FCC RF Test Report

APPLICANT	:	**Nokia Shanghai Bell Co., Ltd.**
EQUIPMENT	:	**Nokia FastMile 5G Receiver High Gain**
BRAND NAME	:	**Nokia**
MODEL NAME	:	**5G16-A**
FCC ID	:	**2ADZR5G16A**
STANDARD	:	**47 CFR Part 2, 27 Subpart O**
CLASSIFICATION	:	**PCS Licensed Transmitter (PCB)**
TEST DATE(S)	:	**Apr. 24, 2023 ~ Jun. 12, 2023**

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

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

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

Jason Jia

Approved by: Jason Jia

ilac-MRA

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG341901K	Rev. 01	Initial issue of report	Jun. 20, 2023

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(j)(3)	Equivalent Isotropic Radiated Power (5G NR n77, n78)	EIRP < 1640 Watt		
3.5	§27.50(j)(4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §27.53(l)(2)	Conducted Band Edge Measurement (5G NR n77, n78)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §27.53(l)(2)	Conducted Spurious Emission (5G NR n77, n78)	< 43+10log10(P[Watts])	PASS	-
3.9	§27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(l)(2)	Radiated Spurious Emission (5G NR n77, n78)	< 43+10$\log_{10}$(P[Watts])	PASS	Under limit 29.65 dB at 11376.000 MHz

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Nokia Shanghai Bell Co., Ltd.
388#, Ningqiao Road, China (Shanghai) Pilot Free Trade Zone, Shanghai 201206, China

1.2 Manufacturer

Nokia Solutions and Networks Oy
Karakaari 7, 02610 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Nokia FastMile 5G Receiver High Gain
Brand Name	Nokia
Model Name	5G16-A
FCC ID	2ADZR5G16A
IMEI Code	Conducted : 355231280005044 Radiation : 35523128005010
HW Version	3TG02369Axxx, x:A~Z
SW Version	5GReceiver-HG-2_D230200B31T0001E0147
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency	5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
SCS	15kHz, 30kHz
Bandwidth	n77/n78(15kHz): 10 / 15 / 20 / 25 / 30 / 40 / 50MHz n77/n78(30kHz): 10 / 15 / 20 / 25 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100MHz
Antenna Gain	**<Ant. 0>** 5G NR n77/78: 18.01 dBi **<Ant. 1>** 5G NR n77/78: 17.99 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum EIRP is calculated from max output power and max antenna gain, only the maximum EIRP is shown in the report, 5G NR n77/n77C/n78 for Antenna 1.
2. The device supports HPUE mode for 5G NR n77C/n78.(Power class 2).
3. The device supports HPUE mode for 5G NR n77. (Power class 2 for SISO mode & Power class 1.5 for UL MIMO mode)
4. 5G NR Band supports SA and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode for 5G NR n77 covers n78.
5. 5G NR n77/n78 support UL MIMO mode for Antenna 0+1.
6. 5G NR n77/n78 UL_MIMO mode is completely uncorrelated, so the directional gain is selected the maximum gain among all antennas.
7. For UL MIMO mode, the conducted BE/Spurious are tested at single antenna port and add 10*log(N_{ANT}) according to KDB 662911 D01.
8. All the supported EN-DC combinations are verified conducted power, only the EN-DC combination with highest power are shown in the report.
9. The EN-DC mode combination could be referred to the product spec.

1.5 Modification of EUT

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

1.6 Maximum EIRP and Emission Designator

5G NR n77 SA for SCS 15kHz		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
10	3705.00 ~ 3975.00	27.7332	9M26G7D	21.4289	9M27W7D
15	3705.505 ~ 3972.495	26.9153	14M1G7D	20.8449	14M1W7D
20	3710.01 ~ 3969.99	26.4241	18M9G7D	20.7491	18M9W7D
25	3712.50 ~ 3967.50	27.6694	23M7G7D	21.1836	23M6W7D
30	3715.005 ~ 3964.98	26.9774	28M7G7D	21.1349	28M6W7D
40	3720.00 ~ 3960.00	27.2270	38M5G7D	20.9411	38M6W7D
50	3725.01 ~ 3954.99	28.4446	48M2G7D	21.8776	48M3W7D
5G NR n77 SA for SCS 30kHz		**PI/2 BPSK / QPSK**		**16QAM / 64QAM / 256QAM**	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
10	3705.00 ~ 3975.00	27.5423	8M58G7D	21.9876	8M58W7D
15	3705.52 ~ 3972.48	27.1644	13M5G7D	21.2324	13M6W7D
20	3710.01 ~ 3969.99	26.8534	18M2G7D	21.0378	18M2W7D
25	3712.50 ~ 3967.50	27.3527	23M2G7D	21.7270	23M2W7D
30	3715.02 ~ 3964.98	27.2270	27M9G7D	21.2814	27M9W7D
40	3720.00 ~ 3960.00	27.4789	37M8G7D	21.4783	37M8W7D
50	3725.01 ~ 3954.99	27.1644	47M4G7D	21.5774	47M5W7D
60	3730.02 ~ 3949.98	28.1190	58M0G7D	21.4289	57M8W7D
70	3735.00 ~ 3945.00	27.3527	67M4G7D	21.5774	67M5W7D
80	3740.01 ~ 3939.99	27.9898	77M4G7D	21.5278	77M6W7D
90	3745.02 ~ 3934.98	27.2270	87M3G7D	21.7270	87M5W7D
100	3750.00 ~ 3930.00	28.3792	97M4G7D	22.3357	97M5W7D

5G NR n78 SA for SCS 15kHz		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3795.00	26.8534	9M26G7D	20.7014	9M27W7D
15	3705.505 ~ 3792.495	26.0016	14M1G7D	20.3236	14M1W7D
20	3710.01 ~ 3789.99	26.4241	18M9G7D	20.4174	18M9W7D
25	3712.50 ~ 3787.50	26.9153	23M7G7D	20.3704	23M6W7D
30	3715.005 ~ 3784.995	27.1019	28M7G7D	20.4174	28M6W7D
40	3720.00 ~ 3780.00	26.6686	38M5G7D	20.3704	38M6W7D
50	3725.01 ~ 3774.99	27.9898	48M2G7D	21.5278	48M3W7D
5G NR n78 SA for SCS 30kHz		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3795.00	26.9774	8M58G7D	21.1349	8M58W7D
15	3707.52 ~ 3792.48	27.1019	13M5G7D	21.2814	13M6W7D
20	3710.01 ~ 3789.99	27.1644	18M2G7D	21.6272	18M2W7D
25	3712.50 ~ 3787.50	27.4157	23M2G7D	21.4289	23M2W7D
30	3715.02 ~ 3784.98	27.2898	27M9G7D	21.5278	27M9W7D
40	3720.00 ~ 3780.00	27.2270	37M8G7D	21.2814	37M8W7D
50	3725.01 ~ 3774.99	26.9774	47M4G7D	21.3304	47M5W7D
60	3730.02 ~ 3769.98	26.7301	58M0G7D	21.0863	57M8W7D
70	3735.00 ~ 3765.00	27.2270	67M4G7D	21.3796	67M5W7D
80	3740.01 ~ 3759.99	27.4789	77M4G7D	21.2324	77M6W7D
90	3745.02 ~ 3754.98	26.7917	87M3G7D	21.1836	87M5W7D
100	3750.00 ~ 3750.00	27.7971	97M4G7D	21.8273	97M5W7D

5G NR n77 UL MIMO for SCS 15kHz		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3975.00	54.2001	9M28G7D	42.5598	9M30W7D
15	3705.505 ~ 3972.495	52.9663	14M1G7D	41.6869	14M1W7D
20	3710.01 ~ 3969.99	53.3335	18M9G7D	42.0727	19M0W7D
25	3712.50 ~ 3967.50	52.9663	23M7G7D	41.4954	23M8W7D
30	3715.005 ~ 3964.98	52.4807	28M6G7D	41.4000	28M6W7D
40	3720.00 ~ 3960.00	52.6017	38M7G7D	41.7830	38M6W7D
50	3725.01 ~ 3954.99	54.2001	48M3G7D	42.8549	48M3W7D
5G NR n77 UL MIMO for SCS 30kHz		**PI/2 BPSK / QPSK**		**16QAM / 64QAM / 256QAM**	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
10	3705.00 ~ 3975.00	53.4564	8M59G7D	42.1697	8M58W7D
15	3705.52 ~ 3972.48	52.3600	13M6G7D	40.7380	13M6W7D
20	3710.01 ~ 3969.99	51.8800	18M2G7D	41.4954	18M3W7D
25	3712.50 ~ 3967.50	52.4807	23M2G7D	41.2098	23M2W7D
30	3715.02 ~ 3964.98	51.2861	27M8G7D	40.4576	27M9W7D
40	3720.00 ~ 3960.00	52.4807	37M8G7D	41.8794	37M9W7D
50	3725.01 ~ 3954.99	52.2396	47M5G7D	41.0204	47M7W7D
60	3730.02 ~ 3949.98	51.6416	58M0G7D	40.8319	57M8W7D
70	3735.00 ~ 3945.00	52.7230	67M5G7D	41.1150	67M6W7D
80	3740.01 ~ 3939.99	51.9996	77M6G7D	41.0204	77M6W7D
90	3745.02 ~ 3934.98	51.6416	87M5G7D	40.4576	87M7W7D
100	3750.00 ~ 3930.00	53.4564	97M5G7D	42.3643	97M8W7D

5G NR n78 UL MIMO for SCS 15kHz		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3795.00	27.0396	9M28G7D	20.7970	9M30W7D
15	3705.505 ~ 3792.495	26.9774	14M1G7D	21.0378	14M1W7D
20	3710.01 ~ 3789.99	27.2898	18M9G7D	20.8930	19M0W7D
25	3712.50 ~ 3787.50	27.4157	23M7G7D	21.4289	23M8W7D
30	3715.005 ~ 3784.995	27.4789	28M6G7D	21.4783	28M6W7D
40	3720.00 ~ 3780.00	27.5423	38M7G7D	21.4289	38M6W7D
50	3725.01 ~ 3774.99	28.7087	48M3G7D	22.4388	48M3W7D
5G NR n78 UL MIMO for SCS 30kHz		**PI/2 BPSK / QPSK**		**16QAM / 64QAM / 256QAM**	
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**	**Maximum EIRP(W)**	**Emission Designator (99%OBW)**
10	3705.00 ~ 3795.00	27.2898	8M59G7D	21.4783	8M58W7D
15	3707.52 ~ 3792.48	27.3527	13M6G7D	21.6770	13M6W7D
20	3710.01 ~ 3789.99	27.1644	18M2G7D	21.7771	18M3W7D
25	3712.50 ~ 3787.50	27.4789	23M2G7D	22.6986	23M2W7D
30	3715.02 ~ 3784.98	27.6058	27M8G7D	22.0800	27M9W7D
40	3720.00 ~ 3780.00	27.8612	37M8G7D	22.2331	37M9W7D
50	3725.01 ~ 3774.99	27.4157	47M5G7D	22.1309	47M7W7D
60	3730.02 ~ 3769.98	27.1644	58M0G7D	22.0800	57M8W7D
70	3735.00 ~ 3765.00	27.2898	67M5G7D	22.6986	67M6W7D
80	3740.01 ~ 3759.99	27.2270	77M6G7D	21.3796	77M6W7D
90	3745.02 ~ 3754.98	27.3527	87M5G7D	21.9786	87M7W7D
100	3750.00 ~ 3750.00	28.6418	97M5G7D	22.7510	97M8W7D

5G NR n77C	PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10MHz+100MHz	2.5298	108MG7D	1.6786	108MW7D
15MHz+90MHz	3.8114	103MG7D	2.5776	103MW7D
15MHz+100MHz	3.8553	112MG7D	2.4442	113MW7D
20MHz+90MHz	4.1744	108MG7D	2.6553	107MW7D
20MHz+100MHz	4.2614	117MG7D	2.8902	117MW7D
25MHz+80MHz	4.0940	102MG7D	2.7111	103MW7D
25MHz+90MHz	4.0240	112MG7D	2.7352	112MW7D
25MHz+100MHz	4.2080	122MG7D	2.7613	122MW7D
30MHz+80MHz	3.8827	107MG7D	2.6254	107MW7D
30MHz+90MHz	4.3171	117MG7D	2.9299	117MW7D
30MHz+100MHz	4.4750	127MG7D	3.0319	127MW7D
40MHz+70MHz	4.2345	107MG7D	2.8061	107MW7D
40MHz+80MHz	4.1071	117MG7D	2.6799	117MW7D
40MHz+90MHz	4.7830	127MG7D	3.1373	127MW7D
40MHz+100MHz	4.5903	137MG7D	3.0391	137MW7D
50MHz+60MHz	4.3442	107MG7D	2.7996	107MW7D
50MHz+70MHz	4.1885	117MG7D	2.7803	117MW7D
50MHz+80MHz	4.6315	126MG7D	3.0666	127MW7D
50MHz+90MHz	4.6031	137MG7D	2.9790	137MW7D
50MHz+100MHz	4.6432	147MG7D	3.0669	146MW7D
60MHz+50MHz	4.2959	107MG7D	2.8060	107MW7D
60MHz+60MHz	4.2468	117MG7D	2.8060	118MW7D
60MHz+70MHz	4.4862	127MG7D	2.9978	127MW7D
60MHz+80MHz	4.4548	136MG7D	2.8713	137MW7D
60MHz+90MHz	4.9438	147MG7D	3.1445	147MW7D
60MHz+100MHz	4.7391	156MG7D	3.1227	157MW7D
70MHz+40MHz	4.3157	107MG7D	2.8060	107MW7D
70MHz+50MHz	4.3257	117MG7D	2.8060	117MW7D
70MHz+60MHz	4.6245	127MG7D	3.0067	127MW7D
70MHz+70MHz	4.8820	137MG7D	3.1195	137MW7D
70MHz+80MHz	4.7213	147MG7D	3.2095	147MW7D
70MHz+90MHz	4.8984	156MG7D	3.1702	157MW7D
70MHz+100MHz	5.0123	166MG7D	3.0594	166MW7D

80MHz+25MHz	6.2094	102MG7D	3.9910	103MW7D
80MHz+30MHz	6.1102	107MG7D	3.9910	107MW7D
80MHz+40MHz	4.2860	117MG7D	2.8450	117MW7D
80MHz+50MHz	4.6996	127MG7D	3.0485	127MW7D
80MHz+60MHz	4.8311	137MG7D	3.1483	137MW7D
80MHz+70MHz	4.7998	147MG7D	3.1601	147MW7D
80MHz+80MHz	4.8536	157MG7D	3.1519	157MW7D
80MHz+90MHz	5.0761	166MG7D	3.1585	166MW7D
80MHz+100MHz	5.1172	176MG7D	3.1450	176MW7D
90MHz+15MHz	6.1810	103MG7D	4.0187	103MW7D
90MHz+20MHz	6.0961	108MG7D	3.9632	108MW7D
90MHz+25MHz	6.1667	112MG7D	3.9910	113MW7D
90MHz+30MHz	6.4424	117MG7D	5.0242	117MW7D
90MHz+40MHz	4.8312	126MG7D	3.1267	127MW7D
90MHz+50MHz	4.9665	137MG7D	3.2440	137MW7D
90MHz+60MHz	4.9780	147MG7D	3.1629	147MW7D
90MHz+70MHz	4.7650	156MG7D	3.1018	156MW7D
90MHz+80MHz	4.8202	167MG7D	3.0768	167MW7D
90MHz+90MHz	5.0127	176MG7D	3.0614	176MW7D
90MHz+100MHz	4.8759	186MG7D	3.2474	186MW7D
100MHz+10MHz	6.1243	108MG7D	4.0002	108MW7D
100MHz+15MHz	6.0821	113MG7D	3.9635	113MW7D
100MHz+20MHz	6.3982	118MG7D	4.1695	117MW7D
100MHz+25MHz	6.4722	123MG7D	4.2080	123MW7D
100MHz+30MHz	6.8873	127MG7D	4.4676	127MW7D
100MHz+40MHz	4.8759	137MG7D	3.1267	137MW7D
100MHz+50MHz	4.9666	147MG7D	3.1702	147MW7D
100MHz+60MHz	4.7869	156MG7D	3.0980	157MW7D
100MHz+70MHz	5.1349	166MG7D	3.1633	166MW7D
100MHz+80MHz	4.7759	176MG7D	3.1314	177MW7D
100MHz+90MHz	5.0126	187MG7D	4.7506	186MW7D
100MHz+100MHz	6.9833	196MG7D	6.9673	196MW7D

Note:

1. 5G NR Band n77 overlaps the entire frequency range of Band n78, and n77 power > n78 power, therefore the conducted test results of n77 provided in this report cover n78.
2. All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.
3. 5G NR n77C supported bandwidth combinations and frequency are followed 3GPP 38.508-1

1.7 Testing Location

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

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

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

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

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

1.8 Test Software

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

1.9 Applicable Standards

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

- 47 CFR Part 2, 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		
		10	15	20	25	30	40	50	60	70~90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Full	L	M	H
Max. Output Power	n77	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	n78	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	n77			v								v	v				v	v	v	v	v
26dB and 99% Bandwidth	n77	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v		v		v	
Conducted Band Edge	n77	v			v			v			v	v	v				v	v	v		v
Conducted Spurious Emission	n77	v			v			v			v	v	v				v		v	v	v
Frequency Stability	n77			v									v					v		v	
E.I.R.P	n77	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	n78	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	n77	Worst Case																		v	

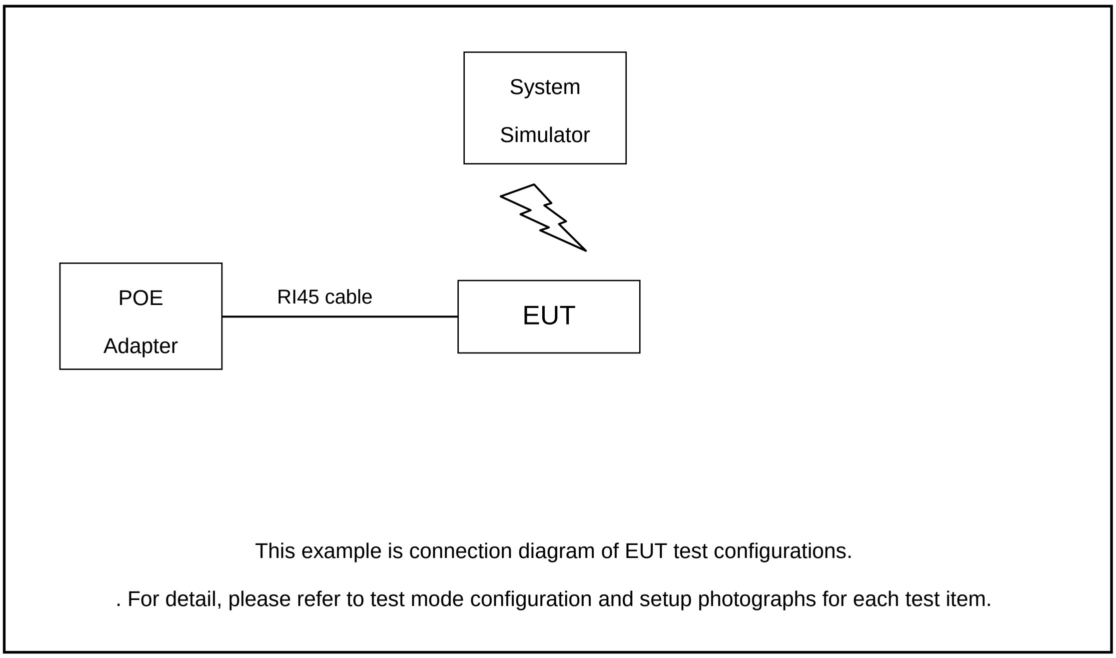
Note:
1. The mark "**v** " means that this configuration is chosen for testing
2. The mark "-" means that this bandwidth is not supported.
3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.
4. Frequency Stability : Normal Voltage = 54V; Low Voltage =48V; High Voltage =57V.

Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 10+100M, 15+90M, 15+100, 20+90M, 20+100M, 25+80M, 25+90M, 25+100M, 30+80M, 30+90M, 30+100M, 40+70M, 40+80M, 40+90M, 40+100M, 50+60M, 50+70M, 50+80M, 50+90M, 50+100M, 60+50M, 60+60M, 60+70M, 60+80M, 60+90M, 60+100M, 70+40M, 70+50M, 70+60M, 70+70M, 70+80M, 70+90M, 70+100M, 80+25M, 80+30M, 80+40M, 80+50M, 80+60M, 80+70M, 80+80M, 80+90M, 80+100M, 90+15M, 90+20M, 90+25M, 90+30M, 90+40M, 90+50M, 90+60M, 90+70M,90+80M, 90+90M, 90+100M, 100+10M, 100+15M, 100+20M, 100+25M, 100+30M, 100+40M, 100+50M, 100+60M, 100+70M,100+80M, 100+90M 100+100M	eg. PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L/M/H
Max. Output Power	n77C	All supported Bandwidth	All Modulation	1RB, Full RB	L, M, H
26dB and 99% Bandwidth	n77C	All supported Bandwidth	QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
Conducted Band Edge	n77C	15+90M, 100+40M, 100+100M	PI/2 BPSK, QPSK	1RB, Full RB	L, H
Conducted Spurious Emission	n77C	15+90M, 100+40M, 100+100M	PI/2 BPSK, QPSK	1RB, Full RB	L, M, H
E.I.R.P	n77C	All supported Bandwidth	All Modulation	1RB, Full RB	L, M, H
Radiated Spurious Emission	n77C	Worst case from maximum power			M

Note:

1. 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.
2. All test items are based on engineering evaluation.

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.	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 and attenuator factor 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 8.7 dB.

Example :

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

= 8.7 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G n77 (15kHz) Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
50	Channel	648334	656000	663666
	Frequency	3725.01	3840	3954.99
40	Channel	648000	656000	664000
	Frequency	3720	3840	3960
30	Channel	647667	656000	664332
	Frequency	3715.005	3840	3964.98
25	Channel	647500	656000	664500
	Frequency	3712.5	3840	3967.5
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99
15	Channel	647167	656000	664833
	Frequency	3707.505	3840	3972.495
10	Channel	647000	656000	665000
	Frequency	3705	3840	3975

5G n77 (30kHz) Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	650000	656000	662000
	Frequency	3750	3840	3930
90	Channel	649668	656000	662332
	Frequency	3745.02	3840	3934.98
80	Channel	649334	656000	662666
	Frequency	3740.01	3840	3939.99
70	Channel	649000	656000	663000
	Frequency	3735	3840	3945
60	Channel	648668	656000	663332
	Frequency	3730.02	3840	3949.98
50	Channel	648334	656000	663666
	Frequency	3725.01	3840	3954.99
40	Channel	648000	656000	664000
	Frequency	3720	3840	3960
30	Channel	647668	656000	664332
	Frequency	3715.02	3840	3964.98
25	Channel	647500	656000	664500
	Frequency	3712.5	3840	3967.5
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99
15	Channel	647168	656000	664832
	Frequency	3707.52	3840	3972.48
10	Channel	647000	656000	665000
	Frequency	3705	3840	3975

5G n78(15kHz) Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
50	Channel	648334	650000	651666
	Frequency	3725.01	3750	3774.99
40	Channel	648000	650000	652000
	Frequency	3720	3750	3780
30	Channel	647667	650000	652333
	Frequency	3715.005	3750	3784.995
25	Channel	647500	650000	652500
	Frequency	3712.5	3750	3787.5
20	Channel	647334	650000	652666
	Frequency	3710.01	3750	3789.99
15	Channel	647167	650000	652833
	Frequency	3707.505	3750	3792.495
10	Channel	647000	650000	653000
	Frequency	3705	3750	3795

5G n78(30kHz) Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel		650000	
	Frequency		3750	
90	Channel	649668	650000	650332
	Frequency	3745.02	3750	3754.98
80	Channel	649334	650000	650666
	Frequency	3740.01	3750	3759.99
70	Channel	649000	650000	651000
	Frequency	3735	3750	3765
60	Channel	648668	650000	651332
	Frequency	3730.02	3750	3769.98
50	Channel	648334	650000	651666
	Frequency	3725.01	3750	3774.99
40	Channel	648000	650000	652000
	Frequency	3720	3750	3780
30	Channel	647668	650000	652332
	Frequency	3715.02	3750	3784.98
25	Channel	647500	650000	652500
	Frequency	3712.5	3750	3787.5
20	Channel	647334	650000	652666
	Frequency	3710.01	3750	3789.99
15	Channel	647168	650000	652832
	Frequency	3707.52	3750	3792.48
10	Channel	647000	650000	653000
	Frequency	3705	3750	3795

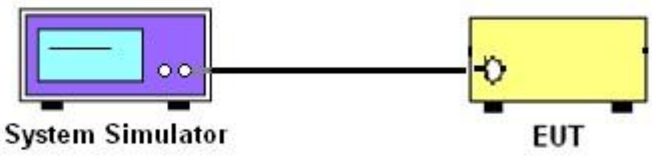
3 Conducted Test Items

3.1 Measuring Instruments

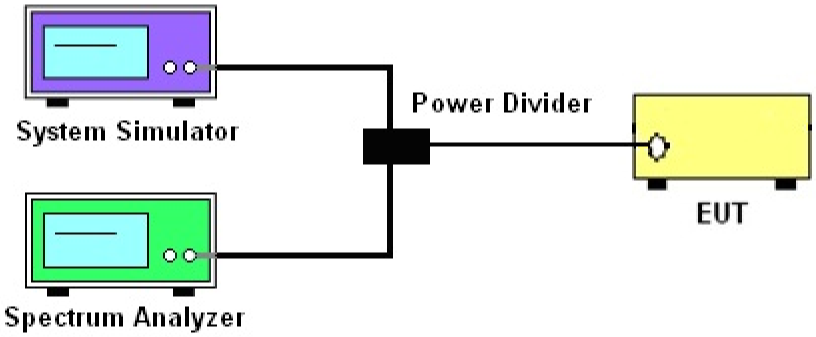
See list of measuring instruments of this test report.

3.2 Test Setup

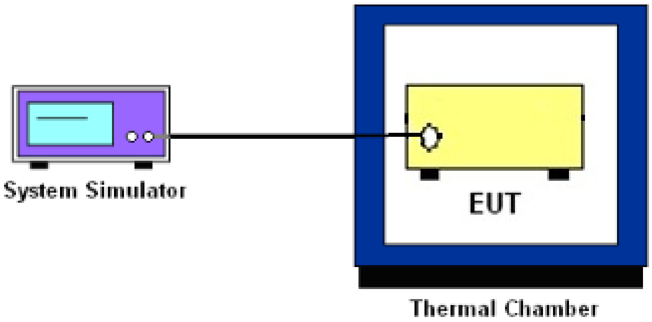
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and 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 fixed transmitters must not exceed 1640 Watts for 5G NR n77, n78.

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 Test Procedures

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

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

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

3.5.2 Test Procedures

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

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 Test Procedures

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

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

27.53(l)(2)

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

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 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.

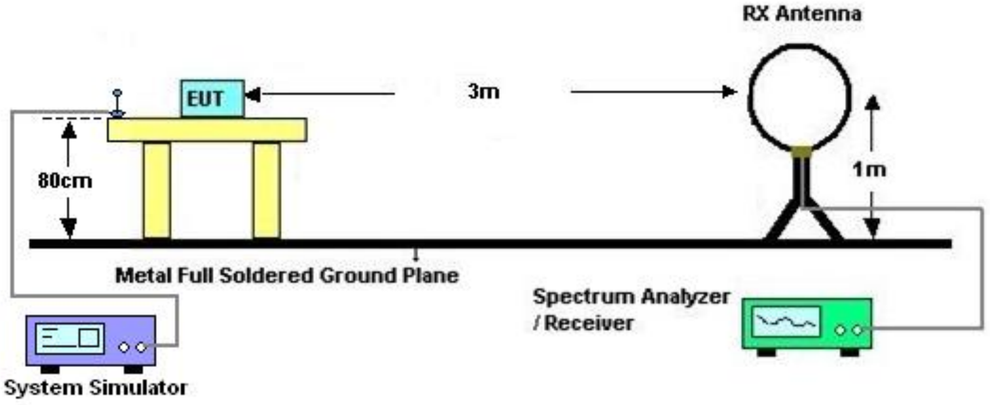
4 Radiated Test Items

4.1 Measuring Instruments

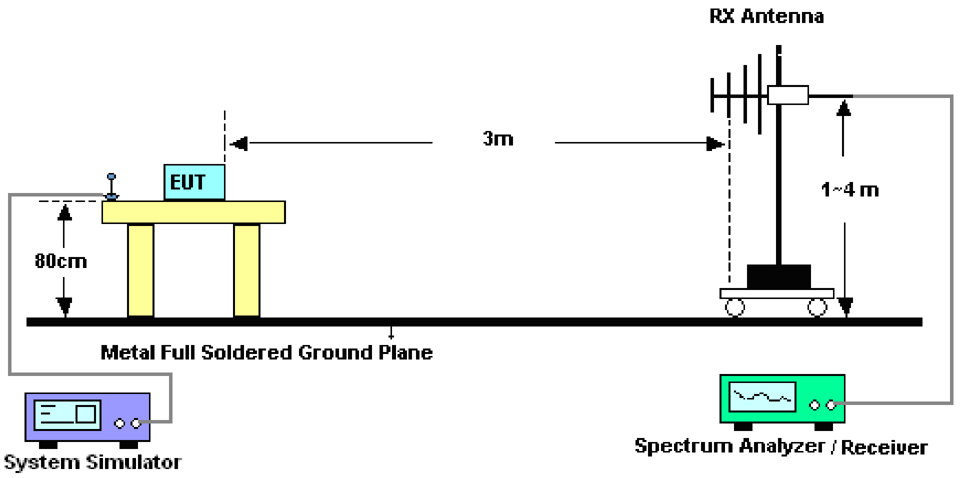
See list of measuring instruments of this test report.

4.2 Test Setup

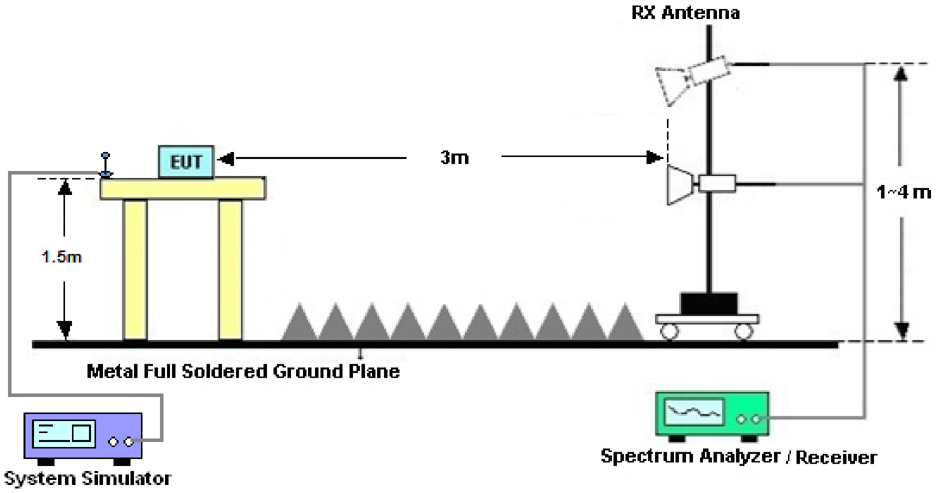
4.2.1 For radiated test below 30MHz



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. 06, 2023	Apr. 24, 2023~ Jun. 12, 2023	Apr. 05, 2024	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 17, 2022	Apr. 24, 2023~ Jun. 12, 2023	Oct. 16, 2023	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2022	Apr. 24, 2023~ Jun. 12, 2023	Dec. 24, 2023	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 07, 2022	Apr. 24, 2023~ Jun. 12, 2023	Jul. 06, 2023	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 12, 2022	May 25, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 16, 2022	May 25, 2023	Oct. 15, 2023	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	Apr. 09, 2023	May 25, 2023	Apr. 08, 2024	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Oct. 16, 2022	May 25, 2023	Oct. 15, 2023	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 08, 2023	May 25, 2023	Jan. 07, 2024	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380827	9KHz-1GHz	Jul. 11, 2022	May 25, 2023	Jul. 10, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2023	May 25, 2023	Jan. 04, 2024	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 12, 2022	May 25, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 12, 2022	May 25, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 25, 2023	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 25, 2023	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 25, 2023	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Measurement Uncertainty

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))	3.82dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.56dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.54dB

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

Appendix A. Test Results of Conducted Test

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

Software Version: 23.04.2801

FR1 N77-SCS 15K(ANT1)

Transmitter Conducted Output Power and EIRP, (G_T - L_C)=17.99dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
77	15	10	647000	3705	DFT-s-OFDM QPSK	1@1	26.2	44.19	26.2422
77	15	10	647000	3705	DFT-s-OFDM 16 QAM	1@1	25.13	43.12	20.5116
77	15	10	656000	3840	DFT-s-OFDM QPSK	1@1	26.28	44.27	26.7301
77	15	10	656000	3840	DFT-s-OFDM 16 QAM	1@1	25.08	43.07	20.2768
77	15	10	665000	3975	DFT-s-OFDM QPSK	1@1	26.44	44.43	27.7332
77	15	10	665000	3975	DFT-s-OFDM 16 QAM	1@1	25.32	43.31	21.4289
77	15	15	647167	3707.505	DFT-s-OFDM QPSK	1@1	26.21	44.2	26.3027
77	15	15	647167	3707.505	DFT-s-OFDM 16 QAM	1@1	25.04	43.03	20.0909
77	15	15	656000	3840	DFT-s-OFDM QPSK	1@1	26.2	44.19	26.2422
77	15	15	656000	3840	DFT-s-OFDM 16 QAM	1@1	25.11	43.1	20.4174
77	15	15	664833	3972.495	DFT-s-OFDM QPSK	1@1	26.31	44.3	26.9153
77	15	15	664833	3972.495	DFT-s-OFDM 16 QAM	1@1	25.2	43.19	20.8449
77	15	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	26.12	44.11	25.7632
77	15	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	25.06	43.05	20.1837
77	15	20	656000	3840	DFT-s-OFDM QPSK	1@1	26.23	44.22	26.4241
77	15	20	656000	3840	DFT-s-OFDM 16 QAM	1@1	25.18	43.17	20.7491
77	15	20	664666	3969.99	DFT-s-OFDM QPSK	1@1	26.22	44.21	26.3633
77	15	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@1	25.17	43.16	20.7014
77	15	25	647500	3712.5	DFT-s-OFDM QPSK	1@1	26.2	44.19	26.2422
77	15	25	647500	3712.5	DFT-s-OFDM 16 QAM	1@1	25.09	43.08	20.3236
77	15	25	656000	3840	DFT-s-OFDM QPSK	1@1	26.23	44.22	26.4241
77	15	25	656000	3840	DFT-s-OFDM 16 QAM	1@1	25.12	43.11	20.4644
77	15	25	664500	3967.5	DFT-s-OFDM QPSK	1@1	26.43	44.42	27.6694
77	15	25	664500	3967.5	DFT-s-OFDM 16 QAM	1@1	25.27	43.26	21.1836
77	15	30	647667	3715.005	DFT-s-OFDM QPSK	1@1	26.32	44.31	26.9774
77	15	30	647667	3715.005	DFT-s-OFDM 16 QAM	1@1	25.05	43.04	20.1372
77	15	30	656000	3840	DFT-s-OFDM QPSK	1@1	26.31	44.3	26.9153
77	15	30	656000	3840	DFT-s-OFDM 16 QAM	1@1	25.19	43.18	20.7970
77	15	30	664332	3964.98	DFT-s-OFDM QPSK	1@1	26.27	44.26	26.6686

77	15	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@1	25.26	43.25	21.1349
77	15	40	648000	3720	DFT-s-OFDM QPSK	1@1	26.2	44.19	26.2422
77	15	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	25.07	43.06	20.2302
77	15	40	656000	3840	DFT-s-OFDM QPSK	1@1	26.33	44.32	27.0396
77	15	40	656000	3840	DFT-s-OFDM 16 QAM	1@1	25.18	43.17	20.7491
77	15	40	664000	3960	DFT-s-OFDM QPSK	1@1	26.36	44.35	27.2270
77	15	40	664000	3960	DFT-s-OFDM 16 QAM	1@1	25.22	43.21	20.9411
77	15	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	135@67	26.35	44.34	27.1644
77	15	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@1	26.32	44.31	26.9774
77	15	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@268	26.37	44.36	27.2898
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	135@67	26.33	44.32	27.0396
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	26.28	44.27	26.7301
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@268	26.34	44.33	27.1019
77	15	50	648334	3725.01	DFT-s-OFDM 16 QAM	135@67	25.33	43.32	21.4783
77	15	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	25.13	43.12	20.5116
77	15	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@268	25.24	43.23	21.0378
77	15	50	648334	3725.01	DFT-s-OFDM 64 QAM	135@67	23.36	41.35	13.6458
77	15	50	648334	3725.01	DFT-s-OFDM 64 QAM	1@1	23.55	41.54	14.2561
77	15	50	648334	3725.01	DFT-s-OFDM 64 QAM	1@268	23.54	41.53	14.2233
77	15	50	648334	3725.01	DFT-s-OFDM 256 QAM	135@67	20.82	38.81	7.6033
77	15	50	648334	3725.01	DFT-s-OFDM 256 QAM	1@1	20.99	38.98	7.9068
77	15	50	648334	3725.01	DFT-s-OFDM 256 QAM	1@268	21.09	39.08	8.0910
77	15	50	648334	3725.01	CP-OFDM QPSK	135@67	24.81	42.8	19.0546
77	15	50	648334	3725.01	CP-OFDM QPSK	1@1	24.86	42.85	19.2752
77	15	50	648334	3725.01	CP-OFDM QPSK	1@268	24.96	42.95	19.7242
77	15	50	656000	3840	DFT-s-OFDM PI/2 BPSK	135@67	26.38	44.37	27.3527
77	15	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	26.42	44.41	27.6058
77	15	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@268	26.18	44.17	26.1216
77	15	50	656000	3840	DFT-s-OFDM QPSK	135@67	26.32	44.31	26.9774
77	15	50	656000	3840	DFT-s-OFDM QPSK	1@1	26.48	44.47	27.9898
77	15	50	656000	3840	DFT-s-OFDM QPSK	1@268	26.19	44.18	26.1818
77	15	50	656000	3840	DFT-s-OFDM 16 QAM	135@67	25.41	43.4	21.8776
77	15	50	656000	3840	DFT-s-OFDM 16 QAM	1@1	25.17	43.16	20.7014
77	15	50	656000	3840	DFT-s-OFDM 16 QAM	1@268	25.1	43.09	20.3704
77	15	50	656000	3840	DFT-s-OFDM 64 QAM	135@67	23.38	41.37	13.7088

77	15	50	656000	3840	DFT-s-OFDM 64 QAM	1@1	23.63	41.62	14.5211
77	15	50	656000	3840	DFT-s-OFDM 64 QAM	1@268	23.43	41.42	13.8676
77	15	50	656000	3840	DFT-s-OFDM 256 QAM	135@67	20.83	38.82	7.6208
77	15	50	656000	3840	DFT-s-OFDM 256 QAM	1@1	21.05	39.04	8.0168
77	15	50	656000	3840	DFT-s-OFDM 256 QAM	1@268	20.91	38.9	7.7625
77	15	50	656000	3840	CP-OFDM QPSK	135@67	24.77	42.76	18.8799
77	15	50	656000	3840	CP-OFDM QPSK	1@1	25.03	43.02	20.0447
77	15	50	656000	3840	CP-OFDM QPSK	1@268	24.83	42.82	19.1426
77	15	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	135@67	26.39	44.38	27.4157
77	15	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@1	26.3	44.29	26.8534
77	15	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@268	26.55	44.54	28.4446
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	135@67	26.46	44.45	27.8612
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@1	26.27	44.26	26.6686
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@268	26.43	44.42	27.6694
77	15	50	663666	3954.99	DFT-s-OFDM 16 QAM	135@67	25.4	43.39	21.8273
77	15	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@1	25.05	43.04	20.1372
77	15	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@268	25.31	43.3	21.3796
77	15	50	663666	3954.99	DFT-s-OFDM 64 QAM	135@67	23.4	41.39	13.7721
77	15	50	663666	3954.99	DFT-s-OFDM 64 QAM	1@1	23.37	41.36	13.6773
77	15	50	663666	3954.99	DFT-s-OFDM 64 QAM	1@268	23.71	41.7	14.7911
77	15	50	663666	3954.99	DFT-s-OFDM 256 QAM	135@67	20.94	38.93	7.8163
77	15	50	663666	3954.99	DFT-s-OFDM 256 QAM	1@1	20.95	38.94	7.8343
77	15	50	663666	3954.99	DFT-s-OFDM 256 QAM	1@268	21.26	39.25	8.4140
77	15	50	663666	3954.99	CP-OFDM QPSK	135@67	24.88	42.87	19.3642
77	15	50	663666	3954.99	CP-OFDM QPSK	1@1	24.82	42.81	19.0985
77	15	50	663666	3954.99	CP-OFDM QPSK	1@268	25.13	43.12	20.5116

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0050	**PASS**	NV
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0027	**PASS**	LV
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0059	**PASS**	HV
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0054	**PASS**	-30℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0067	**PASS**	-20℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0061	**PASS**	-10℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0055	**PASS**	0℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0069	**PASS**	10℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0050	**PASS**	20℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0050	**PASS**	30℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0050	**PASS**	40℃
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	0.0023	**PASS**	50℃

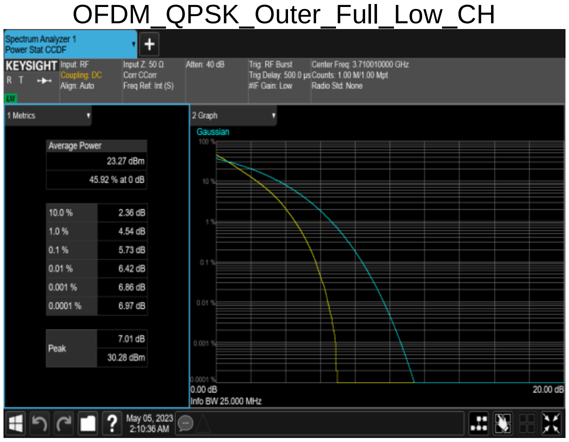
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
77	15	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	100@0	4.41	13	**PASS**
77	15	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@0	4.92	13	**PASS**
77	15	20	647334	3710.01	DFT-s-OFDM QPSK	100@0	5.73	13	**PASS**
77	15	20	647334	3710.01	DFT-s-OFDM QPSK	1@0	6.32	13	**PASS**
77	15	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	100@0	4.29	13	**PASS**
77	15	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	1@0	4.81	13	**PASS**
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	5.62	13	**PASS**
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	1@0	6.04	13	**PASS**
77	15	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	100@0	4.29	13	**PASS**
77	15	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	1@0	5.5	13	**PASS**
77	15	20	664666	3969.99	DFT-s-OFDM QPSK	100@0	5.55	13	**PASS**
77	15	20	664666	3969.99	DFT-s-OFDM QPSK	1@0	6.61	13	**PASS**

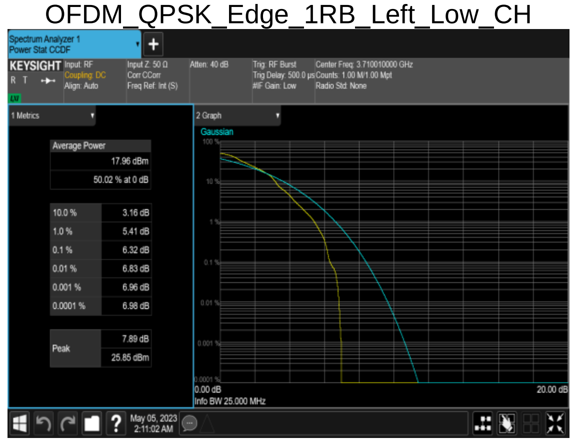
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH

N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH

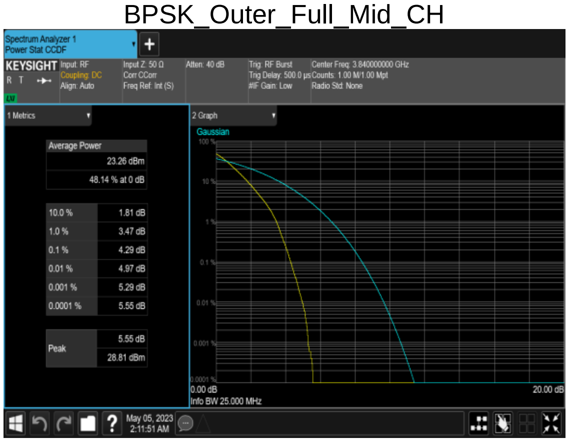
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



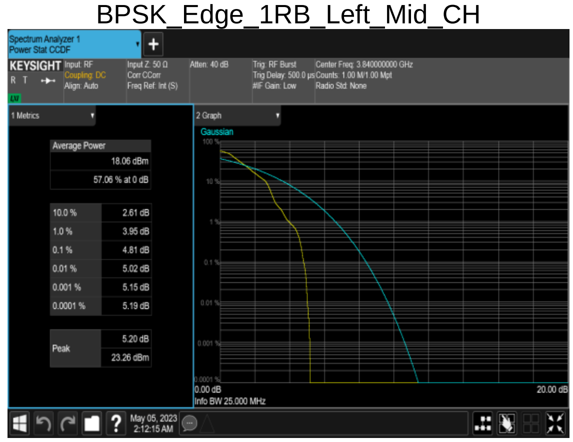
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



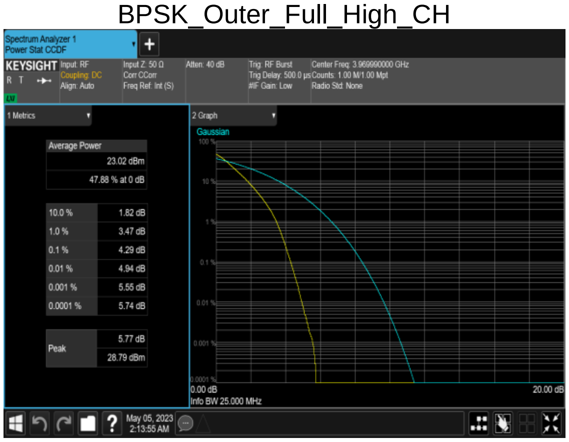
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



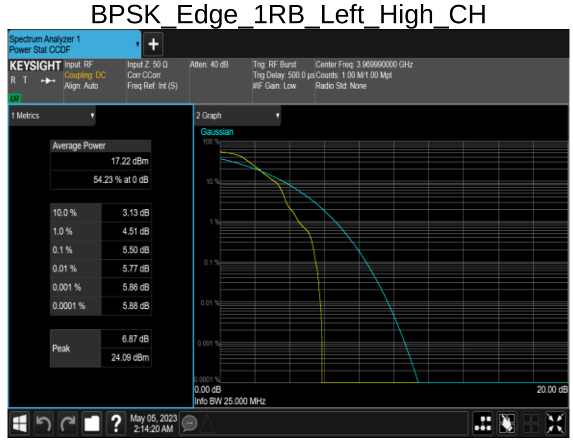
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

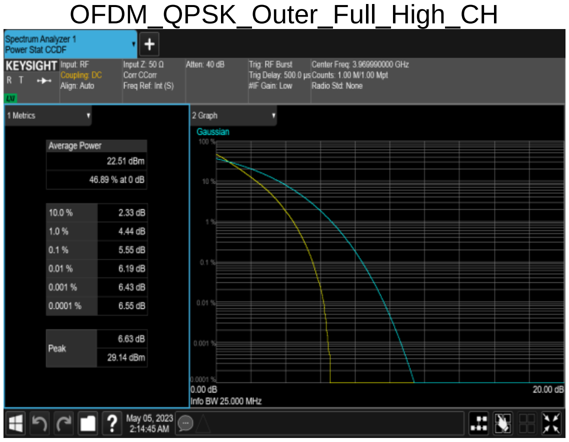
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



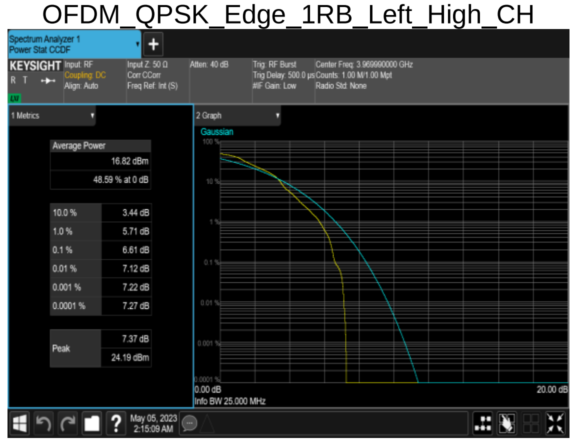
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

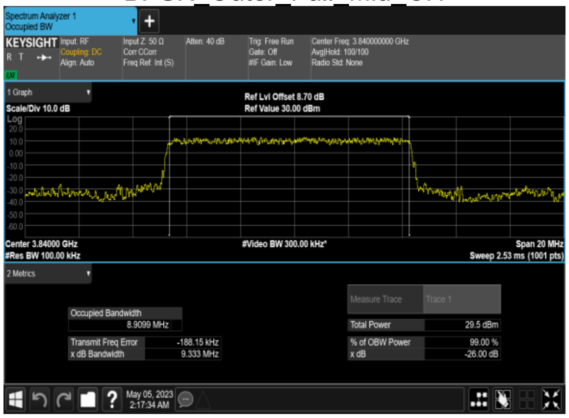


Occupied Bandwidth

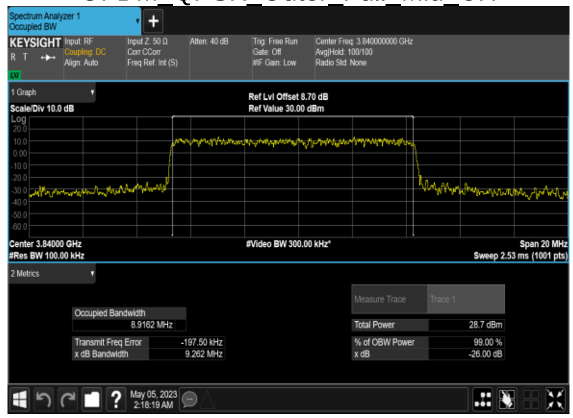
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
77	15	10	656000	3840.0	DFT-s-OFDM PI/2 BPSK	50@0	8.9099	9.333
77	15	10	656000	3840.0	DFT-s-OFDM QPSK	50@0	8.9162	9.262
77	15	10	656000	3840.0	CP-OFDM QPSK	52@0	9.2643	9.613
77	15	10	656000	3840.0	CP-OFDM 16 QAM	52@0	9.2515	9.596
77	15	10	656000	3840.0	CP-OFDM 64 QAM	52@0	9.267	9.684
77	15	10	656000	3840.0	CP-OFDM 256 QAM	52@0	9.25	9.584
77	15	15	656000	3840.0	DFT-s-OFDM PI/2 BPSK	75@0	13.44	13.88
77	15	15	656000	3840.0	DFT-s-OFDM QPSK	75@0	13.334	13.85
77	15	15	656000	3840.0	CP-OFDM QPSK	79@0	14.133	14.61
77	15	15	656000	3840.0	CP-OFDM 16 QAM	79@0	14.076	14.56
77	15	15	656000	3840.0	CP-OFDM 64 QAM	79@0	14.09	14.57
77	15	15	656000	3840.0	CP-OFDM 256 QAM	79@0	14.078	14.68
77	15	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	100@0	17.85	18.47
77	15	20	656000	3840.0	DFT-s-OFDM QPSK	100@0	17.877	18.53
77	15	20	656000	3840.0	CP-OFDM QPSK	106@0	18.944	19.56
77	15	20	656000	3840.0	CP-OFDM 16 QAM	106@0	18.919	19.62
77	15	20	656000	3840.0	CP-OFDM 64 QAM	106@0	18.857	19.63
77	15	20	656000	3840.0	CP-OFDM 256 QAM	106@0	18.871	19.62
77	15	25	656000	3840.0	DFT-s-OFDM PI/2 BPSK	128@0	22.864	23.62
77	15	25	656000	3840.0	DFT-s-OFDM QPSK	128@0	22.841	23.68
77	15	25	656000	3840.0	CP-OFDM QPSK	133@0	23.651	24.51
77	15	25	656000	3840.0	CP-OFDM 16 QAM	133@0	23.649	24.48
77	15	25	656000	3840.0	CP-OFDM 64 QAM	133@0	23.633	24.5
77	15	25	656000	3840.0	CP-OFDM 256 QAM	133@0	23.644	24.55
77	15	30	656000	3840.0	DFT-s-OFDM PI/2 BPSK	160@0	28.653	29.52

77	15	30	656000	3840.0	DFT-s-OFDM QPSK	160@0	28.584	29.52
77	15	30	656000	3840.0	CP-OFDM QPSK	160@0	28.546	29.56
77	15	30	656000	3840.0	CP-OFDM 16 QAM	160@0	28.526	29.49
77	15	30	656000	3840.0	CP-OFDM 64 QAM	160@0	28.581	29.51
77	15	30	656000	3840.0	CP-OFDM 256 QAM	160@0	28.567	29.47
77	15	40	656000	3840.0	DFT-s-OFDM PI/2 BPSK	216@0	38.441	39.83
77	15	40	656000	3840.0	DFT-s-OFDM QPSK	216@0	38.523	39.89
77	15	40	656000	3840.0	CP-OFDM QPSK	216@0	38.546	39.81
77	15	40	656000	3840.0	CP-OFDM 16 QAM	216@0	38.528	39.81
77	15	40	656000	3840.0	CP-OFDM 64 QAM	216@0	38.622	39.77
77	15	40	656000	3840.0	CP-OFDM 256 QAM	216@0	38.592	39.95
77	15	50	656000	3840.0	DFT-s-OFDM PI/2 BPSK	270@0	48.139	49.88
77	15	50	656000	3840.0	DFT-s-OFDM QPSK	270@0	48.144	49.64
77	15	50	656000	3840.0	CP-OFDM QPSK	270@0	48.191	49.75
77	15	50	656000	3840.0	CP-OFDM 16 QAM	270@0	48.281	49.72
77	15	50	656000	3840.0	CP-OFDM 64 QAM	270@0	48.161	49.73
77	15	50	656000	3840.0	CP-OFDM 256 QAM	270@0	48.118	49.78

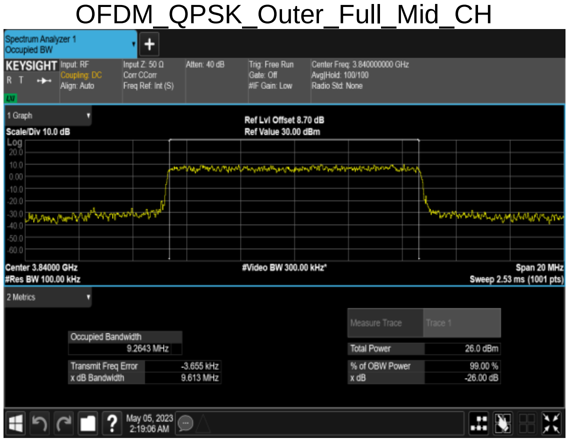
N77(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



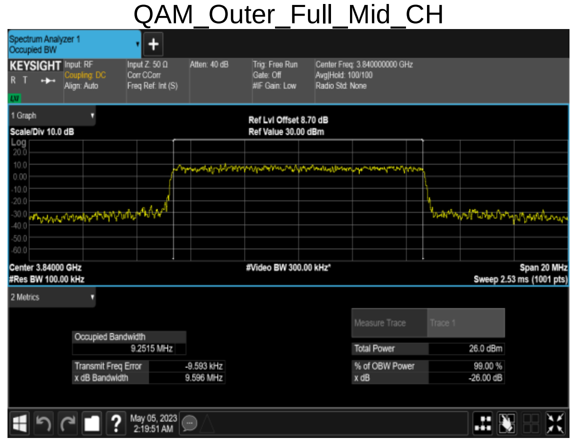
N77(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



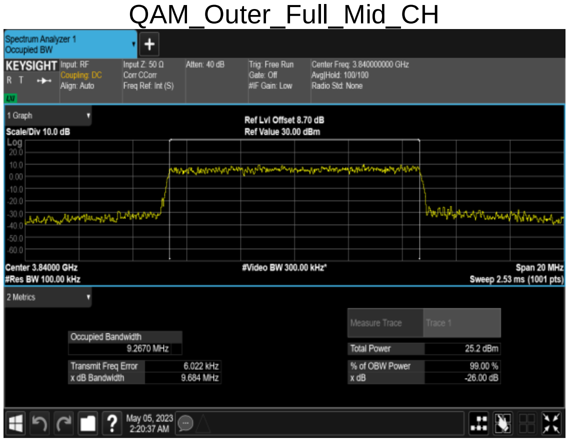
N77(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



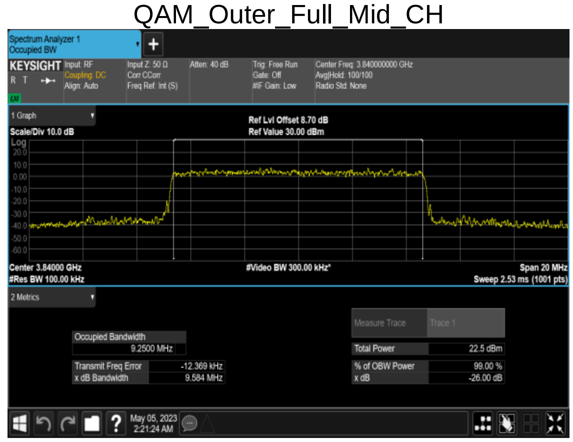
N77(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



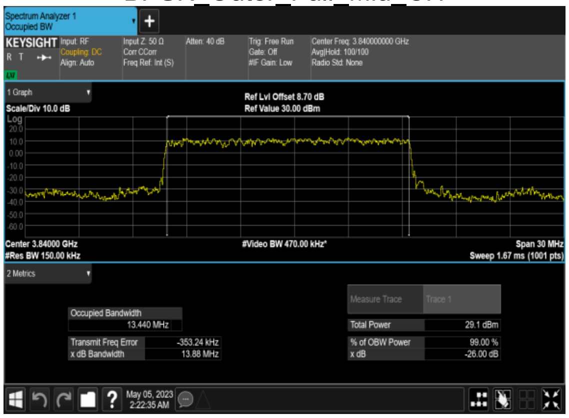
N77(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



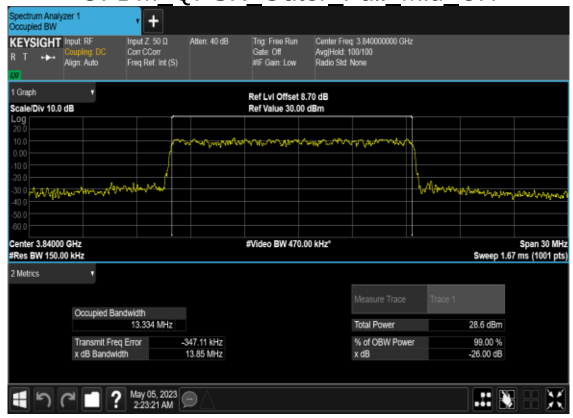
N77(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



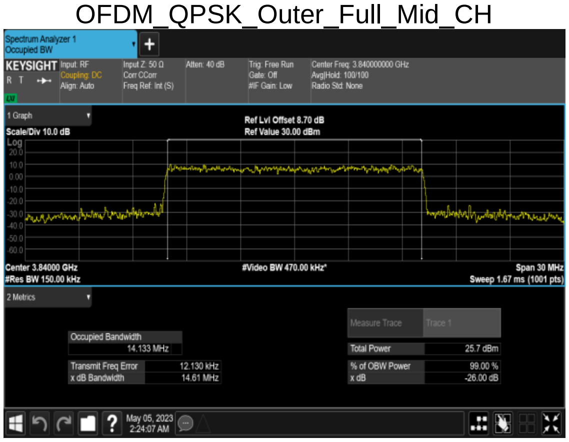
N77(15M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



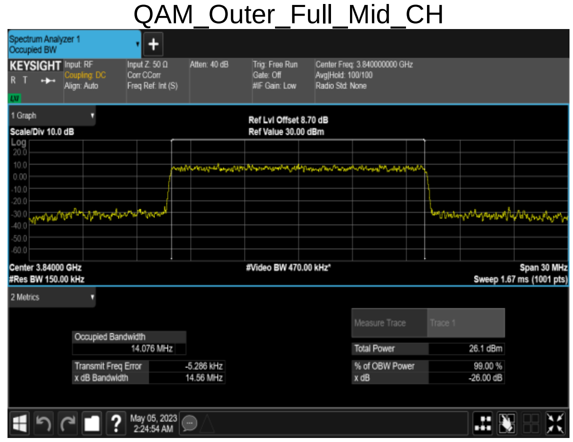
N77(15M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



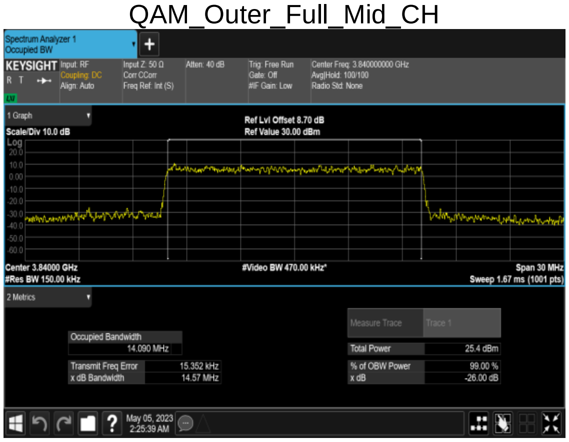
N77(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



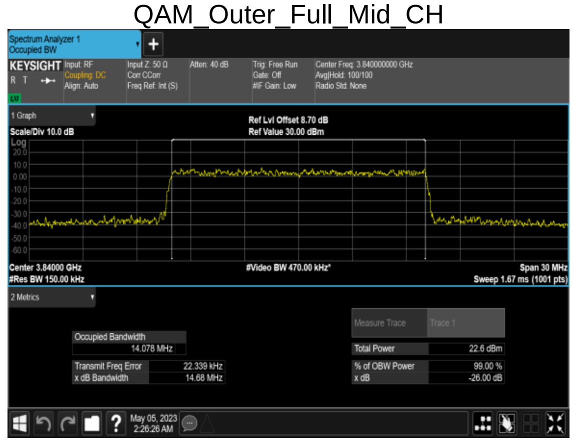
N77(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N77(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

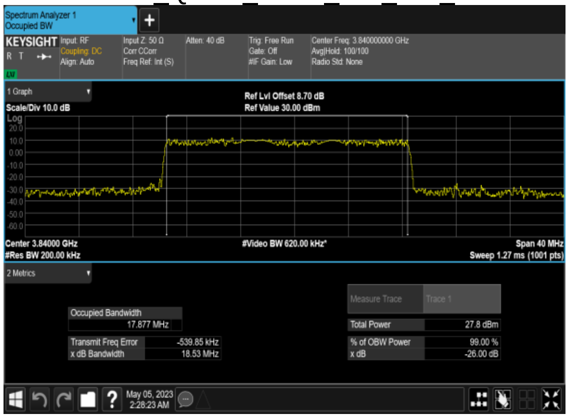


N77(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



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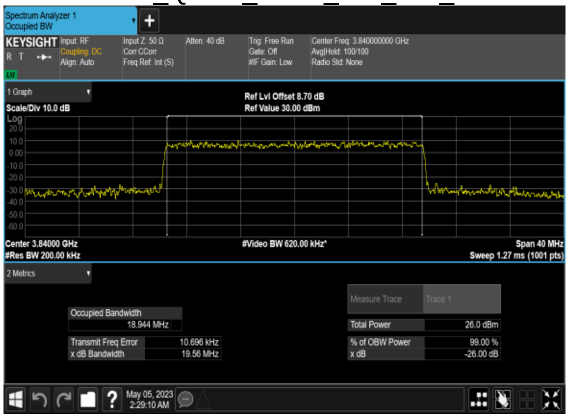
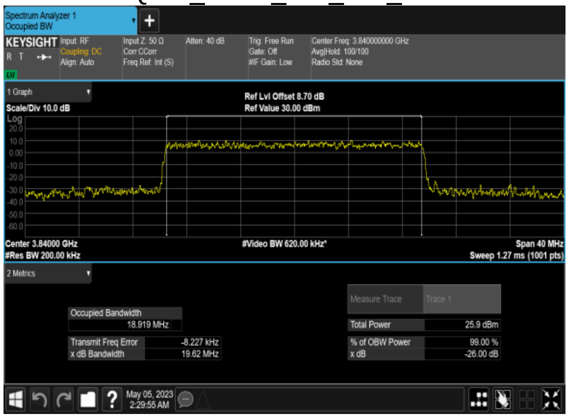
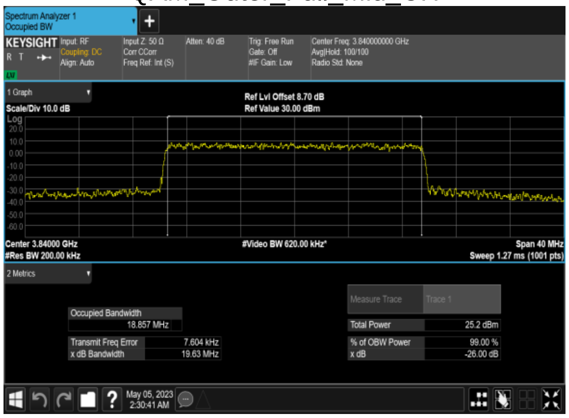


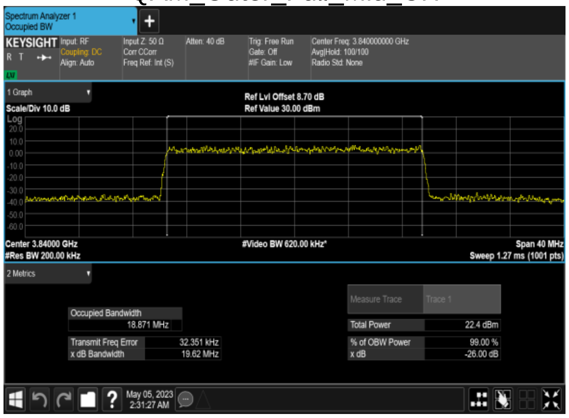
N77(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



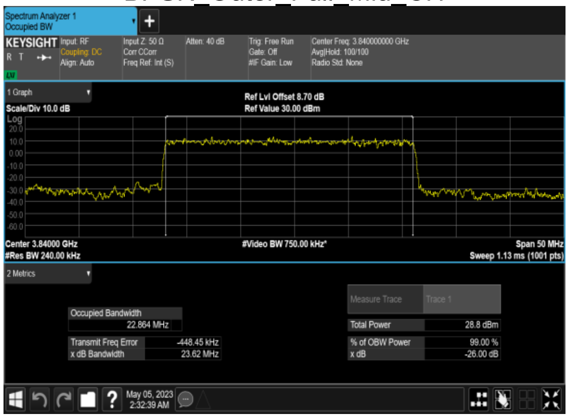
N77(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



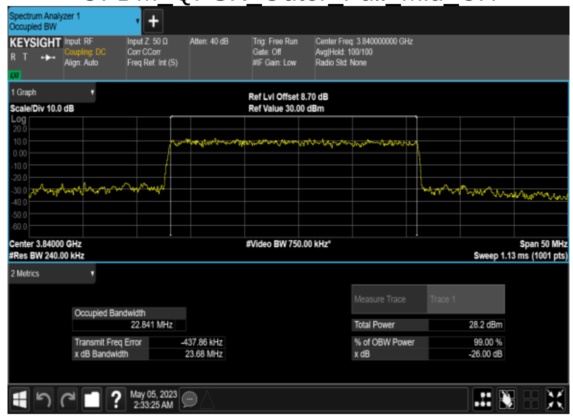
N77(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



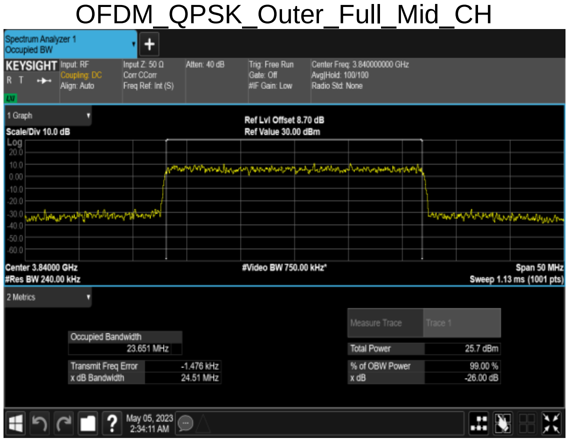
N77(25M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



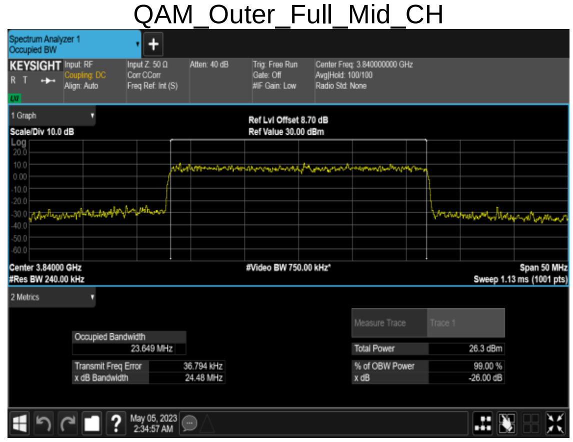
N77(25M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



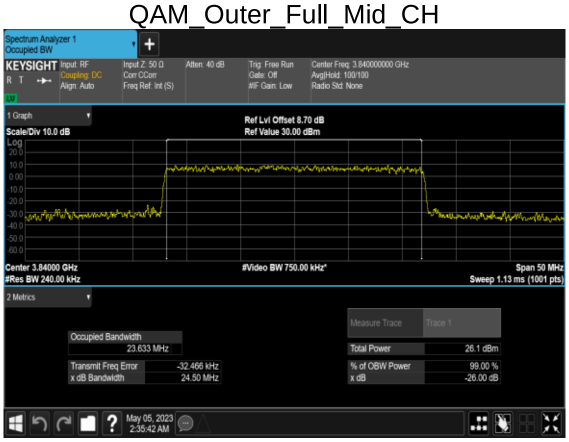
N77(25M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



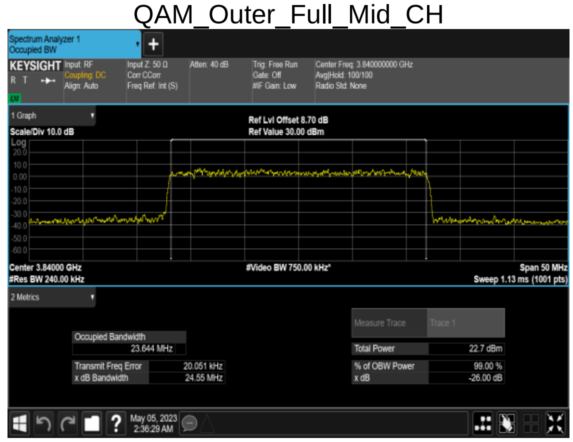
N77(25M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



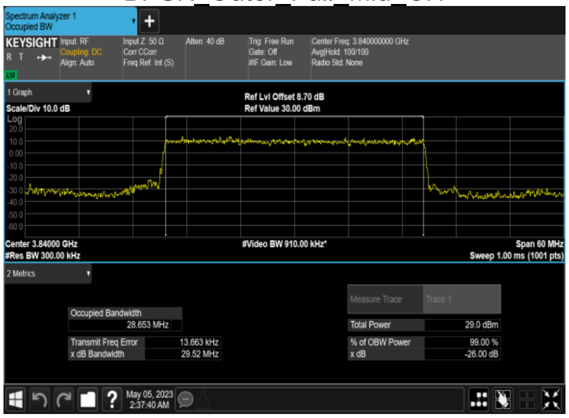
N77(25M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



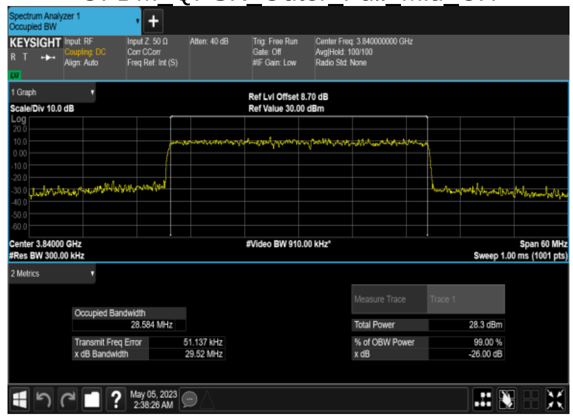
N77(25M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



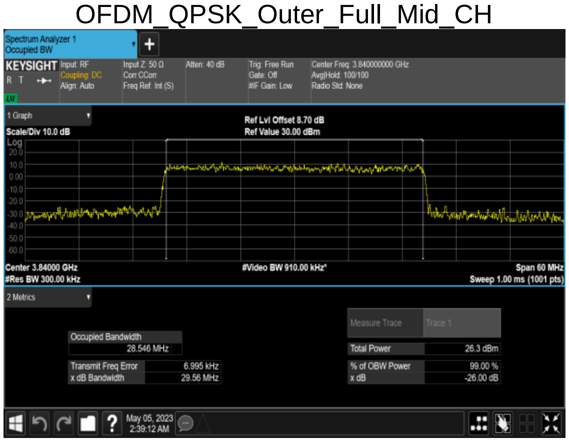
N77(30M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



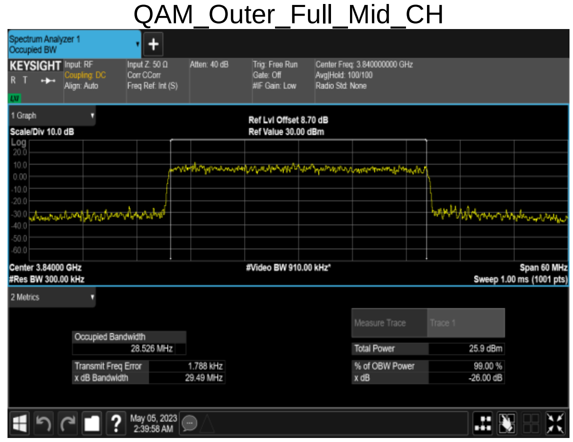
N77(30M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



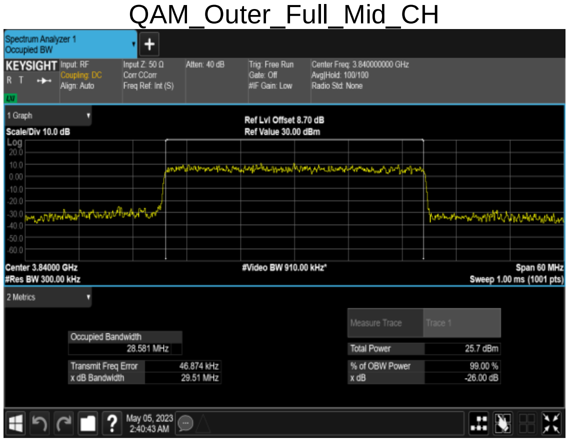
N77(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



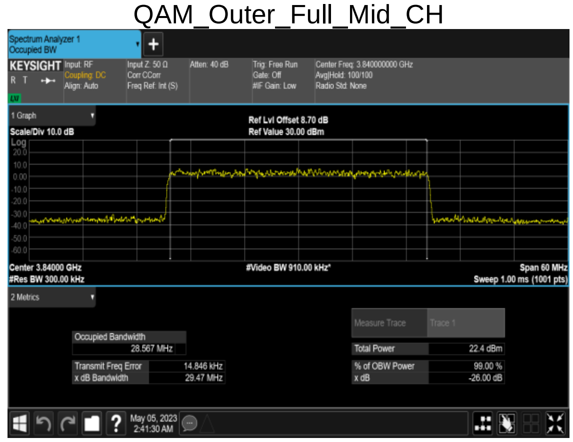
N77(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



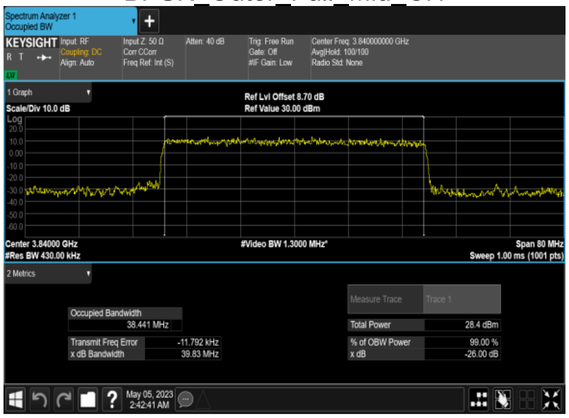
N77(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



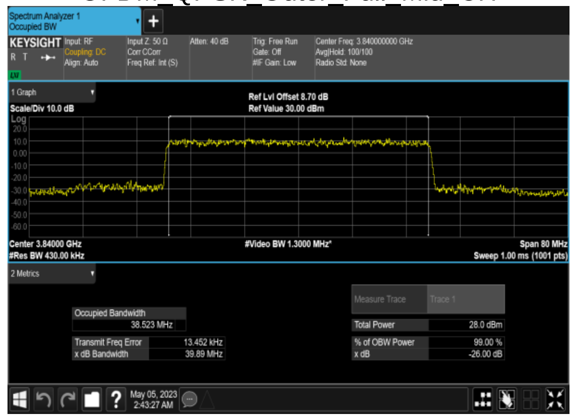
N77(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



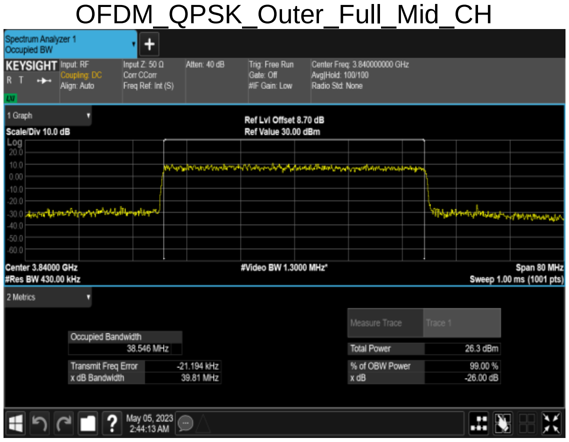
N77(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



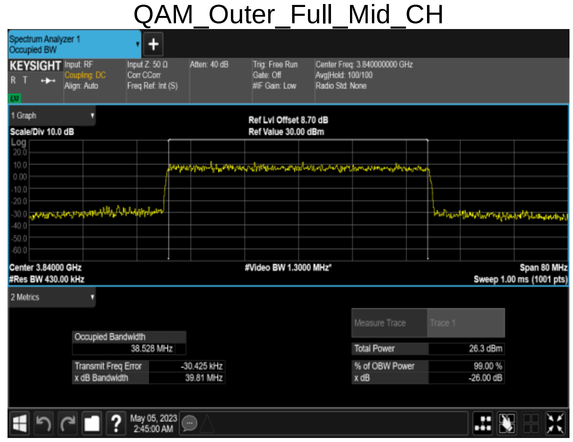
N77(40M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



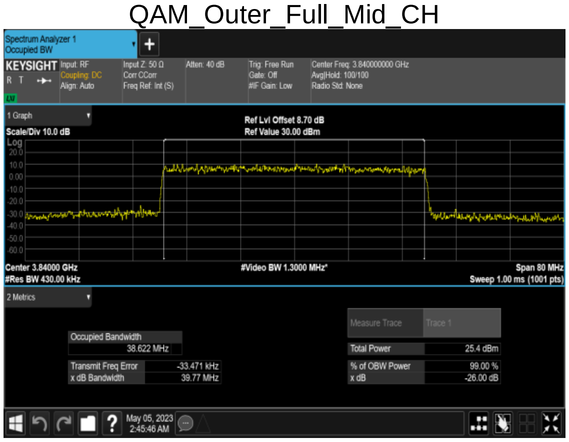
N77(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



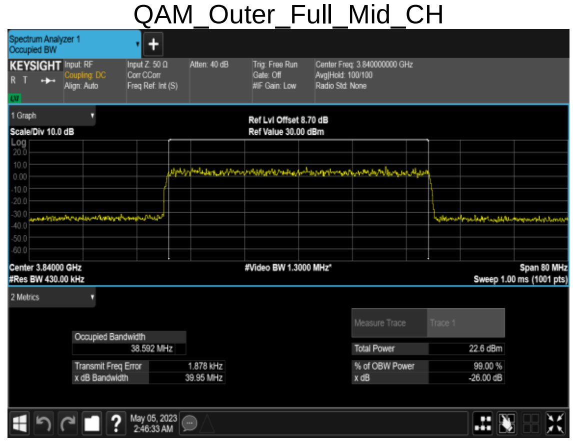
N77(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



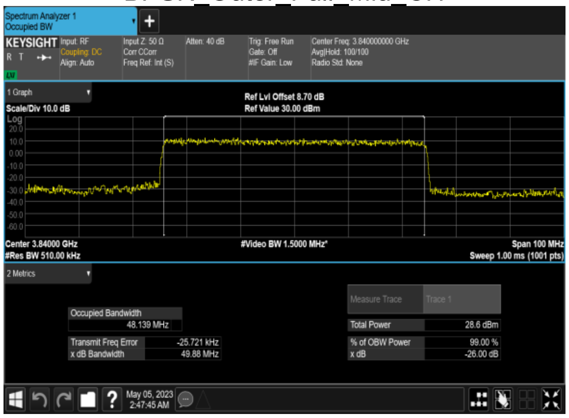
N77(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



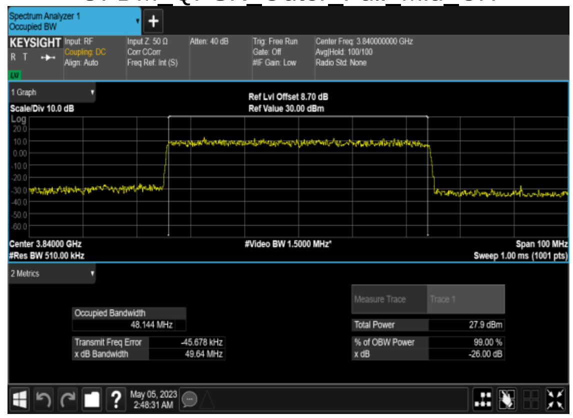
N77(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



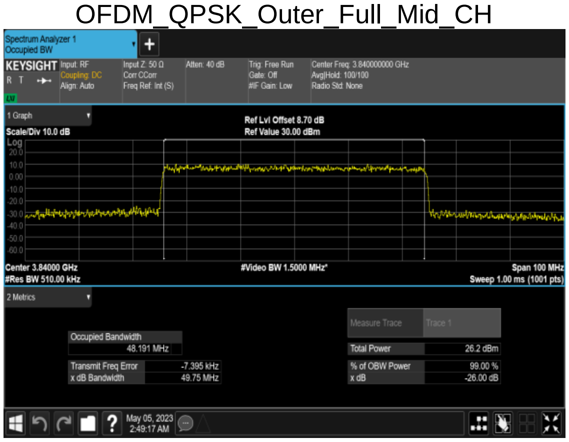
N77(50M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



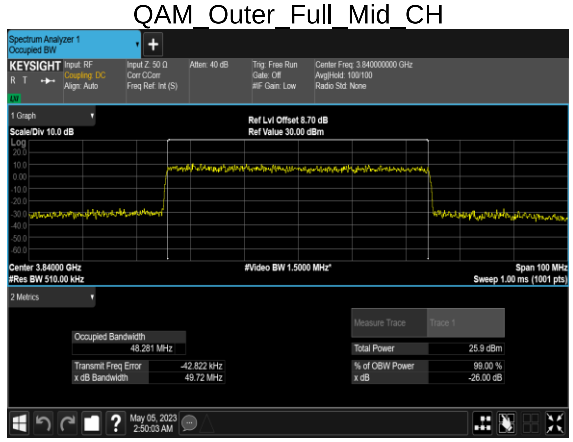
N77(50M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



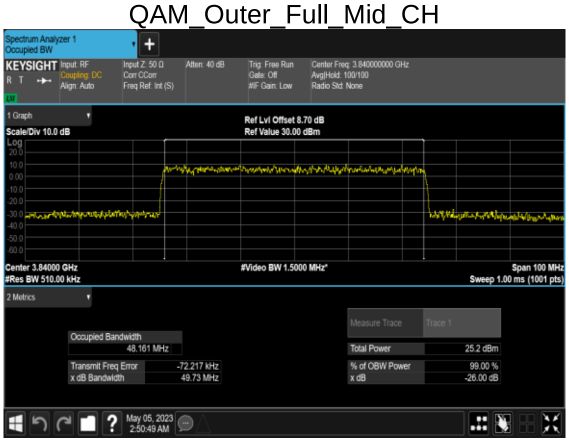
N77(50M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



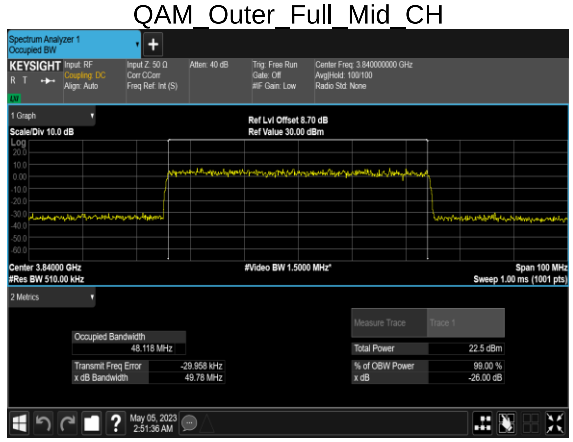
N77(50M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N77(50M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N77(50M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



Conducted Spurious Emissions

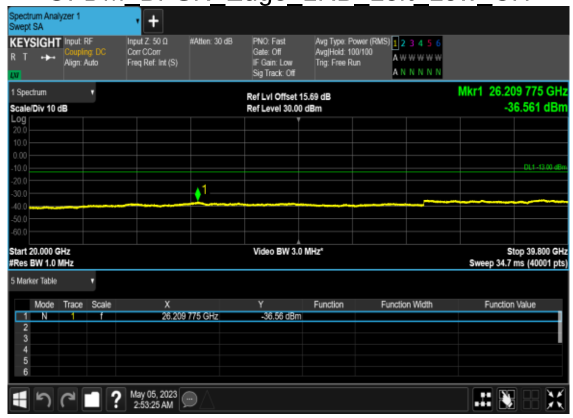
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	15	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	15	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	15	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	15	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	25	647500	3712.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM QPSK	1@0	see graph	**---**

77	15	25	647500	3712.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	25	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	25	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	25	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	25	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	15	25	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	25	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	25	664500	3967.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	15	25	664500	3967.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	50	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	50	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	50	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	50	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**

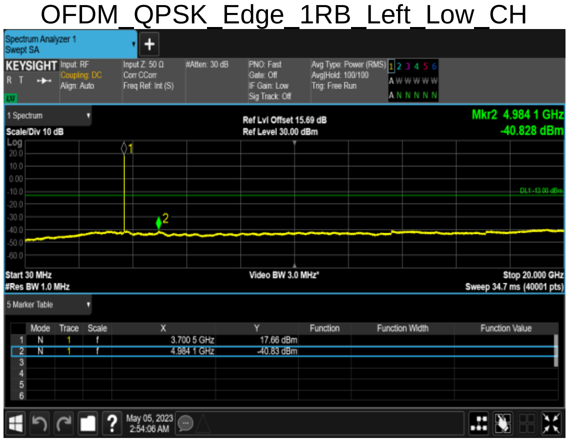
77	15	50	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	50	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	15	50	663666	3954.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

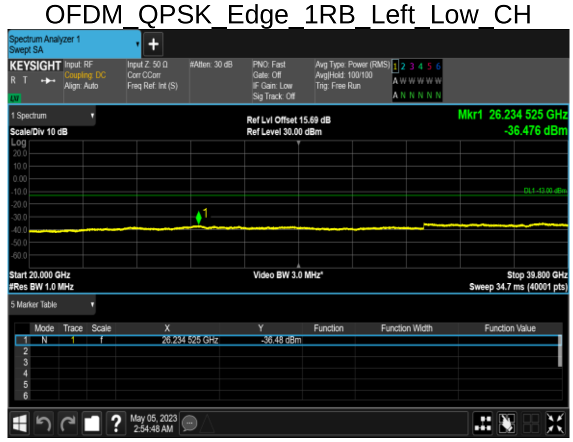
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



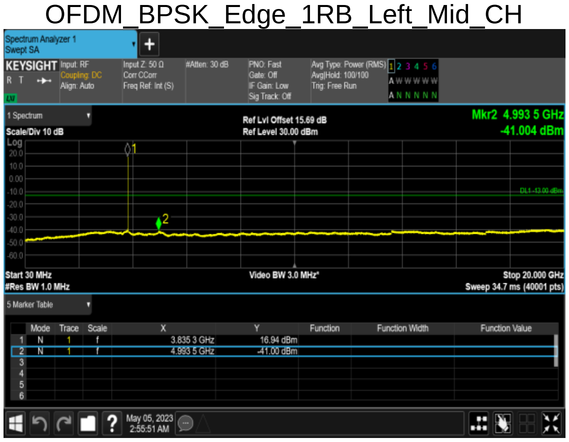
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



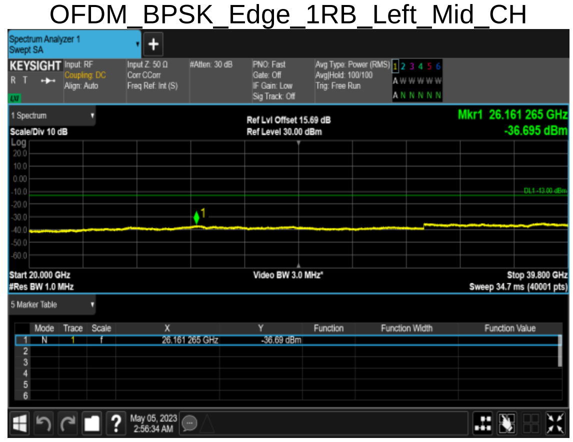
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



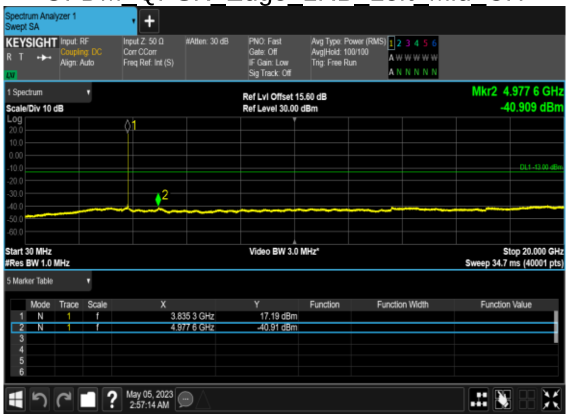
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



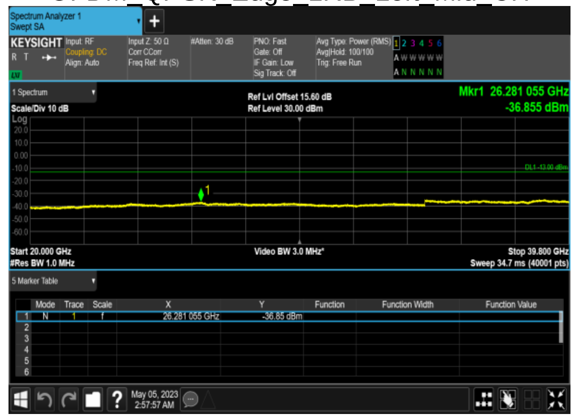
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



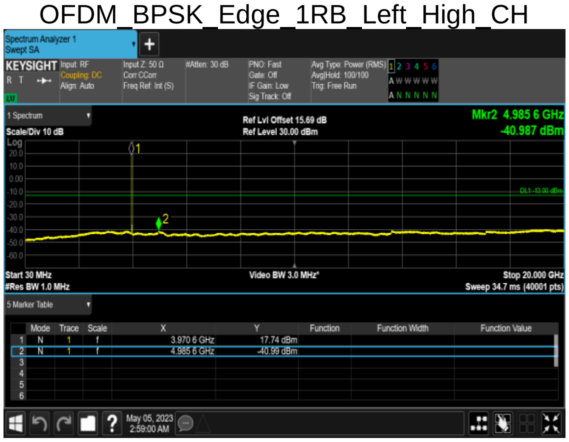
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



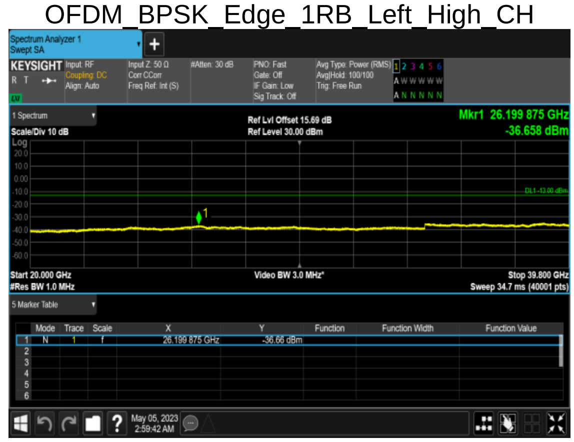
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



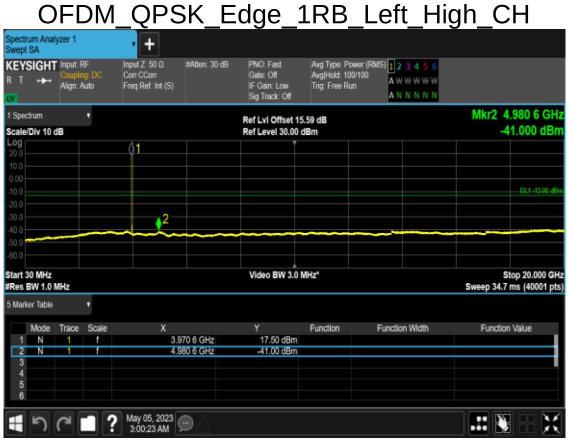
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



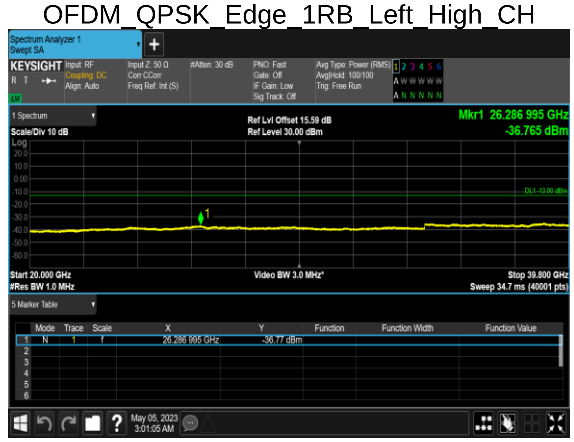
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

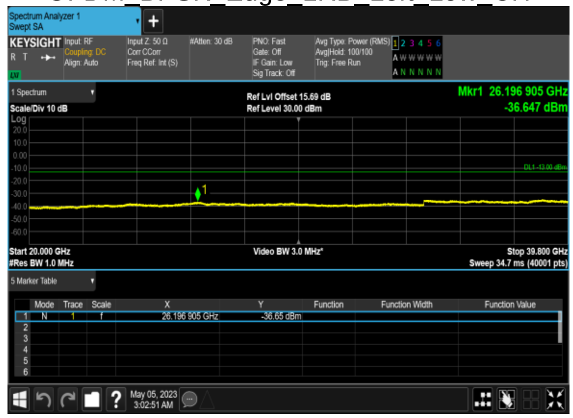


N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

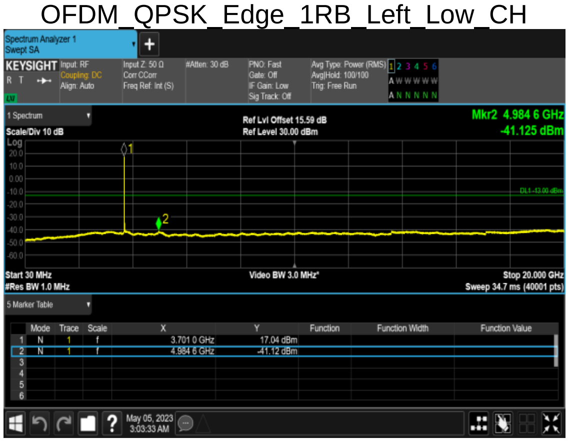


N77(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

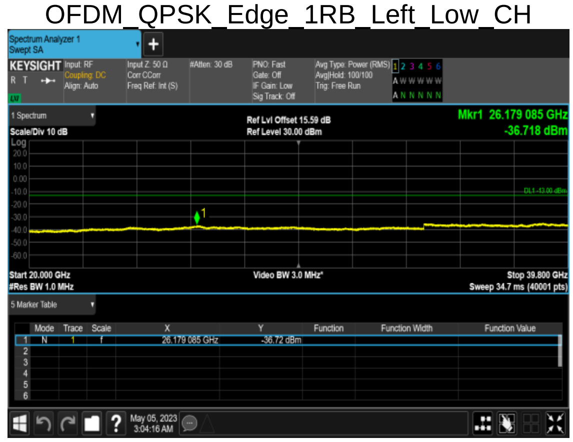
N77(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



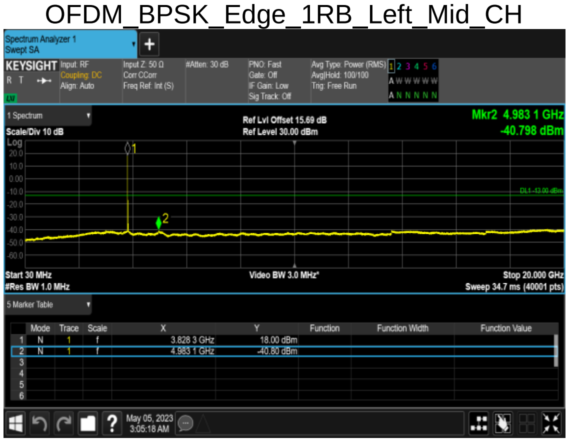
N77(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



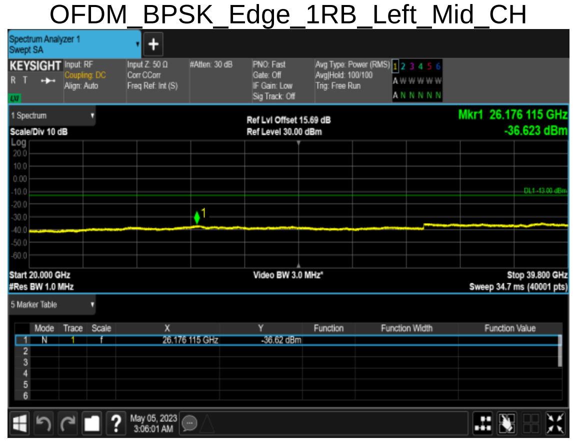
N77(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



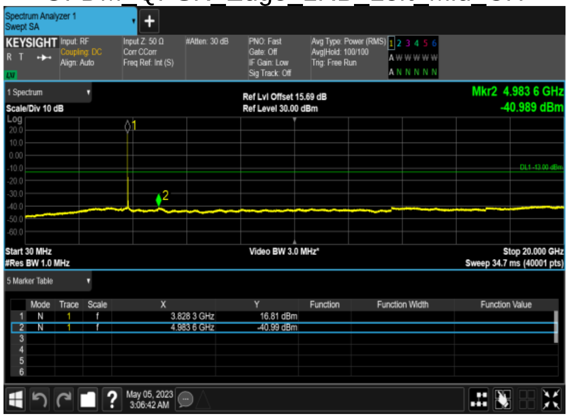
N77(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



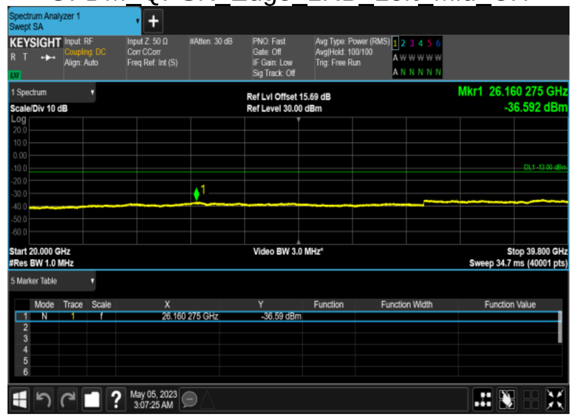
N77(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



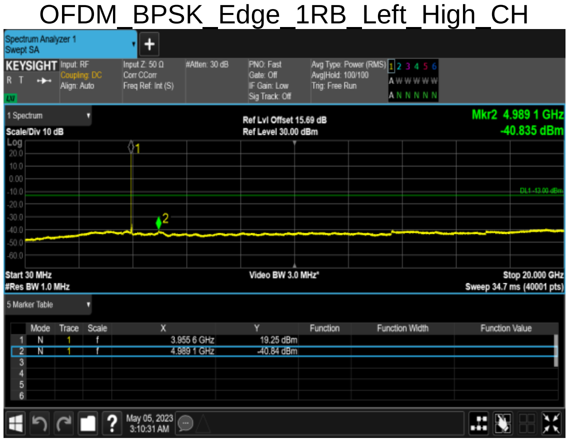
N77(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



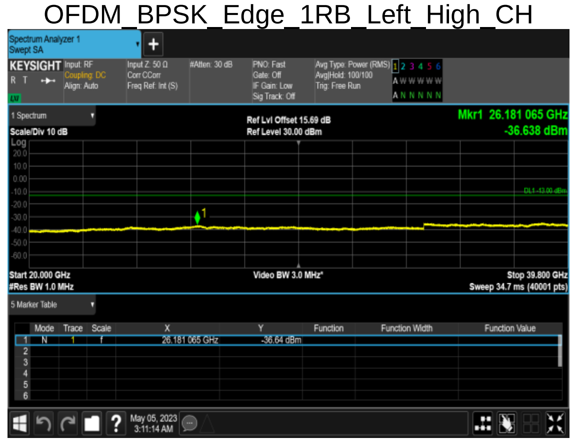
N77(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



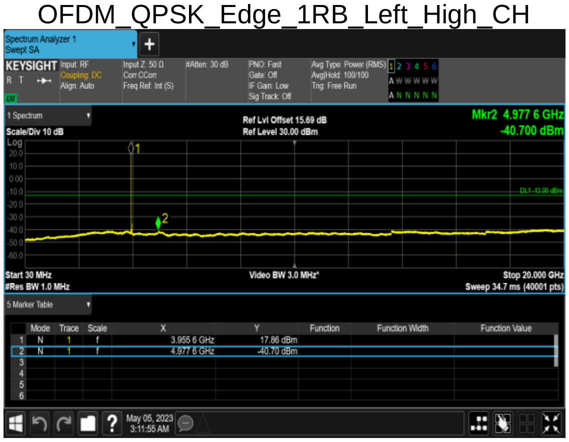
N77(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



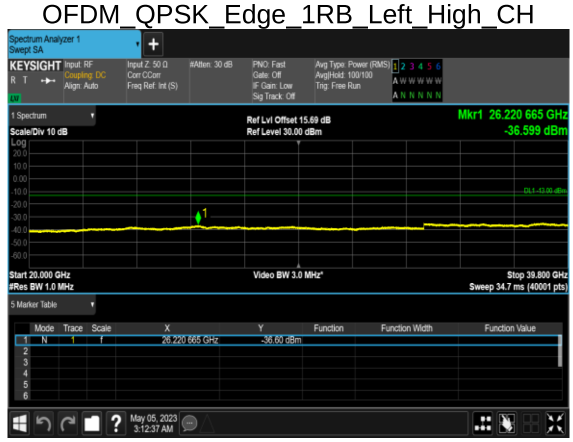
N77(25M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N77(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

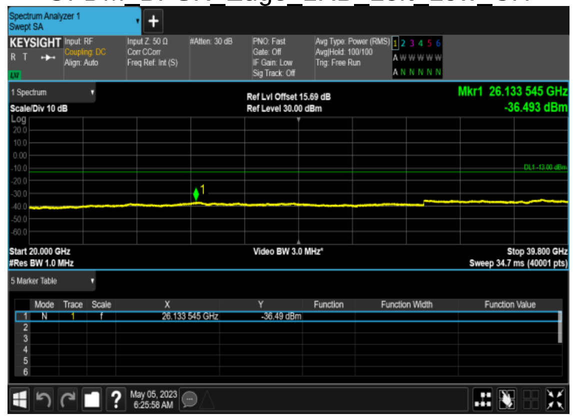


N77(25M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

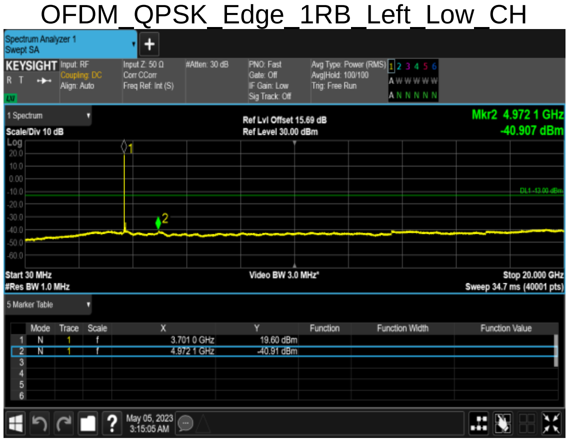


N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

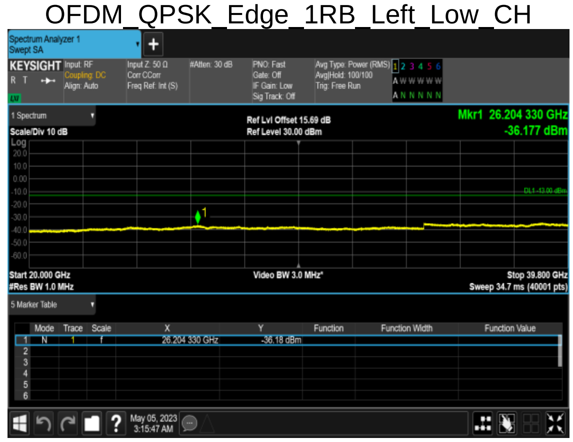
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



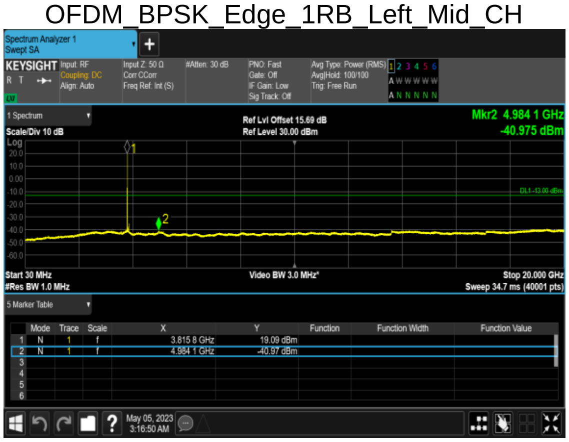
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



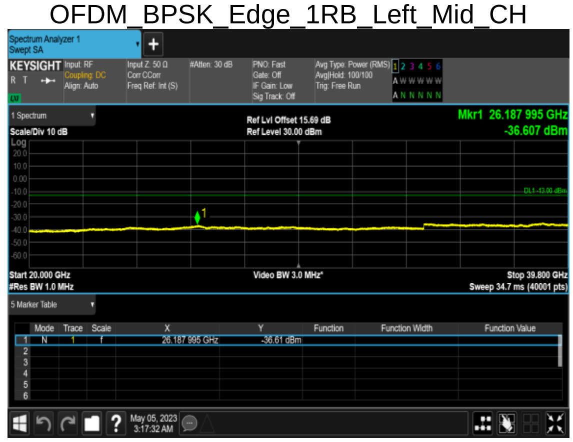
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

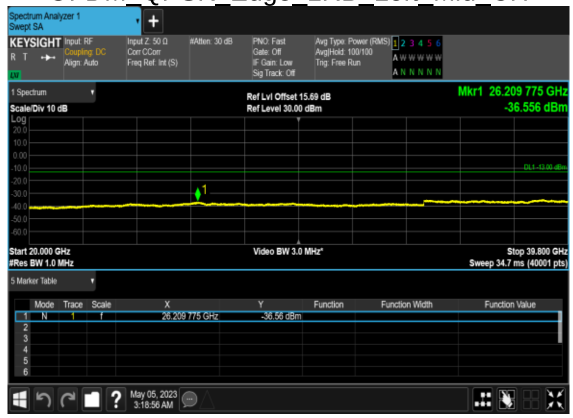


N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

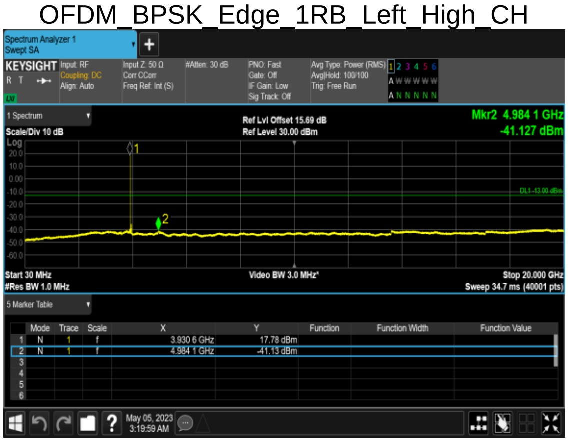


N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

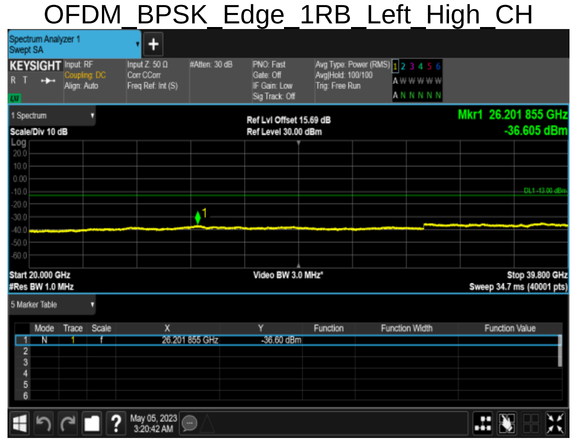
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



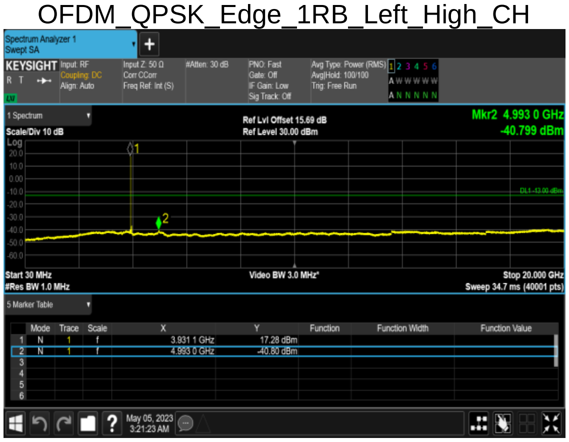
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



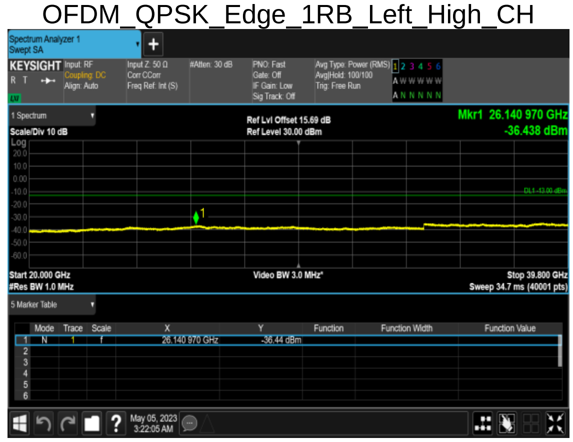
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N77(50M)_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
77	15	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	10	647000	3705.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
77	15	10	647000	3705.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM BPSK	1@51	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM QPSK	1@51	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM BPSK	50@0	see graph	**PASS**
77	15	10	665000	3975.0	DFT-s-OFDM QPSK	50@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM BPSK	128@0	see graph	**PASS**
77	15	25	647500	3712.5	DFT-s-OFDM QPSK	128@0	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM BPSK	1@132	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM QPSK	1@132	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM BPSK	128@0	see graph	**PASS**
77	15	25	664500	3967.5	DFT-s-OFDM QPSK	128@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM BPSK	270@0	see graph	**PASS**
77	15	50	648334	3725.01	DFT-s-OFDM QPSK	270@0	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM BPSK	1@269	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	1@269	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM BPSK	270@0	see graph	**PASS**
77	15	50	663666	3954.99	DFT-s-OFDM QPSK	270@0	see graph	**PASS**