



| F   | CC REPORT  |  |  |
|---|--|--|--|
| Report Reference No:                              | <b>TRE1707003001</b> R/C: 80042  |  |  |
| FCC ID:   | ZSW-30-047   |  |  |
| Applicant's name:                                 | b mobile HK Limited  |  |  |
| Address   | Flat 18; 14/F Block 1; Golden Industrial Building;16-26 KwaiTak Street; Kwai Chung; New Territories; Hong Kong.    |  |  |
| Manufacturer                                      | b mobile HK Limited  |  |  |
| Address   | Flat 18; 14/F Block 1; Golden Industrial Building;16-26 KwaiTak<br>Street; Kwai Chung; New Territories; Hong Kong. |  |  |
| Test item description:                            | Mobile Phone   |  |  |
| Trade Mark  | Bmobile  |  |  |
| Model/Type reference                              | AX1015   |  |  |
| Listed Model(s)                                   |  |  |  |
| Standard:   | FCC Part 22: PUBLIC MOBILE SERVICES<br>FCC Part 24:PERSONAL COMMUNICATIONS SERVICES                                |  |  |
| Date of receipt of test sample                    | Jul.05, 2017   |  |  |
| Date of testing                                   | Jul.06, 2017- Jul.28, 2017   |  |  |
| Date of issue                                     | Jul.29, 2017   |  |  |
| Result:   | Pass   |  |  |
| Compiled by<br>( position+printedname+signature): | File administrators Candy Liu  |  |  |
| Supervised by (position+printedname+signature):   | Project Engineer Lion Cai  |  |  |
| Approved by<br>(position+printedname+signature):  | Manager Hans Hu Hows rue   |  |  |
| Testing Laboratory Name: :                        | : Shenzhen Huatongwei International Inspection Co., Ltd.   |  |  |
| Address   | 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China                       |  |  |

### Shenzhen Huatongwei International Inspection Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Huatongwei International Inspection Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Huatongwei International Inspection Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

# Contents

| <u>1.</u> | TEST STANDARDS AND REPORT VERSION                |    |
|-----------|--|----|
| 1.1.      | Applicable Standards                             | 3  |
| 1.2.      | Report version                                   | 3  |
| <u>2.</u> | TEST DESCRIPTION                                 | 4  |
| <u>3.</u> | SUMMARY  | 5  |
| 3.1.      | Client Information                               | 5  |
| 3.2.      | Product Description                              | 5  |
| 3.3.      | Operation state                                  | 6  |
| 3.4.      | EUT configuration                                | 6  |
| 3.5.      | Modifications                                    | 6  |
| <u>4.</u> | TEST ENVIRONMENT                                 | 7  |
| 4.1.      | Address of the test laboratory                   | 7  |
| 4.2.      | Test Facility                                    | 7  |
| 4.3.      | Equipments Used during the Test                  | 8  |
| 4.4.      | Environmental conditions                         | 9  |
| 4.5.      | Statement of the measurement uncertainty         | 9  |
| <u>5.</u> | TEST CONDITIONS AND RESULTS                      | 10 |
| 5.1.      | Conducted Output Power                           | 10 |
| 5.2.      | 99% & -26 dB Occupied Bandwidth                  | 12 |
| 5.3.      | Conducted Spurious Emissions                     | 22 |
| 5.4.      | Band Edge  | 27 |
| 5.5.      | ERP and EIRP                                     | 37 |
| 5.6.      | Radiated Spurious Emission                       | 40 |
| 5.7.      | Frequency stability V.S. Temperature measurement | 46 |
| 5.8.      | Frequency stability V.S. Voltagemeasurement      | 48 |
| 5.9.      | Peak-Average Ratio                               | 50 |
| <u>6.</u> | TEST SETUP PHOTOS OF THE EUT                     | 53 |
| <u>7.</u> | EXTERNAL AND INTERNAL PHOTOS OF THE EUT          | 54 |

# 1. Test standards and Report version

## **1.1. Applicable Standards**

The tests were performed according to following standards:

FCC Part 22: PRIVATE LAND MOBILE RADIO SERVICES.

FCC Part 24: PUBLIC MOBILE SERVICES

TIA/EIA 603 D June 2010: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

FCC Part 2: FREQUENCY ALLOCA-TIONS AND RADIO TREATY MAT-TERS; GENERAL RULES AND REG-ULATIONS

<u>971168 D01 Power Meas License Digital Systems v02r02</u>: provides a methodology for fully characterizing the fundamental power of wideband (> 1 MHz) digitally modulated RF signals acceptable to the FCC for demonstrating compliance for licensed transmitters.

## 1.2. Report version

| Version No. | Date of issue | Description |
|-------------|---------------|-------------|
| 00          | Jul.29, 2017  | Original    |
|             |               |             |
|             |               |             |
|             |               |             |
|             |               |             |

# 2. Test Description

| Test Item                           | Section in CFR 47    | Result  |
|-------------------------------------|----------------------|---------|
|                                     | Part 2.1046          |         |
| RF Output Power                     | Part 22.913(a)       | Pass    |
|                                     | Part 24.232(c)       |         |
|                                     | Part 2.1049          |         |
| 99% & -26 dB Occupied Bandwidth     | Part 22.917(b)       | Pass    |
|                                     | Part 24.238(b)       |         |
|                                     | Part 2.1051          |         |
| Conducted Spurious Emissions        | Part 22.917          | Pass    |
|                                     | Part 24.238          |         |
|                                     | Part 2.1051          |         |
| Band Edge                           | Part 22.917          | Pass    |
|                                     | Part 24.238          |         |
| ERP and EIRP                        | Part 22.913(a)       | Pass    |
|                                     | Part 24.232(b)       | F d 5 5 |
|                                     | Part 2.1053          |         |
| Radiated Spurious Emissions         | Part 22.917          | Pass    |
|                                     | Part 24.238          |         |
|                                     | Part 2.1055(a)(1)(b) |         |
| Frequency stability vs. temperature | Part 22.255          | Pass    |
|                                     | Part 24.235          |         |
|                                     | Part 2.1055(d)(1)(2) |         |
| Frequency stability vs. voltage     | Part 22.255          | Pass    |
|                                     | Part 24.235          |         |
| Peak-Average Ratio                  | Part 24.232          | Pass    |

Note: The measurement uncertainty is not included in the test result.

# 3. SUMMARY

# 3.1. Client Information

| Applicant:   | b mobile HK Limited  |  |
|--|--|--|
| Address:   | Flat 18; 14/F Block 1; Golden Industrial Building;16-26 KwaiTak Street;<br>Kwai Chung; New Territories; Hong Kong. |  |
| Manufacturer:  | b mobile HK Limited  |  |
| Address:         Flat 18; 14/F Block 1; Golden Industrial Building;16-26 KwaiTak Stre<br>Kwai Chung; New Territories; Hong Kong. |  |  |

# 3.2. Product Description

| Name of EUT:              | Mobile Phone  |  |
|---------------------------|---|--|
| Trade Mark:               | Bmobile   |  |
| Model No.:                | AX1015  |  |
| Listed Model(s):          | -   |  |
| IMEI:                     | 861638030039908   |  |
| Power supply:             | DC 3.8V From internal battery                                 |  |
| Adapter information:      | Input:100-240Va.c., 50-60Hz, 0.2A<br>Output: 5Vd.c.,500mA     |  |
| 2G:                       |   |  |
| Support Network:          | GSM, GPRS, EGPRS  |  |
| Support Band:             | GSM850, PCS1900   |  |
| Modulation:               | GSM/GPRS/EGPRS: GMSK  |  |
| Transmit Frequency:       | GSM850: 824.20MHz-848.80MHz<br>PCS1900: 1850.20MHz-1909.80MHz |  |
| Receive Frequency:        | GSM850: 869.20MHz-893.80MHz<br>PCS1900: 1930.20MHz-1989.80MHz |  |
| GPRS Class:               | 12  |  |
| EGPRS Class:              | 12  |  |
| Antenna type:             | Integral Antenna  |  |
| Antenna gain:             | GSM850:0dBi<br>PCS1900:0dBi                                   |  |
| Hardware version:         | SPR_S3215_V4.0  |  |
| Software version:         | Bmobile_AX1015_TEM_V002                                       |  |
| 3G:                       |   |  |
| Operation Band:           | FDD Band II and FDD Band V                                    |  |
| Power Class:              | Power Class 3   |  |
| Modilation Type:          | QPSK/16QAM/64QAM/HSUPA/HSDPA                                  |  |
| DC-HSUPA Release Version: | Not Supported   |  |
| Antenna type:             | Integral Antenna  |  |
| Antenna gain:             | Band II: 0dBi, Band V: 0dBi                                   |  |

# 3.3. Operation state

## Test frequency list

| GSM850  |                 | PCS     | 1900            |
|---------|-----------------|---------|-----------------|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 128     | 824.20          | 512     | 1850.20         |
| 190     | 836.60          | 661     | 1880.00         |
| 251     | 848.80          | 810     | 1909.80         |

| FDD Band II |                 | FDD B   | and V           |
|-------------|-----------------|---------|-----------------|
| Channel     | Frequency (MHz) | Channel | Frequency (MHz) |
| 9262        | 1852.4          | 4132    | 826.40          |
| 9400        | 1880.0          | 4183    | 836.60          |
| 9538        | 1907.6          | 4233    | 846.60          |

## Test mode

### For RF test items

The EUT has been tested under typical operating condition. The Applicant providessoftware to control the EUT for staying in continoustransmitting and receiving mode for testing.

## 3.4. EUT configuration

### The following peripheral devices and interface cables were connected during the measurement:

## • - supplied by the manufacturer

| C | - ( | supplied | by the | lab |
|---|-----|----------|--------|-----|
|   |     |          |        |     |

|  | Length (m) :   | / |
|--|----------------|---|
|  | Shield :       | / |
|  | Detachable :   | / |
|  | Manufacturer : | / |
|  | Model No. :    | / |

# 3.5. Modifications

No modifications were implemented to meet testing criteria.

#### Page: 7 of 59

# 4. TEST ENVIRONMENT

### 4.1. Address of the test laboratory

Laboratory:Shenzhen Huatongwei International Inspection Co., Ltd. Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China Phone: 86-755-26748019 Fax: 86-755-26748089

## 4.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

### CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

#### A2LA-Lab Cert. No. 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. **FCC-Registration No.: 762235** 

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 762235

### IC-Registration No.: 5377B

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements .

### ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

# 4.3. Equipments Used during the Test

|        | liance&Conducted Spuriou         |                              | •         |             |            |
|--------|----------------------------------|------------------------------|-----------|-------------|------------|
| No.    | Equipment                        | Manufacturer                 | Model No. | SerialNo.   | Last Cal.  |
| 1      | UNIVERSAL RADIO<br>COMMUNICATION | Rohde&Schwarz                | CMU200    | 112012      | 2016/11/13 |
| 2      | Spectrum Analyzer                | Rohde&Schwarz                | FSU26     | 201141      | 2016/11/13 |
| 3      | Spectrum Analyzer                | Rohde&Schwarz                | FSU26     | 201141      | 2016/11/13 |
| 4      | Splitter                         | Mini-Circuit                 | ZAPD-4    | 400059      | 2016/11/13 |
| reque  | ency Stability                   |                              |           |             |            |
| No.    | Equipment                        | Manufacturer                 | Model No. | SerialNo.   | Last Cal.  |
| 1      | UNIVERSAL RADIO<br>COMMUNICATION | Rohde&Schwarz                | CMU200    | 112012      | 2016/11/13 |
| 2      | Spectrum Analyzer                | Rohde&Schwarz                | FSU26     | 201141      | 2016/11/13 |
| 3      | Climate Chamber                  | ESPEC                        | EL-10KA   | 05107008    | 2016/11/13 |
| 4      | Splitter                         | Mini-Circuit                 | ZAPD-4    | 400059      | 2016/11/13 |
| Dutput | Power (Radiated) & Radiate       | d Spurious Emission          |           |             |            |
| No.    | Equipment                        | Manufacturer                 | Model No. | SerialNo.   | Last Cal.  |
| 1      | UNIVERSAL RADIO<br>COMMUNICATION | Rohde&Schwarz                | CMU200    | 112012      | 2016/11/13 |
| 2      | Spectrum Analyzer                | Rohde&Schwarz                | FSU26     | 201141      | 2016/11/13 |
| 3      | HORNANTENNA                      | ShwarzBeck                   | 9120D     | 1012        | 2016/11/13 |
| 4      | HORNANTENNA                      | ShwarzBeck                   | 9120D     | 1011        | 2016/11/13 |
| 5      | Ultra-Broadband Antenna          | ShwarzBeck                   | VULB9163  | 538         | 2016/11/13 |
| 6      | Ultra-Broadband Antenna          | ShwarzBeck                   | VULB9163  | 539         | 2016/11/13 |
| 7      | TURNTABLE                        | MATURO                       | TT2.0     |             | N/A        |
| 8      | ANTENNA MAST                     | MATURO                       | TAM-4.0-P |             | N/A        |
| 9      | EMI Test Software                | Audix                        | E3        | N/A         | N/A        |
| 10     | EMI Test Receiver                | Rohde&Schwarz                | ESIB 26   | 100009      | 2016/11/13 |
| 11     | RF Test Panel                    | Rohde&Schwarz                | TS / RSP  | 335015/0017 | 2016/11/13 |
| 12     | High pass filter                 | Compliance Direction systems | BSU-6     | 34202       | 2016/11/13 |
| 13     | Splitter                         | Mini-Circuit                 | ZAPD-4    | 400059      | 2016/11/13 |
| 14     | Horn Antenna                     | SCHWARZBECK                  | BBHA9170  | 25841       | 2016/11/13 |
| 15     | Horn Antenna                     | SCHWARZBECK                  | BBHA9170  | 25842       | 2016/11/13 |
| 16     | Preamplifier                     | ShwarzBeck                   | BBV 9718  | BBV 9718    | 2016/11/13 |
| 17     | Broadband Preamplifier           | ShwarzBeck                   | BBV743    | 9743-0079   | 2016/11/13 |
| 18     | Signal Generator                 | Rohde&Schwarz                | SMF100A   | 101932      | 2016/11/13 |
| 19     | Amplifer                         | Compliance Direction systems | PAP1-4060 | 120         | 2016/11/13 |
| 20     | TURNTABLE                        | ETS                          | 2088      | 2149        | 2016/11/13 |
| 21     | ANTENNA MAST                     | ETS                          | 2075      | 2346        | 2016/11/13 |
| 22     | HORNANTENNA                      | Rohde&Schwarz                | HF906     | 100068      | 2016/11/13 |
| 23     | HORNANTENNA                      | Rohde&Schwarz                | HF906     | 100039      | 2016/11/13 |

The calibration interval was one year.

# 4.4. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

| Normal Temperature/Tnor: | 15~35°C      |
|--------------------------|--------------|
| lative Humidity          | 30~60 %      |
| Air Pressure             | 950-1050 hPa |

### 4.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01"Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurementof mobile radio equipment characteristics;Part 1"and TR-100028-02 "Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurement characteristics;Part 2 " and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

| Test Items                                 | MeasurementUncertainty | Notes |
|--|------------------------|-------|
| Frequency stability                        | 25 Hz                  | (1)   |
| Transmitter power conducted                | 0.57 dB                | (1)   |
| Transmitter power Radiated                 | 2.20 dB                | (1)   |
| Conducted spurious emission 9KHz-12.75 GHz | 1.60 dB                | (1)   |
| Conducted Emission 9KHz-30MHz              | 3.39 dB                | (1)   |
| Radiated Emission 30~1000MHz               | 4.24 dB                | (1)   |
| Radiated Emissio 1~18GHz                   | 5.16 dB                | (1)   |
| Radiated Emissio 18-40GHz                  | 5.54 dB                | (1)   |
| Occupied Bandwidth                         |                        | (1)   |
| Emission Mask                              |                        | (1)   |
| Modulation Characteristic                  |                        | (1)   |
| Transmitter Frequency Behavior             |                        | (1)   |

 This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

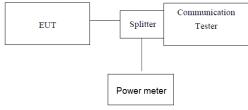
# 5. TEST CONDITIONS AND RESULTS

# 5.1. Conducted Output Power

# LIMIT

N/A

### **TEST CONFIGURATION**



Note: Measurement setup for testing on Antenna connector

### **TEST PROCEDURE**

- 1. The transmitter output port was connected to base station.
- 2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
- 3. Set EUT at maximum power through base station.
- 4. Select lowest, middle, and highest channels for each band and different modulation.
- 5. Measure the maximum burst average power.

### TEST MODE:

Please refer to the clause 3.3

### **TEST RESULTS**

☑ Passed □ Not Applicable

Report No.: TRE1707003001

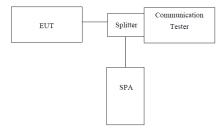
Page: 11 of 59

| EUT Mode                  | Channel | Frequency (MHz) | Power (dBm) |
|---------------------------|---------|-----------------|-------------|
|                           | 128     | 824.20          | 32.55       |
| GSM 850<br>(GMSK)         | 190     | 836.60          | 32.48       |
| (Cimorit)                 | 251     | 848.80          | 32.78       |
|                           | 128     | 824.20          | 32.54       |
| GPRS850<br>(GMSK,1Slot)   | 190     | 836.60          | 32.46       |
|                           | 251     | 848.80          | 32.77       |
| 50550050                  | 128     | 824.20          | 32.52       |
| EGPRS850<br>(GMSK,1Slot)  | 190     | 836.60          | 32.46       |
| (GIMOR, 10101)            | 251     | 848.80          | 32.73       |
|                           | 512     | 1850.20         | 28.08       |
| PCS1900<br>(GMSK)         | 661     | 1880.00         | 28.71       |
| (GMOR)                    | 810     | 1909.80         | 28.83       |
|                           | 512     | 1850.20         | 28.11       |
| GPRS1900<br>(GMSK,1Slot)  | 661     | 1880.00         | 28.72       |
|                           | 810     | 1909.80         | 28.84       |
|                           | 512     | 1850.20         | 28.09       |
| EGPRS1900<br>(GMSK,1Slot) | 661     | 1880.00         | 28.69       |
| (GIMOR, 10101)            | 810     | 1909.80         | 28.83       |
|                           | 9262    | 1852.40         | 22.74       |
| WCDMA Band II             | 9400    | 1880.00         | 22.87       |
|                           | 9538    | 1907.60         | 22.96       |
|                           | 4132    | 826.40          | 22.32       |
| WCDMA Band V              | 4183    | 836.60          | 22.36       |
|                           | 4233    | 846.60          | 22.42       |

# 5.2. 99% & -26 dB Occupied Bandwidth

N/A

### **TEST CONFIGURATION**



Note: Measurement setup for testing on Antenna connector

#### TEST PROCEDURE

- 1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer
- 2. RBWwas set to about 1% of emission BW, VBW= 3 times RBW.
- 3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

### TEST MODE:

Please refer to the clause 3.3

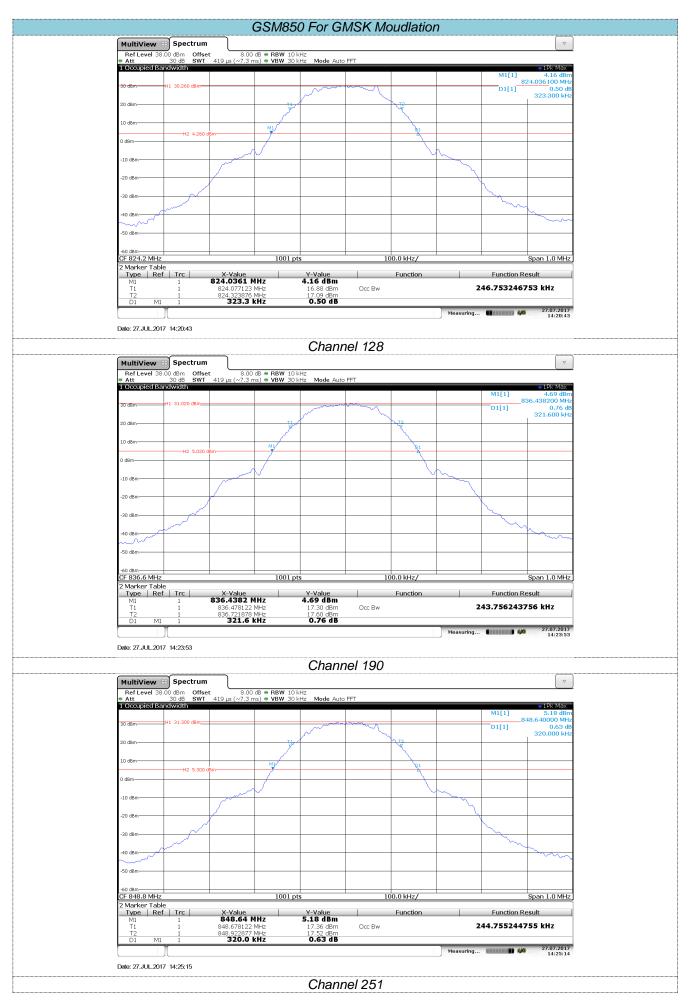
#### **TEST RESULTS**

☑ Passed □ Not Applicable

Report No.: TRE1707003001

Page: 13 of 59

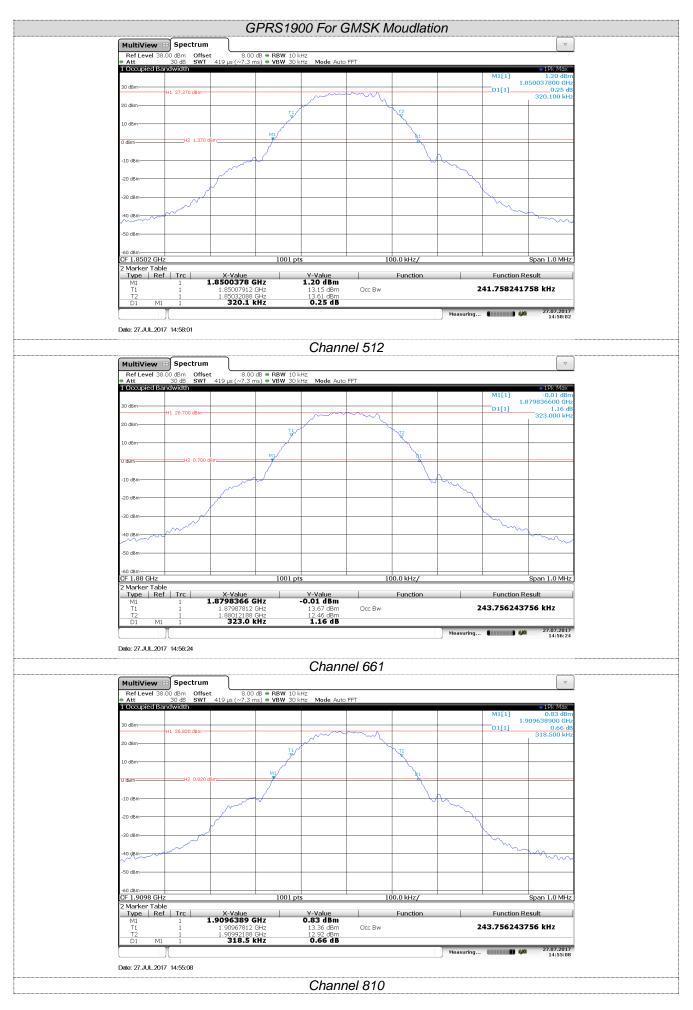
| EUT Mode                  | Channel | Frequency (MHz) | 99% Occupy bandwidth<br>(KHz) | -26dB bandwidth<br>(KHz) |
|---------------------------|---------|-----------------|-------------------------------|--------------------------|
|                           | 128     | 824.20          | 246.75                        | 323.30                   |
| GSM 850<br>(GMSK)         | 190     | 836.60          | 243.75                        | 321.60                   |
| (Childrey)                | 251     | 848.80          | 244.75                        | 320.00                   |
|                           | 128     | 824.20          | 243.75                        | 322.00                   |
| GPRS850<br>(GMSK,1Slot)   | 190     | 836.60          | 242.75                        | 321.60                   |
|                           | 251     | 848.80          | 244.75                        | 323.00                   |
| 50000050                  | 128     | 824.20          | 245.75                        | 320.60                   |
| EGPRS850<br>(GMSK,1Slot)  | 190     | 836.60          | 245.75                        | 323.90                   |
|                           | 251     | 848.80          | 244.75                        | 317.90                   |
|                           | 512     | 1850.20         | 244.75                        | 320.30                   |
| PCS1900<br>(GMSK)         | 661     | 1880.00         | 245.75                        | 322.20                   |
| (Civicity)                | 810     | 1909.80         | 243.75                        | 320.20                   |
|                           | 512     | 1850.20         | 241.75                        | 320.10                   |
| GPRS1900<br>(GMSK,1Slot)  | 661     | 1880.00         | 243.75                        | 323.00                   |
|                           | 810     | 1909.80         | 243.75                        | 318.50                   |
|                           | 512     | 1850.20         | 243.75                        | 322.90                   |
| EGPRS1900<br>(GMSK,1Slot) | 661     | 1880.00         | 243.75                        | 323.00                   |
|                           | 810     | 1909.80         | 245.75                        | 320.20                   |
|                           | 9262    | 1852.40         | 4095.90                       | 4682.00                  |
| WCDMA Band II             | 9400    | 1880.00         | 4085.91                       | 4686.00                  |
|                           | 9538    | 1907.60         | 4095.90                       | 4695.00                  |
|                           | 4132    | 826.40          | 4085.91                       | 4660.00                  |
| WCDMA Band V              | 4183    | 836.60          | 4085.91                       | 4660.00                  |
|                           | 4233    | 846.60          | 4095.90                       | 4682.00                  |



|  |  | G  | SPRS85  | 50 For G  | MSK M         | oudlatio   | n                                       |            |                                       |
|--|--|--|---|---|---------------|--|---|------------|---------------------------------------|
| MultiView  |  |  |   |   |               |  |   |            | ▼                                     |
| Ref Level 38.0<br>Att  | 00 dBm Offset<br>30 dB SWT             | t 8.00<br>419 µs (~7.3 m                   | dB <b>= RBW</b> 10 k<br>ns) <b>= VBW</b> 30 k | <hz<br><hz auto<="" mode="" td=""><td>FFT</td><td></td><td></td><td></td><td></td></hz></hz<br>         | FFT           |  |   |            |                                       |
| 1 Occupied Ban   |  |  |   |   |               |  |   | M1[1]      | ●1Pk Max<br>3.93 dBm<br>24.037500 MHz |
| -30-dBm  | H1 30.060 dBm                          |  |   | ·~~~  | m             |  |   | D1[1]      | 0.34 dB<br>322.000 kHz                |
| 20 dBm   |  |  | Ţ.  |   | ~             | V2   |   |            |                                       |
| 10 dBm   |  |  | MI  |   |               | <u> </u>   |   |            |                                       |
| 0 dBm  | H2 4.060 d                             | Bm   |   |   |               | <u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u> |   |            |                                       |
|  |  | ~~~  | $\checkmark$                                  |   |               |  | h                                       |            |                                       |
| -10 dBm  |  |  |   |   |               |  |   |            |                                       |
| -20 dBm-   | بر                                     |  |   |   |               |  |   |            |                                       |
| -30 dBm  |  |  |   |   |               |  |   | - North    |                                       |
| -40 dBm  |  |  |   |   |               |  |   | ~~~        | from                                  |
| -50 dBm  |  |  |   |   |               |  |   |            |                                       |
| -60 dBm  |  |  |   |   |               |  |   |            |                                       |
| CF 824.2 MHz<br>2 Marker Table                                   |  |  | 1001 pt                                       |   | 10            | 0.0 kHz/   |   |            | Span 1.0 MHz                          |
| Type Ref   | 1<br>1                                 | X-Value<br>824.0375 M                      | IHz   | Y-Value<br>3.93 dBm   |               | Function   |   | Function R |                                       |
| T1<br>T2<br>D1 M1  | 1                                      | 824.078122<br>824.321878<br><b>322.0</b>   | MHZ<br>MHZ<br>KHZ                             | 17.13 dBm<br>16.29 dBm<br><b>0.34 dB</b>  | Occ Bw        |  |   | 43.730243  | <b>730 KH</b> 2                       |
|  | _                                      |  |   |   |               |  | Measuring                               |            | 27.07.2017<br>14:36:23                |
| Date: 27.JUL.2017  | 14:36:23                               |  |   |   |               |  |   |            |                                       |
|  |  |  |   | Chanr   | nel 128       |  |   |            |                                       |
| MultiView 🔠  |  | $\overline{}$                              |   |   |               |  |   |            | ▽                                     |
| Ref Level 38.0<br>Att  | 30 dB SWT                              | t 8.00<br>419 µs (~7.3 m                   | dB <b>= RBW</b> 10 k<br>ns) <b>= VBW</b> 30 k | <hz<br><hz auto<="" mode="" td=""><td>FFT</td><td></td><td></td><td></td><td></td></hz></hz<br>         | FFT           |  |   |            |                                       |
| 1 Occupied Ban   |  |  |   |   |               |  |   | M1[1]      | ●1Pk Max<br>4.63 dBm<br>36.437200 MHz |
| 30 dBm   | H1 30.660 dBm                          |  |   |   | - James and a |  |   | D1[1]      | 0.82 dB<br>321.600 kHz                |
| 20 dBm   |  |  | <u>,</u>                                      | 4   | <u></u>       | N. T.S.  |   |            |                                       |
| 10 dBm   |  |  | M1/   |   |               | 101  |   |            |                                       |
| 0 dBm  | H2 4.660 d                             | Bm   | 1   |   |               |  |   |            |                                       |
| -10 dBm  |  |  | $\checkmark$                                  |   |               |  | h                                       |            |                                       |
| -20 dBm  |  | 7  |   |   |               |  | ~~~~\                                   |            |                                       |
|  | ~ _ /                                  | P  |   |   |               |  |   |            |                                       |
| -30 dBm  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |  |   |   |               |  |   | - Jun      |                                       |
| -40 dBm  | <u> </u>                               |  |   |   |               |  |   |            | June                                  |
| -50 dBm  |  |  |   |   |               |  |   |            |                                       |
| -60 dBm  |  |  | 1021  |   |               |  |   |            | Coor 1 C 1                            |
| CF 836.6 MHz<br>2 Marker Table                                   |  | V 11-7                                     | 1001 pt                                       |   | 10            | 0.0 kHz/   | 1                                       |            | Span 1.0 MHz                          |
| <u>Type Ref</u><br>M1<br>T1                                      | 1<br>1                                 | X-Value<br>836.4372 M<br>836.479121        | IHz<br>MHz                                    | Y-Value<br>4.63 dBm<br>17.10 dBm  | Occ Bw        | Function   | , | Function R |                                       |
| T2<br>D1 M1  | 1                                      | 836.479121<br>836.721878<br><b>321.6</b>   | MHz<br>(Hz                                    | 17.10 dBm<br>16.90 dBm<br>0.82 dB   |               |  |   |            |                                       |
|  |  |  |   |   |               |  | Measuring                               |            | 27.07.2017<br>14:34:44                |
| Date: 27.JUL.2017  | 14:34:45                               |  |   |   |               |  |   |            |                                       |
|  |  |  |   | Chanr   | nel 190       |  |   |            |                                       |
| MultiView  |  |  |   | /H7   |               |  |   |            |                                       |
| Ref Level 38.0<br>Att<br>1 Occupied Ban                          | 30 dB SWT                              | ⊾ 8.00<br>419 μs (~7.3 m                   | uo <b>= RBW</b> 10 k<br>is) <b>= VBW</b> 30 k | <hz<br><hz auto<="" mode="" td=""><td>FFT</td><td></td><td></td><td></td><td>●1Pk Max</td></hz></hz<br> | FFT           |  |   |            | ●1Pk Max                              |
|  | H1 30.310 dBm                          |  |   |   |               |  |   |            | 4.34 dBm<br>48.639000 MHz             |
|  | 30.310 dBm                             |  |   |   | ment          |  |   | D1[1]      | 0.02 dB<br>323.000 kHz                |
| 20 dBm   |  |  | THE STREET                                    |   |               | A STR  |   |            |                                       |
| 10 dBm   | H2 4.310 d                             | 800  | MI  |   |               | 91   |   |            |                                       |
| 0 dBm  |  | 0111                                       |   |   |               |  |   |            |                                       |
| -10 dBm  |  |  | $\checkmark$                                  |   |               |  | m.                                      |            |                                       |
| -20 dBm  |  |  |   |   |               |  | $\vdash$                                |            |                                       |
| -30 d8m  |  |  |   |   |               |  |   | $\sum$     |                                       |
|  | /مسہر                                  |  |   |   |               |  |   | ~~~~       | $ \downarrow $                        |
| -40 dBm  |  |  |   |   |               |  |   |            | June                                  |
| -50 dBm  |  |  |   |   |               |  |   |            |                                       |
| -60 dBm<br>CF 848.8 MHz  |  |  | 1001 pt                                       | :s  | 10            | 0.0 kHz/   |   |            | Span 1.0 MHz                          |
|  | Trc                                    | X-Value                                    |   |   | 10            | Function   |   | Function R |                                       |
| 2 Marker Table<br>Type   Ref                                     |  | X-Value<br>848.639 M                       | Hz  | Y-Value<br>4.34 dBm   |               |  | -                                       |            |                                       |
| Type         Ref           M1         T1                         | 1 1                                    | 848.677123                                 | MHz   | 16.80 dBm   | Occ Bw        |  | 2                                       | 44.7552447 | 755 KHZ                               |
| Type Ref   | 1                                      | 848.677123<br>848.921878<br><b>323.0 I</b> | MHz<br>MHz<br>KHZ                             | 16.80 dBm<br>16.84 dBm<br><b>0.02 dB</b>  | Occ Bw        |  |   |            |                                       |
| Type         Ref           M1         T1           T2         D1 |  | 848.677123<br>848.921878<br>323.0 I        | MHz<br>MHz<br>KHZ                             | 16.80 dBm<br>16.84 dBm<br>0.02 dB   | Occ Bw        |  |   | 44.7552447 |                                       |
| Type         Ref           M1         T1           T2         T2 |  | 848.677123<br>848.921878<br><b>323.0</b>   | MHz<br>MHz<br>CHZ                             | 16.80 dBm<br>16.84 dBm<br>0.02 dB   |               |  |   |            | 27.07.2017                            |

| MultiView<br>Ref Level 3<br>Att   |   |                                   | 350.00                         | 50 For G                                | 11VINDAN IV |                   | ON        |   |   |
|---|---|-----------------------------------|--------------------------------|---|-------------|-------------------|-----------|---|---|
| Ref Level 3   | 🗄 Spectrum  |                                   | 01 1100                        |   |             | louuluu           | 011       |   |   |
|   |   |                                   | dB = RBW 104                   | Hz<br>Hz Mode Auto                      | FFT         |                   |           |   |   |
| 1 Occupied B  | andwidth  |                                   |                                |   |             |                   |           | M1[1]                                       | <ul> <li>1Pk Max</li> <li>4.55 dBm</li> </ul>   |
| 30 dBm  | H1 30.540 dBm   |                                   |                                | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | mony        |                   |           | 01[1]                                       | 24.040600 MHz<br>0.10 dB  |
| 20 dBm  |   |                                   | T1/2                           | /                                       | ~~          | 12                |           |   | 320.600 kHz   |
| 10 dBm  |   |                                   |                                |   |             | $\sum$            |           |   |   |
|   | H2 4.540 d  | 18m-                              | MI                             |   |             | R1                |           |   |   |
| 0 dBm   |   | ~                                 | ſ                              |   |             |                   | h .       |   |   |
| -10 dBm   |   |                                   | ~                              |   |             | )                 | - many    |   |   |
| -20 dBm   |   | /                                 |                                |   |             |                   |           |   |   |
| -30 dBm   |   |                                   |                                |   |             |                   |           | <u>}</u>                                    |   |
| -40 dBm   | m   |                                   |                                |   |             |                   |           | ~~~   | ~~~~~   |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~   |   |                                   |                                |   |             |                   |           |   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~   |
| -50 dBm   |   |                                   |                                |   |             |                   |           |   |   |
| -60 dBm<br>CF 824.2 MHz   | z   |                                   | 1001 pt                        | s                                       | 10          | 0.0 kHz/          |           |   | Span 1.0 MHz  |
| 2 Marker Tab<br>Type Re   | ef   Trc  | X-Value                           |                                | Y-Value                                 |             | Function          |           | Function R                                  |   |
| M1<br>T1  | 1 1   | 824.0406 M<br>824.077123 f        | MHz                            | 4.55 dBm<br>16.96 dBm                   | Occ Bw      |                   | 2         | 45.7542457                                  |   |
| T2<br>D1 M  | 1 1   | 824.322877<br>320.6 k             | MHz<br>KHZ                     | 16.77 dBm<br>0.10 dB                    |             |                   |           |   |   |
|   | ][  |                                   |                                |   |             |                   | Measuring | (11111) <b>)</b> 4/0                        | 27.07.2017<br>14:44:30  |
| Date: 27.JUL.20   | 17 14:44:31   |                                   |                                |   |             |                   |           |   |   |
|   |   |                                   |                                | Chann                                   | el 128      |                   |           |   |   |
| MultiView   |   |                                   |                                |   |             |                   |           |   |   |
| Ref Level 3<br>Att<br>1 Occupied B  | 8.00 dBm Offse<br>30 dB SWT   | τ 8.00<br>419 μs (~7.3 m          | at = RBW 104<br>(s) = VBW 304  | Hz Mode Auto                            | FFT         |                   |           |   | • 1Pk Max   |
|   |   |                                   |                                |   |             |                   |           | M1[1]                                       | 4.12 dBm<br>36.436300 MHz   |
| 30 dem  | H1 30.780 dBm   |                                   |                                |   | Luna        |                   |           | D1[1]                                       | 1.45 dB<br>323.900 kHz  |
| 20 dBm  |   |                                   | TI A                           | 1                                       | ~           | 12<br>K           |           |   |   |
| 10 dBm  |   |                                   | M1/                            |   |             | R1                |           |   |   |
| 0 dBm   | H2 4.780 d  | JBm-                              | 1                              |   |             | 1                 |           |   |   |
| -10 dBm   |   |                                   |                                |   |             |                   | m         |   |   |
|   |   | <u></u>                           |                                |   |             |                   | $\sim$    |   |   |
| -20 dBm   |   | {                                 |                                |   |             |                   |           |   |   |
| -30 dBm   |   |                                   |                                |   |             |                   |           | - marine                                    |   |
| -40 dBm   | -   |                                   |                                |   |             |                   |           |   | mon   |
| -50 dBm   |   |                                   |                                |   |             |                   |           |   |   |
| -60 dBm   |   |                                   |                                |   |             |                   |           |   |   |
| CF 836.6 MHz<br>2 Marker Tab  | ble   |                                   | 1001 pt                        | s                                       | 10          | 0.0 kHz/          |           |   | Span 1.0 MHz  |
| Type   Re<br>   | ef   Trc  | X-Value<br>836.4363 M             | IHZ                            | Y-Value<br>4.12 dBm                     |             | Function          |           | Function R                                  |   |
| 11<br>T2<br>D1 M  | 1 1   | 836.477123<br>836.722877<br>323.9 | VIHZ<br>VIHZ<br>KH7            | 17.25 dBm<br>16.18 dBm<br>1.45 dB       | Occ Bw      |                   | 2         | 45./54245/                                  | 54 KHZ  |
|   | T   |                                   |                                |   |             |                   |           |   |   |
|   |   |                                   |                                |   |             |                   | Measuring | () <i>1/0</i>                               | 27.07.2017<br>14:43:14  |
| Date: 27.JUL.20   | 17 14:43:14   |                                   |                                |   |             |                   | Measuring | () 4/0                                      | 27.07.2017<br>14:43:14  |
| Date: 27.JUL.20   | 17 14:43:14   |                                   |                                | Chann                                   | el 190      |                   | Measuring | (   | 27.07.2017<br>14:43:14  |
| MultiView   | 😑 Spectrum  |                                   |                                |   |             |                   | Measuring | •••••••••••••••••••••••••••••••••••••••     | 27.07.2017<br>14:43:14  |
| MultiView<br>Ref Level 3<br>• Att   | B Spectrum<br>8.00 dBm Offse<br>30 dB SWT   |                                   | dB ● RBW 10↓<br>is) ● VBW 30↓  |   |             |                   | Measuring | •••••••••••                                 | 14:43:14  |
| MultiView<br>Ref Level 3  | Spectrum<br>8.00 dBm Offse<br>30 dB SWT<br>andwidth   |                                   | dB ● RBW 10↓<br>is) ● VBW 30↓  |   |             |                   | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Max<br>5.45 dBm  |
| MultiView<br>Ref Level 3<br>Att   | B Spectrum<br>8.00 dBm Offse<br>30 dB SWT   |                                   | dE ● RBW 10↓<br>s) ● VBW 30↓   |   |             |                   | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView<br>Ref Level 3:<br># Att<br>1 Occupied B  | Spectrum<br>8.00 dBm Offse<br>30 dB SWT<br>andwidth   |                                   | dB ● RBW 10 k<br>s) ● VBW 30 k |   |             |                   | Measuring | M1[1]                                       |   |
| MultiView<br>Ref Level 3<br>* Att<br>1 Occupied B   | Spectrum<br>8.00 dBm Offse<br>30 dB SWT<br>andwidth   |                                   | dB = RBW 10↓<br>s) = VBW 30↓   |   |             |                   | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView<br>Ref Level 3<br>a Att<br>1 Occupied B<br>30 dbm   | Spectrum<br>8.00 dBm Offse<br>30 dB SWT<br>andwidth   | t 8.00<br>419 µs (~7.3 m          |                                |   |             | DI DI             | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView<br>Ref Level 3:<br>Att<br>1 Occupied B<br>30 dBm-<br>10 dBm-<br>0 dBm-  | Spectrum<br>S.00 dBm Offse<br>30 dB SWT<br>andwidth<br>H1 31.060 dBm  | t 8.00<br>419 µs (~7.3 m          |                                |   |             | 125<br>V          | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView<br>Ref Level 3:<br>Att<br>T Occupied B<br>30 dBm<br>20 dBm<br>10 dBm<br>-10 dBm   | Spectrum<br>S.00 dBm Offse<br>30 dB SWT<br>andwidth<br>H1 31.060 dBm  | t 8.00<br>419 µs (~7.3 m          |                                |   |             | 172<br>174        | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView<br>Ref Level 3:<br>Att<br>I Occupied B<br>30 dBm<br>20 dBm<br>10 dBm<br>0 dBm   | Spectrum<br>S.00 dBm Offse<br>30 dB SWT<br>andwidth<br>H1 31.060 dBm  | t 8.00<br>419 µs (~7.3 m          |                                |   |             |                   | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView<br>Ref Level 3:<br>Att<br>Occupied B<br>30 dBm<br>20 dBm<br>10 dBm<br>-10 dBm<br>-10 dBm  | Spectrum<br>S.00 dBm Offse<br>30 dB SWT<br>andwidth<br>H1 31.060 dBm  | t 8.00<br>419 µs (~7.3 m          |                                |   |             | 120<br>120<br>120 | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView<br>Referrel 3:<br>• Att<br>I Occupici B<br>30 dBm<br>20 dBm<br>10 dBm<br>- 0 dBm<br>- 10 dBm  | Spectrum<br>S.00 dBm Offse<br>30 dB SWT<br>andwidth<br>H1 31.060 dBm  | t 8.00<br>419 µs (~7.3 m          |                                |   |             | PT PT             | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView           Ref Level 3:           # Att           I Occupied B           30 dBm           10 dBm           0 dBm           -0 dBm           -20 dBm           -30 dBm           -40 dBm  | Spectrum<br>S.00 dBm Offse<br>30 dB SWT<br>andwidth<br>H1 31.060 dBm  | t 8.00<br>419 µs (~7.3 m          |                                |   |             | Pro-              | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView           Ref level 3:<br>• Att   | Spectrum<br>S.00 dBm Offse<br>30 dB SWT<br>andwidth<br>H1 31.060 dBm  | t 8.00<br>419 µs (~7.3 m          |                                |   |             |                   | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| Multiview           Ref Level 3:           I Occupical B           30 dBm           20 dBm           10 dBm           0 dBm           -20 dBm           -30 dBm           -30 dBm           -50 dBm           -50 dBm   | Spectrum     Sod B m Offse     Sod B swf     andwidth     H1 31.000 dBm     H2 5.060 d      | t 8.00<br>419 µs (~7.3 m          |                                | Hz Mode Auto                            | FFT         | 0.0 kHz/          | Measuring | M1[1]                                       | ■ 14:43:14<br>▼<br>■ 1Pk Mex<br>5.45 dBm<br>48.642200 MHz<br>0.22 dB  |
| MultiView           Ref Level 3:<br><ul> <li>Att</li> </ul> I Occupied B           30 dBm           20 dBm           10 dBm         0         dBm         0         dBm         -0         dBm         -5         dBm         -5         dBm         -5         dBm         -5         dBm         -5         dBm         -20         dBm         -5         dBm         -20         dBm         -5         dBm         -5         dBm         -20         dBm         -20         dBm         -20         dBm         -20         dBm         -20         dBm         -20         dBm  | Spectrum     Sod dam Offse     30 dam SWT     and SWT     H1 31.000 dam     H2 5.060 d     H2 5.060 d     J     L     J   | t <u>8.00</u><br>419 μs (~7.3 m   | 1001 pt                        | Hz<br>Hz<br>Mode Auto                   | FFT         |                   | Measuring | M1[1]                                       | 14:43:14  |
| MultiView           Ref Level 3:<br><ul> <li>Att</li> <li>I Occupical B</li> <li>30 dBm</li> <li>20 dBm</li> <li>0 dBm</li> <li>0 dBm</li> <li>-0 dBm</li> <li>-20 dBm</li> <li>-30 dBm</li> <li>-50 dBm</li></ul> | Spectrum     S.00 dBm Offse     30 dB SWT     30 dB SWT     41 31.060 dBm     42 5.060 d  | t <u>800</u><br>419 μs (~7.3 m    | 1001 pt                        | Hz Mode Auto                            | FFT         | 0.0 kHz/          |           | M1[1] 8<br>D1[1]                            | 14:43:14  |
| Multiview           Ref Level 3:           # Att           I Occupied B           30 dBm           20 dBm           10 dBm           0 dBm           -0 dBm           -20 dBm           -30 dBm           -50 dBm           -50 dBm           -60 dBm           -60 dBm           -20 dBm           -30 dBm           -30 dBm           -30 dBm           -30 dBm           -30 dBm           -50 dBm           -60 dBm           -70 dBm           -80 dBm           -90 dBm   | Spectrum     S.00 dBm Offse     30 dB SWT     30 dB SWT     41 31.060 dBm     42 5.060 d     442 5.060 d     444 5.060 d      | t <u>8.00</u><br>419 μs (~7.3 m   | 1001 pt                        | Hz<br>Hz<br>Mode Auto                   | FFT         | 0.0 kHz/          |           | MI[1]<br>DI[1]<br>Function Re<br>44.7552447 |   |
| MultiView           Ref Level 3:<br>Att           I Occupied B           30 dBm           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -50 dBm           -50 dBm           -20 dBm           -10 dBm           -20 dBm           -20 dBm           -30 dBm           -30 dBm           -50 dBm           CF 843.8 MHz           Type           Ref           11           T2           D1  | Spectrum     Social SWT     Social SWT     Social SWT     Social SWT     Social SWT     H1     Social SWT     Social | t <u>800</u><br>419 μs (~7.3 m    | 1001 pt                        | Hz Mode Auto                            | FFT         | 0.0 kHz/          |           | M1[1] 8<br>D1[1]                            |   |
| MultiView           Ref Level 3:           • Att           1 Occupied B           30 dBm           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -20 dBm           -30 dBm           -20 dBm <tr tr=""></tr>  | Spectrum     Social SWT     Social SWT     Social SWT     Social SWT     Social SWT     H1     Social SWT     Social | t <u>800</u><br>419 μs (~7.3 m    | 1001 pt                        | Hz<br>Hz Mode Auto                      | FFT         | 0.0 kHz/          |           | MI[1]<br>DI[1]<br>Function Re<br>44.7552447 | • IPk Max     5.45 dBm     48.642200 MHz     0.22 dB     317.900 kHz     55.45 dBm     55 skHz     27.07.2017 |
|   |   |                                   |                                |   |             |                   |           |   |   |
| MultiView           Ref Level 3:           Att           10 dEm           20 dEm           10 dEm           0 dEm           -10 dEm           -20 dEm           -30 dEm           -30 dEm           -30 dEm           -30 dEm           -30 dEm           -20 dEm           -30 dEm           -10 dEm           -30 dEm           -   | Spectrum     Social SWT     Social SWT     Social SWT     Social SWT     Social SWT     H1     Social SWT     Social | t <u>800</u><br>419 μs (~7.3 m    | 1001 pt                        | Hz Mode Auto                            | FFT         | 0.0 kHz/          |           | MI[1]<br>DI[1]<br>Function Re<br>44.7552447 | • IPk Max     5.45 dBm     48.642200 MHz     0.22 dB     317.900 kHz     55.45 dBm     55 skHz     27.07.2017 |

| The second se  |                           |                             | ŀ                                 | PCS190                                      | 0 For G                           | MSK Ma                                  | oudlatio                                | n              |                |                        |
|--|---------------------------|-----------------------------|-----------------------------------|---|-----------------------------------|---|---|----------------|----------------|------------------------|
| Monte Standbard         Monte Standbard         Monte Standbard         Monte Standbard           Monte Standbard         Monte Standbard  | MultiView                 | 8 Spectrum                  |                                   |   |                                   |   |   |                |                |                        |
| Monte Standbard         Monte Standbard         Monte Standbard         Monte Standbard           Monte Standbard         Monte Standbard  | Ref Level 3<br>Att        | 8.00 dBm Offse<br>30 dB SWT |                                   | dB • RBW 101<br>ns) • VBW 301               | <hz<br>KHz Mode Auto</hz<br>      | FFT                                     |   |                |                |                        |
| 1.00       40.00       90.00   | 1 Occupied B              | andwidth                    |                                   |   |                                   |   |   |                | M1[1]          | 1Pk Max<br>1.33 dBm    |
| la de la construir de la const   | 30 dBm                    | H1 27.390 dBm               |                                   |   | ~~~                               |   |   |                | 1.             | 0.21 dE                |
| al dan de la la manuel de l   | 20 dBm                    |                             |                                   | 71.0  | ~~~                               | ° h                                     | ) T2                                    |                |                | 320.300 KH2            |
| The I will be a set of  | 10 dBm                    |                             |                                   |   |                                   |   | Ť                                       |                |                |                        |
| la da  | 0 dBm                     | H2 1.390                    | d8m                               | MJ  |                                   |   | 21                                      |                |                |                        |
| si di control de la control de   |                           |                             |                                   |   |                                   |   | $  \rangle$                             |                |                |                        |
| la norden de la conserva de la conse   |                           |                             |                                   | × 12  |                                   |   |   | and the second |                |                        |
| te general de la construit de  | -20 dBm                   |                             |                                   |   |                                   |   |   |                |                |                        |
| Selection       Job Dirk       Job Dirk       Selection       Job Dirk       Selection         2 Market Table       Job Dirk       Job Dirk       Paneton  | -30 dBm                   |                             |                                   |   |                                   |   |   |                | hon .          |                        |
| Bit Instruction         Dot Jits   | -40 dBm                   | ~~~                         |                                   |   |                                   |   |   |                | ~~             | <u>h</u>               |
| CP I. 4000 Other         Doil pase         Doil pase <thdoil pase<="" th=""></thdoil>  | -50 dBm                   |                             |                                   |   |                                   |   |   |                |                |                        |
| 2 <u>Moder in also constantino de la constantino d</u>   | -60 dBm                   |                             |                                   |   |                                   |   |   |                |                |                        |
| 11         1.2600712.0%         1.26007         0.05 BW         244.755244755 kHz           200         200.3 EHz         0.21 BW         0.05 BW         244.755244755 kHz           Dec 7.41.201 / Me2H         Channel 512           Maxwerg  | 2 Marker Tab              | ole                         |                                   |   |                                   | 10                                      |   |                |                |                        |
| Dim         JAUA KHZ         ULA KHZ         ULA KHZ         Presenting  | M1                        |                             | X-Value<br>1.8500398 (            | GHZ   | Y-Value<br>1.33 dBm               |   | Function                                |                |                |                        |
| Date:     Description     Description       Date:     Channel 512       Mathematical 200 den Office     Dot dit # NW 1011       Def date:     Dot dit # NW 1011       Def d  | T2                        | î                           | 1.85007712<br>1.85032188<br>320.3 | GHz<br>KHZ                                  | 13.34 dBm<br>13.85 dBm<br>0.21 dB | Occ Bw                                  |   | 2              | 44./55244      | 755 KHZ                |
| Channel 512         Spectrum       Spectrum       Spectrum       Spectrum         MILTON 161/2018       Spectrum       Spectrum <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Measuring</td> <td>•••••••</td> <td>27.07.2017</td>   |                           |                             |                                   |   |                                   |   |   | Measuring      | •••••••        | 27.07.2017             |
| Extinction         Spectrum         Image: Spectrum  | Date: 27.JUL.20           | 17 14:49:14                 |                                   |   |                                   |   |   |                |                |                        |
| Extinction         Spectrum         Image: Spectrum  |                           |                             |                                   |   | Chanr                             | nel 512                                 |   |                |                |                        |
| 1 Occuped Bard Modellin <ul> <li></li></ul>  | MultiView                 |                             |                                   |   |                                   |   |   |                |                |                        |
| adm     41 27 360 dm     001 10 200 0000000000000000000000000000   | Att                       | 8.00 dBm Offse<br>30 dB SWT | et 8.00<br>419 µs (~7.3 r         | dB <b>= RBW</b> 101<br>ns) <b>= VBW</b> 301 | <hz<br>KHz Mode Auto</hz<br>      | FFT                                     |   |                |                |                        |
| Billion       127.362.800       00.06 /00       00.000 /00         Billion       127.362.800       00.000 /00       00.000 /00         Billion       02.000 /00       00.000 /00       00.000 /00         Billion       00.000 /00       00.000 /00       00.000 /00         Billion       00.000 /00       00.000 /00       00.000 /00       00.000 /00         Billion       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00         Billion       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00         Billion       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00       00.000 /00  |                           | andwidth                    |                                   |   |                                   |   |   |                | M1[1]          | 0.94 dBm               |
| li den versionen offenten versionen  | 30 dBm                    | H1 27.340 dBm               |                                   |   | m                                 | mm.                                     |   |                | D1[1]          | 0.65 dE                |
| i dan 12 130 m 14 12 130 m 14 12 130 m 14 14 14 14 14 14 14 14 14 14 14 14 14  | 20 dBm                    |                             |                                   | Ţ,  |                                   | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | \_T2                                    |                |                |                        |
| Table         10 <th1< td=""><td>10 dBm</td><td></td><td></td><td>الم ا</td><td></td><td></td><td>Let Let Let Let Let Let Let Let Let Let</td><td></td><td></td><td></td></th1<>  | 10 dBm                    |                             |                                   | الم ا                                       |                                   |   | Let |                |                |                        |
| abs  | 0 dBm                     | H2 1.340                    | dBm                               | M1  |                                   |   |   |                |                |                        |
| abs  | -10 dBm-                  |                             | <i>_</i> _                        |   |                                   |   |   | h              |                |                        |
| a am and a more service of the servi   |                           |                             | M                                 |   |                                   |   | Ĭ                                       | m              |                |                        |
| • 0.00         • 0.00<  |                           |                             | 1                                 |   |                                   |   |   |                | ~              |                        |
| Model         Model         Model         Model         Model         Model         Model         Span 1.0 MHz         Span 1.0 MHz         Span 1.0 MHz           Marker Table         Mit         1         3.8798379 GHz         0.94 dBm         Function         Function Result           T1         1         1.8798379 GHz         0.94 dBm         Occ Bw         245.754245754 KHz           D1         Mit         1.8798712 GHz         0.65 dB         Model         245.754245754 KHz           D1         Mit         322.22 KHz         0.65 dB         Model         245.754245754 KHz           D2         Mit         320.20 KHz         0.65 dB         245.754245754 KHz         245.754245754 KHz           D2         Mit         320.20 KHz         0.65 dB         245.754245754 KHz         245.754245754 KHz           D3         Mit         320.00 KHz         0.65 dB         245.754245754 KHz         245.754245754 KHz         245.754245754 KHz           D4         Mit         320.00 KHz         0.65 dB         245.754245754 KHz         245.754245764 KHz           D3         Mit         320.00 KHz         0.92 dBm         0.92 dBm         0.92 dBm           Ret         1.92 Mit         1.92 Mit         1.92 Mit         <  | -30 dBm                   | - A                         |                                   |   |                                   |   |   |                | m              |                        |
| CF         Life         Loop         Her         Span 1.0 MHz           2 Marker Table         Type         Ref         Tric         1         1.8798379 GHz         0.944 dBm         Function         Function Result           Tri         1         1.8798379 GHz         0.944 dBm         Occ Bw         245.754245754 KHz           Di         1         320 dBm         Occ Bw         245.754245754 KHz           Di         Mi         322.2 KHz         0.65 dB         Measuring         210.2017 H5:020   | -40 dBm                   | $\gamma$                    |                                   |   |                                   |   |   |                |                | how                    |
| GF 1.88 CHz         1001 pis         100.0 kHz/         Span 1.0 MHz           Yope         Ref         Trc         X-Value         Yunzer         Function         Function Result           Mit         1         1.8798379 CHz         0.93 4 dBm         Occ Bw         245.754245754 KHz           D1         MI         1         1.8798379 CHz         0.65 dB         245.754245754 KHz           D1         MI         322.2 KHz         0.65 dB         245.754245754 KHz         245.754245754 KHz           D2         MI         322.2 KHz         0.65 dB         245.754245754 KHz         245.754245754 KHz           D2         MI         322.2 KHz         0.65 dB         245.754245754 KHz         245.754245754 KHz           D2         MILIVIEW         Spectrum         0.65 dB         245.754245754 KHz         245.754245754 KHz           D2         Spectrum         0.00 dB         Ref Level 38.00 dB         0.01 Hz         0.02 dB           20 dB         Spectrum         0.00 dB         8.00 dB         Mde Auto FFT         9.25 2.00 MHz           10 dB         10.00 Hz         MILIVIEW         Spectrum         9.25 2.00 MHz         9.25 2.00 MHz           10 dB         10.00 Hz         1.00 Hz         0.01 Hz  | -50 dBm                   |                             |                                   |   |                                   |   |   |                |                |                        |
| 2         Marker Table         Function         Function Result           Mit         1         1.8798373 CHz         0.39 dBm         0.0c Bw         245.754245754 KHz           D1         1         1.8798712 CHz         1.38 dEm         0.0c Bw         245.754245754 KHz           D1         MI         322.2 KHz         0.65 dB         Meesuring         W         210.72017           D2         MI         322.2 KHz         0.65 dB         Meesuring         W         27072017           D4         32.0 dB         Spectrum         V         Value         V         Value         V         Value         Value <td></td> <td></td> <td></td> <td>1001</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td>   |                           |                             |                                   | 1001  |                                   |   |   |                |                | 0                      |
| Mit       1.87987379 GHz       0.94 dBm       Occ BW       245.754245754 KHz         T2       1.8598712 GHz       12.80 dBm       Occ BW       245.754245754 KHz         D1       Mit       322.2 KHz       0.65 dB       Measuring       ####################################   | 2 Marker Tak              |                             | V (J-1                            | 1001 pi                                     |                                   | 10                                      |   |                | From attions F |                        |
| 1       1.802288 GH2       12.90 dBm         01       1       322.2 kHz       0.65 dB         Measuring       1.800288 GH2       27.07.2017         1.1       322.2 kHz       0.65 dB       1.800288 GH2         Channel 661         MultiView: Spectrum       v         Ref Level 33.00 dB       9.00 dB + RBW 10 kH2         Att       30.00 dB + RBW 10 kH2         MultiView: Spectrum         Spectrum         S0.00 dB + RBW 10 kH2         MultiView: Spectrum         MultiView: Spec  | M1                        | 1                           | 1.8798379 (<br>1.87987712         | GHz   | 0.94 dBm<br>13.80 dBm             | Occ Bw                                  | Function                                | 2              |                |                        |
| Des 27.JUL.2017 14:51:20   | T2<br>                    | 1<br>1 1                    | 1.88012288<br>322.2               | GHz<br>KHZ                                  | 12.90 dBm<br>0.65 dB              |   |   |                |                |                        |
| Channel 661         Vilitiview: Spectrum       Vilitiview: Spectrum         Net Levis 33.00 db * RBW 10 kHz         Att 33.00 db * RBW 10 kHz         Mode Auto FFT         Occupied Bandwidth         Militiview: Spectrum         Occupied Bandwidth         Militiview: Spectrum         Militiview: Spectrum         Occupied Bandwidth         Militiview: Spectrum         Militiview: Spectr   |                           | ][]                         |                                   |   |                                   |   |   | Measuring      | 4              | 27.07.2017<br>14:50:20 |
| MultiView         Spectrum         v           Ref Level 38.00 dbm         Offset         8:00 db @ RBW 10 kHz         Mode Auto FFT           10 occpized Dandwidth         M1[1]         0:92 dbm         1.909640300 GHz           30 dbm         H1 27.140 dbm         D1[1]         0.92 dbm         0.92 dbm           20 dbm         H1 27.140 dbm         D1[1]         0.92 dbm         0.92 dbm           10 dbm         H1 27.140 dbm         D1[1]         0.92 dbm         0.92 dbm           10 dbm         H1 27.140 dbm         M1[1]         0.92 dbm         0.92 dbm           10 dbm         H1 27.140 dbm         M1[1]         0.92 dbm         0.92 dbm           10 dbm         H2 1.140 dbm         M1         1         320.200 kHz           10 dbm         H2 1.140 dbm         M1         1         320.200 kHz           10 dbm         H2 1.140 dbm         M1         1         320.200 kHz           10 dbm         H2 1.140 dbm         M1         1         320.200 kHz           10 dbm         H2 1.140 dbm         M1         1         320.200 kHz         1           20 dbm         H2 1.140 dbm         M1         1         320.200 kHz         320.200 kHz           20 d  | Date: 27.JUL.20           | 17 14:50:20                 |                                   |   | _                                 |   |   |                |                |                        |
| Ref Level 38.00 db         Offset<br>30 db         S.00 db         RBW 10 kHz<br>WW 30 kHz         Mode Auto FFT           1 Occupied Bandwidth         MI[1]         0.92 dbn   |                           |                             |                                   |   | Chanr                             | nel 661                                 |   |                |                |                        |
| 1 Occupied Bandwidth       0 1 kk M3x         30 dim       M1 [1]       0.90 2 dim         1 0 dim       0 1 [1]       0.90 2 dim         20 dim       0 1 [1]       920.200 kHz         1 0 dim       1 2 1 40 dim       920.200 kHz         1 0 dim       1 2 1 40 dim       1 2 1 40 dim         1 0 dim       1 2 1 40 dim       1 2 1 40 dim         1 0 dim       1 2 1 40 dim       1 2 1 40 dim         1 0 dim       1 2 1 40 dim       1 2 1 40 dim         20 dim       1 2 1 40 dim       1 2 1 40 dim         1 0 dim       1 2 1 40 dim       1 2 1 40 dim         20 dim       2 1 40 dim       1 2 1 40 dim         20 dim       1 2 1 40 dim       1 2 1 40 dim         20 dim       1 2 1 40 dim       1 2 1 40 dim         20 dim       1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |                           |                             |                                   | dB = RBW 101                                | Hz                                |   |   |                |                | ▽                      |
| an dam hi 27.40 da   | Att                       |                             | 419 µs (~7.3 r                    | ns) <b>= VBW</b> 301                        | KHz Mode Auto                     | FFT                                     |   |                |                |                        |
| H1 27.140 dbm     320.200 kHz       20 dbm     320.200 kHz       10 dbm     10       0 dbm     10       10 dbm     10       20 dbm     100 lpts       20 dbm     100.0 kHz/       11 1     1.90967012 GHz       13.67 dbm     0cc Bw       243.756243756 kHz       11 1     320.2 kHz       0.40 db     14:51:20   | 30 dBm                    |                             |                                   |   |                                   |   |   |                | 1.             | 909640300 GHz          |
| 10 dem<br>10 dem |                           | H1 27.140 dBm               |                                   |   | Jam                               | mont                                    |   |                |                | 320.200 kHz            |
| 0 dBm     H2 1.140 dBm     H2     H2 1.140 dBm     H2     H2 <td></td> <td></td> <td></td> <td>T-</td> <td></td> <td></td> <td>T2<br/>W</td> <td></td> <td></td> <td></td>   |                           |                             |                                   | T-  |                                   |   | T2<br>W                                 |                |                |                        |
| U dBm     1/2 1.140 dBm       -10 dBm     -10 dBm       -20 dBm     -10 dBm       -21 1     1.9096403 GHz       -11 1     1.90967912 GHz       -12 1     1.90967912 GHz       -13 67 dBm     -0 cc Bw       -243.756243756 kHz       -11 1     320.2 kHz       -11 1     -10 dB       -11 1     -10 dBm       -11 1     -10 dBm   <  |                           |                             |                                   | MI  |                                   |   |   |                |                |                        |
| 20 dBm<br>30 dBm<br>40 dBm | 0 dBm-                    | H2 1.140                    | dBm                               |   |                                   |   | Ť                                       |                |                |                        |
| 30 dBm     40 dBm <td>-10 dBm</td> <td></td> <td>-</td> <td><math>\checkmark</math></td> <td></td> <td></td> <td><u>├</u></td> <td>h-</td> <td>-</td> <td></td>  | -10 dBm                   |                             | -                                 | $\checkmark$                                |                                   |   | <u>├</u>                                | h-             | -              |                        |
| 40 dsn         50 dsn<  | -20 dBm                   |                             | $\downarrow$                      |   |                                   |   |   | - ~~           |                |                        |
| S0 dbm         GF         1001 pts         100.0 kHz/         Span 1.0 MHz           20 dbm         GF         1001 pts         100.0 kHz/         Span 1.0 MHz           2 Marker Table         Type         Ref         Trc         X-Value         Function         Function Result           T1         1         1.9096403 GHz         0.92 dBm         Occ Bw         243.756243756 kHz           T2         1         1.90967912 GHz         13.67 dBm         Occ Bw         243.756243756 kHz           D1         M1         1         320.2 kHz         0.40 dB         Messuring         27.07.2017           Date: 27.JUL.2017 14:51:30         Messuring         14:51:29         14:51:29   | -30 dBm                   |                             | 1                                 |   |                                   |   |   |                | <u> </u>       |                        |
| S0 dBm         CF 1.9096 GHz         1001 pts         100.0 kHz/         Span 1.0 MHz           Z Marker Table         Type         Ref         Trc         X-Value         Function         Function Result           T1         1         1.9096403 GHz         0.92 dBm         Occ Bw         243.756243756 kHz           T2         1         1.90967912 GHz         13.67 dBm         Occ Bw         243.756243756 kHz           D1         M1         1         320.2 kHz         0.40 dB         Meesuring         27.07.2017           Date: 27.JUL.2017         14:51:29         Date: 27.JUL.2017         14:51:29         14:51:29   | -40 dBm                   |                             |                                   |   |                                   |   |   |                | $\sim$         |                        |
| 40 dbm         1001 pts         100.0 kHz/         Span 1.0 MHz           2 Marker Table         Type         Ref         Trc         X-Value         Y-Value         Function         Function Result           Mil         1         1.9096403 GHz         0.92 dBm         Occ Bw         243.756243756 kHz           T1         1         1.90967912 GHz         13.67 dBm         Occ Bw         243.756243756 kHz           D1         M1         1         320.2 kHz         0.40 dB         Measuring         27.07.2017           Date: 27.JUL.2017         14:51:20         Measuring         14:51:20         14:51:20  | ~~~~~~                    |                             |                                   |   |                                   |   |   |                |                |                        |
| CF 1.9098 GHz         1001 pts         100.0 kHz/         Span 1.0 MHz           2 Marker Table         Type Ref Trc         X-Value         Y-Value         Function         Function Result           M1         1         1.9096403 GHz         0.92 dBm         Function         Function Result           T1         1         1.90967912 GHz         13.67 dBm         Occ Bw         243.756243756 kHz           T2         1         1.9099288 GHz         13.82 dBm         Occ Bw         27.07.2017           D1         M1         1         320.2 kHz         0.40 dB             D1         K1         320.2 kHz         0.40 dB           27.07.2017           Late: 27.JUL.2017         14:51:30             14:51:29  | -50 dBm                   |                             |                                   |   |                                   |   |   |                |                |                        |
| 2 Marker Table         X-Value         V-Value         Function         Function Result           Type         Ref         Trc         X-Value         V-Value         Function         Function Result           Mit         1         1.9096403 GHz         0.92 dBm         Occ Bw         243.756243756 kHz           T1         1         1.909288 GHz         13.67 dBm         Occ Bw         243.756243756 kHz           D1         M1         1         320.2 kHz         0.40 dB         Measuring         111111 (1111)           Date:         27.07.2017         14:51:20         14:51:20         14:51:20         14:51:20  | -60 dBm<br>CF 1.9098 GF   | lz                          | <u> </u>                          | <u>1001</u> pi                              | s                                 | 10                                      | 10.0 kHz/                               |                | <u> </u>       | Span 1.0 MHz           |
| Mi         1         1.9096403 GHz         0.92 dBm           TI         1         1.9069712 GHz         13.67 dBm         Occ Bw         243.756243756 kHz           T2         1         1.9099288 GHz         13.82 dBm         Occ Bw         243.756243756 kHz           D1         MI         1 <b>320.2 kHz 0.40 dB</b> D1         MI         1 <b>320.2 kHz 0.40 dB</b> D2         Measuring         14:51:29            14:51:29  | 2 Marker Tak<br>Type   Re | ole<br>ef   Trc             | X-Value                           |   | Y-Value                           |   |   |                | Function F     |                        |
| D1         M1         1         320.2 kHz         0.40 dB  | M1<br>T1                  | 1                           | 1.9096403 (                       | GHZ<br>GHZ                                  | 13.67 dBm                         | Occ Bw                                  |   | 2              |                |                        |
| Date: 27.JUL.2017 14:51:30   | D1 M                      | 1<br>1 1                    | 1.90992288<br><b>320.2</b>        | GHZ<br>KHZ                                  | 13.82 dBm<br>0.40 dB              |   |   |                |                | 27.07.20+7             |
|  |                           | _/                          |                                   |   |                                   |   |   | Measuring      | •••••••        | 14:51:29               |
| Channel 810  | Date: 27.JUL.20           | 17 14:51:30                 |                                   |   |                                   |   |   |                |                |                        |
|  |                           |                             |                                   |   | Chanr                             | nel 810                                 |   |                |                |                        |



| MultiView 8  | - Spectrum   | 1   |  | 900 For  | 00      |                       |  |             |  |
|--|--|---|--|--|---------|-----------------------|--|-------------|--|
| <ul> <li>Att</li> </ul>  |  | t 8.00  |  | Hz<br>Hz Mode Auto   | FFT     |                       |  |             | ▽  |
| 1 Occupied Ba  | ndwidth  | 419 µs (~7.3 l  | IS) - VBW 30 K   | Hz Mode Auto   |         |                       |  | M1[1]       | 1Pk Max<br>0.83 dBm  |
| 30 dBm   | H1 27.070 dBm  |   |  |  |         |                       |  |             | 50038600 GHz<br>0.87 dB<br>322.900 kHz   |
| 20 dBm   |  |   | T_/  |  |         | 12                    |  |             |  |
| 10 dBm   |  |   |  |  |         | - V                   |  |             |  |
| 0 dBm-   | H2 1.070 d   | Bm  | My   |  |         | <b>P</b> <sup>1</sup> |  |             |  |
| -10 dBm  |  |   | , /  |  |         |                       | h  |             |  |
| -20 dBm  |  | A many  |  |  |         |                       | m  |             |  |
| -30 dBm  |  | ~   |  |  |         |                       |  |             |  |
|  | ~~~~~  |   |  |  |         |                       |  | m           |  |
| -40 dBm  |  |   |  |  |         |                       |  |             | ~~~~   |
| -50 dBm  |  |   |  |  |         |                       |  |             |  |
| -60 dBm<br>CF 1.8502 GHz   |  |   | 1001 pt  | S  | 10      | 00.0 kHz/             |  |             | Span 1.0 MHz   |
| 2 Marker Table<br>Type Ref   | f Trc  | X-Value   | iH7  | Y-Value<br>0.83 dBm  |         | Function              |  | Function Re | esult  |
| M1<br>T1<br>T2   | 1  | 1.85007812<br>1.85032188  | GHz<br>GHz   | 13.83 dBm<br>13.59 dBm   | Occ Bw  |                       | 2  | 43.7562437  | 56 kHz   |
| D1 M1  | 1  | 322.9   | (Hz  | 0.87 dB  |         |                       | Measuring  | (           | 27.07.2017   |
| Date: 27.JUL.201   | 7 15:03:40   |   |  |  |         |                       |  |             | 15:03:40   |
|  |  |   |  | Chanr  | nel 512 |                       |  |             |  |
| MultiView  | Spectrum   |   |  | Shan   |         |                       |  |             | ~  |
| Ref Level 38<br>Att  | .00 dBm Offse<br>30 dB SWT   | ε 8.00<br>419 μs (~7.3 n  | dB <b>= RBW</b> 10 k<br>ns) <b>= VBW</b> 30 k                                    | Hz<br>Hz Mode Auto   | FFT     |                       |  |             |  |
| 1 Occupied Ba  | ndwidth  |   |  |  |         |                       |  | M1[1]       | <ul> <li>1Pk Max</li> <li>1.07 dBm</li> <li>379837800 GHz</li> </ul>   |
| 30 dBm   | H1 27.200 dBm  |   |  | ~~~~   | m       |                       |  | D1[1]       | 0.36 dB<br>323.000 kHz   |
| 20 dBm   |  |   | <u></u>  | ~~··   |         | 12                    |  |             |  |
| 10 dBm   |  |   |  |  |         |                       |  |             |  |
| 0 dBm  | H2 1.200 d   | Bm  | M1   |  |         |                       |  |             |  |
| -10 dBm  |  |   |  |  |         |                       | ~  |             |  |
| -20 dBm  |  |   |  |  |         |                       | - Marine - M |             |  |
| -30 dBm  | ~  | /   |  |  |         |                       |  | ~           |  |
| -40 dBm  | m  |   |  |  |         |                       |  | ~~~~        |  |
| m  |  |   |  |  |         |                       |  |             | m  |
| -50 dBm  |  |   |  |  |         |                       |  |             |  |
|  |  |   |  |  |         |                       |  |             |  |
| -60 dBm<br>CF 1.88 GHz   |  |   | 1001 pt  | s  | 10      | 00.0 kHz/             |  |             | Span 1.0 MHz   |
| CF 1.88 GHz<br>2 Marker Tabl<br>Type   Ref   | f   Trc  | X-Value   |  |  | 10      | 00.0 kHz/<br>Function |  | Function Re |  |
| CF 1.88 GHz<br>2 Marker Table<br>Type   Ref<br>M1<br>T1<br>T2  | f   Trc  <br>1 1<br>1<br>1   | 8798378 0   | iHz  | Y-Value<br>1.07 dBm  | Occ Bw  |                       | 2  | Function Re | esult  |
| CF 1.88 GHz<br>2 Marker Table<br>Type   Ref<br>M1<br>T1  | f   Trc  <br>1 1<br>1<br>1   | X-Value<br>8798378 (<br>1.87987812<br>1.88012188<br>323.0 1                                       | iHz  |  |         |                       |  |             | esult<br>256 kHz<br>27.07.2017   |
| CF 1.88 GHz<br>2 Marker Table<br>Type   Ref<br>M1<br>T1<br>T2  | f Trc 1<br>1 1<br>1<br>1<br>1<br>1<br>J  | 8798378 0   | iHz  | Y-Value<br>1.07 dBm  |         |                       |  | 43.7562437  | esult<br><b>'56 kH</b> z   |
| CF 1.88 GHz<br>2 Marker Table<br>Type   Ref<br>M1<br>T1<br>T2<br>D1 M1   | f Trc 1<br>1 1<br>1<br>1<br>1<br>1<br>J  | 8798378 0   | iHz  | Y-Value<br>1.07 dBm  | Occ Bw  |                       |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017   |
| CF         1.88         GHz           2 Marker Table         Type         Ref           Min         T1         T2           D1         M1         T2           D2         Marker Table         Marker Table           Marker Table         Marker Table         Marker Table           D1         M1         T2         Marker Table           D2         Marker Table         Marker Table         Marker Table           Marker Table         Marker Table         Marker Table         Marker Table   | f Trc 1<br>1<br>1<br>1<br>7 15:02:37<br>Spectrum   | 8798378 (<br>1.87987812<br>1.88012188<br>323.0  | iHz<br>GHz<br>GH2<br>HZ  | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann  | Occ Bw  |                       |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017   |
| CF 1.88 GHz           2 Marker Table           Type R           M1           T1           T2           D1           Marker Table           Marker Table           Marker Table           Minimum           Date: 27.JUL 201           MultiView           Ref Level 38           Att   | f Trc 1<br>1<br>1<br>7<br>7<br>15:02:37<br>Spectrum<br>00 dBm Offse<br>SwT   |   | HZ<br>GHZ<br>CHZ<br>HZ<br>dB • RBW 10 k  | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann  | Occ Bw  |                       |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37   |
| CF 1.88 GHz<br>2 Marker Tabl<br>Type R<br>M1<br>T1<br>T2<br>D1 M1<br>D1 M1<br>Date: 27.JUL 201<br>MultiView<br>Ref Level 38<br># Att<br>1 Occupied B2  | f Trc 1<br>1<br>1<br>7<br>7<br>15:02:37<br>Spectrum<br>00 dBm Offse<br>SwT   |   | HZ<br>GHZ<br>CHZ<br>HZ<br>dB • RBW 10 k  | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  |                       |  | 43.7562437  | 27.07.2017<br>15:02:37   |
| CF 1.88 GHz           2 Marker Table           Type   Ref           Mil           Ti           D1           D1           D1           MultiView           Ref Level 38           Att           JO dBm-   | f Trc 1<br>1<br>1<br>7<br>7<br>15:02:37<br>Spectrum<br>00 dBm Offse<br>SwT   |   | HZ<br>GHZ<br>CHZ<br>HZ<br>dB • RBW 10 k  | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  |                       |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz<br>2 Marker Tabl<br>Type R<br>M1<br>T1<br>T2<br>D1 M1<br>D1 M1<br>Date: 27.JUL.201<br>MultiView<br>Ref Level 38<br># Att<br>1 Occupied B2  | f Trc 1<br>1<br>1<br>1<br>7 15:02:37<br>7 15:02:37<br>30 dB Offse<br>30 dB SWT<br>mdW/dth  |   | HZ<br>GHZ<br>CHZ<br>HZ<br>dB • RBW 10 k  | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  |                       |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Table           Type   Ref           Mil           Ti           D1           D1           D1           MultiView           Ref Level 38           Att           JO dBm-   | f Trc 1<br>1<br>1<br>1<br>7 15:02:37<br>7 15:02:37<br>30 dB Offse<br>30 dB SWT<br>mdW/dth  |   | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Tabl           Type 1           T1           T2           D1           T1           T2           D1           MultiView           Ref Level 38           Att           T Occupied Ba           30 dBm   | f Trc 1<br>1<br>1<br>1<br>7 15:02:37<br>7 15:02:37<br>30 dB Offse<br>30 dB SWT<br>mdW/dth  | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GHz<br>GHz<br>Hz<br>dB • RBW 10 k<br>s) • VBW 30 k                         | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Table           Type Ref           Mi           T1           D1           T1           D2           D1           MultiView           Ref Level 38           Att           10 dBm  | f         Trc           1         1           1         1           1         1           7         15:02:37           Spectrum         Offse           30 dB         SWT           mdw/dith         H1 27:130 dBm   | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Table           Type   Ref           Mil           T1           D1           D1           D1           MultiView           Ref Level 38           * Att           1 Occupied Ba           30 dBm  | f         Trc           1         1           1         1           1         1           7         15:02:37           Spectrum         Offse           30 dB         SWT           mdw/dith         H1 27:130 dBm   | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Tabl           Type 1           T1           T2           D1           T1           T2           D1           MultiView           Ref Level 38           Att           TOCCUPICE B2           30 dBm           10 dBm           0 dBm   | f         Trc           1         1           1         1           1         1           7         15:02:37           Spectrum         Offse           30 dB         SWT           mdw/dith         H1 27:130 dBm   | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Table           Type Ref           Mil           T1           D1           T1           D2           D1           MultiView           Ref Level 38           Att           20 dBm           10 dBm           -10 dBm  | f         Trc           1         1           1         1           1         1           7         15:02:37           Spectrum         Offse           30 dB         SWT           mdw/dith         H1 27:130 dBm   | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Tabl           Type 1           Type 1           T1           T2           D1           MultiView           Ref Level 38           Att           10 dBm           20 dBm           10 dBm           -20 dBm           -30 dBm   | f         Trc           1         1           1         1           1         1           7         15:02:37           Spectrum         Offse           30 dB         SWT           mdw/dith         H1 27:130 dBm   | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Table           Type Ref           Mil           T1           D1           T1           D2           MultiView           Ref Level 38           Att           20 dBm           10 dBm           -0 dBm           -30 dBm           -30 dBm  | f         Trc           1         1           1         1           1         1           7         15:02:37           Spectrum         Offse           30 dB         SWT           mdw/dith         H1 27:130 dBm   | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | Y-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Hz  | Occ Bw  | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Table           Type Ref           Mil           T1           D1           T1           D1           T1           D2           D1           MultiView           Ref Level 38           Att           20 dBm           10 dBm           20 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -50 dBm           -60 dBm           CF 1.9098 GH2   | F Trc 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  | .8798378 (<br>1.87987812<br>1.88012188<br>323.0 I<br>419 μs (~7.3 n                               | Hz<br>GH2<br>GH2<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ<br>HZ     | V-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Chann<br>Chann  |         | Function              |  | 43.7562437  | esult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓  |
| CF 1.88 GHz           2 Marker Tabl           Type I           MultiView           E           MultiView           Ref Level 38           Att           10 d8m           20 d8m           10 d8m           -20 d8m           -30 d8m           -40 d8m           -20 d8m   | F         Trc           1         1           1         1           7         15:02:37           Spectrum         Oddm Offset           30 dB         Offset           30 dB         Switz           rdWidth         H1 27:130 dBm           H2 1:130 d         H2   | .8798378 (2<br>1.87907812<br>1.88012188<br>323.0 I<br>8.00<br>419 µs (~7.3 п                      | Hz<br>Hz<br>GHz<br>GHz<br>(Hz<br>S) • VBW 30 k<br>S) • VBW 30 k<br>MU<br>1001 pt | V-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chanr<br>Chanr<br>Chanr<br>S<br>V-Value<br>0.80 dBm                                    | Occ Bw  | Function              | Measuring  | 43.7562437  | Span 1.0 MHz     Span 1.0 MHz  |
| CF 1.88 GHz           2 Marker Parker           2 Marker Parker           Type           Ref           Mil           Ti           Di           Mil           Ti           Di           Mil           Ti           Di           MultiView           Ref Level 38           Attraction           20 dBm           20 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           -70 dBm           -70 dBm   | F         Trc           1         1           1         1           7         15:02:37           Spectrum         Oddm Offset           30 dB         Offset           30 dB         Switz           rdWidth         H1 27:130 dBm           H2 1:130 dBm         H2 1:130 dBm           H2 1:130 dBm         H2 1:130 dBm | .8798378 (2<br>1.87987812<br>1.88012188<br>323.0 I<br>323.0 I<br>419 µs (~7.3 п<br>419 µs (~7.3 п | Hz<br>Hz<br>GHz<br>GHz<br>GHz<br>Hz<br>Hz<br>1001 pt<br>Hz<br>GHz                | V-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Chann<br>Chann<br>Chann<br>S<br>V-Value<br>0.80 dBm<br>13.16 dBm<br>13.16 dBm |         | Function              | Measuring  | 43.7562437  | Span 1.0 MHz     Span 1.0 MHz  |
| CF 1.88 GHz           2 Marker Table           Type   Ref           Mil           T1           D1           T1           D1           Mil           T1           D1           Marker Table           T0           MultiView           Ref Level 38           Att           10 d8m           20 d8m           -10 d8m           -20 d8m           -30 d8m           -30 d8m           -20 d8m           -20 d8m           -30 d8m           -20 d8m           -30 d8m           -20 d8m           -30 d8m           -30 d8m           -30 d8m           -20 d8m           -30 d8m | F         Trc           1         1           1         1           7         15:02:37           Spectrum         Oddm Offset           30 dB         Offset           30 dB         Switz           rdWidth         H1 27:130 dBm           H2 1:130 dBm         H2 1:130 dBm           H2 1:130 dBm         H2 1:130 dBm | .8798378 (2<br>1.87907812<br>1.88012188<br>323.0 I<br>8.00<br>419 µs (~7.3 п                      | Hz<br>Hz<br>GHz<br>GHz<br>GHz<br>Hz<br>Hz<br>1001 pt<br>Hz<br>GHz                | V-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Chann<br>Chann<br>Chann<br>S<br>V-Value<br>0.80 dBm<br>13.37 dBm              | Occ Bw  | Function              |  | 43.7562437  | ssult<br>256 kHz<br>27.07.2017<br>15:02:37<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓<br>↓   |
| CF 1.88 GHz           2 Marker Parker           2 Marker Parker           Type           Ref           Mil           Ti           Di           Mil           Ti           Di           Mil           Ti           Di           MultiView           Ref Level 38           Att           So dBm           20 dBm           10 dBm           Di dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           CF 1.9098 GH2           Z Marker Table           Type           Ref           Ti           T2  | F         Trc           1         1           1         1           7         15:02:37           Spectrum         00 dbm Offsee           30 db Swt         Swt           mdWidth         H1 27:130 dbm           H2 1:130 dbm         H2           I         1           I         1           I         1                | .8798378 (2<br>1.87987812<br>1.88012188<br>323.0 I<br>323.0 I<br>419 µs (~7.3 п<br>419 µs (~7.3 п | Hz<br>Hz<br>GHz<br>GHz<br>GHz<br>Hz<br>Hz<br>1001 pt<br>Hz<br>GHz                | V-Value<br>1.07 dBm<br>13.11 dBm<br>13.45 dBm<br>0.36 dB<br>Chann<br>Chann<br>Chann<br>Chann<br>S<br>V-Value<br>0.80 dBm<br>13.16 dBm<br>13.16 dBm | Occ Bw  | Function              |  | 43.7562437  | ssult<br>256 kHz<br>27.07.2017<br>15:02:37<br>■ 1Fk Max<br>0.80 dBm<br>320.200 kHz<br>0.69 dBm<br>320.200 kHz<br>Span 1.0 MHz<br>ssult<br>27.02.2017 |

### Report No.: TRE1707003001

| Eventury     Spectrom     Spect   |                     |                             |                           |  | WCDM                                    | A Band I | 1        |                  |            |                        |
|---|---------------------|-----------------------------|---------------------------|--|---|----------|----------|------------------|------------|------------------------|
| Incomparison     Incomparison     Incomparison     Incomparison       Incomp  |                     |                             |                           |  |   |          |          |                  |            |                        |
| Hard and a second   | Ref Level 35<br>Att | 5.00 dBm Offse<br>28 dB SWT | t 8.0<br>41.84 µs (~6.9   | 00 dB <b>= RBW</b> 10<br>9 ms) <b>= VBW</b> 30 | 00 kHz<br>10 kHz Mode A                 | luto FFT |          |                  |            |                        |
| Image: Sector   |                     | andwidth                    |                           |  |   |          |          |                  | M1[1]      | -7.55 dBm              |
| All of the second of the  |                     |                             |                           |  |   |          |          |                  |            | 0.87 dB                |
| i da de la ser l  | .20.d8m             | H1 19.160 dBm               | т                         | · ·····  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~  |          | m        | 12               |            |                        |
| a din       a din       a din       a din         a din       a din       a din       a din       a din         a din       a din       a din       a din       a din       a din         a din       a din       a din       a din       a din       a din       a din         a din       a di  | 10 dBm              |                             | 7                         | 2  |   |          |          | Č.               |            |                        |
| Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector     Image: Sector     Image: Sector       Image: Sector     Image: Sector     Image: Sector <t< td=""><td>0 dBm</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>  | 0 dBm               |                             |                           |  |   |          |          |                  |            |                        |
| 0.85     0.85     0.95       0.85     0.95       0.85     1.001 ps       1.001 ps     1.004 ps       1.001 ps     1.0   | -10 dBm             | H2 -6.840                   | dBm                       |  |   |          |          |                  |            |                        |
| So. doc     Control of the second secon  | -20 dBm             | h                           | m                         |  |   |          |          | ~~               |            |                        |
| a an and a second a s  | -30 dBm             |                             |                           |  |   |          |          |                  |            |                        |
| ta don-<br>ta |                     |                             |                           |  |   |          |          |                  |            |                        |
| adam     1000 pts     1.00%tr/     Steam 10.0 Mtr/       View 1000     1.00%tr/     Steam 10.0 Mtr/     Steam 10.0 Mtr/       View 1000     1.00%tr/     Steam 10.0 Mtr/     Steam 10.0 Mtr/       View 1000     1.00%tr/     Steam 10.0 Mtr/     Ausstandard       View 1000     1.00%tr/     Steam 10.0 Mtr/     Ausstandard       View 1000     1.00%tr/     0.0 fb/     Ausstandard       View 1000     Steam 10.0 Mtr/     0.0 fb/     Ausstandard       View 1000     Steam 10.0 Mtr/     0.0 fb/     Ausstandard       View 1000     Steam 10.0 Mtr/     Steam 10.0 Mtr/     View 10.0 Mtr/       View 1000     Steam 10.0 Mtr/     Steam 10.0 Mtr/     View 10.0 Mtr/       View 1000     Steam 10.0 Mtr/     Steam 10.0 Mtr/     View 10.0 Mtr/       View 1000     Steam 10.0 Mtr/     Steam 10.0 Mtr/     View 10.0 Mtr/       View 1000     Steam 10.0 Mtr/     Steam 10.0 Mtr/     Steam 10.0 Mtr/       View 1000     View 10.0 Mtr/     Steam 10.0 Mtr/     Steam 10.0 Mtr/       View 1000     Steam 10.0 Mtr/     Steam 10.0 Mtr/     Steam 10.0 Mtr/       View 1000     View 10.0 Mtr/     Steam 10.0 Mtr/     Steam 10.0 Mtr/       View 1000     View 10.0 Mtr/     Steam 10.0 Mtr/     Steam 10.0 Mtr/       View 1000  |                     |                             |                           |  |   |          |          |                  |            |                        |
| Extraction       Control pine       Do Marker       Special Do Wei         Marker Falle       Control pine       Use of the second pine second p  | -50 dBm             |                             |                           |  |   |          |          |                  |            |                        |
| 21 Mode reads   |                     |                             |                           |  |   |          |          |                  |            |                        |
| The second of the sec   | 2 Marker Tab        | le                          |                           |  |   | 1        |          |                  |            |                        |
| Dir         Aussel         Aussel <td>M1</td> <td>1</td> <td>L.850056 GI</td> <td>Hz ·</td> <td>-7.55 dBm</td> <td>Occ Bw</td> <td>Function</td> <td></td> <td></td> <td></td>  | M1                  | 1                           | L.850056 GI               | Hz ·   | -7.55 dBm                               | Occ Bw   | Function |                  |            |                        |
| Del:         Del: <thdel:< th="">         Del:         Del:         <thd< td=""><td>T2</td><td>î</td><td>1.854448 G<br/>4.682 MI</td><td>Hz<br/>Hz</td><td>9.62 dBm<br/>0.87 dB</td><td>OCC BW</td><td></td><td></td><td>4.09390403</td><td>o mnz</td></thd<></thdel:<>  | T2                  | î                           | 1.854448 G<br>4.682 MI    | Hz<br>Hz                                       | 9.62 dBm<br>0.87 dB                     | OCC BW   |          |                  | 4.09390403 | o mnz                  |
| Channel 9262         Implementation of the NEW 1051/12         Implementation of the NE   |                     |                             |                           |  |   |          |          | Measuring        |            | 27.07.2017<br>16:02:04 |
| Multiview         Spectrum  | Date: 27.JUL.201    | 17 16:02:04                 |                           |  |   |          |          |                  |            |                        |
| Ref Let 3500 dem         S 00 de REW 100 HT         S 1,04 (1,-0.5 m) = VEX 20 HT         S 1,05 (1,-0.5 m) = VEX 20  |                     |                             |                           |  | Chann                                   | el 9262  |          |                  |            |                        |
| LCCCUGE Bankwellin         MITU BURKAND           10 Ban         MITU BURKAND           10 Ban         11 BANS           10 Ban         11 BA   | MultiView           | B Spectrum                  |                           |  |   |          |          |                  |            | ▼                      |
| in dem  | Att                 | 5.00 dBm Offse<br>28 dB SWT | t 8.0<br>41.84 µs (~6.9   | 00 dB <b>= RBW</b> 10<br>9 ms) <b>= VBW</b> 30 | 00 kHz<br>00 kHz Mode A                 | Auto FFT |          |                  |            |                        |
| 2. 30         0111         0.000         0.000           0 80         1         0.000         0.000         0.000           10 80         10         0.000         0.000         0.000         0.000           10 80         10         0.0000         0.000         0.000 <td< td=""><td></td><td>andwidth</td><td></td><td></td><td></td><td></td><td></td><td></td><td>M1[1]</td><td>-7.42 dBm</td></td<>  |                     | andwidth                    |                           |  |   |          |          |                  | M1[1]      | -7.42 dBm              |
| Interview       Spectrum   |                     |                             |                           |  |   |          |          |                  | D1[1]      | 0.58 dB                |
| adm         12         2.00 db         1         1.00 Hz/L         Span 10.0 Mz/L           adm         1         1.00 Hz/L         Span 10.0 Mz/L         Span 10.0 Mz/L           adm         1         1.07558 GH/L         1.00 Hz/L         Span 10.0 Mz/L           Varier Table         Value         Function         Function Result           Till         1         1.07558 GH/L         0.05 Bit         0.05 Bit           Di         Mi         1         1.07558 GH/L         0.05 Bit         0.05 Bit           Di         Mi         1         1.07558 GH/L         0.05 Bit         0.05 Bit         0.05 Bit           Di         Mi         1         1.07558 GH/L         0.05 Bit         0.05 Bit         0.05 Bit           Di         Mi         1         0.0758 GH/L         0.05 Bit         0.05 Bit         0.05 Bit           Di         Mi         1         0.0758 GH/L         0.05 Bit         0.05 Bit         0.05 Bit           Di         Mi         1         0.00 dit         1.00 Mz/L         0.00 dit         1.00 Mz/L           Di         Mi         1         0.00 dit         1.00 Mz/L         0.00 dit         1.00 Mz/L           Di <td< td=""><td>.20 dBm</td><td>H1 18.990 dBm</td><td>т</td><td>· ·····</td><td>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</td><td>m</td><td>men in</td><td>2</td><td></td><td></td></td<>  | .20 dBm             | H1 18.990 dBm               | т                         | · ·····  | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | m        | men in   | 2                |            |                        |
| Image: Note of the second se   | 10 dBm              |                             | 7                         |  |   |          |          |                  |            |                        |
| 10 dim       0 dim       <  | 0 dBm               |                             | M                         |  |   |          |          | $\sum_{i=1}^{n}$ |            |                        |
| 30 @m         4.0850 MHz         1001 pts         1.0 MHz/         Span 10.0 MHz           20 @m         1001 pts         1.0 MHz/         Span 10.0 MHz           20 @m         1011 pts         1.0 MHz/         Span 10.0 MHz           20 @m         1011 pts         1.0 MHz/         Span 10.0 MHz           20 @m         1011 pts         1.0 MHz/         Span 10.0 MHz           21 T2         1         1.877555 GHz         -7.42 @m         Function         Function Result           11 T2         1         1.877555 GHz         -7.42 @m         Common State         A.085914036 MHz         207.007           12 T1         1         4.686 MHz         0.55 dB         Wessurfig         4.085914036 MHz         207.007           Det: Z7.4UL.2017 160c17         Channel 94000         V         20.00000         20.0000         20.00000  | -10 dBm             | H2 -7.010                   |                           |  |   |          |          |                  |            |                        |
| 40 dbm   | -20 dBm             | h                           | ~~                        |  |   |          |          | hun              | m          |                        |
| 40 dbm   | -30 dBm             |                             |                           |  |   |          |          |                  |            | m                      |
| So dia         Image: Comparison of the comparison o  |                     |                             |                           |  |   |          |          |                  |            |                        |
| Or Bin         Operation         Span 10.0 MHz/         Span 10.0 MHz/         Span 10.0 MHz/         Span 10.0 MHz/           2 Marker Table         Trc         X-Value         -7.42 dBm         Occ BW         4.085914086 MHz         1           1 1         1.87795 GHz         10.1 B dBm         Occ BW         4.085914086 MHz         1           D1         1         1.87795 GHz         10.1 B dBm         Occ BW         4.085914086 MHz         1           D2         Mi         1         4.686 MHz         0.55 dB         0.52 dB         27072017           Dete: 27.4L.2017 1604:17         Channel 9400         F         10.0111         10.025 MHz         10.0111           1         1.0025 MHz         8.00 dB = RBW 100 HHz         Mode Auto FT         10.0052 MHZ         0.52 dB           10 dBm         0.00 dB = RBW 100 HHz         Mode Auto FT         10.0052 MHZ         0.052 MHZ         0.052 MHZ           10 dBm         0.00 dB = RBW 100 HHz         Mode Auto FT         10.0052 MHZ         0.052 MH  | -40 dBm             |                             |                           |  |   |          |          |                  |            |                        |
| CF 1.88 GHz         1001 pts         1.0 MHz/         Span 10.0 MHz/           2 Marker Table         Trc         X Value         Function         Function Result           1         1         1.977655 GHz         -7.42 dBm         Function         Function Result           11         1         1.977655 GHz         -7.42 dBm         Occ BW         4.085914086 MHz           11         1         1.97058 GHz         0.58 dB         Occ BW         4.085914086 MHz           12         1         1.97058 GHz         0.58 dB         Occ BW         4.085914086 MHz           12         1         4.686 MHz         0.58 dB         Occ BW         4.085914086 MHz           13         4.686 MHz         0.58 dB         Occ BW         4.085914086 MHz         0.58 dB           Channel 94000           MattyTew         Spectrum         v         v         v         v           Soc B         SWT         41.84 µz (<< 9 m) = VBW 300 Hz  | -50 dBm             |                             |                           |  |   |          |          |                  |            |                        |
| Water Table         V-Value         Function         Function Result           Mile         1         1.8776556         CHz         -7.42         Chan         Coc Bw         4.085914086         MHz           D1         1         1.877656         CHz         -7.42         Chan         Coc Bw         4.085914086         MHz           D1         1         1.877656         CHz         10.12         Chan         Coc Bw         4.085914086         MHz         27.07.2917           D1         M1         4.665         MHz         0.58         B         27.07.2917         16.0617           Chancel 9400           Measuring         Channel 9400           Mile Will So dem Offset         8.00 dB = BBW 100 kHz         v           Mile Will So dem Offset         8.00 dB = BBW 100 kHz         v         v           Mile Will So dem Offset         8.00 dB = BBW 100 kHz         v  |                     |                             |                           |  |   |          |          |                  |            |                        |
| Mit         1.877555 GHz         -7.42 dBm         Doc Bw         4.085914086 MHz           1         1.877552 GHz         1018 dBm         Doc Bw         4.085914086 MHz           1         1.87252 GHz         1012 dBm         Doc Bw         4.085914086 MHz           1         1.87252 GHz         1012 dBm         Doc Bw         27072917           Channel 9400           Mattiview         Spectrum         Channel 9400           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           0 dm           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           Mit 1.84 µg (-6.9 mg) = VBW 300 kHz           0 dm           0 dm           0 dm           0 dm           0 dm           0 dm <td>2 Marker Tab</td> <td></td> <td></td> <td>1001 pt</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td>   | 2 Marker Tab        |                             |                           | 1001 pt  |   | 1        |          |                  |            |                        |
| T2       1       1.882038 GHz       10.12 dBm         D1       M1       1       4.885 MHz       0.58 dB         Dete: 27.307.2017         Dete: 27.307.2017         Channel 94000         Image: Spectrum       Image: Spectrum         Reflexed 35.00 dBm offset       8.00 dB = RBW 100 Hz         Add colspan="2">All Levi 35.00 dBm offset       Image: Spectrum         Image: Spectrum       Image: Spectrum         Image: Spectrum  | M1                  |                             | L.877656 GI               | Hz   | -7.42 dBm                               |          | Function |                  |            |                        |
| Measuring   | T2                  | 1 1 1                       | 1.882038 G                | Hz   | 10.18 dBm<br>10.12 dBm<br>0.58 dB       | Occ Bw   |          |                  | 4.08591408 | 66 MHZ                 |
| Channel 94000         V         Notice 100 Ht         Att 200 dB wT 41.84 µs (rd.9 ms) # VBW 300 Htz Mode Auto PFT         192 Mode         192 Mode         30 dBm       0 dBm       01[1]       0.52 dB         10 dBm       1       0.52 dB       0.52 dB         -10 dBm       1       0.52 dB       0.0 Htz       0.0 Htz         -0 dBm       -0 dBm       -0.0 Htz       Span 10.0 Mtz         -0 dBm       -0.0 Htz       -7.81 dBm       0.0 Htz       Span 10.0 Mtz         -10 dBm       -0.0 Htz       -7.81 dBm       0.0 Mtz       Span 10.0 Mtz         -0 dBm       -0.0 Htz       Span 10.0 Mtz       Span 10.0 Mtz       Span 10.0 Mtz         -10 dBm       -0.0 Mtz       -7.81 dBm       Occ Bw       4.095904096 Mtz       50.0 Mtz         -10 dBm       1       1.905321 Gtz       10.1 2 dBm       Occ Bw       4.095904096 Mtz       50.0 Mtz         -11       1       1.905321 Gtz       10.0 2 dBm       Occ Bw       4.095904096 Mtz       50.0 Sta         10 Mt       1       1.905321 Gtz       0.52 dB       0.02 dBm       0cc Bw       4.095904096 Mtz       50.05.6 Bm   |                     |                             |                           |  |   |          |          | Measuring        |            | 27.07.2017<br>16:04:17 |
| Multiview         Spectrum         v           Ref Level 35.00 dBm         Offset         8.00 dB * RBW 100 kHz         200 dBm         2015k M33           1 Occupied Examination         14.84 µs (x46.9 ms) * VBW 300 kHz         Mode Auto PFT         215k M33           10 dBm         1.90524 H00 GHz         01[1]         7.81 dBm         0.52 dB           20 dBm         H1 18.930 dBm         1.90524 H00 GHz         0.52 dB         0.52 dB           10 dBm         4.695200 MHz         31         1.90524 H00 GHz         0.52 dB           10 dBm         4.695200 MHz         31         1.90524 GHz         0.52 dB           10 dBm         4.69520 MHz         31         1.90524 GHz         1.90524 GHz           -00 dBm         -0.00 HHz         Span 10.0 MHz         Span 10.0 MHz           20 dBm         1.9076 GHz         1001 pts         1.0 MHz/         Span 10.0 MHz         Span 10.0 MHz         2100 dBm         -7.81 dBm <t< td=""><td>Date: 27.JUL.201</td><td>17 16:04:17</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>  | Date: 27.JUL.201    | 17 16:04:17                 |                           |  |   |          |          |                  |            |                        |
| Ref Level 35.0 dBm         Offset         8.00 dB * RBW 100 kHz           10 Occupied BandWidth         41.84 µs (~6.9 ms) * VBW 300 kHz         10 million 7.81 dBm           20 dBm         0111         -7.81 dBm         0111           20 dBm         0111         -0.52 dB         -0.52 dB           20 dBm         10 dBm         0111         -0.52 dB           20 dBm         11 dBm         -0.52 dB         -0.52 dB           20 dBm         12 dBm         -0.52 dB         -0.52 dB           20 dBm         -0.52 dB         -7.81 dBm         -0.52 dB           20 dBm         -0.52 dB         -7.61 dBm         -0.52 dB           20 dBm         -0.52 dB         -0.52 dB         -7.95 dBm  |                     |                             |                           |  | Chann                                   | el 9400  |          |                  |            |                        |
| I Occupied Bandwidth         I Decupied Bandwidth         I Decupie  |                     |                             |                           |  |   |          |          |                  |            |                        |
| 30 dBm         M1[1]         -7.81 dBm           20 dBm         H1         18.930 dBm         0.52 dB           20 dBm         10 dBm         10.52 dB         4.69500 MHz           10 dBm         1         1         4.6950 MHz         4.6950 MHz           0 dBm         1         1         1         1         1           10 dBm         1         1         1         1         1         1           10 dBm         1         1         1         1         1         1         1           10 dBm         1         1         1         1         1         1         1           20 dBm         1  | RefLevel 35<br>Att  | 5.00 dBm Offse<br>28 dB SWT | t 8.0<br>41.84 µs (~6.9   | 00 dB • RBW 10<br>9 ms) • VBW 30               | 10 kHz<br>10 kHz Mode A                 | Nuto FFT |          |                  |            | 1 Die Martin           |
| 20.dbm         0.52.db         0.1[1]         4.69500 Mtz           10.dbm         10.dbm         1         4.69500 Mtz         4.69500 Mtz           0.dbm         1         1         1         1         1         1           10.dbm         1         1         1         1         1         1         1           10.dbm         1         1         1         1         1         1         1           10.dbm         1         1         1         1         1         1         1           20.dbm         1 <td></td> <td>anawiaun</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>M1[1]</td> <td>-7.81 dBm</td>   |                     | anawiaun                    |                           |  |   |          |          |                  | M1[1]      | -7.81 dBm              |
| 10 dBm     10 dBm <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.52 dB</td>  |                     |                             |                           |  |   |          |          |                  |            | 0.52 dB                |
| o den   |                     | -+H1 18.930 dBm             | т                         | ·  |   | L        | mon .    | 2                |            |                        |
| H2         H2<  | 10 dBm              |                             | 1 1                       |  |   |          |          |                  |            |                        |
| 10 dbm     -0 dbm       -20 dbm     -0       -30 dbm     -0       -40 dbm     -0       -50 dbm     -0       -60 dbm     -0       -60 dbm     -0       -60 dbm     -0       -7.81 dbm     -0       T1     1       1.905521 GHz     -7.81 dbm       T1     1       1.905521 GHz     9.60 dbm       D1     M1       1     4.695 MHz       0.52 db  | 0 dBm               |                             |                           |  |   |          |          | <u>\</u> .       |            |                        |
| -30 dBm     -30 dBm     -40 dBm   | -10 dBm             | H2 -7.070                   | dBm                       |  |   |          |          |                  |            |                        |
| 40 dbm     -40 dbm     -  | -20 dBm             | fun                         | $\sim$                    |  |   |          |          |                  | -          |                        |
| 40 dbm     -40 dbm  | -30 dAm             |                             |                           |  |   |          |          |                  | _ ~~~      | $\sim \sim$            |
| -50 dBm<br>-60 dBm<br>-60 dBm<br>-60 dBm<br>-60 dBm<br>-750 dBm<br>-750 dBm<br>-77,81 dBm<br>-77,97,2017<br>-77,2017<br>-77,2017<br>-77,2017<br>-77,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,97,2017<br>-77,9  |                     |                             |                           |  |   |          |          |                  |            |                        |
| 40 dbm         CF 1.007 GHz         1001 pts         1.0 MHz/         Span 10.0 MHz           Z Marker Table         2 Marker Table         Function         Function Result           M1         1         1.9055244 GHz         -7.81 dBm         Function         Function Result           T1         1         1.9055321 GHz         10.12 dBm         Occ Bw         4.095904096 MHz           T2         1         1.90563 GHz         9.60 dBm         Occ Bw         4.095904096 MHz           D1         M1         1         4.695 MHz         0.52 dB         7.81 dBm  |                     |                             |                           |  |   |          |          |                  |            |                        |
| CF 1.9076 GHz         1001 pts         1.0 MHz/         Span 10.0 MHz           2 Marker Table         Y-Value         Y-Value         Function         Function Result           M1         1         1.9055244 GHz         -7.81 dBm         Function         Function Result           T1         1         1.9055321 GHz         10.12 dBm         Occ Bw         4.0955904096 MHz           T2         1         1.90628 GHz         9.60 dBm         Occ Bw         4.0955904096 MHz           D1         M1         1         4.695 MHz         0.52 dB         9.60 dBm         6.52 dB   | -50 dBm             |                             |                           |  |   |          |          |                  |            |                        |
| 2 Marker Table         Y-Value         Y-Value         Function         Function Result           MI         1         1.905524 GHz         -7.81 dBm         -7.81 dBm         -7.81 dBm           T1         1         1.9055231 GHz         10.12 dBm         Occ Bw         4.095904096 MHz           T2         1         1.905528 GHz         9.60 dBm         Occ Bw         4.095904096 MHz           D1         M1         1         4.695 MHz         0.52 dB         Measuring         10100 Mm and  |                     |                             |                           |  |   |          |          |                  |            |                        |
| Type         Ref         Trc         X-Value         Y-Value         Function         Function Result           M1         1         1.905244 GHz         -7.81 dBm         Occ Bw         4.095904096 MHz           T1         1         1.905528 GHz         10.12 dBm         Occ Bw         4.095904096 MHz           D1         M1         1         4.695 MHz         0.52 dB         9.60 dBm           D1         M1         1         4.695 MHz         0.52 dB         9.60 dBm   | 2 Marker Tab        | le                          |                           | 1001 pt  | S                                       | 1        | .0 MHz/  |                  | :          | Span 10.0 MHz          |
| T1     1     1.9055321 GHz     10.12 dBm     Occ Bw     4.095904096 MHz       T2     1     1.909538 GHz     9.60 dBm     D1       D1     M1     1     4.695 MHz     0.52 dB   | Type Re<br>M1       | f Trc                       | 1.905244 G                | Hz   | -7.81 dBm                               |          | Function |                  |            |                        |
| Measuring 127.07.2017   | T1<br>T2            | 1                           | 1.9055321 (<br>1.909628 ( | GHz<br>GHz                                     | 10.12 dBm<br>9.60 dBm                   | Occ Bw   |          |                  | 4.09590409 | 96 MHz                 |
|   | D1 M1               | 1                           | 4.695 M                   | πZ   | 0.52 dB                                 |          |          | Measuring        |            | 27.07.2017             |
|   | Date: 27.JUL 201    | 7 16:05:46                  |                           |  |   |          |          |                  |            | 10:00:46               |
| Channel 9538  |                     |                             |                           |  | Chann                                   | 0520     |          |                  |            |                        |

| Multivian  | 🖽 Spectrum   |  |                                       | WCDMA                                   | 1 Danu    | V  |              |  | ⊽  |
|--|--|--|---------------------------------------|---|-----------|--|--------------|--|--|
| MultiView<br>Ref Level 35  | 5.00 dBm Offse<br>28 dB SWT  |  | 0 dB = RBW 10                         | 00 kHz                                  |           |  |              |  | Ľ  |
| Att<br>1 Occupied Ba   | 28 dB SWT<br>andwidth  | 41.84 µs (~6.9   | 9 ms) <b>= VBW</b> 30                 | 00 kHz Mode A                           | Nuto FFT  |  |              |  | • 1Pk Max  |
| 30 dBm   |  |  |                                       |   |           |  |              |  | -7.35 dBm<br>824.06700 MHz   |
| 20.dBm   | H1 19.230 dBm  |  |                                       | 0                                       | 0 (22.4   |  |              | D1[1]                                  | 1.54 dB<br>4.66000 MHz   |
| 10 dBm   |  | Ţ  | · ·····                               |   |           | and the second s | 12           |  |  |
|  |  | /  |                                       |   |           |  | $\backslash$ |  |  |
| 0 dBm  | H2 -6.770  | dBm M  |                                       |   |           |  | dı           |  |  |
| -10 dBm  | 12 0.770   |  |                                       |   |           |  |              |  |  |
| -20 dBm  |  |  |                                       |   |           |  | - man        | ~~~ ·                                  | <b></b>  |
| -30 dBm  |  |  |                                       |   |           |  |              | · · · · ·                              | $\sim\sim\sim$   |
| -40 dBm  |  |  |                                       |   |           |  |              |  |  |
|  |  |  |                                       |   |           |  |              |  |  |
| -50 dBm  |  |  |                                       |   |           |  |              |  |  |
| -60 dBm  |  |  |                                       |   |           |  |              |  |  |
| CF 826.4 MHz<br>2 Marker Tab   | le   |  | 1001 pt                               |   | 1         | .0 MHz/  |              |  | Span 10.0 MHz  |
| Type Re  | ef   Trc   | X-Value<br>824.067 M   | Hz                                    | Y-Value<br>-7.35 dBm                    | 0         | Function   |              | Function R                             |  |
| T1<br>T2<br>D1 M1  | 1  | 824.36204 1<br>828.44795 1<br><b>4.66 M</b>  | MHZ<br>MHZ                            | 10.00 dBm<br>9.71 dBm<br><b>1.54 dB</b> | Occ Bw    |  |              | 4.08591408                             | o Mriz   |
|  |  | 00 M   |                                       | 1.34 UD                                 |           |  | Measuring    |  | 27.07.2017<br>16:09:56   |
| Date: 27.JUL.20  | 17 16:09:56  |  |                                       |   |           |  |              |  |  |
|  |  |  |                                       | Chann                                   | el 4132   |  |              |  |  |
| MultiView  | 🖽 Spectrum   |  |                                       | Unann                                   | CI 7 I JZ |  |              |  | ▽  |
|  | 5.00 dBm Offse   | t 8.0  | 00 dB = RBW 10                        | 00 kHz<br>00 kHz Mode A                 | uto FFT   |  |              |  |  |
| 1 Occupied Ba  | andwidth   | 41.04 µS (~6.5   | / ms/ = visvv 30                      | JOINIZ MODE A                           | water 111 |  |              | M1[1]                                  | ●1Pk Max<br>-5.83 dBm  |
| 30 dBm   |  |  |                                       |   |           |  |              | D1[1]                                  | 834.26400 MHz<br>0.12 dB   |
| 20 dBm-  | H1 19.660 dBm  |  |                                       |   | f         |  |              |  | 4.66000 MHz  |
| 10 dBm   |  |  |                                       |   |           | ~  | 2            |  |  |
| 0 dBm  |  | - /  |                                       |   |           |  |              |  |  |
| -10 dBm  | H2 -6.340  | dBm M  |                                       |   |           |  | dı<br>T      |  |  |
|  |  | ~~~  |                                       |   |           |  | L.           |  |  |
| -20 dBm  |  | rv –   |                                       |   |           |  |              | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | m  |
| -30 dBm  |  |  |                                       |   |           |  |              |  |  |
| -40 dBm  |  |  |                                       |   |           |  |              |  |  |
| -50 dBm  |  |  |                                       |   |           |  |              |  |  |
| -60 dBm  |  |  |                                       |   |           |  |              |  |  |
| CF 836.6 MHz   | 2  |  | 1001 pt                               | :s                                      | 1         | .0 MHz/  |              | :                                      | Span 10.0 MHz  |
| 2 Marker Tab<br>Type   Re  |  | X-Value<br>834.264 M   |                                       | Y-Value<br>-5.83 dBm                    |           | Function   |              | Function R                             | esult  |
| M1<br>T1   | 1  | 834.264 M<br>834.55205 (   | IHZ<br>MHz                            | 10.38 dBm                               | Occ Bw    |  |              | 4.08591408                             | 6 MHz  |
| T2<br>D1 M1  |  | 834.55205 1<br>838.63796 1<br><b>4.66 M</b>  | Hz                                    | 10.40 dBm<br>0.12 dB                    |           |  | ,            |  | 27.07.2017   |
|  | Л  |  |                                       |   |           |  | Measuring    |  | 16:13:04   |
| Date: 27.JUL.20  | 17 10:13:04  |  |                                       | <u> </u>                                |           |  |              |  |  |
| <u></u>  |  |  |                                       | Chann                                   | el 4183   |  |              |  |  |
|  |  |  | 0 dB • RBW 10                         | 00 kHz                                  |           |  |              |  | ▽  |
| MultiView<br>Ref Level 35  | 5.00 dBm Offse   | .e 0.0   | 9 ms) 🖷 VBW 30                        | 00 kHz Mode A                           | uto FFT   |  |              |  | • 1Pk Max  |
|  | 5.00 dBm Offse<br>28 dB SWT<br>andwidth  | 41.84 µs (~6.9   |                                       |   |           |  |              | 10000                                  | -6.31 dBm  |
| Ref Level 35<br>Att  | 5.00 dBm Offse<br>28 dB SWT<br>andwidth  | 41.84 µs (~6.9   |                                       |   |           |  |              |  | 844.25600 MHz  |
| Ref Level 35<br>Att<br>1 Occupied Ba   | 5.00 dBm Offse<br>28 dB SWT<br>andwidth<br>H1 19.700 dBm   | 41.84 µs (~6.9   |                                       |   |           |  |              | M1[1]                                  | 844.25600 MHz<br>0.29 dB<br>4.68200 MHz                            |
| Ref Level 35<br>Att<br>1 Occupied Ba<br>30 dBm<br>-20-dBm  | andwidth   | 41.84 µs (~6.9   |                                       |   |           | ······································   | 2<br>V       |  | 844.25600 MHz<br>0.29 dB   |
| Ref Level 35<br>Att<br>1 Occupied Ba<br>30 dBm<br>-20-dBm<br>10 dBm  | andwidth   | 41.84 µs (~6.9   |                                       |   |           |  | 2            |  | 844.25600 MHz<br>0.29 dB   |
| Ref Level 35<br>Att<br>1 Occupied Ba<br>30 dBm<br>-20-dBm  | H1 19.700 dBm-   | T  | · · · · · · · · · · · · · · · · · · · |   |           |  | 2<br>2<br>9  |  | 844.25600 MHz<br>0.29 dB   |
| Ref Level 35<br>Att<br>1 Occupied Ba<br>30 dBm<br>-20-dBm<br>10 dBm  | andwidth   | T  |                                       |   |           |  | 12<br>41     |  | 844.25600 MHz<br>0.29 dB   |
| Ref Level         35           Att         1         Occupied Baa           30 dBm   | H1 19.700 dBm-   | T  |                                       |   |           |  |              |  | 844.25600 MHz<br>0.29 dB   |
| Ref Level 33           Att           T Occupied B:           30 dBm           -89-dBm           10 dBm           0 dBm   | H1 19.700 dBm-   | T  |                                       |   |           |  | 22<br>41     |  | 844.25600 MHz<br>0.29 dB   |
| Aft Level 32           Att           10 Occupied Bit           30 dBm           -20 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm  | H1 19.700 dBm-   | T  |                                       |   |           |  |              |  | 844.25600 MHz<br>0.29 dB   |
| Ref Level 35           Att           TOCCUPIED B3           30 dBm           -80-dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm  | H1 19.700 dBm-   | T  |                                       |   |           |  |              |  | 844.25600 MHz<br>0.29 dB   |
| Aft Level 32           Att           10 Occupied Bit           30 dBm           -20 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm  | H1 19.700 dBm-   | T  |                                       |   |           |  | 41<br>22     |  | 844.25600 MHz<br>0.29 dB   |
| Ref Level 35           Att           1 Occupied B:           30 dBm           -80-dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -50 dBm           -50 dBm   | H1 19.700 dBm  | T  |                                       |   |           |  | d1           | D1[1]                                  | 844.25600 MHz<br>0.29 dB<br>4.68200 MHz                            |
| Ref Level 33           • Att           1 Occupied Bt           30 dBm           -80 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -30 dBm           -50 dBm           -60 dBm           -27 dBm           -28 dBm           -20 dBm           -30 dBm           -30 dBm           -40 dBm           -50 dBm           -28 dBm           -29 dBm   | H1 19.700 dBm<br>H2 -6.300<br>H2 -6.300  | dem Market   | 1001 pt                               | S                                       |           | .0 MHz/  | d1           | D1[1]                                  | 844.25600 MHz<br>0.29 dB<br>4.68200 MHz                            |
| Ref Level 33           • Att           1 Occupied Bt           30 dBm           -0 dBm           10 dBm           0 dBm           -10 dBm           -30 dBm           -30 dBm           -30 dBm           -20 dBm           -30 dBm           -30 dBm           -40 dBm           -50 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -70 dBm           -80 dBm           -90 dBm  | H1 19.700 dBm<br>H2 -6.300<br>H2 -6.300  | dem Market State S | 1001 pt                               | S<br>V-Value<br>-6.31 dBm               |           |  |              | D1[1]                                  | 844.25600 MHz<br>0.29 dB<br>4.68200 MHz<br>5pan 10.0 MHz<br>essult |
| Ref Level 33           • Att           1 Occupied Bt           30 dBm           -80 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -50 dBm           -50 dBm           -60 dBm           -20 dBm           -20 dBm           -30 dBm           -30 dBm           -10 dBm           -20 dBm           -20 dBm           -20 dBm           -10 dBm           -20 dBm | H1 19.700 dBm<br>H2 -6.300<br>H2 -6.300<br>H2 -6.300<br>H2 -6.300<br>H2 -6.300<br>H2 -1.30<br>H2 -1. | Lem 14<br>K-Value<br>844.5256 M<br>844.54266<br>844.54266  | 1001 pt                               | S<br>V-Value<br>                        |           |  |              | D1[1]                                  | 844.25600 MHz<br>0.29 dB<br>4.68200 MHz<br>5pan 10.0 MHz<br>essult |
| Ref Level 33           Att           TOCCUPIEd B:           30 dBm           -80-dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -40 dBm           -50 dBm           -50 dBm           -60 dBm           -50 dBm           -50 dBm           -50 dBm           -50 dBm           -50 dBm           -50 dBm           -10 dBm  | H1 19.700 dBm<br>H2 -6.300<br>H2 -6.300<br>H2 -6.300<br>H2 -6.300<br>H2 -6.300<br>H2 -1.30<br>H2 -1. | dem Marco Ma | 1001 pt                               | S<br>V-Value<br>-6.31 dBm               |           |  |              | D1[1]                                  | 944.25600 MHz<br>0.29 dB<br>4.68200 MHz                            |

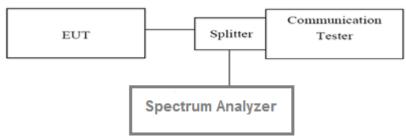
# 5.3. Conducted Spurious Emissions

### LIMIT

Part 24.238 and Part 22.917 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

### TEST CONFIGURATION



## TEST PROCEDURE

- 1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
- 2. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficientscans were taken to show the out of band Emissions if any up to 10th harmonic.
- 3. For the out of band: Set the RBW= 1MHz, VBW = 3MHz, Start=30MHz, Stop= 10th harmonic.

### TEST MODE:

Please refer to the clause 3.3

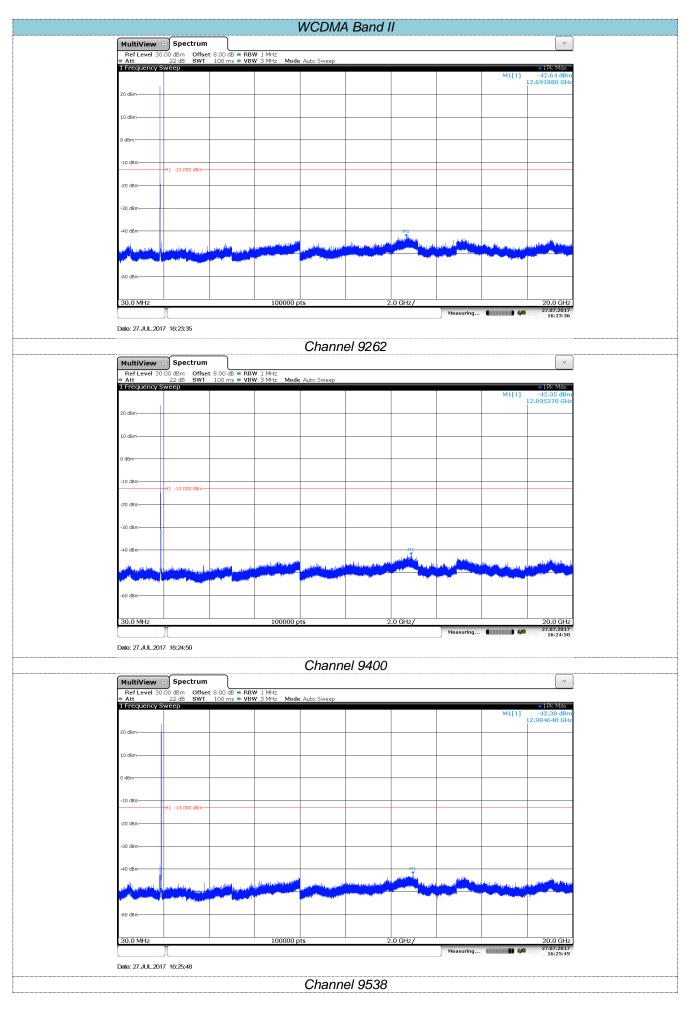
### TEST RESULTS

# ☑ Passed □ Not Applicable

Note:Worst case at GSM850/PCS1900/WCDMA B2/B5

|                 |                 |                       |   |   |  | GSN   | 1850  |  |   |                                |  |
|-----------------|-----------------|-----------------------|---|---|--|---|---|--|---|--------------------------------|--|
|                 |                 |                       | B Spectrum                                |   |  |   |   |  |   |                                | ▼  |
| Ref L<br>Att    | Leve            | I 35.                 | .00 dBm Offset<br>28 dB SWT               | t 8.00 dB • RBV<br>100 ms • VBV   | VIMHz<br>VIMHz Mode  | e Auto Sweep  |   |  |   |                                | o 1Dk Mov  |
| 30 dBm-         |                 | cy 3                  | weep                                      |   |  |   |   |  |   | M1[1]                          | <ul> <li>1Pk Max</li> <li>-33.38 dBm</li> <li>1.648560 GHz</li> </ul>  |
| 00 00M          |                 |                       |   |   |  |   |   |  |   |                                |  |
| 20 dBm-         | -               |                       |   |   |  |   |   |  |   |                                |  |
| 10 dBm-         |                 |                       |   |   |  |   |   |  |   |                                |  |
|                 |                 |                       |   |   |  |   |   |  |   |                                |  |
| 0 dBm—          |                 |                       |   |   |  |   |   |  |   |                                |  |
| -10 dBm         | -               |                       |   |   |  |   |   |  |   |                                |  |
|                 |                 |                       | H1 -13.000 dBm                            |   |  |   |   |  |   |                                |  |
| -20 dBm         |                 |                       |   |   |  |   |   |  |   |                                |  |
| -30 dBm         | -               |                       | M1  |   |  |   |   |  |   |                                |  |
| -40 dBm         | ,               |                       |   |   |  |   | a status - ta t   |  |   |                                | والموالعية الرور المحرار   |
|                 |                 | aliya ya<br>Mana ya   | dated apple and provided                  | allulu and analysis   | and the second | and the second se | Algene Ashib <sup>ar</sup> Presses al Ash<br>Bashiman an Albert | and a second   | aladial Specification<br>Provide Construction | and along your features with   |  |
| -50 dBm         |                 |                       |   | a fillion and a shift of the state of the   |  |   |   |  |   |                                |  |
| -60 dBm         |                 |                       |   |   |  |   |   |  |   |                                |  |
| 30.0 N          | MHz             |                       |   |   | 100000 p   | ots   | 1   | 27 GHz/  |   |                                | 12.75 GHz  |
|                 |                 |                       | Л   |   |  |   |   |  | Measuring                                     | (                              | 27.07.2017<br>15:11:55   |
| Date: 27        | 7.JUL           | .201                  | 7 15:11:55                                |   |  | _   |   |  |   |                                |  |
|                 |                 |                       |   |   |  | Chanr   | nel 128   |  |   |                                |  |
| Multi           |                 |                       |   |   | 42 4 NALI-   |   |   |  |   |                                | ~  |
| ● Att<br>1 Freq | iuen            | cv S                  | .00 dBm Offset<br>28 dB SWT<br>weep       | 100 ms • VBV  | VIMHZ<br>VIMHZ Mode  | e Auto Sweep  |   |  |   |                                | ●1Pk Max   |
| 30 dBm-         | 1               |                       |   |   |  |   |   |  |   | M1[1]                          | -32.53 dBm<br>1.673230 GHz   |
|                 |                 |                       |   |   |  |   |   |  |   |                                |  |
| 20 dBm-         |                 |                       |   |   |  |   |   |  |   |                                |  |
| 10 dBm-         |                 |                       |   |   |  |   |   |  |   |                                |  |
|                 |                 |                       |   |   |  |   |   |  |   |                                |  |
| 0 dBm—          |                 |                       |   |   |  |   |   |  |   |                                |  |
| -10 dBm         |                 |                       | H1 -13.000 dBm                            |   |  |   |   |  |   |                                |  |
| -20 dBm         |                 |                       | 111 -13,000 0011                          |   |  |   |   |  |   |                                |  |
|                 |                 |                       |   |   |  |   |   |  |   |                                |  |
| -30 dBm         |                 |                       | Ma<br>▼                                   |   |  |   |   |  |   |                                |  |
| -40 dBm         |                 |                       |   |   |  |   | r de la constala constal se si                                  | and the second s |   | and the second second          | and the second   |
|                 | Higher<br>South | ruther<br>Annan       | and a subsection of all                   | Andred Block Hardson  | All and a set of a s   | المحمد والله والما والي الم   |   |  | allowed a few and reliefs                     | International Antiperson and a | And the state of t |
| -50 dBm         |                 |                       |   |   |  |   |   |  |   |                                |  |
| -60 dBm         |                 |                       |   |   |  |   |   |  |   |                                |  |
| 30.0 N          | MHz             |                       | I<br>W                                    |   | 100000 p   | ots   | 1   | 27 GHz/  |   |                                | 12.75 GHz<br>27.07.2017  |
|                 | , <b></b>       | ~~··                  | ــــــــــــــــــــــــــــــــــــ      |   |  |   |   |  | Measuring                                     | <b></b>                        | 15:12:34   |
| Date: 27        | r.JUL           | .201                  | 7 15:12:33                                |   |  | ~   | 1.100   |  |   |                                |  |
|                 |                 |                       |   |   |  | Chann   | nel 190   |  |   |                                |  |
|                 |                 |                       | B Spectrum<br>.00 dBm Offset<br>28 dB SWT | t 8.00 dB = RB1   | V 1 MHz  |   |   |  |   |                                | ~  |
| • Att<br>1 Freq | luen            | cy S                  | 28 dB SWT<br>weep                         | 100 ms 🖷 VBV  | VI3MHz Mode  | e Auto Sweep  |   |  | 1   | N41 E + 7                      | • 1Pk Max  |
| 30 dBm-         | -               |                       |   |   |  |   |   |  |   | M1[1]                          | -30.63 dBm<br>1.697400 GHz   |
| 20 dBm-         |                 |                       |   |   |  |   |   |  |   |                                |  |
| LO UBIT         |                 |                       |   |   |  |   |   |  |   |                                |  |
| 10 dBm-         | +               |                       |   |   |  |   |   |  |   |                                |  |
| 0 dBm—          |                 |                       |   |   |  |   |   |  |   |                                |  |
|                 |                 |                       |   |   |  |   |   |  |   |                                |  |
| -10 dBm         |                 |                       | H1 -13.000 dBm                            |   |  |   |   |  |   |                                |  |
| -20 dBm         | -               |                       |   |   |  |   |   |  |   |                                |  |
|                 |                 |                       | M1  |   |  |   |   |  |   |                                |  |
| -30 dBm         | +               |                       | Ī   |   |  |   |   |  |   |                                |  |
| -40 dBm         | +               | ala z                 | daha ta t                                 | e dans  |  | ىلىلەر يەرىپىدىن  | healthing Halling and the                                       |  | والمتعادية والمراجعة والمتعاد                 | and the second second          | A second se  |
| -50 dBm         |                 | rti), Jér<br>Piperter |   | Contraction of the second s |  |   | un anticipa con l'étres constants                               |  |   |                                |  |
| -ou dBm         |                 |                       |   |   |  |   |   |  |   |                                |  |
| -60 dBm         |                 |                       |   |   |  |   |   |  |   |                                |  |
| 30.0 N          | MHz             |                       | Y   |   | 100000 p   | ots   | 1   | .27 GHz/   | Maacusing                                     |                                | 12.75 GHz<br>27.07.2017<br>15:13:19  |
| Date: 27        | 7,111           | .201                  | 7 15:13:19                                |   |  |   |   |  | eusuning                                      |                                | 15:13:19   |
| 5405 21         |                 |                       |   |   |  | Chann   | 01251   |  |   |                                |  |
|                 |                 |                       |   |   |  | Unaril  | 101 201   |  |   |                                |  |

|   |                                    |  |  |  | PCS   | 1900   |   |                      |   |  |
|---|------------------------------------|--|--|--|---|--|---|----------------------|---|--|
| м   |                                    | Spectrum   |  |  |   |  |   |                      |   | ▼  |
| • /   | Ref Level 33<br>Att<br>Frequency S | .00 dBm Offset<br>25 dB SWT  | : 8.00 dB • RBV<br>100 ms • VBV  | VIMHz<br>VIMHz Mode  | Auto Sweep  |  |   |                      |   | ●1Pk Max   |
|   | ) dBm                              |  |  |  |   |  |   |                      | M1[1]   | -39.25 dBm<br>14.925120 GHz  |
| 20  | ) dBm                              |  |  |  |   |  |   |                      |   |  |
|   |                                    |  |  |  |   |  |   |                      |   |  |
| 10  | ) dBm                              |  |  |  |   |  |   |                      |   |  |
| 0 0   | dBm                                |  |  |  |   |  |   |                      |   |  |
| -10   | 0 dBm                              | H1 -13.000 dBm   |  |  |   |  |   |                      |   |  |
| -20   | 0 dBm                              | HI -13.000 dBm   |  |  |   |  |   |                      |   |  |
|   |                                    |  |  |  |   |  |   |                      |   |  |
| -30   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
| -40   | 0 dBm                              |  |  | المراجع ومنطقين معادلينا في  | li aldar na a cardad  | م<br>منابع معلى الأخذين المحافظ  | A CONTRACTOR OF STREET                      | M1<br>14 Jun Jun     | the straight and the states   | and the second secon  |
|   | i contration                       |  |  | and the party of the    |   | and the second | r in the second                             | Concert March Street |   | And the second sec   |
| -60   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
|   | 0.0 MHz                            |  |  | 100000 p   | te  |  | .0 GHz/                                     |                      |   | 20.0 GHz   |
|   | 0.0 Minz                           | )[]  |  | 100000 p   |   | 2  | 10 GH27                                     | Measuring            | 40  | 07.07.0047   |
| Dat   | te: 27.JUL.201                     | 7 15:07:51   |  |  |   |  |   |                      |   |  |
| _   |                                    |  |  |  | Chanr   | nel 512  |   |                      |   |  |
|   | IultiView                          |  | : 8,00 dB • RBV  | V 1 MHz  |   |  |   |                      |   | ▽  |
| 11  | Frequency S                        | .00 dBm Offset<br>25 dB SWT<br>weep  | 100 ms 🖷 VBV   | VI3MHz Mode  | e Auto Sweep  |  |   |                      | M1[1]   | <ul> <li>1Pk Max</li> <li>-39.30 dBm</li> </ul>  |
| 30  | ) dBm                              |  |  |  |   |  |   |                      | milil   | 15.176750 GHz  |
| 20  | ) dBm                              |  |  |  |   |  |   |                      |   |  |
| 10  | ) dBm                              |  |  |  |   |  |   |                      |   |  |
| 0.0   | dBm                                |  |  |  |   |  |   |                      |   |  |
|   |                                    |  |  |  |   |  |   |                      |   |  |
| -10   | 0 dBm                              | H1 -13.000 dBm   |  |  |   |  |   |                      |   |  |
| -20   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
| -30   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
| -40   | 0 dBm                              |  |  |  |   |  |   | M1                   |   | t de   |
| ut the second | all and a start and                | and the state of t | a la distriction de la companya de l<br>La companya de la comp  | الم<br>المحمد المحمد ال | ad a dela seconda e a de  | المراجع المراجع المراجع المراجع المراجع .<br>المراجع المراجع المراجع المراجع المراجع المراجع .                   |   |                      | the state of the state  | and the second states of the s |
| , ot  | O dension and the second           | and the second   | AND  |  |   |  |   |                      |   |  |
| -60   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
| 30  | 0.0 MHz                            | r  |  | 100000 p   | ts  | 2  | .0 GHz/                                     | Measuring            |   | 20.0 GHz<br>27.07.2017   |
| Dat   | te: 27.JUL.201                     | 7 15:09:35   |  |  |   |  |   |                      |   | 15:09:35   |
|   |                                    |  |  |  | Chanr   | nel 661  |   |                      |   |  |
| м   | 1ultiView                          | Spectrum   |  |  |   |  |   |                      |   |  |
| •   | Ref Level 33<br>Att<br>Frequency S | .00 dBm Offset<br>25 dB SWT  | 8.00 dB • RBV<br>100 ms • VBV  | VIMHz<br>VIMHz Mode  | e Auto Sweep  |  |   |                      |   | ●1Pk Max   |
|   | ) dBm                              |  |  |  |   |  |   |                      | M1[1]   | -38.70 dBm<br>12.748790 GHz  |
| 20  | ) dBm                              |  |  |  |   |  |   |                      |   |  |
| 10  | ) dBm                              |  |  |  |   |  |   |                      |   |  |
|   |                                    |  |  |  |   |  |   |                      |   |  |
| 0 0   | dBm                                |  |  |  |   |  |   |                      |   |  |
| -10   | 0 dBm                              | -H1 -13.000 dBm  |  |  |   |  |   |                      |   |  |
| -20   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
|   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
|   |                                    |  |  |  |   |  | M1  |                      |   |  |
| -40<br>1  | O dBm                              | -  | مىرى ر <mark>تىلى</mark> دى .  | boulding disconting  | ر<br>الطوير بيرار ( ( ( الطلق المرير )  | والالار والعارين وماحد   |   |                      | a hara | a seine auf a state and a state and a  |
|   | d'as                               |  | and all of the second s | and the second secon    | and a state of the second s | a billion and a strength of the state  | n na sa |                      | and the street of the second second   | and the second   |
| -60   | 0 dBm                              |  |  |  |   |  |   |                      |   |  |
| 30  | 0.0 MHz                            |  |  | 100000 p   | ts  | 2  | .0 GHz/                                     |                      |   | 20.0 GHz   |
|   |                                    | ][   |  |  |   |  |   | Measuring            | () 40   | 27.07.2017<br>15:10:19   |
| Dat   | te: 27.JUL.201                     | 7 15:10:19   |  |  | 0   | -1010  |   |                      |   |  |
|   |                                    |  |  |  | Chann   | nel 810  |   |                      |   |  |



|  |                  |  |   |  | NCDMA   | A Band N  | /   |  |   |  |
|--|------------------|--|---|--|---|---|---|--|---|--|
| MultiV<br>Ref Le                             |                  | Spectrum     Spectrum     Offset     22 dB SWT | : 8.00 dB • RBV   | V 1 MHz  |   |   |   |  |   |  |
| <ul> <li>Att</li> <li>Frequencies</li> </ul> | ency S           | Sweep  | 100 ms 🖶 VBV  | V 3 MHz Mode   | Auto Sweep  |   |   |  | M1[1]   | <ul> <li>1Pk Max</li> <li>-42.36 dBm</li> </ul>  |
| 20 dBm                                       | -                |  |   |  |   |   |   |  |   | 12.685950 GHz  |
| 10 dBm                                       |                  |  |   |  |   |   |   |  |   |  |
| 0 dBm  |                  |  |   |  |   |   |   |  |   |  |
|  |                  |  |   |  |   |   |   |  |   |  |
| -10 dBm                                      | -                | H1 -13.000 dBm                                 |   |  |   |   |   |  |   |  |
| -20 dBm—                                     |                  |  |   |  |   |   |   |  |   |  |
| -30 dBm                                      |                  |  |   |  |   |   |   |  |   |  |
| -40 dBm                                      |                  |  |   |  |   | المراجع   | للغدر   |  |   |  |
|  | a piellas.       | a ulandan ana kadan                            | dawara yaƙalan yaƙa   | alaan ah sa ah s | A STATE AND A S | dentenda parte de la constituição<br>presenta presenta de la constituição<br>presenta presenta de la constituição de la constituição de la constituição | and provident and a state of the second   | <sup>1</sup> NU ang pagtabahan pangkan sa pangkan s   | la Palana ana amin'ny saratra<br>Gelen teny saratra ana amin'ny saratra | hard a standard and a  |
| -60 dBm—                                     |                  |  |   |  |   |   |   |  |   |  |
| 30.0 M                                       | Iz               |  |   | 100000 p   | its   | 1.  | 27 GHz/   |  |   | 12.75 GHz  |
|  |                  | Л  |   |  |   |   |   | Measuring  | · · · · · · · · · · · · · · · · · · ·                                   | 27.07.2017<br>16:26:50   |
| Date: 27.J                                   | UL.201           | 17 16:26:50                                    |   |  | Chann   | el 4132   |   |  |   |  |
| MultiV                                       |                  |  |   |  |   |   |   |  |   |  |
| Ref Le<br>Att Freque                         | vel 30<br>ancv S | 0.00 dBm Offset<br>22 dB SWT                   | 8.00 dB • RBV<br>100 ms • VBV   | VIMHz<br>VI3MHz Mode   | e Auto Sweep  |   |   |  |   | • 1Pk Max  |
|  |                  |  |   |  |   |   |   |  | M1[1]   | -42.22 dBm<br>12.724880 GHz  |
| 20 dBm                                       |                  |  |   |  |   |   |   |  |   |  |
| 10 dBm                                       |                  |  |   |  |   |   |   |  |   |  |
| 0 dBm  |                  |  |   |  |   |   |   |  |   |  |
| -10 dBm                                      |                  | H1 -13.000 dBm-                                |   |  |   |   |   |  |   |  |
| -20 dBm—                                     |                  |  |   |  |   |   |   |  |   |  |
| -30 dBm                                      |                  |  |   |  |   |   |   |  |   |  |
| -40 dBm                                      |                  |  |   |  |   |   |   |  |   |  |
| Reference of the                             | Arte feith       | in the second second second                    | Weberg, Laboratory and  | salardining a sint   | and the states of the states  | lans de cond  |   | the states a state of sort   | Ment Laulen and   | and the second se<br>Second second s |
| -60 dBm—                                     |                  |  | and and all a second |  |   |   |   |  |   |  |
|  |                  |  |   |  |   |   |   |  |   |  |
| 30.0 Mł                                      | lz               | )[]  |   | 100000 p   | ts  | 1.  | 27 GHz/   | Measuring  | () 4 <i>9</i> 0   | 12.75 GHz<br>27.07.2017<br>16:28:11  |
| Date: 27.J                                   | UL.201           | 17 16:28:10                                    |   |  | ~   | .1.1100   |   |  |   |  |
| MultiV                                       | iew              | B Spectrum                                     |   |  | Cnann   | el 4183   |   |  |   | ▽  |
|  | vel 30           | 0.00 dBm Offset<br>22 dB SWT                   | 8.00 dB • RBV<br>100 ms • VBV   | VIMHz<br>VIMHz Mode  | Auto Sweep  |   |   |  |   | •1Pk Max   |
|  |                  |  |   |  |   |   |   |  | M1[1]   | -42.56 dBm<br>12.417440 GHz  |
| 20 dBm                                       |                  |  |   |  |   |   |   |  |   |  |
| 10 dBm                                       |                  |  |   |  |   |   |   |  |   |  |
| 0 dBm  |                  |  |   |  |   |   |   |  |   |  |
| -10 dBm                                      |                  | H1 -13.000 dBm                                 |   |  |   |   |   |  |   |  |
| -20 dBm—                                     |                  |  |   |  |   |   |   |  |   |  |
| -30 dBm                                      |                  |  |   |  |   |   |   |  |   |  |
| -40 dBm                                      |                  |  |   |  |   |   |   |  |   | M1   |
| le altri le                                  | Lid and          | handed application for the                     | Internet description of the second  | distant as a direct,   | alarasi dineri familikana <sup>na</sup>   | والمراجع الماليون والمرجع   | and the second section of the second  | data and half  | diama francis a spaint  | and the second second  |
| -60 dBm—                                     | ethores          | t <sup>allen</sup> ter an one of the other of  |   | and a constitution of the other  | and the other transferred and the second  |   | and produced as the first state of the second | Station and a state of the stat | a a second a second particular  |  |
| -50 aBm                                      |                  |  |   |  |   |   |   |  |   |  |
| 30.0 Mł                                      | lz               |  |   | 100000 p   | ts  | 1.  | 27 GHz/   | Measuring  | () 40   | 12.75 GHz<br>27.07.2017<br>16:29:45  |
| Date: 27.J                                   | UL.201           | 17 16:29:45                                    |   |  |   |   |   |  |   |  |
|  |                  |  |   |  | Chann   | el 4233   |   |  |   |  |

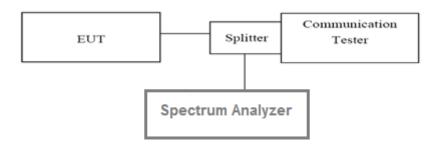
# 5.4. Band Edge

### LIMIT

Part 24.238 and Part 22.917 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P) dB$ .

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

### **TEST CONFIGURATION**



### **TEST PROCEDURE**

- 1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
- 2. For the bandedge: 2G:Set the RBW=3KHz, VBW = 10KHz, Sweep time= Auto

3G: Set the RBW=100KHz, VBW = 300KHz, Sweep time= Auto

### TEST MODE:

Please refer to the clause 3.3

### **TEST RESULTS**

☑ Passed □ Not Applicable

Report No.: TRE1707003001

Page: 28 of 59

|         |           | GSN            | //850       |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | verdict |
| 128     | 824.2     | 824            | -15.24      | -13.00 | Pass    |
| 251     | 848.8     | 849            | -14.28      | -13.00 | Pass    |

|         |           | GPR            | S850        |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | verdict |
| 128     | 824.2     | 824            | -13.82      | -13.00 | Pass    |
| 251     | 848.8     | 849            | -13.80      | -13.00 | Pass    |

|         |           | EGPF           | RS850       |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | Verdici |
| 128     | 824.2     | 824            | -14.80      | -13.00 | Pass    |
| 251     | 848.8     | 849            | -15.70      | -13.00 | Pass    |

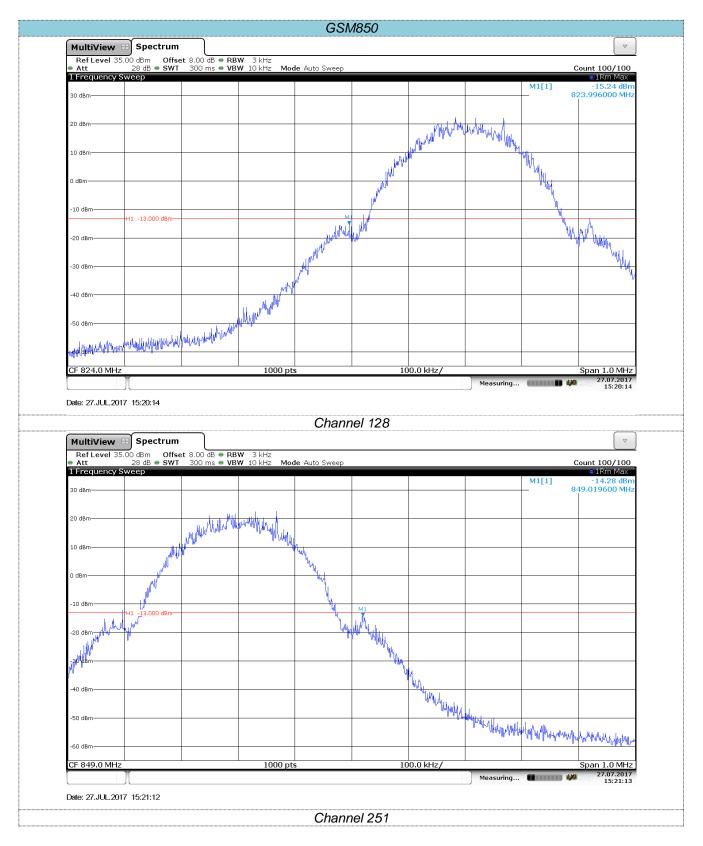
|         |           | PCS            | 1900        |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | verdict |
| 512     | 1850.2    | 1850           | -14.19      | -13.00 | Pass    |
| 810     | 1909.8    | 1910           | -15.80      | -13.00 | Pass    |

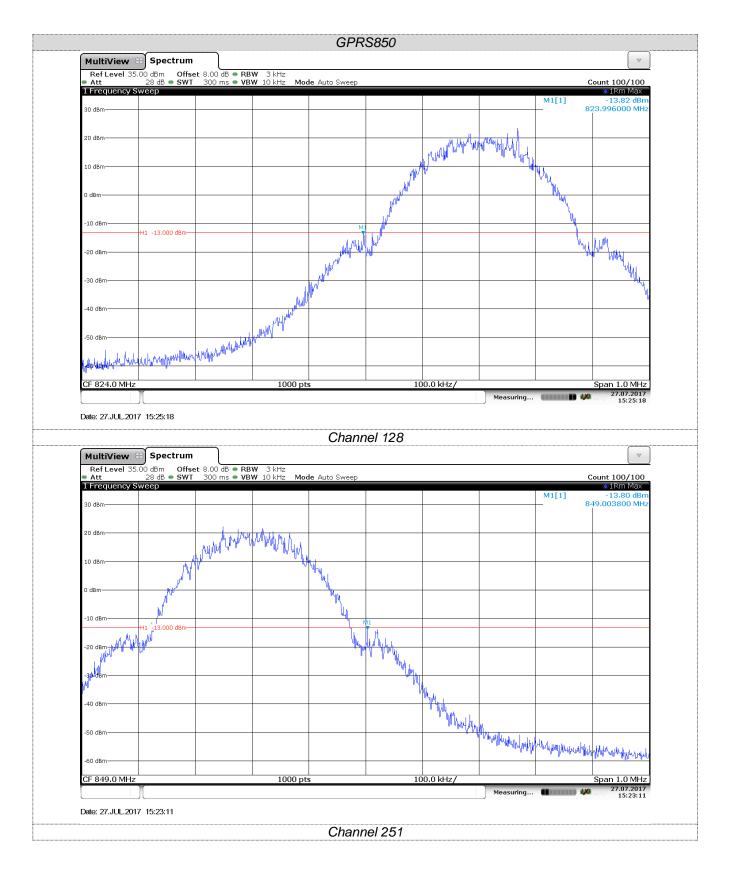
|         |           | GPR            | S1900       |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | verdici |
| 512     | 1850.2    | 1850           | -16.78      | -13.00 | Pass    |
| 810     | 1909.8    | 1910           | -16.33      | -13.00 | Pass    |

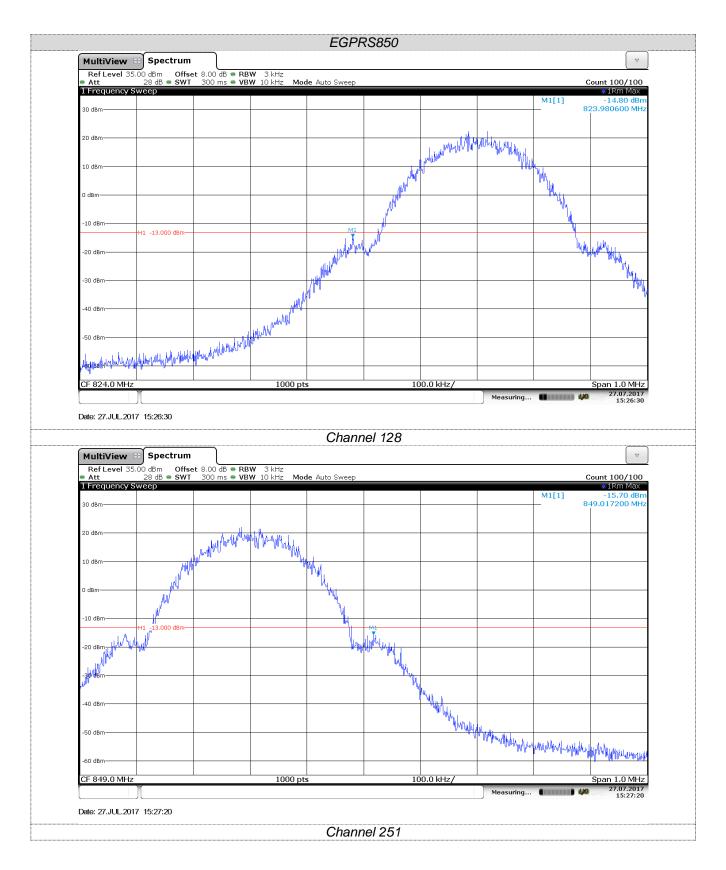
|         |           | EGPR           | S1900       |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | Verdict |
| 512     | 1850.2    | 1850           | -15.79      | -13.00 | Pass    |
| 810     | 1909.8    | 1910           | -15.91      | -13.00 | Pass    |

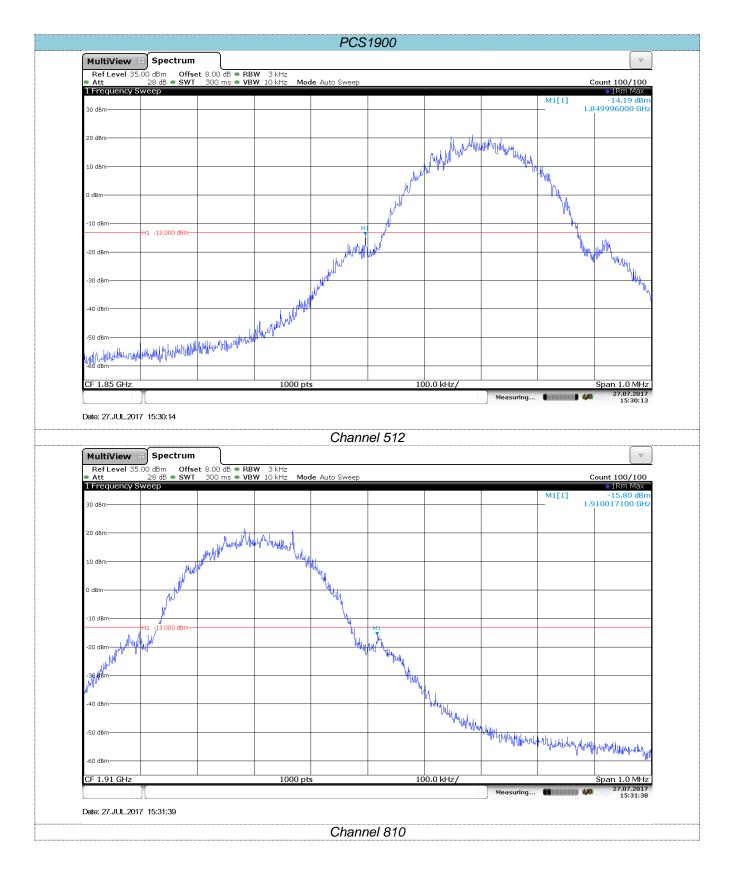
|         |           | WCDMA          | A Band II   |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | verdict |
| 9262    | 1852.4    | 1850           | -20.41      | -13.00 | Pass    |
| 9538    | 1907.6    | 1910           | -21.59      | -13.00 | Pass    |

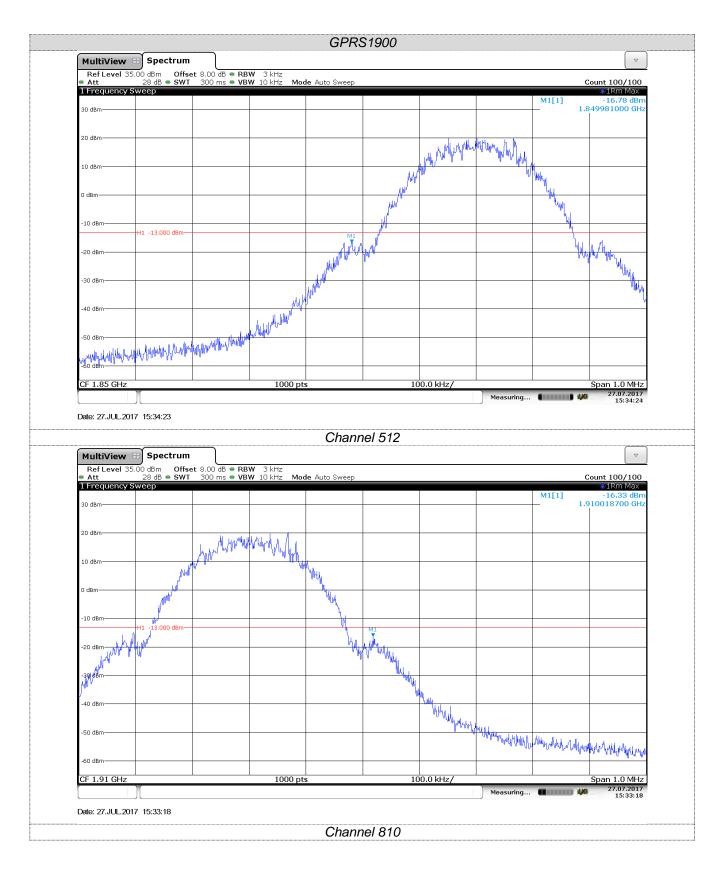
|         |           | WCDMA          | A Band V    |        |         |
|---------|-----------|----------------|-------------|--------|---------|
| Channel | Frequency | Measureme      | nt Results  | Limit  | Verdict |
| Number  | (MHz)     | Frequency(MHz) | Values(dBm) | (dBm)  | verdict |
| 4132    | 826.4     | 824            | -22.21      | -13.00 | Pass    |
| 4233    | 846.6     | 849            | -20.22      | -13.00 | Pass    |











| MultiView 🔠 Spe   | ctrum   |                           |                  |                |                  |             |   |   |
|---|---|---------------------------|------------------|----------------|------------------|-------------|---|---|
| Ref Level 35.00 dBm   | Offset 8.00 dB • R                              | BW 3 kHz                  | da Austa Curra   |                |                  |             |   |   |
| Att 28 dB     I Frequency Sweep   | ● SWT 300 ms ● V                                | RM IOKHZ MOC              | ae Auto Sweep    |                |                  |             |   | • 1Rm Max   |
| 30 dBm  |   |                           |                  |                |                  |             | M1[1]   | -15.79 dBn<br>849977900 GH                                  |
|   |   |                           |                  |                |                  |             |   |   |
| 20 dBm  |   |                           |                  |                | Multiprophersing | Kallinguk . |   |   |
| 10 dBm  |   |                           |                  |                | Hull Way         | w when the  | 1   |   |
| 10 dbin   |   |                           |                  | . Jul          | W                | - · · v     | he have hav |   |
| 0 dBm   |   |                           |                  |                |                  |             |   |   |
|   |   |                           |                  | J. MW          |                  |             | Play  |   |
| -10 dBm   | D0 dBm  |                           | M1               | , f            |                  |             | ų,  |   |
| -20 dBm   |   |                           | L. Mar           | N N            |                  |             | Y   | L MI  |
|   |   |                           | . With market or | 141            |                  |             |   | Mart Martin   |
| -30 dBm   |   |                           | M. Mar           |                |                  |             |   |   |
|   |   | L. A                      | M.               |                |                  |             |   | - ru  |
| -40 dBm   |   |                           |                  |                |                  |             |   |   |
| -50 dBm   |   | Mar Mar Mar               |                  |                |                  |             |   |   |
| und wanterstellenschiede  | WWWWWWWWWWW                                     |                           |                  |                |                  |             |   |   |
| 60 dBm  |   |                           |                  |                |                  |             |   |   |
| CF 1.85 GHz   | 1   | 1000 pt                   | s                | 10             | 0.0 kHz/         | Measuring   | () <b>4</b>   | Span 1.0 MHz  |
| MultiView 😁 Spe   | ctrum   | BW 3 kHz                  | Chanr            | nel 512        |                  |             |   |   |
| Ref Level 35.00 dBm<br>Att 28 dB  | ctrum   | BW 3 kHz<br>BW 10 kHz Moo |                  | nel 512        |                  |             |   | Count 100/100   |
| MultiView B Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep   | ctrum<br>Offset 8.00 dB ● R                     | BW 3 kHz<br>BW 10 kHz Moo |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView 🕀 Spe<br>Ref Level 35.00 dBm<br>Att 28 dB   | ctrum<br>Offset 8.00 dB ● R                     | BW 3 kHz<br>BW 10 kHz Moo |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>IRm Max                                    |
| MultiView B Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep   | Ctrum<br>Offset 8.00 dB = R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm   | ctrum<br>Offset 8.00 dB ● R                     | BW 10 kHz Moo             |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spee<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm   | Ctrum<br>Offset 8.00 dB = R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm   | Ctrum<br>Offset 8.00 dB = R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm<br>10 dBm<br>0 dBm  | Ctrum<br>Offset 8.00 dB = R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spee<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm<br>10 dBm<br>-10 dBm  | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  |                |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm<br>10 dBm<br>0 dBm  | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | nel 512        |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm<br>10 dBm<br>-10 dBm<br>H1 -13.00   | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  |                |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spec<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm<br>10 dBm<br>-10 dBm<br>H1 -13.00   | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  |                |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView         Spec           Ref Level         35.00 dBm           Att         28 dB           1 Frequency         Sweep           30 dBm         20 dBm           10 dBm         0 dBm           -10 dBm         -11 - 13.00           -20 dBm         -35 dBm                   | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | Ma Manuellan . |                  |             | M1[1]   | Count 100/100<br>1Rm Max<br>-15.91 dBn                      |
| MultiView Spee<br>Ref Level 35.00 dBm<br>Att 28 dB<br>1 Frequency Sweep<br>30 dBm<br>20 dBm<br>10 dBm<br>-10 dBm<br>-10 dBm<br>H1 3.300<br>-20 dBm  | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | Ma Manuellan . |                  |             | 1   | Count 100/100<br>• 1Rm Max<br>- 15.91 dBn<br>- 910016800 GH |
| MultiView         Spec           Ref Level         35.00 dBm           Att         28 dB           1 Frequency         Sweep           30 dBm         20 dBm           10 dBm         0 dBm           -10 dBm         -11 - 13.00           -20 dBm         -35 dBm                   | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | Ma Manuellan . |                  |             | 1   | Count 100/100<br>• 1Rm Max<br>- 15.91 dBn<br>- 910016800 GH |
| MultiView         Spec           Ref Level 35.00 dBm         28 dB           1 Frequency Sweep         30 dBm           30 dBm         20 dBm           10 dBm         10 dBm           -10 dBm         11 - 13.00           -20 dBm         -40 dBm                                  | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             |                  | Ma Manuellan . |                  |             | 1   | Count 100/100<br>• 1Rm Max<br>- 15.91 dBn<br>- 910016800 GH |
| MultiView         Spec           Ref Level 35.00 dBm         28 dB           1 Frequency Sweep         30 dBm           30 dBm         20 dBm           10 dBm         10 dBm           -10 dBm         11 :13.00           -20 dBm         -40 dBm           -50 dBm         -50 dBm | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V |                           | de Auto Sweep    |                |                  |             | 1   | Count 100/100<br>• 1Rm Max<br>- 15.91 dBn<br>- 910016800 GH |
| MultiView         Spec           Ref Level 35.00 dBm         28 dB           1 Frequency Sweep         30 dBm           30 dBm         20 dBm           10 dBm         10 dBm           -10 dBm         11 - 13.00           -20 dBm         -40 dBm                                  | ctrum<br>Offset 8.00 dB • R<br>• SWT 300 ms • V | BW 10 kHz Moo             | de Auto Sweep    |                | 0.0 kHz/         | Measuring   | 1   | Count 100/100<br>IRm Max<br>-15.91 dBm<br>910016800 GH      |

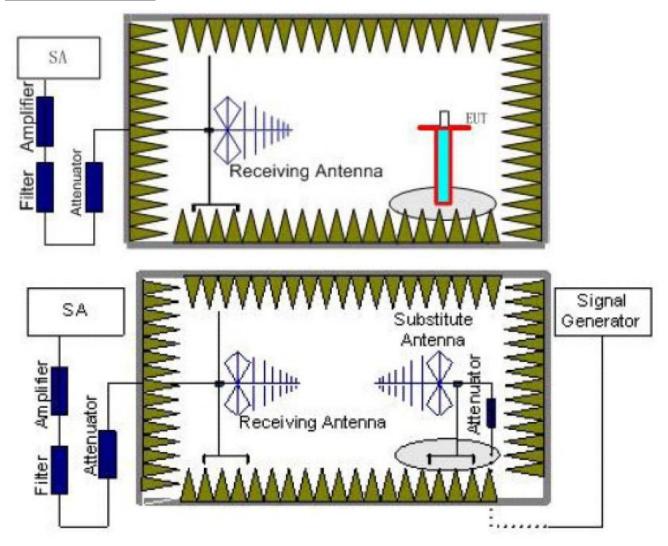
|   |  |   |   |                |                       |   |           |  | ~  |
|---|--|---|---|----------------|-----------------------|---|-----------|--|--|
| MultiView 8   |  |   |   |                |                       |   |           |  | Ľ  |
| Ref Level 30.0<br>Att   | 0 dBm Offse<br>22 dB • SWT                     | : 8.00 dB ● R<br>300 ms ● VI                | BW 100 kHz<br>BW 300 kHz Mo                       | ode Auto Sweep |                       |   |           |  | Count 100/100  |
| 1 Frequency Sv  | veep   |   |   |                |                       |   |           | M1[1]  | 1Rm Max<br>-20,41 dB   |
|   |  |   |   |                |                       |   |           |  | 1.85000000 GI  |
| 20 dBm  |  |   |   |                |                       |   |           |  |  |
|   |  |   |   |                |                       |   |           |  |  |
| 10 dBm  |  |   |   |                | . Contraction and the | and a start a s |           | - Contraction of the Contraction | and the second s |
| 0 dBm   |  |   |   |                |                       |   |           |  | <u>\</u>   |
|   |  |   |   |                |                       |   |           |  |  |
| -10 dBm   |  |   |   |                |                       |   |           |  | $\rightarrow$  |
|   | H1 -13.000 dBm                                 |   |   | N.             |                       |   |           |  |  |
| -20 dBm   |  |   |   | <br>سر         | r                     |   |           |  |  |
| 00.40   |  |   | in and some when                                  | mandala        |                       |   |           |  |  |
| -30 dBm   | and and the second                             | - And and and a start of the                | <i>n</i>  |                |                       |   |           |  |  |
| -40 dBm   | / ~  |   |   |                |                       |   |           |  |  |
|   |  |   |   |                |                       |   |           |  |  |
| -50 dBm   |  |   |   |                |                       |   |           |  |  |
|   |  |   |   |                |                       |   |           |  |  |
| -60 dBm   |  |   |   |                |                       |   |           |  |  |
| 05.1.05.21  |  |   |   |                |                       |   |           |  |  |
| CF 1.85 GHz   | C  |   | 1001 pt   | S              | 1                     | .0 MHz/   |           | -  | Span 10.0 MH   |
|   | ~  |   |   | Chann          | el 9262               |   | Measuring |  | 10.54.1  |
| Date: 27.JUL.2017 MultiView   | Spectrum                                       |   |   |                | el 9262               |   | Measuring |  | 16:34:1  |
| MultiView 3<br>Ref Level 30.0<br>Att  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | t 8.00 dB ● Ri<br>300 ms ● Vi               | <b>3W</b> 100 kHz<br><b>3W</b> 300 kHz <b>M</b> 4 |                | el 9262               |   | Measuring |  | Count 100/100  |
| MultiView 8   | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | ± 8.00 dB ● <b>R</b><br>300 ms ● <b>V</b> I | <b>3W</b> 100 kHz<br><b>3W</b> 300 kHz <b>M</b>   |                | el 9262               |   | Measuring | M1[1]  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 3<br>Ref Level 30.0<br>Att<br>I Frequency Sv  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | : 8.00 dB ● R<br>300 ms ● VI                | BW 100 kHz<br>3W 300 kHz M4                       |                | el 9262               |   | Measuring |  | Count 100/100  |
| MultiView 3<br>Ref Level 30.0<br>Att  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | t 8.00 dB <b>● R</b><br>300 ms <b>● V</b>   | 3W 100 kHz<br>3W 300 kHz M                        |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 3<br>Ref Level 30.0<br>Att<br>I Frequency Sv  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | E 8.00 dB ● R<br>300 ms ● VI                | BW 100 kHz<br>BW 300 kHz Mo                       |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 3<br>Ref Level 30.0<br>Att<br>1 Frequency Sv<br>20 dBm  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | : 9.00 dB • R<br>300 ms • VI                | 3W 100 kHz<br>3W 300 kHz Ma                       |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 3<br>Ref Level 30.0<br>Att<br>1 Frequency Sv<br>20 dBm  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | t 8.00 dB ● R<br>300 ms ● VI                | 3W 100 kHz<br>3W 300 kHz M                        |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 33<br>Ref Level 30.0<br>Att<br>I Frequency SV<br>20 dBm<br>10 dBm<br>0 dBm  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | £ 8.00 dB ● R<br>300 ms ● VI                | BW 100 kHz<br>BW 300 kHz M                        |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView Ref Level 30.0<br>Att<br>1 Frequency St<br>20 dBm<br>10 dBm<br>0 dBm  | Spectrum<br>00 dBm Offse<br>22 dB • SWT        | : 9.00 dB • R<br>300 ms • VI                | BW 100 kHz<br>BW 300 kHz Mo                       |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 33<br>Ref Level 30.0<br>Att<br>I Frequency SV<br>20 dBm<br>10 dBm<br>0 dBm<br>-10 dBm   | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | : 9.00 dB • R<br>300 ms • VI                | 3W 100 kHz<br>3W 300 kHz Ma                       |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView Ref Level 30.0<br>Att<br>1 Frequency St<br>20 dBm<br>10 dBm<br>0 dBm  | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | t 8.00 dB • R<br>300 ms • VI                | BW 100 kHz<br>3W 300 kHz M                        |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 33<br>Ref Level 30.0<br>Att<br>I Frequency SV<br>20 dBm<br>10 dBm<br>0 dBm<br>-10 dBm   | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | r 8.00 dB • R<br>300 ms • VI                | 3W 100 kHz<br>3W 300 kHz M                        |                |                       |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView         State           Ref Level         30.0           Att         I Frequency SV           20 dBm         0           10 dBm         0           -10 dBm   | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | E 8.00 dB • R<br>300 ms • VI                | BW 100 kHz<br>BW 300 kHz Mo                       |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView 33<br>Ref Level 30.0<br>Att<br>I Frequency SV<br>20 dBm<br>10 dBm<br>0 dBm<br>-10 dBm<br>-20 dBm  | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | : 9.00 dB • R<br>300 ms • V                 | 3W 100 kHz<br>3W 300 kHz Mo                       |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView         33           Ref Level         30.0           Att         1           I Frequency SV         20           20 dBm         10           10 dBm         -0           -10 dBm   | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | : 8.00 dB • R<br>300 ms • VI                | 3W 100 kHz<br>3W 300 kHz M                        |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView         State           Ref Level         30.0           Att         I Frequency SV           20 dBm         0           10 dBm         0           -10 dBm   | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | t 8.00 dB • R<br>300 ms • V                 | 3W 100 kHz<br>3W 300 kHz M                        |                | el 9262               |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView         33           Ref Level         30.0           Att         1           I Frequency SV         20           20 dBm         10           10 dBm         -0           -10 dBm   | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | r 8.00 dB • R<br>300 ms • VI                | BW 100 kHz M<br>300 kHz M                         |                |                       |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView         Ref Level 30.0           Att         1           1 Frequency SY         20 dBm           20 dBm         0 dBm           10 dBm         -0 dBm           -30 dBm         -30 dBm           -50 dBm         -50 dBm | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | r 8.00 dB • R<br>300 ms • V                 | BW 100 kHz M<br>300 kHz M                         |                |                       |   | Measuring |  | Count 100/100<br>• 1Rm Max<br>-21.59 dB  |
| MultiView         Ref Level 30.0           Att         1           1 Frequency SY         20 dBm           20 dBm         0 dBm           10 dBm         -0 dBm           -30 dBm         -30 dBm           -50 dBm         -50 dBm | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | E 9.00 dB • R<br>300 ms • VI                | BW 100 kHz<br>BW 300 kHz Mo                       | ode Auto Sweep |                       | .0 MHz/   |           |  | Count 100/100<br>•1Rm Max<br>-21.59 dB<br>1.91000000 GH  |
| MultiView         State           Ref Level 30.0         Att           1 Frequency State         20 dBm           20 dBm         0 dBm           10 dBm   | Spectrum<br>O dBm Offse<br>22 dB • SWT<br>veep | E 8.00 dB • R<br>300 ms • VI                |   | ode Auto Sweep |                       |   |           |  | Count 100/100<br>91Rm Max<br>-21.59 dB<br>1.91000000 GH  |

|  |   |   |                           |                |         |                       |            |           | (   |
|--|---|---|---------------------------|----------------|---------|-----------------------|------------|-----------|---|
| MultiView 8  | B Spectrum                                    | l   |                           |                |         |                       |            |           | $\bigtriangledown$                          |
| Att  | 00 dBm Offse<br>22 dB • SWT                   | t 8.00 dB • RB<br>300 ms • VB               | W 100 kHz<br>W 300 kHz Mo | ode Auto Sweep |         |                       |            |           | Count 100/100                               |
| 1 Frequency Sw   | weep  |   |                           |                |         |                       |            | M1[1]     | ●1Rm Max<br>-22.21 dBr                      |
|  |   |   |                           |                |         |                       |            | wittil.   | 824.00000 MH                                |
| 20 dBm   |   |   |                           |                |         |                       |            |           |   |
|  |   |   |                           |                |         |                       |            |           |   |
| 10 dBm   |   |   |                           |                | -       | and the second second |            | mahananan | theman                                      |
| 0 dBm  |   |   |                           |                |         |                       |            |           |   |
| o ubiii  |   |   |                           |                |         |                       |            |           |   |
| -10 dBm  |   |   |                           |                |         |                       |            |           | $\rightarrow$                               |
|  | H1 -13.000 dBm                                |   |                           |                | /       |                       |            |           |   |
| -20 dBm  |   |   |                           | •              | \$      |                       |            |           |   |
|  |   |   |                           | ~ ^            |         |                       |            |           |   |
| -30 dBm  |   | بدماد                                       | my work.                  | $\sim$         |         |                       |            |           |   |
| -40 dBm  | M /   | $\sum \Delta$                               | and                       |                |         |                       |            |           |   |
| www.man  |   | Luc .                                       |                           |                |         |                       |            |           |   |
| -50 dBm  |   |   |                           |                |         |                       |            |           |   |
|  |   |   |                           |                |         |                       |            |           |   |
| -60 dBm  |   |   |                           |                |         |                       |            |           |   |
|  |   |   |                           |                |         |                       |            |           |   |
| CF 824.0 MHz   |   |   | 1001 pt                   | S              | 1       | .0 MHz/               |            |           | Span 10.0 MH:<br>27.07.2017                 |
|  | ~   |   |                           | Chann          | el 4132 |                       | Measuring  | (         | 16:37:20                                    |
| Date: 27.JUL.2017<br>MultiView 8   | B Spectrum                                    |   |                           | Chann          | el 4132 |                       | Measuring  |           | 16:37:20                                    |
| MultiView 8<br>Ref Level 30.0<br>Att   | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 8.00 dB • RB<br>300 ms • VB               | W 100 kHz<br>W 300 kHz Mo |                | el 4132 |                       | Measuring, |           | 16:37:2€                                    |
| MultiView 8<br>Ref Level 30.0  | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 8.00 dB • RB<br>300 ms • VB               | ₩ 100 kHz<br>₩ 300 kHz Mo |                | el 4132 |                       | Measuring  | M1[1]     | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView 8<br>Ref Level 30.0<br>Att<br>1 Frequency Sv   | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 9.00 dB ● RB<br>300 ms ● VB               | W 100 kHz<br>W 300 kHz Mo |                | el 4132 |                       | Measuring  |           | 16:37:26<br>▼<br>Count 100/100<br>● 1Rm Max |
| MultiView 8<br>Ref Level 30.0<br>Att   | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 8.00 dB ● <b>RB</b><br>300 ms ● <b>VB</b> | W 100 kHz<br>W 300 kHz Mo |                | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView 8<br>Ref Level 30.0<br>Att<br>1 Frequency Sv   | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 8.00 dB ● RB<br>300 ms ● VB               | ₩ 300 kHz Mo              | ode Auto Sweep | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView B<br>Ref Level 30.0<br>Att<br>I Frequency St<br>20 dBm   | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 8.00 dB • RB<br>300 ms • VB               | W 100 kHz<br>W 300 kHz Mo |                | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView B<br>Ref Level 30.0<br>Att<br>I Frequency St<br>20 dBm   | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 9.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView B<br>Ref Level 30.0<br>Att<br>1 Frequency SV<br>20 dBm<br>10 dBm<br>0 dBm  | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 8.00 dB ● RB<br>300 ms ● VB               | ₩ 300 kHz Mo              | ode Auto Sweep | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView B<br>Ref Level 30.0<br>Att<br>1 Frequency SV<br>20 dBm<br>10 dBm<br>0 dBm  | ■ Spectrum<br>00 dBm Offse<br>22 dB ■ SWT     | t 8.00 dB ● RB<br>300 ms ● VB               | ₩ 300 kHz Mo              | ode Auto Sweep | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView B<br>Ref Level 30.0<br>Att<br>1 Frequency SV<br>20 dBm<br>10 dBm<br>-10 dBm  | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 8.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView B<br>Ref Level 30.0<br>Att<br>1 Frequency SV<br>20 dBm<br>10 dBm<br>0 dBm  | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 9.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView Ref Level 30.<br>Att<br>I Frequency Sy<br>20 dBm<br>10 dBm<br>0 dBm<br>-10 dBm   | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 9.00 dB • RE<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep | el 4132 |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView Ref Level 30.<br>Att<br>1 Frequency SV<br>20 dBm<br>10 dBm<br>-10 dBm<br>-20 dBm<br>-30 dBm  | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 8.00 dB <b>• RB</b><br>300 ms <b>• VB</b> | ₩ 300 kHz Mo              | ode Auto Sweep |         |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView Ref Level 30.<br>Att<br>1 Frequency SV<br>20 dBm<br>10 dBm<br>-10 dBm<br>-20 dBm   | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 8.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep |         |                       | Measuring  |           | Count 100/100<br>● 1Rm Max<br>-20.22 dBr    |
| MultiView         B           Ref Level 30.0         Att           1 Frequency SV         20 dBm           10 dBm         0 dBm           -10 dBm                        | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 8.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep |         |                       | Measuring  |           | 16:37:26                                    |
| MultiView Ref Level 30.<br>Att<br>1 Frequency SV<br>20 dBm<br>10 dBm<br>-10 dBm<br>-20 dBm<br>-30 dBm  | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 8.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep |         |                       | Measuring  |           | 16:37:26                                    |
| MultiView         B           Ref Level 30.0         Att           1 Frequency SV         20 dBm           10 dBm         0 dBm           -10 dBm                        | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 9.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep |         |                       | Measuring  |           | 16:37:26                                    |
| MultiView         B           Ref Level 30.0         Att           1 Frequency SV         20 dBm           10 dBm         0 dBm           -10 dBm                        | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 9.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep |         |                       | Measuring  |           | 16:37:26                                    |
| MultiView         Ref Level 30.0           Att         1           1 Frequency Sy         20 dBm           20 dBm         0           10 dBm         0           -10 dBm | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 8.00 dB • RB<br>300 ms • VB               |                           | ode Auto Sweep |         |                       | Measuring  |           | 16:37:26                                    |
| MultiView         B           Ref Level 30.0         Att           1 Frequency SV         20 dBm           10 dBm         0 dBm           -10 dBm                        | Spectrum<br>O0 dBm Offse<br>22 dB SWT<br>weep | t 8.00 dB • RB<br>300 ms • VB               | ₩ 300 kHz Mo              | ode Auto Sweep |         |                       |            |           | Count 100/100    Count 100/100              |

# 5.5. ERP and EIRP

LIMIT

GSM850/WCDMA Band V: 7W ERP PCS1900/WCDMA Band II: 2W EIRP TEST CONFIGURATION



# TEST PROCEDURE

- EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the

frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

- A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
   ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

#### TEST MODE:

Please refer to the clause 3.3

## TEST RESULTS

## ☑ Passed □ Not Applicable

| Mode      | Channel   | Antenna Pol. | ERP   | Limit (dBm) | Result |
|-----------|---|--------------|-------|-------------|--------|
|           | 128   | V            | 31.52 |             |        |
|           | 120   | Н            | 28.45 |             |        |
| GSM850    | 190   | V            | 31.74 | 38.45       | Pass   |
| 0010000   | 130   | Н            | 28.88 | 30.43       | 1 835  |
|           | 251   | V            | 31.52 | 38.45       |        |
|           | 201   | Н            | 28.64 |             |        |
|           | 128   | V            | 31.66 |             |        |
|           | 120   | Н            | 28.47 | 38.45       | Pass   |
| GPRS850   | V         31.84           190         H         21.57           251         V         31.47 | V            | 31.84 |             |        |
| 011100000 |   | Н            | 21.57 |             |        |
|           |   |              |       |             |        |
|           | 201   | Н            | 28.64 | 38.45       |        |
|           | 128   | V            | 31.74 |             |        |
|           | 120   | Н            | 28.62 |             |        |
| EGPRS850  | 190   | V            | 31.77 | 38 45       | Pass   |
| 2011(0000 | 100   | Н            | 28.52 | 30.43       | 1 400  |
|           | 251   | V            | 31.47 |             |        |
|           | 201   | Н            | 28.88 |             |        |

Report No.: TRE1707003001

Page: 39 of 59

Issued: 2017-07-29

| Mode      | Channel   | Antenna Pol. | EIRP  | Limit (dBm)                              | Result |
|-----------|---|--------------|-------|--|--------|
|           | 512   | V            | 27.34 |  |        |
|           | 512   | Н            | 25.43 |  |        |
| PCS1900   | 661   | V            | 27.62 | 33.00                                    | Pass   |
| 1001900   | 001   | Н            | 25.22 | 33.00                                    | 1 835  |
|           | 810   | V            | 27.37 |  |        |
|           | 010   | Н            | 25.44 |  |        |
|           | 512   | V            | 27.58 |  | Pass   |
|           | 012   | Н            | 25.66 | 33.00                                    |        |
| GPRS1900  | V         27.52           H         25.47           V         27.66 | V            | 27.52 |  |        |
| 01101300  |   | н            | 25.47 |  |        |
|           |   |              |       |  |        |
|           | 010   | н            | 25.78 | - 33.00<br>- 33.00<br>- 33.00<br>- 33.00 |        |
|           | 512   | V            | 27.43 |  |        |
|           | 512   | Н            | 25.86 |  |        |
| EGPRS1900 | 661   | V            | 27.36 | 33.00                                    | Pass   |
|           |   | н            | 25.47 | 33.00                                    | 1 435  |
|           | 810   | V            | 27.22 |  |        |
|           | 010   | Н            | 25.83 |  |        |

| Mode          | Channel | Antenna Pol. | EIRP  | Limit (dBm) | Result |
|---------------|---------|--------------|-------|-------------|--------|
|               | 9262    | V            | 21.47 |             |        |
|               | 9262    | Н            | 16.85 |             | Paga   |
| WCDMA Band II | 0.400   | V            | 21.74 | 22.00       |        |
|               | 9400    | Н            | 16.43 | 33.00       | Pass   |
|               | 9538 —  | V            | 21.88 |             |        |
|               |         | Н            | 16.52 |             |        |

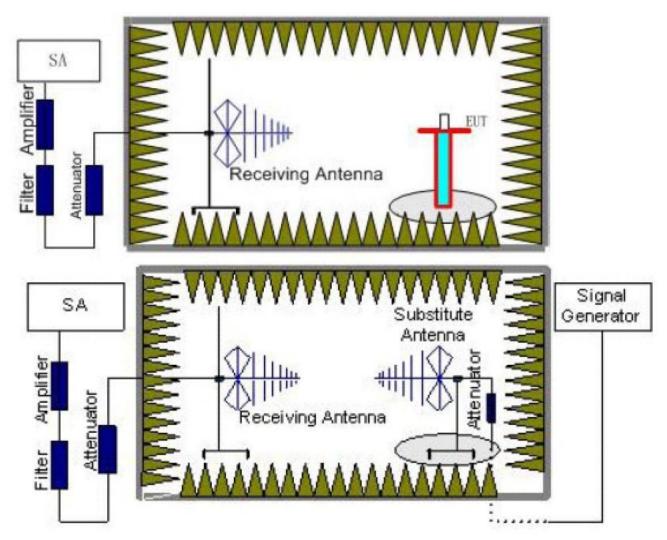
| Mode         | Channel | Antenna Pol. | ERP   | Limit (dBm) | Result |
|--------------|---------|--------------|-------|-------------|--------|
|              | 4132    | V            | 21.58 |             |        |
|              |         | Н            | 16.75 |             | Pass   |
| WCDMA Band V | 4183    | V            | 21.43 | 38.45       |        |
|              |         | Н            | 16.38 |             |        |
|              |         | V            | 21.84 |             |        |
|              |         | Н            | 16.78 |             |        |

# 5.6. Radiated Spurious Emission

# LIMIT

-13dBm

**TEST CONFIGURATION** 



# TEST RESULTS

- EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the

substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

- A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (PcI), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
   ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

#### TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

# ☑ Passed □ Not Applicable

Note:Worst case at GSM850/PCS1900

Report No.: TRE1707003001 Page: 42 of 59

Issued: 2017-07-29

|         |                 | GS           | M850        |             |        |
|---------|-----------------|--------------|-------------|-------------|--------|
| Channel | Frequency       | Spurious     | Emission    | Limit (dPm) | Result |
| Channel | (MHz)           | Polarization | Level (dBm) | Limit (dBm) | Result |
|         | 87.38<br>155.54 | Vertical     | -68.21      |             |        |
|         | 155.54          | V            | -73.88      |             |        |
|         | 1648.51         | V            | -39.93      | 12.00       | 5      |
|         | 2577.97         | V            | -31.34      | -13.00      | Pass   |
|         | 4996.14         | V            | -53.05      |             |        |
| 400     | 10007.53        | V            | -45.03      |             |        |
| 128     | 36.27           | Horizontal   |             |             |        |
|         | 250.05          | Н            | -73.47      |             |        |
|         | 1648.51         | Н            | -40.55      | 12.00       | Deee   |
|         | 2475.28         | н            | -48.51      | -13.00      | Pass   |
|         | 4996.14         | н            | -51.42      |             |        |
|         | 8004.46         | Н            | -47.63      |             |        |
|         | 36.66           | Vertical     | -53.84      |             | Pass   |
|         | 284.79          | V            | -73.79      | -13.00      |        |
|         | 1672.22         | V            | -56.20      |             |        |
|         | 2232.42         | V            | -63.16      |             | Pass   |
|         | 5025.20         | V            | -53.83      |             |        |
| 100     | 9892.10         | V            | -45.76      |             |        |
| 190     | 88.93           | Horizontal   | -64.17      |             | Pass   |
|         | 254.48          | Н            | -62.60      |             |        |
|         | 1672.22         | Н            | -57.85      | 12.00       |        |
| 190     | 2363.67         | Н            | -61.26      | -13.00      | Pass   |
|         | 4259.43         | Н            | -55.83      |             |        |
|         | 7992.86         | Н            | -48.88      |             |        |
|         | 87.68           | Vertical     | -64.89      |             |        |
|         | 258.09          | V            | -67.86      |             |        |
|         | 1698.14         | V            | -40.32      | -13.00      | Deee   |
|         | 2580.81         | V            | -41.86      | -13.00      | Pass   |
|         | 4996.14         | V            | -52.77      |             |        |
| 0F1     | 8924.21         | V            | -46.35      |             |        |
| 251     | 36.27           | Horizontal   | -53.76      |             |        |
|         | 262.67          | Н            | -64.66      |             |        |
|         | 1698.14         | Н            | -39.17      | 12.00       | Dece   |
|         | 2547.01         | Н            | -44.60      | -13.00      | Pass   |
|         | 4546.68         | Н            | -55.52      |             |        |
|         | 8507.17         | Н            | -46.78      |             |        |

Remark:

1.

The emission behaviour belongs to narrowband spurious emission. The emission levels of not record in the report are very lower than the limit and not show in test report. 2.

Report No.: TRE1707003001 Page: 43 of 59

Issued: 2017-07-29

|         |  | PCS          | \$1900      |   |        |
|---------|--|--------------|-------------|---|--------|
| Channel | Frequency  | Spurious     | Emission    | Linsit (dDms)   | Decult |
| Channel | (MHz)  | Polarization | Level (dBm) | Limit (abm)   | Result |
|         | 38.10<br>287.81  | Vertical     | -55.92      |   |        |
|         | 287.81   | V            | -74.42      |   |        |
|         | 1747.34  | V            | -40.92      | 40.00   | 5      |
|         | 2586.49         V         -48.18           4113.73         V         -55.18           8039.36         V         -47.84 | -13.00       | Pass        |   |        |
|         | 4113.73  | V            | -55.18      |   |        |
| - 10    | 8039.36  | V            | -47.84      |   |        |
| 512     | 86.16  | Horizontal   | -68.12      |   |        |
|         | 209.73   | Н            | -76.47      |   |        |
|         | 1764.70  | Н            | -37.16      |   | _      |
|         | 2595.02  | Н            | -36.68      | -13.00  | Pass   |
|         | 3700.48  | н            | -49.56      |   |        |
|         | 4996.14  | н            | -52.25      |   |        |
|         | 36.66  | Vertical     | -54.10      |   |        |
|         | 666.98   | V            | -74.70      | -13.00  | Dees   |
|         | 1764.70  | V            | -38.43      |   |        |
|         | 2421.49  | V            | -35.97      |   | Pass   |
|         | 5039.80  | V            | -51.75      |   |        |
|         | 9595.37  | V            | -44.42      |   |        |
| 661     | 37.05  | Horizontal   | -53.87      |   | Pass   |
|         | 277.87   | Н            | -74.08      |   |        |
|         | 1747.34  | Н            | -36.15      |   |        |
|         | 2577.97  | н            | -48.94      | -13.00  |        |
|         | 4996.14  | н            | -53.15      |   |        |
|         | 8581.52  | н            | -46.13      | Limit (dBm) -13.00 -13.00 -13.00 -13.00 -13.00 -13.00 |        |
|         | 36.53  | Vertical     | -52.00      |   |        |
|         | 332.45   | V            | -70.88      |   |        |
|         | 1625.13  | V            | -49.62      | 40.00   | -      |
|         | 2332.71  | V            | -49.33      | -13.00  | Pass   |
|         | 4996.14  | V            | -53.50      |   |        |
|         | 9595.37  | V            | -45.51      |   |        |
| 810     | 38.78  | Horizontal   | -72.17      |   |        |
|         | 147.55   | Н            | -68.63      |   |        |
|         | 1499.88  | Н            | -52.99      | (0.00   | _      |
|         | 2282.01  | Н            | -51.42      | -13.00  | Pass   |
|         | 4996.14  | Н            | -51.93      |   |        |
|         | 7992.86  | Н            | -47.03      |   |        |

Remark:

1.

The emission behaviour belongs to narrowband spurious emission. The emission levels of not record in the report are very lower than the limit and not show in test report. 2.

Report No.: TRE1707003001

Page: 44 of 59

Issued: 2017-07-29

|         |   | WCDM         | A Band II   |             |        |
|---------|---|--------------|-------------|-------------|--------|
| Channel | Frequency   | Spurious     | Emission    | Limit (dPm) | Result |
| Channel | (MHz)   | Polarization | Level (dBm) |             | Result |
|         | 36.15<br>400.56   | Vertical     | -53.93      |             |        |
|         | 400.56  | V            | -76.61      |             | _      |
|         | 1349.75   | V            | -54.60      | 12.00       |        |
|         | 9262<br>1933.18 V -40.24<br>4553.28 V -54.47<br>5554.08 V -43.13<br>36.53 Horizontal -64.58<br>156.09 H -74.45<br>1499.88 H -52.60 -13.00 | V            | -40.24      | -13.00      | Pass   |
|         |   |              |             |             |        |
| 0000    | 5554.08   | V            | -43.13      |             |        |
| 9262    | 36.53   | Horizontal   | -64.58      |             |        |
|         | 156.09  | Н            | -74.45      |             |        |
|         | 1499.88   | Н            | -52.60      | 10.00       | David  |
|         | 1931.06   | Н            | -37.13      | -13.00      | Pass   |
|         | 5554.08   | Н            | -51.36      |             |        |
|         | 8989.16   | Н            | -46.53      | 6.53        |        |
|         | 36.40   | Vertical     | -50.91      |             |        |
|         | 400.56  | V            | -73.56      |             | Dage   |
|         | 1499.88   | V            | -50.71      | -13.00      |        |
|         | 2577.97   | V            | -43.71      |             | Pass   |
|         | 4680.49   | V            | -55.16      |             |        |
|         | 5635.22   | V            | -41.69      |             |        |
| 9400    | 36.40   | Horizontal   | -66.22      |             |        |
|         | 144.98  | Н            | -75.60      |             |        |
|         | 1513.13   | Н            | -54.55      |             | 5      |
|         | 1958.84   | Н            | -40.27      | -13.00      | Pass   |
|         | 4507.29   | Н            | -54.08      |             |        |
|         | 5635.22   | Н            | -50.59      | -13.00      |        |
|         | 38.24   | Vertical     | -55.50      |             |        |
|         | 325.51  | V            | -79.30      |             |        |
|         | 1373.69   | V            | -52.08      |             | _      |
|         | 2332.71   | V            | -49.83      | -13.00      | Pass   |
|         | 4247.10   | V            | -54.71      |             |        |
| 0500    | 5725.84   | V            | -43.07      |             |        |
| 9538    | 36.02   | Horizontal   | -58.09      |             |        |
|         | 153.91  | Н            | -76.87      |             |        |
|         | 1396.51   | Н            | -54.89      | (0.00       | _      |
|         | 1989.20   | Н            | -37.33      | -13.00      | Pass   |
|         | 5725.84   | Н            | -49.97      |             |        |
|         | 8482.53   | Н            | -46.42      |             |        |

Remark:

1.

The emission behaviour belongs to narrowband spurious emission. The emission levels of not record in the report are very lower than the limit and not show in test report. 2.

|                                 |  | WCDM         | A Band V         |               |        |
|---------------------------------|--|--------------|------------------|---------------|--------|
| Channel                         | Frequency  | Spurious     | Emission         | Linsit (dDms) | Decult |
| Channel                         | (MHz)  | Polarization | Level (dBm)      | Limit (aBm)   | Result |
|                                 | 36.40  | Vertical     | -52.14<br>-79.23 |               |        |
| 307<br>124<br>205<br>499<br>910 | 307.70   | V            | -79.23           |               |        |
|                                 | 1240.27  | V            | -49.12           | 10.00         | Deve   |
|                                 | 2051.34         V         -51.65           4996.14         V         -52.85           9107.26         V         -45.69   | -13.00       | Pass             |               |        |
|                                 | 4996.14  | V            | -52.85           |               |        |
| 4400                            | 9107.26  | V            | -45.69           |               |        |
| 4132                            | 37.05  | Horizontal   | -68.67           |               |        |
|                                 | 281.80   | Н            | -75.03           |               |        |
|                                 | 1499.88  | Н            | -52.98           | 40.00         | 5      |
|                                 | 1852.10  | Н            | -49.26           | -13.00        | Pass   |
|                                 | 4996.14  | Н            | -51.58           |               |        |
|                                 | 7025.00  | Н            | -49.67           | -13.00        |        |
|                                 | 36.66  | Vertical     | -54.06           |               |        |
|                                 | 449.85   | V            | -75.66           | -13.00        | Page   |
|                                 | 1499.88  | V            | -50.86           |               |        |
|                                 | 1664.89  | V            | -48.31           |               | Pass   |
|                                 | 3984.55  | V            | -55.35           |               |        |
|                                 | 7466.20  | V            | -48.29           |               |        |
| 4183                            | 36.27  | Horizontal   | -58.95           |               | Dees   |
|                                 | 156.09   | н            | -75.57           |               |        |
|                                 | 1248.47  | Н            | -54.81           |               |        |
|                                 | 1664.89  | Н            | -51.07           | -13.00        | Pass   |
|                                 | 307.70         V         -79.23           1240.27         V         -49.12           2051.34         V         -51.65           4996.14         V         -52.85           9107.26         V         -45.69           37.05         Horizontal         -68.67           281.80         H         -75.03           1499.88         H         -52.98           1852.10         H         -49.26           4996.14         H         -51.58           7025.00         H         -49.67           36.66         Vertical         -54.06           449.85         V         -75.66           1499.88         V         -50.86           1664.89         V         -48.31           3984.55         V         -55.35           7466.20         V         -48.29           36.27         Horizontal         -58.95           156.09         H         -75.57           1248.47         H         -54.81 |              |                  |               |        |
|                                 | 7348.04  | н            | -49.16           |               |        |
|                                 | 36.40  | Vertical     | -51.14           |               |        |
|                                 | 400.56   | V            | -74.12           |               |        |
|                                 | 1625.13  | V            | -50.00           | 10.00         | 5      |
|                                 | 1692.55  | V            | -46.57           | -13.00        | Pass   |
|                                 | 4996.14  | V            | -52.74           |               |        |
|                                 | 8569.08  | V            | -46.03           |               |        |
| 4233                            | 36.27  | Horizontal   | -65.73           |               |        |
| _                               | 449.85   | н            | -70.13           |               |        |
|                                 | 1418.16  | н            | -54.58           |               | _      |
|                                 | 1692.55  | н            | 1                | -13.00        | Pass   |
|                                 | 4996.14  | н            | -52.81           |               |        |
|                                 | 8004.46  | Н            | -47.65           |               |        |

Remark:

1. The emission behaviour belongs to narrowband spurious emission.

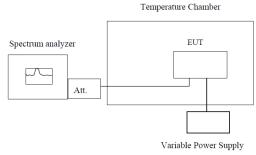
2. The emission levels of not record in the report are very lower than the limit and not show in test report.

# 5.7. Frequency stability V.S. Temperature measurement

LIMIT

2.5ppm

# **TEST CONFIGURATION**



Note: Measurement setup for testing on Antenna connector

## TEST PROCEDURE

- 1. The equipment under test was connected to an external DC power supply and input rated voltage.
- 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.
- 3. The EUT was placed inside the temperature chamber.
- 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°Coperating frequency as reference frequency.
- Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.
- 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

## TEST MODE:

Please refer to the clause 3.3

#### **TEST RESULTS**

☑ Passed □ Not Applicable

Note:Worst case at GSM850/PCS1900/WCDMA B2/B5 mid channel

| Refe           | erence Frequency: G  | SM850 Middle cha | annel=190 chanr | el=836.6MHz  |        |
|----------------|----------------------|------------------|-----------------|--------------|--------|
| Power supplied | Temperature (°C)     | Frequency error  |                 | Limit (ppm)  | Result |
| (Vdc)          | Temperature ( C)     | Hz               | ppm             | Einin (ppin) | Result |
|                | -30                  | 27               | 0.032           |              |        |
|                | -20                  | 28               | 0.033           |              |        |
|                | -10                  | 26               | 0.031           |              |        |
|                | 0                    | 28               | 0.033           |              |        |
| 3.80           | 10                   | 27               | 0.032           | 2.50         | Pass   |
|                | 20                   | 28               | 0.033           |              |        |
|                | 30                   | 29               | 0.035           |              |        |
|                | 40                   | 26               | 0.031           | -            |        |
|                | 50                   | 25               | 0.030           |              |        |
| Refe           | erence Frequency: PC | CS1900 Middle ch | annel=661 chan  | nel=1880MHz  |        |
| Power supplied | Temperature (°C)     | Frequency error  |                 | Limit (ppm)  | Result |
| (Vdc)          |                      | Hz ppm           |                 | сппп (ррпп)  | Result |
|                | -30                  | 28               | 0.015           |              |        |
|                | -20                  | 29               | 0.015           |              |        |
|                | -10                  | 26               | 0.014           |              |        |
|                | 0                    | 26               | 0.014           |              |        |
| 3.80           | 10                   | 28               | 0.015           | 2.50         | Pass   |
|                | 20                   | 25               | 0.013           |              |        |
|                | 30                   | 28               | 0.015           |              |        |
|                | 40                   | 27               | 0.014           |              |        |
|                | 50                   | 29               | 0.015           |              |        |

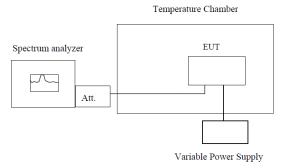
| Referen        | ce Frequency: WCDN | /A Band II Middle | channel=9400 cl | nannel=1880MH  | Z      |
|----------------|--------------------|-------------------|-----------------|----------------|--------|
| Power supplied | Temperature (°C)   | Frequer           | cy error        | Limit (ppm)    | Result |
| (Vdc)          | Temperature ( C)   | Hz                | ppm             | Einin (ppin)   | Result |
|                | -30                | 11                | 0.006           |                |        |
|                | -20                | 13                | 0.007           |                |        |
|                | -10                | 12                | 0.006           |                |        |
|                | 0                  | 14                | 0.007           |                |        |
| 3.80           | 10                 | 12                | 0.006           | 2.50           | Pass   |
|                | 20                 | 14                | 0.007           |                |        |
|                | 30                 | 11                | 0.006           | -              |        |
|                | 40                 | 13                | 0.007           |                |        |
|                | 50                 | 10                | 0.005           |                |        |
| Reference      | ce Frequency: WCDN | IA Band V Middle  | channel=4183 ch | nannel=836.6MH | z      |
| Power supplied | Temperature (°C)   | Frequency error   |                 | Limit (ppm)    | Result |
| (Vdc)          | Temperature ( C)   | Hz                | ppm             | Limit (ppm)    | Result |
|                | -30                | 15                | 0.018           |                |        |
|                | -20                | 17                | 0.020           |                |        |
|                | -10                | 17                | 0.020           |                |        |
|                | 0                  | 16                | 0.019           |                |        |
| 3.80           | 10                 | 18                | 0.022           | 2.50           | Pass   |
|                | 20                 | 16                | 0.019           |                |        |
|                | 30                 | 19                | 0.023           | 1              |        |
|                | 40                 | 16                | 0.019           |                |        |
|                | 50                 | 18                | 0.022           |                |        |

# 5.8. Frequency stability V.S. Voltagemeasurement

LIMIT

2.5ppm

# **TEST CONFIGURATION**



Note: Measurement setup for testing on Antenna connector

## TEST PROCEDURE

- 1. Set chamber temperature to 25°C. Use a variable DC power source topower the EUT and set the voltage to rated voltage.
- 2. Set the spectrum analyzer RBW lowenough to obtain the desired frequency resolution and recorded the frequency.
- 3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

#### TEST MODE:

Please refer to the clause 3.3

## TEST RESULTS

🛛 Passed

Not Applicable

Note:Worst case at GSM850/PCS1900/WCDMA B2/B5 mid channel

Report No.: TRE1707003001

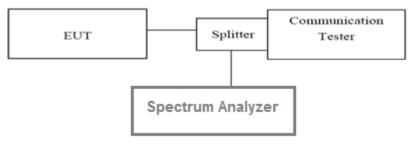
| Reference        | e Frequency: GSM85 | 0 (GSM link) Mido | lle channel=190 | channel=836.6MH | łz     |
|------------------|--------------------|-------------------|-----------------|-----------------|--------|
| Temperature (°C) | Power supplied     | Frequer           | icy error       | Limit (ppm)     | Result |
| remperature ( C) | (Vdc)              | Hz                | ppm             | Linii (ppin)    | Result |
|                  | 4.35               | 17                | 0.020           |                 |        |
| 25               | 3.80               | 14                | 0.017           | 2.50            | Pass   |
|                  | 3.60               | 16                | 0.019           |                 |        |
| Reference        | Frequency: PCS190  | 00 (GSM link) Mid | dle channel=661 | channel=1880MI  | Ηz     |
| Temperature (°C) | Power supplied     | Frequer           | cy error        | Limit (ppm)     | Result |
| remperature ( C) | (Vdc)              | Hz                | ppm             |                 | Result |
| 25               | 4.35               | 10                | 0.005           |                 |        |
|                  | 3.80               | 9                 | 0.005           | 2.50            | Pass   |
|                  | 3.60               | 8                 | 0.004           |                 |        |
| Referen          | ce Frequency: WCDM | MA Band II Middle | channel=9400 c  | hannel=1880MHz  | 2      |
| Temperature (°C) | Power supplied     | Frequer           | cy error        | Limit (         | ,      |
| remperature ( C) | (Vdc)              | Hz                | ppm             | Res             | sult   |
|                  | 4.35               | 15                | 0.008           |                 |        |
| 25               | 3.80               | 16                | 0.009           | 2.50            | Pass   |
|                  | 3.60               | 17                | 0.009           |                 |        |
| Referen          | ce Frequency: WCDN | A Band VMiddle    | channel=4183 c  | hannel=836.6MHz | 2      |
| Temperature (°C) | Power supplied     | Frequer           | icy error       | Limit (ppm)     | Result |
|                  | (Vdc)              | Hz                | ppm             | Enne (ppin)     | rtesur |
|                  | 4.35               | 24                | 0.029           |                 |        |
| 25               | 3.80               | 23                | 0.027           | 2.50            | Pass   |
|                  |                    |                   |                 |                 |        |

# 5.9. Peak-Average Ratio

LIMIT

13dB

## **TEST CONFIGURATION**



# TEST PROCEDURE

According with KDB 971168

- 1. The signal analyzer's CCDF measurement profile is enabled
- 2. Frequency = carrier center frequency
- 3. Measurement BW > Emission bandwidth of signal
- 4. The signal analyzer was set to collect one million samples to generate the CCDF curve

5. The measurement interval was set depending on the type of signal analyzed. Forcontinuoussignals(>98% duty cycle), the measurement interval was set to 1ms. For bursttransmissions, the spectrum analyzer is set to use an internal " RF Burst" trigger that issynced with an incoming pulse and the measurement interval is set to less than the duration of the " on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

## TEST MODE:

Please refer to the clause 3.3

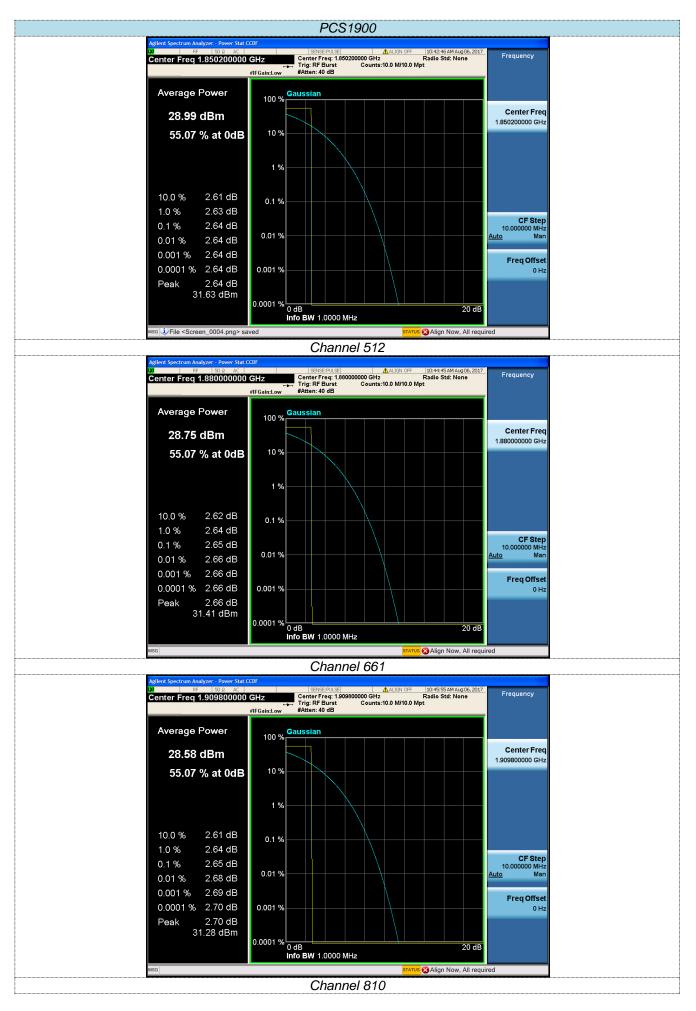
## TEST RESULTS

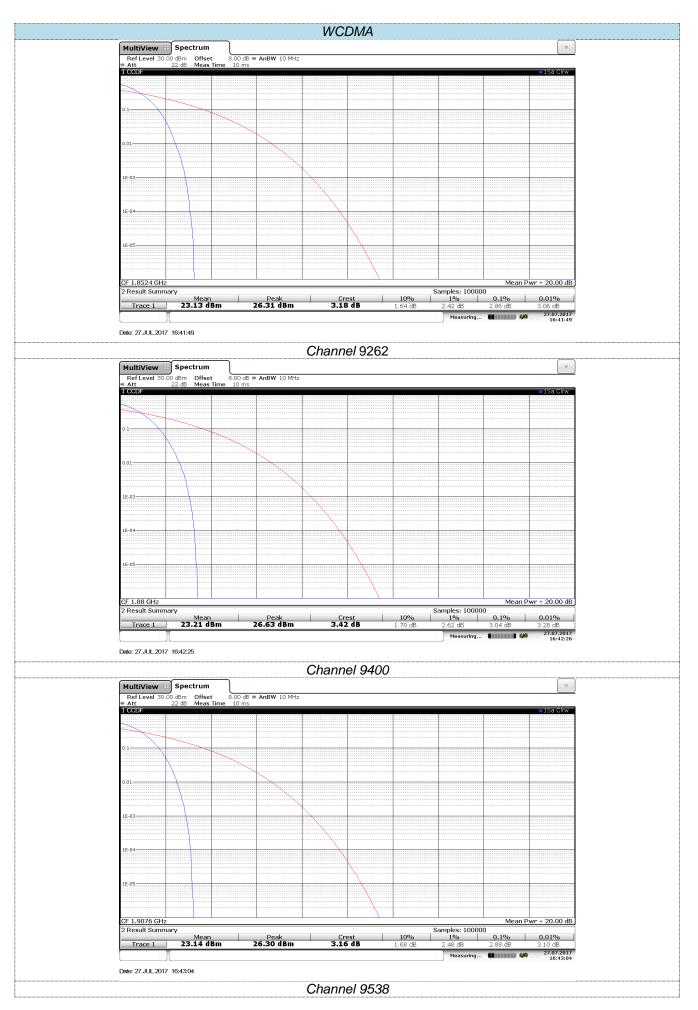
## ☑ Passed □ Not Applicable

Note:Worst case PCS1900,WCDMA BAND1900

| Band    | Channel | Frequency(MHz) | PAR  | Limit(dB) | Result |
|---------|---------|----------------|------|-----------|--------|
|         | 512     | 1850.2         | 2.64 | 13.00     | Pass   |
| PCS1900 | 661     | 1880.0         | 2.65 | 13.00     | Pass   |
|         | 810     | 1909.8         | 2.65 | 13.00     | Pass   |

| Band          | Channel | Frequency(MHz) | PAR  | Limit(dB) | Result |
|---------------|---------|----------------|------|-----------|--------|
| WCDMA BAND II | 9262    | 1852.4         | 2.86 | 13.00     | Pass   |
|               | 9400    | 1880.0         | 3.04 | 13.00     | Pass   |
|               | 9538    | 1907.6         | 2.88 | 13.00     | Pass   |

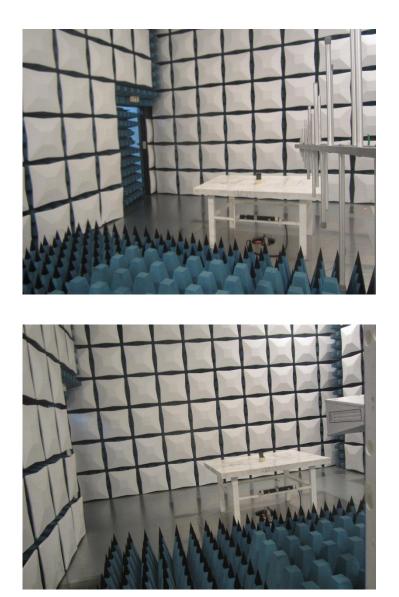


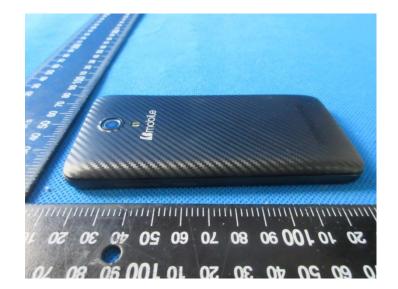


Report Template Version: H00 (2016-08)

# 6. Test Setup Photos of the EUT

Radiated emission:



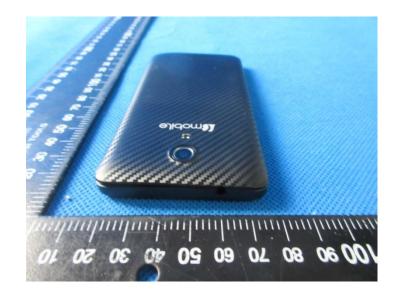






# External photos of the EUT

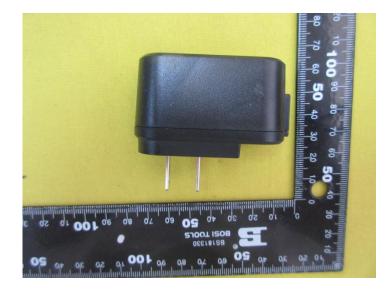
# 7. External and Internal Photos of the EUT













Report Template Version: H00 (2016-08)

# Internal photos of the EUT





