



FCC RF Test Report

APPLICANT : Xiaomi Communications Co., Ltd.
EQUIPMENT : Mobile Phone
BRAND NAME : Xiaomi
MODEL NAME : 24129PN74G
FCC ID : 2AFZZPN74G
STANDARD : 47 CFR Part 27 Subpart O (3700-3980MHz)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Aug. 30, 2024 ~ Sep 27, 2024

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.

Jason Jia

Approved by: Jason Jia



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	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Product Feature of Equipment Under Test	5
1.4 Product Specification of Equipment Under Test	5
1.5 Modification of EUT	6
1.6 Maximum EIRP and Emission Designator	6
1.7 Testing Location	7
1.8 Test Software	7
1.9 Applicable Standards	7
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	8
2.1 Test Mode	8
2.2 Connection Diagram of Test System	9
2.3 Support Unit used in test configuration and system	9
2.4 Measurement Results Explanation Example	9
2.5 Frequency List of Low/Middle/High Channels	10
3 CONDUCTED TEST ITEMS	12
3.1 Measuring Instruments	12
3.2 Test Setup	12
3.3 Test Result of Conducted Test	12
3.4 Conducted Output Power and EIRP	13
3.5 Peak-to-Average Ratio	14
3.6 Occupied Bandwidth	15
3.7 Conducted Band Edge	16
3.8 Conducted Spurious Emission	17
3.9 Frequency Stability	18
4 RADIATED TEST ITEMS	19
4.1 Measuring Instruments	19
4.2 Test Setup	19
4.3 Test Result of Radiated Test	20
4.4 Radiated Spurious Emission	21
5 LIST OF MEASURING EQUIPMENT	22
6 MEASUREMENT UNCERTAINTY	23
APPENDIX A. TEST RESULTS OF CONDUCTED TEST	
APPENDIX B. TEST RESULTS OF RADIATED TEST	
APPENDIX C. TEST SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG482619M	Rev. 01	Initial issue of report	Oct. 14, 2024



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§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 §27.53(l)(2)	Conducted Band Edge Measurement (5G NR n77, n78)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.8	§2.1051 §27.53(l)(2)	Conducted Spurious Emission (5G NR n77, n78)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.9	§27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(l)(2)	Radiated Spurious Emission (5G NR n77, n78)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 21.74 dB at 11100.000 MHz

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

Disclaimer:

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



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	Xiaomi
Model Name	24129PN74G
FCC ID	2AFZZPN74G
IMEI Code	Conducted: 864868070035782/864868070035790 Radiation: 864868070038067/864868070038075
HW Version	1352000O3
SW Version	Xiaomi HyperOS 2.0
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency	5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
SCS	30kHz
Bandwidth	n77/n78: 10 / 15 / 20 / 25 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100MHz
Antenna Gain	<Ant. 4> 5G NR n77/n78: -2.2 dBi <Ant. 5> 5G NR n77/n78: -0.2 dBi <Ant. 8> 5G NR n77/n78: -2.5 dBi <Ant. 9> 5G NR n77/n78: -4.5 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 n77/n78 for Antenna 4.
2. The device supports n77/n78(1T4R) SRS resources on Ant.4/5/8/9, only the test data of worst Ant.4 is showed in the report according to the maximum power.
3. 5G NR n77/n78 support SA and NSA mode. The whole testing has assessed SA mode for n77 by referring to the higher conducted power for conducted test items.
4. The device supports HPUE mode for 5G NR n77/n78.



5. 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 EIRP and Emission Designator

5G NR n77		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)
10	3705.00 ~ 3975.00	0.4178	8M57G7D	0.3266	8M61W7D
15	3707.52 ~ 3972.48	0.4083	13M6G7D	0.3184	13M6W7D
20	3710.01 ~ 3969.99	0.4064	18M2G7D	0.3105	18M3W7D
25	3712.50 ~ 3967.50	0.4188	23M2G7D	0.3289	23M2W7D
30	3715.02 ~ 3964.98	0.4178	27M9G7D	0.3266	27M9W7D
40	3720.00 ~ 3960.00	0.4102	37M8G7D	0.3177	37M9W7D
50	3725.01 ~ 3954.99	0.4345	47M5G7D	0.3334	47M7W7D
60	3730.02 ~ 3949.98	0.4217	57M8G7D	0.3251	58M0W7D
70	3735.00 ~ 3945.00	0.4276	67M3G7D	0.3373	67M6W7D
80	3740.01 ~ 3939.99	0.4335	77M6G7D	0.3388	77M7W7D
90	3745.02 ~ 3934.98	0.4406	87M3G7D	0.4169	87M5W7D
100	3750.00 ~ 3930.00	0.4656	97M5G7D	0.3690	97M4W7D

5G NR 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)
10	3705.00 ~ 3795.00	0.3917	8M57G7D	0.4603	8M61W7D
15	3707.52 ~ 3792.48	0.3656	13M6G7D	0.3556	13M6W7D
20	3710.01 ~ 3789.99	0.4102	18M2G7D	0.3192	18M3W7D
25	3712.50 ~ 3787.50	0.3690	23M2G7D	0.3724	23M2W7D
30	3715.02 ~ 3784.98	0.4560	27M9G7D	0.3581	27M9W7D
40	3720.00 ~ 3780.00	0.4457	37M8G7D	0.3428	37M9W7D
50	3725.01 ~ 3774.99	0.4508	47M5G7D	0.3388	47M7W7D
60	3730.02 ~ 3769.98	0.4188	57M8G7D	0.3319	58M0W7D
70	3735.00 ~ 3765.00	0.4436	67M3G7D	0.3396	67M6W7D
80	3740.01 ~ 3759.99	0.4436	77M6G7D	0.3388	77M7W7D
90	3745.02 ~ 3754.98	0.4256	87M3G7D	0.3350	87M5W7D
100	3750.00 ~ 3750.00	0.4315	97M5G7D	0.3236	97M4W7D



Note:

1. 5G NR Band n77 overlaps the entire frequency range of Band n78, and n77 power > n78 power, therefore the conducted test results of n77 provided in this report cover n78.
2. All modulations have been tested, and only the 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		
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	Manufacture	Name	Version
1.	TH01-KS	Tonscend	JS1120-3 test system China_210602	3.3.10
2.	03CH04-KS	AUDIX	E3	210616

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 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.

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.

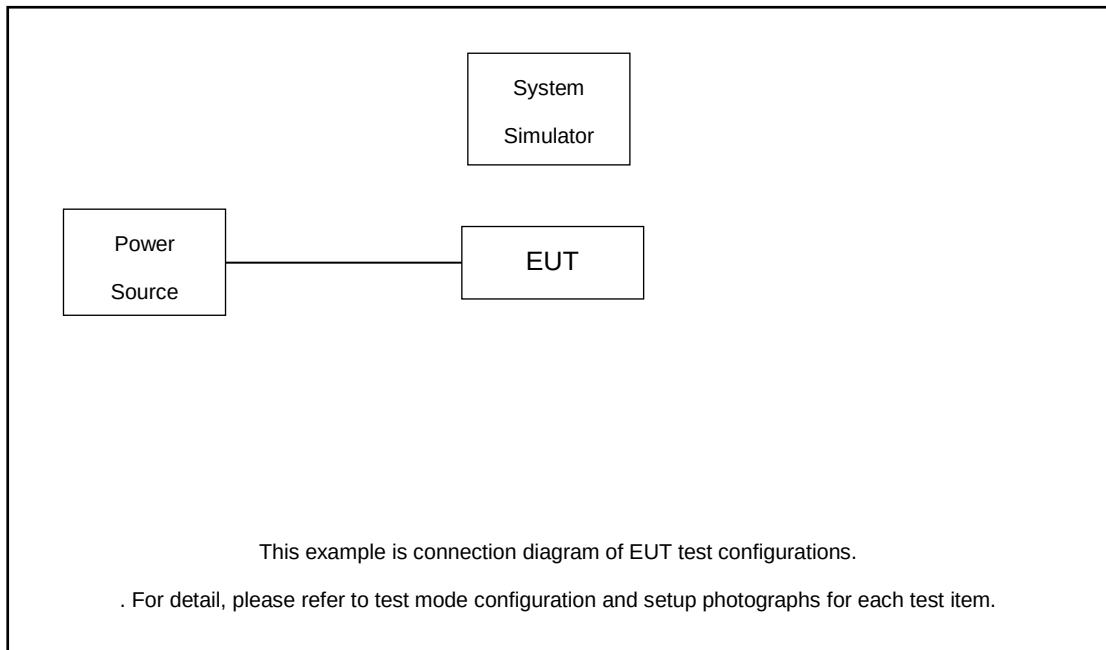
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

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.

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

Test Items	5G NR	Bandwidth (MHz)										Modulation					RB #			Test Channel		
		10	15	20	25	30	40	50	60	70~90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Partial	Full	L	M	H
Max. Output Power	n77	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v		v	v	v	v
	n78	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v		v	v	v	v
Peak-to-Average Ratio	n77			v								v	v				v		v		v	
26dB and 99% Bandwidth	n77	v	v	v	v	v	v	v	v	v	v		v	v	v	v			v		v	
Conducted Band Edge	n77	v							v		v	v	v				v		v	v		v
Conducted Spurious Emission	n77	v							v		v	v	v				v			v	v	v
Frequency Stability	n77			v									v						v		v	
E.I.R.P	n77	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v		v	v	v	v
	n78	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v		v	v	v	v
Radiated Spurious Emission	n77	Worst Case																			v	
	n78	Worst Case																			v	
Note	1. The mark “v ” means that this configuration is chosen for testing 2. The mark “-” means that this bandwidth is not supported. 3. 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. 4. Frequency Stability : Normal Voltage = 3.8V; Low Voltage =3.6V; High Voltage =4.3V.																					

2.2 Connection Diagram of Test System



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 6.5 dB and 20dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 6.5 + 20 = 26.5 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

5G n77 (30kHz) Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	650000	656000	662000
	Frequency	3750	3840	3930
90	Channel	649668	656000	662332
	Frequency	3745.02	3840	3934.98
80	Channel	649334	656000	662666
	Frequency	3740.01	3840	3939.99
70	Channel	649000	656000	663000
	Frequency	3735	3840	3945
60	Channel	648668	656000	663332
	Frequency	3730.02	3840	3949.98
50	Channel	648334	656000	663666
	Frequency	3725.01	3840	3954.99
40	Channel	648000	656000	664000
	Frequency	3720	3840	3960
30	Channel	647668	656000	664332
	Frequency	3715.02	3840	3964.98
25	Channel	647500	656000	664500
	Frequency	3712.5	3840	3967.5
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99
15	Channel	647168	656000	664832
	Frequency	3707.52	3840	3972.48
10	Channel	647000	656000	665000
	Frequency	3705	3840	3975



5G n78(30kHz) Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	650000		
	Frequency	3750		
90	Channel	649668	650000	650332
	Frequency	3745.02	3750	3754.98
80	Channel	649334	650000	650666
	Frequency	3740.01	3750	3759.99
70	Channel	649000	650000	651000
	Frequency	3735	3750	3765
60	Channel	648668	650000	651332
	Frequency	3730.02	3750	3769.98
50	Channel	648334	650000	651666
	Frequency	3725.01	3750	3774.99
40	Channel	648000	650000	652000
	Frequency	3720	3750	3780
30	Channel	647668	650000	652332
	Frequency	3715.02	3750	3784.98
25	Channel	647500	650000	652500
	Frequency	3712.5	3750	3787.5
20	Channel	647334	650000	652666
	Frequency	3710.01	3750	3789.99
15	Channel	647168	650000	652832
	Frequency	3707.52	3750	3792.48
10	Channel	647000	650000	653000
	Frequency	3705	3750	3795

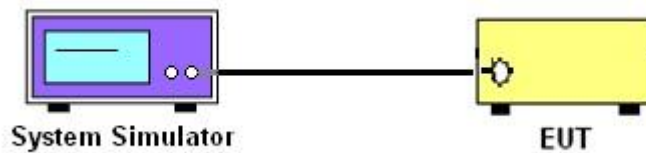
3 Conducted Test Items

3.1 Measuring Instruments

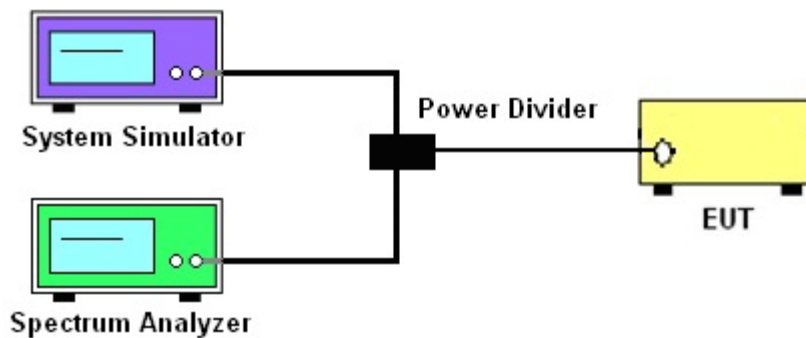
See list of measuring instruments of this test report.

3.2 Test Setup

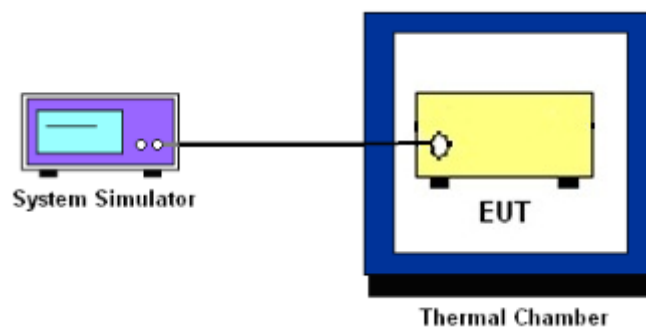
3.2.1 Conducted Output Power



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 EIRP

3.4.1 Description of the Conducted Output Power Measurement and 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 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.

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

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 $\geq 1\%$ 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 or a narrower RBW was used (generally limited to no less than 1% of the OBW) and the measured power was integrated over the full required measurement bandwidth.
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 $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$$

9. 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.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th 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 $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.

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.

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.

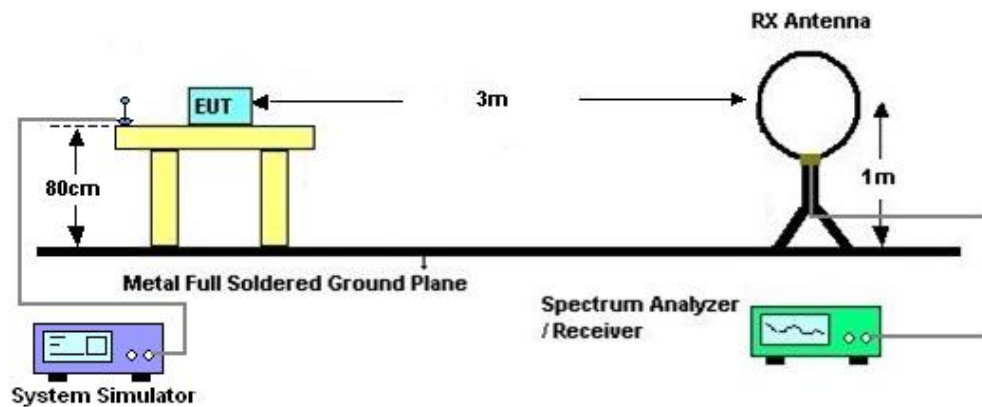
4 Radiated Test Items

4.1 Measuring Instruments

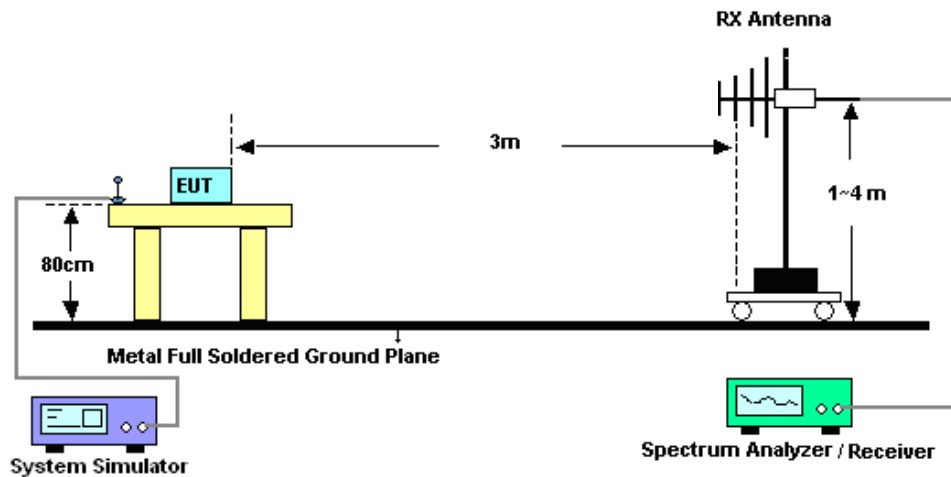
See list of measuring instruments of this test report.

4.2 Test Setup

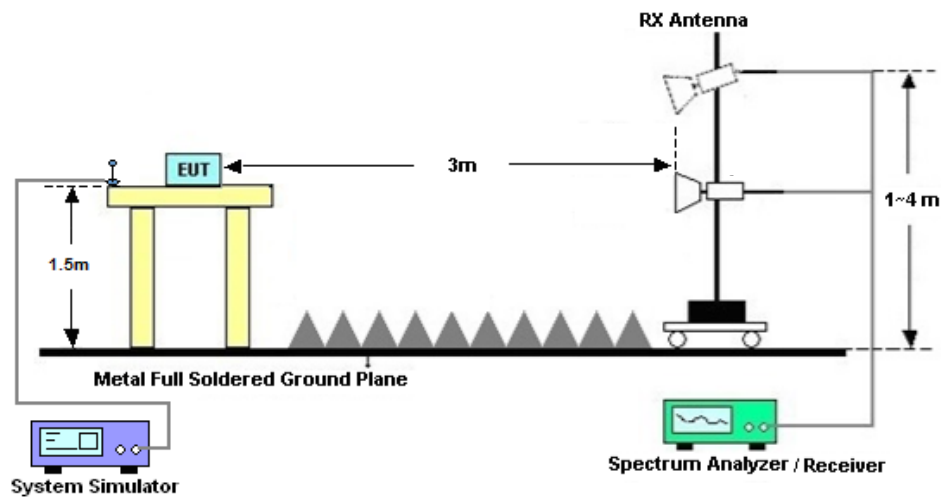
4.2.1 For radiated test below 30MHz



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.

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. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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

$= P(W) - [43 + 10\log(P)] \text{ (dB)}$

$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$

$= -13\text{dBm}.$



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. 11, 2023	Aug. 30, 2024	Oct. 10, 2024	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Aug. 30, 2024	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Aug. 30, 2024	Jul. 03, 2025	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 11, 2023	Sep. 27, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz~44G,MAX 30dB	Oct. 11, 2023	Sep. 27, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Sep. 27, 2024	Sep. 07, 2025	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Dec. 06, 2023	Sep. 27, 2024	Dec. 05, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 23, 2023	Sep. 27, 2024	Oct. 22, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Sep. 27, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz~1GHz	Jan. 03, 2024	Sep. 27, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40G A	060728	18~40GHz	Jan. 02, 2024	Sep. 27, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz~18Ghz	Oct. 11, 2023	Sep. 27, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Amplifier	EM	EM01G18G A	060892	1Ghz~18Ghz	Oct. 11, 2023	Sep. 27, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Sep. 27, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Sep. 27, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Sep. 27, 2024	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Measurement Uncertainty

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

Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.50 dB
Frequency Stability	±0.04 Hz

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

Measuring uncertainty for a level of Confidence of 95% ($u = 2uc(y)$)	2.83 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.82 dB
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Appendix A. Test Results of Conducted Test

Test Engineer :	Simle Wang	Temperature :	22~23°C
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and EIRP

5G NR n77 for Ant.4

NR Band	SCS	BandWidth	Arfcn	Freq(MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
77	30	10	647000	3705	DFT-s-OFDM PI/2 BPSK	1@1	28.14	25.94	0.3926
77	30	10	647000	3705	DFT-s-OFDM QPSK	1@1	28.03	25.83	0.3828
77	30	10	647000	3705	DFT-s-OFDM 16 QAM	1@1	27.01	24.81	0.3027
77	30	10	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.23	26.03	0.4009
77	30	10	656000	3840	DFT-s-OFDM QPSK	1@1	28.14	25.94	0.3926
77	30	10	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.17	24.97	0.3141
77	30	10	665000	3975	DFT-s-OFDM PI/2 BPSK	1@1	28.41	26.21	0.4178
77	30	10	665000	3975	DFT-s-OFDM QPSK	1@1	28.37	26.17	0.4140
77	30	10	665000	3975	DFT-s-OFDM 16 QAM	1@1	27.34	25.14	0.3266
77	30	15	647168	3707.52	DFT-s-OFDM PI/2 BPSK	1@1	28.11	25.91	0.3899
77	30	15	647168	3707.52	DFT-s-OFDM QPSK	1@1	27.99	25.79	0.3793
77	30	15	647168	3707.52	DFT-s-OFDM 16 QAM	1@1	26.98	24.78	0.3006
77	30	15	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.31	26.11	0.4083
77	30	15	656000	3840	DFT-s-OFDM QPSK	1@1	28.23	26.03	0.4009
77	30	15	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.23	25.03	0.3184
77	30	15	664832	3972.48	DFT-s-OFDM PI/2 BPSK	1@1	28.29	26.09	0.4064
77	30	15	664832	3972.48	DFT-s-OFDM QPSK	1@1	28.20	26.00	0.3981
77	30	15	664832	3972.48	DFT-s-OFDM 16 QAM	1@1	27.20	25.00	0.3162
77	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@1	28.03	25.83	0.3828
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	27.92	25.72	0.3733
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	26.79	24.59	0.2877
77	30	20	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.20	26.00	0.3981
77	30	20	656000	3840	DFT-s-OFDM QPSK	1@1	28.16	25.96	0.3945
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.12	24.92	0.3105
77	30	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	1@1	28.29	26.09	0.4064
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@1	28.20	26.00	0.3981
77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@1	27.11	24.91	0.3097
77	30	25	647500	3712.5	DFT-s-OFDM PI/2 BPSK	1@1	28.19	25.99	0.3972
77	30	25	647500	3712.5	DFT-s-OFDM QPSK	1@1	28.07	25.87	0.3864
77	30	25	647500	3712.5	DFT-s-OFDM 16 QAM	1@1	27.05	24.85	0.3055
77	30	25	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.41	26.21	0.4178
77	30	25	656000	3840	DFT-s-OFDM QPSK	1@1	28.36	26.16	0.4130



77	30	25	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.37	25.17	0.3289
77	30	25	664500	3967.5	DFT-s-OFDM PI/2 BPSK	1@1	28.42	26.22	0.4188
77	30	25	664500	3967.5	DFT-s-OFDM QPSK	1@1	28.19	25.99	0.3972
77	30	25	664500	3967.5	DFT-s-OFDM 16 QAM	1@1	27.18	24.98	0.3148
77	30	30	647668	3715.02	DFT-s-OFDM PI/2 BPSK	1@1	28.24	26.04	0.4018
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	1@1	28.12	25.92	0.3908
77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	1@1	27.13	24.93	0.3112
77	30	30	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.41	26.21	0.4178
77	30	30	656000	3840	DFT-s-OFDM QPSK	1@1	28.38	26.18	0.4150
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.34	25.14	0.3266
77	30	30	664332	3964.98	DFT-s-OFDM PI/2 BPSK	1@1	28.26	26.06	0.4036
77	30	30	664332	3964.98	DFT-s-OFDM QPSK	1@1	28.16	25.96	0.3945
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@1	27.14	24.94	0.3119
77	30	40	648000	3720	DFT-s-OFDM PI/2 BPSK	1@1	28.17	25.97	0.3954
77	30	40	648000	3720	DFT-s-OFDM QPSK	1@1	28.08	25.88	0.3873
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	27.04	24.84	0.3048
77	30	40	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.33	26.13	0.4102
77	30	40	656000	3840	DFT-s-OFDM QPSK	1@1	28.30	26.10	0.4074
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.22	25.02	0.3177
77	30	40	664000	3960	DFT-s-OFDM PI/2 BPSK	1@1	28.21	26.01	0.3990
77	30	40	664000	3960	DFT-s-OFDM QPSK	1@1	28.17	25.97	0.3954
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	1@1	27.17	24.97	0.3141
77	30	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@1	28.28	26.08	0.4055
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	28.24	26.04	0.4018
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	27.22	25.02	0.3177
77	30	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.58	26.38	0.4345
77	30	50	656000	3840	DFT-s-OFDM QPSK	1@1	28.55	26.35	0.4315
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.43	25.23	0.3334
77	30	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@1	28.32	26.12	0.4093
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@1	28.28	26.08	0.4055
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@1	27.18	24.98	0.3148
77	30	60	648668	3730.02	DFT-s-OFDM PI/2 BPSK	1@1	28.04	25.84	0.3837
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@1	28.04	25.84	0.3837
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@1	27.00	24.80	0.3020
77	30	60	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.45	26.25	0.4217
77	30	60	656000	3840	DFT-s-OFDM QPSK	1@1	28.42	26.22	0.4188
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.32	25.12	0.3251
77	30	60	663332	3949.98	DFT-s-OFDM PI/2 BPSK	1@1	28.21	26.01	0.3990
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@1	28.19	25.99	0.3972
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	1@1	27.15	24.95	0.3126
77	30	70	649000	3735	DFT-s-OFDM PI/2 BPSK	1@1	28.34	26.14	0.4111
77	30	70	649000	3735	DFT-s-OFDM QPSK	1@1	28.27	26.07	0.4046
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	1@1	27.25	25.05	0.3199
77	30	70	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.50	26.30	0.4266



77	30	70	656000	3840	DFT-s-OFDM QPSK	1@1	28.50	26.30	0.4266
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.48	25.28	0.3373
77	30	70	663000	3945	DFT-s-OFDM PI/2 BPSK	1@1	28.51	26.31	0.4276
77	30	70	663000	3945	DFT-s-OFDM QPSK	1@1	28.49	26.29	0.4256
77	30	70	663000	3945	DFT-s-OFDM 16 QAM	1@1	27.38	25.18	0.3296
77	30	80	649334	3740.01	DFT-s-OFDM PI/2 BPSK	1@1	28.31	26.11	0.4083
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@1	28.16	25.96	0.3945
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@1	27.12	24.92	0.3105
77	30	80	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.52	26.32	0.4285
77	30	80	656000	3840	DFT-s-OFDM QPSK	1@1	28.49	26.29	0.4256
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.39	25.19	0.3304
77	30	80	662666	3939.99	DFT-s-OFDM PI/2 BPSK	1@1	28.57	26.37	0.4335
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	1@1	28.46	26.26	0.4227
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	1@1	27.50	25.30	0.3388
77	30	90	649668	3745.02	DFT-s-OFDM PI/2 BPSK	1@1	27.52	25.32	0.3404
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	1@1	27.63	25.43	0.3491
77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	1@1	28.40	26.20	0.4169
77	30	90	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.53	26.33	0.4295
77	30	90	656000	3840	DFT-s-OFDM QPSK	1@1	28.47	26.27	0.4236
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.45	25.25	0.3350
77	30	90	662332	3934.98	DFT-s-OFDM PI/2 BPSK	1@1	28.64	26.44	0.4406
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	1@1	28.58	26.38	0.4345
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	1@1	27.53	25.33	0.3412
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	135@67	27.82	25.62	0.3648
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	27.63	25.43	0.3491
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@271	27.46	25.26	0.3357
77	30	100	650000	3750	DFT-s-OFDM QPSK	135@67	27.22	25.02	0.3177
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@1	27.31	25.11	0.3243
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@271	27.16	24.96	0.3133
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	135@67	27.85	25.65	0.3673
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.65	25.45	0.3508
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@271	27.46	25.26	0.3357
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	135@67	27.68	25.48	0.3532
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@1	27.87	25.67	0.3690
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@271	27.69	25.49	0.3540
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	135@67	25.77	23.57	0.2275
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@1	25.96	23.76	0.2377
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@271	25.93	23.73	0.2360
77	30	100	650000	3750	CP-OFDM QPSK	137@68	26.64	24.44	0.2780
77	30	100	650000	3750	CP-OFDM QPSK	1@1	26.85	24.65	0.2917
77	30	100	650000	3750	CP-OFDM QPSK	1@271	26.94	24.74	0.2979
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	135@67	28.48	26.28	0.4246
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	28.59	26.39	0.4355
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@271	28.81	26.61	0.4581



77	30	100	656000	3840	DFT-s-OFDM QPSK	135@67	28.41	26.21	0.4178
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@1	28.57	26.37	0.4335
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@271	28.88	26.68	0.4656
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	135@67	27.42	25.22	0.3327
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@1	27.43	25.23	0.3334
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@271	27.74	25.54	0.3581
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	135@67	25.97	23.77	0.2382
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@1	25.74	23.54	0.2259
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@271	26.02	23.82	0.2410
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	135@67	23.99	21.79	0.1510
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@1	23.84	21.64	0.1459
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@271	24.09	21.89	0.1545
77	30	100	656000	3840	CP-OFDM QPSK	137@68	26.83	24.63	0.2904
77	30	100	656000	3840	CP-OFDM QPSK	1@1	27.14	24.94	0.3119
77	30	100	656000	3840	CP-OFDM QPSK	1@271	27.50	25.30	0.3388
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	135@67	28.53	26.33	0.4295
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@1	28.73	26.53	0.4498
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@271	28.76	26.56	0.4529
77	30	100	662000	3930	DFT-s-OFDM QPSK	135@67	28.48	26.28	0.4246
77	30	100	662000	3930	DFT-s-OFDM QPSK	1@1	28.60	26.40	0.4365
77	30	100	662000	3930	DFT-s-OFDM QPSK	1@271	28.75	26.55	0.4519
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	135@67	27.42	25.22	0.3327
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@1	27.55	25.35	0.3428
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@271	27.64	25.44	0.3499
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	135@67	26.04	23.84	0.2421
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@1	25.94	23.74	0.2366
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@271	26.01	23.81	0.2404
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	135@67	23.94	21.74	0.1493
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@1	23.98	21.78	0.1507
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@271	24.03	21.83	0.1524
77	30	100	662000	3930	CP-OFDM QPSK	137@68	26.79	24.59	0.2877
77	30	100	662000	3930	CP-OFDM QPSK	1@1	27.29	25.09	0.3228
77	30	100	662000	3930	CP-OFDM QPSK	1@271	27.37	25.17	0.3289



5G NR n78 for Ant.4

NR Band	SCS	BandWidth	Arfcn	Freq(MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
78	30	10	647000	3705	DFT-s-OFDM PI/2 BPSK	1@1	28.13	25.93	0.3917
78	30	10	647000	3705	DFT-s-OFDM QPSK	1@1	28.11	25.91	0.3899
78	30	10	647000	3705	DFT-s-OFDM 16 QAM	1@1	27.09	24.89	0.3083
78	30	10	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	27.96	25.76	0.3767
78	30	10	650000	3750	DFT-s-OFDM QPSK	1@1	27.72	25.52	0.3565
78	30	10	650000	3750	DFT-s-OFDM 16 QAM	1@1	28.83	26.63	0.4603
78	30	10	653000	3795	DFT-s-OFDM PI/2 BPSK	1@1	27.87	25.67	0.3690
78	30	10	653000	3795	DFT-s-OFDM QPSK	1@1	27.85	25.65	0.3673
78	30	10	653000	3795	DFT-s-OFDM 16 QAM	1@1	26.8	24.6	0.2884
78	30	15	647168	3707.52	DFT-s-OFDM PI/2 BPSK	1@1	27.83	25.63	0.3656
78	30	15	647168	3707.52	DFT-s-OFDM QPSK	1@1	27.65	23.55	0.2265
78	30	15	647168	3707.52	DFT-s-OFDM 16 QAM	1@1	27.67	23.57	0.2275
78	30	15	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	27.52	25.46	0.3516
78	30	15	650000	3750	DFT-s-OFDM QPSK	1@1	27.63	25.43	0.3491
78	30	15	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.46	25.51	0.3556
78	30	15	652832	3792.48	DFT-s-OFDM PI/2 BPSK	1@1	26.82	22.72	0.1871
78	30	15	652832	3792.48	DFT-s-OFDM QPSK	1@1	26.72	22.62	0.1828
78	30	15	652832	3792.48	DFT-s-OFDM 16 QAM	1@1	26.79	22.69	0.1858
78	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@1	28.14	25.94	0.3926
78	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	27.96	25.76	0.3767
78	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	26.93	24.73	0.2972
78	30	20	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.33	26.13	0.4102
78	30	20	650000	3750	DFT-s-OFDM QPSK	1@1	28.31	26.11	0.4083
78	30	20	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.24	25.04	0.3192
78	30	20	652666	3789.99	DFT-s-OFDM PI/2 BPSK	1@1	27.81	25.61	0.3639
78	30	20	652666	3789.99	DFT-s-OFDM QPSK	1@1	27.71	25.51	0.3556
78	30	20	652666	3789.99	DFT-s-OFDM 16 QAM	1@1	26.68	24.48	0.2805
78	30	25	647500	3712.5	DFT-s-OFDM PI/2 BPSK	1@1	27.85	23.75	0.2371
78	30	25	647500	3712.5	DFT-s-OFDM QPSK	1@1	27.66	23.56	0.227
78	30	25	647500	3712.5	DFT-s-OFDM 16 QAM	1@1	27.67	23.57	0.2275
78	30	25	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	27.64	25.67	0.369
78	30	25	650000	3750	DFT-s-OFDM QPSK	1@1	27.71	25.6	0.3631
78	30	25	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.82	25.71	0.3724
78	30	25	652500	3787.5	DFT-s-OFDM PI/2 BPSK	1@1	26.61	22.51	0.1782
78	30	25	652500	3787.5	DFT-s-OFDM QPSK	1@1	26.61	22.51	0.1782
78	30	25	652500	3787.5	DFT-s-OFDM 16 QAM	1@1	26.61	22.51	0.1782
78	30	30	647668	3715.02	DFT-s-OFDM PI/2 BPSK	1@1	28.24	26.04	0.4018
78	30	30	647668	3715.02	DFT-s-OFDM QPSK	1@1	28.13	25.93	0.3917
78	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	1@1	27.09	24.89	0.3083
78	30	30	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.79	26.59	0.4560
78	30	30	650000	3750	DFT-s-OFDM QPSK	1@1	28.79	26.59	0.4560



78	30	30	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.74	25.54	0.3581
78	30	30	652332	3784.98	DFT-s-OFDM PI/2 BPSK	1@1	28.02	25.82	0.3819
78	30	30	652332	3784.98	DFT-s-OFDM QPSK	1@1	28	25.8	0.3802
78	30	30	652332	3784.98	DFT-s-OFDM 16 QAM	1@1	26.96	24.76	0.2992
78	30	40	648000	3720	DFT-s-OFDM PI/2 BPSK	1@1	28.13	25.93	0.3917
78	30	40	648000	3720	DFT-s-OFDM QPSK	1@1	28.11	25.91	0.3899
78	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	26.99	24.79	0.3013
78	30	40	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.69	26.49	0.4457
78	30	40	650000	3750	DFT-s-OFDM QPSK	1@1	28.63	26.43	0.4395
78	30	40	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.55	25.35	0.3428
78	30	40	652000	3780	DFT-s-OFDM PI/2 BPSK	1@1	27.28	25.08	0.3221
78	30	40	652000	3780	DFT-s-OFDM QPSK	1@1	27.15	24.95	0.3126
78	30	40	652000	3780	DFT-s-OFDM 16 QAM	1@1	26.19	23.99	0.2506
78	30	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@1	28.24	26.04	0.4018
78	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	28.22	26.02	0.3999
78	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	27.16	24.96	0.3133
78	30	50	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.74	26.54	0.4508
78	30	50	650000	3750	DFT-s-OFDM QPSK	1@1	28.62	26.42	0.4385
78	30	50	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.5	25.3	0.3388
78	30	50	651666	3774.99	DFT-s-OFDM PI/2 BPSK	1@1	27.46	25.26	0.3357
78	30	50	651666	3774.99	DFT-s-OFDM QPSK	1@1	27.42	25.22	0.3327
78	30	50	651666	3774.99	DFT-s-OFDM 16 QAM	1@1	26.26	24.06	0.2547
78	30	60	648668	3730.02	DFT-s-OFDM PI/2 BPSK	1@1	28.05	25.85	0.3846
78	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@1	28.01	25.81	0.3811
78	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@1	27	24.8	0.3020
78	30	60	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.42	26.22	0.4188
78	30	60	650000	3750	DFT-s-OFDM QPSK	1@1	28.42	26.22	0.4188
78	30	60	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.41	25.21	0.3319
78	30	60	651332	3769.98	DFT-s-OFDM PI/2 BPSK	1@1	28.24	26.04	0.4018
78	30	60	651332	3769.98	DFT-s-OFDM QPSK	1@1	28.21	26.01	0.3990
78	30	60	651332	3769.98	DFT-s-OFDM 16 QAM	1@1	27.12	24.92	0.3105
78	30	70	649000	3735	DFT-s-OFDM PI/2 BPSK	1@1	28.34	26.14	0.4111
78	30	70	649000	3735	DFT-s-OFDM QPSK	1@1	28.28	26.08	0.4055
78	30	70	649000	3735	DFT-s-OFDM 16 QAM	1@1	27.18	24.98	0.3148
78	30	70	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.67	26.47	0.4436
78	30	70	650000	3750	DFT-s-OFDM QPSK	1@1	28.57	26.37	0.4335
78	30	70	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.51	25.31	0.3396
78	30	70	651000	3765	DFT-s-OFDM PI/2 BPSK	1@1	27.73	25.53	0.3573
78	30	70	651000	3765	DFT-s-OFDM QPSK	1@1	27.59	25.39	0.3459
78	30	70	651000	3765	DFT-s-OFDM 16 QAM	1@1	26.51	24.31	0.2698
78	30	80	649334	3740.01	DFT-s-OFDM PI/2 BPSK	1@1	28.33	26.13	0.4102
78	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@1	28.24	26.04	0.4018
78	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@1	27.23	25.03	0.3184
78	30	80	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.57	26.37	0.4335



78	30	80	650000	3750	DFT-s-OFDM QPSK	1@1	28.47	26.27	0.4236
78	30	80	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.46	25.26	0.3357
78	30	80	650666	3759.99	DFT-s-OFDM PI/2 BPSK	1@1	28.67	26.47	0.4436
78	30	80	650666	3759.99	DFT-s-OFDM QPSK	1@1	28.67	26.47	0.4436
78	30	80	650666	3759.99	DFT-s-OFDM 16 QAM	1@1	27.5	25.3	0.3388
78	30	90	649668	3745.02	DFT-s-OFDM PI/2 BPSK	1@1	27.27	25.07	0.3214
78	30	90	649668	3745.02	DFT-s-OFDM QPSK	1@1	27.26	25.06	0.3206
78	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	1@1	26.19	23.99	0.2506
78	30	90	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.43	26.23	0.4198
78	30	90	650000	3750	DFT-s-OFDM QPSK	1@1	28.47	26.27	0.4236
78	30	90	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.38	25.18	0.3296
78	30	90	650332	3754.98	DFT-s-OFDM PI/2 BPSK	1@1	28.49	26.29	0.4256
78	30	90	650332	3754.98	DFT-s-OFDM QPSK	1@1	28.47	26.27	0.4236
78	30	90	650332	3754.98	DFT-s-OFDM 16 QAM	1@1	27.45	25.25	0.3350
78	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	135@67	28.13	25.93	0.3917
78	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	28.54	26.34	0.4305
78	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@271	28.34	26.14	0.4111
78	30	100	650000	3750	DFT-s-OFDM QPSK	135@67	28.1	25.9	0.3890
78	30	100	650000	3750	DFT-s-OFDM QPSK	1@1	28.55	26.35	0.4315
78	30	100	650000	3750	DFT-s-OFDM QPSK	1@271	28.34	26.14	0.4111
78	30	100	650000	3750	DFT-s-OFDM 16 QAM	135@67	26.97	24.77	0.2999
78	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@1	27.27	25.07	0.3214
78	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@271	27.3	25.1	0.3236
78	30	100	650000	3750	DFT-s-OFDM 64 QAM	135@67	25.59	23.39	0.2183
78	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@1	25.65	23.45	0.2213
78	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@271	25.58	23.38	0.2178
78	30	100	650000	3750	DFT-s-OFDM 256 QAM	135@67	23.66	21.46	0.1400
78	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@1	23.86	21.66	0.1466
78	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@271	23.64	21.44	0.1393
78	30	100	650000	3750	CP-OFDM QPSK	137@68	26.51	24.31	0.2698
78	30	100	650000	3750	CP-OFDM QPSK	1@1	27.05	24.85	0.3055
78	30	100	650000	3750	CP-OFDM QPSK	1@271	27.01	24.81	0.3027



Software Version: 23.06.1602

FR1 N77(ANT4)

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	0.0078	PASS	NV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.0041	PASS	LV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.0025	PASS	HV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	0.0036	PASS	-30°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	0.0071	PASS	-20°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.0052	PASS	-10°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	0.0048	PASS	0°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.0028	PASS	10°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.0037	PASS	20°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.0076	PASS	30°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	0.0063	PASS	40°C
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	0.0035	PASS	50°C



Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
77	30	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	50@0	4.36	13	PASS
77	30	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	1@0	4.64	13	PASS
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	5.31	13	PASS
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	1@0	4.87	13	PASS

N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH





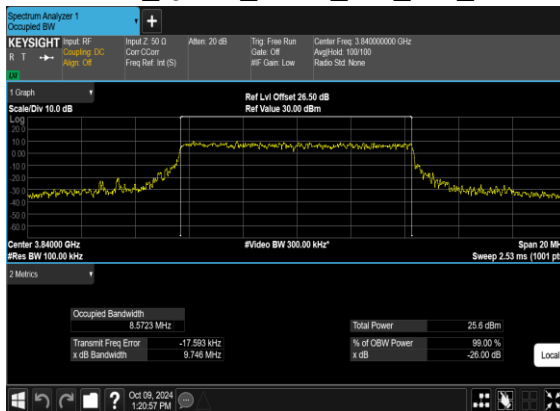
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
77	30	10	656000	3840.0	CP-OFDM QPSK	24@0	8.5723	9.746
77	30	10	656000	3840.0	CP-OFDM 16 QAM	24@0	8.6072	9.972
77	30	10	656000	3840.0	CP-OFDM 64 QAM	24@0	8.6034	9.81
77	30	10	656000	3840.0	CP-OFDM 256 QAM	24@0	8.5823	9.679
77	30	15	656000	3840.0	CP-OFDM QPSK	38@0	13.636	14.89
77	30	15	656000	3840.0	CP-OFDM 16 QAM	38@0	13.572	14.67
77	30	15	656000	3840.0	CP-OFDM 64 QAM	38@0	13.541	14.53
77	30	15	656000	3840.0	CP-OFDM 256 QAM	38@0	13.538	14.52
77	30	20	656000	3840.0	CP-OFDM QPSK	51@0	18.231	19.35
77	30	20	656000	3840.0	CP-OFDM 16 QAM	51@0	18.26	19.58
77	30	20	656000	3840.0	CP-OFDM 64 QAM	51@0	18.239	19.17
77	30	20	656000	3840.0	CP-OFDM 256 QAM	51@0	18.23	19.65
77	30	25	656000	3840.0	CP-OFDM QPSK	65@0	23.231	24.85
77	30	25	656000	3840.0	CP-OFDM 16 QAM	65@0	23.227	24.45
77	30	25	656000	3840.0	CP-OFDM 64 QAM	65@0	23.231	24.58
77	30	25	656000	3840.0	CP-OFDM 256 QAM	65@0	23.092	24.25
77	30	30	656000	3840.0	CP-OFDM QPSK	78@0	27.862	29.09
77	30	30	656000	3840.0	CP-OFDM 16 QAM	78@0	27.81	29.3
77	30	30	656000	3840.0	CP-OFDM 64 QAM	78@0	27.891	29.16
77	30	30	656000	3840.0	CP-OFDM 256 QAM	78@0	27.935	29.05
77	30	40	656000	3840.0	CP-OFDM QPSK	106@0	37.825	39.32
77	30	40	656000	3840.0	CP-OFDM 16 QAM	106@0	37.851	39.25
77	30	40	656000	3840.0	CP-OFDM 64 QAM	106@0	37.771	39.61
77	30	40	656000	3840.0	CP-OFDM 256 QAM	106@0	37.907	39.46
77	30	50	656000	3840.0	CP-OFDM QPSK	133@0	47.534	48.99
77	30	50	656000	3840.0	CP-OFDM 16 QAM	133@0	47.689	49.41
77	30	50	656000	3840.0	CP-OFDM 64 QAM	133@0	47.526	49.12
77	30	50	656000	3840.0	CP-OFDM 256 QAM	133@0	47.52	49.1
77	30	60	656000	3840.0	CP-OFDM QPSK	162@0	57.82	59.83
77	30	60	656000	3840.0	CP-OFDM 16 QAM	162@0	57.821	59.69
77	30	60	656000	3840.0	CP-OFDM 64 QAM	162@0	58.007	60.03
77	30	60	656000	3840.0	CP-OFDM 256 QAM	162@0	57.978	59.75
77	30	70	656000	3840.0	CP-OFDM QPSK	189@0	67.323	69.69
77	30	70	656000	3840.0	CP-OFDM 16 QAM	189@0	67.643	69.71
77	30	70	656000	3840.0	CP-OFDM 64 QAM	189@0	67.497	69.8
77	30	70	656000	3840.0	CP-OFDM 256 QAM	189@0	67.424	69.73
77	30	80	656000	3840.0	CP-OFDM QPSK	217@0	77.626	80.1
77	30	80	656000	3840.0	CP-OFDM 16 QAM	217@0	77.653	80.1
77	30	80	656000	3840.0	CP-OFDM 64 QAM	217@0	77.527	79.98
77	30	80	656000	3840.0	CP-OFDM 256 QAM	217@0	77.328	80.02
77	30	90	656000	3840.0	CP-OFDM QPSK	245@0	87.313	90.3

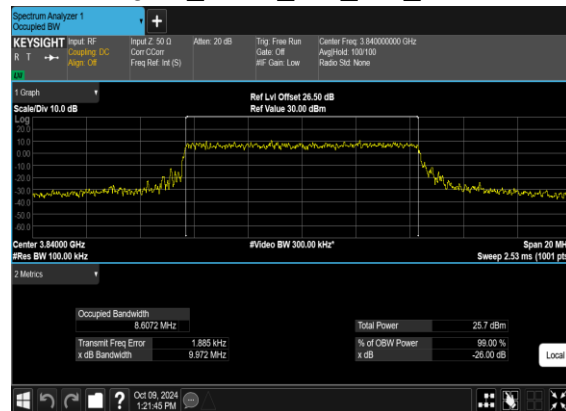


77	30	90	656000	3840.0	CP-OFDM 16 QAM	245@0	87.451	90.29
77	30	90	656000	3840.0	CP-OFDM 64 QAM	245@0	87.542	90.19
77	30	90	656000	3840.0	CP-OFDM 256 QAM	245@0	87.356	90.55
77	30	100	656000	3840.0	CP-OFDM QPSK	273@0	97.47	100.4
77	30	100	656000	3840.0	CP-OFDM 16 QAM	273@0	97.346	100.5
77	30	100	656000	3840.0	CP-OFDM 64 QAM	273@0	97.411	100.4
77	30	100	656000	3840.0	CP-OFDM 256 QAM	273@0	97.382	100.4

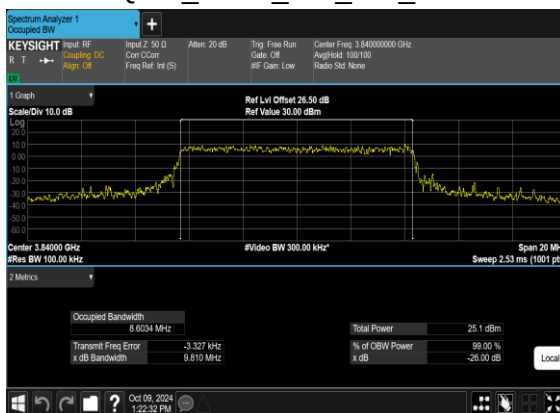
N77(10M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



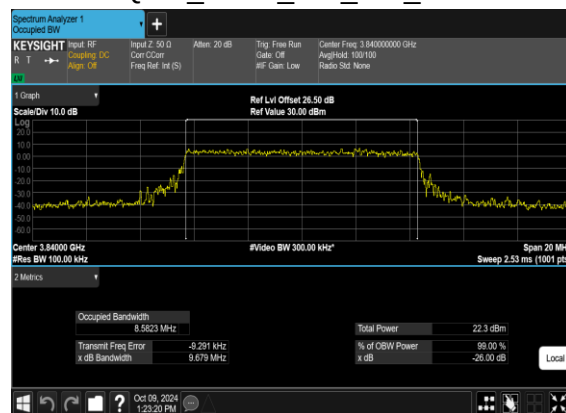
N77(10M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(10M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



N77(10M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

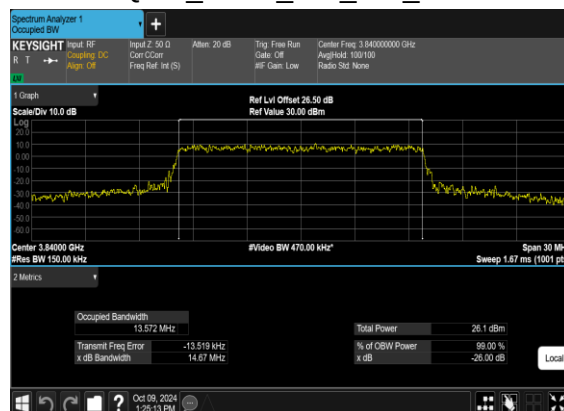




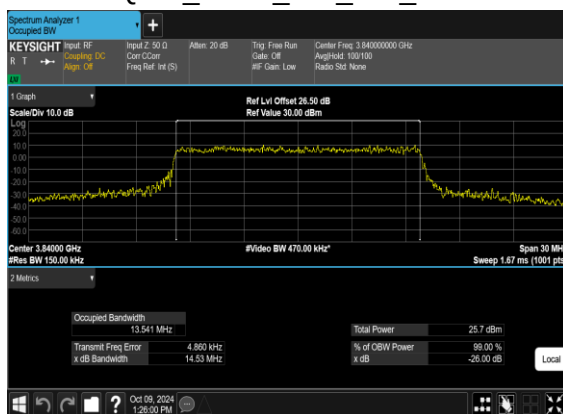
N77(15M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



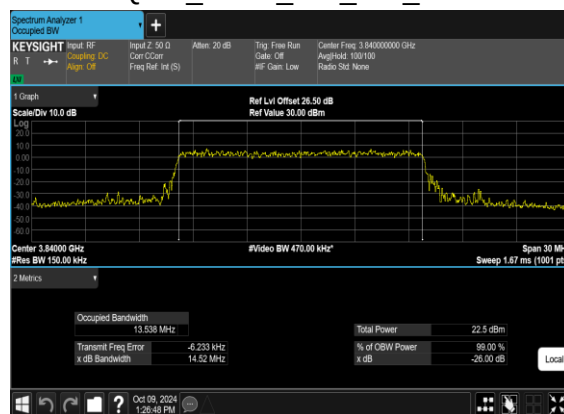
N77(15M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(15M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



N77(15M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

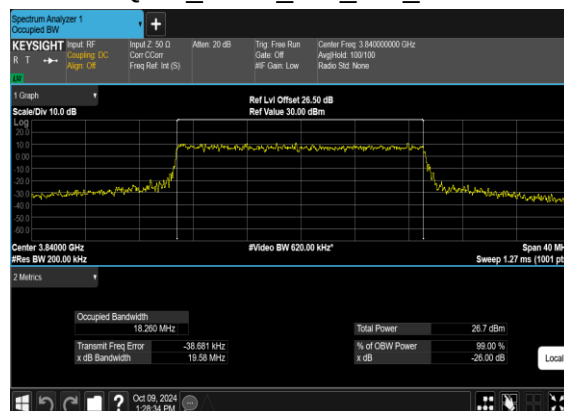




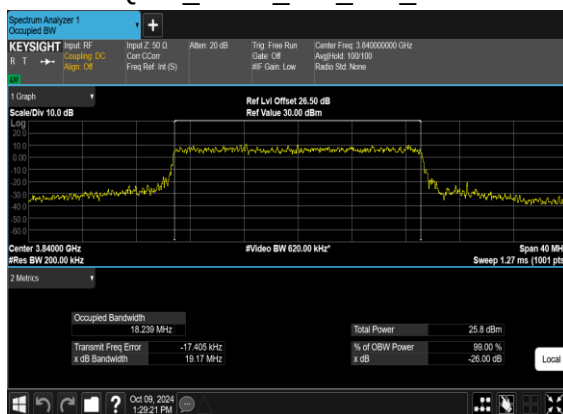
N77(20M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



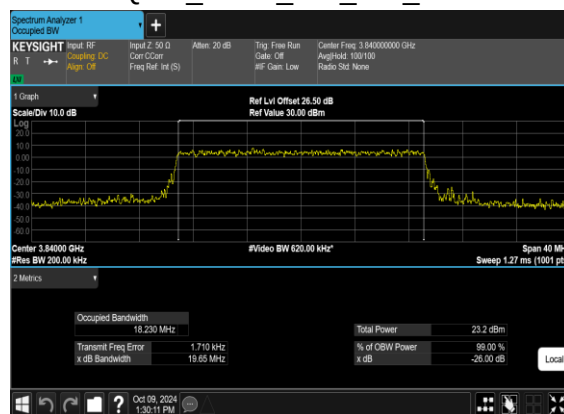
N77(20M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH

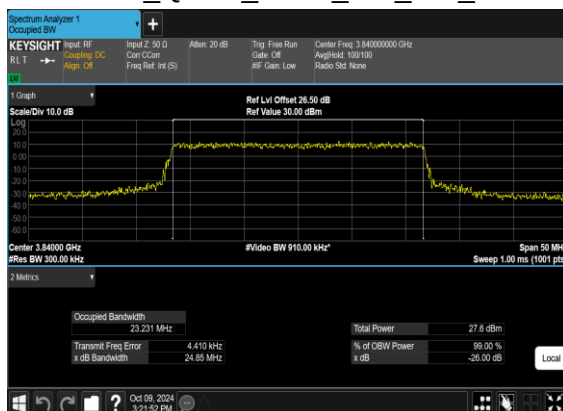
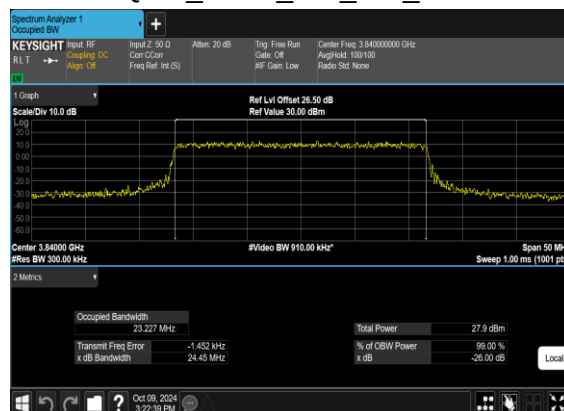
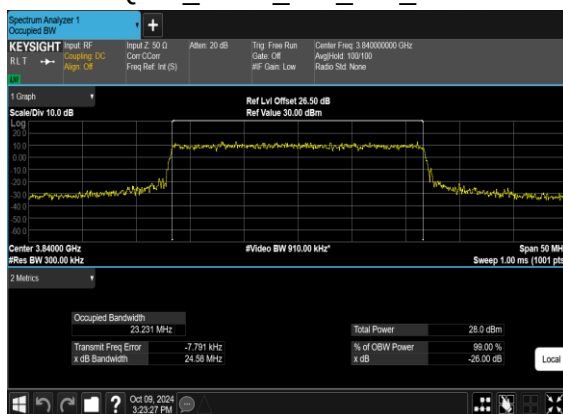
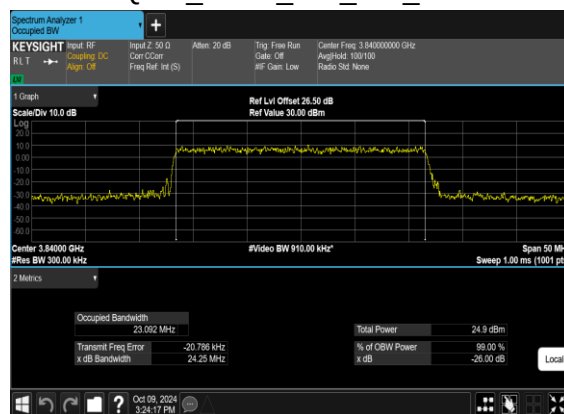


N77(20M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



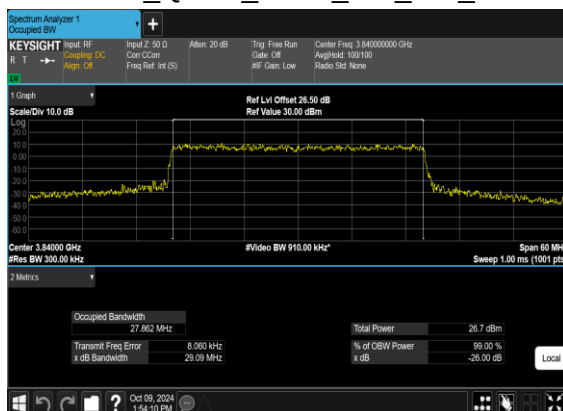
N77(20M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



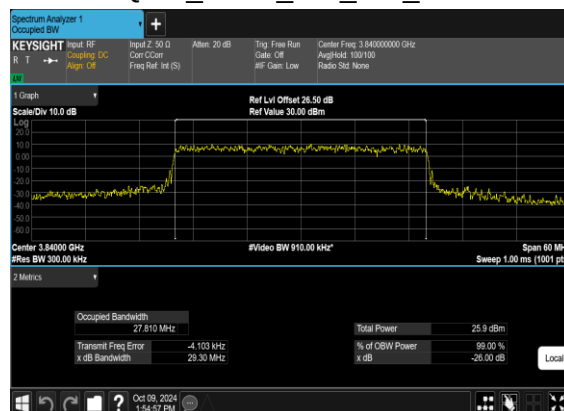
N77(25M)_CP-
OFDM_QPSK_Outer_Full_Mid_CHN77(25M)_CP-OFDM_16
QAM_Outer_Full_Mid_CHN77(25M)_CP-OFDM_64
QAM_Outer_Full_Mid_CHN77(25M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



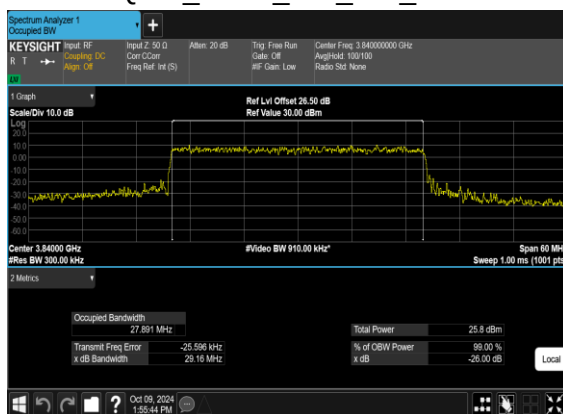
N77(30M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



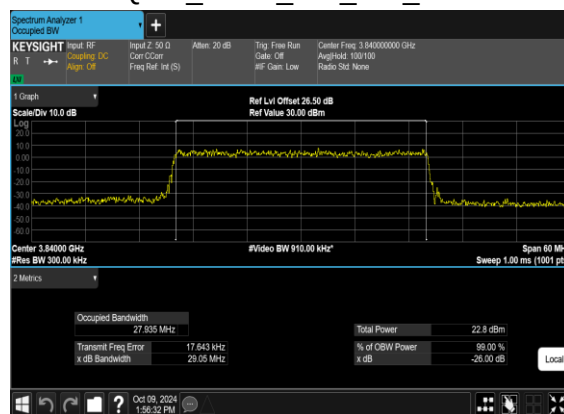
N77(30M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(30M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

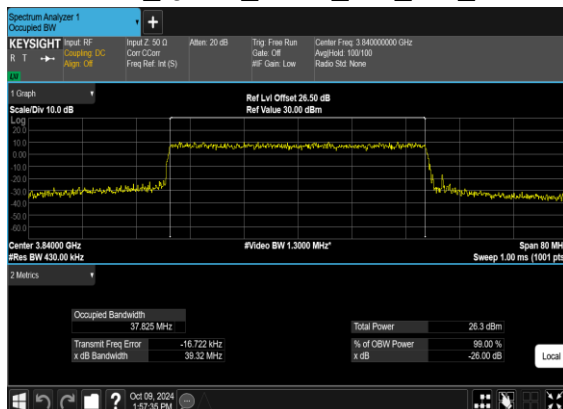


N77(30M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

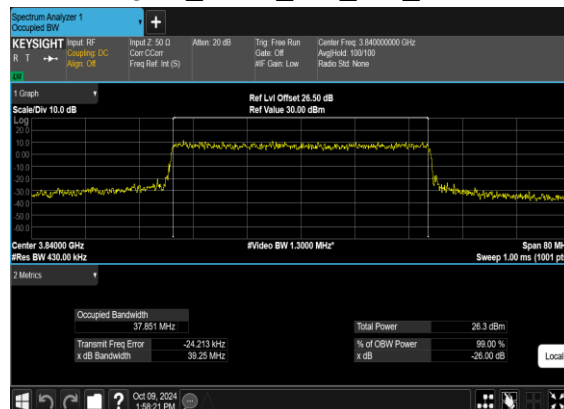




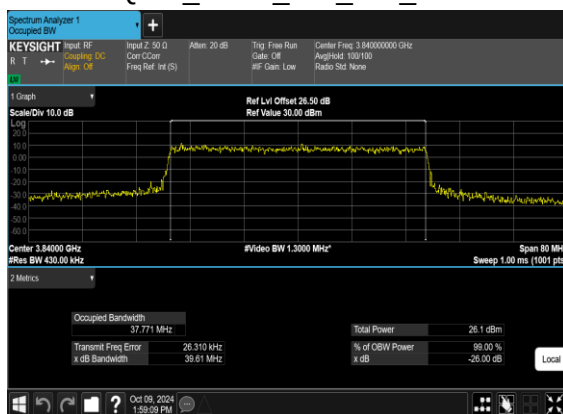
N77(40M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



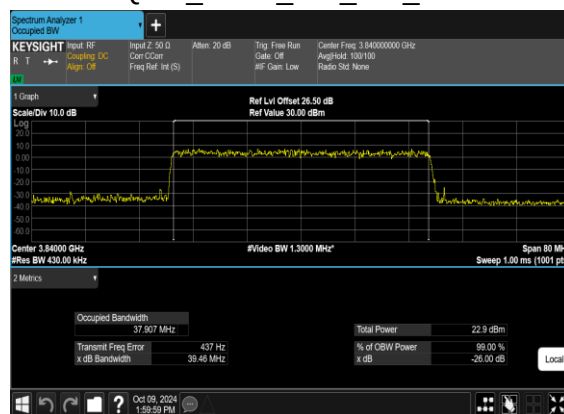
N77(40M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(40M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

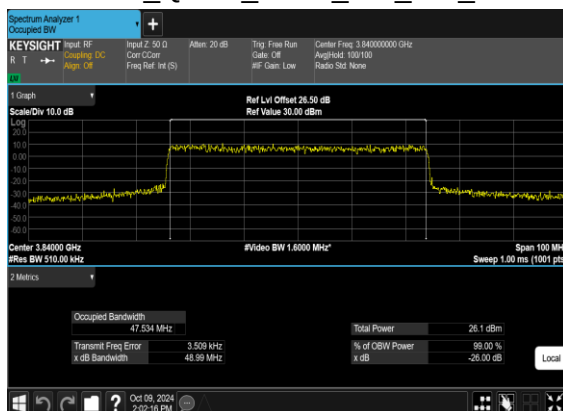


N77(40M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

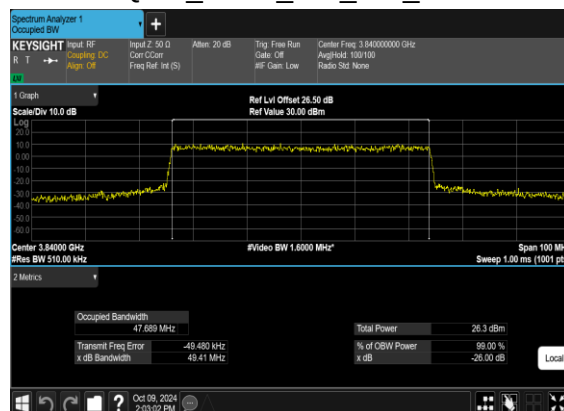




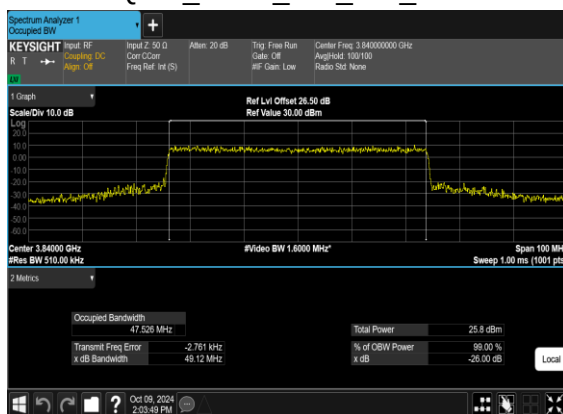
N77(50M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



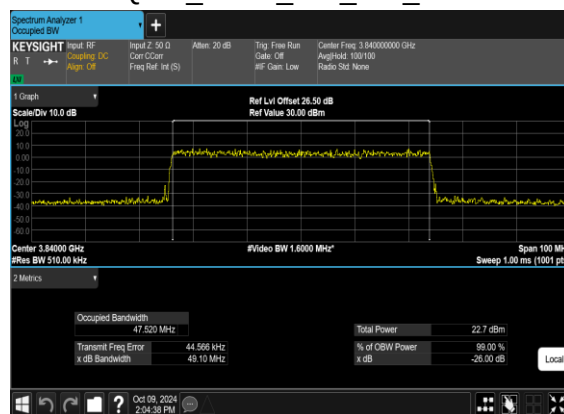
N77(50M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(50M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

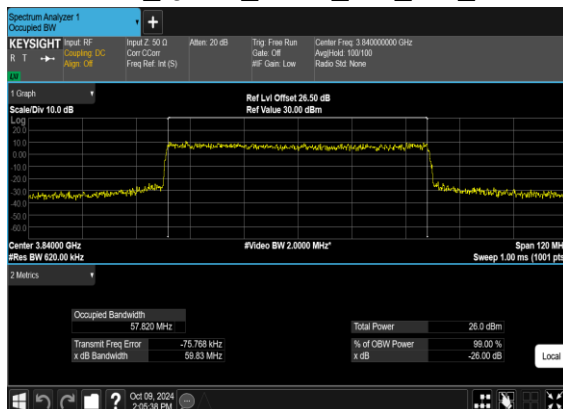


N77(50M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

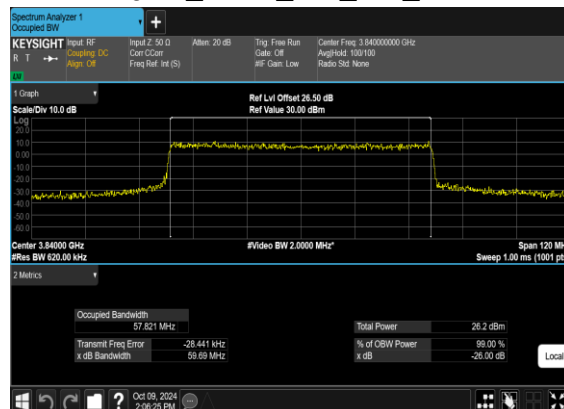




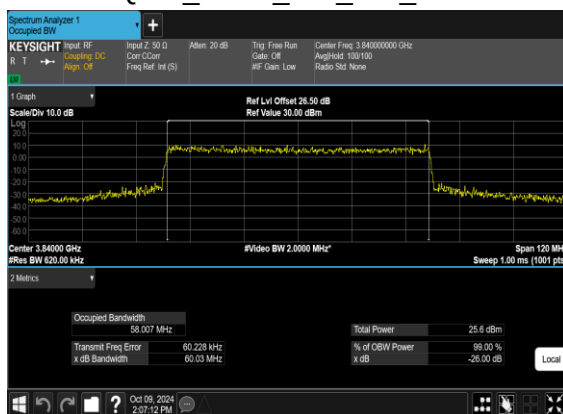
N77(60M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



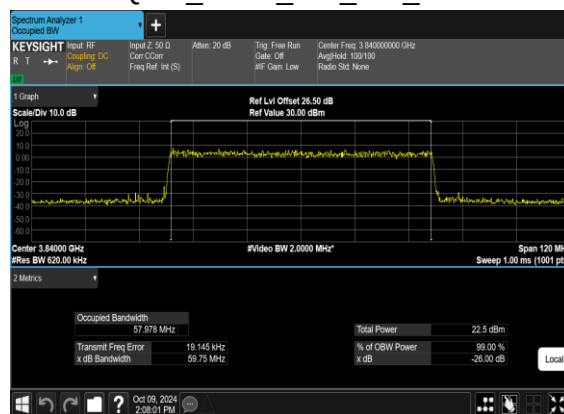
N77(60M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(60M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

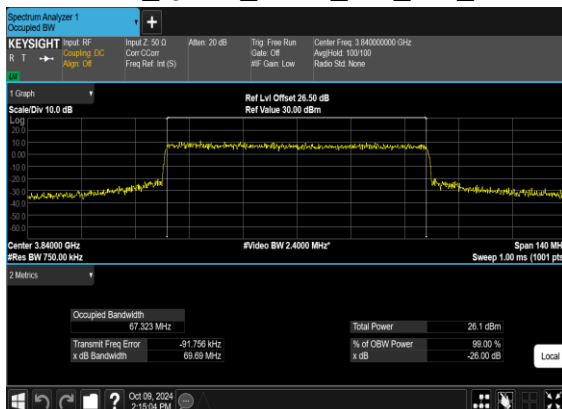


N77(60M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

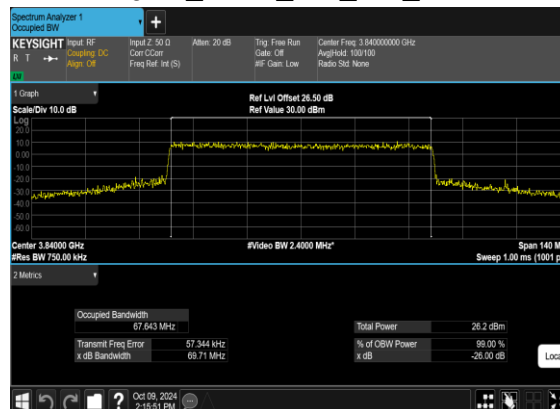




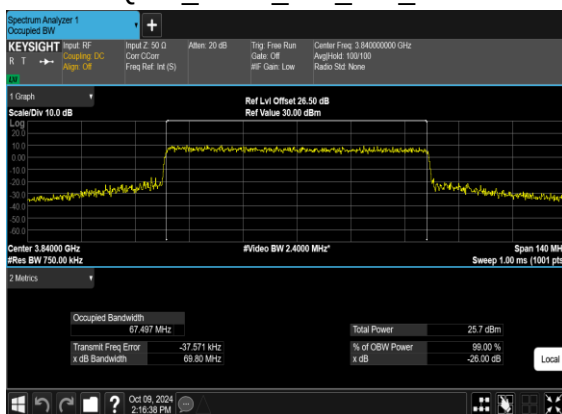
N77(70M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



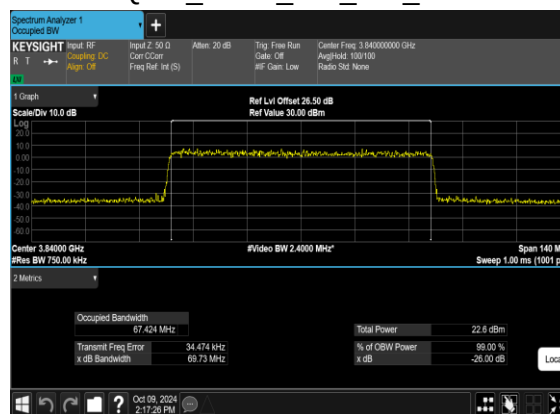
N77(70M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(70M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

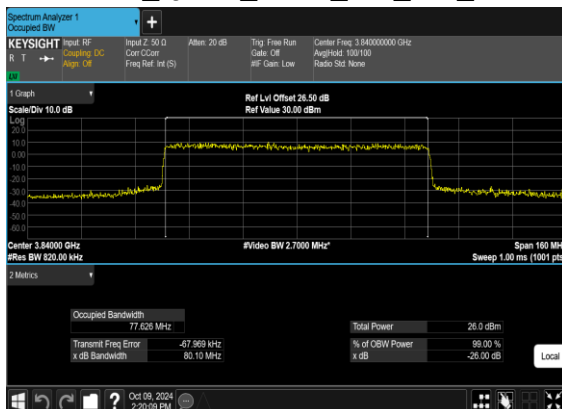


N77(70M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

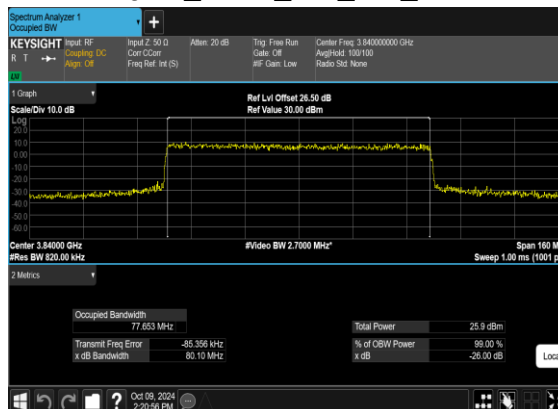




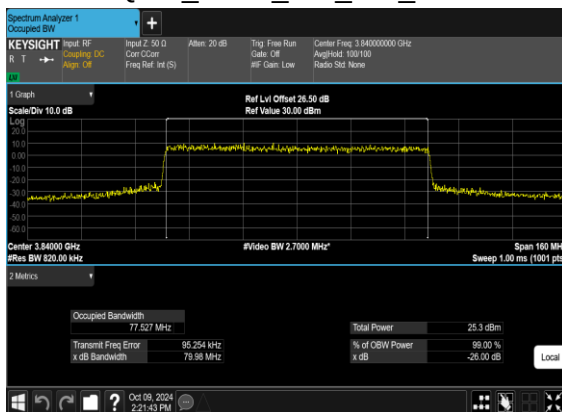
N77(80M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



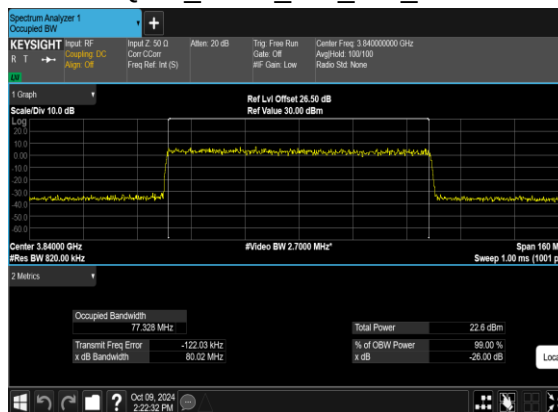
N77(80M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(80M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

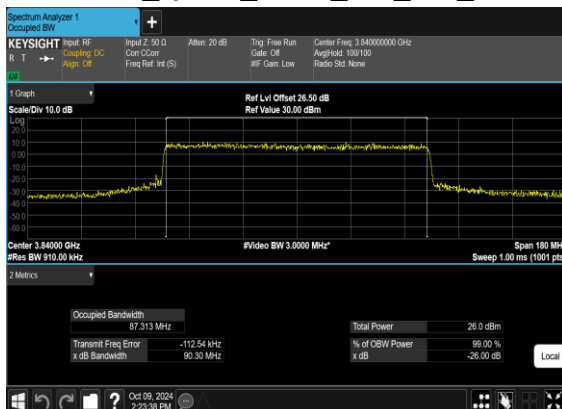


N77(80M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

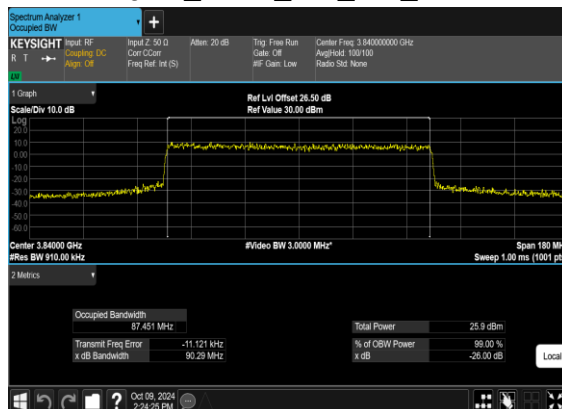




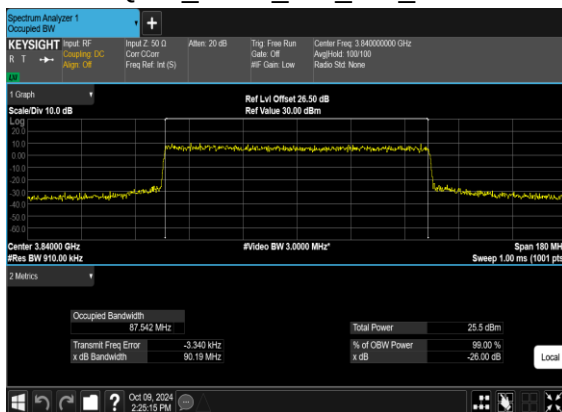
N77(90M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



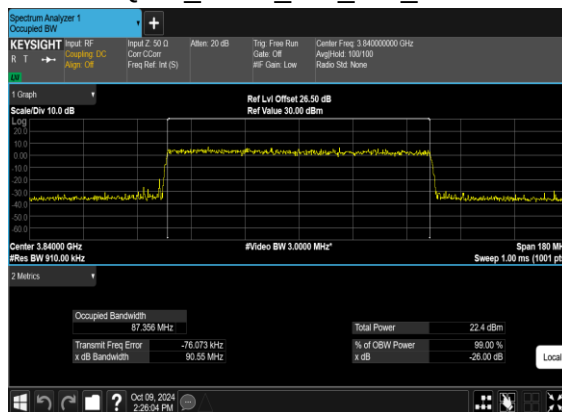
N77(90M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(90M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH

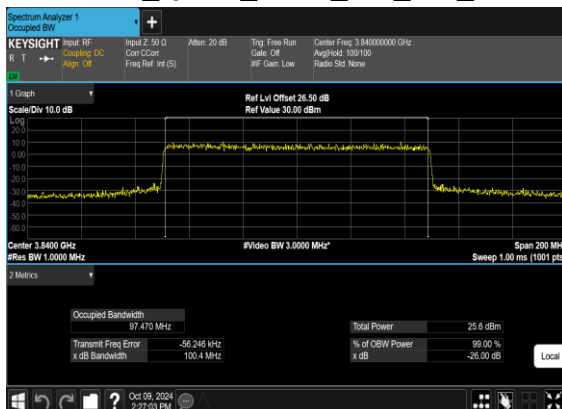


N77(90M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

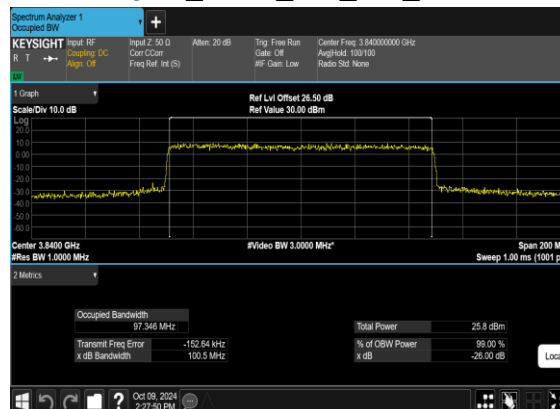




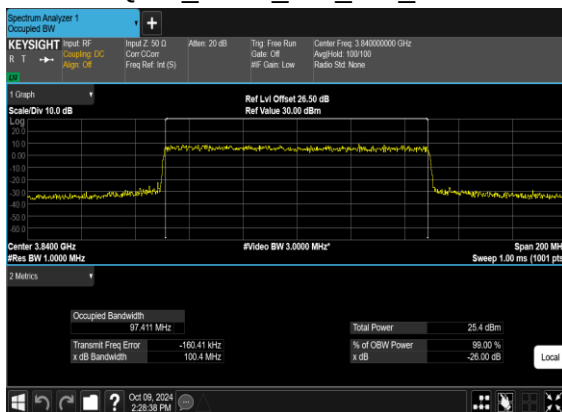
N77(100M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



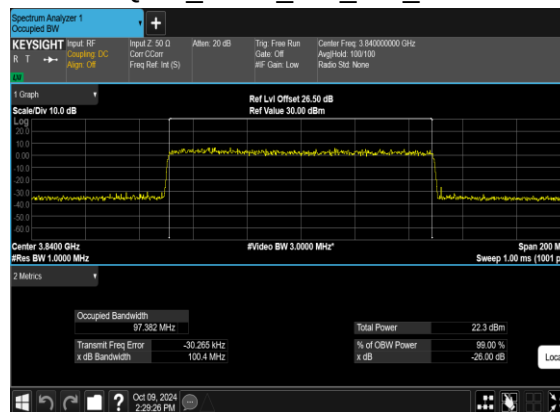
N77(100M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N77(100M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



N77(100M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH





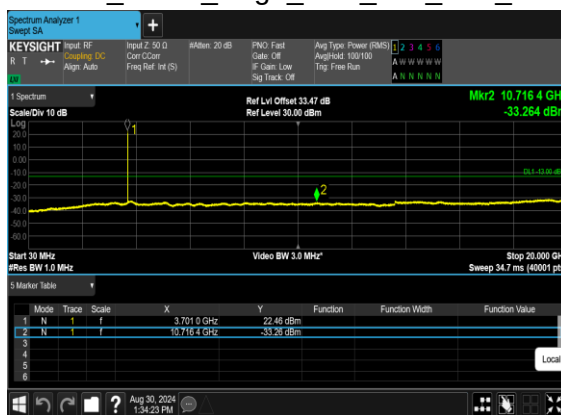
Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	60	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	60	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	60	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	60	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	60	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	60	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	PASS

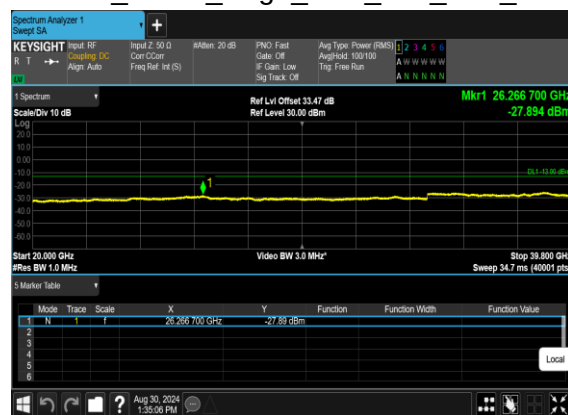


77	30	100	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	100	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	100	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	100	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	100	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	100	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	100	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@0	see graph	---
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@0	see graph	---
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@0	see graph	PASS

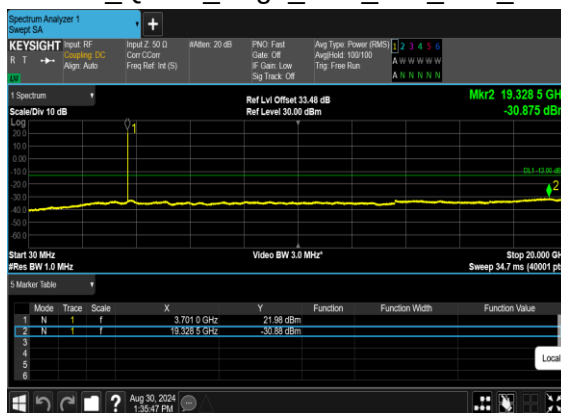
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



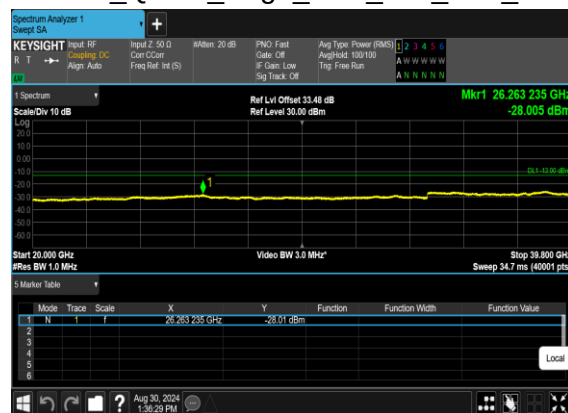
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

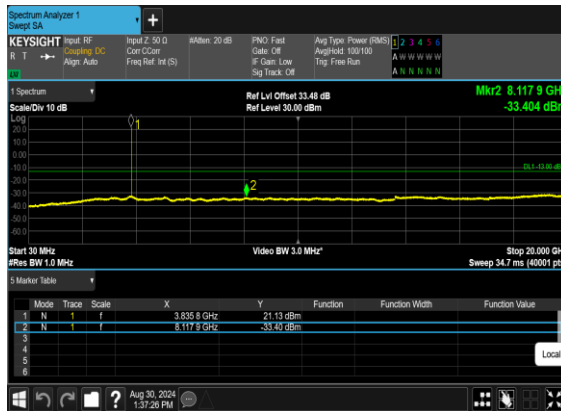


N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

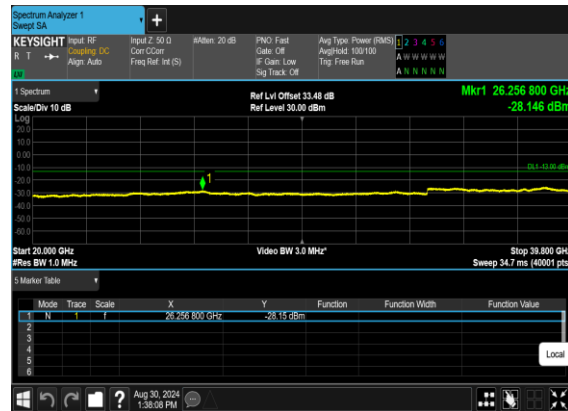




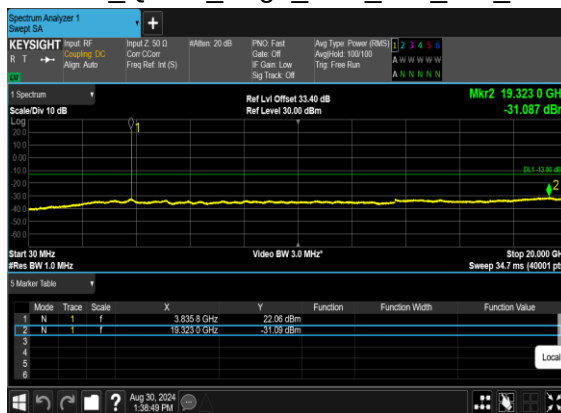
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



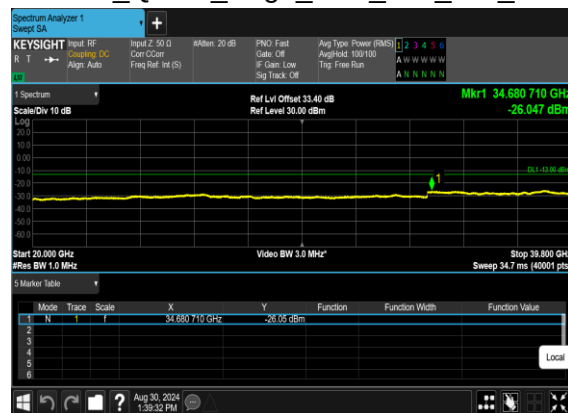
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



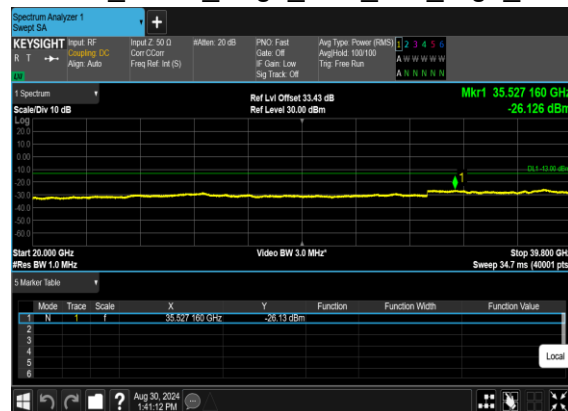
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

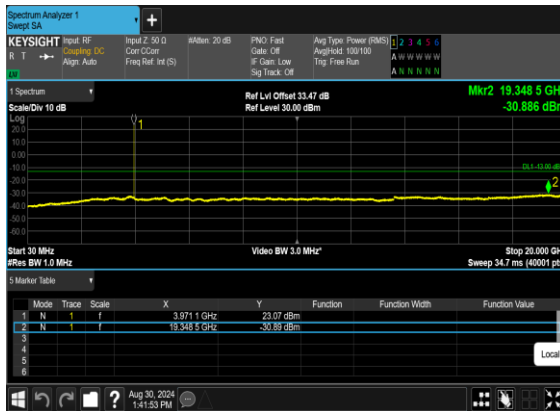
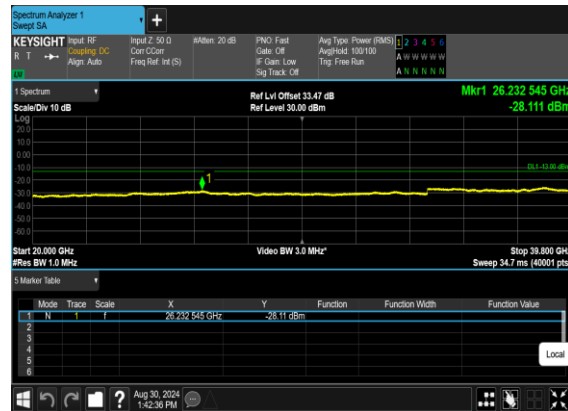
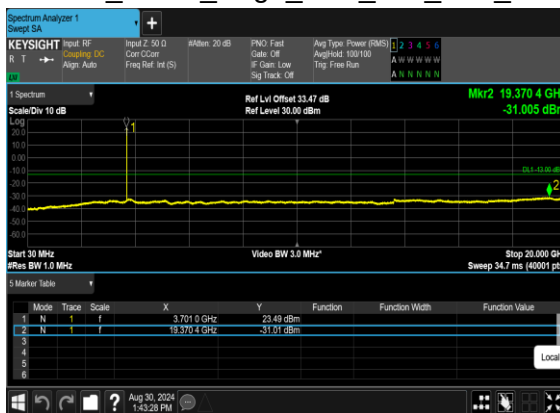
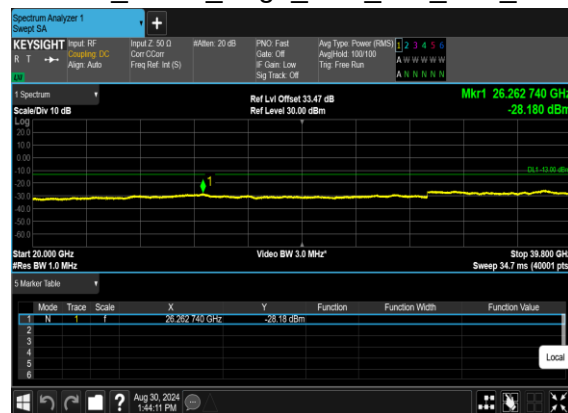
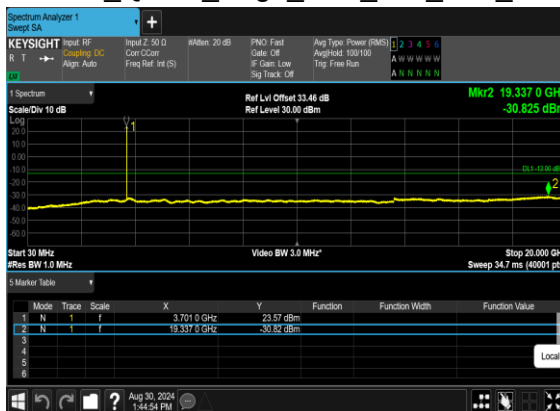
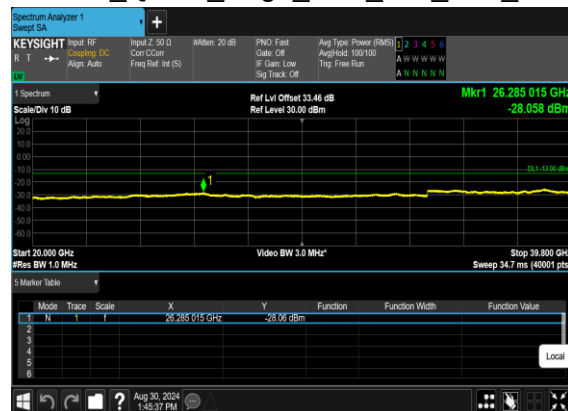


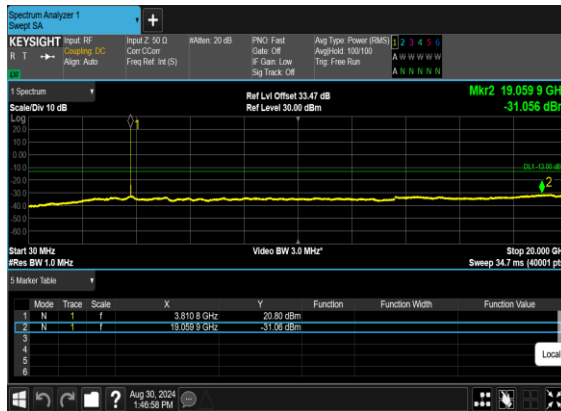
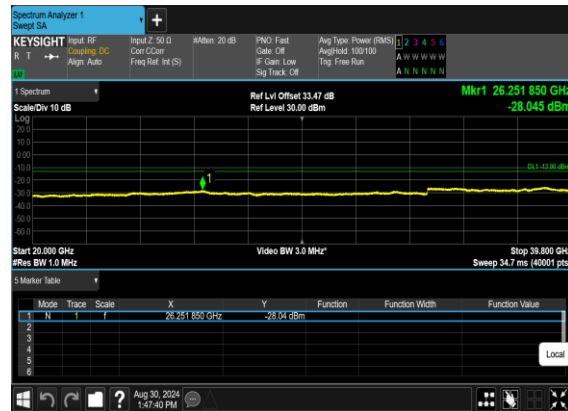
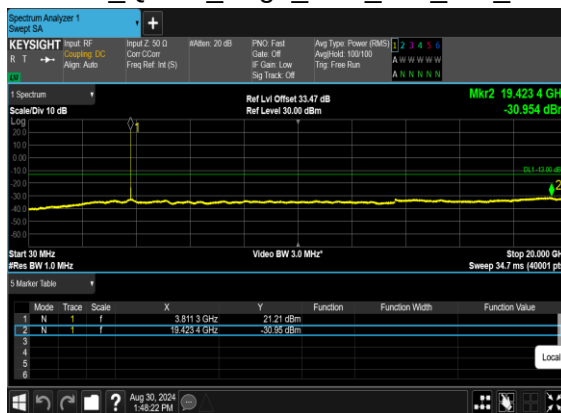
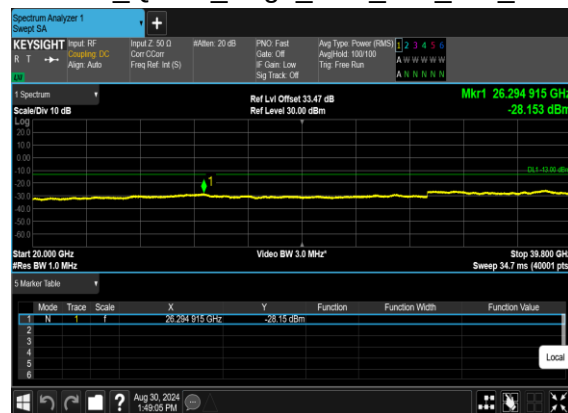
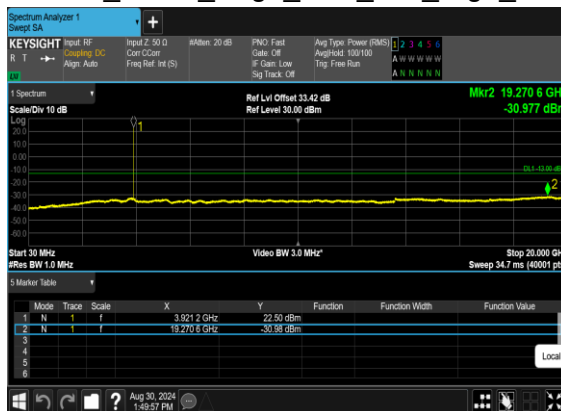
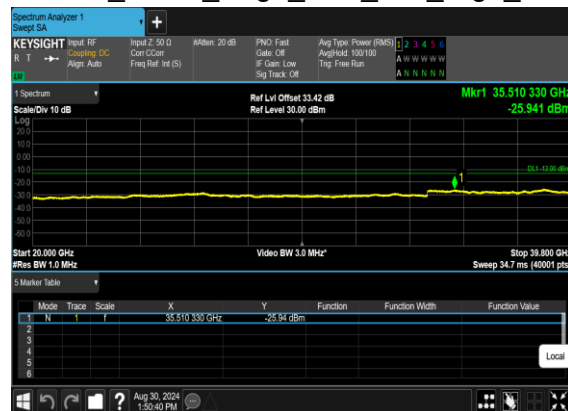
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

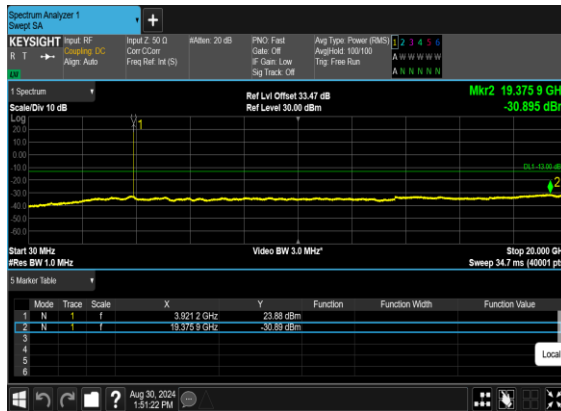
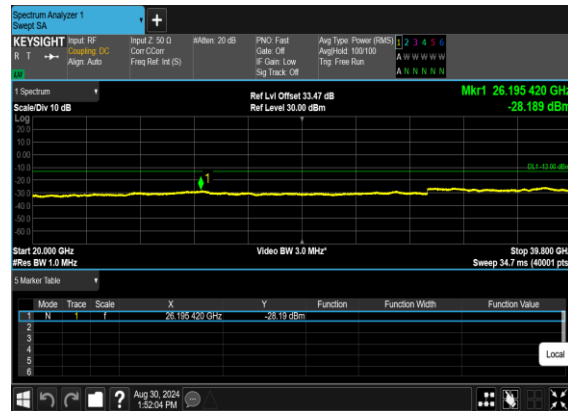
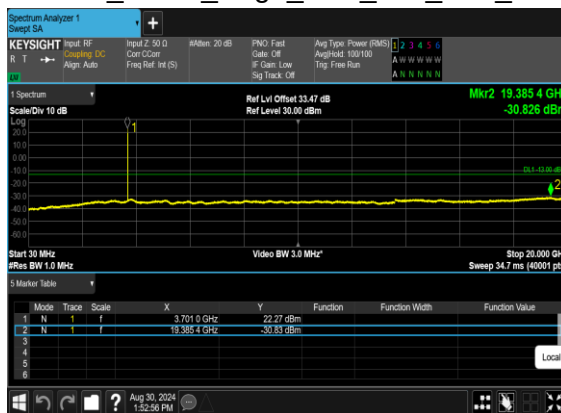
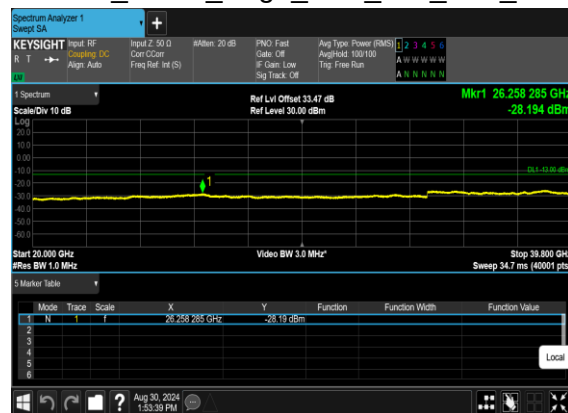
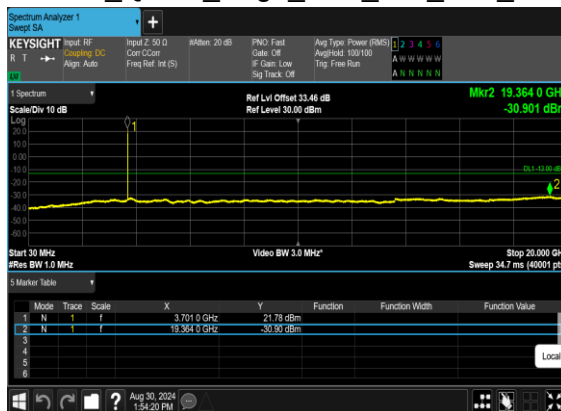
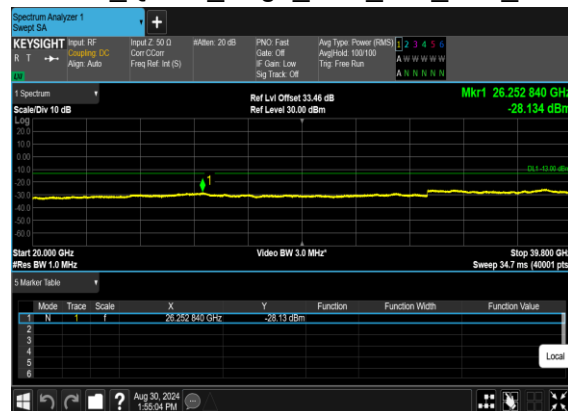


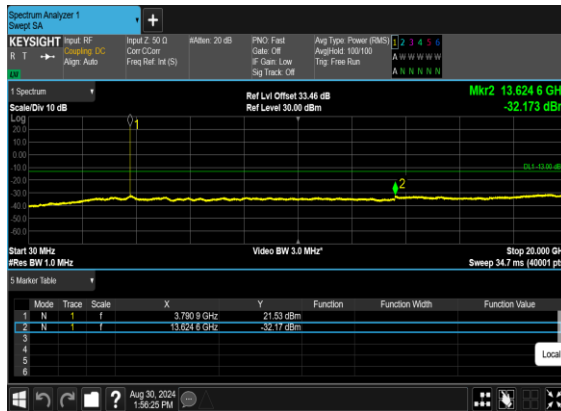
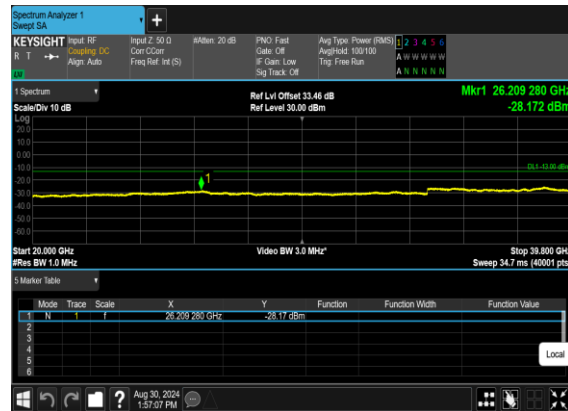
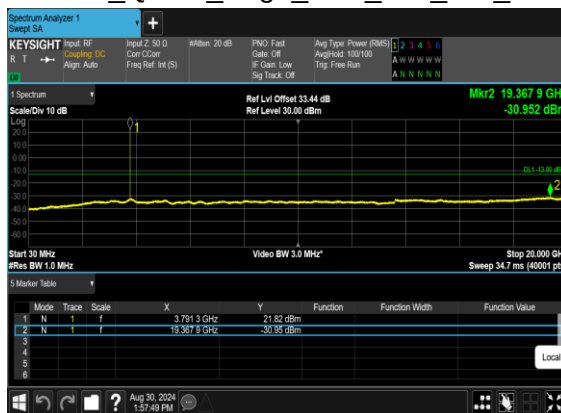
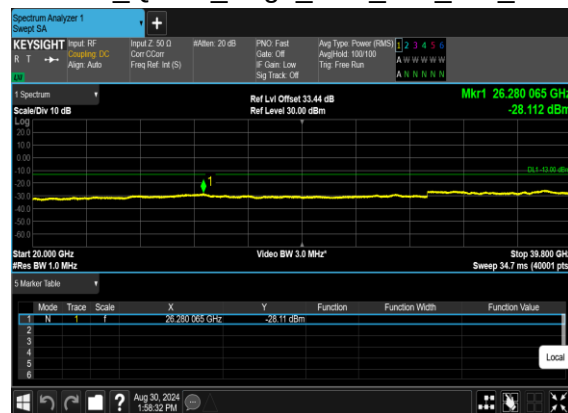
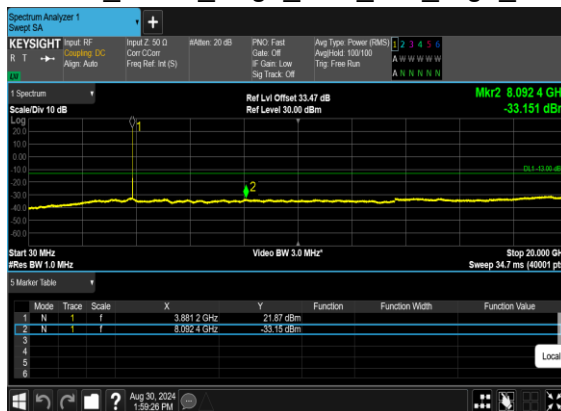
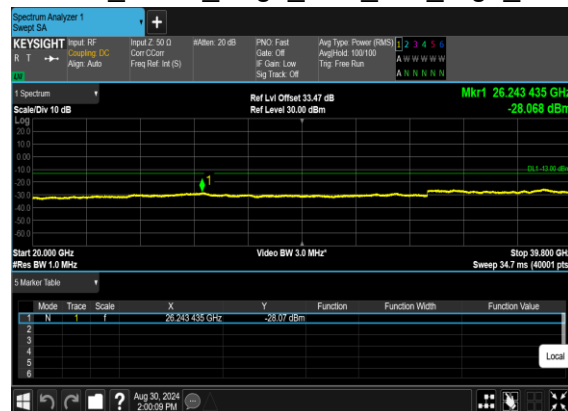
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N77(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CHN77(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CHN77(60M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CHN77(60M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CHN77(60M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CHN77(60M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH

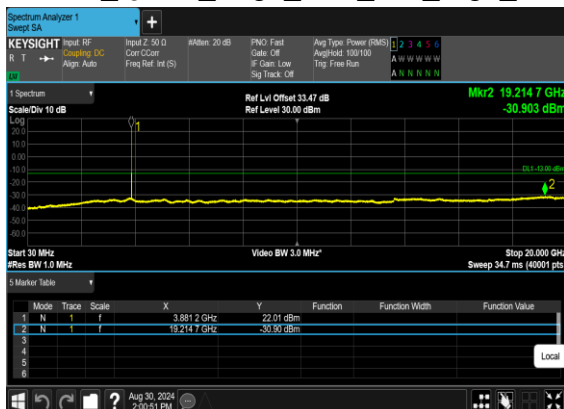
N77(60M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CHN77(60M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CHN77(60M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CHN77(60M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CHN77(60M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CHN77(60M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH

N77(60M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CHN77(60M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CHN77(100M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CHN77(100M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CHN77(100M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CHN77(100M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH

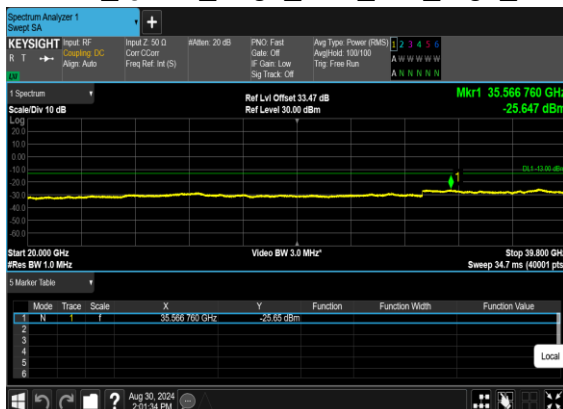
N77(100M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CHN77(100M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CHN77(100M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CHN77(100M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CHN77(100M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CHN77(100M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH





Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	24@0	see graph	PASS
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	24@0	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@23	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@23	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	24@0	see graph	PASS
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	24@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	162@0	see graph	PASS
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	162@0	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	1@161	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@161	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	162@0	see graph	PASS
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	162@0	see graph	PASS
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	270@0	see graph	PASS
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	270@0	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@272	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@272	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	270@0	see graph	PASS
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	270@0	see graph	PASS