FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2175-1
FCC ID	:	IHDT56AC1
STANDARD	:	47 CFR Part 2, 27(O)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	:	Sep. 15, 2021 ~ Sep. 29, 2021

We, Sporton International (Kunshan) Inc., 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 (Shenzhen) Inc.

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

Jason Jia

Reviewed by: Jason Jia / Supervisor

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Approved by: Alex Wang / Manager

ACCREDITED
Cert #5145.02

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APPENDIX A. TEST RESULTS OF CONDUCTED TEST

APPENDIX B. TEST RESULTS OF RADIATED TEST

APPENDIX C. TEST SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG172703G	Rev. 01	Initial issue of report	Oct. 19, 2021

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 < 1Watt		
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	§2.1055 §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 35.50 dB at 11376.000 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	XT2175-1
FCC ID	IHDT56AC1
IMEI Code	Conducted: N/A Radiation: 350506880020724
HW Version	DVT2
SW Version	RRX31.Q3-38
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
Rx Frequency	5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
SCS	n77, n78: 30kHz
Bandwidth	20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz
Maximum Output Power to Antenna	5G NR n77 : 24.20 dBm 5G NR n78 : 23.96 dBm
Antenna Gain	5G NR n77: -6.8 dBi 5G NR n78: -6.8 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The ERP/EIRP is calculated from Output power and antenna gain, so the maximum ERP/EIRP is shown in the report
2. The ERP/EIRP is calculated from Output power and antenna gain, so the maximum ERP/EIRP is shown in the report, 5G NR n77/n78 for Antenna 4.

1.5 Modification of EUT

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

1.6 Maximum EIRP Power and Emission Designator

5G NR n77		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)
20	3710.01 ~ 3969.99	0.0535	18M2G7D	0.0329	18M2W7D
30	3715.02 ~ 3964.98	0.0545	27M9G7D	0.0355	27M8W7D
40	3720.00 ~ 3960.00	0.0550	37M7G7D	0.0342	37M8W7D
50	3725.01 ~ 3954.99	0.0507	47M5G7D	0.0323	47M6W7D
60	3730.02 ~ 3949.98	0.0532	57M9G7D	0.0323	57M9W7D
70	3735.00 ~ 3945.00	0.0525	67M4G7D	0.0334	67M5W7D
80	3740.01 ~ 3939.99	0.0535	77M5G7D	0.0327	77M5W7D
90	3745.02 ~ 3934.98	0.0511	87M3G7D	0.0314	87M6W7D
100	3750.00 ~ 3930.00	0.0518	97M5G7D	0.0324	97M6W7D

5G NR n78		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)
20	3710.01 ~ 3789.99	0.0535	18M2G7D	0.0329	18M2W7D
30	3715.02 ~ 3784.98	0.0545	27M9G7D	0.0355	27M8W7D
40	3720.00 ~ 3780.00	0.0550	37M7G7D	0.0342	37M8W7D
50	3725.01 ~ 3774.99	0.0507	47M5G7D	0.0323	47M6W7D
60	3730.02 ~ 3769.98	0.0532	57M9G7D	0.0323	57M9W7D
70	3735.00 ~ 3765.00	0.0525	67M4G7D	0.0334	67M5W7D
80	3740.01 ~ 3759.99	0.0535	77M5G7D	0.0327	77M5W7D
90	3745.02 ~ 3754.98	0.0511	87M3G7D	0.0314	87M6W7D
100	3750	0.0518	97M5G7D	0.0324	97M6W7D

Note:

1. 5G NR n77 overlaps the entire frequency range of 5G NR n78. Therefore, the test results provided in this report covers 5G NR n77 as well as 5G NR n78

2. All modulations have been evaluation, only the worst test results of PSK & QAM are shown in the report .

1.7 Testing Location

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

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

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

Test Firm	Sporton International (Shenzhen) Inc.		
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 items in section 3 of this report.

1.8 Test Software

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

1.9 Applicable Standards

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

- 47 CFR Part 2, 27O
- 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.

1.10 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-331
AC Adapter 1(EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-332
AC Adapter 1(UK)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-333
AC Adapter 1(AR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-336
AC Adapter 1(BR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-337
AC Adapter 1(PRC)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-338
AC Adapter 1(CHILE)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-339
AC Adapter 2(US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-331
AC Adapter 2(EU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-332
AC Adapter 2(AR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-336
AC Adapter 2(BR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-337
AC Adapter 3(US)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-331
AC Adapter 3(EU)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-332
AC Adapter 3(UK)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-333
Battery 1	**Brand Name**	Motorola(ATL)	**Model Name**	MB50
Earphone 1	**Brand Name**	Motorola(Lyand)	**Model Name**	MH191(SH38C81577)
Earphone 2	**Brand Name**	Motorola(LCHSE)	**Model Name**	MH191(SH38C81576)
Type C to audio cable	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18C27844
Type C to HDMI cable	**Brand Name**	Motorola(Linxee)	**Model Name**	SC18D02146
USB Cable 1	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D22297
USB Cable 2	**Brand Name**	Motorola(Cabletech)	**Model Name**	SC18D22298
USB Cable 3	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18D22299

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.

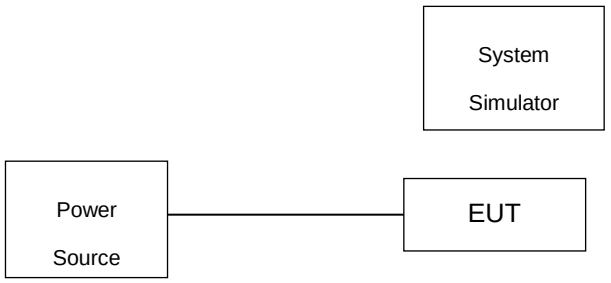
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

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		
		20	30	40-50	60	70-90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	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
	n78	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
26dB and 99% Bandwidth	n77	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
Conducted Spurious Emission	n77	v			v		v	v	v				v		v	v	v
Frequency Stability	n77	v							v					v		v	
E.R.P / E.I.R.P	n77	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
Radiated Spurious Emission	n77	Worst Case														v	
	n78	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 modulations test results are shown in the report.																

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

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

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 4.8 dB.

Example :

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

=4.8 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n77 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	66300
	Frequency	3735.00	3840	3945.00
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	3720.00	3840	3960.00
30	Channel	647668	656000	664332
	Frequency	3715.02	3840	3964.98
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99

5G NR n78 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	3735.00	3750	3765.00
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	3720.00	3750	3780.00
30	Channel	647668	650000	652332
	Frequency	3715.02	3750	3784.98
20	Channel	647334	650000	652666
	Frequency	3710.01	3750	3789.99

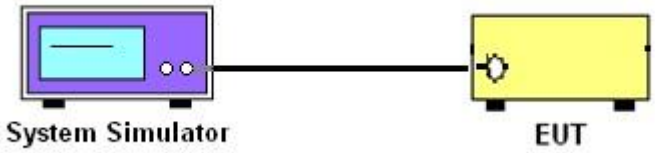
3 Conducted Test Items

3.1 Measuring Instruments

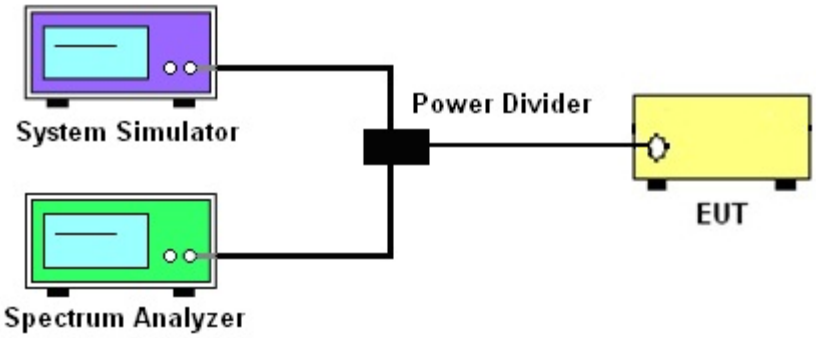
See list of measuring instruments of this test report.

3.2 Test Setup

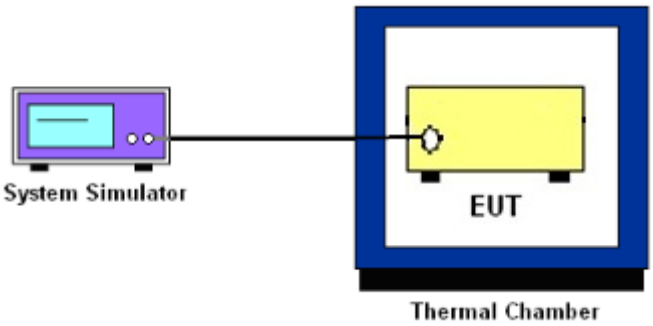
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and EIRP

3.4.1 Description of the Conducted Output Power Measurement and EIRP Measurement

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

The EIRP of mobile transmitters must not exceed 1 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.
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.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

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

3.8.2 Test Procedures

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

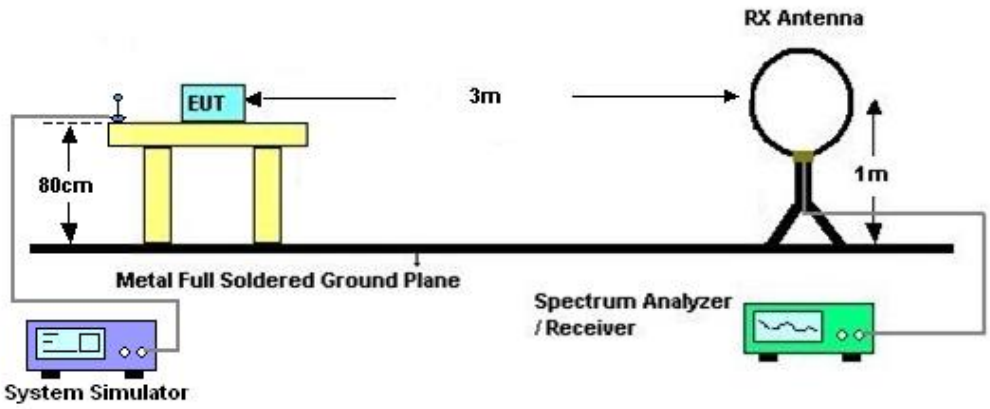
4 Radiated Test Items

4.1 Measuring Instruments

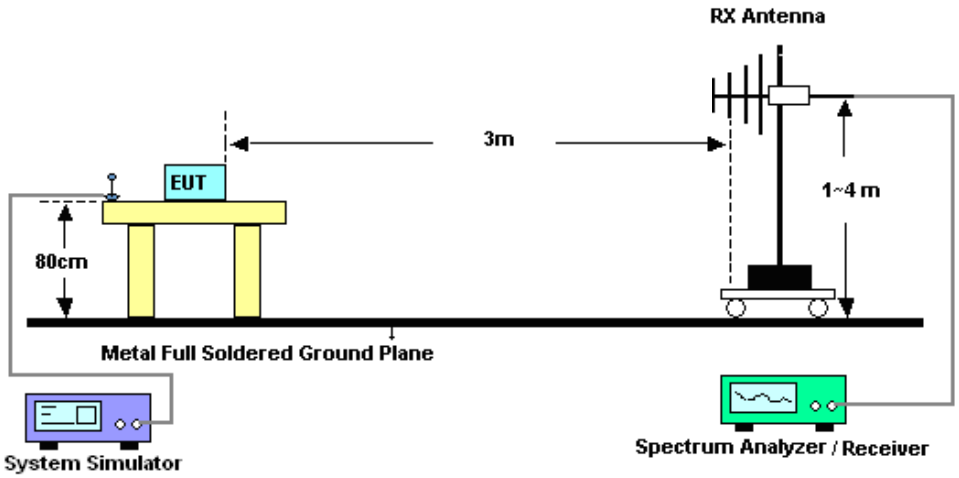
See list of measuring instruments of this test report.

4.2 Test Setup

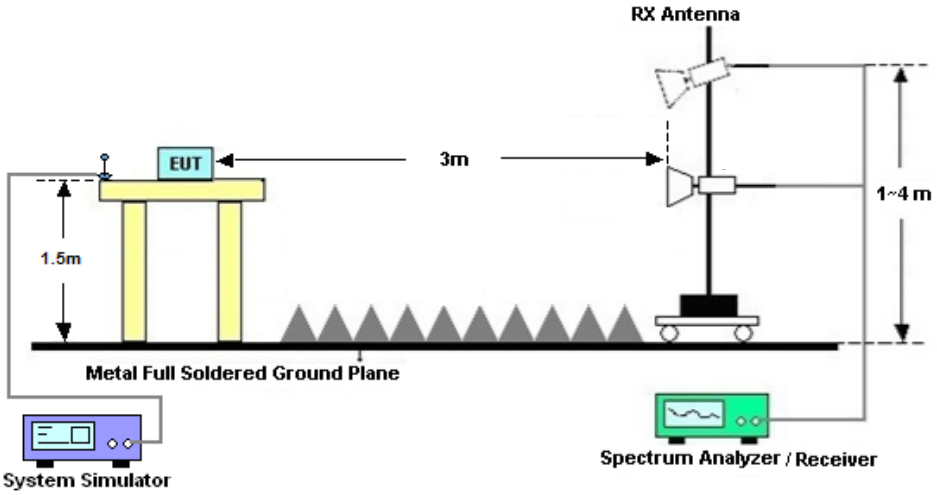
4.2.1 For radiated test below 30MHz



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
EXA Signal Analyzer	KEYSIGHT	N9010B	MY60240803	10Hz~44GHz	Apr. 03, 2021	Sep. 28, 2021~ Sep. 29, 2021	Apr. 02, 2022	Conducted (TH01-SZ)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 26, 2021	Sep. 28, 2021~ Sep. 29, 2021	Aug. 25, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Sep. 28, 2021~ Sep. 29, 2021	Jul. 13, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2021	Sep. 15, 2021	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Sep. 15, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2021	Sep. 15, 2021	May 29, 2022	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 01, 2020	Sep. 15, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jan. 06, 2021	Sep. 15, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 06, 2021	Sep. 15, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 07, 2021	Sep. 15, 2021	Jan. 06, 2022	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Jan. 06, 2021	Sep. 15, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 14, 2020	Sep. 15, 2021	Oct. 13, 2021	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Sep. 15, 2021	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Sep. 15, 2021	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Sep. 15, 2021	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

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

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

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

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

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

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

Appendix A. Test Results of Conducted Test

Software Version: 21.02.091501

FR1 N77

Transmitter Conducted Output Power And ERP/EIRP

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
77	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	25@12	23.81	17.01	0.0502
77	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@1	23.77	16.97	0.0498
77	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@49	23.89	17.09	0.0512
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	25@12	23.73	16.93	0.0493
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	23.62	16.82	0.0481
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@49	23.69	16.89	0.0489
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	25@12	21.86	15.06	0.0321
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	21.71	14.91	0.0310
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@49	21.71	14.91	0.0310
77	30	20	647334	3710.01	DFT-s-OFDM 64 QAM	25@12	20.25	13.45	0.0221
77	30	20	647334	3710.01	DFT-s-OFDM 64 QAM	1@1	20.06	13.26	0.0212
77	30	20	647334	3710.01	DFT-s-OFDM 64 QAM	1@49	20.23	13.43	0.0220
77	30	20	647334	3710.01	DFT-s-OFDM 256 QAM	25@12	18.43	11.63	0.0146
77	30	20	647334	3710.01	DFT-s-OFDM 256 QAM	1@1	18.54	11.74	0.0149
77	30	20	647334	3710.01	DFT-s-OFDM 256 QAM	1@49	18.43	11.63	0.0146
77	30	20	647334	3710.01	CP-OFDM QPSK	25@12	21.16	14.36	0.0273
77	30	20	647334	3710.01	CP-OFDM QPSK	1@1	21.24	14.44	0.0278
77	30	20	647334	3710.01	CP-OFDM QPSK	1@49	21.52	14.72	0.0296
77	30	20	656000	3840	DFT-s-OFDM PI/2 BPSK	25@12	23.8	17	0.0501
77	30	20	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.63	16.83	0.0482

77	30	20	656000	3840	DFT-s-OFDM PI/2 BPSK	1@49	23.82	17.02	0.0504
77	30	20	656000	3840	DFT-s-OFDM QPSK	25@12	23.69	16.89	0.0489
77	30	20	656000	3840	DFT-s-OFDM QPSK	1@1	23.7	16.9	0.0490
77	30	20	656000	3840	DFT-s-OFDM QPSK	1@49	23.73	16.93	0.0493
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	25@12	21.78	14.98	0.0315
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.63	14.83	0.0304
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	1@49	21.93	15.13	0.0326
77	30	20	656000	3840	DFT-s-OFDM 64 QAM	25@12	20.19	13.39	0.0218
77	30	20	656000	3840	DFT-s-OFDM 64 QAM	1@1	20.18	13.38	0.0218
77	30	20	656000	3840	DFT-s-OFDM 64 QAM	1@49	20.16	13.36	0.0217
77	30	20	656000	3840	DFT-s-OFDM 256 QAM	25@12	18.38	11.58	0.0144
77	30	20	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.43	11.63	0.0146
77	30	20	656000	3840	DFT-s-OFDM 256 QAM	1@49	18.21	11.41	0.0138
77	30	20	656000	3840	CP-OFDM QPSK	25@12	21.28	14.48	0.0281
77	30	20	656000	3840	CP-OFDM QPSK	1@1	21.09	14.29	0.0269
77	30	20	656000	3840	CP-OFDM QPSK	1@49	21.27	14.47	0.0280
77	30	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	25@12	23.99	17.19	0.0524
77	30	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	1@1	24.01	17.21	0.0526
77	30	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	1@49	24.08	17.28	0.0535
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	25@12	24.02	17.22	0.0527
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@1	23.99	17.19	0.0524
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@49	23.88	17.08	0.0511
77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	25@12	21.56	14.76	0.0299
77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@1	21.96	15.16	0.0328

77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@49	21.97	15.17	0.0329
77	30	20	664666	3969.99	DFT-s-OFDM 64 QAM	25@12	20.62	13.82	0.0241
77	30	20	664666	3969.99	DFT-s-OFDM 64 QAM	1@1	20.59	13.79	0.0239
77	30	20	664666	3969.99	DFT-s-OFDM 64 QAM	1@49	20.56	13.76	0.0238
77	30	20	664666	3969.99	DFT-s-OFDM 256 QAM	25@12	18.56	11.76	0.0150
77	30	20	664666	3969.99	DFT-s-OFDM 256 QAM	1@1	18.69	11.89	0.0155
77	30	20	664666	3969.99	DFT-s-OFDM 256 QAM	1@49	18.54	11.74	0.0149
77	30	20	664666	3969.99	CP-OFDM QPSK	25@12	21.36	14.56	0.0286
77	30	20	664666	3969.99	CP-OFDM QPSK	1@1	21.5	14.7	0.0295
77	30	20	664666	3969.99	CP-OFDM QPSK	1@49	21.54	14.74	0.0298
77	30	30	647668	3715.02	DFT-s-OFDM PI/2 BPSK	36@18	23.93	17.13	0.0516
77	30	30	647668	3715.02	DFT-s-OFDM PI/2 BPSK	1@1	23.78	16.98	0.0499
77	30	30	647668	3715.02	DFT-s-OFDM PI/2 BPSK	1@76	23.82	17.02	0.0504
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	36@18	23.7	16.9	0.0490
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	1@1	23.76	16.96	0.0497
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	1@76	23.89	17.09	0.0512
77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	36@18	21.81	15.01	0.0317
77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	1@1	21.71	14.91	0.0310
77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	1@76	21.85	15.05	0.0320
77	30	30	647668	3715.02	DFT-s-OFDM 64 QAM	36@18	20.29	13.49	0.0223
77	30	30	647668	3715.02	DFT-s-OFDM 64 QAM	1@1	20.22	13.42	0.0220
77	30	30	647668	3715.02	DFT-s-OFDM 64 QAM	1@76	20.29	13.49	0.0223
77	30	30	647668	3715.02	DFT-s-OFDM 256 QAM	36@18	18.54	11.74	0.0149
77	30	30	647668	3715.02	DFT-s-OFDM 256 QAM	1@1	18.57	11.77	0.0150

77	30	30	647668	3715.02	DFT-s-OFDM 256 QAM	1@76	18.57	11.77	0.0150
77	30	30	647668	3715.02	CP-OFDM QPSK	39@19	21.33	14.53	0.0284
77	30	30	647668	3715.02	CP-OFDM QPSK	1@1	21.35	14.55	0.0285
77	30	30	647668	3715.02	CP-OFDM QPSK	1@76	21.42	14.62	0.0290
77	30	30	656000	3840	DFT-s-OFDM PI/2 BPSK	36@18	23.85	17.05	0.0507
77	30	30	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.87	17.07	0.0509
77	30	30	656000	3840	DFT-s-OFDM PI/2 BPSK	1@76	23.92	17.12	0.0515
77	30	30	656000	3840	DFT-s-OFDM QPSK	36@18	23.72	16.92	0.0492
77	30	30	656000	3840	DFT-s-OFDM QPSK	1@1	23.79	16.99	0.0500
77	30	30	656000	3840	DFT-s-OFDM QPSK	1@76	23.72	16.92	0.0492
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	36@18	21.87	15.07	0.0321
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.87	15.07	0.0321
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	1@76	21.91	15.11	0.0324
77	30	30	656000	3840	DFT-s-OFDM 64 QAM	36@18	20.23	13.43	0.0220
77	30	30	656000	3840	DFT-s-OFDM 64 QAM	1@1	20.18	13.38	0.0218
77	30	30	656000	3840	DFT-s-OFDM 64 QAM	1@76	20.12	13.32	0.0215
77	30	30	656000	3840	DFT-s-OFDM 256 QAM	36@18	18.44	11.64	0.0146
77	30	30	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.44	11.64	0.0146
77	30	30	656000	3840	DFT-s-OFDM 256 QAM	1@76	18.44	11.64	0.0146
77	30	30	656000	3840	CP-OFDM QPSK	39@19	21.19	14.39	0.0275
77	30	30	656000	3840	CP-OFDM QPSK	1@1	21.22	14.42	0.0277
77	30	30	656000	3840	CP-OFDM QPSK	1@76	21.25	14.45	0.0279
77	30	30	664332	3840	DFT-s-OFDM PI/2 BPSK	36@18	24.12	17.32	0.0540
77	30	30	664332	3964.98	DFT-s-OFDM PI/2 BPSK	1@1	24.08	17.28	0.0535
77	30	30	664332	3964.98	DFT-s-OFDM PI/2 BPSK	1@76	24.16	17.36	0.0545

77	30	30	664332	3964.98	DFT-s-OFDM QPSK	36@18	24.02	17.22	0.0527
77	30	30	664332	3964.98	DFT-s-OFDM QPSK	1@1	24	17.2	0.0525
77	30	30	664332	3964.98	DFT-s-OFDM QPSK	1@76	23.93	17.13	0.0516
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	36@18	21.28	14.48	0.0281
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@1	22.3	15.5	0.0355
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@76	22.2	15.4	0.0347
77	30	30	664332	3964.98	DFT-s-OFDM 64 QAM	36@18	20.74	13.94	0.0248
77	30	30	664332	3964.98	DFT-s-OFDM 64 QAM	1@1	20.69	13.89	0.0245
77	30	30	664332	3964.98	DFT-s-OFDM 64 QAM	1@76	20.54	13.74	0.0237
77	30	30	664332	3964.98	DFT-s-OFDM 256 QAM	36@18	18.76	11.96	0.0157
77	30	30	664332	3964.98	DFT-s-OFDM 256 QAM	1@1	18.71	11.91	0.0155
77	30	30	664332	3964.98	DFT-s-OFDM 256 QAM	1@76	18.77	11.97	0.0157
77	30	30	664332	3964.98	CP-OFDM QPSK	39@19	21.67	14.87	0.0307
77	30	30	664332	3964.98	CP-OFDM QPSK	1@1	21.66	14.86	0.0306
77	30	30	664332	3964.98	CP-OFDM QPSK	1@76	21.46	14.66	0.0292
77	30	40	648000	3720	DFT-s-OFDM PI/2 BPSK	50@25	23.82	17.02	0.0504
77	30	40	648000	3720	DFT-s-OFDM PI/2 BPSK	1@1	23.74	16.94	0.0494
77	30	40	648000	3720	DFT-s-OFDM PI/2 BPSK	1@104	23.82	17.02	0.0504
77	30	40	648000	3720	DFT-s-OFDM QPSK	50@25	23.88	17.08	0.0511
77	30	40	648000	3720	DFT-s-OFDM QPSK	1@1	23.93	17.13	0.0516
77	30	40	648000	3720	DFT-s-OFDM QPSK	1@104	23.97	17.17	0.0521
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	50@25	21.89	15.09	0.0323
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	21.93	15.13	0.0326
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@104	21.87	15.07	0.0321

77	30	40	648000	3720	DFT-s-OFDM 64 QAM	50@25	20.34	13.54	0.0226
77	30	40	648000	3720	DFT-s-OFDM 64 QAM	1@1	20.37	13.57	0.0228
77	30	40	648000	3720	DFT-s-OFDM 64 QAM	1@104	20.49	13.69	0.0234
77	30	40	648000	3720	DFT-s-OFDM 256 QAM	50@25	18.55	11.75	0.0150
77	30	40	648000	3720	DFT-s-OFDM 256 QAM	1@1	18.65	11.85	0.0153
77	30	40	648000	3720	DFT-s-OFDM 256 QAM	1@104	18.54	11.74	0.0149
77	30	40	648000	3720	CP-OFDM QPSK	53@26	21.36	14.56	0.0286
77	30	40	648000	3720	CP-OFDM QPSK	1@1	21.28	14.48	0.0281
77	30	40	648000	3720	CP-OFDM QPSK	1@104	21.48	14.68	0.0294
77	30	40	656000	3840	DFT-s-OFDM PI/2 BPSK	50@25	23.85	17.05	0.0507
77	30	40	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.86	17.06	0.0508
77	30	40	656000	3840	DFT-s-OFDM PI/2 BPSK	1@104	23.87	17.07	0.0509
77	30	40	656000	3840	DFT-s-OFDM QPSK	50@25	23.72	16.92	0.0492
77	30	40	656000	3840	DFT-s-OFDM QPSK	1@1	23.65	16.85	0.0484
77	30	40	656000	3840	DFT-s-OFDM QPSK	1@104	23.74	16.94	0.0494
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	50@25	21.75	14.95	0.0313
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.78	14.98	0.0315
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	1@104	21.71	14.91	0.0310
77	30	40	656000	3840	DFT-s-OFDM 64 QAM	50@25	20.22	13.42	0.0220
77	30	40	656000	3840	DFT-s-OFDM 64 QAM	1@1	20.25	13.45	0.0221
77	30	40	656000	3840	DFT-s-OFDM 64 QAM	1@104	20.17	13.37	0.0217
77	30	40	656000	3840	DFT-s-OFDM 256 QAM	50@25	18.44	11.64	0.0146
77	30	40	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.43	11.63	0.0146
77	30	40	656000	3840	DFT-s-OFDM 256 QAM	1@104	18.32	11.52	0.0142

77	30	40	656000	3840	CP-OFDM QPSK	53@26	21.33	14.53	0.0284
77	30	40	656000	3840	CP-OFDM QPSK	1@1	21.45	14.65	0.0292
77	30	40	656000	3840	CP-OFDM QPSK	1@104	21.32	14.52	0.0283
77	30	40	664000	3960	DFT-s-OFDM PI/2 BPSK	50@25	23.95	17.15	0.0519
77	30	40	664000	3960	DFT-s-OFDM PI/2 BPSK	1@1	23.92	17.12	0.0515
77	30	40	664000	3960	DFT-s-OFDM PI/2 BPSK	1@104	24.08	17.28	0.0535
77	30	40	664000	3960	DFT-s-OFDM QPSK	50@25	23.99	17.19	0.0524
77	30	40	664000	3960	DFT-s-OFDM QPSK	1@1	24.18	17.38	0.0547
77	30	40	664000	3960	DFT-s-OFDM QPSK	1@104	24.2	17.4	0.0550
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	50@25	22.12	15.32	0.0340
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	1@1	22.14	15.34	0.0342
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	1@104	21.94	15.14	0.0327
77	30	40	664000	3960	DFT-s-OFDM 64 QAM	50@25	20.86	14.06	0.0255
77	30	40	664000	3960	DFT-s-OFDM 64 QAM	1@1	20.56	13.76	0.0238
77	30	40	664000	3960	DFT-s-OFDM 64 QAM	1@104	20.66	13.86	0.0243
77	30	40	664000	3960	DFT-s-OFDM 256 QAM	50@25	18.77	11.97	0.0157
77	30	40	664000	3960	DFT-s-OFDM 256 QAM	1@1	18.72	11.92	0.0156
77	30	40	664000	3960	DFT-s-OFDM 256 QAM	1@104	18.86	12.06	0.0161
77	30	40	664000	3960	CP-OFDM QPSK	53@26	21.7	14.9	0.0309
77	30	40	664000	3960	CP-OFDM QPSK	1@1	21.61	14.81	0.0303
77	30	40	664000	3960	CP-OFDM QPSK	1@104	21.65	14.85	0.0305
77	30	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	64@32	23.67	16.87	0.0486
77	30	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@1	23.51	16.71	0.0469
77	30	50	648334	3725.01	DFT-s-OFDM PI/2 BPSK	1@131	23.55	16.75	0.0473
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	64@32	23.66	16.86	0.0485

77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	23.39	16.59	0.0456
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@131	23.58	16.78	0.0476
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	64@32	21.89	15.09	0.0323
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	21.53	14.73	0.0297
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@131	21.65	14.85	0.0305
77	30	50	648334	3725.01	DFT-s-OFDM 64 QAM	64@32	20.28	13.48	0.0223
77	30	50	648334	3725.01	DFT-s-OFDM 64 QAM	1@1	20.03	13.23	0.0210
77	30	50	648334	3725.01	DFT-s-OFDM 64 QAM	1@131	20.08	13.28	0.0213
77	30	50	648334	3725.01	DFT-s-OFDM 256 QAM	64@32	18.34	11.54	0.0143
77	30	50	648334	3725.01	DFT-s-OFDM 256 QAM	1@1	18.24	11.44	0.0139
77	30	50	648334	3725.01	DFT-s-OFDM 256 QAM	1@131	18.33	11.53	0.0142
77	30	50	648334	3725.01	CP-OFDM QPSK	67@33	21.08	14.28	0.0268
77	30	50	648334	3725.01	CP-OFDM QPSK	1@1	21.16	14.36	0.0273
77	30	50	648334	3725.01	CP-OFDM QPSK	1@131	21.11	14.31	0.0270
77	30	50	656000	3840	DFT-s-OFDM PI/2 BPSK	64@32	23.56	16.76	0.0474
77	30	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.5	16.7	0.0468
77	30	50	656000	3840	DFT-s-OFDM PI/2 BPSK	1@131	23.51	16.71	0.0469
77	30	50	656000	3840	DFT-s-OFDM QPSK	64@32	23.67	16.87	0.0486
77	30	50	656000	3840	DFT-s-OFDM QPSK	1@1	23.49	16.69	0.0467
77	30	50	656000	3840	DFT-s-OFDM QPSK	1@131	19.66	12.86	0.0193
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	64@32	21.67	14.87	0.0307
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.47	14.67	0.0293
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	1@131	21.55	14.75	0.0299
77	30	50	656000	3840	DFT-s-OFDM 64 QAM	64@32	20	13.2	0.0209

77	30	50	656000	3840	DFT-s-OFDM 64 QAM	1@1	19.92	13.12	0.0205
77	30	50	656000	3840	DFT-s-OFDM 64 QAM	1@131	19.96	13.16	0.0207
77	30	50	656000	3840	DFT-s-OFDM 256 QAM	64@32	18.2	11.4	0.0138
77	30	50	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.1	11.3	0.0135
77	30	50	656000	3840	DFT-s-OFDM 256 QAM	1@131	18.13	11.33	0.0136
77	30	50	656000	3840	CP-OFDM QPSK	67@33	21.05	14.25	0.0266
77	30	50	656000	3840	CP-OFDM QPSK	1@1	20.91	14.11	0.0258
77	30	50	656000	3840	CP-OFDM QPSK	1@131	21.09	14.29	0.0269
77	30	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	64@32	23.85	17.05	0.0507
77	30	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@1	23.77	16.97	0.0498
77	30	50	663666	3954.99	DFT-s-OFDM PI/2 BPSK	1@131	23.63	16.83	0.0482
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	64@32	23.69	16.89	0.0489
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@1	23.72	16.92	0.0492
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@131	22.61	15.81	0.0381
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	64@32	21.15	14.35	0.0272
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@1	21.69	14.89	0.0308
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@131	21.66	14.86	0.0306
77	30	50	663666	3954.99	DFT-s-OFDM 64 QAM	64@32	20.45	13.65	0.0232
77	30	50	663666	3954.99	DFT-s-OFDM 64 QAM	1@1	20.35	13.55	0.0226
77	30	50	663666	3954.99	DFT-s-OFDM 64 QAM	1@131	20.35	13.55	0.0226
77	30	50	663666	3954.99	DFT-s-OFDM 256 QAM	64@32	18.44	11.64	0.0146
77	30	50	663666	3954.99	DFT-s-OFDM 256 QAM	1@1	18.37	11.57	0.0144
77	30	50	663666	3954.99	DFT-s-OFDM 256 QAM	1@131	18.29	11.49	0.0141
77	30	50	663666	3954.99	CP-OFDM QPSK	67@33	21.21	14.41	0.0276
77	30	50	663666	3954.99	CP-OFDM QPSK	1@1	21.24	14.44	0.0278

77	30	50	663666	3954.99	CP-OFDM QPSK	1@131	21.29	14.49	0.0281
77	30	60	648668	3730.02	DFT-s-OFDM PI/2 BPSK	81@40	23.66	16.86	0.0485
77	30	60	648668	3730.02	DFT-s-OFDM PI/2 BPSK	1@1	23.63	16.83	0.0482
77	30	60	648668	3730.02	DFT-s-OFDM PI/2 BPSK	1@160	23.65	16.85	0.0484
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	81@40	23.56	16.76	0.0474
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@1	23.39	16.59	0.0456
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@160	23.66	16.86	0.0485
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	81@40	21.86	15.06	0.0321
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@1	21.58	14.78	0.0301
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@160	21.74	14.94	0.0312
77	30	60	648668	3730.02	DFT-s-OFDM 64 QAM	81@40	20.07	13.27	0.0212
77	30	60	648668	3730.02	DFT-s-OFDM 64 QAM	1@1	20	13.2	0.0209
77	30	60	648668	3730.02	DFT-s-OFDM 64 QAM	1@160	20.11	13.31	0.0214
77	30	60	648668	3730.02	DFT-s-OFDM 256 QAM	81@40	18.35	11.55	0.0143
77	30	60	648668	3730.02	DFT-s-OFDM 256 QAM	1@1	18.2	11.4	0.0138
77	30	60	648668	3730.02	DFT-s-OFDM 256 QAM	1@160	18.38	11.58	0.0144
77	30	60	648668	3730.02	CP-OFDM QPSK	81@40	21.12	14.32	0.0270
77	30	60	648668	3730.02	CP-OFDM QPSK	1@1	21.06	14.26	0.0267
77	30	60	648668	3730.02	CP-OFDM QPSK	1@160	21.13	14.33	0.0271
77	30	60	656000	3840	DFT-s-OFDM PI/2 BPSK	81@40	23.5	16.7	0.0468
77	30	60	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.62	16.82	0.0481
77	30	60	656000	3840	DFT-s-OFDM PI/2 BPSK	1@160	23.58	16.78	0.0476
77	30	60	656000	3840	DFT-s-OFDM QPSK	81@40	23.55	16.75	0.0473
77	30	60	656000	3840	DFT-s-OFDM QPSK	1@1	23.54	16.74	0.0472

77	30	60	656000	3840	DFT-s-OFDM QPSK	1@160	20.55	13.75	0.0237
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	81@40	21.5	14.7	0.0295
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.59	14.79	0.0301
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	1@160	21.48	14.68	0.0294
77	30	60	656000	3840	DFT-s-OFDM 64 QAM	81@40	19.98	13.18	0.0208
77	30	60	656000	3840	DFT-s-OFDM 64 QAM	1@1	19.87	13.07	0.0203
77	30	60	656000	3840	DFT-s-OFDM 64 QAM	1@160	19.82	13.02	0.0200
77	30	60	656000	3840	DFT-s-OFDM 256 QAM	81@40	18.22	11.42	0.0139
77	30	60	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.1	11.3	0.0135
77	30	60	656000	3840	DFT-s-OFDM 256 QAM	1@160	18.06	11.26	0.0134
77	30	60	656000	3840	CP-OFDM QPSK	81@40	20.97	14.17	0.0261
77	30	60	656000	3840	CP-OFDM QPSK	1@1	21.02	14.22	0.0264
77	30	60	656000	3840	CP-OFDM QPSK	1@160	21.03	14.23	0.0265
77	30	60	663332	3949.98	DFT-s-OFDM PI/2 BPSK	81@40	24.03	17.23	0.0528
77	30	60	663332	3949.98	DFT-s-OFDM PI/2 BPSK	1@1	23.8	17	0.0501
77	30	60	663332	3949.98	DFT-s-OFDM PI/2 BPSK	1@160	24.06	17.26	0.0532
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	81@40	23.93	17.13	0.0516
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@1	23.67	16.87	0.0486
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@160	23.63	16.83	0.0482
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	81@40	21.78	14.98	0.0315
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	1@1	21.79	14.99	0.0316
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	1@160	21.89	15.09	0.0323
77	30	60	663332	3949.98	DFT-s-OFDM 64 QAM	81@40	20.47	13.67	0.0233
77	30	60	663332	3949.98	DFT-s-OFDM 64 QAM	1@1	20.32	13.52	0.0225

77	30	60	663332	3949.98	DFT-s-OFDM 64 QAM	1@160	20.28	13.48	0.0223
77	30	60	663332	3949.98	DFT-s-OFDM 256 QAM	81@40	18.53	11.73	0.0149
77	30	60	663332	3949.98	DFT-s-OFDM 256 QAM	1@1	18.58	11.78	0.0151
77	30	60	663332	3949.98	DFT-s-OFDM 256 QAM	1@160	18.47	11.67	0.0147
77	30	60	663332	3949.98	CP-OFDM QPSK	81@40	21.55	14.75	0.0299
77	30	60	663332	3949.98	CP-OFDM QPSK	1@1	21.42	14.62	0.0290
77	30	60	663332	3949.98	CP-OFDM QPSK	1@160	21.57	14.77	0.0300
77	30	70	649000	3735	DFT-s-OFDM PI/2 BPSK	90@45	23.54	16.74	0.0472
77	30	70	649000	3735	DFT-s-OFDM PI/2 BPSK	1@1	23.48	16.68	0.0466
77	30	70	649000	3735	DFT-s-OFDM PI/2 BPSK	1@187	23.53	16.73	0.0471
77	30	70	649000	3735	DFT-s-OFDM QPSK	90@45	23.52	16.72	0.0470
77	30	70	649000	3735	DFT-s-OFDM QPSK	1@1	23.33	16.53	0.0450
77	30	70	649000	3735	DFT-s-OFDM QPSK	1@187	23.62	16.82	0.0481
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	90@45	21.18	14.38	0.0274
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	1@1	21.37	14.57	0.0286
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	1@187	21.52	14.72	0.0296
77	30	70	649000	3735	DFT-s-OFDM 64 QAM	90@45	20.12	13.32	0.0215
77	30	70	649000	3735	DFT-s-OFDM 64 QAM	1@1	19.92	13.12	0.0205
77	30	70	649000	3735	DFT-s-OFDM 64 QAM	1@187	20.02	13.22	0.0210
77	30	70	649000	3735	DFT-s-OFDM 256 QAM	90@45	18.22	11.42	0.0139
77	30	70	649000	3735	DFT-s-OFDM 256 QAM	1@1	18.29	11.49	0.0141
77	30	70	649000	3735	DFT-s-OFDM 256 QAM	1@187	18.19	11.39	0.0138
77	30	70	649000	3735	CP-OFDM QPSK	95@47	21.07	14.27	0.0267
77	30	70	649000	3735	CP-OFDM QPSK	1@1	21	14.2	0.0263
77	30	70	649000	3735	CP-OFDM QPSK	1@187	21.08	14.28	0.0268

77	30	70	656000	3840	DFT-s-OFDM PI/2 BPSK	90@45	23.55	16.75	0.0473
77	30	70	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.63	16.83	0.0482
77	30	70	656000	3840	DFT-s-OFDM PI/2 BPSK	1@187	23.23	16.43	0.0440
77	30	70	656000	3840	DFT-s-OFDM QPSK	90@45	23.44	16.64	0.0461
77	30	70	656000	3840	DFT-s-OFDM QPSK	1@1	23.55	16.75	0.0473
77	30	70	656000	3840	DFT-s-OFDM QPSK	1@187	23.48	16.68	0.0466
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	90@45	21.53	14.73	0.0297
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.49	14.69	0.0294
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	1@187	21.32	14.52	0.0283
77	30	70	656000	3840	DFT-s-OFDM 64 QAM	90@45	20.08	13.28	0.0213
77	30	70	656000	3840	DFT-s-OFDM 64 QAM	1@1	19.95	13.15	0.0207
77	30	70	656000	3840	DFT-s-OFDM 64 QAM	1@187	19.77	12.97	0.0198
77	30	70	656000	3840	DFT-s-OFDM 256 QAM	90@45	18.09	11.29	0.0135
77	30	70	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.15	11.35	0.0136
77	30	70	656000	3840	DFT-s-OFDM 256 QAM	1@187	17.96	11.16	0.0131
77	30	70	656000	3840	CP-OFDM QPSK	95@47	21.04	14.24	0.0265
77	30	70	656000	3840	CP-OFDM QPSK	1@1	20.9	14.1	0.0257
77	30	70	656000	3840	CP-OFDM QPSK	1@187	20.77	13.97	0.0249
77	30	70	663000	3945	DFT-s-OFDM PI/2 BPSK	90@45	24	17.2	0.0525
77	30	70	663000	3945	DFT-s-OFDM PI/2 BPSK	1@1	23.78	16.98	0.0499
77	30	70	663000	3945	DFT-s-OFDM PI/2 BPSK	1@187	23.94	17.14	0.0518
77	30	70	663000	3945	DFT-s-OFDM QPSK	90@45	23.95	17.15	0.0519
77	30	70	663000	3945	DFT-s-OFDM QPSK	1@1	23.82	17.02	0.0504
77	30	70	663000	3945	DFT-s-OFDM QPSK	1@187	23.88	17.08	0.0511

77	30	70	663000	3945	DFT-s-OFDM 16 QAM	90@45	22.04	15.24	0.0334
77	30	70	663000	3945	DFT-s-OFDM 16 QAM	1@1	21.84	15.04	0.0319
77	30	70	663000	3945	DFT-s-OFDM 16 QAM	1@187	21.78	14.98	0.0315
77	30	70	663000	3945	DFT-s-OFDM 64 QAM	90@45	20.41	13.61	0.0230
77	30	70	663000	3945	DFT-s-OFDM 64 QAM	1@1	20.19	13.39	0.0218
77	30	70	663000	3945	DFT-s-OFDM 64 QAM	1@187	20.22	13.42	0.0220
77	30	70	663000	3945	DFT-s-OFDM 256 QAM	90@45	18.45	11.65	0.0146
77	30	70	663000	3945	DFT-s-OFDM 256 QAM	1@1	18.33	11.53	0.0142
77	30	70	663000	3945	DFT-s-OFDM 256 QAM	1@187	18.21	11.41	0.0138
77	30	70	663000	3945	CP-OFDM QPSK	95@47	21.4	14.6	0.0288
77	30	70	663000	3945	CP-OFDM QPSK	1@1	21.36	14.56	0.0286
77	30	70	663000	3945	CP-OFDM QPSK	1@187	21.43	14.63	0.0290
77	30	80	649334	3740.01	DFT-s-OFDM PI/2 BPSK	108@54	23.47	16.67	0.0465
77	30	80	649334	3740.01	DFT-s-OFDM PI/2 BPSK	1@1	23.33	16.53	0.0450
77	30	80	649334	3740.01	DFT-s-OFDM PI/2 BPSK	1@215	23.67	16.87	0.0486
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	108@54	23.62	16.82	0.0481
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@1	23.38	16.58	0.0455
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@215	23.52	16.72	0.0470
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	108@54	21.17	14.37	0.0274
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@1	21.29	14.49	0.0281
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@215	21.57	14.77	0.0300
77	30	80	649334	3740.01	DFT-s-OFDM 64 QAM	108@54	20.2	13.4	0.0219
77	30	80	649334	3740.01	DFT-s-OFDM 64 QAM	1@1	19.84	13.04	0.0201
77	30	80	649334	3740.01	DFT-s-OFDM 64 QAM	1@215	20.05	13.25	0.0211

77	30	80	649334	3740.01	DFT-s-OFDM 256 QAM	108@54	18.28	11.48	0.0141
77	30	80	649334	3740.01	DFT-s-OFDM 256 QAM	1@1	18.19	11.39	0.0138
77	30	80	649334	3740.01	DFT-s-OFDM 256 QAM	1@215	18.4	11.6	0.0145
77	30	80	649334	3740.01	CP-OFDM QPSK	109@54	21.18	14.38	0.0274
77	30	80	649334	3740.01	CP-OFDM QPSK	1@1	20.89	14.09	0.0256
77	30	80	649334	3740.01	CP-OFDM QPSK	1@215	21.11	14.31	0.0270
77	30	80	656000	3840	DFT-s-OFDM PI/2 BPSK	108@54	23.48	16.68	0.0466
77	30	80	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.56	16.76	0.0474
77	30	80	656000	3840	DFT-s-OFDM PI/2 BPSK	1@215	23.56	16.76	0.0474
77	30	80	656000	3840	DFT-s-OFDM QPSK	108@54	23.51	16.71	0.0469
77	30	80	656000	3840	DFT-s-OFDM QPSK	1@1	23.34	16.54	0.0451
77	30	80	656000	3840	DFT-s-OFDM QPSK	1@215	21.81	15.01	0.0317
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	108@54	21.45	14.65	0.0292
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.35	14.55	0.0285
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	1@215	21.42	14.62	0.0290
77	30	80	656000	3840	DFT-s-OFDM 64 QAM	108@54	20.12	13.32	0.0215
77	30	80	656000	3840	DFT-s-OFDM 64 QAM	1@1	19.89	13.09	0.0204
77	30	80	656000	3840	DFT-s-OFDM 64 QAM	1@215	19.94	13.14	0.0206
77	30	80	656000	3840	DFT-s-OFDM 256 QAM	108@54	18.13	11.33	0.0136
77	30	80	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.08	11.28	0.0134
77	30	80	656000	3840	DFT-s-OFDM 256 QAM	1@215	18.1	11.3	0.0135
77	30	80	656000	3840	CP-OFDM QPSK	109@54	20.99	14.19	0.0262
77	30	80	656000	3840	CP-OFDM QPSK	1@1	21	14.2	0.0263
77	30	80	656000	3840	CP-OFDM QPSK	1@215	20.97	14.17	0.0261
77	30	80	662666	3939.99	DFT-s-OFDM PI/2 BPSK	108@54	23.9	17.1	0.0513

77	30	80	662666	3939.99	DFT-s-OFDM PI/2 BPSK	1@1	23.69	16.89	0.0489
77	30	80	662666	3939.99	DFT-s-OFDM PI/2 BPSK	1@215	24.08	17.28	0.0535
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	108@54	23.91	17.11	0.0514
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	1@1	23.77	16.97	0.0498
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	1@215	21.58	14.78	0.0301
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	108@54	21.16	14.36	0.0273
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	1@1	21.94	15.14	0.0327
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	1@215	21.7	14.9	0.0309
77	30	80	662666	3939.99	DFT-s-OFDM 64 QAM	108@54	20.51	13.71	0.0235
77	30	80	662666	3939.99	DFT-s-OFDM 64 QAM	1@1	20.23	13.43	0.0220
77	30	80	662666	3939.99	DFT-s-OFDM 64 QAM	1@215	20.4	13.6	0.0229
77	30	80	662666	3939.99	DFT-s-OFDM 256 QAM	108@54	18.54	11.74	0.0149
77	30	80	662666	3939.99	DFT-s-OFDM 256 QAM	1@1	18.49	11.69	0.0148
77	30	80	662666	3939.99	DFT-s-OFDM 256 QAM	1@215	18.52	11.72	0.0149
77	30	80	662666	3939.99	CP-OFDM QPSK	109@54	21.55	14.75	0.0299
77	30	80	662666	3939.99	CP-OFDM QPSK	1@1	21.3	14.5	0.0282
77	30	80	662666	3939.99	CP-OFDM QPSK	1@215	21.43	14.63	0.0290
77	30	90	649668	3745.02	DFT-s-OFDM PI/2 BPSK	120@60	23.61	16.81	0.0480
77	30	90	649668	3745.02	DFT-s-OFDM PI/2 BPSK	1@1	23.27	16.47	0.0444
77	30	90	649668	3745.02	DFT-s-OFDM PI/2 BPSK	1@243	23.88	17.08	0.0511
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	120@60	23.59	16.79	0.0478
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	1@1	23.44	16.64	0.0461
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	1@243	23.75	16.95	0.0495
77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	120@60	21.34	14.54	0.0284

77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	1@1	21.37	14.57	0.0286
77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	1@243	21.7	14.9	0.0309
77	30	90	649668	3745.02	DFT-s-OFDM 64 QAM	120@60	20.2	13.4	0.0219
77	30	90	649668	3745.02	DFT-s-OFDM 64 QAM	1@1	19.87	13.07	0.0203
77	30	90	649668	3745.02	DFT-s-OFDM 64 QAM	1@243	20.19	13.39	0.0218
77	30	90	649668	3745.02	DFT-s-OFDM 256 QAM	120@60	18.36	11.56	0.0143
77	30	90	649668	3745.02	DFT-s-OFDM 256 QAM	1@1	18.22	11.42	0.0139
77	30	90	649668	3745.02	DFT-s-OFDM 256 QAM	1@243	18.49	11.69	0.0148
77	30	90	649668	3745.02	CP-OFDM QPSK	123@61	21.14	14.34	0.0272
77	30	90	649668	3745.02	CP-OFDM QPSK	1@1	20.94	14.14	0.0259
77	30	90	649668	3745.02	CP-OFDM QPSK	1@243	21.33	14.53	0.0284
77	30	90	656000	3840	DFT-s-OFDM PI/2 BPSK	120@60	23.5	16.7	0.0468
77	30	90	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.49	16.69	0.0467
77	30	90	656000	3840	DFT-s-OFDM PI/2 BPSK	1@243	23.45	16.65	0.0462
77	30	90	656000	3840	DFT-s-OFDM QPSK	120@60	23.43	16.63	0.0460
77	30	90	656000	3840	DFT-s-OFDM QPSK	1@1	23.33	16.53	0.0450
77	30	90	656000	3840	DFT-s-OFDM QPSK	1@243	22.54	15.74	0.0375
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	120@60	21.25	14.45	0.0279
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.35	14.55	0.0285
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	1@243	21.4	14.6	0.0288
77	30	90	656000	3840	DFT-s-OFDM 64 QAM	120@60	19.95	13.15	0.0207
77	30	90	656000	3840	DFT-s-OFDM 64 QAM	1@1	19.82	13.02	0.0200
77	30	90	656000	3840	DFT-s-OFDM 64 QAM	1@243	19.8	13	0.0200
77	30	90	656000	3840	DFT-s-OFDM 256 QAM	120@60	18.15	11.35	0.0136

77	30	90	656000	3840	DFT-s-OFDM 256 QAM	1@1	17.93	11.13	0.0130
77	30	90	656000	3840	DFT-s-OFDM 256 QAM	1@243	18.15	11.35	0.0136
77	30	90	656000	3840	CP-OFDM QPSK	123@61	21.08	14.28	0.0268
77	30	90	656000	3840	CP-OFDM QPSK	1@1	20.9	14.1	0.0257
77	30	90	656000	3840	CP-OFDM QPSK	1@243	20.93	14.13	0.0259
77	30	90	662332	3934.98	DFT-s-OFDM PI/2 BPSK	120@60	23.54	16.74	0.0472
77	30	90	662332	3934.98	DFT-s-OFDM PI/2 BPSK	1@1	23.61	16.81	0.0480
77	30	90	662332	3934.98	DFT-s-OFDM PI/2 BPSK	1@243	23.87	17.07	0.0509
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	120@60	23.78	16.98	0.0499
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	1@1	23.59	16.79	0.0478
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	1@243	23.66	16.86	0.0485
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	120@60	21.68	14.88	0.0308
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	1@1	21.61	14.81	0.0303
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	1@243	21.77	14.97	0.0314
77	30	90	662332	3934.98	DFT-s-OFDM 64 QAM	120@60	20.31	13.51	0.0224
77	30	90	662332	3934.98	DFT-s-OFDM 64 QAM	1@1	20	13.2	0.0209
77	30	90	662332	3934.98	DFT-s-OFDM 64 QAM	1@243	20.25	13.45	0.0221
77	30	90	662332	3934.98	DFT-s-OFDM 256 QAM	120@60	18.33	11.53	0.0142
77	30	90	662332	3934.98	DFT-s-OFDM 256 QAM	1@1	18.38	11.58	0.0144
77	30	90	662332	3934.98	DFT-s-OFDM 256 QAM	1@243	18.24	11.44	0.0139
77	30	90	662332	3934.98	CP-OFDM QPSK	123@61	21.26	14.46	0.0279
77	30	90	662332	3934.98	CP-OFDM QPSK	1@1	20.98	14.18	0.0262
77	30	90	662332	3934.98	CP-OFDM QPSK	1@243	21.2	14.4	0.0275
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	135@67	23.67	16.87	0.0486
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	23.41	16.61	0.0458

77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@271	23.8	17	0.0501
77	30	100	650000	3750	DFT-s-OFDM QPSK	135@67	23.52	16.72	0.0470
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@1	23.25	16.45	0.0442
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@271	23.81	17.01	0.0502
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	135@67	21.6	14.8	0.0302
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@1	21.36	14.56	0.0286
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@271	21.84	15.04	0.0319
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	135@67	20.2	13.4	0.0219
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@1	19.8	13	0.0200
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@271	20.28	13.48	0.0223
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	135@67	18.34	11.54	0.0143
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@1	18.14	11.34	0.0136
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@271	18.6	11.8	0.0151
77	30	100	650000	3750	CP-OFDM QPSK	137@68	21.11	14.31	0.0270
77	30	100	650000	3750	CP-OFDM QPSK	1@1	20.9	14.1	0.0257
77	30	100	650000	3750	CP-OFDM QPSK	1@271	21.32	14.52	0.0283
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	135@67	23.53	16.73	0.0471
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	23.45	16.65	0.0462
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@271	23.45	16.65	0.0462
77	30	100	656000	3840	DFT-s-OFDM QPSK	135@67	23.48	16.68	0.0466
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@1	23.38	16.58	0.0455
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@271	22.93	16.13	0.0410
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	135@67	21.8	15	0.0316
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@1	21.4	14.6	0.0288

77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@271	21.53	14.73	0.0297
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	135@67	20.05	13.25	0.0211
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@1	19.86	13.06	0.0202
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@271	19.86	13.06	0.0202
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	135@67	18.15	11.35	0.0136
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@1	18.07	11.27	0.0134
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@271	18.09	11.29	0.0135
77	30	100	656000	3840	CP-OFDM QPSK	137@68	21.01	14.21	0.0264
77	30	100	656000	3840	CP-OFDM QPSK	1@1	20.91	14.11	0.0258
77	30	100	656000	3840	CP-OFDM QPSK	1@271	20.86	14.06	0.0255
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	135@67	23.83	17.03	0.0505
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@1	23.68	16.88	0.0488
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@271	23.94	17.14	0.0518
77	30	100	662000	3930	DFT-s-OFDM QPSK	135@67	23.82	17.02	0.0504
77	30	100	662000	3930	DFT-s-OFDM QPSK	1@1	23.6	16.8	0.0479
77	30	100	662000	3930	DFT-s-OFDM QPSK	1@271	23.88	17.08	0.0511
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	135@67	21.63	14.83	0.0304
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@1	21.63	14.83	0.0304
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@271	21.91	15.11	0.0324
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	135@67	20.43	13.63	0.0231
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@1	20.06	13.26	0.0212
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@271	20.31	13.51	0.0224
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	135@67	18.41	11.61	0.0145
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@1	18.21	11.41	0.0138

77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@271	18.47	11.67	0.0147
77	30	100	662000	3930	CP-OFDM QPSK	137@68	21.36	14.56	0.0286
77	30	100	662000	3930	CP-OFDM QPSK	1@1	21.27	14.47	0.0280
77	30	100	662000	3930	CP-OFDM QPSK	1@271	21.31	14.51	0.0282

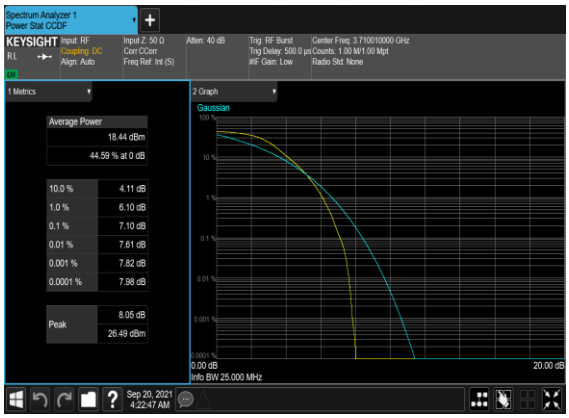
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.0043	**PASS**	NV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00551	**PASS**	LV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00248	**PASS**	HV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00568	**PASS**	-30℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00341	**PASS**	-20℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00357	**PASS**	-10℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00412	**PASS**	0℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00134	**PASS**	10℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00145	**PASS**	20℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00568	**PASS**	30℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00566	**PASS**	40℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	-0.00482	**PASS**	50℃

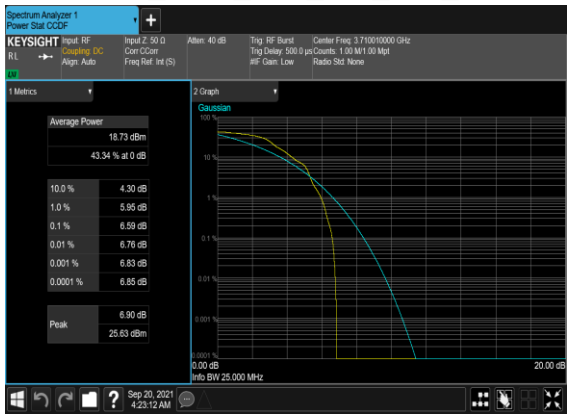
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
77	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	50@0	7.1	13	**PASS**
77	30	20	647334	3710.01	DFT-s-OFDM PI/2 BPSK	1@0	6.59	13	**PASS**
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	50@0	8.28	13	**PASS**
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@0	9.03	13	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	50@0	6.68	13	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	1@0	8.13	13	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	8.24	13	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	1@0	9.19	13	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	50@0	8.78	13	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM PI/2 BPSK	1@0	7.48	13	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	50@0	8.21	13	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@0	8.99	13	**PASS**

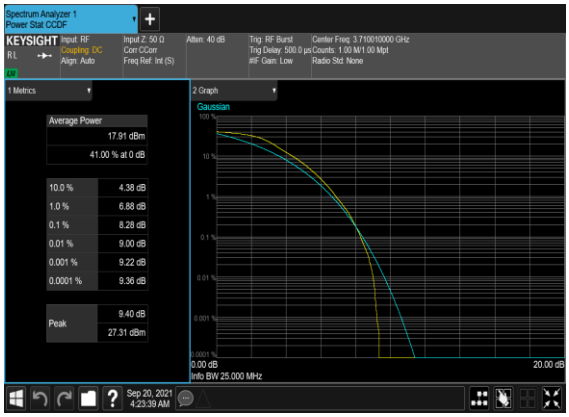
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



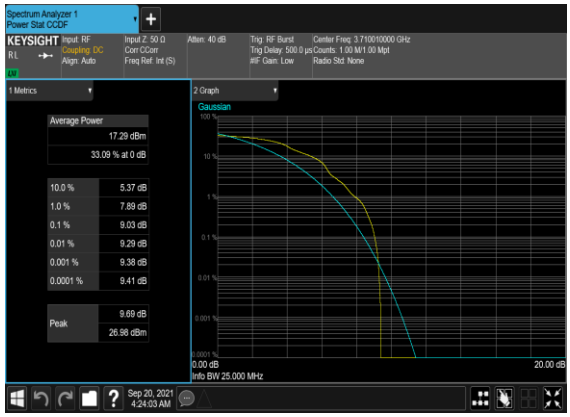
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



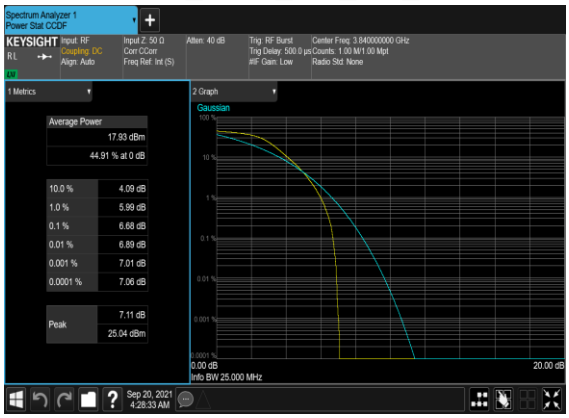
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



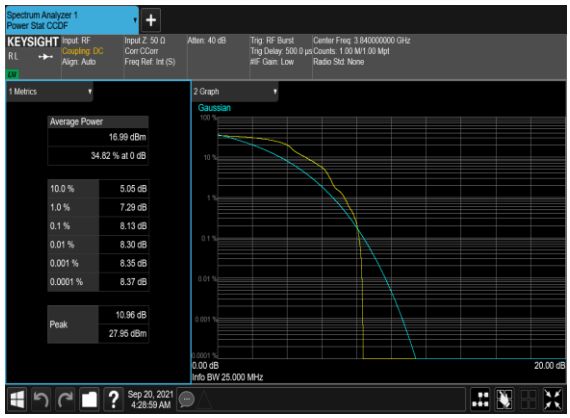
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



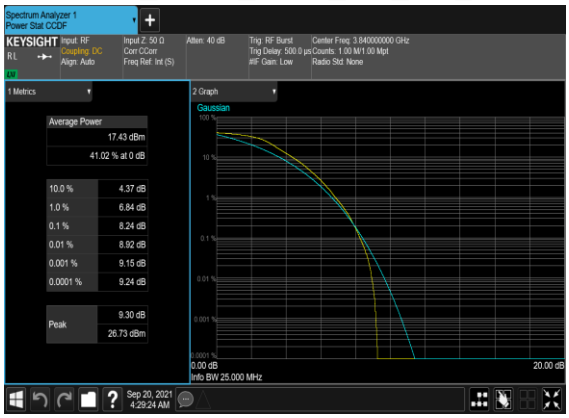
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



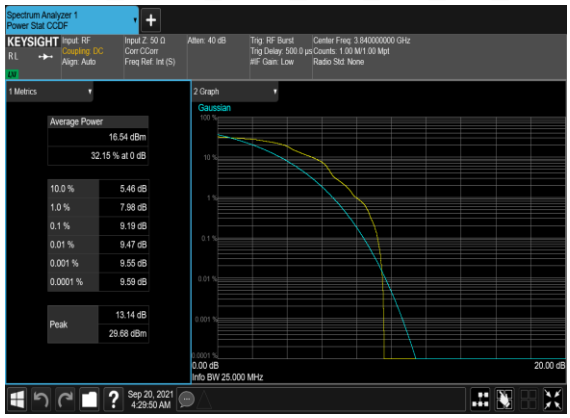
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



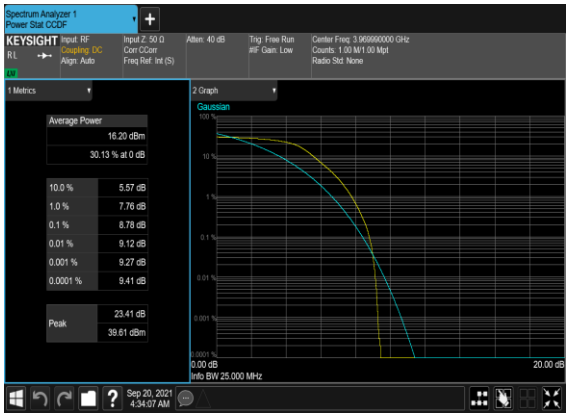
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



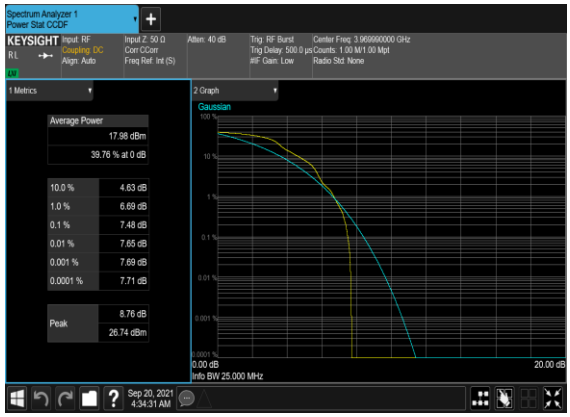
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



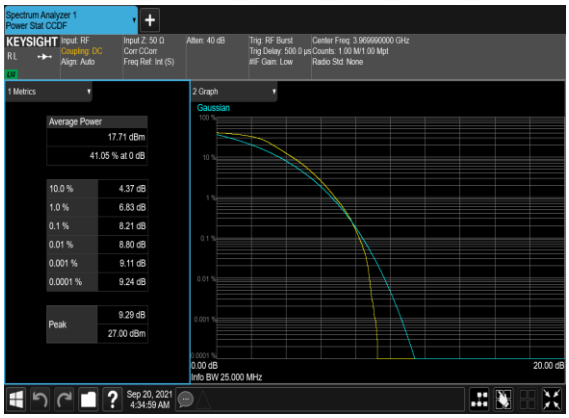
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



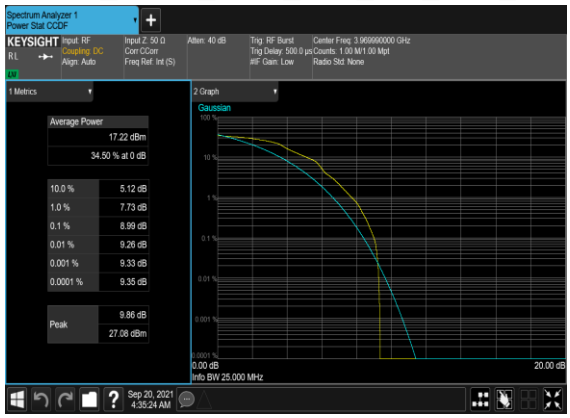
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



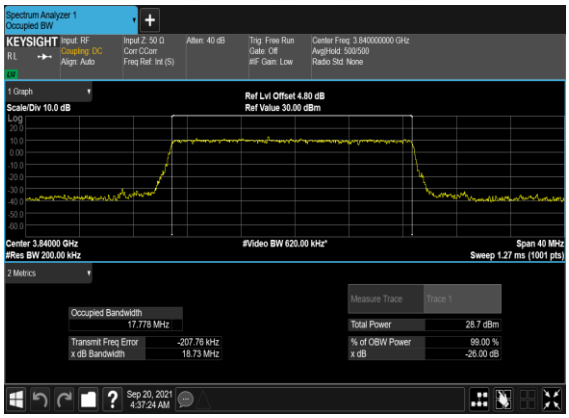
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
77	30	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	50@0	17.778	18.73
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	17.838	18.88
77	30	20	656000	3840.0	CP-OFDM QPSK	51@0	18.181	19.33
77	30	20	656000	3840.0	CP-OFDM 16 QAM	51@0	18.189	19.24
77	30	20	656000	3840.0	CP-OFDM 64 QAM	51@0	18.238	19.21
77	30	20	656000	3840.0	CP-OFDM 256 QAM	51@0	18.176	19.4
77	30	30	656000	3840.0	DFT-s-OFDM PI/2 BPSK	75@0	26.754	28.15
77	30	30	656000	3840.0	DFT-s-OFDM QPSK	75@0	26.754	28.16
77	30	30	656000	3840.0	CP-OFDM QPSK	78@0	27.857	29.17
77	30	30	656000	3840.0	CP-OFDM 16 QAM	78@0	27.848	29.32
77	30	30	656000	3840.0	CP-OFDM 64 QAM	78@0	27.838	29.24
77	30	30	656000	3840.0	CP-OFDM 256 QAM	78@0	27.791	29.3
77	30	40	656000	3840.0	DFT-s-OFDM PI/2 BPSK	100@0	35.646	37.2
77	30	40	656000	3840.0	DFT-s-OFDM QPSK	100@0	35.703	37.24
77	30	40	656000	3840.0	CP-OFDM QPSK	106@0	37.725	39.1
77	30	40	656000	3840.0	CP-OFDM 16 QAM	106@0	37.815	39.32
77	30	40	656000	3840.0	CP-OFDM 64 QAM	106@0	37.791	39.44
77	30	40	656000	3840.0	CP-OFDM 256 QAM	106@0	37.831	39.55
77	30	50	656000	3840.0	DFT-s-OFDM PI/2 BPSK	128@0	45.731	47.54
77	30	50	656000	3840.0	DFT-s-OFDM QPSK	128@0	45.613	47.38
77	30	50	656000	3840.0	CP-OFDM QPSK	133@0	47.49	49.23
77	30	50	656000	3840.0	CP-OFDM 16 QAM	133@0	47.459	49.17
77	30	50	656000	3840.0	CP-OFDM 64 QAM	133@0	47.552	49.05
77	30	50	656000	3840.0	CP-OFDM 256 QAM	133@0	47.416	49.18

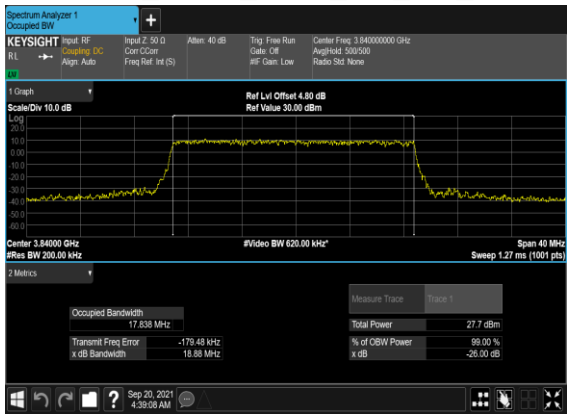
77	30	60	656000	3840.0	DFT-s-OFDM PI/2 BPSK	162@0	57.946	59.74
77	30	60	656000	3840.0	DFT-s-OFDM QPSK	162@0	57.809	59.82
77	30	60	656000	3840.0	CP-OFDM QPSK	162@0	57.727	59.67
77	30	60	656000	3840.0	CP-OFDM 16 QAM	162@0	57.744	59.89
77	30	60	656000	3840.0	CP-OFDM 64 QAM	162@0	57.89	60.06
77	30	60	656000	3840.0	CP-OFDM 256 QAM	162@0	57.812	59.86
77	30	70	656000	3840.0	DFT-s-OFDM PI/2 BPSK	180@0	64.448	66.43
77	30	70	656000	3840.0	DFT-s-OFDM QPSK	180@0	64.437	66.52
77	30	70	656000	3840.0	CP-OFDM QPSK	189@0	67.418	69.67
77	30	70	656000	3840.0	CP-OFDM 16 QAM	189@0	67.439	69.85
77	30	70	656000	3840.0	CP-OFDM 64 QAM	189@0	67.499	69.81
77	30	70	656000	3840.0	CP-OFDM 256 QAM	189@0	67.421	69.59
77	30	80	656000	3840.0	DFT-s-OFDM PI/2 BPSK	216@0	77.099	79.76
77	30	80	656000	3840.0	DFT-s-OFDM QPSK	216@0	77.068	79.66
77	30	80	656000	3840.0	CP-OFDM QPSK	217@0	77.514	79.99
77	30	80	656000	3840.0	CP-OFDM 16 QAM	217@0	77.429	80.04
77	30	80	656000	3840.0	CP-OFDM 64 QAM	217@0	77.472	80.06
77	30	80	656000	3840.0	CP-OFDM 256 QAM	217@0	77.379	80.09
77	30	90	656000	3840.0	DFT-s-OFDM PI/2 BPSK	240@0	85.649	88.53
77	30	90	656000	3840.0	DFT-s-OFDM QPSK	240@0	85.765	88.35
77	30	90	656000	3840.0	CP-OFDM QPSK	245@0	87.338	90.37
77	30	90	656000	3840.0	CP-OFDM 16 QAM	245@0	87.47	90.15
77	30	90	656000	3840.0	CP-OFDM 64 QAM	245@0	87.32	90.29
77	30	90	656000	3840.0	CP-OFDM 256 QAM	245@0	87.556	90.3
77	30	100	656000	3840.0	DFT-s-OFDM PI/2 BPSK	270@0	96.434	99.49

77	30	100	656000	3840.0	DFT-s-OFDM QPSK	270@0	96.613	99.6
77	30	100	656000	3840.0	CP-OFDM QPSK	273@0	97.501	100.5
77	30	100	656000	3840.0	CP-OFDM 16 QAM	273@0	97.564	100.6
77	30	100	656000	3840.0	CP-OFDM 64 QAM	273@0	97.356	100.7
77	30	100	656000	3840.0	CP-OFDM 256 QAM	273@0	97.616	100.6

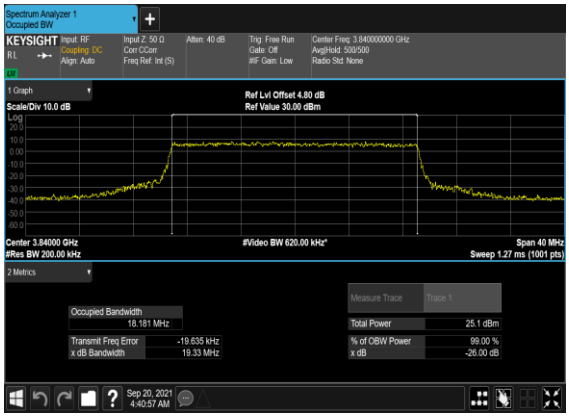
N77(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



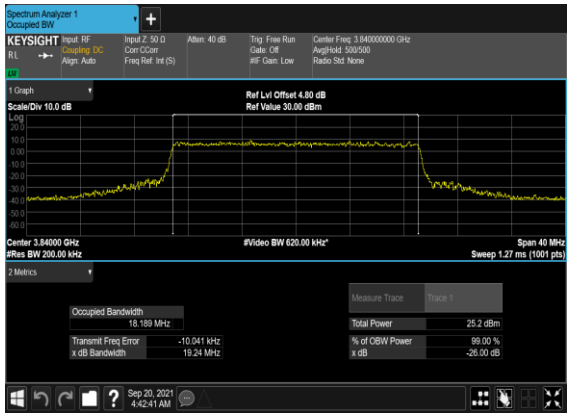
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N77(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

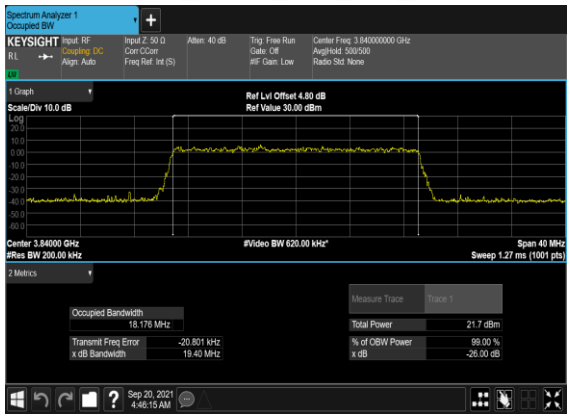


N77(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

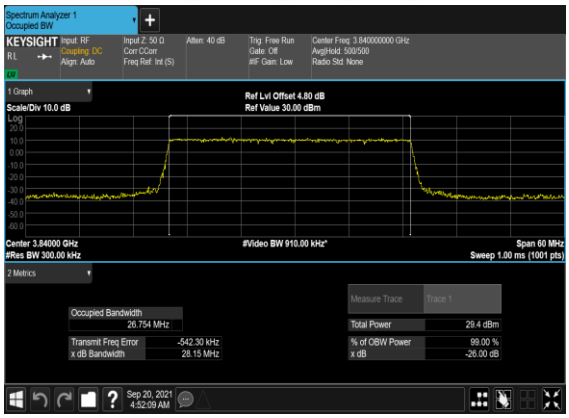


N77(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

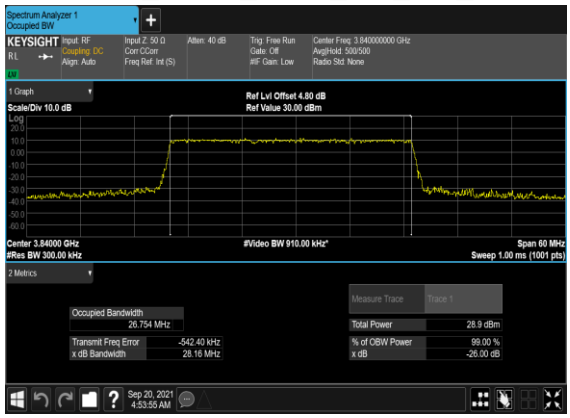
N77(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



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

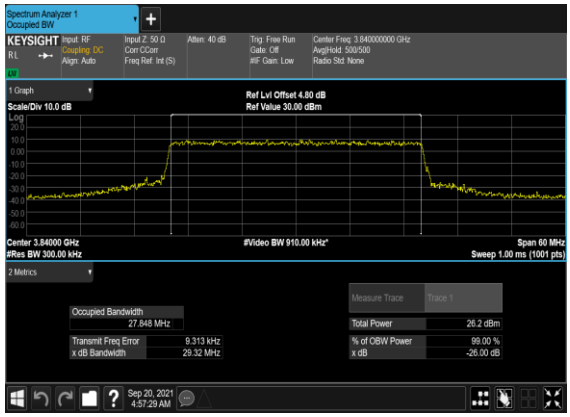


N77(30M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



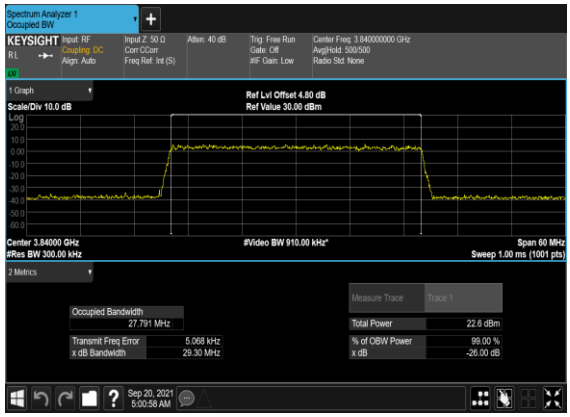
N77(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

N77(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

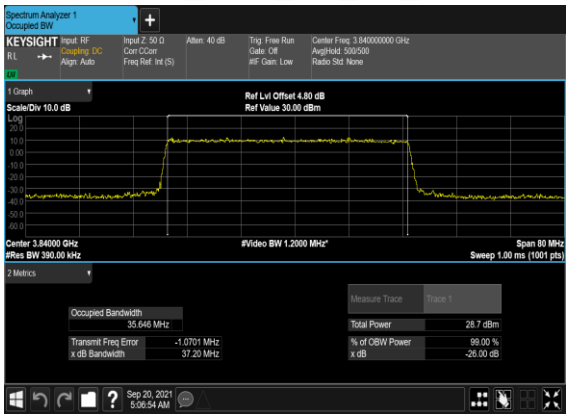


N77(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

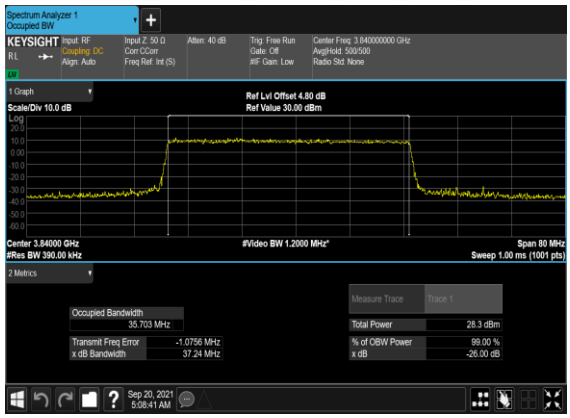
N77(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



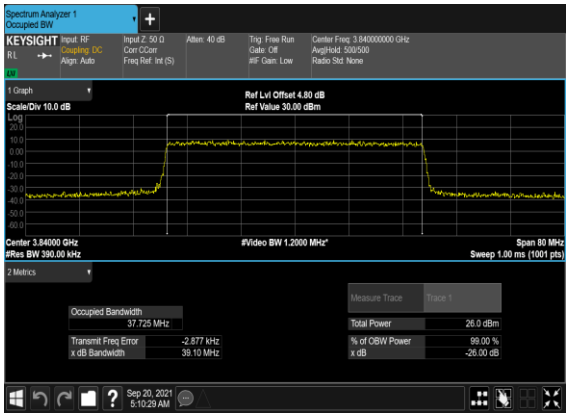
N77(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



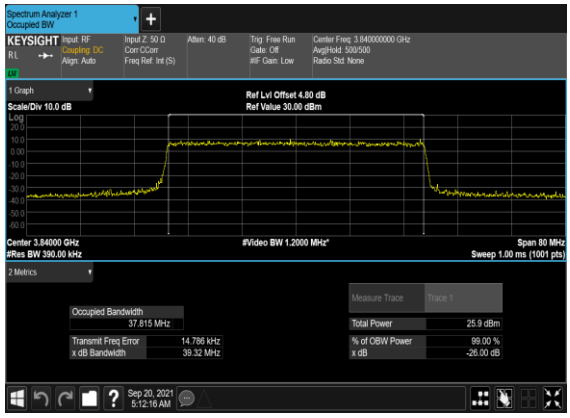
N77(40M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



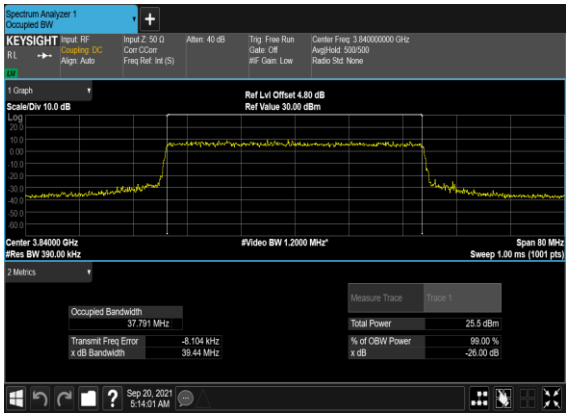
N77(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



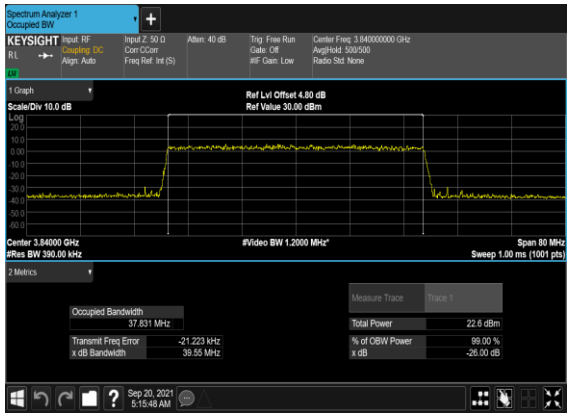
N77(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



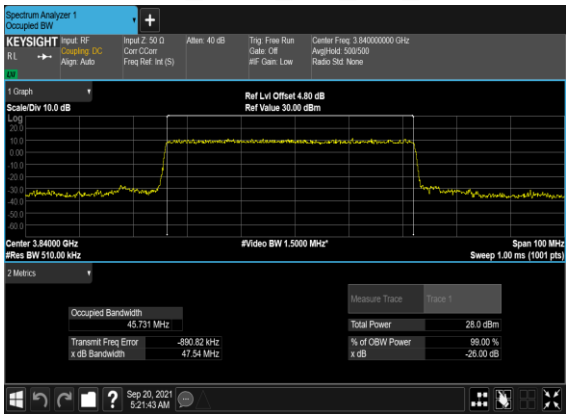
N77(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



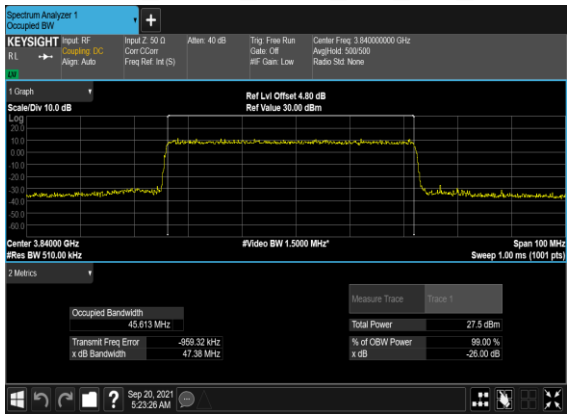
N77(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



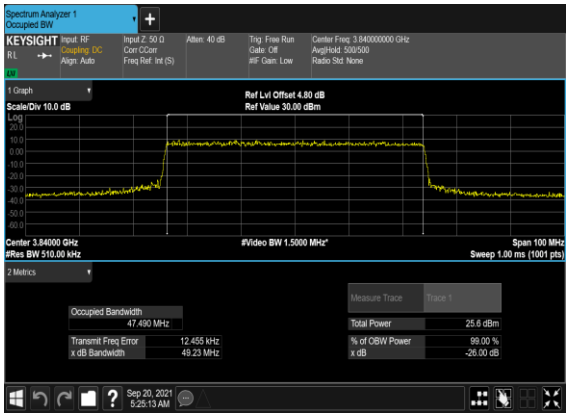
N77(50M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



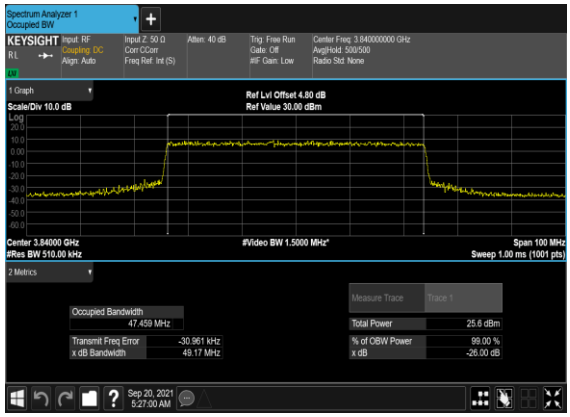
N77(50M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



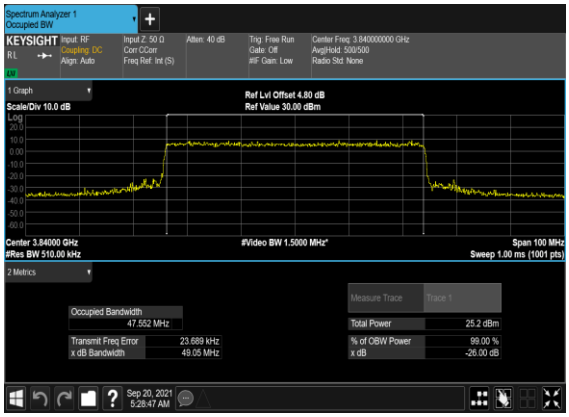
N77(50M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



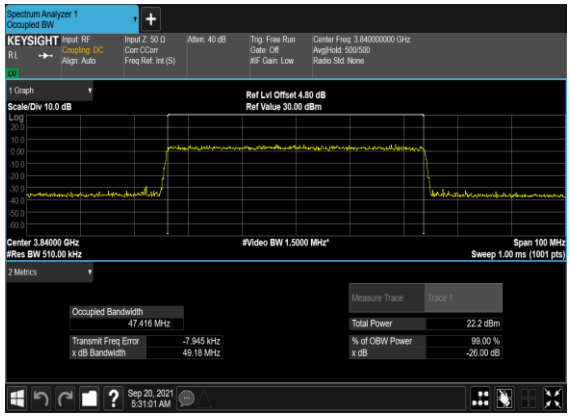
N77(50M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



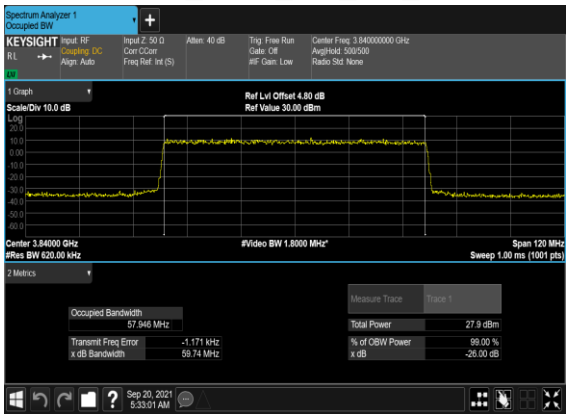
N77(50M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



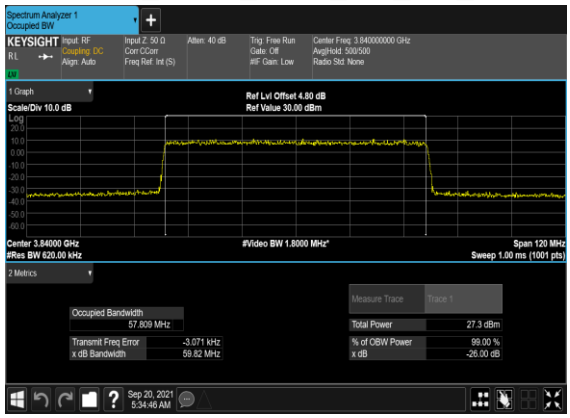
N77(50M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



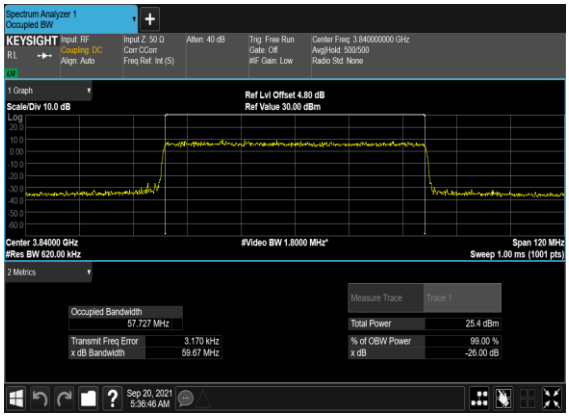
N77(60M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



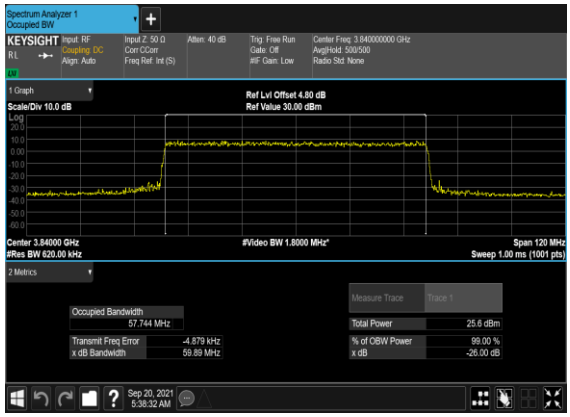
N77(60M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



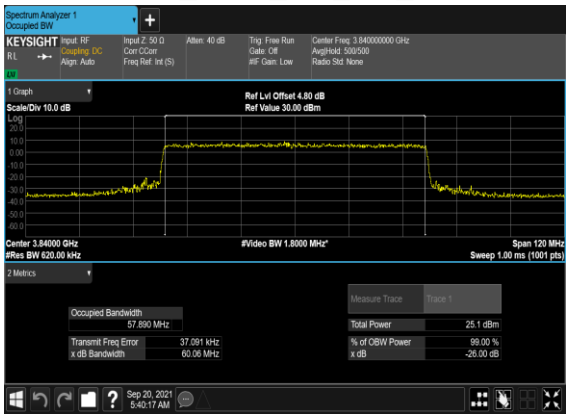
N77(60M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



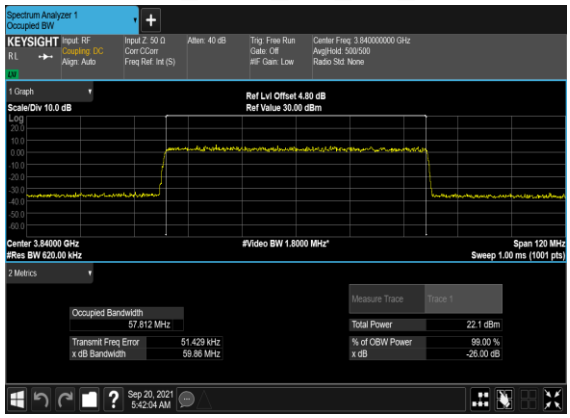
N77(60M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



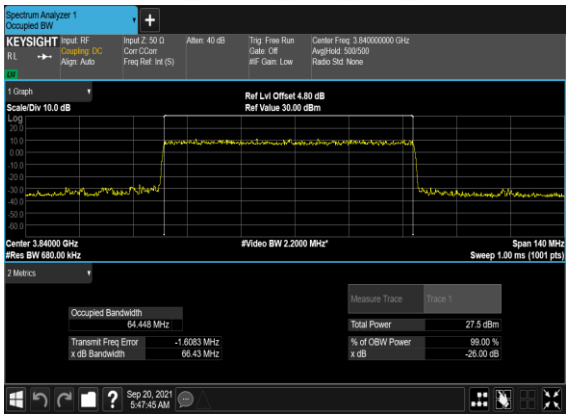
N77(60M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



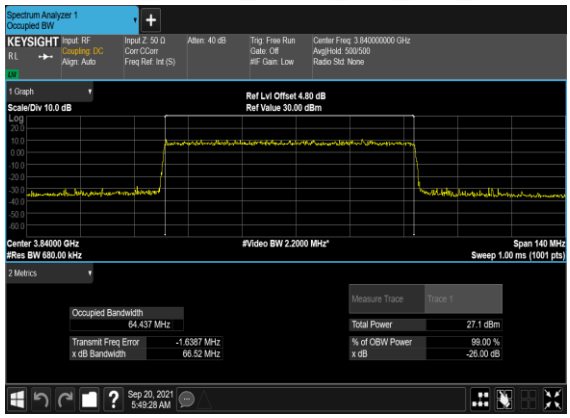
N77(60M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



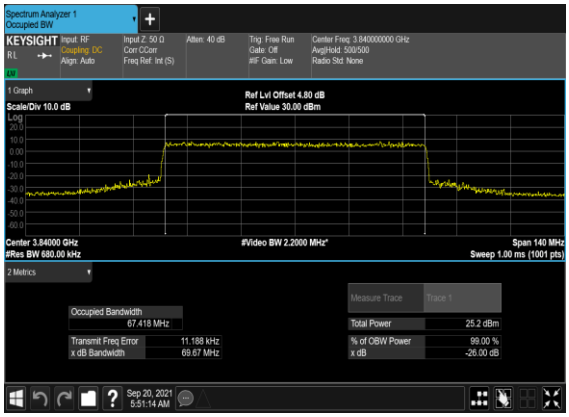
N77(70M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



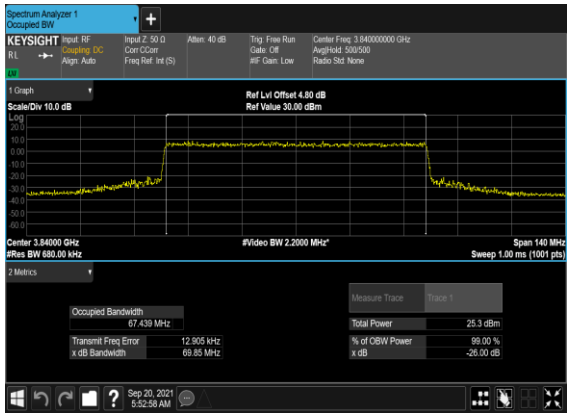
N77(70M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N77(70M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

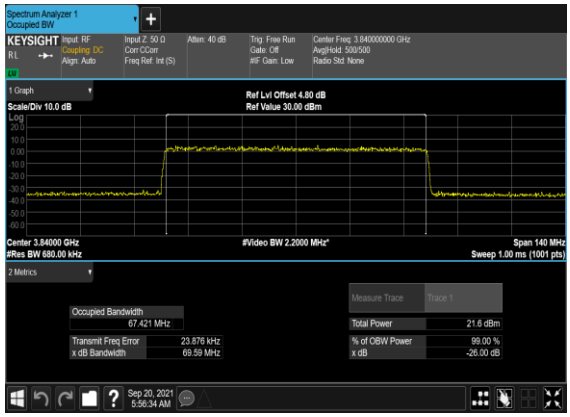


N77(70M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

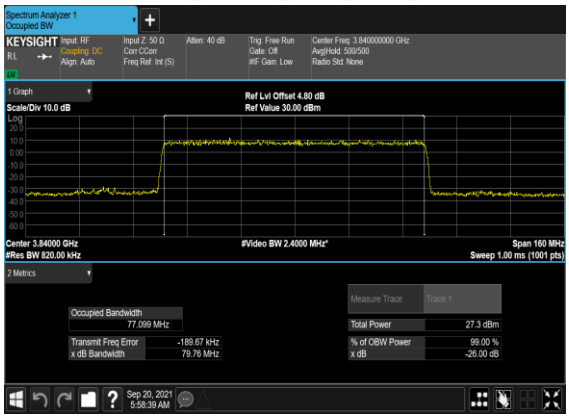


N77(70M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

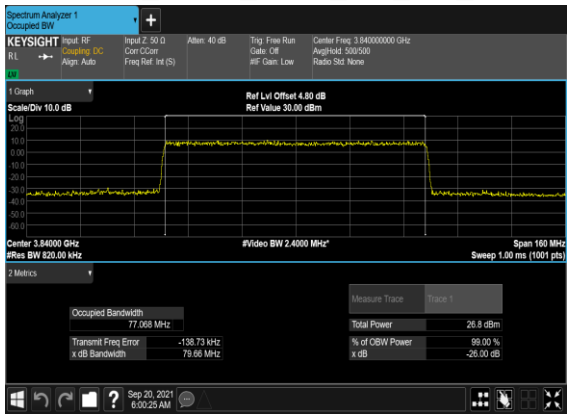
N77(70M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



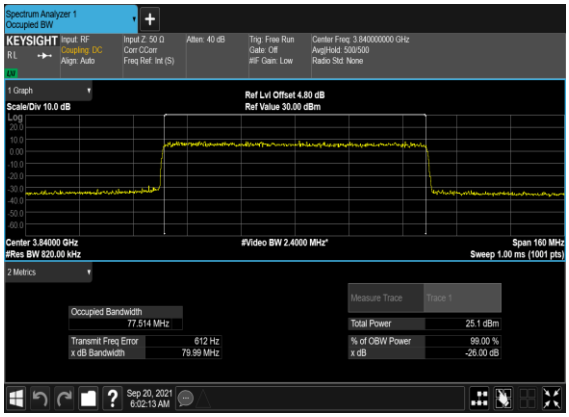
N77(80M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



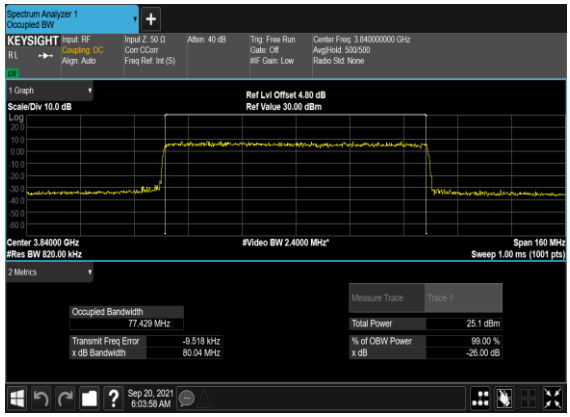
N77(80M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



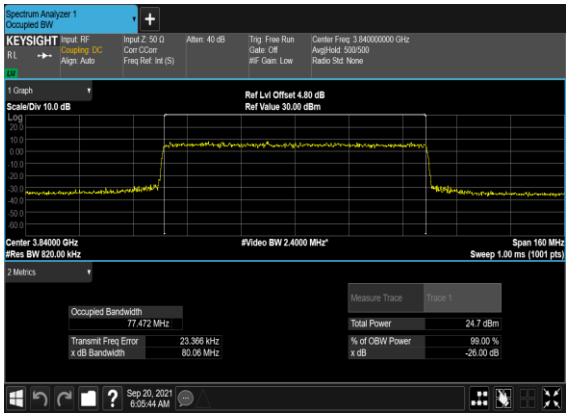
N77(80M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



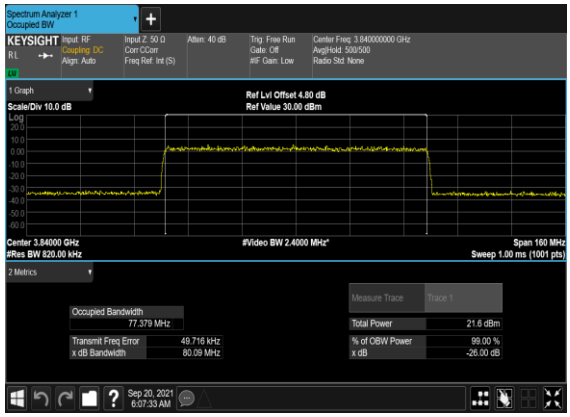
N77(80M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N77(80M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

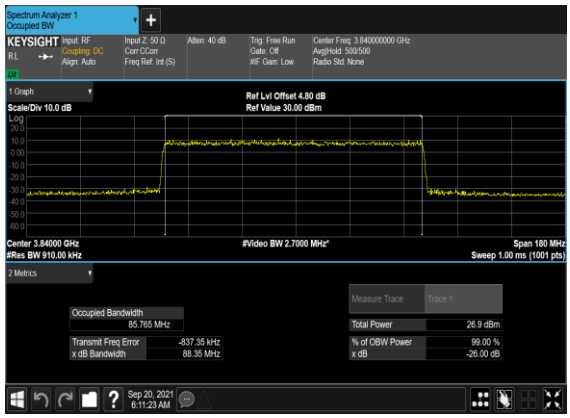


N77(80M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

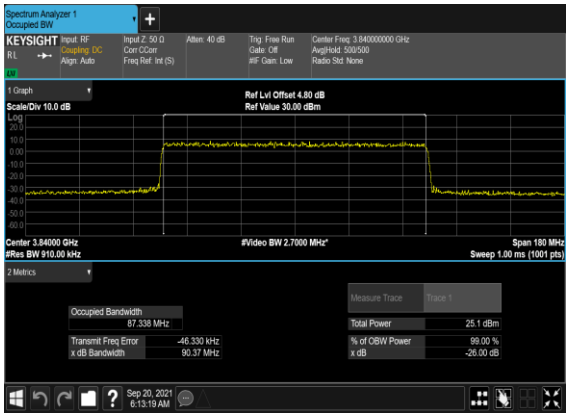


N77(90M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

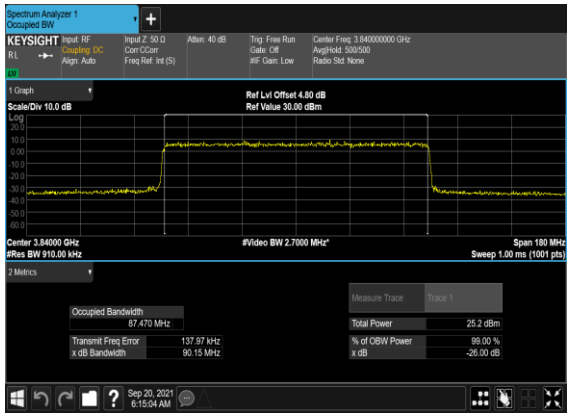
N77(90M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



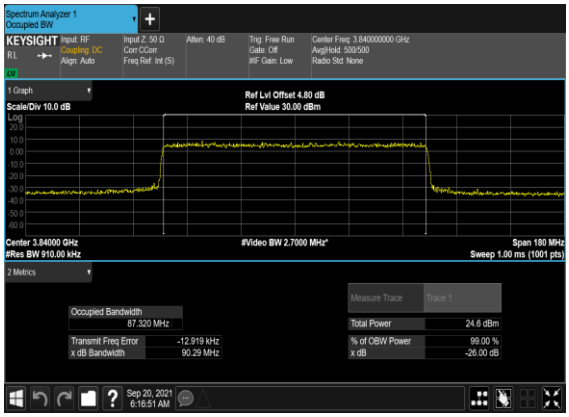
N77(90M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



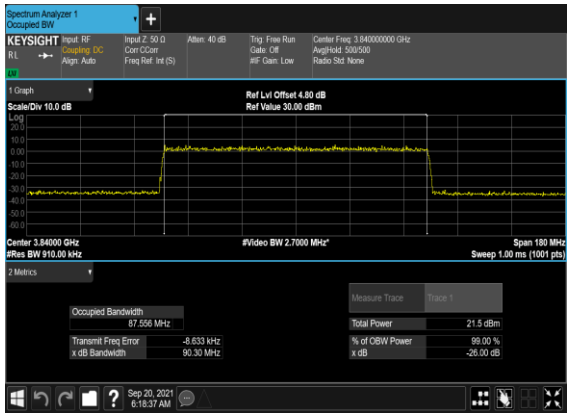
N77(90M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



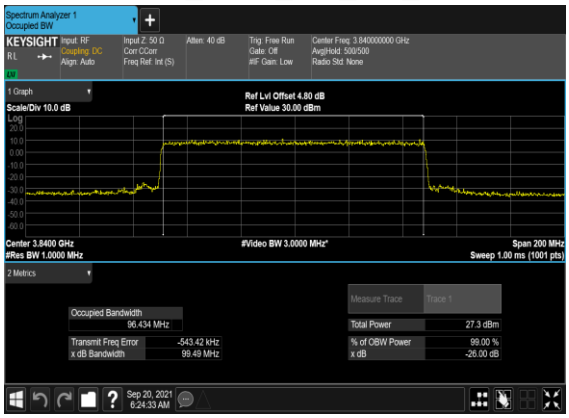
N77(90M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



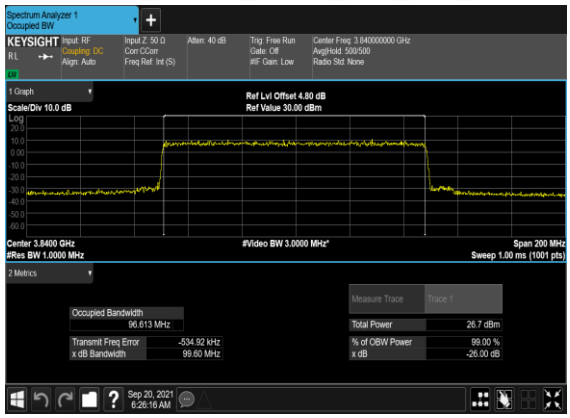
N77(90M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



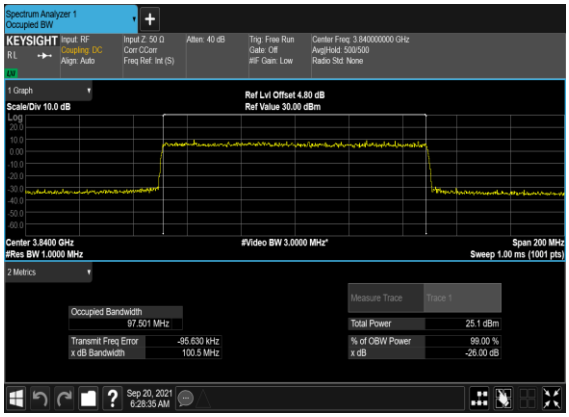
N77(100M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



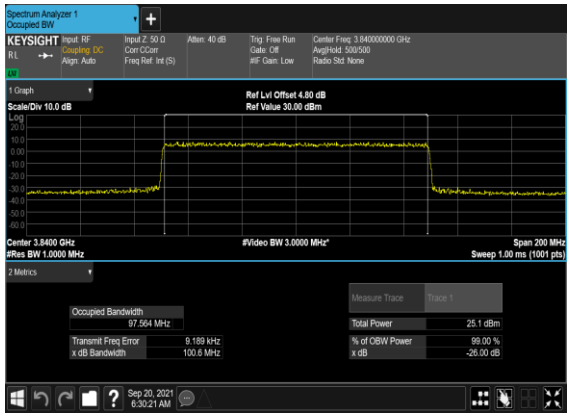
N77(100M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



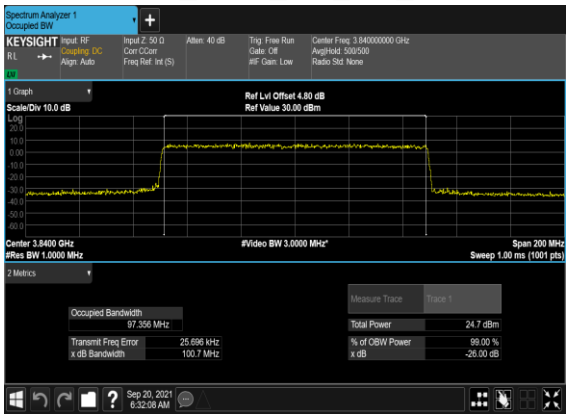
N77(100M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



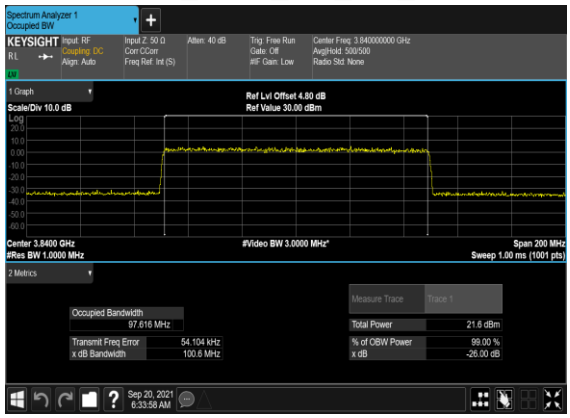
N77(100M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N77(100M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N77(100M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



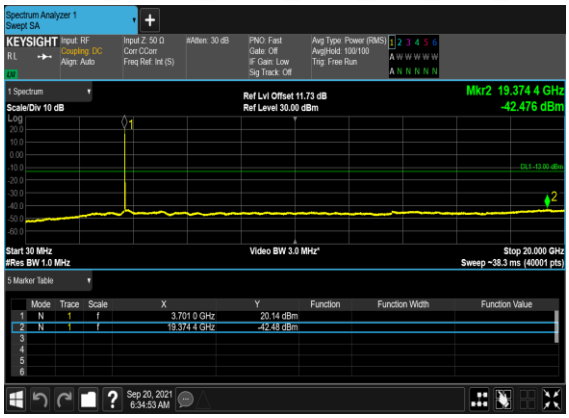
Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	30	20	647334	3710.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	20	647334	3710.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	647334	3710.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	20	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	20	664666	3969.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	60	648668	3730.02	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@0	see graph	**---**

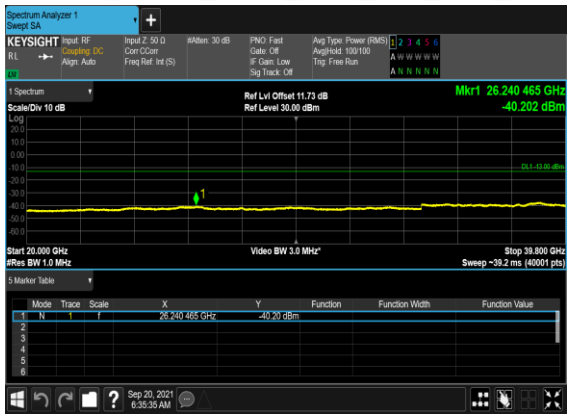
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	60	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	60	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	60	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	60	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	60	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	60	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	60	663332	3949.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	100	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**

77	30	100	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

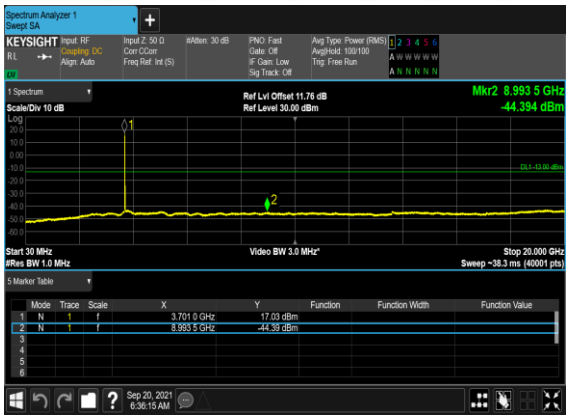
N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



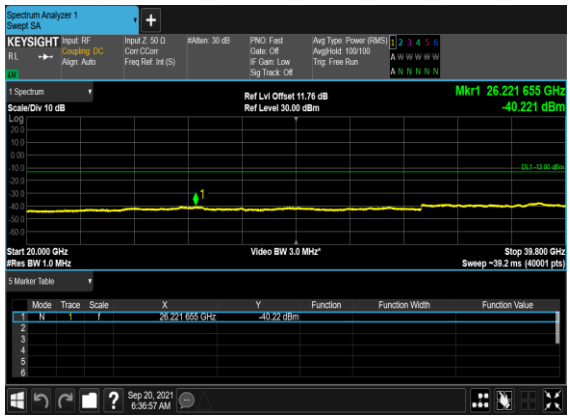
N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



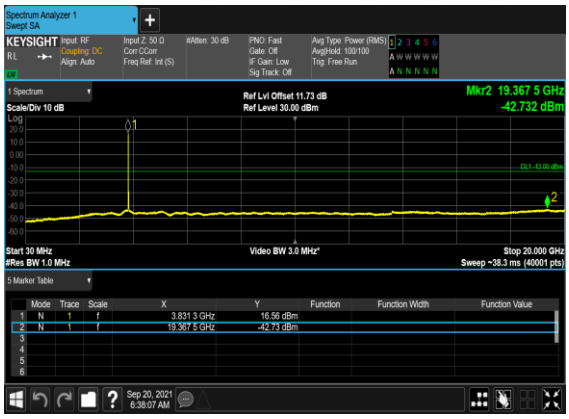
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



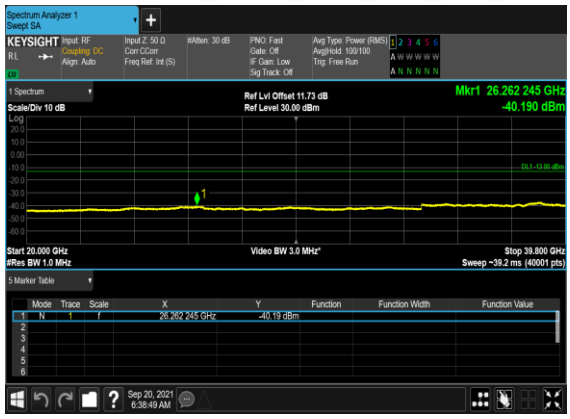
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



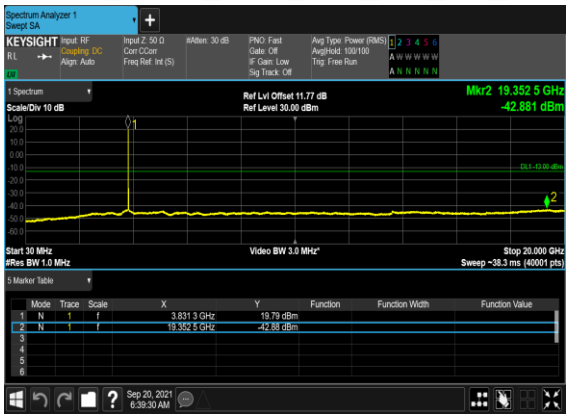
N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



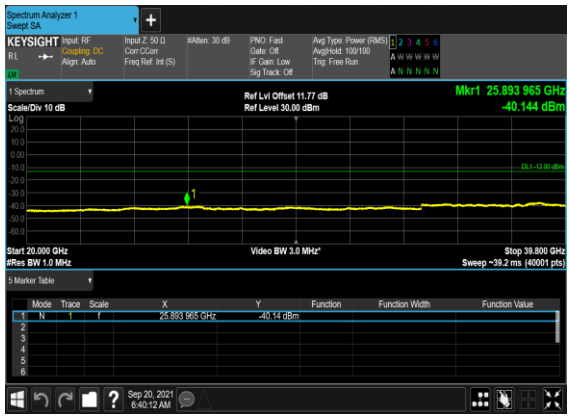
N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



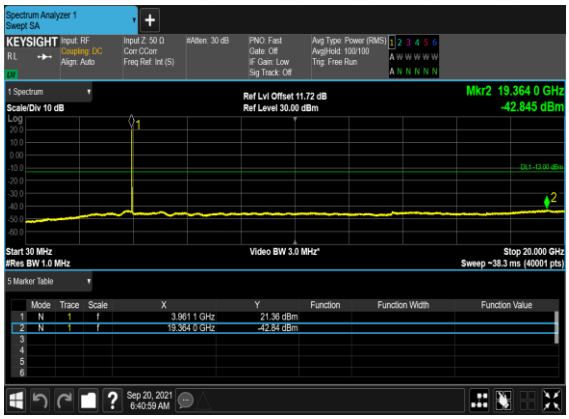
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



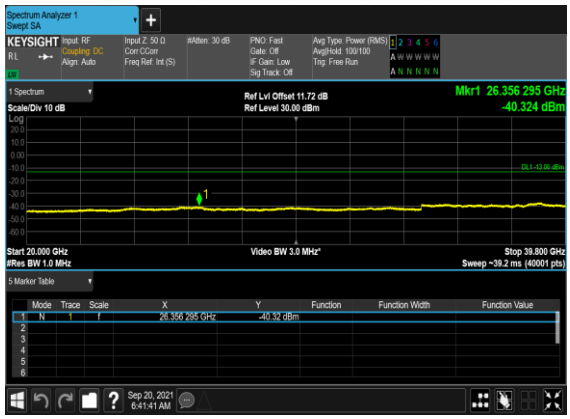
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



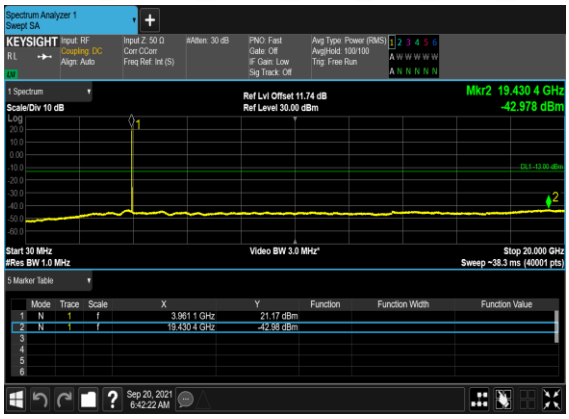
N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



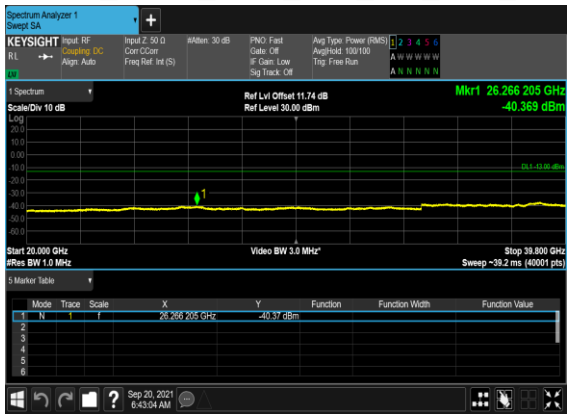
N77(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



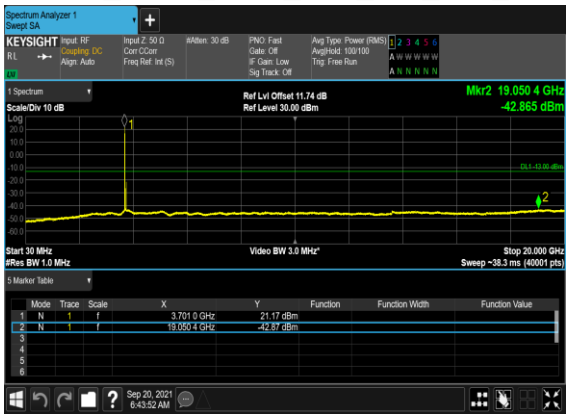
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



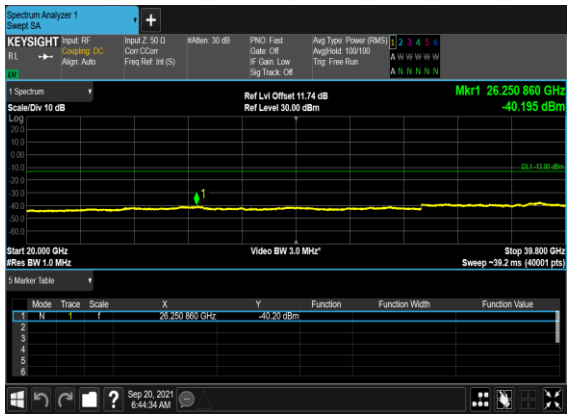
N77(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



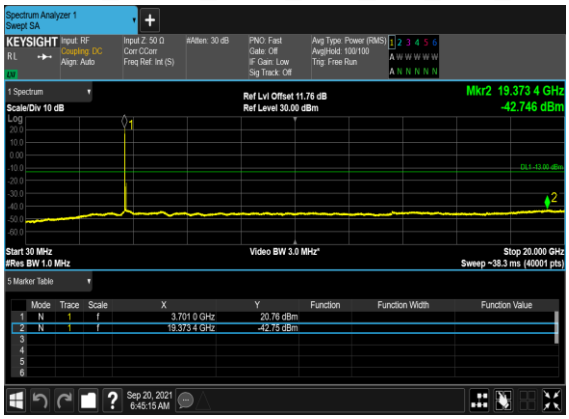
N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



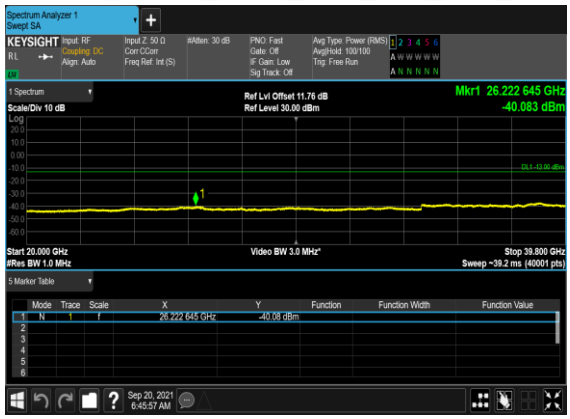
N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



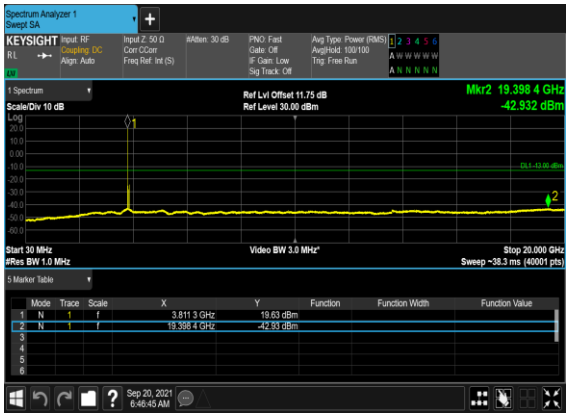
N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



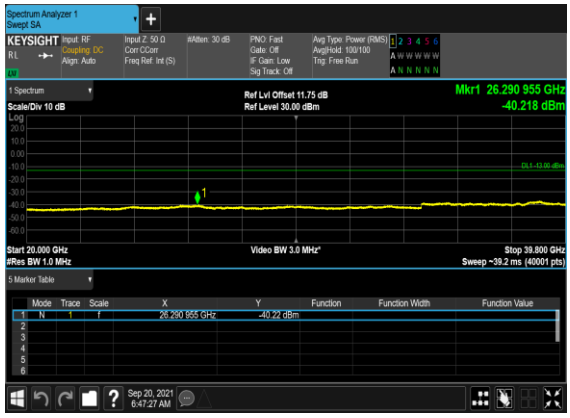
N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



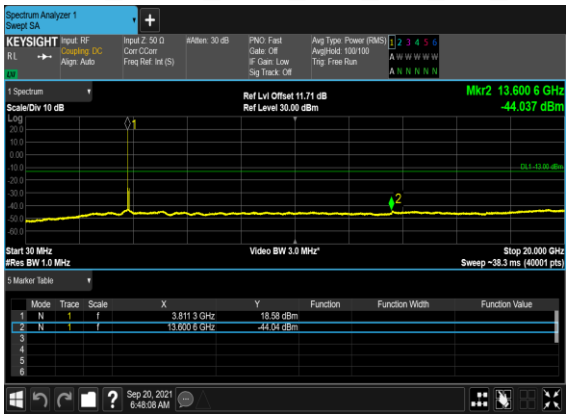
N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



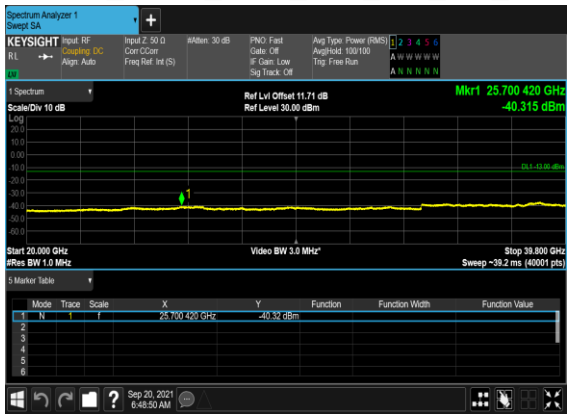
N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



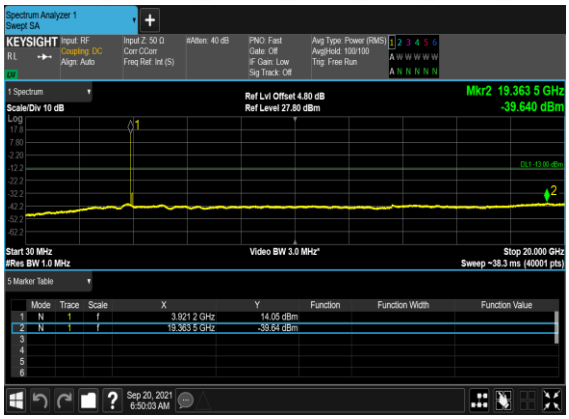
N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



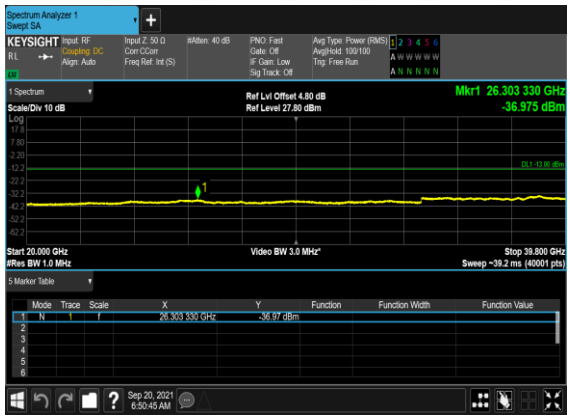
N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



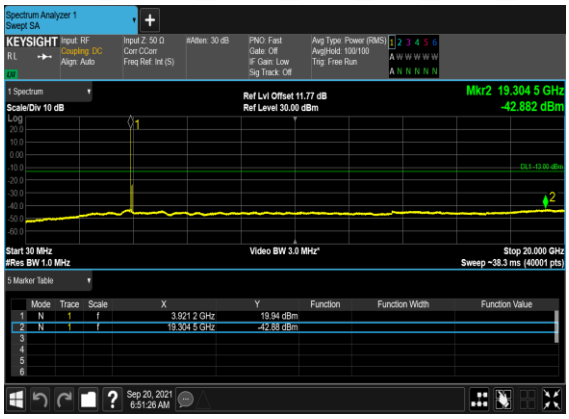
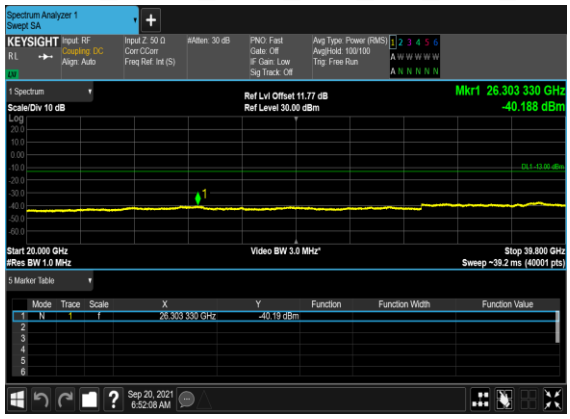
N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N77(60M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N77(60M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH