



# FCC RADIO TEST REPORT

FCC ID : UZ7TC26BK  
Equipment : Touch computer  
Brand Name : Zebra  
Model Name : TC26BK  
Applicant : Zebra Technologies Corporation  
1 Zebra Plaza, Holtsville, NY 11742  
Manufacturer : Zebra Technologies Corporation  
1 Zebra Plaza, Holtsville, NY 11742  
Standard : 47 CFR Part 2, 22(H), 24(E), 27(L)

The product was received on Mar. 20, 2020 and testing was started from Mar. 31, 2020 and completed on May 06, 2020. 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   |
|------------|---------|----------------------------------------------------------------------------------------------------------------|---------------|
| FG010316A  | 01      | Initial issue of report                                                                                        | Apr. 30, 2020 |
| FG010316A  | 02      | 1. Revise FW Version<br>2. Revise specification of accessories table<br>3. Add radiated spurious emission data | May 06, 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>11.31 dB at<br>3816.000 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: Tina Chuang**

# 1 General Description

## 1.1 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Equipment                       | Touch computer                                                                                                      |
| Brand Name                      | Zebra                                                                                                               |
| Model Name                      | TC26BK                                                                                                              |
| FCC ID                          | UZ7TC26BK                                                                                                           |
| Sample 1                        | Single-WAN, WLAN, GMS, SE4710, NFC, 3GB/32GB, Rear camera and Front camera, 2-pin connector                         |
| Sample 2                        | Single-WAN, WLAN, GMS, No Scanner, NFC, 3GB/32GB, Rear camera and Front camera, No back connector                   |
| EUT supports Radios application | GSM/EGPRS/WCDMA/HSPA/LTE/NFC/GNSS<br>WLAN 11a/b/g/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80<br>Bluetooth BR/EDR/LE |
| HW Version                      | EV1.7                                                                                                               |
| SW Version                      | Android version 10                                                                                                  |
| OS Version                      | FUSION_QA_2_1.0.0.008_Q                                                                                             |
| FW Version                      | Zebra/TC26PA/TC26:10/03-09-09.00-QN-U00-PRD/Nabe030<br>91333:userdebug/test-keys                                    |
| MFD                             | 22FEB20                                                                                                             |
| EUT Stage                       | Engineering Sample                                                                                                  |

**Remark:** The above EUT's information was declared by manufacturer.

| Specification of Accessories                  |            |       |             |                     |
|-----------------------------------------------|------------|-------|-------------|---------------------|
| AC Adapter                                    | Brand Name | Zebra | Part Number | PWR-WUA5V12W0US     |
| Battery 1                                     | Brand Name | Zebra | Part Number | BT-000409-00        |
| Battery 2                                     | Brand Name | Zebra | Part Number | BT-000409-50        |
| Battery 3                                     | Brand Name | Zebra | Part Number | BT-000411-08        |
| USB Cable 1<br>(Type A plug to Type C plug)   | Brand Name | Zebra | Part Number | CBL-TC5X-USBC2A-01  |
| USB Cable 2<br>(Type A plug to Type C plug)   | Brand Name | Zebra | Part Number | CBL-TC2Y-USBC90A-01 |
| Headset 3.5mm type with<br>PTT/micassy        | Brand Name | Zebra | Part Number | HDST-35MM-PTVP-01   |
| Adapter Cable PTT headset<br>(3.5mm to 3.5mm) | Brand Name | Zebra | Part Number | CBL-TC51-HDST35-01  |
| Snap on Trigger handle                        | Brand Name | Zebra | Part Number | TRG-TC2Y-SNP1-01    |
| Belt Holster                                  | Brand Name | Zebra | Part Number | SG-TC2Y-HLSTR1-01   |
| Wearable Arm Mount                            | Brand Name | Zebra | Part Number | SG-TC2Y-ARMNT-01    |

| Supported Unit Used in Test Configuration and System |            |        |             |             |
|------------------------------------------------------|------------|--------|-------------|-------------|
| Type C to 3.5mm headset adaptor                      | Brand Name | Google | Part Number | Pixel-2-2XL |

## 1.2 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                                                                                                                            |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                     | <b>GSM:</b><br>GSM850: 824.2 MHz ~ 848.8 MHz<br>GSM1900: 1850.2 MHz ~ 1909.8 MHz<br><b>WCDMA:</b><br>Band V: 826.4 MHz ~ 846.6 MHz<br>Band II: 1852.4 MHz ~ 1907.6 MHz<br>Band IV: 1712.4 MHz ~ 1752.6 MHz |
| <b>Rx Frequency</b>                     | <b>GSM:</b><br>GSM850: 869.2 MHz ~ 893.8 MHz<br>GSM1900: 1930.2 MHz ~ 1989.8 MHz<br><b>WCDMA:</b><br>Band V: 871.4 MHz ~ 891.6 MHz<br>Band II: 1932.4 MHz ~ 1987.6 MHz<br>Band IV: 2112.4 MHz ~ 2152.6 MHz |
| <b>Maximum Output Power to Antenna</b>  | <b>GSM:</b><br>GSM850: 32.73 dBm<br>GSM1900: 29.91 dBm<br><b>WCDMA:</b><br>Band V: 23.31 dBm<br>Band II: 23.36 dBm                                                                                         |
| <b>Antenna Type</b>                     | PIFA Antenna                                                                                                                                                                                               |
| <b>Antenna Gain</b>                     | Cellular Band: 1.40 dBi<br>PCS Band: 3.10 dBi<br>AWS Band: 3.10. dBi                                                                                                                                       |
| <b>Type of Modulation</b>               | GSM / GPRS: GMSK<br>EGPRS: GMSK for MCS 0 ~ 4 & 8PSK for MCS5 ~9<br>WCDMA: QPSK<br>HSDPA: 64QAM<br>HSUPA: QPSK                                                                                             |

## 1.3 Modification of EUT

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

**1.4 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator**

| FCC Rule | Frequency Range (MHz) | System                        | Type of Modulation | Maximum ERP/EIRP (W) | Frequency Tolerance (ppm) | Emission Designator |
|----------|-----------------------|-------------------------------|--------------------|----------------------|---------------------------|---------------------|
| Part 22  | 824.2 ~848.8          | GSM850 GPRS class 8           | GMSK               | 2.1086               | 0.0323 ppm                | 245KGXW             |
| Part 22  | 824.2 ~848.8          | GSM850 EDGE class 8           | 8PSK               | 0.4325               | 0.0072 ppm                | 250KG7W             |
| Part 22  | 826.4 ~846.6          | WCDMA Band V<br>RMC 12.2Kbps  | QPSK               | 0.2851               | 0.0167 ppm                | 4M15F9W             |
| Part 24  | 1850.2 ~1909.8        | GSM1900 GPRS class 8          | GMSK               | 1.6558               | 0.0191 ppm                | 245KGXW             |
| Part 24  | 1850.2 ~1909.8        | GSM1900 EDGE class 8          | 8PSK               | 0.6592               | 0.0191 ppm                | 248KG7W             |
| Part 24  | 1852.4 ~1907.6        | WCDMA Band II<br>RMC 12.2Kbps | QPSK               | 0.5105               | 0.0043 ppm                | 4M16F9W             |
| Part 27  | 1712.4 ~ 1752.6       | WCDMA Band IV<br>RMC 12.2Kbps | QPSK               | 0.5741               | 0.0208 ppm                | 4M13F9W             |



## 1.5 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, Troye Hsieh and Quentin Liu                                                                                           |
| Temperature        | 19.6~26.5°C                                                                                                                               |
| Relative Humidity  | 49.6~70.1%                                                                                                                                |

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

FCC Designation No.: TW1190 and TW0007



## 1.6 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
- ♦ FCC KDB 414788 D01 Radiated Test Site 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, and Accessory. The worst cases (X Plane with Earphone for PCS Band ; Y Plane with Earphone for Cellular Band and AWS Band.) were recorded in this report.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

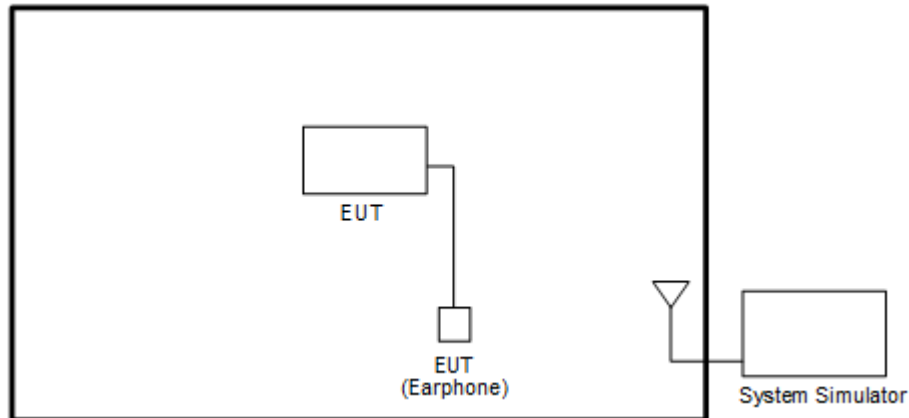
All modes and data rates and positions were investigated.

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 USB Cable 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 | Rohde & Schwarz | CMU200    | N/A    | N/A        | Unshielded, 1.8 m |

## 2.4 Measurement Results Explanation Example

### For all conducted test items:

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

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

*Offset = RF cable loss + attenuator factor.*

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

Example:

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

## 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  |

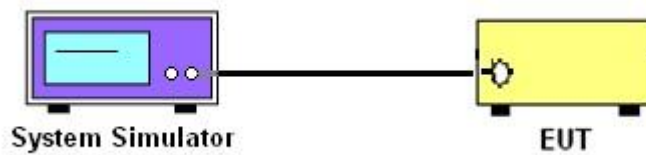
### 3 Conducted Test Result

#### 3.1 Measuring Instruments

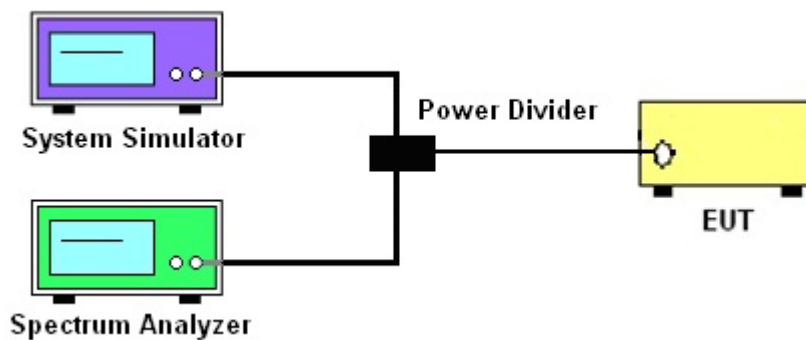
See list of measuring instruments of this test report.

##### 3.1.1 Test Setup

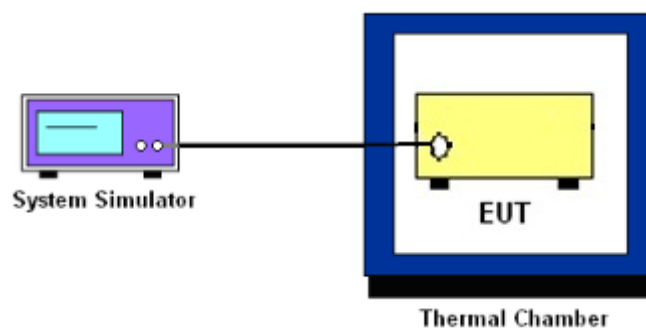
##### 3.1.2 Conducted Output Power



##### 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.

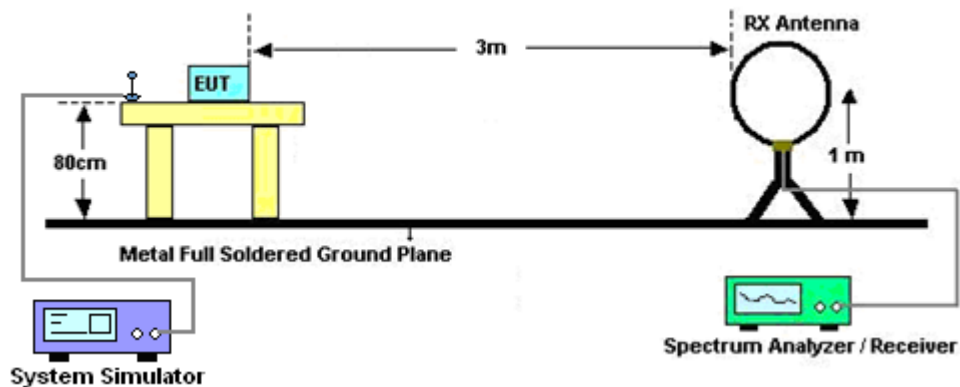
## 4 Radiated Test Items

### 4.1 Measuring Instruments

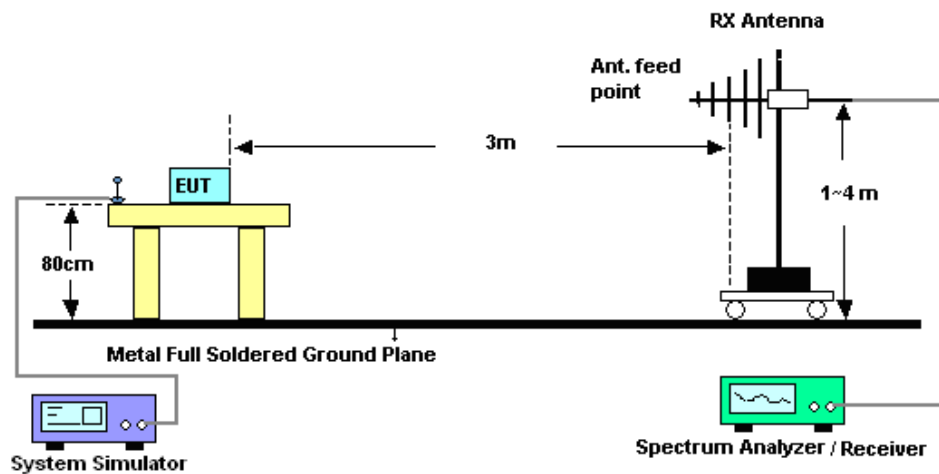
See list of measuring instruments of this test report.

### 4.2 Test Setup

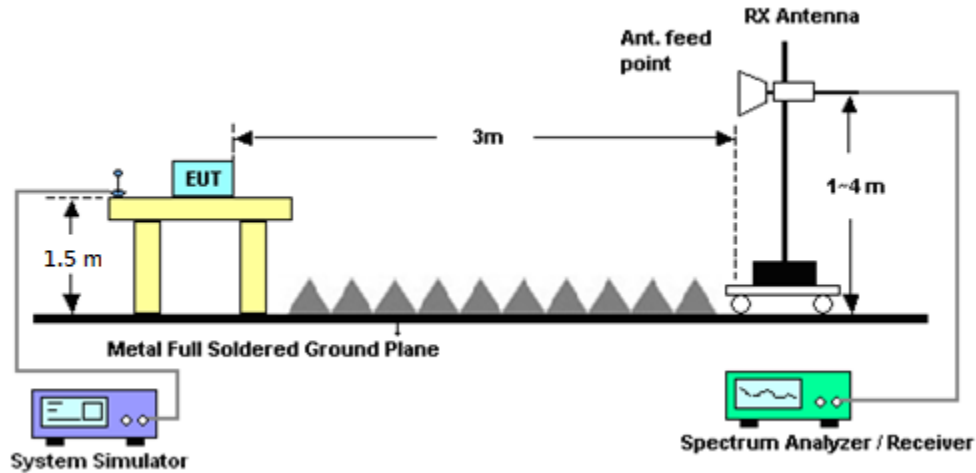
For radiated emissions below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



### 4.3 Test Result of Radiated Test

Please refer to Appendix B.

**Note:**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



## **4.4 Field Strength of Spurious Radiation Measurement**

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

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### **4.4.2 Test Procedures**

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

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. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
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.  $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11.  $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)



## 5 List of Measuring Equipment

| Instrument                | Manufacturer    | Model No.                   | Serial No.       | Characteristics                 | Calibration Date | Test Date                      | Due Date      | Remark                |
|---------------------------|-----------------|-----------------------------|------------------|---------------------------------|------------------|--------------------------------|---------------|-----------------------|
| Hygrometer                | Testo           | 608-H1                      | 34893241         | N/A                             | Mar. 26, 2020    | Mar. 31, 2020                  | Mar. 25, 2021 | Conducted (TH03-HY)   |
| Spectrum Analyzer         | Rohde & Schwarz | FSP30                       | 101329           | 9kHz~30GHz                      | Sep. 04, 2019    | Mar. 31, 2020                  | Sep. 03, 2020 | Conducted (TH03-HY)   |
| Temperature Chamber       | ESPEC           | SU-641                      | 92013721         | -30℃ ~70℃                       | Nov. 26, 2019    | Mar. 31, 2020                  | Nov. 25, 2020 | Conducted (TH03-HY)   |
| Programmable Power Supply | GW Instek       | PSS-2005                    | EL890001         | 1V~20V<br>0.5A~4A               | Oct. 09, 2019    | Mar. 31, 2020                  | Oct. 08, 2020 | Conducted (TH03-HY)   |
| Base Station (Measure)    | Rohde & Schwarz | CMU200                      | 117995           | GSM / GPRS /<br>WCDMA /<br>CDMA | Aug. 23, 2019    | Mar. 31, 2020                  | Aug. 22, 2020 | Conducted (TH03-HY)   |
| Power Divider             | Warison         | WCOU-0.4-26.5S-20           | #A               | N/A                             | Nov. 06, 2019    | Mar. 31, 2020                  | Nov. 05, 2020 | Conducted (TH03-HY)   |
| Preamplifier              | EMEC            | EM18G40G                    | 060715           | 18GHz ~ 40GHz                   | Dec. 13, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Dec. 12, 2020 | Radiation (03CH11-HY) |
| Amplifier                 | SONOMA          | 310N                        | 187312           | 9kHz~1GHz                       | Dec. 13, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Dec. 02, 2020 | Radiation (03CH11-HY) |
| SHF-EHF Horn Antenna      | SCHWARZBECK     | BBHA 9170                   | BBHA9170584      | 18GHz- 40GHz                    | Dec. 10, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Dec. 09, 2020 | Radiation (03CH11-HY) |
| Bilog Antenna             | TESEQ           | CBL 6111D & N-6-06          | 35414 & AT-N0602 | 30MHz~1GHz                      | Oct. 12, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Oct. 11, 2020 | Radiation (03CH11-HY) |
| Horn Antenna              | SCHWARZBECK     | BBHA 9120 D                 | 9120D-1326       | 1GHz ~ 18GHz                    | Nov. 04, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Nov. 03, 2020 | Radiation (03CH11-HY) |
| Loop Antenna              | Rohde & Schwarz | HFH2-Z2                     | 100488           | 9 kHz~30 MHz                    | Jan. 09, 2020    | Apr. 03, 2020~<br>May 06, 2020 | Jan. 08, 2021 | Radiation (03CH11-HY) |
| Preamplifier              | Keysight        | 83017A                      | MY53270080       | 1GHz~26.5GHz                    | Nov. 13, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Nov. 12, 2020 | Radiation (03CH11-HY) |
| Spectrum Analyzer         | Keysight        | N9010A                      | MY54200486       | 10Hz~44GHz                      | Oct. 28, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Oct. 27, 2020 | Radiation (03CH11-HY) |
| Filter                    | Wainwright      | WHKX12-1080-1200-15000-60SS | SN2              | 1.2GHz High Pass Filter         | Sep. 15, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Sep. 14, 2020 | Radiation (03CH11-HY) |
| Filter                    | Wainwright      | WHKX12-2700-3000-18000-60SS | SN3              | 3GHz High Pass Filter           | Sep. 15, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Sep. 14, 2020 | Radiation (03CH11-HY) |
| Controller                | EMEC            | EM 1000                     | N/A              | Control Turn table & Ant Mast   | N/A              | Apr. 03, 2020~<br>May 06, 2020 | N/A           | Radiation (03CH11-HY) |
| Antenna Mast              | EMEC            | AM-BS-4500-B                | N/A              | 1~4m                            | N/A              | Apr. 03, 2020~<br>May 06, 2020 | N/A           | Radiation (03CH11-HY) |
| Turn Table                | EMEC            | TT 2000                     | N/A              | 0~360 Degree                    | N/A              | Apr. 03, 2020~<br>May 06, 2020 | N/A           | Radiation (03CH11-HY) |
| EMI Test Receiver         | Keysight        | N9038A(MXE)                 | MY54130085       | 20MHz~8.4GHz                    | Nov. 01, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Oct. 31, 2020 | Radiation (03CH11-HY) |



| Instrument          | Manufacturer       | Model No.         | Serial No. | Characteristics | Calibration Date | Test Date                      | Due Date      | Remark                   |
|---------------------|--------------------|-------------------|------------|-----------------|------------------|--------------------------------|---------------|--------------------------|
| Software            | Audix              | E3<br>6.2009-8-24 | RK-001053  | N/A             | N/A              | Apr. 03, 2020~<br>May 06, 2020 | N/A           | Radiation<br>(03CH11-HY) |
| Hygrometer          | TECPEL             | DTN-303B          | TP140325   | N/A             | Nov. 07, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Nov. 06, 2020 | Radiation<br>(03CH11-HY) |
| Hygrometer          | TECPEL             | DTN-303B          | TP161237   | N/A             | Oct. 25, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Oct. 24, 2020 | Radiation<br>(03CH11-HY) |
| RF Cable            | HUBER +<br>SUHNER  | SUCOFLEX<br>104   | MY9837/4PE | 9kHz-30MHz      | Mar. 12, 2020    | Apr. 03, 2020~<br>May 06, 2020 | Mar. 11, 2021 | Radiation<br>(03CH11-HY) |
| RF Cable            | HUBER +<br>SUHNER  | SUCOFLEX<br>102   | MY2859/2   | 30MHz-40GHz     | Mar. 12, 2020    | Apr. 03, 2020~<br>May 06, 2020 | Mar. 11, 2021 | Radiation<br>(03CH11-HY) |
| RF Cable            | HUBER +<br>SUHNER  | SUCOFLEX<br>104   | MY9837/4PE | 30M-18G         | Mar. 12, 2020    | Apr. 03, 2020~<br>May 06, 2020 | Mar. 11, 2021 | Radiation<br>(03CH11-HY) |
| RF Cable            | HUBER +<br>SUHNER  | SUCOFLEX<br>102   | MY4274/2   | 30MHz-40GHz     | Mar. 12, 2020    | Apr. 03, 2020~<br>May 06, 2020 | Mar. 11, 2021 | Radiation<br>(03CH11-HY) |
| Signal<br>Generator | Rohde &<br>Schwarz | SMF100A           | 101107     | 100kHz~40GHz    | Aug. 27, 2019    | Apr. 03, 2020~<br>May 06, 2020 | Aug. 26, 2020 | Radiation<br>(03CH11-HY) |

## 6 Uncertainty of Evaluation

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

|                                                                          |      |
|--------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ ) | 3.09 |
|--------------------------------------------------------------------------|------|

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

|                                                                          |      |
|--------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ ) | 3.44 |
|--------------------------------------------------------------------------|------|

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

|                                                                          |      |
|--------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ ) | 3.95 |
|--------------------------------------------------------------------------|------|



## 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                          | 33.16  | 33.26 | 33.34 | 31.27   | 31.29 | 31.18  |
| GPRS class 8                 | 33.82  | 33.99 | 33.92 | 31.49   | 31.43 | 30.84  |
| GPRS class 10                | 30.52  | 30.81 | 30.98 | 27.90   | 28.50 | 26.53  |
| GPRS class 11                | 28.77  | 28.53 | 28.63 | 26.48   | 26.46 | 25.00  |
| GPRS class 12                | 27.25  | 27.71 | 27.62 | 25.10   | 25.09 | 24.00  |
| EGPRS class 8                | 27.11  | 26.77 | 26.90 | 27.36   | 27.22 | 27.49  |
| EGPRS class 10               | 24.44  | 24.11 | 24.20 | 22.54   | 24.27 | 22.94  |
| EGPRS class 11               | 22.98  | 22.60 | 22.79 | 20.53   | 22.06 | 20.88  |
| EGPRS class 12               | 21.63  | 21.22 | 21.43 | 19.56   | 20.41 | 19.61  |

| 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                    | 25.30        | 25.27 | 25.01 | 23.98         | 23.78 | 23.70  |
| HSDPA Subtest-1              | 25.28        | 25.28 | 25.05 | 23.95         | 23.80 | 23.71  |
| HSDPA Subtest-2              | 24.32        | 24.29 | 24.08 | 22.95         | 22.81 | 22.73  |
| HSDPA Subtest-3              | 24.30        | 24.14 | 24.06 | 22.99         | 22.84 | 22.81  |
| HSDPA Subtest-4              | 23.98        | 23.96 | 23.72 | 22.47         | 22.35 | 22.30  |
| HSUPA Subtest-1              | 23.70        | 23.73 | 23.50 | 22.46         | 22.23 | 22.22  |
| HSUPA Subtest-2              | 24.48        | 24.45 | 24.21 | 22.98         | 22.86 | 22.79  |
| HSUPA Subtest-3              | 22.46        | 22.50 | 22.15 | 21.00         | 20.84 | 20.78  |
| HSUPA Subtest-4              | 23.48        | 23.46 | 23.26 | 22.00         | 21.79 | 21.80  |
| HSUPA Subtest-5              | 22.48        | 22.42 | 22.27 | 21.00         | 20.83 | 20.78  |

| Conducted Power (*Unit: dBm) |               |        |        |
|------------------------------|---------------|--------|--------|
| Band                         | WCDMA Band IV |        |        |
| Channel                      | 1312          | 1413   | 1513   |
| Frequency                    | 1712.4        | 1732.6 | 1752.6 |
| RMC 12.2K                    | 24.49         | 24.25  | 24.38  |
| HSDPA Subtest-1              | 24.46         | 24.30  | 24.41  |
| HSDPA Subtest-2              | 23.50         | 23.30  | 23.47  |
| HSDPA Subtest-3              | 23.49         | 23.25  | 23.49  |
| HSDPA Subtest-4              | 22.89         | 22.77  | 22.93  |
| HSUPA Subtest-1              | 22.88         | 22.69  | 22.91  |
| HSUPA Subtest-2              | 23.48         | 23.28  | 23.44  |
| HSUPA Subtest-3              | 21.46         | 21.37  | 21.45  |
| HSUPA Subtest-4              | 22.43         | 22.32  | 22.46  |
| HSUPA Subtest-5              | 21.50         | 21.29  | 21.46  |



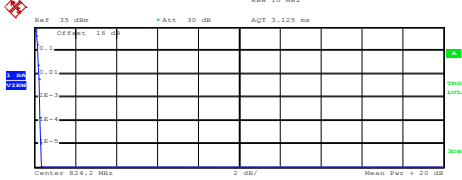
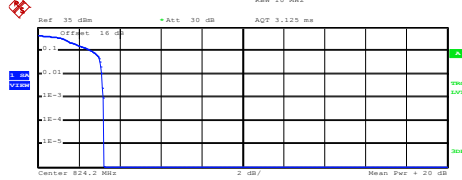
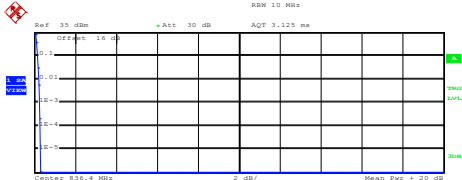
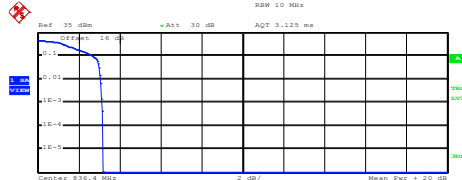
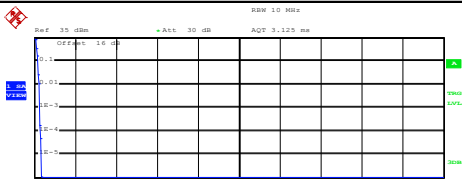
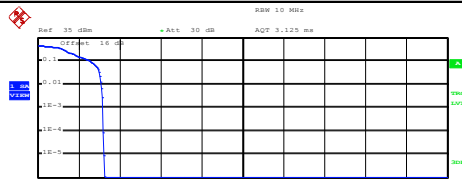
## A2. GSM

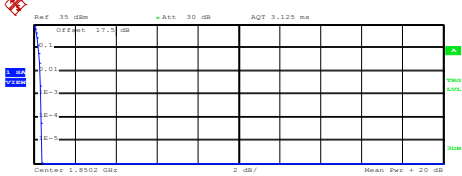
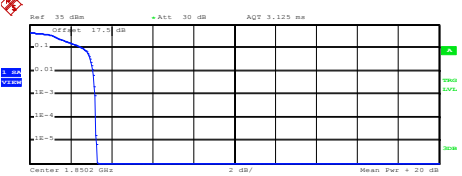
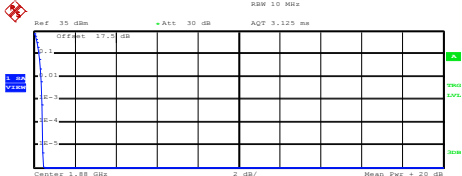
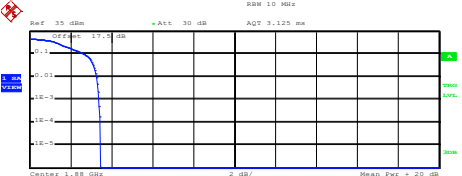
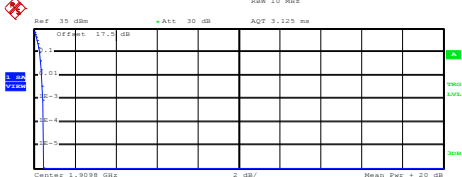
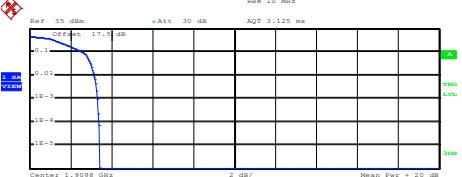
### Peak-to-Average Ratio

| Mode       | GSM850       |              | Limit: 13dB |
|------------|--------------|--------------|-------------|
| Mod.       | GPRS class 8 | EDGE class 8 | Result      |
| Lowest CH  | 0.28         | 3.20         | PASS        |
| Middle CH  | 0.28         | 3.12         |             |
| Highest CH | 0.28         | 3.20         |             |

| Mode       | GSM1900      |              | Limit: 13dB |
|------------|--------------|--------------|-------------|
| Mod.       | GPRS class 8 | EDGE class 8 | Result      |
| Lowest CH  | 0.36         | 3.20         | PASS        |
| Middle CH  | 0.40         | 3.40         |             |
| Highest CH | 0.44         | 3.32         |             |



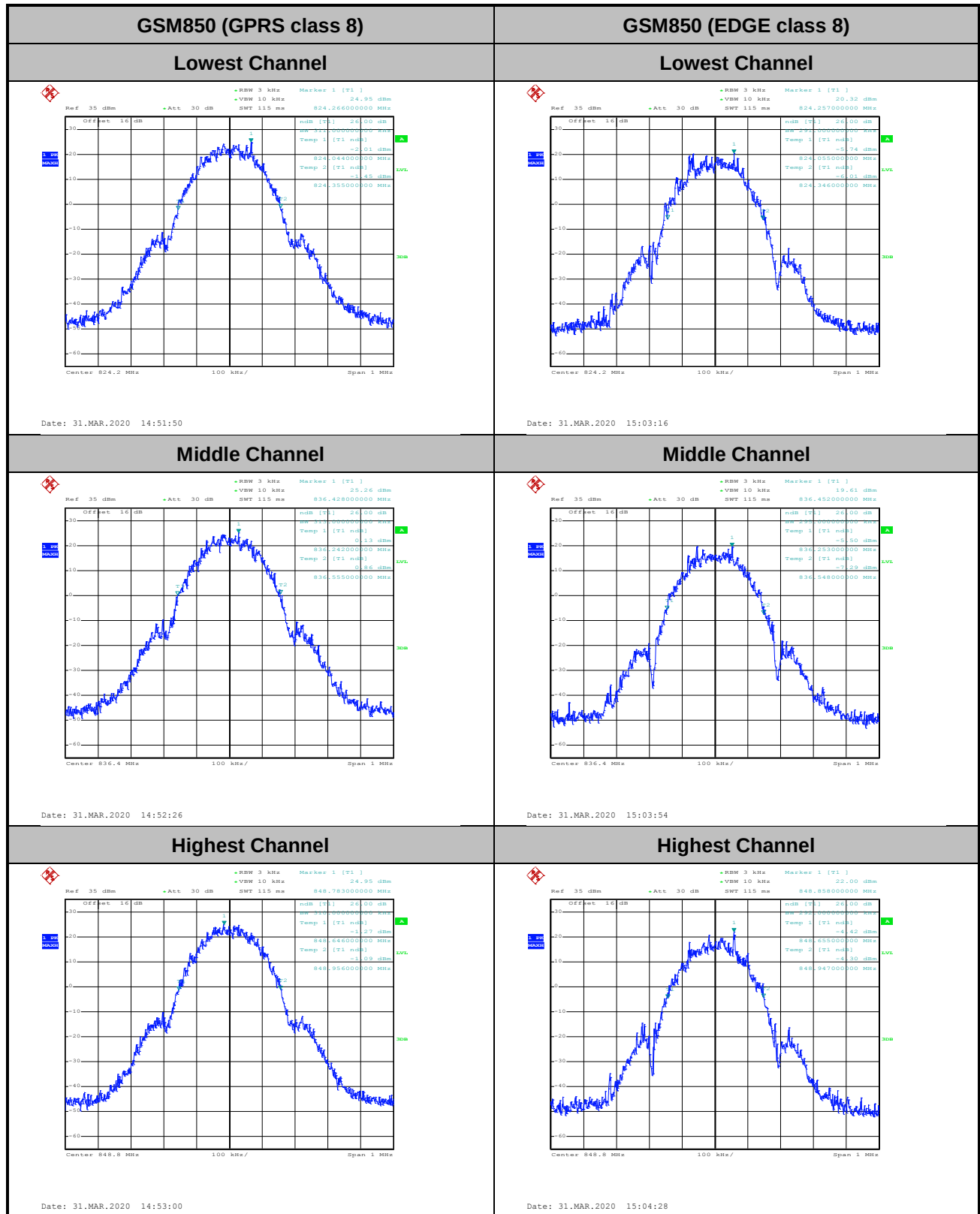
| GSM850 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                                                                                                     |  | GSM850 (EDGE class 8)                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                            |  | Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|  <p>Ref: 35 dBm Att: 30 dB AGT: 3.125 ms</p> <p>Center: 824.2 MHz 2 dB/ Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 32.15 dBm<br/>Peak 32.47 dBm<br/>Crest 0.32 dB</p> <p>10 % 0.20 dB<br/>1 % 0.24 dB<br/>.1 % 0.28 dB<br/>.01 % 0.28 dB</p> <p>Date: 31.MAR.2020 14:57:44</p>   |  |  <p>Ref: 35 dBm Att: 30 dB AGT: 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 26.37 dBm<br/>Peak 29.58 dBm<br/>Crest 3.22 dB</p> <p>10 % 2.64 dB<br/>1 % 3.12 dB<br/>.1 % 3.20 dB<br/>.01 % 3.24 dB</p> <p>Date: 31.MAR.2020 15:07:49</p>   |  |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                            |  | Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|  <p>Ref: 35 dBm Att: 30 dB AGT: 3.125 ms</p> <p>Center: 835.4 MHz 2 dB/ Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 32.34 dBm<br/>Peak 32.62 dBm<br/>Crest 0.28 dB</p> <p>10 % 0.16 dB<br/>1 % 0.24 dB<br/>.1 % 0.28 dB<br/>.01 % 0.32 dB</p> <p>Date: 31.MAR.2020 14:57:56</p>  |  |  <p>Ref: 35 dBm Att: 30 dB AGT: 3.125 ms</p> <p>Center: 835.4 MHz 2 dB/ Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 26.34 dBm<br/>Peak 29.51 dBm<br/>Crest 3.17 dB</p> <p>10 % 2.68 dB<br/>1 % 3.08 dB<br/>.1 % 3.12 dB<br/>.01 % 3.20 dB</p> <p>Date: 31.MAR.2020 15:08:02</p>  |  |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                           |  | Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|  <p>Ref: 35 dBm Att: 30 dB AGT: 3.125 ms</p> <p>Center: 848.8 MHz 2 dB/ Mean Pwr: +20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean 32.63 dBm<br/>Peak 32.97 dBm<br/>Crest 0.34 dB</p> <p>10 % 0.20 dB<br/>1 % 0.24 dB<br/>.1 % 0.28 dB<br/>.01 % 0.32 dB</p> <p>Date: 31.MAR.2020 14:58:07</p> |  |  <p>Ref: 35 dBm Att: 30 dB AGT: 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 26.32 dBm<br/>Peak 29.58 dBm<br/>Crest 3.27 dB</p> <p>10 % 2.56 dB<br/>1 % 3.12 dB<br/>.1 % 3.20 dB<br/>.01 % 3.20 dB</p> <p>Date: 31.MAR.2020 15:08:15</p> |  |

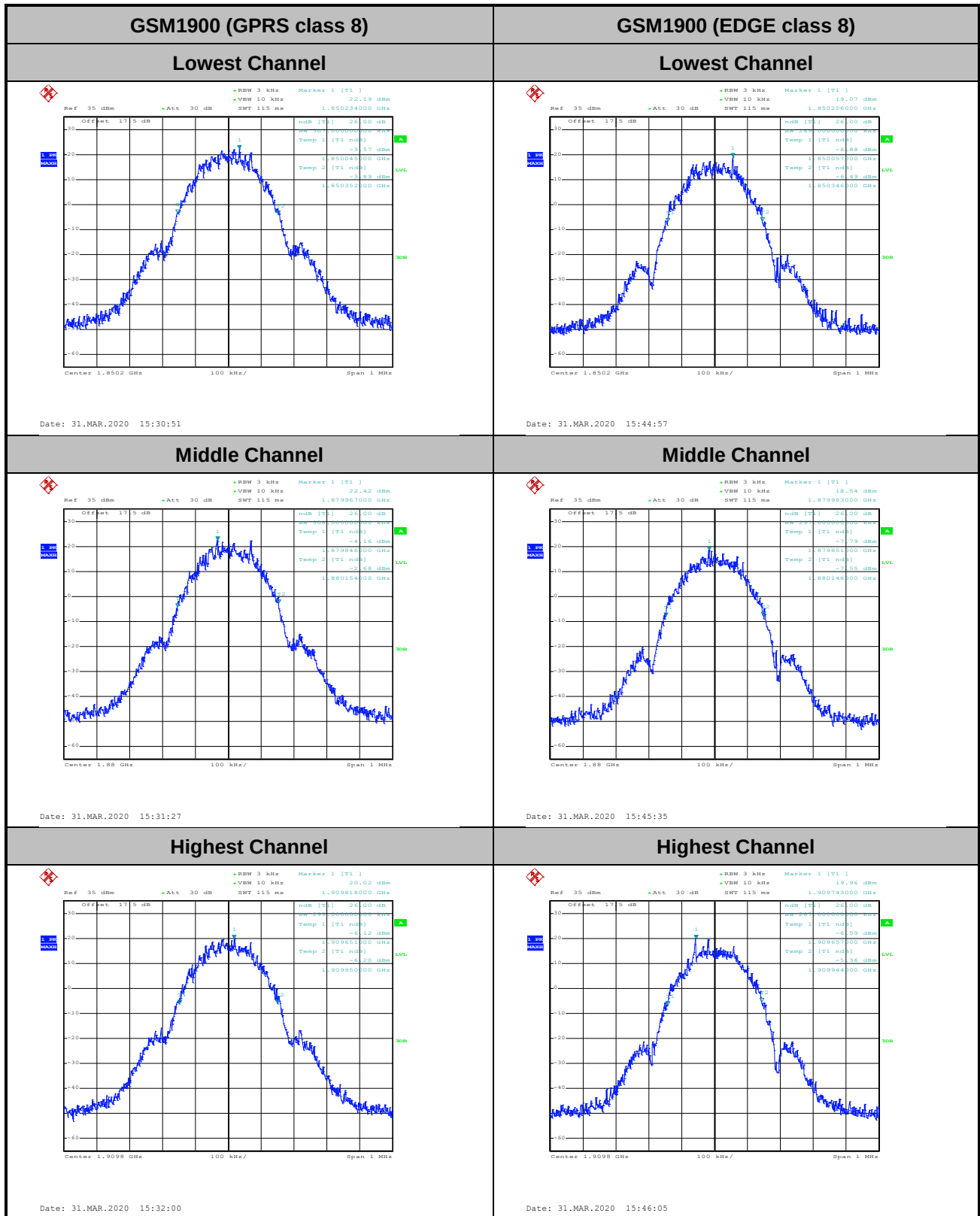
| GSM1900 (GPRS class 8)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | GSM1900 (EDGE class 8) |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------|-----|---------|------|---------|-------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|-----|---------|------|---------|-------|---------|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Lowest Channel         |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
|  <p>Ref: 35 dBm Att: 30 dB AQT: 3.125 ms</p> <p>Center: 1.8502 GHz 2 dB/ Mean: 28.76 dBm Peak: 29.16 dBm Crest: 0.39 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table border="1"> <tr><td>10 %</td><td>0.24 dB</td></tr> <tr><td>1 %</td><td>0.32 dB</td></tr> <tr><td>.1 %</td><td>0.36 dB</td></tr> <tr><td>.01 %</td><td>0.36 dB</td></tr> </table> <p>Date: 31.MAR.2020 15:34:58</p>   | 10 %                   | 0.24 dB | 1 % | 0.32 dB | .1 % | 0.36 dB | .01 % | 0.36 dB |  <p>Ref: 35 dBm Att: 30 dB AQT: 3.125 ms</p> <p>Center: 1.8502 GHz 2 dB/ Mean: 24.52 dBm Peak: 27.82 dBm Crest: 3.30 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table border="1"> <tr><td>10 %</td><td>2.60 dB</td></tr> <tr><td>1 %</td><td>3.08 dB</td></tr> <tr><td>.1 %</td><td>3.20 dB</td></tr> <tr><td>.01 %</td><td>3.24 dB</td></tr> </table> <p>Date: 31.MAR.2020 15:54:04</p>   | 10 % | 2.60 dB | 1 % | 3.08 dB | .1 % | 3.20 dB | .01 % | 3.24 dB |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.24 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.32 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.36 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.36 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.60 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.08 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.20 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.24 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Middle Channel         |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
|  <p>Ref: 35 dBm Att: 30 dB AQT: 3.125 ms</p> <p>Center: 1.85 GHz 2 dB/ Mean: 28.26 dBm Peak: 28.74 dBm Crest: 0.47 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table border="1"> <tr><td>10 %</td><td>0.24 dB</td></tr> <tr><td>1 %</td><td>0.36 dB</td></tr> <tr><td>.1 %</td><td>0.40 dB</td></tr> <tr><td>.01 %</td><td>0.44 dB</td></tr> </table> <p>Date: 31.MAR.2020 15:35:14</p>    | 10 %                   | 0.24 dB | 1 % | 0.36 dB | .1 % | 0.40 dB | .01 % | 0.44 dB |  <p>Ref: 35 dBm Att: 30 dB AQT: 3.125 ms</p> <p>Center: 1.85 GHz 2 dB/ Mean: 24.63 dBm Peak: 28.10 dBm Crest: 3.47 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table border="1"> <tr><td>10 %</td><td>2.68 dB</td></tr> <tr><td>1 %</td><td>3.28 dB</td></tr> <tr><td>.1 %</td><td>3.40 dB</td></tr> <tr><td>.01 %</td><td>3.44 dB</td></tr> </table> <p>Date: 31.MAR.2020 15:54:17</p>    | 10 % | 2.68 dB | 1 % | 3.28 dB | .1 % | 3.40 dB | .01 % | 3.44 dB |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.24 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.36 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.40 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.44 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.68 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.28 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.40 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.44 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Highest Channel        |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
|  <p>Ref: 35 dBm Att: 30 dB AQT: 3.125 ms</p> <p>Center: 1.9098 GHz 2 dB/ Mean: 27.44 dBm Peak: 27.89 dBm Crest: 0.45 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table border="1"> <tr><td>10 %</td><td>0.28 dB</td></tr> <tr><td>1 %</td><td>0.40 dB</td></tr> <tr><td>.1 %</td><td>0.44 dB</td></tr> <tr><td>.01 %</td><td>0.48 dB</td></tr> </table> <p>Date: 31.MAR.2020 15:35:26</p> | 10 %                   | 0.28 dB | 1 % | 0.40 dB | .1 % | 0.44 dB | .01 % | 0.48 dB |  <p>Ref: 35 dBm Att: 30 dB AQT: 3.125 ms</p> <p>Center: 1.9098 GHz 2 dB/ Mean: 24.88 dBm Peak: 28.31 dBm Crest: 3.43 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <table border="1"> <tr><td>10 %</td><td>2.60 dB</td></tr> <tr><td>1 %</td><td>3.16 dB</td></tr> <tr><td>.1 %</td><td>3.32 dB</td></tr> <tr><td>.01 %</td><td>3.40 dB</td></tr> </table> <p>Date: 31.MAR.2020 15:54:30</p> | 10 % | 2.60 dB | 1 % | 3.16 dB | .1 % | 3.32 dB | .01 % | 3.40 dB |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.28 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.40 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.44 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.48 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 10 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.60 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| 1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.16 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .1 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.32 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |
| .01 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.40 dB                |         |     |         |      |         |       |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |         |     |         |      |         |       |         |

**26dB Bandwidth**

| Mode       | GSM850       |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.311        | 0.291        |
| Middle CH  | 0.313        | 0.295        |
| Highest CH | 0.310        | 0.292        |

| Mode       | GSM1900      |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.307        | 0.289        |
| Middle CH  | 0.308        | 0.297        |
| Highest CH | 0.299        | 0.287        |

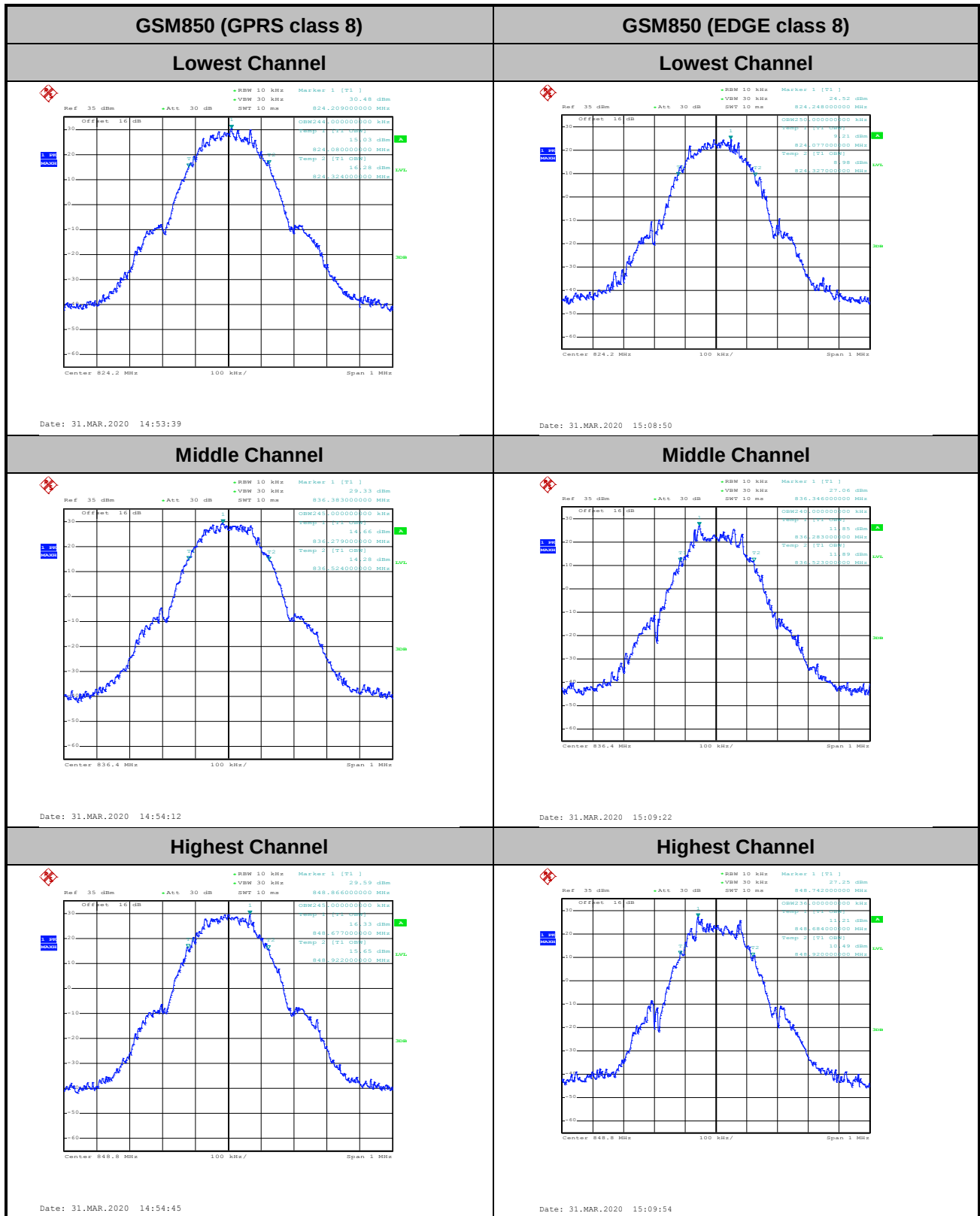


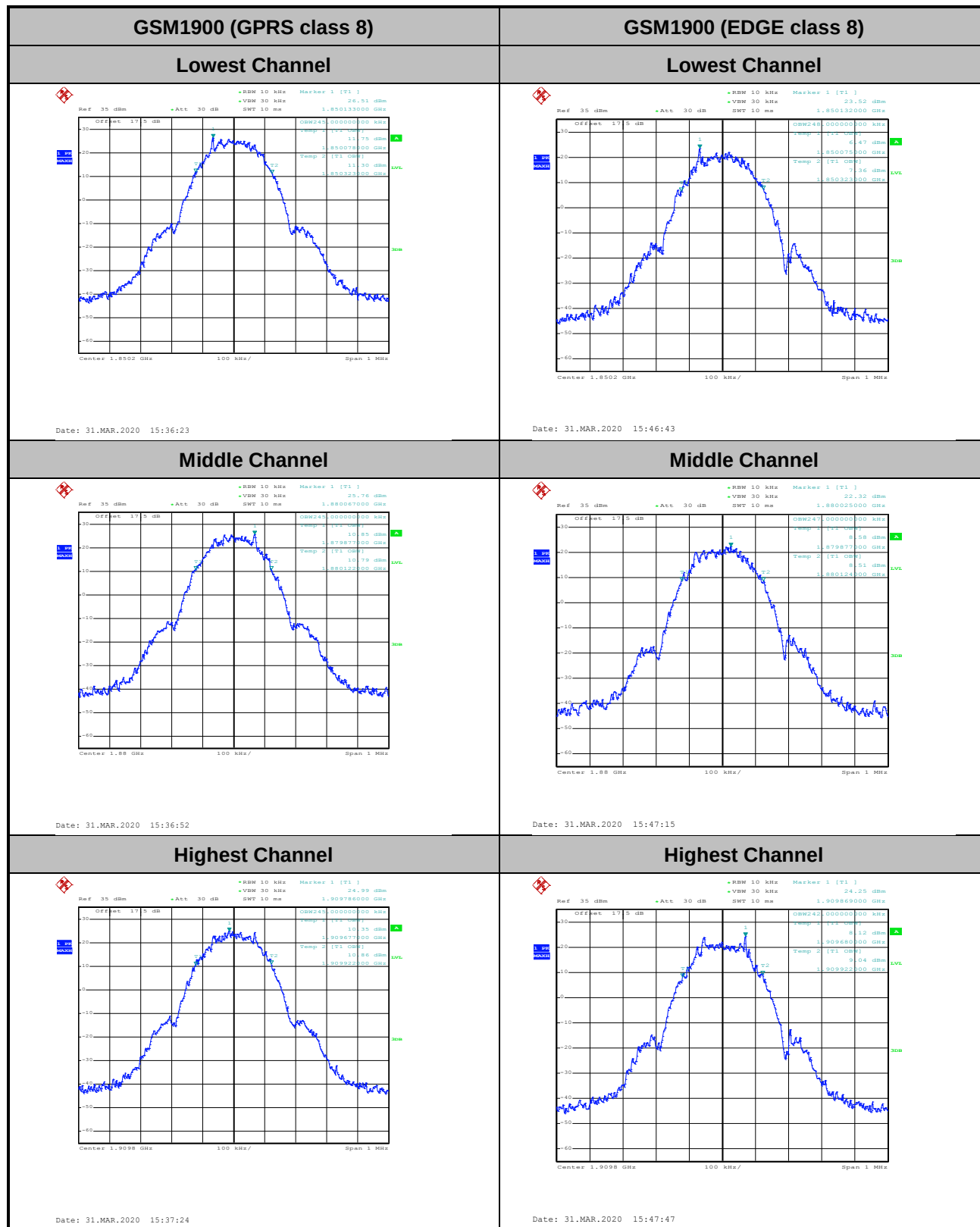


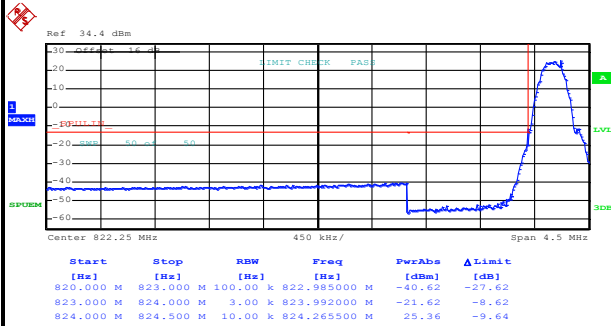
**Occupied Bandwidth**

| Mode       | GSM850       |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.244        | 0.250        |
| Middle CH  | 0.245        | 0.240        |
| Highest CH | 0.245        | 0.236        |

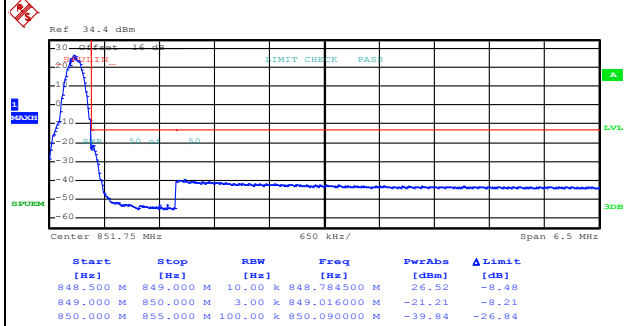
| Mode       | GSM1900      |              |
|------------|--------------|--------------|
| Mod.       | GPRS class 8 | EDGE class 8 |
| Lowest CH  | 0.245        | 0.248        |
| Middle CH  | 0.245        | 0.247        |
| Highest CH | 0.245        | 0.242        |



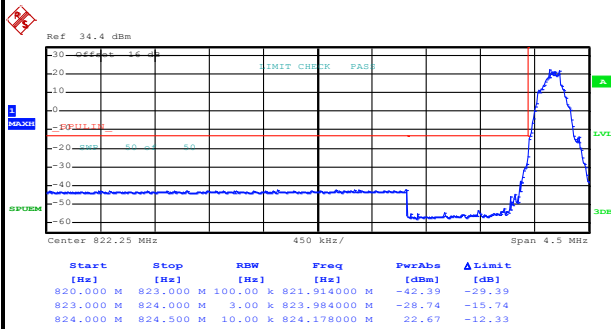


**Conducted Band Edge****GSM850 (GPRS class 8)****Lowest Band Edge**

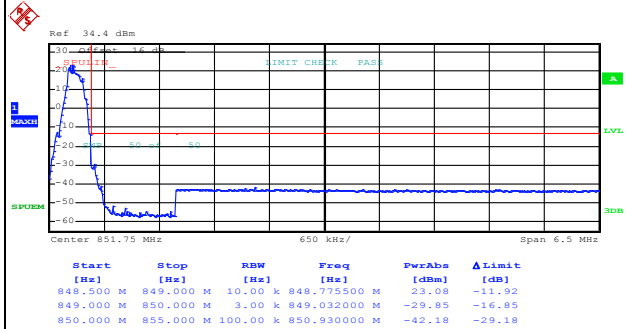
Date: 31.MAR.2020 14:59:38

**Highest Band Edge**

Date: 31.MAR.2020 15:02:02

**GSM850 (EDGE class 8)****Lowest Band Edge**

Date: 31.MAR.2020 15:11:29

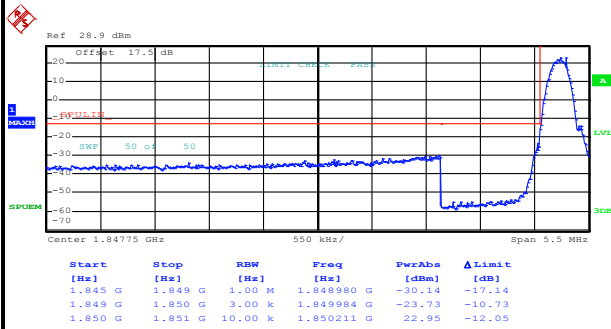
**Highest Band Edge**

Date: 31.MAR.2020 15:13:02



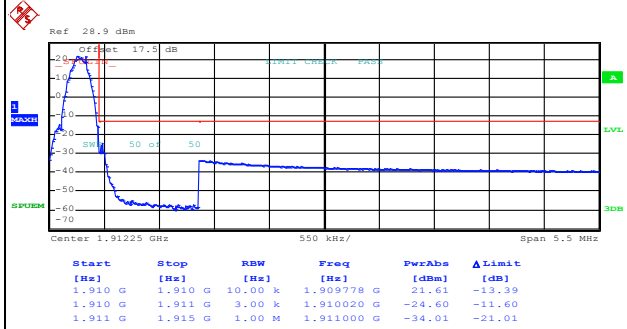
## GSM1900 (GPRS class 8)

## Lowest Band Edge



Date: 31.MAR.2020 15:39:01

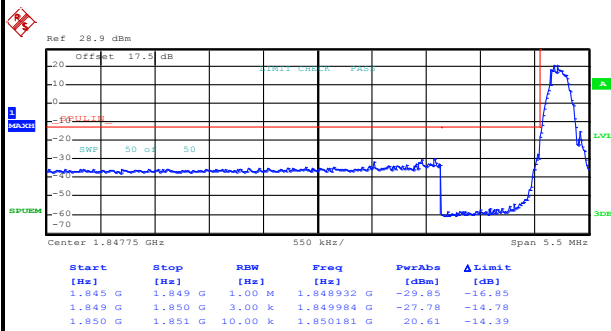
## Highest Band Edge



Date: 31.MAR.2020 15:40:34

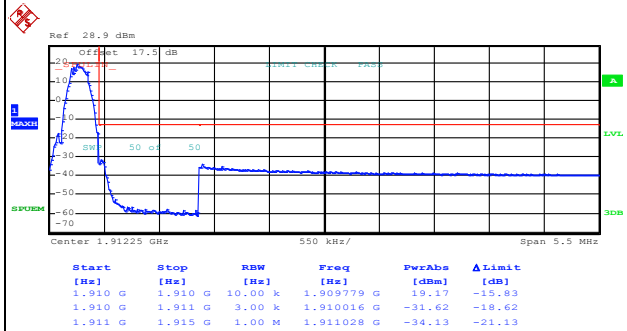
## GSM1900 (EDGE class 8)

## Lowest Band Edge



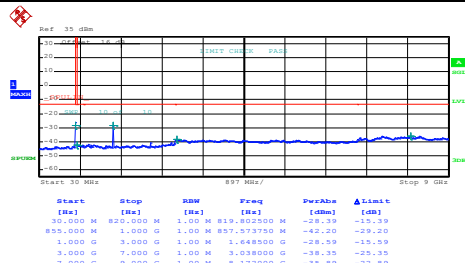
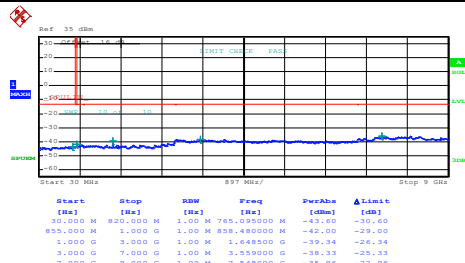
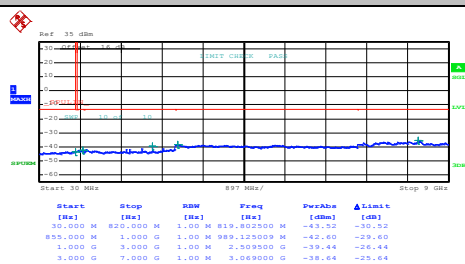
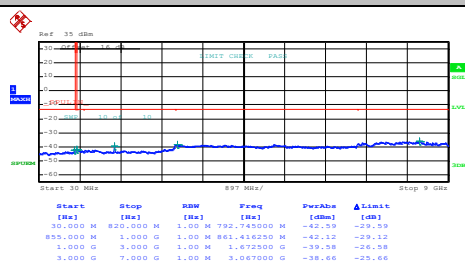
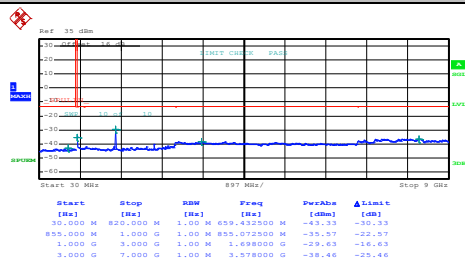
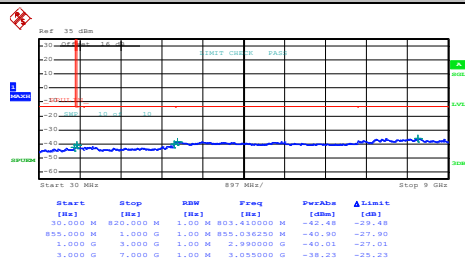
Date: 31.MAR.2020 15:49:20

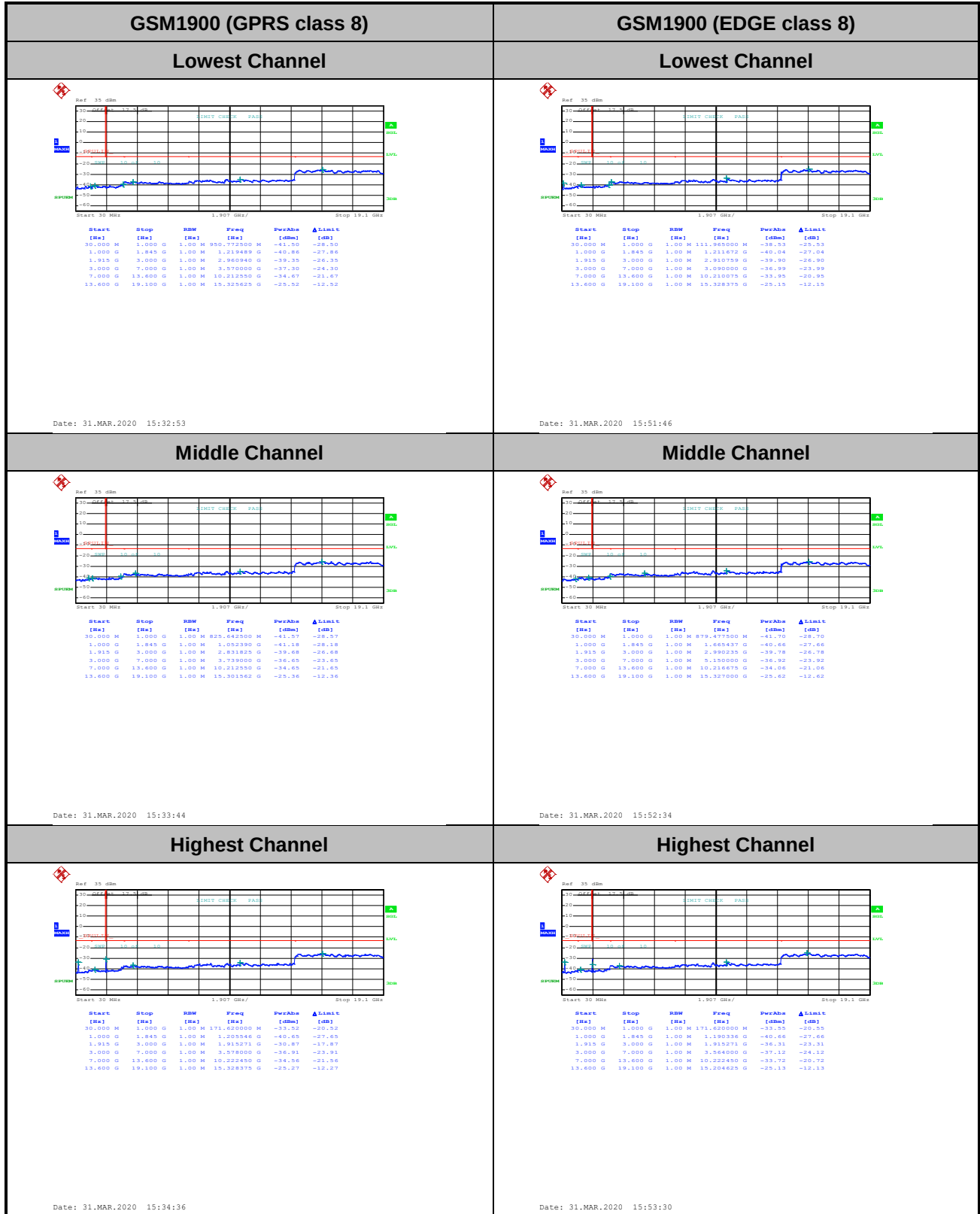
## Highest Band Edge



Date: 31.MAR.2020 15:50:52

**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>-28,39</td><td>-13,39</td></tr><tr><td>855,000 M</td><td>1,000 G</td><td>1,00 M</td><td>857,573750 M</td><td>-42,20</td><td>-29,20</td></tr><tr><td>1,000 G</td><td>3,000 G</td><td>1,00 M</td><td>1,648500 G</td><td>-28,59</td><td>-13,59</td></tr><tr><td>3,000 G</td><td>7,000 G</td><td>1,00 M</td><td>3,038000 G</td><td>-38,35</td><td>-25,35</td></tr><tr><td>7,000 G</td><td>9,000 G</td><td>1,00 M</td><td>8,172000 G</td><td>-35,89</td><td>-22,89</td></tr></table><p>Date: 31.MAR.2020 14:55:39</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 | -28,39 | -13,39 | 855,000 M | 1,000 G | 1,00 M | 857,573750 M | -42,20 | -29,20 | 1,000 G | 3,000 G | 1,00 M | 1,648500 G | -28,59 | -13,59 | 3,000 G | 7,000 G | 1,00 M | 3,038000 G | -38,35 | -25,35 | 7,000 G | 9,000 G | 1,00 M | 8,172000 G | -35,89 | -22,89 | <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>765,055000 M</td><td>-43,60</td><td>-30,60</td></tr><tr><td>855,000 M</td><td>1,000 G</td><td>1,00 M</td><td>858,480000 M</td><td>-42,00</td><td>-29,00</td></tr><tr><td>1,000 G</td><td>3,000 G</td><td>1,00 M</td><td>1,648500 G</td><td>-39,34</td><td>-26,34</td></tr><tr><td>3,000 G</td><td>7,000 G</td><td>1,00 M</td><td>3,559000 G</td><td>-38,33</td><td>-25,33</td></tr><tr><td>7,000 G</td><td>9,000 G</td><td>1,00 M</td><td>7,548000 G</td><td>-35,96</td><td>-22,96</td></tr></table><p>Date: 31.MAR.2020 15:05:22</p></div>   |  | Start | Stop | RBW | Freq | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30,000 M | 820,000 M | 1,00 M | 765,055000 M | -43,60 | -30,60 | 855,000 M | 1,000 G | 1,00 M | 858,480000 M | -42,00 | -29,00 | 1,000 G | 3,000 G | 1,00 M | 1,648500 G | -39,34 | -26,34 | 3,000 G | 7,000 G | 1,00 M | 3,559000 G | -38,33 | -25,33 | 7,000 G | 9,000 G | 1,00 M | 7,548000 G | -35,96 | -22,96 |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stop      | RBW                   | Freq         | PerAbn | ΔLimit |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | [Hz]      | [Hz]                  | [Hz]         | [dBm]  | [dB]   |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 820,000 M | 1,00 M                | 819,802500 M | -28,39 | -13,39 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 855,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1,000 G   | 1,00 M                | 857,573750 M | -42,20 | -29,20 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3,000 G   | 1,00 M                | 1,648500 G   | -28,59 | -13,59 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7,000 G   | 1,00 M                | 3,038000 G   | -38,35 | -25,35 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9,000 G   | 1,00 M                | 8,172000 G   | -35,89 | -22,89 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stop      | RBW                   | Freq         | PerAbn | ΔLimit |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | [Hz]      | [Hz]                  | [Hz]         | [dBm]  | [dB]   |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 820,000 M | 1,00 M                | 765,055000 M | -43,60 | -30,60 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 855,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1,000 G   | 1,00 M                | 858,480000 M | -42,00 | -29,00 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3,000 G   | 1,00 M                | 1,648500 G   | -39,34 | -26,34 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7,000 G   | 1,00 M                | 3,559000 G   | -38,33 | -25,33 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9,000 G   | 1,00 M                | 7,548000 G   | -35,96 | -22,96 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 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>819,802500 M</td><td>-43,52</td><td>-30,52</td></tr><tr><td>855,000 M</td><td>1,000 G</td><td>1,00 M</td><td>989,123000 M</td><td>-42,60</td><td>-29,60</td></tr><tr><td>1,000 G</td><td>3,000 G</td><td>1,00 M</td><td>2,509500 G</td><td>-39,44</td><td>-26,44</td></tr><tr><td>3,000 G</td><td>7,000 G</td><td>1,00 M</td><td>3,069000 G</td><td>-38,64</td><td>-25,64</td></tr><tr><td>7,000 G</td><td>9,000 G</td><td>1,00 M</td><td>8,334500 G</td><td>-35,67</td><td>-22,67</td></tr></table><p>Date: 31.MAR.2020 14:56:32</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 | -43,52 | -30,52 | 855,000 M | 1,000 G | 1,00 M | 989,123000 M | -42,60 | -29,60 | 1,000 G | 3,000 G | 1,00 M | 2,509500 G | -39,44 | -26,44 | 3,000 G | 7,000 G | 1,00 M | 3,069000 G | -38,64 | -25,64 | 7,000 G | 9,000 G | 1,00 M | 8,334500 G | -35,67 | -22,67 | <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>792,745000 M</td><td>-42,59</td><td>-29,59</td></tr><tr><td>855,000 M</td><td>1,000 G</td><td>1,00 M</td><td>861,456250 M</td><td>-42,12</td><td>-29,12</td></tr><tr><td>1,000 G</td><td>3,000 G</td><td>1,00 M</td><td>1,672500 G</td><td>-39,58</td><td>-26,58</td></tr><tr><td>3,000 G</td><td>7,000 G</td><td>1,00 M</td><td>3,067000 G</td><td>-38,66</td><td>-25,66</td></tr><tr><td>7,000 G</td><td>9,000 G</td><td>1,00 M</td><td>8,375000 G</td><td>-36,66</td><td>-23,66</td></tr></table><p>Date: 31.MAR.2020 15:06:13</p></div>  |  | Start | Stop | RBW | Freq | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30,000 M | 820,000 M | 1,00 M | 792,745000 M | -42,59 | -29,59 | 855,000 M | 1,000 G | 1,00 M | 861,456250 M | -42,12 | -29,12 | 1,000 G | 3,000 G | 1,00 M | 1,672500 G | -39,58 | -26,58 | 3,000 G | 7,000 G | 1,00 M | 3,067000 G | -38,66 | -25,66 | 7,000 G | 9,000 G | 1,00 M | 8,375000 G | -36,66 | -23,66 |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stop      | RBW                   | Freq         | PerAbn | ΔLimit |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | [Hz]      | [Hz]                  | [Hz]         | [dBm]  | [dB]   |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 820,000 M | 1,00 M                | 819,802500 M | -43,52 | -30,52 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 855,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1,000 G   | 1,00 M                | 989,123000 M | -42,60 | -29,60 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3,000 G   | 1,00 M                | 2,509500 G   | -39,44 | -26,44 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7,000 G   | 1,00 M                | 3,069000 G   | -38,64 | -25,64 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9,000 G   | 1,00 M                | 8,334500 G   | -35,67 | -22,67 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stop      | RBW                   | Freq         | PerAbn | ΔLimit |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | [Hz]      | [Hz]                  | [Hz]         | [dBm]  | [dB]   |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 820,000 M | 1,00 M                | 792,745000 M | -42,59 | -29,59 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 855,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1,000 G   | 1,00 M                | 861,456250 M | -42,12 | -29,12 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3,000 G   | 1,00 M                | 1,672500 G   | -39,58 | -26,58 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7,000 G   | 1,00 M                | 3,067000 G   | -38,66 | -25,66 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9,000 G   | 1,00 M                | 8,375000 G   | -36,66 | -23,66 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 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>659,432500 M</td><td>-43,33</td><td>-30,33</td></tr><tr><td>855,000 M</td><td>1,000 G</td><td>1,00 M</td><td>855,072500 M</td><td>-35,57</td><td>-22,57</td></tr><tr><td>1,000 G</td><td>3,000 G</td><td>1,00 M</td><td>1,698000 G</td><td>-39,63</td><td>-26,63</td></tr><tr><td>3,000 G</td><td>7,000 G</td><td>1,00 M</td><td>3,578000 G</td><td>-38,46</td><td>-25,46</td></tr><tr><td>7,000 G</td><td>9,000 G</td><td>1,00 M</td><td>8,355500 G</td><td>-36,36</td><td>-23,36</td></tr></table><p>Date: 31.MAR.2020 14:57:22</p></div> |           | Start                 | Stop         | RBW    | Freq   | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30,000 M | 820,000 M | 1,00 M | 659,432500 M | -43,33 | -30,33 | 855,000 M | 1,000 G | 1,00 M | 855,072500 M | -35,57 | -22,57 | 1,000 G | 3,000 G | 1,00 M | 1,698000 G | -39,63 | -26,63 | 3,000 G | 7,000 G | 1,00 M | 3,578000 G | -38,46 | -25,46 | 7,000 G | 9,000 G | 1,00 M | 8,355500 G | -36,36 | -23,36 | <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>803,455000 M</td><td>-42,48</td><td>-29,48</td></tr><tr><td>855,000 M</td><td>1,000 G</td><td>1,00 M</td><td>855,036250 M</td><td>-40,90</td><td>-27,90</td></tr><tr><td>1,000 G</td><td>3,000 G</td><td>1,00 M</td><td>2,990000 G</td><td>-40,01</td><td>-27,01</td></tr><tr><td>3,000 G</td><td>7,000 G</td><td>1,00 M</td><td>3,055000 G</td><td>-38,23</td><td>-25,23</td></tr><tr><td>7,000 G</td><td>9,000 G</td><td>1,00 M</td><td>8,345000 G</td><td>-36,25</td><td>-23,25</td></tr></table><p>Date: 31.MAR.2020 15:07:04</p></div> |  | Start | Stop | RBW | Freq | PerAbn | ΔLimit | [Hz] | [Hz] | [Hz] | [Hz] | [dBm] | [dB] | 30,000 M | 820,000 M | 1,00 M | 803,455000 M | -42,48 | -29,48 | 855,000 M | 1,000 G | 1,00 M | 855,036250 M | -40,90 | -27,90 | 1,000 G | 3,000 G | 1,00 M | 2,990000 G | -40,01 | -27,01 | 3,000 G | 7,000 G | 1,00 M | 3,055000 G | -38,23 | -25,23 | 7,000 G | 9,000 G | 1,00 M | 8,345000 G | -36,25 | -23,25 |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stop      | RBW                   | Freq         | PerAbn | ΔLimit |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | [Hz]      | [Hz]                  | [Hz]         | [dBm]  | [dB]   |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 820,000 M | 1,00 M                | 659,432500 M | -43,33 | -30,33 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 855,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1,000 G   | 1,00 M                | 855,072500 M | -35,57 | -22,57 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3,000 G   | 1,00 M                | 1,698000 G   | -39,63 | -26,63 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7,000 G   | 1,00 M                | 3,578000 G   | -38,46 | -25,46 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9,000 G   | 1,00 M                | 8,355500 G   | -36,36 | -23,36 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| Start                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stop      | RBW                   | Freq         | PerAbn | ΔLimit |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| [Hz]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | [Hz]      | [Hz]                  | [Hz]         | [dBm]  | [dB]   |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 30,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 820,000 M | 1,00 M                | 803,455000 M | -42,48 | -29,48 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 855,000 M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1,000 G   | 1,00 M                | 855,036250 M | -40,90 | -27,90 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 1,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3,000 G   | 1,00 M                | 2,990000 G   | -40,01 | -27,01 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 3,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7,000 G   | 1,00 M                | 3,055000 G   | -38,23 | -25,23 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |
| 7,000 G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9,000 G   | 1,00 M                | 8,345000 G   | -36,25 | -23,25 |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |       |      |     |      |        |        |      |      |      |      |       |      |          |           |        |              |        |        |           |         |        |              |        |        |         |         |        |            |        |        |         |         |        |            |        |        |         |         |        |            |        |        |



## 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    | 0.0263                   | 0.0060                   | PASS            |
| 40               | Normal Voltage    | 0.0287                   | 0.0072                   |                 |
| 30               | Normal Voltage    | 0.0024                   | 0.0024                   |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000                   | 0.0000                   |                 |
| 10               | Normal Voltage    | 0.0012                   | 0.0012                   |                 |
| 0                | Normal Voltage    | 0.0000                   | 0.0048                   |                 |
| -10              | Normal Voltage    | 0.0323                   | 0.0024                   |                 |
| -20              | Normal Voltage    | 0.0311                   | 0.0012                   |                 |
| -30              | Normal Voltage    | 0.0311                   | 0.0024                   |                 |
| 20               | Maximum Voltage   | 0.0036                   | 0.0000                   |                 |
| 20               | Normal Voltage    | 0.0000                   | 0.0000                   |                 |
| 20               | Battery End Point | 0.0012                   | 0.0000                   |                 |

| 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    | 0.0005                    | 0.0191                    | PASS             |
| 40               | Normal Voltage    | 0.0096                    | 0.0106                    |                  |
| 30               | Normal Voltage    | 0.0096                    | 0.0106                    |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                    | 0.0000                    |                  |
| 10               | Normal Voltage    | 0.0021                    | 0.0000                    |                  |
| 0                | Normal Voltage    | 0.0011                    | 0.0005                    |                  |
| -10              | Normal Voltage    | 0.0000                    | 0.0000                    |                  |
| -20              | Normal Voltage    | 0.0191                    | 0.0005                    |                  |
| -30              | Normal Voltage    | 0.0191                    | 0.0005                    |                  |
| 20               | Maximum Voltage   | 0.0021                    | 0.0005                    |                  |
| 20               | Normal Voltage    | 0.0000                    | 0.0000                    |                  |
| 20               | Battery End Point | 0.0011                    | 0.0021                    |                  |

**Note:**

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block..

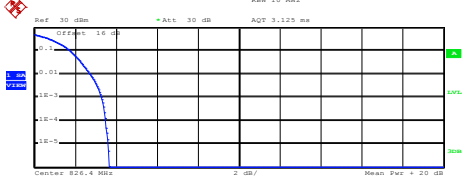
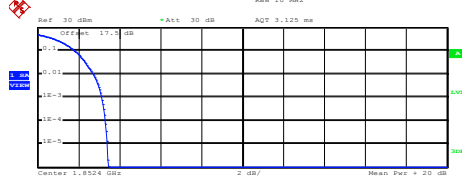
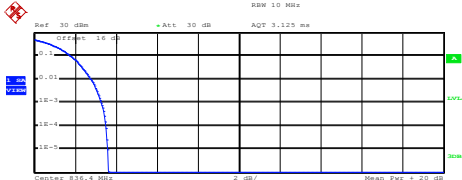
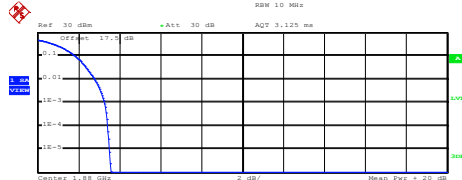
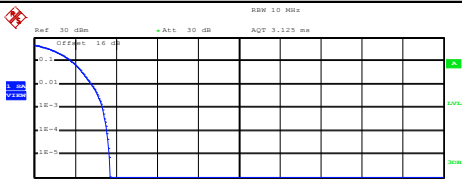
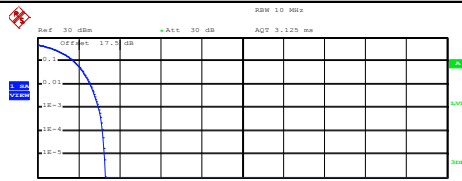


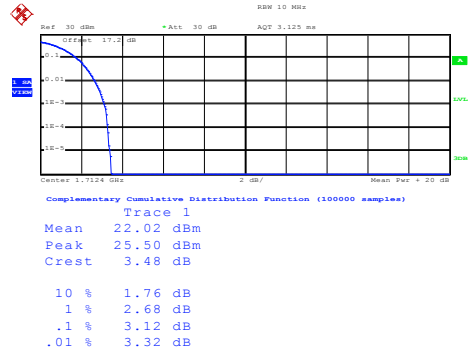
### A3. WCDMA

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

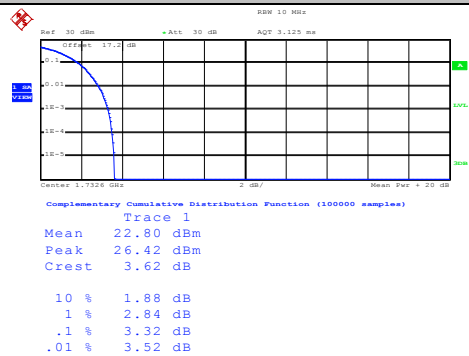
| Mode       | WCDMA Band V | WCDMA Band II | WCDMA Band IV | Limit: 13dB |
|------------|--------------|---------------|---------------|-------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  | Result      |
| Lowest CH  | 3.28         | 3.16          | 3.12          | PASS        |
| Middle CH  | 3.28         | 3.28          | 3.32          |             |
| Highest CH | 3.32         | 2.96          | 2.92          |             |



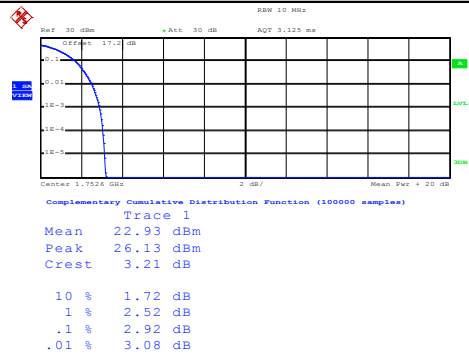
| WCDMA Band V (RMC 12.2Kbps)                                                                                                                                                                                                                                                                                                                                                                                                                                                  | WCDMA Band II (RMC 12.2Kbps)                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Lowest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  <p>Ref: 30 dBm    Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 826.4 MHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 22.77 dBm<br/>Peak: 26.42 dBm<br/>Crest: 3.65 dB</p> <p>10 %: 1.76 dB<br/>1 %: 2.72 dB<br/>.1 %: 3.28 dB<br/>.01 %: 3.48 dB</p> <p>Date: 31.MAR.2020 15:20:06</p>   |  <p>Ref: 30 dBm    Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 1.8524 GHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 22.83 dBm<br/>Peak: 26.28 dBm<br/>Crest: 3.44 dB</p> <p>10 %: 1.84 dB<br/>1 %: 2.72 dB<br/>.1 %: 3.16 dB<br/>.01 %: 3.32 dB</p> <p>Date: 31.MAR.2020 16:02:50</p>   |
| Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Middle Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  <p>Ref: 30 dBm    Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 836.4 MHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 22.73 dBm<br/>Peak: 26.35 dBm<br/>Crest: 3.62 dB</p> <p>10 %: 1.80 dB<br/>1 %: 2.76 dB<br/>.1 %: 3.28 dB<br/>.01 %: 3.52 dB</p> <p>Date: 31.MAR.2020 15:20:23</p>  |  <p>Ref: 30 dBm    Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 1.85 GHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 22.71 dBm<br/>Peak: 26.28 dBm<br/>Crest: 3.57 dB</p> <p>10 %: 1.84 dB<br/>1 %: 2.80 dB<br/>.1 %: 3.28 dB<br/>.01 %: 3.44 dB</p> <p>Date: 31.MAR.2020 16:03:05</p>    |
| Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Highest Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|  <p>Ref: 30 dBm    Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 846.6 MHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 23.49 dBm<br/>Peak: 27.19 dBm<br/>Crest: 3.70 dB</p> <p>10 %: 1.84 dB<br/>1 %: 2.80 dB<br/>.1 %: 3.32 dB<br/>.01 %: 3.56 dB</p> <p>Date: 31.MAR.2020 15:20:38</p> |  <p>Ref: 30 dBm    Att: 30 dB    RSW: 10 MHz    AQT: 3.125 ms</p> <p>Center: 1.9076 GHz    2 dB/    Mean: Per + 20 dB</p> <p>Complementary Cumulative Distribution Function (100000 samples)</p> <p>Trace 1</p> <p>Mean: 22.75 dBm<br/>Peak: 26.06 dBm<br/>Crest: 3.32 dB</p> <p>10 %: 1.76 dB<br/>1 %: 2.56 dB<br/>.1 %: 2.96 dB<br/>.01 %: 3.16 dB</p> <p>Date: 31.MAR.2020 16:03:17</p> |

**WCDMA Band IV (RMC 12.2Kbps)**
**Lowest Channel**


Date: 31.MAR.2020 16:21:13

**Middle Channel**


Date: 31.MAR.2020 16:21:30

**Highest Channel**


Date: 31.MAR.2020 16:21:47

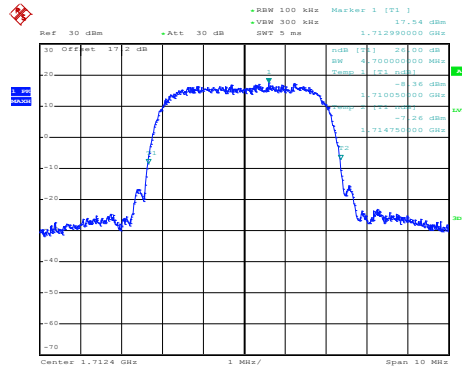
**26dB Bandwidth**

| Mode       | WCDMA Band V | WCDMA Band II | WCDMA Band IV |
|------------|--------------|---------------|---------------|
| Mod.       | RMC 12.2Kbps | RMC 12.2Kbps  | RMC 12.2Kbps  |
| Lowest CH  | 4.70         | 4.69          | 4.70          |
| Middle CH  | 4.71         | 4.71          | 4.69          |
| Highest CH | 4.71         | 4.70          | 4.71          |



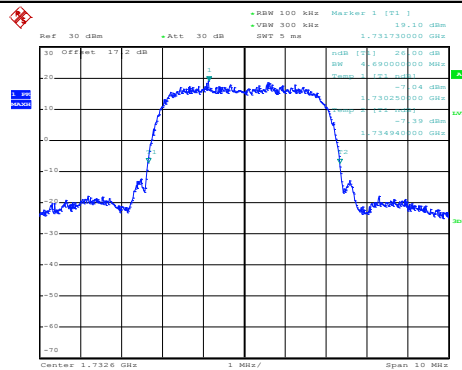
## WCDMA Band IV (RMC 12.2Kbps)

### Lowest Channel



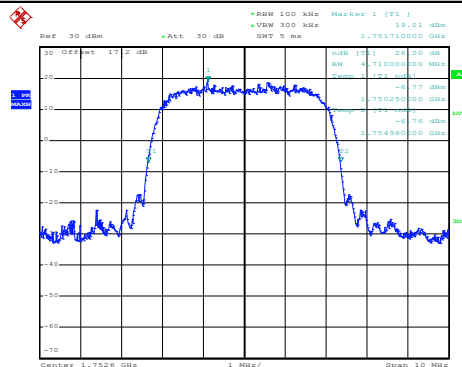
Date: 31.MAR.2020 16:17:14

### Middle Channel



Date: 31.MAR.2020 16:17:51

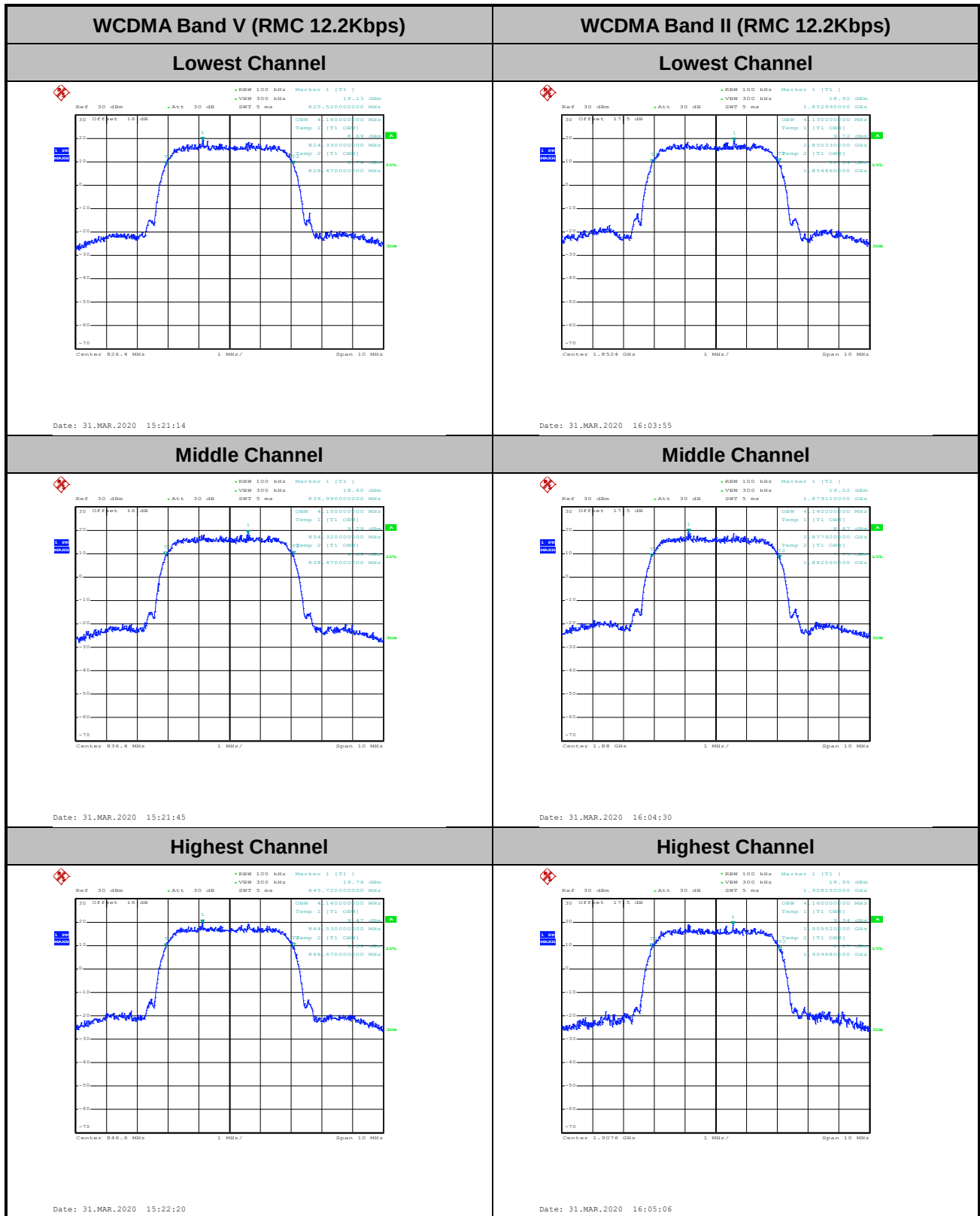
### Highest Channel



Date: 31.MAR.2020 16:18:23

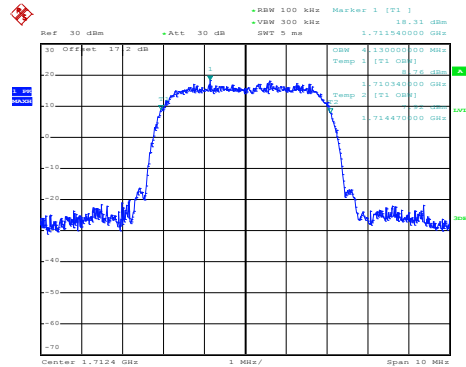
**Occupied Bandwidth**

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



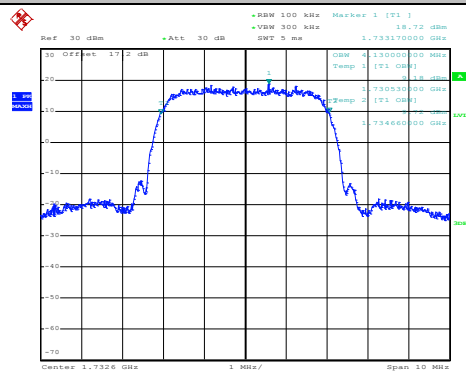
## WCDMA Band IV (RMC 12.2Kbps)

### Lowest Channel



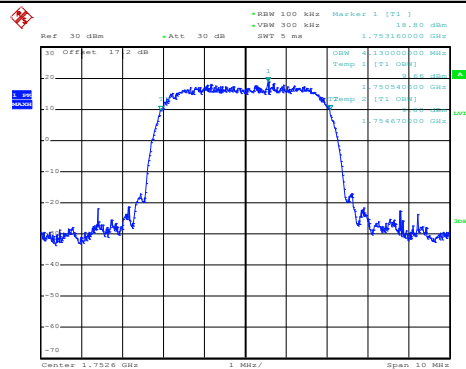
Date: 31.MAR.2020 16:22:36

### Middle Channel

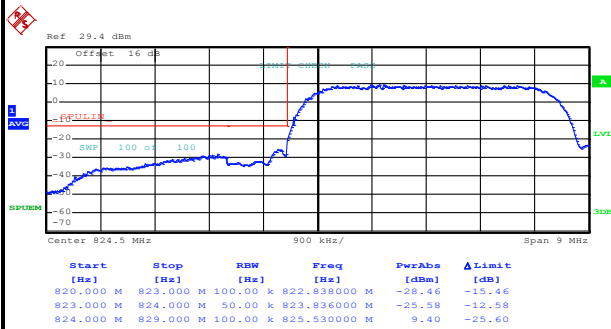


Date: 31.MAR.2020 16:23:17

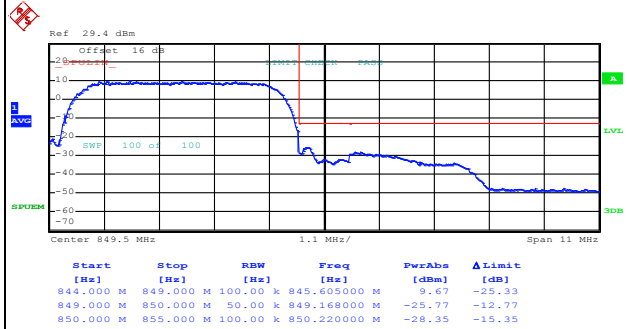
### Highest Channel



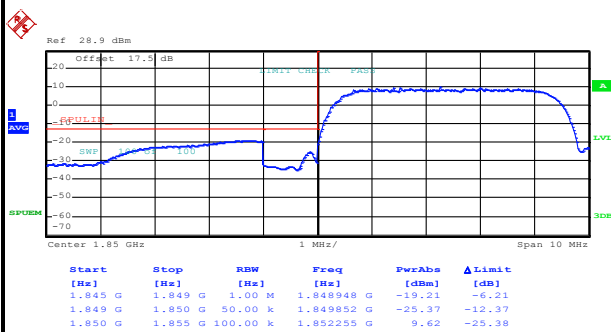
Date: 31.MAR.2020 16:23:51

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

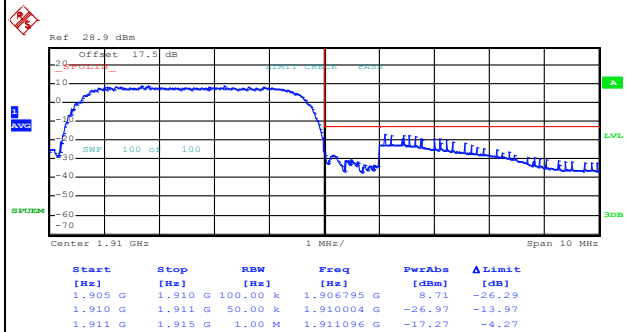
Date: 31.MAR.2020 15:25:15

**Highest Band Edge**

Date: 31.MAR.2020 15:28:05

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

Date: 31.MAR.2020 16:08:08

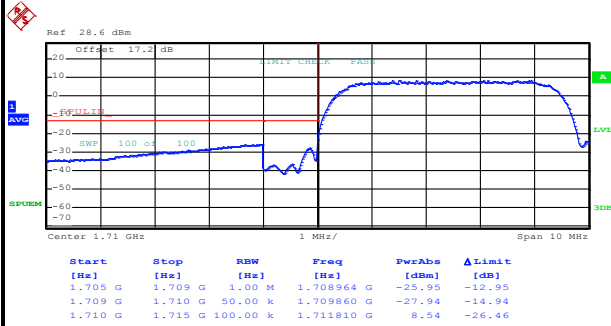
**Highest Band Edge**

Date: 31.MAR.2020 16:11:01



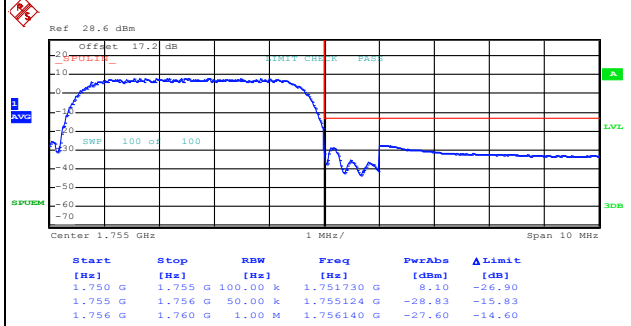
## WCDMA Band IV (RMC 12.2Kbps)

## Lowest Band Edge

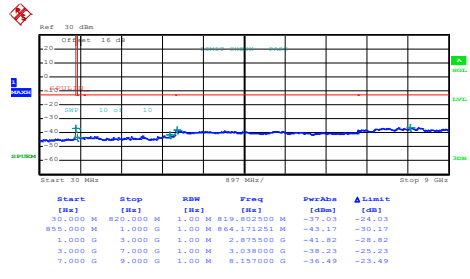


Date: 31.MAR.2020 16:26:43

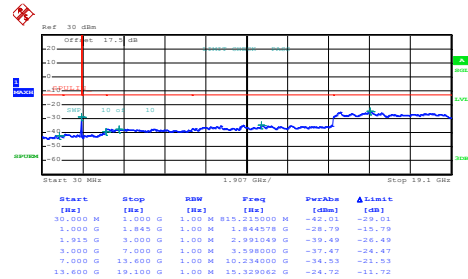
## Highest Band Edge



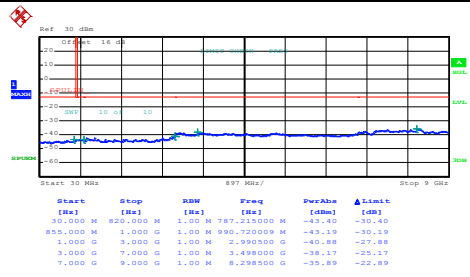
Date: 31.MAR.2020 16:29:34

**Conducted Spurious Emission****WCDMA Band V (RMC 12.2Kbps)****Lowest Channel**

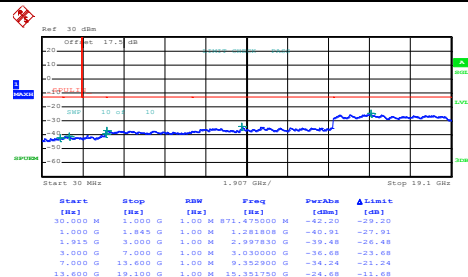
Date: 31.MAR.2020 15:18:02

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

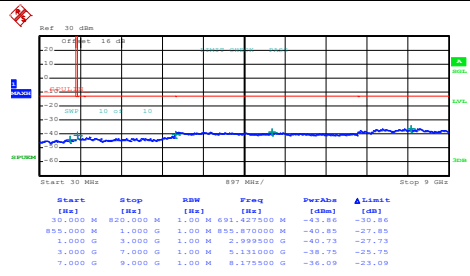
Date: 31.MAR.2020 16:00:49

**Middle Channel**

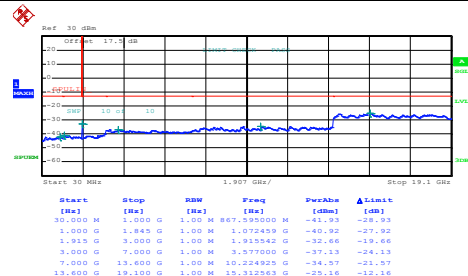
Date: 31.MAR.2020 15:18:54

**Middle Channel**

Date: 31.MAR.2020 16:01:39

**Highest Channel**

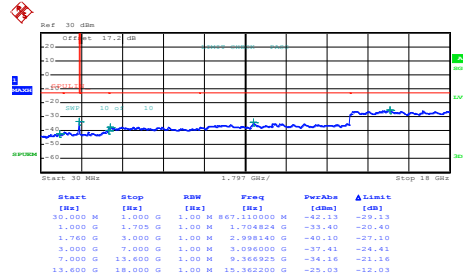
Date: 31.MAR.2020 15:19:47

**Highest Channel**

Date: 31.MAR.2020 16:02:30

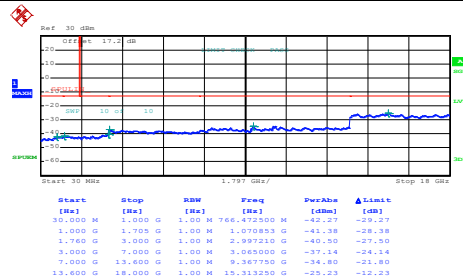
## WCDMA Band IV (RMC 12.2Kbps)

### Lowest Channel



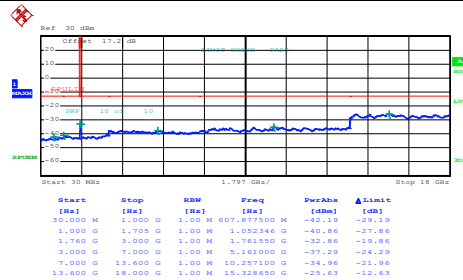
Date: 31.MAR.2020 16:19:16

### Middle Channel



Date: 31.MAR.2020 16:20:05

### Highest Channel



Date: 31.MAR.2020 16:20:55

**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    | 0.0167                         | PASS            |
| 40               | Normal Voltage    | 0.0155                         |                 |
| 30               | Normal Voltage    | 0.0143                         |                 |
| 20(Ref.)         | Normal Voltage    | 0.0000                         |                 |
| 10               | Normal Voltage    | 0.0000                         |                 |
| 0                | Normal Voltage    | 0.0024                         |                 |
| -10              | Normal Voltage    | 0.0024                         |                 |
| -20              | Normal Voltage    | 0.0036                         |                 |
| -30              | Normal Voltage    | 0.0048                         |                 |
| 20               | Maximum Voltage   | 0.0132                         |                 |
| 20               | Normal Voltage    | 0.0000                         |                 |
| 20               | Battery End Point | 0.0024                         |                 |

| 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    | 0.0000                          | PASS             |
| 40               | Normal Voltage    | 0.0005                          |                  |
| 30               | Normal Voltage    | 0.0005                          |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |                  |
| 10               | Normal Voltage    | 0.0021                          |                  |
| 0                | Normal Voltage    | 0.0011                          |                  |
| -10              | Normal Voltage    | 0.0027                          |                  |
| -20              | Normal Voltage    | 0.0037                          |                  |
| -30              | Normal Voltage    | 0.0043                          |                  |
| 20               | Maximum Voltage   | 0.0000                          |                  |
| 20               | Normal Voltage    | 0.0000                          |                  |
| 20               | Battery End Point | 0.0005                          |                  |

| 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    | 0.0040                          | PASS             |
| 40               | Normal Voltage    | 0.0017                          |                  |
| 30               | Normal Voltage    | 0.0023                          |                  |
| 20(Ref.)         | Normal Voltage    | 0.0000                          |                  |
| 10               | Normal Voltage    | 0.0000                          |                  |
| 0                | Normal Voltage    | 0.0006                          |                  |
| -10              | Normal Voltage    | 0.0185                          |                  |
| -20              | Normal Voltage    | 0.0196                          |                  |
| -30              | Normal Voltage    | 0.0208                          |                  |
| 20               | Maximum Voltage   | 0.0012                          |                  |
| 20               | Normal Voltage    | 0.0000                          |                  |
| 20               | Battery End Point | 0.0006                          |                  |

**Note:**

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block.

**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 = 1.4 dB)       | 33.82       | 2.4099        | 33.07    | 2.0277 |
| Middle  |                                                    | 33.99       | 2.5061        | 33.24    | 2.1086 |
| Highest |                                                    | 33.92       | 2.4660        | 33.17    | 2.0749 |
| Lowest  | GSM850<br>EDGE class 8<br>(GT - LC = 1.4 dB)       | 27.11       | 0.5140        | 26.36    | 0.4325 |
| Middle  |                                                    | 26.77       | 0.4753        | 26.02    | 0.3999 |
| Highest |                                                    | 26.90       | 0.4898        | 26.15    | 0.4121 |
| Lowest  | WCDMA Band V<br>RMC 12.2Kbps<br>(GT - LC = 1.4 dB) | 25.30       | 0.3388        | 24.55    | 0.2851 |
| Middle  |                                                    | 25.27       | 0.3365        | 24.52    | 0.2831 |
| Highest |                                                    | 25.01       | 0.3170        | 24.26    | 0.2667 |
| 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 = 0.7 dB)       | 31.49       | 1.4093        | 32.19     | 1.6558  |
| Middle  |                                                     | 31.43       | 1.3900        | 32.13     | 1.6331  |
| Highest |                                                     | 30.84       | 1.2134        | 31.54     | 1.4256  |
| Lowest  | GSM1900<br>EDGE class 8<br>(GT - LC = 0.7 dB)       | 27.36       | 0.5445        | 28.06     | 0.6397  |
| Middle  |                                                     | 27.22       | 0.5272        | 27.92     | 0.6194  |
| Highest |                                                     | 27.49       | 0.5610        | 28.19     | 0.6592  |
| Lowest  | WCDMA Band II<br>RMC 12.2Kbps<br>(GT - LC = 3.1 dB) | 23.98       | 0.2500        | 27.08     | 0.5105  |
| Middle  |                                                     | 23.78       | 0.2388        | 26.88     | 0.4875  |
| Highest |                                                     | 23.70       | 0.2344        | 26.80     | 0.4786  |
| 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 = 3.1 dB) | 24.49       | 0.2812        | 27.59     | 0.5741  |
| Middle  |                                                     | 24.25       | 0.2661        | 27.35     | 0.5433  |
| Highest |                                                     | 24.38       | 0.2742        | 27.48     | 0.5598  |
| Limit   | EIRP < 1W                                           | Result      |               | PASS      |         |

**Radiated Spurious Emission****GSM 850**

| GSM 850 |                   |             |               |                   |                   |                    |                      |                       |                    |
|---------|-------------------|-------------|---------------|-------------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | SPA Reading (dBm) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest  | 1648              | -40.94      | -13           | -27.94            | -51.48            | -47.89             | 0.53                 | 9.63                  | H                  |
|         | 2472              | -48.59      | -13           | -35.59            | -62.54            | -56.57             | 0.65                 | 10.78                 | H                  |
|         | 4120              | -53.09      | -13           | -40.09            | -71.05            | -62.43             | 0.86                 | 12.35                 | H                  |
|         | 1648              | -44.11      | -13           | -31.11            | -54.36            | -51.06             | 0.53                 | 9.63                  | V                  |
|         | 2472              | -45.69      | -13           | -32.69            | -60.13            | -53.67             | 0.65                 | 10.78                 | V                  |
|         | 4120              | -51.74      | -13           | -38.74            | -70.88            | -61.08             | 0.86                 | 12.35                 | V                  |
| Middle  | 1672              | -42.17      | -13           | -29.17            | -52.83            | -49.17             | 0.53                 | 9.68                  | H                  |
|         | 2512              | -44.51      | -13           | -31.51            | -58.48            | -52.51             | 0.66                 | 10.81                 | H                  |
|         | 4184              | -47.45      | -13           | -34.45            | -65.52            | -56.79             | 0.84                 | 12.33                 | H                  |
|         | 1672              | -44.98      | -13           | -31.98            | -55.24            | -51.98             | 0.53                 | 9.68                  | V                  |
|         | 2512              | -41.28      | -13           | -28.28            | -55.66            | -49.28             | 0.66                 | 10.81                 | V                  |
|         | 4184              | -47.33      | -13           | -34.33            | -66.63            | -56.67             | 0.84                 | 12.33                 | V                  |
| Highest | 1696              | -43.28      | -13           | -30.28            | -54.21            | -50.33             | 0.53                 | 9.73                  | H                  |
|         | 2544              | -48.65      | -13           | -35.65            | -62.69            | -56.66             | 0.67                 | 10.83                 | H                  |
|         | 4248              | -47.04      | -13           | -34.04            | -65.32            | -56.35             | 0.84                 | 12.30                 | H                  |
|         | 1696              | -43.56      | -13           | -30.56            | -53.87            | -50.61             | 0.53                 | 9.73                  | V                  |
|         | 2544              | -46.05      | -13           | -33.05            | -60.46            | -54.06             | 0.67                 | 10.83                 | V                  |
|         | 4248              | -48.69      | -13           | -35.69            | -68.24            | -58                | 0.84                 | 12.30                 | 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 ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest   | 1648                 | -55.99         | -13              | -42.99                  | -66.53                  | -62.94                   | 0.53                       | 9.63                        | H                     |
|          | 2472                 | -58.29         | -13              | -45.29                  | -72.24                  | -66.27                   | 0.65                       | 10.78                       | H                     |
|          | 3296                 | -57.87         | -13              | -44.87                  | -74.56                  | -66.95                   | 0.76                       | 11.99                       | H                     |
|          | 1648                 | -53.17         | -13              | -40.17                  | -63.42                  | -60.12                   | 0.53                       | 9.63                        | V                     |
|          | 2472                 | -56.26         | -13              | -43.26                  | -70.7                   | -64.24                   | 0.65                       | 10.78                       | V                     |
|          | 3296                 | -58.02         | -13              | -45.02                  | -74.68                  | -67.1                    | 0.76                       | 11.99                       | V                     |
| Middle   | 1672                 | -53.63         | -13              | -40.63                  | -64.29                  | -60.63                   | 0.53                       | 1672                        | H                     |
|          | 2512                 | -57.53         | -13              | -44.53                  | -71.5                   | -65.53                   | 0.66                       | 2512                        | H                     |
|          | 3344                 | -57.83         | -13              | -44.83                  | -74.6                   | -67.05                   | 0.76                       | 3344                        | H                     |
|          | 1672                 | -54.19         | -13              | -41.19                  | -64.45                  | -61.19                   | 1672                       | -54.19                      | V                     |
|          | 2512                 | -52.12         | -13              | -39.12                  | -66.5                   | -60.12                   | 2512                       | -52.12                      | V                     |
|          | 3344                 | -58.31         | -13              | -45.31                  | -74.89                  | -67.53                   | 3344                       | -58.31                      | V                     |
| Highest  | 1696                 | -48.48         | -13              | -35.48                  | -59.41                  | -55.53                   | 0.53                       | 1696                        | H                     |
|          | 2544                 | -58.90         | -13              | -45.90                  | -72.94                  | -66.91                   | 0.67                       | 2544                        | H                     |
|          | 4248                 | -57.05         | -13              | -44.05                  | -75.33                  | -66.36                   | 0.84                       | 4248                        | H                     |
|          | 1696                 | -51.29         | -13              | -38.29                  | -61.6                   | -58.34                   | 0.53                       | 1696                        | V                     |
|          | 2544                 | -58.14         | -13              | -45.14                  | -72.55                  | -66.15                   | 0.67                       | 2544                        | V                     |
|          | 4248                 | -55.99         | -13              | -42.99                  | -75.54                  | -65.3                    | 0.84                       | 4248                        | V                     |

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



## **WCDMA 850**

| WCDMA 850 |                      |                |                  |                         |                         |                          |                            |                             |                       |
|-----------|----------------------|----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel   | Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest    | 1652                 | -62.18         | -13              | -49.18                  | -72.72                  | -69.14                   | 0.53                       | 9.63                        | H                     |
|           | 2479                 | -59.74         | -13              | -46.74                  | -73.71                  | -67.72                   | 0.65                       | 10.78                       | H                     |
|           | 3305                 | -58.21         | -13              | -45.21                  | -74.9                   | -67.32                   | 0.76                       | 12.02                       | H                     |
|           | 1652                 | -62.90         | -13              | -49.90                  | -73.15                  | -69.86                   | 0.53                       | 9.63                        | V                     |
|           | 2479                 | -59.71         | -13              | -46.71                  | -74.17                  | -67.69                   | 0.65                       | 10.78                       | V                     |
|           | 3305                 | -58.17         | -13              | -45.17                  | -74.83                  | -67.28                   | 0.76                       | 12.02                       | V                     |
| Middle    | 1672                 | -59.27         | -13              | -46.27                  | -69.93                  | -66.27                   | 0.53                       | 9.68                        | H                     |
|           | 2509                 | -60.26         | -13              | -47.26                  | -74.23                  | -68.26                   | 0.66                       | 10.81                       | H                     |
|           | 3345                 | -58.26         | -13              | -45.26                  | -75.06                  | -67.48                   | 0.76                       | 12.14                       | H                     |
|           | 1672                 | -60.53         | -13              | -47.53                  | -70.79                  | -67.53                   | 0.53                       | 9.68                        | V                     |
|           | 2509                 | -59.73         | -13              | -46.73                  | -74.11                  | -67.73                   | 0.66                       | 10.81                       | V                     |
|           | 3345                 | -57.67         | -13              | -44.67                  | -74.21                  | -66.89                   | 0.76                       | 12.14                       | V                     |
| Highest   | 1696                 | -59.11         | -13              | -46.11                  | -70.04                  | -66.16                   | 0.53                       | 1696                        | H                     |
|           | 2544                 | -59.62         | -13              | -46.62                  | -73.66                  | -67.63                   | 0.67                       | 2544                        | H                     |
|           | 3393                 | -57.40         | -13              | -44.40                  | -74.29                  | -66.76                   | 0.77                       | 3393                        | H                     |
|           | 1696                 | -59.52         | -13              | -46.52                  | -69.83                  | -66.57                   | 0.53                       | 1696                        | V                     |
|           | 2544                 | -59.09         | -13              | -46.09                  | -73.5                   | -67.1                    | 0.67                       | 2544                        | V                     |
|           | 3393                 | -58.03         | -13              | -45.03                  | -74.51                  | -67.39                   | 0.77                       | 3393                        | V                     |

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



## **GSM 1900**

| GSM 1900 |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|----------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel  | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest   | 3702                 | -35.50          | -13              | -22.50                  | -52.9                   | -47.29                   | 0.72                       | 12.52                       | H                     |
|          | 5550                 | -36.88          | -13              | -23.88                  | -59.25                  | -49.05                   | 1.00                       | 13.17                       | H                     |
|          | 7398                 | -52.32          | -13              | -39.32                  | -77.86                  | -61.72                   | 1.18                       | 10.58                       | H                     |
|          | 3702                 | -35.79          | -13              | -22.79                  | -54.36                  | -47.58                   | 0.72                       | 12.52                       | V                     |
|          | 5550                 | -34.38          | -13              | -21.38                  | -56.84                  | -46.55                   | 1.00                       | 13.17                       | V                     |
|          | 7398                 | -52.19          | -13              | -39.19                  | -77.52                  | -61.59                   | 1.18                       | 10.58                       | V                     |
| Middle   | 3762                 | -31.35          | -13              | -18.35                  | -48.91                  | -43.16                   | 0.69                       | 12.50                       | H                     |
|          | 5640                 | -33.81          | -13              | -20.81                  | -56.14                  | -45.94                   | 0.98                       | 13.12                       | H                     |
|          | 7518                 | -51.44          | -13              | -38.44                  | -76.85                  | -60.71                   | 1.18                       | 10.45                       | H                     |
|          | 3762                 | -36.58          | -13              | -23.58                  | -55.35                  | -48.39                   | 0.69                       | 12.50                       | V                     |
|          | 5640                 | -38.55          | -13              | -25.55                  | -61.05                  | -50.68                   | 0.98                       | 13.12                       | V                     |
|          | 7518                 | -51.64          | -13              | -38.64                  | -77.1                   | -60.91                   | 1.18                       | 10.45                       | V                     |
| Highest  | 3822                 | -39.38          | -13              | -26.38                  | -57.06                  | -51.16                   | 0.69                       | 12.47                       | H                     |
|          | 5730                 | -37.85          | -13              | -24.85                  | -60.25                  | -49.92                   | 0.99                       | 13.06                       | H                     |
|          | 7638                 | -51.12          | -13              | -38.12                  | -76.81                  | -60.72                   | 1.18                       | 10.79                       | H                     |
|          | 3822                 | -34.01          | -13              | -21.01                  | -52.91                  | -45.79                   | 0.69                       | 12.47                       | V                     |
|          | 5730                 | -35.25          | -13              | -22.25                  | -57.86                  | -47.32                   | 0.99                       | 13.06                       | V                     |
|          | 7638                 | -51.81          | -13              | -38.81                  | -77.25                  | -61.41                   | 1.18                       | 10.79                       | V                     |

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



## **EDGE 1900**

| EDGE 1900 |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|-----------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel   | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest    | 3702                 | -44.20          | -13              | -31.20                  | -61.6                   | -55.99                   | 0.72                       | 12.52                       | H                     |
|           | 5550                 | -40.98          | -13              | -27.98                  | -63.35                  | -53.15                   | 1.00                       | 13.17                       | H                     |
|           | 7398                 | -52.20          | -13              | -39.20                  | -77.74                  | -61.6                    | 1.18                       | 10.58                       | H                     |
|           | 3702                 | -41.13          | -13              | -28.13                  | -59.7                   | -52.92                   | 0.72                       | 12.52                       | V                     |
|           | 5550                 | -41.42          | -13              | -28.42                  | -63.88                  | -53.59                   | 1.00                       | 13.17                       | V                     |
|           | 7398                 | -52.14          | -13              | -39.14                  | -77.47                  | -61.54                   | 1.18                       | 10.58                       | V                     |
| Middle    | 3762                 | -43.92          | -13              | -30.92                  | -61.48                  | -55.73                   | 0.69                       | 12.50                       | H                     |
|           | 5640                 | -40.80          | -13              | -27.80                  | -63.13                  | -52.93                   | 0.98                       | 13.12                       | H                     |
|           | 7518                 | -51.89          | -13              | -38.89                  | -77.3                   | -61.16                   | 1.18                       | 10.45                       | H                     |
|           | 3762                 | -37.85          | -13              | -24.85                  | -56.62                  | -49.66                   | 0.69                       | 12.50                       | V                     |
|           | 5640                 | -42.80          | -13              | -29.80                  | -65.3                   | -54.93                   | 0.98                       | 13.12                       | V                     |
|           | 7518                 | -51.61          | -13              | -38.61                  | -77.07                  | -60.88                   | 1.18                       | 10.45                       | V                     |
| Highest   | 3822                 | -41.57          | -13              | -28.57                  | -59.25                  | -53.35                   | 0.69                       | 12.47                       | H                     |
|           | 5730                 | -42.01          | -13              | -29.01                  | -64.41                  | -54.08                   | 0.99                       | 13.06                       | H                     |
|           | 7638                 | -51.24          | -13              | -38.24                  | -76.93                  | -60.84                   | 1.18                       | 10.79                       | H                     |
|           | 3822                 | -35.91          | -13              | -22.91                  | -54.81                  | -47.69                   | 0.69                       | 12.47                       | V                     |
|           | 5730                 | -43.59          | -13              | -30.59                  | -66.2                   | -55.66                   | 0.99                       | 13.06                       | V                     |
|           | 7638                 | -51.12          | -13              | -38.12                  | -76.56                  | -60.72                   | 1.18                       | 10.79                       | V                     |

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

**WCDMA 1900**

| WCDMA 1900 |                      |                 |                  |                         |                         |                          |                            |                             |                       |
|------------|----------------------|-----------------|------------------|-------------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel    | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest     | 3704                 | -57.23          | -13              | -44.23                  | -74.63                  | -69.02                   | 0.72                       | 12.52                       | H                     |
|            | 5557                 | -54.44          | -13              | -41.44                  | -76.79                  | -66.61                   | 1.00                       | 13.17                       | H                     |
|            | 7409                 | -52.36          | -13              | -39.36                  | -77.87                  | -61.74                   | 1.18                       | 10.56                       | H                     |
|            | 3704                 | -55.76          | -13              | -42.76                  | -74.33                  | -67.55                   | 0.72                       | 12.52                       | V                     |
|            | 5557                 | -54.49          | -13              | -41.49                  | -76.96                  | -66.66                   | 1.00                       | 13.17                       | V                     |
|            | 7409                 | -52.62          | -13              | -39.62                  | -77.98                  | -62                      | 1.18                       | 10.56                       | V                     |
| Middle     | 3760                 | -56.47          | -13              | -43.47                  | -74.03                  | -68.28                   | 0.69                       | 12.50                       | H                     |
|            | 5640                 | -54.23          | -13              | -41.23                  | -76.56                  | -66.36                   | 0.98                       | 13.12                       | H                     |
|            | 7520                 | -51.77          | -13              | -38.77                  | -77.19                  | -61.05                   | 1.18                       | 10.46                       | H                     |
|            | 3760                 | -55.51          | -13              | -42.51                  | -74.28                  | -67.32                   | 0.69                       | 12.50                       | V                     |
|            | 5640                 | -54.03          | -13              | -41.03                  | -76.53                  | -66.16                   | 0.98                       | 13.12                       | V                     |
|            | 7520                 | -51.70          | -13              | -38.70                  | -77.17                  | -60.98                   | 1.18                       | 10.46                       | V                     |
| Highest    | 3816                 | -24.31          | -13              | -11.31                  | -41.99                  | -36.1                    | 0.69                       | 12.47                       | H                     |
|            | 5718                 | -36.87          | -13              | -23.87                  | -59.28                  | -48.95                   | 0.99                       | 13.07                       | H                     |
|            | 7632                 | -46.51          | -13              | -33.51                  | -72.2                   | -56.1                    | 1.18                       | 10.77                       | H                     |
|            | 3816                 | -26.46          | -13              | -13.46                  | -45.36                  | -38.25                   | 0.69                       | 12.47                       | V                     |
|            | 5718                 | -37.34          | -13              | -24.34                  | -59.96                  | -49.42                   | 0.99                       | 13.07                       | V                     |
|            | 7632                 | -44.30          | -13              | -31.30                  | -69.74                  | -53.89                   | 1.18                       | 10.77                       | 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 ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | SPA<br>Reading<br>(dBm) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest     | 3424                 | -57.26          | -13              | -44.26                  | -74.86                  | -68.86                   | 0.77                       | 12.37                       | H                     |
|            | 5137                 | -56.36          | -13              | -43.36                  | -77.35                  | -67.86                   | 0.97                       | 12.47                       | H                     |
|            | 6849                 | -53.77          | -13              | -40.77                  | -77.74                  | -64.58                   | 0.83                       | 11.63                       | H                     |
|            | 3424                 | -57.36          | -13              | -44.36                  | -74.77                  | -68.96                   | 0.77                       | 12.37                       | V                     |
|            | 5137                 | -56.01          | -13              | -43.01                  | -77.17                  | -67.51                   | 0.97                       | 12.47                       | V                     |
|            | 6849                 | -52.91          | -13              | -39.91                  | -77.35                  | -63.72                   | 0.83                       | 11.63                       | V                     |
| Middle     | 3465                 | -32.22          | -13              | -19.22                  | -49.84                  | -43.94                   | 0.78                       | 12.50                       | H                     |
|            | 5197                 | -45.29          | -13              | -32.29                  | -66.46                  | -56.89                   | 0.99                       | 12.59                       | H                     |
|            | 6930                 | -46.82          | -13              | -33.82                  | -71                     | -57.27                   | 1.01                       | 11.45                       | H                     |
|            | 3465                 | -36.66          | -13              | -23.66                  | -54.67                  | -48.38                   | 0.78                       | 12.50                       | V                     |
|            | 5197                 | -44.46          | -13              | -31.46                  | -65.79                  | -56.06                   | 0.99                       | 12.59                       | V                     |
|            | 6930                 | -45.72          | -13              | -32.72                  | -70.28                  | -56.17                   | 1.01                       | 11.45                       | V                     |
| Highest    | 3468                 | -30.64          | -13              | -17.64                  | -48.26                  | -42.37                   | 0.78                       | 12.50                       | H                     |
|            | 5202                 | -41.78          | -13              | -28.78                  | -62.95                  | -53.39                   | 0.99                       | 12.60                       | H                     |
|            | 6930                 | -45.96          | -13              | -32.96                  | -70.14                  | -56.41                   | 1.01                       | 11.45                       | H                     |
|            | 3468                 | -32.65          | -13              | -19.65                  | -50.66                  | -44.38                   | 0.78                       | 12.50                       | V                     |
|            | 5202                 | -43.39          | -13              | -30.39                  | -64.72                  | -55                      | 0.99                       | 12.60                       | V                     |
|            | 6930                 | -47.37          | -13              | -34.37                  | -71.93                  | -57.82                   | 1.01                       | 11.45                       | V                     |

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