FCC RF Test Report

APPLICANT	: Motorola Mobility LLC
EQUIPMENT	: Mobile Cellular Phone
BRAND NAME	: Motorola
MODEL NAME	: XT2415-1, XT2415-3, XT2415-5, XT2415V
FCC ID	: IHDT56AN5
STANDARD	: 47 CFR Part 2, 22, 24, 27
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	: Sep. 28, 2023 ~ Oct. 16, 2023

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
FG391202J	Rev. 01	Initial issue of report	Oct. 25, 2023

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, n26)	ERP < 7 Watt		
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (5G NR n12, n71)	ERP < 3 Watt		
	§24.232(c))	Equivalent Isotropic Radiated Power (5G NR n2, n25)	EIRP < 2Watt		
3.5	§24.232(d) §27.50(j)(4)	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(g))	Conducted Band Edge Measurement (5G NR n5, n26) (5G NR n2, n25) (5G NR n12, n71)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(g)	Conducted Spurious Emission (5G NR n5, n26) (5G NR n2, n25) (5G NR n12, n71)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(g))	Radiated Spurious Emission (5G NR n5, n26) (5G NR n2, n25) (5G NR n12, n71)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 22.79 dB at 7578.270 MHz

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

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

1.2 Manufacturer

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

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2415-1, XT2415-3, XT2415-5, XT2415V
FCC ID	IHDT56AN5
IMEI Code	Conducted: 357534480030391/357534480030409 Radiation: 357534480040630/357534480040648
HW Version	DVT2
SW Version	UUD34.38
EUT Stage	Identical Prototype

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 n12 : 699 MHz ~ 716 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 824 MHz ~ 849 MHz 5G NR n71: 663 MHz ~ 698 MHz
Rx Frequency	5G NR n2 : 1930 MHz ~ 1990 MHz 5G NR n5 : 869 MHz ~ 894 MHz 5G NR n12: 729 MHz ~ 746 MHz 5G NR n25 : 1930 MHz ~ 1995 MHz 5G NR n26 : 869 MHz ~ 894 MHz 5G NR n71: 617 MHz ~ 652 MHz
Bandwidth	n2: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz n5: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz n12: 5MHz / 10MHz / 15MHz n25: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 35MHz / 40MHz / 45MHz n26, n71: 5MHz / 10MHz / 15MHz / 20MHz
SCS	15kHz
Antenna Gain	**<Ant. 0>:**

	n2: -0.7 dBi n5: -5.5 dBi n12: -4.5 dBi n25: -0.7 dBi n26: -5.5 dBi n71: -8.2 dBi **<Ant. 4>:** n2: -1.2 dBi n5: -7.7dBi n12: -5.6 dBi n25: -1.2 dBi n26: -7.7dBi n71: -7.9 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum ERP/EIRP is calculated from output power and antenna gain, only the maximum ERP/EIRP of Ant.0 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 n26 only support SA mode, and n2/n5/n12/n25/n71 support SA & NSA mode. The whole testing has assessed SA mode by referring to the higher conducted power for conducted test items.
4. The device supports two PAs for 5G NR n25 (main PA for SA mode and other PA for NSA mode), the maximum power of main PA is higher than the other PA, therefore, we chose higher power of main PA to calculate the EIRP and show in the report.
5. The EN-DC mode combination could be referred to the product spec.

1.5 Modification of EUT

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

1.6 Specification of Accessory

Accessories Information				
AC Adapter 1	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-101
AC Adapter 2	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-101
AC Adapter 3	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-101
Battery 1	**Brand Name**	Motorola (ATL)	**Model Name**	QA50
USB Cable 1	**Brand Name**	Motorola (WASHIN)	**Model Name**	S928D98335
USB Cable 2	**Brand Name**	Motorola (Saibao)	**Model Name**	S928D98333
USB Cable 3	**Brand Name**	Motorola (Saibao)	**Model Name**	S928D98334

1.7 Maximum ERP/EIRP Power and Emission Designator

5G NR n2		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	1852.5 ~ 1907.5	0.1795	4M47G7D	0.1452	4M48W7D
10	1855.0 ~ 1905.0	0.1738	9M29G7D	0.1400	9M30W7D
15	1857.5 ~ 1902.5	0.1799	14M1G7D	0.1435	14M1W7D
20	1860.0 ~ 1900.0	0.1799	18M9G7D	0.1426	18M9W7D
25	1862.5 ~ 1897.5	0.1750	23M8G7D	0.1380	23M8W7D
30	1865.0 ~ 1895.0	0.1803	28M6G7D	0.1472	28M6W7D

5G NR n25		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	1852.5 ~ 1912.5	0.1811	4M47G7D	0.1442	4M48W7D
10	1855.0 ~ 1910.0	0.1722	9M29G7D	0.1368	9M30W7D
15	1857.5 ~ 1907.5	0.1791	14M1G7D	0.1416	14M1W7D
20	1860.0 ~ 1905.0	0.1778	18M9G7D	0.1416	18M9W7D
25	1862.5 ~ 1902.5	0.1742	23M8G7D	0.1361	23M8W7D
30	1865.0 ~ 1900.0	0.1687	28M6G7D	0.1340	28M6W7D
35	1867.5 ~ 1897.5	0.1637	33M6G7D	0.1288	33M7W7D
40	1870.0 ~ 1895.0	0.1614	38M6G7D	0.1259	38M5W7D
45	1872.5 ~ 1892.5	0.1816	43M1G7D	0.1462	43M2W7D

5G NR n5		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	826.5 ~ 846.5	0.0340	4M47G7D	0.0261	4M47W7D
10	829.0 ~ 844.0	0.0327	9M27G7D	0.0250	9M29W7D
15	831.5 ~ 841.5	0.0335	14M1G7D	0.0257	14M1W7D
20	834.0 ~ 839.0	0.0340	18M8G7D	0.0262	18M9W7D
25	836.5	0.0342	23M8G7D	0.0265	23M7W7D

5G NR n26		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	826.5 ~ 846.5	0.0341	4M47G7D	0.0262	4M47W7D
10	829.0 ~ 844.0	0.0330	9M27G7D	0.0249	9M29W7D
15	831.5 ~ 841.5	0.0339	14M1G7D	0.0258	14M1W7D
20	834.0 ~ 839.0	0.0344	18M8G7D	0.0261	18M9W7D

5G NR n12		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	701.5 ~ 713.5	0.0452	4M47G7D	0.0358	4M48W7D
10	704.0~ 711.0	0.0430	9M30G7D	0.0340	9M29W7D
15	706.5 ~ 708.5	0.0459	14M1G7D	0.0361	14M1W7D

5G NR n71		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.0188	4M47G7D	0.0149	4M47W7D
10	668.0 ~ 693.0	0.0176	9M27G7D	0.0140	9M30W7D
15	670.5 ~ 690.5	0.0184	14M1G7D	0.0146	14M1W7D
20	673.0 ~ 688.0	0.0190	18M9G7D	0.0154	18M9W7D

Note:

1. 5G NR n26 overlaps the entire frequency range of 5G NR n5. Therefore, the test results provided in this report covers 5G NR n5 and the portion of 5G NR n26 subject to Part 22, and 5G NR n5 supports BW 25MHz, it is tested in the report.
2. 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.
3. All modulations have been tested, only the worst test results of PSK & QAM are shown in the report.

1.8 Testing Location

Sporton International Inc. (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

1.9 Test Software

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

1.10 Applicable Standards

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

- 47 CFR Part 2, 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.

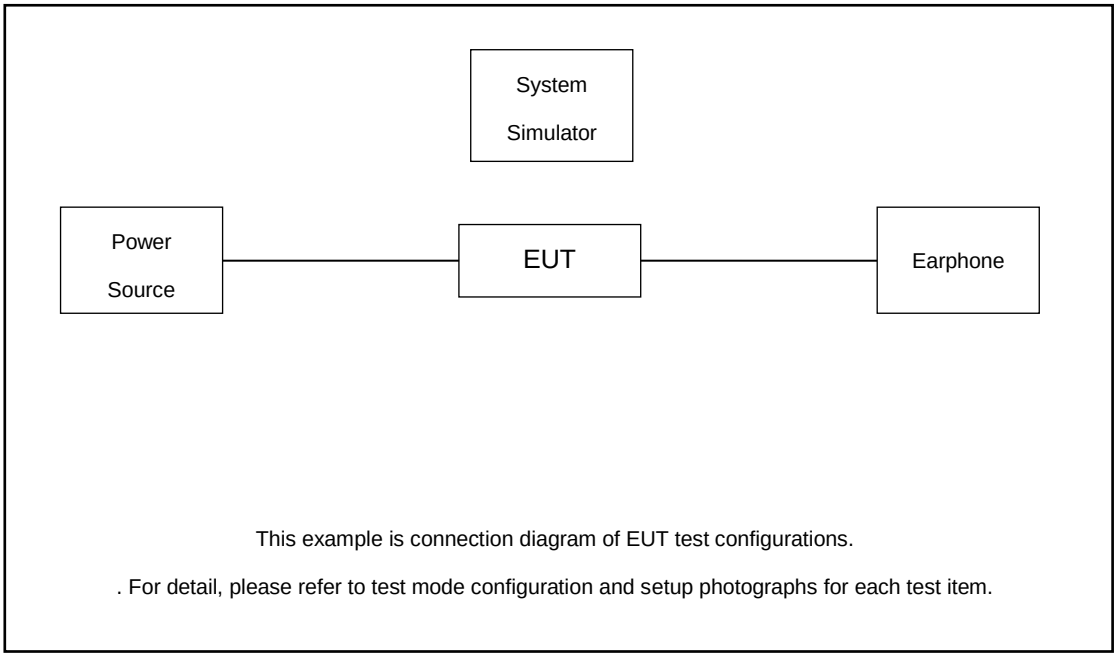
The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

	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	35	40	45	50~60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H
Max. Output Power	n2	v	v	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	v
	n12	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	v	v	v	v	v
	n26	v	v	v	v	-	-		-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n71	v	v	v	v	-	-		-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	n12		v		-	-	-		-	-	-	-	-	-	-	v	v				v	v	v	v	v
	n25				v	-	-		-	-	-	-	-	-	-	v	v				v	v	v	v	v
	n26				v	-	-		-	-	-	-	-	-	-	v	v				v	v	v	v	v
	n71				v	-	-		-	-	-	-	-	-	-	v	v				v	v	v	v	v
26dB and 99% Bandwidth	n5					v	-		-	-	-	-	-	-	-		v	v	v	v	v			v	
	n12	v	v	v	-	-	-		-	-	-	-	-	-	-		v	v	v	v	v			v	
	n25	v	v	v	v	v	v	v	v	-	-	-	-	-	-		v	v	v	v	v			v	
	n26	v	v	v	v	-	-		-	-	-	-	-	-	-		v	v	v	v	v			v	
	n71	v	v	v	v	-	-		-	-	-	-	-	-	-		v	v	v	v	v			v	

Test Items	5G NR	Bandwidth (MHz)														Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	45	50~60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H
Conducted Band Edge	n5					v	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
	n25	v				v				v	-	-	-	-	-	v	v				v	v	v		v
	n26	v	v		v	-	-		-	-	-	-	-	-	-	v	v				v	v	v		v
	n71	v	v		v	-	-		-	-	-	-	-	-	-	v	v				v	v	v		v
Conducted Spurious Emission	n5					v	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
	n12	v	v	v	-	-	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
	n25	v				v				v	-	-	-	-	-	v	v				v		v	v	v
	n26	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	
	n25				v						-	-	-	-	-		v					v		v	
	n26				v	-	-		-	-	-	-	-	-	-		v					v		v	
	n71				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	v	v
	n5	v	v	v	v	v	-		-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n12	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	v	v	v	v	v
	n26	v	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	n5	Worst Case																					v	v	v
	n12	Worst Case																					v	v	v
	n25	Worst Case																					v	v	v
	n26	Worst Case																					v	v	v
	n71	Worst Case																					v	v	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 = 3.91V ；Low Voltage =3.6V.；High Voltage =4.45V																								

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.	Earphone	Lenovo	SH100	N/A	Unshielded,1.2m	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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 7.6 dB

Example :

Offset(dB) = RF cable loss(dB)

= 7.6 (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**
30	Channel	373000	376000	379000
	Frequency	1865	1880	1895
25	Channel	372500	376000	379500
	Frequency	1862.5	1880	1897.5
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**
25	Channel	-	167300	-
	Frequency	-	836.5	-
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 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 n25 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
45	Channel	374500	376500	378500
	Frequency	1872.5	1882.5	1892.5
40	Channel	390000	376500	395000
	Frequency	1870	1882.5	1895
35	Channel	373500	376500	379500
	Frequency	1867.5	1882.5	1897.5
30	Channel	389000	376500	396000
	Frequency	1865	1882.5	1900
25	Channel	388500	376500	396500
	Frequency	1862.5	1882.5	1902.5
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 n26 Channel and Frequency List for SCS 15k/30k				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	175800	176300	176800
	Frequency	834	836.5	839
15	Channel	175300	176300	177300
	Frequency	831.5	836.5	841.5
10	Channel	174800	176300	177800
	Frequency	829	836.5	844
5	Channel	174300	176300	178300
	Frequency	826.5	836.5	846.5

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

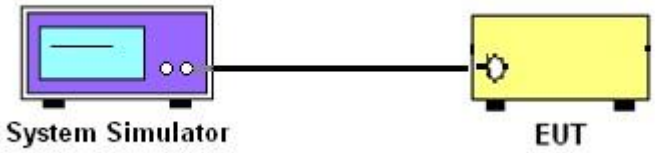
3 Conducted Test Items

3.1 Measuring Instruments

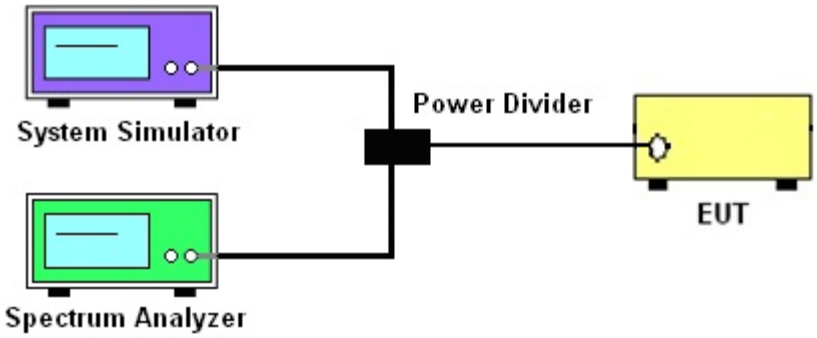
See list of measuring instruments of this test report.

3.2 Test Setup

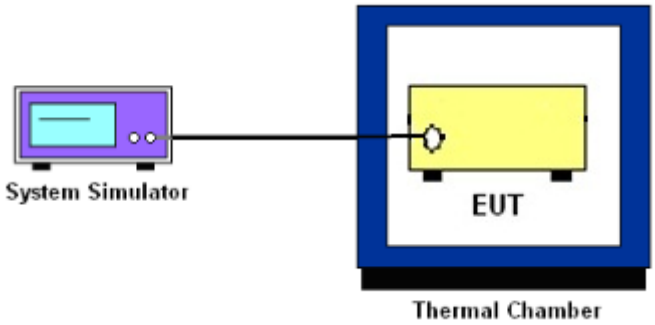
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

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

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

The ERP of mobile transmitters must not exceed 7 Watts for 5G NR n5, n26

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 n2, n25.

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 (g)

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

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used (generally limited to no less than 1% of the OBW) and the measured power was integrated over the full required measurement bandwidth.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.
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.

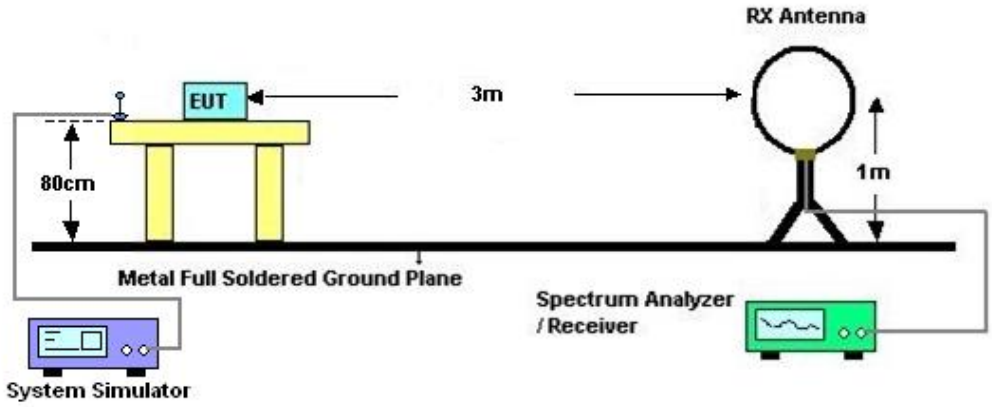
4 Radiated Test Items

4.1 Measuring Instruments

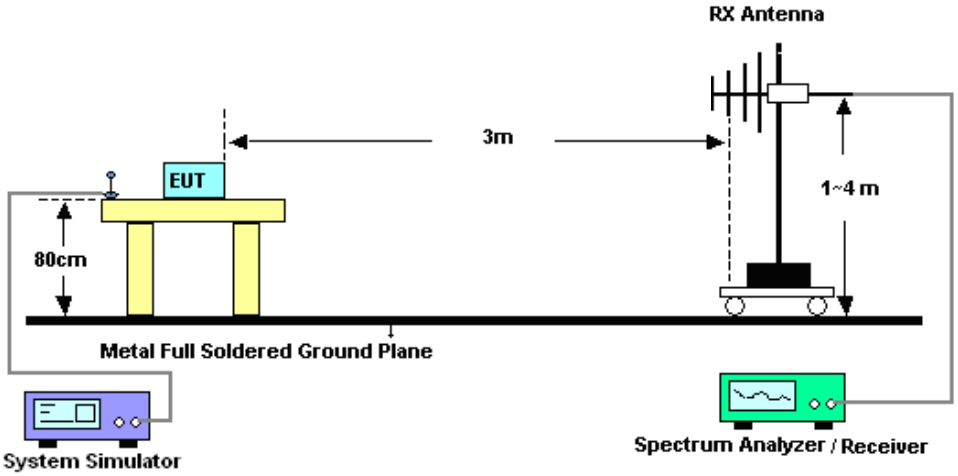
See list of measuring instruments of this test report.

4.2 Test Setup

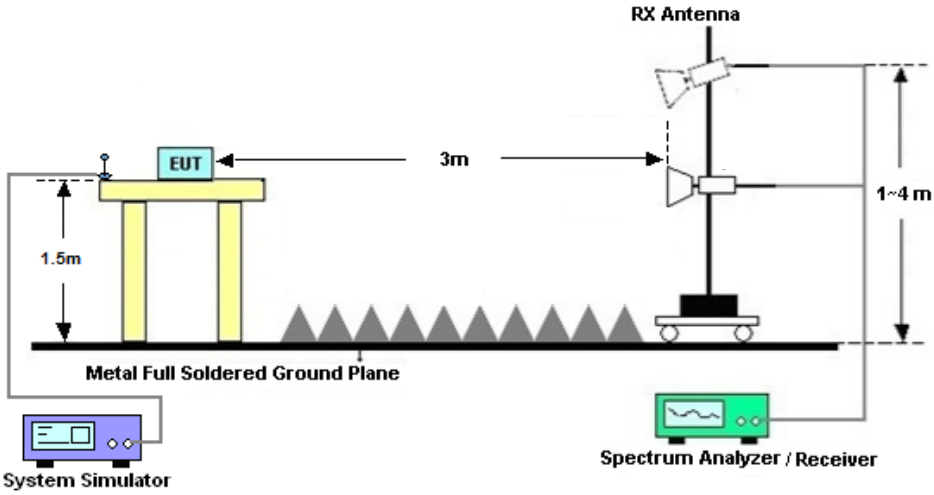
4.2.1 For radiated test below 30MHz



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
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 26, 2022	Sep. 28, 2023~ Oct. 16, 2023	Dec. 25, 2023	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2022	Sep. 28, 2023~ Oct. 16, 2023	Dec. 24, 2023	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 05, 2023	Sep. 28, 2023~ Oct. 16, 2023	Jul. 04, 2024	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 26, 2022	Oct. 10, 2023	Dec. 25, 2023	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 28, 2022	Oct. 10, 2023	Jul. 27, 2024	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 19, 2022	Oct. 10, 2023	Oct. 18, 2023	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Sep. 27, 2023	Oct. 10, 2023	Sep. 26, 2024	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 08, 2023	Oct. 10, 2023	Jul. 07, 2024	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 08, 2023	Oct. 10, 2023	Apr. 07, 2024	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 04, 2023	Oct. 10, 2023	Apr. 03, 2024	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 19, 2022	Oct. 10, 2023	Oct. 18, 2023	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 07, 2023	Oct. 10, 2023	Jul. 06, 2024	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Nov. 10, 2022	Oct. 10, 2023	Nov. 09, 2023	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Oct. 10, 2023	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Oct. 10, 2023	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 Power	±1.34 dB
Conducted Emissions	±1.34 dB
Occupied Channel Bandwidth	±0.13 %

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

Conducted Output Power(Average power) and EIRP

FR1 N2(Ant0) – SCS 15k

Transmitter Conducted Output Power and EIRP, (G_T - L_C)=-0.7dBi

NR Band	SCS	Band Width	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
2	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@1	23.12	22.42	0.1746
2	15	5	370500	1852.5	DFT-s-OFDM 16 QAM	1@1	22.13	21.43	0.1390
2	15	5	376000	1880	DFT-s-OFDM QPSK	1@1	23.15	22.45	0.1758
2	15	5	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.32	21.62	0.1452
2	15	5	381500	1907.5	DFT-s-OFDM QPSK	1@1	23.24	22.54	0.1795
2	15	5	381500	1907.5	DFT-s-OFDM 16 QAM	1@1	22.31	21.61	0.1449
2	15	10	371000	1855	DFT-s-OFDM QPSK	1@1	22.93	22.23	0.1671
2	15	10	371000	1855	DFT-s-OFDM 16 QAM	1@1	21.94	21.24	0.1330
2	15	10	376000	1880	DFT-s-OFDM QPSK	1@1	23.1	22.4	0.1738
2	15	10	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.16	21.46	0.1400
2	15	10	381000	1905	DFT-s-OFDM QPSK	1@1	23.06	22.36	0.1722
2	15	10	381000	1905	DFT-s-OFDM 16 QAM	1@1	22.06	21.36	0.1368
2	15	15	371500	1857.5	DFT-s-OFDM QPSK	1@1	23.07	22.37	0.1726
2	15	15	371500	1857.5	DFT-s-OFDM 16 QAM	1@1	22.03	21.33	0.1358
2	15	15	376000	1880	DFT-s-OFDM QPSK	1@1	23.24	22.54	0.1795
2	15	15	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.27	21.57	0.1435
2	15	15	380500	1902.5	DFT-s-OFDM QPSK	1@1	23.25	22.55	0.1799
2	15	15	380500	1902.5	DFT-s-OFDM 16 QAM	1@1	22.23	21.53	0.1422
2	15	20	372000	1860	DFT-s-OFDM QPSK	1@1	23.08	22.38	0.1730
2	15	20	372000	1860	DFT-s-OFDM 16 QAM	1@1	22.04	21.34	0.1361
2	15	20	376000	1880	DFT-s-OFDM QPSK	1@1	23.25	22.55	0.1799
2	15	20	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.24	21.54	0.1426
2	15	20	380000	1900	DFT-s-OFDM QPSK	1@1	23.23	22.53	0.1791
2	15	20	380000	1900	DFT-s-OFDM 16 QAM	1@1	22.22	21.52	0.1419
2	15	25	372500	1862.5	DFT-s-OFDM QPSK	1@1	23.02	22.32	0.1706
2	15	25	372500	1862.5	DFT-s-OFDM 16 QAM	1@1	21.95	21.25	0.1334
2	15	25	376000	1880	DFT-s-OFDM QPSK	1@1	23.1	22.4	0.1738
2	15	25	376000	1880	DFT-s-OFDM 16 QAM	1@1	22.1	21.4	0.1380
2	15	25	379500	1897.5	DFT-s-OFDM QPSK	1@1	23.13	22.43	0.1750
2	15	25	379500	1897.5	DFT-s-OFDM 16 QAM	1@1	22.09	21.39	0.1377
2	15	30	373000	1865	DFT-s-OFDM PI/2 BPSK	80@40	23.15	22.45	0.1758
2	15	30	373000	1865	DFT-s-OFDM PI/2 BPSK	1@1	22.83	22.13	0.1633
2	15	30	373000	1865	DFT-s-OFDM PI/2 BPSK	1@158	22.95	22.25	0.1679
2	15	30	373000	1865	DFT-s-OFDM QPSK	80@40	23.15	22.45	0.1758
2	15	30	373000	1865	DFT-s-OFDM QPSK	1@1	22.88	22.18	0.1652
2	15	30	373000	1865	DFT-s-OFDM QPSK	1@158	23.09	22.39	0.1734
2	15	30	373000	1865	DFT-s-OFDM 16 QAM	80@40	22.32	21.62	0.1452
2	15	30	373000	1865	DFT-s-OFDM 16 QAM	1@1	21.87	21.17	0.1309
2	15	30	373000	1865	DFT-s-OFDM 16 QAM	1@158	22.02	21.32	0.1355
2	15	30	373000	1865	DFT-s-OFDM 64 QAM	80@40	20.82	20.12	0.1028

2	15	30	373000	1865	DFT-s-OFDM 64 QAM	1@1	20.26	19.56	0.0904
2	15	30	373000	1865	DFT-s-OFDM 64 QAM	1@158	20.48	19.78	0.0951
2	15	30	373000	1865	DFT-s-OFDM 256 QAM	80@40	18.76	18.06	0.0640
2	15	30	373000	1865	DFT-s-OFDM 256 QAM	1@1	18.49	17.79	0.0601
2	15	30	373000	1865	DFT-s-OFDM 256 QAM	1@158	18.65	17.95	0.0624
2	15	30	373000	1865	CP-OFDM QPSK	80@40	21.81	21.11	0.1291
2	15	30	373000	1865	CP-OFDM QPSK	1@1	21.47	20.77	0.1194
2	15	30	373000	1865	CP-OFDM QPSK	1@158	21.61	20.91	0.1233
2	15	30	376000	1880	DFT-s-OFDM PI/2 BPSK	80@40	23.26	22.56	0.1803
2	15	30	376000	1880	DFT-s-OFDM PI/2 BPSK	1@1	22.82	22.12	0.1629
2	15	30	376000	1880	DFT-s-OFDM PI/2 BPSK	1@158	22.89	22.19	0.1656
2	15	30	376000	1880	DFT-s-OFDM QPSK	80@40	23.22	22.52	0.1786
2	15	30	376000	1880	DFT-s-OFDM QPSK	1@1	22.93	22.23	0.1671
2	15	30	376000	1880	DFT-s-OFDM QPSK	1@158	22.98	22.28	0.1690
2	15	30	376000	1880	DFT-s-OFDM 16 QAM	80@40	22.35	21.65	0.1462
2	15	30	376000	1880	DFT-s-OFDM 16 QAM	1@1	21.94	21.24	0.1330
2	15	30	376000	1880	DFT-s-OFDM 16 QAM	1@158	22.04	21.34	0.1361
2	15	30	376000	1880	DFT-s-OFDM 64 QAM	80@40	20.83	20.13	0.1030
2	15	30	376000	1880	DFT-s-OFDM 64 QAM	1@1	20.36	19.66	0.0925
2	15	30	376000	1880	DFT-s-OFDM 64 QAM	1@158	20.48	19.78	0.0951
2	15	30	376000	1880	DFT-s-OFDM 256 QAM	80@40	18.87	18.17	0.0656
2	15	30	376000	1880	DFT-s-OFDM 256 QAM	1@1	18.55	17.85	0.0610
2	15	30	376000	1880	DFT-s-OFDM 256 QAM	1@158	18.67	17.97	0.0627
2	15	30	376000	1880	CP-OFDM QPSK	80@40	21.83	21.13	0.1297
2	15	30	376000	1880	CP-OFDM QPSK	1@1	21.55	20.85	0.1216
2	15	30	376000	1880	CP-OFDM QPSK	1@158	21.51	20.81	0.1205
2	15	30	379000	1895	DFT-s-OFDM PI/2 BPSK	80@40	23.19	22.49	0.1774
2	15	30	379000	1895	DFT-s-OFDM PI/2 BPSK	1@1	22.93	22.23	0.1671
2	15	30	379000	1895	DFT-s-OFDM PI/2 BPSK	1@158	22.97	22.27	0.1687
2	15	30	379000	1895	DFT-s-OFDM QPSK	80@40	23.24	22.54	0.1795
2	15	30	379000	1895	DFT-s-OFDM QPSK	1@1	23.03	22.33	0.1710
2	15	30	379000	1895	DFT-s-OFDM QPSK	1@158	23.09	22.39	0.1734
2	15	30	379000	1895	DFT-s-OFDM 16 QAM	80@40	22.38	21.68	0.1472
2	15	30	379000	1895	DFT-s-OFDM 16 QAM	1@1	21.93	21.23	0.1327
2	15	30	379000	1895	DFT-s-OFDM 16 QAM	1@158	22.05	21.35	0.1365
2	15	30	379000	1895	DFT-s-OFDM 64 QAM	80@40	20.84	20.14	0.1033
2	15	30	379000	1895	DFT-s-OFDM 64 QAM	1@1	20.5	19.8	0.0955
2	15	30	379000	1895	DFT-s-OFDM 64 QAM	1@158	20.49	19.79	0.0953
2	15	30	379000	1895	DFT-s-OFDM 256 QAM	80@40	18.83	18.13	0.0650
2	15	30	379000	1895	DFT-s-OFDM 256 QAM	1@1	18.67	17.97	0.0627
2	15	30	379000	1895	DFT-s-OFDM 256 QAM	1@158	18.73	18.03	0.0635
2	15	30	379000	1895	CP-OFDM QPSK	80@40	21.81	21.11	0.1291
2	15	30	379000	1895	CP-OFDM QPSK	1@1	21.59	20.89	0.1227
2	15	30	379000	1895	CP-OFDM QPSK	1@158	21.56	20.86	0.1219

Software Version: 23.06.1602

FR1 N5

Transmitter Conducted Output Power And ERP, (G_T - L_C)=-5.5dB

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	22.96	15.31	0.0340
5	15	5	165300	826.5	DFT-s-OFDM 16 QAM	1@1	21.78	14.13	0.0259
5	15	5	167300	836.5	DFT-s-OFDM QPSK	1@1	22.97	15.32	0.0340
5	15	5	167300	836.5	DFT-s-OFDM 16 QAM	1@1	21.81	14.16	0.0261
5	15	5	169300	846.5	DFT-s-OFDM QPSK	1@1	22.78	15.13	0.0326
5	15	5	169300	846.5	DFT-s-OFDM 16 QAM	1@1	21.66	14.01	0.0252
5	15	10	165800	829	DFT-s-OFDM QPSK	1@1	22.76	15.11	0.0324
5	15	10	165800	829	DFT-s-OFDM 16 QAM	1@1	21.63	13.98	0.0250
5	15	10	167300	836.5	DFT-s-OFDM QPSK	1@1	22.8	15.15	0.0327
5	15	10	167300	836.5	DFT-s-OFDM 16 QAM	1@1	21.62	13.97	0.0249
5	15	10	168800	844	DFT-s-OFDM QPSK	1@1	22.7	15.05	0.0320
5	15	10	168800	844	DFT-s-OFDM 16 QAM	1@1	21.51	13.86	0.0243
5	15	15	166300	831.5	DFT-s-OFDM QPSK	1@1	22.9	15.25	0.0335
5	15	15	166300	831.5	DFT-s-OFDM 16 QAM	1@1	21.74	14.09	0.0256
5	15	15	167300	836.5	DFT-s-OFDM QPSK	1@1	22.89	15.24	0.0334
5	15	15	167300	836.5	DFT-s-OFDM 16 QAM	1@1	21.75	14.1	0.0257
5	15	15	168300	841.5	DFT-s-OFDM QPSK	1@1	22.84	15.19	0.0330
5	15	15	168300	841.5	DFT-s-OFDM 16 QAM	1@1	21.71	14.06	0.0255
5	15	20	166800	834	DFT-s-OFDM QPSK	1@1	22.86	15.21	0.0332
5	15	20	166800	834	DFT-s-OFDM 16 QAM	1@1	21.74	14.09	0.0256
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@1	22.96	15.31	0.0340
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	1@1	21.84	14.19	0.0262
5	15	20	167800	839	DFT-s-OFDM QPSK	1@1	22.83	15.18	0.0330
5	15	20	167800	839	DFT-s-OFDM 16 QAM	1@1	21.73	14.08	0.0256
5	15	25	167300	836.5	DFT-s-OFDM PI/2 BPSK	64@32	22.86	15.21	0.0332
5	15	25	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@1	22.78	15.13	0.0326
5	15	25	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@131	22.48	14.83	0.0304
5	15	25	167300	836.5	DFT-s-OFDM QPSK	64@32	22.99	15.34	0.0342
5	15	25	167300	836.5	DFT-s-OFDM QPSK	1@1	22.84	15.19	0.0330

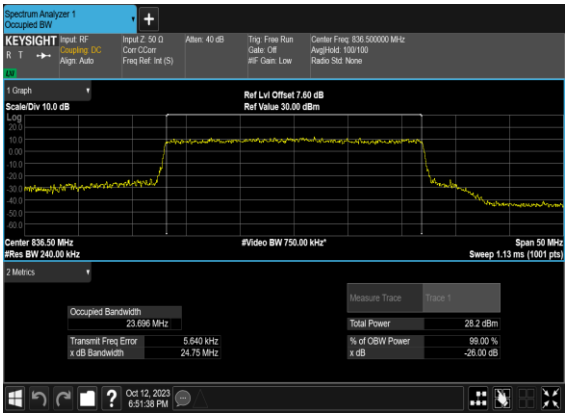
5	15	25	167300	836.5	DFT-s-OFDM QPSK	1@131	22.6	14.95	0.0313
5	15	25	167300	836.5	DFT-s-OFDM 16 QAM	64@32	21.89	14.24	0.0265
5	15	25	167300	836.5	DFT-s-OFDM 16 QAM	1@1	21.59	13.94	0.0248
5	15	25	167300	836.5	DFT-s-OFDM 16 QAM	1@131	21.4	13.75	0.0237
5	15	25	167300	836.5	DFT-s-OFDM 64 QAM	64@32	20.48	12.83	0.0192
5	15	25	167300	836.5	DFT-s-OFDM 64 QAM	1@1	20.2	12.55	0.0180
5	15	25	167300	836.5	DFT-s-OFDM 64 QAM	1@131	19.95	12.3	0.0170
5	15	25	167300	836.5	DFT-s-OFDM 256 QAM	64@32	18.52	10.87	0.0122
5	15	25	167300	836.5	DFT-s-OFDM 256 QAM	1@1	18.43	10.78	0.0120
5	15	25	167300	836.5	DFT-s-OFDM 256 QAM	1@131	18.25	10.6	0.0115
5	15	25	167300	836.5	CP-OFDM QPSK	67@33	21.36	13.71	0.0235
5	15	25	167300	836.5	CP-OFDM QPSK	1@1	21.21	13.56	0.0227
5	15	25	167300	836.5	CP-OFDM QPSK	1@131	20.99	13.34	0.0216

Occupied Bandwidth

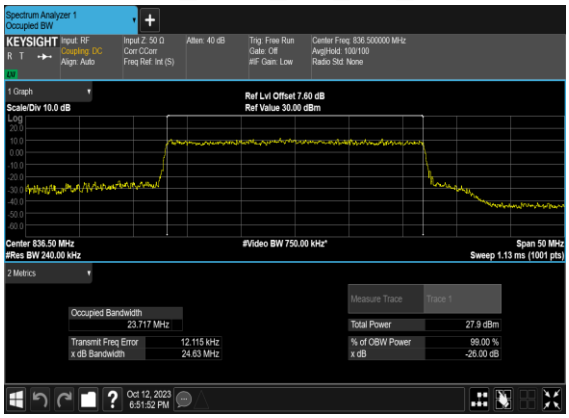
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
5	15	25	167300	836.5	CP-OFDM QPSK	133@0	23.756	24.93
5	15	25	167300	836.5	CP-OFDM 16 QAM	133@0	23.696	24.75
5	15	25	167300	836.5	CP-OFDM 64 QAM	133@0	23.717	24.63
5	15	25	167300	836.5	CP-OFDM 256 QAM	133@0	23.74	24.53

N5(25M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

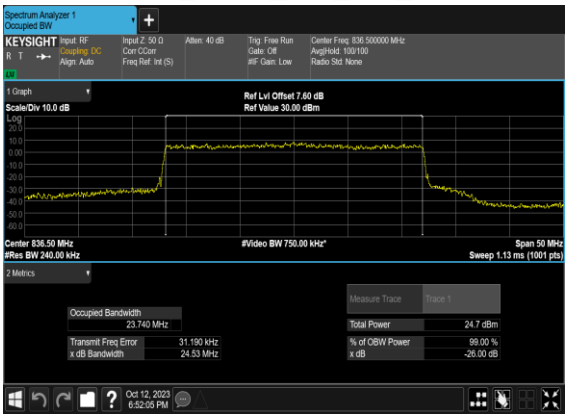
N5(25M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N5(25M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



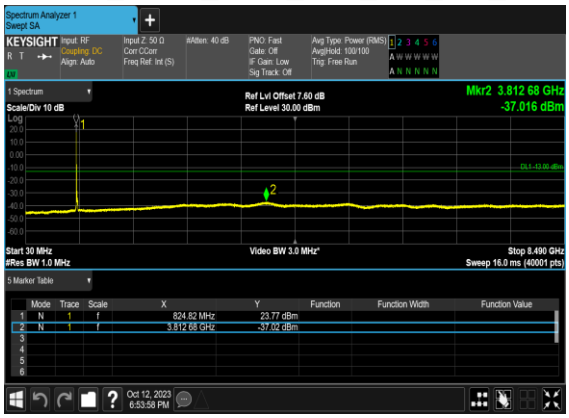
N5(25M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



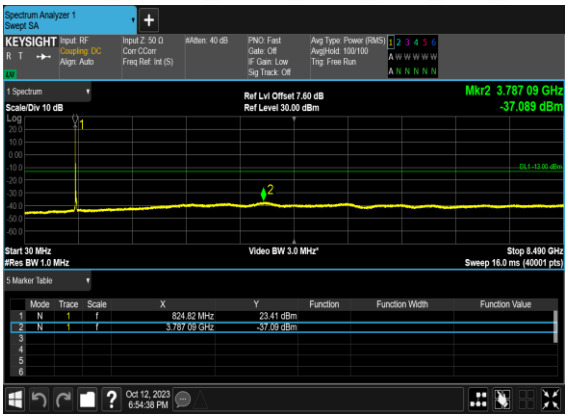
Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
5	15	25	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
5	15	25	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	25	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
5	15	25	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

N5(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



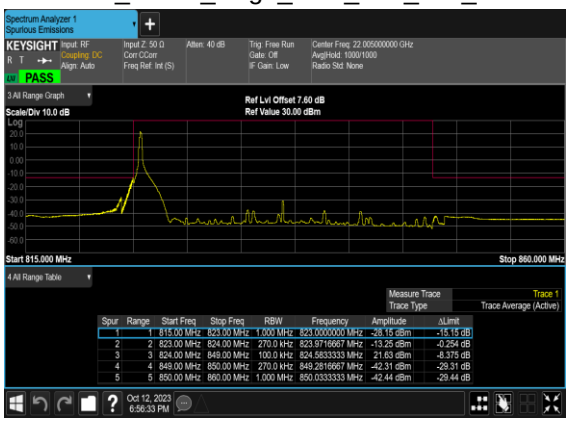
N5(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



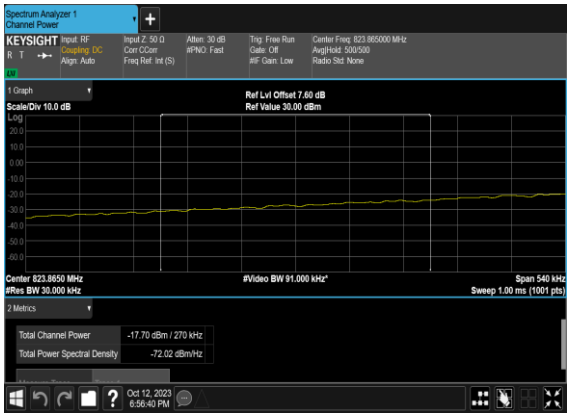
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
5	15	25	167300	836.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
5	15	25	167300	836.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
5	15	25	167300	836.5	DFT-s-OFDM BPSK	1@132	see graph	**PASS**
5	15	25	167300	836.5	DFT-s-OFDM QPSK	1@132	see graph	**PASS**
5	15	25	167300	836.5	DFT-s-OFDM BPSK	128@0	see graph	**PASS**
5	15	25	167300	836.5	DFT-s-OFDM QPSK	128@0	see graph	**PASS**

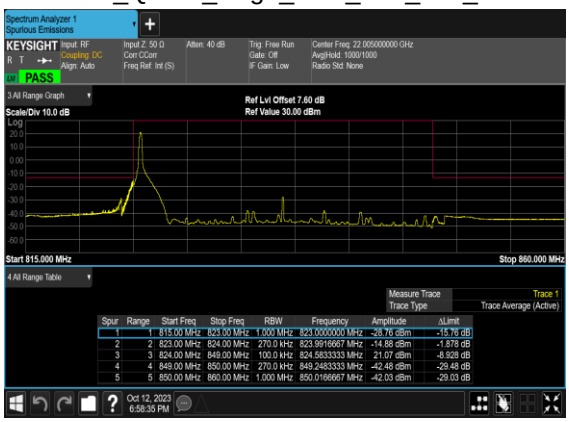
N5(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



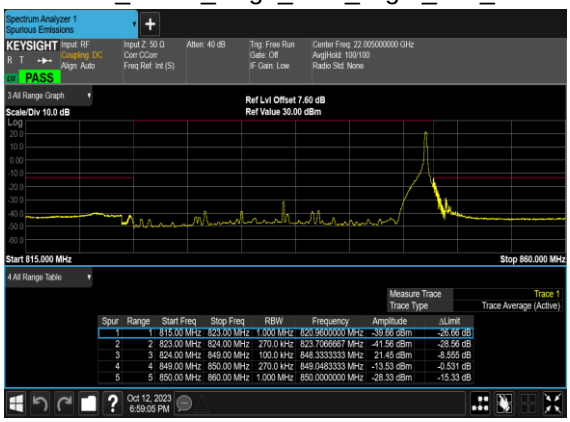
N5(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH_**CHP_PASS**



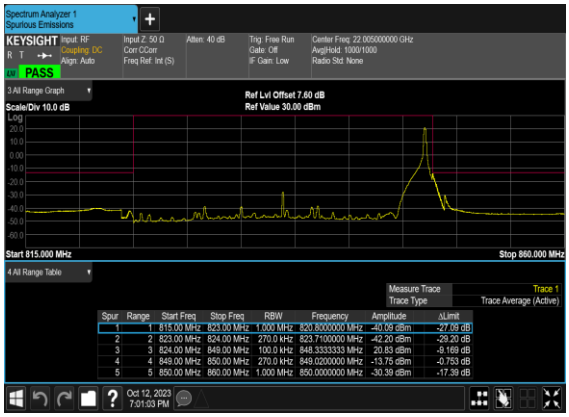
N5(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



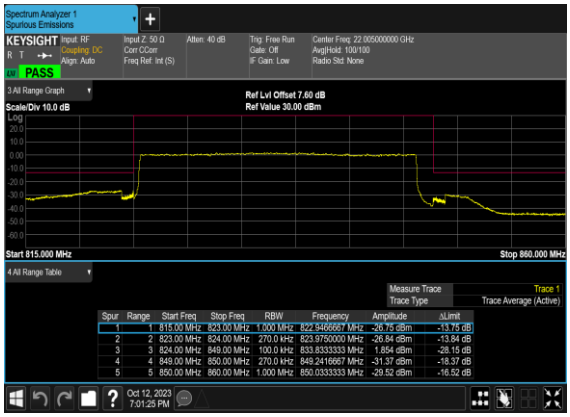
N5(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_Mid_CH



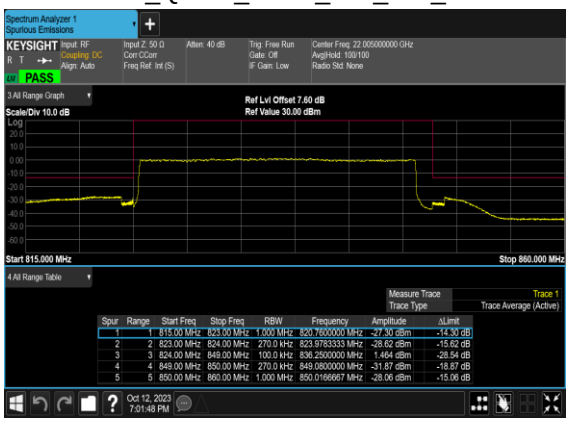
N5(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH



N5(25M)_DFT-s-OFDM_BPSK_Outer_Full_Mid_CH



N5(25M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



Software Version: 23.06.1602

FR1 N12(Ant0) – SCS 15k

Transmitter Conducted Output Power And ERP, (G_T - L_C)=-4.5dB

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	23.2	16.55	0.0452
12	15	5	140300	701.5	DFT-s-OFDM 16 QAM	1@1	22.19	15.54	0.0358
12	15	5	141500	707.5	DFT-s-OFDM QPSK	1@1	23.14	16.49	0.0446
12	15	5	141500	707.5	DFT-s-OFDM 16 QAM	1@1	22.1	15.45	0.0351
12	15	5	142700	713.5	DFT-s-OFDM QPSK	1@1	23.13	16.48	0.0445
12	15	5	142700	713.5	DFT-s-OFDM 16 QAM	1@1	21.94	15.29	0.0338
12	15	10	140800	704	DFT-s-OFDM QPSK	1@1	22.98	16.33	0.0430
12	15	10	140800	704	DFT-s-OFDM 16 QAM	1@1	21.96	15.31	0.0340
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@1	22.89	16.24	0.0421
12	15	10	141500	707.5	DFT-s-OFDM 16 QAM	1@1	21.92	15.27	0.0337
12	15	10	142200	711	DFT-s-OFDM QPSK	1@1	22.91	16.26	0.0423
12	15	10	142200	711	DFT-s-OFDM 16 QAM	1@1	21.94	15.29	0.0338
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	36@18	23.04	16.39	0.0436
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@1	22.93	16.28	0.0425
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@77	22.89	16.24	0.0421
12	15	15	141300	706.5	DFT-s-OFDM QPSK	36@18	23.04	16.39	0.0436
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@1	23.27	16.62	0.0459
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@77	22.94	16.29	0.0426
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	36@18	22.23	15.58	0.0361
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@1	22.11	15.46	0.0352
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@77	21.95	15.3	0.0339
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	36@18	20.67	14.02	0.0252
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@1	20.49	13.84	0.0242
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@77	20.38	13.73	0.0236
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	36@18	18.67	12.02	0.0159
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@1	18.75	12.1	0.0162
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@77	18.57	11.92	0.0156
12	15	15	141300	706.5	CP-OFDM QPSK	39@19	21.74	15.09	0.0323
12	15	15	141300	706.5	CP-OFDM QPSK	1@1	21.63	14.98	0.0315

12	15	15	141300	706.5	CP-OFDM QPSK	1@77	21.48	14.83	0.0304
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	36@18	23.03	16.38	0.0435
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@1	22.98	16.33	0.0430
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@77	22.81	16.16	0.0413
12	15	15	141500	707.5	DFT-s-OFDM QPSK	36@18	23.05	16.4	0.0437
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@1	23.09	16.44	0.0441
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@77	22.94	16.29	0.0426
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	36@18	22.2	15.55	0.0359
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@1	22.11	15.46	0.0352
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@77	22	15.35	0.0343
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	36@18	20.66	14.01	0.0252
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@1	20.48	13.83	0.0242
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@77	20.35	13.7	0.0234
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	36@18	18.67	12.02	0.0159
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@1	18.61	11.96	0.0157
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@77	18.52	11.87	0.0154
12	15	15	141500	707.5	CP-OFDM QPSK	39@19	21.72	15.07	0.0321
12	15	15	141500	707.5	CP-OFDM QPSK	1@1	21.58	14.93	0.0311
12	15	15	141500	707.5	CP-OFDM QPSK	1@77	21.51	14.86	0.0306
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	36@18	23.02	16.37	0.0434
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@1	22.94	16.29	0.0426
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@77	22.8	16.15	0.0412
12	15	15	141700	708.5	DFT-s-OFDM QPSK	36@18	23.02	16.37	0.0434
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@1	22.99	16.34	0.0431
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@77	22.94	16.29	0.0426
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	36@18	22.16	15.51	0.0356
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@1	22.11	15.46	0.0352
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@77	22.04	15.39	0.0346
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	36@18	20.64	13.99	0.0251
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@1	20.44	13.79	0.0239
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@77	20.34	13.69	0.0234
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	36@18	18.62	11.97	0.0157
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@1	18.65	12	0.0158
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@77	18.59	11.94	0.0156
12	15	15	141700	708.5	CP-OFDM QPSK	39@19	21.67	15.02	0.0318
12	15	15	141700	708.5	CP-OFDM QPSK	1@1	21.6	14.95	0.0313
12	15	15	141700	708.5	CP-OFDM QPSK	1@77	21.55	14.9	0.0309

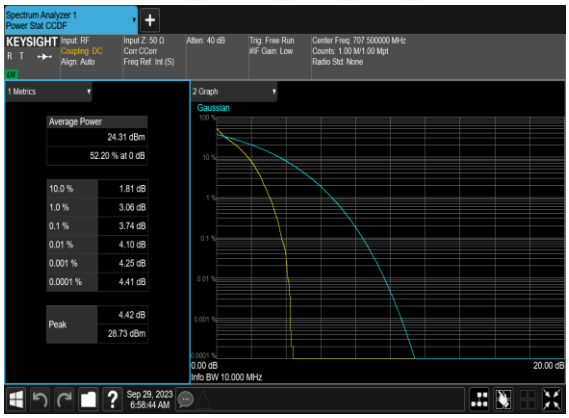
Frequency Stability

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	0.0054	**PASS**	NV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0026	**PASS**	LV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0052	**PASS**	HV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0022	**PASS**	-30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0036	**PASS**	-20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0050	**PASS**	-10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0053	**PASS**	0℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0063	**PASS**	10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0054	**PASS**	20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0047	**PASS**	30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0058	**PASS**	40℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0020	**PASS**	50℃

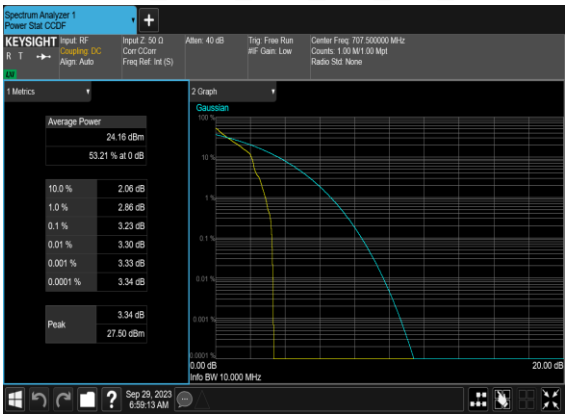
Peak to Average Ratio

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	3.74	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@0	3.23	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	4.65	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@0	3.67	13	**PASS**

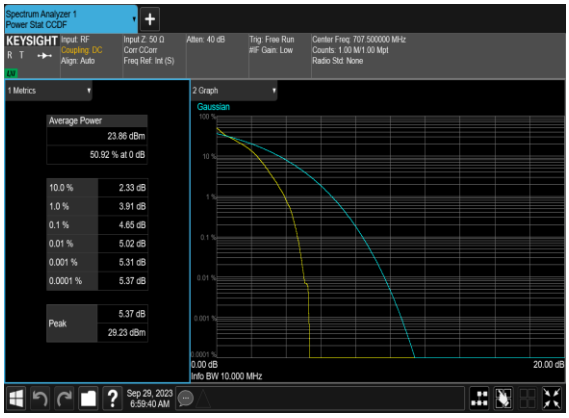
N12(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



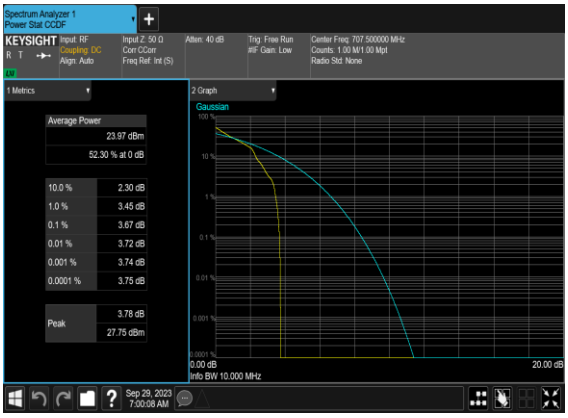
N12(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



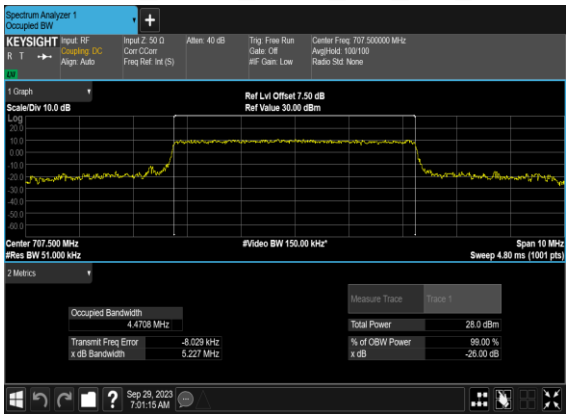
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



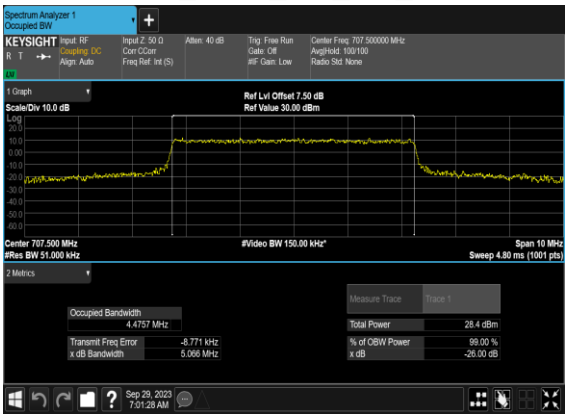
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
12	15	5	141500	707.5	CP-OFDM QPSK	25@0	4.4708	5.227
12	15	5	141500	707.5	CP-OFDM 16 QAM	25@0	4.4757	5.066
12	15	5	141500	707.5	CP-OFDM 64 QAM	25@0	4.4701	4.785
12	15	5	141500	707.5	CP-OFDM 256 QAM	25@0	4.4714	4.816
12	15	10	141500	707.5	CP-OFDM QPSK	52@0	9.2988	9.837
12	15	10	141500	707.5	CP-OFDM 16 QAM	52@0	9.2735	9.707
12	15	10	141500	707.5	CP-OFDM 64 QAM	52@0	9.2855	9.777
12	15	10	141500	707.5	CP-OFDM 256 QAM	52@0	9.2748	9.693
12	15	15	141500	707.5	CP-OFDM QPSK	79@0	14.1	14.78
12	15	15	141500	707.5	CP-OFDM 16 QAM	79@0	14.112	14.82
12	15	15	141500	707.5	CP-OFDM 64 QAM	79@0	14.123	14.65
12	15	15	141500	707.5	CP-OFDM 256 QAM	79@0	14.078	14.7

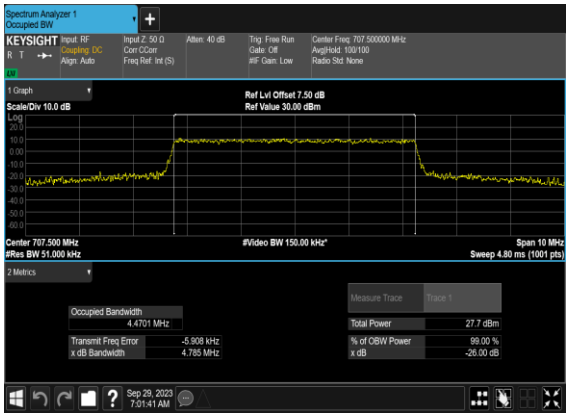
N12(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N12(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

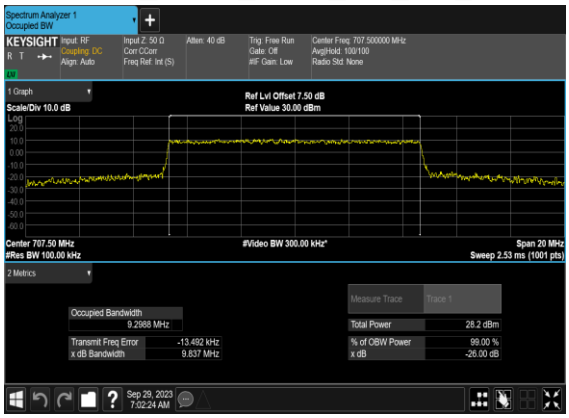


N12(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

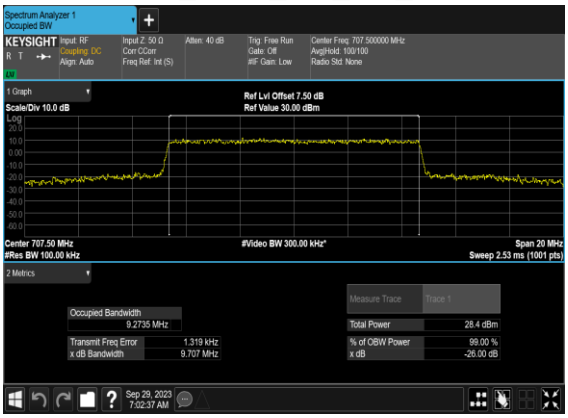


N12(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

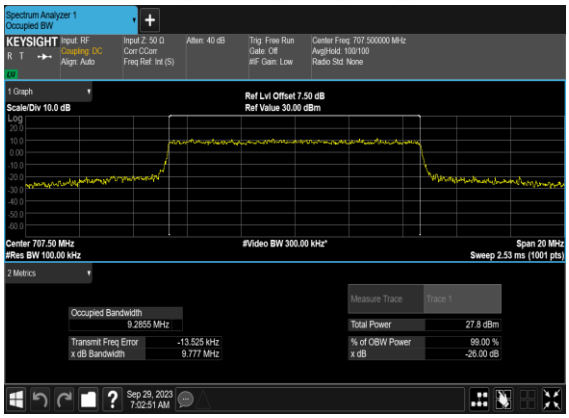
N12(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N12(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

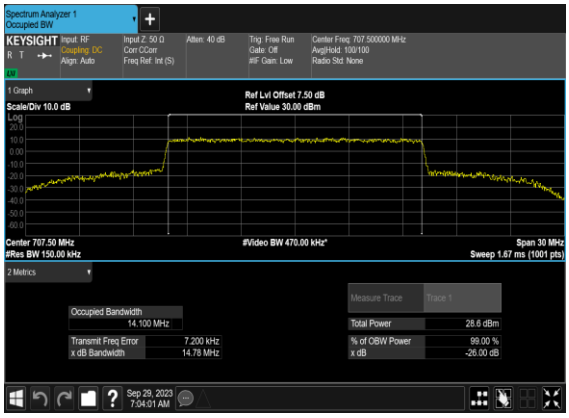


N12(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

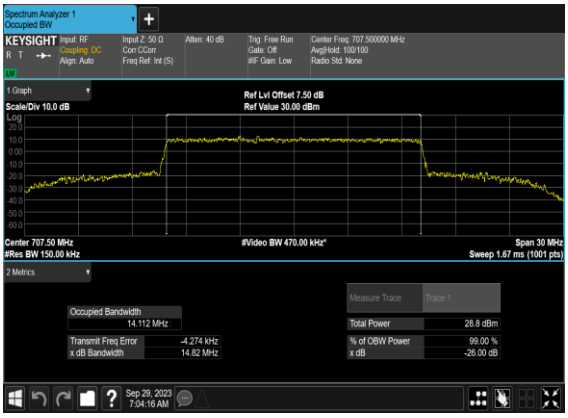


N12(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N12(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

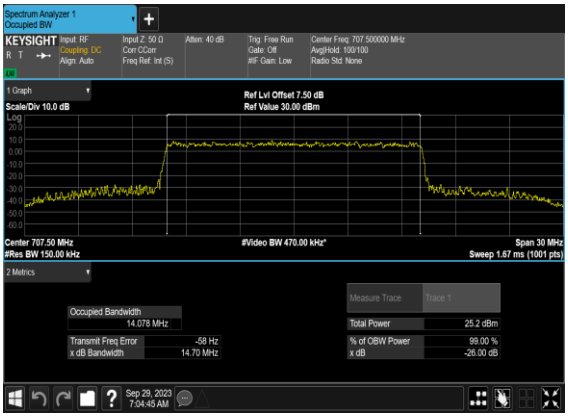


N12(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N12(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N12(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

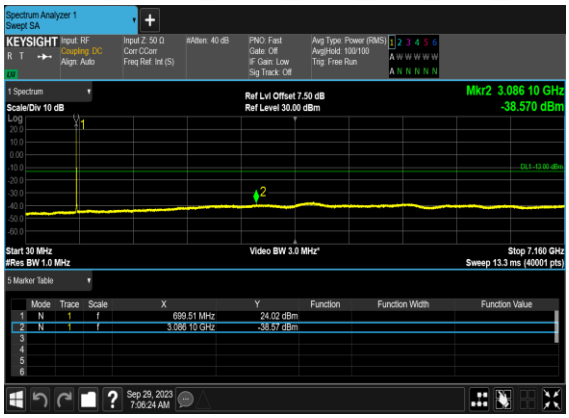


Conducted Spurious Emissions

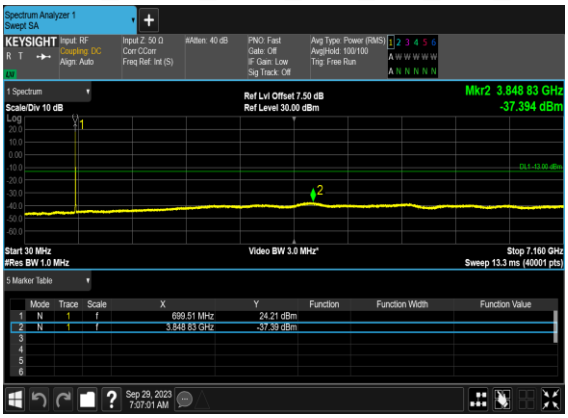
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see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

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

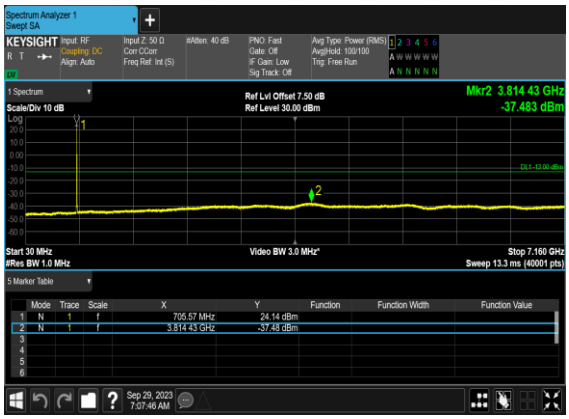
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



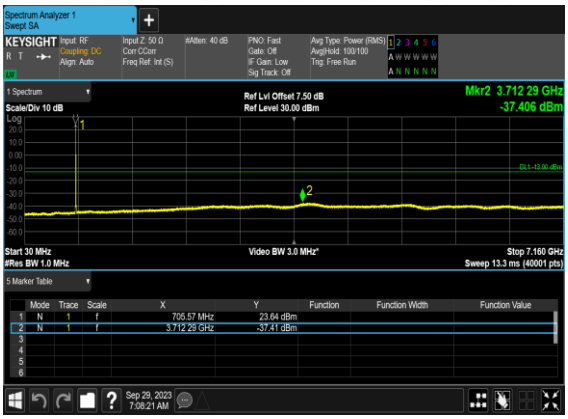
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



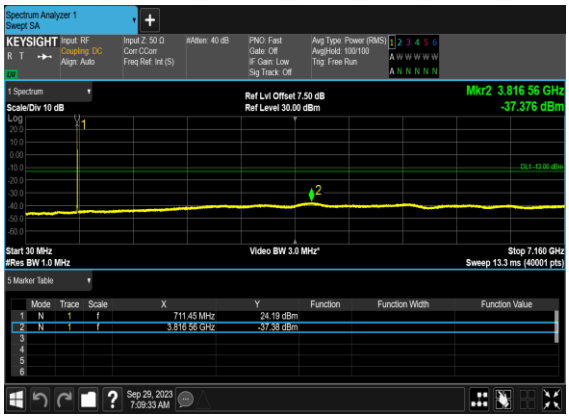
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



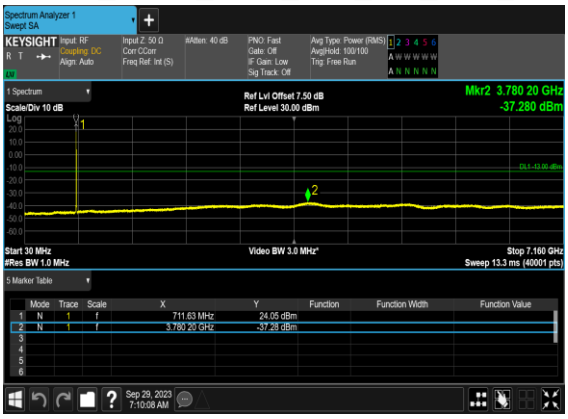
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



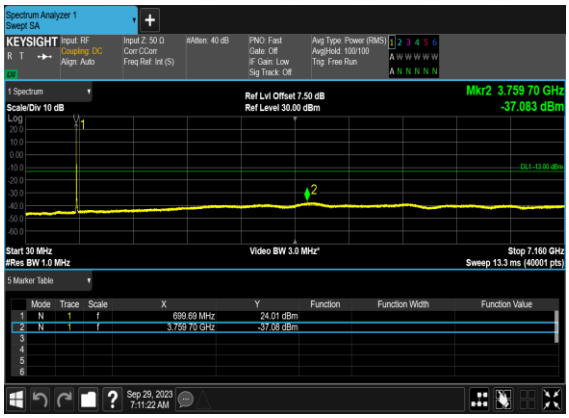
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



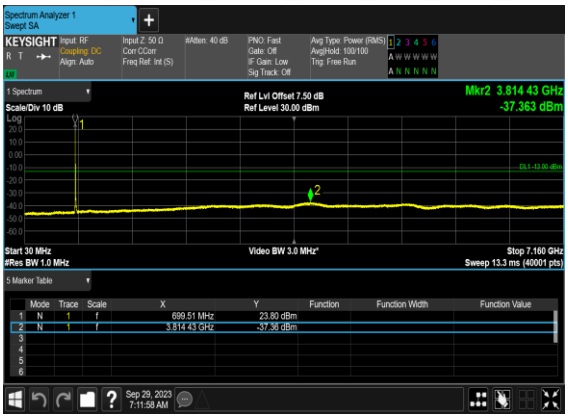
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



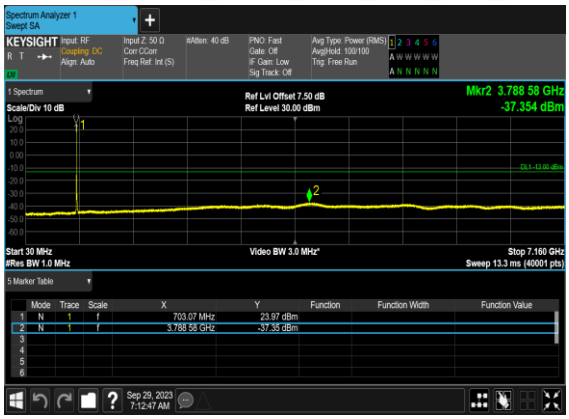
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



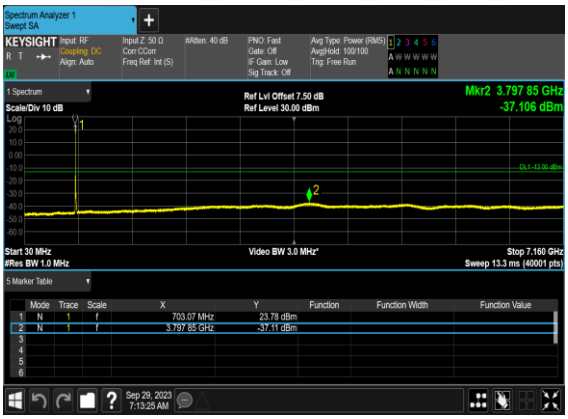
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

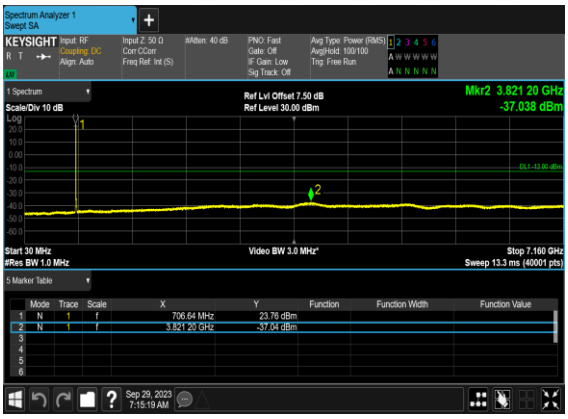


N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

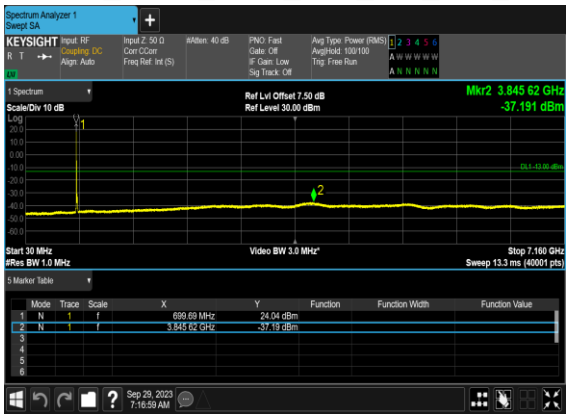


N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

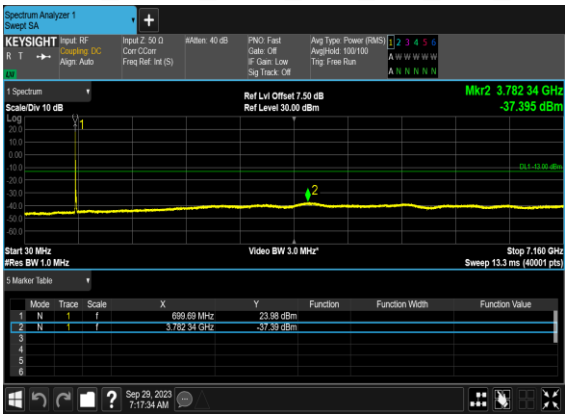
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



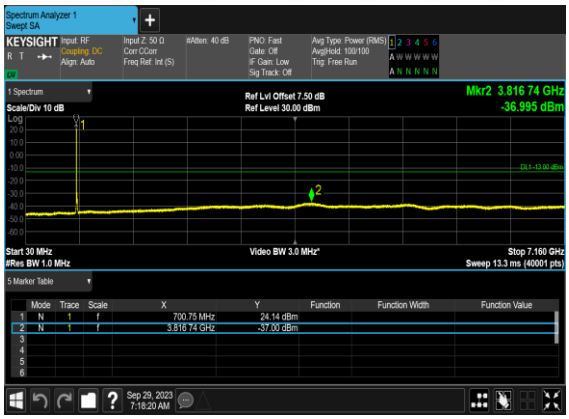
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



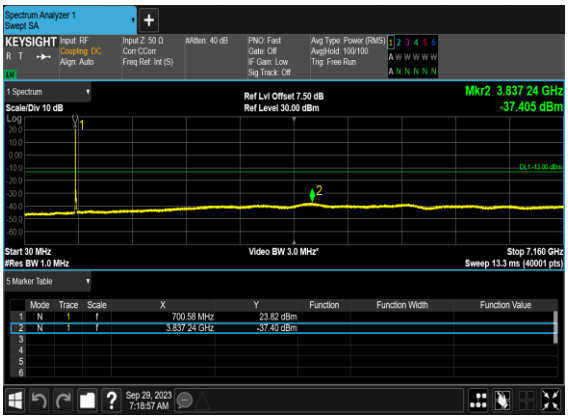
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

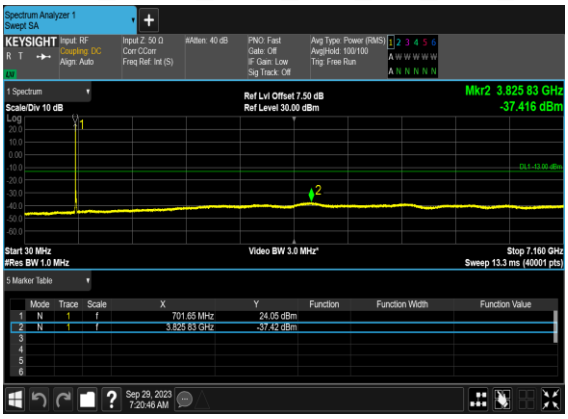


N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

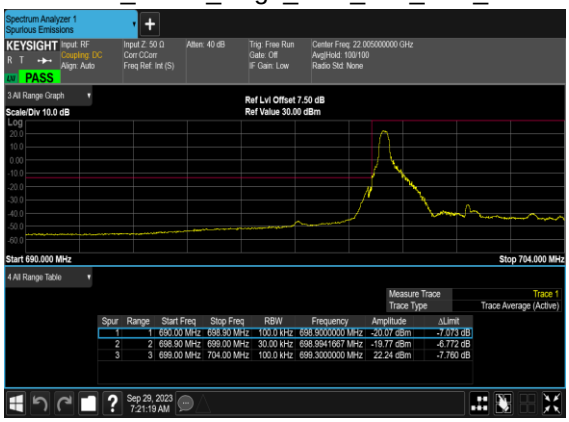
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



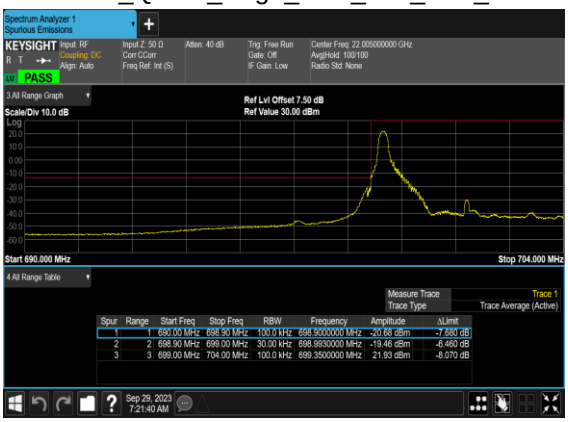
Conducted Band Edge

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

N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

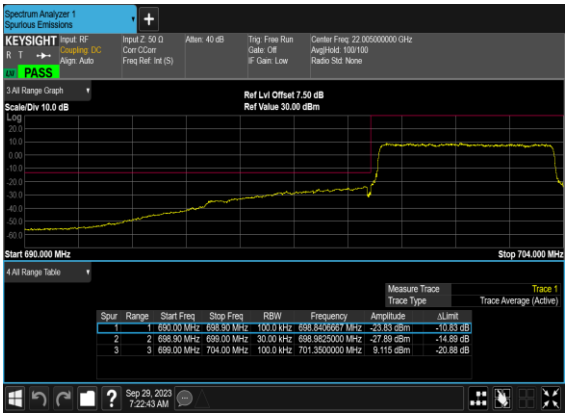


N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

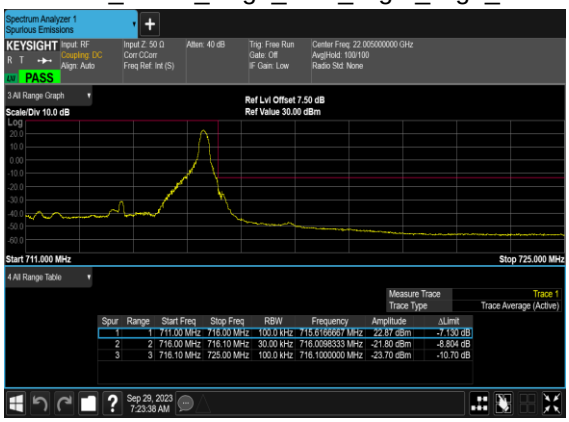


N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

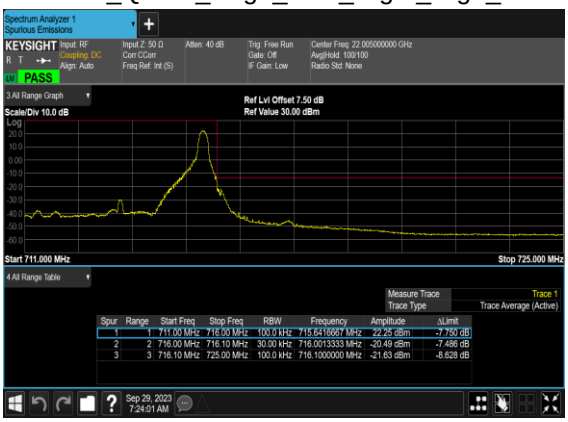
N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



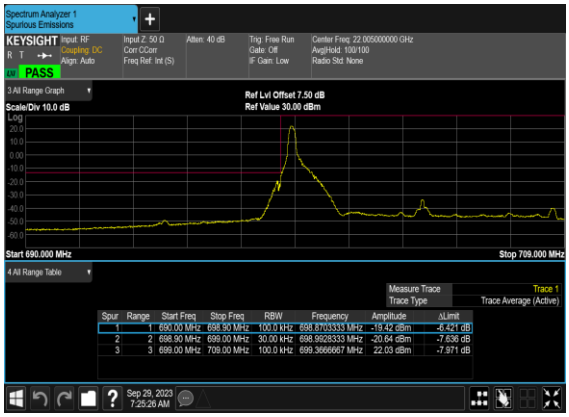
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



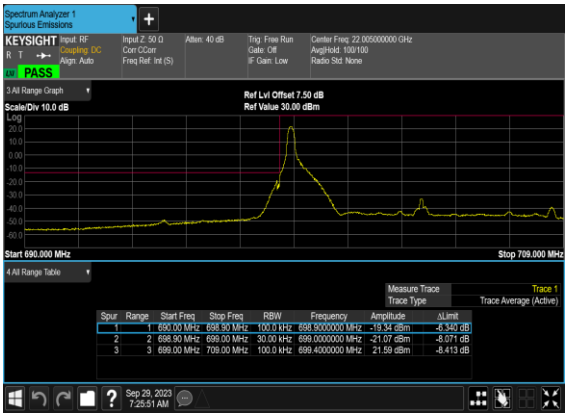
N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

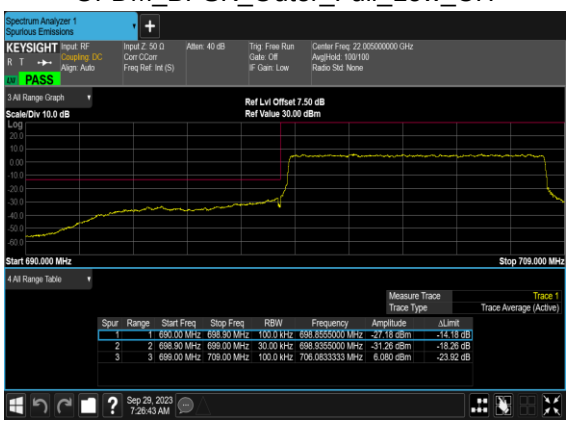
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



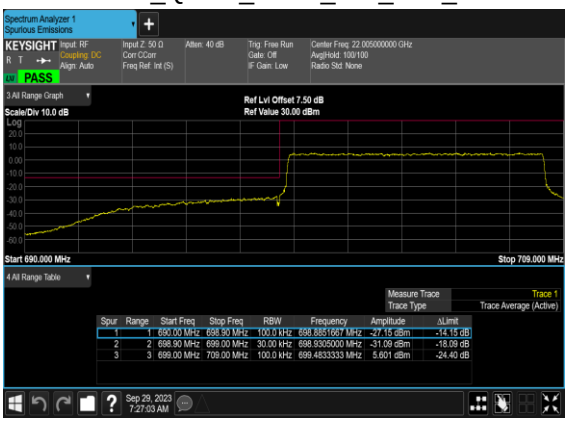
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



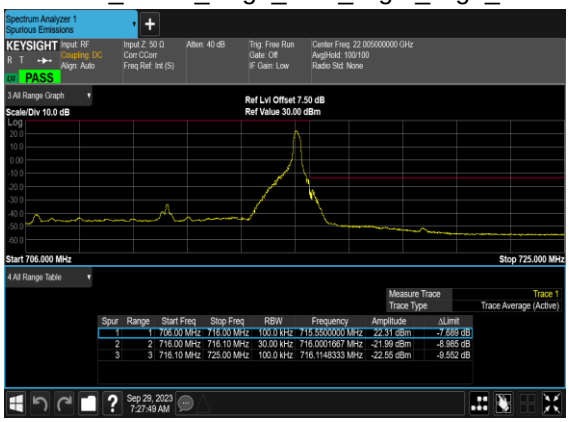
N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



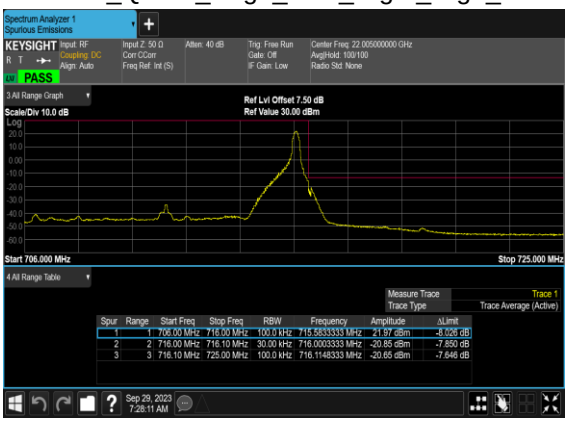
N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



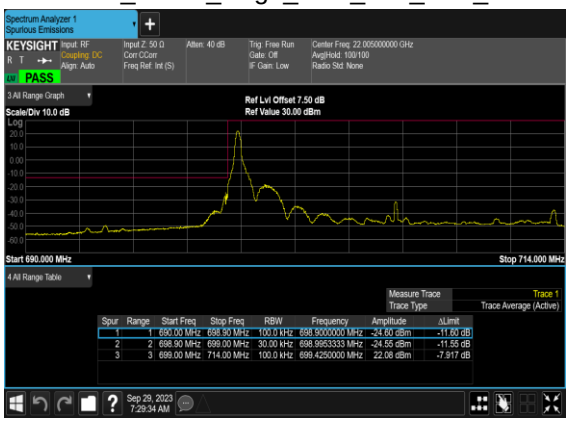
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



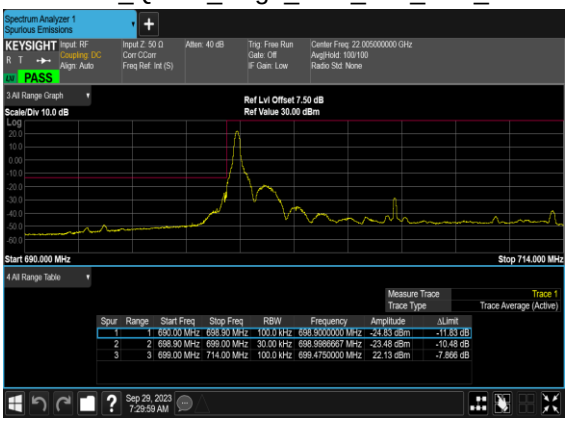
N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

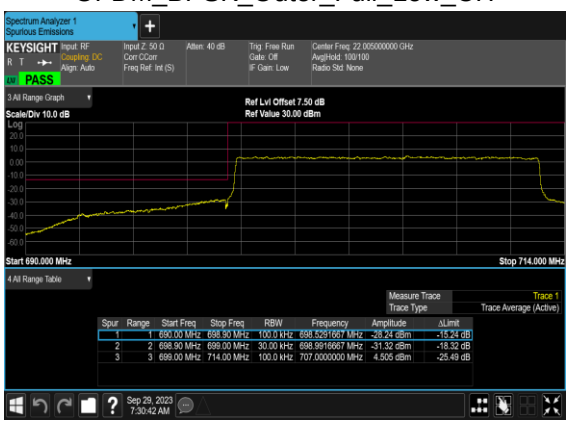
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

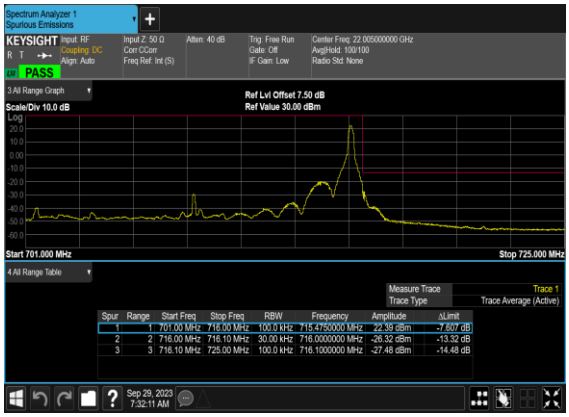


N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

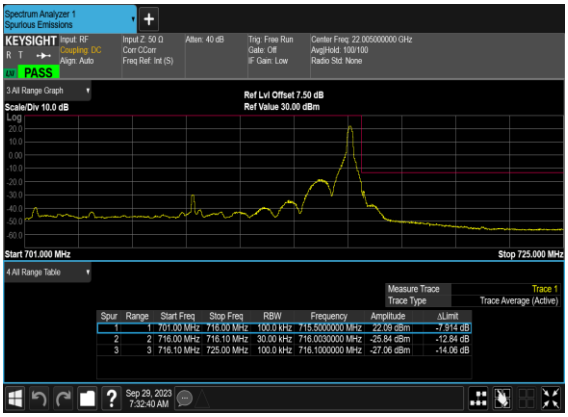


N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

Software Version: 23.06.1602

FR1 N25(Ant0) – SCS 15k

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-0.7dB

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	23.13	22.43	0.1750
25	15	5	370500	1852.5	DFT-s-OFDM 16 QAM	1@1	22.09	21.39	0.1377
25	15	5	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.28	22.58	0.1811
25	15	5	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	22.25	21.55	0.1429
25	15	5	382500	1912.5	DFT-s-OFDM QPSK	1@1	23.2	22.5	0.1778
25	15	5	382500	1912.5	DFT-s-OFDM 16 QAM	1@1	22.29	21.59	0.1442
25	15	10	371000	1855	DFT-s-OFDM QPSK	1@1	22.18	21.48	0.1406
25	15	10	371000	1855	DFT-s-OFDM 16 QAM	1@1	21.88	21.18	0.1312
25	15	10	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.06	22.36	0.1722
25	15	10	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	22.06	21.36	0.1368
25	15	10	382000	1910	DFT-s-OFDM QPSK	1@1	23.03	22.33	0.1710
25	15	10	382000	1910	DFT-s-OFDM 16 QAM	1@1	22.02	21.32	0.1355
25	15	15	371500	1857.5	DFT-s-OFDM QPSK	1@1	23.07	22.37	0.1726
25	15	15	371500	1857.5	DFT-s-OFDM 16 QAM	1@1	22.09	21.39	0.1377
25	15	15	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.23	22.53	0.1791
25	15	15	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	22.21	21.51	0.1416
25	15	15	381500	1907.5	DFT-s-OFDM QPSK	1@1	23.18	22.48	0.1770
25	15	15	381500	1907.5	DFT-s-OFDM 16 QAM	1@1	22.18	21.48	0.1406
25	15	20	372000	1860	DFT-s-OFDM QPSK	1@1	23.05	22.35	0.1718
25	15	20	372000	1860	DFT-s-OFDM 16 QAM	1@1	22.05	21.35	0.1365
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.19	22.49	0.1774
25	15	20	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	22.16	21.46	0.1400
25	15	20	381000	1905	DFT-s-OFDM QPSK	1@1	23.2	22.5	0.1778
25	15	20	381000	1905	DFT-s-OFDM 16 QAM	1@1	22.21	21.51	0.1416
25	15	25	372500	1862.5	DFT-s-OFDM QPSK	1@1	22.22	21.52	0.1419
25	15	25	372500	1862.5	DFT-s-OFDM 16 QAM	1@1	21.91	21.21	0.1321
25	15	25	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.1	22.4	0.1738
25	15	25	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	22.04	21.34	0.1361
25	15	25	380500	1902.5	DFT-s-OFDM QPSK	1@1	23.11	22.41	0.1742

25	15	25	380500	1902.5	DFT-s-OFDM 16 QAM	1@1	22.04	21.34	0.1361
25	15	30	373000	1865	DFT-s-OFDM QPSK	1@1	22.77	22.07	0.1611
25	15	30	373000	1865	DFT-s-OFDM 16 QAM	1@1	21.95	21.25	0.1334
25	15	30	376500	1882.5	DFT-s-OFDM QPSK	1@1	22.95	22.25	0.1679
25	15	30	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	21.95	21.25	0.1334
25	15	30	380000	1900	DFT-s-OFDM QPSK	1@1	22.97	22.27	0.1687
25	15	30	380000	1900	DFT-s-OFDM 16 QAM	1@1	21.97	21.27	0.1340
25	15	35	373500	1867.5	DFT-s-OFDM QPSK	1@1	22.69	21.99	0.1581
25	15	35	373500	1867.5	DFT-s-OFDM 16 QAM	1@1	21.6	20.9	0.1230
25	15	35	376500	1882.5	DFT-s-OFDM QPSK	1@1	22.8	22.1	0.1622
25	15	35	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	21.74	21.04	0.1271
25	15	35	379500	1897.5	DFT-s-OFDM QPSK	1@1	22.84	22.14	0.1637
25	15	35	379500	1897.5	DFT-s-OFDM 16 QAM	1@1	21.8	21.1	0.1288
25	15	40	374000	1870	DFT-s-OFDM QPSK	1@1	22.53	21.83	0.1524
25	15	40	374000	1870	DFT-s-OFDM 16 QAM	1@1	21.51	20.81	0.1205
25	15	40	376500	1882.5	DFT-s-OFDM QPSK	1@1	22.66	21.96	0.1570
25	15	40	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	21.59	20.89	0.1227
25	15	40	379000	1895	DFT-s-OFDM QPSK	1@1	22.78	22.08	0.1614
25	15	40	379000	1895	DFT-s-OFDM 16 QAM	1@1	21.7	21	0.1259
25	15	45	374500	1872.5	DFT-s-OFDM PI/2 BPSK	120@60	23.22	22.52	0.1786
25	15	45	374500	1872.5	DFT-s-OFDM PI/2 BPSK	1@1	22.8	22.1	0.1622
25	15	45	374500	1872.5	DFT-s-OFDM PI/2 BPSK	1@240	22.99	22.29	0.1694
25	15	45	374500	1872.5	DFT-s-OFDM QPSK	120@60	23.18	22.48	0.1770
25	15	45	374500	1872.5	DFT-s-OFDM QPSK	1@1	22.91	22.21	0.1663
25	15	45	374500	1872.5	DFT-s-OFDM QPSK	1@240	23.13	22.43	0.1750
25	15	45	374500	1872.5	DFT-s-OFDM 16 QAM	120@60	22.33	21.63	0.1455
25	15	45	374500	1872.5	DFT-s-OFDM 16 QAM	1@1	21.89	21.19	0.1315
25	15	45	374500	1872.5	DFT-s-OFDM 16 QAM	1@240	22.21	21.51	0.1416
25	15	45	374500	1872.5	DFT-s-OFDM 64 QAM	120@60	20.89	20.19	0.1045
25	15	45	374500	1872.5	DFT-s-OFDM 64 QAM	1@1	20.35	19.65	0.0923
25	15	45	374500	1872.5	DFT-s-OFDM 64 QAM	1@240	20.61	19.91	0.0979
25	15	45	374500	1872.5	DFT-s-OFDM 256 QAM	120@60	18.8	18.1	0.0646
25	15	45	374500	1872.5	DFT-s-OFDM 256 QAM	1@1	18.57	17.87	0.0612
25	15	45	374500	1872.5	DFT-s-OFDM 256 QAM	1@240	18.77	18.07	0.0641
25	15	45	374500	1872.5	CP-OFDM QPSK	121@60	21.81	21.11	0.1291

25	15	45	374500	1872.5	CP-OFDM QPSK	1@1	21.47	20.77	0.1194
25	15	45	374500	1872.5	CP-OFDM QPSK	1@240	21.76	21.06	0.1276
25	15	45	376500	1882.5	DFT-s-OFDM PI/2 BPSK	120@60	23.29	22.59	0.1816
25	15	45	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@1	22.84	22.14	0.1637
25	15	45	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@240	23.02	22.32	0.1706
25	15	45	376500	1882.5	DFT-s-OFDM QPSK	120@60	23.28	22.58	0.1811
25	15	45	376500	1882.5	DFT-s-OFDM QPSK	1@1	22.95	22.25	0.1679
25	15	45	376500	1882.5	DFT-s-OFDM QPSK	1@240	23.11	22.41	0.1742
25	15	45	376500	1882.5	DFT-s-OFDM 16 QAM	120@60	22.35	21.65	0.1462
25	15	45	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	21.98	21.28	0.1343
25	15	45	376500	1882.5	DFT-s-OFDM 16 QAM	1@240	22.1	21.4	0.1380
25	15	45	376500	1882.5	DFT-s-OFDM 64 QAM	120@60	20.93	20.23	0.1054
25	15	45	376500	1882.5	DFT-s-OFDM 64 QAM	1@1	20.43	19.73	0.0940
25	15	45	376500	1882.5	DFT-s-OFDM 64 QAM	1@240	20.59	19.89	0.0975
25	15	45	376500	1882.5	DFT-s-OFDM 256 QAM	120@60	18.86	18.16	0.0655
25	15	45	376500	1882.5	DFT-s-OFDM 256 QAM	1@1	18.64	17.94	0.0622
25	15	45	376500	1882.5	DFT-s-OFDM 256 QAM	1@240	18.74	18.04	0.0637
25	15	45	376500	1882.5	CP-OFDM QPSK	121@60	21.89	21.19	0.1315
25	15	45	376500	1882.5	CP-OFDM QPSK	1@1	21.56	20.86	0.1219
25	15	45	376500	1882.5	CP-OFDM QPSK	1@240	21.72	21.02	0.1265
25	15	45	378500	1892.5	DFT-s-OFDM PI/2 BPSK	120@60	23.21	22.51	0.1782
25	15	45	378500	1892.5	DFT-s-OFDM PI/2 BPSK	1@1	22.95	22.25	0.1679
25	15	45	378500	1892.5	DFT-s-OFDM PI/2 BPSK	1@240	23	22.3	0.1698
25	15	45	378500	1892.5	DFT-s-OFDM QPSK	120@60	23.23	22.53	0.1791
25	15	45	378500	1892.5	DFT-s-OFDM QPSK	1@1	23.08	22.38	0.1730
25	15	45	378500	1892.5	DFT-s-OFDM QPSK	1@240	23.13	22.43	0.1750
25	15	45	378500	1892.5	DFT-s-OFDM 16 QAM	120@60	22.31	21.61	0.1449
25	15	45	378500	1892.5	DFT-s-OFDM 16 QAM	1@1	22.1	21.4	0.1380
25	15	45	378500	1892.5	DFT-s-OFDM 16 QAM	1@240	22.14	21.44	0.1393
25	15	45	378500	1892.5	DFT-s-OFDM 64 QAM	120@60	20.87	20.17	0.1040
25	15	45	378500	1892.5	DFT-s-OFDM 64 QAM	1@1	20.53	19.83	0.0962
25	15	45	378500	1892.5	DFT-s-OFDM 64 QAM	1@240	20.57	19.87	0.0971
25	15	45	378500	1892.5	DFT-s-OFDM 256 QAM	120@60	18.78	18.08	0.0643
25	15	45	378500	1892.5	DFT-s-OFDM 256 QAM	1@1	18.71	18.01	0.0632
25	15	45	378500	1892.5	DFT-s-OFDM 256 QAM	1@240	18.81	18.11	0.0647

25	15	45	378500	1892.5	CP-OFDM QPSK	121@60	21.85	21.15	0.1303
25	15	45	378500	1892.5	CP-OFDM QPSK	1@1	21.67	20.97	0.1250
25	15	45	378500	1892.5	CP-OFDM QPSK	1@240	21.72	21.02	0.1265

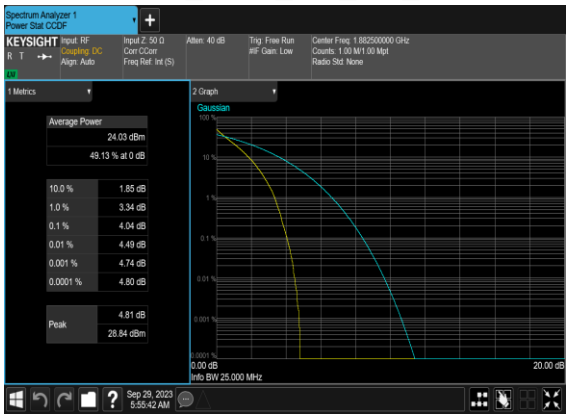
Frequency Stability

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	0.0031	**PASS**	NV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0042	**PASS**	LV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0048	**PASS**	HV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0063	**PASS**	-30℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0060	**PASS**	-20℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0038	**PASS**	-10℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0041	**PASS**	0℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0044	**PASS**	10℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0031	**PASS**	20℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0025	**PASS**	30℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0039	**PASS**	40℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0043	**PASS**	50℃

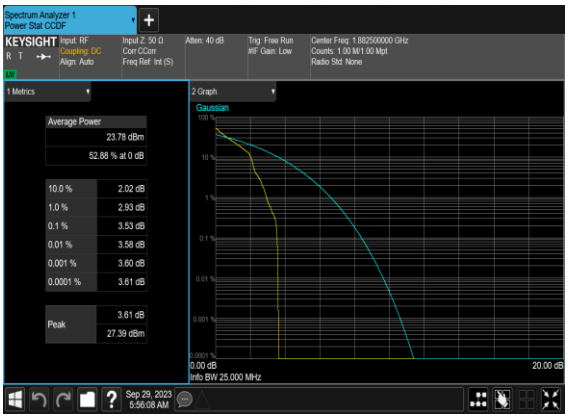
Peak to Average Ratio

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	4.04	13	**PASS**
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@0	3.53	13	**PASS**
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	5.06	13	**PASS**
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	1@0	3.98	13	**PASS**

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

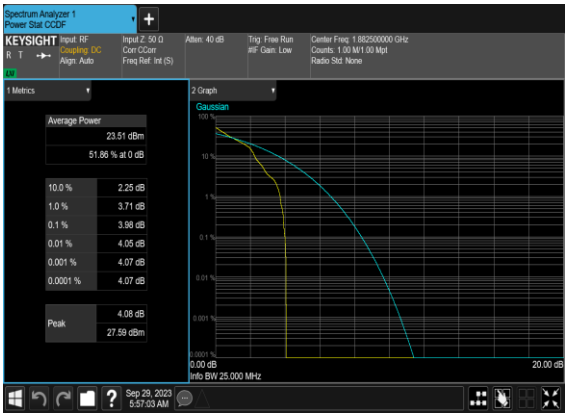


N25(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N25(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

N25(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

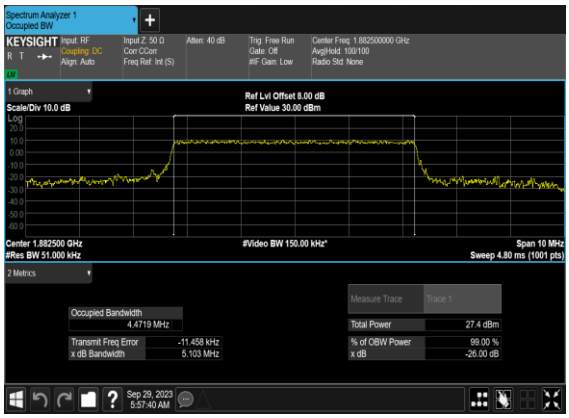


Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
25	15	5	376500	1882.5	CP-OFDM QPSK	25@0	4.4719	5.103
25	15	5	376500	1882.5	CP-OFDM 16 QAM	25@0	4.4767	4.955
25	15	5	376500	1882.5	CP-OFDM 64 QAM	25@0	4.4673	4.837
25	15	5	376500	1882.5	CP-OFDM 256 QAM	25@0	4.4727	4.856
25	15	10	376500	1882.5	CP-OFDM QPSK	52@0	9.2925	9.769
25	15	10	376500	1882.5	CP-OFDM 16 QAM	52@0	9.2902	9.929
25	15	10	376500	1882.5	CP-OFDM 64 QAM	52@0	9.297	9.939
25	15	10	376500	1882.5	CP-OFDM 256 QAM	52@0	9.2737	9.767
25	15	15	376500	1882.5	CP-OFDM QPSK	79@0	14.133	14.74
25	15	15	376500	1882.5	CP-OFDM 16 QAM	79@0	14.133	14.73
25	15	15	376500	1882.5	CP-OFDM 64 QAM	79@0	14.129	14.73
25	15	15	376500	1882.5	CP-OFDM 256 QAM	79@0	14.108	14.72
25	15	20	376500	1882.5	CP-OFDM QPSK	106@0	18.948	19.98
25	15	20	376500	1882.5	CP-OFDM 16 QAM	106@0	18.936	19.85
25	15	20	376500	1882.5	CP-OFDM 64 QAM	106@0	18.907	19.79
25	15	20	376500	1882.5	CP-OFDM 256 QAM	106@0	18.928	20.05
25	15	25	376500	1882.5	CP-OFDM QPSK	133@0	23.811	25.04
25	15	25	376500	1882.5	CP-OFDM 16 QAM	133@0	23.717	24.72
25	15	25	376500	1882.5	CP-OFDM 64 QAM	133@0	23.785	24.83
25	15	25	376500	1882.5	CP-OFDM 256 QAM	133@0	23.733	24.92
25	15	30	376500	1882.5	CP-OFDM QPSK	160@0	28.62	29.61
25	15	30	376500	1882.5	CP-OFDM 16 QAM	160@0	28.638	29.81
25	15	30	376500	1882.5	CP-OFDM 64 QAM	160@0	28.58	29.68
25	15	30	376500	1882.5	CP-OFDM 256 QAM	160@0	28.564	29.65
25	15	35	376500	1882.5	CP-OFDM QPSK	188@0	33.647	35.15

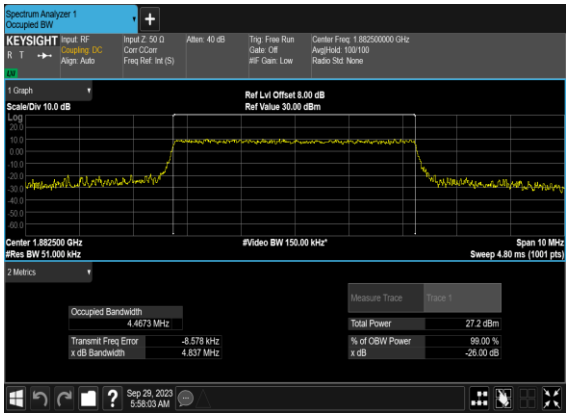
25	15	35	376500	1882.5	CP-OFDM 16 QAM	188@0	33.635	34.94
25	15	35	376500	1882.5	CP-OFDM 64 QAM	188@0	33.658	34.87
25	15	35	376500	1882.5	CP-OFDM 256 QAM	188@0	33.571	35.2
25	15	40	376500	1882.5	CP-OFDM QPSK	216@0	38.646	39.92
25	15	40	376500	1882.5	CP-OFDM 16 QAM	216@0	38.515	39.98
25	15	40	376500	1882.5	CP-OFDM 64 QAM	216@0	38.536	39.81
25	15	40	376500	1882.5	CP-OFDM 256 QAM	216@0	38.491	39.84
25	15	45	376500	1882.5	CP-OFDM QPSK	242@0	43.095	48.9
25	15	45	376500	1882.5	CP-OFDM 16 QAM	242@0	43.191	44.67
25	15	45	376500	1882.5	CP-OFDM 64 QAM	242@0	43.228	45.0
25	15	45	376500	1882.5	CP-OFDM 256 QAM	242@0	43.118	44.72

N25(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

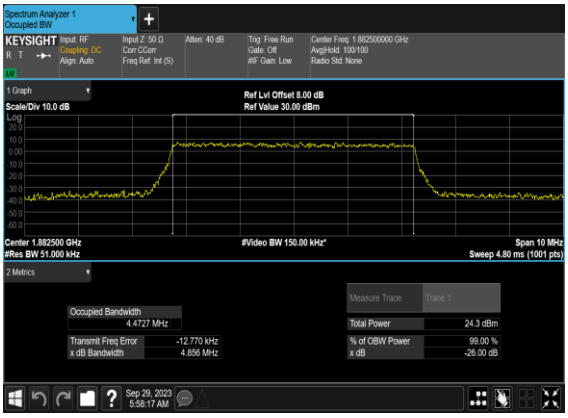


N25(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

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