



FCC RADIO TEST REPORT

FCC ID : NKR-VMC-QSA515MNA
Equipment : Module (Data + Voice)
Brand Name : Wistron NeWeb Corporation
Model Name : VMC-QSA515M NA
Marketing Name : VMC-QSA515M NA
Applicant : Wistron NeWeb Corporation
20 Park Avenue II, Hsinchu Science
Park, Hsinchu 308 Taiwan
Manufacturer : Wistron NeWeb Corporation
20 Park Avenue II, Hsinchu Science
Park, Hsinchu 308 Taiwan
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27

The product was received on Aug. 30, 2023 and testing was performed from Sep. 04, 2023 to Nov. 30, 2023. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



Table of Contents

History of this test report..... 3

Summary of Test Result..... 4

1 General Description 6

 1.1 Product Feature of Equipment Under Test..... 6

 1.2 Modification of EUT 6

 1.3 Testing Location 7

 1.4 Applicable Standards..... 8

2 Test Configuration of Equipment Under Test 9

 2.1 Test Mode..... 9

 2.2 Connection Diagram of Test System..... 10

 2.3 Support Unit used in test configuration and system 10

 2.4 Measurement Results Explanation Example..... 10

 2.5 Frequency List of Low/Middle/High Channels 11

3 Conducted Test Items..... 16

 3.1 Measuring Instruments 16

 3.2 Conducted Output Power and ERP/EIRP 17

 3.3 Peak-to-Average Ratio 18

 3.4 Occupied Bandwidth..... 19

 3.5 Conducted Band Edge 20

 3.6 Conducted Spurious Emission 22

 3.7 Frequency Stability 23

4 Radiated Test Items 24

 4.1 Measuring Instruments 24

 4.2 Radiated Spurious Emission Measurement 26

5 List of Measuring Equipment..... 27

6 Measurement Uncertainty 29

Appendix A. Test Results of Conducted Test

Appendix B. Test Results of Radiated Test

Appendix C. Test Setup Photographs



History of this test report

Report No.	Version	Description	Issue Date
FG370621-01C	01	Initial issue of report	Dec. 08, 2023
FG370621-01C	02	Revise Frequency List of Low/Middle/High Channels and Description of Frequency Stability Measurement This report is an updated version, replacing the report issued on Dec. 08, 2023.	Dec. 18, 2023



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§22.913 (a)(5)	Effective Radiated Power (n5)	Pass	
	§27.50 (c)(10)	Effective Radiated Power (n71)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (n2) (n25) (n41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (n66)		
	§27.50 (j)(3) §27.50 (k)(3)	Effective Isotropic Radiated Power (n77) (n78)		
3.3	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049	Occupied Bandwidth	Reporting only	-
3.5	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (n2) (n5) (n25) (n66) (n71)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (n41)		
	§2.1051 §27.53 (l)(2) §27.53 (n)(2)	Conducted Band Edge Measurement (n77) (n78)		
3.6	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (n2) (n5) (n25) (n66) (n71)	Pass	-
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (n41)		
	§2.1051 §27.53 (l)(2) §27.53 (n)(2)	Conducted Spurious Emission (n77) (n78)		
3.7	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Pass	-



Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
4.2	§2.1053 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Radiated Spurious Emission (n2) (n5) (n25) (n66) (n71)	Pass	15.55 dB under the limit at 7753.00 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (n41)		
	§2.1051 §27.53 (l)(2) §27.53 (n)(2)	Radiated Spurious Emission (n77) (n78)		

Conformity Assessment Condition:

1. 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.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

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

Reviewed by: Avis Chuang

Report Producer: Rachel Hsieh



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs	WCDMA/LTE/5G NR, and GNSS.
Antenna Type	WWAN: Fixed External Antenna GPS / Glonass / BDS / Galileo: Dipole Antenna

Remark:

1. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.
2. Maximum allow antenna Gain : refer MPE Report FA370621-01.

Support Band and Evaluated Information	
Supported Band	n2, n5, n25, n41, n66, n71, n77, n78
Evaluated and Tested Band	n5, n25, n41, n66, n71, n77
Band Covered Information	Wider operating frequency band range covers narrower one when the power is worse as follows: <input checked="" type="checkbox"/> n25 cover n2 (Part 24) <input checked="" type="checkbox"/> n77 cover n78 (Part 27)

TDD Band Power Class		
	PC3	PC2
n41	V	V
n77	V	V
n78	V	V

1.2 Modification of EUT

No modifications made to the EUT during the testing.



1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory	
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	Sporton Site No.	
	TH03-HY	03CH07-HY
Test Engineer	Hank Chen	Jesse Wang, Stan Hsieh and Ken Wu
Temperature (°C)	22.2~27.2	24.5~26.3
Relative Humidity (%)	49.3~57.4	43~53.2

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

Test Site	Sporton International Inc. Wensan Laboratory	
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855	
Test Site No.	Sporton Site No.	
	03CH22-HY (TAF Code: 3786)	
Test Engineer	WEN-KAI Lu, Karl Hou and Bank Lin	
Temperature (°C)	18.9~24.8	
Relative Humidity (%)	61.3~70.4	
Remark	The Radiated Spurious Emission for Part27O and Part27Q test item subcontracted to Sporton International Inc. Wensan Laboratory.	

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

FCC Designation No.: TW1190 and TW3786



1.4 Applicable Standards

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

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

Remark:

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



2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in two antenna degrees (Ant. Degrees 0 and Ant. Degrees 90), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report.

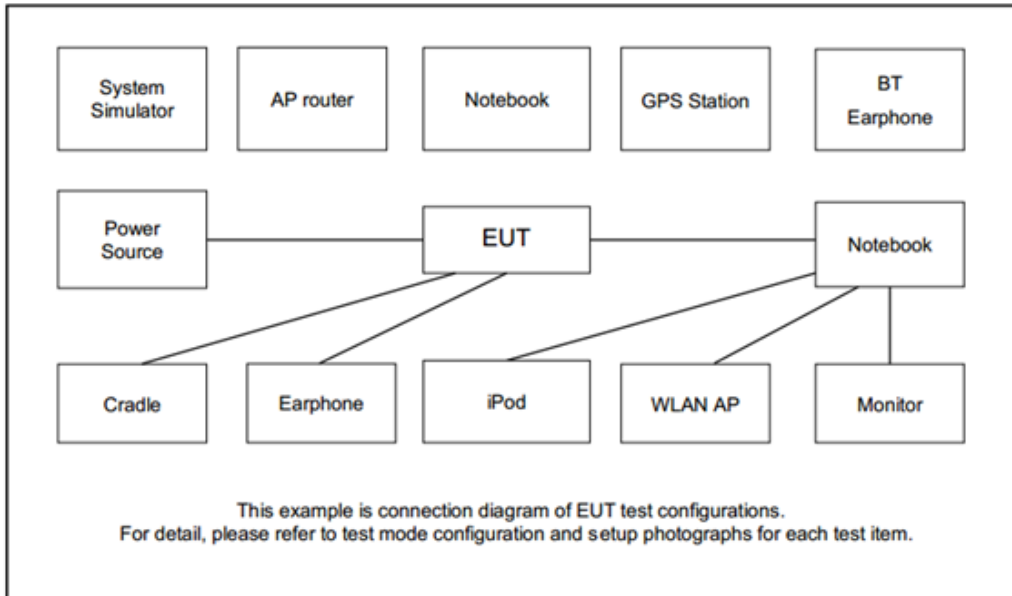
Modulation Type	Modulation	Modulation Type	Modulation
A	DFT-s-OFDM pi/2 BPSK	N/A	N/A
B	DFT-s-OFDM QPSK	F	CP-OFDM QPSK
C	DFT-s-OFDM 16QAM	G	CP-OFDM 16QAM
D	DFT-s-OFDM 64QAM	H	CP-OFDM 64QAM
E	DFT-s-OFDM 256QAM	I	CP-OFDM 256QAM

Test Item	Modulation Type	Bandwidth	RB Size	Channel
Conducted Power	A, B, C, D, E	All	1, Half, Full	L, M, H
EIRP	A, B, C, D, E	All	1, Half, Full	L, M, H
PAR	A, B, C, D, E	20 MHz or less	Outer_Full	M
Bandwidth	A, F, G, H, I	All	Outer_Full	M
CBE	A, B, C, D, E, F	All	Outer_1RB Outer_Full	L, H
CSE	B	Minimum	Inner_1RB	L, M, H
Frequency Stability	A	20 MHz or less	Outer_Full	M
RSE	A	20 MHz or less	Inner_1RB	L, M, H

Remark:

1. Evaluated all the transmitter signal and reporting worst-case configuration among all modulation types.
2. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst-case emissions are reported.
3. For 5G NR test combination are EN-DC 2A_n77A, EN-DC 5A_n77A, EN-DC 7A_n77A, EN-DC 12A_n77A, EN-DC 13A_n77A, EN-DC 14A_n77A, EN-DC 41A_n77A, EN-DC 66A_n77A, EN-DC 26A_n78A, EN-DC 41A_n78A, EN-DC 71A_n78A.

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power supply	GW Instenk	GPE2323	N/A	N/A	N/A
2.	System Simulator	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
3.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	MP2CWSBZ	PD9AX201NG	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Fixture	WNC	VMC-QSA515MIF	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

$$\text{Offset} = \text{RF cable loss} + \text{attenuator factor}.$$

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

Example :

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



2.5 Frequency List of Low/Middle/High Channels

5G NR n2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	372000	376000	380000
	Frequency	1860	1880	1900
15	Channel	371500	376000	380500
	Frequency	1857.5	1880	1902.5
10	Channel	371000	376000	381000
	Frequency	1855	1880	1905
5	Channel	370500	376000	381500
	Frequency	1852.5	1880	1907.5

5G NR n5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	166800	167300	167800
	Frequency	834	836.5	839
15	Channel	166300	167300	168300
	Frequency	831.5	836.5	841.5
10	Channel	165800	167300	168800
	Frequency	829	836.5	844
5	Channel	165300	167300	169300
	Frequency	826.5	836.5	846.5

5G NR n25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	372000	376500	381000
	Frequency	1860	1882.5	1905
15	Channel	371500	376500	381500
	Frequency	1857.5	1882.5	1907.5
10	Channel	371000	376500	382000
	Frequency	1855	1882.5	1910
5	Channel	370500	376500	382500
	Frequency	1852.5	1882.5	1912.5



5G NR n41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	346000	349000	352000
	Frequency	1730	1745	1760
20	Channel	344000	349000	354000
	Frequency	1720	1745	1770
15	Channel	343500	349000	354500
	Frequency	1717.5	1745	1772.5
10	Channel	343000	349000	355000
	Frequency	1715	1745	1775
5	Channel	342500	349000	355500
	Frequency	1712.5	1745	1777.5



5G NR n71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	134600	136100	137600
	Frequency	673	680.5	688
15	Channel	134100	136100	138100
	Frequency	670.5	680.5	690.5
10	Channel	133600	136100	138600
	Frequency	668	680.5	693
5	Channel	133100	136100	139100
	Frequency	665.5	680.5	695.5



Part270_5G NR Band n77 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	650000	656000	662000
	Frequency	3750	3840	3930
90	Channel	649668	656000	662332
	Frequency	3745.02	3840	3934.98
80	Channel	649334	656000	662666
	Frequency	3740.01	3840	3939.99
60	Channel	648668	656000	663332
	Frequency	3730.02	3840	3949.98
50	Channel	648334	656000	663666
	Frequency	3725.01	3840	3954.99
40	Channel	648000	656000	664000
	Frequency	3720	3840	3960
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99

Part270_5G NR n78 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	-	650000	-
	Frequency	-	3750	-
90	Channel	649668	650000	650332
	Frequency	3745.02	3750	3754.98
80	Channel	649334	650000	650666
	Frequency	3740.01	3750	3759.99
60	Channel	648668	650000	651332
	Frequency	3730.02	3750	3769.98
50	Channel	648334	650000	651666
	Frequency	3725.01	3750	3774.99
40	Channel	648000	650000	652000
	Frequency	3720	3750	3780
20	Channel	647334	650000	652666
	Frequency	3710.01	3750	3789.99



Part27Q_5G NR Band n77 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	-	633334	-
	Frequency	-	3500.01	-
90	Channel	633000	633334	633666
	Frequency	3495	3500.01	3504.99
80	Channel	632668	633334	634000
	Frequency	3490.02	3500.01	3510
60	Channel	632000	633334	634666
	Frequency	3480	3500.01	3519.99
50	Channel	631668	633334	635000
	Frequency	3475.02	3500.01	3525
40	Channel	631334	633334	635332
	Frequency	3470.01	3500.01	3529.98
20	Channel	630668	633334	636000
	Frequency	3460.02	3500.01	3540

Part27Q_5G NR n78 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	-	633334	-
	Frequency	-	3500.01	-
90	Channel	633000	633334	633666
	Frequency	3495	3500.01	3504.99
80	Channel	632668	633334	634000
	Frequency	3490.02	3500.01	3510
60	Channel	632000	633334	634666
	Frequency	3480	3500.01	3519.99
50	Channel	631668	633334	635000
	Frequency	3475.02	3500.01	3525
40	Channel	631334	633334	635332
	Frequency	3470.01	3500.01	3529.98
20	Channel	630668	633334	636000
	Frequency	3460.02	3500.01	3540

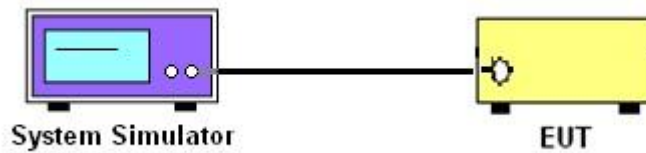
3 Conducted Test Items

3.1 Measuring Instruments

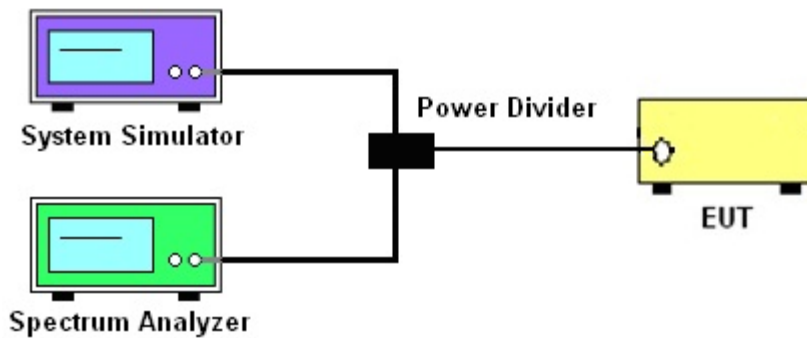
See list of measuring instruments of this test report.

3.1.1 Test Setup

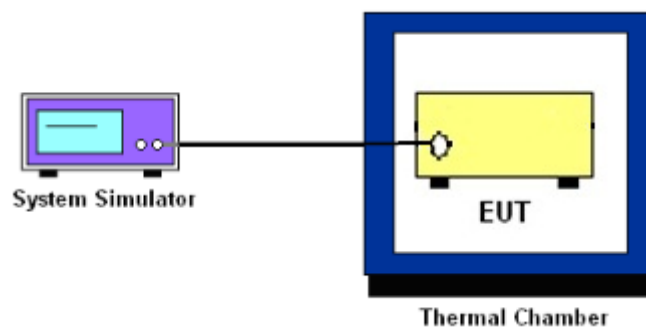
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power and ERP/EIRP

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

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

The ERP of mobile transmitters must not exceed 7 Watts for 5G NR n5

The ERP of mobile transmitters must not exceed 3 Watts for 5G NR n71

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n2, n25, n41

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n66

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n77 and n78

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.2.2 Test Procedures

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



3.3 Peak-to-Average Ratio

3.3.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.



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

22.917(a)

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

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698-746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

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

27.53 (h)

For operations in the 1695–1710 MHz, 1710 – 1755 MHz, 1755-1780 MHz bands, the limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

**27.53(m)(4)**

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

3.5.2 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. Checked that all the results comply with the emission limit line.

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

For 5G NR n41

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



3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

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

For 5G NR n41

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

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

3.6.2 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 conducted spurious emission for the whole frequency range was taken.
4. Make the measurement with the spectrum analyzer's RBW = 100 kHz if the authorized frequency band/block is at or below 1 GHz and 1 MHz if the authorized frequency band/block is above 1 GH, VBW = 3 * RBW.
5. Set spectrum analyzer with RMS detector.
6. Taking the record of maximum spurious emission.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

For 5G NR n41

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



3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

22.355

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

24.235 & 27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

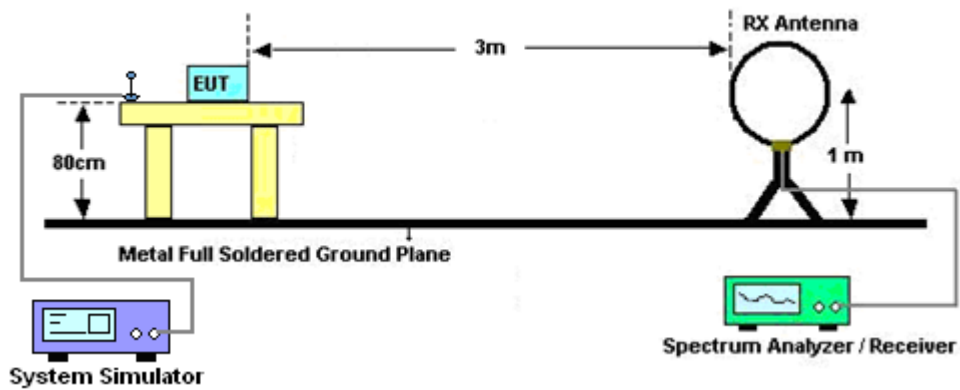
4 Radiated Test Items

4.1 Measuring Instruments

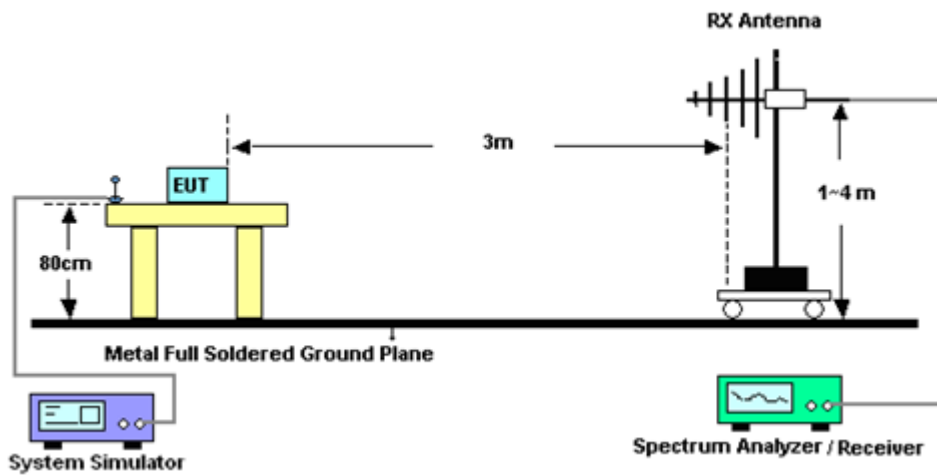
See list of measuring instruments of this test report.

4.1.1 Test Setup

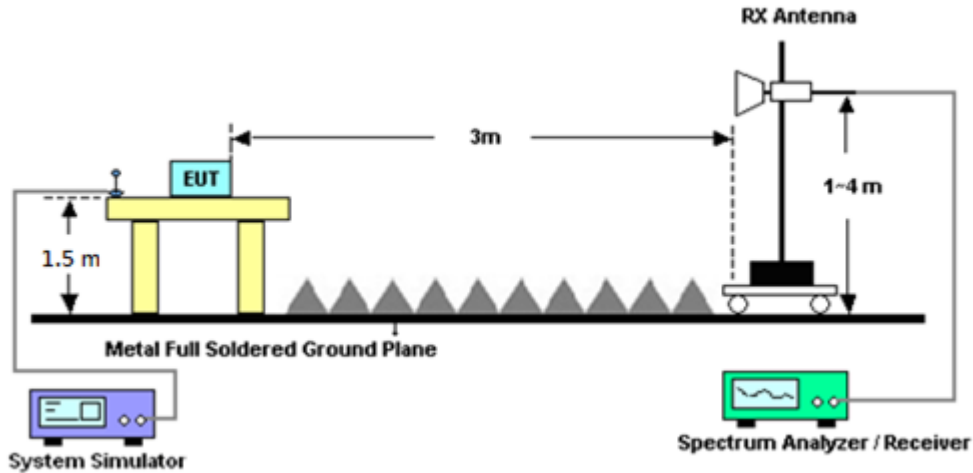
For radiated test below 30MHz



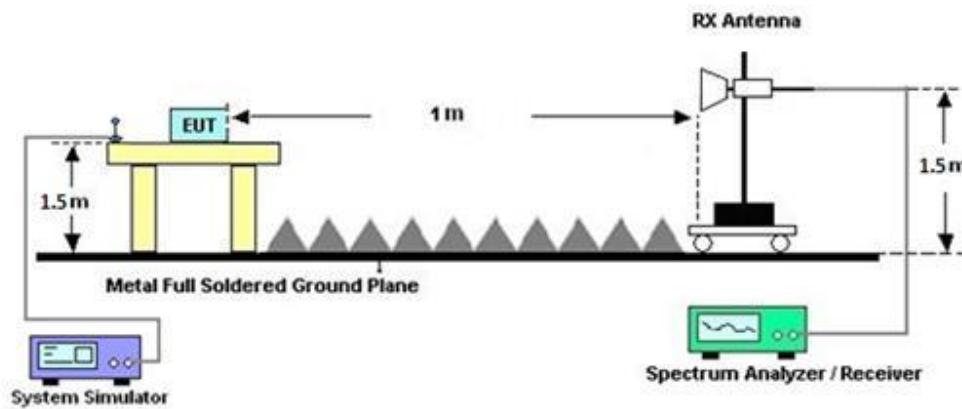
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

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

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



4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

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

For 5G NR n41

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

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

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI C63.26-2015 section 5.5.4 Radiated measurement using the field strength method.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. To convert spectrum reading E(dBuV/m) to EIRP(dBm)
 $EIRP(dBm) = Level (dBuV/m) + 20\log(d) - 104.77,$
where d is the distance at which field strength limit is specified in the rules
7. Field Strength Level (dBm) = Spectrum Reading (dBm) + Antenna Factor + Cable Loss + Read Level - Preamp Factor.
8. ERP (dBm) = EIRP (dBm) - 2.15
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

For LTE Band 41

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



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D&00802N1 D01N-06	55608 & 09	30MHz~1GHz	Oct. 20, 2023	Oct. 27, 2023~ Nov. 08, 2023	Oct. 19, 2024	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 01, 2022	Oct. 27, 2023~ Nov. 08, 2023	Nov. 30, 2023	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Feb. 28, 2023	Oct. 27, 2023~ Nov. 08, 2023	Feb. 27, 2024	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010180 0-30-10P	1590075	1GHz~18GHz	Apr. 20, 2023	Oct. 27, 2023~ Nov. 08, 2023	Apr. 19, 2024	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	Oct. 02, 2023	Oct. 27, 2023~ Nov. 08, 2023	Oct. 01, 2024	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Mar. 24, 2023	Oct. 27, 2023~ Nov. 08, 2023	Mar. 23, 2024	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Jul. 25, 2023	Oct. 27, 2023~ Nov. 08, 2023	Jul. 24, 2024	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Mar. 28, 2023	Oct. 27, 2023~ Nov. 08, 2023	Mar. 27, 2024	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682/4	30MHz to 18GHz	Feb. 22, 2023	Oct. 27, 2023~ Nov. 08, 2023	Feb. 21, 2024	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4	9kHz to 18GHz	Feb. 22, 2023	Oct. 27, 2023~ Nov. 08, 2023	Feb. 21, 2024	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4	9kHz to 18GHz	Feb. 22, 2023	Oct. 27, 2023~ Nov. 08, 2023	Feb. 21, 2024	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126	532078/126E	30MHz~18GHz	Sep. 15, 2023	Oct. 27, 2023~ Nov. 08, 2023	Sep. 14, 2024	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2	18GHz~40GHz	Feb. 22, 2023	Oct. 27, 2023~ Nov. 08, 2023	Feb. 21, 2024	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801606/2	9KHz ~ 40GHz	Apr. 20, 2023	Oct. 27, 2023~ Nov. 08, 2023	Apr. 19, 2024	Radiation (03CH07-HY)
Controller	EMEC	EM1000	N/A	Control Ant Mast	N/A	Oct. 27, 2023~ Nov. 08, 2023	N/A	Radiation (03CH07-HY)
Controller	MF	MF-7802	N/A	Control Turn table	N/A	Oct. 27, 2023~ Nov. 08, 2023	N/A	Radiation (03CH07-HY)
Antenna Mast	EMEC	AM-BS-4500E	N/A	Boresight mast 1M~4M	N/A	Oct. 27, 2023~ Nov. 08, 2023	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Oct. 27, 2023~ Nov. 08, 2023	N/A	Radiation (03CH07-HY)
Software	Audix	E3	N/A	N/A	N/A	Oct. 27, 2023~ Nov. 08, 2023	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	Mar. 14, 2023	Oct. 27, 2023~ Nov. 08, 2023	Mar. 13, 2024	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290053	20Hz~26.5GHz	Aug. 29, 2023	Oct. 27, 2023~ Nov. 08, 2023	Aug. 28, 2024	Radiation (03CH07-HY)
Horn Antenna	ETS-Lindgren	3117	00143261	1GHz~18GHz	Feb. 24, 2023	Oct. 27, 2023~ Nov. 08, 2023	Feb. 23, 2024	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 24, 2022	Oct. 27, 2023~ Nov. 08, 2023	Nov. 23, 2023	Radiation (03CH07-HY)
Signal Generator	Anritsu	MG3710A	6261943042	2G / 3G / LTE / 5G FR1	May 25, 2023	Oct. 27, 2023~ Nov. 08, 2023	May 24, 2024	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 12, 2023	Oct. 20, 2023~ Nov. 27, 2023	Sep. 11, 2024	Radiation (03CH22-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	40103 & 07	30MHz~1GHz	Apr. 23, 2023	Oct. 20, 2023~ Nov. 27, 2023	Apr. 22, 2024	Radiation (03CH22-HY)
Amplifier	SONOMA	310N	421581	N/A	Jul. 15, 2023	Oct. 20, 2023~ Nov. 27, 2023	Jul. 14, 2024	Radiation (03CH22-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C04A18EN	1GHz~18GHz	Jul. 12, 2023	Oct. 20, 2023~Nov. 27, 2023	Jul. 11, 2024	Radiation (03CH22-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz-40GHz	Jul. 10, 2023	Oct. 20, 2023~Nov. 27, 2023	Jul. 09, 2024	Radiation (03CH22-HY)
Amplifier	EMEC	EM01G18GA	060877	N/A	Sep. 28, 2023	Oct. 20, 2023~Nov. 27, 2023	Sep. 27, 2024	Radiation (03CH22-HY)
Preamplifier	EMEC	EM18G40G	060872	18-40GHz	Sep. 06, 2023	Oct. 20, 2023~Nov. 27, 2023	Sep. 05, 2024	Radiation (03CH22-HY)
Signal Analyzer	Keysight	N9010B	MY60241058	10Hz~44GHz	Jul. 06, 2023	Oct. 20, 2023~Nov. 27, 2023	Jul. 05, 2024	Radiation (03CH22-HY)
Hygrometer	TECPEL	DTM-303A	TP201998	N/A	Oct. 17, 2023	Oct. 20, 2023~Nov. 27, 2023	Oct. 16, 2024	Radiation (03CH22-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 20, 2023~Nov. 27, 2023	N/A	Radiation (03CH22-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Oct. 20, 2023~Nov. 27, 2023	N/A	Radiation (03CH22-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Oct. 20, 2023~Nov. 27, 2023	N/A	Radiation (03CH22-HY)
Software	Audix	E3 6.09824_2019122	RK-002347	N/A	N/A	Oct. 20, 2023~Nov. 27, 2023	N/A	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 07, 2023	Oct. 20, 2023~Nov. 27, 2023	Mar. 06, 2024	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804390/2,804611/2,804615/2	N/A	Oct. 25, 2022	Oct. 20, 2023~Oct. 23, 2023	Oct. 24, 2023	Radiation (03CH22-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804390/2,804611/2,804615/2	N/A	Oct. 24, 2023	Oct. 24, 2023~Nov. 27, 2023	Oct. 23, 2024	Radiation (03CH22-HY)
Filter	Wainwright	WHKX12-900-1000-15000-60SS	SN8	1GHz High Pass Filter	Nov. 03, 2022	Oct. 20, 2023~Nov. 01, 2023	Nov. 02, 2023	Radiation (03CH22-HY)
Filter	Wainwright	WHKX12-900-1000-15000-60SS	SN6	1GHz High Pass Filter	Nov. 02, 2023	Nov. 02, 2023~Nov. 27, 2023	Nov. 01, 2023	Radiation (03CH22-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN29	1.53GHz Low Pass Filter	May 23, 2023	Oct. 20, 2023~Nov. 27, 2023	May 22, 2024	Radiation (03CH22-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN25	6.75GHz High Pass Filter	Nov. 14, 2022	Oct. 20, 2023~Nov. 12, 2023	Nov. 13, 2023	Radiation (03CH22-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN25	6.75GHz High Pass Filter	Nov. 13, 2023	Nov. 13, 2023~Nov. 27, 2023	Nov. 12, 2024	Radiation (03CH22-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN7	N/A	Dec. 02, 2022	Oct. 20, 2023~Nov. 27, 2023	Dec. 01, 2023	Radiation (03CH22-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 28, 2023	Sep. 04, 2023~Nov. 30, 2023	Mar. 27, 2024	Conducted (TH03-HY)
Radio Communication Test Station	Anritsu	MT8000A	6262134937	N/A	Jul. 19, 2023	Nov. 09, 2023~Nov. 30, 2023	Jul. 18, 2024	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8821C	6262116730	LTE FDD/TDD LTE-3CC DLCA/2CC ULCA	Jul. 10, 2023	Nov. 09, 2023~Nov. 30, 2023	Jul. 09, 2024	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	GPE-2323	GET910884	0V~64V ;0A~6A	Dec. 21, 2022	Sep. 04, 2023~Nov. 30, 2023	Dec. 20, 2023	Conducted (TH03-HY)
Temperature Chamber	ESPEC	LHU-113	1012005860	-20°C ~85°C	Dec. 05, 2022	Sep. 04, 2023~Nov. 30, 2023	Dec. 04, 2023	Conducted (TH03-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101102	10Hz~44GHz	Feb. 02, 2023	Sep. 04, 2023~Nov. 30, 2023	Feb. 01, 2024	Conducted (TH03-HY)
Signal Analyzer	Rohde & Schwarz	FSW43	101456	RBW 50MHz	Feb. 23, 2023	Sep. 04, 2023~Nov. 30, 2023	Feb. 22, 2024	Conducted (TH03-HY)



6 Measurement Uncertainty

<03CH07-HY>

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.46 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.33 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.91 dB
---	---------

<03CH22-HY>

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.97 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.38 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.94 dB
---	---------



Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

NR n2 Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
5	1	1	PI/2 BPSK	22.53	22.42	22.85	22.97	0.1982
5	1	23		22.58	22.45	22.87		
5	12	6		22.55	22.43	22.89		
5	1	0		21.95	21.86	22.20		
5	1	24		22.01	21.97	22.31		
5	25	0		22.03	21.92	22.34		
5	1	1	QPSK	22.49	22.45	22.77		
5	1	23		22.41	22.59	22.97		
5	12	6		22.53	22.43	22.86		
5	1	0		21.35	21.32	21.66		
5	1	24		21.56	21.33	21.82		
5	25	0		21.55	21.43	21.84		
5	1	1	16-QAM	21.41	21.45	22.01	22.01	0.1589
5	1	1	64-QAM	20.04	19.95	20.26		
5	1	1	256-QAM	17.81	17.95	18.24		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
10	1	1	PI/2 BPSK	22.34	22.38	22.72	22.83	0.1919
10	1	50		22.55	22.59	22.81		
10	25	12		22.53	22.45	22.83		
10	1	0		21.86	21.88	22.27		
10	1	51		22.07	22.09	22.35		
10	50	0		22.03	21.95	22.27		
10	1	1	QPSK	22.41	22.35	22.71		
10	1	50		22.62	22.52	22.83		
10	25	12		22.53	22.45	22.81		
10	1	0		21.41	21.33	21.67		
10	1	51		21.45	21.45	21.74		
10	50	0		21.55	21.45	21.76		
10	1	1	16-QAM	21.33	21.34	21.65	21.65	0.1462
10	1	1	64-QAM	20.02	20.02	20.08		
10	1	1	256-QAM	18.01	17.86	18.20		
Limit	EIRP < 2W			Result			Pass	



NR n2 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
15	1	1	PI/2 BPSK	22.53	22.30	22.72	22.92	0.1959		
15	1	77		22.51	22.61	22.90				
15	36	18		22.56	22.48	22.81				
15	1	0		22.00	21.84	22.08				
15	1	78		22.01	22.14	22.39				
15	75	0		22.02	21.95	22.31				
15	1	1	QPSK	22.41	22.34	22.65			21.62	0.1452
15	1	77		22.54	22.64	22.92				
15	36	18		22.58	22.45	22.85				
15	1	0		21.47	21.23	21.67				
15	1	78		21.45	21.64	21.95				
15	75	0		21.60	21.47	21.79				
15	1	1	16-QAM	21.44	21.44	21.62	21.62	0.1452		
15	1	1	64-QAM	20.01	19.85	20.17				
15	1	1	256-QAM	18.02	17.92	18.12				
Limit	EIRP < 2W			Result			Pass			

NR n2 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	22.41	22.30	22.51	22.95	0.1972		
20	1	104		22.44	22.61	22.95				
20	50	25		22.50	22.47	22.72				
20	1	0		21.96	21.81	22.06				
20	1	105		21.97	22.14	22.43				
20	100	0		21.88	21.95	22.23				
20	1	1	QPSK	22.46	22.37	22.55			21.61	0.1449
20	1	104		22.49	22.64	22.90				
20	50	25		22.42	22.45	22.79				
20	1	0		21.40	21.34	21.63				
20	1	105		21.43	21.61	21.81				
20	100	0		21.45	21.48	21.79				
20	1	1	16-QAM	21.45	21.35	21.61	21.61	0.1449		
20	1	1	64-QAM	20.05	19.72	20.06				
20	1	1	256-QAM	17.92	17.92	18.10				
Limit	EIRP < 2W			Result			Pass			



NR n5 Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
5	1	1	PI/2 BPSK	22.49	22.73	22.81	22.85	0.1928
5	1	23		22.42	22.64	22.70		
5	12	6		22.42	22.61	22.75		
5	1	0		21.96	22.08	22.24		
5	1	24		21.93	22.11	22.24		
5	25	0		21.95	22.11	22.25		
5	1	1	QPSK	22.62	22.54	22.85		
5	1	23		22.55	22.49	22.73		
5	12	6		22.45	22.57	22.72		
5	1	0		21.43	21.55	21.74		
5	1	24		21.36	21.60	21.68		
5	25	0		21.54	21.62	21.75		
5	1	1	16-QAM	21.34	21.74	21.75	21.75	0.1496
5	1	1	64-QAM	20.10	20.12	20.29		
5	1	1	256-QAM	18.01	18.13	18.24		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
10	1	1	PI/2 BPSK	22.32	22.44	22.58	22.76	0.1888
10	1	50		22.58	22.54	21.02		
10	25	12		22.53	22.60	22.69		
10	1	0		21.94	21.95	21.02		
10	1	51		22.05	22.05	20.40		
10	50	0		22.05	22.13	22.23		
10	1	1	QPSK	22.47	22.45	22.57		
10	1	50		22.46	22.60	22.76		
10	25	12		22.55	22.65	22.72		
10	1	0		21.30	21.45	21.56		
10	1	51		21.49	21.62	21.71		
10	50	0		21.57	21.56	21.73		
10	1	1	16-QAM	21.40	21.40	21.53	21.53	0.1422
10	1	1	64-QAM	19.94	20.06	20.18		
10	1	1	256-QAM	17.86	18.03	18.09		
Limit	ERP < 7W			Result			Pass	



NR n5 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
15	1	1	PI/2 BPSK	22.39	22.53	22.61	22.87	0.1936		
15	1	77		22.62	22.73	22.87				
15	36	18		22.61	22.61	22.69				
15	1	0		22.02	22.10	22.14				
15	1	78		22.18	22.30	22.39				
15	75	0		22.09	22.15	22.19				
15	1	1	QPSK	22.42	22.59	22.55			21.57	0.1435
15	1	77		22.58	22.76	22.87				
15	36	18		22.63	22.62	22.69				
15	1	0		21.43	21.61	21.51				
15	1	78		21.61	21.81	21.82				
15	75	0		21.64	21.65	21.69				
15	1	1	16-QAM	21.39	21.51	21.57	21.57	0.1435		
15	1	1	64-QAM	20.15	20.05	20.13				
15	1	1	256-QAM	17.92	17.98	18.04				
Limit	ERP < 7W			Result			Pass			

NR n5 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	22.38	22.41	22.50	22.91	0.1954		
20	1	104		22.68	22.76	22.85				
20	50	25		22.68	22.67	22.55				
20	1	0		21.90	21.98	22.03				
20	1	105		22.18	22.22	22.34				
20	100	0		22.17	22.18	22.14				
20	1	1	QPSK	22.43	22.51	22.59			21.53	0.1422
20	1	104		22.71	22.83	22.91				
20	50	25		22.69	22.70	22.60				
20	1	0		21.47	21.47	21.56				
20	1	105		21.77	21.82	21.90				
20	100	0		21.69	21.68	21.65				
20	1	1	16-QAM	21.50	21.44	21.53	21.53	0.1422		
20	1	1	64-QAM	19.93	20.04	20.07				
20	1	1	256-QAM	17.90	17.96	18.02				
Limit	ERP < 7W			Result			Pass			



NR n25 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
5	1	1	PI/2 BPSK	22.71	22.48	23.05	23.16	0.2070		
5	1	23		22.78	22.64	23.16				
5	12	6		22.79	22.68	23.10				
5	1	0		22.31	22.08	22.59				
5	1	24		22.18	22.19	22.58				
5	25	0		22.35	22.13	22.60				
5	1	1	QPSK	22.71	22.68	23.02			23.16	0.2070
5	1	23		22.72	22.72	23.02				
5	12	6		22.83	22.64	23.12				
5	1	0		21.73	21.46	22.07				
5	1	24		21.80	21.62	22.06				
5	25	0		21.83	21.60	22.13				
5	1	1	16-QAM	21.85	21.50	22.07	22.07	0.1611		
5	1	1	64-QAM	20.36	20.02	20.48				
5	1	1	256-QAM	18.21	18.12	18.56				
Limit	EIRP < 2W			Result			Pass			

NR n25 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
10	1	1	PI/2 BPSK	22.06	22.57	22.93	23.02	0.2004		
10	1	50		22.71	22.72	23.02				
10	25	12		22.77	22.71	23.02				
10	1	0		21.56	22.09	22.46				
10	1	51		22.14	22.27	22.47				
10	50	0		22.26	22.14	22.53				
10	1	1	QPSK	22.69	22.65	23.01			23.02	0.2004
10	1	50		22.79	22.79	23.02				
10	25	12		22.72	22.69	23.00				
10	1	0		21.70	21.55	21.95				
10	1	51		21.69	21.71	22.02				
10	50	0		21.75	21.69	22.00				
10	1	1	16-QAM	21.71	21.53	22.02	22.02	0.1592		
10	1	1	64-QAM	20.10	20.03	20.60				
10	1	1	256-QAM	18.21	18.06	18.44				
Limit	EIRP < 2W			Result			Pass			



NR n25 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
15	1	1	PI/2 BPSK	22.78	22.63	22.90	23.15	0.2065		
15	1	77		22.67	22.79	23.15				
15	36	18		22.79	22.68	23.12				
15	1	0		22.33	22.15	22.39				
15	1	78		22.19	22.28	22.63				
15	75	0		22.22	22.19	22.56				
15	1	1	QPSK	22.67	22.64	22.80			23.15	0.2065
15	1	77		22.61	22.91	23.12				
15	36	18		22.76	22.70	23.12				
15	1	0		21.65	21.59	21.93				
15	1	78		21.68	21.79	22.14				
15	75	0		21.76	21.65	22.15				
15	1	1	16-QAM	21.75	21.58	21.73	21.75	0.1496		
15	1	1	64-QAM	20.24	20.11	20.44				
15	1	1	256-QAM	18.26	18.15	18.42				
Limit	EIRP < 2W			Result			Pass			

NR n25 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	22.74	22.68	22.86	23.17	0.2075		
20	1	104		22.65	22.81	23.06				
20	50	25		22.76	22.64	23.03				
20	1	0		22.25	22.12	22.37				
20	1	105		22.16	22.31	22.64				
20	100	0		22.25	22.15	22.53				
20	1	1	QPSK	22.65	22.71	22.90			23.17	0.2075
20	1	104		22.65	22.82	23.17				
20	50	25		22.79	22.71	23.01				
20	1	0		21.68	21.66	21.80				
20	1	105		21.64	21.83	22.13				
20	100	0		21.78	21.70	22.00				
20	1	1	16-QAM	21.65	21.71	21.83	21.83	0.1524		
20	1	1	64-QAM	20.21	20.22	20.40				
20	1	1	256-QAM	18.24	18.15	18.35				
Limit	EIRP < 2W			Result			Pass			



NR n41 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	25.50	25.62	25.63	25.70	0.3715		
20	1	49		25.53	25.59	25.65				
20	25	12		25.60	25.63	25.70				
20	1	0		22.09	22.12	22.15				
20	1	50		22.05	22.07	22.15				
20	50	0		25.09	25.16	25.18				
20	1	1	QPSK	25.57	25.64	25.61			24.63	0.2904
20	1	49		25.56	25.58	25.70				
20	25	12		25.57	25.65	25.68				
20	1	0		22.06	22.15	22.12				
20	1	50		22.07	22.15	22.18				
20	50	0		24.58	24.64	24.66				
20	1	1	16-QAM	24.55	24.57	24.63	24.63	0.2904		
20	1	1	64-QAM	23.10	23.15	23.13				
20	1	1	256-QAM	21.07	21.20	21.20				
Limit	EIRP < 2W			Result			Pass			

NR n41 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
40	1	1	PI/2 BPSK	25.94	25.91	25.93	26.16	0.4130		
40	1	104		25.96	26.06	26.10				
40	50	25		25.94	26.00	25.96				
40	1	0		22.48	22.40	22.43				
40	1	105		22.48	22.59	22.62				
40	100	0		25.49	25.53	25.46				
40	1	1	QPSK	25.95	25.92	24.94			24.97	0.3141
40	1	104		26.00	26.16	26.15				
40	50	25		25.92	25.95	25.93				
40	1	0		22.49	22.42	22.45				
40	1	105		22.51	22.67	22.63				
40	100	0		25.00	25.00	24.98				
40	1	1	16-QAM	24.95	24.85	24.97	24.97	0.3141		
40	1	1	64-QAM	23.45	23.47	23.47				
40	1	1	256-QAM	21.47	21.43	21.49				
Limit	EIRP < 2W			Result			Pass			



NR n41 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
50	1	1	PI/2 BPSK	25.91	25.83	25.66	26.04	0.4018		
50	1	131		25.94	26.02	25.98				
50	64	32		26.00	26.00	25.83				
50	1	0		22.44	22.34	22.13				
50	1	132		22.40	22.52	22.43				
50	128	0		25.45	25.48	25.32				
50	1	1	QPSK	25.92	25.84	25.67			26.04	0.4018
50	1	131		25.92	26.04	26.01				
50	64	32		25.97	25.97	25.85				
50	1	0		22.45	22.36	22.15				
50	1	132		22.49	22.57	22.48				
50	128	0		24.94	24.98	24.79				
50	1	1	16-QAM	24.92	24.82	24.64	24.92	0.3105		
50	1	1	64-QAM	23.39	23.32	23.15				
50	1	1	256-QAM	21.43	21.34	21.12				
Limit	EIRP < 2W			Result			Pass			

NR n41 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
60	1	1	PI/2 BPSK	25.85	25.82	25.57	26.02	0.3999		
60	1	160		25.80	26.00	26.01				
60	81	40		25.95	26.02	25.85				
60	1	0		22.32	22.31	22.06				
60	1	161		22.31	22.46	22.48				
60	162	0		25.40	25.50	25.36				
60	1	1	QPSK	25.85	25.79	25.57			26.02	0.3999
60	1	160		25.81	26.02	26.00				
60	81	40		25.95	25.99	25.84				
60	1	0		22.33	22.30	22.08				
60	1	161		22.34	22.52	22.56				
60	162	0		24.94	25.02	24.88				
60	1	1	16-QAM	24.80	24.73	24.57	24.80	0.3020		
60	1	1	64-QAM	23.36	23.31	23.09				
60	1	1	256-QAM	21.37	21.26	21.20				
Limit	EIRP < 2W			Result			Pass			



NR n41 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
80	1	1	PI/2 BPSK	25.91	25.78	25.68	26.14	0.4111		
80	1	215		25.77	26.00	26.14				
80	108	54		25.91	25.89	25.90				
80	1	0		22.40	22.28	22.23				
80	1	216		22.27	22.46	22.69				
80	216	0		25.44	25.40	25.40				
80	1	1	QPSK	25.97	25.79	25.66			26.14	0.4111
80	1	215		25.74	26.03	26.13				
80	108	54		25.92	25.87	25.91				
80	1	0		22.41	22.25	22.18				
80	1	216		22.29	22.50	22.64				
80	216	0		24.90	24.90	24.88				
80	1	1	16-QAM	25.03	24.73	24.66	25.03	0.3184		
80	1	1	64-QAM	23.39	23.35	23.20				
80	1	1	256-QAM	21.33	21.49	21.15				
Limit	EIRP < 2W			Result			Pass			

NR n41 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
90	1	1	PI/2 BPSK	25.92	25.73	25.58	26.14	0.4111		
90	1	243		25.62	26.02	26.14				
90	120	60		25.79	25.82	25.81				
90	1	0		22.42	22.27	21.95				
90	1	244		22.12	22.56	22.64				
90	243	0		25.27	25.42	25.30				
90	1	1	QPSK	25.88	25.75	25.55			26.14	0.4111
90	1	243		25.66	26.00	26.12				
90	120	60		25.79	25.93	25.84				
90	1	0		22.42	22.26	22.09				
90	1	244		22.13	22.52	22.62				
90	243	0		24.82	24.90	24.78				
90	1	1	16-QAM	24.92	24.79	24.54	24.92	0.3105		
90	1	1	64-QAM	23.41	23.29	23.13				
90	1	1	256-QAM	21.45	21.31	21.08				
Limit	EIRP < 2W			Result			Pass			



NR n41 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
100	1	1	PI/2 BPSK	25.90	25.70	25.48	26.22	0.4188
100	1	271		25.64	26.02	26.22		
100	135	67		25.79	25.86	25.81		
100	1	0		22.41	22.25	22.00		
100	1	272		22.17	22.52	22.70		
100	270	0		25.30	25.42	25.32		
100	1	1	QPSK	25.88	25.76	25.46		
100	1	271		25.65	26.05	26.16		
100	135	67		25.80	25.90	25.85		
100	1	0		22.38	22.23	21.96		
100	1	272		22.15	22.56	22.68		
100	270	0		24.77	24.88	24.82		
100	1	1	16-QAM	24.84	24.73	24.43	24.84	0.3048
100	1	1	64-QAM	23.39	23.29	22.95		
100	1	1	256-QAM	21.38	21.37	21.05		
Limit	EIRP < 2W			Result			Pass	



NR n66 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
5	1	1	PI/2 BPSK	22.68	22.83	22.88	23.00	0.1995		
5	1	23		22.81	22.88	22.86				
5	12	6		22.71	22.91	22.94				
5	1	0		22.19	22.30	22.35				
5	1	24		22.28	22.41	22.42				
5	25	0		22.26	22.35	22.36				
5	1	1	QPSK	22.65	22.85	22.82			23.00	0.1995
5	1	23		22.76	23.00	22.90				
5	12	6		22.72	22.90	22.94				
5	1	0		21.62	21.82	21.82				
5	1	24		21.75	21.86	21.91				
5	25	0		21.72	21.91	21.87				
5	1	1	16-QAM	21.52	21.72	21.80	21.80	0.1514		
5	1	1	64-QAM	20.11	20.35	20.29				
5	1	1	256-QAM	18.24	18.35	18.39				
Limit	EIRP < 1W			Result			Pass			

NR n66 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
10	1	1	PI/2 BPSK	22.73	22.84	22.89	22.96	0.1977		
10	1	50		22.76	22.83	22.92				
10	25	12		22.77	22.89	22.96				
10	1	0		22.15	22.28	22.35				
10	1	51		22.24	22.38	22.38				
10	50	0		22.23	22.46	22.39				
10	1	1	QPSK	22.64	22.82	22.88			22.96	0.1977
10	1	50		22.71	22.90	22.94				
10	25	12		22.73	22.94	22.90				
10	1	0		21.67	21.75	21.88				
10	1	51		21.67	21.96	22.00				
10	50	0		21.73	21.90	21.92				
10	1	1	16-QAM	21.67	21.75	21.86	21.86	0.1535		
10	1	1	64-QAM	20.23	20.27	20.47				
10	1	1	256-QAM	18.24	18.32	18.28				
Limit	EIRP < 1W			Result			Pass			



NR n66 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
15	1	1	PI/2 BPSK	22.90	22.93	22.87	22.96	0.1977		
15	1	77		22.86	22.83	22.87				
15	36	18		22.88	22.91	22.85				
15	1	0		22.37	22.37	22.37				
15	1	78		22.33	22.32	22.34				
15	75	0		22.40	22.43	22.36				
15	1	1	QPSK	22.84	22.91	22.75			22.96	0.1977
15	1	77		22.90	22.96	22.85				
15	36	18		22.91	22.94	22.83				
15	1	0		21.80	21.92	21.85				
15	1	78		21.74	21.88	21.85				
15	75	0		21.93	21.96	21.88				
15	1	1	16-QAM	21.77	21.93	21.84	21.93	0.1560		
15	1	1	64-QAM	20.28	20.46	20.41				
15	1	1	256-QAM	18.42	18.46	18.34				
Limit	EIRP < 1W			Result			Pass			

NR n66 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	22.76	22.90	22.77	22.97	0.1982		
20	1	104		22.80	22.88	22.87				
20	50	25		22.80	22.95	22.94				
20	1	0		22.31	22.39	22.30				
20	1	105		22.30	22.37	22.37				
20	100	0		22.34	22.42	22.40				
20	1	1	QPSK	22.78	22.84	22.81			22.97	0.1982
20	1	104		22.71	22.88	22.79				
20	50	25		22.89	22.93	22.97				
20	1	0		21.82	21.85	21.75				
20	1	105		21.80	21.94	21.83				
20	100	0		21.79	21.92	21.92				
20	1	1	16-QAM	22.20	21.84	21.73	22.20	0.1660		
20	1	1	64-QAM	20.29	20.37	20.36				
20	1	1	256-QAM	18.21	18.42	18.23				
Limit	EIRP < 1W			Result			Pass			



NR n66 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
40	1	1	PI/2 BPSK	22.71	22.71	23.01	23.22	0.2099		
40	1	214		23.06	23.08	23.17				
40	108	54		22.91	23.02	23.08				
40	1	0		22.18	22.19	22.48				
40	1	215		22.48	22.53	22.66				
40	216	0		22.43	22.51	22.41				
40	1	1	QPSK	22.70	22.71	22.96			23.22	0.2099
40	1	214		23.06	23.18	23.22				
40	108	54		22.97	23.02	23.04				
40	1	0		21.68	21.70	22.02				
40	1	215		22.05	22.08	22.21				
40	216	0		22.04	22.06	22.10				
40	1	1	16-QAM	21.82	21.80	21.86	21.86	0.1535		
40	1	1	64-QAM	20.32	20.25	20.45				
40	1	1	256-QAM	18.36	18.45	18.37				
Limit	EIRP < 1W			Result			Pass			



NR n71 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
5	1	1	PI/2 BPSK	22.92	22.88	22.82	23.00	0.1995		
5	1	23		22.87	22.77	22.72				
5	12	6		22.95	22.83	22.72				
5	1	0		22.42	22.40	22.36				
5	1	24		22.32	22.29	22.21				
5	25	0		22.43	22.39	22.22				
5	1	1	QPSK	23.00	22.92	22.85			23.00	0.1995
5	1	23		22.91	22.87	22.76				
5	12	6		22.86	22.87	22.80				
5	1	0		21.86	21.82	21.84				
5	1	24		21.85	21.65	21.60				
5	25	0		21.87	21.85	21.70				
5	1	1	16-QAM	21.90	21.84	21.75	21.90	0.1549		
5	1	1	64-QAM	20.32	20.40	20.33				
5	1	1	256-QAM	18.43	18.46	18.44				
Limit	ERP < 3W			Result			Pass			

NR n71 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
10	1	1	PI/2 BPSK	22.92	22.87	22.71	22.92	0.1959		
10	1	50		22.81	22.82	22.78				
10	25	12		22.90	22.86	22.82				
10	1	0		22.45	22.40	22.23				
10	1	51		22.32	22.31	22.23				
10	50	0		22.39	22.34	22.32				
10	1	1	QPSK	22.81	22.90	22.82			22.92	0.1959
10	1	50		22.75	22.87	22.77				
10	25	12		22.80	22.85	22.81				
10	1	0		21.80	21.81	21.72				
10	1	51		21.71	21.76	21.70				
10	50	0		21.81	21.87	21.77				
10	1	1	16-QAM	21.93	21.77	21.75	21.93	0.1560		
10	1	1	64-QAM	20.45	20.43	20.32				
10	1	1	256-QAM	18.37	18.35	18.25				
Limit	ERP < 3W			Result			Pass			



NR n71 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
15	1	1	PI/2 BPSK	23.06	22.92	22.80	23.06	0.2023		
15	1	77		22.95	22.82	22.59				
15	36	18		23.05	22.90	22.81				
15	1	0		22.43	22.50	22.33				
15	1	78		22.30	22.32	22.12				
15	75	0		22.50	22.43	22.25				
15	1	1	QPSK	23.03	22.92	22.83			23.06	0.2023
15	1	77		23.00	22.85	22.75				
15	36	18		22.97	22.90	22.80				
15	1	0		21.96	21.91	21.86				
15	1	78		21.85	21.81	21.65				
15	75	0		22.05	21.92	21.77				
15	1	1	16-QAM	21.93	21.94	21.85	21.94	0.1563		
15	1	1	64-QAM	20.50	20.42	20.35				
15	1	1	256-QAM	18.50	18.48	18.33				
Limit	ERP < 3W			Result			Pass			

NR n71 Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	23.05	22.95	22.86	23.05	0.2018		
20	1	104		22.90	22.63	22.65				
20	50	25		22.95	22.88	22.86				
20	1	0		22.45	22.40	22.43				
20	1	105		22.26	22.21	22.13				
20	100	0		22.43	22.35	22.30				
20	1	1	QPSK	22.92	23.03	22.91			23.05	0.2018
20	1	104		22.87	22.76	22.63				
20	50	25		22.96	22.85	22.80				
20	1	0		21.96	21.93	21.95				
20	1	105		21.76	21.82	21.70				
20	100	0		21.93	21.80	21.82				
20	1	1	16-QAM	21.90	22.00	21.85	22.00	0.1585		
20	1	1	64-QAM	20.43	20.56	20.52				
20	1	1	256-QAM	18.40	18.42	18.35				
Limit	ERP < 3W			Result			Pass			



Part 270 NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
20	1	1	PI/2 BPSK	25.57	25.62	25.72	25.82	0.3819
20	1	49		25.48	25.77	25.78		
20	25	12		25.57	25.66	25.82		
20	1	0		22.10	22.15	22.25		
20	1	50		22.09	22.25	22.30		
20	50	0		25.09	25.19	25.26		
20	1	1	QPSK	25.57	25.62	25.70		
20	1	49		25.50	25.75	25.79		
20	25	12		25.45	25.65	25.73		
20	1	0		22.13	22.14	22.23		
20	1	50		22.05	22.30	22.33		
20	50	0		24.62	24.72	24.72		
20	1	1	16-QAM	24.55	24.65	24.75	24.75	0.2985
20	1	1	64-QAM	23.08	23.15	23.29		
20	1	1	256-QAM	21.15	21.15	21.32		
Limit	EIRP < 1W			Result			Pass	

Part 270 NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
40	1	1	PI/2 BPSK	25.57	25.49	25.45	25.75	0.3758
40	1	104		25.67	25.56	25.74		
40	50	25		25.63	25.59	25.52		
40	1	0		22.10	22.04	21.98		
40	1	105		22.19	22.12	22.23		
40	100	0		25.07	25.01	25.05		
40	1	1	QPSK	25.59	25.48	25.50		
40	1	104		25.62	25.64	25.75		
40	50	25		25.58	25.47	25.51		
40	1	0		22.14	22.00	21.95		
40	1	105		22.18	22.14	22.23		
40	100	0		24.59	24.53	24.56		
40	1	1	16-QAM	24.51	24.50	24.53	24.53	0.2838
40	1	1	64-QAM	23.06	23.00	22.96		
40	1	1	256-QAM	21.00	21.09	20.94		
Limit	EIRP < 1W			Result			Pass	



Part 270 NR n77 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
50	1	1	PI/2 BPSK	25.39	25.35	25.55	25.65	0.3673		
50	1	131		25.44	25.34	25.64				
50	64	32		25.45	25.47	25.38				
50	1	0		21.90	21.84	22.06				
50	1	132		22.01	21.86	22.14				
50	128	0		24.92	24.95	24.93				
50	1	1	QPSK	25.38	25.33	25.58			24.56	0.2858
50	1	131		25.38	25.35	25.65				
50	64	32		25.39	25.47	25.35				
50	1	0		21.89	21.85	22.02				
50	1	132		21.97	21.83	22.16				
50	128	0		24.45	24.43	24.45				
50	1	1	16-QAM	24.40	24.33	24.56	24.56	0.2858		
50	1	1	64-QAM	22.94	22.83	23.03				
50	1	1	256-QAM	20.83	20.92	21.04				
Limit	EIRP < 1W			Result			Pass			

Part 270 NR n77 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
60	1	1	PI/2 BPSK	25.44	25.58	25.58	25.92	0.3908		
60	1	160		25.56	25.85	25.88				
60	81	40		25.65	25.76	25.92				
60	1	0		21.96	21.96	22.12				
60	1	161		22.06	22.35	22.42				
60	162	0		25.11	25.20	25.35				
60	1	1	QPSK	25.47	25.56	25.60			24.63	0.2904
60	1	160		25.56	22.87	25.89				
60	81	40		25.61	25.78	25.88				
60	1	0		21.98	22.01	22.12				
60	1	161		22.06	22.36	22.42				
60	162	0		24.63	24.75	24.85				
60	1	1	16-QAM	24.44	24.63	24.54	24.63	0.2904		
60	1	1	64-QAM	22.93	23.05	23.16				
60	1	1	256-QAM	20.94	21.12	21.08				
Limit	EIRP < 1W			Result			Pass			



Part 270 NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
80	1	1	PI/2 BPSK	25.58	25.65	25.66	25.95	0.3936
80	1	215		25.43	25.73	25.92		
80	108	54		25.64	25.78	25.95		
80	1	0		22.08	22.15	22.18		
80	1	216		21.97	22.25	22.43		
80	216	0		25.12	25.26	25.35		
80	1	1	QPSK	25.58	25.66	25.65		
80	1	215		25.43	25.71	25.94		
80	108	54		25.67	25.79	25.95		
80	1	0		22.09	22.18	22.14		
80	1	216		21.96	22.23	22.41		
80	216	0		24.65	24.73	24.83		
80	1	1	16-QAM	24.60	24.61	24.61	24.61	0.2891
80	1	1	64-QAM	23.09	23.20	23.17		
80	1	1	256-QAM	21.09	21.14	21.23		
Limit	EIRP < 1W			Result			Pass	

Part 270 NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
90	1	1	PI/2 BPSK	25.55	25.55	25.55	25.95	0.3936
90	1	243		25.45	25.79	25.95		
90	120	60		25.62	25.77	25.83		
90	1	0		22.06	22.06	22.12		
90	1	244		22.02	22.23	22.46		
90	243	0		25.11	25.26	25.35		
90	1	1	QPSK	25.55	25.59	25.56		
90	1	243		25.54	25.78	25.93		
90	120	60		25.59	25.76	25.83		
90	1	0		22.10	22.08	22.01		
90	1	244		22.02	22.25	22.47		
90	243	0		24.58	24.76	24.83		
90	1	1	16-QAM	24.45	24.55	24.56	24.56	0.2858
90	1	1	64-QAM	22.93	23.09	23.05		
90	1	1	256-QAM	21.03	21.10	21.05		
Limit	EIRP < 1W			Result			Pass	



Part 270 NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
100	1	1	PI/2 BPSK	25.53	25.50	25.55	26.05	0.4027
100	1	271		25.52	25.83	26.02		
100	135	67		25.56	25.73	25.86		
100	1	0		22.01	21.92	22.02		
100	1	272		22.04	22.32	22.58		
100	270	0		25.10	25.15	25.27		
100	1	1	QPSK	25.51	25.43	25.51	26.05	0.4027
100	1	271		25.55	25.82	26.05		
100	135	67		25.57	25.70	25.85		
100	1	0		21.99	21.93	22.02		
100	1	272		22.05	22.31	22.51		
100	270	0		24.57	24.70	24.77		
100	1	1	16-QAM	24.50	24.36	24.54	24.54	0.2844
100	1	1	64-QAM	23.01	22.93	23.10		
100	1	1	256-QAM	20.91	21.06	21.02		
Limit	EIRP < 1W			Result			Pass	



Part 270 NR n78 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
20	1	1	PI/2 BPSK	25.55	25.55	25.58	25.66	0.3681
20	1	49		25.47	25.54	25.65		
20	25	12		25.42	25.55	25.59		
20	1	0		22.00	22.11	22.14		
20	1	50		22.05	22.11	22.22		
20	50	0		24.97	25.05	25.11		
20	1	1	QPSK	25.61	25.54	25.57		
20	1	49		25.48	25.55	25.66		
20	25	12		25.43	25.54	25.58		
20	1	0		22.12	22.08	22.12		
20	1	50		22.04	22.11	22.23		
20	50	0		24.51	24.57	24.62		
20	1	1	16-QAM	24.58	24.64	24.60	24.64	0.2911
20	1	1	64-QAM	23.05	23.10	23.14		
20	1	1	256-QAM	21.07	21.15	21.05		
Limit	EIRP < 1W			Result			Pass	

Part 270 NR n78 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
40	1	1	PI/2 BPSK	25.33	25.46	25.50	25.58	0.3614
40	1	104		25.50	25.53	25.56		
40	50	25		25.30	25.38	25.46		
40	1	0		21.86	21.92	22.02		
40	1	105		21.99	22.11	22.11		
40	100	0		24.82	24.93	25.00		
40	1	1	QPSK	25.32	25.48	25.53		
40	1	104		25.48	25.52	25.58		
40	50	25		25.29	25.35	25.40		
40	1	0		21.86	21.94	22.02		
40	1	105		22.02	22.06	22.10		
40	100	0		24.35	24.41	24.51		
40	1	1	16-QAM	24.31	24.39	24.40	24.4000	0.2754
40	1	1	64-QAM	24.20	22.95	22.91		
40	1	1	256-QAM	20.82	20.93	20.93		
Limit	EIRP < 1W			Result			Pass	



Part 270 NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
50	1	1	PI/2 BPSK	25.26	25.24	25.22	25.38	0.3451		
50	1	131		25.31	25.36	25.38				
50	64	32		25.26	25.34	25.26				
50	1	0		21.77	21.78	21.80				
50	1	132		21.81	21.92	21.93				
50	128	0		24.75	24.81	24.80				
50	1	1	QPSK	25.26	25.23	25.21			25.38	0.3451
50	1	131		25.29	25.33	25.36				
50	64	32		25.21	25.30	25.24				
50	1	0		21.76	21.77	21.75				
50	1	132		21.80	21.84	21.92				
50	128	0		24.25	24.33	24.29				
50	1	1	16-QAM	24.23	24.25	24.22	24.25	0.2661		
50	1	1	64-QAM	22.73	22.74	22.70				
50	1	1	256-QAM	20.69	20.70	20.73				
Limit	EIRP < 1W			Result			Pass			

Part 270 NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
60	1	1	PI/2 BPSK	25.24	25.32	25.24	25.52	0.3565		
60	1	160		25.29	25.44	25.49				
60	81	40		25.39	25.33	25.33				
60	1	0		21.78	21.82	21.75				
60	1	161		21.78	21.94	22.02				
60	162	0		24.92	24.82	24.85				
60	1	1	QPSK	25.24	25.32	25.26			25.52	0.3565
60	1	160		25.31	25.45	25.52				
60	81	40		25.31	25.30	25.32				
60	1	0		21.76	21.79	21.73				
60	1	161		21.85	21.94	22.10				
60	162	0		24.37	24.30	24.34				
60	1	1	16-QAM	24.24	24.22	24.25	24.25	0.2661		
60	1	1	64-QAM	22.63	22.75	22.75				
60	1	1	256-QAM	20.81	20.83	20.72				
Limit	EIRP < 1W			Result			Pass			



Part 270 NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
80	1	1	PI/2 BPSK	25.27	25.26	25.29	25.62	0.3648		
80	1	215		25.44	25.57	25.62				
80	108	54		25.40	25.35	25.38				
80	1	0		21.79	21.82	21.86				
80	1	216		21.97	22.08	22.16				
80	216	0		24.89	24.84	24.89				
80	1	1	QPSK	25.30	25.32	25.27			25.62	0.3648
80	1	215		25.49	25.58	25.62				
80	108	54		25.39	25.32	25.37				
80	1	0		21.85	21.78	21.86				
80	1	216		22.03	22.11	22.17				
80	216	0		24.39	24.34	24.41				
80	1	1	16-QAM	24.24	24.32	24.35	24.35	0.2723		
80	1	1	64-QAM	22.79	22.67	22.80				
80	1	1	256-QAM	20.77	20.73	20.79				
Limit	EIRP < 1W			Result			Pass			

Part 270 NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
90	1	1	PI/2 BPSK	25.40	25.41	25.36	25.67	0.3690		
90	1	243		25.63	25.60	25.54				
90	120	60		25.41	25.37	25.43				
90	1	0		21.89	21.87	21.89				
90	1	244		22.15	22.15	22.14				
90	243	0		24.91	24.90	24.96				
90	1	1	QPSK	25.40	25.41	25.35			25.67	0.3690
90	1	243		25.53	25.60	25.67				
90	120	60		25.39	25.38	25.41				
90	1	0		21.94	21.86	21.80				
90	1	244		22.15	22.13	22.10				
90	243	0		24.39	24.38	24.41				
90	1	1	16-QAM	24.35	24.31	24.34	24.35	0.2723		
90	1	1	64-QAM	22.84	22.95	22.79				
90	1	1	256-QAM	20.80	20.85	20.92				
Limit	EIRP < 1W			Result			Pass			



Part 270 NR n78 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
100	1	1	PI/2 BPSK	-	25.35	-	25.66	0.3681
100	1	271		-	25.62	-		
100	135	67		-	25.40	-		
100	1	0		-	21.89	-		
100	1	272		-	22.18	-		
100	270	0		-	24.92	-		
100	1	1	QPSK	-	25.37	-	25.66	0.3681
100	1	271		-	25.66	-		
100	135	67		-	25.35	-		
100	1	0		-	21.93	-		
100	1	272		-	22.19	-		
100	270	0		-	24.37	-		
100	1	1	16-QAM	-	24.43	-	24.43	0.2773
100	1	1	64-QAM	-	22.90	-		
100	1	1	256-QAM	-	20.83	-		
Limit	EIRP < 1W			Result			Pass	



Part 27Q NR n77 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	25.50	25.30	25.51	25.51	0.3556		
20	1	49		25.38	25.39	25.30				
20	25	12		25.45	25.28	25.37				
20	1	0		21.91	21.83	22.14				
20	1	50		21.85	21.83	21.76				
20	50	0		24.95	24.75	24.93				
20	1	1	QPSK	25.45	25.37	25.49			25.51	0.3556
20	1	49		25.34	25.35	25.29				
20	25	12		25.43	25.26	25.37				
20	1	0		21.92	21.76	21.96				
20	1	50		21.84	21.85	21.76				
20	50	0		24.43	24.35	24.40				
20	1	1	16-QAM	24.49	24.43	24.55	24.55	0.2851		
20	1	1	64-QAM	22.86	22.82	22.03				
20	1	1	256-QAM	20.97	20.87	20.97				
Limit	EIRP < 1W			Result			Pass			

Part 27Q NR n77 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
40	1	1	PI/2 BPSK	25.44	25.53	25.54	25.55	0.3589		
40	1	104		25.31	25.53	25.38				
40	50	25		25.40	25.34	25.47				
40	1	0		21.95	21.94	22.03				
40	1	105		21.68	21.91	21.86				
40	100	0		24.90	24.93	24.95				
40	1	1	QPSK	25.48	25.42	25.55			25.55	0.3589
40	1	104		25.29	25.49	25.36				
40	50	25		25.37	25.37	25.44				
40	1	0		21.93	21.97	22.04				
40	1	105		21.77	22.02	21.90				
40	100	0		24.37	24.41	24.45				
40	1	1	16-QAM	24.41	24.35	24.57	24.57	0.2864		
40	1	1	64-QAM	22.94	22.90	23.03				
40	1	1	256-QAM	20.96	20.89	21.08				
Limit	EIRP < 1W			Result			Pass			



Part 27Q NR n77 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
50	1	1	PI/2 BPSK	25.34	25.38	25.37	25.39	0.3459		
50	1	131		25.02	25.23	25.03				
50	64	32		25.29	25.24	25.39				
50	1	0		21.79	21.83	21.73				
50	1	132		21.51	21.72	21.53				
50	128	0		24.72	24.76	24.76				
50	1	1	QPSK	25.35	25.39	25.30			24.35	0.2723
50	1	131		25.00	25.23	25.08				
50	64	32		25.26	25.22	25.32				
50	1	0		21.81	21.85	21.78				
50	1	132		21.47	21.70	21.51				
50	128	0		24.25	24.21	24.30				
50	1	1	16-QAM	24.35	24.27	24.22	24.35	0.2723		
50	1	1	64-QAM	22.90	22.85	22.76				
50	1	1	256-QAM	20.82	20.81	20.70				
Limit	EIRP < 1W			Result			Pass			

Part 27Q NR n77 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
60	1	1	PI/2 BPSK	25.44	25.46	25.30	25.46	0.3516		
60	1	160		25.23	25.22	25.12				
60	81	40		25.28	25.37	25.46				
60	1	0		21.85	21.93	21.82				
60	1	161		21.68	21.69	21.68				
60	162	0		24.83	24.90	24.92				
60	1	1	QPSK	25.42	25.42	25.41			24.42	0.2767
60	1	160		25.19	25.26	25.19				
60	81	40		25.35	25.34	25.46				
60	1	0		21.88	21.91	21.76				
60	1	161		21.71	21.73	21.68				
60	162	0		24.37	24.38	24.39				
60	1	1	16-QAM	24.33	24.42	24.30	24.42	0.2767		
60	1	1	64-QAM	22.91	22.98	22.86				
60	1	1	256-QAM	20.84	20.99	20.80				
Limit	EIRP < 1W			Result			Pass			



Part 27Q NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
80	1	1	PI/2 BPSK	25.46	25.65	25.65	25.65	0.3673
80	1	215		25.16	25.07	25.11		
80	108	54		25.49	25.38	25.47		
80	1	0		21.92	22.12	22.11		
80	1	216		21.67	21.58	21.52		
80	216	0		24.95	24.95	24.95		
80	1	1	QPSK	25.52	25.65	25.63		
80	1	215		25.15	25.10	25.06		
80	108	54		25.45	25.49	25.48		
80	1	0		21.90	22.11	22.09		
80	1	216		21.66	21.56	21.57		
80	216	0		25.49	24.47	24.43		
80	1	1	16-QAM	24.57	24.60	24.65	24.65	0.2917
80	1	1	64-QAM	22.94	23.13	22.10		
80	1	1	256-QAM	20.96	21.24	21.12		
Limit	EIRP < 1W			Result			Pass	

Part 27Q NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
90	1	1	PI/2 BPSK	25.63	25.72	25.73	25.75	0.3758
90	1	243		25.06	25.09	25.10		
90	120	60		25.30	25.39	25.37		
90	1	0		22.08	22.20	22.26		
90	1	244		21.50	21.60	21.64		
90	243	0		24.85	24.97	25.02		
90	1	1	QPSK	25.65	25.70	25.75		
90	1	243		25.06	25.13	25.14		
90	120	60		25.31	25.35	25.37		
90	1	0		22.08	22.19	22.28		
90	1	244		21.52	21.65	21.61		
90	243	0		24.37	24.41	24.36		
90	1	1	16-QAM	24.56	24.79	24.74	24.79	0.3013
90	1	1	64-QAM	23.15	23.19	23.16		
90	1	1	256-QAM	21.10	21.23	21.20		
Limit	EIRP < 1W			Result			Pass	



Part 27Q NR n77 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
100	1	1	PI/2 BPSK	-	25.67	-	25.67	0.3690
100	1	271		-	25.12	-		
100	135	67		-	25.41	-		
100	1	0		-	22.13	-		
100	1	272		-	21.62	-		
100	270	0		-	25.05	-		
100	1	1	QPSK	-	25.66	-	25.67	0.3690
100	1	271		-	25.08	-		
100	135	67		-	25.35	-		
100	1	0		-	22.15	-		
100	1	272		-	21.64	-		
100	270	0		-	24.42	-		
100	1	1	16-QAM	-	24.64	-	24.64	0.2911
100	1	1	64-QAM	-	23.13	-		
100	1	1	256-QAM	-	21.15	-		
Limit	EIRP < 1W			Result			Pass	



Part 27Q NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
20	1	1	PI/2 BPSK	25.24	25.29	25.39	25.49	0.3540		
20	1	49		25.15	25.44	25.45				
20	25	12		25.24	25.33	25.49				
20	1	0		21.77	21.82	21.92				
20	1	50		21.76	21.92	21.97				
20	50	0		24.76	24.86	24.93				
20	1	1	QPSK	25.24	25.29	25.37			24.42	0.2767
20	1	49		25.17	25.42	25.46				
20	25	12		25.12	25.32	25.40				
20	1	0		21.80	21.81	21.90				
20	1	50		21.72	21.97	22.00				
20	50	0		24.29	24.39	24.39				
20	1	1	16-QAM	24.22	24.32	24.42	24.42	0.2767		
20	1	1	64-QAM	22.75	22.82	22.96				
20	1	1	256-QAM	20.82	20.82	20.99				
Limit	EIRP < 1W			Result			Pass			

Part 27Q NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
40	1	1	PI/2 BPSK	25.41	25.51	25.46	25.61	0.3639		
40	1	104		25.35	25.19	25.34				
40	50	25		25.21	25.41	25.33				
40	1	0		21.88	22.10	21.90				
40	1	105		21.86	21.69	21.81				
40	100	0		24.76	24.91	24.85				
40	1	1	QPSK	25.47	25.61	25.41			24.58	0.2871
40	1	104		25.40	25.20	25.32				
40	50	25		25.23	25.37	25.32				
40	1	0		21.91	22.13	21.94				
40	1	105		21.84	21.65	21.80				
40	100	0		24.26	24.40	24.34				
40	1	1	16-QAM	24.44	24.58	24.41	24.58	0.2871		
40	1	1	64-QAM	22.95	23.12	22.98				
40	1	1	256-QAM	20.98	21.09	20.85				
Limit	EIRP < 1W			Result			Pass			



Part 27Q NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
50	1	1	PI/2 BPSK	25.27	25.35	25.31	25.35	0.3428		
50	1	131		25.00	24.95	25.05				
50	64	32		25.18	25.26	25.15				
50	1	0		21.76	21.83	21.85				
50	1	132		21.49	21.45	21.56				
50	128	0		24.69	24.75	24.68				
50	1	1	QPSK	25.24	25.35	25.29			25.35	0.3428
50	1	131		25.01	24.99	25.04				
50	64	32		25.15	25.26	25.14				
50	1	0		21.76	21.85	21.78				
50	1	132		21.48	21.47	21.54				
50	128	0		24.17	24.23	24.18				
50	1	1	16-QAM	24.32	24.34	24.33	24.34	0.2716		
50	1	1	64-QAM	22.80	22.89	22.85				
50	1	1	256-QAM	20.73	20.91	20.74				
Limit	EIRP < 1W			Result			Pass			

Part 27Q NR n78 HPUE Maximum Average Power [dBm]										
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)		
60	1	1	PI/2 BPSK	25.35	25.38	25.56	25.56	0.3597		
60	1	160		25.03	25.05	25.14				
60	81	40		25.27	25.42	25.23				
60	1	0		21.89	21.85	22.02				
60	1	161		21.45	21.53	21.75				
60	162	0		24.71	24.89	24.82				
60	1	1	QPSK	25.37	25.40	25.43			25.56	0.3597
60	1	160		25.03	25.11	25.24				
60	81	40		25.32	25.40	25.23				
60	1	0		21.86	21.82	22.01				
60	1	161		21.49	21.58	21.61				
60	162	0		24.21	24.37	24.29				
60	1	1	16-QAM	24.32	24.39	24.45	24.45	0.2786		
60	1	1	64-QAM	22.81	22.84	23.06				
60	1	1	256-QAM	20.88	20.97	21.03				
Limit	EIRP < 1W			Result			Pass			



Part 27Q NR n78 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
80	1	1	PI/2 BPSK	25.45	25.43	25.49	25.49	0.3540
80	1	215		25.00	25.11	25.16		
80	108	54		25.39	25.39	25.36		
80	1	0		21.92	22.03	22.00		
80	1	216		21.48	21.60	21.63		
80	216	0		24.85	24.89	24.95		
80	1	1	QPSK	25.47	25.43	25.47		
80	1	215		25.07	25.10	25.13		
80	108	54		25.38	25.40	25.36		
80	1	0		21.96	21.92	21.98		
80	1	216		21.48	21.63	21.67		
80	216	0		24.34	24.36	24.43		
80	1	1	16-QAM	24.42	24.43	24.56	24.56	0.2858
80	1	1	64-QAM	22.94	22.93	22.89		
80	1	1	256-QAM	20.83	20.90	21.02		
Limit	EIRP < 1W			Result			Pass	

Part 27Q NR n78 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
90	1	1	PI/2 BPSK	25.57	25.53	25.53	25.61	0.3639
90	1	243		25.06	25.14	25.11		
90	120	60		25.35	25.42	25.41		
90	1	0		22.04	22.02	22.04		
90	1	244		21.54	21.57	21.63		
90	243	0		24.84	24.92	24.95		
90	1	1	QPSK	25.54	25.50	25.61		
90	1	243		25.02	25.16	25.18		
90	120	60		25.36	25.36	25.45		
90	1	0		22.04	22.00	22.06		
90	1	244		21.61	21.67	21.65		
90	243	0		24.34	24.39	24.46		
90	1	1	16-QAM	24.51	24.57	24.49	24.57	0.2864
90	1	1	64-QAM	23.04	23.02	23.02		
90	1	1	256-QAM	21.14	21.01	21.09		
Limit	EIRP < 1W			Result			Pass	



Part 27Q NR n78 HPUE Maximum Average Power [dBm]								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	Output Power (dBm)	Output Power (W)
100	1	1	PI/2 BPSK	-	25.56	-	25.60	0.3631
100	1	271		-	25.07	-		
100	135	67		-	25.39	-		
100	1	0		-	22.10	-		
100	1	272		-	21.59	-		
100	270	0		-	24.88	-		
100	1	1	QPSK	-	25.60	-	24.62	0.2897
100	1	271		-	25.20	-		
100	135	67		-	25.49	-		
100	1	0		-	22.11	-		
100	1	272		-	21.58	-		
100	270	0		-	24.41	-		
100	1	1	16-QAM	-	24.62	-	24.62	0.2897
100	1	1	64-QAM	-	23.06	-		
100	1	1	256-QAM	-	21.02	-		
Limit	EIRP < 1W			Result			Pass	



FR1 n5

Peak-to-Average Ratio

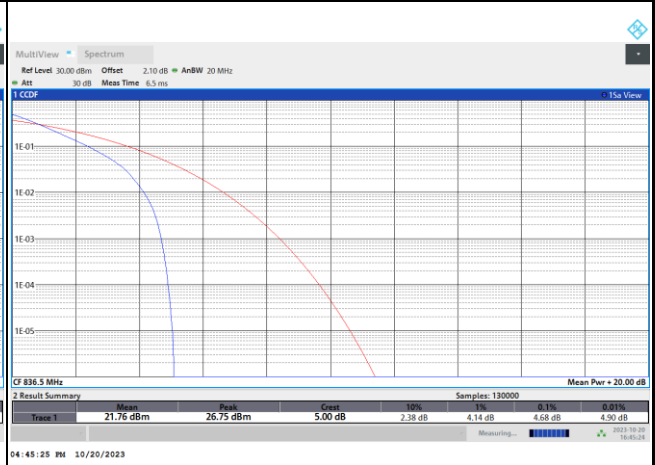
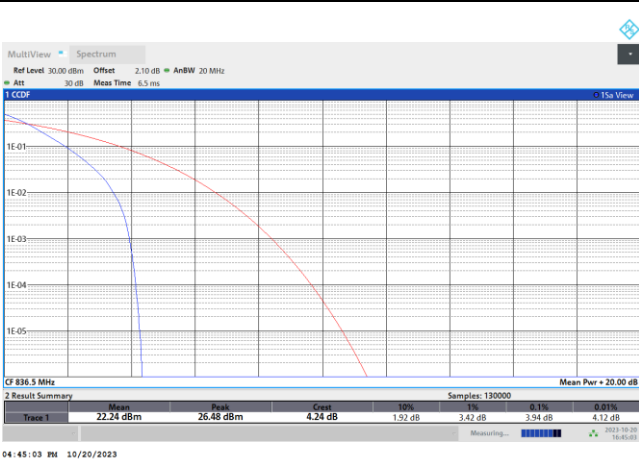
Mode	FR1 n5 / 20MHz / DFT-S OFDM				
Mod.	PI/2 BPSK	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	3.94	4.68	5.66	6.02	PASS
Mode	FR1 n5 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.64				PASS



FR1 n5 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

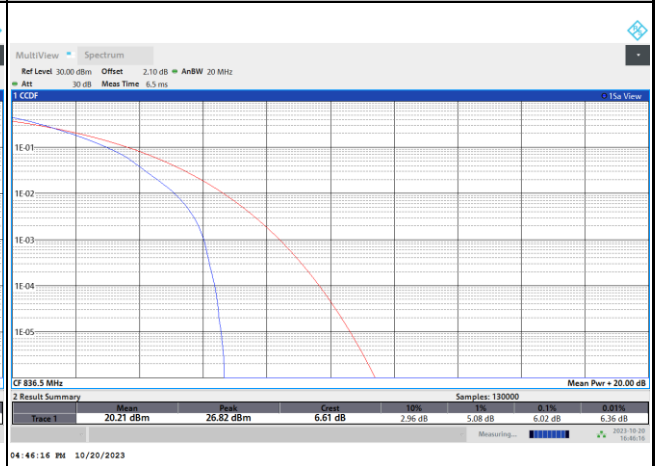
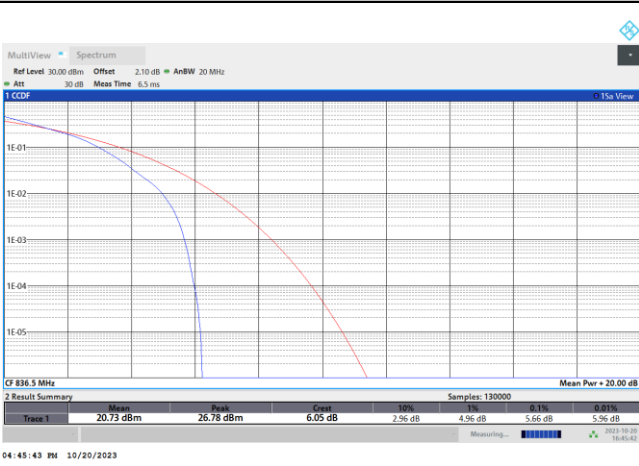
PI/2 BPSK

QPSK

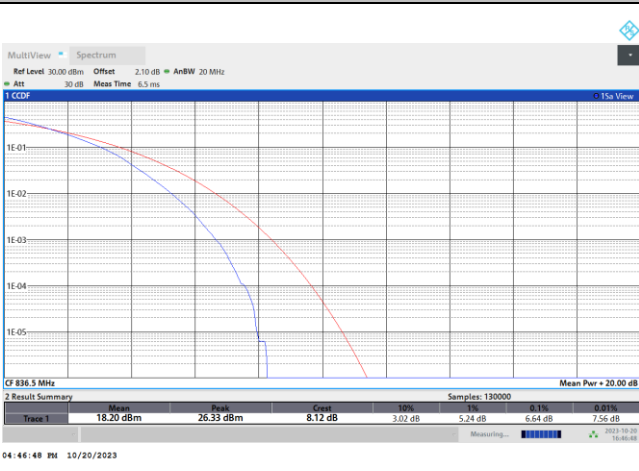


16QAM

64QAM



256QAM





26dB Bandwidth

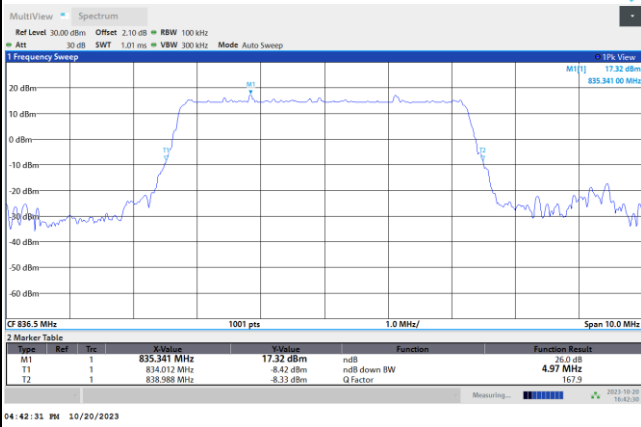
Mode	FR1 n5 : 26dB BW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Middle CH	4.97		9.55		14.36		18.82	

Mode	FR1 n5 : 26dB BW(MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	5.00	5.01	9.97	9.99	15.20	15.13	19.90	19.98
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	5.01	4.97	9.95	9.97	15.11	15.11	19.94	19.98



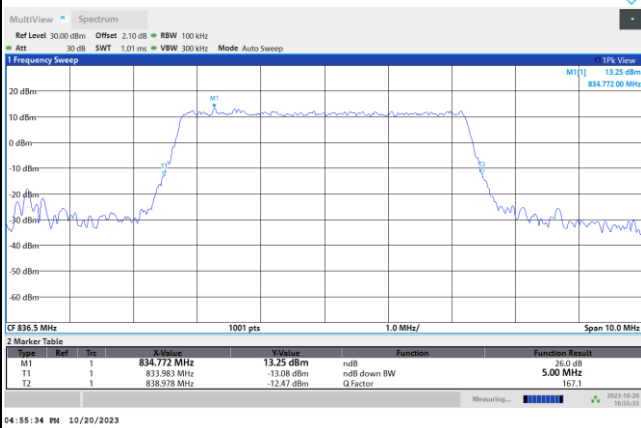
FR1 n5 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

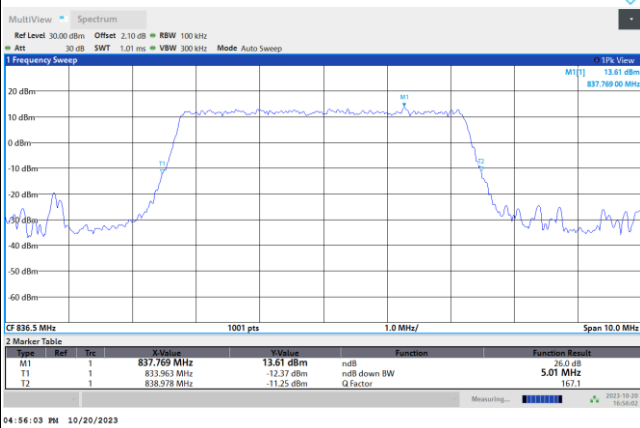


FR1 n5 / 5MHz / CP OFDM / Middle Channel / Full RB

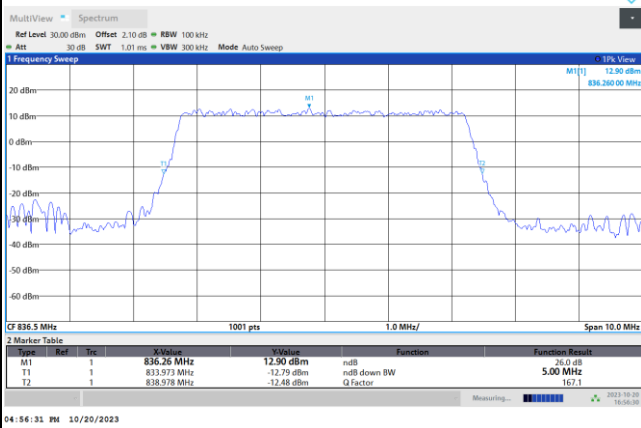
QPSK



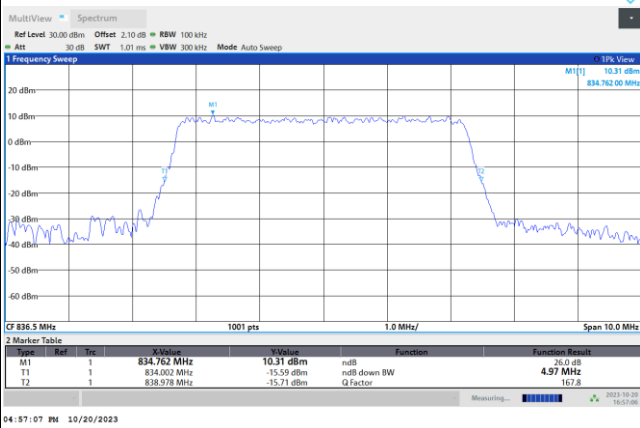
16QAM



64QAM



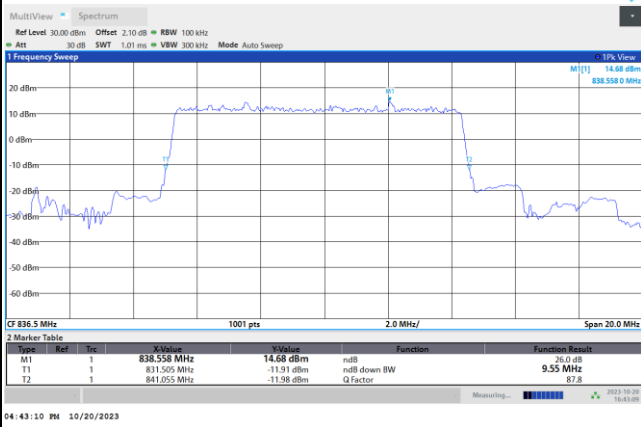
256QAM





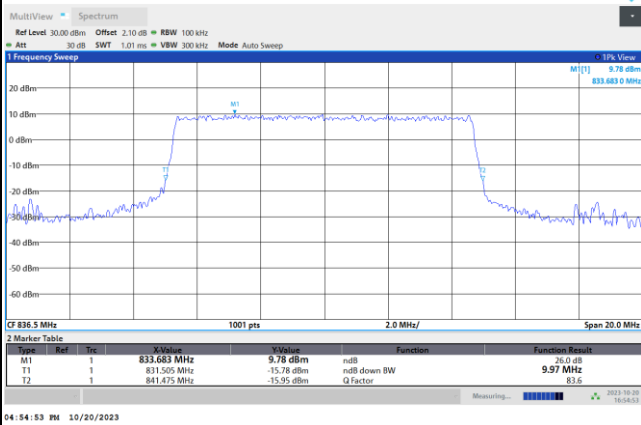
FR1 n5 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

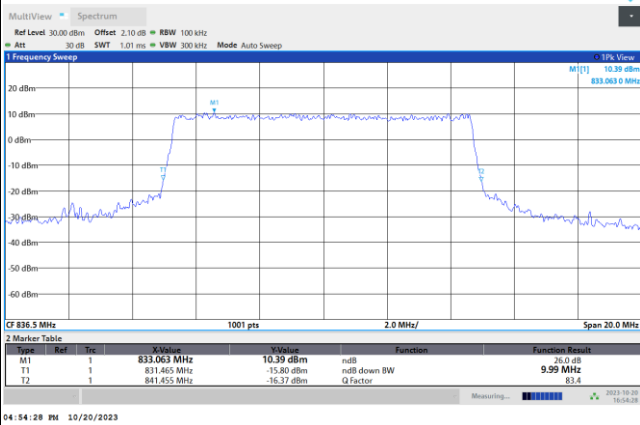


FR1 n5 / 10MHz / CP OFDM / Middle Channel / Full RB

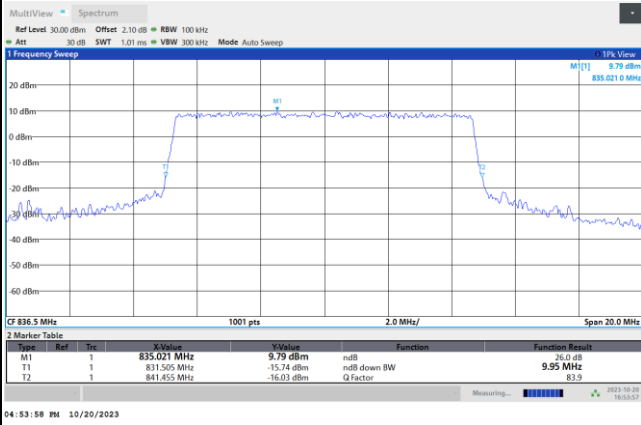
QPSK



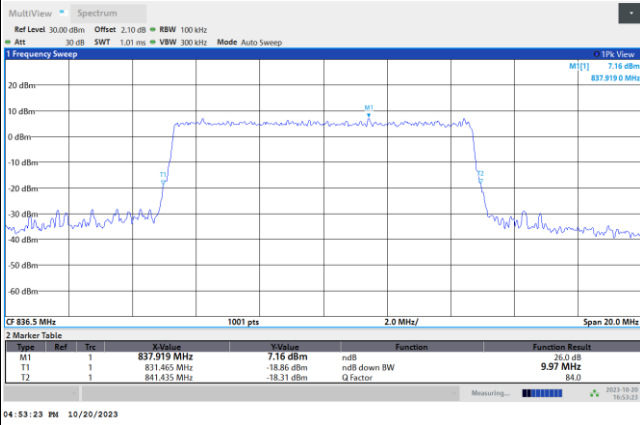
16QAM



64QAM



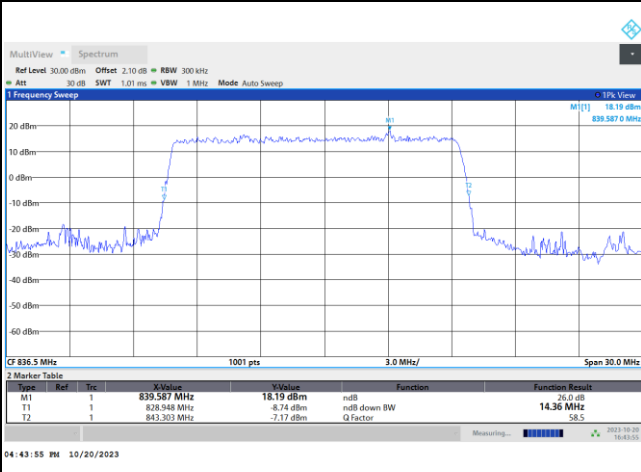
256QAM





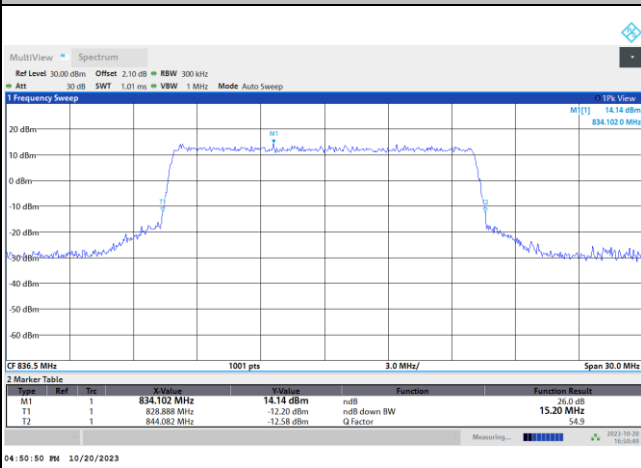
FR1 n5 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

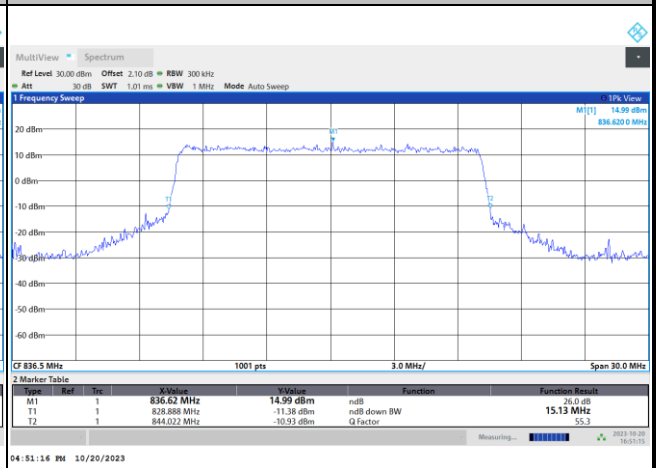


FR1 n5 / 15MHz / CP OFDM / Middle Channel / Full RB

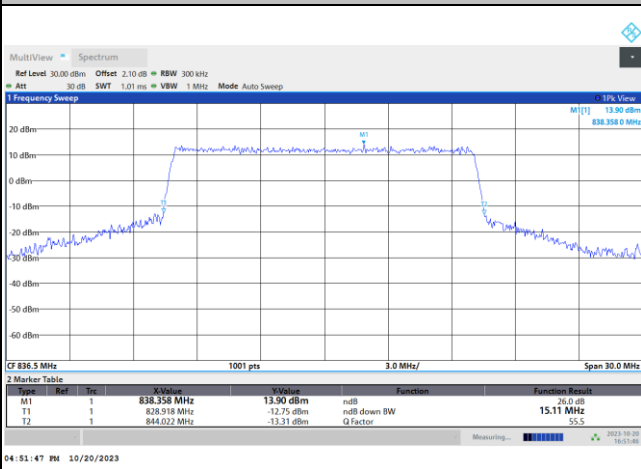
QPSK



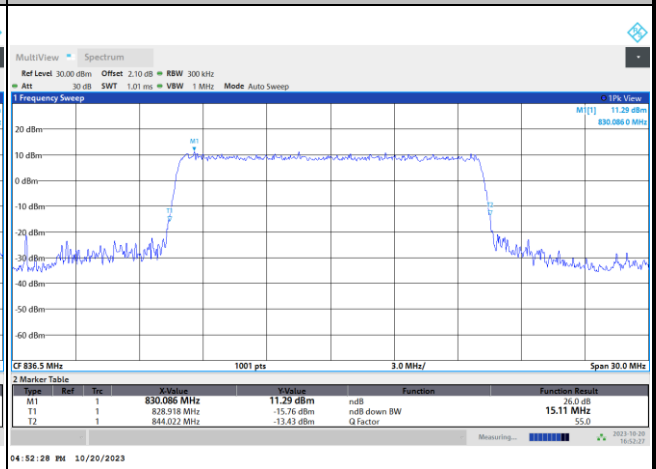
16QAM



64QAM



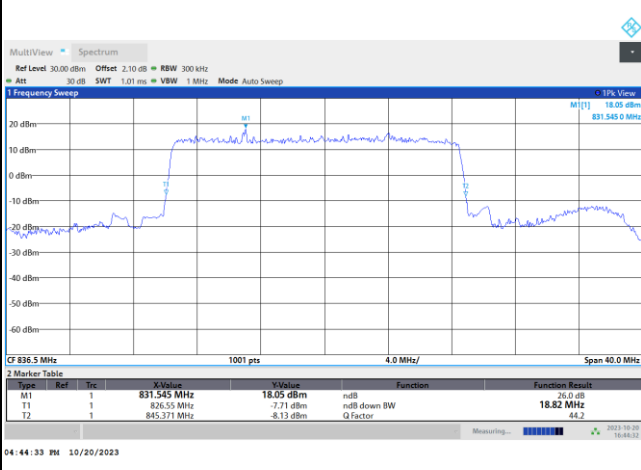
256QAM





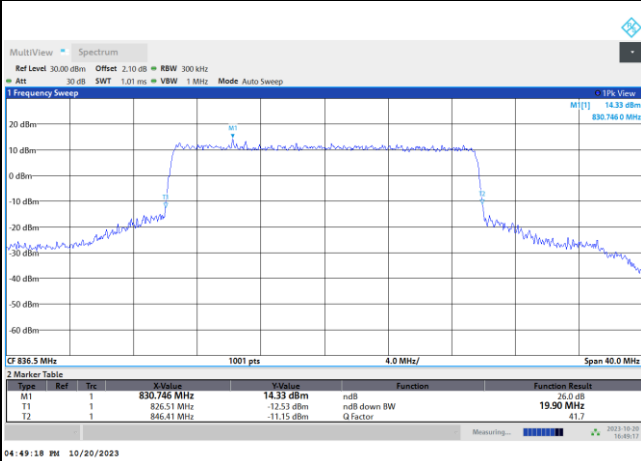
FR1 n5 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

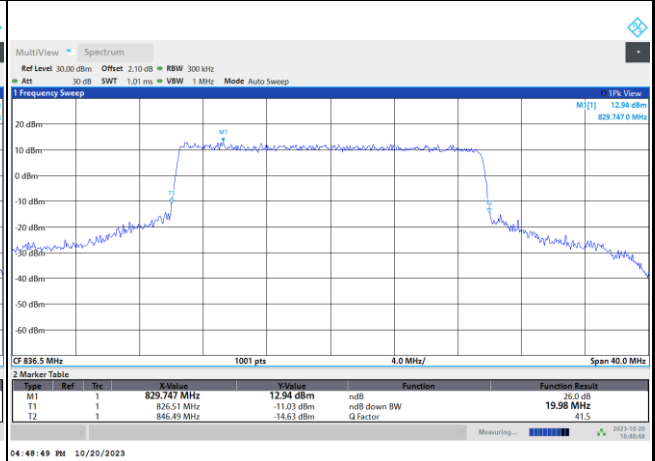


FR1 n5 / 20MHz / CP OFDM / Middle Channel / Full RB

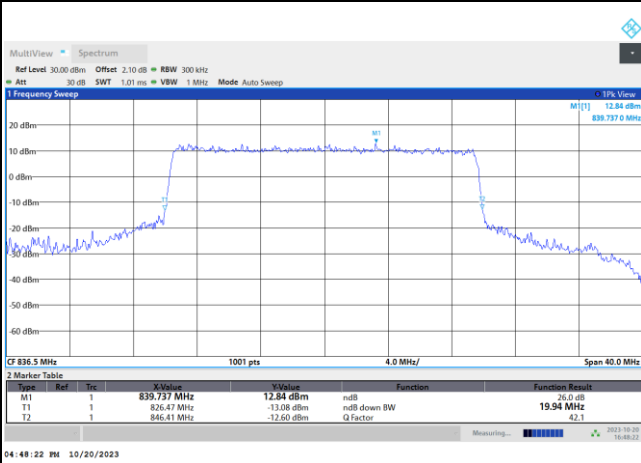
QPSK



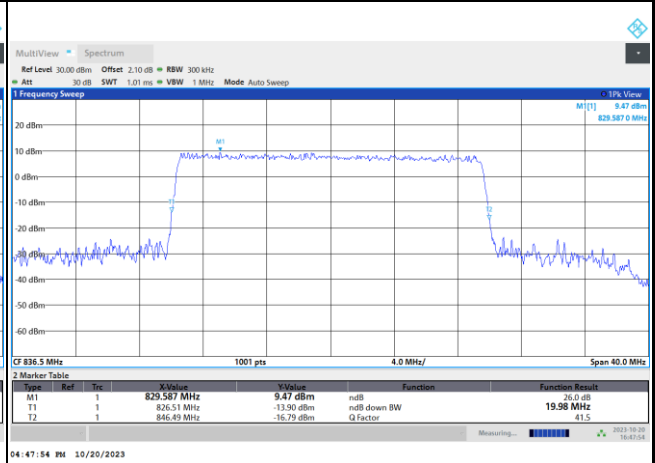
16QAM



64QAM



256QAM





Occupied Bandwidth

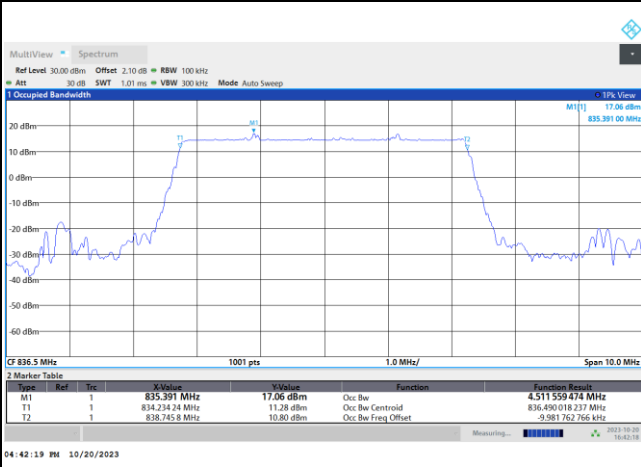
Mode	FR1 n5 : 99%OBW(MHz) / DFT-S OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	PI/2 BPSK		PI/2 BPSK		PI/2 BPSK		PI/2 BPSK	
Middle CH	4.51		8.95		13.46		17.88	

Mode	FR1 n5 : 99%OBW (MHz) / CP OFDM							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.49	4.49	9.28	9.28	14.17	14.16	18.93	18.94
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	4.49	4.49	9.30	9.29	14.17	14.16	18.92	18.96



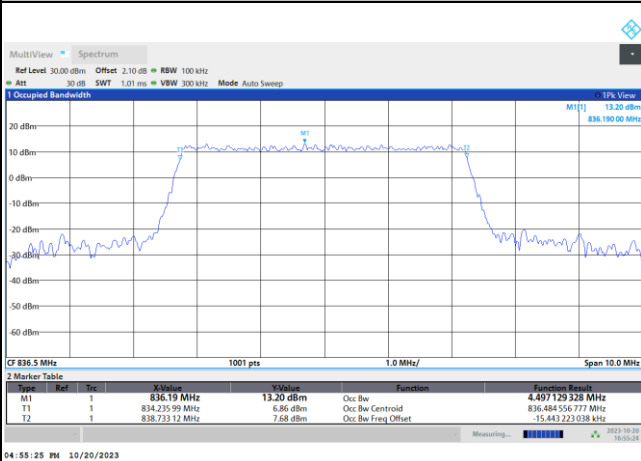
FR1 n5 / 5MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

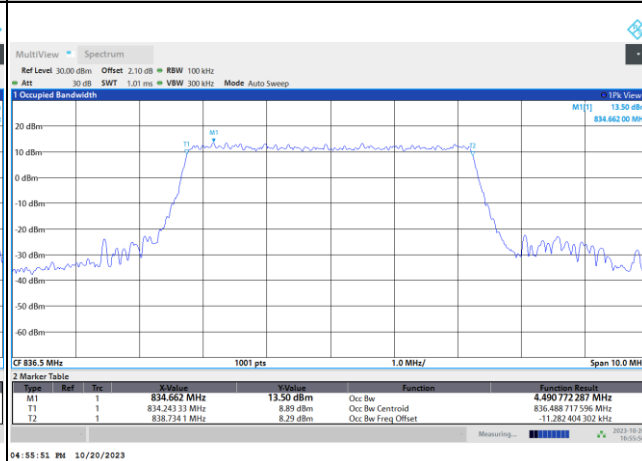


FR1 n5 / 5MHz / CP OFDM / Middle Channel / Full RB

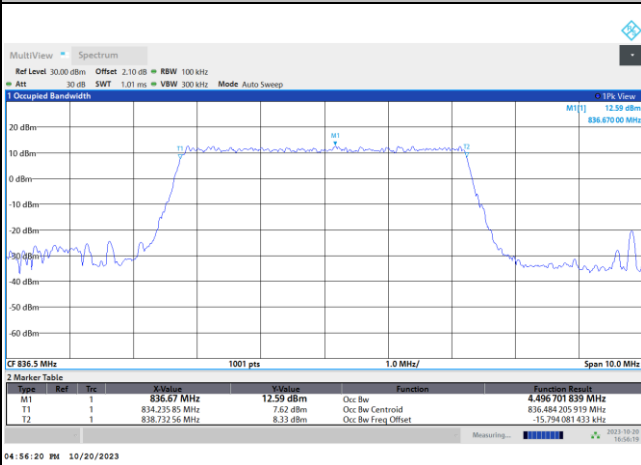
QPSK



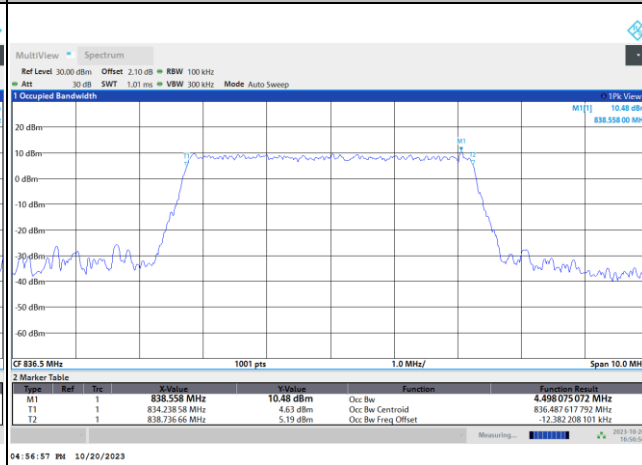
16QAM



64QAM



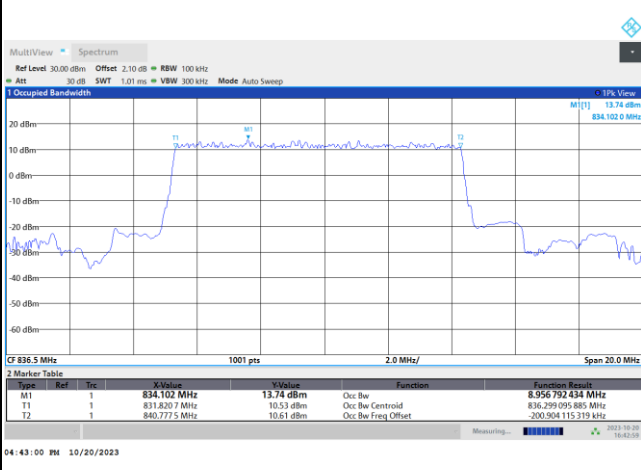
256QAM





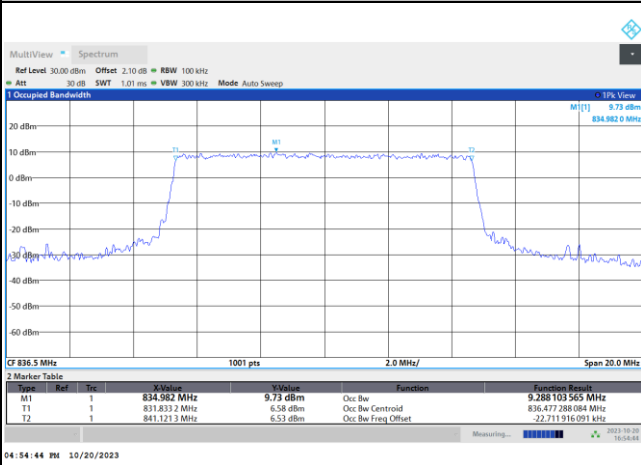
FR1 n5 / 10MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

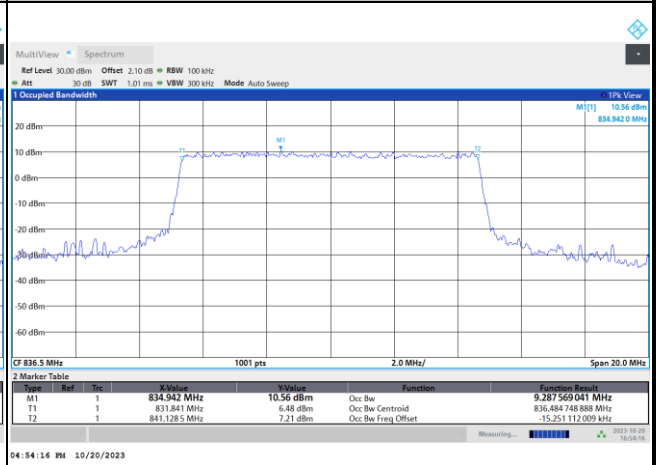


FR1 n5 / 10MHz / CP OFDM / Middle Channel / Full RB

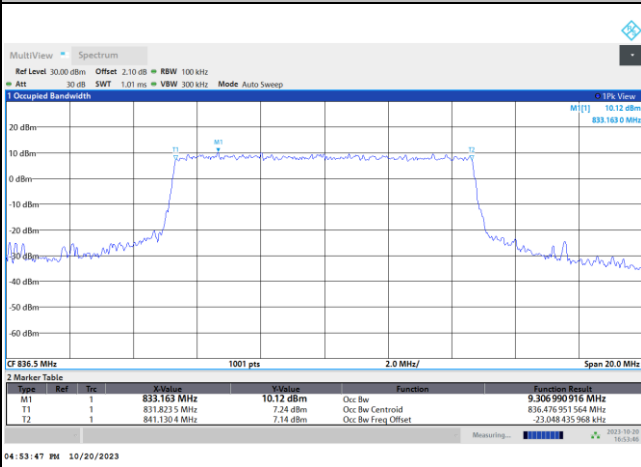
QPSK



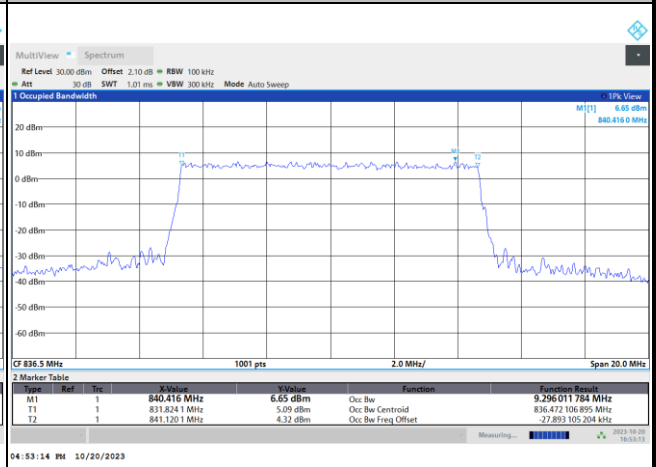
16QAM



64QAM



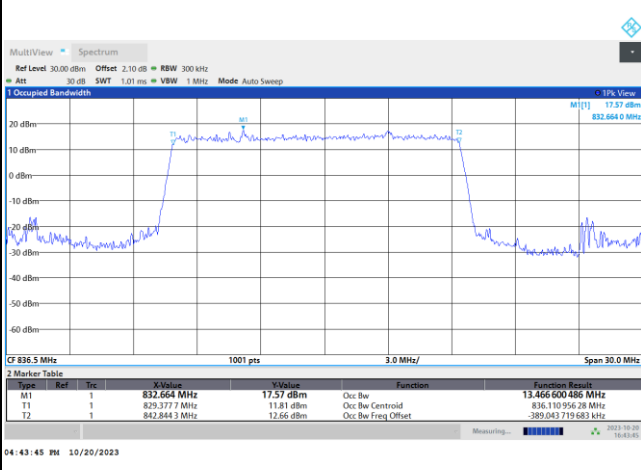
256QAM





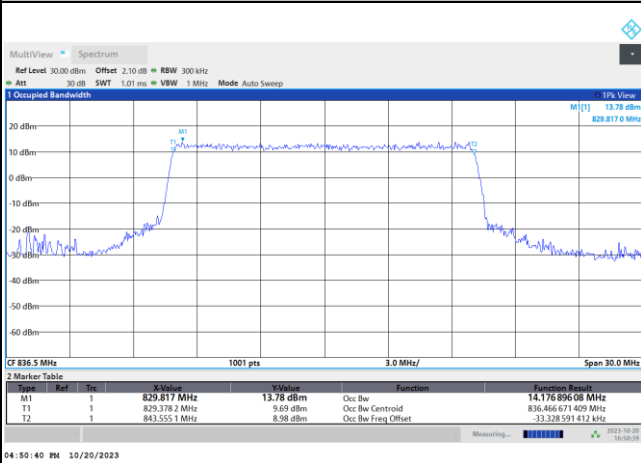
FR1 n5 / 15MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

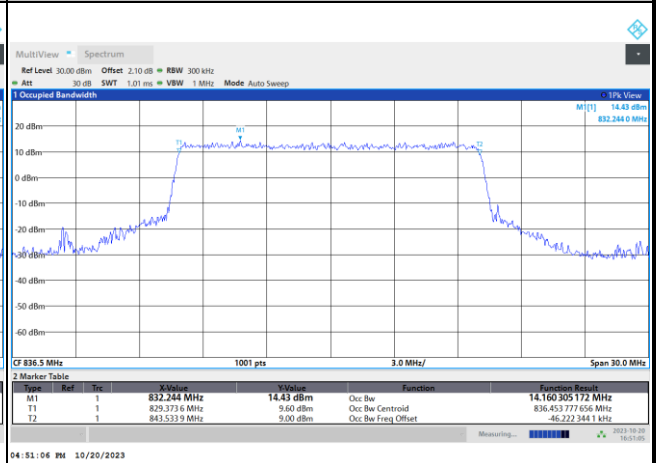


FR1 n5 / 15MHz / CP OFDM / Middle Channel / Full RB

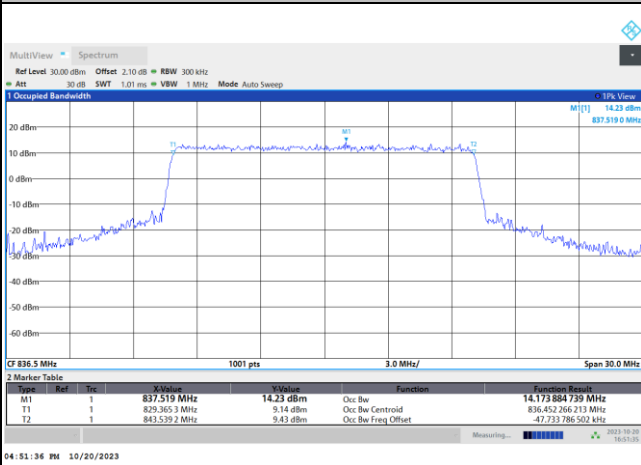
QPSK



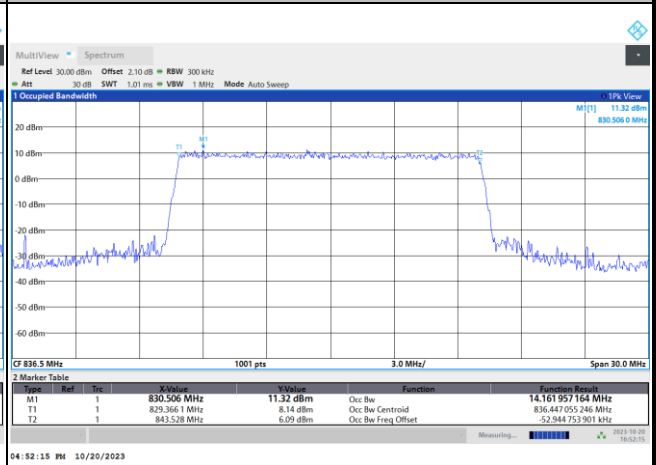
16QAM



64QAM



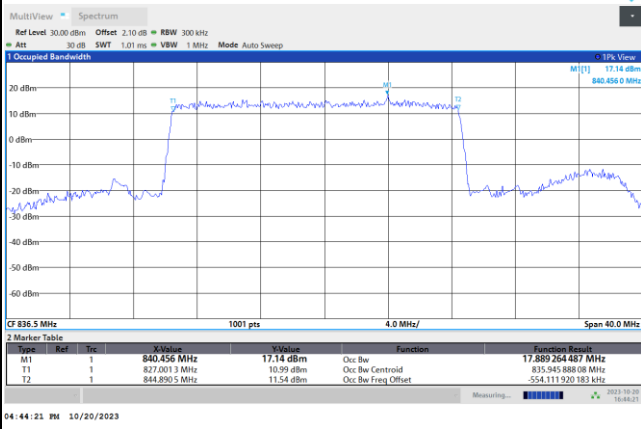
256QAM





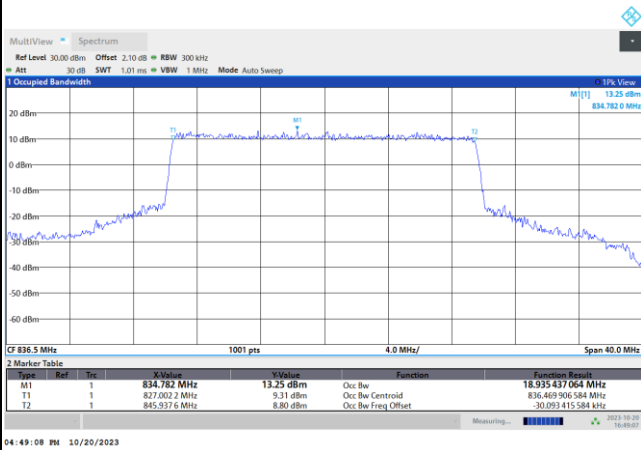
FR1 n5 / 20MHz / DFT-S OFDM / Middle Channel / Full RB

PI/2 BPSK

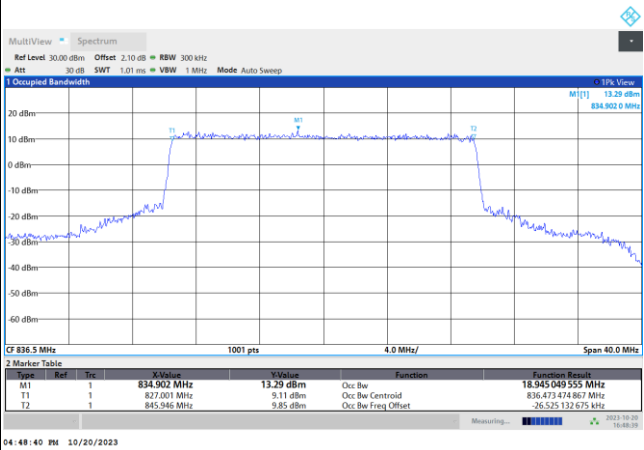


FR1 n5 / 20MHz / CP OFDM / Middle Channel / Full RB

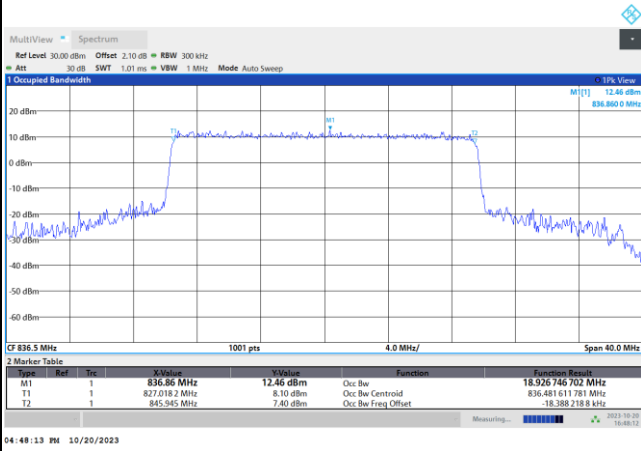
QPSK



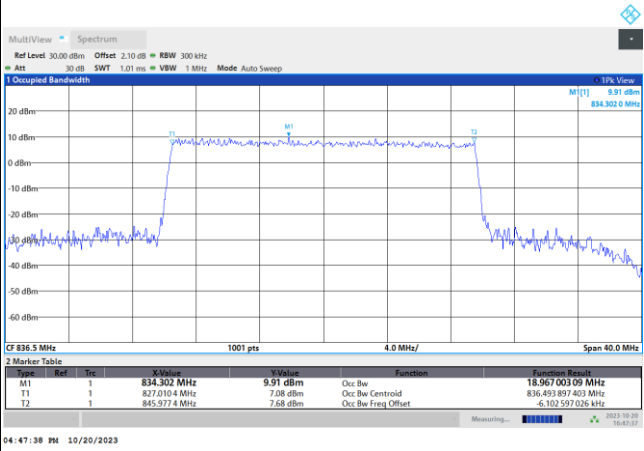
16QAM



64QAM



256QAM



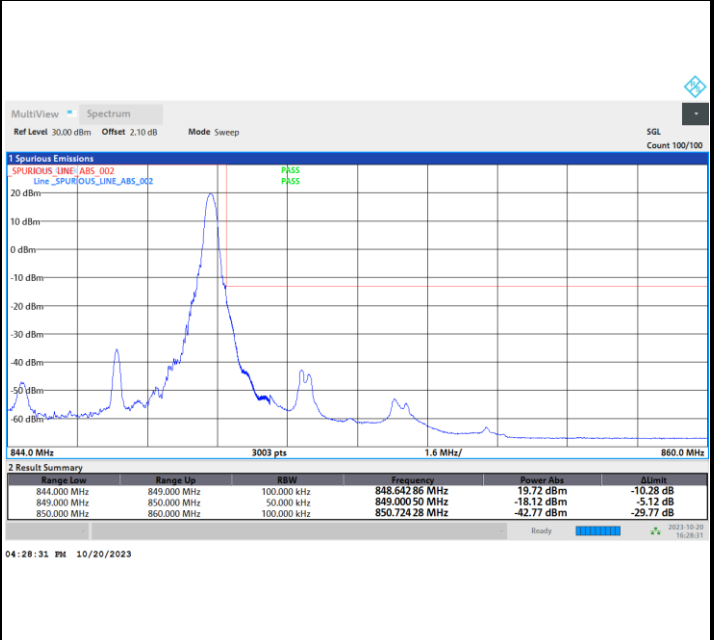
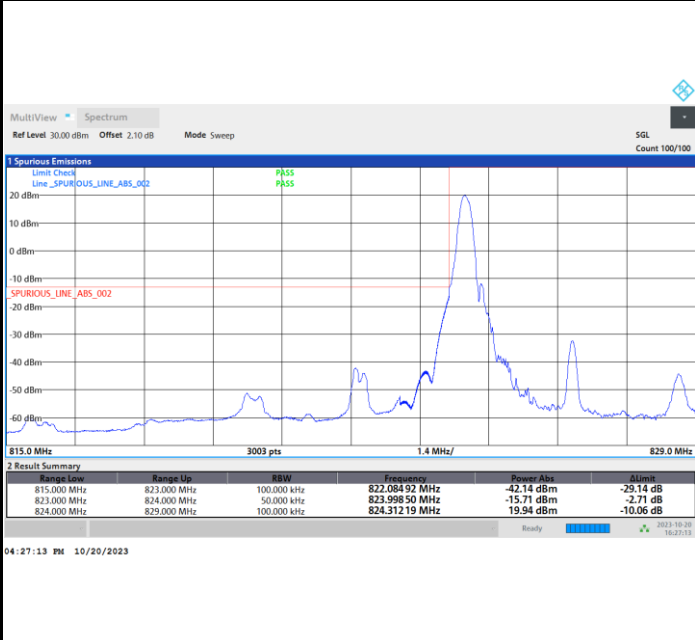


Conducted Band Edge

FR1 n5 / 5MHz / DFT-S OFDM / PI/2 BPSK

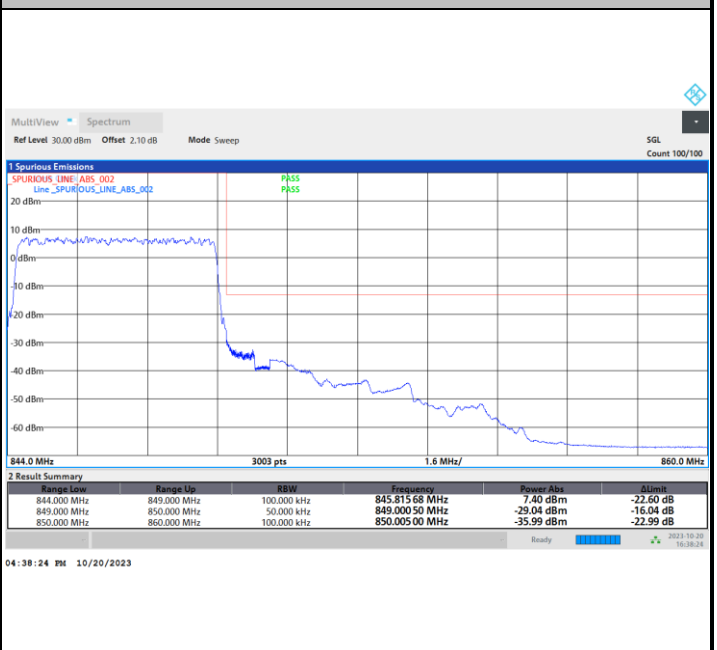
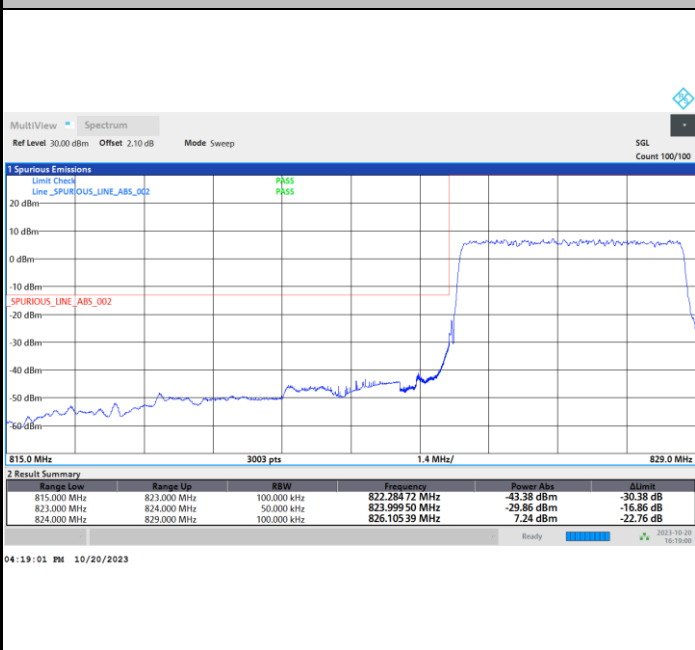
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

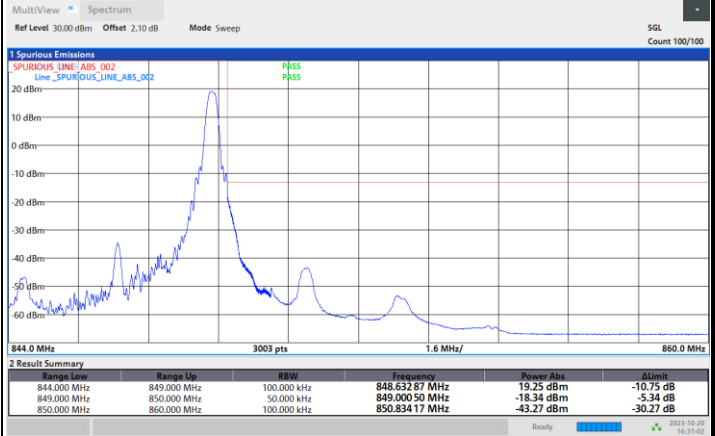
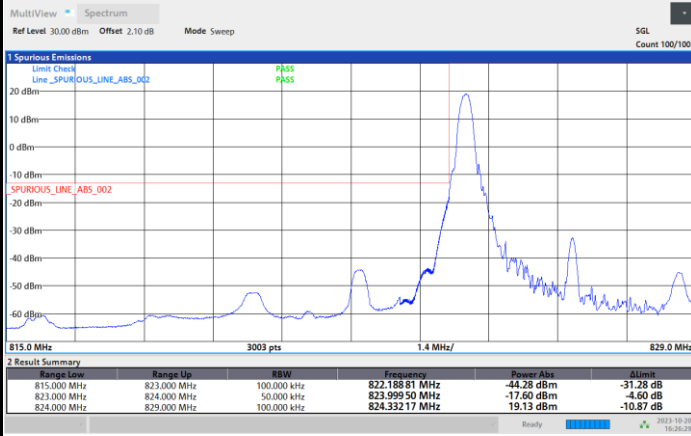




FR1 n5 / 5MHz / DFT-S OFDM / QPSK

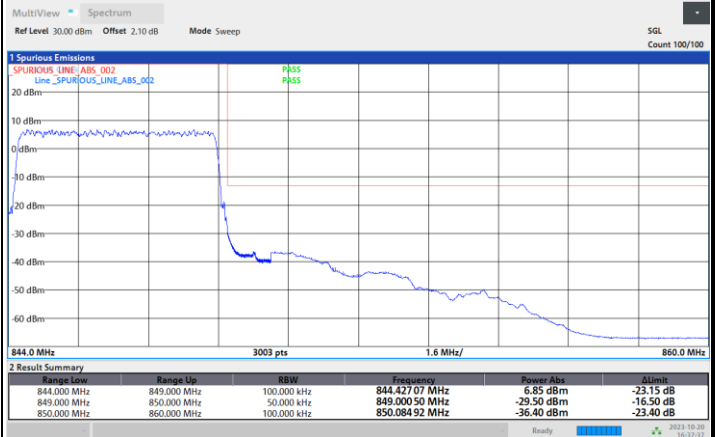
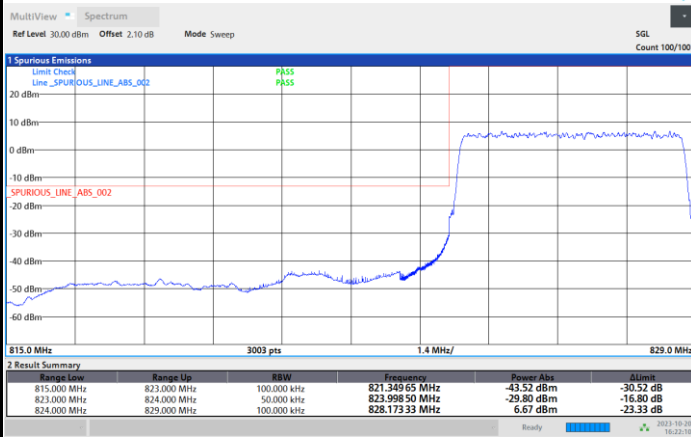
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

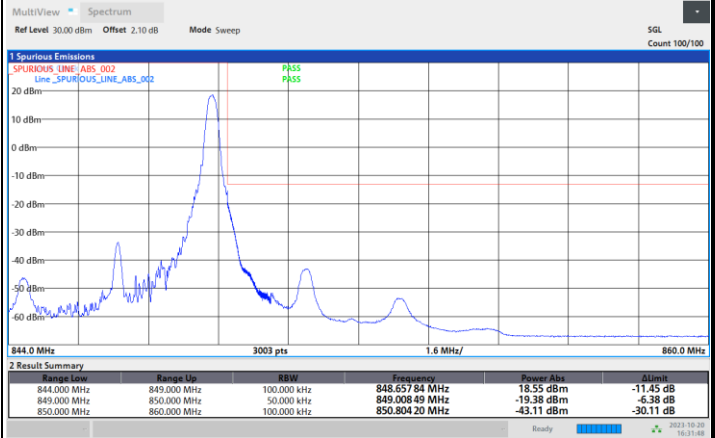
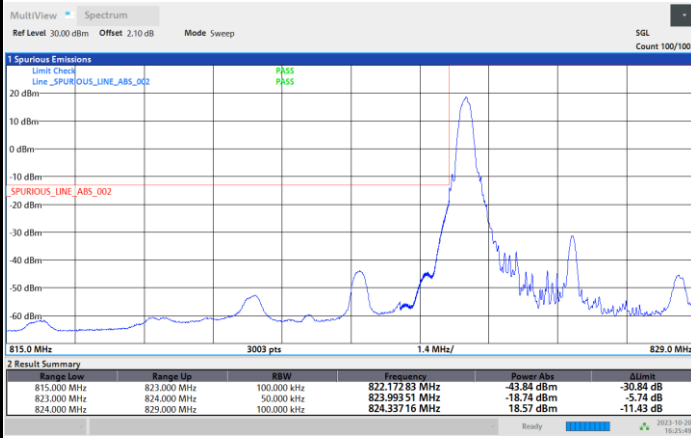




FR1 n5 / 5MHz / DFT-S OFDM / 16QAM

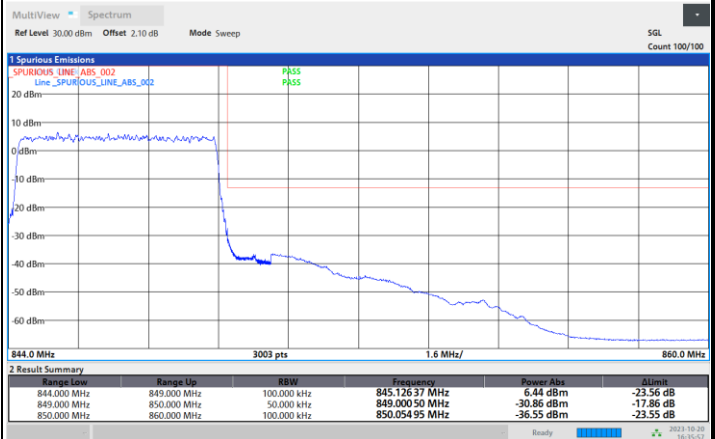
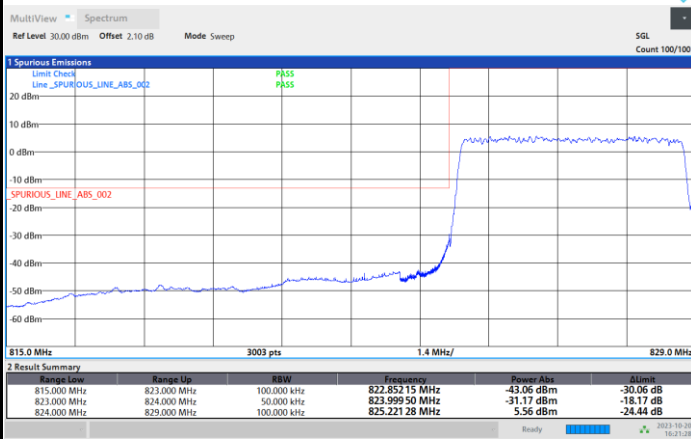
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

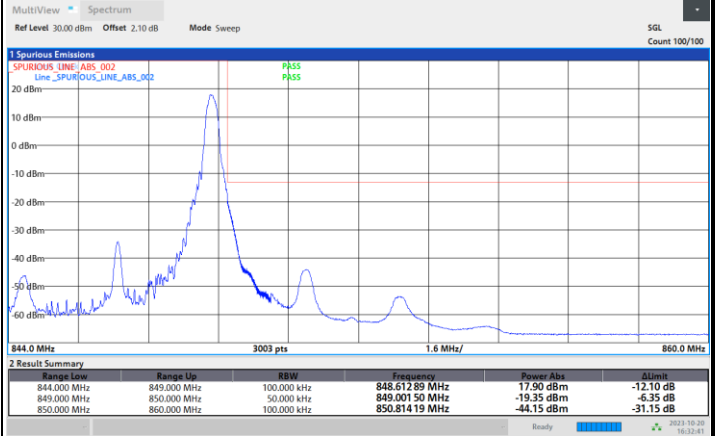
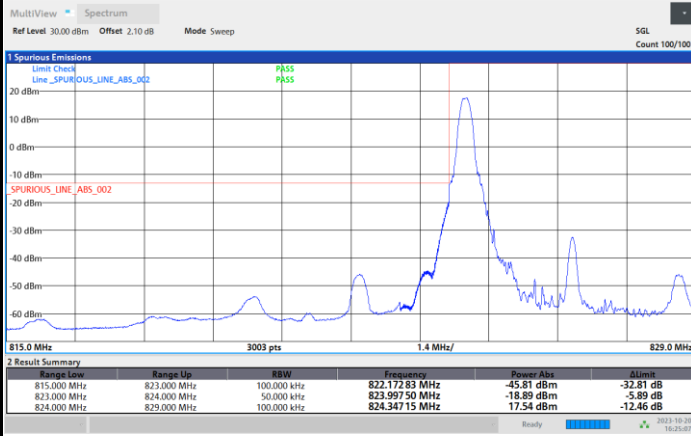




FR1 n5 / 5MHz / DFT-S OFDM / 64QAM

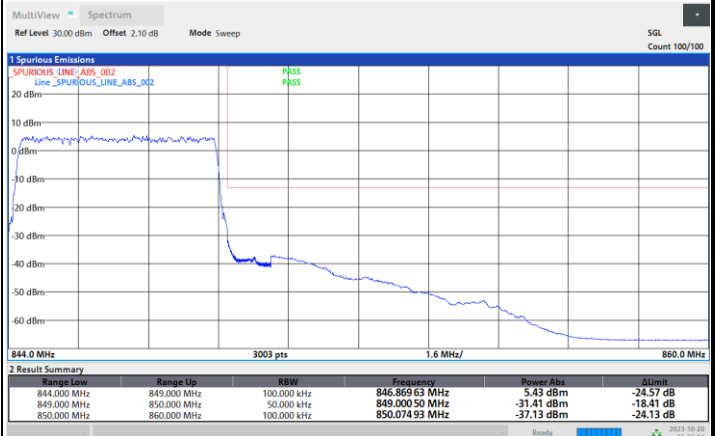
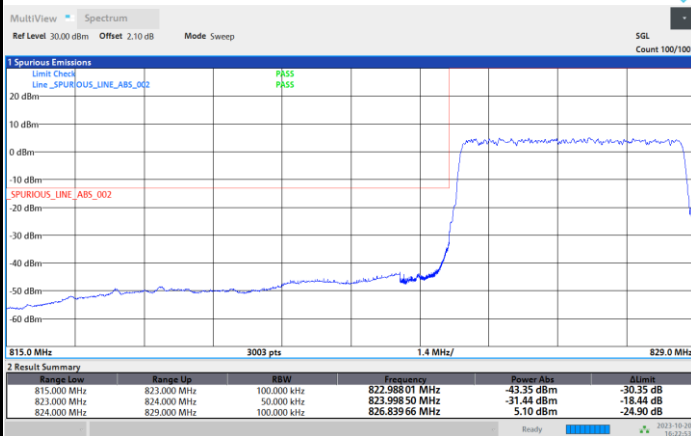
Lowest Band Edge / 1RB0

Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB

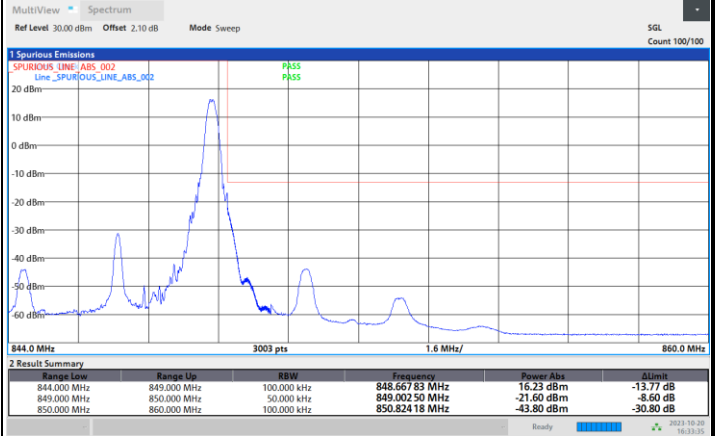
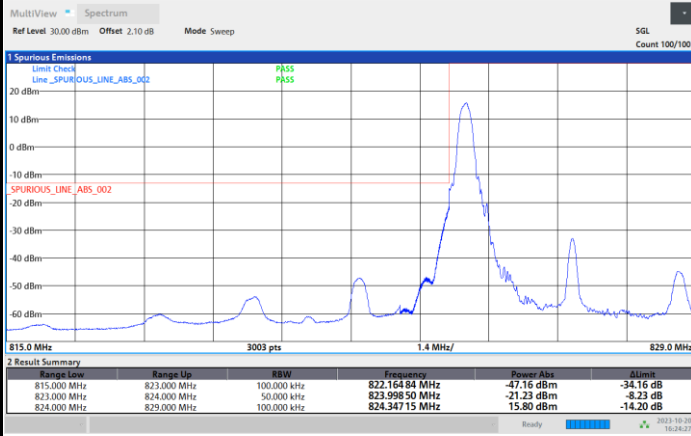




FR1 n5 / 5MHz / DFT-S OFDM / 256QAM

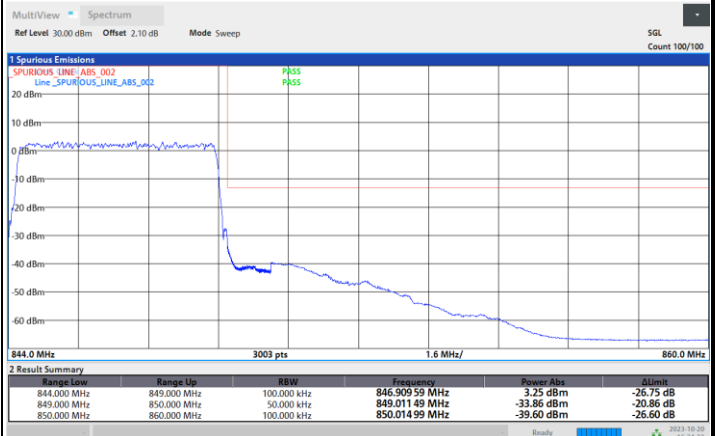
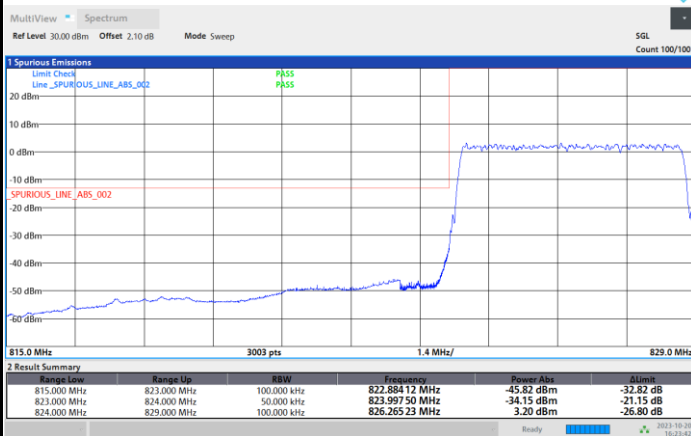
Lowest Band Edge / 1RB0

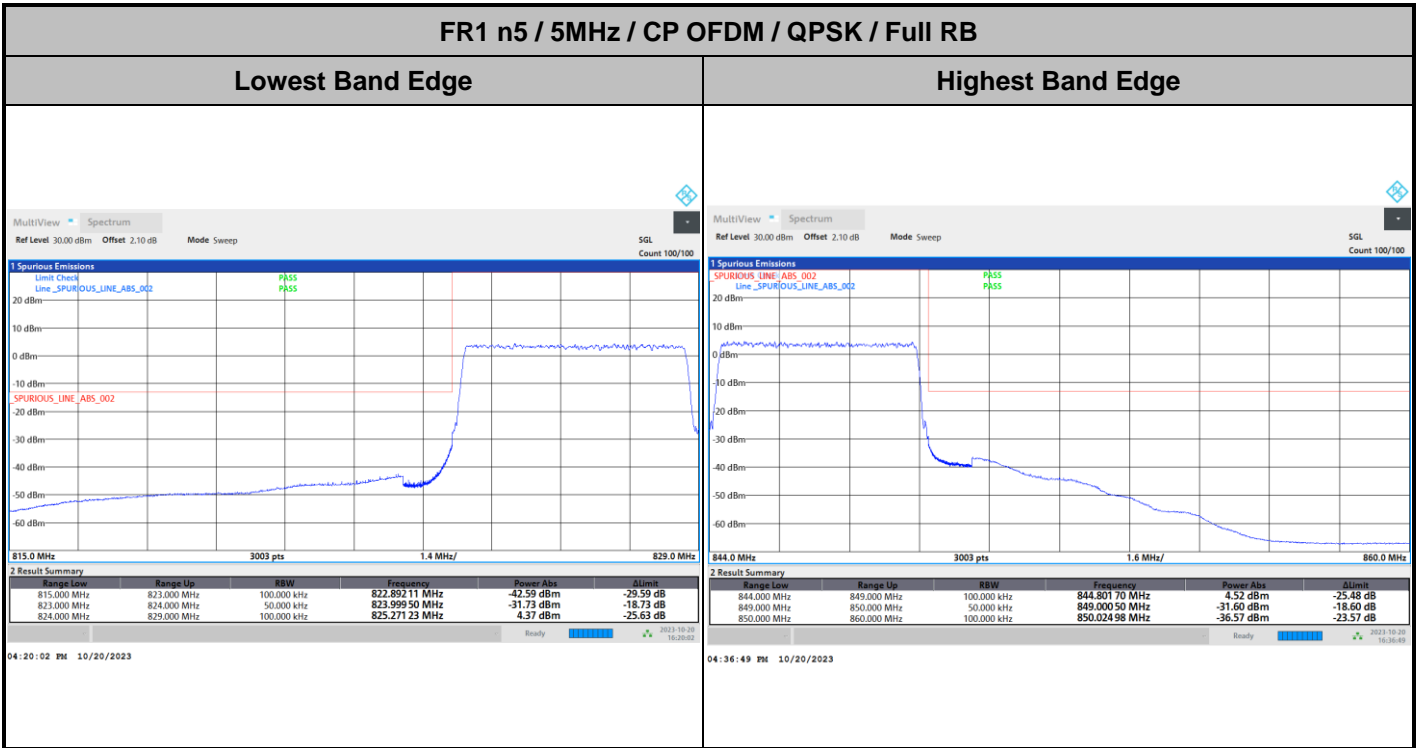
Highest Band Edge / 1RBmax



Lowest Band Edge / Full RB

Highest Band Edge / Full RB



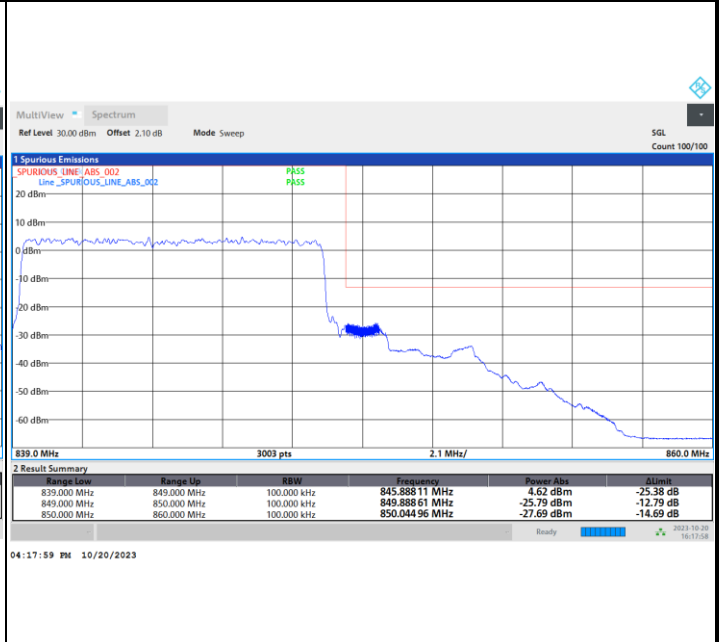
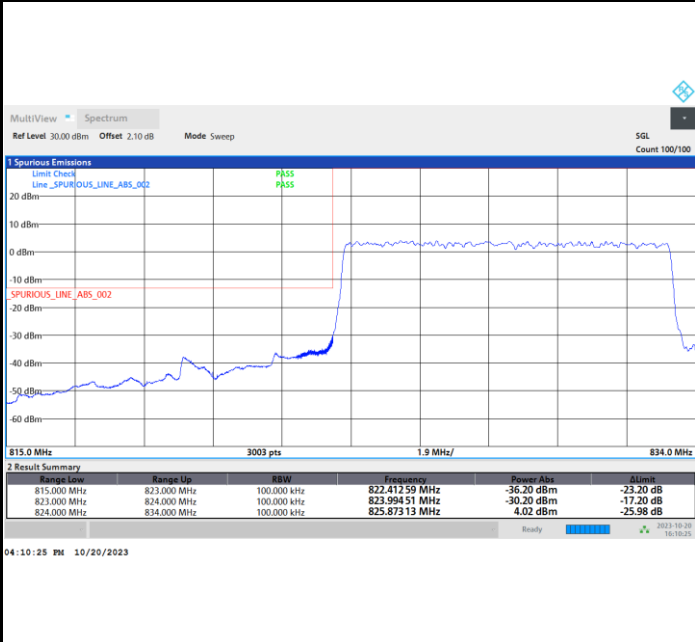




FR1 n5 / 10MHz / DFT-s-OFDM / PI/2 BPSK / Full RB

Lowest Band Edge

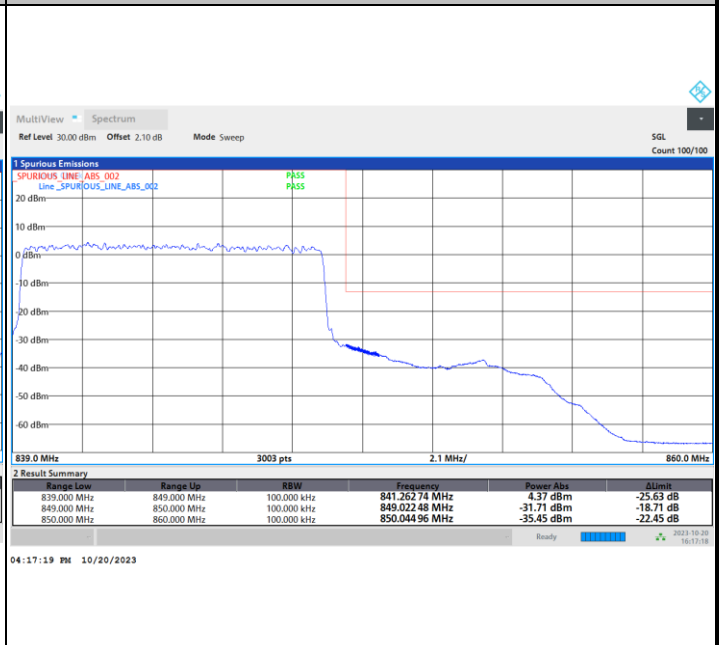
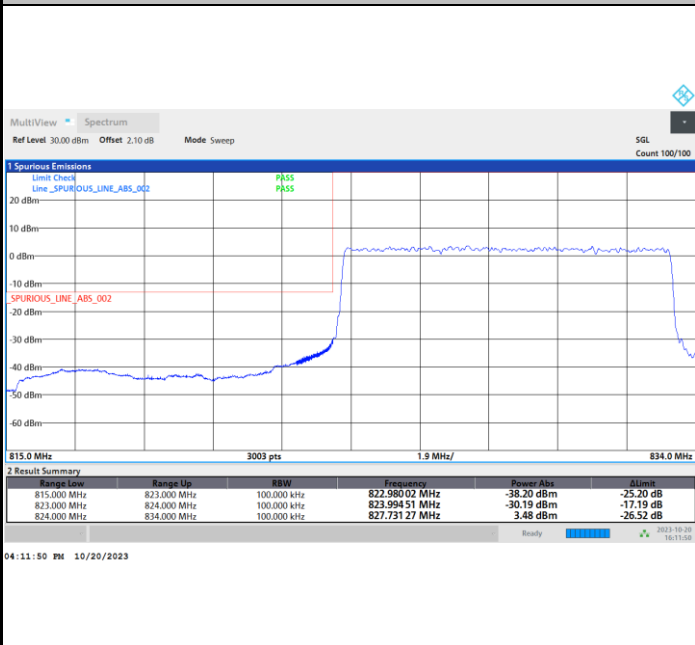
Highest Band Edge



FR1 n5 / 10MHz / DFT-s-OFDM / QPSK / Full RB

Lowest Band Edge

Highest Band Edge

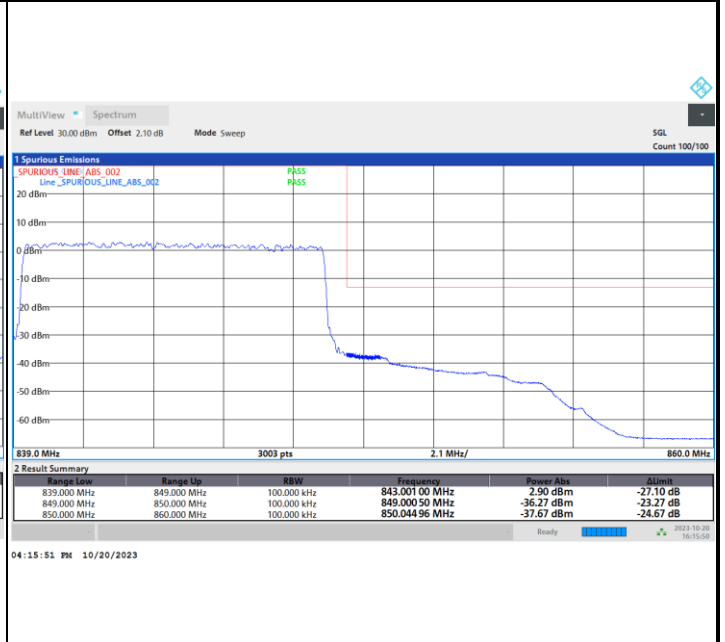
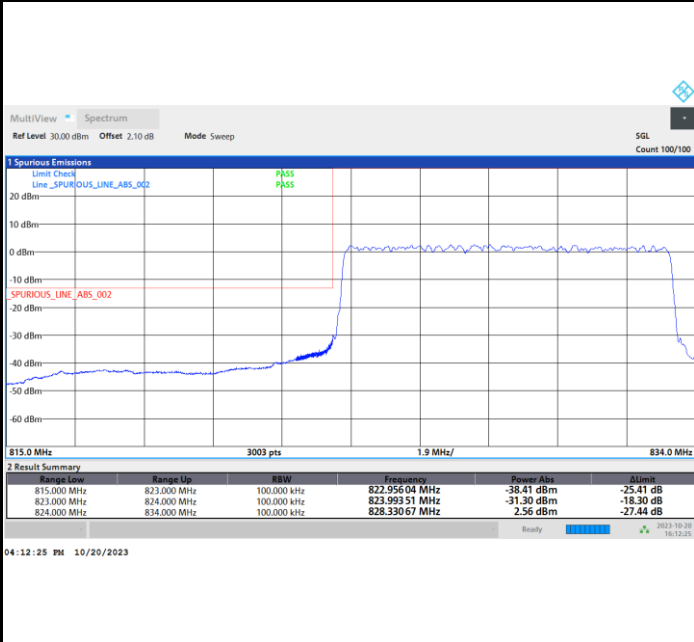




FR1 n5 / 10MHz / DFT-s-OFDM / 16QAM / Full RB

Lowest Band Edge

Highest Band Edge



FR1 n5 / 10MHz / DFT-s-OFDM / 64QAM / Full RB

Lowest Band Edge

Highest Band Edge

