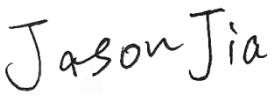
FCC RF Test Report

APPLICANT	: Motorola Mobility LLC
EQUIPMENT	: Mobile Cellular Phone
BRAND NAME	: Motorola
MODEL NAME	: XT2223-1
FCC ID	: IHDT56AE3
STANDARD	: 47 CFR Part 2, 22, 27
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	: Mar. 11, 2022 ~ Mar. 28, 2022

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.



Reviewed by: Jason Jia / Supervisor

Approved by: Alex Wang / Manager

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG230110F	Rev. 01	Initial issue of report	Apr. 12, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power (5G NR n5)	ERP < 7 Watt		
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (5G NR n7)	EIRP < 2Watt		
	§27.50(j)(3)	Equivalent Isotropic Radiated Power (5G NR n77, n78)	EIRP < 1Watt		
3.5	§27.50(j)(4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §27.53(l)(2)	Conducted Band Edge Measurement (5G NR n5) (5G NR n77, n78)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n7)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a) §27.53(l)(2)	Conducted Spurious Emission (5G NR n5) (5G NR n77, n78)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n7)	< 55+10log$_{10}$(P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §27.53(l)(2)	Radiated Spurious Emission (5G NR n5) (5G NR n77, n78)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 36.24 dB at 2480.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n7)	< 55+10log$_{10}$(P[Watts])		

Declaration of Conformity:

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

Comments and Explanations:

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

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2223-1
FCC ID	IHDT56AE3
IMEI Code	Conducted : 359131420065476/359131420065484 Radiation : 359131420066078
HW Version	DVT2
SW Version	S1SS32.38
EUT Stage	Identical Prototype

Remark:
Only 5G NR bands are tested in this report, all the other RF bands are tested in the other reports separately.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
Rx Frequency	5G NR n5 : 869 MHz ~ 894 MHz 5G NR n7 : 2620 MHz ~ 2690 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
SCS	15kHz: 5G NR n5/n7 30kHz: 5G NR n77/n78
Bandwidth	n5: 5MHz / 10MHz / 15MHz / 20MHz n7: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz n77/n78: 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz
Antenna Gain	**<Ant. 0>:** n7: -0.20 dBi n78: -4.00 dBi **<Ant. 1>:** n5: -4.80 dBi **<Ant. 3>:** n78: -0.70 dBi **<Ant. 5>:** n77: -4.50 dBi n78: -5.60 dBi **<Ant. 8>:** n78: -2.30 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum EIRP is calculated from max output power and max antenna gain, only the maximum EIRP is shown in the report, 5G NR n78 for Antenna 3.
2. The device supports SA mode for 5G NR n7/n78 and NSA mode for 5G NR n5/n7/n77/n78.
3. For n5/n77 for NSA mode and n7/n78 for SA mode, the whole testing has assessed by referring to the higher conducted power for conducted test items.
4. For NSA mode of all EN-DC combination, we only show the combination of the maximum power among all NSA combinations in the report.
5. The device supports HPUE mode for 5G NR SA n78.
6. The device supports n78(1T4R) SRS resources on ant.0/3/5/8, only the test data of worst ant.5 is showed in the report according to the maximum power.
7. The EN-DC mode combination could be referred to the product spec.

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP and Emission Designator

5G NR n5 NSA (EN DC_7A-n5A)		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
20	834.0 ~ 839.0	0.0461	19M4G7D	0.0396	19M2W7D

5G NR n7 SA		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
40	2520.0 ~ 2550.0	0.2046	38M6G7D	0.1663	38M8W7D

5G NR n77 NSA (EN DC_41A-n77A)		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
100	3750.00 ~ 3930.00	0.0762	98M3G7D	0.0545	97M3W7D

5G NR n78 SA		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
100	3750.00	0.3664	96M7G7D	0.2547	96M9W7D

Note: All modulations have been tested, only the maximum bandwidth and modulation worst test results of PSK & QAM are shown in the report.

1.7 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a

1.9 Applicable Standards

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

- 47 CFR Part 2, 22, 27
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

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

1.10 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-101
AC Adapter 1(EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-102
AC Adapter 1(UK)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-103
AC Adapter 1(AU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-105
AC Adapter 1(AR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-106
AC Adapter 1(CHILE)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-109
AC Adapter 2(US)	**Brand Name**	Motorola(Aohai)	**Model Name**	MC-101
AC Adapter 2(EU)	**Brand Name**	Motorola(Aohai)	**Model Name**	MC-102
AC Adapter 2(UK)	**Brand Name**	Motorola(Aohai)	**Model Name**	MC-103
AC Adapter 2(AU)	**Brand Name**	Motorola(Aohai)	**Model Name**	MC-105
AC Adapter 2(AR)	**Brand Name**	Motorola(Aohai)	**Model Name**	MC-106
AC Adapter 3(US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-101
AC Adapter 3(EU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-102
AC Adapter 3(UK)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-103
AC Adapter 3(AU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-105
AC Adapter 3(AR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-106
AC Adapter 4(US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-201
AC Adapter 4(IN)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-204
AC Adapter 5(US)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-201
AC Adapter 6(IN)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-204
AC Adapter 7 (BR Local build)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-207
AC Adapter 8 (BR Local build)	**Brand Name**	Motorola(Flex)	**Model Name**	MC-207
Battery	**Brand Name**	Motorola(ATL)	**Model Name**	ND50
Earphone 1	**Brand Name**	Motorola(NLD)	**Model Name**	MH202
Earphone 2	**Brand Name**	Motorola(NLD)	**Model Name**	MH191
Earphone 3	**Brand Name**	Motorola(Lyand)	**Model Name**	MH191
Earphone 4	**Brand Name**	Motorola(LCHSE)	**Model Name**	MH191
USB Cable 1	**Brand Name**	Motorola(HX)	**Model Name**	S928D43190
USB Cable 2	**Brand Name**	Motorola(NAEE)	**Model Name**	S928D43191

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

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.

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 5M, 10M, 15M, 20M	eg. QPSK, 16QAM, 64QAM	1RB, Partial RB, Full RB	L/M/H
Max. Output Power	5G n5	5M, 10M, 15M, 20M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
	5G n7	5M, 10M, 15M, 20M, 25M, 30M, 40M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
	5G n77	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
Peak-to-Average Ratio	5G n5	20M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
	5G n7	40M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
	5G n77	100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
	5G n78	100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
E.I.R.P	5G n5	5M, 10M, 15M, 20M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
	5G n7	5M, 10M, 15M, 20M, 25M, 30M, 40M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
	5G n77	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H

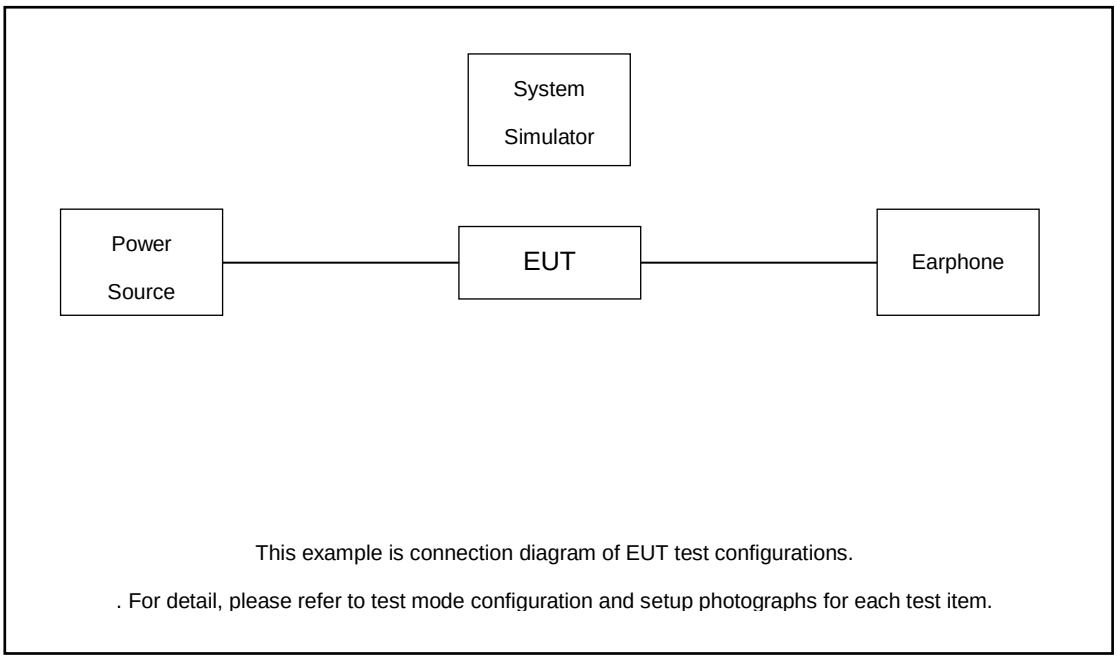
Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 5M, 10M, 15M, 20M	eg. QPSK, 16QAM, 64QAM	1RB, Partial RB, Full RB	L/M/H
26dB and 99% Bandwidth	5G n5	20M	QPSK, 16QAM	Full RB	M
	5G n7	40M	QPSK, 16QAM	Full RB	M
	5G n77	100M	QPSK, 16QAM	Full RB	M
	5G n78	100M	QPSK, 16QAM	Full RB	M
Conducted Band Edge	5G n5	5M, 10M, 15M, 20M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Full RB	L, H
	5G n7	5M, 10M, 15M, 20M, 25M, 30M, 40M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Full RB	L, H
	5G n77	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Full RB	L, H
	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Full RB	L, H
Conducted Spurious Emission	5G n5	5M, 10M, 15M, 20M	QPSK	1RB	L, M, H
	5G n7	5M, 10M, 15M, 20M, 25M, 30M, 40M	QPSK	1RB	L, M, H
	5G n77	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	QPSK	1RB	L, M, H
	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	QPSK	1RB	L, M, H
Frequency Stability	5G n5	20M	QPSK	Full RB	M
	5G n7	20M	QPSK	Full RB	M
	5G n77	20M	QPSK	Full RB	M
	5G n78	20M	QPSK	Full RB	M
Radiated Spurious Emission	5G n5	Worst case from maximum power			M
	5G n7	Worst case from maximum power			M
	5G n77	Worst case from maximum power			M
	5G n78	Worst case from maximum power			M

Note:

1. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

2. Based on engineering evaluation, only the worst modulations test results are shown in the report.

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 3.49 dB and 10dB attenuator.

Example :

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

= 3.49 + 10 = 13.49 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n5 Channel and Frequency List for				
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 n7 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
40	Channel	504000	507000	510000
	Frequency	2520	2535	2550
30	Channel	503000	507000	511000
	Frequency	2515	2535	2555
25	Channel	502500	507000	511500
	Frequency	2512.5	2535	2557.5
20	Channel	502000	507000	512000
	Frequency	2510	2535	2560
15	Channel	501500	507000	512500
	Frequency	2507.5	2535	2562.5
10	Channel	501000	507000	513000
	Frequency	2505	2535	2565
5	Channel	500500	507000	513500
	Frequency	2502.5	2535	2567.5

5G 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	662334
	Frequency	3745.02	3840	3935.01
80	Channel	649334	656000	662668
	Frequency	3740.01	3840	3940.02
70	Channel	649000	656000	663000
	Frequency	3735	3840	3945
60	Channel	648668	656000	663334
	Frequency	3730.02	3840	3950.01
50	Channel	648334	656000	663668
	Frequency	3725.01	3840	3955.02
40	Channel	648000	656000	664000
	Frequency	3720	3840	3960
30	Channel	647668	656000	664334
	Frequency	3715.02	3840	3965.01
20	Channel	647334	656000	664668
	Frequency	3710.01	3840	3970.02

5G n78 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel		650000	
	Frequency		3750	
90	Channel	649668	650000	650334
	Frequency	3745.02	3750	3755.01
80	Channel	649334	650000	650668
	Frequency	3740.01	3750	3760.02
70	Channel	649000	650000	651000
	Frequency	3735	3750	3765
60	Channel	648668	650000	651334
	Frequency	3730.02	3750	3770.01
50	Channel	648334	650000	651668
	Frequency	3725.01	3750	3775.02
40	Channel	648000	650000	652000
	Frequency	3720	3750	3780
30	Channel	647668	650000	652334
	Frequency	3715.02	3750	3785.01
20	Channel	647334	650000	652668
	Frequency	3710.01	3750	3790.02

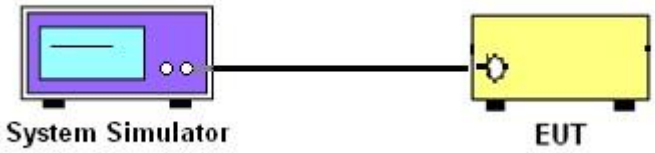
3 Conducted Test Items

3.1 Measuring Instruments

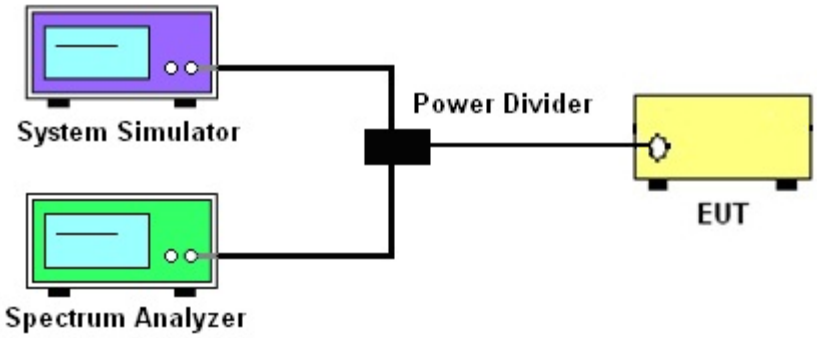
See list of measuring instruments of this test report.

3.2 Test Setup

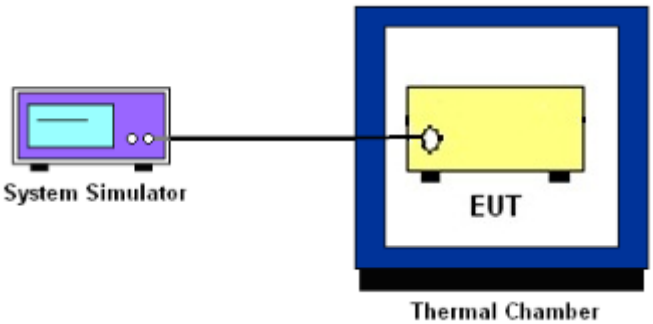
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 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 EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n7.

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

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 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.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

1. The testing follows ANSI C63.26 Section 5.2.6 (PAPR).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set EUT in maximum power output.
4. Set the RBW = 1MHz, VBW = 3MHz, Detector = Peak, Trace mode = max hold, Set span ≥ 2 × OBW in spectrum analyzer.
5. Set the RBW = 1MHz, VBW = 3MHz, Detector = power averaging, Trace mode = max hold, Set span ≥ 2 × OBW in spectrum analyzer.
6. Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission.
7. PAPR (dB) = P_{Pk} (dBm) − P_{Avg} (dBm)
   where
   PAPR peak-to-average power ratio, in dB
   P_{Pk} measured peak power level, in dBm
   P_{Avg} measured average power level, in dBm
8. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 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.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. 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.
5. Set the detection mode to peak, and the trace mode to max hold.
6. 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)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. 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.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

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

27.53(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.

27.53(l)(2)

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.
   Example:
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. For 5G NR n7, the other 40 dB, and 55 dB have additionally applied same calculation above.
10. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 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 n7:

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 10^{th} harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
11. For 5G NR n7
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55+ 10log(P)] (dB)
    = [30+ 10log(P)] (dBm) - [55+ 10log(P)] (dB)
    = -25dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

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 ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. 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.
4. 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.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

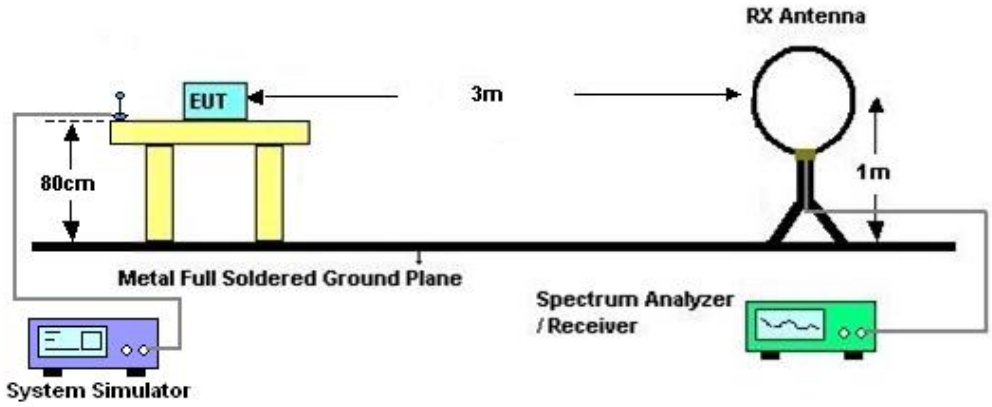
4 Radiated Test Items

4.1 Measuring Instruments

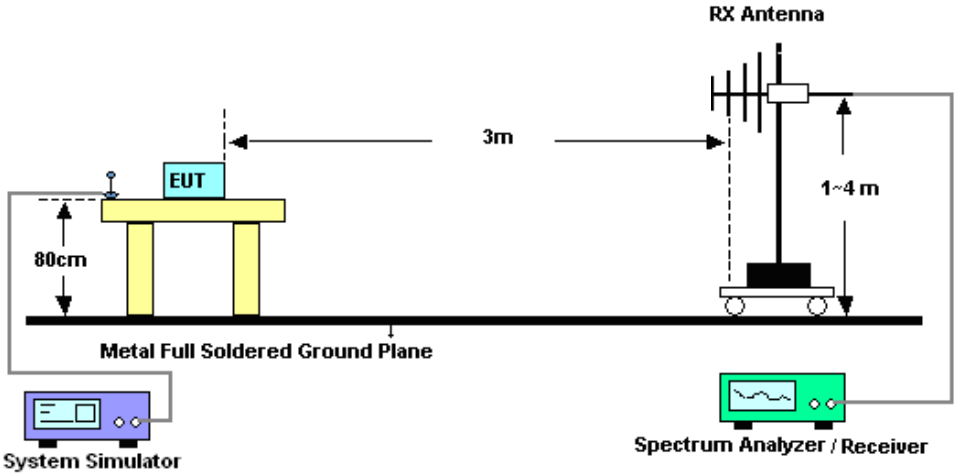
See list of measuring instruments of this test report.

4.2 Test Setup

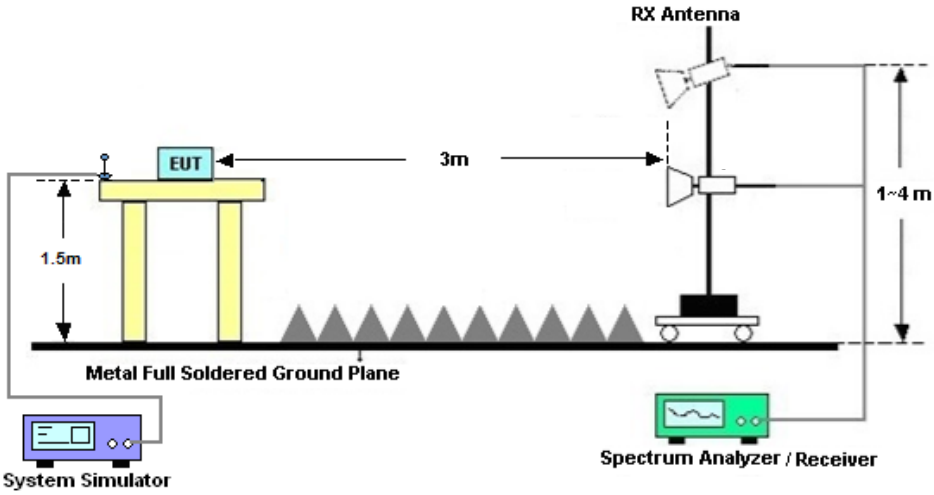
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. 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 n7

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.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
13. For 5G NR n7:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 14, 2021	Mar. 11, 2022~ Mar. 14, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 26, 2021	Mar. 11, 2022~ Mar. 14, 2022	Aug. 25, 2022	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 12, 2021	Mar. 11, 2022~ Mar. 14, 2022	Jul. 11, 2022	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2021	Mar. 28, 2022	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Mar. 28, 2022	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2021	Mar. 28, 2022	May 29, 2022	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 25, 2021	Mar. 28, 2022	Apr. 24, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jan. 05, 2022	Mar. 28, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 05, 2022	Mar. 28, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Mar. 28, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Jan. 05, 2022	Mar. 28, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 13, 2021	Mar. 28, 2022	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 28, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 28, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 28, 2022	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±0.56 dB
Conducted Emissions	±0.92 dB
Occupied Channel Bandwidth	±0.03 %

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.3dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.8dB

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Test Engineer :	Lew Wu	Temperature :	21~24℃
		Relative Humidity :	45~51%

Conducted Output Power(Average power and EIRP)

5G NR n5:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	ERP	ERP	ERP
Channel				166800	167300	167800		L	M	H
Frequency (MHz)				834	836.5	839				
20	PI/2 BPSK	1	1	23.15	23.23	23.36	-4.80	0.0417	0.0425	0.0438
20	QPSK	1	1	23.06	23.56	23.23	-4.80	0.0408	0.0458	0.0425
20	QPSK	1	53	23.15	23.39	23.06	-4.80	0.0417	0.0441	0.0408
20	QPSK	1	104	22.86	23.06	22.96	-4.80	0.0390	0.0408	0.0399
20	QPSK	50	0	22.44	22.44	22.52	-4.80	0.0354	0.0354	0.0361
20	QPSK	50	28	23.51	23.59	23.44	-4.80	0.0453	0.0461	0.0446
20	QPSK	50	56	22.28	22.32	22.31	-4.80	0.0341	0.0344	0.0344
20	QPSK	100	0	22.44	22.59	22.53	-4.80	0.0354	0.0366	0.0361
20	16QAM	1	1	22.71	22.93	22.92	-4.80	0.0377	0.0396	0.0395
20	64QAM	1	1	20.69	20.85	20.82	-4.80	0.0237	0.0245	0.0244
20	256QAM	1	1	18.72	18.93	18.79	-4.80	0.0150	0.0158	0.0153
Channel				166300	167300	168300	Gain	ERP	ERP	ERP
Frequency (MHz)				831.5	836.5	841.5				
15	QPSK	1	1	23.31	23.44	23.39	-4.80	0.0433	0.0446	0.0441
15	16QAM	1	1	22.78	22.71	22.79	-4.80	0.0383	0.0377	0.0384
Channel				165800	167300	168800	Gain	ERP	ERP	ERP
Frequency (MHz)				829	836.5	844				
10	QPSK	1	1	23.56	23.53	22.35	-4.80	0.0458	0.0455	0.0347
10	16QAM	1	1	22.83	22.89	22.81	-4.80	0.0387	0.0393	0.0385
Channel				165300	167300	169300	Gain	ERP	ERP	ERP
Frequency (MHz)				826.5	836.5	846.5				
5	QPSK	1	1	23.48	23.52	23.31	-4.80	0.0450	0.0454	0.0433
5	16QAM	1	1	22.93	22.93	22.72	-4.80	0.0396	0.0396	0.0378

5G NR n7:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP	EIRP	EIRP
Channel				504000	507000	510000		L	M	H
Frequency (MHz)				2520	2535	2550				
40	PI/2 BPSK	1	1	23.06	22.95	22.96	-0.20	0.1932	0.1884	0.1888
40	QPSK	1	1	23.31	22.82	23.16	-0.20	0.2046	0.1828	0.1977
40	QPSK	1	108	23.21	22.81	23.08	-0.20	0.2000	0.1824	0.1941
40	QPSK	1	214	23.13	22.79	23.02	-0.20	0.1963	0.1816	0.1914
40	QPSK	108	0	22.06	21.95	22.13	-0.20	0.1535	0.1496	0.1560
40	QPSK	108	54	23.09	22.98	23.05	-0.20	0.1945	0.1897	0.1928
40	QPSK	108	108	22.17	21.95	22.02	-0.20	0.1574	0.1496	0.1521
40	QPSK	216	0	22.15	21.94	22.03	-0.20	0.1567	0.1493	0.1524
40	16QAM	1	1	22.41	22.16	22.26	-0.20	0.1663	0.1570	0.1607
40	64QAM	1	1	20.52	20.26	20.53	-0.20	0.1076	0.1014	0.1079
40	256QAM	1	1	18.59	18.44	18.59	-0.20	0.0690	0.0667	0.0690
Channel				503000	507000	511000	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				2515	2535	2555				
30	QPSK	1	1	22.95	22.89	22.83	-0.20	0.1884	0.1858	0.1832
30	16QAM	1	1	22.22	22.13	22.11	-0.20	0.1592	0.1560	0.1552
Channel				502500	507000	511500	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				2512.5	2535	2557.5				
25	QPSK	1	1	23.26	22.83	22.86	-0.20	0.2023	0.1832	0.1845
25	16QAM	1	1	22.41	22.12	22.03	-0.20	0.1663	0.1556	0.1524
Channel				502000	507000	512000	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				2510	2535	2560				
20	QPSK	1	1	22.96	22.69	22.79	-0.20	0.1888	0.1774	0.1816
20	16QAM	1	1	22.11	21.92	22.02	-0.20	0.1552	0.1486	0.1521
Channel				501500	507000	512500	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				2507.5	2535	2562.5				
15	QPSK	1	1	22.93	22.79	22.79	-0.20	0.1875	0.1816	0.1816
15	16QAM	1	1	22.15	22.02	21.98	-0.20	0.1567	0.1521	0.1507
Channel				501000	507000	513000	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				2505	2535	2565				
10	QPSK	1	1	22.92	22.97	22.58	-0.20	0.1871	0.1892	0.1730
10	16QAM	1	1	22.06	22.03	21.79	-0.20	0.1535	0.1524	0.1442
Channel				500500	507000	513500	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				2502.5	2535	2567.5				
5	QPSK	1	1	23.13	22.86	22.68	-0.20	0.1963	0.1845	0.1770
5	16QAM	1	1	22.36	22.05	21.87	-0.20	0.1644	0.1531	0.1469

5G NR n77:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP	EIRP	EIRP
Channel				650000	656000	662000		L	M	H
Frequency (MHz)				3750	3840	3930				
100	PI/2 BPSK	1	1	23.32	22.78	22.35	-4.50	0.0762	0.0673	0.0610
100	PI/2 BPSK	1	137	23.22	22.73	22.18	-4.50	0.0745	0.0665	0.0586
100	PI/2 BPSK	1	271	22.98	22.53	22.21	-4.50	0.0705	0.0635	0.0590
100	PI/2 BPSK	135	0	22.63	22.26	21.62	-4.50	0.0650	0.0597	0.0515
100	PI/2 BPSK	135	69	23.09	22.65	22.16	-4.50	0.0723	0.0653	0.0583
100	PI/2 BPSK	135	138	22.59	22.15	21.63	-4.50	0.0644	0.0582	0.0516
100	PI/2 BPSK	270	0	22.53	22.21	21.63	-4.50	0.0635	0.0590	0.0516
100	QPSK	1	1	22.96	22.56	22.13	-4.50	0.0701	0.0640	0.0579
100	QPSK	1	137	23.03	22.61	21.96	-4.50	0.0713	0.0647	0.0557
100	QPSK	1	271	22.93	22.46	22.13	-4.50	0.0697	0.0625	0.0579
100	QPSK	135	0	22.06	21.73	21.21	-4.50	0.0570	0.0528	0.0469
100	QPSK	135	69	23.06	22.62	22.06	-4.50	0.0718	0.0649	0.0570
100	QPSK	135	138	22.12	21.65	21.06	-4.50	0.0578	0.0519	0.0453
100	QPSK	270	0	21.93	21.62	21.13	-4.50	0.0553	0.0515	0.0460
100	16QAM	1	1	21.86	21.63	21.06	-4.50	0.0545	0.0516	0.0453
100	64QAM	1	1	20.03	19.93	19.36	-4.50	0.0357	0.0349	0.0306
100	256QAM	1	1	18.56	18.06	17.69	-4.50	0.0255	0.0227	0.0208
Channel				649668	656000	662334	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3745.02	3840	3935.01				
90	PI/2 BPSK	1	1	22.87	22.82	22.16	-4.50	0.0687	0.0679	0.0583
Channel				649334	656000	662668	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3740.01	3840	3940.02				
80	PI/2 BPSK	1	1	23.06	22.79	22.16	-4.50	0.0718	0.0675	0.0583
Channel				649000	656000	663000	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3735	3840	3945				
70	PI/2 BPSK	1	1	22.96	22.78	22.05	-4.50	0.0701	0.0673	0.0569
Channel				648668	656000	663334	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3730.02	3840	3950.01				
60	PI/2 BPSK	1	1	23.12	22.87	22.16	-4.50	0.0728	0.0687	0.0583
Channel				648334	656000	663668	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3725.01	3840	3955.02				
50	PI/2 BPSK	1	1	23.12	22.87	22.25	-4.50	0.0728	0.0687	0.0596
Channel				648000	656000	664000	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3720	3840	3960				
40	PI/2 BPSK	1	1	23.28	22.59	22.53	-4.50	0.0755	0.0644	0.0635
Channel				647668	656000	664334	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3715.02	3840	3965.01				
30	PI/2 BPSK	1	1	23.23	22.58	22.33	-4.50	0.0746	0.0643	0.0607
Channel				647334	656000	664668	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3710.01	3840	3970.02				
20	PI/2 BPSK	1	1	23.23	23.03	22.53	-4.50	0.0746	0.0713	0.0635

5G NR n78:

Ant.5

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP	EIRP	EIRP
Channel					650000				L	M	H
Frequency (MHz)					3750						
100	PI/2 BPSK	1	1		26.42		-5.60		0.1208	
100	PI/2 BPSK	1	137		25.93		-5.60		0.1079	
100	PI/2 BPSK	1	271		26.09		-5.60		0.1119	
100	PI/2 BPSK	135	0		25.58		-5.60		0.0995	
100	PI/2 BPSK	135	69		26.05		-5.60		0.1109	
100	PI/2 BPSK	135	138		25.63		-5.60		0.1007	
100	PI/2 BPSK	270	0		25.53		-5.60		0.0984	
100	QPSK	1	1		25.92		-5.60		0.1076	
100	QPSK	1	137		25.92		-5.60		0.1076	
100	QPSK	1	271		26.02		-5.60		0.1102	
100	QPSK	135	0		25.03		-5.60		0.0877	
100	QPSK	135	69		26.03		-5.60		0.1104	
100	QPSK	135	138		25.09		-5.60		0.0889	
100	QPSK	270	0		25.05		-5.60		0.0881	
100	16QAM	1	1		25.16		-5.60		0.0904	
100	64QAM	1	1		22.96		-5.60		0.0545	
100	256QAM	1	1		21.32		-5.60		0.0373	
Channel				649668	650000	650334	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3745.02	3750	3755.01				
90	PI/2 BPSK	1	1	25.93	25.98	25.86	-5.60	0.1079	0.1091	0.1062
Channel				649334	650000	650668	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3740.01	3750	3760.02				
80	PI/2 BPSK	1	1	26.02	25.93	26.03	-5.60	0.1102	0.1079	0.1104
Channel				649000	650000	651000	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3735	3750	3765				
70	PI/2 BPSK	1	1	25.86	25.99	25.75	-5.60	0.1062	0.1094	0.1035
Channel				648668	650000	651334	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3730.02	3750	3770.01				
60	PI/2 BPSK	1	1	26.08	26.03	25.86	-5.60	0.1117	0.1104	0.1062
Channel				648334	650000	651668	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3725.01	3750	3775.02				
50	PI/2 BPSK	1	1	25.96	26.03	25.86	-5.60	0.1086	0.1104	0.1062
Channel				648000	650000	652000	Gain	EIRP	EIRP	ERP
Frequency (MHz)				3720	3750	3780				
40	PI/2 BPSK	1	1	26.21	26.25	26.31	-5.60	0.1151	0.1161	0.1178
Channel				647668	650000	652334	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3715.02	3750	3785.01				
30	PI/2 BPSK	1	1	26.32	26.36	26.26	-5.60	0.1180	0.1191	0.1164
Channel				647334	650000	652668	Gain	EIRP	EIRP	EIRP
Frequency (MHz)				3710.01	3750	3790.02				
20	PI/2 BPSK	1	1	26.36	26.22	26.28	-5.60	0.1191	0.1153	0.1169

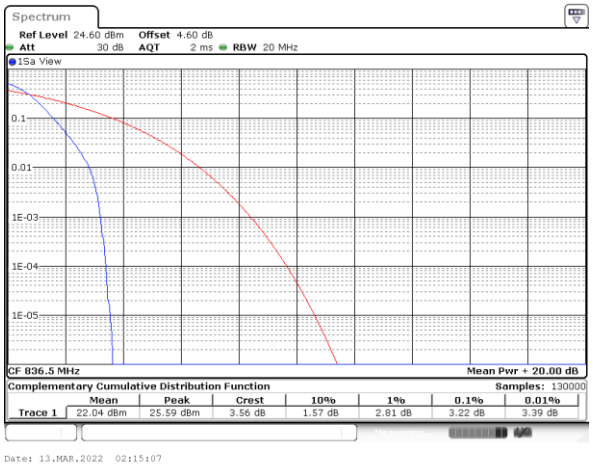
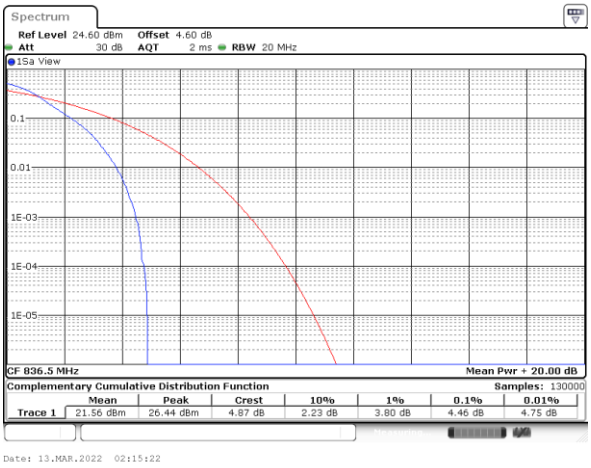
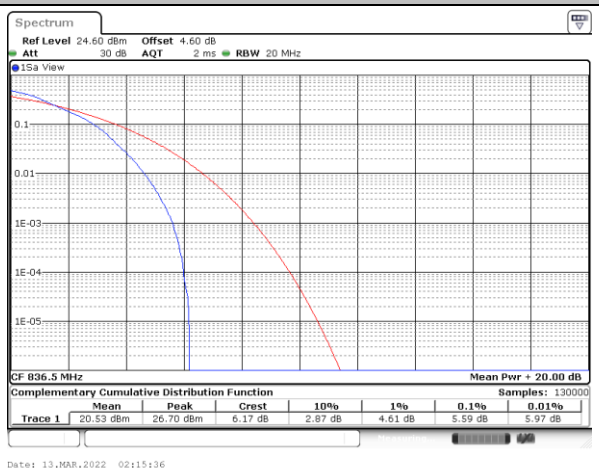
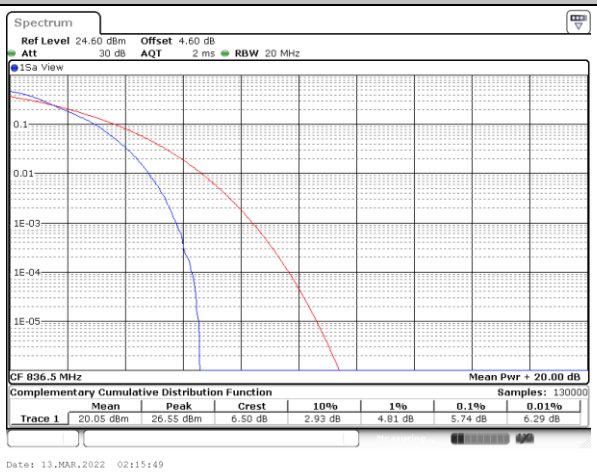
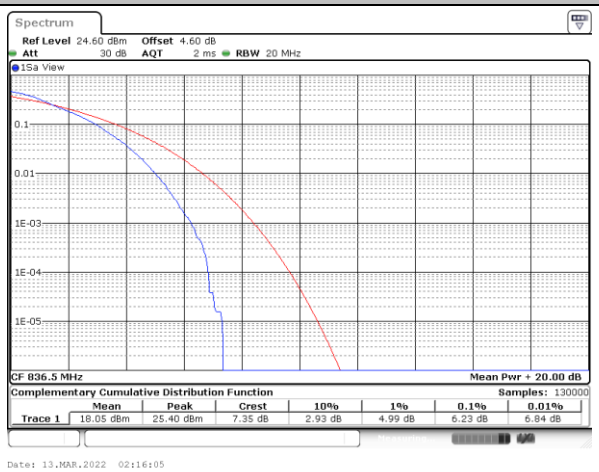
Ant.3

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP	EIRP	EIRP
Channel					650000			L	M	H
Frequency (MHz)					3750					
100	PI/2 BPSK	1	1		26.24		-0.70		0.3581	
100	PI/2 BPSK	1	137		26.32		-0.70		0.3648	
100	PI/2 BPSK	1	271		26.25		-0.70		0.3589	
100	PI/2 BPSK	135	0		25.16		-0.70		0.2793	
100	PI/2 BPSK	135	69		26.26		-0.70		0.3597	
100	PI/2 BPSK	135	138		25.11		-0.70		0.2761	
100	PI/2 BPSK	270	0		25.09		-0.70		0.2748	
100	QPSK	1	1		26.34		-0.70		0.3664	
100	QPSK	1	137		26.18		-0.70		0.3532	
100	QPSK	1	271		26.21		-0.70		0.3556	
100	QPSK	135	0		24.63		-0.70		0.2472	
100	QPSK	135	69		26.25		-0.70		0.3589	
100	QPSK	135	138		24.48		-0.70		0.2388	
100	QPSK	270	0		24.71		-0.70		0.2518	
100	16QAM	1	1		24.76		-0.70		0.2547	
100	64QAM	1	1		23.02		-0.70		0.1706	
100	256QAM	1	1		21.43		-0.70		0.1183	

FR1 n5

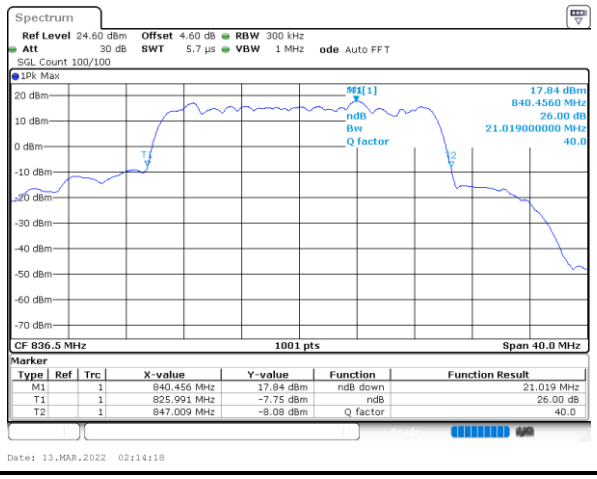
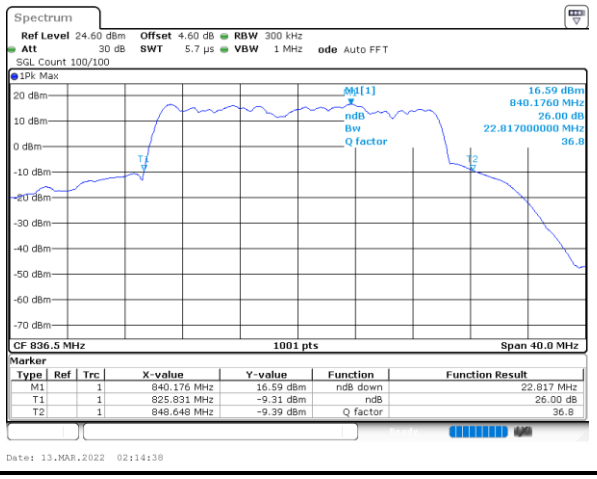
Peak-to-Average Ratio

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	3.22	4.46	5.59	5.74	PASS
Mode	FR1 n5 / 20MHz / DFT-S OFDM				
Mod.	256QAM				Limit: 13dB
RB Size	Full RB				Result
Middle CH	6.23				PASS

FR1 n5 / 20MHz / DFT-S OFDM	
Middle Channel / Full RB	**Middle Channel / Full RB**
PI/2 BPSK	**QPSK**
	
16QAM	**64QAM**
	
256QAM	
	

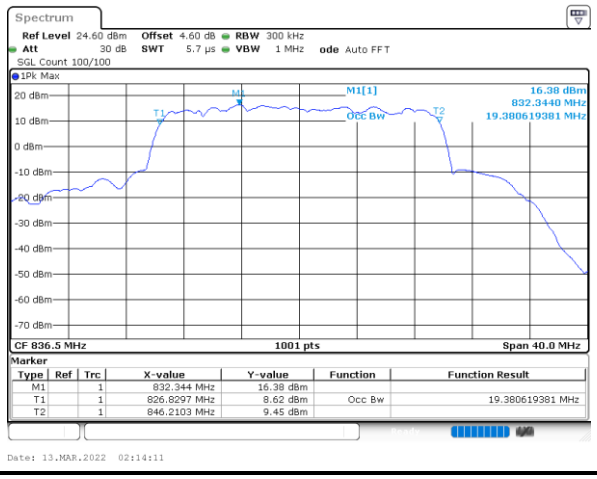
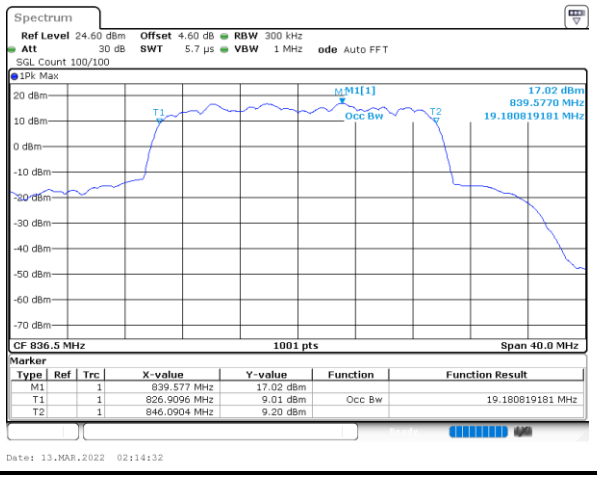
26dB Bandwidth

Mode	FR1 n5: 26dB BW(MHz) / DFT-S OFDM	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	21.02	22.82

FR1 n5 / 20MHz / DFT-S OFDM	
Middle Channel	
QPSK	16QAM
	

Occupied Bandwidth

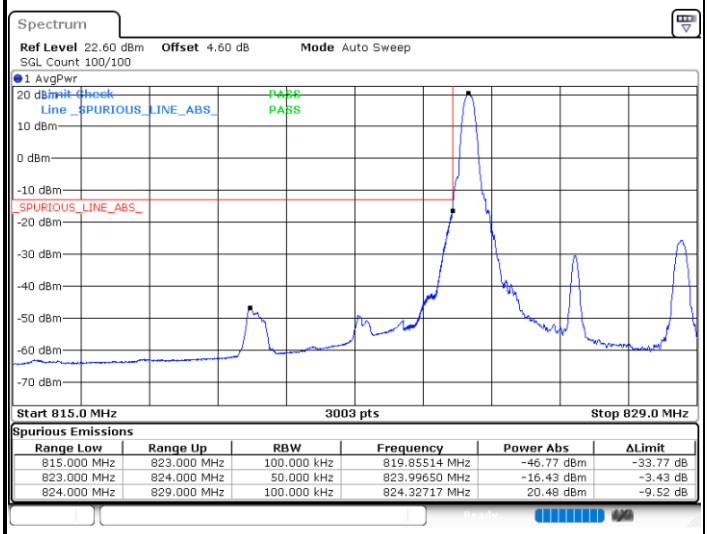
Mode	FR1 n5 : 99%OBW(MHz) / DFT-S OFDM	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	19.38	19.18

FR1 n5 / 20MHz / DFT-S OFDM	
Middle Channel	
QPSK	16QAM
	

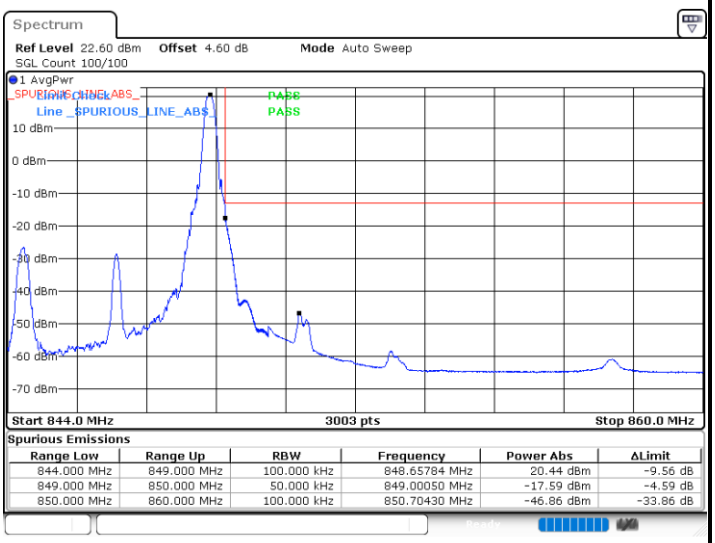
Conducted Band Edge

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

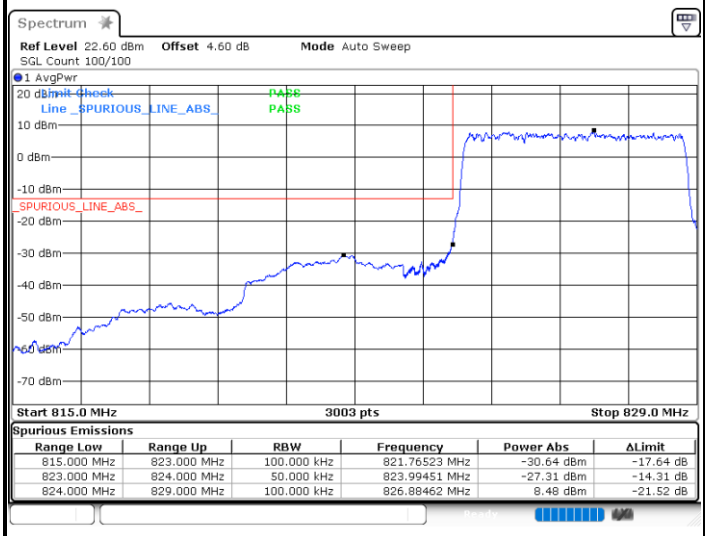
Lowest Band Edge / 1RB0



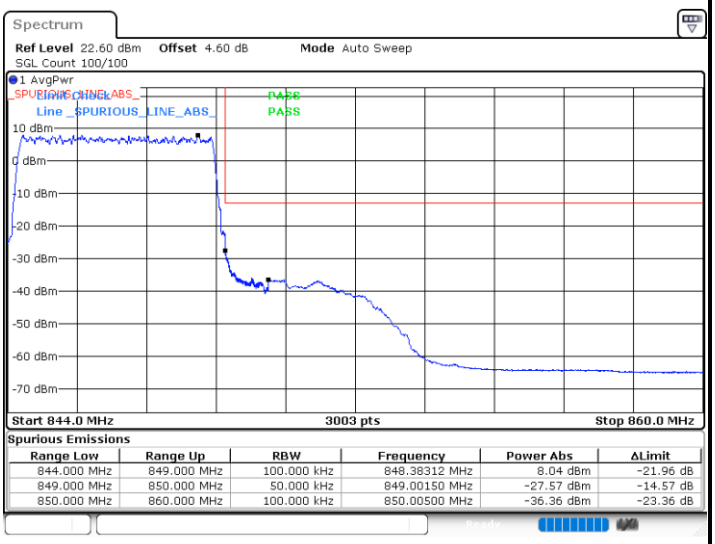
Highest Band Edge / 1RBMAX



Lowest Band Edge / Full RB

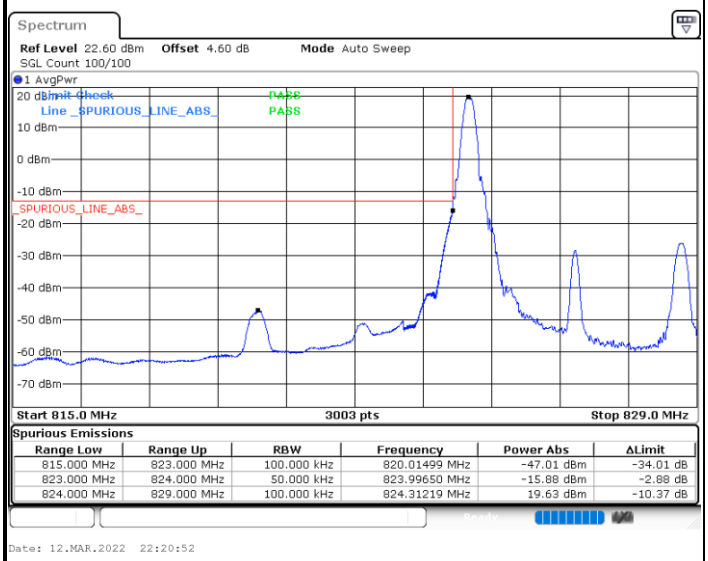


Highest Band Edge / Full RB



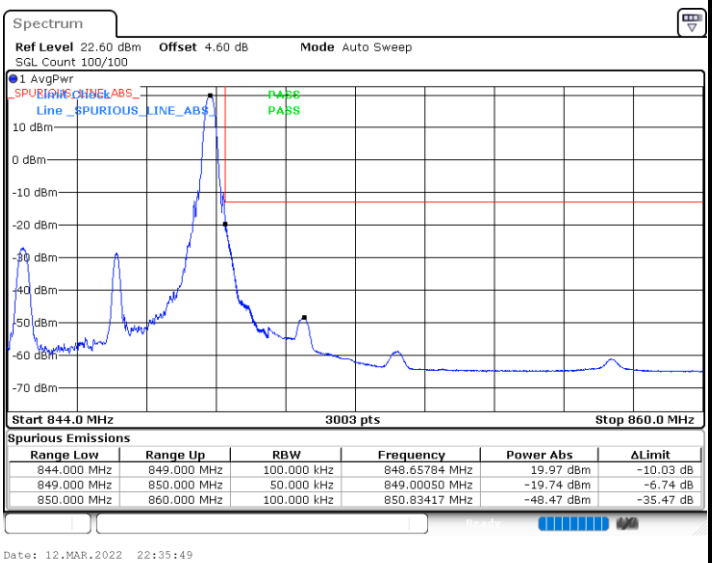
FR1 n5 / 5MHz / DFT-S OFDM / QPSK

Lowest Band Edge / 1RB0



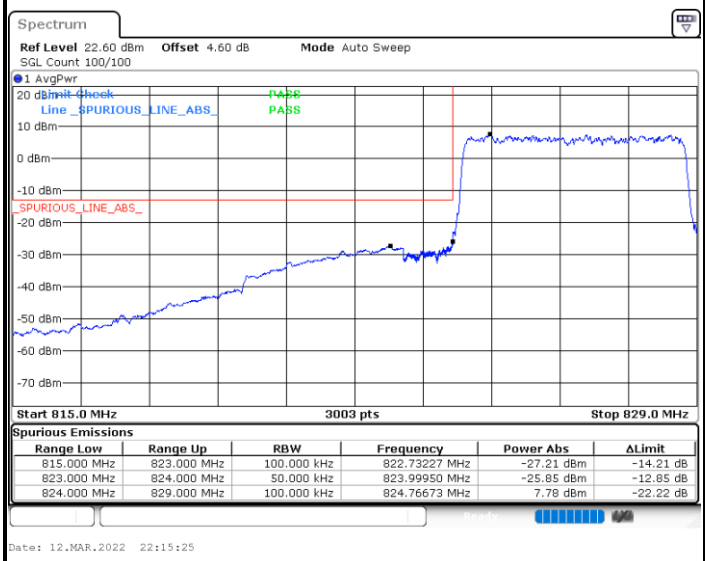
Date: 12.MAR.2022 22:20:52

Highest Band Edge / 1RBMAX



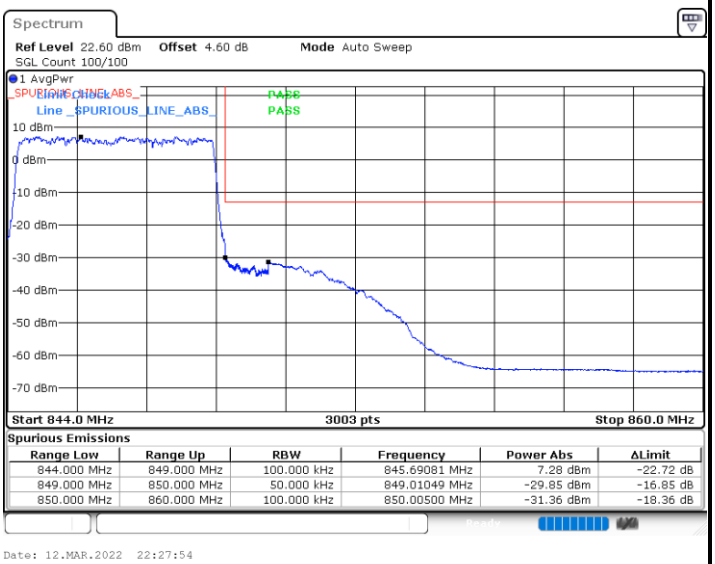
Date: 12.MAR.2022 22:35:49

Lowest Band Edge / Full RB

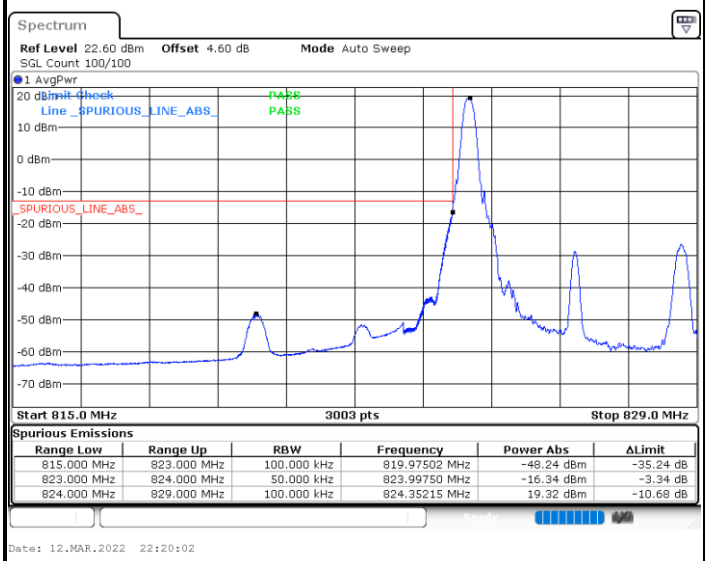
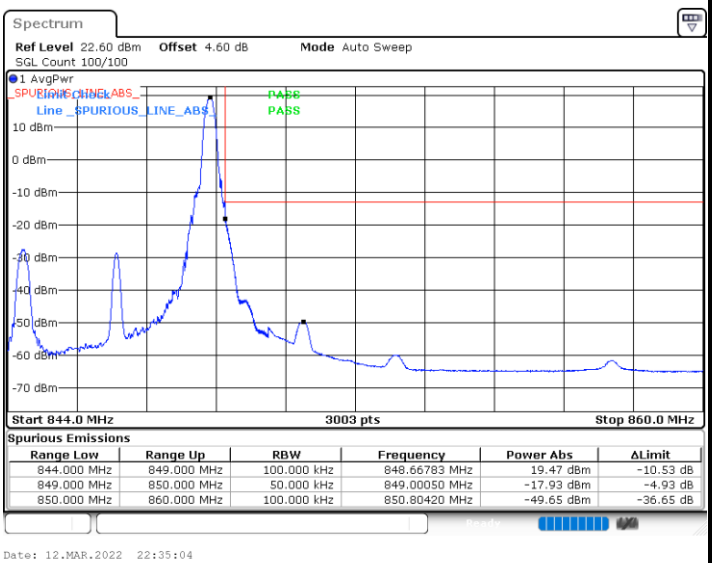
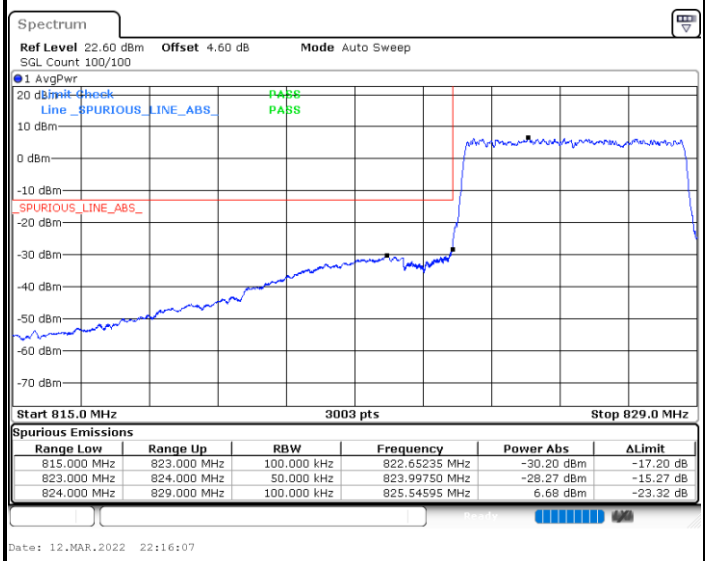
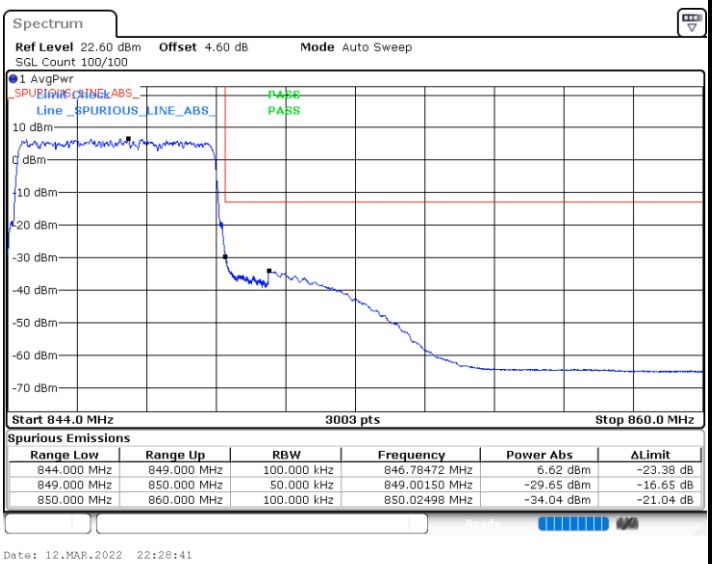


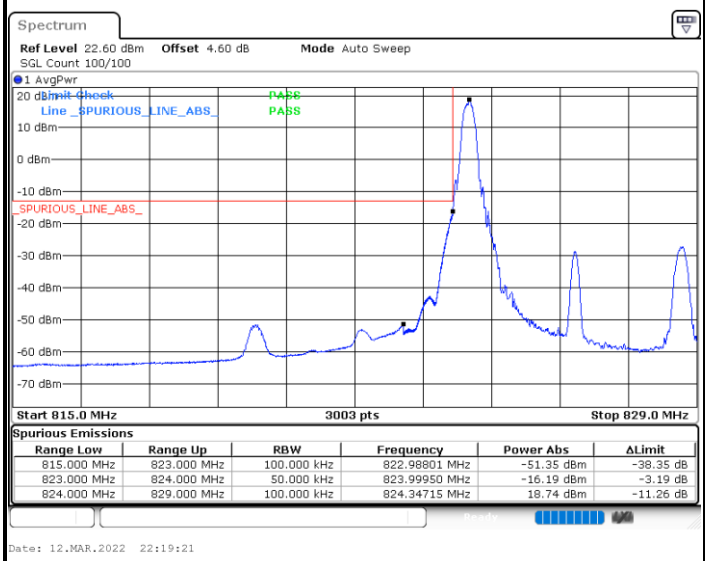
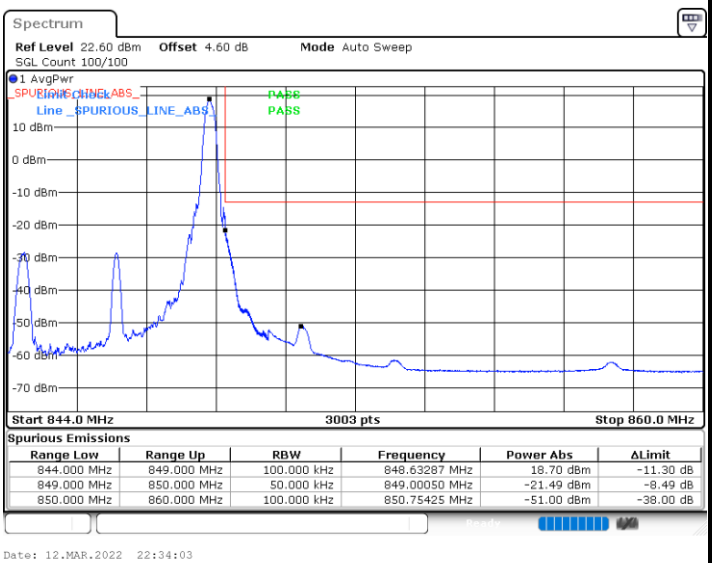
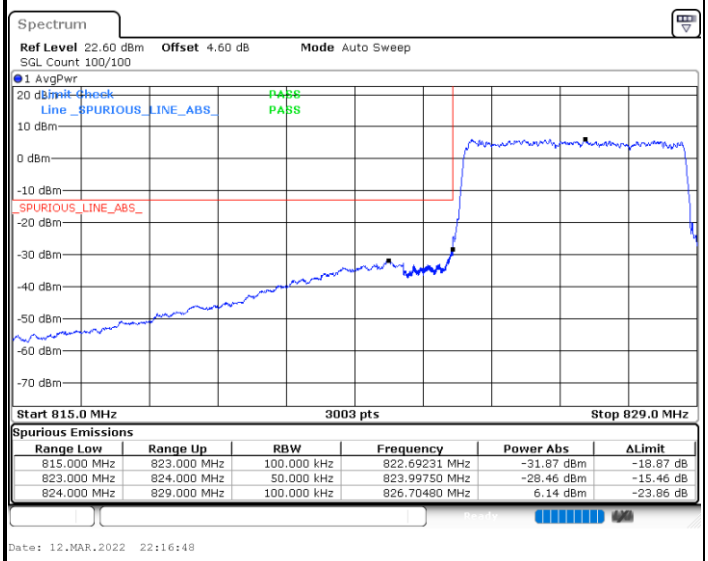
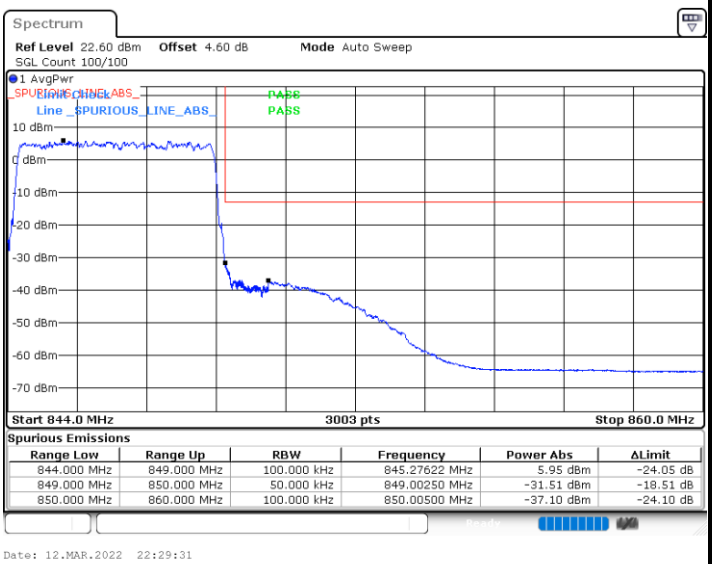
Date: 12.MAR.2022 22:15:25

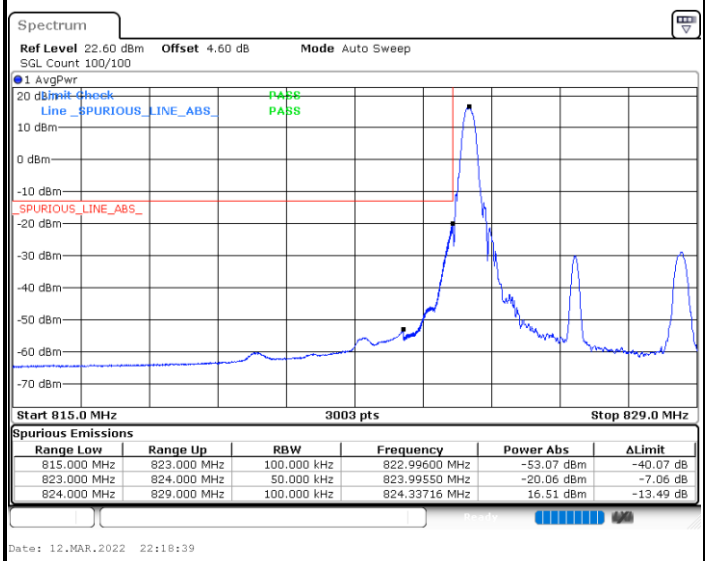
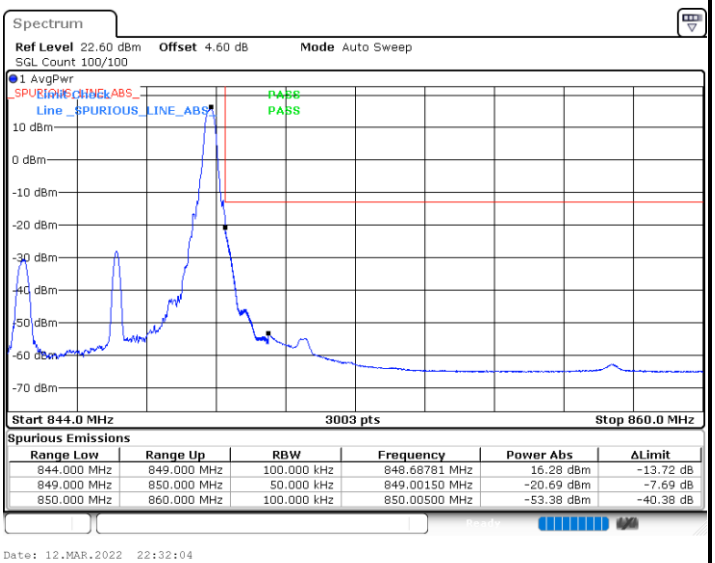
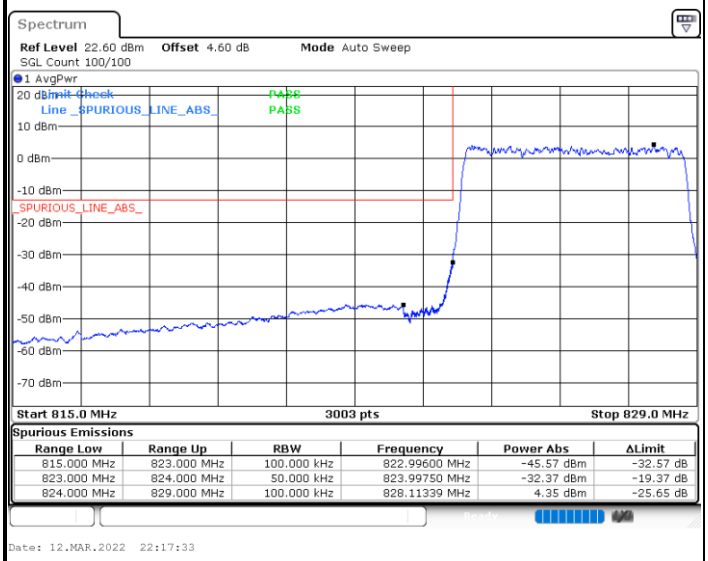
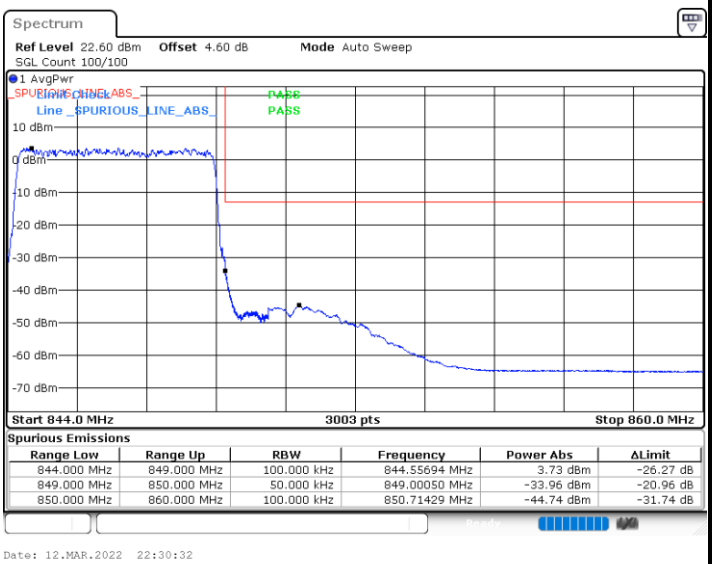
Highest Band Edge / Full RB

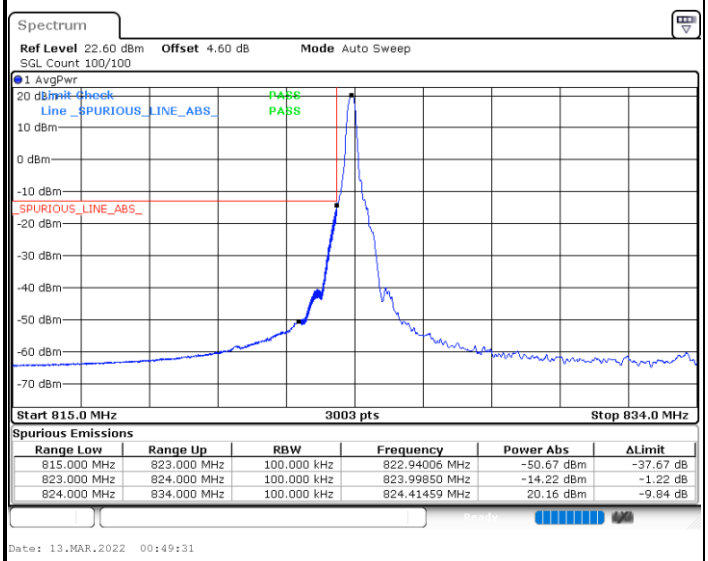
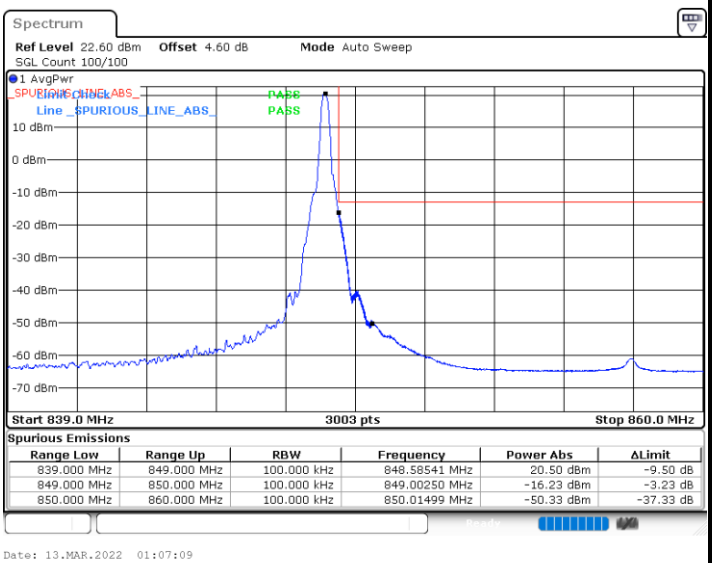
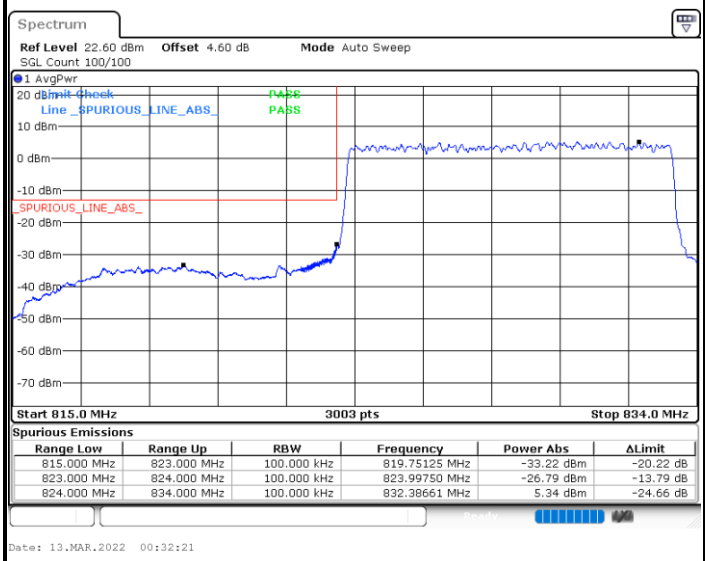
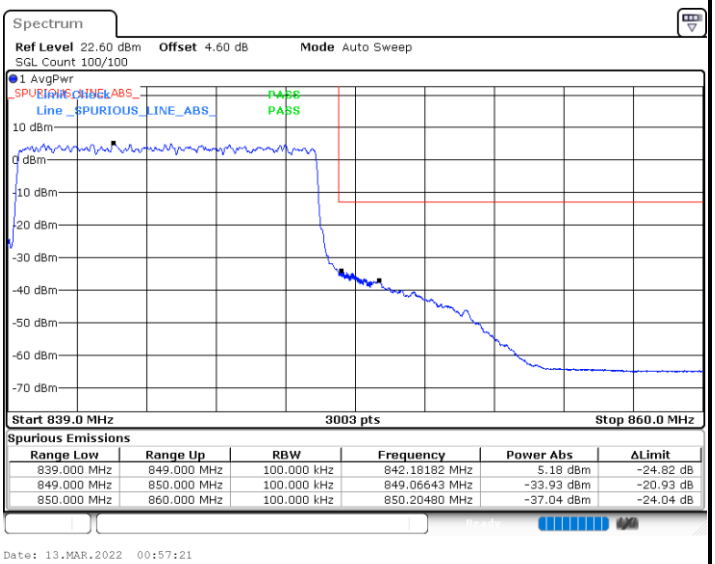


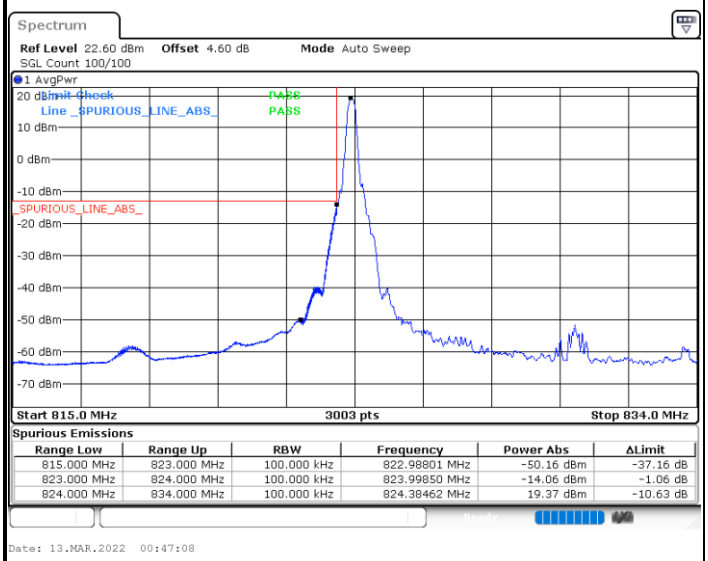
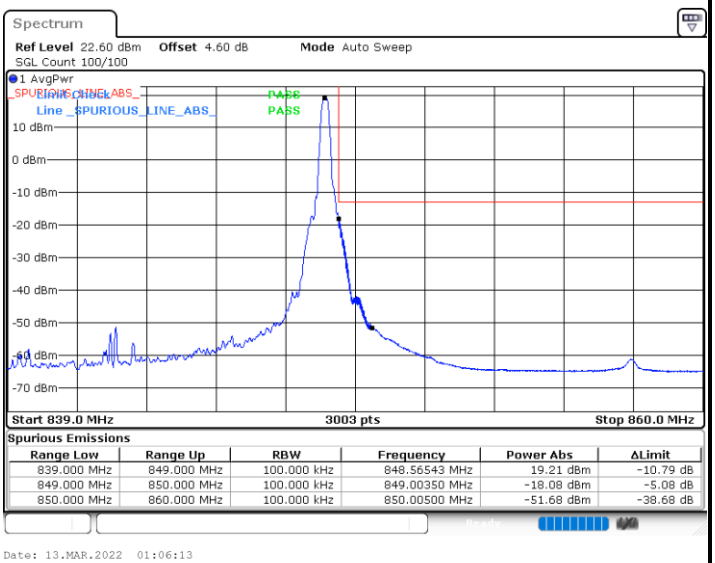
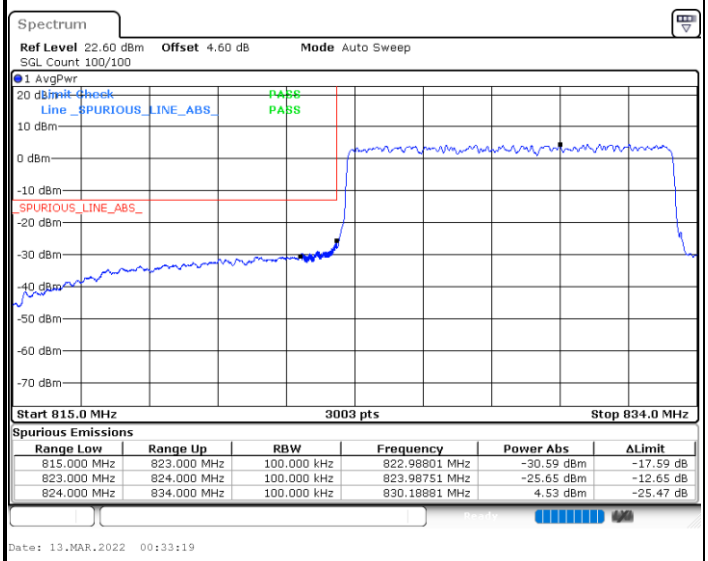
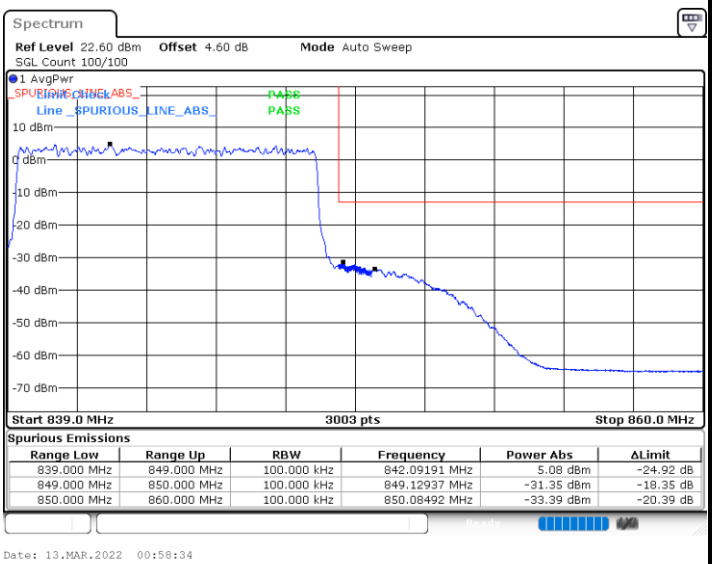
Date: 12.MAR.2022 22:27:54

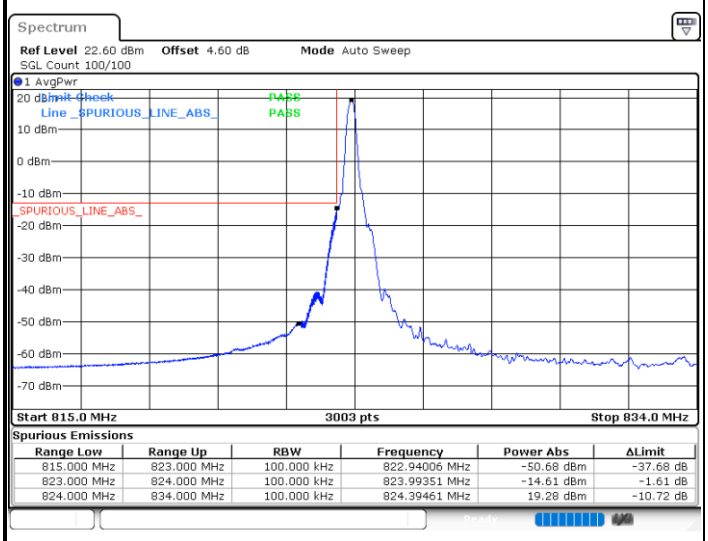
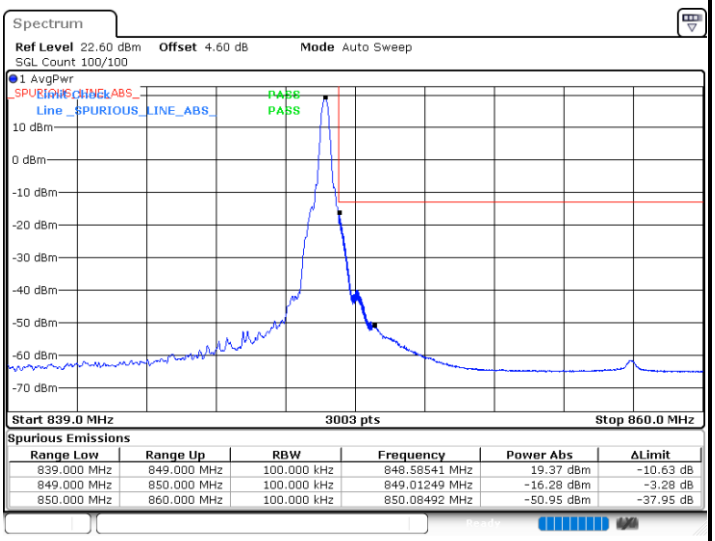
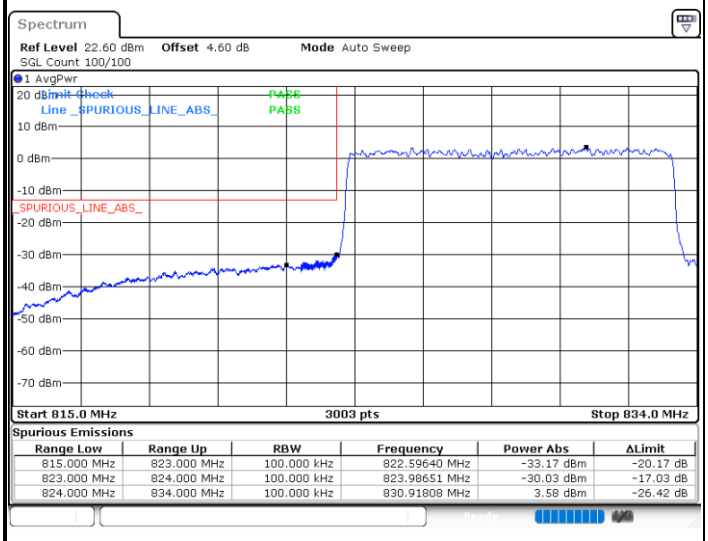
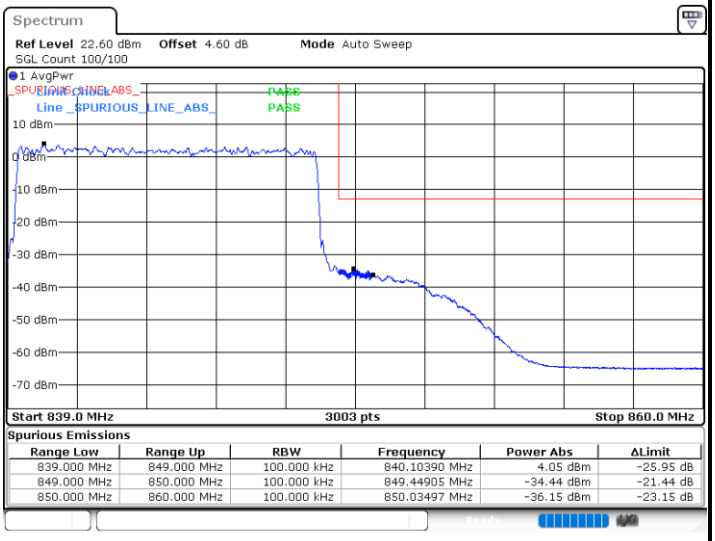
FR1 n5 / 5MHz / DFT-S OFDM / 16Q	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBMAX**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n5/ 5MHz / DFT-S OFDM / 64Q	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBMAX**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n5 / 5MHz / DFT-S OFDM / 256Q	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBMAX**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

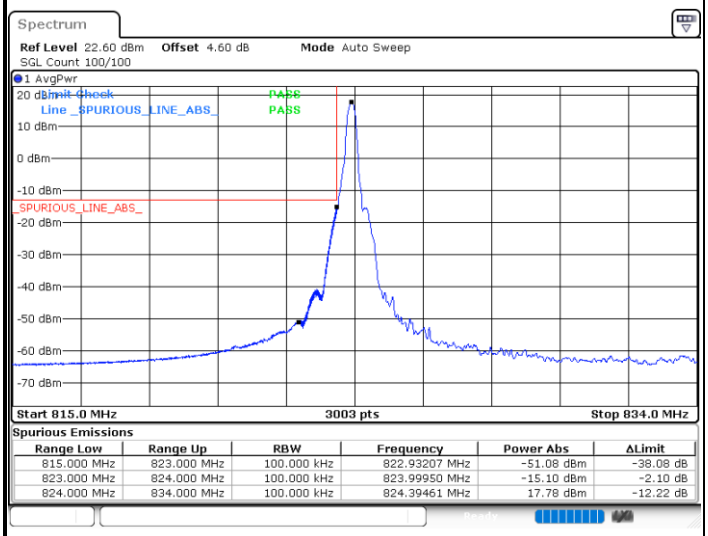
FR1 n5 / 10MHz / DFT-s-OFDM / PI/2 BPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBMAX**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n5 / 10MHz / DFT-s-OFDM / QPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBMAX**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n5/ 10MHz / DFT-s-OFDM / 16QAM	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBMAX**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

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

Lowest Band Edge / 1RB0

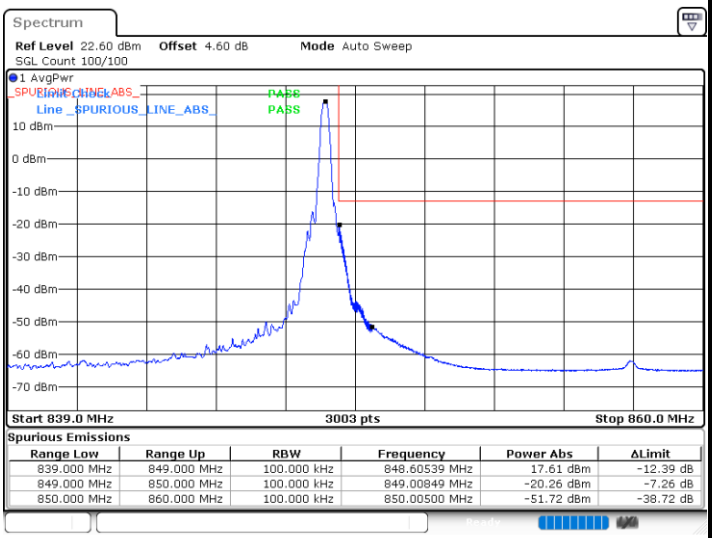


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.93207 MHz	-51.08 dBm	-38.08 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99950 MHz	-15.10 dBm	-2.10 dB
824.000 MHz	834.000 MHz	100.000 kHz	824.39461 MHz	17.78 dBm	-12.22 dB

Date: 13.MAR.2022 00:42:04

Highest Band Edge / 1RBMAX

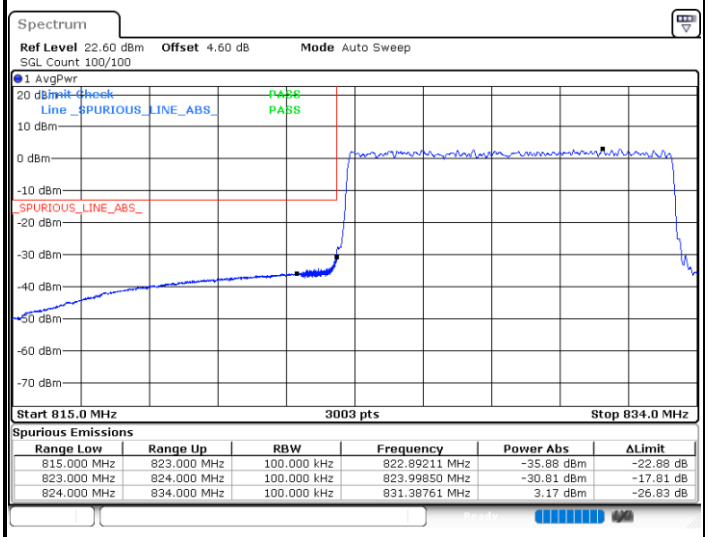


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	848.60539 MHz	17.61 dBm	-12.39 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.00849 MHz	-20.26 dBm	-7.26 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-51.72 dBm	-38.72 dB

Date: 13.MAR.2022 01:03:43

Lowest Band Edge / Full RB

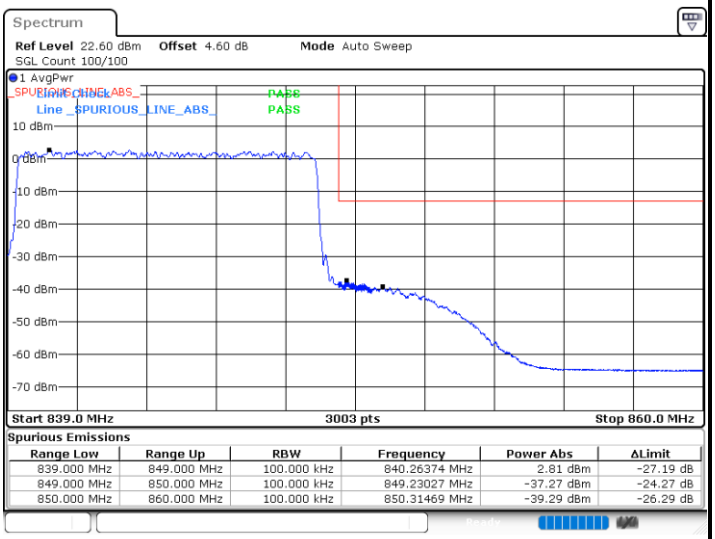


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.89211 MHz	-35.88 dBm	-22.88 dB
823.000 MHz	824.000 MHz	100.000 kHz	823.99850 MHz	-30.81 dBm	-17.81 dB
824.000 MHz	834.000 MHz	100.000 kHz	831.38761 MHz	3.17 dBm	-26.83 dB

Date: 13.MAR.2022 00:35:30

Highest Band Edge / Full RB



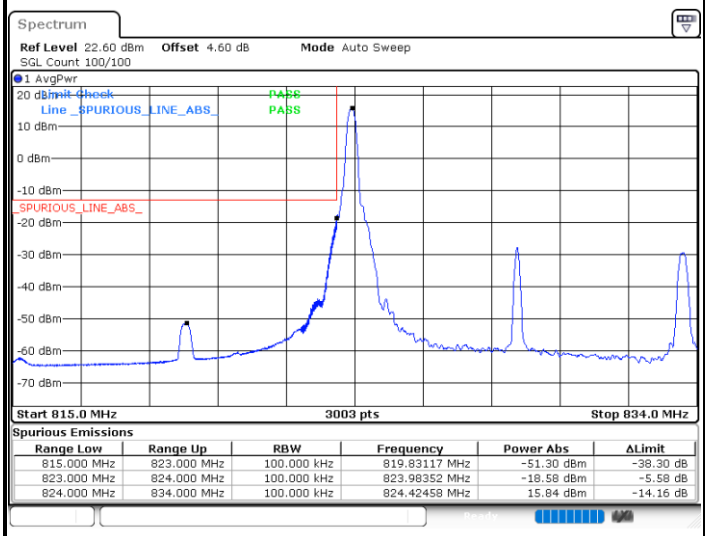
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
839.000 MHz	849.000 MHz	100.000 kHz	840.26374 MHz	2.81 dBm	-27.19 dB
849.000 MHz	850.000 MHz	100.000 kHz	849.23027 MHz	-37.27 dBm	-24.27 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.31469 MHz	-39.29 dBm	-26.29 dB

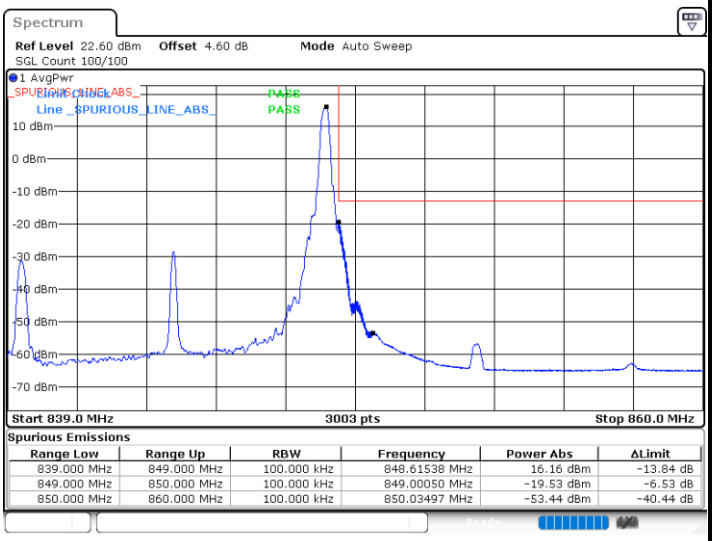
Date: 13.MAR.2022 01:00:49

FR1 n5 / 10MHz / DFT-s-OFDM / 256QAM

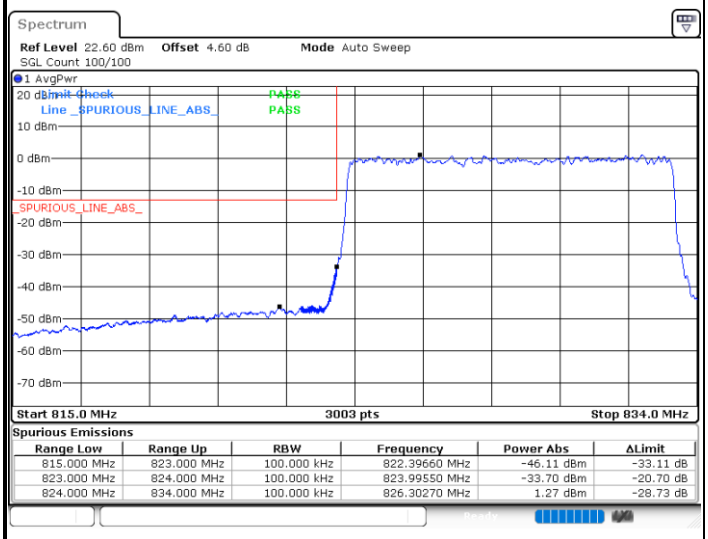
Lowest Band Edge / 1RB0



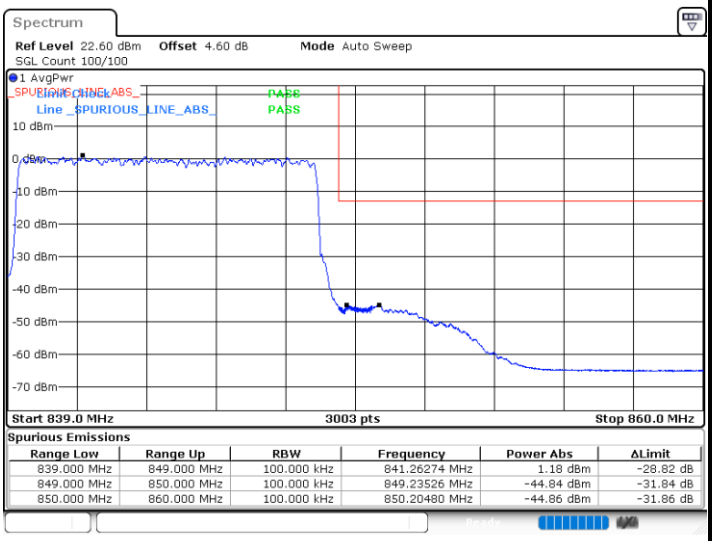
Highest Band Edge / 1RBMAX



Lowest Band Edge / Full RB

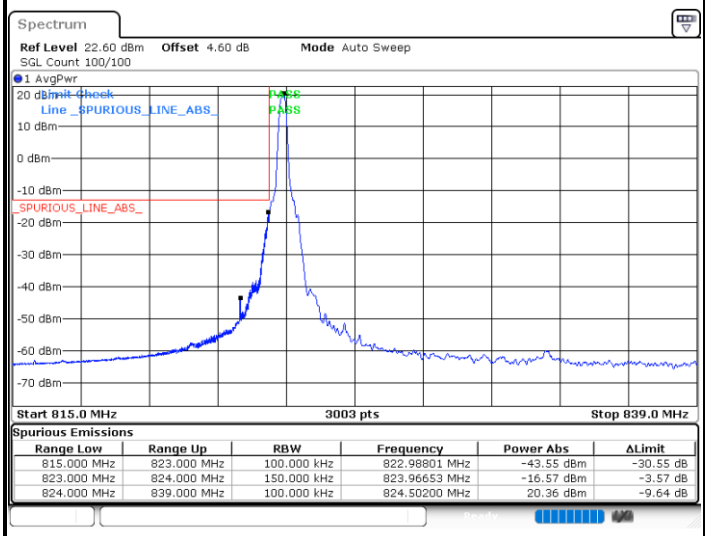


Highest Band Edge / Full RB

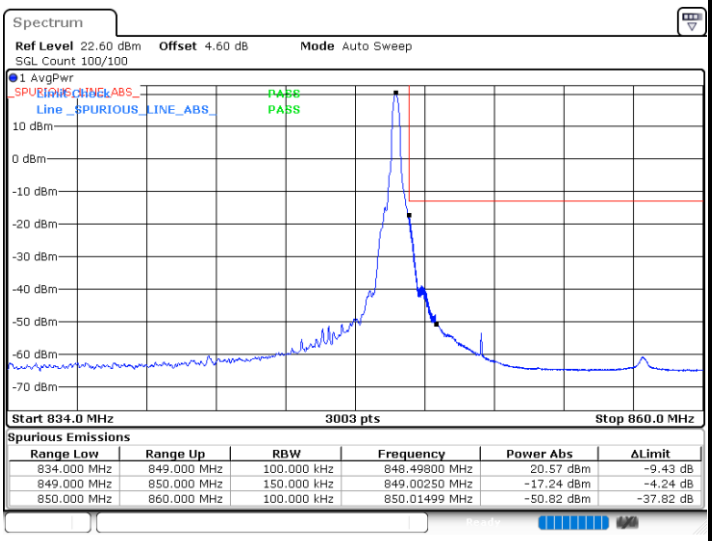


FR1 n5 / 15MHz / DFT-s-OFDM / PI/2 BPSK

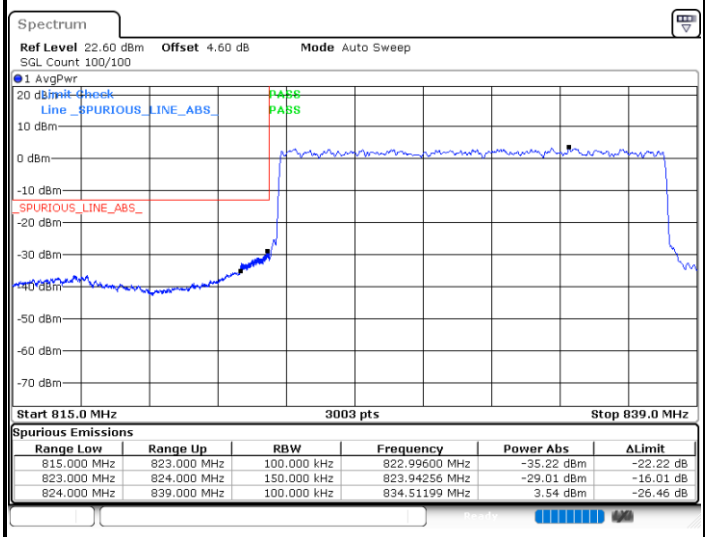
Lowest Band Edge / 1RB0



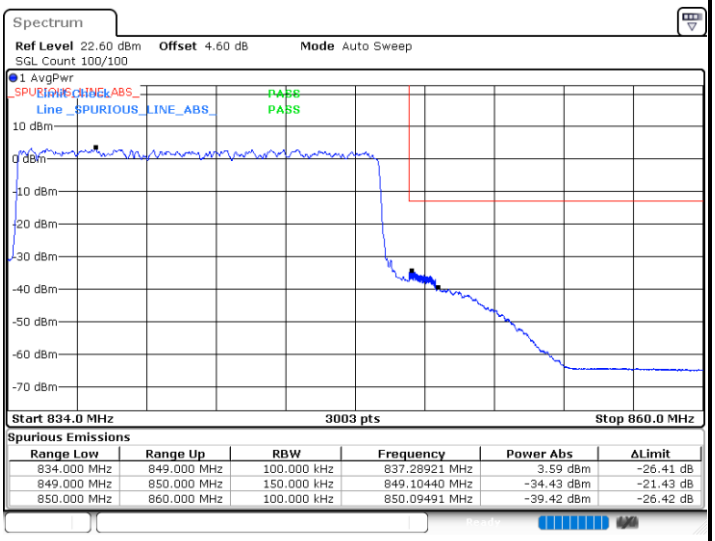
Highest Band Edge / 1RBMAX



Lowest Band Edge / Full RB

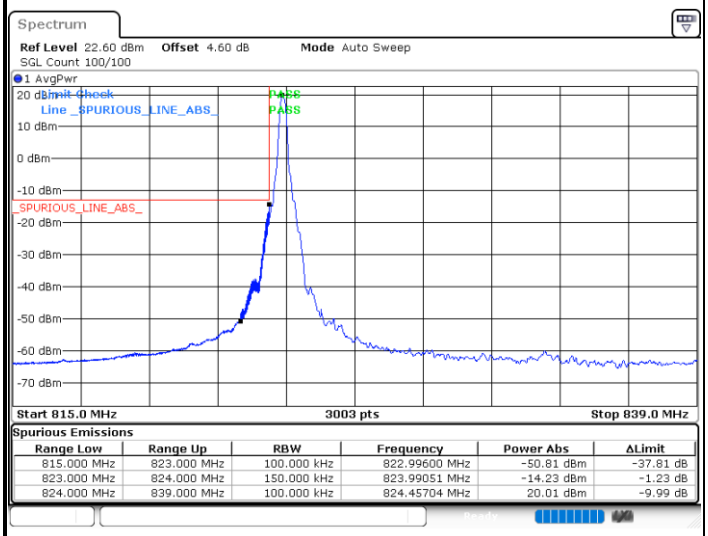


Highest Band Edge / Full RB



FR1 n5/ 15MHz / DFT-s-OFDM / QPSK

Lowest Band Edge / 1RB0

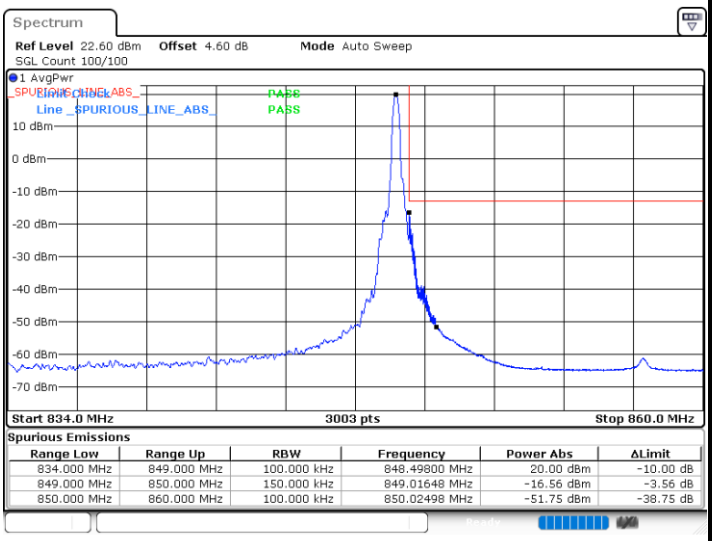


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.99600 MHz	-50.81 dBm	-37.81 dB
823.000 MHz	824.000 MHz	150.000 kHz	823.99051 MHz	-14.23 dBm	-1.23 dB
824.000 MHz	839.000 MHz	100.000 kHz	824.45704 MHz	20.01 dBm	-9.99 dB

Date: 13.MAR.2022 01:21:35

Highest Band Edge / 1RBMAX

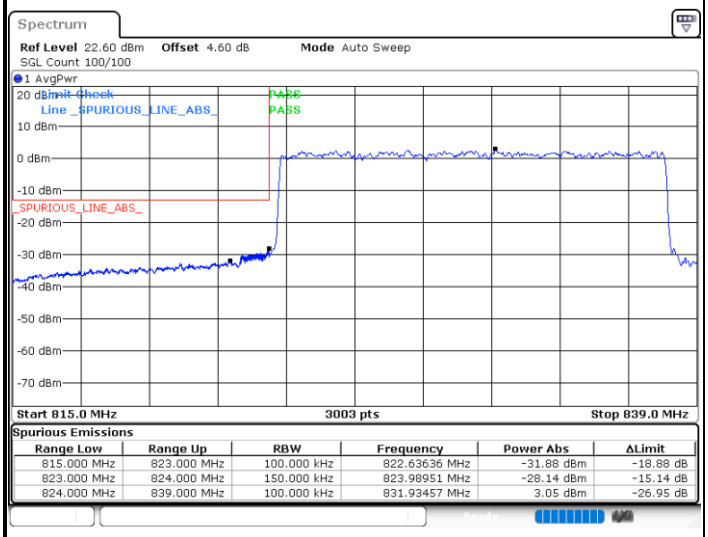


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
834.000 MHz	849.000 MHz	100.000 kHz	848.49800 MHz	20.00 dBm	-10.00 dB
849.000 MHz	850.000 MHz	150.000 kHz	849.01648 MHz	-16.56 dBm	-3.56 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.02498 MHz	-51.75 dBm	-38.75 dB

Date: 13.MAR.2022 01:32:59

Lowest Band Edge / Full RB

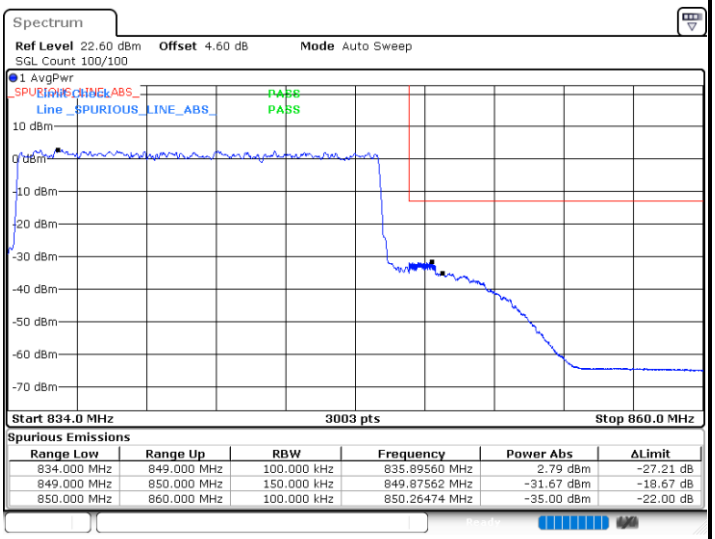


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.63636 MHz	-31.88 dBm	-18.88 dB
823.000 MHz	824.000 MHz	150.000 kHz	823.98951 MHz	-28.14 dBm	-15.14 dB
824.000 MHz	839.000 MHz	100.000 kHz	831.93457 MHz	3.05 dBm	-26.95 dB

Date: 13.MAR.2022 01:15:18

Highest Band Edge / Full RB



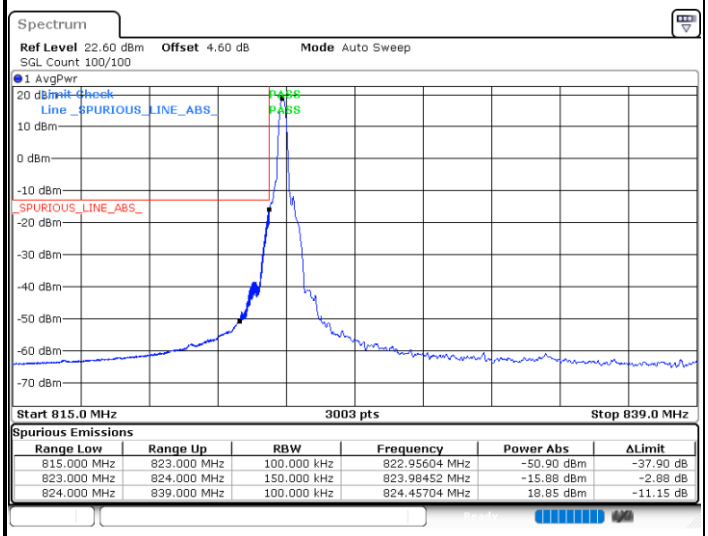
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
834.000 MHz	849.000 MHz	100.000 kHz	835.89560 MHz	2.79 dBm	-27.21 dB
849.000 MHz	850.000 MHz	150.000 kHz	849.87562 MHz	-31.67 dBm	-18.67 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.26474 MHz	-35.00 dBm	-22.00 dB

Date: 13.MAR.2022 01:26:23

FR1 n5 / 15MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / 1RB0

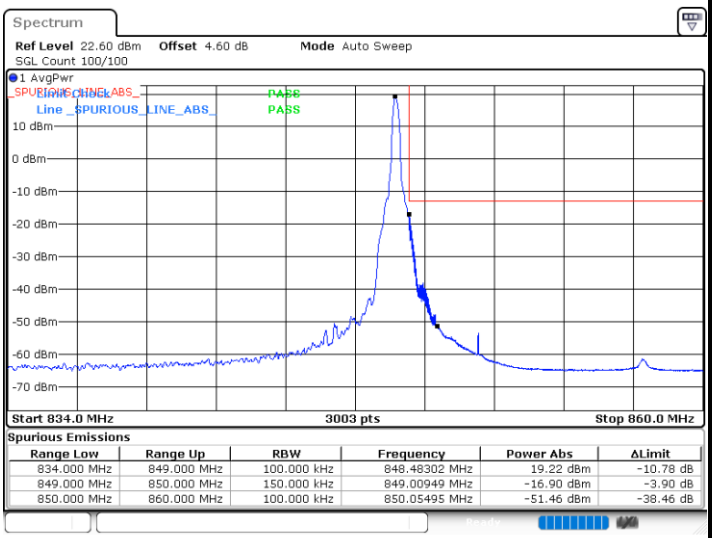


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.95604 MHz	-50.90 dBm	-37.90 dB
823.000 MHz	824.000 MHz	150.000 kHz	823.98452 MHz	-15.88 dBm	-2.88 dB
824.000 MHz	839.000 MHz	100.000 kHz	824.45704 MHz	18.85 dBm	-11.15 dB

Date: 13.MAR.2022 01:21:02

Highest Band Edge / 1RBMAX

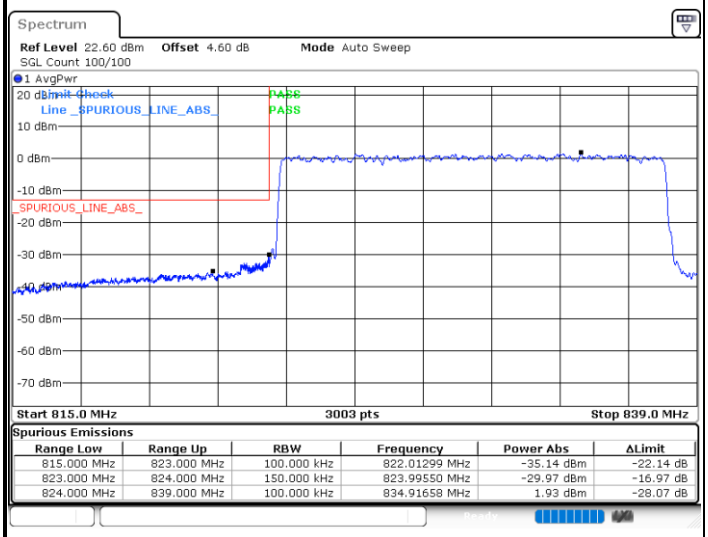


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
834.000 MHz	849.000 MHz	100.000 kHz	848.48302 MHz	19.22 dBm	-10.78 dB
849.000 MHz	850.000 MHz	150.000 kHz	849.00949 MHz	-16.90 dBm	-3.90 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.05495 MHz	-51.46 dBm	-38.46 dB

Date: 13.MAR.2022 01:32:23

Lowest Band Edge / Full RB

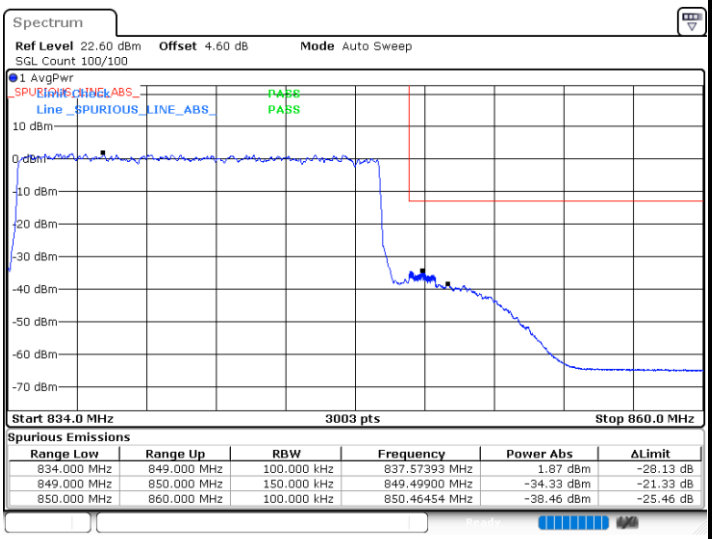


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.01299 MHz	-35.14 dBm	-22.14 dB
823.000 MHz	824.000 MHz	150.000 kHz	823.99550 MHz	-29.97 dBm	-16.97 dB
824.000 MHz	839.000 MHz	100.000 kHz	834.91658 MHz	1.93 dBm	-28.07 dB

Date: 13.MAR.2022 01:16:01

Highest Band Edge / Full RB



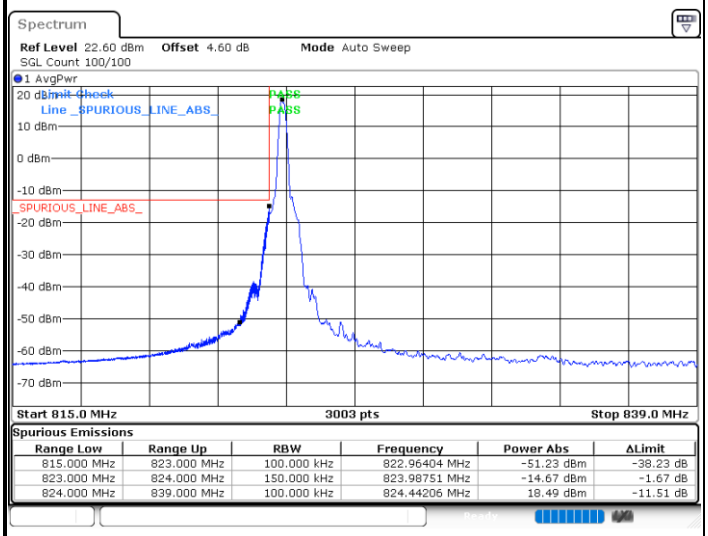
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
834.000 MHz	849.000 MHz	100.000 kHz	837.57393 MHz	1.87 dBm	-28.13 dB
849.000 MHz	850.000 MHz	150.000 kHz	849.49900 MHz	-34.33 dBm	-21.33 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.46454 MHz	-38.46 dBm	-25.46 dB

Date: 13.MAR.2022 01:27:01

FR1 n5 / 15MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / 1RB0

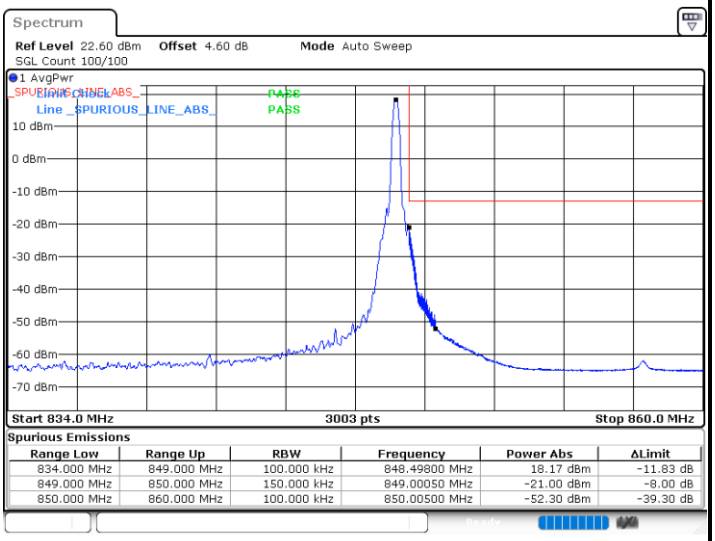


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.96404 MHz	-51.23 dBm	-38.23 dB
823.000 MHz	824.000 MHz	150.000 kHz	823.98751 MHz	-14.67 dBm	-1.67 dB
824.000 MHz	839.000 MHz	100.000 kHz	824.44206 MHz	18.49 dBm	-11.51 dB

Date: 13.MAR.2022 01:20:29

Highest Band Edge / 1RBMAX

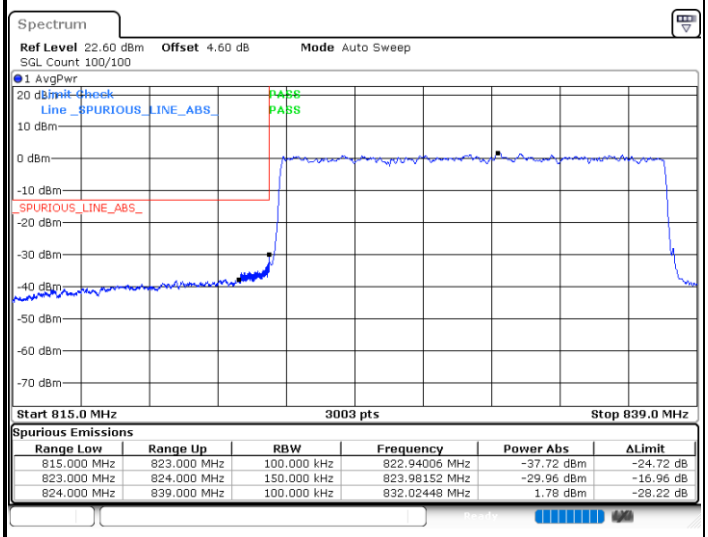


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
834.000 MHz	849.000 MHz	100.000 kHz	848.49800 MHz	18.17 dBm	-11.83 dB
849.000 MHz	850.000 MHz	150.000 kHz	849.00050 MHz	-21.00 dBm	-8.00 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-52.30 dBm	-39.30 dB

Date: 13.MAR.2022 01:31:46

Lowest Band Edge / Full RB

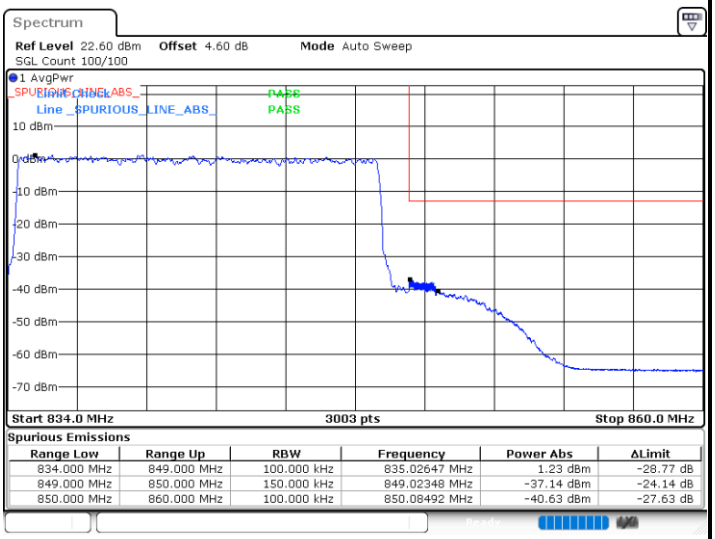


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.94006 MHz	-37.72 dBm	-24.72 dB
823.000 MHz	824.000 MHz	150.000 kHz	823.98152 MHz	-29.96 dBm	-16.96 dB
824.000 MHz	839.000 MHz	100.000 kHz	832.02448 MHz	1.78 dBm	-28.22 dB

Date: 13.MAR.2022 01:16:34

Highest Band Edge / Full RB



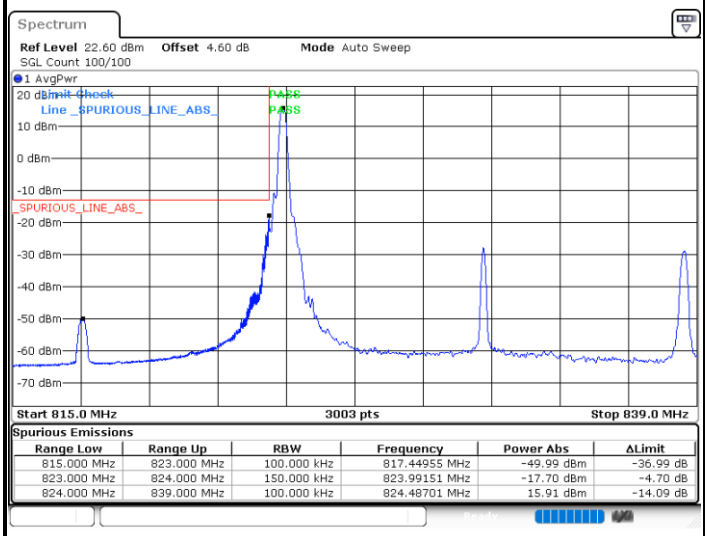
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
834.000 MHz	849.000 MHz	100.000 kHz	835.02647 MHz	1.23 dBm	-28.77 dB
849.000 MHz	850.000 MHz	150.000 kHz	849.02348 MHz	-37.14 dBm	-24.14 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.08492 MHz	-40.63 dBm	-27.63 dB

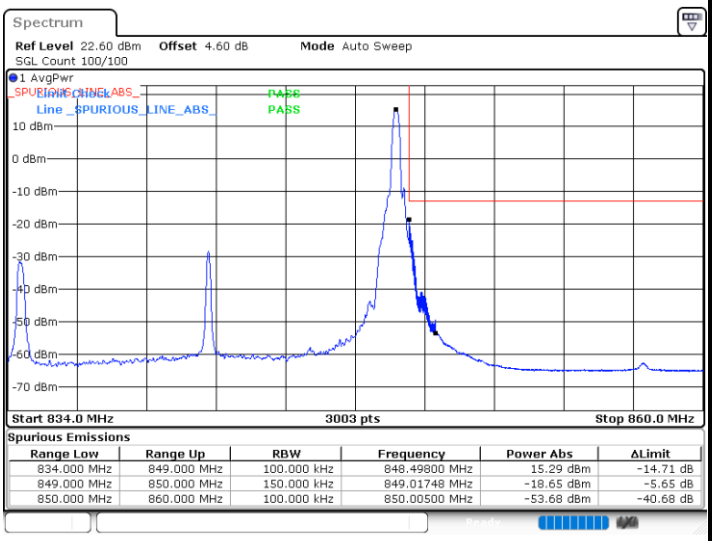
Date: 13.MAR.2022 01:27:50

FR1 n5/ 15MHz / DFT-s-OFDM / 256QAM

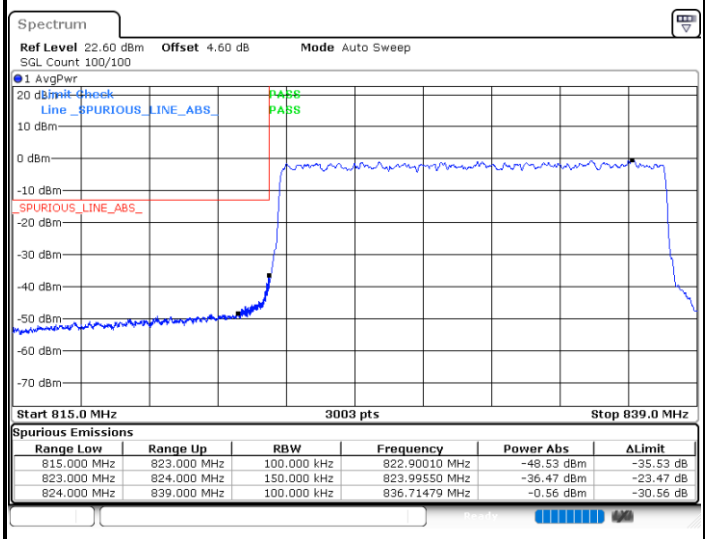
Lowest Band Edge / 1RB0



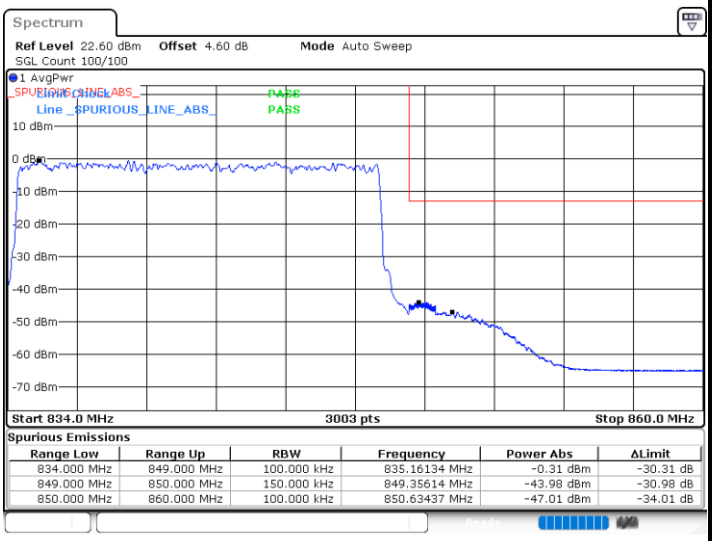
Highest Band Edge / 1RBMAX



Lowest Band Edge / Full RB

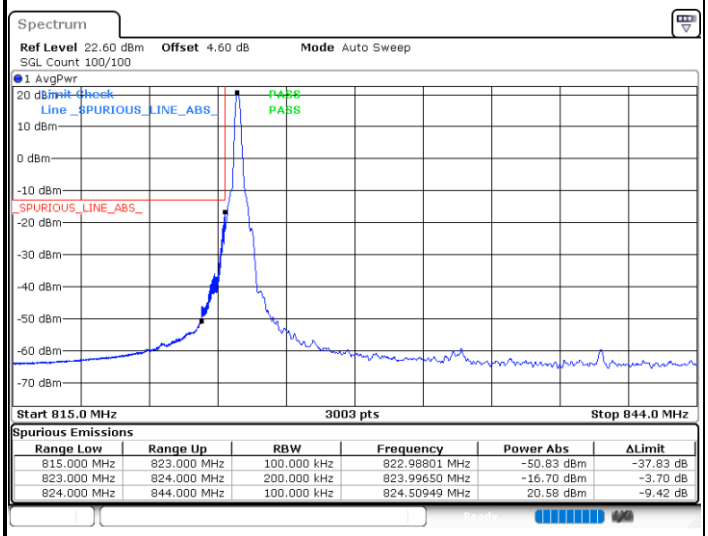


Highest Band Edge / Full RB

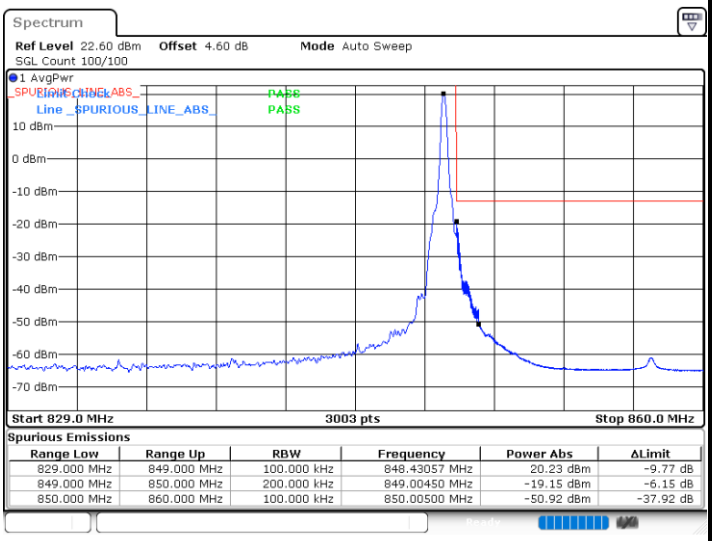


FR1 n5 / 20MHz / DFT-s-OFDM / PI/2 BPSK

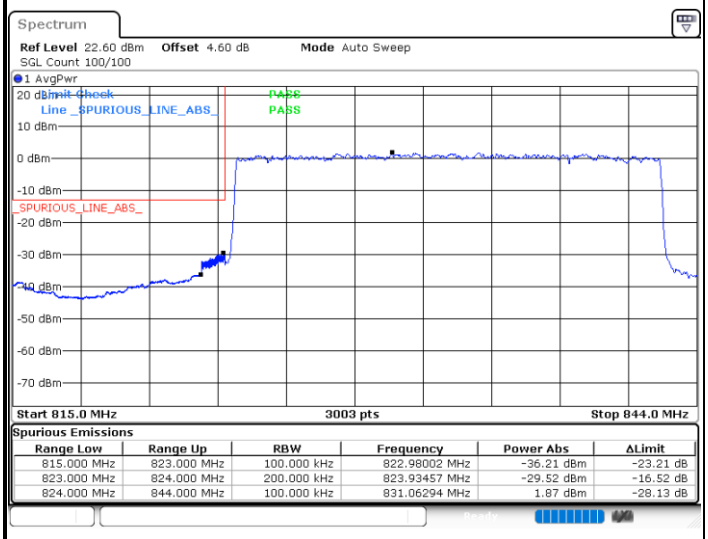
Lowest Band Edge / 1RB0



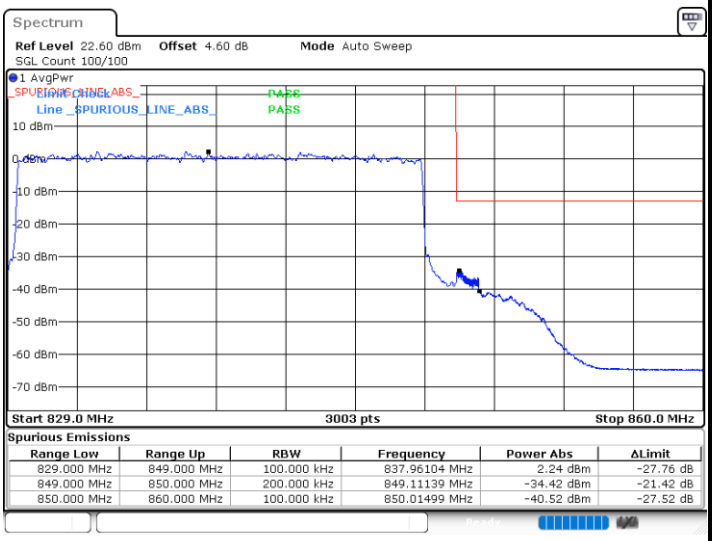
Highest Band Edge / 1RBMAX

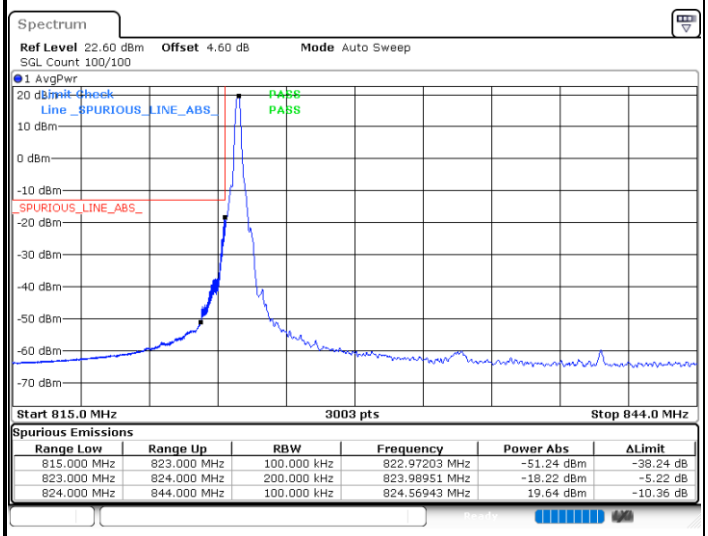
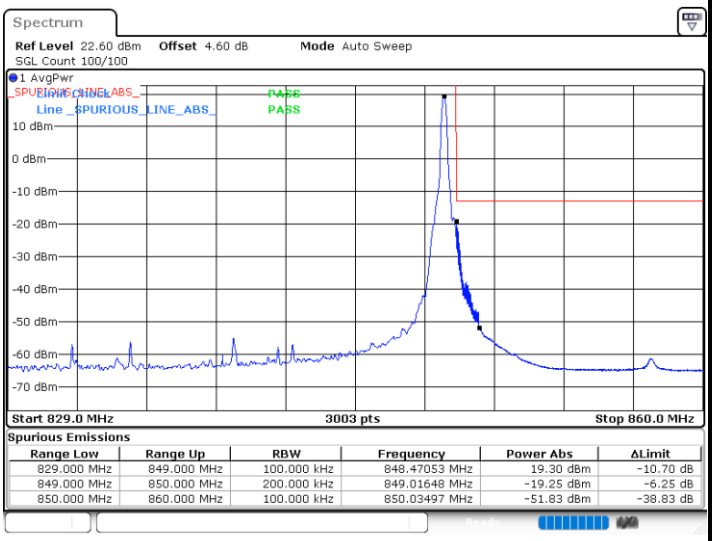
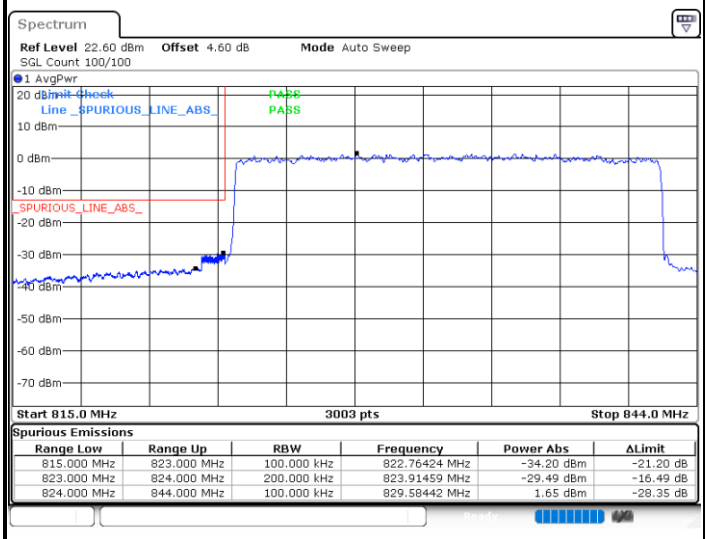
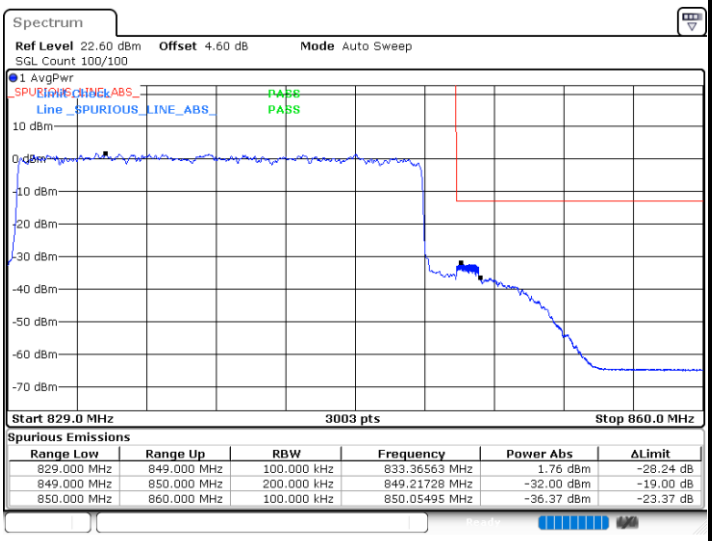


Lowest Band Edge / Full RB



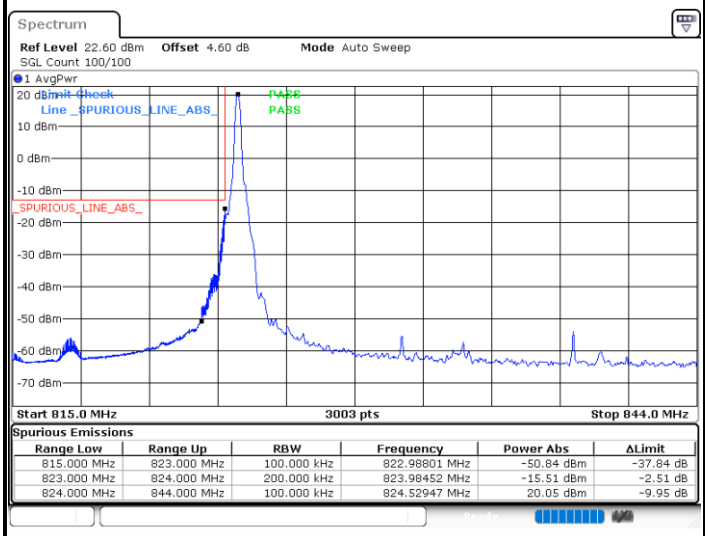
Highest Band Edge / Full RB



FR1 n5/ 20MHz / DFT-s-OFDM / QPSK	
Lowest Band Edge / 1RB0	**Highest Band Edge / 1RBMAX**
	
Lowest Band Edge / Full RB	**Highest Band Edge / Full RB**
	

FR1 n5 / 20MHz / DFT-s-OFDM / 16QAM

Lowest Band Edge / 1RB0

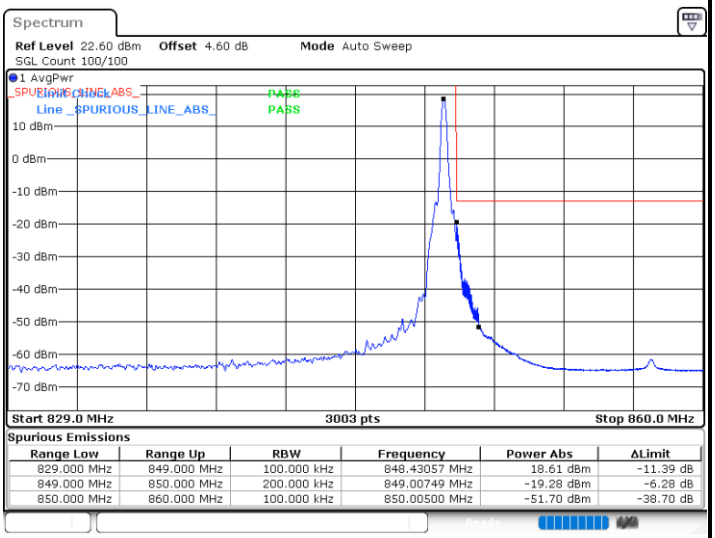


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98801 MHz	-50.84 dBm	-37.84 dB
823.000 MHz	824.000 MHz	200.000 kHz	823.98452 MHz	-15.51 dBm	-2.51 dB
824.000 MHz	844.000 MHz	100.000 kHz	824.52947 MHz	20.05 dBm	-9.95 dB

Date: 13.MAR.2022 02:02:12

Highest Band Edge / 1RBMAX

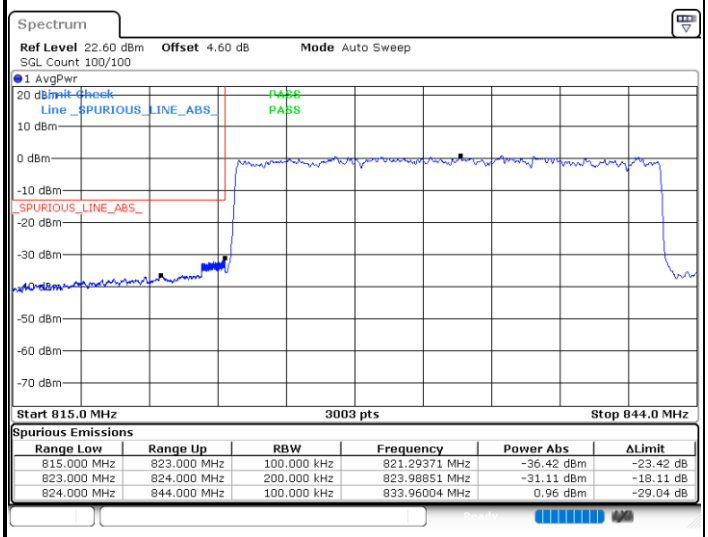


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	848.43057 MHz	18.61 dBm	-11.39 dB
849.000 MHz	850.000 MHz	200.000 kHz	849.00749 MHz	-19.28 dBm	-6.28 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-51.70 dBm	-38.70 dB

Date: 13.MAR.2022 02:11:09

Lowest Band Edge / Full RB

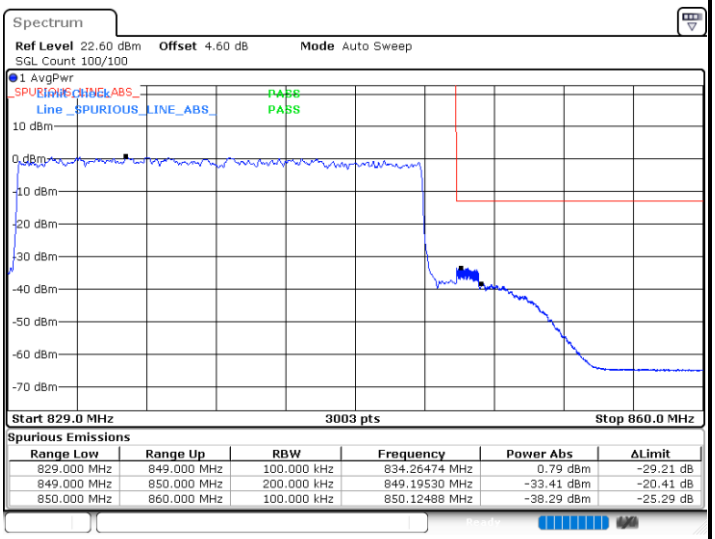


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	821.29371 MHz	-36.42 dBm	-23.42 dB
823.000 MHz	824.000 MHz	200.000 kHz	823.98851 MHz	-31.11 dBm	-18.11 dB
824.000 MHz	844.000 MHz	100.000 kHz	833.96004 MHz	0.96 dBm	-29.04 dB

Date: 13.MAR.2022 01:36:33

Highest Band Edge / Full RB



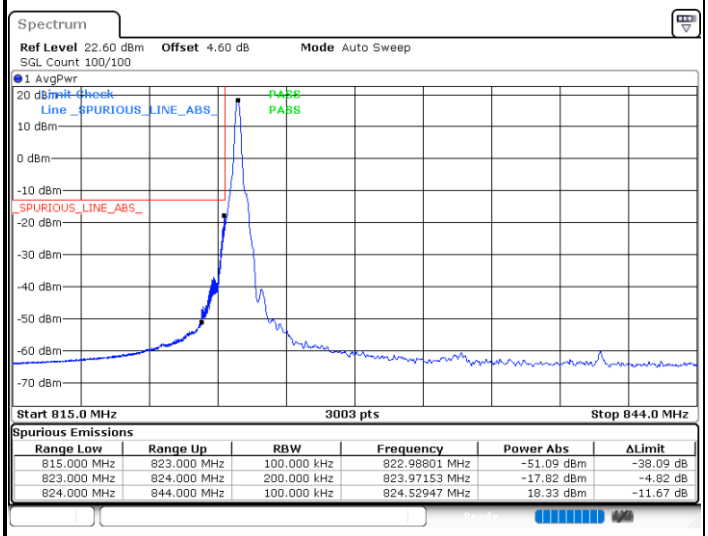
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	834.26474 MHz	0.79 dBm	-29.21 dB
849.000 MHz	850.000 MHz	200.000 kHz	849.19530 MHz	-33.41 dBm	-20.41 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.12488 MHz	-38.29 dBm	-25.29 dB

Date: 13.MAR.2022 02:08:00

FR1 n5 / 20MHz / DFT-s-OFDM / 64QAM

Lowest Band Edge / 1RB0

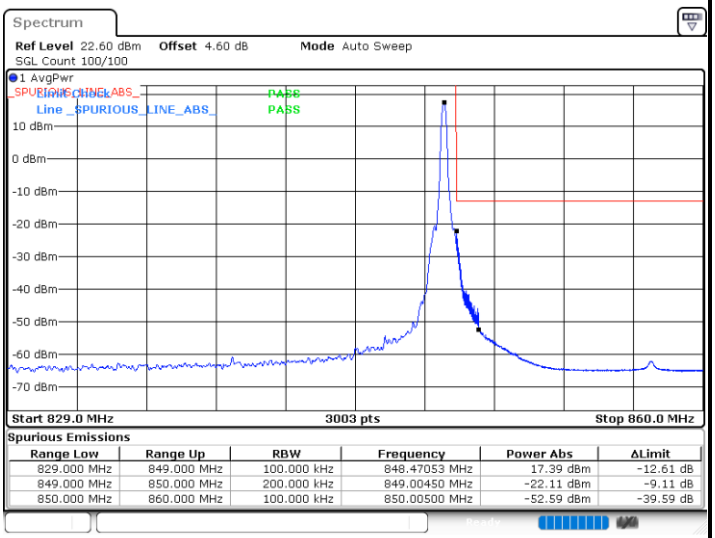


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98801 MHz	-51.09 dBm	-38.09 dB
823.000 MHz	824.000 MHz	200.000 kHz	823.97153 MHz	-17.82 dBm	-4.82 dB
824.000 MHz	844.000 MHz	100.000 kHz	824.52947 MHz	18.33 dBm	-11.67 dB

Date: 13.MAR.2022 02:01:41

Highest Band Edge / 1RBMAX

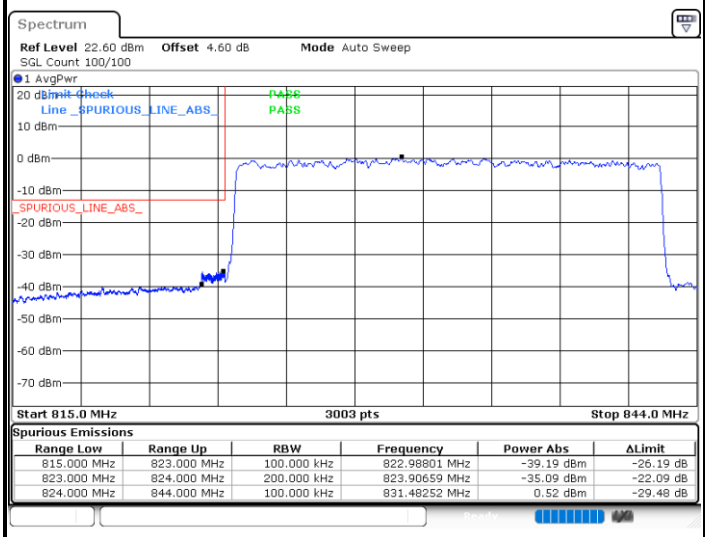


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	848.47053 MHz	17.39 dBm	-12.61 dB
849.000 MHz	850.000 MHz	200.000 kHz	849.00450 MHz	-22.11 dBm	-9.11 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-52.59 dBm	-39.59 dB

Date: 13.MAR.2022 02:10:35

Lowest Band Edge / Full RB

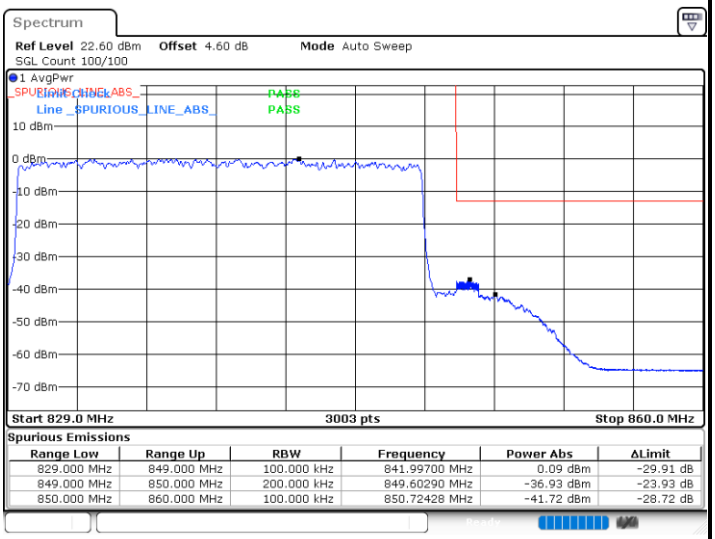


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.98801 MHz	-39.19 dBm	-26.19 dB
823.000 MHz	824.000 MHz	200.000 kHz	823.90659 MHz	-35.09 dBm	-22.09 dB
824.000 MHz	844.000 MHz	100.000 kHz	831.48252 MHz	0.52 dBm	-29.48 dB

Date: 13.MAR.2022 01:37:08

Highest Band Edge / Full RB



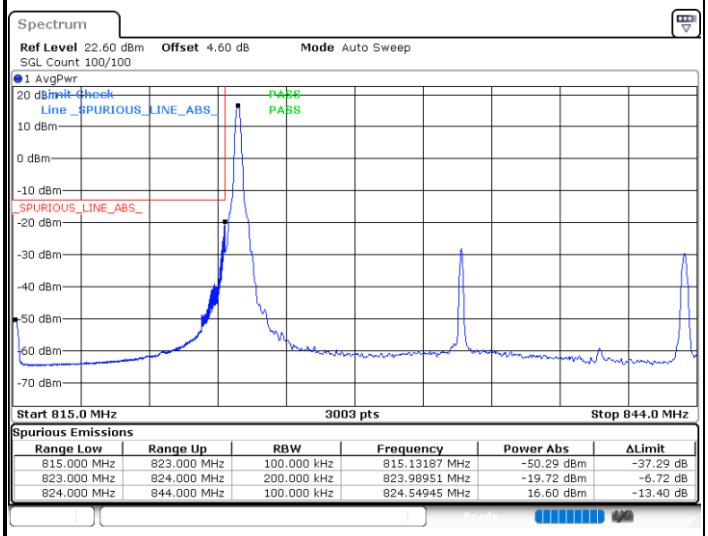
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	841.99700 MHz	0.09 dBm	-29.91 dB
849.000 MHz	850.000 MHz	200.000 kHz	849.60290 MHz	-36.93 dBm	-23.93 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.72428 MHz	-41.72 dBm	-28.72 dB

Date: 13.MAR.2022 02:08:36

FR1 n5/ 20MHz / DFT-s-OFDM / 256QAM

Lowest Band Edge / 1RB0

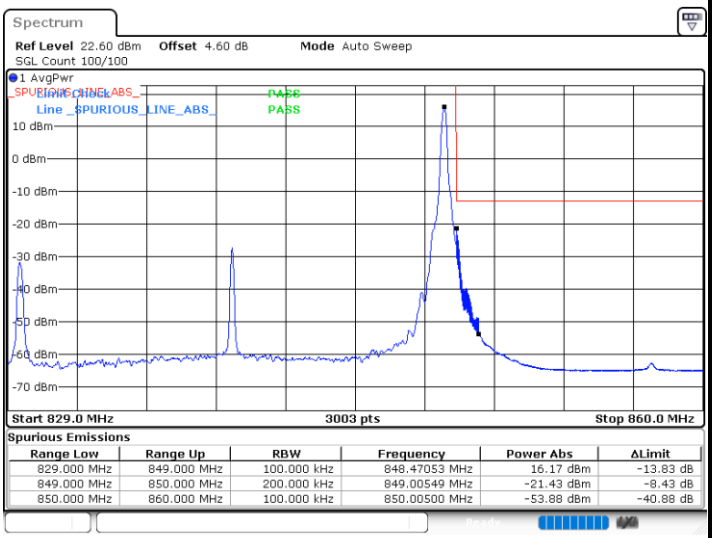


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	815.13187 MHz	-50.29 dBm	-37.29 dB
823.000 MHz	824.000 MHz	200.000 kHz	823.98951 MHz	-19.72 dBm	-6.72 dB
824.000 MHz	844.000 MHz	100.000 kHz	824.54945 MHz	16.60 dBm	-13.40 dB

Date: 13.MAR.2022 02:01:09

Highest Band Edge / 1RBMAX

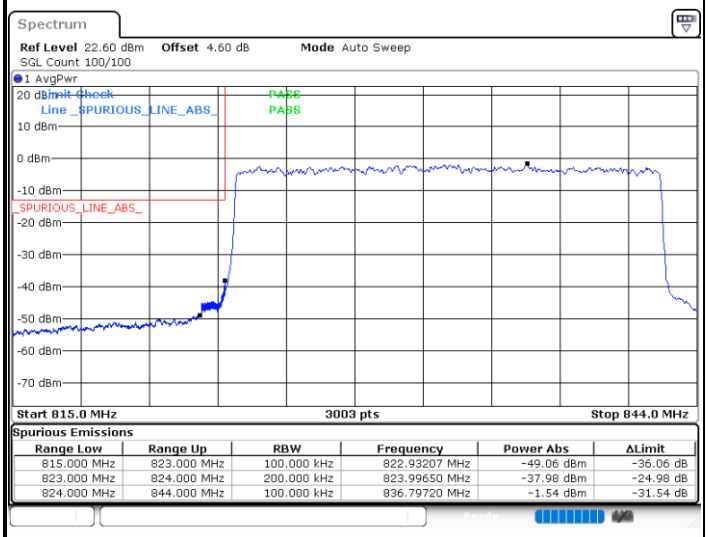


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	848.47053 MHz	16.17 dBm	-13.83 dB
849.000 MHz	850.000 MHz	200.000 kHz	849.00549 MHz	-21.43 dBm	-8.43 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.00500 MHz	-53.88 dBm	-40.88 dB

Date: 13.MAR.2022 02:10:00

Lowest Band Edge / Full RB

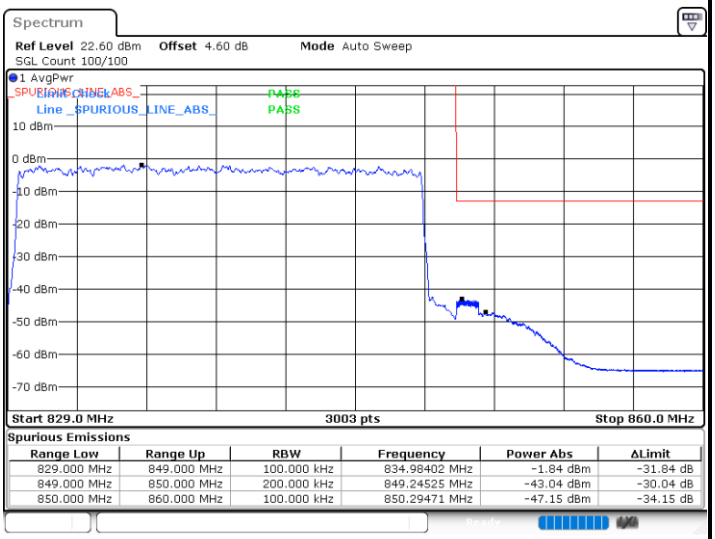


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
815.000 MHz	823.000 MHz	100.000 kHz	822.93207 MHz	-49.06 dBm	-36.06 dB
823.000 MHz	824.000 MHz	200.000 kHz	823.99650 MHz	-37.98 dBm	-24.98 dB
824.000 MHz	844.000 MHz	100.000 kHz	836.79720 MHz	-1.54 dBm	-31.54 dB

Date: 13.MAR.2022 01:37:44

Highest Band Edge / Full RB



Spurious Emissions

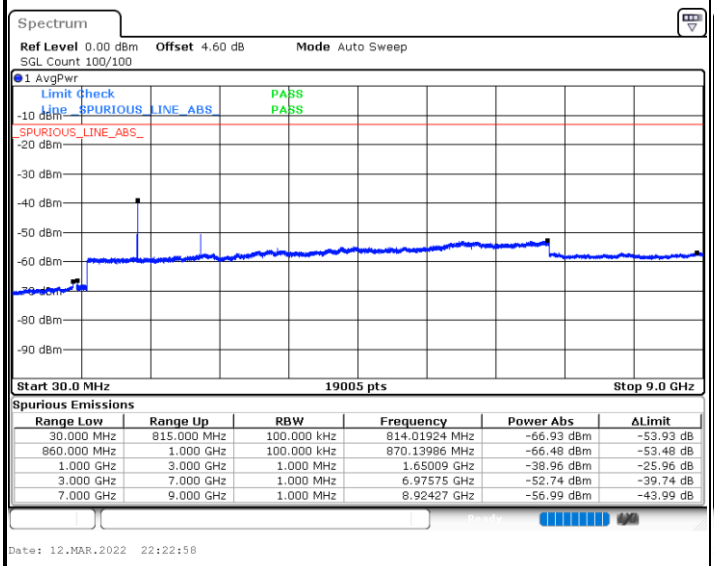
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
829.000 MHz	849.000 MHz	100.000 kHz	834.98402 MHz	-1.84 dBm	-31.84 dB
849.000 MHz	850.000 MHz	200.000 kHz	849.24525 MHz	-43.04 dBm	-30.04 dB
850.000 MHz	860.000 MHz	100.000 kHz	850.29471 MHz	-47.15 dBm	-34.15 dB

Date: 13.MAR.2022 02:09:15

Conducted Spurious Emission

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

Lowest Channel / 1RB1

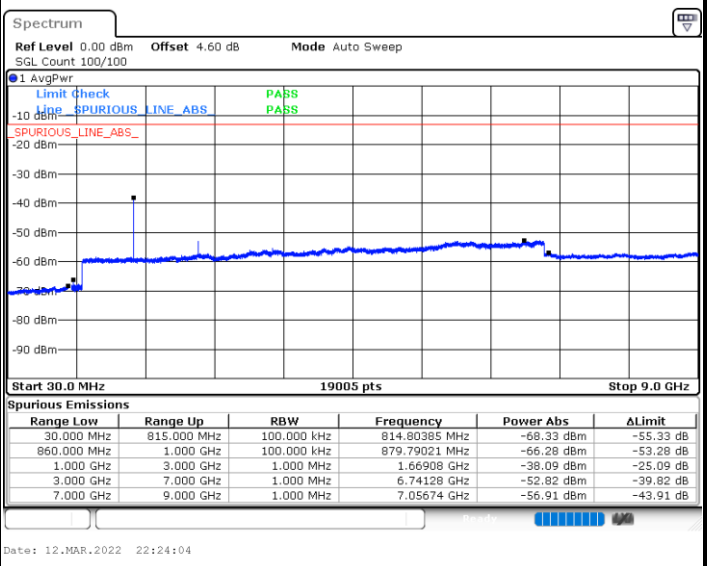


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.01924 MHz	-66.93 dBm	-53.93 dB
860.000 MHz	1.000 GHz	100.000 kHz	870.13986 MHz	-66.48 dBm	-53.48 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.65009 GHz	-38.96 dBm	-25.96 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.97575 GHz	-52.74 dBm	-39.74 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.92427 GHz	-56.99 dBm	-43.99 dB

Date: 12.MAR.2022 22:22:58

Middle Channel / 1RB1

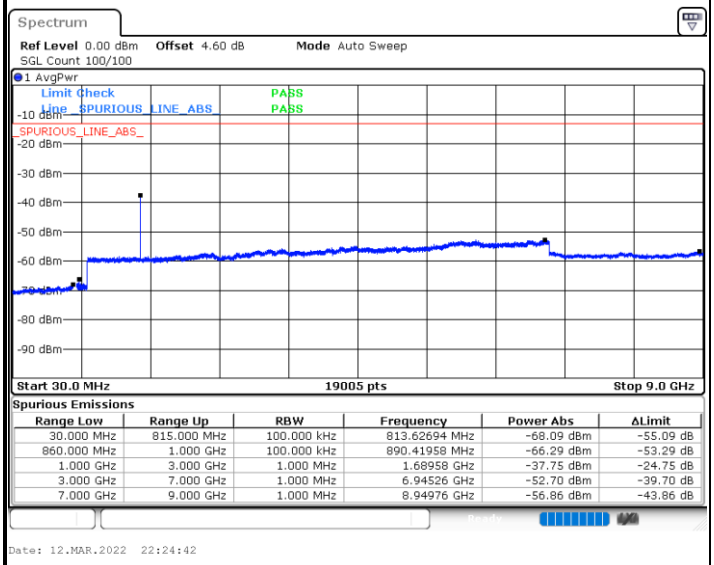


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	814.80385 MHz	-68.33 dBm	-55.33 dB
860.000 MHz	1.000 GHz	100.000 kHz	879.79021 MHz	-66.28 dBm	-53.28 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.66908 GHz	-38.09 dBm	-25.09 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.74128 GHz	-52.82 dBm	-39.82 dB
7.000 GHz	9.000 GHz	1.000 MHz	7.05674 GHz	-56.91 dBm	-43.91 dB

Date: 12.MAR.2022 22:24:04

Highest Channel / 1RB1



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	815.000 MHz	100.000 kHz	813.62694 MHz	-68.09 dBm	-55.09 dB
860.000 MHz	1.000 GHz	100.000 kHz	890.41958 MHz	-66.29 dBm	-53.29 dB
1.000 GHz	3.000 GHz	1.000 MHz	1.68958 GHz	-37.75 dBm	-24.75 dB
3.000 GHz	7.000 GHz	1.000 MHz	6.94526 GHz	-52.70 dBm	-39.70 dB
7.000 GHz	9.000 GHz	1.000 MHz	8.94976 GHz	-56.86 dBm	-43.86 dB

Date: 12.MAR.2022 22:24:42