FCC RF Test Report

APPLICANT	:	**vivo Mobile Communication Co., Ltd.**
EQUIPMENT	:	**Mobile Phone**
BRAND NAME	:	**vivo**
MODEL NAME	:	**V2202**
FCC ID	:	**2AUCY-V2202**
STANDARD	:	**47 CFR Part 2, 24, 27**
CLASSIFICATION	:	**PCS Licensed Transmitter Held to Ear (PCE)**
TEST DATE(S)	:	**Jul. 04, 2022 ~ Jul. 22, 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.

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

Jason Jia

Approved by: Jason Jia

ilac-MRA

ACCREDITED
Cert #5145.01

Sporton International Inc. (ShenZhen)

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

People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG260813D	Rev. 01	Initial issue of report	Aug. 05, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (5G NR n2) (5G NR n7)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (5G NR n66)	EIRP < 1Watt		
3.5	§24.232(d) §27.50(j)(4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §24.238(a) §27.53(h)	Conducted Band Edge Measurement (5G NR n2) (5G NR n66)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n7)	§27.53(m)(4)		
3.8	§2.1051 §24.238(a) §27.53(h)	Conducted Spurious Emission (5G NR n2) (5G NR n66)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n7)	< 55+10log$_{10}$(P[Watts])		
3.9	§2.1055	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §24.238(a) §27.53(h)	Radiated Spurious Emission (5G NR n2) (5G NR n66)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 26.45 dB at 10104.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n7)	< 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

vivo Mobile Communication Co., Ltd.
No.1, vivo Road, Chang'an, Dongguan,Guangdong,China

1.2 Manufacturer

vivo Mobile Communication Co., Ltd.
No.1, vivo Road, Chang'an, Dongguan,Guangdong,China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	vivo
Model Name	V2202
FCC ID	2AUCY-V2202
IMEI Code	Conducted: 866295060094256 Radiation: 866295060093993 /866295060093985 /866295060093910
HW Version	MP_0.1
SW Version	PD2215CF_EX_A_12.0.3.8.W30.V000L1
EUT Stage	Production Unit

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz
Rx Frequency	5G NR n2 : 1930 MHz ~ 1990 MHz 5G NR n7 : 2620 MHz ~ 2690 MHz 5G NR n66 : 2110 MHz~ 2200 MHz
SCS	15kHz: 5G NR n2/n7/n66 30kHz: 5G NR n2/n7/n66
Bandwidth	n2/n7: 5MHz / 10MHz / 15MHz / 20MHz n66: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 35MHz / 40MHz

Standards-related Product Specification	
Antenna Gain	**<Ant. 11>** n2 : -5.4 dBi n7 : -1.6 dBi n66 : -5.6 dBi **<Ant. 13>** n2 : -2.9 dBi n7 : 0 dBi n66 : -3.4 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum EIRP is calculated from max output power and max antenna gain, only the maximum EIRP is shown in the report, 5G NR n2/n7/n66 for Ant.13.
2. The device supports SA mode for 5G NR n2/ n7/ n66 and NSA mode for 5G NR n7/n66.
3. For 5G NR n7/n66, NSA covers SA by referring to the maximum power.
4. For NSA mode of all EN-DC combination, we only show the combination of the maximum power among all NSA combinations 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 n2 SA		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	0.0811	4M47G7D	0.0637	4M46W7D
10	1855.0 ~ 1905.0	0.0743	9M29G7D	0.0605	9M27W7D
15	1857.5 ~ 1902.5	0.0743	14M1G7D	0.0614	14M1W7D
20	1860.0 ~ 1900.0	0.0813	18M9G7D	0.0676	18M9W7D

5G NR n7 NSA (EN DC_2A-n7A)		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	2502.50 ~ 2567.50	0.1300	4M47G7D	0.1161	4M48W7D
10	2505.00 ~ 2565.00	0.1265	9M27G7D	0.1104	9M29W7D
15	2507.50 ~ 2562.50	0.1265	14M1G7D	0.1153	14M1W7D
20	2510.00 ~ 2560.00	0.1374	18M9G7D	0.1167	18M9W7D

5G NR n66 SA		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	0.0710	4M47G7D	0.0542	4M47W7D
10	1715.0 ~ 1775.0	0.0685	9M27G7D	0.0520	9M29W7D
15	1717.5 ~ 1772.5	0.0710	14M1G7D	0.0540	14M1W7D
20	1720.0 ~ 1770.0	0.0701	18M9G7D	0.0540	19M0W7D
25	1722.5 ~ 1767.5	0.0678	23M7G7D	0.0522	23M7W7D
30	1725.0 ~ 1765.0	0.0658	28M5G7D	0.0507	28M5W7D
40	1730.0 ~ 1760.0	0.0736	38M5G7D	0.0579	38M6W7D

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

1.7 Testing Location

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

<table>
<tr><td>Test Firm</td><td colspan="3">Sporton International Inc. (Shenzhen)</td></tr>
<tr><td>Test Site Location</td><td colspan="3">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</td></tr>
<tr><td rowspan="2">Test Site No.</td><td>Sporton Site No.</td><td>FCC Designation No.</td><td>FCC Test Firm Registration No.</td></tr>
<tr><td>TH01-SZ</td><td>CN1256</td><td>421272</td></tr>
</table>

<table>
<tr><td>Test Firm</td><td colspan="3">Sporton International Inc. (Shenzhen)</td></tr>
<tr><td>Test Site Location</td><td colspan="3">101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103
TEL: +86-755-33202398</td></tr>
<tr><td rowspan="2">Test Site No.</td><td>Sporton Site No.</td><td>FCC Designation No.</td><td>FCC Test Firm Registration No.</td></tr>
<tr><td>03CH01-SZ</td><td>CN1256</td><td>421272</td></tr>
</table>

1.8 Test Software

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

1.9 Applicable Standards

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

- 47 CFR Part 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:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

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.

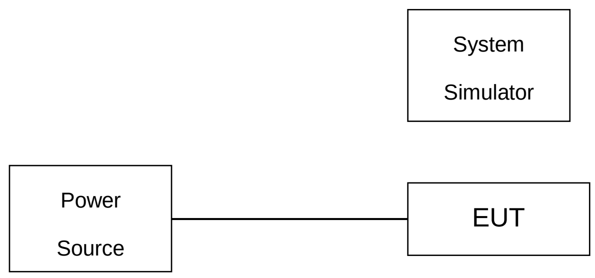
The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

Test Items	5G NR	Bandwidth (MHz)									Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	50-100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
Max. Output Power	n2	v	v	v	v	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n7	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	v	v
Peak-to-Average Ratio	n2				v	-	-	-	-	-	v	v				v	v	v	v	v
	n7				v	-	-	-	-	-	v	v				v	v	v	v	v
	n66				v					-	v	v				v	v	v	v	v
26dB and 99% Bandwidth	n2	v	v	v	v	-	-	-	-	-	v	v	v	v	v		v		v	
	n7	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	

Test Items	5G NR	Bandwidth (MHz)									Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	50-100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
Conducted Band Edge	n2	v	v		v	-	-	-	-	-	v	v				v	v	v		v
	n7	v	v		v	-	-	-	-	-	v	v				v	v	v		v
	n66	v			v				v	-	v	v				v	v	v		v
Conducted Spurious Emission	n2	v	v		v	-	-	-	-	-	v	v				v		v	v	v
	n7	v	v		v	-	-	-	-	-	v	v				v		v	v	v
	n66	v			v				v	-	v	v				v		v	v	v
Frequency Stability	n2				v	-	-	-	-	-		v					v		v	
	n7				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
	n7	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	v	v
Radiated Spurious Emission	n2	Worst Case																	v	
	n7	Worst Case																	v	
	n66	Worst Case																	v	
Note	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. Frequency Stability : Normal Voltage = 3.89V ; Low Voltage =3.60V. ; High Voltage =4.48V																			

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

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

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
2.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

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 8.1 dB.

Example :

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

= 8.1 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	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 n7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	526000	531000	536000
	Frequency	2510	2535	2560
15	Channel	525500	531000	536500
	Frequency	2507.5	2535	2562.5
10	Channel	525000	531000	537000
	Frequency	2505	2535	2565
5	Channel	524500	531000	537500
	Frequency	2502.5	2535	2567.5

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
25	Channel	424500	429000	433500
	Frequency	1722.5	1745	1767.5
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

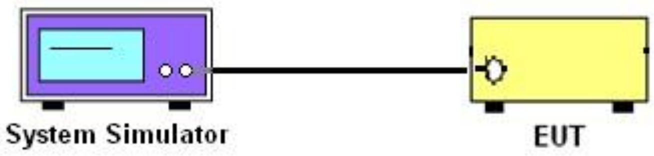
3 Conducted Test Items

3.1 Measuring Instruments

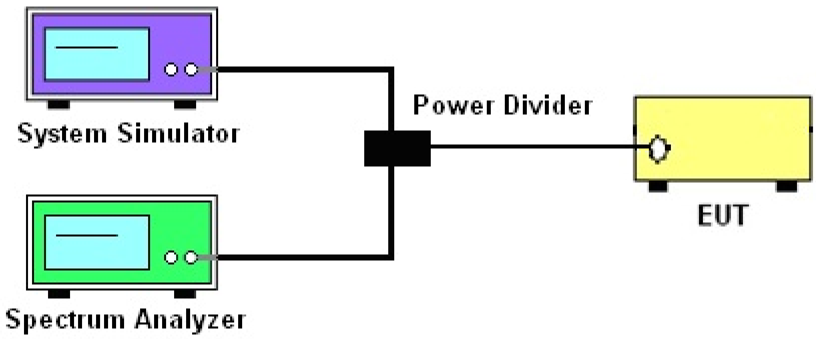
See list of measuring instruments of this test report.

3.2 Test Setup

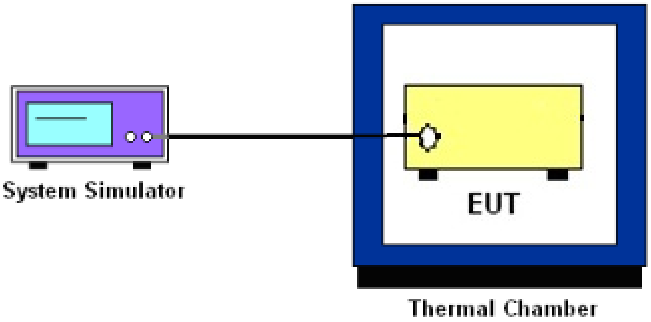
3.2.1 Conducted Output Power



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 EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n2 and n7.

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

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (h)

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

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.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

   Example:

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

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. For 5G NR n7, the other 40 dB, and 55 dB have additionally applied same calculation above.
10. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

For 5G NR n7:

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

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

3.8.2 Test Procedures

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

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

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

3.9.3 Test Procedures for Voltage Variation

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

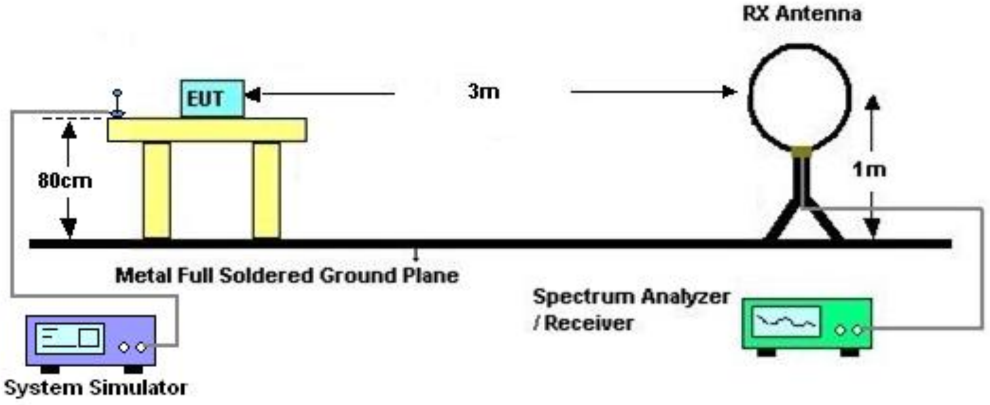
4 Radiated Test Items

4.1 Measuring Instruments

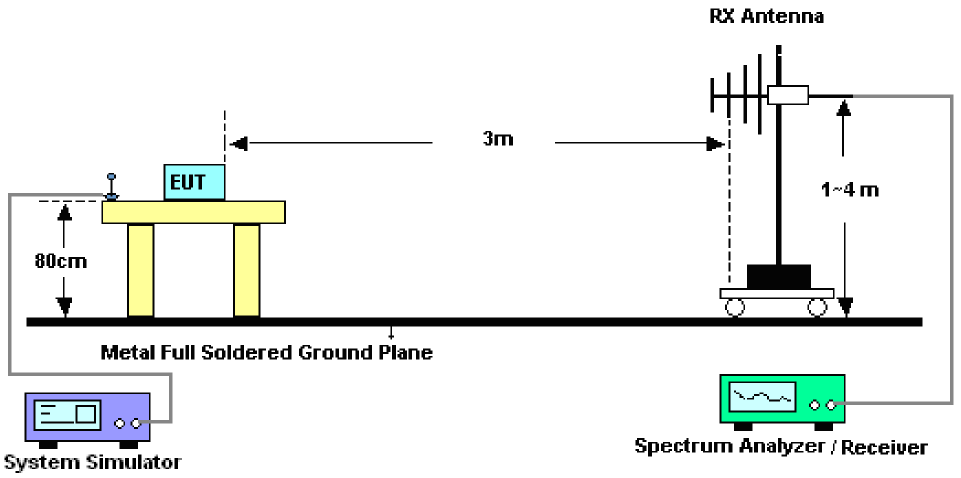
See list of measuring instruments of this test report.

4.2 Test Setup

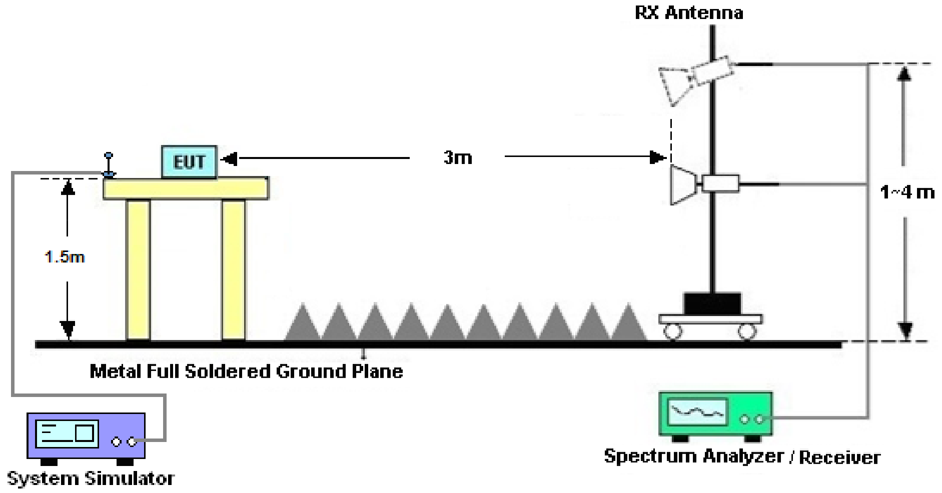
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

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 + 10log(P)dB below the transmitter power P(Watts)

    = P(W)- [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

    = -13dBm.
13. For 5G NR n7:

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

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Jul. 05, 2022~ Jul. 22, 2022	Apr. 08, 2023	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 25, 2021	Jul. 05, 2022~ Jul. 22, 2022	Oct. 24, 2022	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-0426	60.06.020.0077	0.4GHz~26.5GHz	Dec. 25, 2021	Jul. 05, 2022~ Jul. 22, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Jul. 05, 2022~ Jul. 22, 2022	Jul. 13, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 07, 2022	Jul. 05, 2022~ Jul. 22, 2022	Jul. 06, 2023	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 27, 2021	Jul. 04, 2022~ Jul. 19, 2022	Dec. 26, 2022	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 22, 2021	Jul. 04, 2022~ Jul. 19, 2022	Oct. 21, 2022	Radiation (03CH01-SZ
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul.17, 2020	Jul. 04, 2022~ Jul. 19, 2022	Jul. 16, 2022	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 17, 2022	Jul. 04, 2022~ Jul. 19, 2022	Jul. 16, 2024	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Sep. 28, 2021	Jul. 04, 2022~ Jul. 19, 2022	Sep. 27, 2022	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2022	Jul. 04, 2022~ Jul. 19, 2022	Jul. 03, 2023	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 10, 2022	Jul. 04, 2022~ Jul. 19, 2022	Apr. 09, 2023	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 06, 2022	Jul. 04, 2022~ Jul. 19, 2022	Apr. 05, 2023	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-R	1943528	1GHz~18GHz	Oct. 22, 2021	Jul. 04, 2022~ Jul. 19, 2022	Oct. 21, 2022	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 04, 2022	Jul. 04, 2022~ Jul. 19, 2022	Jul. 03, 2023	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Jul. 04, 2022~ Jul. 19, 2022	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jul. 04, 2022~ Jul. 19, 2022	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jul. 04, 2022~ Jul. 19, 2022	NCR	Radiation (03CH01-SZ)

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 Radiated Emission Measurement (30 MHz ~ 1000 MHz)

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

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

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

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

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

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Zheng Jianhan	**Temperature :**	24~26℃
		Relative Humidity :	40~45%

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Kuang Jia, Shiwei Wen	Temperature :	22~25℃
		Relative Humidity :	48~52%

Note: Pre-scanned harmonic for the different antenna combinations for EN-DC mode, we choose the worst combination to test.

n2 SA / NR 20MHz / QPSK / ANT11(NR)									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3741.5	-60.45	-13	-47.45	-77.08	-67.20	5.85	12.60	H
	5612.25	-41.52	-13	-28.52	-61.01	-47.32	7.30	13.10	H
	7483	-55.70	-13	-42.70	-79.45	-58.85	8.35	11.50	H
	3741.5	-58.74	-13	-45.74	-74.99	-65.49	5.85	12.60	V
	5612.25	-51.05	-13	-38.05	-70.05	-56.85	7.30	13.10	V
	7483	-55.26	-13	-42.26	-79.4	-58.41	8.35	11.50	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

n7 SA / NR 20MHz / QPSK / ANT11(NR)									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5051.50	-61.20	-25	-36.20	-80.81	-66.76	7.14	12.70	H
	7577.25	-55.59	-25	-30.59	-79.19	-58.89	8.30	11.60	H
	10103.00	-52.78	-25	-27.78	-79.72	-54.30	10.48	12.00	H
	5051.50	-61.41	-25	-36.41	-80.91	-66.97	7.14	12.70	V
	7577.25	-55.23	-25	-30.23	-79.31	-58.53	8.30	11.60	V
	10103.00	-54.13	-25	-29.13	-79.73	-55.65	10.48	12.00	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC_2A_n7A / LTE 20MHz + NR 20MHz / QPSK / ANT31(LTE) & ANT11(NR)									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
n7 Middle	5051.50	-58.27	-25	-33.27	-81.37	-63.83	7.14	12.70	H
	7577.25	-56.26	-25	-31.26	-82.34	-59.56	8.30	11.60	H
	10103.00	-53.16	-25	-28.16	-83.33	-54.68	10.48	12.00	H
	5051.50	-56.89	-25	-31.89	-81.32	-62.45	7.14	12.70	V
	7577.25	-56.08	-25	-31.08	-82.16	-59.38	8.30	11.60	V
	10103.00	-51.88	-25	-26.88	-82.98	-53.40	10.48	12.00	V
B66 Middle	3742.18	-57.81	-13	-44.81	-80.70	-64.56	5.85	12.60	H
	5613.27	-57.59	-13	-44.59	-81.87	-63.39	7.30	13.10	H
	7484.36	-55.77	-13	-42.77	-82.23	-58.92	8.35	11.50	H
	3742.18	-55.48	-13	-42.48	-80.38	-62.23	5.85	12.60	V
	5613.27	-56.02	-13	-43.02	-81.15	-61.82	7.30	13.10	V
	7484.36	-55.59	-13	-42.59	-82.03	-58.74	8.35	11.50	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

n66 SA / NR 40MHz / QPSK / ANT11(NR)									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3451.84	-63.71	-13	-50.71	-84.86	-70.56	5.65	12.50	H
	5177.76	-47.79	-13	-34.79	-71.83	-53.46	7.13	12.80	H
	6903.68	-58.06	-13	-45.06	-83.73	-61.46	8.40	11.80	H
	3451.84	-61.50	-13	-48.50	-83.59	-68.35	5.65	12.50	V
	5177.76	-48.68	-13	-35.68	-73.11	-54.35	7.13	12.80	V
	6903.68	-57.89	-13	-44.89	-84.84	-61.29	8.40	11.80	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC_7A_n66A / LTE 20MHz + NR 40MHz / QPSK / ANT31(LTE) & ANT11(NR)									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
n66 Middle	3451.84	-60.58	-13	-47.58	-81.73	-67.43	5.65	12.50	H
	5177.76	-56.71	-13	-43.71	-80.75	-62.38	7.13	12.80	H
	6903.68	-55.48	-13	-42.48	-81.15	-58.88	8.40	11.80	H
	3451.84	-60.30	-13	-47.30	-82.39	-67.15	5.65	12.50	V
	5177.76	-56.51	-13	-43.51	-80.94	-62.18	7.13	12.80	V
	6903.68	-54.55	-13	-41.55	-81.5	-57.95	8.40	11.80	V
B7 Middle	5052.00	-57.64	-25	-32.64	-80.74	-63.20	7.14	12.70	H
	7578.00	-55.41	-25	-30.41	-81.49	-58.71	8.30	11.60	H
	10104.00	-52.27	-25	-27.27	-82.47	-53.79	10.48	12.00	H
	5052.00	-56.49	-25	-31.49	-80.92	-62.05	7.14	12.70	V
	7578.00	-55.71	-25	-30.71	-81.79	-59.01	8.30	11.60	V
	10104.00	-51.45	-25	-26.45	-82.63	-52.97	10.48	12.00	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Software Version: 22.02.041801

FR1 N2

Maximum EIRP (Ant.13), Antenna gain =-2.9dB

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	21.68	18.78	0.0755
2	15	5	386500	1852.5	DFT-s-OFDM 16 QAM	1@1	20.49	17.59	0.0574
2	15	5	392000	1880	DFT-s-OFDM QPSK	1@1	21.65	18.75	0.0750
2	15	5	392000	1880	DFT-s-OFDM 16 QAM	1@1	20.69	17.79	0.0601
2	15	5	397500	1907.5	DFT-s-OFDM QPSK	1@1	21.99	19.09	0.0811
2	15	5	397500	1907.5	DFT-s-OFDM 16 QAM	1@1	20.94	18.04	0.0637
2	15	10	387000	1855	DFT-s-OFDM QPSK	1@1	21.34	18.44	0.0698
2	15	10	387000	1855	DFT-s-OFDM 16 QAM	1@1	20.36	17.46	0.0557
2	15	10	392000	1880	DFT-s-OFDM QPSK	1@1	21.39	18.49	0.0706
2	15	10	392000	1880	DFT-s-OFDM 16 QAM	1@1	20.52	17.62	0.0578
2	15	10	397000	1905	DFT-s-OFDM QPSK	1@1	21.61	18.71	0.0743
2	15	10	397000	1905	DFT-s-OFDM 16 QAM	1@1	20.72	17.82	0.0605
2	15	15	387500	1857.5	DFT-s-OFDM QPSK	1@1	21.61	18.71	0.0743
2	15	15	387500	1857.5	DFT-s-OFDM 16 QAM	1@1	20.5	17.6	0.0575
2	15	15	392000	1880	DFT-s-OFDM QPSK	1@1	21.53	18.63	0.0729
2	15	15	392000	1880	DFT-s-OFDM 16 QAM	1@1	20.67	17.77	0.0598
2	15	15	396500	1902.5	DFT-s-OFDM QPSK	1@1	21.61	18.71	0.0743
2	15	15	396500	1902.5	DFT-s-OFDM 16 QAM	1@1	20.78	17.88	0.0614
2	15	20	388000	1860	DFT-s-OFDM PI/2 BPSK	50@25	21.84	18.94	0.0783

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
2	15	20	388000	1860	DFT-s-OFDM PI/2 BPSK	1@1	21.55	18.65	0.0733
2	15	20	388000	1860	DFT-s-OFDM PI/2 BPSK	1@104	21.71	18.81	0.0760
2	15	20	388000	1860	DFT-s-OFDM QPSK	50@25	22	19.1	0.0813
2	15	20	388000	1860	DFT-s-OFDM QPSK	1@1	21.45	18.55	0.0716
2	15	20	388000	1860	DFT-s-OFDM QPSK	1@104	21.78	18.88	0.0773
2	15	20	388000	1860	DFT-s-OFDM 16 QAM	50@25	20.94	18.04	0.0637
2	15	20	388000	1860	DFT-s-OFDM 16 QAM	1@1	20.51	17.61	0.0577
2	15	20	388000	1860	DFT-s-OFDM 16 QAM	1@104	20.74	17.84	0.0608
2	15	20	388000	1860	DFT-s-OFDM 64 QAM	50@25	19.55	16.65	0.0462
2	15	20	388000	1860	DFT-s-OFDM 64 QAM	1@1	19.55	16.65	0.0462
2	15	20	388000	1860	DFT-s-OFDM 64 QAM	1@104	19.7	16.8	0.0479
2	15	20	388000	1860	DFT-s-OFDM 256 QAM	50@25	17.53	14.63	0.0290
2	15	20	388000	1860	DFT-s-OFDM 256 QAM	1@1	17.13	14.23	0.0265
2	15	20	388000	1860	DFT-s-OFDM 256 QAM	1@104	17.22	14.32	0.0270
2	15	20	388000	1860	CP-OFDM QPSK	53@26	20.52	17.62	0.0578
2	15	20	388000	1860	CP-OFDM QPSK	1@1	20.26	17.36	0.0545
2	15	20	388000	1860	CP-OFDM QPSK	1@104	20.33	17.43	0.0553
2	15	20	392000	1880	DFT-s-OFDM PI/2 BPSK	50@25	21.81	18.91	0.0778
2	15	20	392000	1880	DFT-s-OFDM PI/2 BPSK	1@1	21.6	18.7	0.0741
2	15	20	392000	1880	DFT-s-OFDM PI/2 BPSK	1@104	21.66	18.76	0.0752
2	15	20	392000	1880	DFT-s-OFDM QPSK	50@25	21.83	18.93	0.0782
2	15	20	392000	1880	DFT-s-OFDM QPSK	1@1	21.52	18.62	0.0728
2	15	20	392000	1880	DFT-s-OFDM QPSK	1@104	21.7	18.8	0.0759

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
2	15	20	392000	1880	DFT-s-OFDM 16 QAM	50@25	21.04	18.14	0.0652
2	15	20	392000	1880	DFT-s-OFDM 16 QAM	1@1	20.63	17.73	0.0593
2	15	20	392000	1880	DFT-s-OFDM 16 QAM	1@104	20.71	17.81	0.0604
2	15	20	392000	1880	DFT-s-OFDM 64 QAM	50@25	19.44	16.54	0.0451
2	15	20	392000	1880	DFT-s-OFDM 64 QAM	1@1	19.62	16.72	0.0470
2	15	20	392000	1880	DFT-s-OFDM 64 QAM	1@104	19.6	16.7	0.0468
2	15	20	392000	1880	DFT-s-OFDM 256 QAM	50@25	17.49	14.59	0.0288
2	15	20	392000	1880	DFT-s-OFDM 256 QAM	1@1	17.12	14.22	0.0264
2	15	20	392000	1880	DFT-s-OFDM 256 QAM	1@104	17.15	14.25	0.0266
2	15	20	392000	1880	CP-OFDM QPSK	53@26	20.49	17.59	0.0574
2	15	20	392000	1880	CP-OFDM QPSK	1@1	20.24	17.34	0.0542
2	15	20	392000	1880	CP-OFDM QPSK	1@104	20.2	17.3	0.0537
2	15	20	396000	1900	DFT-s-OFDM PI/2 BPSK	50@25	21.93	19.03	0.0800
2	15	20	396000	1900	DFT-s-OFDM PI/2 BPSK	1@1	21.65	18.75	0.0750
2	15	20	396000	1900	DFT-s-OFDM PI/2 BPSK	1@104	21.89	18.99	0.0793
2	15	20	396000	1900	DFT-s-OFDM QPSK	50@25	21.93	19.03	0.0800
2	15	20	396000	1900	DFT-s-OFDM QPSK	1@1	21.59	18.69	0.0740
2	15	20	396000	1900	DFT-s-OFDM QPSK	1@104	21.91	19.01	0.0796
2	15	20	396000	1900	DFT-s-OFDM 16 QAM	50@25	21.2	18.3	0.0676
2	15	20	396000	1900	DFT-s-OFDM 16 QAM	1@1	20.73	17.83	0.0607
2	15	20	396000	1900	DFT-s-OFDM 16 QAM	1@104	20.97	18.07	0.0641
2	15	20	396000	1900	DFT-s-OFDM 64 QAM	50@25	19.59	16.69	0.0467
2	15	20	396000	1900	DFT-s-OFDM 64 QAM	1@1	19.63	16.73	0.0471
2	15	20	396000	1900	DFT-s-OFDM 64 QAM	1@104	19.83	16.93	0.0493

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
2	15	20	396000	1900	DFT-s-OFDM 256 QAM	50@25	17.62	14.72	0.0296
2	15	20	396000	1900	DFT-s-OFDM 256 QAM	1@1	17.19	14.29	0.0269
2	15	20	396000	1900	DFT-s-OFDM 256 QAM	1@104	17.37	14.47	0.0280
2	15	20	396000	1900	CP-OFDM QPSK	53@26	20.69	17.79	0.0601
2	15	20	396000	1900	CP-OFDM QPSK	1@1	20.37	17.47	0.0558
2	15	20	396000	1900	CP-OFDM QPSK	1@104	20.47	17.57	0.0571

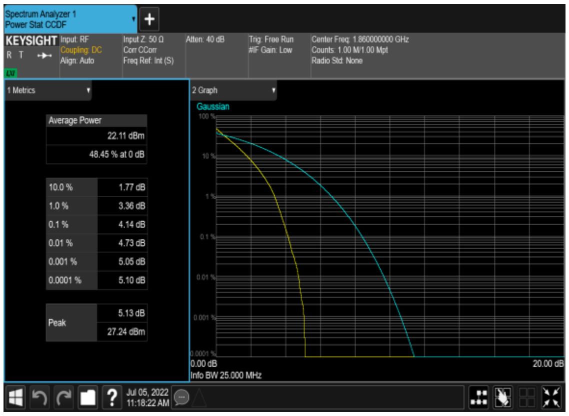
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0031	**PASS**	NV
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0048	**PASS**	LV
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0048	**PASS**	HV
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0026	**PASS**	-30℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0042	**PASS**	-20℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0051	**PASS**	-10℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0022	**PASS**	0℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0049	**PASS**	10℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0031	**PASS**	20℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0070	**PASS**	30℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0039	**PASS**	40℃
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	0.0030	**PASS**	50℃

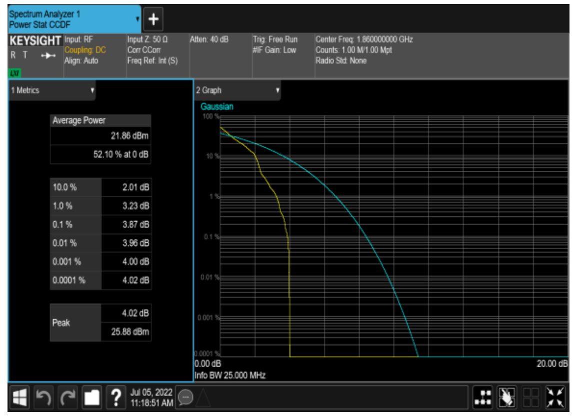
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
2	15	20	388000	1860.0	DFT-s-OFDM PI/2 BPSK	100@0	4.14	13	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM PI/2 BPSK	1@0	3.87	13	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM QPSK	100@0	5.25	13	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM QPSK	1@0	4.51	13	**PASS**
2	15	20	392000	1880.0	DFT-s-OFDM PI/2 BPSK	100@0	4.31	13	**PASS**
2	15	20	392000	1880.0	DFT-s-OFDM PI/2 BPSK	1@0	4.16	13	**PASS**
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	5.5	13	**PASS**
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	1@0	4.82	13	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM PI/2 BPSK	100@0	4.28	13	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM PI/2 BPSK	1@0	4.19	13	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM QPSK	100@0	5.44	13	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM QPSK	1@0	4.84	13	**PASS**

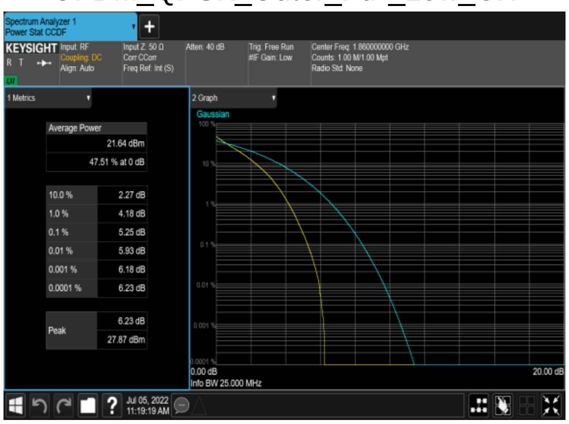
N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



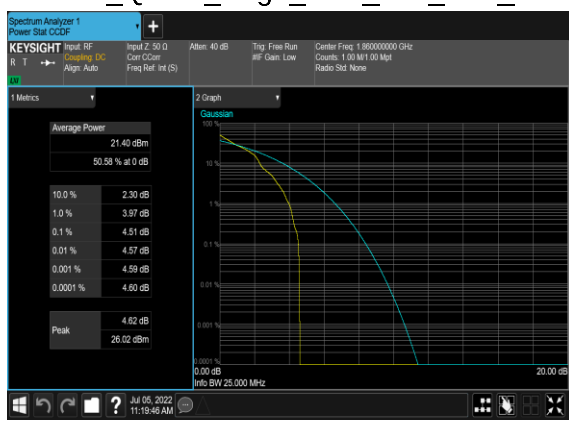
N2(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



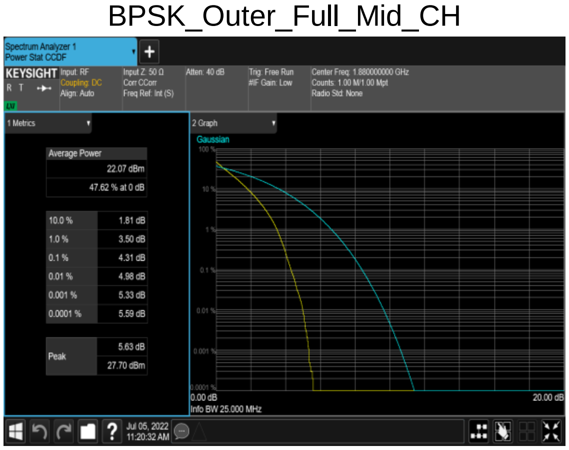
N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



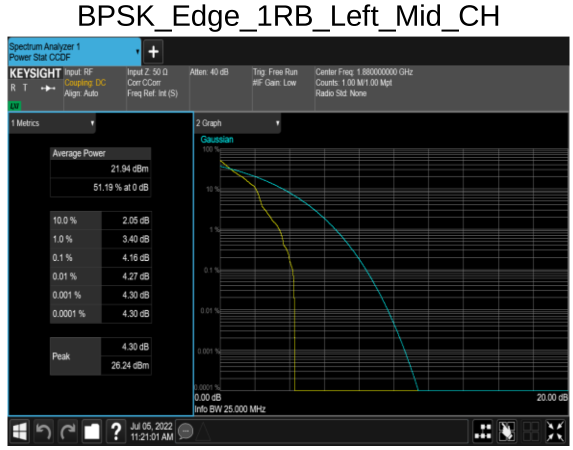
N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



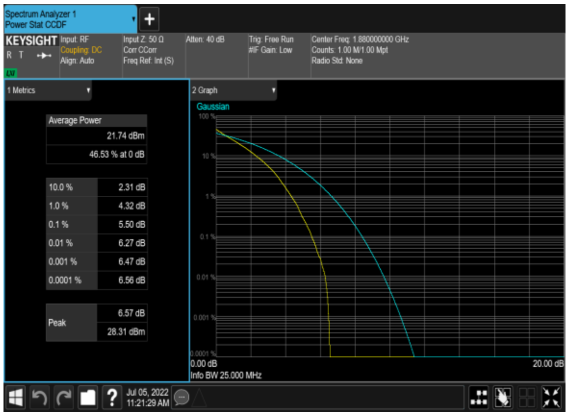
N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N2(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH

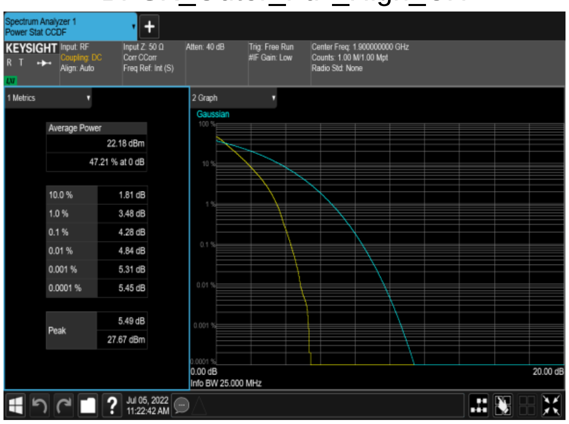


N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



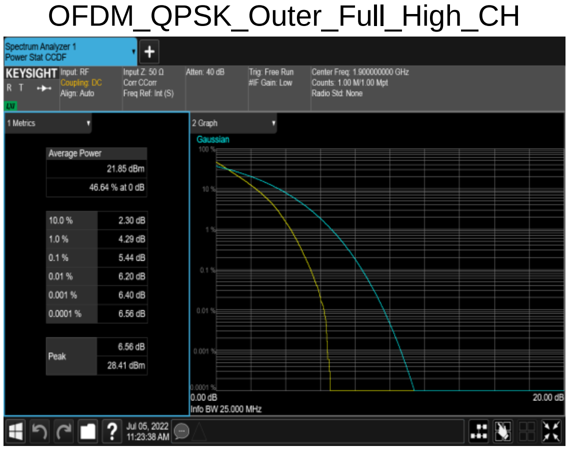
N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

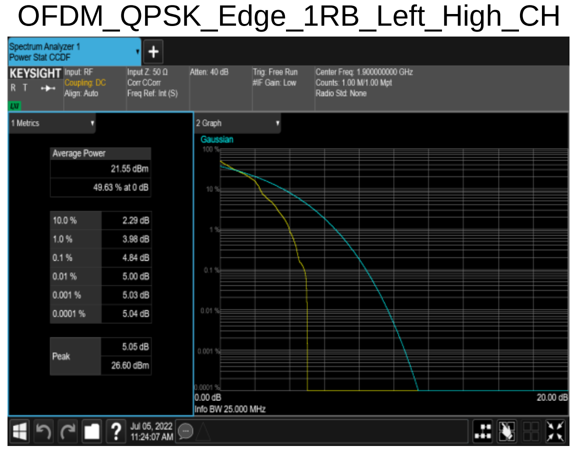


N2(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH

N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



Occupied Bandwidth

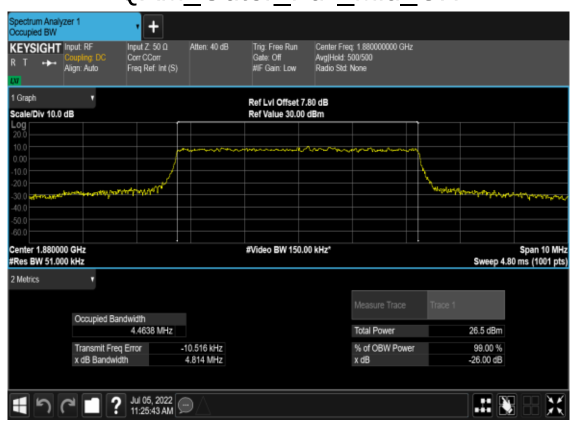
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
2	15	5	392000	1880.0	DFT-s-OFDM PI/2 BPSK	25@0	4.4576	4.821
2	15	5	392000	1880.0	DFT-s-OFDM QPSK	25@0	4.4674	4.82
2	15	5	392000	1880.0	CP-OFDM QPSK	25@0	4.4659	4.872
2	15	5	392000	1880.0	CP-OFDM 16 QAM	25@0	4.4638	4.814
2	15	5	392000	1880.0	CP-OFDM 64 QAM	25@0	4.4625	4.799
2	15	5	392000	1880.0	CP-OFDM 256 QAM	25@0	4.4644	4.842
2	15	10	392000	1880.0	DFT-s-OFDM PI/2 BPSK	50@0	8.926	9.453
2	15	10	392000	1880.0	DFT-s-OFDM QPSK	50@0	8.9017	9.546
2	15	10	392000	1880.0	CP-OFDM QPSK	52@0	9.2869	9.888
2	15	10	392000	1880.0	CP-OFDM 16 QAM	52@0	9.2687	9.84
2	15	10	392000	1880.0	CP-OFDM 64 QAM	52@0	9.2648	9.874
2	15	10	392000	1880.0	CP-OFDM 256 QAM	52@0	9.2711	9.871
2	15	15	392000	1880.0	DFT-s-OFDM PI/2 BPSK	75@0	13.379	14.12
2	15	15	392000	1880.0	DFT-s-OFDM QPSK	75@0	13.407	14.09
2	15	15	392000	1880.0	CP-OFDM QPSK	79@0	14.091	14.81
2	15	15	392000	1880.0	CP-OFDM 16 QAM	79@0	14.101	14.81
2	15	15	392000	1880.0	CP-OFDM 64 QAM	79@0	14.101	14.74
2	15	15	392000	1880.0	CP-OFDM 256 QAM	79@0	14.109	14.8
2	15	20	392000	1880.0	DFT-s-OFDM PI/2 BPSK	100@0	17.878	18.87
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	100@0	17.848	19.1
2	15	20	392000	1880.0	CP-OFDM QPSK	106@0	18.906	19.95
2	15	20	392000	1880.0	CP-OFDM 16 QAM	106@0	18.89	19.87
2	15	20	392000	1880.0	CP-OFDM 64 QAM	106@0	18.873	19.99
2	15	20	392000	1880.0	CP-OFDM 256 QAM	106@0	18.923	20.02

N2(5M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

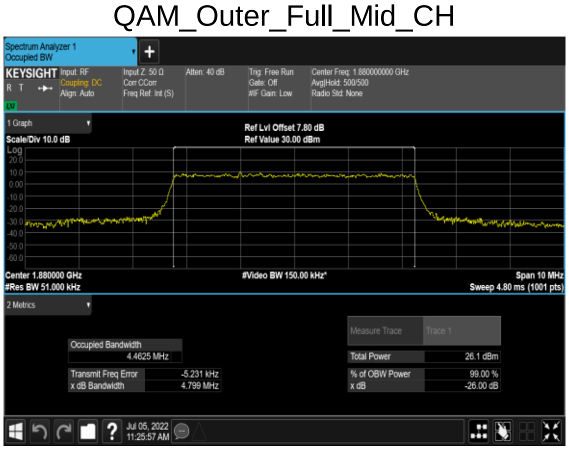
N2(5M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

N2(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

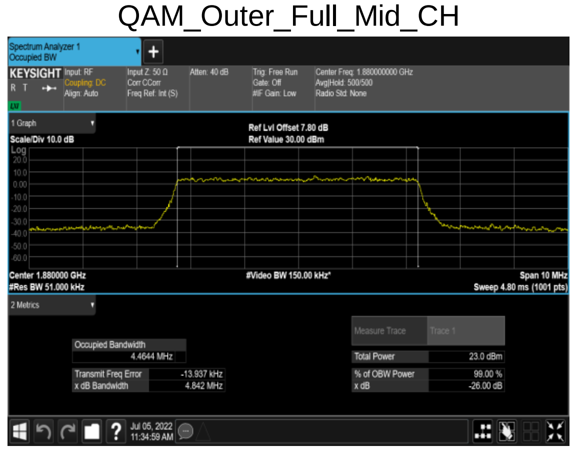
N2(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N2(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N2(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

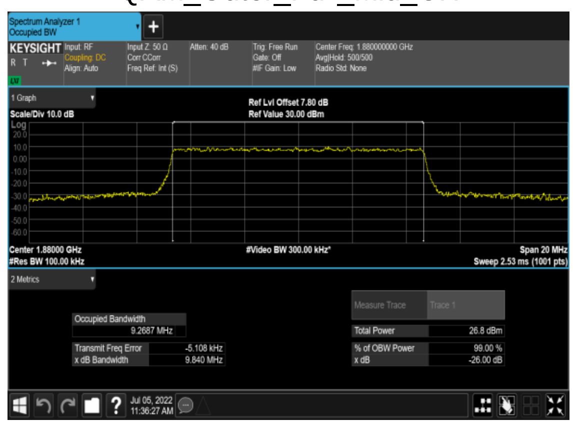


N2(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

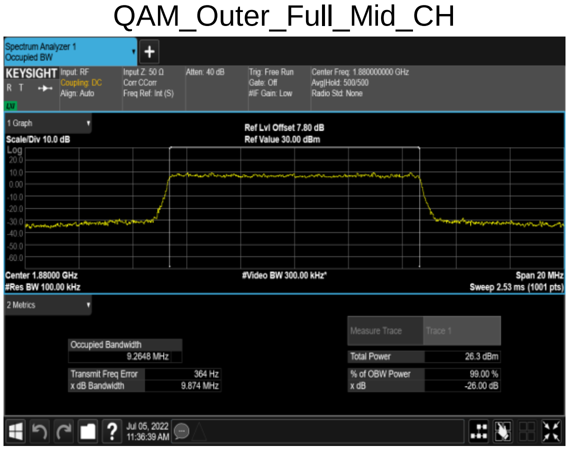
N2(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

N2(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

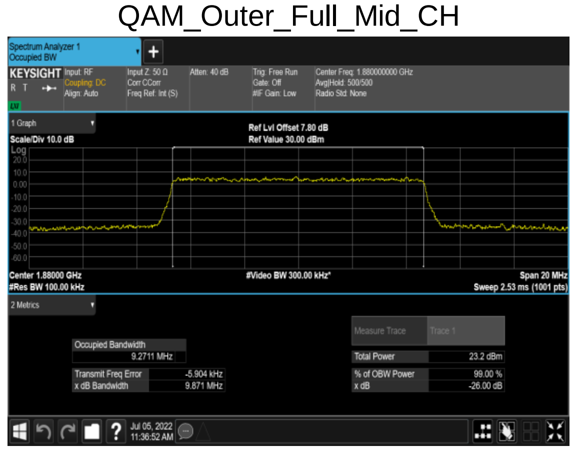
N2(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N2(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



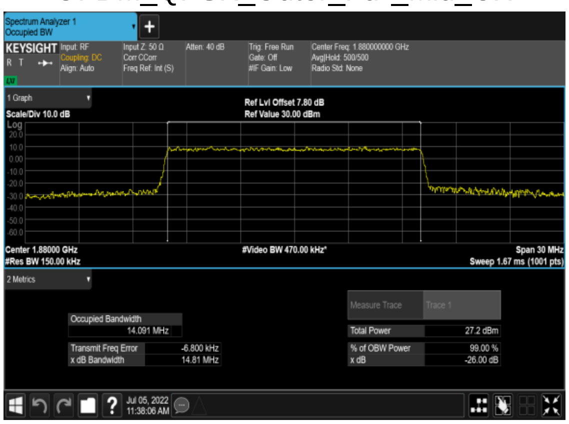
N2(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



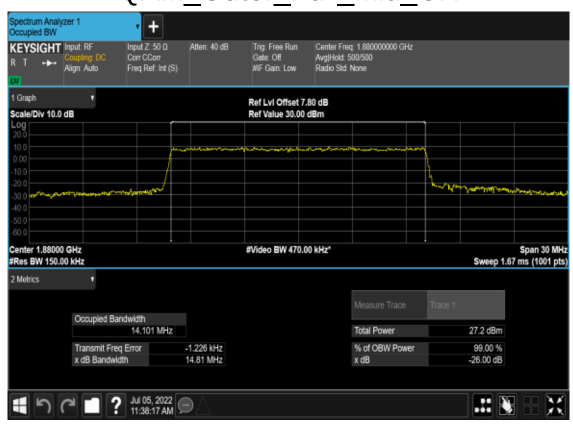
N2(15M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

N2(15M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

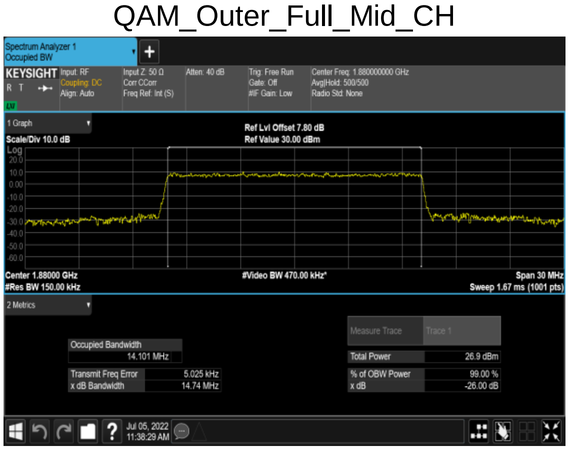
N2(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



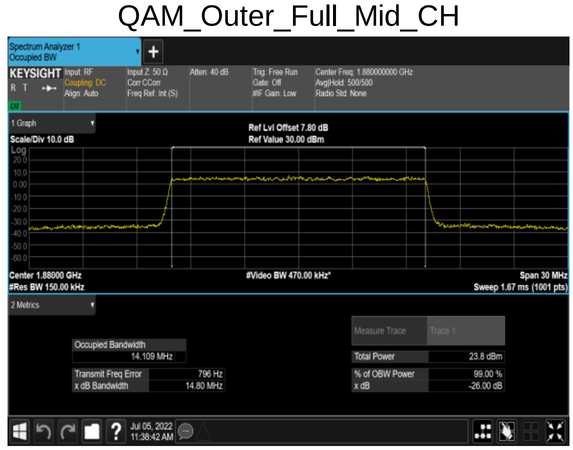
N2(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



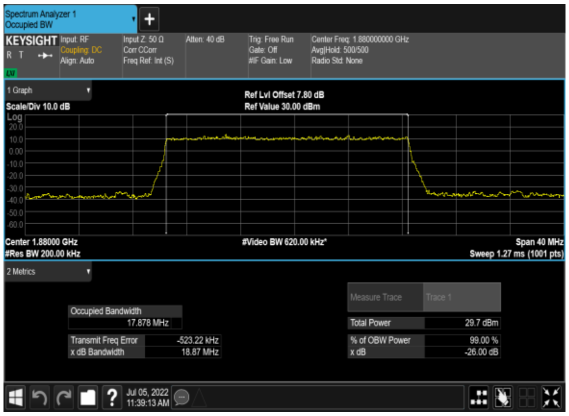
N2(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



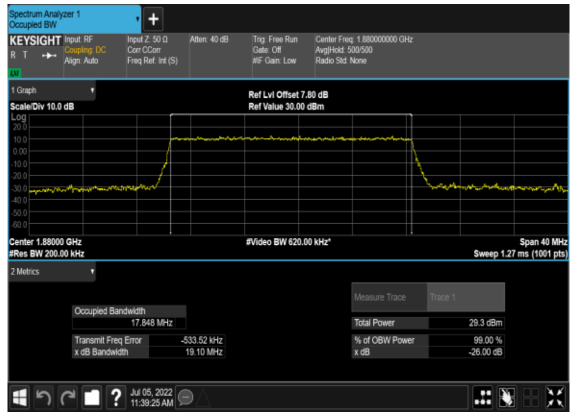
N2(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



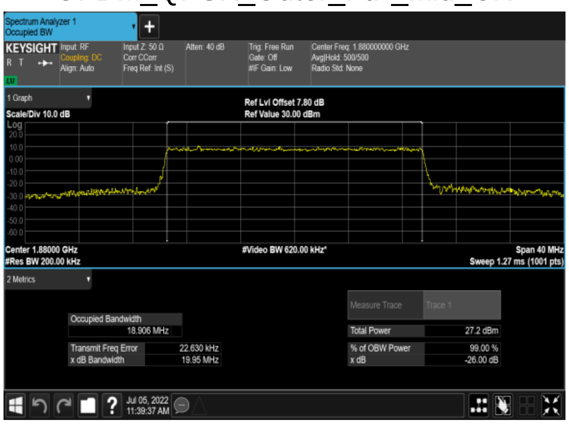
N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



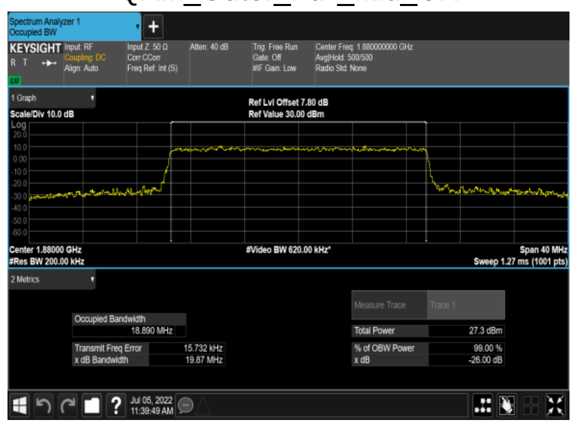
N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



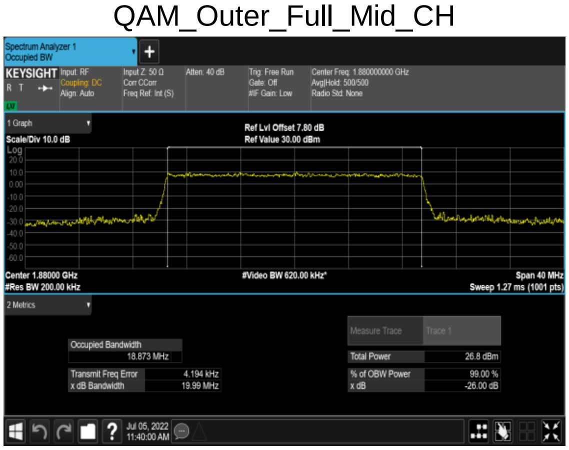
N2(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



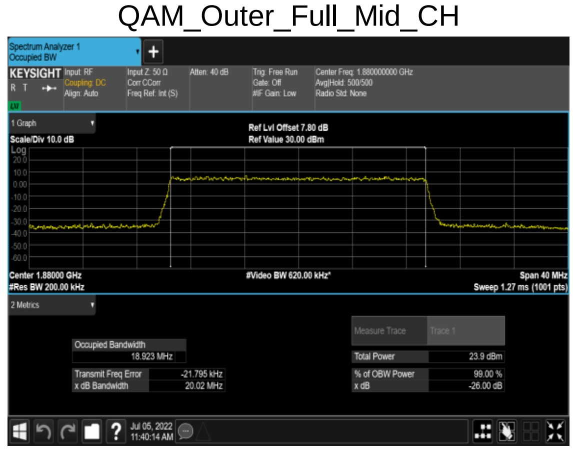
N2(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N2(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N2(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

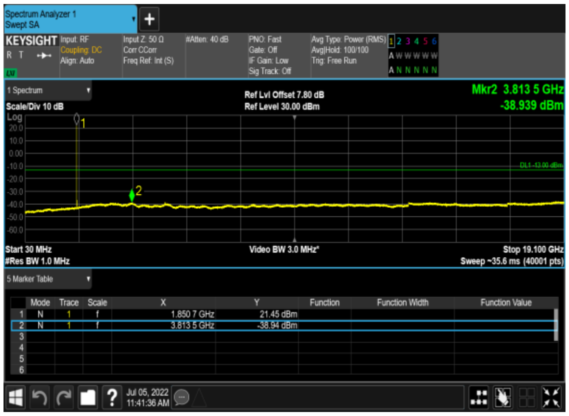


Conducted Spurious Emissions

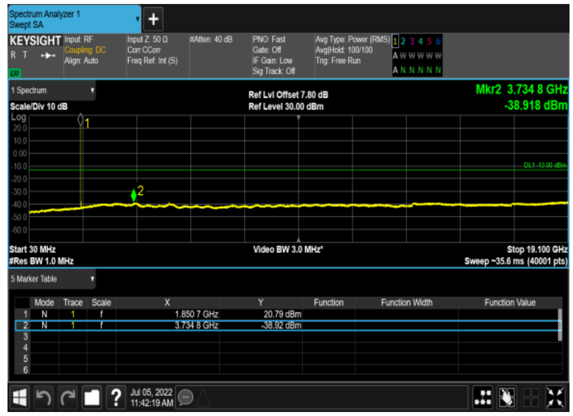
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
2	15	5	386500	1852.5	DFT-s-OFDM BPSK	1@0	see graph	---
2	15	5	386500	1852.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	386500	1852.5	DFT-s-OFDM QPSK	1@0	see graph	---
2	15	5	386500	1852.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	5	392000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	---
2	15	5	392000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	392000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	---
2	15	5	392000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	5	397500	1907.5	DFT-s-OFDM BPSK	1@0	see graph	---
2	15	5	397500	1907.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	397500	1907.5	DFT-s-OFDM QPSK	1@0	see graph	---
2	15	5	397500	1907.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	387000	1855.0	DFT-s-OFDM BPSK	1@0	see graph	---
2	15	10	387000	1855.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	10	387000	1855.0	DFT-s-OFDM QPSK	1@0	see graph	---
2	15	10	387000	1855.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	392000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	---
2	15	10	392000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	10	392000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	---
2	15	10	392000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	397000	1905.0	DFT-s-OFDM BPSK	1@0	see graph	---
2	15	10	397000	1905.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**

2	15	10	397000	1905.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	10	397000	1905.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	20	388000	1860.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	20	388000	1860.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	392000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	20	392000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	20	392000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	20	396000	1900.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	20	396000	1900.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

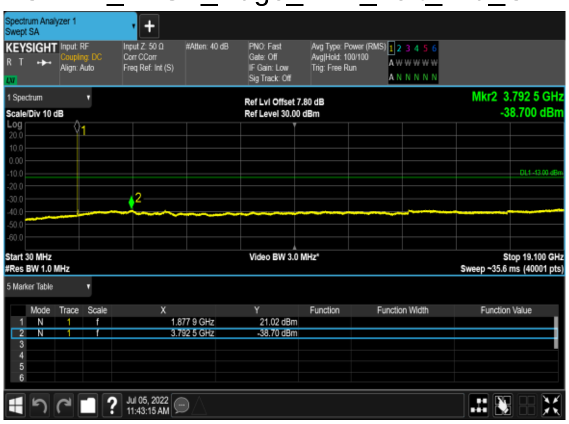
N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



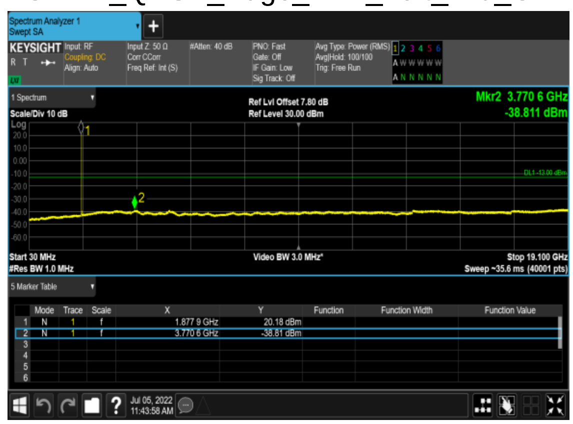
N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



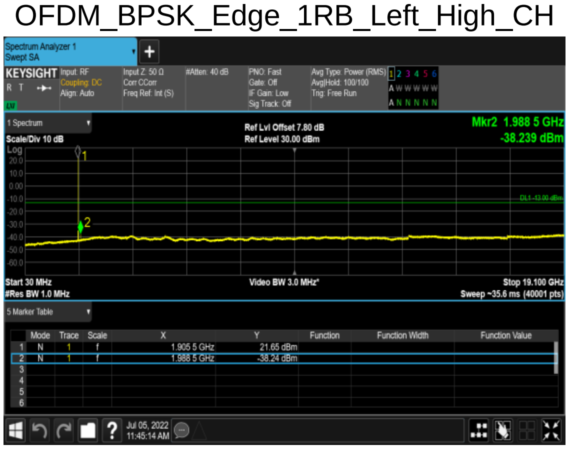
N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



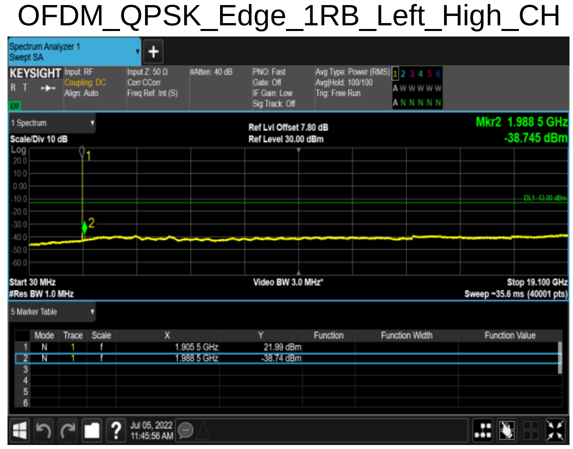
N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



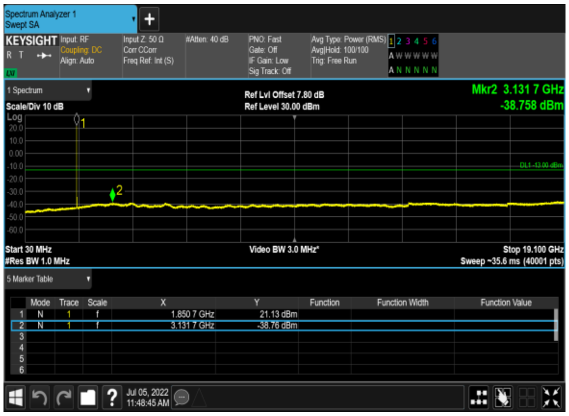
N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



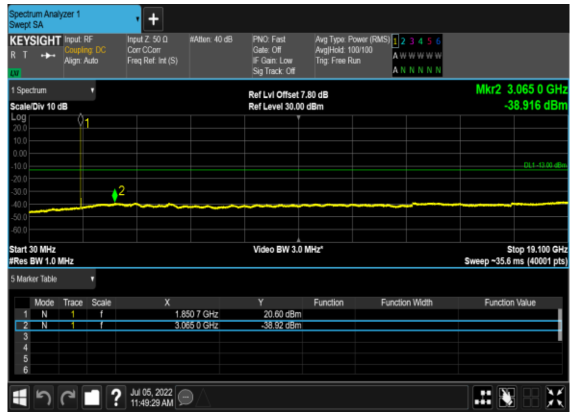
N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



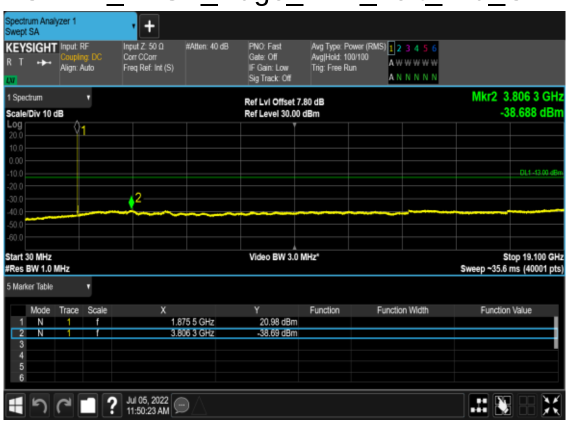
N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



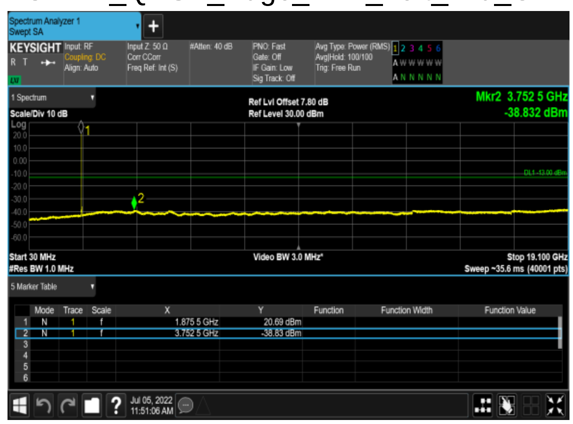
N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



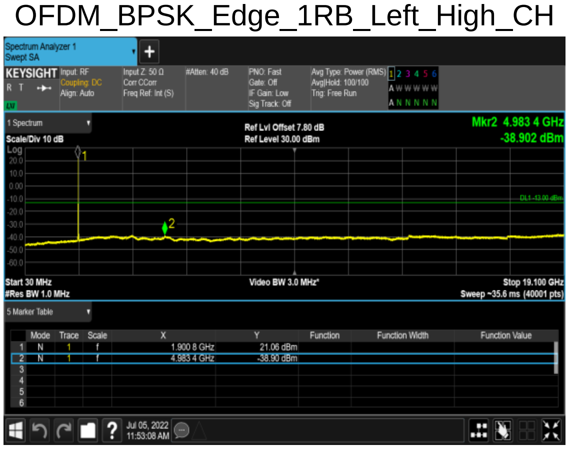
N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



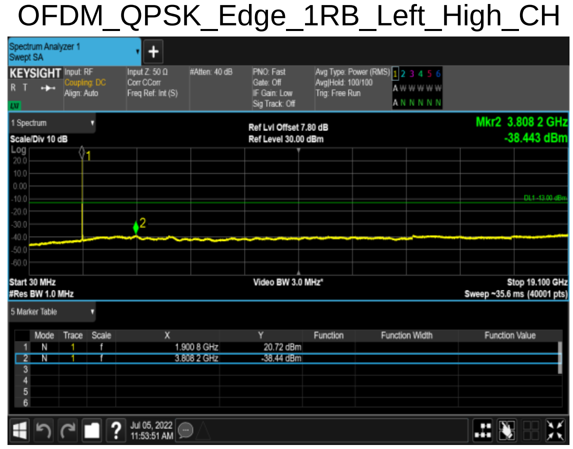
N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



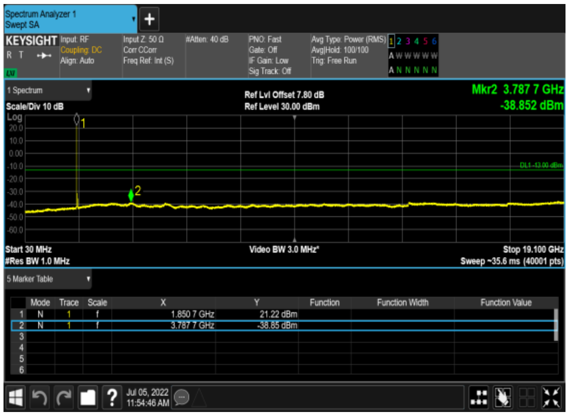
N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



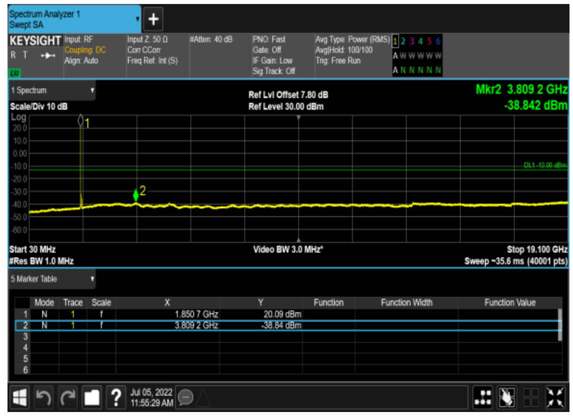
N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



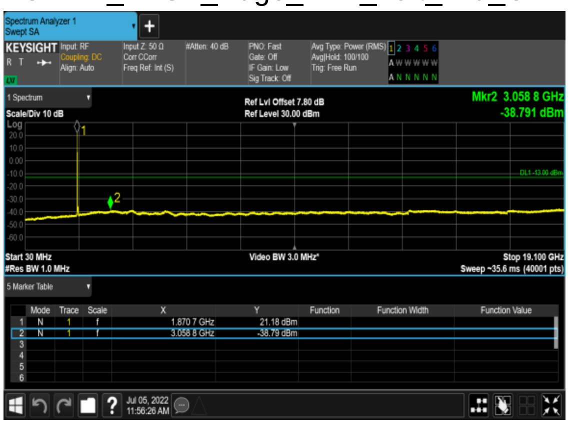
N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



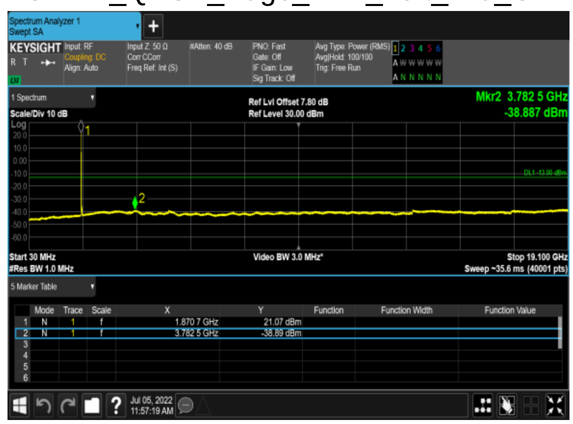
N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



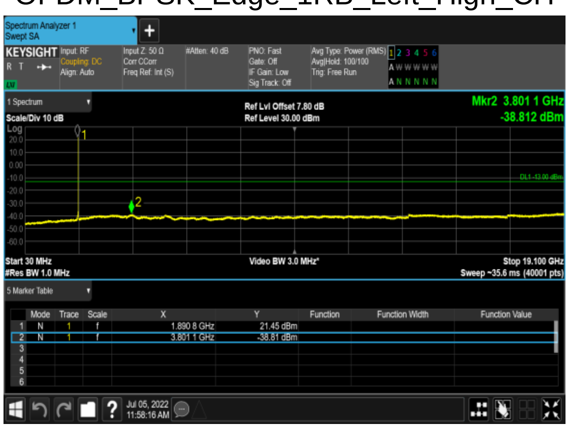
N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



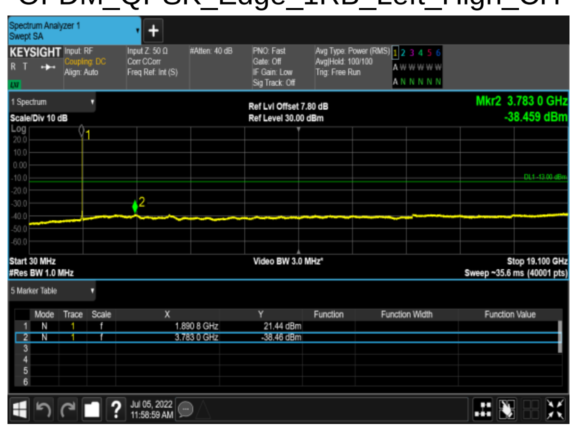
N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



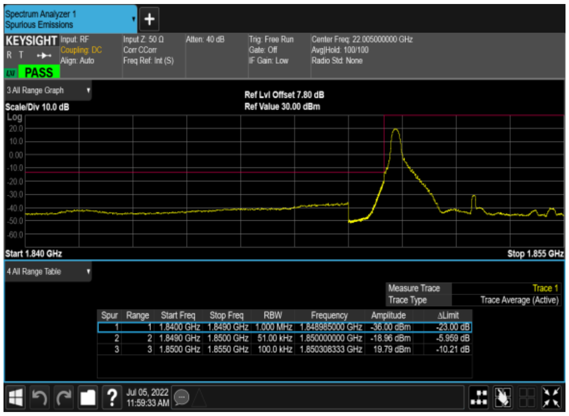
N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



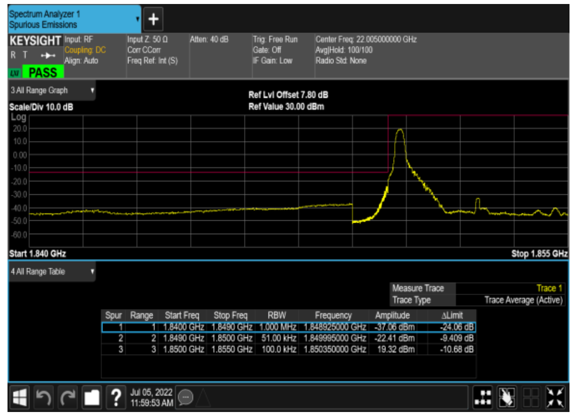
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
2	15	5	386500	1852.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	386500	1852.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	5	386500	1852.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
2	15	5	386500	1852.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
2	15	5	397500	1907.5	DFT-s-OFDM BPSK	1@24	see graph	**PASS**
2	15	5	397500	1907.5	DFT-s-OFDM QPSK	1@24	see graph	**PASS**
2	15	5	397500	1907.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
2	15	5	397500	1907.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
2	15	10	387000	1855.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	10	387000	1855.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	387000	1855.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
2	15	10	387000	1855.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
2	15	10	397000	1905.0	DFT-s-OFDM BPSK	1@51	see graph	**PASS**
2	15	10	397000	1905.0	DFT-s-OFDM QPSK	1@51	see graph	**PASS**
2	15	10	397000	1905.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
2	15	10	397000	1905.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
2	15	20	388000	1860.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM BPSK	1@105	see graph	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM QPSK	1@105	see graph	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
2	15	20	396000	1900.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**

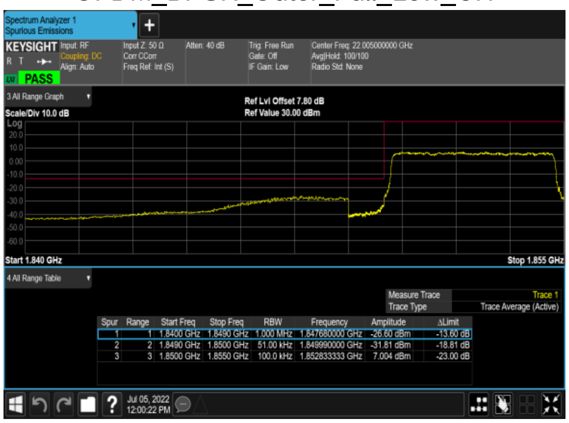
N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



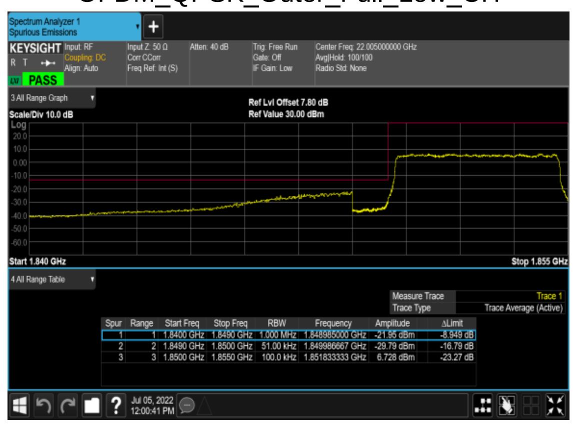
N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



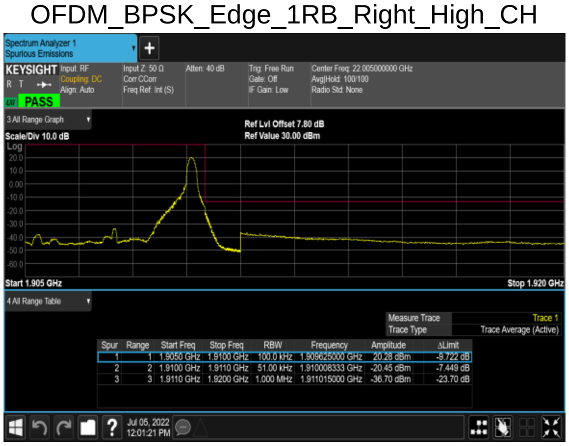
N2(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



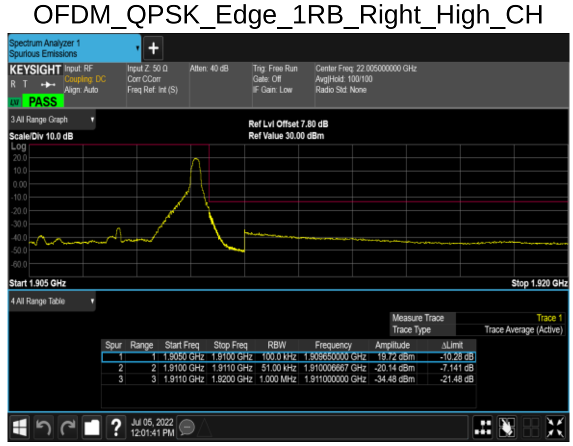
N2(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



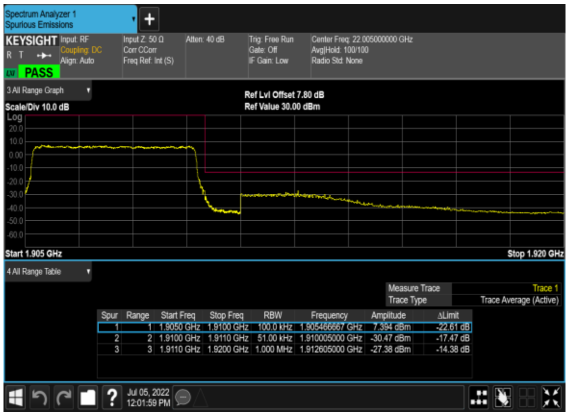
N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



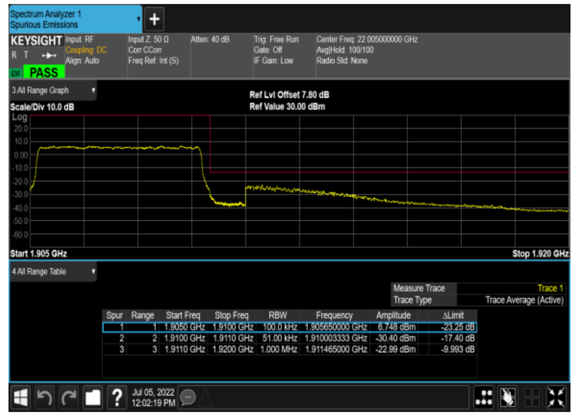
N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



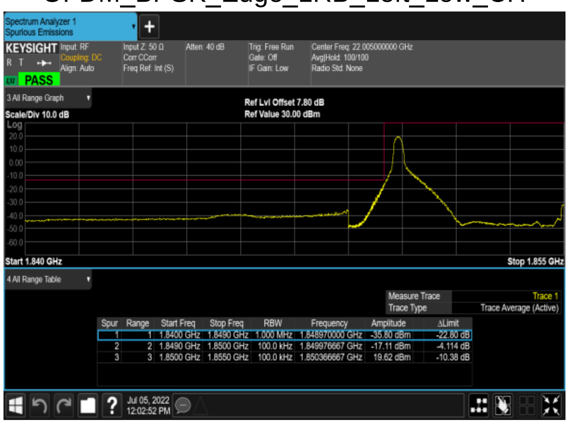
N2(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



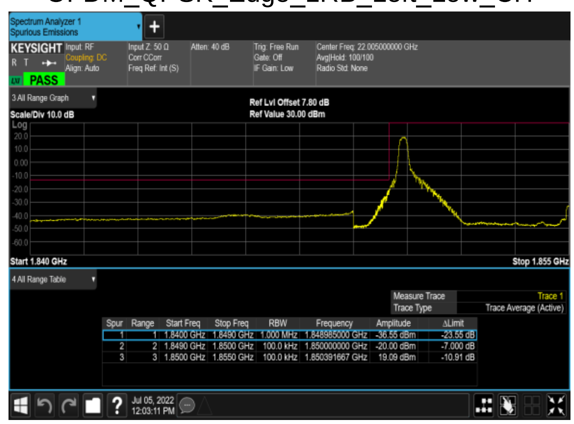
N2(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



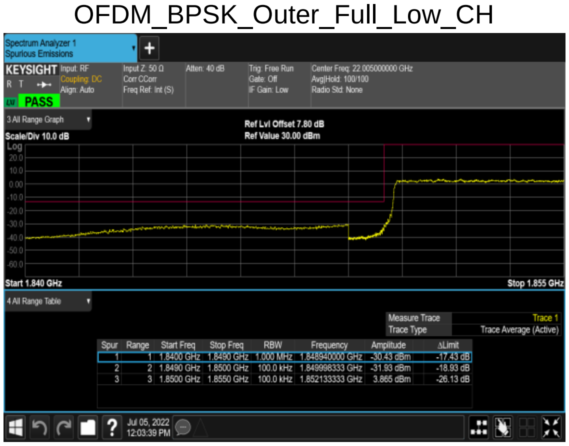
N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



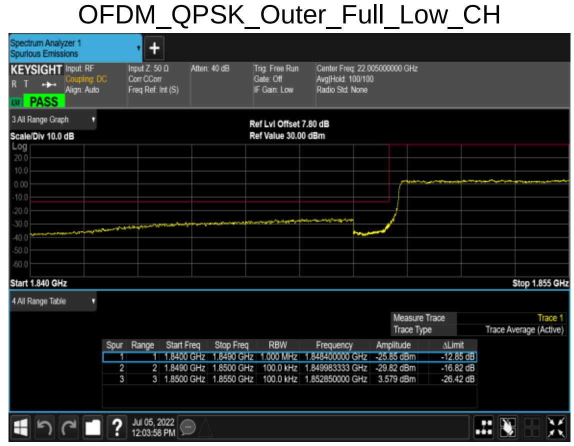
N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



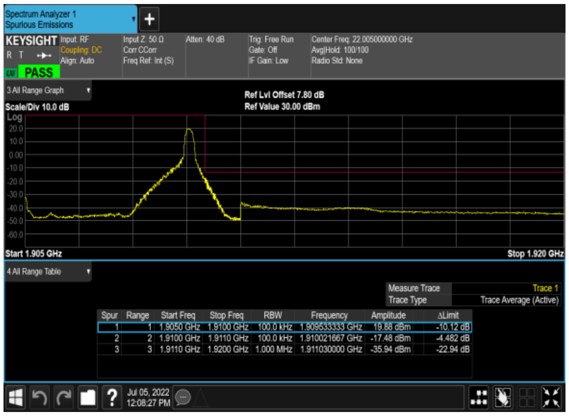
N2(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



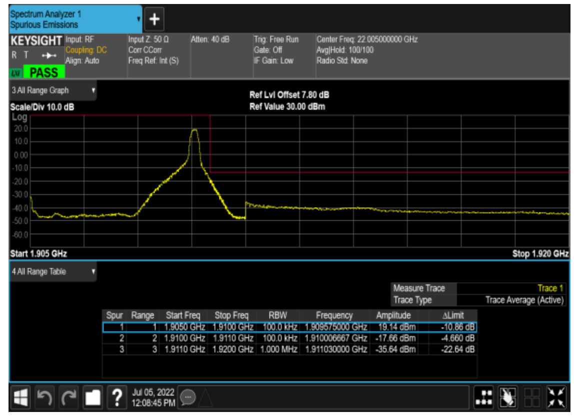
N2(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



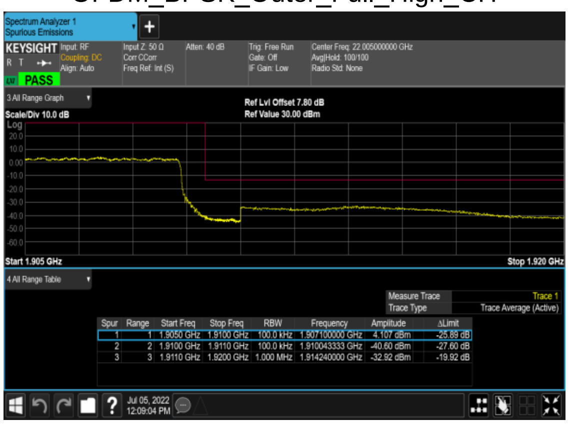
N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



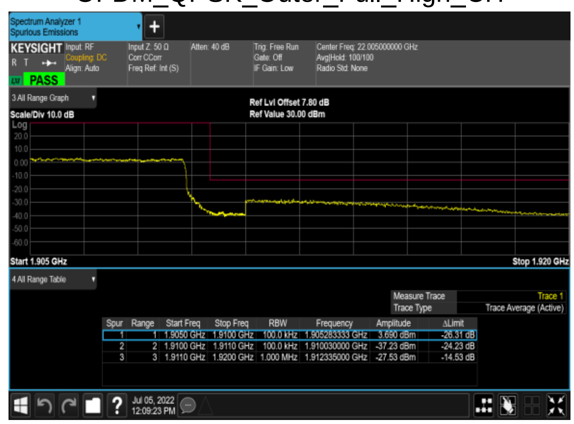
N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



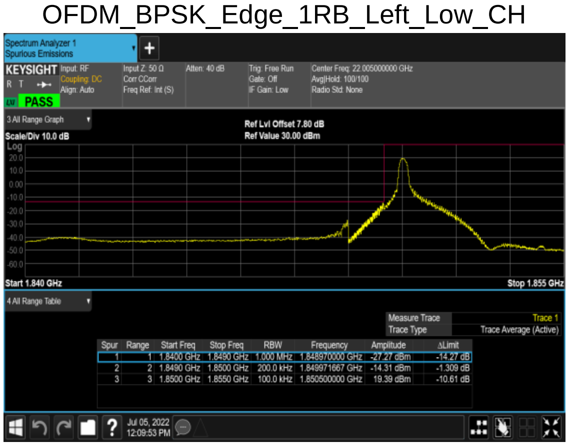
N2(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



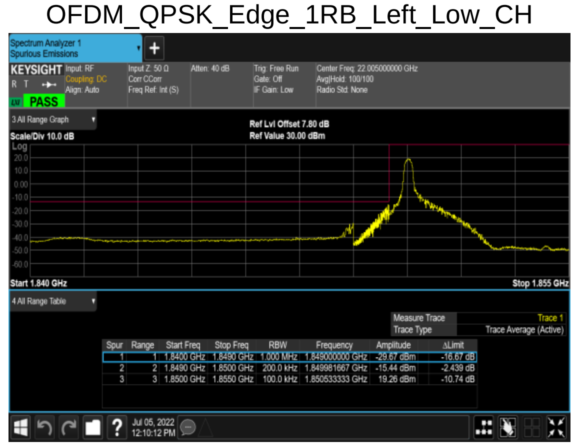
N2(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



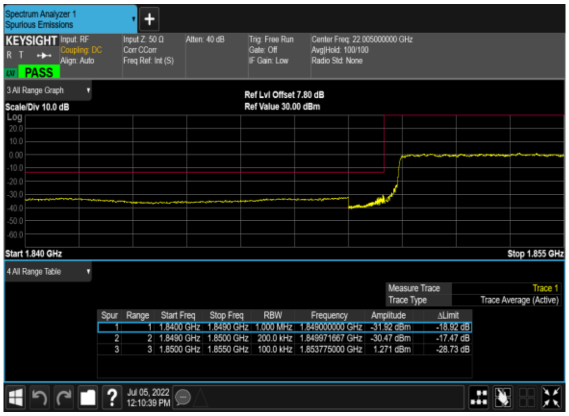
N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



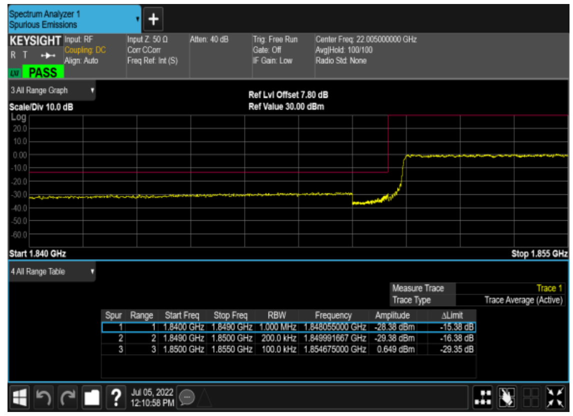
N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



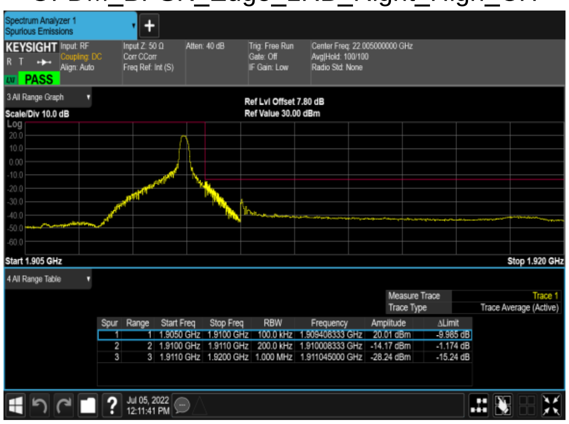
N2(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



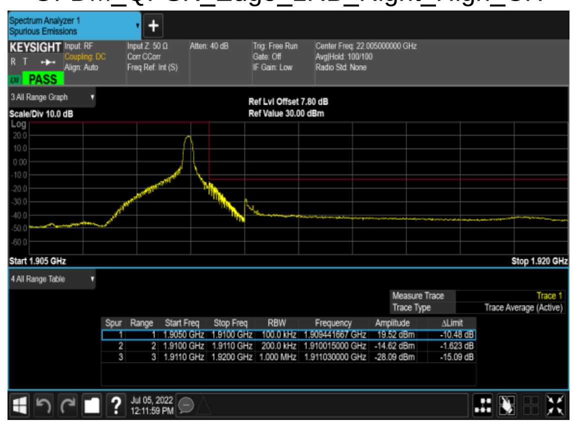
N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



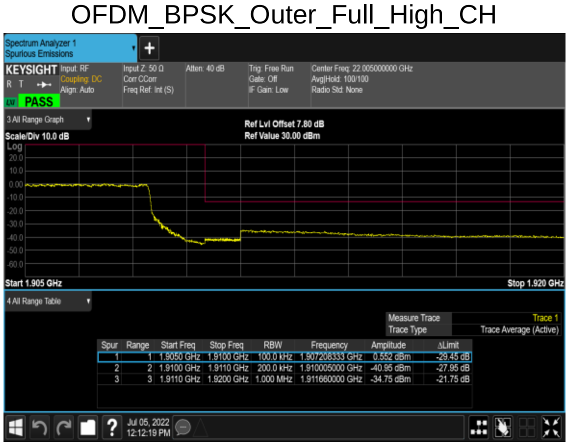
N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



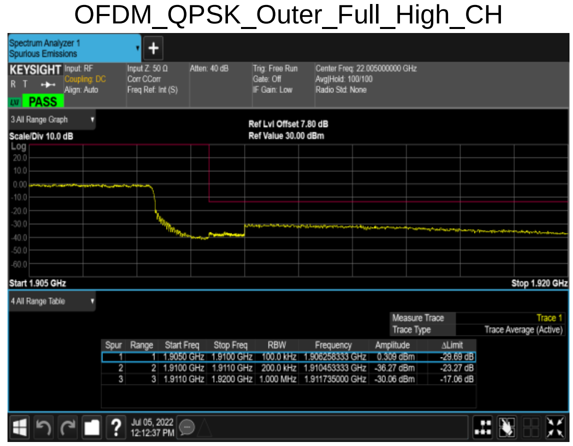
N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N2(20M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



Software Version: 22.05.231801

FR1 N7

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

Maximum EIRP (Ant.13), Antenna gain=0.00dBi

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	5	524500	2502.5	DFT-s-OFDM QPSK	1@1	20.99	20.99	0.1256
7	15	5	524500	2502.5	DFT-s-OFDM 16 QAM	1@1	20.62	20.62	0.1153
7	15	5	531000	2535	DFT-s-OFDM QPSK	1@1	21.11	21.11	0.1291
7	15	5	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.65	20.65	0.1161
7	15	5	537500	2567.5	DFT-s-OFDM QPSK	1@1	21.14	21.14	0.1300
7	15	5	537500	2567.5	DFT-s-OFDM 16 QAM	1@1	20.61	20.61	0.1151
7	15	10	525000	2505	DFT-s-OFDM QPSK	1@1	20.84	20.84	0.1213
7	15	10	525000	2505	DFT-s-OFDM 16 QAM	1@1	20.43	20.43	0.1104
7	15	10	531000	2535	DFT-s-OFDM QPSK	1@1	20.9	20.9	0.1230
7	15	10	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.39	20.39	0.1094
7	15	10	537000	2565	DFT-s-OFDM QPSK	1@1	21.02	21.02	0.1265
7	15	10	537000	2565	DFT-s-OFDM 16 QAM	1@1	20.4	20.4	0.1096
7	15	15	525500	2507.5	DFT-s-OFDM QPSK	1@1	20.93	20.93	0.1239
7	15	15	525500	2507.5	DFT-s-OFDM 16 QAM	1@1	20.58	20.58	0.1143
7	15	15	531000	2535	DFT-s-OFDM QPSK	1@1	21.02	21.02	0.1265
7	15	15	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.62	20.62	0.1153
7	15	15	536500	2562.5	DFT-s-OFDM QPSK	1@1	21.01	21.01	0.1262
7	15	15	536500	2562.5	DFT-s-OFDM 16 QAM	1@1	20.46	20.46	0.1112
7	15	20	526000	2510	DFT-s-OFDM PI/2 BPSK	50@25	21.15	21.15	0.1303

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	20	526000	2510	DFT-s-OFDM PI/2 BPSK	1@1	21.02	21.02	0.1265
7	15	20	526000	2510	DFT-s-OFDM PI/2 BPSK	1@104	21.11	21.11	0.1291
7	15	20	526000	2510	DFT-s-OFDM QPSK	50@25	21.21	21.21	0.1321
7	15	20	526000	2510	DFT-s-OFDM QPSK	1@1	20.93	20.93	0.1239
7	15	20	526000	2510	DFT-s-OFDM QPSK	1@104	21.01	21.01	0.1262
7	15	20	526000	2510	DFT-s-OFDM 16 QAM	50@25	19.88	19.88	0.0973
7	15	20	526000	2510	DFT-s-OFDM 16 QAM	1@1	20.62	20.62	0.1153
7	15	20	526000	2510	DFT-s-OFDM 16 QAM	1@104	20.62	20.62	0.1153
7	15	20	526000	2510	DFT-s-OFDM 64 QAM	50@25	18.84	18.84	0.0766
7	15	20	526000	2510	DFT-s-OFDM 64 QAM	1@1	18.74	18.74	0.0748
7	15	20	526000	2510	DFT-s-OFDM 64 QAM	1@104	18.79	18.79	0.0757
7	15	20	526000	2510	DFT-s-OFDM 256 QAM	50@25	16.73	16.73	0.0471
7	15	20	526000	2510	DFT-s-OFDM 256 QAM	1@1	16.86	16.86	0.0485
7	15	20	526000	2510	DFT-s-OFDM 256 QAM	1@104	16.93	16.93	0.0493
7	15	20	526000	2510	CP-OFDM QPSK	53@26	19.87	19.87	0.0971
7	15	20	526000	2510	CP-OFDM QPSK	1@1	19.64	19.64	0.0920
7	15	20	526000	2510	CP-OFDM QPSK	1@104	19.62	19.62	0.0916
7	15	20	531000	2535	DFT-s-OFDM PI/2 BPSK	50@25	21.21	21.21	0.1321
7	15	20	531000	2535	DFT-s-OFDM PI/2 BPSK	1@1	21.04	21.04	0.1271
7	15	20	531000	2535	DFT-s-OFDM PI/2 BPSK	1@104	21.09	21.09	0.1285
7	15	20	531000	2535	DFT-s-OFDM QPSK	50@25	21.22	21.22	0.1324
7	15	20	531000	2535	DFT-s-OFDM QPSK	1@1	20.97	20.97	0.1250
7	15	20	531000	2535	DFT-s-OFDM QPSK	1@104	21.02	21.02	0.1265
7	15	20	531000	2535	DFT-s-OFDM 16 QAM	50@25	19.88	19.88	0.0973

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	20	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.48	20.48	0.1117
7	15	20	531000	2535	DFT-s-OFDM 16 QAM	1@104	20.59	20.59	0.1146
7	15	20	531000	2535	DFT-s-OFDM 64 QAM	50@25	18.89	18.89	0.0774
7	15	20	531000	2535	DFT-s-OFDM 64 QAM	1@1	18.81	18.81	0.0760
7	15	20	531000	2535	DFT-s-OFDM 64 QAM	1@104	18.83	18.83	0.0764
7	15	20	531000	2535	DFT-s-OFDM 256 QAM	50@25	16.79	16.79	0.0478
7	15	20	531000	2535	DFT-s-OFDM 256 QAM	1@1	16.81	16.81	0.0480
7	15	20	531000	2535	DFT-s-OFDM 256 QAM	1@104	16.94	16.94	0.0494
7	15	20	531000	2535	CP-OFDM QPSK	53@26	19.86	19.86	0.0968
7	15	20	531000	2535	CP-OFDM QPSK	1@1	19.58	19.58	0.0908
7	15	20	531000	2535	CP-OFDM QPSK	1@104	19.63	19.63	0.0918
7	15	20	536000	2560	DFT-s-OFDM PI/2 BPSK	50@25	21.37	21.37	0.1371
7	15	20	536000	2560	DFT-s-OFDM PI/2 BPSK	1@1	21.13	21.13	0.1297
7	15	20	536000	2560	DFT-s-OFDM PI/2 BPSK	1@104	21.21	21.21	0.1321
7	15	20	536000	2560	DFT-s-OFDM QPSK	50@25	21.38	21.38	0.1374
7	15	20	536000	2560	DFT-s-OFDM QPSK	1@1	20.99	20.99	0.1256
7	15	20	536000	2560	DFT-s-OFDM QPSK	1@104	21.06	21.06	0.1276
7	15	20	536000	2560	DFT-s-OFDM 16 QAM	50@25	19.85	19.85	0.0966
7	15	20	536000	2560	DFT-s-OFDM 16 QAM	1@1	20.63	20.63	0.1156
7	15	20	536000	2560	DFT-s-OFDM 16 QAM	1@104	20.67	20.67	0.1167
7	15	20	536000	2560	DFT-s-OFDM 64 QAM	50@25	18.99	18.99	0.0793
7	15	20	536000	2560	DFT-s-OFDM 64 QAM	1@1	18.85	18.85	0.0767
7	15	20	536000	2560	DFT-s-OFDM 64 QAM	1@104	18.92	18.92	0.0780
7	15	20	536000	2560	DFT-s-OFDM 256 QAM	50@25	16.93	16.93	0.0493

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	20	536000	2560	DFT-s-OFDM 256 QAM	1@1	16.93	16.93	0.0493
7	15	20	536000	2560	DFT-s-OFDM 256 QAM	1@104	17.08	17.08	0.0511
7	15	20	536000	2560	CP-OFDM QPSK	53@26	20.01	20.01	0.1002
7	15	20	536000	2560	CP-OFDM QPSK	1@1	19.66	19.66	0.0925
7	15	20	536000	2560	CP-OFDM QPSK	1@104	19.73	19.73	0.0940

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	5	524500	2502.5	DFT-s-OFDM QPSK	1@1	20.99	20.99	0.1256
7	15	5	531000	2535	DFT-s-OFDM QPSK	1@1	21.11	21.11	0.1291
7	15	5	537500	2567.5	DFT-s-OFDM QPSK	1@1	21.14	21.14	0.1300
7	15	5	524500	2502.5	DFT-s-OFDM 16 QAM	1@1	20.62	20.62	0.1153
7	15	5	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.65	20.65	0.1161
7	15	5	537500	2567.5	DFT-s-OFDM 16 QAM	1@1	20.61	20.61	0.1151
7	15	10	525000	2505	DFT-s-OFDM QPSK	1@1	20.84	20.84	0.1213
7	15	10	531000	2535	DFT-s-OFDM QPSK	1@1	20.9	20.9	0.1230
7	15	10	537000	2565	DFT-s-OFDM QPSK	1@1	21.02	21.02	0.1265
7	15	10	525000	2505	DFT-s-OFDM 16 QAM	1@1	20.43	20.43	0.1104
7	15	10	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.39	20.39	0.1094
7	15	10	537000	2565	DFT-s-OFDM 16 QAM	1@1	20.4	20.4	0.1096
7	15	15	525500	2507.5	DFT-s-OFDM QPSK	1@1	20.93	20.93	0.1239
7	15	15	531000	2535	DFT-s-OFDM QPSK	1@1	21.02	21.02	0.1265
7	15	15	536500	2562.5	DFT-s-OFDM QPSK	1@1	21.01	21.01	0.1262
7	15	15	525500	2507.5	DFT-s-OFDM 16 QAM	1@1	20.58	20.58	0.1143
7	15	15	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.62	20.62	0.1153
7	15	15	536500	2562.5	DFT-s-OFDM 16 QAM	1@1	20.46	20.46	0.1112
7	15	20	526000	2510	DFT-s-OFDM PI/2 BPSK	50@25	21.15	21.15	0.1303
7	15	20	526000	2510	DFT-s-OFDM PI/2 BPSK	1@1	21.02	21.02	0.1265
7	15	20	526000	2510	DFT-s-OFDM PI/2 BPSK	1@104	21.11	21.11	0.1291
7	15	20	526000	2510	DFT-s-OFDM QPSK	50@25	21.21	21.21	0.1321
7	15	20	526000	2510	DFT-s-OFDM QPSK	1@1	20.93	20.93	0.1239
7	15	20	526000	2510	DFT-s-OFDM QPSK	1@104	21.01	21.01	0.1262
7	15	20	526000	2510	CP-OFDM QPSK	53@26	19.87	19.87	0.0971
7	15	20	526000	2510	CP-OFDM QPSK	1@1	19.64	19.64	0.0920
7	15	20	526000	2510	CP-OFDM QPSK	1@104	19.62	19.62	0.0916
7	15	20	531000	2535	DFT-s-OFDM PI/2 BPSK	50@25	21.21	21.21	0.1321
7	15	20	531000	2535	DFT-s-OFDM PI/2 BPSK	1@1	21.04	21.04	0.1271
7	15	20	531000	2535	DFT-s-OFDM PI/2 BPSK	1@104	21.09	21.09	0.1285
7	15	20	531000	2535	DFT-s-OFDM QPSK	50@25	21.22	21.22	0.1324

7	15	20	531000	2535	DFT-s-OFDM QPSK	1@1	20.97	20.97	0.1250
7	15	20	531000	2535	DFT-s-OFDM QPSK	1@104	21.02	21.02	0.1265
7	15	20	531000	2535	CP-OFDM QPSK	53@26	19.86	19.86	0.0968
7	15	20	531000	2535	CP-OFDM QPSK	1@1	19.58	19.58	0.0908
7	15	20	531000	2535	CP-OFDM QPSK	1@104	19.63	19.63	0.0918
7	15	20	536000	2560	DFT-s-OFDM PI/2 BPSK	50@25	21.37	21.37	0.1371
7	15	20	536000	2560	DFT-s-OFDM PI/2 BPSK	1@1	21.13	21.13	0.1297
7	15	20	536000	2560	DFT-s-OFDM PI/2 BPSK	1@104	21.21	21.21	0.1321
7	15	20	536000	2560	DFT-s-OFDM QPSK	50@25	21.38	21.38	0.1374
7	15	20	536000	2560	DFT-s-OFDM QPSK	1@1	20.99	20.99	0.1256
7	15	20	536000	2560	DFT-s-OFDM QPSK	1@104	21.06	21.06	0.1276
7	15	20	536000	2560	CP-OFDM QPSK	53@26	20.01	20.01	0.1002
7	15	20	536000	2560	CP-OFDM QPSK	1@1	19.66	19.66	0.0925
7	15	20	536000	2560	CP-OFDM QPSK	1@104	19.73	19.73	0.0940
7	15	20	526000	2510	DFT-s-OFDM 16 QAM	50@25	19.88	19.88	0.0973
7	15	20	526000	2510	DFT-s-OFDM 16 QAM	1@1	20.62	20.62	0.1153
7	15	20	526000	2510	DFT-s-OFDM 16 QAM	1@104	20.62	20.62	0.1153
7	15	20	526000	2510	DFT-s-OFDM 64 QAM	50@25	18.84	18.84	0.0766
7	15	20	526000	2510	DFT-s-OFDM 64 QAM	1@1	18.74	18.74	0.0748
7	15	20	526000	2510	DFT-s-OFDM 64 QAM	1@104	18.79	18.79	0.0757
7	15	20	526000	2510	DFT-s-OFDM 256 QAM	50@25	16.73	16.73	0.0471
7	15	20	526000	2510	DFT-s-OFDM 256 QAM	1@1	16.86	16.86	0.0485
7	15	20	526000	2510	DFT-s-OFDM 256 QAM	1@104	16.93	16.93	0.0493
7	15	20	531000	2535	DFT-s-OFDM 16 QAM	50@25	19.88	19.88	0.0973
7	15	20	531000	2535	DFT-s-OFDM 16 QAM	1@1	20.48	20.48	0.1117
7	15	20	531000	2535	DFT-s-OFDM 16 QAM	1@104	20.59	20.59	0.1146
7	15	20	531000	2535	DFT-s-OFDM 64 QAM	50@25	18.89	18.89	0.0774
7	15	20	531000	2535	DFT-s-OFDM 64 QAM	1@1	18.81	18.81	0.0760
7	15	20	531000	2535	DFT-s-OFDM 64 QAM	1@104	18.83	18.83	0.0764
7	15	20	531000	2535	DFT-s-OFDM 256 QAM	50@25	16.79	16.79	0.0478
7	15	20	531000	2535	DFT-s-OFDM 256 QAM	1@1	16.81	16.81	0.0480
7	15	20	531000	2535	DFT-s-OFDM 256 QAM	1@104	16.94	16.94	0.0494
7	15	20	536000	2560	DFT-s-OFDM 16 QAM	50@25	19.85	19.85	0.0966
7	15	20	536000	2560	DFT-s-OFDM 16 QAM	1@1	20.63	20.63	0.1156

7	15	20	536000	2560	DFT-s-OFDM 16 QAM	1@104	20.67	20.67	0.1167
7	15	20	536000	2560	DFT-s-OFDM 64 QAM	50@25	18.99	18.99	0.0793
7	15	20	536000	2560	DFT-s-OFDM 64 QAM	1@1	18.85	18.85	0.0767
7	15	20	536000	2560	DFT-s-OFDM 64 QAM	1@104	18.92	18.92	0.0780
7	15	20	536000	2560	DFT-s-OFDM 256 QAM	50@25	16.93	16.93	0.0493
7	15	20	536000	2560	DFT-s-OFDM 256 QAM	1@1	16.93	16.93	0.0493
7	15	20	536000	2560	DFT-s-OFDM 256 QAM	1@104	17.08	17.08	0.0511

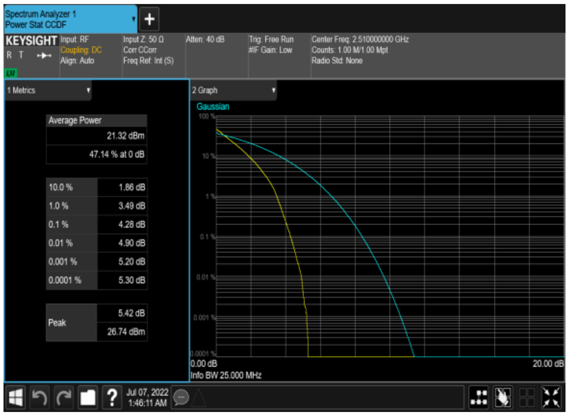
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0037	**PASS**	NV
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0032	**PASS**	LV
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0033	**PASS**	HV
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0025	**PASS**	-30℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0028	**PASS**	-20℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0069	**PASS**	-10℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0050	**PASS**	0℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0051	**PASS**	10℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0037	**PASS**	20℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0028	**PASS**	30℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0048	**PASS**	40℃
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	0.0023	**PASS**	50℃

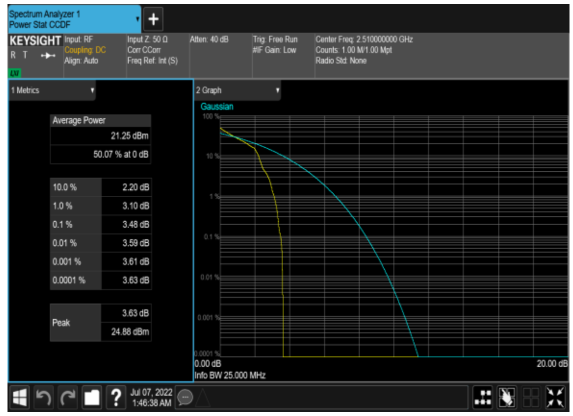
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
7	15	20	526000	2510.0	DFT-s-OFDM PI/2 BPSK	100@0	4.28	13	**PASS**
7	15	20	526000	2510.0	DFT-s-OFDM PI/2 BPSK	1@0	3.48	13	**PASS**
7	15	20	526000	2510.0	DFT-s-OFDM QPSK	100@0	5.32	13	**PASS**
7	15	20	526000	2510.0	DFT-s-OFDM QPSK	1@0	4.38	13	**PASS**
7	15	20	531000	2535.0	DFT-s-OFDM PI/2 BPSK	100@0	4.33	13	**PASS**
7	15	20	531000	2535.0	DFT-s-OFDM PI/2 BPSK	1@0	3.56	13	**PASS**
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	100@0	5.36	13	**PASS**
7	15	20	531000	2535.0	DFT-s-OFDM QPSK	1@0	4.57	13	**PASS**
7	15	20	536000	2560.0	DFT-s-OFDM PI/2 BPSK	100@0	4.19	13	**PASS**
7	15	20	536000	2560.0	DFT-s-OFDM PI/2 BPSK	1@0	3.5	13	**PASS**
7	15	20	536000	2560.0	DFT-s-OFDM QPSK	100@0	5.27	13	**PASS**
7	15	20	536000	2560.0	DFT-s-OFDM QPSK	1@0	4.41	13	**PASS**

B2_N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



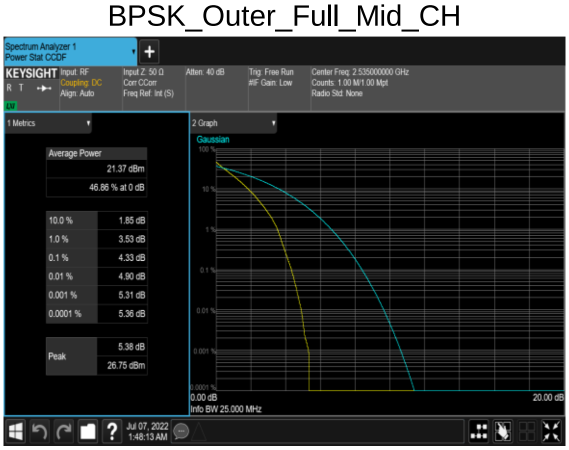
B2_N7(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



B2_N7(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

B2_N7(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

B2_N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



B2_N7(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH