------------|----------------------------------------------------------------------------------|----------------|-------------------------|------------------|--------------------------|-------------------------------|------------------------|----------------------------|-----------------------|
| Channel        | Frequency<br>( MHz )                                                             | ERP<br>( dBm ) | Over<br>Limit<br>( dB ) | Limit<br>( dBm ) | Read<br>Level<br>( dBm ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Polarization<br>(H/V) |
| <b>Lowest</b>  | 1648                                                                             | -44.96         | -31.96                  | -13              | -51.72                   | 25.1                          | 15.87                  | 34.21                      | H                     |
|                | 2472                                                                             | -45.41         | -32.41                  | -13              | -56.18                   | 27.5                          | 16.87                  | 33.6                       | H                     |
|                | 3296                                                                             | -61.6          | -48.6                   | -13              | -74.35                   | 28.42                         | 17.8                   | 33.47                      | H                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|                | 1648                                                                             | -43.72         | -30.72                  | -13              | -50.48                   | 25.1                          | 15.87                  | 34.21                      | V                     |
|                | 2472                                                                             | -42.81         | -29.81                  | -13              | -53.58                   | 27.5                          | 16.87                  | 33.6                       | V                     |
|                | 3296                                                                             | -60.62         | -47.62                  | -13              | -73.37                   | 28.42                         | 17.8                   | 33.47                      | V                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| <b>Middle</b>  | 1672                                                                             | -44.25         | -31.25                  | -13              | -51.09                   | 25.14                         | 15.88                  | 34.18                      | H                     |
|                | 2512                                                                             | -41.63         | -28.63                  | -13              | -52.47                   | 27.5                          | 16.93                  | 33.59                      | H                     |
|                | 3344                                                                             | -61.32         | -48.32                  | -13              | -74.07                   | 28.31                         | 17.89                  | 33.45                      | H                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|                | 1672                                                                             | -42.9          | -29.9                   | -13              | -49.74                   | 25.14                         | 15.88                  | 34.18                      | V                     |
|                | 2512                                                                             | -38.12         | -25.12                  | -13              | -48.96                   | 27.5                          | 16.93                  | 33.59                      | V                     |
|                | 3344                                                                             | -61.13         | -48.13                  | -13              | -73.88                   | 28.31                         | 17.89                  | 33.45                      | V                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| <b>Highest</b> | 1696                                                                             | -43.3          | -30.3                   | -13              | -50.24                   | 25.19                         | 15.9                   | 34.15                      | H                     |
|                | 2544                                                                             | -41.62         | -28.62                  | -13              | -52.5                    | 27.5                          | 16.97                  | 33.59                      | H                     |
|                | 3392                                                                             | -60.52         | -47.52                  | -13              | -73.45                   | 28.38                         | 17.99                  | 33.44                      | H                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|                | 1696                                                                             | -44.16         | -31.16                  | -13              | -51.1                    | 25.19                         | 15.9                   | 34.15                      | V                     |
|                | 2544                                                                             | -41.69         | -28.69                  | -13              | -52.57                   | 27.5                          | 16.97                  | 33.59                      | V                     |
|                | 3392                                                                             | -59.36         | -46.36                  | -13              | -72.29                   | 28.38                         | 17.99                  | 33.44                      | V                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| <b>Remark</b>  | Spurious emissions within 30-1000MHz were found more than 20dB below limit line. |                |                         |                  |                          |                               |                        |                            |                       |

## WCDMA 850

| WCDMA 850      |                                                                                  |                |                         |                  |                          |                               |                        |                            |                       |
|----------------|----------------------------------------------------------------------------------|----------------|-------------------------|------------------|--------------------------|-------------------------------|------------------------|----------------------------|-----------------------|
| Channel        | Frequency<br>( MHz )                                                             | ERP<br>( dBm ) | Over<br>Limit<br>( dB ) | Limit<br>( dBm ) | Read<br>Level<br>( dBm ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Polarization<br>(H/V) |
| <b>Lowest</b>  | 1648                                                                             | -64.65         | -51.65                  | -13              | -71.41                   | 25.1                          | 15.87                  | 34.21                      | H                     |
|                | 2480                                                                             | -60.79         | -47.79                  | -13              | -71.57                   | 27.5                          | 16.88                  | 33.6                       | H                     |
|                | 3296                                                                             | -61.73         | -48.73                  | -13              | -74.48                   | 28.42                         | 17.8                   | 33.47                      | H                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|                | 1648                                                                             | -63.77         | -50.77                  | -13              | -70.53                   | 25.1                          | 15.87                  | 34.21                      | V                     |
|                | 2480                                                                             | -46.42         | -33.42                  | -13              | -57.2                    | 27.5                          | 16.88                  | 33.6                       | V                     |
|                | 3296                                                                             | -61.89         | -48.89                  | -13              | -74.64                   | 28.42                         | 17.8                   | 33.47                      | V                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| <b>Middle</b>  | 1672                                                                             | -59.03         | -46.03                  | -13              | -65.87                   | 25.14                         | 15.88                  | 34.18                      | H                     |
|                | 2512                                                                             | -48.89         | -35.89                  | -13              | -59.73                   | 27.5                          | 16.93                  | 33.59                      | H                     |
|                | 3344                                                                             | -61.32         | -48.32                  | -13              | -74.07                   | 28.31                         | 17.89                  | 33.45                      | H                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|                | 1672                                                                             | -58.73         | -45.73                  | -13              | -65.57                   | 25.14                         | 15.88                  | 34.18                      | V                     |
|                | 2512                                                                             | -56.04         | -43.04                  | -13              | -66.88                   | 27.5                          | 16.93                  | 33.59                      | V                     |
|                | 3344                                                                             | -59.57         | -46.57                  | -13              | -72.32                   | 28.31                         | 17.89                  | 33.45                      | V                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| <b>Highest</b> | 1696                                                                             | -57.8          | -44.8                   | -13              | -64.74                   | 25.19                         | 15.9                   | 34.15                      | H                     |
|                | 2544                                                                             | -61.15         | -48.15                  | -13              | -72.03                   | 27.5                          | 16.97                  | 33.59                      | H                     |
|                | 3392                                                                             | -61.21         | -48.21                  | -13              | -74.14                   | 28.38                         | 17.99                  | 33.44                      | H                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | H                     |
|                | 1696                                                                             | -58.94         | -45.94                  | -13              | -65.88                   | 25.19                         | 15.9                   | 34.15                      | V                     |
|                | 2544                                                                             | -57.52         | -44.52                  | -13              | -68.4                    | 27.5                          | 16.97                  | 33.59                      | V                     |
|                | 3392                                                                             | -60.17         | -47.17                  | -13              | -73.1                    | 28.38                         | 17.99                  | 33.44                      | V                     |
|                |                                                                                  |                |                         |                  |                          |                               |                        |                            | V                     |
| <b>Remark</b>  | Spurious emissions within 30-1000MHz were found more than 20dB below limit line. |                |                         |                  |                          |                               |                        |                            |                       |

## GPRS 1900

| GPRS 1900      |                                                                                  |                 |                         |                  |                          |                               |                        |                            |                       |
|----------------|----------------------------------------------------------------------------------|-----------------|-------------------------|------------------|--------------------------|-------------------------------|------------------------|----------------------------|-----------------------|
| Channel        | Frequency<br>( MHz )                                                             | EIRP<br>( dBm ) | Over<br>Limit<br>( dB ) | Limit<br>( dBm ) | Read<br>Level<br>( dBm ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Polarization<br>(H/V) |
| <b>Lowest</b>  | 3702                                                                             | -50.15          | -37.15                  | -13              | -77.16                   | 48.58                         | 11.76                  | 33.33                      | H                     |
|                | 5550                                                                             | -45.7           | -32.7                   | -13              | -77.83                   | 53.5                          | 11.76                  | 33.13                      | H                     |
|                | 7398                                                                             | -53.58          | -40.58                  | -13              | -89.05                   | 57.78                         | 11.76                  | 34.07                      | H                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | H                     |
|                | 3702                                                                             | -54.97          | -41.97                  | -13              | -83.15                   | 49.75                         | 11.76                  | 33.33                      | V                     |
|                | 5550                                                                             | -44.74          | -31.74                  | -13              | -76.96                   | 53.59                         | 11.76                  | 33.13                      | V                     |
|                | 7398                                                                             | -53.97          | -40.97                  | -13              | -89.23                   | 57.57                         | 11.76                  | 34.07                      | V                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | V                     |
| <b>Middle</b>  | 3762                                                                             | -55.25          | -42.25                  | -13              | -82.45                   | 48.75                         | 11.76                  | 33.31                      | H                     |
|                | 5640                                                                             | -44.7           | -31.7                   | -13              | -76.73                   | 53.42                         | 11.76                  | 33.15                      | H                     |
|                | 7520                                                                             | -53.46          | -40.46                  | -13              | -88.72                   | 57.64                         | 11.76                  | 34.14                      | H                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | H                     |
|                | 3762                                                                             | -54.02          | -41.02                  | -13              | -82.43                   | 49.96                         | 11.76                  | 33.31                      | V                     |
|                | 5640                                                                             | -45.33          | -32.33                  | -13              | -77.53                   | 53.59                         | 11.76                  | 33.15                      | V                     |
|                | 7518                                                                             | -53.68          | -40.68                  | -13              | -88.99                   | 57.69                         | 11.76                  | 34.14                      | V                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | V                     |
| <b>Highest</b> | 3822                                                                             | -55.86          | -42.86                  | -13              | -83.2                    | 48.87                         | 11.76                  | 33.29                      | H                     |
|                | 5730                                                                             | -52.78          | -39.78                  | -13              | -84.85                   | 53.49                         | 11.76                  | 33.18                      | H                     |
|                | 7638                                                                             | -53.03          | -40.03                  | -13              | -88.51                   | 57.92                         | 11.76                  | 34.2                       | H                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | H                     |
|                | 3822                                                                             | -53.84          | -40.84                  | -13              | -82.4                    | 50.09                         | 11.76                  | 33.29                      | V                     |
|                | 5730                                                                             | -42.51          | -29.51                  | -13              | -74.79                   | 53.7                          | 11.76                  | 33.18                      | V                     |
|                | 7638                                                                             | -52.74          | -39.74                  | -13              | -87.97                   | 57.67                         | 11.76                  | 34.2                       | V                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | V                     |
| <b>Remark</b>  | Spurious emissions within 30-1000MHz were found more than 20dB below limit line. |                 |                         |                  |                          |                               |                        |                            |                       |

## EDGE 1900

| EDGE 1900      |                                                                                  |                 |                         |                  |                          |                               |                        |                            |                       |
|----------------|----------------------------------------------------------------------------------|-----------------|-------------------------|------------------|--------------------------|-------------------------------|------------------------|----------------------------|-----------------------|
| Channel        | Frequency<br>( MHz )                                                             | EIRP<br>( dBm ) | Over<br>Limit<br>( dB ) | Limit<br>( dBm ) | Read<br>Level<br>( dBm ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Polarization<br>(H/V) |
| <b>Lowest</b>  | 3702                                                                             | -51.94          | -38.94                  | -13              | -78.95                   | 48.58                         | 11.76                  | 33.33                      | H                     |
|                | 5556                                                                             | -40.68          | -27.68                  | -13              | -72.77                   | 53.46                         | 11.76                  | 33.13                      | H                     |
|                | 7398                                                                             | -53.87          | -40.87                  | -13              | -89.34                   | 57.78                         | 11.76                  | 34.07                      | H                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | H                     |
|                | 3702                                                                             | -54.19          | -41.19                  | -13              | -82.37                   | 49.75                         | 11.76                  | 33.33                      | V                     |
|                | 5556                                                                             | -38.06          | -25.06                  | -13              | -70.27                   | 53.58                         | 11.76                  | 33.13                      | V                     |
|                | 7398                                                                             | -52.92          | -39.92                  | -13              | -88.18                   | 57.57                         | 11.76                  | 34.07                      | V                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | V                     |
| <b>Middle</b>  | 3762                                                                             | -53.11          | -40.11                  | -13              | -80.31                   | 48.75                         | 11.76                  | 33.31                      | H                     |
|                | 5640                                                                             | -42.15          | -29.15                  | -13              | -74.18                   | 53.42                         | 11.76                  | 33.15                      | H                     |
|                | 7518                                                                             | -53.51          | -40.51                  | -13              | -88.77                   | 57.64                         | 11.76                  | 34.14                      | H                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | H                     |
|                | 3762                                                                             | -54.72          | -41.72                  | -13              | -83.13                   | 49.96                         | 11.76                  | 33.31                      | V                     |
|                | 5640                                                                             | -40.97          | -27.97                  | -13              | -73.17                   | 53.59                         | 11.76                  | 33.15                      | V                     |
|                | 7518                                                                             | -53.6           | -40.6                   | -13              | -88.91                   | 57.69                         | 11.76                  | 34.14                      | V                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | V                     |
| <b>Highest</b> | 3822                                                                             | -54.82          | -41.82                  | -13              | -82.16                   | 48.87                         | 11.76                  | 33.29                      | H                     |
|                | 5730                                                                             | -49.56          | -36.56                  | -13              | -81.63                   | 53.49                         | 11.76                  | 33.18                      | H                     |
|                | 7638                                                                             | -52.78          | -39.78                  | -13              | -88.26                   | 57.92                         | 11.76                  | 34.2                       | H                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | H                     |
|                | 3822                                                                             | -53.57          | -40.57                  | -13              | -82.13                   | 50.09                         | 11.76                  | 33.29                      | V                     |
|                | 5730                                                                             | -48.16          | -35.16                  | -13              | -80.44                   | 53.7                          | 11.76                  | 33.18                      | V                     |
|                | 7638                                                                             | -52.21          | -39.21                  | -13              | -87.44                   | 57.67                         | 11.76                  | 34.2                       | V                     |
|                |                                                                                  |                 |                         |                  |                          |                               |                        |                            | V                     |
| <b>Remark</b>  | Spurious emissions within 30-1000MHz were found more than 20dB below limit line. |                 |                         |                  |                          |                               |                        |                            |                       |

**WCDMA 1900**

| WCDMA 1900 |                                                                                  |                 |                         |                  |                          |                               |                        |                            |                       |
|------------|----------------------------------------------------------------------------------|-----------------|-------------------------|------------------|--------------------------|-------------------------------|------------------------|----------------------------|-----------------------|
| Channel    | Frequency<br>( MHz )                                                             | EIRP<br>( dBm ) | Over<br>Limit<br>( dB ) | Limit<br>( dBm ) | Read<br>Level<br>( dBm ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Polarization<br>(H/V) |
| Lowest     | 3708                                                                             | -55.52          | -42.52                  | -13              | -72.39                   | 29.32                         | 20.88                  | 33.33                      | H                     |
|            | 5556                                                                             | -52.14          | -39.14                  | -13              | -73.52                   | 31.9                          | 22.61                  | 33.13                      | H                     |
|            | 7404                                                                             | -42.4           | -29.4                   | -13              | -69.23                   | 36.61                         | 24.29                  | 34.07                      | H                     |
|            | 9262.5                                                                           | -41.39          | -28.39                  | -13              | -72.33                   | 38.93                         | 26.1                   | 34.09                      | H                     |
|            | 3708                                                                             | -53.38          | -40.38                  | -13              | -70.25                   | 29.32                         | 20.88                  | 33.33                      | V                     |
|            | 5556                                                                             | -53.52          | -40.52                  | -13              | -74.9                    | 31.9                          | 22.61                  | 33.13                      | V                     |
|            | 7404                                                                             | -46             | -33                     | -13              | -72.83                   | 36.61                         | 24.29                  | 34.07                      | V                     |
|            | 9262.5                                                                           | -44.46          | -31.46                  | -13              | -75.4                    | 38.93                         | 26.1                   | 34.09                      | V                     |
| Middle     | 3756                                                                             | -53.86          | -40.86                  | -13              | -70.87                   | 29.42                         | 20.9                   | 33.31                      | H                     |
|            | 5646                                                                             | -49.58          | -36.58                  | -13              | -71.03                   | 31.9                          | 22.71                  | 33.16                      | H                     |
|            | 7524                                                                             | -41.06          | -28.06                  | -13              | -67.99                   | 36.65                         | 24.42                  | 34.14                      | H                     |
|            | 9399                                                                             | -40.75          | -27.75                  | -13              | -72.41                   | 39                            | 26.69                  | 34.03                      | H                     |
|            | 3756                                                                             | -53.76          | -40.76                  | -13              | -70.77                   | 29.42                         | 20.9                   | 33.31                      | V                     |
|            | 5646                                                                             | -51.86          | -38.86                  | -13              | -73.31                   | 31.9                          | 22.71                  | 33.16                      | V                     |
|            | 7524                                                                             | -45.75          | -32.75                  | -13              | -72.68                   | 36.65                         | 24.42                  | 34.14                      | V                     |
|            | 9399                                                                             | -43.8           | -30.8                   | -13              | -75.46                   | 39                            | 26.69                  | 34.03                      | V                     |
| Highest    | 3816                                                                             | -50.8           | -37.8                   | -13              | -68.09                   | 29.63                         | 20.95                  | 33.29                      | H                     |
|            | 5718                                                                             | -49.29          | -36.29                  | -13              | -70.88                   | 32.04                         | 22.73                  | 33.18                      | H                     |
|            | 7626                                                                             | -40.59          | -27.59                  | -13              | -67.42                   | 36.5                          | 24.53                  | 34.2                       | H                     |
|            | 9535.5                                                                           | -41.16          | -28.16                  | -13              | -73.18                   | 38.87                         | 27.12                  | 33.97                      | H                     |
|            | 3816                                                                             | -51.48          | -38.48                  | -13              | -68.77                   | 29.63                         | 20.95                  | 33.29                      | V                     |
|            | 5718                                                                             | -51.39          | -38.39                  | -13              | -72.98                   | 32.04                         | 22.73                  | 33.18                      | V                     |
|            | 7626                                                                             | -45.61          | -32.61                  | -13              | -72.44                   | 36.5                          | 24.53                  | 34.2                       | V                     |
|            | 9535.5                                                                           | -43.41          | -30.41                  | -13              | -75.43                   | 38.87                         | 27.12                  | 33.97                      | V                     |
| Remark     | Spurious emissions within 30-1000MHz were found more than 20dB below limit line. |                 |                         |                  |                          |                               |                        |                            |                       |

## WCDMA 1700

| WCDMA 1700     |                                                                                  |                 |                         |                  |                          |                               |                        |                            |                       |
|----------------|----------------------------------------------------------------------------------|-----------------|-------------------------|------------------|--------------------------|-------------------------------|------------------------|----------------------------|-----------------------|
| Channel        | Frequency<br>( MHz )                                                             | EIRP<br>( dBm ) | Over<br>Limit<br>( dB ) | Limit<br>( dBm ) | Read<br>Level<br>( dBm ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Polarization<br>(H/V) |
| <b>Lowest</b>  | 3424.8                                                                           | -58.12          | -45.12                  | -13              | -73.96                   | 28.45                         | 20.82                  | 33.43                      | H                     |
|                | 5136                                                                             | -51.3           | -38.3                   | -13              | -72.54                   | 32.07                         | 22.29                  | 33.12                      | H                     |
|                | 6852                                                                             | -45.32          | -32.32                  | -13              | -71.06                   | 34.91                         | 24.58                  | 33.75                      | H                     |
|                | 8568                                                                             | -44.3           | -31.3                   | -13              | -72.34                   | 37.24                         | 25.18                  | 34.38                      | H                     |
|                | 3424.8                                                                           | -58.27          | -45.27                  | -13              | -74.11                   | 28.45                         | 20.82                  | 33.43                      | V                     |
|                | 5136                                                                             | -49.12          | -36.12                  | -13              | -70.36                   | 32.07                         | 22.29                  | 33.12                      | V                     |
|                | 6852                                                                             | -47.6           | -34.6                   | -13              | -73.34                   | 34.91                         | 24.58                  | 33.75                      | V                     |
|                | 8568                                                                             | -45.35          | -32.35                  | -13              | -73.39                   | 37.24                         | 25.18                  | 34.38                      | V                     |
| <b>Middle</b>  | 3468                                                                             | -57.99          | -44.99                  | -13              | -74.01                   | 28.61                         | 20.83                  | 33.42                      | H                     |
|                | 5197.8                                                                           | -54.21          | -41.21                  | -13              | -75.27                   | 31.81                         | 22.37                  | 33.12                      | H                     |
|                | 6930.4                                                                           | -48.2           | -35.2                   | -13              | -74.3                    | 35.28                         | 24.61                  | 33.79                      | H                     |
|                | 3468                                                                             | -58.22          | -45.22                  | -13              | -74.24                   | 28.61                         | 20.83                  | 33.42                      | V                     |
|                | 5197.8                                                                           | -54.87          | -41.87                  | -13              | -75.93                   | 31.81                         | 22.37                  | 33.12                      | V                     |
|                | 6930.4                                                                           | -49.8           | -36.8                   | -13              | -75.9                    | 35.28                         | 24.61                  | 33.79                      | V                     |
| <b>Highest</b> | 3504                                                                             | -58.4           | -45.4                   | -13              | -74.63                   | 28.82                         | 20.82                  | 33.41                      | H                     |
|                | 5256                                                                             | -52.41          | -39.41                  | -13              | -73.15                   | 31.49                         | 22.36                  | 33.11                      | H                     |
|                | 7008                                                                             | -41.5           | -28.5                   | -13              | -67.93                   | 35.63                         | 24.63                  | 33.83                      | H                     |
|                | 8760                                                                             | -43.14          | -30.14                  | -13              | -71.93                   | 37.74                         | 25.36                  | 34.31                      | H                     |
|                | 10522.5                                                                          | -43.07          | -30.07                  | -13              | -76.14                   | 40                            | 26.83                  | 33.76                      | H                     |
|                | 3504                                                                             | -58.66          | -45.66                  | -13              | -74.89                   | 28.82                         | 20.82                  | 33.41                      | V                     |
|                | 5256                                                                             | -53.68          | -40.68                  | -13              | -74.42                   | 31.49                         | 22.36                  | 33.11                      | V                     |
|                | 7008                                                                             | -44.07          | -31.07                  | -13              | -70.5                    | 35.63                         | 24.63                  | 33.83                      | V                     |
|                | 8760                                                                             | -44.3           | -31.3                   | -13              | -73.09                   | 37.74                         | 25.36                  | 34.31                      | V                     |
|                | 10522.5                                                                          | -41.84          | -28.84                  | -13              | -74.91                   | 40                            | 26.83                  | 33.76                      | V                     |
| <b>Remark</b>  | Spurious emissions within 30-1000MHz were found more than 20dB below limit line. |                 |                         |                  |                          |                               |                        |                            |                       |