



# FCC RADIO TEST REPORT

**FCC ID** : PKRISGMD2000  
**Equipment** : Wireless Module  
**Brand Name** : Inseego  
**Model Name** : MD2000  
**Applicant** : Inseego Corporation  
9710 Scranton Road Suite 200, San Diego, CA 92121  
**Manufacturer** : Inseego Corporation  
9710 Scranton Road Suite 200, San Diego, CA 92121  
**Standard** : FCC 47 CFR Part 2, 22(H), 24(E), 27

The product was received on Sep. 14, 2020 and testing was started from Sep. 24, 2020 and completed on Oct. 15, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**  
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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## History of this test report

| Report No.   | Version | Description             | Issued Date   |
|--------------|---------|-------------------------|---------------|
| FG090125-01A | 01      | Initial issue of report | Oct. 22, 2020 |
|              |         |                         |               |
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|              |         |                         |               |



## Summary of Test Result

| Report Clause | Ref Std. Clause                                                                       | Test Items                                                                                                                       | Result (PASS/FAIL) | Remark |
|---------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------|--------|
| 3.2           | §2.1046                                                                               | Conducted Output Power                                                                                                           | Reporting only     | -      |
|               | §22.913 (a)(2)                                                                        | Effective Radiated Power (Band 5) (Band 26)                                                                                      | Pass               |        |
|               | §27.50 (b)(10)<br>§27.50 (c)(10)                                                      | Effective Radiated Power (Band 12) (Band 13) (Band 17) (Band 71)                                                                 |                    |        |
|               | §24.232 (c)<br>§27.50 (h)(2)                                                          | Equivalent Isotropic Radiated Power (Band 2) (Band 25) (Band 7) (Band 38) (Band 41)                                              |                    |        |
|               | §27.50 (d)(4)                                                                         | Equivalent Isotropic Radiated Power (Band 4) (Band 66)                                                                           |                    |        |
| -             | §24.232 (d)<br>§27.50 (d)(5)                                                          | Peak-to-Average Ratio                                                                                                            | Not Required       | -      |
| 3.3           | §2.1049                                                                               | Occupied Bandwidth                                                                                                               | Reporting only     | -      |
| 3.4           | §2.1051<br>§22.917 (a)<br>§24.238 (a)<br>§27.53 (c)(2)(4)<br>§27.53 (g)<br>§27.53 (h) | Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 25) (Band 26) (Band 66) (Band 71) | Pass               | -      |
|               | §2.1051<br>§27.53 (m)(4)                                                              | Conducted Band Edge Measurement (Band 7) (Band 38) (Band 41)                                                                     |                    |        |
| 3.5           | §2.1051<br>§22.917 (a)<br>§24.238 (a)<br>§27.53 (c)(2)<br>§27.53 (g)<br>§27.53 (h)    | Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 17) (Band 25) (Band 26) (Band 66) (Band 71)     | Pass               | -      |
|               | §2.1051<br>§27.53 (m)(4)                                                              | Conducted Spurious Emission (Band 7) (Band 38) (Band 41)                                                                         |                    |        |
| -             | §2.1055<br>§22.355<br>§24.235<br>§27.54                                               | Frequency Stability<br>Temperature & Voltage                                                                                     | Not Required       | -      |



| Report Clause | Ref Std. Clause                                                                                         | Test Items                                                                                                                              | Result (PASS/FAIL) | Remark                                      |
|---------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------|
| 4.2           | \$2.1053<br>\$22.917 (a)<br>\$24.238 (a)<br>\$27.53 (c)(2)<br>\$27.53 (f)<br>\$27.53 (g)<br>\$27.53 (h) | Radiated Spurious Emission<br>(Band 2) (Band 4) (Band 5)<br>(Band 12) (Band 13) (Band 17)<br>(Band 25) (Band 26) (Band 66)<br>(Band 71) | Pass               | Under limit<br>21.69 dB at<br>10368.000 MHz |
|               | \$2.1051<br>\$27.53 (m)(4)                                                                              | Radiated Spurious Emission<br>(Band 7) (Band 38) (Band 41)                                                                              |                    |                                             |

**Remark:** This is a variant report by enable LTE CA Band. All the test cases were performed on original report which can be referred to Sporton Report Number FG090125B.

**Declaration of Conformity:**

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

**Comments and Explanations:**

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

**Reviewed by:** Wii Chang

**Report Producer:** Lucy Wu



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

WCDMA/LTE/5G NR, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, and GNSS.

| Product Specification subjective to this standard |                                                                                                                                               |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Type                                      | WWAN: Monopole Antenna<br>WLAN<br><Ant. 0>: Monopole Antenna<br><Ant. 1>: Monopole Antenna<br>GPS / Glonass / BDS / Galileo: Monopole Antenna |

## 1.2 Modification of EUT

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

## 1.3 Testing Location

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                   |
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |
| Test Site No.      | <b>Sporton Site No.</b><br>TH05-HY                                                                                    |
| Test Engineer      | Benjamin Lin                                                                                                          |
| Temperature        | 22.2~25.3℃                                                                                                            |
| Relative Humidity  | 46.2~50.6%                                                                                                            |

|                    |                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                                       |
| Test Site Location | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |
| Test Site No.      | <b>Sporton Site No.</b><br>03CH12-HY                                                                                                      |
| Test Engineer      | Jack Cheng, Lance Chiang and Chuan Chu                                                                                                    |
| Temperature        | 24.3~26.4℃                                                                                                                                |
| Relative Humidity  | 58~66%                                                                                                                                    |

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

FCC Designation No.: TW1190 and TW0007



## 1.4 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.



## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

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

For radiated measurement, pre-scanned in two config (Ant. Horizontal and Ant. Vertical). The worst cases (Ant. Horizontal for LTE Band 5\_CA, 41\_CA, 66C\_CA ; Ant. Vertical for LTE Band 66B\_CA) were recorded in this report.

| Test Items                  | Band                                                                                                                                                                                                                                                                                                                                                                                | Bandwidth (MHz) |     |      |      |       | Modulation |       |       |        | RB # |      |      | Test Channel |   |   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|------|------|-------|------------|-------|-------|--------|------|------|------|--------------|---|---|
|                             |                                                                                                                                                                                                                                                                                                                                                                                     | 3+5             | 5+3 | 5+10 | 10+5 | 10+10 | QPSK       | 16QAM | 64QAM | 256QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power           | 5_CA                                                                                                                                                                                                                                                                                                                                                                                |                 |     | v    | v    | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| 26dB and 99% Bandwidth      | 5_CA                                                                                                                                                                                                                                                                                                                                                                                |                 |     | v    | v    | v     | v          | v     | v     | v      |      |      | v    | v            | v | v |
| Conducted Band Edge         | 5_CA                                                                                                                                                                                                                                                                                                                                                                                |                 |     | v    | v    | v     | v          | v     | v     | v      | v    |      | v    | v            |   | v |
| Conducted Spurious Emission | 5_CA                                                                                                                                                                                                                                                                                                                                                                                |                 |     | v    | v    | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| E.R.P.                      | 5_CA                                                                                                                                                                                                                                                                                                                                                                                |                 |     | v    | v    | v     | v          | v     | v     | v      | v    |      |      | v            | v | v |
| Radiated Spurious Emission  | 5_CA                                                                                                                                                                                                                                                                                                                                                                                | Worst Case      |     |      |      |       |            |       |       |        |      |      |      | v            | v | v |
| Remark                      | 1. The mark “v ” means that this configuration is chosen for testing<br>2. The mark “-“ means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. |                 |     |      |      |       |            |       |       |        |      |      |      |              |   |   |

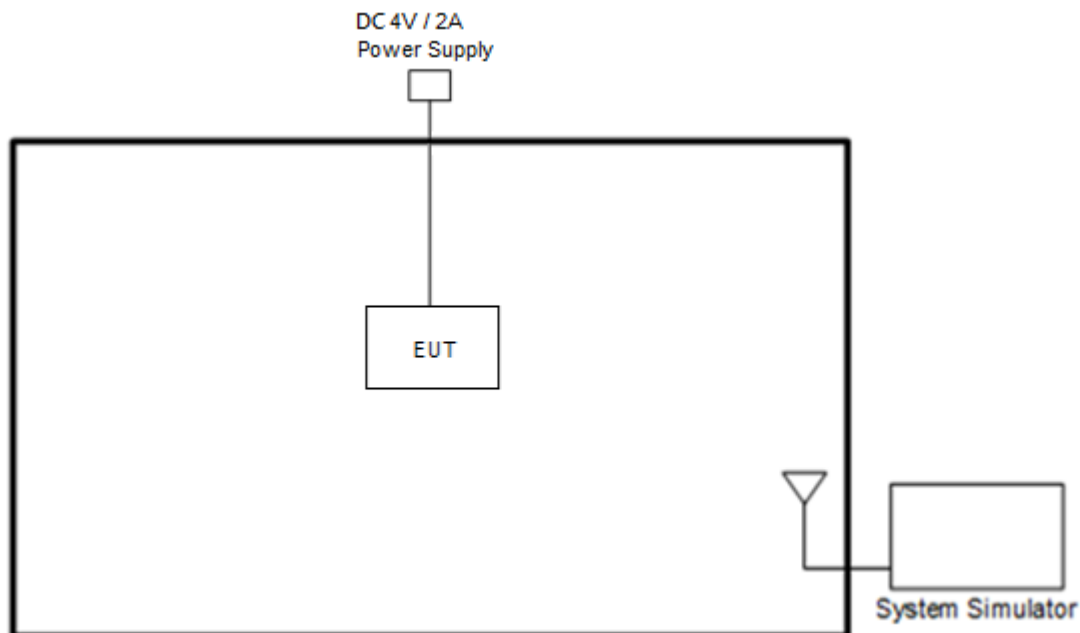


| Test Items                  | Band                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Bandwidth (MHz)     |       |       |       |       |      |      |       |       |       | Modulation |       |       |        | RB # |      |      | Test Channel |   |   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|-------|-------|-------|------|------|-------|-------|-------|------------|-------|-------|--------|------|------|------|--------------|---|---|
|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20+20               | 20+15 | 15+20 | 20+10 | 10+20 | 20+5 | 5+20 | 15+15 | 15+10 | 10+15 | QPSK       | 16QAM | 64QAM | 256QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power           | 38_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | v                   | -     | -     | -     | -     | -    | -    | v     | -     | -     | v          | v     | v     | v      | v    | v    | v    | v            | v | v |
|                             | 41_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | v                   | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v      | v    | v    | v    | v            | v | v |
| 26dB and 99% Bandwidth      | 38_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Covered by Band 41C |       |       |       |       |      |      |       |       |       |            |       |       |        |      |      |      |              |   |   |
|                             | 41_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | v                   | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v      |      |      | v    | v            | v | v |
| Conducted Band Edge         | 38_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Covered by Band 41C |       |       |       |       |      |      |       |       |       |            |       |       |        |      |      |      |              |   |   |
|                             | 41_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | v                   | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v      | v    |      | v    | v            |   | v |
| Conducted Spurious Emission | 38_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Covered by Band 41C |       |       |       |       |      |      |       |       |       |            |       |       |        |      |      |      |              |   |   |
|                             | 41_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | v                   | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| E.I.R.P.                    | 38_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | v                   | -     | -     | -     | -     | -    | -    | v     | -     | -     | v          | v     | v     | v      | v    |      |      | v            | v | v |
|                             | 41_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | v                   | v     | v     | v     | v     | v    | v    | v     | v     | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| Radiated Spurious Emission  | 38_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Covered by Band 41C |       |       |       |       |      |      |       |       |       |            |       |       |        |      |      |      |              |   |   |
|                             | 41_CA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Worst Case          |       |       |       |       |      |      |       |       |       |            |       |       |        |      |      |      | v            | v | v |
| Remark                      | <div>1. The mark "v " means that this configuration is chosen for testing</div> <div>2. The mark "- " means that this bandwidth is not supported.</div> <div>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.</div> <div>4. Wider operating range bandwidth covers narrower one when the power is higher or the same.</div> |                     |       |       |       |       |      |      |       |       |       |            |       |       |        |      |      |      |              |   |   |

| Test Items                  | Band                                                                                                                                                                                                                                                                                                                                                                                | Bandwidth (MHz) |      |      |      |      |       | Modulation |       |       |        | RB # |      |      | Test Channel |   |   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|------|------|------|-------|------------|-------|-------|--------|------|------|------|--------------|---|---|
|                             |                                                                                                                                                                                                                                                                                                                                                                                     | 5+5             | 5+10 | 10+5 | 5+15 | 15+5 | 10+10 | QPSK       | 16QAM | 64QAM | 256QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power           | 66B_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v    | v    | v    | v    | v     | v          | v     | v     | v      | v    | v    | v    | v            | v | v |
| 26dB and 99% Bandwidth      | 66B_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v    | v    | v    | v    | v     | v          | v     | v     | v      |      |      | v    | v            | v | v |
| Conducted Band Edge         | 66B_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v    | v    | v    | v    | v     | v          | v     | v     | v      | v    |      | v    | v            |   | v |
| Conducted Spurious Emission | 66B_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v    | v    | v    | v    | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| E.R.P.                      | 66B_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v    | v    | v    | v    | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| Radiated Spurious Emission  | 66B_CA                                                                                                                                                                                                                                                                                                                                                                              | Worst Case      |      |      |      |      |       |            |       |       |        |      |      |      | v            | v | v |
| Remark                      | 1. The mark “v ” means that this configuration is chosen for testing<br>2. The mark “-“ means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. |                 |      |      |      |      |       |            |       |       |        |      |      |      |              |   |   |

| Test Items                  | Band                                                                                                                                                                                                                                                                                                                                                                                | Bandwidth (MHz) |       |       |      |      |       |       |       |       |       | Modulation |       |       |        | RB # |      |      | Test Channel |   |   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|-------|------|------|-------|-------|-------|-------|-------|------------|-------|-------|--------|------|------|------|--------------|---|---|
|                             |                                                                                                                                                                                                                                                                                                                                                                                     | 15+15           | 10+15 | 15+10 | 5+20 | 20+5 | 10+20 | 20+10 | 15+20 | 20+15 | 20+20 | QPSK       | 16QAM | 64QAM | 256QAM | 1    | Half | Full | L            | M | H |
| Max. Output Power           | 66C_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v     | v     | v    | v    | v     | v     | v     | v     | v     | v          | v     | v     | v      | v    | v    | v    | v            | v | v |
| 26dB and 99% Bandwidth      | 66C_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v     | v     | v    | v    | v     | v     | v     | v     | v     | v          | v     | v     | v      |      |      | v    | v            | v | v |
| Conducted Band Edge         | 66C_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v     | v     | v    | v    | v     | v     | v     | v     | v     | v          | v     | v     | v      | v    |      | v    | v            |   | v |
| Conducted Spurious Emission | 66C_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v     | v     | v    | v    | v     | v     | v     | v     | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| E.R.P.                      | 66C_CA                                                                                                                                                                                                                                                                                                                                                                              | v               | v     | v     | v    | v    | v     | v     | v     | v     | v     | v          | v     | v     | v      | v    |      | v    | v            | v | v |
| Radiated Spurious Emission  | 66C_CA                                                                                                                                                                                                                                                                                                                                                                              | Worst Case      |       |       |      |      |       |       |       |       |       |            |       |       |        |      |      |      | v            | v | v |
| Remark                      | 1. The mark “v ” means that this configuration is chosen for testing<br>2. The mark “-” means that this bandwidth is not supported.<br>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. |                 |       |       |      |      |       |       |       |       |       |            |       |       |        |      |      |      |              |   |   |

## 2.2 Connection Diagram of Test System





## 2.3 Support Unit used in test configuration and system

| Item | Equipment        | Brand Name | Model No. | FCC ID | Data Cable | Power Cord        |
|------|------------------|------------|-----------|--------|------------|-------------------|
| 1.   | System Simulator | Anritsu    | MT8821C   | N/A    | N/A        | Unshielded, 1.8 m |

## 2.4 Measurement Results Explanation Example

### For all conducted test items:

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

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

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

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

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

| LTE Band 5 Channel and Frequency List_CA |                        |           |        |        |         |
|------------------------------------------|------------------------|-----------|--------|--------|---------|
| BW [MHz]                                 | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 5 + 10                                   | PCC                    | Channel   | 20428  | 20478  | 20528   |
|                                          |                        | Frequency | 826.8  | 831.8  | 836.8   |
|                                          | SCC                    | Channel   | 20500  | 20550  | 20600   |
|                                          |                        | Frequency | 834    | 839    | 844     |
| 10 + 5                                   | PCC                    | Channel   | 20450  | 20500  | 20550   |
|                                          |                        | Frequency | 829    | 834    | 839     |
|                                          | SCC                    | Channel   | 20522  | 20572  | 20622   |
|                                          |                        | Frequency | 836.2  | 841.2  | 846.2   |
| 10 + 10                                  | PCC                    | Channel   | 20450  | 20476  | 20501   |
|                                          |                        | Frequency | 829    | 831.6  | 834.1   |
|                                          | SCC                    | Channel   | 20549  | 20575  | 20600   |
|                                          |                        | Frequency | 838.9  | 841.5  | 844     |



| LTE Band 38 Channel and Frequency List |                        |           |        |        |         |
|----------------------------------------|------------------------|-----------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 20 + 20                                | PCC                    | Channel   | 37850  | 37901  | 37952   |
|                                        |                        | Frequency | 2580.0 | 2585.1 | 2590.2  |
|                                        | SCC                    | Channel   | 38048  | 38099  | 38150   |
|                                        |                        | Frequency | 2599.8 | 2604.9 | 2610.0  |
| 15+ 15                                 | PCC                    | Channel   | 37825  | 37925  | 38025   |
|                                        |                        | Frequency | 2577.5 | 2587.5 | 2597.5  |
|                                        | SCC                    | Channel   | 37975  | 38075  | 38175   |
|                                        |                        | Frequency | 2592.5 | 2602.5 | 2612.5  |

| LTE Band 41 Channel and Frequency List |                        |           |        |        |         |
|----------------------------------------|------------------------|-----------|--------|--------|---------|
| BW [MHz]                               | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 20 + 20                                | PCC                    | Channel   | 39750  | 40521  | 41292   |
|                                        |                        | Frequency | 2506.0 | 2583.1 | 2660.2  |
|                                        | SCC                    | Channel   | 39948  | 40719  | 41490   |
|                                        |                        | Frequency | 2525.8 | 2602.9 | 2680.0  |
| 20 + 15                                | PCC                    | Channel   | 39750  | 40546  | 41341   |
|                                        |                        | Frequency | 2506.0 | 2585.6 | 2665.1  |
|                                        | SCC                    | Channel   | 39921  | 40717  | 41512   |
|                                        |                        | Frequency | 2523.1 | 2602.7 | 2682.2  |
| 15 + 20                                | PCC                    | Channel   | 39728  | 40523  | 41319   |
|                                        |                        | Frequency | 2503.8 | 2593.3 | 2662.9  |
|                                        | SCC                    | Channel   | 39899  | 40694  | 41490   |
|                                        |                        | Frequency | 2520.9 | 2600.4 | 2680.0  |
| 20 + 10                                | PCC                    | Channel   | 39750  | 40571  | 41391   |
|                                        |                        | Frequency | 2506.0 | 2588.1 | 2670.1  |
|                                        | SCC                    | Channel   | 39894  | 40715  | 41535   |
|                                        |                        | Frequency | 2520.4 | 2602.5 | 2684.5  |
| 10 + 20                                | PCC                    | Channel   | 39705  | 40526  | 41346   |
|                                        |                        | Frequency | 2501.5 | 2583.6 | 2665.6  |
|                                        | SCC                    | Channel   | 39849  | 40670  | 41490   |
|                                        |                        | Frequency | 2515.9 | 2598.0 | 2680.0  |



| LTE Band 41 Channel and Frequency List |     |           |        |        |        |
|----------------------------------------|-----|-----------|--------|--------|--------|
| 20 + 5                                 | PCC | Channel   | 39750  | 40595  | 41440  |
|                                        |     | Frequency | 2506.0 | 2590.5 | 2675.0 |
|                                        | SCC | Channel   | 39867  | 40712  | 41557  |
|                                        |     | Frequency | 2517.7 | 2602.2 | 2686.7 |
| 5 + 20                                 | PCC | Channel   | 39683  | 40528  | 41373  |
|                                        |     | Frequency | 2499.3 | 2583.8 | 2668.3 |
|                                        | SCC | Channel   | 39800  | 40645  | 41490  |
|                                        |     | Frequency | 2511.0 | 2595.5 | 2680.0 |
| 15 + 15                                | PCC | Channel   | 39725  | 40545  | 41365  |
|                                        |     | Frequency | 2503.5 | 2585.5 | 2667.5 |
|                                        | SCC | Channel   | 39875  | 40695  | 41515  |
|                                        |     | Frequency | 2518.5 | 2600.5 | 2682.5 |
| 10 + 15                                | PCC | Channel   | 39703  | 40549  | 41395  |
|                                        |     | Frequency | 2501.3 | 2585.9 | 2670.5 |
|                                        | SCC | Channel   | 39823  | 40669  | 41515  |
|                                        |     | Frequency | 2513.3 | 2597.9 | 2682.5 |
| 15 + 10                                | PCC | Channel   | 39725  | 40571  | 41417  |
|                                        |     | Frequency | 2503.5 | 2588.1 | 2672.7 |
|                                        | SCC | Channel   | 39845  | 40691  | 41537  |
|                                        |     | Frequency | 2515.5 | 2600.1 | 2684.7 |



| LTE Band 66B Channel and Frequency List_CA |                        |           |        |        |         |
|--------------------------------------------|------------------------|-----------|--------|--------|---------|
| BW [MHz]                                   | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 5 + 5                                      | PCC                    | Channel   | 131997 | 132398 | 132599  |
|                                            |                        | Frequency | 1712.5 | 1752.6 | 1772.7  |
|                                            | SCC                    | Channel   | 132045 | 133346 | 132647  |
|                                            |                        | Frequency | 1717.3 | 1757.4 | 1777.5  |
| 5 + 10                                     | PCC                    | Channel   | 132000 | 132375 | 132550  |
|                                            |                        | Frequency | 1712.8 | 1750.3 | 1767.8  |
|                                            | SCC                    | Channel   | 132072 | 133347 | 132622  |
|                                            |                        | Frequency | 1720   | 1757.5 | 1775    |
| 10 + 5                                     | PCC                    | Channel   | 132022 | 132397 | 132572  |
|                                            |                        | Frequency | 1715   | 1752.5 | 1770    |
|                                            | SCC                    | Channel   | 132094 | 133369 | 132644  |
|                                            |                        | Frequency | 1722.2 | 1759.7 | 1777.2  |
| 5 + 15                                     | PCC                    | Channel   | 132002 | 132353 | 132504  |
|                                            |                        | Frequency | 1713   | 1748.1 | 1763.2  |
|                                            | SCC                    | Channel   | 132095 | 133346 | 132597  |
|                                            |                        | Frequency | 1722.3 | 1757.4 | 1772.5  |
| 15 + 5                                     | PCC                    | Channel   | 132047 | 132398 | 132549  |
|                                            |                        | Frequency | 1717.5 | 1752.6 | 1767.7  |
|                                            | SCC                    | Channel   | 132140 | 133391 | 132642  |
|                                            |                        | Frequency | 1726.8 | 1761.9 | 1777    |
| 10 + 10                                    | PCC                    | Channel   | 132022 | 132373 | 135523  |
|                                            |                        | Frequency | 1715   | 1750.1 | 1765.1  |
|                                            | SCC                    | Channel   | 132121 | 133372 | 132622  |
|                                            |                        | Frequency | 1724.9 | 1760   | 1775    |



| LTE Band 66C Channel and Frequency List_CA |                        |           |        |        |         |
|--------------------------------------------|------------------------|-----------|--------|--------|---------|
| BW [MHz]                                   | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 10 + 15                                    | PCC                    | Channel   | 132025 | 132351 | 132477  |
|                                            |                        | Frequency | 1715.3 | 1747.9 | 1760.5  |
|                                            | SCC                    | Channel   | 132145 | 133371 | 132597  |
|                                            |                        | Frequency | 1727.3 | 1759.9 | 1772.5  |
| 15 + 10                                    | PCC                    | Channel   | 132047 | 132373 | 132499  |
|                                            |                        | Frequency | 1717.5 | 1750.1 | 1762.7  |
|                                            | SCC                    | Channel   | 132167 | 133393 | 132619  |
|                                            |                        | Frequency | 1729.5 | 1761.1 | 1774.7  |
| 10 + 20                                    | PCC                    | Channel   | 132027 | 132328 | 132428  |
|                                            |                        | Frequency | 1715.5 | 1745.6 | 1755.6  |
|                                            | SCC                    | Channel   | 131171 | 133372 | 132572  |
|                                            |                        | Frequency | 1729.9 | 1760   | 1770    |
| 20 + 10                                    | PCC                    | Channel   | 132072 | 132373 | 132473  |
|                                            |                        | Frequency | 1720   | 1750.1 | 1760.1  |
|                                            | SCC                    | Channel   | 132216 | 133417 | 132617  |
|                                            |                        | Frequency | 1734.4 | 1764.5 | 1774.5  |
| 15 + 15                                    | PCC                    | Channel   | 132047 | 132347 | 132447  |
|                                            |                        | Frequency | 1717.5 | 1747.5 | 1757.5  |
|                                            | SCC                    | Channel   | 132197 | 133397 | 132597  |
|                                            |                        | Frequency | 1732.5 | 1762.5 | 1772.5  |
| 15 + 20                                    | PCC                    | Channel   | 132050 | 132325 | 132401  |
|                                            |                        | Frequency | 1717.8 | 1745.3 | 1752.9  |
|                                            | SCC                    | Channel   | 132221 | 133396 | 132572  |
|                                            |                        | Frequency | 1734.9 | 1762.4 | 1770    |
| 20 + 15                                    | PCC                    | Channel   | 132072 | 132348 | 132423  |
|                                            |                        | Frequency | 1720   | 1747.6 | 1755.1  |
|                                            | SCC                    | Channel   | 132243 | 133419 | 132594  |
|                                            |                        | Frequency | 1737.1 | 1764.7 | 1772.2  |
| 20 + 5                                     | PCC                    | Channel   | 132072 | 132397 | 132522  |
|                                            |                        | Frequency | 1720   | 1752.5 | 1765    |
|                                            | SCC                    | Channel   | 132189 | 133414 | 132639  |
|                                            |                        | Frequency | 1731.7 | 1764.2 | 1776.7  |



| LTE Band 66C Channel and Frequency List_CA |     |           |        |        |        |
|--------------------------------------------|-----|-----------|--------|--------|--------|
| 5 + 20                                     | PCC | Channel   | 132005 | 132330 | 132455 |
|                                            |     | Frequency | 1713.3 | 1745.8 | 1758.3 |
|                                            | SCC | Channel   | 132122 | 132447 | 132572 |
|                                            |     | Frequency | 1725   | 1757.5 | 1770.0 |
| 20 + 20                                    | PCC | Channel   | 132072 | 132323 | 132374 |
|                                            |     | Frequency | 1720   | 1745.1 | 1750.2 |
|                                            | SCC | Channel   | 132270 | 133421 | 132572 |
|                                            |     | Frequency | 1739.8 | 1764.9 | 1770   |

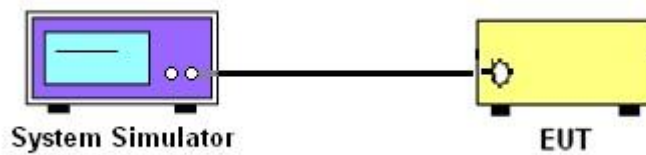
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

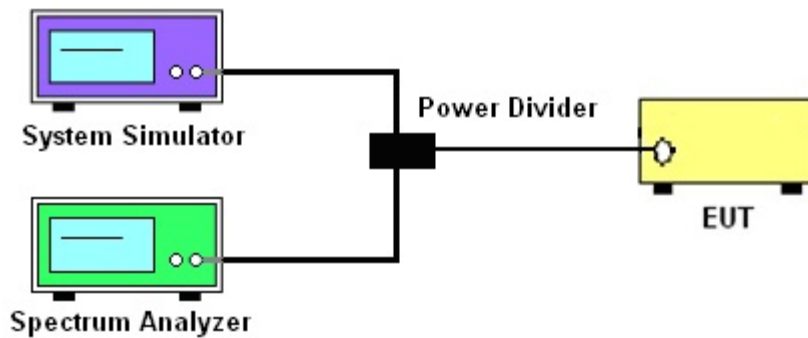
See list of measuring instruments of this test report.

##### 3.1.1 Test Setup

##### 3.1.2 Conducted Output Power



##### 3.1.3 Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



##### 3.1.4 Test Result of Conducted Test

Please refer to Appendix A.



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

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

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

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 38 and Band 41

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 66

According to KDB 412172 D01 Power Approach,

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

$P_T$  = transmitter output power in dBm

$G_T$  = gain of the transmitting antenna in dBi

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

### **3.2.2 Test Procedures**

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



### **3.3 Occupied Bandwidth**

#### **3.3.1 Description of Occupied Bandwidth Measurement**

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

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

#### **3.3.2 Test Procedures**

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

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



### **3.4 Conducted Band Edge**

#### **3.4.1 Description of Conducted Band Edge Measurement**

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (h)

For operations in the 1710 – 1755 MHz band, 1755-1780 MHz, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.



### 3.4.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW  $\geq$  1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.

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

For LTE Band 38, 41

The other 40 dB, and 55 dB have additionally applied same calculation above.



## **3.5 Conducted Spurious Emission**

### **3.5.1 Description of Conducted Spurious Emission Measurement**

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For LTE Band 38, 41

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

### **3.5.2 Test Procedures**

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.  
The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)

For LTE Band 38, 41

The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)

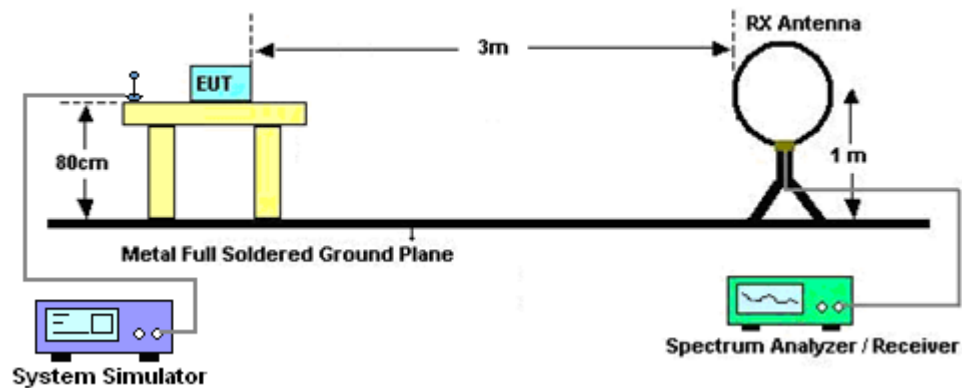
## 4 Radiated Test Items

### 4.1 Measuring Instruments

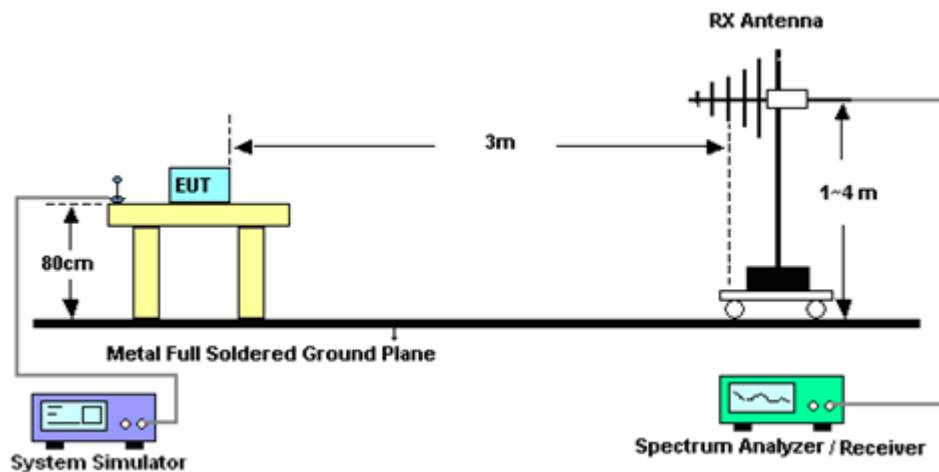
See list of measuring instruments of this test report.

#### 4.1.1 Test Setup

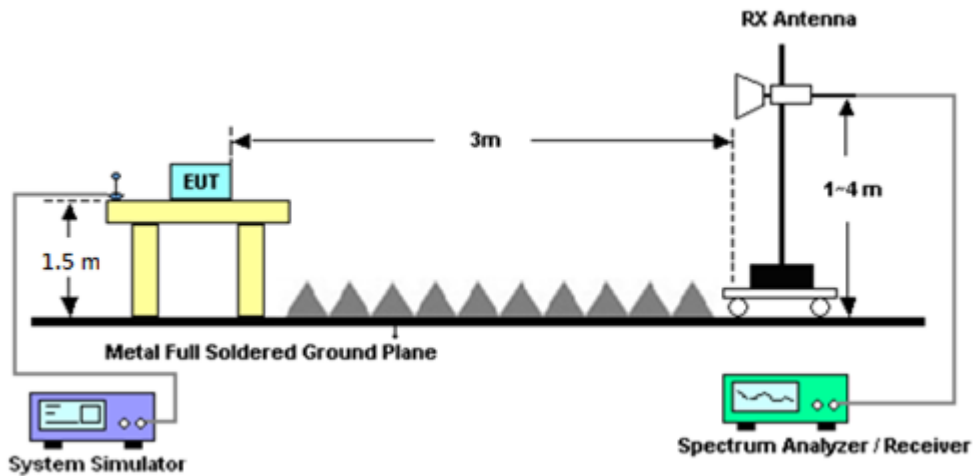
For radiated test below 30MHz



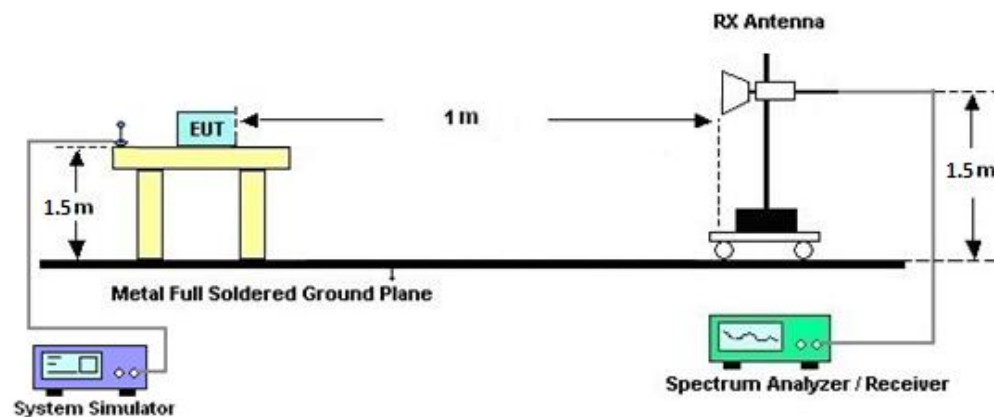
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



#### 4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

##### Note:

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

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



## **4.2 Radiated Spurious Emission Measurement**

### **4.2.1 Description of Radiated Spurious Emission Measurement**

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For LTE Band 38, 41

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### **4.2.2 Test Procedures**

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

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

For LTE Band 38, 41

The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)

$EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$

$ERP \text{ (dBm)} = EIRP - 2.15$



## 5 List of Measuring Equipment

| Instrument             | Brand Name      | Model No.                        | Serial No.       | Characteristics                             | Calibration Date | Test Date                    | Due Date      | Remark                |
|------------------------|-----------------|----------------------------------|------------------|---------------------------------------------|------------------|------------------------------|---------------|-----------------------|
| Base Station (Measure) | Anritsu         | MT8821C                          | 6262025280       | LTE FDD/TDD with 44) /LTE-3CC DLCA,2CC ULCA | Oct. 25, 2019    | Oct. 04, 2020~ Oct. 09, 2020 | Oct. 24, 2020 | Conducted (TH05-HY)   |
| Spectrum Analyzer      | Rohde & Schwarz | FSV40                            | 101908           | 10Hz~40GHz                                  | May 13, 2020     | Oct. 04, 2020~ Oct. 09, 2020 | May 12, 2021  | Conducted (TH05-HY)   |
| Coupler                | Warison         | 20dB 25W SMA Directional Coupler | #A               | 1-18GHz                                     | Jan. 13, 2020    | Oct. 04, 2020~ Oct. 09, 2020 | Jan. 12, 2021 | Conducted (TH05-HY)   |
| Loop Antenna           | Rohde & Schwarz | HFH2-Z2                          | 100315           | 9 kHz~30 MHz                                | Dec. 26, 2019    | Sep. 24, 2020~ Oct. 15, 2020 | Dec. 25, 2020 | Radiation (03CH12-HY) |
| Bilog Antenna          | TESEQ           | CBL 6111D & 00800N1D01 N-06      | 40103 & 07       | 30MHz~1GHz                                  | Apr. 29, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Apr. 28, 2021 | Radiation (03CH12-HY) |
| Horn Antenna           | SCHWARZBECK     | BBHA 9120 D                      | 9120D-1328       | 1GHz~18GHz                                  | Nov. 14, 2019    | Sep. 24, 2020~ Oct. 15, 2020 | Nov. 13, 2020 | Radiation (03CH12-HY) |
| Horn Antenna           | SCHWARZBECK     | BBHA 9120D                       | 9120D-1241       | 1GHz ~ 18GHz                                | Jul. 15, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Jul. 14, 2021 | Radiation (03CH12-HY) |
| SHF-EHF Horn Antenna   | SCHWARZBECK     | BBHA 9170                        | BBHA9170584      | 18GHz~40GHz                                 | Dec. 10, 2019    | Sep. 24, 2020~ Oct. 15, 2020 | Dec. 09, 2020 | Radiation (03CH12-HY) |
| SHF-EHF Horn Antenna   | SCHWARZBECK     | BBHA 9170                        | BBHA9170980      | 18GHz ~ 40GHz                               | Jan. 10, 2019    | Sep. 24, 2020~ Oct. 15, 2020 | Jan. 09, 2021 | Radiation (03CH12-HY) |
| Preamplifier           | COM-POWER       | PA-103                           | 161075           | 10MHz~1GHz                                  | Mar. 25, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Mar. 24, 2021 | Radiation (03CH12-HY) |
| Preamplifier           | Keysight        | 83017A                           | MY57280120       | 1GHz~26.5GHz                                | Jul. 20, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Jul. 19, 2021 | Radiation (03CH12-HY) |
| Preamplifier           | Jet-Power       | JPA0118-55-303K                  | 1710001800054002 | 1GHz~18GHz                                  | Feb. 07, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Feb. 06, 2021 | Radiation (03CH12-HY) |
| Preamplifier           | EMEC            | EM18G40G                         | 060715           | 18GHz~40GHz                                 | Dec. 13, 2019    | Sep. 24, 2020~ Oct. 15, 2020 | Dec. 12, 2020 | Radiation (03CH12-HY) |
| Spectrum Analyzer      | Agilent         | N9010A                           | MY54200485       | 10Hz~44GHz                                  | Feb. 10, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Feb. 09, 2021 | Radiation (03CH12-HY) |
| Signal Generator       | Anritsu         | MG3694C                          | 163401           | 0.1Hz~40GHz                                 | Feb. 15, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Feb. 14, 2021 | Radiation (03CH12-HY) |
| RF Cable               | HUBER + SUHNER  | SUCOFLEX 104                     | MY9837/4PE       | 9kHz~30MHz                                  | Mar. 12, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Mar. 11, 2021 | Radiation (03CH12-HY) |
| RF Cable               | HUBER + SUHNER  | SUCOFLEX 126E                    | 0058/126E        | 30MHz~18GHz                                 | Dec. 12, 2019    | Sep. 24, 2020~ Oct. 15, 2020 | Dec. 11, 2020 | Radiation (03CH12-HY) |
| RF Cable               | HUBER + SUHNER  | SUCOFLEX 102                     | 505134/2         | 30MHz~40GHz                                 | Feb. 25, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Feb. 24, 2021 | Radiation (03CH12-HY) |
| RF Cable               | HUBER + SUHNER  | SUCOFLEX 102                     | 800740/2         | 30MHz~40GHz                                 | Feb. 25, 2020    | Sep. 24, 2020~ Oct. 15, 2020 | Feb. 24, 2021 | Radiation (03CH12-HY) |
| Hygrometer             | TECEPEL         | DTM-303B                         | TP140349         | N/A                                         | Oct. 25, 2019    | Sep. 24, 2020~ Oct. 15, 2020 | Oct. 24, 2020 | Radiation (03CH12-HY) |
| Controller             | EMEC            | EM1000                           | N/A              | Control Turn table & Ant Mast               | N/A              | Sep. 24, 2020~ Oct. 15, 2020 | N/A           | Radiation (03CH12-HY) |
| Antenna Mast           | EMEC            | AM-BS-4500-B                     | N/A              | 1m~4m                                       | N/A              | Sep. 24, 2020~ Oct. 15, 2020 | N/A           | Radiation (03CH12-HY) |
| Turn Table             | EMEC            | TT2000                           | N/A              | 0~360 Degree                                | N/A              | Sep. 24, 2020~ Oct. 15, 2020 | N/A           | Radiation (03CH12-HY) |
| Software               | Audix           | E3 6.2009-8-24                   | RK-000989        | N/A                                         | N/A              | Sep. 24, 2020~ Oct. 15, 2020 | N/A           | Radiation (03CH12-HY) |



## 6 Uncertainty of Evaluation

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

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.07 |
|-------------------------------------------------------------------------|------|

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

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.21 |
|-------------------------------------------------------------------------|------|

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

|                                                                         |      |
|-------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 3.80 |
|-------------------------------------------------------------------------|------|



## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power)

| LTE Band 5B_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|--------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                   | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                            | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 10+10                                      | 50      | 0         | 50      | 0         | QPSK    | 21.37  | 21.38  | 21.28   |
| 10+10                                      | 1       | 0         | 1       | 49        |         | 11.35  | 11.31  | 11.47   |
| 10+10                                      | 1       | 49        | 1       | 0         |         | 23.16  | 23.12  | 22.34   |
| 10+10                                      | 50      | 0         | 50      | 0         | 16-QAM  | 20.42  | 20.36  | 20.32   |
| 10+10                                      | 1       | 0         | 1       | 49        |         | 11.79  | 11.72  | 11.97   |
| 10+10                                      | 1       | 49        | 1       | 0         |         | 22.68  | 22.54  | 21.84   |
| 10+10                                      | 50      | 0         | 50      | 0         | 64-QAM  | 20.38  | 20.29  | 18.88   |
| 10+10                                      | 1       | 0         | 1       | 49        |         | 11.80  | 11.71  | 11.93   |
| 10+10                                      | 1       | 49        | 1       | 0         |         | 21.47  | 21.43  | 21.54   |
| 10+10                                      | 50      | 0         | 50      | 0         | 256-QAM | 18.43  | 18.37  | 18.28   |
| 10+10                                      | 1       | 0         | 1       | 49        |         | 10.70  | 10.46  | 10.72   |
| 10+10                                      | 1       | 49        | 1       | 0         |         | 18.46  | 18.38  | 18.51   |
| 10+5                                       | 50      | 0         | 25      | 0         | QPSK    | 22.14  | 22.08  | 22.04   |
| 10+5                                       | 1       | 0         | 1       | 24        |         | 11.94  | 12.14  | 12.38   |
| 10+5                                       | 1       | 49        | 1       | 0         |         | 23.75  | 23.77  | 23.65   |
| 10+5                                       | 50      | 0         | 25      | 0         | 16-QAM  | 21.14  | 21.02  | 21.02   |
| 10+5                                       | 1       | 0         | 1       | 24        |         | 12.55  | 12.51  | 12.81   |
| 10+5                                       | 1       | 49        | 1       | 0         |         | 23.52  | 23.28  | 23.23   |
| 10+5                                       | 50      | 0         | 25      | 0         | 64-QAM  | 21.12  | 21.04  | 20.88   |
| 10+5                                       | 1       | 0         | 1       | 24        |         | 12.51  | 12.47  | 12.60   |
| 10+5                                       | 1       | 49        | 1       | 0         |         | 21.34  | 21.38  | 20.29   |
| 10+5                                       | 50      | 0         | 25      | 0         | 256-QAM | 19.08  | 19.05  | 19.06   |
| 10+5                                       | 1       | 0         | 1       | 24        |         | 11.40  | 11.30  | 11.48   |
| 10+5                                       | 1       | 49        | 1       | 0         |         | 19.21  | 19.07  | 19.21   |
| 5+10                                       | 25      | 0         | 50      | 0         | QPSK    | 22.08  | 22.03  | 21.99   |
| 5+10                                       | 1       | 0         | 1       | 49        |         | 11.92  | 12.07  | 12.35   |
| 5+10                                       | 1       | 24        | 1       | 0         |         | 23.68  | 23.62  | 23.60   |
| 5+10                                       | 25      | 0         | 50      | 0         | 16-QAM  | 21.13  | 21.03  | 21.03   |
| 5+10                                       | 1       | 0         | 1       | 49        |         | 12.39  | 12.58  | 12.83   |
| 5+10                                       | 1       | 24        | 1       | 0         |         | 23.44  | 23.40  | 23.51   |
| 5+10                                       | 25      | 0         | 50      | 0         | 64-QAM  | 21.04  | 21.05  | 21.01   |
| 5+10                                       | 1       | 0         | 1       | 49        |         | 12.42  | 12.41  | 12.63   |
| 5+10                                       | 1       | 24        | 1       | 0         |         | 21.17  | 21.58  | 21.52   |
| 5+10                                       | 25      | 0         | 50      | 0         | 256-QAM | 19.10  | 19.05  | 19.01   |
| 5+10                                       | 1       | 0         | 1       | 49        |         | 11.39  | 11.21  | 11.44   |
| 5+10                                       | 1       | 24        | 1       | 0         |         | 19.32  | 19.12  | 19.16   |



| LTE Band 66B_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 10+10                                       | 50      | 0         | 50      | 0         | QPSK    | 21.49  | 21.86  | 21.51   |
| 10+10                                       | 1       | 0         | 1       | 49        |         | 13.01  | 12.93  | 13.07   |
| 10+10                                       | 1       | 49        | 1       | 0         |         | 23.32  | 23.33  | 23.76   |
| 10+10                                       | 50      | 0         | 50      | 0         | 16-QAM  | 20.48  | 20.87  | 20.47   |
| 10+10                                       | 1       | 0         | 1       | 49        |         | 13.43  | 13.38  | 13.52   |
| 10+10                                       | 1       | 49        | 1       | 0         |         | 22.79  | 22.86  | 22.85   |
| 10+10                                       | 50      | 0         | 50      | 0         | 64-QAM  | 20.51  | 20.87  | 20.51   |
| 10+10                                       | 1       | 0         | 1       | 49        |         | 13.21  | 13.52  | 13.32   |
| 10+10                                       | 1       | 49        | 1       | 0         |         | 21.67  | 21.80  | 20.20   |
| 10+10                                       | 50      | 0         | 50      | 0         | 256-QAM | 18.42  | 18.84  | 18.54   |
| 10+10                                       | 1       | 0         | 1       | 49        |         | 13.21  | 13.47  | 13.34   |
| 10+10                                       | 1       | 49        | 1       | 0         |         | 18.56  | 18.80  | 18.83   |
| 15+5                                        | 75      | 0         | 25      | 0         | QPSK    | 21.32  | 20.86  | 21.73   |
| 15+5                                        | 1       | 0         | 1       | 24        |         | 13.07  | 12.55  | 13.43   |
| 15+5                                        | 1       | 74        | 1       | 0         |         | 23.68  | 22.90  | 23.71   |
| 15+5                                        | 75      | 0         | 25      | 0         | 16-QAM  | 20.35  | 19.81  | 20.80   |
| 15+5                                        | 1       | 0         | 1       | 24        |         | 13.55  | 13.06  | 13.90   |
| 15+5                                        | 1       | 74        | 1       | 0         |         | 23.33  | 22.48  | 23.32   |
| 15+5                                        | 75      | 0         | 25      | 0         | 64-QAM  | 20.33  | 19.85  | 20.88   |
| 15+5                                        | 1       | 0         | 1       | 24        |         | 13.28  | 12.96  | 13.73   |
| 15+5                                        | 1       | 74        | 1       | 0         |         | 22.13  | 21.35  | 21.80   |
| 15+5                                        | 75      | 0         | 25      | 0         | 256-QAM | 18.34  | 17.93  | 18.81   |
| 15+5                                        | 1       | 0         | 1       | 24        |         | 13.06  | 12.71  | 13.65   |
| 15+5                                        | 1       | 74        | 1       | 0         |         | 18.95  | 18.40  | 18.94   |
| 5+15                                        | 25      | 0         | 75      | 0         | QPSK    | 21.51  | 21.73  | 21.42   |
| 5+15                                        | 1       | 0         | 1       | 74        |         | 13.21  | 13.24  | 12.86   |
| 5+15                                        | 1       | 24        | 1       | 0         |         | 23.63  | 23.57  | 23.45   |
| 5+15                                        | 25      | 0         | 75      | 0         | 16-QAM  | 20.52  | 20.81  | 20.45   |
| 5+15                                        | 1       | 0         | 1       | 74        |         | 13.55  | 13.66  | 13.28   |
| 5+15                                        | 1       | 24        | 1       | 0         |         | 23.01  | 23.26  | 23.36   |
| 5+15                                        | 25      | 0         | 75      | 0         | 64-QAM  | 20.53  | 20.73  | 20.45   |
| 5+15                                        | 1       | 0         | 1       | 74        |         | 13.38  | 13.55  | 13.46   |
| 5+15                                        | 1       | 24        | 1       | 0         |         | 21.75  | 21.55  | 21.32   |
| 5+15                                        | 25      | 0         | 75      | 0         | 256-QAM | 18.53  | 18.76  | 18.53   |
| 5+15                                        | 1       | 0         | 1       | 74        |         | 13.21  | 13.54  | 13.34   |
| 5+15                                        | 1       | 24        | 1       | 0         |         | 18.85  | 18.97  | 19.03   |



| LTE Band 66B_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 10+5                                        | 50      | 0         | 25      | 0         | QPSK    | 21.76  | 21.99  | 21.41   |
| 10+5                                        | 1       | 0         | 1       | 24        |         | 13.96  | 14.04  | 13.44   |
| 10+5                                        | 1       | 49        | 1       | 0         |         | 23.64  | 23.78  | 23.33   |
| 10+5                                        | 50      | 0         | 25      | 0         | 16-QAM  | 20.83  | 20.97  | 20.42   |
| 10+5                                        | 1       | 0         | 1       | 24        |         | 14.28  | 14.30  | 13.78   |
| 10+5                                        | 1       | 49        | 1       | 0         |         | 23.08  | 23.22  | 22.81   |
| 10+5                                        | 50      | 0         | 25      | 0         | 64-QAM  | 20.82  | 21.01  | 20.43   |
| 10+5                                        | 1       | 0         | 1       | 24        |         | 14.07  | 14.32  | 13.64   |
| 10+5                                        | 1       | 49        | 1       | 0         |         | 21.96  | 22.05  | 19.76   |
| 10+5                                        | 50      | 0         | 25      | 0         | 256-QAM | 18.84  | 18.99  | 18.52   |
| 10+5                                        | 1       | 0         | 1       | 24        |         | 14.08  | 14.18  | 13.51   |
| 10+5                                        | 1       | 49        | 1       | 0         |         | 18.99  | 18.97  | 18.78   |
| 5+10                                        | 25      | 0         | 50      | 0         | QPSK    | 21.96  | 22.16  | 22.12   |
| 5+10                                        | 1       | 0         | 1       | 49        |         | 14.13  | 14.32  | 14.07   |
| 5+10                                        | 1       | 24        | 1       | 0         |         | 23.80  | 23.81  | 23.75   |
| 5+10                                        | 25      | 0         | 50      | 0         | 16-QAM  | 20.87  | 21.23  | 21.08   |
| 5+10                                        | 1       | 0         | 1       | 49        |         | 14.28  | 14.58  | 14.37   |
| 5+10                                        | 1       | 24        | 1       | 0         |         | 23.58  | 23.44  | 23.50   |
| 5+10                                        | 25      | 0         | 50      | 0         | 64-QAM  | 20.91  | 21.15  | 21.12   |
| 5+10                                        | 1       | 0         | 1       | 49        |         | 14.35  | 14.49  | 14.30   |
| 5+10                                        | 1       | 24        | 1       | 0         |         | 21.87  | 22.54  | 21.26   |
| 5+10                                        | 25      | 0         | 50      | 0         | 256-QAM | 18.95  | 19.23  | 19.10   |
| 5+10                                        | 1       | 0         | 1       | 49        |         | 13.83  | 14.37  | 14.24   |
| 5+10                                        | 1       | 24        | 1       | 0         |         | 19.03  | 19.80  | 19.17   |
| 5+5                                         | 25      | 0         | 25      | 0         | QPSK    | 22.07  | 22.17  | 22.02   |
| 5+5                                         | 1       | 0         | 1       | 24        |         | 14.11  | 14.20  | 14.15   |
| 5+5                                         | 1       | 24        | 1       | 0         |         | 23.70  | 23.78  | 23.75   |
| 5+5                                         | 25      | 0         | 25      | 0         | 16-QAM  | 21.07  | 21.16  | 21.05   |
| 5+5                                         | 1       | 0         | 1       | 24        |         | 14.39  | 14.62  | 14.64   |
| 5+5                                         | 1       | 24        | 1       | 0         |         | 23.33  | 23.60  | 23.48   |
| 5+5                                         | 25      | 0         | 25      | 0         | 64-QAM  | 20.99  | 21.27  | 21.09   |
| 5+5                                         | 1       | 0         | 1       | 24        |         | 14.28  | 14.42  | 14.14   |
| 5+5                                         | 1       | 24        | 1       | 0         |         | 22.29  | 22.58  | 21.81   |
| 5+5                                         | 25      | 0         | 25      | 0         | 256-QAM | 19.02  | 19.21  | 19.04   |
| 5+5                                         | 1       | 0         | 1       | 24        |         | 14.19  | 14.32  | 14.07   |
| 5+5                                         | 1       | 24        | 1       | 0         |         | 19.15  | 19.37  | 19.04   |



| LTE Band 66C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 20+20                                       | 100     | 0         | 100     | 0         | QPSK    | 21.21  | 21.19  | 21.29   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 14.67  | 14.51  | 15.02   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 22.94  | 22.75  | 23.38   |
| 20+20                                       | 100     | 0         | 100     | 0         | 16-QAM  | 20.13  | 20.07  | 20.41   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 15.12  | 15.05  | 15.51   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 22.56  | 22.23  | 22.74   |
| 20+20                                       | 100     | 0         | 100     | 0         | 64-QAM  | 20.29  | 20.09  | 20.50   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 14.85  | 14.87  | 15.46   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 21.47  | 20.69  | 21.65   |
| 20+20                                       | 100     | 0         | 100     | 0         | 256-QAM | 18.18  | 18.15  | 18.44   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 14.83  | 14.65  | 15.09   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 18.61  | 18.62  | 18.36   |
| 20+15                                       | 100     | 0         | 75      | 0         | QPSK    | 21.35  | 21.45  | 21.65   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 14.99  | 14.90  | 15.19   |
| 20+15                                       | 1       | 74        | 1       | 0         |         | 23.13  | 23.12  | 23.25   |
| 20+15                                       | 100     | 0         | 75      | 0         | 16-QAM  | 20.26  | 20.26  | 20.65   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 15.37  | 14.91  | 15.55   |
| 20+15                                       | 1       | 74        | 1       | 0         |         | 22.41  | 22.37  | 22.83   |
| 20+15                                       | 100     | 0         | 75      | 0         | 64-QAM  | 20.34  | 20.23  | 20.75   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 15.12  | 14.90  | 15.66   |
| 20+15                                       | 1       | 74        | 1       | 0         |         | 21.61  | 21.16  | 20.27   |
| 20+15                                       | 100     | 0         | 75      | 0         | 256-QAM | 18.32  | 18.32  | 18.79   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 14.88  | 14.82  | 15.38   |
| 20+15                                       | 1       | 74        | 1       | 0         |         | 18.48  | 18.08  | 18.44   |
| 15+20                                       | 75      | 0         | 100     | 0         | QPSK    | 21.22  | 21.44  | 21.67   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 14.75  | 14.91  | 14.95   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 22.99  | 23.25  | 23.58   |
| 15+20                                       | 75      | 0         | 100     | 0         | 16-QAM  | 20.32  | 20.65  | 20.34   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 15.05  | 15.19  | 15.39   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 22.34  | 22.80  | 23.43   |
| 15+20                                       | 75      | 0         | 100     | 0         | 64-QAM  | 20.23  | 20.23  | 20.61   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 15.01  | 15.38  | 15.20   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 21.70  | 21.35  | 20.52   |
| 15+20                                       | 75      | 0         | 100     | 0         | 256-QAM | 18.32  | 18.43  | 18.34   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 15.24  | 15.28  | 15.45   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 18.22  | 18.52  | 19.06   |



| LTE Band 66C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 20+10                                       | 100     | 0         | 50      | 0         | QPSK    | 21.20  | 21.44  | 21.65   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 14.85  | 14.81  | 15.24   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 23.19  | 23.40  | 23.33   |
| 20+10                                       | 100     | 0         | 50      | 0         | 16-QAM  | 20.35  | 20.37  | 20.61   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 15.28  | 15.78  | 15.58   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 22.85  | 22.48  | 23.12   |
| 20+10                                       | 100     | 0         | 50      | 0         | 64-QAM  | 19.75  | 20.43  | 20.62   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 14.98  | 15.45  | 15.33   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 21.64  | 21.72  | 20.18   |
| 20+10                                       | 100     | 0         | 50      | 0         | 256-QAM | 18.33  | 18.52  | 18.58   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 15.16  | 15.23  | 15.44   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 18.53  | 18.40  | 18.86   |
| 10+20                                       | 50      | 0         | 100     | 0         | QPSK    | 21.14  | 21.37  | 21.48   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 14.79  | 14.98  | 15.04   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 22.98  | 23.27  | 23.31   |
| 10+20                                       | 50      | 0         | 100     | 0         | 16-QAM  | 20.25  | 20.51  | 20.56   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 15.10  | 15.54  | 15.68   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 22.27  | 23.00  | 22.52   |
| 10+20                                       | 50      | 0         | 100     | 0         | 64-QAM  | 20.20  | 20.28  | 20.63   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 15.00  | 15.08  | 15.39   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 21.17  | 21.94  | 22.01   |
| 10+20                                       | 50      | 0         | 100     | 0         | 256-QAM | 18.15  | 18.50  | 18.59   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 14.99  | 15.53  | 15.36   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 18.21  | 18.17  | 18.55   |
| 20+5                                        | 100     | 0         | 25      | 0         | QPSK    | 20.82  | 21.03  | 21.55   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 14.41  | 14.39  | 15.16   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 22.90  | 22.77  | 23.41   |
| 20+5                                        | 100     | 0         | 25      | 0         | 16-QAM  | 19.87  | 20.12  | 20.59   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 14.96  | 14.78  | 15.71   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 22.45  | 22.24  | 22.88   |
| 20+5                                        | 100     | 0         | 25      | 0         | 64-QAM  | 19.91  | 20.01  | 20.61   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 14.28  | 14.74  | 15.42   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 21.35  | 21.22  | 20.39   |
| 20+5                                        | 100     | 0         | 25      | 0         | 256-QAM | 17.87  | 18.11  | 18.59   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 14.57  | 14.90  | 15.36   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 18.36  | 18.31  | 19.06   |



| LTE Band 66C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 5+20                                        | 25      | 0         | 100     | 0         | QPSK    | 20.97  | 21.11  | 21.16   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 14.41  | 14.62  | 14.72   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 23.02  | 23.26  | 23.14   |
| 5+20                                        | 25      | 0         | 100     | 0         | 16-QAM  | 19.98  | 20.25  | 20.35   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 15.23  | 14.65  | 15.07   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 22.36  | 22.42  | 22.77   |
| 5+20                                        | 25      | 0         | 100     | 0         | 64-QAM  | 19.94  | 20.16  | 20.25   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 14.77  | 15.07  | 14.87   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 20.48  | 21.41  | 21.22   |
| 5+20                                        | 25      | 0         | 100     | 0         | 256-QAM | 17.90  | 18.22  | 18.34   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 14.80  | 15.11  | 15.03   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 17.85  | 17.71  | 18.50   |
| 15+10                                       | 75      | 0         | 50      | 0         | QPSK    | 21.13  | 21.27  | 21.58   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 14.65  | 14.62  | 15.02   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 23.01  | 23.04  | 23.41   |
| 15+10                                       | 75      | 0         | 50      | 0         | 16-QAM  | 20.17  | 20.14  | 20.62   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 15.08  | 15.12  | 15.64   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 22.37  | 22.31  | 23.08   |
| 15+10                                       | 75      | 0         | 50      | 0         | 64-QAM  | 20.18  | 20.18  | 20.55   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 14.95  | 14.86  | 15.43   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 21.09  | 21.64  | 20.53   |
| 15+10                                       | 75      | 0         | 50      | 0         | 256-QAM | 18.21  | 18.21  | 18.68   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 14.83  | 14.91  | 15.43   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 17.73  | 18.01  | 18.45   |
| 10+15                                       | 50      | 0         | 75      | 0         | QPSK    | 20.98  | 20.52  | 21.63   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 14.40  | 14.19  | 15.16   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 22.72  | 22.67  | 23.48   |
| 10+15                                       | 50      | 0         | 75      | 0         | 16-QAM  | 20.02  | 19.58  | 20.72   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 14.88  | 14.62  | 14.53   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 22.30  | 21.88  | 22.97   |
| 10+15                                       | 50      | 0         | 75      | 0         | 64-QAM  | 20.02  | 19.59  | 20.64   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 14.82  | 14.02  | 15.39   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 20.77  | 20.95  | 21.83   |
| 10+15                                       | 50      | 0         | 75      | 0         | 256-QAM | 18.02  | 17.57  | 18.68   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 15.04  | 14.05  | 15.44   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 18.14  | 17.53  | 18.93   |



| LTE Band 66C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 15+15                                       | 75      | 0         | 75      | 0         | QPSK    | 21.25  | 21.73  | 21.73   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 14.53  | 14.62  | 15.26   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 22.90  | 23.19  | 23.13   |
| 15+15                                       | 75      | 0         | 75      | 0         | 16-QAM  | 20.17  | 20.57  | 20.77   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 15.11  | 15.43  | 15.58   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 22.36  | 22.44  | 22.76   |
| 15+15                                       | 75      | 0         | 75      | 0         | 64-QAM  | 20.13  | 20.37  | 20.67   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 15.22  | 15.12  | 15.58   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 21.27  | 21.34  | 19.64   |
| 15+15                                       | 75      | 0         | 75      | 0         | 256-QAM | 18.21  | 18.33  | 18.72   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 14.93  | 15.88  | 15.45   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 18.34  | 18.40  | 18.38   |



| LTE Band 38C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 20+20                                       | 100     | 0         | 100     | 0         | QPSK    | 18.29  | 18.09  | 17.87   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 13.59  | 13.54  | 13.59   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 20.84  | 20.94  | 21.20   |
| 20+20                                       | 100     | 0         | 100     | 0         | 16-QAM  | 17.44  | 17.20  | 16.60   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 14.12  | 14.05  | 14.11   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 20.44  | 20.30  | 20.60   |
| 20+20                                       | 100     | 0         | 100     | 0         | 64-QAM  | 16.44  | 16.16  | 15.56   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 13.89  | 13.83  | 13.88   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 17.34  | 17.08  | 17.35   |
| 20+20                                       | 100     | 0         | 100     | 0         | 256-QAM | 15.45  | 15.10  | 14.55   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 13.87  | 13.73  | 13.81   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 16.27  | 16.03  | 16.28   |
| 15+15                                       | 75      | 0         | 75      | 0         | QPSK    | 18.29  | 18.13  | 18.32   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 13.64  | 13.56  | 13.56   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 20.69  | 20.96  | 21.12   |
| 15+15                                       | 75      | 0         | 75      | 0         | 16-QAM  | 17.45  | 17.34  | 17.23   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 14.18  | 14.10  | 14.05   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 20.36  | 20.36  | 20.56   |
| 15+15                                       | 75      | 0         | 75      | 0         | 64-QAM  | 16.55  | 16.39  | 16.19   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 13.89  | 13.84  | 13.79   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 17.33  | 17.18  | 17.27   |
| 15+15                                       | 75      | 0         | 75      | 0         | 256-QAM | 15.51  | 15.31  | 15.17   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 13.78  | 13.70  | 13.79   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 16.36  | 16.11  | 16.21   |



| LTE Band 41C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 20+20                                       | 100     | 0         | 100     | 0         | QPSK    | 20.46  | 20.93  | 20.84   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 13.97  | 14.37  | 14.35   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 22.28  | 22.40  | 23.15   |
| 20+20                                       | 100     | 0         | 100     | 0         | 16-QAM  | 19.52  | 19.95  | 19.86   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 13.98  | 14.41  | 14.37   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 20.99  | 21.47  | 21.71   |
| 20+20                                       | 100     | 0         | 100     | 0         | 64-QAM  | 19.48  | 19.94  | 19.85   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 13.64  | 14.03  | 14.06   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 19.95  | 20.45  | 20.84   |
| 20+20                                       | 100     | 0         | 100     | 0         | 256-QAM | 17.46  | 17.94  | 17.88   |
| 20+20                                       | 1       | 0         | 1       | 99        |         | 13.88  | 14.27  | 14.24   |
| 20+20                                       | 1       | 99        | 1       | 0         |         | 17.23  | 17.63  | 18.13   |
| 20+15                                       | 100     | 0         | 75      | 0         | QPSK    | 20.93  | 21.31  | 21.19   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 14.43  | 14.79  | 14.73   |
| 20+15                                       | 1       | 99        | 1       | 0         |         | 22.48  | 23.09  | 23.01   |
| 20+15                                       | 100     | 0         | 75      | 0         | 16-QAM  | 19.93  | 20.33  | 20.18   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 14.44  | 14.82  | 14.71   |
| 20+15                                       | 1       | 99        | 1       | 0         |         | 21.49  | 21.73  | 21.64   |
| 20+15                                       | 100     | 0         | 75      | 0         | 64-QAM  | 19.99  | 20.38  | 20.21   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 14.12  | 14.48  | 14.39   |
| 20+15                                       | 1       | 99        | 1       | 0         |         | 20.47  | 20.91  | 20.76   |
| 20+15                                       | 100     | 0         | 75      | 0         | 256-QAM | 17.97  | 18.40  | 18.25   |
| 20+15                                       | 1       | 0         | 1       | 74        |         | 14.30  | 14.68  | 14.58   |
| 20+15                                       | 1       | 99        | 1       | 0         |         | 17.77  | 18.11  | 18.02   |
| 15+20                                       | 75      | 0         | 100     | 0         | QPSK    | 20.86  | 21.24  | 21.13   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 14.43  | 14.68  | 14.59   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 22.66  | 22.99  | 22.90   |
| 15+20                                       | 75      | 0         | 100     | 0         | 16-QAM  | 19.86  | 20.25  | 20.08   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 14.28  | 14.79  | 14.62   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 21.41  | 21.79  | 21.41   |
| 15+20                                       | 75      | 0         | 100     | 0         | 64-QAM  | 19.87  | 20.24  | 20.05   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 13.96  | 14.44  | 14.34   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 20.61  | 20.81  | 20.68   |
| 15+20                                       | 75      | 0         | 100     | 0         | 256-QAM | 17.87  | 18.26  | 18.14   |
| 15+20                                       | 1       | 0         | 1       | 99        |         | 14.37  | 14.70  | 14.49   |
| 15+20                                       | 1       | 74        | 1       | 0         |         | 17.60  | 17.99  | 17.93   |



| LTE Band 41C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 20+10                                       | 100     | 0         | 50      | 0         | QPSK    | 20.23  | 20.72  | 21.03   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 13.69  | 14.21  | 14.58   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 22.11  | 22.55  | 22.86   |
| 20+10                                       | 100     | 0         | 50      | 0         | 16-QAM  | 19.23  | 19.78  | 20.06   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 13.78  | 14.36  | 14.56   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 20.67  | 21.16  | 21.52   |
| 20+10                                       | 100     | 0         | 50      | 0         | 64-QAM  | 19.25  | 19.80  | 19.98   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 13.40  | 13.92  | 14.24   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 19.78  | 20.35  | 20.62   |
| 20+10                                       | 100     | 0         | 50      | 0         | 256-QAM | 17.27  | 17.78  | 18.02   |
| 20+10                                       | 1       | 0         | 1       | 49        |         | 13.65  | 14.15  | 14.41   |
| 20+10                                       | 1       | 99        | 1       | 0         |         | 17.04  | 17.54  | 17.85   |
| 10+20                                       | 50      | 0         | 100     | 0         | QPSK    | 20.19  | 20.66  | 20.54   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 13.73  | 14.18  | 14.13   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 21.97  | 22.46  | 22.36   |
| 10+20                                       | 50      | 0         | 100     | 0         | 16-QAM  | 19.23  | 19.70  | 19.60   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 13.86  | 14.29  | 14.12   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 20.63  | 21.06  | 21.04   |
| 10+20                                       | 50      | 0         | 100     | 0         | 64-QAM  | 19.21  | 19.71  | 19.63   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 13.42  | 13.90  | 13.79   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 19.71  | 20.26  | 20.07   |
| 10+20                                       | 50      | 0         | 100     | 0         | 256-QAM | 17.25  | 17.76  | 17.64   |
| 10+20                                       | 1       | 0         | 1       | 99        |         | 13.65  | 14.09  | 13.94   |
| 10+20                                       | 1       | 49        | 1       | 0         |         | 16.99  | 17.49  | 17.38   |
| 20+5                                        | 100     | 0         | 25      | 0         | QPSK    | 20.01  | 20.56  | 20.58   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 13.46  | 14.12  | 14.13   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 21.71  | 22.48  | 22.45   |
| 20+5                                        | 100     | 0         | 25      | 0         | 16-QAM  | 19.06  | 19.53  | 19.60   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 13.54  | 14.27  | 14.14   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 20.48  | 21.26  | 21.16   |
| 20+5                                        | 100     | 0         | 25      | 0         | 64-QAM  | 19.03  | 19.67  | 19.59   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 13.20  | 13.85  | 13.80   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 19.72  | 20.15  | 20.25   |
| 20+5                                        | 100     | 0         | 25      | 0         | 256-QAM | 17.05  | 17.63  | 17.64   |
| 20+5                                        | 1       | 0         | 1       | 24        |         | 13.39  | 14.02  | 13.94   |
| 20+5                                        | 1       | 99        | 1       | 0         |         | 16.81  | 17.43  | 17.50   |



| LTE Band 41C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 5+20                                        | 25      | 0         | 100     | 0         | QPSK    | 20.60  | 20.94  | 21.04   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 14.16  | 14.41  | 14.58   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 22.46  | 22.84  | 22.98   |
| 5+20                                        | 25      | 0         | 100     | 0         | 16-QAM  | 19.65  | 19.96  | 20.09   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 14.31  | 14.61  | 14.61   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 21.14  | 21.41  | 21.72   |
| 5+20                                        | 25      | 0         | 100     | 0         | 64-QAM  | 19.63  | 19.94  | 20.03   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 13.83  | 14.08  | 14.26   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 20.19  | 20.62  | 20.72   |
| 5+20                                        | 25      | 0         | 100     | 0         | 256-QAM | 17.66  | 18.00  | 17.99   |
| 5+20                                        | 1       | 0         | 1       | 99        |         | 14.06  | 14.41  | 14.46   |
| 5+20                                        | 1       | 24        | 1       | 0         |         | 17.40  | 17.80  | 17.98   |
| 15+10                                       | 75      | 0         | 50      | 0         | QPSK    | 20.02  | 20.63  | 20.71   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 13.53  | 14.12  | 14.12   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 21.87  | 22.46  | 22.32   |
| 15+10                                       | 75      | 0         | 50      | 0         | 16-QAM  | 19.01  | 19.65  | 19.61   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 13.62  | 14.29  | 14.14   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 20.49  | 21.21  | 21.06   |
| 15+10                                       | 75      | 0         | 50      | 0         | 64-QAM  | 19.05  | 19.68  | 19.56   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 13.26  | 13.82  | 13.78   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 19.55  | 20.26  | 20.18   |
| 15+10                                       | 75      | 0         | 50      | 0         | 256-QAM | 17.07  | 17.79  | 17.64   |
| 15+10                                       | 1       | 0         | 1       | 49        |         | 13.54  | 14.05  | 14.00   |
| 15+10                                       | 1       | 74        | 1       | 0         |         | 17.02  | 17.46  | 17.42   |
| 10+15                                       | 50      | 0         | 75      | 0         | QPSK    | 20.05  | 20.65  | 20.62   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 13.69  | 14.15  | 14.18   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 21.96  | 22.43  | 22.46   |
| 10+15                                       | 50      | 0         | 75      | 0         | 16-QAM  | 19.08  | 19.68  | 19.66   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 13.79  | 14.29  | 14.18   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 20.52  | 20.99  | 21.13   |
| 10+15                                       | 50      | 0         | 75      | 0         | 64-QAM  | 19.12  | 19.75  | 19.73   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 13.40  | 13.87  | 14.09   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 19.69  | 20.26  | 20.19   |
| 10+15                                       | 50      | 0         | 75      | 0         | 256-QAM | 17.25  | 17.76  | 17.72   |
| 10+15                                       | 1       | 0         | 1       | 74        |         | 13.64  | 14.09  | 14.04   |
| 10+15                                       | 1       | 49        | 1       | 0         |         | 16.89  | 17.48  | 17.50   |



| LTE Band 41C_CA Maximum Average Power [dBm] |         |           |         |           |         |        |        |         |
|---------------------------------------------|---------|-----------|---------|-----------|---------|--------|--------|---------|
| BW [MHz]                                    | PCC     |           | SCC     |           | Mod     | Lowest | Middle | Highest |
|                                             | RB Size | RB Offset | RB Size | RB Offset |         |        |        |         |
| 15+15                                       | 75      | 0         | 75      | 0         | QPSK    | 20.75  | 21.13  | 20.75   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 14.30  | 14.57  | 14.27   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 22.29  | 22.86  | 22.77   |
| 15+15                                       | 75      | 0         | 75      | 0         | 16-QAM  | 19.77  | 20.15  | 19.80   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 14.27  | 14.70  | 14.40   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 21.23  | 21.59  | 21.43   |
| 15+15                                       | 75      | 0         | 75      | 0         | 64-QAM  | 19.83  | 20.16  | 19.88   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 13.96  | 14.35  | 14.13   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 20.25  | 20.63  | 20.49   |
| 15+15                                       | 75      | 0         | 75      | 0         | 256-QAM | 17.81  | 18.19  | 17.94   |
| 15+15                                       | 1       | 0         | 1       | 74        |         | 14.19  | 14.44  | 14.31   |
| 15+15                                       | 1       | 74        | 1       | 0         |         | 17.51  | 17.83  | 17.62   |

## LTE Band 5B

### 26dB Bandwidth

| Mode       | LTE Band 5B : 26dB BW(MHz) |             |            |
|------------|----------------------------|-------------|------------|
| QPSK       |                            |             |            |
| BW         | 3MHz+5MHz                  | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                          | -           | 14.51      |
| Middle CH  | -                          | -           | 14.63      |
| Highest CH | -                          | -           | 14.63      |
| BW         | 10MHz+5MHz                 | 10MHz+10MHz | N/A        |
| Lowest CH  | 14.60                      | 19.54       | -          |
| Middle CH  | 14.66                      | 19.74       | -          |
| Highest CH | 14.63                      | 19.82       | -          |

| Mode       | LTE Band 5B : 26dB BW(MHz) |             |            |
|------------|----------------------------|-------------|------------|
| 16QAM      |                            |             |            |
| BW         | 3MHz+5MHz                  | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                          | -           | 14.54      |
| Middle CH  | -                          | -           | 14.54      |
| Highest CH | -                          | -           | 14.51      |
| BW         | 10MHz+5MHz                 | 10MHz+10MHz | N/A        |
| Lowest CH  | 14.60                      | 19.70       | -          |
| Middle CH  | 14.63                      | 19.82       | -          |
| Highest CH | 14.54                      | 19.62       | -          |

| Mode       | LTE Band 5B : 26dB BW(MHz) |             |            |
|------------|----------------------------|-------------|------------|
| 64QAM      |                            |             |            |
| BW         | 3MHz+5MHz                  | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                          | -           | 14.57      |
| Middle CH  | -                          | -           | 14.57      |
| Highest CH | -                          | -           | 14.54      |
| BW         | 10MHz+5MHz                 | 10MHz+10MHz | N/A        |
| Lowest CH  | 14.72                      | 19.70       | -          |
| Middle CH  | 14.69                      | 19.54       | -          |
| Highest CH | 14.72                      | 19.74       | -          |



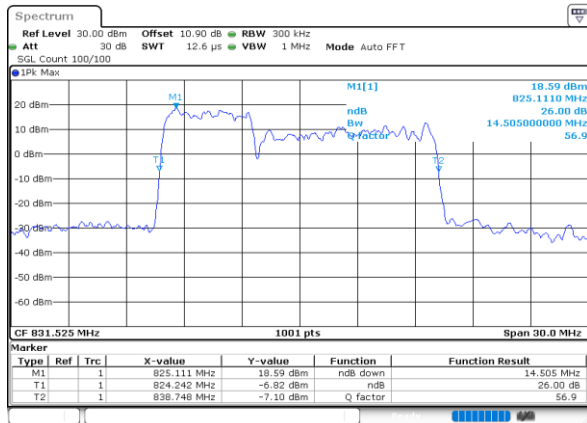
| Mode       | LTE Band 5B : 26dB BW(MHz) |             |            |
|------------|----------------------------|-------------|------------|
| 256QAM     |                            |             |            |
| BW         | 3MHz+5MHz                  | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                          | -           | 14.54      |
| Middle CH  | -                          | -           | 14.57      |
| Highest CH | -                          | -           | 14.54      |
| BW         | 10MHz+5MHz                 | 10MHz+10MHz | N/A        |
| Lowest CH  | 14.57                      | 19.66       | -          |
| Middle CH  | 14.60                      | 19.70       | -          |
| Highest CH | 14.60                      | 19.54       | -          |



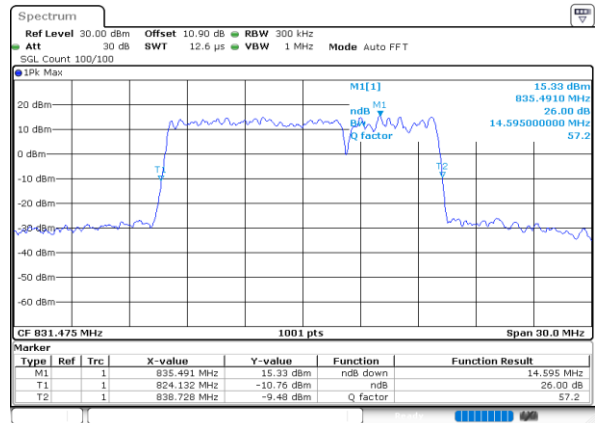
## LTE Band 5B

## QPSK

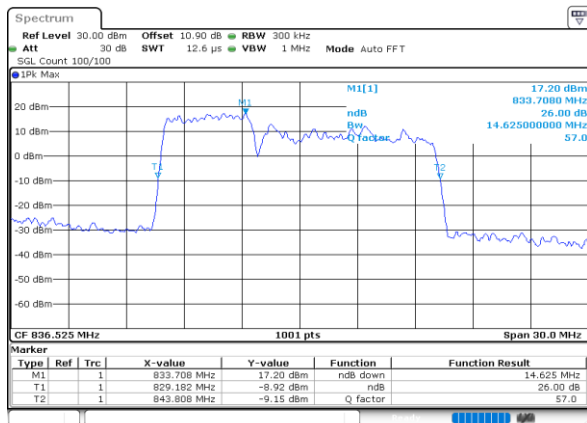
## Lowest Channel / 5MHz+10MHz



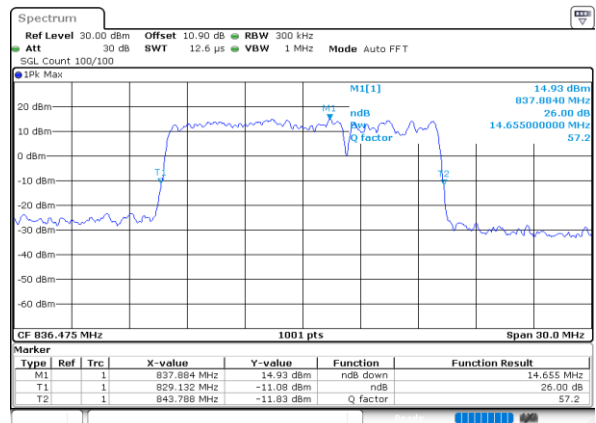
## Lowest Channel / 10MHz+5MHz



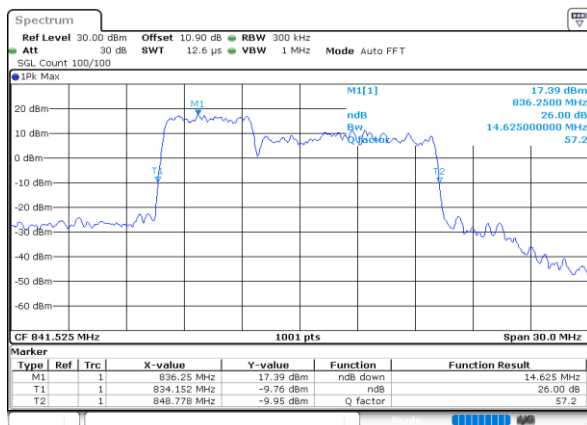
## Middle Channel / 5MHz+10MHz



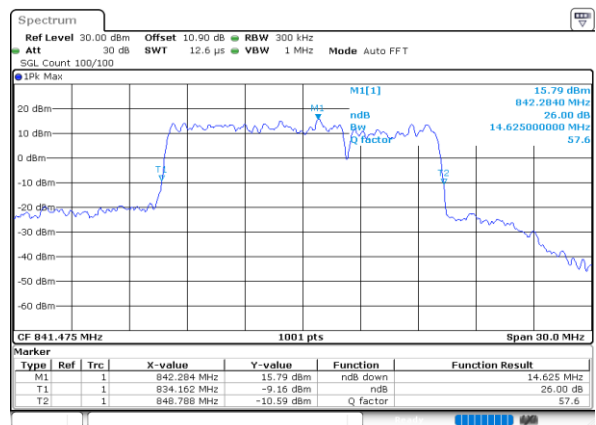
## Middle Channel / 10MHz+5MHz



## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



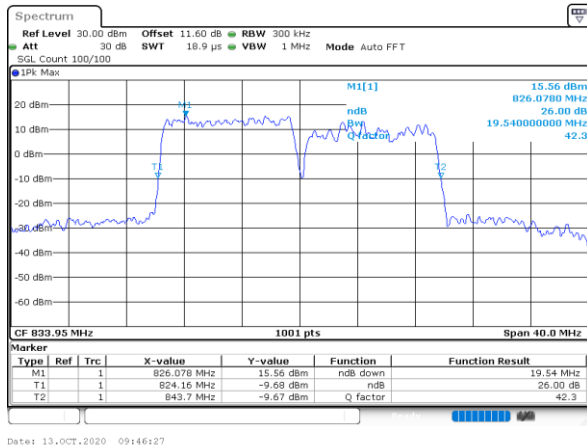


## LTE Band 5B

## QPSK

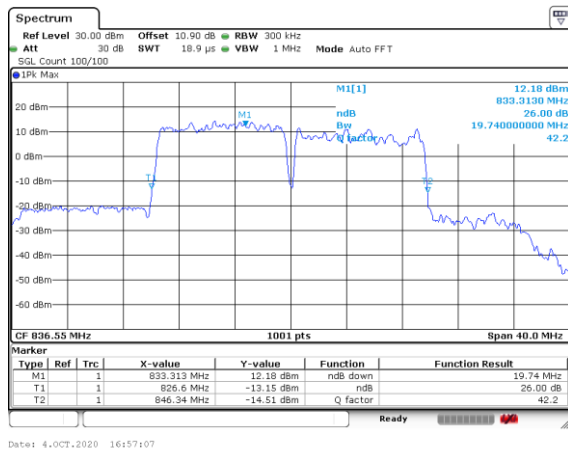
## Lowest Channel / 10MHz+10MHz

N/A



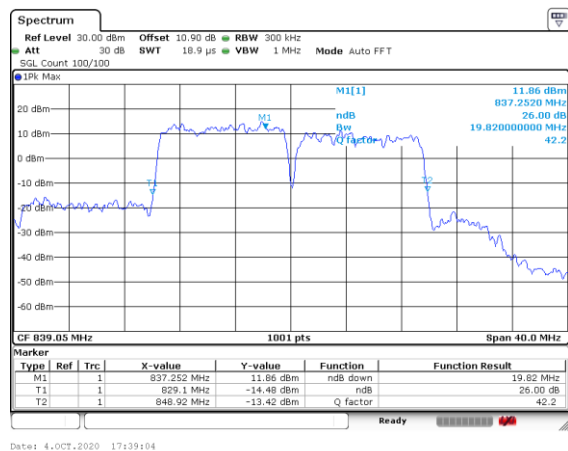
## Middle Channel / 10MHz+10MHz

N/A



## Highest Channel / 10MHz+10MHz

N/A

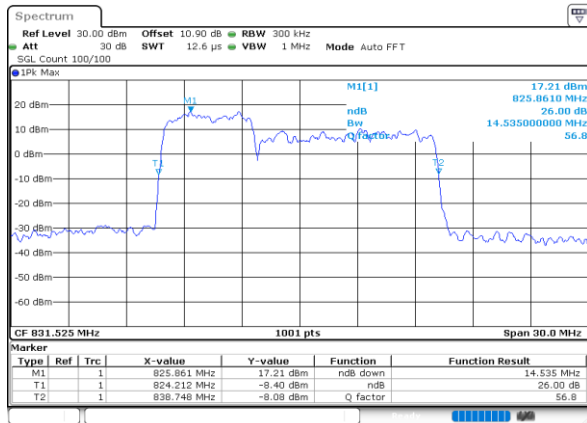




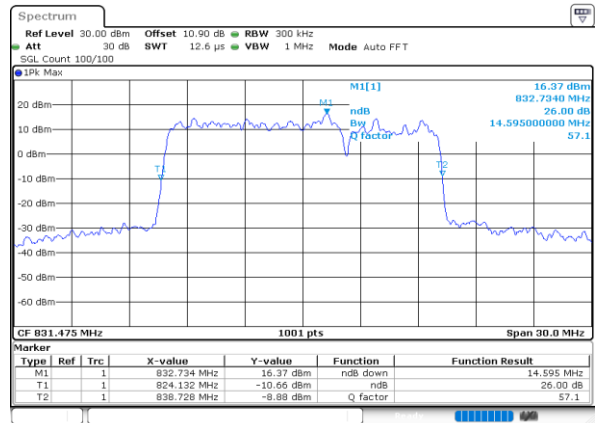
## LTE Band 5B

## 16QAM

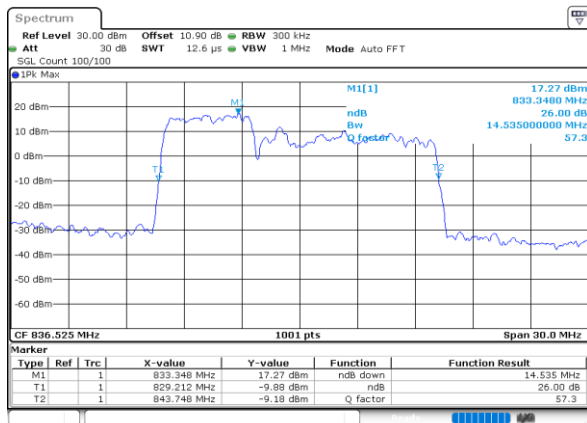
## Lowest Channel / 5MHz+10MHz



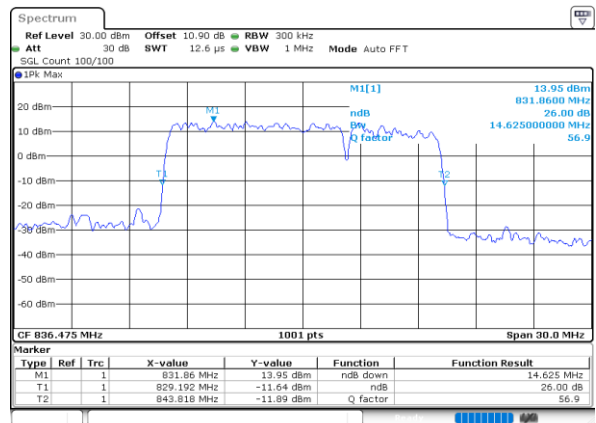
## Lowest Channel / 10MHz+5MHz



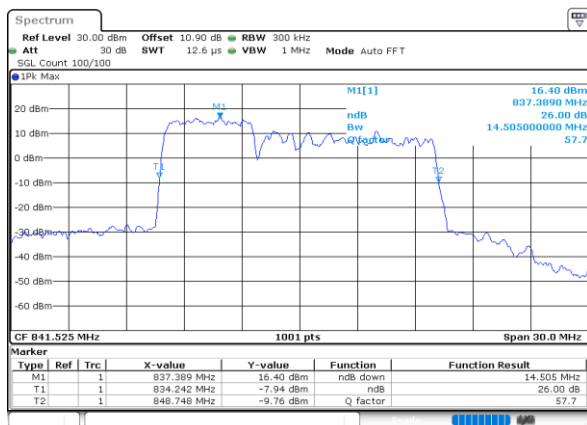
## Middle Channel / 5MHz+10MHz



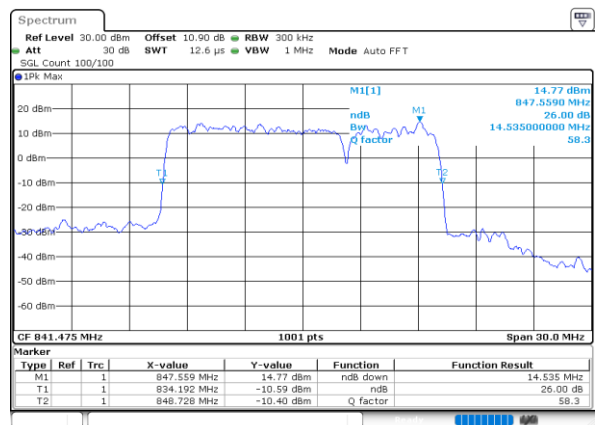
## Middle Channel / 10MHz+5MHz



## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



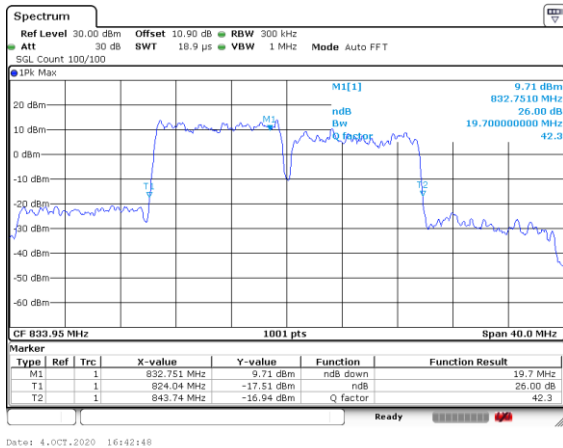


## LTE Band 5B

## 16QAM

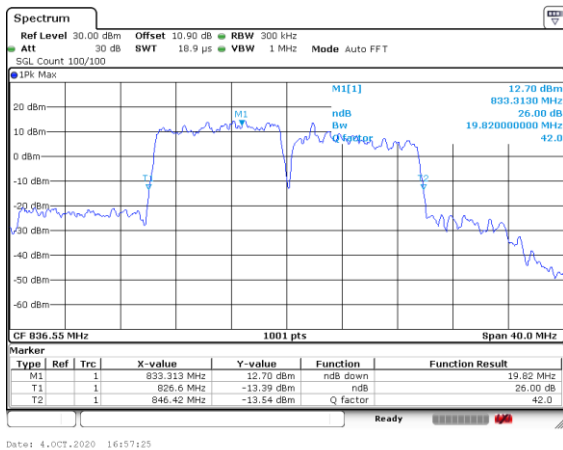
## Lowest Channel / 10MHz+10MHz

N/A



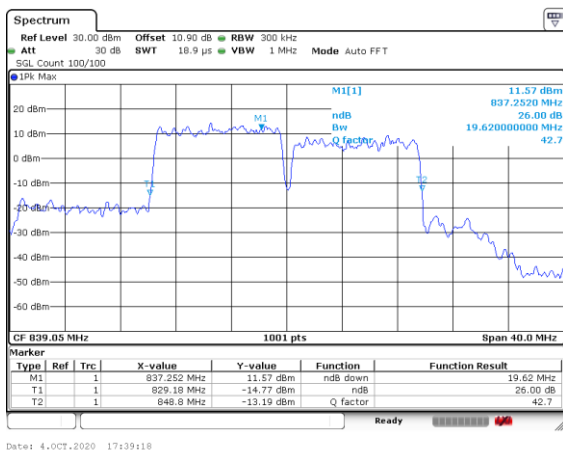
## Middle Channel / 10MHz+10MHz

N/A



## Highest Channel / 10MHz+10MHz

N/A

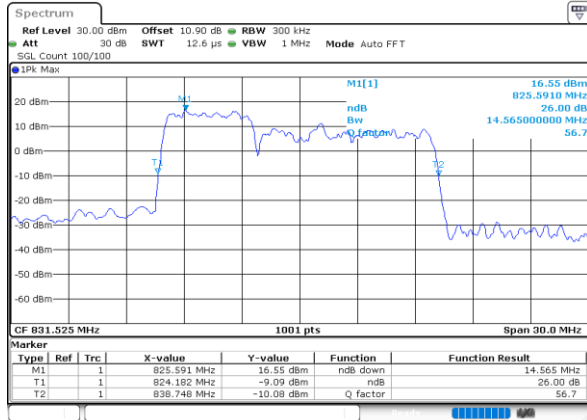




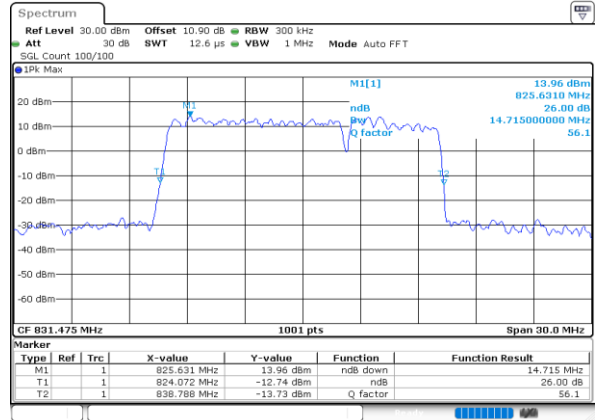
## LTE Band 5B

## 64QAM

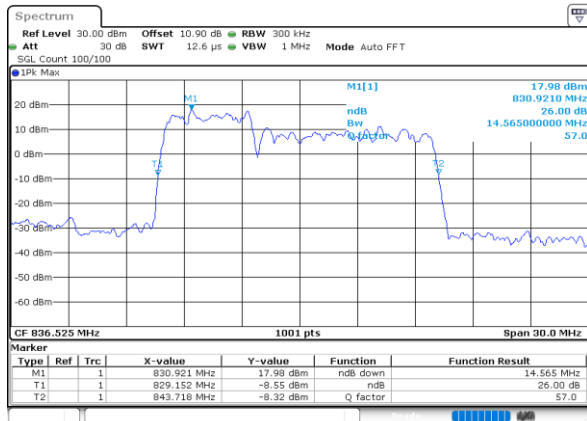
## Lowest Channel / 5MHz+10MHz



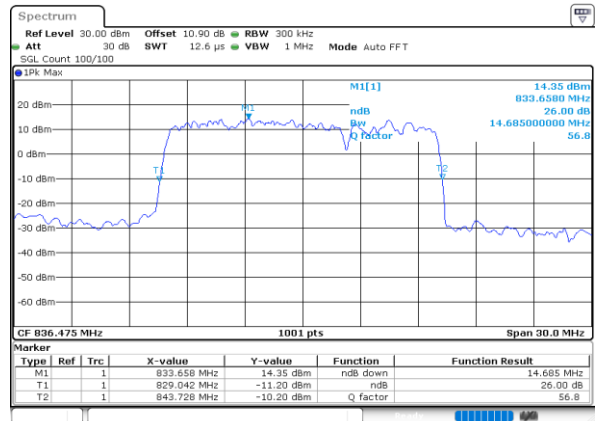
## Lowest Channel / 10MHz+5MHz



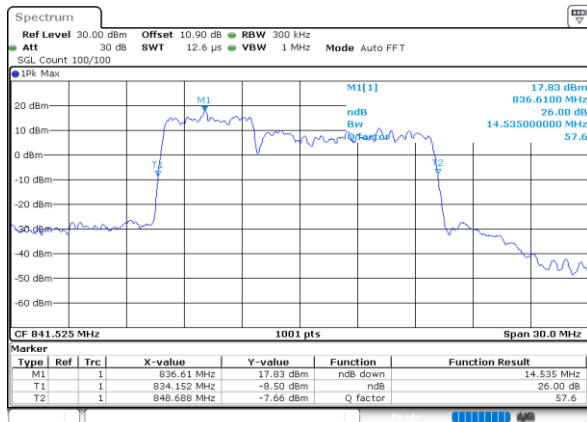
## Middle Channel / 5MHz+10MHz



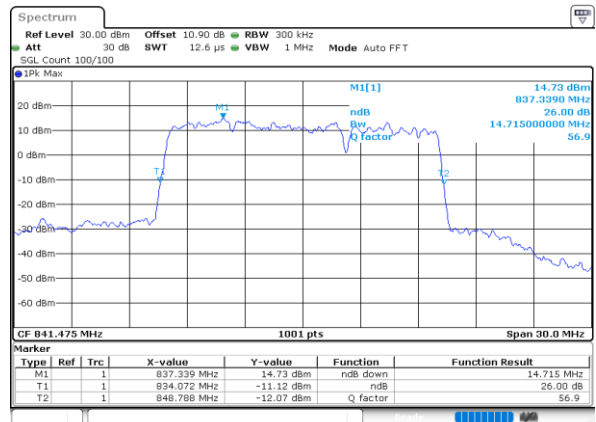
## Middle Channel / 10MHz+5MHz



## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



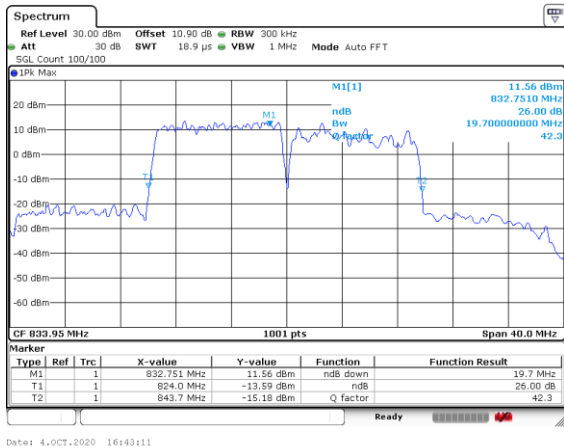


## LTE Band 5B

## 64QAM

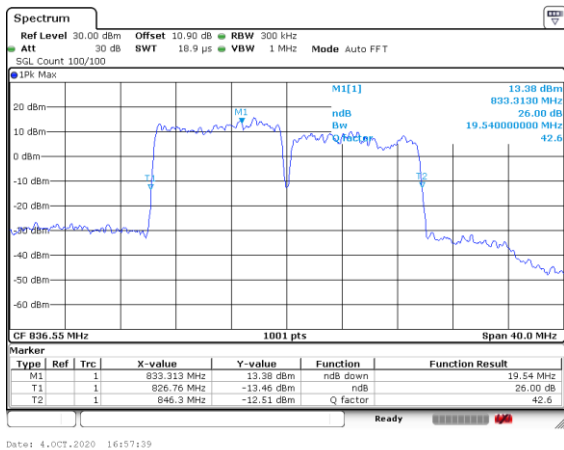
## Lowest Channel / 10MHz+10MHz

N/A



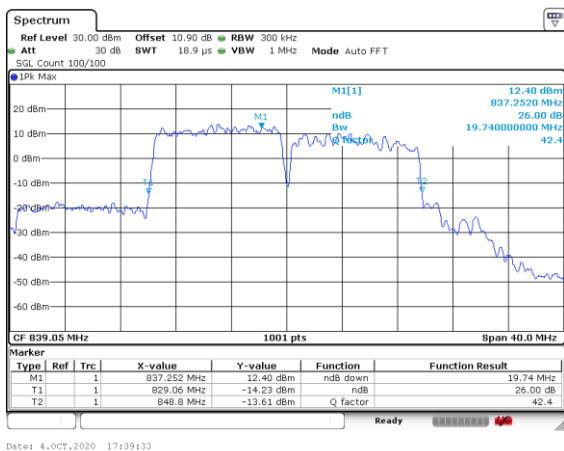
## Middle Channel / 10MHz+10MHz

N/A



## Highest Channel / 10MHz+10MHz

N/A

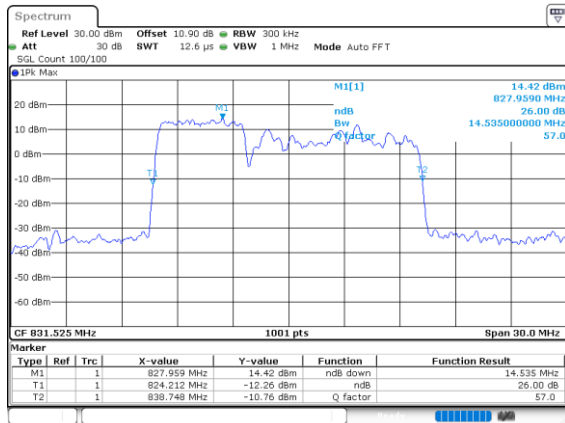




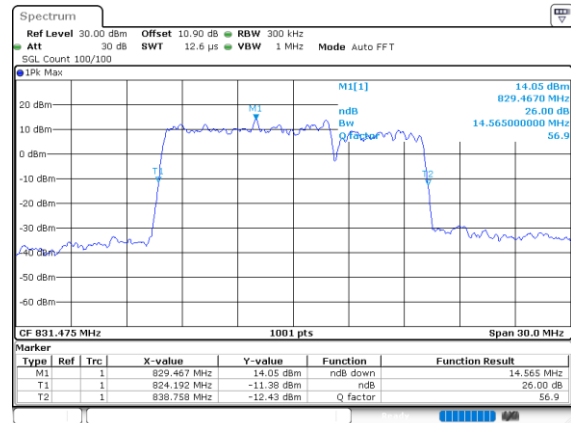
## LTE Band 5B

## 256QAM

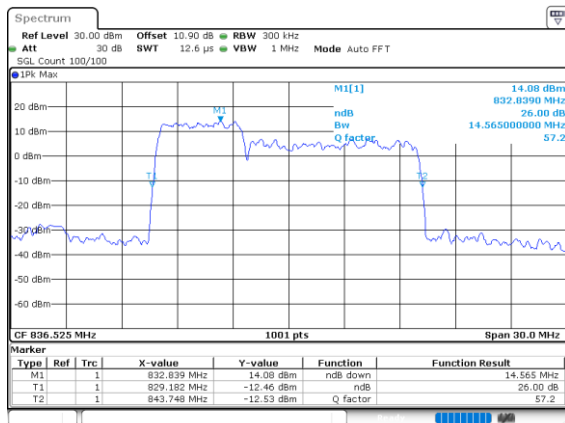
## Lowest Channel / 5MHz+10MHz



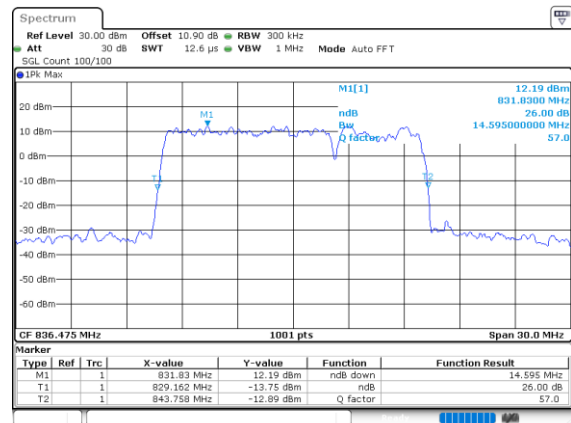
## Lowest Channel / 10MHz+5MHz



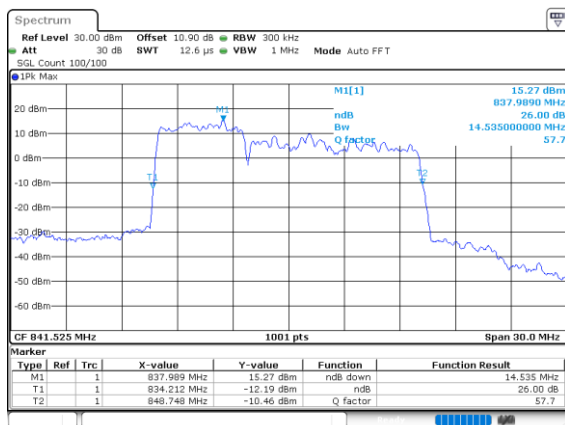
## Middle Channel / 5MHz+10MHz



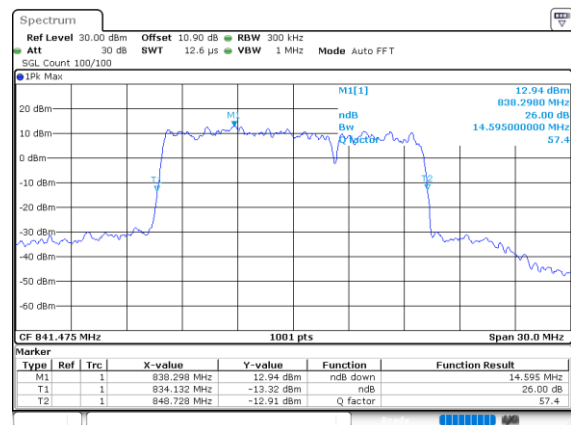
## Middle Channel / 10MHz+5MHz

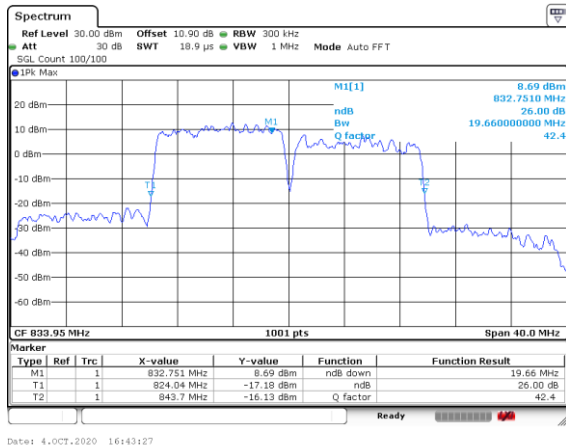
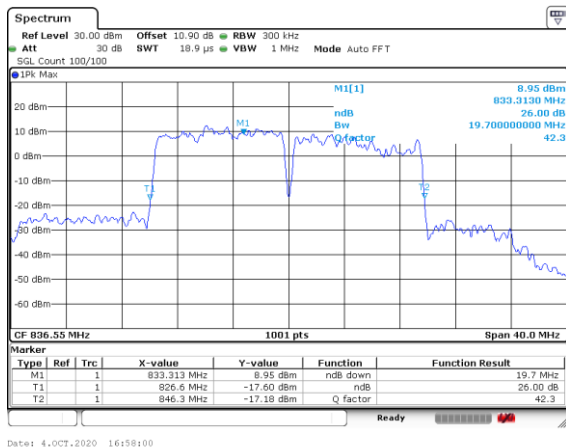
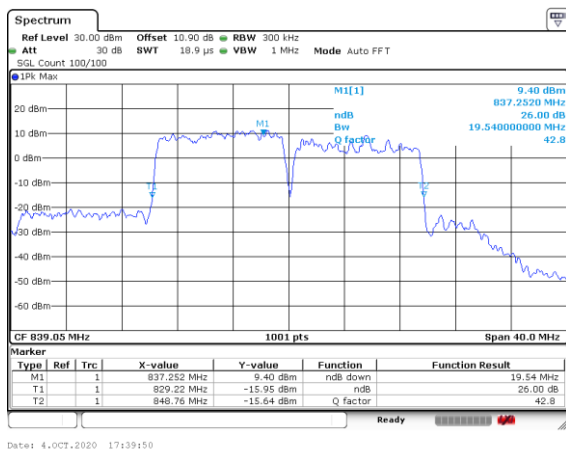


## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



**LTE Band 5B****256QAM****Lowest Channel / 10MHz+10MHz****N/A****Middle Channel / 10MHz+10MHz****N/A****Highest Channel / 10MHz+10MHz****N/A**

## Occupied Bandwidth

| Mode       | LTE Band 5B : 99%OBW(MHz) |             |            |
|------------|---------------------------|-------------|------------|
|            | QPSK                      |             |            |
| BW         | 3MHz+5MHz                 | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                         | -           | 13.76      |
| Middle CH  | -                         | -           | 13.88      |
| Highest CH | -                         | -           | 13.91      |
| BW         | 10MHz+5MHz                | 10MHz+10MHz | N/A        |
| Lowest CH  | 13.76                     | 18.62       | -          |
| Middle CH  | 13.85                     | 18.70       | -          |
| Highest CH | 13.88                     | 18.70       | -          |

| Mode       | LTE Band 5B : 99%OBW(MHz) |             |            |
|------------|---------------------------|-------------|------------|
|            | 16QAM                     |             |            |
| BW         | 3MHz+5MHz                 | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                         | -           | 13.82      |
| Middle CH  | -                         | -           | 13.79      |
| Highest CH | -                         | -           | 13.61      |
| BW         | 10MHz+5MHz                | 10MHz+10MHz | N/A        |
| Lowest CH  | 13.88                     | 18.58       | -          |
| Middle CH  | 13.82                     | 18.74       | -          |
| Highest CH | 13.85                     | 18.58       | -          |

| Mode       | LTE Band 5B : 99%OBW(MHz) |             |            |
|------------|---------------------------|-------------|------------|
|            | 64QAM                     |             |            |
| BW         | 3MHz+5MHz                 | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                         | -           | 13.85      |
| Middle CH  | -                         | -           | 13.79      |
| Highest CH | -                         | -           | 13.79      |
| BW         | 10MHz+5MHz                | 10MHz+10MHz | N/A        |
| Lowest CH  | 13.91                     | 18.82       | -          |
| Middle CH  | 13.79                     | 18.70       | -          |
| Highest CH | 13.88                     | 18.78       | -          |



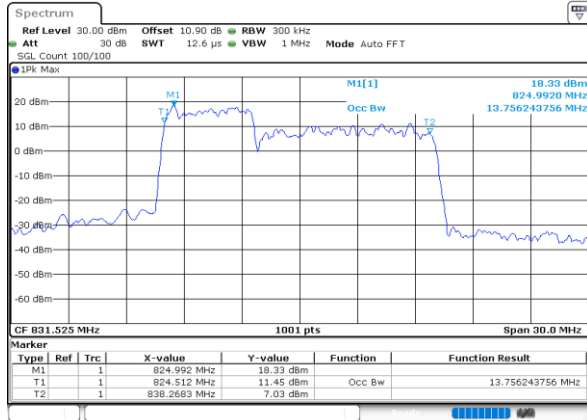
| Mode       | LTE Band 5B : 99%OBW(MHz) |             |            |
|------------|---------------------------|-------------|------------|
| 256QAM     |                           |             |            |
| BW         | 3MHz+5MHz                 | 5MHz+3MHz   | 5MHz+10MHz |
| Lowest CH  | -                         | -           | 13.85      |
| Middle CH  | -                         | -           | 13.79      |
| Highest CH | -                         | -           | 13.79      |
| BW         | 10MHz+5MHz                | 10MHz+10MHz | N/A        |
| Lowest CH  | 13.88                     | 18.78       | -          |
| Middle CH  | 13.82                     | 18.62       | -          |
| Highest CH | 13.91                     | 18.58       | -          |



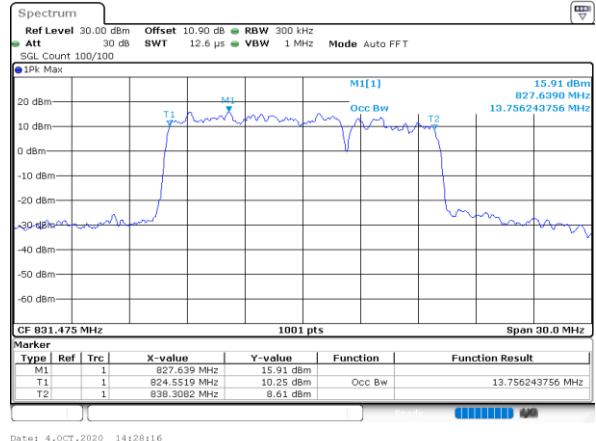
## LTE Band 5B

## QPSK

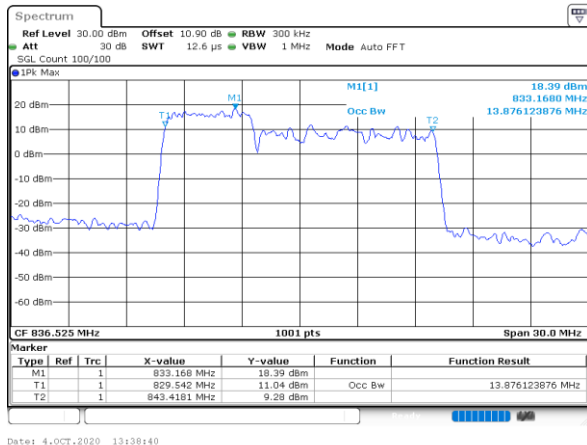
## Lowest Channel / 5MHz+10MHz



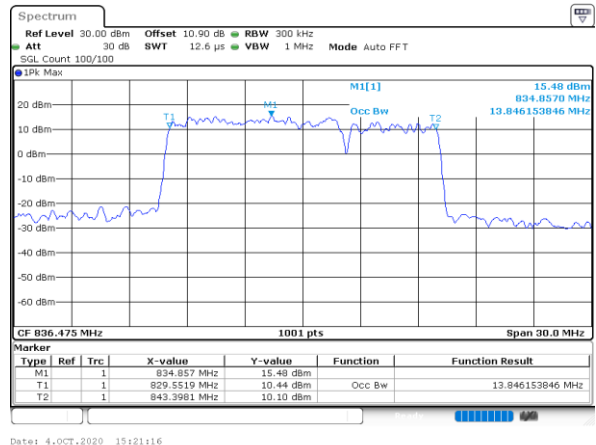
## Lowest Channel / 10MHz+5MHz



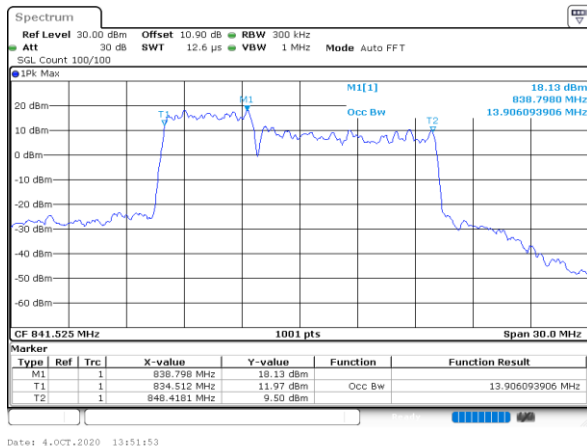
## Middle Channel / 5MHz+10MHz



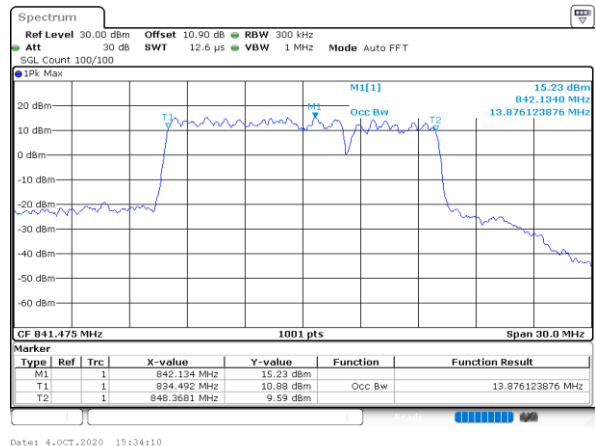
## Middle Channel / 10MHz+5MHz

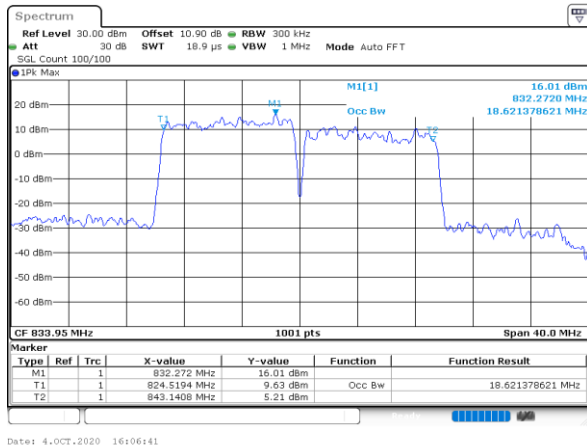
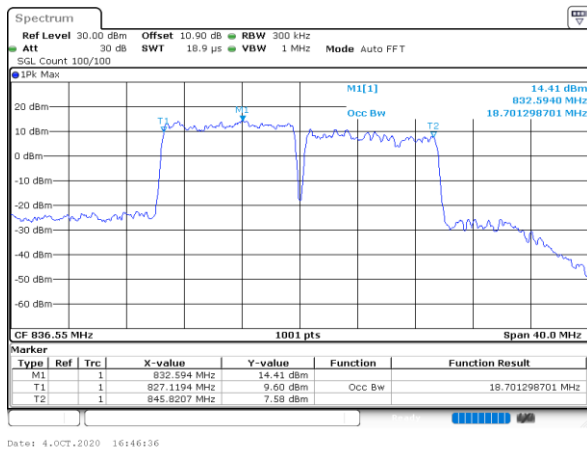
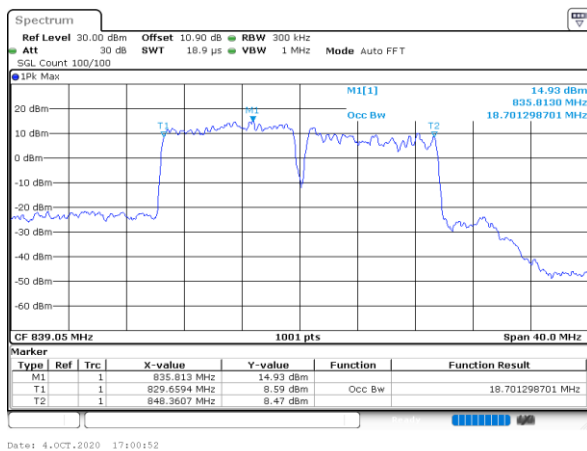


## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



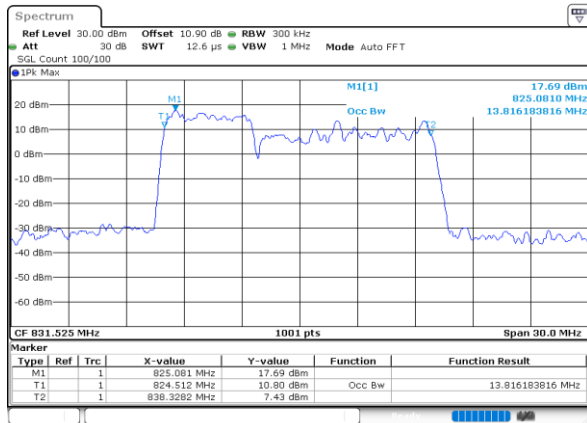
**LTE Band 5B****QPSK****Lowest Channel / 10MHz+10MHz****N/A****Middle Channel / 10MHz+10MHz****N/A****Highest Channel / 10MHz+10MHz****N/A**



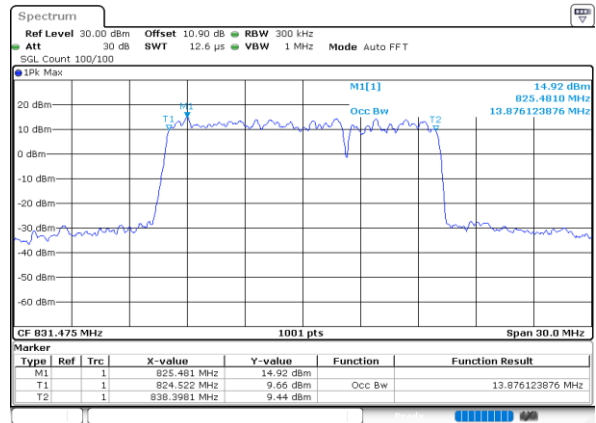
## LTE Band 5B

## 16QAM

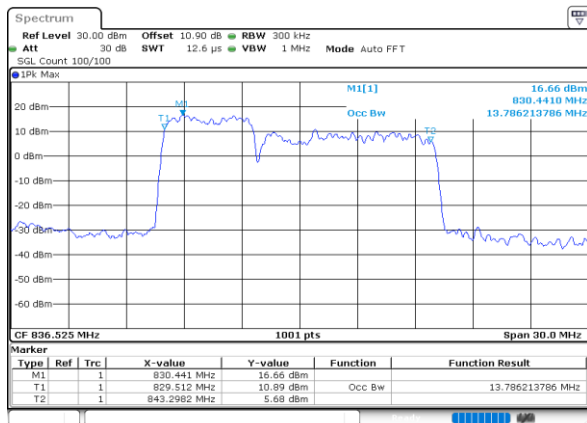
## Lowest Channel / 5MHz+10MHz



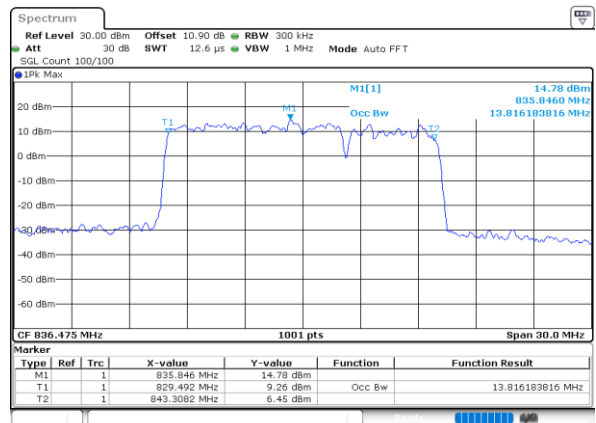
## Lowest Channel / 10MHz+5MHz



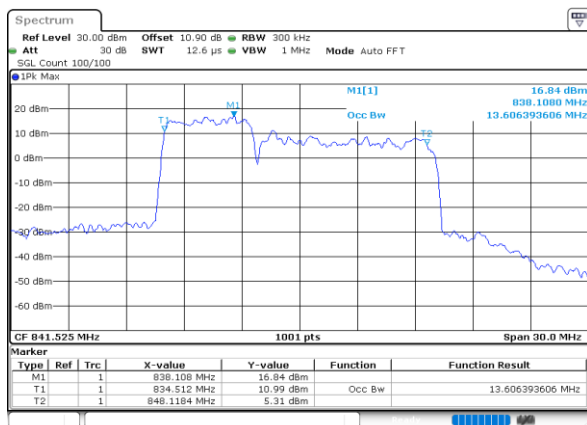
## Middle Channel / 5MHz+10MHz



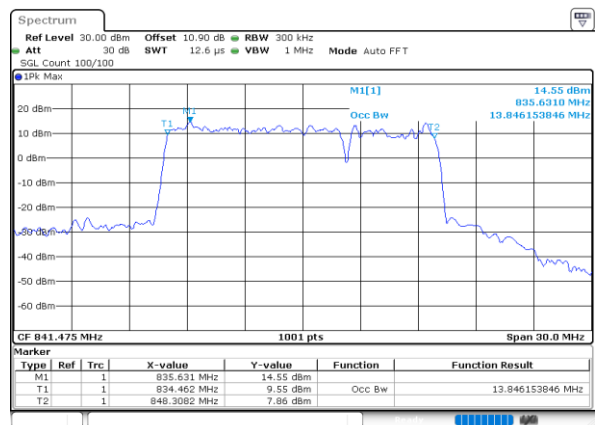
## Middle Channel / 10MHz+5MHz



## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



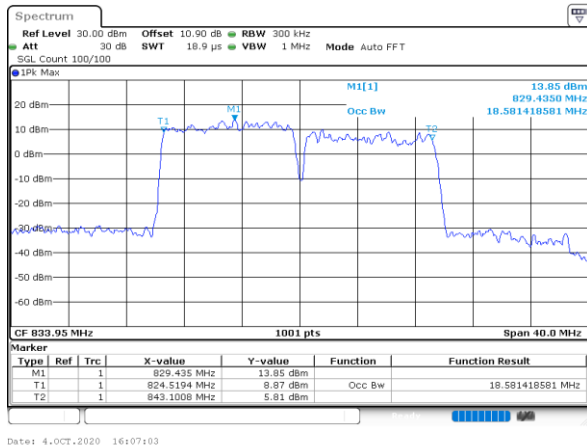


## LTE Band 5B

## 16QAM

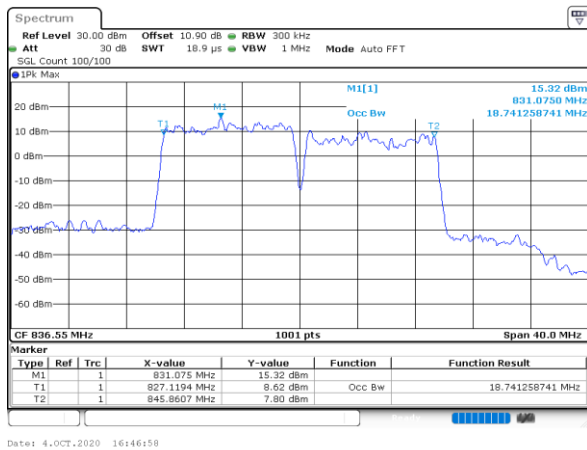
## Lowest Channel / 10MHz+10MHz

N/A



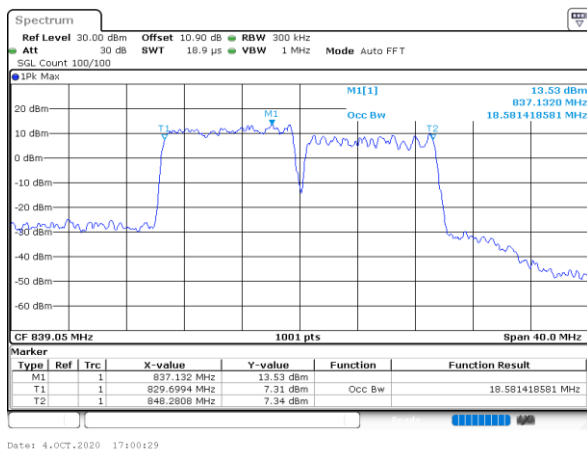
## Middle Channel / 10MHz+10MHz

N/A



## Highest Channel / 10MHz+10MHz

N/A

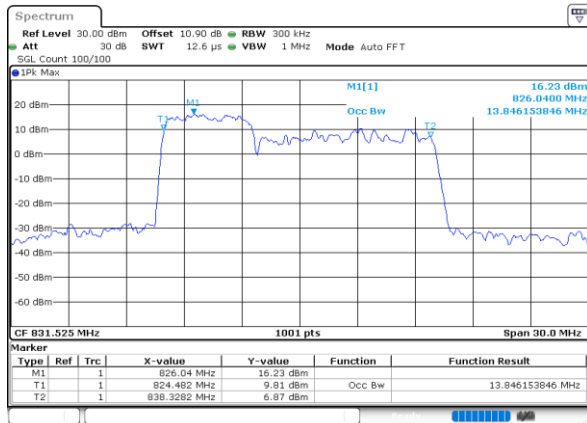




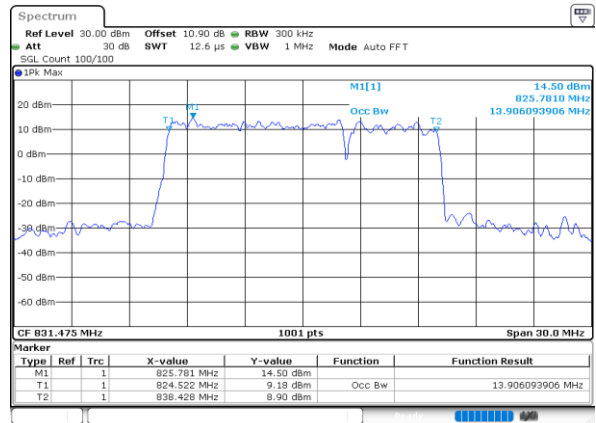
## LTE Band 5B

## 64QAM

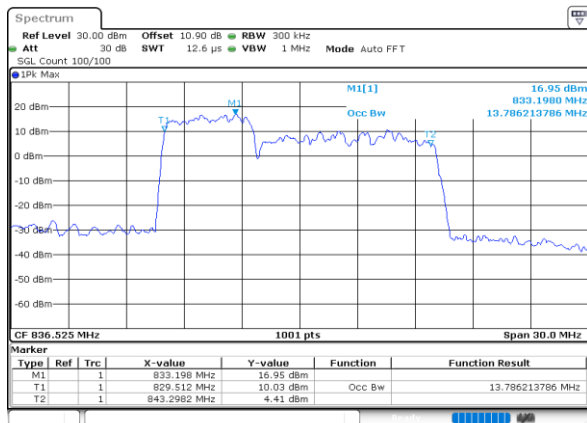
## Lowest Channel / 5MHz+10MHz



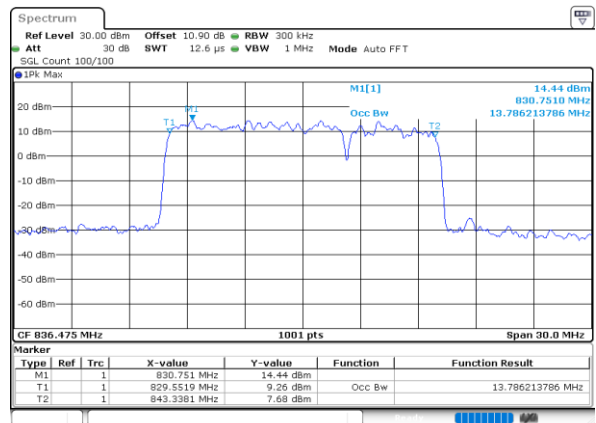
## Lowest Channel / 10MHz+5MHz



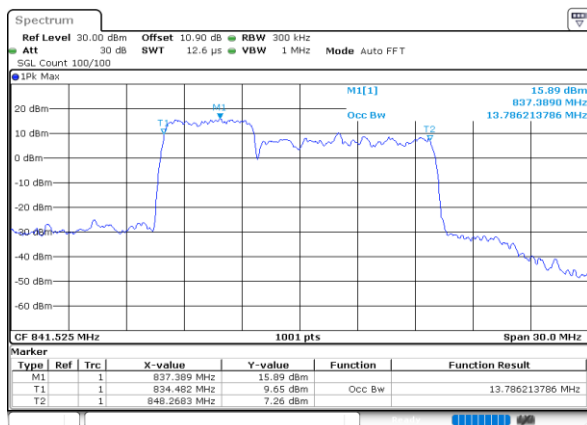
## Middle Channel / 5MHz+10MHz



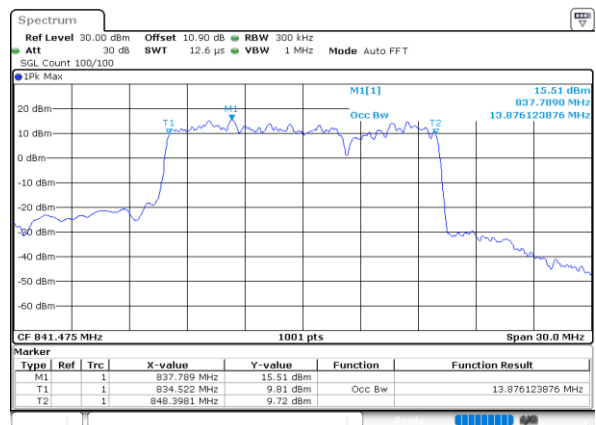
## Middle Channel / 10MHz+5MHz



## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



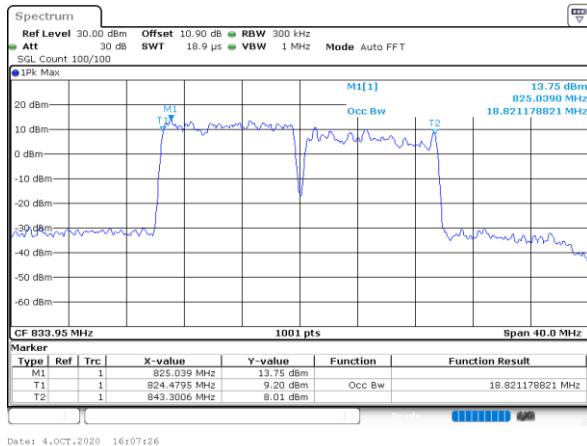


## LTE Band 5B

## 64QAM

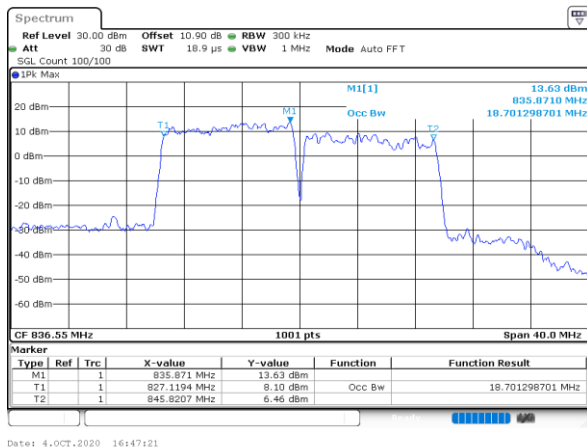
## Lowest Channel / 10MHz+10MHz

N/A



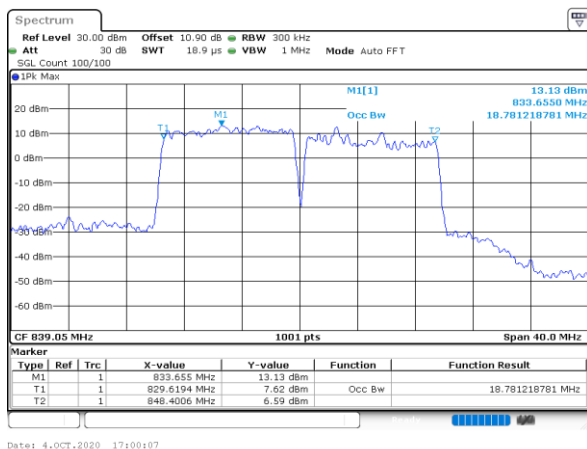
## Middle Channel / 10MHz+10MHz

N/A



## Highest Channel / 10MHz+10MHz

N/A

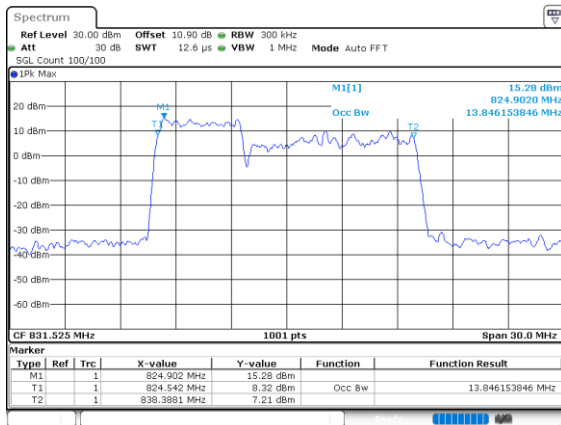




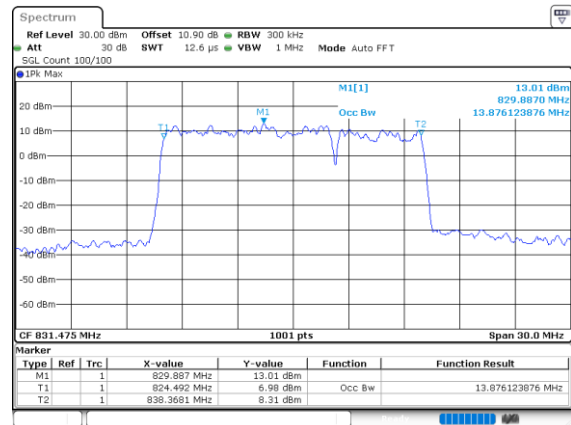
## LTE Band 5B

## 256QAM

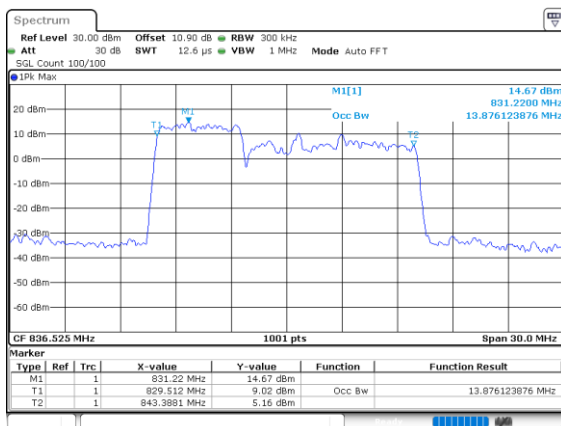
## Lowest Channel / 5MHz+10MHz



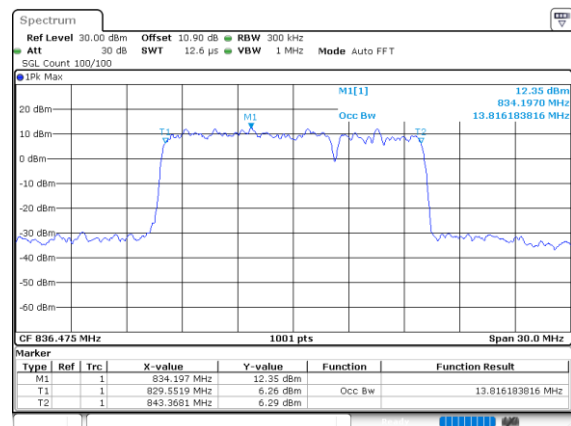
## Lowest Channel / 10MHz+5MHz



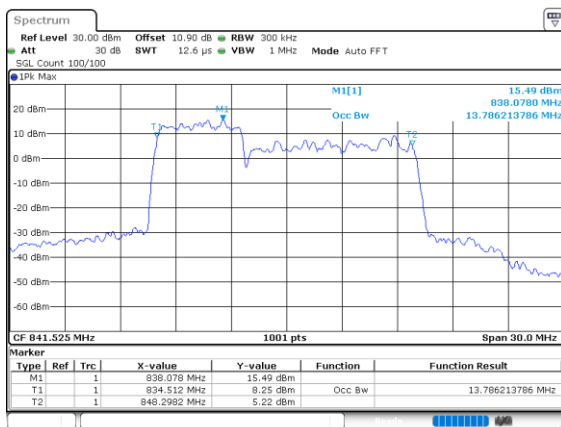
## Middle Channel / 5MHz+10MHz



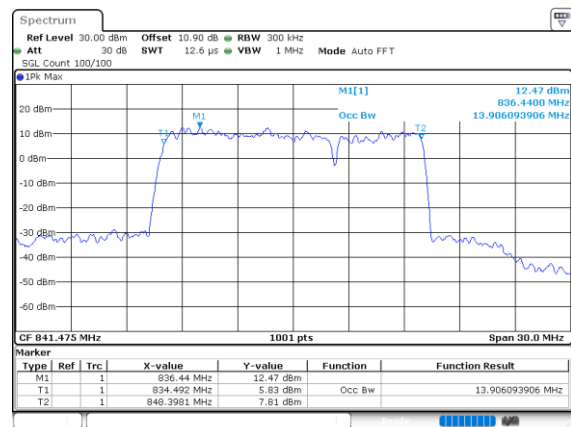
## Middle Channel / 10MHz+5MHz

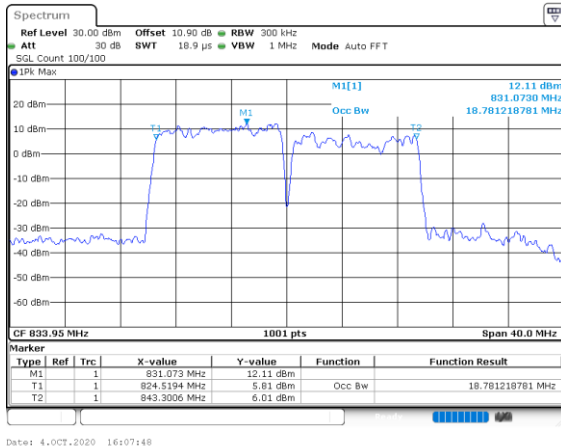
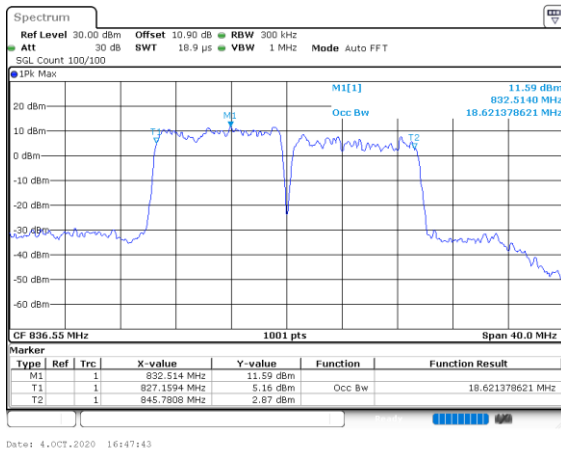
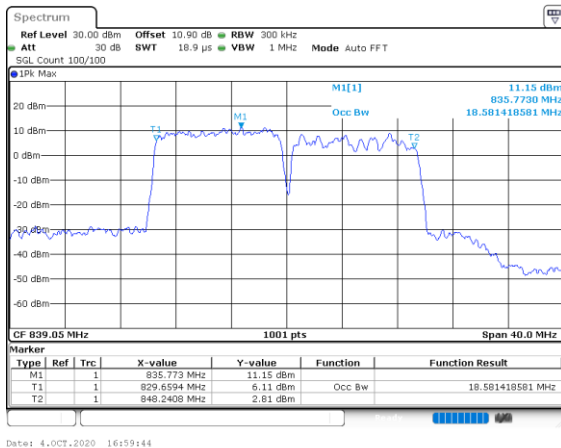


## Highest Channel / 5MHz+10MHz



## Highest Channel / 10MHz+5MHz



**LTE Band 5B****256QAM****Lowest Channel / 10MHz+10MHz****N/A****Middle Channel / 10MHz+10MHz****N/A****Highest Channel / 10MHz+10MHz****N/A**

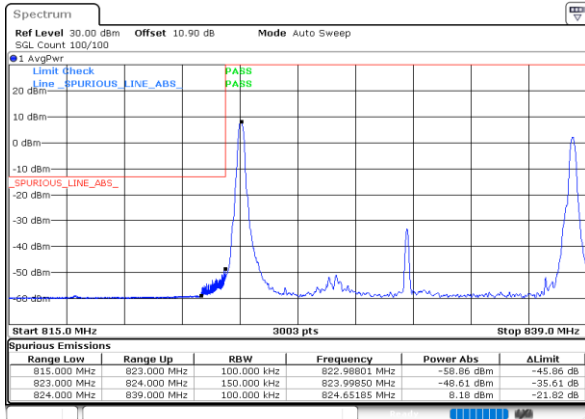


## Conducted Band Edge

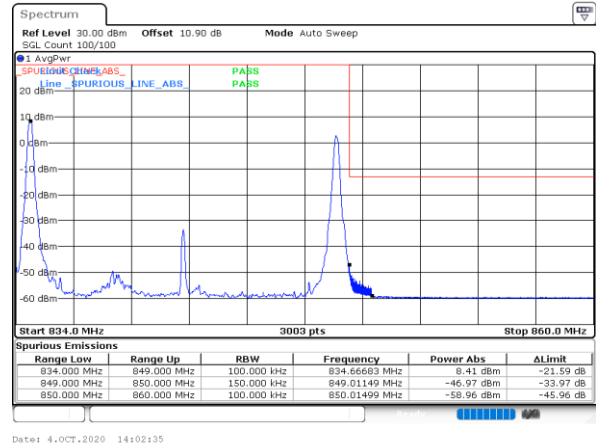
### LTE Band 5B / 5MHz+10MHz

#### QPSK

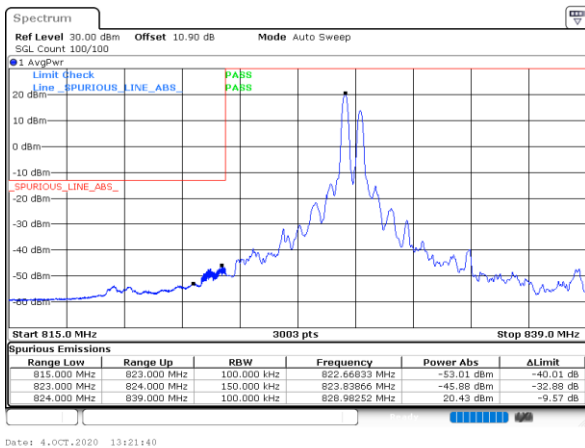
##### Lowest Band Edge / 1RB0 and 1RB49



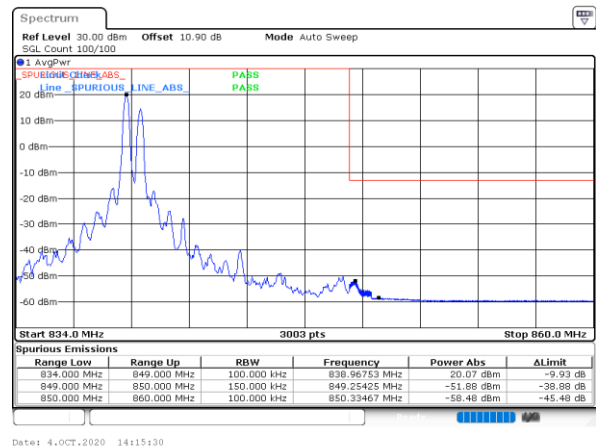
##### Highest Band Edge / 1RB0 and 1RB49



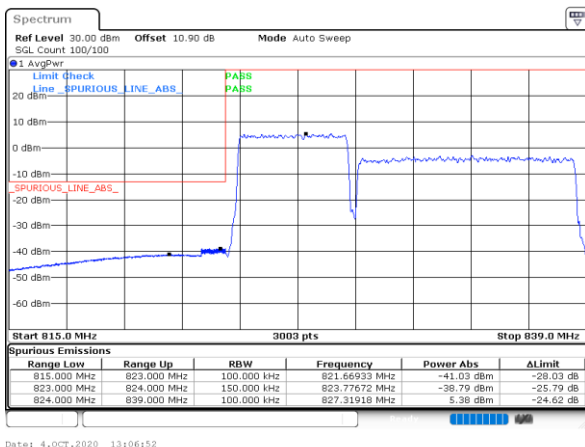
##### Lowest Band Edge / 1RB24 and 1RB0



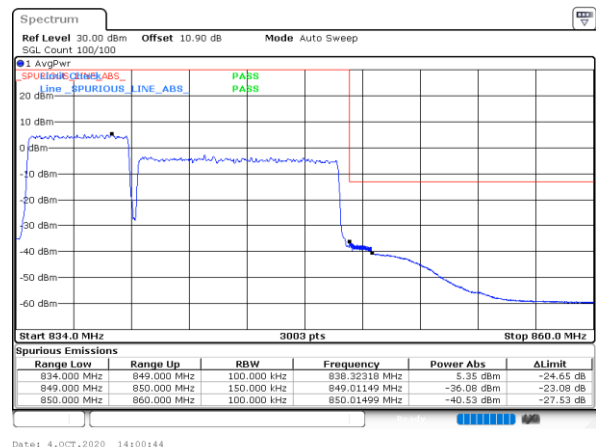
##### Highest Band Edge / 1RB24 and 1RB0



##### Lowest Band Edge / Full RB



##### Highest Band Edge / Full RB

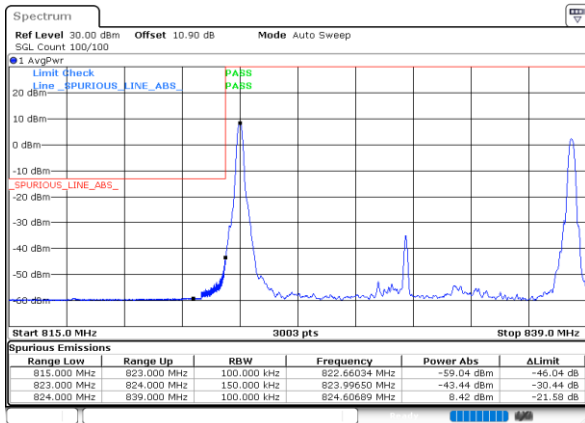




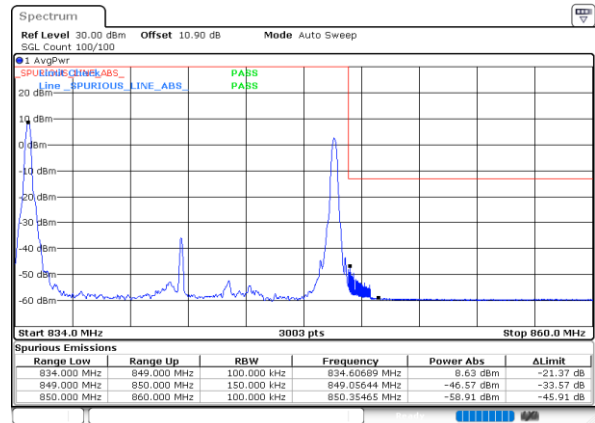
## LTE Band 5B / 10MHz+5MHz

## QPSK

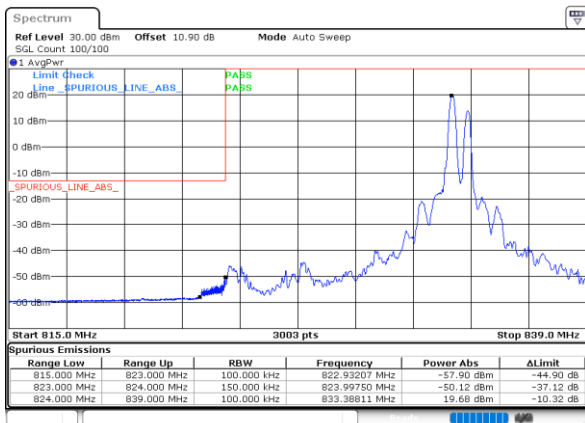
## Lowest Band Edge / 1RB0 and 1RB24



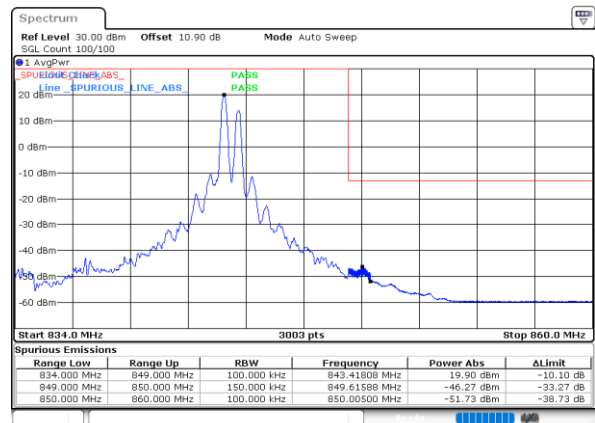
## Highest Band Edge / 1RB0 and 1RB24



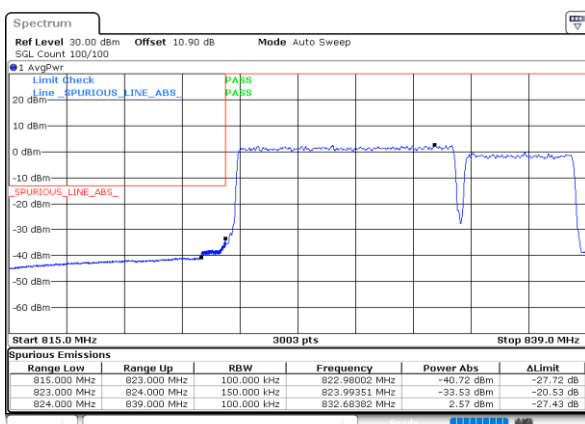
## Lowest Band Edge / 1RB49 and 1RB0



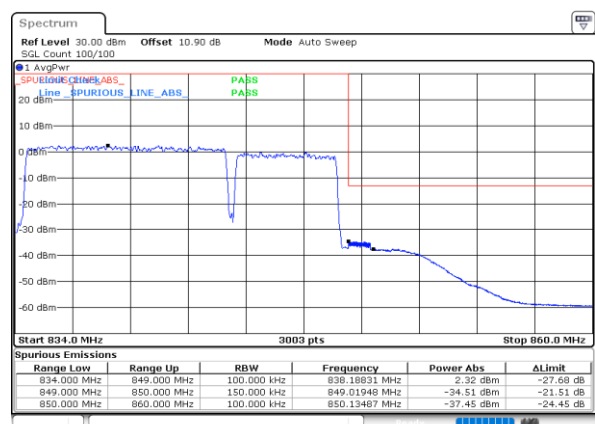
## Highest Band Edge / 1RB49 and 1RB0



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

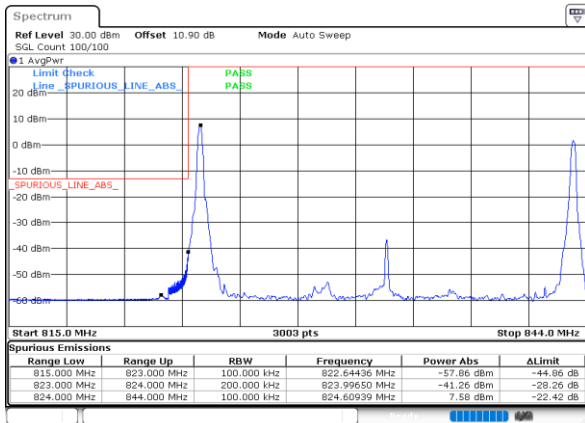




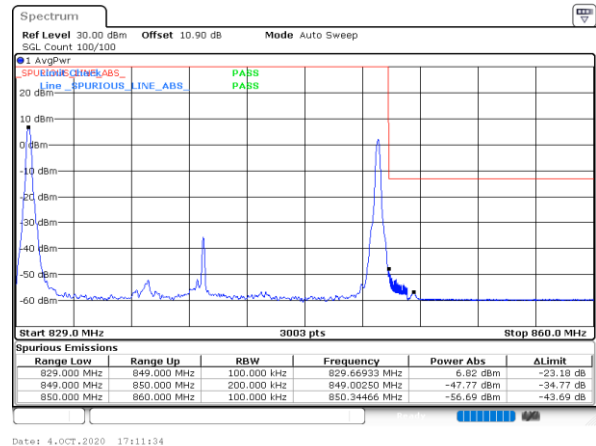
## LTE Band 5B / 10MHz+10MHz

## QPSK

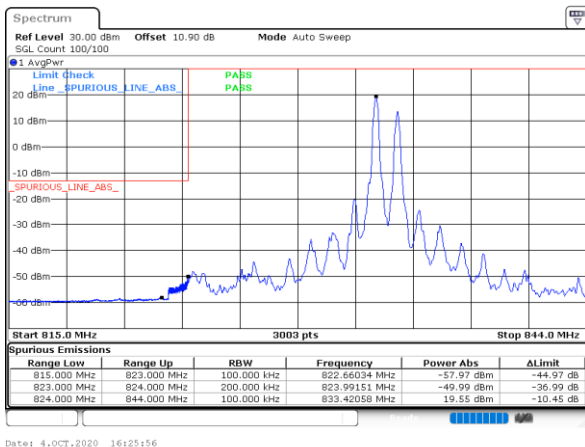
## Lowest Band Edge / 1RB0 and 1RB49



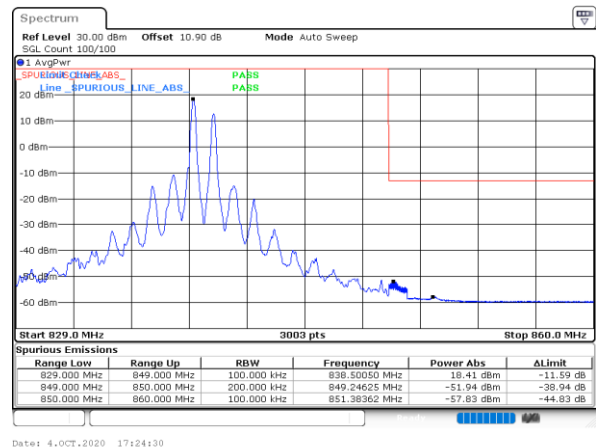
## Highest Band Edge / 1RB0 and 1RB49



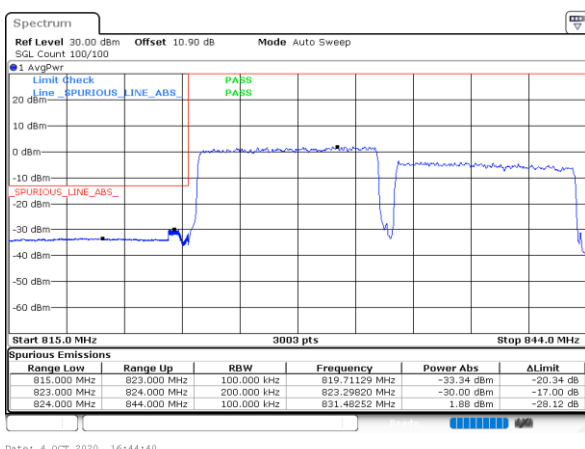
## Lowest Band Edge / 1RB49 and 1RB0



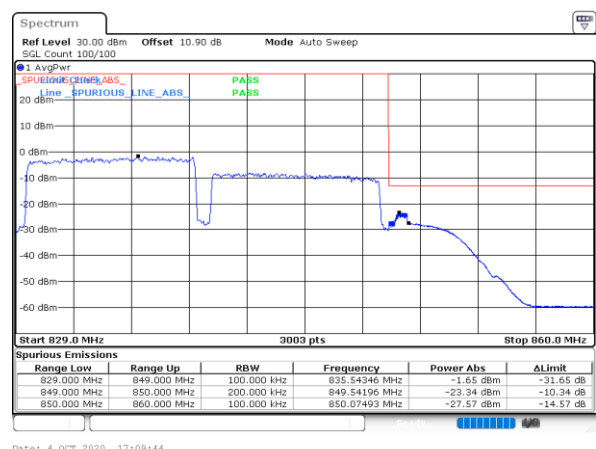
## Highest Band Edge / 1RB49 and 1RB0



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

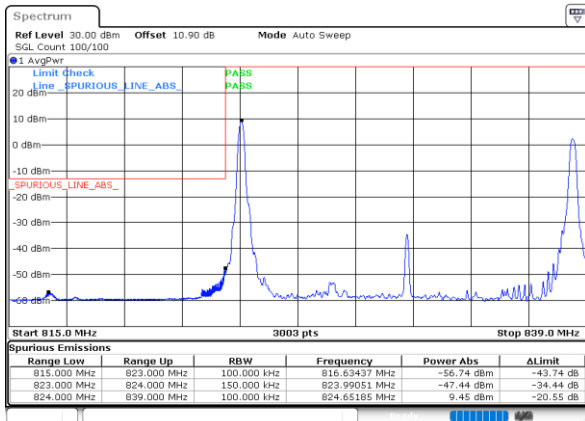




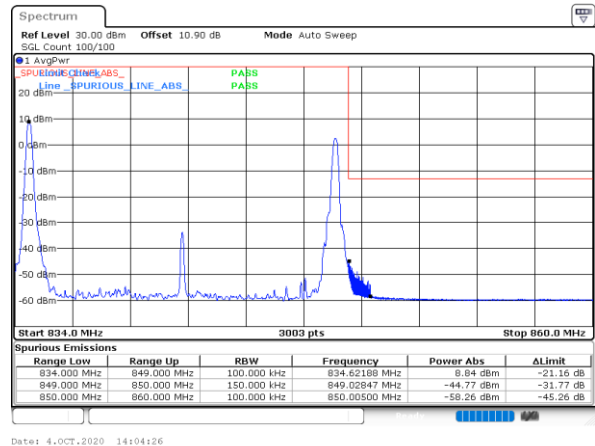
## LTE Band 5B / 5MHz+10MHz

## 16QAM

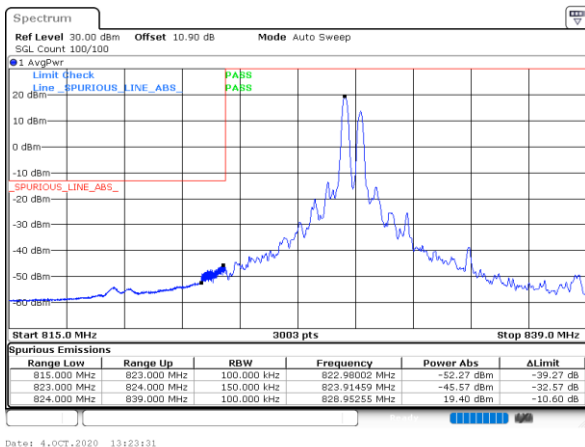
## Lowest Band Edge / 1RB0 and 1RB49



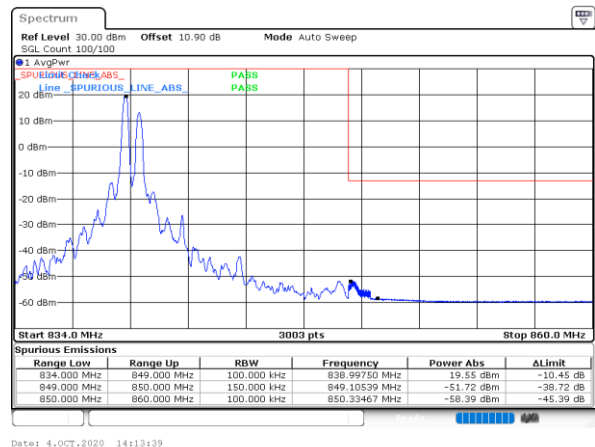
## Highest Band Edge / 1RB0 and 1RB49



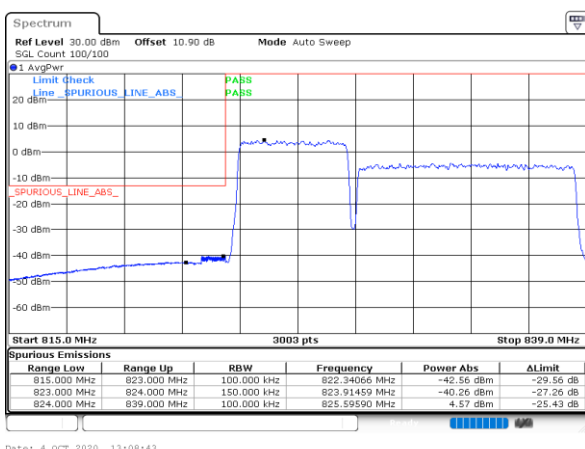
## Lowest Band Edge / 1RB24 and 1RB0



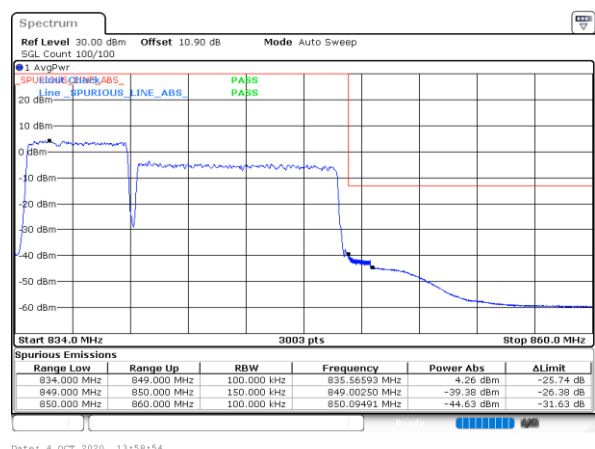
## Highest Band Edge / 1RB24 and 1RB0



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

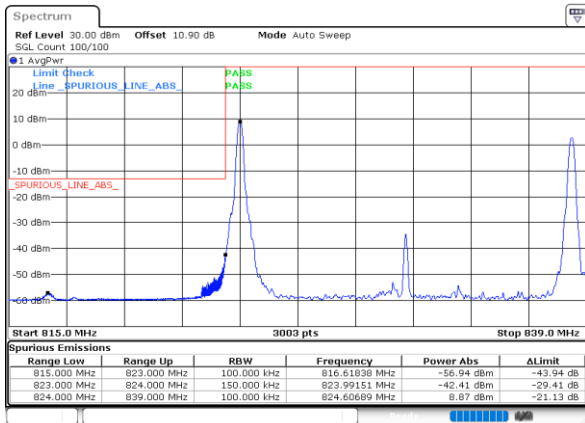




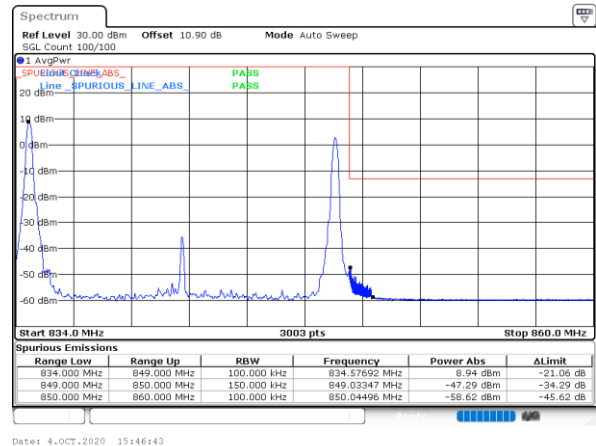
## LTE Band 5B / 10MHz+5MHz

## 16QAM

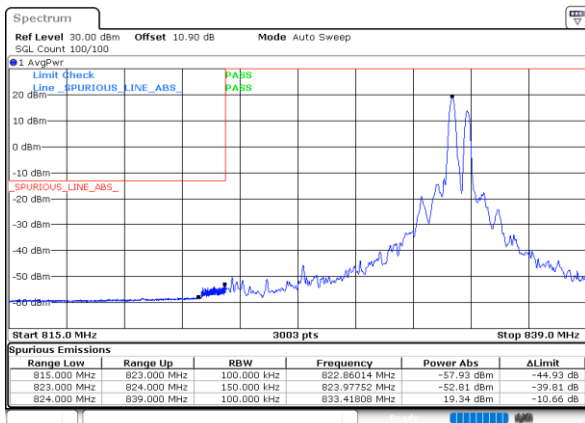
## Lowest Band Edge / 1RB0 and 1RB24



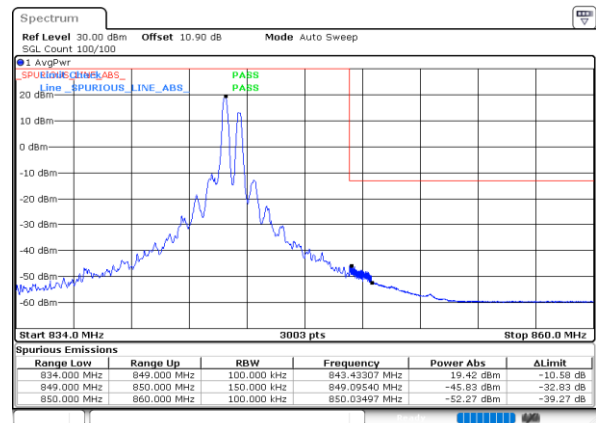
## Highest Band Edge / 1RB0 and 1RB24



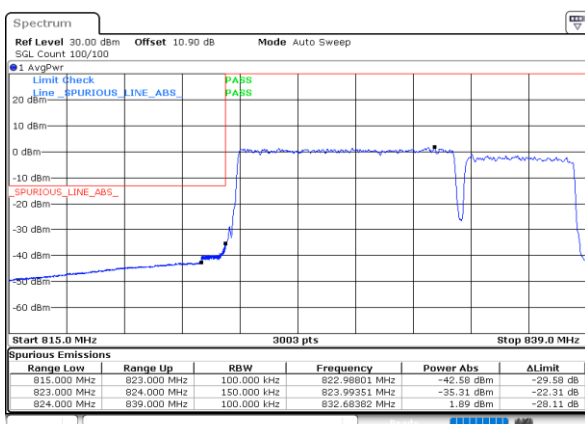
## Lowest Band Edge / 1RB49 and 1RB0



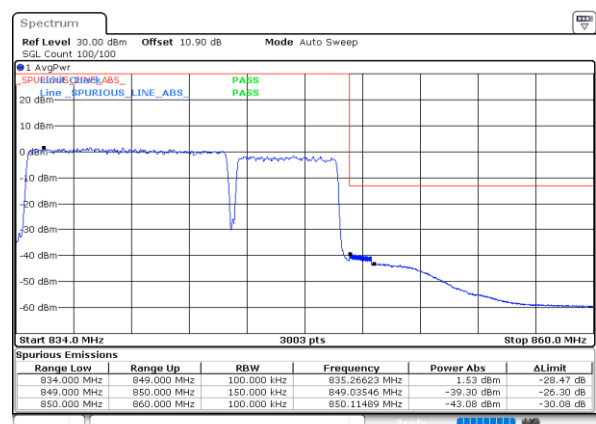
## Highest Band Edge / 1RB49 and 1RB0



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

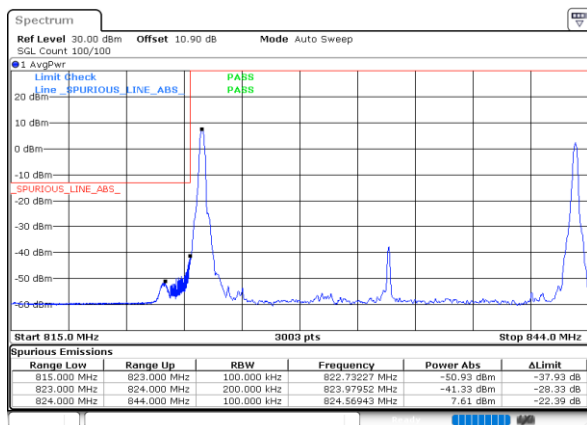




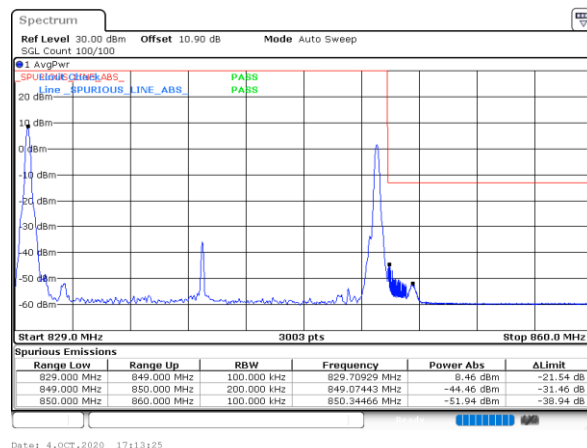
## LTE Band 5B / 10MHz+10MHz

## 16QAM

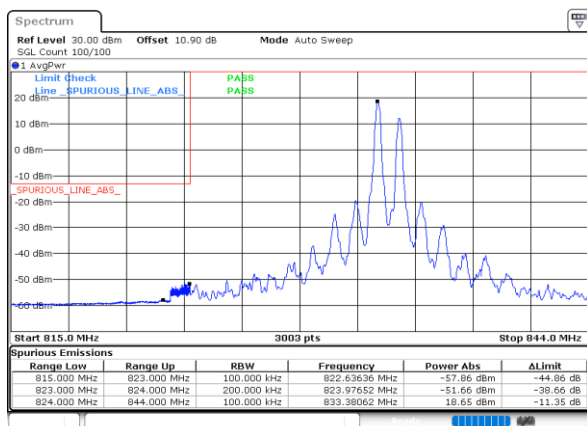
## Lowest Band Edge / 1RB0 and 1RB49



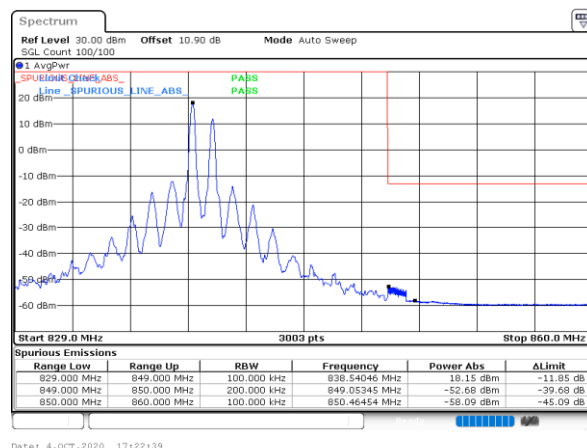
## Highest Band Edge / 1RB0 and 1RB49



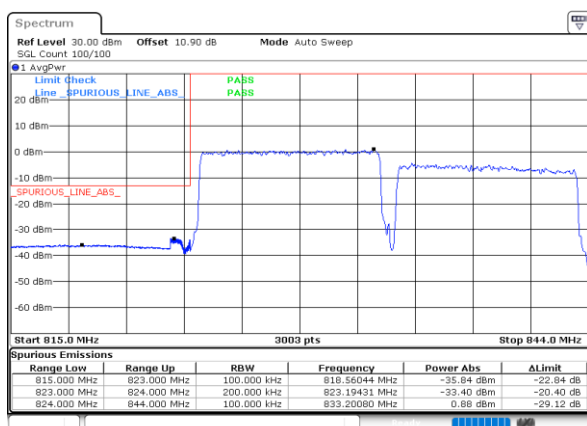
## Lowest Band Edge / 1RB49 and 1RB0



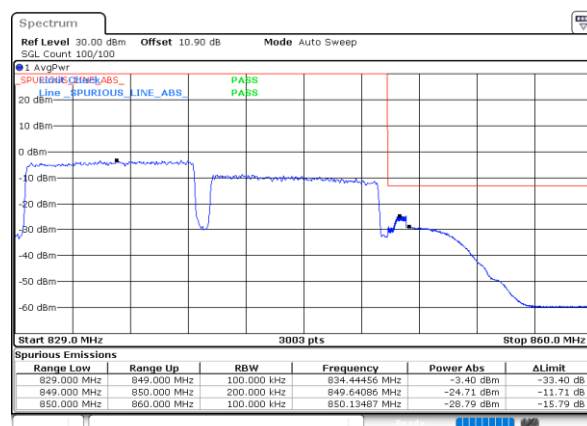
## Highest Band Edge / 1RB49 and 1RB0



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

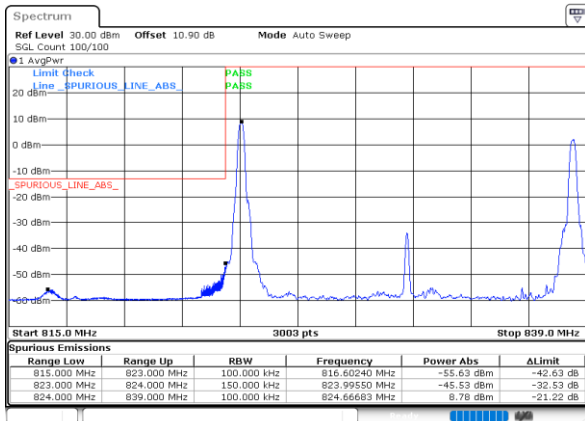




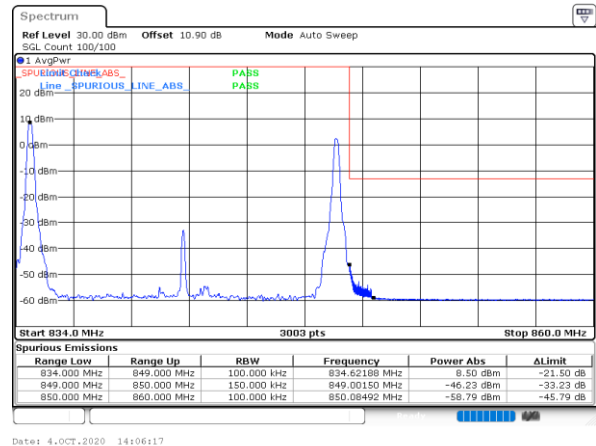
## LTE Band 5B / 5MHz+10MHz

## 64QAM

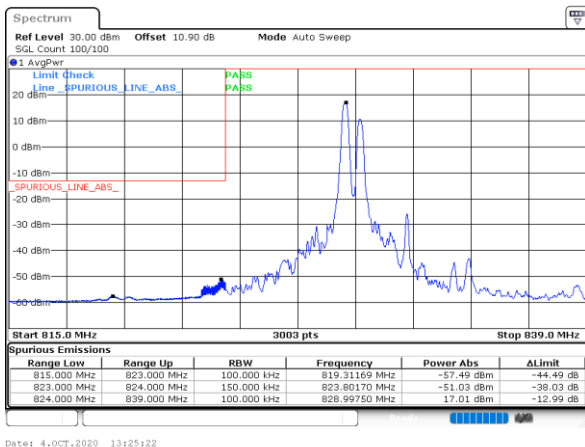
## Lowest Band Edge / 1RB0 and 1RB49



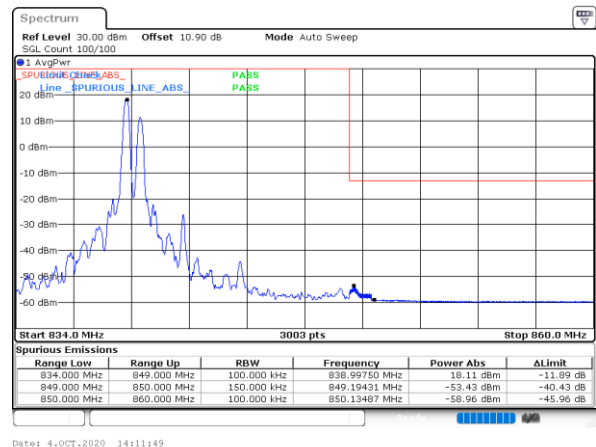
## Highest Band Edge / 1RB0 and 1RB49



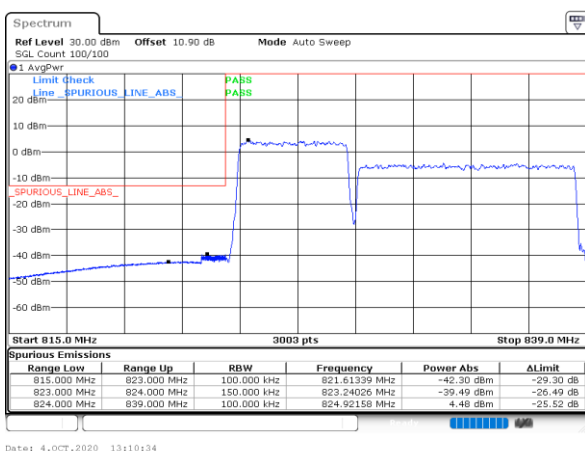
## Lowest Band Edge / 1RB24 and 1RB0



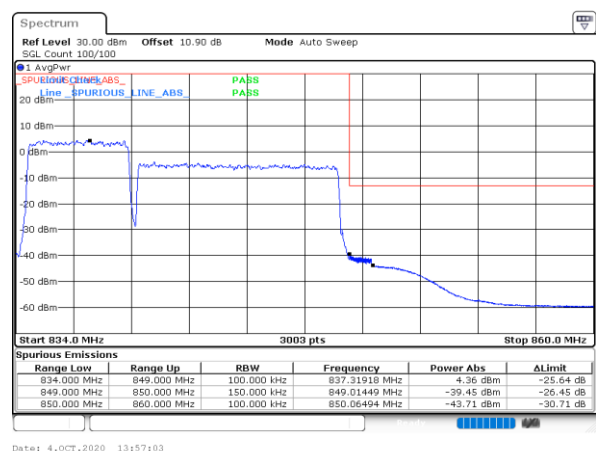
## Highest Band Edge / 1RB24 and 1RB0



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

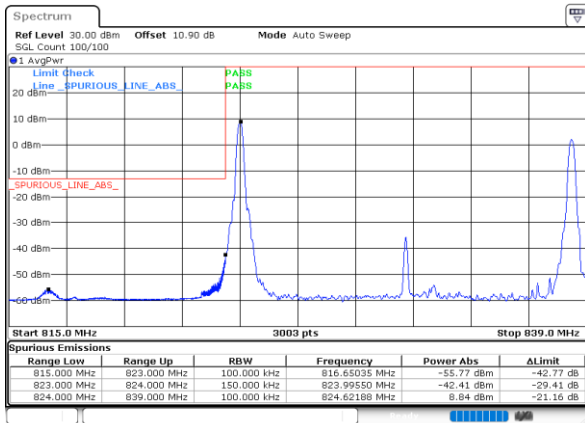




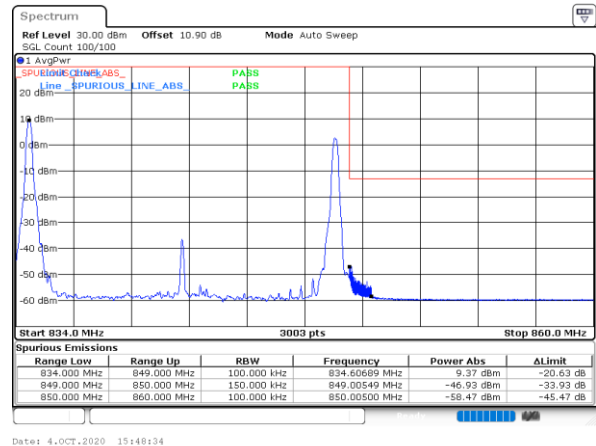
## LTE Band 5B / 10MHz+5MHz

## 64QAM

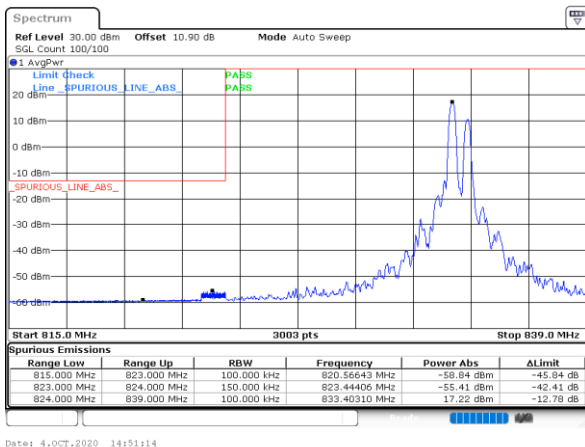
## Lowest Band Edge / 1RB0 and 1RB24



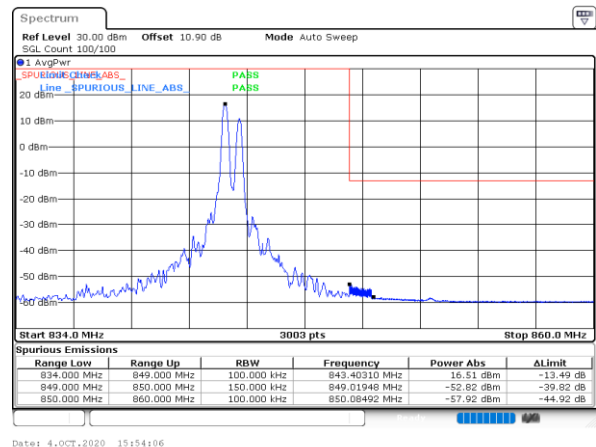
## Highest Band Edge / 1RB0 and 1RB24



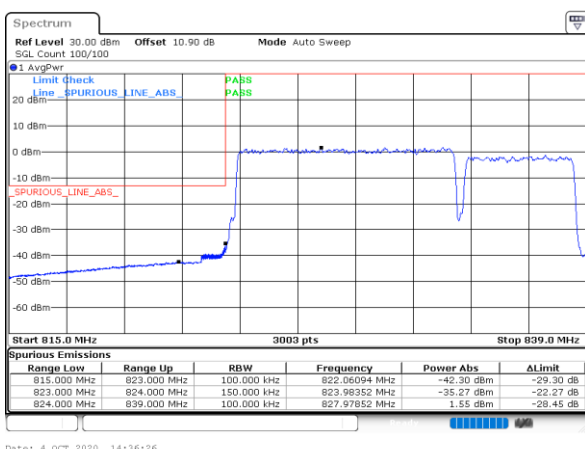
## Lowest Band Edge / 1RB49 and 1RB0



## Highest Band Edge / 1RB49 and 1RB0



## Lowest Band Edge / Full RB



## Highest Band Edge / Full RB

