FCC RF Test Report

APPLICANT	: ASKEY COMPUTER CORP.
EQUIPMENT	: Module
BRAND NAME	: ASKEY
MODEL NAME	: NMQ2210
FCC ID	: H8NNMQ2210-D187
STANDARD	: 47 CFR Part 22, 24, 27
CLASSIFICATION	: PCS Licensed Transmitter (PCB)
TEST DATE(S)	: Aug. 14, 2024 ~ Sep. 04, 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)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG471806H	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	-
	§22.913(a)(5)	Effective Radiated Power (5G NR n5)	ERP < 7 Watt		
	§24.232(c)	Equivalent Isotropic Radiated Power (5G NR n2, n25)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (5G NR n66)	EIRP < 1Watt		
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(h)	Conducted Band Edge Measurement (5G NR n5) (5G NR n2, n25) (5G NR n66)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(h)	Conducted Spurious Emission (5G NR n5) (5G NR n2, n25) (5G NR n66)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§24.235 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(h)	Radiated Spurious Emission (5G NR n5) (5G NR n2, n25) (5G NR n66)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 0.83 dB at 11527.50 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

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 n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz
Rx Frequency	5G NR n2 : 1930 MHz ~ 1990 MHz 5G NR n5 : 869 MHz ~ 894 MHz 5G NR n25 : 1930 MHz ~ 1995 MHz 5G NR n66 : 2110 MHz~ 2200 MHz
Bandwidth	n2, n5, n25: 5MHz / 10MHz / 15MHz / 20MHz n66 : 5MHz / 10MHz / 15MHz / 20MHz / 30MHz
SCS	15kHz
Antenna Gain	<Ant.0> n5: 0.93 dBi <Ant.0/3> n2: 2.71 dBi n25: 2.71 dBi n66: 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 & ERP/EIRP of Ant.0 for 5G NR n2/25/66 are shown in the report.
2. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown in the report.
3. 5G NR n2/5/25/66 support SA and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode.
4. 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 n2		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	1852.5 ~ 1907.5	0.2377	4M47G7D	0.1888	4M48W7D
10	1855.0 ~ 1905.0	0.2328	9M28G7D	0.1892	9M28W7D
15	1857.5 ~ 1902.5	0.2366	14M1G7D	0.1919	14M1W7D
20	1860.0 ~ 1900.0	0.2512	18M9G7D	0.2018	18M9W7D
5G NR n25		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	1852.5 ~ 1912.5	0.2512	4M47G7D	0.1954	4M48W7D
10	1855.0 ~ 1910.0	0.2443	9M28G7D	0.1982	9M28W7D
15	1857.5 ~ 1907.5	0.2559	14M1G7D	0.2032	14M1W7D
20	1860.0 ~ 1905.0	0.2723	18M9G7D	0.2193	18M9W7D
5G NR n5		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	826.5 ~ 846.5	0.2037	4M46G7D	0.1641	4M49W7D
10	829.0 ~ 844.0	0.1995	9M25G7D	0.1611	9M28W7D
15	831.5 ~ 841.5	0.2089	14M1G7D	0.1667	14M1W7D
20	834.0 ~ 839.0	0.2094	18M9G7D	0.1687	18M9W7D

5G NR n66		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	1712.5 ~ 1777.5	0.2606	4M47G7D	0.2080	4M49W7D
10	1715.0 ~ 1775.0	0.2541	9M27G7D	0.2046	9M29W7D
15	1717.5 ~ 1772.5	0.2600	14M1G7D	0.2109	14M1W7D
20	1720.0 ~ 1770.0	0.2624	18M9G7D	0.2128	18M9W7D
30	1725.0 ~ 1765.0	0.2667	28M5G7D	0.2133	28M5W7D

Note:

1. 5G NR n25 overlaps the entire frequency range of 5G NR n2. Therefore, the test results provided in this report covers 5G NR n25 as well as 5G NR n2.
2. 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 22, 24, 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.

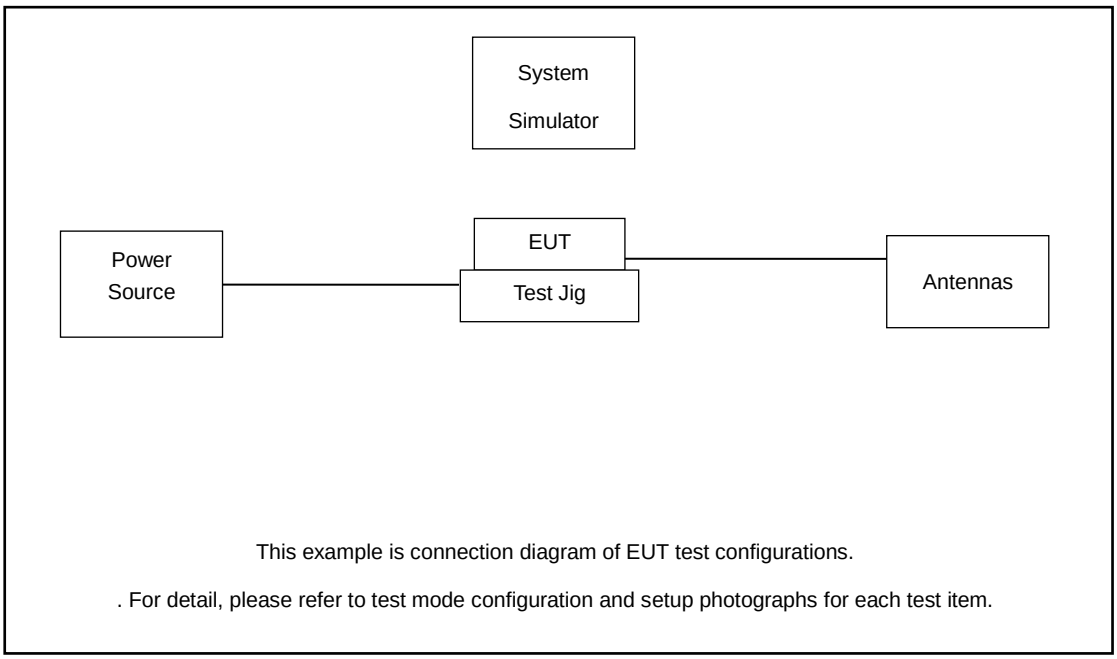
The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

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	n2	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n5	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n25	v	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
Peak-to-Average Ratio	n5				v	-	-	-	-	-	-	-	-	-	v	v					v		v	
	n25				v	-	-	-	-	-	-	-	-	-	v	v					v		v	
	n66				v	-		-	-	-	-	-	-	-	v	v					v		v	
26dB and 99% Bandwidth	n5	v	v	v	v	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
	n25	v	v	v	v	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
	n66	v	v	v	v	-	v	-	-	-	-	-	-	-		v	v	v	v		v		v	
Conducted Band Edge	n5	v	v		v	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
	n25	v	v		v	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
	n66	v		v		-	v	-	-	-	-	-	-	-	v	v				v	v	v		v
Conducted Spurious Emission	n5	v	v		v	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
	n25	v	v		v	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
	n66	v		v		-	v	-	-	-	-	-	-	-	v	v				v		v	v	v
Frequency	n5				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
Stability	n25				v	-	-	-	-	-	-	-	-	-		v					v		v	
	n66				v	-		-	-	-	-	-	-	-		v					v		v	
E.R.P / E.I.R.P	n2	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n5	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n25	v	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
Radiated Spurious Emission	n5	Worst Case																					v	
	n25	Worst Case																					v	
	n66	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



This example is connection diagram of EUT test configurations.

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

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 8.0dB.

Example :

Offset(dB) = RF cable loss(dB)

= 8.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n2 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	372000	376000	380000
	Frequency	1860	1880	1900
15	Channel	371500	376000	380500
	Frequency	1857.5	1880	1902.5
10	Channel	371000	376000	381000
	Frequency	1855	1880	1905
5	Channel	370500	376000	381500
	Frequency	1852.5	1880	1907.5

5G NR n5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	166800	167300	167800
	Frequency	834	836.5	839
15	Channel	166300	167300	168300
	Frequency	831.5	836.5	841.5
10	Channel	165800	167300	168800
	Frequency	829	836.5	844
5	Channel	165300	167300	169300
	Frequency	826.5	836.5	846.5

5G NR n25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	372000	376500	381000
	Frequency	1860	1882.5	1905
15	Channel	371500	376500	381500
	Frequency	1857.5	1882.5	1907.5
10	Channel	371000	376500	382000
	Frequency	1855	1882.5	1910
5	Channel	370500	376500	382500
	Frequency	1852.5	1882.5	1912.5

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
30	Channel	345000	349000	353000
	Frequency	1725	1745	1765
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

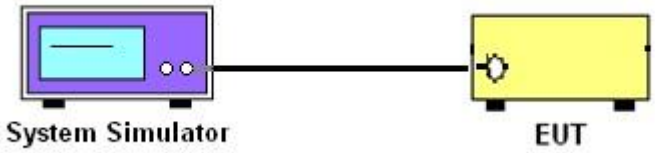
3 Conducted Test Items

3.1 Measuring Instruments

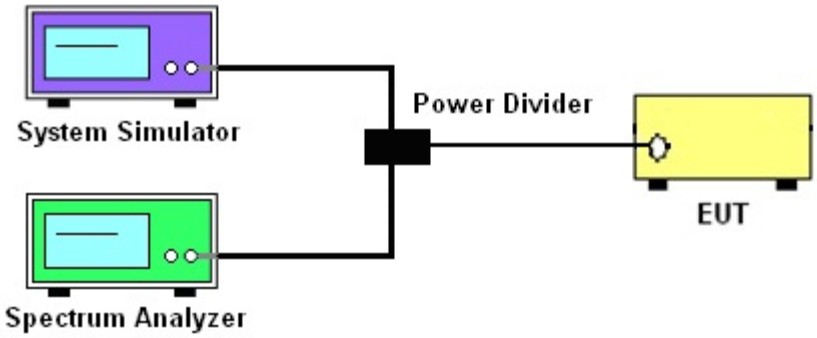
See list of measuring instruments of this test report.

3.2 Test Setup

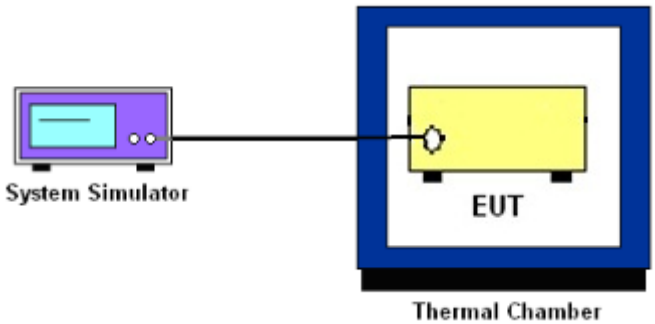
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

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

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

The ERP of mobile transmitters must not exceed 7 Watts for 5G NR n5.

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n2, n25.

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

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

22.917(a)

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

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the 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 (h)

For operations in the 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% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.
   Example:
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. 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. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

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

3.9.3 Test Procedures for Voltage Variation

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

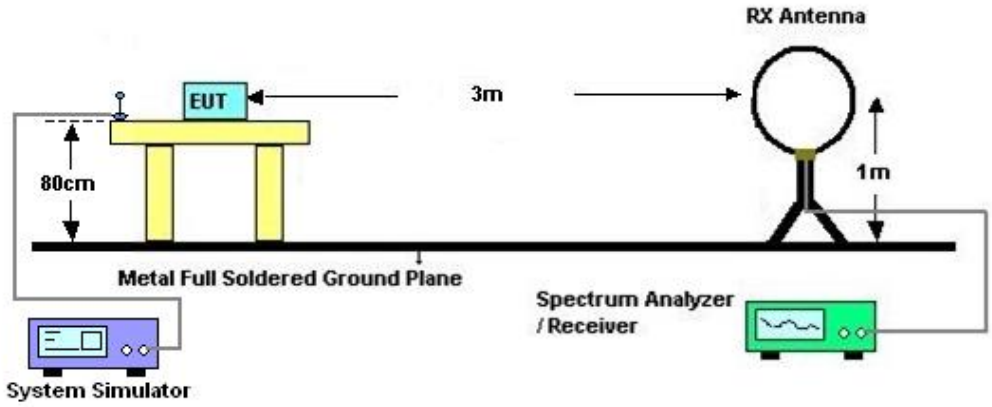
4 Radiated Test Items

4.1 Measuring Instruments

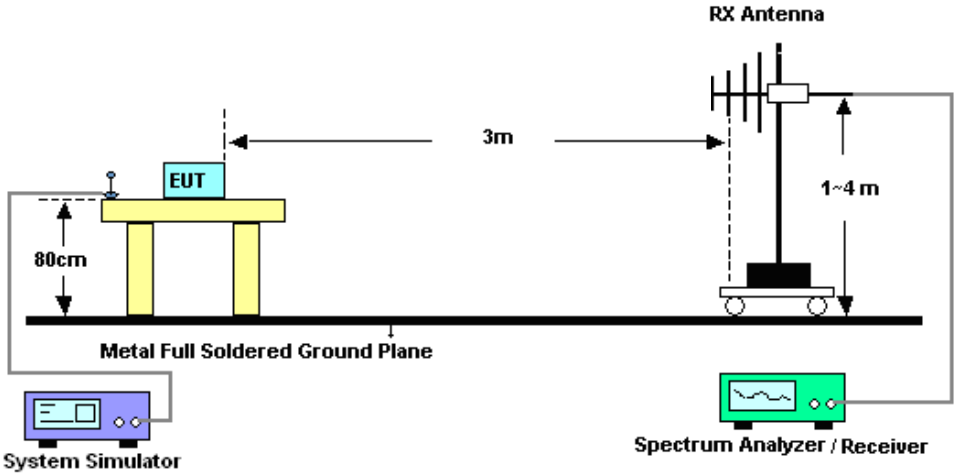
See list of measuring instruments of this test report.

4.2 Test Setup

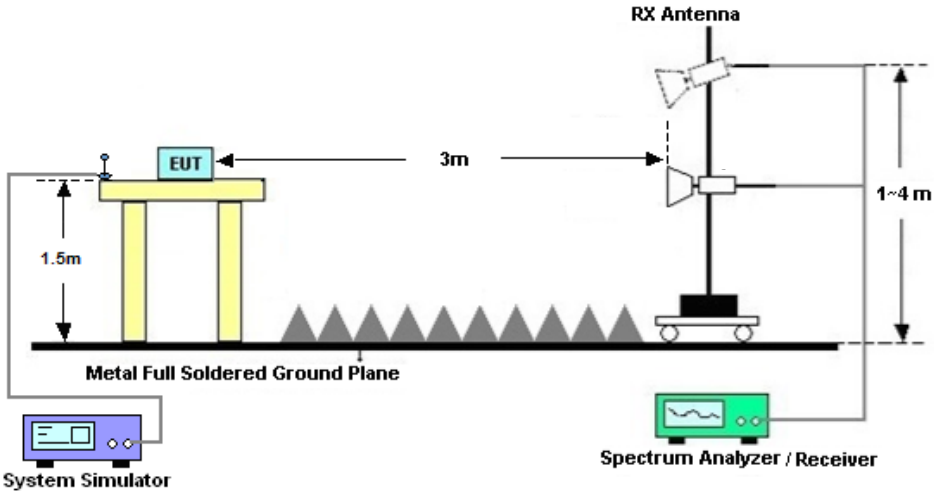
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

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
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Aug. 14, 2024~ Aug. 20, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 16, 2023	Aug. 14, 2024~ Aug. 20, 2024	Oct. 15, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04265	60.06.020.0077	0.4GHz~26.5GHz	Dec. 25, 2023	Aug. 14, 2024~ Aug. 20, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 03, 2024	Aug. 14, 2024~ Aug. 20, 2024	Jul. 02, 2025	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 27, 2023	Sep. 04, 2024	Dec. 26, 2024	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 29, 2023	Sep. 04, 2024	Dec. 28, 2024	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18, 2023	Sep. 04, 2024	Oct. 17, 2024	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Sep. 04, 2024	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Sep. 04, 2024	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Sep. 04, 2024	Apr. 08, 2025	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 09, 2024	Sep. 04, 2024	Apr. 08, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2023	Sep. 04, 2024	Oct. 17, 2024	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Sep. 04, 2024	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 18, 2023	Sep. 04, 2024	Oct. 17, 2024	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Sep. 04, 2024	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Sep. 04, 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 N2(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)
2	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@1	23.49	26.2	0.4169
2	15	5	370500	1852.5	DFT-s-OFDM 16 QAM	1@1	22.54	25.25	0.3350
2	15	5	376000	1880	DFT-s-OFDM QPSK	1@1	23.76	26.47	0.4436
2	15	5	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.76	25.47	0.3524
2	15	5	381500	1907.5	DFT-s-OFDM QPSK	1@1	23.52	26.23	0.4198
2	15	5	381500	1907.5	DFT-s-OFDM 16 QAM	1@1	22.61	25.32	0.3404
2	15	10	371000	1855	DFT-s-OFDM QPSK	1@1	23.49	26.2	0.4169
2	15	10	371000	1855	DFT-s-OFDM 16 QAM	1@1	22.61	25.32	0.3404
2	15	10	376000	1880	DFT-s-OFDM QPSK	1@1	23.67	26.38	0.4345
2	15	10	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.77	25.48	0.3532
2	15	10	381000	1905	DFT-s-OFDM QPSK	1@1	23.62	26.33	0.4295
2	15	10	381000	1905	DFT-s-OFDM 16 QAM	1@1	22.65	25.36	0.3436
2	15	15	371500	1857.5	DFT-s-OFDM QPSK	1@1	23.64	26.35	0.4315
2	15	15	371500	1857.5	DFT-s-OFDM 16 QAM	1@1	22.65	25.36	0.3436
2	15	15	376000	1880	DFT-s-OFDM QPSK	1@1	23.67	26.38	0.4345
2	15	15	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.77	25.48	0.3532
2	15	15	380500	1902.5	DFT-s-OFDM QPSK	1@1	23.74	26.45	0.4416
2	15	15	380500	1902.5	DFT-s-OFDM 16 QAM	1@1	22.83	25.54	0.3581
2	15	20	372000	1860	DFT-s-OFDM PI/2 BPSK	50@25	23.72	26.43	0.4395
2	15	20	372000	1860	DFT-s-OFDM PI/2 BPSK	1@1	23.5	26.21	0.4178
2	15	20	372000	1860	DFT-s-OFDM PI/2 BPSK	1@104	23.8	26.51	0.4477
2	15	20	372000	1860	DFT-s-OFDM QPSK	50@25	23.71	26.42	0.4385
2	15	20	372000	1860	DFT-s-OFDM QPSK	1@1	23.63	26.34	0.4305
2	15	20	372000	1860	DFT-s-OFDM QPSK	1@104	23.84	26.55	0.4519
2	15	20	372000	1860	DFT-s-OFDM 16 QAM	50@25	22.71	25.42	0.3483
2	15	20	372000	1860	DFT-s-OFDM 16 QAM	1@1	22.65	25.36	0.3436
2	15	20	372000	1860	DFT-s-OFDM 16 QAM	1@104	22.87	25.58	0.3614
2	15	20	372000	1860	DFT-s-OFDM 64 QAM	50@25	21.2	23.91	0.2460
2	15	20	372000	1860	DFT-s-OFDM 64 QAM	1@1	21.21	23.92	0.2466
2	15	20	372000	1860	DFT-s-OFDM 64 QAM	1@104	21.44	24.15	0.2600
2	15	20	372000	1860	DFT-s-OFDM 256 QAM	50@25	19.21	21.92	0.1556
2	15	20	372000	1860	DFT-s-OFDM 256 QAM	1@1	18.83	21.54	0.1426
2	15	20	372000	1860	DFT-s-OFDM 256 QAM	1@104	18.96	21.67	0.1469

2	15	20	372000	1860	CP-OFDM QPSK	53@26	22.28	24.99	0.3155
2	15	20	372000	1860	CP-OFDM QPSK	1@1	22.24	24.95	0.3126
2	15	20	372000	1860	CP-OFDM QPSK	1@104	22.32	25.03	0.3184
2	15	20	376000	1880	DFT-s-OFDM PI/2 BPSK	50@25	23.77	26.48	0.4446
2	15	20	376000	1880	DFT-s-OFDM PI/2 BPSK	1@1	23.67	26.38	0.4345
2	15	20	376000	1880	DFT-s-OFDM PI/2 BPSK	1@104	23.82	26.53	0.4498
2	15	20	376000	1880	DFT-s-OFDM QPSK	50@25	23.85	26.56	0.4529
2	15	20	376000	1880	DFT-s-OFDM QPSK	1@1	23.8	26.51	0.4477
2	15	20	376000	1880	DFT-s-OFDM QPSK	1@104	24	26.71	0.4688
2	15	20	376000	1880	DFT-s-OFDM 16 QAM	50@25	22.84	25.55	0.3589
2	15	20	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.84	25.55	0.3589
2	15	20	376000	1880	DFT-s-OFDM 16 QAM	1@104	23.05	25.76	0.3767
2	15	20	376000	1880	DFT-s-OFDM 64 QAM	50@25	21.36	24.07	0.2553
2	15	20	376000	1880	DFT-s-OFDM 64 QAM	1@1	21.43	24.14	0.2594
2	15	20	376000	1880	DFT-s-OFDM 64 QAM	1@104	21.54	24.25	0.2661
2	15	20	376000	1880	DFT-s-OFDM 256 QAM	50@25	19.26	21.97	0.1574
2	15	20	376000	1880	DFT-s-OFDM 256 QAM	1@1	18.97	21.68	0.1472
2	15	20	376000	1880	DFT-s-OFDM 256 QAM	1@104	19.06	21.77	0.1503
2	15	20	376000	1880	CP-OFDM QPSK	53@26	22.36	25.07	0.3214
2	15	20	376000	1880	CP-OFDM QPSK	1@1	22.32	25.03	0.3184
2	15	20	376000	1880	CP-OFDM QPSK	1@104	22.46	25.17	0.3289
2	15	20	380000	1900	DFT-s-OFDM PI/2 BPSK	50@25	23.79	26.5	0.4467
2	15	20	380000	1900	DFT-s-OFDM PI/2 BPSK	1@1	23.71	26.42	0.4385
2	15	20	380000	1900	DFT-s-OFDM PI/2 BPSK	1@104	23.64	26.35	0.4315
2	15	20	380000	1900	DFT-s-OFDM QPSK	50@25	23.79	26.5	0.4467
2	15	20	380000	1900	DFT-s-OFDM QPSK	1@1	23.86	26.57	0.4539
2	15	20	380000	1900	DFT-s-OFDM QPSK	1@104	23.8	26.51	0.4477
2	15	20	380000	1900	DFT-s-OFDM 16 QAM	50@25	22.82	25.53	0.3573
2	15	20	380000	1900	DFT-s-OFDM 16 QAM	1@1	22.86	25.57	0.3606
2	15	20	380000	1900	DFT-s-OFDM 16 QAM	1@104	22.82	25.53	0.3573
2	15	20	380000	1900	DFT-s-OFDM 64 QAM	50@25	21.3	24.01	0.2518
2	15	20	380000	1900	DFT-s-OFDM 64 QAM	1@1	21.42	24.13	0.2588
2	15	20	380000	1900	DFT-s-OFDM 64 QAM	1@104	21.35	24.06	0.2547
2	15	20	380000	1900	DFT-s-OFDM 256 QAM	50@25	19.2	21.91	0.1552
2	15	20	380000	1900	DFT-s-OFDM 256 QAM	1@1	19.04	21.75	0.1496
2	15	20	380000	1900	DFT-s-OFDM 256 QAM	1@104	18.92	21.63	0.1455
2	15	20	380000	1900	CP-OFDM QPSK	53@26	22.27	24.98	0.3148
2	15	20	380000	1900	CP-OFDM QPSK	1@1	22.35	25.06	0.3206
2	15	20	380000	1900	CP-OFDM QPSK	1@104	22.3	25.01	0.3170

Software Version: 23.06.1602

FR1 N5(ANT0)

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

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	ERP (dBm)	ERP (W)
5	15	5	165300	826.5	DFT-s-OFDM QPSK	1@1	23.05	21.83	0.1524
5	15	5	165300	826.5	DFT-s-OFDM 16 QAM	1@1	22.12	20.9	0.1230
5	15	5	167300	836.5	DFT-s-OFDM QPSK	1@1	23.09	21.87	0.1538
5	15	5	167300	836.5	DFT-s-OFDM 16 QAM	1@1	22.08	20.86	0.1219
5	15	5	169300	846.5	DFT-s-OFDM QPSK	1@1	23.09	21.87	0.1538
5	15	5	169300	846.5	DFT-s-OFDM 16 QAM	1@1	22.15	20.93	0.1239
5	15	10	165800	829	DFT-s-OFDM QPSK	1@1	22.89	21.67	0.1469
5	15	10	165800	829	DFT-s-OFDM 16 QAM	1@1	22	20.78	0.1197
5	15	10	167300	836.5	DFT-s-OFDM QPSK	1@1	23	21.78	0.1507
5	15	10	167300	836.5	DFT-s-OFDM 16 QAM	1@1	22.07	20.85	0.1216
5	15	10	168800	844	DFT-s-OFDM QPSK	1@1	22.97	21.75	0.1496
5	15	10	168800	844	DFT-s-OFDM 16 QAM	1@1	22.06	20.84	0.1213
5	15	15	166300	831.5	DFT-s-OFDM QPSK	1@1	23.15	21.93	0.1560
5	15	15	166300	831.5	DFT-s-OFDM 16 QAM	1@1	22.16	20.94	0.1242
5	15	15	167300	836.5	DFT-s-OFDM QPSK	1@1	23.16	21.94	0.1563
5	15	15	167300	836.5	DFT-s-OFDM 16 QAM	1@1	22.22	21	0.1259
5	15	15	168300	841.5	DFT-s-OFDM QPSK	1@1	23.2	21.98	0.1578
5	15	15	168300	841.5	DFT-s-OFDM 16 QAM	1@1	22.15	20.93	0.1239
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	50@25	23.21	21.99	0.1581
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	1@1	23.07	21.85	0.1531
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	1@104	22.96	21.74	0.1493
5	15	20	166800	834	DFT-s-OFDM QPSK	50@25	23.17	21.95	0.1567
5	15	20	166800	834	DFT-s-OFDM QPSK	1@1	23.2	21.98	0.1578
5	15	20	166800	834	DFT-s-OFDM QPSK	1@104	22.97	21.75	0.1496
5	15	20	166800	834	DFT-s-OFDM 16 QAM	50@25	22.18	20.96	0.1247
5	15	20	166800	834	DFT-s-OFDM 16 QAM	1@1	22.25	21.03	0.1268
5	15	20	166800	834	DFT-s-OFDM 16 QAM	1@104	22.02	20.8	0.1202
5	15	20	166800	834	DFT-s-OFDM 64 QAM	50@25	20.77	19.55	0.0902
5	15	20	166800	834	DFT-s-OFDM 64 QAM	1@1	20.7	19.48	0.0887
5	15	20	166800	834	DFT-s-OFDM 64 QAM	1@104	20.58	19.36	0.0863
5	15	20	166800	834	DFT-s-OFDM 256 QAM	50@25	18.65	17.43	0.0553
5	15	20	166800	834	DFT-s-OFDM 256 QAM	1@1	18.46	17.24	0.0530
5	15	20	166800	834	DFT-s-OFDM 256 QAM	1@104	18.31	17.09	0.0512

5	15	20	166800	834	CP-OFDM QPSK	53@26	21.76	20.54	0.1132
5	15	20	166800	834	CP-OFDM QPSK	1@1	21.74	20.52	0.1127
5	15	20	166800	834	CP-OFDM QPSK	1@104	21.58	20.36	0.1086
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	50@25	23.16	21.94	0.1563
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@1	23.07	21.85	0.1531
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@104	23.04	21.82	0.1521
5	15	20	167300	836.5	DFT-s-OFDM QPSK	50@25	23.14	21.92	0.1556
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@1	23.12	21.9	0.1549
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@104	23.07	21.85	0.1531
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	50@25	22.14	20.92	0.1236
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	1@1	22.18	20.96	0.1247
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	1@104	22.14	20.92	0.1236
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	50@25	20.72	19.5	0.0891
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	1@1	20.76	19.54	0.0899
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	1@104	20.65	19.43	0.0877
5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	50@25	18.63	17.41	0.0551
5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	1@1	18.42	17.2	0.0525
5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	1@104	18.4	17.18	0.0522
5	15	20	167300	836.5	CP-OFDM QPSK	53@26	21.7	20.48	0.1117
5	15	20	167300	836.5	CP-OFDM QPSK	1@1	21.74	20.52	0.1127
5	15	20	167300	836.5	CP-OFDM QPSK	1@104	21.58	20.36	0.1086
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	50@25	23.13	21.91	0.1552
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	1@1	23.17	21.95	0.1567
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	1@104	22.93	21.71	0.1483
5	15	20	167800	839	DFT-s-OFDM QPSK	50@25	23.13	21.91	0.1552
5	15	20	167800	839	DFT-s-OFDM QPSK	1@1	23.2	21.98	0.1578
5	15	20	167800	839	DFT-s-OFDM QPSK	1@104	23.07	21.85	0.1531
5	15	20	167800	839	DFT-s-OFDM 16 QAM	50@25	22.13	20.91	0.1233
5	15	20	167800	839	DFT-s-OFDM 16 QAM	1@1	22.27	21.05	0.1274
5	15	20	167800	839	DFT-s-OFDM 16 QAM	1@104	22.07	20.85	0.1216
5	15	20	167800	839	DFT-s-OFDM 64 QAM	50@25	20.63	19.41	0.0873
5	15	20	167800	839	DFT-s-OFDM 64 QAM	1@1	20.74	19.52	0.0895
5	15	20	167800	839	DFT-s-OFDM 64 QAM	1@104	20.58	19.36	0.0863
5	15	20	167800	839	DFT-s-OFDM 256 QAM	50@25	18.51	17.29	0.0536
5	15	20	167800	839	DFT-s-OFDM 256 QAM	1@1	18.42	17.2	0.0525
5	15	20	167800	839	DFT-s-OFDM 256 QAM	1@104	18.28	17.06	0.0508
5	15	20	167800	839	CP-OFDM QPSK	53@26	21.61	20.39	0.1094
5	15	20	167800	839	CP-OFDM QPSK	1@1	21.75	20.53	0.1130
5	15	20	167800	839	CP-OFDM QPSK	1@104	21.57	20.35	0.1084

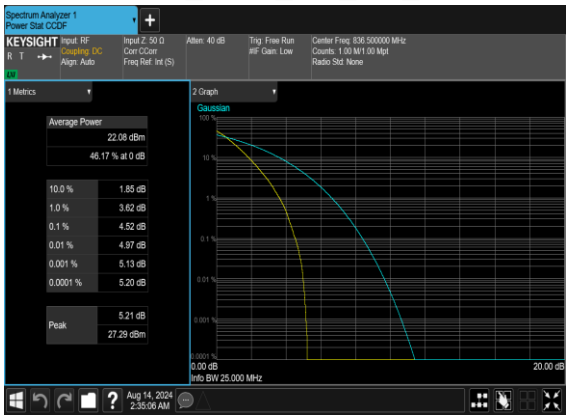
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0050	**PASS**	NV
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0038	**PASS**	LV
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0065	**PASS**	HV
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0062	**PASS**	-30℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0028	**PASS**	-20℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0020	**PASS**	-10℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0038	**PASS**	0℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0064	**PASS**	10℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0050	**PASS**	20℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0031	**PASS**	30℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0039	**PASS**	40℃
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0039	**PASS**	50℃

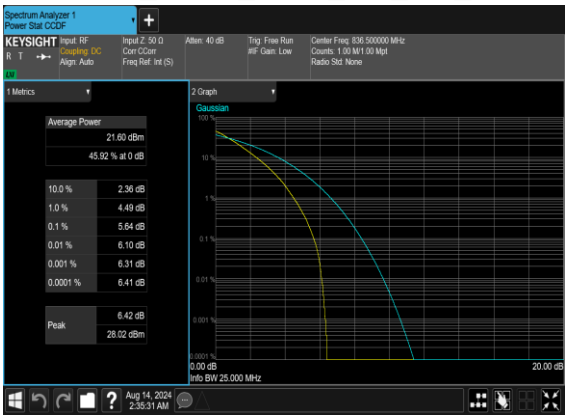
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	100@0	4.52	13	**PASS**
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	5.64	13	**PASS**

N5(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



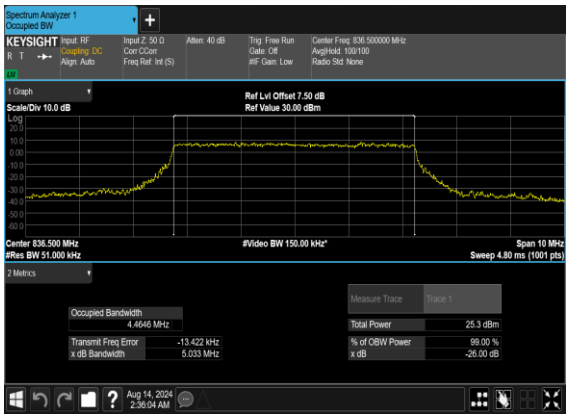
N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



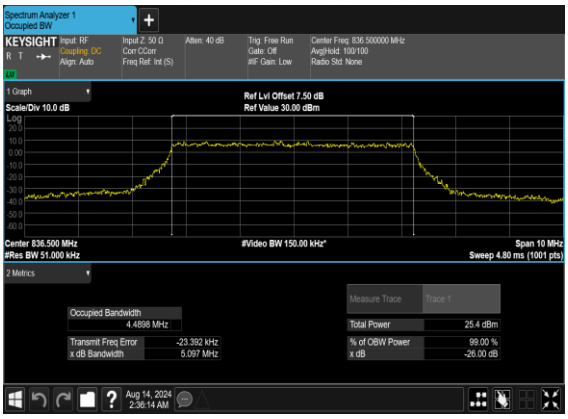
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
5	15	5	167300	836.5	CP-OFDM QPSK	25@0	4.4646	5.033
5	15	5	167300	836.5	CP-OFDM 16 QAM	25@0	4.4898	5.097
5	15	5	167300	836.5	CP-OFDM 64 QAM	25@0	4.4606	4.947
5	15	5	167300	836.5	CP-OFDM 256 QAM	25@0	4.487	5.053
5	15	10	167300	836.5	CP-OFDM QPSK	52@0	9.2525	9.907
5	15	10	167300	836.5	CP-OFDM 16 QAM	52@0	9.2758	9.95
5	15	10	167300	836.5	CP-OFDM 64 QAM	52@0	9.2808	9.882
5	15	10	167300	836.5	CP-OFDM 256 QAM	52@0	9.2768	9.999
5	15	15	167300	836.5	CP-OFDM QPSK	79@0	14.08	14.76
5	15	15	167300	836.5	CP-OFDM 16 QAM	79@0	14.064	14.78
5	15	15	167300	836.5	CP-OFDM 64 QAM	79@0	14.076	14.76
5	15	15	167300	836.5	CP-OFDM 256 QAM	79@0	14.039	14.88
5	15	20	167300	836.5	CP-OFDM QPSK	106@0	18.862	19.76
5	15	20	167300	836.5	CP-OFDM 16 QAM	106@0	18.845	19.79
5	15	20	167300	836.5	CP-OFDM 64 QAM	106@0	18.8	19.67
5	15	20	167300	836.5	CP-OFDM 256 QAM	106@0	18.882	19.65

N5(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

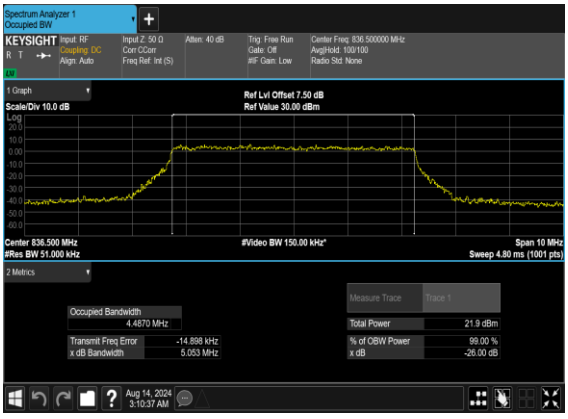


N5(5M)_CP-OFDM_16QAM_Outer_Full_Mid_CH

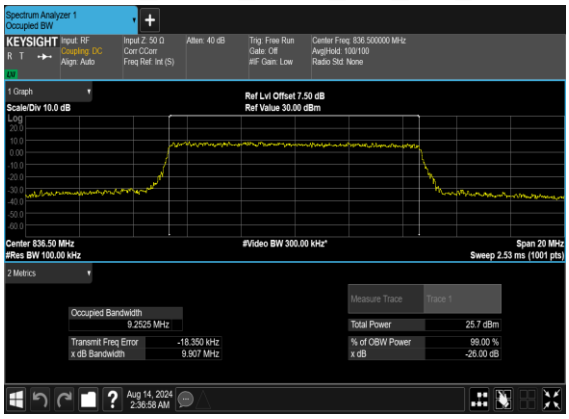


N5(5M)_CP-OFDM_64QAM_Outer_Full_Mid_CH

N5(5M)_CP-OFDM_256QAM_Outer_Full_Mid_CH



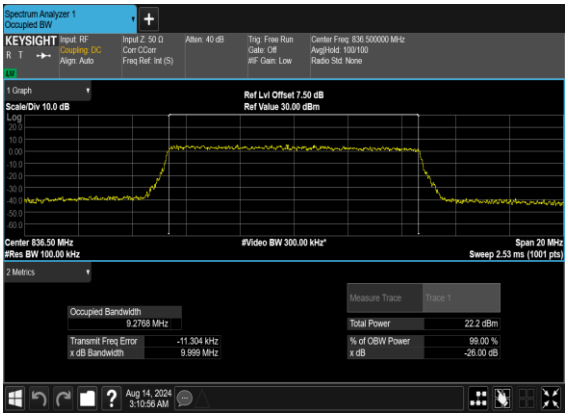
N5(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



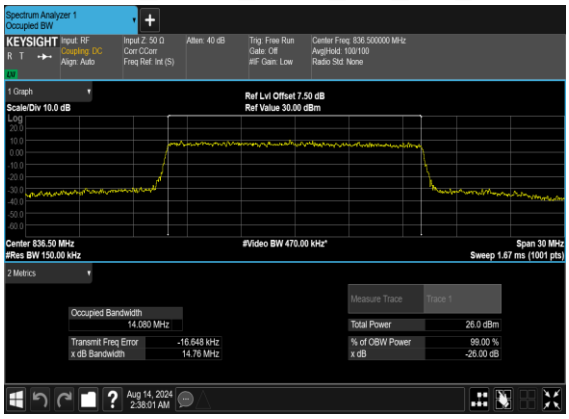
N5(10M)_CP-OFDM_16QAM_Outer_Full_Mid_CH

N5(10M)_CP-OFDM_64QAM_Outer_Full_Mid_CH

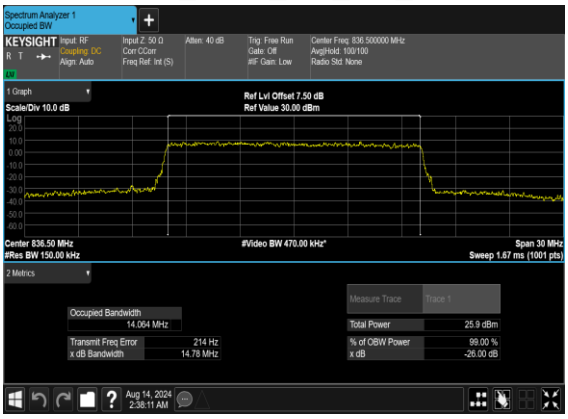
N5(10M)_CP-OFDM_256QAM_Outer_Full_Mid_CH



N5(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



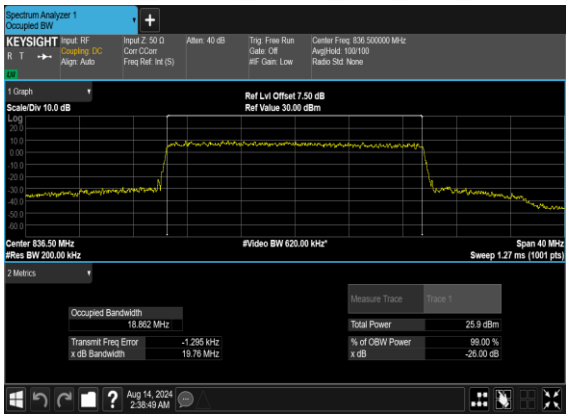
N5(15M)_CP-OFDM_16QAM_Outer_Full_Mid_CH



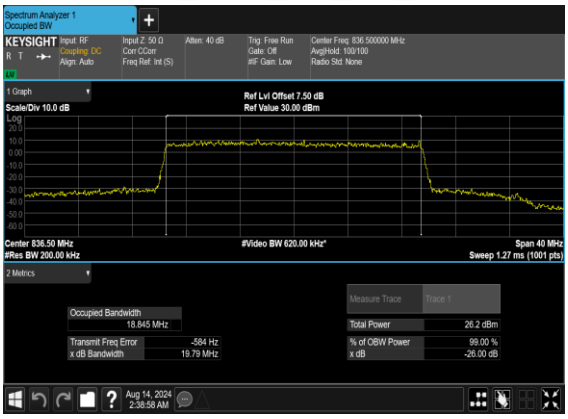
N5(15M)_CP-OFDM_64QAM_Outer_Full_Mid_CH

N5(15M)_CP-OFDM_256QAM_Outer_Full_Mid_CH

N5(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

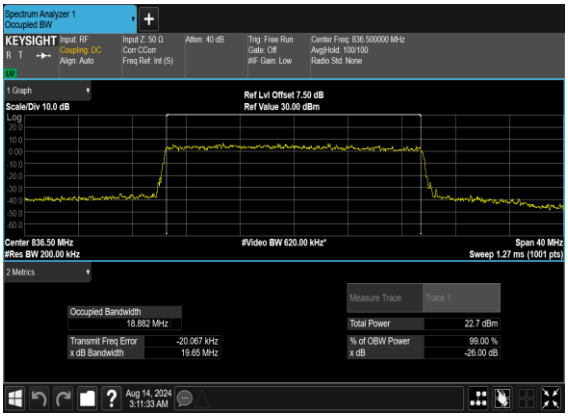


N5(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N5(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N5(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



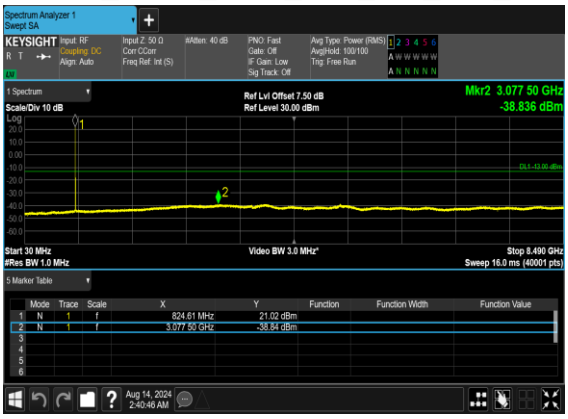
Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
5	15	5	165300	826.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	5	165300	826.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	5	165300	826.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	5	165300	826.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	5	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	5	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	5	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	5	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	5	169300	846.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	5	169300	846.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	5	169300	846.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	5	169300	846.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	10	165800	829.0	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	10	165800	829.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	10	165800	829.0	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	10	165800	829.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	10	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	10	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	10	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	10	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

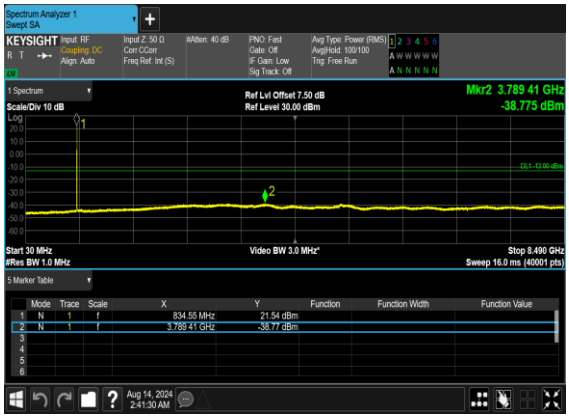
5	15	10	168800	844.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
5	15	10	168800	844.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	10	168800	844.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
5	15	10	168800	844.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	20	166800	834.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
5	15	20	166800	834.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	20	166800	834.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
5	15	20	166800	834.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	20	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
5	15	20	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	20	167800	839.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
5	15	20	167800	839.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	20	167800	839.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
5	15	20	167800	839.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

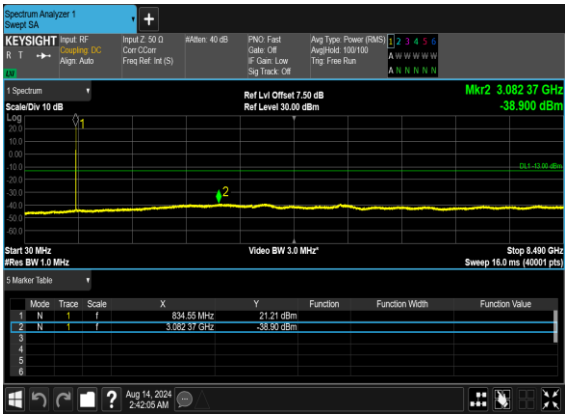
N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

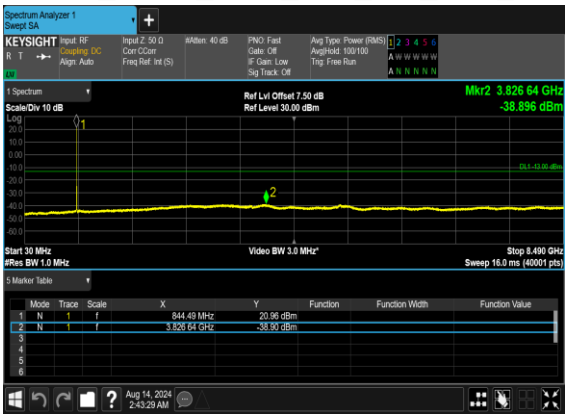


N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

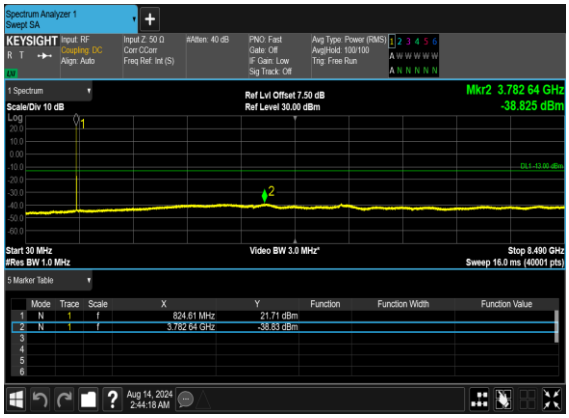


N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

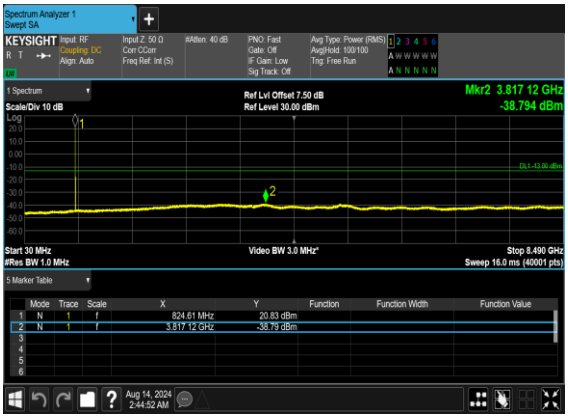
N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

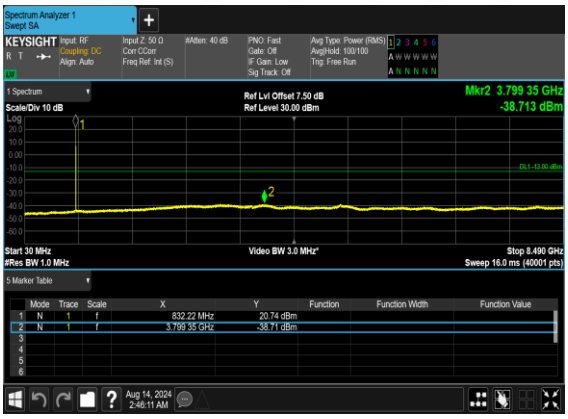


N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

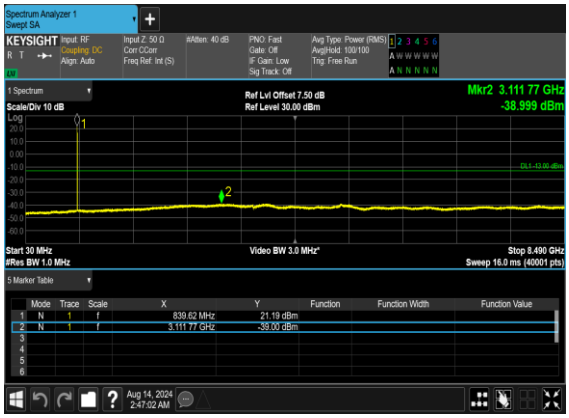


N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

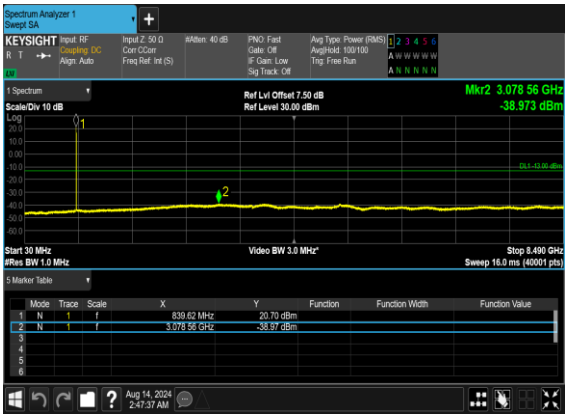
N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

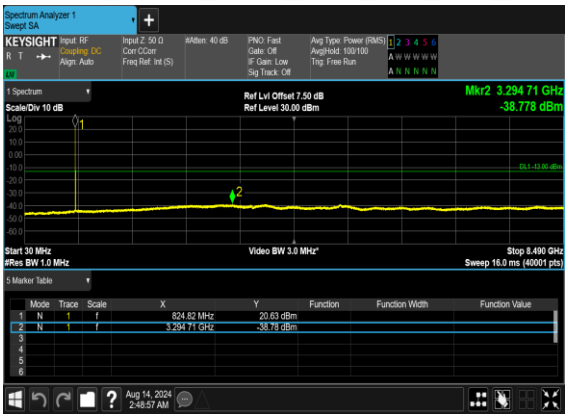


N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

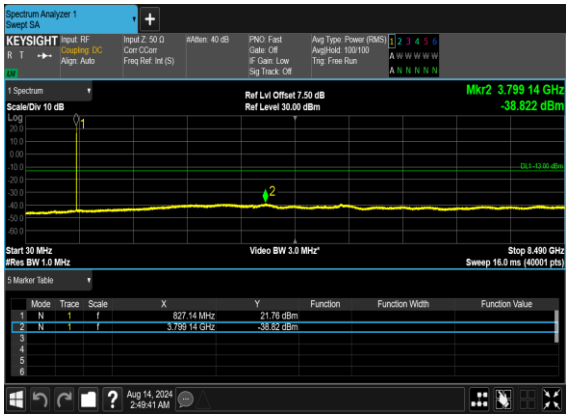


N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

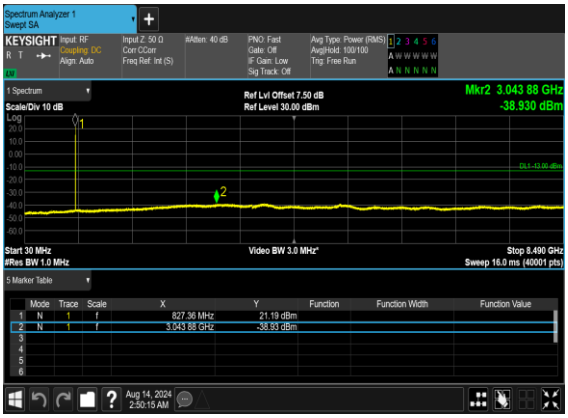
N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

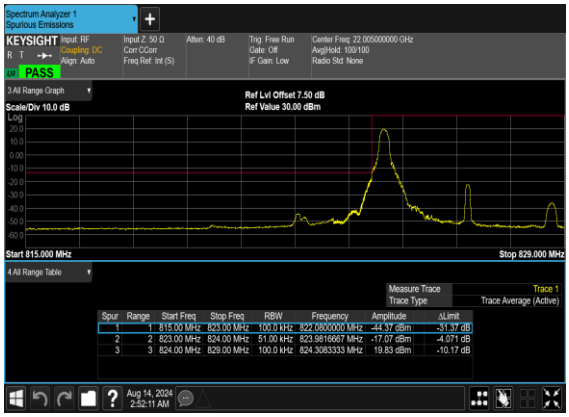
N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

Conducted Band Edge

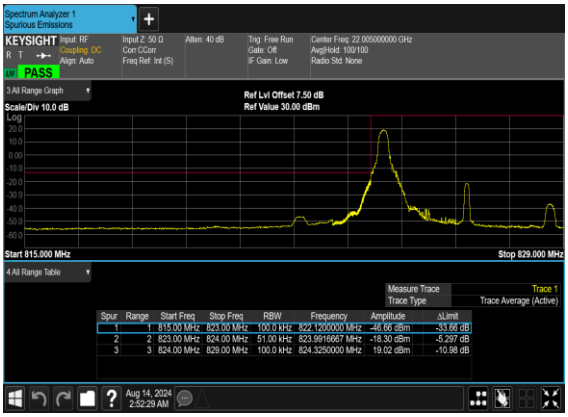
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
5	15	5	165300	826.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	5	165300	826.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	5	165300	826.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
5	15	5	165300	826.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
5	15	5	169300	846.5	DFT-s-OFDM BPSK	1@24	see graph	**PASS**
5	15	5	169300	846.5	DFT-s-OFDM QPSK	1@24	see graph	**PASS**
5	15	5	169300	846.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
5	15	5	169300	846.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
5	15	10	165800	829.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	10	165800	829.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	10	165800	829.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
5	15	10	165800	829.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
5	15	10	168800	844.0	DFT-s-OFDM BPSK	1@51	see graph	**PASS**
5	15	10	168800	844.0	DFT-s-OFDM QPSK	1@51	see graph	**PASS**
5	15	10	168800	844.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
5	15	10	168800	844.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
5	15	20	166800	834.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	20	166800	834.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	20	166800	834.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
5	15	20	166800	834.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**

5	15	20	167800	839.0	DFT-s-OFDM BPSK	1@105	see graph	**PASS**
5	15	20	167800	839.0	DFT-s-OFDM QPSK	1@105	see graph	**PASS**
5	15	20	167800	839.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
5	15	20	167800	839.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**

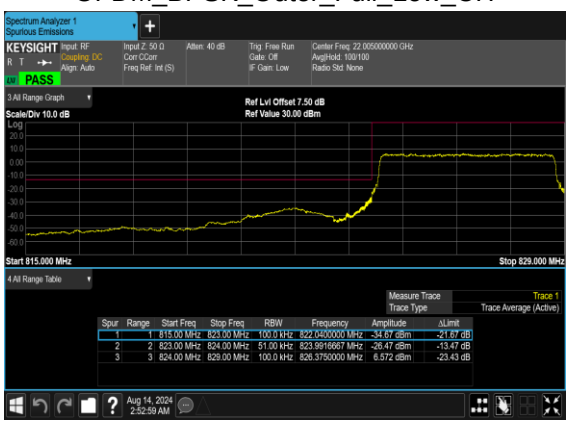
N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



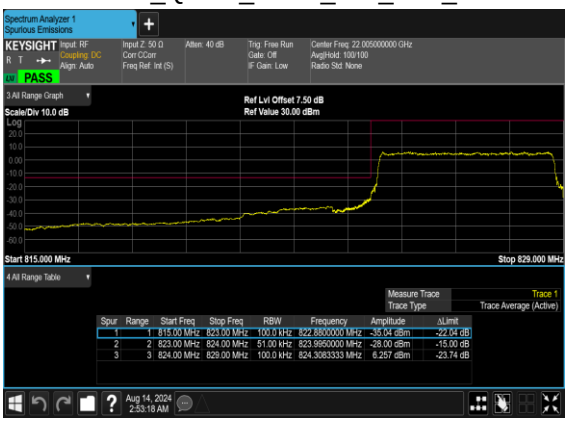
N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



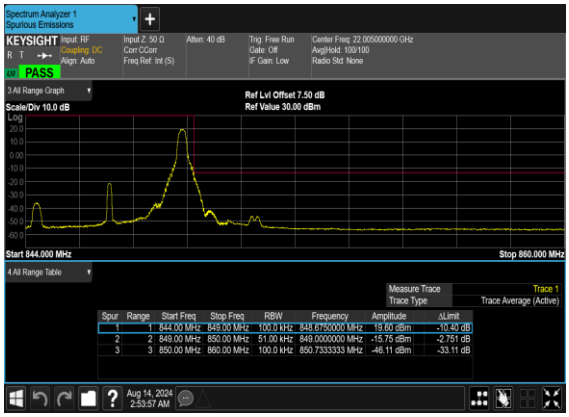
N5(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



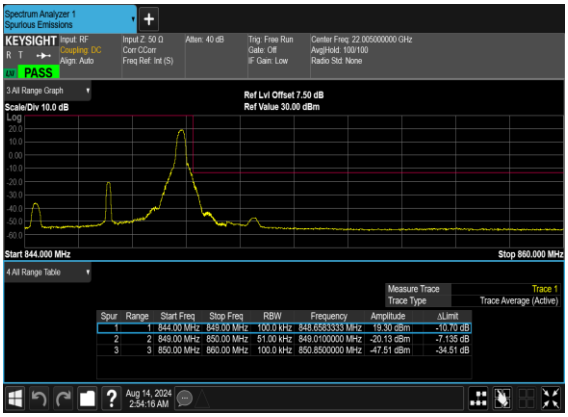
N5(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



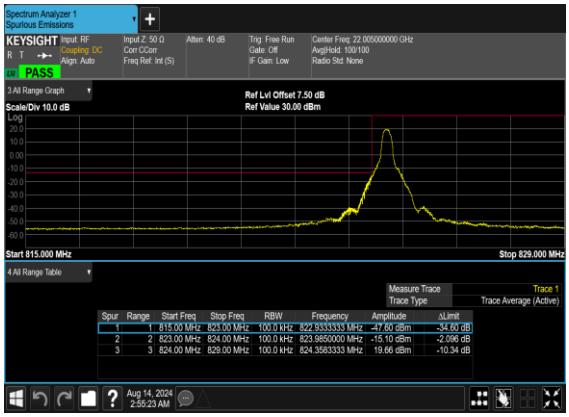
N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



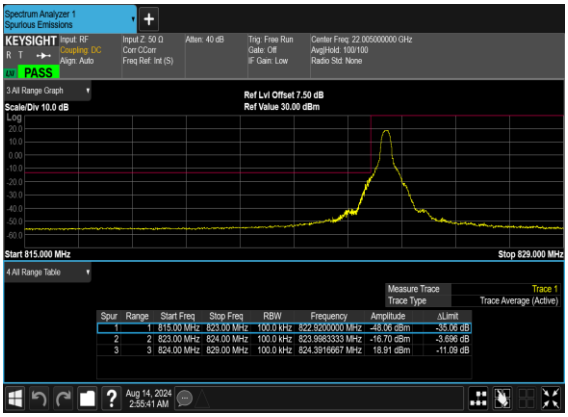
N5(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N5(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

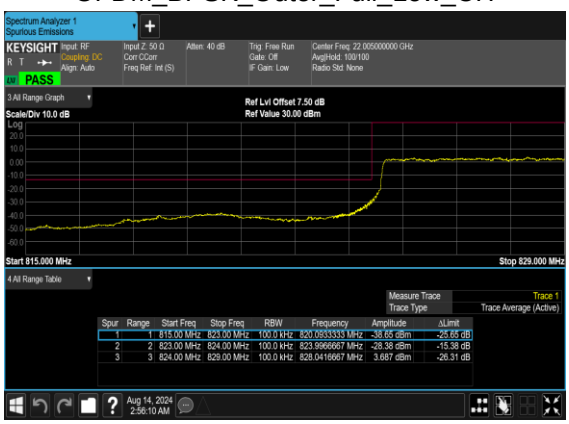
N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



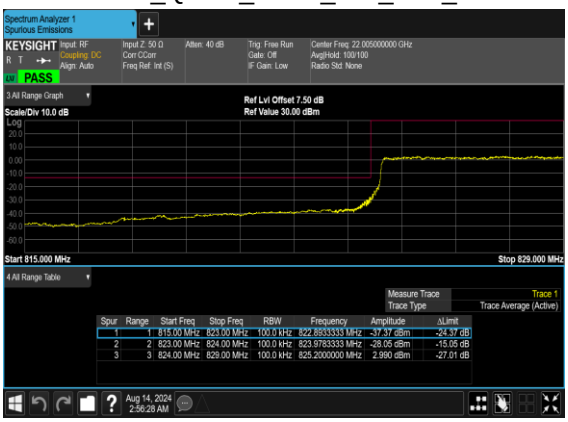
N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



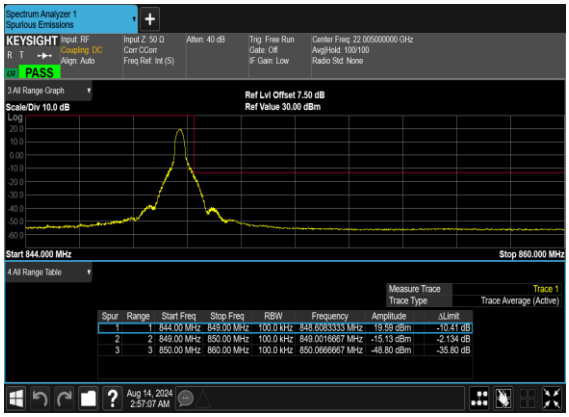
N5(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



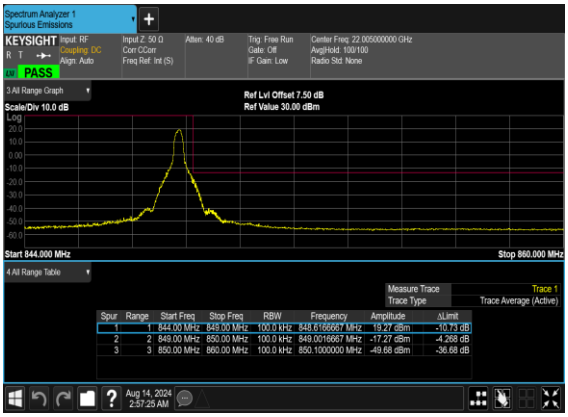
N5(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



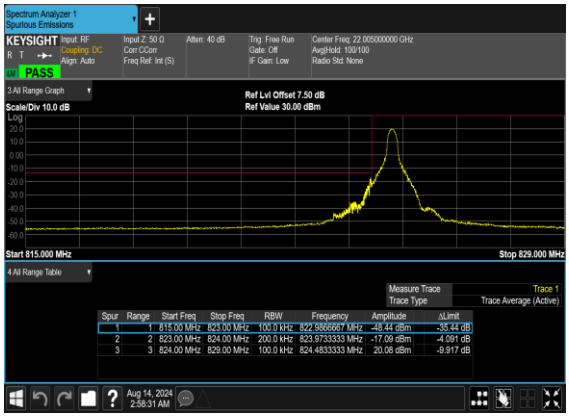
N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



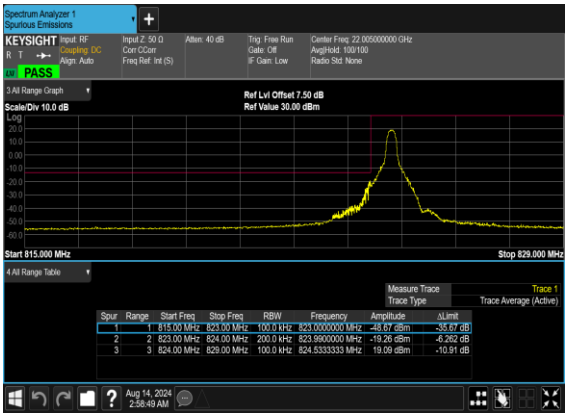
N5(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N5(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

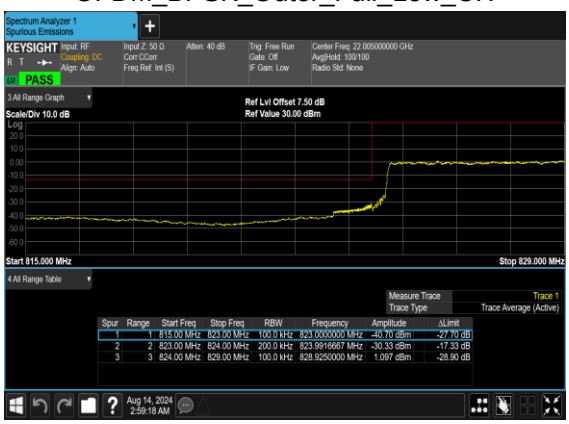
N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



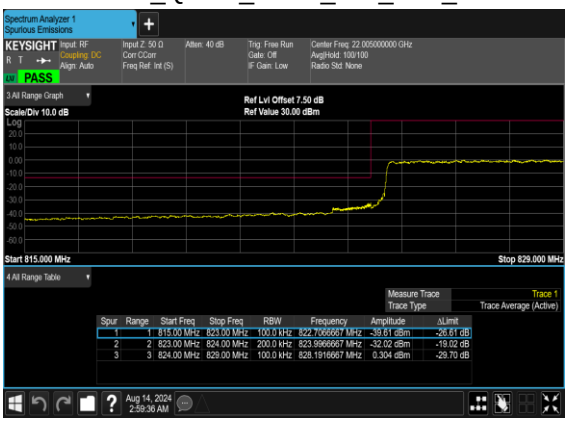
N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



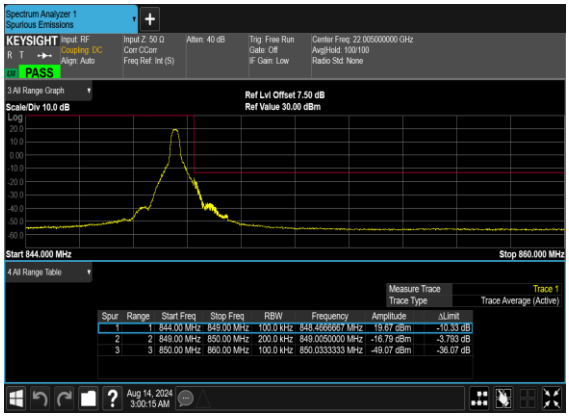
N5(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



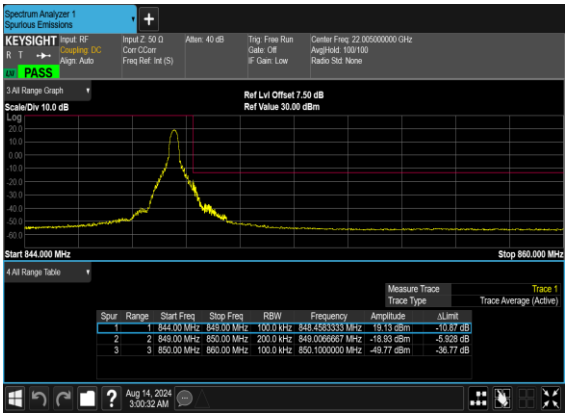
N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



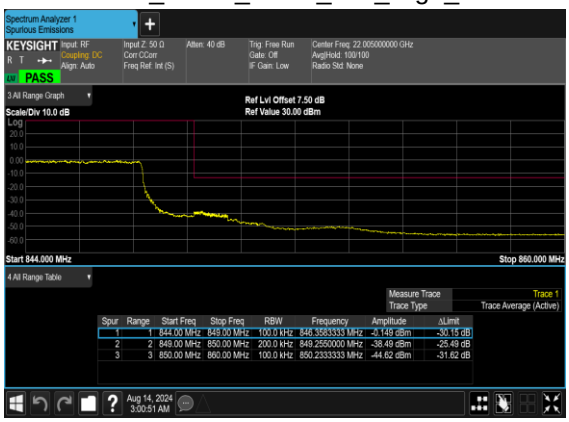
N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



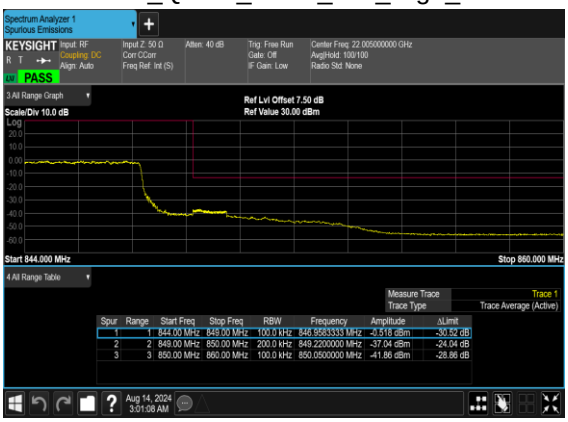
N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N5(20M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



Software Version: 23.06.1602

FR1 N25(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)
25	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@1	23.79	26.5	0.4467
25	15	5	370500	1852.5	DFT-s-OFDM 16 QAM	1@1	22.88	25.59	0.3622
25	15	5	376500	1882.5	DFT-s-OFDM QPSK	1@1	24	26.71	0.4688
25	15	5	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	22.89	25.6	0.3631
25	15	5	382500	1912.5	DFT-s-OFDM QPSK	1@1	23.81	26.52	0.4487
25	15	5	382500	1912.5	DFT-s-OFDM 16 QAM	1@1	22.91	25.62	0.3648
25	15	10	371000	1855	DFT-s-OFDM QPSK	1@1	23.64	26.35	0.4315
25	15	10	371000	1855	DFT-s-OFDM 16 QAM	1@1	22.69	25.4	0.3467
25	15	10	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.88	26.59	0.4560
25	15	10	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	22.91	25.62	0.3648
25	15	10	382000	1910	DFT-s-OFDM QPSK	1@1	23.88	26.59	0.4560
25	15	10	382000	1910	DFT-s-OFDM 16 QAM	1@1	22.97	25.68	0.3698
25	15	15	371500	1857.5	DFT-s-OFDM QPSK	1@1	23.89	26.6	0.4571
25	15	15	371500	1857.5	DFT-s-OFDM 16 QAM	1@1	22.98	25.69	0.3707
25	15	15	376500	1882.5	DFT-s-OFDM QPSK	1@1	24.05	26.76	0.4742
25	15	15	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	23.08	25.79	0.3793
25	15	15	381500	1907.5	DFT-s-OFDM QPSK	1@1	24.08	26.79	0.4775
25	15	15	381500	1907.5	DFT-s-OFDM 16 QAM	1@1	22.95	25.66	0.3681
25	15	20	372000	1860	DFT-s-OFDM PI/2 BPSK	50@25	24.04	26.75	0.4732
25	15	20	372000	1860	DFT-s-OFDM PI/2 BPSK	1@1	23.82	26.53	0.4498
25	15	20	372000	1860	DFT-s-OFDM PI/2 BPSK	1@104	24.15	26.86	0.4853
25	15	20	372000	1860	DFT-s-OFDM QPSK	50@25	24.09	26.8	0.4786
25	15	20	372000	1860	DFT-s-OFDM QPSK	1@1	23.9	26.61	0.4581
25	15	20	372000	1860	DFT-s-OFDM QPSK	1@104	24.21	26.92	0.4920
25	15	20	372000	1860	DFT-s-OFDM 16 QAM	50@25	23.07	25.78	0.3784
25	15	20	372000	1860	DFT-s-OFDM 16 QAM	1@1	22.96	25.67	0.3690
25	15	20	372000	1860	DFT-s-OFDM 16 QAM	1@104	23.24	25.95	0.3936
25	15	20	372000	1860	DFT-s-OFDM 64 QAM	50@25	21.64	24.35	0.2723
25	15	20	372000	1860	DFT-s-OFDM 64 QAM	1@1	21.52	24.23	0.2649
25	15	20	372000	1860	DFT-s-OFDM 64 QAM	1@104	21.9	24.61	0.2891
25	15	20	372000	1860	DFT-s-OFDM 256 QAM	50@25	19.57	22.28	0.1690
25	15	20	372000	1860	DFT-s-OFDM 256 QAM	1@1	19.2	21.91	0.1552
25	15	20	372000	1860	DFT-s-OFDM 256 QAM	1@104	19.55	22.26	0.1683

25	15	20	372000	1860	CP-OFDM QPSK	53@26	22.69	25.4	0.3467
25	15	20	372000	1860	CP-OFDM QPSK	1@1	22.51	25.22	0.3327
25	15	20	372000	1860	CP-OFDM QPSK	1@104	22.75	25.46	0.3516
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	50@25	24.22	26.93	0.4932
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@1	24.07	26.78	0.4764
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@104	24.26	26.97	0.4977
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	50@25	24.27	26.98	0.4989
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	1@1	24.1	26.81	0.4797
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	1@104	24.35	27.06	0.5082
25	15	20	376500	1882.5	DFT-s-OFDM 16 QAM	50@25	23.34	26.05	0.4027
25	15	20	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	23.1	25.81	0.3811
25	15	20	376500	1882.5	DFT-s-OFDM 16 QAM	1@104	23.41	26.12	0.4093
25	15	20	376500	1882.5	DFT-s-OFDM 64 QAM	50@25	21.84	24.55	0.2851
25	15	20	376500	1882.5	DFT-s-OFDM 64 QAM	1@1	21.77	24.48	0.2805
25	15	20	376500	1882.5	DFT-s-OFDM 64 QAM	1@104	22.02	24.73	0.2972
25	15	20	376500	1882.5	DFT-s-OFDM 256 QAM	50@25	19.85	22.56	0.1803
25	15	20	376500	1882.5	DFT-s-OFDM 256 QAM	1@1	19.75	22.46	0.1762
25	15	20	376500	1882.5	DFT-s-OFDM 256 QAM	1@104	19.75	22.46	0.1762
25	15	20	376500	1882.5	CP-OFDM QPSK	53@26	22.88	25.59	0.3622
25	15	20	376500	1882.5	CP-OFDM QPSK	1@1	22.66	25.37	0.3443
25	15	20	376500	1882.5	CP-OFDM QPSK	1@104	22.78	25.49	0.3540
25	15	20	381000	1905	DFT-s-OFDM PI/2 BPSK	50@25	24.19	26.9	0.4898
25	15	20	381000	1905	DFT-s-OFDM PI/2 BPSK	1@1	24.09	26.8	0.4786
25	15	20	381000	1905	DFT-s-OFDM PI/2 BPSK	1@104	24.07	26.78	0.4764
25	15	20	381000	1905	DFT-s-OFDM QPSK	50@25	24.24	26.95	0.4955
25	15	20	381000	1905	DFT-s-OFDM QPSK	1@1	24.23	26.94	0.4943
25	15	20	381000	1905	DFT-s-OFDM QPSK	1@104	23.88	26.59	0.4560
25	15	20	381000	1905	DFT-s-OFDM 16 QAM	50@25	23.31	26.02	0.3999
25	15	20	381000	1905	DFT-s-OFDM 16 QAM	1@1	23.41	26.12	0.4093
25	15	20	381000	1905	DFT-s-OFDM 16 QAM	1@104	22.85	25.56	0.3597
25	15	20	381000	1905	DFT-s-OFDM 64 QAM	50@25	21.82	24.53	0.2838
25	15	20	381000	1905	DFT-s-OFDM 64 QAM	1@1	21.98	24.69	0.2944
25	15	20	381000	1905	DFT-s-OFDM 64 QAM	1@104	21.61	24.32	0.2704
25	15	20	381000	1905	DFT-s-OFDM 256 QAM	50@25	19.82	22.53	0.1791
25	15	20	381000	1905	DFT-s-OFDM 256 QAM	1@1	19.9	22.61	0.1824
25	15	20	381000	1905	DFT-s-OFDM 256 QAM	1@104	19.75	22.46	0.1762
25	15	20	381000	1905	CP-OFDM QPSK	53@26	22.84	25.55	0.3589
25	15	20	381000	1905	CP-OFDM QPSK	1@1	22.77	25.48	0.3532
25	15	20	381000	1905	CP-OFDM QPSK	1@104	22.38	25.09	0.3228

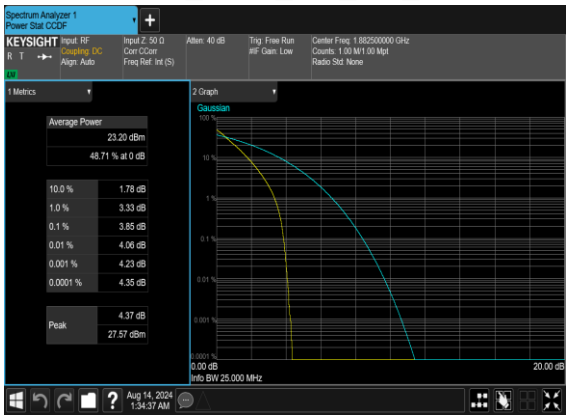
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0024	**PASS**	NV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0020	**PASS**	LV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0030	**PASS**	HV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0029	**PASS**	-30℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0027	**PASS**	-20℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0053	**PASS**	-10℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0036	**PASS**	0℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0029	**PASS**	10℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0024	**PASS**	20℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0020	**PASS**	30℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0060	**PASS**	40℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0037	**PASS**	50℃

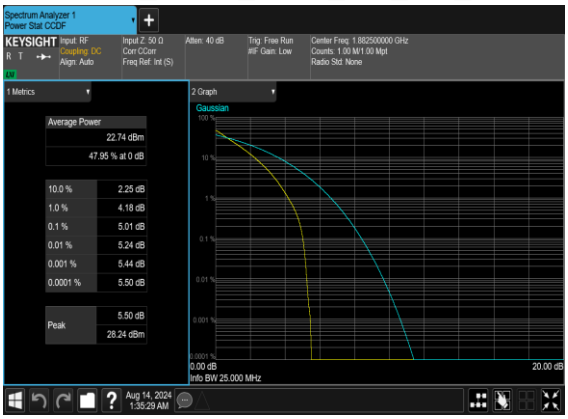
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	100@0	3.85	13	**PASS**
5	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	5.01	13	**PASS**

N25(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



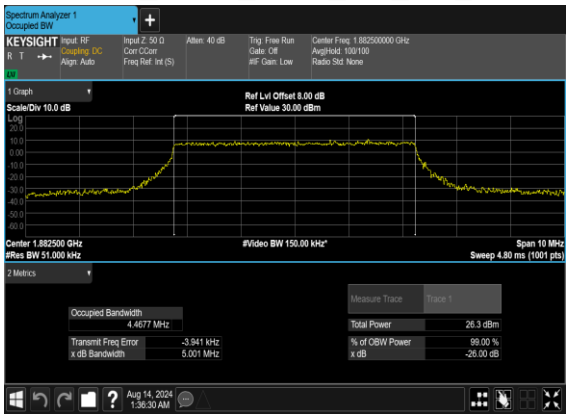
N25(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
25	15	5	376500	1882.5	CP-OFDM QPSK	25@0	4.4677	5.001
25	15	5	376500	1882.5	CP-OFDM 16 QAM	25@0	4.4716	5.1
25	15	5	376500	1882.5	CP-OFDM 64 QAM	25@0	4.4702	5.039
25	15	5	376500	1882.5	CP-OFDM 256 QAM	25@0	4.478	5.002
25	15	10	376500	1882.5	CP-OFDM QPSK	52@0	9.2843	10.09
25	15	10	376500	1882.5	CP-OFDM 16 QAM	52@0	9.2792	10.01
25	15	10	376500	1882.5	CP-OFDM 64 QAM	52@0	9.2661	9.891
25	15	10	376500	1882.5	CP-OFDM 256 QAM	52@0	9.2802	10.0
25	15	15	376500	1882.5	CP-OFDM QPSK	79@0	14.107	14.91
25	15	15	376500	1882.5	CP-OFDM 16 QAM	79@0	14.089	14.93
25	15	15	376500	1882.5	CP-OFDM 64 QAM	79@0	14.078	14.98
25	15	15	376500	1882.5	CP-OFDM 256 QAM	79@0	14.09	14.93
25	15	20	376500	1882.5	CP-OFDM QPSK	106@0	18.937	19.83
25	15	20	376500	1882.5	CP-OFDM 16 QAM	106@0	18.903	19.79
25	15	20	376500	1882.5	CP-OFDM 64 QAM	106@0	18.913	19.85
25	15	20	376500	1882.5	CP-OFDM 256 QAM	106@0	18.936	19.77

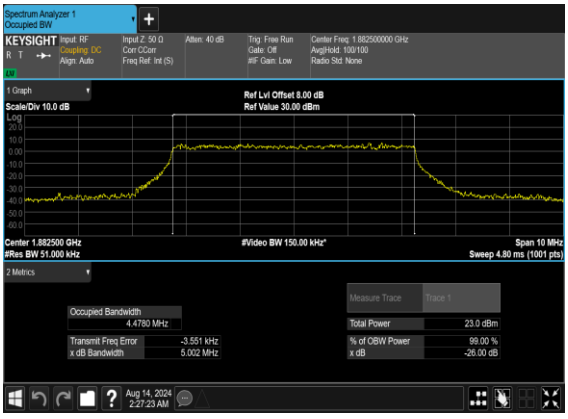
N25(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



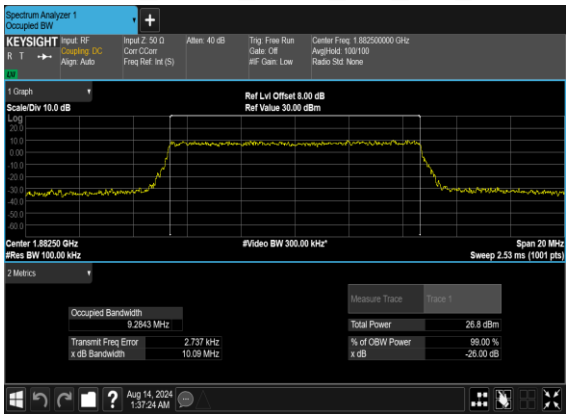
N25(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N25(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

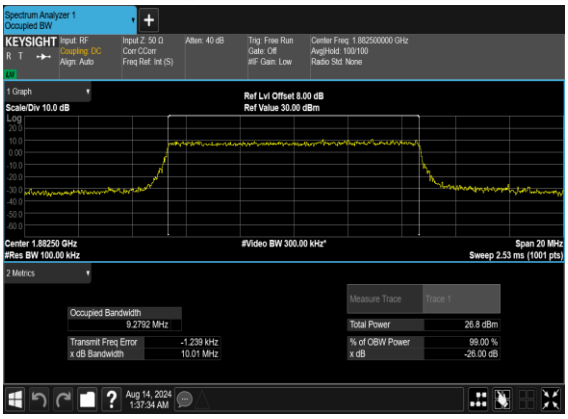
N25(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N25(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



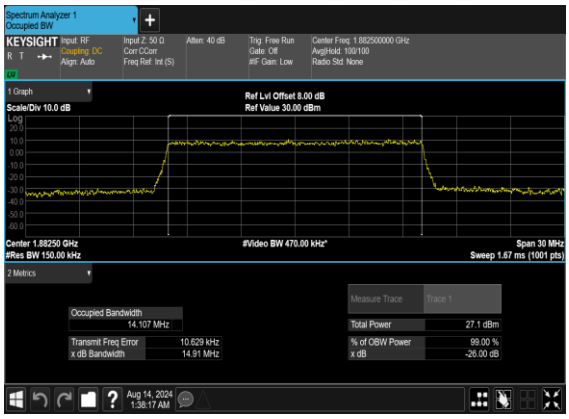
N25(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N25(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N25(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N25(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N25(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N25(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N25(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH