FCC RF Test Report

APPLICANT	:	**Motorola Mobility LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
MODEL NAME	:	**XT2237-1**
FCC ID	:	**IHDT56AJ1**
STANDARD	:	**47 CFR Part 2, 24, 27**
CLASSIFICATION	:	**PCS Licensed Transmitter Held to Ear (PCE)**
TEST DATE(S)	:	**Oct. 29, 2022 ~ Nov. 14, 2022**

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

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

Jason Jia

Approved by: Jason Jia

ilac-MRA

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG2O0909G	Rev. 01	Initial issue of report	Nov. 23, 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 §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	§24.235 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
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 32.44 dB at 7576.000 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

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

1.2 Manufacturer

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

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2237-1
FCC ID	IHDT56AJ1
IMEI Code	Conducted : 352182740025347/352182740025382 Radiation : 352182740025754/352182740025762
HW Version	DVT2
SW Version	TTN33.40
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR 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
Bandwidth	**<SCS 15kHz>** n2(NSA): 5MHz / 10MHz / 15MHz / 20MHz n7(SA/NSA): 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz / 50MHz n66(NSA): 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz **<SCS 30kHz>** n2(NSA): 10MHz / 15MHz / 20MHz n7(SA/NSA): 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz / 50MHz n66(NSA): 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz
Antenna Gain	**<Ant. 0>:** n2: -2.9 dBi **<Ant. 1>:** n7(SA): -3.6 dBi **<Ant. 4>:** n7(NSA): -5.4 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. 5G NR bands support SCS 15kHz and SCS 30kHz. According to the maximum power, n2 SCS 15kHz covers SCS 30kHz for BW 10/15/20MHz, n7 SCS 15kHz covers SCS 30kHz for BW 10/15/20/25/30/40/50MHz, n66 SCS 15kHz covers SCS 30kHz for BW 10/15/20/25/30/40MHz.
2. The device supports two PAs for 5G NR n7(main PA for SA mode and other PA for NSA mode), the maximum power of main PA is higher than the other PA, therefore, we chose higher power of main PA to calculate the EIRP and show in the report.
3. The EN-DC combinations declared by the manufacturer are as follows: DC_66A_n2A, DC_2A_n7A, DC_5A_n7A, DC_7A_n7A, DC_66A_n7A, DC_2A_n66A, DC_5A_n66A, DC_7A_n66A and DC_66A_n66A.
4. 5G NR n2/n66 supports NSA mode only.
5. All the supported EN-DC combinations are verified conducted power, only the ENDC combinations with highest power are shown in the report.

1.5 Specification of Accessory

Accessories Information				
AC Adapter 1 (US)	**Brand Name**	Motorola(Salom)	**Model Name**	MC-301
AC Adapter 1 (EU)	**Brand Name**	Motorola(Salom)	**Model Name**	MC-302
AC Adapter 1 (UK)	**Brand Name**	Motorola(Salom)	**Model Name**	MC-303
AC Adapter 1 (AU)	**Brand Name**	Motorola(Salom)	**Model Name**	MC-305
AC Adapter 1 (AR)	**Brand Name**	Motorola(Salom)	**Model Name**	MC-306
AC Adapter 1 (BR)	**Brand Name**	Motorola(Salom)	**Model Name**	MC-307
AC Adapter 2 (IN)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-304
Battery 1	**Brand Name**	Motorola(Sunwoda)	**Model Name**	PV50
Battery 2	**Brand Name**	Motorola(SCUD)	**Model Name**	PV50
Earphone	**Brand Name**	Motorola(Juwei)	**Model Name**	MH202
USB Cable 1	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D13215
USB Cable 2	**Brand Name**	Motorola(Cabletech)	**Model Name**	SC18D13216
USB Cable 3	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18D13217

1.6 Modification of EUT

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

1.7 Maximum EIRP and Emission Designator

EN DC_66A-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	0.1315	4M47G7D	0.0984	4M48W7D
10	1855.0 ~ 1905.0	0.1247	9M28G7D	0.0942	9M30W7D
15	1857.5 ~ 1902.5	0.1274	14M1G7D	0.0962	14M1W7D
20	1860.0 ~ 1900.0	0.1321	18M9G7D	0.1052	18M9W7D

5G NR n7		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
5	2502.5 ~ 2567.5	0.1161	4M48G7D	0.0871	4M48W7D
10	2505.0 ~ 2565.0	0.1096	9M28G7D	0.0841	9M31W7D
15	2507.5 ~ 2562.5	0.1102	14M1G7D	0.0853	14M1W7D
20	2510.0 ~ 2560.0	0.1102	18M9G7D	0.0845	19M0W7D
25	2512.5 ~ 2557.5	0.1067	23M7G7D	0.0832	23M8W7D
30	2515.0 ~ 2555.0	0.1030	28M6G7D	0.0804	28M6W7D
40	2520.0 ~ 2550.0	0.0955	38M6G7D	0.0785	38M5W7D
50	2525.0 ~ 2545.0	0.1175	48M2G7D	0.0933	48M2W7D

EN DC_2A-n66A		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	0.0962	4M46G7D	0.0796	4M48W7D
10	1715.0 ~ 1775.0	0.0906	9M26G7D	0.0755	9M31W7D
15	1717.5 ~ 1772.5	0.0933	14M1G7D	0.0791	14M1W7D
20	1720.0 ~ 1770.0	0.0929	18M9G7D	0.0764	18M9W7D
25	1722.5 ~ 1767.5	0.0817	23M7G7D	0.0750	23M7W7D
30	1725.0 ~ 1765.0	0.0861	28M5G7D	0.0713	28M5W7D
40	1730.0 ~ 1760.0	0.1035	38M5G7D	0.0875	38M5W7D

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

1.8 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

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

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

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ	CN1256	421272

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

1.9 Test Software

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

1.10 Applicable Standards

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

- 47 CFR Part 2, 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 (Y plane) were recorded in this report.

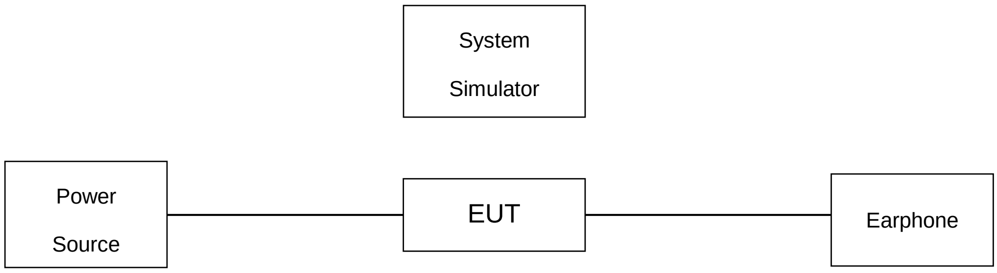
The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

Test Items	5G NR	Bandwidth (MHz)								Modulation					RB #		Test Channel		
		5	10	15	20	25	30	40	50	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
	n7	v	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	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	v	v		v		v	
	n66	v	v	v	v	v	v	v	-	v	v	v	v	v		v		v	
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	

Test Items	5G NR	Bandwidth (MHz)								Modulation					RB #		Test Channel		
		5	10	15	20	25	30	40	50	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H
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	v	v	v	v
	n66	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 =3.6V. ; High Voltage =4.2V																		

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

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

The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

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 8.0 dB.

Example :

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

= 8.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

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

5G NR n7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
50	Channel	505000	507000	509000
	Frequency	2525	2535	2545
40	Channel	504000	507000	510000
	Frequency	2520	2535	2550
30	Channel	503000	507000	511000
	Frequency	2515	2535	2555
25	Channel	502500	507000	511500
	Frequency	2512.5	2535	2557.5
20	Channel	502000	507000	512000
	Frequency	2510	2535	2560
15	Channel	501500	507000	512500
	Frequency	2507.5	2535	2562.5
10	Channel	501000	507000	513000
	Frequency	2505	2535	2565
5	Channel	500500	507000	513500
	Frequency	2502.5	2535	2567.5

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	346000	349000	352000
	Frequency	1730	1745	1760
30	Channel	345000	349000	353000
	Frequency	1725	1745	1765
25	Channel	344500	349000	353500
	Frequency	1722.5	1745	1767.5
20	Channel	344000	349000	354000
	Frequency	1720	1745	1770
15	Channel	343500	349000	354500
	Frequency	1717.5	1745	1772.5
10	Channel	343000	349000	355000
	Frequency	1715	1745	1775
5	Channel	342500	349000	355500
	Frequency	1712.5	1745	1777.5

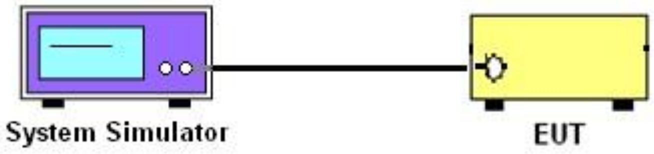
3 Conducted Test Items

3.1 Measuring Instruments

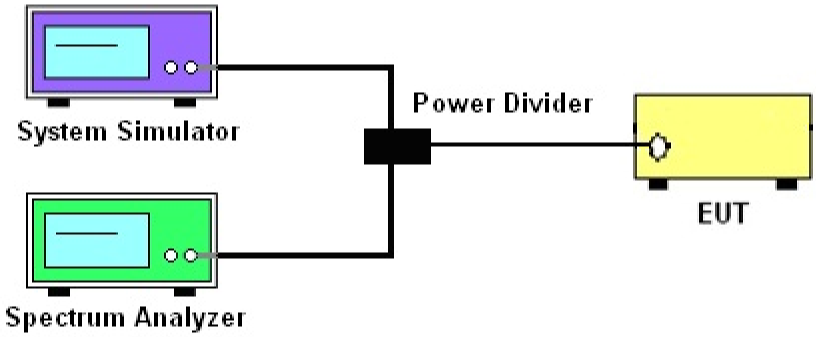
See list of measuring instruments of this test report.

3.2 Test Setup

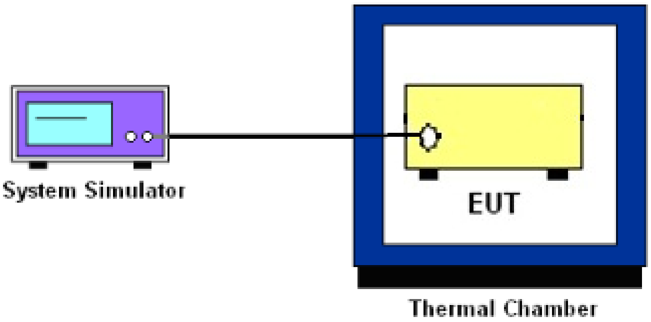
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and EIRP

3.4.1 Description of the Conducted Output Power Measurement and 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, 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 and 1710 – 1780 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% /2%EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used (generally limited to no less than 1% of the OBW) and the measured power was integrated over the full required measurement bandwidth.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

   Example:

   The limit line is derived from 43 + 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.

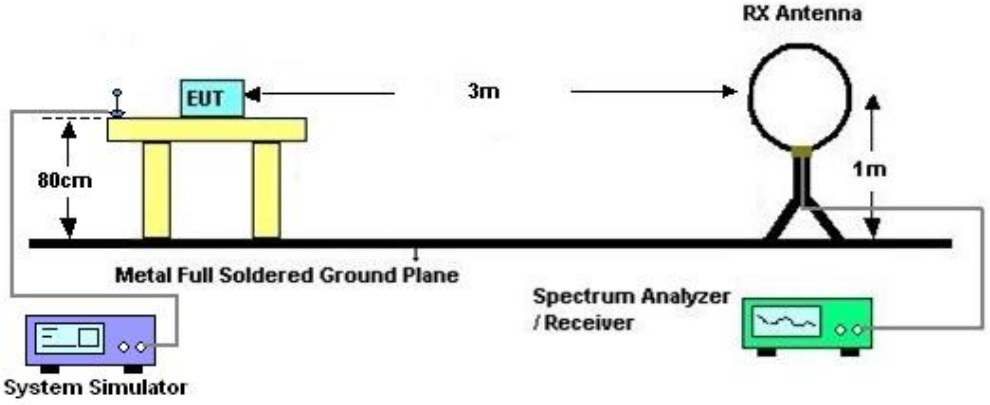
4 Radiated Test Items

4.1 Measuring Instruments

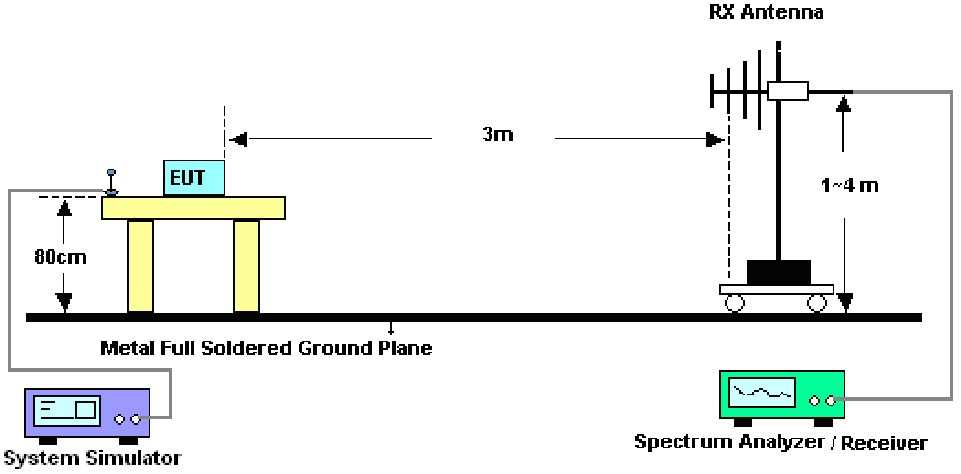
See list of measuring instruments of this test report.

4.2 Test Setup

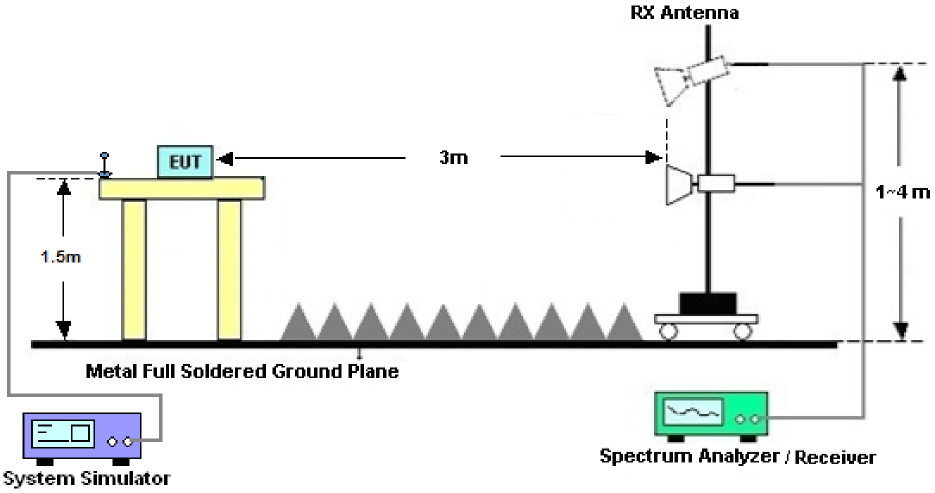
4.2.1 For radiated test below 30MHz



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

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
EXA Signal Analyzer	KEYSIGHT	N9010B	MY60240803	10Hz~44GHz	Apr. 02, 2022	Oct. 29, 2022~ Nov. 03, 2022	Apr. 01, 2023	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2021	Oct. 29, 2022~ Nov. 03, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 07, 2022	Oct. 29, 2022~ Nov. 03, 2022	Jul. 06, 2023	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 12, 2022	Nov. 14, 2022	Oct. 11, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 16, 2022	Nov. 14, 2022	Oct. 15, 2023	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 24, 2022	Nov. 14, 2022	May 23, 2023	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Jan. 05, 2022	Nov. 14, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Nov. 14, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 05, 2022	Nov. 14, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2022	Nov. 14, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 12, 2022	Nov. 14, 2022	Oct. 11, 2023	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 12, 2022	Nov. 14, 2022	Oct. 11, 2023	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 14, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 14, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 14, 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	±0.13 %

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.3dB

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

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

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

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

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Jung Kuo	**Temperature :**	22~23℃
		Relative Humidity :	40~42%

Software Version: 22.09.0601

FR1 N2(ANT0)

LTE Band: 66(ANT4), LTE BW: 10M, LTE ARFCN: Mid

Transmitter Conducted Output Power And EIRP, $(G_T - L_C)$=-2.9dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
2	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@1	24	21.1	0.1288
2	15	5	370500	1852.5	DFT-s-OFDM 16 QAM	1@1	22.7	19.8	0.0955
2	15	5	376000	1880.0	DFT-s-OFDM QPSK	1@1	24.09	21.19	0.1315
2	15	5	376000	1880.0	DFT-s-OFDM 16 QAM	1@1	22.83	19.93	0.0984
2	15	5	381500	1907.5	DFT-s-OFDM QPSK	1@1	23.93	21.03	0.1268
2	15	5	381500	1907.5	DFT-s-OFDM 16 QAM	1@1	22.66	19.76	0.0946
2	15	10	371000	1855.0	DFT-s-OFDM QPSK	1@1	23.82	20.92	0.1236
2	15	10	371000	1855.0	DFT-s-OFDM 16 QAM	1@1	22.59	19.69	0.0931
2	15	10	376000	1880.0	DFT-s-OFDM QPSK	1@1	23.86	20.96	0.1247
2	15	10	376000	1880.0	DFT-s-OFDM 16 QAM	1@1	22.64	19.74	0.0942
2	15	10	381000	1905.0	DFT-s-OFDM QPSK	1@1	23.78	20.88	0.1225
2	15	10	381000	1905.0	DFT-s-OFDM 16 QAM	1@1	22.55	19.65	0.0923
2	15	15	371500	1857.5	DFT-s-OFDM QPSK	1@1	23.91	21.01	0.1262
2	15	15	371500	1857.5	DFT-s-OFDM 16 QAM	1@1	22.66	19.76	0.0946
2	15	15	376000	1880.0	DFT-s-OFDM QPSK	1@1	23.95	21.05	0.1274
2	15	15	376000	1880.0	DFT-s-OFDM 16 QAM	1@1	22.73	19.83	0.0962
2	15	15	380500	1902.5	DFT-s-OFDM QPSK	1@1	23.84	20.94	0.1242
2	15	15	380500	1902.5	DFT-s-OFDM 16 QAM	1@1	22.59	19.69	0.0931
2	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	50@25	24.03	21.13	0.1297
2	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	1@1	23.84	20.94	0.1242
2	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	1@104	23.95	21.05	0.1274
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	50@25	24.1	21.2	0.1318
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@1	23.91	21.01	0.1262
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@104	24.02	21.12	0.1294
2	15	20	372000	1860.0	DFT-s-OFDM 16 QAM	50@25	23.09	20.19	0.1045
2	15	20	372000	1860.0	DFT-s-OFDM 16 QAM	1@1	22.72	19.82	0.0959
2	15	20	372000	1860.0	DFT-s-OFDM 16 QAM	1@104	22.81	19.91	0.0979
2	15	20	372000	1860.0	DFT-s-OFDM 64 QAM	50@25	21.51	18.61	0.0726

2	15	20	372000	1860.0	DFT-s-OFDM 64 QAM	1@1	21.07	18.17	0.0656
2	15	20	372000	1860.0	DFT-s-OFDM 64 QAM	1@104	21.16	18.26	0.0670
2	15	20	372000	1860.0	DFT-s-OFDM 256 QAM	50@25	19.5	16.6	0.0457
2	15	20	372000	1860.0	DFT-s-OFDM 256 QAM	1@1	19.34	16.44	0.0441
2	15	20	372000	1860.0	DFT-s-OFDM 256 QAM	1@104	19.43	16.53	0.0450
2	15	20	372000	1860.0	CP-OFDM QPSK	53@26	22.53	19.63	0.0918
2	15	20	372000	1860.0	CP-OFDM QPSK	1@1	22.65	19.75	0.0944
2	15	20	372000	1860.0	CP-OFDM QPSK	1@104	22.66	19.76	0.0946
2	15	20	376000	1880.0	DFT-s-OFDM PI/2 BPSK	50@25	24.07	21.17	0.1309
2	15	20	376000	1880.0	DFT-s-OFDM PI/2 BPSK	1@1	23.85	20.95	0.1245
2	15	20	376000	1880.0	DFT-s-OFDM PI/2 BPSK	1@104	23.79	20.89	0.1227
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	50@25	24.11	21.21	0.1321
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	1@1	23.93	21.03	0.1268
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	1@104	23.9	21	0.1259
2	15	20	376000	1880.0	DFT-s-OFDM 16 QAM	50@25	23.12	20.22	0.1052
2	15	20	376000	1880.0	DFT-s-OFDM 16 QAM	1@1	22.72	19.82	0.0959
2	15	20	376000	1880.0	DFT-s-OFDM 16 QAM	1@104	22.7	19.8	0.0955
2	15	20	376000	1880.0	DFT-s-OFDM 64 QAM	50@25	21.53	18.63	0.0729
2	15	20	376000	1880.0	DFT-s-OFDM 64 QAM	1@1	21.08	18.18	0.0658
2	15	20	376000	1880.0	DFT-s-OFDM 64 QAM	1@104	21.07	18.17	0.0656
2	15	20	376000	1880.0	DFT-s-OFDM 256 QAM	50@25	19.49	16.59	0.0456
2	15	20	376000	1880.0	DFT-s-OFDM 256 QAM	1@1	19.32	16.42	0.0439
2	15	20	376000	1880.0	DFT-s-OFDM 256 QAM	1@104	19.32	16.42	0.0439
2	15	20	376000	1880.0	CP-OFDM QPSK	53@26	22.55	19.65	0.0923
2	15	20	376000	1880.0	CP-OFDM QPSK	1@1	22.6	19.7	0.0933
2	15	20	376000	1880.0	CP-OFDM QPSK	1@104	22.65	19.75	0.0944
2	15	20	380000	1900.0	DFT-s-OFDM PI/2 BPSK	50@25	23.93	21.03	0.1268
2	15	20	380000	1900.0	DFT-s-OFDM PI/2 BPSK	1@1	23.07	20.17	0.1040
2	15	20	380000	1900.0	DFT-s-OFDM PI/2 BPSK	1@104	23.7	20.8	0.1202
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	50@25	23.11	20.21	0.1050
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	1@1	23.41	20.51	0.1125
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	1@104	24.04	21.14	0.1300
2	15	20	380000	1900.0	DFT-s-OFDM 16 QAM	50@25	23.09	20.19	0.1045
2	15	20	380000	1900.0	DFT-s-OFDM 16 QAM	1@1	22.55	19.65	0.0923
2	15	20	380000	1900.0	DFT-s-OFDM 16 QAM	1@104	22.54	19.64	0.0920
2	15	20	380000	1900.0	DFT-s-OFDM 64 QAM	50@25	21.42	18.52	0.0711

2	15	20	380000	1900.0	DFT-s-OFDM 64 QAM	1@1	21.02	18.12	0.0649
2	15	20	380000	1900.0	DFT-s-OFDM 64 QAM	1@104	20.93	18.03	0.0635
2	15	20	380000	1900.0	DFT-s-OFDM 256 QAM	50@25	19.42	16.52	0.0449
2	15	20	380000	1900.0	DFT-s-OFDM 256 QAM	1@1	19.25	16.35	0.0432
2	15	20	380000	1900.0	DFT-s-OFDM 256 QAM	1@104	19.27	16.37	0.0434
2	15	20	380000	1900.0	CP-OFDM QPSK	53@26	22.47	19.57	0.0906
2	15	20	380000	1900.0	CP-OFDM QPSK	1@1	22.58	19.68	0.0929
2	15	20	380000	1900.0	CP-OFDM QPSK	1@104	22.68	19.78	0.0951

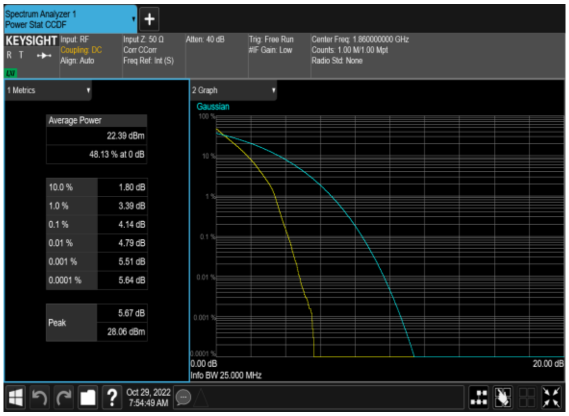
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0034	**PASS**	NV
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0020	**PASS**	LV
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0064	**PASS**	HV
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0021	**PASS**	-30℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0057	**PASS**	-20℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0048	**PASS**	-10℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0056	**PASS**	0℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0047	**PASS**	10℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0034	**PASS**	20℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0032	**PASS**	30℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0028	**PASS**	40℃
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	0.0063	**PASS**	50℃

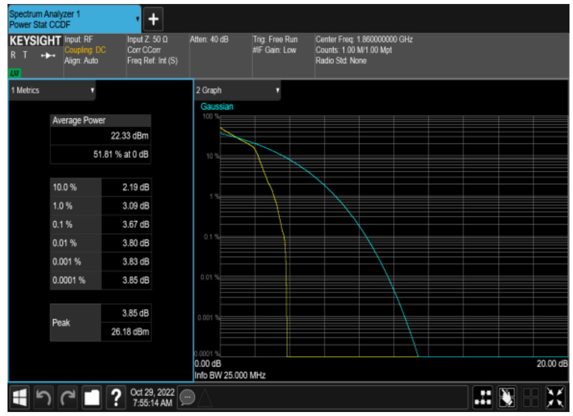
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
2	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	100@0	4.14	13	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	1@0	3.67	13	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	100@0	5.25	13	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@0	5.05	13	**PASS**
2	15	20	376000	1880.0	DFT-s-OFDM PI/2 BPSK	100@0	4.16	13	**PASS**
2	15	20	376000	1880.0	DFT-s-OFDM PI/2 BPSK	1@0	3.9	13	**PASS**
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	5.39	13	**PASS**
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	1@0	5.46	13	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM PI/2 BPSK	100@0	4.24	13	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM PI/2 BPSK	1@0	3.68	13	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	100@0	5.39	13	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	1@0	4.95	13	**PASS**

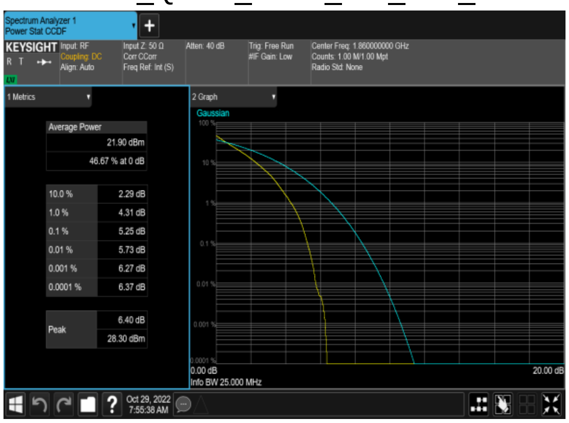
B66_N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



B66_N2(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH

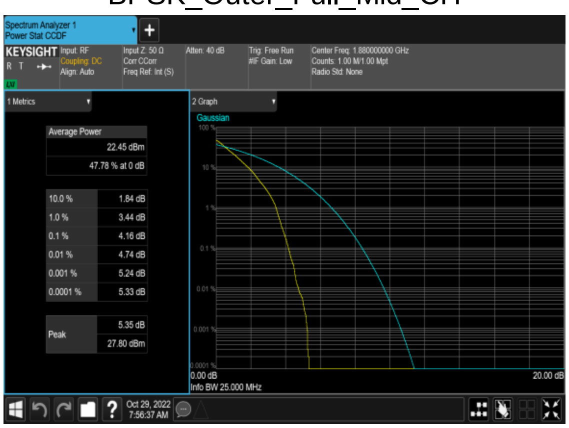


B66_N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

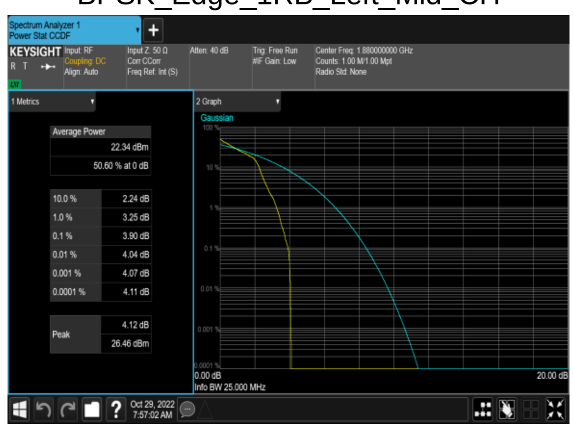


B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

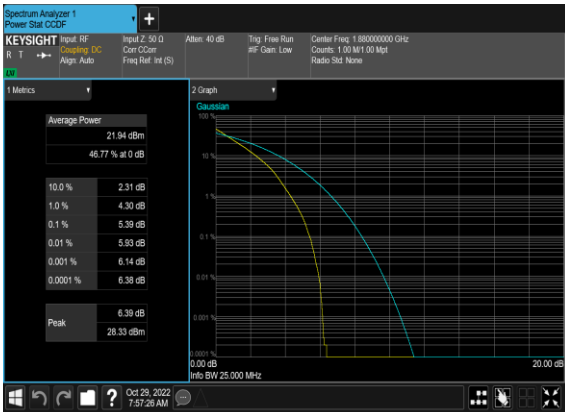
B66_N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



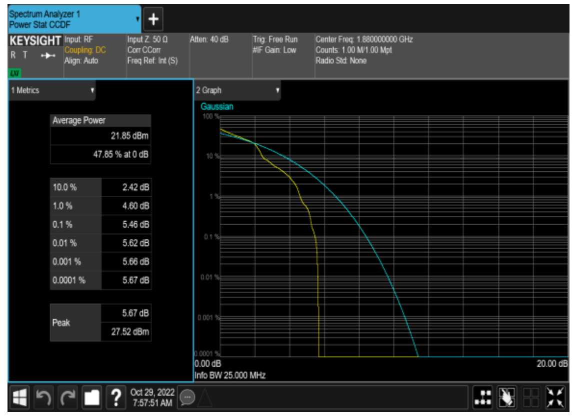
B66_N2(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



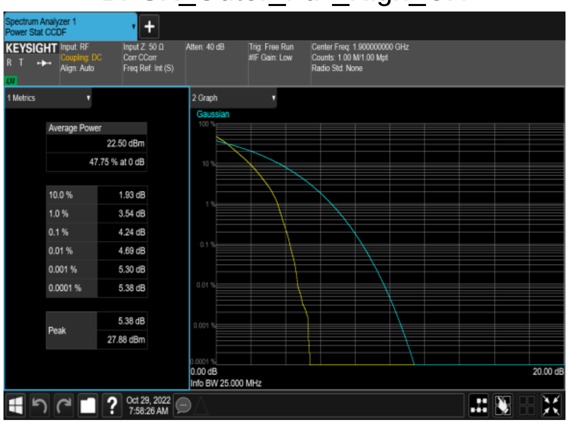
B66_N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

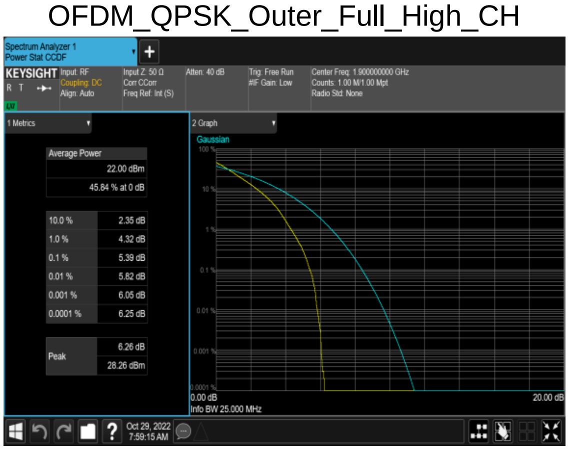


B66_N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

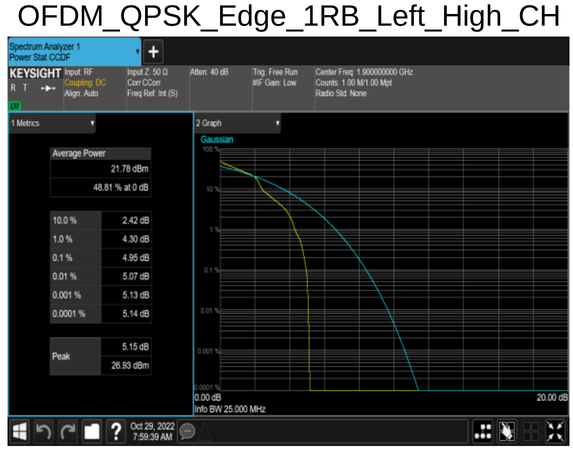


B66_N2(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH

B66_N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



Occupied Bandwidth

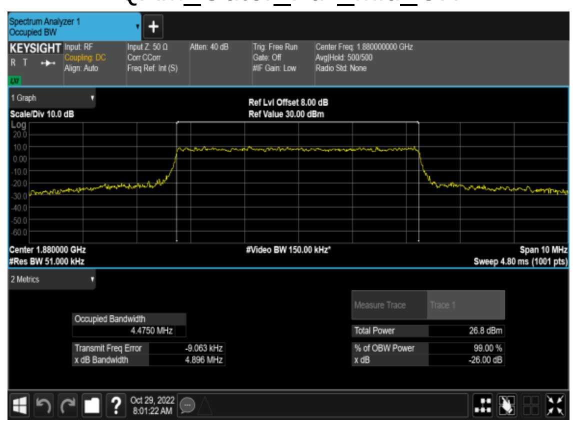
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
2	15	5	376000	1880.0	DFT-s-OFDM PI/2 BPSK	25@0	4.4579	4.847
2	15	5	376000	1880.0	DFT-s-OFDM QPSK	25@0	4.4748	4.848
2	15	5	376000	1880.0	CP-OFDM QPSK	25@0	4.4737	4.872
2	15	5	376000	1880.0	CP-OFDM 16 QAM	25@0	4.475	4.896
2	15	5	376000	1880.0	CP-OFDM 64 QAM	25@0	4.4701	4.862
2	15	5	376000	1880.0	CP-OFDM 256 QAM	25@0	4.465	4.854
2	15	10	376000	1880.0	DFT-s-OFDM PI/2 BPSK	50@0	8.9305	9.575
2	15	10	376000	1880.0	DFT-s-OFDM QPSK	50@0	8.9162	9.474
2	15	10	376000	1880.0	CP-OFDM QPSK	52@0	9.2808	9.87
2	15	10	376000	1880.0	CP-OFDM 16 QAM	52@0	9.3045	9.898
2	15	10	376000	1880.0	CP-OFDM 64 QAM	52@0	9.2871	9.888
2	15	10	376000	1880.0	CP-OFDM 256 QAM	52@0	9.2843	9.843
2	15	15	376000	1880.0	DFT-s-OFDM PI/2 BPSK	75@0	13.408	14.21
2	15	15	376000	1880.0	DFT-s-OFDM QPSK	75@0	13.387	14.14
2	15	15	376000	1880.0	CP-OFDM QPSK	79@0	14.119	14.77
2	15	15	376000	1880.0	CP-OFDM 16 QAM	79@0	14.113	14.78
2	15	15	376000	1880.0	CP-OFDM 64 QAM	79@0	14.089	14.79
2	15	15	376000	1880.0	CP-OFDM 256 QAM	79@0	14.087	14.74
2	15	20	376000	1880.0	DFT-s-OFDM PI/2 BPSK	100@0	17.927	18.94
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	100@0	17.886	18.92
2	15	20	376000	1880.0	CP-OFDM QPSK	106@0	18.9	19.87
2	15	20	376000	1880.0	CP-OFDM 16 QAM	106@0	18.888	19.96
2	15	20	376000	1880.0	CP-OFDM 64 QAM	106@0	18.919	19.98
2	15	20	376000	1880.0	CP-OFDM 256 QAM	106@0	18.944	19.78

B66_N2(5M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

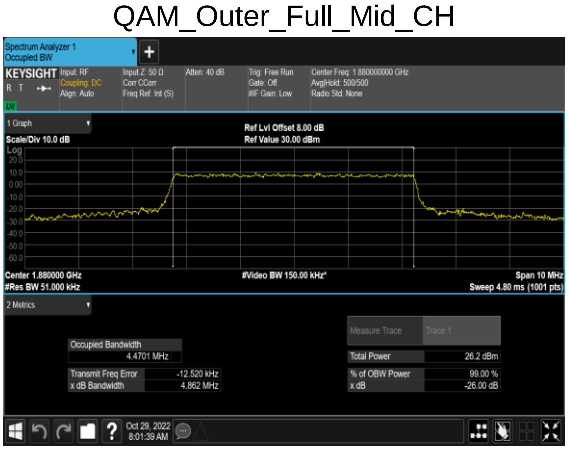
B66_N2(5M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

B66_N2(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

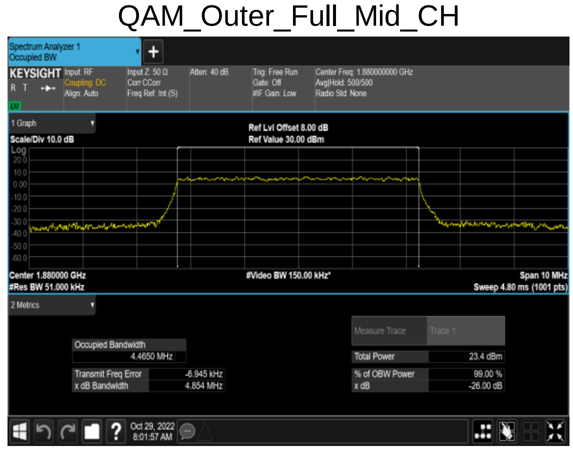
B66_N2(5M)_CP-OFDM_16QAM_Outer_Full_Mid_CH



B66_N2(5M)_CP-OFDM_64QAM_Outer_Full_Mid_CH



B66_N2(5M)_CP-OFDM_256QAM_Outer_Full_Mid_CH

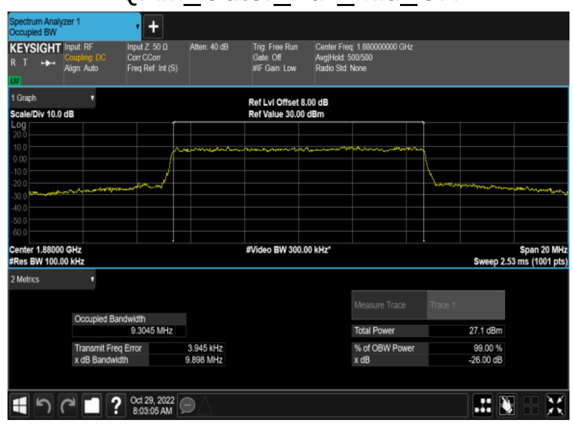


B66_N2(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

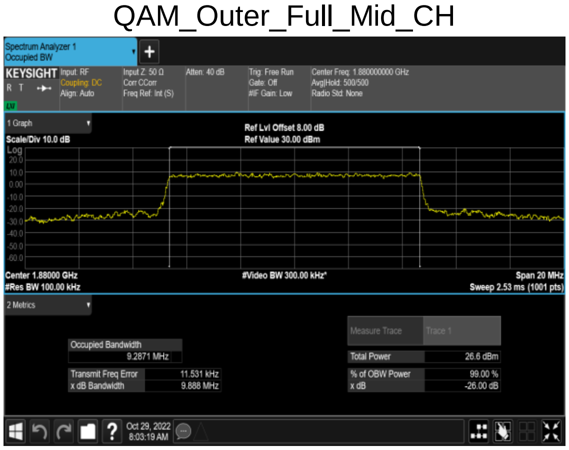
B66_N2(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

B66_N2(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

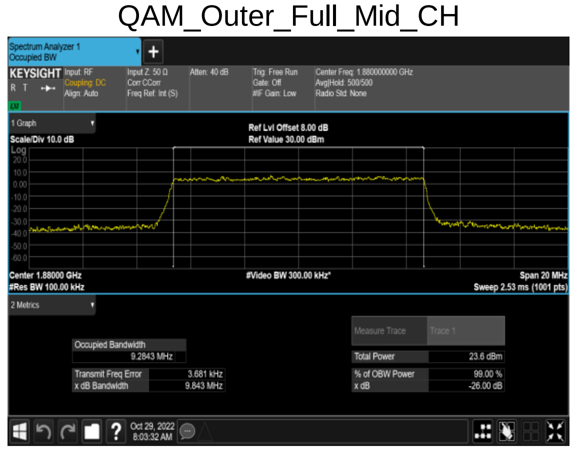
B66_N2(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



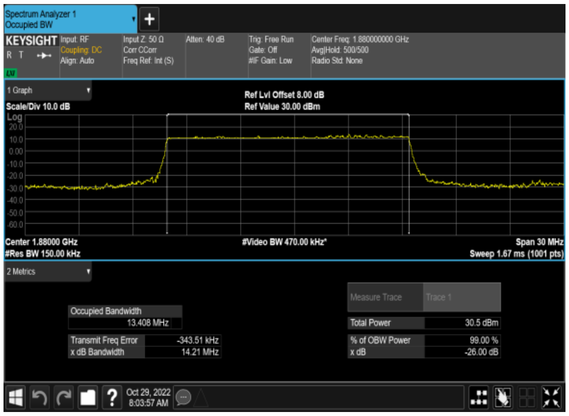
B66_N2(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



B66_N2(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



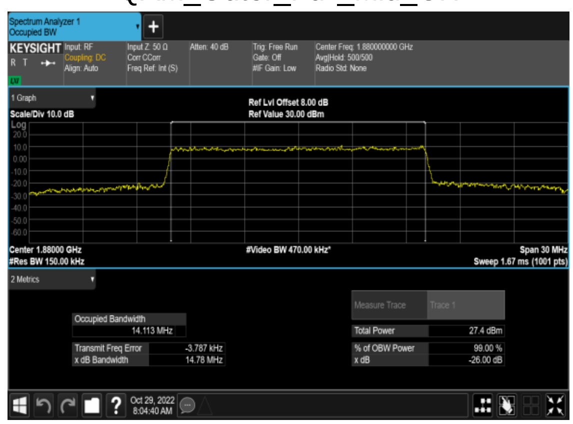
B66_N2(15M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



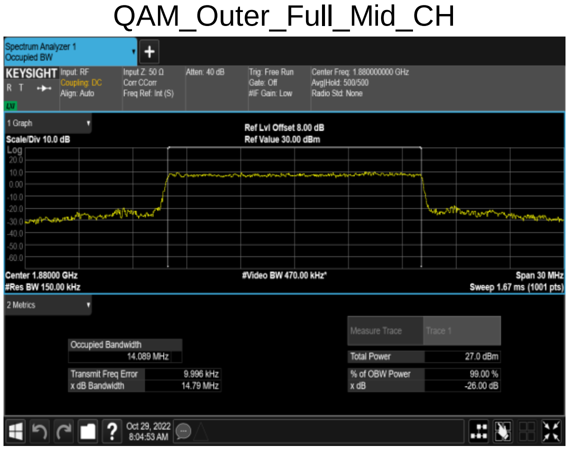
B66_N2(15M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

B66_N2(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

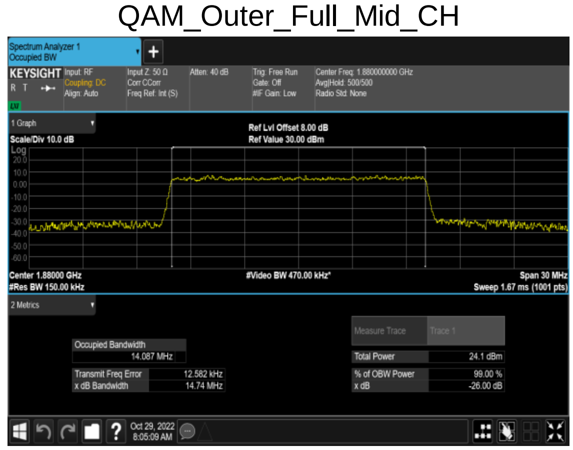
B66_N2(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



B66_N2(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



B66_N2(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

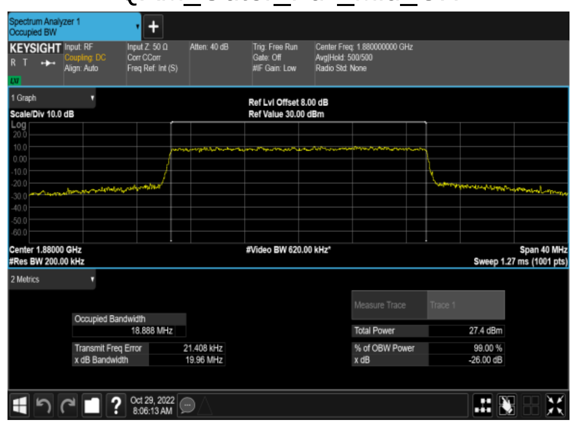


B66_N2(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

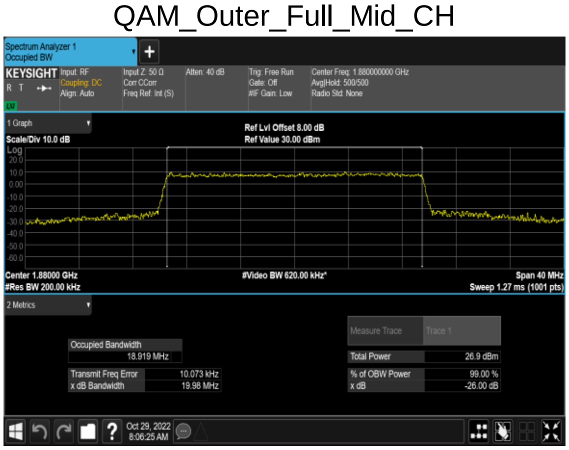
B66_N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

B66_N2(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

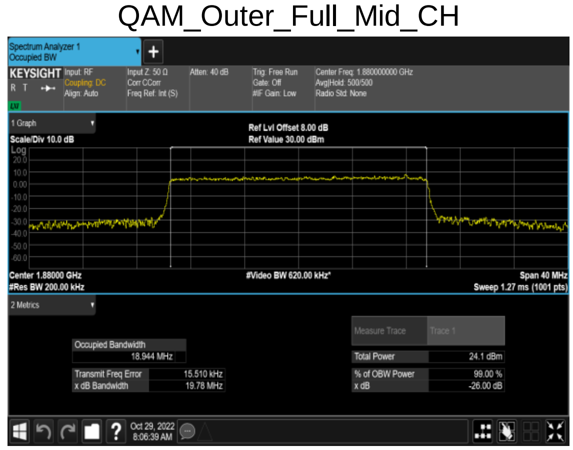
B66_N2(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



B66_N2(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



B66_N2(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

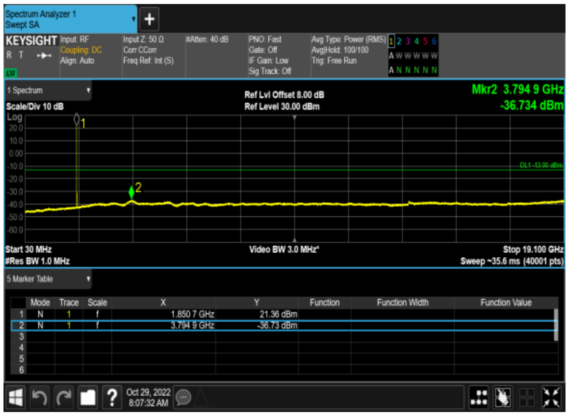


Conducted Spurious Emissions

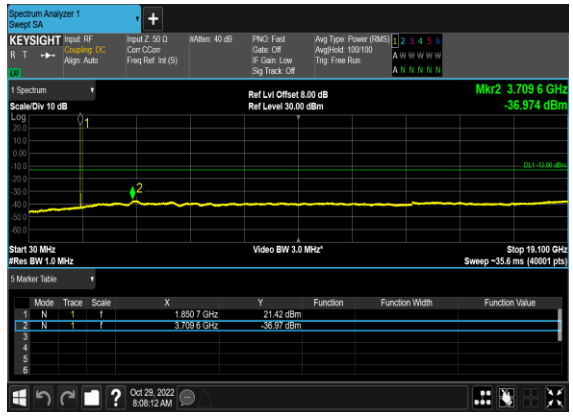
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
2	15	5	370500	1852.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	5	370500	1852.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	5	376000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	5	376000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	376000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	5	376000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	5	381500	1907.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	5	381500	1907.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	381500	1907.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	5	381500	1907.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	371000	1855.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	10	371000	1855.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	10	371000	1855.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	10	371000	1855.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	376000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	10	376000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	10	376000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	10	376000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	381000	1905.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	10	381000	1905.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**

2	15	10	381000	1905.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	10	381000	1905.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	20	372000	1860.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	376000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	20	376000	1880.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	20	376000	1880.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
2	15	20	380000	1900.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

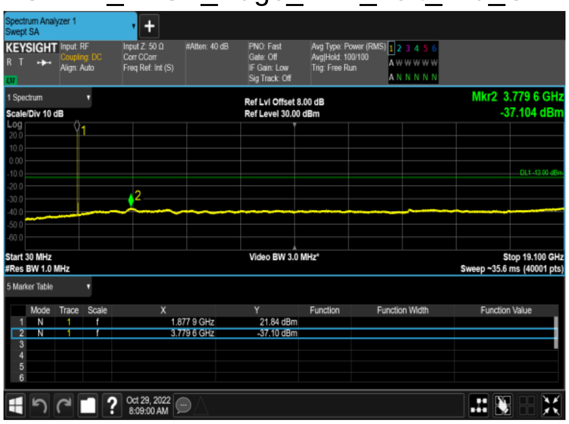
B66_N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



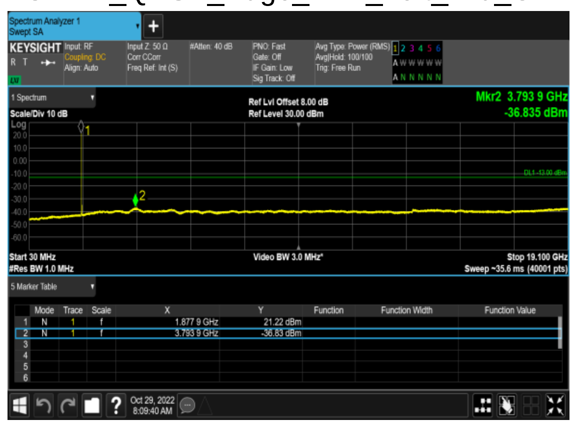
B66_N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



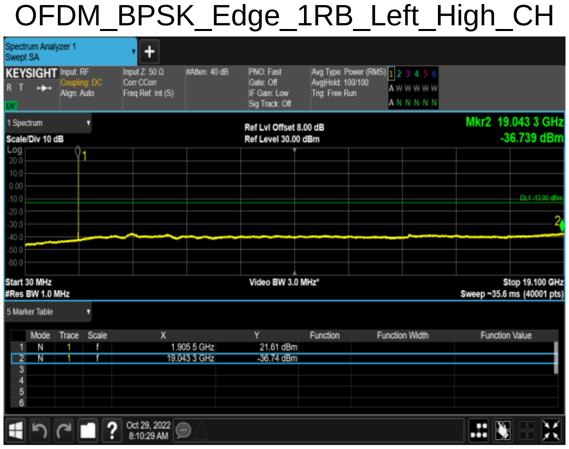
B66_N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



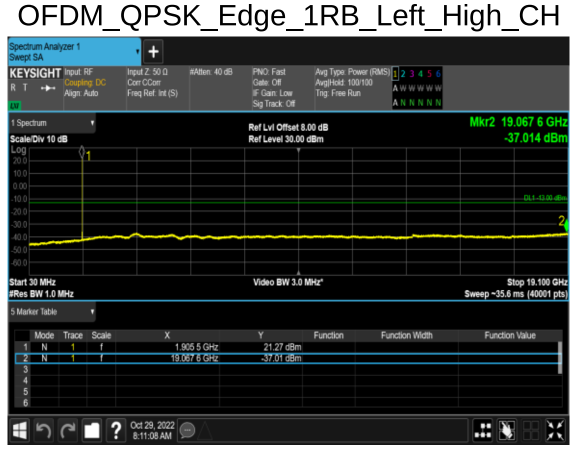
B66_N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



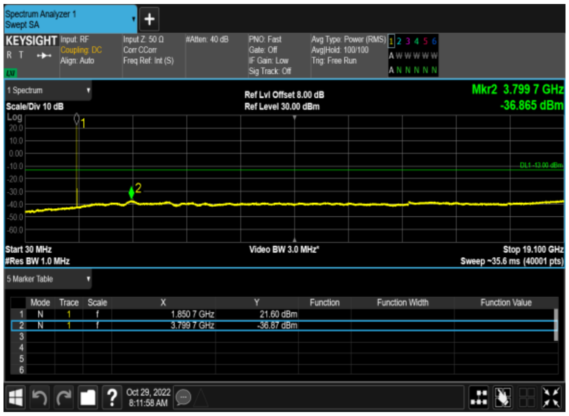
B66_N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



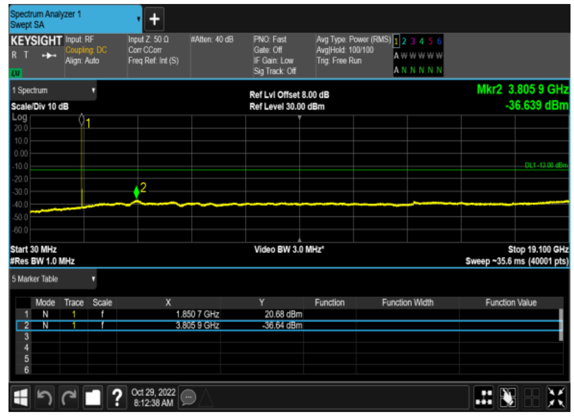
B66_N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



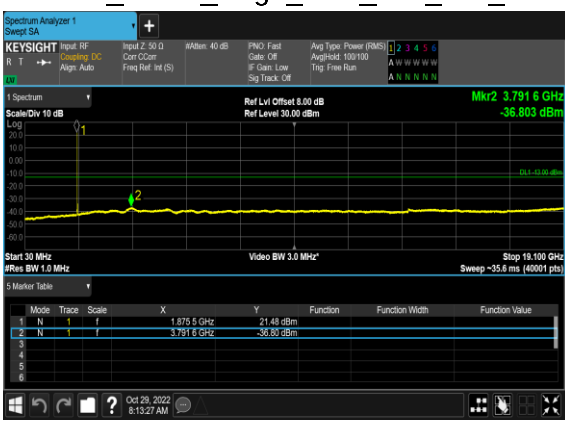
B66_N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



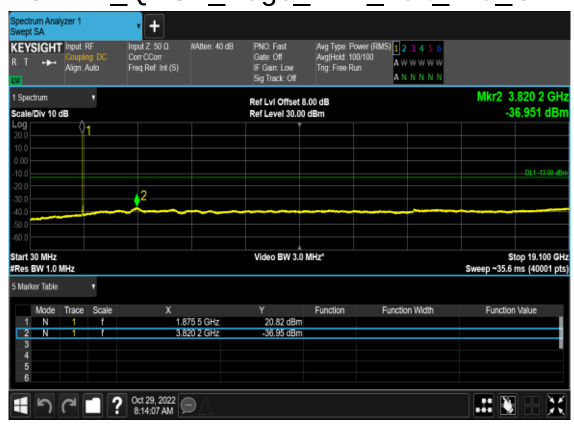
B66_N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



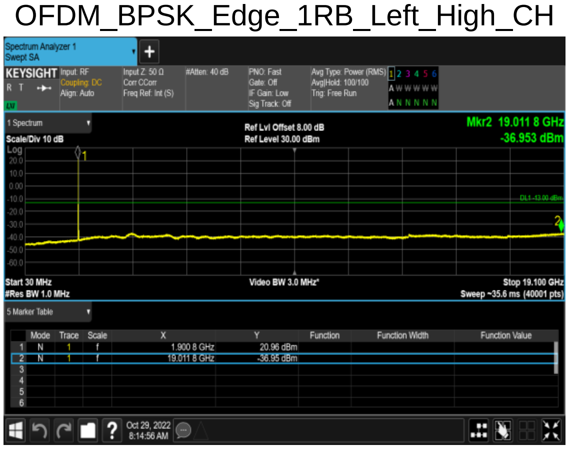
B66_N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



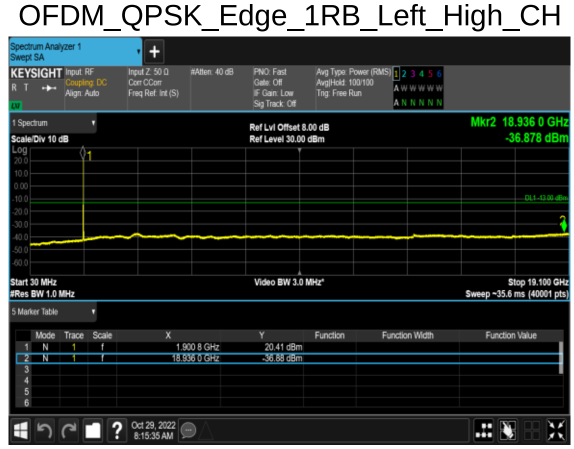
B66_N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



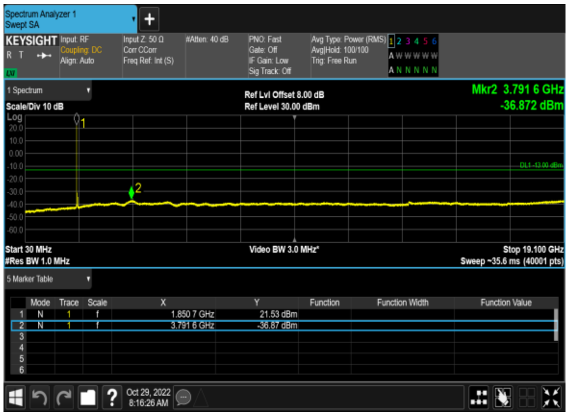
B66_N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



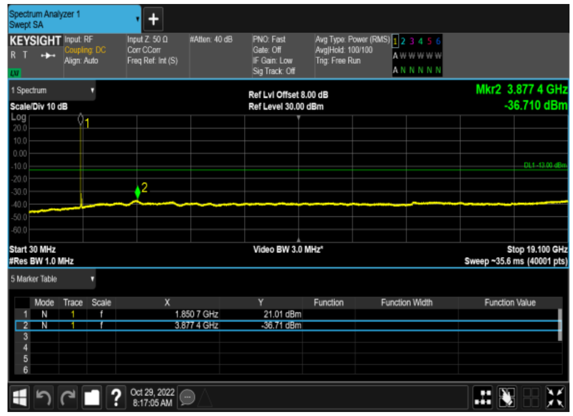
B66_N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



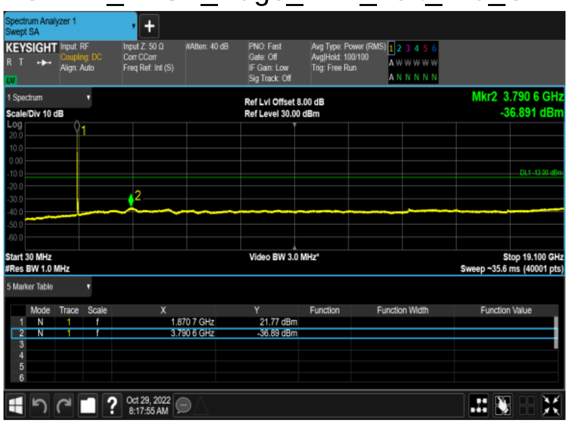
B66_N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



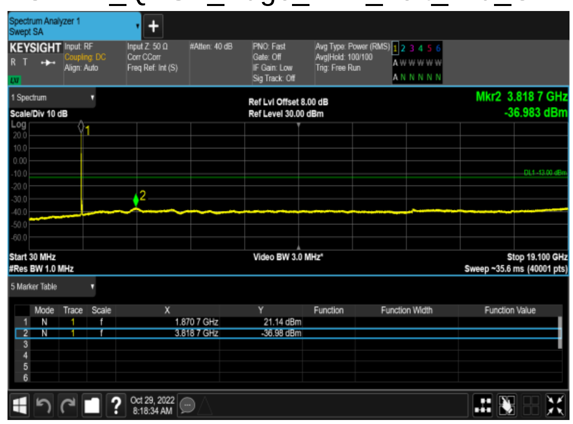
B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



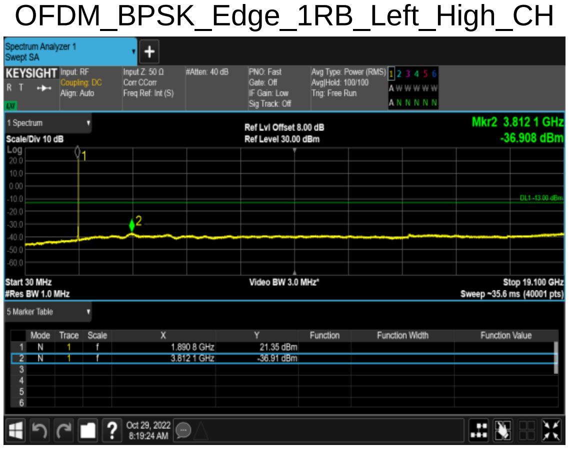
B66_N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



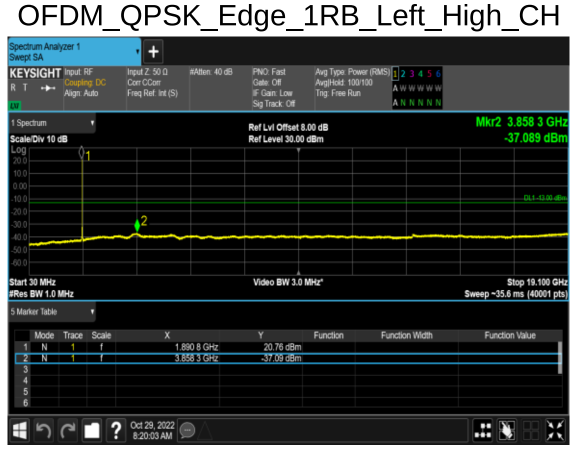
B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



B66_N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



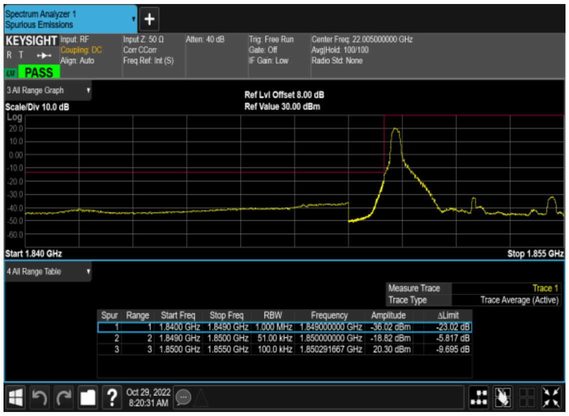
B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



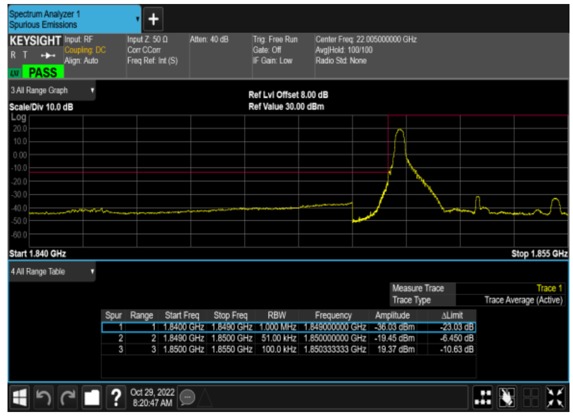
Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
2	15	5	370500	1852.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	5	370500	1852.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
2	15	5	370500	1852.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
2	15	5	381500	1907.5	DFT-s-OFDM BPSK	1@24	see graph	**PASS**
2	15	5	381500	1907.5	DFT-s-OFDM QPSK	1@24	see graph	**PASS**
2	15	5	381500	1907.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
2	15	5	381500	1907.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
2	15	10	371000	1855.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	10	371000	1855.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	10	371000	1855.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
2	15	10	371000	1855.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
2	15	10	381000	1905.0	DFT-s-OFDM BPSK	1@51	see graph	**PASS**
2	15	10	381000	1905.0	DFT-s-OFDM QPSK	1@51	see graph	**PASS**
2	15	10	381000	1905.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
2	15	10	381000	1905.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
2	15	20	372000	1860.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM BPSK	1@105	see graph	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	1@105	see graph	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
2	15	20	380000	1900.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**

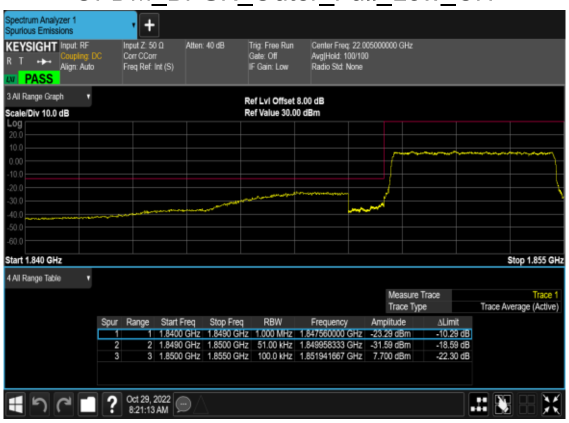
B66_N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



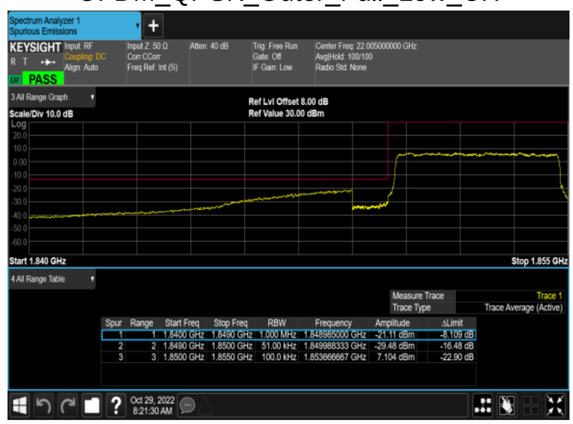
B66_N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



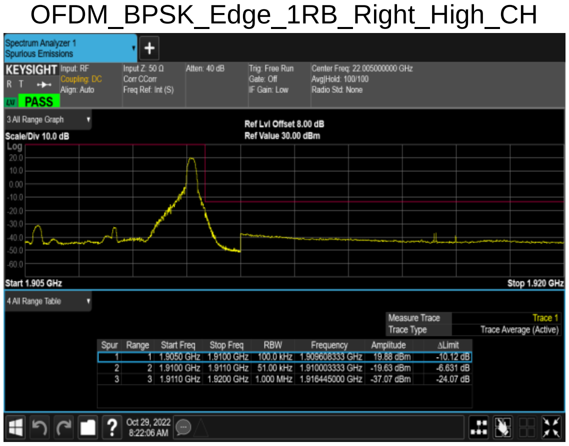
B66_N2(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



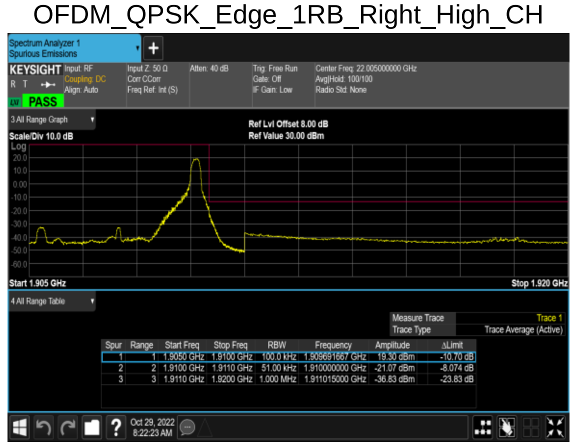
B66_N2(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



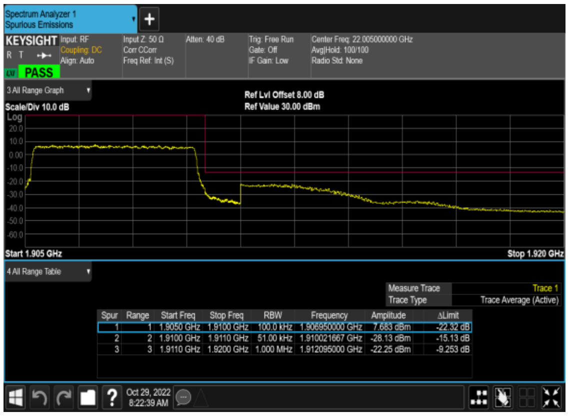
B66_N2(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



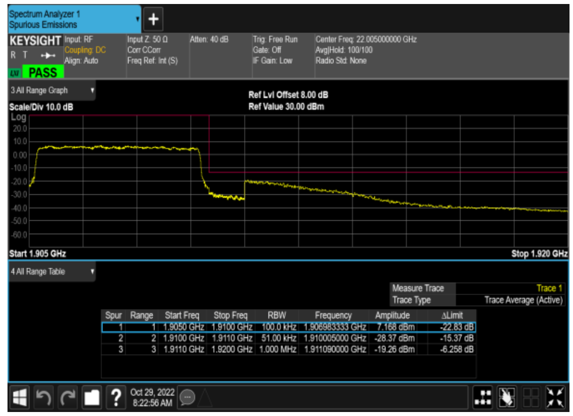
B66_N2(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



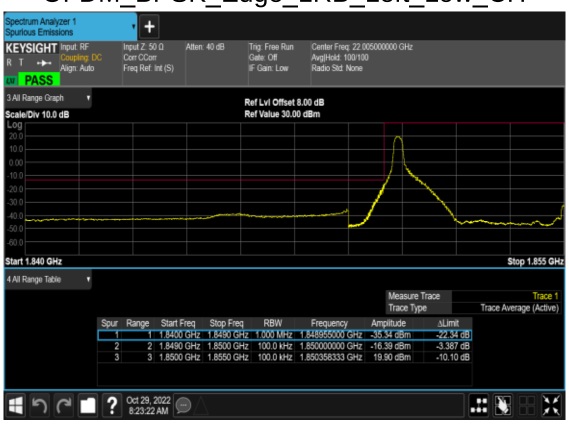
B66_N2(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



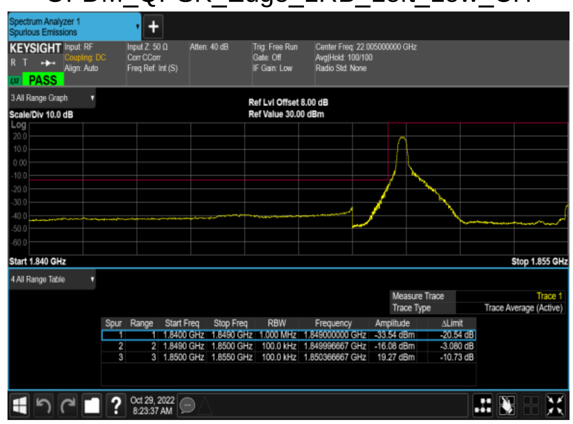
B66_N2(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



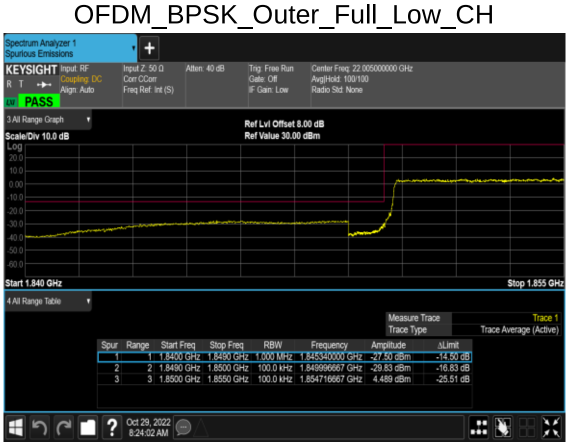
B66_N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



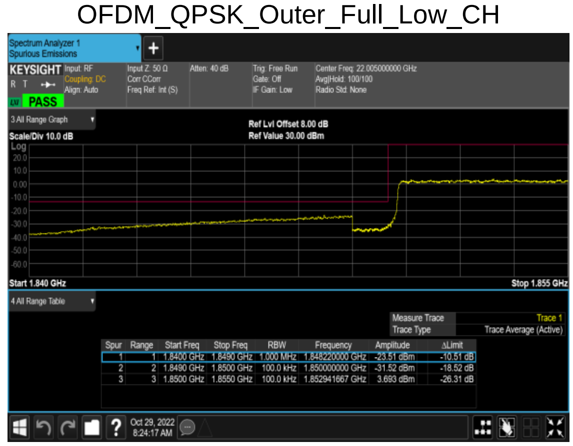
B66_N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



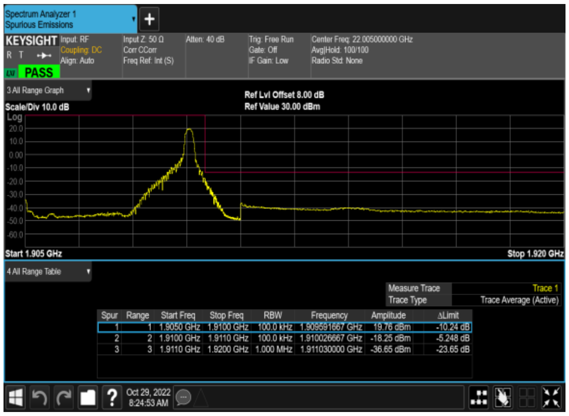
B66_N2(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



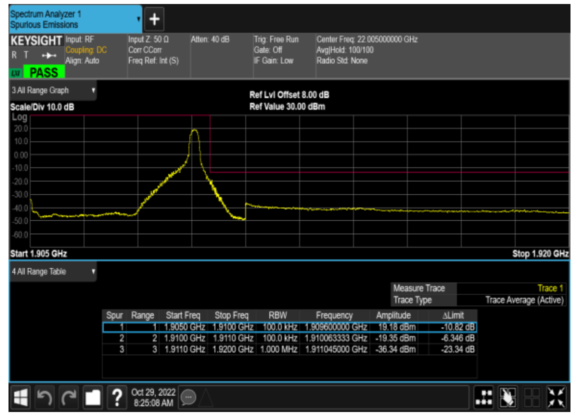
B66_N2(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



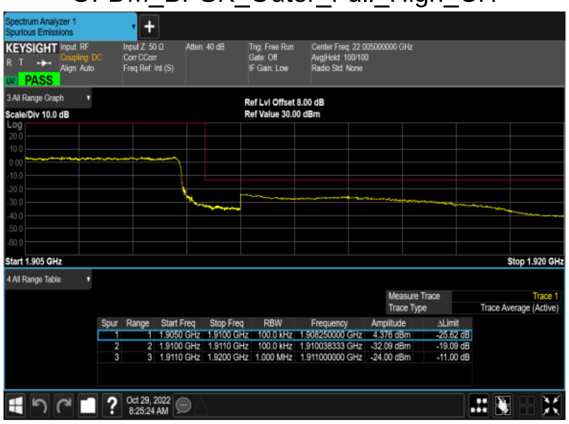
B66_N2(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



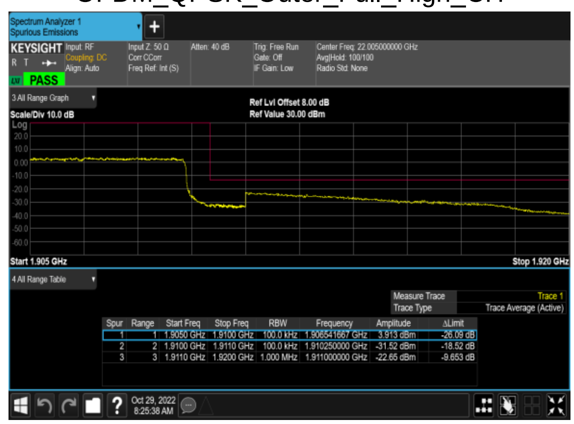
B66_N2(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



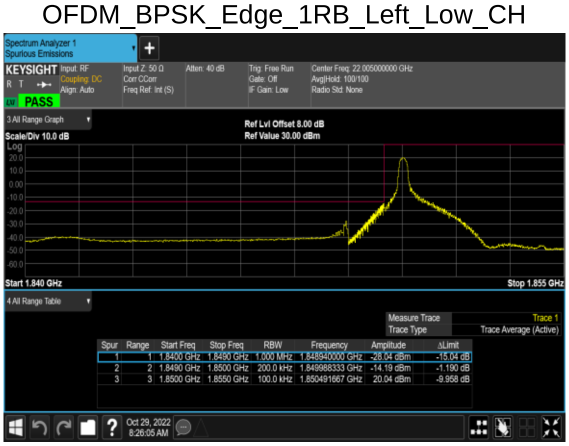
B66_N2(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



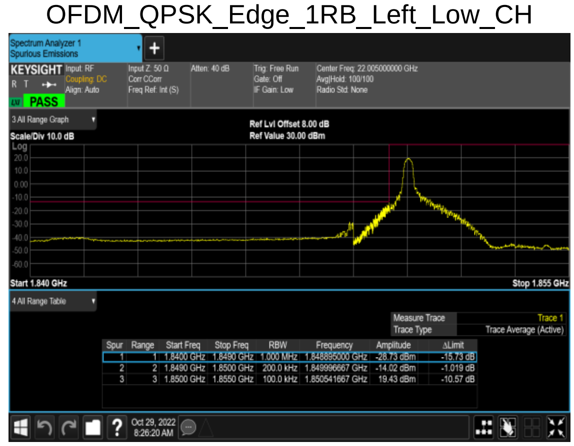
B66_N2(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



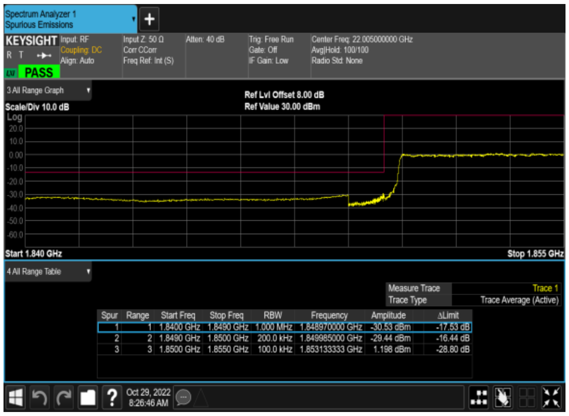
B66_N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



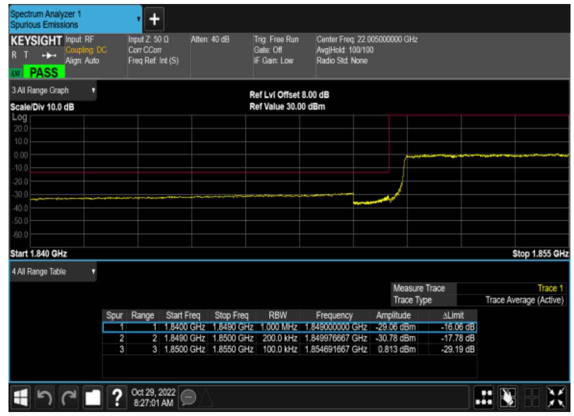
B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



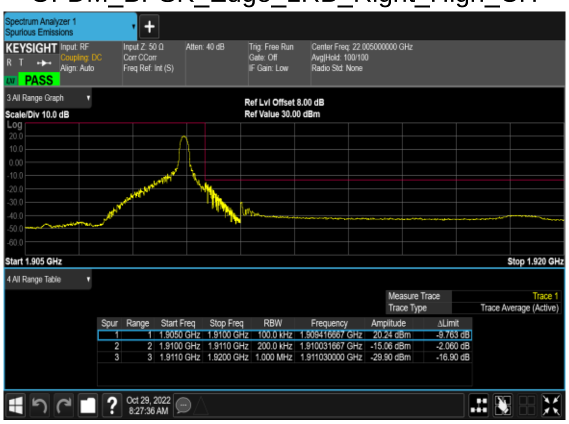
B66_N2(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



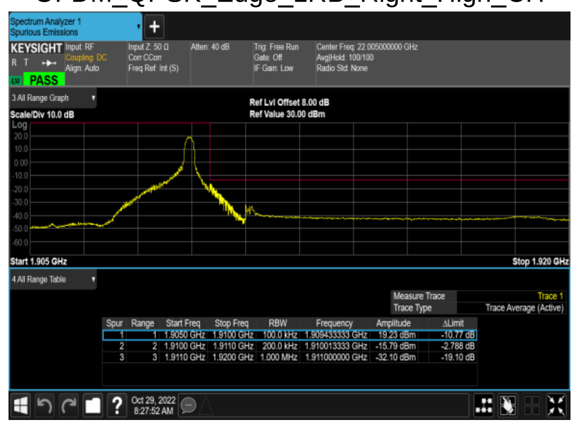
B66_N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



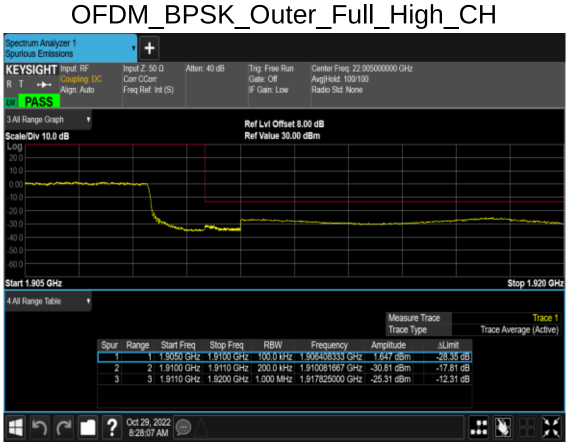
B66_N2(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



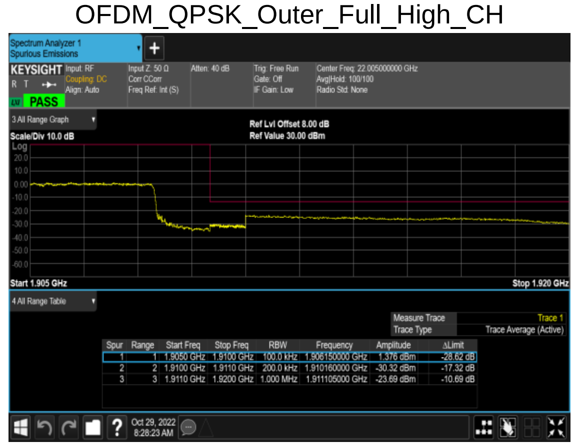
B66_N2(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



B66_N2(20M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



B66_N2(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



Software Version: 22.09.0601

FR1 N7(ANT1) Main PA

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-3.6dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
7	15	5	500500	2502.5	DFT-s-OFDM QPSK	1@1	23.78	20.18	0.1042
7	15	5	500500	2502.5	DFT-s-OFDM 16 QAM	1@1	22.6	19	0.0794
7	15	5	507000	2535.0	DFT-s-OFDM QPSK	1@1	24.02	20.42	0.1102
7	15	5	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.9	19.3	0.0851
7	15	5	513500	2567.5	DFT-s-OFDM QPSK	1@1	24.25	20.65	0.1161
7	15	5	513500	2567.5	DFT-s-OFDM 16 QAM	1@1	23	19.4	0.0871
7	15	10	501000	2505.0	DFT-s-OFDM QPSK	1@1	23.63	20.03	0.1007
7	15	10	501000	2505.0	DFT-s-OFDM 16 QAM	1@1	22.51	18.91	0.0778
7	15	10	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.76	20.16	0.1038
7	15	10	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.68	19.08	0.0809
7	15	10	513000	2565.0	DFT-s-OFDM QPSK	1@1	24	20.4	0.1096
7	15	10	513000	2565.0	DFT-s-OFDM 16 QAM	1@1	22.85	19.25	0.0841
7	15	15	501500	2507.5	DFT-s-OFDM QPSK	1@1	23.83	20.23	0.1054
7	15	15	501500	2507.5	DFT-s-OFDM 16 QAM	1@1	22.67	19.07	0.0807
7	15	15	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.87	20.27	0.1064
7	15	15	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.72	19.12	0.0817
7	15	15	512500	2562.5	DFT-s-OFDM QPSK	1@1	24.02	20.42	0.1102
7	15	15	512500	2562.5	DFT-s-OFDM 16 QAM	1@1	22.91	19.31	0.0853
7	15	20	502000	2510.0	DFT-s-OFDM QPSK	1@1	23.76	20.16	0.1038
7	15	20	502000	2510.0	DFT-s-OFDM 16 QAM	1@1	22.64	19.04	0.0802
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.77	20.17	0.1040
7	15	20	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.67	19.07	0.0807
7	15	20	512000	2560.0	DFT-s-OFDM QPSK	1@1	24.02	20.42	0.1102
7	15	20	512000	2560.0	DFT-s-OFDM 16 QAM	1@1	22.87	19.27	0.0845
7	15	25	502500	2512.5	DFT-s-OFDM QPSK	1@1	23.68	20.08	0.1019
7	15	25	502500	2512.5	DFT-s-OFDM 16 QAM	1@1	22.59	18.99	0.0793
7	15	25	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.71	20.11	0.1026
7	15	25	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.6	19	0.0794
7	15	25	511500	2557.5	DFT-s-OFDM QPSK	1@1	23.88	20.28	0.1067

7	15	25	511500	2557.5	DFT-s-OFDM 16 QAM	1@1	22.8	19.2	0.0832
7	15	30	503000	2515.0	DFT-s-OFDM QPSK	1@1	23.59	19.99	0.0998
7	15	30	503000	2515.0	DFT-s-OFDM 16 QAM	1@1	22.48	18.88	0.0773
7	15	30	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.53	19.93	0.0984
7	15	30	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.42	18.82	0.0762
7	15	30	511000	2555.0	DFT-s-OFDM QPSK	1@1	23.73	20.13	0.1030
7	15	30	511000	2555.0	DFT-s-OFDM 16 QAM	1@1	22.65	19.05	0.0804
7	15	40	504000	2520.0	DFT-s-OFDM QPSK	1@1	23.4	19.8	0.0955
7	15	40	504000	2520.0	DFT-s-OFDM 16 QAM	1@1	22.31	18.71	0.0743
7	15	40	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.22	19.62	0.0916
7	15	40	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.52	18.92	0.0780
7	15	40	510000	2550.0	DFT-s-OFDM QPSK	1@1	23.34	19.74	0.0942
7	15	40	510000	2550.0	DFT-s-OFDM 16 QAM	1@1	22.55	18.95	0.0785
7	15	50	505000	2525.0	DFT-s-OFDM PI/2 BPSK	135@67	24.1	20.5	0.1122
7	15	50	505000	2525.0	DFT-s-OFDM PI/2 BPSK	1@1	23.79	20.19	0.1045
7	15	50	505000	2525.0	DFT-s-OFDM PI/2 BPSK	1@268	23.95	20.35	0.1084
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	135@67	24.16	20.56	0.1138
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	1@1	23.91	20.31	0.1074
7	15	50	505000	2525.0	DFT-s-OFDM QPSK	1@268	24.07	20.47	0.1114
7	15	50	505000	2525.0	DFT-s-OFDM 16 QAM	135@67	23.19	19.59	0.0910
7	15	50	505000	2525.0	DFT-s-OFDM 16 QAM	1@1	22.8	19.2	0.0832
7	15	50	505000	2525.0	DFT-s-OFDM 16 QAM	1@268	22.97	19.37	0.0865
7	15	50	505000	2525.0	DFT-s-OFDM 64 QAM	135@67	21.66	18.06	0.0640
7	15	50	505000	2525.0	DFT-s-OFDM 64 QAM	1@1	21.19	17.59	0.0574
7	15	50	505000	2525.0	DFT-s-OFDM 64 QAM	1@268	21.39	17.79	0.0601
7	15	50	505000	2525.0	DFT-s-OFDM 256 QAM	135@67	19.6	16	0.0398
7	15	50	505000	2525.0	DFT-s-OFDM 256 QAM	1@1	19.36	15.76	0.0377
7	15	50	505000	2525.0	DFT-s-OFDM 256 QAM	1@268	19.52	15.92	0.0391
7	15	50	505000	2525.0	CP-OFDM QPSK	135@67	22.63	19.03	0.0800
7	15	50	505000	2525.0	CP-OFDM QPSK	1@1	22.66	19.06	0.0805
7	15	50	505000	2525.0	CP-OFDM QPSK	1@268	22.38	18.78	0.0755
7	15	50	507000	2535.0	DFT-s-OFDM PI/2 BPSK	135@67	23.77	20.17	0.1040
7	15	50	507000	2535.0	DFT-s-OFDM PI/2 BPSK	1@1	23.68	20.08	0.1019
7	15	50	507000	2535.0	DFT-s-OFDM PI/2 BPSK	1@268	23.98	20.38	0.1091
7	15	50	507000	2535.0	DFT-s-OFDM QPSK	135@67	24.17	20.57	0.1140

7	15	50	507000	2535.0	DFT-s-OFDM QPSK	1@1	23.79	20.19	0.1045
7	15	50	507000	2535.0	DFT-s-OFDM QPSK	1@268	24.13	20.53	0.1130
7	15	50	507000	2535.0	DFT-s-OFDM 16 QAM	135@67	23.18	19.58	0.0908
7	15	50	507000	2535.0	DFT-s-OFDM 16 QAM	1@1	22.69	19.09	0.0811
7	15	50	507000	2535.0	DFT-s-OFDM 16 QAM	1@268	23.02	19.42	0.0875
7	15	50	507000	2535.0	DFT-s-OFDM 64 QAM	135@67	21.68	18.08	0.0643
7	15	50	507000	2535.0	DFT-s-OFDM 64 QAM	1@1	21.14	17.54	0.0568
7	15	50	507000	2535.0	DFT-s-OFDM 64 QAM	1@268	21.42	17.82	0.0605
7	15	50	507000	2535.0	DFT-s-OFDM 256 QAM	135@67	19.61	16.01	0.0399
7	15	50	507000	2535.0	DFT-s-OFDM 256 QAM	1@1	19.27	15.67	0.0369
7	15	50	507000	2535.0	DFT-s-OFDM 256 QAM	1@268	19.52	15.92	0.0391
7	15	50	507000	2535.0	CP-OFDM QPSK	135@67	22.6	19	0.0794
7	15	50	507000	2535.0	CP-OFDM QPSK	1@1	22.39	18.79	0.0757
7	15	50	507000	2535.0	CP-OFDM QPSK	1@268	22.35	18.75	0.0750
7	15	50	509000	2545.0	DFT-s-OFDM PI/2 BPSK	135@67	24.17	20.57	0.1140
7	15	50	509000	2545.0	DFT-s-OFDM PI/2 BPSK	1@1	23.75	20.15	0.1035
7	15	50	509000	2545.0	DFT-s-OFDM PI/2 BPSK	1@268	24.06	20.46	0.1112
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	135@67	24.26	20.66	0.1164
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	1@1	23.86	20.26	0.1062
7	15	50	509000	2545.0	DFT-s-OFDM QPSK	1@268	24.3	20.7	0.1175
7	15	50	509000	2545.0	DFT-s-OFDM 16 QAM	135@67	23.3	19.7	0.0933
7	15	50	509000	2545.0	DFT-s-OFDM 16 QAM	1@1	22.78	19.18	0.0828
7	15	50	509000	2545.0	DFT-s-OFDM 16 QAM	1@268	23.11	19.51	0.0893
7	15	50	509000	2545.0	DFT-s-OFDM 64 QAM	135@67	21.82	18.22	0.0664
7	15	50	509000	2545.0	DFT-s-OFDM 64 QAM	1@1	21.25	17.65	0.0582
7	15	50	509000	2545.0	DFT-s-OFDM 64 QAM	1@268	21.52	17.92	0.0619
7	15	50	509000	2545.0	DFT-s-OFDM 256 QAM	135@67	19.76	16.16	0.0413
7	15	50	509000	2545.0	DFT-s-OFDM 256 QAM	1@1	19.34	15.74	0.0375
7	15	50	509000	2545.0	DFT-s-OFDM 256 QAM	1@268	19.64	16.04	0.0402
7	15	50	509000	2545.0	CP-OFDM QPSK	135@67	22.73	19.13	0.0818
7	15	50	509000	2545.0	CP-OFDM QPSK	1@1	22.48	18.88	0.0773
7	15	50	509000	2545.0	CP-OFDM QPSK	1@268	22.54	18.94	0.0783

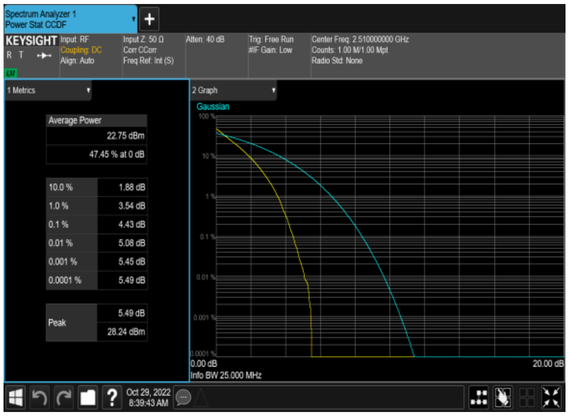
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0064	**PASS**	NV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0037	**PASS**	LV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0041	**PASS**	HV
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0027	**PASS**	-30℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0028	**PASS**	-20℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0059	**PASS**	-10℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0034	**PASS**	0℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0041	**PASS**	10℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0064	**PASS**	20℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0065	**PASS**	30℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0065	**PASS**	40℃
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	0.0036	**PASS**	50℃

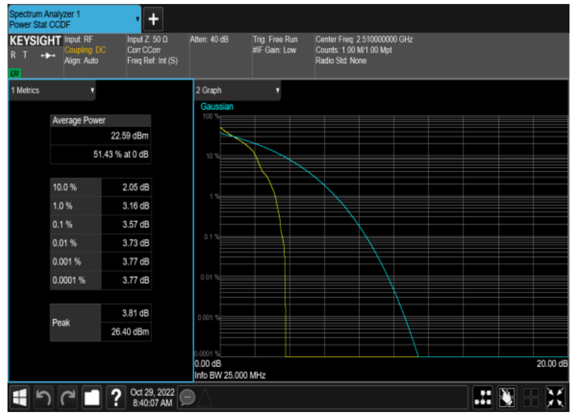
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
7	15	20	502000	2510.0	DFT-s-OFDM PI/2 BPSK	100@0	4.43	13	**PASS**
7	15	20	502000	2510.0	DFT-s-OFDM PI/2 BPSK	1@0	3.57	13	**PASS**
7	15	20	502000	2510.0	DFT-s-OFDM QPSK	100@0	5.57	13	**PASS**
7	15	20	502000	2510.0	DFT-s-OFDM QPSK	1@0	5.0	13	**PASS**
7	15	20	507000	2535.0	DFT-s-OFDM PI/2 BPSK	100@0	4.31	13	**PASS**
7	15	20	507000	2535.0	DFT-s-OFDM PI/2 BPSK	1@0	3.64	13	**PASS**
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	5.42	13	**PASS**
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	1@0	5.12	13	**PASS**
7	15	20	512000	2560.0	DFT-s-OFDM PI/2 BPSK	100@0	4.25	13	**PASS**
7	15	20	512000	2560.0	DFT-s-OFDM PI/2 BPSK	1@0	3.71	13	**PASS**
7	15	20	512000	2560.0	DFT-s-OFDM QPSK	100@0	5.17	13	**PASS**
7	15	20	512000	2560.0	DFT-s-OFDM QPSK	1@0	5.02	13	**PASS**

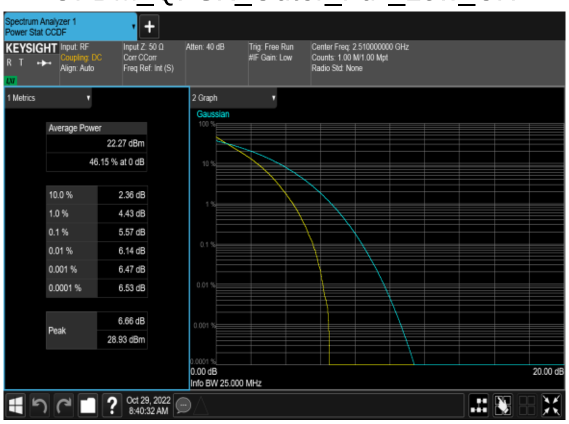
N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



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

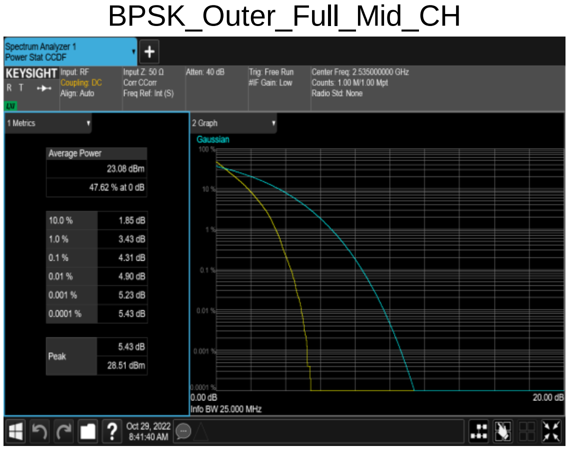


N7(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

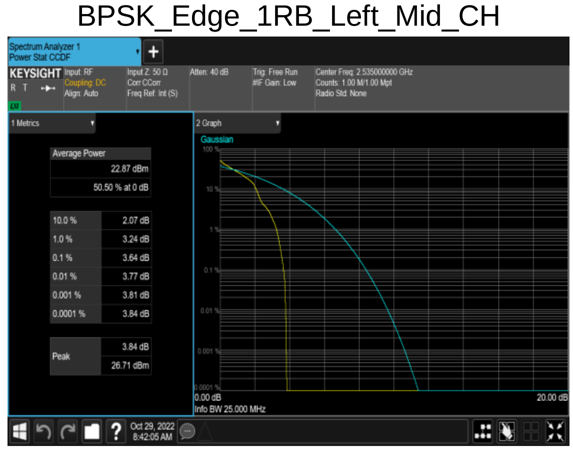


N7(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

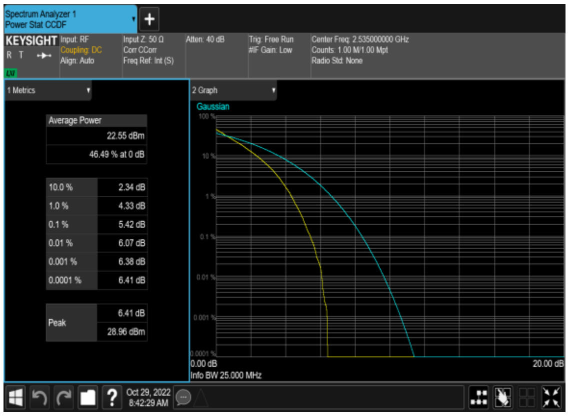
N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



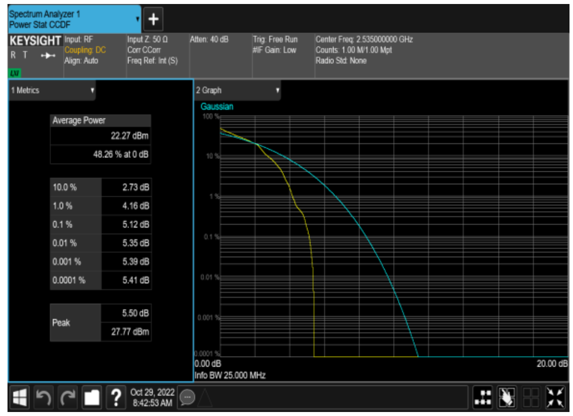
N7(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



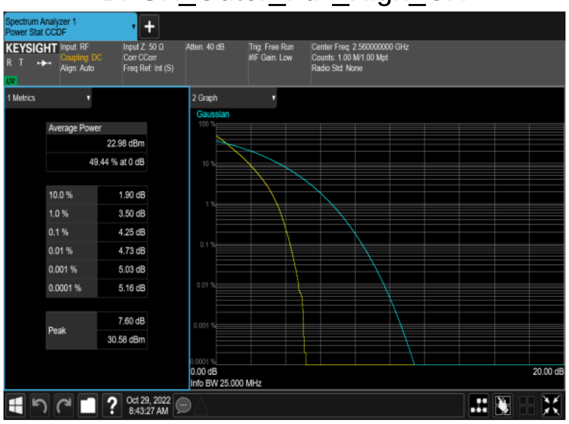
N7(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N7(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

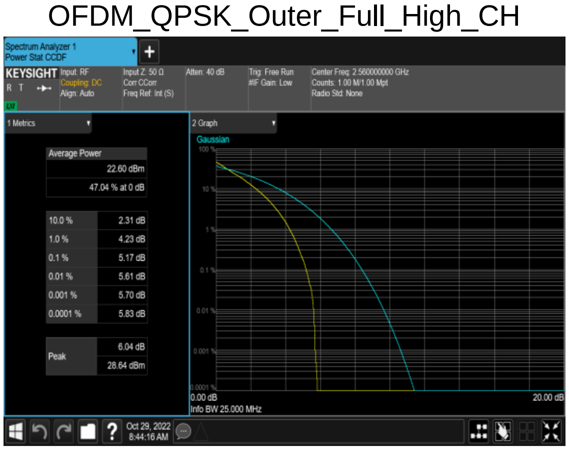


N7(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

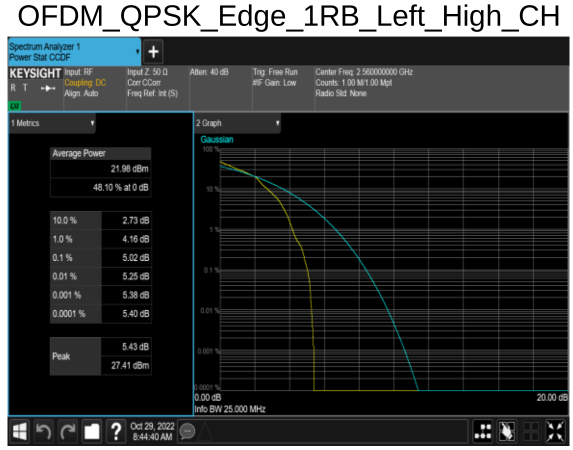


N7(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH

N7(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N7(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
7	15	5	507000	2535.0	DFT-s-OFDM PI/2 BPSK	25@0	4.4784	4.818
7	15	5	507000	2535.0	DFT-s-OFDM QPSK	25@0	4.461	4.838
7	15	5	507000	2535.0	CP-OFDM QPSK	25@0	4.4628	4.817
7	15	5	507000	2535.0	CP-OFDM 16 QAM	25@0	4.4683	4.884
7	15	5	507000	2535.0	CP-OFDM 64 QAM	25@0	4.4705	4.897
7	15	5	507000	2535.0	CP-OFDM 256 QAM	25@0	4.4785	4.888
7	15	10	507000	2535.0	DFT-s-OFDM PI/2 BPSK	50@0	8.9047	9.532
7	15	10	507000	2535.0	DFT-s-OFDM QPSK	50@0	8.9261	9.539
7	15	10	507000	2535.0	CP-OFDM QPSK	52@0	9.2795	9.816
7	15	10	507000	2535.0	CP-OFDM 16 QAM	52@0	9.2904	9.824
7	15	10	507000	2535.0	CP-OFDM 64 QAM	52@0	9.271	9.821
7	15	10	507000	2535.0	CP-OFDM 256 QAM	52@0	9.2946	9.81
7	15	15	507000	2535.0	DFT-s-OFDM PI/2 BPSK	75@0	13.389	13.92
7	15	15	507000	2535.0	DFT-s-OFDM QPSK	75@0	13.379	14.13
7	15	15	507000	2535.0	CP-OFDM QPSK	79@0	14.076	14.79
7	15	15	507000	2535.0	CP-OFDM 16 QAM	79@0	14.135	14.73
7	15	15	507000	2535.0	CP-OFDM 64 QAM	79@0	14.109	14.78
7	15	15	507000	2535.0	CP-OFDM 256 QAM	79@0	14.081	14.76
7	15	20	507000	2535.0	DFT-s-OFDM PI/2 BPSK	100@0	17.853	18.92
7	15	20	507000	2535.0	DFT-s-OFDM QPSK	100@0	17.83	18.82
7	15	20	507000	2535.0	CP-OFDM QPSK	106@0	18.882	19.83
7	15	20	507000	2535.0	CP-OFDM 16 QAM	106@0	18.936	19.89
7	15	20	507000	2535.0	CP-OFDM 64 QAM	106@0	18.876	19.94
7	15	20	507000	2535.0	CP-OFDM 256 QAM	106@0	18.87	19.86
7	15	25	507000	2535.0	DFT-s-OFDM PI/2 BPSK	128@0	22.85	23.99

7	15	25	507000	2535.0	DFT-s-OFDM QPSK	128@0	22.849	23.91
7	15	25	507000	2535.0	CP-OFDM QPSK	133@0	23.702	24.76
7	15	25	507000	2535.0	CP-OFDM 16 QAM	133@0	23.693	24.71
7	15	25	507000	2535.0	CP-OFDM 64 QAM	133@0	23.75	24.8
7	15	25	507000	2535.0	CP-OFDM 256 QAM	133@0	23.727	24.89
7	15	30	507000	2535.0	DFT-s-OFDM PI/2 BPSK	160@0	28.465	29.69
7	15	30	507000	2535.0	DFT-s-OFDM QPSK	160@0	28.517	29.6
7	15	30	507000	2535.0	CP-OFDM QPSK	160@0	28.556	29.72
7	15	30	507000	2535.0	CP-OFDM 16 QAM	160@0	28.563	29.71
7	15	30	507000	2535.0	CP-OFDM 64 QAM	160@0	28.496	29.7
7	15	30	507000	2535.0	CP-OFDM 256 QAM	160@0	28.593	29.66
7	15	40	507000	2535.0	DFT-s-OFDM PI/2 BPSK	216@0	38.459	39.99
7	15	40	507000	2535.0	DFT-s-OFDM QPSK	216@0	38.562	40.03
7	15	40	507000	2535.0	CP-OFDM QPSK	216@0	38.464	40.05
7	15	40	507000	2535.0	CP-OFDM 16 QAM	216@0	38.433	40.05
7	15	40	507000	2535.0	CP-OFDM 64 QAM	216@0	38.447	39.89
7	15	40	507000	2535.0	CP-OFDM 256 QAM	216@0	38.442	39.96
7	15	50	507000	2535.0	DFT-s-OFDM PI/2 BPSK	270@0	48.036	49.81
7	15	50	507000	2535.0	DFT-s-OFDM QPSK	270@0	48.098	49.92
7	15	50	507000	2535.0	CP-OFDM QPSK	270@0	48.088	49.82
7	15	50	507000	2535.0	CP-OFDM 16 QAM	270@0	48.187	49.92
7	15	50	507000	2535.0	CP-OFDM 64 QAM	270@0	48.083	49.78
7	15	50	507000	2535.0	CP-OFDM 256 QAM	270@0	48.1	49.79