FCC RF Test Report

APPLICANT	: Motorola Mobility LLC
EQUIPMENT	: Mobile Cellular Phone
BRAND NAME	: Motorola
MODEL NAME	: XT2203-1
FCC ID	: IHDT56AE6
STANDARD	: 47 CFR Part 2, Part 27 Subpart Q
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	: Jan. 28, 2022 ~ Feb. 21, 2022

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

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

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

Reviewed by: Jason Jia / Supervisor

Approved by: Alex Wang / Manager

ACCREDITED Cert #5145.02

Sporton International Inc. (Kunshan)
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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG1D2901H	Rev. 01	Initial issue of report	Mar. 01, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	—	Report Only	-
3.5	§27.50 (k)(4)	Peak-to-Average Ratio	<13dB	PASS	
3.6	§27.50 (k)(3)	EIRP	EIRP < 1W (30dBm)	PASS	-
3.7	§2.1049	Occupied Bandwidth	—	Report Only	-
3.8	§2.1051 §27.53 (n)(2)	Conducted Band Edge Measurement	-13dBm/MHz	PASS	-
3.9	§2.1051 §27.53 (n)(2)	Conducted Spurious Emission	-13dBm/MHz	PASS	-
3.10	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within the band	PASS	-
4.4	§2.1053 §27.53 (n)(2)	Radiated Spurious Emission	-13dBm/MHz	PASS	Under limit 40.51 dB at 10356.000 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	XT2203-1
FCC ID	IHDT56AE6
IMEI Code	Conducted : 354596750030032/354596750030040 Radiation : 354596750032137/354596750032145
HW Version	DVT2
SW Version	S1RD32.41
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Product Feature	
Tx/Rx Frequency	5G NR n78: 3450 MHz ~ 3550 MHz
Bandwidth	5G NR n78: 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz
SCS	30kHz
Antenna Gain	**<Ant. 2>:**5G NR n78 : -1.6 dBi **<Ant. 4>:**5G NR n78 : 0.2 dBi **<Ant. 7>:**5G NR n78 : -4.5 dBi **<Ant. 8>:**5G NR n78 : -2.5 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum EIRP is calculated from max Output power and antenna gain, only the maximum EIRP are shown in the report, 5G n78 for Antenna 4.
2. According to the maximum power between SA and NSA mode, SA covers NSA mode, we choose SA mode to test all test items. For EN-DC RSE testing, we only choice the combination of the maximum power among all EN-DC combinations to test.

3. 5G NR n78 support HPUE mode.
4. The EN-DC combinations declared by the manufacturer are as follows: DC_2A_n78A, DC_4A_n78A, DC_5A_n78A, DC_7A_n78A, DC_38A_n78A, DC_66A_n78A.

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 n78		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	3460.02 ~ 3540.00	0.5012	18M2G7D	0.3963	18M3W7D
30	3465.00 ~ 3534.99	0.5370	27M8G7D	0.4345	27M8W7D
40	3470.01 ~ 3529.98	0.5272	37M9G7D	0.4395	37M8W7D
50	3475.02 ~ 3525.00	0.5610	47M5G7D	0.4285	47M5W7D
60	3480.00 ~ 3519.99	0.5370	57M9G7D	0.4266	57M8W7D
70	3485.01 ~ 3514.98	0.5370	67M6G7D	0.4385	67M6W7D
80	3490.02 ~ 3510.00	0.5188	77M4G7D	0.4188	77M6W7D
90	3495.00 ~ 3504.99	0.5035	87M5G7D	0.3999	87M5W7D
100	3500.01 ~ 3500.01	0.5176	97M4G7D	0.4246	97M6W7D

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

1.7 Testing Site

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

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

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

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

Test data subcontracted: conducted test 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 Applied Standards

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

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

Remark:

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

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(IN)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-334
AC Adapter 1(AU)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-335
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(CHILE)	**Brand Name**	Motorola (Salcomp)	**Model Name**	MC-339
AC Adapter 2(US)	**Brand Name**	Motorola (Acbel)	**Model Name**	MC-331
AC Adapter 2(EU)	**Brand Name**	Motorola (Acbel)	**Model Name**	MC-332
AC Adapter 2(UK)	**Brand Name**	Motorola (Acbel)	**Model Name**	MC-333
AC Adapter 3(US)	**Brand Name**	Motorola (AOHAI)	**Model Name**	MC-331
AC Adapter 3(EU)	**Brand Name**	Motorola (AOHAI)	**Model Name**	MC-332
AC Adapter 3(UK)	**Brand Name**	Motorola (AOHAI)	**Model Name**	MC-333
Earphone	**Brand Name**	Motorola (Lyand)	**Model Name**	MI181C
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
Battery 1	**Brand Name**	Motorola(ATL)	**Model Name**	ND40
Battery 2	**Brand Name**	Motorola(SCUD)	**Model Name**	ND40

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

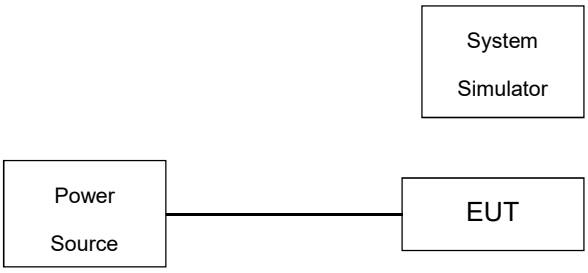
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission (Y plane).

Test Cases	Band	Bandwidth (MHz)	Modulation	RB #	Test Channel
		eg. 20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	eg. QPSK, 16QAM, 64QAM	1RB, Partial RB, Full RB	L/M/H
Max. Output Power	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
Peak-to-Average Ratio	5G n78	20M	BPSK, QPSK	Full RB	M
E.I.R.P	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB, Partial RB, Full RB	L, M, H
26dB and 99% Bandwidth	5G n78	20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M	BPSK, QPSK, 16QAM, 64QAM, 256QAM	Full RB	M
Conducted Band Edge	5G n78	20M, 60M, 100M	BPSK, QPSK	1RB, Full RB	L, H
Conducted Spurious Emission	5G n78	20M, 60M, 100M	BPSK, QPSK	1RB	L, M, H
Frequency Stability	5G n78	20M	QPSK	1RB	L, H
Radiated Spurious Emission	5G n78	Worst case			M

Note:

1. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.
2. Frequency Stability：Normal Voltage = 3.89V ； Low Voltage =3.4V.； High Voltage =4.4V

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.	Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	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 9.10 dB.

Example :

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

= 9.10 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G n78 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
100	Channel	-	633334	-
	Frequency	-	3500.01	-
90	Channel	633000	633334	633666
	Frequency	3495	3500.01	3504.99
80	Channel	632668	633334	634000
	Frequency	3490.02	3500.01	3510
70	Channel	632334	633334	634332
	Frequency	3485.01	3500.01	3514.98
60	Channel	632000	633334	634666
	Frequency	3480	3500.01	3519.99
50	Channel	631668	633334	635000
	Frequency	3475.02	3500.01	3525
40	Channel	631334	633334	635332
	Frequency	3470.01	3500.01	3529.98
30	Channel	631000	633334	635666
	Frequency	3465	3500.01	3534.99
20	Channel	630668	633334	636000
	Frequency	3460.02	3500.01	3540

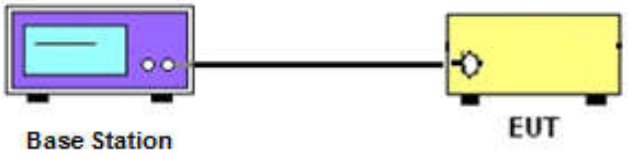
3 Conducted Test Items

3.1 Measuring Instruments

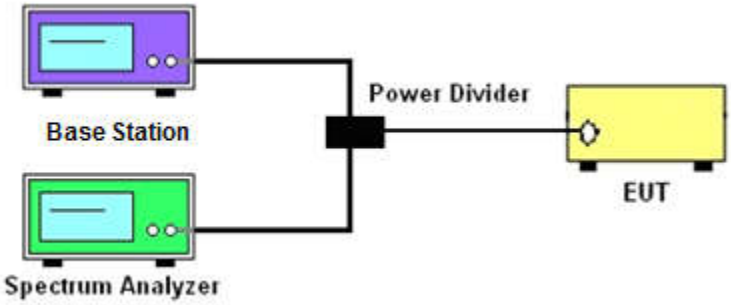
See list of measuring instruments of this test report.

3.2 Test Setup

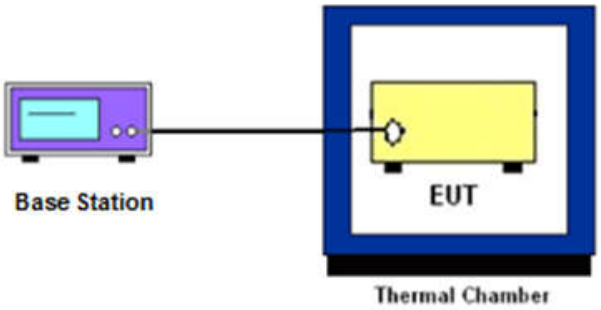
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied / 26dB Bandwidth ,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 Measurement

3.4.1 Description of the Conducted Output Power Measurement

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

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 EIRP

3.6.1 Description of EIRP Limit

§ 27.50 (k)(3)

Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications

3.6.2 Test Procedures

1. According to KDB 412172 D01 Power Approach,
2. 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

3.7 Occupied Bandwidth

3.7.1 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.

3.7.2 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.

3.8 Conducted Band Edge Measurement

3.8.1 Description of Conducted Band Edge Measurement

§ 27.53 (n)(2)

For mobile operations in the 3450-3550 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, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 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.

3.8.2 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 band edges of low and high channels for the highest RF powers were measured.
4. Set RBW ≥ 1% EBW but limited to a maximum of 200 kHz in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz and 5 MHz removed from the band edge, set RBW ≥ 500KHz.
6. Beyond the 5 MHz removed from the band edge, set RBW = 1MHz.
7. Set spectrum analyzer with RMS detector.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. Checked that all the results comply with the emission limit line.

3.9 Conducted Spurious Emission Measurement

3.9.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges shall not exceed −13 dBm/MHz.

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

3.9.2 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. Checked that all the results comply with the emission limit line.

3.10 Frequency Stability Measurement

3.10.1 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.

3.10.2 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.

3.10.3 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.

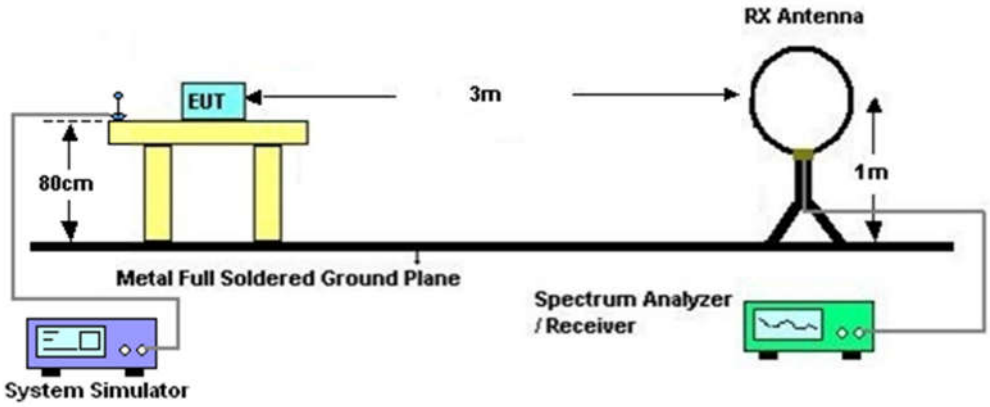
4 Radiated Test Items

4.1 Measuring Instruments

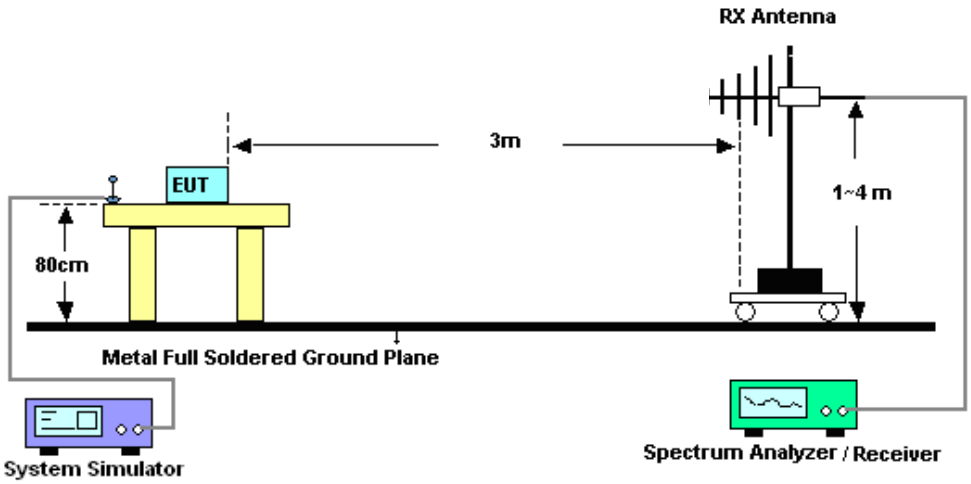
See list of measuring instruments of this test report.

4.2 Test Setup

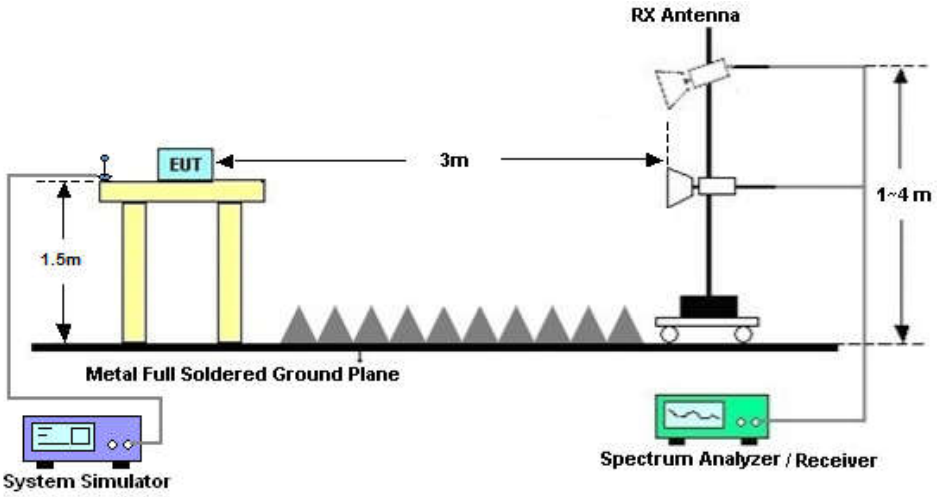
4.2.1 For radiated test below 30MHz



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 Measurement

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI/TIA-603-E.

The power of any emission outside of the authorized operating frequency ranges shall not exceed −13 dBm/MHz.

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.
   EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
   ERP (dBm) = EIRP - 2.15
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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	Jan. 28, 2022~ Feb. 21, 2022	Apr. 02, 2022	Conducted (TH01-SZ)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 26, 2021	Jan. 28, 2022~ Feb. 21, 2022	Aug. 25, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Jan. 28, 2022~ Feb. 21, 2022	Jul. 13, 2022	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2021	Feb. 15, 2022	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Feb. 15, 2022	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2021	Feb. 15, 2022	May 29, 2022	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 25, 2021	Feb. 15, 2022	Apr. 24, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jan. 05, 2022	Feb. 15, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 05, 2022	Feb. 15, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Feb. 15, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Jan. 05, 2022	Feb. 15, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 13, 2021	Feb. 15, 2022	Oct. 12, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Feb. 15, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Feb. 15, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Feb. 15, 2022	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

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

Uncertainty of 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 ~ 40 GHz)

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

Appendix A. Test Results of Conducted Test

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

Software Version: 22.02.012503

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Transmitter Conducted Output Power and EIRP

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
78	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	25@12	26.7	26.9	0.4898
78	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	1@1	26.74	26.94	0.4943
78	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	1@49	26.58	26.78	0.4764
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	25@12	26.76	26.96	0.4966
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@1	26.8	27	0.5012
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@49	26.62	26.82	0.4808
78	30	20	630668	3460.02	DFT-s-OFDM 16 QAM	25@12	25.76	25.96	0.3945
78	30	20	630668	3460.02	DFT-s-OFDM 16 QAM	1@1	25.67	25.87	0.3864
78	30	20	630668	3460.02	DFT-s-OFDM 16 QAM	1@49	25.56	25.76	0.3767
78	30	20	630668	3460.02	DFT-s-OFDM 64 QAM	25@12	24.2	24.4	0.2754
78	30	20	630668	3460.02	DFT-s-OFDM 64 QAM	1@1	23.92	24.12	0.2582
78	30	20	630668	3460.02	DFT-s-OFDM 64 QAM	1@49	23.68	23.88	0.2443
78	30	20	630668	3460.02	DFT-s-OFDM 256 QAM	25@12	22.12	22.32	0.1706
78	30	20	630668	3460.02	DFT-s-OFDM 256 QAM	1@1	22.2	22.4	0.1738
78	30	20	630668	3460.02	DFT-s-OFDM 256 QAM	1@49	21.99	22.19	0.1656
78	30	20	630668	3460.02	CP-OFDM QPSK	25@12	25.17	25.37	0.3443
78	30	20	630668	3460.02	CP-OFDM QPSK	1@1	25.25	25.45	0.3508
78	30	20	630668	3460.02	CP-OFDM QPSK	1@49	25.18	25.38	0.3451
78	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	25@12	26.24	26.44	0.4406
78	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	26.43	26.63	0.4603
78	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@49	26.1	26.3	0.4266
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	25@12	26.24	26.44	0.4406
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@1	26.52	26.72	0.4699
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@49	26.05	26.25	0.4217
78	30	20	633334	3500.01	DFT-s-OFDM 16 QAM	25@12	25.36	25.56	0.3597

78	30	20	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	25.5	25.7	0.3715
78	30	20	633334	3500.01	DFT-s-OFDM 16 QAM	1@49	25.25	25.45	0.3508
78	30	20	633334	3500.01	DFT-s-OFDM 64 QAM	25@12	23.92	24.12	0.2582
78	30	20	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	23.69	23.89	0.2449
78	30	20	633334	3500.01	DFT-s-OFDM 64 QAM	1@49	23.33	23.53	0.2254
78	30	20	633334	3500.01	DFT-s-OFDM 256 QAM	25@12	21.79	21.99	0.1581
78	30	20	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	21.82	22.02	0.1592
78	30	20	633334	3500.01	DFT-s-OFDM 256 QAM	1@49	21.65	21.85	0.1531
78	30	20	633334	3500.01	CP-OFDM QPSK	25@12	24.83	25.03	0.3184
78	30	20	633334	3500.01	CP-OFDM QPSK	1@1	25.14	25.34	0.3420
78	30	20	633334	3500.01	CP-OFDM QPSK	1@49	24.16	24.36	0.2729
78	30	20	636000	3540	DFT-s-OFDM PI/2 BPSK	25@12	26.52	26.72	0.4699
78	30	20	636000	3540	DFT-s-OFDM PI/2 BPSK	1@1	26.6	26.8	0.4786
78	30	20	636000	3540	DFT-s-OFDM PI/2 BPSK	1@49	26.53	26.73	0.4710
78	30	20	636000	3540	DFT-s-OFDM QPSK	25@12	26.56	26.76	0.4742
78	30	20	636000	3540	DFT-s-OFDM QPSK	1@1	26.66	26.86	0.4853
78	30	20	636000	3540	DFT-s-OFDM QPSK	1@49	26.57	26.77	0.4753
78	30	20	636000	3540	DFT-s-OFDM 16 QAM	25@12	25.67	25.87	0.3864
78	30	20	636000	3540	DFT-s-OFDM 16 QAM	1@1	25.78	25.98	0.3963
78	30	20	636000	3540	DFT-s-OFDM 16 QAM	1@49	25.67	25.87	0.3864
78	30	20	636000	3540	DFT-s-OFDM 64 QAM	25@12	24.08	24.28	0.2679
78	30	20	636000	3540	DFT-s-OFDM 64 QAM	1@1	23.72	23.92	0.2466
78	30	20	636000	3540	DFT-s-OFDM 64 QAM	1@49	23.82	24.02	0.2523
78	30	20	636000	3540	DFT-s-OFDM 256 QAM	25@12	21.99	22.19	0.1656
78	30	20	636000	3540	DFT-s-OFDM 256 QAM	1@1	21.97	22.17	0.1648
78	30	20	636000	3540	DFT-s-OFDM 256 QAM	1@49	22.08	22.28	0.1690
78	30	20	636000	3540	CP-OFDM QPSK	25@12	25.1	25.3	0.3388
78	30	20	636000	3540	CP-OFDM QPSK	1@1	25.13	25.33	0.3412
78	30	20	636000	3540	CP-OFDM QPSK	1@49	25.07	25.27	0.3365
78	30	30	631000	3465	DFT-s-OFDM PI/2 BPSK	36@18	27.09	27.29	0.5358
78	30	30	631000	3465	DFT-s-OFDM PI/2 BPSK	1@1	26.92	27.12	0.5152

78	30	30	631000	3465	DFT-s-OFDM PI/2 BPSK	1@76	27	27.2	0.5248
78	30	30	631000	3465	DFT-s-OFDM QPSK	36@18	27.04	27.24	0.5297
78	30	30	631000	3465	DFT-s-OFDM QPSK	1@1	27	27.2	0.5248
78	30	30	631000	3465	DFT-s-OFDM QPSK	1@76	27.04	27.24	0.5297
78	30	30	631000	3465	DFT-s-OFDM 16 QAM	36@18	26.1	26.3	0.4266
78	30	30	631000	3465	DFT-s-OFDM 16 QAM	1@1	26.07	26.27	0.4236
78	30	30	631000	3465	DFT-s-OFDM 16 QAM	1@76	26.15	26.35	0.4315
78	30	30	631000	3465	DFT-s-OFDM 64 QAM	36@18	24.53	24.73	0.2972
78	30	30	631000	3465	DFT-s-OFDM 64 QAM	1@1	24.08	24.28	0.2679
78	30	30	631000	3465	DFT-s-OFDM 64 QAM	1@76	24.16	24.36	0.2729
78	30	30	631000	3465	DFT-s-OFDM 256 QAM	36@18	22.65	22.85	0.1928
78	30	30	631000	3465	DFT-s-OFDM 256 QAM	1@1	22.21	22.41	0.1742
78	30	30	631000	3465	DFT-s-OFDM 256 QAM	1@76	22.39	22.59	0.1816
78	30	30	631000	3465	CP-OFDM QPSK	39@19	25.55	25.75	0.3758
78	30	30	631000	3465	CP-OFDM QPSK	1@1	25.43	25.63	0.3656
78	30	30	631000	3465	CP-OFDM QPSK	1@76	25.53	25.73	0.3741
78	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	36@18	26.64	26.84	0.4831
78	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	26.96	27.16	0.5200
78	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@76	26.85	27.05	0.5070
78	30	30	633334	3500.01	DFT-s-OFDM QPSK	36@18	26.61	26.81	0.4797
78	30	30	633334	3500.01	DFT-s-OFDM QPSK	1@1	26.89	27.09	0.5117
78	30	30	633334	3500.01	DFT-s-OFDM QPSK	1@76	26.79	26.99	0.5000
78	30	30	633334	3500.01	DFT-s-OFDM 16 QAM	36@18	25.6	25.8	0.3802
78	30	30	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.03	26.23	0.4198
78	30	30	633334	3500.01	DFT-s-OFDM 16 QAM	1@76	25.94	26.14	0.4111
78	30	30	633334	3500.01	DFT-s-OFDM 64 QAM	36@18	24.13	24.33	0.2710
78	30	30	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	24.05	24.25	0.2661
78	30	30	633334	3500.01	DFT-s-OFDM 64 QAM	1@76	23.97	24.17	0.2612
78	30	30	633334	3500.01	DFT-s-OFDM 256 QAM	36@18	22.28	22.48	0.1770
78	30	30	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	22.41	22.61	0.1824
78	30	30	633334	3500.01	DFT-s-OFDM 256 QAM	1@76	22.35	22.55	0.1799

78	30	30	633334	3500.01	CP-OFDM QPSK	39@19	25.19	25.39	0.3459
78	30	30	633334	3500.01	CP-OFDM QPSK	1@1	25.51	25.71	0.3724
78	30	30	633334	3500.01	CP-OFDM QPSK	1@76	25.3	25.5	0.3548
78	30	30	635666	3534.99	DFT-s-OFDM PI/2 BPSK	36@18	27.1	27.3	0.5370
78	30	30	635666	3534.99	DFT-s-OFDM PI/2 BPSK	1@1	27.05	27.25	0.5309
78	30	30	635666	3534.99	DFT-s-OFDM PI/2 BPSK	1@76	27	27.2	0.5248
78	30	30	635666	3534.99	DFT-s-OFDM QPSK	36@18	26.89	27.09	0.5117
78	30	30	635666	3534.99	DFT-s-OFDM QPSK	1@1	26.86	27.06	0.5082
78	30	30	635666	3534.99	DFT-s-OFDM QPSK	1@76	26.74	26.94	0.4943
78	30	30	635666	3534.99	DFT-s-OFDM 16 QAM	36@18	26.08	26.28	0.4246
78	30	30	635666	3534.99	DFT-s-OFDM 16 QAM	1@1	26.18	26.38	0.4345
78	30	30	635666	3534.99	DFT-s-OFDM 16 QAM	1@76	26.16	26.36	0.4325
78	30	30	635666	3534.99	DFT-s-OFDM 64 QAM	36@18	24.46	24.66	0.2924
78	30	30	635666	3534.99	DFT-s-OFDM 64 QAM	1@1	24.43	24.63	0.2904
78	30	30	635666	3534.99	DFT-s-OFDM 64 QAM	1@76	24.39	24.59	0.2877
78	30	30	635666	3534.99	DFT-s-OFDM 256 QAM	36@18	22.48	22.68	0.1854
78	30	30	635666	3534.99	DFT-s-OFDM 256 QAM	1@1	22.32	22.52	0.1786
78	30	30	635666	3534.99	DFT-s-OFDM 256 QAM	1@76	22.2	22.4	0.1738
78	30	30	635666	3534.99	CP-OFDM QPSK	39@19	25.48	25.68	0.3698
78	30	30	635666	3534.99	CP-OFDM QPSK	1@1	25.47	25.67	0.3690
78	30	30	635666	3534.99	CP-OFDM QPSK	1@76	25.42	25.62	0.3648
78	30	40	631334	3470.01	DFT-s-OFDM PI/2 BPSK	50@25	26.98	27.18	0.5224
78	30	40	631334	3470.01	DFT-s-OFDM PI/2 BPSK	1@1	27	27.2	0.5248
78	30	40	631334	3470.01	DFT-s-OFDM PI/2 BPSK	1@104	26.73	26.93	0.4932
78	30	40	631334	3470.01	DFT-s-OFDM QPSK	50@25	27.02	27.22	0.5272
78	30	40	631334	3470.01	DFT-s-OFDM QPSK	1@1	26.97	27.17	0.5212
78	30	40	631334	3470.01	DFT-s-OFDM QPSK	1@104	26.78	26.98	0.4989
78	30	40	631334	3470.01	DFT-s-OFDM 16 QAM	50@25	26.01	26.21	0.4178
78	30	40	631334	3470.01	DFT-s-OFDM 16 QAM	1@1	26.23	26.43	0.4395
78	30	40	631334	3470.01	DFT-s-OFDM 16 QAM	1@104	25.73	25.93	0.3917
78	30	40	631334	3470.01	DFT-s-OFDM 64 QAM	50@25	24.48	24.68	0.2938

78	30	40	631334	3470.01	DFT-s-OFDM 64 QAM	1@1	24.32	24.52	0.2831
78	30	40	631334	3470.01	DFT-s-OFDM 64 QAM	1@104	23.9	24.1	0.2570
78	30	40	631334	3470.01	DFT-s-OFDM 256 QAM	50@25	22.41	22.61	0.1824
78	30	40	631334	3470.01	DFT-s-OFDM 256 QAM	1@1	22.29	22.49	0.1774
78	30	40	631334	3470.01	DFT-s-OFDM 256 QAM	1@104	22.24	22.44	0.1754
78	30	40	631334	3470.01	CP-OFDM QPSK	53@26	25.58	25.78	0.3784
78	30	40	631334	3470.01	CP-OFDM QPSK	1@1	25.66	25.86	0.3855
78	30	40	631334	3470.01	CP-OFDM QPSK	1@104	25.3	25.5	0.3548
78	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	50@25	26.5	26.7	0.4677
78	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	26.96	27.16	0.5200
78	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@104	26.86	27.06	0.5082
78	30	40	633334	3500.01	DFT-s-OFDM QPSK	50@25	26.4	26.6	0.4571
78	30	40	633334	3500.01	DFT-s-OFDM QPSK	1@1	26.9	27.1	0.5129
78	30	40	633334	3500.01	DFT-s-OFDM QPSK	1@104	26.85	27.05	0.5070
78	30	40	633334	3500.01	DFT-s-OFDM 16 QAM	50@25	25.54	25.74	0.3750
78	30	40	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	25.88	26.08	0.4055
78	30	40	633334	3500.01	DFT-s-OFDM 16 QAM	1@104	25.98	26.18	0.4150
78	30	40	633334	3500.01	DFT-s-OFDM 64 QAM	50@25	24.08	24.28	0.2679
78	30	40	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	24.19	24.39	0.2748
78	30	40	633334	3500.01	DFT-s-OFDM 64 QAM	1@104	24.1	24.3	0.2692
78	30	40	633334	3500.01	DFT-s-OFDM 256 QAM	50@25	21.89	22.09	0.1618
78	30	40	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	22.2	22.4	0.1738
78	30	40	633334	3500.01	DFT-s-OFDM 256 QAM	1@104	22.29	22.49	0.1774
78	30	40	633334	3500.01	CP-OFDM QPSK	53@26	24.98	25.18	0.3296
78	30	40	633334	3500.01	CP-OFDM QPSK	1@1	25.52	25.72	0.3733
78	30	40	633334	3500.01	CP-OFDM QPSK	1@104	25.37	25.57	0.3606
78	30	40	635332	3529.98	DFT-s-OFDM PI/2 BPSK	50@25	26.71	26.91	0.4909
78	30	40	635332	3529.98	DFT-s-OFDM PI/2 BPSK	1@1	26.63	26.83	0.4819
78	30	40	635332	3529.98	DFT-s-OFDM PI/2 BPSK	1@104	26.9	27.1	0.5129
78	30	40	635332	3529.98	DFT-s-OFDM QPSK	50@25	26.77	26.97	0.4977
78	30	40	635332	3529.98	DFT-s-OFDM QPSK	1@1	26.42	26.62	0.4592

78	30	40	635332	3529.98	DFT-s-OFDM QPSK	1@104	26.86	27.06	0.5082
78	30	40	635332	3529.98	DFT-s-OFDM 16 QAM	50@25	25.79	25.99	0.3972
78	30	40	635332	3529.98	DFT-s-OFDM 16 QAM	1@1	25.75	25.95	0.3936
78	30	40	635332	3529.98	DFT-s-OFDM 16 QAM	1@104	25.9	26.1	0.4074
78	30	40	635332	3529.98	DFT-s-OFDM 64 QAM	50@25	24.26	24.46	0.2793
78	30	40	635332	3529.98	DFT-s-OFDM 64 QAM	1@1	23.87	24.07	0.2553
78	30	40	635332	3529.98	DFT-s-OFDM 64 QAM	1@104	24.06	24.26	0.2667
78	30	40	635332	3529.98	DFT-s-OFDM 256 QAM	50@25	22.25	22.45	0.1758
78	30	40	635332	3529.98	DFT-s-OFDM 256 QAM	1@1	21.88	22.08	0.1614
78	30	40	635332	3529.98	DFT-s-OFDM 256 QAM	1@104	22.3	22.5	0.1778
78	30	40	635332	3529.98	CP-OFDM QPSK	53@26	25.19	25.39	0.3459
78	30	40	635332	3529.98	CP-OFDM QPSK	1@1	25.31	25.51	0.3556
78	30	40	635332	3529.98	CP-OFDM QPSK	1@104	25.39	25.59	0.3622
78	30	50	631668	3475.02	DFT-s-OFDM PI/2 BPSK	64@32	26.71	26.91	0.4909
78	30	50	631668	3475.02	DFT-s-OFDM PI/2 BPSK	1@1	26.93	27.13	0.5164
78	30	50	631668	3475.02	DFT-s-OFDM PI/2 BPSK	1@131	26.73	26.93	0.4932
78	30	50	631668	3475.02	DFT-s-OFDM QPSK	64@32	27.29	27.49	0.5610
78	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@1	27.07	27.27	0.5333
78	30	50	631668	3475.02	DFT-s-OFDM QPSK	1@131	26.71	26.91	0.4909
78	30	50	631668	3475.02	DFT-s-OFDM 16 QAM	64@32	26.1	26.3	0.4266
78	30	50	631668	3475.02	DFT-s-OFDM 16 QAM	1@1	26.01	26.21	0.4178
78	30	50	631668	3475.02	DFT-s-OFDM 16 QAM	1@131	25.69	25.89	0.3882
78	30	50	631668	3475.02	DFT-s-OFDM 64 QAM	64@32	24.66	24.86	0.3062
78	30	50	631668	3475.02	DFT-s-OFDM 64 QAM	1@1	24.23	24.43	0.2773
78	30	50	631668	3475.02	DFT-s-OFDM 64 QAM	1@131	23.99	24.19	0.2624
78	30	50	631668	3475.02	DFT-s-OFDM 256 QAM	64@32	22.72	22.92	0.1959
78	30	50	631668	3475.02	DFT-s-OFDM 256 QAM	1@1	22.49	22.69	0.1858
78	30	50	631668	3475.02	DFT-s-OFDM 256 QAM	1@131	22.16	22.36	0.1722
78	30	50	631668	3475.02	CP-OFDM QPSK	67@33	25.66	25.86	0.3855
78	30	50	631668	3475.02	CP-OFDM QPSK	1@1	25.68	25.88	0.3873
78	30	50	631668	3475.02	CP-OFDM QPSK	1@131	25.26	25.46	0.3516

78	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	64@32	26.71	26.91	0.4909
78	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.1	27.3	0.5370
78	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@131	26.98	27.18	0.5224
78	30	50	633334	3500.01	DFT-s-OFDM QPSK	64@32	26.64	26.84	0.4831
78	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.12	27.32	0.5395
78	30	50	633334	3500.01	DFT-s-OFDM QPSK	1@131	26.99	27.19	0.5236
78	30	50	633334	3500.01	DFT-s-OFDM 16 QAM	64@32	25.72	25.92	0.3908
78	30	50	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.12	26.32	0.4285
78	30	50	633334	3500.01	DFT-s-OFDM 16 QAM	1@131	25.91	26.11	0.4083
78	30	50	633334	3500.01	DFT-s-OFDM 64 QAM	64@32	24.3	24.5	0.2818
78	30	50	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	24.26	24.46	0.2793
78	30	50	633334	3500.01	DFT-s-OFDM 64 QAM	1@131	24.24	24.44	0.2780
78	30	50	633334	3500.01	DFT-s-OFDM 256 QAM	64@32	22.2	22.4	0.1738
78	30	50	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	22.61	22.81	0.1910
78	30	50	633334	3500.01	DFT-s-OFDM 256 QAM	1@131	22.48	22.68	0.1854
78	30	50	633334	3500.01	CP-OFDM QPSK	67@33	25.28	25.48	0.3532
78	30	50	633334	3500.01	CP-OFDM QPSK	1@1	25.72	25.92	0.3908
78	30	50	633334	3500.01	CP-OFDM QPSK	1@131	25.57	25.77	0.3776
78	30	50	635000	3525	DFT-s-OFDM PI/2 BPSK	64@32	26.96	27.16	0.5200
78	30	50	635000	3525	DFT-s-OFDM PI/2 BPSK	1@1	26.54	26.74	0.4721
78	30	50	635000	3525	DFT-s-OFDM PI/2 BPSK	1@131	27	27.2	0.5248
78	30	50	635000	3525	DFT-s-OFDM QPSK	64@32	26.95	27.15	0.5188
78	30	50	635000	3525	DFT-s-OFDM QPSK	1@1	26.43	26.63	0.4603
78	30	50	635000	3525	DFT-s-OFDM QPSK	1@131	26.86	27.06	0.5082
78	30	50	635000	3525	DFT-s-OFDM 16 QAM	64@32	25.87	26.07	0.4046
78	30	50	635000	3525	DFT-s-OFDM 16 QAM	1@1	25.75	25.95	0.3936
78	30	50	635000	3525	DFT-s-OFDM 16 QAM	1@131	25.95	26.15	0.4121
78	30	50	635000	3525	DFT-s-OFDM 64 QAM	64@32	24.49	24.69	0.2944
78	30	50	635000	3525	DFT-s-OFDM 64 QAM	1@1	23.72	23.92	0.2466
78	30	50	635000	3525	DFT-s-OFDM 64 QAM	1@131	24.22	24.42	0.2767
78	30	50	635000	3525	DFT-s-OFDM 256 QAM	64@32	22.29	22.49	0.1774

78	30	50	635000	3525	DFT-s-OFDM 256 QAM	1@1	21.88	22.08	0.1614
78	30	50	635000	3525	DFT-s-OFDM 256 QAM	1@131	22.19	22.39	0.1734
78	30	50	635000	3525	CP-OFDM QPSK	67@33	25.41	25.61	0.3639
78	30	50	635000	3525	CP-OFDM QPSK	1@1	25.09	25.29	0.3381
78	30	50	635000	3525	CP-OFDM QPSK	1@131	25.44	25.64	0.3664
78	30	60	632000	3480	DFT-s-OFDM PI/2 BPSK	81@40	26.89	27.09	0.5117
78	30	60	632000	3480	DFT-s-OFDM PI/2 BPSK	1@1	26.97	27.17	0.5212
78	30	60	632000	3480	DFT-s-OFDM PI/2 BPSK	1@160	26.47	26.67	0.4645
78	30	60	632000	3480	DFT-s-OFDM QPSK	81@40	26.9	27.1	0.5129
78	30	60	632000	3480	DFT-s-OFDM QPSK	1@1	27.06	27.26	0.5321
78	30	60	632000	3480	DFT-s-OFDM QPSK	1@160	26.49	26.69	0.4667
78	30	60	632000	3480	DFT-s-OFDM 16 QAM	81@40	25.87	26.07	0.4046
78	30	60	632000	3480	DFT-s-OFDM 16 QAM	1@1	25.98	26.18	0.4150
78	30	60	632000	3480	DFT-s-OFDM 16 QAM	1@160	25.45	25.65	0.3673
78	30	60	632000	3480	DFT-s-OFDM 64 QAM	81@40	25.93	26.13	0.4102
78	30	60	632000	3480	DFT-s-OFDM 64 QAM	1@1	26	26.2	0.4169
78	30	60	632000	3480	DFT-s-OFDM 64 QAM	1@160	25.37	25.57	0.3606
78	30	60	632000	3480	DFT-s-OFDM 256 QAM	81@40	22.45	22.65	0.1841
78	30	60	632000	3480	DFT-s-OFDM 256 QAM	1@1	22.25	22.45	0.1758
78	30	60	632000	3480	DFT-s-OFDM 256 QAM	1@160	21.82	22.02	0.1592
78	30	60	632000	3480	CP-OFDM QPSK	81@40	25.45	25.65	0.3673
78	30	60	632000	3480	CP-OFDM QPSK	1@1	25.52	25.72	0.3733
78	30	60	632000	3480	CP-OFDM QPSK	1@160	25.07	25.27	0.3365
78	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	81@40	26.58	26.78	0.4764
78	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.1	27.3	0.5370
78	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@160	26.82	27.02	0.5035
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	81@40	26.61	26.81	0.4797
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.1	27.3	0.5370
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	1@160	26.82	27.02	0.5035
78	30	60	633334	3500.01	DFT-s-OFDM 16 QAM	81@40	25.58	25.78	0.3784
78	30	60	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.1	26.3	0.4266

78	30	60	633334	3500.01	DFT-s-OFDM 16 QAM	1@160	25.9	26.1	0.4074
78	30	60	633334	3500.01	DFT-s-OFDM 64 QAM	81@40	24.25	24.45	0.2786
78	30	60	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	24.18	24.38	0.2742
78	30	60	633334	3500.01	DFT-s-OFDM 64 QAM	1@160	24.12	24.32	0.2704
78	30	60	633334	3500.01	DFT-s-OFDM 256 QAM	81@40	22.01	22.21	0.1663
78	30	60	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	22.49	22.69	0.1858
78	30	60	633334	3500.01	DFT-s-OFDM 256 QAM	1@160	22.28	22.48	0.1770
78	30	60	633334	3500.01	CP-OFDM QPSK	81@40	25.1	25.3	0.3388
78	30	60	633334	3500.01	CP-OFDM QPSK	1@1	25.58	25.78	0.3784
78	30	60	633334	3500.01	CP-OFDM QPSK	1@160	25.43	25.63	0.3656
78	30	60	634666	3519.99	DFT-s-OFDM PI/2 BPSK	81@40	26.77	26.97	0.4977
78	30	60	634666	3519.99	DFT-s-OFDM PI/2 BPSK	1@1	26.4	26.6	0.4571
78	30	60	634666	3519.99	DFT-s-OFDM PI/2 BPSK	1@160	26.65	26.85	0.4842
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	81@40	26.7	26.9	0.4898
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@1	26.56	26.76	0.4742
78	30	60	634666	3519.99	DFT-s-OFDM QPSK	1@160	26.7	26.9	0.4898
78	30	60	634666	3519.99	DFT-s-OFDM 16 QAM	81@40	25.69	25.89	0.3882
78	30	60	634666	3519.99	DFT-s-OFDM 16 QAM	1@1	25.7	25.9	0.3890
78	30	60	634666	3519.99	DFT-s-OFDM 16 QAM	1@160	25.96	26.16	0.4130
78	30	60	634666	3519.99	DFT-s-OFDM 64 QAM	81@40	24.32	24.52	0.2831
78	30	60	634666	3519.99	DFT-s-OFDM 64 QAM	1@1	23.63	23.83	0.2415
78	30	60	634666	3519.99	DFT-s-OFDM 64 QAM	1@160	23.94	24.14	0.2594
78	30	60	634666	3519.99	DFT-s-OFDM 256 QAM	81@40	22.27	22.47	0.1766
78	30	60	634666	3519.99	DFT-s-OFDM 256 QAM	1@1	21.91	22.11	0.1626
78	30	60	634666	3519.99	DFT-s-OFDM 256 QAM	1@160	22.07	22.27	0.1687
78	30	60	634666	3519.99	CP-OFDM QPSK	81@40	25.16	25.36	0.3436
78	30	60	634666	3519.99	CP-OFDM QPSK	1@1	25	25.2	0.3311
78	30	60	634666	3519.99	CP-OFDM QPSK	1@160	25.46	25.66	0.3681
78	30	70	632334	3485.01	DFT-s-OFDM PI/2 BPSK	90@45	26.8	27	0.5012
78	30	70	632334	3485.01	DFT-s-OFDM PI/2 BPSK	1@1	27.04	27.24	0.5297
78	30	70	632334	3485.01	DFT-s-OFDM PI/2 BPSK	1@187	26.78	26.98	0.4989

78	30	70	632334	3485.01	DFT-s-OFDM QPSK	90@45	26.77	26.97	0.4977
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	1@1	26.76	26.96	0.4966
78	30	70	632334	3485.01	DFT-s-OFDM QPSK	1@187	26.63	26.83	0.4819
78	30	70	632334	3485.01	DFT-s-OFDM 16 QAM	90@45	25.78	25.98	0.3963
78	30	70	632334	3485.01	DFT-s-OFDM 16 QAM	1@1	26.17	26.37	0.4335
78	30	70	632334	3485.01	DFT-s-OFDM 16 QAM	1@187	25.94	26.14	0.4111
78	30	70	632334	3485.01	DFT-s-OFDM 64 QAM	90@45	24.13	24.33	0.2710
78	30	70	632334	3485.01	DFT-s-OFDM 64 QAM	1@1	24.11	24.31	0.2698
78	30	70	632334	3485.01	DFT-s-OFDM 64 QAM	1@187	23.96	24.16	0.2606
78	30	70	632334	3485.01	DFT-s-OFDM 256 QAM	90@45	22.07	22.27	0.1687
78	30	70	632334	3485.01	DFT-s-OFDM 256 QAM	1@1	22.33	22.53	0.1791
78	30	70	632334	3485.01	DFT-s-OFDM 256 QAM	1@187	22.1	22.3	0.1698
78	30	70	632334	3485.01	CP-OFDM QPSK	95@47	25.29	25.49	0.3540
78	30	70	632334	3485.01	CP-OFDM QPSK	1@1	25.45	25.65	0.3673
78	30	70	632334	3485.01	CP-OFDM QPSK	1@187	25.43	25.63	0.3656
78	30	70	633334	3485.01	DFT-s-OFDM PI/2 BPSK	90@45	26.78	26.98	0.4989
78	30	70	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	27.1	27.3	0.5370
78	30	70	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@187	26.93	27.13	0.5164
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	90@45	26.68	26.88	0.4875
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	1@1	27.1	27.3	0.5370
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	1@187	26.81	27.01	0.5023
78	30	70	633334	3500.01	DFT-s-OFDM 16 QAM	90@45	25.76	25.96	0.3945
78	30	70	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.22	26.42	0.4385
78	30	70	633334	3500.01	DFT-s-OFDM 16 QAM	1@187	25.96	26.16	0.4130
78	30	70	633334	3500.01	DFT-s-OFDM 64 QAM	90@45	24.25	24.45	0.2786
78	30	70	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	24.2	24.4	0.2754
78	30	70	633334	3500.01	DFT-s-OFDM 64 QAM	1@187	24.33	24.53	0.2838
78	30	70	633334	3500.01	DFT-s-OFDM 256 QAM	90@45	22.04	22.24	0.1675
78	30	70	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	22.57	22.77	0.1892
78	30	70	633334	3500.01	DFT-s-OFDM 256 QAM	1@187	22.28	22.48	0.1770
78	30	70	633334	3500.01	CP-OFDM QPSK	95@47	25.18	25.38	0.3451

78	30	70	633334	3500.01	CP-OFDM QPSK	1@1	25.66	25.86	0.3855
78	30	70	633334	3500.01	CP-OFDM QPSK	1@187	25.43	25.63	0.3656
78	30	70	634332	3514.98	DFT-s-OFDM PI/2 BPSK	90@45	26.73	26.93	0.4932
78	30	70	634332	3514.98	DFT-s-OFDM PI/2 BPSK	1@1	27.03	27.23	0.5284
78	30	70	634332	3514.98	DFT-s-OFDM PI/2 BPSK	1@187	26.86	27.06	0.5082
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	90@45	26.9	27.1	0.5129
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	1@1	27.06	27.26	0.5321
78	30	70	634332	3514.98	DFT-s-OFDM QPSK	1@187	26.84	27.04	0.5058
78	30	70	634332	3514.98	DFT-s-OFDM 16 QAM	90@45	25.73	25.93	0.3917
78	30	70	634332	3514.98	DFT-s-OFDM 16 QAM	1@1	26.19	26.39	0.4355
78	30	70	634332	3514.98	DFT-s-OFDM 16 QAM	1@187	25.99	26.19	0.4159
78	30	70	634332	3514.98	DFT-s-OFDM 64 QAM	90@45	24.22	24.42	0.2767
78	30	70	634332	3514.98	DFT-s-OFDM 64 QAM	1@1	24.53	24.73	0.2972
78	30	70	634332	3514.98	DFT-s-OFDM 64 QAM	1@187	24.3	24.5	0.2818
78	30	70	634332	3514.98	DFT-s-OFDM 256 QAM	90@45	22.38	22.58	0.1811
78	30	70	634332	3514.98	DFT-s-OFDM 256 QAM	1@1	22.54	22.74	0.1879
78	30	70	634332	3514.98	DFT-s-OFDM 256 QAM	1@187	22.11	22.31	0.1702
78	30	70	634332	3514.98	CP-OFDM QPSK	95@47	25.32	25.52	0.3565
78	30	70	634332	3514.98	CP-OFDM QPSK	1@1	25.6	25.8	0.3802
78	30	70	634332	3514.98	CP-OFDM QPSK	1@187	25.51	25.71	0.3724
78	30	80	632668	3490.02	DFT-s-OFDM PI/2 BPSK	108@54	26.74	26.94	0.4943
78	30	80	632668	3490.02	DFT-s-OFDM PI/2 BPSK	1@1	26.88	27.08	0.5105
78	30	80	632668	3490.02	DFT-s-OFDM PI/2 BPSK	1@215	26.81	27.01	0.5023
78	30	80	632668	3490.02	DFT-s-OFDM QPSK	108@54	26.64	26.84	0.4831
78	30	80	632668	3490.02	DFT-s-OFDM QPSK	1@1	26.87	27.07	0.5093
78	30	80	632668	3490.02	DFT-s-OFDM QPSK	1@215	26.77	26.97	0.4977
78	30	80	632668	3490.02	DFT-s-OFDM 16 QAM	108@54	25.61	25.81	0.3811
78	30	80	632668	3490.02	DFT-s-OFDM 16 QAM	1@1	26.02	26.22	0.4188
78	30	80	632668	3490.02	DFT-s-OFDM 16 QAM	1@215	25.83	26.03	0.4009
78	30	80	632668	3490.02	DFT-s-OFDM 64 QAM	108@54	24.12	24.32	0.2704
78	30	80	632668	3490.02	DFT-s-OFDM 64 QAM	1@1	24.04	24.24	0.2655

78	30	80	632668	3490.02	DFT-s-OFDM 64 QAM	1@215	23.99	24.19	0.2624
78	30	80	632668	3490.02	DFT-s-OFDM 256 QAM	108@54	22.2	22.4	0.1738
78	30	80	632668	3490.02	DFT-s-OFDM 256 QAM	1@1	22.35	22.55	0.1799
78	30	80	632668	3490.02	DFT-s-OFDM 256 QAM	1@215	22.22	22.42	0.1746
78	30	80	632668	3490.02	CP-OFDM QPSK	109@54	25.19	25.39	0.3459
78	30	80	632668	3490.02	CP-OFDM QPSK	1@1	25.42	25.62	0.3648
78	30	80	632668	3490.02	CP-OFDM QPSK	1@215	25.41	25.61	0.3639
78	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	108@54	26.66	26.86	0.4853
78	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	26.95	27.15	0.5188
78	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@215	26.85	27.05	0.5070
78	30	80	633334	3500.01	DFT-s-OFDM QPSK	108@54	26.81	27.01	0.5023
78	30	80	633334	3500.01	DFT-s-OFDM QPSK	1@1	26.94	27.14	0.5176
78	30	80	633334	3500.01	DFT-s-OFDM QPSK	1@215	26.59	26.79	0.4775
78	30	80	633334	3500.01	DFT-s-OFDM 16 QAM	108@54	25.59	25.79	0.3793
78	30	80	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	26.01	26.21	0.4178
78	30	80	633334	3500.01	DFT-s-OFDM 16 QAM	1@215	25.91	26.11	0.4083
78	30	80	633334	3500.01	DFT-s-OFDM 64 QAM	108@54	23.99	24.19	0.2624
78	30	80	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	24.25	24.45	0.2786
78	30	80	633334	3500.01	DFT-s-OFDM 64 QAM	1@215	23.99	24.19	0.2624
78	30	80	633334	3500.01	DFT-s-OFDM 256 QAM	108@54	22.23	22.43	0.1750
78	30	80	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	22.45	22.65	0.1841
78	30	80	633334	3500.01	DFT-s-OFDM 256 QAM	1@215	22.33	22.53	0.1791
78	30	80	633334	3500.01	CP-OFDM QPSK	109@54	25.09	25.29	0.3381
78	30	80	633334	3500.01	CP-OFDM QPSK	1@1	25.63	25.83	0.3828
78	30	80	633334	3500.01	CP-OFDM QPSK	1@215	25.38	25.58	0.3614
78	30	80	634000	3510	DFT-s-OFDM PI/2 BPSK	108@54	26.63	26.83	0.4819
78	30	80	634000	3510	DFT-s-OFDM PI/2 BPSK	1@1	26.92	27.12	0.5152
78	30	80	634000	3510	DFT-s-OFDM PI/2 BPSK	1@215	26.81	27.01	0.5023
78	30	80	634000	3510	DFT-s-OFDM QPSK	108@54	26.62	26.82	0.4808
78	30	80	634000	3510	DFT-s-OFDM QPSK	1@1	26.84	27.04	0.5058
78	30	80	634000	3510	DFT-s-OFDM QPSK	1@215	26.75	26.95	0.4955

78	30	80	634000	3510	DFT-s-OFDM 16 QAM	108@54	25.59	25.79	0.3793
78	30	80	634000	3510	DFT-s-OFDM 16 QAM	1@1	25.95	26.15	0.4121
78	30	80	634000	3510	DFT-s-OFDM 16 QAM	1@215	25.9	26.1	0.4074
78	30	80	634000	3510	DFT-s-OFDM 64 QAM	108@54	24.19	24.39	0.2748
78	30	80	634000	3510	DFT-s-OFDM 64 QAM	1@1	24.28	24.48	0.2805
78	30	80	634000	3510	DFT-s-OFDM 64 QAM	1@215	23.97	24.17	0.2612
78	30	80	634000	3510	DFT-s-OFDM 256 QAM	108@54	22.14	22.34	0.1714
78	30	80	634000	3510	DFT-s-OFDM 256 QAM	1@1	22.28	22.48	0.1770
78	30	80	634000	3510	DFT-s-OFDM 256 QAM	1@215	22.33	22.53	0.1791
78	30	80	634000	3510	CP-OFDM QPSK	109@54	24.99	25.19	0.3304
78	30	80	634000	3510	CP-OFDM QPSK	1@1	25.42	25.62	0.3648
78	30	80	634000	3510	CP-OFDM QPSK	1@215	25.47	25.67	0.3690
78	30	90	633000	3495	DFT-s-OFDM PI/2 BPSK	120@60	26.55	26.75	0.4732
78	30	90	633000	3495	DFT-s-OFDM PI/2 BPSK	1@1	26.8	27	0.5012
78	30	90	633000	3495	DFT-s-OFDM PI/2 BPSK	1@243	26.73	26.93	0.4932
78	30	90	633000	3495	DFT-s-OFDM QPSK	120@60	26.33	26.53	0.4498
78	30	90	633000	3495	DFT-s-OFDM QPSK	1@1	26.51	26.71	0.4688
78	30	90	633000	3495	DFT-s-OFDM QPSK	1@243	26.65	26.85	0.4842
78	30	90	633000	3495	DFT-s-OFDM 16 QAM	120@60	25.36	25.56	0.3597
78	30	90	633000	3495	DFT-s-OFDM 16 QAM	1@1	25.55	25.75	0.3758
78	30	90	633000	3495	DFT-s-OFDM 16 QAM	1@243	25.82	26.02	0.3999
78	30	90	633000	3495	DFT-s-OFDM 64 QAM	120@60	23.83	24.03	0.2529
78	30	90	633000	3495	DFT-s-OFDM 64 QAM	1@1	23.83	24.03	0.2529
78	30	90	633000	3495	DFT-s-OFDM 64 QAM	1@243	24.13	24.33	0.2710
78	30	90	633000	3495	DFT-s-OFDM 256 QAM	120@60	21.98	22.18	0.1652
78	30	90	633000	3495	DFT-s-OFDM 256 QAM	1@1	21.95	22.15	0.1641
78	30	90	633000	3495	DFT-s-OFDM 256 QAM	1@243	22.13	22.33	0.1710
78	30	90	633000	3495	CP-OFDM QPSK	123@61	24.8	25	0.3162
78	30	90	633000	3495	CP-OFDM QPSK	1@1	25.13	25.33	0.3412
78	30	90	633000	3495	CP-OFDM QPSK	1@243	25.19	25.39	0.3459
78	30	90	633334	3500.01	DFT-s-OFDM PI/2 BPSK	120@60	26.34	26.54	0.4508

78	30	90	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	26.62	26.82	0.4808
78	30	90	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@243	26.58	26.78	0.4764
78	30	90	633334	3500.01	DFT-s-OFDM QPSK	120@60	26.39	26.59	0.4560
78	30	90	633334	3500.01	DFT-s-OFDM QPSK	1@1	26.52	26.72	0.4699
78	30	90	633334	3500.01	DFT-s-OFDM QPSK	1@243	26.56	26.76	0.4742
78	30	90	633334	3500.01	DFT-s-OFDM 16 QAM	120@60	25.38	25.58	0.3614
78	30	90	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	25.46	25.66	0.3681
78	30	90	633334	3500.01	DFT-s-OFDM 16 QAM	1@243	25.6	25.8	0.3802
78	30	90	633334	3500.01	DFT-s-OFDM 64 QAM	120@60	23.88	24.08	0.2559
78	30	90	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	23.82	24.02	0.2523
78	30	90	633334	3500.01	DFT-s-OFDM 64 QAM	1@243	24.01	24.21	0.2636
78	30	90	633334	3500.01	DFT-s-OFDM 256 QAM	120@60	21.71	21.91	0.1552
78	30	90	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	21.99	22.19	0.1656
78	30	90	633334	3500.01	DFT-s-OFDM 256 QAM	1@243	21.9	22.1	0.1622
78	30	90	633334	3500.01	CP-OFDM QPSK	123@61	24.74	24.94	0.3119
78	30	90	633334	3500.01	CP-OFDM QPSK	1@1	24.98	25.18	0.3296
78	30	90	633334	3500.01	CP-OFDM QPSK	1@243	25.05	25.25	0.3350
78	30	90	633666	3504.99	DFT-s-OFDM PI/2 BPSK	120@60	26.42	26.62	0.4592
78	30	90	633666	3504.99	DFT-s-OFDM PI/2 BPSK	1@1	26.82	27.02	0.5035
78	30	90	633666	3504.99	DFT-s-OFDM PI/2 BPSK	1@243	26.44	26.64	0.4613
78	30	90	633666	3504.99	DFT-s-OFDM QPSK	120@60	26.32	26.52	0.4487
78	30	90	633666	3504.99	DFT-s-OFDM QPSK	1@1	26.72	26.92	0.4920
78	30	90	633666	3504.99	DFT-s-OFDM QPSK	1@243	26.39	26.59	0.4560
78	30	90	633666	3504.99	DFT-s-OFDM 16 QAM	120@60	25.36	25.56	0.3597
78	30	90	633666	3504.99	DFT-s-OFDM 16 QAM	1@1	25.73	25.93	0.3917
78	30	90	633666	3504.99	DFT-s-OFDM 16 QAM	1@243	25.62	25.82	0.3819
78	30	90	633666	3504.99	DFT-s-OFDM 64 QAM	120@60	23.52	23.72	0.2355
78	30	90	633666	3504.99	DFT-s-OFDM 64 QAM	1@1	23.92	24.12	0.2582
78	30	90	633666	3504.99	DFT-s-OFDM 64 QAM	1@243	23.53	23.73	0.2360
78	30	90	633666	3504.99	DFT-s-OFDM 256 QAM	120@60	21.93	22.13	0.1633
78	30	90	633666	3504.99	DFT-s-OFDM 256 QAM	1@1	22.12	22.32	0.1706

78	30	90	633666	3504.99	DFT-s-OFDM 256 QAM	1@243	21.95	22.15	0.1641
78	30	90	633666	3504.99	CP-OFDM QPSK	123@61	24.82	25.02	0.3177
78	30	90	633666	3504.99	CP-OFDM QPSK	1@1	25.31	25.51	0.3556
78	30	90	633666	3504.99	CP-OFDM QPSK	1@243	24.94	25.14	0.3266
78	30	100	633334	3504.99	DFT-s-OFDM PI/2 BPSK	135@67	26.76	26.96	0.4966
78	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@1	26.94	27.14	0.5176
78	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@271	26.84	27.04	0.5058
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	135@67	26.66	26.86	0.4853
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@1	26.86	27.06	0.5082
78	30	100	633334	3500.01	DFT-s-OFDM QPSK	1@271	26.88	27.08	0.5105
78	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	135@67	25.74	25.94	0.3926
78	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	1@1	25.81	26.01	0.3990
78	30	100	633334	3500.01	DFT-s-OFDM 16 QAM	1@271	26.08	26.28	0.4246
78	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	135@67	24.16	24.36	0.2729
78	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	1@1	24.21	24.41	0.2761
78	30	100	633334	3500.01	DFT-s-OFDM 64 QAM	1@271	24.09	24.29	0.2685
78	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	135@67	22.17	22.37	0.1726
78	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	1@1	22.32	22.52	0.1786
78	30	100	633334	3500.01	DFT-s-OFDM 256 QAM	1@271	22.17	22.37	0.1726
78	30	100	633334	3500.01	CP-OFDM QPSK	137@68	25.14	25.34	0.3420
78	30	100	633334	3500.01	CP-OFDM QPSK	1@1	25.44	25.64	0.3664
78	30	100	633334	3500.01	CP-OFDM QPSK	1@271	25.42	25.62	0.3648

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0421	**PASS**	NV
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0323	**PASS**	LV
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0165	**PASS**	HV
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0259	**PASS**	-30℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0235	**PASS**	-20℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0361	**PASS**	-10℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0321	**PASS**	0℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0261	**PASS**	10℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0263	**PASS**	20℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0254	**PASS**	30℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0235	**PASS**	40℃
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	0.0252	**PASS**	50℃

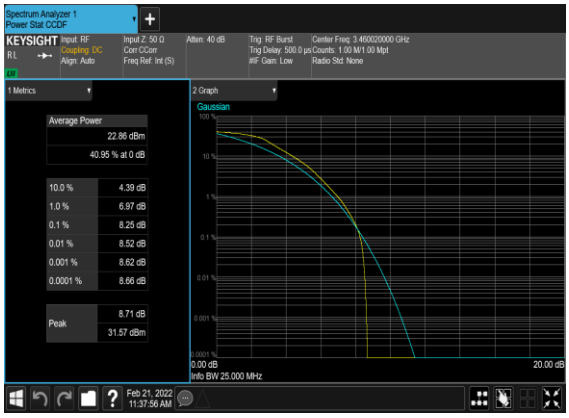
Peak to Average Radio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
78	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	50@0	6.98	13	**PASS**
78	30	20	630668	3460.02	DFT-s-OFDM PI/2 BPSK	1@0	7.94	13	**PASS**
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	50@0	8.25	13	**PASS**
78	30	20	630668	3460.02	DFT-s-OFDM QPSK	1@0	9.41	13	**PASS**
78	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	50@0	6.93	13	**PASS**
78	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	1@0	7.47	13	**PASS**
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	8.32	13	**PASS**
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	1@0	9.43	13	**PASS**
78	30	20	636000	3540.0	DFT-s-OFDM PI/2 BPSK	50@0	7.13	13	**PASS**
78	30	20	636000	3540.0	DFT-s-OFDM PI/2 BPSK	1@0	8.02	13	**PASS**
78	30	20	636000	3540.0	DFT-s-OFDM QPSK	50@0	8.42	13	**PASS**
78	30	20	636000	3540.0	DFT-s-OFDM QPSK	1@0	8.95	13	**PASS**

N78(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH

N78(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH

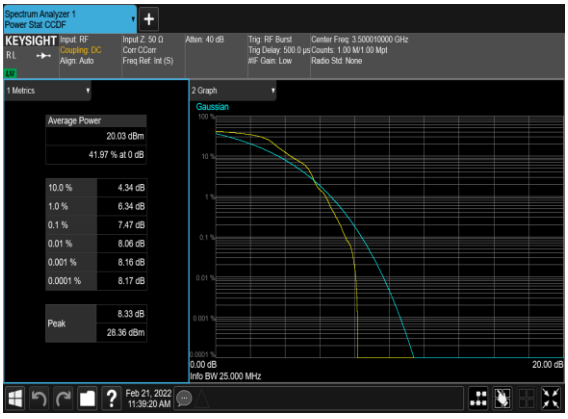
N78(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



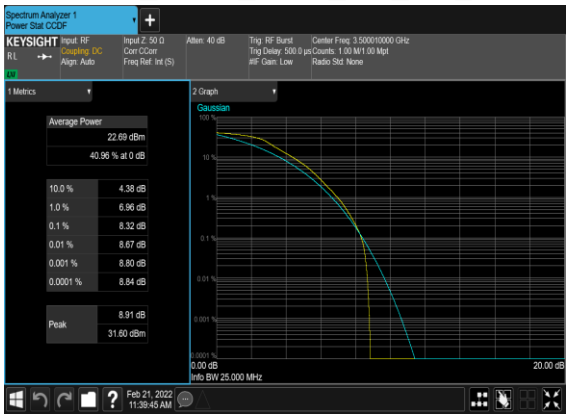
N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

N78(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

N78(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH

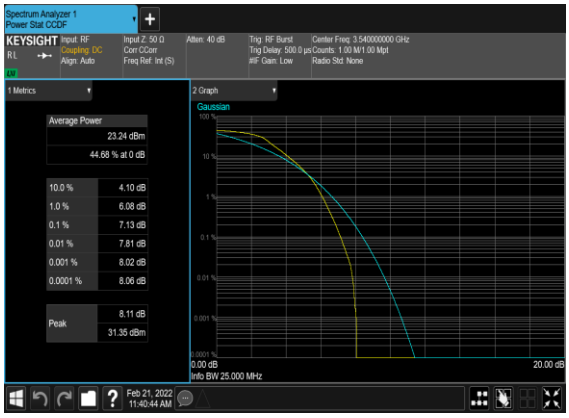


N78(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

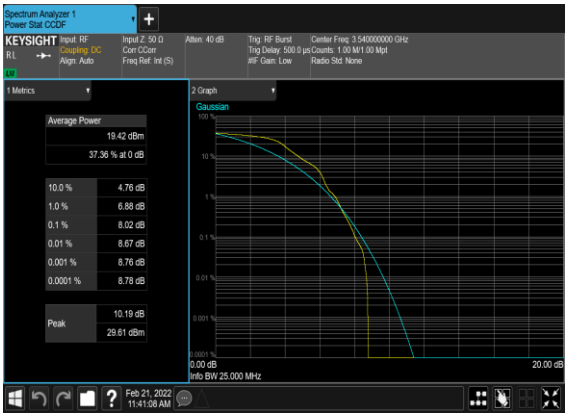


N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

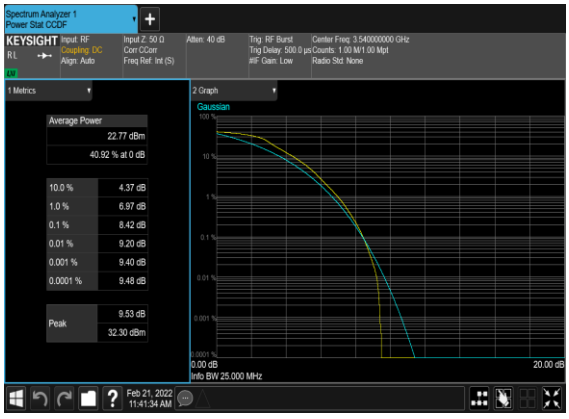
N78(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



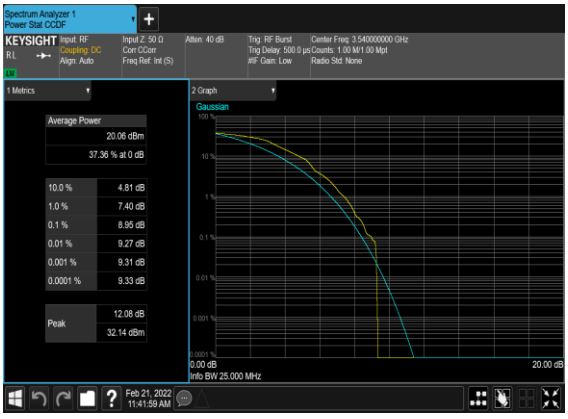
N78(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



N78(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N78(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



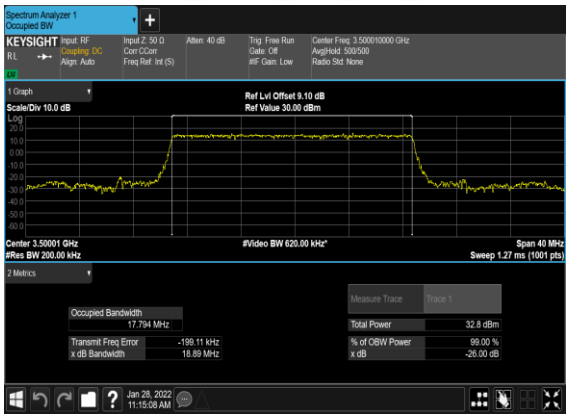
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB OBW (MHz)
78	30	20	633334	3500.01	DFT-s-OFDM PI/2 BPSK	50@0	17.794	18.89
78	30	20	633334	3500.01	DFT-s-OFDM QPSK	50@0	17.834	19.01
78	30	20	633334	3500.01	CP-OFDM QPSK	51@0	18.194	19.48
78	30	20	633334	3500.01	CP-OFDM 16 QAM	51@0	18.254	19.44
78	30	20	633334	3500.01	CP-OFDM 64 QAM	51@0	18.234	19.35
78	30	20	633334	3500.01	CP-OFDM 256 QAM	51@0	18.189	19.32
78	30	30	633334	3500.01	DFT-s-OFDM PI/2 BPSK	75@0	26.757	27.93
78	30	30	633334	3500.01	DFT-s-OFDM QPSK	75@0	26.791	27.91
78	30	30	633334	3500.01	CP-OFDM QPSK	78@0	27.817	29.15
78	30	30	633334	3500.01	CP-OFDM 16 QAM	78@0	27.845	29.19
78	30	30	633334	3500.01	CP-OFDM 64 QAM	78@0	27.848	29.17
78	30	30	633334	3500.01	CP-OFDM 256 QAM	78@0	27.825	29.15
78	30	40	633334	3500.01	DFT-s-OFDM PI/2 BPSK	100@0	35.73	37.22
78	30	40	633334	3500.01	DFT-s-OFDM QPSK	100@0	35.723	37.05
78	30	40	633334	3500.01	CP-OFDM QPSK	106@0	37.901	39.54
78	30	40	633334	3500.01	CP-OFDM 16 QAM	106@0	37.818	39.23
78	30	40	633334	3500.01	CP-OFDM 64 QAM	106@0	37.801	39.36
78	30	40	633334	3500.01	CP-OFDM 256 QAM	106@0	37.807	39.52
78	30	50	633334	3500.01	DFT-s-OFDM PI/2 BPSK	128@0	45.816	47.5
78	30	50	633334	3500.01	DFT-s-OFDM QPSK	128@0	45.733	47.29
78	30	50	633334	3500.01	CP-OFDM QPSK	133@0	47.466	49.17
78	30	50	633334	3500.01	CP-OFDM 16 QAM	133@0	47.479	49.24
78	30	50	633334	3500.01	CP-OFDM 64 QAM	133@0	47.47	49.31
78	30	50	633334	3500.01	CP-OFDM 256 QAM	133@0	47.45	49.12

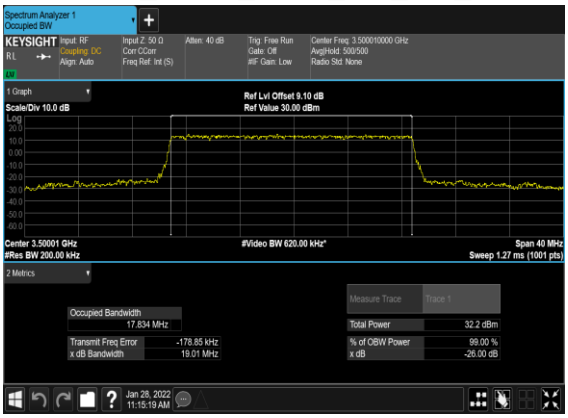
78	30	60	633334	3500.01	DFT-s-OFDM PI/2 BPSK	162@0	57.851	60.05
78	30	60	633334	3500.01	DFT-s-OFDM QPSK	162@0	57.887	59.89
78	30	60	633334	3500.01	CP-OFDM QPSK	162@0	57.779	59.95
78	30	60	633334	3500.01	CP-OFDM 16 QAM	162@0	57.74	59.81
78	30	60	633334	3500.01	CP-OFDM 64 QAM	162@0	57.772	59.93
78	30	60	633334	3500.01	CP-OFDM 256 QAM	162@0	57.793	59.82
78	30	70	633334	3500.01	DFT-s-OFDM PI/2 BPSK	180@0	64.409	66.54
78	30	70	633334	3500.01	DFT-s-OFDM QPSK	180@0	64.325	66.62
78	30	70	633334	3500.01	CP-OFDM QPSK	189@0	67.6	69.75
78	30	70	633334	3500.01	CP-OFDM 16 QAM	189@0	67.419	69.65
78	30	70	633334	3500.01	CP-OFDM 64 QAM	189@0	67.59	69.74
78	30	70	633334	3500.01	CP-OFDM 256 QAM	189@0	67.494	69.60
78	30	80	633334	3500.01	DFT-s-OFDM PI/2 BPSK	216@0	77.123	79.59
78	30	80	633334	3500.01	DFT-s-OFDM QPSK	216@0	77.15	79.64
78	30	80	633334	3500.01	CP-OFDM QPSK	217@0	77.421	79.97
78	30	80	633334	3500.01	CP-OFDM 16 QAM	217@0	77.619	79.99
78	30	80	633334	3500.01	CP-OFDM 64 QAM	217@0	77.526	79.96
78	30	80	633334	3500.01	CP-OFDM 256 QAM	217@0	77.416	79.9
78	30	90	633334	3500.01	DFT-s-OFDM PI/2 BPSK	240@0	85.734	88.43
78	30	90	633334	3500.01	DFT-s-OFDM QPSK	240@0	85.696	88.49
78	30	90	633334	3500.01	CP-OFDM QPSK	245@0	87.52	90.26
78	30	90	633334	3500.01	CP-OFDM 16 QAM	245@0	87.253	90.35
78	30	90	633334	3500.01	CP-OFDM 64 QAM	245@0	87.359	90.23
78	30	90	633334	3500.01	CP-OFDM 256 QAM	245@0	87.549	90.3
78	30	100	633334	3500.01	DFT-s-OFDM PI/2 BPSK	270@0	96.429	99.5
78	30	100	633334	3500.01	DFT-s-OFDM	270@0	96.433	99.46

					QPSK			
78	30	100	633334	3500.01	CP-OFDM QPSK	273@0	97.353	100.5
78	30	100	633334	3500.01	CP-OFDM 16 QAM	273@0	97.503	100.5
78	30	100	633334	3500.01	CP-OFDM 64 QAM	273@0	97.22	100.5
78	30	100	633334	3500.01	CP-OFDM 256 QAM	273@0	97.604	100.6

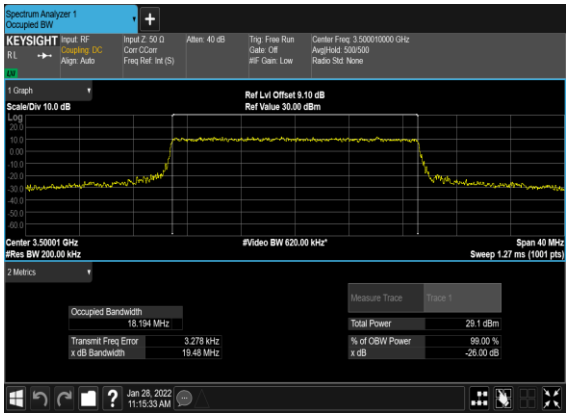
N78(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



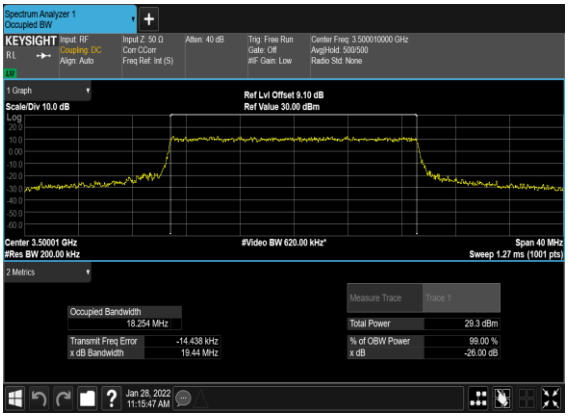
N78(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N78(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

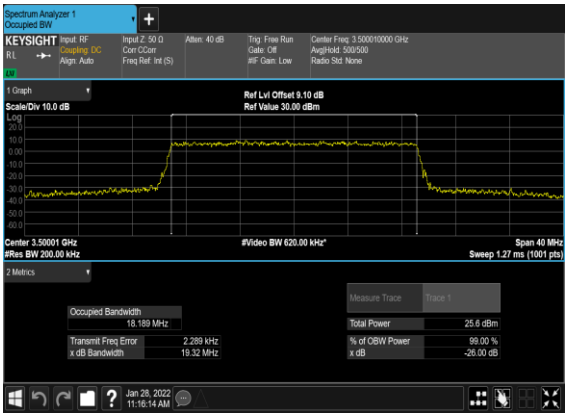


N78(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

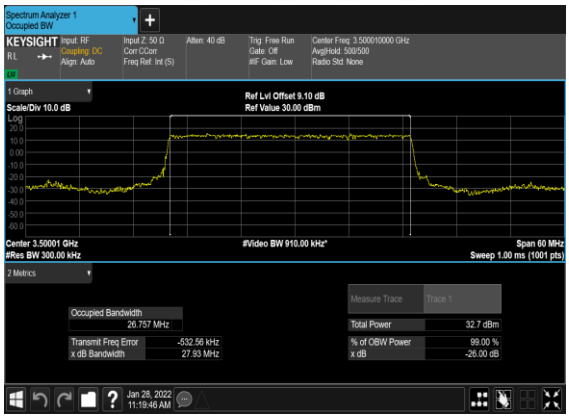


N78(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N78(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

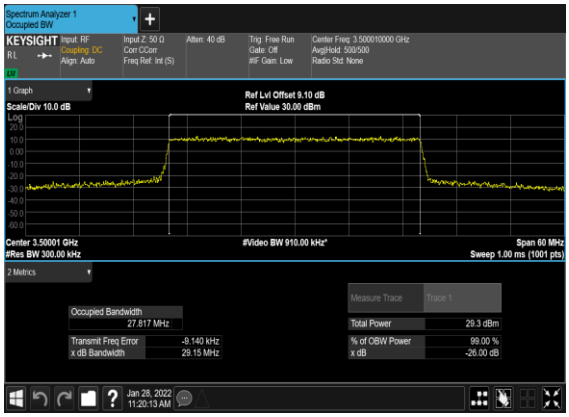


N78(30M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

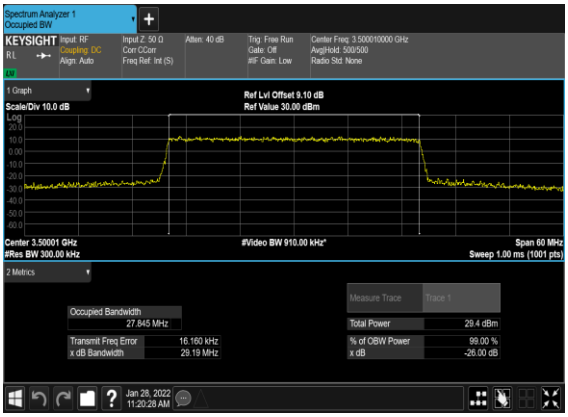


N78(30M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

N78(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

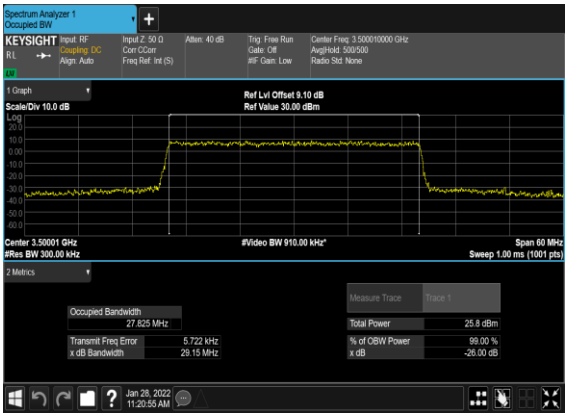


N78(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

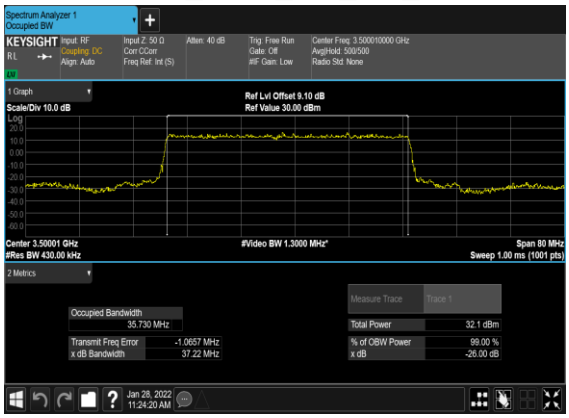


N78(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

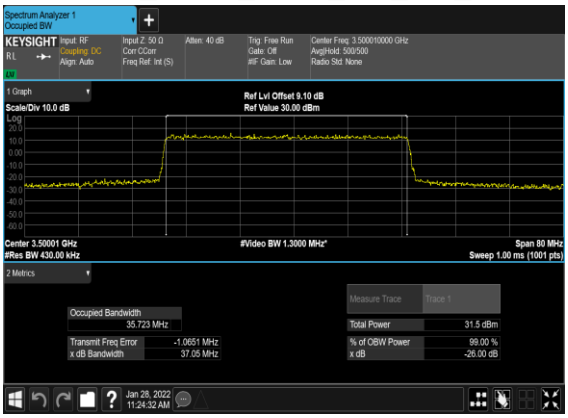
N78(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



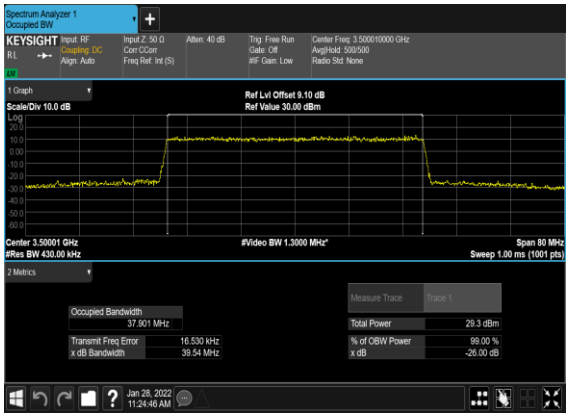
N78(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



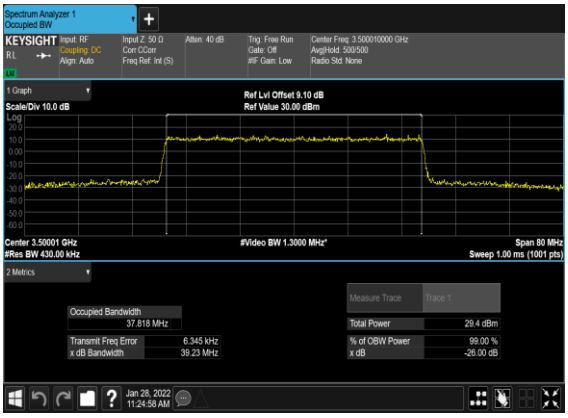
N78(40M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



N78(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

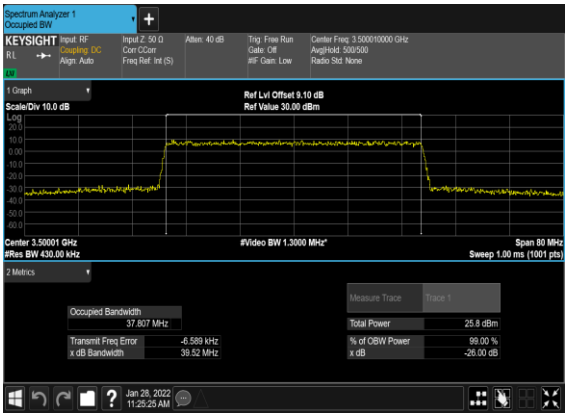


N78(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

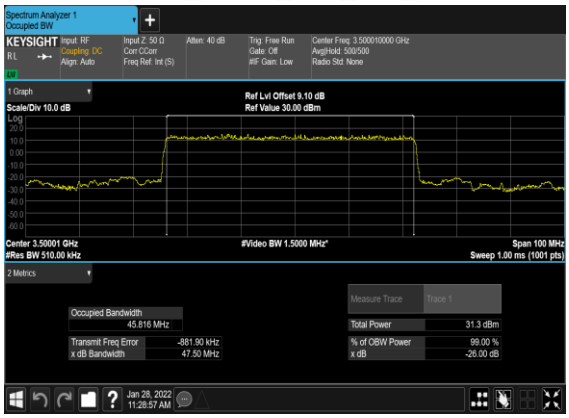


N78(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N78(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

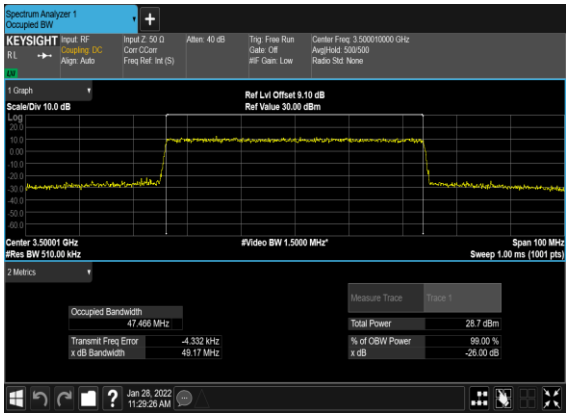


N78(50M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

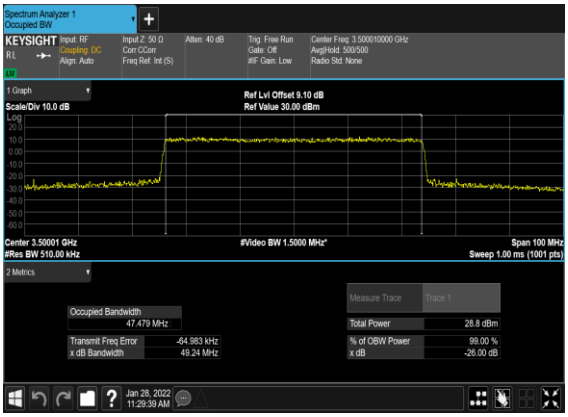


N78(50M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

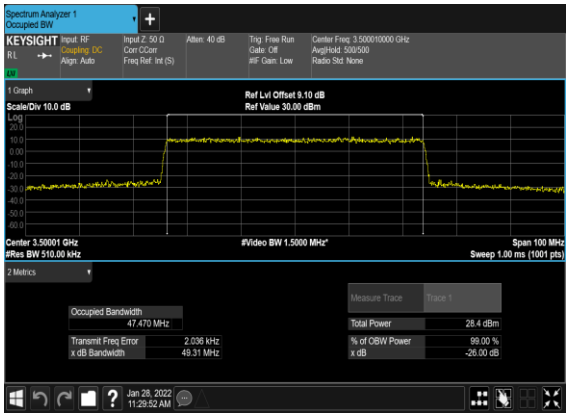
N78(50M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



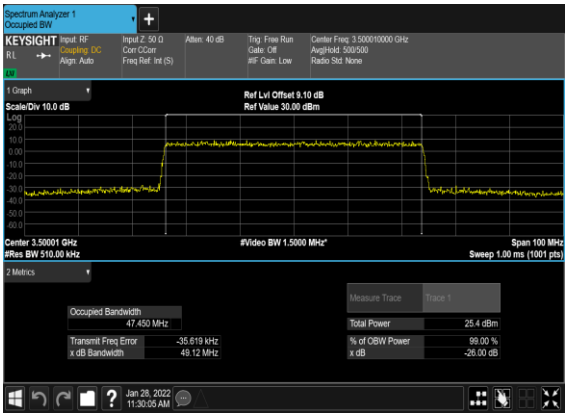
N78(50M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



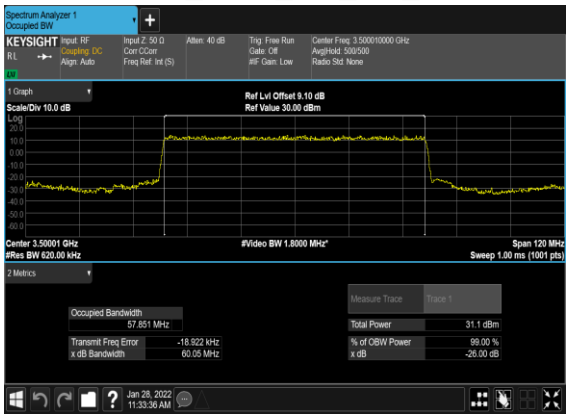
N78(50M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



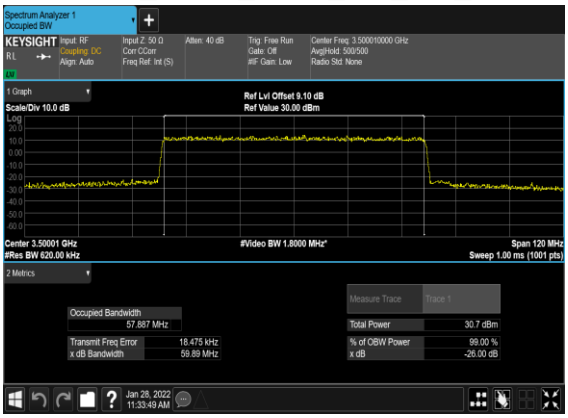
N78(50M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



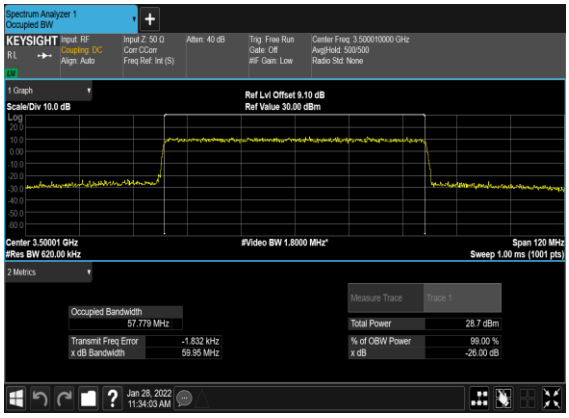
N78(60M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



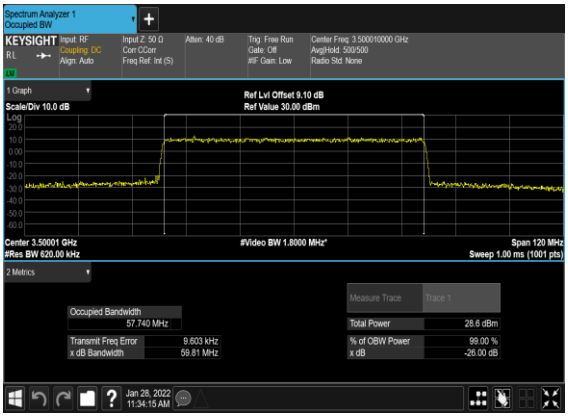
N78(60M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



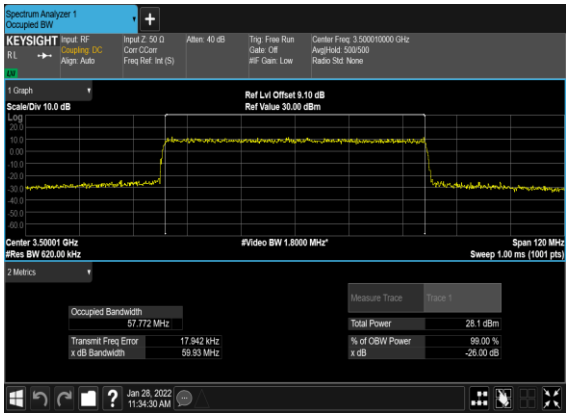
N78(60M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



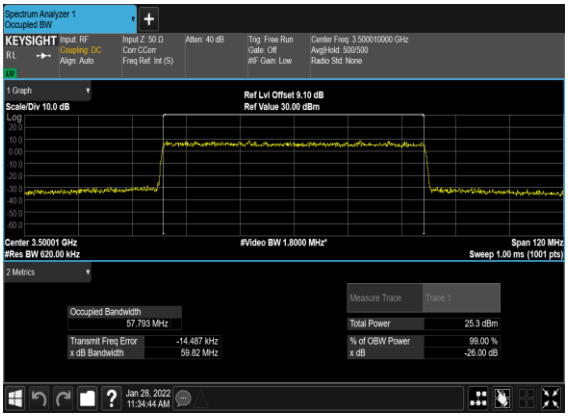
N78(60M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



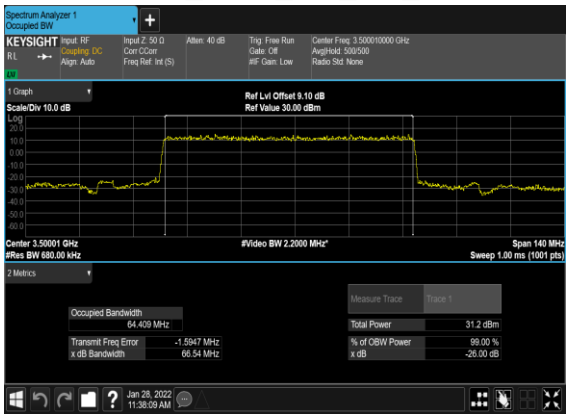
N78(60M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



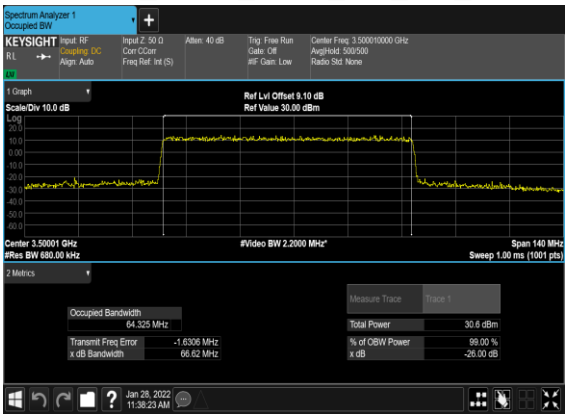
N78(60M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



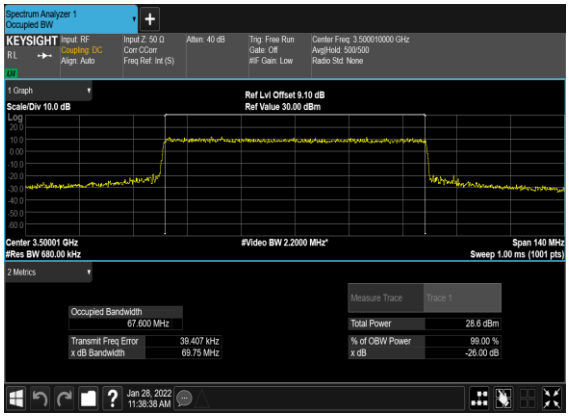
N78(70M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



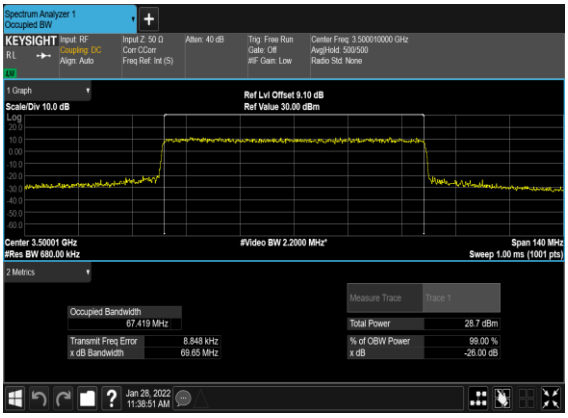
N78(70M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



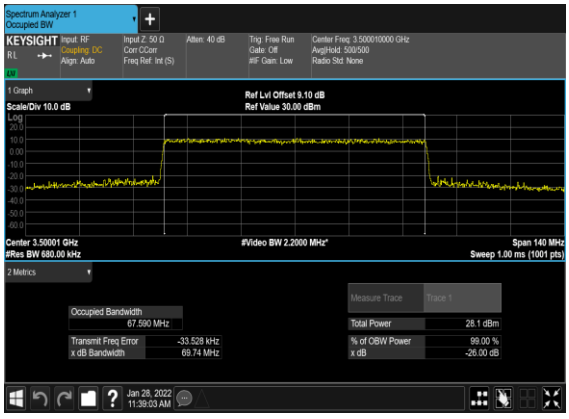
N78(70M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N78(70M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



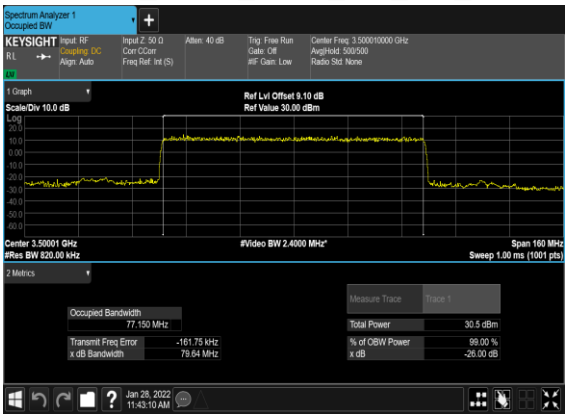
N78(70M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



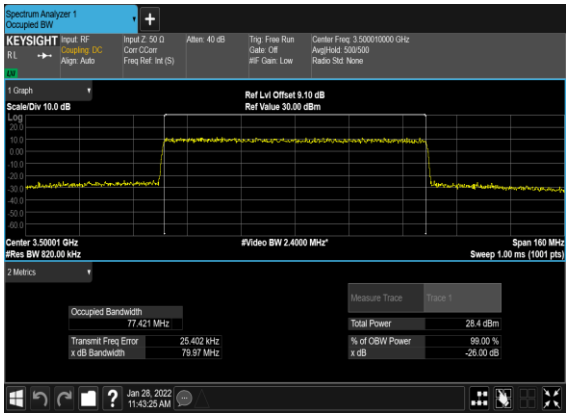
N78(70M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N78(80M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

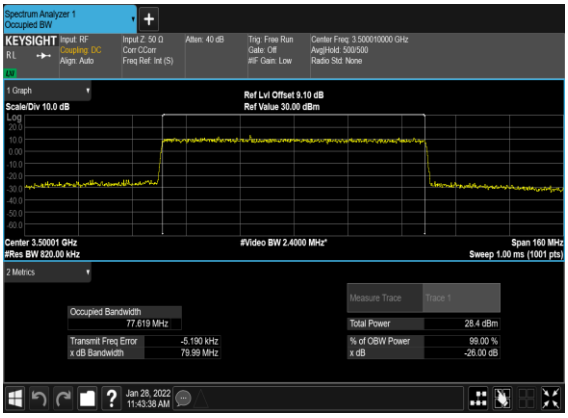
N78(80M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



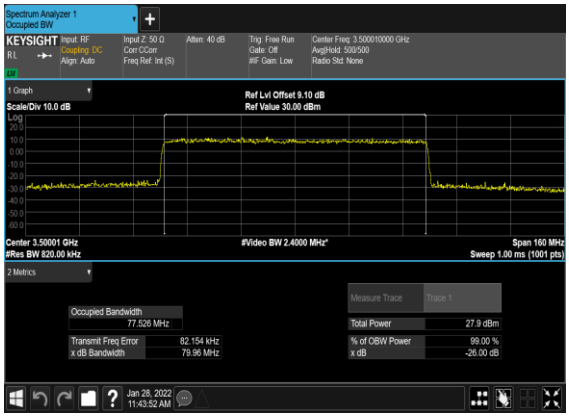
N78(80M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



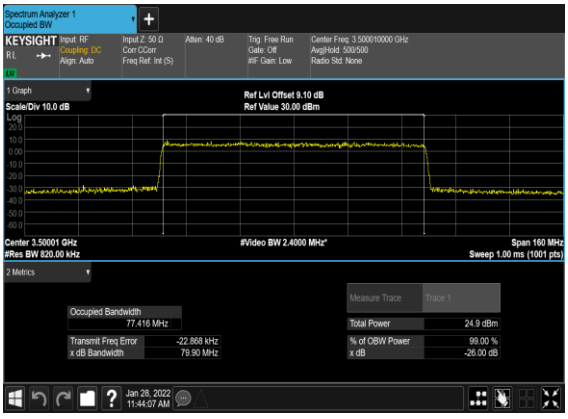
N78(80M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N78(80M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



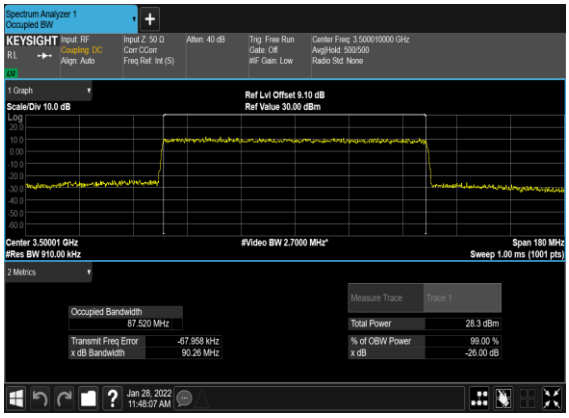
N78(80M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



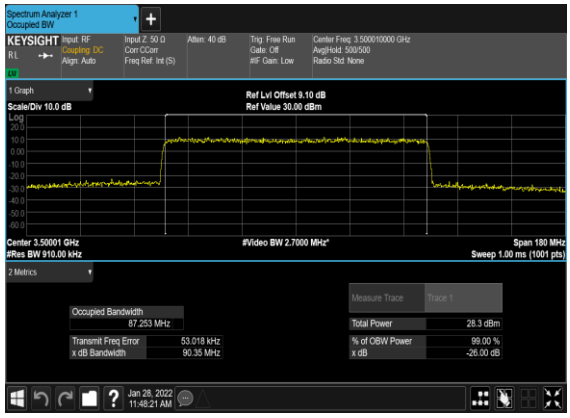
N78(90M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

N78(90M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

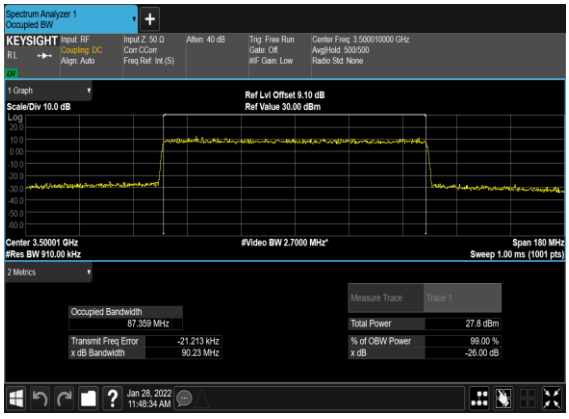
N78(90M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N78(90M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N78(90M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N78(90M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH