



FCC RF Test Report

APPLICANT : ASUSTeK COMPUTER INC.
EQUIPMENT : ASUS Phone(Mobile Phone)
BRAND NAME : ASUS
MODEL NAME : ASUS_AI2202
FCC ID : MSQAI2202
STANDARD : 47 CFR Part 2, 22, 24, 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : May 30, 2022 ~ Jul. 06, 2022

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.

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

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.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG241808I	Rev. 01	Initial issue of report	Jul. 20, 2022



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(c)(10)	Effective Radiated Power (5G NR n12)	ERP < 3 Watt		
	§24.232(c)	Equivalent Isotropic Radiated Power (5G NR n2, n25)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (5G NR n66)	EIRP < 1Watt		
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(h) §27.53(g)	Conducted Band Edge Measurement (5G NR n5) (5G NR n2, n25) (5G NR n66) (5G NR n12)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(h) §27.53(g)	Conducted Spurious Emission (5G NR n5) (5G NR n2, n25) (5G NR n66) (5G NR n12)	< 43+10log ₁₀ (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(h) §27.53(g)	Radiated Spurious Emission (5G NR n5) (5G NR n2, n25) (5G NR n66) (5G NR n12)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 35.86 dB at 2480.000 MHz

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

ASUSTeK COMPUTER INC.

1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

1.2 Manufacturer

ASUSTeK COMPUTER INC.

1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	ASUS Phone(Mobile Phone)
Brand Name	ASUS
Model Name	ASUS_AI2202
FCC ID	MSQAI2202
IMEI Code	Conducted : 355316920101376 Radiation : 354283690001593/354283690001601
HW Version	AI2202_MB_ER2 R2.0
SW Version	Android R
EUT Stage	Production Unit

Remark: Only 5G NR n2/n5/n12/n25/n66 are tested in this report, all the other RF bands are tested in the other reports separately.

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 n66 : 1710 MHz ~ 1780 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 n66 : 2110 MHz~ 2200 MHz
SCS	15kHz
Bandwidth	n2, n5: 5/10/15/20MHz n12: 5/10/15MHz n25: 5/10/15/20/25/30/40MHz n66: 5/10/15/20/30/40MHz
Antenna Gain	<Ant. 1>: n5: -6.04 dBi n12: -5.47 dBi <Ant. 2>: n2: -3.26 dBi n25: -3.26 dBi n66: -4.71 dBi <Ant. 3>: n5: -4.31 dBi n12: -8.64 dBi <Ant. 4>: n2: -6.66 dBi n25: -6.66 dBi n66: -5.59 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum ERP/EIRP is calculated from max output power and max antenna gain, only the maximum ERP/EIRP of 5G NR n5/n12 of Antenna 1 and 5G NR n2/n25/n66 of Antenna 2 are shown in the report.
2. 5G NR n2/n5 Band supports SA and NSA mode and n12/n25/n66 only supports SA mode for SCS 15kHz. According to the maximum power between SA and NSA mode NSA covers SA mode for n2/n5.
3. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown in the report.
4. The EN-DC mode combination could be referred to the product spec.

1.5 Modification of EUT

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



1.6 Maximum ERP/EIRP Power and Emission Designator

EN DC_5A-n2A		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	0.1202	4M48G7D	0.0986	4M48W7D
10	1855.0 ~ 1905.0	0.1189	9M28G7D	0.1016	9M28W7D
15	1857.5 ~ 1902.5	0.1202	14M1G7D	0.0975	14M1W7D
20	1860.0 ~ 1900.0	0.1208	18M9G7D	0.1005	18M9W7D

EN DC_2A-n5A		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	0.0313	4M48G7D	0.0257	4M50W7D
10	829.0 ~ 844.0	0.0311	9M28G7D	0.0249	9M28W7D
15	831.5 ~ 841.5	0.0324	14M1G7D	0.0267	14M1W7D
20	834.0 ~ 839.0	0.0327	18M9G7D	0.0275	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	0.0373	4M48G7D	0.0312	4M48W7D
10	704.0 ~ 711.0	0.0383	9M27G7D	0.0310	9M27W7D
15	706.5 ~ 708.5	0.0401	14M1G7D	0.0326	14M1W7D

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	0.1117	4M48G7D	0.0929	4M48W7D
10	1855.0 ~ 1910.0	0.1117	9M28G7D	0.0912	9M28W7D
15	1857.5 ~ 1907.5	0.1140	14M1G7D	0.0951	14M1W7D
20	1860.0 ~ 1905.0	0.1159	18M9G7D	0.0942	18M9W7D
25	1862.5 ~ 1902.5	0.1125	23M7G7D	0.0935	23M7W7D
30	1865.0 ~ 1900.0	0.1151	28M6G7D	0.0902	28M6W7D
40	1870.0 ~ 1895.0	0.1213	38M7G7D	0.0998	38M6W7D

5G NR n66		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	1712.5 ~ 1777.5	0.0869	4M49G7D	0.0711	4M49W7D
10	1715.0 ~ 1775.0	0.0889	9M29G7D	0.0719	9M30W7D
15	1717.5 ~ 1772.5	0.0877	14M1G7D	0.0697	14M1W7D
20	1720.0 ~ 1770.0	0.0871	18M9G7D	0.0718	19M0W7D
30	1725.0 ~ 1765.0	0.0871	28M6G7D	0.0719	28M6W7D
40	1730.0 ~ 1760.0	0.0897	38M6G7D	0.0724	38M6W7D

Note:

1. All modulations have been tested, only the worst test results of PSK & QAM are shown in the report.
2. 5GNR Band n25 overlaps the entire frequency range of 5GNR Band n2. Therefore, the test results provided in this report covers n25 as well as n2.

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

Note: Test data subcontracted: Conducted test cases in section 4.4 of this report



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

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a

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, 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 were recorded in this report.(X/Y-Plane)

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.

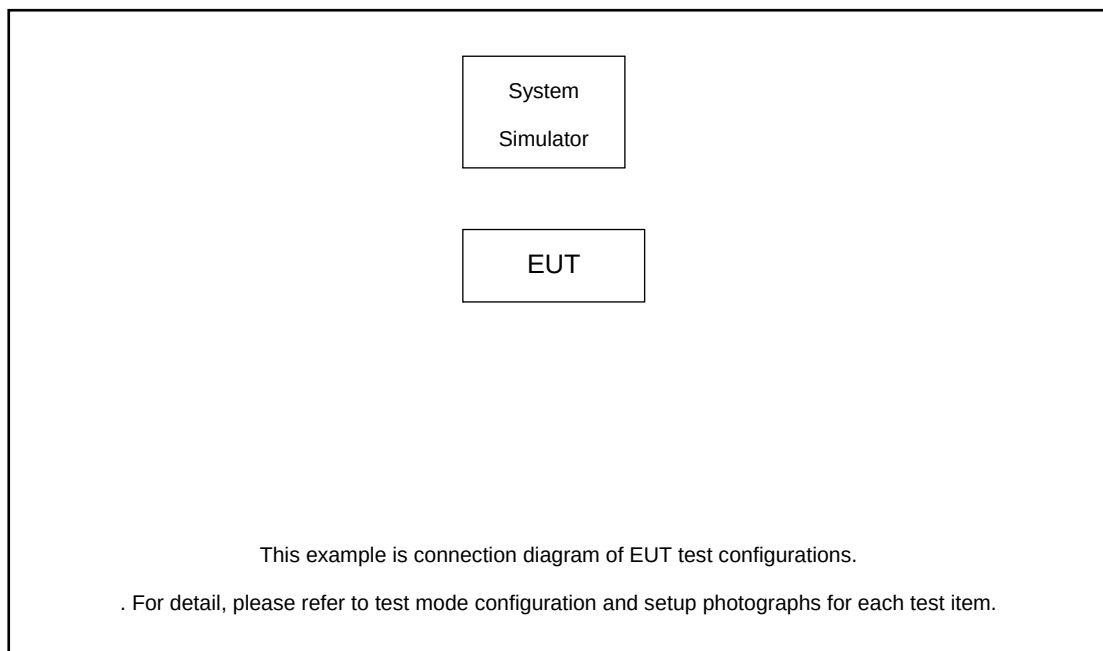
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

Test Items	5G NR	Bandwidth (MHz)							Modulation					RB #		Test Channel		
		5	10	15	20	25	30	40	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
	n5	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
	n66	v	v	v	v	-	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to- Average Ratio	n25				v				v	v				v	v	v	v	v
	n5				v	-	-	-	v	v				v	v	v	v	v
	n12		v		-	-	-	-	v	v				v	v	v	v	v
	n66				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	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H
26dB and 99% Bandwidth	n25	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	
	n12	v	v	v	-	-	-	-	v	v	v	v	v		v		v	
	n66	v	v	v	v	-	v	v	v	v	v	v	v		v		v	
Conducted Band Edge	n25	v			v			v	v	v				v	v	v		v
	n5	v	v		v	-	-	-	v	v				v	v	v		v
	n12	v	v	v	-	-	-	-	v	v				v	v	v		v
	n66	v			v			v	v	v				v	v	v		v
Conducted Spurious Emission	n25	v			v			v	v	v				v		v	v	v
	n5	v	v		v	-	-	-	v	v				v		v	v	v
	n12	v	v	v	-	-	-	-	v	v				v		v	v	v
	n66	v			v			v	v	v				v		v	v	v
Frequency Stability	n25				v					v					v		v	
	n5				v	-	-	-		v					v		v	
	n12			v	-	-	-	-		v					v		v	
	n66				v					v					v		v	
E.R.P / E.I.R.P	n2	v	v	v	v	-	-	-	v	v	v	v	v	v	v	v	v	v
	n5	v	v	v	v	-	-	-	v	v	v	v	v	v	v	v	v	v
	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
	n66	v	v	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
	n66	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. Based on engineering evaluation, only the worst modulation test results are shown in the report. 5. 5GNR Band n25 overlaps the entire frequency range of 5GNR Band n2. Therefore, the test results provided in this report covers n25 as well as n2. 6. Frequency Stability : Normal Voltage = 3.89V ; Low Voltage =3.65V ; High Voltage =4.35V																	

2.2 Connection Diagram of Test System



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.	Base Station	Anritsu	MT8820/8821	N/A	N/A	Unshielded,1.8m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 8.6 dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 8.6 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

5G NR n2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	388000	392000	396000
	Frequency	1860	1880	1900
15	Channel	387500	392000	396500
	Frequency	1857.5	1880	1902.5
10	Channel	387000	392000	397000
	Frequency	1855	1880	1905
5	Channel	386500	392000	397500
	Frequency	1852.5	1880	1907.5

5G NR n5 Channel and Frequency List				
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 n12 Channel and Frequency List -SCS 15k				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	147300	147500	147700
	Frequency	706.5	707.5	708.5
10	Channel	146800	147500	148200
	Frequency	704	707.5	711
5	Channel	146300	147500	148700
	Frequency	701.5	707.5	713.5



5G NR n25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	390000	392500	395000
	Frequency	1870	1882.5	1895
30	Channel	389000	392500	396000
	Frequency	1865	1882.5	1900
25	Channel	388500	392500	396500
	Frequency	1862.5	1882.5	1902.5
20	Channel	388000	392500	397000
	Frequency	1860	1882.5	1905
15	Channel	387500	392500	397500
	Frequency	1857.5	1882.5	1907.5
10	Channel	387000	392500	398000
	Frequency	1855	1882.5	1910
5	Channel	386500	392500	398500
	Frequency	1852.5	1882.5	1912.5

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	426000	429000	432000
	Frequency	1730	1745	1760
30	Channel	425000	429000	433000
	Frequency	1725	1745	1765
20	Channel	424000	429000	434000
	Frequency	1720	1745	1770
15	Channel	423500	429000	434500
	Frequency	1717.5	1745	1772.5
10	Channel	423000	429000	435000
	Frequency	1715	1745	1775
5	Channel	422500	429000	435500
	Frequency	1712.5	1745	1777.5

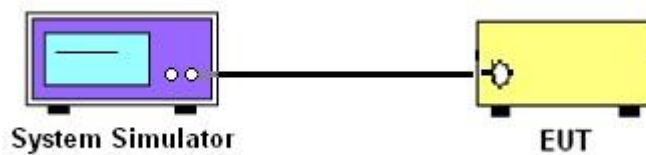
3 Conducted Test Items

3.1 Measuring Instruments

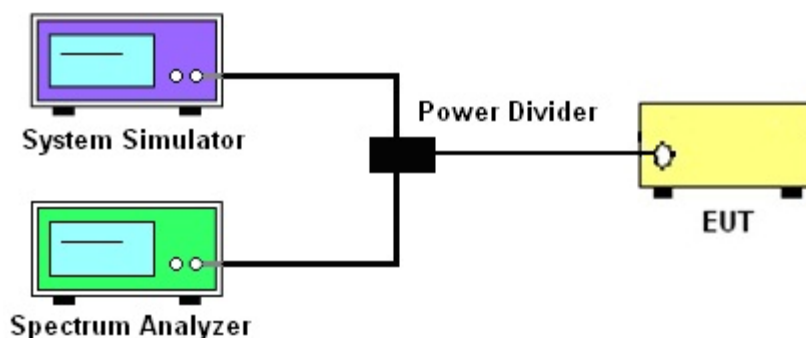
See list of measuring instruments of this test report.

3.2 Test Setup

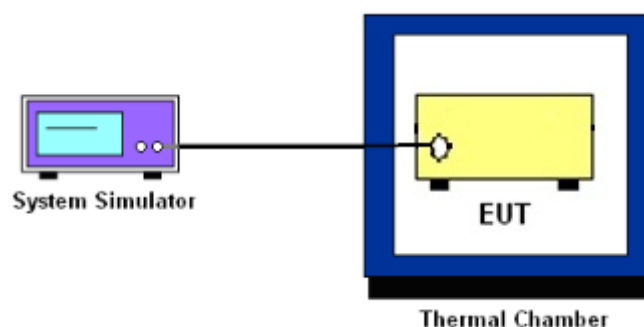
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

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

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

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

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

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

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

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 Test Procedures

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

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

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

3.5.2 Test Procedures

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

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 Test Procedures

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



3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

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

27.53 (h)

For operations in the 1710 – 1755 and 1710 – 1780 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ 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 $\geq$ 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.
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. 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 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)
 $= -13$ dBm.

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.

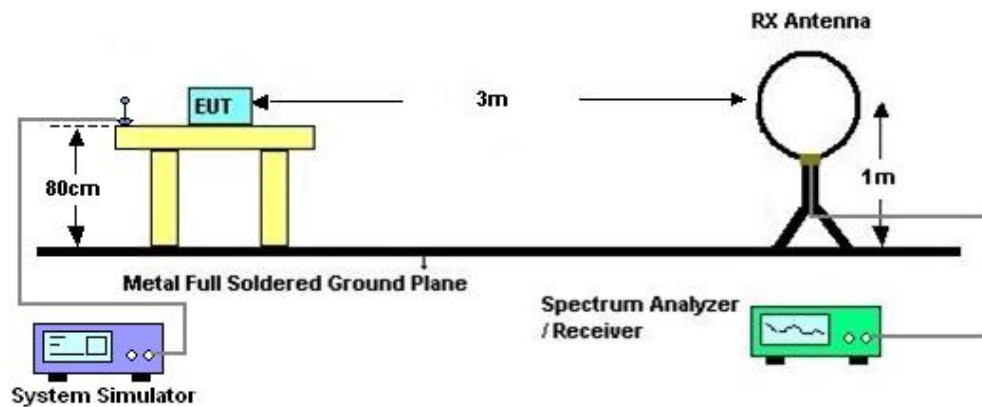
4 Radiated Test Items

4.1 Measuring Instruments

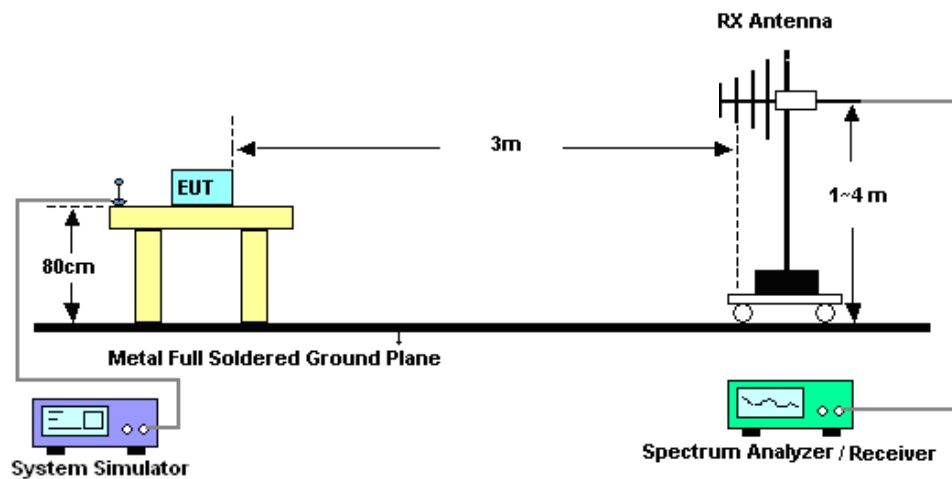
See list of measuring instruments of this test report.

4.2 Test Setup

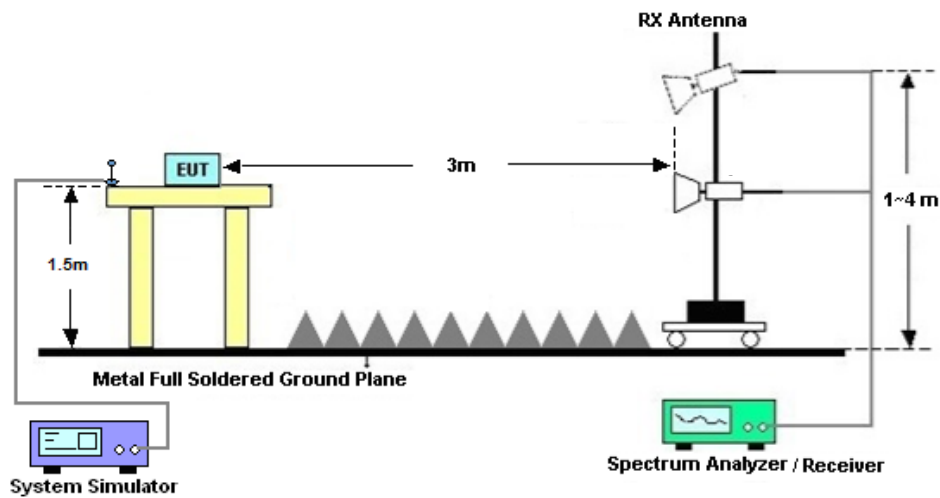
4.2.1 For radiated test below 30MHz



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.

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. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
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)

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

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

$$= -13\text{dBm}.$$



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. 27, 2021	Jun. 07, 2022~Jul. 06, 2022	Dec. 26, 2022	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2021	Jun. 07, 2022~Jul. 06, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Jun. 07, 2022~Jul. 06, 2022	Jul. 13, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2022	May 30, 2022	Apr. 12, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	May 30, 2022	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 24, 2022	May 30, 2022	May 23, 2023	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 18, 2022	May 30, 2022	Apr. 17, 2023	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	May 30, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 05, 2022	May 30, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2022	May 30, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Jul. 30, 2021	May 30, 2022	Jul. 29, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 13, 2021	May 30, 2022	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 30, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 30, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 30, 2022	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	0.012MHz
Conducted Power Spectral Density	1.32 dB
Frequency tolerance	1.30 ppm

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 Guo	Temperature :	24~26°C
		Relative Humidity :	50~53%

FR1 N2+5A(Ant2+1_Max Conducted Power)

Transmitter Conducted Output Power And EIRP, ($G_T - L_C$)= -3.26dBi

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
2	15	5	386500	1852.5	DFT-s-OFDM QPSK	1@1	24.01	20.75	0.1189
2	15	5	386500	1852.5	DFT-s-OFDM 16 QAM	1@1	23.07	19.81	0.0957
2	15	5	392000	1880	DFT-s-OFDM QPSK	1@1	23.72	20.46	0.1112
2	15	5	392000	1880	DFT-s-OFDM 16 QAM	1@1	22.87	19.61	0.0914
2	15	5	397500	1907.5	DFT-s-OFDM QPSK	1@1	24.06	20.8	0.1202
2	15	5	397500	1907.5	DFT-s-OFDM 16 QAM	1@1	23.2	19.94	0.0986
2	15	10	387000	1855	DFT-s-OFDM QPSK	1@1	23.98	20.72	0.1180
2	15	10	387000	1855	DFT-s-OFDM 16 QAM	1@1	23	19.74	0.0942
2	15	10	392000	1880	DFT-s-OFDM QPSK	1@1	23.69	20.43	0.1104
2	15	10	392000	1880	DFT-s-OFDM 16 QAM	1@1	22.88	19.62	0.0916
2	15	10	397000	1905	DFT-s-OFDM QPSK	1@1	24.01	20.75	0.1189
2	15	10	397000	1905	DFT-s-OFDM 16 QAM	1@1	23.33	20.07	0.1016
2	15	15	387500	1857.5	DFT-s-OFDM QPSK	1@1	24.06	20.8	0.1202
2	15	15	387500	1857.5	DFT-s-OFDM 16 QAM	1@1	23.14	19.88	0.0973
2	15	15	392000	1880	DFT-s-OFDM QPSK	1@1	23.8	20.54	0.1132
2	15	15	392000	1880	DFT-s-OFDM 16 QAM	1@1	23.04	19.78	0.0951
2	15	15	396500	1902.5	DFT-s-OFDM QPSK	1@1	23.91	20.65	0.1161
2	15	15	396500	1902.5	DFT-s-OFDM 16 QAM	1@1	23.15	19.89	0.0975

2	15	20	388000	1860	DFT-s-OFDM PI/2 BPSK	50@25	23.91	20.65	0.1161
2	15	20	388000	1860	DFT-s-OFDM PI/2 BPSK	1@1	24.01	20.75	0.1189
2	15	20	388000	1860	DFT-s-OFDM PI/2 BPSK	1@104	23.97	20.71	0.1178
2	15	20	388000	1860	DFT-s-OFDM QPSK	50@25	23.88	20.62	0.1153
2	15	20	388000	1860	DFT-s-OFDM QPSK	1@1	24.05	20.79	0.1199
2	15	20	388000	1860	DFT-s-OFDM QPSK	1@104	23.88	20.62	0.1153
2	15	20	388000	1860	DFT-s-OFDM 16 QAM	50@25	23.02	19.76	0.0946
2	15	20	388000	1860	DFT-s-OFDM 16 QAM	1@1	23.12	19.86	0.0968
2	15	20	388000	1860	DFT-s-OFDM 16 QAM	1@104	23.15	19.89	0.0975
2	15	20	388000	1860	DFT-s-OFDM 64 QAM	50@25	21.55	18.29	0.0675
2	15	20	388000	1860	DFT-s-OFDM 64 QAM	1@1	21.73	18.47	0.0703
2	15	20	388000	1860	DFT-s-OFDM 64 QAM	1@104	21.73	18.47	0.0703
2	15	20	388000	1860	DFT-s-OFDM 256 QAM	50@25	19.47	16.21	0.0418
2	15	20	388000	1860	DFT-s-OFDM 256 QAM	1@1	19.07	15.81	0.0381
2	15	20	388000	1860	DFT-s-OFDM 256 QAM	1@104	18.8	15.54	0.0358
2	15	20	388000	1860	CP-OFDM QPSK	53@26	22.54	19.28	0.0847
2	15	20	388000	1860	CP-OFDM QPSK	1@1	22.62	19.36	0.0863
2	15	20	388000	1860	CP-OFDM QPSK	1@104	22.42	19.16	0.0824
2	15	20	392000	1880	DFT-s-OFDM PI/2 BPSK	50@25	23.77	20.51	0.1125
2	15	20	392000	1880	DFT-s-OFDM PI/2 BPSK	1@1	23.88	20.62	0.1153
2	15	20	392000	1880	DFT-s-OFDM PI/2 BPSK	1@104	23.92	20.66	0.1164
2	15	20	392000	1880	DFT-s-OFDM	50@25	23.78	20.52	0.1127

QPSK									
2	15	20	392000	1880	DFT-s-OFDM QPSK	1@1	23.86	20.6	0.1148
2	15	20	392000	1880	DFT-s-OFDM QPSK	1@104	23.93	20.67	0.1167
2	15	20	392000	1880	DFT-s-OFDM 16 QAM	50@25	22.87	19.61	0.0914
2	15	20	392000	1880	DFT-s-OFDM 16 QAM	1@1	23	19.74	0.0942
2	15	20	392000	1880	DFT-s-OFDM 16 QAM	1@104	23.09	19.83	0.0962
2	15	20	392000	1880	DFT-s-OFDM 64 QAM	50@25	21.39	18.13	0.0650
2	15	20	392000	1880	DFT-s-OFDM 64 QAM	1@1	21.79	18.53	0.0713
2	15	20	392000	1880	DFT-s-OFDM 64 QAM	1@104	21.84	18.58	0.0721
2	15	20	392000	1880	DFT-s-OFDM 256 QAM	50@25	19.37	16.11	0.0408
2	15	20	392000	1880	DFT-s-OFDM 256 QAM	1@1	18.8	15.54	0.0358
2	15	20	392000	1880	DFT-s-OFDM 256 QAM	1@104	18.85	15.59	0.0362
2	15	20	392000	1880	CP-OFDM QPSK	53@26	22.37	19.11	0.0815
2	15	20	392000	1880	CP-OFDM QPSK	1@1	22.48	19.22	0.0836
2	15	20	392000	1880	CP-OFDM QPSK	1@104	22.51	19.25	0.0841
2	15	20	396000	1900	DFT-s-OFDM PI/2 BPSK	50@25	24.05	20.79	0.1199
2	15	20	396000	1900	DFT-s-OFDM PI/2 BPSK	1@1	23.88	20.62	0.1153
2	15	20	396000	1900	DFT-s-OFDM PI/2 BPSK	1@104	23.92	20.66	0.1164
2	15	20	396000	1900	DFT-s-OFDM QPSK	50@25	24.08	20.82	0.1208
2	15	20	396000	1900	DFT-s-OFDM QPSK	1@1	23.95	20.69	0.1172
2	15	20	396000	1900	DFT-s-OFDM QPSK	1@104	23.82	20.56	0.1138
2	15	20	396000	1900	DFT-s-OFDM 16 QAM	50@25	23.11	19.85	0.0966

2	15	20	396000	1900	DFT-s-OFDM 16 QAM	1@1	22.98	19.72	0.0938
2	15	20	396000	1900	DFT-s-OFDM 16 QAM	1@104	23.28	20.02	0.1005
2	15	20	396000	1900	DFT-s-OFDM 64 QAM	50@25	21.59	18.33	0.0681
2	15	20	396000	1900	DFT-s-OFDM 64 QAM	1@1	21.47	18.21	0.0662
2	15	20	396000	1900	DFT-s-OFDM 64 QAM	1@104	22.04	18.78	0.0755
2	15	20	396000	1900	DFT-s-OFDM 256 QAM	50@25	19.51	16.25	0.0422
2	15	20	396000	1900	DFT-s-OFDM 256 QAM	1@1	18.99	15.73	0.0374
2	15	20	396000	1900	DFT-s-OFDM 256 QAM	1@104	19.25	15.99	0.0397
2	15	20	396000	1900	CP-OFDM QPSK	53@26	22.58	19.32	0.0855
2	15	20	396000	1900	CP-OFDM QPSK	1@1	22.47	19.21	0.0834
2	15	20	396000	1900	CP-OFDM QPSK	1@104	22.84	19.58	0.0908

FR1 N5(Ant1+2_Max Conducted Power)

LTE Band: 2, LTE BW: 10M, LTE ARFCN: Mid

Transmitter Conducted Output Power And EIRP, ($G_T - L_C$)= -6.04dBi

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	ERP(dBm)	ERP(W)
5	15	5	174300	826.5	DFT-s-OFDM QPSK	1@1	23.15	14.96	0.0313
5	15	5	174300	826.5	DFT-s-OFDM 16 QAM	1@1	22.29	14.1	0.0257
5	15	5	176300	836.5	DFT-s-OFDM QPSK	1@1	22.99	14.8	0.0302
5	15	5	176300	836.5	DFT-s-OFDM 16 QAM	1@1	21.98	13.79	0.0239
5	15	5	178300	846.5	DFT-s-OFDM QPSK	1@1	22.98	14.79	0.0301
5	15	5	178300	846.5	DFT-s-OFDM 16 QAM	1@1	22	13.81	0.0240
5	15	10	174800	829	DFT-s-OFDM QPSK	1@1	23.12	14.93	0.0311
5	15	10	174800	829	DFT-s-OFDM 16 QAM	1@1	22.16	13.97	0.0249
5	15	10	176300	836.5	DFT-s-OFDM QPSK	1@1	22.94	14.75	0.0299
5	15	10	176300	836.5	DFT-s-OFDM 16 QAM	1@1	22.02	13.83	0.0242
5	15	10	177800	844	DFT-s-OFDM QPSK	1@1	22.89	14.7	0.0295
5	15	10	177800	844	DFT-s-OFDM 16 QAM	1@1	21.9	13.71	0.0235
5	15	15	175300	831.5	DFT-s-OFDM QPSK	1@1	23.26	15.07	0.0321
5	15	15	175300	831.5	DFT-s-OFDM 16 QAM	1@1	22.45	14.26	0.0267
5	15	15	176300	836.5	DFT-s-OFDM QPSK	1@1	23.3	15.11	0.0324
5	15	15	176300	836.5	DFT-s-OFDM 16 QAM	1@1	22.37	14.18	0.0262
5	15	15	177300	841.5	DFT-s-OFDM QPSK	1@1	23.2	15.01	0.0317
5	15	15	177300	841.5	DFT-s-OFDM 16 QAM	1@1	22.18	13.99	0.0251

5	15	20	175800	834	DFT-s-OFDM PI/2 BPSK	50@25	23.22	15.03	0.0318
5	15	20	175800	834	DFT-s-OFDM PI/2 BPSK	1@1	23.23	15.04	0.0319
5	15	20	175800	834	DFT-s-OFDM PI/2 BPSK	1@104	23.12	14.93	0.0311
5	15	20	175800	834	DFT-s-OFDM QPSK	50@25	23.17	14.98	0.0315
5	15	20	175800	834	DFT-s-OFDM QPSK	1@1	23.34	15.15	0.0327
5	15	20	175800	834	DFT-s-OFDM QPSK	1@104	23.05	14.86	0.0306
5	15	20	175800	834	DFT-s-OFDM 16 QAM	50@25	22.31	14.12	0.0258
5	15	20	175800	834	DFT-s-OFDM 16 QAM	1@1	22.5	14.31	0.0270
5	15	20	175800	834	DFT-s-OFDM 16 QAM	1@104	22.16	13.97	0.0249
5	15	20	175800	834	DFT-s-OFDM 64 QAM	50@25	20.85	12.66	0.0185
5	15	20	175800	834	DFT-s-OFDM 64 QAM	1@1	21.46	13.27	0.0212
5	15	20	175800	834	DFT-s-OFDM 64 QAM	1@104	22.52	14.33	0.0271
5	15	20	175800	834	DFT-s-OFDM 256 QAM	50@25	18.78	10.59	0.0115
5	15	20	175800	834	DFT-s-OFDM 256 QAM	1@1	18.05	9.86	0.0097
5	15	20	175800	834	DFT-s-OFDM 256 QAM	1@104	18.17	9.98	0.0100
5	15	20	175800	834	CP-OFDM QPSK	53@26	21.79	13.6	0.0229
5	15	20	175800	834	CP-OFDM QPSK	1@1	21.97	13.78	0.0239
5	15	20	175800	834	CP-OFDM QPSK	1@104	21.68	13.49	0.0223
5	15	20	176300	836.5	DFT-s-OFDM PI/2 BPSK	50@25	23.22	15.03	0.0318
5	15	20	176300	836.5	DFT-s-OFDM PI/2 BPSK	1@1	23.12	14.93	0.0311
5	15	20	176300	836.5	DFT-s-OFDM PI/2 BPSK	1@104	23.29	15.1	0.0324
5	15	20	176300	836.5	DFT-s-OFDM QPSK	50@25	23.22	15.03	0.0318
5	15	20	176300	836.5	DFT-s-OFDM QPSK	1@1	23.26	15.07	0.0321
5	15	20	176300	836.5	DFT-s-	1@104	23.31	15.12	0.0325

					OFDM QPSK				
5	15	20	176300	836.5	DFT-s- OFDM 16 QAM	50@25	22.51	14.32	0.0270
5	15	20	176300	836.5	DFT-s- OFDM 16 QAM	1@1	22.32	14.13	0.0259
5	15	20	176300	836.5	DFT-s- OFDM 16 QAM	1@104	22.35	14.16	0.0261
5	15	20	176300	836.5	DFT-s- OFDM 64 QAM	50@25	21.92	13.73	0.0236
5	15	20	176300	836.5	DFT-s- OFDM 64 QAM	1@1	21.68	13.49	0.0223
5	15	20	176300	836.5	DFT-s- OFDM 64 QAM	1@104	22.58	14.39	0.0275
5	15	20	176300	836.5	DFT-s- OFDM 256 QAM	50@25	18.82	10.63	0.0116
5	15	20	176300	836.5	DFT-s- OFDM 256 QAM	1@1	18.28	10.09	0.0102
5	15	20	176300	836.5	DFT-s- OFDM 256 QAM	1@104	18.17	9.98	0.0100
5	15	20	176300	836.5	CP-OFDM QPSK	53@26	21.8	13.61	0.0230
5	15	20	176300	836.5	CP-OFDM QPSK	1@1	21.89	13.7	0.0234
5	15	20	176300	836.5	CP-OFDM QPSK	1@104	21.64	13.45	0.0221
5	15	20	176800	839	DFT-s- OFDM PI/2 BPSK	50@25	23.16	14.97	0.0314
5	15	20	176800	839	DFT-s- OFDM PI/2 BPSK	1@1	23.22	15.03	0.0318
5	15	20	176800	839	DFT-s- OFDM PI/2 BPSK	1@104	23.09	14.9	0.0309
5	15	20	176800	839	DFT-s- OFDM QPSK	50@25	23.18	14.99	0.0316
5	15	20	176800	839	DFT-s- OFDM QPSK	1@1	23.2	15.01	0.0317
5	15	20	176800	839	DFT-s- OFDM QPSK	1@104	23.14	14.95	0.0313
5	15	20	176800	839	DFT-s- OFDM 16 QAM	50@25	22.32	14.13	0.0259
5	15	20	176800	839	DFT-s- OFDM 16 QAM	1@1	22.34	14.15	0.0260
5	15	20	176800	839	DFT-s- OFDM 16 QAM	1@104	22.2	14.01	0.0252
5	15	20	176800	839	DFT-s- OFDM 64 QAM	50@25	20.83	12.64	0.0184
5	15	20	176800	839	DFT-s- OFDM 64 QAM	1@1	21.04	12.85	0.0193

QAM									
5	15	20	176800	839	DFT-s-OFDM 64 QAM	1@104	20.85	12.66	0.0185
5	15	20	176800	839	DFT-s-OFDM 256 QAM	50@25	18.78	10.59	0.0115
5	15	20	176800	839	DFT-s-OFDM 256 QAM	1@1	18.25	10.06	0.0101
5	15	20	176800	839	DFT-s-OFDM 256 QAM	1@104	18.18	9.99	0.0100
5	15	20	176800	839	CP-OFDM QPSK	53@26	21.75	13.56	0.0227
5	15	20	176800	839	CP-OFDM QPSK	1@1	21.8	13.61	0.0230
5	15	20	176800	839	CP-OFDM QPSK	1@104	21.7	13.51	0.0224

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00013	PASS	NV
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00221	PASS	LV
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00455	PASS	HV
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00286	PASS	-30°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00401	PASS	-20°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00484	PASS	-10°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00396	PASS	0°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00495	PASS	10°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00015	PASS	20°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00613	PASS	30°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00228	PASS	40°C
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	0.00237	PASS	50°C

Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
5	15	20	175800	834.0	DFT-s-OFDM PI/2 BPSK	100@0	3.97	13	PASS
5	15	20	175800	834.0	DFT-s-OFDM PI/2 BPSK	1@0	3.48	13	PASS
5	15	20	175800	834.0	DFT-s-OFDM QPSK	100@0	5.48	13	PASS
5	15	20	175800	834.0	DFT-s-OFDM QPSK	1@0	5.72	13	PASS
5	15	20	176300	836.5	DFT-s-OFDM PI/2 BPSK	100@0	4.03	13	PASS
5	15	20	176300	836.5	DFT-s-OFDM PI/2 BPSK	1@0	3.58	13	PASS
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	5.6	13	PASS
5	15	20	176300	836.5	DFT-s-OFDM QPSK	1@0	5.84	13	PASS
5	15	20	176800	839.0	DFT-s-OFDM PI/2 BPSK	100@0	4.03	13	PASS
5	15	20	176800	839.0	DFT-s-OFDM PI/2 BPSK	1@0	3.56	13	PASS
5	15	20	176800	839.0	DFT-s-OFDM QPSK	100@0	5.71	13	PASS
5	15	20	176800	839.0	DFT-s-OFDM QPSK	1@0	5.95	13	PASS

B2_N5(20M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Low_CH



B2_N5(20M)_DFT-s-OFDM_PI_2-
BPSK_Edge_1RB_Left_Low_CH



B2_N5(20M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH



B2_N5(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



B2_N5(20M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



B2_N5(20M)_DFT-s-OFDM_PI_2-
BPSK_Edge_1RB_Left_Mid_CH



B2_N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



B2_N5(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



B2_N5(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



B2_N5(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



B2_N5(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



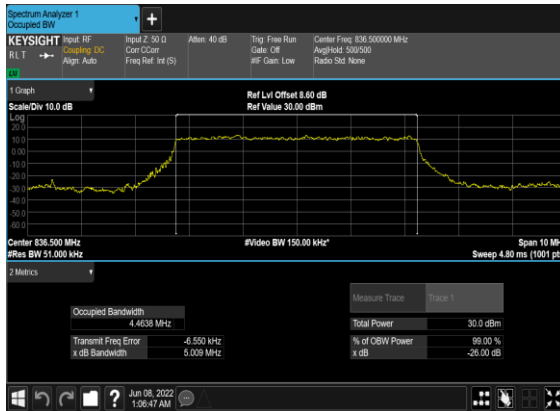
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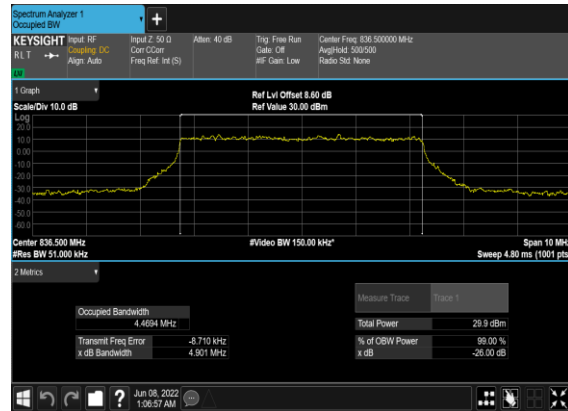
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
5	15	5	176300	836.5	DFT-s-OFDM PI/2 BPSK	25@0	4.4638	5.009
5	15	5	176300	836.5	DFT-s-OFDM QPSK	25@0	4.4694	4.901
5	15	5	176300	836.5	CP-OFDM QPSK	25@0	4.4792	5.162
5	15	5	176300	836.5	CP-OFDM 16 QAM	25@0	4.4992	5.154
5	15	5	176300	836.5	CP-OFDM 64 QAM	25@0	4.485	5.135
5	15	5	176300	836.5	CP-OFDM 256 QAM	25@0	4.4708	5.095
5	15	10	176300	836.5	DFT-s-OFDM PI/2 BPSK	50@0	8.8871	9.608
5	15	10	176300	836.5	DFT-s-OFDM QPSK	50@0	8.9044	9.689
5	15	10	176300	836.5	CP-OFDM QPSK	52@0	9.2759	10.06
5	15	10	176300	836.5	CP-OFDM 16 QAM	52@0	9.263	10.06
5	15	10	176300	836.5	CP-OFDM 64 QAM	52@0	9.2552	9.894
5	15	10	176300	836.5	CP-OFDM 256 QAM	52@0	9.2801	10.06
5	15	15	176300	836.5	DFT-s-OFDM PI/2 BPSK	75@0	13.359	14.23
5	15	15	176300	836.5	DFT-s-OFDM QPSK	75@0	13.379	14.17
5	15	15	176300	836.5	CP-OFDM QPSK	79@0	14.068	14.99
5	15	15	176300	836.5	CP-OFDM 16 QAM	79@0	14.097	15.0
5	15	15	176300	836.5	CP-OFDM 64 QAM	79@0	14.114	15.01
5	15	15	176300	836.5	CP-OFDM 256 QAM	79@0	14.05	14.89
5	15	20	176300	836.5	DFT-s-OFDM PI/2 BPSK	100@0	17.826	18.8
5	15	20	176300	836.5	DFT-s-OFDM QPSK	100@0	17.818	18.77
5	15	20	176300	836.5	CP-OFDM QPSK	106@0	18.85	19.93
5	15	20	176300	836.5	CP-OFDM 16 QAM	106@0	18.878	19.9
5	15	20	176300	836.5	CP-OFDM 64 QAM	106@0	18.88	19.79
5	15	20	176300	836.5	CP-OFDM 256 QAM	106@0	18.926	19.88

B2_N5(5M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



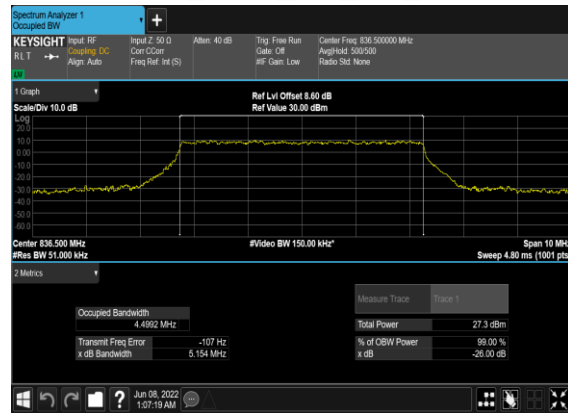
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OFDM_QPSK_Outer_Full_Mid_CH



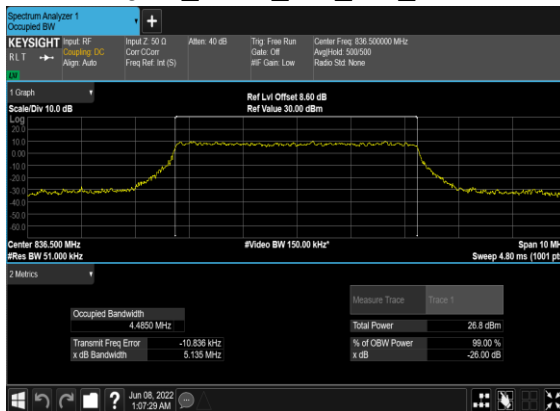
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OFDM_QPSK_Outer_Full_Mid_CH



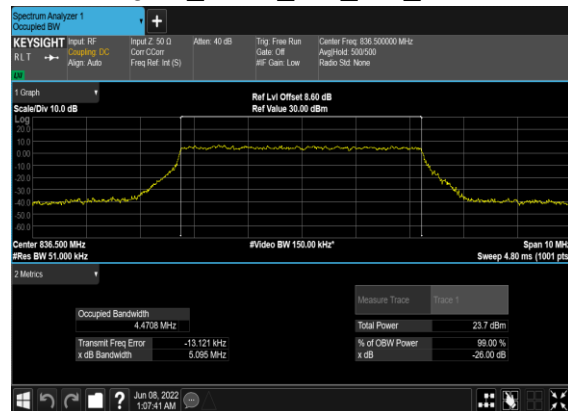
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QAM_Outer_Full_Mid_CH



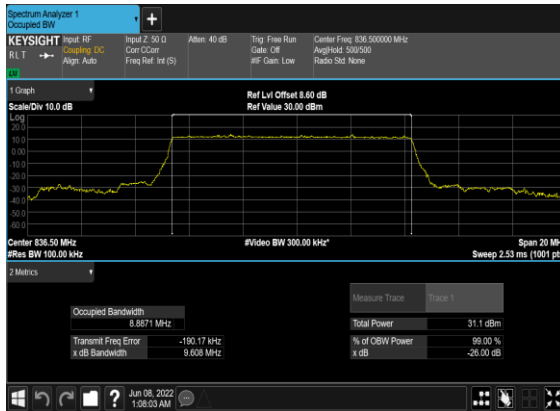
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QAM_Outer_Full_Mid_CH



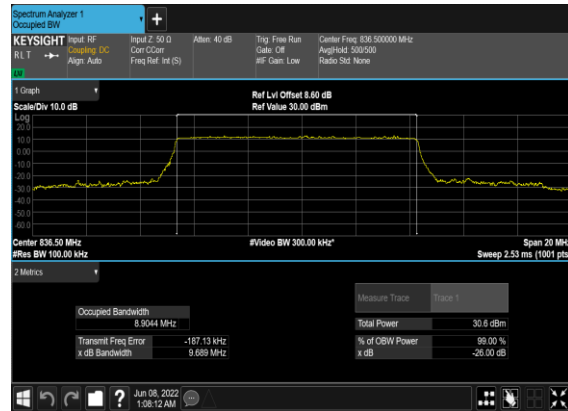
B2_N5(5M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



B2_N5(10M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



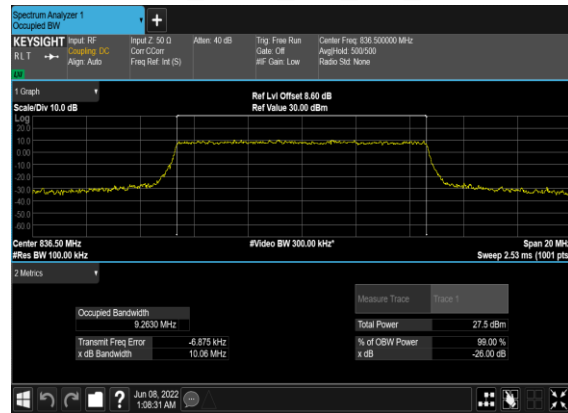
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OFDM_QPSK_Outer_Full_Mid_CH



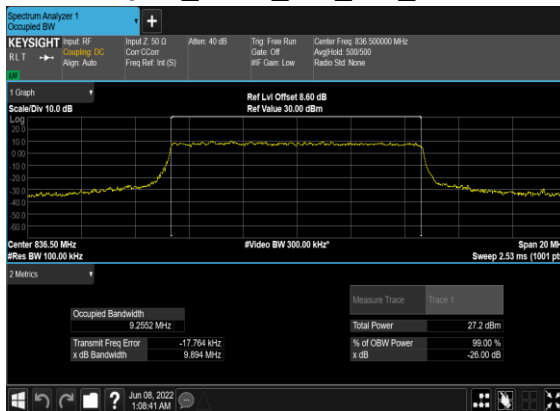
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OFDM_QPSK_Outer_Full_Mid_CH



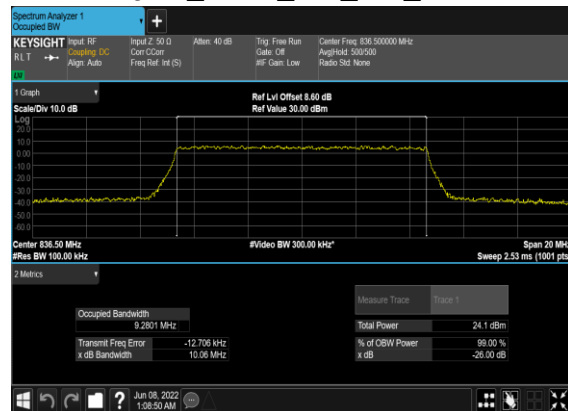
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QAM_Outer_Full_Mid_CH



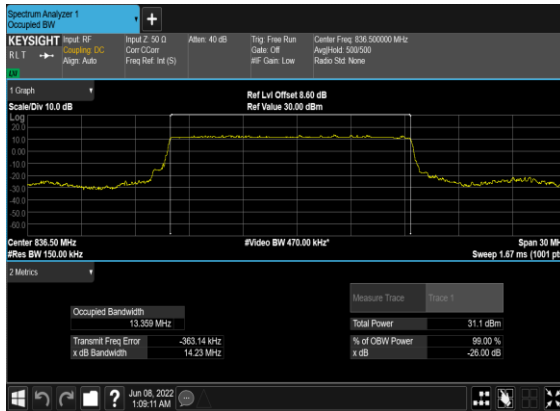
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QAM_Outer_Full_Mid_CH



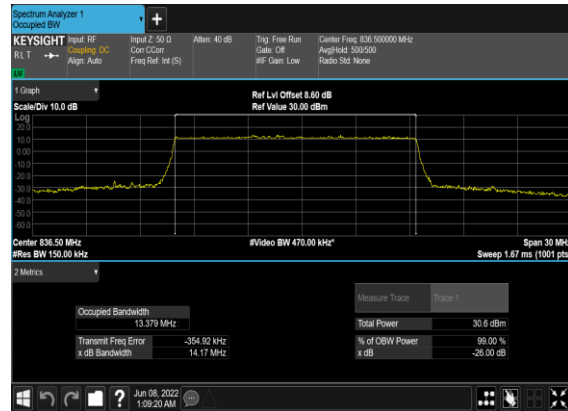
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QAM_Outer_Full_Mid_CH



B2_N5(15M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



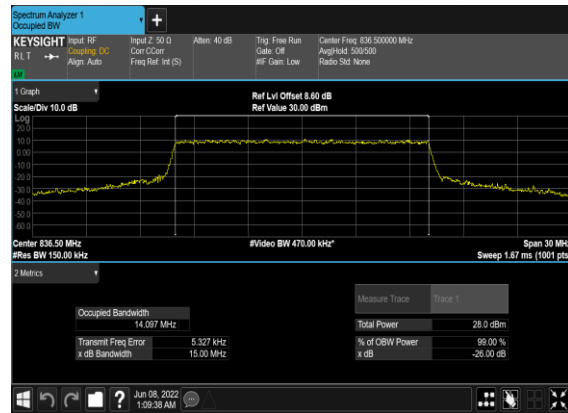
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OFDM_QPSK_Outer_Full_Mid_CH



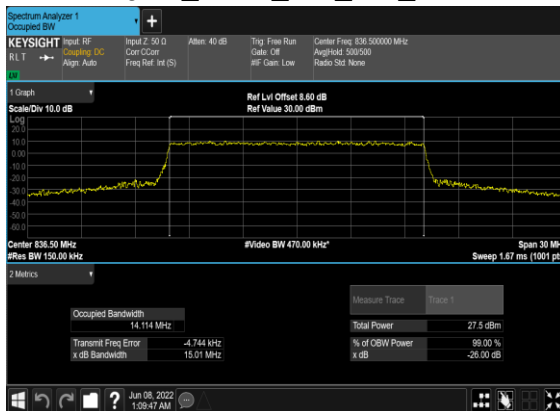
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OFDM_QPSK_Outer_Full_Mid_CH



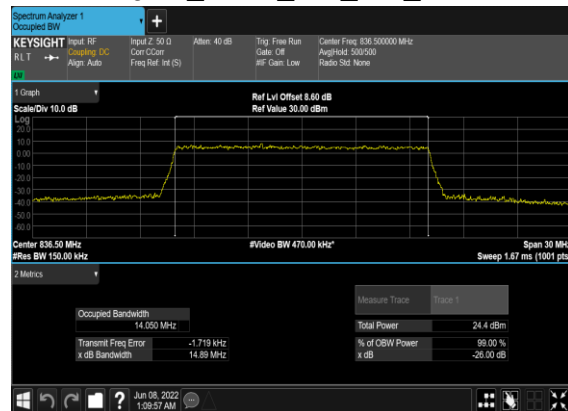
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QAM_Outer_Full_Mid_CH



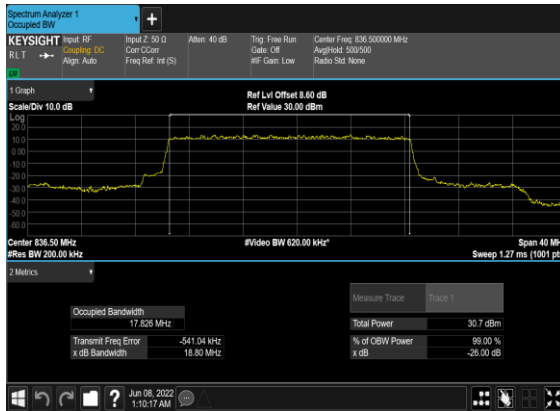
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QAM_Outer_Full_Mid_CH



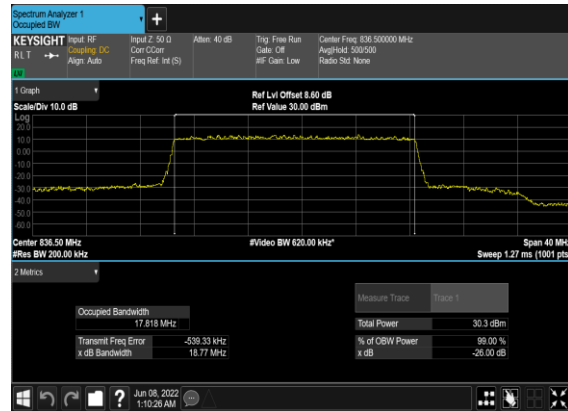
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QAM_Outer_Full_Mid_CH



B2_N5(20M)_DFT-s-OFDM_PI_2-
BPSK_Outer_Full_Mid_CH



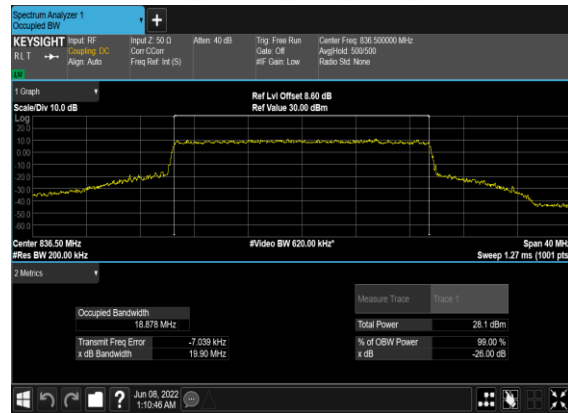
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OFDM_QPSK_Outer_Full_Mid_CH



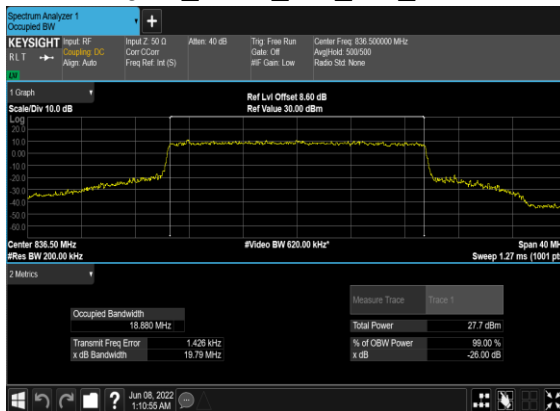
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OFDM_QPSK_Outer_Full_Mid_CH



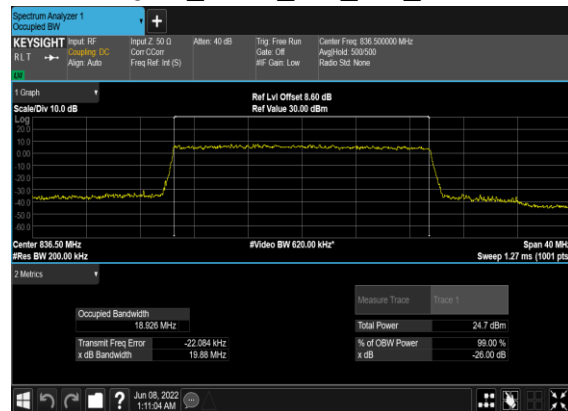
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QAM_Outer_Full_Mid_CH



B2_N5(20M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



B2_N5(20M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

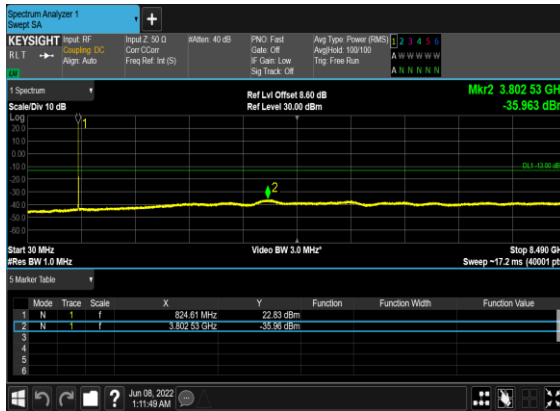


Conducted Spurious Emissions

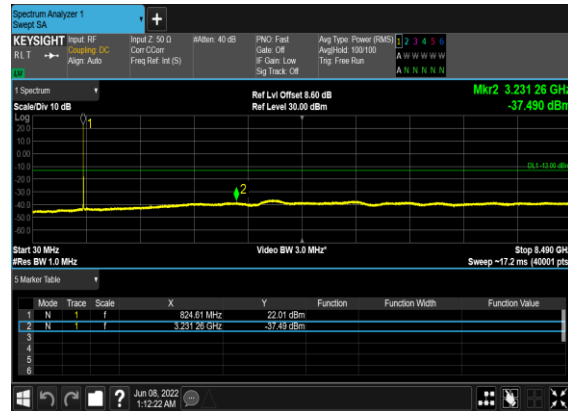
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
5	15	5	174300	826.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	5	174300	826.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	5	174300	826.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	5	174300	826.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	5	176300	836.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	5	176300	836.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	5	176300	836.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	5	176300	836.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	5	178300	846.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	5	178300	846.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	5	178300	846.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	5	178300	846.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	10	174800	829.0	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	10	174800	829.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	10	174800	829.0	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	10	174800	829.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	10	176300	836.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	10	176300	836.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	10	176300	836.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	10	176300	836.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	10	177800	844.0	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	10	177800	844.0	DFT-s-OFDM BPSK	1@0	see graph	PASS

5	15	10	177800	844.0	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	10	177800	844.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	20	175800	834.0	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	20	175800	834.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	20	175800	834.0	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	20	175800	834.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	20	176300	836.5	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	20	176300	836.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	20	176300	836.5	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	20	176300	836.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	20	176800	839.0	DFT-s-OFDM BPSK	1@0	see graph	---
5	15	20	176800	839.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	20	176800	839.0	DFT-s-OFDM QPSK	1@0	see graph	---
5	15	20	176800	839.0	DFT-s-OFDM QPSK	1@0	see graph	PASS

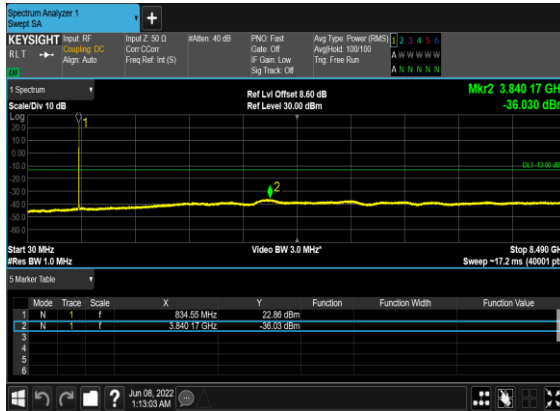
B2_N5(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



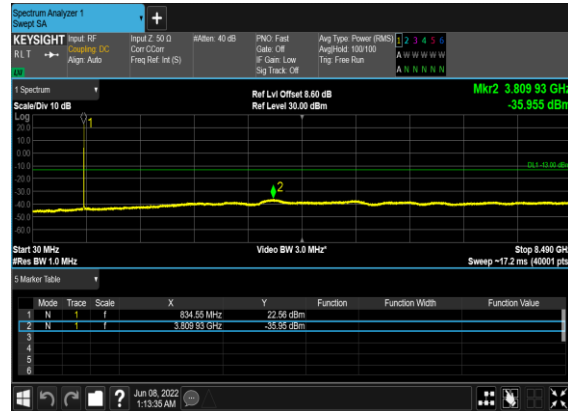
B2_N5(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



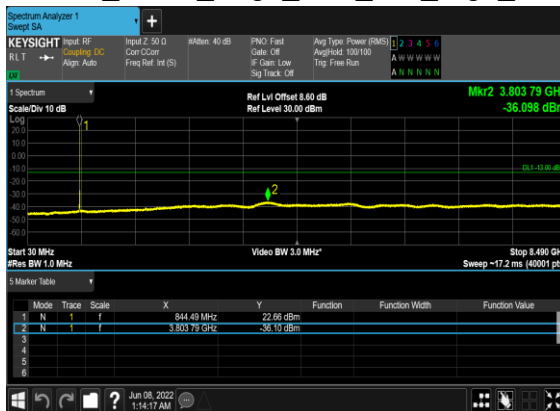
B2_N5(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



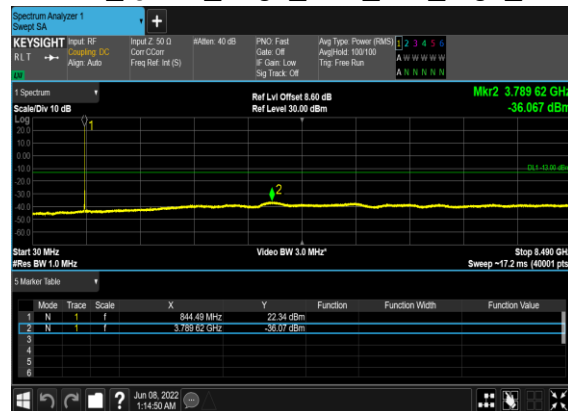
B2_N5(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH



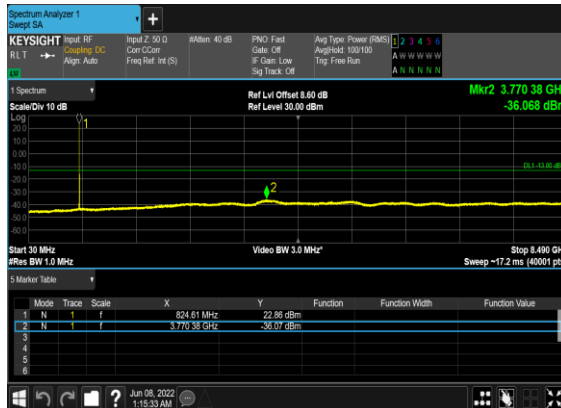
B2_N5(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



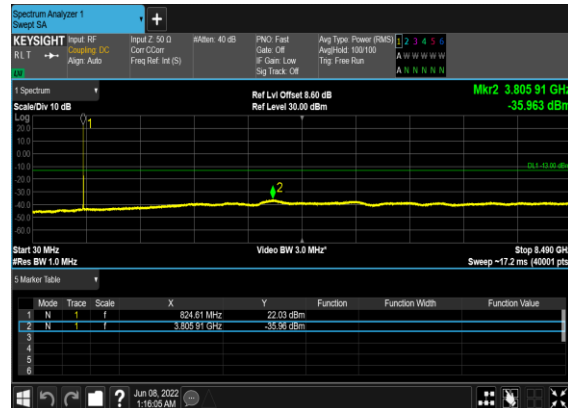
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OFDM_QPSK_Edge_1RB_Left_High_CH



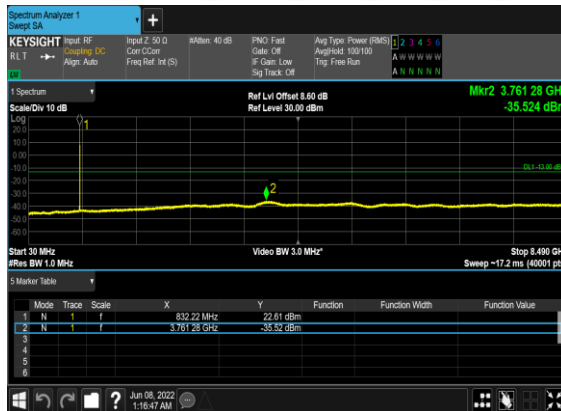
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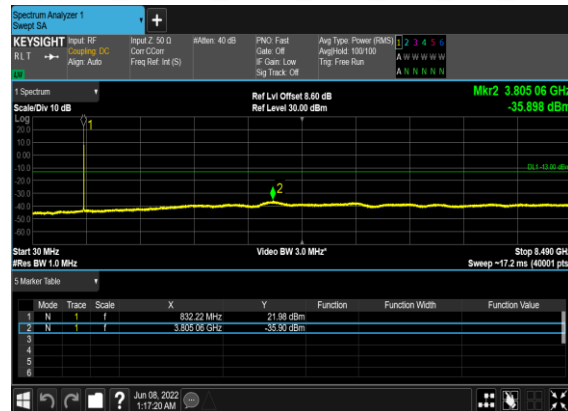
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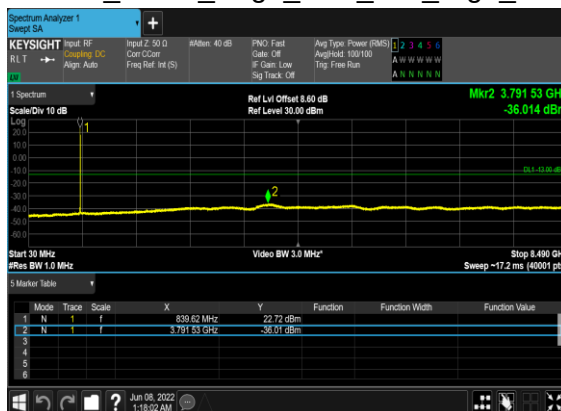
B2_N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



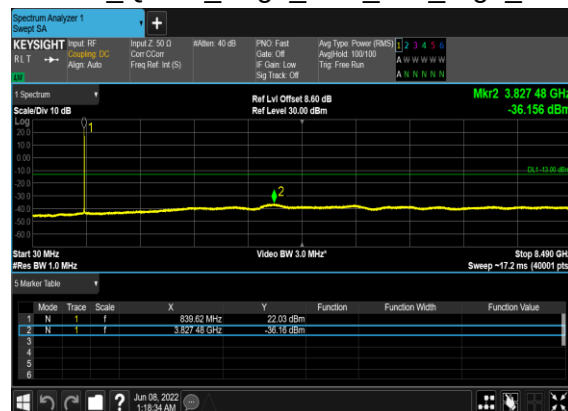
B2_N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



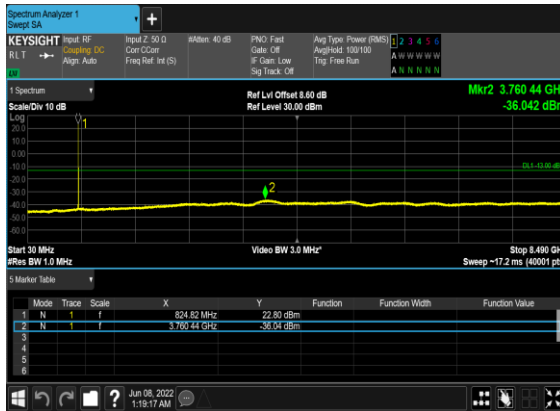
B2_N5(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



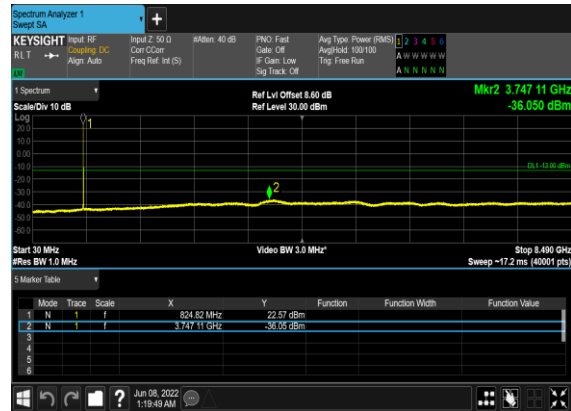
B2_N5(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



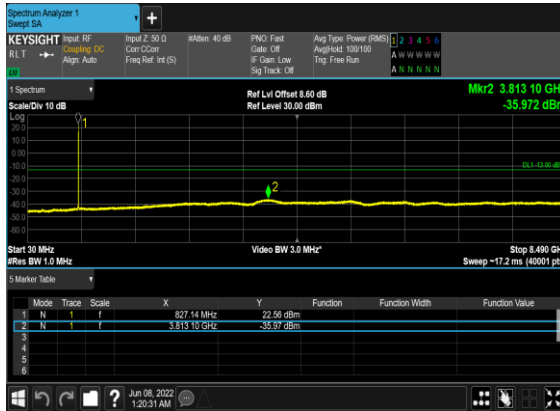
B2_N5(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



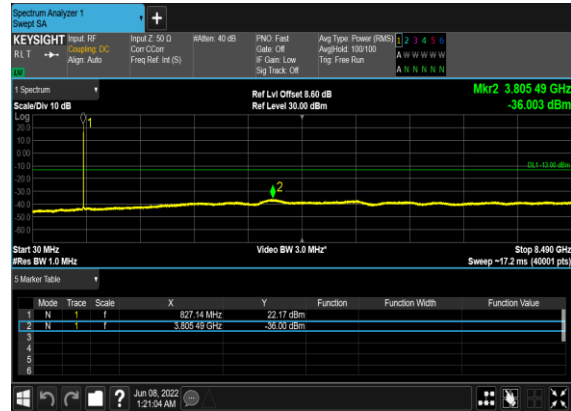
B2_N5(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



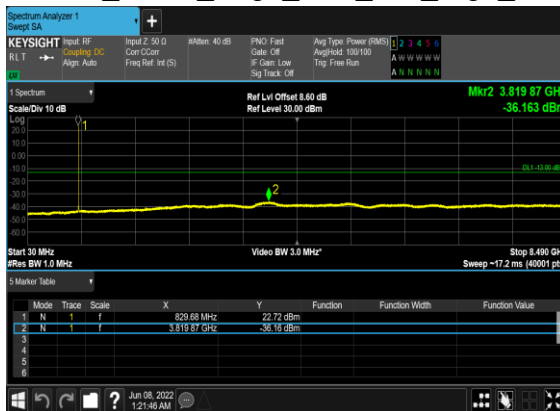
B2_N5(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



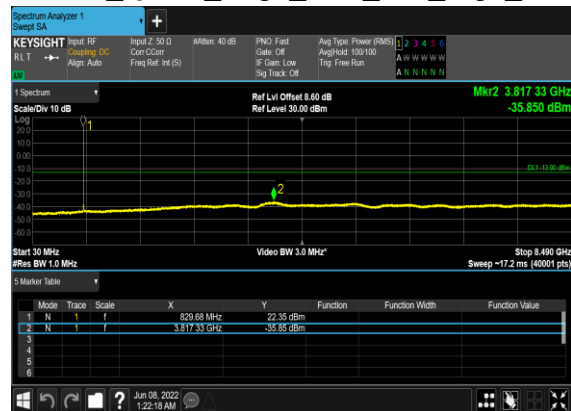
B2_N5(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH



B2_N5(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



B2_N5(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH



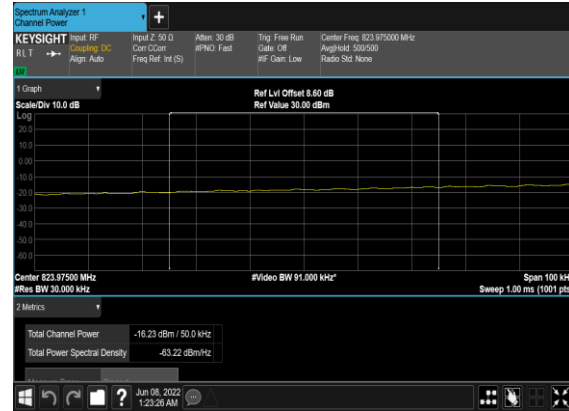
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
5	15	5	174300	826.5	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	5	174300	826.5	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	5	174300	826.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
5	15	5	174300	826.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
5	15	5	178300	846.5	DFT-s-OFDM BPSK	1@24	see graph	PASS
5	15	5	178300	846.5	DFT-s-OFDM QPSK	1@24	see graph	PASS
5	15	5	178300	846.5	DFT-s-OFDM BPSK	25@0	see graph	PASS
5	15	5	178300	846.5	DFT-s-OFDM QPSK	25@0	see graph	PASS
5	15	10	174800	829.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	10	174800	829.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	10	174800	829.0	DFT-s-OFDM BPSK	50@0	see graph	PASS
5	15	10	174800	829.0	DFT-s-OFDM QPSK	50@0	see graph	PASS
5	15	10	177800	844.0	DFT-s-OFDM BPSK	1@51	see graph	PASS
5	15	10	177800	844.0	DFT-s-OFDM QPSK	1@51	see graph	PASS
5	15	10	177800	844.0	DFT-s-OFDM BPSK	50@0	see graph	PASS
5	15	10	177800	844.0	DFT-s-OFDM QPSK	50@0	see graph	PASS
5	15	20	175800	834.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
5	15	20	175800	834.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
5	15	20	175800	834.0	DFT-s-OFDM BPSK	100@0	see graph	PASS
5	15	20	175800	834.0	DFT-s-OFDM QPSK	100@0	see graph	PASS
5	15	20	176800	839.0	DFT-s-OFDM BPSK	1@105	see graph	PASS
5	15	20	176800	839.0	DFT-s-OFDM QPSK	1@105	see graph	PASS
5	15	20	176800	839.0	DFT-s-OFDM BPSK	100@0	see graph	PASS
5	15	20	176800	839.0	DFT-s-OFDM QPSK	100@0	see graph	PASS

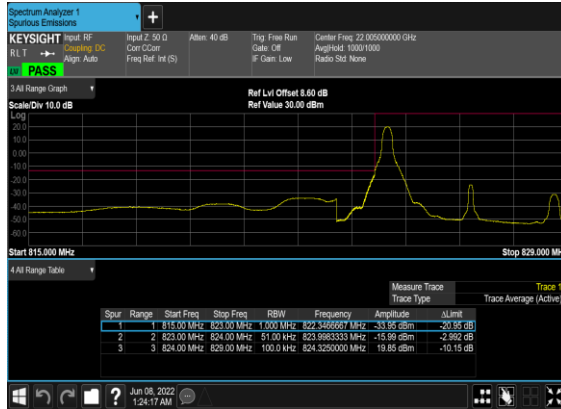
B2_N5(5M)_DFT-s- OFDM_BPSK_Edge_1RB_Left_Low_CH



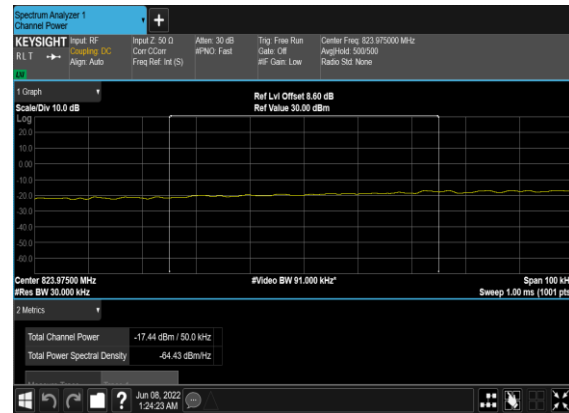
B2_N5(5M)_DFT-s- OFDM_BPSK_Edge_1RB_Left_Low_CH_chp_ PASS



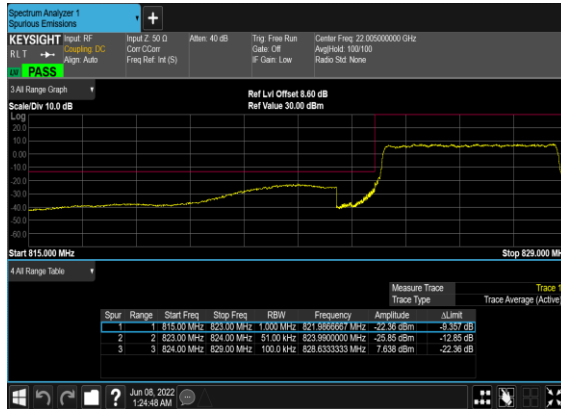
B2_N5(5M)_DFT-s- OFDM_QPSK_Edge_1RB_Left_Low_CH



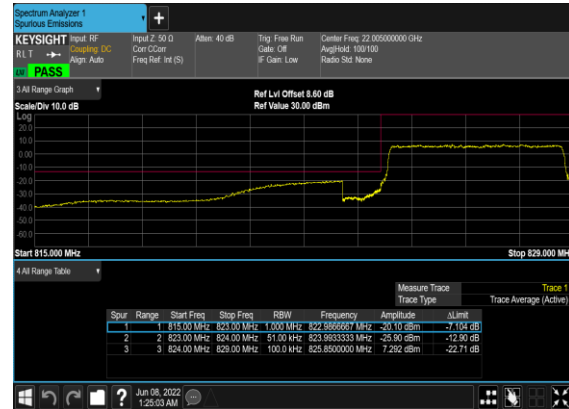
B2_N5(5M)_DFT-s- OFDM_QPSK_Edge_1RB_Left_Low_CH_chp_ PASS



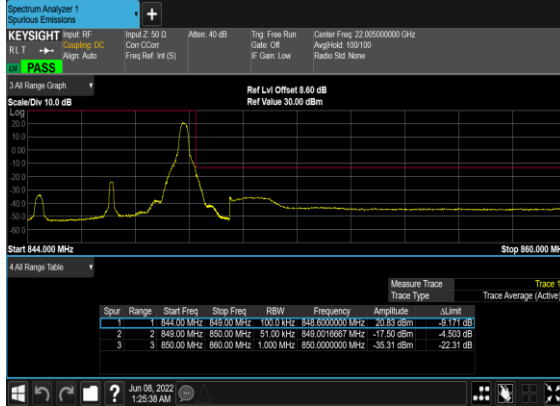
B2_N5(5M)_DFT-s- OFDM_BPSK_Outer_Full_Low_CH



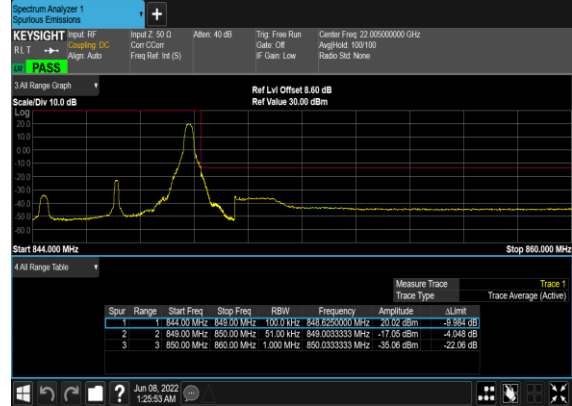
B2_N5(5M)_DFT-s- OFDM_QPSK_Outer_Full_Low_CH



B2_N5(5M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



B2_N5(5M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



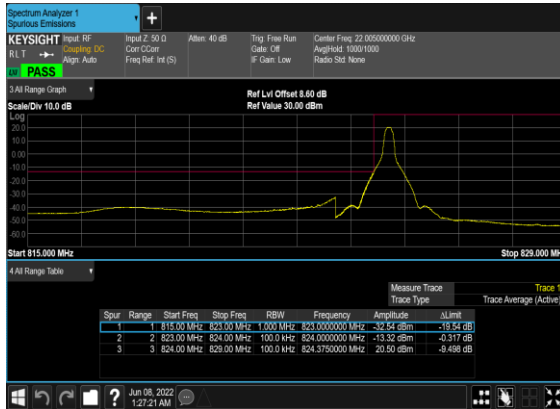
B2_N5(5M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



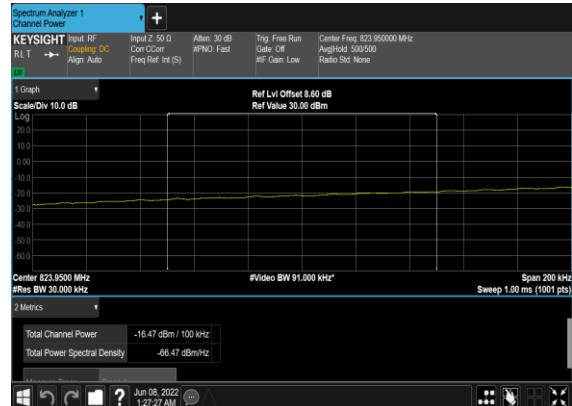
B2_N5(5M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH



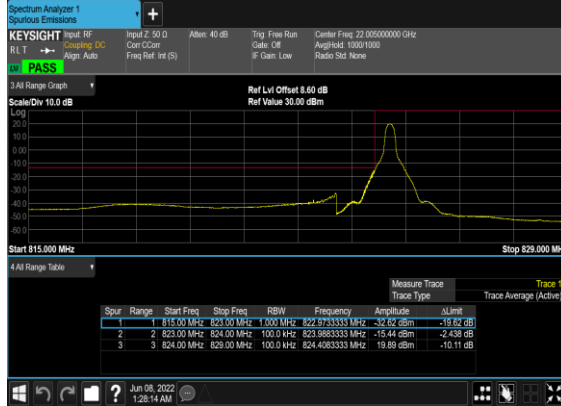
B2_N5(10M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



B2_N5(10M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH_CHP_ PASS



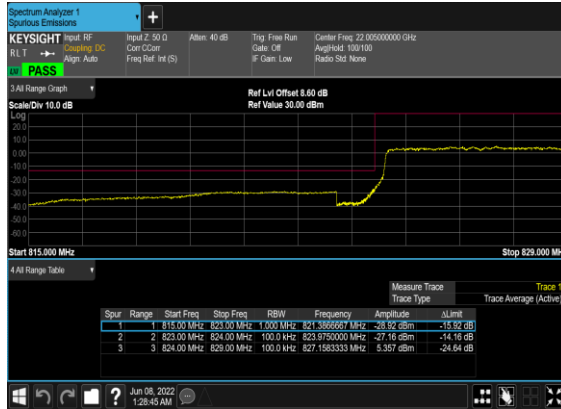
B2_N5(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



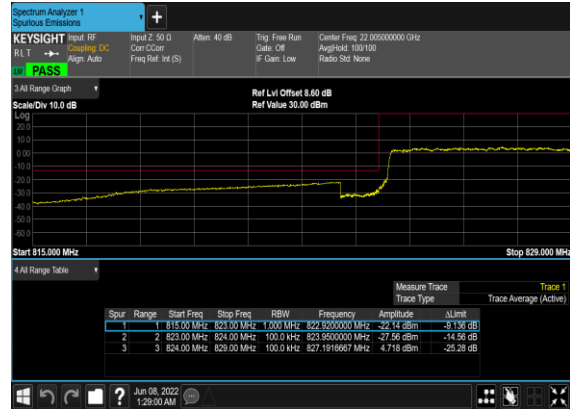
B2_N5(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH_CHP
_PASS



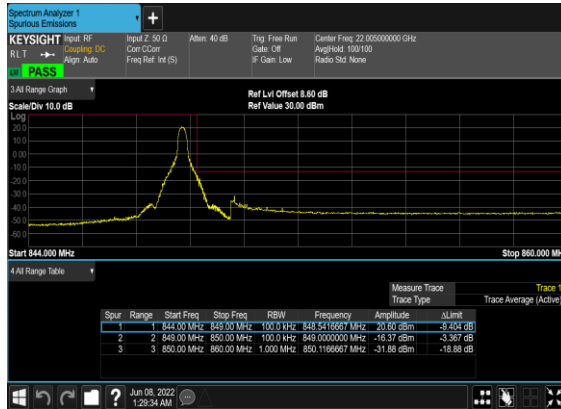
B2_N5(10M)_DFT-s-
OFDM_BPSK_Outer_Full_Low_CH



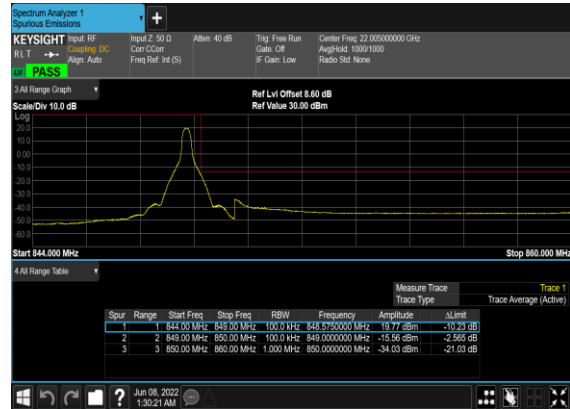
B2_N5(10M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH



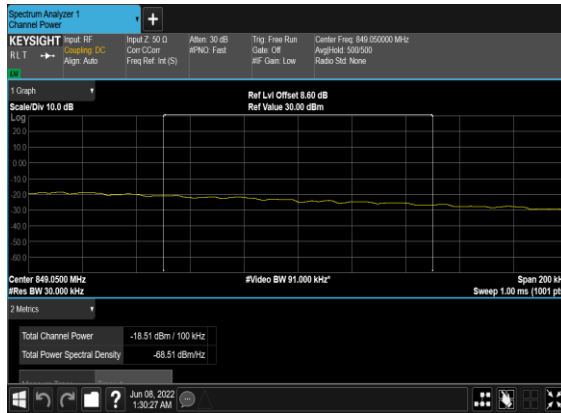
B2_N5(10M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



B2_N5(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



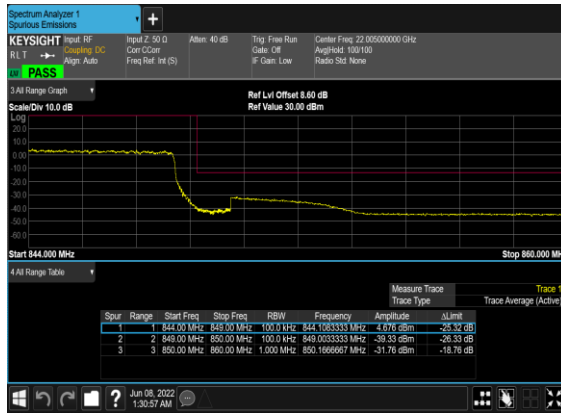
B2_N5(10M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH_PASS



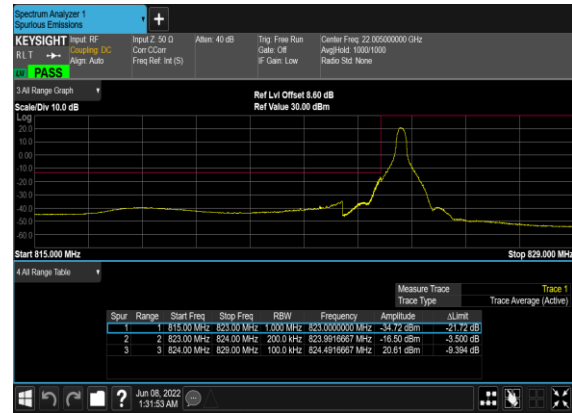
B2_N5(10M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



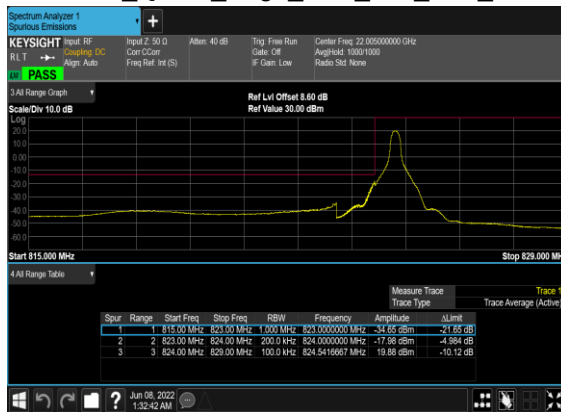
B2_N5(10M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH



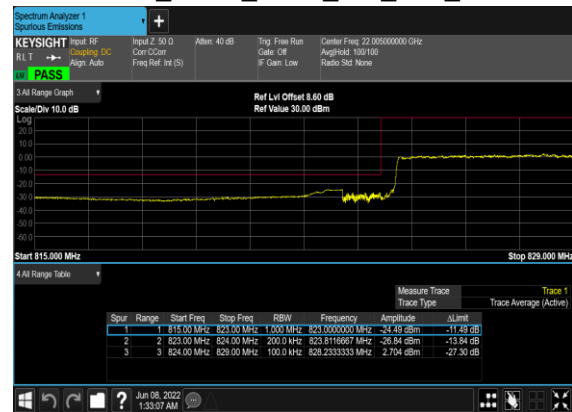
B2_N5(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



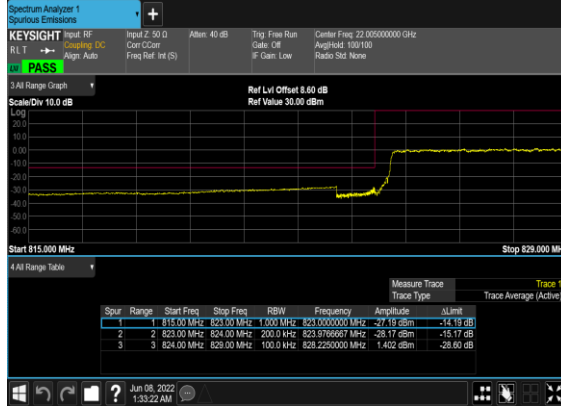
B2_N5(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



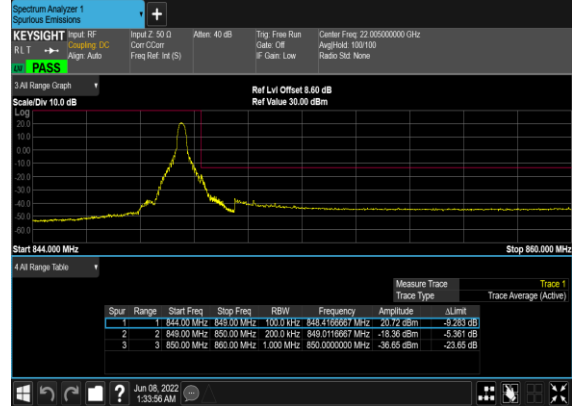
B2_N5(20M)_DFT-s-
OFDM_BPSK_Outer_Full_Low_CH



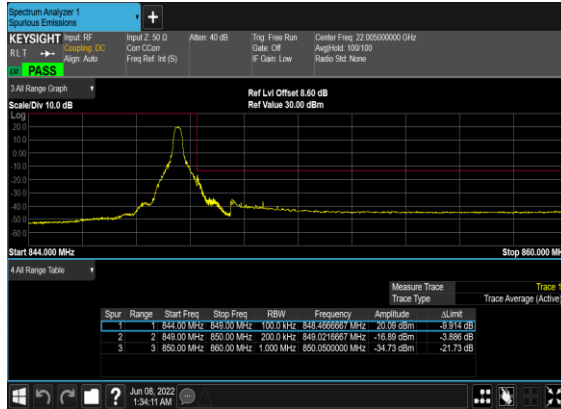
B2_N5(20M)_DFT-s-
OFDM_QPSK_Outer_Full_Low_CH



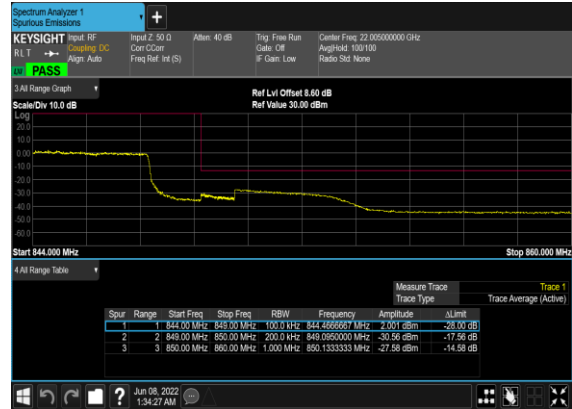
B2_N5(20M)_DFT-s-
OFDM_BPSK_Edge_1RB_Right_High_CH



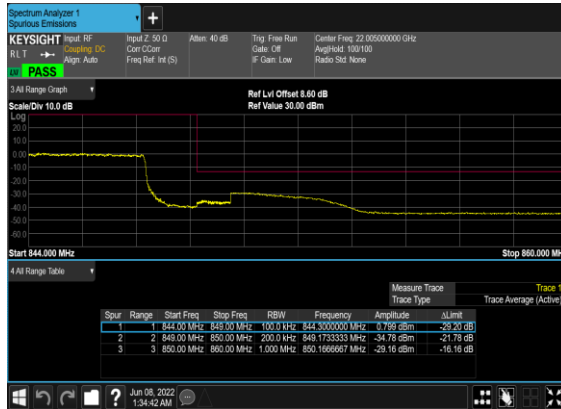
B2_N5(20M)_DFT-s-
OFDM_QPSK_Edge_1RB_Right_High_CH



B2_N5(20M)_DFT-s-
OFDM_BPSK_Outer_Full_High_CH



B2_N5(20M)_DFT-s-
OFDM_QPSK_Outer_Full_High_CH



FR1 N12(Ant1_Max Conducted Power)

Transmitter Conducted Output Power And EIRP, ($G_T - L_C$)= -5.47dBi

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	ERP(dBm)	ERP(W)
12	15	5	146300	701.5	DFT-s-OFDM QPSK	1@1	23.28	15.66	0.0368
12	15	5	146300	701.5	DFT-s-OFDM 16 QAM	1@1	22.44	14.82	0.0303
12	15	5	147500	707.5	DFT-s-OFDM QPSK	1@1	23.28	15.66	0.0368
12	15	5	147500	707.5	DFT-s-OFDM 16 QAM	1@1	22.56	14.94	0.0312
12	15	5	148700	713.5	DFT-s-OFDM QPSK	1@1	23.34	15.72	0.0373
12	15	5	148700	713.5	DFT-s-OFDM 16 QAM	1@1	22.54	14.92	0.0310
12	15	10	146800	704	DFT-s-OFDM QPSK	1@1	23.35	15.73	0.0374
12	15	10	146800	704	DFT-s-OFDM 16 QAM	1@1	22.51	14.89	0.0308
12	15	10	147500	707.5	DFT-s-OFDM QPSK	1@1	23.35	15.73	0.0374
12	15	10	147500	707.5	DFT-s-OFDM 16 QAM	1@1	22.52	14.9	0.0309
12	15	10	148200	711	DFT-s-OFDM QPSK	1@1	23.45	15.83	0.0383
12	15	10	148200	711	DFT-s-OFDM 16 QAM	1@1	22.54	14.92	0.0310
12	15	15	147300	706.5	DFT-s-OFDM PI/2 BPSK	36@18	23.59	15.97	0.0395
12	15	15	147300	706.5	DFT-s-OFDM PI/2 BPSK	1@1	23.48	15.86	0.0385
12	15	15	147300	706.5	DFT-s-OFDM PI/2 BPSK	1@77	23.32	15.7	0.0372
12	15	15	147300	706.5	DFT-s-OFDM QPSK	36@18	23.65	16.03	0.0401
12	15	15	147300	706.5	DFT-s-OFDM QPSK	1@1	23.44	15.82	0.0382
12	15	15	147300	706.5	DFT-s-OFDM QPSK	1@77	23.36	15.74	0.0375
12	15	15	147300	706.5	DFT-s-OFDM 16 QAM	36@18	22.65	15.03	0.0318

12	15	15	147300	706.5	DFT-s-OFDM 16 QAM	1@1	22.75	15.13	0.0326
12	15	15	147300	706.5	DFT-s-OFDM 16 QAM	1@77	22.76	15.14	0.0327
12	15	15	147300	706.5	DFT-s-OFDM 64 QAM	36@18	21.14	13.52	0.0225
12	15	15	147300	706.5	DFT-s-OFDM 64 QAM	1@1	21.06	13.44	0.0221
12	15	15	147300	706.5	DFT-s-OFDM 64 QAM	1@77	21.1	13.48	0.0223
12	15	15	147300	706.5	DFT-s-OFDM 256 QAM	36@18	19.04	11.42	0.0139
12	15	15	147300	706.5	DFT-s-OFDM 256 QAM	1@1	18.73	11.11	0.0129
12	15	15	147300	706.5	DFT-s-OFDM 256 QAM	1@77	18.79	11.17	0.0131
12	15	15	147300	706.5	CP-OFDM QPSK	39@19	22.12	14.5	0.0282
12	15	15	147300	706.5	CP-OFDM QPSK	1@1	22.16	14.54	0.0284
12	15	15	147300	706.5	CP-OFDM QPSK	1@77	21.91	14.29	0.0269
12	15	15	147500	707.5	DFT-s-OFDM PI/2 BPSK	36@18	23.47	15.85	0.0385
12	15	15	147500	707.5	DFT-s-OFDM PI/2 BPSK	1@1	23.38	15.76	0.0377
12	15	15	147500	707.5	DFT-s-OFDM PI/2 BPSK	1@77	23.37	15.75	0.0376
12	15	15	147500	707.5	DFT-s-OFDM QPSK	36@18	23.58	15.96	0.0394
12	15	15	147500	707.5	DFT-s-OFDM QPSK	1@1	23.49	15.87	0.0386
12	15	15	147500	707.5	DFT-s-OFDM QPSK	1@77	23.41	15.79	0.0379
12	15	15	147500	707.5	DFT-s-OFDM 16 QAM	36@18	22.58	14.96	0.0313
12	15	15	147500	707.5	DFT-s-OFDM 16 QAM	1@1	22.63	15.01	0.0317
12	15	15	147500	707.5	DFT-s-OFDM 16 QAM	1@77	22.69	15.07	0.0321
12	15	15	147500	707.5	DFT-s-OFDM 64 QAM	36@18	21.11	13.49	0.0223
12	15	15	147500	707.5	DFT-s-OFDM 64 QAM	1@1	21.06	13.44	0.0221
12	15	15	147500	707.5	DFT-s-OFDM 64 QAM	1@77	21.09	13.47	0.0222
12	15	15	147500	707.5	DFT-s-OFDM 256 QAM	36@18	18.82	11.2	0.0132

12	15	15	147500	707.5	DFT-s-OFDM 256 QAM	1@1	18.73	11.11	0.0129
12	15	15	147500	707.5	DFT-s-OFDM 256 QAM	1@77	18.75	11.13	0.0130
12	15	15	147500	707.5	CP-OFDM QPSK	39@19	22.19	14.57	0.0286
12	15	15	147500	707.5	CP-OFDM QPSK	1@1	22.05	14.43	0.0277
12	15	15	147500	707.5	CP-OFDM QPSK	1@77	21.96	14.34	0.0272
12	15	15	147700	708.5	DFT-s-OFDM PI/2 BPSK	36@18	23.55	15.93	0.0392
12	15	15	147700	708.5	DFT-s-OFDM PI/2 BPSK	1@1	23.39	15.77	0.0378
12	15	15	147700	708.5	DFT-s-OFDM PI/2 BPSK	1@77	23.34	15.72	0.0373
12	15	15	147700	708.5	DFT-s-OFDM QPSK	36@18	23.61	15.99	0.0397
12	15	15	147700	708.5	DFT-s-OFDM QPSK	1@1	23.58	15.96	0.0394
12	15	15	147700	708.5	DFT-s-OFDM QPSK	1@77	23.35	15.73	0.0374
12	15	15	147700	708.5	DFT-s-OFDM 16 QAM	36@18	22.62	15	0.0316
12	15	15	147700	708.5	DFT-s-OFDM 16 QAM	1@1	22.64	15.02	0.0318
12	15	15	147700	708.5	DFT-s-OFDM 16 QAM	1@77	22.57	14.95	0.0313
12	15	15	147700	708.5	DFT-s-OFDM 64 QAM	36@18	21.15	13.53	0.0225
12	15	15	147700	708.5	DFT-s-OFDM 64 QAM	1@1	21.1	13.48	0.0223
12	15	15	147700	708.5	DFT-s-OFDM 64 QAM	1@77	21.03	13.41	0.0219
12	15	15	147700	708.5	DFT-s-OFDM 256 QAM	36@18	18.52	10.9	0.0123
12	15	15	147700	708.5	DFT-s-OFDM 256 QAM	1@1	18.75	11.13	0.0130
12	15	15	147700	708.5	DFT-s-OFDM 256 QAM	1@77	18.74	11.12	0.0129
12	15	15	147700	708.5	CP-OFDM QPSK	39@19	22.13	14.51	0.0282
12	15	15	147700	708.5	CP-OFDM QPSK	1@1	22.1	14.48	0.0281
12	15	15	147700	708.5	CP-OFDM QPSK	1@77	21.95	14.33	0.0271

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00321	PASS	NV
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00654	PASS	LV
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00421	PASS	HV
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00673	PASS	-30°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00341	PASS	-20°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00305	PASS	-10°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00211	PASS	0°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00482	PASS	10°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00012	PASS	20°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00622	PASS	30°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00363	PASS	40°C
12	15	15	147500	707.5	DFT-s-OFDM QPSK	75@0	0.00651	PASS	50°C