



FCC RADIO TEST REPORT

FCC ID : PKRISGM3000B
Equipment : M3000B
Brand Name : Inseego
Model Name : M3000B
Marketing Name : M3000
Applicant : Inseego Corp.
9710 Scranton Road Suite 200, San Diego,, CA 92121
Manufacturer : Inseego Corp.
9710 Scranton Road Suite 200, San Diego,, CA 92121
Standard : FCC 47 CFR Part 2, 96

The product was received on Sep. 29, 2022 and testing was performed from Oct. 02, 2022 to Oct. 19, 2022. We, Sporton International (USA) Inc., 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 partial report apply exclusively to the tested model / sample. Without written approval from Sporton International (USA) Inc., the test report shall not be reproduced except in full.

Approved by: Lance Tang

Sporton International (USA) Inc.
1175 Montague Expressway, Milpitas, CA 95035



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Appendix A. Test Results of Conducted Test



History of this test report

| Report No. | Version | Description | Issue Date |
|--------------|---------|-------------------------|---------------|
| FG211223001B | 01 | Initial issue of report | Oct. 06, 2022 |
| FG211223001B | 02 | Update SISO mode power | Oct. 20, 2022 |
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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 | - |
| 3.3 | §96.41 | Effective Isotropic Radiated Power | Pass | - |
| 3.4 | §2.1049 §96.41 | Occupied Bandwidth | Reporting only | - |
| 3.5 | §2.1051 §96.41 | Conducted Band Edge Measurement | Pass | - |
| 3.6 | §2.1051 §96.41 | Conducted Spurious Emission | Pass | - |

Conformity Assessment Condition:

The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.

Comments and Explanations:

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.



1 General Description

1.1 Product Feature of Equipment Under Test

3G-WCDMA, 4G-LTE, 5G-FR1, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, and GNSS

| Product Feature | |
|-----------------|--|
| Antenna Type | WWAN: Internal Antenna WLAN <Ant. 0>: Internal Antenna <Ant. 1>: Internal Antenna GPS / Glonass / BDS / Galileo : Internal Antenna |
| Antenna Gain | 5G NR n48 <Ant. 4>: 1.5 dBi <Ant. 6>: 3.8 dBi |

Remark: The EUT's information above was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.2 Modification of EUT

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

1.3 Testing Location

| | |
|--------------------|---|
| Test Site | Sporton International (USA) Inc. |
| Test Site Location | 1175 Montague Expressway, Milpitas, CA 95035 TEL : 408 9043300 |
| Test Site No. | Sporton Site No. |
| | TH01-CA |
| Test Engineer | Venkata Kondepudi |
| Temperature | 22~24°C |
| Relative Humidity | 48.7~52.2% |

FCC Designation No.: US1250



1.4 Applied 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, 96
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 940660 D01 Part 96 CBRS Eqpt v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.



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.

| Test Items | Band | Bandwidth (MHz) | | | | Modulation | | | | | RB # | | | Test Channel | | |
|-----------------------------|---|-----------------|----|----|----|------------|------|-------|-------|--------|------------|------|------|--------------|---|---|
| | | 10 | 20 | 30 | 40 | PI/2 BPSK | QPSK | 16QAM | 64QAM | 256QAM | 1 | Half | Full | L | M | H |
| Max. Output Power | n48 | | | v | v | v | v | v | v | v | v | v | v | v | v | v |
| 26dB and 99% Bandwidth | n48 | | | v | v | v | v | v | v | v | | | v | | v | |
| Conducted Band Edge | n48 | | | v | v | v | v | v | v | v | v | | v | v | v | v |
| Conducted Spurious Emission | n48 | | | v | v | | v | | | | v | | | v | v | v |
| E.I.R.P | n48 | | | v | v | v | v | v | v | v | Max. Power | | | | | |
| Remark | 1. The mark "v " means that this configuration is chosen for testing 2. The mark "- " means that this bandwidth is not supported. 3. This test report merely covers conducted test for bandwidths 30MHz and 40MHz, while the rest of the bandwidths supported and missing test items are covered by another report issued by Sporton International Inc, report No. FG1D2409G. | | | | | | | | | | | | | | | |

2.2 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 :

$$Offset(dB) = RF\ cable\ loss(dB) + attenuator\ factor(dB).$$

$$= 4.2 + 10 = 14.2 (dB)$$



2.3 Frequency List of Low/Middle/High Channels

| 5G NR n48 Channel and Frequency List | | | | |
|--------------------------------------|------------------------|---------|---------|---------|
| BW [MHz] | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 40 | Channel | 638000 | 641666 | 645332 |
| | Frequency | 3570 | 3624.99 | 3679.98 |
| 30 | Channel | 637668 | 641666 | 645666 |
| | Frequency | 3565.02 | 3624.99 | 3684.99 |

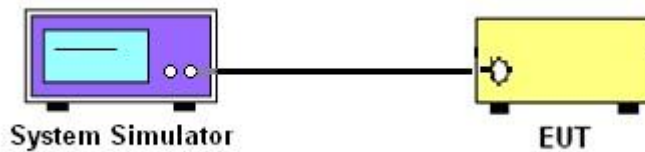
3 Conducted Test Items

3.1 Measuring Instruments

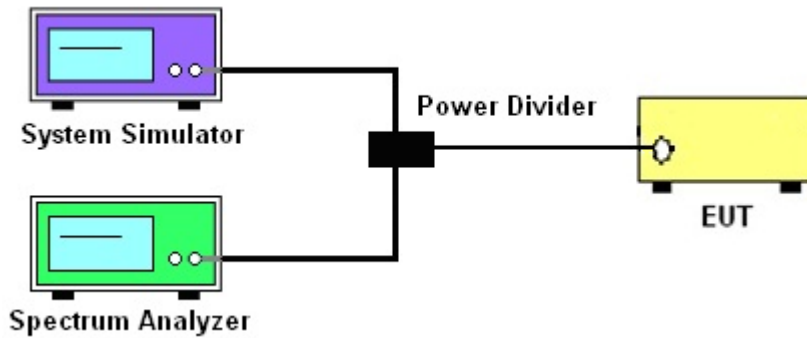
See list of measuring instruments of this test report.

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

3.2.1 Description of the Conducted Output Power 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.

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 EIRP

3.3.1 Description of the EIRP Measurement

The EIRP of mobile transmitters must not exceed 23 dBm /10 megahertz for 5G NR n48.

The testing follows ANSI C63.26-2015 Section 5.2.5.5

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - LC$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

| Device | Maximum EIRP (dBm/10 MHz) | Maximum PSD (dBm/MHz) |
|-----------------|------------------------------|--------------------------|
| End User Device | 23 | n/a |

Remark:

1. Total channel power is complied with EIRP limit 23dBm/10MHz.
2. The MIMO mode is completely uncorrelated, so the directional gain is selected the maximum gain among all antennas.

3.3.2 Test Procedures

The testing follows procedure in Section 5.2 of ANSI C63.26-2015 and KDB 940660 D01 Part 96 CBRS Eqpt v03 Section 3.2(b)(2)

Determine the EIRP by adding the effective antenna gain to the measured average conducted power level.



3.4 Occupied Bandwidth

3.4.1 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.

3.4.2 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.



3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

The conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

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 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. For MIMO mode, add additional MIMO factor $10\log(\text{NTX}=2) = 3.01\text{dB}$ into the spectrum analyzer offset.

For Adjacent Channel Leakage Ratio (ACLR) measurement,

1. The Adjacent Channel Leakage Ratio (ACLR) is the ratio of the average power in the assigned aggregated channel bandwidth to the average power over the equivalent adjacent channel bandwidth.
2. The option ACLR of spectrum analyzer is used and measures the ACLR ratio by setting equivalent channel bandwidth.
3. The measured ACLR ratio shall be at least 30 dB.



3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

96.41 (e)(2)

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

3.6.2 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 -40dBm/MHz.
10. For MIMO mode, add additional MIMO factor $10\log(\text{NTX}=2) = 3.01\text{dB}$ into the spectrum analyzer offset.



4 List of Measuring Equipment

| Instrument | Brand Name | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|----------------------------------|-----------------|-----------|------------|-----------------|------------------|---------------------------------|---------------|------------------------|
| Hygrometer | Testo | 608-H1 | 45141354 | N/A | Jul. 27, 2022 | Oct. 02, 2022~ Oct. 19, 2022 | Jul. 26, 2023 | Conducted (TH01-CA) |
| Spectrum Analyzer | Rohde & Schwarz | FSV40 | 101545 | 10Hz-40GHz | May 31, 2022 | Oct. 02, 2022~ Oct. 19, 2022 | May 30, 2023 | Conducted (TH01-CA) |
| Radio Communication Test Station | Anritsu | MT8000A | 6262208375 | N/A | Jun. 08, 2022 | Oct. 02, 2022~ Oct. 19, 2022 | Jun. 07, 2023 | Conducted (TH01-CA) |



Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and EIRP

<SISO Mode>

| NR n48 Maximum Average Power [dBm] (GT - LC = 1.5 dB) | | | | | | | | |
|---|--------------------|-----------|-----------|--------|--------|---------|------------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 30 | 1 | 1 | PI/2 BPSK | 13.40 | 21.30 | 15.16 | 22.85 | 0.1928 |
| 30 | 1 | 76 | | 13.20 | 21.28 | 15.02 | | |
| 30 | 36 | 18 | | 13.29 | 21.34 | 15.18 | | |
| 30 | 1 | 0 | | 13.33 | 20.78 | 15.17 | | |
| 30 | 1 | 77 | | 13.22 | 20.75 | 15.10 | | |
| 30 | 75 | 0 | | 13.26 | 20.89 | 15.16 | | |
| 30 | 1 | 1 | QPSK | 13.42 | 21.25 | 15.11 | | |
| 30 | 1 | 76 | | 13.23 | 21.20 | 15.11 | | |
| 30 | 36 | 18 | | 13.21 | 21.35 | 15.16 | | |
| 30 | 1 | 0 | | 13.42 | 20.24 | 15.15 | | |
| 30 | 1 | 77 | | 13.23 | 20.26 | 15.09 | | |
| 30 | 75 | 0 | | 13.29 | 20.32 | 15.19 | | |
| 30 | 1 | 1 | 16-QAM | 13.39 | 20.37 | 14.99 | 21.87 | 0.1538 |
| 30 | 1 | 1 | 64-QAM | 14.36 | 18.64 | 14.98 | | |
| 30 | 1 | 1 | 256-QAM | 14.09 | 16.47 | 15.02 | | |
| Limit | EIRP < 23dBm/10MHz | | | Result | | | Pass | |

| NR n48 Maximum Average Power [dBm] (GT - LC = 1.5 dB) | | | | | | | | |
|---|--------------------|-----------|-----------|--------|--------|---------|------------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | EIRP (dBm) | EIRP(W) |
| 40 | 1 | 1 | PI/2 BPSK | 13.34 | 21.24 | 14.30 | 22.91 | 0.1954 |
| 40 | 1 | 104 | | 13.35 | 21.36 | 14.30 | | |
| 40 | 50 | 25 | | 13.25 | 21.41 | 14.20 | | |
| 40 | 1 | 0 | | 13.33 | 20.81 | 14.25 | | |
| 40 | 1 | 105 | | 13.32 | 20.81 | 14.26 | | |
| 40 | 100 | 0 | | 13.31 | 20.86 | 14.21 | | |
| 40 | 1 | 1 | QPSK | 13.36 | 21.29 | 15.16 | | |
| 40 | 1 | 104 | | 13.38 | 21.33 | 14.28 | | |
| 40 | 50 | 25 | | 13.31 | 21.36 | 14.23 | | |
| 40 | 1 | 0 | | 13.38 | 20.33 | 14.31 | | |
| 40 | 1 | 105 | | 13.35 | 20.35 | 15.18 | | |
| 40 | 100 | 0 | | 13.26 | 20.40 | 15.12 | | |
| 40 | 1 | 1 | 16-QAM | 13.38 | 20.25 | 14.28 | 21.75 | 0.1496 |
| 40 | 1 | 1 | 64-QAM | 14.44 | 18.79 | 14.03 | | |
| 40 | 1 | 1 | 256-QAM | 14.18 | 16.52 | 13.97 | | |
| Limit | EIRP < 23dBm/10MHz | | | Result | | | Pass | |

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



<MIMO Mode>

| Part96 NR n48 Maximum Average Power [dBm], DG = 3.8 dBi | | | | | | | | | | | | | | |
|---|--------------------|--------------|---------|-----------|--------|---------|-----------|--------|---------|---------|--------|---------|---------------|-------------|
| BW (MHz) | RB Size | RB Offset | Mod | Antenna 4 | | | Antenna 6 | | | Combine | | | EIRP (dBm) | EIRP (W) |
| | | | | Lowest | Middle | Highest | Lowest | Middle | Highest | Lowest | Middle | Highest | | |
| 30 | 1 | 1 | QPSK | 8.86 | 12.88 | 11.38 | 9.69 | 13.28 | 11.75 | 12.31 | 16.09 | 14.58 | 19.99 | 0.0998 |
| 30 | 1 | 76 | | 9.13 | 13.09 | 11.31 | 9.53 | 13.27 | 11.72 | 12.34 | 16.19 | 14.53 | | |
| 30 | 39 | 19 | | 8.96 | 12.95 | 11.39 | 9.67 | 13.27 | 11.76 | 12.34 | 16.12 | 14.59 | | |
| 30 | 1 | 0 | | 8.80 | 11.38 | 11.49 | 9.62 | 11.93 | 11.94 | 12.24 | 14.67 | 14.73 | | |
| 30 | 1 | 77 | | 9.02 | 11.51 | 11.34 | 9.50 | 11.76 | 11.71 | 12.28 | 14.65 | 14.54 | | |
| 30 | 78 | 0 | | 8.99 | 11.45 | 11.43 | 9.69 | 11.76 | 11.75 | 12.36 | 14.62 | 14.60 | | |
| 30 | 1 | 1 | 16-QAM | 11.11 | 12.37 | 11.35 | 11.57 | 12.89 | 11.99 | 14.36 | 15.65 | 14.69 | 19.45 | 0.0881 |
| 30 | 1 | 1 | 64-QAM | 10.70 | 10.72 | 11.52 | 11.79 | 11.46 | 11.57 | 14.29 | 14.12 | 14.56 | | |
| 30 | 1 | 1 | 256-QAM | 10.96 | 7.82 | 11.50 | 11.58 | 8.22 | 11.91 | 14.29 | 11.03 | 14.72 | | |
| Limit | EIRP < 23dBm/10MHz | | | Result | | | | | | | | | Pass | |

| Part96 NR n48 Maximum Average Power [dBm], DG = 3.8 dBi | | | | | | | | | | | | | | |
|---|--------------------|--------------|---------|-----------|--------|---------|-----------|--------|---------|---------|--------|---------|---------------|-------------|
| BW (MHz) | RB Size | RB Offset | Mod | Antenna 4 | | | Antenna 6 | | | Combine | | | EIRP (dBm) | EIRP (W) |
| | | | | Lowest | Middle | Highest | Lowest | Middle | Highest | Lowest | Middle | Highest | | |
| 40 | 1 | 1 | QPSK | 10.00 | 13.00 | 9.36 | 10.76 | 13.15 | 9.72 | 13.41 | 16.09 | 12.55 | 20.07 | 0.1016 |
| 40 | 1 | 104 | | 10.35 | 13.24 | 9.34 | 10.77 | 13.27 | 9.65 | 13.58 | 16.27 | 12.51 | | |
| 40 | 53 | 26 | | 10.70 | 12.94 | 9.29 | 10.06 | 13.28 | 9.73 | 13.40 | 16.12 | 12.53 | | |
| 40 | 1 | 0 | | 10.70 | 11.47 | 9.45 | 9.92 | 11.66 | 9.74 | 13.34 | 14.58 | 12.61 | | |
| 40 | 1 | 105 | | 10.40 | 11.26 | 9.36 | 11.49 | 10.80 | 9.74 | 13.99 | 14.05 | 12.56 | | |
| 40 | 106 | 0 | | 10.71 | 11.47 | 9.33 | 10.09 | 11.80 | 9.76 | 13.42 | 14.65 | 12.56 | | |
| 40 | 1 | 1 | 16-QAM | 9.66 | 12.58 | 10.31 | 8.93 | 12.74 | 10.80 | 12.32 | 15.67 | 13.57 | 19.47 | 0.0885 |
| 40 | 1 | 1 | 64-QAM | 9.70 | 10.76 | 10.14 | 10.60 | 11.20 | 10.70 | 13.18 | 14.00 | 13.44 | | |
| 40 | 1 | 1 | 256-QAM | 10.02 | 7.80 | 10.46 | 10.69 | 8.25 | 10.72 | 13.38 | 11.04 | 13.60 | | |
| Limit | EIRP < 23dBm/10MHz | | | Result | | | | | | | | | Pass | |

Total EIRP power is less than partial EIRP limit 23 dBm/10MHz.



FR1 n48

<SISO Mode>

<Ant. 4>

26dB Bandwidth

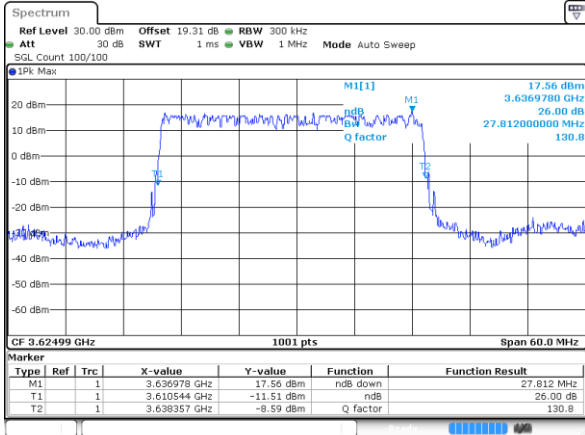
| Mode | FR1 n48 : 26dB BW(MHz) / DFT-S OFDM | | | | | | | |
|-----------|-------------------------------------|-----------|--|--|--|--|--|--|
| BW | 30MHz | 40MHz | | | | | | |
| Mod. | PI/2 BPSK | PI/2 BPSK | | | | | | |
| Middle CH | 27.81 | 38.28 | | | | | | |

| Mode | FR1 n48 : 26dB BW(MHz) / CP OFDM | | | | | | | |
|-----------|----------------------------------|--------|-------|--------|--|--|--|--|
| BW | 30MHz | | 40MHz | | | | | |
| Mod. | QPSK | 16QAM | QPSK | 16QAM | | | | |
| Middle CH | 29.07 | 29.19 | 40.36 | 40.44 | | | | |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | | | | |
| Middle CH | 29.13 | 29.13 | 40.44 | 40.36 | | | | |



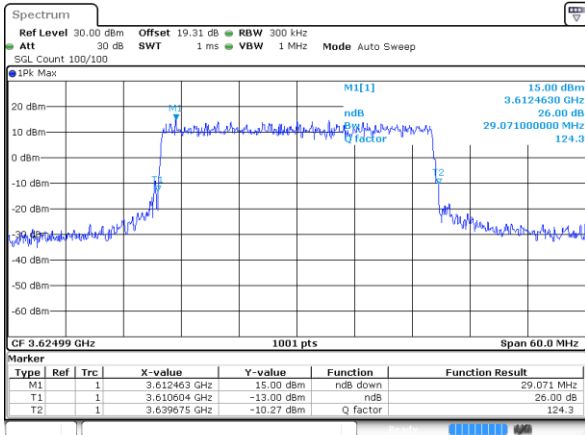
FR1 n48 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

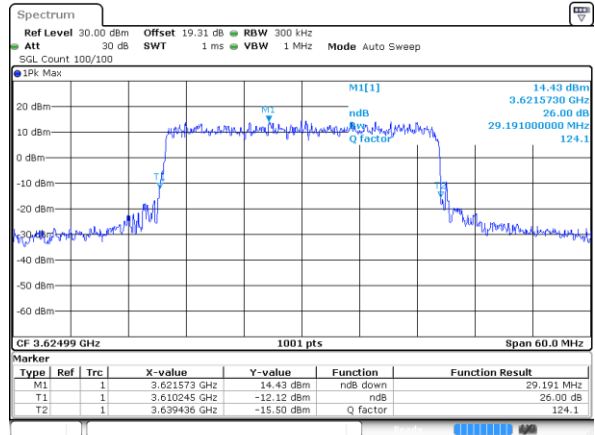


FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB

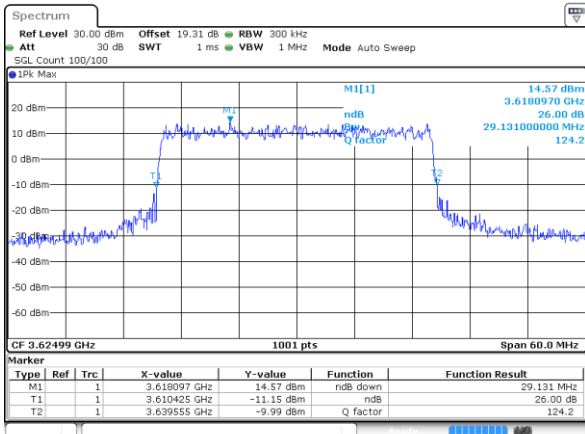
QPSK



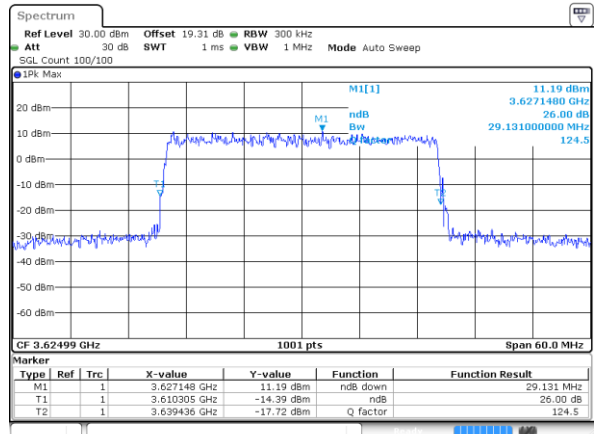
16QAM



64QAM



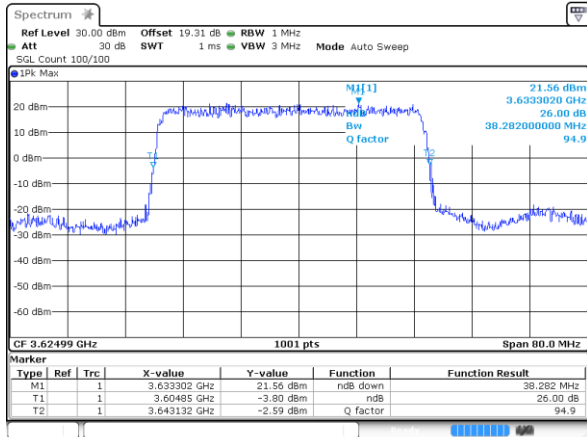
256QAM





FR1 n48 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

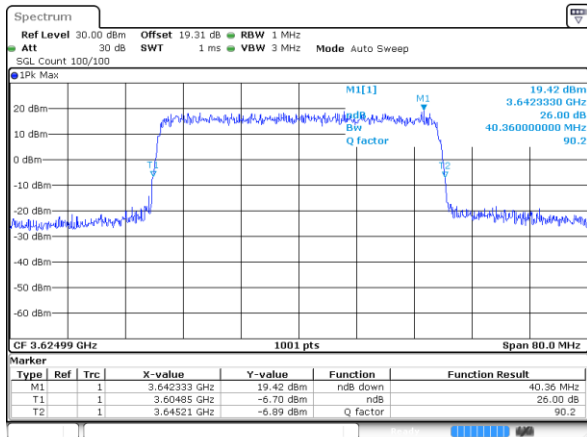
PI/2 BPSK



Date: 18.OCT.2022 23.34.21

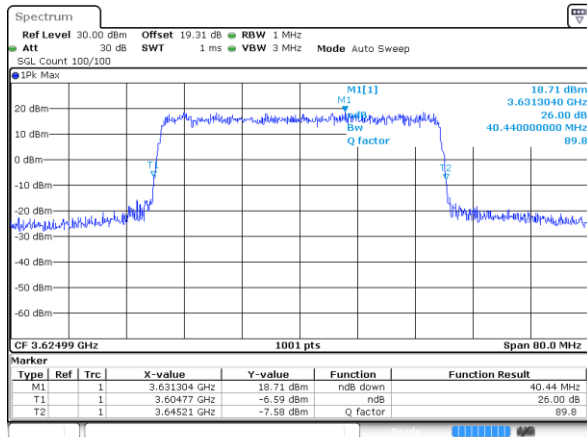
FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB

QPSK



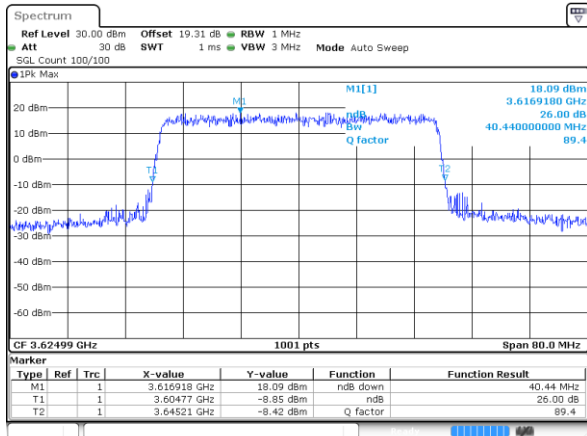
Date: 18.OCT.2022 23.38.04

16QAM



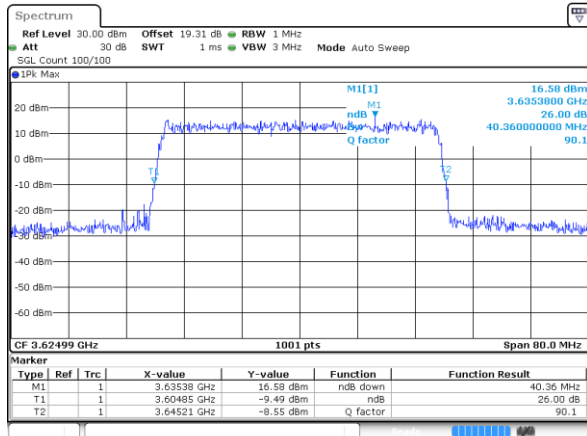
Date: 18.OCT.2022 23.38.32

64QAM



Date: 18.OCT.2022 23.38.57

256QAM



Date: 18.OCT.2022 23.39.26



Occupied Bandwidth

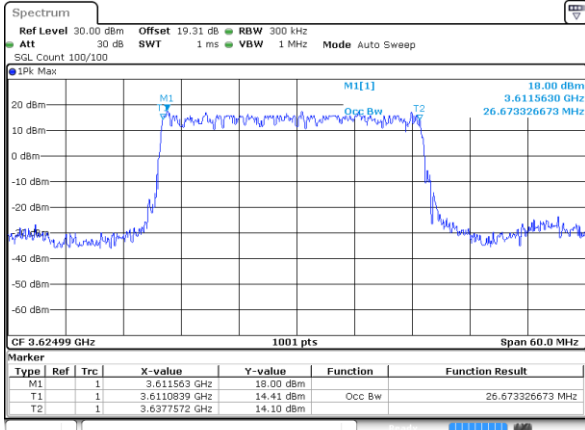
| Mode | FR1 n48 : OB BW(MHz) / DFT-S OFDM | | | | | | | |
|-----------|-----------------------------------|-----------|--|--|--|--|--|--|
| BW | 30MHz | 40MHz | | | | | | |
| Mod. | PI/2 BPSK | PI/2 BPSK | | | | | | |
| Middle CH | 26.67 | 36.12 | | | | | | |

| Mode | FR1 n48 : OB BW(MHz) / CP OFDM | | | | | | | |
|-----------|--------------------------------|--------|-------|--------|--|--|--|--|
| BW | 30MHz | | 40MHz | | | | | |
| Mod. | QPSK | 16PSK | QPSK | 16QAM | | | | |
| Middle CH | 27.81 | 27.87 | 38.12 | 38.12 | | | | |
| Mod. | 64QAM | 256QAM | 64QAM | 256QAM | | | | |
| Middle CH | 27.81 | 27.81 | 37.88 | 38.12 | | | | |



FR1 n48 / 30MHz / DFT-S OFDM / Middle Channel / Full RB

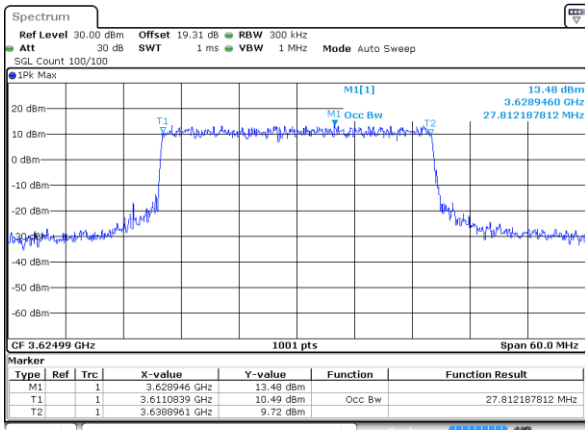
PI/2 BPSK



Date: 19.OCT.2022 00:05:23

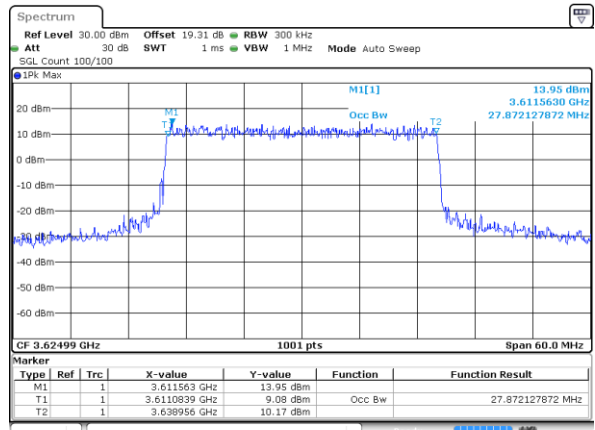
FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB

QPSK



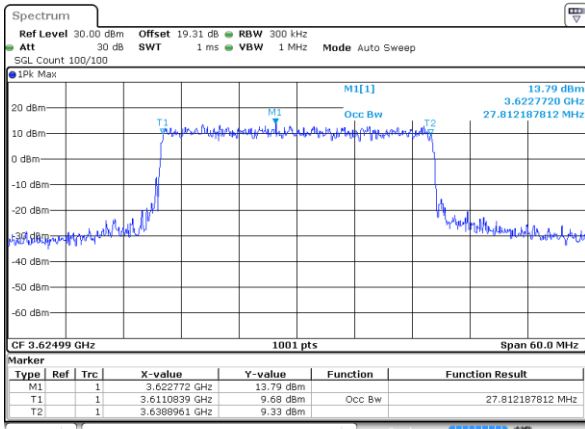
Date: 19.OCT.2022 00:14:07

16QAM



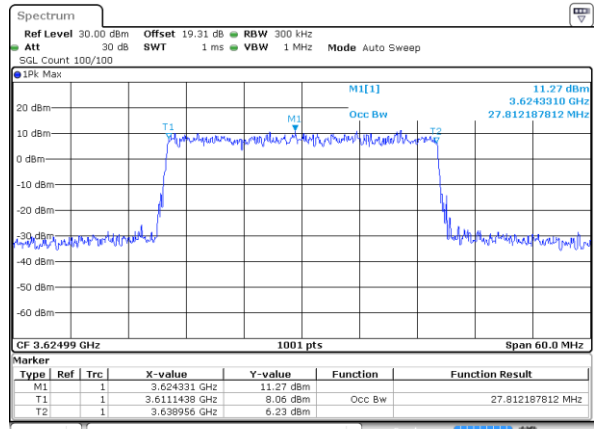
Date: 19.OCT.2022 00:18:53

64QAM



Date: 19.OCT.2022 00:21:49

256QAM

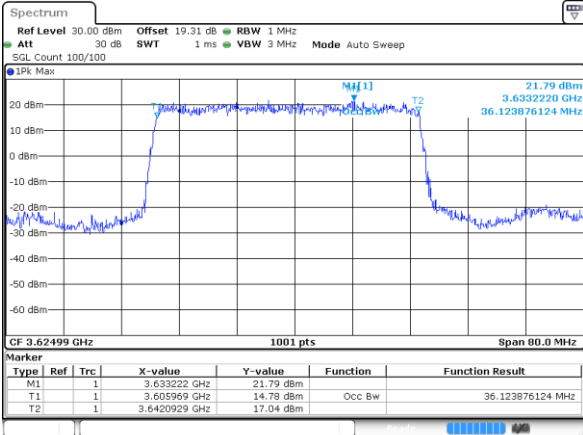


Date: 19.OCT.2022 00:22:32



FR1 n48 / 40MHz / DFT-S OFDM / Middle Channel / Full RB

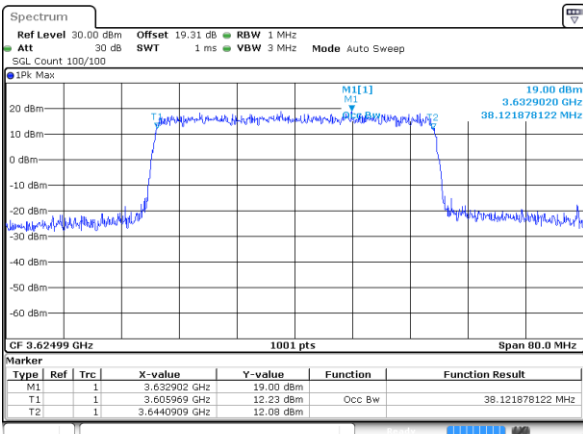
PI/2 BPSK



Date: 18.OCT.2022 23:42:10

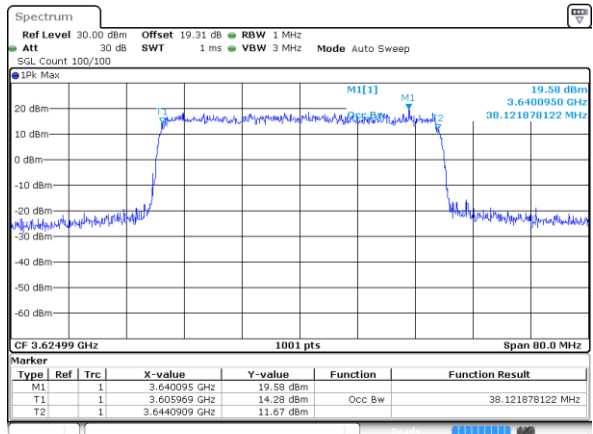
FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB

QPSK



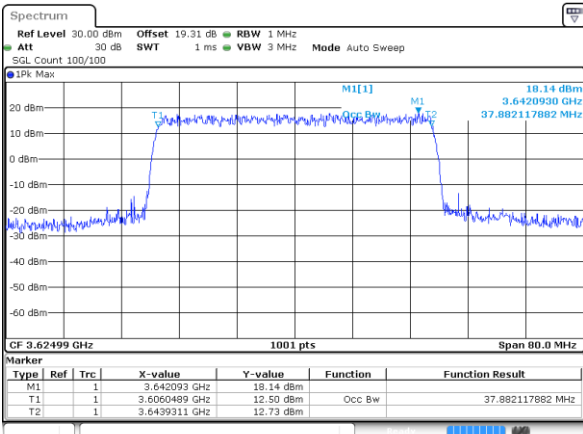
Date: 18.OCT.2022 23:41:22

16QAM



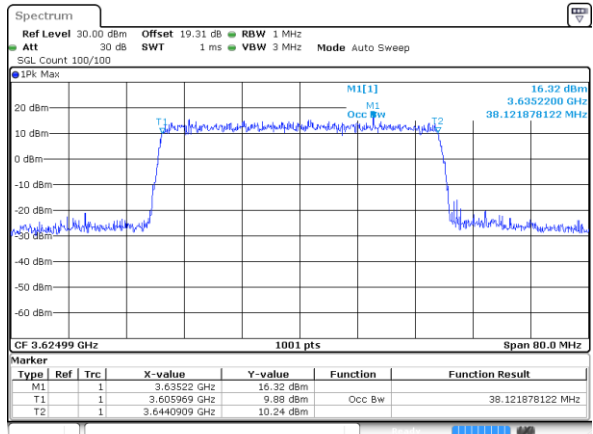
Date: 18.OCT.2022 23:40:55

64QAM



Date: 18.OCT.2022 23:40:32

256QAM



Date: 18.OCT.2022 23:39:57



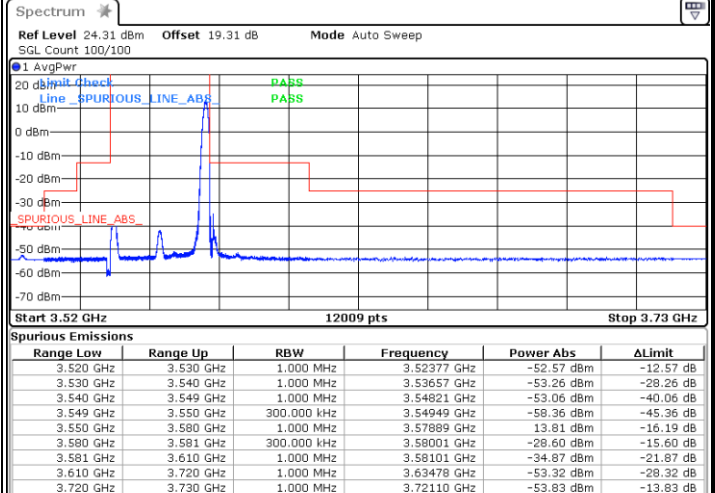
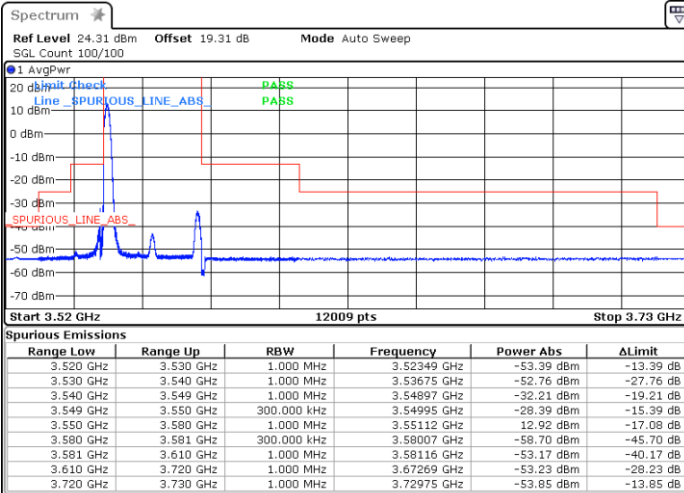
Unwanted Emission (MASK)

FR1 n48 / 30MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

1RB0

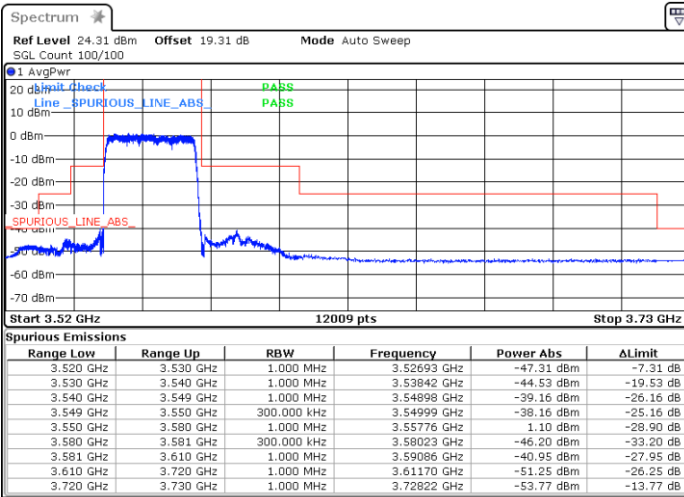
1RBmax



Date: 19.OCT.2022 00:26:17

Date: 19.OCT.2022 00:35:04

Full RB



Date: 18.OCT.2022 20:47:03

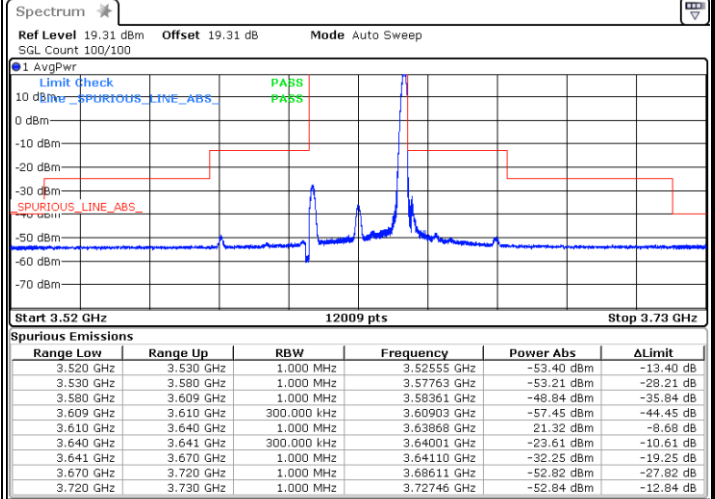
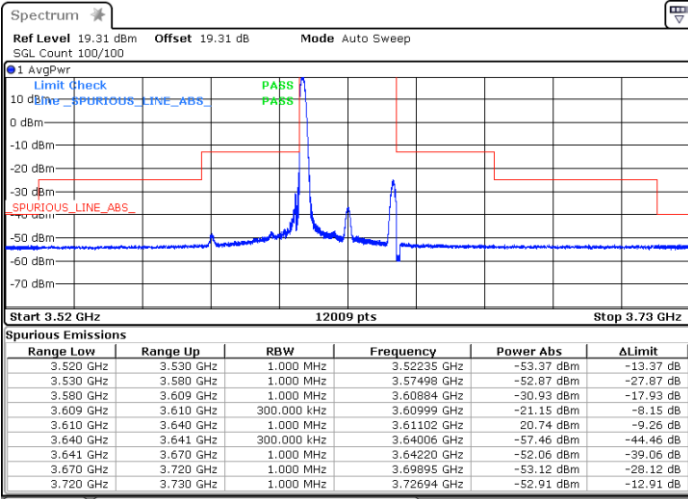


FR1 n48 / 30MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

1RB0

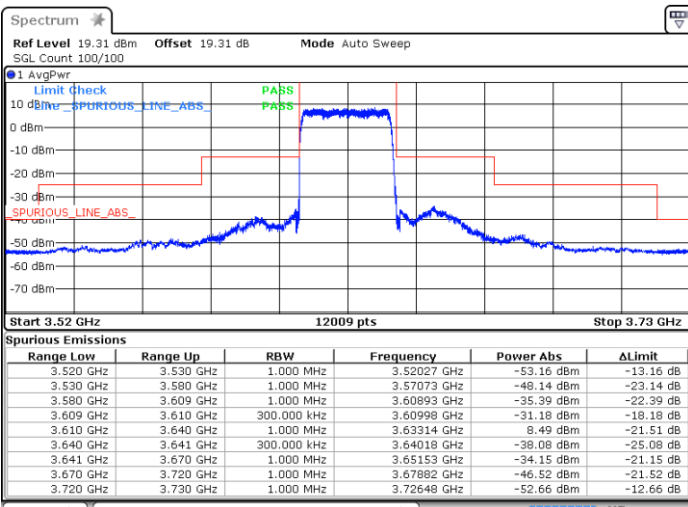
1RBmax



Date: 19.OCT.2022 00:30:39

Date: 19.OCT.2022 00:30:08

Full RB



Date: 19.OCT.2022 00:09:29

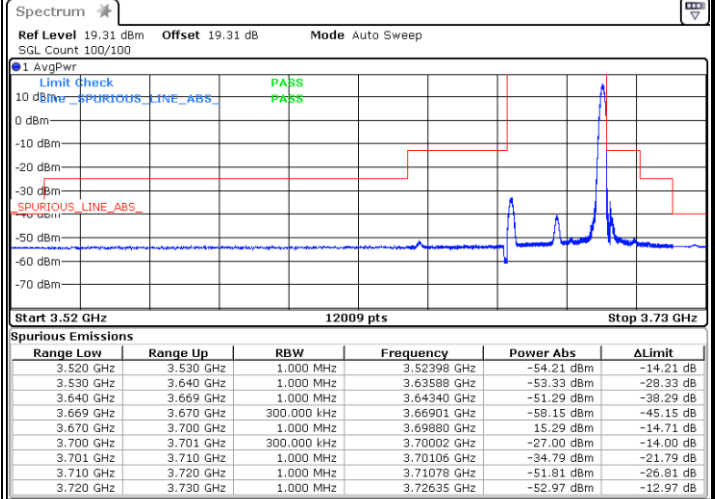
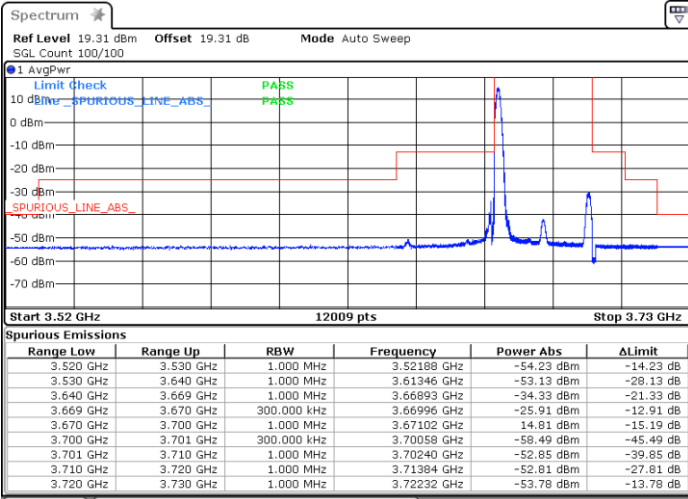


FR1 n48 / 30MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

1RB0

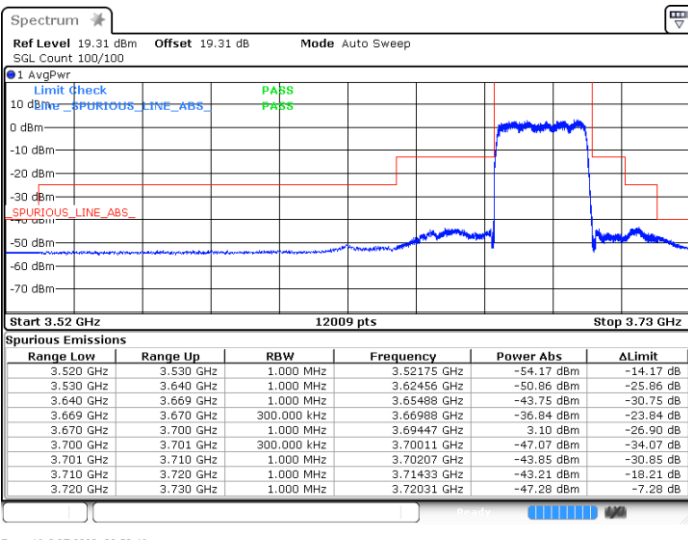
1RBmax



Date: 19.OCT.2022 00:31:43

Date: 19.OCT.2022 00:39:45

Full RB



Date: 18.OCT.2022 20:52:48

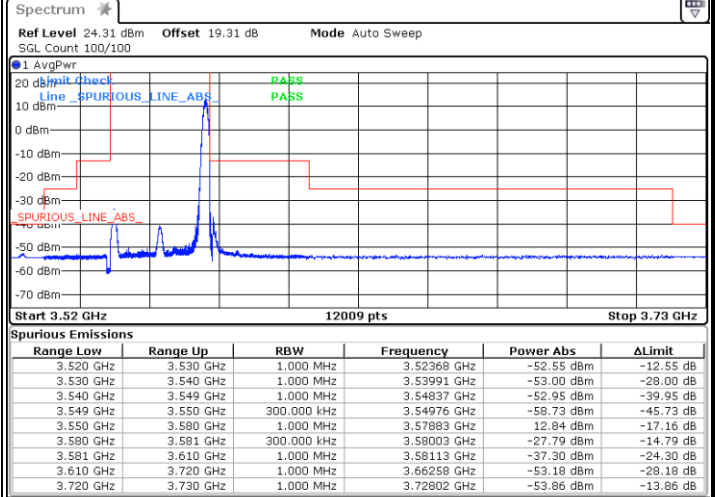
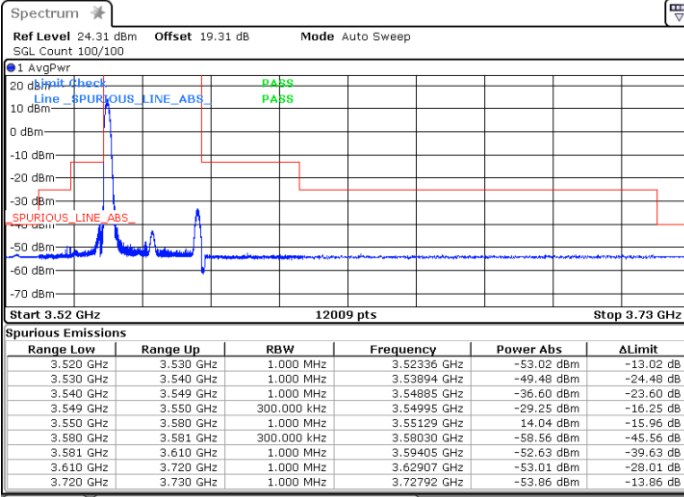


FR1 n48 / 30MHz / DFT-S OFDM / QPSK

Lowest Channel

1RB0

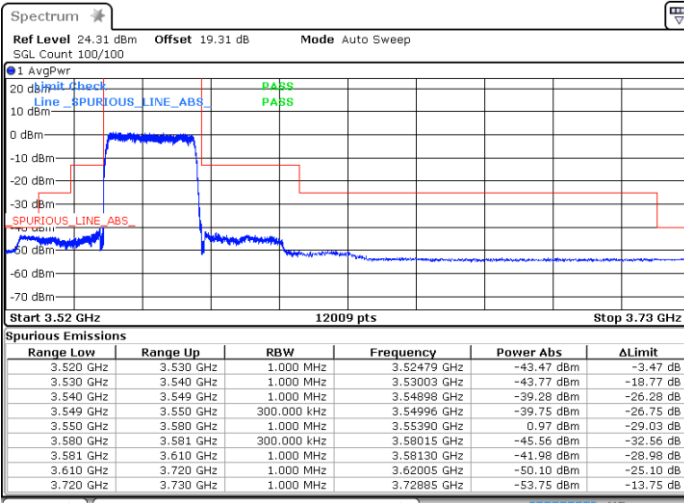
1RBmax



Date: 19.OCT.2022 00:26:47

Date: 19.OCT.2022 00:35:31

Full RB



Date: 18.OCT.2022 20:47:43

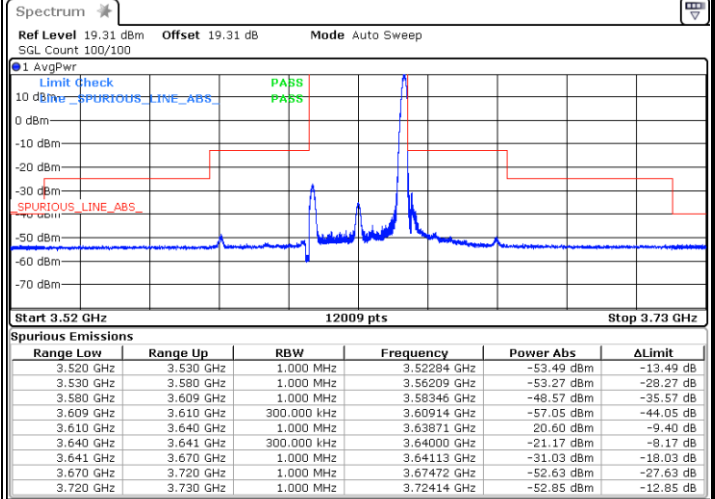
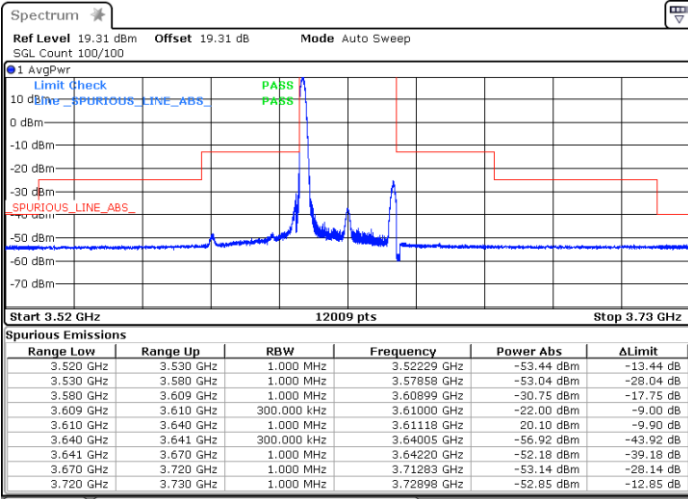


FR1 n48 / 30MHz / DFT-S OFDM / QPSK

Middle Channel

1RB0

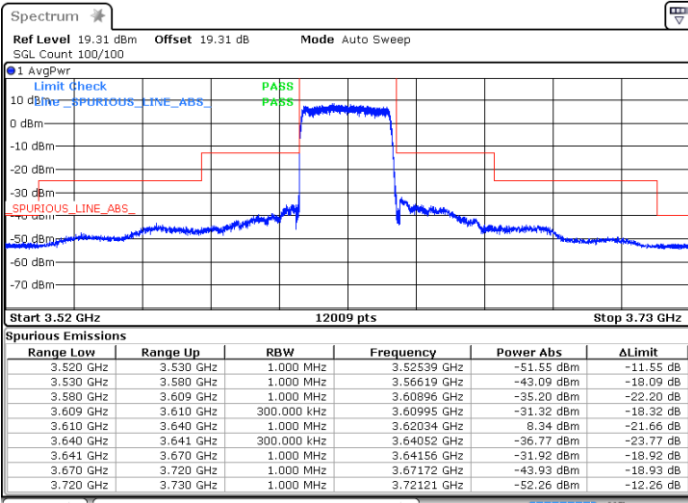
1RBmax



Date: 19.OCT.2022 00:30:04

Date: 19.OCT.2022 00:38:41

Full RB



Date: 19.OCT.2022 00:10:03

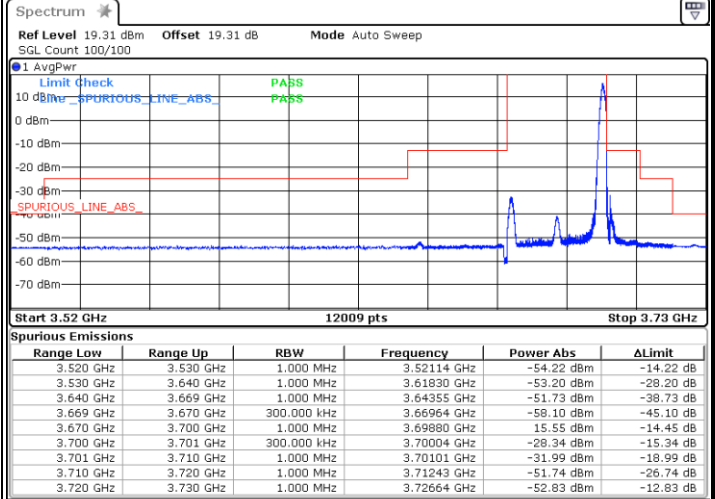
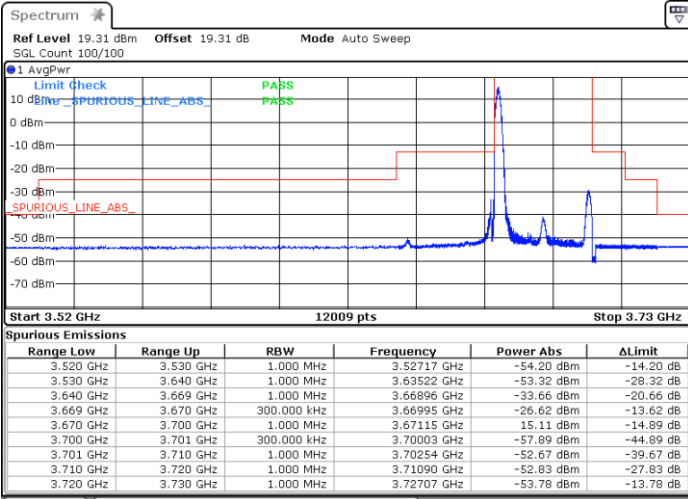


FR1 n48 / 30MHz / DFT-S OFDM / QPSK

Highest Channel

1RB0

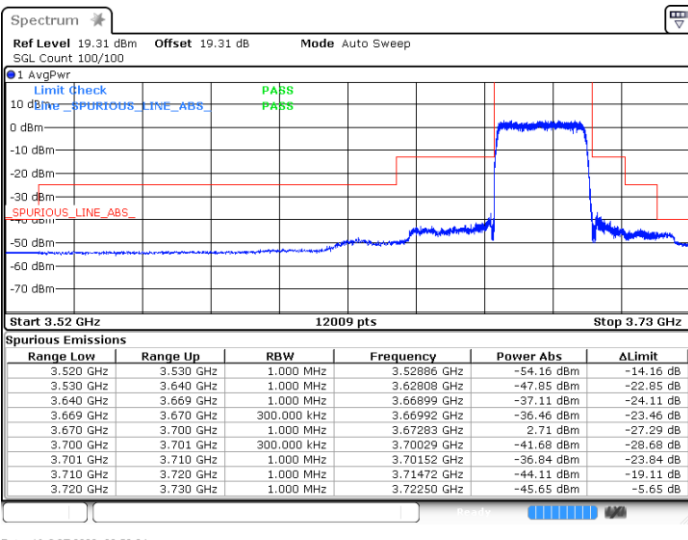
1RBmax



Date: 19.OCT.2022 00:32:08

Date: 19.OCT.2022 00:40:10

Full RB



Date: 18.OCT.2022 20:50:24

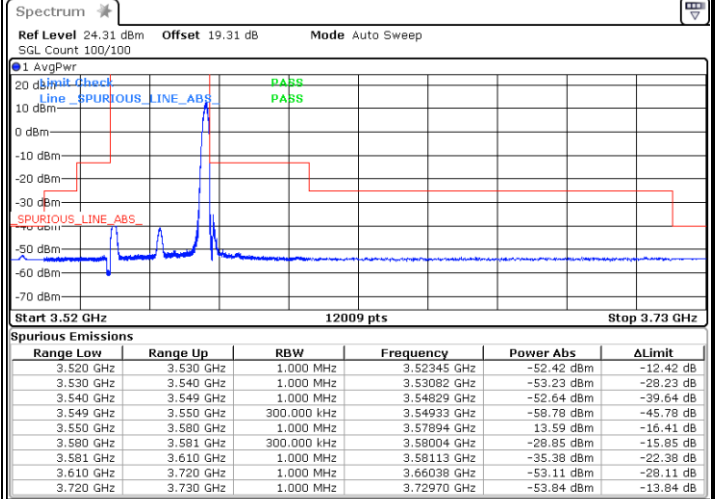
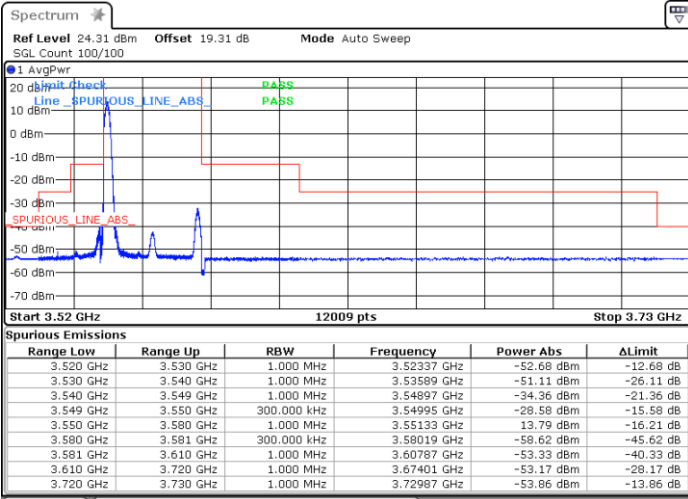


FR1 n48 / 30MHz / DFT-S OFDM / 16QAM

Lowest Channel

1RB0

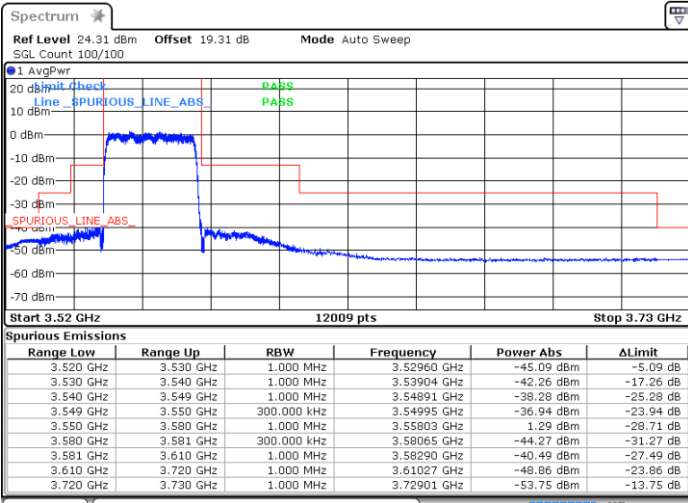
1RBmax



Date: 19.OCT.2022 00:27:14

Date: 19.OCT.2022 00:35:59

Full RB



Date: 18.OCT.2022 20:48:20

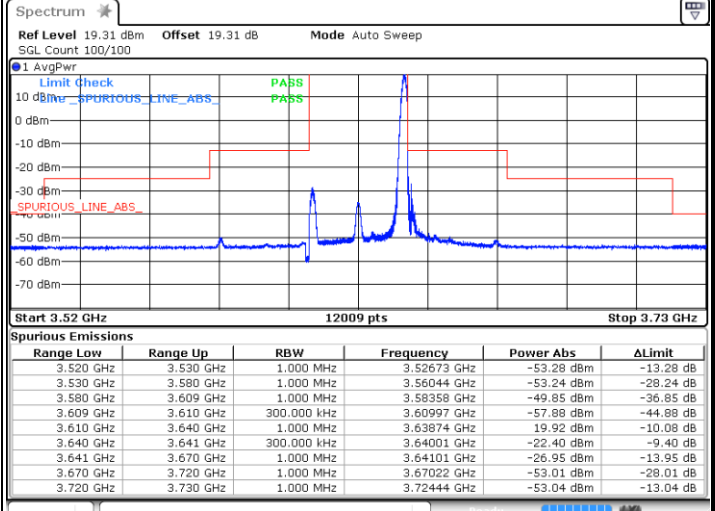
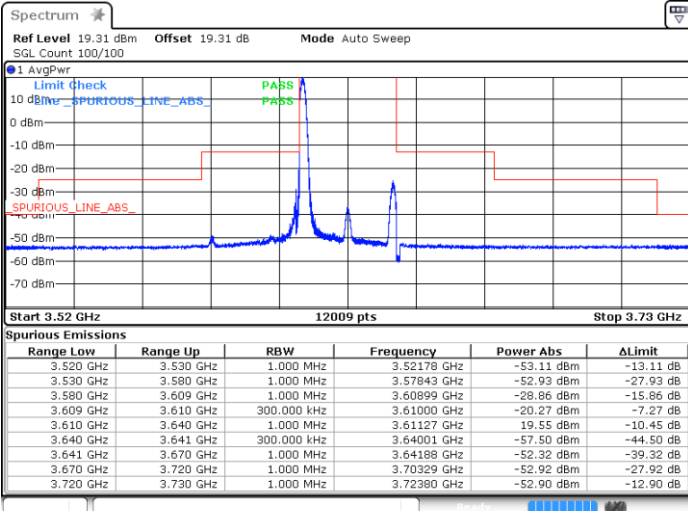


FR1 n48 / 30MHz / DFT-S OFDM / 16QAM

Middle Channel

1RB0

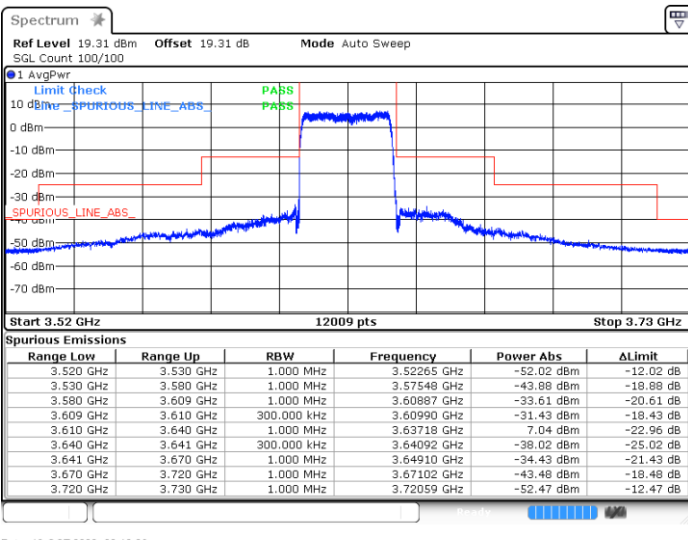
1RBmax



Date: 19.OCT.2022 00:29:43

Date: 19.OCT.2022 00:38:12

Full RB



Date: 19.OCT.2022 00:10:26

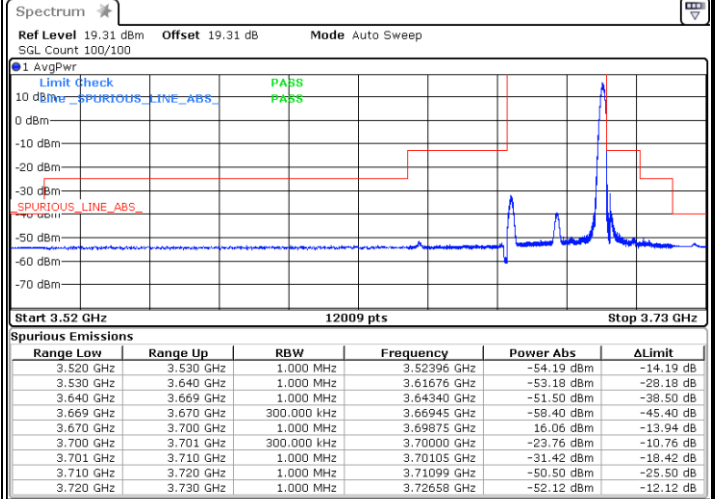
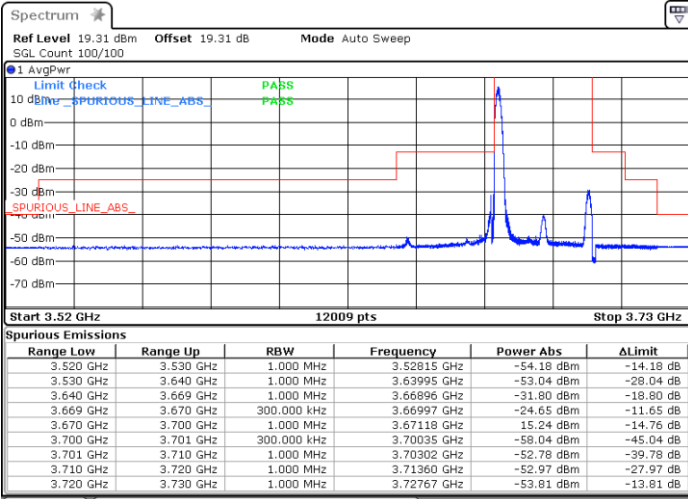


FR1 n48 / 30MHz / DFT-S OFDM / 16QAM

Highest Channel

1RB0

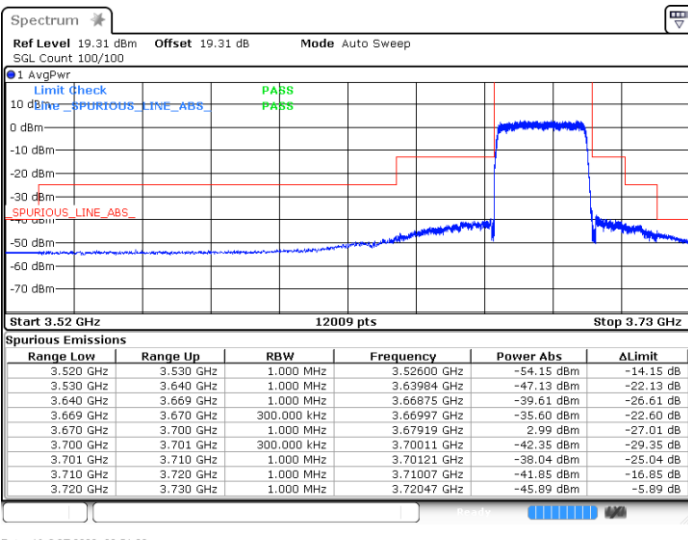
1RBmax



Date: 19.OCT.2022 00:32:32

Date: 19.OCT.2022 00:40:35

Full RB



Date: 18.OCT.2022 20:51:00

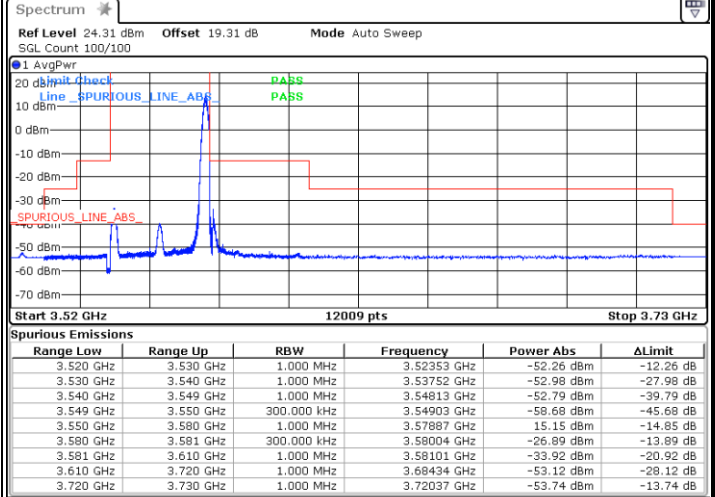
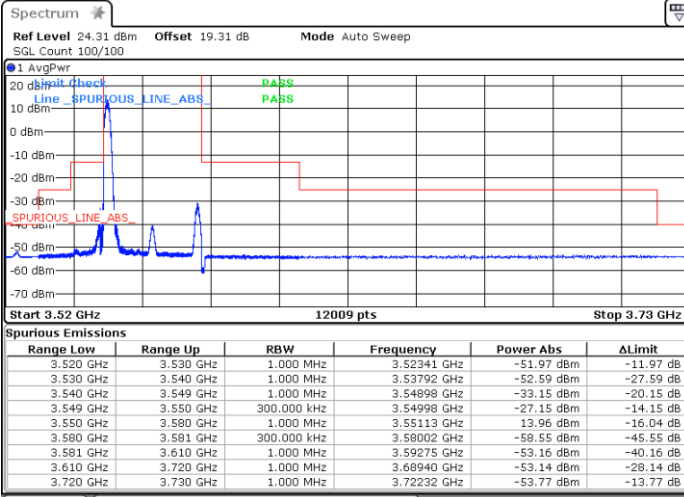


FR1 n48 / 30MHz / DFT-S OFDM / 64QAM

Lowest Channel

1RB0

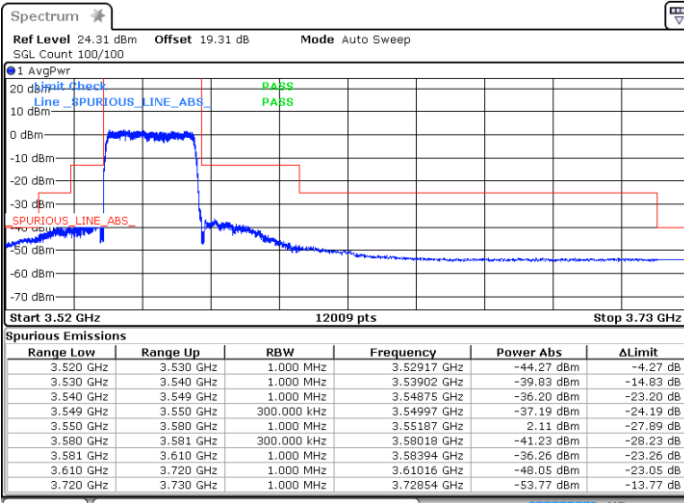
1RBmax



Date: 19.OCT.2022 00:27:42

Date: 19.OCT.2022 00:36:25

Full RB



Date: 18.OCT.2022 20:48:54

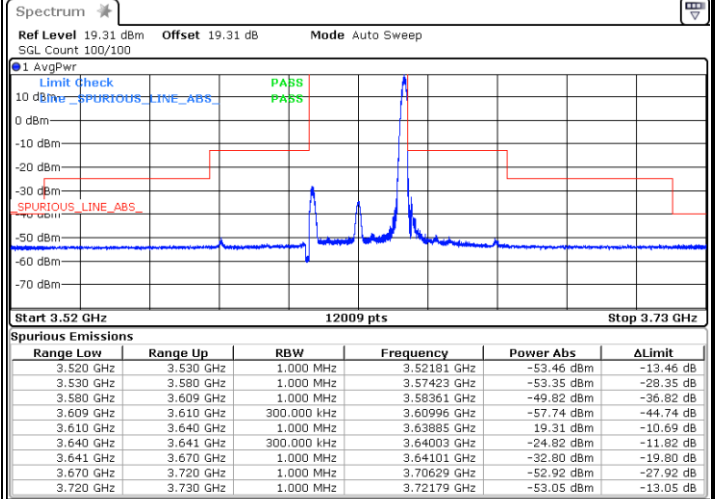
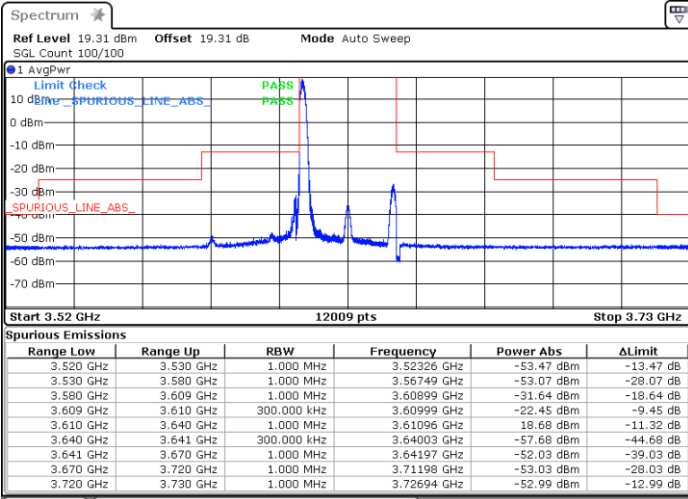


FR1 n48 / 30MHz / DFT-S OFDM / 64QAM

Middle Channel

1RB0

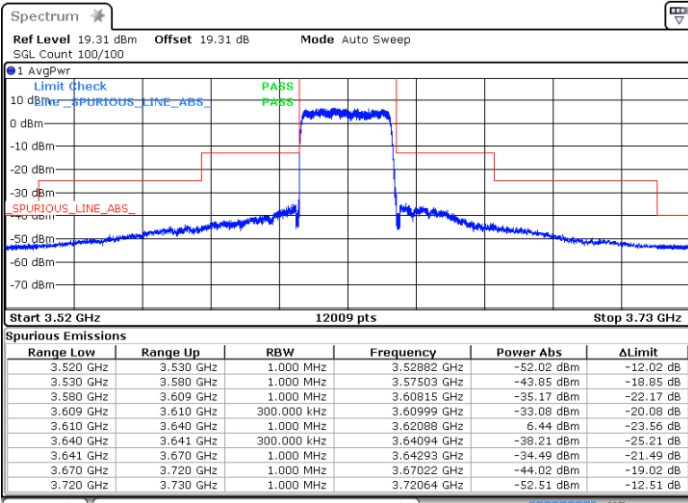
1RBmax



Date: 19.OCT.2022 00:29:20

Date: 19.OCT.2022 00:37:50

Full RB



Date: 19.OCT.2022 00:10:48

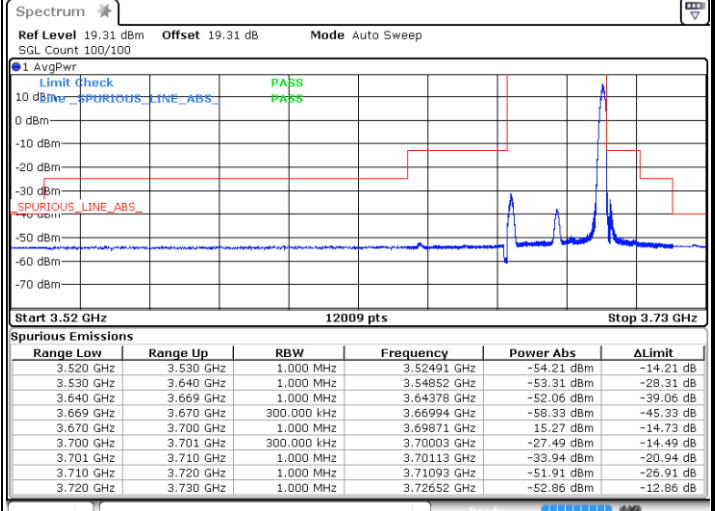
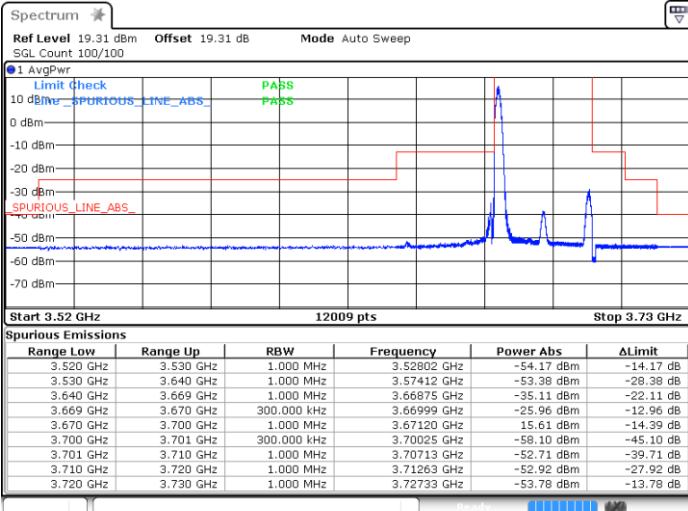


FR1 n48 / 30MHz / DFT-S OFDM / 64QAM

Highest Channel

1RB0

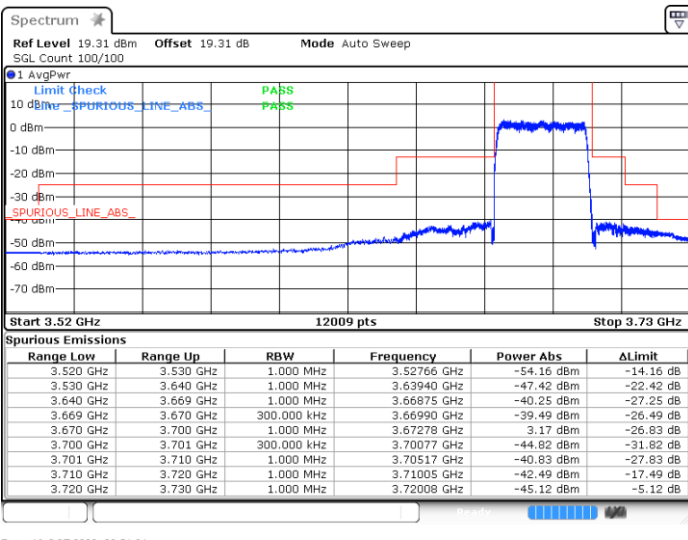
1RBmax



Date: 19.OCT.2022 00:33:08

Date: 19.OCT.2022 00:40:59

Full RB



Date: 18.OCT.2022 20:51:31

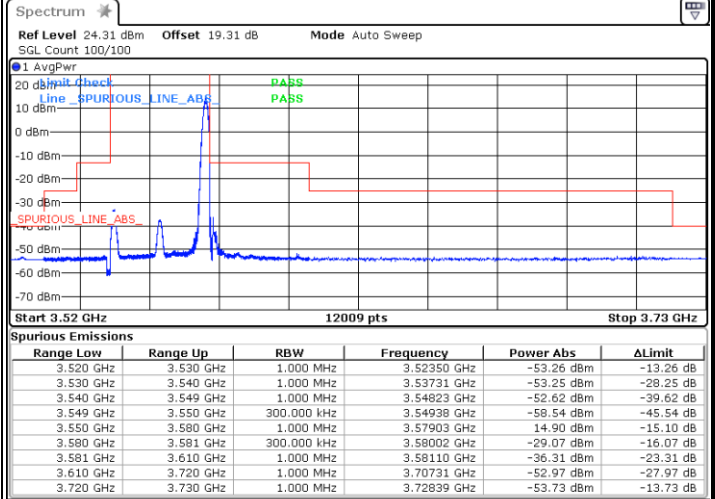
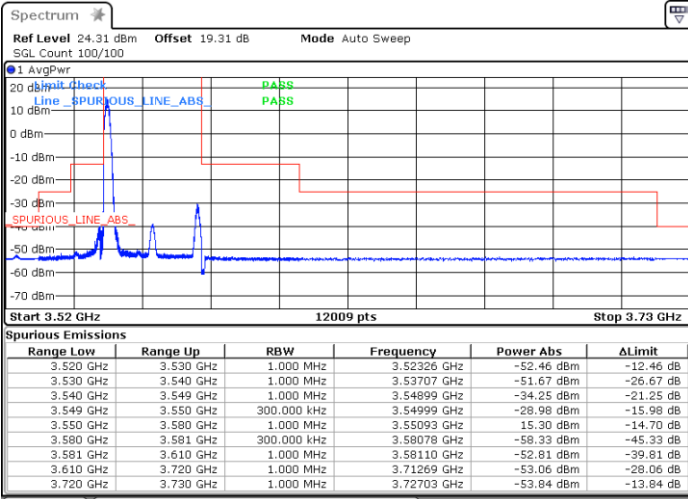


FR1 n48 / 30MHz / DFT-S OFDM / 256QAM

Lowest Channel

1RB0

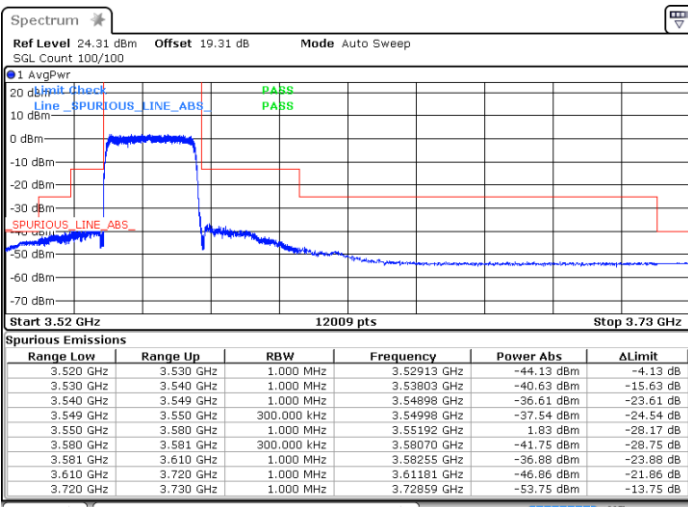
1RBmax



Date: 19.OCT.2022 00:28:12

Date: 19.OCT.2022 00:36:58

Full RB



Date: 18.OCT.2022 20:49:37

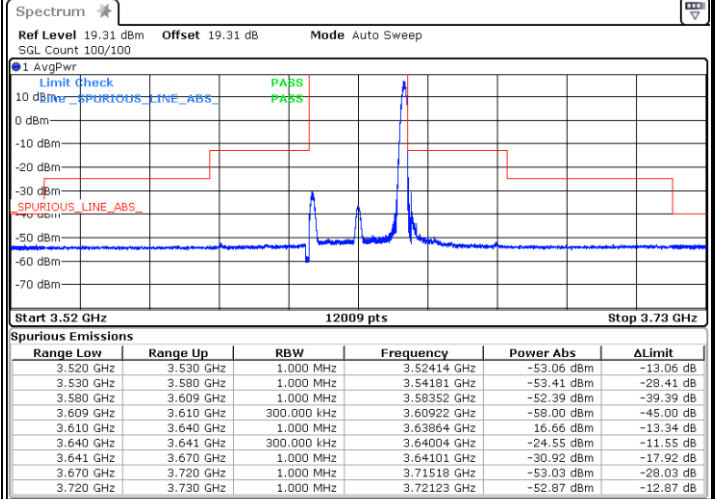
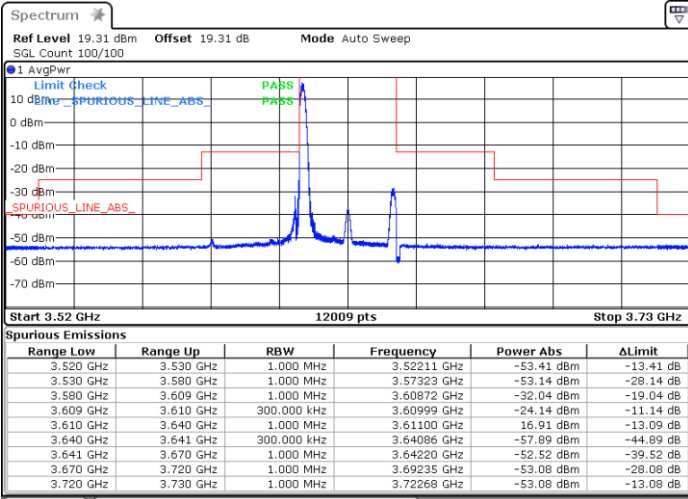


FR1 n48 / 30MHz / DFT-S OFDM / 256QAM

Middle Channel

1RB0

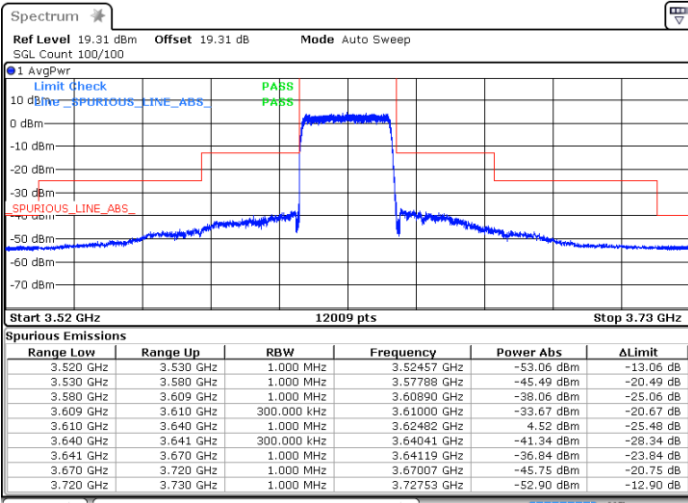
1RBmax



Date: 19.OCT.2022 00:28:59

Date: 19.OCT.2022 00:37:27

Full RB



Date: 19.OCT.2022 00:11:14

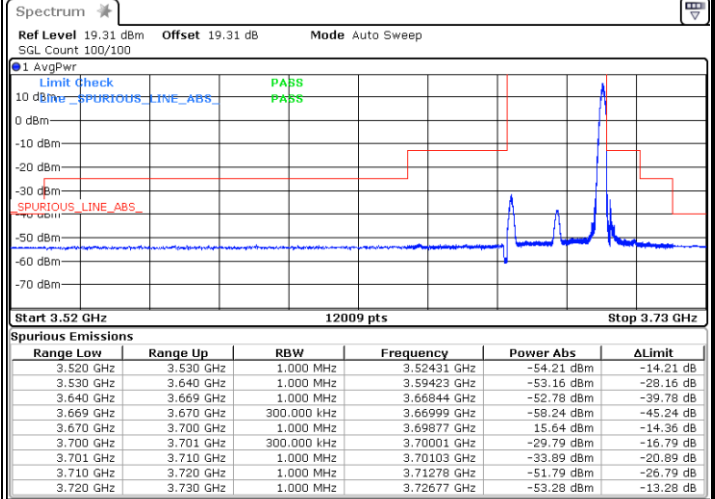
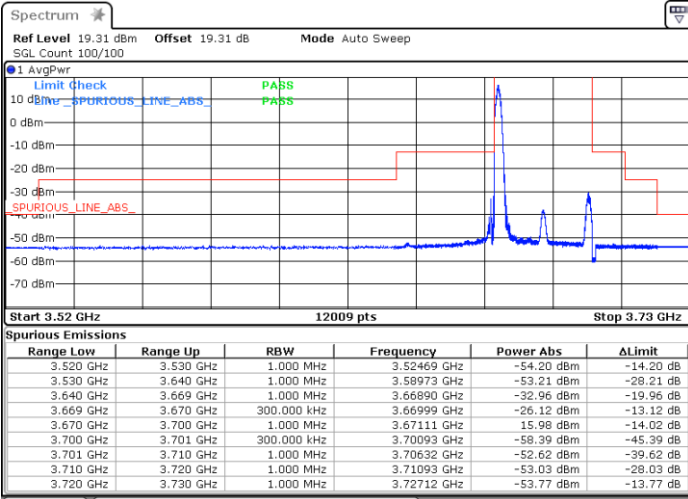


FR1 n48 / 30MHz / DFT-S OFDM / 256QAM

Highest Channel

1RB0

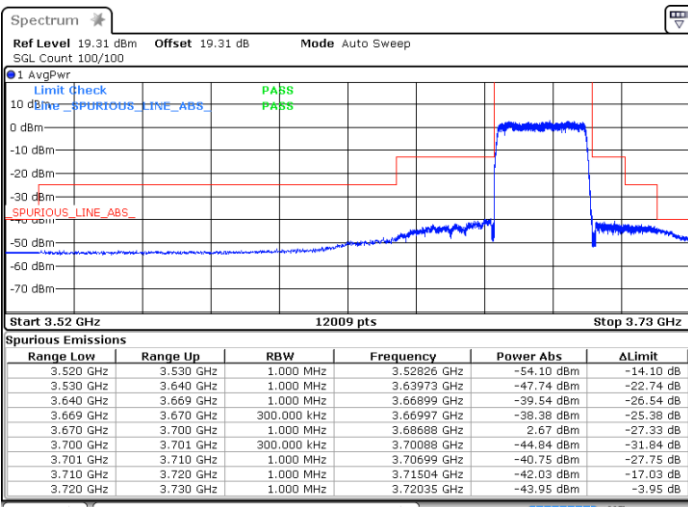
1RBmax



Date: 19.OCT.2022 00:34:03

Date: 19.OCT.2022 00:42:01

Full RB



Date: 18.OCT.2022 20:52:04

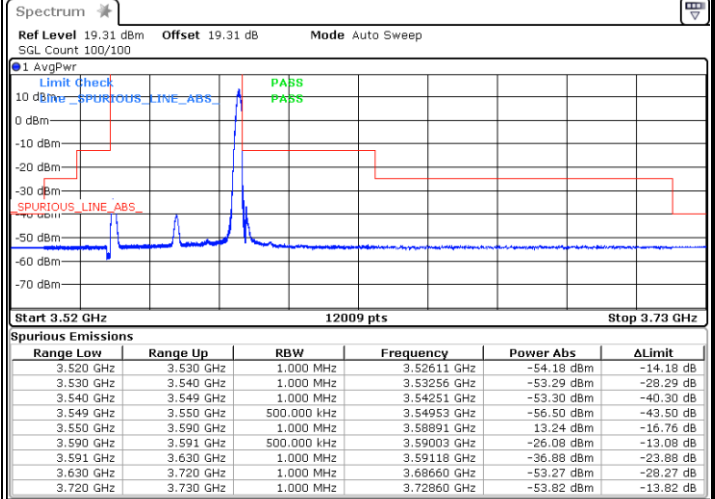
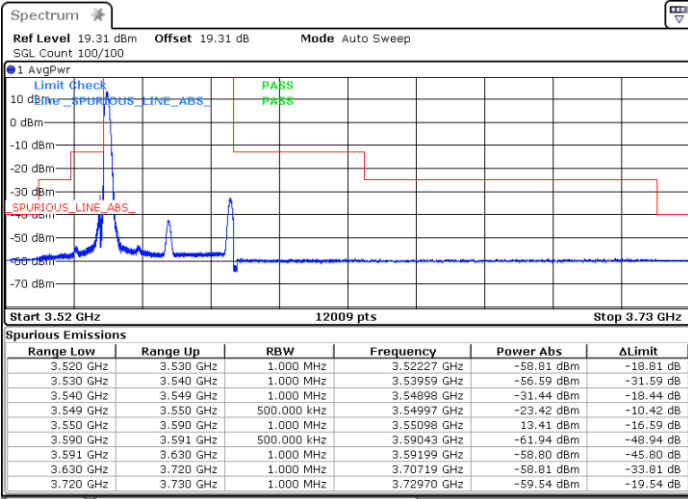


FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

Lowest Channel

1RB0

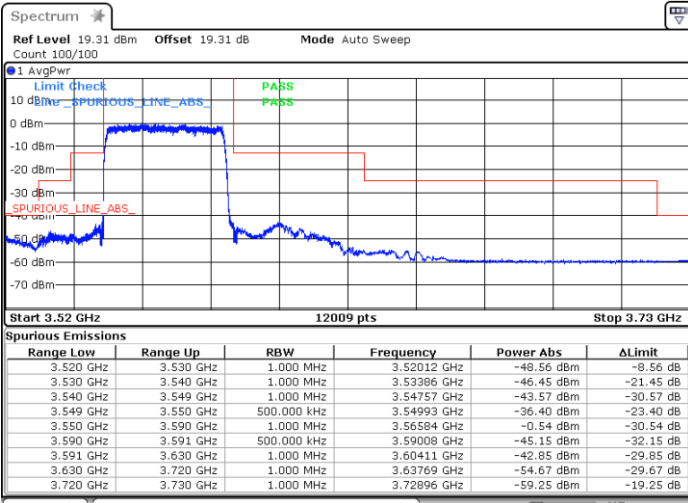
1RBmax



Date: 18.OCT.2022 23:44:20

Date: 18.OCT.2022 23:54:48

Full RB



Date: 18.OCT.2022 20:32:03

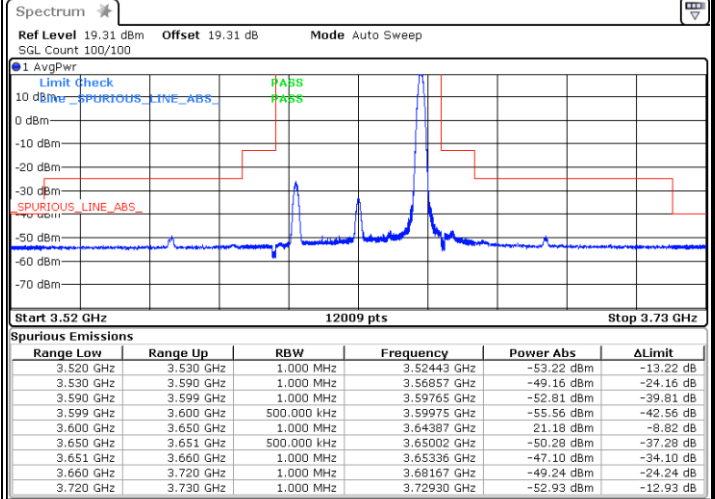
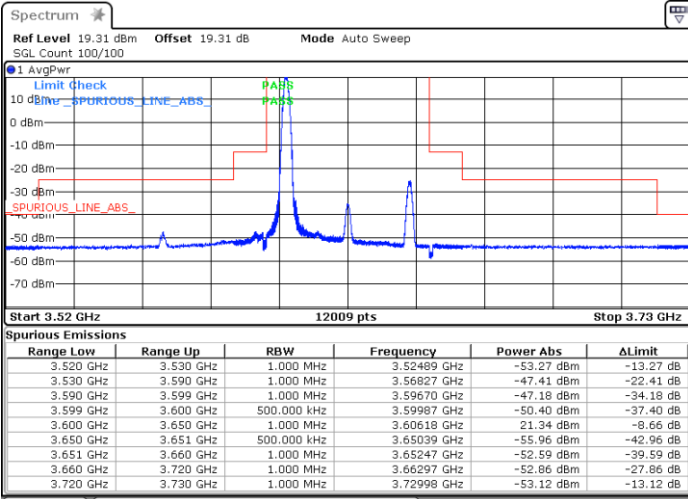


FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

Middle Channel

1RB0

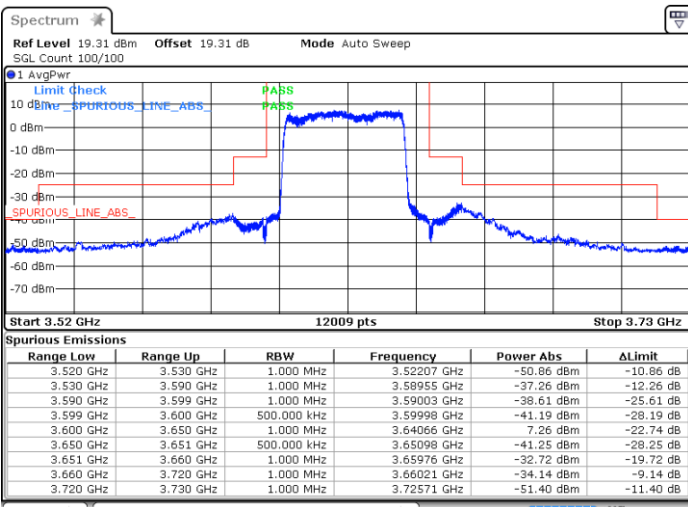
1RBmax



Date: 18.OCT.2022 23:50:51

Date: 18.OCT.2022 23:59:20

Full RB



Date: 18.OCT.2022 23:30:11

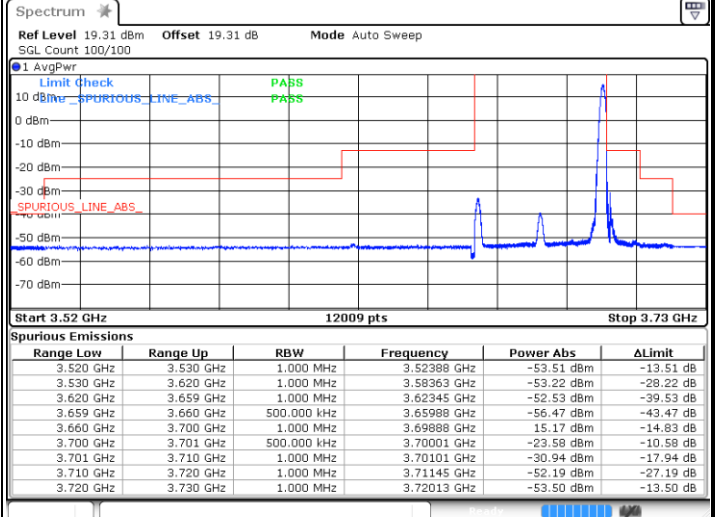
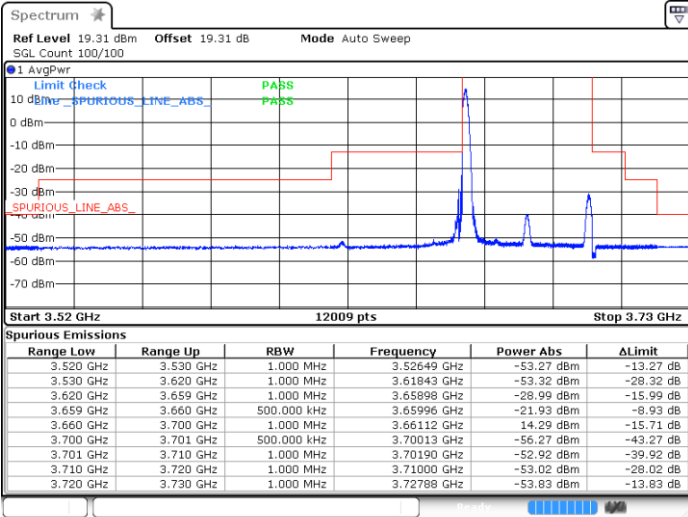


FR1 n48 / 40MHz / DFT-S OFDM / PI/2 BPSK

Highest Channel

1RB0

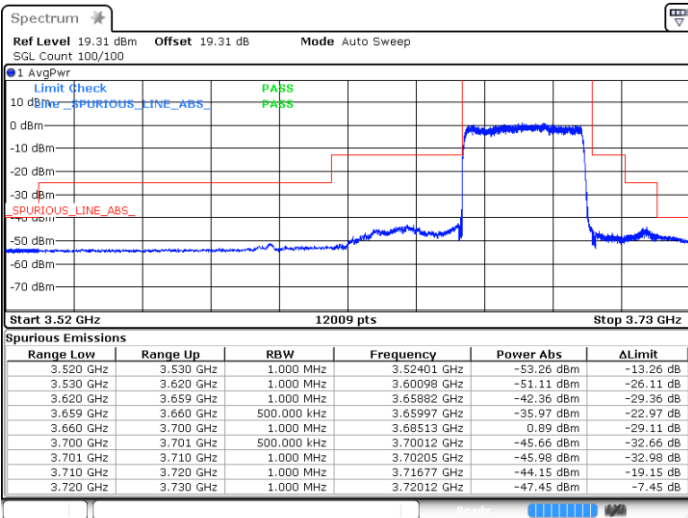
1RBmax



Date: 18.OCT.2022 23:51:42

Date: 18.OCT.2022 23:59:59

Full RB



Date: 18.OCT.2022 20:36:18

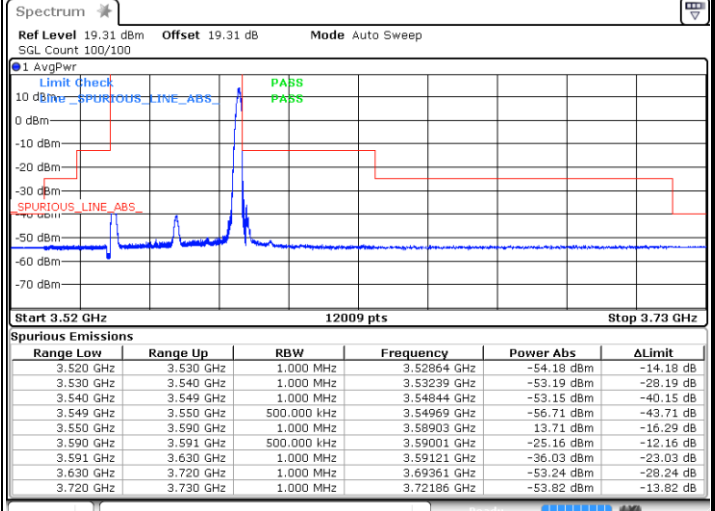
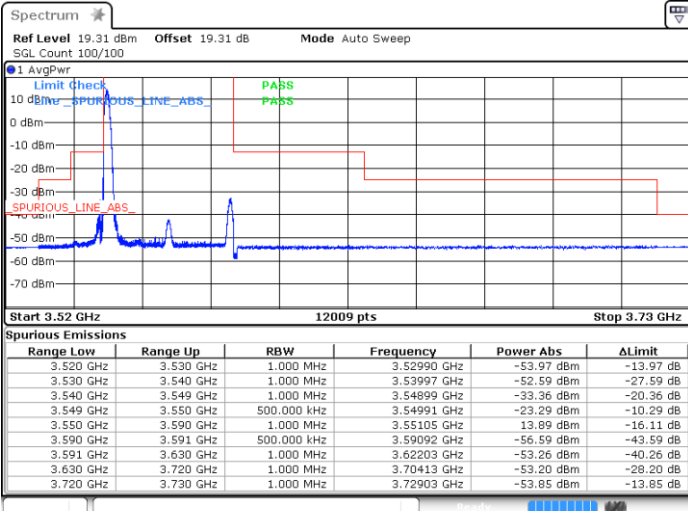


FR1 n48 / 40MHz / DFT-S OFDM / QPSK

Lowest Channel

1RB0

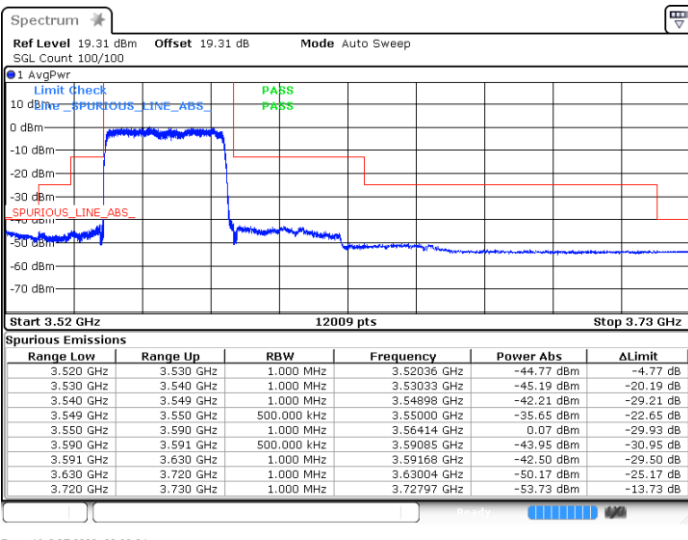
1RBmax



Date: 18.OCT.2022 23:45:41

Date: 18.OCT.2022 23:55:16

Full RB



Date: 18.OCT.2022 20:33:04

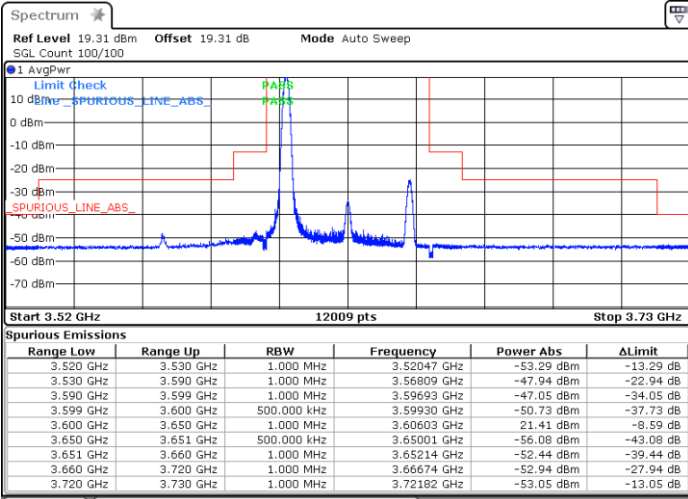


FR1 n48 / 40MHz / DFT-S OFDM / QPSK

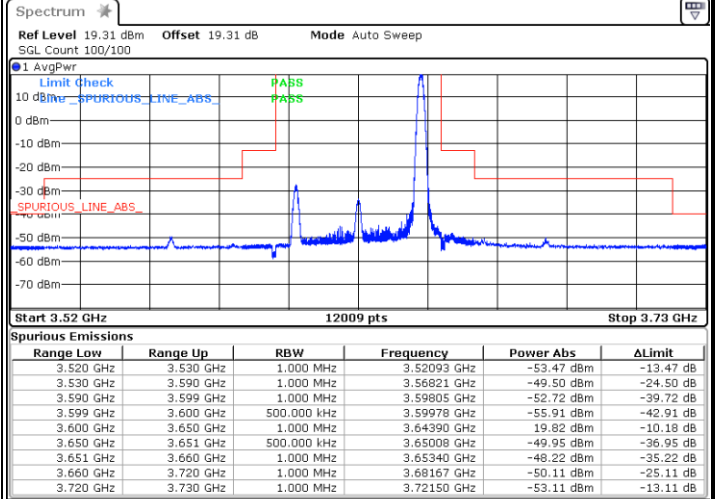
Middle Channel

1RB0

1RBmax

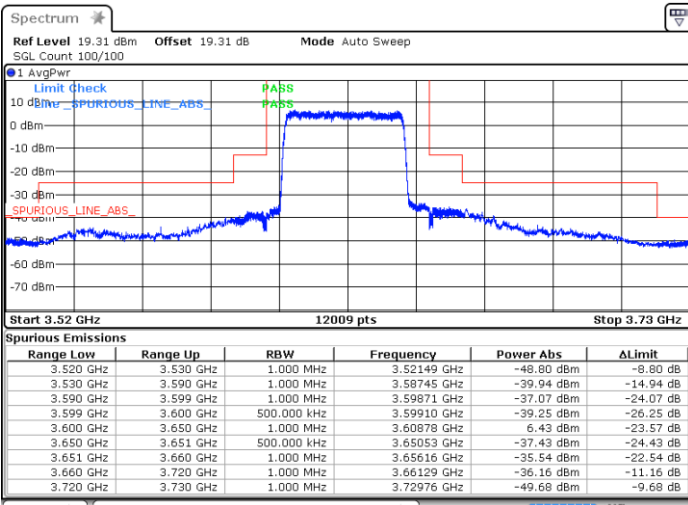


Date: 18.OCT.2022 23:49:52



Date: 18.OCT.2022 23:58:37

Full RB



Date: 18.OCT.2022 23:30:42