

# FCC Test Report

**FCC ID** : 2A7G3XS5G01  
**Equipment** : 5G SOM  
**Model No.** : XS5G01-GB0  
(refer to item 1.1.1 for more details)  
**Brand Name** : XSquare  
**Applicant** : XSquare Communications Corporation  
**Address** : NO.6 INNOVATION ROAD II, SCIENCE PARK,  
HSINCHU 30076, TAIWAN, R.O.C  
**Standard** : 47 CFR FCC Part 27  
**Received Date** : Dec. 01, 2022  
**Tested Date** : Dec. 23, 2022 ~ Feb. 09, 2023

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:

  
Along Chen / Assistant Manager

  
Gary Chang / Manager

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**APPENDIX A TEST RESULTS FOR EFFECTIVE ISOTROPICALLY RADIATED POWER**

**APPENDIX B TEST RESULTS FOR RADIATED EMISSIONS**

**APPENDIX C.1 TEST RESULTS FOR OUT OF BAND EMISSIONS**

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**APPENDIX E TEST RESULTS FOR PEAK TO AVERAGE POWER RATIO**

**APPENDIX F TEST RESULTS FOR FREQUENCY STABILITY**

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## Release Record

| Report No.        | Version | Description   | Issued Date   |
|-------------------|---------|---------------|---------------|
| FG132502-04P27Q-1 | Rev. 01 | Initial issue | Apr. 18, 2023 |

## Summary of Test Results

| FCC Rules            | Test Items                              | Measured                      | Result |
|----------------------|---|-------------------------------|--------|
| 2.1046 / 27.50(k)(3) | Equivalent Isotropically Radiated Power | Maximum EIRP[dBm]: 22.46      | Pass   |
| 2.1053 / 27.53(n)(2) | Radiated Emissions                      | Meet the requirement of limit | Pass   |
| 2.1051 / 27.53(n)(2) | Conducted Emissions                     | Meet the requirement of limit | Pass   |
| 2.1051 / 27.53(n)(2) | Band Edge Measurement                   | Meet the requirement of limit | Pass   |
| 2.1049               | Occupied Bandwidth                      | Meet the requirement of limit | Pass   |
| 27.50(k)(4)          | Peak to Average Ratio                   | Meet the requirement of limit | Pass   |
| 2.1055 / 27.54       | Frequency Stability                     | Meet the requirement of limit | Pass   |

### 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.

# 1 General Description

## 1.1 Information

### 1.1.1 Product Details

The following models are provided to this EUT.

| Brand Name   | Model Name | Product Name | Description           |
|--|------------|--------------|-----------------------|
| XSquare  | XS5G01-GB0 | 5G SOM       | With GPS Component    |
|  | XS5G01-GBI |              | Without GPS Component |
| ✦ The above models, model <b>XS5G01-GB0</b> was selected as a representative one for the final test and only its data was recorded in this report. |            |              |                       |

### 1.1.2 Specification of the Equipment under Test (EUT)

|                            |   |
|----------------------------|---|
| <b>Operating Frequency</b> | LTE Band 42:<br>Channel Bandwidth: 5MHz: 3452.5 MHz ~ 3547.5 MHz<br>Channel Bandwidth: 10MHz: 3455 MHz ~ 3545 MHz<br>Channel Bandwidth: 15MHz: 3457.5 MHz ~ 3542.5 MHz<br>Channel Bandwidth: 20MHz: 3460 MHz ~ 3540 MHz |
| <b>Modulation</b>          | QPSK, 16QAM, 64QAM, 256QAM (Uplink)<br>QPSK, 16QAM, 64QAM, 256QAM (Downlink)  |

### 1.1.3 Antenna Details

| Brand | Model        | Type   | Connector | Gain (dBi) |
|-------|--------------|--------|-----------|------------|
| Anjie | AELQ2S-B066L | Dipole | SMA       | -0.4       |

### 1.1.4 Power Supply Type of Equipment under Test (EUT)

|                             |   |  |  |
|-----------------------------|---|--|--|
| <b>Supply Voltage</b>       | 4 Vdc   |  |  |
| <b>Operational Voltage</b>  | <input checked="" type="checkbox"/> Vnom (4 V)  | <input checked="" type="checkbox"/> Vmax (4.2 V) | <input checked="" type="checkbox"/> Vmin (3.8 V) |
| <b>Operational Climatic</b> | <input checked="" type="checkbox"/> Tnom (20°C) | <input checked="" type="checkbox"/> Tmax (70°C)  | <input checked="" type="checkbox"/> Tmin (-30°C) |

### 1.1.5 Accessories

N/A

### 1.1.6 Maximum Conducted Power and Emission Designator

| LTE Band 42       |            |                             |                     |
|-------------------|------------|-----------------------------|---------------------|
| Channel Bandwidth | Modulation | Maximum Conducted Power (W) | Emission Designator |
| 5 MHz             | QPSK       | 0.191                       | 4M46G7D             |
| 5 MHz             | 16QAM      | 0.150                       | 4M46W7D             |
| 5 MHz             | 64QAM      | 0.117                       | 4M47W7D             |
| 5 MHz             | 256QAM     | 0.066                       | 4M45W7D             |
| 10 MHz            | QPSK       | 0.193                       | 8M91G7D             |
| 10 MHz            | 16QAM      | 0.150                       | 8M92W7D             |
| 10 MHz            | 64QAM      | 0.119                       | 8M93W7D             |
| 10 MHz            | 256QAM     | 0.066                       | 8M92W7D             |
| 15 MHz            | QPSK       | 0.191                       | 13M5G7D             |
| 15 MHz            | 16QAM      | 0.150                       | 13M4W7D             |
| 15 MHz            | 64QAM      | 0.119                       | 13M4W7D             |
| 15 MHz            | 256QAM     | 0.065                       | 13M5W7D             |
| 20 MHz            | QPSK       | 0.193                       | 17M9G7D             |
| 20 MHz            | 16QAM      | 0.150                       | 17M8W7D             |
| 20 MHz            | 64QAM      | 0.121                       | 17M9W7D             |
| 20 MHz            | 256QAM     | 0.066                       | 17M9W7D             |

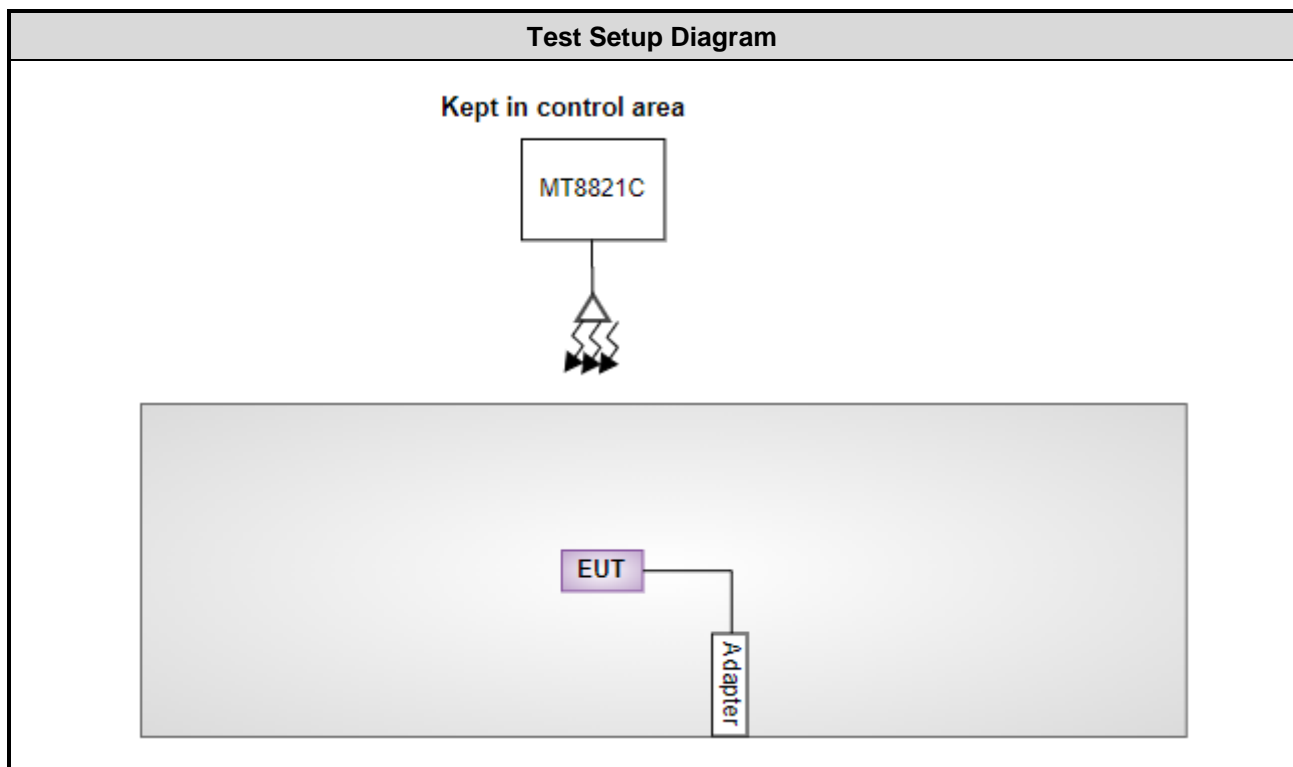
### 1.1.7 Operating Channel List

| LTE Band 42             |         |                 |
|-------------------------|---------|-----------------|
| Channel Bandwidth (MHz) | Channel | Frequency (MHz) |
| 5                       | 42115   | 3452.5          |
| 5                       | 42590   | 3500            |
| 5                       | 43065   | 3547.5          |
| 10                      | 42140   | 3455            |
| 10                      | 42590   | 3500            |
| 10                      | 43040   | 3545            |
| 15                      | 42165   | 3457.5          |
| 15                      | 42590   | 3500            |
| 15                      | 43015   | 3542.5          |
| 20                      | 42190   | 3460            |
| 20                      | 42590   | 3500            |
| 20                      | 42990   | 3540            |

## 1.2 Local Support Equipment List

| Support Equipment List |           |       |            |        |                        |
|------------------------|-----------|-------|------------|--------|------------------------|
| No.                    | Equipment | Brand | Model      | FCC ID | Remarks                |
| 1                      | Adapter   | APD   | WY-36C12FU | ---    | Provided by applicant. |

## 1.3 Test Setup Chart



## 1.4 The Equipment List

|   |                            |                           |                   |                         |                          |
|---|----------------------------|---------------------------|-------------------|-------------------------|--------------------------|
| <b>Test Item</b>  | Radiated Emission          |                           |                   |                         |                          |
| <b>Test Site</b>  | 966 chamber1 / (03CH01-WS) |                           |                   |                         |                          |
| <b>Tested Date</b>  | Feb. 06 ~ Feb. 09, 2023    |                           |                   |                         |                          |
| <b>Instrument</b>   | <b>Brand</b>               | <b>Model No.</b>          | <b>Serial No.</b> | <b>Calibration Date</b> | <b>Calibration Until</b> |
| Receiver  | R&S                        | ESR3                      | 101657            | Mar. 15, 2022           | Mar. 14, 2023            |
| Spectrum Analyzer   | R&S                        | FSV40                     | 101498            | Nov. 21, 2022           | Nov. 20, 2023            |
| Loop Antenna  | R&S                        | HFH2-Z2                   | 100330            | Nov. 01, 2022           | Oct. 31, 2023            |
| Bilog Antenna   | SCHWARZBECK                | VULB9168                  | VULB9168-522      | Aug. 03, 2022           | Aug. 02, 2023            |
| Horn Antenna<br>1G-18G  | SCHWARZBECK                | BBHA 9120 D               | BBHA 9120 D 1096  | Nov. 25, 2022           | Nov. 24, 2023            |
| Horn Antenna<br>18G-40G   | SCHWARZBECK                | BBHA 9170                 | BBHA 9170517      | Oct. 27, 2022           | Oct. 26, 2023            |
| Preamplifier  | EMC                        | EMC02325                  | 980225            | Jun. 28, 2022           | Jun. 27, 2023            |
| Preamplifier  | EMC                        | EMC118A45SE               | 980898            | Jul. 16, 2022           | Jul. 15, 2023            |
| Preamplifier  | EMC                        | EMC184045SE               | 980903            | Jul. 16, 2022           | Jul. 15, 2023            |
| Loop Antenna Cable  | KOAX KABEL                 | 101354-BW                 | 101354-BW         | Oct. 04, 2022           | Oct. 03, 2023            |
| LF cable 3M   | Woken                      | CFD400NL-LW               | CFD400NL-001      | Oct. 04, 2022           | Oct. 03, 2023            |
| LF cable 11M  | EMC                        | EMCCFD400-NW-N<br>W-11000 | 200801            | Oct. 04, 2022           | Oct. 03, 2023            |
| LF cable 1M   | EMC                        | EMCCFD400-NM-N<br>M-1000  | 160502            | Oct. 04, 2022           | Oct. 03, 2023            |
| RF Cable  | EMC                        | EMC104-35M-35M-<br>8000   | 210920            | Oct. 04, 2022           | Oct. 03, 2023            |
| RF Cable  | HUBER+SUHNER               | SUCOFLEX104               | MY16019/4         | Oct. 04, 2022           | Oct. 03, 2023            |
| Measurement<br>Software   | AUDIX                      | e3                        | 6.120210g         | NA                      | NA                       |
| Radio<br>Communication<br>Analyzer                                  | Anritsu                    | MT8821C                   | 6262149999        | Sep. 12, 2022           | Sep. 11, 2023            |
| Note: Calibration Interval of instruments listed above is one year. |                            |                           |                   |                         |                          |



|   |                               |                  |                   |                         |                          |
|---|-------------------------------|------------------|-------------------|-------------------------|--------------------------|
| <b>Test Item</b>  | RF Conducted                  |                  |                   |                         |                          |
| <b>Test Site</b>  | (TH01-WS)                     |                  |                   |                         |                          |
| <b>Tested Date</b>  | Dec. 23, 2022 ~ Feb. 09, 2023 |                  |                   |                         |                          |
| <b>Instrument</b>   | <b>Brand</b>                  | <b>Model No.</b> | <b>Serial No.</b> | <b>Calibration Date</b> | <b>Calibration Until</b> |
| Spectrum Analyzer   | R&S                           | FSV40            | 101910            | Apr. 08, 2022           | Apr. 07, 2023            |
| Spectrum Analyzer   | Keysight                      | N9010A           | MY54510374        | Aug. 26, 2022           | Aug. 25, 2023            |
| Power Meter   | Anritsu                       | ML2495A          | 1241002           | Nov. 23, 2022           | Nov. 22, 2023            |
| Power Sensor  | Anritsu                       | MA2411B          | 1207366           | Nov. 23, 2022           | Nov. 22, 2023            |
| TEMP&HUMIDITY CHAMBER   | GIANT FORCE                   | GCT-225-40-SP-SD | MAF1212-002       | Jun. 22, 2022           | Jun. 21, 2023            |
| DC POWER SOURCE   | GW INSTRON                    | GPC-6030D        | GES855395         | Oct. 31, 2022           | Oct. 30, 2023            |
| Measurement Software  | Sporton                       | SENSE-FCC_2G-4 G | V6.1.6            | NA                      | NA                       |
| Radio Communication Analyzer  | Anritsu                       | MT8821C          | 6262149999        | Sep. 12, 2022           | Sep. 11, 2023            |
| Note: Calibration Interval of instruments listed above is one year. |                               |                  |                   |                         |                          |

## 1.5 Test Standards

47 CFR FCC Part 27  
ANSI C63.26-2015

## 1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01  
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01  
FCC KDB 971168 D02 Misc Rev Approv License Devices v02r01

## 1.7 Deviation from Test Standard and Measurement Procedure

None

## 1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ( $k=2$ )).

| Measurement Uncertainty        |                        |
|--------------------------------|------------------------|
| Parameters                     | Uncertainty            |
| Bandwidth                      | $\pm 34.130$ Hz        |
| Conducted power                | $\pm 0.808$ dB         |
| Frequency error                | $\pm 1 \times 10^{-9}$ |
| Conducted emission             | $\pm 2.715$ dB         |
| Radiated emission $\leq 1$ GHz | $\pm 3.41$ dB          |
| Radiated emission $> 1$ GHz    | $\pm 4.59$ dB          |
| Temperature                    | $\pm 0.4$ °C           |

## 2 Test Configuration

### 2.1 Testing Condition and Location Information

| Test Item          | Test Site | Ambient Condition | Tested By |
|--------------------|-----------|-------------------|-----------|
| Radiated Emissions | 03CH01-WS | 23-24°C / 65-66%  | Bard Wu   |
| RF Conducted       | TH01-WS   | 23-25°C / 62-66%  | Roger Lu  |

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISSED#: 10807A
- CAB identifier: TW2732

### 2.2 Testing Facility

|                      |   |
|----------------------|---|
| Test Laboratory      | International Certification Corp.   |
| Test Site            | 03CH01-WS, TH01-WS  |
| Address of Test Site | No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 33381, Taiwan, R.O.C. |

## 2.3 The Worst Test Modes and Channel Details

| Test items                  | Band   | Bandwidth(MHz) |   |   |    |    |    | Modulation |       |       |        | RB#        |      |      | Test Channel |   |   |
|-----------------------------|--|----------------|---|---|----|----|----|------------|-------|-------|--------|------------|------|------|--------------|---|---|
|                             |  | 1.4            | 3 | 5 | 10 | 15 | 20 | QPSK       | 16QAM | 64QAM | 256QAM | 1          | Half | Full | L            | M | H |
| Max. Output Power           | 42   | -              | - | v | v  | v  | v  | v          | v     | v     | v      | v          | v    | v    | v            | v | v |
| peak-to-Average Ratio       | 42   | -              | - |   |    |    | v  | v          | v     | v     | v      |            |      | v    |              | v |   |
| 26dB and 99% Bandwidth      | 42   | -              | - | v | v  | v  | v  | v          | v     | v     | v      |            |      | v    |              | v |   |
| Conducted Band edge         | 42   | -              | - | v | v  | v  | v  | v          | v     | v     | v      | v          |      | v    | v            |   | v |
| Conducted Spurious Emission | 42   | -              | - | v | v  | v  | v  | v          |       |       |        | v          |      |      | v            | v | v |
| Frequency Stability         | 42   | -              | - |   |    |    | v  | v          |       |       |        |            |      | v    |              | v |   |
| E.R.P / E.I.R.P             | 42   | -              | - | v | v  | v  | v  | v          | v     | v     | v      | Max. power |      |      |              |   |   |
| Radiated Spurious Emission  | 42   | Worst Case     |   |   |    |    |    |            |       |       |        |            |      |      | v            | v | v |
| Remark                      | 1. "v": this configuration is for testing.<br>2. “-” :This bandwidth is not supported.<br>3. Frequency range of radiated measurement is from 30 MHz to 10th harmonic of fundamental frequency.<br>4. All spurious emissions below 1000 MHz are more than 20 dB below the limit.<br>5. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. |                |   |   |    |    |    |            |       |       |        |            |      |      |              |   |   |

### 3 Test Results

#### 3.1 Equivalent Isotropically Radiated Power

##### 3.1.1 Limit of Equivalent Isotropically Radiated Power

Mobile devices are limited to 1Watt (30 dBm) EIRP

##### 3.1.2 Test Procedures

For E.I.R.P measurement

EIPR can be calculated by below formula from KDB 412172 D01.

1.  $EIRP = P_T + G_T - L_C$

$P_T$  = transmitter output power, in dBm.

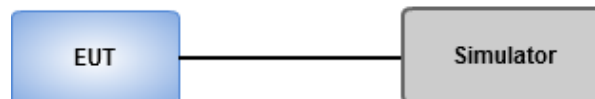
$G_T$  = gain of the transmitting antenna, in dBi (EIRP).

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

For Conducted power measurement

1. The EUT links up with simulator and is set to maximum output power level at low / middel / high channel.
2. Measure the output power of low / middle / high channel of the EUT

##### 3.1.3 Test Setup



##### 3.1.4 Test Result of Equivalent Isotropically Radiated Power and Conducted Power (dBm)

Refer to Appendix A.

## **3.2 Radiated Emissions**

### **3.2.1 Limit of Radiated Emissions**

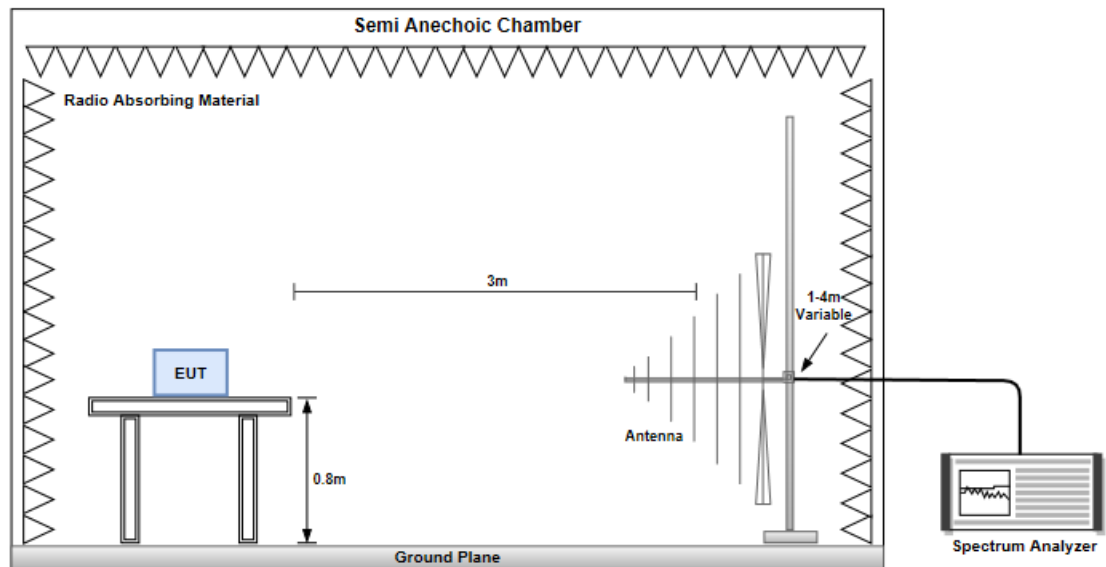
For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed  $-13$  dBm/MHz

### **3.2.2 Test Procedures**

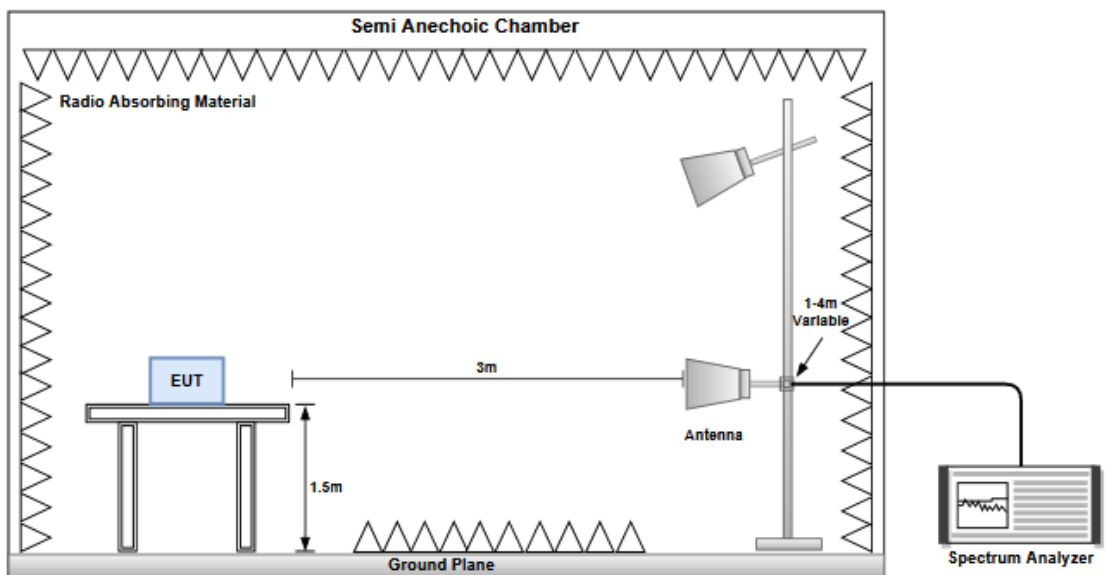
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of  $360^\circ$ . A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated  $360^\circ$ , the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.
4. After finding the max radiated emission, substitution method will be used for getting effective radiated power. EUT will be removed and substitution antenna will be placed at same position. Signal generator will output CW signal to substitution antenna through a RF cable. Rotate turntable and move antenna to find maximum radiated emission. Adjust output power of signal generator to let the maximum radiated emission is same as step 3. Record the output power level.
5. E.I.R.P = output power of step 4 + gain of substitution antenna – cable loss of RF cable.

### 3.2.3 Test Setup

#### Radiated Emissions below 1 GHz



#### Radiated Emissions above 1 GHz



### 3.2.4 Test Result of Radiated Emissions

Refer to Appendix B.

### 3.3 Out of Band Emissions& Band Edge

#### 3.3.1 Limit of Out of Band Emissions & Band Edge

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz

#### 3.3.2 Test Procedures

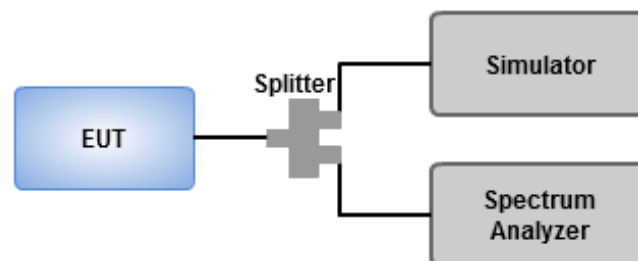
##### Out of band emission

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz ~ 20 GHz.
3. Set RBW = 1 MHz, VBW = 3 MHz, detector = RMS, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

##### Band edge

1. Lowest and highest operating channels are tested for this item.
2. Set RBW = 1% of EBW, VBW = 3 x RBW, detector = RMS, sweep time = auto.
3. Record the max trace value and capture the test plot of each sub frequency band.

#### 3.3.3 Test Setup



#### 3.3.4 Test Result of Out of Band Emissions & Band Edge

Refer to Appendix C.1, C.2.

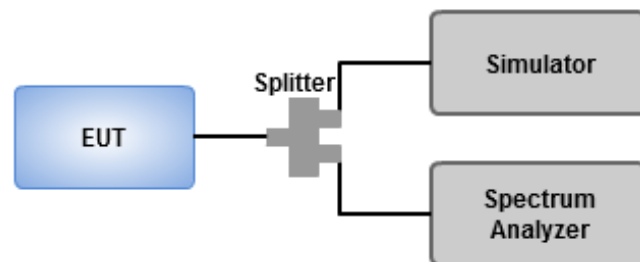


### 3.4 Occupied and 26 dB Bandwidth

#### 3.4.1 Test Procedures

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Using occupied bandwidth measurement function of spectrum analyzer to measure occupied bandwidth
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 26dB relative to the maximum level measured in the fundamental emission.

#### 3.4.2 Test Setup



#### 3.4.3 Test Result of Occupied and 26 dB Bandwidth

Refer to Appendix D.

### 3.5 Peak to Average Power Ratio

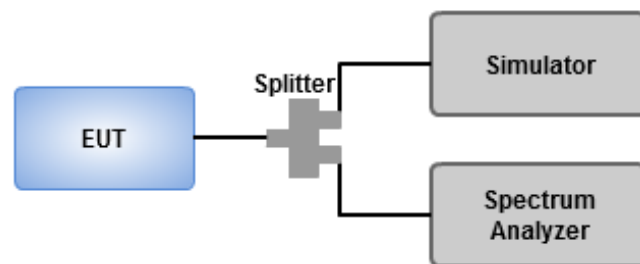
#### 3.5.1 Limit of Peak to Average Power Ratio

The Peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

#### 3.5.2 Test Procedures

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

#### 3.5.3 Test Setup



#### 3.5.4 Test Result of Peak to Average Power Ratio

Refer to Appendix E.

## 3.6 Frequency Stability

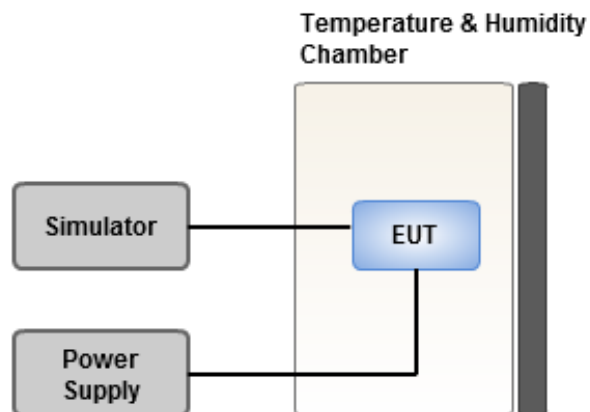
### 3.6.1 Limit of Frequency Stability

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

### 3.6.2 Test Procedures

1. EUT was placed at temperature chamber and connected to an external power supply.
2. Temperature and voltage condition shall be tested to confirm frequency stability.
3. The test shall be performed under normal and extreme condition for temperature and voltage.
4. Link up EUT and simulator. Confirm frequency drift value of simulator and record it.

### 3.6.3 Test Setup



### 3.6.4 Test Result of Frequency Stability

Refer to Appendix F.

## 4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

### **Linkou**

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou  
District, New Taipei City, Taiwan  
(R.O.C.)

### **Kwei Shan**

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)  
No.2-1, Lane 6, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)

### **Kwei Shan Site II**

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

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==END==

## Summary

| Part27Q LTE Band 42 Maximum Average Power [dBm](GT-LC= -0.4 dB) |            |         |           |        |        |         |               |             |
|---|------------|---------|-----------|--------|--------|---------|---------------|-------------|
| BW (MHz)  | Modulation | RB Size | RB Offset | Lowest | Middle | Highest | EIRP<br>(dBm) | EIRP<br>(W) |
| Channel   |            |         |           | 42190  | 42590  | 42990   |               |             |
| Frequency   |            |         |           | 3460   | 3500   | 3540    |               |             |
| 20  | QPSK       | 1       | 0         | 22.61  | 22.85  | 22.78   | 22.45         | 0.1758      |
| 20  | QPSK       | 1       | 99        | 22.61  | 22.8   | 22.7    |               |             |
| 20  | QPSK       | 100     | 0         | 21.69  | 21.86  | 21.71   |               |             |
| 20  | 16QAM      | 1       | 0         | 21.69  | 21.73  | 21.75   | 21.35         | 0.1365      |
| 20  | 64QAM      | 1       | 0         | 20.81  | 20.79  | 20.72   | 20.41         | 0.1099      |
| 20  | 256QAM     | 1       | 0         | 18.06  | 18.2   | 18.11   | 17.8          | 0.0603      |
| Channel   |            |         |           | 42165  | 42590  | 43015   | EIRP<br>(dBm) | EIRP<br>(W) |
| Frequency   |            |         |           | 3457.5 | 3500   | 3542.5  |               |             |
| 15  | QPSK       | 1       | 0         | 22.65  | 22.81  | 22.75   | 22.41         | 0.1742      |
| 15  | QPSK       | 1       | 74        | 22.62  | 22.78  | 22.73   |               |             |
| 15  | QPSK       | 75      | 0         | 21.68  | 21.84  | 21.69   |               |             |
| 15  | 16QAM      | 1       | 0         | 21.75  | 21.72  | 21.72   | 21.35         | 0.1365      |
| 15  | 64QAM      | 1       | 0         | 20.69  | 20.76  | 20.68   | 20.36         | 0.1086      |
| 15  | 256QAM     | 1       | 0         | 18.05  | 18.15  | 18.13   | 17.75         | 0.0596      |
| Channel   |            |         |           | 42140  | 42590  | 43040   | EIRP<br>(dBm) | EIRP<br>(W) |
| Frequency   |            |         |           | 3455   | 3500   | 3545    |               |             |
| 10  | QPSK       | 1       | 0         | 22.66  | 22.86  | 22.76   | 22.46         | 0.1762      |
| 10  | QPSK       | 1       | 49        | 22.63  | 22.81  | 22.74   |               |             |
| 10  | QPSK       | 50      | 0         | 21.68  | 21.84  | 21.73   |               |             |
| 10  | 16QAM      | 1       | 0         | 21.65  | 21.75  | 21.76   | 21.36         | 0.1368      |
| 10  | 64QAM      | 1       | 0         | 20.75  | 20.73  | 20.68   | 20.35         | 0.1084      |
| 10  | 256QAM     | 1       | 0         | 18.07  | 18.19  | 18.15   | 17.79         | 0.0601      |
| Channel   |            |         |           | 42115  | 42590  | 43065   | EIRP<br>(dBm) | EIRP<br>(W) |
| Frequency   |            |         |           | 3452.5 | 3500   | 3547.5  |               |             |
| 5   | QPSK       | 1       | 0         | 22.65  | 22.81  | 22.73   | 22.41         | 0.1742      |
| 5   | QPSK       | 1       | 24        | 22.64  | 22.79  | 22.71   |               |             |
| 5   | QPSK       | 25      | 0         | 21.69  | 21.76  | 21.68   |               |             |
| 5   | 16QAM      | 1       | 0         | 21.67  | 21.73  | 21.75   | 21.35         | 0.1365      |
| 5   | 64QAM      | 1       | 0         | 20.68  | 20.65  | 20.66   | 20.28         | 0.1067      |
| 5   | 256QAM     | 1       | 0         | 18.11  | 18.22  | 18.13   | 17.82         | 0.0605      |
| Limit   | EIRP < 1 W |         |           | Result |        |         | Pass          |             |

| Mode            | LTE Band 42, QPSK, CB:20 MHz, 1 RB, Channel: 42190 |               |             |             |                   |                       |                        |
|-----------------|--|---------------|-------------|-------------|-------------------|-----------------------|------------------------|
| Frequency (MHz) | Antenna Polarity                                   | E.I.R.P (dBm) | Limit (dBm) | Margin (dB) | S.A Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) |
| 6902.4          | H  | -49.52        | -25         | -24.52      | -64.26            | -53.54                | 4.02                   |
| 10353.6         | H  | -53.72        | -25         | -28.72      | -68.65            | -54.5                 | 0.78                   |
| 13804.8         | H  | -50.57        | -25         | -25.57      | -65.83            | -50.45                | -0.12                  |
| 6902.4          | V  | -41.14        | -25         | -16.14      | -56.22            | -45.16                | 4.02                   |
| 10353.6         | V  | -54.62        | -25         | -29.62      | -68.71            | -55.4                 | 0.78                   |
| 13804.8         | V  | -50.96        | -25         | -25.96      | -65.22            | -50.84                | -0.12                  |

| Mode            | LTE Band 42, QPSK, CB:20 MHz, 1 RB, Channel: 42590 |               |             |             |                   |                       |                        |
|-----------------|--|---------------|-------------|-------------|-------------------|-----------------------|------------------------|
| Frequency (MHz) | Antenna Polarity                                   | E.I.R.P (dBm) | Limit (dBm) | Margin (dB) | S.A Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) |
| 6982.4          | H  | -49.64        | -25         | -24.64      | -63.83            | -53.31                | 3.67                   |
| 10473.6         | H  | -53.95        | -25         | -28.95      | -68.75            | -54.62                | 0.67                   |
| 13964.8         | H  | -51.18        | -25         | -26.18      | -65.65            | -50.78                | -0.4                   |
| 6982.4          | V  | -41.01        | -25         | -16.01      | -56.07            | -44.68                | 3.67                   |
| 10473.6         | V  | -54.16        | -25         | -29.16      | -68.52            | -54.83                | 0.67                   |
| 13964.8         | V  | -51.48        | -25         | -26.48      | -65.68            | -51.08                | -0.4                   |

| Mode            | LTE Band 42, QPSK, CB:20 MHz, 1 RB, Channel: 42990 |               |             |             |                   |                       |                        |
|-----------------|--|---------------|-------------|-------------|-------------------|-----------------------|------------------------|
| Frequency (MHz) | Antenna Polarity                                   | E.I.R.P (dBm) | Limit (dBm) | Margin (dB) | S.A Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) |
| 7062.4          | H  | -50.47        | -25         | -25.47      | -64.62            | -53.81                | 3.34                   |
| 10593.6         | H  | -54.11        | -25         | -29.11      | -68.92            | -54.67                | 0.56                   |
| 14124.8         | H  | -51.67        | -25         | -26.67      | -65.56            | -51.12                | -0.55                  |
| 7062.4          | V  | -41.24        | -25         | -16.24      | -56.47            | -44.58                | 3.34                   |
| 10593.6         | V  | -54.45        | -25         | -29.45      | -68.91            | -55.01                | 0.56                   |
| 14124.8         | V  | -51.34        | -25         | -26.34      | -65.49            | -50.79                | -0.55                  |

NOTE: EIRP = S.G power value + correction factor

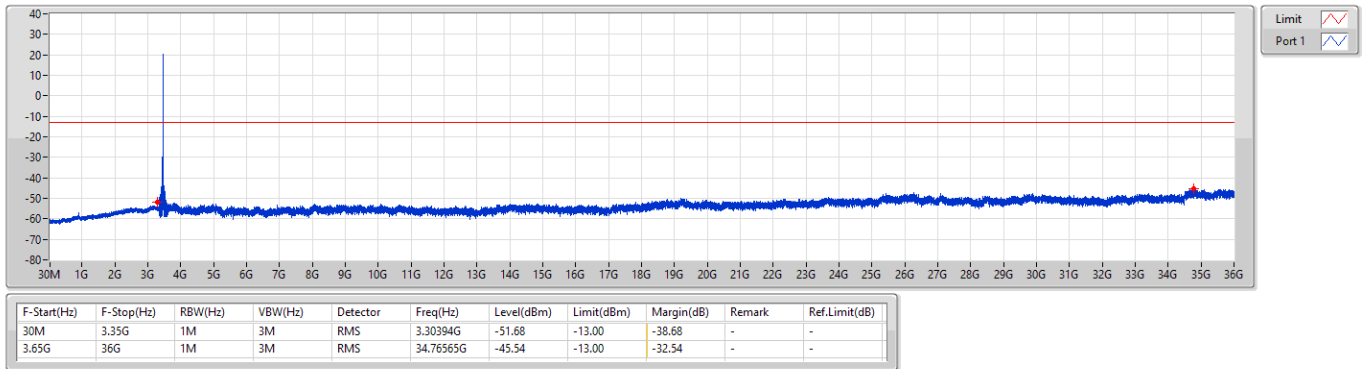
**Summary**

| Mode                    | Result | F-Start<br>(Hz) | F-Stop<br>(Hz) | RBW<br>(Hz) | VBW<br>(Hz) | Detector | Freq<br>(Hz) | Level<br>(dBm) | Limit  | Margin<br>(dB) | Remark | Ref.Limit<br>(dB) |
|-------------------------|--------|-----------------|----------------|-------------|-------------|----------|--------------|----------------|--------|----------------|--------|-------------------|
|                         |        |                 |                |             |             |          |              |                | (dBm)  |                |        |                   |
| Band 42                 | -      | -               | -              | -           | -           | -        | -            | -              | -      | -              | -      | -                 |
| LTE_20MHz_Nss1,QPSK_1TX | Pass   | 3.65G           | 36G            | 1M          | 3M          | RMS      | 35.60472G    | -44.99         | -13.00 | -31.99         | -      | -                 |
| LTE_15MHz_Nss1,QPSK_1TX | Pass   | 3.65G           | 36G            | 1M          | 3M          | RMS      | 34.64939G    | -45.24         | -13.00 | -32.24         | -      | -                 |
| LTE_10MHz_Nss1,QPSK_1TX | Pass   | 3.65G           | 36G            | 1M          | 3M          | RMS      | 35.52587G    | -44.95         | -13.00 | -31.95         | -      | -                 |
| LTE_5MHz_Nss1,QPSK_1TX  | Pass   | 3.65G           | 36G            | 1M          | 3M          | RMS      | 35.72705G    | -45.45         | -13.00 | -32.45         | -      | -                 |

Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

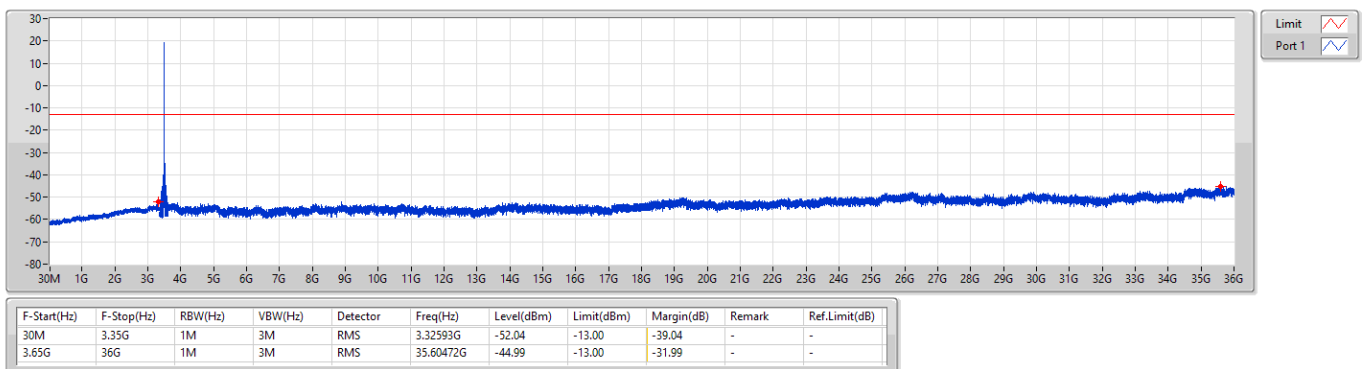
3460MHz\_QPSK\_RB 1



Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

3500MHz\_QPSK\_RB 1

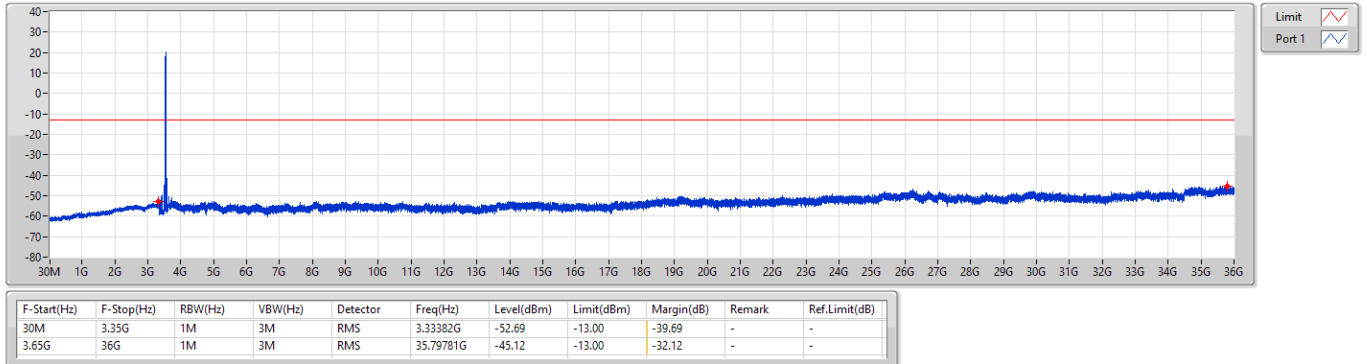




Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

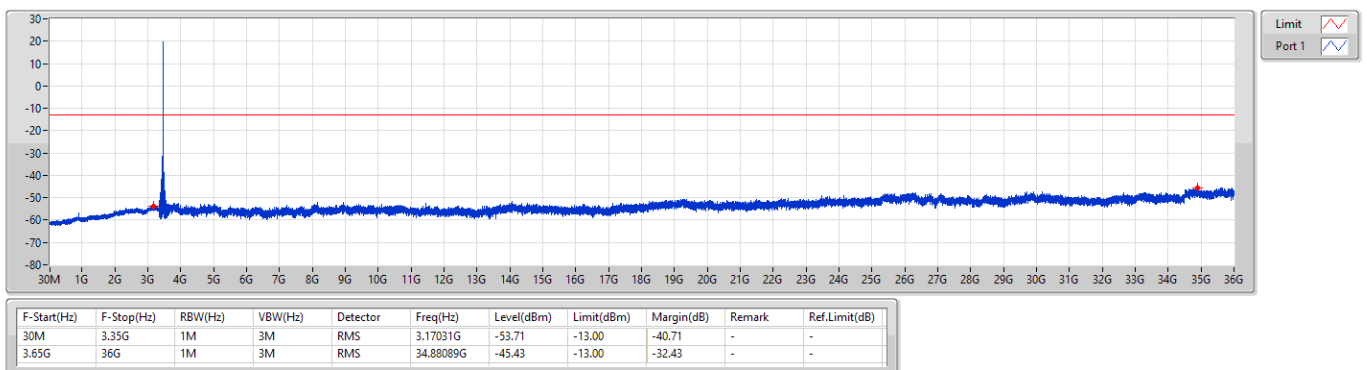
3540MHz\_QPSK\_RB 1



Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

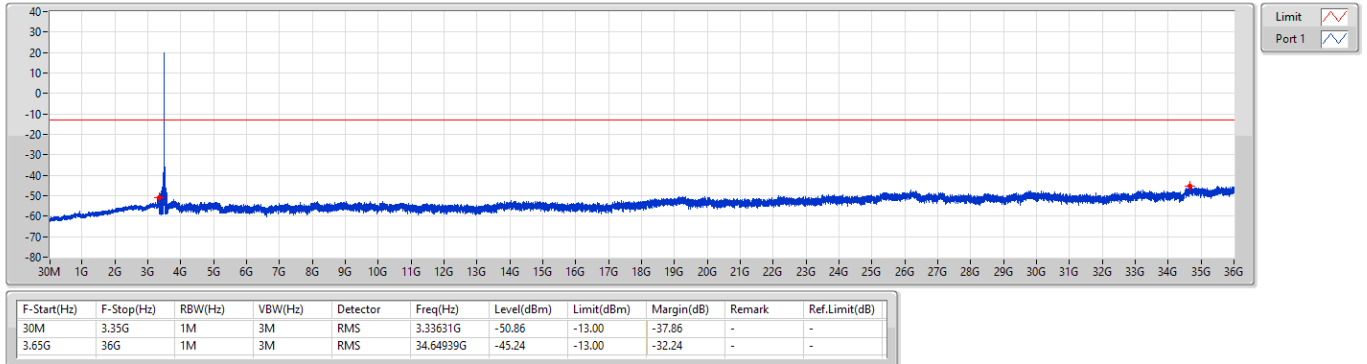
3457.5MHz\_QPSK\_RB 1



Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

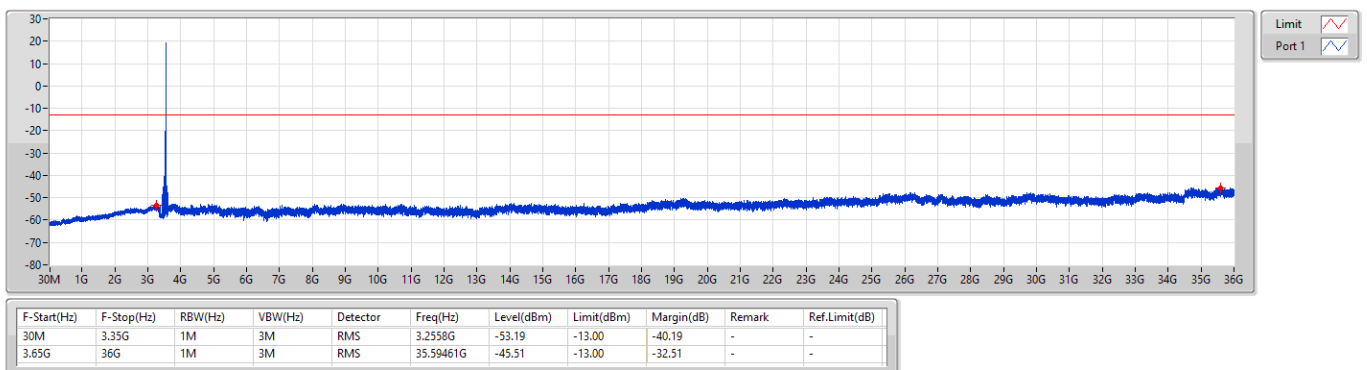
3500MHz\_QPSK\_RB 1



Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

3542.5MHz\_QPSK\_RB 1

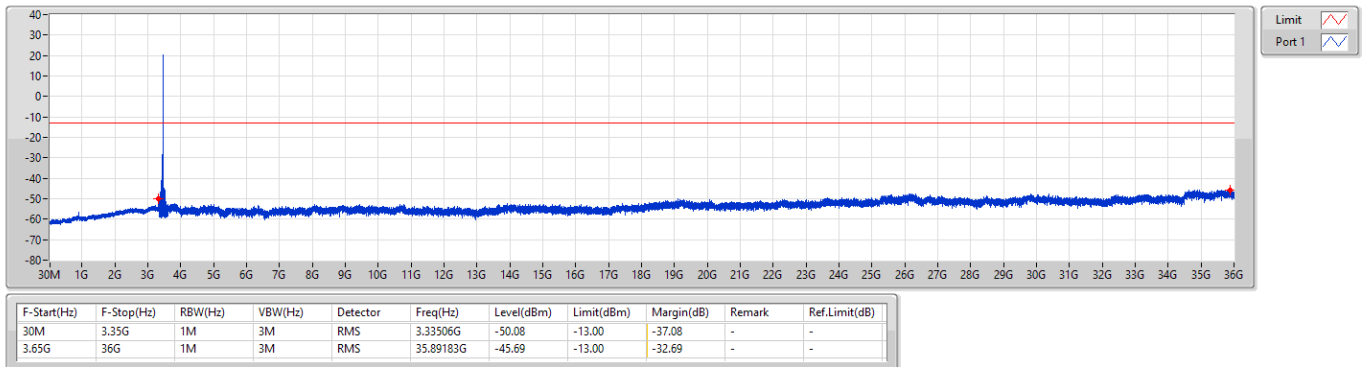




Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

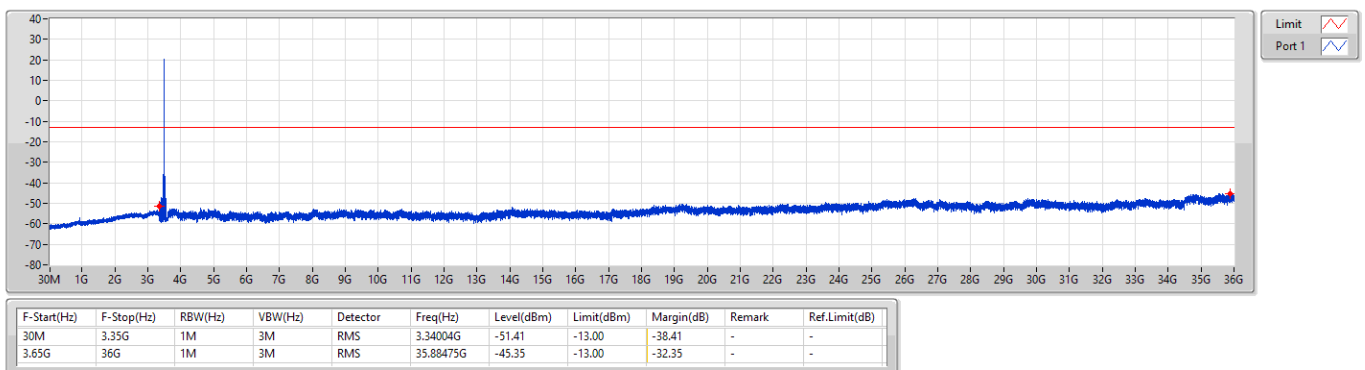
3455MHz\_QPSK\_RB 1



Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

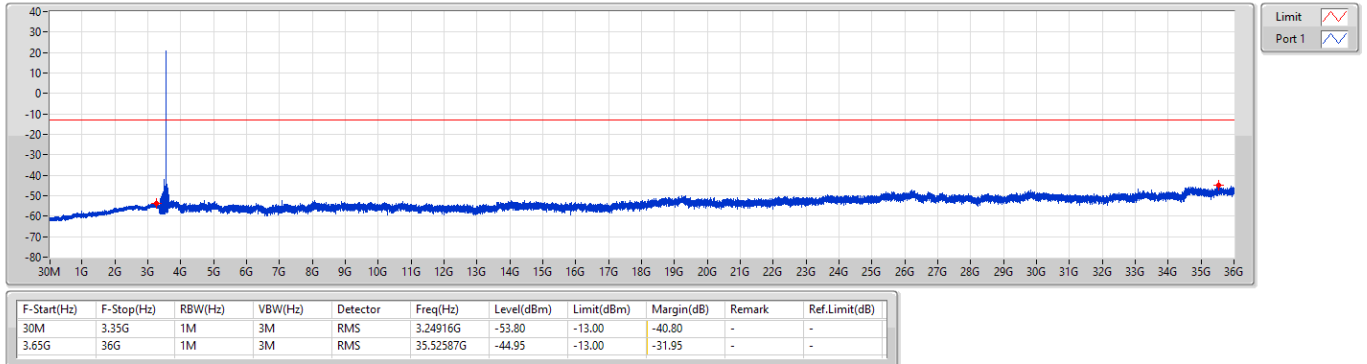
3500MHz\_QPSK\_RB 1



Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

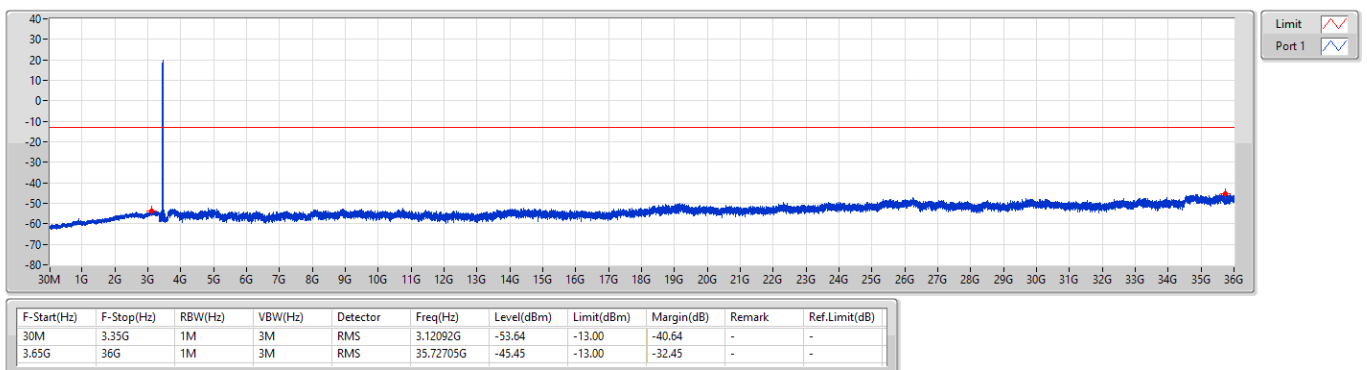
3545MHz\_QPSK\_RB 1



Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

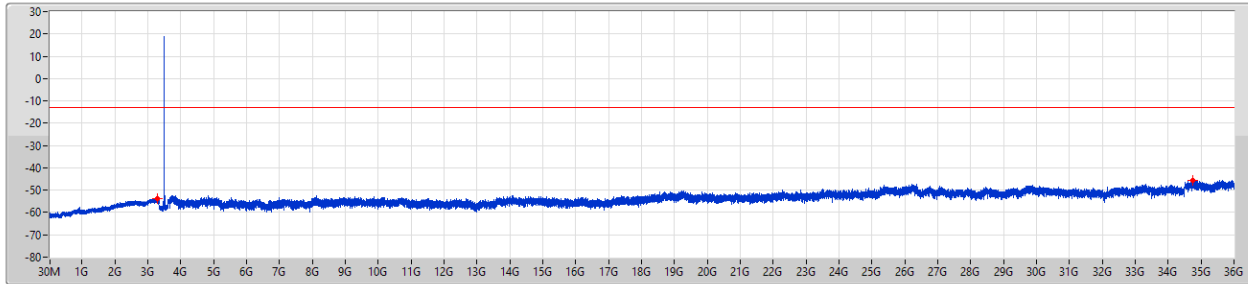
3452.5MHz\_QPSK\_RB 1



Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

3500MHz\_QPSK\_RB 1

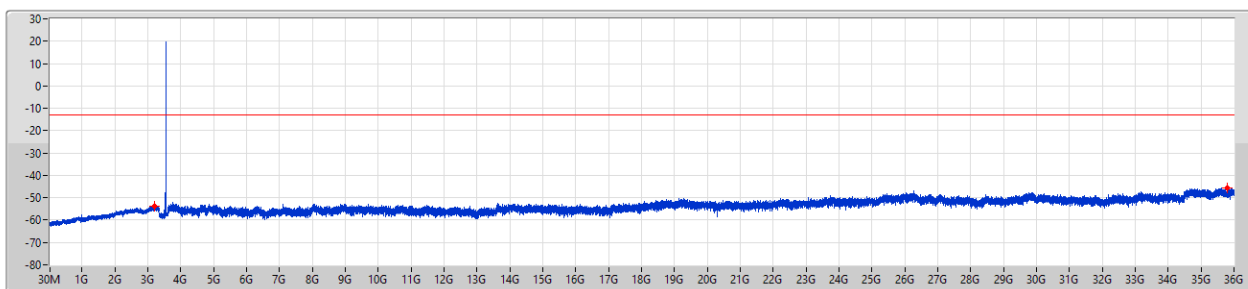


| F-Start(Hz) | F-Stop(Hz) | RBW(Hz) | VBW(Hz) | Detector | Freq(Hz)  | Level(dBm) | Limit(dBm) | Margin(dB) | Remark | Ref.Limit(dB) |
|-------------|------------|---------|---------|----------|-----------|------------|------------|------------|--------|---------------|
| 30M         | 3.35G      | 1M      | 3M      | RMS      | 3.28734G  | -53.97     | -13.00     | -40.97     | -      | -             |
| 3.65G       | 36G        | 1M      | 3M      | RMS      | 34.73431G | -45.47     | -13.00     | -32.47     | -      | -             |

Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX

CSE-TX-Sum

3547.5MHz\_QPSK\_RB 1



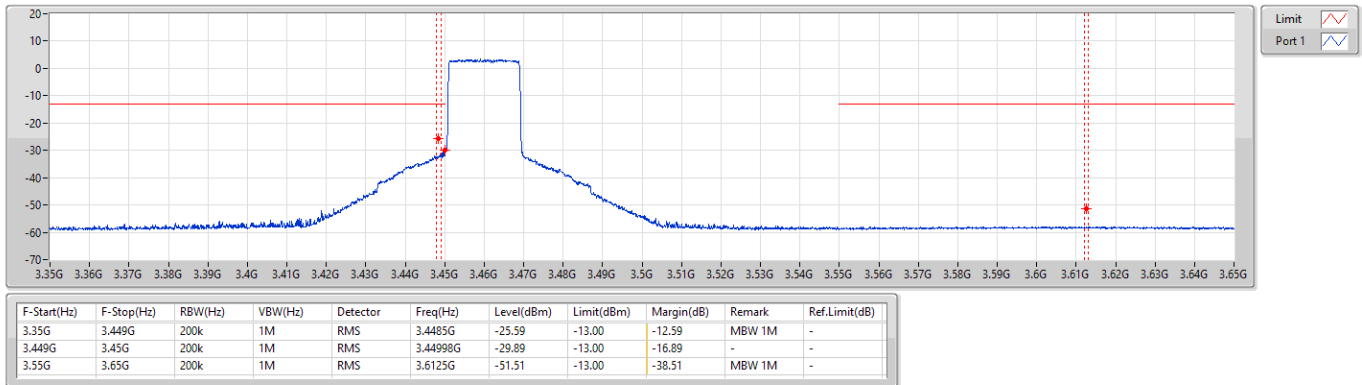
| F-Start(Hz) | F-Stop(Hz) | RBW(Hz) | VBW(Hz) | Detector | Freq(Hz)  | Level(dBm) | Limit(dBm) | Margin(dB) | Remark | Ref.Limit(dB) |
|-------------|------------|---------|---------|----------|-----------|------------|------------|------------|--------|---------------|
| 30M         | 3.35G      | 1M      | 3M      | RMS      | 3.19521G  | -53.78     | -13.00     | -40.78     | -      | -             |
| 3.65G       | 36G        | 1M      | 3M      | RMS      | 35.80186G | -45.59     | -13.00     | -32.59     | -      | -             |

**Summary**

| Mode                      | Result | F-Start<br>(Hz) | F-Stop<br>(Hz) | RBW<br>(Hz) | VBW<br>(Hz) | Detector | Freq<br>(Hz) | Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Remark | Ref.Limit<br>(dB) |
|---------------------------|--------|-----------------|----------------|-------------|-------------|----------|--------------|----------------|----------------|----------------|--------|-------------------|
| Band 42                   | -      | -               | -              | -           | -           | -        | -            | -              | -              | -              | -      | -                 |
| LTE_20MHz_Nss1,QPSK_1TX   | Pass   | 3.55G           | 3.551G         | 200k        | 1M          | RMS      | 3.55002G     | -23.05         | -13.00         | -10.05         | -      | -                 |
| LTE_20MHz_Nss1,16QAM_1TX  | Pass   | 3.55G           | 3.551G         | 200k        | 1M          | RMS      | 3.55002G     | -22.88         | -13.00         | -9.88          | -      | -                 |
| LTE_20MHz_Nss1,64QAM_1TX  | Pass   | 3.55G           | 3.551G         | 200k        | 1M          | RMS      | 3.55001G     | -23.62         | -13.00         | -10.62         | -      | -                 |
| LTE_20MHz_Nss1,256QAM_1TX | Pass   | 3.449G          | 3.45G          | 200k        | 1M          | RMS      | 3.44999G     | -27.03         | -13.00         | -14.03         | -      | -                 |
| LTE_15MHz_Nss1,QPSK_1TX   | Pass   | 3.55G           | 3.551G         | 200k        | 1M          | RMS      | 3.55002G     | -19.65         | -13.00         | -6.65          | -      | -                 |
| LTE_15MHz_Nss1,16QAM_1TX  | Pass   | 3.449G          | 3.45G          | 200k        | 1M          | RMS      | 3.45G        | -19.78         | -13.00         | -6.78          | -      | -                 |
| LTE_15MHz_Nss1,64QAM_1TX  | Pass   | 3.449G          | 3.45G          | 200k        | 1M          | RMS      | 3.45G        | -20.63         | -13.00         | -7.63          | -      | -                 |
| LTE_15MHz_Nss1,256QAM_1TX | Pass   | 3.55G           | 3.551G         | 200k        | 1M          | RMS      | 3.55001G     | -24.27         | -13.00         | -11.27         | -      | -                 |
| LTE_10MHz_Nss1,QPSK_1TX   | Pass   | 3.449G          | 3.45G          | 100k        | 300k        | RMS      | 3.45G        | -20.54         | -13.00         | -7.54          | -      | -                 |
| LTE_10MHz_Nss1,16QAM_1TX  | Pass   | 3.449G          | 3.45G          | 100k        | 300k        | RMS      | 3.44999G     | -21.69         | -13.00         | -8.69          | -      | -                 |
| LTE_10MHz_Nss1,64QAM_1TX  | Pass   | 3.55G           | 3.551G         | 100k        | 300k        | RMS      | 3.55001G     | -22.24         | -13.00         | -9.24          | -      | -                 |
| LTE_10MHz_Nss1,256QAM_1TX | Pass   | 3.449G          | 3.45G          | 100k        | 300k        | RMS      | 3.45G        | -24.54         | -13.00         | -11.54         | -      | -                 |
| LTE_5MHz_Nss1,QPSK_1TX    | Pass   | 3.449G          | 3.45G          | 50k         | 200k        | RMS      | 3.45G        | -18.53         | -13.00         | -5.53          | -      | -                 |
| LTE_5MHz_Nss1,16QAM_1TX   | Pass   | 3.449G          | 3.45G          | 50k         | 200k        | RMS      | 3.44999G     | -19.72         | -13.00         | -6.72          | -      | -                 |
| LTE_5MHz_Nss1,64QAM_1TX   | Pass   | 3.449G          | 3.45G          | 50k         | 200k        | RMS      | 3.44998G     | -20.83         | -13.00         | -7.83          | -      | -                 |
| LTE_5MHz_Nss1,256QAM_1TX  | Pass   | 3.449G          | 3.45G          | 50k         | 200k        | RMS      | 3.44999G     | -22.47         | -13.00         | -9.47          | -      | -                 |

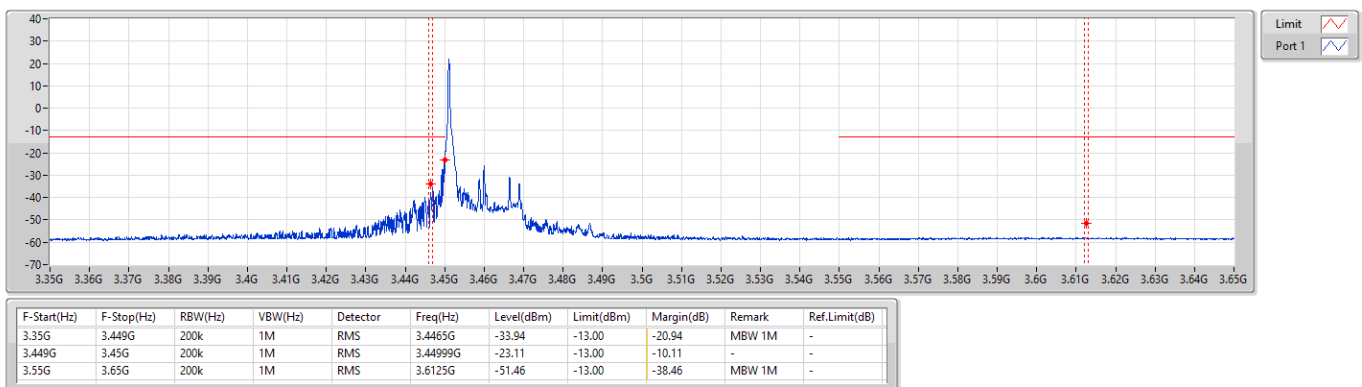
Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX  
3460MHz\_QPSK\_RB 100,#RB 0

CSE-TX-Sum



Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX  
3460MHz\_QPSK\_RB 1,#RB L

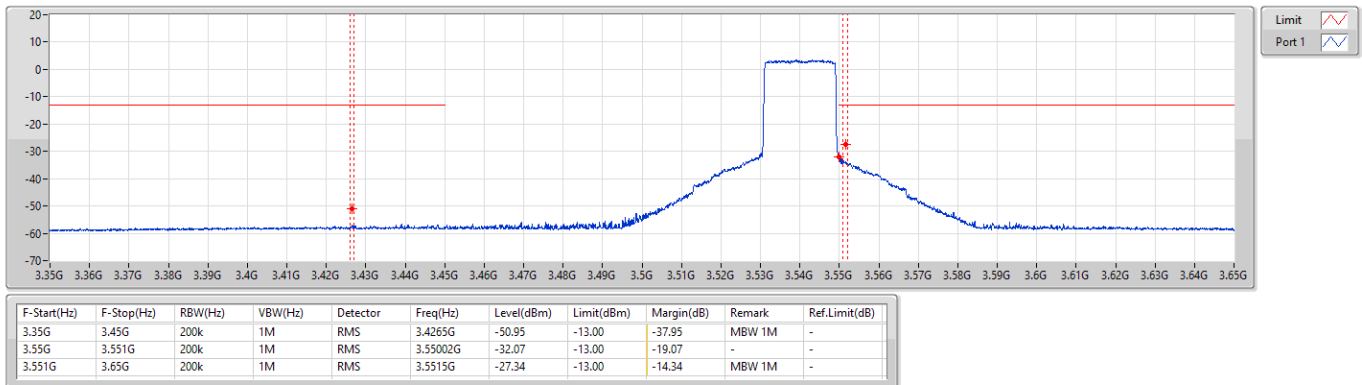
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

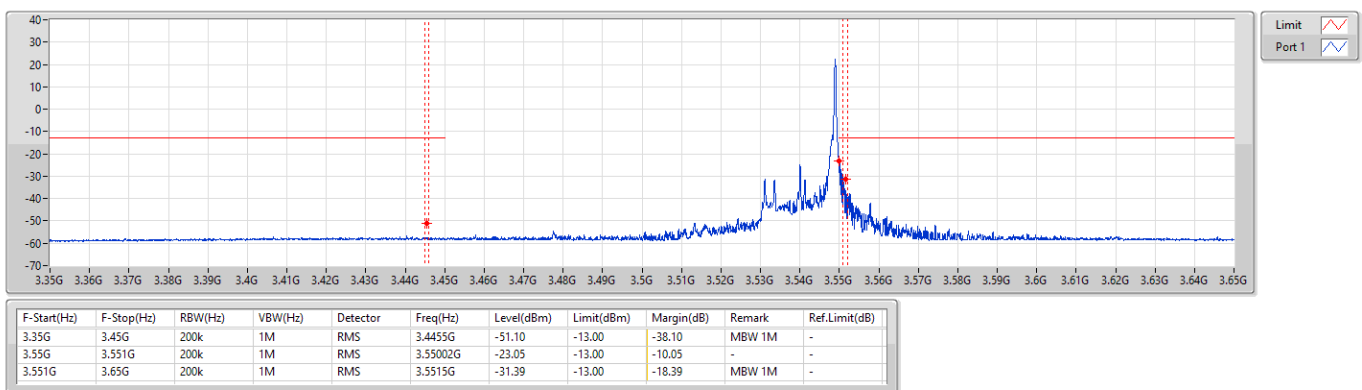
Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX  
3540MHz\_QPSK\_RB 100,#RB 0

CSE-TX-Sum



Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX  
3540MHz\_QPSK\_RB 1,#RB R

CSE-TX-Sum

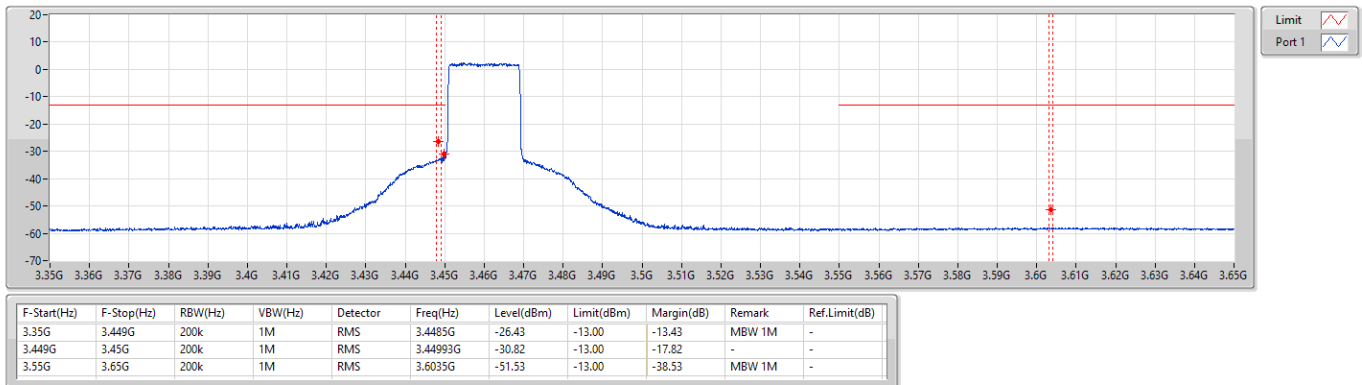


Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.



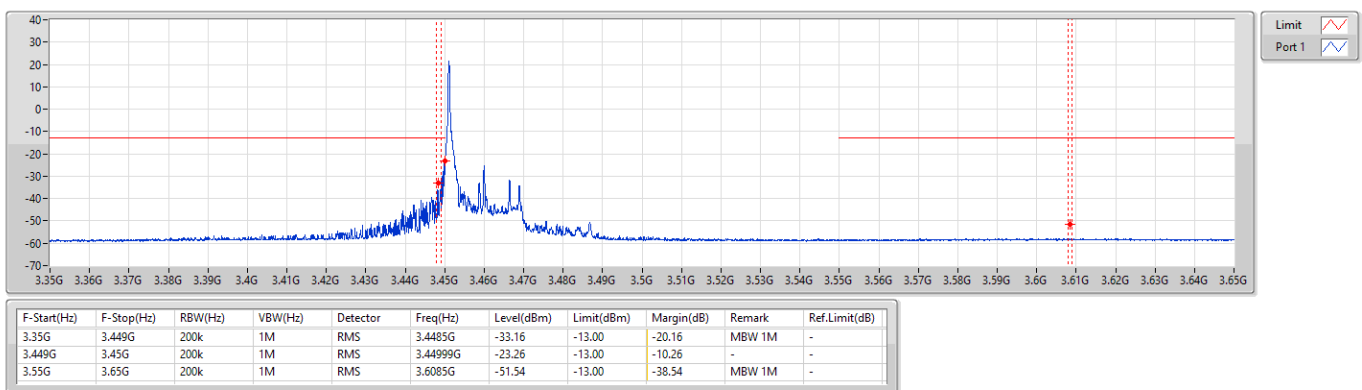
Band 42\_LTE\_20MHz\_Nss1,16QAM\_1TX  
3460MHz\_16QAM\_RB 100,#RB 0

CSE-TX-Sum



Band 42\_LTE\_20MHz\_Nss1,16QAM\_1TX  
3460MHz\_16QAM\_RB 1,#RB L

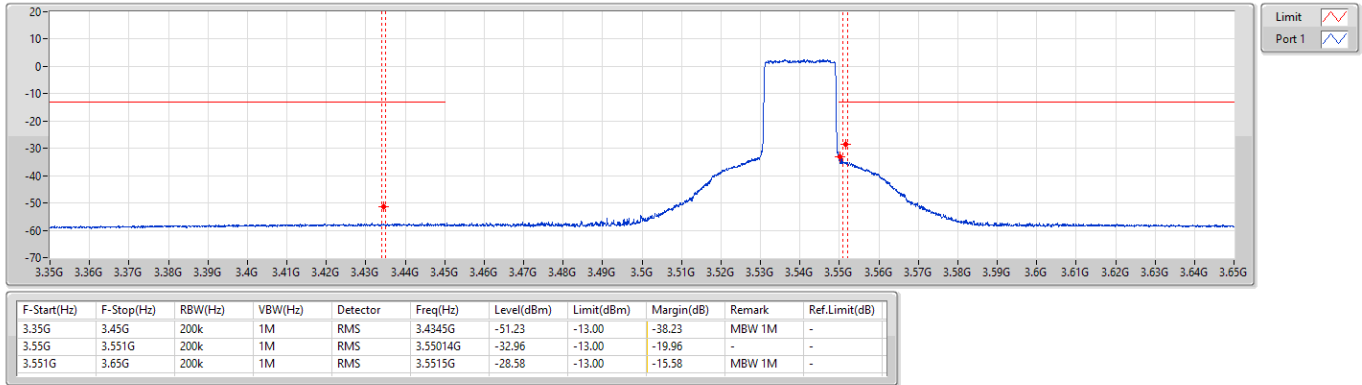
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

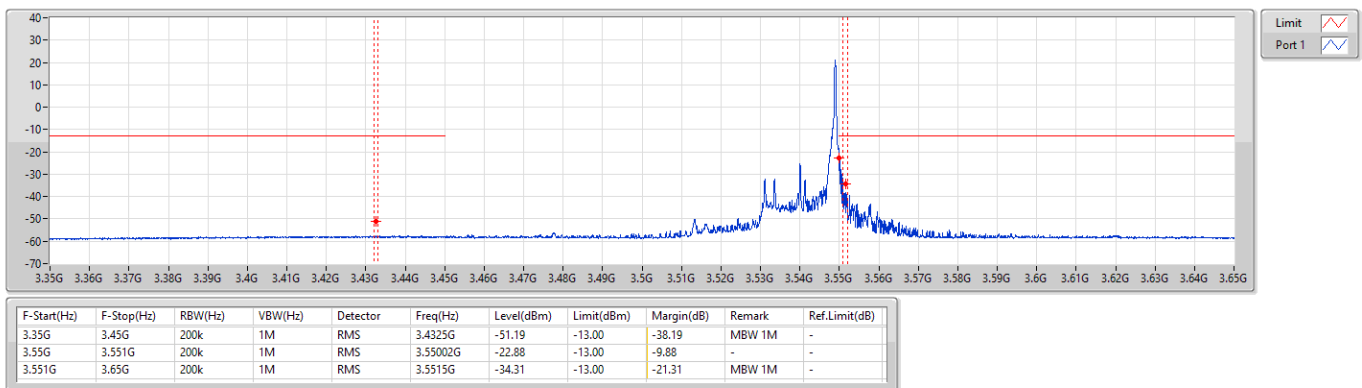
**Band 42\_LTE\_20MHz\_Nss1,16QAM\_1TX**  
**3540MHz\_16QAM\_RB 100,#RB 0**

CSE-TX-Sum



**Band 42\_LTE\_20MHz\_Nss1,16QAM\_1TX**  
**3540MHz\_16QAM\_RB 1,#RB R**

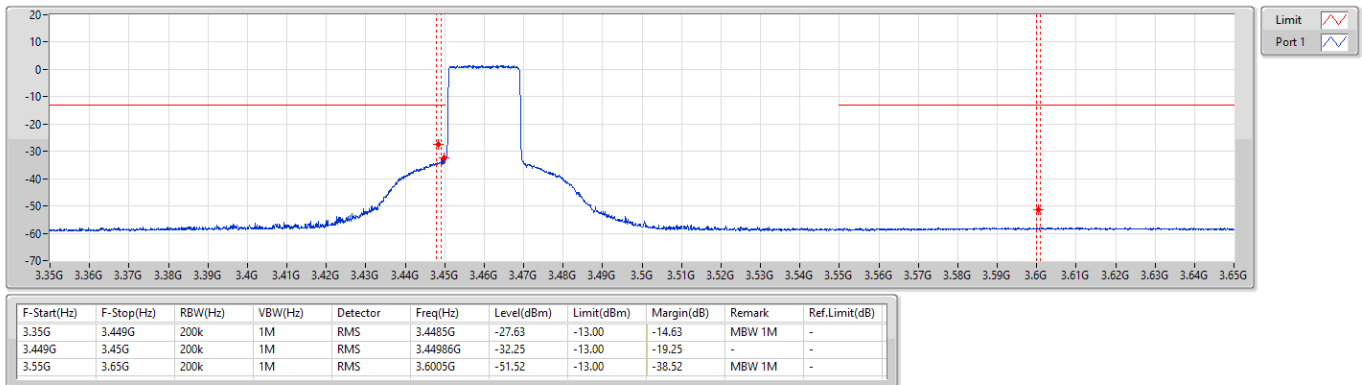
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
 Note 2: MBW = Measured bandwidth.

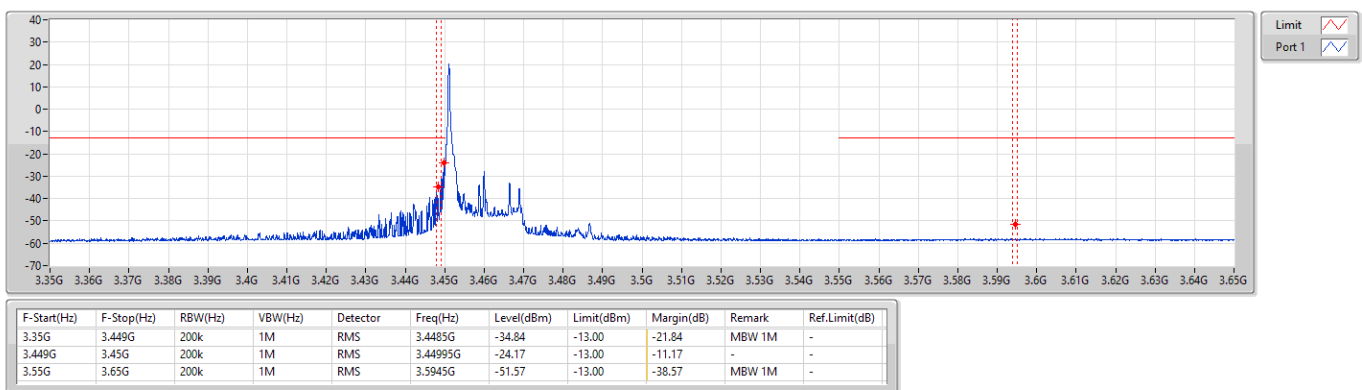
Band 42\_LTE\_20MHz\_Nss1,64QAM\_1TX  
3460MHz\_64QAM\_RB 100,#RB 0

CSE-TX-Sum



Band 42\_LTE\_20MHz\_Nss1,64QAM\_1TX  
3460MHz\_64QAM\_RB 1,#RB L

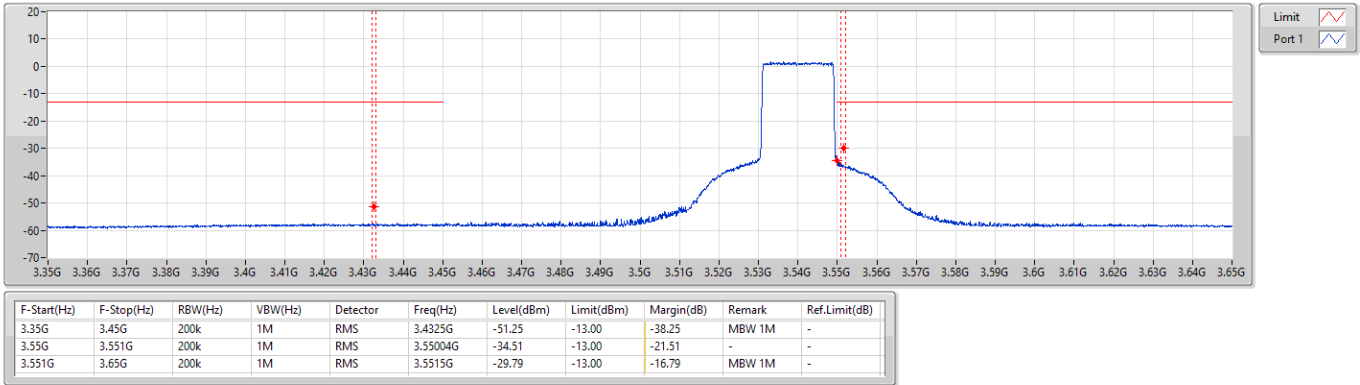
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

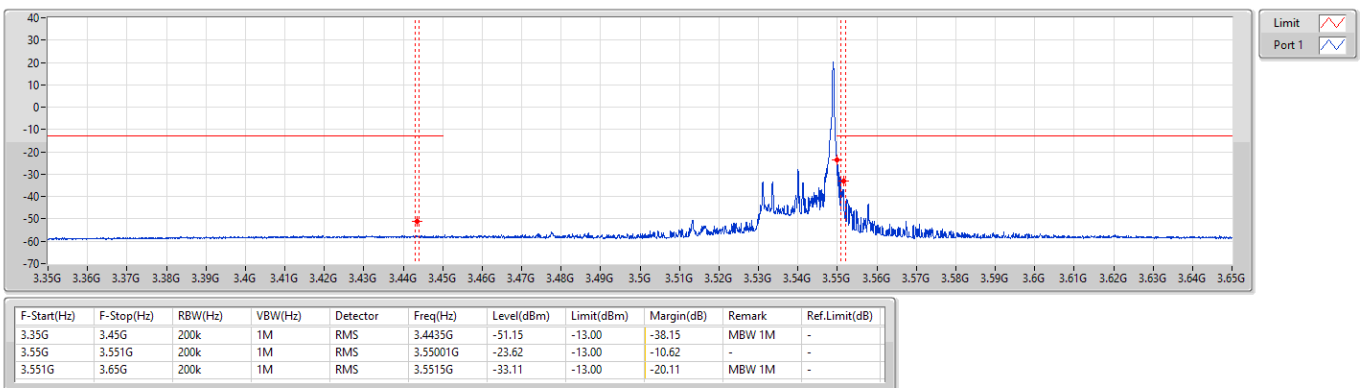
Band 42\_LTE\_20MHz\_Nss1,64QAM\_1TX  
3540MHz\_64QAM\_RB 100,#RB 0

CSE-TX-Sum



Band 42\_LTE\_20MHz\_Nss1,64QAM\_1TX  
3540MHz\_64QAM\_RB 1,#RB R

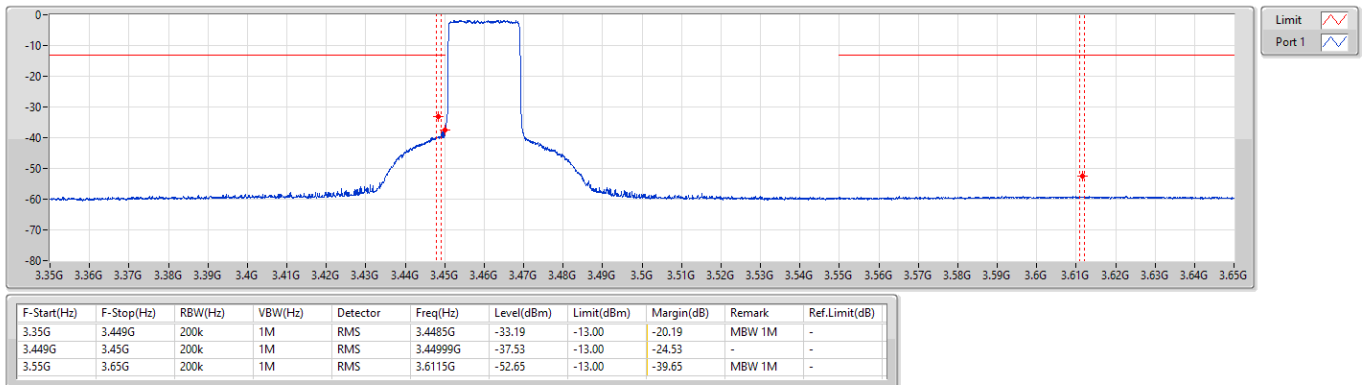
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

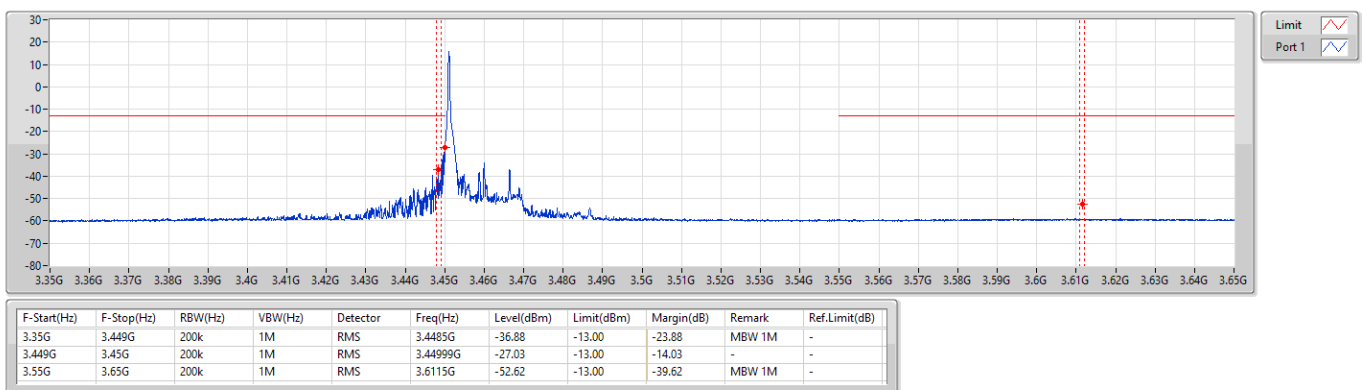
Band 42\_LTE\_20MHz\_Nss1,256QAM\_1TX  
3460MHz\_256QAM\_RB 100,#RB 0

CSE-TX-Sum



Band 42\_LTE\_20MHz\_Nss1,256QAM\_1TX  
3460MHz\_256QAM\_RB 1,#RB L

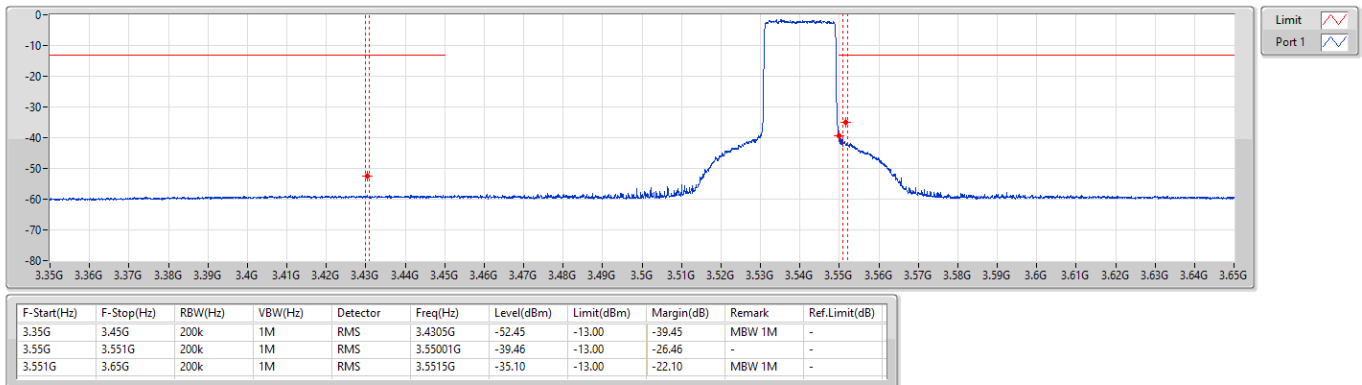
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

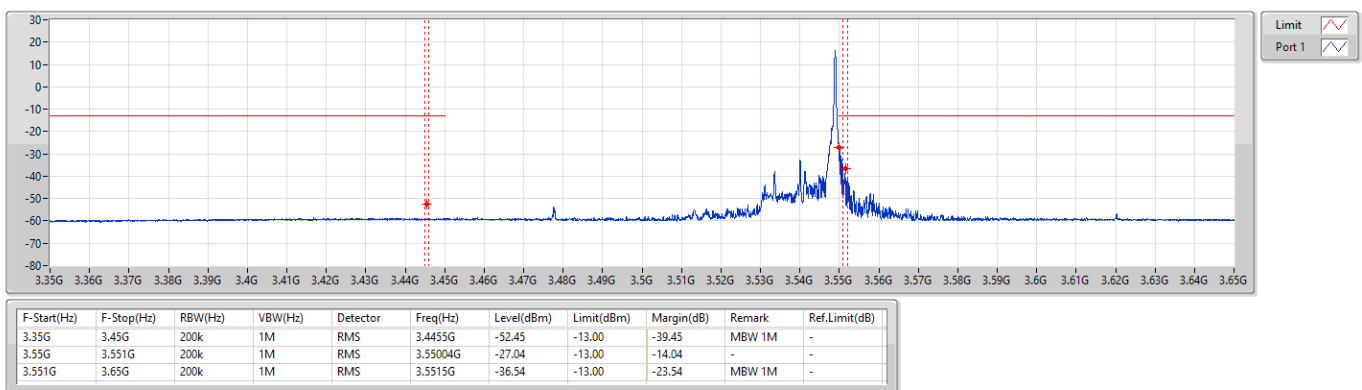
Band 42\_LTE\_20MHz\_Nss1,256QAM\_1TX  
3540MHz\_256QAM\_RB 100,#RB 0

CSE-TX-Sum



Band 42\_LTE\_20MHz\_Nss1,256QAM\_1TX  
3540MHz\_256QAM\_RB 1,#RB R

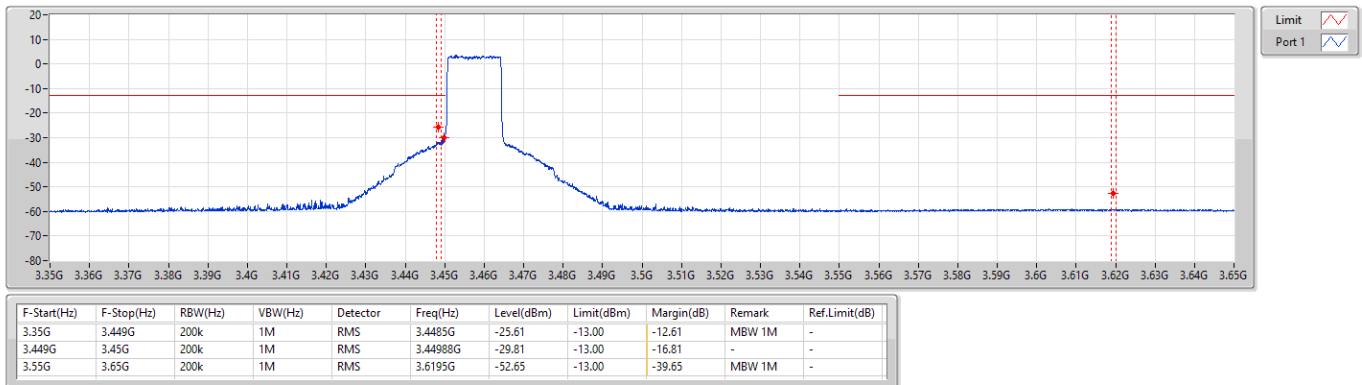
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

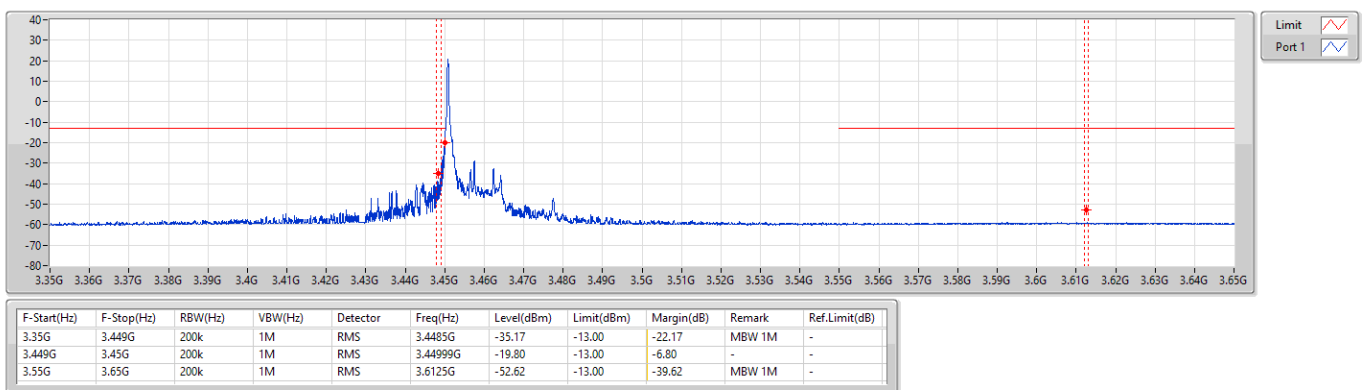
Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX  
3457.5MHz\_QPSK\_RB 75,#RB 0

CSE-TX-Sum



Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX  
3457.5MHz\_QPSK\_RB 1,#RB L

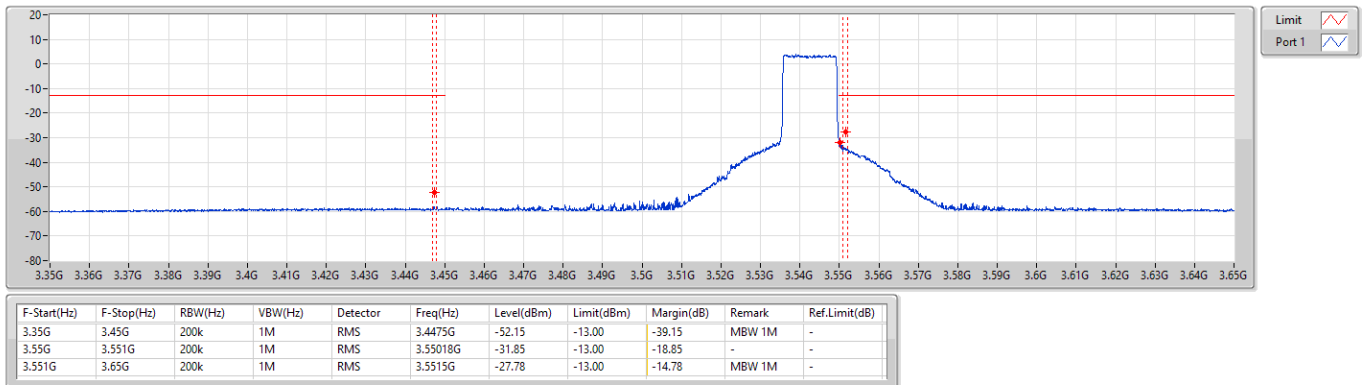
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

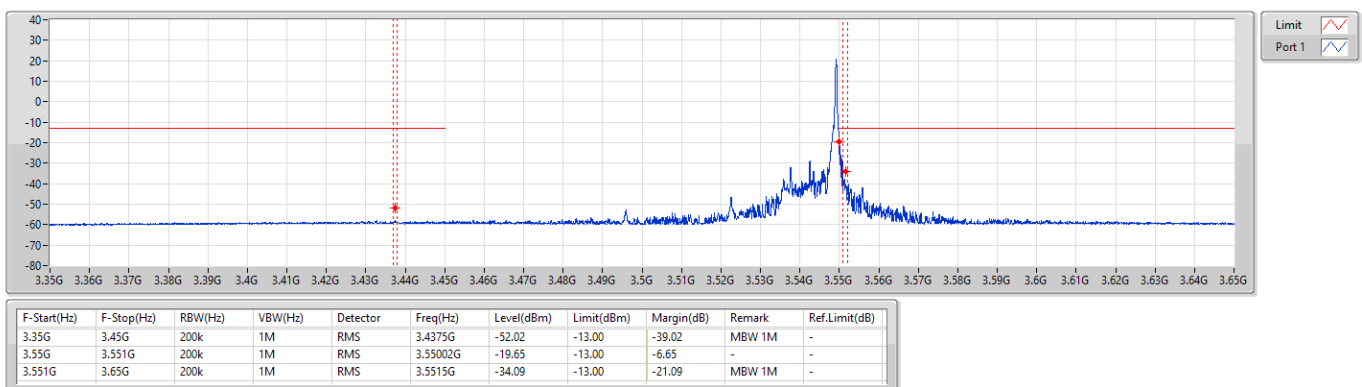
Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX  
3542.5MHz\_QPSK\_RB 75,#RB 0

CSE-TX-Sum



Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX  
3542.5MHz\_QPSK\_RB 1,#RB R

CSE-TX-Sum

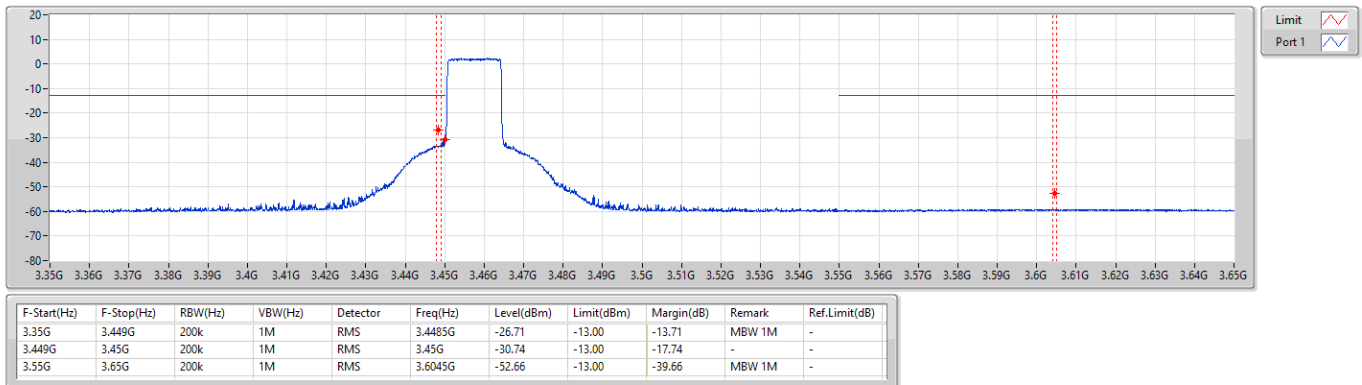


Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.



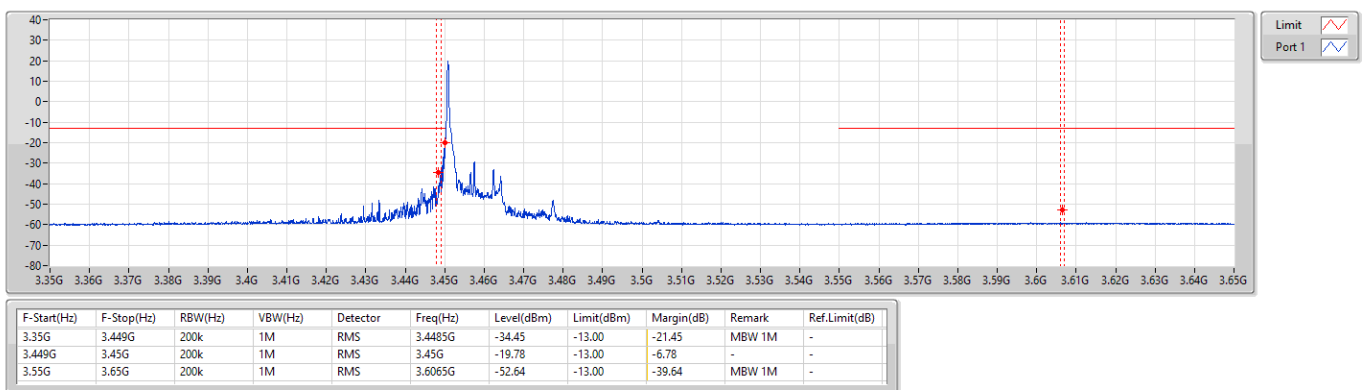
Band 42\_LTE\_15MHz\_Nss1,16QAM\_1TX  
3457.5MHz\_16QAM\_RB 75,#RB 0

CSE-TX-Sum



Band 42\_LTE\_15MHz\_Nss1,16QAM\_1TX  
3457.5MHz\_16QAM\_RB 1,#RB L

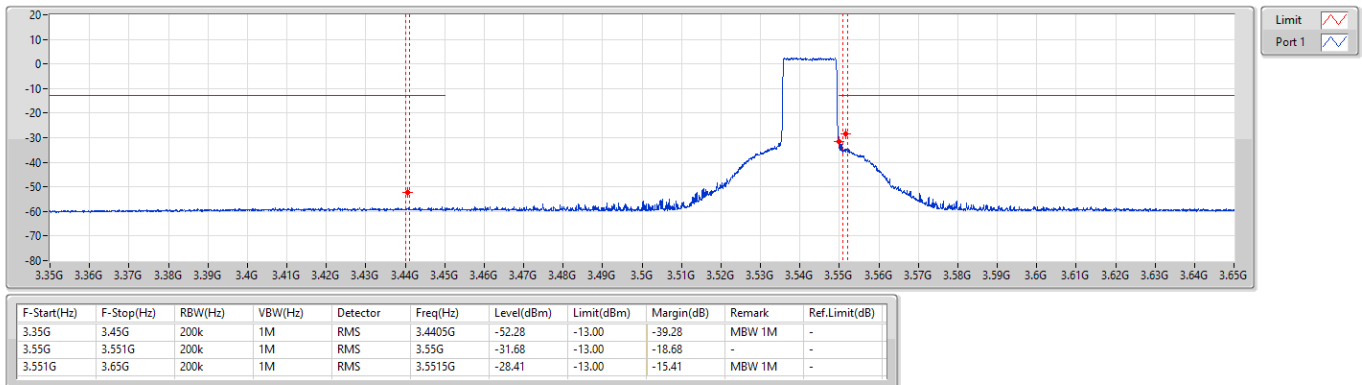
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

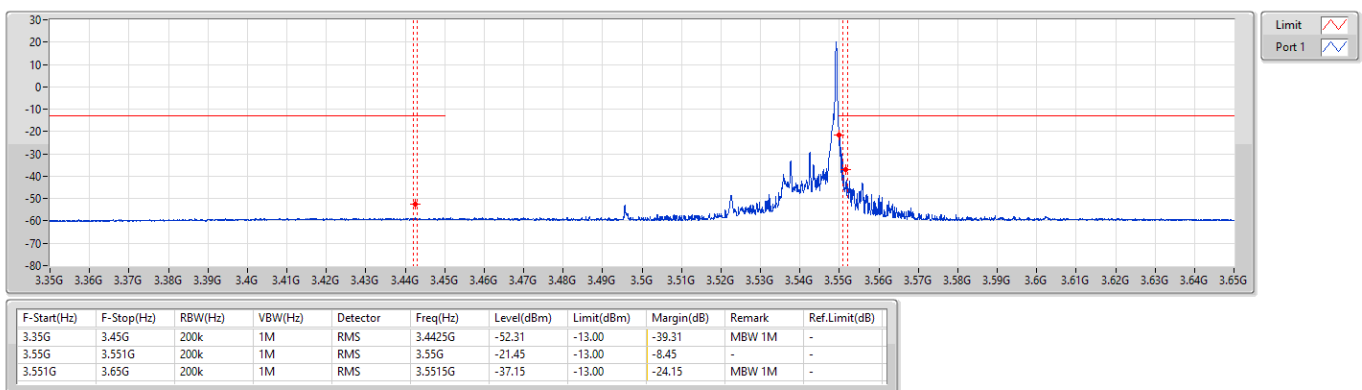
Band 42\_LTE\_15MHz\_Nss1,16QAM\_1TX  
3542.5MHz\_16QAM\_RB 75,#RB 0

CSE-TX-Sum



Band 42\_LTE\_15MHz\_Nss1,16QAM\_1TX  
3542.5MHz\_16QAM\_RB 1,#RB R

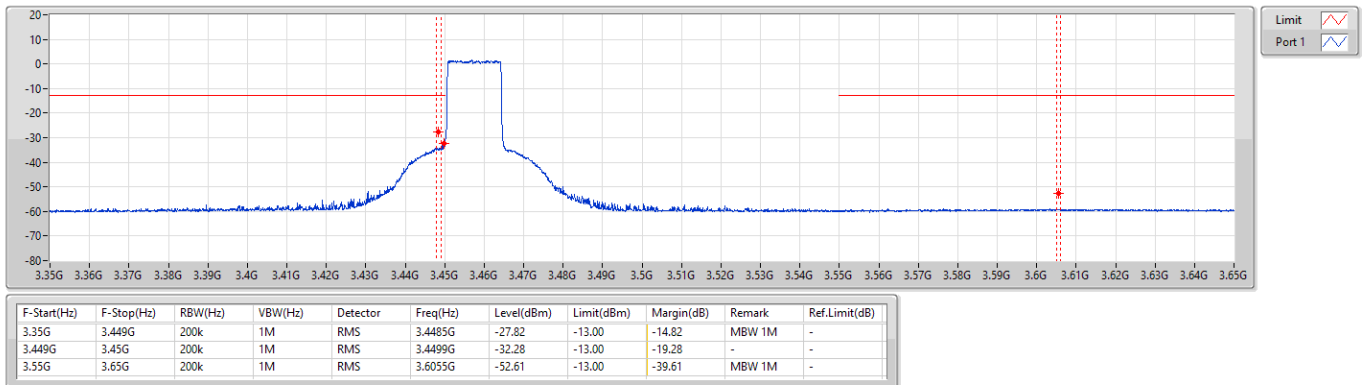
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

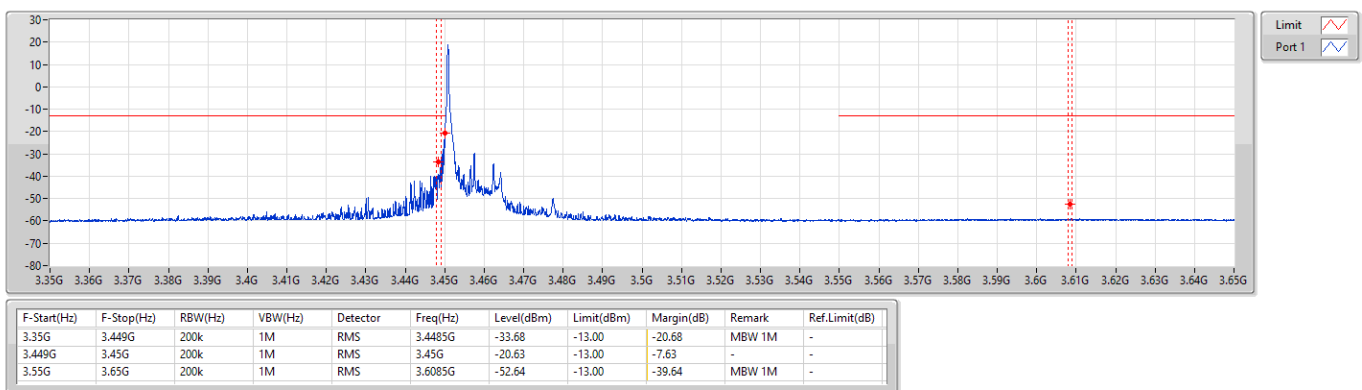
Band 42\_LTE\_15MHz\_Nss1,64QAM\_1TX  
3457.5MHz\_64QAM\_RB 75,#RB 0

CSE-TX-Sum



Band 42\_LTE\_15MHz\_Nss1,64QAM\_1TX  
3457.5MHz\_64QAM\_RB 1,#RB L

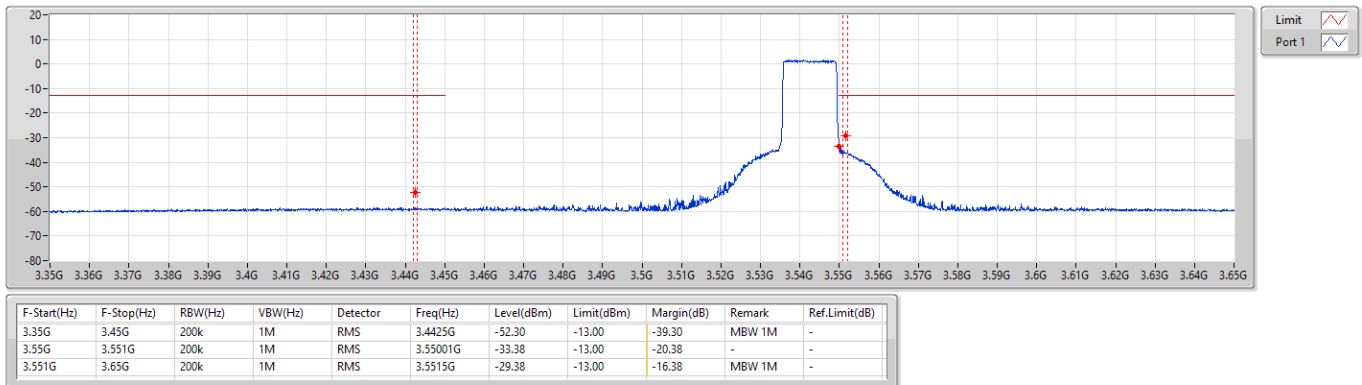
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

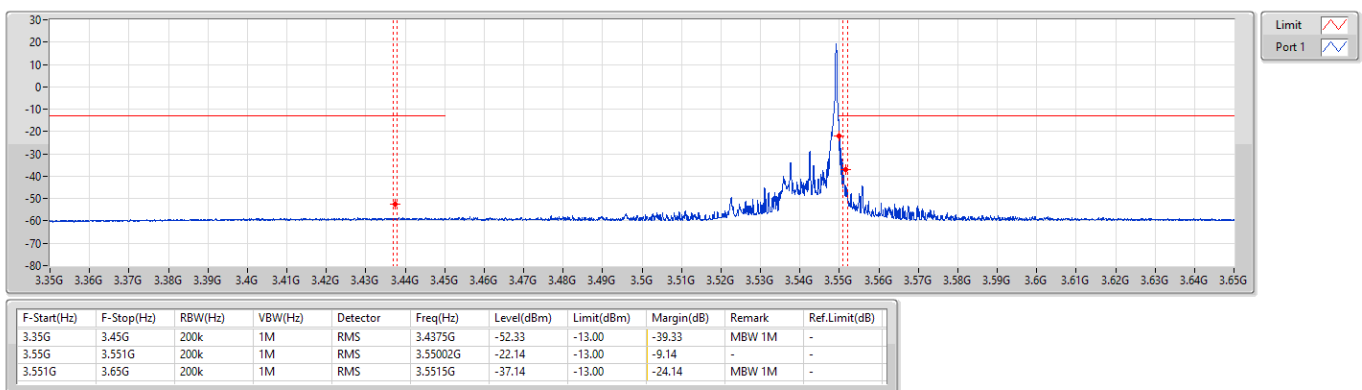
**Band 42\_LTE\_15MHz\_Nss1,64QAM\_1TX**  
**3542.5MHz\_64QAM\_RB 75,#RB 0**

CSE-TX-Sum



**Band 42\_LTE\_15MHz\_Nss1,64QAM\_1TX**  
**3542.5MHz\_64QAM\_RB 1,#RB R**

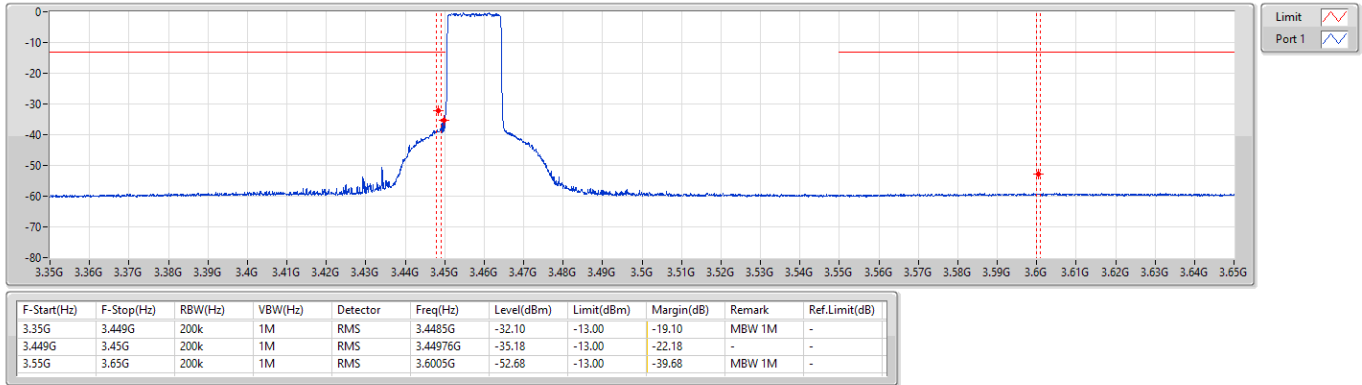
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
 Note 2: MBW = Measured bandwidth.

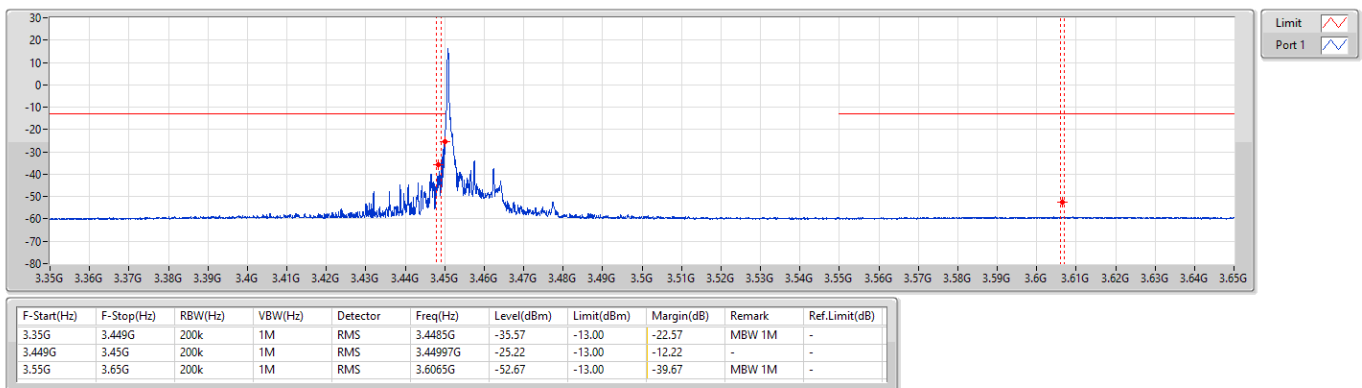
Band 42\_LTE\_15MHz\_Nss1,256QAM\_1TX  
3457.5MHz\_256QAM\_RB 75,#RB 0

CSE-TX-Sum



Band 42\_LTE\_15MHz\_Nss1,256QAM\_1TX  
3457.5MHz\_256QAM\_RB 1,#RB L

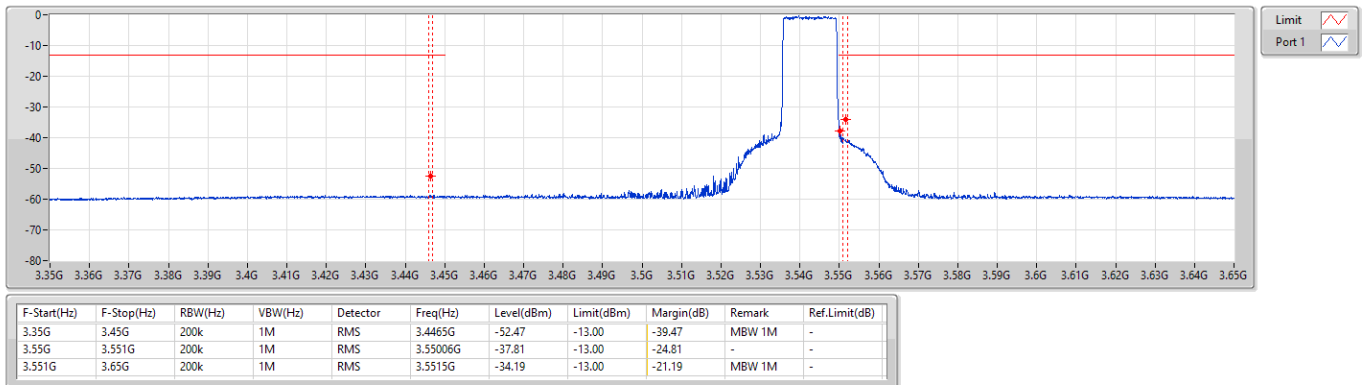
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

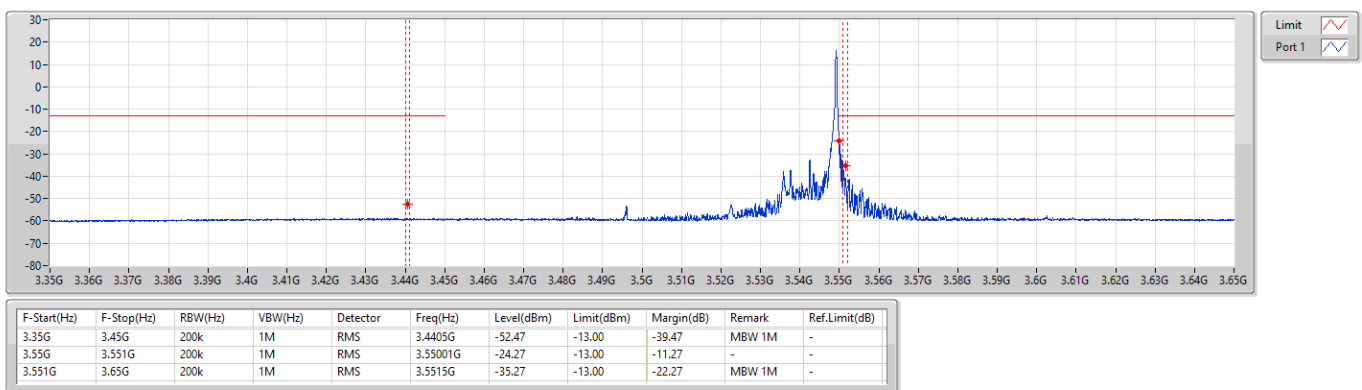
Band 42\_LTE\_15MHz\_Nss1,256QAM\_1TX  
3542.5MHz\_256QAM\_RB 75,#RB 0

CSE-TX-Sum



Band 42\_LTE\_15MHz\_Nss1,256QAM\_1TX  
3542.5MHz\_256QAM\_RB 1,#RB R

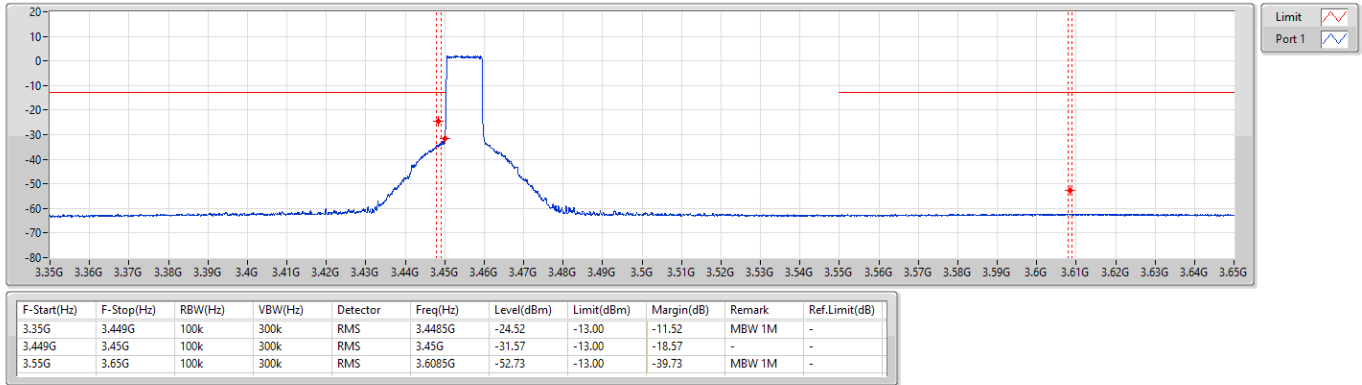
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

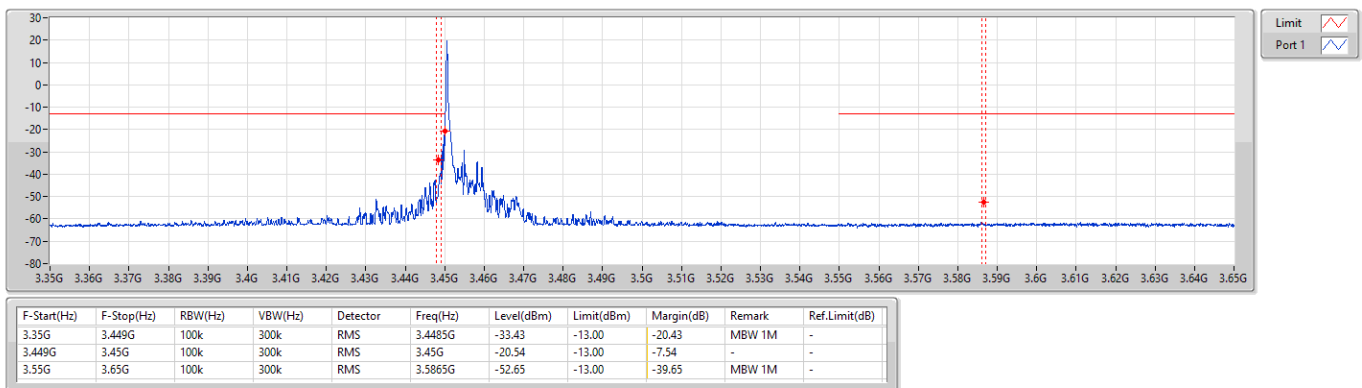
Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX  
3455MHz\_QPSK\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX  
3455MHz\_QPSK\_RB 1,#RB L

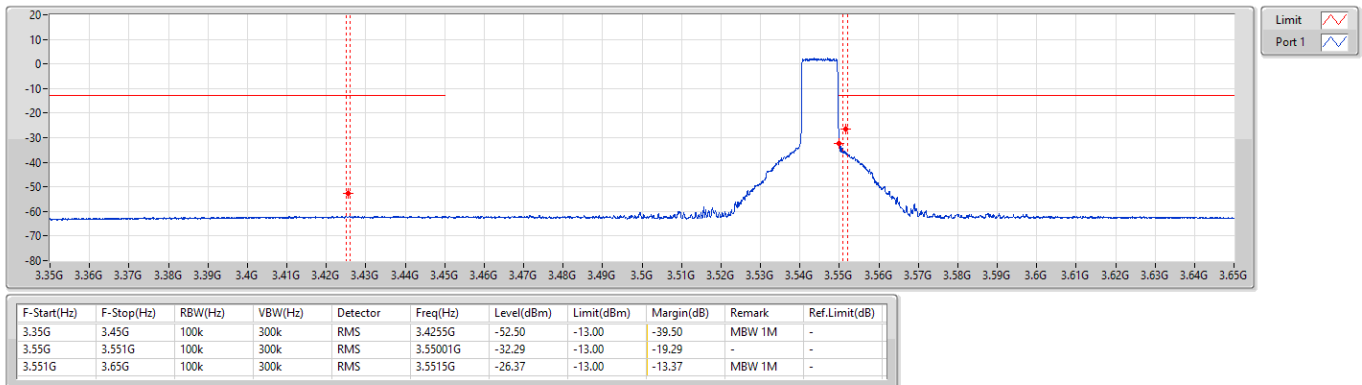
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

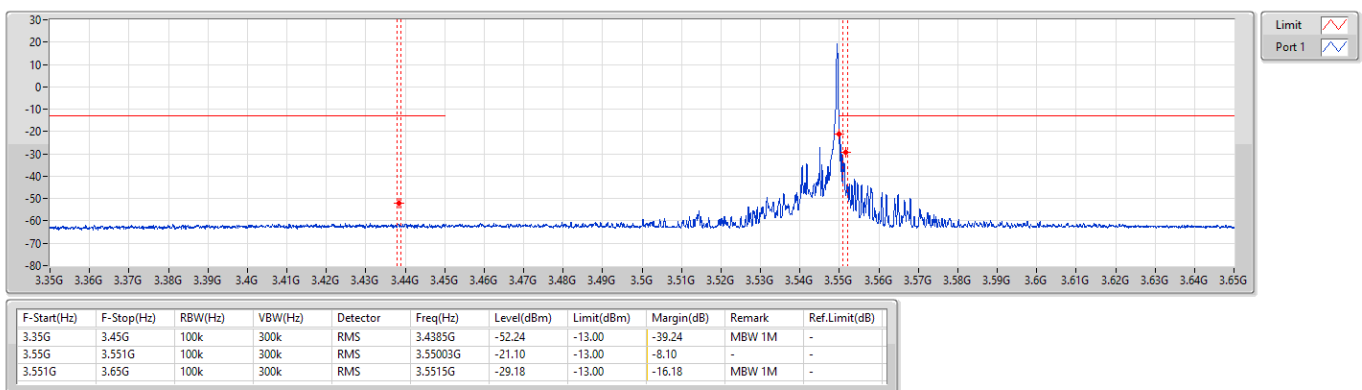
Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX  
3545MHz\_QPSK\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX  
3545MHz\_QPSK\_RB 1,#RB R

CSE-TX-Sum

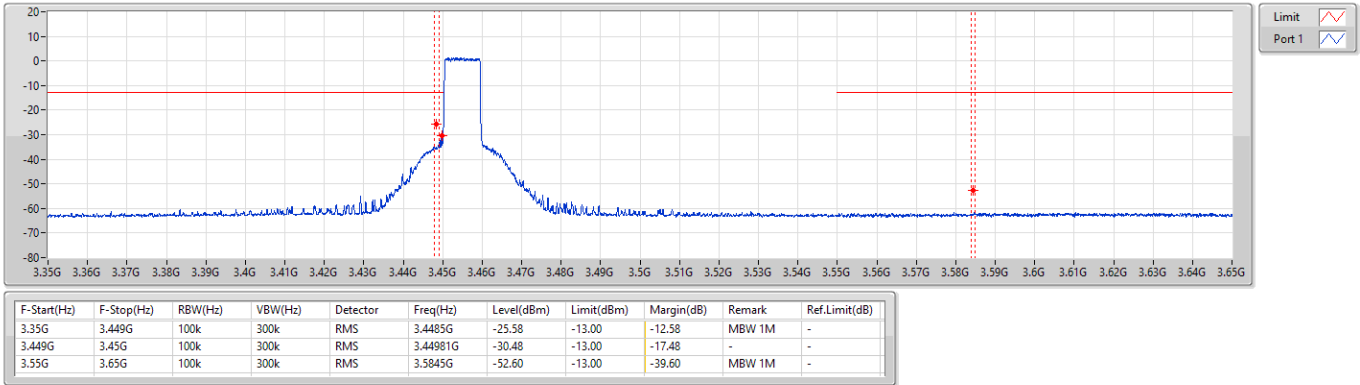


Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.



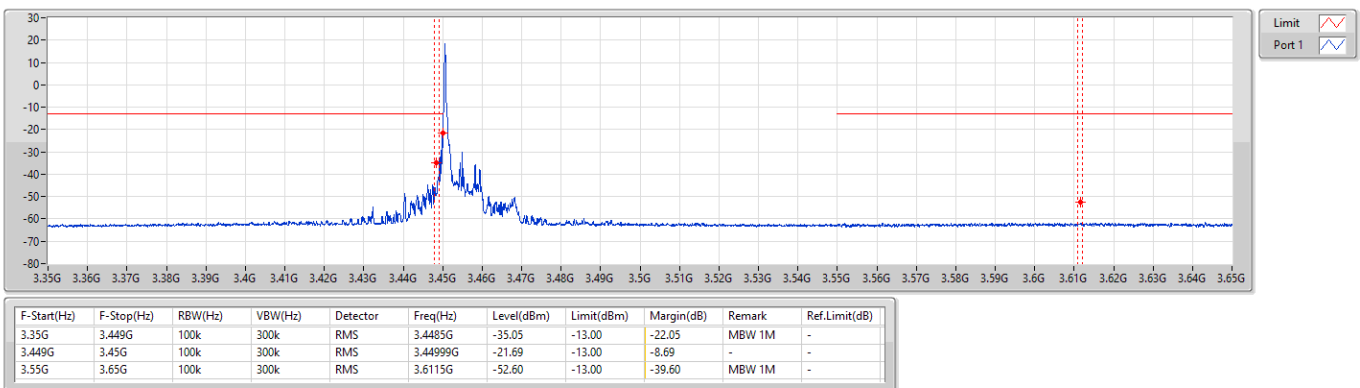
Band 42\_LTE\_10MHz\_Nss1,16QAM\_1TX  
3455MHz\_16QAM\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,16QAM\_1TX  
3455MHz\_16QAM\_RB 1,#RB L

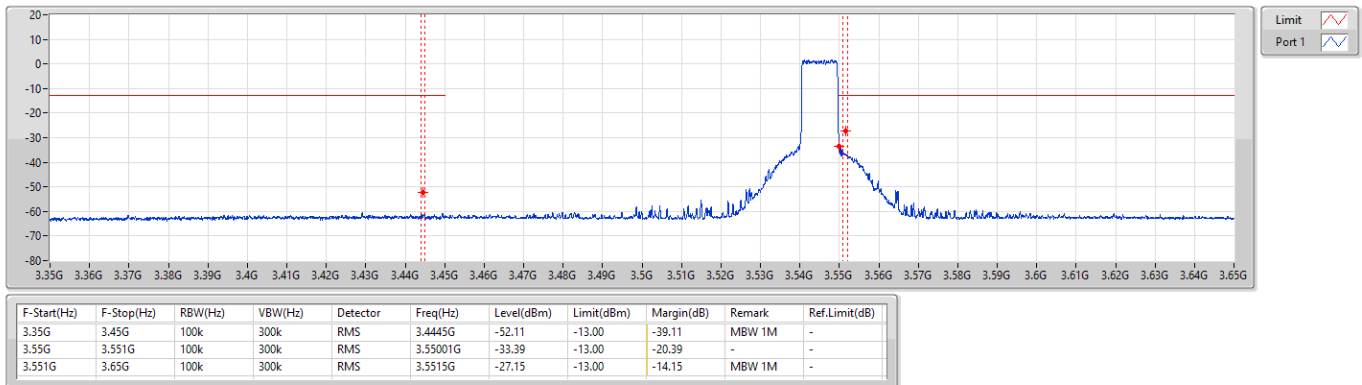
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

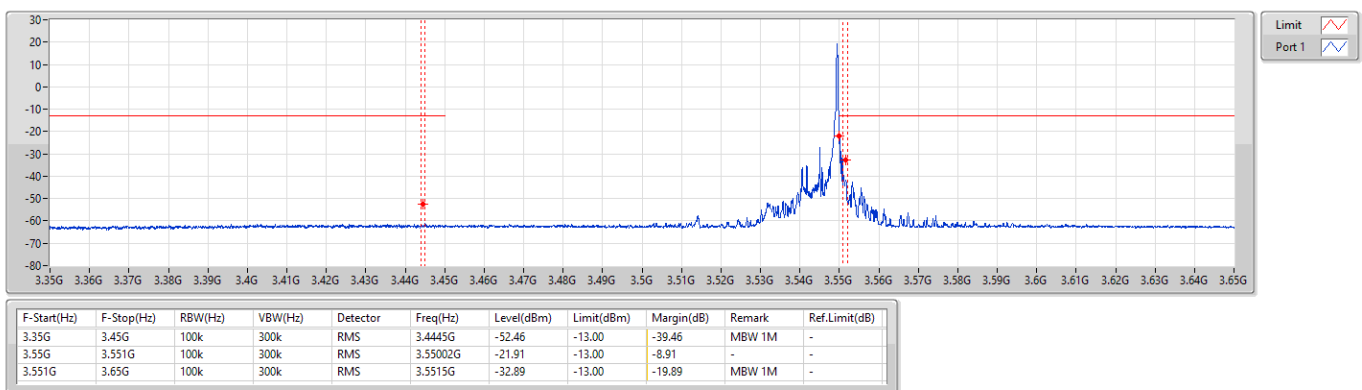
Band 42\_LTE\_10MHz\_Nss1,16QAM\_1TX  
3545MHz\_16QAM\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,16QAM\_1TX  
3545MHz\_16QAM\_RB 1,#RB R

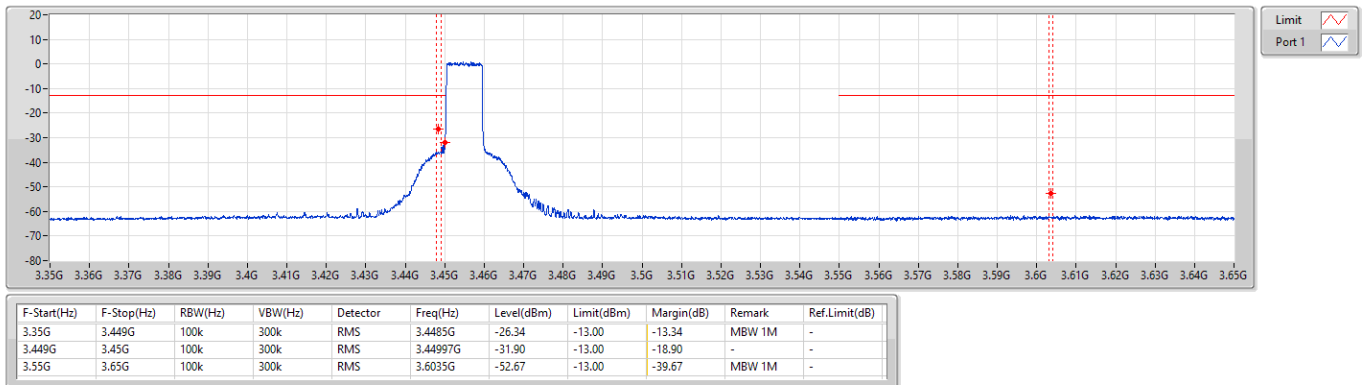
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

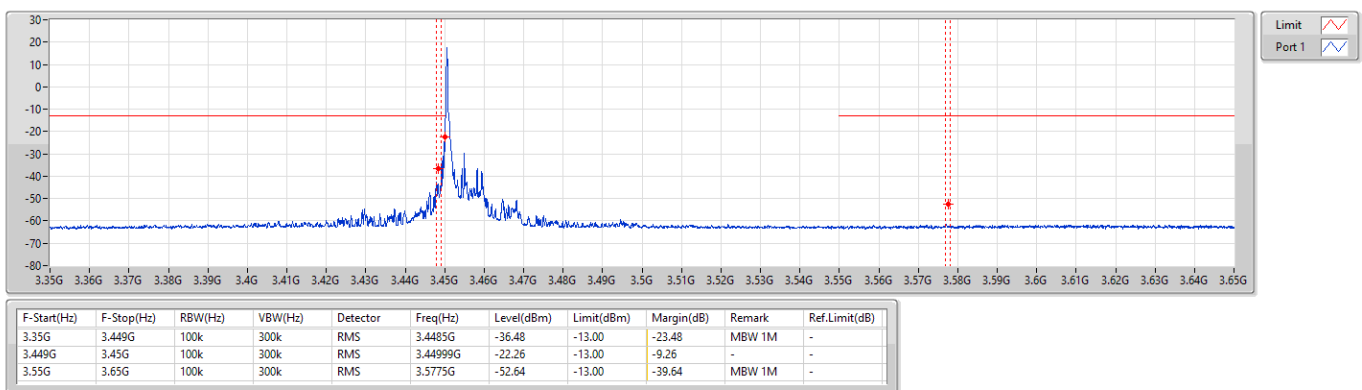
Band 42\_LTE\_10MHz\_Nss1,64QAM\_1TX  
3455MHz\_64QAM\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,64QAM\_1TX  
3455MHz\_64QAM\_RB 1,#RB L

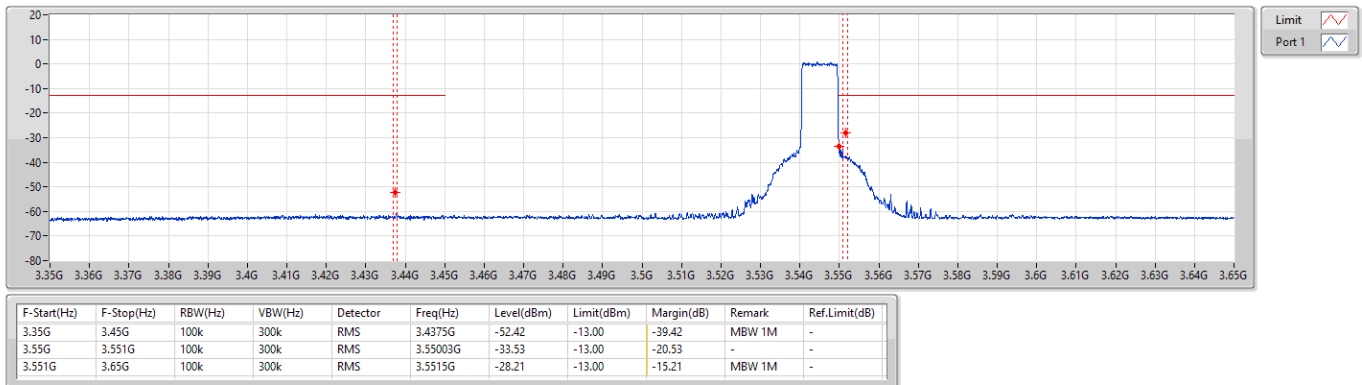
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

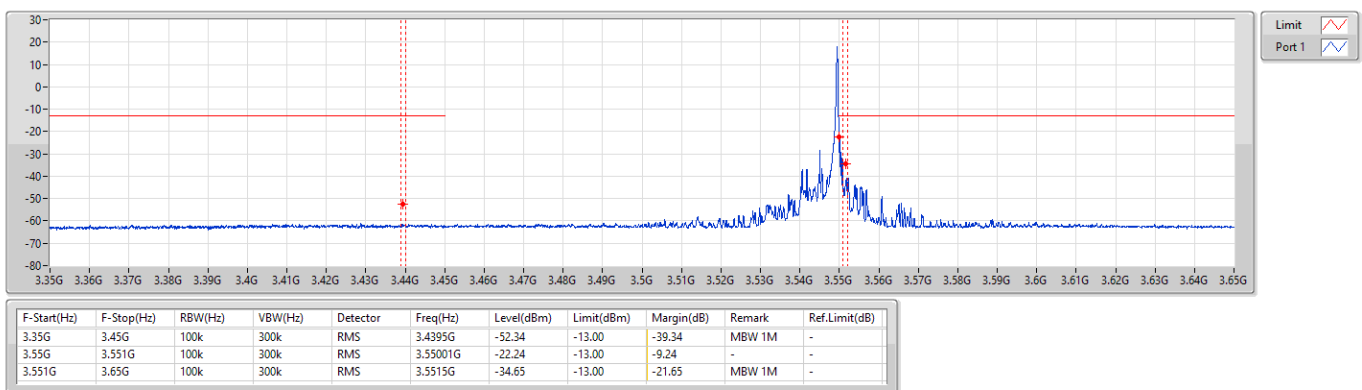
Band 42\_LTE\_10MHz\_Nss1,64QAM\_1TX  
3545MHz\_64QAM\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,64QAM\_1TX  
3545MHz\_64QAM\_RB 1,#RB R

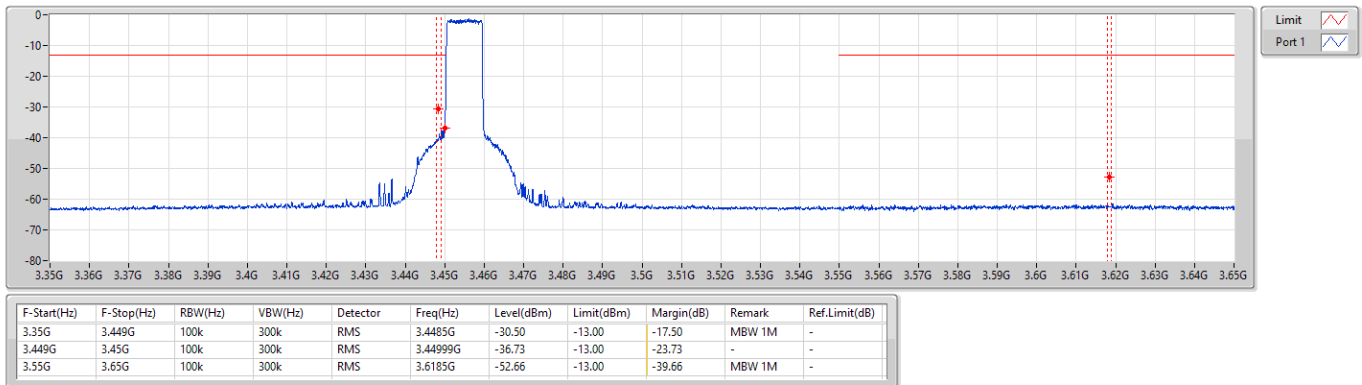
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

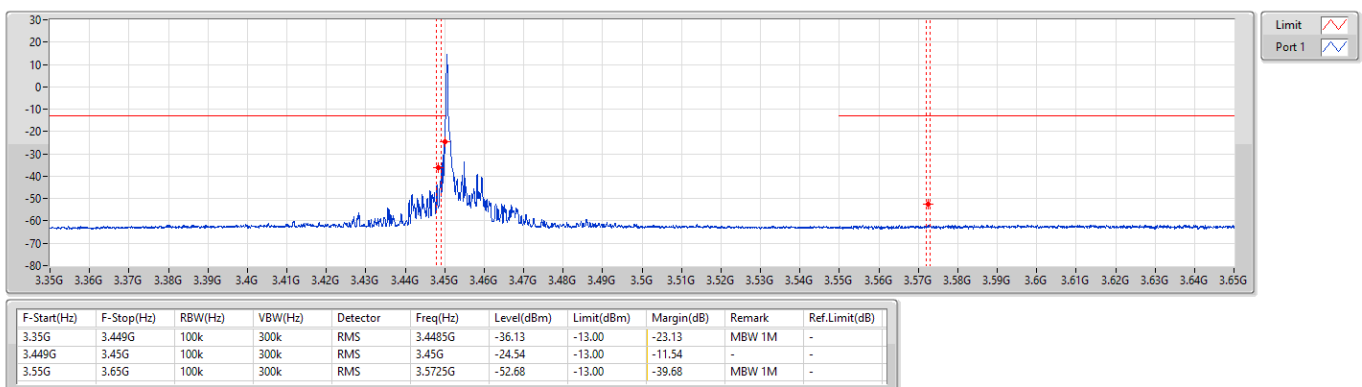
Band 42\_LTE\_10MHz\_Nss1,256QAM\_1TX  
3455MHz\_256QAM\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,256QAM\_1TX  
3455MHz\_256QAM\_RB 1,#RB L

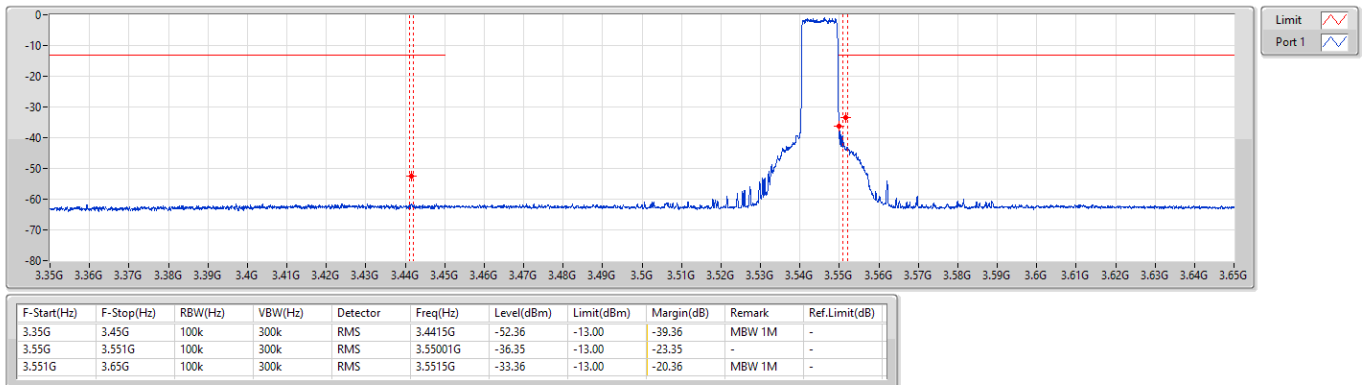
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

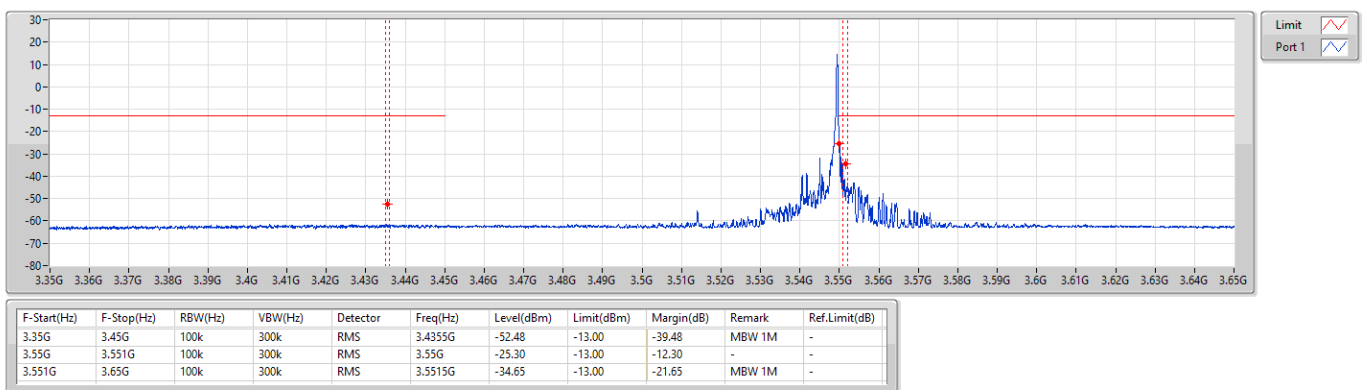
Band 42\_LTE\_10MHz\_Nss1,256QAM\_1TX  
3545MHz\_256QAM\_RB 50,#RB 0

CSE-TX-Sum



Band 42\_LTE\_10MHz\_Nss1,256QAM\_1TX  
3545MHz\_256QAM\_RB 1,#RB R

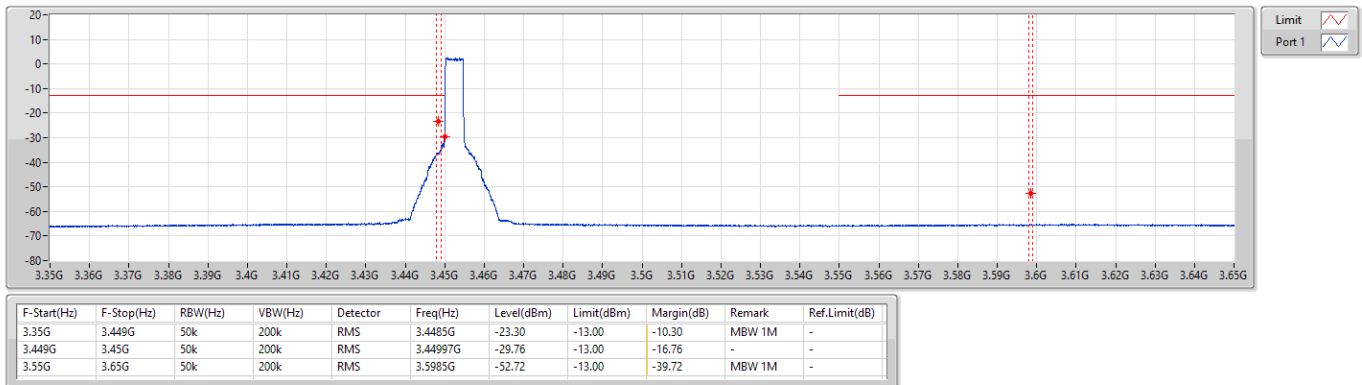
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

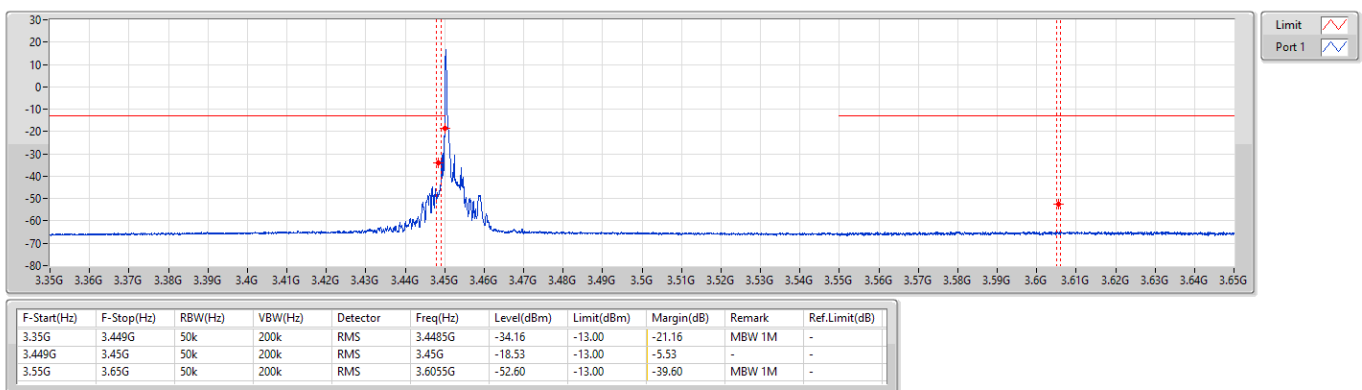
Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX  
3452.5MHz\_QPSK\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX  
3452.5MHz\_QPSK\_RB 1,#RB L

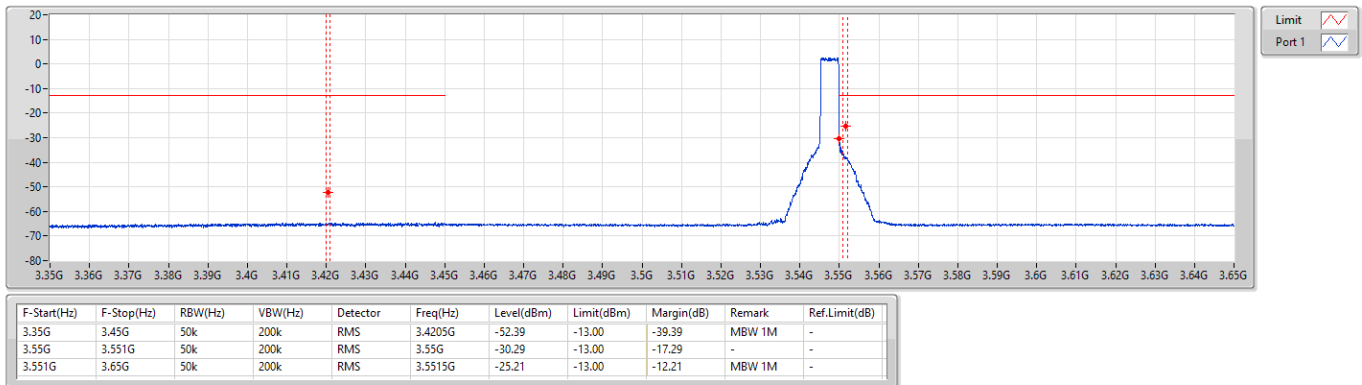
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

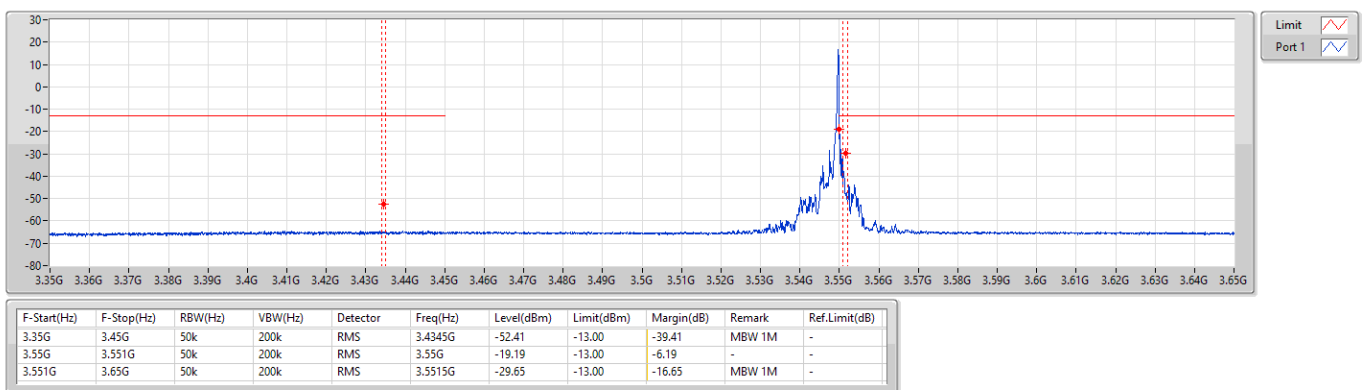
Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX  
3547.5MHz\_QPSK\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX  
3547.5MHz\_QPSK\_RB 1,#RB R

CSE-TX-Sum

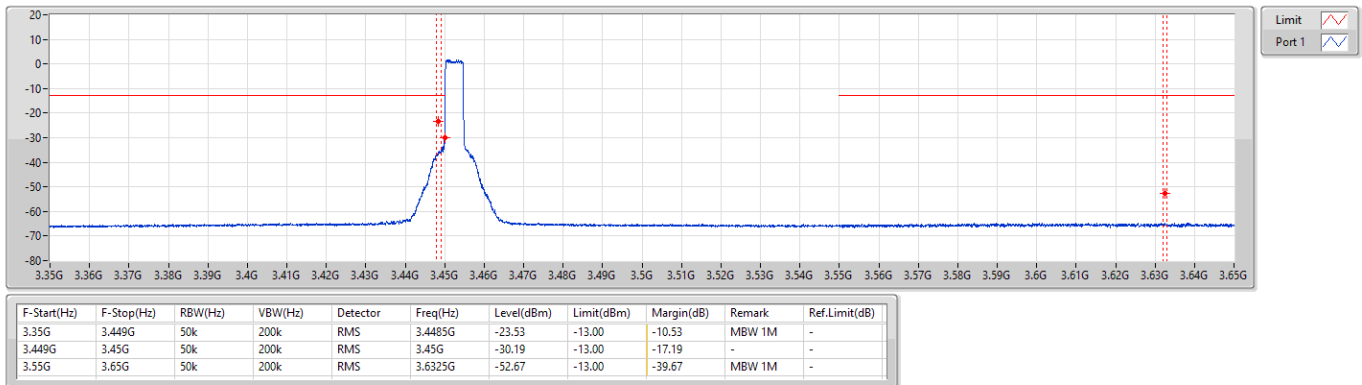


Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.



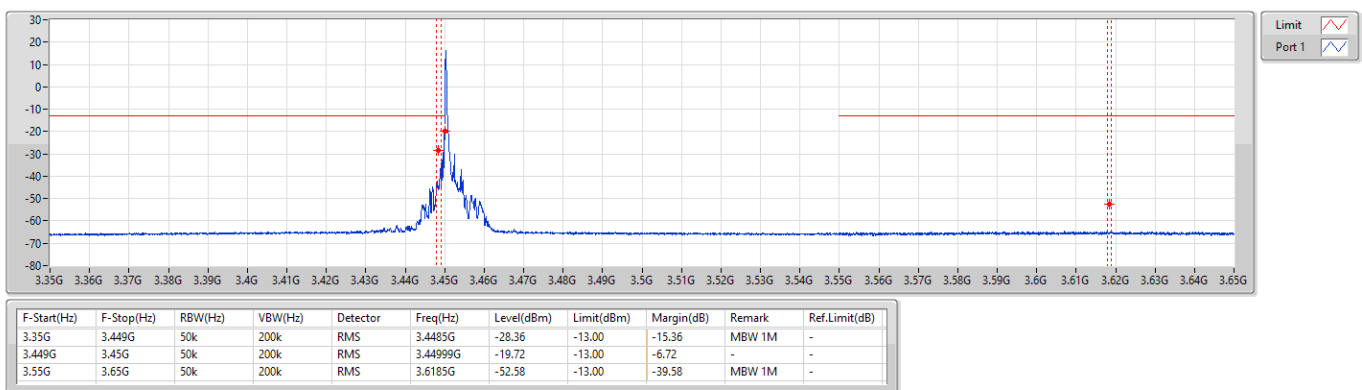
Band 42\_LTE\_5MHz\_Nss1,16QAM\_1TX  
3452.5MHz\_16QAM\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,16QAM\_1TX  
3452.5MHz\_16QAM\_RB 1,#RB L

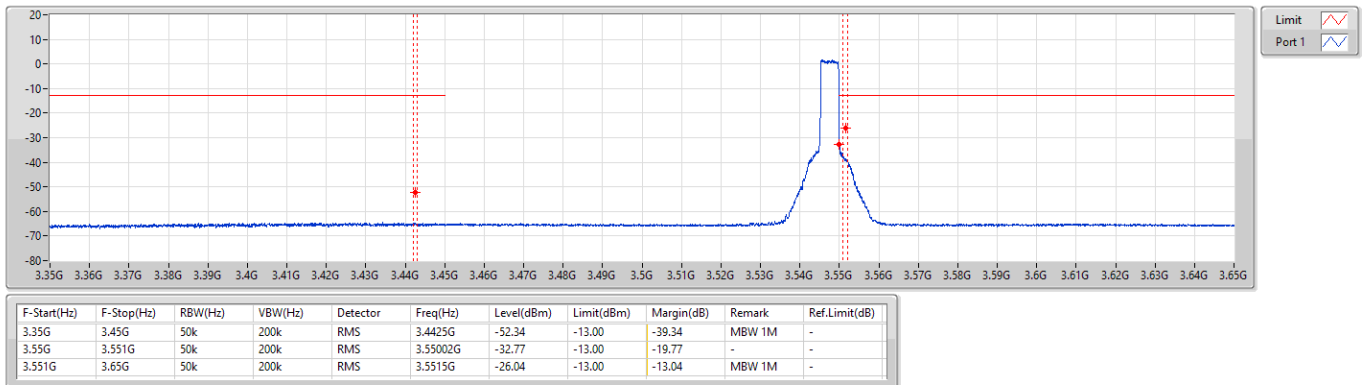
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

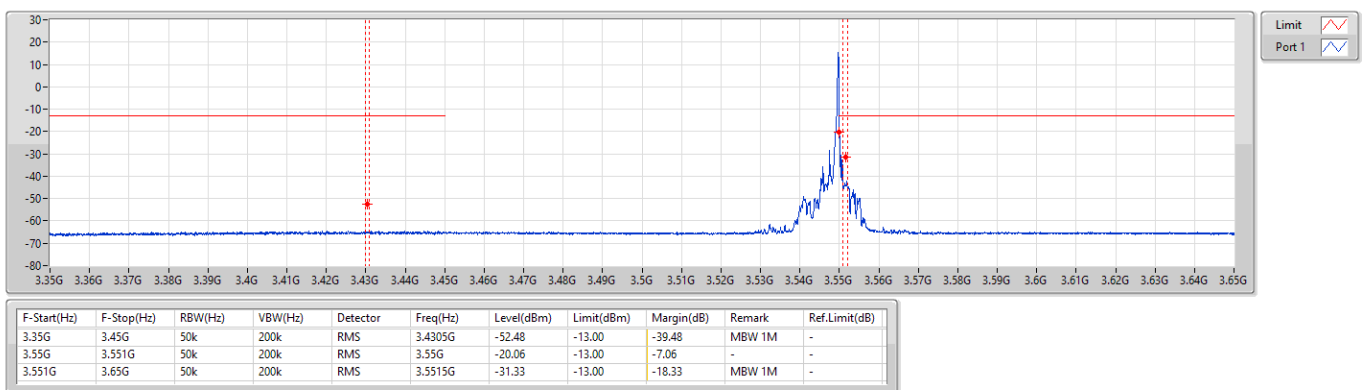
Band 42\_LTE\_5MHz\_Nss1,16QAM\_1TX  
3547.5MHz\_16QAM\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,16QAM\_1TX  
3547.5MHz\_16QAM\_RB 1,#RB R

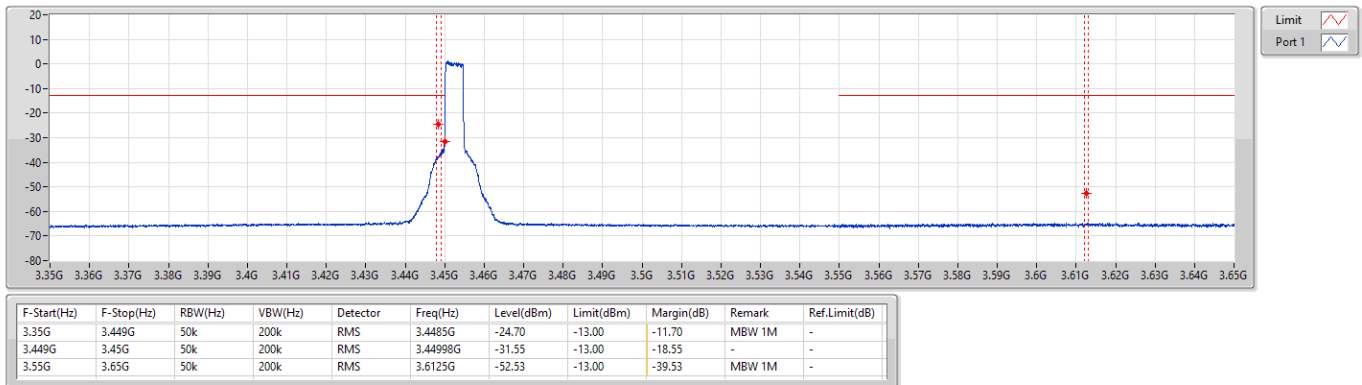
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

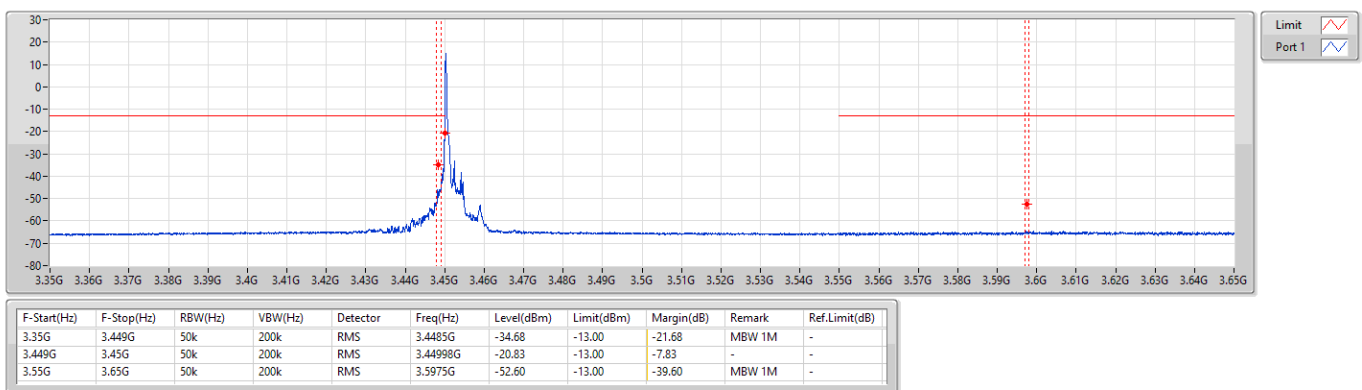
Band 42\_LTE\_5MHz\_Nss1,64QAM\_1TX  
3452.5MHz\_64QAM\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,64QAM\_1TX  
3452.5MHz\_64QAM\_RB 1,#RB L

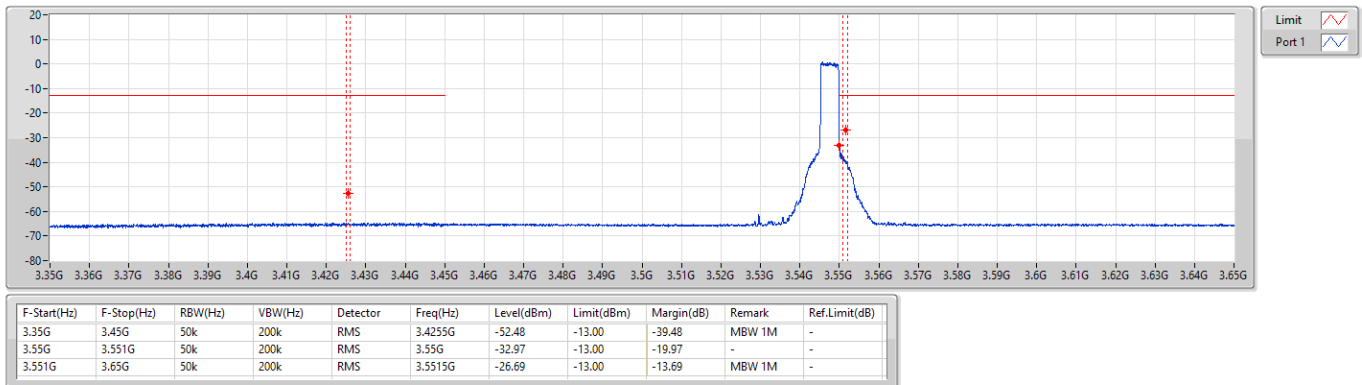
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

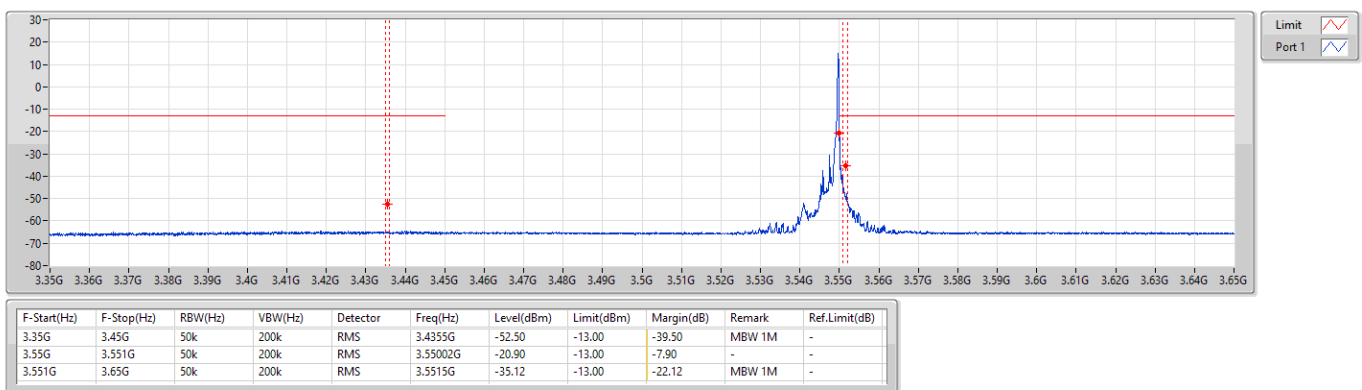
Band 42\_LTE\_5MHz\_Nss1,64QAM\_1TX  
3547.5MHz\_64QAM\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,64QAM\_1TX  
3547.5MHz\_64QAM\_RB 1,#RB R

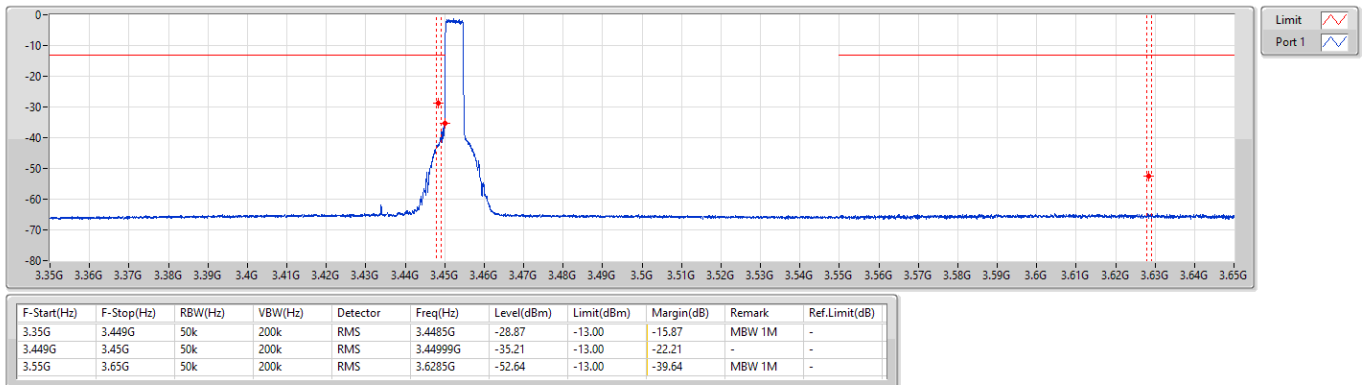
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

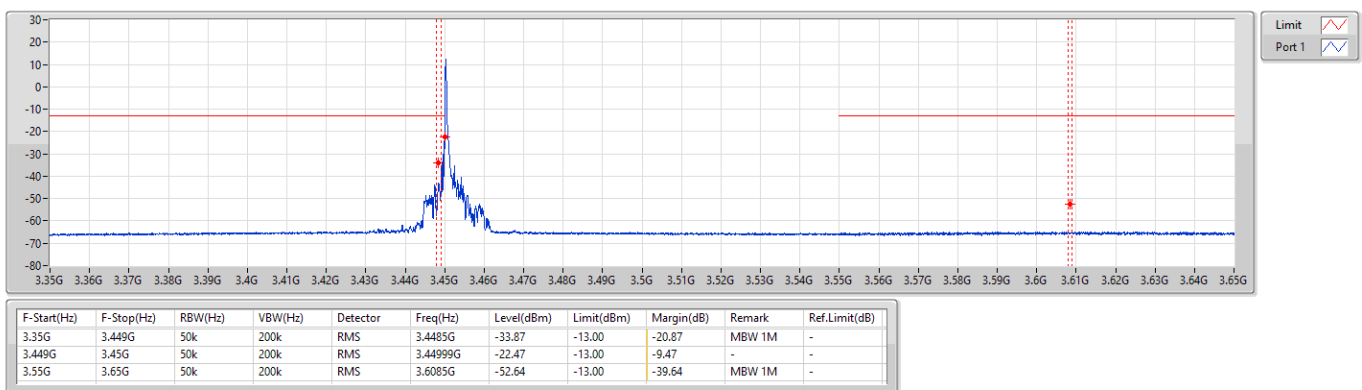
Band 42\_LTE\_5MHz\_Nss1,256QAM\_1TX  
3452.5MHz\_256QAM\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,256QAM\_1TX  
3452.5MHz\_256QAM\_RB 1,#RB L

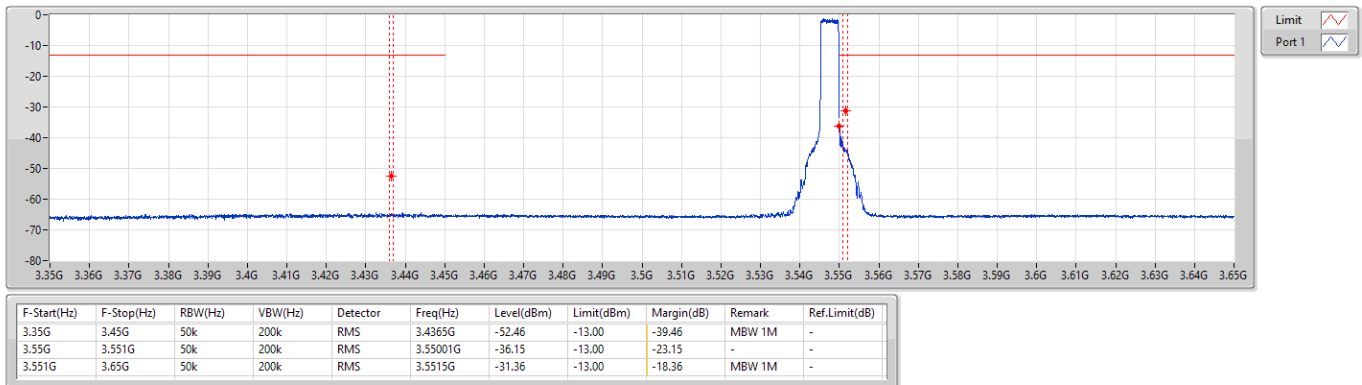
CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

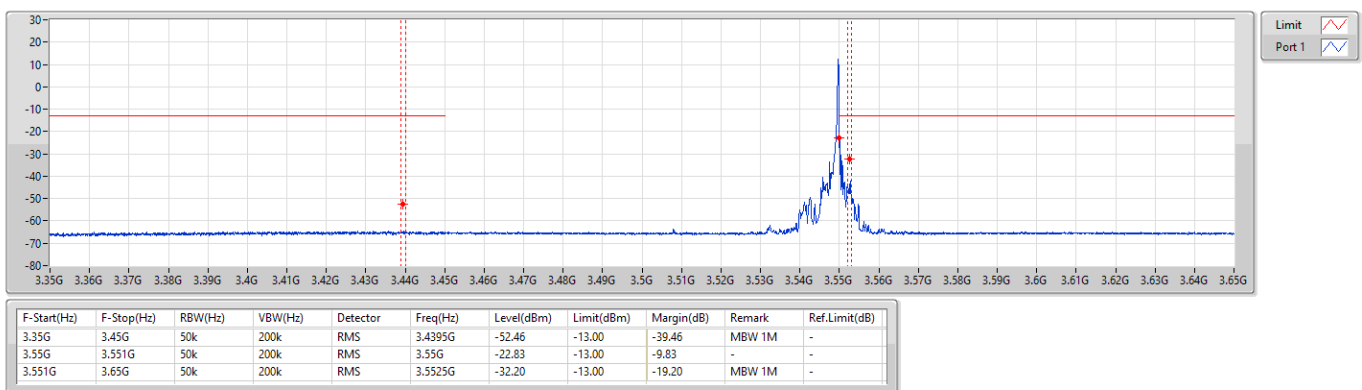
Band 42\_LTE\_5MHz\_Nss1,256QAM\_1TX  
3547.5MHz\_256QAM\_RB 25,#RB 0

CSE-TX-Sum



Band 42\_LTE\_5MHz\_Nss1,256QAM\_1TX  
3547.5MHz\_256QAM\_RB 1,#RB R

CSE-TX-Sum



Note 1: Measured level is integrated to 1 MHz bandwidth by lower RBW setting and band power measurement function for remark item.  
Note 2: MBW = Measured bandwidth.

**Summary**

| Mode                      | Max-NdB<br>(Hz) | Max-OBW<br>(Hz) | ITU-Code | Min-NdB | Min-OBW |
|---------------------------|-----------------|-----------------|----------|---------|---------|
|                           |                 |                 |          | (Hz)    | (Hz)    |
| Band 42                   | -               | -               | -        | -       | -       |
| LTE_20MHz_Nss1,QPSK_1TX   | 18.825M         | 17.841M         | 17M9G7D  | 18.825M | 17.841M |
| LTE_20MHz_Nss1,16QAM_1TX  | 19.4M           | 17.791M         | 17M8W7D  | 19.4M   | 17.791M |
| LTE_20MHz_Nss1,64QAM_1TX  | 18.85M          | 17.841M         | 17M9W7D  | 18.85M  | 17.841M |
| LTE_20MHz_Nss1,256QAM_1TX | 18.9M           | 17.841M         | 17M9W7D  | 18.9M   | 17.841M |
| LTE_15MHz_Nss1,QPSK_1TX   | 14.438M         | 13.437M         | 13M5G7D  | 14.438M | 13.437M |
| LTE_15MHz_Nss1,16QAM_1TX  | 15.881M         | 13.4M           | 13M4W7D  | 15.881M | 13.4M   |
| LTE_15MHz_Nss1,64QAM_1TX  | 15.506M         | 13.4M           | 13M4W7D  | 15.506M | 13.4M   |
| LTE_15MHz_Nss1,256QAM_1TX | 14.681M         | 13.418M         | 13M5W7D  | 14.681M | 13.418M |
| LTE_10MHz_Nss1,QPSK_1TX   | 9.438M          | 8.908M          | 8M91G7D  | 9.438M  | 8.908M  |
| LTE_10MHz_Nss1,16QAM_1TX  | 9.363M          | 8.921M          | 8M92W7D  | 9.363M  | 8.921M  |
| LTE_10MHz_Nss1,64QAM_1TX  | 9.513M          | 8.933M          | 8M93W7D  | 9.513M  | 8.933M  |
| LTE_10MHz_Nss1,256QAM_1TX | 9.425M          | 8.921M          | 8M92W7D  | 9.425M  | 8.921M  |
| LTE_5MHz_Nss1,QPSK_1TX    | 4.825M          | 4.46M           | 4M46G7D  | 4.825M  | 4.46M   |
| LTE_5MHz_Nss1,16QAM_1TX   | 4.763M          | 4.46M           | 4M46W7D  | 4.763M  | 4.46M   |
| LTE_5MHz_Nss1,64QAM_1TX   | 4.769M          | 4.467M          | 4M47W7D  | 4.769M  | 4.467M  |
| LTE_5MHz_Nss1,256QAM_1TX  | 4.763M          | 4.448M          | 4M45W7D  | 4.763M  | 4.448M  |

Max-N dB = Maximum 26dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 26dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

**Result**

| Mode                        | Result | Port 1-NdB<br>(Hz) | Port 1-OBW | Limit |
|-----------------------------|--------|--------------------|------------|-------|
|                             |        |                    | (Hz)       | (Hz)  |
| Band 42_LTE_20MHz_Nss1_1TX  | -      | -                  | -          | -     |
| 3500MHz_QPSK_RB 100,#RB 0   | Pass   | 18.825M            | 17.841M    | Inf   |
| 3500MHz_16QAM_RB 100,#RB 0  | Pass   | 19.4M              | 17.791M    | Inf   |
| 3500MHz_64QAM_RB 100,#RB 0  | Pass   | 18.85M             | 17.841M    | Inf   |
| 3500MHz_256QAM_RB 100,#RB 0 | Pass   | 18.9M              | 17.841M    | Inf   |
| Band 42_LTE_15MHz_Nss1_1TX  | -      | -                  | -          | -     |
| 3500MHz_QPSK_RB 75,#RB 0    | Pass   | 14.438M            | 13.437M    | Inf   |
| 3500MHz_16QAM_RB 75,#RB 0   | Pass   | 15.881M            | 13.4M      | Inf   |
| 3500MHz_64QAM_RB 75,#RB 0   | Pass   | 15.506M            | 13.4M      | Inf   |
| 3500MHz_256QAM_RB 75,#RB 0  | Pass   | 14.681M            | 13.418M    | Inf   |
| Band 42_LTE_10MHz_Nss1_1TX  | -      | -                  | -          | -     |
| 3500MHz_QPSK_RB 50,#RB 0    | Pass   | 9.438M             | 8.908M     | Inf   |
| 3500MHz_16QAM_RB 50,#RB 0   | Pass   | 9.363M             | 8.921M     | Inf   |
| 3500MHz_64QAM_RB 50,#RB 0   | Pass   | 9.513M             | 8.933M     | Inf   |
| 3500MHz_256QAM_RB 50,#RB 0  | Pass   | 9.425M             | 8.921M     | Inf   |
| Band 42_LTE_5MHz_Nss1_1TX   | -      | -                  | -          | -     |
| 3500MHz_QPSK_RB 25,#RB 0    | Pass   | 4.825M             | 4.46M      | Inf   |
| 3500MHz_16QAM_RB 25,#RB 0   | Pass   | 4.763M             | 4.46M      | Inf   |
| 3500MHz_64QAM_RB 25,#RB 0   | Pass   | 4.769M             | 4.467M     | Inf   |
| 3500MHz_256QAM_RB 25,#RB 0  | Pass   | 4.763M             | 4.448M     | Inf   |

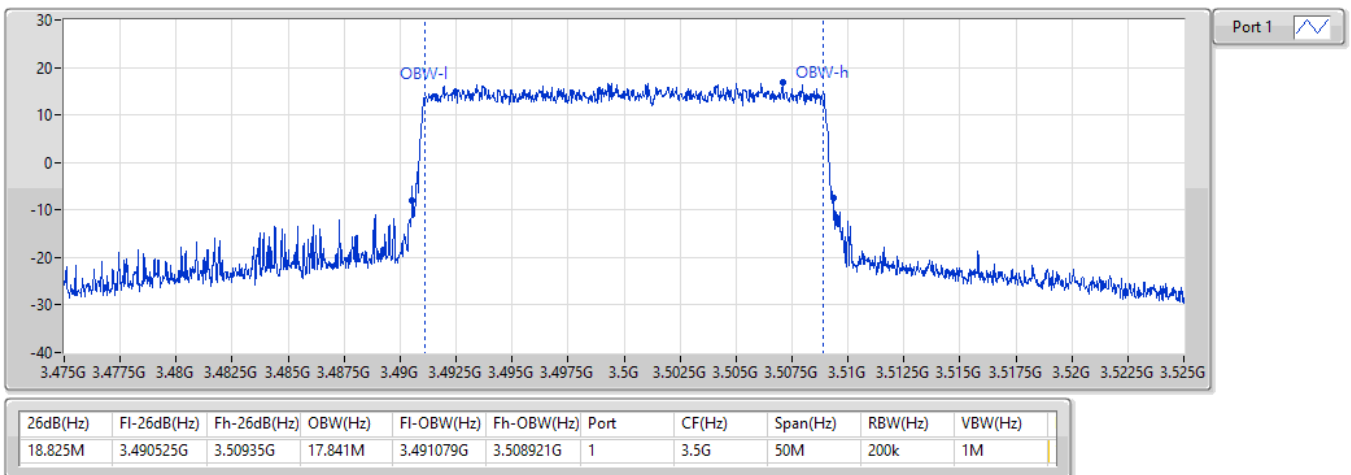
Port X-N dB = Port X 26dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth



## Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX

EBW

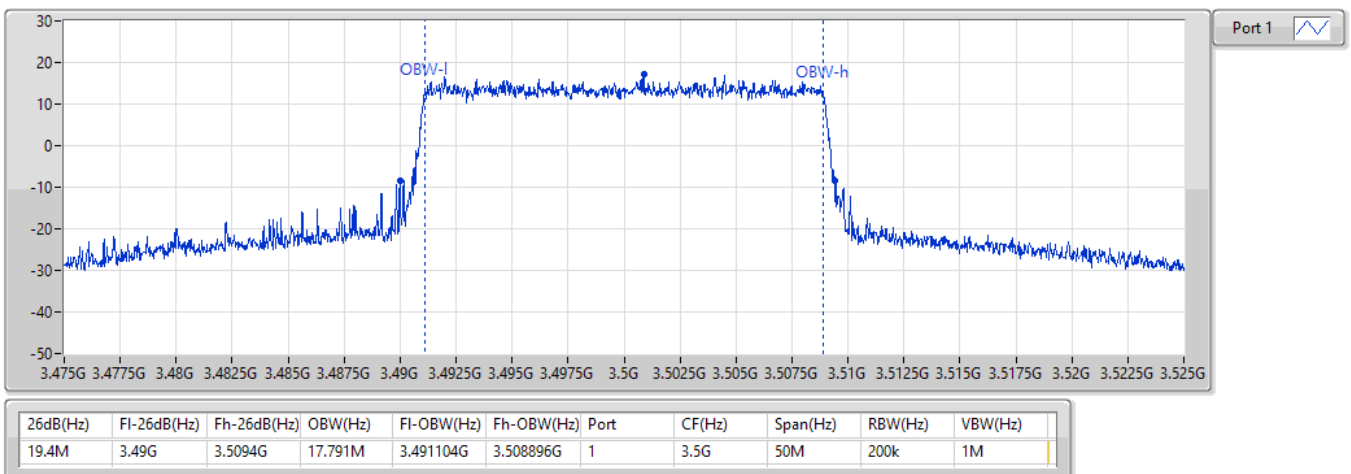
3500MHz\_QPSK\_RB 100,#RB 0



## Band 42\_LTE\_20MHz\_Nss1,16QAM\_1TX

EBW

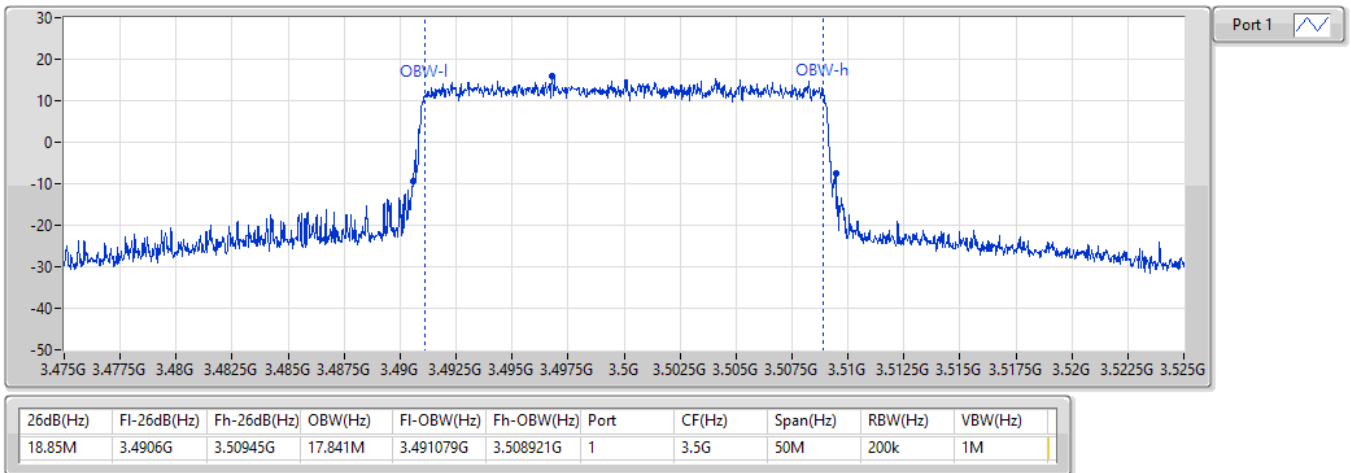
3500MHz\_16QAM\_RB 100,#RB 0



Band 42\_LTE\_20MHz\_Nss1,64QAM\_1TX

EBW

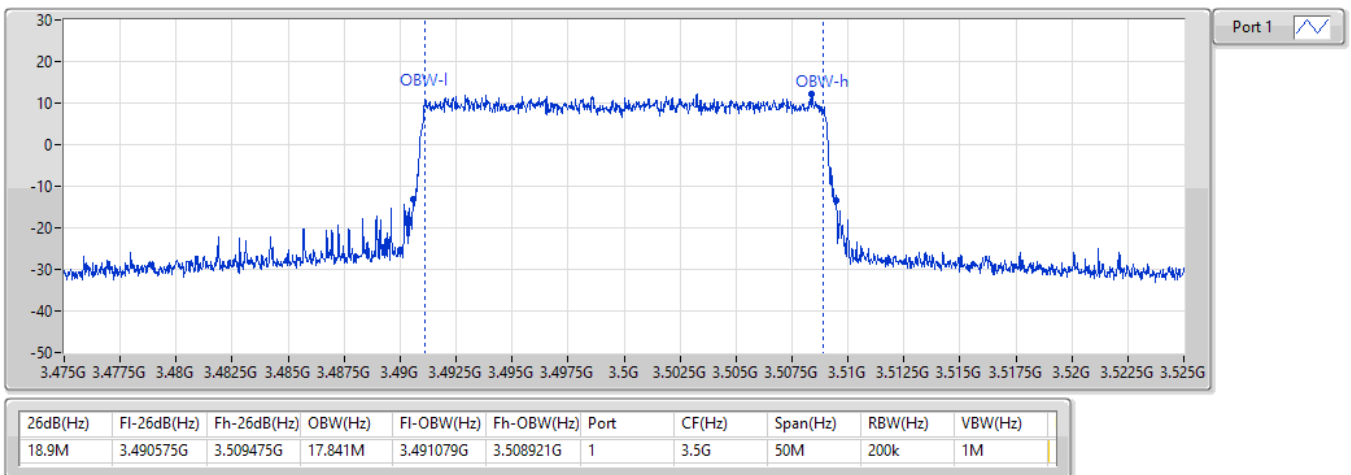
3500MHz\_64QAM\_RB 100,#RB 0



Band 42\_LTE\_20MHz\_Nss1,256QAM\_1TX

EBW

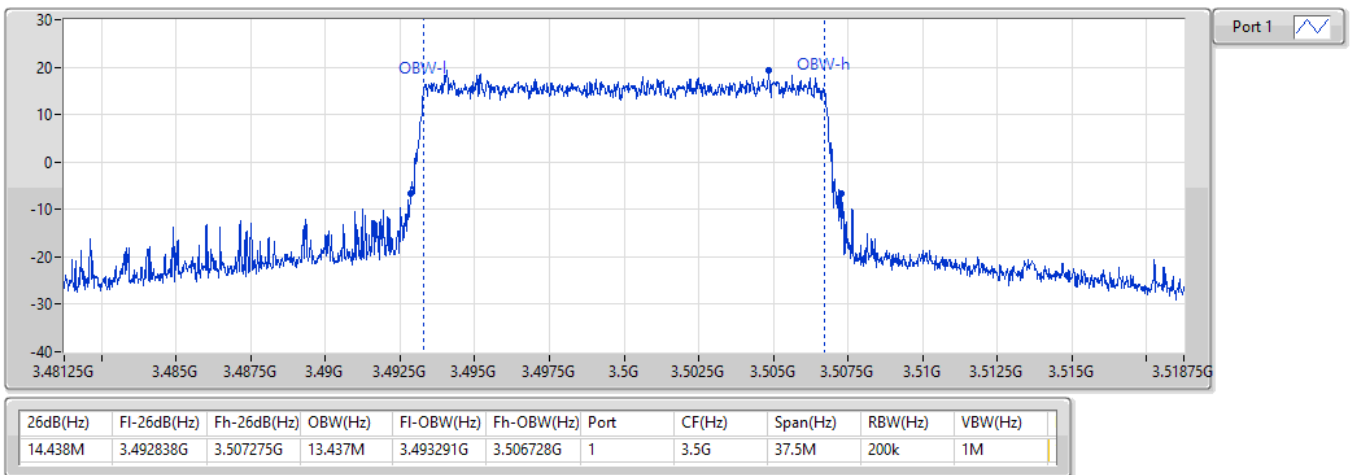
3500MHz\_256QAM\_RB 100,#RB 0



## Band 42\_LTE\_15MHz\_Nss1,QPSK\_1TX

EBW

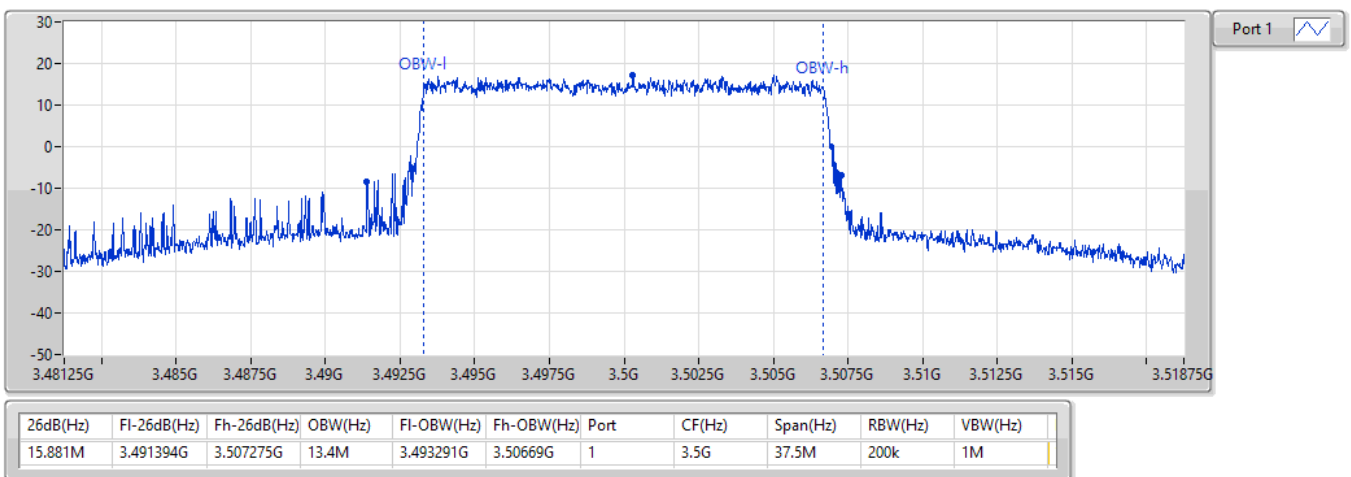
3500MHz\_QPSK\_RB 75,#RB 0



## Band 42\_LTE\_15MHz\_Nss1,16QAM\_1TX

EBW

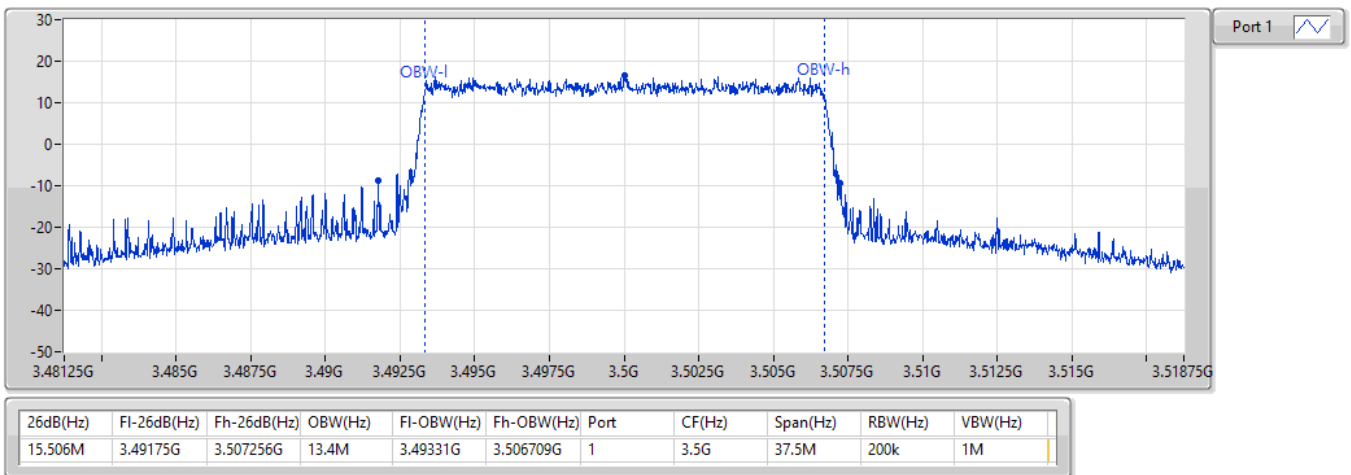
3500MHz\_16QAM\_RB 75,#RB 0



## Band 42\_LTE\_15MHz\_Nss1,64QAM\_1TX

EBW

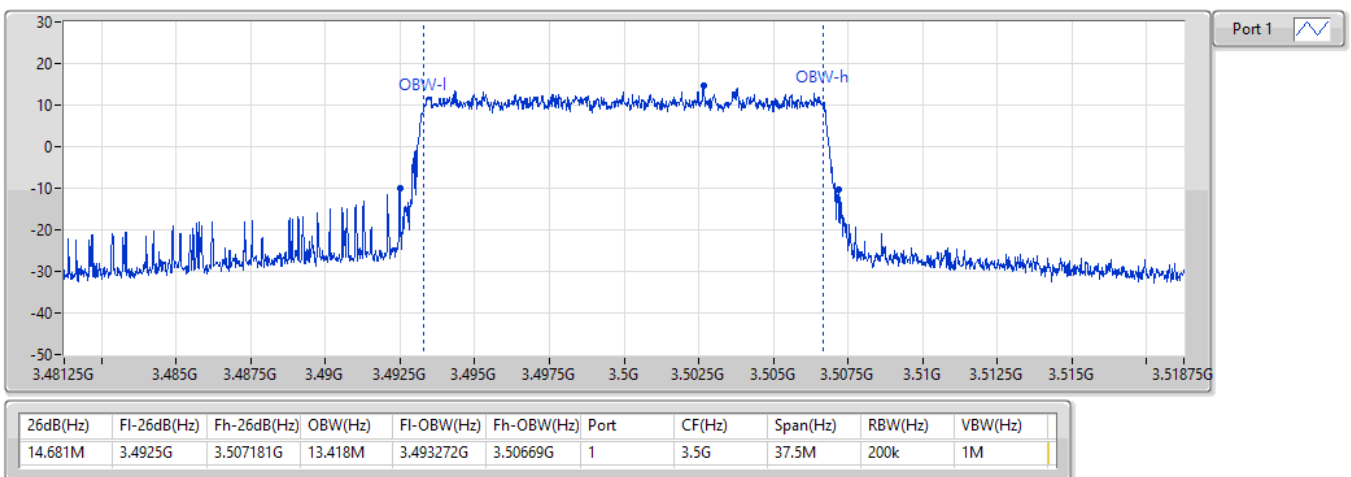
3500MHz\_64QAM\_RB 75,#RB 0



## Band 42\_LTE\_15MHz\_Nss1,256QAM\_1TX

EBW

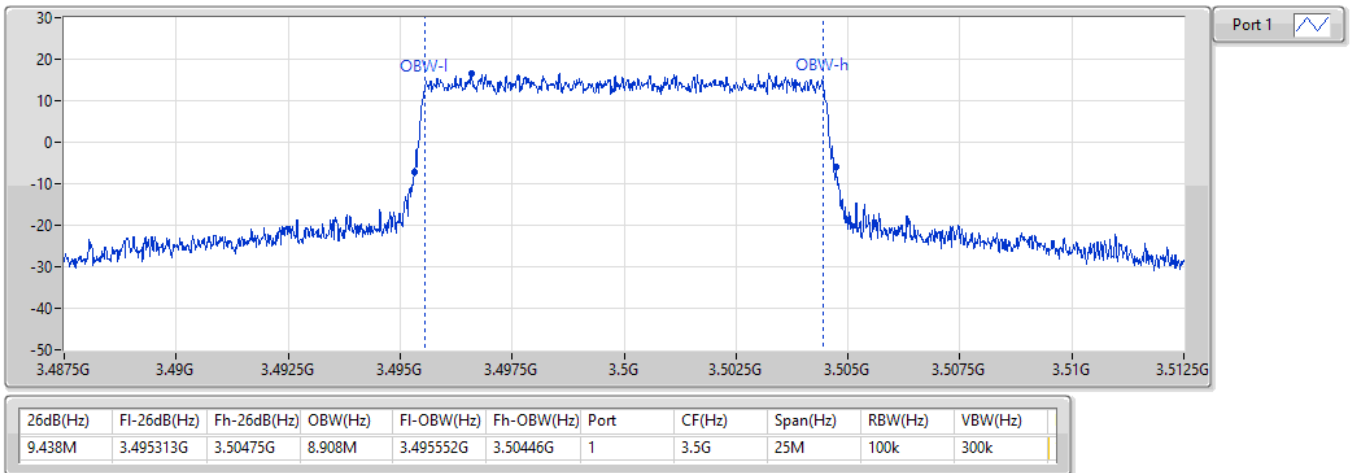
3500MHz\_256QAM\_RB 75,#RB 0



**Band 42\_LTE\_10MHz\_Nss1,QPSK\_1TX**

EBW

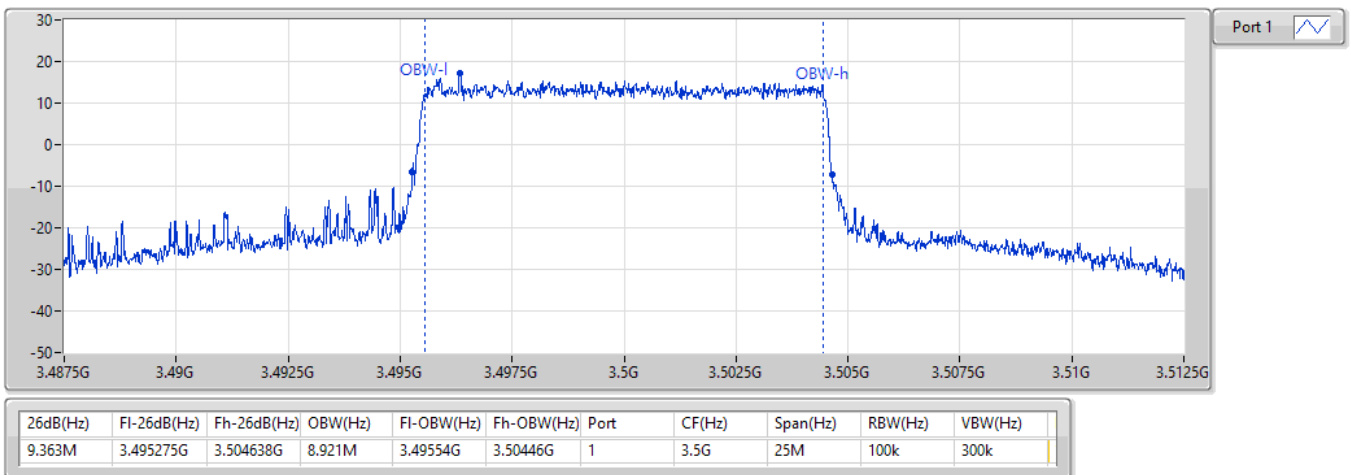
**3500MHz\_QPSK\_RB 50,#RB 0**



**Band 42\_LTE\_10MHz\_Nss1,16QAM\_1TX**

EBW

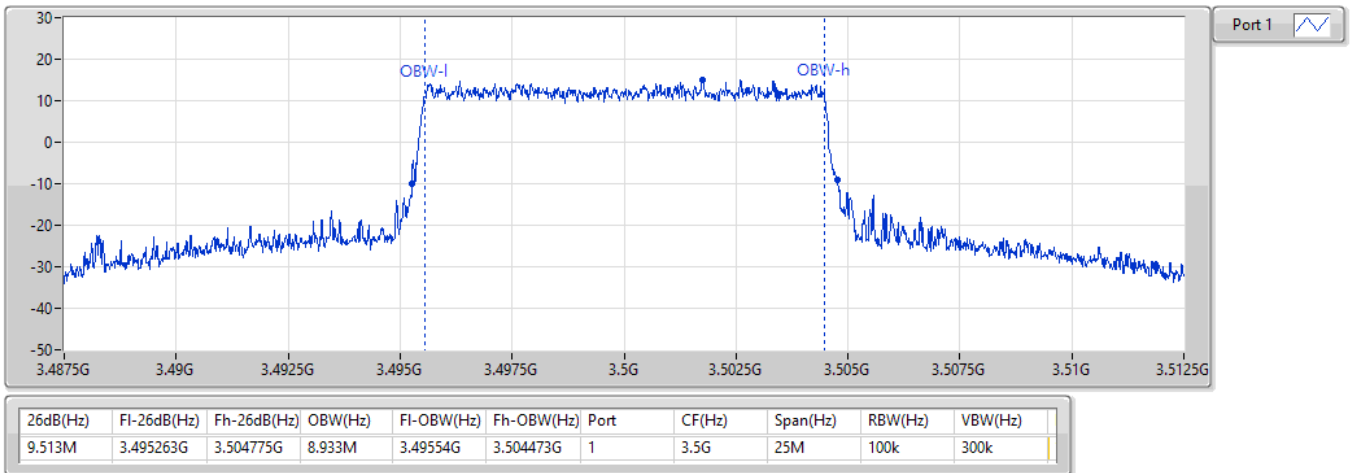
**3500MHz\_16QAM\_RB 50,#RB 0**



Band 42\_LTE\_10MHz\_Nss1,64QAM\_1TX

EBW

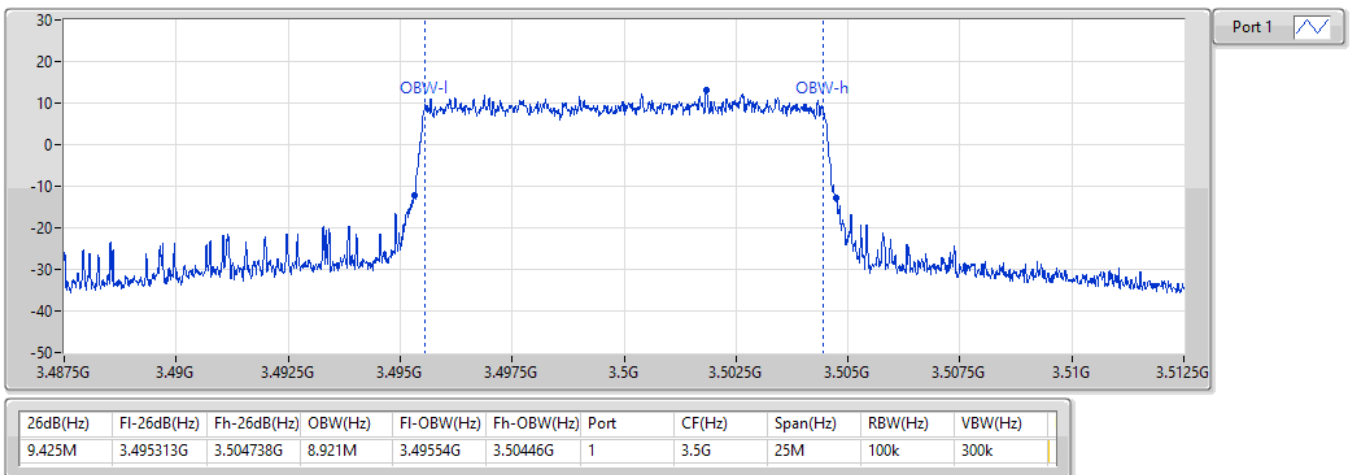
3500MHz\_64QAM\_RB 50,#RB 0



Band 42\_LTE\_10MHz\_Nss1,256QAM\_1TX

EBW

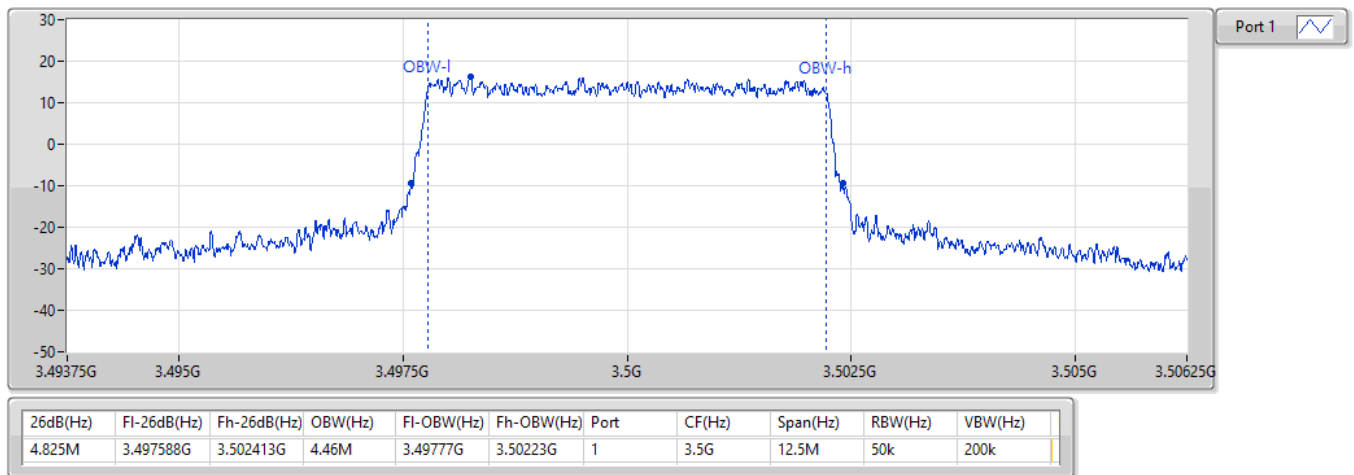
3500MHz\_256QAM\_RB 50,#RB 0



**Band 42\_LTE\_5MHz\_Nss1,QPSK\_1TX**

**EBW**

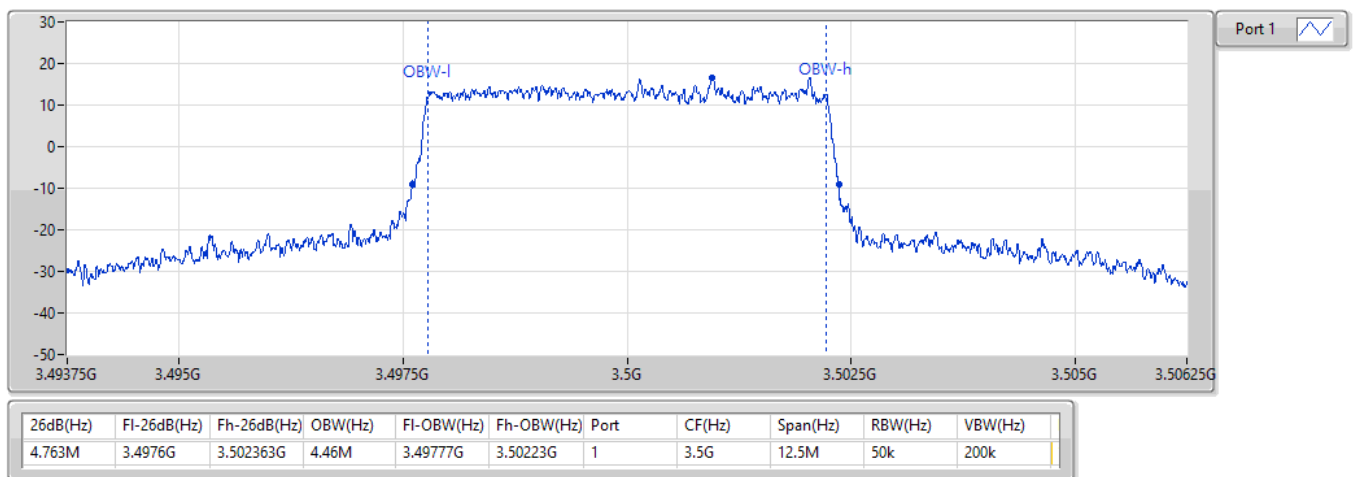
**3500MHz\_QPSK\_RB 25,#RB 0**



**Band 42\_LTE\_5MHz\_Nss1,16QAM\_1TX**

**EBW**

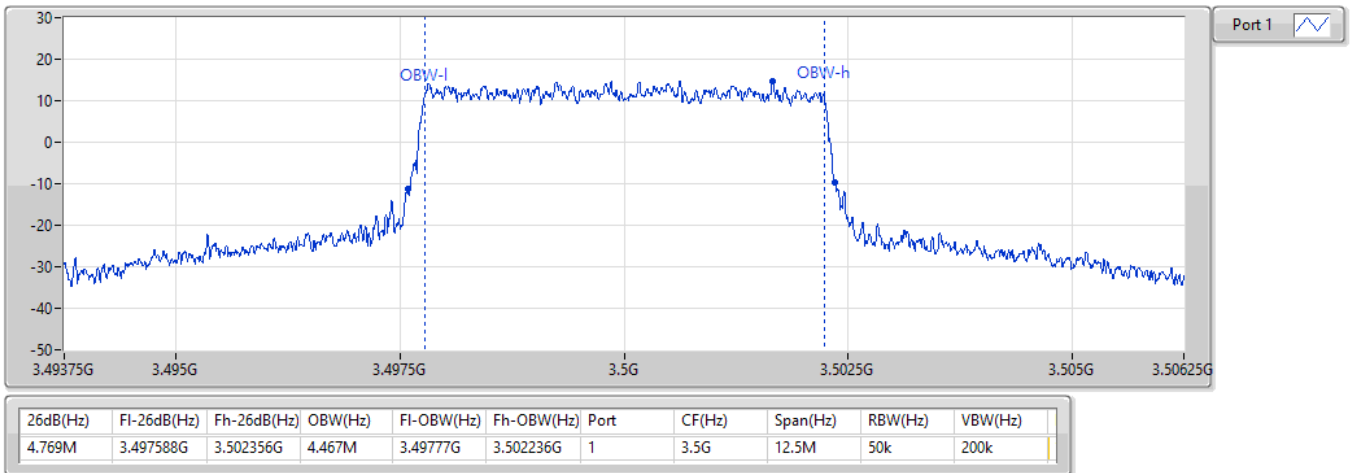
**3500MHz\_16QAM\_RB 25,#RB 0**



## Band 42\_LTE\_5MHz\_Nss1,64QAM\_1TX

EBW

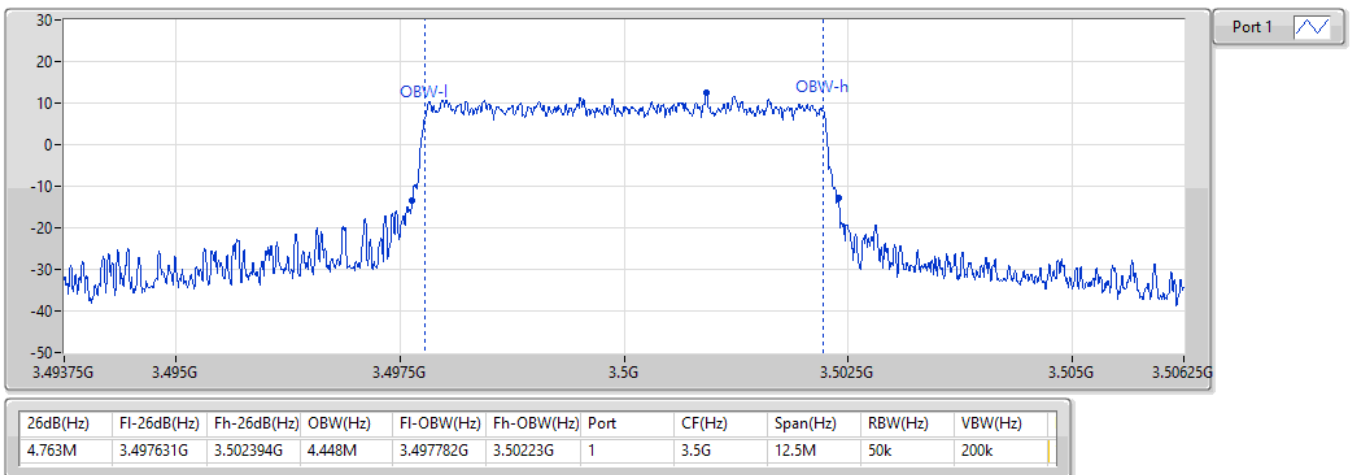
3500MHz\_64QAM\_RB 25,#RB 0



## Band 42\_LTE\_5MHz\_Nss1,256QAM\_1TX

EBW

3500MHz\_256QAM\_RB 25,#RB 0





**Summary**

| Mode                      | Result | Freq<br>(MHz) | Limit<br>(dB) | 0.1% | Port |
|---------------------------|--------|---------------|---------------|------|------|
| Band 42                   | -      | -             | -             | -    | -    |
| LTE_20MHz_Nss1,QPSK_1TX   | Pass   | 3500          | 13.00         | 6.41 | 1    |
| LTE_20MHz_Nss1,16QAM_1TX  | Pass   | 3500          | 13.00         | 6.43 | 1    |
| LTE_20MHz_Nss1,64QAM_1TX  | Pass   | 3500          | 13.00         | 6.64 | 1    |
| LTE_20MHz_Nss1,256QAM_1TX | Pass   | 3500          | 13.00         | 6.61 | 1    |

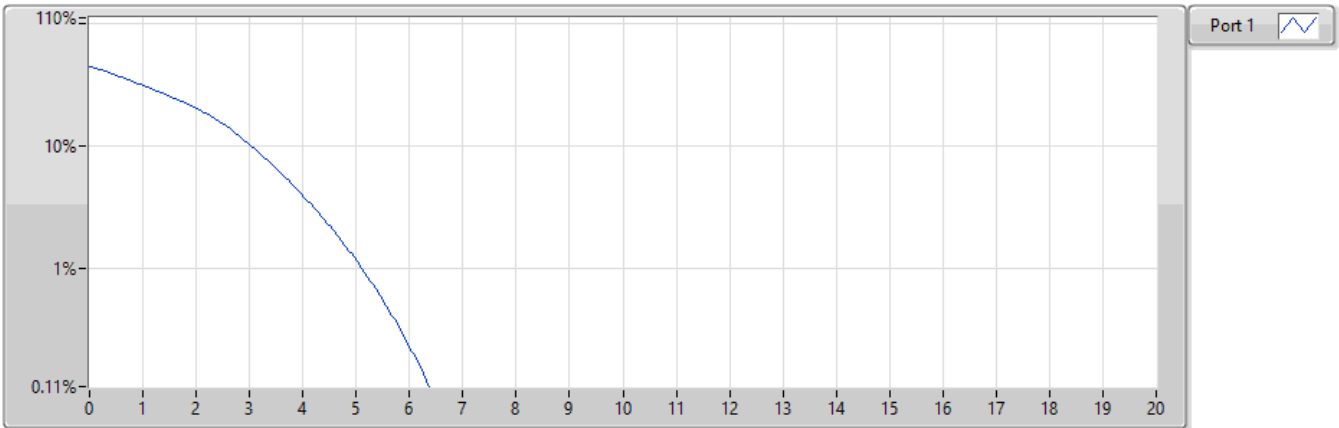
**Result**

| Mode                        | Result | Freq<br>(MHz) | Limit<br>(dB) | 0.1% | Port |
|-----------------------------|--------|---------------|---------------|------|------|
| Band 42_LTE_20MHz_Nss1_1TX  | -      | -             | -             | -    | -    |
| 3500MHz_QPSK_RB 100,#RB 0   | Pass   | 3500          | 13.00         | 6.41 | 1    |
| 3500MHz_16QAM_RB 100,#RB 0  | Pass   | 3500          | 13.00         | 6.43 | 1    |
| 3500MHz_64QAM_RB 100,#RB 0  | Pass   | 3500          | 13.00         | 6.64 | 1    |
| 3500MHz_256QAM_RB 100,#RB 0 | Pass   | 3500          | 13.00         | 6.61 | 1    |

**Band 42\_LTE\_20MHz\_Nss1,QPSK\_1TX**

**PAPR**

**3500MHz\_QPSK\_RB 100,#RB 0**

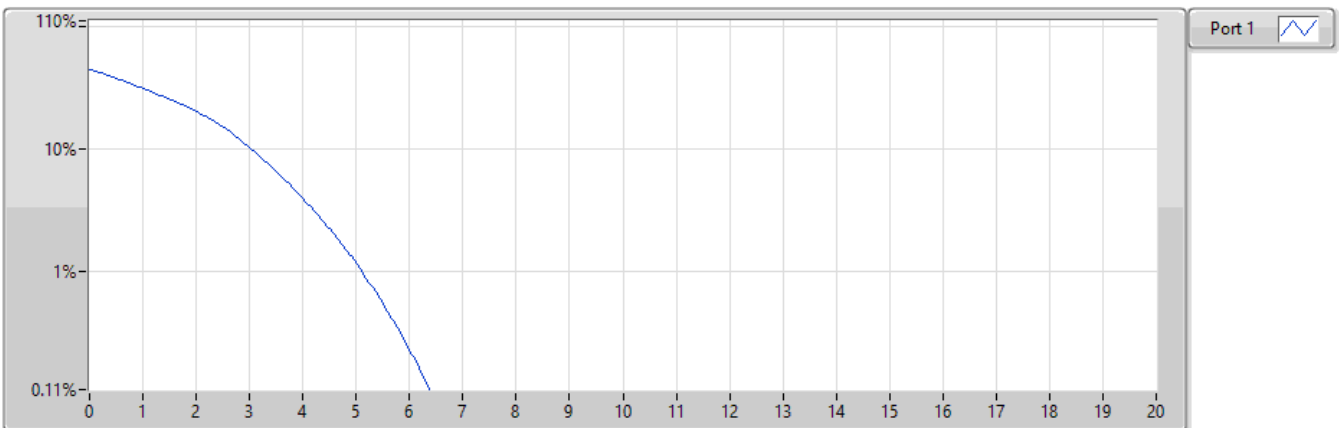


| Freq (MHz) | MBW(Hz) | 0.1% | Margin(dB) | Limit(dB) | Port |
|------------|---------|------|------------|-----------|------|
| 3500       | 20M     | 6.41 | -6.59      | 13.00     | 1    |

**Band 42\_LTE\_20MHz\_Nss1,16QAM\_1TX**

**PAPR**

**3500MHz\_16QAM\_RB 100,#RB 0**

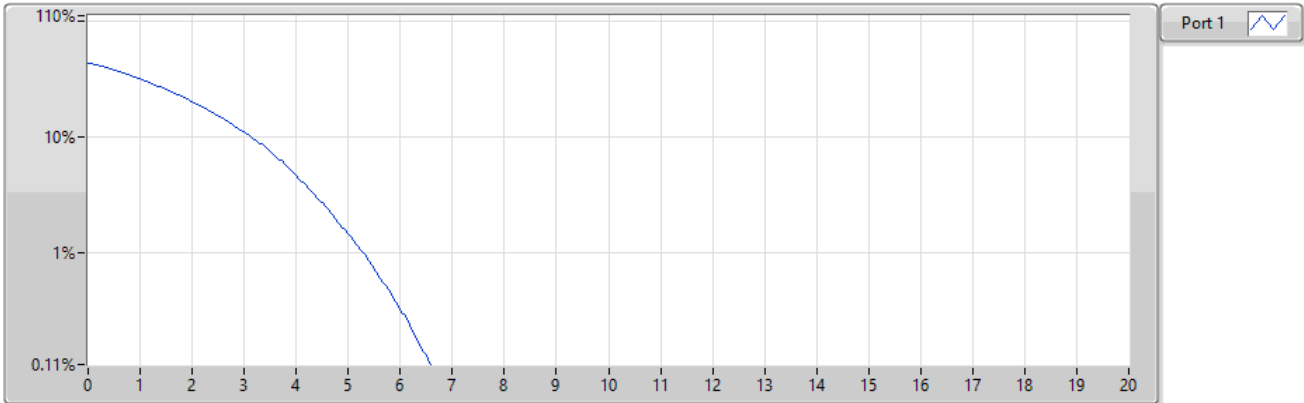


| Freq (MHz) | MBW(Hz) | 0.1% | Margin(dB) | Limit(dB) | Port |
|------------|---------|------|------------|-----------|------|
| 3500       | 20M     | 6.43 | -6.57      | 13.00     | 1    |

**Band 42\_LTE\_20MHz\_Nss1,64QAM\_1TX**

**PAPR**

**3500MHz\_64QAM\_RB 100,#RB 0**

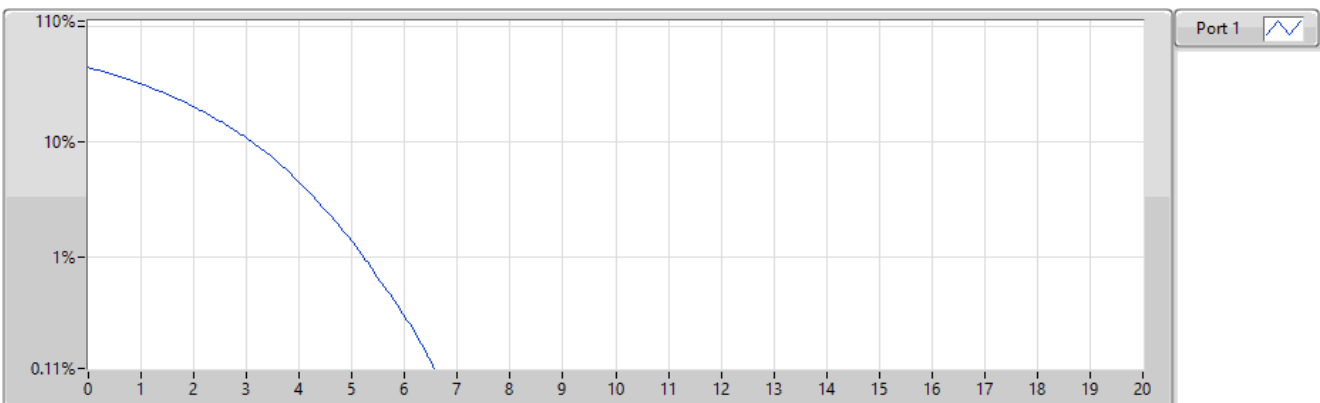


| Freq (MHz) | MBW(Hz) | 0.1% | Margin(dB) | Limit(dB) | Port |
|------------|---------|------|------------|-----------|------|
| 3500       | 20M     | 6.64 | -6.36      | 13.00     | 1    |

**Band 42\_LTE\_20MHz\_Nss1,256QAM\_1TX**

**PAPR**

**3500MHz\_256QAM\_RB 100,#RB 0**



| Freq (MHz) | MBW(Hz) | 0.1% | Margin(dB) | Limit(dB) | Port |
|------------|---------|------|------------|-----------|------|
| 3500       | 20M     | 6.61 | -6.39      | 13.00     | 1    |

|                         |  |                                |
|-------------------------|--|--------------------------------|
| <b>Ref. Freq:</b>       | <b>3500MHz</b>                             |                                |
| <b>Test Conditions</b>  | <b>LTE Band 42 (QPSK) / Middle channel</b> |                                |
| <b>Temperature (°C)</b> | <b>Deviation (ppm)</b>                     | <b>Limit <sup>Note 1</sup></b> |
|                         |  | <b>Result</b>                  |
| T20°C Vmax              | 0.01                                       | PASS                           |
| T20°C Vmin              | 0.01                                       |                                |
| T70°C Vnom              | 0.01                                       |                                |
| T60°C Vnom              | 0.01                                       |                                |
| T50°C Vnom              | 0.01                                       |                                |
| T40°C Vnom              | 0.01                                       |                                |
| T30°C Vnom              | 0.01                                       |                                |
| T20°C Vnom              | 0.01                                       |                                |
| T10°C Vnom              | 0.01                                       |                                |
| T0°C Vnom               | 0.01                                       |                                |
| T-10°C Vnom             | 0.01                                       |                                |
| T-20°C Vnom             | 0.01                                       |                                |
| T-30°C Vnom             | 0.01                                       |                                |

Note:

1. The frequency fundamental emissions stay within the authorized frequency block.