FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2453-3, XT2453-4, XT2453-5, XT2453V
FCC ID	:	IHDT56AR7
STANDARD	:	47 CFR Part 2, 27
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	:	Mar. 08, 2024 ~ Mar. 28, 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

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG422203L	Rev. 01	Initial issue of report	Apr. 10, 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(c)(10)	Effective Radiated Power (5G NR n12, n71)	ERP < 3 Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (5G NR n66, n70)	EIRP < 1Watt		
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §27.53(h) §27.53(g)	Conducted Band Edge Measurement (5G NR n66, n70) (5G NR n12, n71)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §27.53(h) §27.53(g)	Conducted Spurious Emission (5G NR n66, n70) (5G NR n12, n71)	< 43+10log10(P[Watts])	PASS	-
3.9	§27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(h) §27.53(g)	Radiated Spurious Emission (5G NR n66, n70) (5G NR n12, n71)	< 43+10$\log_{10}$(P[Watts])	PASS	Under limit 35.33 dB at 3450.00 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/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

Disclaimer:

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

1 General Description

1.1 Applicant

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

1.2 Manufacturer

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

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2453-3, XT2453-4, XT2453-5, XT2453V
FCC ID	IHDT56AR7
IMEI Code	Conducted : 358394210026253/358394210026261 Radiation : 358394210031030/358394210031048
HW Version	DVT2
SW Version	U3UC34.22
EUT Stage	Identical Prototype

Note：The four model names are only for market segment, no other difference.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n12 : 699 MHz ~ 716 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz
Rx Frequency	5G NR n12: 729 MHz ~ 746 MHz 5G NR n66 : 2110 MHz~ 2200 MHz 5G NR n70 : 1995 MHz ~ 2020 MHz 5G NR n71: 617 MHz ~ 652 MHz
Bandwidth	n12/n70: 5MHz / 10MHz / 15MHz n66: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 35MHz / 40MHz n71: 5MHz / 10MHz / 15MHz / 20MHz
SCS	15kHz,30kHz
Antenna Gain	**<Ant. 0>** n12: -3.73 dBi n66: -2.18 dBi n70: -2.36 dBi n71: -3.55 dBi

	<Ant. 1> n12: -4.05 dBi n66: -1.88 dBi n70: -2.13 dBi n71: -4.68 dBi **<Ant. 2>** n66: -2.18 dBi n70: -2.67 dBi **<Ant. 3>** n66: -3.41 dBi n70: -5.32 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum ERP/EIRP is calculated from max output power and max antenna gain, only the maximum ERP/EIRP are shown in the report, 5G NR n12/71 for Ant. 0 and n66/70 for Ant. 2 and n66_UL MIMO for Ant.(2+3).
2. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are tested in the report.
3. 5G NR n12/n66/n71 support SA mode and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode and SCS 15kHz covers 30kHz.
4. 5G NR n70 supports SA mode only, and SCS 15kHz covers 30kHz.
5. 5G NR n66 supports UL MIMO mode (the two antennas are completely uncorrelated), the conducted BE/Spurious are tested at single antenna port and add 10*log(NANT) according to KDB 662911 D01.
6. 5G NR n66 UL MIMO supports CP-OFDM Mode only.
7. The device supports n66/n70(1T4R) SRS resources on ant.0/1/2/3, only the test data of worst ant.2 is showed in the report according to the maximum power.
8. The EN-DC mode combination could be referred to the product spec.
9. For 5G NR n66,there are two paths, one path for SA and other path for NSA, the two paths are same RF components thus RF only verify the power for two paths, and full test the path with maximum power.

1.5 Modification of EUT

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

1.6 Specification of Accessory

Specification of Accessory				
Battery 1	**Brand Name**	Motorola	**Model Name**	QR11
Battery 2	**Brand Name**	Motorola	**Model Name**	QR31
USB Cable 1	**Brand Name**	Motorola(CABLETECH)	**Model Name**	SC18E05246
USB Cable 2	**Brand Name**	Motorola(SAIBAO)	**Model Name**	SC18D86732

1.7 Maximum ERP/EIRP and Emission Designator

5G NR n12		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	701.5 ~ 713.5	0.0906	4M45G7D	0.0753	4M47W7D
10	704.0~ 711.0	0.0904	9M26G7D	0.0735	9M28W7D
15	706.5 ~ 708.5	0.0948	14M1G7D	0.0798	14M1W7D

5G NR n66		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)
5	1712.5 ~ 1777.5	0.1365	4M47G7D	0.1102	4M48W7D
10	1715.0 ~ 1775.0	0.1503	9M26G7D	0.1125	9M29W7D
15	1717.5 ~ 1772.5	0.1416	14M1G7D	0.1086	14M1W7D
20	1720.0 ~ 1770.0	0.1503	18M9G7D	0.1127	18M9W7D
25	1722.5 ~ 1767.5	0.1352	23M7G7D	0.1054	23M8W7D
30	1725.0 ~ 1765.0	0.1377	28M5G7D	0.1164	28M5W7D
35	1727.5 ~ 1762.5	0.1352	33M6G7D	0.1143	33M7W7D
40	1730.0 ~ 1760.0	0.1514	38M6G7D	0.1282	38M6W7D

5G NR n66 UL MIMO		QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	1712.5 ~ 1777.5	0.1017	4M46G7D	0.0967	4M48W7D
10	1715.0 ~ 1775.0	0.0958	9M27G7D	0.0884	9M27W7D
15	1717.5 ~ 1772.5	0.0972	14M1G7D	0.0882	14M1W7D
20	1720.0 ~ 1770.0	0.0971	18M9G7D	0.0890	19M0W7D
25	1722.5 ~ 1767.5	0.0964	23M8G7D	0.0884	23M8W7D
30	1725.0 ~ 1765.0	0.0955	28M6G7D	0.0879	28M6W7D
35	1727.5 ~ 1762.5	0.0942	33M5G7D	0.0867	33M6W7D
40	1730.0 ~ 1760.0	0.1018	38M6G7D	0.0860	38M6W7D

5G NR n70		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)
5	1697.5 ~ 1707.5	0.1219	4M46G7D	0.0955	4M49W7D
10	1700.0 ~ 1705.0	0.1337	9M27G7D	0.0955	9M28W7D
15	1702.5	0.1337	14M1G7D	0.0927	14M1W7D

5G NR n71		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.0658	4M46G7D	0.0550	4M47W7D
10	668.0 ~ 693.0	0.0662	9M28G7D	0.0558	9M28W7D
15	670.5 ~ 690.5	0.0675	14M1G7D	0.0573	14M1W7D
20	673.0 ~ 688.0	0.0675	18M9G7D	0.0577	18M9W7D

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

1.8 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

1.9 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC_5GNR_China_201027	1.0
2.	03CH04-KS	AUDIX	E3	210616

1.10 Applicable Standards

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

- 47 CFR Part 2, 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.

The EUT is a folding phone, pretest the open status and closed status, only the worst status perform final test and record in the report. For the accessories, pretest standalone mode / Earphone mode / Adapter mode / Wireless charging mode, only the worst status perform final test and record in the report.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X 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
			

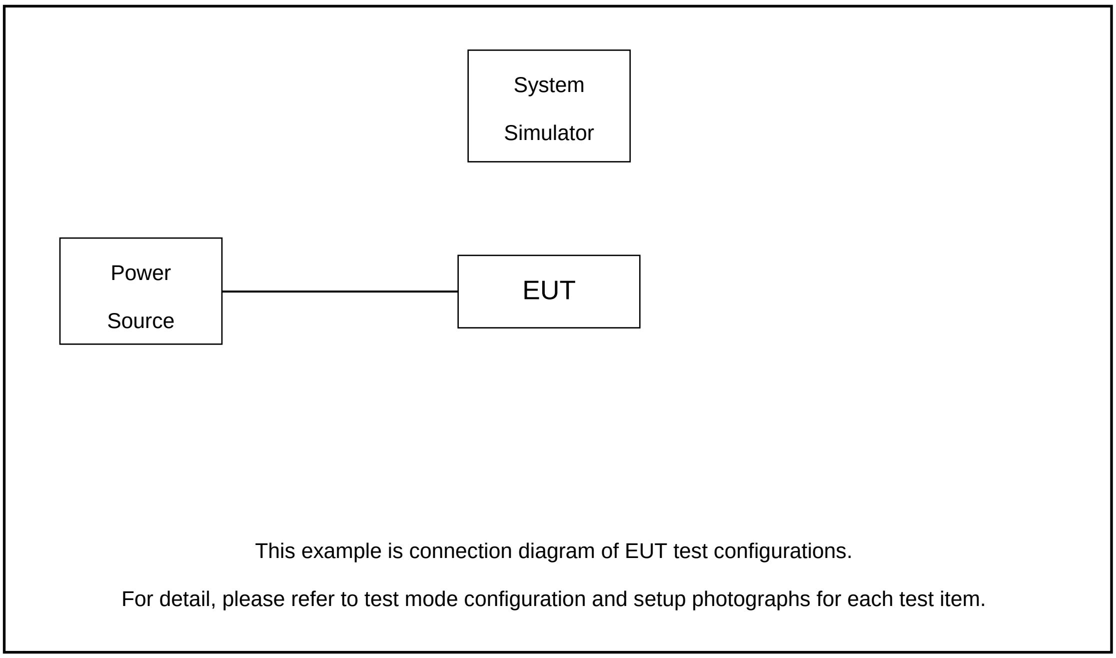
Test Items	5G NR	Bandwidth (MHz)														Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16 QAM	64 QAM	256 QAM	1	Full	L	M	H
Max. Output Power	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n66	v	v	v	v	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n71	v	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	n12			v	-	-	-	-	-	-	-	-	-	-	-	v	v				v	v		v	
	n66				v					-	-	-	-	-	-	v	v				v	v		v	
	n70			v	-	-	-	-	-	-	-	-	-	-	-	v	v				v	v		v	
	n71				v	-	-	-	-	-	-	-	-	-	-	v	v				v	v		v	
26dB and 99% Bandwidth	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
	n66	v	v	v	v	v	v	v	v	-	-	-	-	-	-		v	v	v	v		v		v	
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
	n71	v	v	v	v	-	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
Conducted	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v

Test Items	5G NR	Bandwidth (MHz)														Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16 QAM	64 QAM	256 QAM	1	Full	L	M	H
Band Edge	n66	v	v		v				v	-	-	-	-	-	-	v	v				v	v	v		v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
	n71	v	v		v	-	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
Conducted Spurious Emission	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
	n66	v	v		v				v	-	-	-	-	-	-	v	v				v		v	v	v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
	n71	v	v		v	-	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
Frequency Stability	n12		v		-	-	-	-	-	-	-	-	-	-	-		v					v		v	
	n66				v					-	-	-	-	-	-		v					v		v	
	n70			v	-	-	-	-	-	-	-	-	-	-	-		v					v		v	
	n71				v	-	-	-	-	-	-	-	-	-	-		v					v		v	
E.I.R.P	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n66	v	v	v	v	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n71	v	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	n12	Worst Case																						v	
	n66	Worst Case																						v	
	n70	Worst Case																						v	
	n71	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 = 3.88V ；Low Voltage =3.40V.；High Voltage =4.48V

2.2 Connection Diagram of Test System



The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

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 5.0 dB and 20dB attenuator.

Example :

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

= 5.0 + 20 = 25.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	141300	141500	141700
	Frequency	706.5	707.5	708.5
10	Channel	140800	141500	142200
	Frequency	704	707.5	711
5	Channel	140300	141500	142700
	Frequency	701.5	707.5	713.5

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	346000	349000	352000
	Frequency	1730	1745	1760
35	Channel	345500	349000	352500
	Frequency	1727.5	1745	1762.5
30	Channel	345000	349000	353000
	Frequency	1725	1745	1765
25	Channel	344500	349000	353500
	Frequency	1722.5	1745	1767.5
20	Channel	344000	349000	354000
	Frequency	1720	1745	1770
15	Channel	343500	349000	354500
	Frequency	1717.5	1745	1772.5
10	Channel	343000	349000	355000
	Frequency	1715	1745	1775
5	Channel	342500	349000	355500
	Frequency	1712.5	1745	1777.5

5G NR n70 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel		340500	
	Frequency		1702.5	
10	Channel	340000	340500	341000
	Frequency	1700	1702.5	1705
5	Channel	399500	340500	341500
	Frequency	1697.5	1702.5	1707.5

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

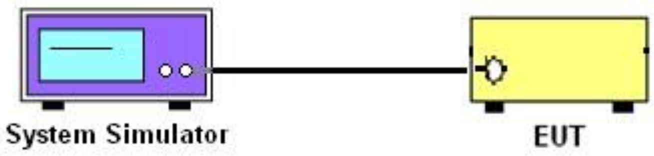
3 Conducted Test Items

3.1 Measuring Instruments

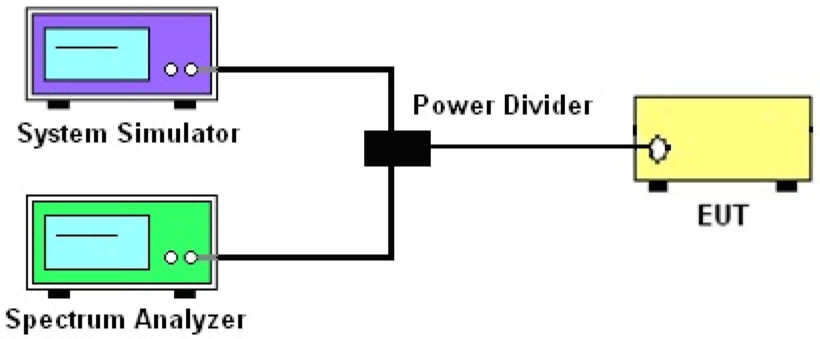
See list of measuring instruments of this test report.

3.2 Test Setup

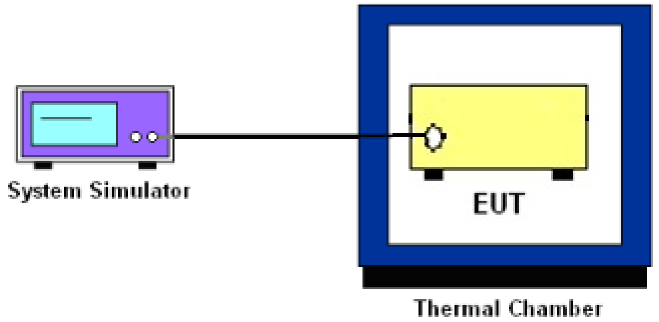
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

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

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

The ERP of mobile transmitters must not exceed 3 Watts for 5G NR n12, n71.

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n66, n70.

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 (h)

For operations in the 1695 – 1710 MHz and1710 – 1755 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used 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 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. 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 10^{th} harmonic.

3.8.2 Test Procedures

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

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.

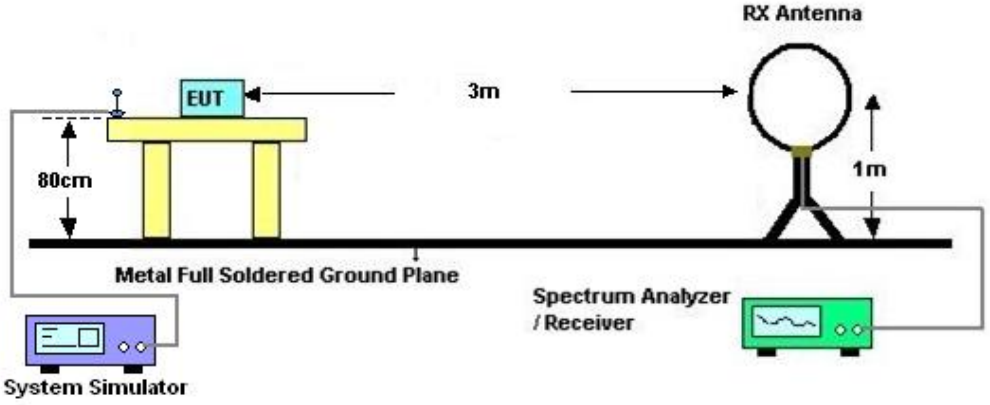
4 Radiated Test Items

4.1 Measuring Instruments

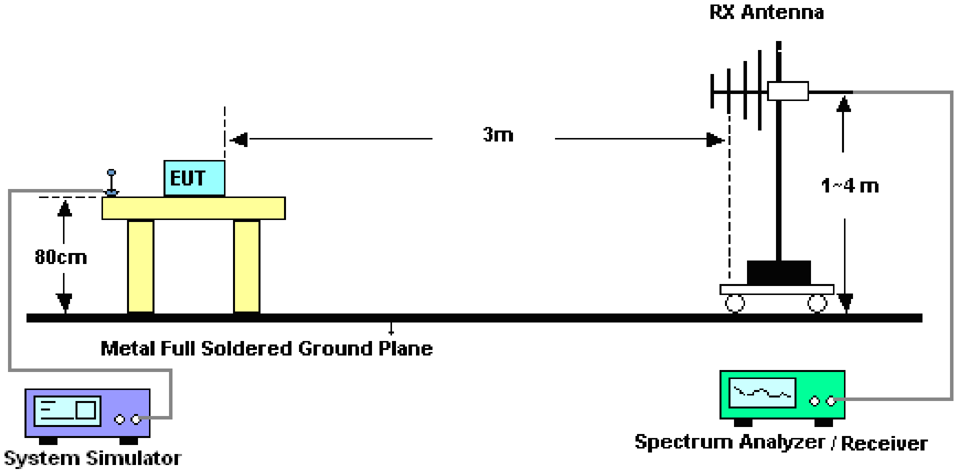
See list of measuring instruments of this test report.

4.2 Test Setup

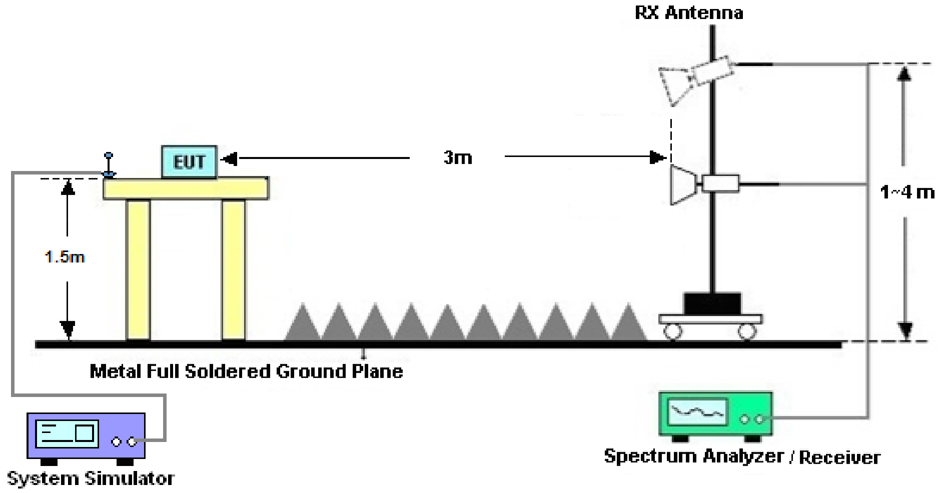
4.2.1 For radiated test below 30MHz



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

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

    = P(W)- [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

    = -13dBm.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 10, 2023	Mar. 08, 2024~ Mar. 28, 2024~	Oct. 09, 2024	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Mar. 08, 2024~ Mar. 28, 2024~	NCR	Conducted (TH01-KS)
Temperature &h umidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 06, 2023	Mar. 08, 2024~ Mar. 28, 2024~	Jul. 05, 2024	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 10, 2023	Mar. 28, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 11 2023	Mar. 28, 2024	Sep. 10, 2024	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	Apr. 09, 2023	Mar. 28, 2024	Apr. 08, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00251694	1GHz~18GHz	Jul. 12, 2023	Mar. 28, 2024	Jul. 11, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2024	Mar. 28, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380827	9KHz-1GHz	Jul. 06, 2023	Mar. 28, 2024	Jul. 05, 2024	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2024	Mar. 28, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 10, 2023	Mar. 28, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 10, 2023	Mar. 28, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 28, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 28, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 28, 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	**±2.26 dB**
Occupied Channel Bandwidth	**±0.1%**
Conducted Power	**±0.46 dB**
Peak to Average Ratio	**±0.46 dB**
Frequency Stability	**±0.4 ppm**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.82 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.56 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.54 dB**

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Simle Wang	**Temperature :**	22~23℃
		Relative Humidity :	40~42%

Software Version: 23.06.1602

FR1 N12 (ANT0)

Transmitter Conducted Output Power And ERP, $(G_T - L_C)$=-3.73dB

NR Band	SCS	Band Width	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	ERP(dBm)	ERP(W)	ERP(W)
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	36@18	23.36	19.63	0.0560	0.0918
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@1	23.44	19.71	0.0570	0.0935
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@77	23.34	19.61	0.0557	0.0914
12	15	15	141300	706.5	DFT-s-OFDM QPSK	36@18	23.36	19.63	0.0560	0.0918
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@1	23.5	19.77	0.0578	0.0948
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@77	23.35	19.62	0.0558	0.0916
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	36@18	22.47	18.74	0.0456	0.0748
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@1	22.45	18.72	0.0454	0.0745
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@77	22.3	18.57	0.0439	0.0719
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	36@18	20.99	17.26	0.0324	0.0532
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@1	21.26	17.53	0.0345	0.0566
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@77	21.07	17.34	0.0330	0.0542
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	36@18	18.93	15.20	0.0202	0.0331
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@1	19.06	15.33	0.0208	0.0341
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@77	18.93	15.20	0.0202	0.0331
12	15	15	141300	706.5	CP-OFDM QPSK	39@19	21.9	18.17	0.0400	0.0656
12	15	15	141300	706.5	CP-OFDM QPSK	1@1	21.9	18.17	0.0400	0.0656
12	15	15	141300	706.5	CP-OFDM QPSK	1@77	21.78	18.05	0.0389	0.0638
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	36@18	23.32	19.59	0.0555	0.0910
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@1	23.38	19.65	0.0562	0.0923
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@77	23.26	19.53	0.0547	0.0897
12	15	15	141500	707.5	DFT-s-OFDM QPSK	36@18	23.35	19.62	0.0558	0.0916
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@1	23.45	19.72	0.0571	0.0938
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@77	23.32	19.59	0.0555	0.0910
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	36@18	22.4	18.67	0.0449	0.0736
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@1	22.69	18.96	0.0480	0.0787
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@77	22.47	18.74	0.0456	0.0748
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	36@18	20.92	17.19	0.0319	0.0524
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@1	20.75	17.02	0.0307	0.0504
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@77	20.61	16.88	0.0297	0.0488
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	36@18	18.9	15.17	0.0200	0.0329
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@1	18.82	15.09	0.0197	0.0323
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@77	18.78	15.05	0.0195	0.0320
12	15	15	141500	707.5	CP-OFDM QPSK	39@19	21.89	18.16	0.0399	0.0655
12	15	15	141500	707.5	CP-OFDM QPSK	1@1	21.99	18.26	0.0408	0.0670
12	15	15	141500	707.5	CP-OFDM QPSK	1@77	21.87	18.14	0.0397	0.0652
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	36@18	23.29	19.56	0.0551	0.0904
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@1	23.33	19.60	0.0556	0.0912
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@77	23.25	19.52	0.0546	0.0895
12	15	15	141700	708.5	DFT-s-OFDM QPSK	36@18	23.31	19.58	0.0553	0.0908

12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@1	23.44	19.71	0.0570	0.0935
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@77	23.31	19.58	0.0553	0.0908
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	36@18	22.38	18.65	0.0447	0.0733
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@1	22.75	19.02	0.0486	0.0798
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@77	22.43	18.70	0.0452	0.0741
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	36@18	20.88	17.15	0.0316	0.0519
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@1	20.83	17.10	0.0313	0.0513
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@77	20.6	16.87	0.0296	0.0486
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	36@18	18.9	15.17	0.0200	0.0329
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@1	18.91	15.18	0.0201	0.0330
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@77	18.72	14.99	0.0192	0.0316
12	15	15	141700	708.5	CP-OFDM QPSK	39@19	21.92	18.19	0.0402	0.0659
12	15	15	141700	708.5	CP-OFDM QPSK	1@1	22.08	18.35	0.0417	0.0684
12	15	15	141700	708.5	CP-OFDM QPSK	1@77	21.9	18.17	0.0400	0.0656
12	15	5	140300	701.5	DFT-s-OFDM PI/2 BPSK	1@1	23.21	19.48	0.0541	0.0887
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@1	23.3	19.57	0.0552	0.0906
12	15	5	140300	701.5	DFT-s-OFDM 16 QAM	1@1	22.46	18.73	0.0455	0.0746
12	15	5	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@1	23.22	19.49	0.0542	0.0889
12	15	5	141500	707.5	DFT-s-OFDM QPSK	1@1	23.28	19.55	0.0550	0.0902
12	15	5	141500	707.5	DFT-s-OFDM 16 QAM	1@1	22.5	18.77	0.0459	0.0753
12	15	5	142700	713.5	DFT-s-OFDM PI/2 BPSK	1@1	23.2	19.47	0.0540	0.0885
12	15	5	142700	713.5	DFT-s-OFDM QPSK	1@1	23.24	19.51	0.0545	0.0893
12	15	5	142700	713.5	DFT-s-OFDM 16 QAM	1@1	22.41	18.68	0.0450	0.0738
12	15	10	140800	704	DFT-s-OFDM PI/2 BPSK	1@1	23.21	19.48	0.0541	0.0887
12	15	10	140800	704	DFT-s-OFDM QPSK	1@1	23.23	19.50	0.0543	0.0891
12	15	10	140800	704	DFT-s-OFDM 16 QAM	1@1	22.37	18.64	0.0446	0.0731
12	15	10	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@1	23.14	19.41	0.0532	0.0873
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@1	23.13	19.40	0.0531	0.0871
12	15	10	141500	707.5	DFT-s-OFDM 16 QAM	1@1	22.39	18.66	0.0448	0.0735
12	15	10	142200	711	DFT-s-OFDM PI/2 BPSK	1@1	23.2	19.47	0.0540	0.0885
12	15	10	142200	711	DFT-s-OFDM QPSK	1@1	23.29	19.56	0.0551	0.0904
12	15	10	142200	711	DFT-s-OFDM 16 QAM	1@1	22.37	18.64	0.0446	0.0731

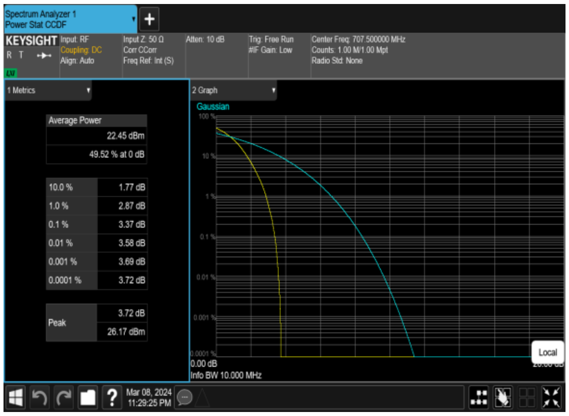
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00035	**PASS**	NV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00147	**PASS**	LV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	-0.00153	**PASS**	HV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00362	**PASS**	-30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00412	**PASS**	-20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00368	**PASS**	-10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00471	**PASS**	0℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	-0.00526	**PASS**	10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00635	**PASS**	20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00423	**PASS**	30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	-0.00416	**PASS**	40℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.00359	**PASS**	50℃

Peak to Average Ratio

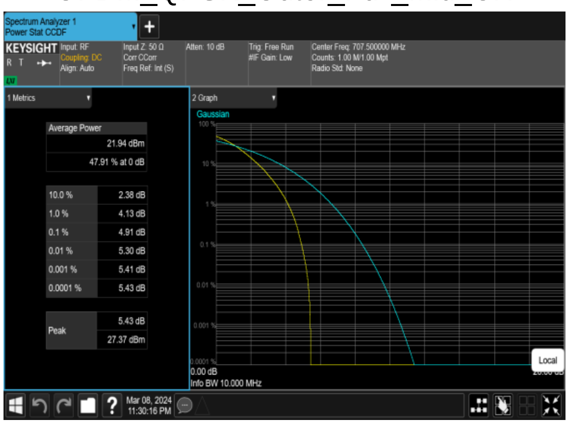
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	75@0	3.37	13	**PASS**
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@0	4.52	13	**PASS**
12	15	15	141500	707.5	DFT-s-OFDM QPSK	75@0	4.91	13	**PASS**
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@0	5.07	13	**PASS**

N12(15M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N12(15M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH

N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

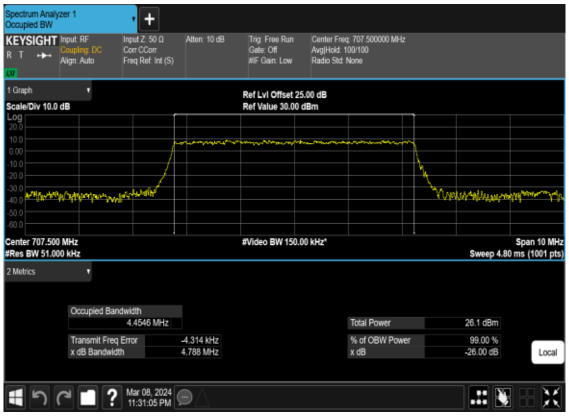


N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

Occupied Bandwidth

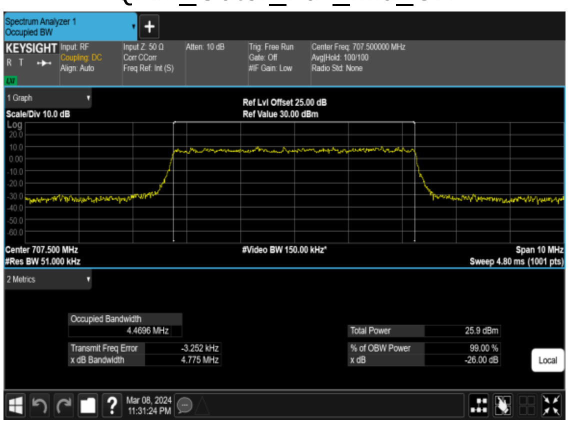
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
12	15	5	141500	707.5	CP-OFDM QPSK	25@0	4.4546	4.788
12	15	5	141500	707.5	CP-OFDM 16 QAM	25@0	4.4591	4.768
12	15	5	141500	707.5	CP-OFDM 64 QAM	25@0	4.4696	4.775
12	15	5	141500	707.5	CP-OFDM 256 QAM	25@0	4.4736	4.774
12	15	10	141500	707.5	CP-OFDM QPSK	52@0	9.2572	9.716
12	15	10	141500	707.5	CP-OFDM 16 QAM	52@0	9.2567	9.672
12	15	10	141500	707.5	CP-OFDM 64 QAM	52@0	9.2754	9.702
12	15	10	141500	707.5	CP-OFDM 256 QAM	52@0	9.2678	9.662
12	15	15	141500	707.5	CP-OFDM QPSK	79@0	14.07	14.72
12	15	15	141500	707.5	CP-OFDM 16 QAM	79@0	14.098	14.73
12	15	15	141500	707.5	CP-OFDM 64 QAM	79@0	14.083	14.66
12	15	15	141500	707.5	CP-OFDM 256 QAM	79@0	14.082	14.7

N12(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

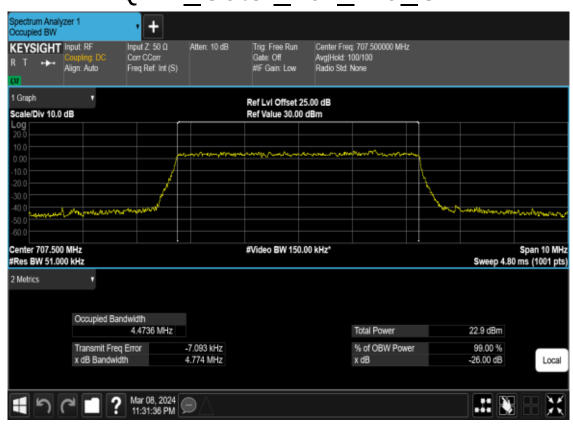


N12(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

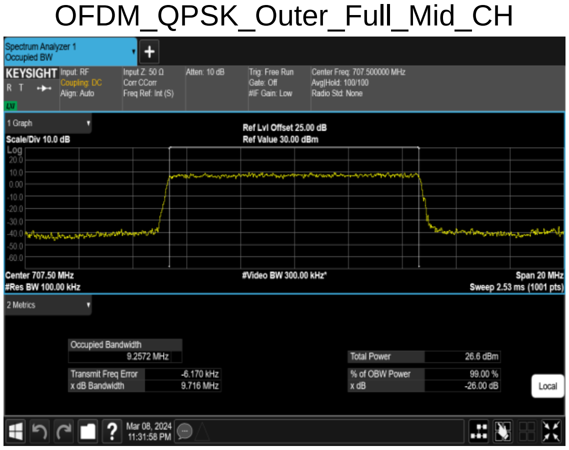
N12(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



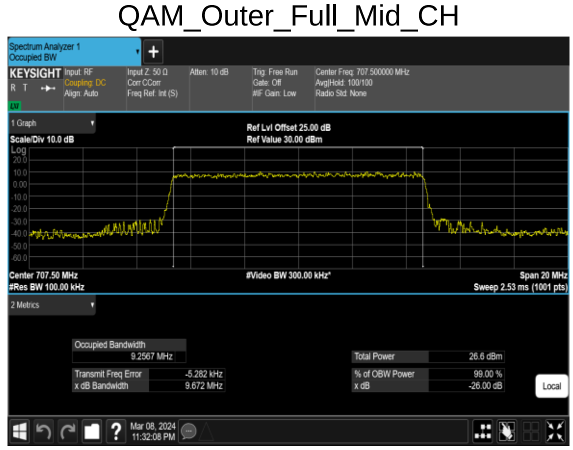
N12(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



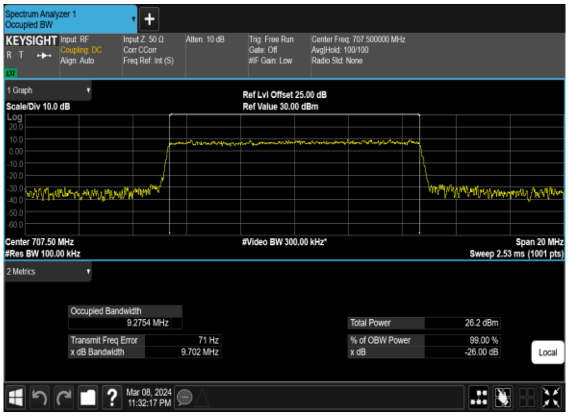
N12(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N12(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

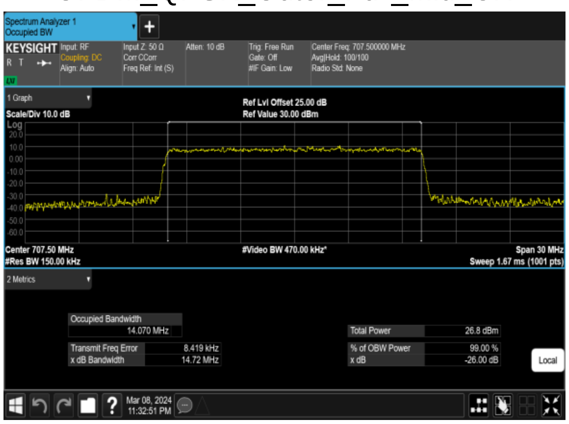


N12(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

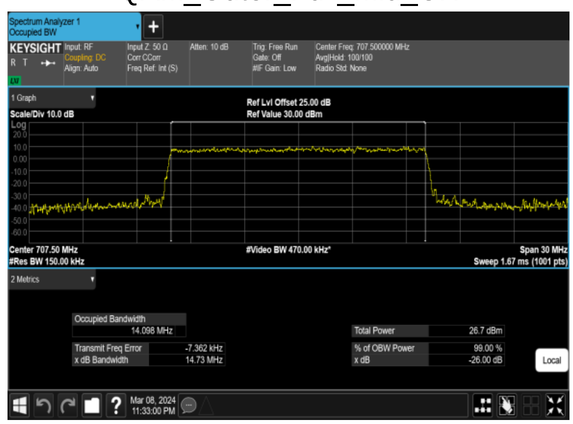


N12(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

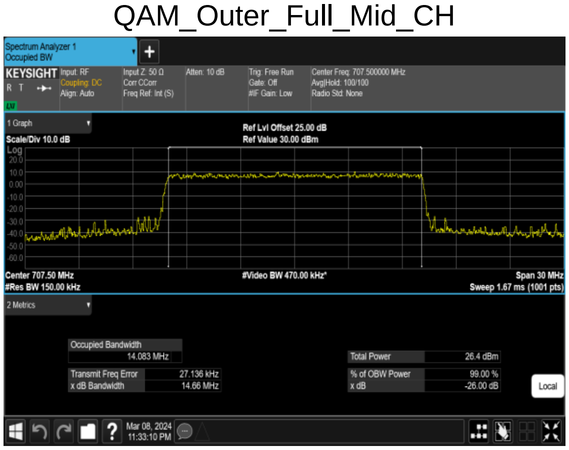
N12(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



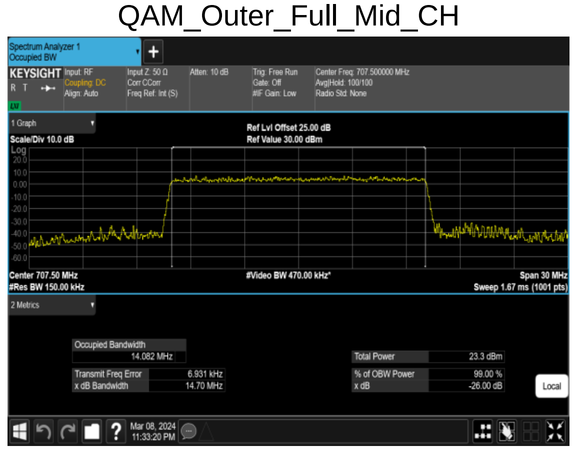
N12(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N12(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N12(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

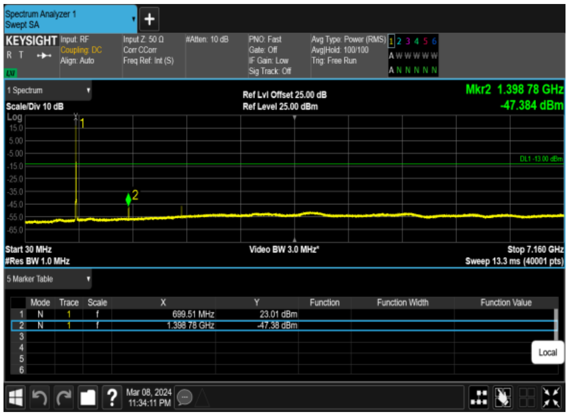


Conducted Spurious Emissions

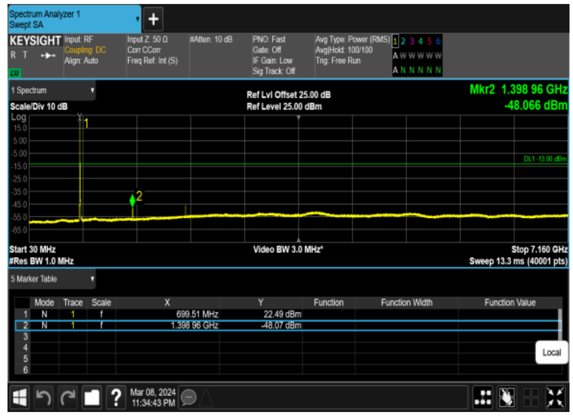
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	---
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	---
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	5	141500	707.5	DFT-s-OFDM BPSK	1@0	see graph	---
12	15	5	141500	707.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	141500	707.5	DFT-s-OFDM QPSK	1@0	see graph	---
12	15	5	141500	707.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	5	142700	713.5	DFT-s-OFDM BPSK	1@0	see graph	---
12	15	5	142700	713.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	142700	713.5	DFT-s-OFDM QPSK	1@0	see graph	---
12	15	5	142700	713.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM BPSK	1@0	see graph	---
12	15	10	140800	704.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM QPSK	1@0	see graph	---
12	15	10	140800	704.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM BPSK	1@0	see graph	---
12	15	10	141500	707.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@0	see graph	---
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM BPSK	1@0	see graph	---

12	15	10	142200	711.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
12	15	10	142200	711.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	15	141300	706.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
12	15	15	141300	706.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	15	141500	707.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
12	15	15	141500	707.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	15	141700	708.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
12	15	15	141700	708.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

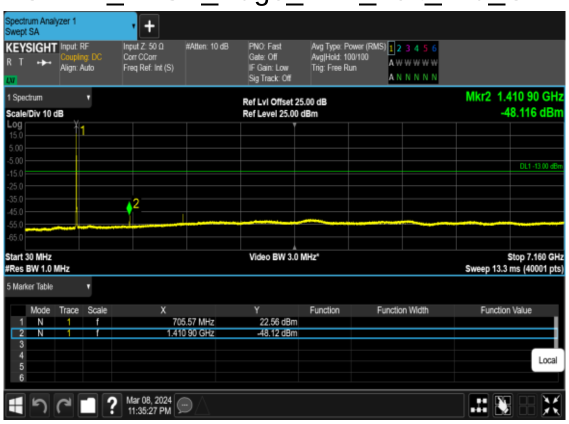
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



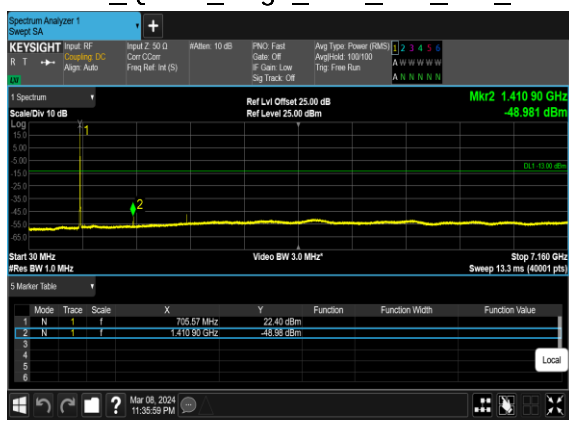
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



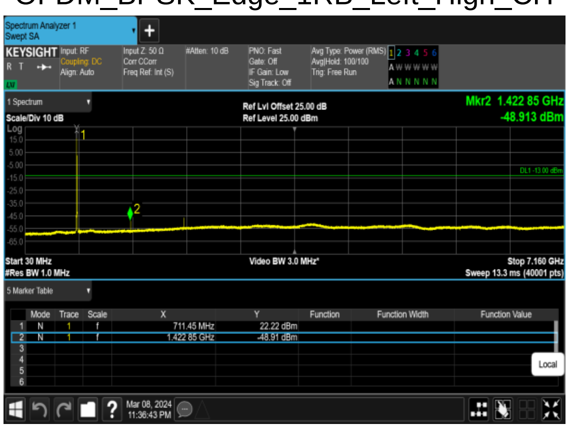
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



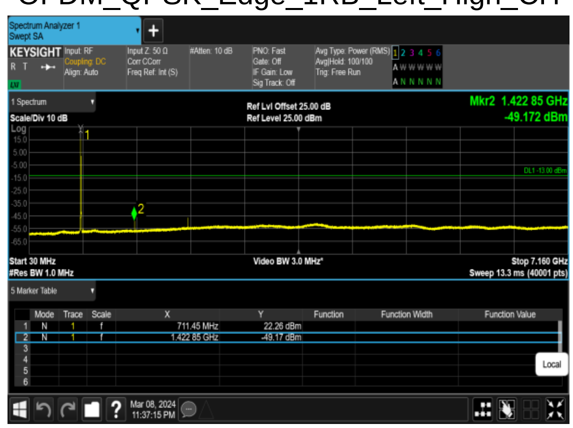
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



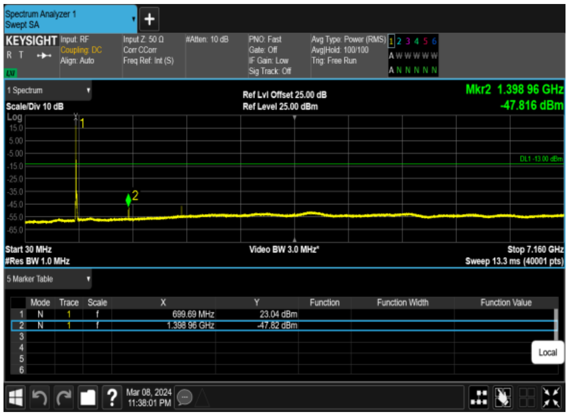
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



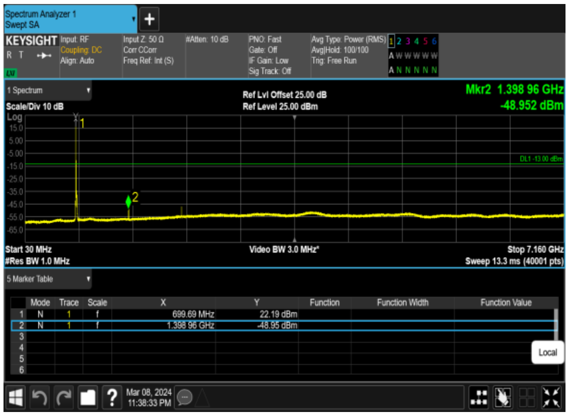
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



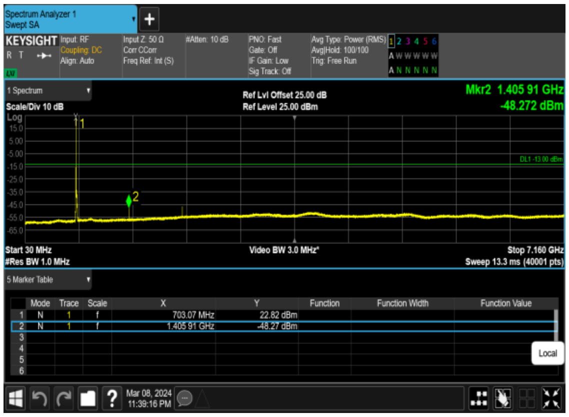
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



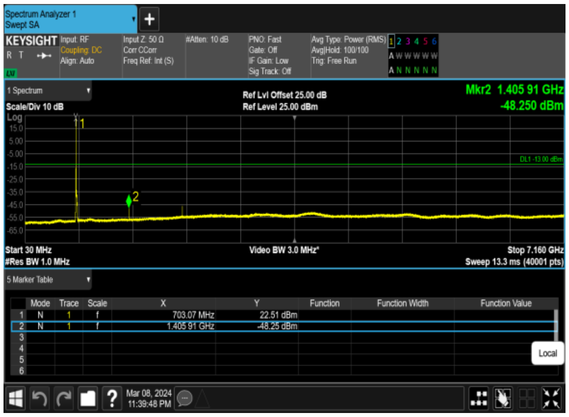
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



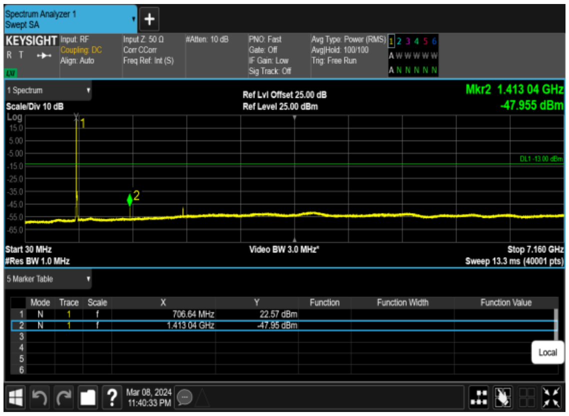
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



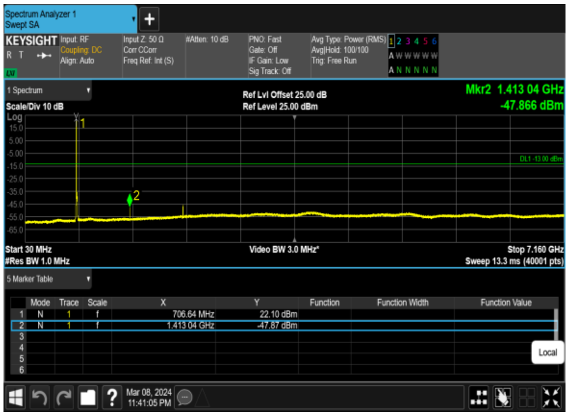
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



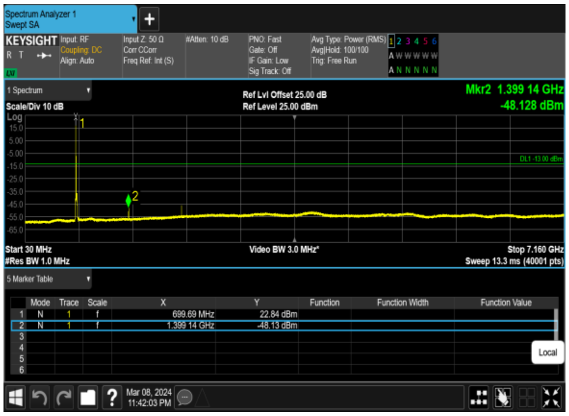
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



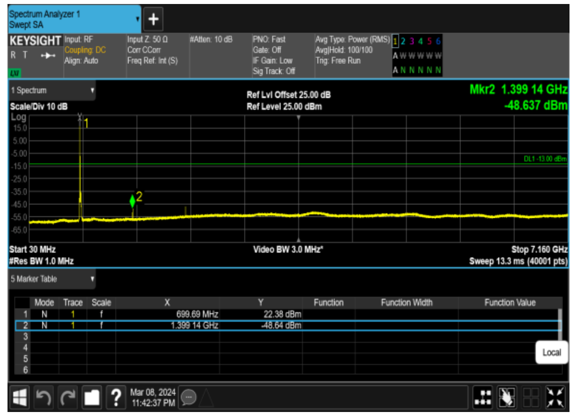
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



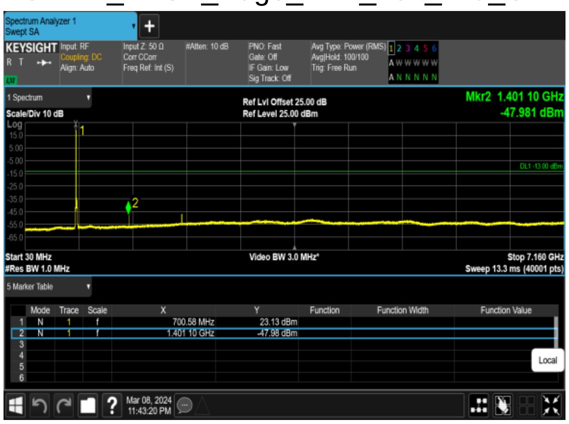
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



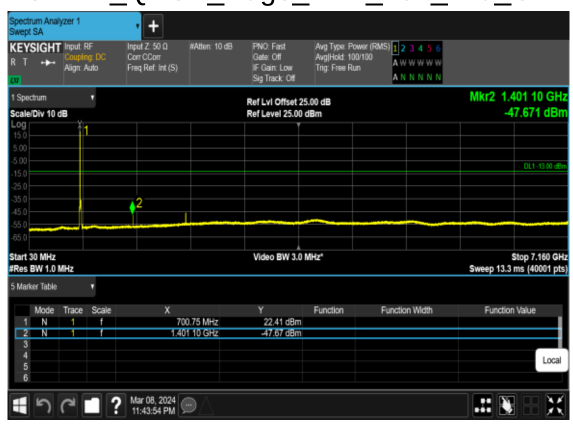
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



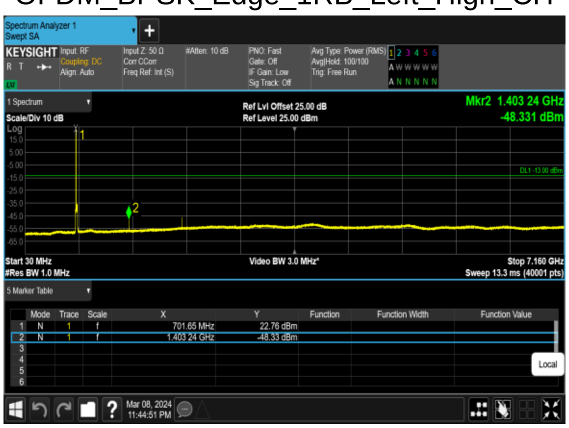
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



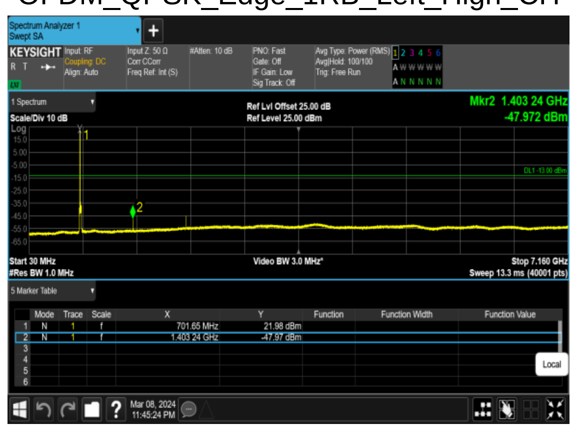
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



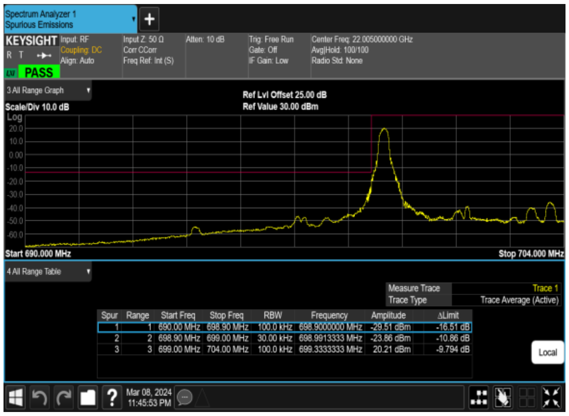
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



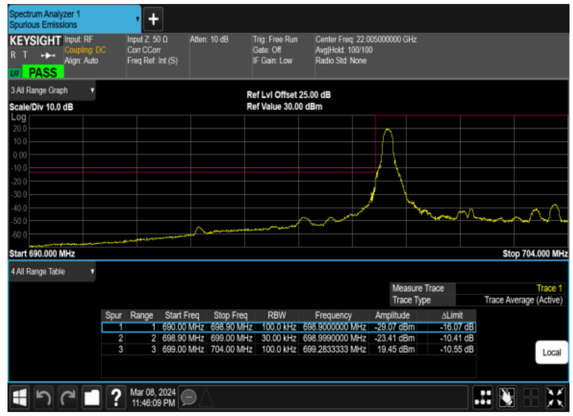
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
12	15	5	142700	713.5	DFT-s-OFDM BPSK	1@24	see graph	**PASS**
12	15	5	142700	713.5	DFT-s-OFDM QPSK	1@24	see graph	**PASS**
12	15	5	142700	713.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
12	15	5	142700	713.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM BPSK	1@51	see graph	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM QPSK	1@51	see graph	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
12	15	15	141300	706.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	15	141300	706.5	DFT-s-OFDM BPSK	75@0	see graph	**PASS**
12	15	15	141300	706.5	DFT-s-OFDM QPSK	75@0	see graph	**PASS**
12	15	15	141700	708.5	DFT-s-OFDM BPSK	1@78	see graph	**PASS**
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@78	see graph	**PASS**
12	15	15	141700	708.5	DFT-s-OFDM BPSK	75@0	see graph	**PASS**
12	15	15	141700	708.5	DFT-s-OFDM QPSK	75@0	see graph	**PASS**

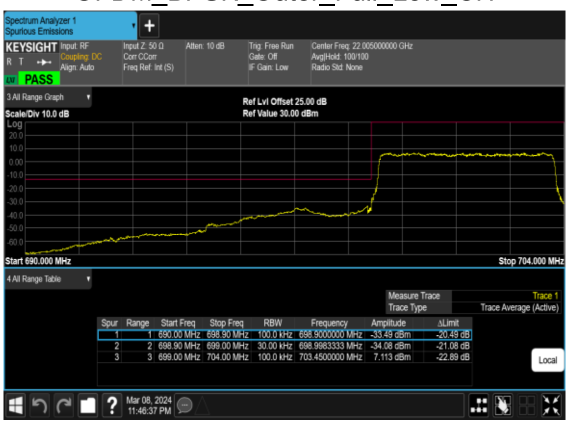
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



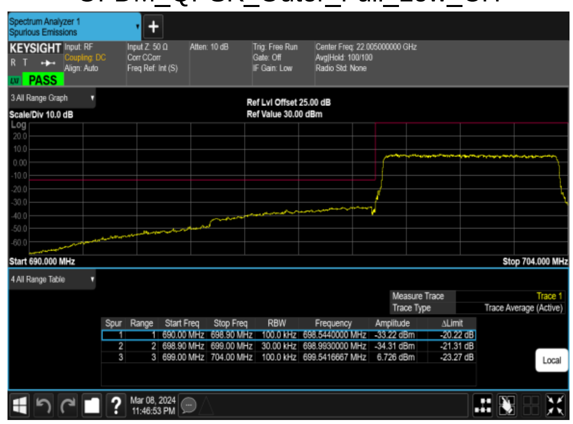
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



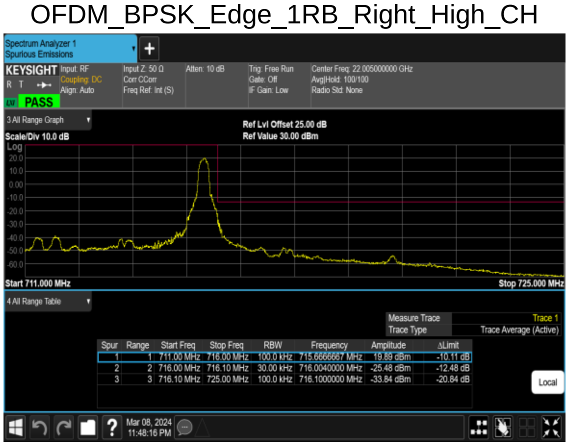
N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



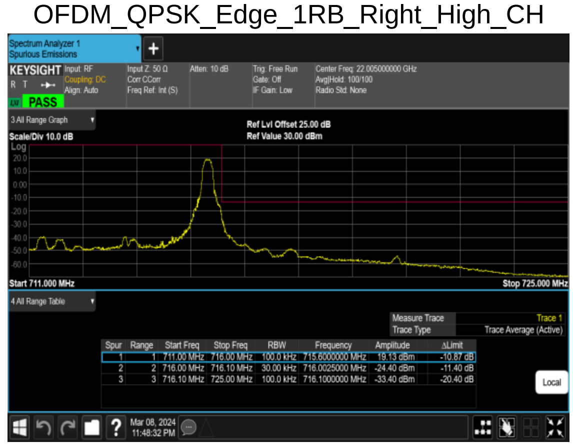
N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



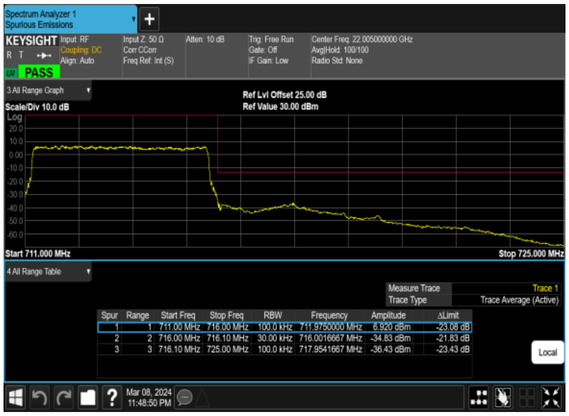
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



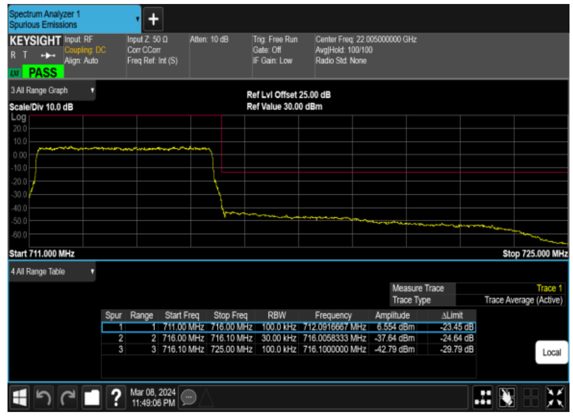
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



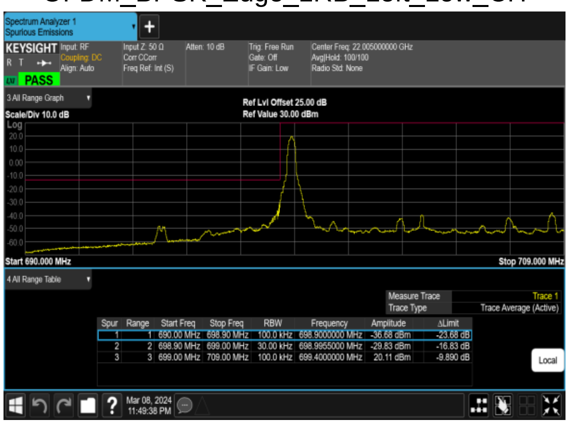
N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



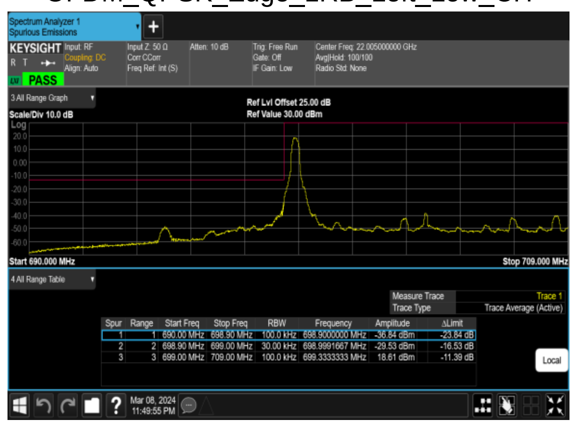
N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



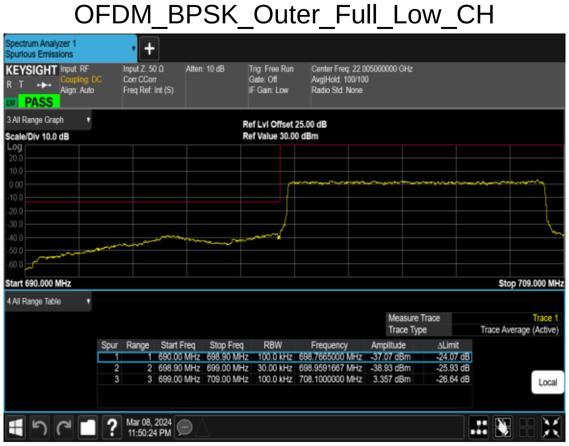
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



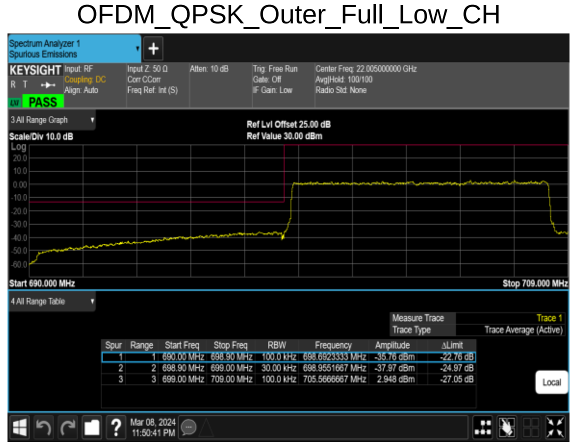
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



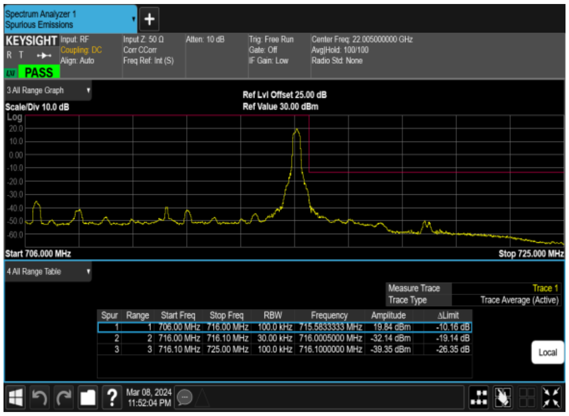
N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



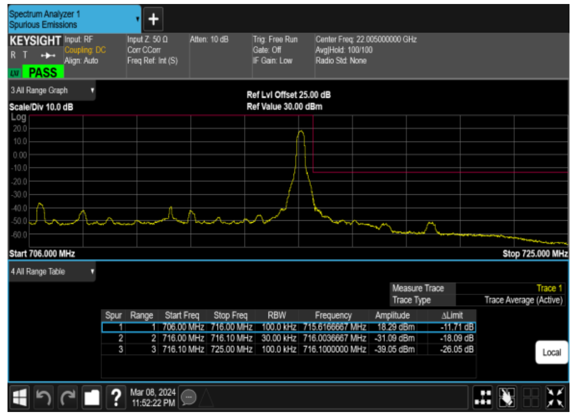
N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



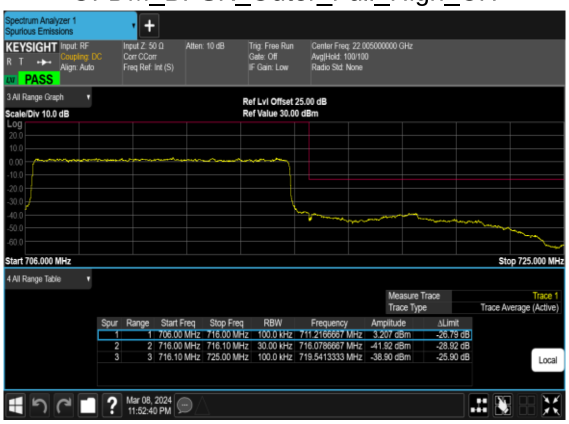
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



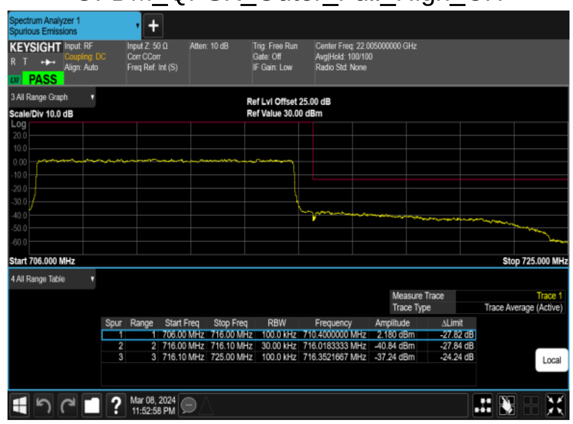
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



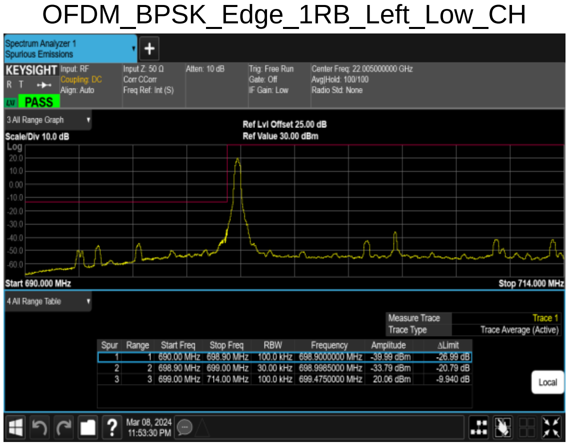
N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



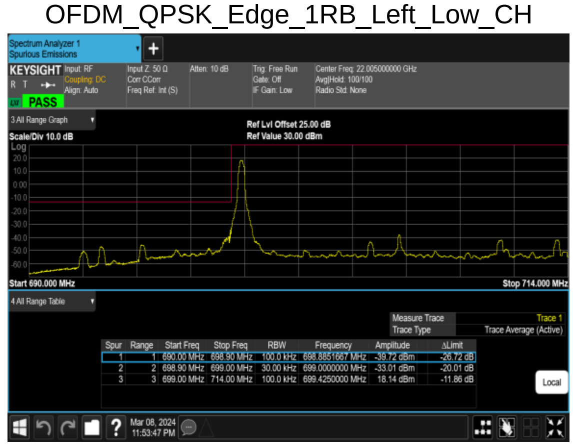
N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



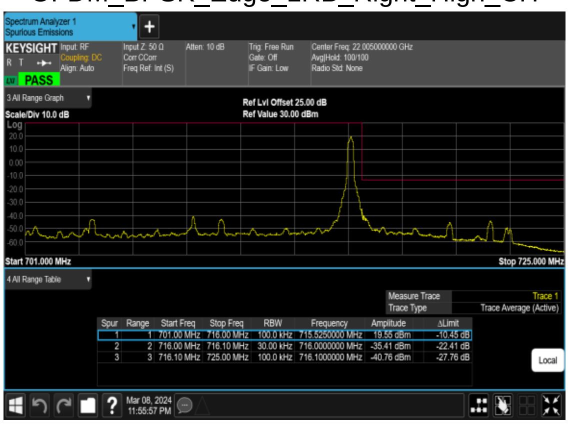
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



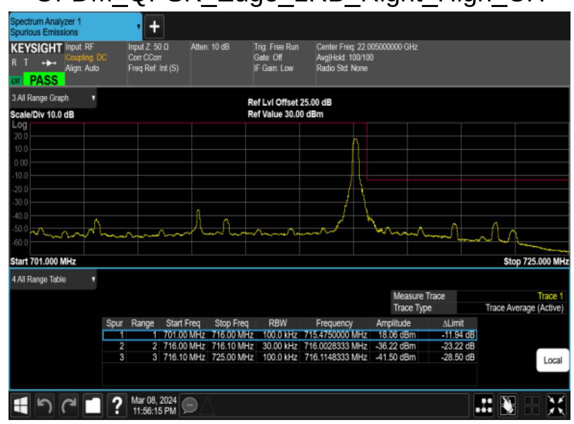
N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

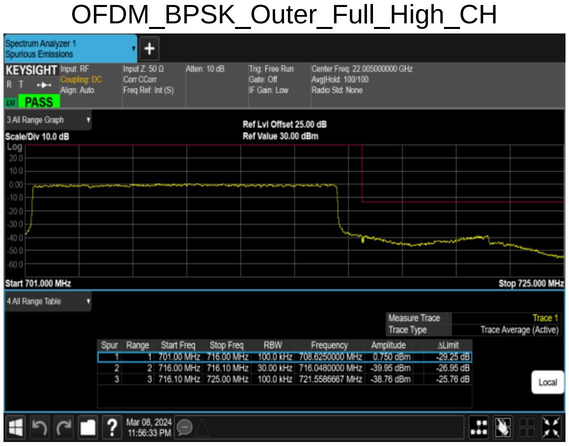
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



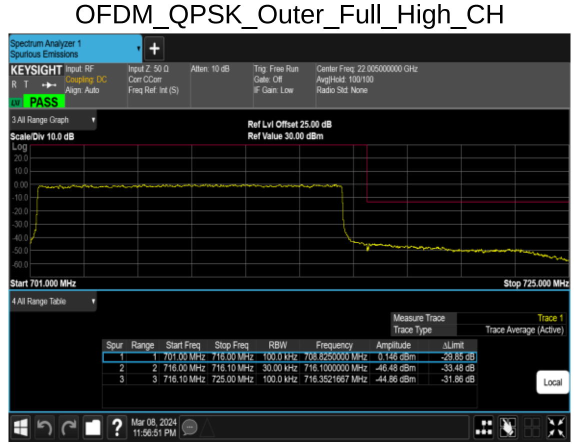
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



FR1 N66 (ANT2)

Transmitter Conducted Output Power And EIRP, $(G_T - L_C)$=-2.18dBi

NR Band	SCS	Band Width	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
66	15	5	342500	1712.5	DFT-s-OFDM PI/2 BPSK	1@1	23.29	21.11	0.1291
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@1	23.53	21.35	0.1365
66	15	5	342500	1712.5	DFT-s-OFDM 16 QAM	1@1	22.6	20.42	0.1102
66	15	5	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	22.97	20.79	0.1199
66	15	5	349000	1745	DFT-s-OFDM QPSK	1@1	23.31	21.13	0.1297
66	15	5	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.27	20.09	0.1021
66	15	5	355500	1777.5	DFT-s-OFDM PI/2 BPSK	1@1	23.05	20.87	0.1222
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	1@1	23.41	21.23	0.1327
66	15	5	355500	1777.5	DFT-s-OFDM 16 QAM	1@1	22.59	20.41	0.1099
66	15	10	343000	1715	DFT-s-OFDM PI/2 BPSK	1@1	23.33	21.15	0.1303
66	15	10	343000	1715	DFT-s-OFDM QPSK	1@1	23.95	21.77	0.1503
66	15	10	343000	1715	DFT-s-OFDM 16 QAM	1@1	22.4	20.22	0.1052
66	15	10	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	22.91	20.73	0.1183
66	15	10	349000	1745	DFT-s-OFDM QPSK	1@1	23.22	21.04	0.1271
66	15	10	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.03	19.85	0.0966
66	15	10	355000	1775	DFT-s-OFDM PI/2 BPSK	1@1	23.15	20.97	0.1250
66	15	10	355000	1775	DFT-s-OFDM QPSK	1@1	23.46	21.28	0.1343
66	15	10	355000	1775	DFT-s-OFDM 16 QAM	1@1	22.69	20.51	0.1125
66	15	15	343500	1717.5	DFT-s-OFDM PI/2 BPSK	1@1	23.41	21.23	0.1327
66	15	15	343500	1717.5	DFT-s-OFDM QPSK	1@1	23.68	21.5	0.1413
66	15	15	343500	1717.5	DFT-s-OFDM 16 QAM	1@1	22.28	20.1	0.1023
66	15	15	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.05	20.87	0.1222
66	15	15	349000	1745	DFT-s-OFDM QPSK	1@1	23.35	21.17	0.1309
66	15	15	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.54	20.36	0.1086
66	15	15	354500	1772.5	DFT-s-OFDM PI/2 BPSK	1@1	23.26	21.08	0.1282
66	15	15	354500	1772.5	DFT-s-OFDM QPSK	1@1	23.69	21.51	0.1416
66	15	15	354500	1772.5	DFT-s-OFDM 16 QAM	1@1	22.19	20.01	0.1002
66	15	20	344000	1720	DFT-s-OFDM PI/2 BPSK	1@1	23.36	21.18	0.1312
66	15	20	344000	1720	DFT-s-OFDM QPSK	1@1	23.95	21.77	0.1503
66	15	20	344000	1720	DFT-s-OFDM 16 QAM	1@1	22.7	20.52	0.1127
66	15	20	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.02	20.84	0.1213
66	15	20	349000	1745	DFT-s-OFDM QPSK	1@1	23.26	21.08	0.1282
66	15	20	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.19	20.01	0.1002
66	15	20	354000	1770	DFT-s-OFDM PI/2 BPSK	1@1	23.36	21.18	0.1312
66	15	20	354000	1770	DFT-s-OFDM QPSK	1@1	23.67	21.49	0.1409
66	15	20	354000	1770	DFT-s-OFDM 16 QAM	1@1	22.5	20.32	0.1076
66	15	25	344500	1722.5	DFT-s-OFDM PI/2 BPSK	1@1	23.2	21.02	0.1265
66	15	25	344500	1722.5	DFT-s-OFDM QPSK	1@1	23.49	21.31	0.1352
66	15	25	344500	1722.5	DFT-s-OFDM 16 QAM	1@1	22.41	20.23	0.1054
66	15	25	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	22.97	20.79	0.1199

66	15	25	349000	1745	DFT-s-OFDM QPSK	1@1	23.23	21.05	0.1274
66	15	25	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.02	19.84	0.0964
66	15	25	353500	1767.5	DFT-s-OFDM PI/2 BPSK	1@1	23.16	20.98	0.1253
66	15	25	353500	1767.5	DFT-s-OFDM QPSK	1@1	23.45	21.27	0.1340
66	15	25	353500	1767.5	DFT-s-OFDM 16 QAM	1@1	22.02	19.84	0.0964
66	15	30	345000	1725	DFT-s-OFDM PI/2 BPSK	1@1	23.28	21.1	0.1288
66	15	30	345000	1725	DFT-s-OFDM QPSK	1@1	23.57	21.39	0.1377
66	15	30	345000	1725	DFT-s-OFDM 16 QAM	1@1	22.66	20.48	0.1117
66	15	30	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.02	20.84	0.1213
66	15	30	349000	1745	DFT-s-OFDM QPSK	1@1	23.36	21.18	0.1312
66	15	30	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.29	20.11	0.1026
66	15	30	353000	1765	DFT-s-OFDM PI/2 BPSK	1@1	23.18	21	0.1259
66	15	30	353000	1765	DFT-s-OFDM QPSK	1@1	23.47	21.29	0.1346
66	15	30	353000	1765	DFT-s-OFDM 16 QAM	1@1	22.84	20.66	0.1164
66	15	35	345500	1727.5	DFT-s-OFDM PI/2 BPSK	1@1	23.2	21.02	0.1265
66	15	35	345500	1727.5	DFT-s-OFDM QPSK	1@1	23.49	21.31	0.1352
66	15	35	345500	1727.5	DFT-s-OFDM 16 QAM	1@1	22.58	20.4	0.1096
66	15	35	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	22.94	20.76	0.1191
66	15	35	349000	1745	DFT-s-OFDM QPSK	1@1	23.28	21.1	0.1288
66	15	35	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.21	20.03	0.1007
66	15	35	352500	1762.5	DFT-s-OFDM PI/2 BPSK	1@1	23.1	20.92	0.1236
66	15	35	352500	1762.5	DFT-s-OFDM QPSK	1@1	23.39	21.21	0.1321
66	15	35	352500	1762.5	DFT-s-OFDM 16 QAM	1@1	22.76	20.58	0.1143
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	108@54	23.81	21.63	0.1455
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	1@1	23.85	21.67	0.1469
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	1@214	23.83	21.65	0.1462
66	15	40	346000	1730	DFT-s-OFDM QPSK	108@54	23.77	21.59	0.1442
66	15	40	346000	1730	DFT-s-OFDM QPSK	1@1	23.98	21.80	0.1514
66	15	40	346000	1730	DFT-s-OFDM QPSK	1@214	23.88	21.7	0.1479
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	108@54	22.9	20.72	0.1180
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	1@1	22.96	20.78	0.1197
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	1@214	22.95	20.77	0.1194
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	108@54	21.36	19.18	0.0828
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	1@1	21.46	19.28	0.0847
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	1@214	21.45	19.27	0.0845
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	108@54	19.41	17.23	0.0528
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	1@1	19.28	17.1	0.0513
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	1@214	19.22	17.04	0.0506
66	15	40	346000	1730	CP-OFDM QPSK	108@54	22.36	20.18	0.1042
66	15	40	346000	1730	CP-OFDM QPSK	1@1	22.64	20.46	0.1112
66	15	40	346000	1730	CP-OFDM QPSK	1@214	22.37	20.19	0.1045
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	108@54	23.8	21.62	0.1452
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.66	21.48	0.1406
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	1@214	23.79	21.61	0.1449
66	15	40	349000	1745	DFT-s-OFDM QPSK	108@54	23.81	21.63	0.1455
66	15	40	349000	1745	DFT-s-OFDM QPSK	1@1	23.86	21.68	0.1472
66	15	40	349000	1745	DFT-s-OFDM QPSK	1@214	23.95	21.77	0.1503
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	108@54	22.9	20.72	0.1180

66	15	40	349000	1745	DFT-s-OFDM 16 QAM	1@1	23.01	20.83	0.1211
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	1@214	23.19	21.01	0.1262
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	108@54	21.39	19.21	0.0834
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	1@1	21.56	19.38	0.0867
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	1@214	21.73	19.55	0.0902
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	108@54	19.37	17.19	0.0524
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	1@1	19.37	17.19	0.0524
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	1@214	19.56	17.38	0.0547
66	15	40	349000	1745	CP-OFDM QPSK	108@54	22.36	20.18	0.1042
66	15	40	349000	1745	CP-OFDM QPSK	1@1	22.52	20.34	0.1081
66	15	40	349000	1745	CP-OFDM QPSK	1@214	22.47	20.29	0.1069
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	108@54	23.94	21.76	0.1500
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	1@1	23.54	21.36	0.1368
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	1@214	23.88	21.7	0.1479
66	15	40	352000	1760	DFT-s-OFDM QPSK	108@54	23.96	21.78	0.1507
66	15	40	352000	1760	DFT-s-OFDM QPSK	1@1	23.79	21.61	0.1449
66	15	40	352000	1760	DFT-s-OFDM QPSK	1@214	23.95	21.77	0.1503
66	15	40	352000	1760	DFT-s-OFDM 16 QAM	108@54	23.1	20.92	0.1236
66	15	40	352000	1760	DFT-s-OFDM 16 QAM	1@1	22.9	20.72	0.1180
66	15	40	352000	1760	DFT-s-OFDM 16 QAM	1@214	23.26	21.08	0.1282
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	108@54	21.49	19.31	0.0853
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	1@1	21.44	19.26	0.0843
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	1@214	21.74	19.56	0.0904
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	108@54	19.53	17.35	0.0543
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	1@1	19.03	16.85	0.0484
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	1@214	19.34	17.16	0.0520
66	15	40	352000	1760	CP-OFDM QPSK	108@54	22.48	20.3	0.1072
66	15	40	352000	1760	CP-OFDM QPSK	1@1	22.52	20.34	0.1081
66	15	40	352000	1760	CP-OFDM QPSK	1@214	22.49	20.31	0.1074

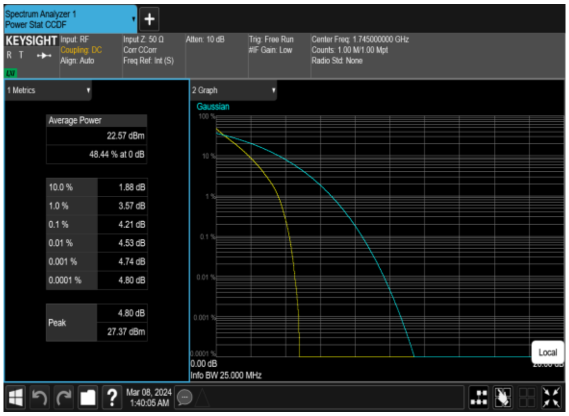
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00227	**PASS**	NV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00366	**PASS**	LV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00141	**PASS**	HV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00228	**PASS**	-30℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	-0.00316	**PASS**	-20℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00142	**PASS**	-10℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00329	**PASS**	0℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	-0.00457	**PASS**	10℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00526	**PASS**	20℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00374	**PASS**	30℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00416	**PASS**	40℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.00389	**PASS**	50℃

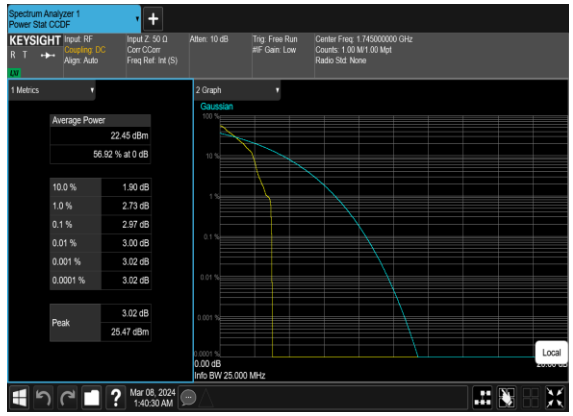
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
66	15	20	349000	1745.0	DFT-s-OFDM PI/2 BPSK	100@0	4.21	13	**PASS**
66	15	20	349000	1745.0	DFT-s-OFDM PI/2 BPSK	1@0	2.97	13	**PASS**
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	5.12	13	**PASS**
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	1@0	3.67	13	**PASS**

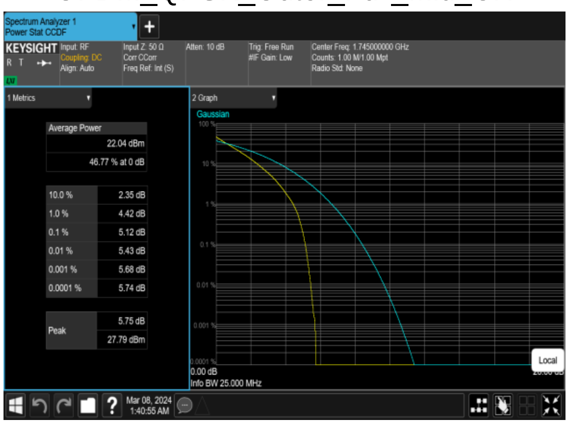
N66(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N66(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N66(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



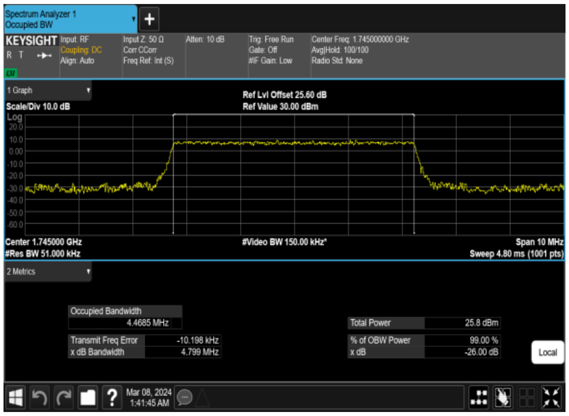
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
66	15	5	349000	1745.0	CP-OFDM QPSK	25@0	4.4685	4.799
66	15	5	349000	1745.0	CP-OFDM 16 QAM	25@0	4.4772	4.783
66	15	5	349000	1745.0	CP-OFDM 64 QAM	25@0	4.4737	4.787
66	15	5	349000	1745.0	CP-OFDM 256 QAM	25@0	4.4745	4.805
66	15	10	349000	1745.0	CP-OFDM QPSK	52@0	9.2646	9.751
66	15	10	349000	1745.0	CP-OFDM 16 QAM	52@0	9.2623	9.766
66	15	10	349000	1745.0	CP-OFDM 64 QAM	52@0	9.2859	9.731
66	15	10	349000	1745.0	CP-OFDM 256 QAM	52@0	9.2658	9.705
66	15	15	349000	1745.0	CP-OFDM QPSK	79@0	14.07	14.68
66	15	15	349000	1745.0	CP-OFDM 16 QAM	79@0	14.124	14.64
66	15	15	349000	1745.0	CP-OFDM 64 QAM	79@0	14.133	14.69
66	15	15	349000	1745.0	CP-OFDM 256 QAM	79@0	14.116	14.7
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	18.89	19.63
66	15	20	349000	1745.0	CP-OFDM 16 QAM	106@0	18.934	19.69
66	15	20	349000	1745.0	CP-OFDM 64 QAM	106@0	18.9	19.69
66	15	20	349000	1745.0	CP-OFDM 256 QAM	106@0	18.91	19.63
66	15	25	349000	1745.0	CP-OFDM QPSK	133@0	23.71	24.6
66	15	25	349000	1745.0	CP-OFDM 16 QAM	133@0	23.779	24.69
66	15	25	349000	1745.0	CP-OFDM 64 QAM	133@0	23.712	24.66
66	15	25	349000	1745.0	CP-OFDM 256 QAM	133@0	23.771	24.65
66	15	30	349000	1745.0	CP-OFDM QPSK	160@0	28.494	29.7
66	15	30	349000	1745.0	CP-OFDM 16 QAM	160@0	28.496	29.58
66	15	30	349000	1745.0	CP-OFDM 64 QAM	160@0	28.545	29.57
66	15	30	349000	1745.0	CP-OFDM 256 QAM	160@0	28.497	29.61
66	15	35	349000	1745.0	CP-OFDM QPSK	188@0	33.595	34.69
66	15	35	349000	1745.0	CP-OFDM 16 QAM	188@0	33.569	34.78

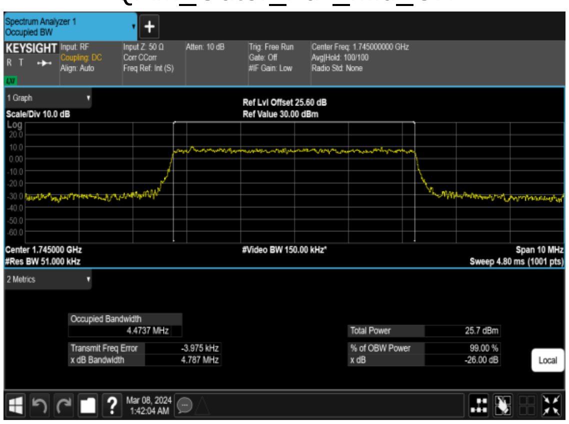
66	15	35	349000	1745.0	CP-OFDM 64 QAM	188@0	33.651	34.74
66	15	35	349000	1745.0	CP-OFDM 256 QAM	188@0	33.495	34.83
66	15	40	349000	1745.0	CP-OFDM QPSK	216@0	38.578	39.94
66	15	40	349000	1745.0	CP-OFDM 16 QAM	216@0	38.608	39.86
66	15	40	349000	1745.0	CP-OFDM 64 QAM	216@0	38.509	39.89
66	15	40	349000	1745.0	CP-OFDM 256 QAM	216@0	38.578	39.94

N66(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

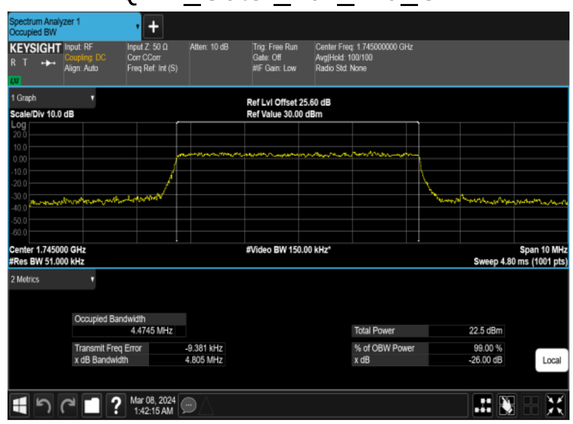


N66(5M)_CP-OFDM_16QAM_Outer_Full_Mid_CH

N66(5M)_CP-OFDM_64QAM_Outer_Full_Mid_CH



N66(5M)_CP-OFDM_256QAM_Outer_Full_Mid_CH



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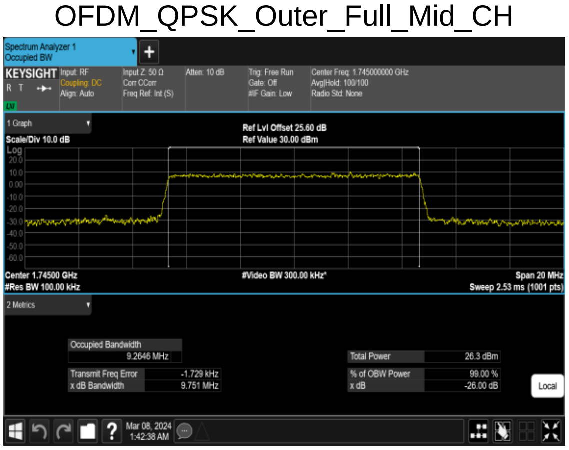

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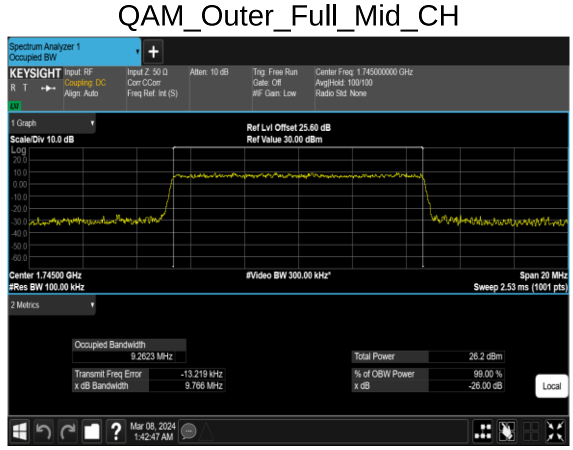

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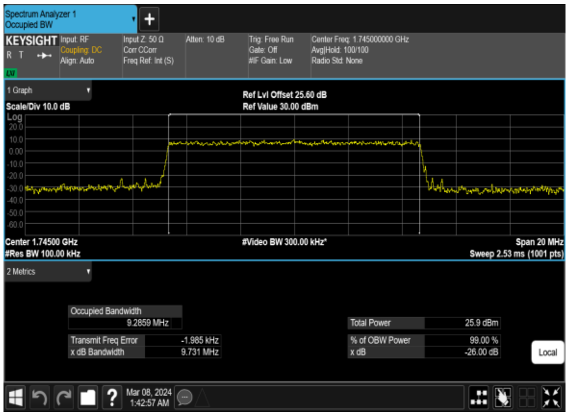

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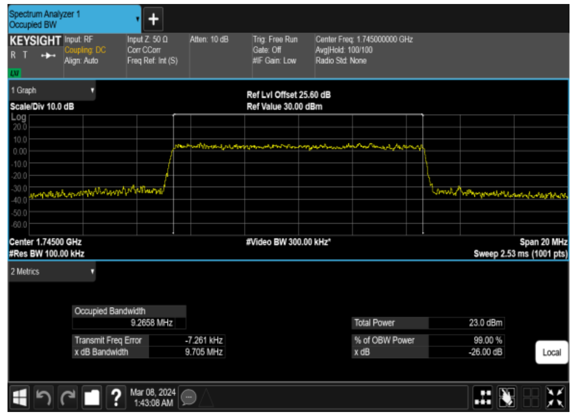
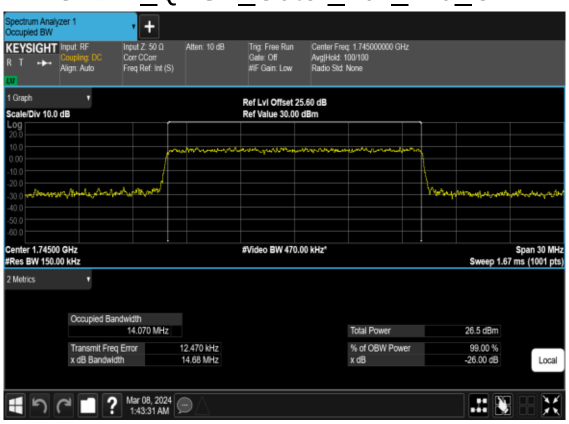
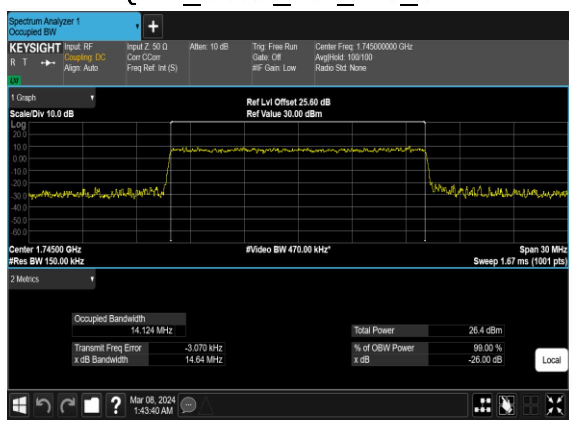


N66(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N66(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



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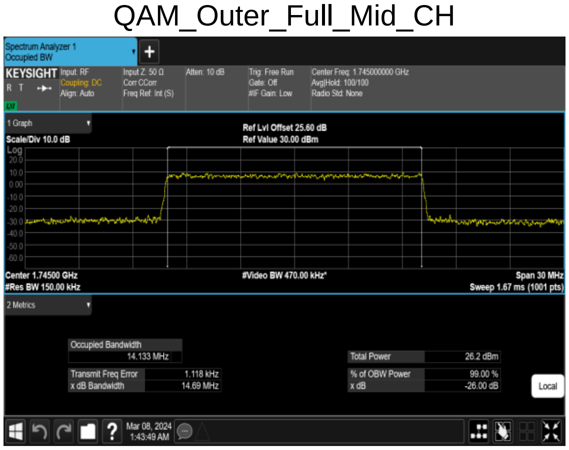

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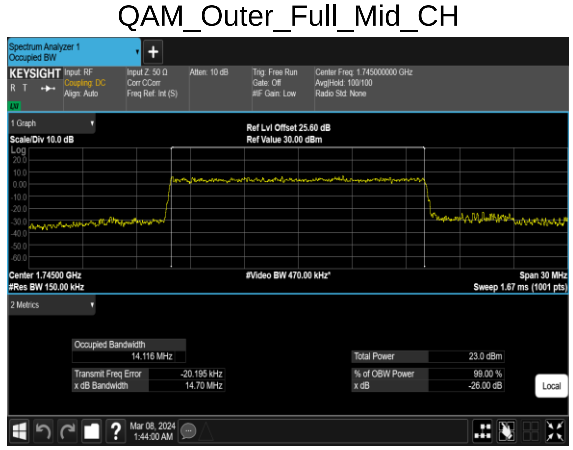
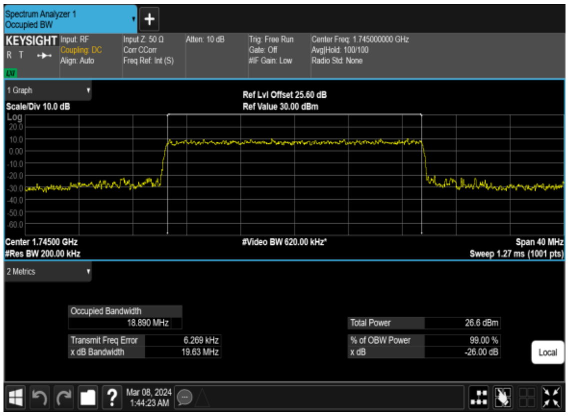
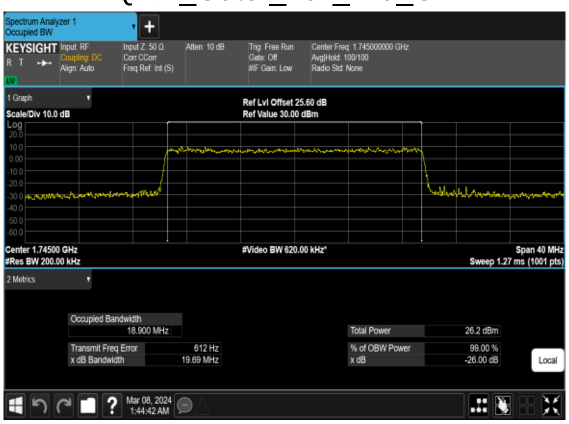


N66(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N66(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N66(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



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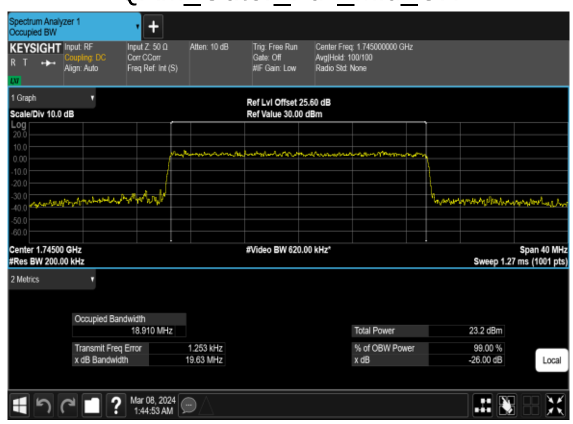
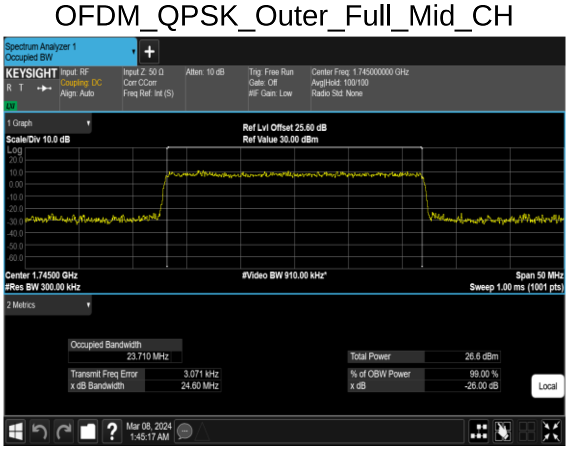


N66(25M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



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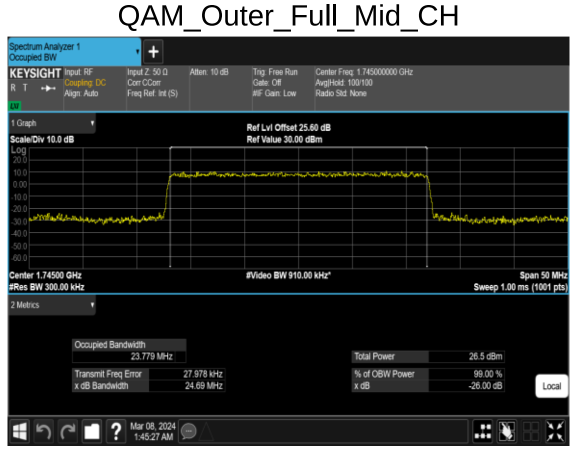

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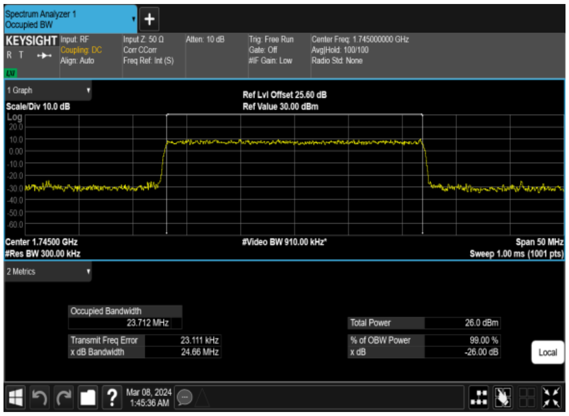
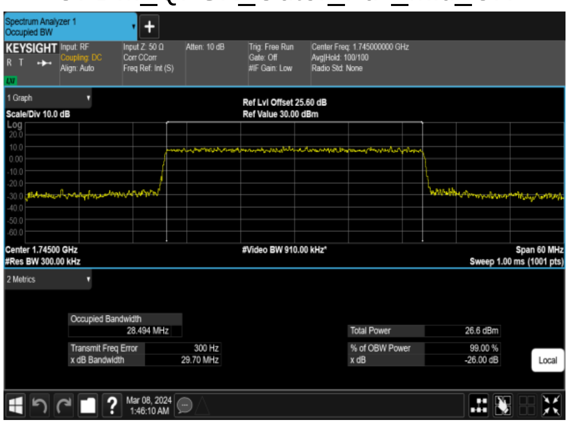


N66(25M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N66(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



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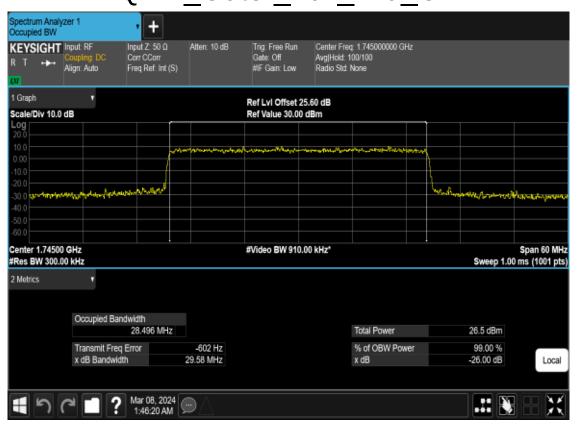
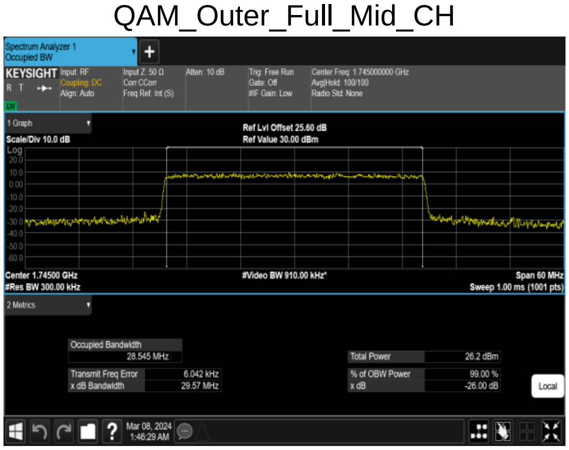


N66(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N66(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH