

## FCC Part 22H & 24E & 27M Test Report

Product Name : LE910C4-NF  
Trade Name :   
Model No. : LE910C4-NF  
FCC ID : RI7LE910CXNF  
IC ID : 5131A-LE910CXNF

Applicant : Telit Wireless Solutions Co., LTD  
Address : 13th Fl., Shinyoung Securities Bld, 6, Gukjegeumyung-ro 8-gil,  
Yeongdeungpo-gu, Seoul, 07330, South Korea

Date of Receipt : Jul. 16, 2018  
Issued Date : Aug. 23, 2018  
Report No. : 1870209R-HPUSP17V00  
Report Version : V1.0



The test results relate only to the samples tested.

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# Test Report Certification

Issued Date: Aug. 23, 2018

Report No.: 1870209R-HPUSP17V00



Product Name : LE910C4-NF  
Applicant : Telit Wireless Solutions Co., LTD  
Address : 13th Fl., Shinyoung Securities Bld, 6, Gukjegeumyung-ro 8-gil,  
Yeongdeungpo-gu, Seoul, 07330, South Korea  
Manufacturer : Telit Wireless Solutions Co., LTD  
Trade Name :   
Model No. : LE910C4-NF  
FCC ID : RI7LE910CXNF  
IC ID : 5131A-LE910CXNF  
EUT Voltage : DC 3.8V  
Testing Voltage : DC 3.8V  
Applicable Standard : FCC CFR Title 47 Part 2, ANSI/TIA-603-D  
FCC Part 22 Subpart H, FCC Part 24 Subpart E,  
FCC Part 27 Subpart M  
Industry Canada RSS-132, Issue 3  
Industry Canada RSS-133, Issue 6  
Industry Canada RSS-139, Issue 3  
ANSI/TIA-603-D-2010  
RSS Gen Issue 5  
Test Lab : Hsin Chu Laboratory  
Test Result : Complied

Documented By :



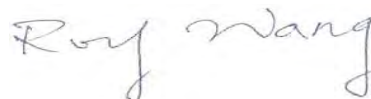
( Demi Chang / Senior Engineering Adm. Specialist )

Tested By :



( Clemens Fang / Engineer )

Approved By :



( Roy Wang / Director )

### **Revision History**

| <b>Report No.</b>   | <b>Version</b> | <b>Description</b>      | <b>Issued Date</b> |
|---------------------|----------------|-------------------------|--------------------|
| 1870209R-HPUSP17V00 | V1.0           | Initial issue of report | Aug. 23, 2018      |
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|                     |                |                         |                    |

## TABLE OF CONTENTS

| Description                               | Page |
|-------------------------------------------|------|
| 1. General Information .....              | 6    |
| 1.1. EUT Description .....                | 6    |
| 1.2. Mode of Operation .....              | 7    |
| 1.3. Tested System Details .....          | 8    |
| 1.4. Configuration of Tested System ..... | 8    |
| 1.5. EUT Exercise Software .....          | 8    |
| 2. Technical Test .....                   | 9    |
| 2.1. Summary of Test Result .....         | 9    |
| 2.2. Test Environment .....               | 11   |
| 2.3. List of Test Equipment .....         | 12   |
| 2.4. Measurement Uncertainty .....        | 14   |
| 3. RF Output Power .....                  | 15   |
| 3.1. Test Setup .....                     | 15   |
| 3.2. Test Procedure .....                 | 15   |
| 3.3. Test Method .....                    | 15   |
| 3.4. Test Result .....                    | 16   |
| 4. Occupied Bandwidth .....               | 19   |
| 4.1. Test Setup .....                     | 19   |
| 4.2. Test Procedure .....                 | 19   |
| 4.3. Test Method .....                    | 19   |
| 4.4. Test Result .....                    | 20   |
| 5. Peak To Average Ratio .....            | 56   |
| 5.1. Test Setup .....                     | 56   |
| 5.2. Test Procedure .....                 | 56   |
| 5.3. Test Method .....                    | 56   |
| 5.4. Test Result .....                    | 57   |
| 6. Conducted Band Edge .....              | 72   |
| 6.1. Test Setup .....                     | 72   |
| 6.2. Test Procedure .....                 | 72   |
| 6.3. Test Method .....                    | 72   |
| 6.4. Test Result .....                    | 73   |
| 7. Spurious Emission .....                | 85   |

|                               |                           |     |
|-------------------------------|---------------------------|-----|
| 7.1.                          | Test Setup .....          | 85  |
| 7.2.                          | Test Procedure .....      | 86  |
| 7.3.                          | Test Method .....         | 86  |
| 7.4.                          | Test Result .....         | 87  |
| 8.                            | Frequency Stability ..... | 126 |
| 8.1.                          | Test Setup .....          | 126 |
| 8.2.                          | Test Procedure .....      | 126 |
| 8.3.                          | Test Method .....         | 126 |
| 8.4.                          | Test Result .....         | 127 |
| Attachment 1.....             |                           | 136 |
| Test Setup Photograph.....    |                           | 136 |
| Attachment 2.....             |                           | 140 |
| EUT External Photograph ..... |                           | 140 |
| Attachment 3.....             |                           | 142 |
| EUT Internal Photograph ..... |                           | 142 |

## 1. General Information

### 1.1. EUT Description

|                                       |                                                                                                     |
|---------------------------------------|-----------------------------------------------------------------------------------------------------|
| Product Name                          | LE910C4-NF                                                                                          |
| Trade Name                            |                    |
| Model No.                             | LE910C4-NF                                                                                          |
| Tx Frequency Range/<br>Channel number | WCDMA Band 2: 1852.4-1907.6 MHz<br>WCDMA Band 4: 1712.4-1752.6 MHz<br>WCDMA Band 5: 826.4-846.6 MHz |
| Rx Frequency Range/<br>Channel number | WCDMA Band 2: 1932.4-1987.6 MHz<br>WCDMA Band 4: 2112.4-2152.6 MHz<br>WCDMA Band 5: 871.4-891.6 MHz |
| Type of Modulation                    | WCDMA: QPSK (Uplink); HSDPA: QPSK (Uplink);<br>HSUPA: QPSK (Uplink)                                 |
| HW Version                            | 1.00                                                                                                |
| SW (C4) Version                       | 25.20.661                                                                                           |
| SW (C1) Version                       | 25.20.261                                                                                           |
| IMEI No.                              | 354328099989383                                                                                     |

| Accessories Information |       |
|-------------------------|-------|
| Antenna                 | 3 Pcs |

| Antenna Information |                                    |
|---------------------|------------------------------------|
| Product Name        | HNS (HANKOOK NETWORK SOLUTION)     |
| Model No.           | WE14-LF-07                         |
| Antenna Type        | Dipole Antenna                     |
| Antenna Gain        | Band 2/4: 3.5dBi<br>Band 5: 1.5dBi |

**Note:**

1. This LE910C4-NF support WCDMA Band 2/4/5 and LTE Band 2/4/5/12/13/14/66/71.
2. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

## 1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

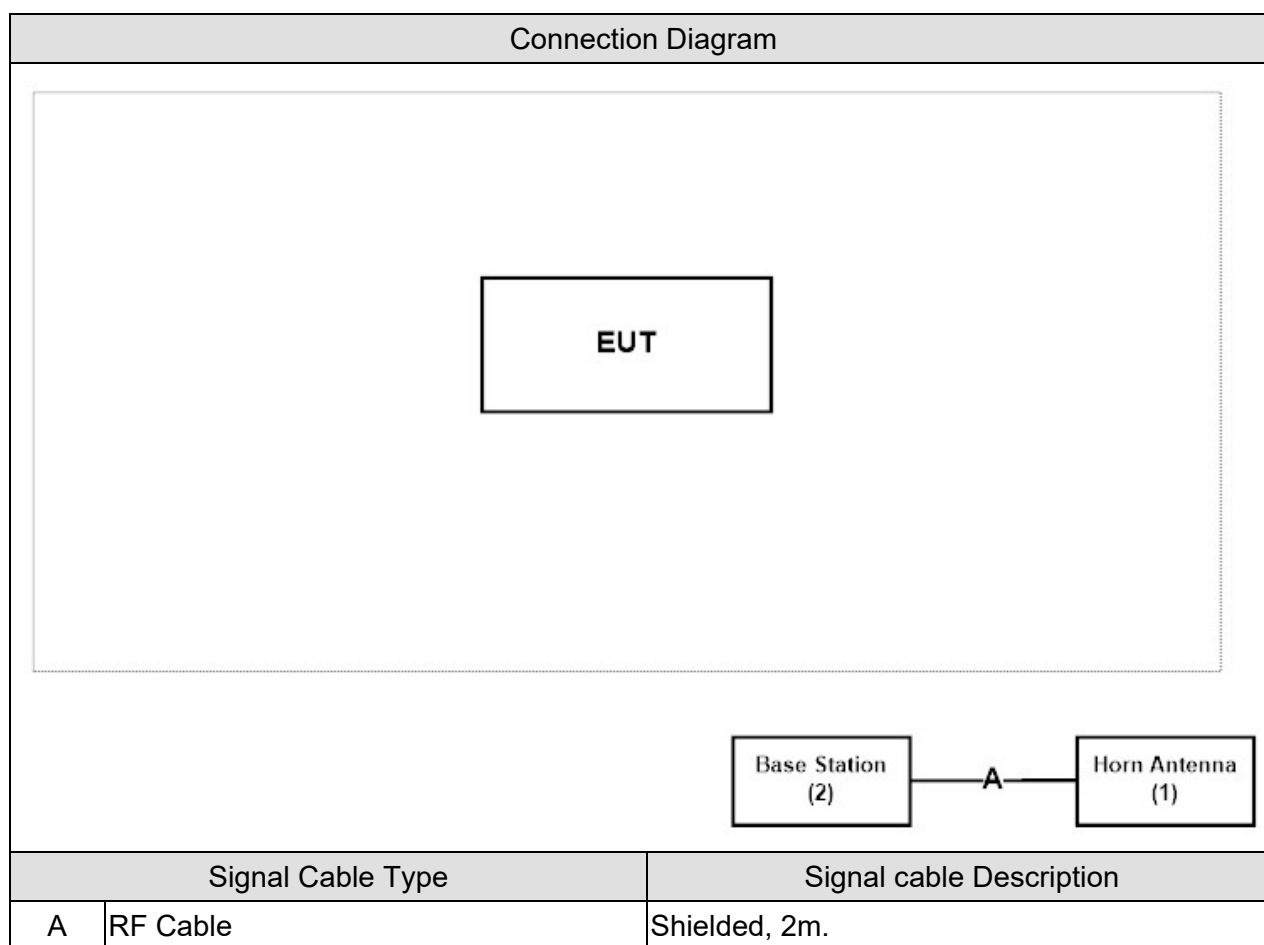
| Test Mode            |
|----------------------|
| Mode 1: WCDMA Band 2 |
| Mode 2: WCDMA Band 4 |
| Mode 3: WCDMA Band 5 |

### 1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

|   | Product      | Manufacturer    | Model No. | Serial No. | Power Cord |
|---|--------------|-----------------|-----------|------------|------------|
| 1 | Horn Antenna | ELECTRO METRICS | EM-6961   | 103326     | --         |
| 2 | Base Station | R&S             | CMW500    | 106071     | --         |

### 1.4. Configuration of Tested System



### 1.5. EUT Exercise Software

|   |                                                                         |
|---|-------------------------------------------------------------------------|
| 1 | Setup the EUT and simulators as shown on 1.4.                           |
| 2 | Turn on the power of all equipment. Horn link with base station.        |
| 3 | The EUT link with base station and it will continue receive the signal. |
| 4 | Repeat the above procedure.                                             |

## 2. Technical Test

### 2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

#### For WCDMA Band 2

(FCC Part 24 Subpart E, Industry Canada RSS-133, Issue 6, Industry Canada RSS-GEN)

| Performed Item        | FCC Rule   | IC Rule      | Limit       | Result |
|-----------------------|------------|--------------|-------------|--------|
| RF Output Power       | §2.1033    | §6.4         | < 2 Watts   | Pass   |
|                       | §2.1046    |              |             |        |
|                       | §24.232    |              |             |        |
| Occupied Bandwidth    | §2.1049    | RSS-GEN §4.2 | N/A         | Pass   |
| Peak To Average Ratio | §24.232(d) | §6.4         | $\leq$ 13dB | Pass   |
| Conducted Band Edge   | §27.238    | §6.5         | < -13dBm    | Pass   |
| Spurious Emission     | §2.1053    | §6.5         | < -13dBm    | Pass   |
|                       | §24.238    |              |             |        |
| Frequency Stability   | §2.1055    | §6.3         | < 2.5 ppm   | Pass   |
|                       | §24.235    |              |             |        |

**For WCDMA Band 4****(FCC Part 27 Subpart M, Industry Canada RSS-139, Issue 3, Industry Canada RSS-GEN)**

| Performed Item        | FCC Rule                                | IC Rule        | Limit          | Result |
|-----------------------|-----------------------------------------|----------------|----------------|--------|
| RF Output Power       | FCC PART 2.1046 and PART 27.50(h)(2)    | RSS -139 §6.5  | < 1 Watts EIRP | Pass   |
| Occupied Bandwidth    | FCC PART 2.1049 and PART 27.53(l)(6)    | RSS - Gen §6.6 | N/A            | Pass   |
| Peak To Average Ratio | §27.50(b)                               | §6.5           | ≤ 13dB         | Pass   |
| Conducted Band Edge   | FCC PART 2.1051 and PART 27.53(l)(4)(6) | RSS - 139 §6.6 | < -13 dBm      | Pass   |
| Spurious Emission     | FCC PART 2.1051 and PART 27.53(l)(4)(6) | RSS - 139 §6.6 | < -25 dBm      | Pass   |
| Frequency Stability   | FCC PART 2.1055(a)(l) and PART 27.54    | RSS - 139 §6.4 | < 2.5 ppm      | Pass   |

**For WCDMA Band 5****(FCC Part 22 Subpart H, Industry Canada RSS-132, Issue 3, Industry Canada RSS-GEN)**

| Performed Item        | FCC Rule                      | IC Rule      | Limit     | Result |
|-----------------------|-------------------------------|--------------|-----------|--------|
| RF Output Power       | §2.1033<br>§2.1046<br>§22.913 | §5.4         | < 7 Watts | Pass   |
| Occupied Bandwidth    | §2.1049                       | RSS-GEN §4.2 | N/A       | Pass   |
| Peak To Average Ratio | §22.913(d)                    | §5.4         | ≤ 13dB    | Pass   |
| Conducted Band Edge   | §22.917                       | §5.5         | < -13dBm  | Pass   |
| Spurious Emission     | §2.1053<br>§22.917            | §5.5         | < -13dBm  | Pass   |
| Frequency Stability   | §2.1055<br>§22.335            | §5.3         | < 2.5 ppm | Pass   |

## 2.2. Test Environment

| Items                      | Test Item             | Required (IEC 68-1) | Actual   | Test Site |
|----------------------------|-----------------------|---------------------|----------|-----------|
| Temperature (°C)           | RF Output Power       | 15-35               | 23       | 3         |
| Humidity (%RH)             |                       | 25-75               | 52       |           |
| Barometric pressure (mbar) |                       | 860-1060            | 950-1000 |           |
| Temperature (°C)           | Occupied Bandwidth    | 15-35               | 23       | 3         |
| Humidity (%RH)             |                       | 25-75               | 52       |           |
| Barometric pressure (mbar) |                       | 860-1060            | 950-1000 |           |
| Temperature (°C)           | Peak To Average Ratio | 15-35               | 23       | 3         |
| Humidity (%RH)             |                       | 25-75               | 52       |           |
| Barometric pressure (mbar) |                       | 860-1060            | 950-1000 |           |
| Temperature (°C)           | Conducted Band Edge   | 15-35               | 23       | 3         |
| Humidity (%RH)             |                       | 25-75               | 52       |           |
| Barometric pressure (mbar) |                       | 860-1060            | 950-1000 |           |
| Temperature (°C)           | Spurious Emission     | 15-35               | 23       | 2/3       |
| Humidity (%RH)             |                       | 25-75               | 52       |           |
| Barometric pressure (mbar) |                       | 860-1060            | 950-1000 |           |
| Temperature (°C)           | Frequency Stability   | 15-35               | 23       | 3         |
| Humidity (%RH)             |                       | 25-75               | 52       |           |
| Barometric pressure (mbar) |                       | 860-1060            | 950-1000 |           |

Note: Test Site information refers to Laboratory Information.

## Laboratory Information

|               |                                                              |
|---------------|--------------------------------------------------------------|
| <b>USA</b>    | <b>: FCC Registration Number: TW3024</b>                     |
| <b>Canada</b> | <b>: IC Registration Number: 22397-1 / 22397-2 / 22397-3</b> |

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site :

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : [http://www.dekra.com.tw/index\\_en.aspx](http://www.dekra.com.tw/index_en.aspx)

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### 2.3. List of Test Equipment

#### RF Output Power / SR10-H

| Instrument                             | Manufacturer | Model No. | Serial No. | Cal. Date  | Next Cal. Date |
|----------------------------------------|--------------|-----------|------------|------------|----------------|
| High Speed Peak Power Meter Dual Input | Anritsu      | ML2496A   | 1602004    | 2018/01/02 | 2019/01/01     |
| Pulse Power Sensor                     | Anritsu      | MA2411B   | 1531043    | 2018/01/02 | 2019/01/01     |
| Pulse Power Sensor                     | Anritsu      | MA2411B   | 1531044    | 2018/01/02 | 2019/01/01     |
| Wideband Radio Communication Tester    | R&S          | CMW500    | 150246     | 2018/03/30 | 2019/03/29     |
| Directional Coupler                    | Agilent      | 778D      | 20402      | 2017/09/25 | 2018/09/24     |

#### Occupied Bandwidth / SR10-H

| Instrument                          | Manufacturer | Model No. | Serial No. | Cal. Date  | Next Cal. Date |
|-------------------------------------|--------------|-----------|------------|------------|----------------|
| Signal Analyzer                     | R&S          | FSVA40    | 101455     | 2017/11/21 | 2018/11/20     |
| Wideband Radio Communication Tester | R&S          | CMW500    | 150246     | 2018/03/30 | 2019/03/29     |
| Directional Coupler                 | Agilent      | 778D      | 20402      | 2017/09/25 | 2018/09/24     |

#### Peak To Average Ratio / SR10-H

| Instrument                          | Manufacturer | Model No. | Serial No. | Cal. Date  | Next Cal. Date |
|-------------------------------------|--------------|-----------|------------|------------|----------------|
| Signal Analyzer                     | R&S          | FSVA40    | 101455     | 2017/11/21 | 2018/11/20     |
| Wideband Radio Communication Tester | R&S          | CMW500    | 150246     | 2018/03/30 | 2019/03/29     |
| Directional Coupler                 | Agilent      | 778D      | 20402      | 2017/09/25 | 2018/09/24     |

#### Conducted Band Edge / SR10-H

| Instrument                          | Manufacturer | Model No. | Serial No. | Cal. Date  | Next Cal. Date |
|-------------------------------------|--------------|-----------|------------|------------|----------------|
| Signal Analyzer                     | R&S          | FSVA40    | 101455     | 2017/11/21 | 2018/11/20     |
| Wideband Radio Communication Tester | R&S          | CMW500    | 150246     | 2018/03/30 | 2019/03/29     |
| Directional Coupler                 | Agilent      | 778D      | 20402      | 2017/09/25 | 2018/09/24     |

## Conducted Spurious Emissions / SR10-H

| Instrument                             | Manufacturer | Model No. | Serial No. | Cal. Date  | Next Cal. Date |
|----------------------------------------|--------------|-----------|------------|------------|----------------|
| Signal Analyzer                        | R&S          | FSVA40    | 101455     | 2017/11/21 | 2018/11/20     |
| Wideband Radio<br>Communication Tester | R&S          | CMW500    | 150246     | 2018/03/30 | 2019/03/29     |
| Directional Coupler                    | Agilent      | 778D      | 20402      | 2017/09/25 | 2018/09/24     |

## Radiated Spurious Emissions / CB2-H, CB4-H

| Instrument          | Manufacturer | Model No.  | Serial No. | Cal. Date  | Next Cal. Date |
|---------------------|--------------|------------|------------|------------|----------------|
| Signal Analyzer     | R&S          | FSVA40     | 101455     | 2017/11/21 | 2018/11/20     |
| Spectrum Analyzer   | R&S          | FSV40      | 101049     | 2018/01/10 | 2019/01/09     |
| EXA Signal Analyzer | Keysight     | N9010A     | MY51440132 | 2018/03/05 | 2019/03/04     |
| Bilog Antenna       | Teseq        | CBL6112D   | 23191      | 2018/06/26 | 2019/06/25     |
| Horn Antenna        | Schwarzbeck  | BBHA 9120D | 639        | 2018/06/01 | 2019/05/31     |
| Horn Antenna        | Schwarzbeck  | BBHA 9170  | 202        | 2018/01/31 | 2019/01/30     |
| Pre-Amplifier       | DEKRA.       | AP-025C    | 201801235  | 2018/03/12 | 2019/03/11     |
| Pre-Amplifier       | EMCI         | EMCI 1830I | 980366     | 2018/01/08 | 2019/01/07     |
| Pre-Amplifier       | Dekra        | AP-400C    | 201801231  | 2017/12/13 | 2018/12/12     |

## Frequency Stability / SR10-H

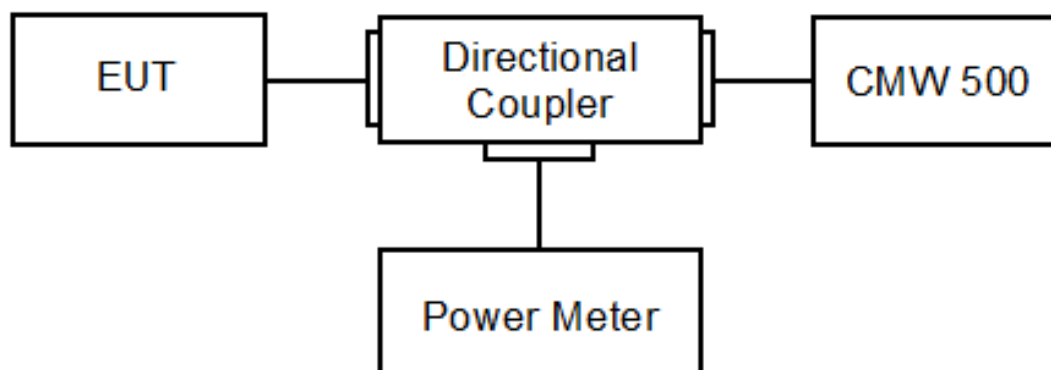
| Instrument                             | Manufacturer | Model No. | Serial No. | Cal. Date  | Next Cal. Date |
|----------------------------------------|--------------|-----------|------------|------------|----------------|
| Signal Analyzer                        | R&S          | FSVA40    | 101455     | 2017/11/21 | 2018/11/20     |
| Wideband Radio<br>Communication Tester | R&S          | CMW500    | 150246     | 2018/03/30 | 2019/03/29     |
| Temperature & Humidity<br>Chamber      | WIT          | TH-1S-B   | 1082101    | 2018/01/23 | 2019/01/22     |

## 2.4. Measurement Uncertainty

| Test Item             | Uncertainty                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RF Output Power       | $\pm 1.27\text{dB}$                                                                                                                                                                  |
| Occupied Bandwidth    | $\pm 10\text{ Hz}$                                                                                                                                                                   |
| Peak To Average Ratio | In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13dB.                                   |
| Conducted Band Edge   | $\pm 1.2\text{ dB}$                                                                                                                                                                  |
| Spurious Emissions    | The measurement uncertainty is defined as $\pm 1.27\text{ dB}$ for Conducted Measurement.<br>The measurement uncertainty is defined as $\pm 3.2\text{ dB}$ for Radiated Measurement. |
| Frequency Stability   | $\pm 10\text{ Hz}$                                                                                                                                                                   |

### 3. RF Output Power

#### 3.1. Test Setup



#### 3.2. Test Procedure

- The RF output of the transmitter was connected to base station simulator.
- The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- Set EUT at maximum average power by base station simulator.
- Measure lowest, middle, and highest channels for each bandwidth and different modulation.

Effective Isotropic Radiated Power = Conducted Power(dBm) + Antenna Gain(dBi)

Effective Radiated Power = Conducted Power(dBm) + Antenna Gain(dBi) - 2.15dB

#### 3.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 5.2.4

ANSI C63.26-2015 Sub-clause 5.2.4.2

### 3.4. Test Result

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | RF Output Power      |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/08           | Test Site | SR10-H |

| WCDMA_Band 2_RMC   |                                    |                             |                   |
|--------------------|------------------------------------|-----------------------------|-------------------|
| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>EIRP |
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                   |
| 1852.4             | 24.54                              | 0.637                       | 2                 |
| 1880               | 24.74                              | 0.667                       | 2                 |
| 1907.6             | 24.38                              | 0.614                       | 2                 |

| WCDMA_Band 2_HSUPA |                                    |                             |                   |
|--------------------|------------------------------------|-----------------------------|-------------------|
| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>EIRP |
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                   |
| 1852.4             | 22.35                              | 0.385                       | 2                 |
| 1880               | 22.53                              | 0.401                       | 2                 |
| 1907.6             | 22.21                              | 0.372                       | 2                 |

| WCDMA_Band 2_HSDPA |                                    |                             |                   |
|--------------------|------------------------------------|-----------------------------|-------------------|
| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>EIRP |
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                   |
| 1852.4             | 21.86                              | 0.344                       | 2                 |
| 1880               | 22.11                              | 0.364                       | 2                 |
| 1907.6             | 21.93                              | 0.349                       | 2                 |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | RF Output Power      |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/08           | Test Site | SR10-H |

## WCDMA\_Band 4\_RMC

| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>EIRP |
|--------------------|------------------------------------|-----------------------------|-------------------|
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                   |
| 1712.4             | 25.10                              | 0.724                       | 1                 |
| 1732.6             | 25.07                              | 0.719                       | 1                 |
| 1752.6             | 24.82                              | 0.679                       | 1                 |

## WCDMA\_Band 4\_HSUPA

| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>EIRP |
|--------------------|------------------------------------|-----------------------------|-------------------|
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                   |
| 1712.4             | 22.51                              | 0.399                       | 1                 |
| 1732.6             | 22.85                              | 0.432                       | 1                 |
| 1752.6             | 22.65                              | 0.412                       | 1                 |

## WCDMA\_Band 4\_HSDPA

| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>EIRP |
|--------------------|------------------------------------|-----------------------------|-------------------|
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                   |
| 1712.4             | 22.35                              | 0.385                       | 1                 |
| 1732.6             | 22.47                              | 0.395                       | 1                 |
| 1752.6             | 22.44                              | 0.393                       | 1                 |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | RF Output Power      |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/08           | Test Site | SR10-H |

## WCDMA\_Band 5\_RMC

| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>ERP |
|--------------------|------------------------------------|-----------------------------|------------------|
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                  |
| 826.4              | 24.94                              | 0.622                       | 7                |
| 836.6              | 25.04                              | 0.637                       | 7                |
| 846.6              | 25.14                              | 0.652                       | 7                |

## WCDMA\_Band 5\_HSUPA

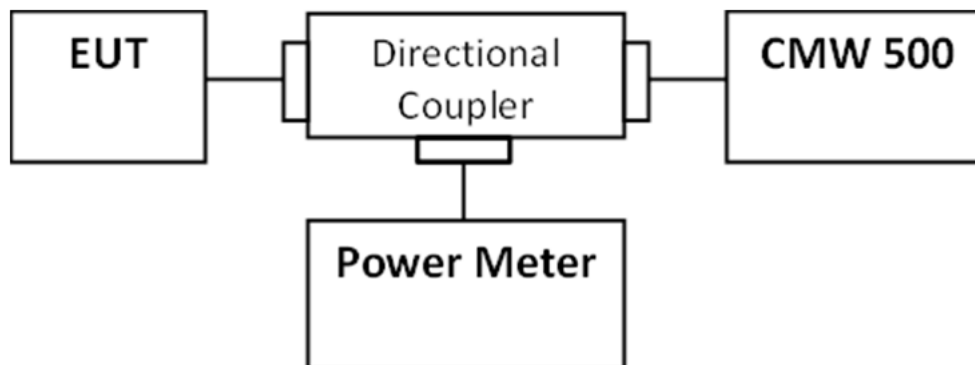
| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>ERP |
|--------------------|------------------------------------|-----------------------------|------------------|
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                  |
| 826.4              | 22.91                              | 0.390                       | 7                |
| 836.6              | 22.93                              | 0.392                       | 7                |
| 846.6              | 22.78                              | 0.378                       | 7                |

## WCDMA\_Band 5\_HSDPA

| Frequency<br>(MHz) | Average Power                      |                             | Limit (W)<br>ERP |
|--------------------|------------------------------------|-----------------------------|------------------|
|                    | Conducted Output<br>Power<br>(dBm) | RF Output Power (W)<br>EIRP |                  |
| 826.4              | 22.30                              | 0.339                       | 7                |
| 836.6              | 22.41                              | 0.348                       | 7                |
| 846.6              | 22.59                              | 0.362                       | 7                |

## 4. Occupied Bandwidth

### 4.1. Test Setup



### 4.2. Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The 26 dB bandwidth and 99% occupied bandwidth of the low & middle & high channel for the highest RF powers were measured.

### 4.3. Test Method

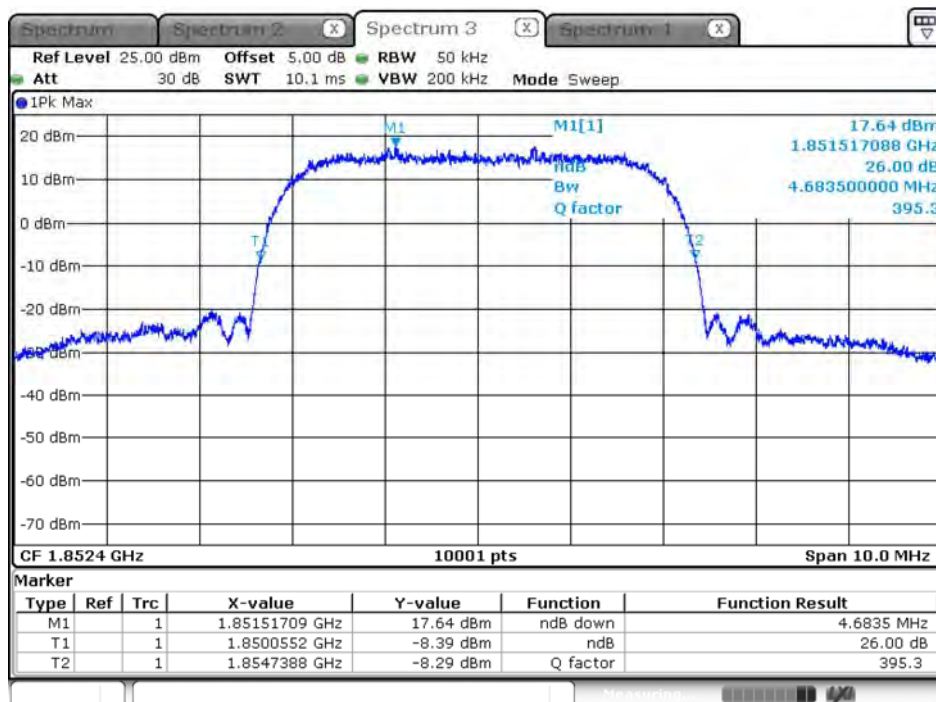
KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 4.2 & 4.3

ANSI C63.26-2015 Sub-clause 5.4.3 & 5.4.4

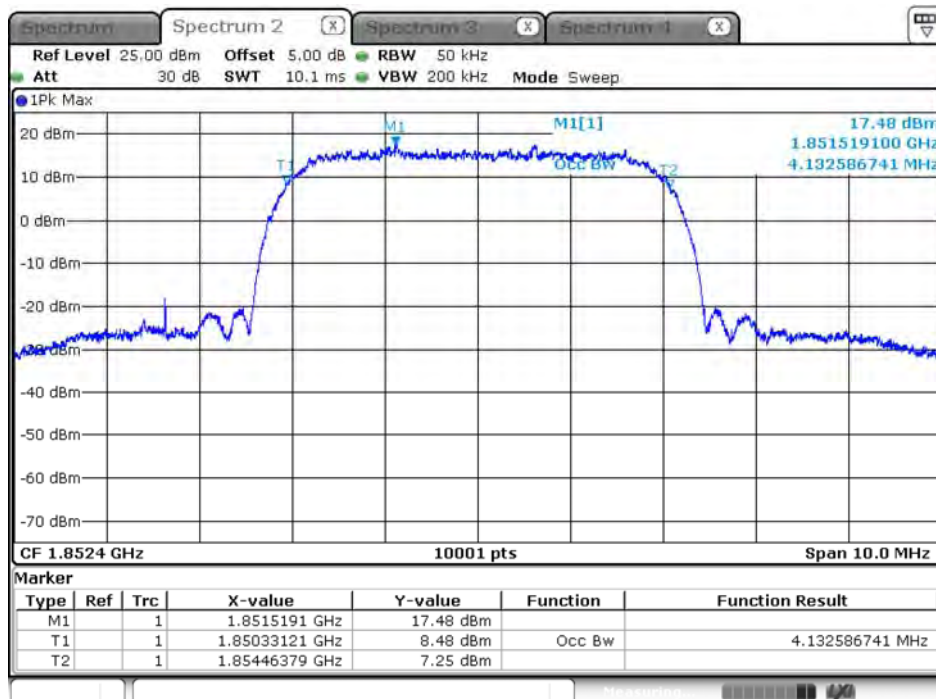
#### 4.4. Test Result

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/06           | Test Site | SR10-H |

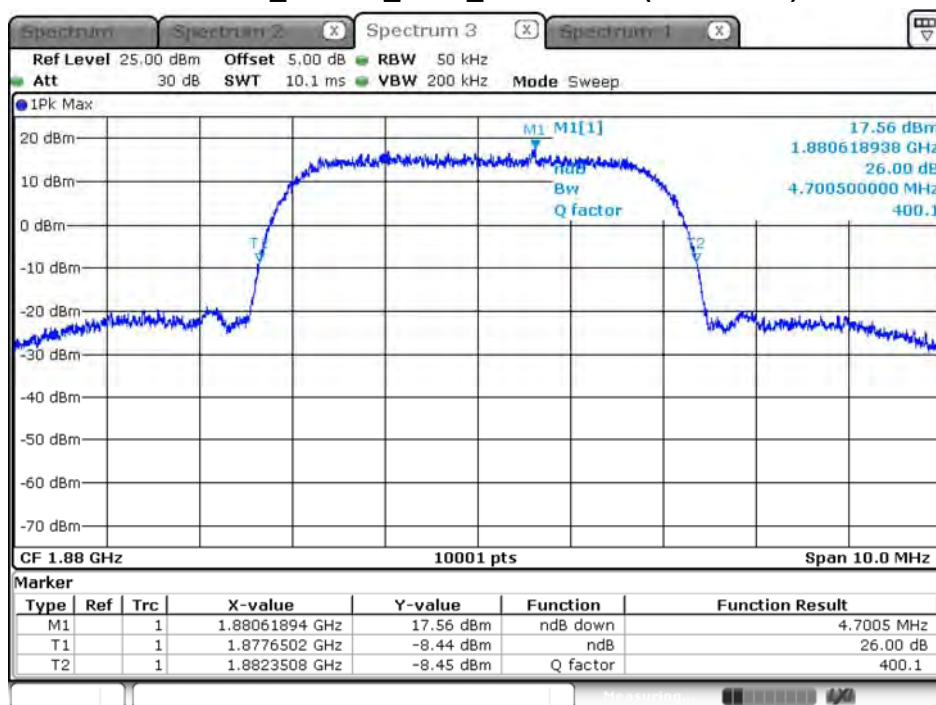
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 2_RMC   |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 1852.4             | 4.683                           | 4.132                         | N/A            |
| 1880               | 4.700                           | 4.138                         | N/A            |
| 1907.6             | 4.693                           | 4.128                         | N/A            |

**WCDMA\_Band 2\_RMC\_1852.4MHz (-26dB BW)**

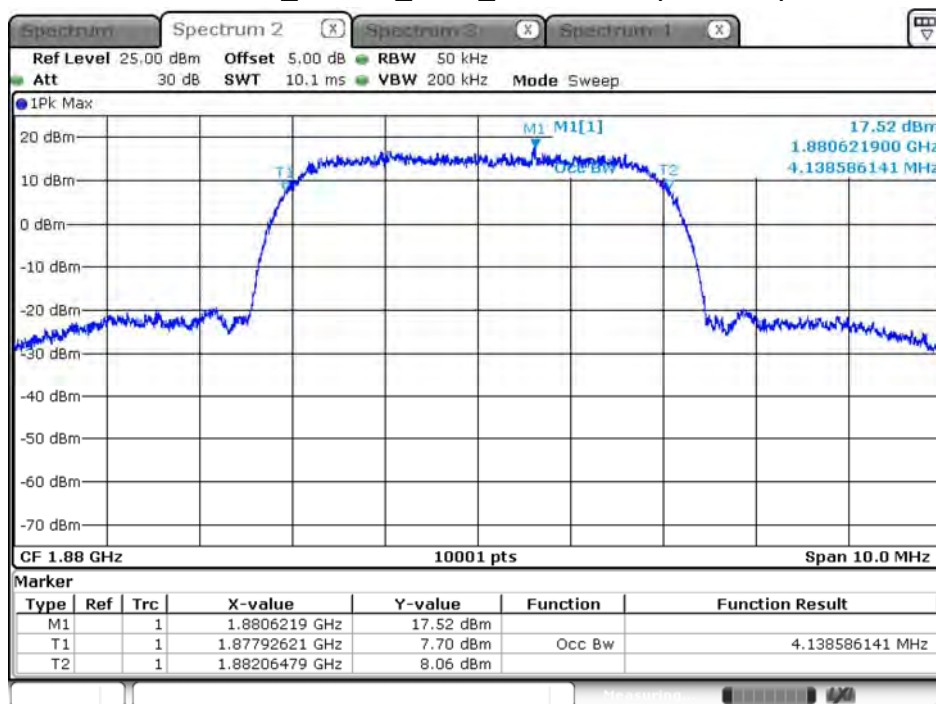
Date: 6.AUG.2018 17:01:13

**WCDMA\_Band 2\_RMC\_1852.4MHz (99% BW)**

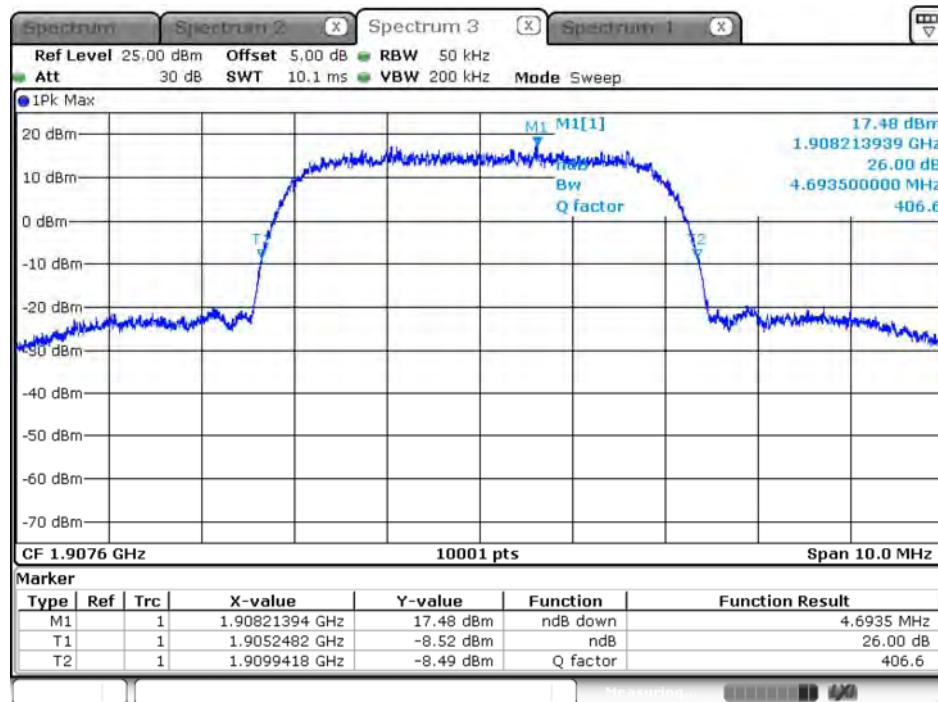
Date: 6.AUG.2018 17:00:45

**WCDMA\_Band 2\_RMC\_1880.0MHz (-26dB BW)**

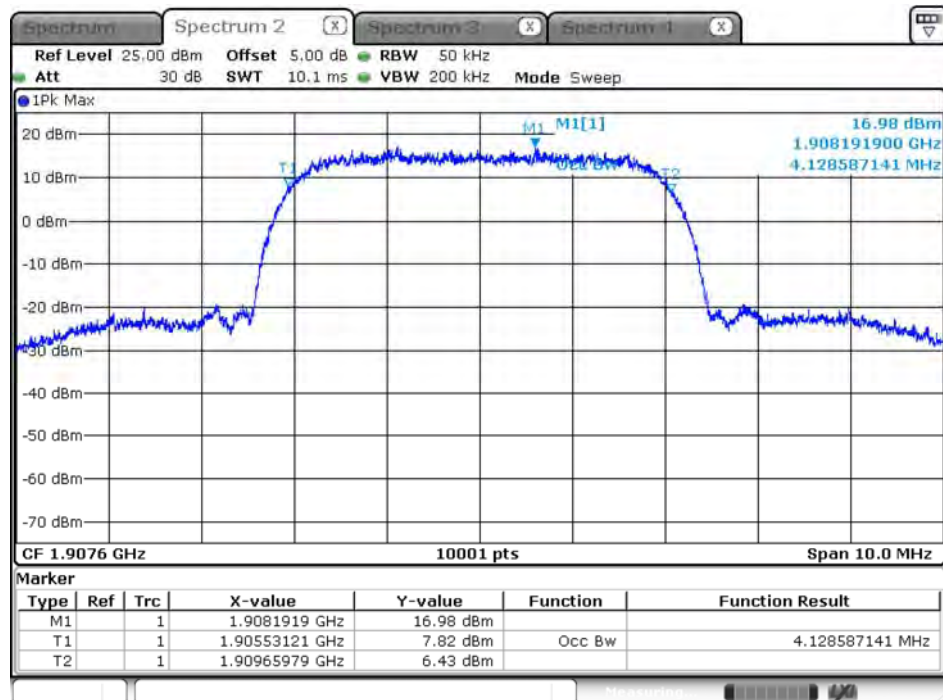
Date: 6.AUG.2018 17:04:13

**WCDMA\_Band 2\_RMC\_1880.0MHz (99% BW)**

Date: 6.AUG.2018 17:03:56

**WCDMA\_Band 2\_RMC\_1907.6MHz (-26dB BW)**

Date: 6.AUG.2018 17:06:02

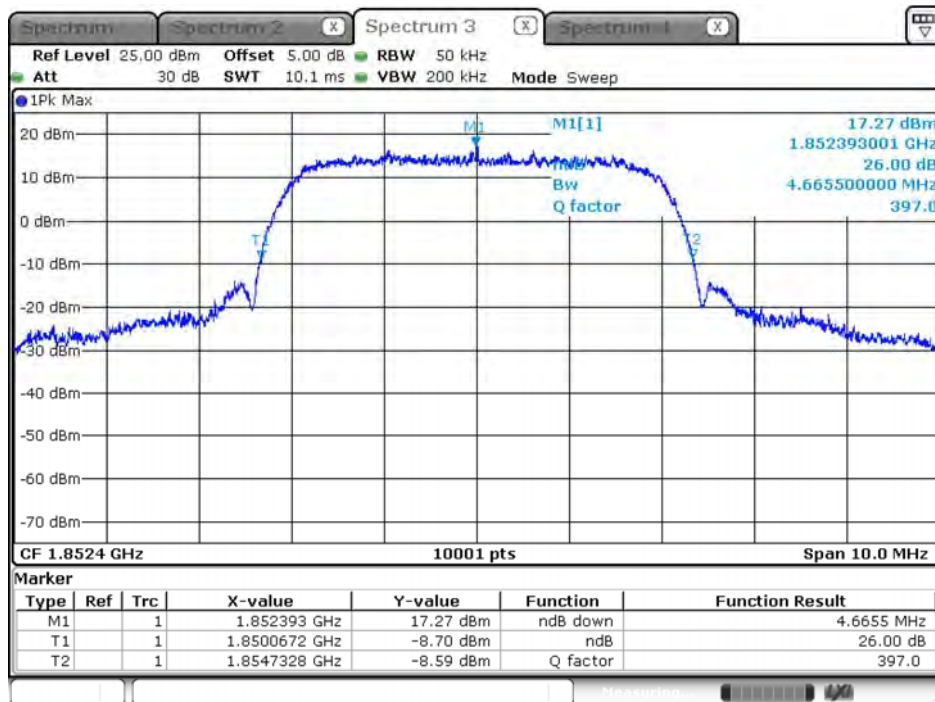
**WCDMA\_Band 2\_RMC\_1907.6MHz (99% BW)**

Date: 6.AUG.2018 17:05:47

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/06           | Test Site | SR10-H |

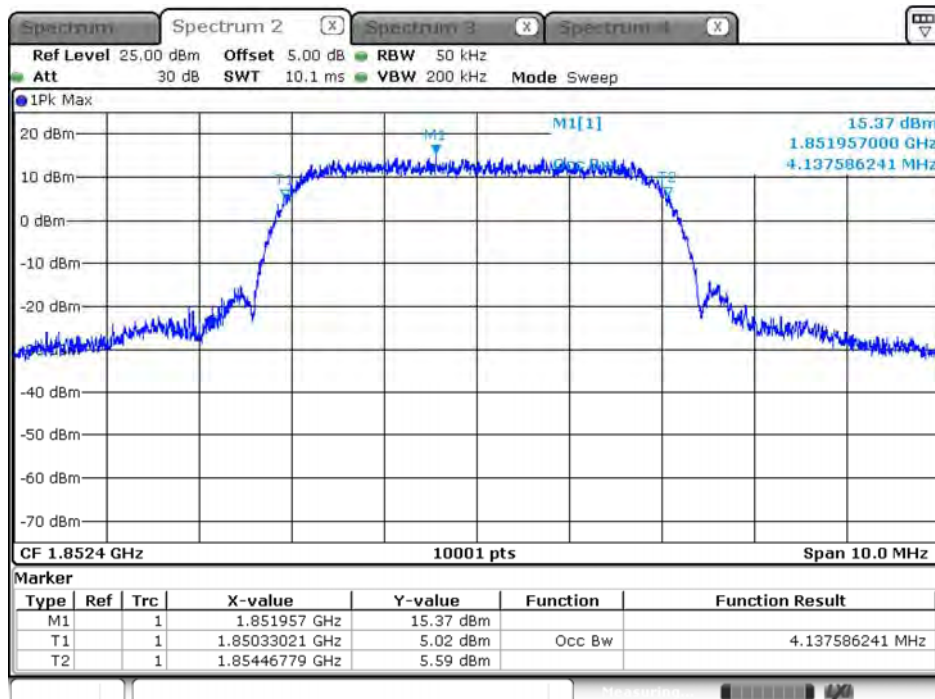
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 2_HSDPA |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 1852.4             | 4.665                           | 4.137                         | N/A            |
| 1880               | 4.651                           | 4.133                         | N/A            |
| 1907.6             | 4.672                           | 4.133                         | N/A            |

## WCDMA\_Band 2\_HSDPA\_1852.4MHz (-26dB BW)



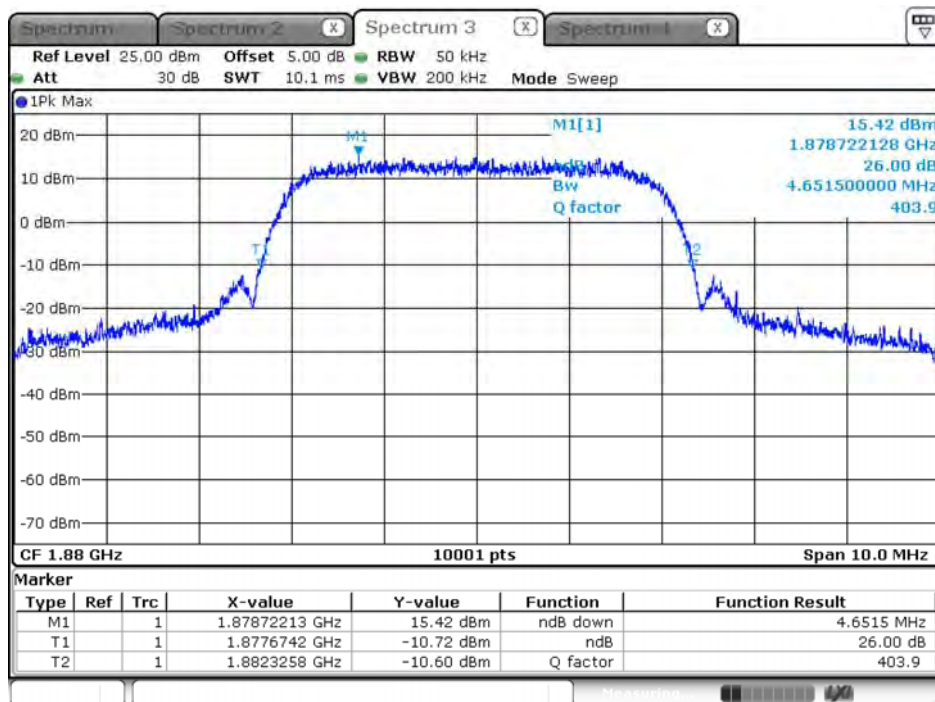
Date: 6.AUG.2018 17:22:54

## WCDMA\_Band 2\_HSDPA\_1852.4MHz (99% BW)



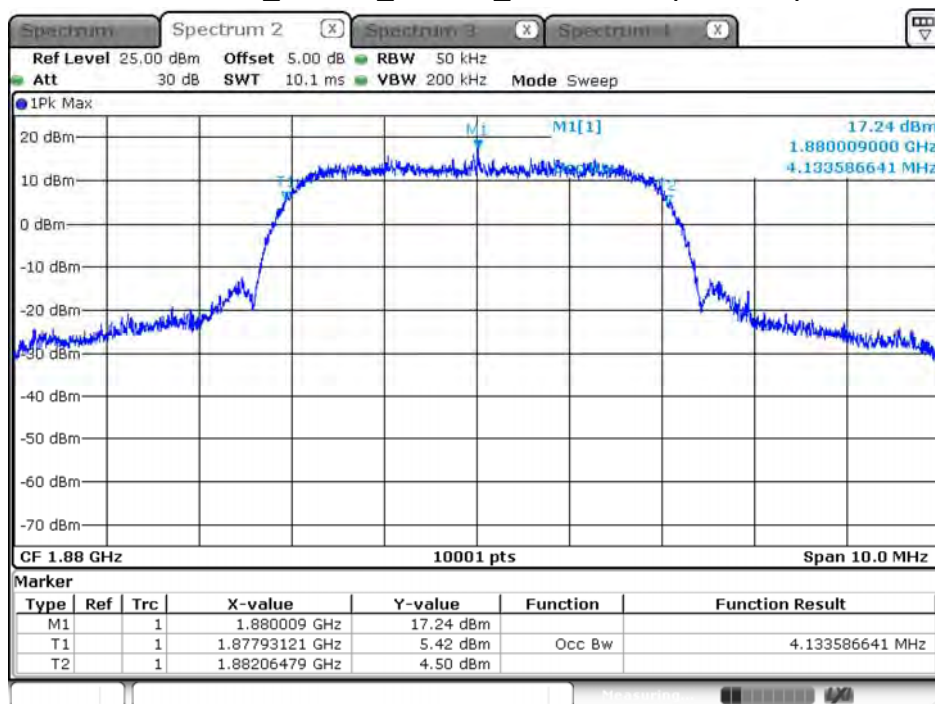
Date: 6.AUG.2018 17:18:58

## WCDMA\_Band 2\_HSDPA\_1880.0MHz (-26dB BW)

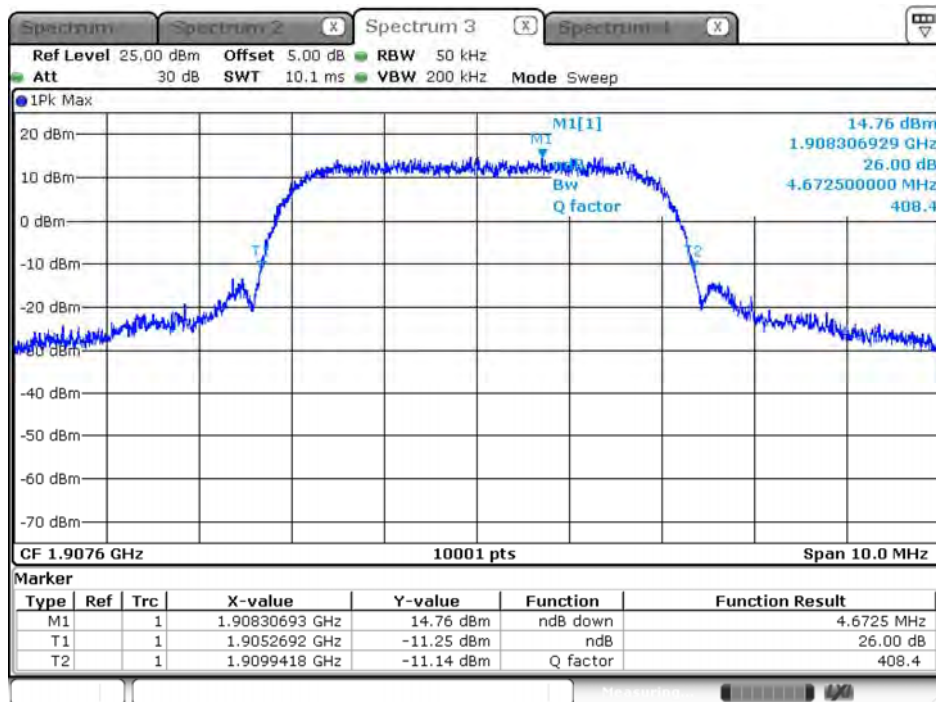


Date: 6.AUG.2018 17:25:06

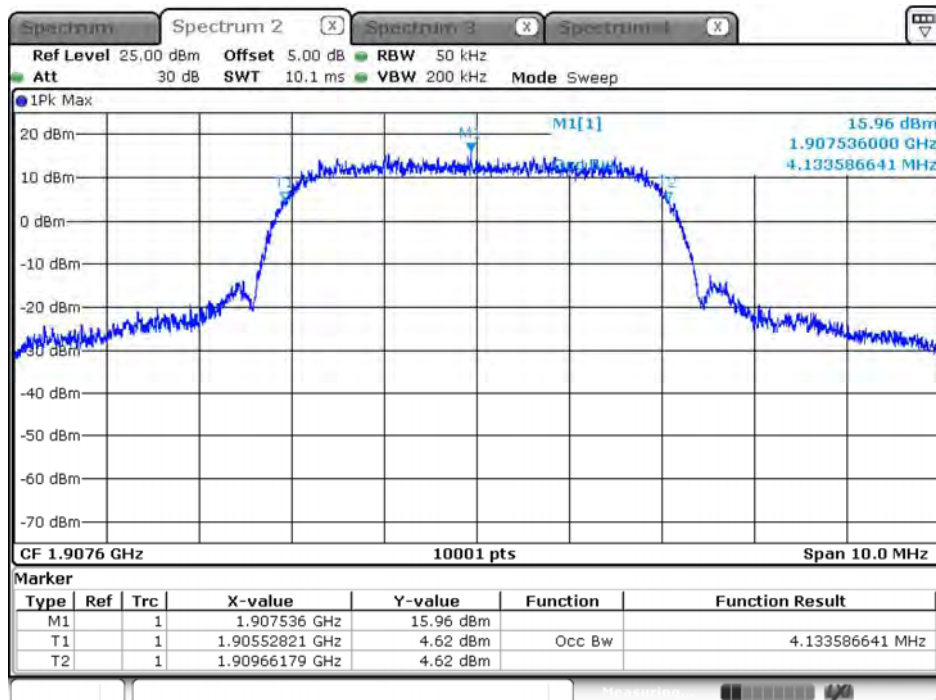
## WCDMA\_Band 2\_HSDPA\_1880.0MHz (99% BW)



Date: 6.AUG.2018 17:24:32

**WCDMA\_Band 2\_HSDPA\_1907.6MHz (-26dB BW)**

Date: 6.AUG.2018 17:27:00

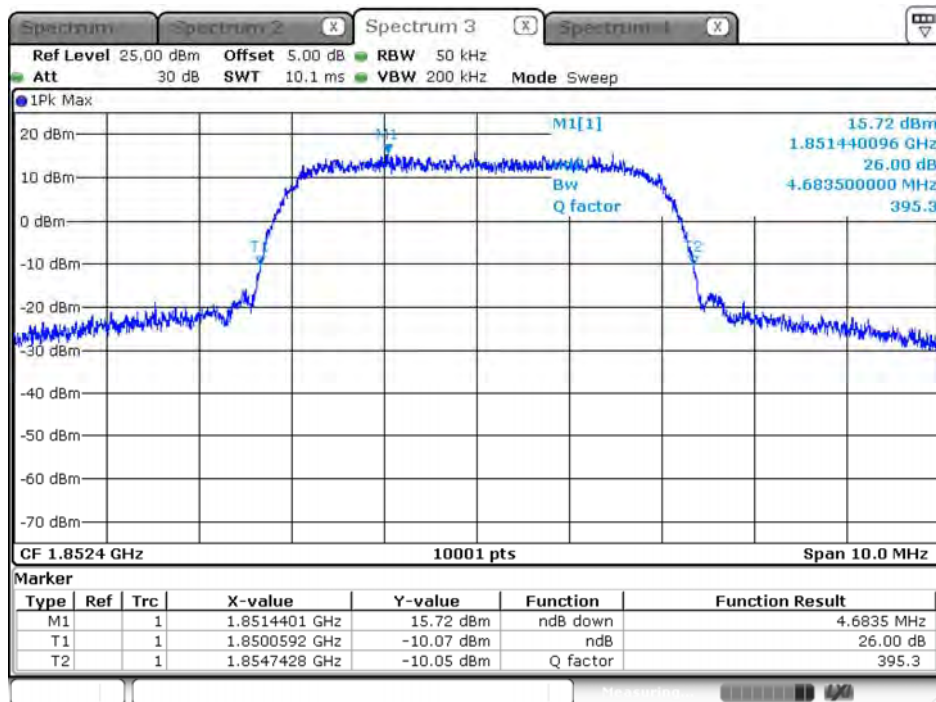
**WCDMA\_Band 2\_HSDPA\_1907.6MHz (99% BW)**

Date: 6.AUG.2018 17:26:30

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/06           | Test Site | SR10-H |

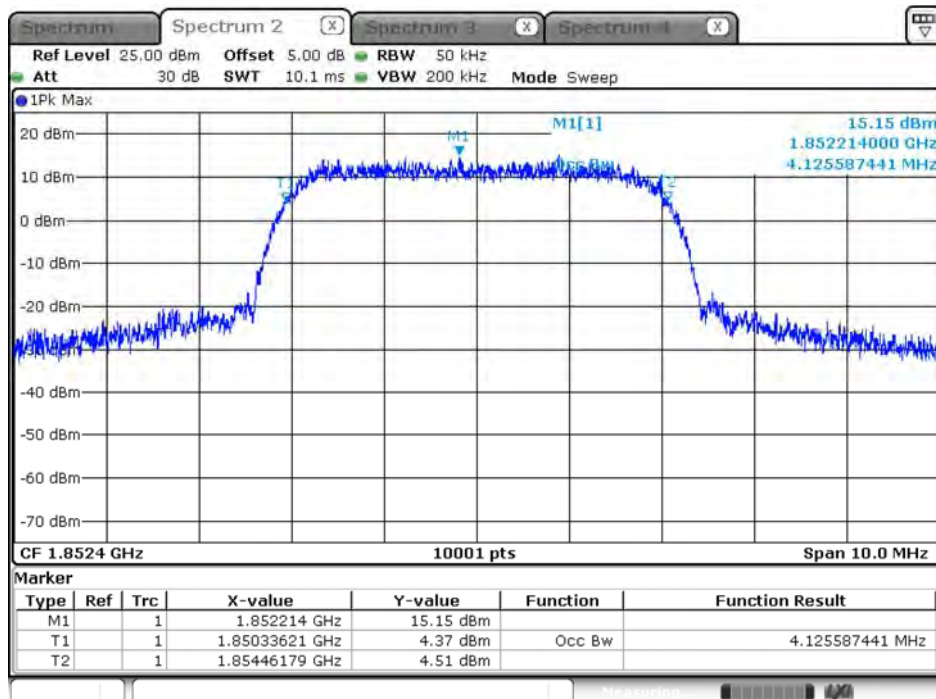
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 2_HSUPA |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 1852.4             | 4.683                           | 4.125                         | N/A            |
| 1880               | 4.662                           | 4.136                         | N/A            |
| 1907.6             | 4.627                           | 4.133                         | N/A            |

## WCDMA\_Band 2\_HSUPA\_1852.4MHz (-26dB BW)

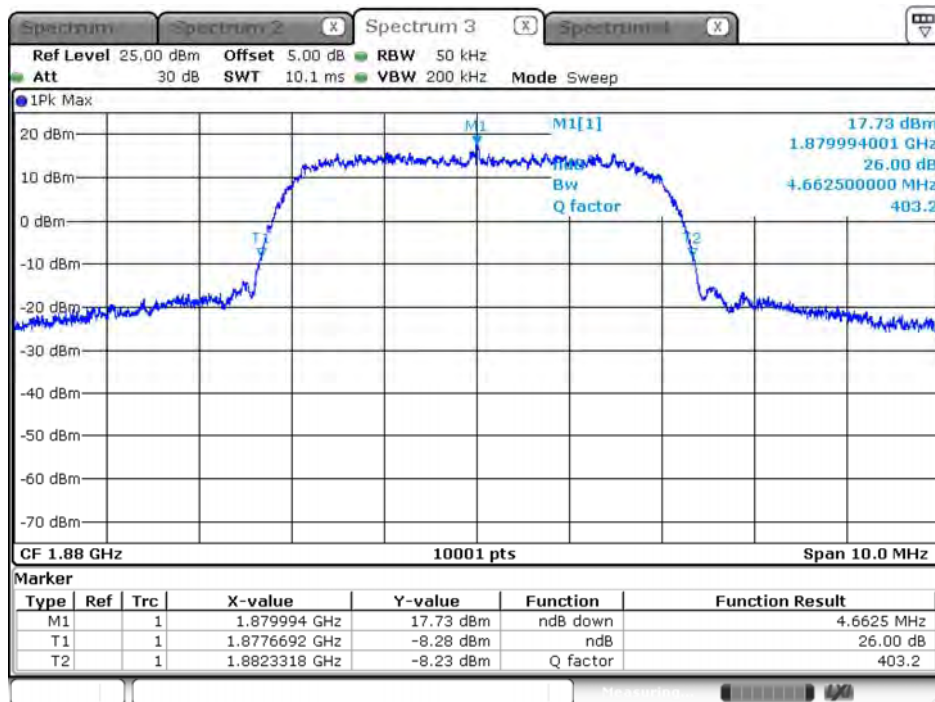


Date: 6.AUG.2018 17:15:08

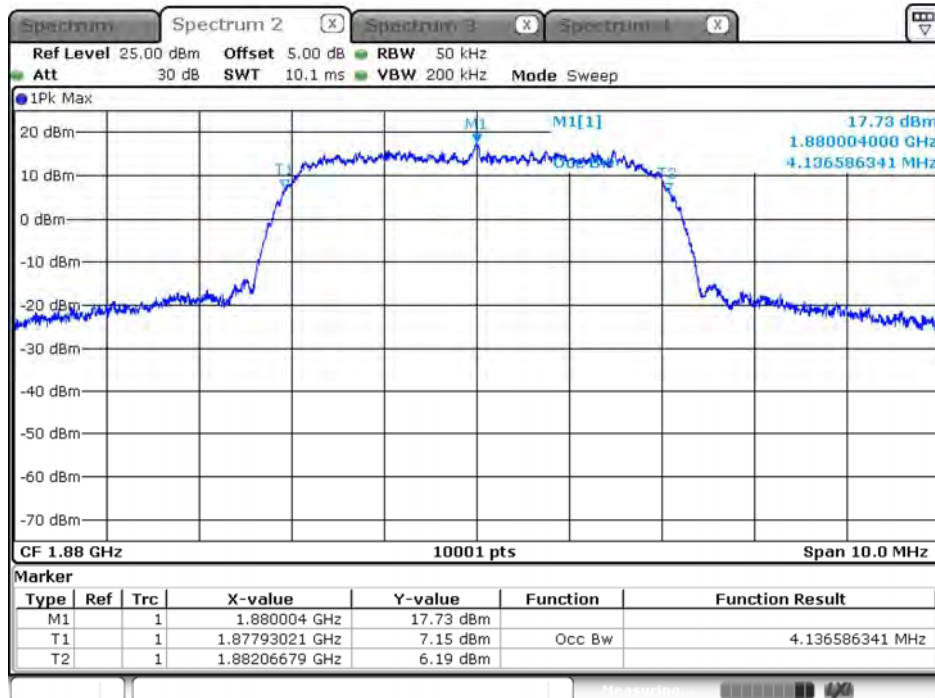
## WCDMA\_Band 2\_HSUPA\_1852.4MHz (99% BW)



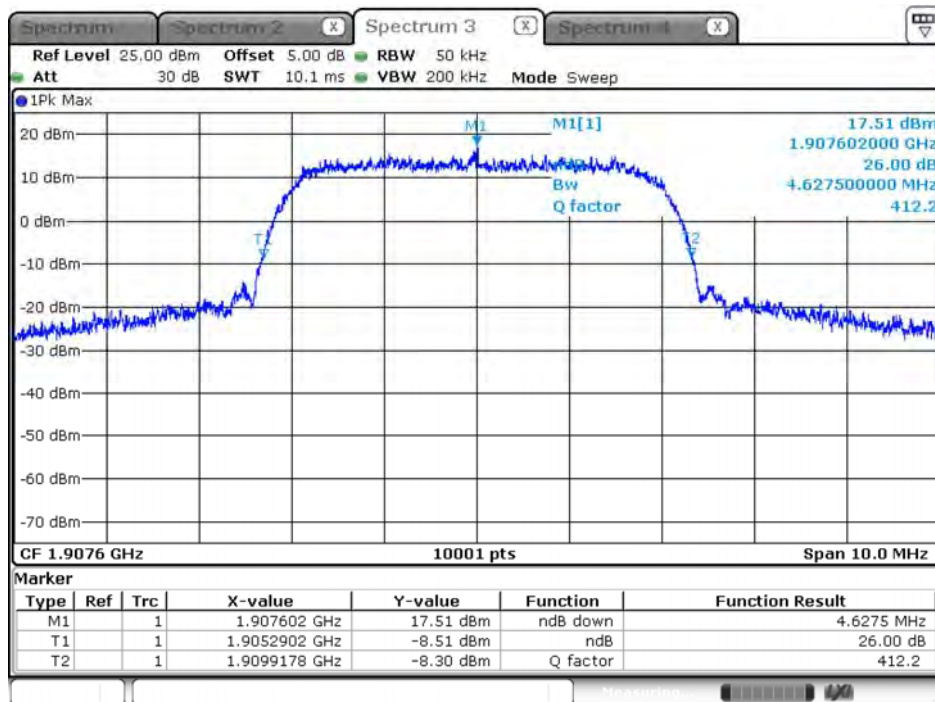
Date: 6.AUG.2018 17:15:37

**WCDMA\_Band 2\_HSUPA\_1880.0MHz (-26dB BW)**

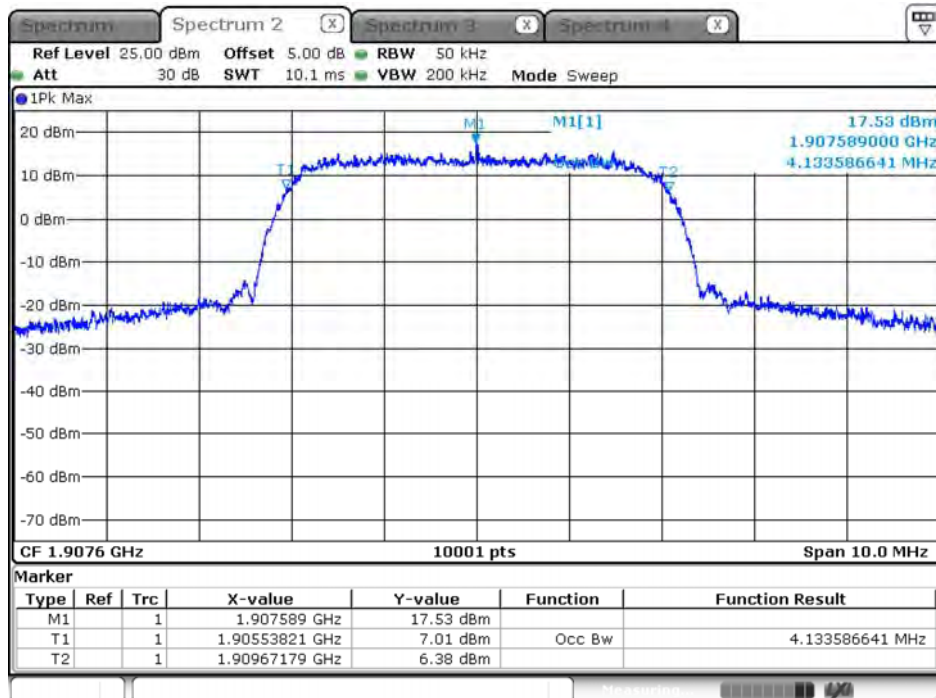
Date: 6.AUG.2018 17:12:05

**WCDMA\_Band 2\_HSUPA\_1880.0MHz (99% BW)**

Date: 6.AUG.2018 17:10:45

**WCDMA\_Band 2\_HSUPA\_1907.6MHz (-26dB BW)**

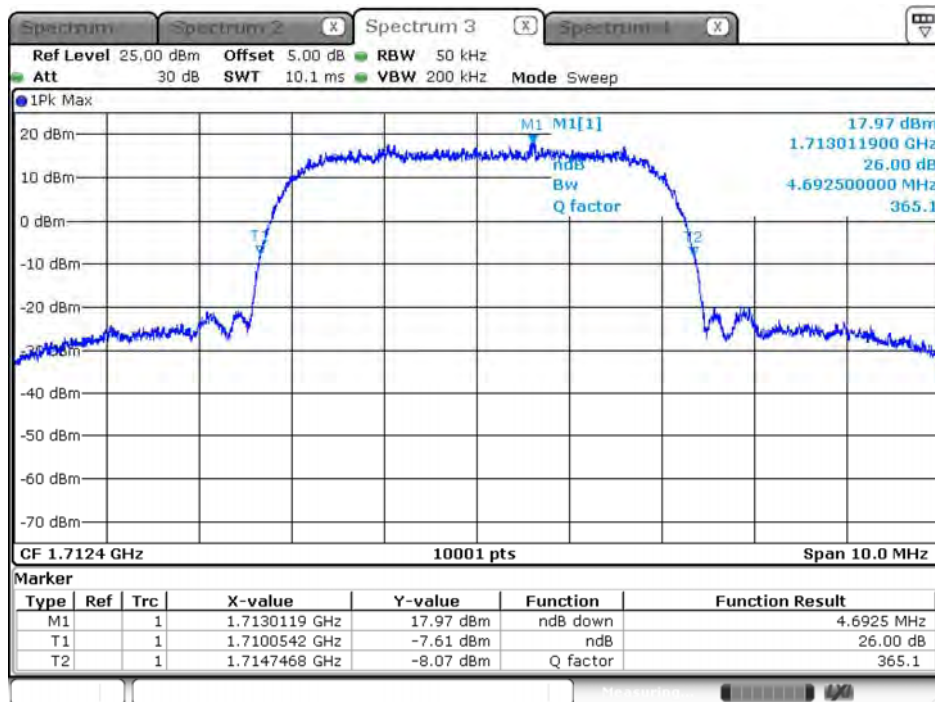
Date: 6.AUG.2018 17:08:12

**WCDMA\_Band 2\_HSUPA\_1907.6MHz (99% BW)**

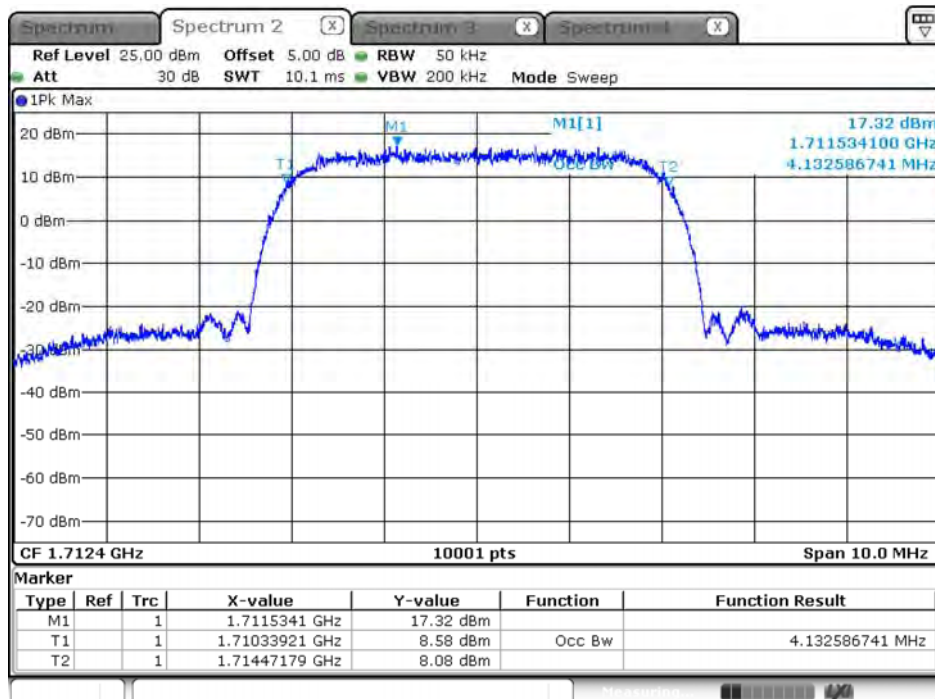
Date: 6.AUG.2018 17:07:45

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

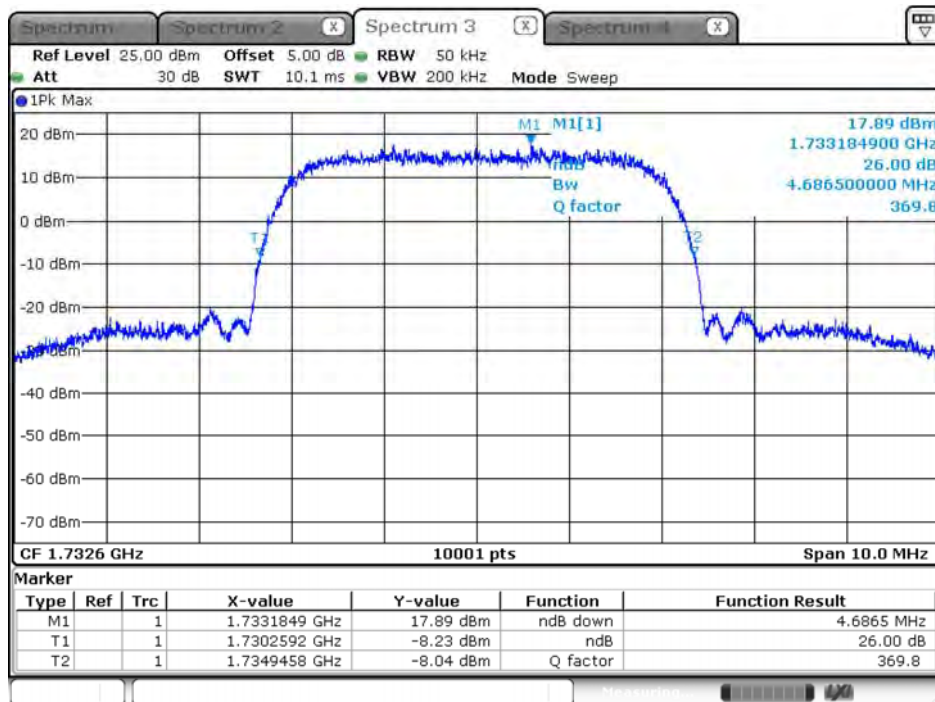
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 4_RMC   |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 1712.4             | 4.692                           | 4.132                         | N/A            |
| 1732.6             | 4.686                           | 4.135                         | N/A            |
| 1752.6             | 4.714                           | 4.144                         | N/A            |

**WCDMA\_Band 4\_RMC\_1712.4MHz (-26dB BW)**

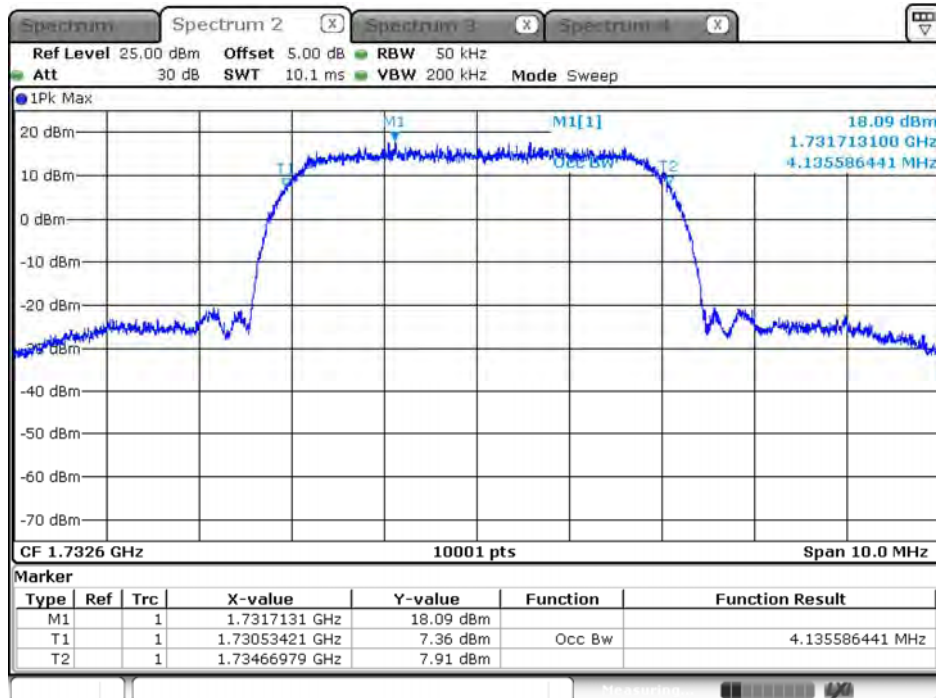
Date: 7.AUG.2018 10:06:36

**WCDMA\_Band 4\_RMC\_1712.4MHz (99% BW)**

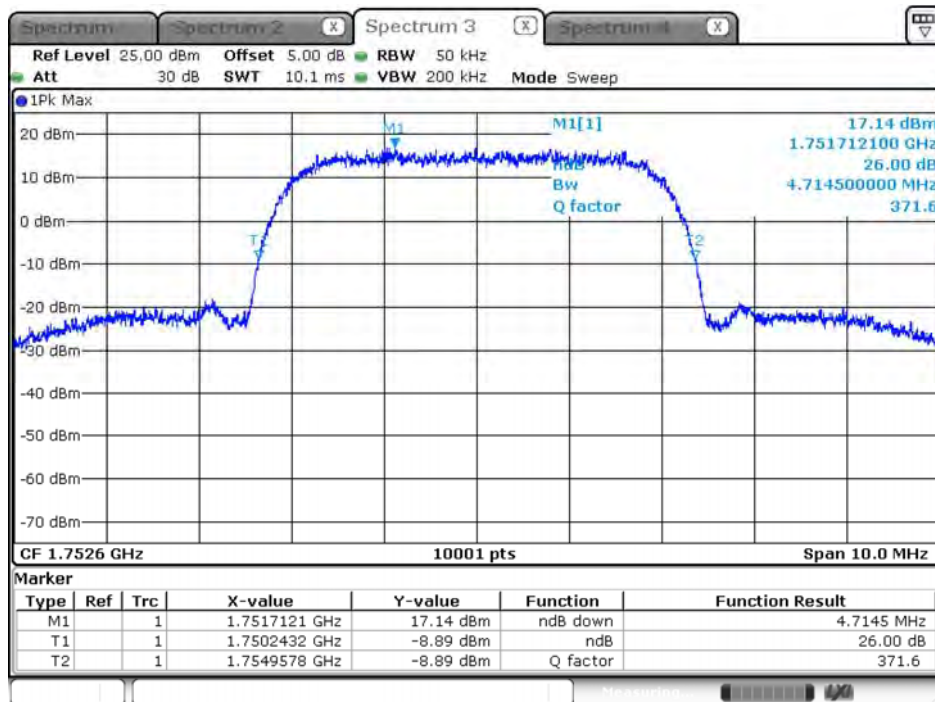
Date: 7.AUG.2018 10:07:23

**WCDMA\_Band 4\_RMC\_1732.6MHz (-26dB BW)**

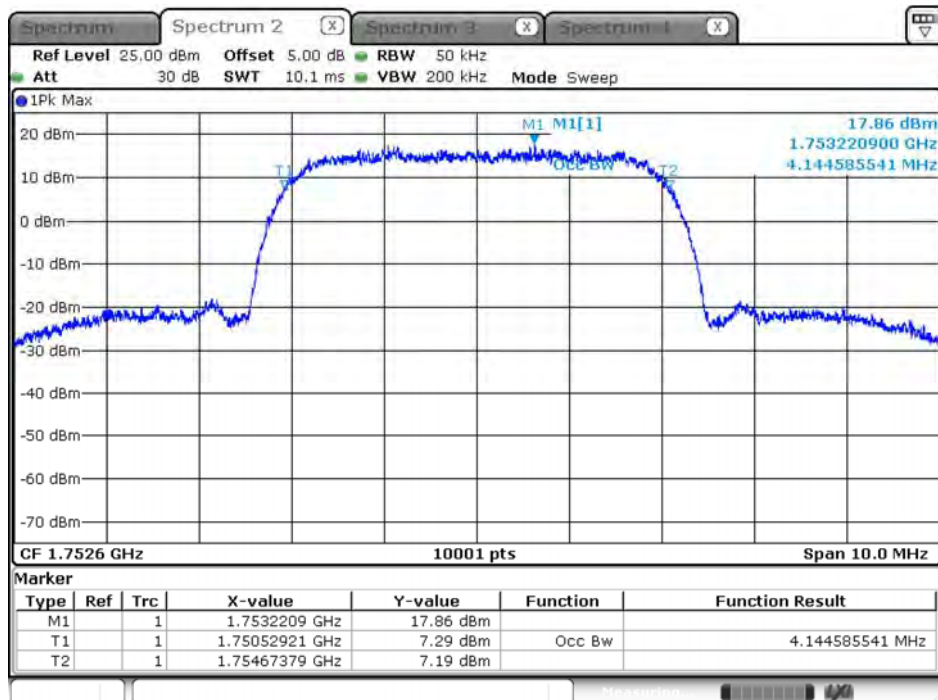
Date: 7.AUG.2018 10:08:21

**WCDMA\_Band 4\_RMC\_1732.6MHz (99% BW)**

Date: 7.AUG.2018 10:08:07

**WCDMA\_Band 4\_RMC\_1752.6MHz (-26dB BW)**

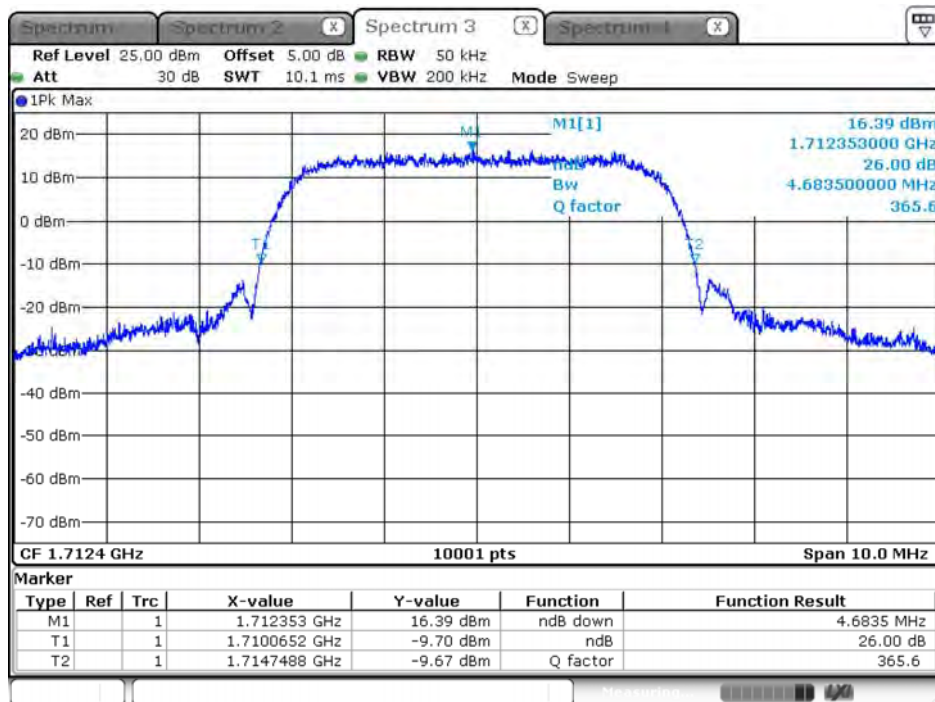
Date: 7.AUG.2018 10:09:30

**WCDMA\_Band 4\_RMC\_1752.6MHz (99% BW)**

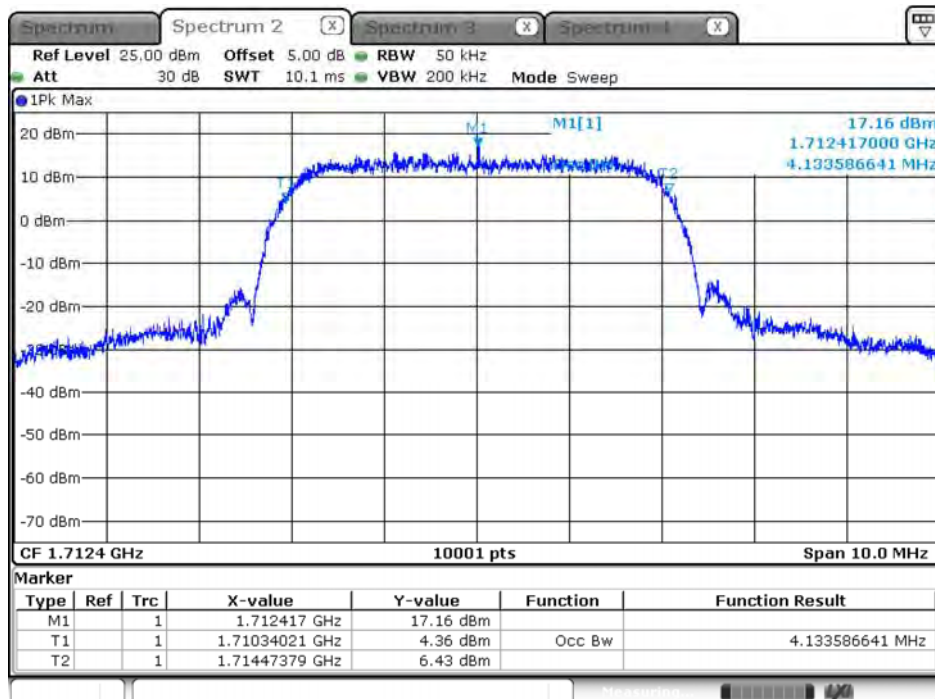
Date: 7.AUG.2018 10:09:19

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

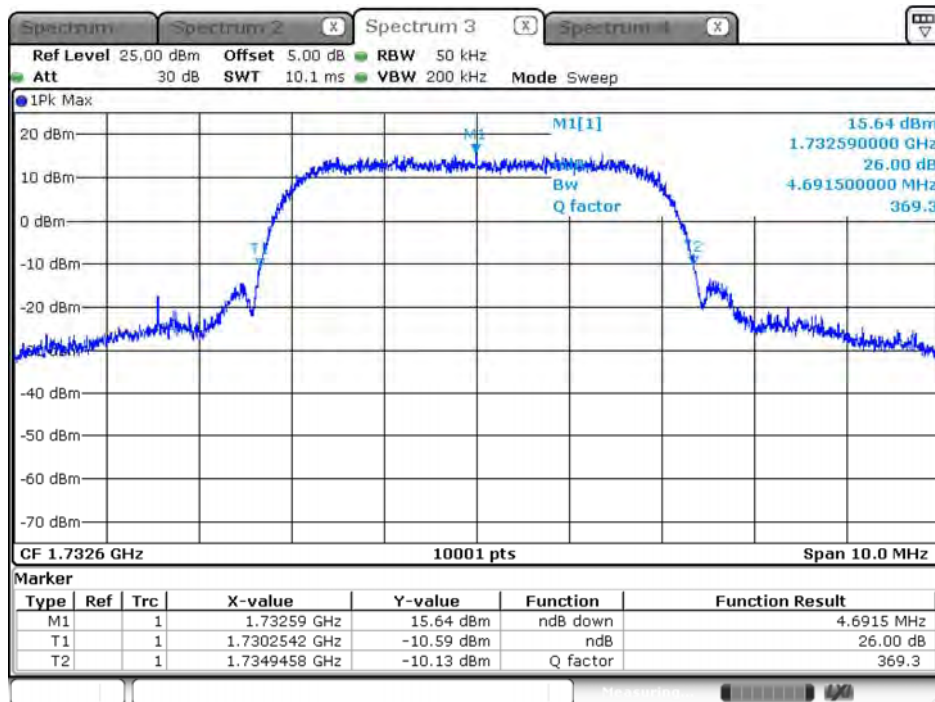
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 4_HSDPA |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 1712.4             | 4.683                           | 4.133                         | N/A            |
| 1732.6             | 4.691                           | 4.127                         | N/A            |
| 1752.6             | 4.702                           | 4.143                         | N/A            |

**WCDMA\_Band 4\_HSDPA\_1712.4MHz (-26dB BW)**

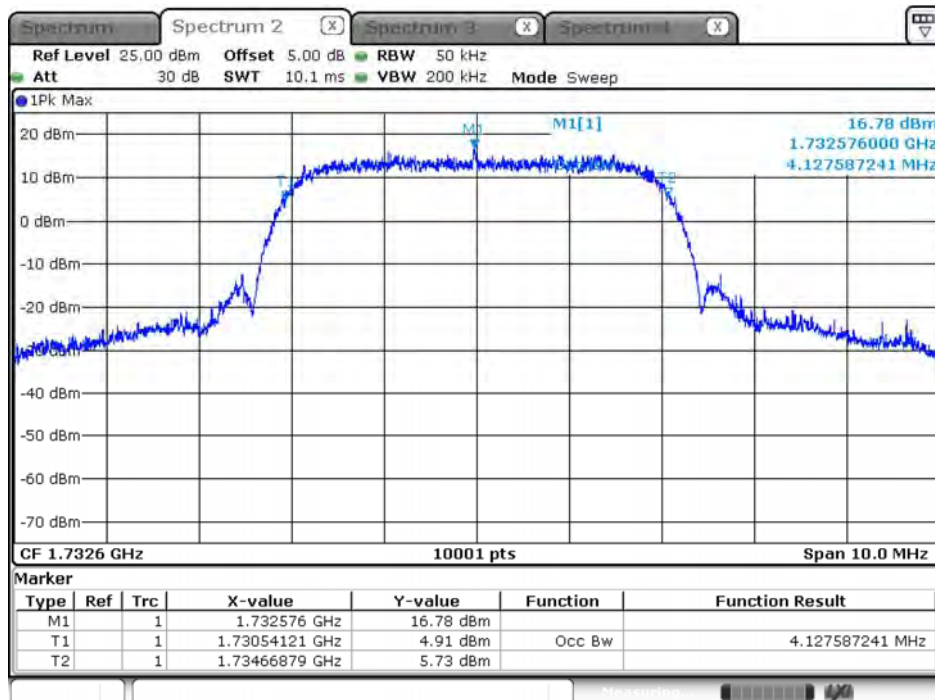
Date: 7.AUG.2018 10:14:03

**WCDMA\_Band 4\_HSDPA\_1712.4MHz (99% BW)**

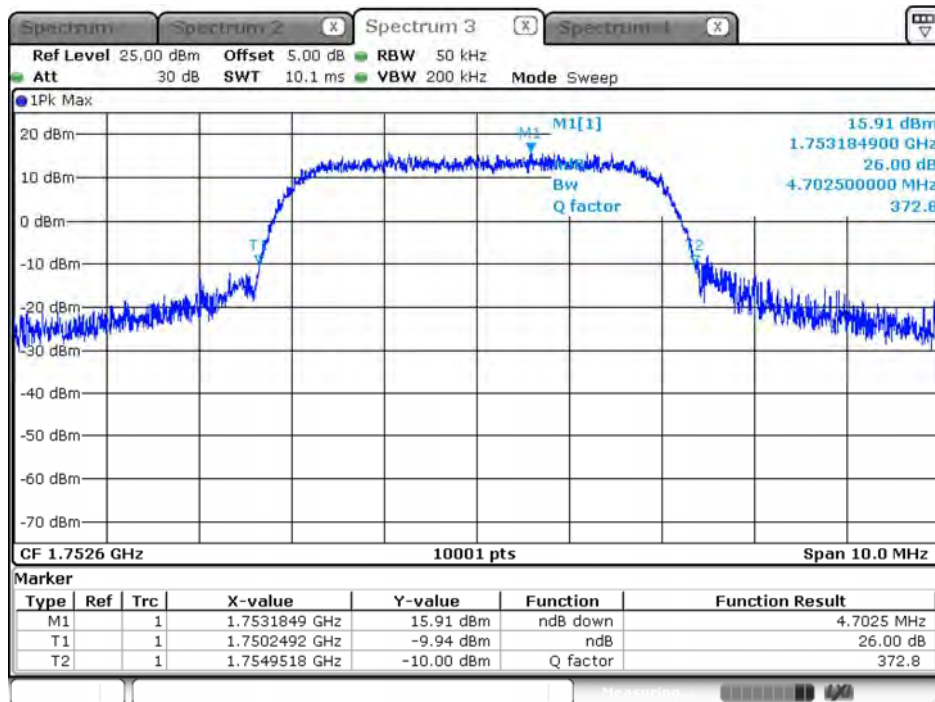
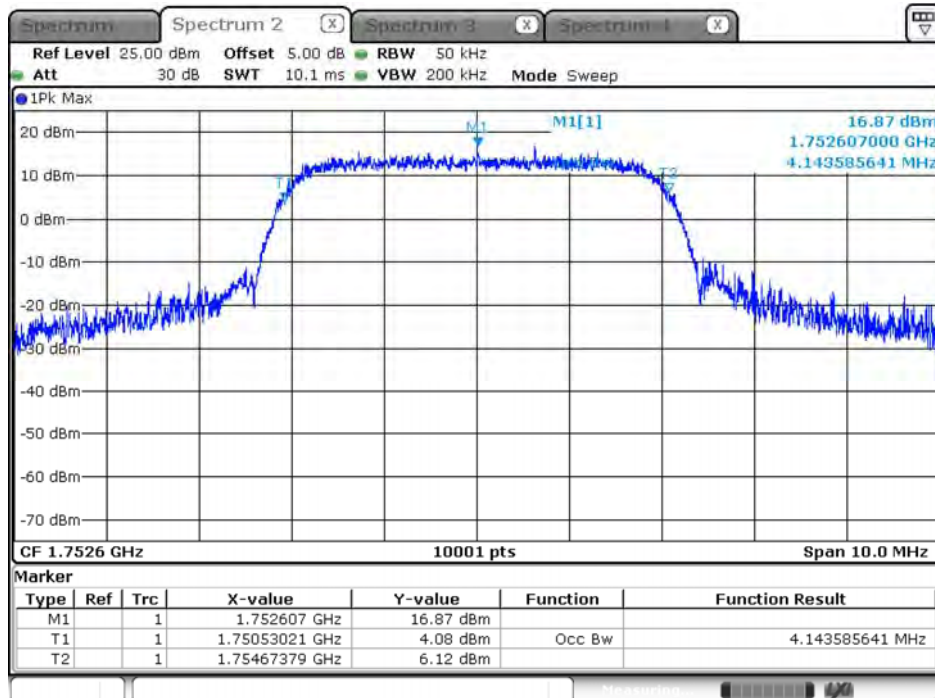
Date: 7.AUG.2018 10:14:29

**WCDMA\_Band 4\_HSDPA\_1732.6MHz (-26dB BW)**

Date: 7.AUG.2018 10:16:03

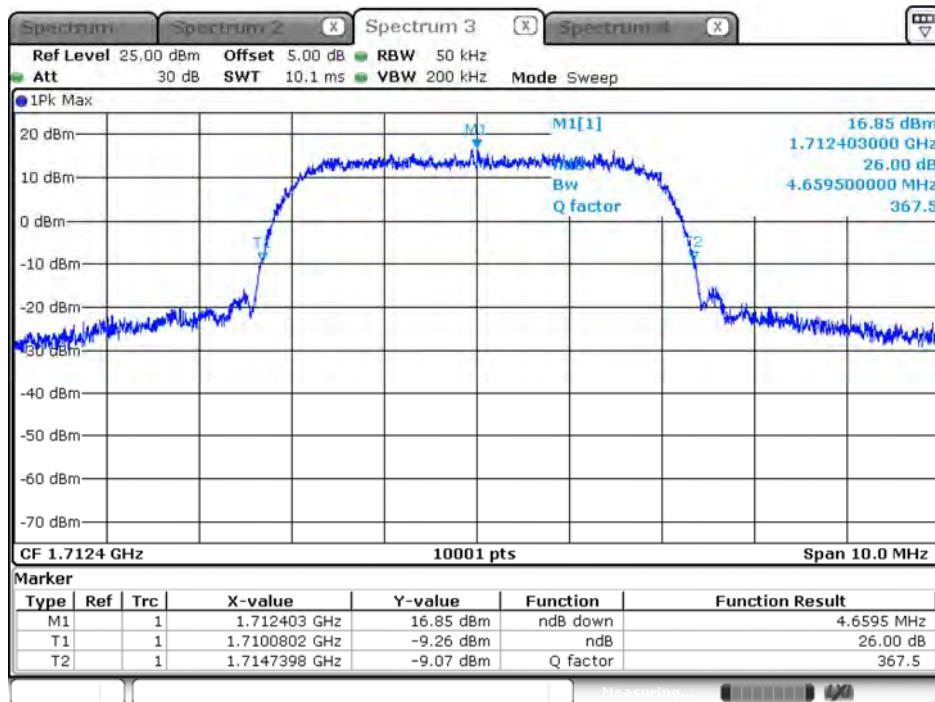
**WCDMA\_Band 4\_HSDPA\_1732.6MHz (99% BW)**

Date: 7.AUG.2018 10:15:49

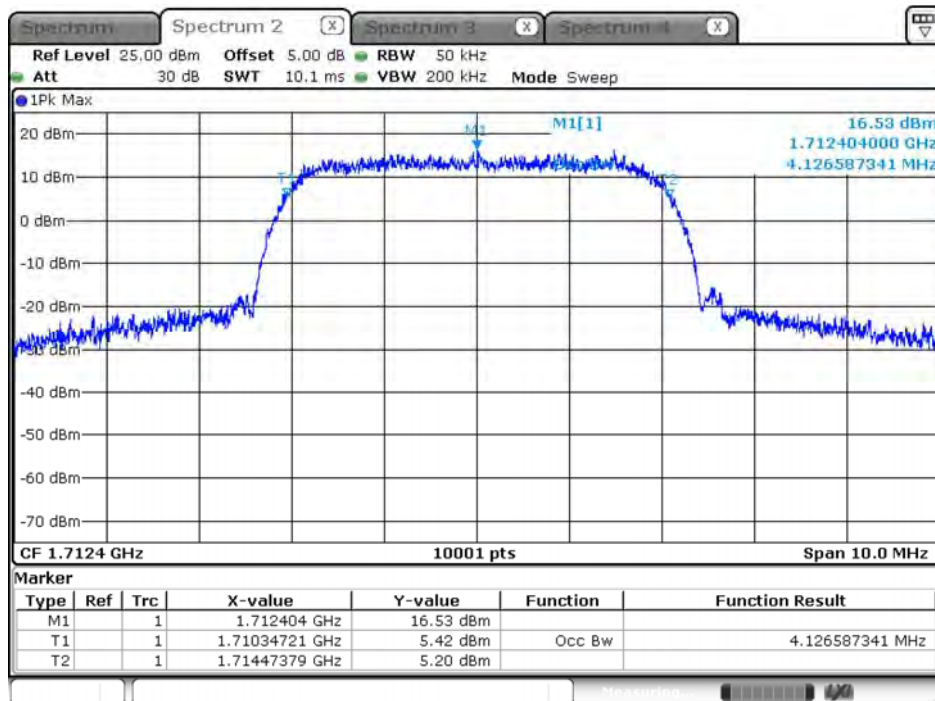
**WCDMA\_Band 4\_HSDPA\_1752.6MHz (-26dB BW)****WCDMA\_Band 4\_HSDPA\_1752.6MHz (99% BW)**

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

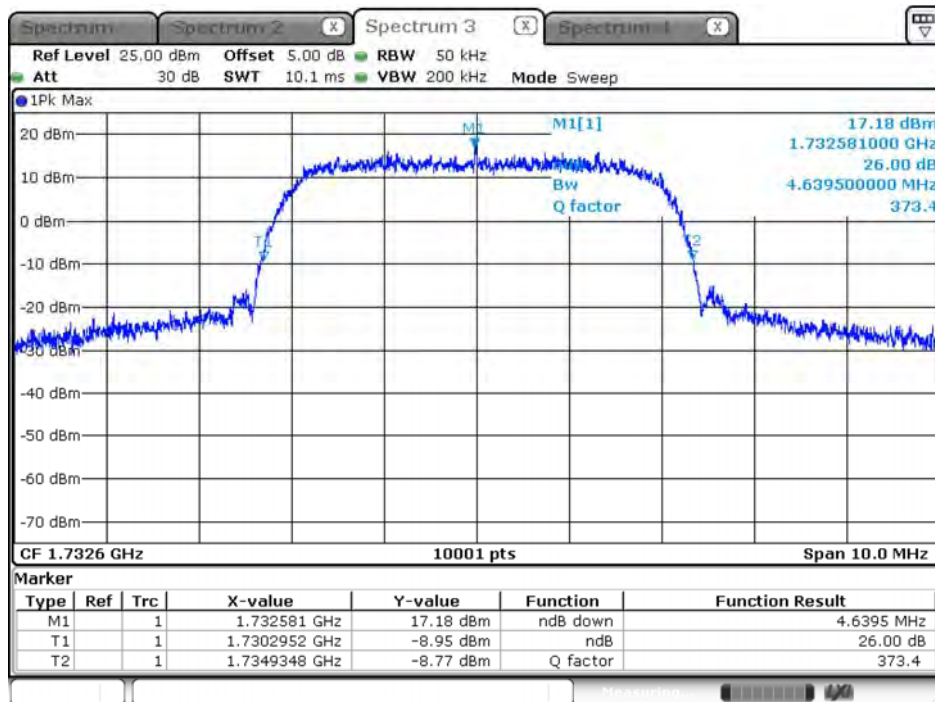
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 4_HSUPA |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 1712.4             | 4.659                           | 4.126                         | N/A            |
| 1732.6             | 4.639                           | 4.131                         | N/A            |
| 1752.6             | 4.672                           | 4.136                         | N/A            |

**WCDMA\_Band 4\_HSUPA\_1712.4MHz (-26dB BW)**

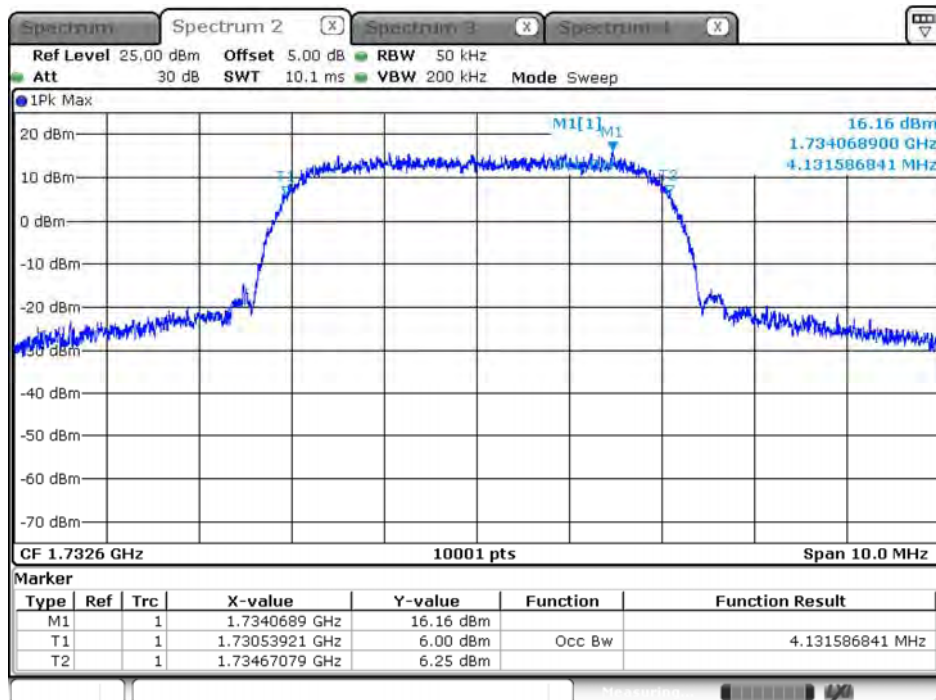
Date: 7.AUG.2018 10:12:42

**WCDMA\_Band 4\_HSUPA\_1712.4MHz (99% BW)**

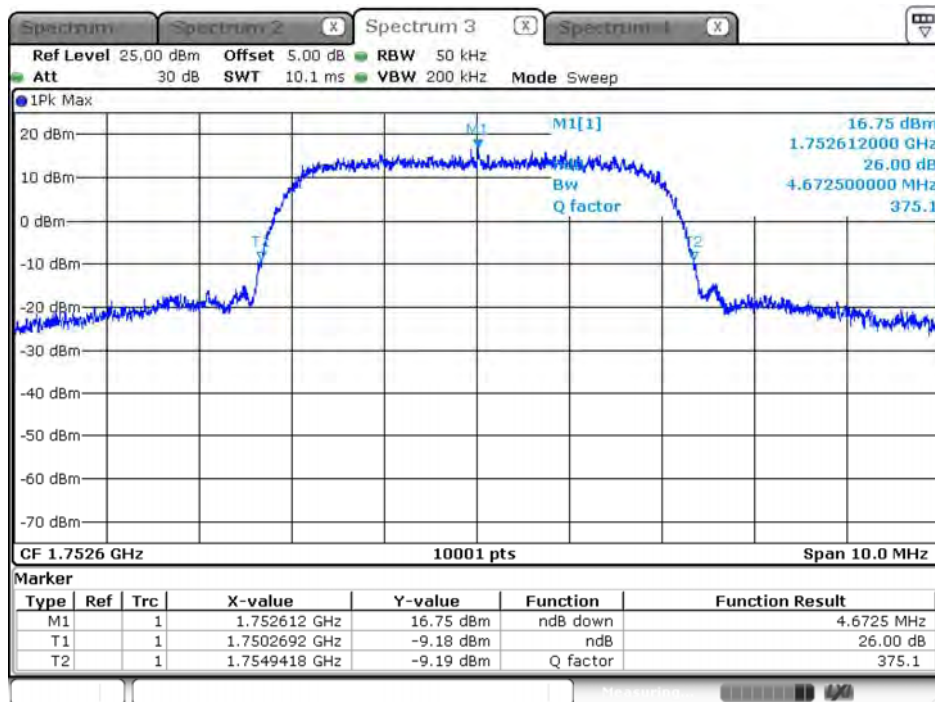
Date: 7.AUG.2018 10:12:22

**WCDMA\_Band 4\_HSUPA\_1732.6MHz (-26dB BW)**

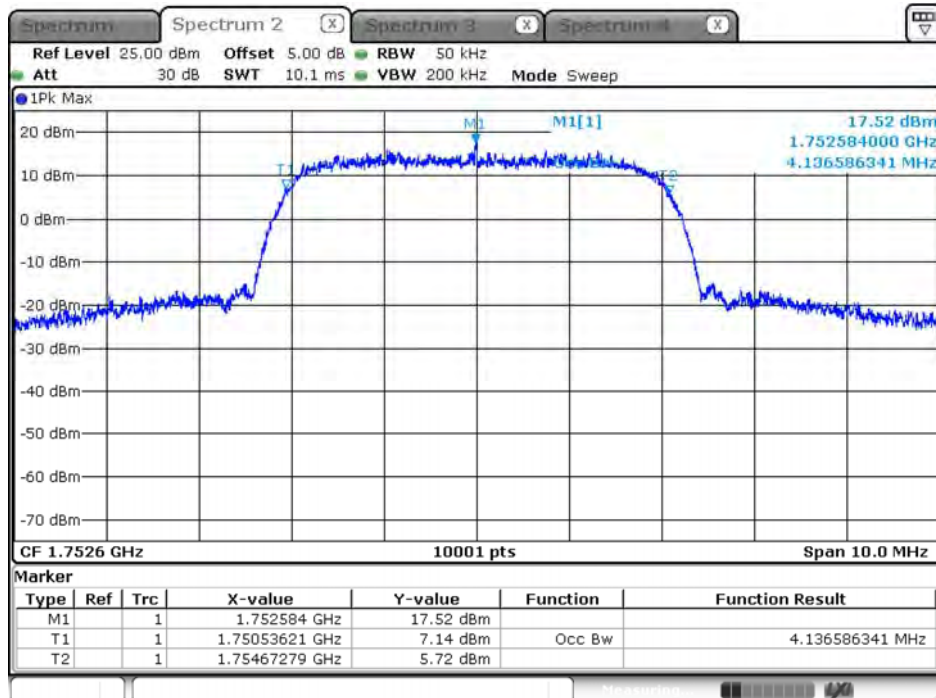
Date: 7.AUG.2018 10:11:28

**WCDMA\_Band 4\_HSUPA\_1732.6MHz (99% BW)**

Date: 7.AUG.2018 10:11:13

**WCDMA\_Band 4\_HSUPA\_1752.6MHz (-26dB BW)**

Date: 7.AUG.2018 10:10:16

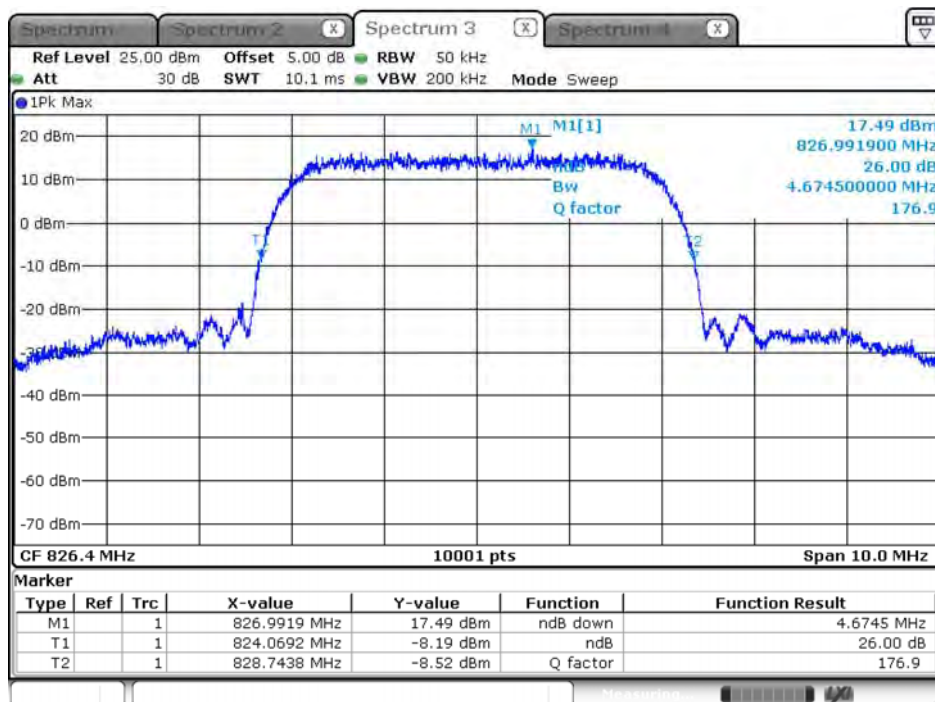
**WCDMA\_Band 4\_HSUPA\_1752.6MHz (99% BW)**

Date: 7.AUG.2018 10:10:36

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

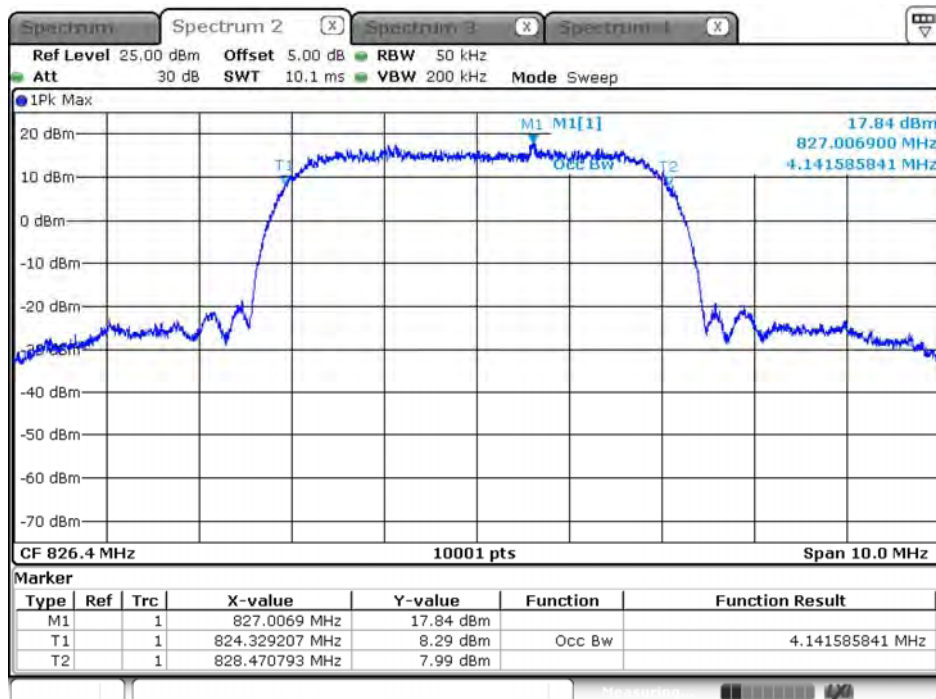
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 5_RMC   |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 826.4              | 4.674                           | 4.141                         | N/A            |
| 836.6              | 4.682                           | 4.129                         | N/A            |
| 846.6              | 4.702                           | 4.160                         | N/A            |

## WCDMA\_Band 5\_RMC\_826.4MHz (-26dB BW)



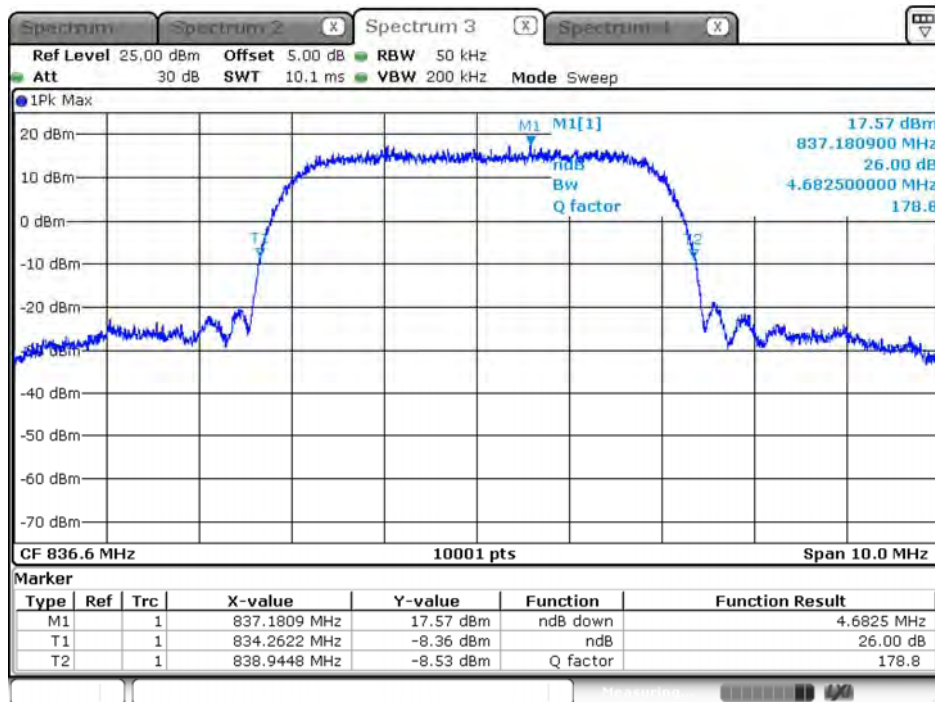
Date: 7.AUG.2018 10:32:06

## WCDMA\_Band 5\_RMC\_826.4MHz (99% BW)



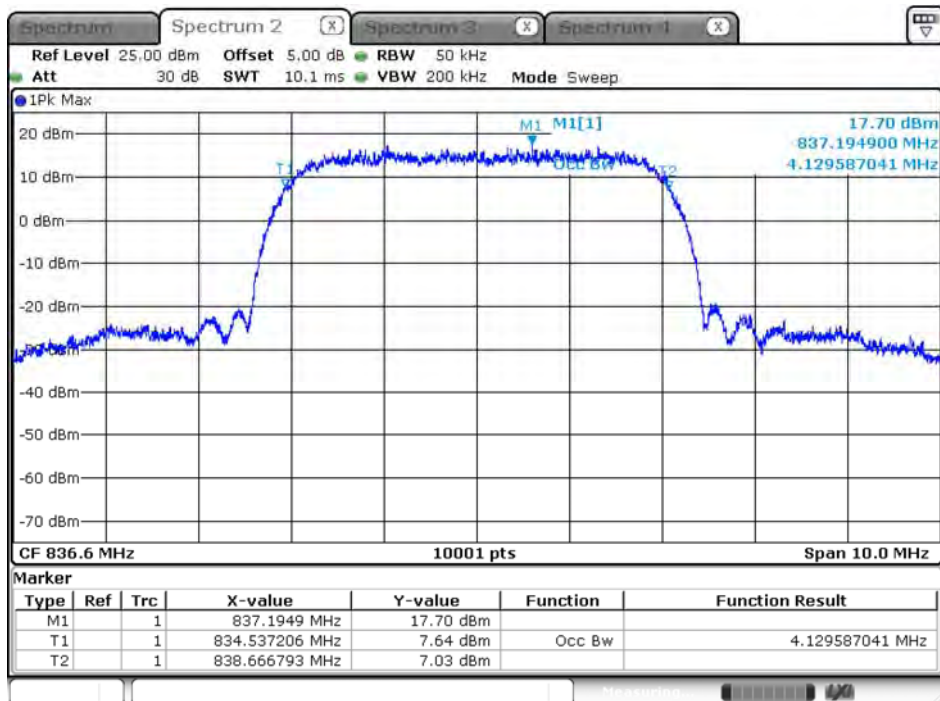
Date: 7.AUG.2018 10:31:49

## WCDMA\_Band 5\_RMC\_836.6MHz (-26dB BW)

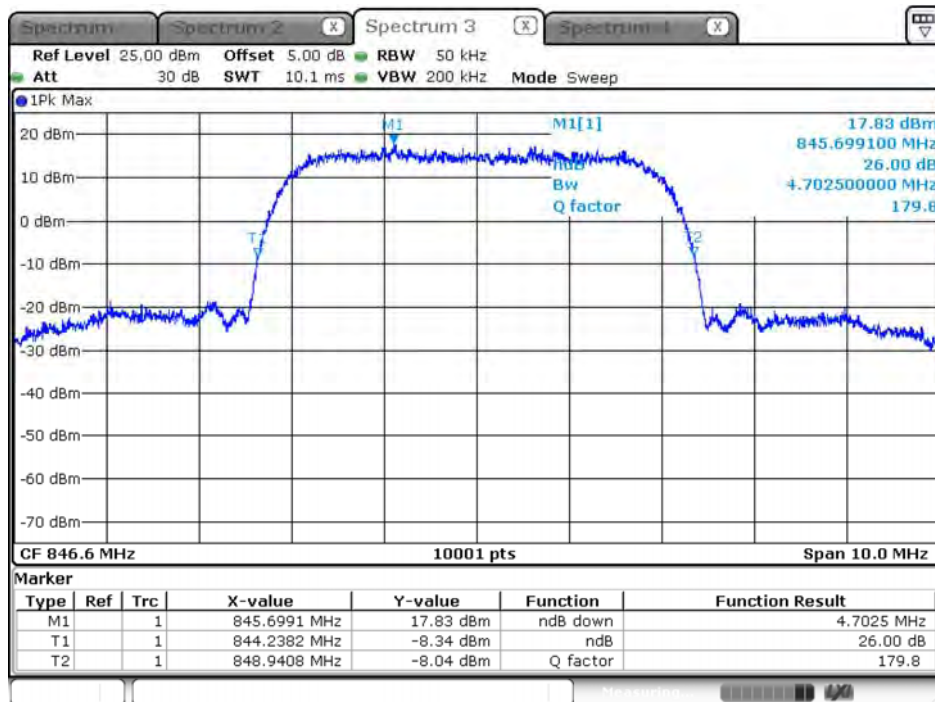


Date: 7.AUG.2018 10:33:44

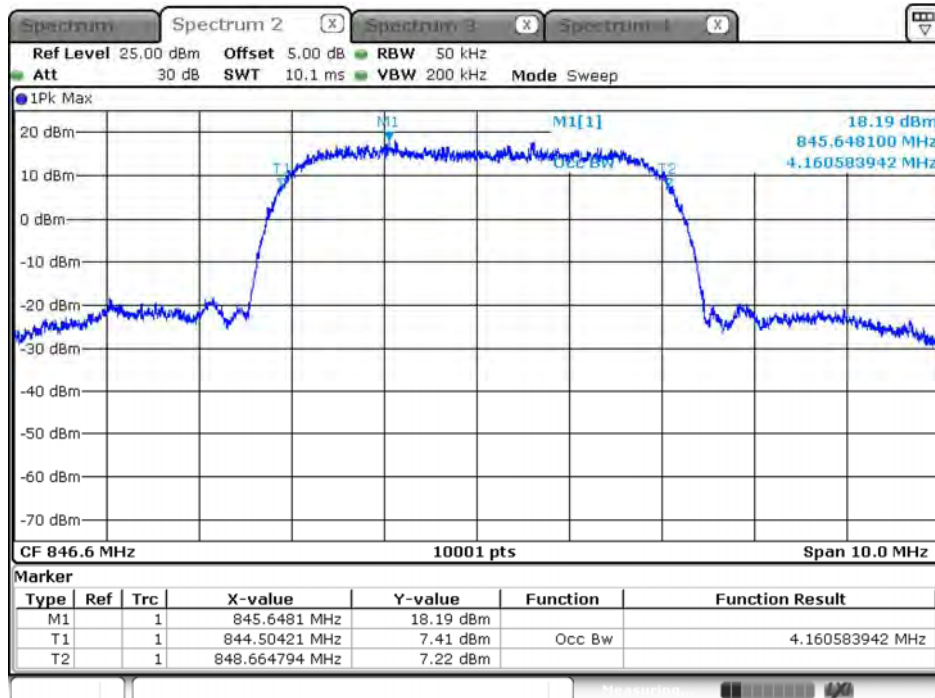
## WCDMA\_Band 5\_RMC\_836.6MHz (99% BW)



Date: 7.AUG.2018 10:33:18

**WCDMA\_Band 5\_RMC\_846.6MHz (-26dB BW)**

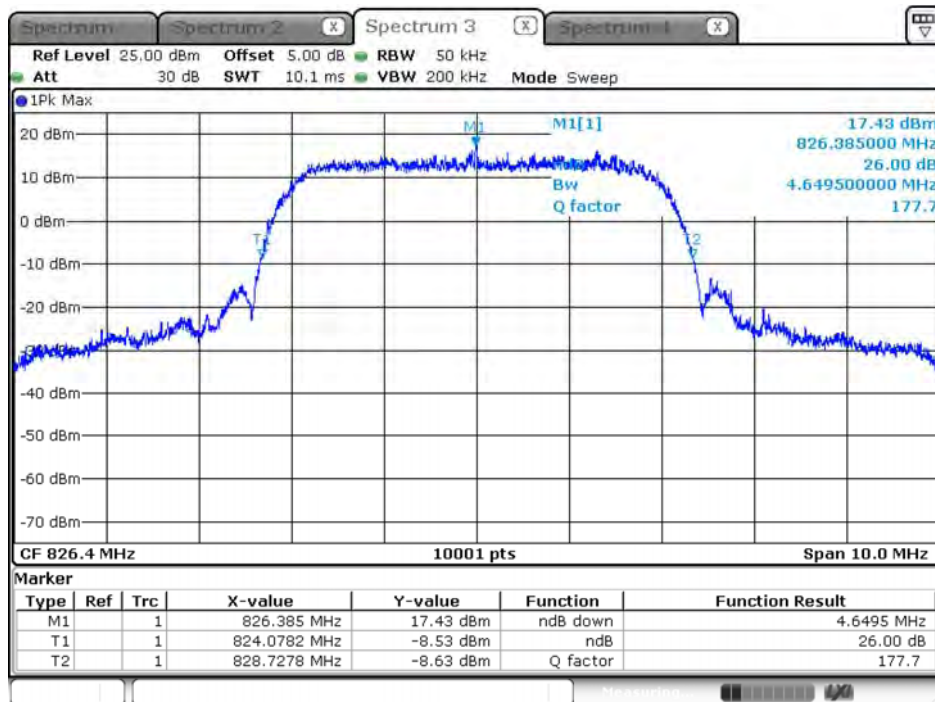
Date: 7.AUG.2018 10:35:06

**WCDMA\_Band 5\_RMC\_846.6MHz (99% BW)**

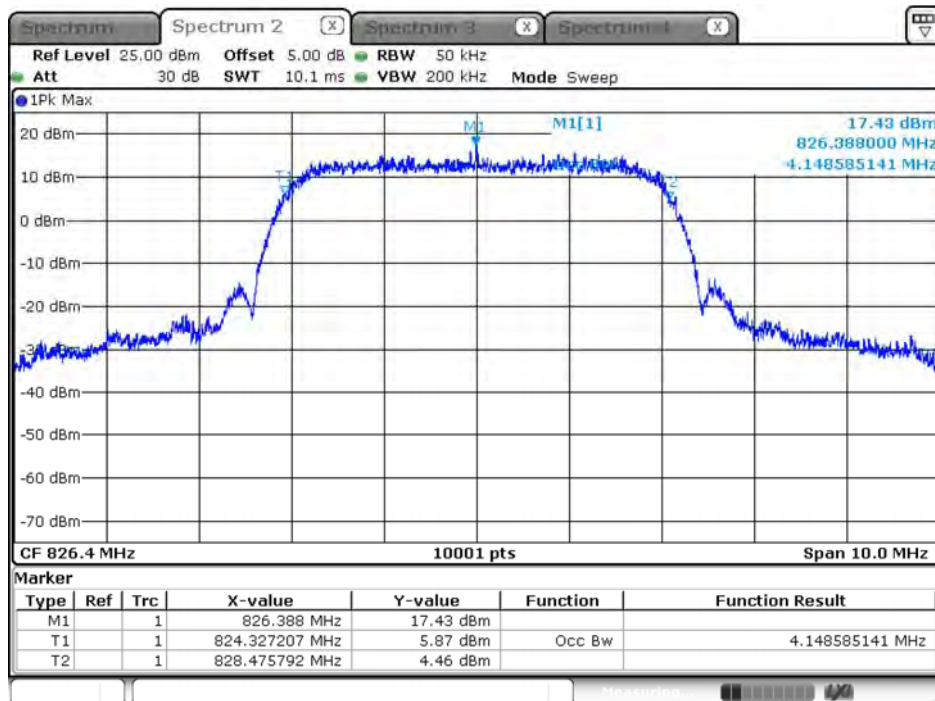
Date: 7.AUG.2018 10:34:44

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

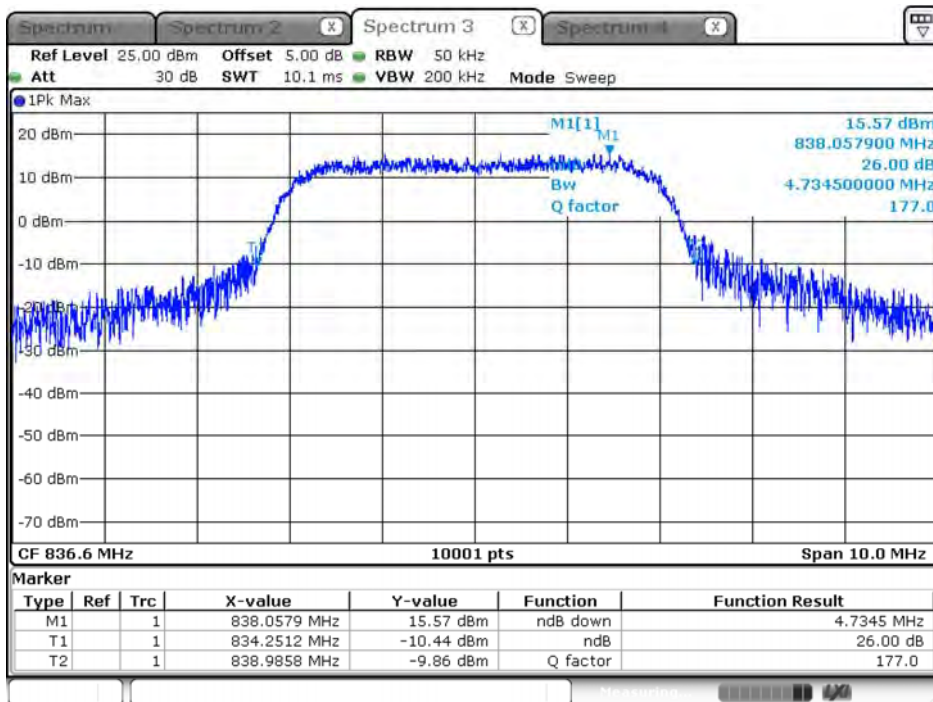
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 5_HSDPA |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 826.4              | 4.649                           | 4.148                         | N/A            |
| 836.6              | 4.734                           | 4.193                         | N/A            |
| 846.6              | 4.696                           | 4.161                         | N/A            |

**WCDMA\_Band 5\_HSDPA\_826.4MHz (-26dB BW)**

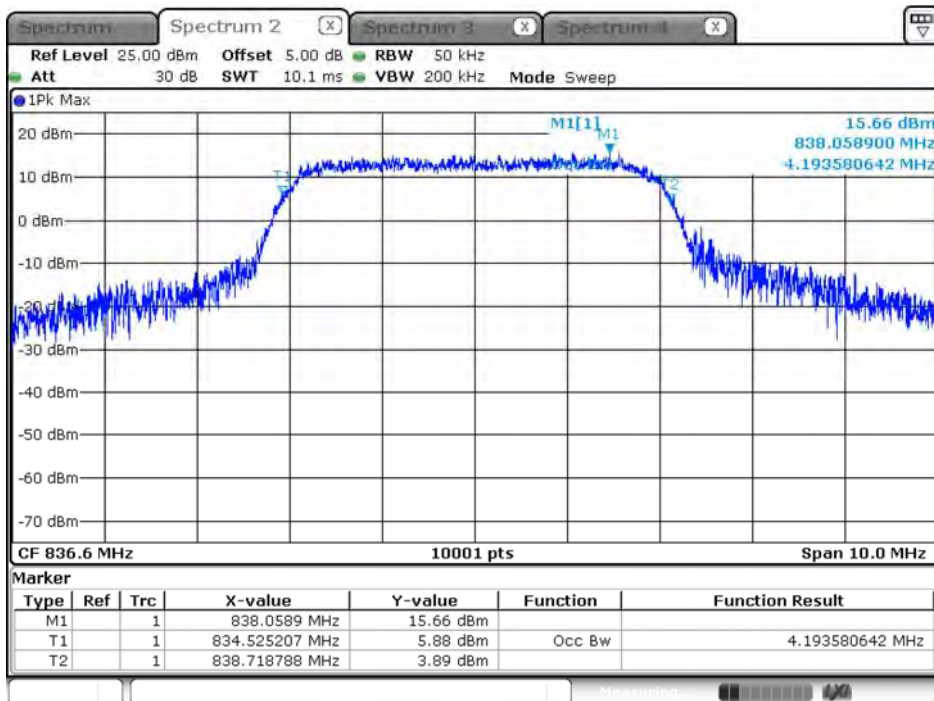
Date: 7.AUG.2018 10:22:17

**WCDMA\_Band 5\_HSDPA\_826.4MHz (99% BW)**

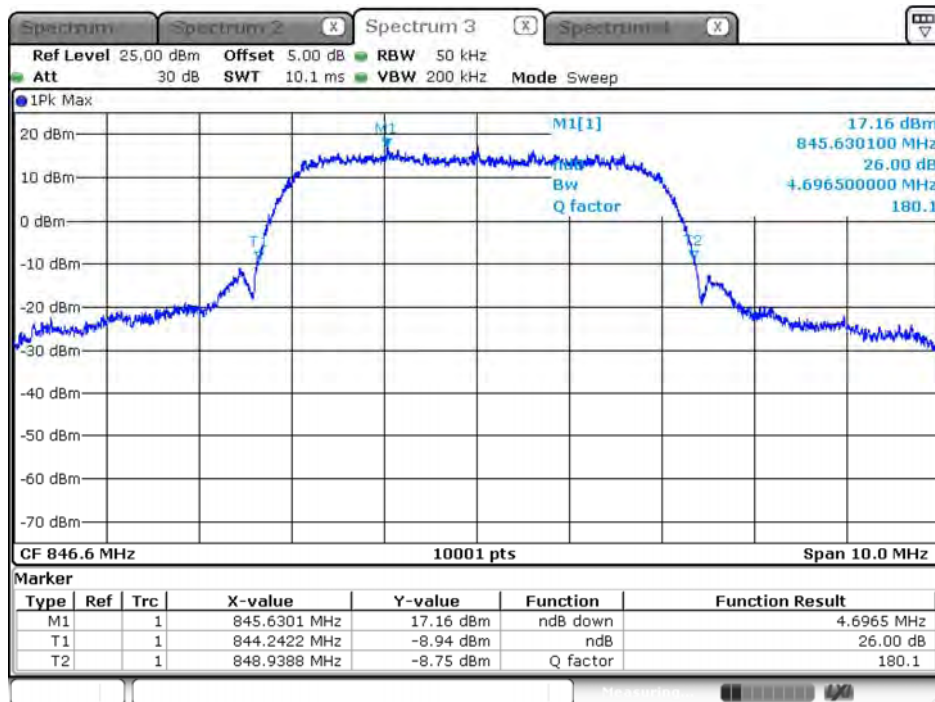
Date: 7.AUG.2018 10:21:35

**WCDMA\_Band 5\_HSDPA\_836.6MHz (-26dB BW)**

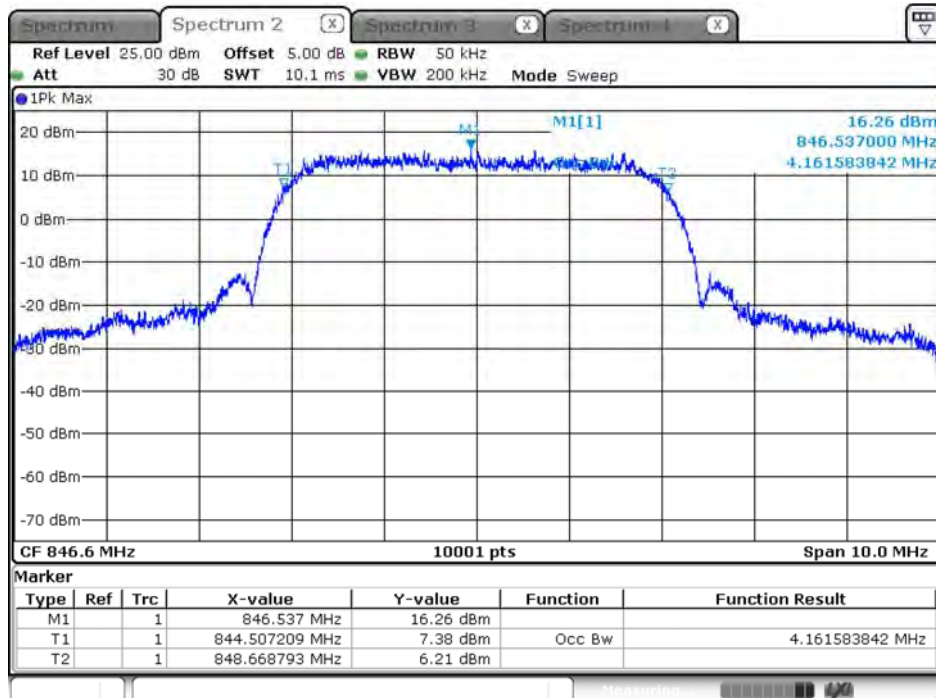
Date: 7.AUG.2018 10:23:58

**WCDMA\_Band 5\_HSDPA\_836.6MHz (99% BW)**

Date: 7.AUG.2018 10:23:45

**WCDMA\_Band 5\_HSDPA\_846.6MHz (-26dB BW)**

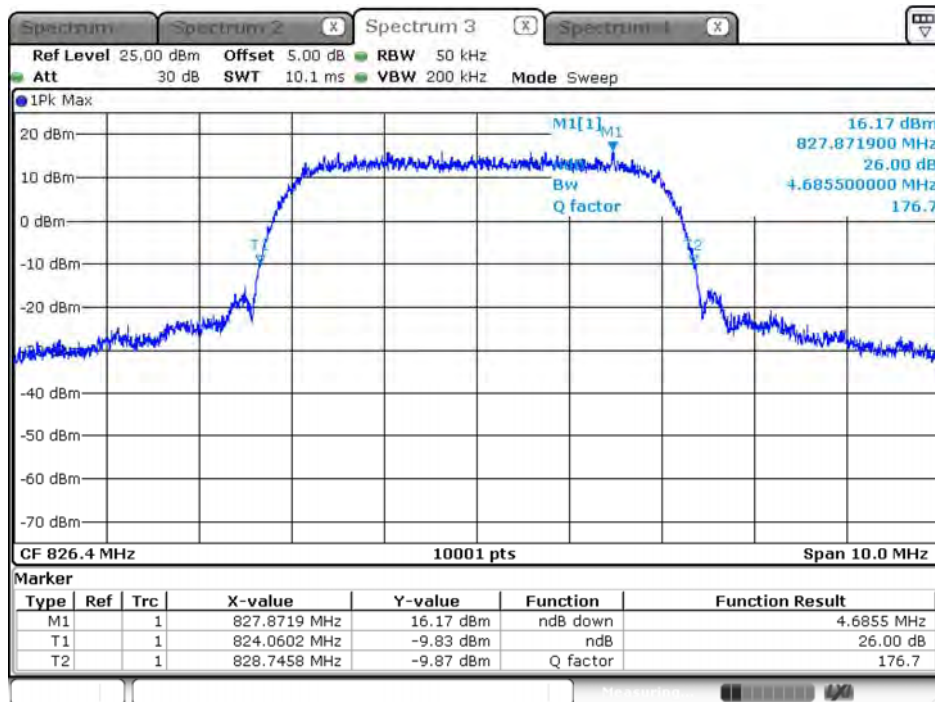
Date: 7.AUG.2018 10:26:31

**WCDMA\_Band 5\_HSDPA\_846.6MHz (99% BW)**

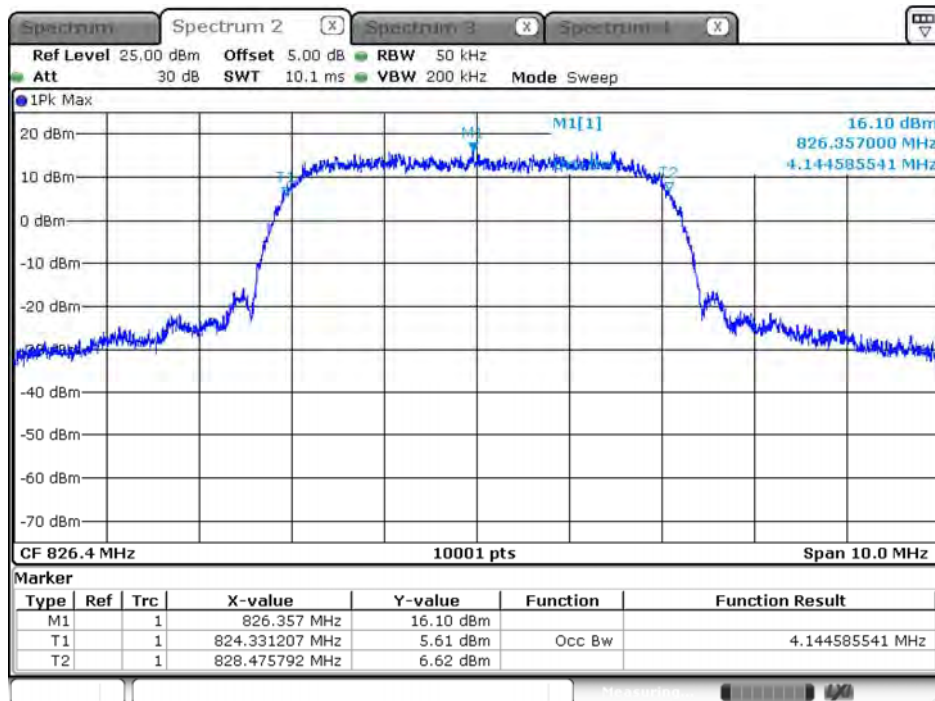
Date: 7.AUG.2018 10:25:17

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Occupied Bandwidth   |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

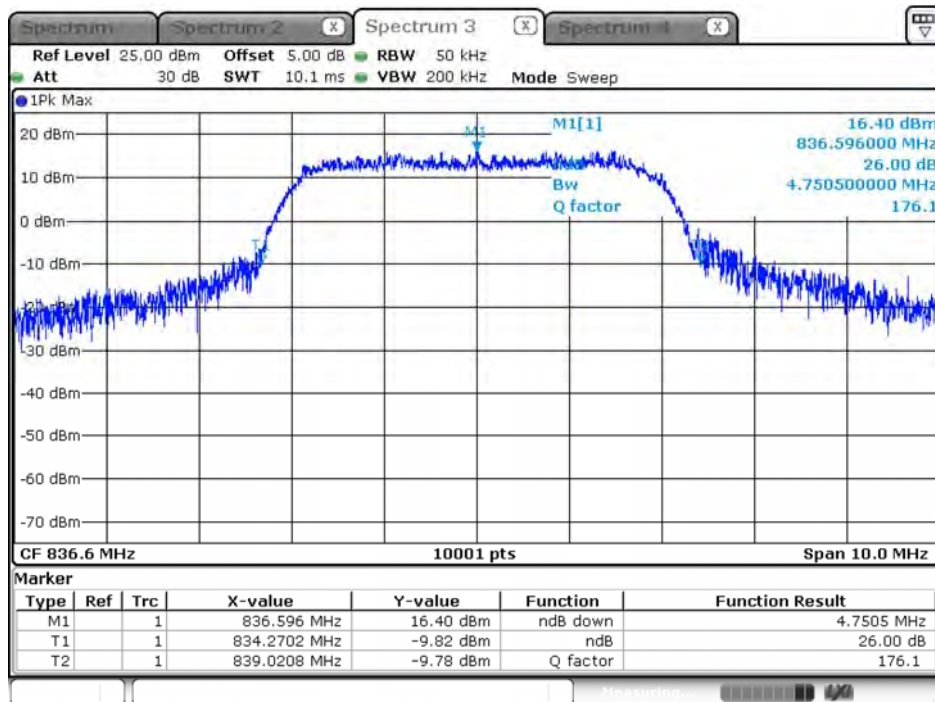
|                    |                                 |                               |                |
|--------------------|---------------------------------|-------------------------------|----------------|
| FCC Part 22H       |                                 |                               |                |
| WCDMA Band 5_HSUPA |                                 |                               |                |
| Frequency<br>(MHz) | -26dB BW<br>Measure Level (MHz) | 99% BW<br>Measure Level (MHz) | Limit<br>(MHz) |
| 826.4              | 4.685                           | 4.144                         | N/A            |
| 836.6              | 4.750                           | 4.190                         | N/A            |
| 846.6              | 4.683                           | 4.156                         | N/A            |

**WCDMA\_Band 5\_HSUPA\_826.4MHz (-26dB BW)**

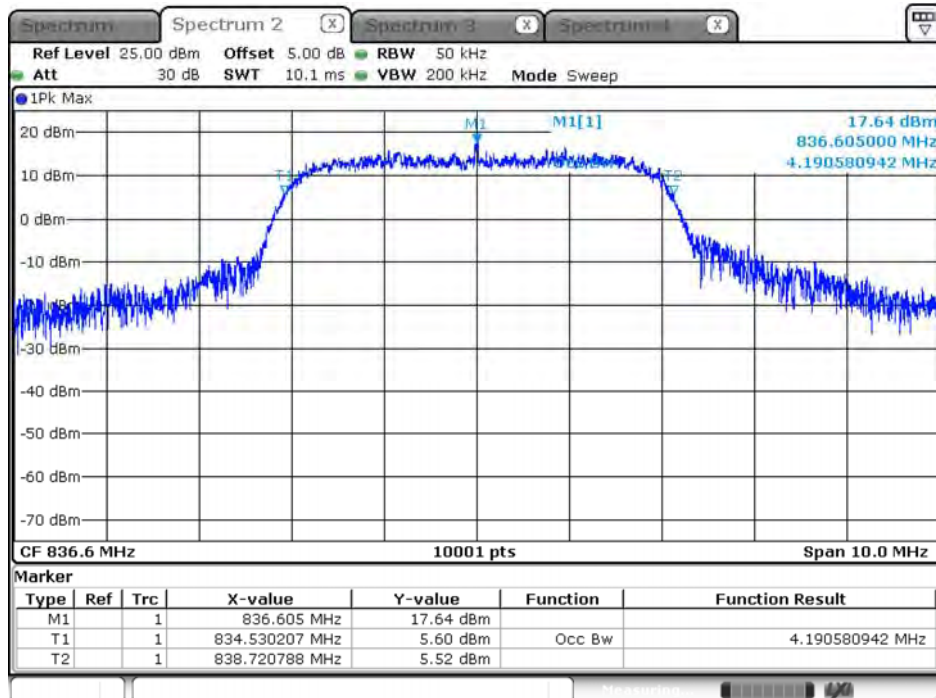
Date: 7.AUG.2018 10:30:32

**WCDMA\_Band 5\_HSUPA\_826.4MHz (99% BW)**

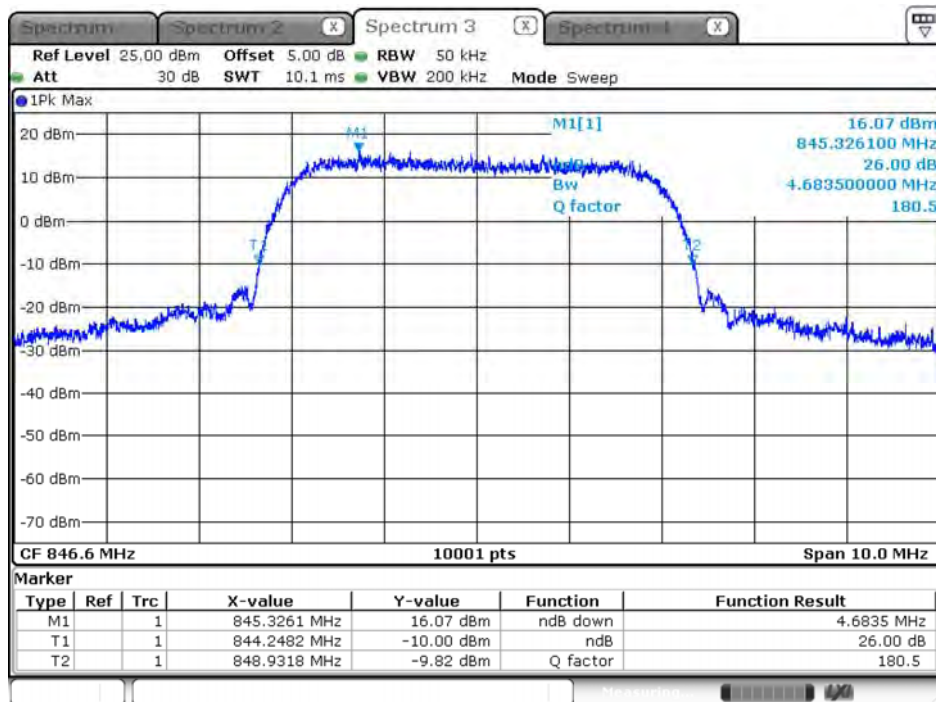
Date: 7.AUG.2018 10:30:54

**WCDMA\_Band 5\_HSUPA\_836.6MHz (-26dB BW)**

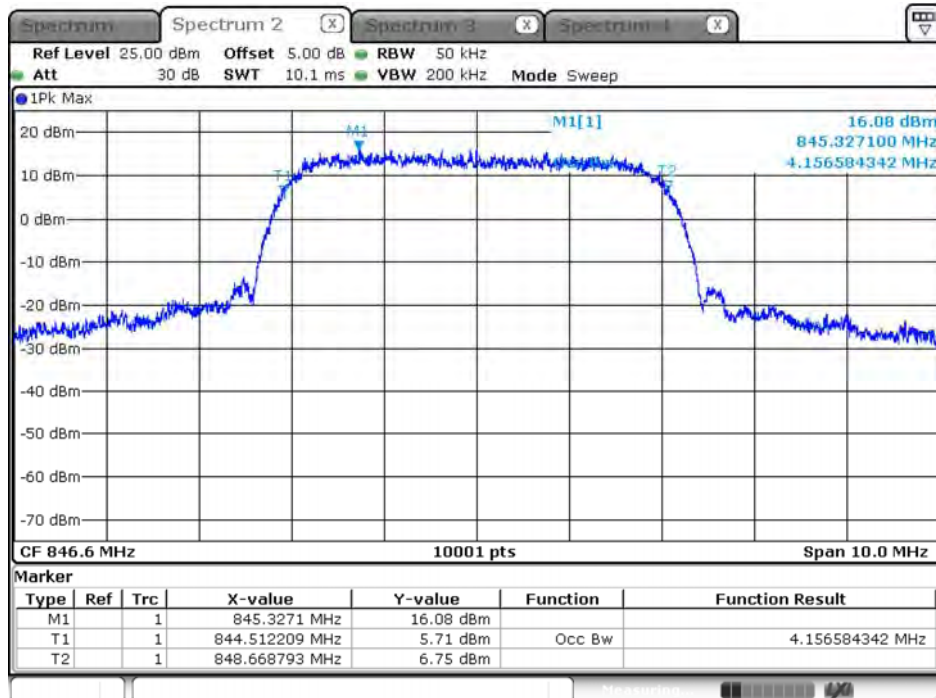
Date: 7.AUG.2018 10:29:02

**WCDMA\_Band 5\_HSUPA\_836.6MHz (99% BW)**

Date: 7.AUG.2018 10:29:25

**WCDMA\_Band 5\_HSUPA\_846.6MHz (-26dB BW)**

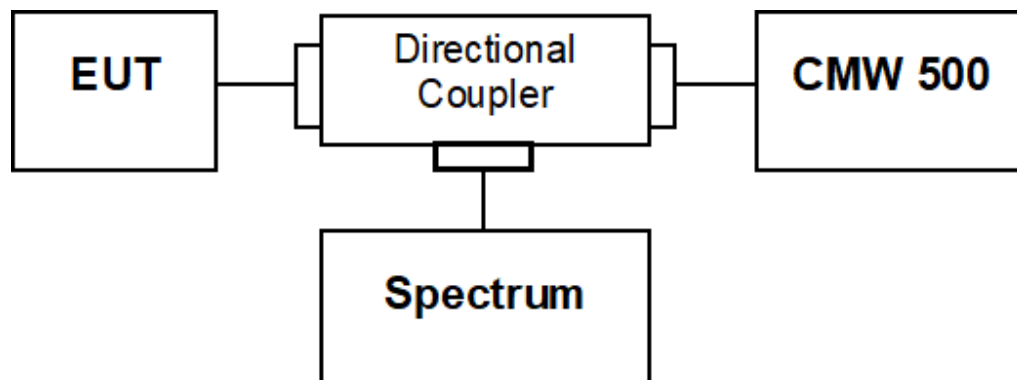
Date: 7.AUG.2018 10:27:34

**WCDMA\_Band 5\_HSUPA\_846.6MHz (99% BW)**

Date: 7.AUG.2018 10:27:56

## 5. Peak To Average Ratio

### 5.1. Test Setup



### 5.2. Test Procedure

1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth.
2. Set the number of counts to a value that stabilizes the measured CCDF curve.
3. Record the maximum PAPR level associated with a probability of 0.1 %.

### 5.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 5.7.2  
ANSI C63.26-2015 Sub-clause 5.2.3.4

## 5.4. Test Result

|              |                       |           |        |
|--------------|-----------------------|-----------|--------|
| Product      | LE910C4-NF            |           |        |
| Test Item    | Peak To Average Ratio |           |        |
| Test Mode    | Mode 1: WCDMA Band 2  |           |        |
| Date of Test | 2018/08/07            | Test Site | SR10-H |

### WCDMA\_Band 2\_RMC\_1852.4MHz



Date: 7.AUG.2018 11:11:18

## WCDMA\_Band 2\_RMC\_1880.0MHz



Date: 7.AUG.2018 11:11:00

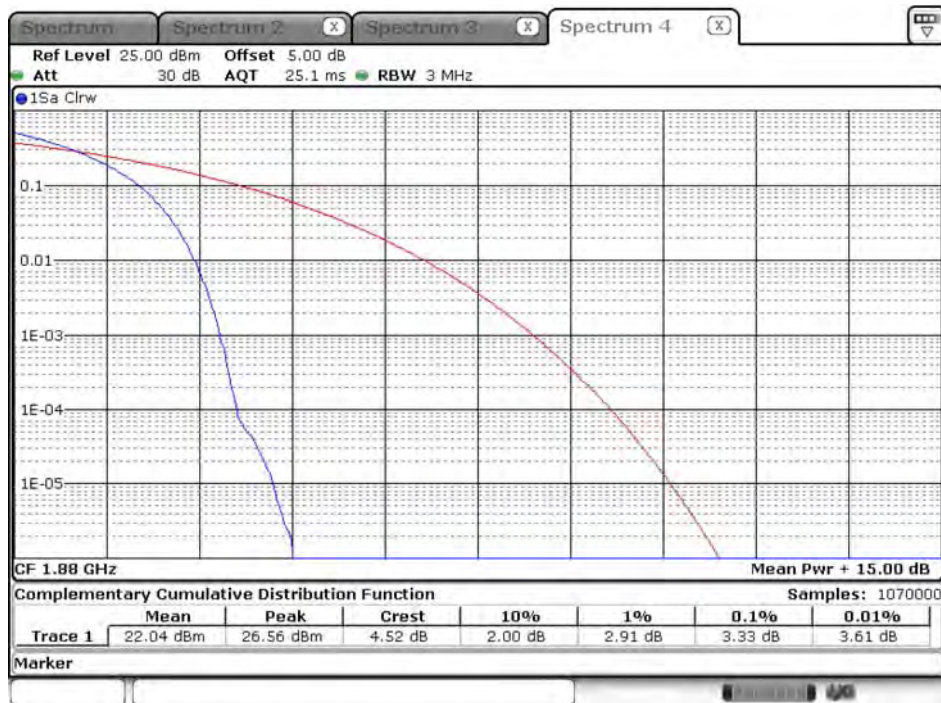
## WCDMA\_Band 2\_RMC\_1907.6MHz



Date: 7.AUG.2018 11:10:30

**WCDMA\_Band 2\_HSDPA\_1852.4MHz**

Date: 7.AUG.2018 11:12:32

**WCDMA\_Band 2\_HSDPA\_1880.0MHz**

Date: 7.AUG.2018 11:12:52

**WCDMA\_Band 2\_HSDPA\_1907.6MHz**

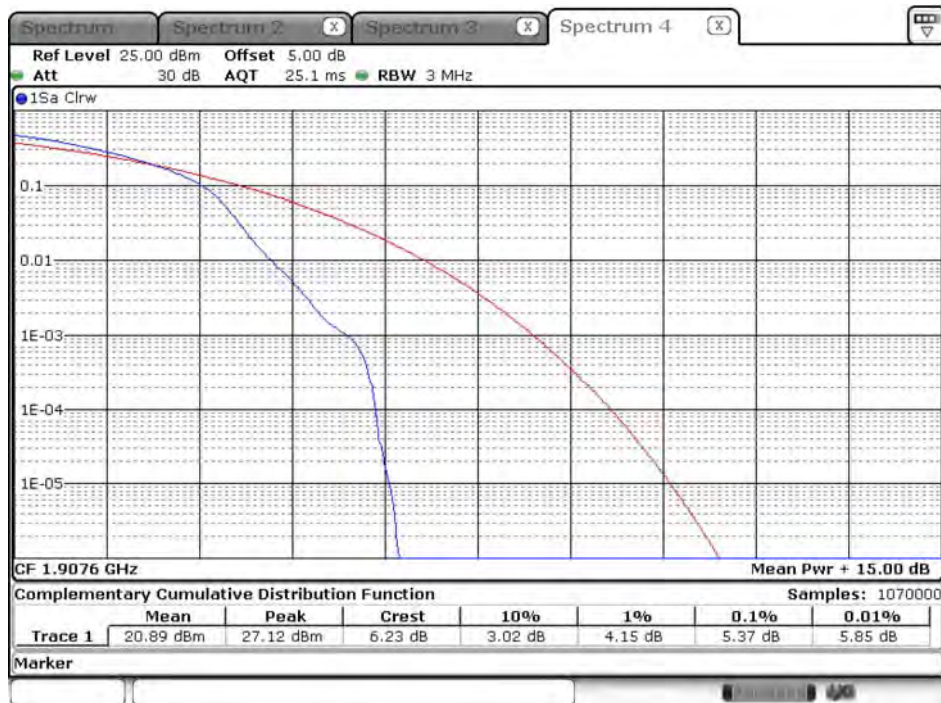
Date: 7.AUG.2018 11:14:04

**WCDMA\_Band 2\_HSUPA\_1852.4MHz**

Date: 7.AUG.2018 11:15:50

**WCDMA\_Band 2\_HSUPA\_1880.0MHz**

Date: 7.AUG.2018 11:15:07

**WCDMA\_Band 2\_HSUPA\_1907.6MHz**

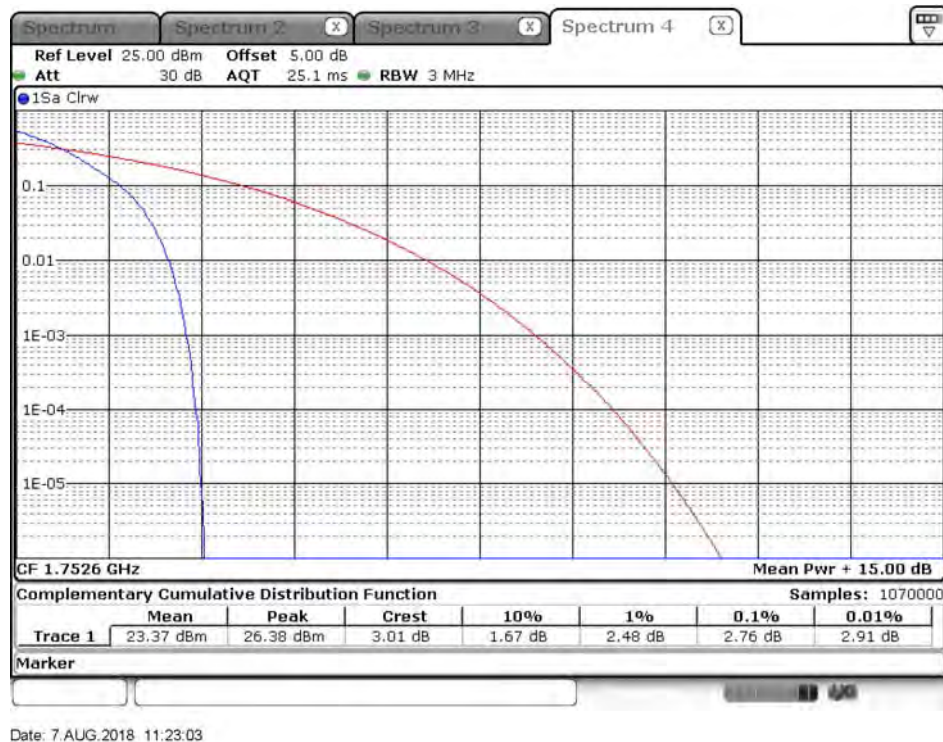
Date: 7.AUG.2018 11:14:48

|              |                       |           |        |
|--------------|-----------------------|-----------|--------|
| Product      | LE910C4-NF            |           |        |
| Test Item    | Peak To Average Ratio |           |        |
| Test Mode    | Mode 2: WCDMA Band 4  |           |        |
| Date of Test | 2018/08/07            | Test Site | SR10-H |

### WCDMA\_Band 4\_RMC\_1712.4MHz



Date: 7.AUG.2018 11:22:11

**WCDMA\_Band 4\_RMC\_1732.6MHz****WCDMA\_Band 4\_RMC\_1752.6MHz**

**WCDMA\_Band 4\_HSDPA\_1712.4MHz**

Date: 7.AUG.2018 11:21:26

**WCDMA\_Band 4\_HSDPA\_1732.6MHz**

Date: 7.AUG.2018 11:21:06

**WCDMA\_Band 4\_HSDPA\_1752.6MHz**

Date: 7.AUG.2018 11:20:43

**WCDMA\_Band 4\_HSUPA\_1712.4MHz**

Date: 7.AUG.2018 11:16:43

**WCDMA\_Band 4\_HSUPA\_1732.6MHz**

Date: 7.AUG.2018 11:17:58

**WCDMA\_Band 4\_HSUPA\_1752.6MHz**

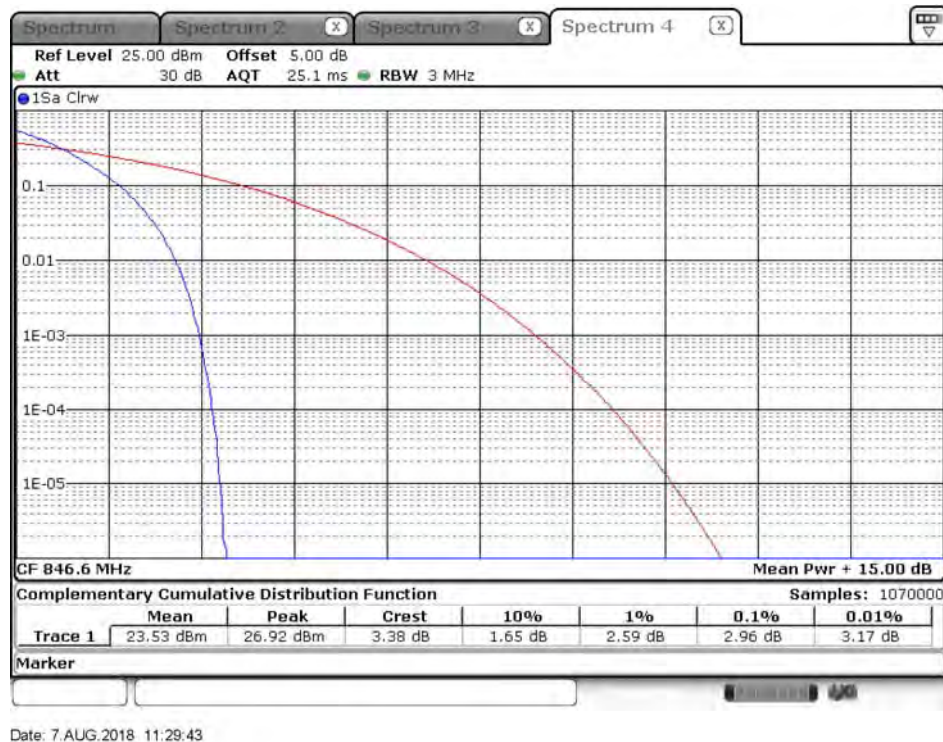
Date: 7.AUG.2018 11:20:08

|              |                       |           |        |
|--------------|-----------------------|-----------|--------|
| Product      | LE910C4-NF            |           |        |
| Test Item    | Peak To Average Ratio |           |        |
| Test Mode    | Mode 3: WCDMA Band 5  |           |        |
| Date of Test | 2018/08/07            | Test Site | SR10-H |

### WCDMA\_Band 5\_RMC\_826.4MHz



Date: 7.AUG.2018 11:28:32

**WCDMA\_Band 5\_RMC\_836.6MHz****WCDMA\_Band 5\_RMC\_846.6MHz**

## WCDMA\_Band 5\_HSDPA\_826.4MHz



Date: 7.AUG.2018 11:32:35

## WCDMA\_Band 5\_HSDPA\_836.6MHz



Date: 7.AUG.2018 11:33:26

**WCDMA\_Band 5\_HSDPA\_846.6MHz**

Date: 7.AUG.2018 11:33:46

**WCDMA\_Band 5\_HSUPA\_826.4MHz**

Date: 7.AUG.2018 11:31:52

**WCDMA\_Band 5\_HSUPA\_836.6MHz**

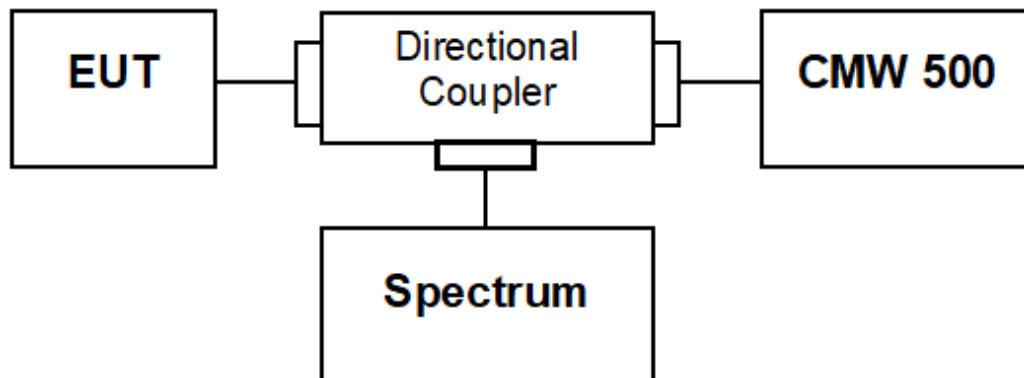
Date: 7.AUG.2018 11:31:01

**WCDMA\_Band 5\_HSUPA\_846.6MHz**

Date: 7.AUG.2018 11:30:18

## 6. Conducted Band Edge

### 6.1. Test Setup



### 6.2. Test Procedure

1. The EUT was connected to spectrum analyzer and System Simulator via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The conducted spurious emission for the whole frequency range was taken.
4. In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.

### 6.3. Test Method

#### **Conducted Spurious Measurement:**

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 6.1

ANSI C63.26: 2015 Sub-clause 5.7

#### **Radiated Spurious Measurement:**

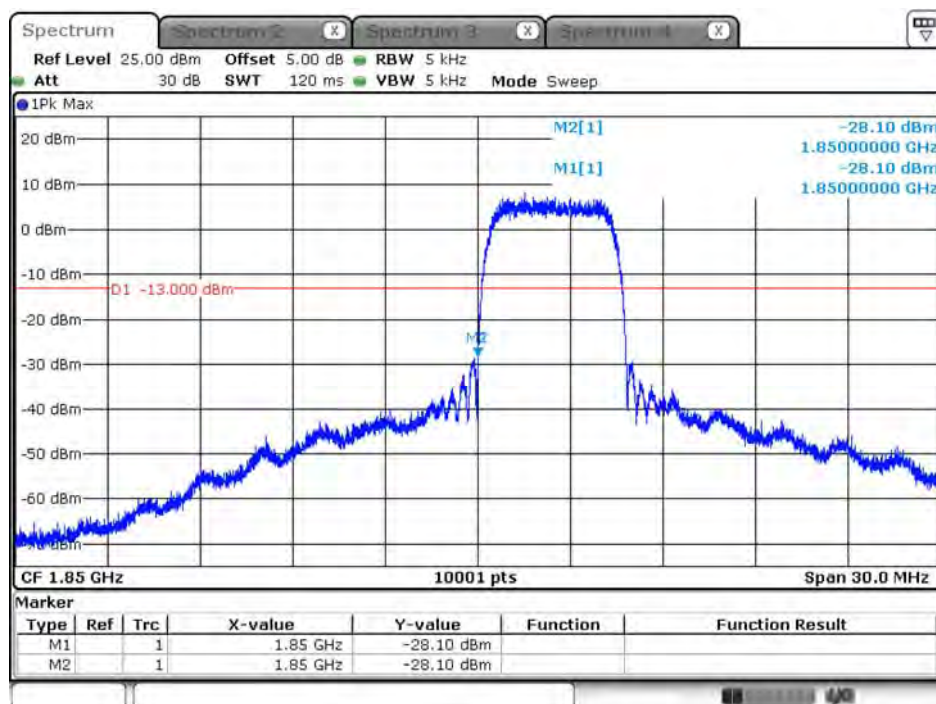
KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 5.8

ANSI C63.26: 2015 Sub-clause 5.5.3.2

## 6.4. Test Result

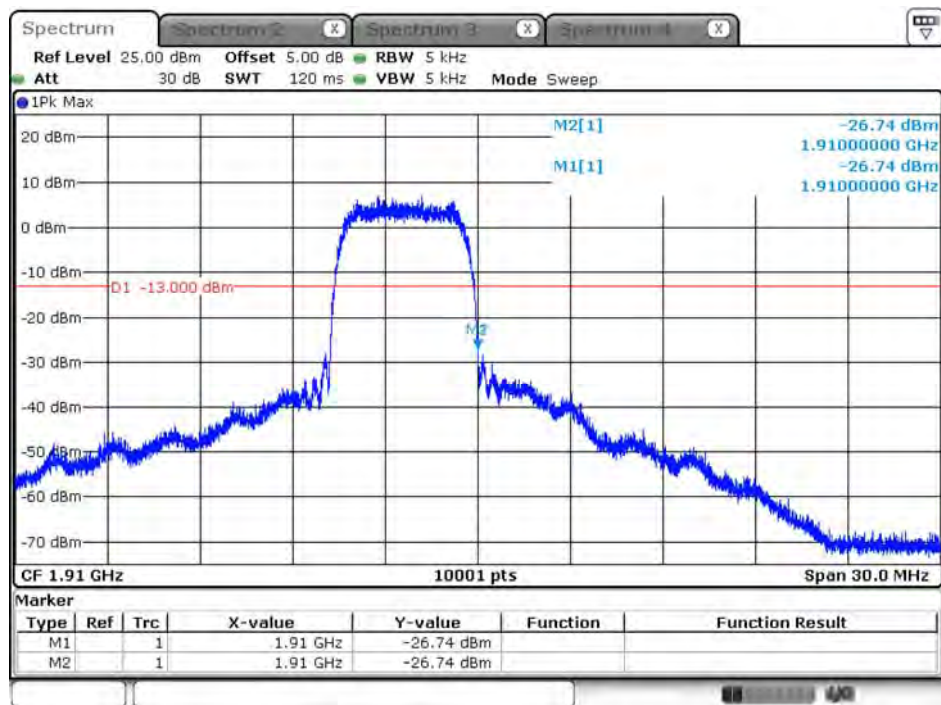
|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Conducted Band Edge  |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

### WCDMA\_Band 2\_RMC\_1852.4MHz

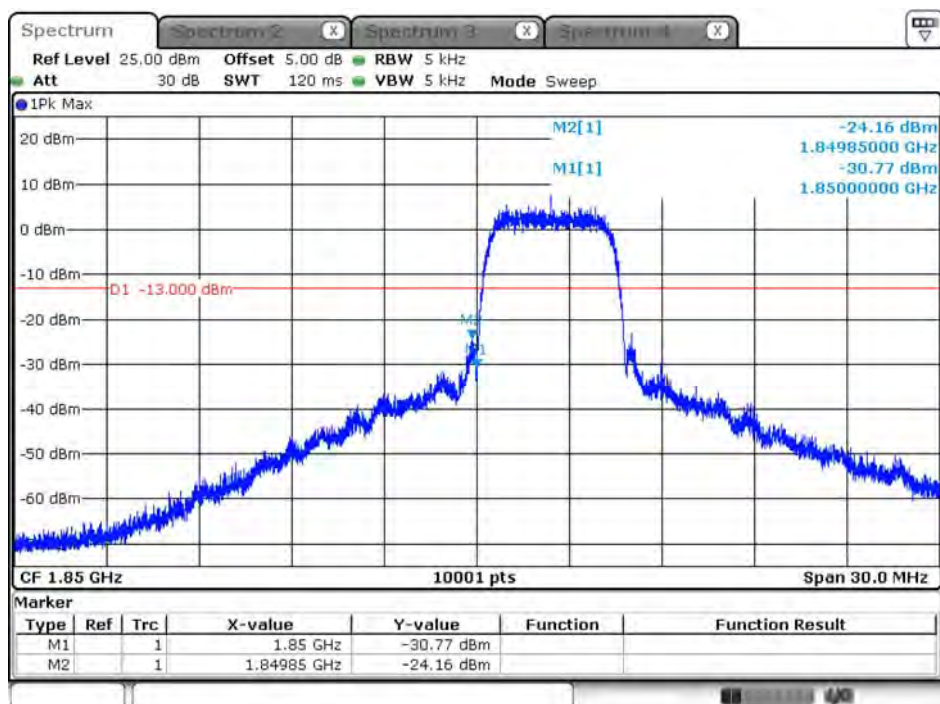


Date: 7.AUG.2018 11:05:08

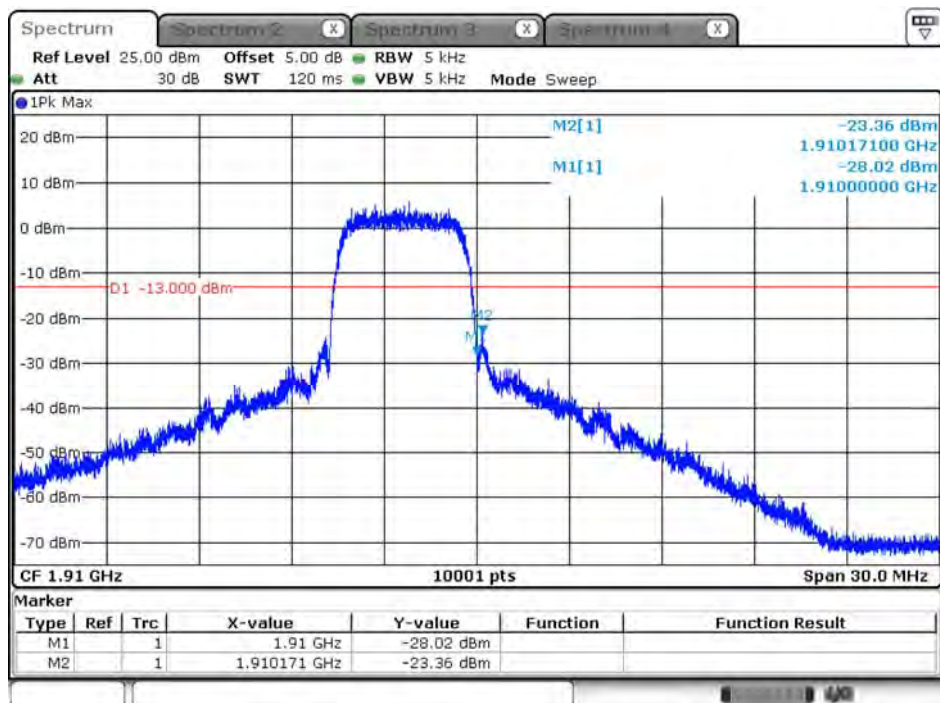
## WCDMA\_Band 2\_RMC\_1907.6MHz



Date: 7.AUG.2018 11:09:42

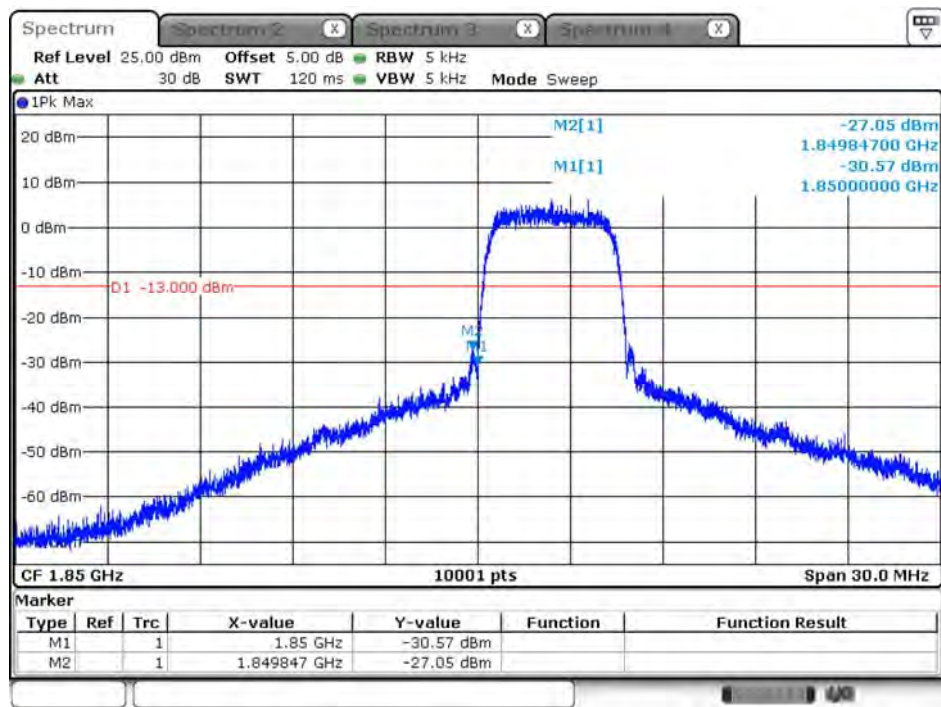
**WCDMA\_Band 2\_HSDPA\_1852.4MHz**

Date: 7.AUG.2018 11:06:12

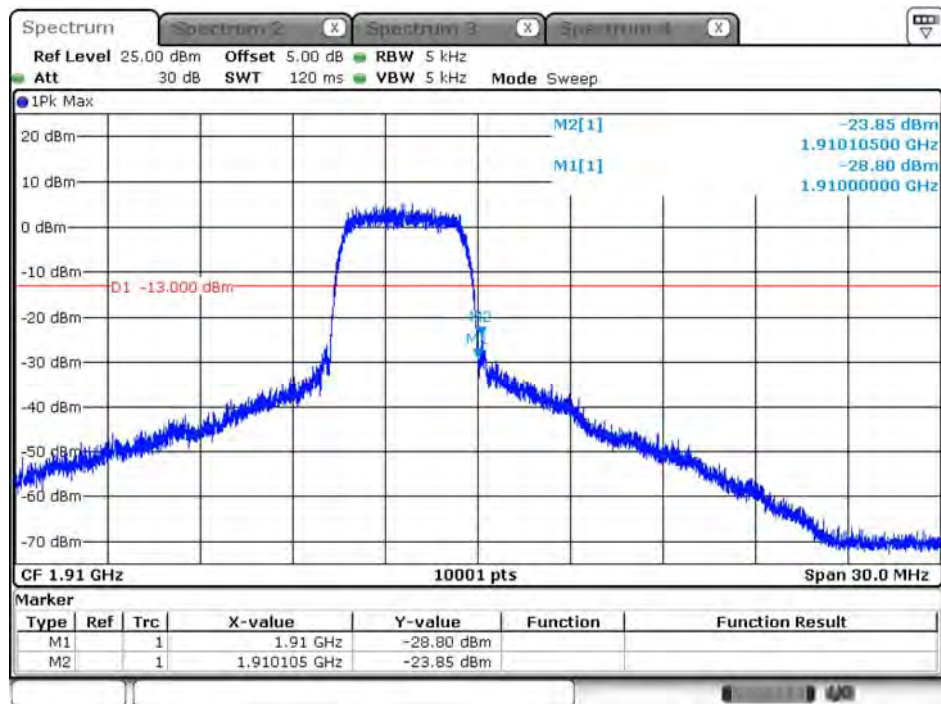
**WCDMA\_Band 2\_HSDPA\_1907.6MHz**

Date: 7.AUG.2018 11:09:13

**WCDMA\_Band 2\_HSUPA\_1852.4MHz**



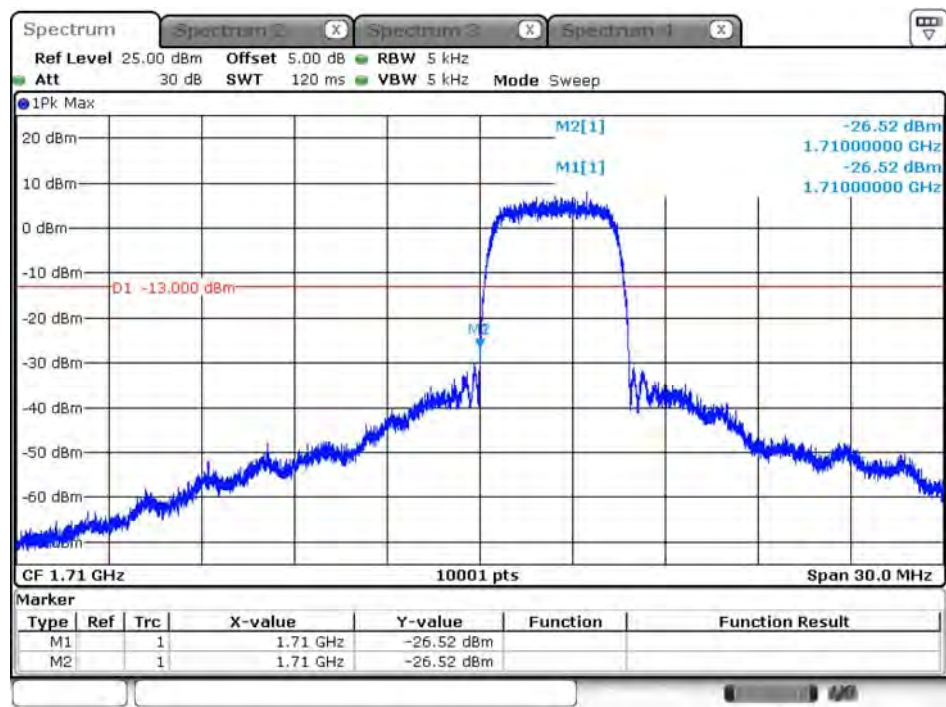
Date: 7.AUG.2018 11:07:07

**WCDMA\_Band 2\_HSUPA\_1907.6MHz**

Date: 7.AUG.2018 11:08:31

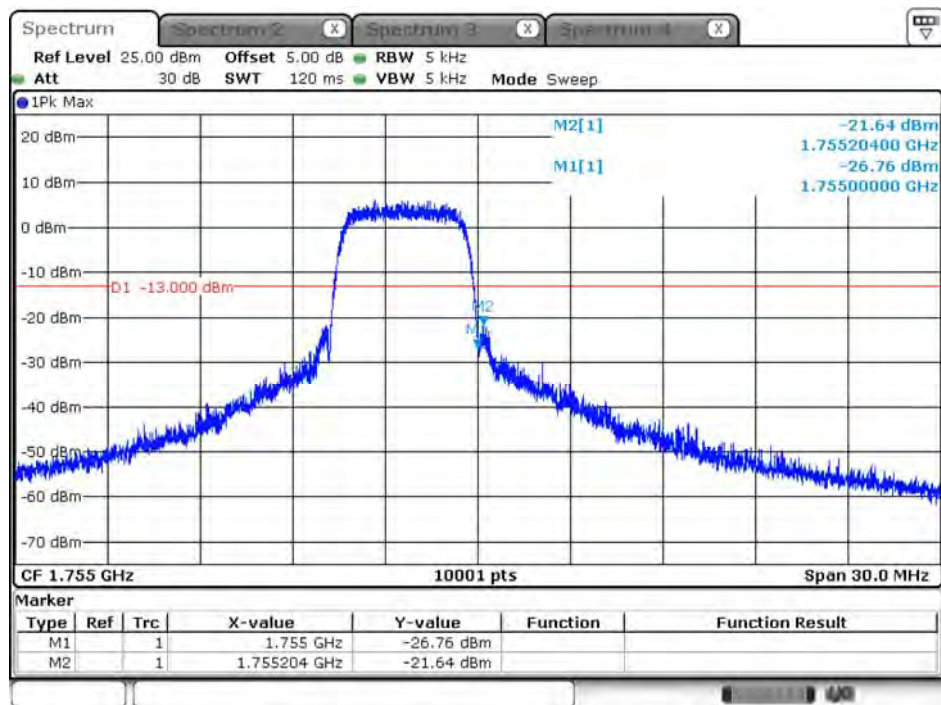
|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Conducted Band Edge  |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

### WCDMA\_Band 4\_RMC\_1712.4MHz

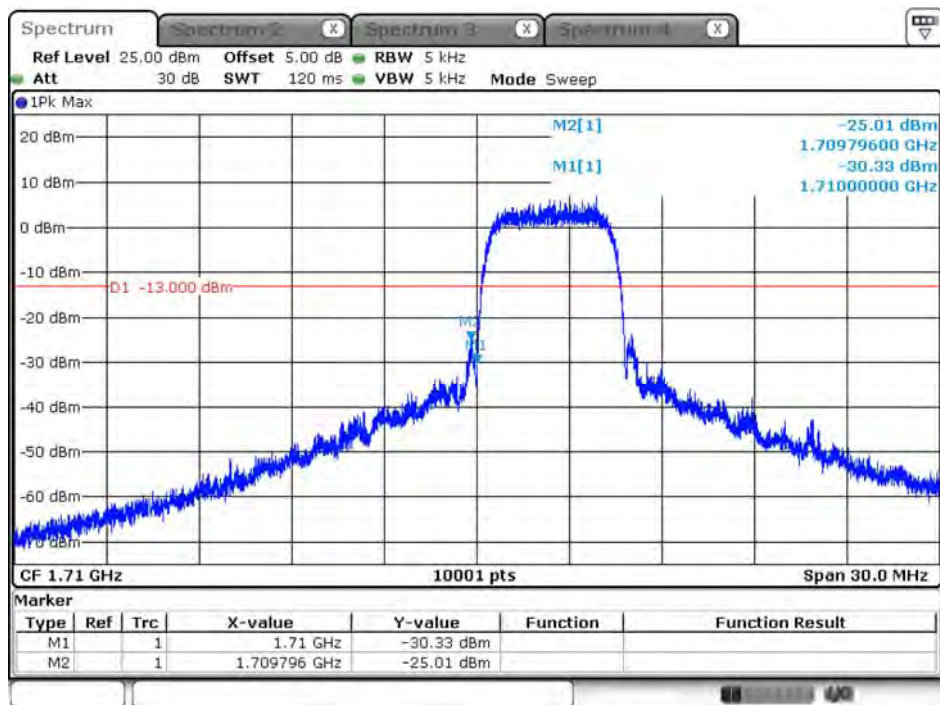


Date: 7.AUG.2018 10:56:39

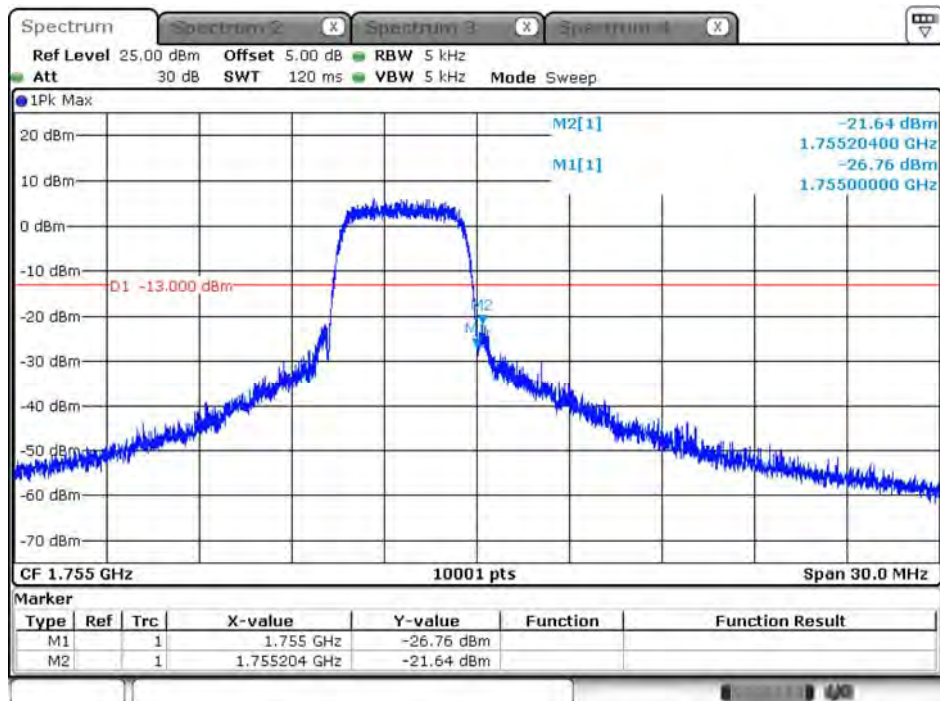
## WCDMA\_Band 4\_RMC\_1752.6MHz



Date: 7.AUG.2018 10:53:49

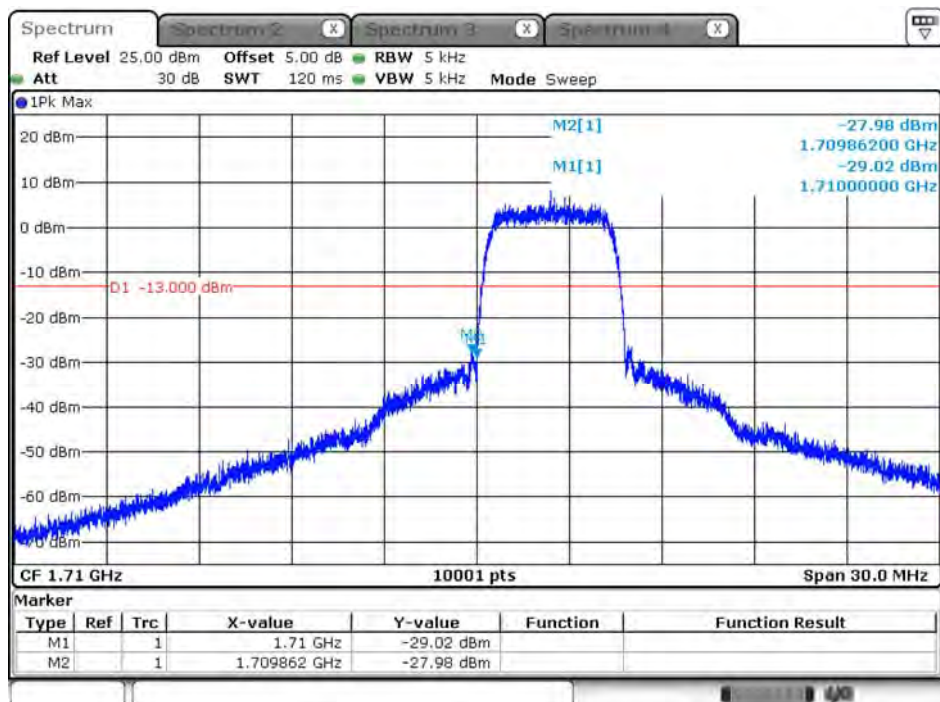
**WCDMA\_Band 4\_HSDPA\_1712.6MHz**

Date: 7.AUG.2018 10:58:40

**WCDMA\_Band 4\_HSDPA\_1752.6MHz**

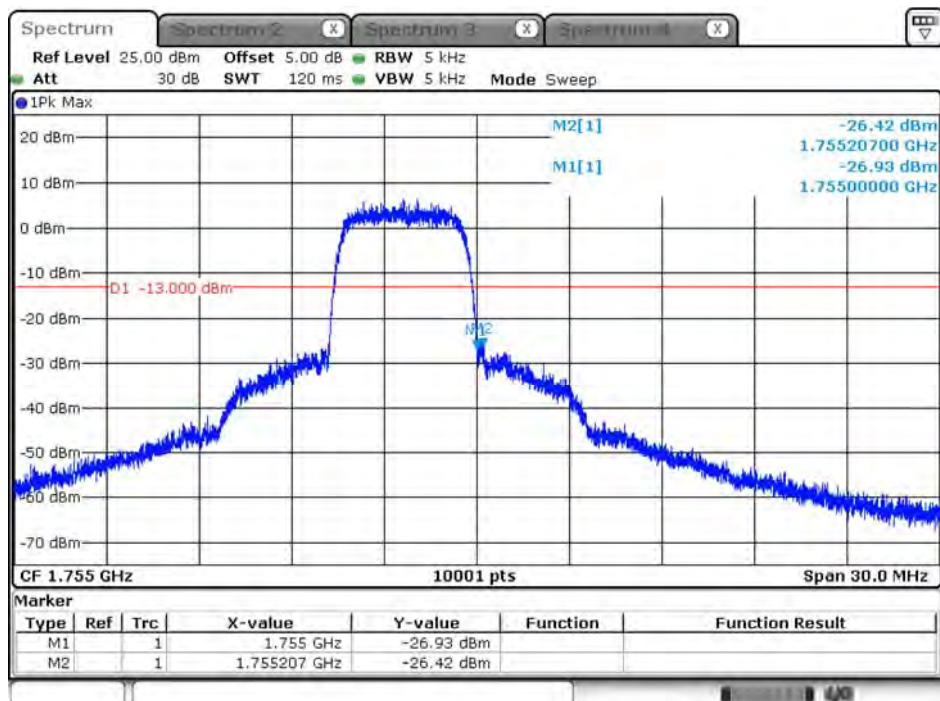
Date: 7.AUG.2018 10:53:49

## WCDMA\_Band 4\_HSUPA\_1712.4MHz



Date: 7.AUG.2018 10:57:45

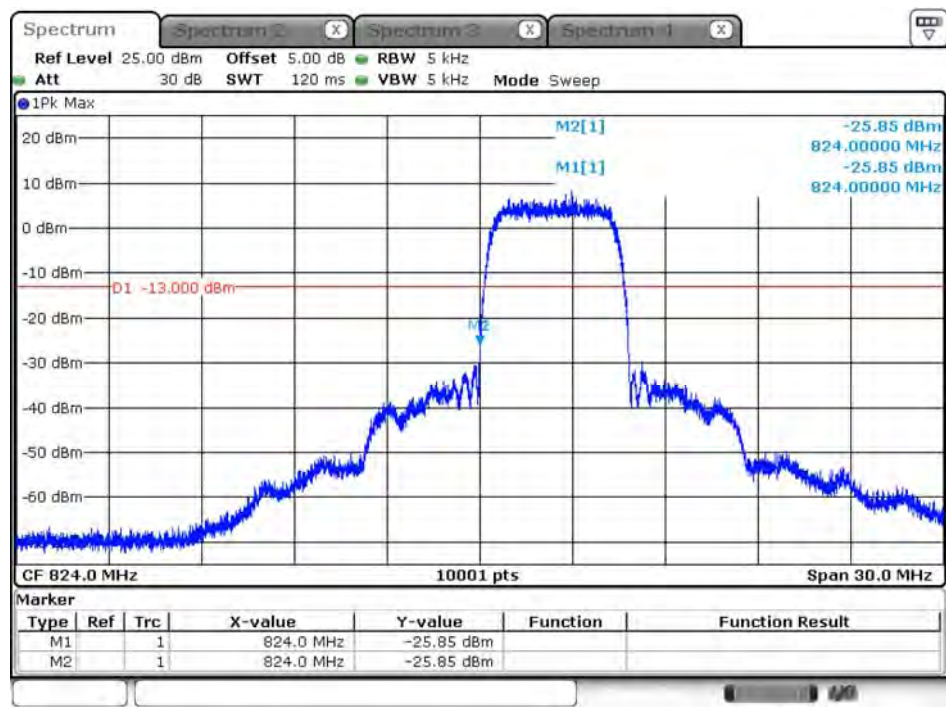
## WCDMA\_Band 4\_HSUPA\_1752.6MHz



Date: 7.AUG.2018 10:54:54

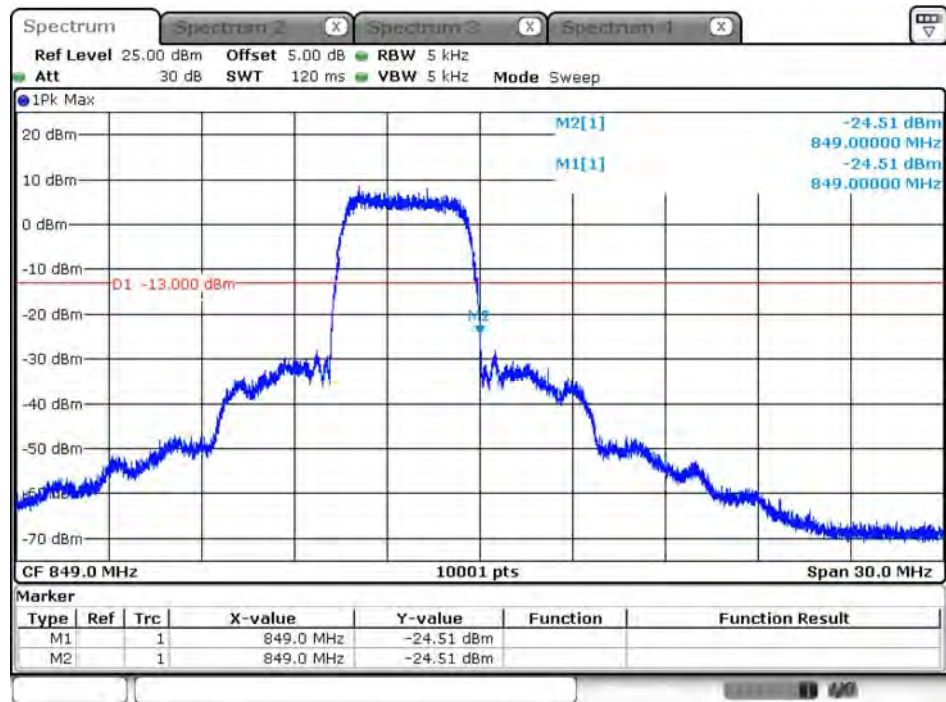
|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Conducted Band Edge  |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/07           | Test Site | SR10-H |

### WCDMA\_Band 5\_RMC\_826.4MHz

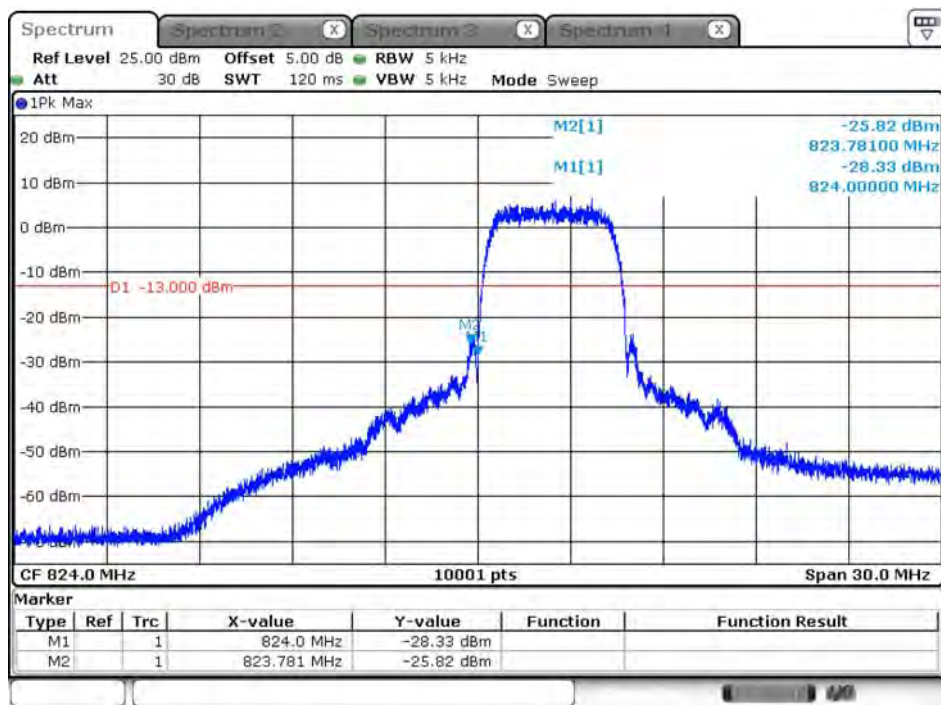


Date: 7.AUG.2018 10:46:51

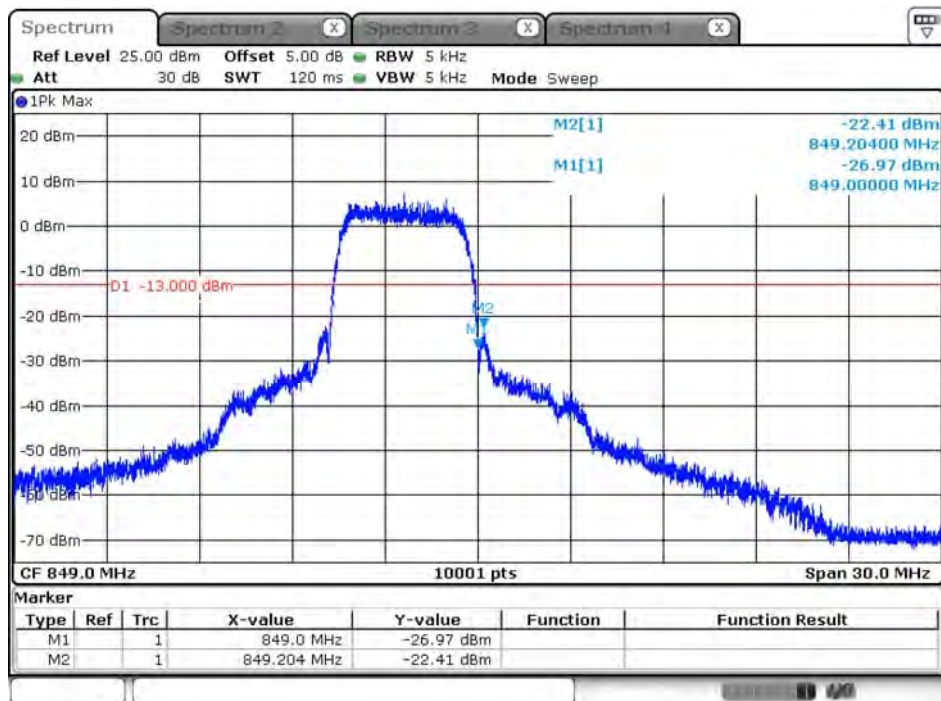
## WCDMA\_Band 5\_RMC\_846.6MHz



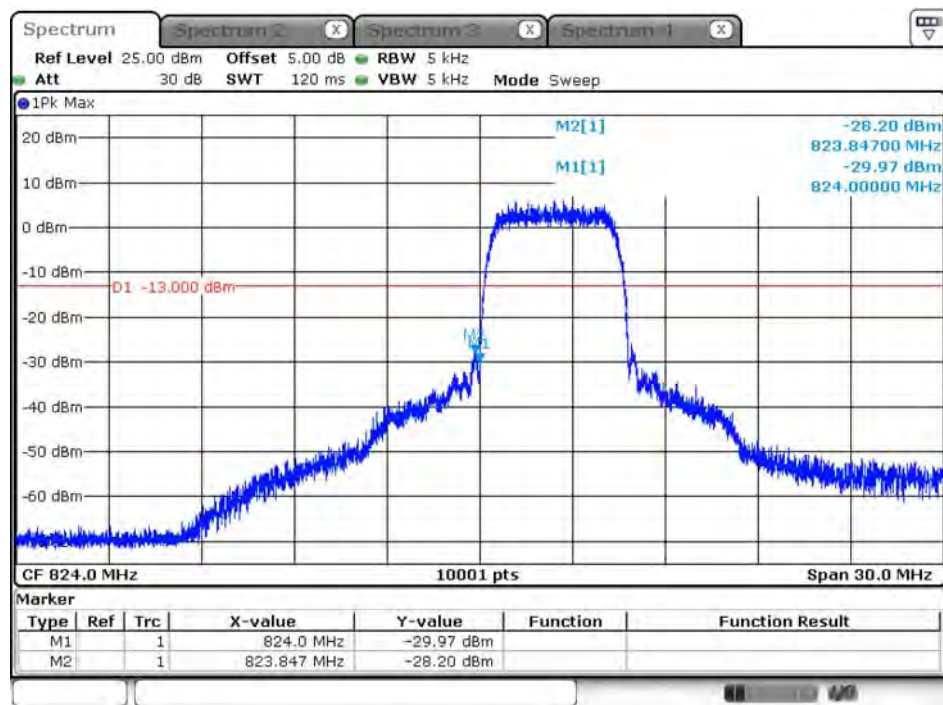
Date: 7.AUG.2018 10:40:09

**WCDMA\_Band 5\_HSDPA\_826.4MHz**

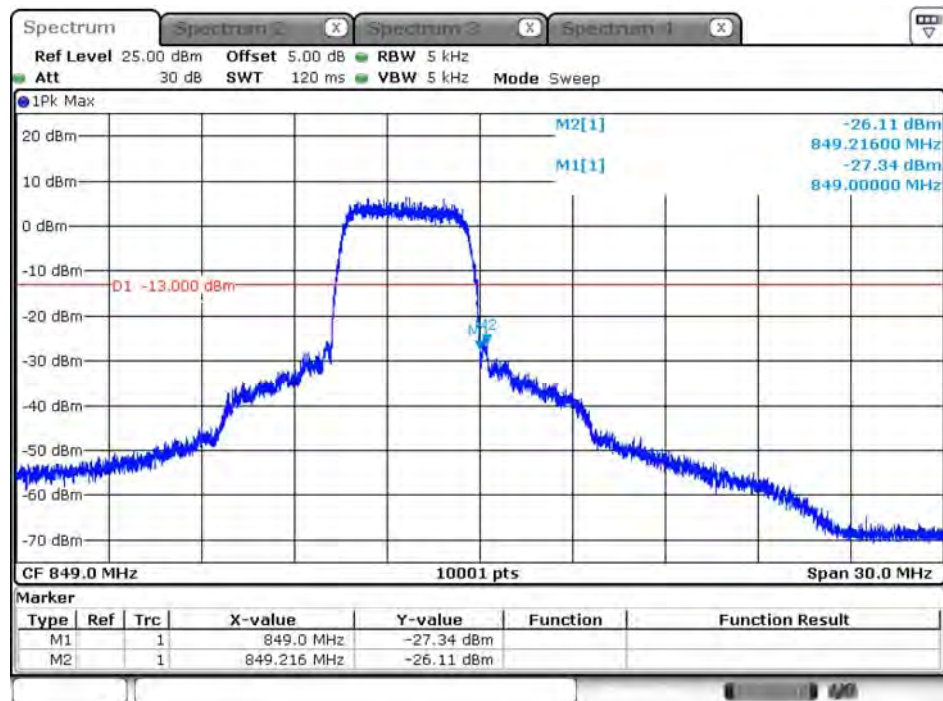
Date: 7.AUG.2018 10:45:06

**WCDMA\_Band 5\_HSDPA\_846.6MHz**

Date: 7.AUG.2018 10:43:23

**WCDMA\_Band 5\_HSUPA\_826.4MHz**

Date: 7.AUG.2018 10:46:07

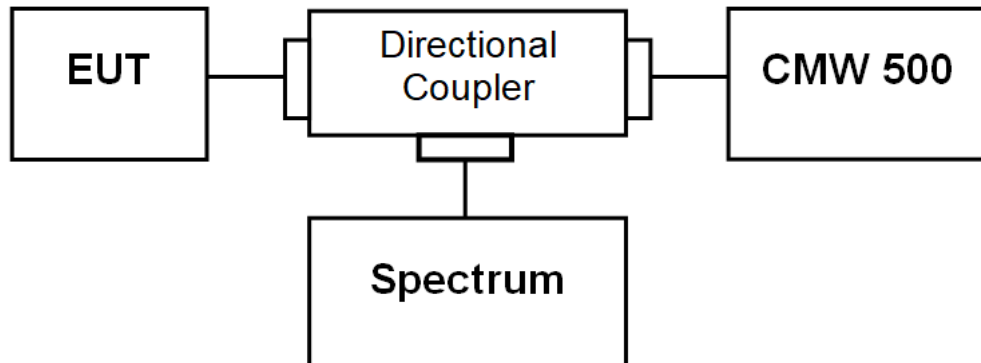
**WCDMA\_Band 5\_HSUPA\_846.6MHz**

Date: 7.AUG.2018 10:42:22

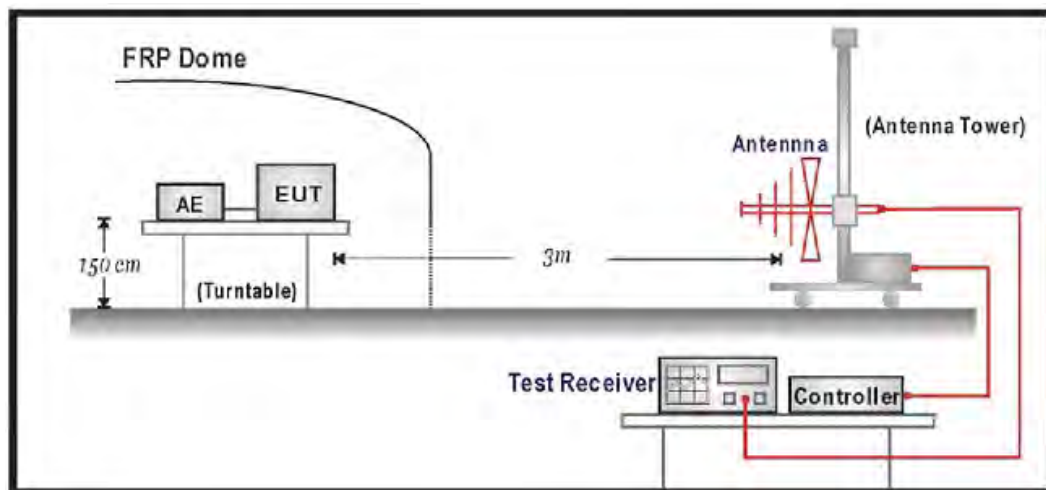
## 7. Spurious Emission

### 7.1. Test Setup

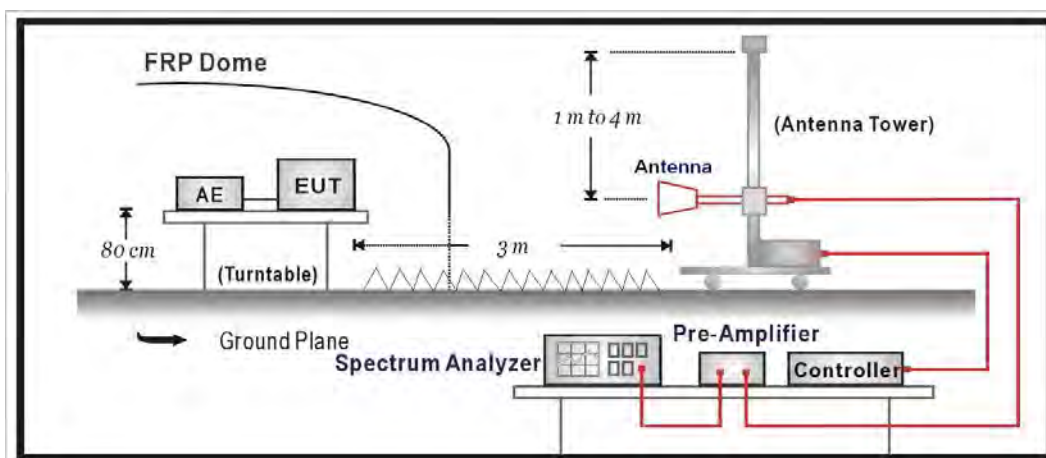
Conducted Spurious Measurement (below 1GHz)



Radiated Spurious Measurement (below 1GHz)



Radiated Spurious Measurement (above 1GHz)



## 7.2. Test Procedure

### Conducted Spurious Measurement:

- a) Place the EUT on a bench and set it in transmitting mode.
- b) Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMU200 by a Directional Couple.
- c) EUT Communicate with CMU200, then select a channel for testing.
- d) Add a correction factor to the display of spectrum, and then test.
- e) The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10<sup>th</sup> harmonic.

### Radiated Spurious Measurement:

- a) The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
- b) The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- c) The table was rotated 360 degrees to determine the position of the highest spurious emission.
- d) The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
- e) Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 1MHz, Sweep 500ms, Taking the record of maximum spurious emission.
- f) A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- g) Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- h) Taking the record of output power at antenna port
- i) Repeat step 7 to step 8 for another polarization.
- j)  $EIRP = SG - \text{Cable loss} + \text{Antenna Gain}$

## 7.3. Test Method

### Conducted Spurious Measurement:

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 6.1  
ANSI C63.26-2015 Sub-clause 5.7

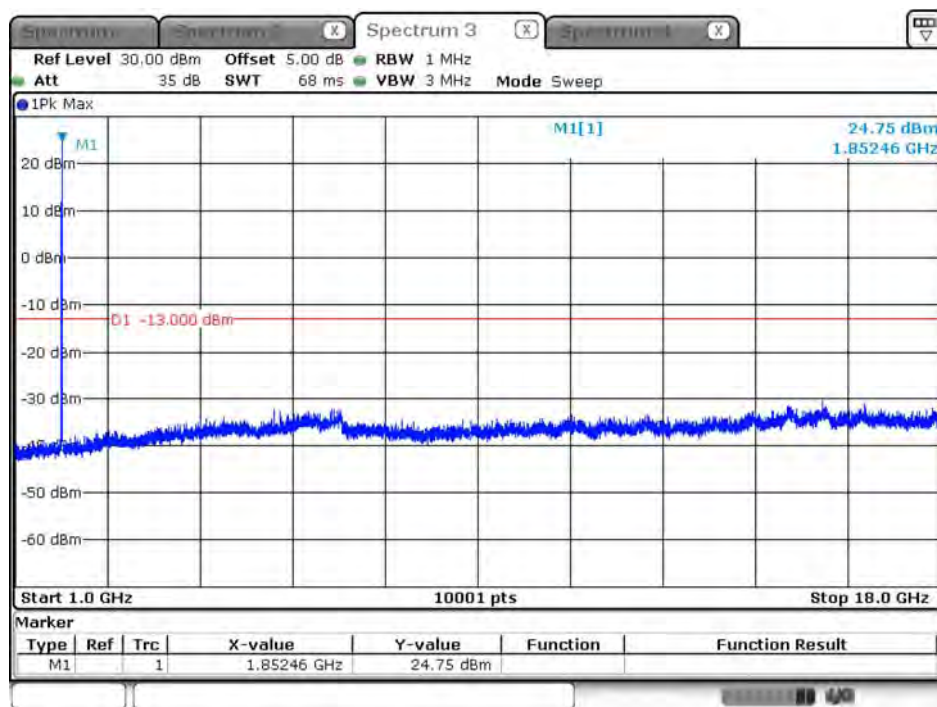
### Radiated Spurious Measurement:

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 5.8  
ANSI C63.26-2015 Sub-clause 5.5.3.2

## 7.4. Test Result

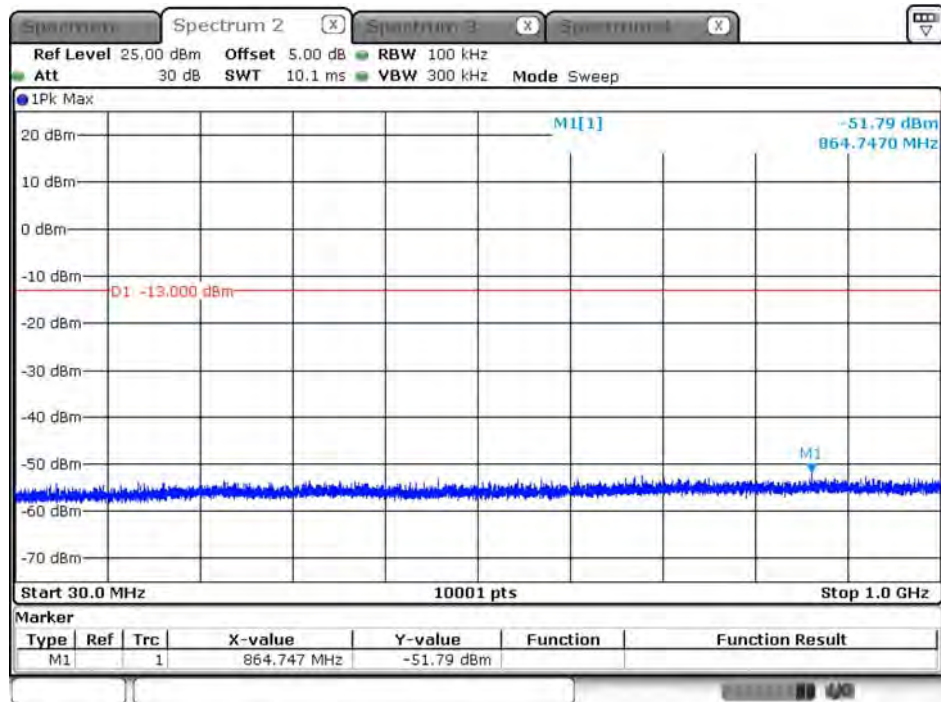
|              |                             |           |        |
|--------------|-----------------------------|-----------|--------|
| Product      | LE910C4-NF                  |           |        |
| Test Item    | Conducted Spurious Emission |           |        |
| Test Mode    | Mode 1: WCDMA Band 2        |           |        |
| Date of Test | 2018/08/07                  | Test Site | SR10-H |

### WCDMA\_Band 2\_RMC\_1852.4MHz\_above 1G

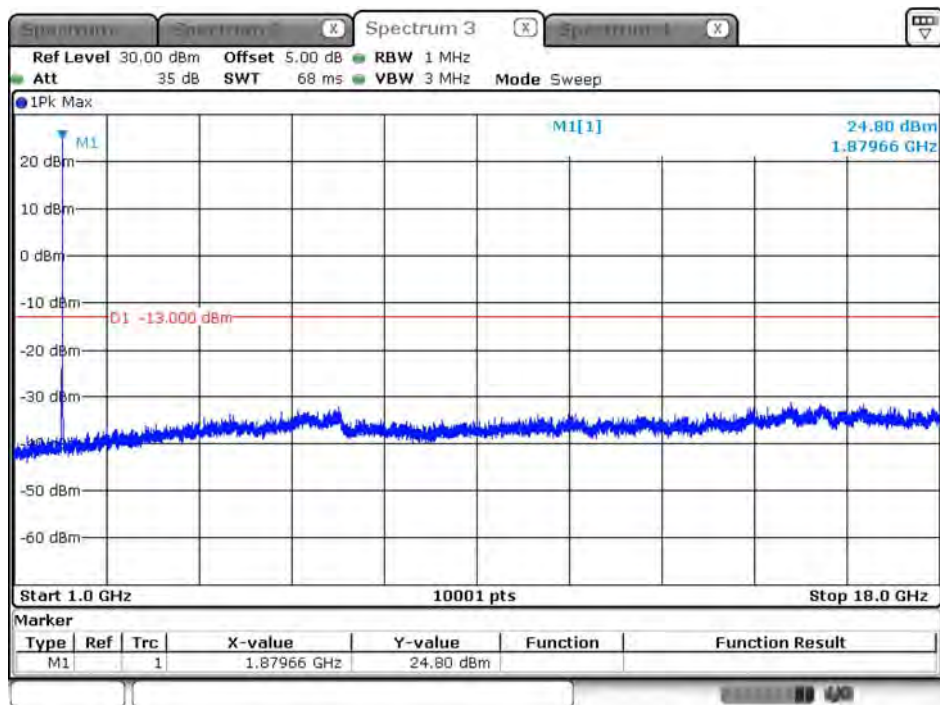


Date: 7.AUG.2018 13:26:58

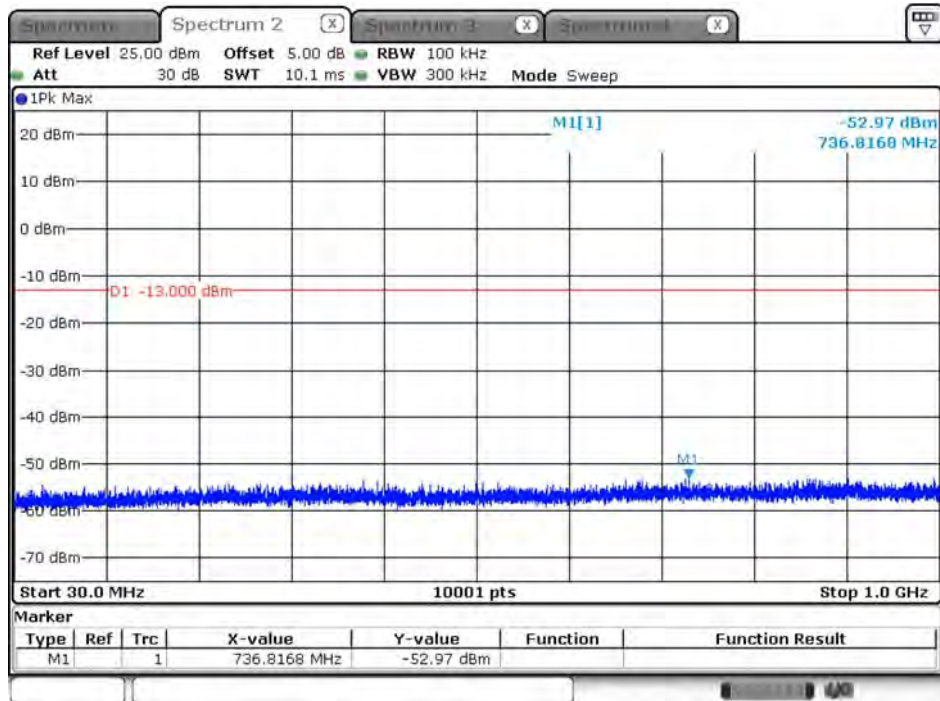
## WCDMA\_Band 2\_RMC\_1852.4MHz\_under 1G



Date: 7.AUG.2018 13:26:02

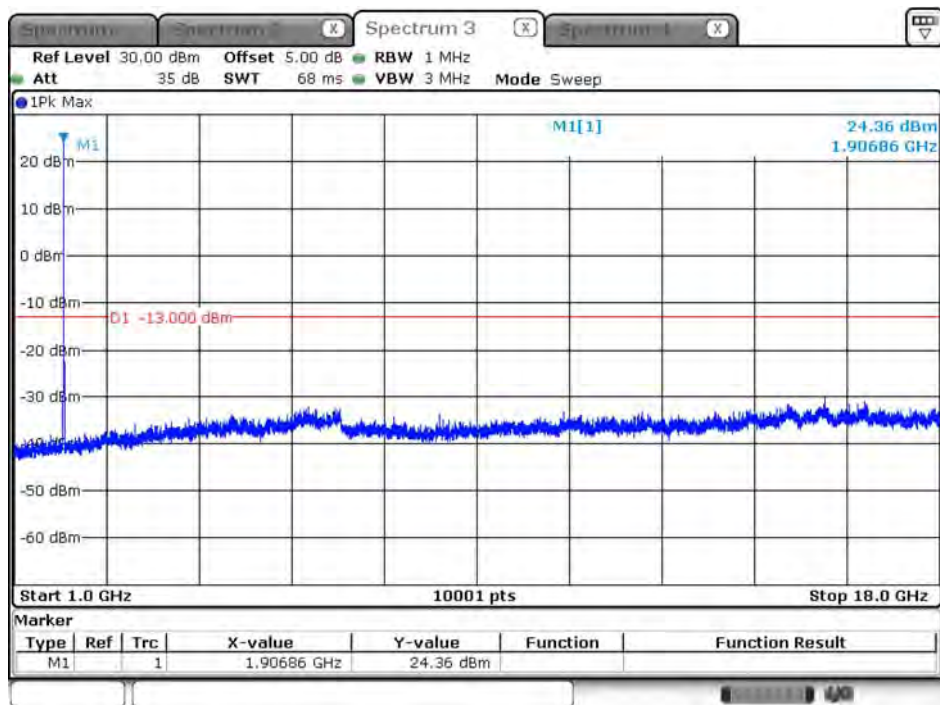
**WCDMA\_Band 2\_RMC\_1880.0MHz\_above 1G**

Date: 7.AUG.2018 13:28:26

**WCDMA\_Band 2\_RMC\_1880.0MHz\_under 1G**

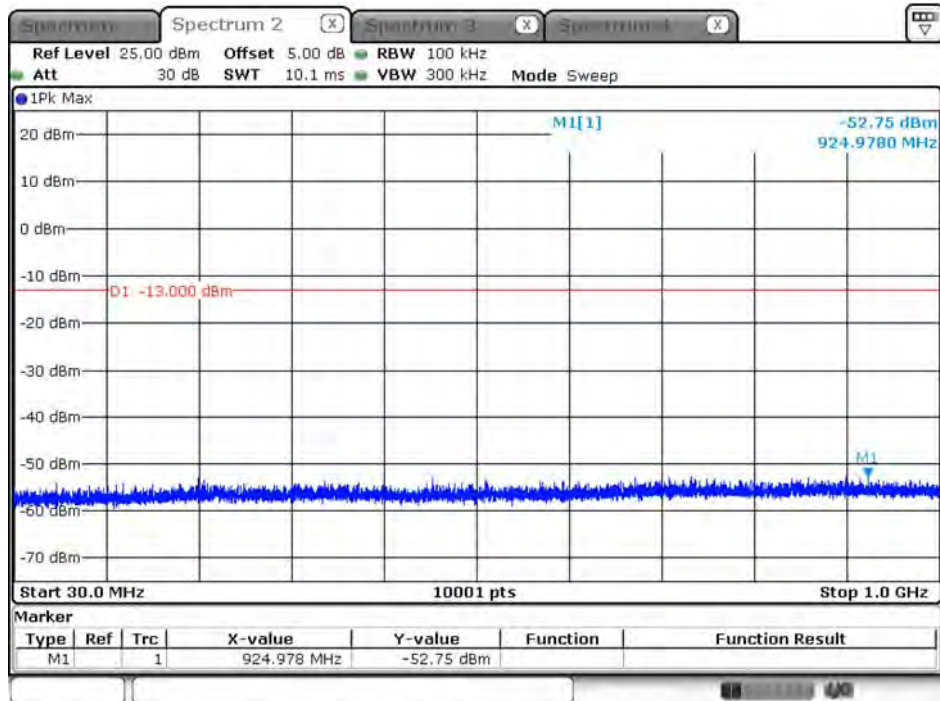
Date: 7.AUG.2018 13:27:47

## WCDMA\_Band 2\_RMC\_1907.6MHz\_above 1G

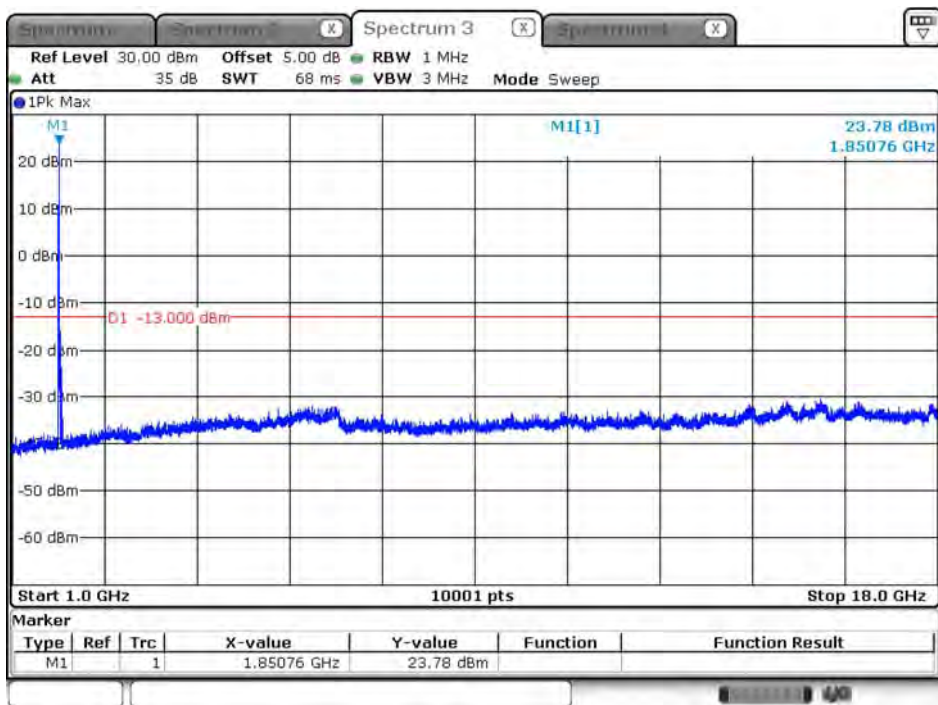


Date: 7.AUG.2018 13:31:32

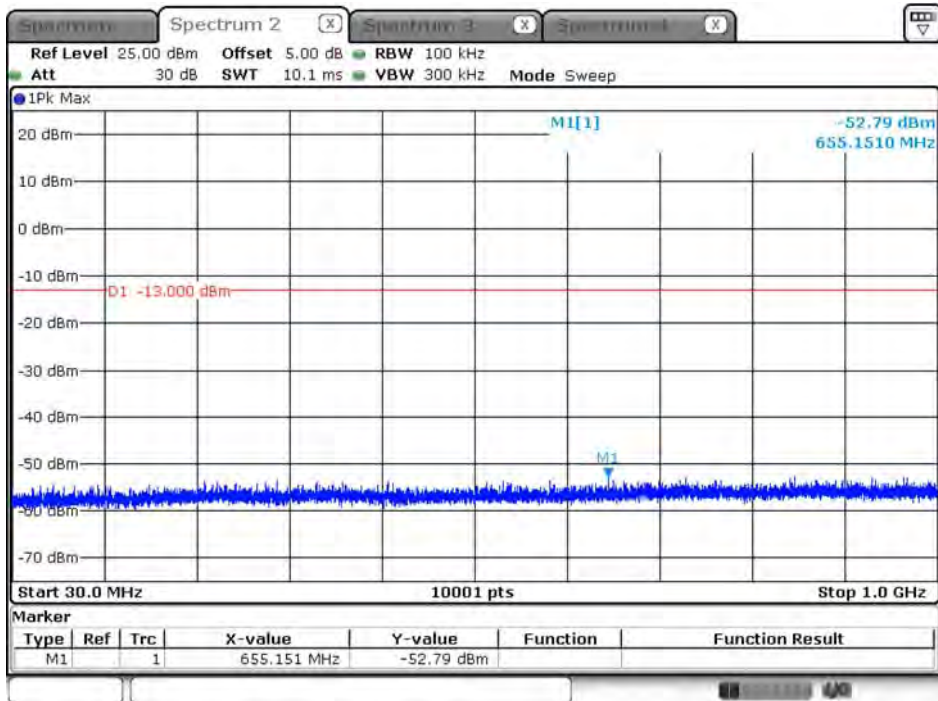
## WCDMA\_Band 2\_RMC\_1907.6MHz\_under 1G



Date: 7.AUG.2018 13:30:51

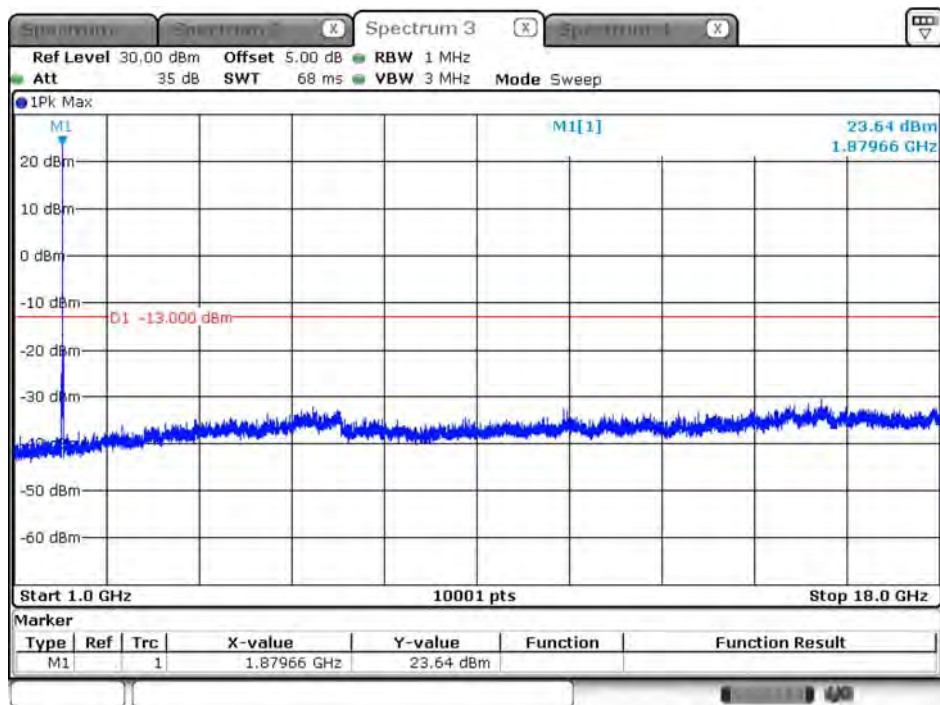
**WCDMA\_Band 2\_HSDPA\_1852.4MHz\_above 1G**

Date: 7.AUG.2018 13:48:18

**WCDMA\_Band 2\_HSDPA\_1852.4MHz\_under 1G**

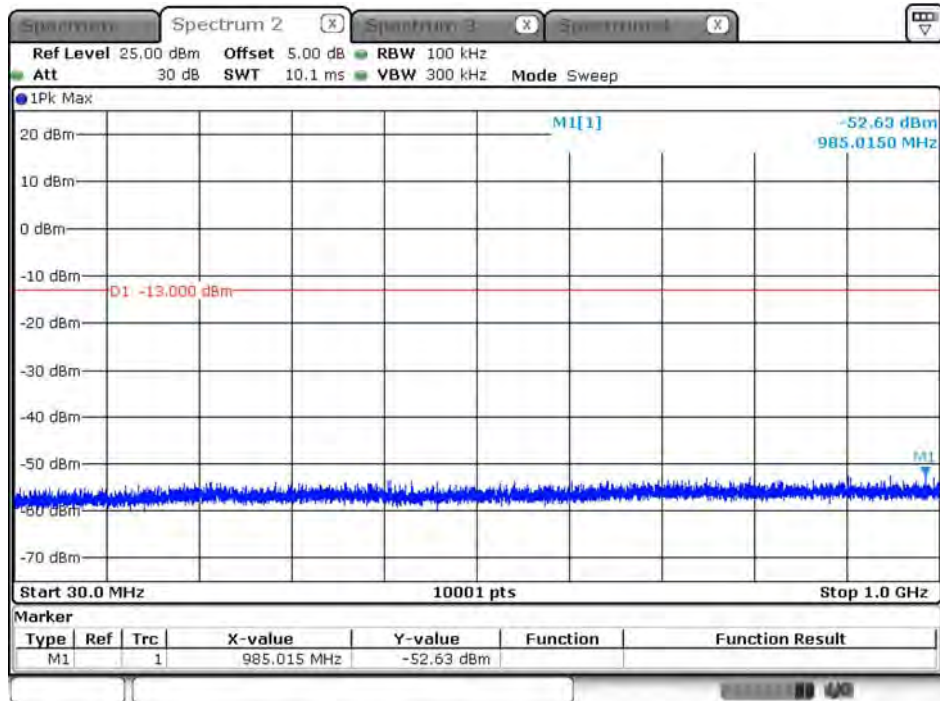
Date: 7.AUG.2018 13:47:01

## WCDMA\_Band 2\_HSDPA\_1880.0MHz\_above 1G



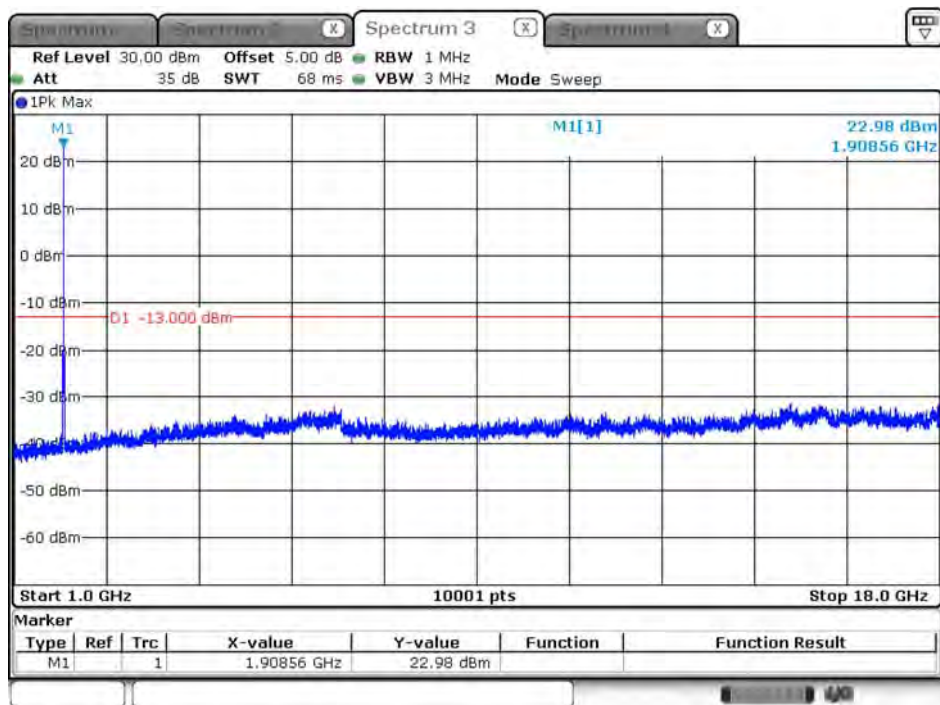
Date: 7.AUG.2018 13:49:50

## WCDMA\_Band 2\_HSDPA\_1880.0MHz\_under 1G



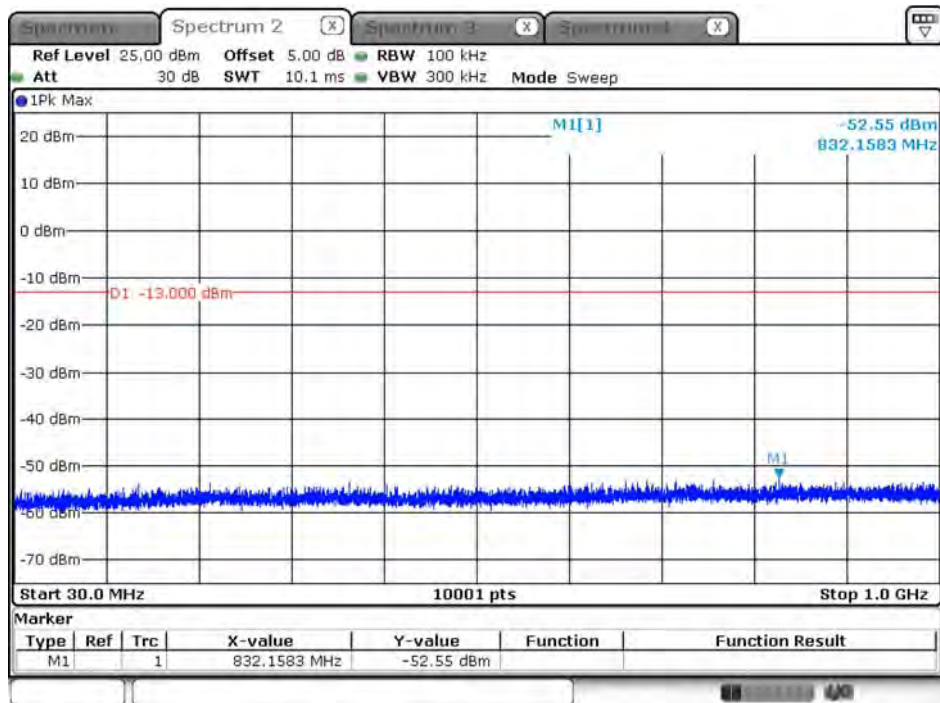
Date: 7.AUG.2018 13:49:21

## WCDMA\_Band 2\_HSDPA\_1907.6MHz\_above 1G

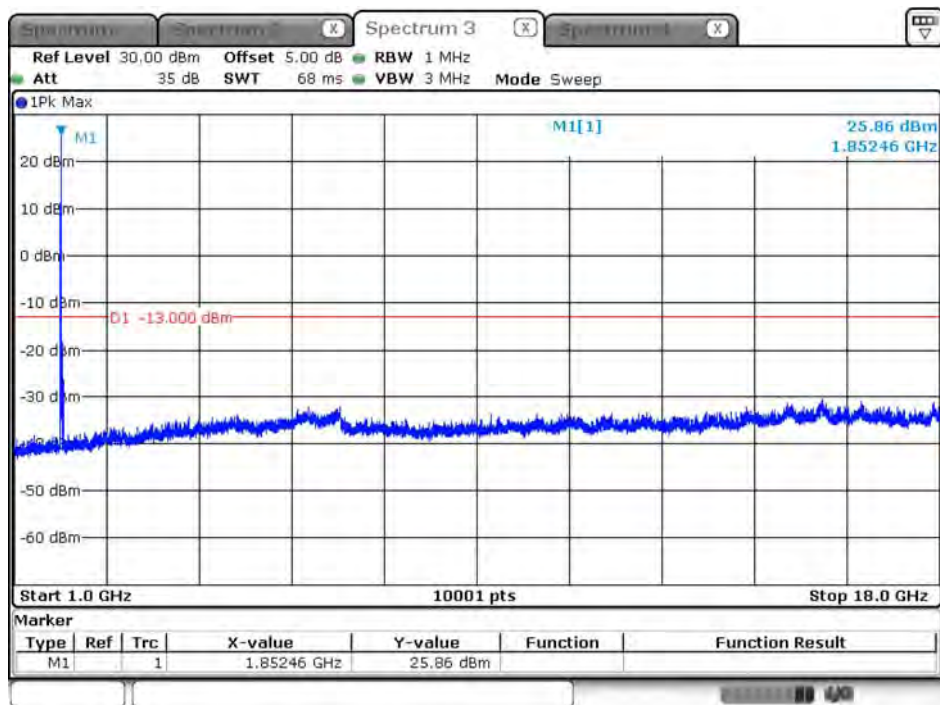


Date: 7.AUG.2018 13:51:44

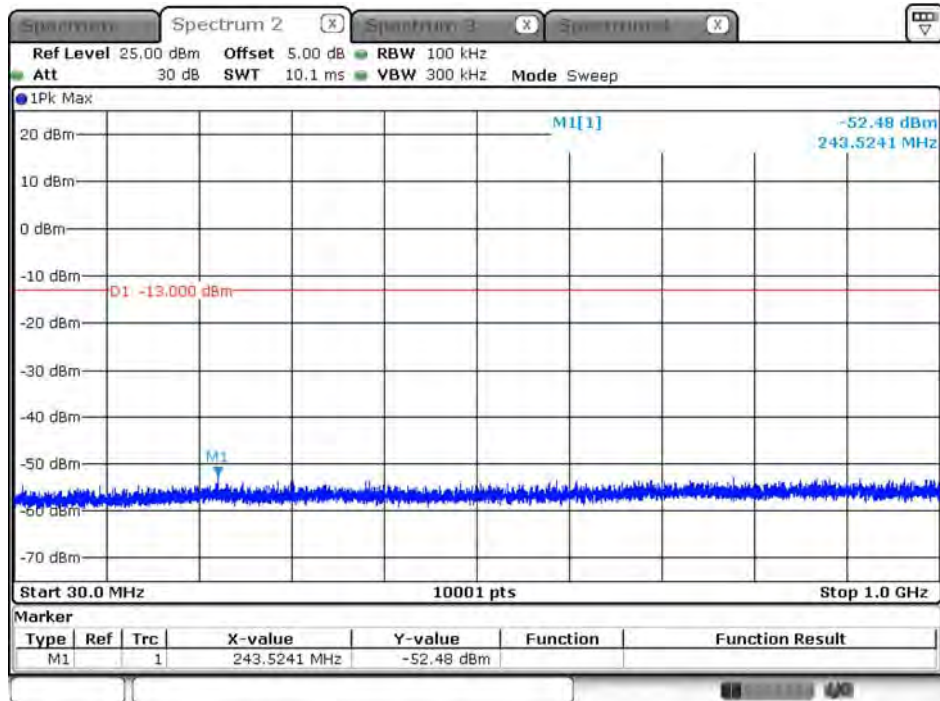
## WCDMA\_Band 2\_HSDPA\_1907.6MHz\_under 1G



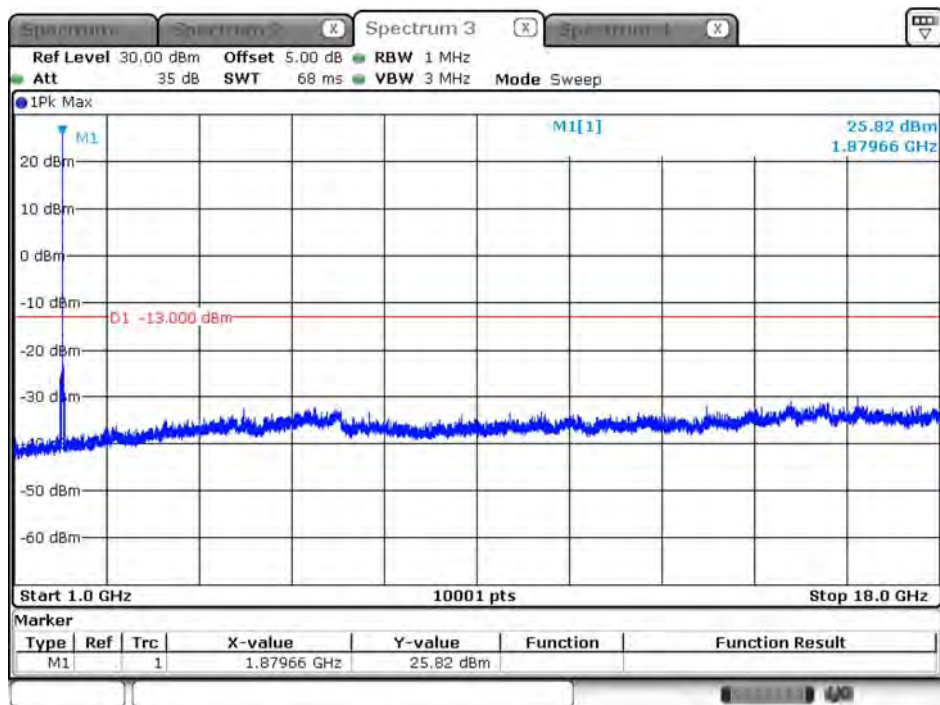
Date: 7.AUG.2018 13:51:01

**WCDMA\_Band 2\_HSUPA\_1852.4MHz\_above 1G**

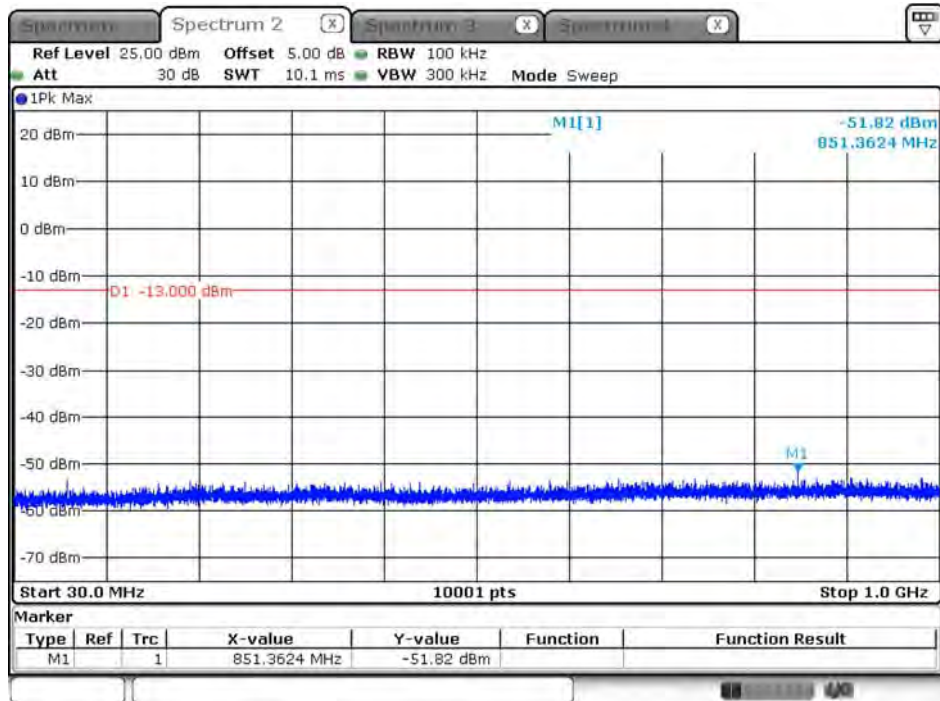
Date: 7.AUG.2018 13:38:31

**WCDMA\_Band 2\_HSUPA\_1852.4MHz\_under 1G**

Date: 7.AUG.2018 13:37:27

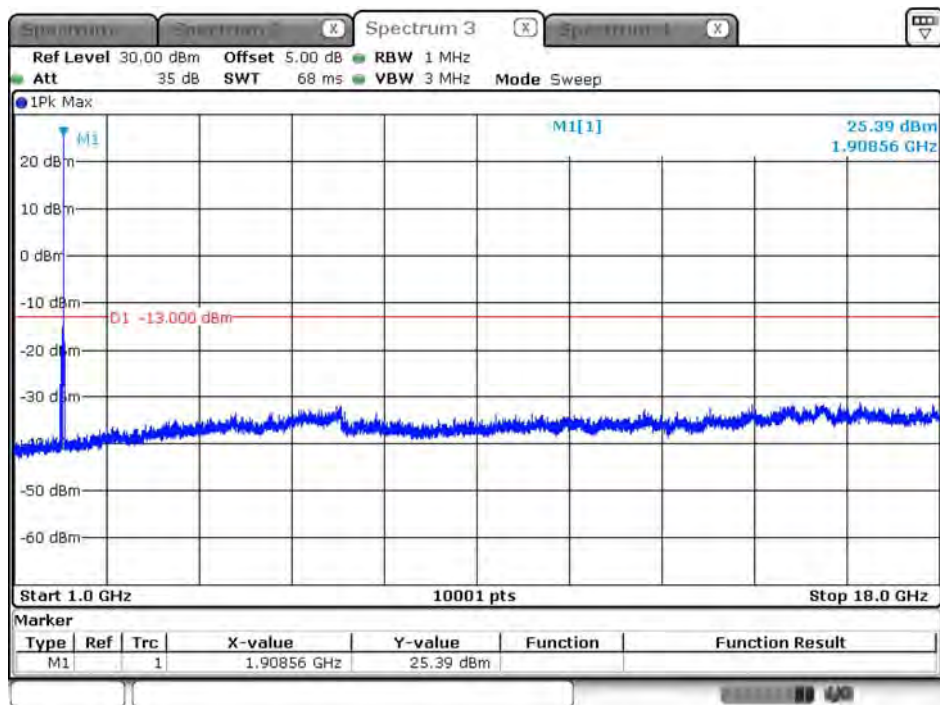
**WCDMA\_Band 2\_HSUPA\_1880.0MHz\_above 1G**

Date: 7.AUG.2018 13:36:24

**WCDMA\_Band 2\_HSUPA\_1880.0MHz\_under 1G**

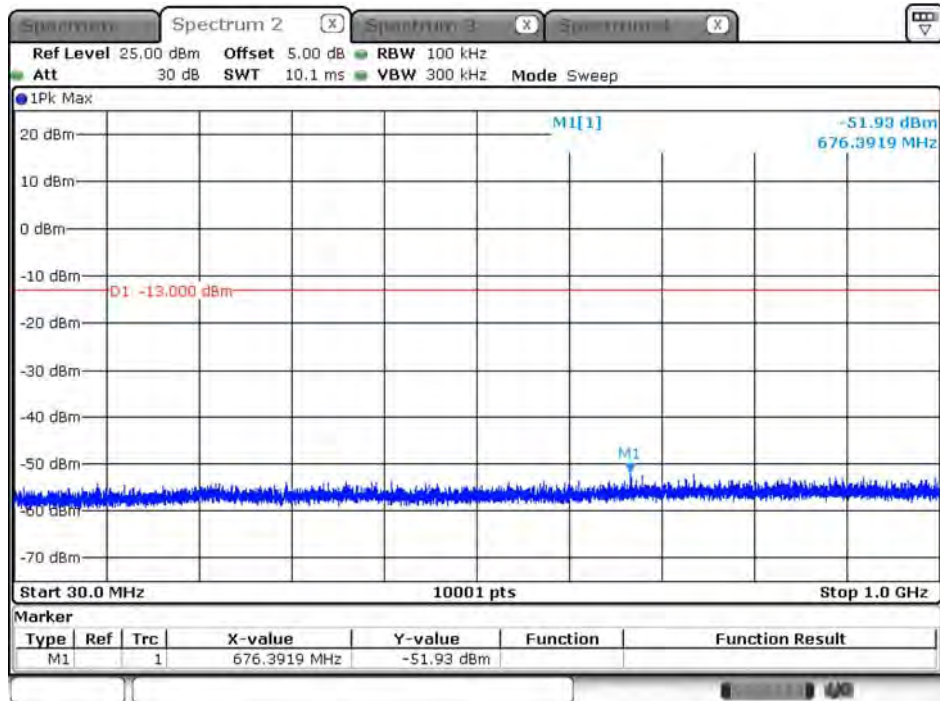
Date: 7.AUG.2018 13:35:43

## WCDMA\_Band 2\_HSUPA\_1907.6MHz\_above 1G



Date: 7.AUG.2018 13:34:45

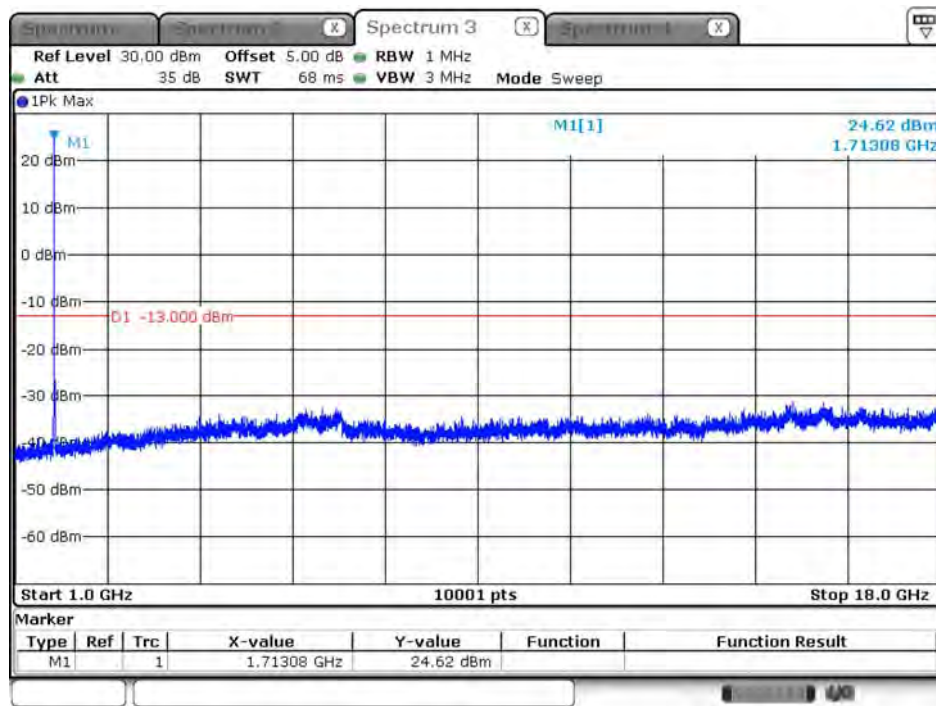
## WCDMA\_Band 2\_HSUPA\_1907.6MHz\_under 1G



Date: 7.AUG.2018 13:33:18

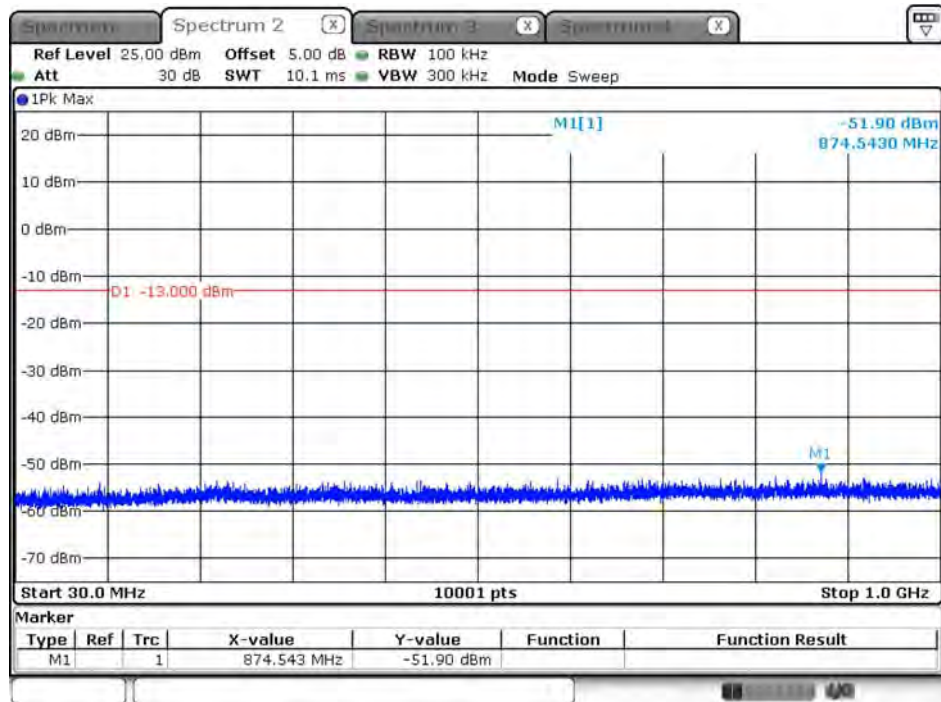
|              |                             |           |        |
|--------------|-----------------------------|-----------|--------|
| Product      | LE910C4-NF                  |           |        |
| Test Item    | Conducted Spurious Emission |           |        |
| Test Mode    | Mode 2: WCDMA Band 4        |           |        |
| Date of Test | 2018/08/07                  | Test Site | SR10-H |

### WCDMA\_Band 4\_RMC\_1712.4MHz\_above 1G

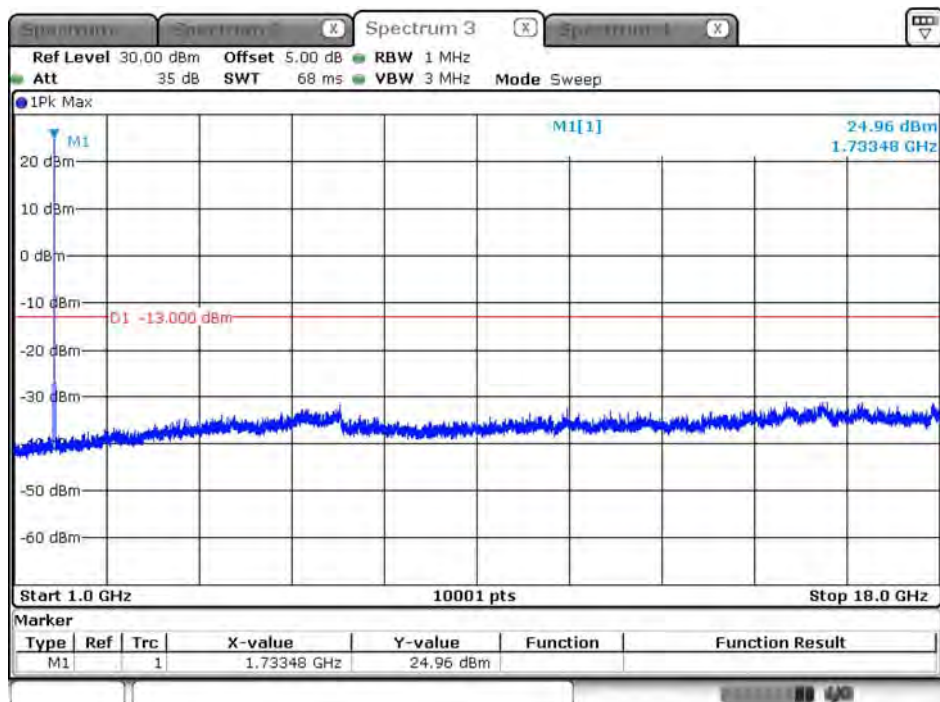


Date: 7.AUG.2018 11:46:12

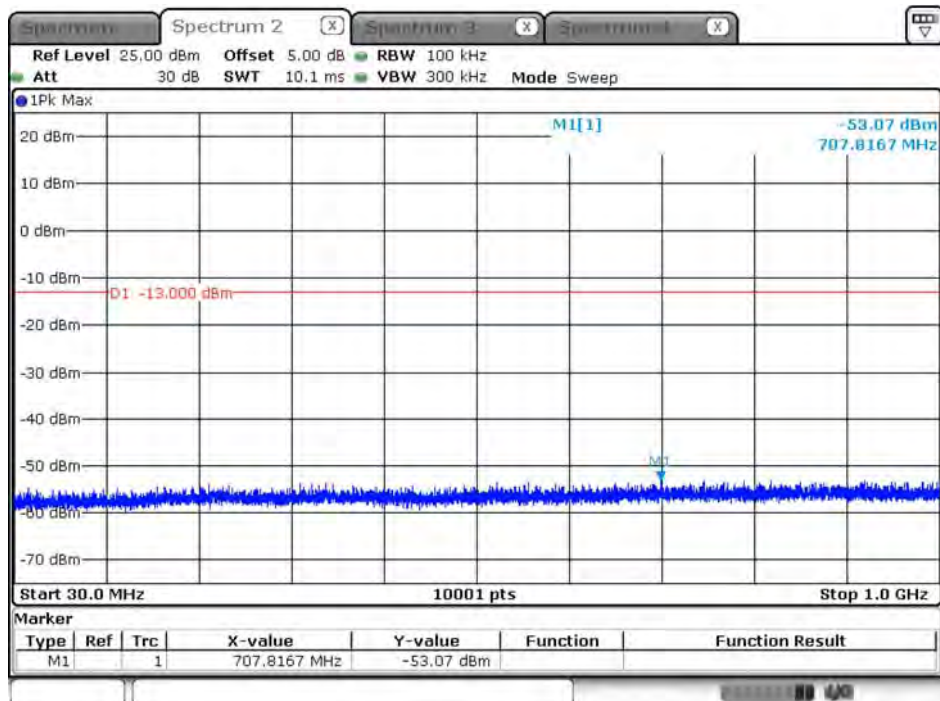
## WCDMA\_Band 4\_RMC\_1712.4MHz\_under 1G



Date: 7.AUG.2018 11:45:20

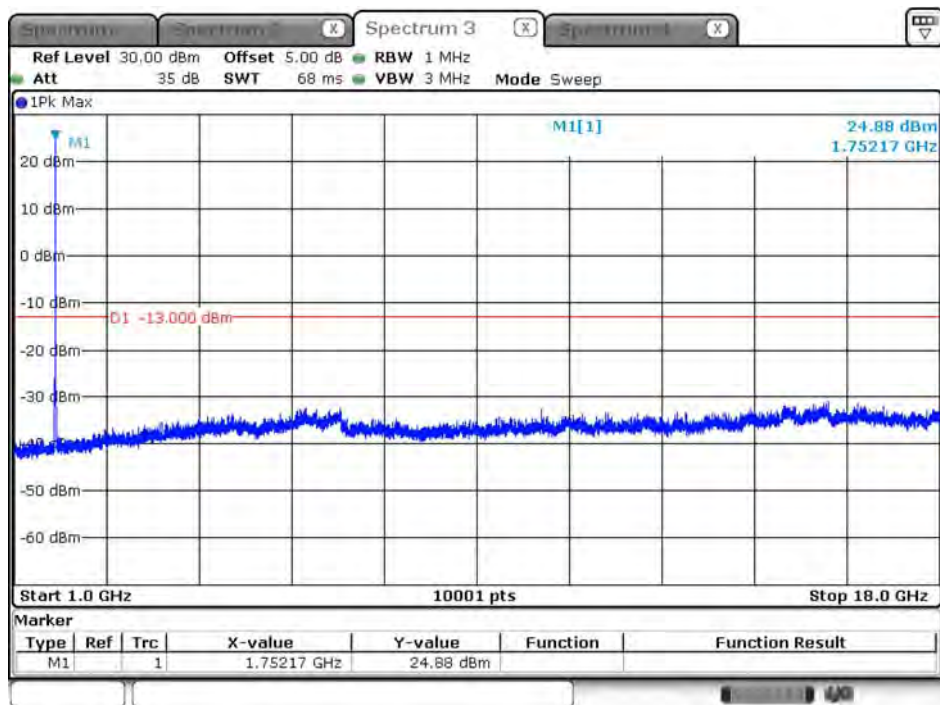
**WCDMA\_Band 4\_RMC\_1732.6MHz\_above 1G**

Date: 7.AUG.2018 11:47:08

**WCDMA\_Band 4\_RMC\_1732.6MHz\_under 1G**

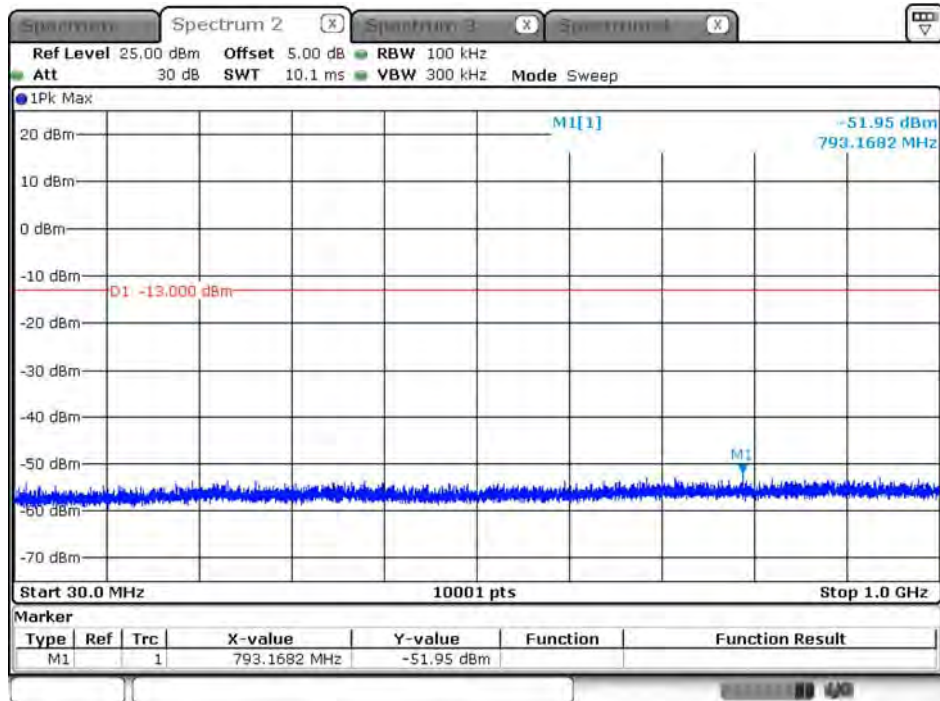
Date: 7.AUG.2018 11:46:47

## WCDMA\_Band 4\_RMC\_1752.6MHz\_above 1G



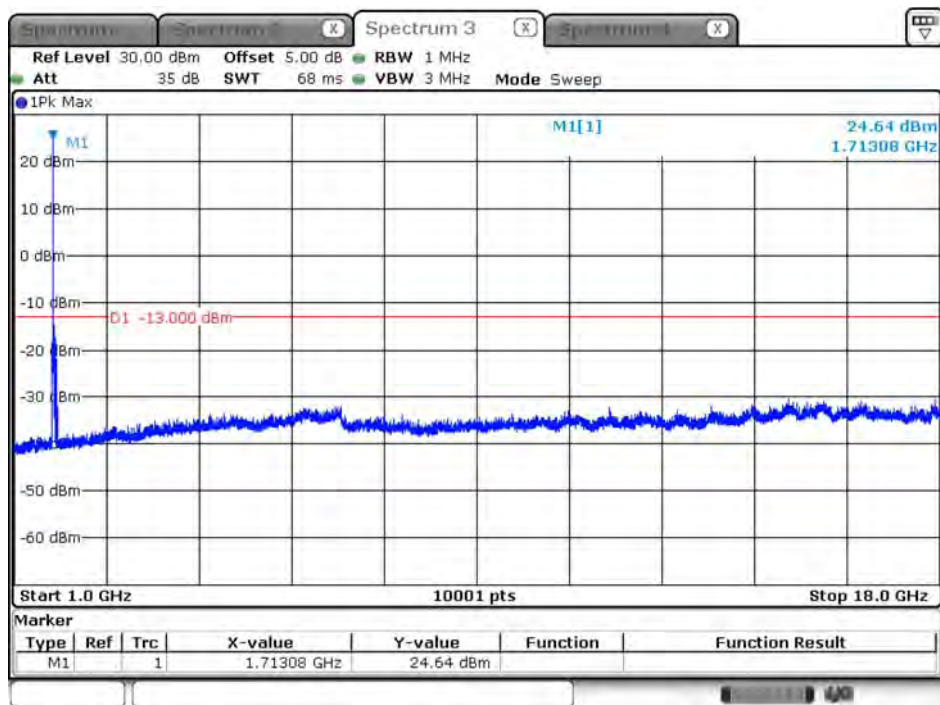
Date: 7.AUG.2018 11:47:53

## WCDMA\_Band 4\_RMC\_1752.6MHz\_under 1G



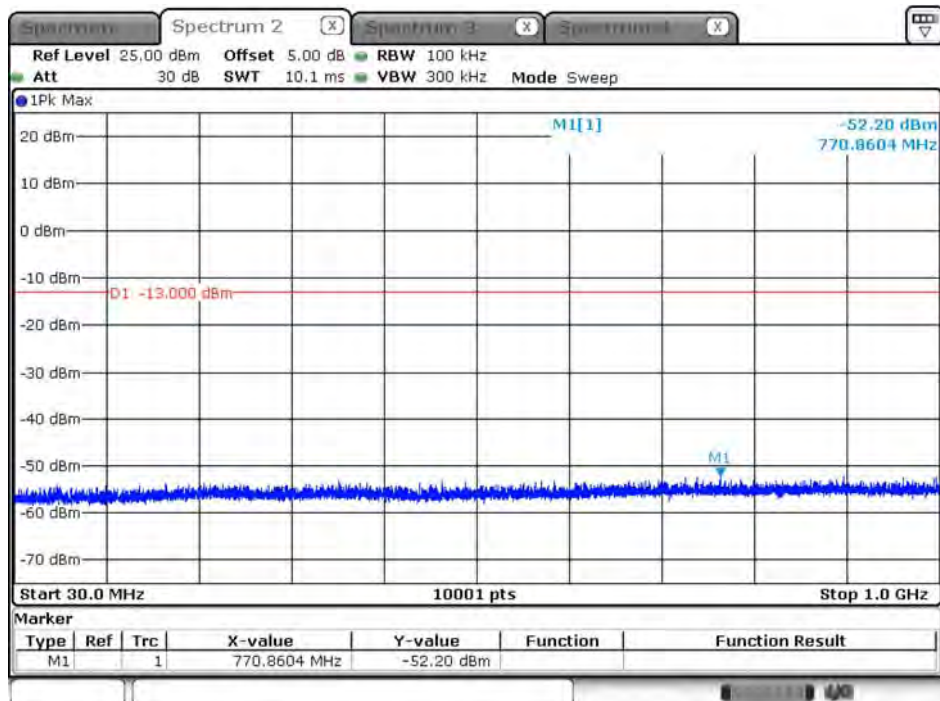
Date: 7.AUG.2018 11:47:39

## WCDMA\_Band 4\_HSDPA\_1712.4MHz\_above 1G

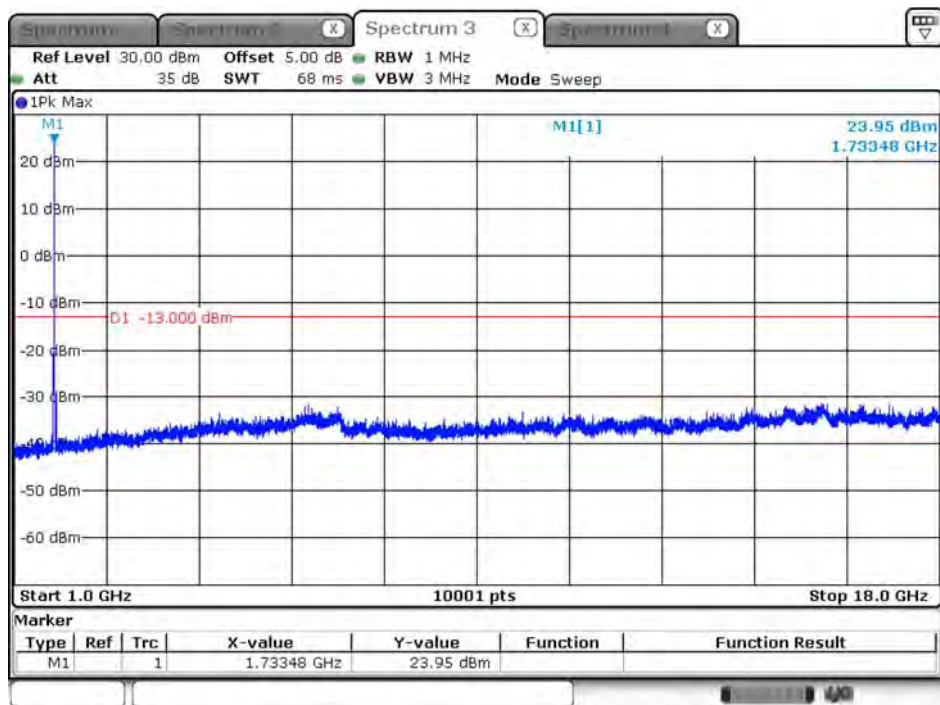


Date: 7.AUG.2018 11:52:57

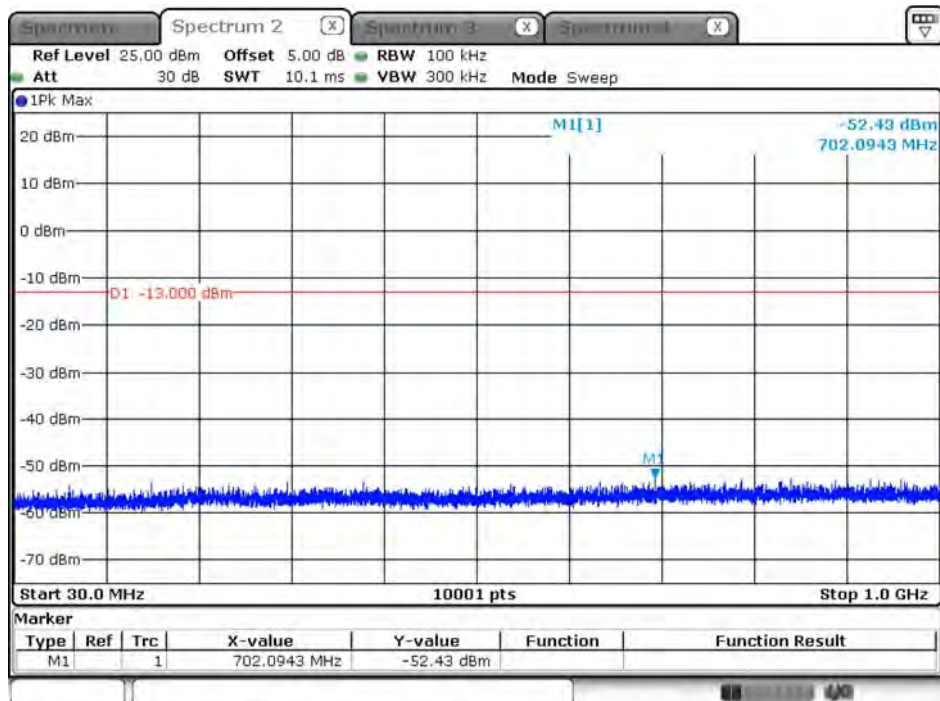
## WCDMA\_Band 4\_HSDPA\_1712.4MHz\_under 1G



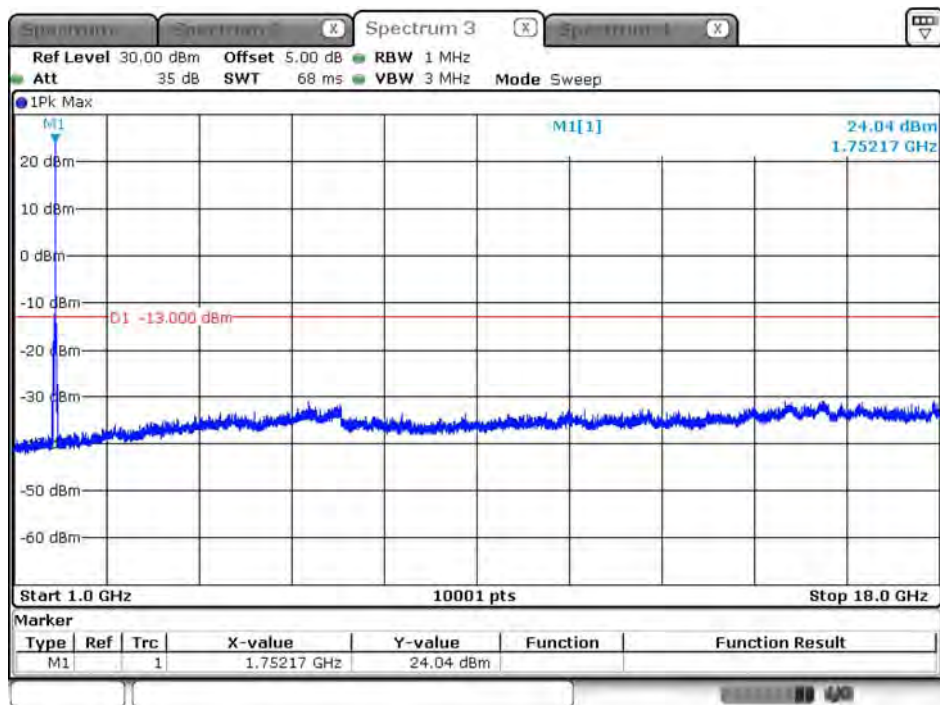
Date: 7.AUG.2018 11:51:56

**WCDMA\_Band 4\_HSDPA\_1732.6MHz\_above 1G**

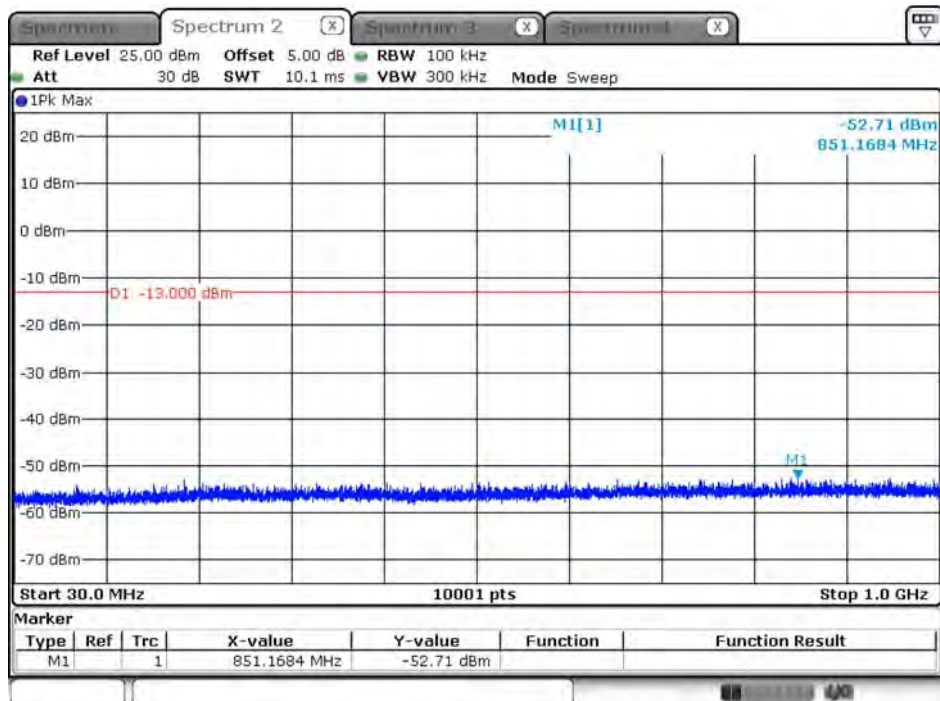
Date: 7.AUG.2018 11:53:50

**WCDMA\_Band 4\_HSDPA\_1732.6MHz\_under 1G**

Date: 7.AUG.2018 11:53:36

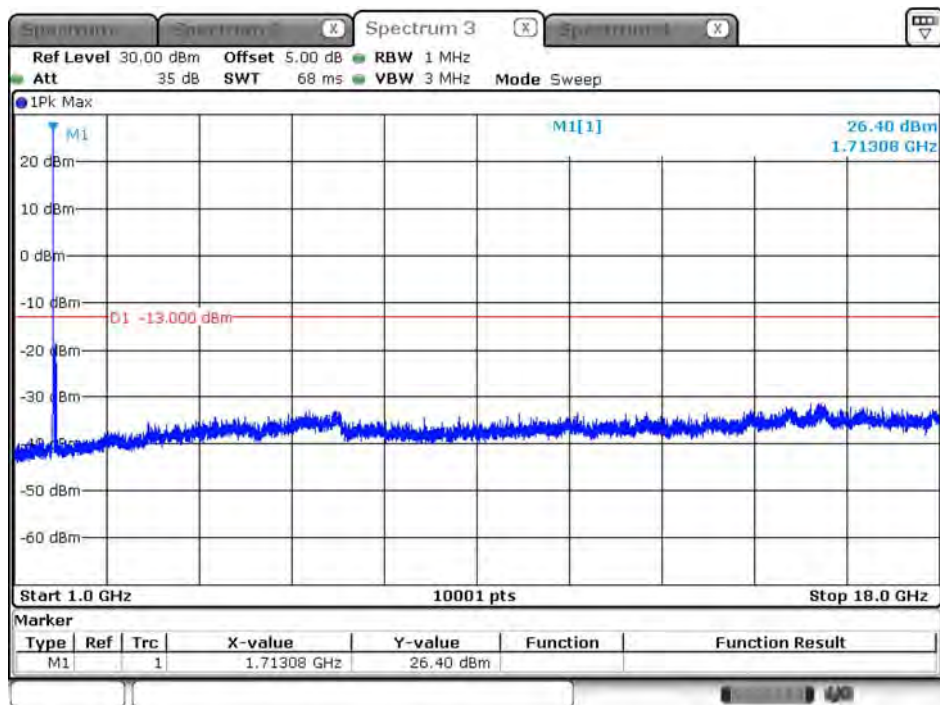
**WCDMA\_Band 4\_HSDPA\_1752.6MHz\_above 1G**

Date: 7.AUG.2018 11:56:00

**WCDMA\_Band 4\_HSDPA\_1752.6MHz\_under 1G**

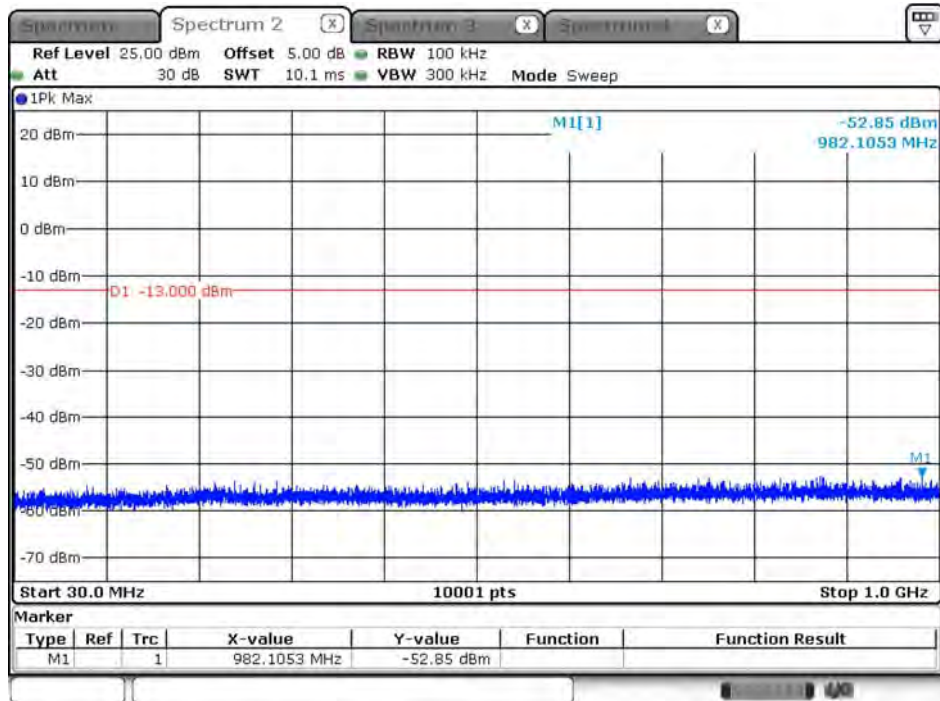
Date: 7.AUG.2018 11:54:34

## WCDMA\_Band 4\_HSUPA\_1712.4MHz\_above 1G

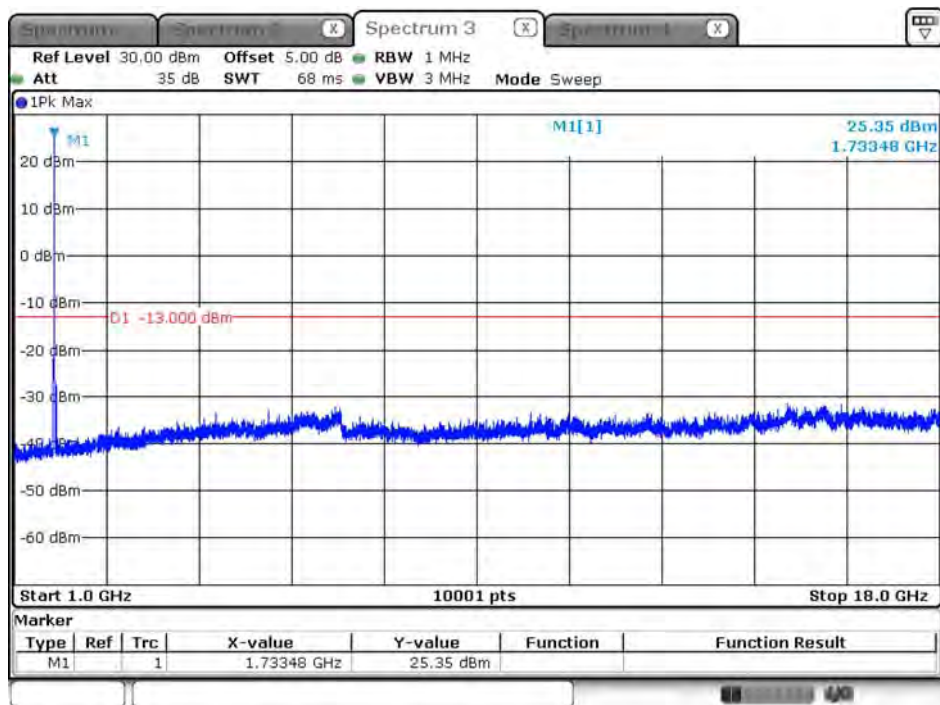


Date: 7.AUG.2018 11:50:56

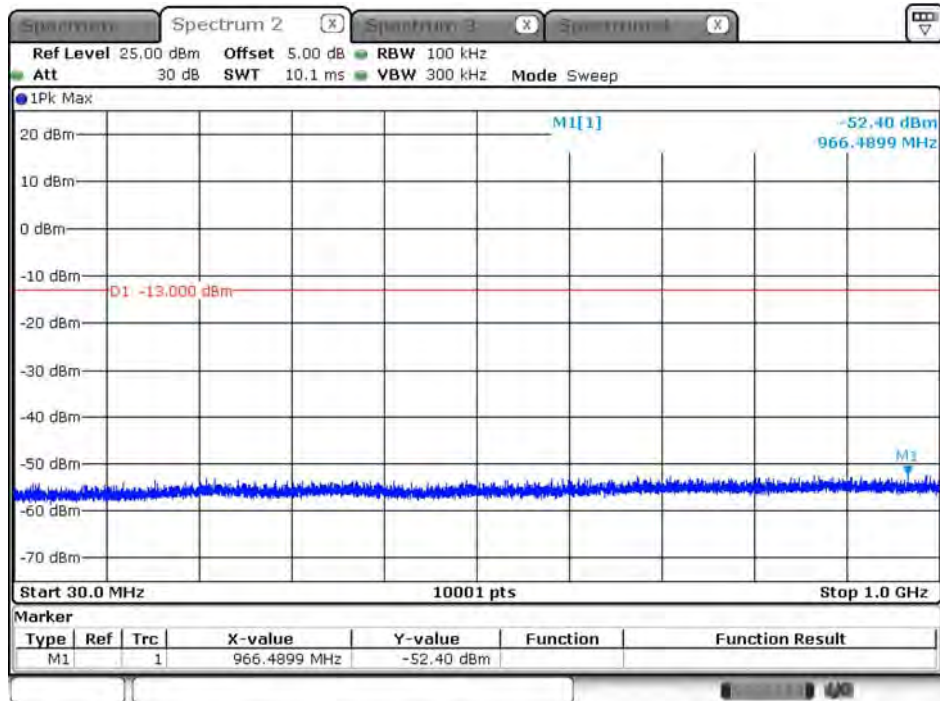
## WCDMA\_Band 4\_HSUPA\_1712.4MHz\_under 1G



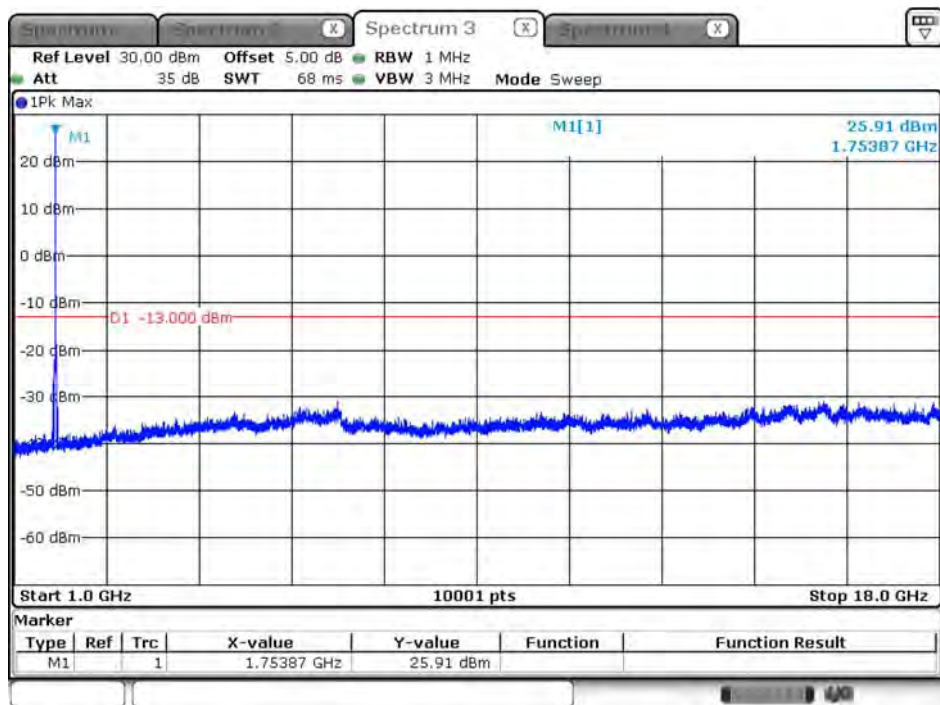
Date: 7.AUG.2018 11:50:41

**WCDMA\_Band 4\_HSUPA\_1732.6MHz\_above 1G**

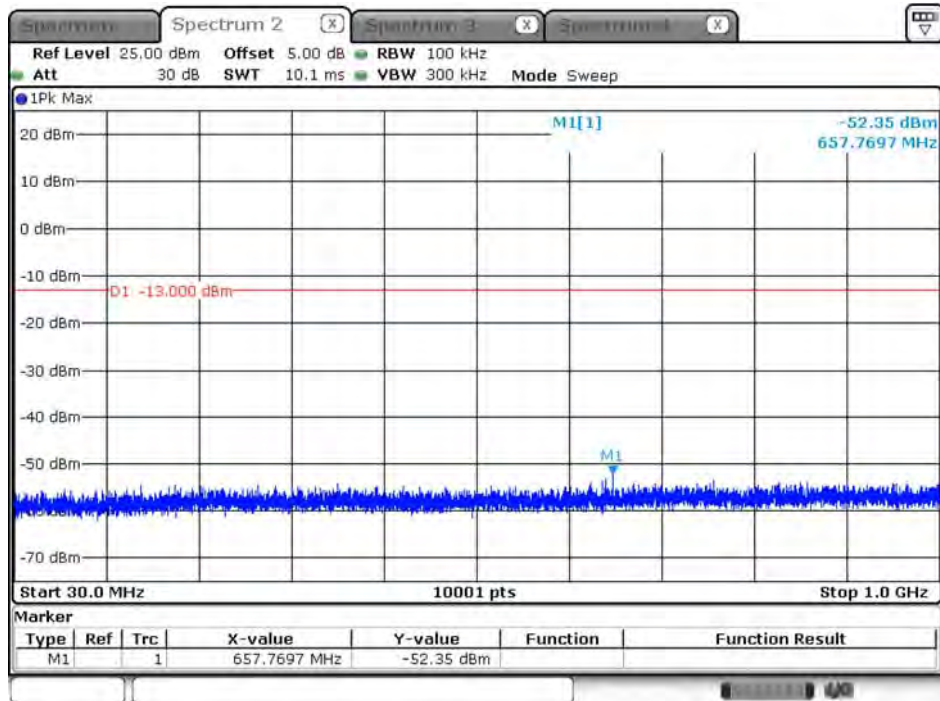
Date: 7.AUG.2018 11:50:22

**WCDMA\_Band 4\_HSUPA\_1732.6MHz\_under 1G**

Date: 7.AUG.2018 11:50:01

**WCDMA\_Band 4\_HSUPA\_1752.6MHz\_above 1G**

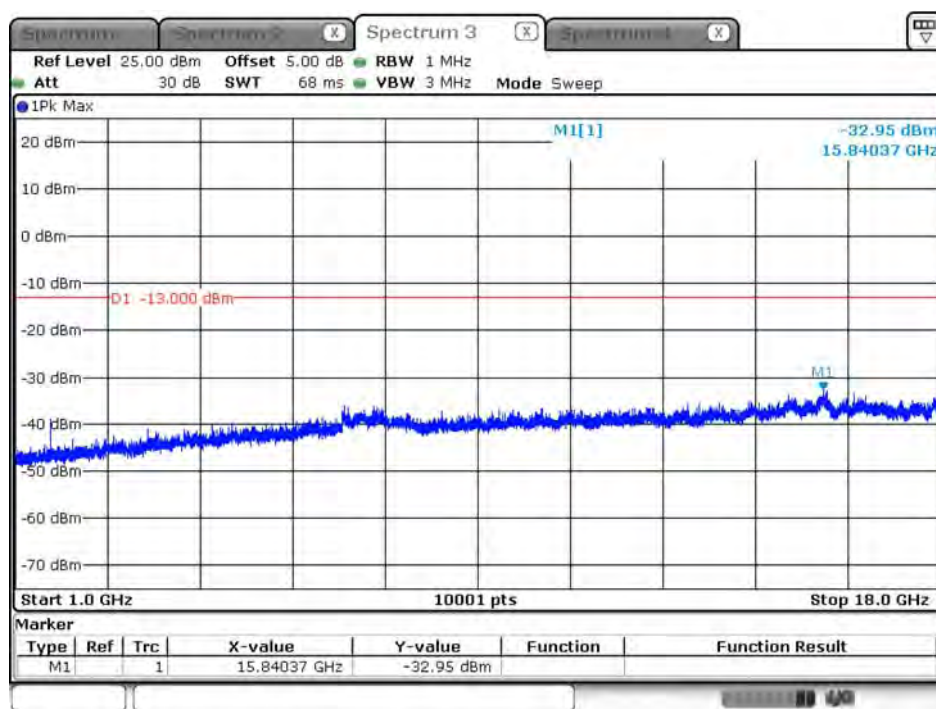
Date: 7.AUG.2018 11:48:57

**WCDMA\_Band 4\_HSUPA\_1752.6MHz\_under 1G**

Date: 7.AUG.2018 11:48:19

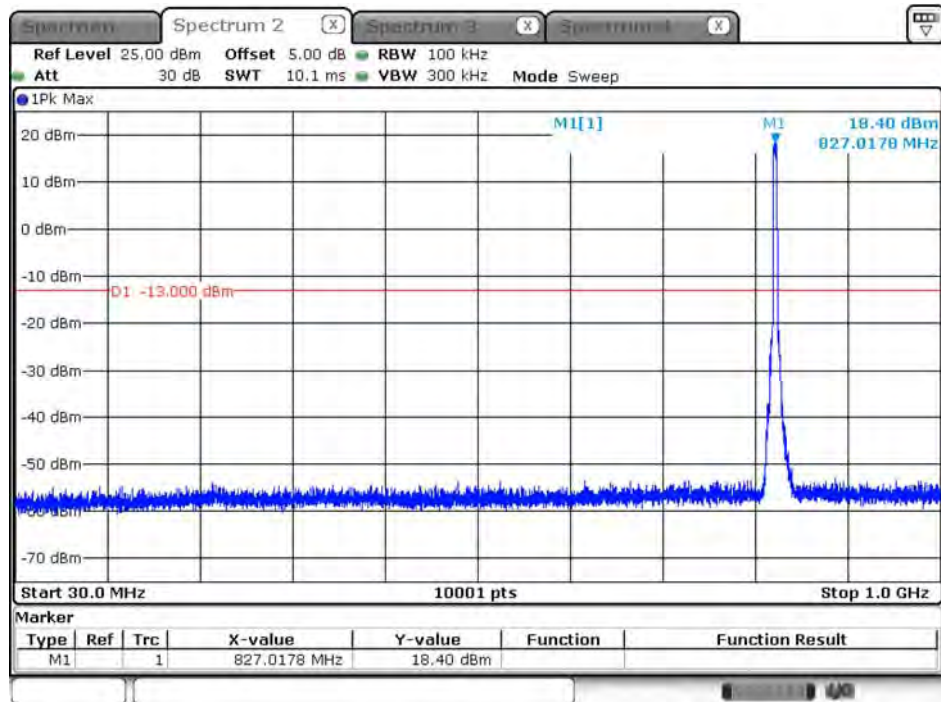
|              |                             |           |        |
|--------------|-----------------------------|-----------|--------|
| Product      | LE910C4-NF                  |           |        |
| Test Item    | Conducted Spurious Emission |           |        |
| Test Mode    | Mode 3: WCDMA Band 5        |           |        |
| Date of Test | 2018/08/07                  | Test Site | SR10-H |

### WCDMA\_Band 5\_RMC\_826.4MHz\_above 1G

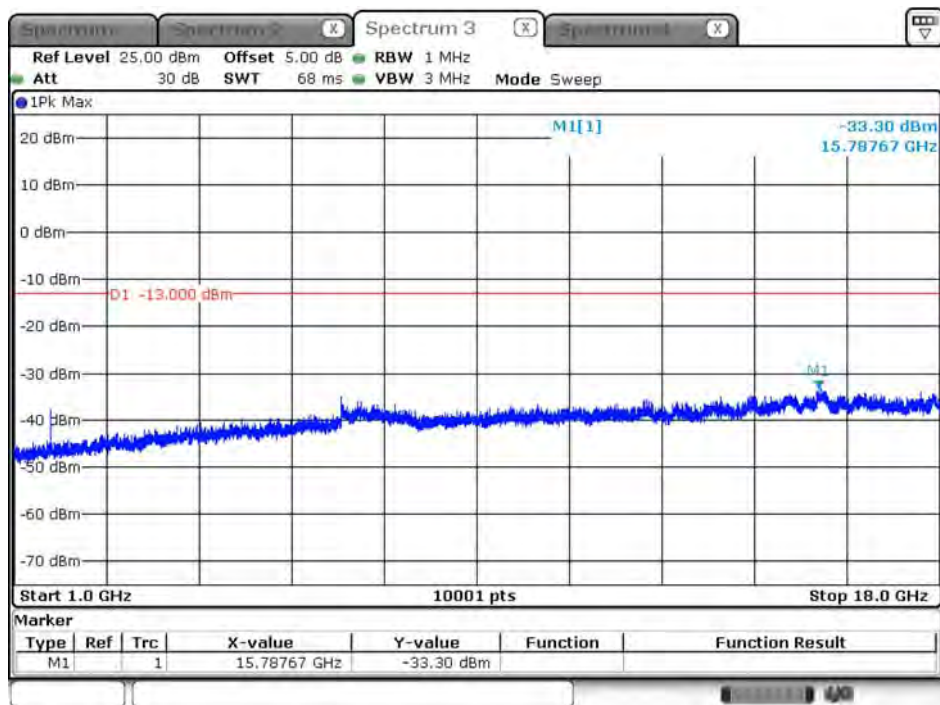


Date: 7.AUG.2018 11:43:36

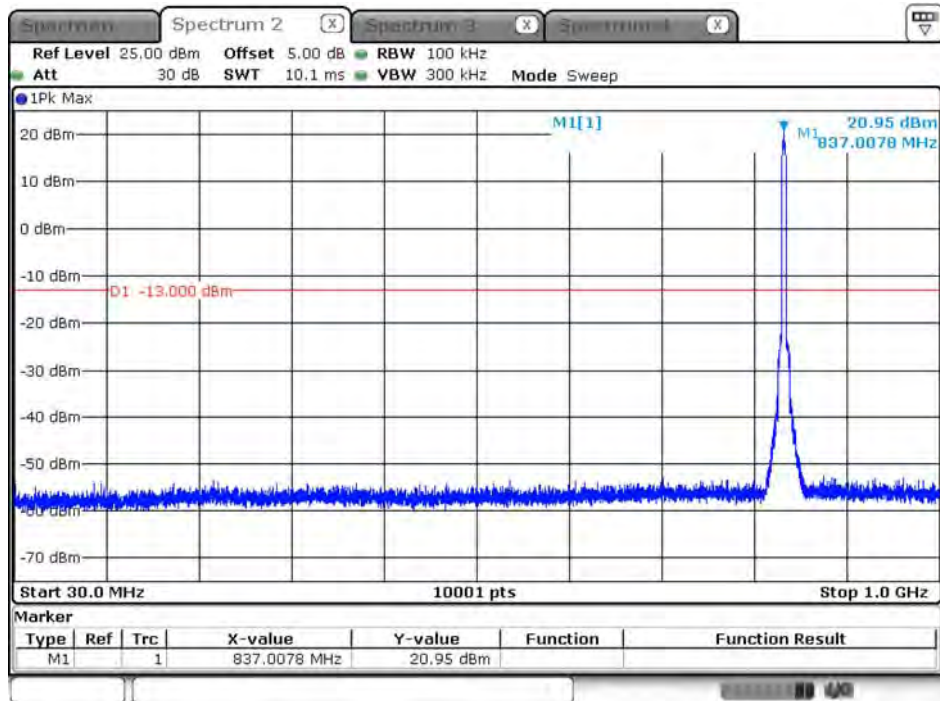
## WCDMA\_Band 5\_RMC\_826.4MHz\_under 1G



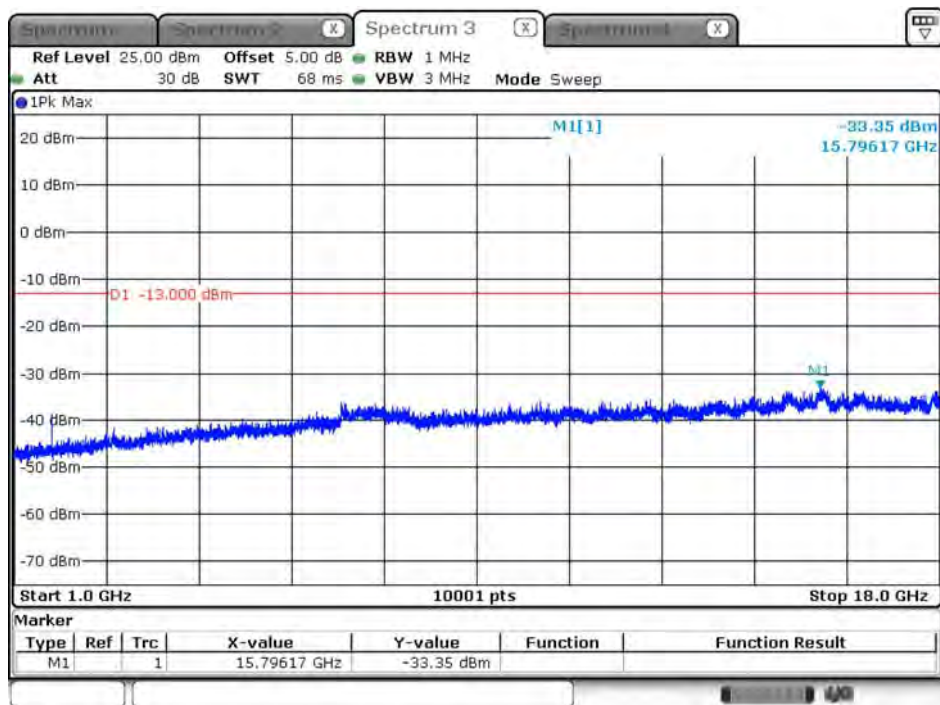
Date: 7.AUG.2018 11:43:24

**WCDMA\_Band 5\_RMC\_836.6MHz\_above 1G**

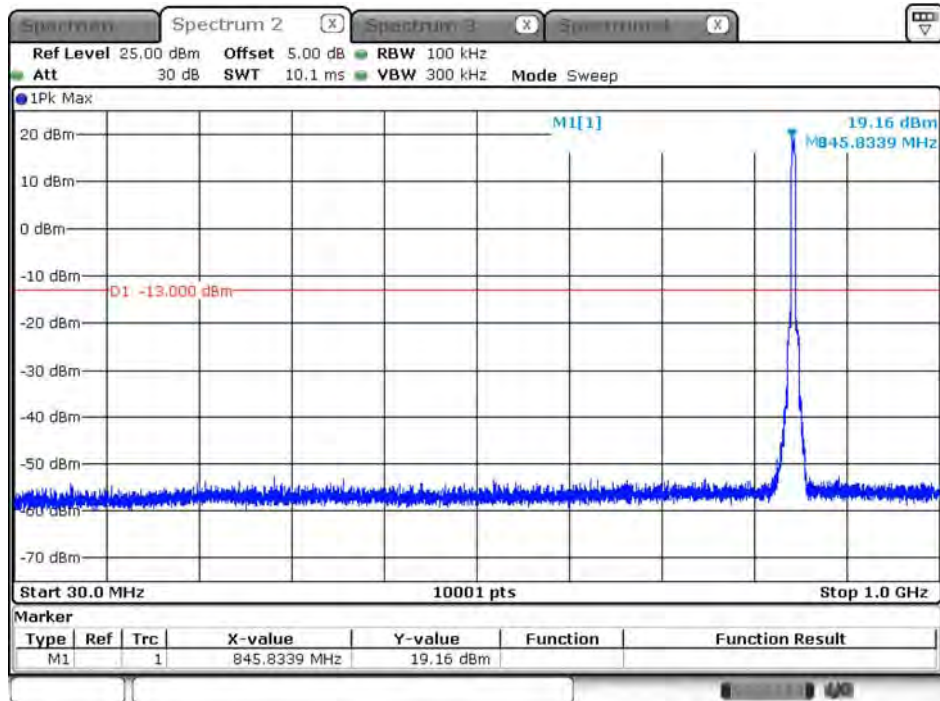
Date: 7.AUG.2018 11:43:01

**WCDMA\_Band 5\_RMC\_836.6MHz\_under 1G**

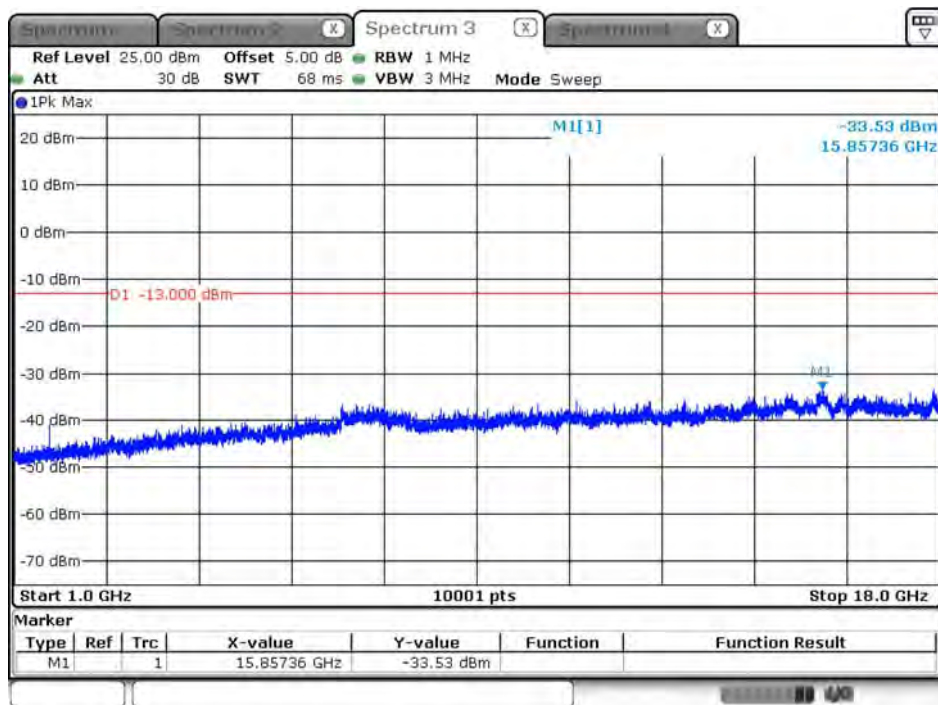
Date: 7.AUG.2018 11:42:45

**WCDMA\_Band 5\_RMC\_846.6MHz\_above 1G**

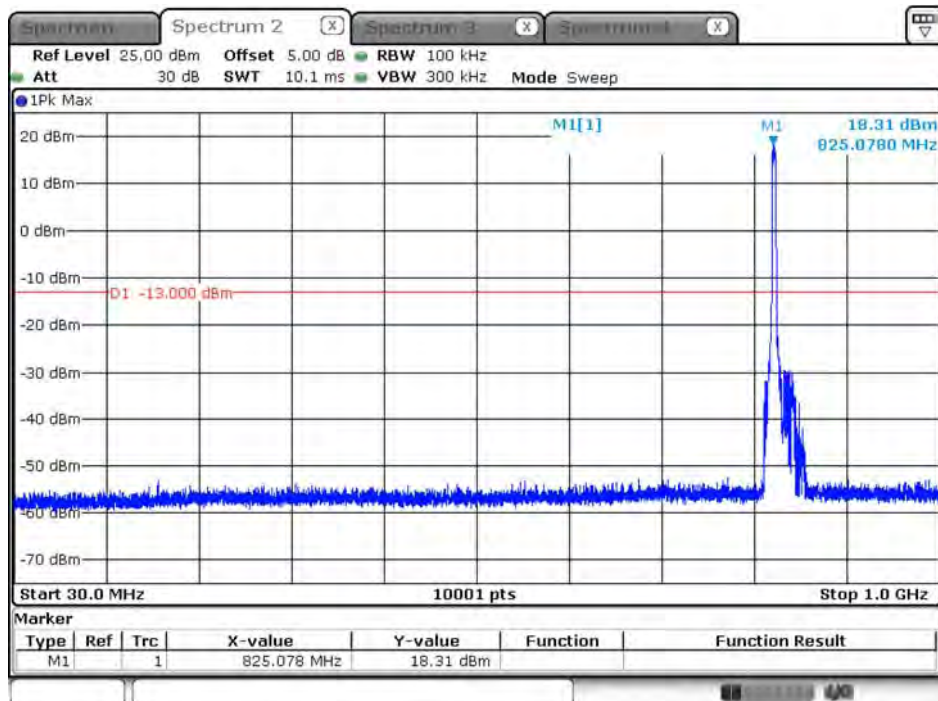
Date: 7.AUG.2018 11:42:08

**WCDMA\_Band 5\_RMC\_846.6MHz\_under 1G**

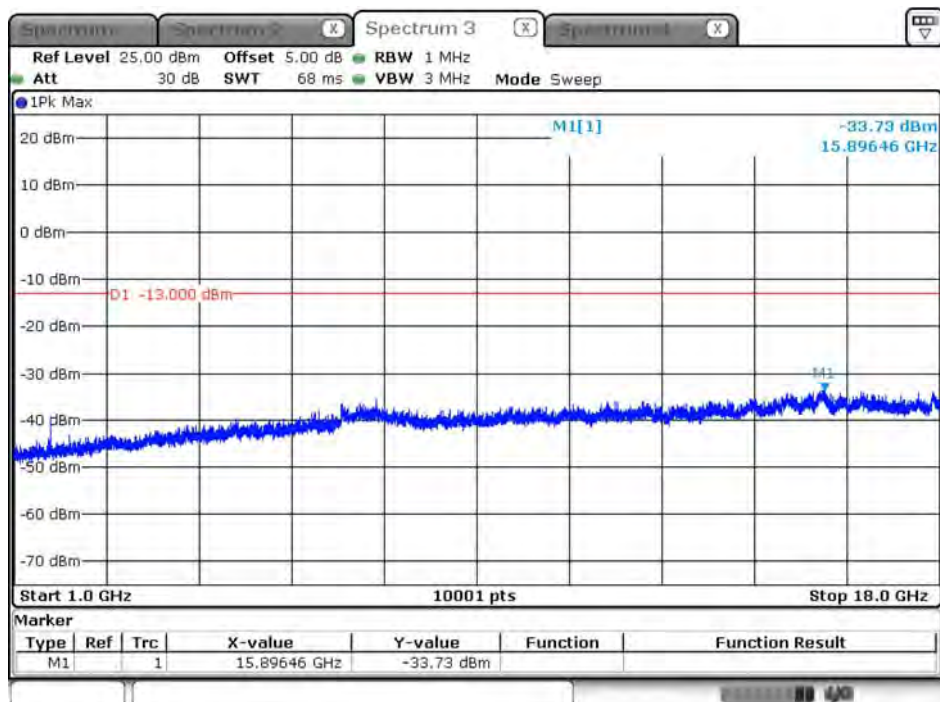
Date: 7.AUG.2018 11:41:48

**WCDMA\_Band 5\_HSDPA\_826.4MHz\_above 1G**

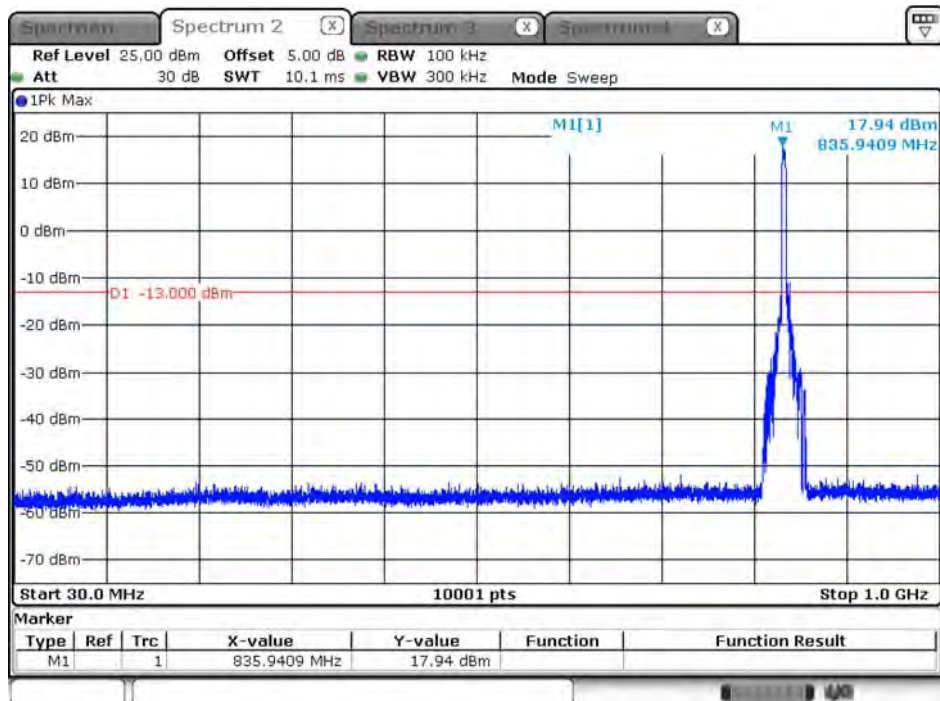
Date: 7.AUG.2018 11:38:07

**WCDMA\_Band 5\_HSDPA\_826.4MHz\_under 1G**

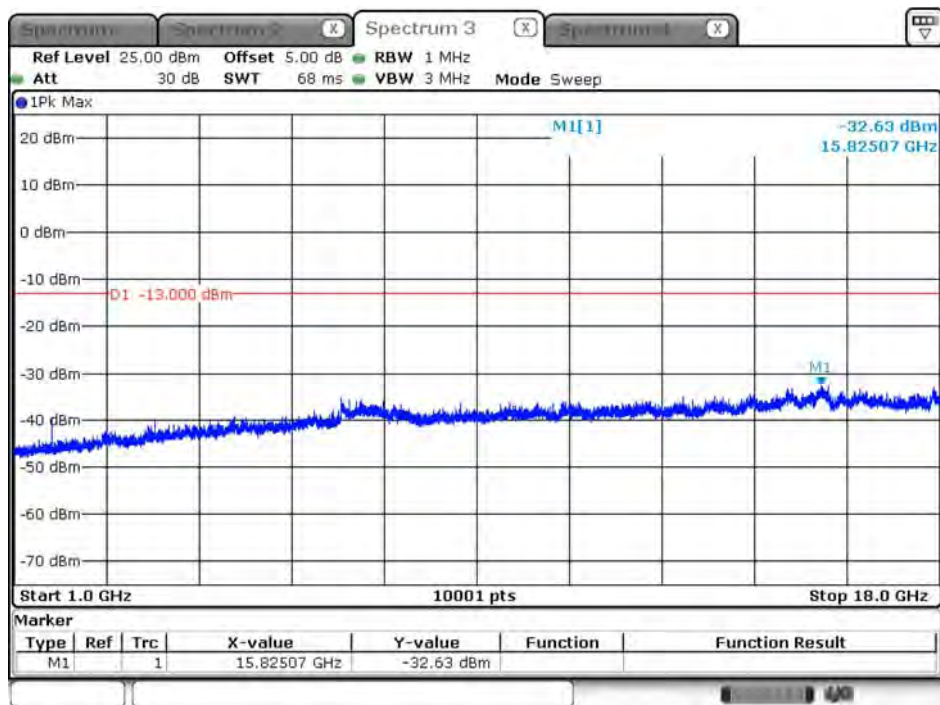
Date: 7.AUG.2018 11:37:57

**WCDMA\_Band 5\_HSDPA\_836.6MHz\_above 1G**

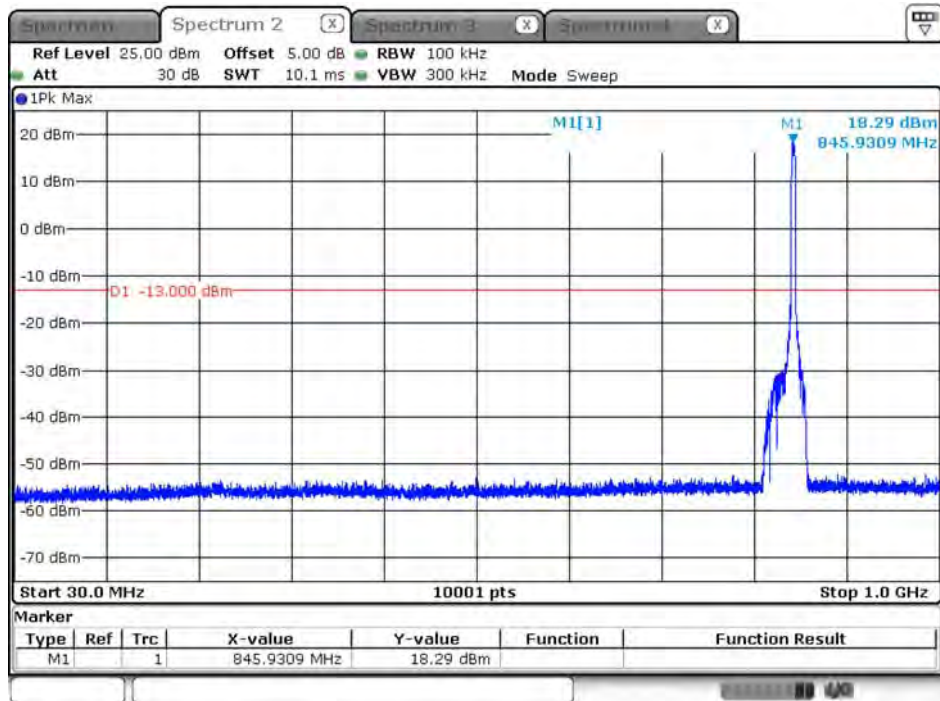
Date: 7.AUG.2018 11:37:35

**WCDMA\_Band 5\_HSDPA\_836.6MHz\_under 1G**

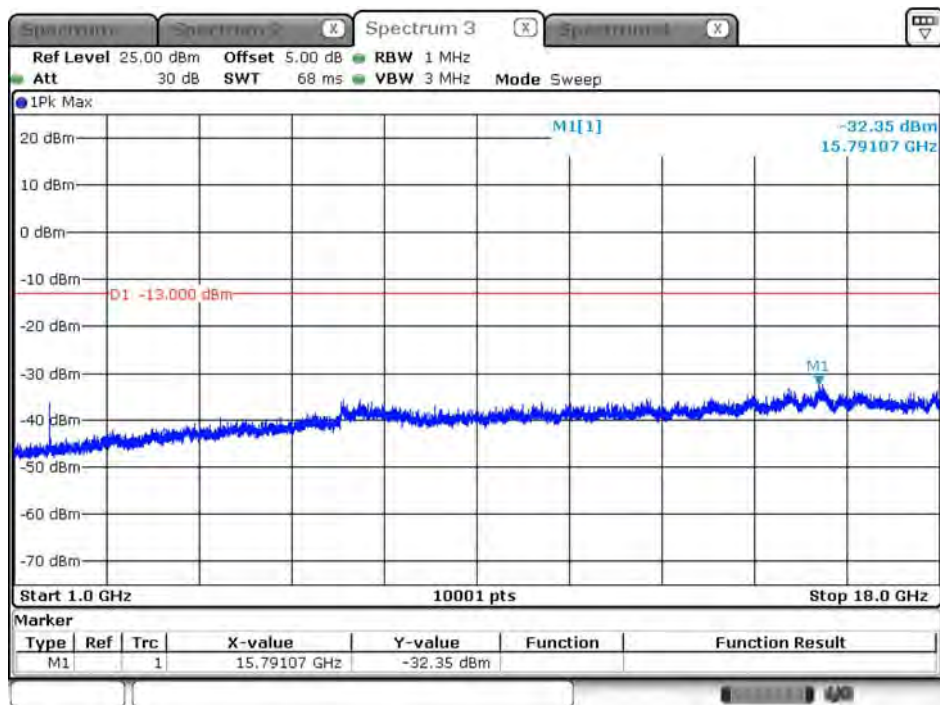
Date: 7.AUG.2018 11:37:19

**WCDMA\_Band 5\_HSDPA\_846.6MHz\_above 1G**

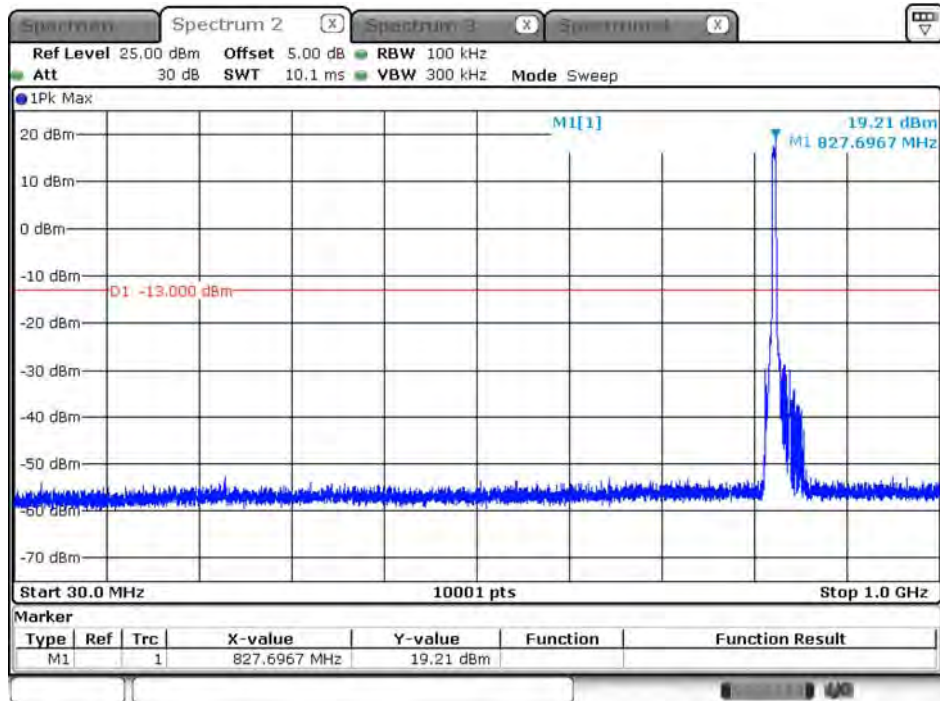
Date: 7.AUG.2018 11:36:24

**WCDMA\_Band 5\_HSDPA\_846.6MHz\_under 1G**

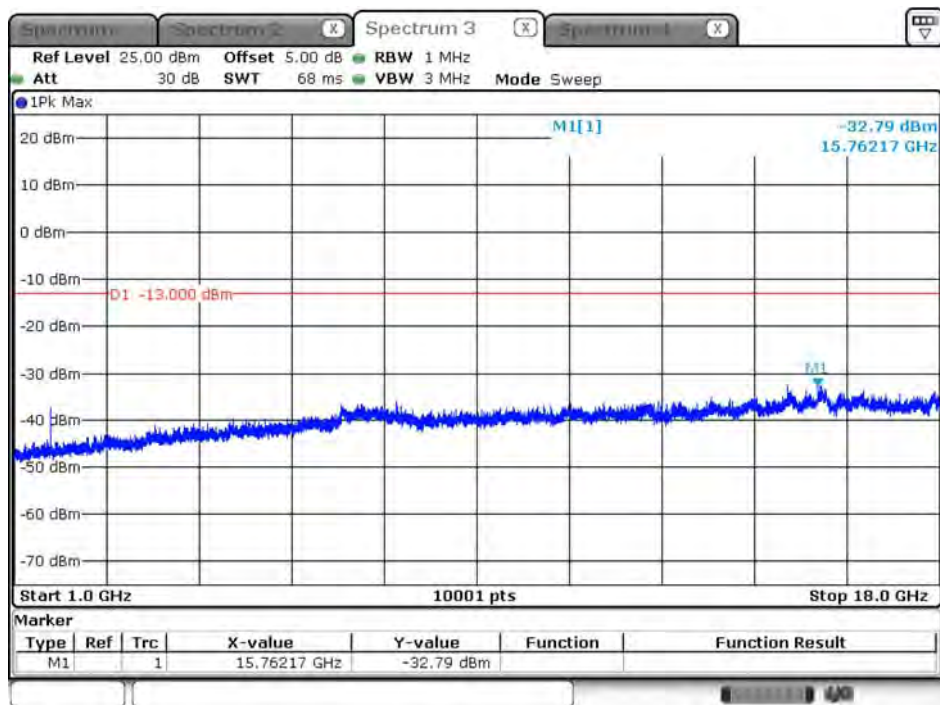
Date: 7.AUG.2018 11:35:38

**WCDMA\_Band 5\_HSUPA\_826.4MHz\_above 1G**

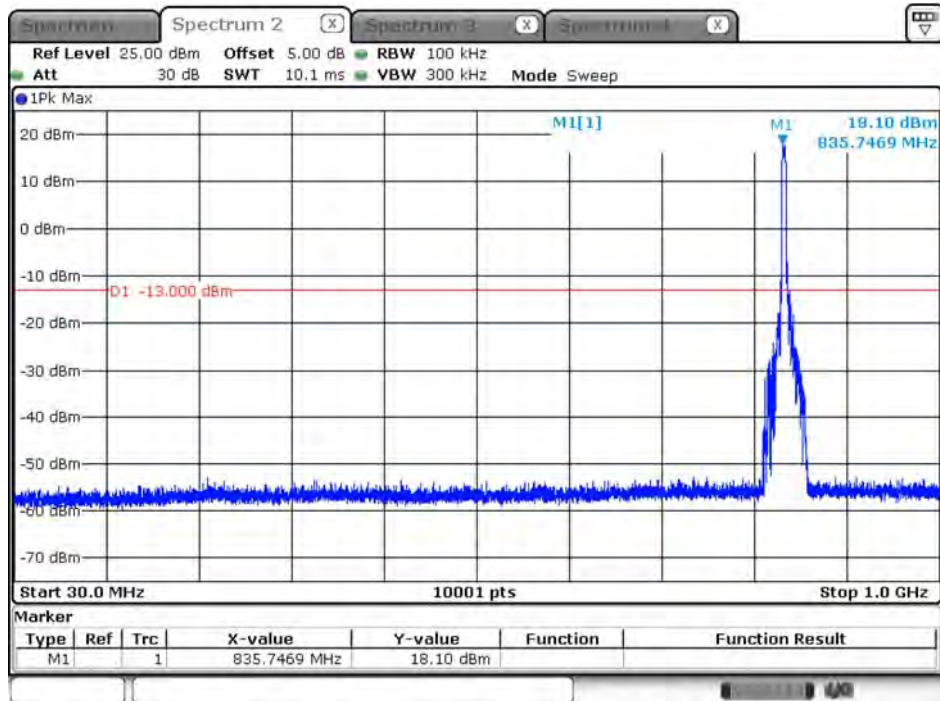
Date: 7.AUG.2018 11:39:21

**WCDMA\_Band 5\_HSUPA\_826.4MHz\_under 1G**

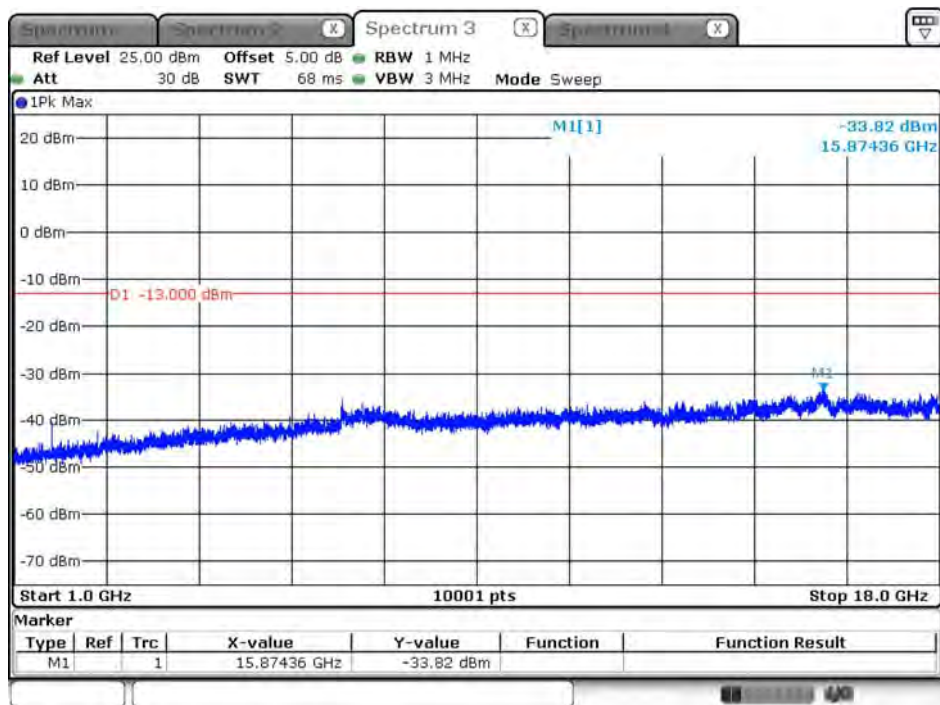
Date: 7.AUG.2018 11:38:35

**WCDMA\_Band 5\_HSUPA\_836.6MHz\_above 1G**

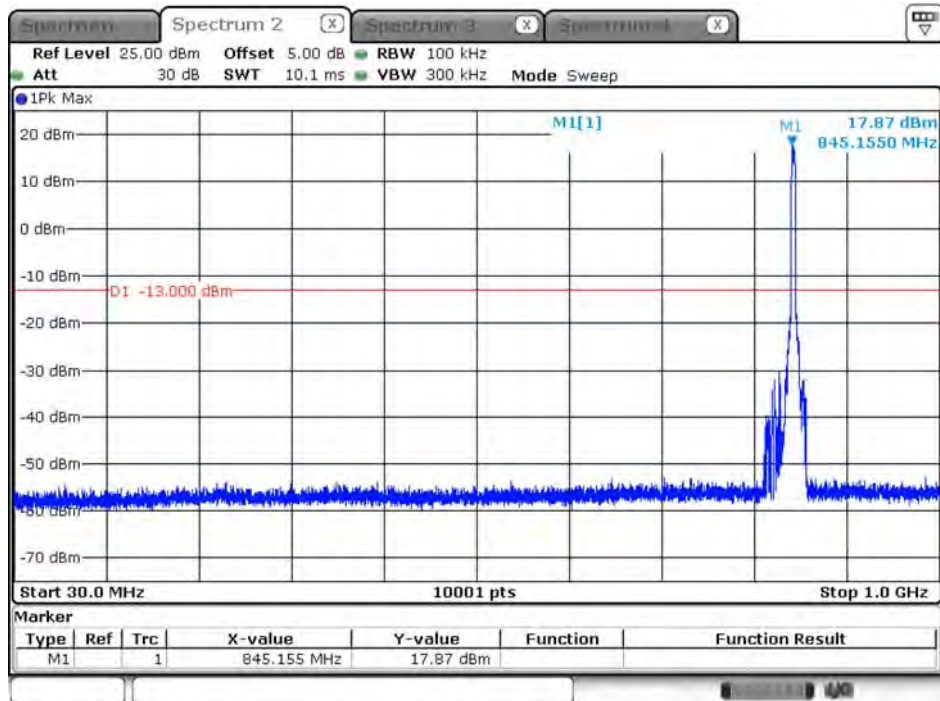
Date: 7.AUG.2018 11:40:34

**WCDMA\_Band 5\_HSUPA\_836.6MHz\_under 1G**

Date: 7.AUG.2018 11:40:17

**WCDMA\_Band 5\_HSUPA\_846.6MHz\_above 1G**

Date: 7.AUG.2018 11:41:24

**WCDMA\_Band 5\_HSUPA\_846.6MHz\_under 1G**

Date: 7.AUG.2018 11:41:12

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 1: WCDMA Band 2       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 2\_RMC\_Link

| Frequency (MHz)               | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 9262 (1852.4MHz)  |                  |                |                  |                 |            |            |             |             |
| 3704.80                       | -63.250          | H              | -51.575          | 4.287           | 11.931     | -43.931    | -13         | -30.931     |
| 5557.20                       | -67.750          | H              | -52.644          | 5.203           | 12.900     | -44.947    | -13         | -31.947     |
| 3704.80                       | -63.880          | V              | -51.404          | 4.287           | 11.931     | -43.760    | -13         | -30.760     |
| 5557.20                       | -65.510          | V              | -50.558          | 5.203           | 12.900     | -42.861    | -13         | -29.861     |
| Middle Channel 9400 (1880MHz) |                  |                |                  |                 |            |            |             |             |
| 3760.00                       | -62.600          | H              | -50.621          | 4.335           | 11.832     | -43.124    | -13         | -30.124     |
| 5640.00                       | -62.750          | H              | -47.698          | 5.235           | 12.900     | -40.033    | -13         | -27.033     |
| 3760.00                       | -63.150          | V              | -50.379          | 4.335           | 11.832     | -42.882    | -13         | -29.882     |
| 5640.00                       | -60.900          | V              | -46.007          | 5.235           | 12.900     | -38.342    | -13         | -25.342     |
| High Channel 9538 (1907.6MHz) |                  |                |                  |                 |            |            |             |             |
| 3815.20                       | -62.860          | H              | -50.625          | 4.382           | 11.733     | -43.274    | -13         | -30.274     |
| 5722.80                       | -60.060          | H              | -44.690          | 5.267           | 12.900     | -37.057    | -13         | -24.057     |
| 3815.20                       | -62.160          | V              | -49.153          | 4.382           | 11.733     | -41.802    | -13         | -28.802     |
| 5722.80                       | -58.300          | V              | -43.094          | 5.267           | 12.900     | -35.461    | -13         | -22.461     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 1: WCDMA Band 2       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 2\_HSUPA\_Link

| Frequency (MHz)               | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 9262 (1852.4MHz)  |                  |                |                  |                 |            |            |             |             |
| 3704.80                       | -63.330          | H              | -51.655          | 4.287           | 11.931     | -44.011    | -13         | -31.011     |
| 5557.20                       | -63.260          | H              | -48.154          | 5.203           | 12.900     | -40.457    | -13         | -27.457     |
| 3704.80                       | -62.290          | V              | -49.814          | 4.287           | 11.931     | -42.170    | -13         | -29.170     |
| 5557.20                       | -62.460          | V              | -47.508          | 5.203           | 12.900     | -39.811    | -13         | -26.811     |
| Middle Channel 9400 (1880MHz) |                  |                |                  |                 |            |            |             |             |
| 3760.00                       | -63.420          | H              | -51.441          | 4.335           | 11.832     | -43.944    | -13         | -30.944     |
| 5460.00                       | -61.940          | H              | -47.431          | 5.169           | 12.828     | -39.772    | -13         | -26.772     |
| 3760.00                       | -63.110          | V              | -50.339          | 4.335           | 11.832     | -42.842    | -13         | -29.842     |
| 5640.00                       | -60.310          | V              | -45.417          | 5.235           | 12.900     | -37.752    | -13         | -24.752     |
| High Channel 9538 (1907.6MHz) |                  |                |                  |                 |            |            |             |             |
| 3815.20                       | -62.950          | H              | -50.715          | 4.382           | 11.733     | -43.364    | -13         | -30.364     |
| 5722.80                       | -60.070          | H              | -44.700          | 5.267           | 12.900     | -37.067    | -13         | -24.067     |
| 3815.20                       | -68.770          | V              | -55.763          | 4.382           | 11.733     | -48.412    | -13         | -35.412     |
| 5722.80                       | -58.440          | V              | -43.234          | 5.267           | 12.900     | -35.601    | -13         | -22.601     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 1: WCDMA Band 2       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 2\_HSDPA\_Link

| Frequency (MHz)               | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 9262 (1852.4MHz)  |                  |                |                  |                 |            |            |             |             |
| 3704.80                       | -64.710          | H              | -53.035          | 4.287           | 11.931     | -45.391    | -13         | -32.391     |
| 5557.20                       | -62.990          | H              | -47.884          | 5.203           | 12.900     | -40.187    | -13         | -27.187     |
| 3704.80                       | -63.220          | V              | -50.744          | 4.287           | 11.931     | -43.100    | -13         | -30.100     |
| 5557.20                       | -60.250          | V              | -45.298          | 5.203           | 12.900     | -37.601    | -13         | -24.601     |
| Middle Channel 9400 (1880MHz) |                  |                |                  |                 |            |            |             |             |
| 3760.00                       | -63.600          | H              | -51.621          | 4.335           | 11.832     | -44.124    | -13         | -31.124     |
| 5640.00                       | -61.914          | H              | -46.862          | 5.235           | 12.900     | -39.197    | -13         | -26.197     |
| 3760.00                       | -63.690          | V              | -50.919          | 4.335           | 11.832     | -43.422    | -13         | -30.422     |
| 5640.00                       | -61.710          | V              | -46.817          | 5.235           | 12.900     | -39.152    | -13         | -26.152     |
| High Channel 9538 (1907.6MHz) |                  |                |                  |                 |            |            |             |             |
| 3815.20                       | -63.240          | H              | -51.005          | 4.382           | 11.733     | -43.654    | -13         | -30.654     |
| 5722.80                       | -60.710          | H              | -45.340          | 5.267           | 12.900     | -37.707    | -13         | -24.707     |
| 3815.20                       | -62.390          | V              | -49.383          | 4.382           | 11.733     | -42.032    | -13         | -29.032     |
| 5722.80                       | -59.520          | V              | -44.314          | 5.267           | 12.900     | -36.681    | -13         | -23.681     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 2: WCDMA Band 4       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 4\_RMC\_Link

| Frequency (MHz)                 | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|---------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 1312 (1712.4MHz)    |                  |                |                  |                 |            |            |             |             |
| 3424.80                         | -69.470          | H              | -58.790          | 4.066           | 12.104     | -50.752    | -13         | -37.752     |
| 5137.20                         | -69.110          | H              | -54.437          | 5.077           | 12.247     | -47.267    | -13         | -34.267     |
| 3424.80                         | -66.450          | V              | -55.036          | 4.066           | 12.104     | -46.998    | -13         | -33.998     |
| 5137.20                         | -64.200          | V              | -49.837          | 5.077           | 12.247     | -42.667    | -13         | -29.667     |
| Middle Channel 1413 (1732.6MHz) |                  |                |                  |                 |            |            |             |             |
| 3465.20                         | -69.470          | H              | -58.943          | 4.090           | 12.210     | -50.824    | -13         | -37.824     |
| 5197.80                         | -70.732          | H              | -56.226          | 5.094           | 12.356     | -48.964    | -13         | -35.964     |
| 3465.20                         | -68.690          | V              | -57.381          | 4.090           | 12.210     | -49.262    | -13         | -36.262     |
| 5197.80                         | -64.790          | V              | -50.567          | 5.094           | 12.356     | -43.305    | -13         | -30.305     |
| High Channel 1513 (1752.6MHz)   |                  |                |                  |                 |            |            |             |             |
| 3505.20                         | -69.740          | H              | -59.017          | 4.115           | 12.291     | -50.842    | -13         | -37.842     |
| 5257.80                         | -70.550          | H              | -56.314          | 5.111           | 12.464     | -48.961    | -13         | -35.961     |
| 3505.20                         | -69.300          | V              | -57.755          | 4.115           | 12.291     | -49.580    | -13         | -36.580     |
| 5257.80                         | -61.820          | V              | -47.840          | 5.111           | 12.464     | -40.487    | -13         | -27.487     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 2: WCDMA Band 4       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 4\_HSUPA\_Link

| Frequency (MHz)                 | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|---------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 1312 (1712.4MHz)    |                  |                |                  |                 |            |            |             |             |
| 3424.80                         | -70.270          | H              | -59.590          | 4.066           | 12.104     | -51.552    | -13         | -38.552     |
| 5137.20                         | -71.560          | H              | -56.887          | 5.077           | 12.247     | -49.717    | -13         | -36.717     |
| 3424.80                         | -66.180          | V              | -54.766          | 4.066           | 12.104     | -46.728    | -13         | -33.728     |
| 5137.20                         | -62.610          | V              | -48.247          | 5.077           | 12.247     | -41.077    | -13         | -28.077     |
| Middle Channel 1413 (1732.6MHz) |                  |                |                  |                 |            |            |             |             |
| 3465.20                         | -69.180          | H              | -58.653          | 4.090           | 12.210     | -50.534    | -13         | -37.534     |
| 5197.80                         | -71.310          | H              | -56.804          | 5.094           | 12.356     | -49.542    | -13         | -36.542     |
| 3465.20                         | -68.810          | V              | -57.501          | 4.090           | 12.210     | -49.382    | -13         | -36.382     |
| 5197.80                         | -63.440          | V              | -49.217          | 5.094           | 12.356     | -41.955    | -13         | -28.955     |
| High Channel 1513 (1752.6MHz)   |                  |                |                  |                 |            |            |             |             |
| 3505.20                         | -70.420          | H              | -59.697          | 4.115           | 12.291     | -51.522    | -13         | -38.522     |
| 5257.80                         | -68.960          | H              | -54.724          | 5.111           | 12.464     | -47.371    | -13         | -34.371     |
| 3505.20                         | -69.270          | V              | -57.725          | 4.115           | 12.291     | -49.550    | -13         | -36.550     |
| 5257.80                         | -60.560          | V              | -46.580          | 5.111           | 12.464     | -39.227    | -13         | -26.227     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 2: WCDMA Band 4       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 4\_HSDPA\_Link

| Frequency (MHz)                 | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|---------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 1312 (1712.4MHz)    |                  |                |                  |                 |            |            |             |             |
| 3424.80                         | -70.030          | H              | -59.350          | 4.066           | 12.104     | -51.312    | -13         | -38.312     |
| 5137.20                         | -71.200          | H              | -56.527          | 5.077           | 12.247     | -49.357    | -13         | -36.357     |
| 3424.80                         | -62.230          | V              | -50.816          | 4.066           | 12.104     | -42.778    | -13         | -29.778     |
| 5137.20                         | -64.470          | V              | -50.107          | 5.077           | 12.247     | -42.937    | -13         | -29.937     |
| Middle Channel 1413 (1732.6MHz) |                  |                |                  |                 |            |            |             |             |
| 3465.20                         | -71.340          | H              | -60.813          | 4.090           | 12.210     | -52.694    | -13         | -39.694     |
| 5197.80                         | -71.920          | H              | -57.414          | 5.094           | 12.356     | -50.152    | -13         | -37.152     |
| 3465.20                         | -69.580          | V              | -58.271          | 4.090           | 12.210     | -50.152    | -13         | -37.152     |
| 5197.80                         | -65.380          | V              | -51.157          | 5.094           | 12.356     | -43.895    | -13         | -30.895     |
| High Channel 1513 (1752.6MHz)   |                  |                |                  |                 |            |            |             |             |
| 3505.20                         | -70.900          | H              | -60.177          | 4.115           | 12.291     | -52.002    | -13         | -39.002     |
| 5257.80                         | -70.970          | H              | -56.734          | 5.111           | 12.464     | -49.381    | -13         | -36.381     |
| 3505.20                         | -69.470          | V              | -57.925          | 4.115           | 12.291     | -49.750    | -13         | -36.750     |
| 5257.80                         | -63.110          | V              | -49.130          | 5.111           | 12.464     | -41.777    | -13         | -28.777     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 3: WCDMA Band 5       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 5\_RMC\_Link

| Frequency (MHz)                | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|--------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 4132 (826.4MHz)    |                  |                |                  |                 |            |            |             |             |
| 1652.80                        | -64.220          | H              | -59.629          | 2.794           | 8.758      | -53.665    | -13         | -40.665     |
| 2479.20                        | -68.280          | H              | -59.651          | 3.442           | 10.567     | -52.526    | -13         | -39.526     |
| 1652.80                        | -61.260          | V              | -56.141          | 2.794           | 8.758      | -50.177    | -13         | -37.177     |
| 2479.20                        | -68.100          | V              | -59.121          | 3.442           | 10.567     | -51.996    | -13         | -38.996     |
| Middle Channel 4183 (836.6MHz) |                  |                |                  |                 |            |            |             |             |
| 1673.20                        | -65.400          | H              | -60.896          | 2.813           | 8.820      | -54.889    | -13         | -41.889     |
| 2509.80                        | -68.640          | H              | -60.221          | 3.463           | 10.608     | -53.076    | -13         | -40.076     |
| 1673.20                        | -61.630          | V              | -56.561          | 2.813           | 8.820      | -50.554    | -13         | -37.554     |
| 2509.80                        | -65.390          | V              | -56.582          | 3.463           | 10.608     | -49.437    | -13         | -36.437     |
| High Channel 4233 (846.6MHz)   |                  |                |                  |                 |            |            |             |             |
| 1693.20                        | -67.430          | H              | -63.020          | 2.831           | 8.880      | -56.971    | -13         | -43.971     |
| 2539.80                        | -62.870          | H              | -54.339          | 3.484           | 10.632     | -47.192    | -13         | -34.192     |
| 1693.20                        | -64.110          | V              | -59.098          | 2.831           | 8.880      | -53.049    | -13         | -40.049     |
| 2539.80                        | -60.100          | V              | -51.191          | 3.484           | 10.632     | -44.044    | -13         | -31.044     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 3: WCDMA Band 5       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

## WCDMA\_Band 5\_HSUPA\_Link

| Frequency (MHz)                | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|--------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 4132 (826.4MHz)    |                  |                |                  |                 |            |            |             |             |
| 1652.80                        | -62.400          | H              | -57.809          | 2.794           | 8.758      | -51.845    | -13         | -38.845     |
| 2479.20                        | -69.200          | H              | -60.571          | 3.442           | 10.567     | -53.446    | -13         | -40.446     |
| 1652.80                        | -60.650          | V              | -55.531          | 2.794           | 8.758      | -49.567    | -13         | -36.567     |
| 2479.20                        | -69.350          | V              | -60.371          | 3.442           | 10.567     | -53.246    | -13         | -40.246     |
| Middle Channel 4183 (836.6MHz) |                  |                |                  |                 |            |            |             |             |
| 1673.20                        | -63.820          | H              | -59.316          | 2.813           | 8.820      | -53.309    | -13         | -40.309     |
| 2509.80                        | -68.030          | H              | -59.611          | 3.463           | 10.608     | -52.466    | -13         | -39.466     |
| 1673.20                        | -59.770          | V              | -54.701          | 2.813           | 8.820      | -48.694    | -13         | -35.694     |
| 2509.80                        | -64.660          | V              | -55.852          | 3.463           | 10.608     | -48.707    | -13         | -35.707     |
| High Channel 4233 (846.6MHz)   |                  |                |                  |                 |            |            |             |             |
| 1693.20                        | -67.700          | H              | -63.290          | 2.831           | 8.880      | -57.241    | -13         | -44.241     |
| 2539.80                        | -62.470          | H              | -53.939          | 3.484           | 10.632     | -46.792    | -13         | -33.792     |
| 1693.20                        | -61.250          | V              | -56.238          | 2.831           | 8.880      | -50.189    | -13         | -37.189     |
| 2539.80                        | -58.880          | V              | -49.971          | 3.484           | 10.632     | -42.824    | -13         | -29.824     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

|              |                            |           |       |
|--------------|----------------------------|-----------|-------|
| Product      | LE910C4-NF                 |           |       |
| Test Item    | Radiated Spurious Emission |           |       |
| Test Mode    | Mode 3: WCDMA Band 5       |           |       |
| Date of Test | 2018/08/09                 | Test Site | CB4-H |

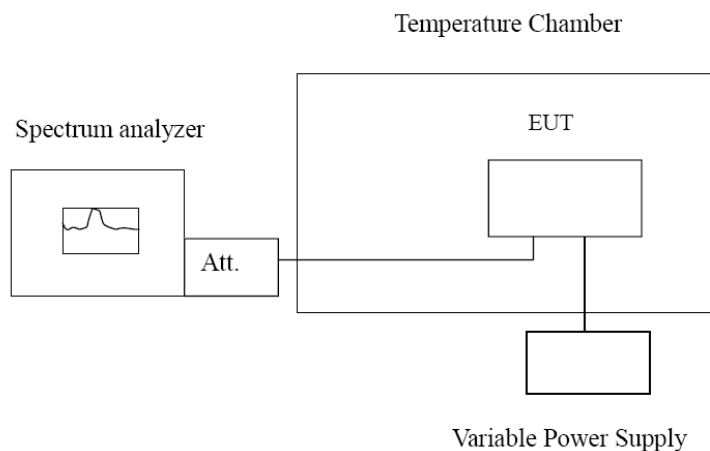
## WCDMA\_Band 5\_HSDPA\_Link

| Frequency (MHz)                | SA Reading (dBm) | Ant.Pol. (H/V) | SG Reading (dBm) | Cable Loss (dB) | Gain (dBi) | EIRP (dBm) | Limit (dBm) | Margin (dB) |
|--------------------------------|------------------|----------------|------------------|-----------------|------------|------------|-------------|-------------|
| Low Channel 4132 (826.4MHz)    |                  |                |                  |                 |            |            |             |             |
| 1652.80                        | -64.310          | H              | -59.719          | 2.794           | 8.758      | -53.755    | -13         | -40.755     |
| 2479.20                        | -68.820          | H              | -60.191          | 3.442           | 10.567     | -53.066    | -13         | -40.066     |
| 1652.80                        | -62.500          | V              | -57.381          | 2.794           | 8.758      | -51.417    | -13         | -38.417     |
| 2479.20                        | -68.890          | V              | -59.911          | 3.442           | 10.567     | -52.786    | -13         | -39.786     |
| Middle Channel 4183 (836.6MHz) |                  |                |                  |                 |            |            |             |             |
| 1673.20                        | -67.920          | H              | -63.416          | 2.813           | 8.820      | -57.409    | -13         | -44.409     |
| 2509.80                        | -69.730          | H              | -61.311          | 3.463           | 10.608     | -54.166    | -13         | -41.166     |
| 1673.20                        | -62.320          | V              | -57.251          | 2.813           | 8.820      | -51.244    | -13         | -38.244     |
| 2509.80                        | -65.900          | V              | -57.092          | 3.463           | 10.608     | -49.947    | -13         | -36.947     |
| High Channel 4233 (846.6MHz)   |                  |                |                  |                 |            |            |             |             |
| 1693.20                        | -61.110          | H              | -56.700          | 2.831           | 8.880      | -50.651    | -13         | -37.651     |
| 2539.80                        | -65.550          | H              | -57.019          | 3.484           | 10.632     | -49.872    | -13         | -36.872     |
| 1693.20                        | -62.260          | V              | -57.248          | 2.831           | 8.880      | -51.199    | -13         | -38.199     |
| 2539.80                        | -60.540          | V              | -51.631          | 3.484           | 10.632     | -44.484    | -13         | -31.484     |

Test Result (EIRP) = SG Level - Cable Loss + Antenna Gain

## 8. Frequency Stability

### 8.1. Test Setup



### 8.2. Test Procedure

#### Frequency Stability under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating 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. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

#### Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

### 8.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 9

ANSI C63.26-2015 Sub-clause 5.6

#### 8.4. Test Result

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

WCDMA Band 2 – 1852.4MHz

Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 10                   | -0.0118               |
| 3.8           | 9                    | -0.0108               |
| 4.2           | 11                   | -0.0130               |

Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | 10                   | -0.0123               |
| -20         | 9                    | -0.0114               |
| -10         | 10                   | -0.0123               |
| 0           | 9                    | -0.0113               |
| +10         | 11                   | -0.0138               |
| +20         | 9                    | -0.0108               |
| +30         | 14                   | -0.0166               |
| +40         | 12                   | -0.0150               |
| +50         | 10                   | -0.0119               |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

## WCDMA Band 2 – 1880MHz

## Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 16                   | -0.0192               |
| 3.8           | 11                   | -0.0127               |
| 4.2           | 11                   | -0.0128               |

## Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | 16                   | -0.0188               |
| -20         | 13                   | -0.0160               |
| -10         | -12                  | 0.0143                |
| 0           | -14                  | 0.0169                |
| +10         | 15                   | -0.0180               |
| +20         | -11                  | 0.0131                |
| +30         | -13                  | 0.0155                |
| +40         | 10                   | -0.0123               |
| +50         | 11                   | -0.0128               |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 1: WCDMA Band 2 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

## WCDMA Band 2 – 1907.6MHz

## Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 5                    | -0.0072               |
| 3.8           | 7                    | -0.0101               |
| 4.2           | 7                    | -0.0101               |

## Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | -30                  | 0.0431                |
| -20         | -10                  | 0.0144                |
| -10         | 3                    | -0.0043               |
| 0           | -30                  | 0.0431                |
| +10         | -15                  | 0.0216                |
| +20         | 23                   | -0.0331               |
| +30         | 25                   | -0.0359               |
| +40         | -24                  | 0.0345                |
| +50         | 18                   | -0.0259               |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

## WCDMA Band 4 – 1712.4MHz

## Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 11                   | -0.0158               |
| 3.8           | -29                  | 0.0417                |
| 4.2           | -31                  | 0.0446                |

## Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | 13                   | -0.0187               |
| -20         | -11                  | 0.0158                |
| -10         | 11                   | -0.0158               |
| 0           | -2                   | 0.0029                |
| +10         | -6                   | 0.0086                |
| +20         | -33                  | 0.0474                |
| +30         | -31                  | 0.0446                |
| +40         | -4                   | 0.0058                |
| +50         | -15                  | 0.0216                |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

## WCDMA Band 4 – 1732.6MHz

## Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 5                    | -0.0073               |
| 3.8           | -40                  | 0.0588                |
| 4.2           | 18                   | -0.0265               |

## Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | -15                  | 0.0220                |
| -20         | -31                  | 0.0456                |
| -10         | -36                  | 0.0529                |
| 0           | -32                  | 0.0470                |
| +10         | -1                   | 0.0015                |
| +20         | -18                  | 0.0265                |
| +30         | -29                  | 0.0426                |
| +40         | 21                   | -0.0309               |
| +50         | 8                    | -0.0118               |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 2: WCDMA Band 4 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

WCDMA\_Band 4\_1752.6MHz

Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | -2                   | 0.0029                |
| 3.8           | -6                   | 0.0088                |
| 4.2           | 1                    | -0.0015               |

Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | 21                   | -0.0309               |
| -20         | -6                   | 0.0088                |
| -10         | -21                  | 0.0309                |
| 0           | -23                  | 0.0338                |
| +10         | -39                  | 0.0573                |
| +20         | -33                  | 0.0485                |
| +30         | -25                  | 0.0367                |
| +40         | -28                  | 0.0411                |
| +50         | 16                   | -0.0235               |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

## WCDMA\_Band 5\_826.4MHz

## Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 11                   | -0.0130               |
| 3.8           | 24                   | -0.0293               |
| 4.2           | 35                   | -0.0424               |

## Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | 16                   | -0.0188               |
| -20         | 20                   | -0.0239               |
| -10         | 26                   | -0.0312               |
| 0           | 26                   | -0.0317               |
| +10         | 13                   | -0.0160               |
| +20         | 24                   | -0.0293               |
| +30         | 24                   | -0.0286               |
| +40         | 26                   | -0.0314               |
| +50         | 18                   | -0.0220               |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

WCDMA\_Band 5\_836.6MHz

Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 24                   | -0.0286               |
| 3.8           | -21                  | 0.0250                |
| 4.2           | -31                  | 0.0367                |

Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | -15                  | 0.0178                |
| -20         | -27                  | 0.0317                |
| -10         | -13                  | 0.0161                |
| 0           | -19                  | 0.0230                |
| +10         | -23                  | 0.0272                |
| +20         | -21                  | 0.0250                |
| +30         | -27                  | 0.0317                |
| +40         | -27                  | 0.0319                |
| +50         | -7                   | 0.0088                |

|              |                      |           |        |
|--------------|----------------------|-----------|--------|
| Product      | LE910C4-NF           |           |        |
| Test Item    | Frequency Stability  |           |        |
| Test Mode    | Mode 3: WCDMA Band 5 |           |        |
| Date of Test | 2018/08/12           | Test Site | SR10-H |

WCDMA\_Band 5\_846.6MHz

Voltage

| Voltage (VDC) | Frequency Error (Hz) | Frequency Error (ppm) |
|---------------|----------------------|-----------------------|
| 3.4           | 16                   | -0.0194               |
| 3.8           | -19                  | 0.0230                |
| 4.2           | -27                  | 0.0321                |

Temperature

| Temperature | Frequency Error (Hz) | Frequency Error (ppm) |
|-------------|----------------------|-----------------------|
| -30         | -28                  | 0.0331                |
| -20         | -28                  | 0.0329                |
| -10         | -27                  | 0.0320                |
| 0           | -26                  | 0.0312                |
| +10         | -27                  | 0.0319                |
| +20         | -19                  | 0.0230                |
| +30         | -27                  | 0.0322                |
| +40         | -27                  | 0.0321                |
| +50         | -29                  | 0.0346                |