FCC RF Test Report

APPLICANT	:	ASKEY COMPUTER CORP.
EQUIPMENT	:	Module
BRAND NAME	:	ASKEY
MODEL NAME	:	NMQ2210
FCC ID	:	H8NNMQ2210-D187
STANDARD	:	47 CFR Part 27
CLASSIFICATION	:	PCS Licensed Transmitter (PCB)
TEST DATE(S)	:	Aug. 13, 2024 ~ Sep. 02, 2024

We, Sporton International Inc. (ShenZhen), 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. (ShenZhen), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG471806I	Rev. 01	Initial issue of report	Dec. 05, 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(h)(2)	Equivalent Isotropic Radiated Power (5G NR n41)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (5G NR 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 n70) (5G NR n12, n71)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n41)	§27.53(m)(4)		
3.8	§2.1051 §27.53(h) §27.53(g)	Conducted Spurious Emission (5G NR n70) (5G NR n12, n71)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n41)	< 55+10log$_{10}$(P[Watts])		
3.9	§2.1055 §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 n70) (5G NR n12, n71)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 3.17 dB at 12722.50 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n41)	< 55+10log$_{10}$(P[Watts])		

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

ASKEY COMPUTER CORP.

10F, No.119, Jiankang Rd., Zhonghe Dist., New Taipei City, Taiwan

1.2 Manufacturer

ASKEY COMPUTER CORP.

10F, No.119, Jiankang Rd., Zhonghe Dist., New Taipei City, Taiwan

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Module
Brand Name	ASKEY
Model Name	NMQ2210
FCC ID	H8NNMQ2210-D187
IMEI Code	Conducted: 355241830363892 Radiation: 355241830363652
HW Version	REV3
SW Version	NMQ2210_NA_V4.2.25.1
EUT Stage	Production Unit

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n12 : 699 MHz ~ 716 MHz 5G NR n41 : 2496 MHz ~ 2690 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 n41 : 2496 MHz ~ 2690 MHz 5G NR n70 : 1995 MHz ~ 2020 MHz 5G NR n71: 617 MHz ~ 652 MHz
Bandwidth	n12, n70 : 5MHz / 10MHz / 15MHz n71: 5MHz / 10MHz / 15MHz / 20MHz n41 : 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz
SCS	15kHz for FDD Bands, 30kHz for TDD Bands
Antenna Gain	<Ant.0> n12: 0.93 dBi n70: 2.71 dBi n71: 0.93 dBi <Ant.0/1/2/3> n41: 2.71 dBi

Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. Only the maximum conducted power & EIRP of Ant.0 for 5G NR n41 is shown in the report.
2. The device supports n41(1T4R) SRS resources on Ant.0/1/2/3, only the test data of worst Ant.0 is showed in the report according to the maximum power.
3. 5G NR bands support SA mode and NSA mode, n12/n70 support for SA mode only. According to the maximum power between SA and NSA mode, SA covers NSA mode.
4. 5G NR n41 supports UL MIMO mode for Ant.0+3, and only supports CP-OFDM modulation in UL MIMO mode.
5. The 5G NR n41 MIMO mode is completely uncorrelated, so the directional gain is selected the maximum gain among all antennas.
6. For UL MIMO mode, the conducted BE/Spurious are tested at single antenna port and add 10*log(N_{ANT}) according to KDB 662911 D01.
7. The device supports HPUE(PC2) for 5G NR n41 SISO mode, and HPUE(PC1.5) for n41 UL MIMO mode.
8. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown in the report.
9. 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 Conducted Power and Emission Designator

5G NR n12		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	701.5 ~ 713.5	0.2742	4M48G7D	0.2183	4M49W7D
10	704.0~ 711.0	0.2767	9M30G7D	0.2223	9M30W7D
15	706.5 ~ 708.5	0.2877	14M1G7D	0.2296	14M1W7D
5G NR n70		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	1697.5 ~ 1707.5	0.2280	4M47G7D	0.1832	44M8W7D
10	1700.0 ~ 1705.0	0.2280	9M27G7D	0.1811	9M28W7D
15	1702.5	0.2317	14M1G7D	0.1845	14M1W7D

5G NR n71		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.2655	4M47G7D	0.2193	4M48W7D
10	668.0 ~ 693.0	0.2655	9M26G7D	0.2148	9M29W7D
15	670.5 ~ 690.5	0.2685	14M1G7D	0.2143	14M1W7D
20	673.0 ~ 688.0	0.2754	18M9G7D	0.2213	18M9W7D
5G NR n41		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
20	2506.02 ~ 2679.99	0.4592	18M2G7D	0.3656	18M2W7D
30	2511.00 ~ 2674.98	0.4467	27M9G7D	0.3508	27M9W7D
40	2516.01 ~ 2670.00	0.4519	37M8G7D	0.3548	38M0W7D
50	2521.02 ~ 2664.99	0.4295	47M5G7D	0.3443	47M6W7D
60	2526.00 ~ 2659.98	0.4256	57M8G7D	0.3412	57M9W7D
70	2531.01 ~ 2655.00	0.4140	67M6G7D	0.3350	67M8W7D
80	2536.02 ~ 2649.99	0.4064	77M5G7D	0.3243	77M5W7D
90	2541.00 ~ 2644.98	0.4009	87M3G7D	0.3184	87M6W7D
100	2546.01 ~ 2640.00	0.4732	97M7G7D	0.3715	97M8W7D
5G NR n41 UL MIMO		QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
20	2506.02 ~ 2679.99	0.6209	18M2G7D	0.6081	18M2W7D
30	2511.00 ~ 2674.98	0.6471	27M9G7D	0.6223	27M9W7D
40	2516.01 ~ 2670.00	0.6486	37M9G7D	0.6324	37M9W7D
50	2521.02 ~ 2664.99	0.6324	47M6G7D	0.5902	47M5W7D
60	2526.00 ~ 2659.98	0.6281	58M0G7D	0.5821	58M0W7D
70	2531.01 ~ 2655.00	0.6053	67M5G7D	0.5821	67M7W7D
80	2536.02 ~ 2649.99	0.6095	77M6G7D	0.5572	77M6W7D
90	2541.00 ~ 2644.98	0.5998	87M6G7D	0.5929	87M7W7D
100	2546.01 ~ 2640.00	0.6516	97M7G7D	0.6237	97M8W7D

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

1.7 Testing Location

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

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

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH01-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24

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 (X/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
			

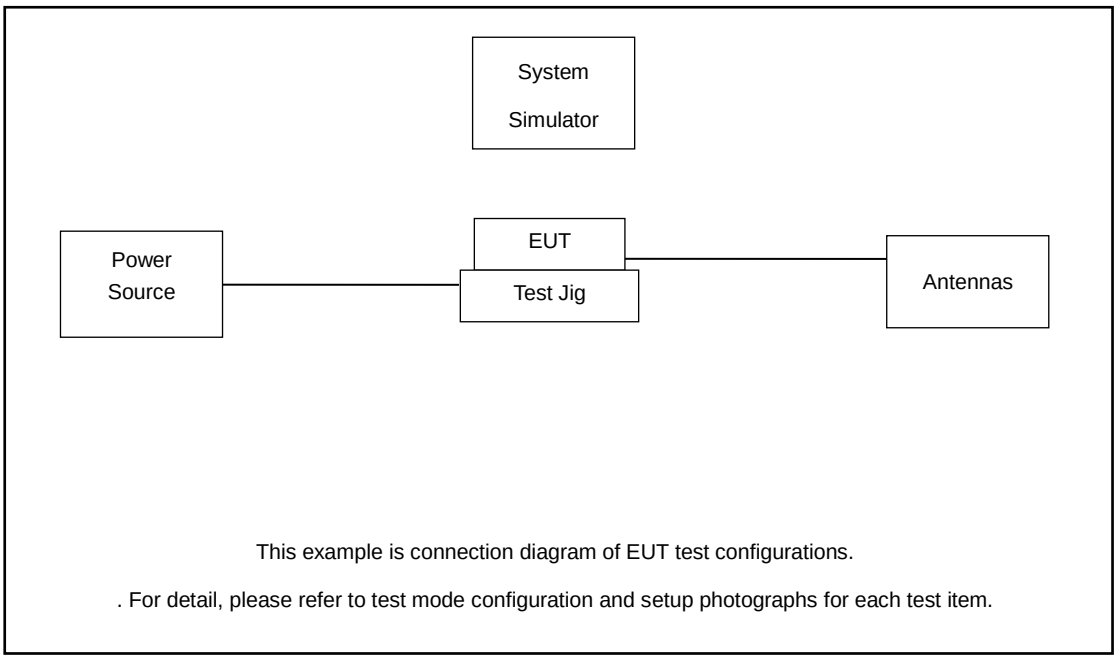
Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #		Test Channel		
		5	10	15	20	25	30	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
Max. Output Power	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n41	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	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	
	n41	-	-	-	v	-									v	v					v		v	
	n70			v	-	-	-	-	-	-	-	-	-	-	v	v					v		v	
	n71				v	-	-	-	-	-	-	-	-	-	v	v					v		v	
26dB and 99% Bandwidth	n12	v	v	v	-	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
	n41	-	-	-	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	
	n71	v	v	v	v	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
Conducted Band Edge	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
	n41	-	-	-	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	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	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
Spurious Emission	n41	-	-	-	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	
	n41	-	-	-	v	-										v					v		v	
	n70			v	-	-	-	-	-	-	-	-	-	-		v					v		v	
	n71				v	-	-	-	-	-	-	-	-	-		v					v		v	
E.R.P / E.I.R.P	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n41	-	-	-	v	-	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	
	n41	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 = 3.8V ；Low Voltage =3.4V.；High Voltage =4.4V

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
4.	Adapter(with cable)	N/A	N/A	N/A	N/A	N/A
5.	Test Jig	N/A	N/A	N/A	N/A	N/A
6.	Antenna	N/A	N/A	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 7.5 dB.

Example :

Offset(dB) = RF cable loss(dB).

= 7.5 (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 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 n41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
70	Channel	506202	518598	531000
	Frequency	2531.01	2592.99	2655
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99

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

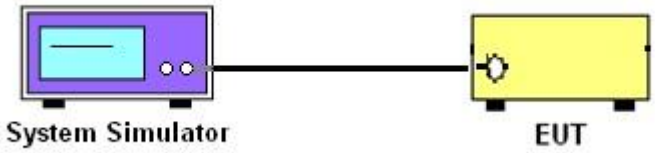
3 Conducted Test Items

3.1 Measuring Instruments

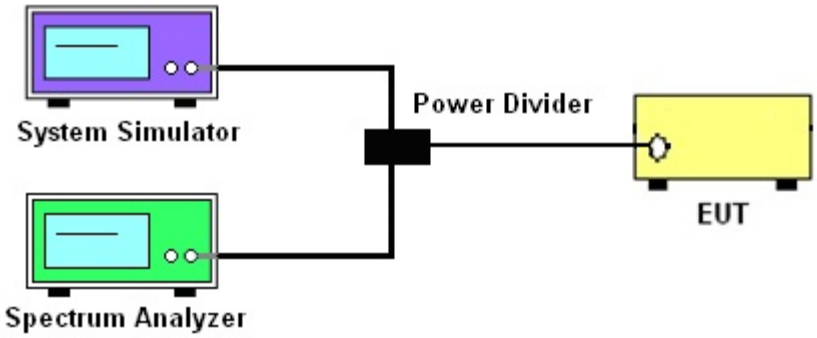
See list of measuring instruments of this test report.

3.2 Test Setup

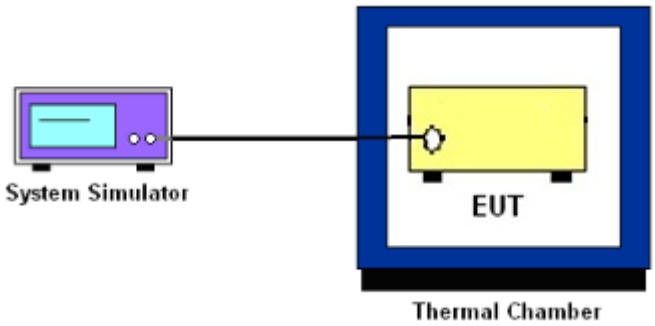
3.2.1 Conducted Output Power



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 2 Watts for 5G NR n41.

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

27.53(m)(4)

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

27.53 (h)

For operations in the 1695 – 1710 MHz and 1710 – 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.

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%/ 2% 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. For 5G NR n41, the other 40 dB, and 55 dB have additionally applied same calculation above.
10. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

For 5G NR n41:

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

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

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
11. For 5G NR n41
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55+ 10log(P)] (dB)
    = [30+ 10log(P)] (dBm) - [55+ 10log(P)] (dB)
    = -25dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

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

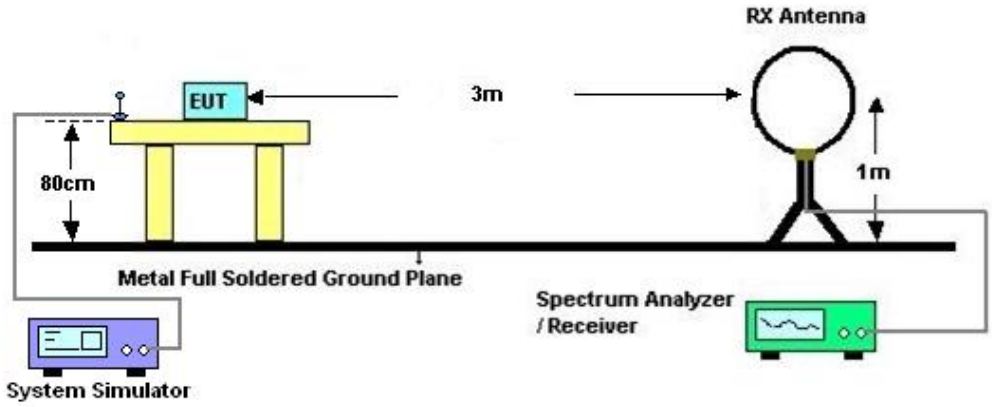
4 Radiated Test Items

4.1 Measuring Instruments

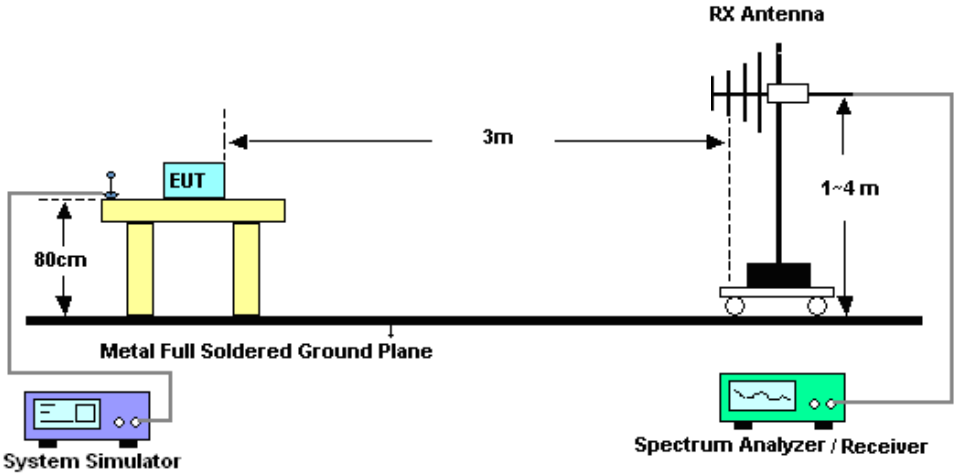
See list of measuring instruments of this test report.

4.2 Test Setup

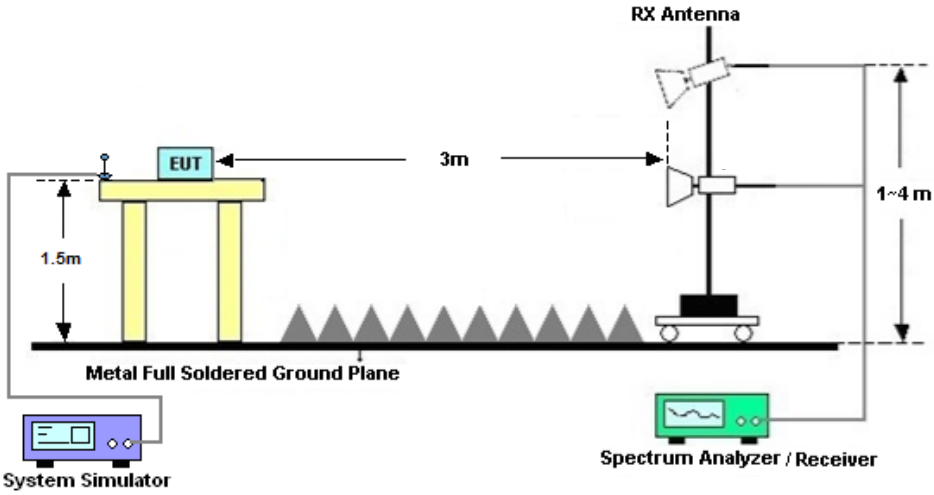
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For 5G NR n41

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

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

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
13. For 5G NR n41:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Aug. 13, 2024~ Aug. 21, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 16, 2023	Aug. 13, 2024~ Aug. 21, 2024	Oct. 15, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2023	Aug. 13, 2024~ Aug. 21, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 03, 2024	Aug. 13, 2024~ Aug. 21, 2024	Jul. 02, 2025	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 27, 2023	Aug. 31, 2024~ Sep. 02, 2024	Dec. 26, 2024	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 29, 2023	Aug. 31, 2024~ Sep. 02, 2024	Dec. 28, 2024	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18, 2023	Aug. 31, 2024~ Sep. 02, 2024	Oct. 17, 2024	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Aug. 31, 2024~ Sep. 02, 2024	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Aug. 31, 2024~ Sep. 02, 2024	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Aug. 31, 2024~ Sep. 02, 2024	Apr. 08, 2025	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 09, 2024	Aug. 31, 2024~ Sep. 02, 2024	Apr. 08, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 18, 2023	Aug. 31, 2024~ Sep. 02, 2024	Oct. 17, 2024	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 03, 2024	Aug. 31, 2024~ Sep. 02, 2024	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 18, 2023	Aug. 31, 2024~ Sep. 02, 2024	Oct. 17, 2024	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Aug. 31, 2024~ Sep. 02, 2024	NCR	Radiation (03CH01-SZ)

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

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Peak to Average Ratio	±1.34 dB
Frequency Stability	±1.3 Hz

Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.48 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.53 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.02 dB

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Khan Zhen	**Temperature :**	22~23℃
		Relative Humidity :	40~42%

Software Version: 23.06.1602

FR1 N12(ANT0)

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=0.93dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	ERP (dBm)	ERP (W)
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@1	24.32	23.1	0.2042
12	15	5	140300	701.5	DFT-s-OFDM 16 QAM	1@1	23.32	22.1	0.1622
12	15	5	141500	707.5	DFT-s-OFDM QPSK	1@1	24.38	23.16	0.2070
12	15	5	141500	707.5	DFT-s-OFDM 16 QAM	1@1	23.39	22.17	0.1648
12	15	5	142700	713.5	DFT-s-OFDM QPSK	1@1	24.27	23.05	0.2018
12	15	5	142700	713.5	DFT-s-OFDM 16 QAM	1@1	23.33	22.11	0.1626
12	15	10	140800	704	DFT-s-OFDM QPSK	1@1	24.39	23.17	0.2075
12	15	10	140800	704	DFT-s-OFDM 16 QAM	1@1	23.39	22.17	0.1648
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@1	24.32	23.1	0.2042
12	15	10	141500	707.5	DFT-s-OFDM 16 QAM	1@1	23.47	22.25	0.1679
12	15	10	142200	711	DFT-s-OFDM QPSK	1@1	24.42	23.2	0.2089
12	15	10	142200	711	DFT-s-OFDM 16 QAM	1@1	23.45	22.23	0.1671
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	36@18	24.51	23.29	0.2133
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@1	24.52	23.3	0.2138
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@77	24.27	23.05	0.2018
12	15	15	141300	706.5	DFT-s-OFDM QPSK	36@18	24.5	23.28	0.2128
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@1	24.53	23.31	0.2143
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@77	24.33	23.11	0.2046
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	36@18	23.51	22.29	0.1694
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@1	23.61	22.39	0.1734
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@77	23.38	22.16	0.1644
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	36@18	22.09	20.87	0.1222
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@1	22.12	20.9	0.1230
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@77	21.91	20.69	0.1172
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	36@18	19.88	18.66	0.0735
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@1	19.8	18.58	0.0721
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@77	19.63	18.41	0.0693
12	15	15	141300	706.5	CP-OFDM QPSK	39@19	23.03	21.81	0.1517
12	15	15	141300	706.5	CP-OFDM QPSK	1@1	23.12	21.9	0.1549
12	15	15	141300	706.5	CP-OFDM QPSK	1@77	22.87	21.65	0.1462
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	36@18	24.5	23.28	0.2128
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@1	24.47	23.25	0.2113
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@77	24.21	22.99	0.1991

12	15	15	141500	707.5	DFT-s-OFDM QPSK	36@18	24.47	23.25	0.2113
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@1	24.59	23.37	0.2173
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@77	24.34	23.12	0.2051
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	36@18	23.48	22.26	0.1683
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@1	23.61	22.39	0.1734
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@77	23.33	22.11	0.1626
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	36@18	22.02	20.8	0.1202
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@1	22.14	20.92	0.1236
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@77	21.92	20.7	0.1175
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	36@18	19.88	18.66	0.0735
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@1	19.81	18.59	0.0723
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@77	19.59	18.37	0.0687
12	15	15	141500	707.5	CP-OFDM QPSK	39@19	23.02	21.8	0.1514
12	15	15	141500	707.5	CP-OFDM QPSK	1@1	22.89	21.67	0.1469
12	15	15	141500	707.5	CP-OFDM QPSK	1@77	22.71	21.49	0.1409
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	36@18	24.4	23.18	0.2080
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@1	24.47	23.25	0.2113
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@77	24.28	23.06	0.2023
12	15	15	141700	708.5	DFT-s-OFDM QPSK	36@18	24.44	23.22	0.2099
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@1	24.51	23.29	0.2133
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@77	24.26	23.04	0.2014
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	36@18	23.46	22.24	0.1675
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@1	23.56	22.34	0.1714
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@77	23.3	22.08	0.1614
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	36@18	22	20.78	0.1197
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@1	22.18	20.96	0.1247
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@77	21.86	20.64	0.1159
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	36@18	19.83	18.61	0.0726
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@1	19.77	18.55	0.0716
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@77	19.55	18.33	0.0681
12	15	15	141700	708.5	CP-OFDM QPSK	39@19	23.02	21.8	0.1514
12	15	15	141700	708.5	CP-OFDM QPSK	1@1	23.05	21.83	0.1524
12	15	15	141700	708.5	CP-OFDM QPSK	1@77	22.83	21.61	0.1449

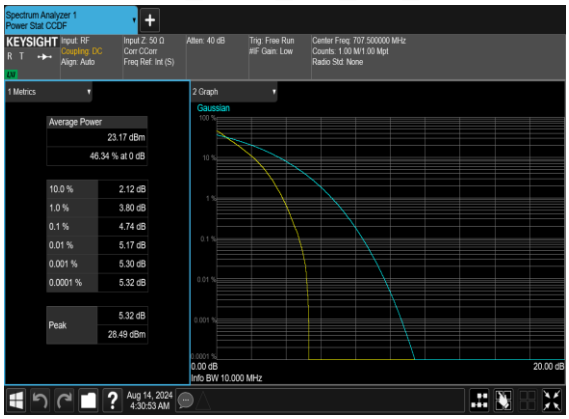
Frequency Stability

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	0.0045	**PASS**	NV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0021	**PASS**	LV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0040	**PASS**	HV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0045	**PASS**	-30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0062	**PASS**	-20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0054	**PASS**	-10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0050	**PASS**	0℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0065	**PASS**	10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0045	**PASS**	20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0069	**PASS**	30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0043	**PASS**	40℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0040	**PASS**	50℃

Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
12	15	10	141500	707.5	DFT-s-OFDM PI/2 BPSK	50@0	4.74	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	5.95	13	**PASS**

N12(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

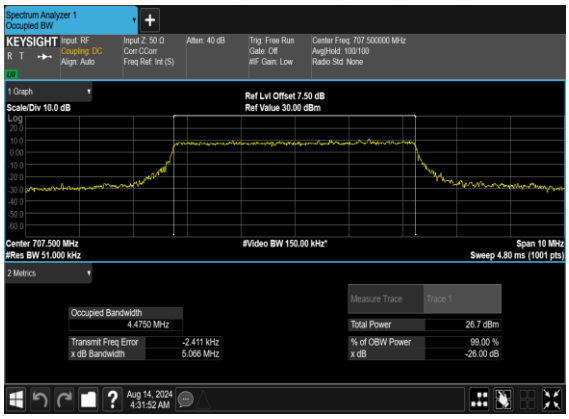


N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

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	4.475	5.066
12	15	5	141500	707.5	CP-OFDM 16 QAM	25@0	4.4888	5.254
12	15	5	141500	707.5	CP-OFDM 64 QAM	25@0	4.4731	5.128
12	15	5	141500	707.5	CP-OFDM 256 QAM	25@0	4.4848	5.053
12	15	10	141500	707.5	CP-OFDM QPSK	52@0	9.3024	9.958
12	15	10	141500	707.5	CP-OFDM 16 QAM	52@0	9.302	10.06
12	15	10	141500	707.5	CP-OFDM 64 QAM	52@0	9.2741	9.938
12	15	10	141500	707.5	CP-OFDM 256 QAM	52@0	9.3006	9.959
12	15	15	141500	707.5	CP-OFDM QPSK	79@0	14.068	14.85
12	15	15	141500	707.5	CP-OFDM 16 QAM	79@0	14.076	14.9
12	15	15	141500	707.5	CP-OFDM 64 QAM	79@0	14.119	14.86
12	15	15	141500	707.5	CP-OFDM 256 QAM	79@0	14.071	14.8

N12(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

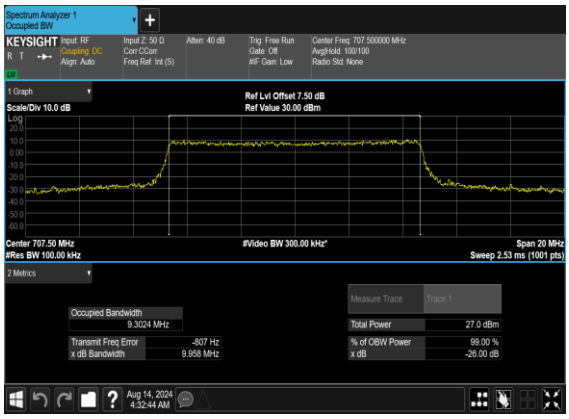


N12(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N12(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N12(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

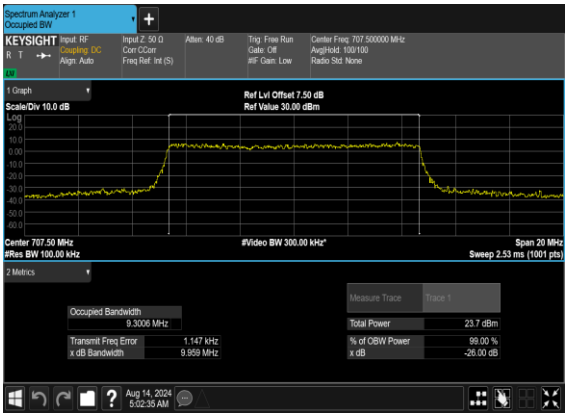
N12(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



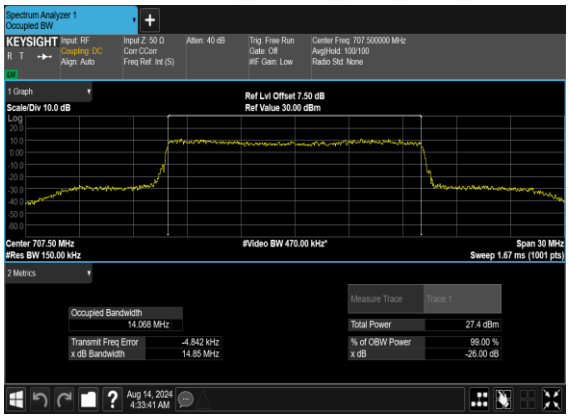
N12(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N12(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

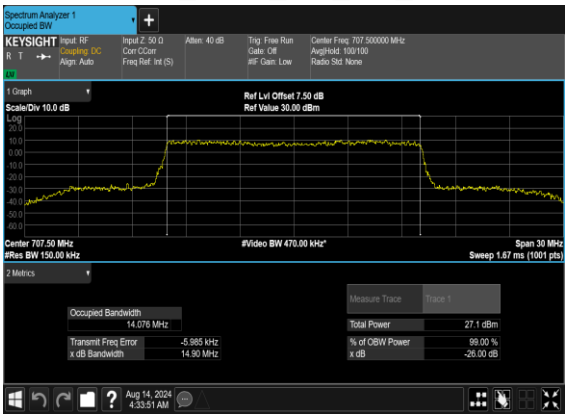
N12(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



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

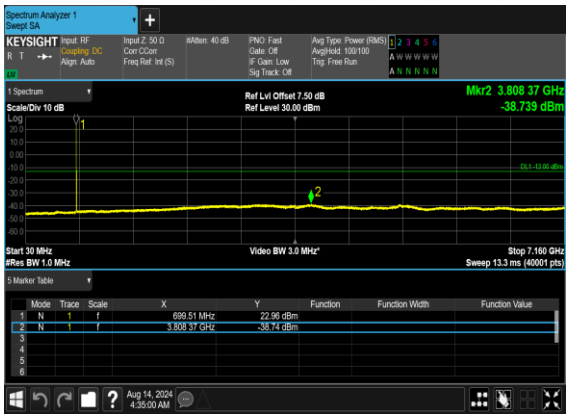
N12(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

Conducted Spurious Emissions

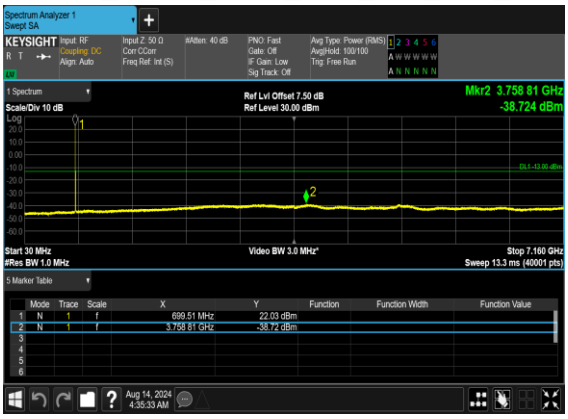
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	---
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	---
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	**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**

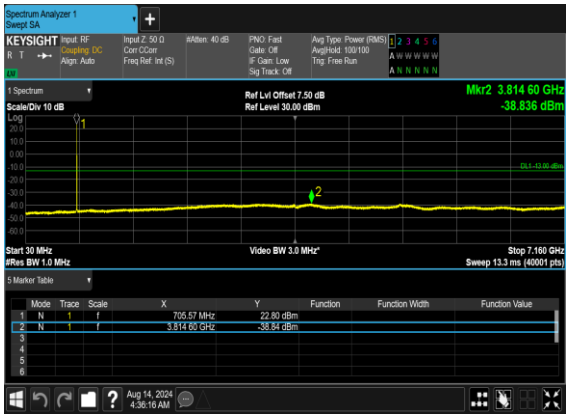
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



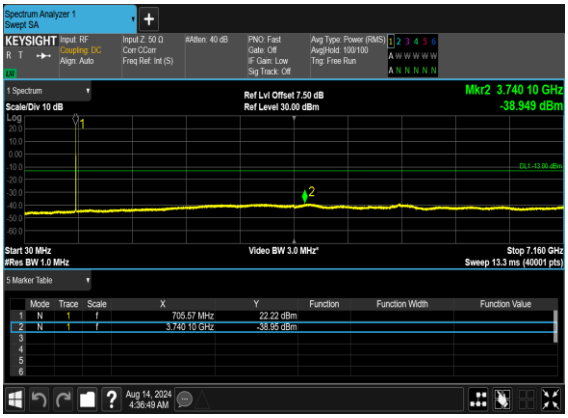
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

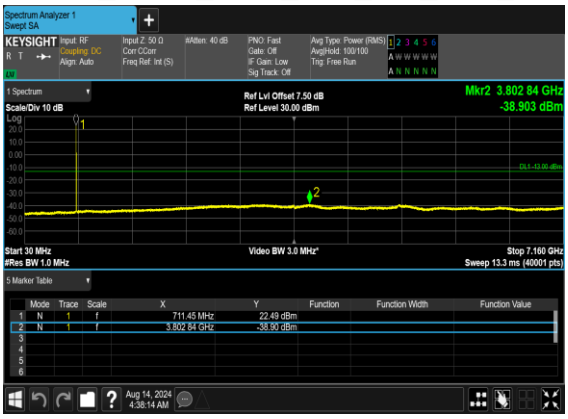


N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

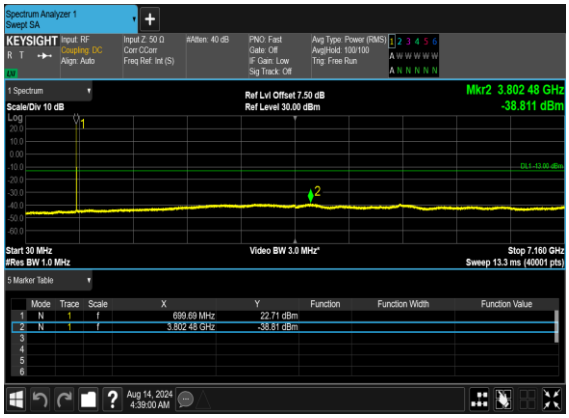


N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

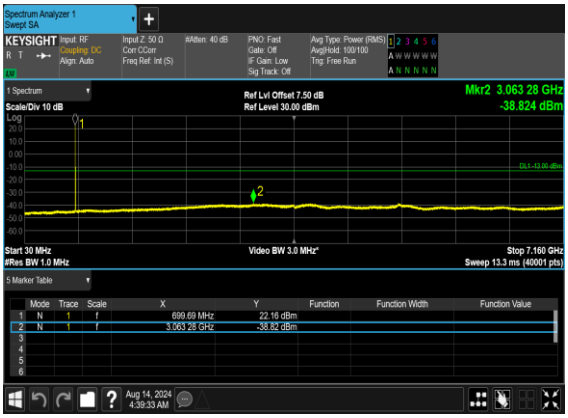
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



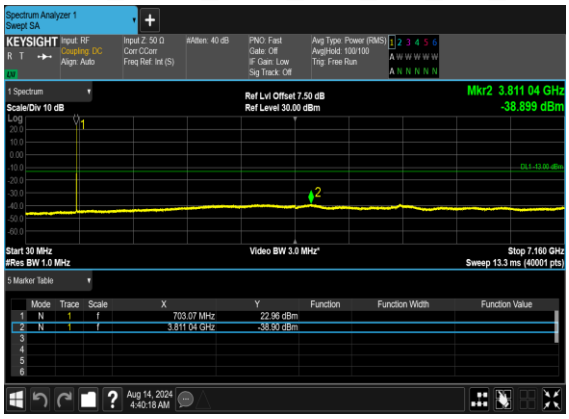
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



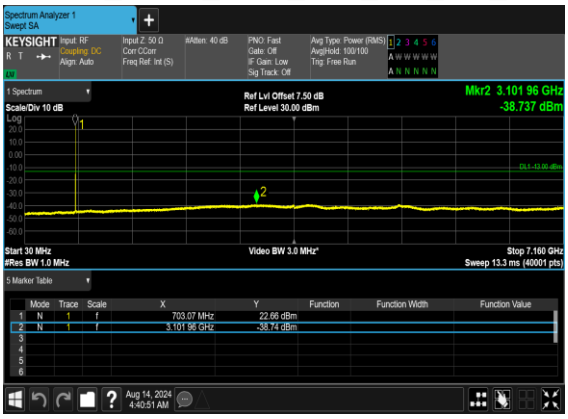
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



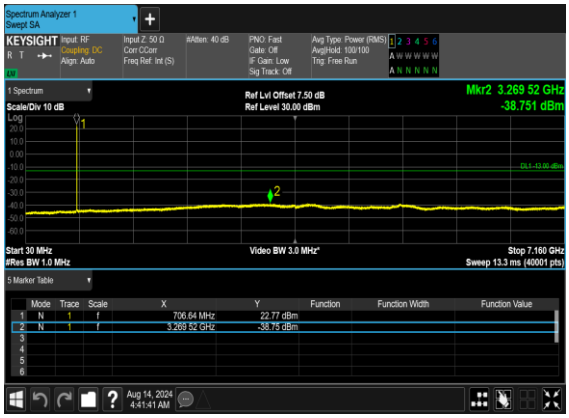
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



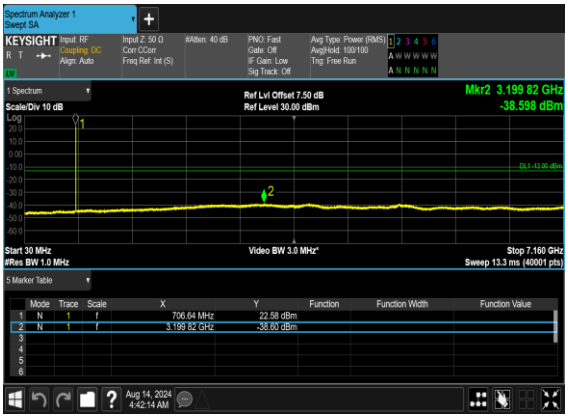
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



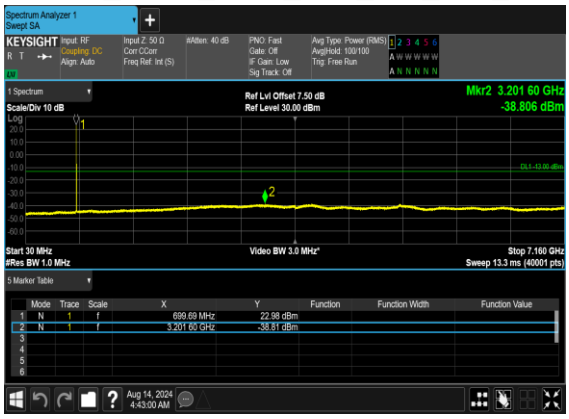
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



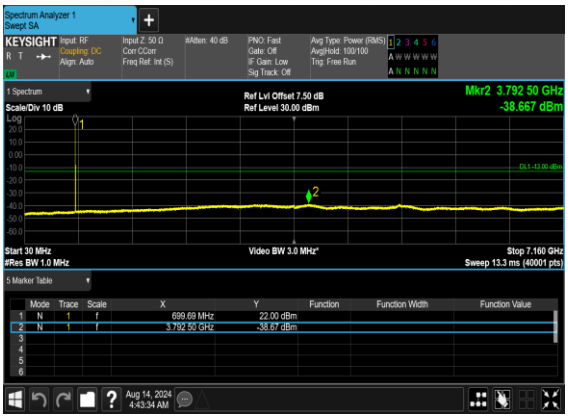
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



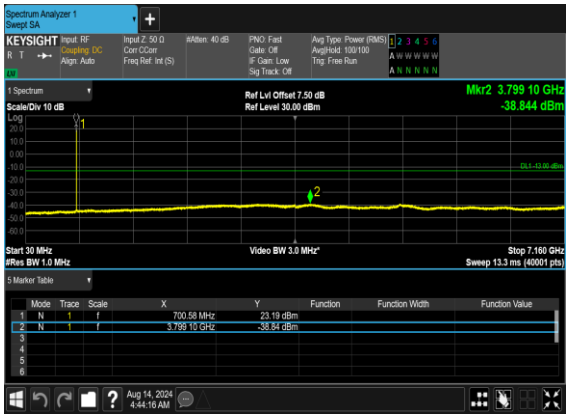
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



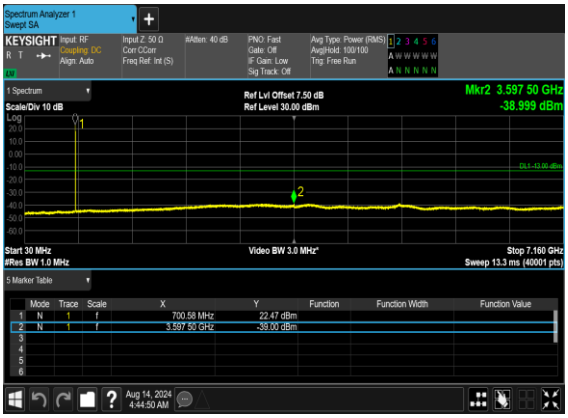
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

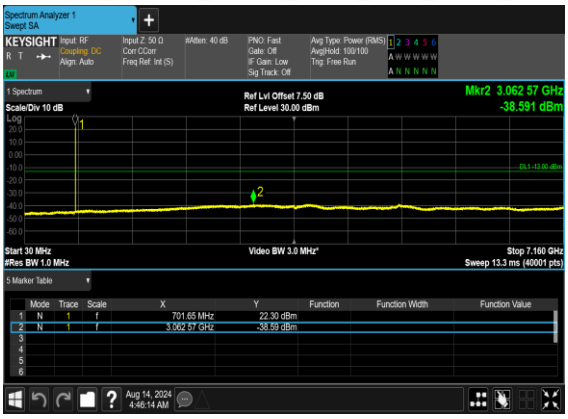


N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

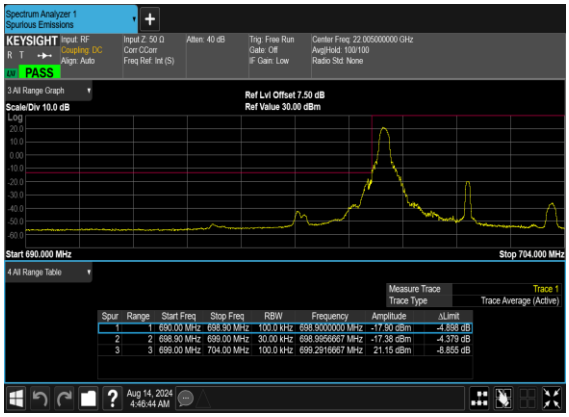


Conducted Band Edge

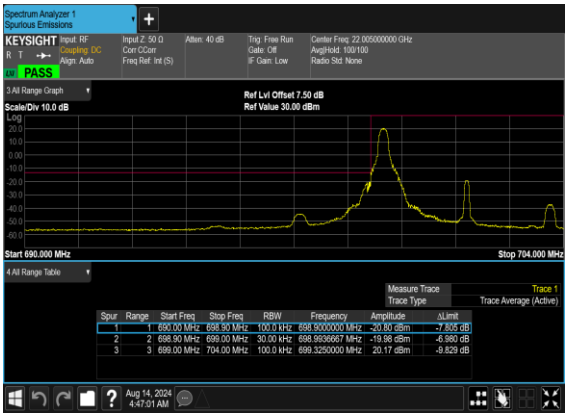
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	25@0	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**

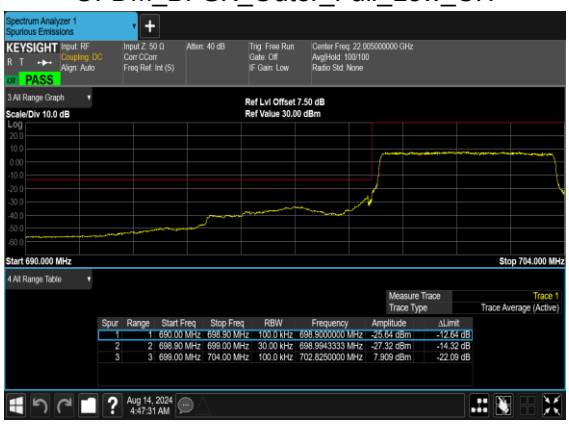
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



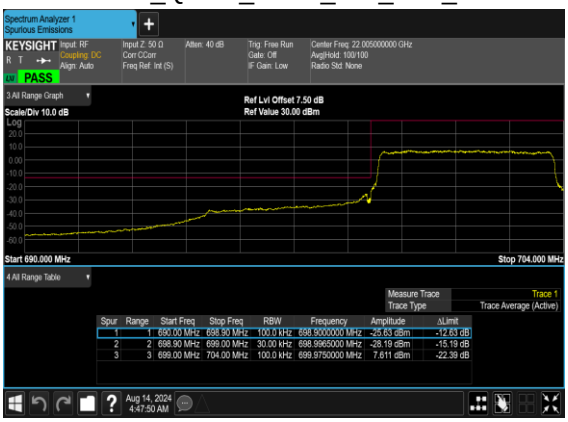
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



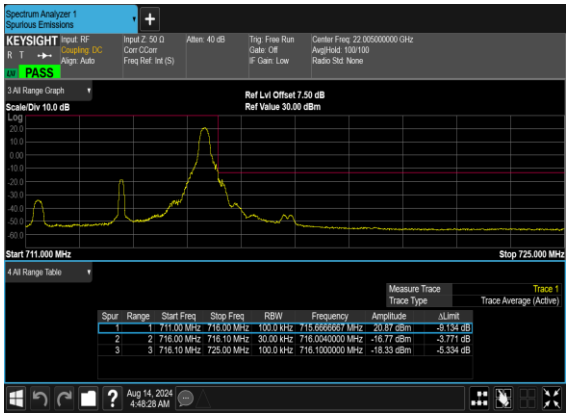
N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



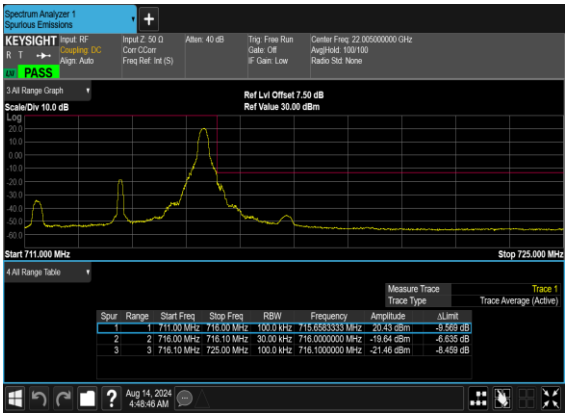
N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



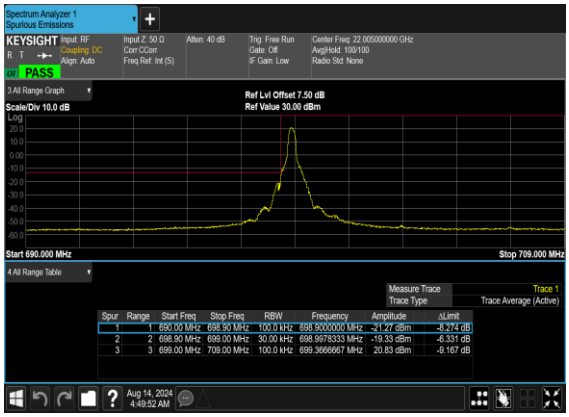
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



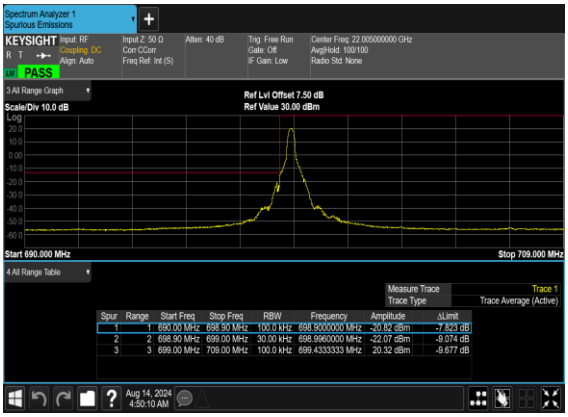
N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

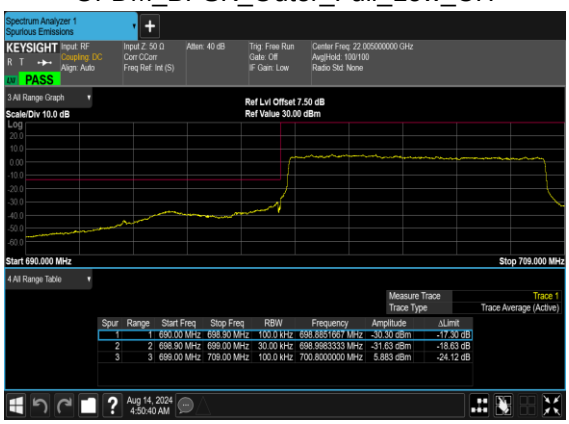
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

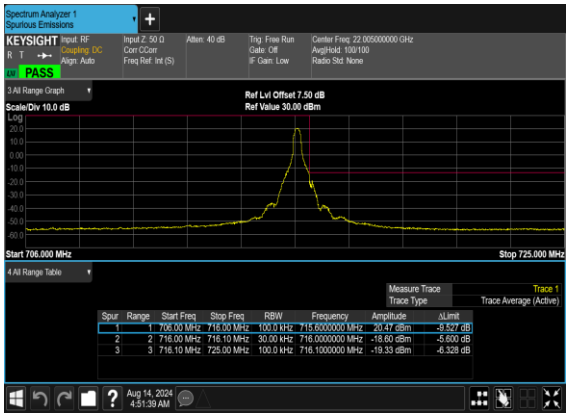


N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

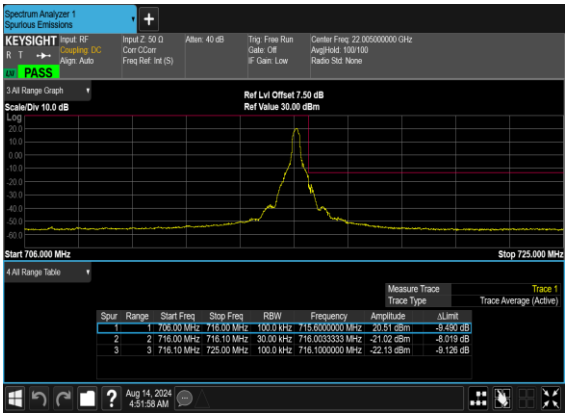


N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



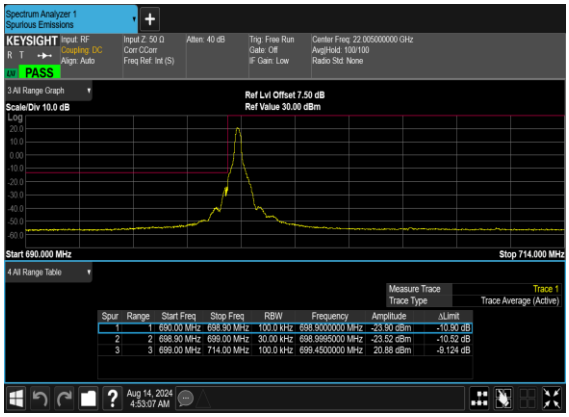
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



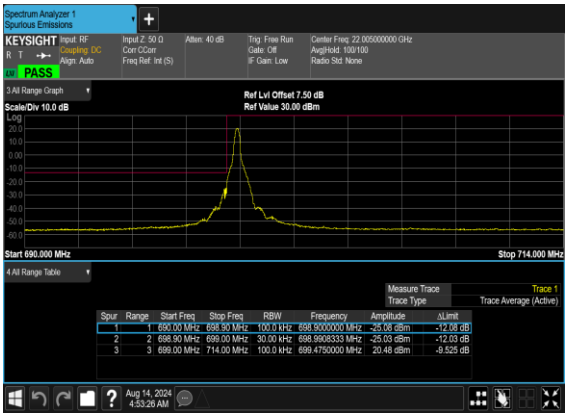
N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

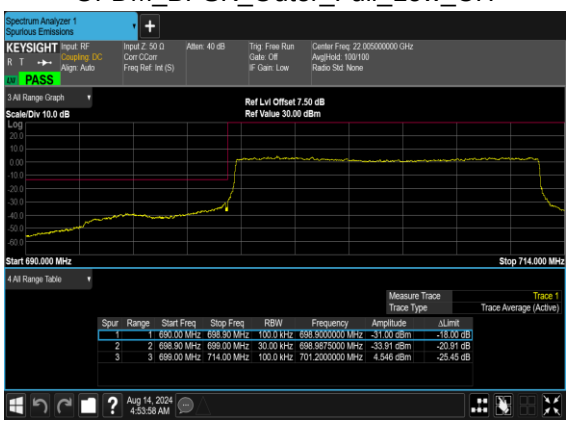
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



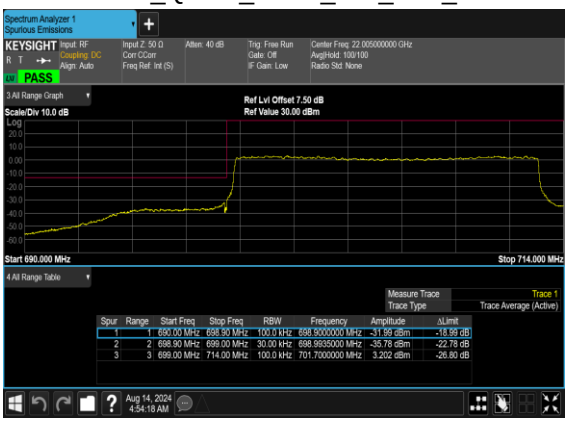
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



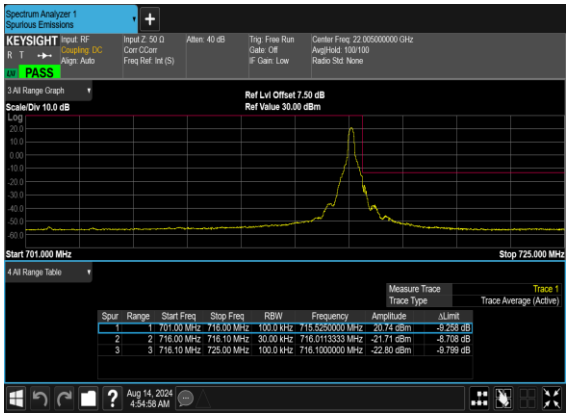
N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



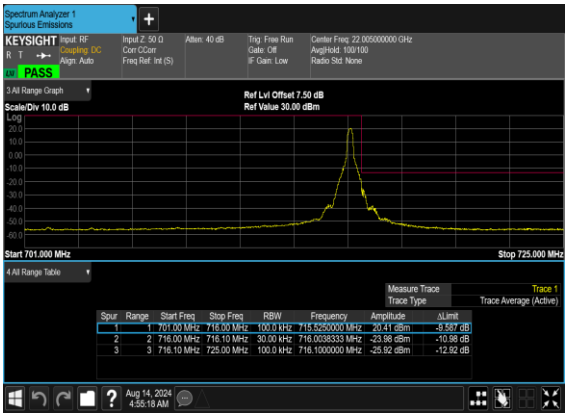
N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH

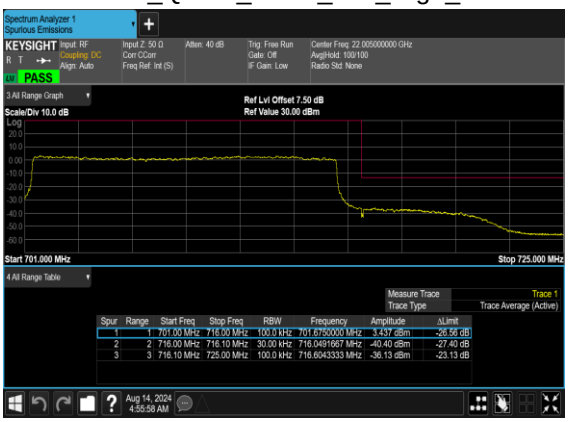


N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



Software Version: 23.06.1602

FR1 N41(ANT0)

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=2.71dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
41	30	20	501204	2506.02	DFT-s-OFDM QPSK	1@1	26.37	29.08	0.8091
41	30	20	501204	2506.02	DFT-s-OFDM 16 QAM	1@1	25.29	28	0.6310
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.31	29.02	0.7980
41	30	20	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.21	27.92	0.6194
41	30	20	535998	2679.99	DFT-s-OFDM QPSK	1@1	26.62	29.33	0.8570
41	30	20	535998	2679.99	DFT-s-OFDM 16 QAM	1@1	25.63	28.34	0.6823
41	30	30	502200	2511	DFT-s-OFDM QPSK	1@1	26.16	28.87	0.7709
41	30	30	502200	2511	DFT-s-OFDM 16 QAM	1@1	25.15	27.86	0.6109
41	30	30	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.33	29.04	0.8017
41	30	30	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.38	28.09	0.6442
41	30	30	534996	2674.98	DFT-s-OFDM QPSK	1@1	26.5	29.21	0.8337
41	30	30	534996	2674.98	DFT-s-OFDM 16 QAM	1@1	25.45	28.16	0.6546
41	30	40	503202	2516.01	DFT-s-OFDM QPSK	1@1	26.24	28.95	0.7852
41	30	40	503202	2516.01	DFT-s-OFDM 16 QAM	1@1	25.24	27.95	0.6237
41	30	40	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.47	29.18	0.8279
41	30	40	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.32	28.03	0.6353
41	30	40	534000	2670	DFT-s-OFDM QPSK	1@1	26.55	29.26	0.8433
41	30	40	534000	2670	DFT-s-OFDM 16 QAM	1@1	25.5	28.21	0.6622
41	30	50	504204	2521.02	DFT-s-OFDM QPSK	1@1	26.1	28.81	0.7603
41	30	50	504204	2521.02	DFT-s-OFDM 16 QAM	1@1	25.03	27.74	0.5943
41	30	50	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.22	28.93	0.7816
41	30	50	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.26	27.97	0.6266
41	30	50	532998	2664.99	DFT-s-OFDM QPSK	1@1	26.33	29.04	0.8017
41	30	50	532998	2664.99	DFT-s-OFDM 16 QAM	1@1	25.37	28.08	0.6427
41	30	60	505200	2526	DFT-s-OFDM QPSK	1@1	26.02	28.73	0.7464
41	30	60	505200	2526	DFT-s-OFDM 16 QAM	1@1	25	27.71	0.5902
41	30	60	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.28	28.99	0.7925
41	30	60	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.21	27.92	0.6194
41	30	60	531996	2659.98	DFT-s-OFDM QPSK	1@1	26.29	29	0.7943
41	30	60	531996	2659.98	DFT-s-OFDM 16 QAM	1@1	25.33	28.04	0.6368
41	30	70	505200	2531.01	DFT-s-OFDM QPSK	1@1	25.95	28.66	0.7345
41	30	70	505200	2531.01	DFT-s-OFDM 16 QAM	1@1	25.14	27.85	0.6095
41	30	70	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.17	28.88	0.7727

41	30	70	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.19	27.9	0.6166
41	30	70	531996	2655	DFT-s-OFDM QPSK	1@1	26.13	28.84	0.7656
41	30	70	531996	2655	DFT-s-OFDM 16 QAM	1@1	25.25	27.96	0.6252
41	30	80	507204	2536.02	DFT-s-OFDM QPSK	1@1	26	28.71	0.7430
41	30	80	507204	2536.02	DFT-s-OFDM 16 QAM	1@1	25.06	27.77	0.5984
41	30	80	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.09	28.8	0.7586
41	30	80	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	24.92	27.63	0.5794
41	30	80	529998	2649.99	DFT-s-OFDM QPSK	1@1	25.98	28.69	0.7396
41	30	80	529998	2649.99	DFT-s-OFDM 16 QAM	1@1	25.11	27.82	0.6053
41	30	90	508200	2541	DFT-s-OFDM QPSK	1@1	25.98	28.69	0.7396
41	30	90	508200	2541	DFT-s-OFDM 16 QAM	1@1	25.02	27.73	0.5929
41	30	90	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.03	28.74	0.7482
41	30	90	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.03	27.74	0.5943
41	30	90	528996	2644.98	DFT-s-OFDM QPSK	1@1	25.89	28.6	0.7244
41	30	90	528996	2644.98	DFT-s-OFDM 16 QAM	1@1	25	27.71	0.5902
41	30	100	509202	2546.01	DFT-s-OFDM PI/2 BPSK	135@67	26.27	28.98	0.7907
41	30	100	509202	2546.01	DFT-s-OFDM PI/2 BPSK	1@1	26.18	28.89	0.7745
41	30	100	509202	2546.01	DFT-s-OFDM PI/2 BPSK	1@271	26.23	28.94	0.7834
41	30	100	509202	2546.01	DFT-s-OFDM QPSK	135@67	26.32	29.03	0.7998
41	30	100	509202	2546.01	DFT-s-OFDM QPSK	1@1	26.28	28.99	0.7925
41	30	100	509202	2546.01	DFT-s-OFDM QPSK	1@271	26.31	29.02	0.7980
41	30	100	509202	2546.01	DFT-s-OFDM 16 QAM	135@67	25.4	28.11	0.6471
41	30	100	509202	2546.01	DFT-s-OFDM 16 QAM	1@1	25.41	28.12	0.6486
41	30	100	509202	2546.01	DFT-s-OFDM 16 QAM	1@271	25.38	28.09	0.6442
41	30	100	509202	2546.01	DFT-s-OFDM 64 QAM	135@67	23.41	26.12	0.4093
41	30	100	509202	2546.01	DFT-s-OFDM 64 QAM	1@1	23.35	26.06	0.4036
41	30	100	509202	2546.01	DFT-s-OFDM 64 QAM	1@271	23.35	26.06	0.4036
41	30	100	509202	2546.01	DFT-s-OFDM 256 QAM	135@67	20.98	23.69	0.2339
41	30	100	509202	2546.01	DFT-s-OFDM 256 QAM	1@1	20.78	23.49	0.2234
41	30	100	509202	2546.01	DFT-s-OFDM 256 QAM	1@271	20.82	23.53	0.2254
41	30	100	509202	2546.01	CP-OFDM QPSK	137@68	24.91	27.62	0.5781
41	30	100	509202	2546.01	CP-OFDM QPSK	1@1	25.08	27.79	0.6012
41	30	100	509202	2546.01	CP-OFDM QPSK	1@271	24.71	27.42	0.5521
41	30	100	518598	2592.99	DFT-s-OFDM PI/2 BPSK	135@67	26.15	28.86	0.7691
41	30	100	518598	2592.99	DFT-s-OFDM PI/2 BPSK	1@1	26.01	28.72	0.7447
41	30	100	518598	2592.99	DFT-s-OFDM PI/2 BPSK	1@271	26.51	29.22	0.8356
41	30	100	518598	2592.99	DFT-s-OFDM QPSK	135@67	26.18	28.89	0.7745
41	30	100	518598	2592.99	DFT-s-OFDM QPSK	1@1	26.14	28.85	0.7674
41	30	100	518598	2592.99	DFT-s-OFDM QPSK	1@271	26.63	29.34	0.8590
41	30	100	518598	2592.99	DFT-s-OFDM 16 QAM	135@67	25.27	27.98	0.6281
41	30	100	518598	2592.99	DFT-s-OFDM 16 QAM	1@1	25.08	27.79	0.6012

41	30	100	518598	2592.99	DFT-s-OFDM 16 QAM	1@271	25.65	28.36	0.6855
41	30	100	518598	2592.99	DFT-s-OFDM 64 QAM	135@67	23.32	26.03	0.4009
41	30	100	518598	2592.99	DFT-s-OFDM 64 QAM	1@1	23.21	25.92	0.3908
41	30	100	518598	2592.99	DFT-s-OFDM 64 QAM	1@271	23.7	26.41	0.4375
41	30	100	518598	2592.99	DFT-s-OFDM 256 QAM	135@67	20.87	23.58	0.2280
41	30	100	518598	2592.99	DFT-s-OFDM 256 QAM	1@1	20.54	23.25	0.2113
41	30	100	518598	2592.99	DFT-s-OFDM 256 QAM	1@271	21.08	23.79	0.2393
41	30	100	518598	2592.99	CP-OFDM QPSK	137@68	24.74	27.45	0.5559
41	30	100	518598	2592.99	CP-OFDM QPSK	1@1	24.4	27.11	0.5140
41	30	100	518598	2592.99	CP-OFDM QPSK	1@271	25.23	27.94	0.6223
41	30	100	528000	2640	DFT-s-OFDM PI/2 BPSK	135@67	26.3	29.01	0.7962
41	30	100	528000	2640	DFT-s-OFDM PI/2 BPSK	1@1	25.92	28.63	0.7295
41	30	100	528000	2640	DFT-s-OFDM PI/2 BPSK	1@271	26.6	29.31	0.8531
41	30	100	528000	2640	DFT-s-OFDM QPSK	135@67	26.35	29.06	0.8054
41	30	100	528000	2640	DFT-s-OFDM QPSK	1@1	26.11	28.82	0.7621
41	30	100	528000	2640	DFT-s-OFDM QPSK	1@271	26.75	29.46	0.8831
41	30	100	528000	2640	DFT-s-OFDM 16 QAM	135@67	25.36	28.07	0.6412
41	30	100	528000	2640	DFT-s-OFDM 16 QAM	1@1	25.12	27.83	0.6067
41	30	100	528000	2640	DFT-s-OFDM 16 QAM	1@271	25.7	28.41	0.6934
41	30	100	528000	2640	DFT-s-OFDM 64 QAM	135@67	23.36	26.07	0.4046
41	30	100	528000	2640	DFT-s-OFDM 64 QAM	1@1	22.92	25.63	0.3656
41	30	100	528000	2640	DFT-s-OFDM 64 QAM	1@271	23.79	26.5	0.4467
41	30	100	528000	2640	DFT-s-OFDM 256 QAM	135@67	20.95	23.66	0.2323
41	30	100	528000	2640	DFT-s-OFDM 256 QAM	1@1	20.41	23.12	0.2051
41	30	100	528000	2640	DFT-s-OFDM 256 QAM	1@271	21.22	23.93	0.2472
41	30	100	528000	2640	CP-OFDM QPSK	137@68	24.85	27.56	0.5702
41	30	100	528000	2640	CP-OFDM QPSK	1@1	24.59	27.3	0.5370
41	30	100	528000	2640	CP-OFDM QPSK	1@271	25.21	27.92	0.6194

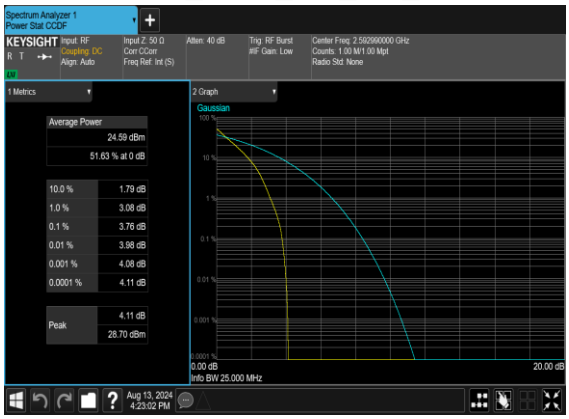
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0022	**PASS**	NV
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0027	**PASS**	LV
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0048	**PASS**	HV
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0068	**PASS**	-30℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0051	**PASS**	-20℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0048	**PASS**	-10℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0055	**PASS**	0℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0024	**PASS**	10℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0022	**PASS**	20℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0066	**PASS**	30℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0048	**PASS**	40℃
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	0.0060	**PASS**	50℃

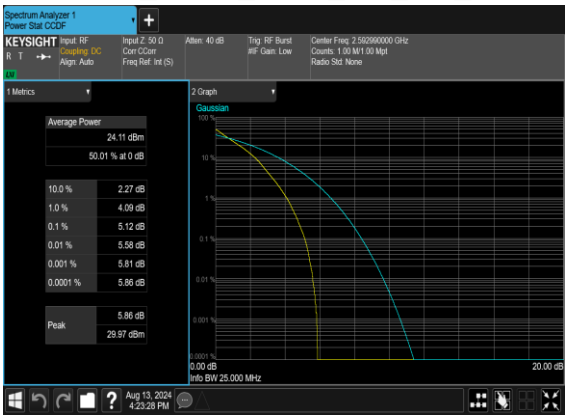
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
41	30	20	518598	2592.99	DFT-s-OFDM PI/2 BPSK	50@0	3.76	13	**PASS**
41	30	20	518598	2592.99	DFT-s-OFDM QPSK	50@0	5.12	13	**PASS**

N41(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N41(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

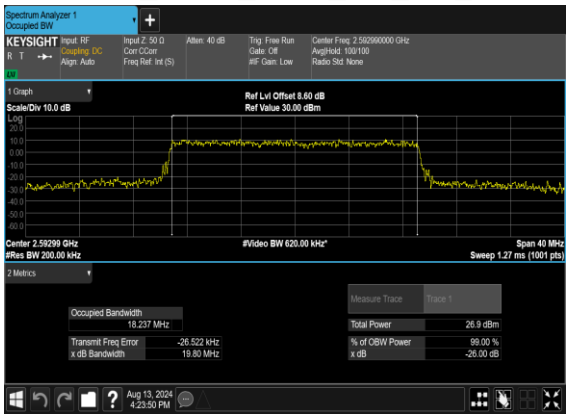


Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
41	30	20	518598	2592.99	CP-OFDM QPSK	51@0	18.237	19.8
41	30	20	518598	2592.99	CP-OFDM 16 QAM	51@0	18.242	19.23
41	30	20	518598	2592.99	CP-OFDM 64 QAM	51@0	18.24	19.27
41	30	20	518598	2592.99	CP-OFDM 256 QAM	51@0	18.158	19.37
41	30	30	518598	2592.99	CP-OFDM QPSK	78@0	27.853	29.13
41	30	30	518598	2592.99	CP-OFDM 16 QAM	78@0	27.934	30.11
41	30	30	518598	2592.99	CP-OFDM 64 QAM	78@0	27.82	29.08
41	30	30	518598	2592.99	CP-OFDM 256 QAM	78@0	27.855	29.79
41	30	40	518598	2592.99	CP-OFDM QPSK	106@0	37.787	39.12
41	30	40	518598	2592.99	CP-OFDM 16 QAM	106@0	37.972	39.6
41	30	40	518598	2592.99	CP-OFDM 64 QAM	106@0	37.907	39.31
41	30	40	518598	2592.99	CP-OFDM 256 QAM	106@0	37.799	39.36
41	30	50	518598	2592.99	CP-OFDM QPSK	133@0	47.498	49.07
41	30	50	518598	2592.99	CP-OFDM 16 QAM	133@0	47.475	49.24
41	30	50	518598	2592.99	CP-OFDM 64 QAM	133@0	47.525	49.67
41	30	50	518598	2592.99	CP-OFDM 256 QAM	133@0	47.614	49.03
41	30	60	518598	2592.99	CP-OFDM QPSK	162@0	57.823	59.77
41	30	60	518598	2592.99	CP-OFDM 16 QAM	162@0	57.827	60.15
41	30	60	518598	2592.99	CP-OFDM 64 QAM	162@0	57.893	60.06
41	30	60	518598	2592.99	CP-OFDM 256 QAM	162@0	57.825	59.98
41	30	70	518598	2592.99	CP-OFDM QPSK	189@0	67.634	69.68
41	30	70	518598	2592.99	CP-OFDM 16 QAM	189@0	67.472	72.96

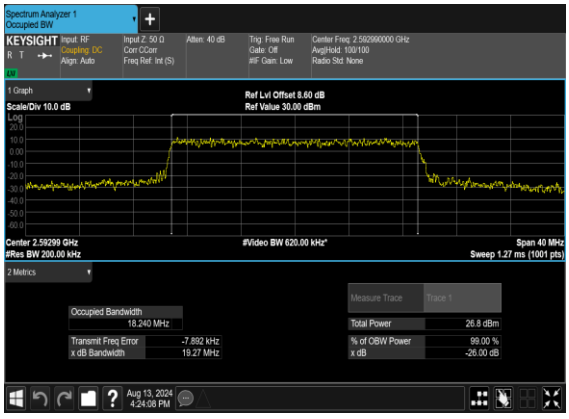
41	30	70	518598	2592.99	CP-OFDM 64 QAM	189@0	67.828	73.25
41	30	70	518598	2592.99	CP-OFDM 256 QAM	189@0	67.325	69.58
41	30	80	518598	2592.99	CP-OFDM QPSK	217@0	77.5	79.93
41	30	80	518598	2592.99	CP-OFDM 16 QAM	217@0	77.466	79.9
41	30	80	518598	2592.99	CP-OFDM 64 QAM	217@0	77.474	79.81
41	30	80	518598	2592.99	CP-OFDM 256 QAM	217@0	77.363	79.94
41	30	90	518598	2592.99	CP-OFDM QPSK	245@0	87.294	90.52
41	30	90	518598	2592.99	CP-OFDM 16 QAM	245@0	87.409	90.22
41	30	90	518598	2592.99	CP-OFDM 64 QAM	245@0	87.528	90.28
41	30	90	518598	2592.99	CP-OFDM 256 QAM	245@0	87.624	90.14
41	30	100	518598	2592.99	CP-OFDM QPSK	273@0	97.673	100.5
41	30	100	518598	2592.99	CP-OFDM 16 QAM	273@0	97.632	100.5
41	30	100	518598	2592.99	CP-OFDM 64 QAM	273@0	97.377	100.5
41	30	100	518598	2592.99	CP-OFDM 256 QAM	273@0	97.754	100.6

N41(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

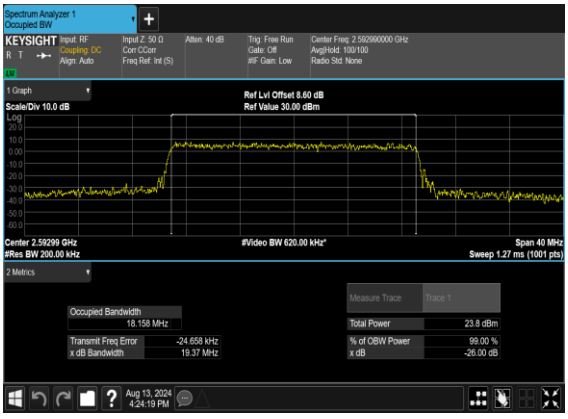


N41(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

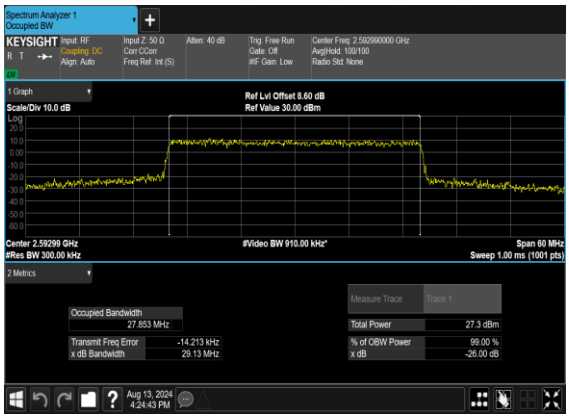
N41(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



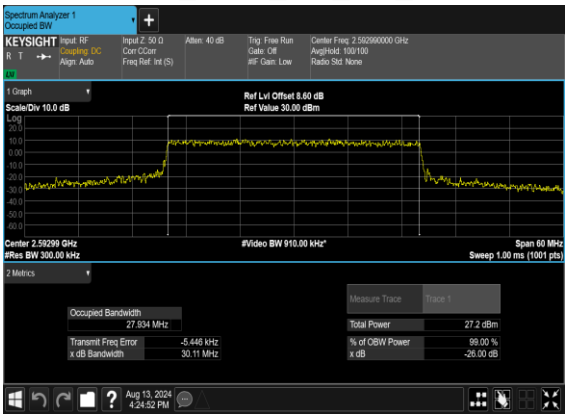
N41(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N41(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

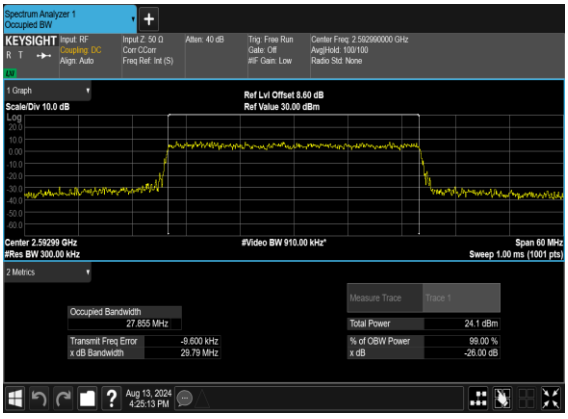


N41(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

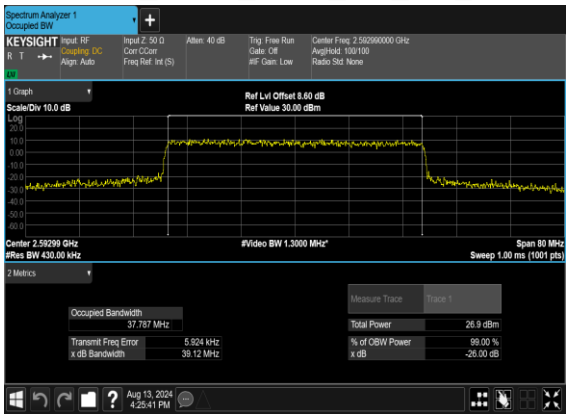


N41(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N41(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

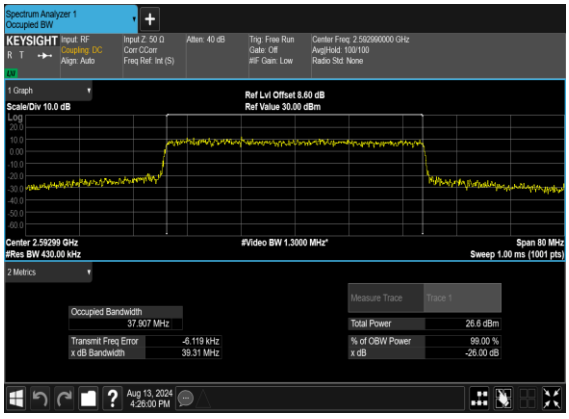


N41(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

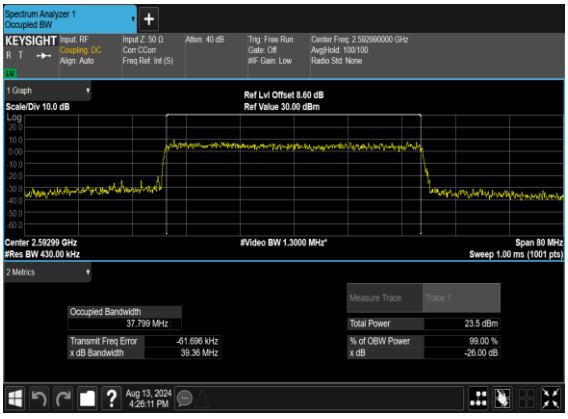


N41(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

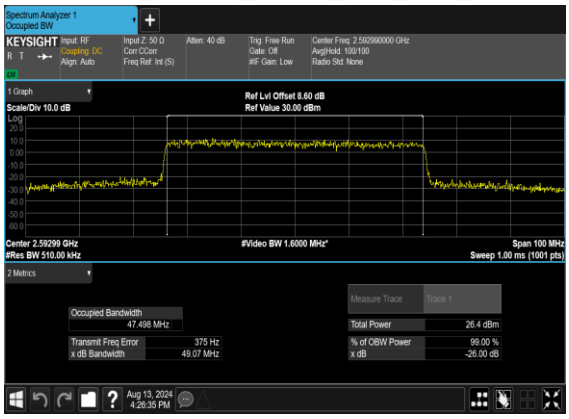
N41(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



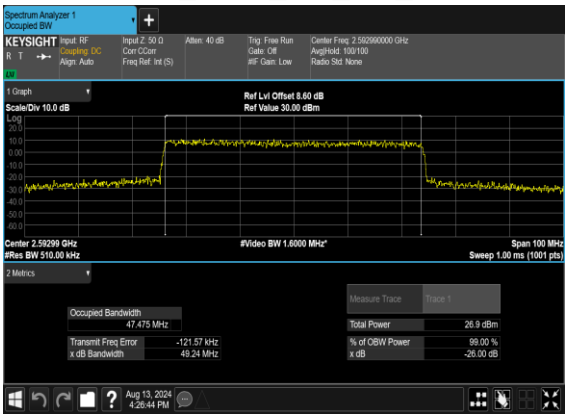
N41(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N41(50M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



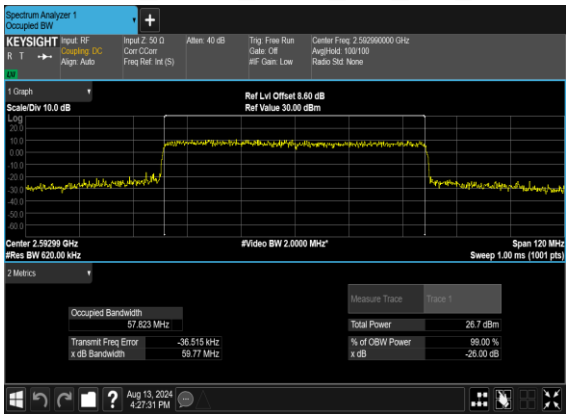
N41(50M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N41(50M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

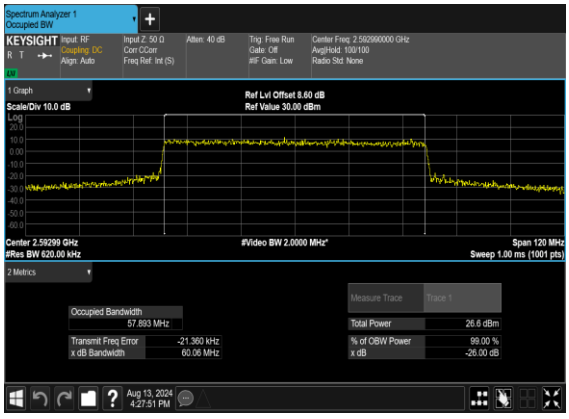
N41(50M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N41(60M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N41(60M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N41(60M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N41(60M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH