



FCC RF Test Report

APPLICANT : Xiaomi Communications Co., Ltd.
EQUIPMENT : Mobile Phone
BRAND NAME : POCO
MODEL NAME : 23049PCD8G
FCC ID : 2AFZZPCD8G
STANDARD : 47 CFR Part 2, 22, 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Jan. 06, 2023 ~ Jan. 13, 2023

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Sporton International Inc. (Shenzhen).

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

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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		
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (5G NR n7, n41, n38)	EIRP < 2Watt		
	§27.50(j)(3)	Equivalent Isotropic Radiated Power (5G NR n77, n78)	EIRP < 1Watt		
3.5	§27.50(j)(4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §27.53(l)(2)	Conducted Band Edge Measurement (5G NR n5) (5G NR n77, n78)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n7, n41, n38)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a) §27.53(l)(2)	Conducted Spurious Emission (5G NR n5) (5G NR n77, n78)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n7, n41, n38)	< 55+10log ₁₀ (P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §27.53(l)(2)	Radiated Spurious Emission (5G NR n5) (5G NR n77, n78)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 35.56 dB at 7632.00 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n7, n41, n38)	< 55+10log ₁₀ (P[Watts])		

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



1 General Description

1.1 Applicant

Xiaomi Communications Co., Ltd.

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Manufacturer

Xiaomi Communications Co., Ltd.

#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	POCO
Model Name	23049PCD8G
FCC ID	2AFZZPCD8G
IMEI Code	Conducted : 860460060036121/860460060035628 Radiation : 860460060036709/860460060036717
HW Version	P2
SW Version	MIUI 14
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
Rx Frequency	5G NR n5 : 869 MHz ~ 894 MHz 5G NR n7 : 2620 MHz ~ 2690 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
Bandwidth	n5: 5MHz / 10MHz / 15MHz / 20MHz n7: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz n38: 10MHz / 15MHz / 20MHz / 30MHz / 40MHz n41 : 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz n77, n78 : 10MHz / 15MHz / 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz



SCS	15kHz for n5/n7 30kHz for n38/n41/n77/n78
Antenna Gain	<p><Ant. 0>: n5: -6.4 dBi, n7: -5.2 dBi, n38: -6.0 dBi, n41: -5.0 dBi</p> <p><Ant. 1>: n5: -4.2 dBi, n7: -1.9 dBi, n38: -2.1 dBi, n41: -1.6 dBi</p> <p><Ant. 2>: n7: -2.0 dBi, n38: -2.0 dBi, n41: -1.3 dBi</p> <p><Ant. 3>: n7: -1.4 dBi, n38: -1.6 dBi, n41: -0.9 dBi</p> <p><Ant. 6>: n77: 2.0 dBi, n78: 2.0 dBi</p> <p><Ant. 7>: n77: 2.8 dBi, n78: 2.8 dBi</p> <p><Ant. 8>: n77: 0.4 dBi, n78: -0.3 dBi</p> <p><Ant. 10>: n77: 1.5 dBi, n78: 1.5 dBi</p>
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum ERP/EIRP is calculated from max output power and max antenna gain, only the maximum ERP/EIRP are shown in the report, Ant. 1 for 5G NR n5 and Ant. 2 for n7/n38/n41 and Ant. 6 for n77/n78.
2. 5G NR n5/n78 support SA mode and NSA mode, n7/n38/n41/n77 support SA mode only. According to the maximum power between SA and NSA mode, SA covers NSA mode for n5/n78.
3. The device supports HPUE mode for 5G NR n77/n78.
4. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown 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 Maximum ERP/EIRP Power and Emission Designator

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	0.0698	4M49G7D	0.0551	4M49W7D
10	829.0 ~ 844.0	0.0693	9M28G7D	0.0538	9M30W7D
15	831.5 ~ 841.5	0.0714	14M1G7D	0.0569	14M1W7D
20	834.0 ~ 839.0	0.0716	18M9G7D	0.0589	18M9W7D

5G NR n7		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	2502.5 ~ 2567.5	0.1432	4M49G7D	0.1161	4M50W7D
10	2505.0 ~ 2565.0	0.1422	9M28G7D	0.1178	9M30W7D
15	2507.5 ~ 2562.5	0.1552	14M1G7D	0.1297	14M1W7D
20	2510.0 ~ 2560.0	0.1552	18M9G7D	0.1291	19M0W7D
25	2512.5 ~ 2557.5	0.1449	23M7G7D	0.1167	23M8W7D
30	2515.0 ~ 2555.0	0.1349	28M6G7D	0.1086	28M6W7D
40	2520.0 ~ 2550.0	0.1633	38M7G7D	0.1361	38M7W7D

5G NR n38		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	2575.0 ~ 2615.0	0.1614	8M59G7D	0.1327	8M58W7D
15	2577.5 ~ 2612.5	0.1714	13M6G7D	0.1393	13M6W7D
20	2580.0 ~ 2610.0	0.1690	18M2G7D	0.1346	18M3W7D
30	2585.0 ~ 2605.0	0.1778	27M8G7D	0.1435	27M9W7D
40	2590.0 ~ 2600.0	0.1803	37M9G7D	0.1442	37M9W7D



5G NR n41		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)
20	2506.02 ~ 2679.99	0.2099	18M2G7D	0.1629	18M3W7D
30	2511.00 ~ 2674.98	0.2094	27M8G7D	0.1687	27M9W7D
40	2516.01 ~ 2670.00	0.2138	37M9G7D	0.1726	37M9W7D
50	2521.02 ~ 2664.99	0.2037	47M5G7D	0.1637	47M5W7D
60	2526.00 ~ 2659.98	0.2018	58M1G7D	0.1641	57M9W7D
70	2531.01 ~ 2655.00	0.1932	67M6G7D	0.1596	67M5W7D
80	2536.02 ~ 2649.99	0.1901	77M5G7D	0.1560	77M6W7D
90	2541.00 ~ 2644.98	0.1914	87M4G7D	0.1552	87M5W7D
100	2546.01 ~ 2640.00	0.2143	97M6G7D	0.1706	97M7W7D

5G NR n77		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3975.00	0.7161	8M59G7D	0.5689	8M60W7D
15	3707.52 ~ 3972.48	0.7762	13M6G7D	0.5984	13M6W7D
20	3710.01 ~ 3969.99	0.7568	18M3G7D	0.6067	18M2W7D
30	3715.02 ~ 3964.98	0.7709	27M9G7D	0.6095	27M9W7D
40	3720.00 ~ 3960.00	0.7925	37M9G7D	0.6368	37M8W7D
50	3725.01 ~ 3954.99	0.7278	47M4G7D	0.6026	47M6W7D
60	3730.02 ~ 3949.98	0.7295	58M0G7D	0.5943	58M0W7D
70	3735.00 ~ 3945.00	0.7295	67M6G7D	0.5848	67M7W7D
80	3740.01 ~ 3939.99	0.7228	77M6G7D	0.5875	77M6W7D
90	3745.02 ~ 3934.98	0.7211	87M6G7D	0.5768	87M7W7D
100	3750.00 ~ 3930.00	0.7962	97M3G7D	0.6471	97M6W7D



5G NR n78		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3795.00	0.7047	8M59G7D	0.5598	8M60W7D
15	3707.52 ~ 3792.48	0.7482	13M6G7D	0.5781	13M6W7D
20	3710.01 ~ 3789.99	0.7464	18M3G7D	0.5848	18M2W7D
30	3715.02 ~ 3784.98	0.7396	27M9G7D	0.5984	27M9W7D
40	3720.00 ~ 3780.00	0.7709	37M9G7D	0.5998	37M8W7D
50	3725.01 ~ 3774.99	0.7096	47M4G7D	0.5636	47M6W7D
60	3730.02 ~ 3769.98	0.7063	58M0G7D	0.5598	58M0W7D
70	3735.00 ~ 3765.00	0.6966	67M6G7D	0.5728	67M7W7D
80	3740.01 ~ 3759.99	0.6855	77M6G7D	0.5610	77M6W7D
90	3745.02 ~ 3754.98	0.6934	87M6G7D	0.5636	87M7W7D
100	3750.00	0.7727	97M3G7D	0.6166	97M6W7D

Note:

1. 5G NR Band n41 overlaps the entire frequency range of Band n38. Therefore, the conducted test results provided in this report covers Band n41 as well as Band n38, and 5G NR n38 supports BW 10/15MHz, it is tested in the report.
2. 5G NR n77 overlaps the entire frequency range of 5G NR n78. Therefore, the test results provided in this report covers 5G NR n77 as well as 5G NR n78.
3. 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. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS	CN1257	314309



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 data subcontracted: Conducted test case in section 3 of this report.

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24al

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 2, 22, 27
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.




2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

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

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

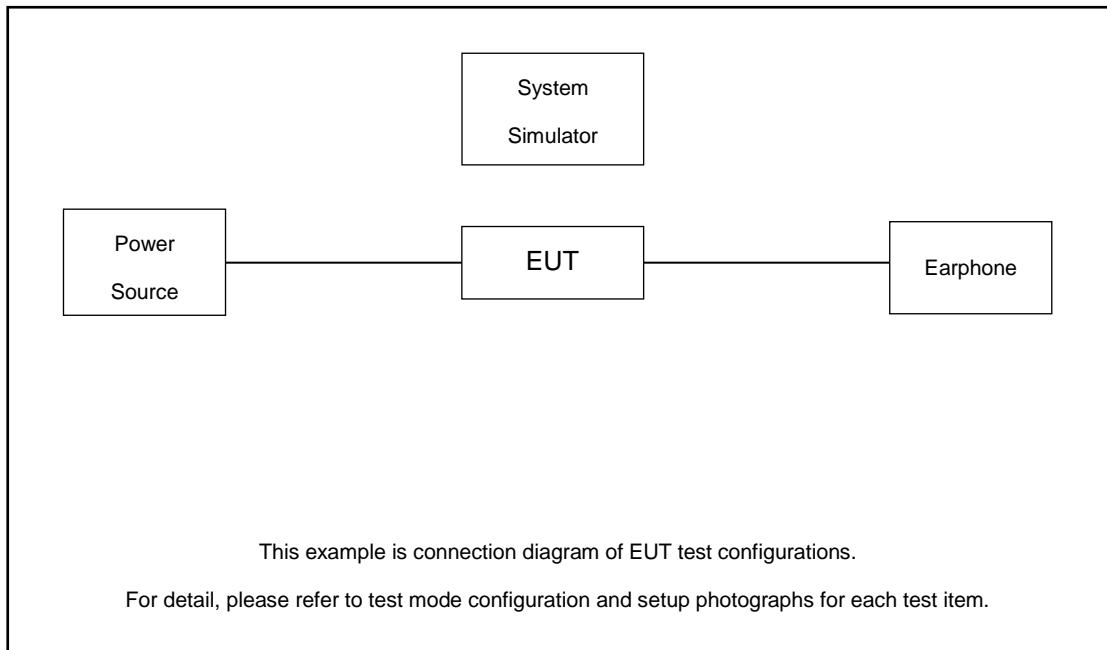
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #		Test Channel			
		5	10	15	20	25	30	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H	
Max. Output Power	n5	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	
	n7	v	v	v	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	
	n38	-	v	v	v	-	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	
	n41	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	n77	-	v	v	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	n78	-	v	v	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
Peak-to-Average Ratio	n5				v	-	-	-	-	-	-	-	-	-	v	v				v	v	v	v	v	
	n7				v				-	-	-	-	-	-	v	v				v	v	v	v	v	
	n41	-	-	-	v	-									v	v				v	v	v	v	v	
	n77	-			v	-									v	v				v	v	v	v	v	
26dB and 99% Bandwidth	n5	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v		v		v		
	n7	v	v	v	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v		v		v		
	n38	-	v	v		-			-	-	-	-	-	-	v	v	v	v	v		v		v		
	n41	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v		v		v	
	n77	-	v	v	v	-	v	v	v	v	v	v	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	40	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	v		v	
	n7	v			v			v	-	-	-	-	-	-	v	v				v	v	v		v	
	n38	-	v	v		-			-	-	-	-	-	-	v	v				v	v	v		v	
	n41	-	-	-	v	-				v					v	v	v				v	v	v		v
	n77	-	v			-			v						v	v	v				v	v	v		v
Conducted Spurious Emission	n5	v	v		v	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v	
	n7	v			v			v	-	-	-	-	-	-	v	v				v		v	v	v	
	n38	-	v	v		-			-	-	-	-	-	-	v	v				v		v	v	v	
	n41	-	-	-	v	-				v					v	v	v				v		v	v	v
	n77	-	v			-			v						v	v	v				v		v	v	v
Frequency Stability	n5				v	-	-	-	-	-	-	-	-	-		v					v		v		
	n7				v				-	-	-	-	-	-		v					v		v		
	n41	-	-	-	v	-										v					v		v		
	n77	-			v	-										v					v		v		
E.R.P / E.I.R.P	n5	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	
	n7	v	v	v	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	
	n38	-	v	v	v	-	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	
	n41	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	n77	-	v	v	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
	n78	-	v	v	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	
Radiated Spurious Emission	n5	Worst Case																						v	
	n7	Worst Case																						v	
	n41	Worst Case																						v	
	n77	Worst Case																						v	
	n78	Worst Case																						v	
Note	<ol style="list-style-type: none"> The mark "v" means that this configuration is chosen for testing The mark "-" means that this bandwidth is not supported. 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. All test items are based on engineering evaluation. Frequency Stability: Normal Voltage = 3.87V ;Low Voltage =3.60V.; 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	MI	EM023	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.

$$\text{Offset} = \text{RF cable loss.}$$

Following shows an offset computation example with cable loss 7.6 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 7.6 \text{ (dB)} \end{aligned}$$

2.5 Frequency List of Low/Middle/High Channels

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 n7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	504000	507000	510000
	Frequency	2520	2535	2550
30	Channel	503000	507000	511000
	Frequency	2515	2535	2555
25	Channel	502500	507000	511500
	Frequency	2512.5	2535	2557.5
20	Channel	502000	507000	512000
	Frequency	2510	2535	2560
15	Channel	501500	507000	512500
	Frequency	2507.5	2535	2562.5
10	Channel	501000	507000	513000
	Frequency	2505	2535	2565
5	Channel	500500	507000	513500
	Frequency	2502.5	2535	2567.5

5G NR n38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	518000	519000	520000
	Frequency	2590	2595	2600
30	Channel	517000	519000	521000
	Frequency	2585	2595	2605
20	Channel	516000	519000	522000
	Frequency	2580	2595	2610
15	Channel	515500	519000	522500
	Frequency	2577.5	2595	2612.5
10	Channel	515000	519000	523000
	Frequency	2575	2595	2615



5G NR n41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
70	Channel	506202	518598	531000
	Frequency	2531.01	2592.99	2655
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99



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



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

3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power and 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 n7, n38, n41.

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n77, n78.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.



3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.



3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ 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.

27.53(m)(4)

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

27.53(l)(2)

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.



3.7.2 Test Procedures

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

Example:

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

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

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

9. For 5G NR n7/n38/n41, the other 40 dB, and 55 dB have additionally applied same calculation above.

When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.



3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

For 5G NR n7/n38/n41:

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

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

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [43 + 10\log(P)]$ (dB)
= $[30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
= -13dBm.
11. For 5G NR n7/n38/n41
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [55 + 10\log(P)]$ (dB)
= $[30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
= -25dBm.



3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) 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 $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

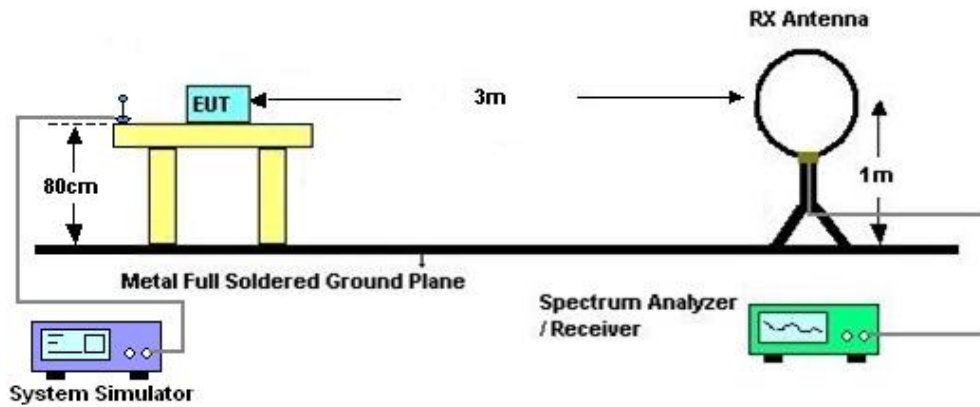
4 Radiated Test Items

4.1 Measuring Instruments

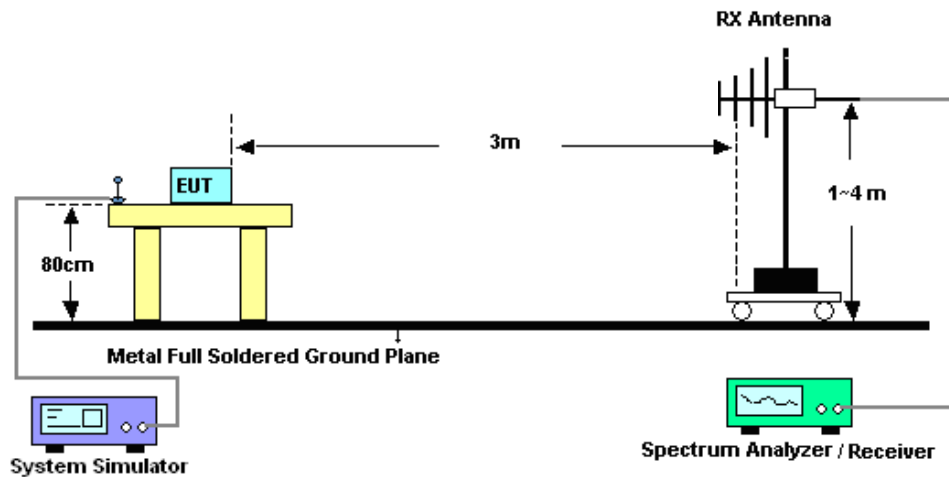
See list of measuring instruments of this test report.

4.2 Test Setup

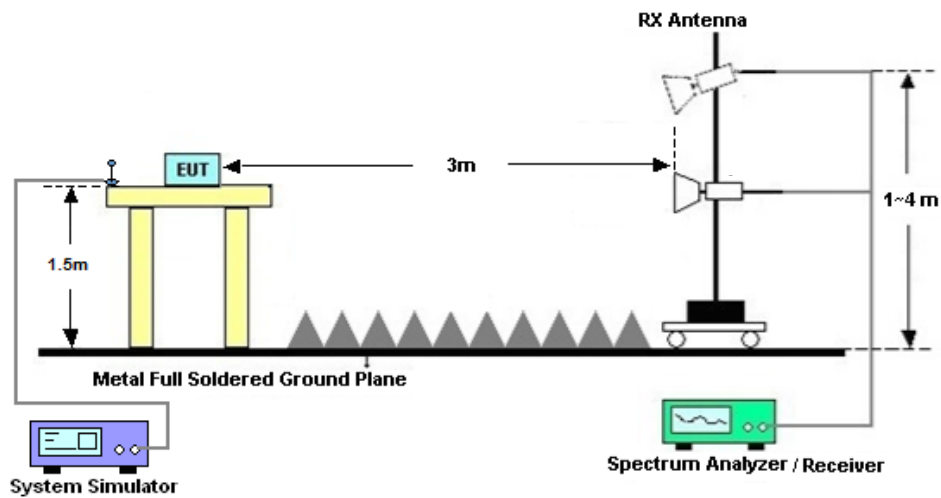
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.



4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

For 5G NR n7/n38/n41

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

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

4.4.2 Test Procedures

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

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] (dB)$
 $= [30 + 10\log(P)] (dBm) - [43 + 10\log(P)] (dB)$
 $= -13dBm.$

13. For 5G NR n7/n38/n41:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Jan. 10, 2023~ Jan. 13, 2023	Apr. 08, 2023	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2022	Jan. 10, 2023~ Jan. 13, 2023	Dec. 24, 2023	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 07, 2022	Jan. 10, 2023~ Jan. 13, 2023	Jul. 06, 2023	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 12, 2022	Jan. 06, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 29, 2022	Jan. 06, 2023	Oct. 28, 2023	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 24, 2022	Jan. 06, 2023	May 23, 2023	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Jan. 04, 2023	Jan. 06, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 04, 2023	Jan. 06, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 04, 2023	Jan. 06, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 04, 2023	Jan. 06, 2023	Jan. 03, 2024	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 12, 2022	Jan. 06, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 12, 2022	Jan. 06, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jan. 06, 2023	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jan. 06, 2023	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jan. 06, 2023	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required



6 Uncertainty of Evaluation

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))	3.3dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.8dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

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



Appendix A. Test Results of Conducted Test

Test Engineer :	Jung Kuo	Temperature :	22~23°C
		Relative Humidity :	40~42%

FR1 N5

(Ant. 1 with Max ERP)

Transmitter Conducted Output Power And ERP, $(G_T-L_C)=-4.2\text{dB}$

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	24.79	18.44	0.0698
5	15	5	165300	826.5	DFT-s-OFDM 16 QAM	1@1	23.76	17.41	0.0551
5	15	5	167300	836.5	DFT-s-OFDM QPSK	1@1	24.46	18.11	0.0647
5	15	5	167300	836.5	DFT-s-OFDM 16 QAM	1@1	23.56	17.21	0.0526
5	15	5	169300	846.5	DFT-s-OFDM QPSK	1@1	24.7	18.35	0.0684
5	15	5	169300	846.5	DFT-s-OFDM 16 QAM	1@1	23.7	17.35	0.0543
5	15	10	165800	829	DFT-s-OFDM QPSK	1@1	24.76	18.41	0.0693
5	15	10	165800	829	DFT-s-OFDM 16 QAM	1@1	23.66	17.31	0.0538
5	15	10	167300	836.5	DFT-s-OFDM QPSK	1@1	24.58	18.23	0.0665
5	15	10	167300	836.5	DFT-s-OFDM 16 QAM	1@1	23.57	17.22	0.0527
5	15	10	168800	844	DFT-s-OFDM QPSK	1@1	24.57	18.22	0.0664
5	15	10	168800	844	DFT-s-OFDM 16 QAM	1@1	23.62	17.27	0.0533
5	15	15	166300	831.5	DFT-s-OFDM QPSK	1@1	24.89	18.54	0.0714
5	15	15	166300	831.5	DFT-s-OFDM 16 QAM	1@1	23.9	17.55	0.0569
5	15	15	167300	836.5	DFT-s-OFDM QPSK	1@1	24.71	18.36	0.0685
5	15	15	167300	836.5	DFT-s-OFDM 16 QAM	1@1	23.78	17.43	0.0553
5	15	15	168300	841.5	DFT-s-OFDM QPSK	1@1	24.78	18.43	0.0697
5	15	15	168300	841.5	DFT-s-OFDM 16 QAM	1@1	23.72	17.37	0.0546
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	50@25	24.77	18.42	0.0695
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	1@1	24.83	18.48	0.0705
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	1@104	24.79	18.44	0.0698

5	15	20	166800	834	DFT-s-OFDM QPSK	50@25	24.84	18.49	0.0706
5	15	20	166800	834	DFT-s-OFDM QPSK	1@1	24.86	18.51	0.0710
5	15	20	166800	834	DFT-s-OFDM QPSK	1@104	24.83	18.48	0.0705
5	15	20	166800	834	DFT-s-OFDM 16 QAM	50@25	23.8	17.45	0.0556
5	15	20	166800	834	DFT-s-OFDM 16 QAM	1@1	24.05	17.7	0.0589
5	15	20	166800	834	DFT-s-OFDM 16 QAM	1@104	23.89	17.54	0.0568
5	15	20	166800	834	DFT-s-OFDM 64 QAM	50@25	22.31	15.96	0.0394
5	15	20	166800	834	DFT-s-OFDM 64 QAM	1@1	22.53	16.18	0.0415
5	15	20	166800	834	DFT-s-OFDM 64 QAM	1@104	22.38	16.03	0.0401
5	15	20	166800	834	DFT-s-OFDM 256 QAM	50@25	20.25	13.9	0.0245
5	15	20	166800	834	DFT-s-OFDM 256 QAM	1@1	20.17	13.82	0.0241
5	15	20	166800	834	DFT-s-OFDM 256 QAM	1@104	20.07	13.72	0.0236
5	15	20	166800	834	CP-OFDM QPSK	53@26	23.32	16.97	0.0498
5	15	20	166800	834	CP-OFDM QPSK	1@1	23.44	17.09	0.0512
5	15	20	166800	834	CP-OFDM QPSK	1@104	23.18	16.83	0.0482
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	50@25	24.84	18.49	0.0706
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@1	24.75	18.4	0.0692
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@104	24.75	18.4	0.0692
5	15	20	167300	836.5	DFT-s-OFDM QPSK	50@25	24.81	18.46	0.0701
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@1	24.88	18.53	0.0713
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@104	24.84	18.49	0.0706
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	50@25	23.77	17.42	0.0552
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	1@1	23.96	17.61	0.0577
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	1@104	23.87	17.52	0.0565
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	50@25	22.26	15.91	0.0390
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	1@1	22.43	16.08	0.0406
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	1@104	22.42	16.07	0.0405

5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	50@25	20.26	13.91	0.0246
5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	1@1	20.16	13.81	0.0240
5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	1@104	20.03	13.68	0.0233
5	15	20	167300	836.5	CP-OFDM QPSK	53@26	23.37	17.02	0.0504
5	15	20	167300	836.5	CP-OFDM QPSK	1@1	23.42	17.07	0.0509
5	15	20	167300	836.5	CP-OFDM QPSK	1@104	23.15	16.8	0.0479
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	50@25	24.85	18.5	0.0708
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	1@1	24.87	18.52	0.0711
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	1@104	24.74	18.39	0.0690
5	15	20	167800	839	DFT-s-OFDM QPSK	50@25	24.9	18.55	0.0716
5	15	20	167800	839	DFT-s-OFDM QPSK	1@1	24.84	18.49	0.0706
5	15	20	167800	839	DFT-s-OFDM QPSK	1@104	24.77	18.42	0.0695
5	15	20	167800	839	DFT-s-OFDM 16 QAM	50@25	23.77	17.42	0.0552
5	15	20	167800	839	DFT-s-OFDM 16 QAM	1@1	23.85	17.5	0.0562
5	15	20	167800	839	DFT-s-OFDM 16 QAM	1@104	23.84	17.49	0.0561
5	15	20	167800	839	DFT-s-OFDM 64 QAM	50@25	22.4	16.05	0.0403
5	15	20	167800	839	DFT-s-OFDM 64 QAM	1@1	22.4	16.05	0.0403
5	15	20	167800	839	DFT-s-OFDM 64 QAM	1@104	22.36	16.01	0.0399
5	15	20	167800	839	DFT-s-OFDM 256 QAM	50@25	20.29	13.94	0.0248
5	15	20	167800	839	DFT-s-OFDM 256 QAM	1@1	20.08	13.73	0.0236
5	15	20	167800	839	DFT-s-OFDM 256 QAM	1@104	20.09	13.74	0.0237
5	15	20	167800	839	CP-OFDM QPSK	53@26	23.43	17.08	0.0511
5	15	20	167800	839	CP-OFDM QPSK	1@1	23.4	17.05	0.0507
5	15	20	167800	839	CP-OFDM QPSK	1@104	23.35	17	0.0501

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(Ant. 0 with Max Power)

Transmitter Conducted Output Power

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)
5	15	5	165300	826.5	DFT-s-OFDM QPSK	1@1	24.92
5	15	5	165300	826.5	DFT-s-OFDM 16 QAM	12@6	23.71
5	15	5	167300	836.5	DFT-s-OFDM QPSK	1@1	24.87
5	15	5	167300	836.5	DFT-s-OFDM 16 QAM	12@6	23.75
5	15	5	169300	846.5	DFT-s-OFDM QPSK	1@1	24.93
5	15	5	169300	846.5	DFT-s-OFDM 16 QAM	12@6	23.26
5	15	10	165800	829	DFT-s-OFDM QPSK	1@1	24.79
5	15	10	165800	829	DFT-s-OFDM 16 QAM	25@12	23.96
5	15	10	167300	836.5	DFT-s-OFDM QPSK	1@1	24.78
5	15	10	167300	836.5	DFT-s-OFDM 16 QAM	25@12	23.87
5	15	10	168800	844	DFT-s-OFDM QPSK	1@1	24.81
5	15	10	168800	844	DFT-s-OFDM 16 QAM	25@12	23.79
5	15	15	166300	831.5	DFT-s-OFDM QPSK	1@1	25.15
5	15	15	166300	831.5	DFT-s-OFDM 16 QAM	36@18	24.15
5	15	15	167300	836.5	DFT-s-OFDM QPSK	1@1	25.16
5	15	15	167300	836.5	DFT-s-OFDM 16 QAM	36@18	24.03
5	15	15	168300	841.5	DFT-s-OFDM QPSK	1@1	25.01
5	15	15	168300	841.5	DFT-s-OFDM 16 QAM	36@18	23.97
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	50@25	25.11
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	1@1	25
5	15	20	166800	834	DFT-s-OFDM PI/2 BPSK	1@104	24.97
5	15	20	166800	834	DFT-s-OFDM QPSK	50@25	25.2

5	15	20	166800	834	DFT-s-OFDM QPSK	1@1	24.93
5	15	20	166800	834	DFT-s-OFDM QPSK	1@104	24.52
5	15	20	166800	834	DFT-s-OFDM 16 QAM	50@25	24.13
5	15	20	166800	834	DFT-s-OFDM 16 QAM	1@1	24.09
5	15	20	166800	834	DFT-s-OFDM 16 QAM	1@104	24.02
5	15	20	166800	834	DFT-s-OFDM 64 QAM	50@25	22.63
5	15	20	166800	834	DFT-s-OFDM 64 QAM	1@1	22.74
5	15	20	166800	834	DFT-s-OFDM 64 QAM	1@104	22.43
5	15	20	166800	834	DFT-s-OFDM 256 QAM	50@25	20.36
5	15	20	166800	834	DFT-s-OFDM 256 QAM	1@1	20.3
5	15	20	166800	834	DFT-s-OFDM 256 QAM	1@104	19.98
5	15	20	166800	834	CP-OFDM QPSK	53@26	23.53
5	15	20	166800	834	CP-OFDM QPSK	1@1	23.59
5	15	20	166800	834	CP-OFDM QPSK	1@104	23.31
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	50@25	25.15
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@1	25.01
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@104	24.83
5	15	20	167300	836.5	DFT-s-OFDM QPSK	50@25	25.11
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@1	25.1
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@104	24.03
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	50@25	24.11
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	1@1	24.09
5	15	20	167300	836.5	DFT-s-OFDM 16 QAM	1@104	24.01
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	50@25	22.69
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	1@1	22.67
5	15	20	167300	836.5	DFT-s-OFDM 64 QAM	1@104	22.1
5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	50@25	20.31

5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	1@1	20.28
5	15	20	167300	836.5	DFT-s-OFDM 256 QAM	1@104	19.68
5	15	20	167300	836.5	CP-OFDM QPSK	53@26	23.57
5	15	20	167300	836.5	CP-OFDM QPSK	1@1	23.63
5	15	20	167300	836.5	CP-OFDM QPSK	1@104	22.84
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	50@25	25.11
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	1@1	25.01
5	15	20	167800	839	DFT-s-OFDM PI/2 BPSK	1@104	23.2
5	15	20	167800	839	DFT-s-OFDM QPSK	50@25	24.8
5	15	20	167800	839	DFT-s-OFDM QPSK	1@1	25.13
5	15	20	167800	839	DFT-s-OFDM QPSK	1@104	22.23
5	15	20	167800	839	DFT-s-OFDM 16 QAM	50@25	23.8
5	15	20	167800	839	DFT-s-OFDM 16 QAM	1@1	23.73
5	15	20	167800	839	DFT-s-OFDM 16 QAM	1@104	23.68
5	15	20	167800	839	DFT-s-OFDM 64 QAM	50@25	22.57
5	15	20	167800	839	DFT-s-OFDM 64 QAM	1@1	22.7
5	15	20	167800	839	DFT-s-OFDM 64 QAM	1@104	20.51
5	15	20	167800	839	DFT-s-OFDM 256 QAM	50@25	20.45
5	15	20	167800	839	DFT-s-OFDM 256 QAM	1@1	20.3
5	15	20	167800	839	DFT-s-OFDM 256 QAM	1@104	20.19
5	15	20	167800	839	CP-OFDM QPSK	53@26	23.37
5	15	20	167800	839	CP-OFDM QPSK	1@1	22.85
5	15	20	167800	839	CP-OFDM QPSK	1@104	22.75

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	0.0029	PASS	NV
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0041	PASS	LV
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0041	PASS	HV
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0067	PASS	-30°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0044	PASS	-20°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0070	PASS	-10°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0069	PASS	0°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0067	PASS	10°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0029	PASS	20°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0053	PASS	30°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0039	PASS	40°C
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	0.0052	PASS	50°C

Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
5	15	20	166800	834.0	DFT-s-OFDM PI/2 BPSK	100@0	4.08	13	PASS
5	15	20	166800	834.0	DFT-s-OFDM PI/2 BPSK	1@0	4.07	13	PASS
5	15	20	166800	834.0	DFT-s-OFDM QPSK	100@0	5.09	13	PASS
5	15	20	166800	834.0	DFT-s-OFDM QPSK	1@0	5.22	13	PASS
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	100@0	4.11	13	PASS
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	1@0	4.19	13	PASS
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	5.2	13	PASS
5	15	20	167300	836.5	DFT-s-OFDM QPSK	1@0	5.17	13	PASS
5	15	20	167800	839.0	DFT-s-OFDM PI/2 BPSK	100@0	4.11	13	PASS
5	15	20	167800	839.0	DFT-s-OFDM PI/2 BPSK	1@0	4.1	13	PASS
5	15	20	167800	839.0	DFT-s-OFDM QPSK	100@0	5.27	13	PASS
5	15	20	167800	839.0	DFT-s-OFDM QPSK	1@0	4.84	13	PASS

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



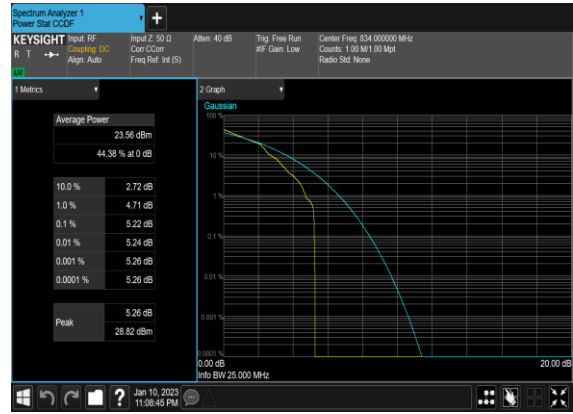
N5(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



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



N5(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



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



N5(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



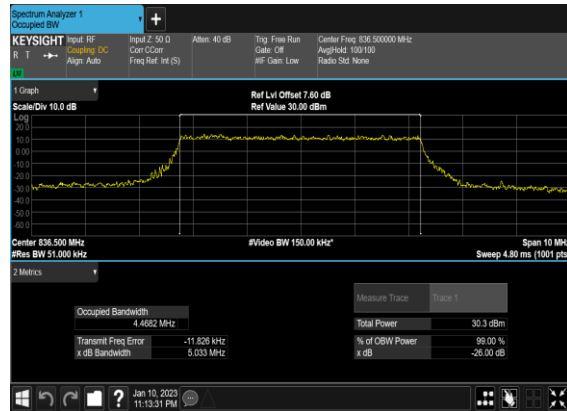
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
5	15	5	167300	836.5	DFT-s-OFDM PI/2 BPSK	25@0	4.4869	4.971
5	15	5	167300	836.5	DFT-s-OFDM QPSK	25@0	4.4682	5.033
5	15	5	167300	836.5	CP-OFDM QPSK	25@0	4.4643	4.949
5	15	5	167300	836.5	CP-OFDM 16 QAM	25@0	4.4932	5.134
5	15	5	167300	836.5	CP-OFDM 64 QAM	25@0	4.4583	4.952
5	15	5	167300	836.5	CP-OFDM 256 QAM	25@0	4.4828	5.042
5	15	10	167300	836.5	DFT-s-OFDM PI/2 BPSK	50@0	8.9	9.499
5	15	10	167300	836.5	DFT-s-OFDM QPSK	50@0	8.9138	9.719
5	15	10	167300	836.5	CP-OFDM QPSK	52@0	9.2792	9.935
5	15	10	167300	836.5	CP-OFDM 16 QAM	52@0	9.2777	9.939
5	15	10	167300	836.5	CP-OFDM 64 QAM	52@0	9.2971	9.947
5	15	10	167300	836.5	CP-OFDM 256 QAM	52@0	9.2811	9.992
5	15	15	167300	836.5	DFT-s-OFDM PI/2 BPSK	75@0	13.369	14.07
5	15	15	167300	836.5	DFT-s-OFDM QPSK	75@0	13.379	14.14
5	15	15	167300	836.5	CP-OFDM QPSK	79@0	14.062	14.9
5	15	15	167300	836.5	CP-OFDM 16 QAM	79@0	14.067	14.8
5	15	15	167300	836.5	CP-OFDM 64 QAM	79@0	14.077	14.9
5	15	15	167300	836.5	CP-OFDM 256 QAM	79@0	14.063	14.8
5	15	20	167300	836.5	DFT-s-OFDM PI/2 BPSK	100@0	17.852	18.63
5	15	20	167300	836.5	DFT-s-OFDM QPSK	100@0	17.842	18.64
5	15	20	167300	836.5	CP-OFDM QPSK	106@0	18.85	19.81
5	15	20	167300	836.5	CP-OFDM 16 QAM	106@0	18.901	19.68
5	15	20	167300	836.5	CP-OFDM 64 QAM	106@0	18.852	19.7
5	15	20	167300	836.5	CP-OFDM 256 QAM	106@0	18.87	19.8

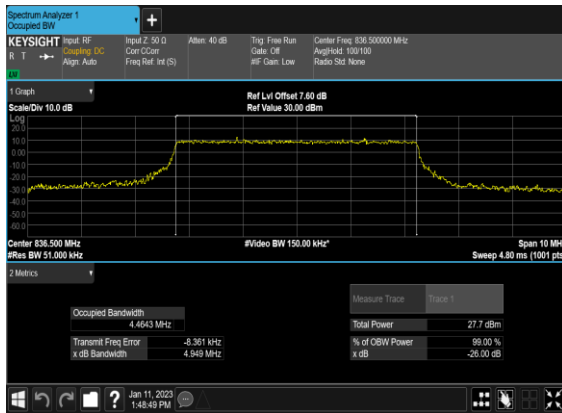
N5(5M)_DFT-s-OFDM_PI_2- BPSK_Outer_Full_Mid_CH



N5(5M)_DFT-s- OFDM_QPSK_Outer_Full_Mid_CH



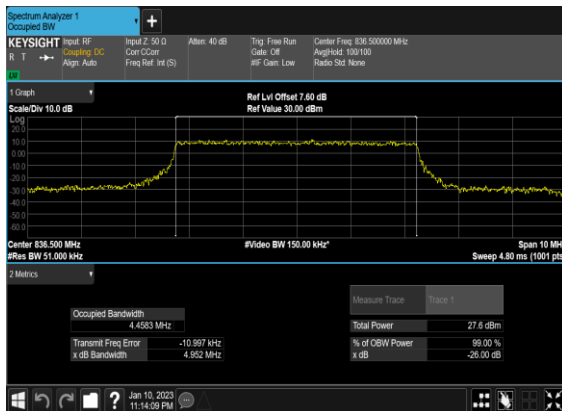
N5(5M)_CP- OFDM_QPSK_Outer_Full_Mid_CH



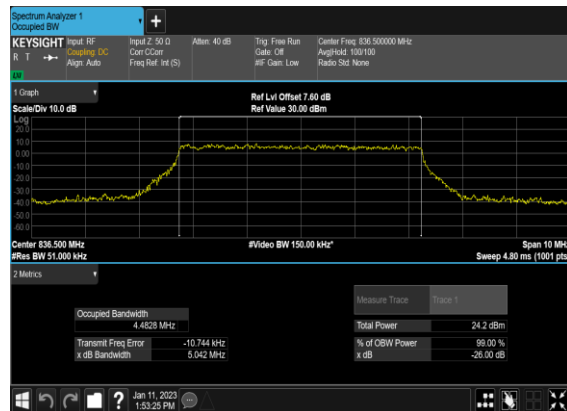
N5(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



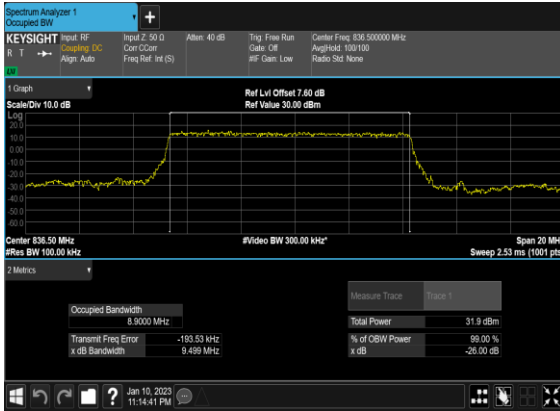
N5(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N5(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N5(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N5(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



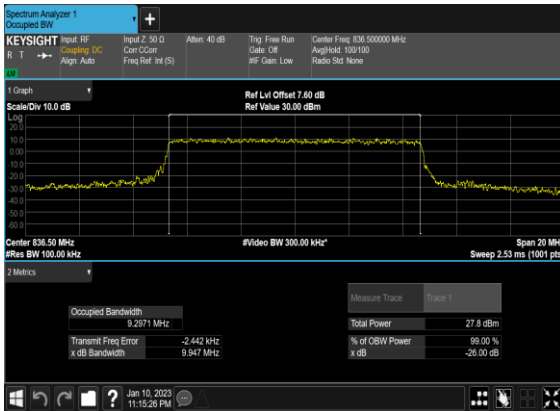
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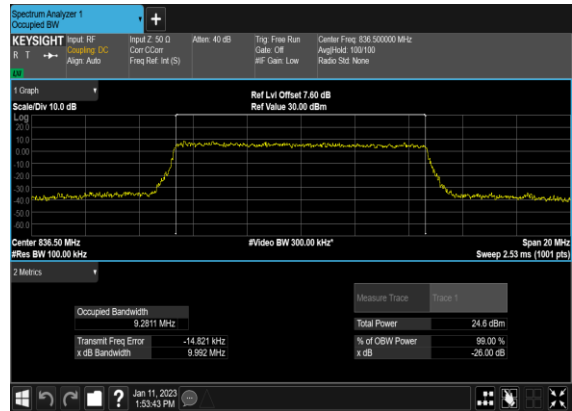
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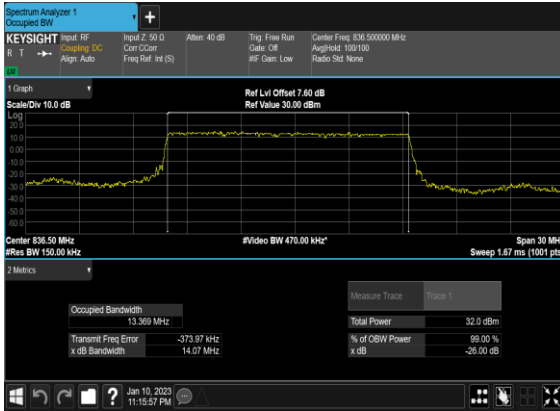
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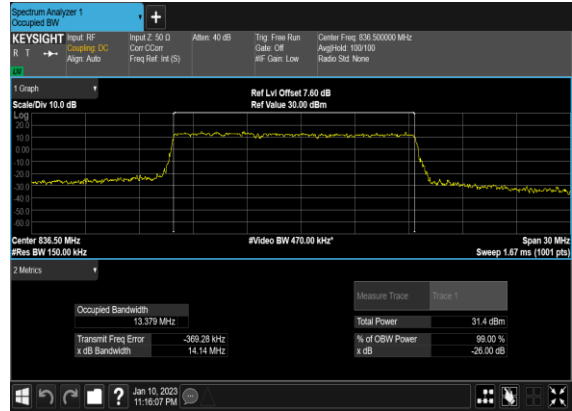
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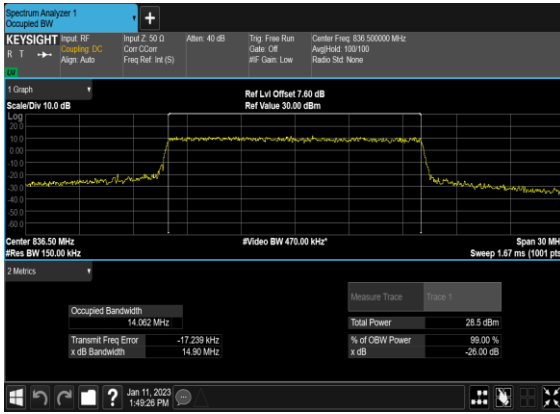
N5(15M)_DFT-s-OFDM_PI_2- BPSK_Outer_Full_Mid_CH



N5(15M)_DFT-s- OFDM_QPSK_Outer_Full_Mid_CH



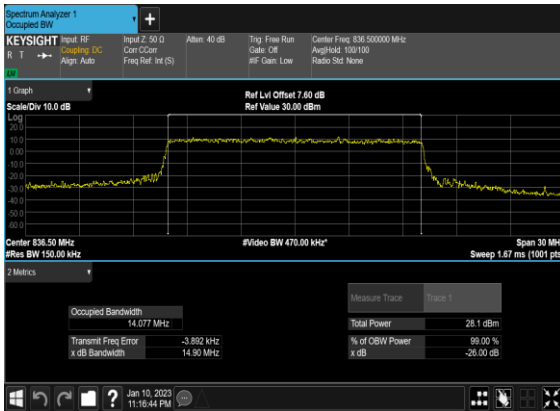
N5(15M)_CP- OFDM_QPSK_Outer_Full_Mid_CH



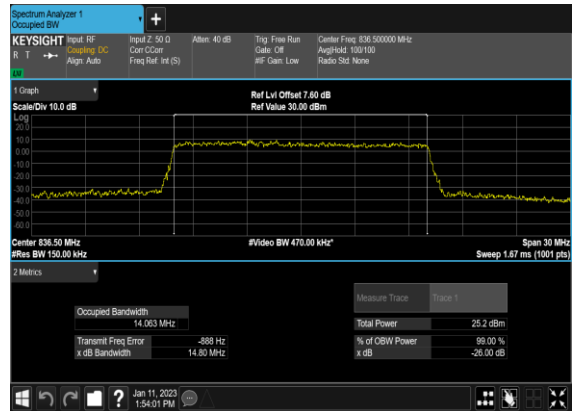
N5(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



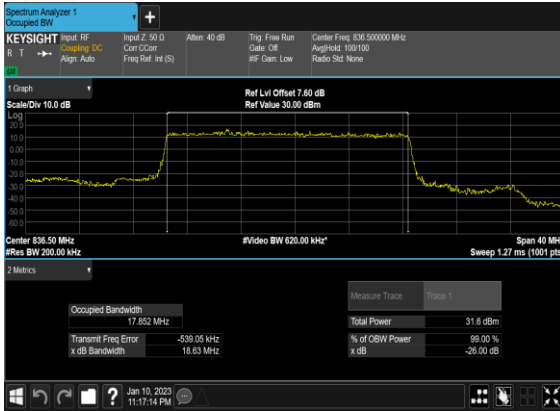
N5(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



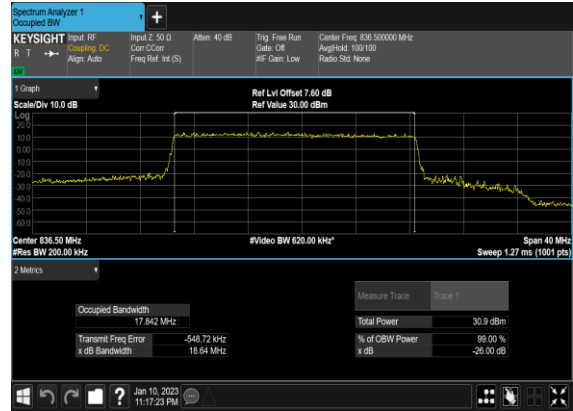
N5(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



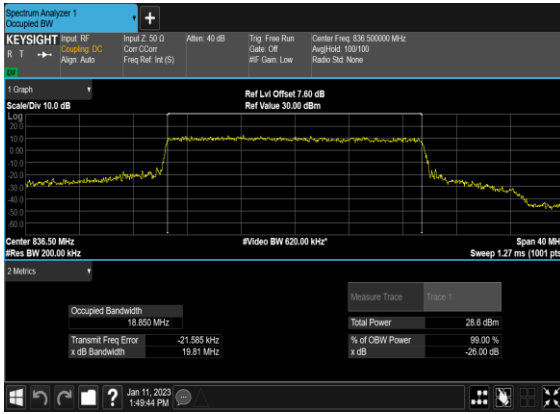
N5(20M)_DFT-s-OFDM_PI_2- BPSK_Outer_Full_Mid_CH



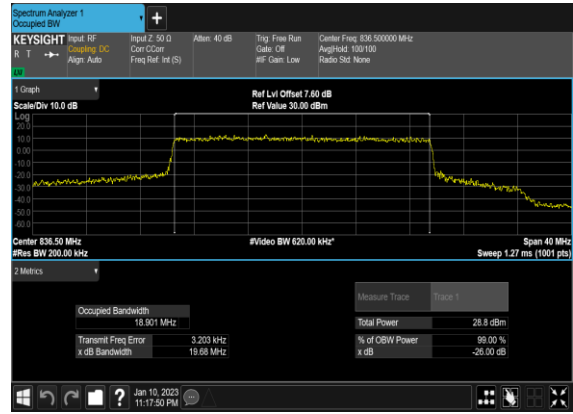
N5(20M)_DFT-s- OFDM_QPSK_Outer_Full_Mid_CH



N5(20M)_CP- OFDM_QPSK_Outer_Full_Mid_CH



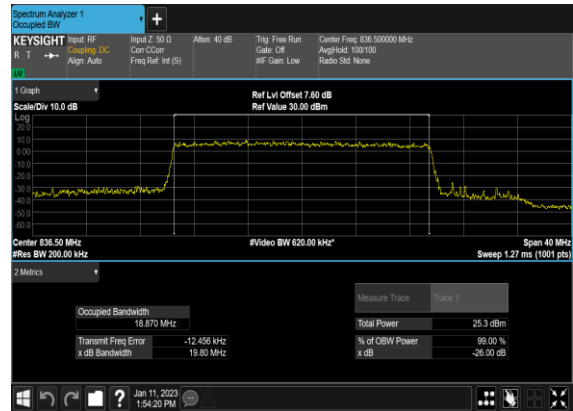
N5(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N5(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N5(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

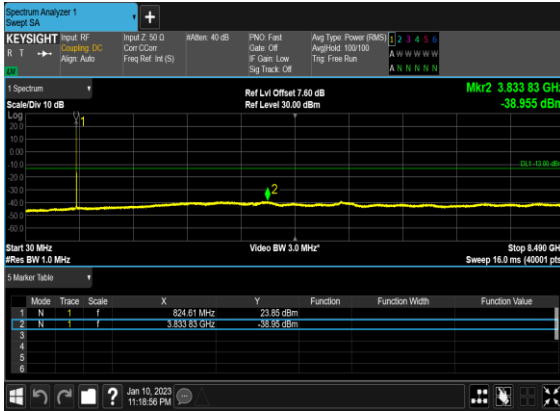


Conducted Spurious Emissions

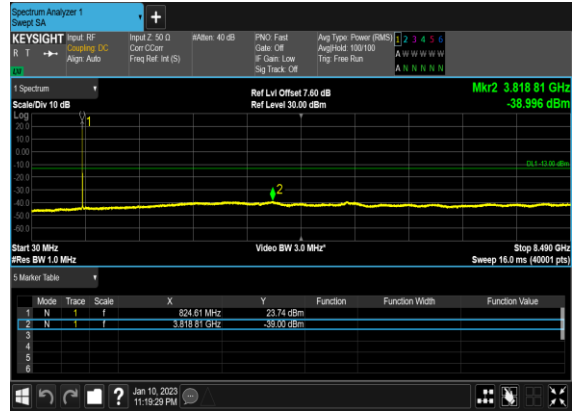
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
5	15	5	165300	826.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	5	165300	826.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	5	165300	826.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	5	165300	826.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15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

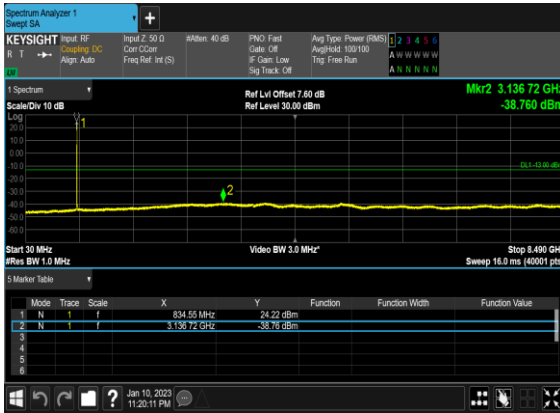
N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



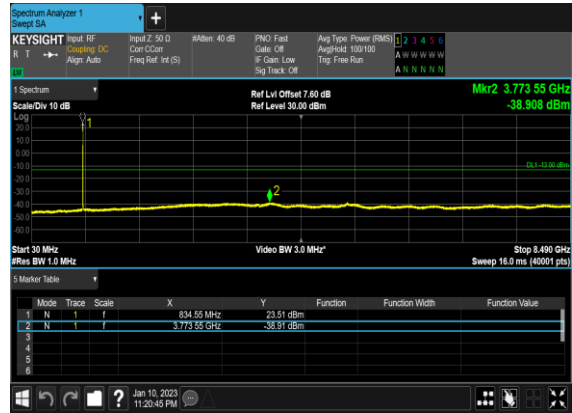
N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



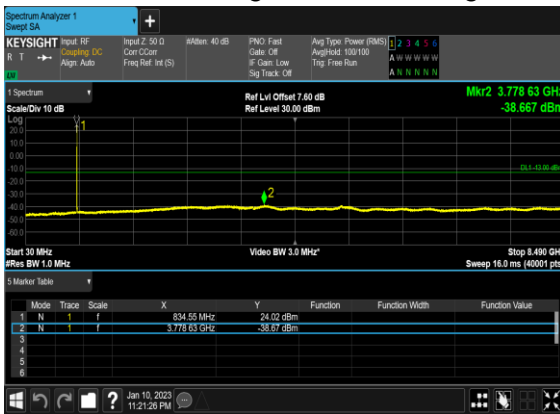
N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



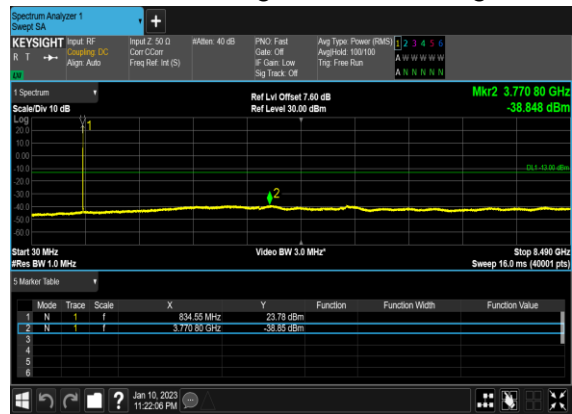
N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



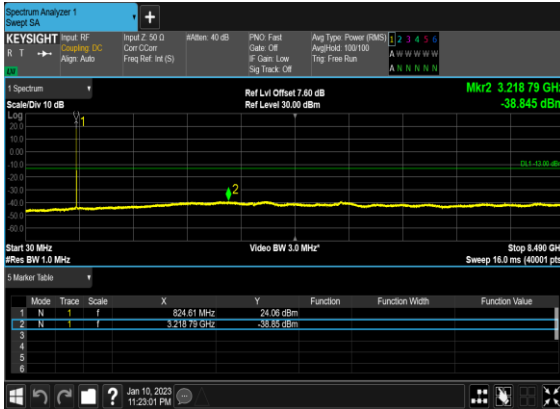
N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



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



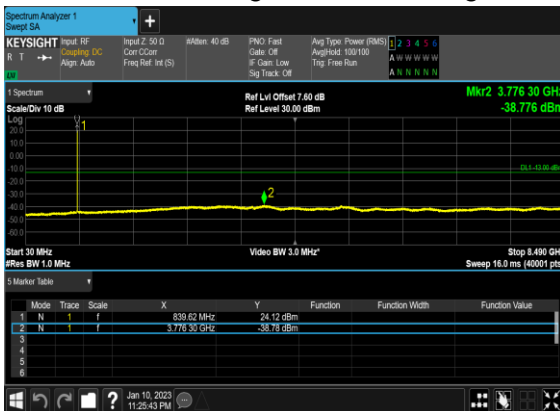
N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



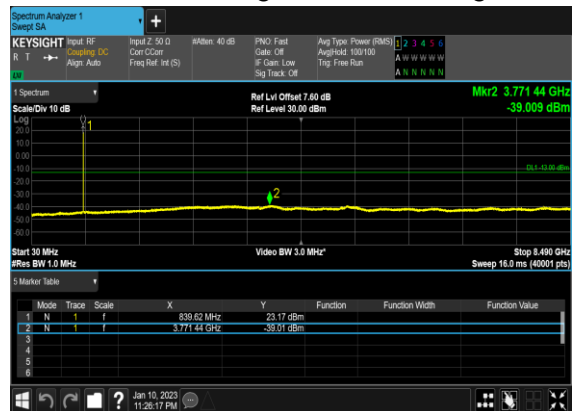
N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



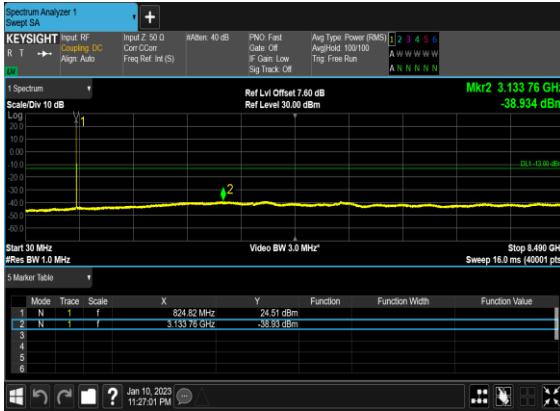
N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



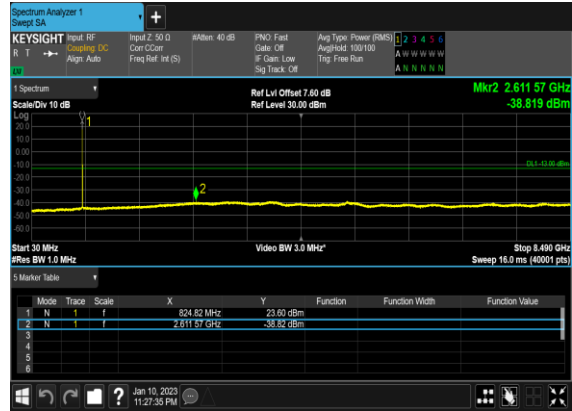
N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



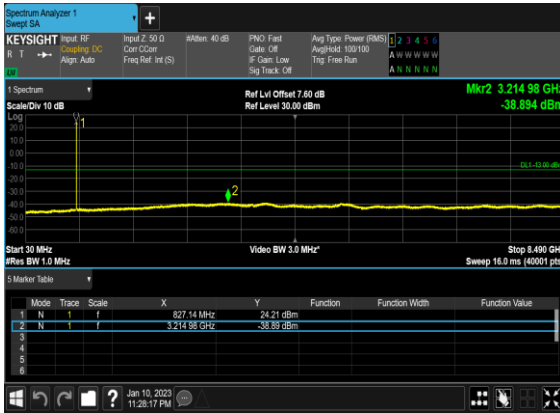
N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



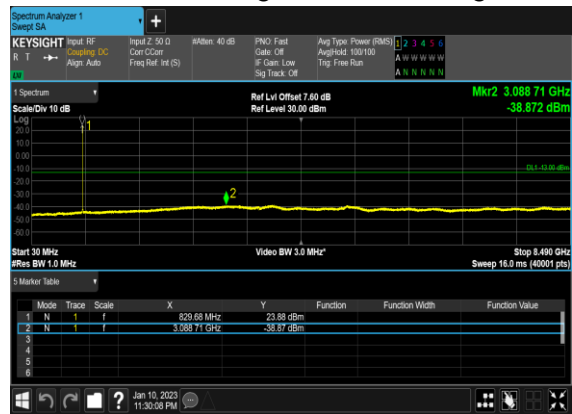
N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



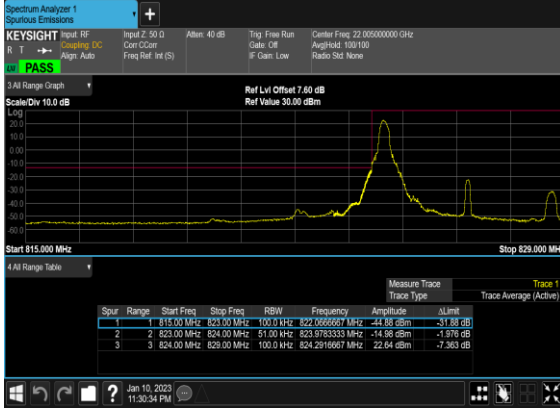
N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



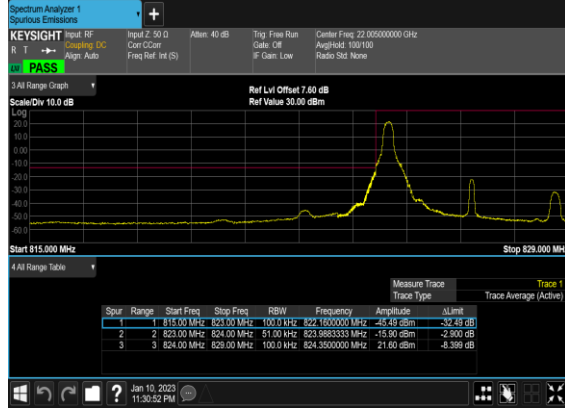
Conducted Band Edge

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

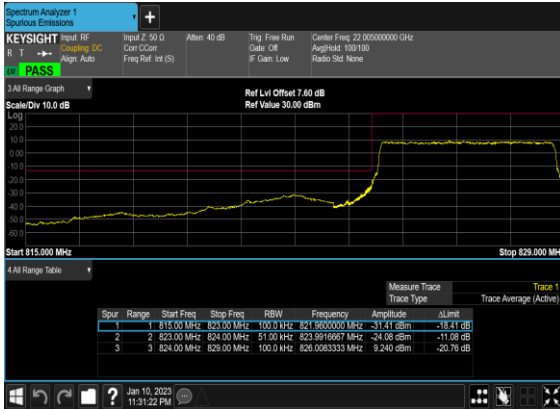
N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



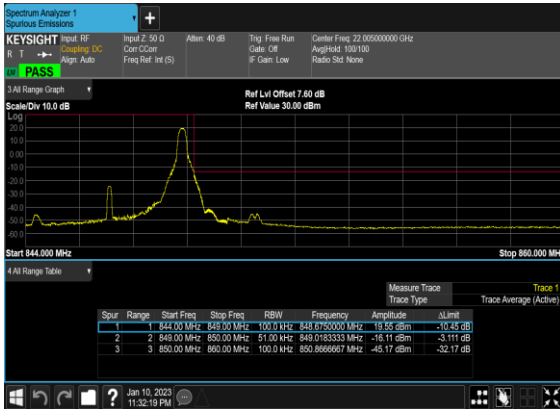
N5(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



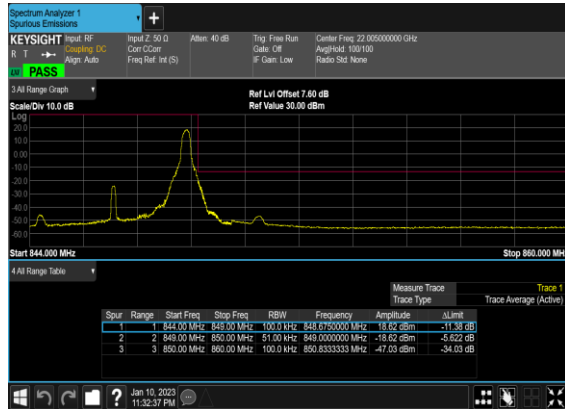
N5(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



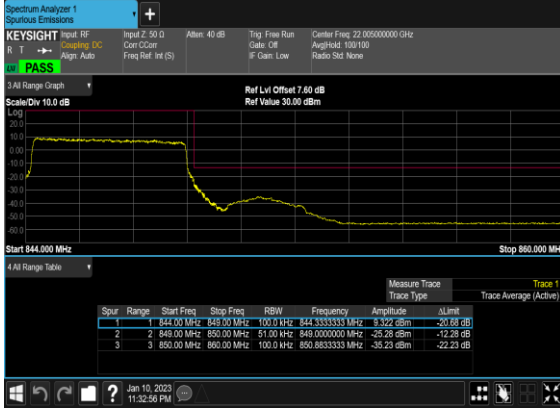
N5(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



N5(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



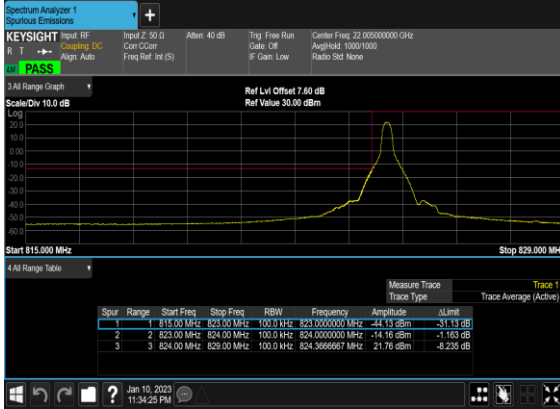
N5(5M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



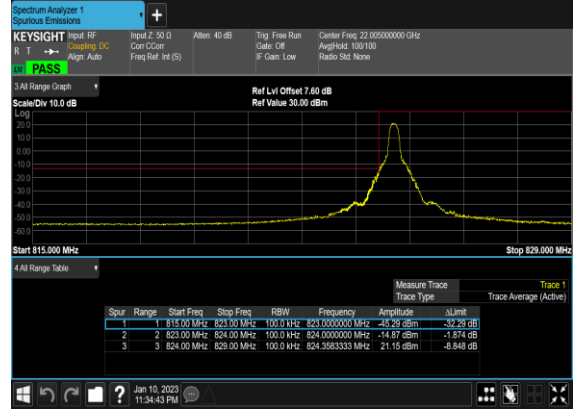
N5(5M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH



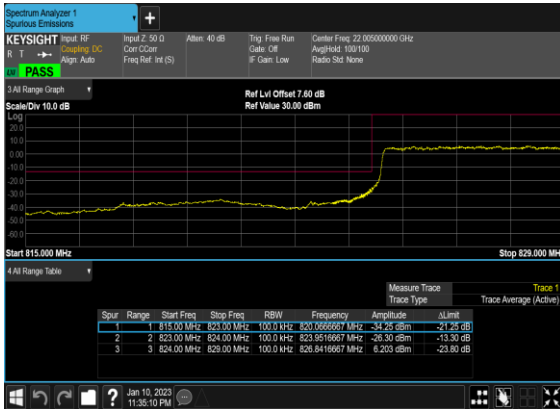
N5(10M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



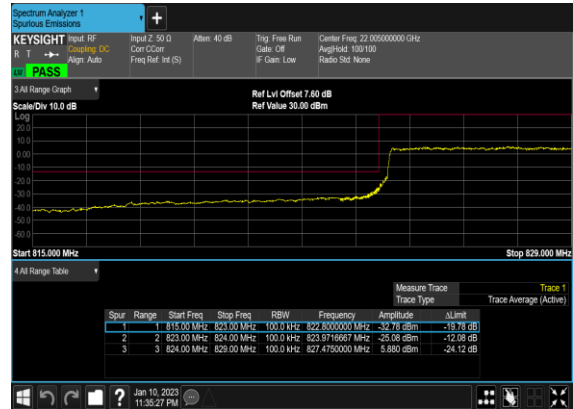
N5(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



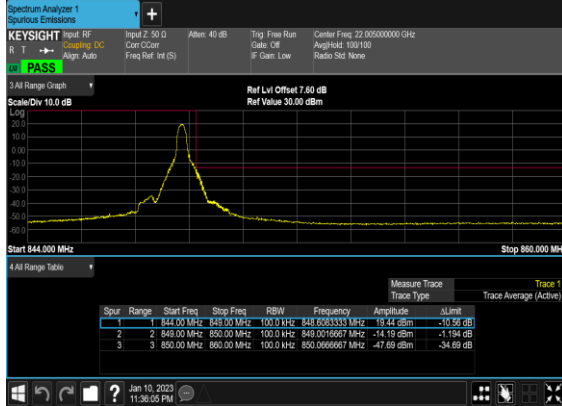
N5(10M)_DFT-s-
OFDM_BPSK_Outer_Full_Low_CH



N5(10M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH



N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



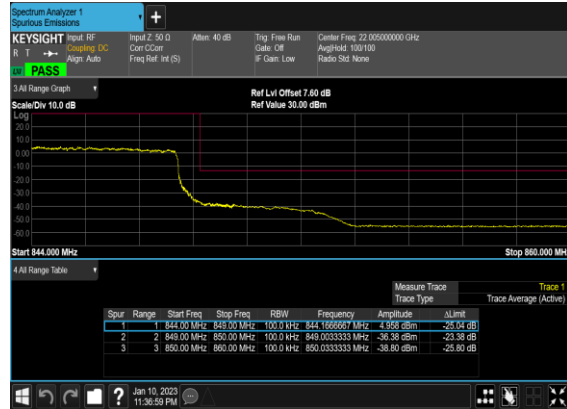
N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



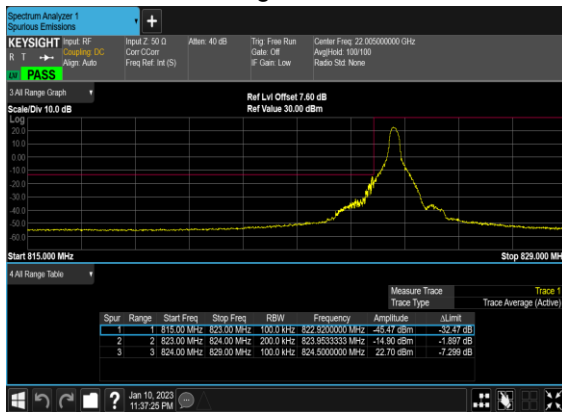
N5(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



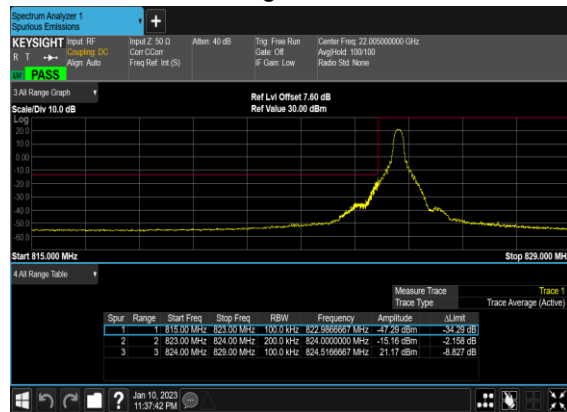
N5(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



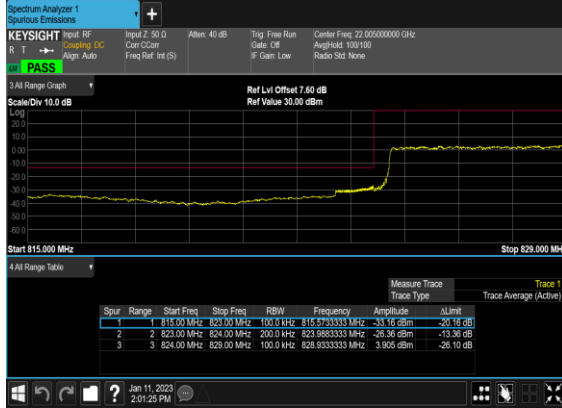
N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



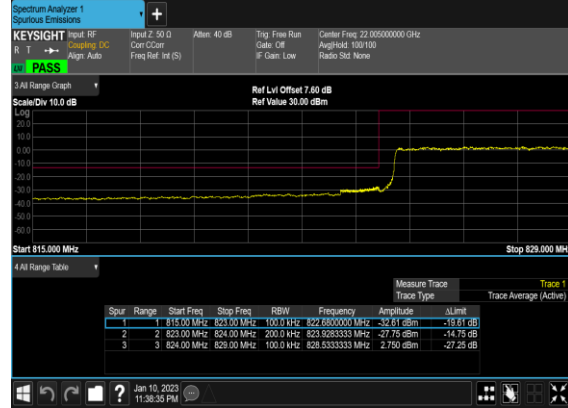
N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



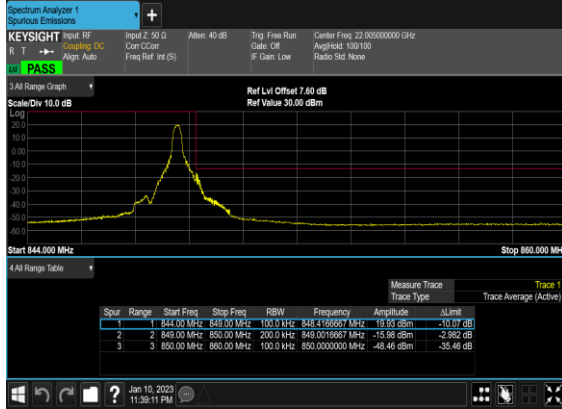
N5(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



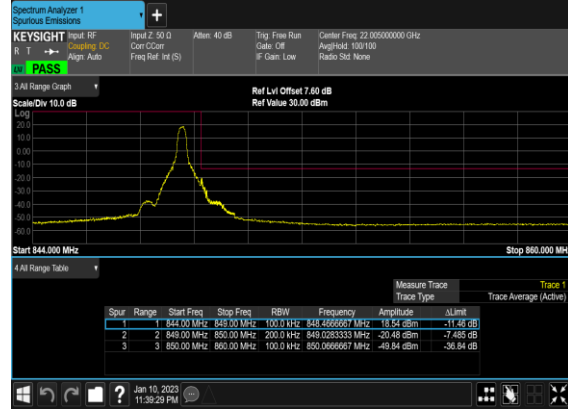
N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



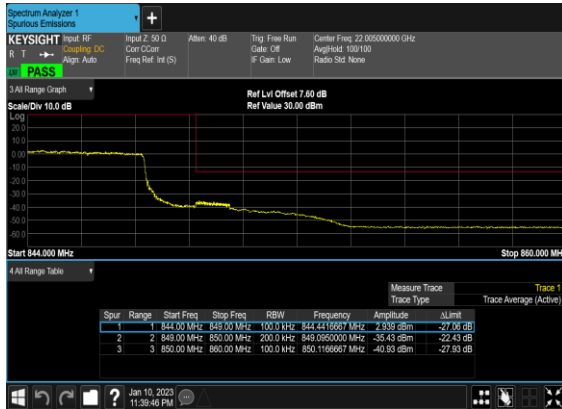
N5(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



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



FR1 N7 (Ant. 2)

Transmitter Conducted Output Power And EIRP, $(G_T - L_C) = -2.0\text{dB}$

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	1@1	22.21	20.21	0.1050
7	15	5	500500	2502.5	DFT-s-OFDM 16 QAM	1@1	21.29	19.29	0.0849
7	15	5	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.28	21.28	0.1343
7	15	5	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.34	20.34	0.1081
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	1@1	23.56	21.56	0.1432
7	15	5	513500	2567.5	DFT-s-OFDM 16 QAM	1@1	22.65	20.65	0.1161
7	15	10	501000	2505.0	DFT-s-OFDM QPSK	1@1	22.23	20.23	0.1054
7	15	10	501000	2505.0	DFT-s-OFDM 16 QAM	1@1	21.27	19.27	0.0845
7	15	10	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.1	21.1	0.1288
7	15	10	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.12	20.12	0.1028
7	15	10	513000	2565.0	DFT-s-OFDM QPSK	1@1	23.53	21.53	0.1422
7	15	10	513000	2565.0	DFT-s-OFDM 16 QAM	1@1	22.71	20.71	0.1178
7	15	15	501500	2507.5	DFT-s-OFDM QPSK	1@1	22.24	20.24	0.1057
7	15	15	501500	2507.5	DFT-s-OFDM 16 QAM	1@1	21.27	19.27	0.0845
7	15	15	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.04	21.04	0.1271
7	15	15	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	21.95	19.95	0.0989
7	15	15	512500	2562.5	DFT-s-OFDM QPSK	1@1	23.91	21.91	0.1552
7	15	15	512500	2562.5	DFT-s-OFDM 16 QAM	1@1	23.13	21.13	0.1297
7	15	20	502000	2510.0	DFT-s-OFDM QPSK	1@1	22.2	20.2	0.1047
7	15	20	502000	2510.0	DFT-s-OFDM 16 QAM	1@1	21.25	19.25	0.0841
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.06	21.06	0.1276
7	15	20	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.1	20.1	0.1023

7	15	20	512000	2560.0	DFT-s-OFDM QPSK	1@1	23.91	21.91	0.1552
7	15	20	512000	2560.0	DFT-s-OFDM 16 QAM	1@1	23.11	21.11	0.1291
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	1@1	22.46	20.46	0.1112
7	15	25	502500	2512.5	DFT-s-OFDM 16 QAM	1@1	21.54	19.54	0.0899
7	15	25	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.51	21.51	0.1416
7	15	25	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.59	20.59	0.1146
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	1@1	23.61	21.61	0.1449
7	15	25	511500	2557.5	DFT-s-OFDM 16 QAM	1@1	22.67	20.67	0.1167
7	15	30	503000	2515.0	DFT-s-OFDM QPSK	1@1	22.22	20.22	0.1052
7	15	30	503000	2515.0	DFT-s-OFDM 16 QAM	1@1	21.26	19.26	0.0843
7	15	30	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.3	21.3	0.1349
7	15	30	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.35	20.35	0.1084
7	15	30	511000	2555.0	DFT-s-OFDM QPSK	1@1	23.3	21.3	0.1349
7	15	30	511000	2555.0	DFT-s-OFDM 16 QAM	1@1	22.36	20.36	0.1086
7	15	40	504000	2520.0	DFT-s-OFDM PI/2 BPSK	108@54	23.88	21.88	0.1542
7	15	40	504000	2520.0	DFT-s-OFDM PI/2 BPSK	1@1	23.74	21.74	0.1493
7	15	40	504000	2520.0	DFT-s-OFDM PI/2 BPSK	1@214	23.86	21.86	0.1535
7	15	40	504000	2520.0	DFT-s-OFDM QPSK	108@54	23.86	21.86	0.1535
7	15	40	504000	2520.0	DFT-s-OFDM QPSK	1@1	23.75	21.75	0.1496
7	15	40	504000	2520.0	DFT-s-OFDM QPSK	1@214	24.06	22.06	0.1607
7	15	40	504000	2520.0	DFT-s-OFDM 16 QAM	108@54	23.03	21.03	0.1268
7	15	40	504000	2520.0	DFT-s-OFDM 16 QAM	1@1	23.01	21.01	0.1262
7	15	40	504000	2520.0	DFT-s-OFDM 16 QAM	1@214	23.1	21.1	0.1288
7	15	40	504000	2520.0	DFT-s-OFDM 64 QAM	108@54	21.45	19.45	0.0881
7	15	40	504000	2520.0	DFT-s-OFDM 64 QAM	1@1	21.43	19.43	0.0877
7	15	40	504000	2520.0	DFT-s-OFDM 64 QAM	1@214	21.7	19.7	0.0933
7	15	40	504000	2520.0	DFT-s-OFDM 256 QAM	108@54	19.44	17.44	0.0555

7	15	40	504000	2520.0	DFT-s-OFDM 256 QAM	1@1	19.18	17.18	0.0522
7	15	40	504000	2520.0	DFT-s-OFDM 256 QAM	1@214	19.4	17.4	0.0550
7	15	40	504000	2520.0	CP-OFDM QPSK	108@54	22.47	20.47	0.1114
7	15	40	504000	2520.0	CP-OFDM QPSK	1@1	22.6	20.6	0.1148
7	15	40	504000	2520.0	CP-OFDM QPSK	1@214	22.54	20.54	0.1132
7	15	40	507000	2535.0	DFT-s-OFDM PI/2 BPSK	108@54	23.92	21.92	0.1556
7	15	40	507000	2535.0	DFT-s-OFDM PI/2 BPSK	1@1	23.86	21.86	0.1535
7	15	40	507000	2535.0	DFT-s-OFDM PI/2 BPSK	1@214	23.89	21.89	0.1545
7	15	40	507000	2535.0	DFT-s-OFDM QPSK	108@54	24.01	22.01	0.1589
7	15	40	507000	2535.0	DFT-s-OFDM QPSK	1@1	24.13	22.13	0.1633
7	15	40	507000	2535.0	DFT-s-OFDM QPSK	1@214	24.12	22.12	0.1629
7	15	40	507000	2535.0	DFT-s-OFDM 16 QAM	108@54	23.14	21.14	0.1300
7	15	40	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	23.2	21.2	0.1318
7	15	40	507000	2535.0	DFT-s-OFDM 16 QAM	1@214	23.08	21.08	0.1282
7	15	40	507000	2535.0	DFT-s-OFDM 64 QAM	108@54	21.5	19.5	0.0891
7	15	40	507000	2535.0	DFT-s-OFDM 64 QAM	1@1	21.69	19.69	0.0931
7	15	40	507000	2535.0	DFT-s-OFDM 64 QAM	1@214	21.67	19.67	0.0927
7	15	40	507000	2535.0	DFT-s-OFDM 256 QAM	108@54	19.5	17.5	0.0562
7	15	40	507000	2535.0	DFT-s-OFDM 256 QAM	1@1	19.3	17.3	0.0537
7	15	40	507000	2535.0	DFT-s-OFDM 256 QAM	1@214	19.29	17.29	0.0536
7	15	40	507000	2535.0	CP-OFDM QPSK	108@54	22.47	20.47	0.1114
7	15	40	507000	2535.0	CP-OFDM QPSK	1@1	22.58	20.58	0.1143
7	15	40	507000	2535.0	CP-OFDM QPSK	1@214	22.51	20.51	0.1125
7	15	40	510000	2550.0	DFT-s-OFDM PI/2 BPSK	108@54	23.9	21.9	0.1549
7	15	40	510000	2550.0	DFT-s-OFDM PI/2 BPSK	1@1	24	22	0.1585
7	15	40	510000	2550.0	DFT-s-OFDM PI/2 BPSK	1@214	23.99	21.99	0.1581
7	15	40	510000	2550.0	DFT-s-OFDM QPSK	108@54	24.07	22.07	0.1611

7	15	40	510000	2550.0	DFT-s-OFDM QPSK	1@1	24.09	22.09	0.1618
7	15	40	510000	2550.0	DFT-s-OFDM QPSK	1@214	24.08	22.08	0.1614
7	15	40	510000	2550.0	DFT-s-OFDM 16 QAM	108@54	23.19	21.19	0.1315
7	15	40	510000	2550.0	DFT-s-OFDM 16 QAM	1@1	23.2	21.2	0.1318
7	15	40	510000	2550.0	DFT-s-OFDM 16 QAM	1@214	23.34	21.34	0.1361
7	15	40	510000	2550.0	DFT-s-OFDM 64 QAM	108@54	21.62	19.62	0.0916
7	15	40	510000	2550.0	DFT-s-OFDM 64 QAM	1@1	21.71	19.71	0.0935
7	15	40	510000	2550.0	DFT-s-OFDM 64 QAM	1@214	21.78	19.78	0.0951
7	15	40	510000	2550.0	DFT-s-OFDM 256 QAM	108@54	19.57	17.57	0.0571
7	15	40	510000	2550.0	DFT-s-OFDM 256 QAM	1@1	19.37	17.37	0.0546
7	15	40	510000	2550.0	DFT-s-OFDM 256 QAM	1@214	19.4	17.4	0.0550
7	15	40	510000	2550.0	CP-OFDM QPSK	108@54	22.55	20.55	0.1135
7	15	40	510000	2550.0	CP-OFDM QPSK	1@1	22.63	20.63	0.1156
7	15	40	510000	2550.0	CP-OFDM QPSK	1@214	22.61	20.61	0.1151

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0046	PASS	NV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0031	PASS	LV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0052	PASS	HV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0039	PASS	-30°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0049	PASS	-20°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0040	PASS	-10°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0037	PASS	0°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0032	PASS	10°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0046	PASS	20°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0045	PASS	30°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0060	PASS	40°C
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0052	PASS	50°C

Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
7	15	20	502000	2510.0	DFT-s-OFDM PI/2 BPSK	100@0	4.28	13	PASS
7	15	20	502000	2510.0	DFT-s-OFDM PI/2 BPSK	1@0	4.27	13	PASS
7	15	20	502000	2510.0	DFT-s-OFDM QPSK	100@0	5.2	13	PASS
7	15	20	502000	2510.0	DFT-s-OFDM QPSK	1@0	5.58	13	PASS
7	15	20	507000	2535.0	DFT-s-OFDM PI/2 BPSK	100@0	4.65	13	PASS
7	15	20	507000	2535.0	DFT-s-OFDM PI/2 BPSK	1@0	4.6	13	PASS
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	5.6	13	PASS
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	1@0	5.67	13	PASS
7	15	20	512000	2560.0	DFT-s-OFDM PI/2 BPSK	100@0	4.47	13	PASS
7	15	20	512000	2560.0	DFT-s-OFDM PI/2 BPSK	1@0	4.49	13	PASS
7	15	20	512000	2560.0	DFT-s-OFDM QPSK	100@0	5.43	13	PASS
7	15	20	512000	2560.0	DFT-s-OFDM QPSK	1@0	5.55	13	PASS

N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



N7(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



N7(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N7(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N7(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N7(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N7(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



N7(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



N7(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N7(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
7	15	5	507000	2535.0	DFT-s-OFDM PI/2 BPSK	25@0	4.4894	4.963
7	15	5	507000	2535.0	DFT-s-OFDM QPSK	25@0	4.4724	5.055
7	15	5	507000	2535.0	CP-OFDM QPSK	25@0	4.4625	4.978
7	15	5	507000	2535.0	CP-OFDM 16 QAM	25@0	4.5023	5.146
7	15	5	507000	2535.0	CP-OFDM 64 QAM	25@0	4.4636	4.914
7	15	5	507000	2535.0	CP-OFDM 256 QAM	25@0	4.4828	5.115
7	15	10	507000	2535.0	DFT-s-OFDM PI/2 BPSK	50@0	8.9047	9.558
7	15	10	507000	2535.0	DFT-s-OFDM QPSK	50@0	8.919	9.675
7	15	10	507000	2535.0	CP-OFDM QPSK	52@0	9.2849	9.976
7	15	10	507000	2535.0	CP-OFDM 16 QAM	52@0	9.286	9.931
7	15	10	507000	2535.0	CP-OFDM 64 QAM	52@0	9.2736	9.911
7	15	10	507000	2535.0	CP-OFDM 256 QAM	52@0	9.2993	9.976
7	15	15	507000	2535.0	DFT-s-OFDM PI/2 BPSK	75@0	13.395	14.29
7	15	15	507000	2535.0	DFT-s-OFDM QPSK	75@0	13.388	14.19
7	15	15	507000	2535.0	CP-OFDM QPSK	79@0	14.096	14.96
7	15	15	507000	2535.0	CP-OFDM 16 QAM	79@0	14.096	14.84
7	15	15	507000	2535.0	CP-OFDM 64 QAM	79@0	14.124	14.93
7	15	15	507000	2535.0	CP-OFDM 256 QAM	79@0	14.086	15.01
7	15	20	507000	2535.0	DFT-s-OFDM PI/2 BPSK	100@0	17.941	18.84
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	17.846	18.81
7	15	20	507000	2535.0	CP-OFDM QPSK	106@0	18.908	19.86
7	15	20	507000	2535.0	CP-OFDM 16 QAM	106@0	18.931	19.83
7	15	20	507000	2535.0	CP-OFDM 64 QAM	106@0	18.912	19.79
7	15	20	507000	2535.0	CP-OFDM 256 QAM	106@0	18.991	19.89
7	15	25	507000	2535.0	DFT-s-OFDM PI/2 BPSK	128@0	22.86	23.98

7	15	25	507000	2535.0	DFT-s-OFDM QPSK	128@0	22.9	23.79
7	15	25	507000	2535.0	CP-OFDM QPSK	133@0	23.711	24.7
7	15	25	507000	2535.0	CP-OFDM 16 QAM	133@0	23.77	24.81
7	15	25	507000	2535.0	CP-OFDM 64 QAM	133@0	23.779	24.73
7	15	25	507000	2535.0	CP-OFDM 256 QAM	133@0	23.748	24.68
7	15	30	507000	2535.0	DFT-s-OFDM PI/2 BPSK	160@0	28.614	29.69
7	15	30	507000	2535.0	DFT-s-OFDM QPSK	160@0	28.519	29.61
7	15	30	507000	2535.0	CP-OFDM QPSK	160@0	28.514	29.65
7	15	30	507000	2535.0	CP-OFDM 16 QAM	160@0	28.583	29.7
7	15	30	507000	2535.0	CP-OFDM 64 QAM	160@0	28.576	29.78
7	15	30	507000	2535.0	CP-OFDM 256 QAM	160@0	28.572	29.61
7	15	40	507000	2535.0	DFT-s-OFDM PI/2 BPSK	216@0	38.619	39.94
7	15	40	507000	2535.0	DFT-s-OFDM QPSK	216@0	38.499	39.89
7	15	40	507000	2535.0	CP-OFDM QPSK	216@0	38.654	39.92
7	15	40	507000	2535.0	CP-OFDM 16 QAM	216@0	38.577	39.95
7	15	40	507000	2535.0	CP-OFDM 64 QAM	216@0	38.608	40.04
7	15	40	507000	2535.0	CP-OFDM 256 QAM	216@0	38.665	39.87