FCC RF Test Report

APPLICANT	**: Xiaomi Communications Co., Ltd.**
EQUIPMENT	**: Mobile Phone**
BRAND NAME	**: Redmi**
MODEL NAME	**: 2201116SG**
FCC ID	**: 2AFZZ16SG**
STANDARD	**: 47 CFR Part 2, Part 27 Subpart Q**
CLASSIFICATION	**: PCS Licensed Transmitter Held to Ear (PCE)**
TEST DATE(S)	**: Dec. 04, 2021 ~ Dec. 23, 2021**

We, Sporton International (Kunshan) Inc., 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.

This report contains data that were produced under subcontract by Sporton International (ShenZhen) Inc.

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

Jason Jia

Reviewed by: Jason Jia / Supervisor

Alex Wang

Approved by: Alex Wang / Manager

ACCREDITED Cert #5145.02

Sporton International (Kunshan) Inc.

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300

People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG1N1013G	Rev. 01	Initial issue of report	Jan. 04, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	—	Report Only	-
3.5	§27.50 (k)(4)	Peak-to-Average Ratio	<13dB	PASS	
3.6	§27.50 (k)(3)	EIRP	EIRP < 1W (30dBm)	PASS	-
3.7	§2.1049	Occupied Bandwidth	—	Report Only	-
3.8	§2.1051 §27.53 (n)(2)	Conducted Band Edge Measurement	-13dBm/MHz	PASS	-
3.9	§2.1051 §27.53 (n)(2)	Conducted Spurious Emission	-13dBm/MHz	PASS	-
3.10	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within the band	PASS	-
4.4	§2.1053 §27.53 (n)(2)	Radiated Spurious Emission	-13dBm/MHz	PASS	Under limit 34.44 dB at 10356.00 MHz

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

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Manufacturer

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Redmi
Model Name	2201116SG
FCC ID	2AFZZ16SG
IMEI Code	Conducted : 864451050055441/864451050055158 Radiation : 864451050060201/864451050060219
HW Version	P1.1
SW Version	MIUI 13
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Product Feature	
Tx/Rx Frequency	5G NR n77: 3450 MHz ~ 3550 MHz 5G NR n78: 3450 MHz ~ 3550 MHz
Bandwidth	20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 80MHz / 100MHz
Maximum Output Power to Antenna	**<Ant. 3>** 5G NR n77 : 26.21 dBm 5G NR n78 : 25.96 dBm **<Ant. 5>** 5G NR n77 : 25.39 dBm 5G NR n78 : 25.98 dBm
Antenna Gain	**<Ant.3>** 5G NR n77 : -3.5 dBi 5G NR n78 : -3.5 dBi **<Ant.5>** 5G NR n77 : -1.4 dBi 5G NR n78 : -2.1 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK/QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The EIRP is calculated from output power and antenna gain, only the maximum EIRP of n77/n78 for Antenna 5 are shown in the report.
2. 5G NR Bands support SA and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode and 5G NR n77 covers n78 for all test items.
3. The EN-DC combinations declared by the manufacturer are as follows: DC_41A_n77A , DC_2A_n78A, DC_5A_n78A, DC_7A_n78A, DC_38A_n78A, DC_41A_n78A and DC_66A_n78A.
4. The device supports HPUE mode for 5G NR n77/n78.

1.5 Modification of EUT

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

1.6 Maximum EIRP Power and Emission Designator

5G NR n77/n78		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)
20	3460.02 ~ 3540.00	0.2472	18M3G7D	0.2014	18M3W7D
30	3465.00 ~ 3534.99	0.2500	27M8G7D	0.2080	27M9W7D
40	3470.01 ~ 3529.98	0.2506	37M7G7D	0.2032	37M9W7D
50	3475.02 ~ 3525.00	0.2323	47M4G7D	0.1871	47M6W7D
60	3480.00 ~ 3519.99	0.2371	57M9G7D	0.1914	57M8W7D
80	3490.02 ~ 3510.00	0.2307	77M4G7D	0.2004	77M6W7D
100	3500.01 ~ 3500.01	0.2317	97M5G7D	0.1905	97M5W7D

Note:

1. 5G NR Band n77 overlaps the entire frequency range of Band n78. Therefore, the test results of conducted test items provided in this report covers Band n77 as well as Band n78
2. All modulations have been evaluation, only the worst test results of PSK & QAM are shown in the report.

1.7 Testing Site

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

Test Firm	Sporton International (Kunshan) Inc.		
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.**
	03CH05-KS	CN1257	314309

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ	CN1256	421272

Test data subcontracted: conducted test case in section 3.4~3.10 of this report

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH05-KS	AUDIX	E3	6.2009-8-24al

1.9 Applied Standards

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

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

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

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.

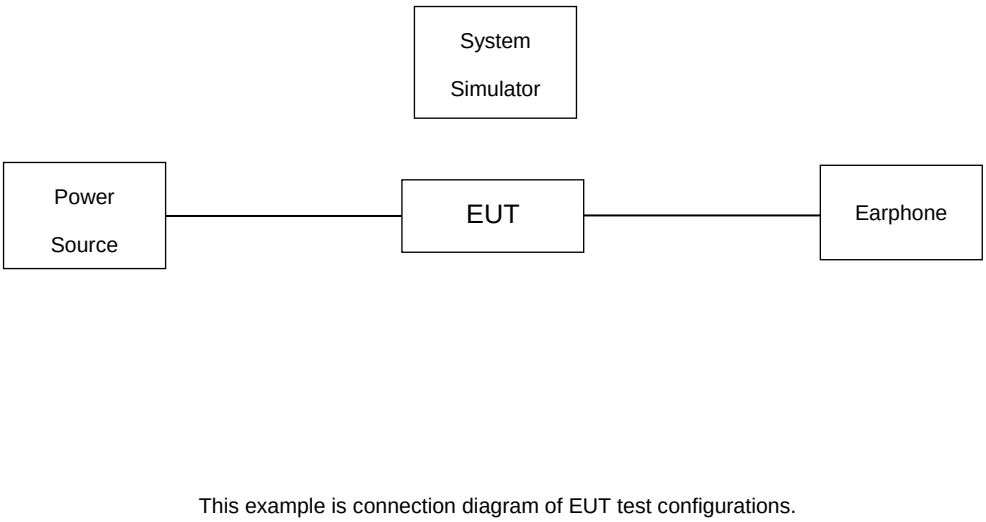
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

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 n77	20M, 30M, 40M, 50M, 60M, 80M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
	5G n78	20M, 30M, 40M, 50M, 60M, 80M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
Peak-to-Average Ratio	5G n77	20M	PI/2 BPSK, QPSK	1RB, Full RB	L, M, H
E.I.R.P	5G n77	20M, 30M, 40M, 50M, 60M, 80M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
26dB and 99% Bandwidth	5G n77	20M, 30M, 40M, 50M, 60M, 80M, 100M	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
Conducted Band Edge	5G n77	20M, 50M, 100M	PI/2 BPSK, QPSK	1RB, Full RB	L, H
Conducted Spurious Emission	5G n77	20M, 50M, 100M	PI/2 BPSK, QPSK	1RB	L, M, H
Frequency Stability	5G n77	20M	QPSK	Full RB	M
Radiated Spurious Emission	5G n77	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.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
4.	Earphone	MI	N/A	N/A	Unshielded,1.2m	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.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 1.97 dB and 10dB attenuator.

Example :

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

= 1.97 + 10 = 11.97 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G n77/n78 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
100	Channel	-	633334	-
	Frequency	-	3500.01	-
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
30	Channel	631000	633334	635666
	Frequency	3465	3500.01	3534.99
20	Channel	630668	633334	636000
	Frequency	3460.02	3500.01	3540

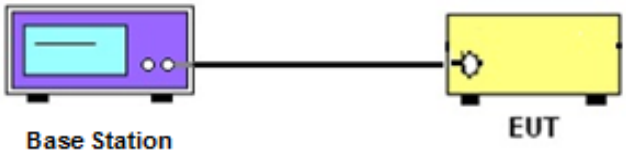
3 Conducted Test Items

3.1 Measuring Instruments

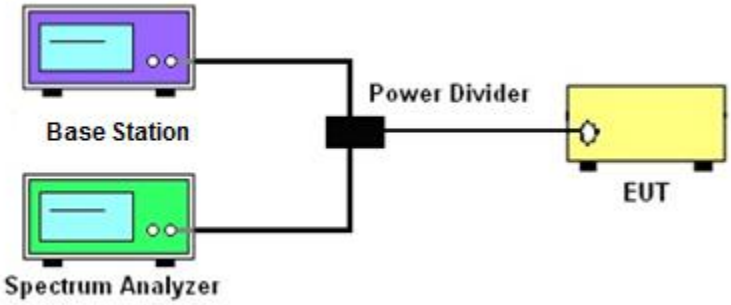
See list of measuring instruments of this test report.

3.2 Test Setup

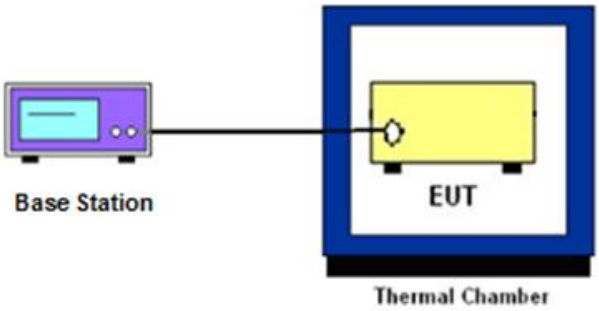
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied / 26dB Bandwidth ,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 Measurement

3.4.1 Description of the Conducted Output Power Measurement

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

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.

3.6 EIRP

3.6.1 Description of EIRP Limit

§ 27.50 (k)(3)

Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications

3.6.2 Test Procedures

1. According to KDB 412172 D01 Power Approach,
2. 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

3.7 Occupied Bandwidth

3.7.1 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.

3.7.2 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.

3.8 Conducted Band Edge Measurement

3.8.1 Description of Conducted Band Edge Measurement

§ 27.53 (n)(2)

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

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, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 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.

3.8.2 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 band edges of low and high channels for the highest RF powers were measured.
4. Set RBW ≥ 1% EBW but limited to a maximum of 200 kHz in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz and 5 MHz removed from the band edge, set RBW ≥ 500KHz.
6. Beyond the 5 MHz removed from the band edge, set RBW = 1MHz.
7. Set spectrum analyzer with RMS detector.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. Checked that all the results comply with the emission limit line.

3.9 Conducted Spurious Emission Measurement

3.9.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges shall not exceed −13 dBm/MHz.

It is measured by means of a calibrated spectrum analyzer and scanned from 9 kHz up to a frequency including its 10^{th} harmonic.

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

3.10 Frequency Stability Measurement

3.10.1 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.

3.10.2 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.

3.10.3 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.

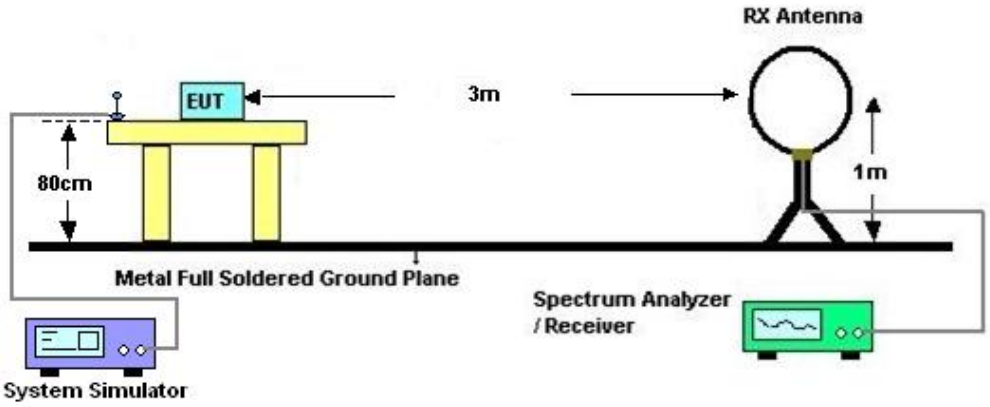
4 Radiated Test Items

4.1 Measuring Instruments

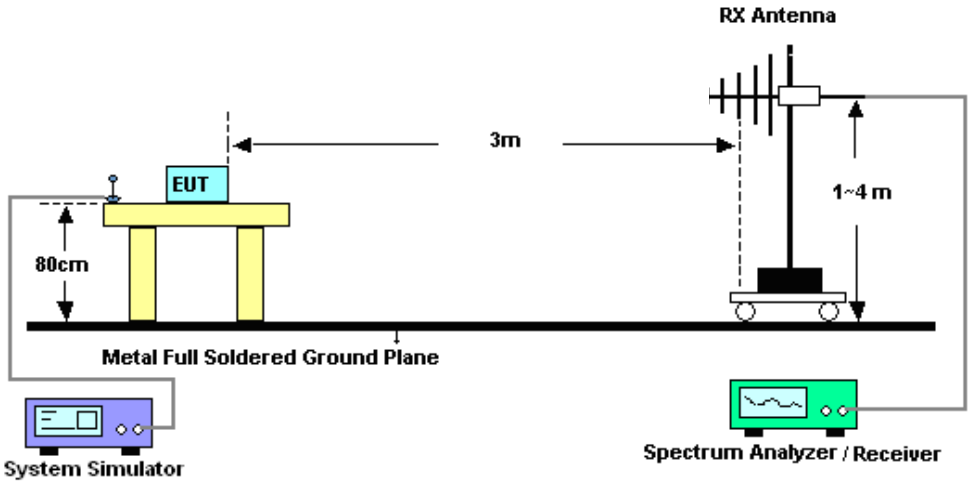
See list of measuring instruments of this test report.

4.2 Test Setup

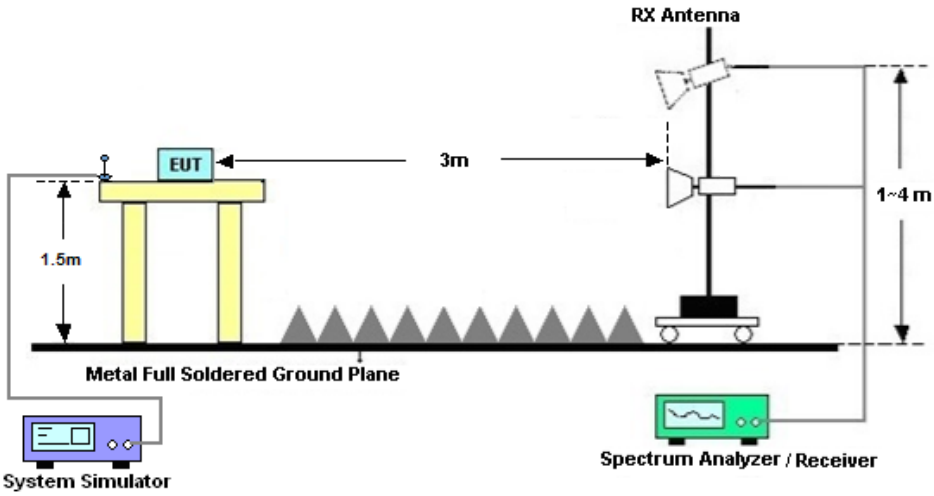
4.2.1 For radiated test below 30MHz



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 Measurement

4.4.1 Description of Radiated Spurious Emission

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 shall not exceed −13 dBm/MHz.

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.
   EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
   ERP (dBm) = EIRP - 2.15
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 08, 2021	Dec. 04, 2021~ Dec. 23, 2021	Apr. 07, 2022	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 25, 2021	Dec. 04, 2021~ Dec. 23, 2021	Oct. 24, 2022	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04265	60.06.020.0077	0.4GHz~26.5GHz	Dec. 26, 2020	Dec. 04, 2021~ Dec. 23, 2021	Dec. 25, 2021	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Dec. 04, 2021~ Dec. 23, 2021	Jul. 13, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr.13, 2021	Dec. 16, 2021	Apr. 12, 2022	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	Jun. 04 ,2021	Dec. 16, 2021	Jun. 03, 2022	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 24, 2021	Dec. 16, 2021	Apr. 23, 2022	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 06, 2021	Dec. 16, 2021	Jan. 05, 2022	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Apr. 12, 2021	Dec. 16, 2021	Apr. 11, 2022	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 07, 2021	Dec. 16, 2021	Jan. 06, 2022	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2012228	1Ghz-18Ghz	Oct. 16, 2021	Dec. 16, 2021	Oct. 15, 2022	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 16, 2021	Dec. 16, 2021	Oct. 15, 2022	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Dec. 16, 2021	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Dec. 16, 2021	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Dec. 16, 2021	NCR	Radiation (03CH05-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 Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.5dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.1dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.1dB**

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Jung Guo	**Temperature :**	22~23℃
		Relative Humidity :	40~42%

Software Version: 21.02.111001

FR1 N77(ANT5)

Conducted Power and EIRP

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
77	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	25@12	25.06	23.66	0.2323
77	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	1@1	25.23	23.83	0.2415
77	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	1@49	25.01	23.61	0.2296
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	25@12	25.08	23.68	0.2333
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@1	25.33	23.93	0.2472
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@49	24.96	23.56	0.2270
77	30	20	630668	3460.02	DFT-s-OFDM 16 QAM	25@12	24.16	22.76	0.1888
77	30	20	630668	3460.02	DFT-s-OFDM 16 QAM	1@1	24.44	23.04	0.2014
77	30	20	630668	3460.02	DFT-s-OFDM 16 QAM	1@49	24.14	22.74	0.1879
77	30	20	630668	3460.02	DFT-s-OFDM 64 QAM	25@12	22.63	21.23	0.1327
77	30	20	630668	3460.02	DFT-s-OFDM 64 QAM	1@1	22.87	21.47	0.1403
77	30	20	630668	3460.02	DFT-s-OFDM 64 QAM	1@49	22.63	21.23	0.1327
77	30	20	630668	3460.02	DFT-s-OFDM 256 QAM	25@12	20.53	19.13	0.0818
77	30	20	630668	3460.02	DFT-s-OFDM 256 QAM	1@1	20.63	19.23	0.0838
77	30	20	630668	3460.02	DFT-s-OFDM 256 QAM	1@49	20.35	18.95	0.0785
77	30	20	630668	3460.02	CP-OFDM QPSK	25@12	23.63	22.23	0.1671
77	30	20	630668	3460.02	CP-OFDM QPSK	1@1	23.74	22.34	0.1714
77	30	20	630668	3460.02	CP-OFDM QPSK	1@49	23.52	22.12	0.1629
77	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	25@12	25.04	23.64	0.2312
77	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	25.07	23.67	0.2328
77	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@49	25.06	23.66	0.2323
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	25@12	25.05	23.65	0.2317
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@1	25.03	23.63	0.2307
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@49	25.02	23.62	0.2301
77	30	20	633334	3500.01	DFT-s-OFDM 16 QAM	25@12	24.14	22.74	0.1879
77	30	20	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	24.16	22.76	0.1888
77	30	20	633334	3500.01	DFT-s-OFDM 16 QAM	1@49	24.21	22.81	0.1910
77	30	20	633334	3500.01	DFT-s-OFDM	25@12	22.64	21.24	0.1330

					64 QAM				
77	30	20	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	22.42	21.02	0.1265
77	30	20	633334	3500.01	DFT-s-OFDM 64 QAM	1@49	22.56	21.16	0.1306
77	30	20	633334	3500.01	DFT-s-OFDM 256 QAM	25@12	20.55	19.15	0.0822
77	30	20	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	20.49	19.09	0.0811
77	30	20	633334	3500.01	DFT-s-OFDM 256 QAM	1@49	20.29	18.89	0.0774
77	30	20	633334	3500.01	CP-OFDM QPSK	25@12	23.62	22.22	0.1667
77	30	20	633334	3500.01	CP-OFDM QPSK	1@1	23.48	22.08	0.1614
77	30	20	633334	3500.01	CP-OFDM QPSK	1@49	23.51	22.11	0.1626
77	30	20	636000	3540	DFT-s-OFDM PI/2 BPSK	25@12	25.08	23.68	0.2333
77	30	20	636000	3540	DFT-s-OFDM PI/2 BPSK	1@1	25.17	23.77	0.2382
77	30	20	636000	3540	DFT-s-OFDM PI/2 BPSK	1@49	25.04	23.64	0.2312
77	30	20	636000	3540	DFT-s-OFDM QPSK	25@12	25.11	23.71	0.2350
77	30	20	636000	3540	DFT-s-OFDM QPSK	1@1	25.13	23.73	0.2360
77	30	20	636000	3540	DFT-s-OFDM QPSK	1@49	25.12	23.72	0.2355
77	30	20	636000	3540	DFT-s-OFDM 16 QAM	25@12	24.17	22.77	0.1892
77	30	20	636000	3540	DFT-s-OFDM 16 QAM	1@1	24.28	22.88	0.1941
77	30	20	636000	3540	DFT-s-OFDM 16 QAM	1@49	24.17	22.77	0.1892
77	30	20	636000	3540	DFT-s-OFDM 64 QAM	25@12	22.7	21.3	0.1349
77	30	20	636000	3540	DFT-s-OFDM 64 QAM	1@1	22.71	21.31	0.1352
77	30	20	636000	3540	DFT-s-OFDM 64 QAM	1@49	22.59	21.19	0.1315
77	30	20	636000	3540	DFT-s-OFDM 256 QAM	25@12	20.61	19.21	0.0834
77	30	20	636000	3540	DFT-s-OFDM 256 QAM	1@1	20.64	19.24	0.0839
77	30	20	636000	3540	DFT-s-OFDM 256 QAM	1@49	20.27	18.87	0.0771
77	30	20	636000	3540	CP-OFDM QPSK	25@12	23.66	22.26	0.1683
77	30	20	636000	3540	CP-OFDM QPSK	1@1	23.59	22.19	0.1656
77	30	20	636000	3540	CP-OFDM QPSK	1@49	23.57	22.17	0.1648
77	30	30	631000	3465	DFT-s-OFDM PI/2 BPSK	36@18	25.22	23.82	0.2410
77	30	30	631000	3465	DFT-s-OFDM PI/2 BPSK	1@1	25.33	23.93	0.2472
77	30	30	631000	3465	DFT-s-OFDM PI/2 BPSK	1@76	25.11	23.71	0.2350
77	30	30	631000	3465	DFT-s-OFDM QPSK	36@18	25.19	23.79	0.2393
77	30	30	631000	3465	DFT-s-OFDM QPSK	1@1	25.38	23.98	0.2500
77	30	30	631000	3465	DFT-s-OFDM QPSK	1@76	24.99	23.59	0.2286
77	30	30	631000	3465	DFT-s-OFDM 16 QAM	36@18	24.21	22.81	0.1910

77	30	30	631000	3465	DFT-s-OFDM 16 QAM	1@1	24.53	23.13	0.2056
77	30	30	631000	3465	DFT-s-OFDM 16 QAM	1@76	24.16	22.76	0.1888
77	30	30	631000	3465	DFT-s-OFDM 64 QAM	36@18	22.7	21.3	0.1349
77	30	30	631000	3465	DFT-s-OFDM 64 QAM	1@1	22.78	21.38	0.1374
77	30	30	631000	3465	DFT-s-OFDM 64 QAM	1@76	22.47	21.07	0.1279
77	30	30	631000	3465	DFT-s-OFDM 256 QAM	36@18	20.58	19.18	0.0828
77	30	30	631000	3465	DFT-s-OFDM 256 QAM	1@1	20.85	19.45	0.0881
77	30	30	631000	3465	DFT-s-OFDM 256 QAM	1@76	20.38	18.98	0.0791
77	30	30	631000	3465	CP-OFDM QPSK	39@19	23.65	22.25	0.1679
77	30	30	631000	3465	CP-OFDM QPSK	1@1	23.8	22.4	0.1738
77	30	30	631000	3465	CP-OFDM QPSK	1@76	23.58	22.18	0.1652
77	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	36@18	25.1	23.7	0.2344
77	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	25.13	23.73	0.2360
77	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@76	25.22	23.82	0.2410
77	30	30	633334	3500.01	DFT-s-OFDM QPSK	36@18	25.12	23.72	0.2355
77	30	30	633334	3500.01	DFT-s-OFDM QPSK	1@1	25.08	23.68	0.2333
77	30	30	633334	3500.01	DFT-s-OFDM QPSK	1@76	25.14	23.74	0.2366
77	30	30	633334	3500.01	DFT-s-OFDM 16 QAM	36@18	24.18	22.78	0.1897
77	30	30	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	24.28	22.88	0.1941
77	30	30	633334	3500.01	DFT-s-OFDM 16 QAM	1@76	24.3	22.9	0.1950
77	30	30	633334	3500.01	DFT-s-OFDM 64 QAM	36@18	22.67	21.27	0.1340
77	30	30	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	22.5	21.1	0.1288
77	30	30	633334	3500.01	DFT-s-OFDM 64 QAM	1@76	22.55	21.15	0.1303
77	30	30	633334	3500.01	DFT-s-OFDM 256 QAM	36@18	20.69	19.29	0.0849
77	30	30	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	20.55	19.15	0.0822
77	30	30	633334	3500.01	DFT-s-OFDM 256 QAM	1@76	20.63	19.23	0.0838
77	30	30	633334	3500.01	CP-OFDM QPSK	39@19	23.7	22.3	0.1698
77	30	30	633334	3500.01	CP-OFDM QPSK	1@1	23.71	22.31	0.1702
77	30	30	633334	3500.01	CP-OFDM QPSK	1@76	23.67	22.27	0.1687
77	30	30	635666	3534.99	DFT-s-OFDM PI/2 BPSK	36@18	25.25	23.85	0.2427
77	30	30	635666	3534.99	DFT-s-OFDM PI/2 BPSK	1@1	25.35	23.95	0.2483
77	30	30	635666	3534.99	DFT-s-OFDM PI/2 BPSK	1@76	25.14	23.74	0.2366
77	30	30	635666	3534.99	DFT-s-OFDM QPSK	36@18	25.15	23.75	0.2371
77	30	30	635666	3534.99	DFT-s-OFDM QPSK	1@1	25.36	23.96	0.2489

77	30	30	635666	3534.99	DFT-s-OFDM QPSK	1@76	25.09	23.69	0.2339
77	30	30	635666	3534.99	DFT-s-OFDM 16 QAM	36@18	24.21	22.81	0.1910
77	30	30	635666	3534.99	DFT-s-OFDM 16 QAM	1@1	24.58	23.18	0.2080
77	30	30	635666	3534.99	DFT-s-OFDM 16 QAM	1@76	24.36	22.96	0.1977
77	30	30	635666	3534.99	DFT-s-OFDM 64 QAM	36@18	22.65	21.25	0.1334
77	30	30	635666	3534.99	DFT-s-OFDM 64 QAM	1@1	22.99	21.59	0.1442
77	30	30	635666	3534.99	DFT-s-OFDM 64 QAM	1@76	22.54	21.14	0.1300
77	30	30	635666	3534.99	DFT-s-OFDM 256 QAM	36@18	20.65	19.25	0.0841
77	30	30	635666	3534.99	DFT-s-OFDM 256 QAM	1@1	20.69	19.29	0.0849
77	30	30	635666	3534.99	DFT-s-OFDM 256 QAM	1@76	20.37	18.97	0.0789
77	30	30	635666	3534.99	CP-OFDM QPSK	39@19	23.67	22.27	0.1687
77	30	30	635666	3534.99	CP-OFDM QPSK	1@1	23.87	22.47	0.1766
77	30	30	635666	3534.99	CP-OFDM QPSK	1@76	23.57	22.17	0.1648
77	30	40	631334	3470.01	DFT-s-OFDM PI/2 BPSK	50@25	25.03	23.63	0.2307
77	30	40	631334	3470.01	DFT-s-OFDM PI/2 BPSK	1@1	25.29	23.89	0.2449
77	30	40	631334	3470.01	DFT-s-OFDM PI/2 BPSK	1@104	25.07	23.67	0.2328
77	30	40	631334	3470.01	DFT-s-OFDM QPSK	50@25	25.08	23.68	0.2333
77	30	40	631334	3470.01	DFT-s-OFDM QPSK	1@1	25.21	23.81	0.2404
77	30	40	631334	3470.01	DFT-s-OFDM QPSK	1@104	25.08	23.68	0.2333
77	30	40	631334	3470.01	DFT-s-OFDM 16 QAM	50@25	24.08	22.68	0.1854
77	30	40	631334	3470.01	DFT-s-OFDM 16 QAM	1@1	24.38	22.98	0.1986
77	30	40	631334	3470.01	DFT-s-OFDM 16 QAM	1@104	24.23	22.83	0.1919
77	30	40	631334	3470.01	DFT-s-OFDM 64 QAM	50@25	22.62	21.22	0.1324
77	30	40	631334	3470.01	DFT-s-OFDM 64 QAM	1@1	22.71	21.31	0.1352
77	30	40	631334	3470.01	DFT-s-OFDM 64 QAM	1@104	22.5	21.1	0.1288
77	30	40	631334	3470.01	DFT-s-OFDM 256 QAM	50@25	20.68	19.28	0.0847
77	30	40	631334	3470.01	DFT-s-OFDM 256 QAM	1@1	20.52	19.12	0.0817
77	30	40	631334	3470.01	DFT-s-OFDM 256 QAM	1@104	20.41	19.01	0.0796
77	30	40	631334	3470.01	CP-OFDM QPSK	53@26	23.62	22.22	0.1667
77	30	40	631334	3470.01	CP-OFDM QPSK	1@1	23.77	22.37	0.1726
77	30	40	631334	3470.01	CP-OFDM QPSK	1@104	23.69	22.29	0.1694
77	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	50@25	25.14	23.74	0.2366
77	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	25.19	23.79	0.2393
77	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@104	25.26	23.86	0.2432

77	30	40	633334	3500.01	DFT-s-OFDM QPSK	50@25	25.16	23.76	0.2377
77	30	40	633334	3500.01	DFT-s-OFDM QPSK	1@1	25.14	23.74	0.2366
77	30	40	633334	3500.01	DFT-s-OFDM QPSK	1@104	25.18	23.78	0.2388
77	30	40	633334	3500.01	DFT-s-OFDM 16 QAM	50@25	24.2	22.8	0.1905
77	30	40	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	24.42	23.02	0.2004
77	30	40	633334	3500.01	DFT-s-OFDM 16 QAM	1@104	24.35	22.95	0.1972
77	30	40	633334	3500.01	DFT-s-OFDM 64 QAM	50@25	22.74	21.34	0.1361
77	30	40	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	22.5	21.1	0.1288
77	30	40	633334	3500.01	DFT-s-OFDM 64 QAM	1@104	22.58	21.18	0.1312
77	30	40	633334	3500.01	DFT-s-OFDM 256 QAM	50@25	20.68	19.28	0.0847
77	30	40	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	20.45	19.05	0.0804
77	30	40	633334	3500.01	DFT-s-OFDM 256 QAM	1@104	20.6	19.2	0.0832
77	30	40	633334	3500.01	CP-OFDM QPSK	53@26	23.68	22.28	0.1690
77	30	40	633334	3500.01	CP-OFDM QPSK	1@1	23.67	22.27	0.1687
77	30	40	633334	3500.01	CP-OFDM QPSK	1@104	23.81	22.41	0.1742
77	30	40	635332	3529.98	DFT-s-OFDM PI/2 BPSK	50@25	25.3	23.9	0.2455
77	30	40	635332	3529.98	DFT-s-OFDM PI/2 BPSK	1@1	25.37	23.97	0.2495
77	30	40	635332	3529.98	DFT-s-OFDM PI/2 BPSK	1@104	25.26	23.86	0.2432
77	30	40	635332	3529.98	DFT-s-OFDM QPSK	50@25	25.29	23.89	0.2449
77	30	40	635332	3529.98	DFT-s-OFDM QPSK	1@1	25.39	23.99	0.2506
77	30	40	635332	3529.98	DFT-s-OFDM QPSK	1@104	25.2	23.8	0.2399
77	30	40	635332	3529.98	DFT-s-OFDM 16 QAM	50@25	24.3	22.9	0.1950
77	30	40	635332	3529.98	DFT-s-OFDM 16 QAM	1@1	24.48	23.08	0.2032
77	30	40	635332	3529.98	DFT-s-OFDM 16 QAM	1@104	24.45	23.05	0.2018
77	30	40	635332	3529.98	DFT-s-OFDM 64 QAM	50@25	22.84	21.44	0.1393
77	30	40	635332	3529.98	DFT-s-OFDM 64 QAM	1@1	22.76	21.36	0.1368
77	30	40	635332	3529.98	DFT-s-OFDM 64 QAM	1@104	22.68	21.28	0.1343
77	30	40	635332	3529.98	DFT-s-OFDM 256 QAM	50@25	20.78	19.38	0.0867
77	30	40	635332	3529.98	DFT-s-OFDM 256 QAM	1@1	20.69	19.29	0.0849
77	30	40	635332	3529.98	DFT-s-OFDM 256 QAM	1@104	20.55	19.15	0.0822
77	30	40	635332	3529.98	CP-OFDM QPSK	53@26	23.73	22.33	0.1710
77	30	40	635332	3529.98	CP-OFDM QPSK	1@1	23.9	22.5	0.1778
77	30	40	635332	3529.98	CP-OFDM QPSK	1@104	23.74	22.34	0.1714
77	30	50	631668	3475.02	DFT-s-OFDM PI/2 BPSK	64@32	24.8	23.4	0.2188

77	30	50	631668	3475.02	DFT-s-OFDM PI/2 BPSK	1@1	25.06	23.66	0.2323
77	30	50	631668	3475.02	DFT-s-OFDM PI/2 BPSK	1@131	24.84	23.44	0.2208
77	30	50	631668	3475.02	DFT-s-OFDM QPSK	64@32	24.83	23.43	0.2203
77	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@1	25.03	23.63	0.2307
77	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@131	24.78	23.38	0.2178
77	30	50	631668	3475.02	DFT-s-OFDM 16 QAM	64@32	23.89	22.49	0.1774
77	30	50	631668	3475.02	DFT-s-OFDM 16 QAM	1@1	24.12	22.72	0.1871
77	30	50	631668	3475.02	DFT-s-OFDM 16 QAM	1@131	24.04	22.64	0.1837
77	30	50	631668	3475.02	DFT-s-OFDM 64 QAM	64@32	22.36	20.96	0.1247
77	30	50	631668	3475.02	DFT-s-OFDM 64 QAM	1@1	22.35	20.95	0.1245
77	30	50	631668	3475.02	DFT-s-OFDM 64 QAM	1@131	22.25	20.85	0.1216
77	30	50	631668	3475.02	DFT-s-OFDM 256 QAM	64@32	20.43	19.03	0.0800
77	30	50	631668	3475.02	DFT-s-OFDM 256 QAM	1@1	20.41	19.01	0.0796
77	30	50	631668	3475.02	DFT-s-OFDM 256 QAM	1@131	20.13	18.73	0.0746
77	30	50	631668	3475.02	CP-OFDM QPSK	67@33	23.45	22.05	0.1603
77	30	50	631668	3475.02	CP-OFDM QPSK	1@1	23.47	22.07	0.1611
77	30	50	631668	3475.02	CP-OFDM QPSK	1@131	23.33	21.93	0.1560
77	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	64@32	24.84	23.44	0.2208
77	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	24.9	23.5	0.2239
77	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@131	24.92	23.52	0.2249
77	30	50	633334	3500.01	DFT-s-OFDM QPSK	64@32	24.86	23.46	0.2218
77	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@1	24.83	23.43	0.2203
77	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@131	24.8	23.4	0.2188
77	30	50	633334	3500.01	DFT-s-OFDM 16 QAM	64@32	23.95	22.55	0.1799
77	30	50	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	24.1	22.7	0.1862
77	30	50	633334	3500.01	DFT-s-OFDM 16 QAM	1@131	23.91	22.51	0.1782
77	30	50	633334	3500.01	DFT-s-OFDM 64 QAM	64@32	22.44	21.04	0.1271
77	30	50	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	22.24	20.84	0.1213
77	30	50	633334	3500.01	DFT-s-OFDM 64 QAM	1@131	22.05	20.65	0.1161
77	30	50	633334	3500.01	DFT-s-OFDM 256 QAM	64@32	20.4	19	0.0794
77	30	50	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	20.18	18.78	0.0755
77	30	50	633334	3500.01	DFT-s-OFDM 256 QAM	1@131	20.34	18.94	0.0783
77	30	50	633334	3500.01	CP-OFDM QPSK	67@33	23.42	22.02	0.1592
77	30	50	633334	3500.01	CP-OFDM QPSK	1@1	23.32	21.92	0.1556

77	30	50	633334	3500.01	CP-OFDM QPSK	1@131	23.35	21.95	0.1567
77	30	50	635000	3525	DFT-s-OFDM PI/2 BPSK	64@32	24.88	23.48	0.2228
77	30	50	635000	3525	DFT-s-OFDM PI/2 BPSK	1@1	25.03	23.63	0.2307
77	30	50	635000	3525	DFT-s-OFDM PI/2 BPSK	1@131	24.84	23.44	0.2208
77	30	50	635000	3525	DFT-s-OFDM QPSK	64@32	24.93	23.53	0.2254
77	30	50	635000	3525	DFT-s-OFDM QPSK	1@1	24.94	23.54	0.2259
77	30	50	635000	3525	DFT-s-OFDM QPSK	1@131	24.76	23.36	0.2168
77	30	50	635000	3525	DFT-s-OFDM 16 QAM	64@32	23.95	22.55	0.1799
77	30	50	635000	3525	DFT-s-OFDM 16 QAM	1@1	24.12	22.72	0.1871
77	30	50	635000	3525	DFT-s-OFDM 16 QAM	1@131	24.03	22.63	0.1832
77	30	50	635000	3525	DFT-s-OFDM 64 QAM	64@32	22.46	21.06	0.1276
77	30	50	635000	3525	DFT-s-OFDM 64 QAM	1@1	22.3	20.9	0.1230
77	30	50	635000	3525	DFT-s-OFDM 64 QAM	1@131	22.19	20.79	0.1199
77	30	50	635000	3525	DFT-s-OFDM 256 QAM	64@32	20.57	19.17	0.0826
77	30	50	635000	3525	DFT-s-OFDM 256 QAM	1@1	20.31	18.91	0.0778
77	30	50	635000	3525	DFT-s-OFDM 256 QAM	1@131	20.24	18.84	0.0766
77	30	50	635000	3525	CP-OFDM QPSK	67@33	23.44	22.04	0.1600
77	30	50	635000	3525	CP-OFDM QPSK	1@1	23.41	22.01	0.1589
77	30	50	635000	3525	CP-OFDM QPSK	1@131	23.31	21.91	0.1552
77	30	60	632000	3480	DFT-s-OFDM PI/2 BPSK	81@40	24.86	23.46	0.2218
77	30	60	632000	3480	DFT-s-OFDM PI/2 BPSK	1@1	25.08	23.68	0.2333
77	30	60	632000	3480	DFT-s-OFDM PI/2 BPSK	1@160	24.87	23.47	0.2223
77	30	60	632000	3480	DFT-s-OFDM QPSK	81@40	24.88	23.48	0.2228
77	30	60	632000	3480	DFT-s-OFDM QPSK	1@1	25.07	23.67	0.2328
77	30	60	632000	3480	DFT-s-OFDM QPSK	1@160	24.86	23.46	0.2218
77	30	60	632000	3480	DFT-s-OFDM 16 QAM	81@40	23.87	22.47	0.1766
77	30	60	632000	3480	DFT-s-OFDM 16 QAM	1@1	24.08	22.68	0.1854
77	30	60	632000	3480	DFT-s-OFDM 16 QAM	1@160	23.88	22.48	0.1770
77	30	60	632000	3480	DFT-s-OFDM 64 QAM	81@40	22.41	21.01	0.1262
77	30	60	632000	3480	DFT-s-OFDM 64 QAM	1@1	22.67	21.27	0.1340
77	30	60	632000	3480	DFT-s-OFDM 64 QAM	1@160	22.5	21.1	0.1288
77	30	60	632000	3480	DFT-s-OFDM 256 QAM	81@40	20.54	19.14	0.0820
77	30	60	632000	3480	DFT-s-OFDM 256 QAM	1@1	20.46	19.06	0.0805
77	30	60	632000	3480	DFT-s-OFDM 256 QAM	1@160	20.29	18.89	0.0774

77	30	60	632000	3480	CP-OFDM QPSK	81@40	23.41	22.01	0.1589
77	30	60	632000	3480	CP-OFDM QPSK	1@1	23.5	22.1	0.1622
77	30	60	632000	3480	CP-OFDM QPSK	1@160	23.41	22.01	0.1589
77	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	81@40	24.93	23.53	0.2254
77	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	24.95	23.55	0.2265
77	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@160	24.85	23.45	0.2213
77	30	60	633334	3500.01	DFT-s-OFDM QPSK	81@40	24.95	23.55	0.2265
77	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@1	24.87	23.47	0.2223
77	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@160	24.87	23.47	0.2223
77	30	60	633334	3500.01	DFT-s-OFDM 16 QAM	81@40	23.94	22.54	0.1795
77	30	60	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	24.05	22.65	0.1841
77	30	60	633334	3500.01	DFT-s-OFDM 16 QAM	1@160	23.96	22.56	0.1803
77	30	60	633334	3500.01	DFT-s-OFDM 64 QAM	81@40	22.46	21.06	0.1276
77	30	60	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	22.31	20.91	0.1233
77	30	60	633334	3500.01	DFT-s-OFDM 64 QAM	1@160	22.28	20.88	0.1225
77	30	60	633334	3500.01	DFT-s-OFDM 256 QAM	81@40	20.62	19.22	0.0836
77	30	60	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	20.23	18.83	0.0764
77	30	60	633334	3500.01	DFT-s-OFDM 256 QAM	1@160	20.18	18.78	0.0755
77	30	60	633334	3500.01	CP-OFDM QPSK	81@40	23.4	22	0.1585
77	30	60	633334	3500.01	CP-OFDM QPSK	1@1	23.35	21.95	0.1567
77	30	60	633334	3500.01	CP-OFDM QPSK	1@160	23.35	21.95	0.1567
77	30	60	634666	3519.99	DFT-s-OFDM PI/2 BPSK	81@40	25.13	23.73	0.2360
77	30	60	634666	3519.99	DFT-s-OFDM PI/2 BPSK	1@1	25.05	23.65	0.2317
77	30	60	634666	3519.99	DFT-s-OFDM PI/2 BPSK	1@160	24.98	23.58	0.2280
77	30	60	634666	3519.99	DFT-s-OFDM QPSK	81@40	25.15	23.75	0.2371
77	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@1	25.02	23.62	0.2301
77	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@160	24.91	23.51	0.2244
77	30	60	634666	3519.99	DFT-s-OFDM 16 QAM	81@40	24.15	22.75	0.1884
77	30	60	634666	3519.99	DFT-s-OFDM 16 QAM	1@1	24.22	22.82	0.1914
77	30	60	634666	3519.99	DFT-s-OFDM 16 QAM	1@160	23.99	22.59	0.1816
77	30	60	634666	3519.99	DFT-s-OFDM 64 QAM	81@40	22.59	21.19	0.1315
77	30	60	634666	3519.99	DFT-s-OFDM 64 QAM	1@1	22.61	21.21	0.1321
77	30	60	634666	3519.99	DFT-s-OFDM 64 QAM	1@160	22.38	20.98	0.1253
77	30	60	634666	3519.99	DFT-s-OFDM 256 QAM	81@40	20.65	19.25	0.0841

77	30	60	634666	3519.99	DFT-s-OFDM 256 QAM	1@1	20.23	18.83	0.0764
77	30	60	634666	3519.99	DFT-s-OFDM 256 QAM	1@160	20.21	18.81	0.0760
77	30	60	634666	3519.99	CP-OFDM QPSK	81@40	23.59	22.19	0.1656
77	30	60	634666	3519.99	CP-OFDM QPSK	1@1	23.45	22.05	0.1603
77	30	60	634666	3519.99	CP-OFDM QPSK	1@160	23.46	22.06	0.1607
77	30	80	632668	3490.02	DFT-s-OFDM PI/2 BPSK	108@54	24.92	23.52	0.2249
77	30	80	632668	3490.02	DFT-s-OFDM PI/2 BPSK	1@1	25.03	23.63	0.2307
77	30	80	632668	3490.02	DFT-s-OFDM PI/2 BPSK	1@215	24.88	23.48	0.2228
77	30	80	632668	3490.02	DFT-s-OFDM QPSK	108@54	24.9	23.5	0.2239
77	30	80	632668	3490.02	DFT-s-OFDM QPSK	1@1	24.98	23.58	0.2280
77	30	80	632668	3490.02	DFT-s-OFDM QPSK	1@215	24.77	23.37	0.2173
77	30	80	632668	3490.02	DFT-s-OFDM 16 QAM	108@54	24.42	23.02	0.2004
77	30	80	632668	3490.02	DFT-s-OFDM 16 QAM	1@1	24.38	22.98	0.1986
77	30	80	632668	3490.02	DFT-s-OFDM 16 QAM	1@215	23.84	22.44	0.1754
77	30	80	632668	3490.02	DFT-s-OFDM 64 QAM	108@54	22.45	21.05	0.1274
77	30	80	632668	3490.02	DFT-s-OFDM 64 QAM	1@1	22.41	21.01	0.1262
77	30	80	632668	3490.02	DFT-s-OFDM 64 QAM	1@215	22.24	20.84	0.1213
77	30	80	632668	3490.02	DFT-s-OFDM 256 QAM	108@54	20.44	19.04	0.0802
77	30	80	632668	3490.02	DFT-s-OFDM 256 QAM	1@1	20.29	18.89	0.0774
77	30	80	632668	3490.02	DFT-s-OFDM 256 QAM	1@215	20.05	18.65	0.0733
77	30	80	632668	3490.02	CP-OFDM QPSK	109@54	23.4	22	0.1585
77	30	80	632668	3490.02	CP-OFDM QPSK	1@1	23.38	21.98	0.1578
77	30	80	632668	3490.02	CP-OFDM QPSK	1@215	23.3	21.9	0.1549
77	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	108@54	24.85	23.45	0.2213
77	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	24.92	23.52	0.2249
77	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@215	24.71	23.31	0.2143
77	30	80	633334	3500.01	DFT-s-OFDM QPSK	108@54	24.85	23.45	0.2213
77	30	80	633334	3500.01	DFT-s-OFDM QPSK	1@1	24.91	23.51	0.2244
77	30	80	633334	3500.01	DFT-s-OFDM QPSK	1@215	24.66	23.26	0.2118
77	30	80	633334	3500.01	DFT-s-OFDM 16 QAM	108@54	23.9	22.5	0.1778
77	30	80	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	24.02	22.62	0.1828
77	30	80	633334	3500.01	DFT-s-OFDM 16 QAM	1@215	24.01	22.61	0.1824
77	30	80	633334	3500.01	DFT-s-OFDM 64 QAM	108@54	22.42	21.02	0.1265
77	30	80	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	22.46	21.06	0.1276

77	30	80	633334	3500.01	DFT-s-OFDM 64 QAM	1@215	22.01	20.61	0.1151
77	30	80	633334	3500.01	DFT-s-OFDM 256 QAM	108@54	20.24	18.84	0.0766
77	30	80	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	20.24	18.84	0.0766
77	30	80	633334	3500.01	DFT-s-OFDM 256 QAM	1@215	19.84	18.44	0.0698
77	30	80	633334	3500.01	CP-OFDM QPSK	109@54	23.38	21.98	0.1578
77	30	80	633334	3500.01	CP-OFDM QPSK	1@1	23.47	22.07	0.1611
77	30	80	633334	3500.01	CP-OFDM QPSK	1@215	23.11	21.71	0.1483
77	30	80	634000	3510	DFT-s-OFDM PI/2 BPSK	108@54	24.88	23.48	0.2228
77	30	80	634000	3510	DFT-s-OFDM PI/2 BPSK	1@1	24.86	23.46	0.2218
77	30	80	634000	3510	DFT-s-OFDM PI/2 BPSK	1@215	24.67	23.27	0.2123
77	30	80	634000	3510	DFT-s-OFDM QPSK	108@54	24.88	23.48	0.2228
77	30	80	634000	3510	DFT-s-OFDM QPSK	1@1	24.76	23.36	0.2168
77	30	80	634000	3510	DFT-s-OFDM QPSK	1@215	24.69	23.29	0.2133
77	30	80	634000	3510	DFT-s-OFDM 16 QAM	108@54	23.79	22.39	0.1734
77	30	80	634000	3510	DFT-s-OFDM 16 QAM	1@1	23.95	22.55	0.1799
77	30	80	634000	3510	DFT-s-OFDM 16 QAM	1@215	23.7	22.3	0.1698
77	30	80	634000	3510	DFT-s-OFDM 64 QAM	108@54	22.39	20.99	0.1256
77	30	80	634000	3510	DFT-s-OFDM 64 QAM	1@1	22.13	20.73	0.1183
77	30	80	634000	3510	DFT-s-OFDM 64 QAM	1@215	21.96	20.56	0.1138
77	30	80	634000	3510	DFT-s-OFDM 256 QAM	108@54	20.23	18.83	0.0764
77	30	80	634000	3510	DFT-s-OFDM 256 QAM	1@1	20.31	18.91	0.0778
77	30	80	634000	3510	DFT-s-OFDM 256 QAM	1@215	19.9	18.5	0.0708
77	30	80	634000	3510	CP-OFDM QPSK	109@54	23.36	21.96	0.1570
77	30	80	634000	3510	CP-OFDM QPSK	1@1	23.35	21.95	0.1567
77	30	80	634000	3510	CP-OFDM QPSK	1@215	23.23	21.83	0.1524
77	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	135@67	24.99	23.59	0.2286
77	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	25.05	23.65	0.2317
77	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@271	24.84	23.44	0.2208
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	135@67	25	23.6	0.2291
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@1	24.96	23.56	0.2270
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@271	24.78	23.38	0.2178
77	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	135@67	23.99	22.59	0.1816
77	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	24.2	22.8	0.1905
77	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	1@271	24	22.6	0.1820

77	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	135@67	22.48	21.08	0.1282
77	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	22.55	21.15	0.1303
77	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	1@271	22.35	20.95	0.1245
77	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	135@67	20.39	18.99	0.0793
77	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	20.38	18.98	0.0791
77	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	1@271	20.01	18.61	0.0726
77	30	100	633334	3500.01	CP-OFDM QPSK	137@68	23.54	22.14	0.1637
77	30	100	633334	3500.01	CP-OFDM QPSK	1@1	23.48	22.08	0.1614
77	30	100	633334	3500.01	CP-OFDM QPSK	1@271	23.31	21.91	0.1552

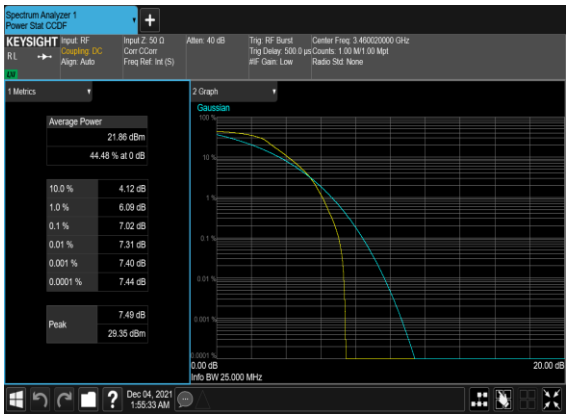
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00417	**PASS**	NV
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.01112	**PASS**	LV
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.0062	**PASS**	HV
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00302	**PASS**	-30℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00774	**PASS**	-20℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00771	**PASS**	-10℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00327	**PASS**	0℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00627	**PASS**	10℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.0046	**PASS**	20℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00443	**PASS**	30℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00229	**PASS**	40℃
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	-0.00618	**PASS**	50℃

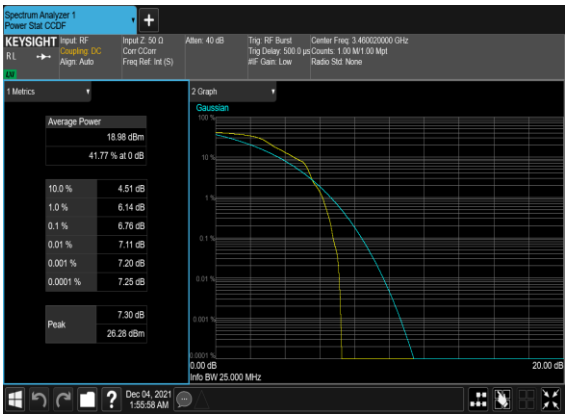
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
77	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	50@0	7.02	13	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	1@0	6.76	13	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	50@0	8.3	13	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	8.81	13	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	50@0	5.58	13	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@0	5.08	13	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	6.77	13	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	6.31	13	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM PI/2 BPSK	50@0	5.57	13	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM PI/2 BPSK	1@0	5.05	13	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM QPSK	50@0	6.8	13	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	6.27	13	**PASS**

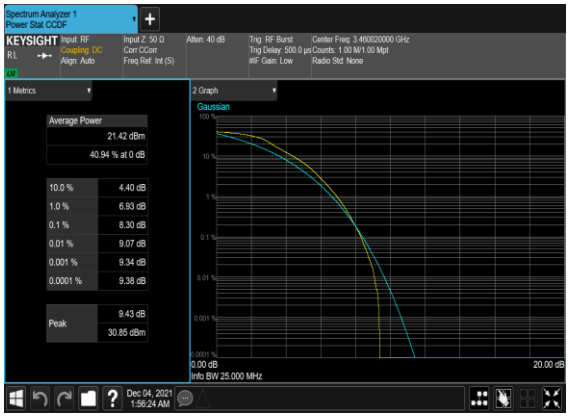
B41_N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



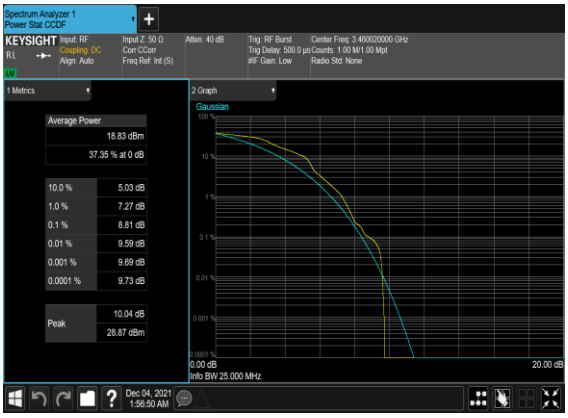
B41_N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



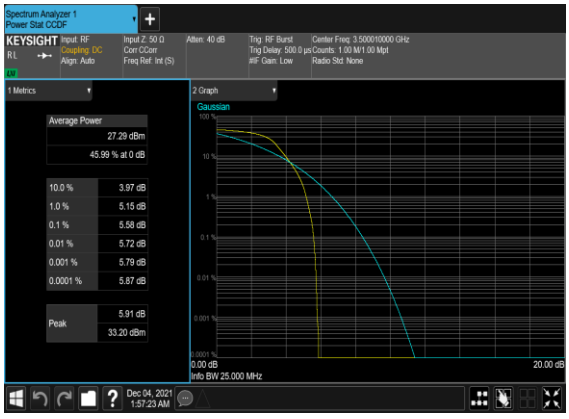
B41_N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



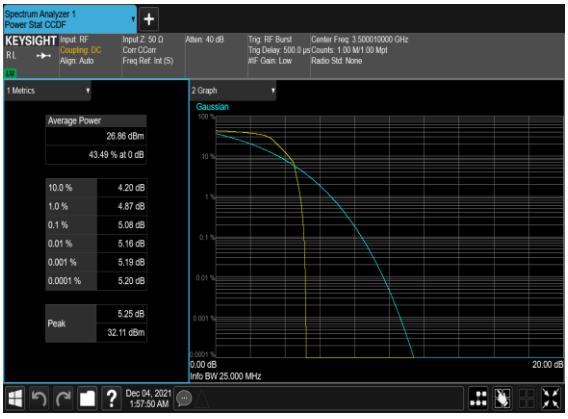
B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



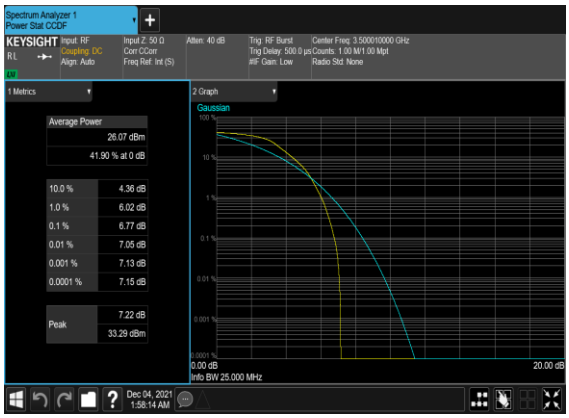
B41_N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



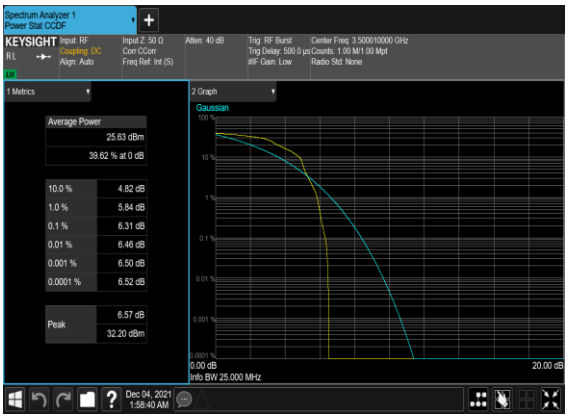
B41_N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



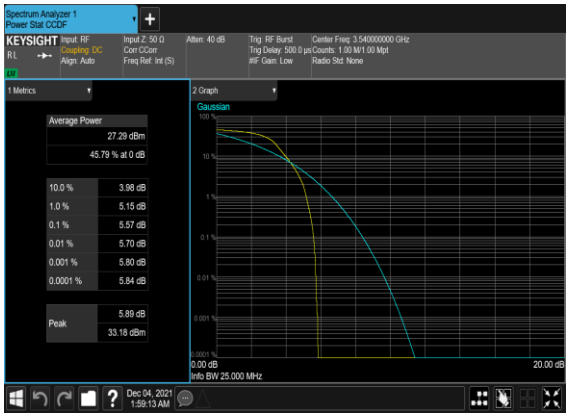
B41_N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



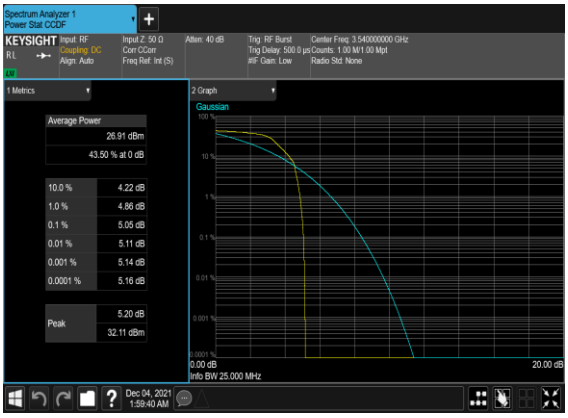
B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



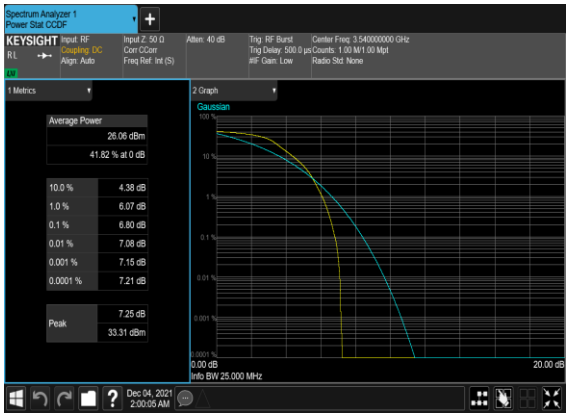
B41_N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



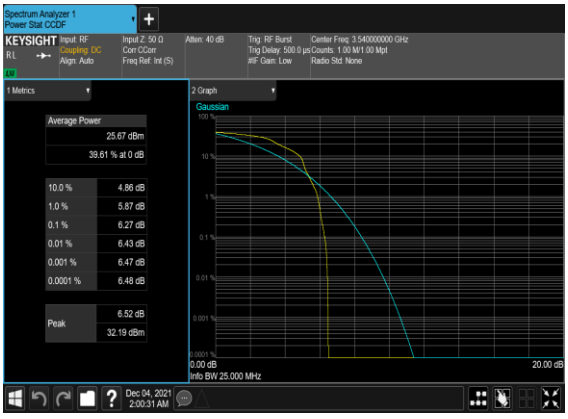
B41_N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



B41_N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

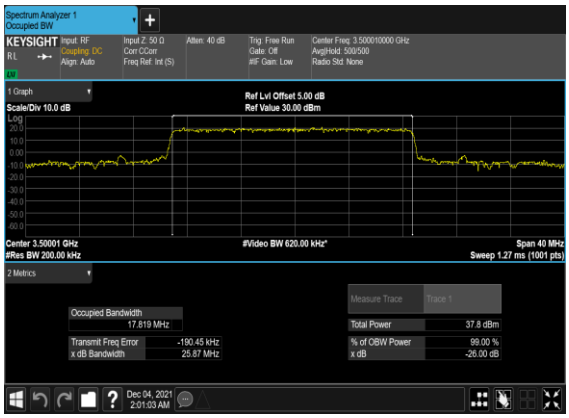


Occupied Bandwidth

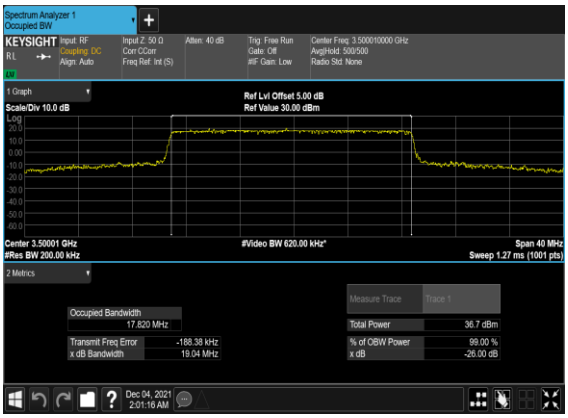
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
77	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	50@0	17.819	25.87
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	17.82	19.04
77	30	20	633334	3500.01	CP-OFDM QPSK	51@0	18.277	24.54
77	30	20	633334	3500.01	CP-OFDM 16 QAM	51@0	18.282	28.25
77	30	20	633334	3500.01	CP-OFDM 64 QAM	51@0	18.235	23.65
77	30	20	633334	3500.01	CP-OFDM 256 QAM	51@0	18.167	19.28
77	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	75@0	26.78	28.08
77	30	30	633334	3500.01	DFT-s-OFDM QPSK	75@0	26.825	28.07
77	30	30	633334	3500.01	CP-OFDM QPSK	78@0	27.842	29.28
77	30	30	633334	3500.01	CP-OFDM 16 QAM	78@0	27.859	28.98
77	30	30	633334	3500.01	CP-OFDM 64 QAM	78@0	27.765	29.06
77	30	30	633334	3500.01	CP-OFDM 256 QAM	78@0	27.79	29.2
77	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	100@0	35.718	37.22
77	30	40	633334	3500.01	DFT-s-OFDM QPSK	100@0	35.803	37.27
77	30	40	633334	3500.01	CP-OFDM QPSK	106@0	37.725	39.36
77	30	40	633334	3500.01	CP-OFDM 16 QAM	106@0	37.771	39.41
77	30	40	633334	3500.01	CP-OFDM 64 QAM	106@0	37.768	39.39
77	30	40	633334	3500.01	CP-OFDM 256 QAM	106@0	37.88	39.51
77	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	128@0	45.769	47.46
77	30	50	633334	3500.01	DFT-s-OFDM QPSK	128@0	45.726	47.62
77	30	50	633334	3500.01	CP-OFDM QPSK	133@0	47.432	49.23
77	30	50	633334	3500.01	CP-OFDM 16 QAM	133@0	47.448	49.3
77	30	50	633334	3500.01	CP-OFDM 64 QAM	133@0	47.439	49.14
77	30	50	633334	3500.01	CP-OFDM 256 QAM	133@0	47.551	49.31

77	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	162@0	57.888	59.82
77	30	60	633334	3500.01	DFT-s-OFDM QPSK	162@0	57.923	59.97
77	30	60	633334	3500.01	CP-OFDM QPSK	162@0	57.837	59.84
77	30	60	633334	3500.01	CP-OFDM 16 QAM	162@0	57.754	59.72
77	30	60	633334	3500.01	CP-OFDM 64 QAM	162@0	57.699	59.69
77	30	60	633334	3500.01	CP-OFDM 256 QAM	162@0	57.794	59.76
77	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	216@0	77.175	79.64
77	30	80	633334	3500.01	DFT-s-OFDM QPSK	216@0	77.099	79.7
77	30	80	633334	3500.01	CP-OFDM QPSK	217@0	77.442	79.9
77	30	80	633334	3500.01	CP-OFDM 16 QAM	217@0	77.496	80.03
77	30	80	633334	3500.01	CP-OFDM 64 QAM	217@0	77.626	79.98
77	30	80	633334	3500.01	CP-OFDM 256 QAM	217@0	77.427	80.11
77	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	270@0	96.562	99.5
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	270@0	96.427	99.53
77	30	100	633334	3500.01	CP-OFDM QPSK	273@0	97.477	100.5
77	30	100	633334	3500.01	CP-OFDM 16 QAM	273@0	97.273	100.4
77	30	100	633334	3500.01	CP-OFDM 64 QAM	273@0	97.533	100.6
77	30	100	633334	3500.01	CP-OFDM 256 QAM	273@0	97.542	100.6

B41_N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



B41_N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



B41_N77(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

B41_N77(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

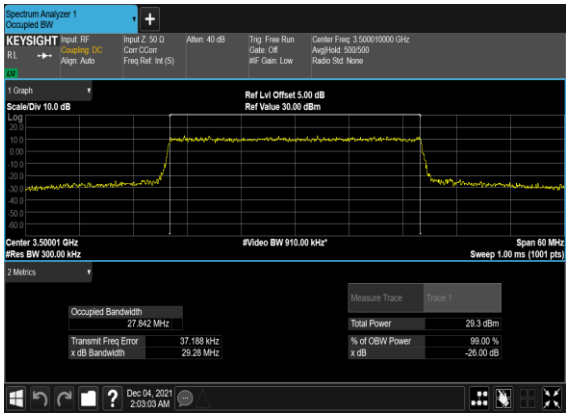
B41_N77(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

B41_N77(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

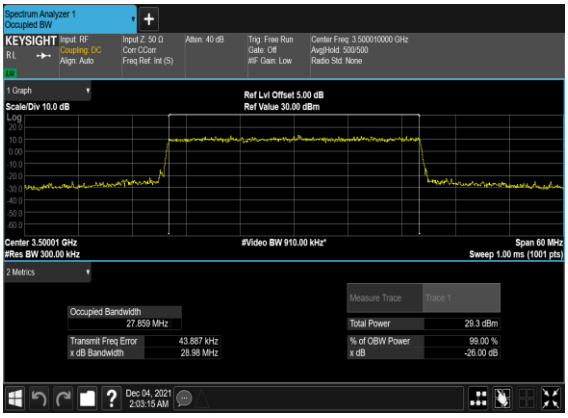
B41_N77(30M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

B41_N77(30M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

B41_N77(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



B41_N77(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

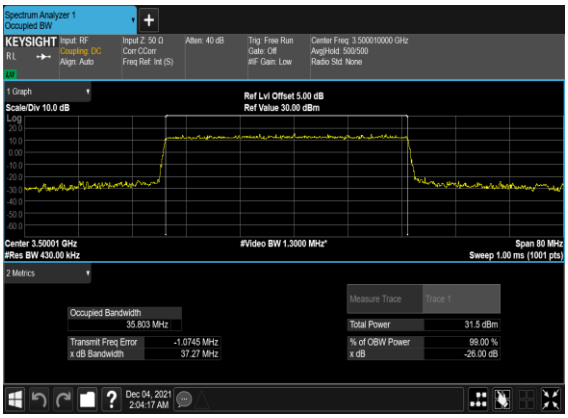


B41_N77(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

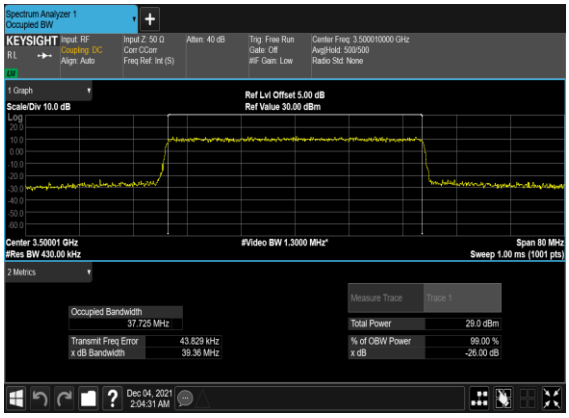
B41_N77(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

B41_N77(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

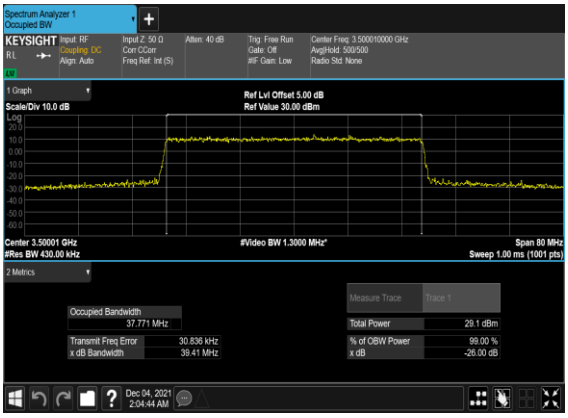
B41_N77(40M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



B41_N77(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

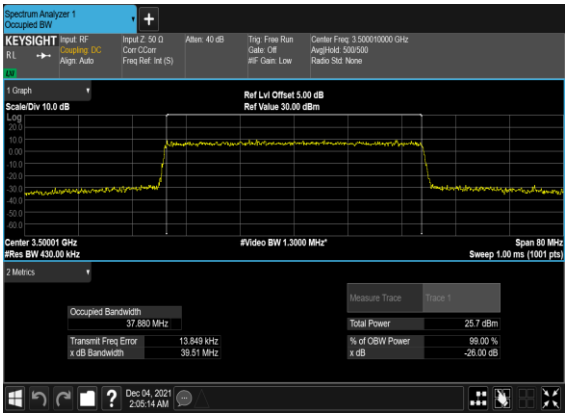


B41_N77(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

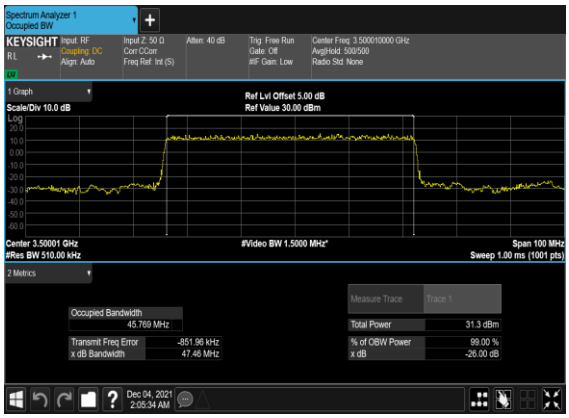


B41_N77(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

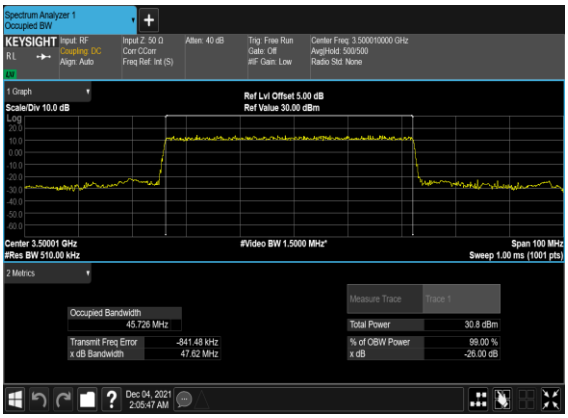
B41_N77(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



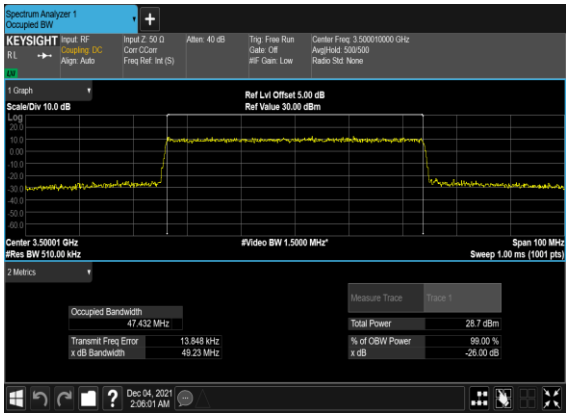
B41_N77(50M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



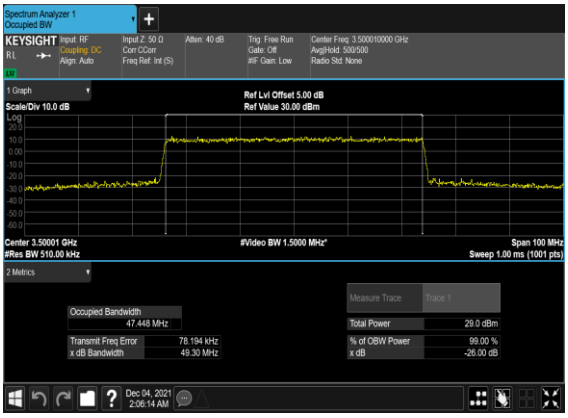
B41_N77(50M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



B41_N77(50M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



B41_N77(50M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

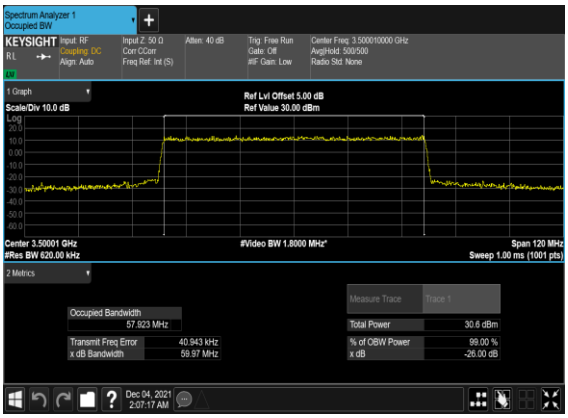


B41_N77(50M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

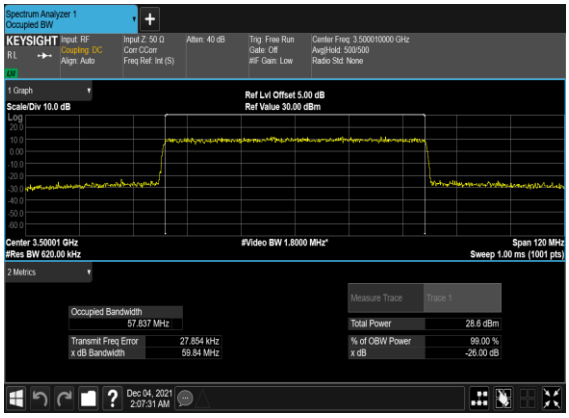
B41_N77(50M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

B41_N77(60M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

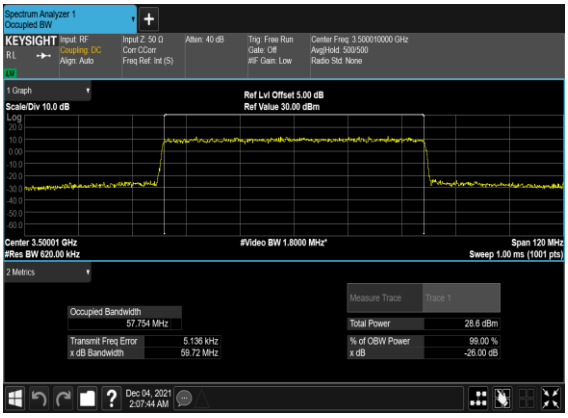
B41_N77(60M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



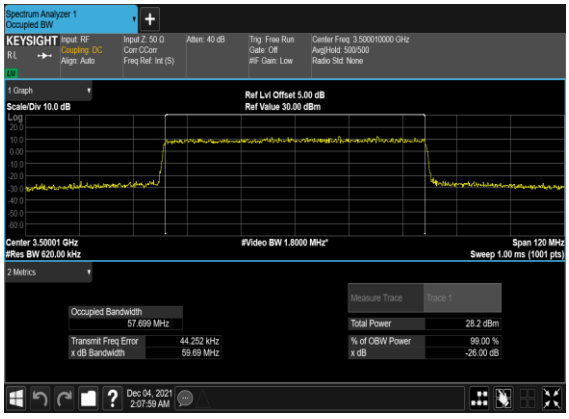
B41_N77(60M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



B41_N77(60M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



B41_N77(60M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

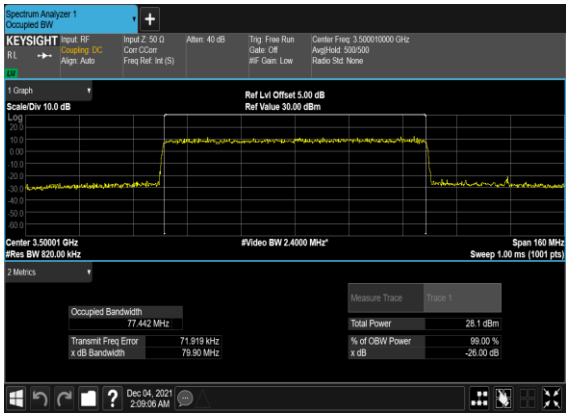


B41_N77(60M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

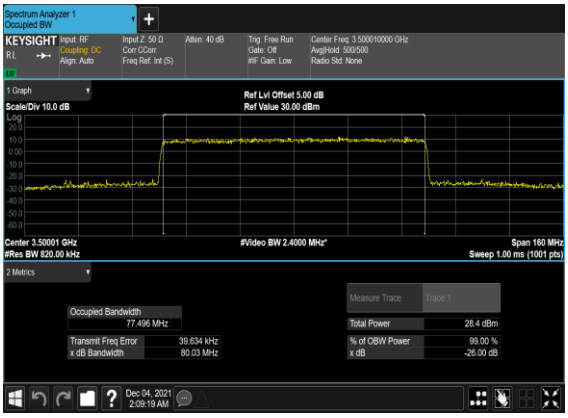
B41_N77(80M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

B41_N77(80M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

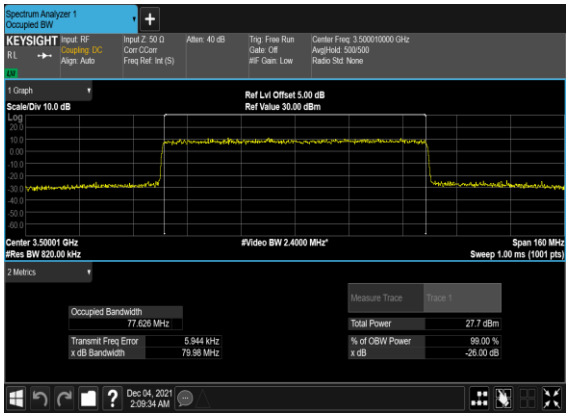
B41_N77(80M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



B41_N77(80M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

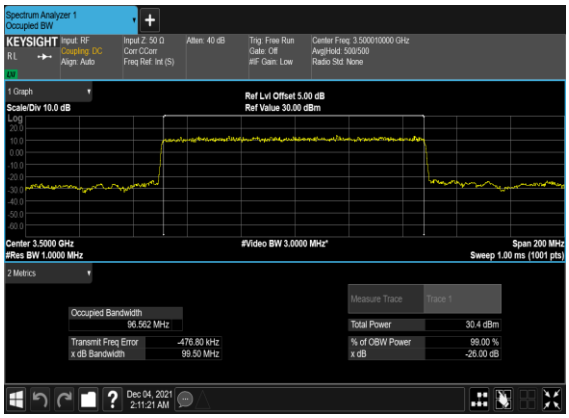


B41_N77(80M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



B41_N77(80M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

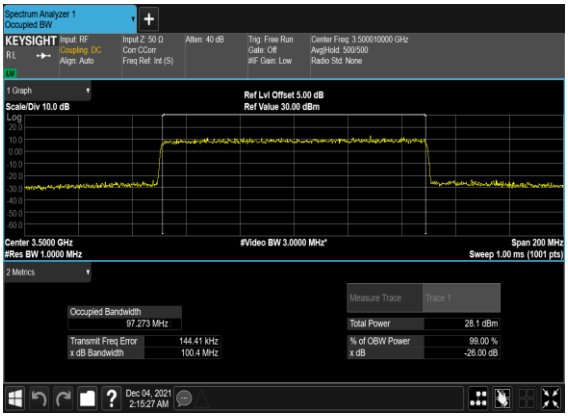
B41_N77(100M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



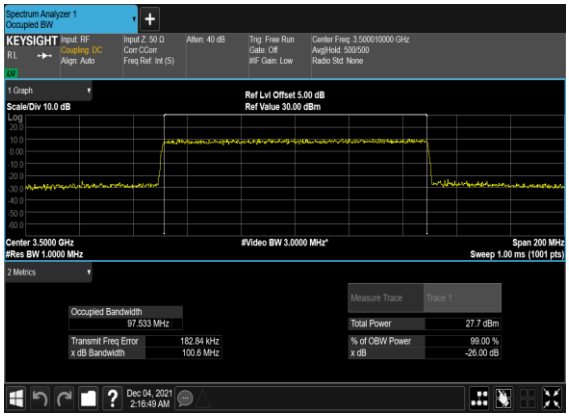
B41_N77(100M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

B41_N77(100M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

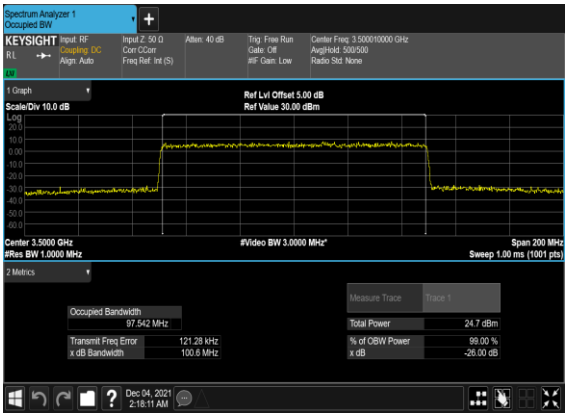
B41_N77(100M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



B41_N77(100M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



B41_N77(100M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

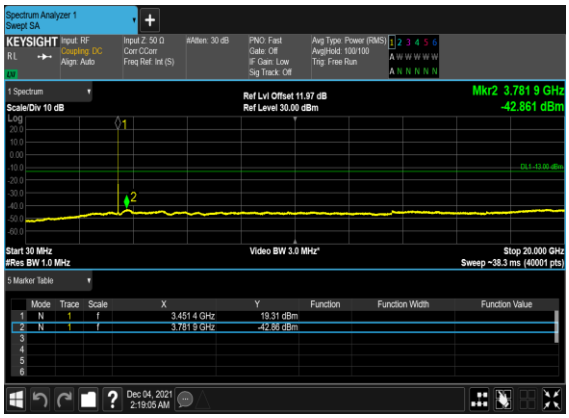


Conducted Spurious Emissions

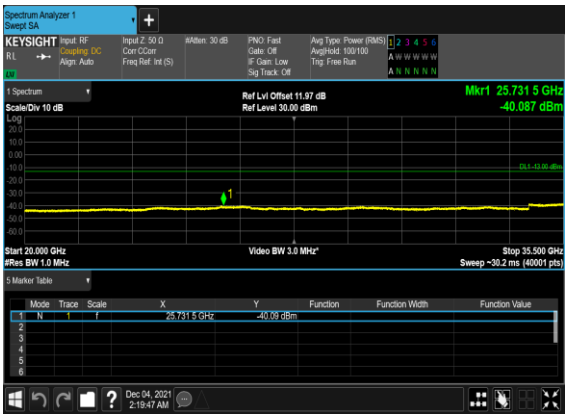
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	20	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	50	631668	3475.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@0	see graph	**---**

77	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	50	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	50	635000	3525.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	50	635000	3525.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

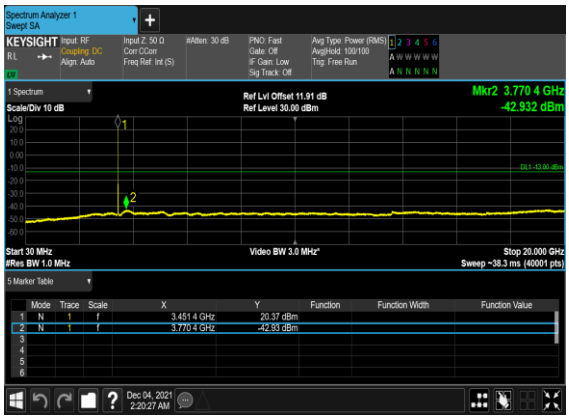
B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

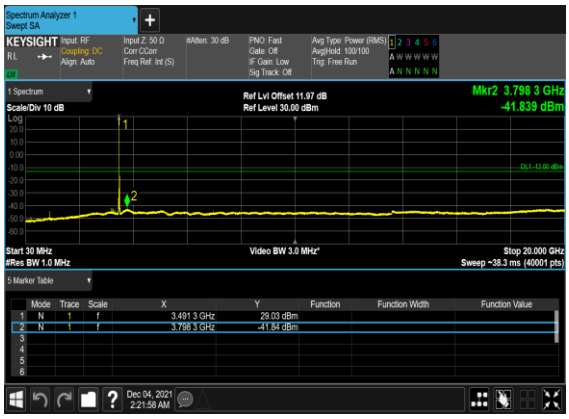


B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

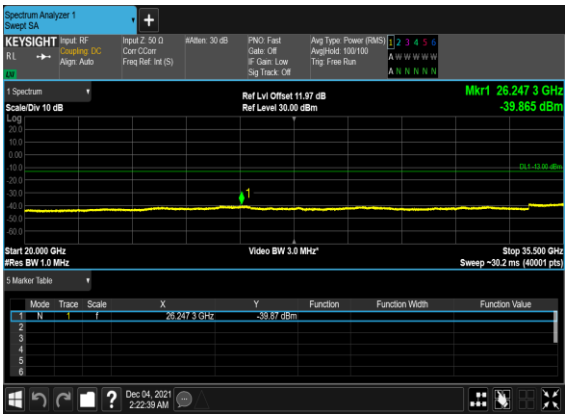


B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

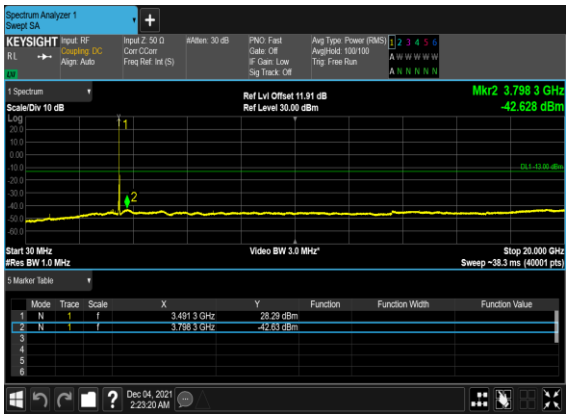
B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



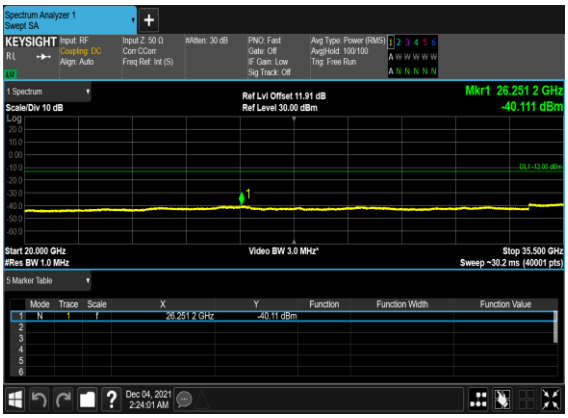
B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



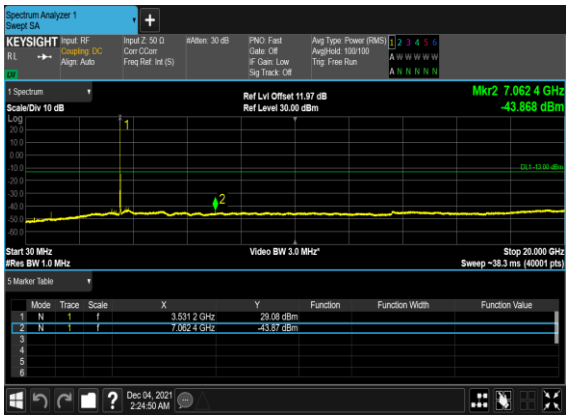
B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

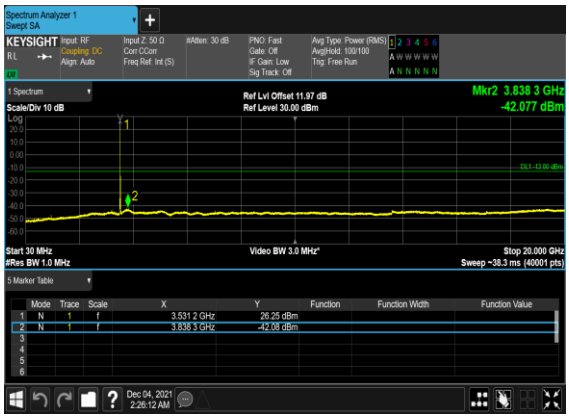


B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



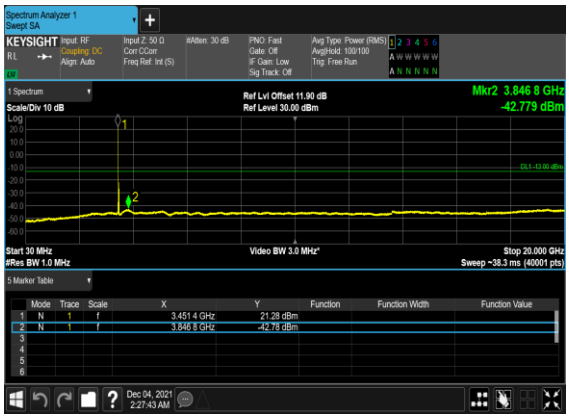
B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

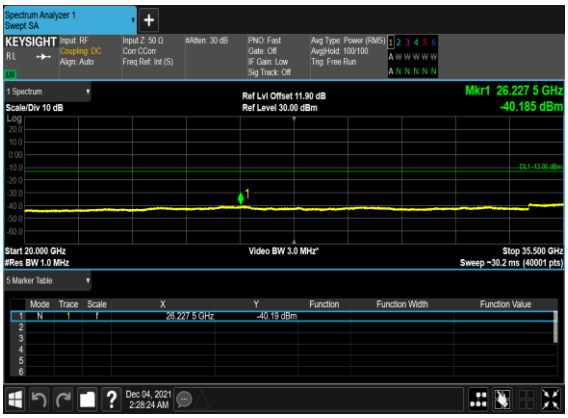


B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

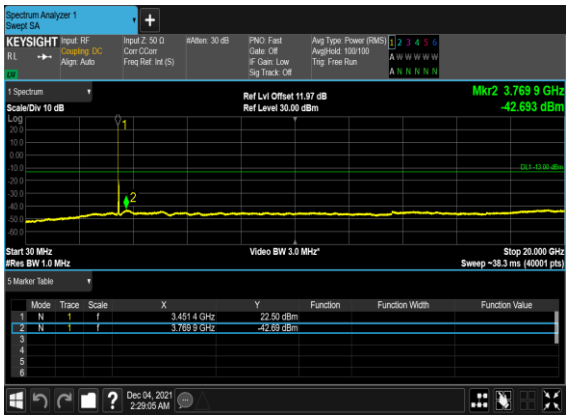
B41_N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



B41_N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

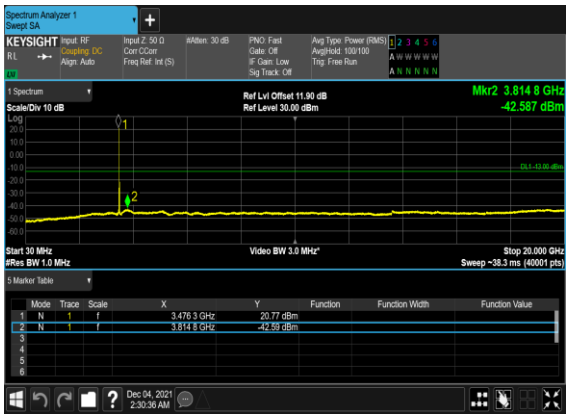


B41_N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



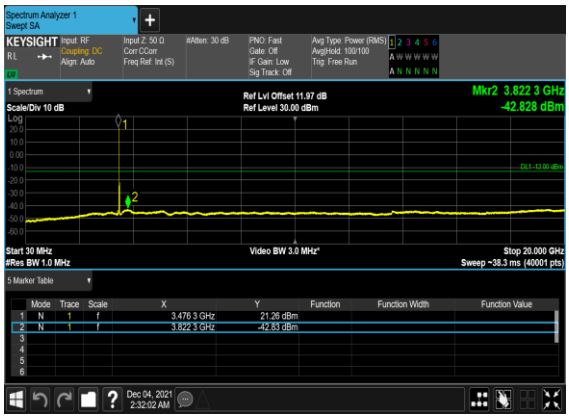
B41_N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

B41_N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

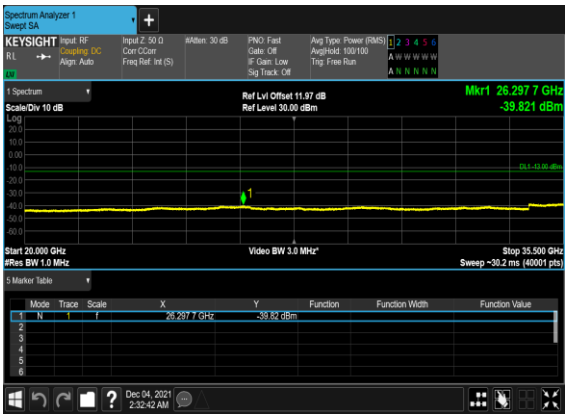


B41_N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

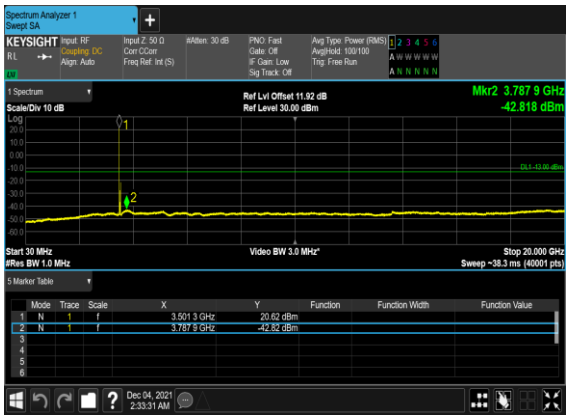
B41_N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



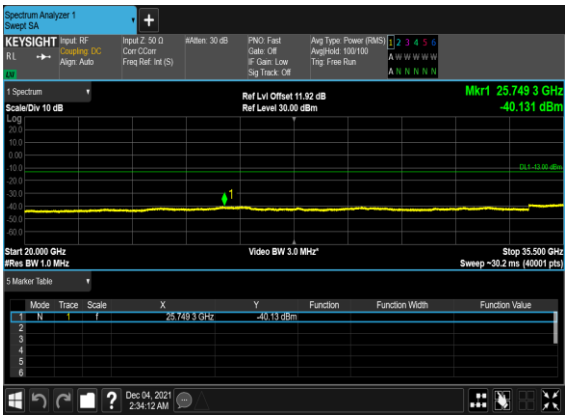
B41_N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



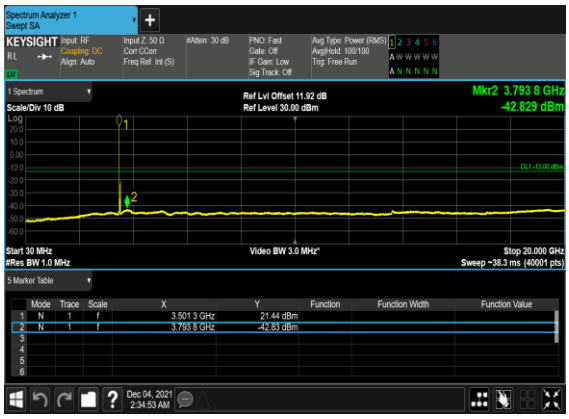
B41_N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



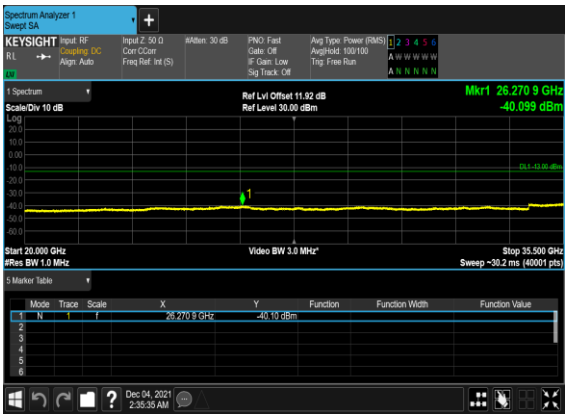
B41_N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



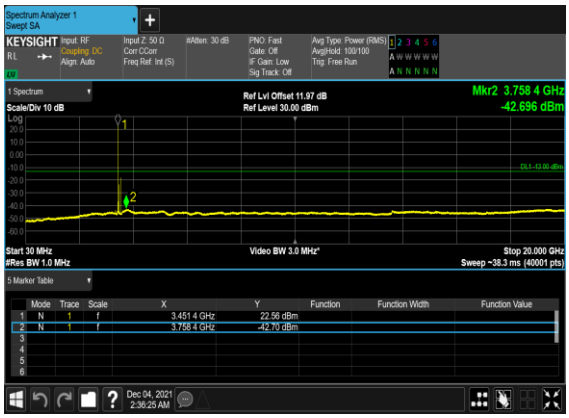
B41_N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



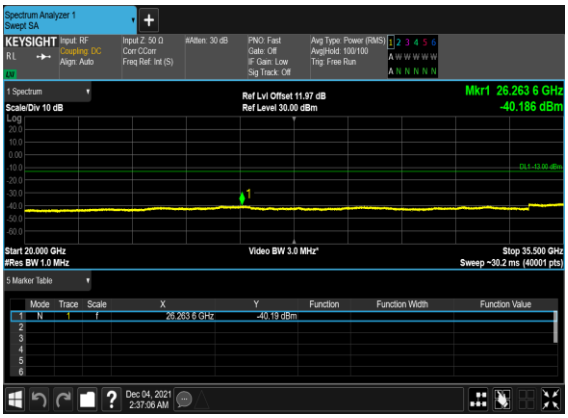
B41_N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



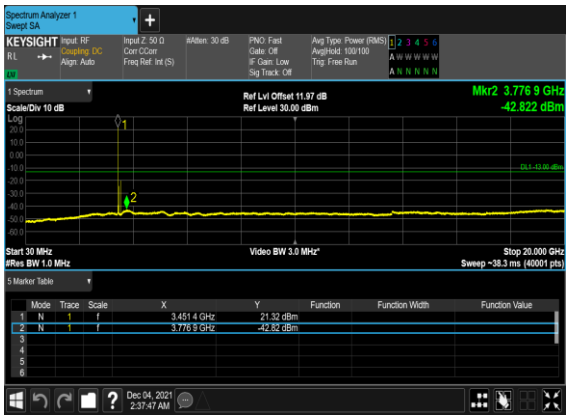
B41_N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



B41_N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



B41_N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

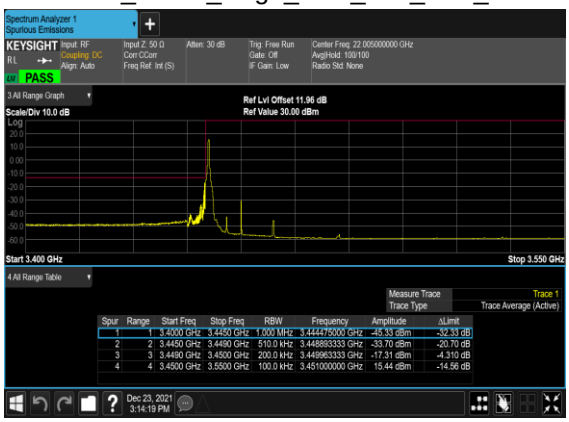


B41_N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

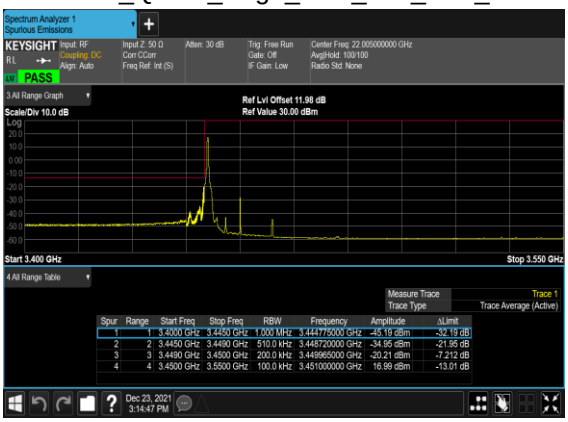
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	30	20	630668	3460.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
77	30	20	630668	3460.02	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM BPSK	1@50	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@50	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
77	30	20	636000	3540.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM BPSK	128@0	see graph	**PASS**
77	30	50	631668	3475.02	DFT-s-OFDM QPSK	128@0	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM BPSK	1@132	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM QPSK	1@132	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM BPSK	128@0	see graph	**PASS**
77	30	50	635000	3525.0	DFT-s-OFDM QPSK	128@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM BPSK	1@272	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@272	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM BPSK	270@0	see graph	**PASS**
77	30	100	633334	3500.01	DFT-s-OFDM QPSK	270@0	see graph	**PASS**

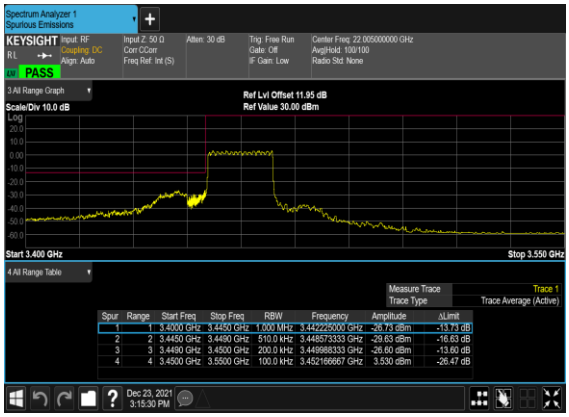
B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



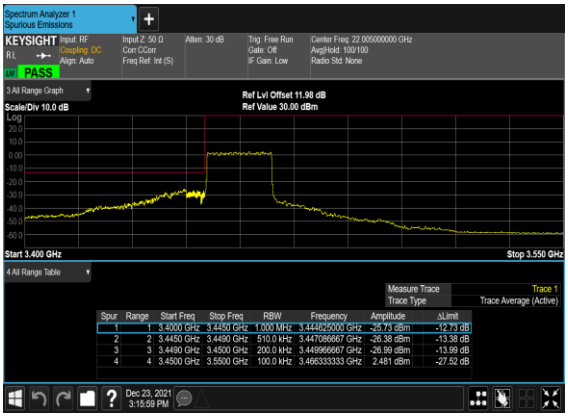
B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



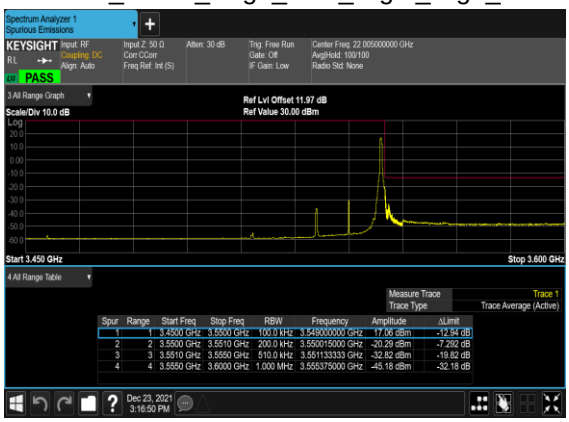
B41_N77(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



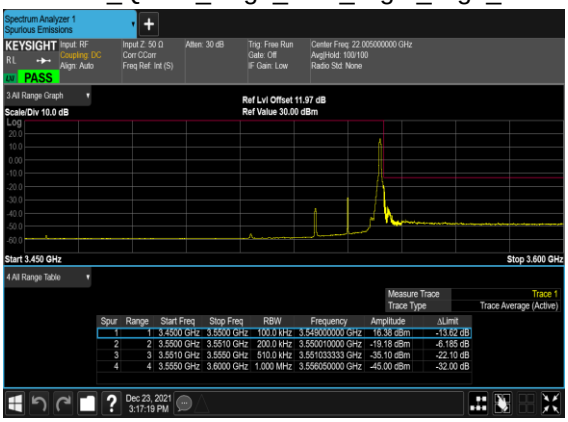
B41_N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



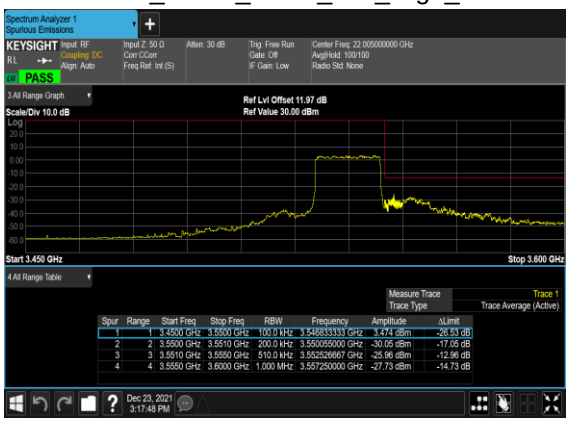
B41_N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



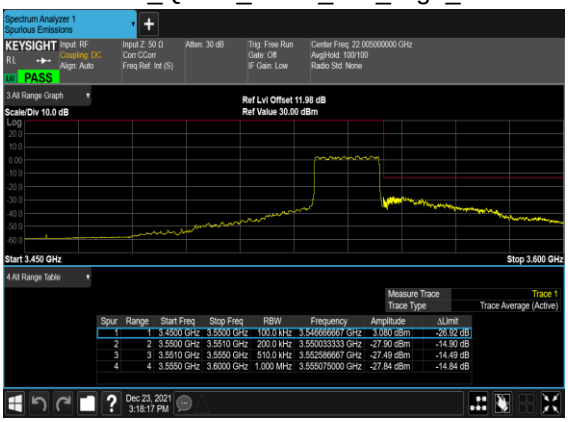
B41_N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



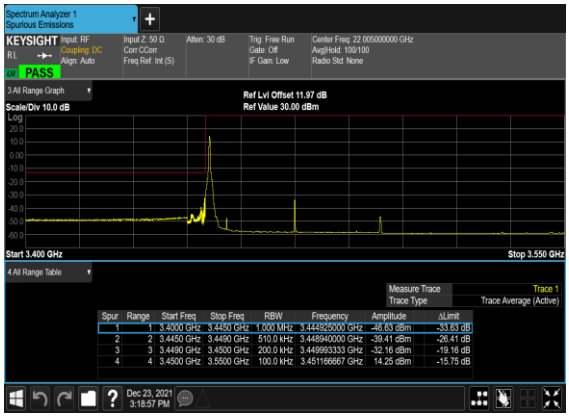
B41_N77(20M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



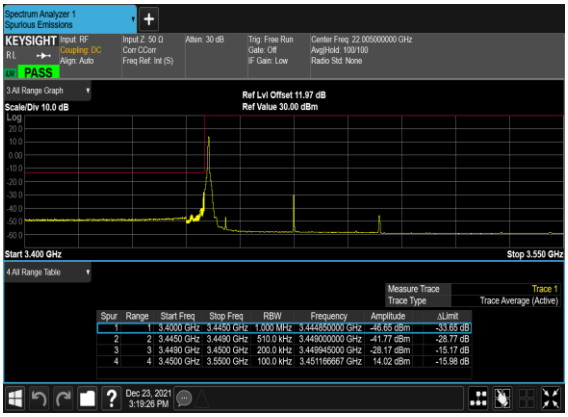
B41_N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



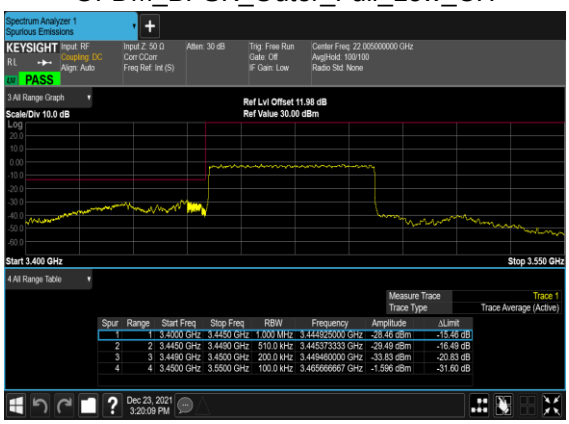
B41_N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



B41_N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



B41_N77(50M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



B41_N77(50M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH