

## FCC Part 22/24/27 Compliance Test Report

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                         |                                   |                                                                                                                                |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Report no.:</b>                                 | FCC_Cellular_RM-1128_11.docx                                                                                                                                                                                                                                                                                                                                                                                            | <b>Date of Report:</b>            | 09-Sep-2015                                                                                                                    |
| <b>Number of pages:</b>                                 | 111                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Customer's Contact person:</b> | Tero Huhtala                                                                                                                   |
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| <b>FCC listing no.:</b>                                 | 975940                                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |                                                                                                                                |
| <b>IC recognition no.:</b>                              | 661AH-1                                                                                                                                                                                                                                                                                                                                                                                                                 |                                   |                                                                                                                                |
| <b>Tested devices/ accessories:</b>                     | <b>Phone RM-1128 / Cover CC-3097 / Battery Samsung BL-T5A / AC-Charger AC-18U / Headset WH-108/ Dummy battery SD-133</b>                                                                                                                                                                                                                                                                                                |                                   |                                                                                                                                |
| <b>FCC ID:</b>                                          | PYARM-1128                                                                                                                                                                                                                                                                                                                                                                                                              | <b>IC:</b>                        | 661X-RM1128                                                                                                                    |
| <b>Supplement reports:</b>                              | -                                                                                                                                                                                                                                                                                                                                                                                                                       |                                   |                                                                                                                                |
| <b>Testing has been carried out in accordance with:</b> | CFR 47, FCC rules Parts 22/24/27, TIA-603-C-2004 and IC standards, RSS-GEN (Issue 4, November 2014), RSS-132 (Issue 3, January 2013), RSS-133 (Issue 6, January 2013), RSS-139 (Issue 2, February 2009), RSS-199 (Issue 2, October 2014), RSS-130 (Issue 1, October 2013). Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit". |                                   |                                                                                                                                |
| <b>Documentation:</b>                                   | The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 15 years at TCC Microsoft.                                                                                                                                                                |                                   |                                                                                                                                |
| <b>Test Results:</b>                                    | <b>The EUT complies with the requirements in respect of all parameters subject to the test.</b><br>The test results relate only to devices specified in this document                                                                                                                                                                                                                                                   |                                   |                                                                                                                                |
| <b>Date and signature for the contents:</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                         |                                   |                                                                                                                                |

Gao Sherina, System Manager, EMC

## 1. Summary for FCC Part 22/24/27 Compliance Test Report

|                               |                                                       |
|-------------------------------|-------------------------------------------------------|
| Date of receipt               | 02-Jun-2015                                           |
| Testing completed             | 26s-Aug-2015                                          |
| The customer's contact person | Tero Huhtala                                          |
| Test Plan referred to         | T:\Projects\RM-1128\TestPlan\RS_testplan_RM-1128.xlsm |
| Notes                         | -                                                     |
| Document name                 | FCC_Cellular_RM-1128_11.docx                          |

### 1.1. EUT and Accessory Information

The EUT is a mobile phone with following features:

GSM/WCDMA/WLAN/Bluetooth

The EUT is tested with maximum rated TX power.

Devices under tests

| Product       | Type           | SN                          | HW          | MV | SW                      | DUT    |
|---------------|----------------|-----------------------------|-------------|----|-------------------------|--------|
| Phone         | RM-1128        | 004402742351970             | 1510        | -  | 01065.00000.15265.37000 | 500100 |
| Cover         | CC-3097        | -                           | -           | -  | -                       | 500127 |
| Battery       | Samsung BL-T5A | 5241525213V10200063;0670778 | PWB Ver.1.1 | -  | -                       | 500101 |
| AC-Charger    | AC-18U         | 4818715115100100661;0675735 | -           | -  | -                       | 500124 |
| Headset       | WH-108         | -                           | -           | -  | -                       | 500121 |
| Phone         | RM-1128        | 004402742351913             | 1510        | -  | 01065.00000.15265.37000 | 500110 |
| Cover         | CC-3097        | -                           | -           | -  | -                       | 500128 |
| Battery       | Samsung BL-T5A | 5241525213V10205754;0670778 | PWB Ver.1.1 | -  | -                       | 500117 |
| AC-Charger    | AC-18U         | 418715115100100658;0675735  | -           | -  | -                       | 500122 |
| Headset       | WH-108         | -                           | -           | -  | -                       | 500121 |
| Dummy battery | SD-133         | 03618                       | -           | -  | -                       | 500120 |

### 1.2. Summary of Test Results

#### GSM 850:

| Section in CFR 47     | Section in RSS-GEN or RSS-132 | Name of the test                           | Result |
|-----------------------|-------------------------------|--------------------------------------------|--------|
| §2.1046(a), 22.913(a) | 4.4                           | Conducted RF output power                  | NP     |
| §22.913(a)            | 4.4                           | Radiated RF output power                   | NP     |
| N/A                   | 5.4                           | Peak to average power ratio                | PASSED |
| §2.1049(h)            | 6.6                           | 99 % occupied bandwidth                    | PASSED |
| §22.917(a)            | 4.5                           | Band edge compliance                       | PASSED |
| §22.917(a), §2.1051   | 4.5                           | Spurious emissions at antenna terminals    | NP     |
| §22.917(a), §2.1053   | 4.5                           | Spurious radiated emissions                | PASSED |
| §2.1055(a)            | 4.3                           | Frequency stability, temperature variation | PASSED |
| §2.1055(d)            | 4.3                           | Frequency stability, voltage variation     | PASSED |

#### GSM 1900:

| Section in CFR 47 | Section in RSS-GEN or RSS-133 | Name of the test          | Result |
|-------------------|-------------------------------|---------------------------|--------|
| §2.1046(a)        | 6.4                           | Conducted RF output power | NP     |
| §24.232(b)        | 6.4                           | Radiated RF output power  | NP     |

|                     |     |                                            |        |
|---------------------|-----|--------------------------------------------|--------|
| N/A                 | 6.4 | Peak to average power ratio                | PASSED |
| §2.1049(h)          | 6.6 | 99 % occupied bandwidth                    | PASSED |
| §24.238(a)          | 6.5 | Band edge compliance                       | PASSED |
| §24.238(a), §2.1051 | 6.5 | Spurious emissions at antenna terminals    | NP     |
| §24.238(a), §2.1053 | 6.5 | Spurious radiated emissions                | PASSED |
| §2.1055(a)          | 6.3 | Frequency stability, temperature variation | PASSED |
| §2.1055(d)          | 6.3 | Frequency stability, voltage variation     | PASSED |

#### WCDMA4:

| Section in CFR 47   | Section in RSS-GEN or RSS-139 | Name of the test                           | Result |
|---------------------|-------------------------------|--------------------------------------------|--------|
| §2.1046(a)          | 6.4                           | Conducted RF output power                  | NP     |
| §27.50(d)(2)        | 6.4                           | Radiated RF output power                   | NP     |
| N/A                 | 6.4                           | Peak to average power ratio                | PASSED |
| §2.1049(h)          | 6.6                           | 99 % occupied bandwidth                    | PASSED |
| §27.53(g)           | 6.5                           | Band edge compliance                       | PASSED |
| §27.53(g), §2.1051  | 6.5                           | Spurious emissions at antenna terminals    | NP     |
| §24.238(a), §2.1053 | 6.5                           | Spurious radiated emissions                | PASSED |
| §2.1055(a)          | 6.3                           | Frequency stability, temperature variation | PASSED |
| §2.1055(d)          | 6.3                           | Frequency stability, voltage variation     | PASSED |

#### WCDMA5:

| Section in CFR 47     | Section in RSS-GEN or RSS-132 | Name of the test                           | Result |
|-----------------------|-------------------------------|--------------------------------------------|--------|
| §2.1046(a), 22.913(a) | 4.4                           | Conducted RF output power                  | NP     |
| §22.913(a)            | 4.4                           | Radiated RF output power                   | NP     |
| N/A                   | 5.4                           | Peak to average power ratio                | PASSED |
| §2.1049(h)            | 6.6                           | 99 % occupied bandwidth                    | PASSED |
| §22.917(a)            | 4.5                           | Band edge compliance                       | PASSED |
| §22.917(a), §2.1051   | 4.5                           | Spurious emissions at antenna terminals    | NP     |
| §22.917(a), §2.1053   | 4.5                           | Spurious radiated emissions                | PASSED |
| §2.1055(a)            | 4.3                           | Frequency stability, temperature variation | NP     |
| §2.1055(d)            | 4.3                           | Frequency stability, voltage variation     | NP     |

#### WCDMA2:

| Section in CFR 47   | Section in RSS-GEN or RSS-133 | Name of the test                           | Result |
|---------------------|-------------------------------|--------------------------------------------|--------|
| §2.1046(a)          | 6.4                           | Conducted RF output power                  | NP     |
| §24.232(b)          | 6.4                           | Radiated RF output power                   | NP     |
| N/A                 | 6.4                           | Peak to average power ratio                | PASSED |
| §2.1049(h)          | 6.6                           | 99 % occupied bandwidth                    | PASSED |
| §24.238(a)          | 6.5                           | Band edge compliance                       | PASSED |
| §24.238(a), §2.1051 | 6.5                           | Spurious emissions at antenna terminals    | NP     |
| §24.238(a), §2.1053 | 6.5                           | Spurious radiated emissions                | PASSED |
| §2.1055(a)          | 6.3                           | Frequency stability, temperature variation | NP     |
| §2.1055(d)          | 6.3                           | Frequency stability, voltage variation     | NP     |

#### LTE4:

| Section in CFR 47 | Section in RSS-GEN or RSS-139 | Name of the test            | Result |
|-------------------|-------------------------------|-----------------------------|--------|
| §2.1046(a)        | 6.4                           | Conducted RF output power   | NP     |
| §27.50(d)(4)      | 6.4                           | Radiated RF output power    | NP     |
| N/A               | 6.4                           | Peak to average power ratio | NP     |
| §2.1049(h)        | 6.6                           | 99 % occupied bandwidth     | PASSED |

|                    |     |                                            |        |
|--------------------|-----|--------------------------------------------|--------|
| §27.53(h)          | 6.5 | Band edge compliance                       | PASSED |
| §27.53(h), §2.1051 | 6.5 | Spurious emissions at antenna terminals    | NP     |
| §27.53(h), §2.1053 | 6.5 | Spurious radiated emissions                | PASSED |
| §2.1055(a)         | 6.3 | Frequency stability, temperature variation | PASSED |
| §2.1055(d)         | 6.3 | Frequency stability, voltage variation     | PASSED |

#### LTE5:

| Section in CFR 47     | Section in RSS-GEN or RSS-132 | Name of the test                           | Result |
|-----------------------|-------------------------------|--------------------------------------------|--------|
| §2.1046(a), 22.913(a) | 4.4                           | Conducted RF output power                  | NP     |
| §22.913(a)            | 4.4                           | Radiated RF output power                   | NP     |
| N/A                   | 5.4                           | Peak to average power ratio                | PASSED |
| §2.1049(h)            | 6.6                           | 99 % occupied bandwidth                    | PASSED |
| §22.917(a)            | 4.5                           | Band edge compliance                       | PASSED |
| §22.917(a), §2.1051   | 4.5                           | Spurious emissions at antenna terminals    | NP     |
| §22.917(a), §2.1053   | 4.5                           | Spurious radiated emissions                | PASSED |
| §2.1055(a)            | 4.3                           | Frequency stability, temperature variation | NP     |
| §2.1055(d)            | 4.3                           | Frequency stability, voltage variation     | NP     |

#### LTE7:

| Section in CFR 47  | Section in RSS-GEN or RSS-199 | Name of the test                           | Result |
|--------------------|-------------------------------|--------------------------------------------|--------|
| §2.1046(a)         | 4.4                           | Conducted RF output power                  | NP     |
| §27.50(h)(2)       | 4.4                           | Radiated RF output power                   | NP     |
| N/A                | N/A                           | Peak to average power ratio                | NP     |
| §2.1049(h)         | 6.6                           | 99 % occupied bandwidth                    | PASSED |
| §27.53(l)          | 4.5(b)                        | Band edge compliance                       | PASSED |
| §2.1051            | 4.5(b)                        | Spurious emissions at antenna terminals    | NP     |
| §27.53(l), §2.1053 | 4.5(b)                        | Spurious radiated emissions                | PASSED |
| §27.54             | 4.3                           | Frequency stability, temperature variation | PASSED |
| §27.54             | 4.3                           | Frequency stability, voltage variation     | PASSED |

#### LTE12:

| Section in CFR 47 | Section in RSS-GEN or RSS-130 | Name of the test                           | Result |
|-------------------|-------------------------------|--------------------------------------------|--------|
| §2.1046(a)        | 4.4                           | Conducted RF output power                  | NP     |
| §27.50(c)10       | 4.4                           | Radiated RF output power                   | NP     |
| N/A               | N/A                           | Peak to average power ratio                | PASSED |
| §2.1049(h)        | 6.6                           | 99 % occupied bandwidth                    | PASSED |
| §27.53(f)         | 4.6                           | Band edge compliance                       | PASSED |
| §27.53(f)         | 4.6                           | Spurious emissions at antenna terminals    | NP     |
| §27.53(f)         | 4.6                           | Spurious radiated emissions                | PASSED |
| §27.54            | 4.3                           | Frequency stability, temperature variation | PASSED |
| §27.54            | 4.3                           | Frequency stability, voltage variation     | PASSED |

#### LTE17:

| Section in CFR 47  | Section in RSS-GEN or RSS-130 | Name of the test                        | Result |
|--------------------|-------------------------------|-----------------------------------------|--------|
| §2.1046(a)         | 4.4                           | Conducted RF output power               | NP     |
| §27.50(c)(10)      | 4.4                           | Radiated RF output power                | NP     |
| N/A                | N/A                           | Peak to average power ratio             | PASSED |
| §2.1049(h)         | 6.6                           | 99 % occupied bandwidth                 | PASSED |
| §27.53(g)          | 4.6                           | Band edge compliance                    | PASSED |
| §27.53(g), §2.1051 | 4.6                           | Spurious emissions at antenna terminals | NP     |

|                    |         |                                            |        |
|--------------------|---------|--------------------------------------------|--------|
| §27.53(g), §2.1051 | 4.6     | Spurious radiated emissions                | PASSED |
| §2.1055(a)         | 4.3 (a) | Frequency stability, temperature variation | PASSED |
| §2.1055(d)         | 4.3 (a) | Frequency stability, voltage variation     | PASSED |

PASSED

FAILED

NP

The EUT complies with the essential requirements in the standard.

The EUT does not comply with the essential requirements in the standard.

The test was not performed by the TCC Microsoft Laboratory.

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|                                                                                                                  |    |
|------------------------------------------------------------------------------------------------------------------|----|
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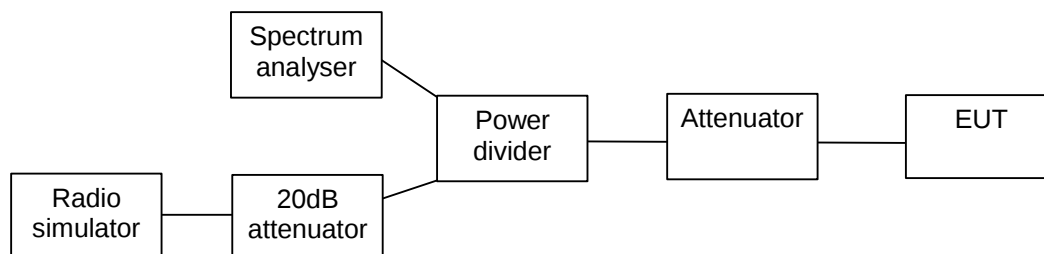
|      |                             |    |
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## 2. Peak to average power ratio (FCC N/A, RSS-133 6.4, RSS-132 5.4, RSS-139 6.4, RSS-130 N/A)

|                                                        |                                                                                         |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>EUT with DUT number</b>                             | RM-1128, DUT 500110                                                                     |
| <b>Accessories with DUT numbers</b>                    | CC-3097, DUT 500128; Samsung BL-T5A, DUT 500117; AC-18U, DUT 500122; WH-108, DUT 500103 |
| <b>Operation Voltage [V] / [Hz]</b>                    | Nominal                                                                                 |
| <b>Results</b>                                         | PASSED                                                                                  |
| <b>Remarks</b>                                         | Test was in conducted RF2 system.                                                       |
| <b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b> | 21/59/100.5 to 23/51/100.1                                                              |
| <b>Date of measurements</b>                            | 16-Jul-2015 to 20-Jul-2015                                                              |
| <b>Measured by</b>                                     | Dou Rubo                                                                                |

### 2.1. Test Setup



### 2.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards.

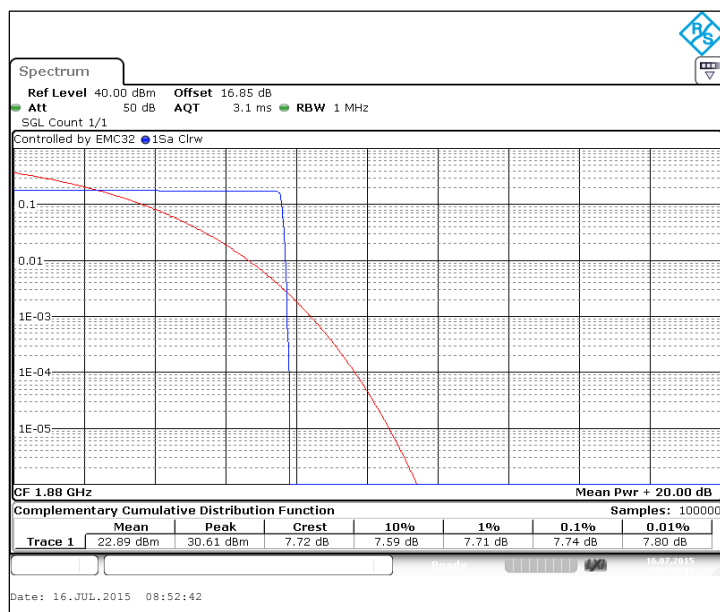
Limits for Peak to average power ratio measurements

| Peak to average power ratio [dB] |
|----------------------------------|
| $\leq 13$                        |

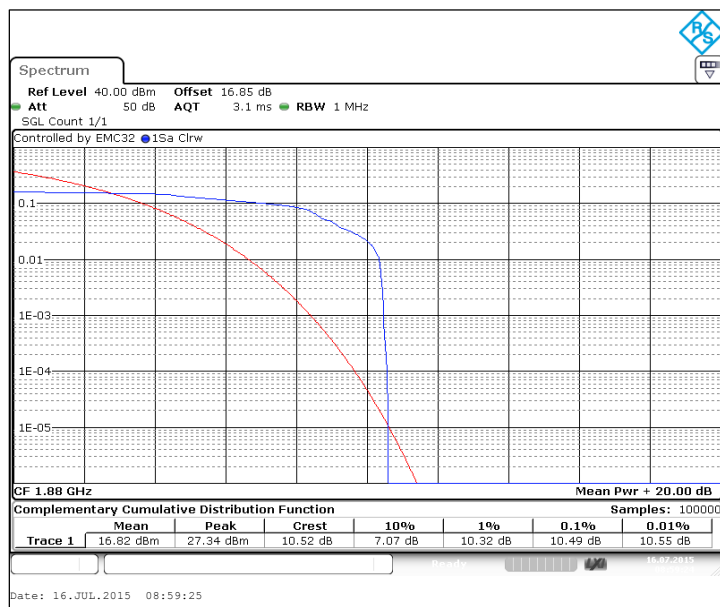
## 2.3. GSM 1900 Test results

| Operation mode (TX on) | Channel / $f_c$ [MHz] | Peak to average power ratio [dB] | Result |
|------------------------|-----------------------|----------------------------------|--------|
| GSM                    | 661 / 1880.0          | 7.72                             | PASSED |
| EGPRS                  | 661 / 1880.0          | 10.52                            | PASSED |

### GSM



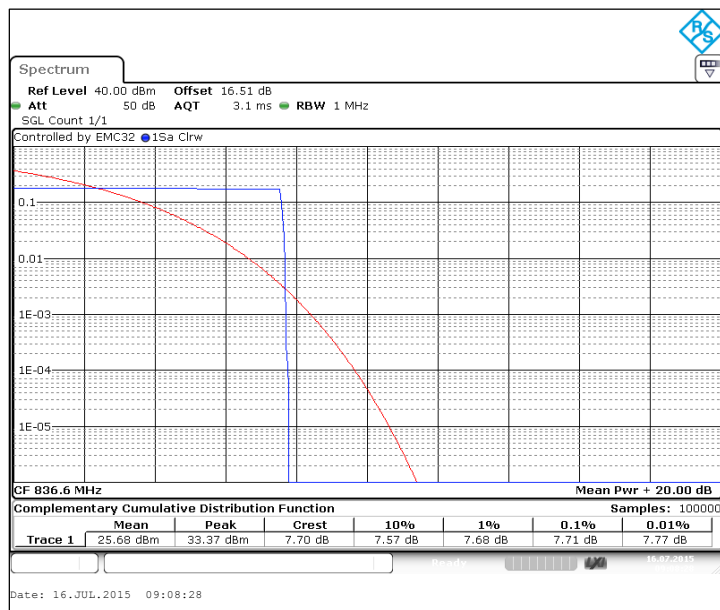
### EGPRS



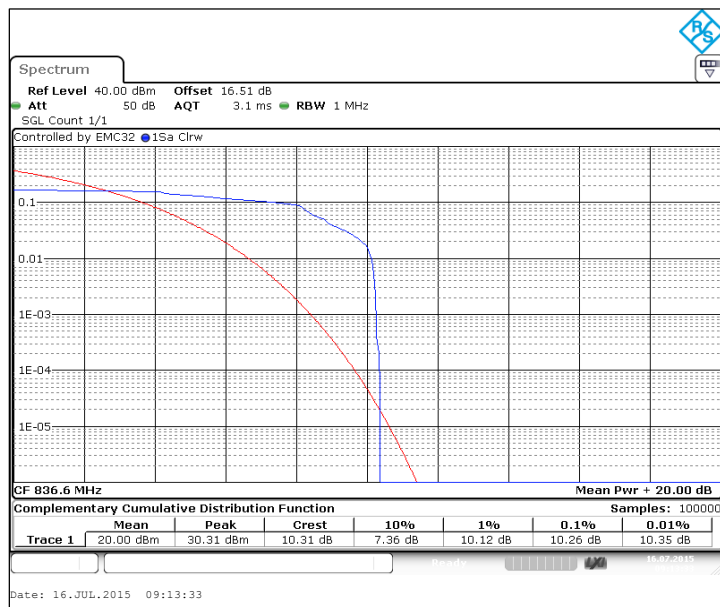
## 2.4. GSM 850 Test results

| Operation mode (TX on) | Channel / f <sub>c</sub> [MHz] | Peak to average power ratio [dB] | Result |
|------------------------|--------------------------------|----------------------------------|--------|
| GSM                    | 190 / 836.6                    | 7.70                             | PASSED |
| EGPRS                  | 190 / 836.6                    | 10.31                            | PASSED |

### GSM



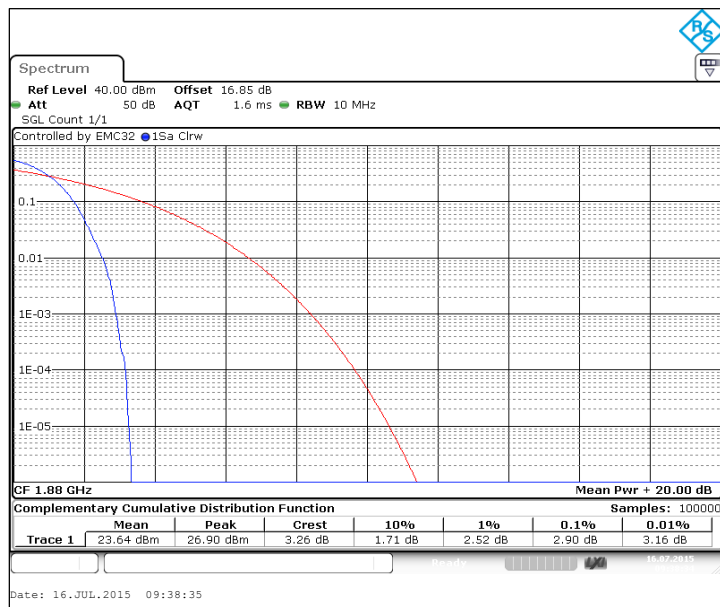
### EGPRS



## 2.5. WCDMA2 Test results

| Operation mode (TX on) | Channel / f <sub>c</sub> [MHz] | Peak to average power ratio [dB] | Result |
|------------------------|--------------------------------|----------------------------------|--------|
| FDD                    | 9400 / 1880.0                  | 3.26                             | PASSED |

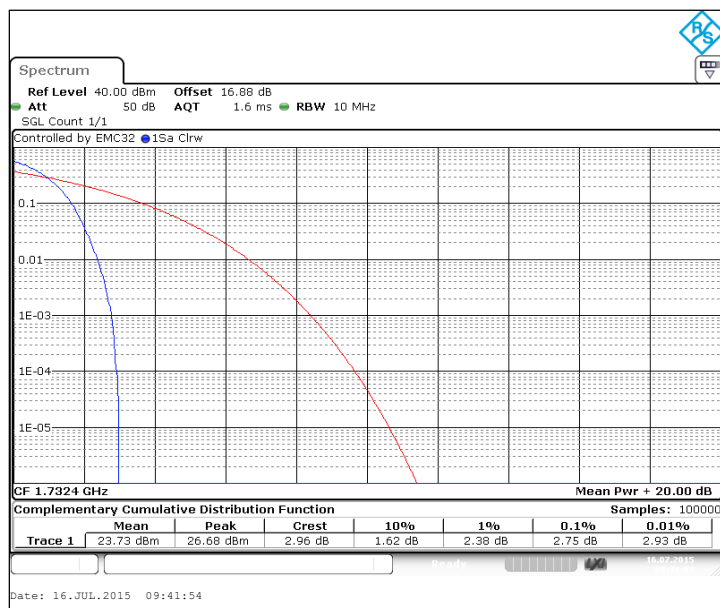
### FDD



## 2.6. WCDMA4 Test results

| Operation mode (TX on) | Channel / f <sub>c</sub> [MHz] | Peak to average power ratio [dB] | Result |
|------------------------|--------------------------------|----------------------------------|--------|
| FDD                    | 1412 / 1732.4                  | 2.96                             | PASSED |

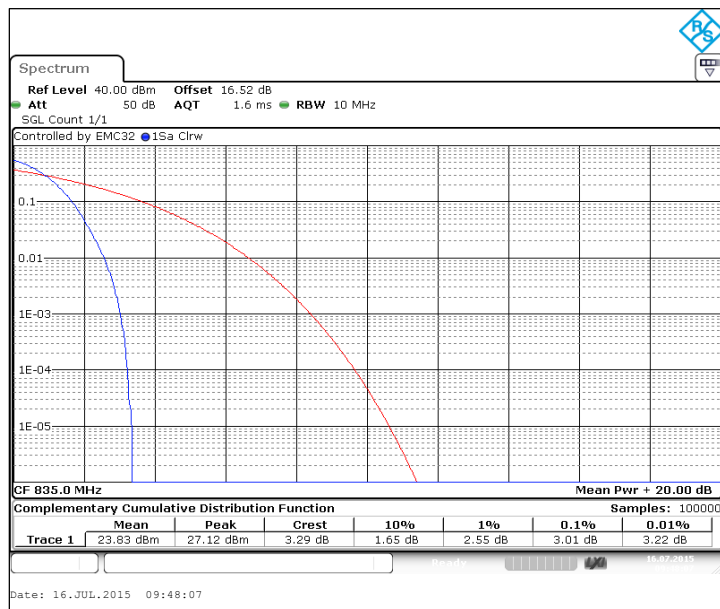
### FDD



## 2.7. WCDMA5 Test results

| Operation mode (TX on) | Channel / f <sub>c</sub> [MHz] | Peak to average power ratio [dB] | Result |
|------------------------|--------------------------------|----------------------------------|--------|
| FDD                    | 4175 / 835.0                   | 3.29                             | PASSED |

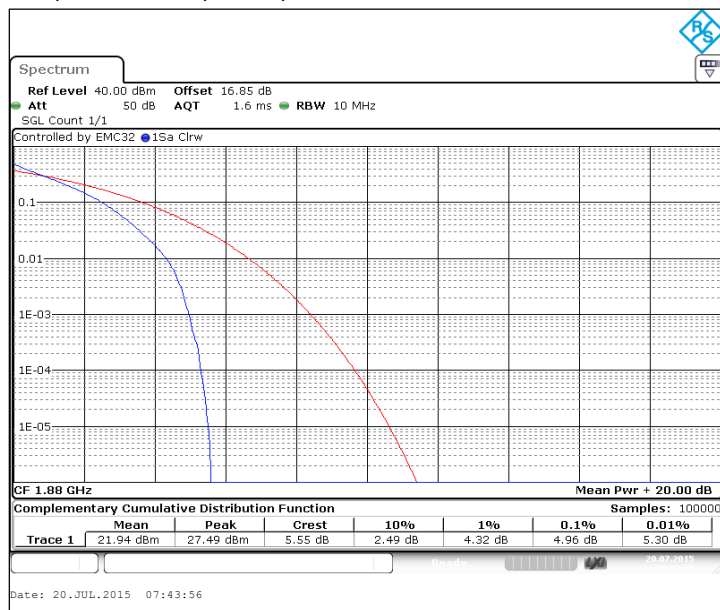
### FDD



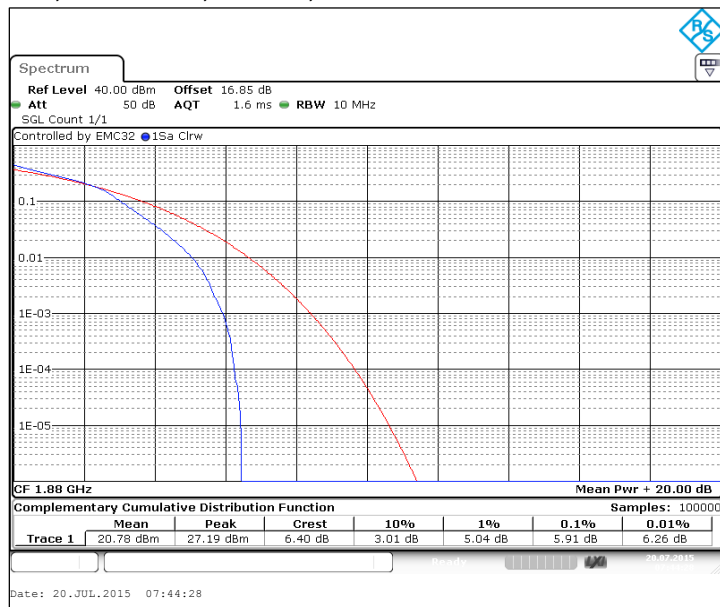
## 2.8. LTE2 Test results

| Operation mode (TX on)      | Channel / $f_c$ [MHz] | Peak to average power ratio [dB] | Result |
|-----------------------------|-----------------------|----------------------------------|--------|
| FDD, CBW 5MHz, QPSK, 25 RB  | 18900 / 1880.0        | 5.55                             | PASSED |
| FDD, CBW 5MHz, 16QAM, 25 RB | 18900 / 1880.0        | 6.40                             | PASSED |

FDD, CBW 5MHz, QPSK, 25 RB



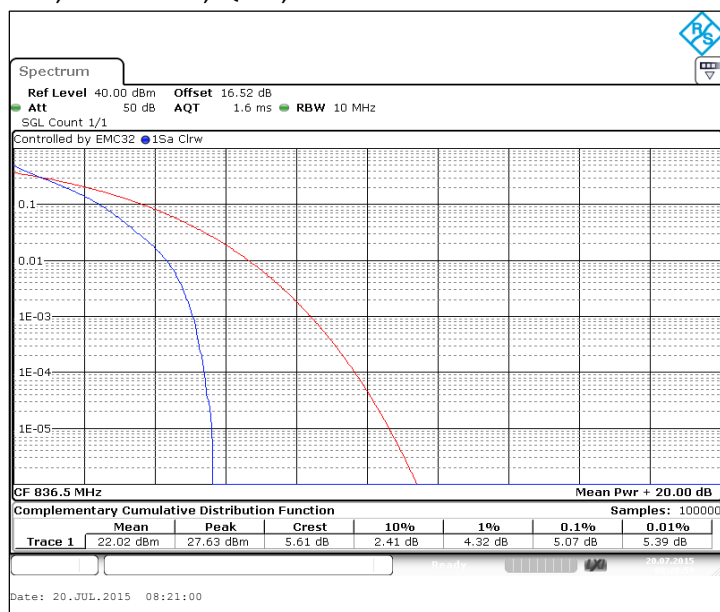
FDD, CBW 5MHz, 16QAM, 25 RB



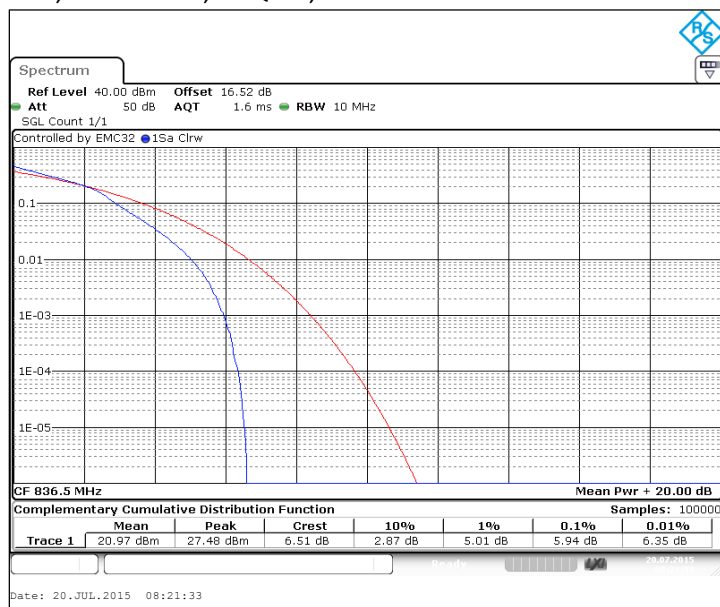
## 2.9. LTE5 Test results

| Operation mode (TX on)      | Channel / $f_c$ [MHz] | Peak to average power ratio [dB] | Result |
|-----------------------------|-----------------------|----------------------------------|--------|
| FDD, CBW 5MHz, QPSK, 25 RB  | 20525 / 836.5         | 5.61                             | PASSED |
| FDD, CBW 5MHz, 16QAM, 25 RB | 20525 / 836.5         | 6.51                             | PASSED |

### FDD, CBW 5MHz, QPSK, 25 RB



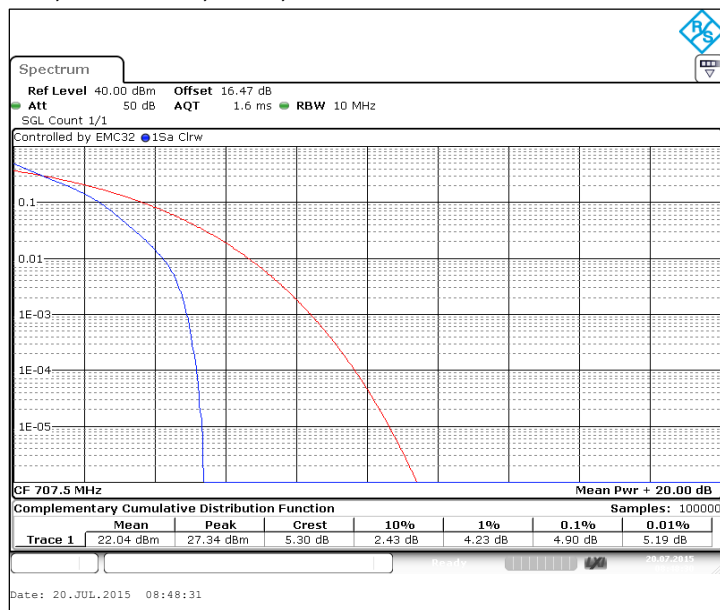
### FDD, CBW 5MHz, 16QAM, 25 RB



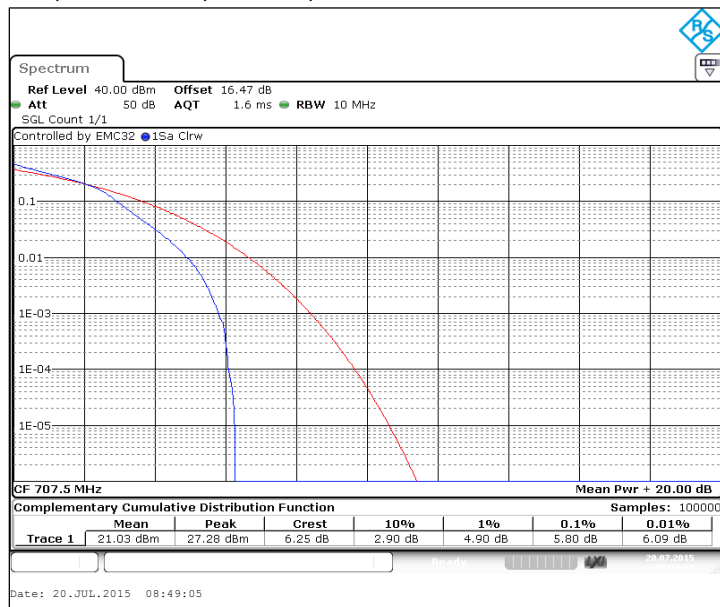
## 2.10. LTE12 Test results

| Operation mode (TX on)      | Channel / $f_c$ [MHz] | Peak to average power ratio [dB] | Result |
|-----------------------------|-----------------------|----------------------------------|--------|
| FDD, CBW 5MHz, QPSK, 25 RB  | 23095 / 707.5         | 5.30                             | PASSED |
| FDD, CBW 5MHz, 16QAM, 25 RB | 23095 / 707.5         | 6.25                             | PASSED |

### FDD, CBW 5MHz, QPSK, 25 RB



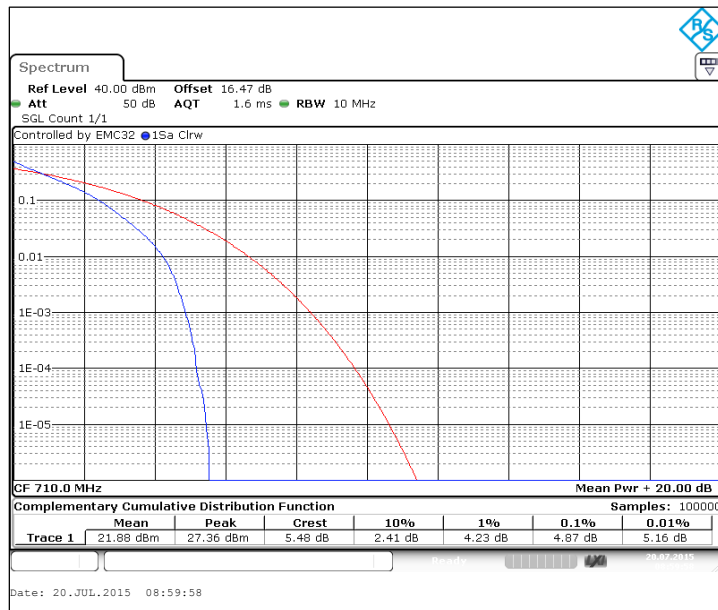
### FDD, CBW 5MHz, 16QAM, 25 RB



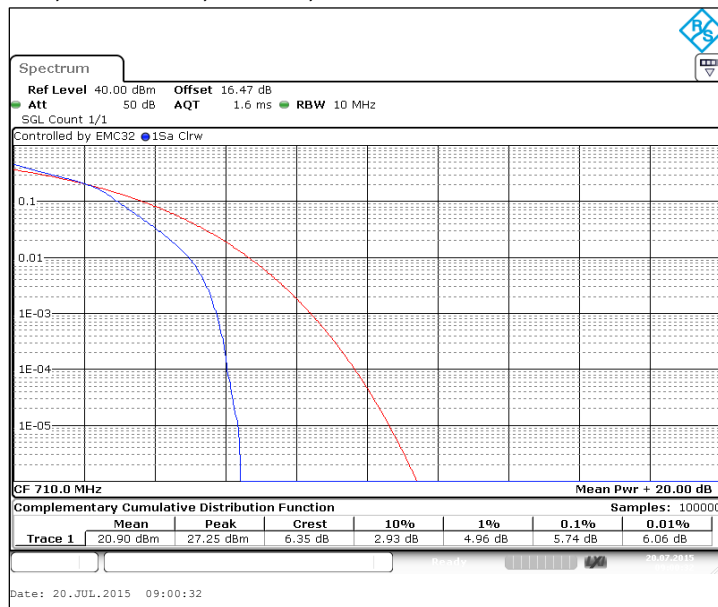
## 2.11. LTE17 Test results

| Operation mode (TX on)      | Channel / $f_c$ [MHz] | Peak to average power ratio [dB] | Result |
|-----------------------------|-----------------------|----------------------------------|--------|
| FDD, CBW 5MHz, QPSK, 25 RB  | 23790 / 710.0         | 5.48                             | PASSED |
| FDD, CBW 5MHz, 16QAM, 25 RB | 23790 / 710.0         | 6.35                             | PASSED |

### FDD, CBW 5MHz, QPSK, 25 RB



### FDD, CBW 5MHz, 16QAM, 25 RB

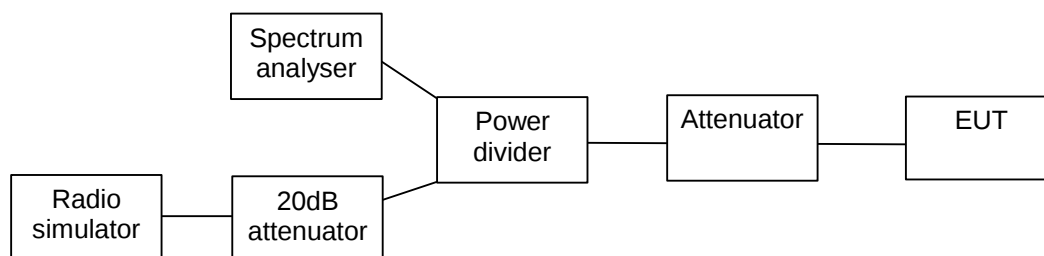


### 3. 99 % occupied bandwidth

(FCC §2.1049(h), RSS-133 6.6, RSS-132 6.6, RSS-139 6.6, RSS-199 6.6, RSS-130 6.6)

|                                                 |                                                                                         |
|-------------------------------------------------|-----------------------------------------------------------------------------------------|
| EUT with DUT number                             | RM-1128, DUT 500110                                                                     |
| Accessories with DUT numbers                    | CC-3097, DUT 500128; Samsung BL-T5A, DUT 500117; AC-18U, DUT 500122; WH-108, DUT 500103 |
| Operation Voltage [V] / [Hz]                    | Nominal                                                                                 |
| Results                                         | PASSED                                                                                  |
| Remarks                                         | Test was in conducted RF2 system.                                                       |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 21/59/100.5 to 23/51/100.1                                                              |
| Date of measurements                            | 16-Jul-2015 to 20-Jul-2015                                                              |
| Measured by                                     | Dou Rubo                                                                                |

#### 3.1. Test Setup



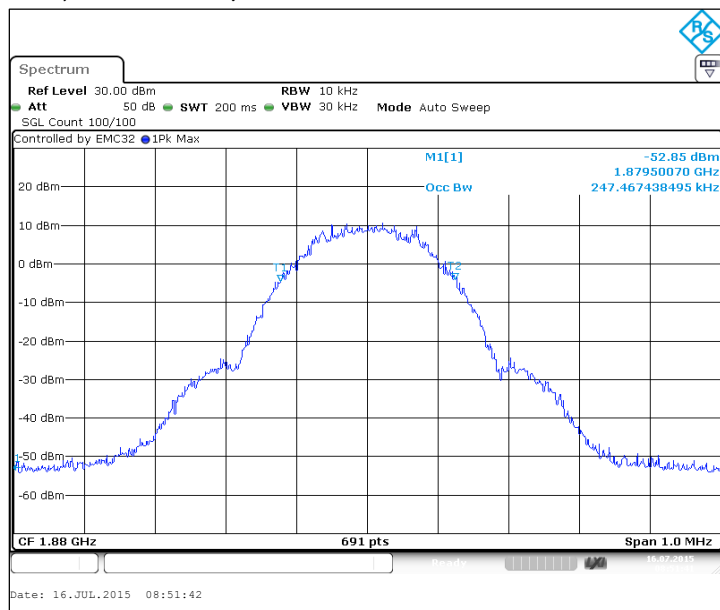
#### 3.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards.

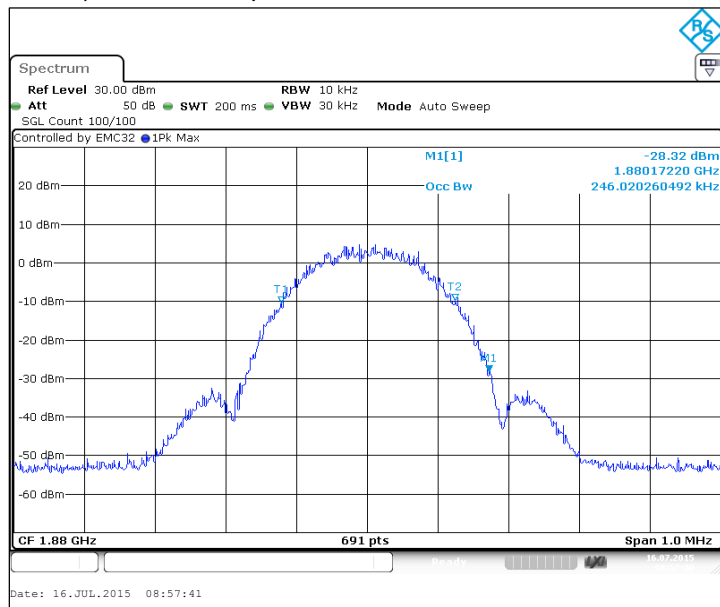
### 3.3. GSM 1900 Test results

| Operation mode (TX on) | 99% Occupied bandwidth [kHz] |
|------------------------|------------------------------|
| GSM                    | 247.5                        |
| EGPRS                  | 246                          |

#### GSM, Channel 661 / 1880.0 MHz



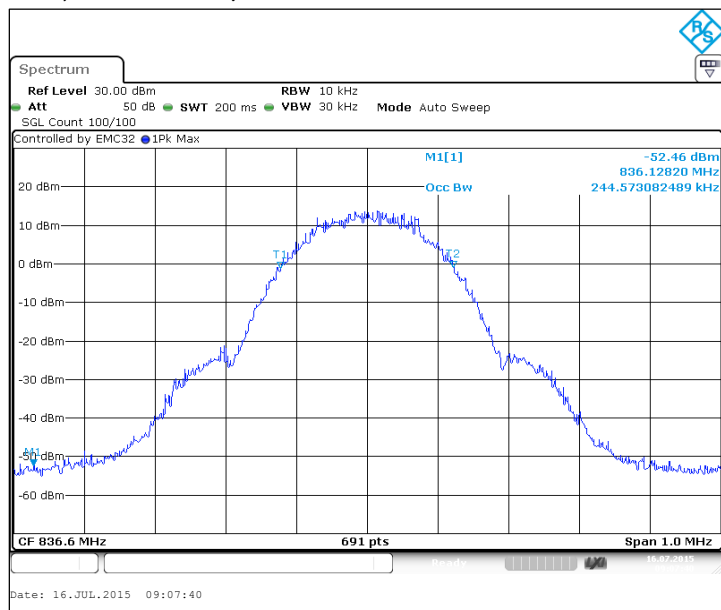
#### EGPRS, Channel 661 / 1880.0 MHz



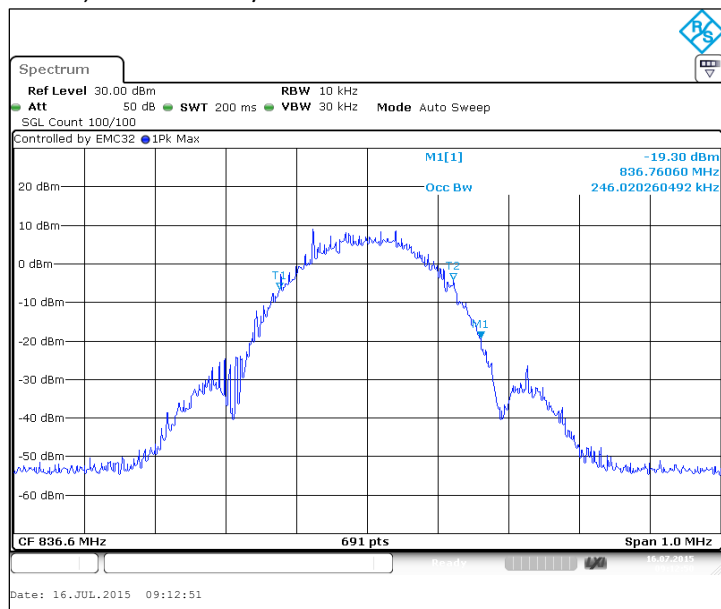
### 3.4. GSM 850 Test results

| Operation mode (TX on) | 99% Occupied bandwidth [kHz] |
|------------------------|------------------------------|
| GSM                    | 244.6                        |
| EGPRS                  | 246                          |

#### GSM, Channel 190 / 836.6 MHz



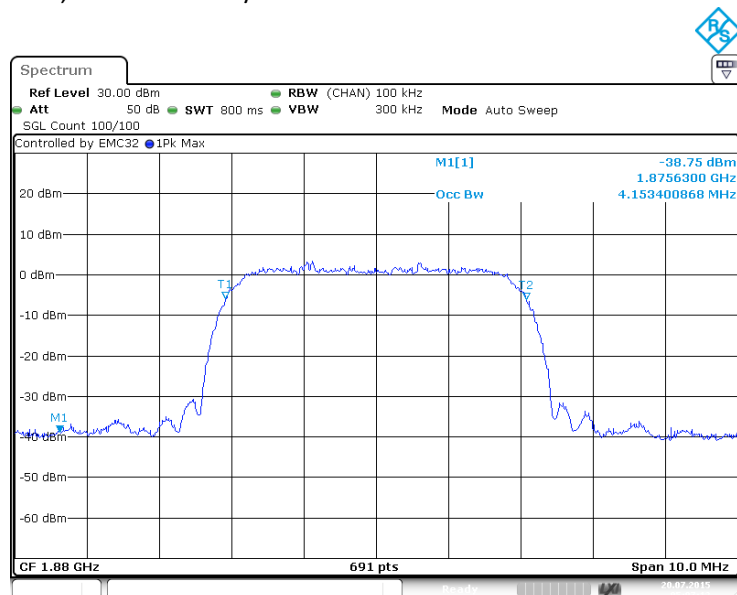
#### EGPRS, Channel 190 / 836.6 MHz



### 3.5. WCDMA2 Test results

| Operation mode (TX on) | 99% Occupied bandwidth [kHz] |
|------------------------|------------------------------|
| FDD                    | 4153.4                       |

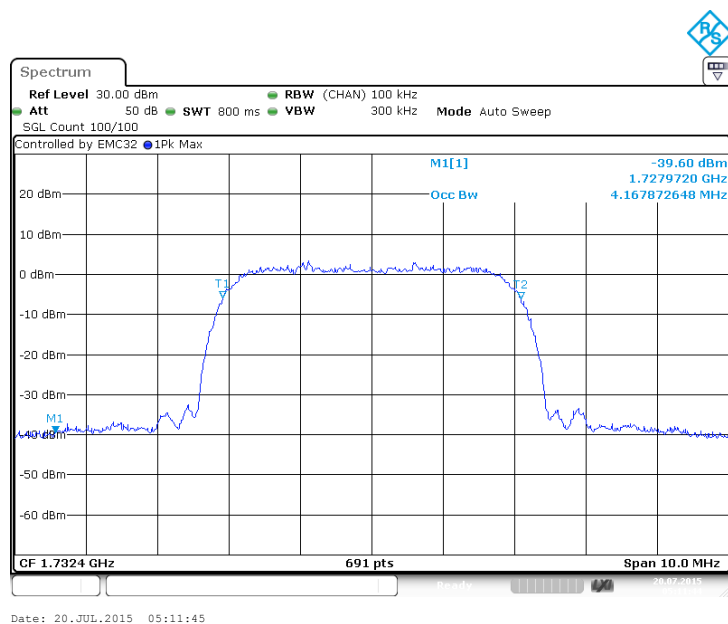
FDD, Channel 9400 / 1880.0 MHz



### 3.6. WCDMA4 Test results

| Operation mode (TX on) | 99% Occupied bandwidth [kHz] |
|------------------------|------------------------------|
| FDD                    | 4167.9                       |

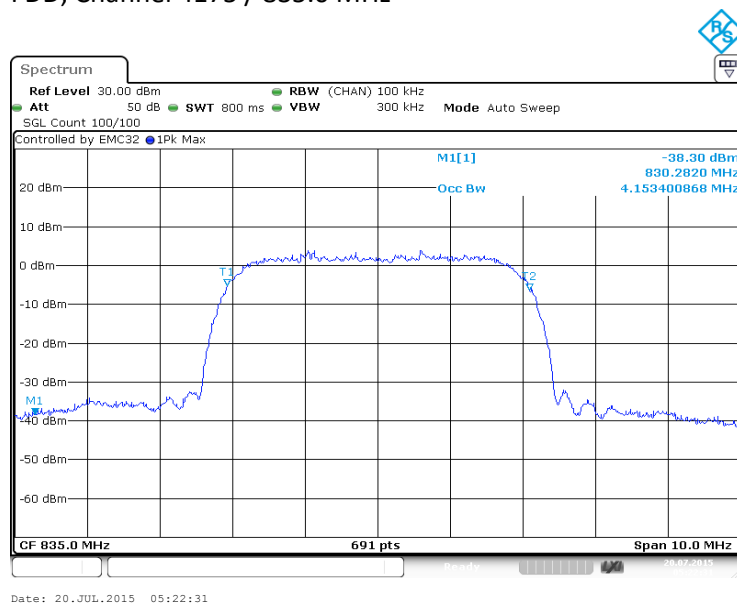
FDD, Channel 1412 / 1732.4 MHz



### 3.7. WCDMA5 Test results

| Operation mode (TX on) | 99% Occupied bandwidth [kHz] |
|------------------------|------------------------------|
| FDD                    | 4153.4                       |

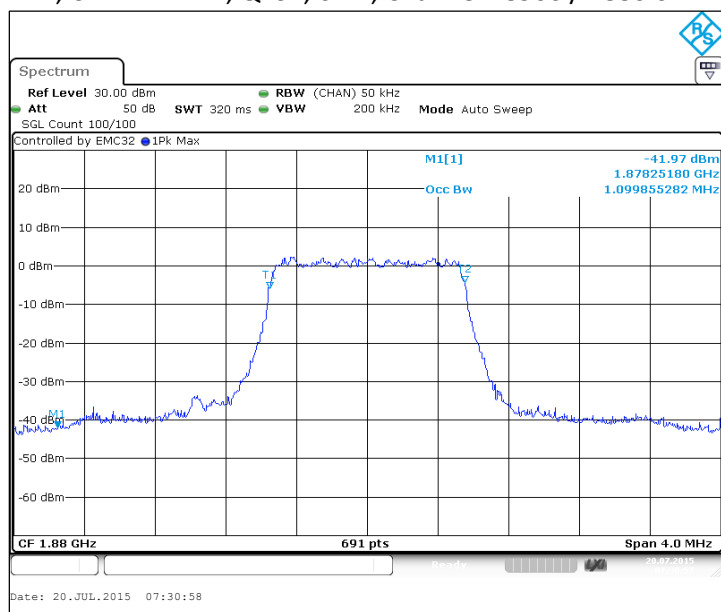
FDD, Channel 4175 / 835.0 MHz



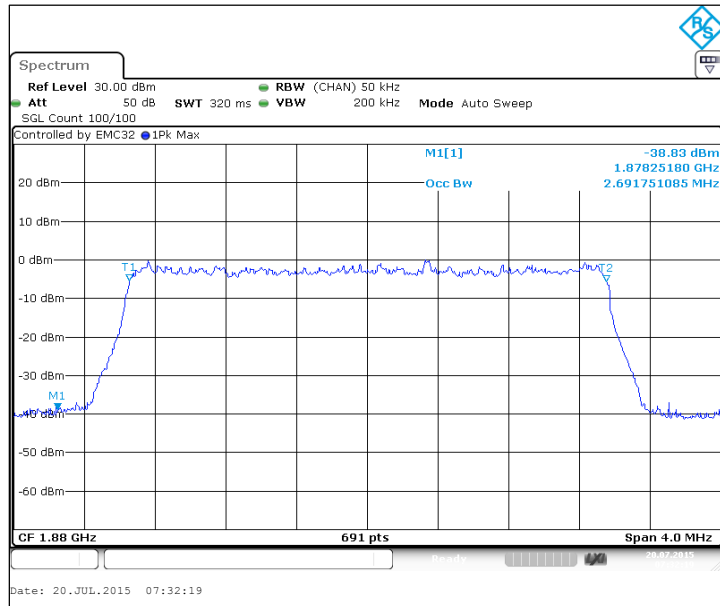
### 3.8. LTE2 Test results

| Operation mode (TX on)        | 99% Occupied bandwidth [kHz] |
|-------------------------------|------------------------------|
| FDD, CBW 1.4MHz, QPSK, 6 RB   | 1099.9                       |
| FDD, CBW 3MHz, QPSK, 15 RB    | 2691.8                       |
| FDD, CBW 5MHz, QPSK, 25 RB    | 4497.8                       |
| FDD, CBW 10MHz, QPSK, 50 RB   | 8943.6                       |
| FDD, CBW 15MHz, QPSK, 75 RB   | 13429.8                      |
| FDD, CBW 20MHz, QPSK, 100 RB  | 17872.6                      |
| FDD, CBW 1.4MHz, 16QAM, 6 RB  | 1105.6                       |
| FDD, CBW 3MHz, 16QAM, 15 RB   | 2680.2                       |
| FDD, CBW 5MHz, 16QAM, 25 RB   | 4477.6                       |
| FDD, CBW 10MHz, 16QAM, 50 RB  | 8943.6                       |
| FDD, CBW 15MHz, 16QAM, 75 RB  | 13371.9                      |
| FDD, CBW 20MHz, 16QAM, 100 RB | 17872.6                      |

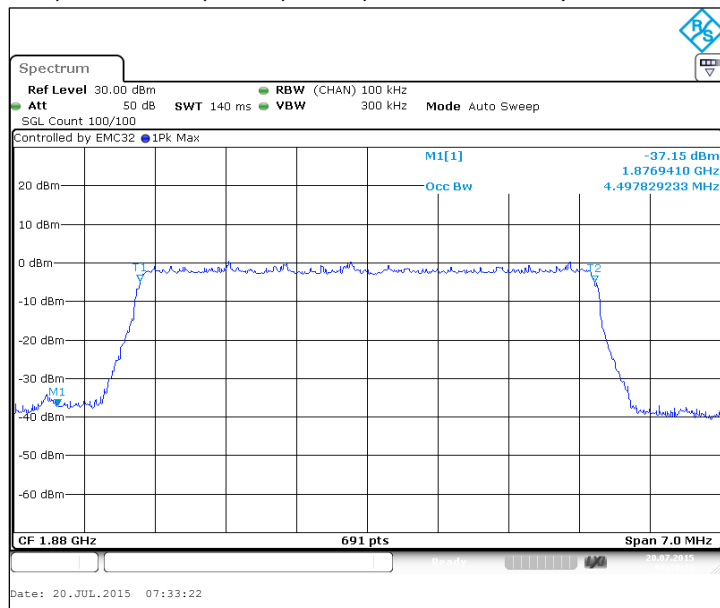
FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 18900 / 1880.0 MHz



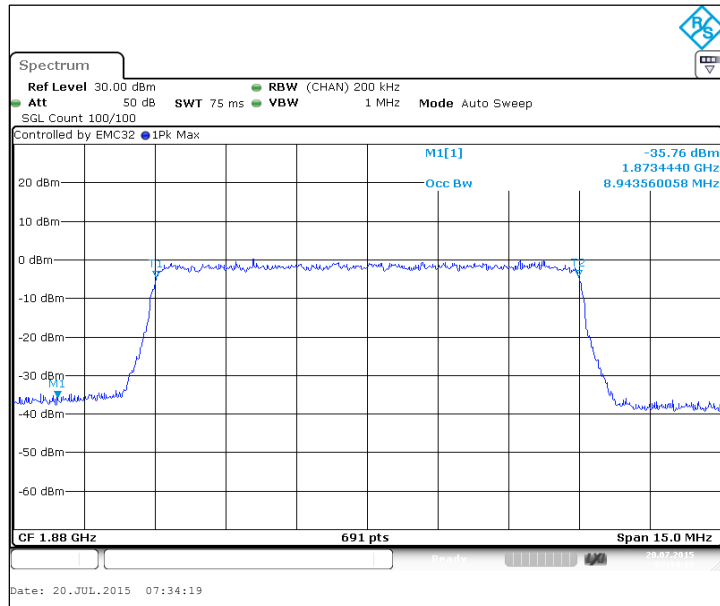
FDD, CBW 3MHz, QPSK, 15 RB, Channel 18900 / 1880.0 MHz



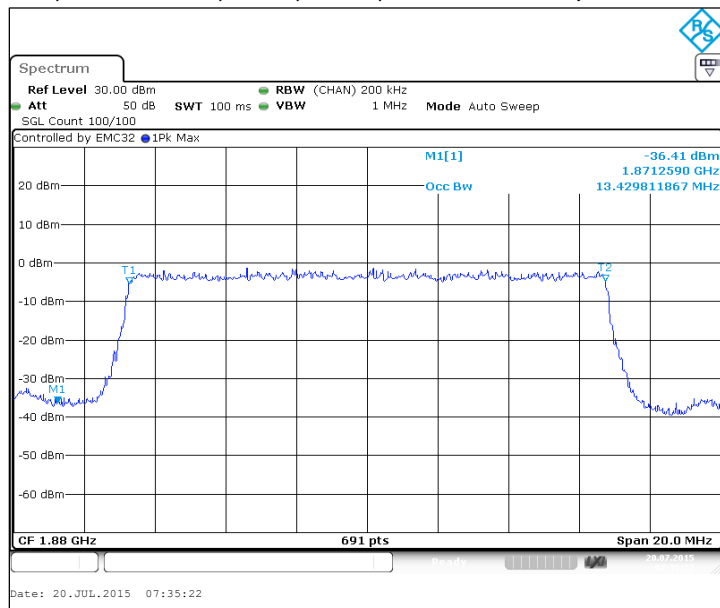
FDD, CBW 5MHz, QPSK, 25 RB, Channel 18900 / 1880.0 MHz



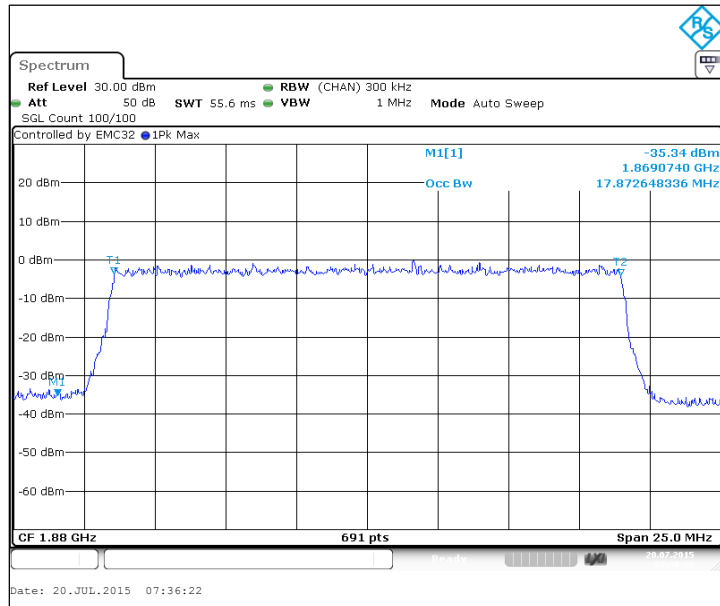
FDD, CBW 10MHz, QPSK, 50 RB, Channel 18900 / 1880.0 MHz



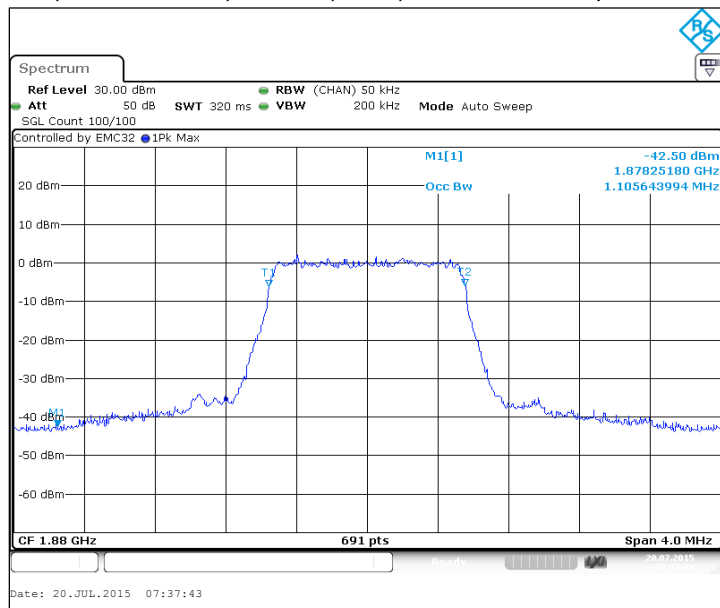
FDD, CBW 15MHz, QPSK, 75 RB, Channel 18900 / 1880.0 MHz



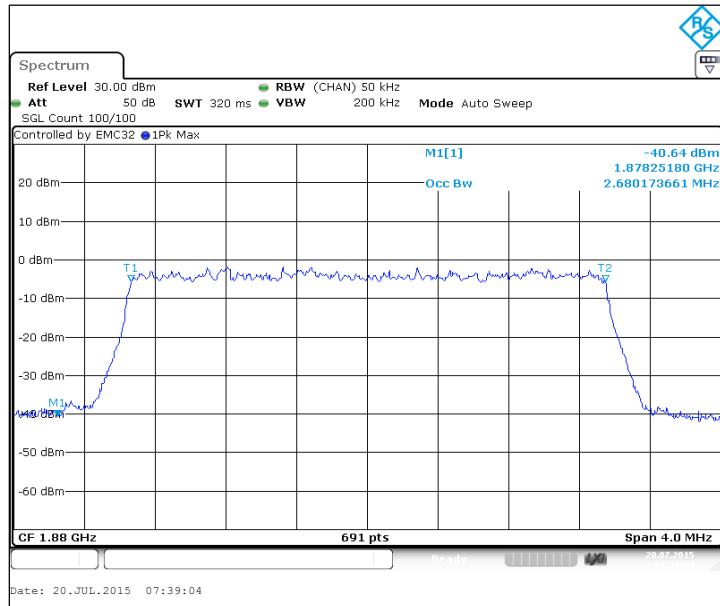
FDD, CBW 20MHz, QPSK, 100 RB, Channel 18900 / 1880.0 MHz



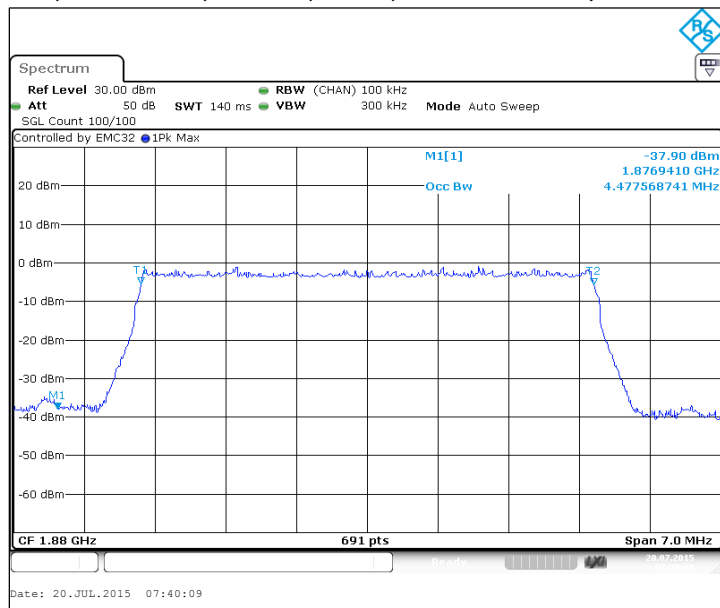
FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 18900 / 1880.0 MHz



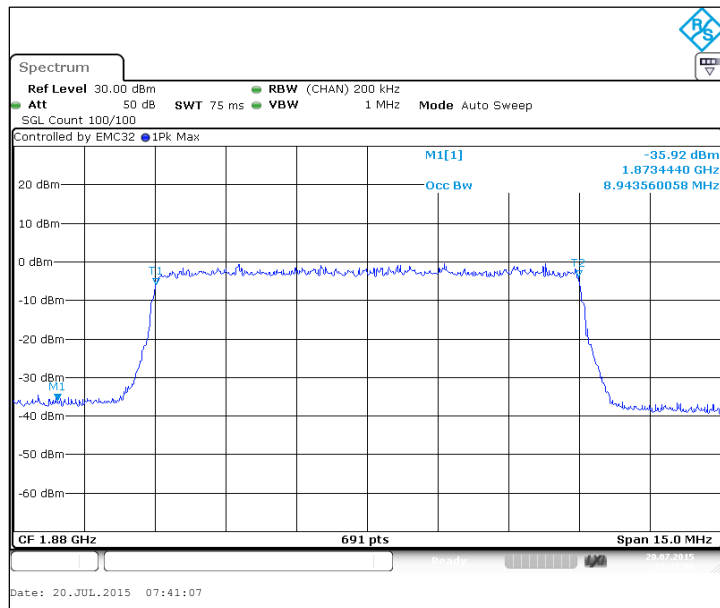
FDD, CBW 3MHz, 16QAM, 15 RB, Channel 18900 / 1880.0 MHz



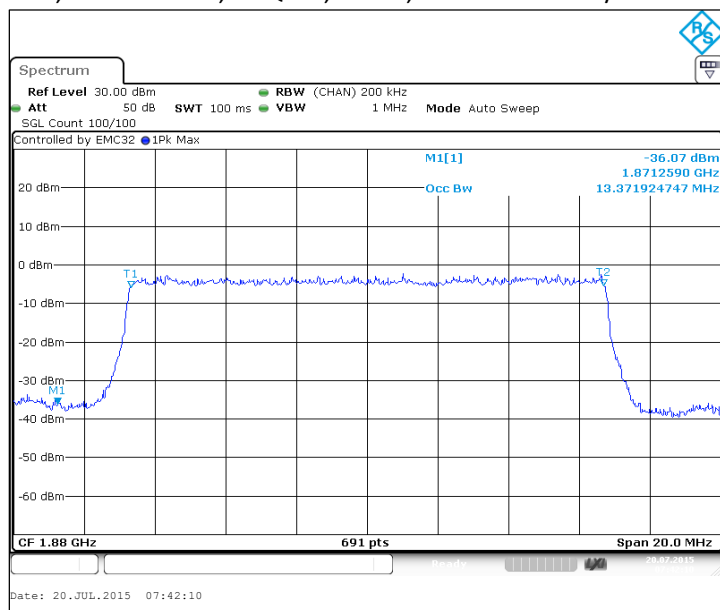
FDD, CBW 5MHz, 16QAM, 25 RB, Channel 18900 / 1880.0 MHz



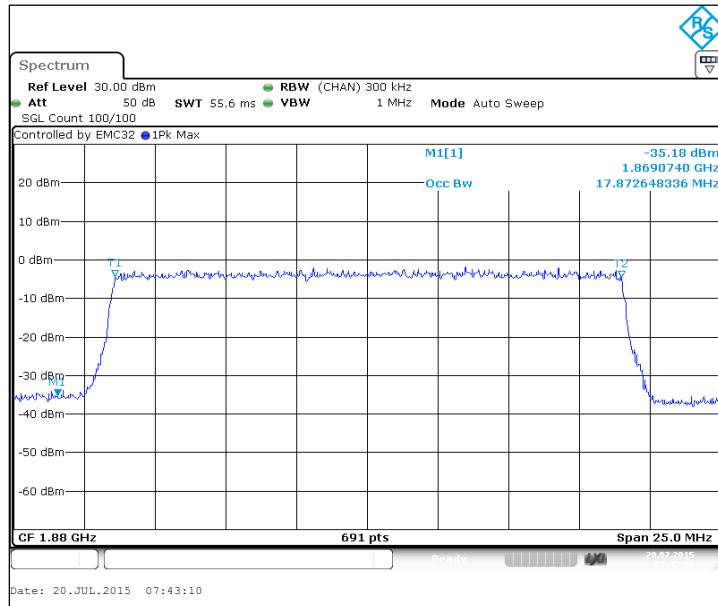
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 18900 / 1880.0 MHz



FDD, CBW 15MHz, 16QAM, 75 RB, Channel 18900 / 1880.0 MHz



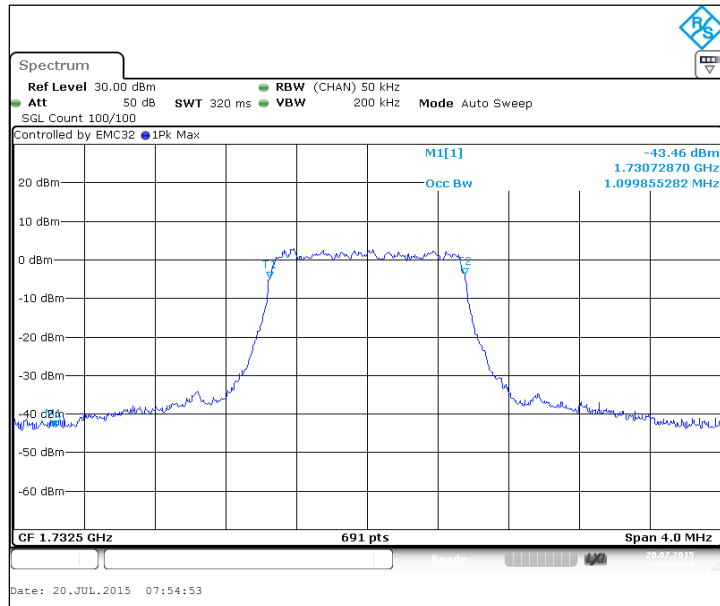
FDD, CBW 20MHz, 16QAM, 100 RB, Channel 18900 / 1880.0 MHz



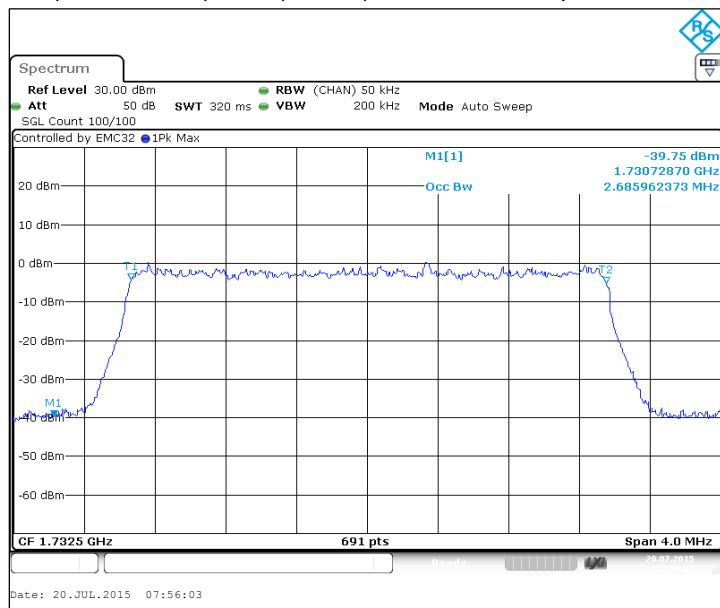
### 3.9. LTE4 Test results

| Operation mode (TX on)        | 99% Occupied bandwidth [kHz] |
|-------------------------------|------------------------------|
| FDD, CBW 1.4MHz, QPSK, 6 RB   | 1099.9                       |
| FDD, CBW 3MHz, QPSK, 15 RB    | 2686                         |
| FDD, CBW 5MHz, QPSK, 25 RB    | 4497.8                       |
| FDD, CBW 10MHz, QPSK, 50 RB   | 8943.6                       |
| FDD, CBW 15MHz, QPSK, 75 RB   | 13429.8                      |
| FDD, CBW 20MHz, QPSK, 100 RB  | 17836.5                      |
| FDD, CBW 1.4MHz, 16QAM, 6 RB  | 1105.6                       |
| FDD, CBW 3MHz, 16QAM, 15 RB   | 2680.2                       |
| FDD, CBW 5MHz, 16QAM, 25 RB   | 4477.6                       |
| FDD, CBW 10MHz, 16QAM, 50 RB  | 8943.6                       |
| FDD, CBW 15MHz, 16QAM, 75 RB  | 13400.9                      |
| FDD, CBW 20MHz, 16QAM, 100 RB | 17836.5                      |

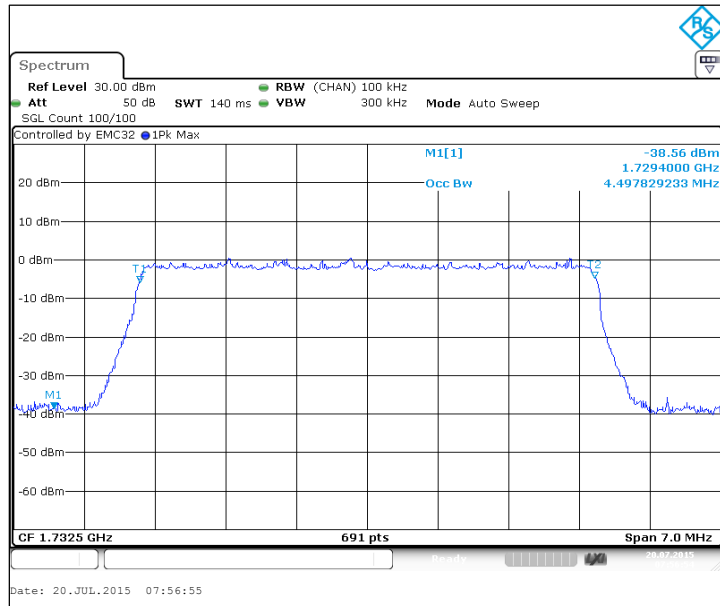
FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 20175 / 1732.5 MHz



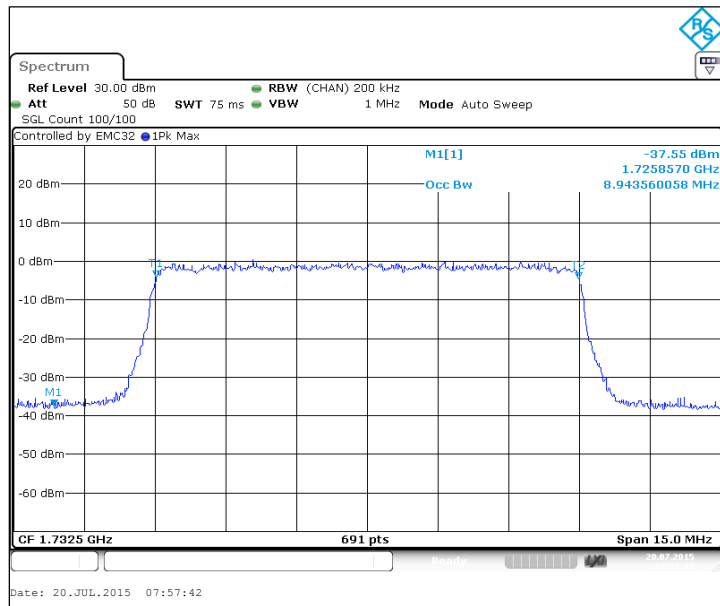
FDD, CBW 3MHz, QPSK, 15 RB, Channel 20175 / 1732.5 MHz



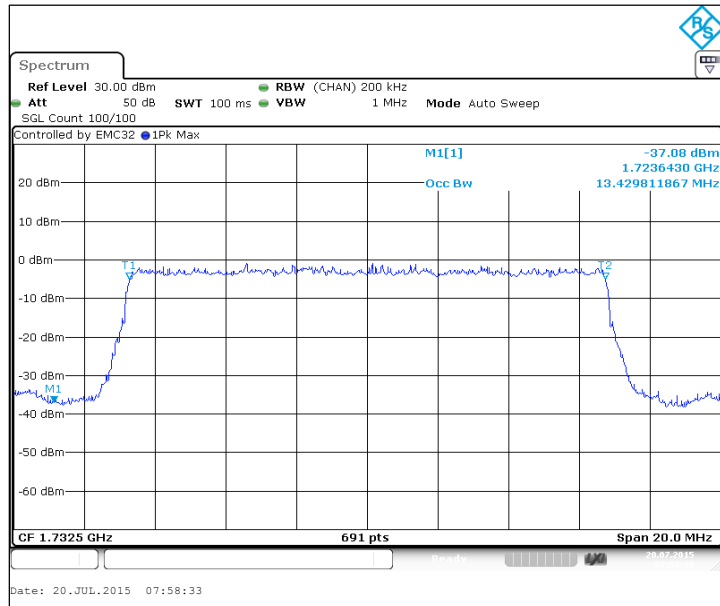
FDD, CBW 5MHz, QPSK, 25 RB, Channel 20175 / 1732.5 MHz



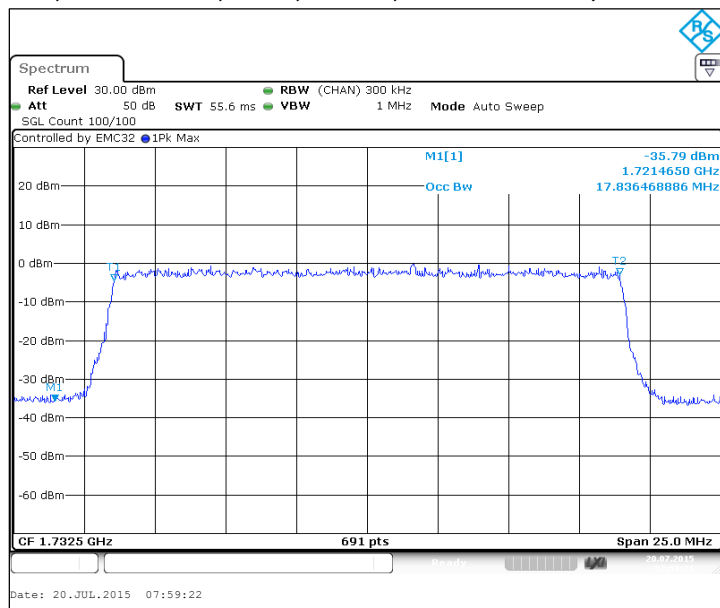
FDD, CBW 10MHz, QPSK, 50 RB, Channel 20175 / 1732.5 MHz



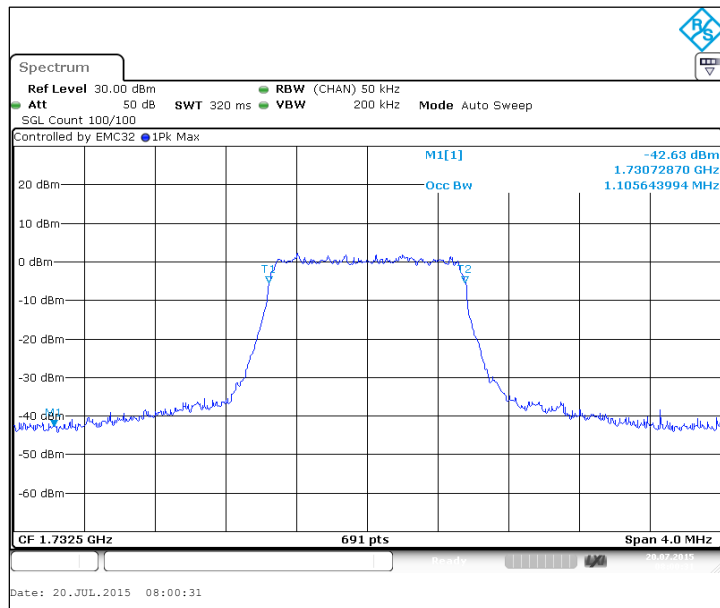
FDD, CBW 15MHz, QPSK, 75 RB, Channel 20175 / 1732.5 MHz



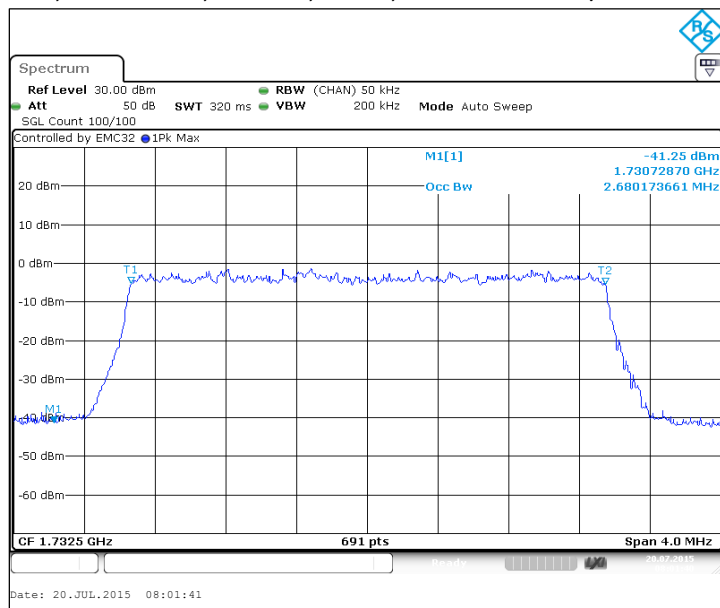
FDD, CBW 20MHz, QPSK, 100 RB, Channel 20175 / 1732.5 MHz



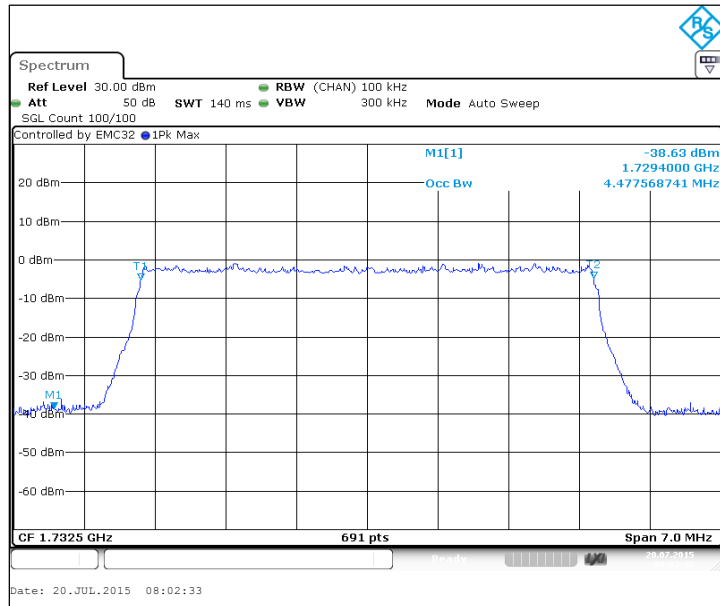
FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 20175 / 1732.5 MHz



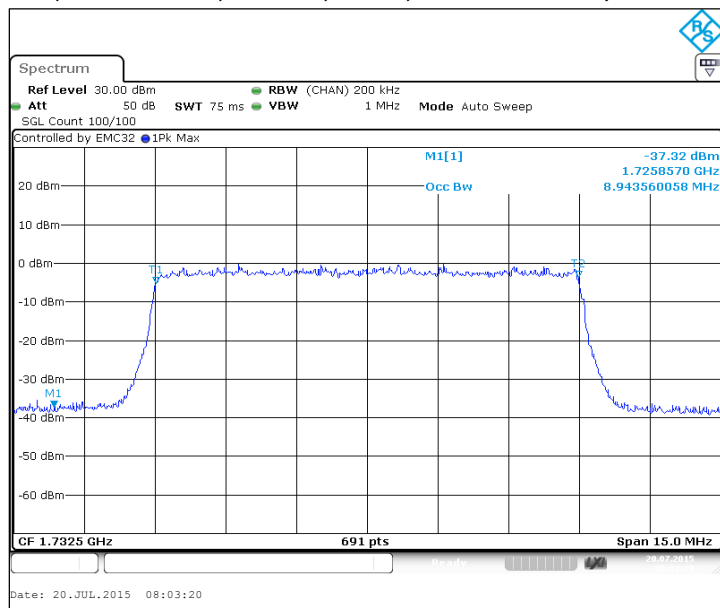
FDD, CBW 3MHz, 16QAM, 15 RB, Channel 20175 / 1732.5 MHz



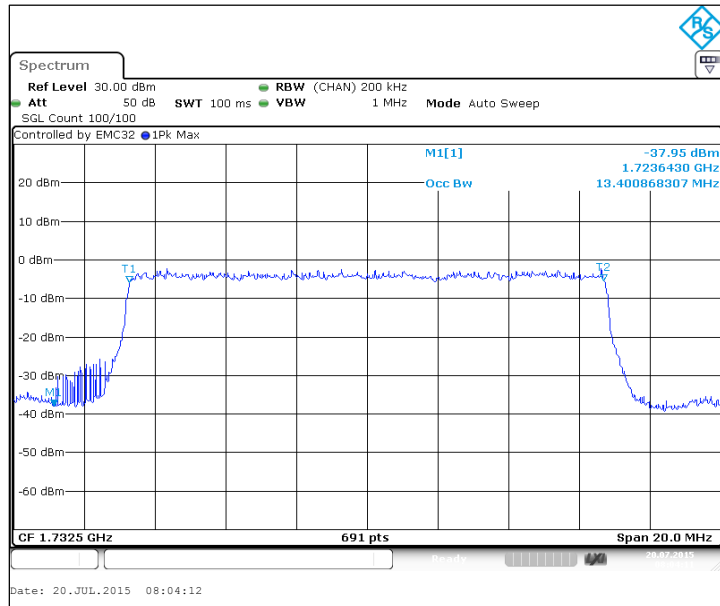
FDD, CBW 5MHz, 16QAM, 25 RB, Channel 20175 / 1732.5 MHz



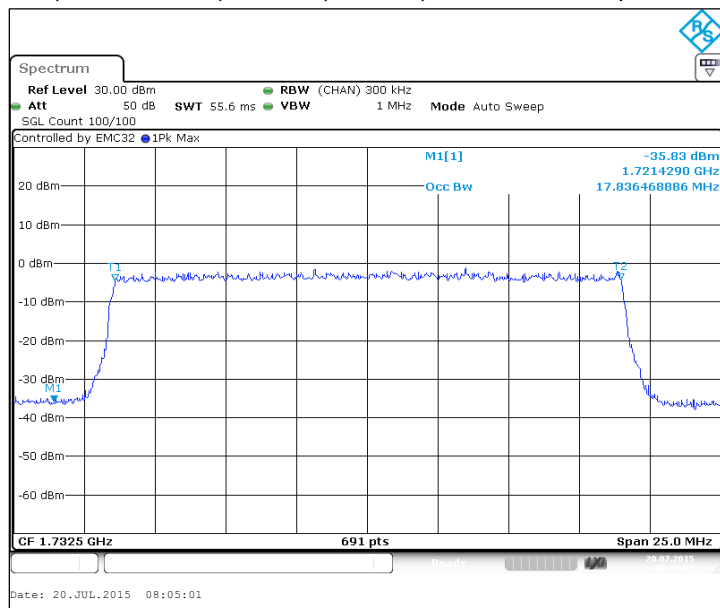
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 20175 / 1732.5 MHz



FDD, CBW 15MHz, 16QAM, 75 RB, Channel 20175 / 1732.5 MHz



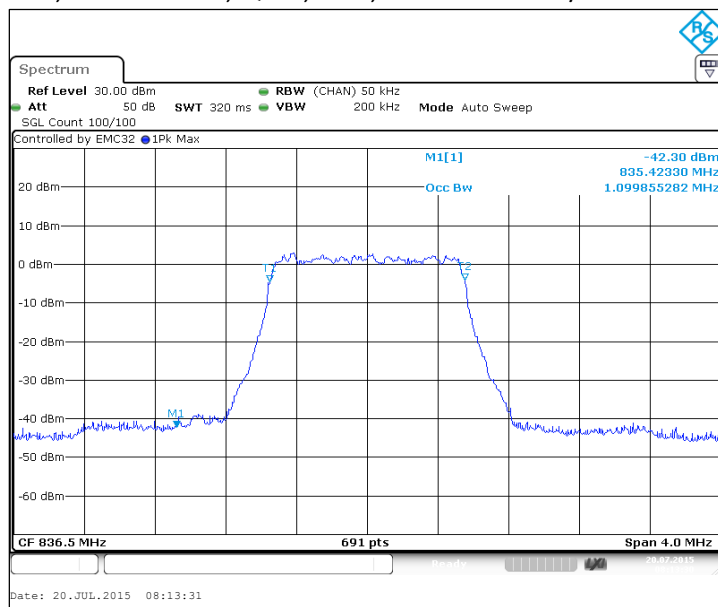
FDD, CBW 20MHz, 16QAM, 100 RB, Channel 20175 / 1732.5 MHz



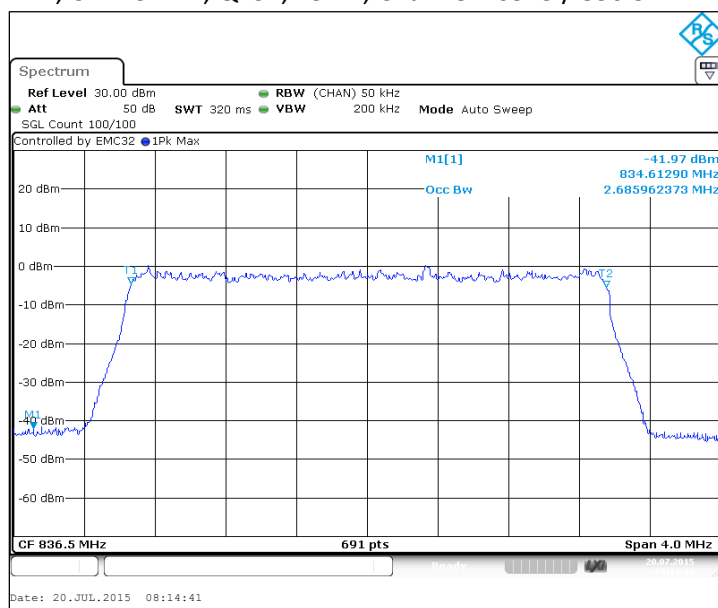
### 3.10. LTE5 Test results

| Operation mode (TX on)       | 99% Occupied bandwidth [kHz] |
|------------------------------|------------------------------|
| FDD, CBW 1.4MHz, QPSK, 6 RB  | 1099.9                       |
| FDD, CBW 3MHz, QPSK, 15 RB   | 2686                         |
| FDD, CBW 5MHz, QPSK, 25 RB   | 4497.8                       |
| FDD, CBW 10MHz, QPSK, 50 RB  | 8943.6                       |
| FDD, CBW 1.4MHz, 16QAM, 6 RB | 1105.6                       |
| FDD, CBW 3MHz, 16QAM, 15 RB  | 2680.2                       |
| FDD, CBW 5MHz, 16QAM, 25 RB  | 4477.6                       |
| FDD, CBW 10MHz, 16QAM, 50 RB | 8943.6                       |

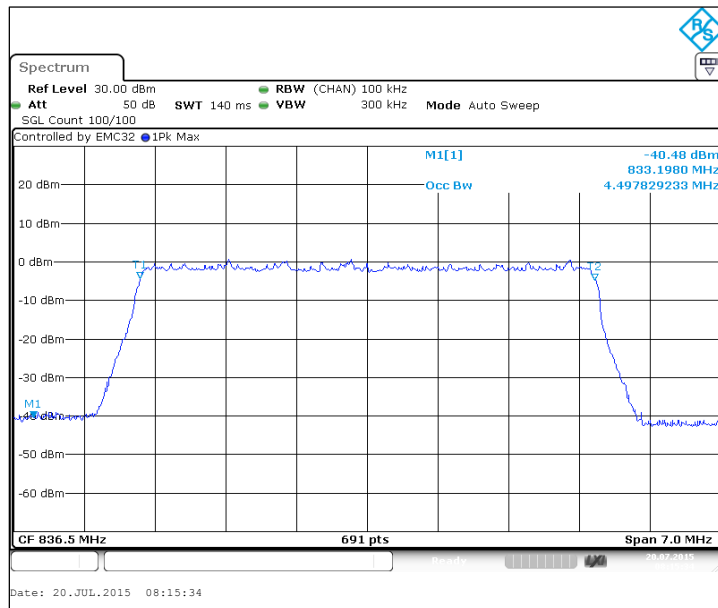
FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 20525 / 836.5 MHz



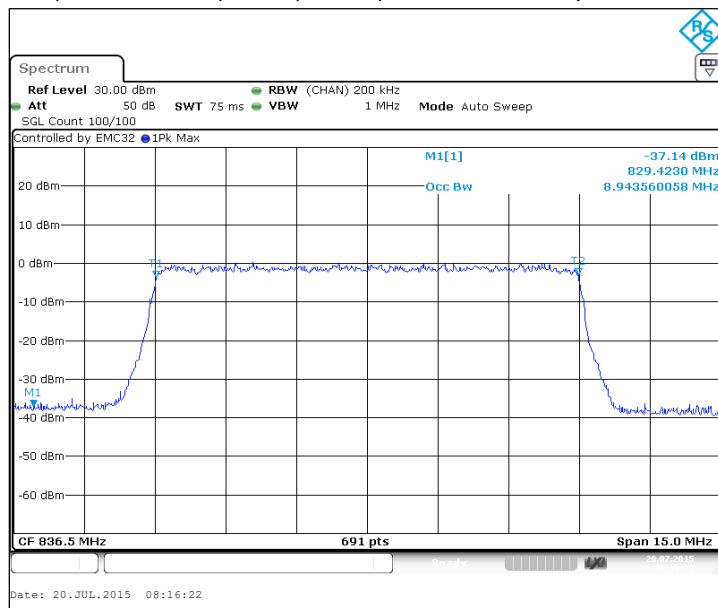
FDD, CBW 3MHz, QPSK, 15 RB, Channel 20525 / 836.5 MHz



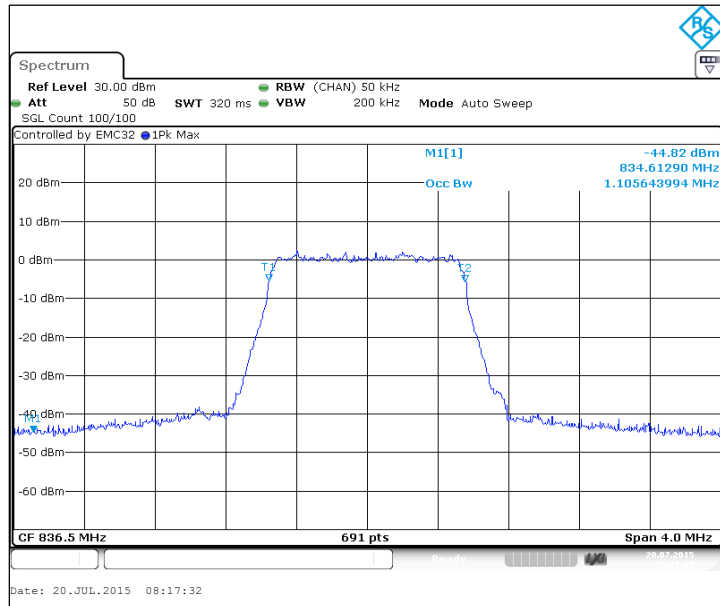
FDD, CBW 5MHz, QPSK, 25 RB, Channel 20525 / 836.5 MHz



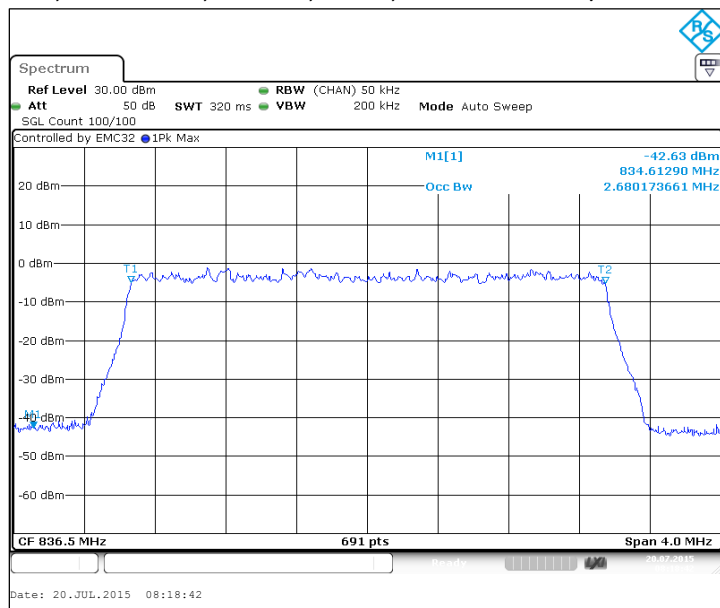
FDD, CBW 10MHz, QPSK, 50 RB, Channel 20525 / 836.5 MHz



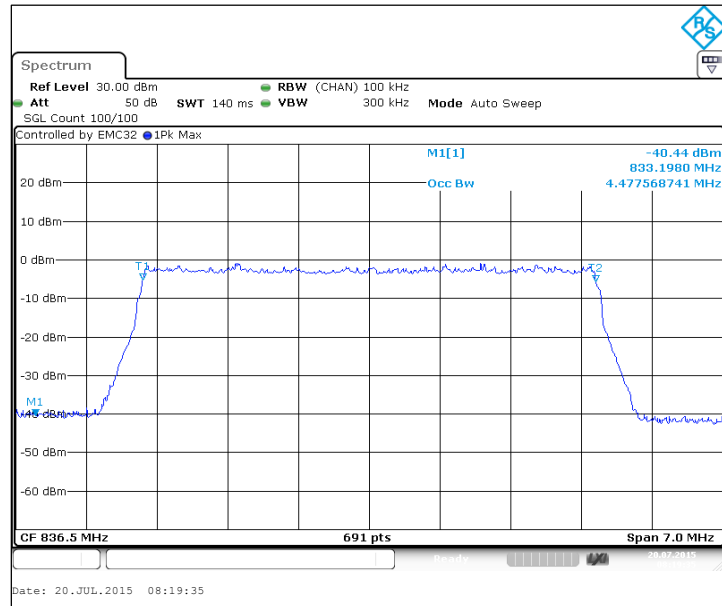
FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 20525 / 836.5 MHz



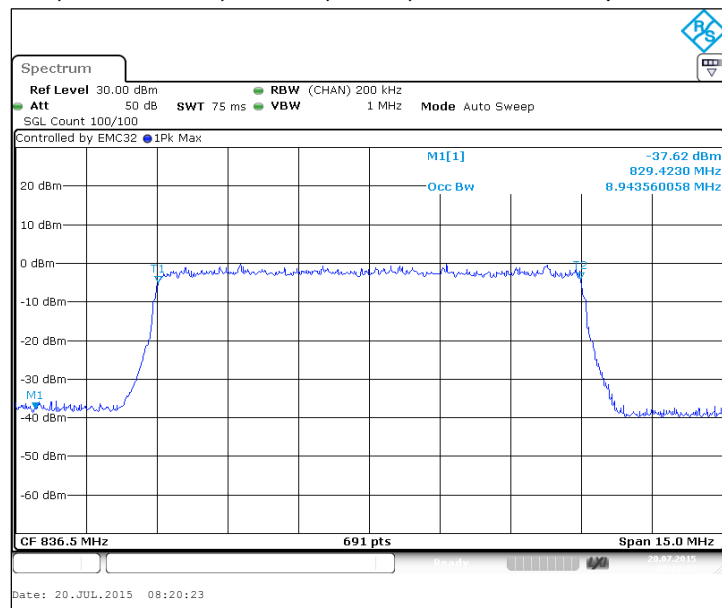
FDD, CBW 3MHz, 16QAM, 15 RB, Channel 20525 / 836.5 MHz



FDD, CBW 5MHz, 16QAM, 25 RB, Channel 20525 / 836.5 MHz



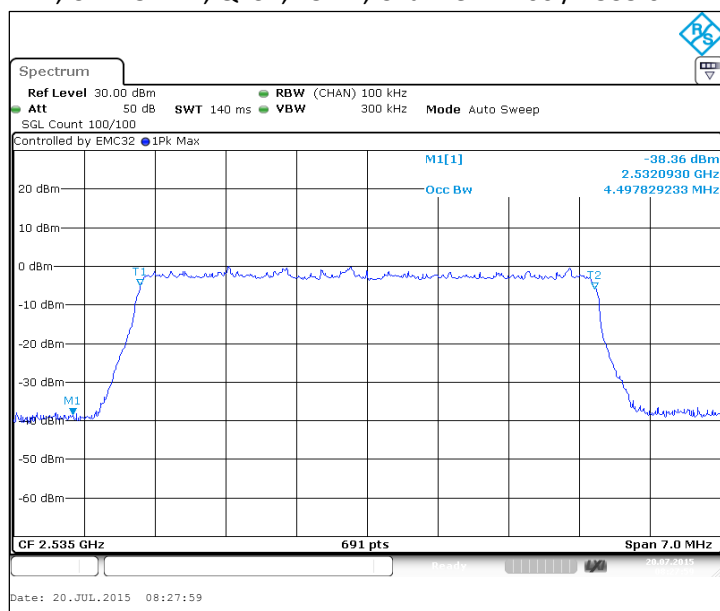
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 20525 / 836.5 MHz



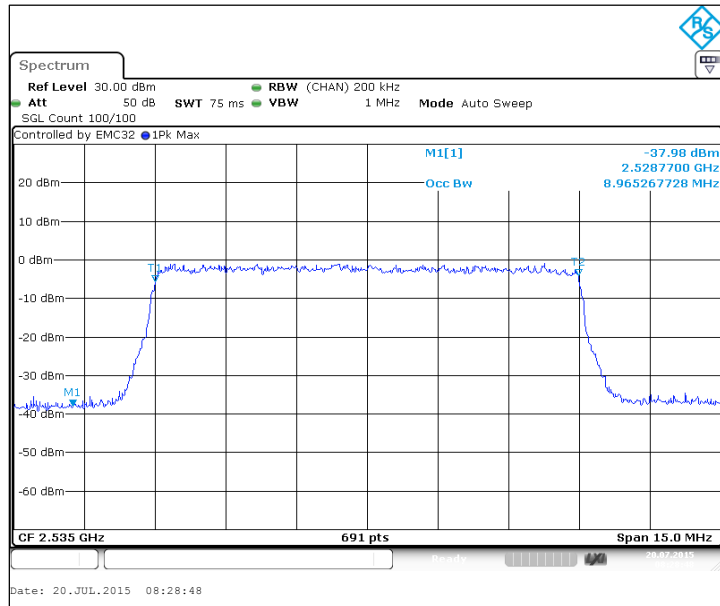
### 3.11. LTE7 Test results

| Operation mode (TX on)        | 99% Occupied bandwidth [kHz] |
|-------------------------------|------------------------------|
| FDD, CBW 5MHz, QPSK, 25 RB    | 4497.8                       |
| FDD, CBW 10MHz, QPSK, 50 RB   | 8965.3                       |
| FDD, CBW 15MHz, QPSK, 75 RB   | 13429.8                      |
| FDD, CBW 20MHz, QPSK, 100 RB  | 17836.5                      |
| FDD, CBW 5MHz, 16QAM, 25 RB   | 4477.6                       |
| FDD, CBW 10MHz, 16QAM, 50 RB  | 8943.6                       |
| FDD, CBW 15MHz, 16QAM, 75 RB  | 13400.9                      |
| FDD, CBW 20MHz, 16QAM, 100 RB | 17872.6                      |

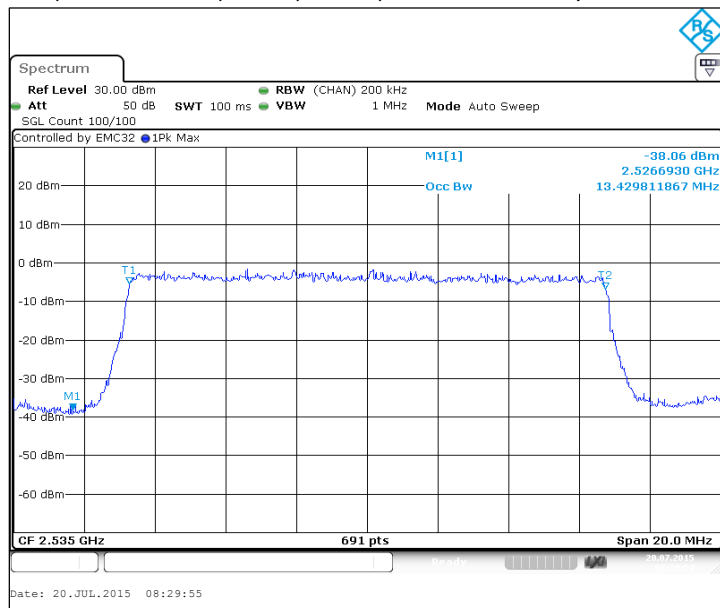
FDD, CBW 5MHz, QPSK, 25 RB, Channel 21100 / 2535.0 MHz



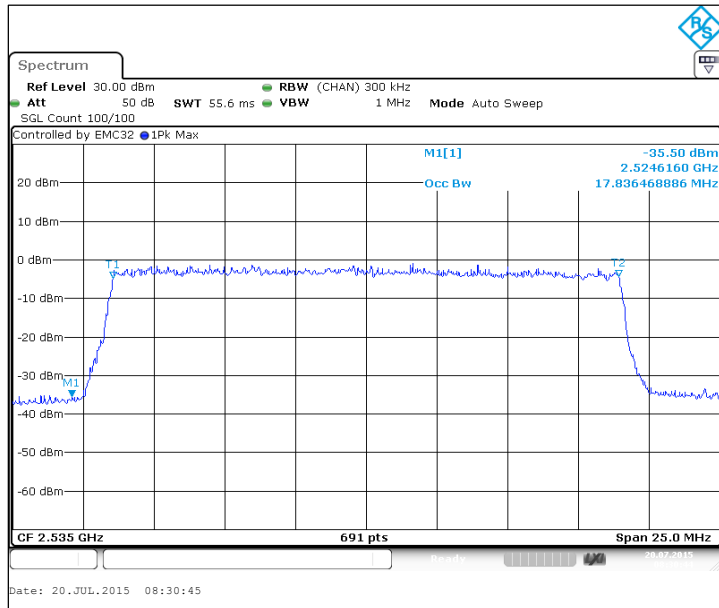
FDD, CBW 10MHz, QPSK, 50 RB, Channel 21100 / 2535.0 MHz



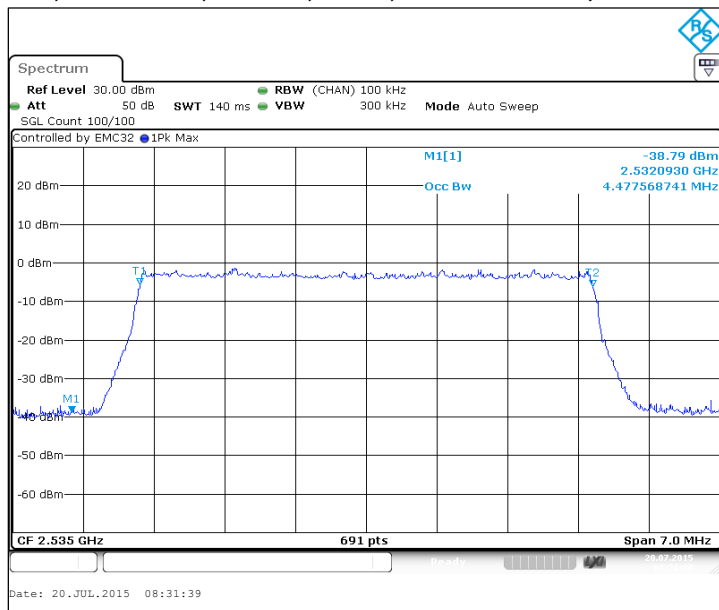
FDD, CBW 15MHz, QPSK, 75 RB, Channel 21100 / 2535.0 MHz



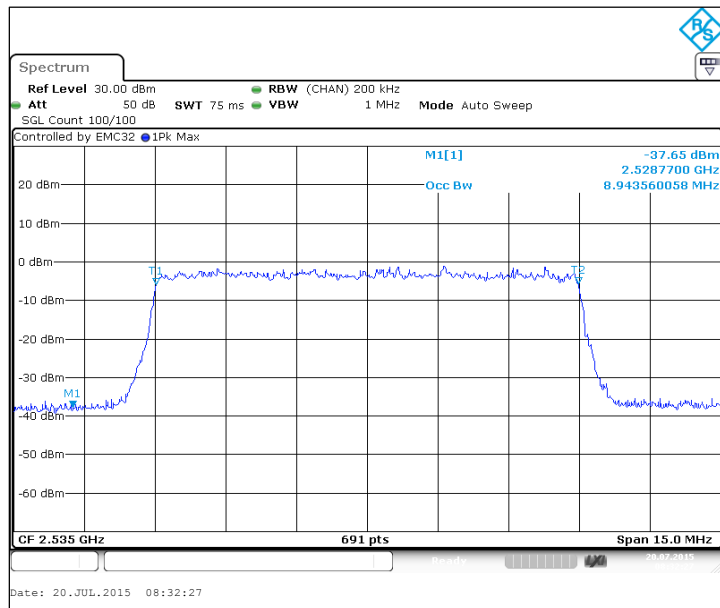
FDD, CBW 20MHz, QPSK, 100 RB, Channel 21100 / 2535.0 MHz



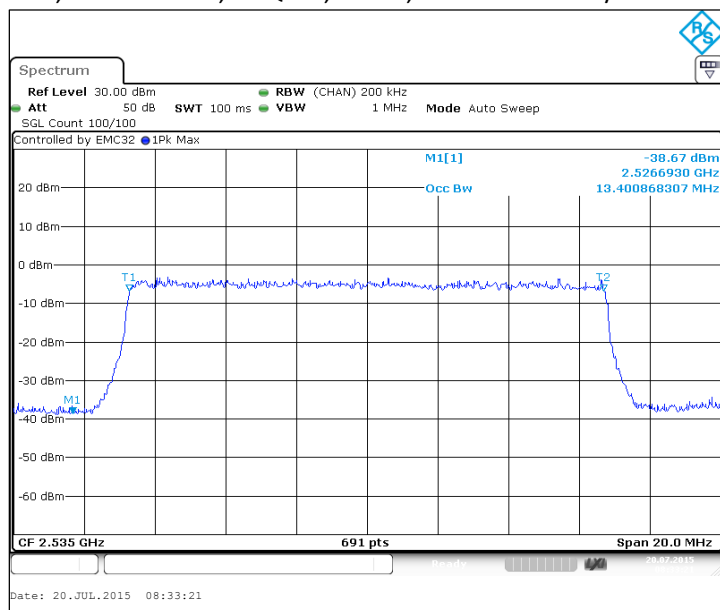
FDD, CBW 5MHz, 16QAM, 25 RB, Channel 21100 / 2535.0 MHz



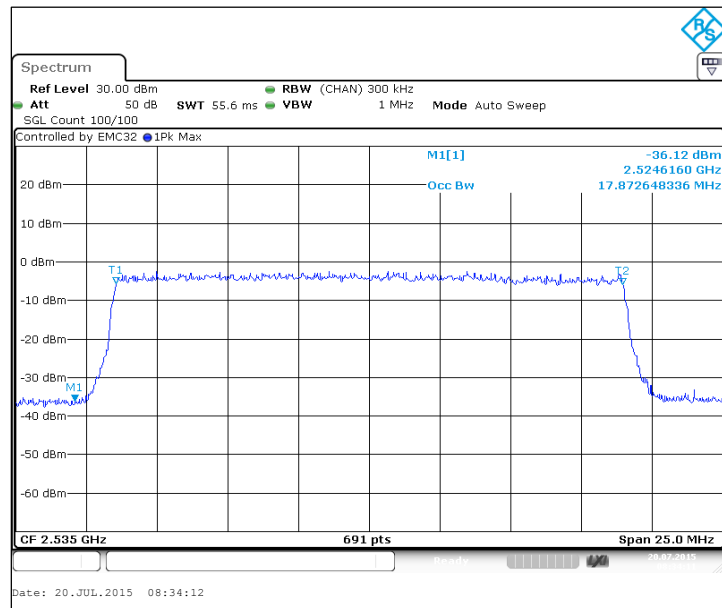
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 21100 / 2535.0 MHz



FDD, CBW 15MHz, 16QAM, 75 RB, Channel 21100 / 2535.0 MHz



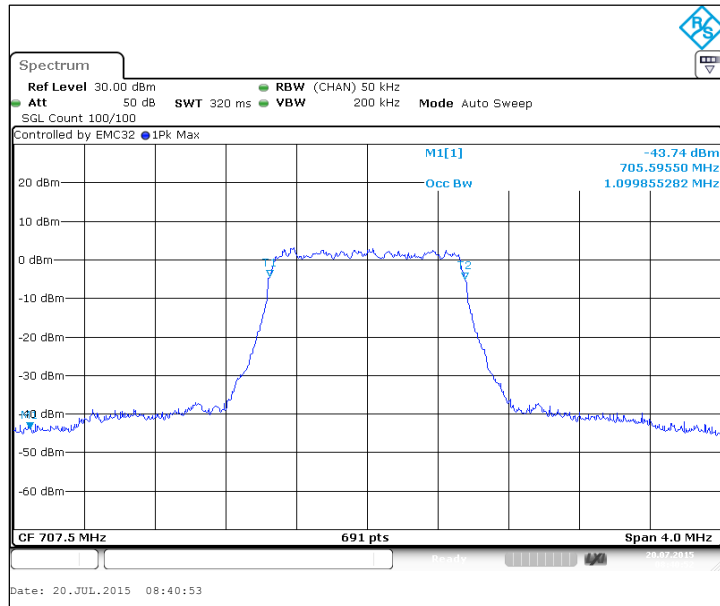
FDD, CBW 20MHz, 16QAM, 100 RB, Channel 21100 / 2535.0 MHz



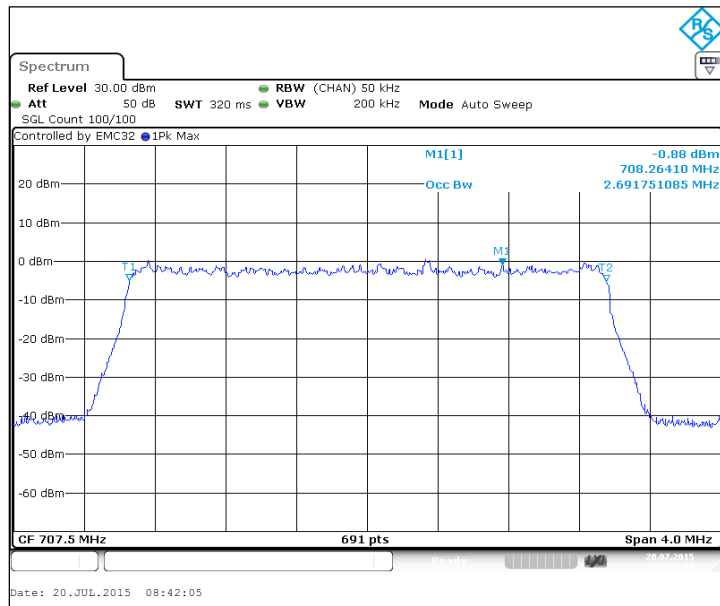
### 3.12. LTE12 Test results

| Operation mode (TX on)       | 99% Occupied bandwidth [kHz] |
|------------------------------|------------------------------|
| FDD, CBW 1.4MHz, QPSK, 6 RB  | 1099.9                       |
| FDD, CBW 3MHz, QPSK, 15 RB   | 2691.8                       |
| FDD, CBW 5MHz, QPSK, 25 RB   | 4497.8                       |
| FDD, CBW 10MHz, QPSK, 50 RB  | 8943.6                       |
| FDD, CBW 1.4MHz, 16QAM, 6 RB | 1105.6                       |
| FDD, CBW 3MHz, 16QAM, 15 RB  | 2680.2                       |
| FDD, CBW 5MHz, 16QAM, 25 RB  | 4477.6                       |
| FDD, CBW 10MHz, 16QAM, 50 RB | 8943.6                       |

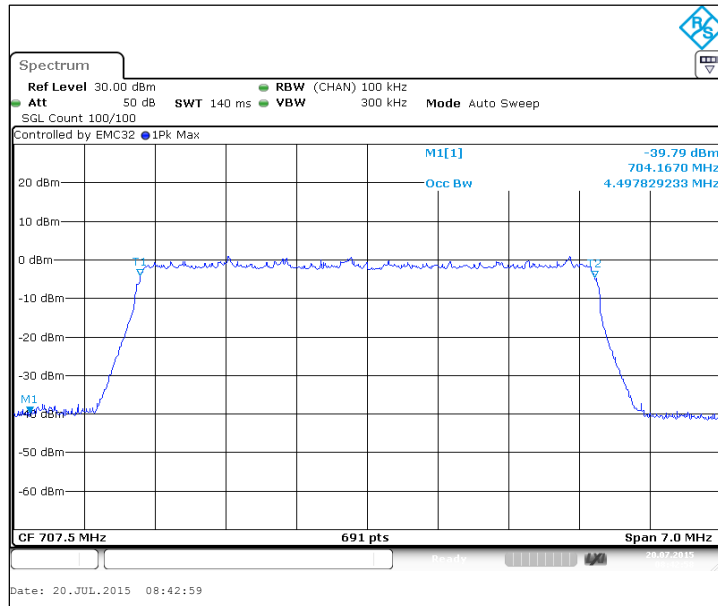
FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 23095 / 707.5 MHz



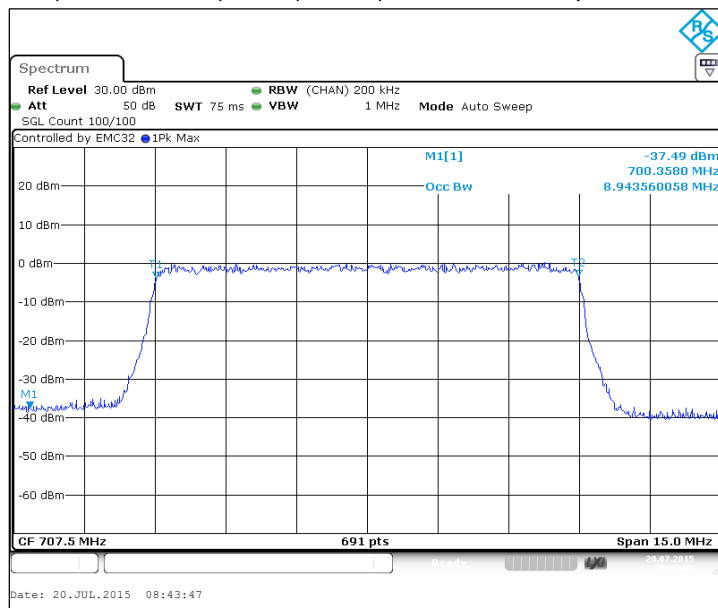
FDD, CBW 3MHz, QPSK, 15 RB, Channel 23095 / 707.5 MHz



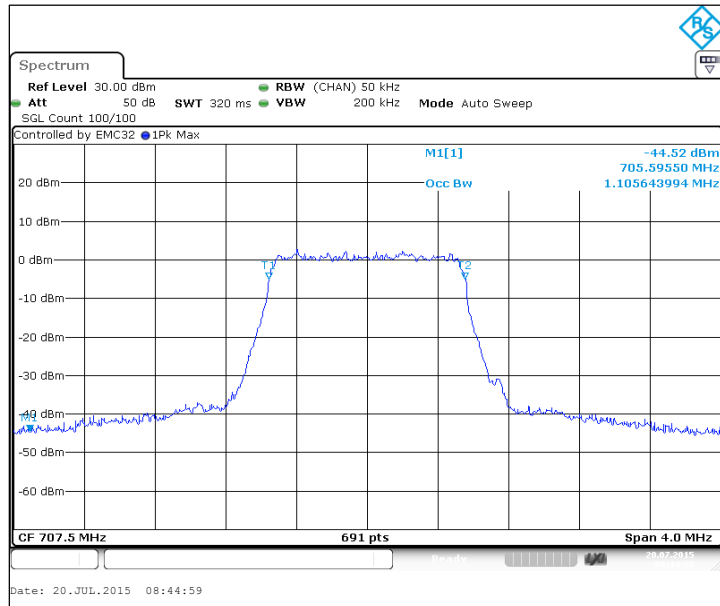
FDD, CBW 5MHz, QPSK, 25 RB, Channel 23095 / 707.5 MHz



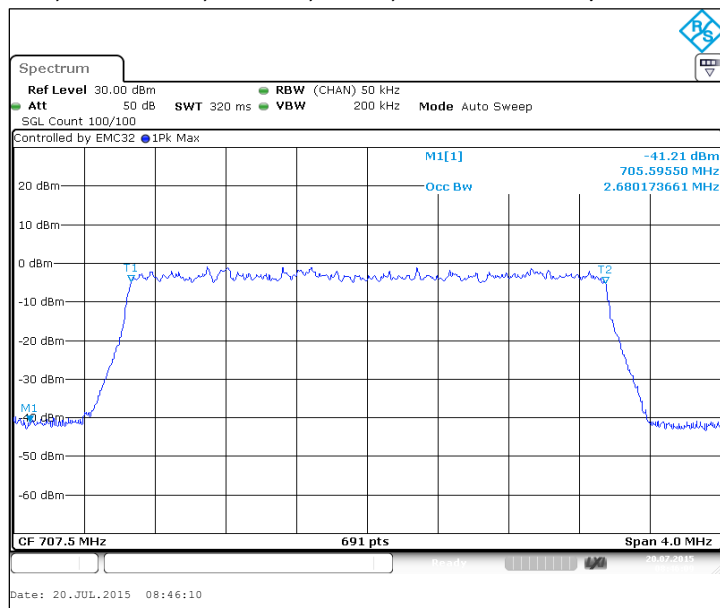
FDD, CBW 10MHz, QPSK, 50 RB, Channel 23095 / 707.5 MHz



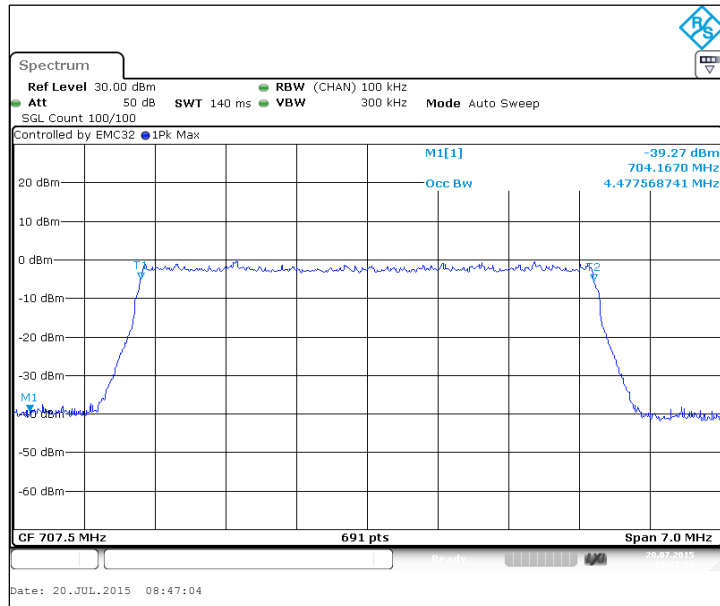
FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 23095 / 707.5 MHz



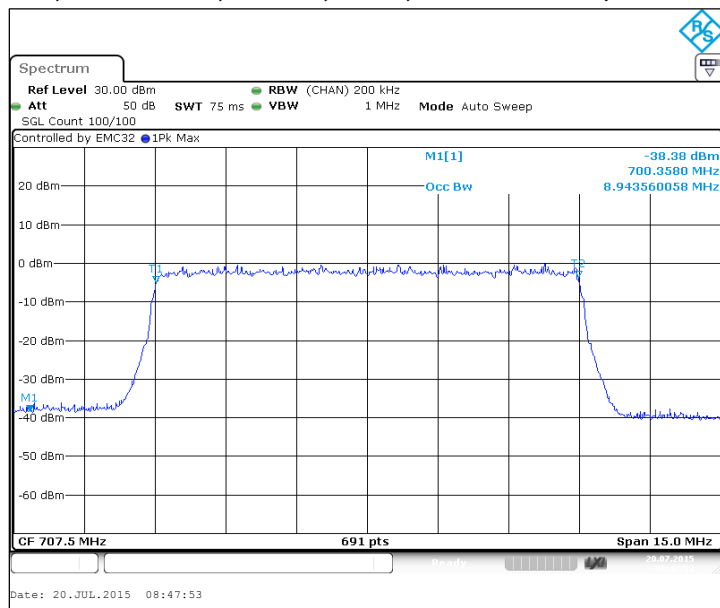
FDD, CBW 3MHz, 16QAM, 15 RB, Channel 23095 / 707.5 MHz



FDD, CBW 5MHz, 16QAM, 25 RB, Channel 23095 / 707.5 MHz



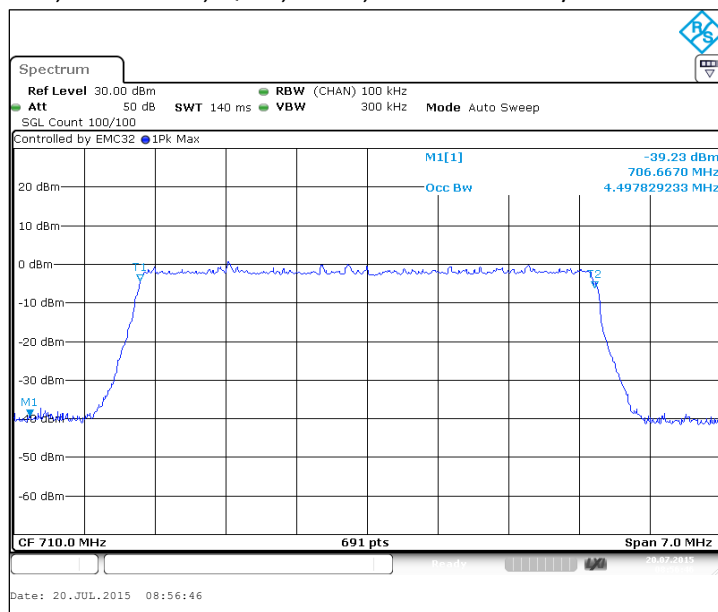
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 23095 / 707.5 MHz



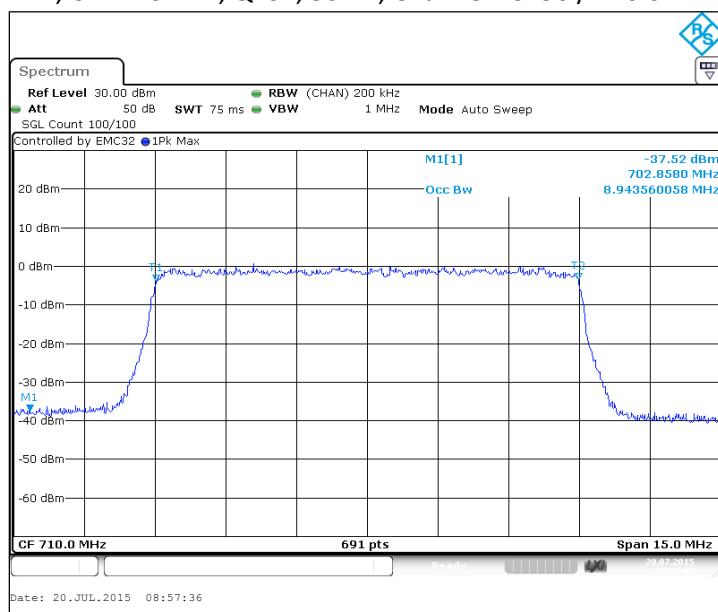
### 3.13. LTE17 Test results

| Operation mode (TX on)       | 99% Occupied bandwidth [kHz] |
|------------------------------|------------------------------|
| FDD, CBW 5MHz, QPSK, 25 RB   | 4497.8                       |
| FDD, CBW 10MHz, QPSK, 50 RB  | 8943.6                       |
| FDD, CBW 5MHz, 16QAM, 25 RB  | 4477.6                       |
| FDD, CBW 10MHz, 16QAM, 50 RB | 8943.6                       |

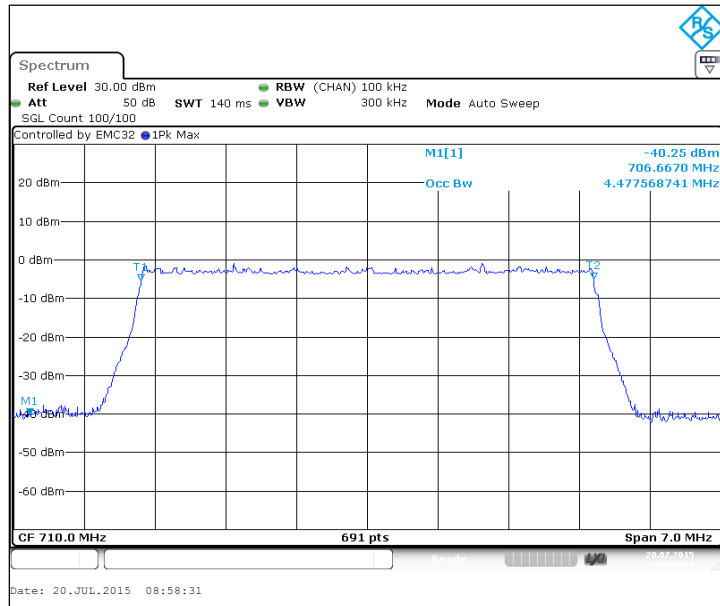
FDD, CBW 5MHz, QPSK, 25 RB, Channel 23790 / 710.0 MHz



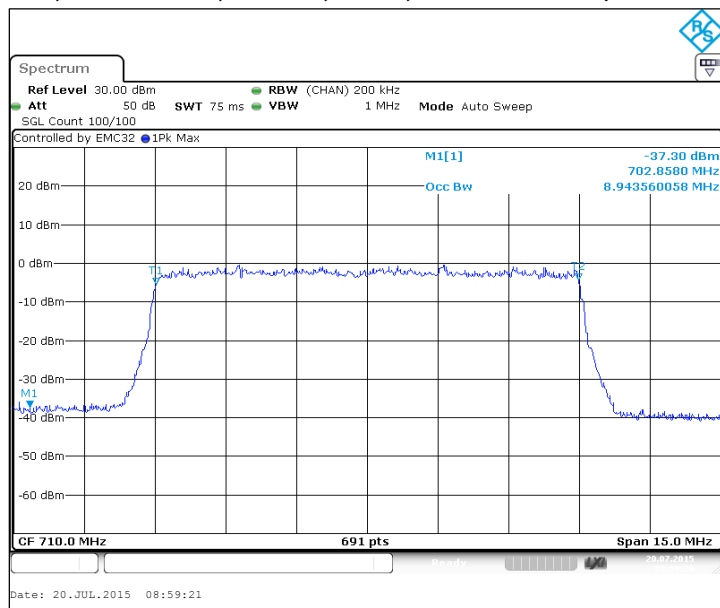
FDD, CBW 10MHz, QPSK, 50 RB, Channel 23790 / 710.0 MHz



FDD, CBW 5MHz, 16QAM, 25 RB, Channel 23790 / 710.0 MHz



FDD, CBW 10MHz, 16QAM, 50 RB, Channel 23790 / 710.0 MHz

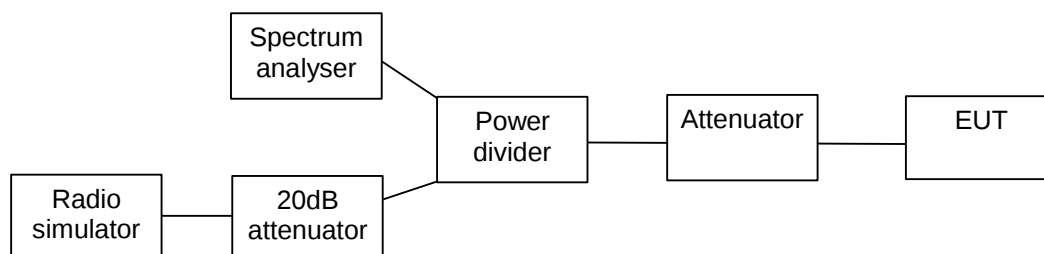


#### 4. Band edge compliance

(FCC §24.238(a), §27.53(f), §27.53(l), §27.53(h), §27.53(g), §22.917(a), RSS-133 6.5, RSS-132 4.5, RSS-139 6.5, RSS-199 4.5(b), RSS-130 4.6)

|                                                 |                                                                                         |
|-------------------------------------------------|-----------------------------------------------------------------------------------------|
| EUT with DUT number                             | RM-1128, DUT 500110                                                                     |
| Accessories with DUT numbers                    | CC-3097, DUT 500128; Samsung BL-T5A, DUT 500117; AC-18U, DUT 500122; WH-108, DUT 500103 |
| Operation Voltage [V] / [Hz]                    | Nominal                                                                                 |
| Results                                         | PASSED                                                                                  |
| Remarks                                         | Test was in conducted RF2 system.                                                       |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 21/59/100.5                                                                             |
| Date of measurements                            | 16-Jul-2015                                                                             |
| Measured by                                     | Dou Rubo                                                                                |

##### 4.1. Test Setup



##### 4.2. Test method and limit

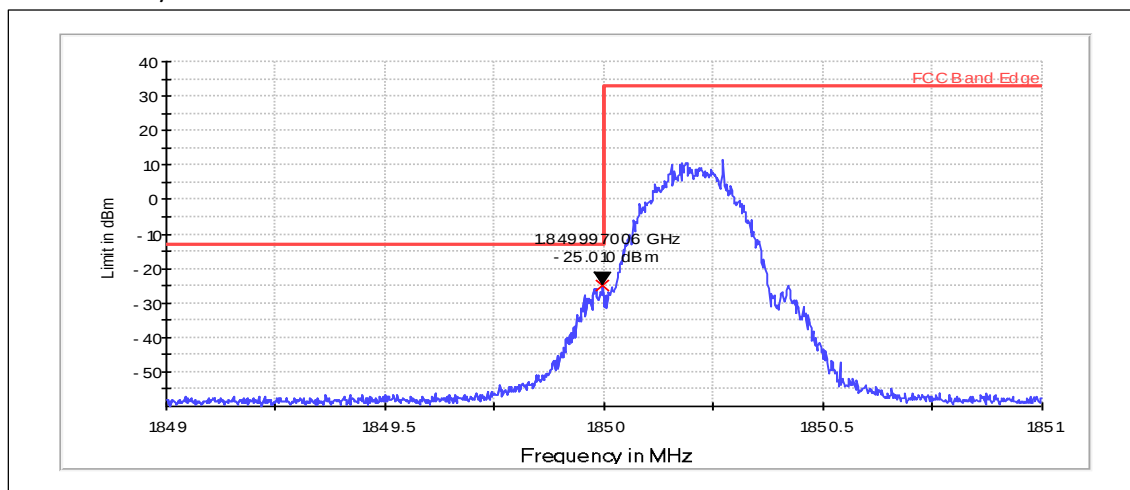
The measurement is made according to applicable FCC rule parts and IC standards.

Limits for band edge compliance measurements

| Operation band | Frequency range [MHz]                                          | Limit [dBm]                                                                                                                              |
|----------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| GSM 1900       | Below 1850 and above 1910                                      | -13                                                                                                                                      |
| GSM 850        | Below 824 and above 849                                        | -13                                                                                                                                      |
| WCDMA2         | Below 1850 and above 1910                                      | -13                                                                                                                                      |
| WCDMA4         | Below 1710 and above 1755                                      | -13                                                                                                                                      |
| WCDMA5         | Below 824 and above 849                                        | -13                                                                                                                                      |
| LTE2           | Below 1850 and above 1910                                      | -13                                                                                                                                      |
| LTE4           | Below 1710 and above 1755                                      | -13                                                                                                                                      |
| LTE5           | Below 824 and above 849                                        | -13                                                                                                                                      |
| LTE7           | 2496 - 2499<br>2499 - 2500<br>2570 - 2571<br>2571 - 2575       | -10 (RBW = 1 MHz, VBW = 3 MHz)<br>-10 (RBW = 500 kHz, VBW = 2 MHz)<br>-10 (RBW = 500 kHz, VBW = 2 MHz)<br>-10 (RBW = 1 MHz, VBW = 3 MHz) |
| LTE12          | 698.9 - 699.0 and 716.0 - 716.1<br>Below 698.9 and above 716.1 | -13 (RBW = 30 kHz, VBW = 100 kHz)<br>-13 (RBW = 100 kHz, VBW = 300 kHz)                                                                  |
| LTE17          | 703.9 - 704 and 716 - 716.1<br>Below 703.9 and above 716.1     | -13 (RBW = 30 kHz, VBW = 100 kHz)<br>-13 (RBW = 100 kHz, VBW = 300 kHz)                                                                  |

### 4.3. GSM 1900 Test results

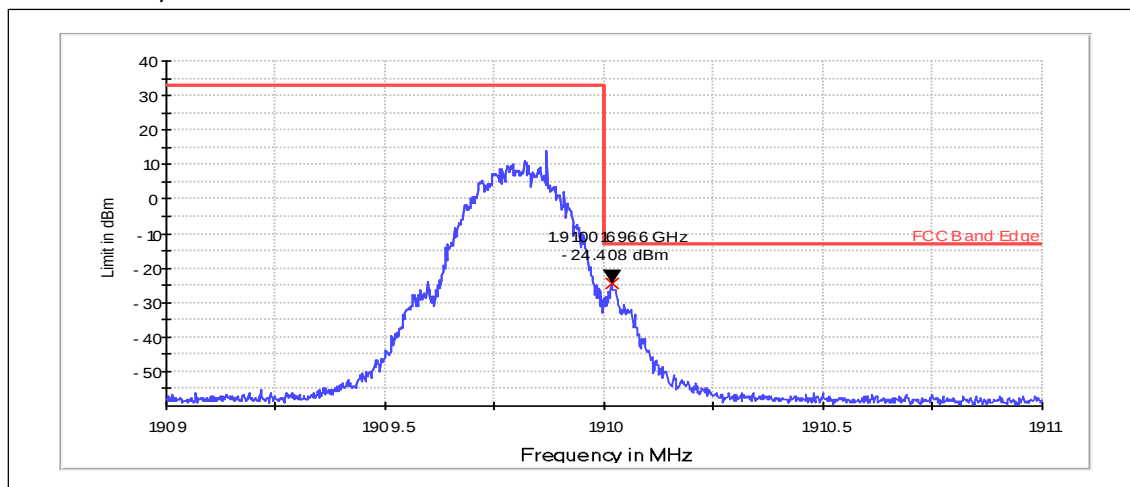
Channel 512 / 1850.2 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| GSM                    | 1849.997        | -25.01      | PASSED |

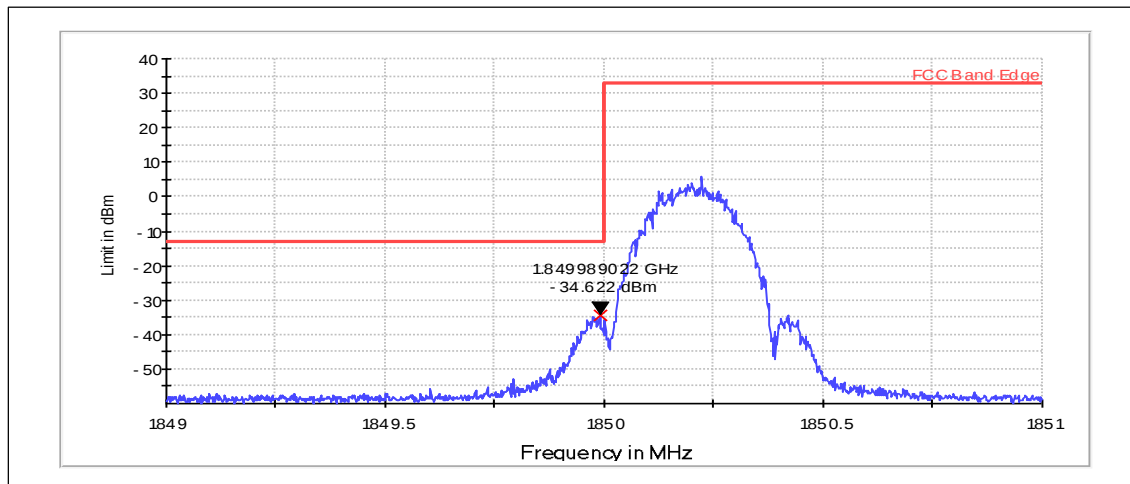
Channel 810 / 1909.8 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| GSM                    | 1910.017        | -24.41      | PASSED |

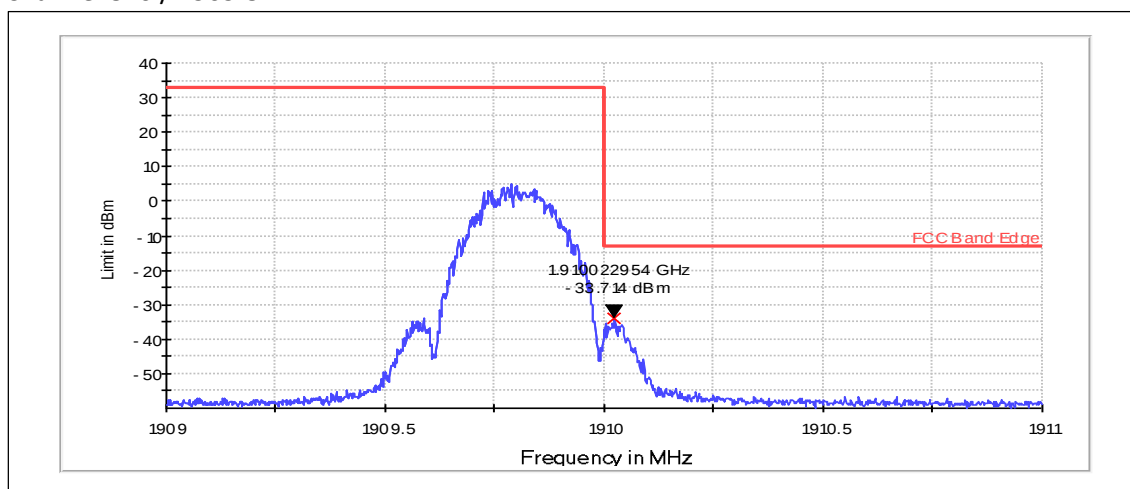
### Channel 512 / 1850.2 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| EGPRS                  | 1849.989        | -34.62      | PASSED |

### Channel 810 / 1909.8 MHz

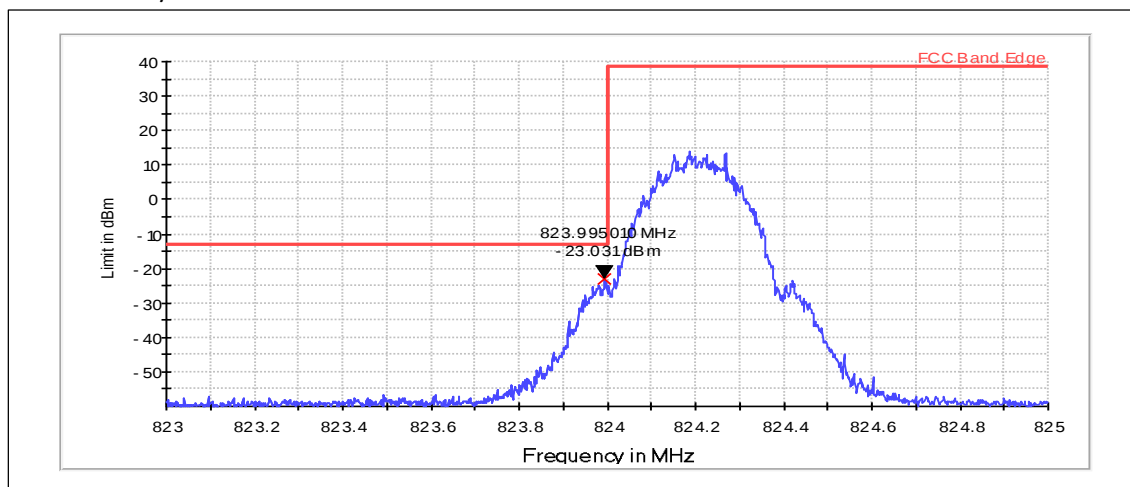


RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| EGPRS                  | 1910.023        | -33.71      | PASSED |

#### 4.4. GSM 850 Test results

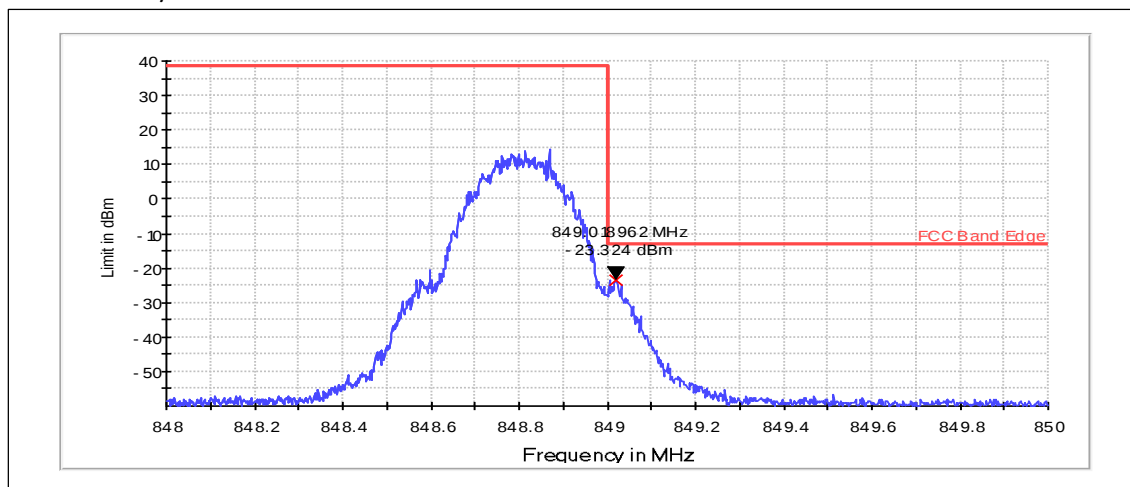
Channel 128 / 824.2 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| GSM                    | 823.995         | -23.03      | PASSED |

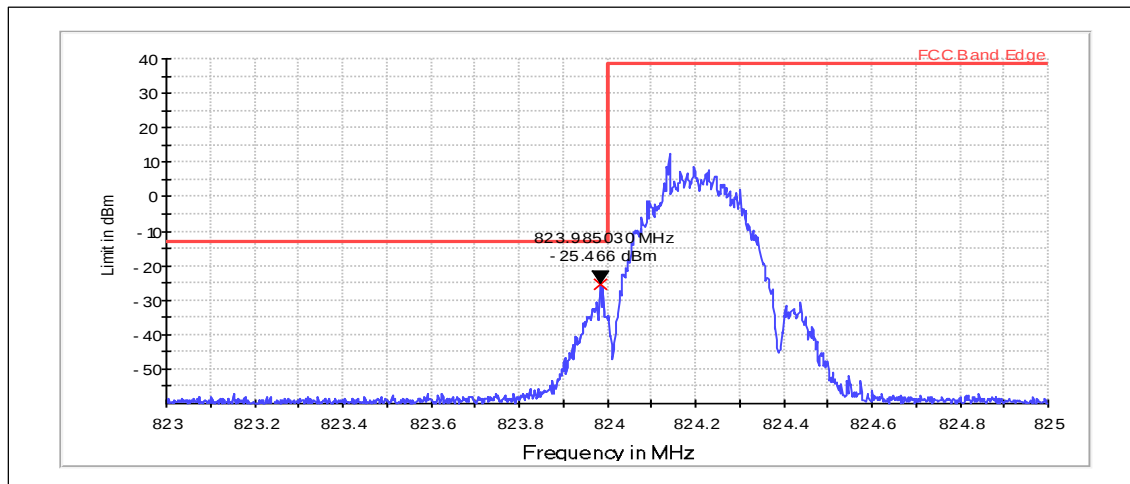
Channel 251 / 848.8 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| GSM                    | 849.019         | -23.32      | PASSED |

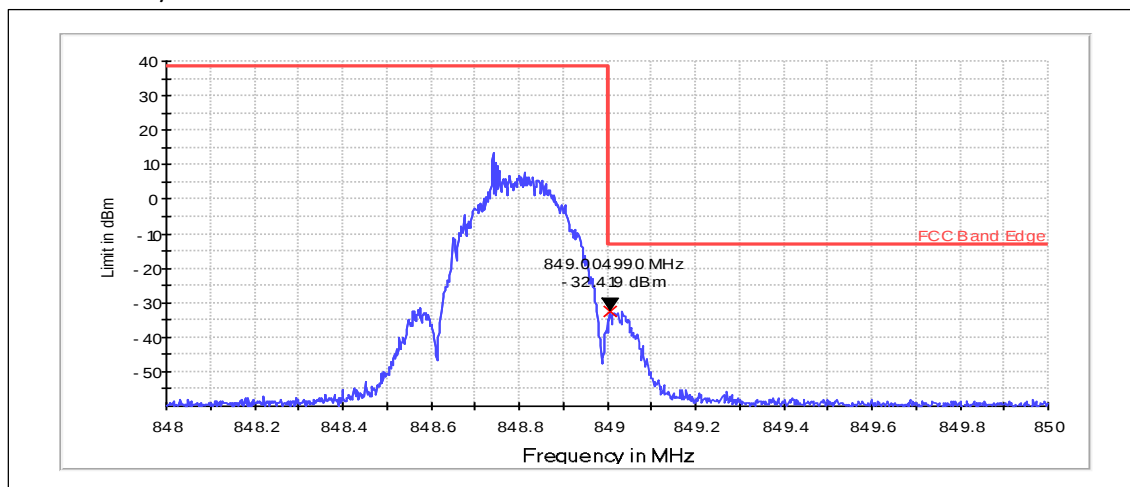
### Channel 128 / 824.2 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| EGPRS                  | 823.985         | -25.47      | PASSED |

### Channel 251 / 848.8 MHz

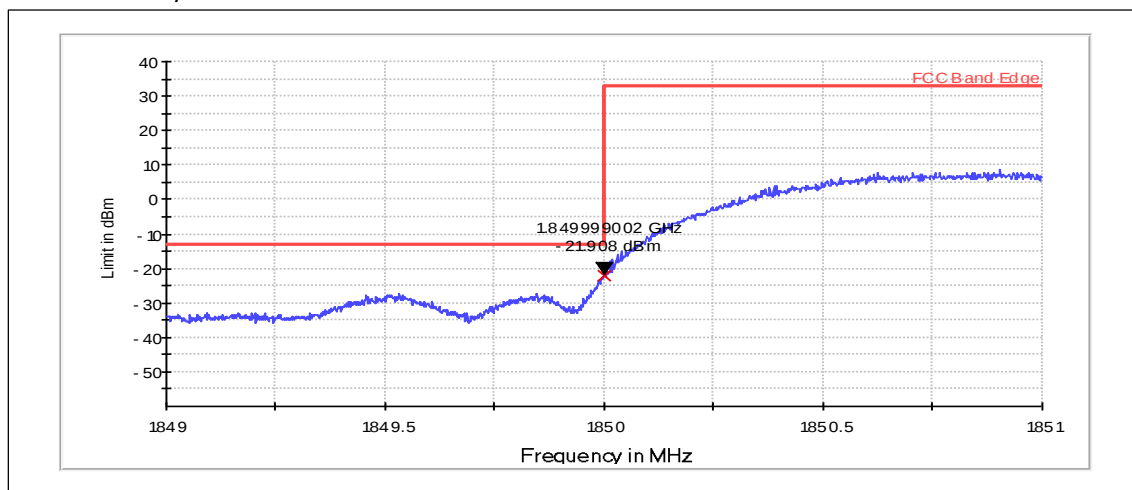


RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| EGPRS                  | 849.005         | -32.42      | PASSED |

#### 4.5. WCDMA2 Test results

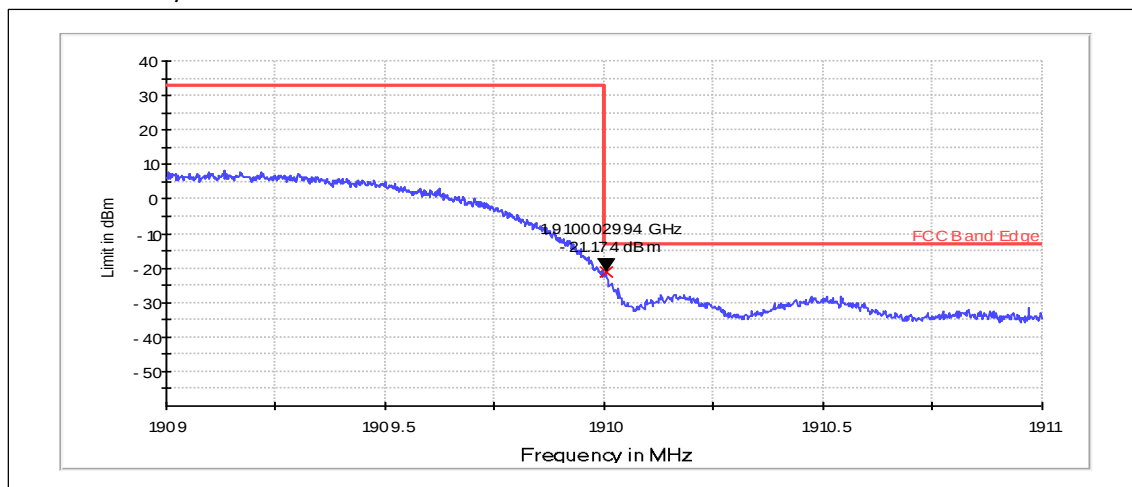
Channel 9262 / 1852.4 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| FDD                    | 1849.999        | -21.91      | PASSED |

Channel 9538 / 1907.6 MHz

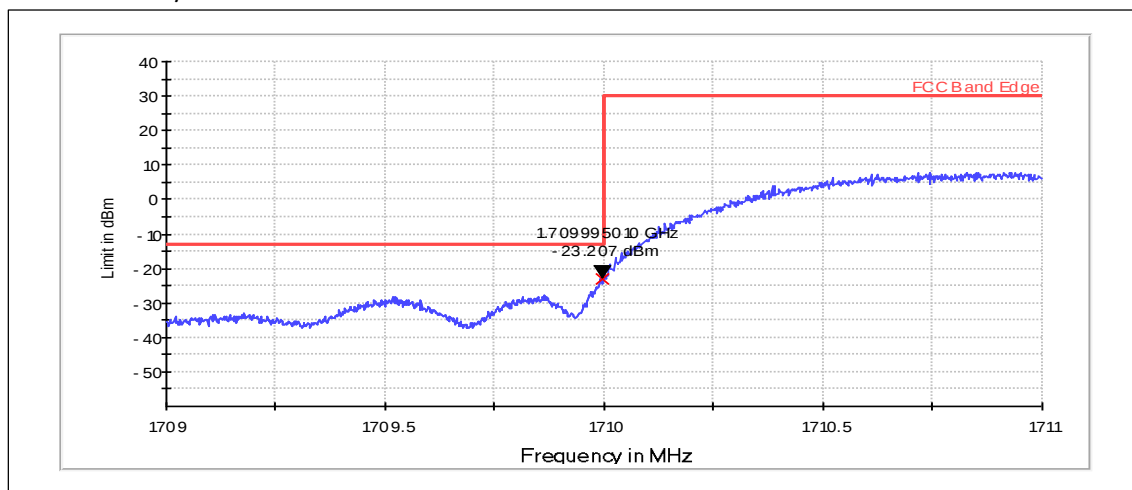


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| FDD                    | 1910.003        | -21.17      | PASSED |

#### 4.6. WCDMA4 Test results

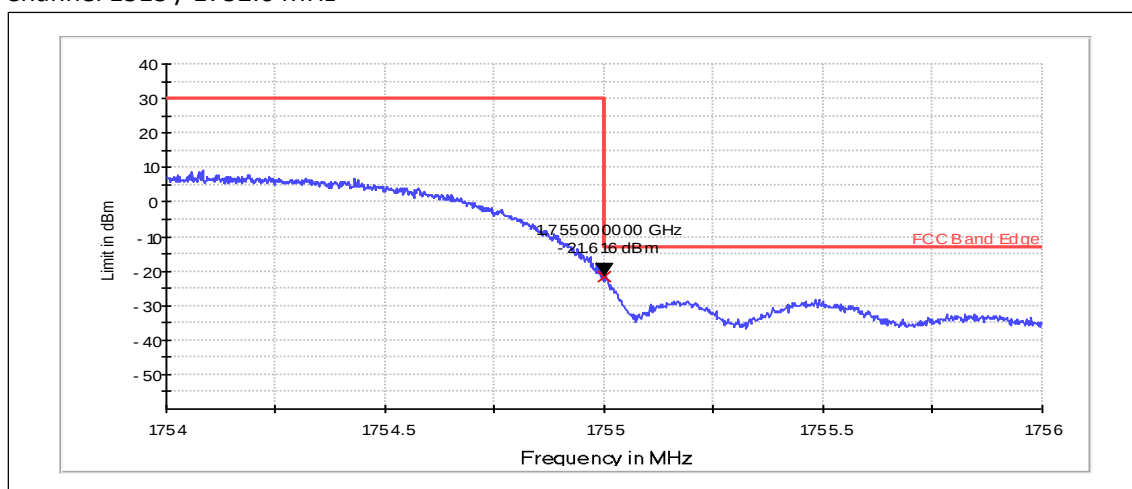
Channel 1312 / 1712.4 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| FDD                    | 1709.995        | -23.21      | PASSED |

Channel 1513 / 1752.6 MHz

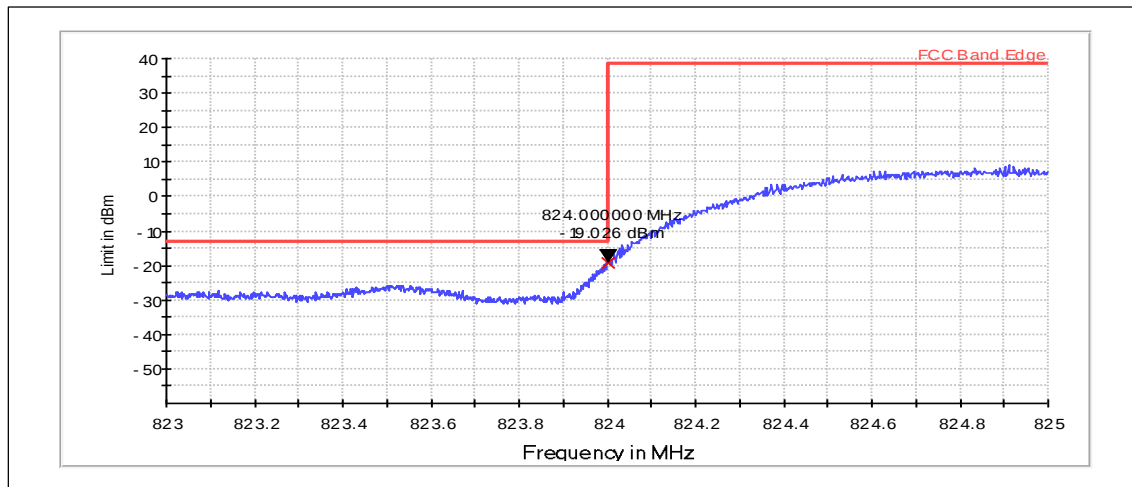


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| FDD                    | 1755.000        | -21.62      | PASSED |

#### 4.7. WCDMA5 Test results

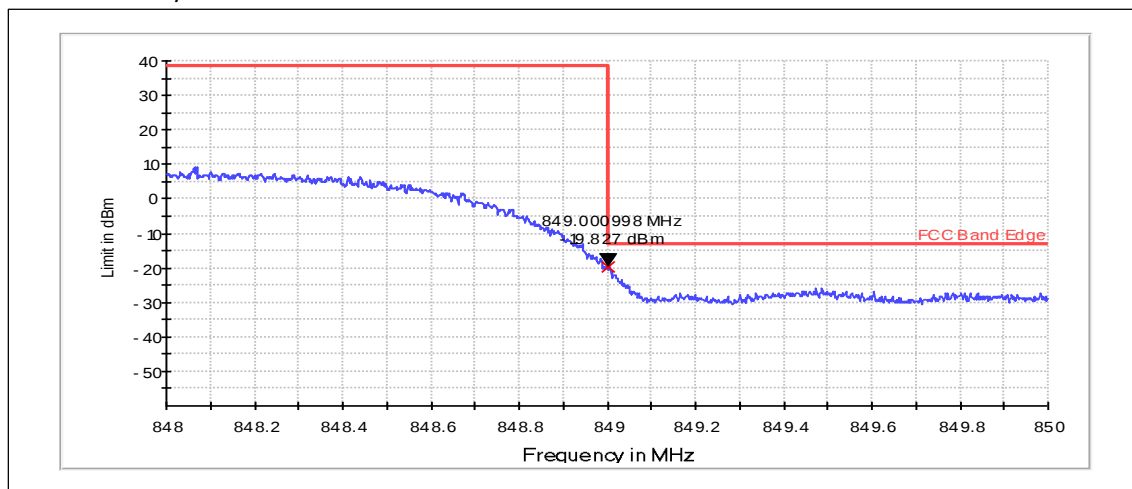
Channel 4132 / 826.4 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| FDD                    | 824.000         | -19.03      | PASSED |

Channel 4233 / 846.6 MHz

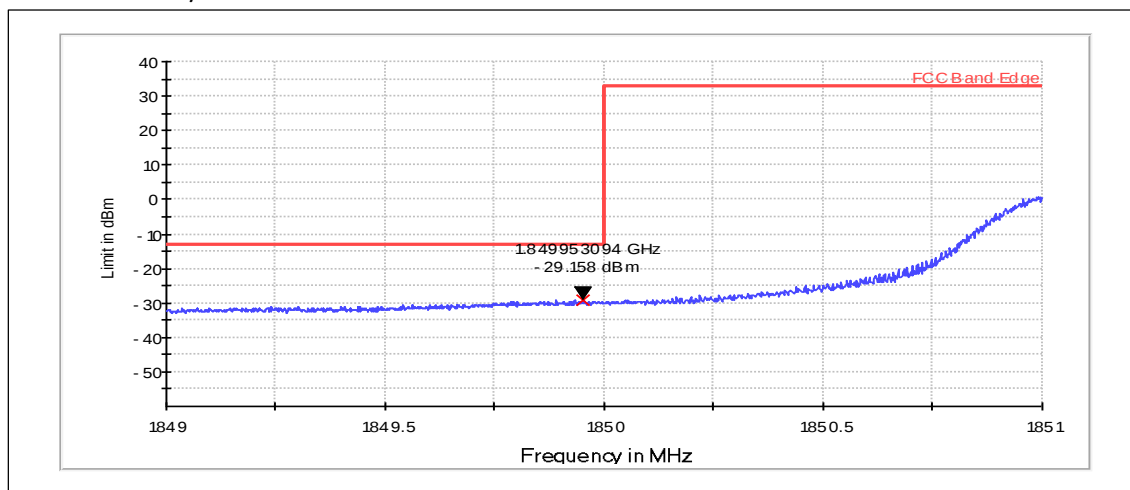


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Operation mode (TX on) | Frequency [MHz] | Level [dBm] | Result |
|------------------------|-----------------|-------------|--------|
| FDD                    | 849.001         | -19.83      | PASSED |

#### 4.8. LTE2 Test results

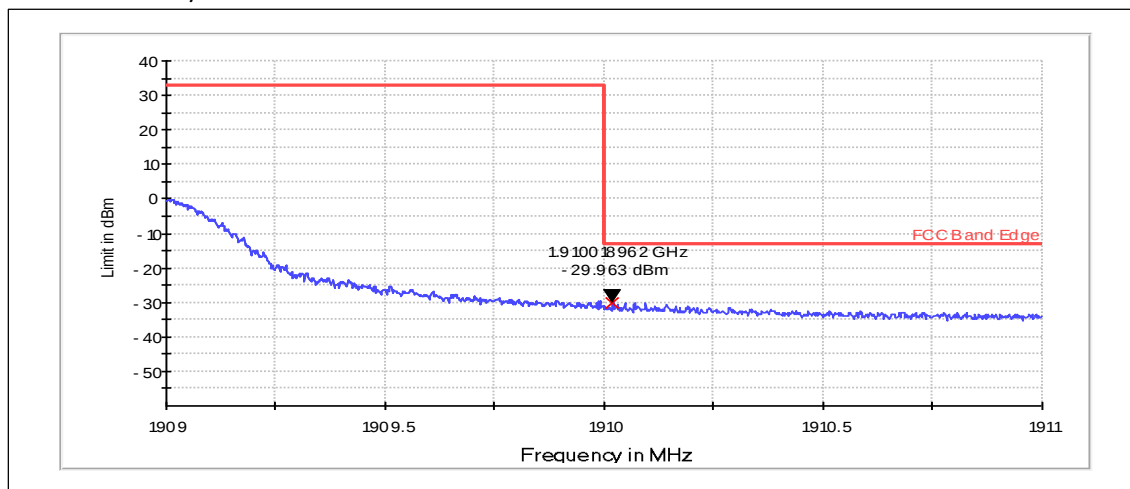
Channel 18700 / 1860 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, QPSK, 100 RB | 1849.953        | -29.16      | PASSED |

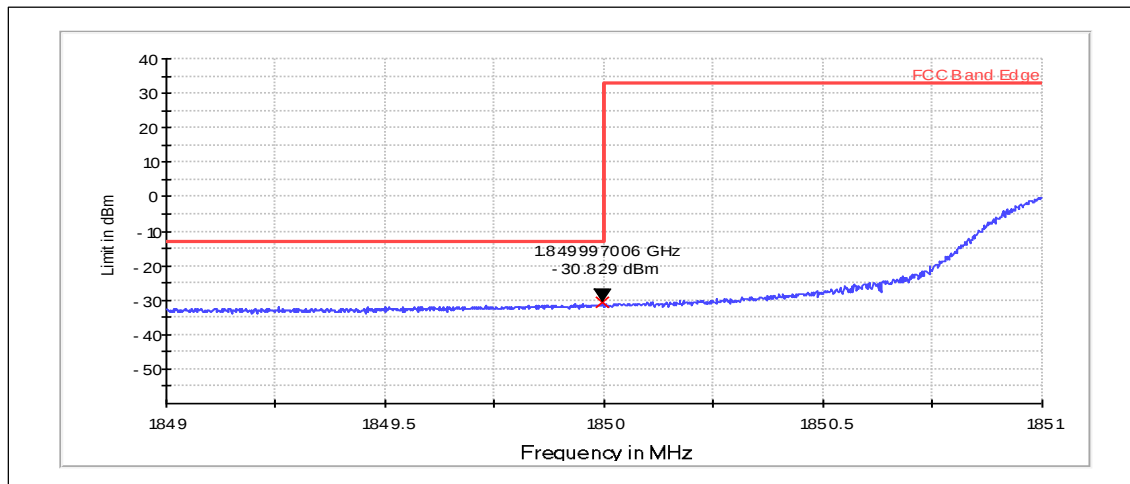
Channel 19100 / 1900 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, QPSK, 100 RB | 1910.019        | -29.96      | PASSED |

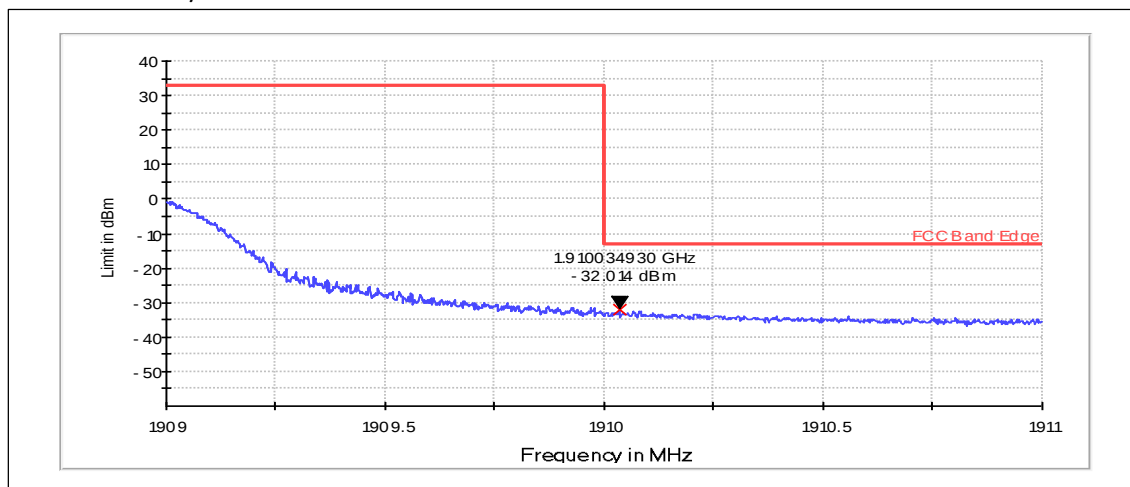
## Channel 18700 / 1860 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)        | Frequency [MHz] | Level [dBm] | Result |
|-------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, 16QAM, 100 RB | 1849.997        | -30.83      | PASSED |

## Channel 19100 / 1900 MHz

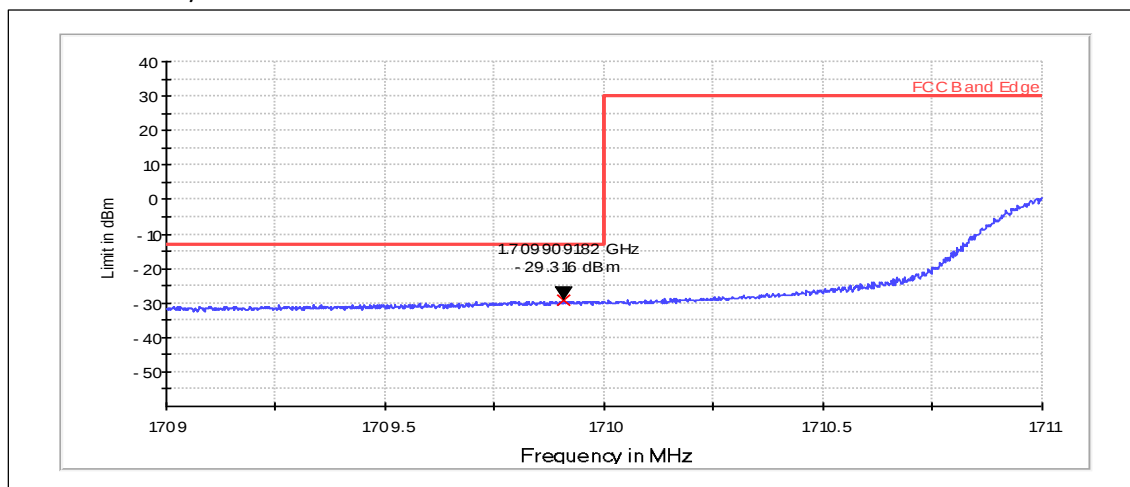


RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)        | Frequency [MHz] | Level [dBm] | Result |
|-------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, 16QAM, 100 RB | 1910.035        | -32.01      | PASSED |

## 4.9. LTE4 Test results

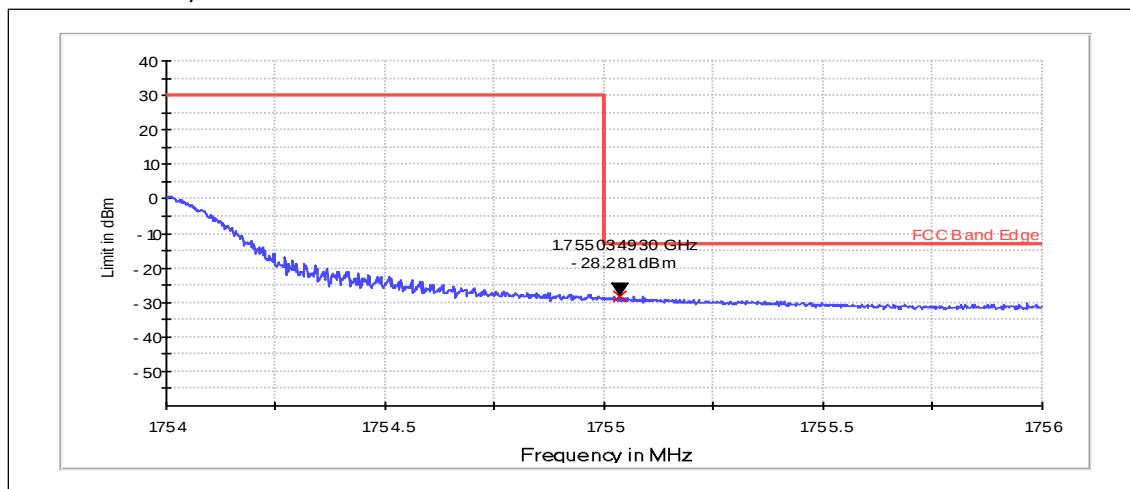
Channel 20050 / 1720 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, QPSK, 100 RB | 1709.909        | -29.32      | PASSED |

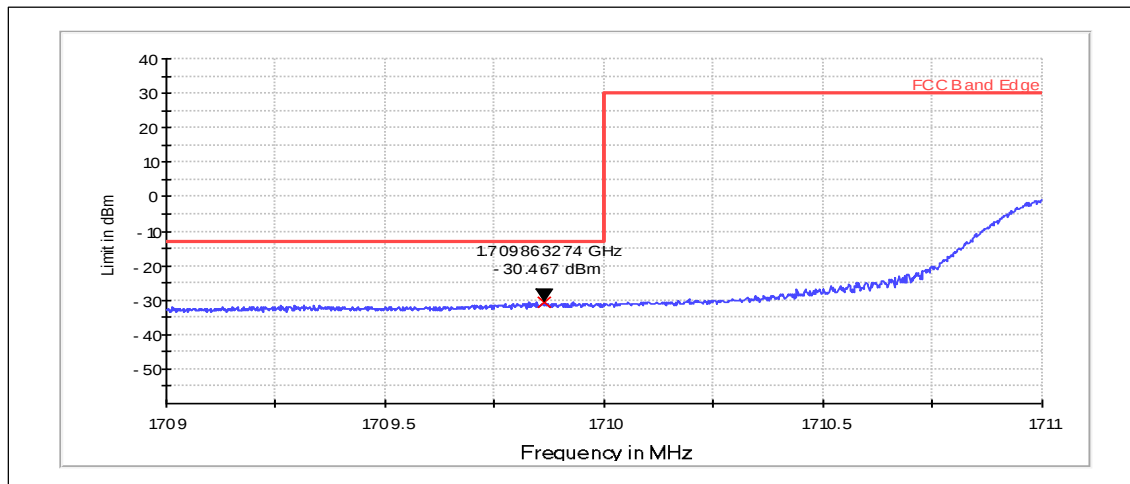
Channel 20300 / 1745 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, QPSK, 100 RB | 1755.035        | -28.28      | PASSED |

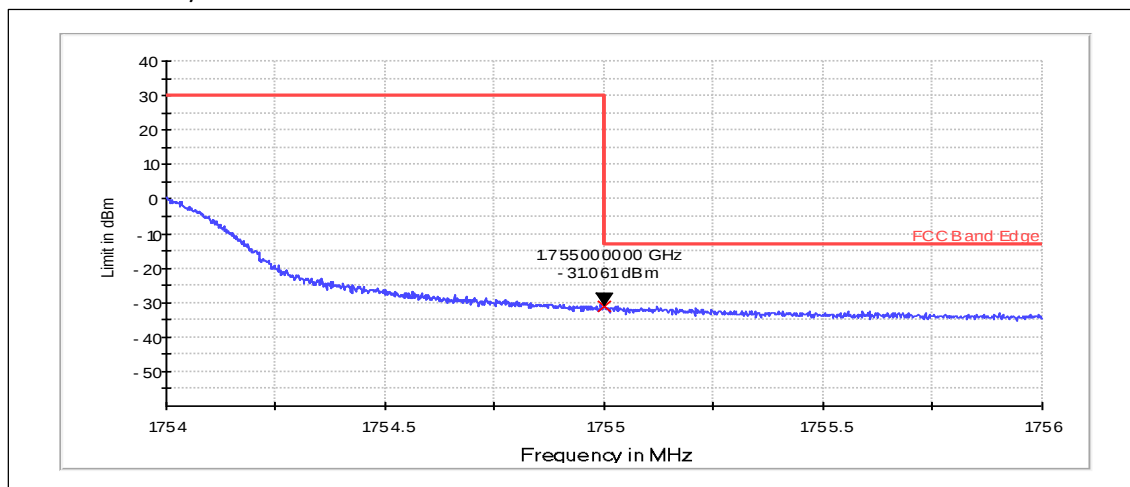
### Channel 20050 / 1720 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)        | Frequency [MHz] | Level [dBm] | Result |
|-------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, 16QAM, 100 RB | 1709.863        | -30.47      | PASSED |

### Channel 20300 / 1745 MHz

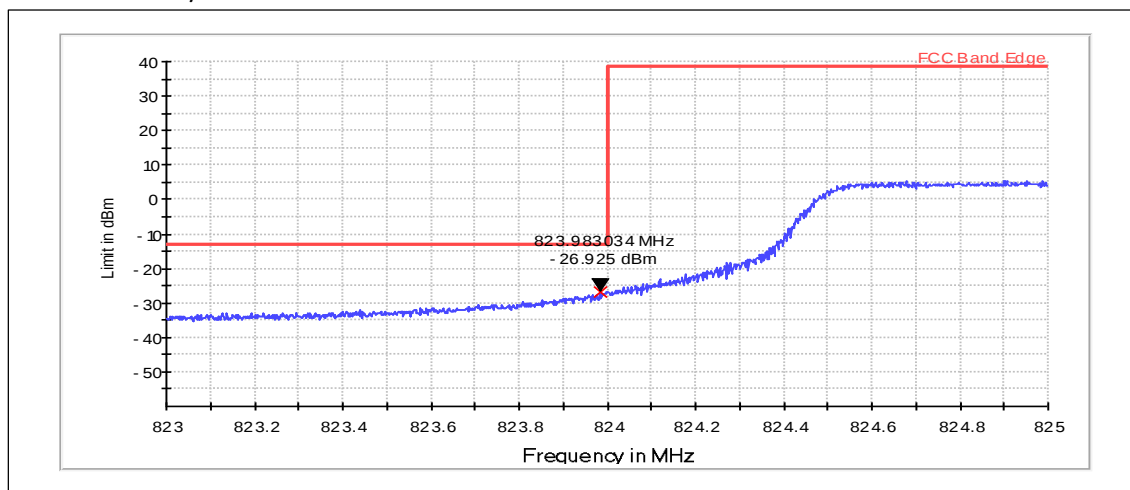


RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

| Operation mode (TX on)        | Frequency [MHz] | Level [dBm] | Result |
|-------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, 16QAM, 100 RB | 1755.000        | -31.06      | PASSED |

#### 4.10. LTE5 Test results

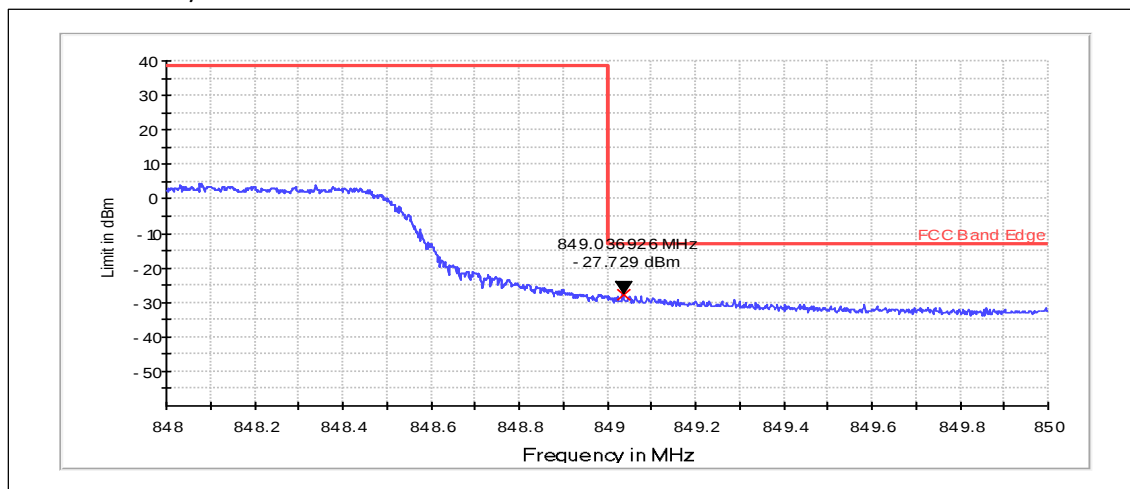
Channel 20450 / 829 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

| Operation mode (TX on)      | Frequency [MHz] | Level [dBm] | Result |
|-----------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, QPSK, 50 RB | 823.983         | -26.93      | PASSED |

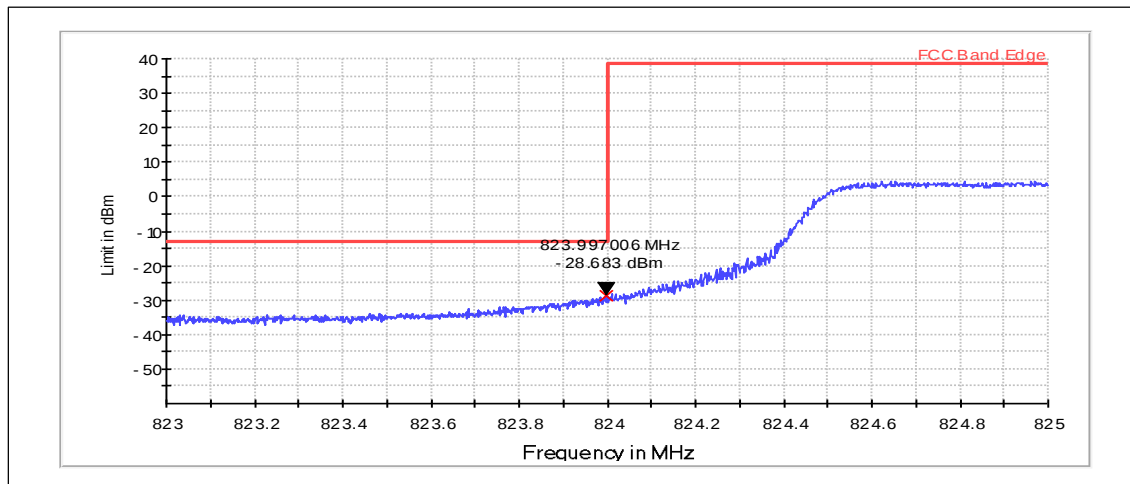
Channel 20600 / 844 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

| Operation mode (TX on)      | Frequency [MHz] | Level [dBm] | Result |
|-----------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, QPSK, 50 RB | 849.037         | -27.73      | PASSED |

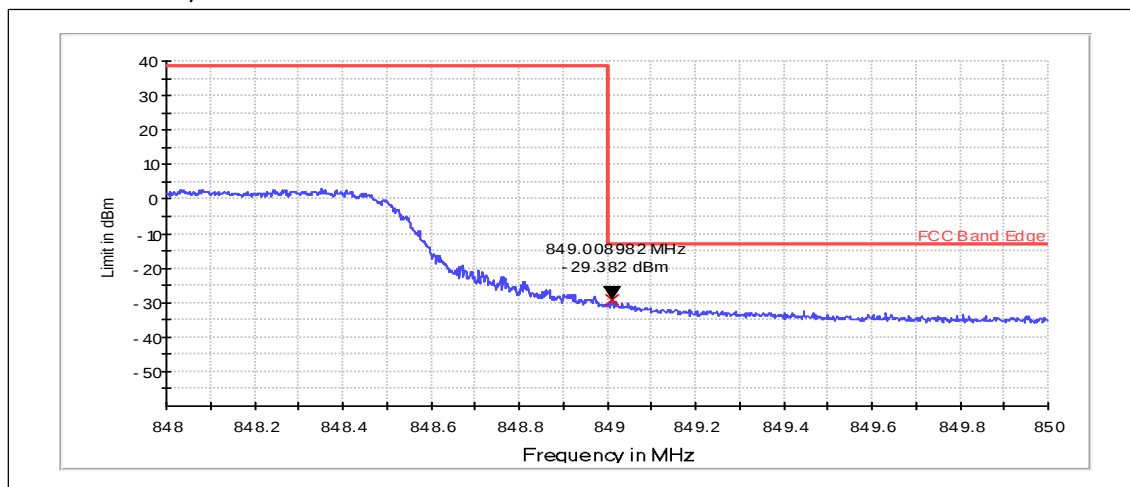
### Channel 20450 / 829 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, 16QAM, 50 RB | 823.997         | -28.68      | PASSED |

### Channel 20600 / 844 MHz

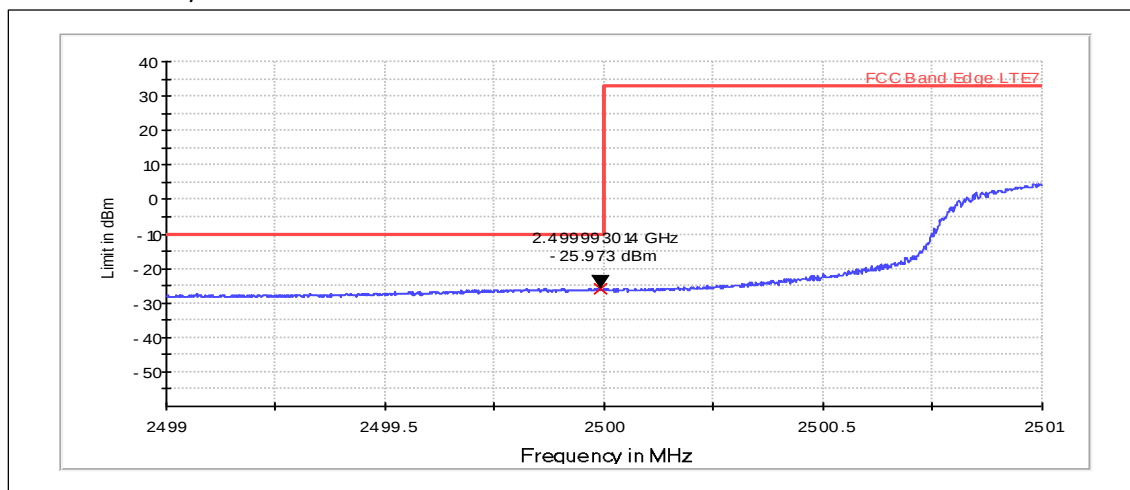


RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, 16QAM, 50 RB | 849.009         | -29.38      | PASSED |

#### 4.11. LTE7 Test results

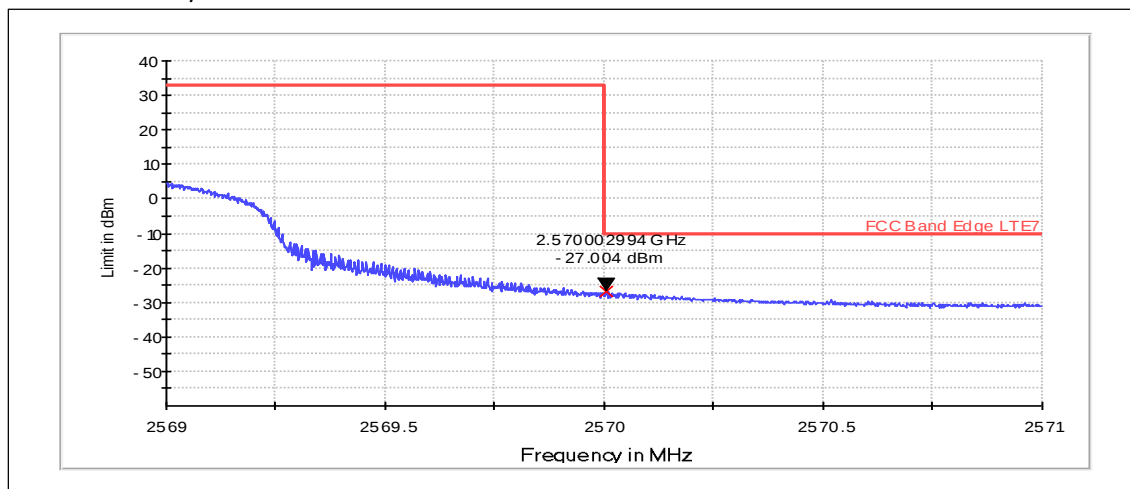
Channel 20850 / 2510 MHz



RMS detector, Max hold

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, QPSK, 100 RB | 2499.993        | -25.97      | PASSED |

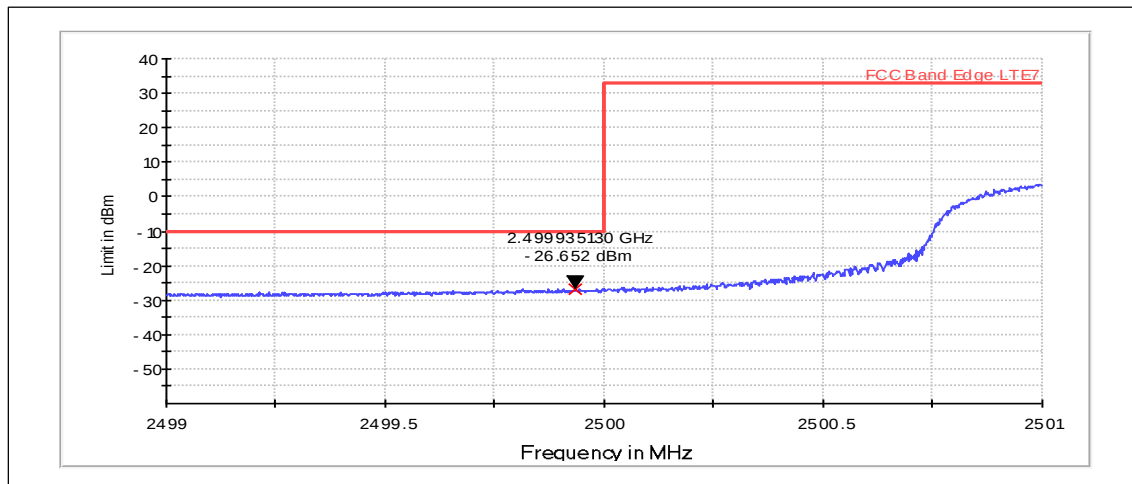
Channel 21350 / 2560 MHz



RMS detector, Max hold

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, QPSK, 100 RB | 2570.003        | -27.00      | PASSED |

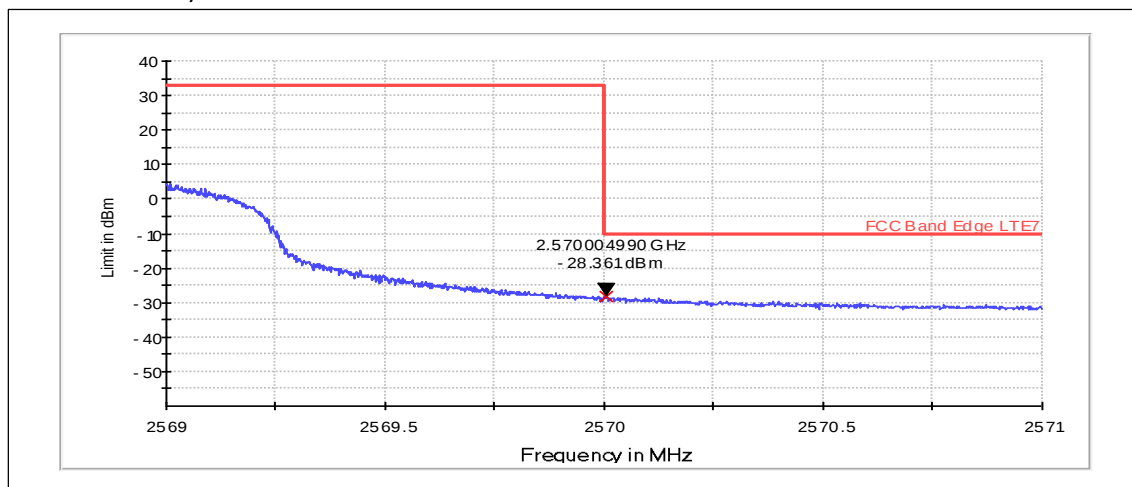
## Channel 20850 / 2510 MHz



RMS detector, Max hold

| Operation mode (TX on)        | Frequency [MHz] | Level [dBm] | Result |
|-------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, 16QAM, 100 RB | 2499.935        | -26.65      | PASSED |

## Channel 21350 / 2560 MHz

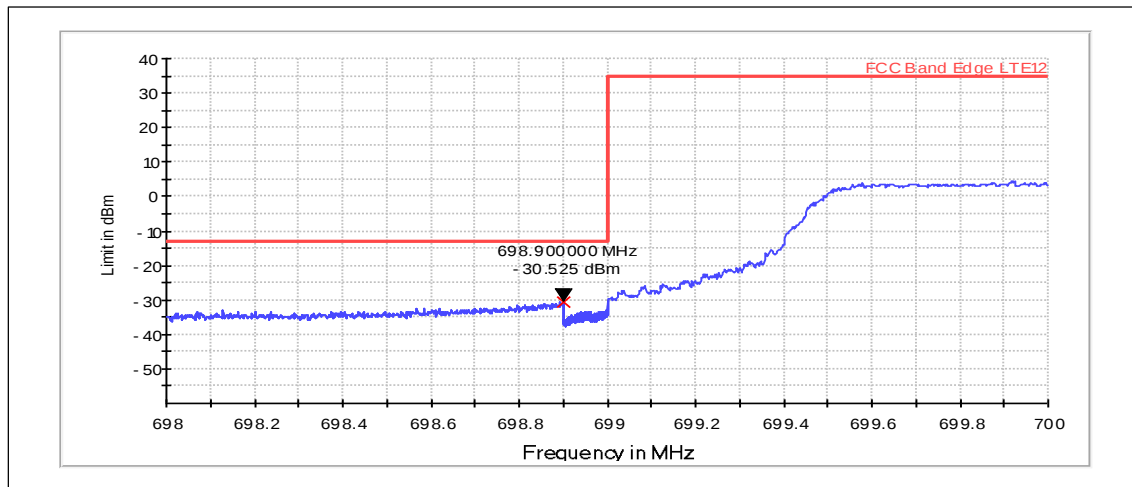


RMS detector, Max hold

| Operation mode (TX on)        | Frequency [MHz] | Level [dBm] | Result |
|-------------------------------|-----------------|-------------|--------|
| FDD, CBW 20MHz, 16QAM, 100 RB | 2570.005        | -28.36      | PASSED |

#### 4.12. LTE12 Test results

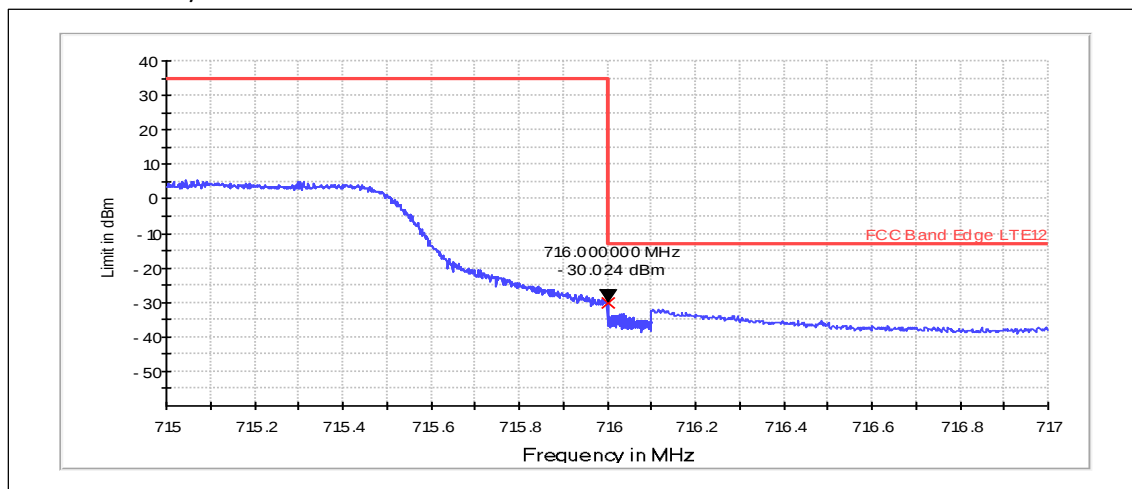
Channel 23060 / 704 MHz



RMS detector, Max hold

| Operation mode (TX on)      | Frequency [MHz] | Level [dBm] | Result |
|-----------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, QPSK, 50 RB | 698.900         | -30.52      | PASSED |

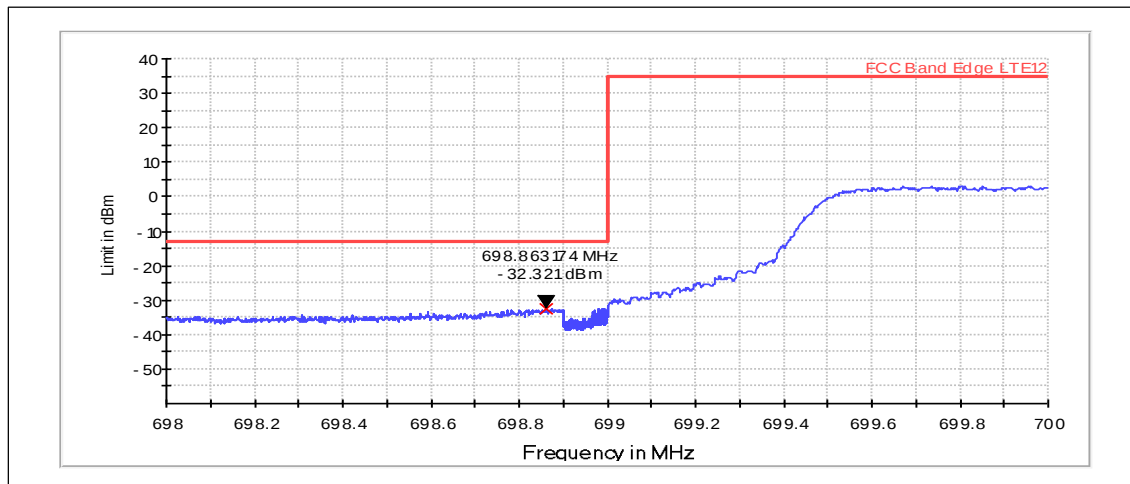
Channel 23130 / 711 MHz



RMS detector, Max hold

| Operation mode (TX on)      | Frequency [MHz] | Level [dBm] | Result |
|-----------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, QPSK, 50 RB | 716.000         | -30.02      | PASSED |

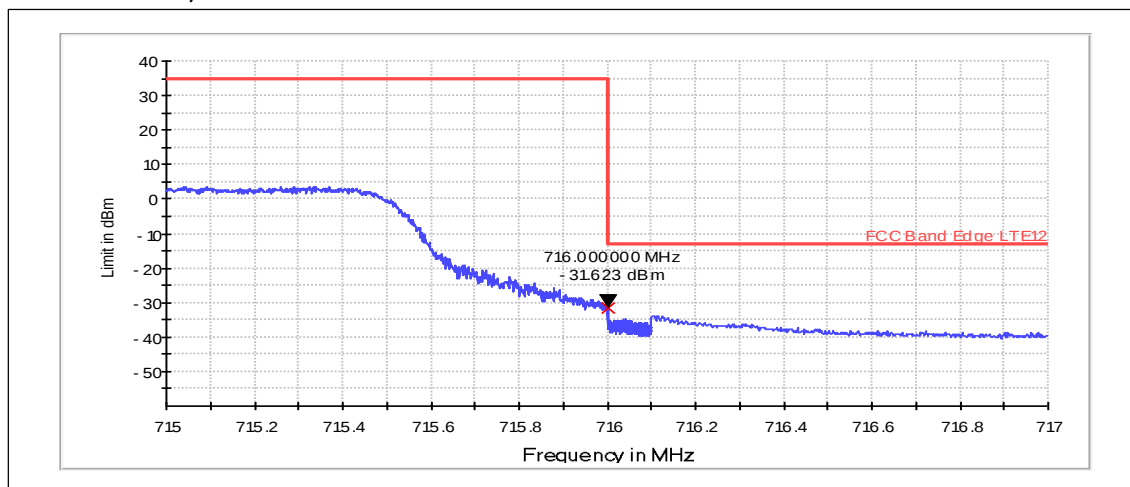
## Channel 23060 / 704 MHz



RMS detector, Max hold

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, 16QAM, 50 RB | 698.863         | -32.32      | PASSED |

## Channel 23130 / 711 MHz

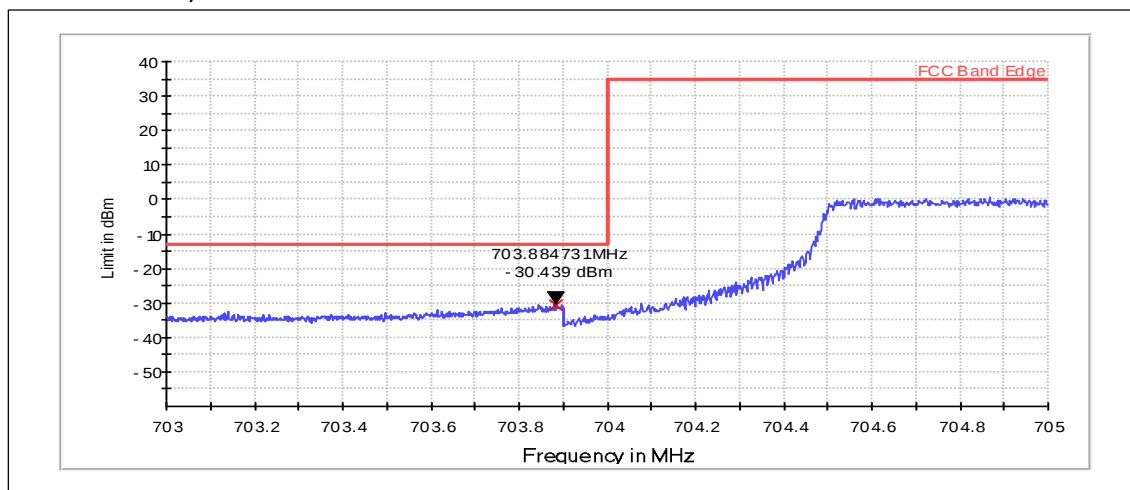


RMS detector, Max hold

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, 16QAM, 50 RB | 716.000         | -31.62      | PASSED |

#### 4.13. LTE17 Test results

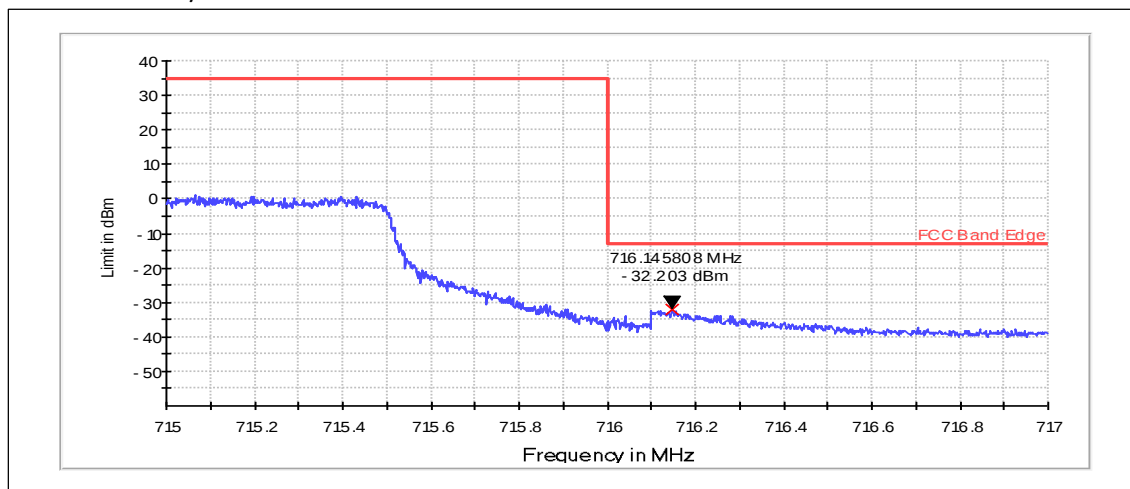
Channel 23780 / 709 MHz



RMS detector, Max hold

| Operation mode (TX on)      | Frequency [MHz] | Level [dBm] | Result |
|-----------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, QPSK, 50 RB | 703.885         | -30.44      | PASSED |

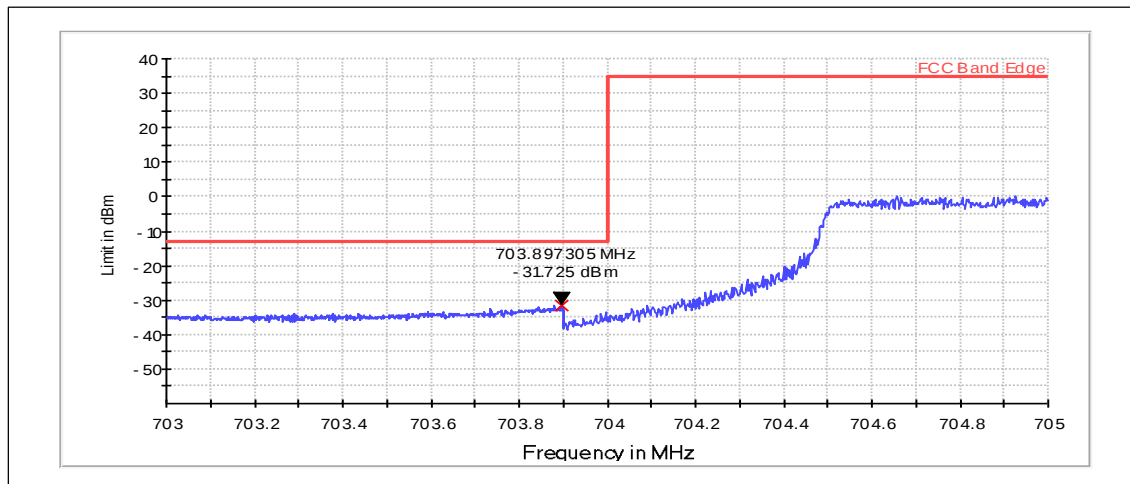
Channel 23800 / 711 MHz



RMS detector, Max hold

| Operation mode (TX on)      | Frequency [MHz] | Level [dBm] | Result |
|-----------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, QPSK, 50 RB | 716.146         | -32.20      | PASSED |

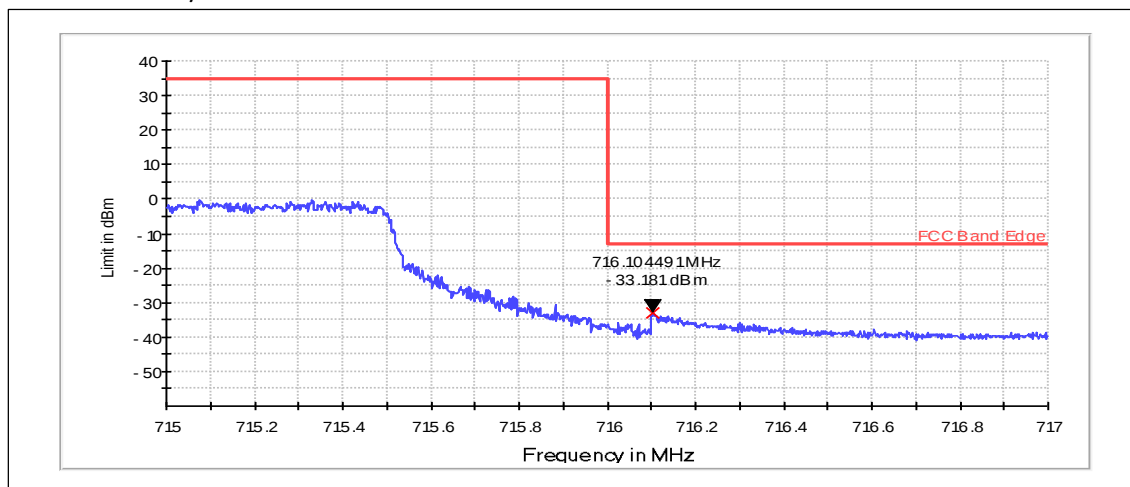
## Channel 23780 / 709 MHz



RMS detector, Max hold

| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, 16QAM, 50 RB | 703.897         | -31.73      | PASSED |

## Channel 23800 / 711 MHz



RMS detector, Max hold

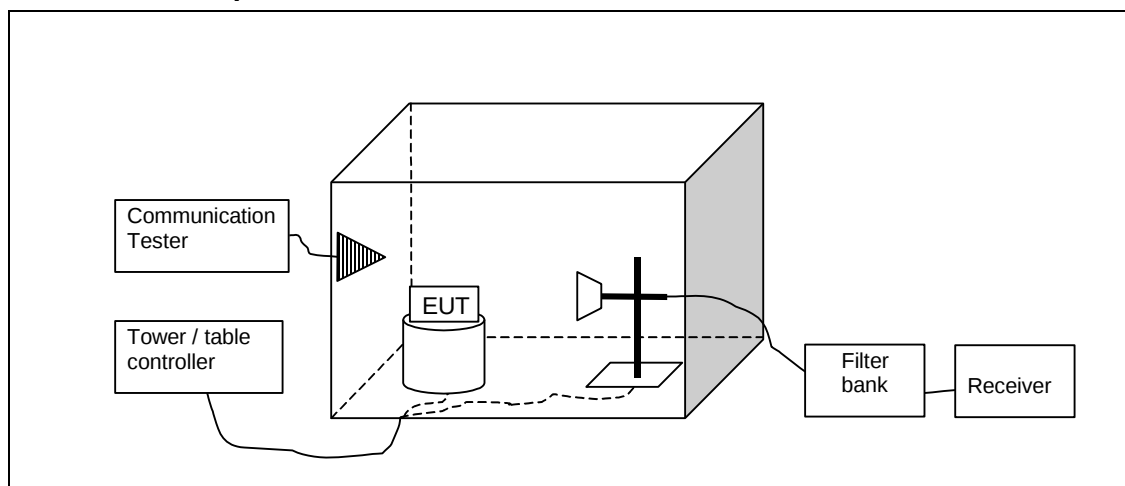
| Operation mode (TX on)       | Frequency [MHz] | Level [dBm] | Result |
|------------------------------|-----------------|-------------|--------|
| FDD, CBW 10MHz, 16QAM, 50 RB | 716.104         | -33.18      | PASSED |

## 5. Spurious radiated emissions

(FCC §22.917(a), §27.53(f), §27.53(l), §2.1053, §27.53(h), §2.1053, §22.917(a), §2.1053, §24.238(a), §2.1053, §2.1053, RSS-132 4.5, RSS-133 6.5, RSS-139 6.5, RSS-199 4.5(b), RSS-130 4.6)

|                                                        |                                                                                          |
|--------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>EUT with DUT number</b>                             | RM-1128, DUT 500100                                                                      |
| <b>Accessories with DUT numbers</b>                    | CC-3097, DUT 500127 ; Samsung BL-T5A, DUT 500101; AC-18U, DUT 500124; WH-108, DUT 500121 |
| <b>Operation Voltage [V] / [Hz]</b>                    | Nominal                                                                                  |
| <b>Results</b>                                         | PASSED                                                                                   |
| <b>Remarks</b>                                         | Test was done in lab1.                                                                   |
| <b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b> | 23/52/100.5 to 21/59/100.5                                                               |
| <b>Date of measurements</b>                            | 10-Jul-2015 to 16-Jul-2015                                                               |
| <b>Measured by</b>                                     | Gao Sherina                                                                              |

### 5.1.1 Test setup



### 5.2. Test method and limit

The measurement is made according to TIA-603-C-2004 as follows:

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with absorbers on the floor and measuring antenna at fixed height using 2-axis EUT position system.

The Final Measurement is performed in the Semi-Anechoic Chamber with conducting metal floor, if the Preliminary Measurement results are closer than 20 dB to the permissible value.

The EUT is placed at nonconductive plate at the turntable center.

For each suspected frequency, the turntable is rotated 360 degrees and antenna is scanned from 1 to 4 m. This is repeated for both horizontal and vertical receive antenna polarizations.

The emissions less than 20 dB below the permissible value are reported.

The substitution method is used. Substitution values at each frequencies are measured beforehand and saved to the test software.

The substitution corrections are obtained as described below:

$$ASUBST = PSUBST\_TX - PSUBST\_RX - LSUBST\_CABLES + GSUBST\_TX\_ANT$$

Where ASUBST is the final substitution correction including receive antenna gain. PSUBST\_TX is signal generator level, PSUBST\_RX is receiver level, LSUBST\_CABLES is cable losses including both TX and RX cables and GSUBST\_TX\_ANT is substitution antenna gain.

The measurement results are obtained as described below:

$$P \text{ [dBm]} = PMEAS + ATOT$$

Where PMEAS is receiver reading in dBm and ATOT is total correction factor including cable loss, preamplifier gain and substitution correction (ATOT = LCABLES - GPREAMP + ASUBST).

Limits for spurious radiated emissions measurements

| Operation band | Frequency range [MHz] | Limit [dBm]              |
|----------------|-----------------------|--------------------------|
| GSM 850        | 30 - 8500             | -13                      |
| GSM 1900       | 30 - 19100            | -13                      |
| WCDMA2         | 30 - 19100            | -13                      |
| WCDMA4         | 30 - 17500            | -13                      |
| WCDMA5         | 30 - 8500             | -13                      |
| LTE2           | 30 - 19100            | -13                      |
| LTE4           | 30 - 17500            | -13                      |
| LTE5           | 30 - 8500             | -13                      |
| LTE7           | 30 - 25700            | -13                      |
| LTE12          | 30 - 7200             | -13                      |
| LTE17          | 30 - 7200             | -13 (RBW = 100 kHz, ERP) |

### 5.3. GSM 850 test results

Antenna1; Channel 190 / 836.6 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 849.001         | -72.58  | 6E-05   | -70.98                  | -1.6                  | HORIZONTAL   | PASSED  |
| 1673.066        | -47.54  | 0.01762 | -52.74                  | 5.2                   | VERTICAL     | PASSED  |
| 1673.387        | -48.86  | 0.013   | -54.06                  | 5.2                   | VERTICAL     | PASSED  |
| 2497.275        | -52.42  | 0.00573 | -64.02                  | 11.6                  | HORIZONTAL   | PASSED  |
| 2539.76         | -52.31  | 0.00587 | -64.31                  | 12                    | VERTICAL     | PASSED  |
| 3346.212        | -53.37  | 0.0046  | -60.97                  | 7.6                   | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 190 / 836.6 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 848.62          | -70.86  | 8E-05   | -69.26                  | -1.6                  | HORIZONTAL   | PASSED  |
| 1695.631        | -56.62  | 0.00218 | -62.82                  | 6.2                   | HORIZONTAL   | PASSED  |
| 2542.124        | -52.35  | 0.00582 | -64.35                  | 12                    | VERTICAL     | PASSED  |
| 2559.399        | -51.89  | 0.00647 | -63.79                  | 11.9                  | HORIZONTAL   | PASSED  |
| 3290.942        | -56.84  | 0.00207 | -64.34                  | 7.5                   | HORIZONTAL   | PASSED  |
| 3397.555        | -56.4   | 0.00229 | -64.2                   | 7.8                   | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

### 5.4. GSM 850 E-GPRS (MSC9) test results

Antenna1; Channel 190 / 836.6 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1673.34         | -54.9   | 0.00324 | -60.3                   | 5.4                   | HORIZONTAL   | PASSED  |
| 2509.78         | -48.38  | 0.01452 | -60.38                  | 12                    | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 190 / 836.6 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1682.398        | -56.77  | 0.0021  | -62.47                  | 5.7                   | HORIZONTAL   | PASSED  |
| 2518.878        | -51.38  | 0.00728 | -63.68                  | 12.3                  | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.5. GSM 1900 test results

Antenna1; Channel 661 / 1880.0 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 8809.499        | -42.78  | 0.05272 | -66.48                  | 23.7                  | VERTICAL     | PASSED  |
| 9272.465        | -41.58  | 0.0695  | -66.68                  | 25.1                  | HORIZONTAL   | PASSED  |
| 9464.649        | -42.14  | 0.06109 | -66.64                  | 24.5                  | VERTICAL     | PASSED  |
| 9664.008        | -41.93  | 0.06412 | -67.53                  | 25.6                  | VERTICAL     | PASSED  |
| 9929.058        | -40.72  | 0.08472 | -66.52                  | 25.8                  | HORIZONTAL   | PASSED  |
| 10004.162       | -41.49  | 0.07096 | -67.39                  | 25.9                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 661 / 1880.0 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 2405.813        | -49.25  | 0.01189 | -63.55                  | 14.3                  | HORIZONTAL   | PASSED  |
| 6983.037        | -39.37  | 0.11561 | -59.97                  | 20.6                  | VERTICAL     | PASSED  |
| 9663.407        | -42.49  | 0.05636 | -68.09                  | 25.6                  | HORIZONTAL   | PASSED  |
| 9812.705        | -41.16  | 0.07656 | -66.66                  | 25.5                  | HORIZONTAL   | PASSED  |
| 9876.513        | -42.11  | 0.06152 | -67.91                  | 25.8                  | VERTICAL     | PASSED  |
| 9913.026        | -41.82  | 0.06577 | -67.52                  | 25.7                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.6. GSM 1900 E-GPRS (MSC9) test results

Antenna1; Channel 661 / 1880.0 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 3759.9          | -47.28  | 0.01871 | -58.18                  | 10.9                  | VERTICAL     | PASSED  |
| 5640.461        | -48.22  | 0.01507 | -62.52                  | 14.3                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 661 / 1880.0 MHz

Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 3760.14         | -46.95  | 0.02018 | -57.85                  | 10.9                  | VERTICAL     | PASSED  |
| 5640.18         | -48.37  | 0.01455 | -62.67                  | 14.3                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.7. WCDMA2 test results

Antenna1; Channel 9400 / 1880.0 MHz

FDD mode, Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 3758.577        | -49.14  | 0.01219 | -60.24                  | 11.1                  | HORIZONTAL   | PASSED  |
| 5638.737        | -47.69  | 0.01702 | -61.99                  | 14.3                  | HORIZONTAL   | PASSED  |
| 7522.385        | -44.09  | 0.03899 | -66.19                  | 22.1                  | VERTICAL     | PASSED  |
| 9267.715        | -41.52  | 0.07047 | -66.62                  | 25.1                  | HORIZONTAL   | PASSED  |
| 9406.874        | -41.59  | 0.06934 | -66.29                  | 24.7                  | VERTICAL     | PASSED  |
| 9424.349        | -42.98  | 0.05035 | -67.68                  | 24.7                  | HORIZONTAL   | PASSED  |
| 9791.202        | -41.67  | 0.06808 | -67.17                  | 25.5                  | VERTICAL     | PASSED  |
| 9928.116        | -41.61  | 0.06902 | -67.41                  | 25.8                  | HORIZONTAL   | PASSED  |
| 9955.812        | -41.91  | 0.06442 | -67.41                  | 25.5                  | VERTICAL     | PASSED  |
| 11273.527       | -39.16  | 0.12134 | -67.36                  | 28.2                  | HORIZONTAL   | PASSED  |
| 13167.515       | -50.69  | 0.00853 | -73.09                  | 22.4                  | VERTICAL     | PASSED  |
| 15047.796       | -48.19  | 0.01517 | -72.89                  | 24.7                  | HORIZONTAL   | PASSED  |
| 16911.283       | -50.16  | 0.00964 | -73.36                  | 23.2                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 9400 / 1880.0 MHz

FDD mode, Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 3757.255        | -52.33  | 0.00585 | -63.43                  | 11.1                  | HORIZONTAL   | PASSED  |
| 5640.741        | -47.51  | 0.01774 | -61.81                  | 14.3                  | VERTICAL     | PASSED  |
| 6940.621        | -36.05  | 0.24831 | -56.55                  | 20.5                  | VERTICAL     | PASSED  |
| 7529.92         | -43.45  | 0.04519 | -65.85                  | 22.4                  | HORIZONTAL   | PASSED  |
| 9255.451        | -40.87  | 0.08185 | -65.77                  | 24.9                  | VERTICAL     | PASSED  |
| 9285.351        | -41.53  | 0.07031 | -66.53                  | 25                    | VERTICAL     | PASSED  |
| 9394.449        | -41.94  | 0.06397 | -66.64                  | 24.7                  | VERTICAL     | PASSED  |
| 9875.411        | -41.21  | 0.07568 | -67.11                  | 25.9                  | HORIZONTAL   | PASSED  |
| 9908.717        | -41.95  | 0.06383 | -67.65                  | 25.7                  | HORIZONTAL   | PASSED  |
| 9964.068        | -40.76  | 0.08395 | -66.46                  | 25.7                  | HORIZONTAL   | PASSED  |
| 11274.048       | -37.95  | 0.16032 | -66.15                  | 28.2                  | HORIZONTAL   | PASSED  |
| 13153.447       | -50.03  | 0.00993 | -72.33                  | 22.3                  | VERTICAL     | PASSED  |
| 15041.703       | -47.7   | 0.01698 | -72                     | 24.3                  | VERTICAL     | PASSED  |
| 16929.88        | -50.18  | 0.00959 | -73.38                  | 23.2                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.8. WCDMA4 test results

Antenna1; Channel 1412 / 1732.4 MHz

FDD mode, Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1755.661        | -43.54  | 0.04426 | -52.34                  | 8.8                   | VERTICAL     | PASSED  |
| 1757.515        | -46.84  | 0.0207  | -55.64                  | 8.8                   | VERTICAL     | PASSED  |
| 3462.255        | -49.71  | 0.01069 | -60.11                  | 10.4                  | VERTICAL     | PASSED  |
| 5190.446        | -47.98  | 0.01592 | -61.98                  | 14                    | HORIZONTAL   | PASSED  |
| 6931.464        | -37.25  | 0.18836 | -57.55                  | 20.3                  | VERTICAL     | PASSED  |
| 8663.904        | -43.19  | 0.04797 | -66.39                  | 23.2                  | HORIZONTAL   | PASSED  |
| 9427.515        | -41.7   | 0.06761 | -66.4                   | 24.7                  | HORIZONTAL   | PASSED  |
| 9856.613        | -40.89  | 0.08147 | -66.59                  | 25.7                  | HORIZONTAL   | PASSED  |
| 9985.11         | -41.07  | 0.07816 | -66.77                  | 25.7                  | HORIZONTAL   | PASSED  |
| 10393.218       | -39.72  | 0.10666 | -66.52                  | 26.8                  | HORIZONTAL   | PASSED  |
| 12130.347       | -38.31  | 0.14757 | -66.41                  | 28.1                  | VERTICAL     | PASSED  |
| 13864.39        | -49.51  | 0.01119 | -73.81                  | 24.3                  | VERTICAL     | PASSED  |
| 15590.378       | -48.7   | 0.01349 | -72.7                   | 24                    | HORIZONTAL   | PASSED  |
| 17320.854       | -49.21  | 0.01199 | -73.01                  | 23.8                  | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 1412 / 1732.4 MHz

FDD mode, Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1714.82         | -38.73  | 0.13397 | -46.73                  | 8                     | VERTICAL     | PASSED  |
| 1755.782        | -39.93  | 0.10162 | -48.73                  | 8.8                   | VERTICAL     | PASSED  |
| 3466.944        | -49.62  | 0.01091 | -60.12                  | 10.5                  | VERTICAL     | PASSED  |
| 5191.929        | -47.95  | 0.01603 | -61.95                  | 14                    | HORIZONTAL   | PASSED  |
| 6938.518        | -37.61  | 0.17338 | -58.01                  | 20.4                  | VERTICAL     | PASSED  |
| 8654.164        | -43.04  | 0.04966 | -66.14                  | 23.1                  | HORIZONTAL   | PASSED  |
| 9258.457        | -41.29  | 0.0743  | -66.29                  | 25                    | HORIZONTAL   | PASSED  |
| 9270.24         | -41.29  | 0.0743  | -66.39                  | 25.1                  | VERTICAL     | PASSED  |
| 9763.347        | -41.23  | 0.07534 | -66.73                  | 25.5                  | VERTICAL     | PASSED  |
| 9987.133        | -41.54  | 0.07015 | -67.24                  | 25.7                  | HORIZONTAL   | PASSED  |
| 10386.885       | -39.71  | 0.10691 | -66.51                  | 26.8                  | VERTICAL     | PASSED  |
| 12135.357       | -38.96  | 0.12706 | -67.06                  | 28.1                  | HORIZONTAL   | PASSED  |
| 13850.923       | -49.98  | 0.01005 | -74.18                  | 24.2                  | VERTICAL     | PASSED  |
| 15586.69        | -49.91  | 0.01021 | -73.11                  | 23.2                  | VERTICAL     | PASSED  |
| 17332.717       | -49.19  | 0.01205 | -73.09                  | 23.9                  | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.9. WCDMA5 test results

Antenna1; Channel 4175 / 835.0 MHz

FDD mode, Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 816.268         | -46.64  | 0.02168 | -80.94                  | 34.3                  | HORIZONTAL   | PASSED  |
| 848.47          | -47.82  | 0.01652 | -80.82                  | 33                    | HORIZONTAL   | PASSED  |
| 852.109         | -48.45  | 0.01429 | -81.45                  | 33                    | HORIZONTAL   | PASSED  |
| 934.354         | -43.61  | 0.04355 | -80.41                  | 36.8                  | HORIZONTAL   | PASSED  |
| 997.462         | -42.17  | 0.06067 | -79.67                  | 37.5                  | HORIZONTAL   | PASSED  |
| 1000.16         | -59.37  | 0.00116 | -63.77                  | 4.4                   | HORIZONTAL   | PASSED  |
| 1672.184        | -55.7   | 0.00269 | -61.1                   | 5.4                   | HORIZONTAL   | PASSED  |
| 2512.234        | -51.49  | 0.0071  | -63.29                  | 11.8                  | HORIZONTAL   | PASSED  |
| 3349.238        | -55.41  | 0.00288 | -63.21                  | 7.8                   | HORIZONTAL   | PASSED  |
| 4183.677        | -54.98  | 0.00318 | -65.08                  | 10.1                  | HORIZONTAL   | PASSED  |
| 5018.236        | -50.9   | 0.00813 | -62.7                   | 11.8                  | HORIZONTAL   | PASSED  |
| 5836.523        | -49.37  | 0.01156 | -62.27                  | 12.9                  | VERTICAL     | PASSED  |
| 6674.168        | -44.17  | 0.03828 | -61.27                  | 17.1                  | VERTICAL     | PASSED  |
| 7514.9          | -46.24  | 0.02377 | -66.24                  | 20                    | HORIZONTAL   | PASSED  |
| 8344.208        | -47.2   | 0.01905 | -67.2                   | 20                    | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 4175 / 835.0 MHz

FDD mode, Peak detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 814.083         | -45.53  | 0.02799 | -79.83                  | 34.3                  | HORIZONTAL   | PASSED  |
| 850.225         | -47.75  | 0.01679 | -80.75                  | 33                    | HORIZONTAL   | PASSED  |
| 855.979         | -47.73  | 0.01687 | -80.73                  | 33                    | HORIZONTAL   | PASSED  |
| 921.167         | -42.85  | 0.05188 | -79.95                  | 37.1                  | VERTICAL     | PASSED  |
| 997.671         | -41.68  | 0.06792 | -79.18                  | 37.5                  | HORIZONTAL   | PASSED  |
| 1000.441        | -59.39  | 0.00115 | -63.69                  | 4.3                   | HORIZONTAL   | PASSED  |
| 1671.062        | -56.85  | 0.00207 | -62.25                  | 5.4                   | HORIZONTAL   | PASSED  |
| 2508.146        | -51.78  | 0.00664 | -63.38                  | 11.6                  | HORIZONTAL   | PASSED  |
| 3334.529        | -55.28  | 0.00296 | -62.78                  | 7.5                   | VERTICAL     | PASSED  |
| 4170.21         | -55.79  | 0.00264 | -65.49                  | 9.7                   | VERTICAL     | PASSED  |
| 5019.279        | -49.99  | 0.01002 | -61.79                  | 11.8                  | HORIZONTAL   | PASSED  |
| 5846.784        | -49.78  | 0.01052 | -62.78                  | 13                    | HORIZONTAL   | PASSED  |
| 6670.12         | -43.63  | 0.04335 | -60.63                  | 17                    | VERTICAL     | PASSED  |
| 7505.04         | -45.99  | 0.02518 | -65.99                  | 20                    | VERTICAL     | PASSED  |
| 8355.23         | -46.94  | 0.02023 | -67.04                  | 20.1                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.10. LTE2 test results

Antenna 1; Channel 18900 / 1880.0 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1958.196        | -41.19  | 0.07603 | -50.59                  | 9.4                   | HORIZONTAL   | PASSED  |
| 3760.341        | -57.29  | 0.00187 | -68.39                  | 11.1                  | HORIZONTAL   | PASSED  |
| 5631.283        | -58.35  | 0.00146 | -72.75                  | 14.4                  | HORIZONTAL   | PASSED  |
| 7524.87         | -55.12  | 0.00308 | -77.42                  | 22.3                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna 1; Channel 18900 / 1880.0 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1958.702        | -40.59  | 0.0873  | -49.99                  | 9.4                   | HORIZONTAL   | PASSED  |
| 3760.461        | -56.79  | 0.00209 | -67.89                  | 11.1                  | HORIZONTAL   | PASSED  |
| 5636.774        | -58.38  | 0.00145 | -72.78                  | 14.4                  | HORIZONTAL   | PASSED  |
| 7528.597        | -55.08  | 0.0031  | -77.48                  | 22.4                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 18900 / 1880.0 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1961.027        | -41.3   | 0.07413 | -50.8                   | 9.5                   | HORIZONTAL   | PASSED  |
| 3760.581        | -59.84  | 0.00104 | -70.94                  | 11.1                  | HORIZONTAL   | PASSED  |
| 5634.449        | -58.65  | 0.00136 | -73.05                  | 14.4                  | HORIZONTAL   | PASSED  |
| 7510.762        | -55.28  | 0.00296 | -77.48                  | 22.2                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 18900 / 1880.0 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1960.947        | -41.39  | 0.07261 | -50.89                  | 9.5                   | HORIZONTAL   | PASSED  |
| 3760.18         | -59.85  | 0.00104 | -70.95                  | 11.1                  | HORIZONTAL   | PASSED  |
| 5638.016        | -58.67  | 0.00136 | -72.97                  | 14.3                  | HORIZONTAL   | PASSED  |
| 7525.271        | -55.12  | 0.00308 | -77.42                  | 22.3                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.11. LTE4 test results

Antenna 1; Channel 20175 / 1732.5 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 854.792         | -59.99  | 0.001   | -92.99                  | 33                    | HORIZONTAL   | PASSED  |
| 881.056         | -51.6   | 0.00692 | -85.7                   | 34.1                  | HORIZONTAL   | PASSED  |
| 994.182         | -52.95  | 0.00507 | -90.55                  | 37.6                  | HORIZONTAL   | PASSED  |
| 1673.381        | -64.68  | 0.00034 | -70.08                  | 5.4                   | HORIZONTAL   | PASSED  |
| 2518.498        | -70.52  | 9E-05   | -82.52                  | 12                    | HORIZONTAL   | PASSED  |
| 3346.501        | -74.08  | 4E-05   | -81.78                  | 7.7                   | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna 1; Channel 20175 / 1732.5 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 3465.381        | -53.97  | 0.00401 | -64.37                  | 10.4                  | VERTICAL     | PASSED  |
| 5187.861        | -59.2   | 0.0012  | -73.3                   | 14.1                  | HORIZONTAL   | PASSED  |
| 6940            | -48.13  | 0.01538 | -68.63                  | 20.5                  | VERTICAL     | PASSED  |
| 8672.5          | -54.23  | 0.00378 | -77.43                  | 23.2                  | VERTICAL     | PASSED  |
| 10405           | -51.08  | 0.0078  | -77.98                  | 26.9                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 20175 / 1732.5 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 3465.381        | -56.59  | 0.00219 | -66.69                  | 10.1                  | HORIZONTAL   | PASSED  |
| 5187.5          | -58.61  | 0.00138 | -72.71                  | 14.1                  | HORIZONTAL   | PASSED  |
| 6925.01         | -49.45  | 0.01135 | -69.65                  | 20.2                  | HORIZONTAL   | PASSED  |
| 8672.5          | -54.25  | 0.00376 | -77.45                  | 23.2                  | HORIZONTAL   | PASSED  |
| 10385           | -51.12  | 0.00773 | -77.92                  | 26.8                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 20175 / 1732.5 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 3465.421        | -57.47  | 0.00179 | -67.57                  | 10.1                  | HORIZONTAL   | PASSED  |
| 5197.761        | -58.35  | 0.00146 | -72.15                  | 13.8                  | HORIZONTAL   | PASSED  |
| 6940            | -47.79  | 0.01663 | -68.29                  | 20.5                  | VERTICAL     | PASSED  |
| 8672.5          | -54.25  | 0.00376 | -77.45                  | 23.2                  | HORIZONTAL   | PASSED  |
| 10385           | -51.12  | 0.00773 | -77.92                  | 26.8                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.12. LTE5 test results

Antenna 1; Channel 20525 / 836.5 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 851.104         | -60.03  | 0.00099 | -93.03                  | 33                    | HORIZONTAL   | PASSED  |
| 880.261         | -50.42  | 0.00908 | -84.52                  | 34.1                  | HORIZONTAL   | PASSED  |
| 881.505         | -50.38  | 0.00916 | -84.48                  | 34.1                  | HORIZONTAL   | PASSED  |
| 1673.381        | -67.05  | 0.0002  | -72.45                  | 5.4                   | HORIZONTAL   | PASSED  |
| 2513.288        | -70.66  | 9E-05   | -82.56                  | 11.9                  | HORIZONTAL   | PASSED  |
| 3350.028        | -73.95  | 4E-05   | -81.75                  | 7.8                   | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna 1; Channel 20525 / 836.5 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 849.822         | -57.55  | 0.00176 | -90.55                  | 33                    | HORIZONTAL   | PASSED  |
| 881.024         | -50.45  | 0.00902 | -84.55                  | 34.1                  | HORIZONTAL   | PASSED  |
| 882.898         | -50.43  | 0.00906 | -84.53                  | 34.1                  | HORIZONTAL   | PASSED  |
| 997.889         | -53     | 0.00501 | -90.5                   | 37.5                  | HORIZONTAL   | PASSED  |
| 1673.301        | -68.21  | 0.00015 | -73.61                  | 5.4                   | HORIZONTAL   | PASSED  |
| 2518.899        | -70.52  | 9E-05   | -82.52                  | 12                    | HORIZONTAL   | PASSED  |
| 3347.182        | -74.05  | 4E-05   | -81.75                  | 7.7                   | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 20525 / 836.5 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 851.966         | -60.02  | 0.001   | -93.02                  | 33                    | HORIZONTAL   | PASSED  |
| 880.774         | -48.5   | 0.01413 | -82.6                   | 34.1                  | HORIZONTAL   | PASSED  |
| 880.886         | -49.42  | 0.01143 | -83.52                  | 34.1                  | HORIZONTAL   | PASSED  |
| 1680.515        | -76.1   | 2E-05   | -81.7                   | 5.6                   | HORIZONTAL   | PASSED  |
| 2515.332        | -70.5   | 9E-05   | -82.6                   | 12.1                  | HORIZONTAL   | PASSED  |
| 3348.505        | -74     | 4E-05   | -81.7                   | 7.7                   | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 20525 / 836.5 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 857.236         | -59.95  | 0.00101 | -93.05                  | 33.1                  | HORIZONTAL   | PASSED  |
| 879.689         | -49.42  | 0.01143 | -83.52                  | 34.1                  | HORIZONTAL   | PASSED  |
| 880.182         | -49.4   | 0.01148 | -83.5                   | 34.1                  | HORIZONTAL   | PASSED  |
| 1677.749        | -76.2   | 2E-05   | -81.7                   | 5.5                   | HORIZONTAL   | PASSED  |
| 2514.049        | -69.76  | 0.00011 | -81.76                  | 12                    | HORIZONTAL   | PASSED  |
| 3347.743        | -74.86  | 3E-05   | -82.56                  | 7.7                   | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

### 5.13. LTE7 test results

Antenna1, Channel 21100 / 2535.0 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 2556.759        | -61.25  | 0.00075 | -73.65                  | 12.4                  | HORIZONTAL   | PASSED  |
| 2654.314        | -42.67  | 0.05408 | -55.77                  | 13.1                  | HORIZONTAL   | PASSED  |
| 5077.475        | -57.64  | 0.00172 | -71.94                  | 14.3                  | HORIZONTAL   | PASSED  |
| 7612.876        | -55.64  | 0.00273 | -77.94                  | 22.3                  | HORIZONTAL   | PASSED  |
| 10134.93        | -52.35  | 0.00582 | -77.95                  | 25.6                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna1, Channel 21100 / 2535.0 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 2553.833        | -61.22  | 0.00076 | -73.62                  | 12.4                  | HORIZONTAL   | PASSED  |
| 2654.91         | -42.6   | 0.05495 | -55.7                   | 13.1                  | HORIZONTAL   | PASSED  |
| 5077.154        | -57.64  | 0.00172 | -71.94                  | 14.3                  | HORIZONTAL   | PASSED  |
| 7604.98         | -56.13  | 0.00244 | -78.53                  | 22.4                  | HORIZONTAL   | PASSED  |
| 10140.741       | -52.31  | 0.00587 | -77.91                  | 25.6                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 21100 / 2535.0 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 2553.412        | -61.23  | 0.00075 | -73.63                  | 12.4                  | HORIZONTAL   | PASSED  |
| 2655.967        | -45.44  | 0.02858 | -58.44                  | 13                    | HORIZONTAL   | PASSED  |
| 5079.719        | -58.21  | 0.00151 | -72.51                  | 14.3                  | HORIZONTAL   | PASSED  |
| 7605.621        | -55.61  | 0.00275 | -78.01                  | 22.4                  | HORIZONTAL   | PASSED  |
| 10130.441       | -52.38  | 0.00578 | -77.98                  | 25.6                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 21100 / 2535.0 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 2555.155        | -61.53  | 0.0007  | -73.93                  | 12.4                  | HORIZONTAL   | PASSED  |
| 2655.366        | -45.42  | 0.02871 | -58.52                  | 13.1                  | HORIZONTAL   | PASSED  |
| 5072.064        | -58.36  | 0.00146 | -72.76                  | 14.4                  | HORIZONTAL   | PASSED  |
| 7607.585        | -55.61  | 0.00275 | -77.91                  | 22.3                  | HORIZONTAL   | PASSED  |
| 10145.752       | -52.27  | 0.00593 | -77.97                  | 25.7                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

#### 5.14. LTE12 test results

Antenna 1; Channel 23095 / 707.5 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1415.421        | -69.64  | 0.00011 | -73.94                  | 4.3                   | VERTICAL     | PASSED  |
| 2116.107        | -72.75  | 5E-05   | -81.75                  | 9                     | VERTICAL     | PASSED  |
| 2827.094        | -66.7   | 0.00021 | -81.7                   | 15                    | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna 1; Channel 23095 / 707.5 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1415.381        | -69.65  | 0.00011 | -73.95                  | 4.3                   | VERTICAL     | PASSED  |
| 2113.422        | -72.08  | 6E-05   | -80.98                  | 8.9                   | VERTICAL     | PASSED  |
| 2823.527        | -66.8   | 0.00021 | -81.7                   | 14.9                  | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 23095 / 707.5 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1415.581        | -74.74  | 3E-05   | -79.04                  | 4.3                   | VERTICAL     | PASSED  |
| 2115.706        | -72.75  | 5E-05   | -81.75                  | 9                     | VERTICAL     | PASSED  |
| 2825.01         | -66.6   | 0.00022 | -81                     | 14.4                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 23095 / 707.5 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1415.461        | -67.14  | 0.00019 | -71.44                  | 4.3                   | VERTICAL     | PASSED  |
| 2113.262        | -72.08  | 6E-05   | -80.98                  | 8.9                   | VERTICAL     | PASSED  |
| 2825.05         | -66.6   | 0.00022 | -81                     | 14.4                  | HORIZONTAL   | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5.15. LTE17 test results

Antenna 1; Channel 23790 / 710 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1420.381        | -64.93  | 0.00032 | -69.53                  | 4.6                   | VERTICAL     | PASSED  |
| 2138.076        | -71.6   | 7E-05   | -80.3                   | 8.7                   | VERTICAL     | PASSED  |
| 2830.04         | -66.69  | 0.00021 | -81.79                  | 15.1                  | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna 1; Channel 23790 / 710 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1420.421        | -72.38  | 6E-05   | -76.58                  | 4.2                   | HORIZONTAL   | PASSED  |
| 2136.553        | -72.27  | 6E-05   | -80.97                  | 8.7                   | VERTICAL     | PASSED  |
| 2830.16         | -66.69  | 0.00021 | -81.69                  | 15                    | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 23790 / 710 MHz  
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1420.341        | -69.7   | 0.00011 | -74.3                   | 4.6                   | VERTICAL     | PASSED  |
| 2136.633        | -72.27  | 6E-05   | -80.97                  | 8.7                   | VERTICAL     | PASSED  |
| 2830            | -65.23  | 0.0003  | -80.33                  | 15.1                  | VERTICAL     | PASSED  |

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

Antenna2; Channel 23790 / 710 MHz  
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

| Frequency [MHz] | P [dBm] | P [μW]  | P <sub>MEAS</sub> [dBm] | A <sub>TOT</sub> [dB] | Polarisation | Results |
|-----------------|---------|---------|-------------------------|-----------------------|--------------|---------|
| 1420.541        | -74.47  | 4E-05   | -79.07                  | 4.6                   | VERTICAL     | PASSED  |
| 2139.639        | -72.63  | 5E-05   | -81.03                  | 8.4                   | HORIZONTAL   | PASSED  |
| 2830            | -65.93  | 0.00026 | -81.03                  | 15.1                  | VERTICAL     | PASSED  |

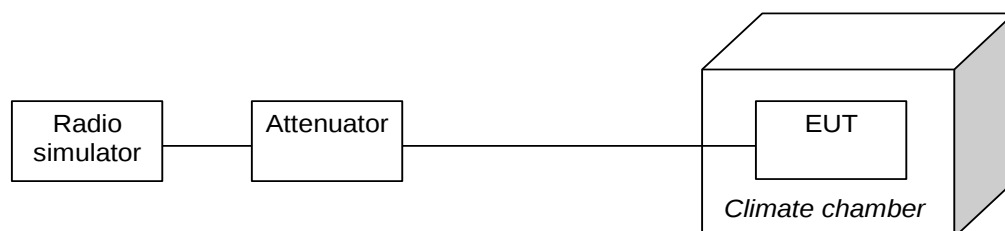
\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 6. Frequency stability, temperature variation

(FCC §2.1055(a), §27.54, RSS-133 6.3, RSS-132 4.3, RSS-139 6.3, RSS-199 4.3, RSS-130 4.3, RSS-130 4.3 (a))

|                                                        |                                         |
|--------------------------------------------------------|-----------------------------------------|
| <b>EUT with DUT number</b>                             | RM-1128, DUT 500110                     |
| <b>Accessories with DUT numbers</b>                    | CC-3097, DUT 500128; SD-133, DUT 500120 |
| <b>Operation Voltage [V] / [Hz]</b>                    | Nominal                                 |
| <b>Results</b>                                         | PASSED                                  |
| <b>Remarks</b>                                         | Test was in conducted RF2 system.       |
| <b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b> | 21/59/100.5                             |
| <b>Date of measurements</b>                            | 16-Jul-2015                             |
| <b>Measured by</b>                                     | Dou Rubo                                |

### 6.1. Test Setup



### 6.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards as follows:

The climate chamber temperature is set to the maximum value and the temperature is allowed to stabilize.

The EUT is placed in the chamber.

The EUT is set in idle mode for 15 minutes.

The EUT is set to transmit.

The transmit frequency error was measured immediately.

The steps c - e were repeated for each temperature. Limits for frequency stability, temperature variation measurements

| Frequency deviation [ppm] |
|---------------------------|
| +/- 2.5                   |

### 6.3. GSM 1900 Test results

GSM, Channel 661 / 1880.0 MHz

| Temperature [°C] | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|------------------|-----------------|----------------|-----------------|--------|
| 50               | 1880.00         | -7.17000       | -0.0038         | PASSED |
| 40               | 1880.00         | -7.30000       | -0.0039         | PASSED |
| 30               | 1880.00         | 5.04000        | 0.0027          | PASSED |
| 20               | 1880.00         | -7.36000       | -0.0039         | PASSED |
| 10               | 1880.00         | -0.65000       | -0.0003         | PASSED |
| 0                | 1880.00         | 2.65000        | 0.0014          | PASSED |
| -10              | 1880.00         | 4.20000        | 0.0022          | PASSED |
| -20              | 1880.00         | 12.66000       | 0.0067          | PASSED |
| -30              | 1880.00         | 14.66000       | 0.0078          | PASSED |

### 6.4. GSM 850 Test results

GSM, Channel 190 / 836.6 MHz

| Temperature [°C] | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|------------------|-----------------|----------------|-----------------|--------|
| 50               | 836.60          | 1.03000        | 0.0012          | PASSED |
| 40               | 836.60          | 2.26000        | 0.0027          | PASSED |
| 30               | 836.60          | -0.58000       | -0.0007         | PASSED |
| 20               | 836.60          | -0.58000       | -0.0007         | PASSED |
| 10               | 836.60          | 0.52000        | 0.0006          | PASSED |
| 0                | 836.60          | 4.58000        | 0.0055          | PASSED |
| -11              | 836.60          | 5.68000        | 0.0068          | PASSED |
| -20              | 836.60          | 6.78000        | 0.0081          | PASSED |
| -30              | 836.60          | 12.14000       | 0.0145          | PASSED |

### 6.5. WCDMA4 Test results

FDD, Channel 1412 / 1732.4 MHz

| Temperature [°C] | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|------------------|-----------------|----------------|-----------------|--------|
| 50               | 1732.40         | -1.44959       | -0.0008         | PASSED |
| 40               | 1732.40         | -2.85339       | -0.0016         | PASSED |
| 30               | 1732.40         | -2.48718       | -0.0014         | PASSED |
| 20               | 1732.40         | -4.66919       | -0.0027         | PASSED |
| 10               | 1732.40         | -5.37109       | -0.0031         | PASSED |
| 0                | 1732.40         | -1.69373       | -0.001          | PASSED |
| -10              | 1732.40         | -0.96130       | -0.0006         | PASSED |
| -20              | 1732.40         | 1.90735        | 0.0011          | PASSED |
| -30              | 1732.40         | 3.12805        | 0.0018          | PASSED |

## 6.6. LTE7 Test results

FDD, CBW 20MHz, QPSK, 100 RB, Channel 21100 / 2535.0 MHz

| Temperature [°C] | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|------------------|-----------------|----------------|-----------------|--------|
| 50               | 2535.00         | -0.48637       | -0.0002         | PASSED |
| 40               | 2535.00         | 1.97411        | 0.0008          | PASSED |
| 30               | 2535.00         | 0.51498        | 0.0002          | PASSED |
| 20               | 2535.00         | 1.61648        | 0.0006          | PASSED |
| 10               | 2535.00         | 0.04292        | 0               | PASSED |
| 0                | 2535.00         | 0.97275        | 0.0004          | PASSED |
| -10              | 2535.00         | 0.30041        | 0.0001          | PASSED |
| -20              | 2535.00         | 0.97275        | 0.0004          | PASSED |
| -30              | 2535.00         | -1.00000       | -0.0004         | PASSED |

## 6.7. LTE12 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 23095 / 707.5 MHz

| Temperature [°C] | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|------------------|-----------------|----------------|-----------------|--------|
| 50               | 707.50          | -0.82970       | -0.0012         | PASSED |
| 40               | 707.50          | -0.74387       | -0.001          | PASSED |
| 30               | 707.50          | -0.37193       | -0.0005         | PASSED |
| 20               | 707.50          | -0.64373       | -0.0009         | PASSED |
| 10               | 707.50          | -0.95844       | -0.0014         | PASSED |
| 0                | 707.50          | -0.10014       | -0.0001         | PASSED |
| -10              | 707.50          | -0.10014       | -0.0001         | PASSED |
| -20              | 707.50          | -1.40190       | -0.002          | PASSED |
| -30              | 707.50          | 1.15871        | 0.0016          | PASSED |

## 6.8. LTE17 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 23790 / 710.0 MHz

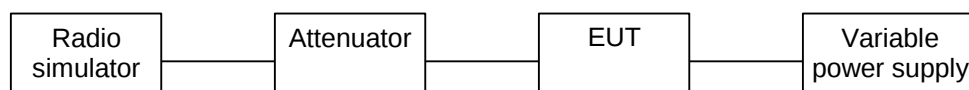
| Temperature [°C] | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|------------------|-----------------|----------------|-----------------|--------|
| 50               | 710.00          | -0.25749       | -0.0004         | PASSED |
| 40               | 710.00          | -0.74387       | -0.001          | PASSED |
| 30               | 710.00          | -0.61512       | -0.0009         | PASSED |
| 20               | 710.00          | -0.42915       | -0.0006         | PASSED |
| 10               | 710.00          | 0.24319        | 0.0003          | PASSED |
| 0                | 710.00          | -0.25749       | -0.0004         | PASSED |
| -10              | 710.00          | 0.77248        | 0.0011          | PASSED |
| -20              | 710.00          | 0.45776        | 0.0006          | PASSED |
| -30              | 710.00          | 0.84400        | 0.0012          | PASSED |

## 7. Frequency stability, voltage variation

(FCC §2.1055(d), §27.54, RSS-133 6.3, RSS-132 4.3, RSS-139 6.3, RSS-199 4.3, RSS-130 4.3, RSS-130 4.3 (a))

|                                                 |                                         |
|-------------------------------------------------|-----------------------------------------|
| EUT with DUT number                             | RM-1128, DUT 500110                     |
| Accessories with DUT numbers                    | CC-3097, DUT 500128; SD-133, DUT 500120 |
| Operation Voltage [V] / [Hz]                    | Nominal                                 |
| Results                                         | PASSED                                  |
| Remarks                                         | Test was in conducted RF2 system.       |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 23/50/100.1                             |
| Date of measurements                            | 21-Jul-2015                             |
| Measured by                                     | Dou Rubo                                |

### 7.1. Test Setup



### 7.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards as follows:

The EUT battery was replaced with an adjustable power supply. The frequency stability was measured at nominal voltage and at the battery cut-off point.

Limits for frequency stability, voltage variation measurements

| Frequency deviation [ppm] |
|---------------------------|
| +/- 2.5                   |

### 7.3. GSM 1900 Test results

GSM, Channel 661 / 1880.0 MHz

| Voltage level [V]           | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|-----------------------------|-----------------|----------------|-----------------|--------|
| Max / 4.2                   | 1880.00         | -7.49000       | -0.004          | PASSED |
| Battery cut-off point / 3.4 | 1880.00         | -2.39000       | -0.0013         | PASSED |
| Nominal / 3.7               | 1880.00         | -6.65000       | -0.0035         | PASSED |

### 7.4. GSM 850 Test results

GSM, Channel 190 / 836.6 MHz

| Voltage level [V]           | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|-----------------------------|-----------------|----------------|-----------------|--------|
| Max / 4.2                   | 836.60          | -2.32000       | -0.0028         | PASSED |
| Battery cut-off point / 3.4 | 836.60          | -1.16000       | -0.0014         | PASSED |
| Nominal / 3.7               | 836.60          | 0.90000        | 0.0011          | PASSED |

### 7.5. WCDMA4 Test results

FDD, Channel 1412 / 1732.4 MHz

| Voltage level [V]           | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|-----------------------------|-----------------|----------------|-----------------|--------|
| Max / 4.2                   | 1732.40         | -4.04358       | -0.0023         | PASSED |
| Battery cut-off point / 3.4 | 1732.40         | -3.96729       | -0.0023         | PASSED |
| Nominal / 3.7               | 1732.40         | -6.62231       | -0.0038         | PASSED |

### 7.6. LTE7 Test results

FDD, CBW 20MHz, QPSK, 100 RB, Channel 21100 / 2535.0 MHz

| Voltage level [V]           | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|-----------------------------|-----------------|----------------|-----------------|--------|
| Max / 4.2                   | 2535.00         | 0.30041        | 0.0001          | PASSED |
| Battery cut-off point / 3.4 | 2535.00         | -0.87261       | -0.0003         | PASSED |
| Nominal / 3.7               | 2535.00         | 0.51498        | 0.0002          | PASSED |

### 7.7. LTE12 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 23095 / 707.5 MHz

| Voltage level [V]           | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|-----------------------------|-----------------|----------------|-----------------|--------|
| Max / 4.2                   | 707.50          | -1.95980       | -0.0028         | PASSED |
| Battery cut-off point / 3.4 | 707.50          | -0.40054       | -0.0006         | PASSED |
| Nominal / 3.7               | 707.50          | -0.42915       | -0.0006         | PASSED |

## 7.8. LTE17 Test results

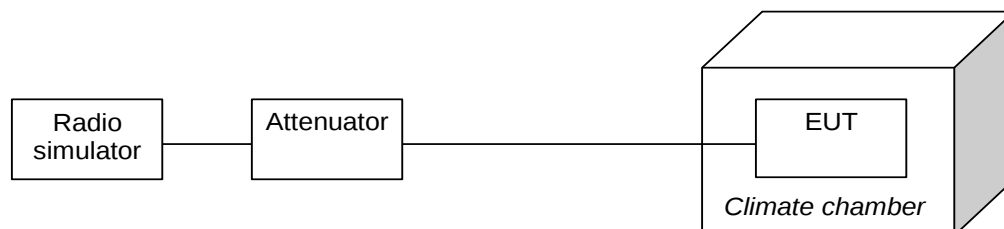
FDD, CBW 10MHz, QPSK, 50 RB, Channel 23790 / 710.0 MHz

| Voltage level [V]           | Frequency [MHz] | Deviation [Hz] | Deviation [ppm] | Result |
|-----------------------------|-----------------|----------------|-----------------|--------|
| Max / 4.2                   | 710.00          | -0.14305       | -0.0002         | PASSED |
| Battery cut-off point / 3.4 | 710.00          | -1.18733       | -0.0017         | PASSED |
| Nominal / 3.7               | 710.00          | 0.01431        | 0               | PASSED |

## 8. Frequency stability, temperature variation, (Band edge method) (RSS-139 6.3, RSS-199 4.3, RSS-130 4.3, RSS-130 4.3 (a))

|                                                        |                                         |
|--------------------------------------------------------|-----------------------------------------|
| <b>EUT with DUT number</b>                             | RM-1128, DUT 500110                     |
| <b>Accessories with DUT numbers</b>                    | CC-3097, DUT 500128; SD-133, DUT 500120 |
| <b>Operation Voltage [V] / [Hz]</b>                    | Nominal                                 |
| <b>Results</b>                                         | PASSED                                  |
| <b>Remarks</b>                                         | Test was in conducted RF2 system.       |
| <b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b> | 21/59/100.5                             |
| <b>Date of measurements</b>                            | 16-Jul-2015                             |
| <b>Measured by</b>                                     | Dou Rubo                                |

### 8.1. Test Setup



### 8.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards as follows:

The climate chamber temperature is set to the maximum value and the temperature is allowed to stabilize.

The EUT is placed in the chamber.

The EUT is set in idle mode for 15 minutes.

The EUT is set to transmit.

The transmit frequency error was measured immediately.

The steps c - e were repeated for each temperature.

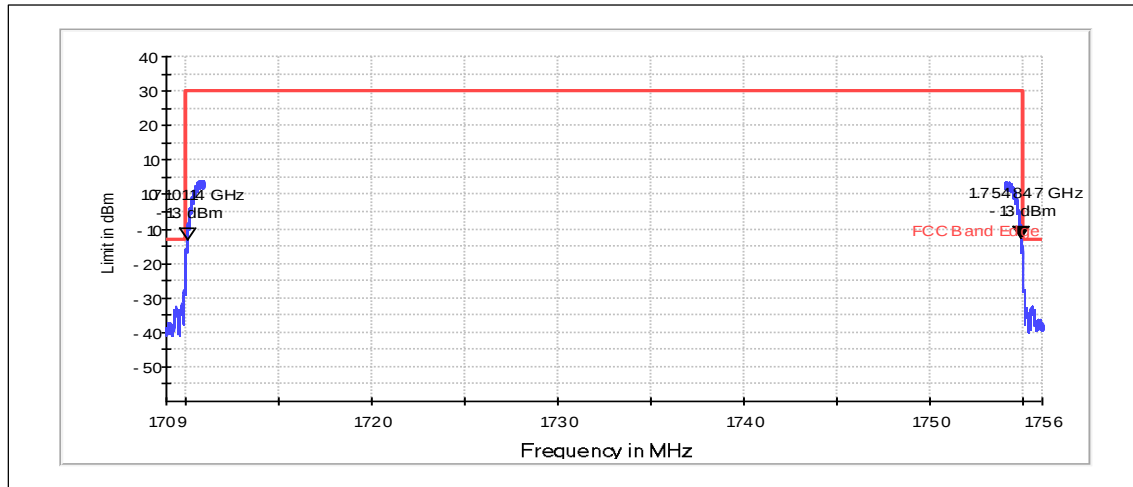
The results were then calculated as per section 4.3 of RSS-130.

Limits for frequency stability, temperature variation measurements

| Limit                                          |
|------------------------------------------------|
| The results must be within the operating band. |

### 8.3. WCDMA4 Test results

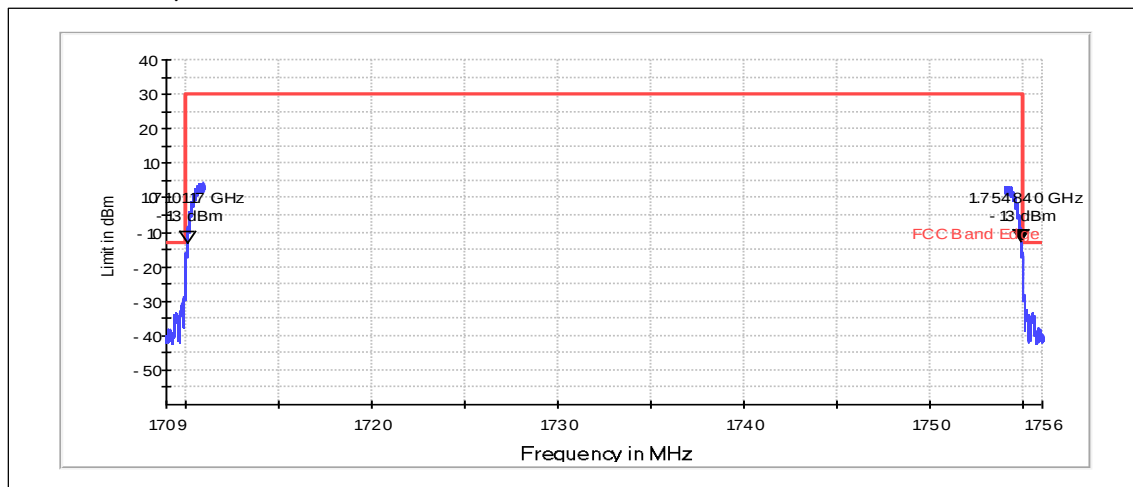
Channel 1412 / 1732.4 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 50               | 14.11438       | 1710.113988      | 1710.113974        | 1754.847415       | 1754.847429        | PASSED |

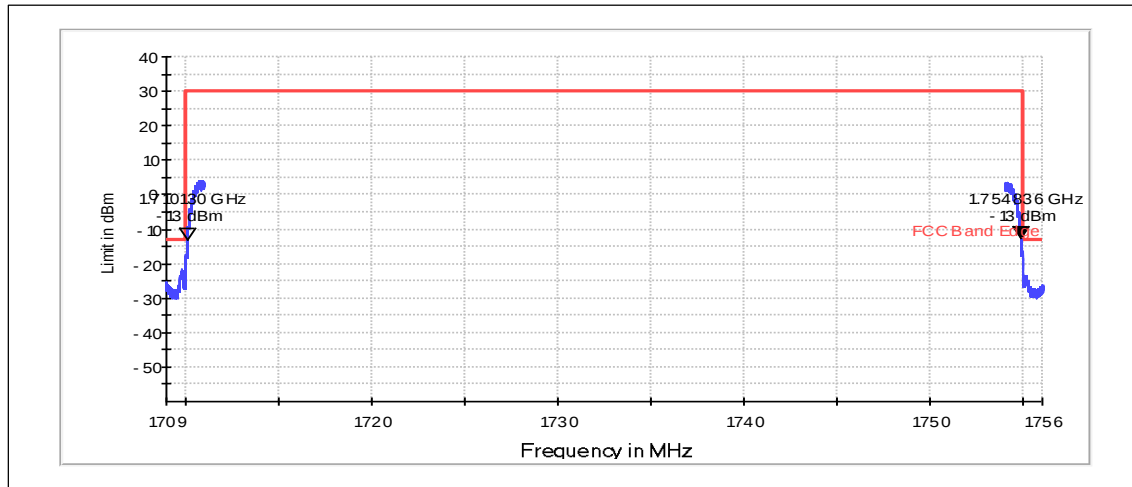
Channel 1412 / 1732.4 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 20               | 15.38086       | 1710.117188      | 1710.117172        | 1754.840216       | 1754.840231        | PASSED |

Channel 1412 / 1732.4 MHz

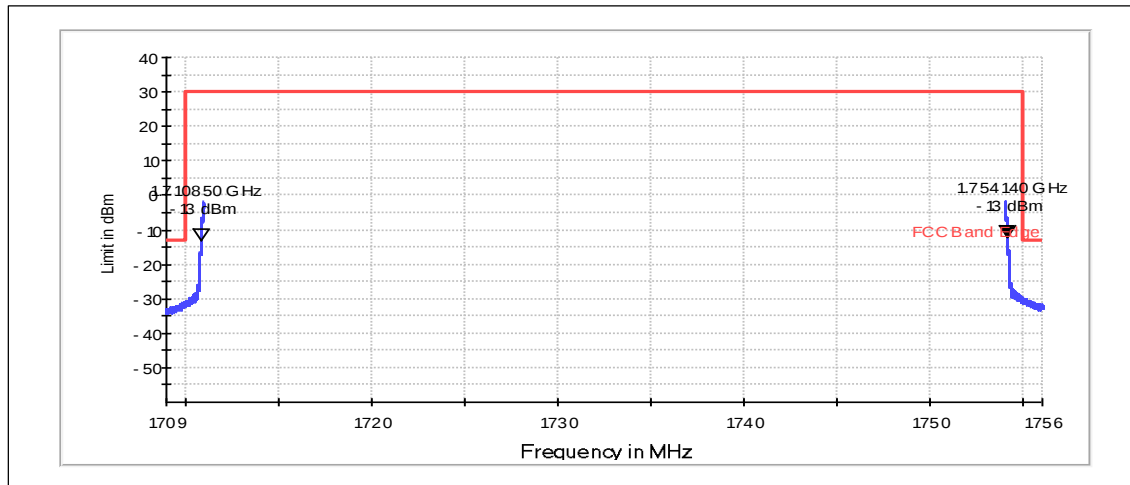


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| -30              | -1.78528       | 1710.130387      | 1710.130385        | 1754.836416       | 1754.836418        | PASSED |

## 8.4. LTE4 Test results

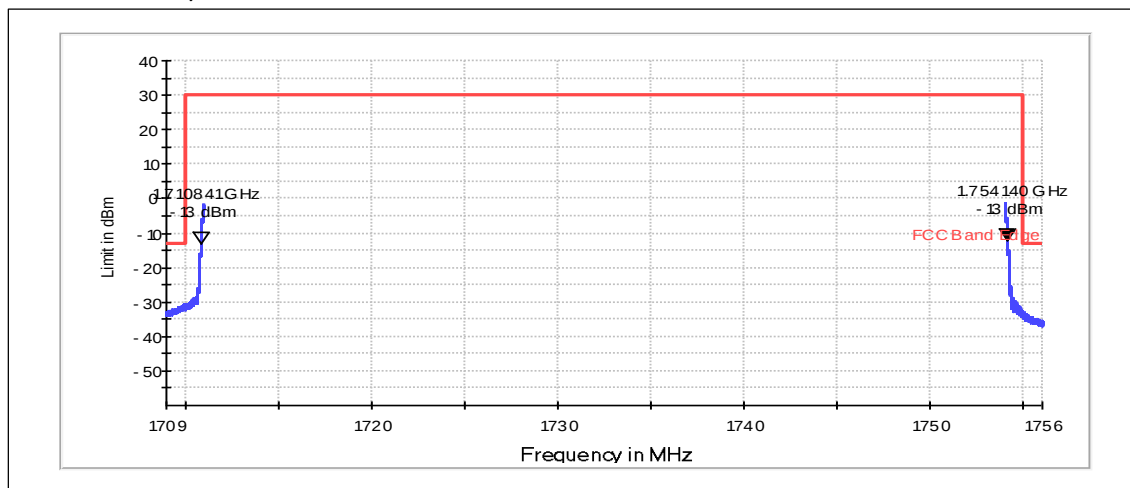
Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker - Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 50               | 0.71526        | 1710.849715      | 1710.849714        | 1754.140086       | 1754.140086        | PASSED |

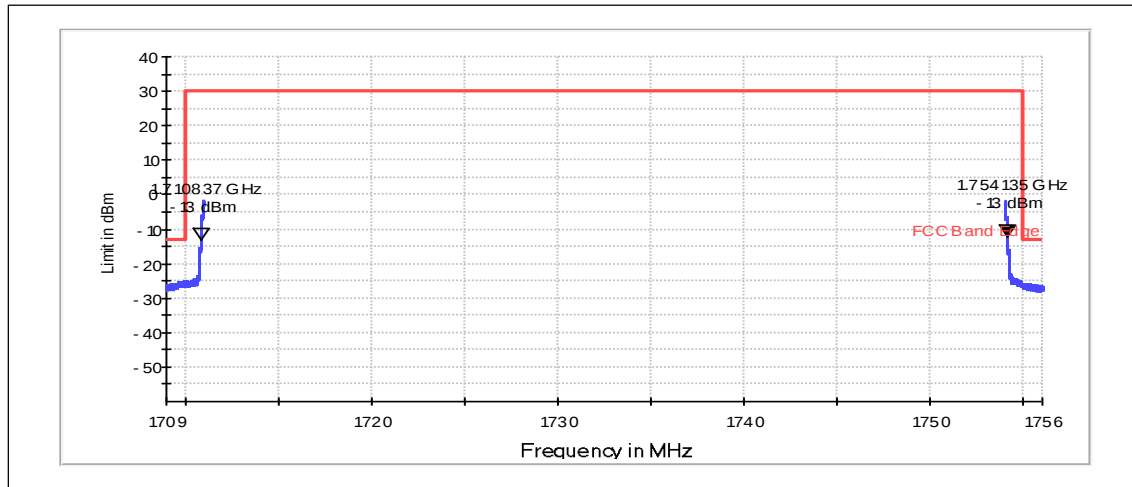
Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker - Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 20               | 0.47207        | 1710.841315      | 1710.841315        | 1754.139886       | 1754.139886        | PASSED |

#### Channel 20175 / 1732.5 MHz

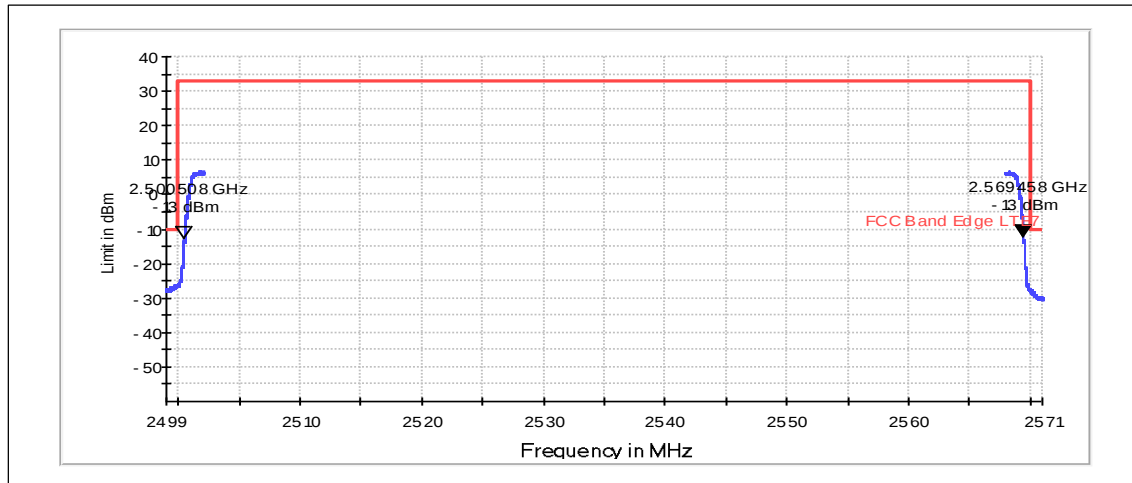


RMS (RBW: 500 kHz, VBW: 2 MHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| -30              | 1.43051        | 1710.836916      | 1710.836914        | 1754.135286       | 1754.135287        | PASSED |

#### 8.5. LTE7 Test results

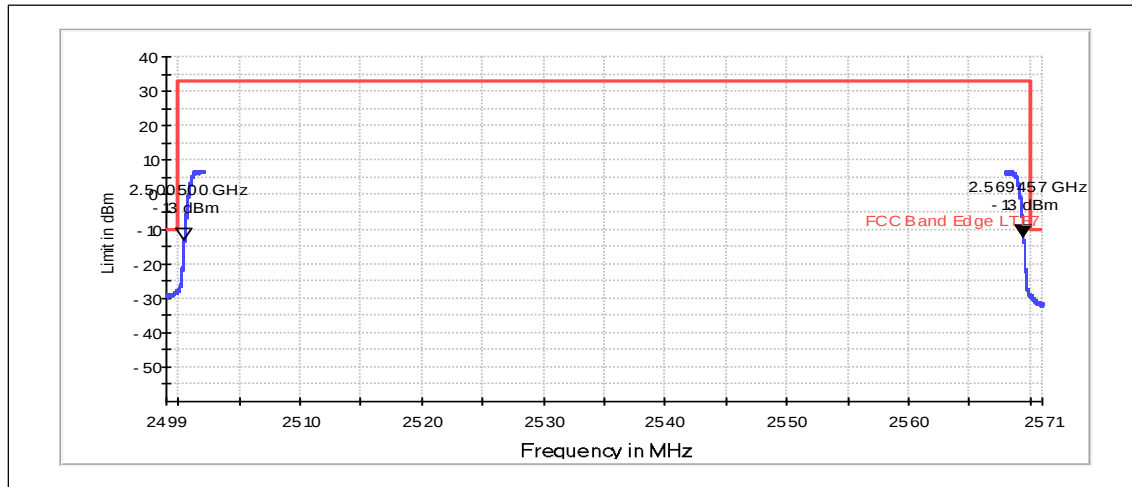
##### Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 50               | 2.87533        | 2500.508399      | 2500.508396        | 2569.458004       | 2569.458007        | PASSED |

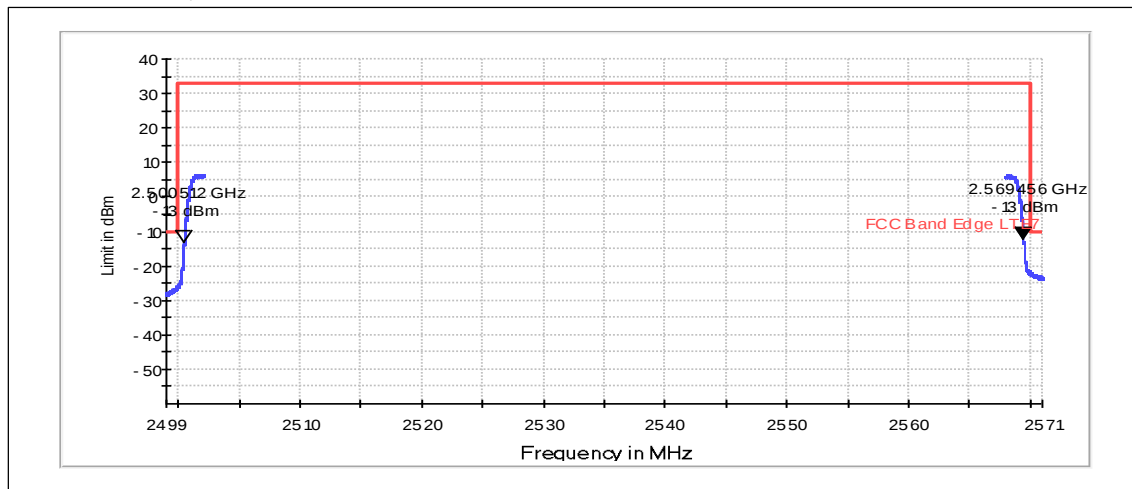
Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 20               | 1.98841        | 2500.500000      | 2500.499998        | 2569.457404       | 2569.457406        | PASSED |

Channel 21100 / 2535.0 MHz

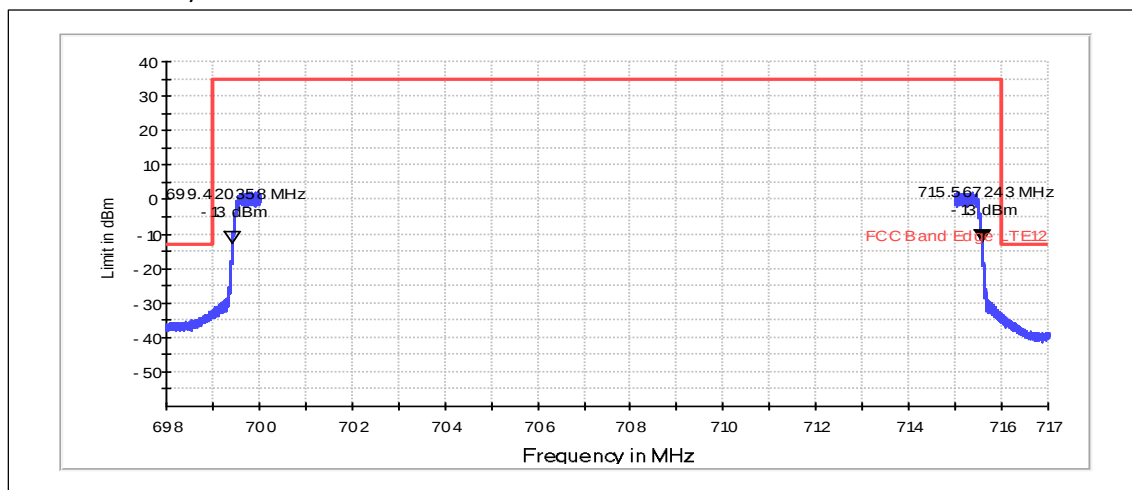


RMS (RBW: 500 kHz, VBW: 2 MHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| -30              | 4.94957        | 2500.512298      | 2500.512293        | 2569.455904       | 2569.455909        | PASSED |

## 8.6. LTE12 Test results

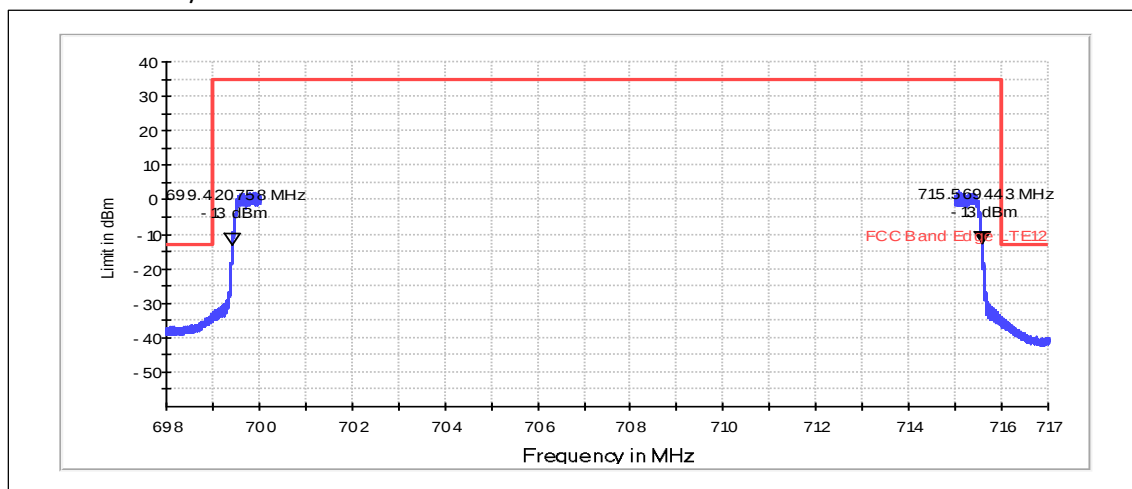
Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 50               | -0.04292       | 699.420358       | 699.420357         | 715.567243        | 715.567243         | PASSED |

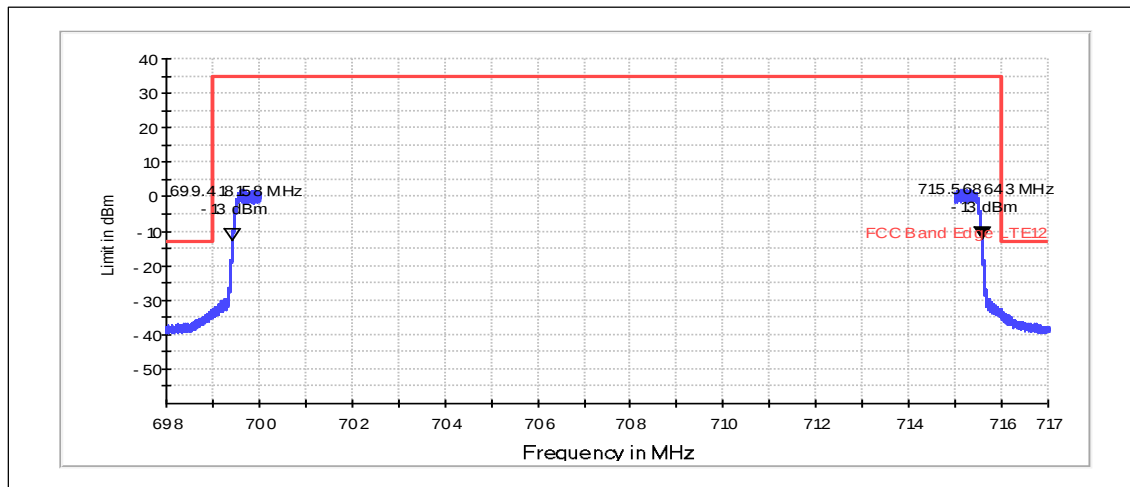
Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 20               | -0.75817       | 699.420757       | 699.420757         | 715.569443        | 715.569443         | PASSED |

### Channel 23095 / 707.5 MHz

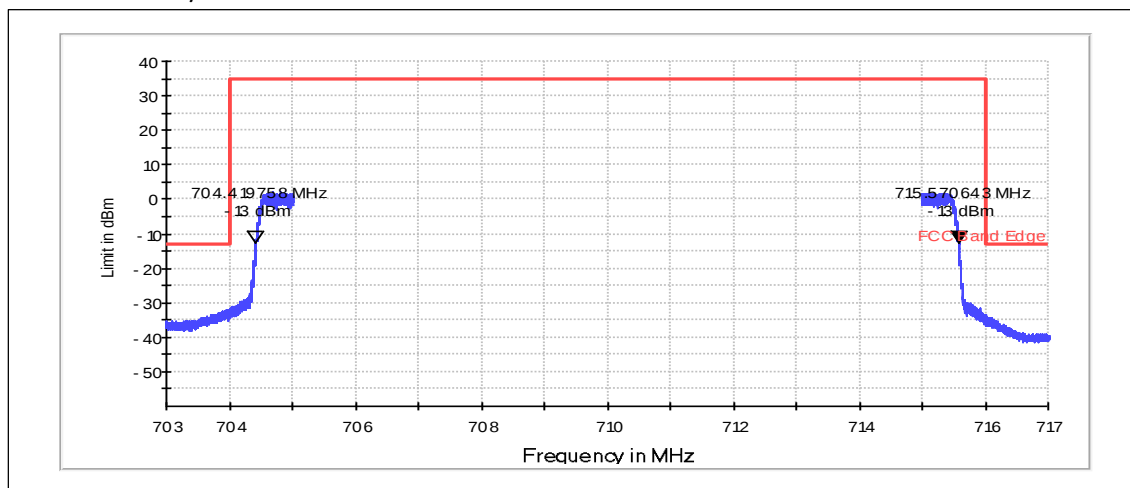


RMS (RBW: 100 kHz, VBW: 300 kHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| -30              | 0.71526        | 699.418158       | 699.418157         | 715.568643        | 715.568643         | PASSED |

## 8.7. LTE17 Test results

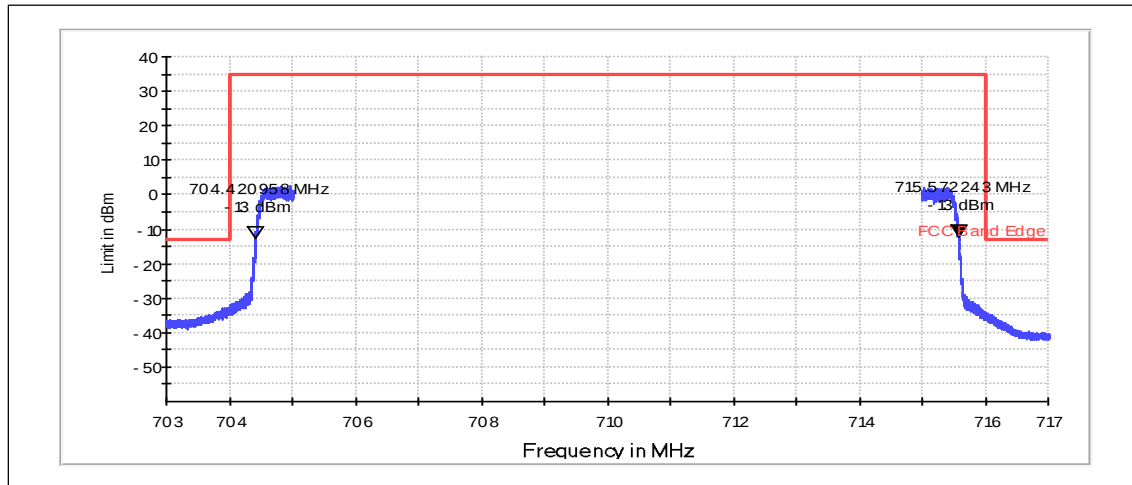
### Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 50               | -1.20163       | 704.419758       | 704.419756         | 715.570642        | 715.570644         | PASSED |

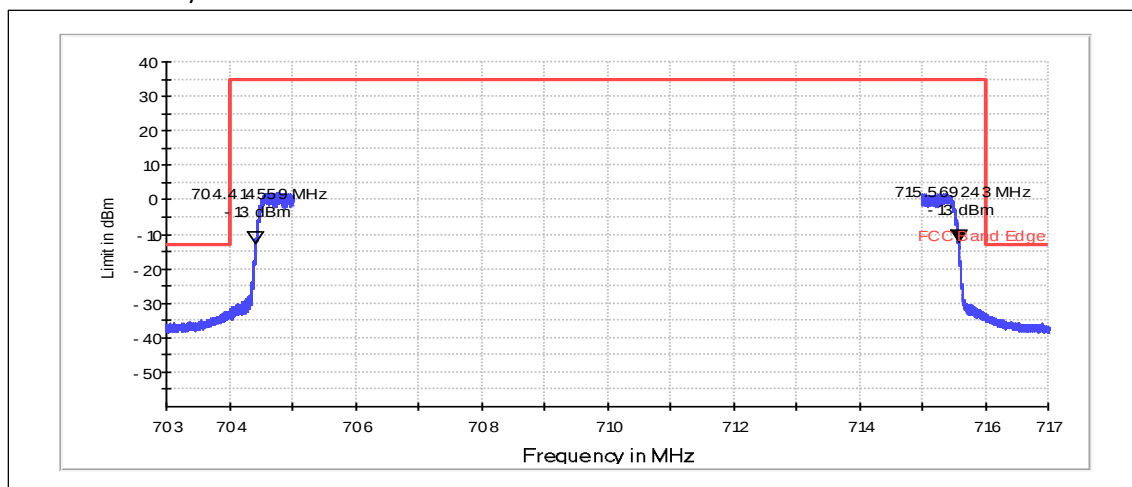
SChannel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| 20               | -0.12875       | 704.420957       | 704.420957         | 715.572242        | 715.572242         | PASSED |

Channel 23790 / 710.0 MHz



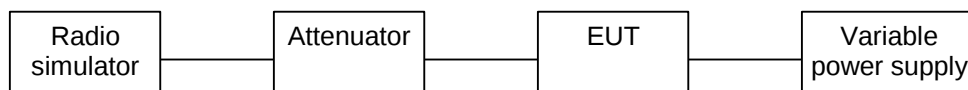
RMS (RBW: 100 kHz, VBW: 300 kHz)

| Temperature [°C] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| -30              | -0.04292       | 704.414558       | 704.414558         | 715.569243        | 715.569243         | PASSED |

## 9. Frequency stability, voltage variation, (Band edge method) (RSS-139 6.3)

|                                                 |                                         |
|-------------------------------------------------|-----------------------------------------|
| EUT with DUT number                             | RM-1128, DUT 500110                     |
| Accessories with DUT numbers                    | CC-3097, DUT 500128; SD-133, DUT 500120 |
| Operation Voltage [V] / [Hz]                    | Nominal                                 |
| Results                                         | PASSED                                  |
| Remarks                                         | Test was in conducted RF2 system.       |
| Temp [°C] / Humidity [%RH] / Air Pressure [kPa] | 23/50/100.1                             |
| Date of measurements                            | 21-Jul-2015                             |
| Measured by                                     | Dou Rubo                                |

### 9.1. Test Setup



### 9.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards as follows:

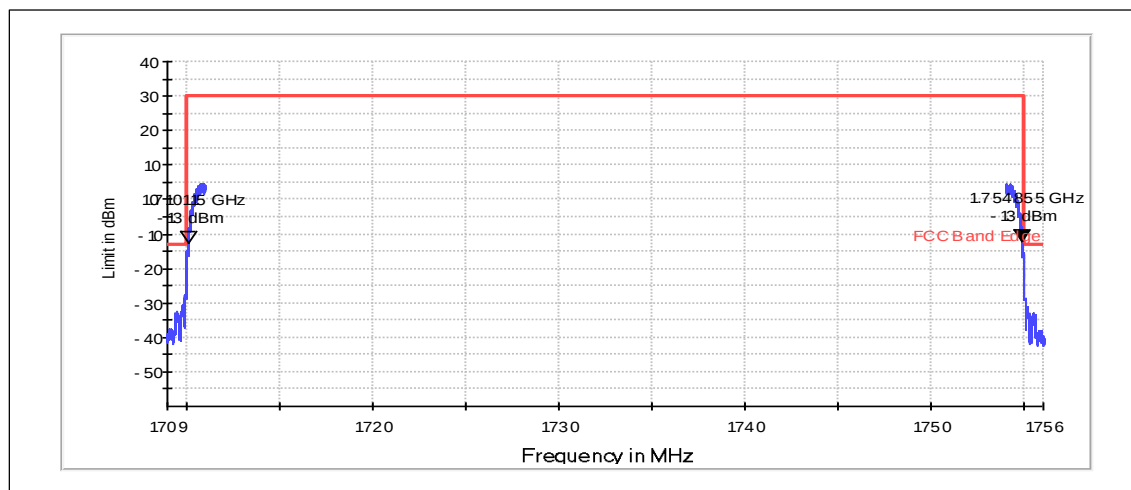
The EUT battery was replaced with an adjustable power supply. The frequency stability was measured at nominal voltage and at the battery cut-off point.

The results were then calculated as per section 4.3 of RSS-130.

Limits for frequency stability, voltage variation measurements

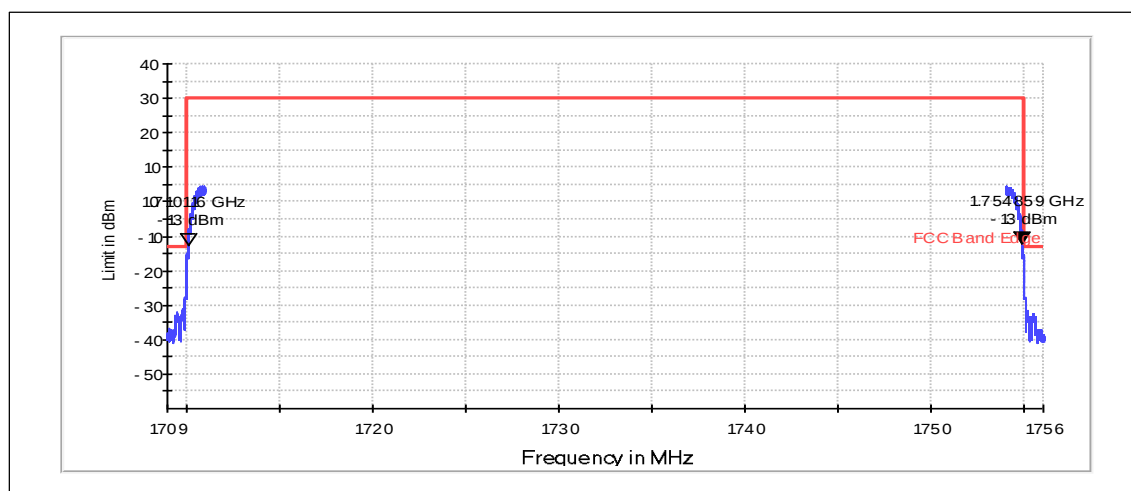
| Limit                                          |
|------------------------------------------------|
| The results must be within the operating band. |

### 9.3. WCDMA4 Test results



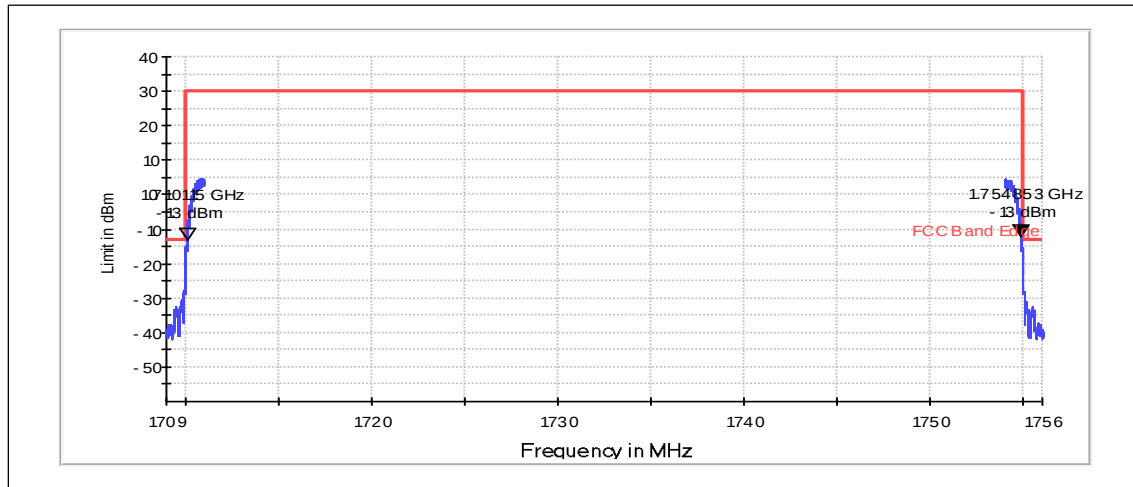
RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Max / 4.2         | -3.60107       | 1710.114588      | 1710.114584        | 1754.855414       | 1754.855418        | PASSED |



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Voltage level [V]           | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-----------------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Battery cut-off point / 3.4 | 12.72583       | 1710.115988      | 1710.115975        | 1754.858614       | 1754.858626        | PASSED |

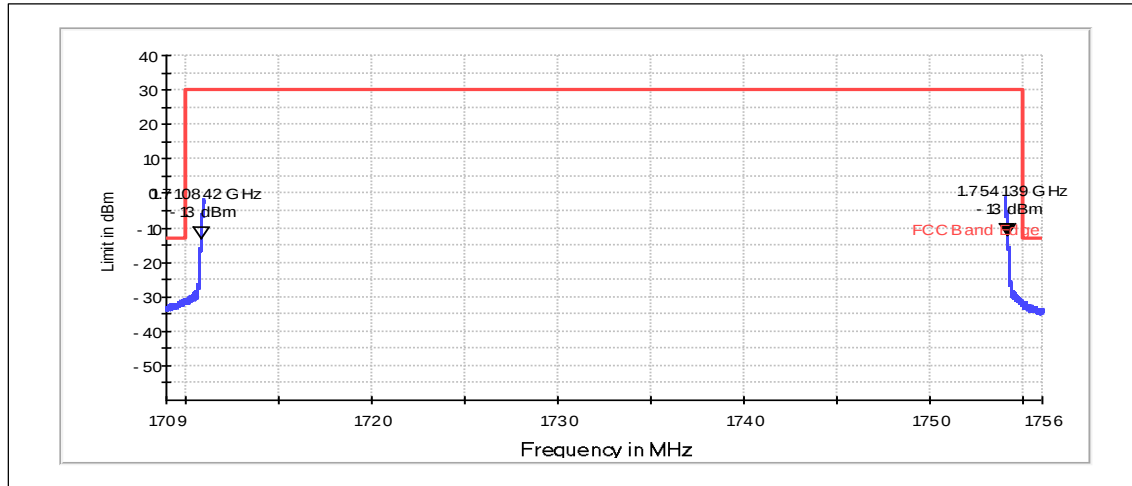


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Nominal / 3.7     | 9.36890        | 1710.114788      | 1710.114779        | 1754.853414       | 1754.853424        | PASSED |

## 9.4. LTE4 Test results

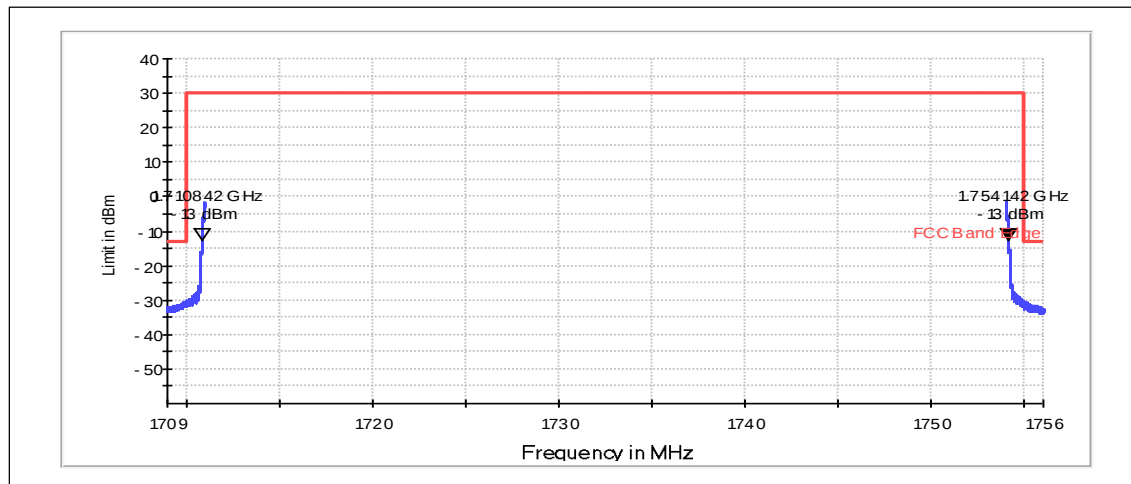
Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Max / 4.2         | 1.54495        | 1710.841515      | 1710.841514        | 1754.139086       | 1754.139087        | PASSED |

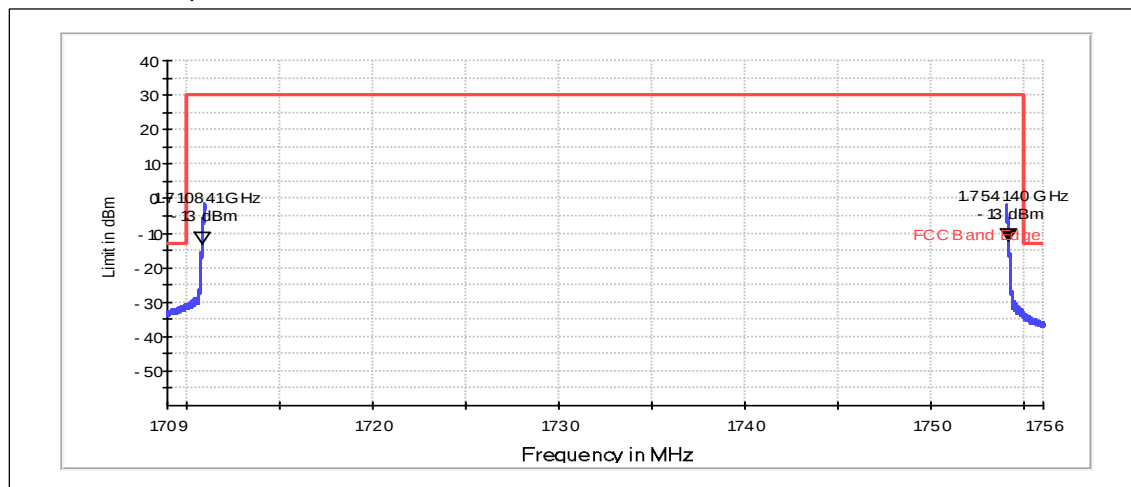
Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Voltage level [V]           | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-----------------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Battery cut-off point / 3.4 | 0.10014        | 1710.841515      | 1710.841515        | 1754.142285       | 1754.142285        | PASSED |

Channel 20175 / 1732.5 MHz

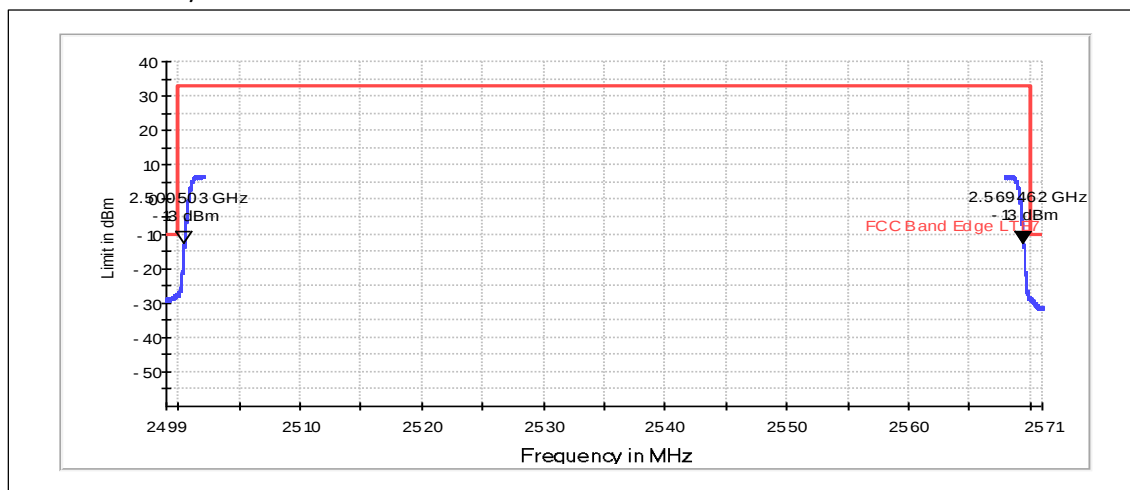


RMS (RBW: 500 kHz, VBW: 2 MHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Nominal / 3.7     | 999.00000      | 1710.840515      | 1710.839516        | 1754.139686       | 1754.140685        | PASSED |

## 9.5. LTE7 Test results

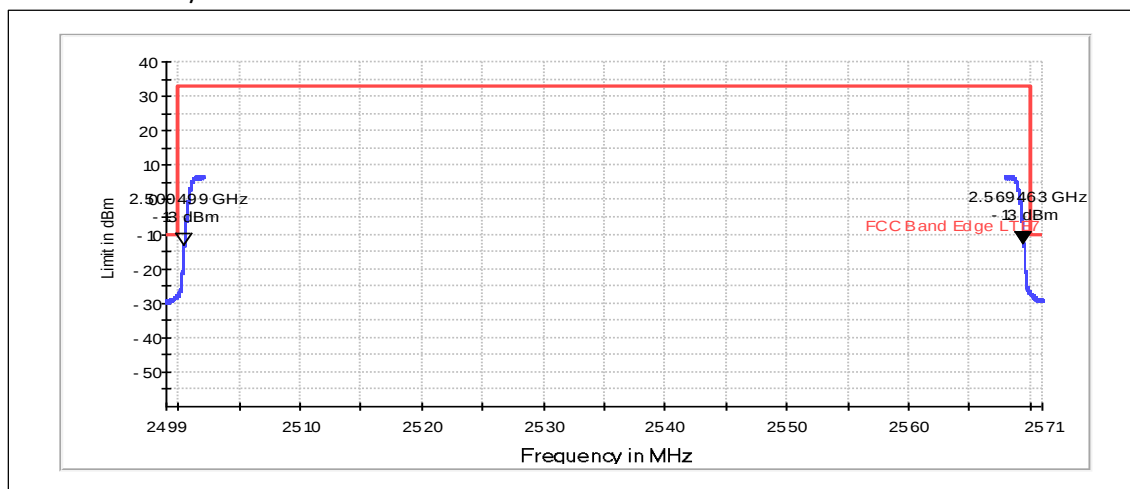
Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Max / 4.2         | 1.60217        | 2500.503299      | 2500.503298        | 2569.462203       | 2569.462205        | PASSED |

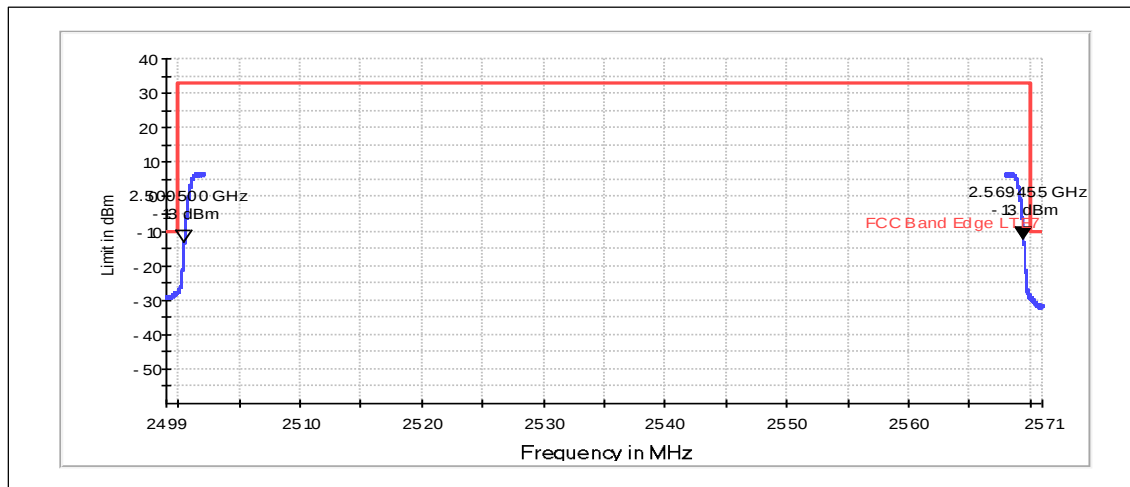
Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

| Voltage level [V]           | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-----------------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Battery cut-off point / 3.4 | 3.01838        | 2500.498500      | 2500.498497        | 2569.463103       | 2569.463106        | PASSED |

#### Channel 21100 / 2535.0 MHz

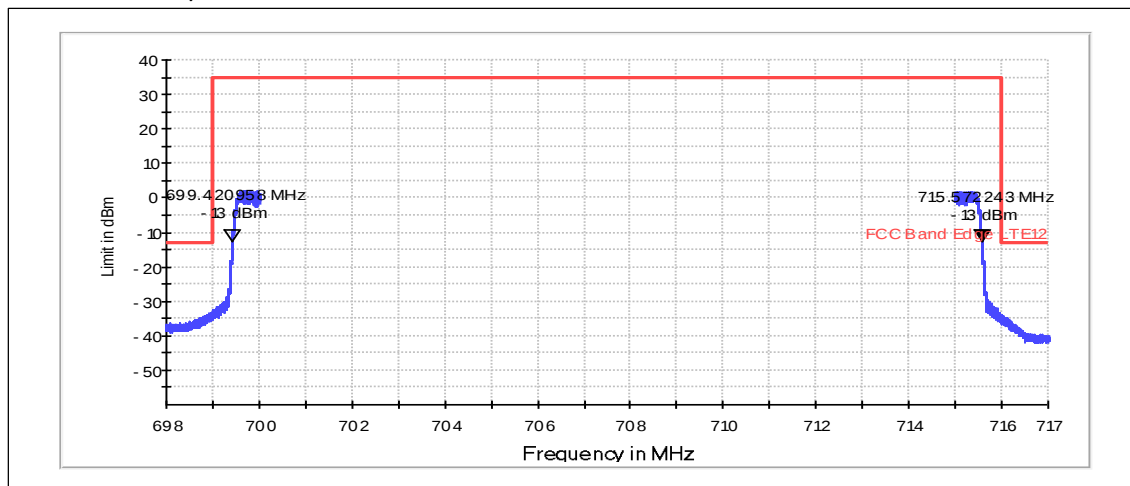


RMS (RBW: 500 kHz, VBW: 2 MHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Nominal / 3.7     | -0.21458       | 2500.500300      | 2500.500299        | 2569.455304       | 2569.455304        | PASSED |

### 9.6. LTE12 Test results

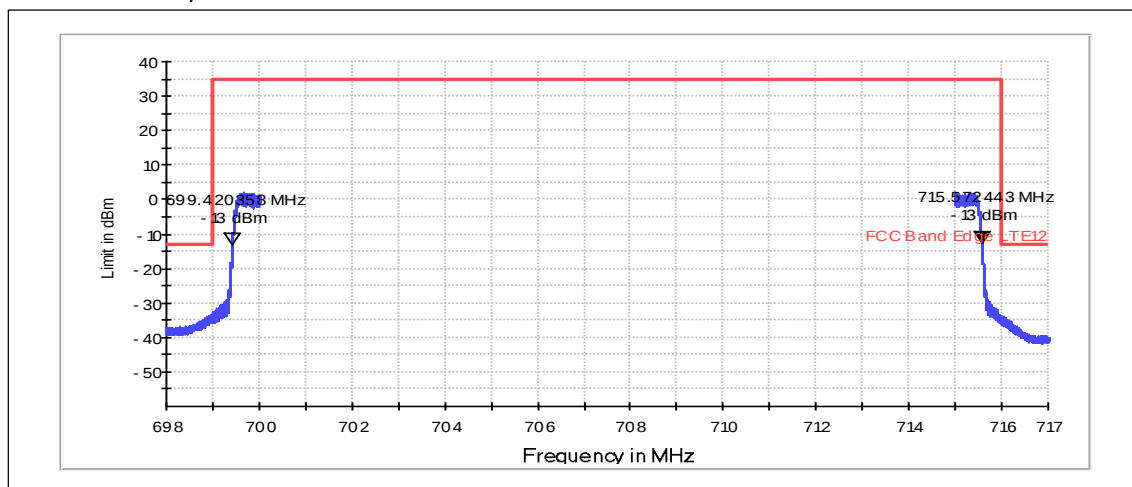
#### Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker – Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Max / 4.2         | -0.05722       | 699.420957       | 699.420957         | 715.572242        | 715.572242         | PASSED |

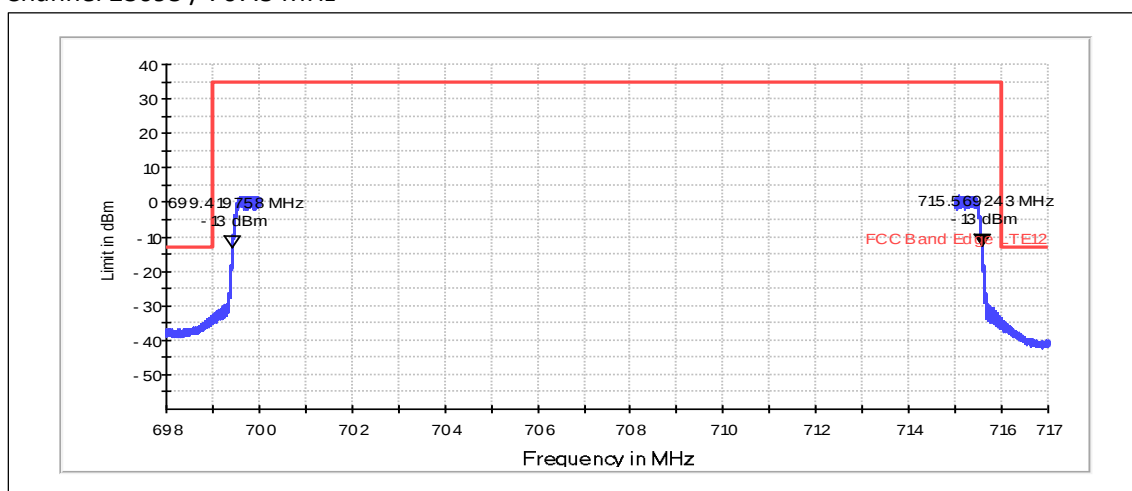
Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Voltage level [V]           | Deviation [Hz] | Low marker [MHz] | Marker - Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-----------------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Battery cut-off point / 3.4 | -0.21458       | 699.420358       | 699.420357         | 715.572442        | 715.572443         | PASSED |

Channel 23095 / 707.5 MHz

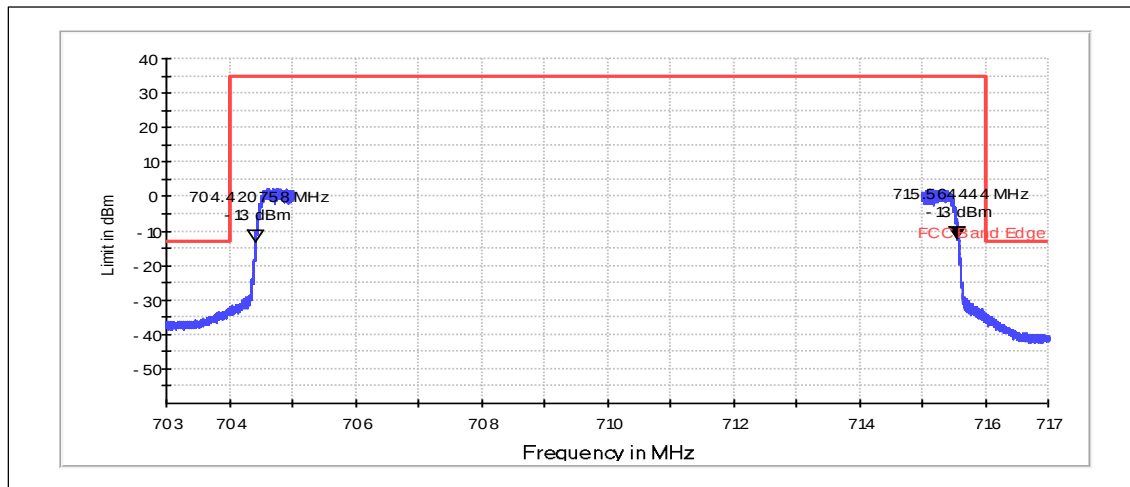


RMS (RBW: 100 kHz, VBW: 300 kHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker - Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Nominal / 3.7     | -0.82970       | 699.419758       | 699.419757         | 715.569243        | 715.569243         | PASSED |

## 9.7. LTE17 Test results

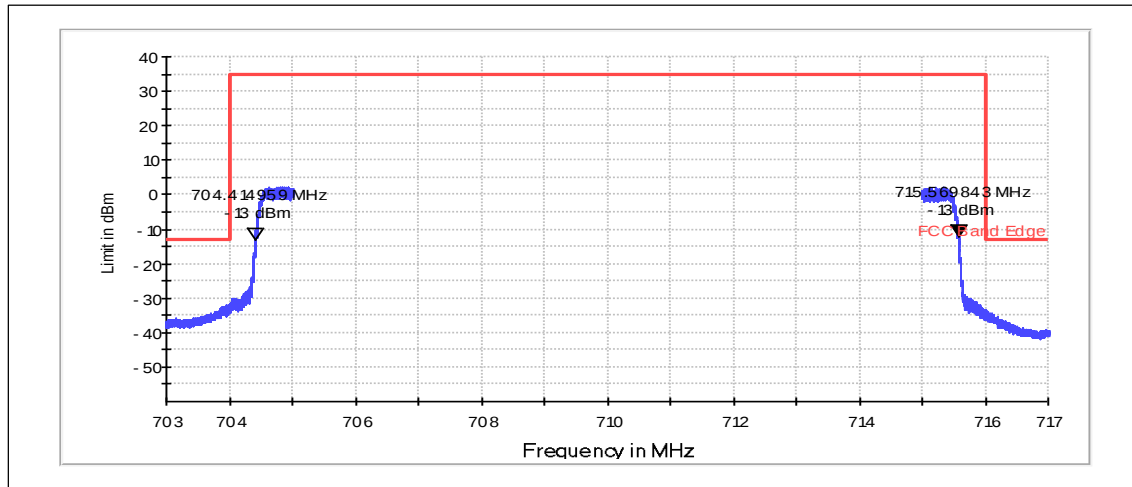
Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker - Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Max / 4.2         | -0.90122       | 704.420757       | 704.420756         | 715.564443        | 715.564444         | PASSED |

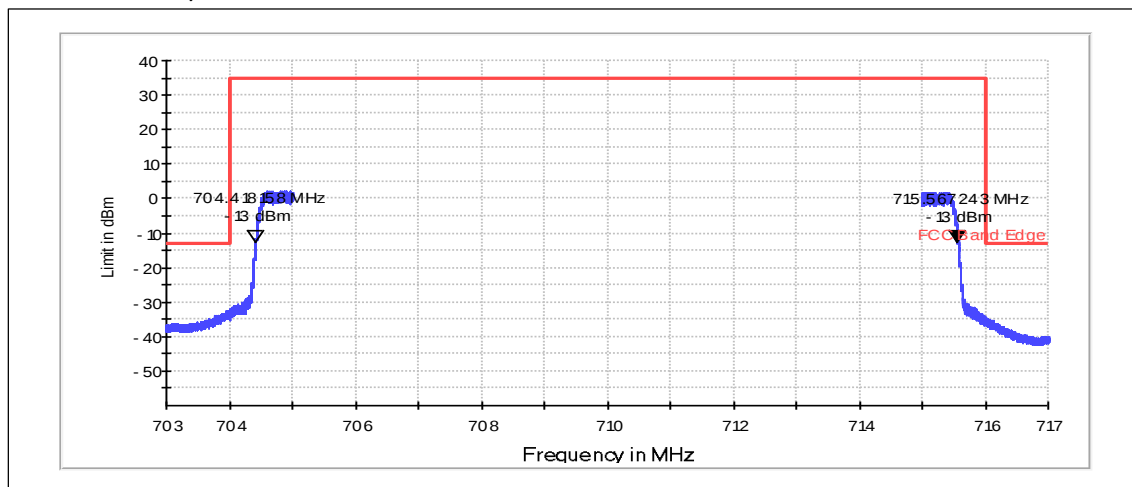
Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Voltage level [V]           | Deviation [Hz] | Low marker [MHz] | Marker - Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-----------------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Battery cut-off point / 3.4 | -0.72956       | 704.414958       | 704.414957         | 715.569843        | 715.569843         | PASSED |

Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

| Voltage level [V] | Deviation [Hz] | Low marker [MHz] | Marker - Dev [MHz] | High marker [MHz] | Marker + Dev [MHz] | Result |
|-------------------|----------------|------------------|--------------------|-------------------|--------------------|--------|
| Nominal / 3.7     | -0.21458       | 704.418158       | 704.418157         | 715.567243        | 715.567243         | PASSED |

## 10. Test Equipment

### 10.1. Conducted measurements

| Eq. No      | Equipment                              | Type                | Manufacturer            | Used in            |
|-------------|----------------------------------------|---------------------|-------------------------|--------------------|
| -           | BT / WLAN Antenna                      | SPA 2400/75/9/0/V   | Huber-Suhner            | 15C, 15B           |
| -           | BT / WLAN Antenna                      | SPA 2400/75/9/0/V   | Huber-Suhner            | 15C, 15B           |
| -           | RF Emission Software                   | EMC32 Test Software | R&S                     | 22/24/27, 15C, 15B |
| BJPCHW0020  | DC Power supply                        | Hp6632B             | HP                      | 22/24/27, 15C      |
| BJPCPT0040  | Receiver                               | ESCS30              | R&S                     | 15C,15B            |
| BJPCPT0069  | LISN 50 $\mu$ H                        | ESH3-Z5             | R&S                     | 15C,15B            |
| BJPCTC0323  | Signal Generator                       | SMR 27              | R&S                     | 22/24/27, 15C, 15B |
| BJPCPT0073  | Signal Generator                       | SMR 20              | R&S                     | 22/24/27, 15C, 15B |
| BJPCPT0191  | Pulse Limiter                          | ESH3-Z2             | R&S                     | 15C,15B            |
| BJPCPT0208  | UPS                                    | PULSAR RX10         | Merlin gerin            | 15C,15B            |
| BJPCTC0001  | DIGITAL CAMERA                         | PC1015              | CANON                   | 15C,15R            |
| BJPCTC0017  | Communication Tester                   | CMU200              | R&S                     | 22/24/27, 15C, 15B |
| BJPCTC0062  | AC Power source                        | 6812B               | Hp                      | 15C,15B            |
| BJPCTC0067  | Bluetooth Tester                       | CBT                 | R&S                     | 22/24/27, 15C      |
| BJPCTC0082  | Humidity and Temperature Sensor        | 175-H2              | Testo                   | 15B,15C            |
| BJPCTC0088  | Absolut pressure meter                 | testo 511           | Testo                   | 22/24/27, 15B,15C  |
| BJPCTC0089  | Tempreture Test chamber                | VT4002              | Votsch industrietechnik | 22/24/27, 15C      |
| BJPCTC0090  | FSP spectrum analyzer                  | FSP30               | R&S                     | 22/24/27, 15C      |
| BJPCTC0094  | GPIO-RS232 convertor                   | GPIO-RS232          | NI                      | 22/24/27, 15C      |
| BJPCTC0112  | Power Splitter                         | 11667B              | Agilent                 | 22/24/27, 15C      |
| BJPCTC0127  | AC Power source                        | SOYI-500VA          | SOYI                    | 15B 15C            |
| BJPCTC0128  | Communication antenna                  | JTXLB-10180         | A-INFOMW                | 22/24/27 15B 15C   |
| BJPCTC0129  | Communication antenna                  | JTXLB-10180         | A-INFOMW                | 22/24/27 15B 15C   |
| BJPCTC0131  | Communication tester                   | CMW500              | R&S                     | 22/24/27 15B 15C   |
| BJPCTC0136  | Communication antenna                  | JTXLB-880-NF        | A-INFOMW                | 15B 15C            |
| BJPCTC0306  | Power Splitter                         | 11667B              | Agilent                 | 22/24/27, 15C      |
| BJPCTC0305  | GPIO converter                         | GPIO-RS232          | NI                      | 22/24/27, 15C      |
| BJPCTC0304  | Spectrum Analyser                      | FSV30               | R&S                     | 22/24/27, 15C      |
| BJPCTC0309  | GPIO-RS232 convertor                   | RS232               | NI                      | 22/24/27, 15C      |
| BJPCTC0307  | Dual channel battery/charger simulator | 2306                | KEITHLEY                | 22/24/27, 15C      |
| BJPCTC0308  | Dual channel battery/charger simulator | 2306                | KEITHLEY                | 22/24/27, 15C      |
| BJPCTC0352  | Signal Generator 20GHz                 | MG3692B             | Anritsu                 | 22/24/27, 15C      |
| BJBDATC0169 | Tempreture Test chamber                | VT4002              | Votsch                  | 22/24/27, 15C      |
| BJPCTC0334  | Communication Tester                   | CMU200              | R&S                     | 22/24/27, 15C, 15B |
| BJPCTC0342  | Communication Tester                   | CMU200              | R&S                     | 15B, 15C           |
| BJPCTC0343  | Power Splitter                         | 1167A               | Agilent                 | EN300328           |
| BJPCTC0344  | Power Splitter                         | 1167A               | Agilent                 | EN300328           |
| BJPCTC0345  | Power Splitter                         | 1167A               | Agilent                 | EN300328           |
| BJPCTC0346  | Attenuator                             | 8496A               | Agilent                 | EN300328           |
| BJPCTC0347  | Directional Coupler                    | 4226-20             | Narda                   | EN300328           |
| BJPCTC0348  | Signal generator                       | E4438C              | Agilent                 | EN300328           |
| BJPCTC0336  | Signal Generator                       | SMP22               | R&S                     | 22/24/27, 15C      |
| BJPCTC0357  | Signal Generator                       | SMB100A             | R&S                     | -                  |

### 10.2. Radiated measurements

| Eq. No     | Equipment            | Type                | Manufacturer | Used in            |
|------------|----------------------|---------------------|--------------|--------------------|
| -          | BT / WLAN Antenna    | SPA 2400/75/9/0/V   | Huber-Suhner | 15C, 15B           |
| -          | BT / WLAN Antenna    | SPA 2400/75/9/0/V   | Huber-Suhner | 15C, 15B           |
| -          | RF Emission Software | EMC32 Test Software | R&S          | 22/24/27, 15C, 15B |
| BJPCPT0072 | Receiver             | ESIB26              | R&S          | 22/24/27, 15C, 15B |

| Eq. No     | Equipment                       | Type                              | Manufacturer                        | Used in            |
|------------|---------------------------------|-----------------------------------|-------------------------------------|--------------------|
| BJPCPT0150 | High Pass Filter                | WHKS1200-10SS                     | Wainwright                          | 22/24/27, 15C, 15B |
| BJPCPT0151 | Band Reject Filter              | WRCD1880/2000-0.2/40-5SSK         | Wainwright                          | 24, 15B            |
| BJPCPT0154 | Band Reject Filter              | WRCT2402/2480-2400/2483.5-30-20SS | Wainwright                          | 15C, 15B           |
| BJPCPT0166 | Antenna                         | VUBA 9117                         | Swarzbeck                           | 22/24/27           |
| BJPCPT0208 | UPS                             | PULSAR RX10                       | Merlin gerin                        | 15C.15B            |
| BJPCTC0001 | DIGITAL CAMERA                  | PC1015                            | CANON                               | 15C.15R            |
| BJPCTC0007 | Antenna                         | HL562                             | R&S                                 | 22/24/27, 15C, 15B |
| BJPCTC0029 | Antenna                         | HF906                             | R&S                                 | 22/24/27, 15C, 15B |
| BJPCTC0034 | Band Reject Filter              | WRCT 800/880-0.2/40-5SSK          | Wainwright                          | 22, 15B            |
| BJPCTC0049 | Preamplifier                    | Blma 0118-1A-Bt                   | Bonn                                | 22/24/27, 15C, 15B |
| BJPCTC0055 | Communication Tester            | CMU200                            | R&S                                 | 22/24/27,15C,15B   |
| BJPCTC0058 | Bluetooth Tester                | CBT                               | R&S                                 | 15C, 15B           |
| BJPCTC0062 | AC Power source                 | 6812B                             | Hp                                  | 15C.15B            |
| BJPCTC0064 | Band Reject Filter              | WRCG1877/1883-1870/1890-40/6SS    | Wainwright                          | 24, 15B            |
| BJPCTC0071 | Multi-Device Controller         | 2090                              | EMCO                                | 22/24/27, 15C, 15B |
| BJPCTC0072 | Anechoic Chamber                | 3 m Semi / Full Anechoic Chamber  | ETS                                 | 22/24/27, 15C, 15B |
| BJPCTC0073 | MAST                            | Model-TR/POL                      | ETS                                 | 22/24/27, 15C, 15B |
| BJPCTC0074 | MAST                            | Model 2070-2                      | ETS                                 | 22/24/27, 15C, 15B |
| BJPCTC0075 | Turntable                       | Model 2188                        | ETS-EMCO                            | 22/24/27, 15C, 15B |
| BJPCTC0081 | Humidity and Temperature Sensor | 175-H2                            | Testo                               | 15B, 15C           |
| BJPCTC0088 | Absolut pressure meter          | testo 511                         | Testo                               | 22/24/27, 15B,15C  |
| BJPCTC0124 | Attenuator                      | SA18N200W-40                      | Fairview Microwave                  | -                  |
| BJPCTC0125 | Loop Antenna                    | HFH2-Z2                           | R&S                                 | 15C                |
| BJPCTC0126 | Tripod                          | FHU-Z                             | R&S                                 | 15C                |
| BJPCTC0128 | Communication antenna           | JXTXLB-10180                      | A-INFOMW                            | 22/24/27 15B 15C   |
| BJPCTC0129 | Communication antenna           | JXTXLB-10180                      | A-INFOMW                            | 22/24/27 15B 15C   |
| BJPCTC0131 | Communication tester            | CMW500                            | R&S                                 | 22/24/27 15B 15C   |
| BJPCTC0133 | Open Swith and contril unit     | OSP 150                           | R&S                                 | 15B,15C            |
| BJPCTC0134 | Open Swith and contril unit     | OSP 150                           | R&S                                 | 15B,15C            |
| BJPCTC0135 | Open Swith and contril unit     | OSP 130                           | R&S                                 | 15B,15C            |
| BJPCTC0136 | Communication antenna           | JXTXLB-880-NF                     | A-INFOMW                            | 15B 15C            |
| BJPCTC0171 | Broad-band Horn Antenna         | BBHA9120 D                        | SCHWARZBECK<br>MESS -<br>ELEKTRONIK | 22/24/27, 15C, 15B |
| BJPCTC0310 | Horn Antenna                    | QSH20SMA                          | Q-par                               | 22/24/27, 15C, 15B |
| BJPCTC0311 | Horn Antenna                    | QSH18SMA                          | Q-par                               | 22/24/27, 15C, 15B |
| BJPCTC0312 | Relay Switch Unit               | -                                 | -                                   | 22/24/27, 15C, 15B |
| BJPCTC0313 | High Pass Filter                | WHKX1.0/15G-12SS                  | Wainwright                          | 22/24/27, 15C, 15B |
| BJPCTC0314 | High Pass Filter                | WHKX8.0/18G-88SS                  | Wainwright                          | 22/24/27, 15C, 15B |
| BJPCTC0315 | High Pass Filter                | WHKX3.0/18G-12SS                  | Wainwright                          | 22/24/27, 15C, 15B |
| BJPCTC0316 | Preamplifier                    | AMT-5F-18002550-25-108            | -                                   | 22/24/27, 15C, 15B |
| BJPCTC0317 | Preamplifier                    | AMF-6D-02001800-29-20P            | -                                   | 22/24/27, 15C, 15B |
| BJPCTC0350 | Preamplifier                    | AMF-4D-01000800-30-29P            | Miteq                               | 22/24/27, 15C, 15B |
| BJPCTC0324 | Preamplifier                    | AFS4-00100300-20-23P-6            | Miteq                               | 22/24/27, 15C, 15B |
| BJPCTC0329 | Relay Switch Unit               | -                                 | -                                   | 22/24/27, 15C, 15B |
| BJPCTC0334 | Communication Tester            | CMU200                            | R&S                                 | 22/24/27, 15C, 15B |
| BJPCTC0342 | Communication Tester            | CMU200                            | R&S                                 | 15B, 15C           |
| BJPCTC0349 | Preamplifier                    | AMF-4D-01000800-30-79P            | Miteq                               | 22/24/27, 15C, 15B |

| Eq. No     | Equipment    | Type                   | Manufacturer | Used in            |
|------------|--------------|------------------------|--------------|--------------------|
| BJPCTC0350 | Preamplifier | AMF-4D-01000800-30-29P | Miteg        | 22/24/27, 15C, 15B |
| BJPCTC0351 | Preamplifier | AFS4-00101800          | -            | 22/24/27, 15C, 15B |
| BJPCTC0113 | Receiver     | ESI B26                | R&S          | 22/24/27, 15B, 15C |