FCC RF Test Report

APPLICANT	:	**Motorola Mobility LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
MODEL NAME	:	**XT2301-1**
FCC ID	:	**IHDT56AH1**
STANDARD	:	**47 CFR Part 2, 22, 24, 27**
CLASSIFICATION	:	**PCS Licensed Transmitter Held to Ear (PCE)**
TEST DATE(S)	:	**Oct. 30, 2022 ~ Nov. 02, 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 #5145.02

Sporton International Inc. (ShenZhen)

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG292622J	Rev. 01	Initial issue of report	Dec. 12, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power (5G NR n5, n26,)	ERP < 7 Watt		
	§27.50(c)(10)	Effective Radiated Power (5G NR n12)	ERP < 3 Watt		
	§24.232(c)	Equivalent Isotropic Radiated Power (5G NR n2, n25)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (5G NR n66)	EIRP < 1Watt		
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(h) §27.53(g)	Conducted Band Edge Measurement (5G NR n5, n26) (5G NR n2, n25) (5G NR n66) (5G NR n12)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(h) §27.53(g)	Conducted Spurious Emission (5G NR n5, n26) (5G NR n2, n25) (5G NR n66) (5G NR n12)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(h) §27.53(g)	Radiated Spurious Emission (5G NR n5, n26) (5G NR n2, n25) (5G NR n66) (5G NR n12)	< 43+10$\log_{10}$(P[Watts])	PASS	Under limit 4.42 dB at 10848.000 MHz

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

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

1 General Description

1.1 Applicant

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	XT2301-1
FCC ID	IHDT56AH1
IMEI Code	Conducted : 350007550015938/350007550016357 Radiation : 350007550014055/350007550014063
HW Version	DVT2
SW Version	TTR33.124
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 824 MHz ~ 849 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz
Rx Frequency	5G NR n2 : 1930 MHz ~ 1990 MHz 5G NR n5 : 869 MHz ~ 894 MHz 5G NR n12: 729 MHz ~ 746 MHz 5G NR n25 : 1930 MHz ~ 1995 MHz 5G NR n26 : 869 MHz ~ 894 MHz 5G NR n66 : 2110 MHz~ 2200 MHz
Bandwidth	n2/n5/n25/n26: 5MHz / 10MHz / 15MHz / 20MHz n66: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz
SCS	15kHz
Antenna Gain	**<Ant. 0>:** n5: -4.5 dBi n12: -4.5 dBi n26: -4.5 dBi **<Ant. 1>:**

	n2: -0.58 dBi n5: -5.76 dBi n25: -0.58 dBi n26: -5.76 dBi n66: -1.91 dBi **<Ant. 2>:** n2: -3.1 dBi n25: -3.1 dBi n66: -3.5 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum ERP/EIRP is calculated from max output power and max antenna gain, only the maximum ERP/EIRP are shown in the report, 5G NR n2/n25/n66 for Ant. 1 and 5G NR n5/n12/n26 for Ant. 0.
2. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown in the report.
3. 5G NR support SA mode and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode.
4. The EN-DC mode combination could be referred to the product spec.

1.5 Modification of EUT

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

1.6 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola (Chenyang)	**Model Name**	MC-681N
AC Adapter 2(US)	**Brand Name**	Motorola (Acbel)	**Model Name**	MC-681N
Battery 1	**Brand Name**	Motorola(SCUD)	**Model Name**	PC51
Earphone 1	**Brand Name**	Motorola (Lyand)	**Model Name**	MI181C(SH38D62338)
USB Cable 1	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D24968
C to HDMI HDMI/USBC Cable 1	**Brand Name**	Motorola(Linxee)	**Model Name**	SC18D02146
C to HDMI HDMI/USBC Cable 2	**Brand Name**	Motorola(Linxee)	**Model Name**	SC18D38847

1.7 Maximum ERP/EIRP Power and Emission Designator

5G NR n2		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	1852.5 ~ 1907.5	0.2183	4M49G7D	0.1795	4M48W7D
10	1855.0 ~ 1905.0	0.2173	9M29G7D	0.1750	9M30W7D
15	1857.5 ~ 1902.5	0.2183	14M1G7D	0.1816	14M1W7D
20	1860.0 ~ 1900.0	0.2188	18M9G7D	0.1862	19M0W7D

5G NR n5		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	826.5 ~ 846.5	0.0540	4M48G7D	0.0447	4M50W7D
10	829.0 ~ 844.0	0.0540	9M26G7D	0.0433	9M29W7D
15	831.5 ~ 841.5	0.0540	14M1G7D	0.0448	14M1W7D
20	834.0 ~ 839.0	0.0541	18M9G7D	0.0447	18M9W7D

5G NR n12		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	701.5 ~ 713.5	0.0537	4M52G7D	0.0425	4M53W7D
10	704.0~ 711.0	0.0537	9M31G7D	0.0435	9M32W7D
15	706.5 ~ 708.5	0.0542	14M2G7D	0.0443	14M2W7D

5G NR n25		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	1852.5 ~ 1912.5	0.2178	4M49G7D	0.1762	4M48W7D
10	1855.0 ~ 1910.0	0.2158	9M29G7D	0.1746	9M30W7D
15	1857.5 ~ 1907.5	0.2178	14M1G7D	0.1811	14M1W7D
20	1860.0 ~ 1905.0	0.2193	18M9G7D	0.1832	19M0W7D

5G NR n26		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	826.5 ~ 846.5	0.0540	4M48G7D	0.0439	4M50W7D
10	829.0 ~ 844.0	0.0541	9M26G7D	0.0449	9M29W7D
15	831.5 ~ 841.5	0.0541	14M1G7D	0.0450	14M1W7D
20	834.0 ~ 839.0	0.0542	18M9G7D	0.0453	18M9W7D

5G NR n66		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	1712.5 ~ 1777.5	0.1542	4M49G7D	0.1194	4M49W7D
10	1715.0 ~ 1775.0	0.1514	9M289G7D	0.1199	9M30W7D
15	1717.5 ~ 1772.5	0.1585	14M1G7D	0.1285	14M1W7D
20	1720.0 ~ 1770.0	0.1535	18M9G7D	0.1262	19M0W7D
25	1722.5 ~ 1767.5	0.1545	23M7G7D	0.1337	23M7W7D
30	1725.0 ~ 1765.0	0.1466	28M6G7D	0.1202	28M6W7D
40	1730.0 ~ 1760.0	0.1614	38M6G7D	0.1294	38M6W7D

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

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

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH03-SZ	CN1256	421272

1.9 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH03-SZ	AUDIX	E3	6.2009-8-24

1.10 Applicable Standards

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

- 47 CFR Part 2, 22, 24, 27
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

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

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

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

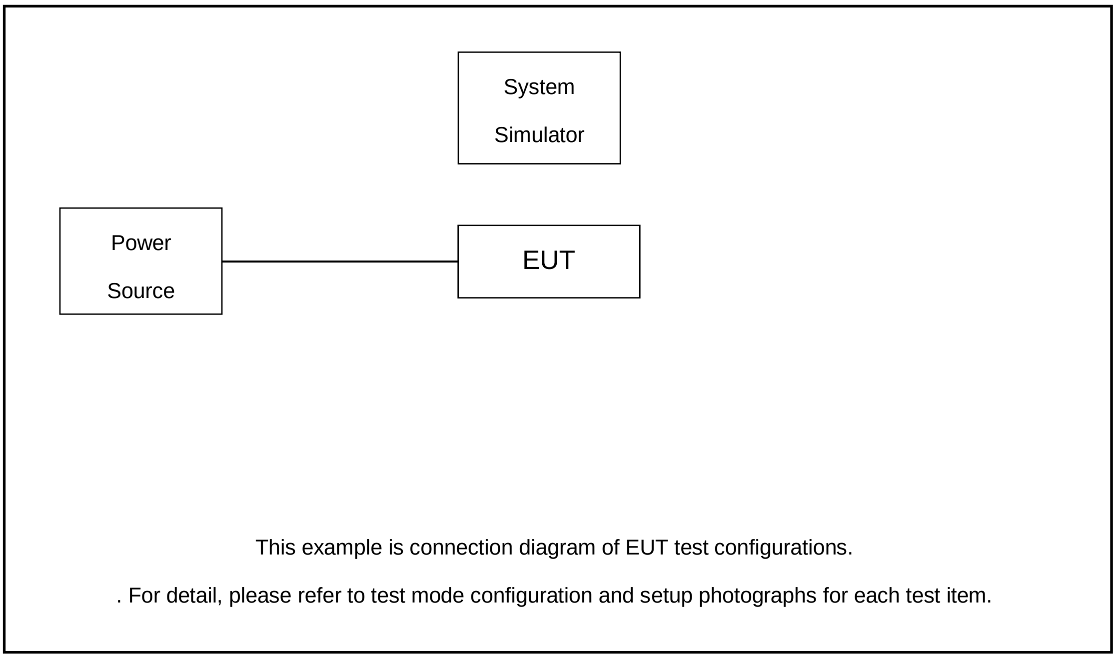
Test Items	5G NR	Bandwidth (MHz)							Modulation					RB #		Test Channel		
		5	10	15	20	25	30	40	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H
Max. Output Power	n2	v	v	v	v	-	-	-	v	v	v	v	v	v	v	v	v	v
	n5	v	v	v	v	-	-	-	v	v	v	v	v	v	v	v	v	v
	n12	v	v	v	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n25	v	v	v	v	-	-	-	v	v	v	v	v	v	v	v	v	v
	n26	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	n12		v		-	-	-	-	v	v				v	v		v	
	n25				v	-	-	-	v	v				v	v		v	
	n26				-v	-	-	-	v	v				v	v		v	
	n66				v	-	-	-	v	v				v	v		v	
26dB and 99% Bandwidth	n12	v	v	v	-	-	-	-	v	v	v	v	v		v	v	v	v
	n25	v	v	v	v	-	-	-	v	v	v	v	v		v	v	v	v
	n26	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

Test Items	5G NR	Bandwidth (MHz)							Modulation					RB #		Test Channel		
		5	10	15	20	25	30	40	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H
Conducted Band Edge	n12	v	v	v	-	-	-	-	v	v				v	v	v		v
	n25	v	v		v	-	-	-	v	v				v	v	v		v
	n26	v	v		v	-	-	-	v	v				v	v	v		v
	n66	v			v			v	v	v				v	v	v		v
Conducted Spurious Emission	n12	v	v	v	-	-	-	-	v	v				v		v	v	v
	n25	v	v		v	-	-	-	v	v				v		v	v	v
	n26	v	v		v	-	-	-	v	v				v		v	v	v
	n66	v			v			v	v	v				v		v	v	v
Frequency Stability	n12		v		-	-	-	-	v	v					v		v	
	n25				v	-	-	-	v	v					v		v	
	n26				-v	-	-	-	v	v					v		v	
	n66				v				v	v					v		v	
E.R.P / E.I.R.P	n12	v	v	v	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n25	v	v	v	v	-	-	-	v	v	v	v	v	v	v	v	v	v
	n26	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	n12	Worst Case															v	
	n25	Worst Case															v	
	n26	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. Based on engineering evaluation, only the worst modulation test results are shown in the report.
5. Frequency Stability：Normal Voltage = 3.89V ；Low Voltage =3.40V.；High Voltage =4.48V

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

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

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

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

Example :

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

= 7.6 (dB)

2.5 Frequency List of Low/Middle/High Channels

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

5G NR n5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	166800	167300	167800
	Frequency	834	836.5	839
15	Channel	166300	167300	168300
	Frequency	831.5	836.5	841.5
10	Channel	165800	167300	168800
	Frequency	829	836.5	844
5	Channel	165300	167300	169300
	Frequency	826.5	836.5	846.5

5G NR n12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	141300	141500	141700
	Frequency	706.5	707.5	708.5
10	Channel	140800	141500	142200
	Frequency	704	707.5	711
5	Channel	140300	141500	142700
	Frequency	701.5	707.5	713.5

5G NR n25 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	372000	376500	381000
	Frequency	1860	1882.5	1905
15	Channel	371500	376500	381500
	Frequency	1857.5	1882.5	1907.5
10	Channel	371000	376500	382000
	Frequency	1855	1882.5	1910
5	Channel	370500	376500	382500
	Frequency	1852.5	1882.5	1912.5

5G NR n26 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	175800	176300	176800
	Frequency	834	836.5	839
15	Channel	175300	176300	177300
	Frequency	831.5	836.5	841.5
10	Channel	174800	176300	177800
	Frequency	829	836.5	844
5	Channel	174300	176300	178300
	Frequency	826.5	836.5	846.5

5G NR 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	344000	349000	354000
	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

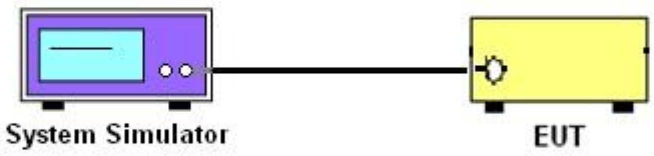
3 Conducted Test Items

3.1 Measuring Instruments

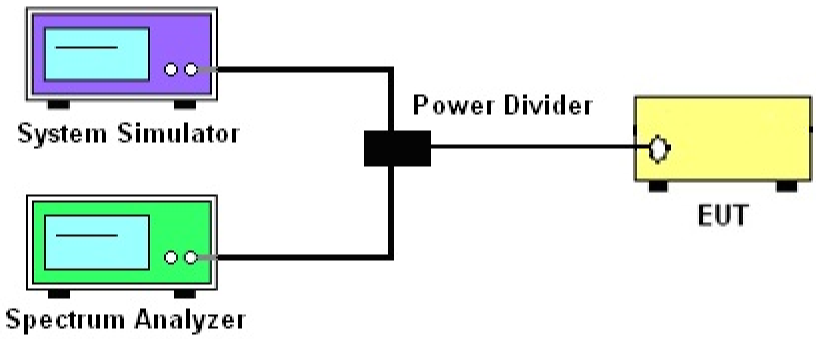
See list of measuring instruments of this test report.

3.2 Test Setup

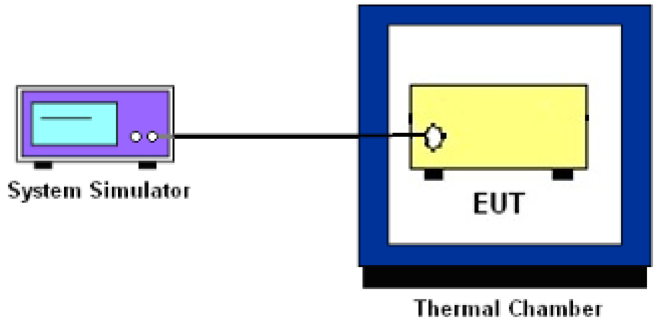
3.2.1 Conducted Output Power



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 ERP/EIRP

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

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

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

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

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

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

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 Test Procedures

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

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

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

3.5.2 Test Procedures

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

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 Test Procedures

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

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a)

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

27.53 (g)

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

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.

3.7.2 Test Procedures

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

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

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

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

3.8.2 Test Procedures

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

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

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

3.9.2 Test Procedures for Temperature Variation

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

3.9.3 Test Procedures for Voltage Variation

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

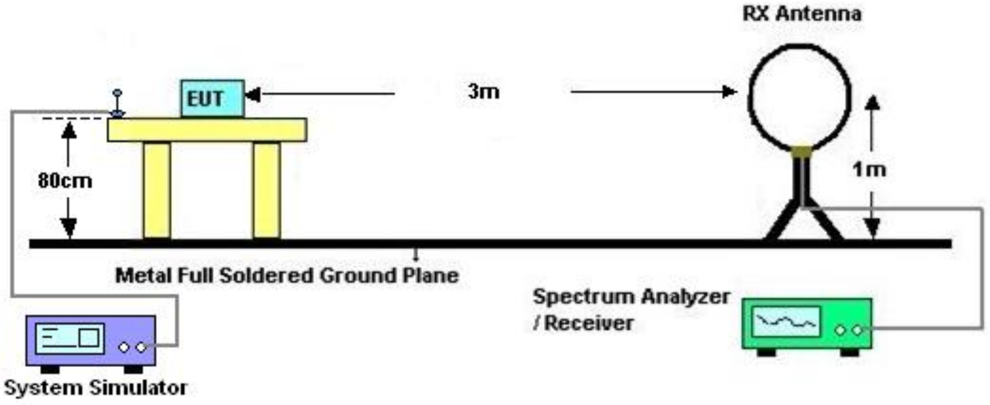
4 Radiated Test Items

4.1 Measuring Instruments

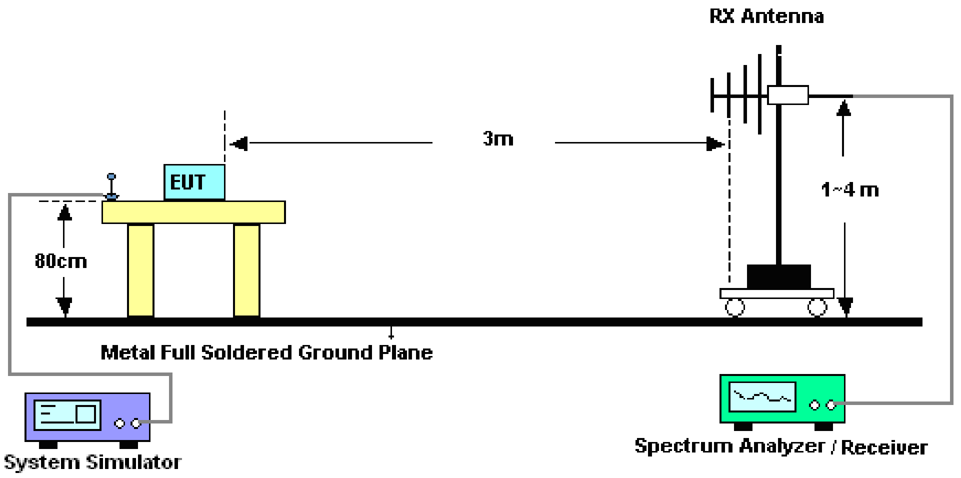
See list of measuring instruments of this test report.

4.2 Test Setup

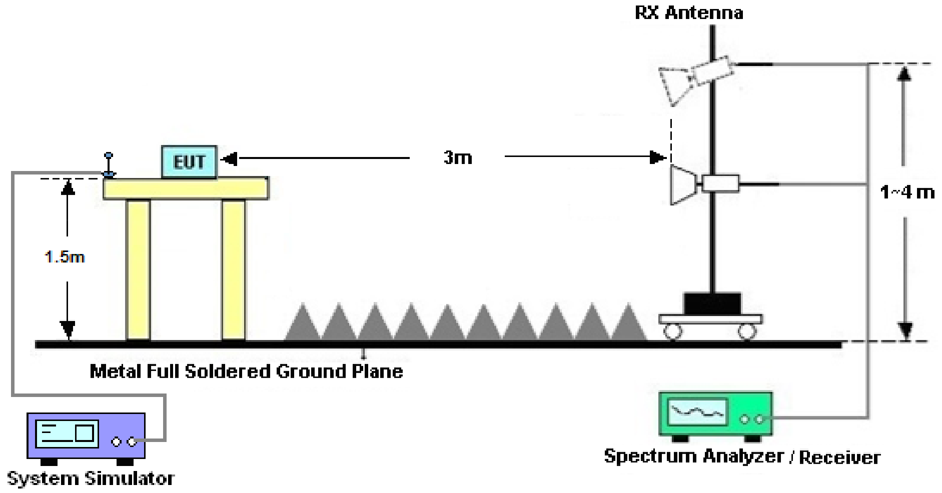
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

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

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Oct. 30, 2022~ Nov. 02, 2022	Apr. 08, 2023	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2021	Oct. 30, 2022~ Nov. 02, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 07, 2022	Oct. 30, 2022~ Nov. 02, 2022	Jul. 06, 2023	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 06, 2022	Nov. 01, 2022	Apr. 05, 2023	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 28, 2022	Nov. 01, 2022	Jun. 27, 2024	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 06, 2022	Nov. 01, 2022	Apr. 05, 2023	Radiation (03CH03-SZ
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 09, 2021	Nov. 01, 2022	Aug. 08, 2023	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 08, 2022	Nov. 01, 2022	Apr. 07, 2023	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 19, 2022	Nov. 01, 2022	Oct. 18, 2023	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 06, 2022	Nov. 01, 2022	Jul. 05, 2023	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 10, 2022	Nov. 01, 2022	Apr. 09, 2023	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 27,2021	Nov. 01, 2022	Dec. 26,2022	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010002729	N/A	Nov. 10, 2022	Nov. 01, 2022	Nov. 09, 2023	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Nov. 01, 2022	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Nov. 01, 2022	NCR	Radiation (03CH03-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 Conducted Measurement

Test Item	Uncertainty
Conducted Power	±1.34 dB
Conducted Emissions	±1.34 dB
Occupied Channel Bandwidth	±1.2 %

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.0dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.60dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.80dB

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

Appendix A. Test Results of Conducted Test

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

TEL : +86-755-8637-9589
FAX : + 86-755-8637-9595

Software Version: 22.09.0601

FR1 N12-Ant 0

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

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@1	23.92	17.27	0.0533
12	15	5	140300	701.5	DFT-s-OFDM 16 QAM	1@1	22.92	16.27	0.0424
12	15	5	141500	707.5	DFT-s-OFDM QPSK	1@1	23.82	17.17	0.0521
12	15	5	141500	707.5	DFT-s-OFDM 16 QAM	1@1	22.93	16.28	0.0425
12	15	5	142700	713.5	DFT-s-OFDM QPSK	1@1	23.95	17.3	0.0537
12	15	5	142700	713.5	DFT-s-OFDM 16 QAM	1@1	22.9	16.25	0.0422
12	15	10	140800	704	DFT-s-OFDM QPSK	1@1	23.9	17.25	0.0531
12	15	10	140800	704	DFT-s-OFDM 16 QAM	1@1	22.99	16.34	0.0431
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@1	23.95	17.3	0.0537
12	15	10	141500	707.5	DFT-s-OFDM 16 QAM	1@1	23.03	16.38	0.0435
12	15	10	142200	711	DFT-s-OFDM QPSK	1@1	23.79	17.14	0.0518
12	15	10	142200	711	DFT-s-OFDM 16 QAM	1@1	22.95	16.3	0.0427
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	36@18	23.99	17.34	0.0542
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@1	23.92	17.27	0.0533
12	15	15	141300	706.5	DFT-s-OFDM PI/2 BPSK	1@77	23.81	17.16	0.0520
12	15	15	141300	706.5	DFT-s-OFDM QPSK	36@18	23.97	17.32	0.0540
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@1	23.95	17.3	0.0537
12	15	15	141300	706.5	DFT-s-OFDM QPSK	1@77	23.96	17.31	0.0538
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	36@18	23.09	16.44	0.0441

12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@1	23.1	16.45	0.0442
12	15	15	141300	706.5	DFT-s-OFDM 16 QAM	1@77	23	16.35	0.0432
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	36@18	21.55	14.9	0.0309
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@1	21.61	14.96	0.0313
12	15	15	141300	706.5	DFT-s-OFDM 64 QAM	1@77	21.6	14.95	0.0313
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	36@18	19.35	12.7	0.0186
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@1	19.29	12.64	0.0184
12	15	15	141300	706.5	DFT-s-OFDM 256 QAM	1@77	19.16	12.51	0.0178
12	15	15	141300	706.5	CP-OFDM QPSK	39@19	22.52	15.87	0.0386
12	15	15	141300	706.5	CP-OFDM QPSK	1@1	22.61	15.96	0.0394
12	15	15	141300	706.5	CP-OFDM QPSK	1@77	22.48	15.83	0.0383
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	36@18	23.98	17.33	0.0541
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@1	23.95	17.3	0.0537
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@77	23.81	17.16	0.0520
12	15	15	141500	707.5	DFT-s-OFDM QPSK	36@18	23.95	17.3	0.0537
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@1	23.91	17.26	0.0532
12	15	15	141500	707.5	DFT-s-OFDM QPSK	1@77	23.92	17.27	0.0533
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	36@18	23.1	16.45	0.0442
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@1	23.11	16.46	0.0443
12	15	15	141500	707.5	DFT-s-OFDM 16 QAM	1@77	23.04	16.39	0.0436
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	36@18	21.57	14.92	0.0310
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@1	21.66	15.01	0.0317
12	15	15	141500	707.5	DFT-s-OFDM 64 QAM	1@77	21.52	14.87	0.0307
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	36@18	19.31	12.66	0.0185

12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@1	19.29	12.64	0.0184
12	15	15	141500	707.5	DFT-s-OFDM 256 QAM	1@77	19.13	12.48	0.0177
12	15	15	141500	707.5	CP-OFDM QPSK	39@19	22.62	15.97	0.0395
12	15	15	141500	707.5	CP-OFDM QPSK	1@1	22.57	15.92	0.0391
12	15	15	141500	707.5	CP-OFDM QPSK	1@77	22.1	15.45	0.0351
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	36@18	23.91	17.26	0.0532
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@1	23.97	17.32	0.0540
12	15	15	141700	708.5	DFT-s-OFDM PI/2 BPSK	1@77	23.87	17.22	0.0527
12	15	15	141700	708.5	DFT-s-OFDM QPSK	36@18	23.95	17.3	0.0537
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@1	23.94	17.29	0.0536
12	15	15	141700	708.5	DFT-s-OFDM QPSK	1@77	23.91	17.26	0.0532
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	36@18	23.11	16.46	0.0443
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@1	23.06	16.41	0.0438
12	15	15	141700	708.5	DFT-s-OFDM 16 QAM	1@77	22.92	16.27	0.0424
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	36@18	21.66	15.01	0.0317
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@1	21.62	14.97	0.0314
12	15	15	141700	708.5	DFT-s-OFDM 64 QAM	1@77	21.54	14.89	0.0308
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	36@18	19.15	12.5	0.0178
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@1	19.29	12.64	0.0184
12	15	15	141700	708.5	DFT-s-OFDM 256 QAM	1@77	19.2	12.55	0.0180
12	15	15	141700	708.5	CP-OFDM QPSK	39@19	22.64	15.99	0.0397
12	15	15	141700	708.5	CP-OFDM QPSK	1@1	22.54	15.89	0.0388
12	15	15	141700	708.5	CP-OFDM QPSK	1@77	22.22	15.57	0.0361

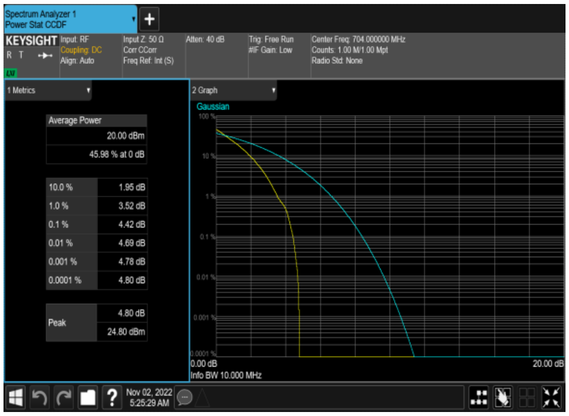
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0052	**PASS**	NV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0046	**PASS**	LV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0057	**PASS**	HV
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0042	**PASS**	-30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0040	**PASS**	-20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0051	**PASS**	-10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0033	**PASS**	0℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0037	**PASS**	10℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0052	**PASS**	20℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0049	**PASS**	30℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0027	**PASS**	40℃
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	0.0038	**PASS**	50℃

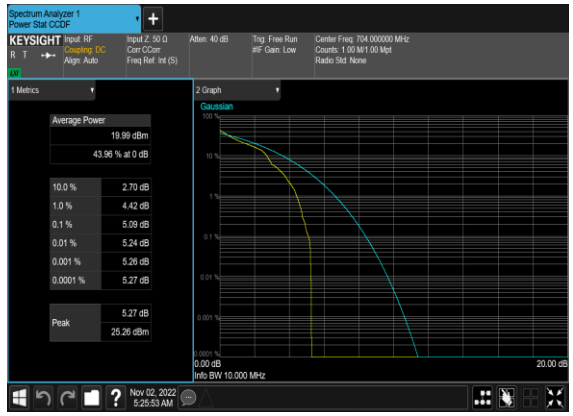
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
12	15	10	140800	704.0	DFT-s-OFDM PI/2 BPSK	50@0	4.42	13	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM PI/2 BPSK	1@0	5.09	13	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM QPSK	50@0	5.21	13	**PASS**
12	15	10	140800	704.0	DFT-s-OFDM QPSK	1@0	5.79	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM PI/2 BPSK	50@0	4.98	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM PI/2 BPSK	1@0	4.02	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	5.95	13	**PASS**
12	15	10	141500	707.5	DFT-s-OFDM QPSK	1@0	4.77	13	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM PI/2 BPSK	50@0	5.04	13	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM PI/2 BPSK	1@0	4.66	13	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM QPSK	50@0	5.57	13	**PASS**
12	15	10	142200	711.0	DFT-s-OFDM QPSK	1@0	5.27	13	**PASS**

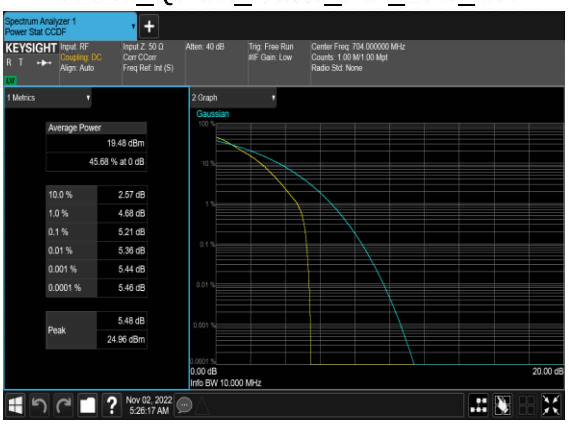
N12(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



N12(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH

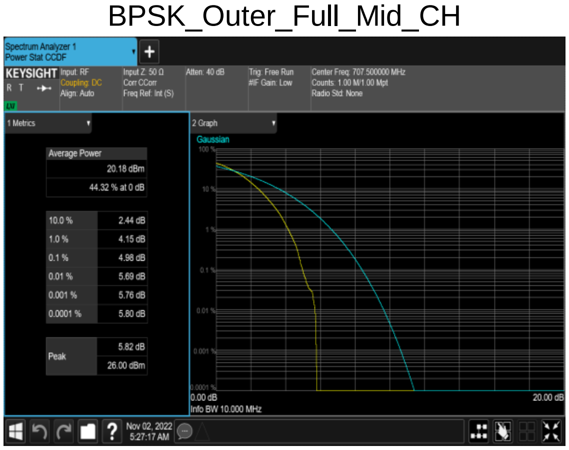


N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

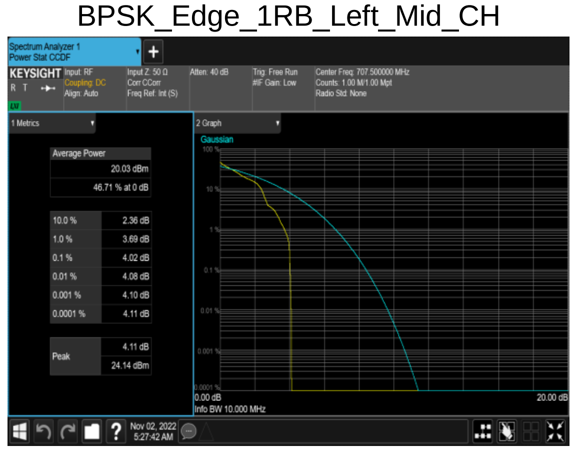


N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

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

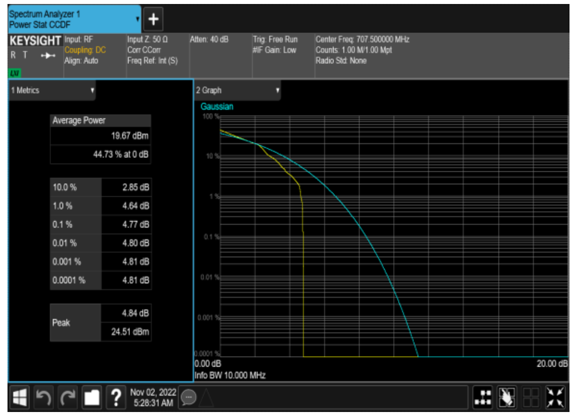


N12(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

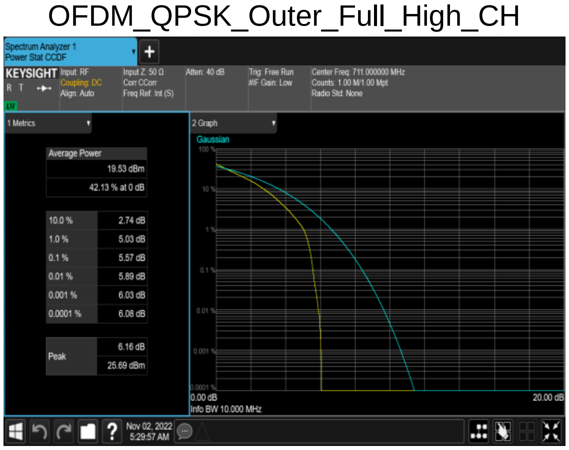
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



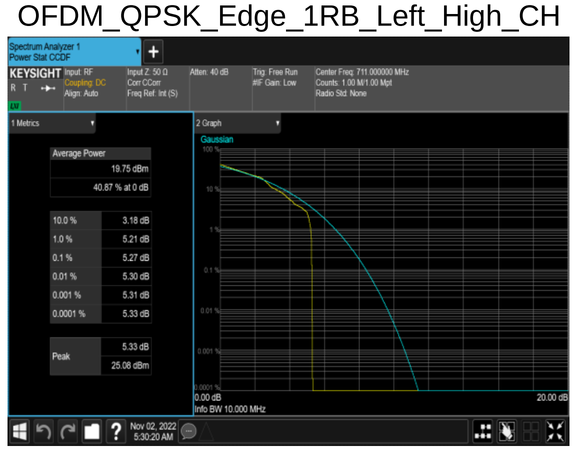
N12(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

N12(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH

N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N12(10M)_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)
12	15	5	141500	707.5	DFT-s-OFDM PI/2 BPSK	25@0	4.5024	5.143
12	15	5	141500	707.5	DFT-s-OFDM QPSK	25@0	4.4832	5.525
12	15	5	141500	707.5	CP-OFDM QPSK	25@0	4.5177	8.126
12	15	5	141500	707.5	CP-OFDM 16 QAM	25@0	4.5349	7.341
12	15	5	141500	707.5	CP-OFDM 64 QAM	25@0	4.4912	7.475
12	15	5	141500	707.5	CP-OFDM 256 QAM	25@0	4.5129	6.742
12	15	10	141500	707.5	DFT-s-OFDM PI/2 BPSK	50@0	8.9052	9.509
12	15	10	141500	707.5	DFT-s-OFDM QPSK	50@0	8.9174	9.623
12	15	10	141500	707.5	CP-OFDM QPSK	52@0	9.3055	16.5
12	15	10	141500	707.5	CP-OFDM 16 QAM	52@0	9.3234	13.04
12	15	10	141500	707.5	CP-OFDM 64 QAM	52@0	9.2917	13.27
12	15	10	141500	707.5	CP-OFDM 256 QAM	52@0	9.3105	13.85
12	15	15	141500	707.5	DFT-s-OFDM PI/2 BPSK	75@0	13.399	14.61
12	15	15	141500	707.5	DFT-s-OFDM QPSK	75@0	13.426	14.65
12	15	15	141500	707.5	CP-OFDM QPSK	79@0	14.153	20.85
12	15	15	141500	707.5	CP-OFDM 16 QAM	79@0	14.161	16.69
12	15	15	141500	707.5	CP-OFDM 64 QAM	79@0	14.162	17.43
12	15	15	141500	707.5	CP-OFDM 256 QAM	79@0	14.148	19.65

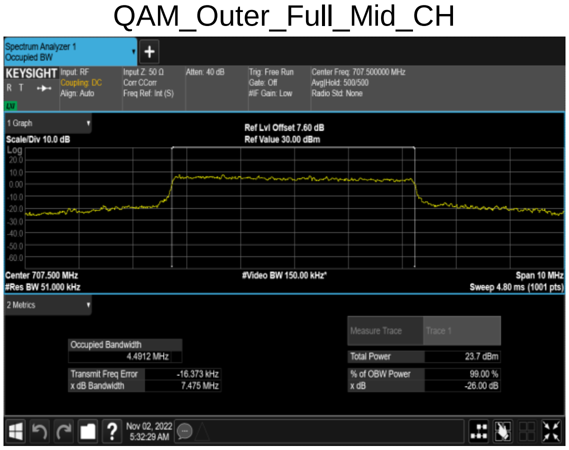
N12(5M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

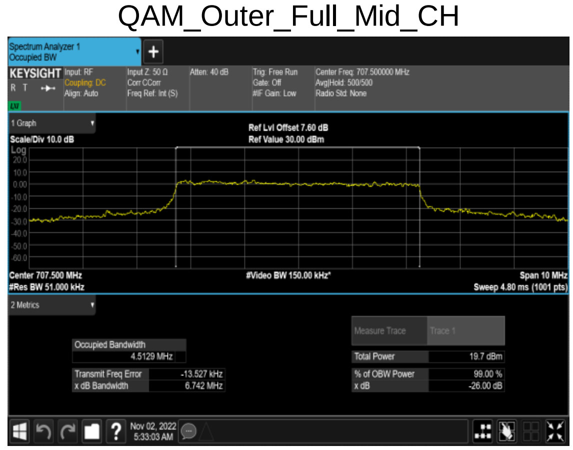
N12(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

N12(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N12(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N12(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



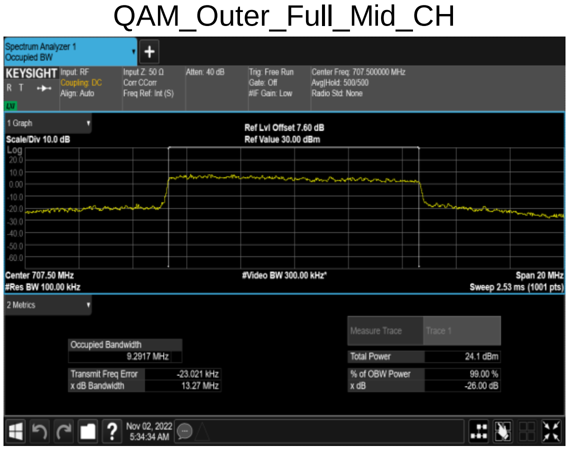
N12(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

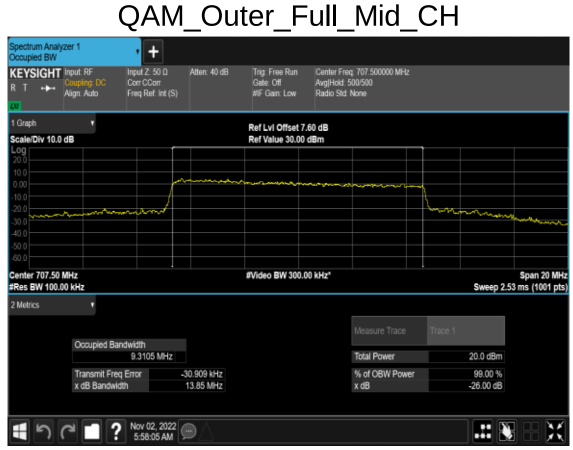
N12(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

N12(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N12(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N12(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

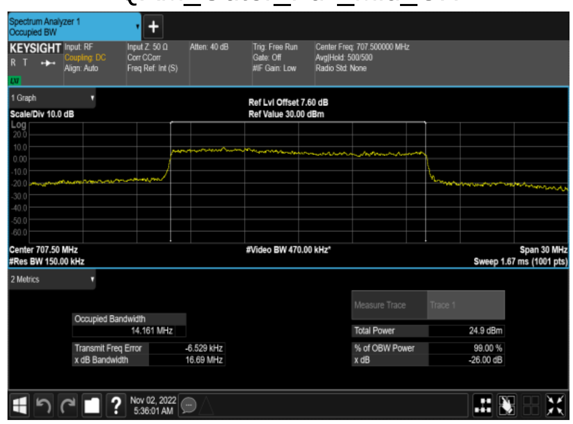


N12(15M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

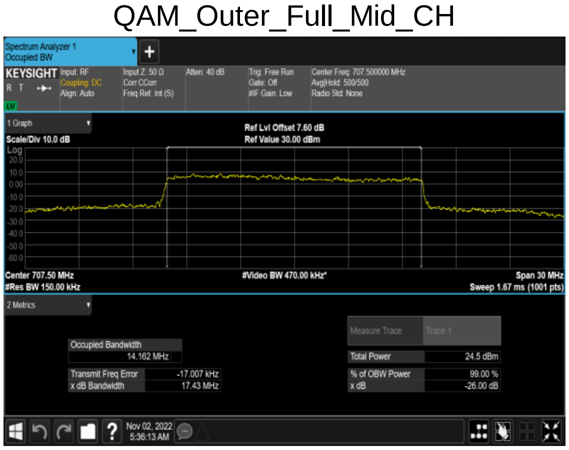
N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

N12(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

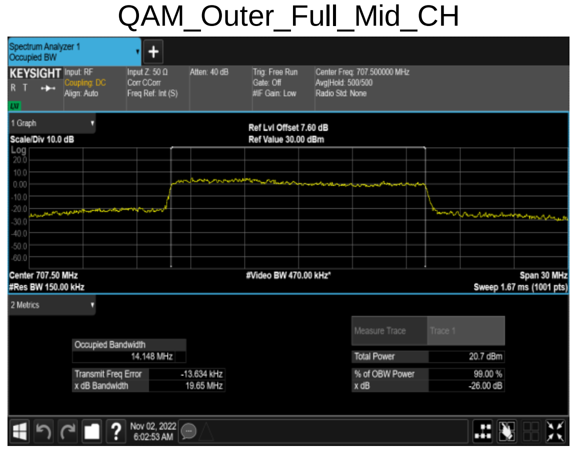
N12(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N12(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N12(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

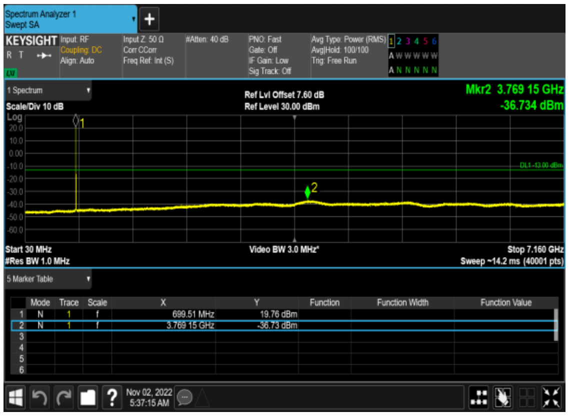


Conducted Spurious Emissions

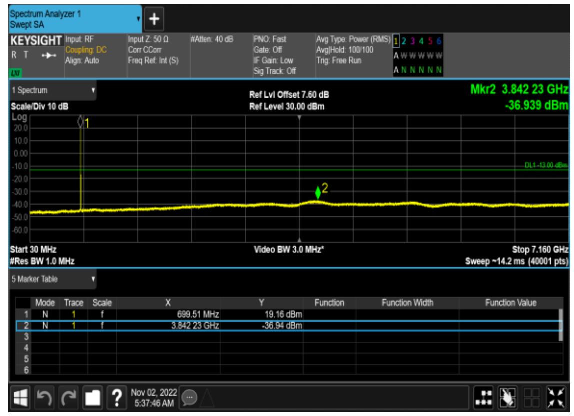
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
12	15	5	140300	701.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
12	15	5	140300	701.5	DFT-s-OFDM QPSK	1@0	see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

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

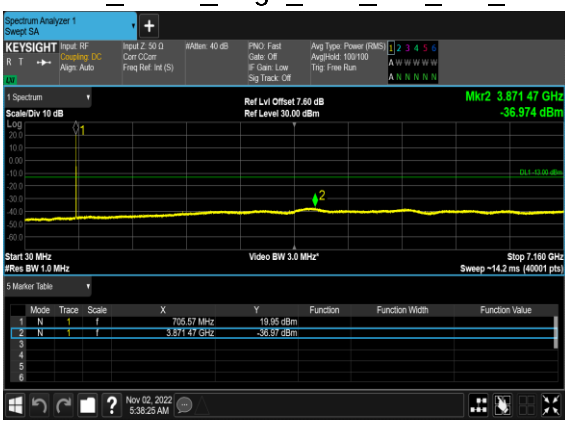
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



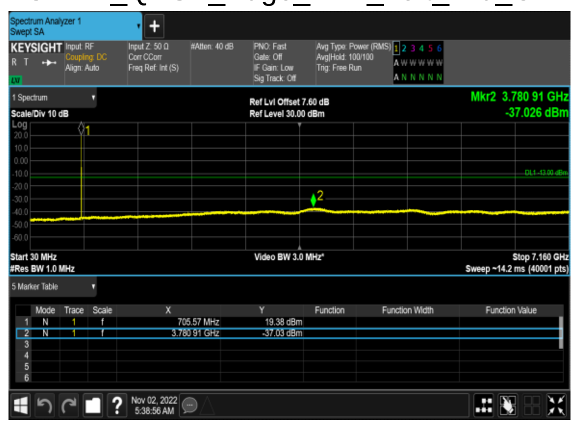
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



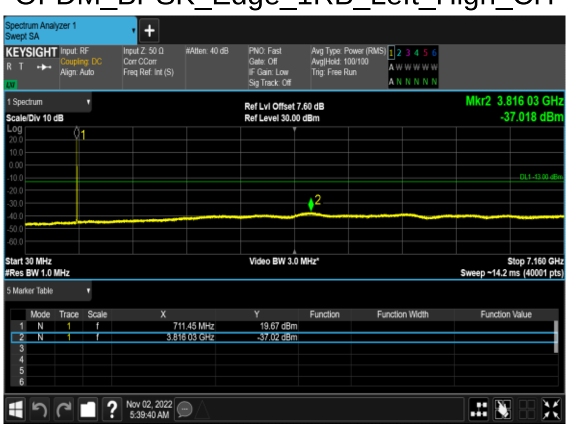
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

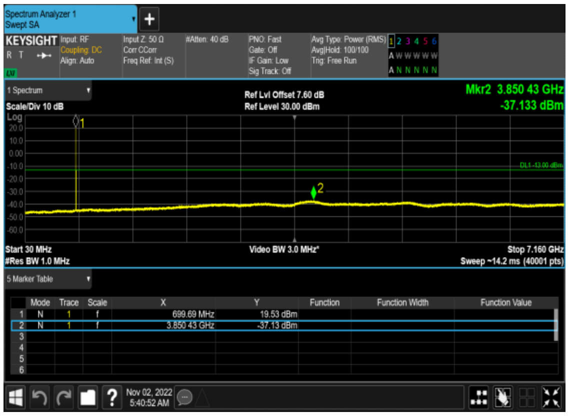


N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

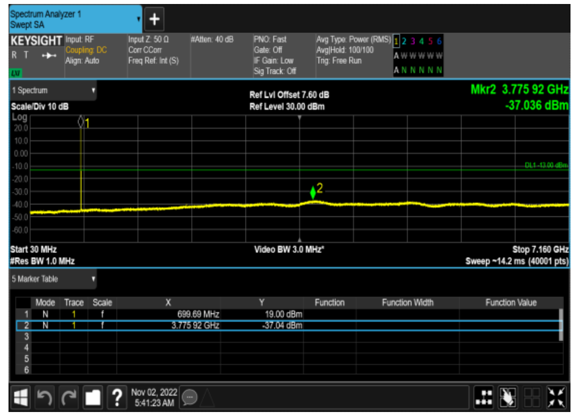


N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

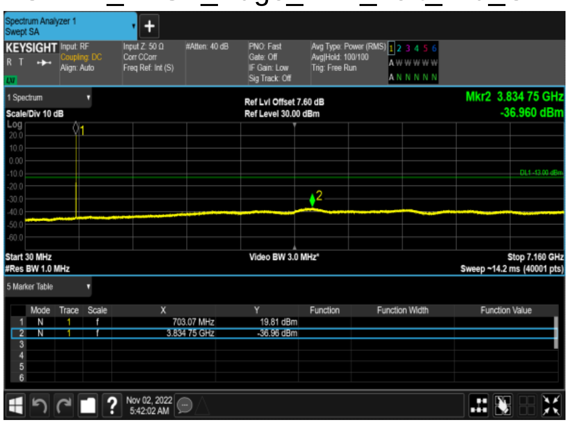
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



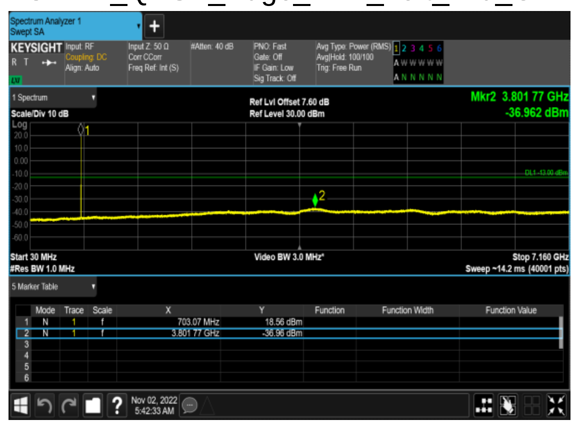
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



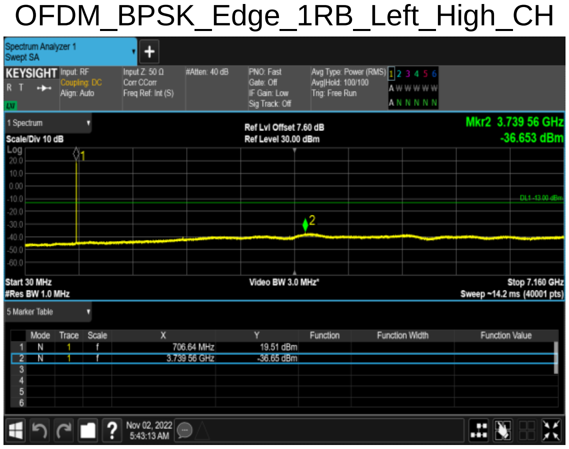
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



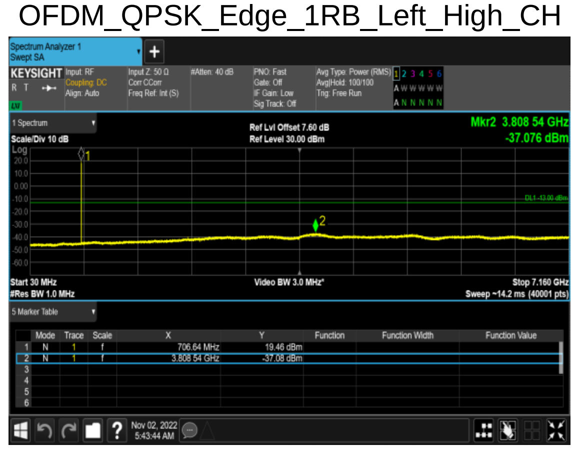
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



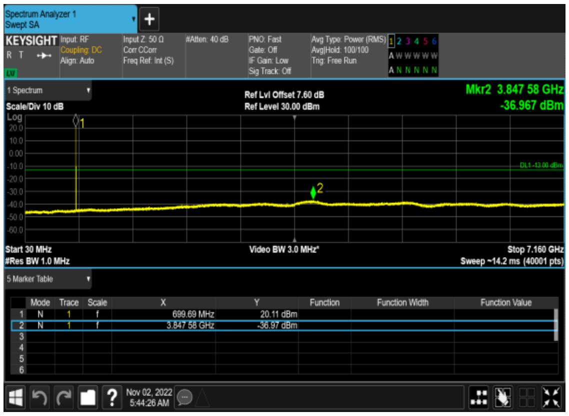
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



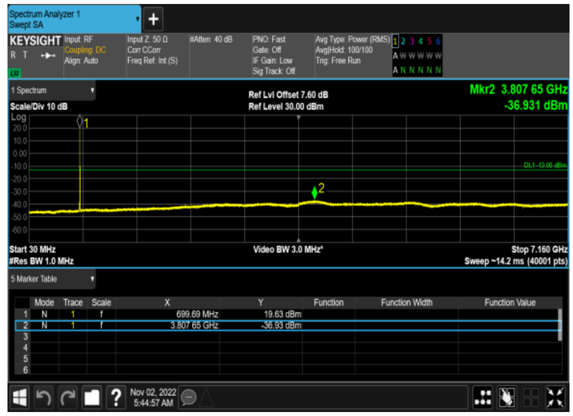
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



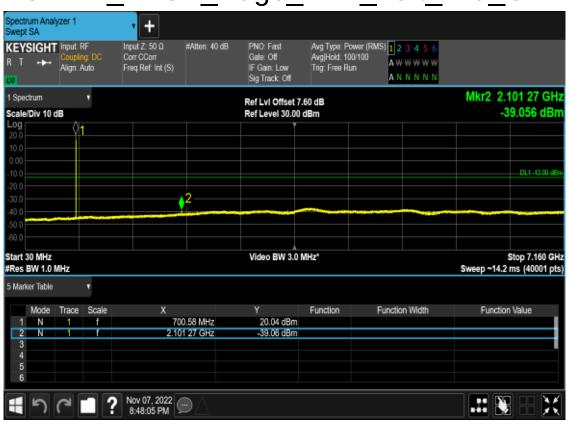
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



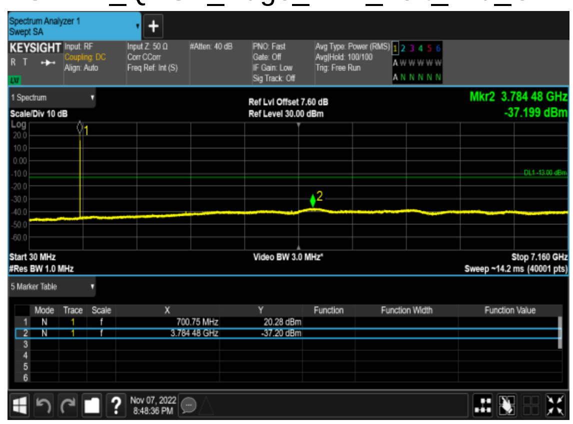
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



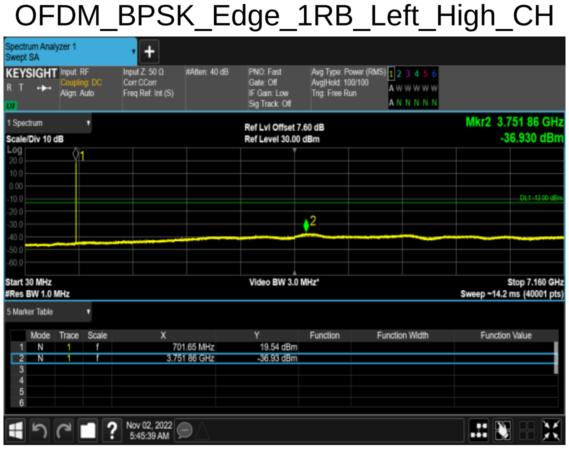
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



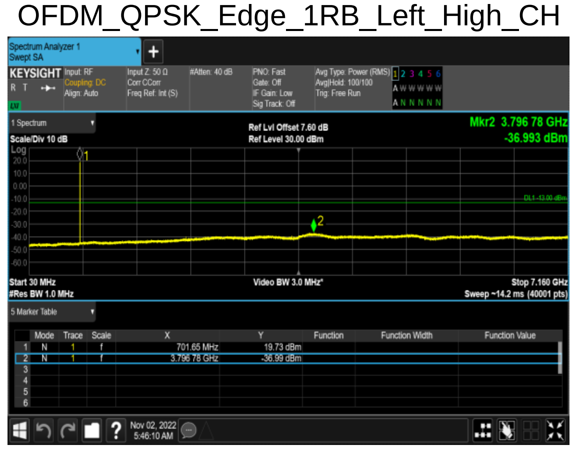
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



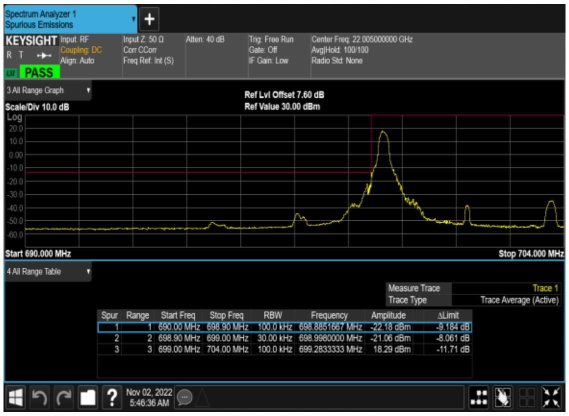
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



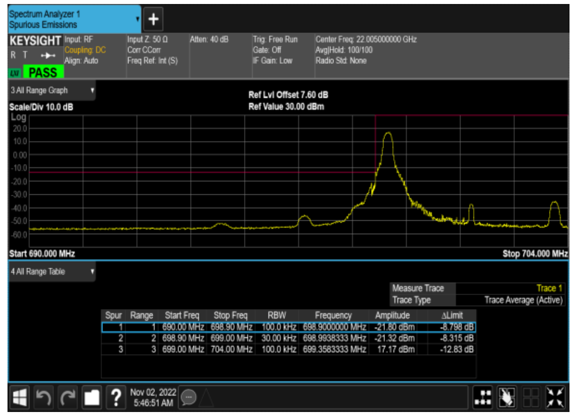
Conducted Band Edge

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

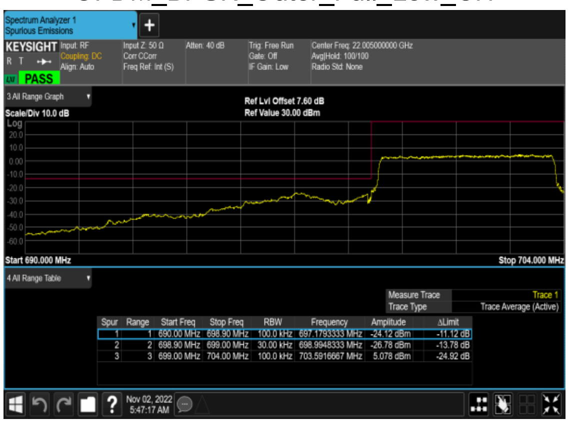
N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



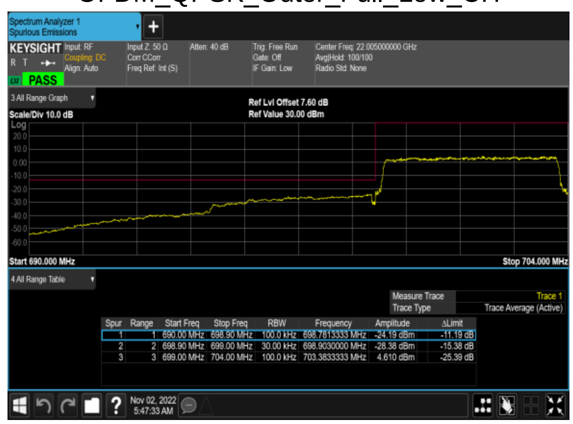
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



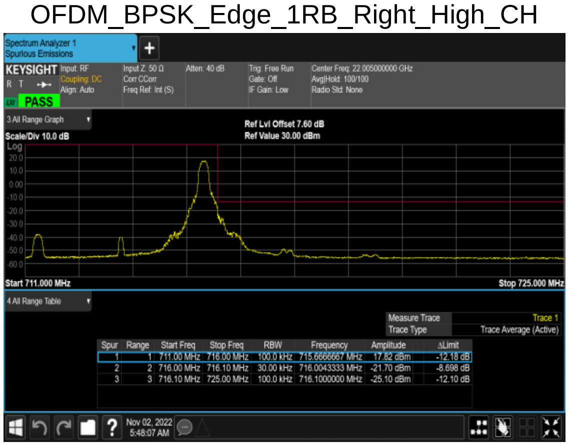
N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



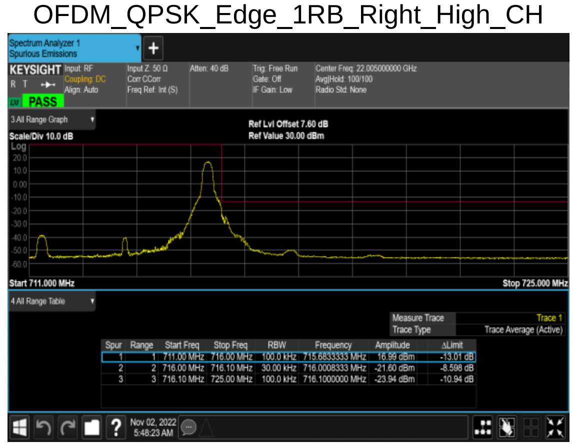
N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N12(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



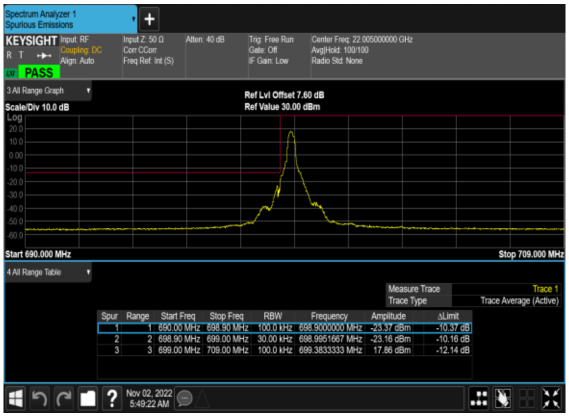
N12(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



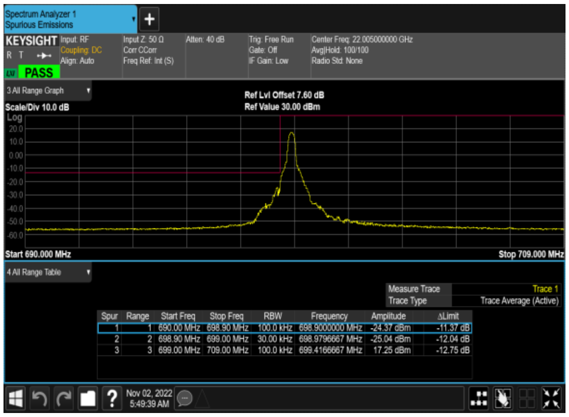
N12(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N12(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

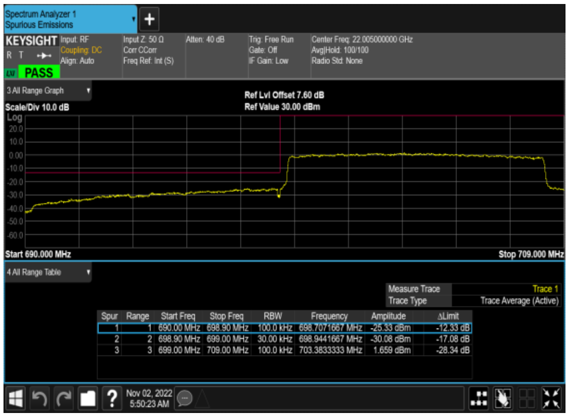


N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

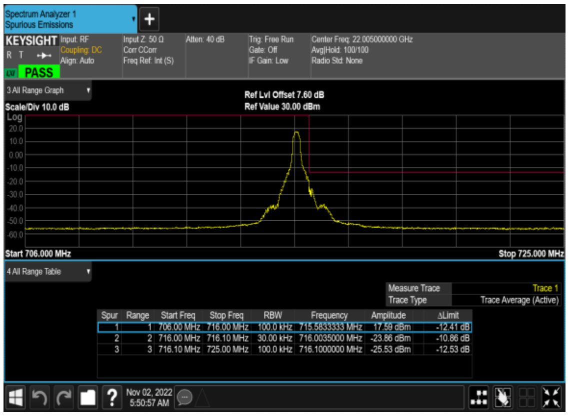


N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

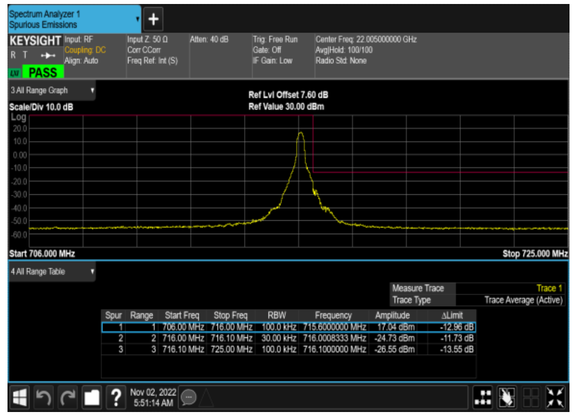
N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



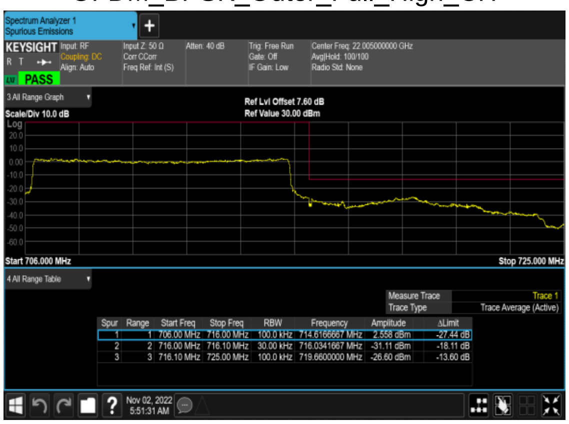
N12(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



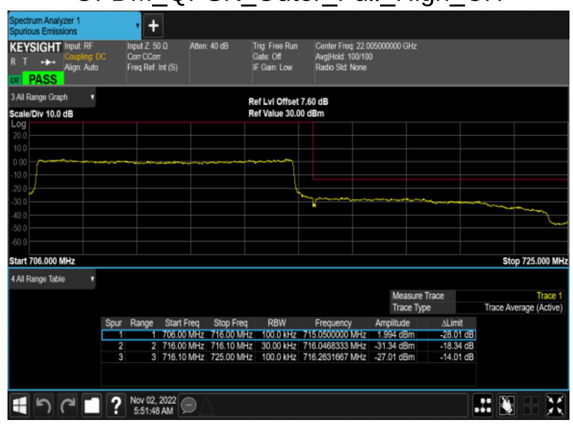
N12(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



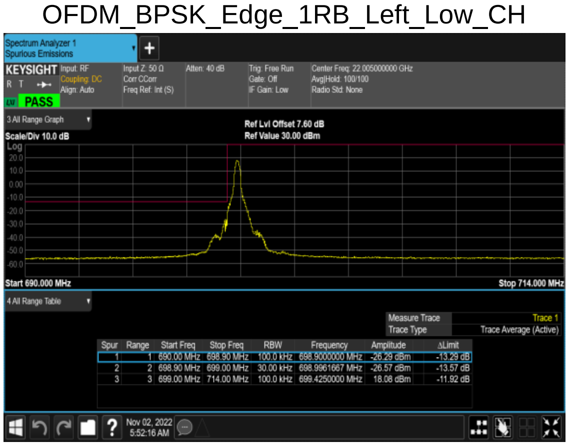
N12(10M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



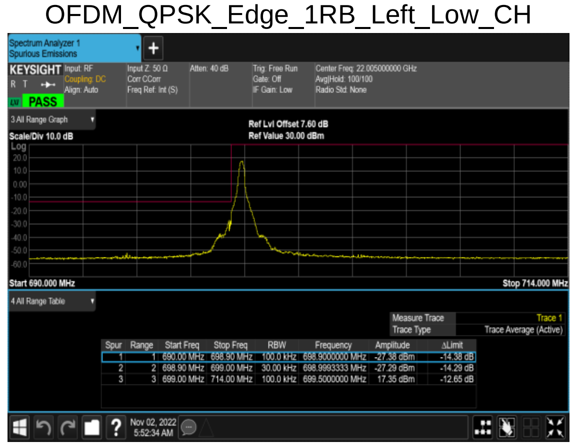
N12(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



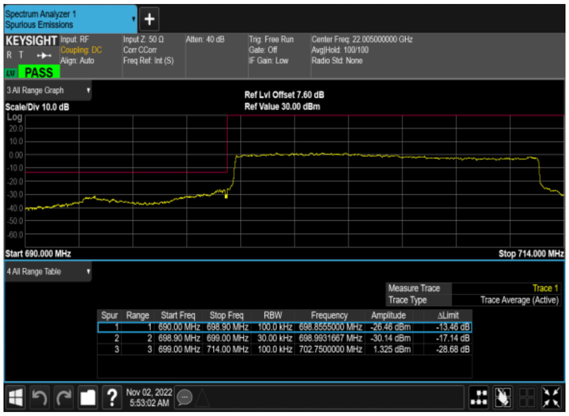
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



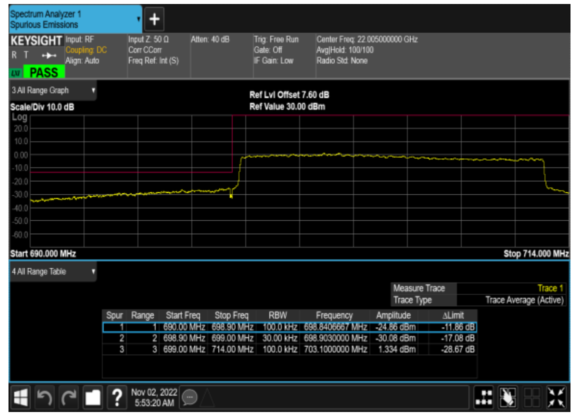
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



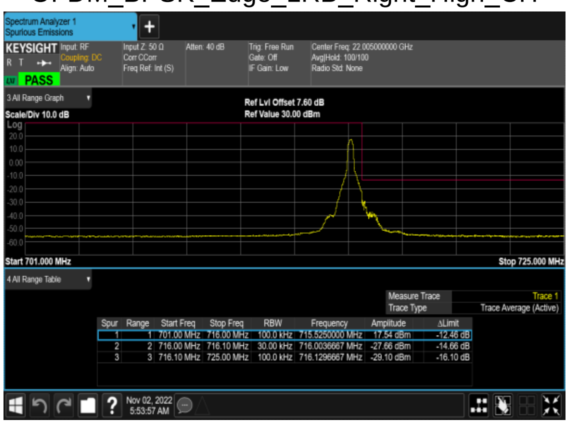
N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



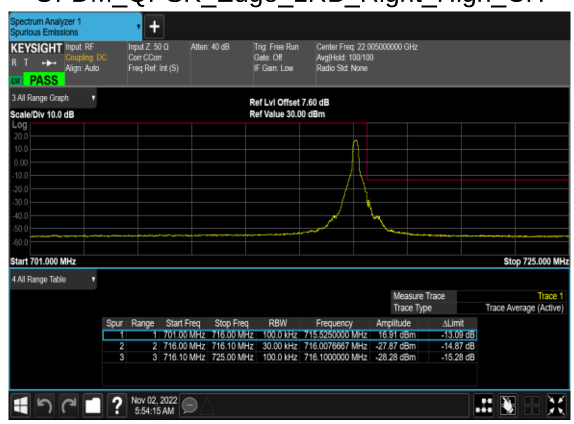
N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



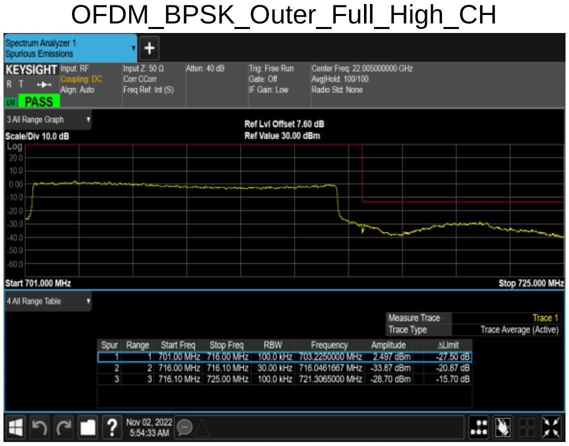
N12(15M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



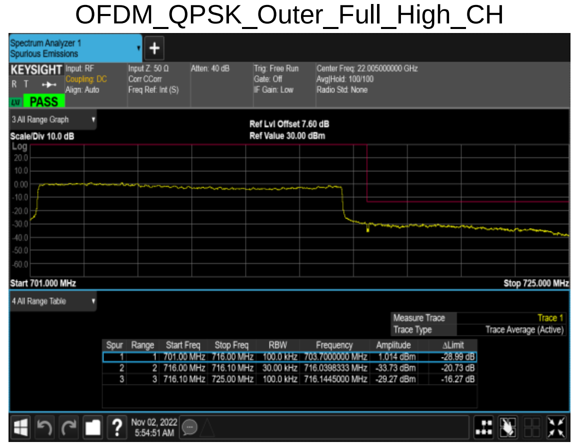
N12(15M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N12(15M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



N12(15M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



Software Version: 22.09.0601

FR1 N25-Ant 1

Transmitter Conducted Output Power And ERP/EIRP, $(G_T - L_C)$=-0.58dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
25	15	5	370500	1852.5	DFT-s-OFDM QPSK	1@1	23.56	22.98	0.1986
25	15	5	370500	1852.5	DFT-s-OFDM 16 QAM	1@1	22.71	22.13	0.1633
25	15	5	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.96	23.38	0.2178
25	15	5	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	23.04	22.46	0.1762
25	15	5	382500	1912.5	DFT-s-OFDM QPSK	1@1	23.7	23.12	0.2051
25	15	5	382500	1912.5	DFT-s-OFDM 16 QAM	1@1	22.74	22.16	0.1644
25	15	10	371000	1855.0	DFT-s-OFDM QPSK	1@1	23.62	23.04	0.2014
25	15	10	371000	1855.0	DFT-s-OFDM 16 QAM	1@1	22.66	22.08	0.1614
25	15	10	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.92	23.34	0.2158
25	15	10	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	23	22.42	0.1746
25	15	10	382000	1910.0	DFT-s-OFDM QPSK	1@1	23.66	23.08	0.2032
25	15	10	382000	1910.0	DFT-s-OFDM 16 QAM	1@1	22.75	22.17	0.1648
25	15	15	371500	1857.5	DFT-s-OFDM QPSK	1@1	23.66	23.08	0.2032
25	15	15	371500	1857.5	DFT-s-OFDM 16 QAM	1@1	22.79	22.21	0.1663
25	15	15	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.96	23.38	0.2178
25	15	15	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	23.16	22.58	0.1811
25	15	15	381500	1907.5	DFT-s-OFDM QPSK	1@1	23.9	23.32	0.2148
25	15	15	381500	1907.5	DFT-s-OFDM 16 QAM	1@1	23.01	22.43	0.1750
25	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	50@25	23.87	23.29	0.2133
25	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	1@1	23.66	23.08	0.2032
25	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	1@104	23.88	23.3	0.2138

25	15	20	372000	1860.0	DFT-s-OFDM QPSK	50@25	23.94	23.36	0.2168
25	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@1	23.84	23.26	0.2118
25	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@104	23.92	23.34	0.2158
25	15	20	372000	1860.0	DFT-s-OFDM 16 QAM	50@25	22.88	22.3	0.1698
25	15	20	372000	1860.0	DFT-s-OFDM 16 QAM	1@1	22.81	22.23	0.1671
25	15	20	372000	1860.0	DFT-s-OFDM 16 QAM	1@104	23.05	22.47	0.1766
25	15	20	372000	1860.0	DFT-s-OFDM 64 QAM	50@25	21.38	20.8	0.1202
25	15	20	372000	1860.0	DFT-s-OFDM 64 QAM	1@1	21.36	20.78	0.1197
25	15	20	372000	1860.0	DFT-s-OFDM 64 QAM	1@104	21.65	21.07	0.1279
25	15	20	372000	1860.0	DFT-s-OFDM 256 QAM	50@25	19.32	18.74	0.0748
25	15	20	372000	1860.0	DFT-s-OFDM 256 QAM	1@1	18.93	18.35	0.0684
25	15	20	372000	1860.0	DFT-s-OFDM 256 QAM	1@104	19.15	18.57	0.0719
25	15	20	372000	1860.0	CP-OFDM QPSK	53@26	22.37	21.79	0.1510
25	15	20	372000	1860.0	CP-OFDM QPSK	1@1	22.36	21.78	0.1507
25	15	20	372000	1860.0	CP-OFDM QPSK	1@104	22.56	21.98	0.1578
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	50@25	23.9	23.32	0.2148
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@1	23.94	23.36	0.2168
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@104	23.92	23.34	0.2158
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	50@25	23.94	23.36	0.2168
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	1@1	23.93	23.35	0.2163
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	1@104	23.92	23.34	0.2158
25	15	20	376500	1882.5	DFT-s-OFDM 16 QAM	50@25	23.21	22.63	0.1832
25	15	20	376500	1882.5	DFT-s-OFDM 16 QAM	1@1	23.12	22.54	0.1795
25	15	20	376500	1882.5	DFT-s-OFDM 16 QAM	1@104	23.03	22.45	0.1758
25	15	20	376500	1882.5	DFT-s-OFDM 64 QAM	50@25	21.71	21.13	0.1297
25	15	20	376500	1882.5	DFT-s-OFDM 64 QAM	1@1	21.59	21.01	0.1262
25	15	20	376500	1882.5	DFT-s-OFDM 64 QAM	1@104	21.54	20.96	0.1247

25	15	20	376500	1882.5	DFT-s-OFDM 256 QAM	50@25	19.36	18.78	0.0755
25	15	20	376500	1882.5	DFT-s-OFDM 256 QAM	1@1	19.28	18.7	0.0741
25	15	20	376500	1882.5	DFT-s-OFDM 256 QAM	1@104	19.18	18.6	0.0724
25	15	20	376500	1882.5	CP-OFDM QPSK	53@26	22.76	22.18	0.1652
25	15	20	376500	1882.5	CP-OFDM QPSK	1@1	22.67	22.09	0.1618
25	15	20	376500	1882.5	CP-OFDM QPSK	1@104	22.46	21.88	0.1542
25	15	20	381000	1905.0	DFT-s-OFDM PI/2 BPSK	50@25	23.99	23.41	0.2193
25	15	20	381000	1905.0	DFT-s-OFDM PI/2 BPSK	1@1	23.94	23.36	0.2168
25	15	20	381000	1905.0	DFT-s-OFDM PI/2 BPSK	1@104	23.58	23	0.1995
25	15	20	381000	1905.0	DFT-s-OFDM QPSK	50@25	23.97	23.39	0.2183
25	15	20	381000	1905.0	DFT-s-OFDM QPSK	1@1	23.91	23.33	0.2153
25	15	20	381000	1905.0	DFT-s-OFDM QPSK	1@104	23.71	23.13	0.2056
25	15	20	381000	1905.0	DFT-s-OFDM 16 QAM	50@25	22.94	22.36	0.1722
25	15	20	381000	1905.0	DFT-s-OFDM 16 QAM	1@1	23.14	22.56	0.1803
25	15	20	381000	1905.0	DFT-s-OFDM 16 QAM	1@104	22.91	22.33	0.1710
25	15	20	381000	1905.0	DFT-s-OFDM 64 QAM	50@25	21.51	20.93	0.1239
25	15	20	381000	1905.0	DFT-s-OFDM 64 QAM	1@1	21.65	21.07	0.1279
25	15	20	381000	1905.0	DFT-s-OFDM 64 QAM	1@104	21.47	20.89	0.1227
25	15	20	381000	1905.0	DFT-s-OFDM 256 QAM	50@25	19.36	18.78	0.0755
25	15	20	381000	1905.0	DFT-s-OFDM 256 QAM	1@1	19.32	18.74	0.0748
25	15	20	381000	1905.0	DFT-s-OFDM 256 QAM	1@104	19	18.42	0.0695
25	15	20	381000	1905.0	CP-OFDM QPSK	53@26	22.45	21.87	0.1538
25	15	20	381000	1905.0	CP-OFDM QPSK	1@1	22.75	22.17	0.1648
25	15	20	381000	1905.0	CP-OFDM QPSK	1@104	22.19	21.61	0.1449

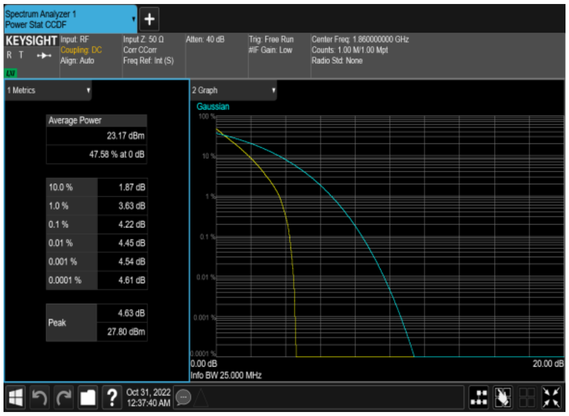
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0047	**PASS**	NV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0033	**PASS**	LV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0055	**PASS**	HV
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0058	**PASS**	-30℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0064	**PASS**	-20℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0023	**PASS**	-10℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0029	**PASS**	0℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0064	**PASS**	10℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0047	**PASS**	20℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0051	**PASS**	30℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0051	**PASS**	40℃
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	0.0070	**PASS**	50℃

Peak to Average Radio

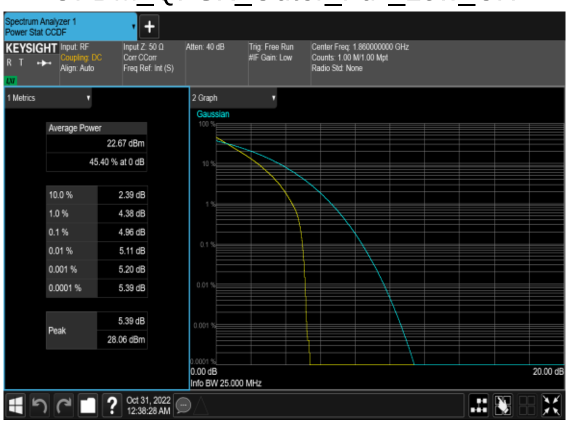
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
25	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	100@0	4.22	13	**PASS**
25	15	20	372000	1860.0	DFT-s-OFDM PI/2 BPSK	1@0	4.33	13	**PASS**
25	15	20	372000	1860.0	DFT-s-OFDM QPSK	100@0	4.96	13	**PASS**
25	15	20	372000	1860.0	DFT-s-OFDM QPSK	1@0	5.14	13	**PASS**
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	100@0	4.71	13	**PASS**
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	1@0	4.05	13	**PASS**
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	5.5	13	**PASS**
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	1@0	4.12	13	**PASS**
25	15	20	381000	1905.0	DFT-s-OFDM PI/2 BPSK	100@0	4.74	13	**PASS**
25	15	20	381000	1905.0	DFT-s-OFDM PI/2 BPSK	1@0	4.04	13	**PASS**
25	15	20	381000	1905.0	DFT-s-OFDM QPSK	100@0	4.83	13	**PASS**
25	15	20	381000	1905.0	DFT-s-OFDM QPSK	1@0	4.64	13	**PASS**

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



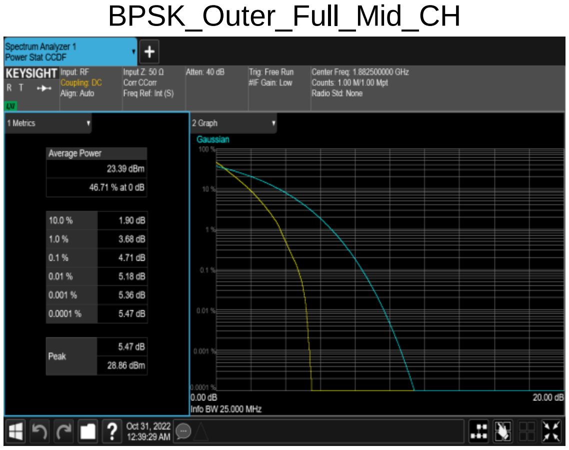
N25(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH

N25(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

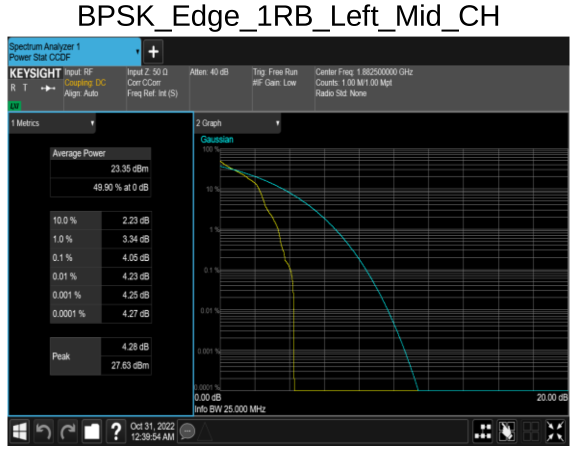


N25(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

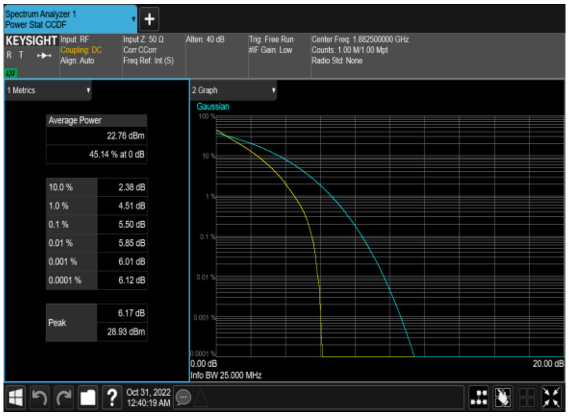
N25(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



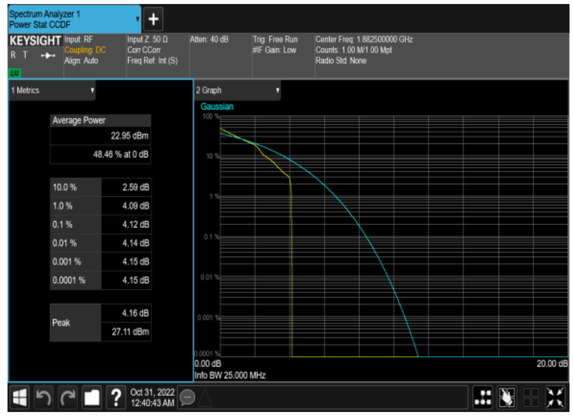
N25(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N25(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



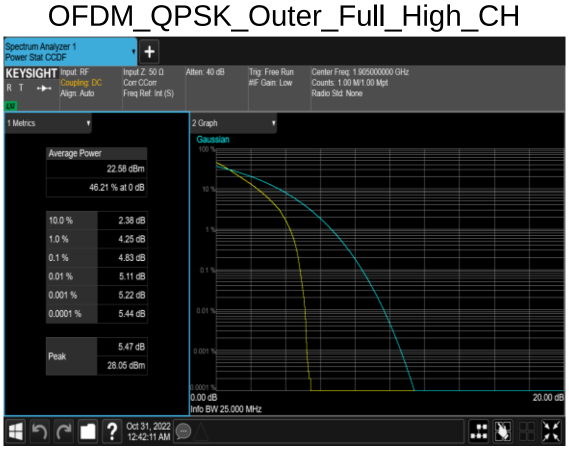
N25(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



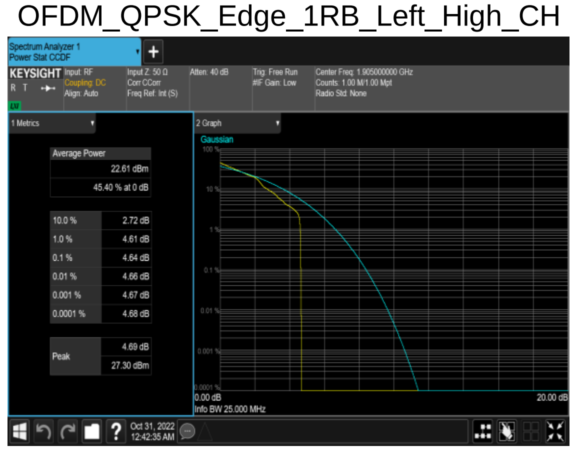
N25(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

N25(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH

N25(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N25(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)
25	15	5	376500	1882.5	DFT-s-OFDM PI/2 BPSK	25@0	4.4872	5.13
25	15	5	376500	1882.5	DFT-s-OFDM QPSK	25@0	4.4671	5.075
25	15	5	376500	1882.5	CP-OFDM QPSK	25@0	4.4798	5.125
25	15	5	376500	1882.5	CP-OFDM 16 QAM	25@0	4.4804	5.14
25	15	5	376500	1882.5	CP-OFDM 64 QAM	25@0	4.4683	5.054
25	15	5	376500	1882.5	CP-OFDM 256 QAM	25@0	4.48	5.05
25	15	10	376500	1882.5	DFT-s-OFDM PI/2 BPSK	50@0	8.9016	9.512
25	15	10	376500	1882.5	DFT-s-OFDM QPSK	50@0	8.9295	9.708
25	15	10	376500	1882.5	CP-OFDM QPSK	52@0	9.2879	10.17
25	15	10	376500	1882.5	CP-OFDM 16 QAM	52@0	9.3039	10.1
25	15	10	376500	1882.5	CP-OFDM 64 QAM	52@0	9.2709	9.894
25	15	10	376500	1882.5	CP-OFDM 256 QAM	52@0	9.2859	9.983
25	15	15	376500	1882.5	DFT-s-OFDM PI/2 BPSK	75@0	13.395	14.28
25	15	15	376500	1882.5	DFT-s-OFDM QPSK	75@0	13.399	14.3
25	15	15	376500	1882.5	CP-OFDM QPSK	79@0	14.087	14.9
25	15	15	376500	1882.5	CP-OFDM 16 QAM	79@0	14.096	14.95
25	15	15	376500	1882.5	CP-OFDM 64 QAM	79@0	14.113	15.04
25	15	15	376500	1882.5	CP-OFDM 256 QAM	79@0	14.092	15.01
25	15	20	376500	1882.5	DFT-s-OFDM PI/2 BPSK	100@0	17.92	18.8
25	15	20	376500	1882.5	DFT-s-OFDM QPSK	100@0	17.877	18.83
25	15	20	376500	1882.5	CP-OFDM QPSK	106@0	18.9	19.91
25	15	20	376500	1882.5	CP-OFDM 16 QAM	106@0	18.935	19.95
25	15	20	376500	1882.5	CP-OFDM 64 QAM	106@0	18.895	19.89
25	15	20	376500	1882.5	CP-OFDM 256 QAM	106@0	18.962	19.96