FCC RF Test Report

APPLICANT	: Motorola Mobility LLC
EQUIPMENT	: Mobile Cellular Phone
BRAND NAME	: Motorola
MODEL NAME	: XT2519-1, XT2519-2, XT2519V
FCC ID	: IHDT56AU6
STANDARD	: 47 CFR Part 27 Subpart O (3700-3980MHz)
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	: Jan. 17, 2025 ~ Feb 19, 2025

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

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

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG510740T	Rev. 01	Initial issue of report	Mar. 07, 2025

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	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	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §27.53(l)(2)	Conducted Spurious Emission	< 43+10log10(P[Watts])	PASS	-
3.9	§27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(l)(2)	Radiated Spurious Emission	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 4.31 dB at 11376.00 MHz

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

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	XT2519-1, XT2519-2, XT2519V
FCC ID	IHDT56AU6
IMEI Code	Conducted: 355782390039091/355782390039109 Radiation: 355782390037798/355782390037806
HW Version	DVT2
SW Version	V2VD35.27
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The different model name is different for market purpose.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency	5G NR n77: 3700 MHz ~ 3980 MHz 5G NR n78: 3700 MHz ~ 3800 MHz
SCS	30kHz
Bandwidth	n77/n78: 10 / 15 / 20 / 25 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100MHz
Antenna Gain	**<Ant. 2>** 5G NR n77: -4.5 dBi 5G NR n78: -4.5 dBi **<Ant. 4>** 5G NR n77: -5.3 dBi 5G NR n78: -5.3 dBi **<Ant. 6>** 5G NR n77: -4.9 dBi 5G NR n78: -4.9 dBi **<Ant. 7>** 5G NR n77: -5.0 dBi

	5G NR n78: -5.0 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum EIRP is calculated from max output power and max antenna gain, only the maximum EIRP is shown in the report, 5G NR n77/n78 for Antenna 2 and n77/n78_UL MIMO for Ant(2+6).
2. 5G NR n77/n78 support SA and NSA mode.
3. The device supports two PAs for 5G NR n77/n78 (main PA and other PA), both the PAs are full tested, only the worst EIRP are shown in the report. According to the maximum power between SA and NSA mode, SA covers NSA mode for main PA, and NSA covers SA mode for other PA.
4. 5G NR n77/n78 supports UL MIMO mode for Ant.(4+7)/Ant.(2+7)/Ant.(4+6)/Ant.(2+6), only the worst test data of Ant.(2+6) is shown in the report.
5. 5G NR n77 Single Carrier supports PC2 and UL MIMO mode supports PC1.5.
6. 5G NR n78 Single Carrier supports PC2 and UL MIMO mode supports PC2.
7. MIMO Antenna gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ /2].
8. For UL MIMO mode, the conducted BE/Spurious are tested at single antenna port and add 10*log(N_{ANT}) according to KDB 662911 D01.
9. All the supported EN-DC combinations are verified conducted power, only the EN-DC combination with highest power are shown in the report.
10. The EN-DC mode combination could be referred to the product spec.

1.5 Specification of Accessory

Specification of Accessory				
Battery	**Brand Name**	Motorola(ATL)	**Model Name**	RM52
USB Cable 1	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D86731
USB Cable 2	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18E08103

1.6 Modification of EUT

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

1.7 Maximum EIRP and Emission Designator

5G NR n77 SA		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3975.00	0.1496	8M57G7D	0.1143	8M59W7D
15	3705.52 ~ 3972.48	0.1439	13M6G7D	0.1130	13M6W7D
20	3710.01 ~ 3969.99	0.1483	18M3G7D	0.1140	18M2W7D
25	3712.50 ~ 3967.50	0.1445	23M2G7D	0.1132	23M3W7D
30	3715.02 ~ 3964.98	0.1455	27M8G7D	0.1127	27M8W7D
40	3720.00 ~ 3960.00	0.1462	37M9G7D	0.1156	37M9W7D
50	3725.01 ~ 3954.99	0.1452	47M4G7D	0.1140	47M6W7D
60	3730.02 ~ 3949.98	0.1455	57M7G7D	0.1130	58M0W7D
70	3735.00 ~ 3945.00	0.1486	67M5G7D	0.1189	67M6W7D
80	3740.01 ~ 3939.99	0.1503	77M4G7D	0.1151	77M7W7D
90	3745.02 ~ 3934.98	0.1469	87M5G7D	0.1138	87M6W7D
100	3750.00 ~ 3930.00	0.1542	97M4G7D	0.1159	97M6W7D

5G NR n78 SA		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3795.00	0.1449	8M57G7D	0.1189	8M59W7D
15	3707.52 ~ 3792.48	0.1449	13M6G7D	0.1159	13M6W7D
20	3710.01 ~ 3789.99	0.1445	18M3G7D	0.1159	18M2W7D
25	3712.50 ~ 3787.50	0.1393	23M2G7D	0.1140	23M3W7D
30	3715.02 ~ 3784.98	0.1432	27M8G7D	0.1159	27M8W7D
40	3720.00 ~ 3780.00	0.1439	37M9G7D	0.1167	37M9W7D
50	3725.01 ~ 3774.99	0.1432	47M4G7D	0.1151	47M6W7D
60	3730.02 ~ 3769.98	0.1422	57M7G7D	0.1146	58M0W7D
70	3735.00 ~ 3765.00	0.1462	67M5G7D	0.1199	67M6W7D
80	3740.01 ~ 3759.99	0.1472	77M4G7D	0.1213	77M7W7D
90	3745.02 ~ 3754.98	0.1435	87M5G7D	0.1189	87M6W7D
100	3750.00 ~ 3750.00	0.1489	97M4G7D	0.1180	97M6W7D

5G NR n77 UL MIMO		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3975.00	0.5248	8M58G7D	0.4365	8M59W7D
15	3705.52 ~ 3972.48	0.5070	13M6G7D	0.4236	13M6W7D
20	3710.01 ~ 3969.99	0.5047	18M2G7D	0.4178	18M2W7D
25	3712.50 ~ 3967.50	0.4775	23M2G7D	0.4036	23M3W7D
30	3715.02 ~ 3964.98	0.4808	27M8G7D	0.4093	27M8W7D
40	3720.00 ~ 3960.00	0.4688	37M8G7D	0.3945	37M9W7D
50	3725.01 ~ 3954.99	0.4677	47M5G7D	0.3864	47M6W7D
60	3730.02 ~ 3949.98	0.4550	57M8G7D	0.3873	57M8W7D
70	3735.00 ~ 3945.00	0.4677	67M5G7D	0.3981	67M5W7D
80	3740.01 ~ 3939.99	0.4775	77M6G7D	0.4046	77M5W7D
90	3745.02 ~ 3934.98	0.4571	87M6G7D	0.3741	87M7W7D
100	3750.00 ~ 3930.00	0.5284	97M4G7D	0.4266	97M6W7D

5G NR n78 UL MIMO		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3795.00	0.3097	8M58G7D	0.2518	8M59W7D
15	3707.52 ~ 3792.48	0.3055	13M6G7D	0.2455	13M6W7D
20	3710.01 ~ 3789.99	0.3055	18M2G7D	0.2443	18M2W7D
25	3712.50 ~ 3787.50	0.2985	23M2G7D	0.2438	23M3W7D
30	3715.02 ~ 3784.98	0.3048	27M8G7D	0.2518	27M8W7D
40	3720.00 ~ 3780.00	0.3041	37M8G7D	0.2438	37M9W7D
50	3725.01 ~ 3774.99	0.3062	47M5G7D	0.2483	47M6W7D
60	3730.02 ~ 3769.98	0.2965	57M8G7D	0.2438	57M8W7D
70	3735.00 ~ 3765.00	0.3155	67M5G7D	0.2612	67M5W7D
80	3740.01 ~ 3759.99	0.3141	77M6G7D	0.2594	77M5W7D
90	3745.02 ~ 3754.98	0.3184	87M6G7D	0.2559	87M7W7D
100	3750.00 ~ 3750.00	0.3228	97M4G7D	0.2594	97M6W7D

Note:

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

1.8 Testing Location

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

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-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	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH03-SZ	CN1256	421272

Test data subcontracted: Radiated Spurious Emission test case in section 4 of this report

1.9 Test Software

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

1.10 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

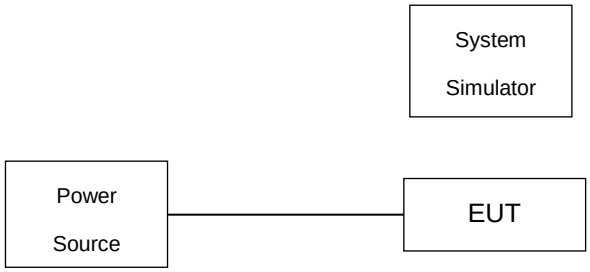
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

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

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

Test Items	5G NR	Bandwidth (MHz)										Modulation					RB #			Test Channel		
		10	15	20	25	30	40	50	60	70~90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Partial	Full	L	M	H
Max. Output Power	n77	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	n78	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	n77			v								v	v				v		v		v	
26dB and 99% Bandwidth	n77	v	v	v	v	v	v	v	v	v	v		v	v	v	v			v		v	
Conducted Band Edge	n77	v						v			v	v	v				v		v	v		v
Conducted Spurious Emission	n77	v						v			v	v	v				v			v	v	v
Frequency Stability	n77			v									v						v		v	
E.I.R.P	n77	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	n78	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	n77	Worst Case																		v	v	v
Note	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. Frequency Stability：Normal Voltage = 3.91V; Low Voltage =3.6V; High Voltage =4.5V.																					

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.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 8.9 dB.

Example :

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

= 8.9 (dB)

2.5 Frequency List of Low/Middle/High Channels

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

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

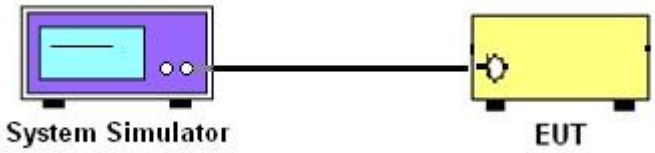
3 Conducted Test Items

3.1 Measuring Instruments

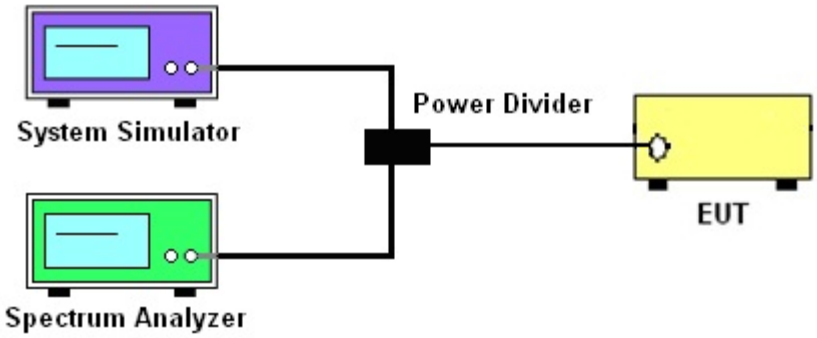
See list of measuring instruments of this test report.

3.2 Test Setup

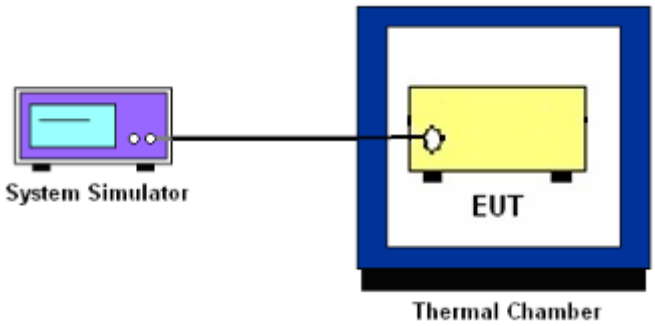
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and EIRP

3.4.1 Description of the Conducted Output Power Measurement and EIRP Measurement

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

The EIRP of 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.

1. The testing follows ANSI C63.26 Section 5.2.6 (PAPR).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set EUT in maximum power output.
4. Set the RBW = 1MHz, VBW = 3MHz, Detector = Peak, Trace mode = max hold, Set span ≥ 2 × OBW in spectrum analyzer.
5. Set the RBW = 1MHz, VBW = 3MHz, Detector = power averaging, Trace mode = max hold, Set span ≥ 2 × OBW in spectrum analyzer.
6. Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission.
7. PAPR (dB) = P_{Pk} (dBm) − P_{Avg} (dBm)
   where
   PAPR peak-to-average power ratio, in dB
   P_{Pk} measured peak power level, in dBm
   P_{Avg} measured average power level, in dBm
8. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 Test Procedures

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

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

27.53(l)(2)

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

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used (generally limited to no less than 1% of the OBW) and the measured power was integrated over the full required measurement bandwidth.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.
   Example:
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

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

3.8.2 Test Procedures

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

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

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

3.9.2 Test Procedures for Temperature Variation

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

3.9.3 Test Procedures for Voltage Variation

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

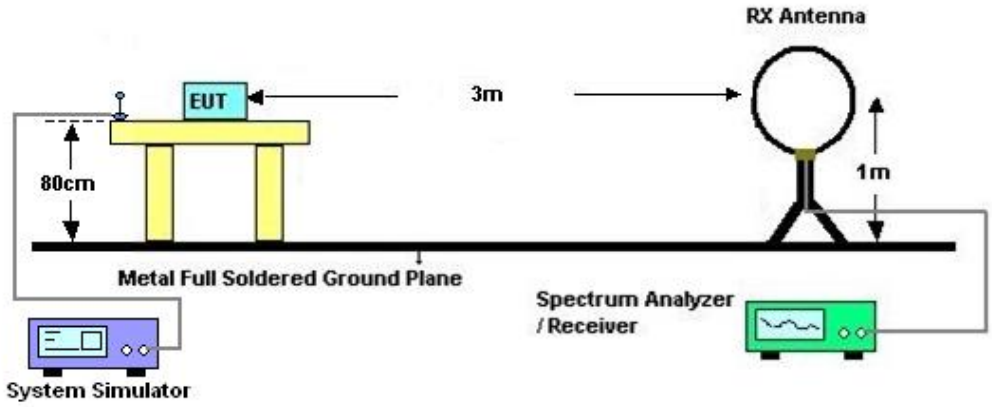
4 Radiated Test Items

4.1 Measuring Instruments

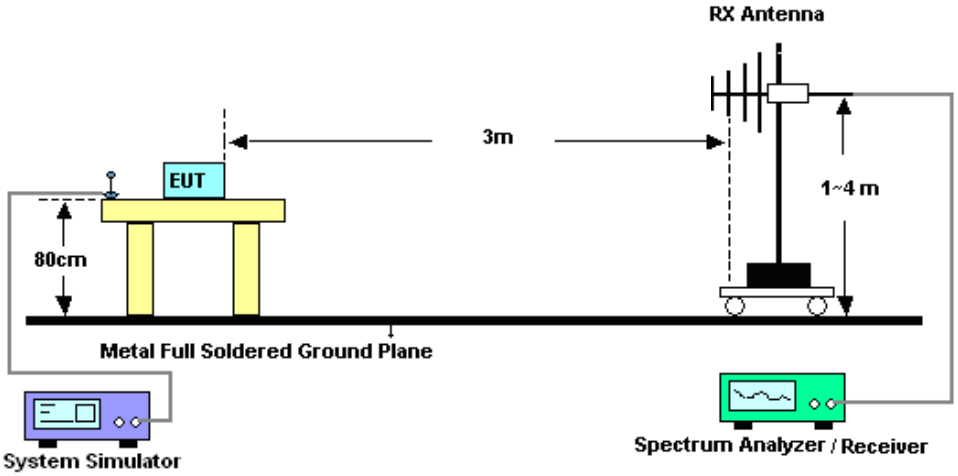
See list of measuring instruments of this test report.

4.2 Test Setup

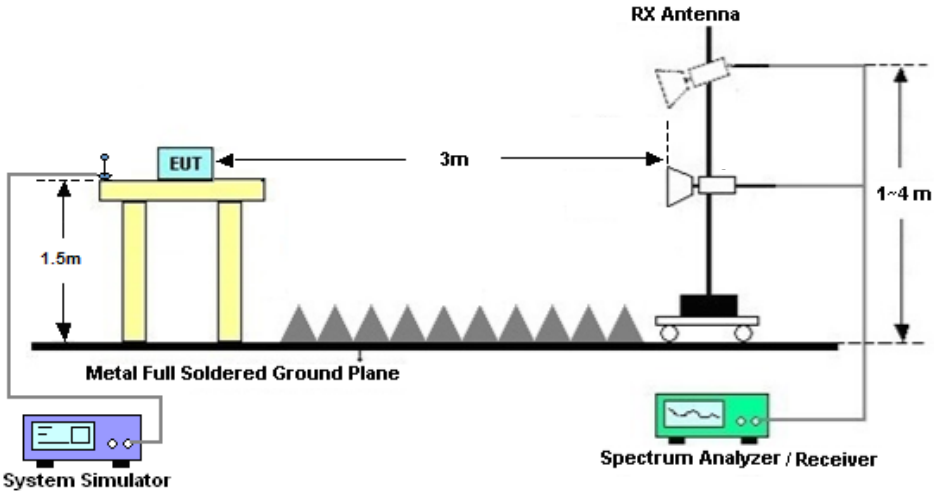
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

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

4.4.2 Test Procedures

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

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Jan. 17, 2025~ Feb. 14, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Jan. 17, 2025~ Feb. 14, 2025	NCR	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H20140114 40	-40~+150°C 20%~95%RH	Jul. 04, 2024	Jan. 17, 2025~ Feb. 14, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 09, 2024	Feb. 19, 2025	Apr. 08, 2025	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Feb. 19, 2025	Dec. 27, 2025	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 09, 2024	Feb. 19, 2025	Apr. 08, 2025	Radiation (03CH03-SZ
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 20, 2023	Feb. 19, 2025	Aug. 19, 2025	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 09, 2024	Feb. 19, 2025	Apr. 08, 2025	Radiation (03CH03-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 09, 2024	Feb. 19, 2025	Apr. 08,2025	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Feb. 19, 2025	Jul.02, 2025	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Feb. 19, 2025	Apr. 08, 2025	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010002729	N/A	Oct. 18, 2024	Feb. 19, 2025	Oct. 17, 2025	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 19, 2025	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 19, 2025	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

6 Measurement Uncertainty

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

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.90 dB
Frequency Stability	±0.04ppm

Uncertainty of Radiated Emission Measurement (30MHz~1GHz)

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.6 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.8 dB

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Khan Zheng	**Temperature :**	22~23℃
		Relative Humidity :	40~42%

Software Version: 23.06.1602

FR1 N77 Ant.2

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

NR Band	SCS	BandWidth	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
77	30	10	647000	3705	DFT-s-OFDM QPSK	12@6	25.85	21.35	0.1365
77	30	10	647000	3705	DFT-s-OFDM QPSK	1@1	25.86	21.36	0.1368
77	30	10	647000	3705	DFT-s-OFDM QPSK	1@22	25.85	21.35	0.1365
77	30	10	647000	3705	DFT-s-OFDM 16 QAM	12@6	24.41	19.91	0.0979
77	30	10	647000	3705	DFT-s-OFDM 16 QAM	1@1	24.44	19.94	0.0986
77	30	10	647000	3705	DFT-s-OFDM 16 QAM	1@22	24.38	19.88	0.0973
77	30	10	656000	3840	DFT-s-OFDM QPSK	12@6	25.9	21.4	0.1380
77	30	10	656000	3840	DFT-s-OFDM QPSK	1@1	26.05	21.55	0.1429
77	30	10	656000	3840	DFT-s-OFDM QPSK	1@22	25.97	21.47	0.1403
77	30	10	656000	3840	DFT-s-OFDM 16 QAM	12@6	24.41	19.91	0.0979
77	30	10	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.42	19.92	0.0982
77	30	10	656000	3840	DFT-s-OFDM 16 QAM	1@22	24.39	19.89	0.0975
77	30	10	665000	3975	DFT-s-OFDM QPSK	12@6	26.25	21.75	0.1496
77	30	10	665000	3975	DFT-s-OFDM QPSK	1@1	26.21	21.71	0.1483
77	30	10	665000	3975	DFT-s-OFDM QPSK	1@22	26.2	21.7	0.1479
77	30	10	665000	3975	DFT-s-OFDM 16 QAM	12@6	25.05	20.55	0.1135
77	30	10	665000	3975	DFT-s-OFDM 16 QAM	1@1	25.06	20.56	0.1138
77	30	10	665000	3975	DFT-s-OFDM 16 QAM	1@22	25.08	20.58	0.1143
77	30	15	647168	3707.52	DFT-s-OFDM QPSK	18@9	26	21.5	0.1413
77	30	15	647168	3707.52	DFT-s-OFDM QPSK	1@1	25.9	21.4	0.1380
77	30	15	647168	3707.52	DFT-s-OFDM QPSK	1@36	25.9	21.4	0.1380
77	30	15	647168	3707.52	DFT-s-OFDM 16 QAM	18@9	24.44	19.94	0.0986
77	30	15	647168	3707.52	DFT-s-OFDM 16 QAM	1@1	24.44	19.94	0.0986
77	30	15	647168	3707.52	DFT-s-OFDM 16 QAM	1@36	24.34	19.84	0.0964
77	30	15	656000	3840	DFT-s-OFDM QPSK	18@9	25.94	21.44	0.1393
77	30	15	656000	3840	DFT-s-OFDM QPSK	1@1	26.08	21.58	0.1439
77	30	15	656000	3840	DFT-s-OFDM QPSK	1@36	26	21.5	0.1413
77	30	15	656000	3840	DFT-s-OFDM 16 QAM	18@9	24.38	19.88	0.0973
77	30	15	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.45	19.95	0.0989
77	30	15	656000	3840	DFT-s-OFDM 16 QAM	1@36	24.43	19.93	0.0984
77	30	15	664832	3972.48	DFT-s-OFDM QPSK	18@9	26.08	21.58	0.1439
77	30	15	664832	3972.48	DFT-s-OFDM QPSK	1@1	25.98	21.48	0.1406
77	30	15	664832	3972.48	DFT-s-OFDM QPSK	1@36	26.08	21.58	0.1439
77	30	15	664832	3972.48	DFT-s-OFDM 16 QAM	18@9	25.03	20.53	0.1130

77	30	15	664832	3972.48	DFT-s-OFDM 16 QAM	1@1	24.87	20.37	0.1089
77	30	15	664832	3972.48	DFT-s-OFDM 16 QAM	1@36	25.02	20.52	0.1127
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	25@12	26.03	21.53	0.1422
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@1	25.83	21.33	0.1358
77	30	20	647334	3710.01	DFT-s-OFDM QPSK	1@49	25.82	21.32	0.1355
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	25@12	24.39	19.89	0.0975
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@1	24.33	19.83	0.0962
77	30	20	647334	3710.01	DFT-s-OFDM 16 QAM	1@49	24.29	19.79	0.0953
77	30	20	656000	3840	DFT-s-OFDM QPSK	25@12	26.1	21.6	0.1445
77	30	20	656000	3840	DFT-s-OFDM QPSK	1@1	26.09	21.59	0.1442
77	30	20	656000	3840	DFT-s-OFDM QPSK	1@49	26.02	21.52	0.1419
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	25@12	24.44	19.94	0.0986
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.49	19.99	0.0998
77	30	20	656000	3840	DFT-s-OFDM 16 QAM	1@49	24.37	19.87	0.0971
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	25@12	26.21	21.71	0.1483
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@1	25.99	21.49	0.1409
77	30	20	664666	3969.99	DFT-s-OFDM QPSK	1@49	26.2	21.7	0.1479
77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	25@12	25.06	20.56	0.1138
77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@1	24.91	20.41	0.1099
77	30	20	664666	3969.99	DFT-s-OFDM 16 QAM	1@49	25.07	20.57	0.1140
77	30	25	647500	3712.5	DFT-s-OFDM QPSK	32@16	25.77	21.27	0.1340
77	30	25	647500	3712.5	DFT-s-OFDM QPSK	1@1	25.78	21.28	0.1343
77	30	25	647500	3712.5	DFT-s-OFDM QPSK	1@63	25.7	21.2	0.1318
77	30	25	647500	3712.5	DFT-s-OFDM 16 QAM	32@16	24.24	19.74	0.0942
77	30	25	647500	3712.5	DFT-s-OFDM 16 QAM	1@1	24.31	19.81	0.0957
77	30	25	647500	3712.5	DFT-s-OFDM 16 QAM	1@63	24.18	19.68	0.0929
77	30	25	656000	3840	DFT-s-OFDM QPSK	32@16	26.08	21.58	0.1439
77	30	25	656000	3840	DFT-s-OFDM QPSK	1@1	25.94	21.44	0.1393
77	30	25	656000	3840	DFT-s-OFDM QPSK	1@63	25.9	21.4	0.1380
77	30	25	656000	3840	DFT-s-OFDM 16 QAM	32@16	24.42	19.92	0.0982
77	30	25	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.39	19.89	0.0975
77	30	25	656000	3840	DFT-s-OFDM 16 QAM	1@63	24.36	19.86	0.0968
77	30	25	664500	3967.5	DFT-s-OFDM QPSK	32@16	26.1	21.6	0.1445
77	30	25	664500	3967.5	DFT-s-OFDM QPSK	1@1	25.84	21.34	0.1361
77	30	25	664500	3967.5	DFT-s-OFDM QPSK	1@63	26.09	21.59	0.1442
77	30	25	664500	3967.5	DFT-s-OFDM 16 QAM	32@16	25.04	20.54	0.1132
77	30	25	664500	3967.5	DFT-s-OFDM 16 QAM	1@1	24.94	20.44	0.1107
77	30	25	664500	3967.5	DFT-s-OFDM 16 QAM	1@63	25.02	20.52	0.1127
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	36@18	25.81	21.31	0.1352
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	1@1	25.84	21.34	0.1361
77	30	30	647668	3715.02	DFT-s-OFDM QPSK	1@76	25.72	21.22	0.1324

77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	36@18	24.31	19.81	0.0957
77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	1@1	24.3	19.8	0.0955
77	30	30	647668	3715.02	DFT-s-OFDM 16 QAM	1@76	24.18	19.68	0.0929
77	30	30	656000	3840	DFT-s-OFDM QPSK	36@18	26.13	21.63	0.1455
77	30	30	656000	3840	DFT-s-OFDM QPSK	1@1	26.09	21.59	0.1442
77	30	30	656000	3840	DFT-s-OFDM QPSK	1@76	26.01	21.51	0.1416
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	36@18	24.45	19.95	0.0989
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.51	20.01	0.1002
77	30	30	656000	3840	DFT-s-OFDM 16 QAM	1@76	24.41	19.91	0.0979
77	30	30	664332	3964.98	DFT-s-OFDM QPSK	36@18	26.03	21.53	0.1422
77	30	30	664332	3964.98	DFT-s-OFDM QPSK	1@1	25.99	21.49	0.1409
77	30	30	664332	3964.98	DFT-s-OFDM QPSK	1@76	26.1	21.6	0.1445
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	36@18	24.92	20.42	0.1102
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@1	24.84	20.34	0.1081
77	30	30	664332	3964.98	DFT-s-OFDM 16 QAM	1@76	25.02	20.52	0.1127
77	30	40	648000	3720	DFT-s-OFDM QPSK	50@25	25.83	21.33	0.1358
77	30	40	648000	3720	DFT-s-OFDM QPSK	1@1	25.81	21.31	0.1352
77	30	40	648000	3720	DFT-s-OFDM QPSK	1@104	25.61	21.11	0.1291
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	50@25	24.26	19.76	0.0946
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@1	24.33	19.83	0.0962
77	30	40	648000	3720	DFT-s-OFDM 16 QAM	1@104	24.17	19.67	0.0927
77	30	40	656000	3840	DFT-s-OFDM QPSK	50@25	26.12	21.62	0.1452
77	30	40	656000	3840	DFT-s-OFDM QPSK	1@1	26	21.5	0.1413
77	30	40	656000	3840	DFT-s-OFDM QPSK	1@104	26.01	21.51	0.1416
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	50@25	24.48	19.98	0.0995
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.46	19.96	0.0991
77	30	40	656000	3840	DFT-s-OFDM 16 QAM	1@104	24.41	19.91	0.0979
77	30	40	664000	3960	DFT-s-OFDM QPSK	50@25	26.06	21.56	0.1432
77	30	40	664000	3960	DFT-s-OFDM QPSK	1@1	25.85	21.35	0.1365
77	30	40	664000	3960	DFT-s-OFDM QPSK	1@104	26.15	21.65	0.1462
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	50@25	25.01	20.51	0.1125
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	1@1	24.87	20.37	0.1089
77	30	40	664000	3960	DFT-s-OFDM 16 QAM	1@104	25.13	20.63	0.1156
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	64@32	25.86	21.36	0.1368
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@1	25.92	21.42	0.1387
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@131	25.7	21.2	0.1318
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	64@32	24.31	19.81	0.0957
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@1	24.36	19.86	0.0968
77	30	50	648334	3725.01	DFT-s-OFDM 16 QAM	1@131	24.21	19.71	0.0935
77	30	50	656000	3840	DFT-s-OFDM QPSK	64@32	26.12	21.62	0.1452
77	30	50	656000	3840	DFT-s-OFDM QPSK	1@1	26.04	21.54	0.1426

77	30	50	656000	3840	DFT-s-OFDM QPSK	1@131	26.03	21.53	0.1422
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	64@32	24.49	19.99	0.0998
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.5	20	0.1000
77	30	50	656000	3840	DFT-s-OFDM 16 QAM	1@131	24.36	19.86	0.0968
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	64@32	25.98	21.48	0.1406
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@1	25.66	21.16	0.1306
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@131	25.97	21.47	0.1403
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	64@32	24.91	20.41	0.1099
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@1	24.85	20.35	0.1084
77	30	50	663666	3954.99	DFT-s-OFDM 16 QAM	1@131	25.07	20.57	0.1140
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	81@40	25.72	21.22	0.1324
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@1	25.77	21.27	0.1340
77	30	60	648668	3730.02	DFT-s-OFDM QPSK	1@160	25.6	21.1	0.1288
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	81@40	24.26	19.76	0.0946
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@1	24.23	19.73	0.0940
77	30	60	648668	3730.02	DFT-s-OFDM 16 QAM	1@160	24.19	19.69	0.0931
77	30	60	656000	3840	DFT-s-OFDM QPSK	81@40	26.08	21.58	0.1439
77	30	60	656000	3840	DFT-s-OFDM QPSK	1@1	26	21.5	0.1413
77	30	60	656000	3840	DFT-s-OFDM QPSK	1@160	26.05	21.55	0.1429
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	81@40	24.42	19.92	0.0982
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.44	19.94	0.0986
77	30	60	656000	3840	DFT-s-OFDM 16 QAM	1@160	24.39	19.89	0.0975
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	81@40	25.93	21.43	0.1390
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@1	25.61	21.11	0.1291
77	30	60	663332	3949.98	DFT-s-OFDM QPSK	1@160	26.13	21.63	0.1455
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	81@40	24.91	20.41	0.1099
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	1@1	24.66	20.16	0.1038
77	30	60	663332	3949.98	DFT-s-OFDM 16 QAM	1@160	25.03	20.53	0.1130
77	30	70	649000	3735	DFT-s-OFDM QPSK	90@45	25.89	21.39	0.1377
77	30	70	649000	3735	DFT-s-OFDM QPSK	1@1	25.95	21.45	0.1396
77	30	70	649000	3735	DFT-s-OFDM QPSK	1@187	25.75	21.25	0.1334
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	90@45	24.46	19.96	0.0991
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	1@1	24.58	20.08	0.1019
77	30	70	649000	3735	DFT-s-OFDM 16 QAM	1@187	24.38	19.88	0.0973
77	30	70	656000	3840	DFT-s-OFDM QPSK	90@45	26.22	21.72	0.1486
77	30	70	656000	3840	DFT-s-OFDM QPSK	1@1	26.18	21.68	0.1472
77	30	70	656000	3840	DFT-s-OFDM QPSK	1@187	26.11	21.61	0.1449
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	90@45	24.58	20.08	0.1019
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.57	20.07	0.1016
77	30	70	656000	3840	DFT-s-OFDM 16 QAM	1@187	24.44	19.94	0.0986
77	30	70	663000	3945	DFT-s-OFDM QPSK	90@45	25.95	21.45	0.1396

77	30	70	663000	3945	DFT-s-OFDM QPSK	1@1	25.58	21.08	0.1282
77	30	70	663000	3945	DFT-s-OFDM QPSK	1@187	26.19	21.69	0.1476
77	30	70	663000	3945	DFT-s-OFDM 16 QAM	90@45	25.01	20.51	0.1125
77	30	70	663000	3945	DFT-s-OFDM 16 QAM	1@1	24.74	20.24	0.1057
77	30	70	663000	3945	DFT-s-OFDM 16 QAM	1@187	25.25	20.75	0.1189
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	108@54	25.85	21.35	0.1365
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@1	25.94	21.44	0.1393
77	30	80	649334	3740.01	DFT-s-OFDM QPSK	1@215	25.96	21.46	0.1400
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	108@54	24.44	19.94	0.0986
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@1	24.56	20.06	0.1014
77	30	80	649334	3740.01	DFT-s-OFDM 16 QAM	1@215	24.44	19.94	0.0986
77	30	80	656000	3840	DFT-s-OFDM QPSK	108@54	26.27	21.77	0.1503
77	30	80	656000	3840	DFT-s-OFDM QPSK	1@1	26.18	21.68	0.1472
77	30	80	656000	3840	DFT-s-OFDM QPSK	1@215	26.15	21.65	0.1462
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	108@54	24.55	20.05	0.1012
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.55	20.05	0.1012
77	30	80	656000	3840	DFT-s-OFDM 16 QAM	1@215	24.49	19.99	0.0998
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	108@54	25.9	21.4	0.1380
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	1@1	25.54	21.04	0.1271
77	30	80	662666	3939.99	DFT-s-OFDM QPSK	1@215	26.15	21.65	0.1462
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	108@54	24.95	20.45	0.1109
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	1@1	24.71	20.21	0.1050
77	30	80	662666	3939.99	DFT-s-OFDM 16 QAM	1@215	25.11	20.61	0.1151
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	120@60	25.84	21.34	0.1361
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	1@1	25.92	21.42	0.1387
77	30	90	649668	3745.02	DFT-s-OFDM QPSK	1@243	25.91	21.41	0.1384
77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	120@60	24.44	19.94	0.0986
77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	1@1	24.57	20.07	0.1016
77	30	90	649668	3745.02	DFT-s-OFDM 16 QAM	1@243	24.47	19.97	0.0993
77	30	90	656000	3840	DFT-s-OFDM QPSK	120@60	26.17	21.67	0.1469
77	30	90	656000	3840	DFT-s-OFDM QPSK	1@1	26.08	21.58	0.1439
77	30	90	656000	3840	DFT-s-OFDM QPSK	1@243	26.03	21.53	0.1422
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	120@60	24.52	20.02	0.1005
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.62	20.12	0.1028
77	30	90	656000	3840	DFT-s-OFDM 16 QAM	1@243	24.37	19.87	0.0971
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	120@60	25.77	21.27	0.1340
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	1@1	25.41	20.91	0.1233
77	30	90	662332	3934.98	DFT-s-OFDM QPSK	1@243	26.14	21.64	0.1459
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	120@60	24.84	20.34	0.1081
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	1@1	24.69	20.19	0.1045
77	30	90	662332	3934.98	DFT-s-OFDM 16 QAM	1@243	25.06	20.56	0.1138

77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	135@67	25.89	21.39	0.1377
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@1	26.08	21.58	0.1439
77	30	100	650000	3750	DFT-s-OFDM PI/2 BPSK	1@271	26.2	21.7	0.1479
77	30	100	650000	3750	DFT-s-OFDM QPSK	135@67	25.86	21.36	0.1368
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@1	25.98	21.48	0.1406
77	30	100	650000	3750	DFT-s-OFDM QPSK	1@271	26.06	21.56	0.1432
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	135@67	24.51	20.01	0.1002
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@1	24.64	20.14	0.1033
77	30	100	650000	3750	DFT-s-OFDM 16 QAM	1@271	24.6	20.1	0.1023
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	135@67	22.57	18.07	0.0641
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@1	22.61	18.11	0.0647
77	30	100	650000	3750	DFT-s-OFDM 64 QAM	1@271	22.68	18.18	0.0658
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	135@67	20.58	16.08	0.0406
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@1	20.53	16.03	0.0401
77	30	100	650000	3750	DFT-s-OFDM 256 QAM	1@271	20.56	16.06	0.0404
77	30	100	650000	3750	CP-OFDM QPSK	137@68	23.93	19.43	0.0877
77	30	100	650000	3750	CP-OFDM QPSK	1@1	24.06	19.56	0.0904
77	30	100	650000	3750	CP-OFDM QPSK	1@271	24.07	19.57	0.0906
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	135@67	26.31	21.81	0.1517
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@1	26.22	21.72	0.1486
77	30	100	656000	3840	DFT-s-OFDM PI/2 BPSK	1@271	26.27	21.77	0.1503
77	30	100	656000	3840	DFT-s-OFDM QPSK	135@67	26.36	21.86	0.1535
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@1	26.18	21.68	0.1472
77	30	100	656000	3840	DFT-s-OFDM QPSK	1@271	26.24	21.74	0.1493
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	135@67	24.68	20.18	0.1042
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@1	24.71	20.21	0.1050
77	30	100	656000	3840	DFT-s-OFDM 16 QAM	1@271	24.51	20.01	0.1002
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	135@67	22.73	18.23	0.0665
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@1	22.73	18.23	0.0665
77	30	100	656000	3840	DFT-s-OFDM 64 QAM	1@271	22.57	18.07	0.0641
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	135@67	20.87	16.37	0.0434
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@1	20.63	16.13	0.0410
77	30	100	656000	3840	DFT-s-OFDM 256 QAM	1@271	20.47	15.97	0.0395
77	30	100	656000	3840	CP-OFDM QPSK	137@68	24.13	19.63	0.0918
77	30	100	656000	3840	CP-OFDM QPSK	1@1	24.24	19.74	0.0942
77	30	100	656000	3840	CP-OFDM QPSK	1@271	24	19.5	0.0891
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	135@67	26.22	21.72	0.1486
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@1	26.03	21.53	0.1422
77	30	100	662000	3930	DFT-s-OFDM PI/2 BPSK	1@271	26.38	21.88	0.1542
77	30	100	662000	3930	DFT-s-OFDM QPSK	135@67	26.01	21.51	0.1416
77	30	100	662000	3930	DFT-s-OFDM QPSK	1@1	26.11	21.61	0.1449

77	30	100	662000	3930	DFT-s-OFDM QPSK	1@271	26.19	21.69	0.1476
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	135@67	24.95	20.45	0.1109
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@1	24.83	20.33	0.1079
77	30	100	662000	3930	DFT-s-OFDM 16 QAM	1@271	25.14	20.64	0.1159
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	135@67	22.98	18.48	0.0705
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@1	22.9	18.4	0.0692
77	30	100	662000	3930	DFT-s-OFDM 64 QAM	1@271	23.24	18.74	0.0748
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	135@67	20.06	15.56	0.0360
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@1	19.7	15.2	0.0331
77	30	100	662000	3930	DFT-s-OFDM 256 QAM	1@271	20.19	15.69	0.0371
77	30	100	662000	3930	CP-OFDM QPSK	137@68	24.39	19.89	0.0975
77	30	100	662000	3930	CP-OFDM QPSK	1@1	24.23	19.73	0.0940
77	30	100	662000	3930	CP-OFDM QPSK	1@271	24.68	20.18	0.1042

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (Hz)	Verdict	Environment
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	10.9	**PASS**	NV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	15.5	**PASS**	LV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	6.5	**PASS**	HV
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	13.5	**PASS**	-30℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	13.5	**PASS**	-20℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	11.7	**PASS**	-10℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	9.2	**PASS**	0℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	3.3	**PASS**	10℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	10.9	**PASS**	20℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	10.3	**PASS**	30℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	16.1	**PASS**	40℃
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	3.9	**PASS**	50℃

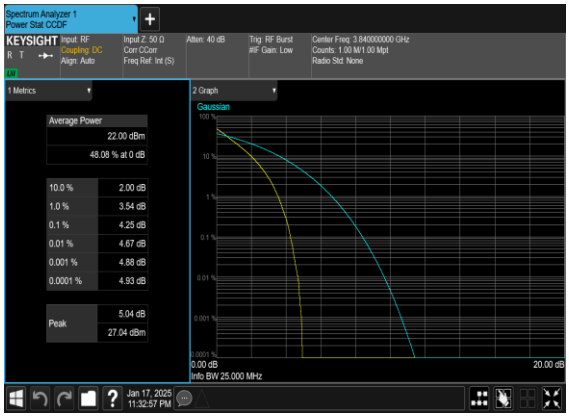
|MAX(△f)| =16.1 Hz

Frequency Stability	Frequency (MHz)	Limit Line	Result
fL – |MAX(△f)|	3700.859184	≧ 3700 MHz	PASS
fH + |MAX(△f)|	3978.741216	≦ 3980 MHz	

Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
77	30	20	656000	3840.0	DFT-s-OFDM PI/2 BPSK	50@0	4.25	13	**PASS**
77	30	20	656000	3840.0	DFT-s-OFDM QPSK	50@0	5.3	13	**PASS**

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



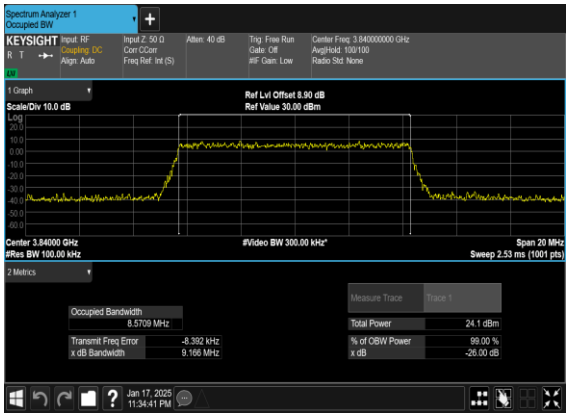
N77(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

Occupied Bandwidth

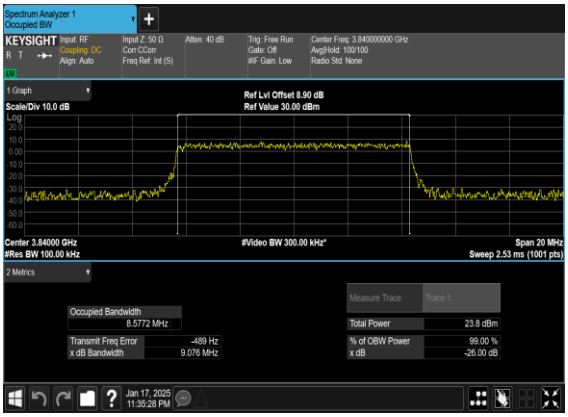
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
77	30	10	656000	3840.0	CP-OFDM QPSK	24@0	8.5709	9.166
77	30	10	656000	3840.0	CP-OFDM 16 QAM	24@0	8.5772	9.076
77	30	10	656000	3840.0	CP-OFDM 64 QAM	24@0	8.5709	9.152
77	30	10	656000	3840.0	CP-OFDM 256 QAM	24@0	8.5698	9.106
77	30	15	656000	3840.0	CP-OFDM QPSK	38@0	13.553	14.16
77	30	15	656000	3840.0	CP-OFDM 16 QAM	38@0	13.608	14.32
77	30	15	656000	3840.0	CP-OFDM 64 QAM	38@0	13.645	14.13
77	30	15	656000	3840.0	CP-OFDM 256 QAM	38@0	13.608	14.33
77	30	20	656000	3840.0	CP-OFDM QPSK	51@0	18.205	18.96
77	30	20	656000	3840.0	CP-OFDM 16 QAM	51@0	18.21	18.94
77	30	20	656000	3840.0	CP-OFDM 64 QAM	51@0	18.228	18.92
77	30	20	656000	3840.0	CP-OFDM 256 QAM	51@0	18.2	18.85
77	30	25	656000	3840.0	CP-OFDM QPSK	65@0	23.199	24.09
77	30	25	656000	3840.0	CP-OFDM 16 QAM	65@0	23.222	24.07
77	30	25	656000	3840.0	CP-OFDM 64 QAM	65@0	23.2	24.13
77	30	25	656000	3840.0	CP-OFDM 256 QAM	65@0	23.188	24.12
77	30	30	656000	3840.0	CP-OFDM QPSK	78@0	27.713	28.86
77	30	30	656000	3840.0	CP-OFDM 16 QAM	78@0	27.84	29.01
77	30	30	656000	3840.0	CP-OFDM 64 QAM	78@0	27.83	28.99
77	30	30	656000	3840.0	CP-OFDM 256 QAM	78@0	27.809	28.95
77	30	40	656000	3840.0	CP-OFDM QPSK	106@0	37.832	39.22
77	30	40	656000	3840.0	CP-OFDM 16 QAM	106@0	37.759	39.27
77	30	40	656000	3840.0	CP-OFDM 64 QAM	106@0	37.904	39.38
77	30	40	656000	3840.0	CP-OFDM 256 QAM	106@0	37.795	39.11
77	30	50	656000	3840.0	CP-OFDM QPSK	133@0	47.449	49.02
77	30	50	656000	3840.0	CP-OFDM 16 QAM	133@0	47.389	49.35
77	30	50	656000	3840.0	CP-OFDM 64 QAM	133@0	47.422	49.04
77	30	50	656000	3840.0	CP-OFDM 256 QAM	133@0	47.397	49.15
77	30	60	656000	3840.0	CP-OFDM QPSK	162@0	57.742	59.77
77	30	60	656000	3840.0	CP-OFDM 16 QAM	162@0	57.681	59.68
77	30	60	656000	3840.0	CP-OFDM 64 QAM	162@0	57.852	59.68
77	30	60	656000	3840.0	CP-OFDM 256 QAM	162@0	57.715	59.61
77	30	70	656000	3840.0	CP-OFDM QPSK	189@0	67.297	69.77
77	30	70	656000	3840.0	CP-OFDM 16 QAM	189@0	67.434	69.67
77	30	70	656000	3840.0	CP-OFDM 64 QAM	189@0	67.552	69.75
77	30	70	656000	3840.0	CP-OFDM 256 QAM	189@0	67.414	69.69
77	30	80	656000	3840.0	CP-OFDM QPSK	217@0	77.366	80.06

77	30	80	656000	3840.0	CP-OFDM 16 QAM	217@0	77.605	80.03
77	30	80	656000	3840.0	CP-OFDM 64 QAM	217@0	77.485	79.96
77	30	80	656000	3840.0	CP-OFDM 256 QAM	217@0	77.47	79.89
77	30	90	656000	3840.0	CP-OFDM QPSK	245@0	87.375	90.31
77	30	90	656000	3840.0	CP-OFDM 16 QAM	245@0	87.453	90.27
77	30	90	656000	3840.0	CP-OFDM 64 QAM	245@0	87.213	90.19
77	30	90	656000	3840.0	CP-OFDM 256 QAM	245@0	87.438	90.22
77	30	100	656000	3840.0	CP-OFDM QPSK	273@0	97.387	100.5
77	30	100	656000	3840.0	CP-OFDM 16 QAM	273@0	97.475	100.4
77	30	100	656000	3840.0	CP-OFDM 64 QAM	273@0	97.61	100.5
77	30	100	656000	3840.0	CP-OFDM 256 QAM	273@0	97.333	100.4

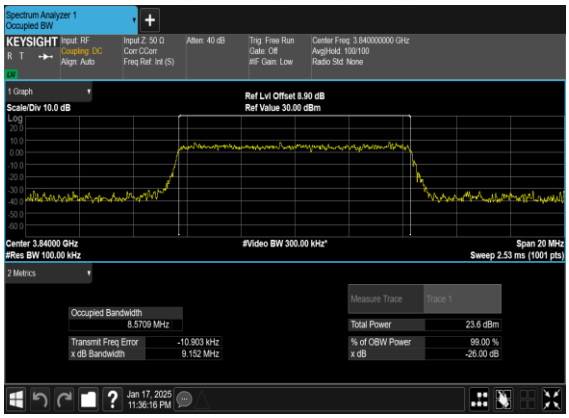
N77(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



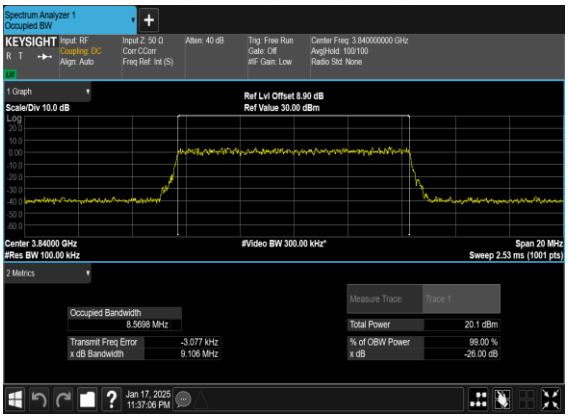
N77(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



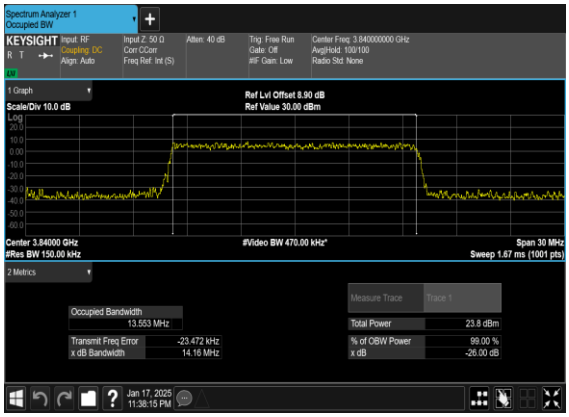
N77(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



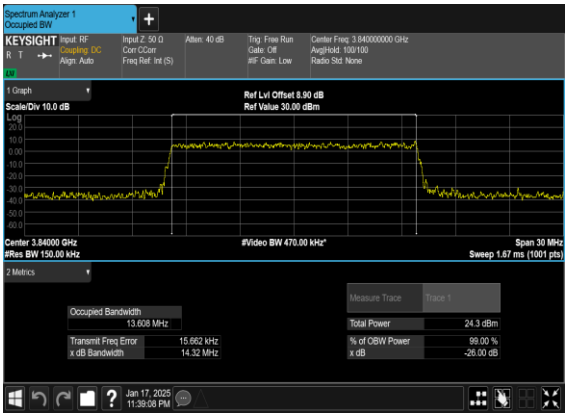
N77(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



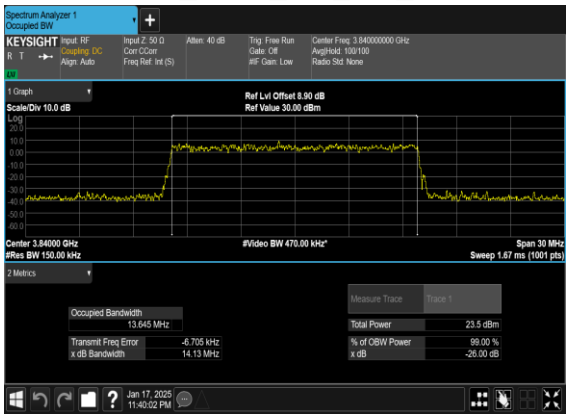
N77(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



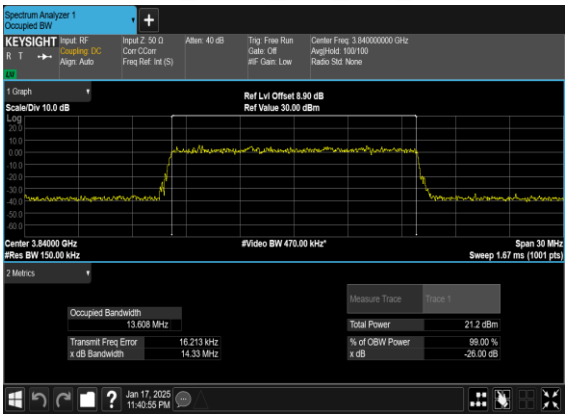
N77(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



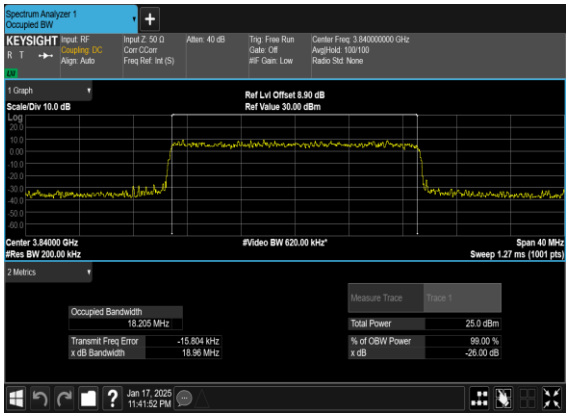
N77(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



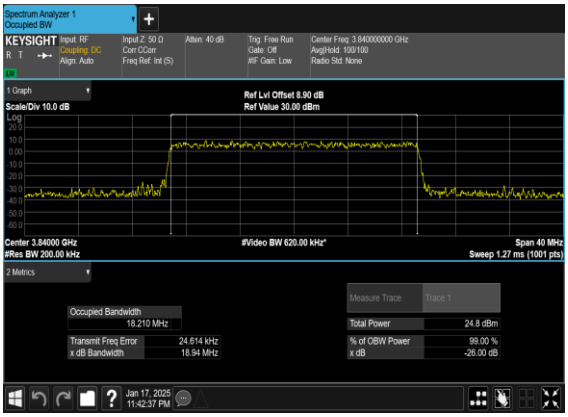
N77(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



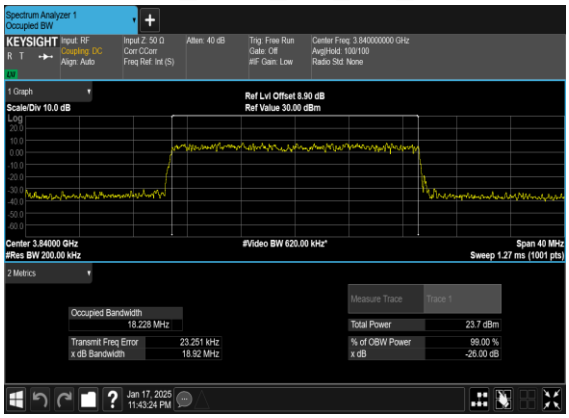
N77(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



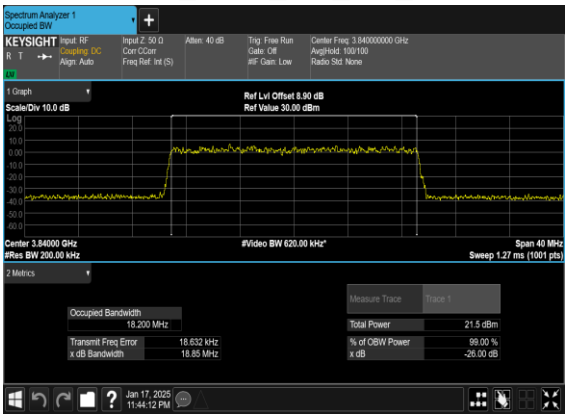
N77(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



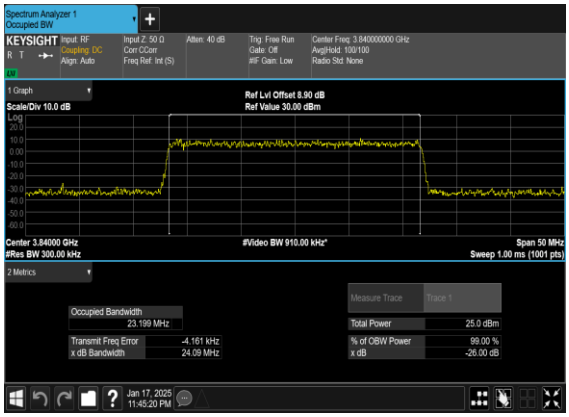
N77(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



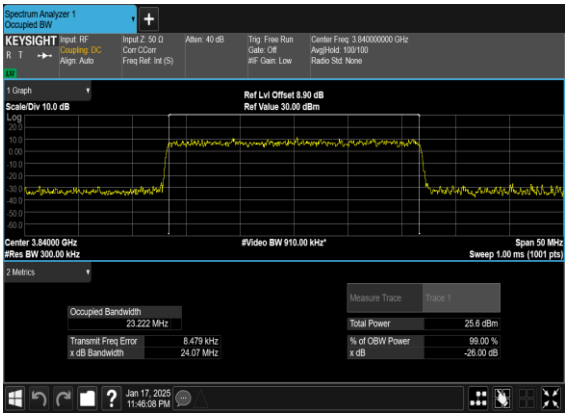
N77(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



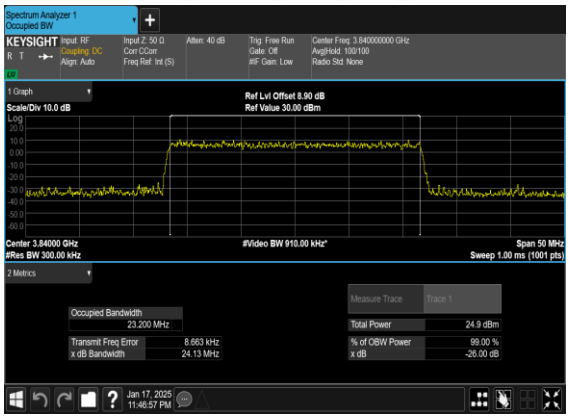
N77(25M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



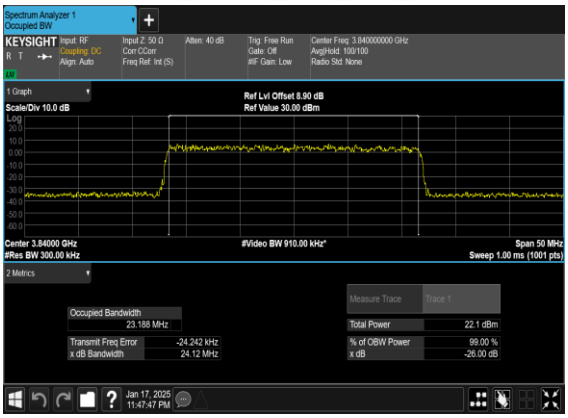
N77(25M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



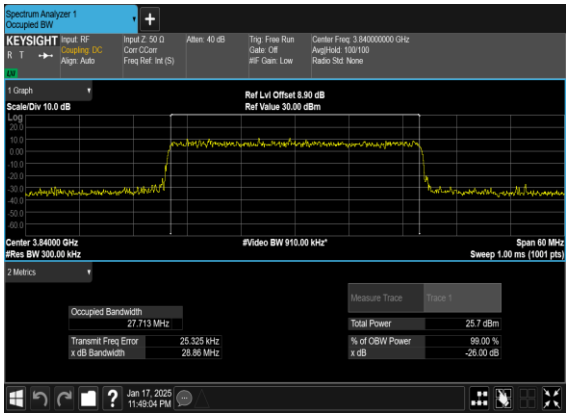
N77(25M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



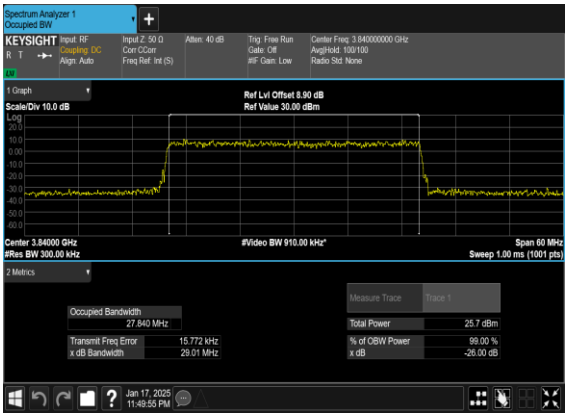
N77(25M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



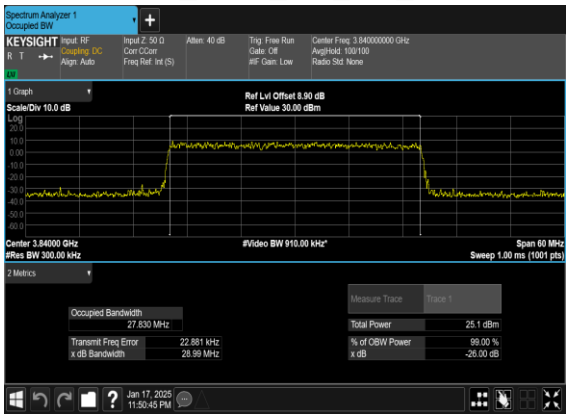
N77(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



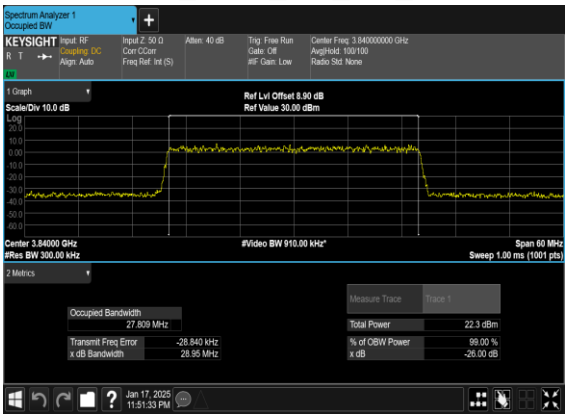
N77(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



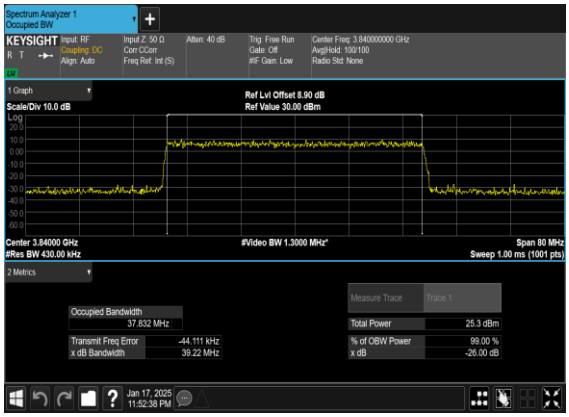
N77(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



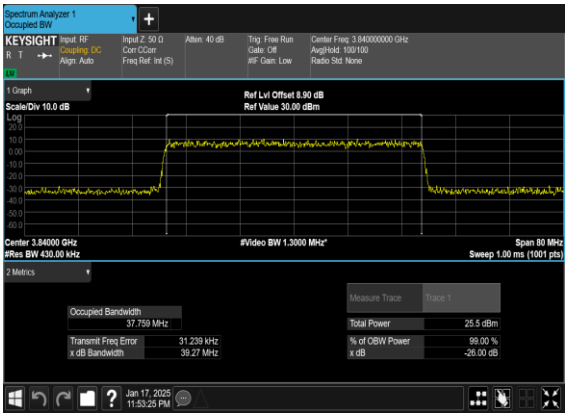
N77(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



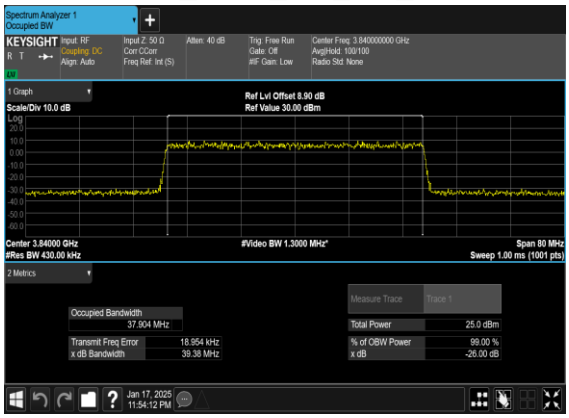
N77(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



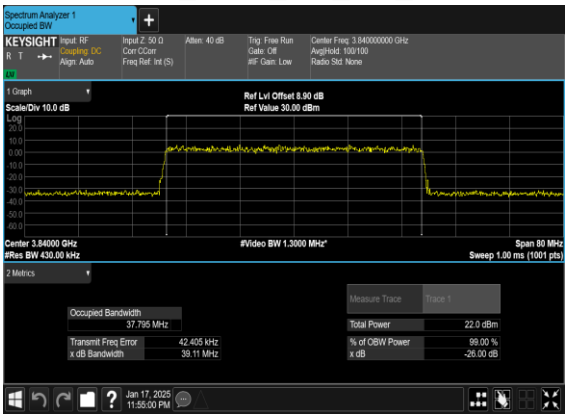
N77(40M)_CP-OFDM_16QAM_Outer_Full_Mid_CH



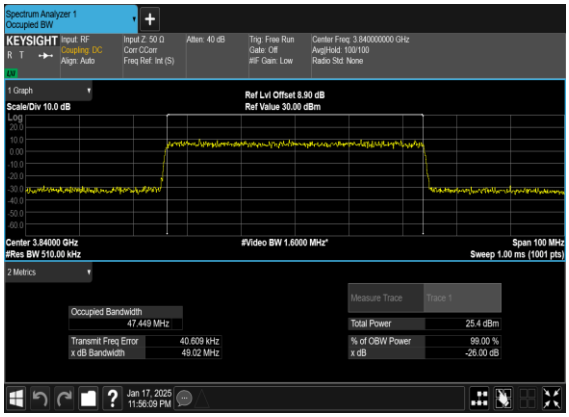
N77(40M)_CP-OFDM_64QAM_Outer_Full_Mid_CH



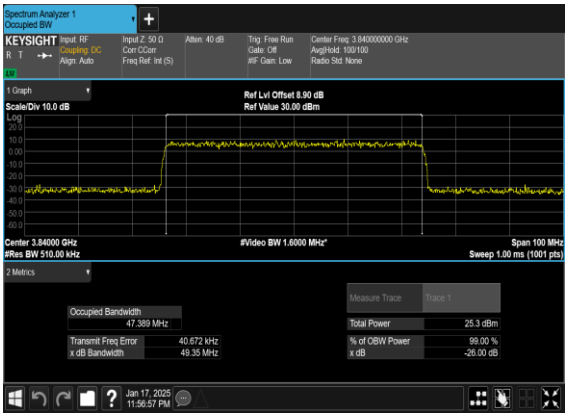
N77(40M)_CP-OFDM_256QAM_Outer_Full_Mid_CH



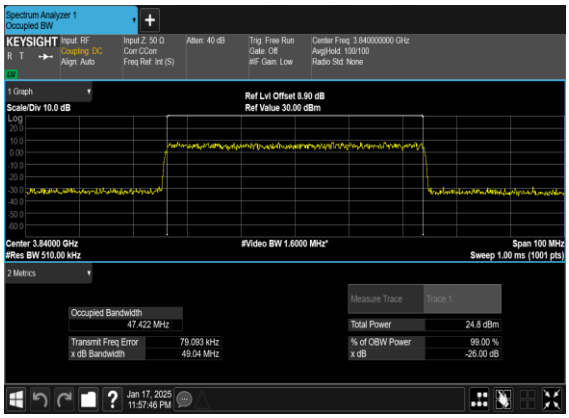
N77(50M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



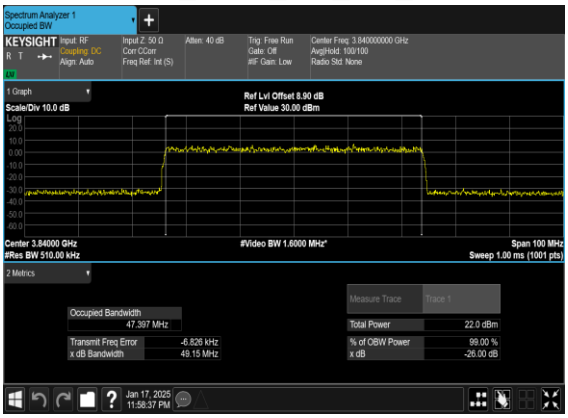
N77(50M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N77(50M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

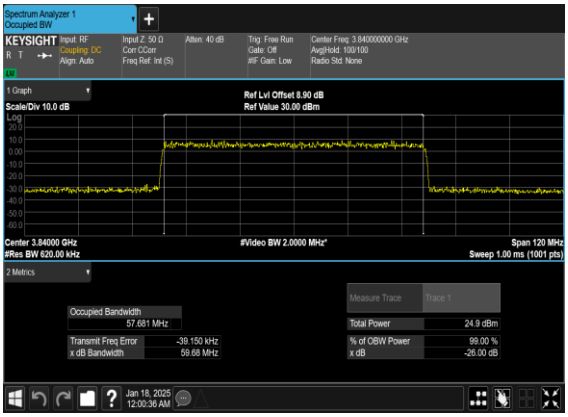


N77(50M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

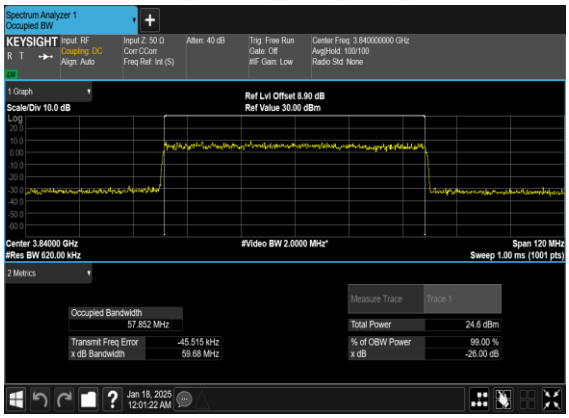


N77(60M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

N77(60M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

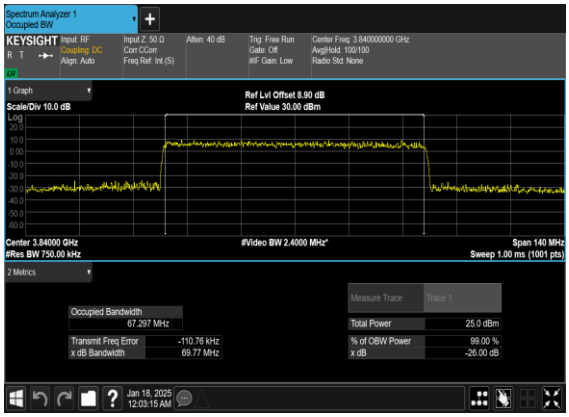


N77(60M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

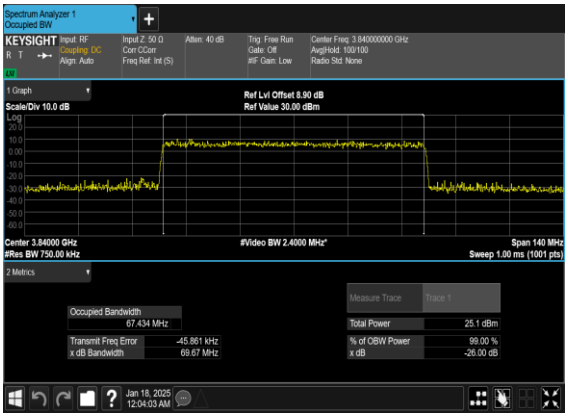


N77(60M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

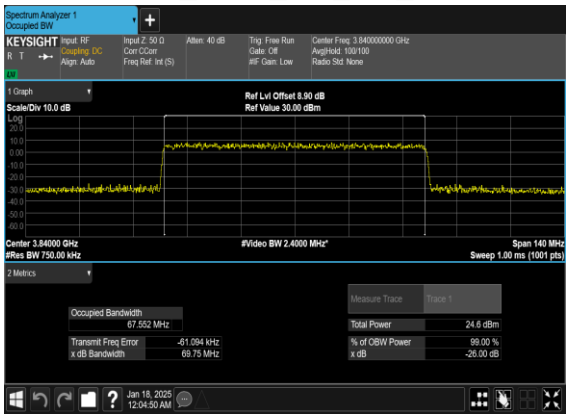
N77(70M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



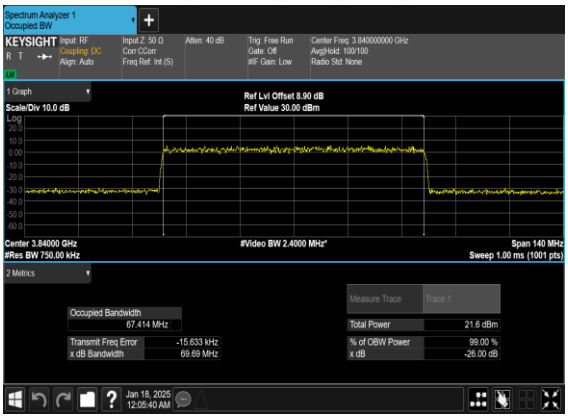
N77(70M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



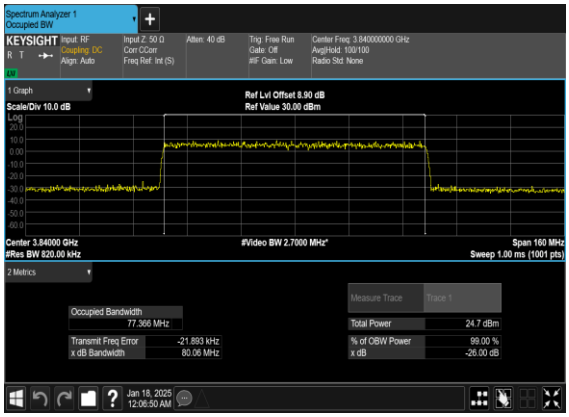
N77(70M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



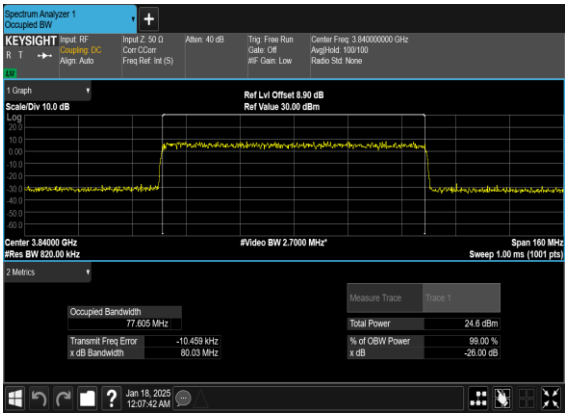
N77(70M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



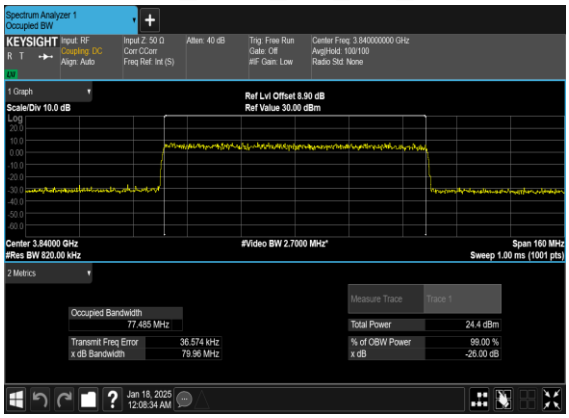
N77(80M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



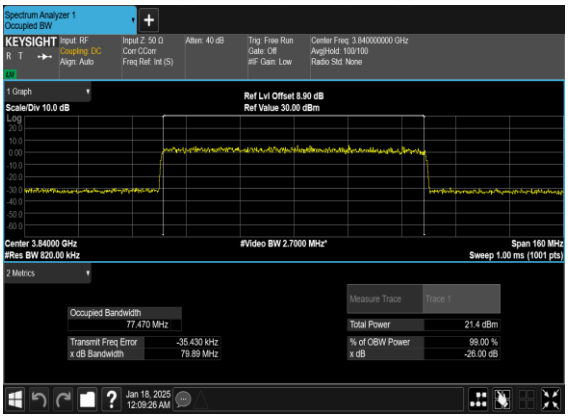
N77(80M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



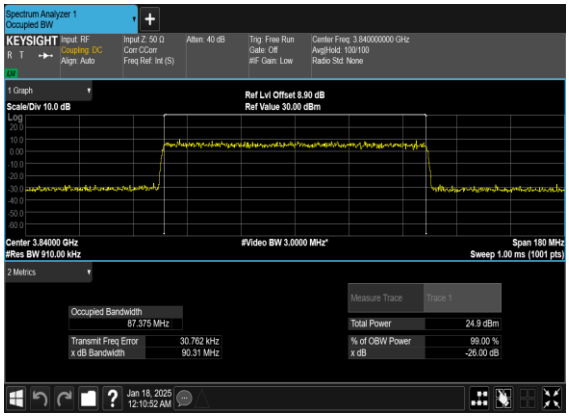
N77(80M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



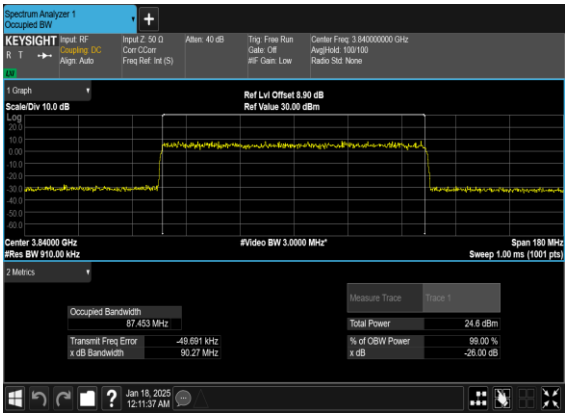
N77(80M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



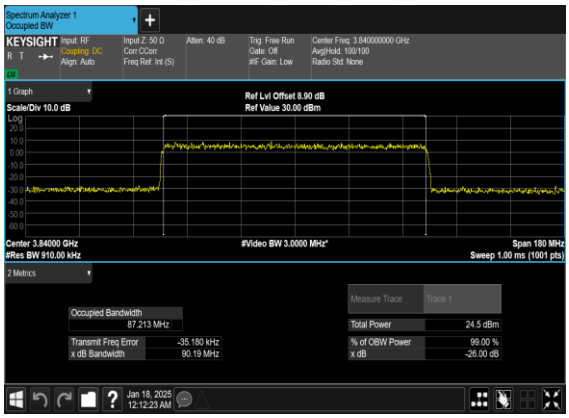
N77(90M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



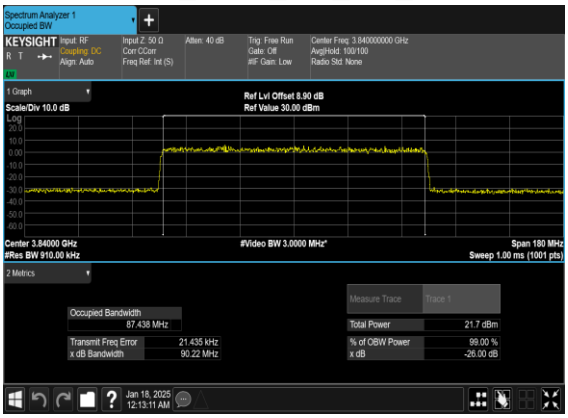
N77(90M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



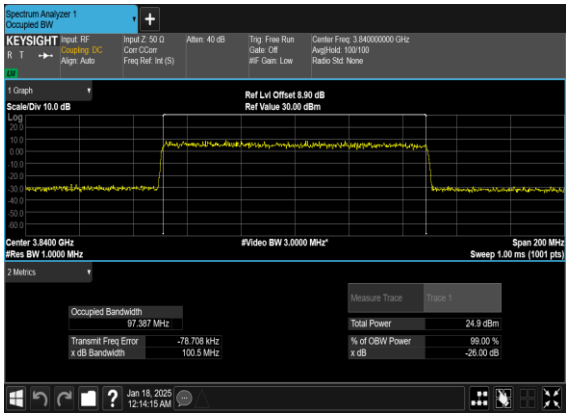
N77(90M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N77(90M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

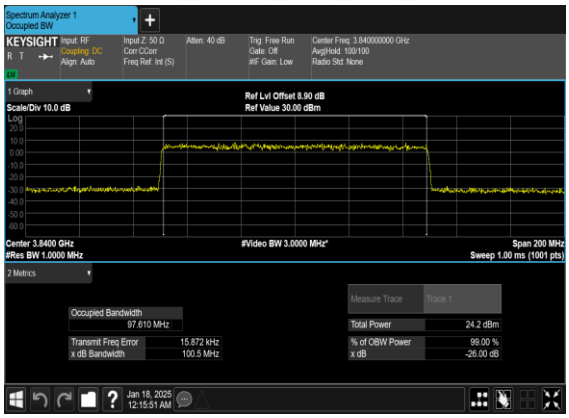


N77(100M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

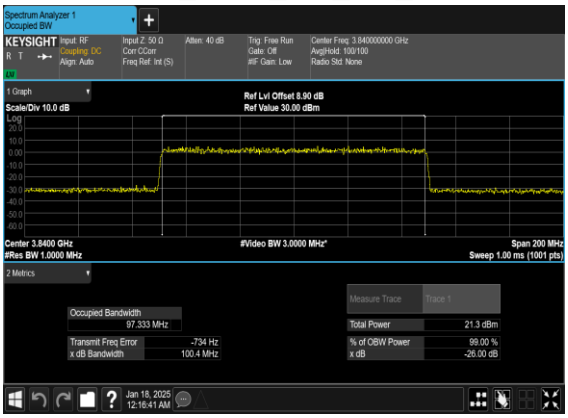


N77(100M)_CP-OFDM_16QAM_Outer_Full_Mid_CH

N77(100M)_CP-OFDM_64QAM_Outer_Full_Mid_CH



N77(100M)_CP-OFDM_256QAM_Outer_Full_Mid_CH

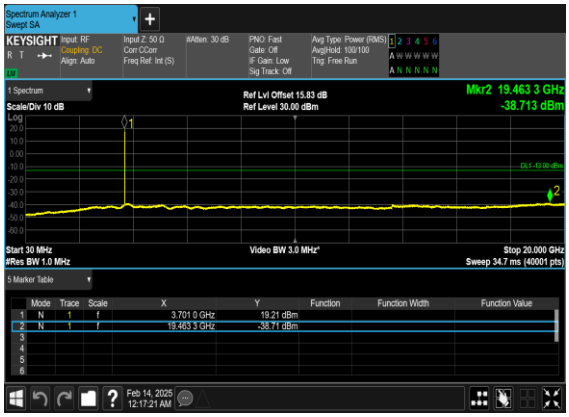


Conducted Spurious Emissions

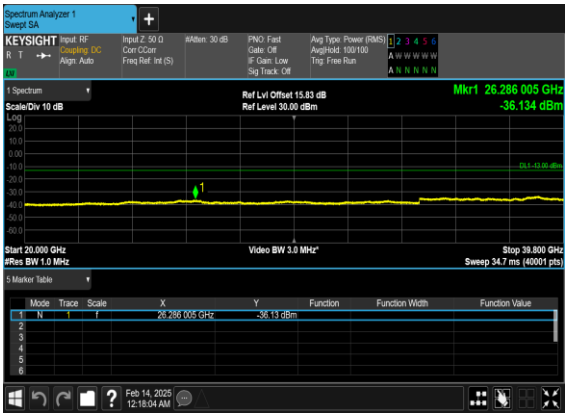
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	10	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	10	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	50	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	656000	3840.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	50	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	656000	3840.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	663666	3954.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
77	30	50	663666	3954.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	663666	3954.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@0	see graph	**---**
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	663666	3954.99	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**

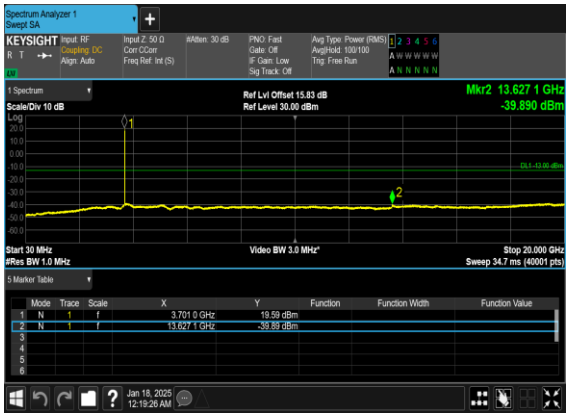
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



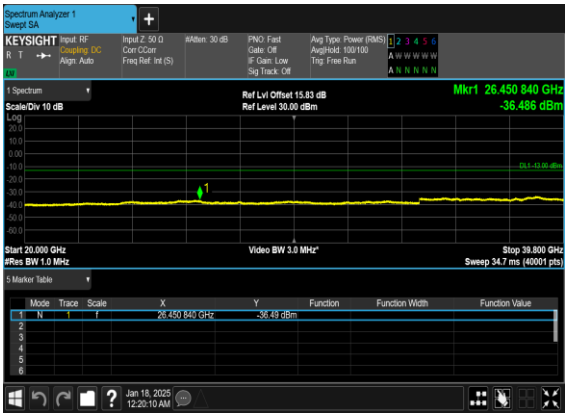
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



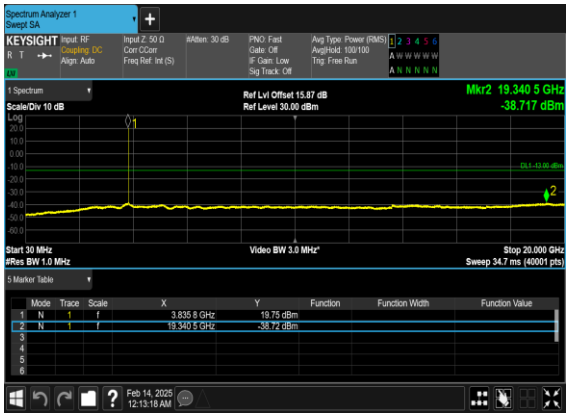
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



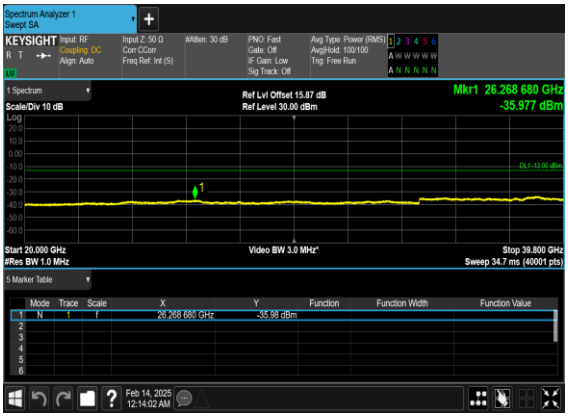
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



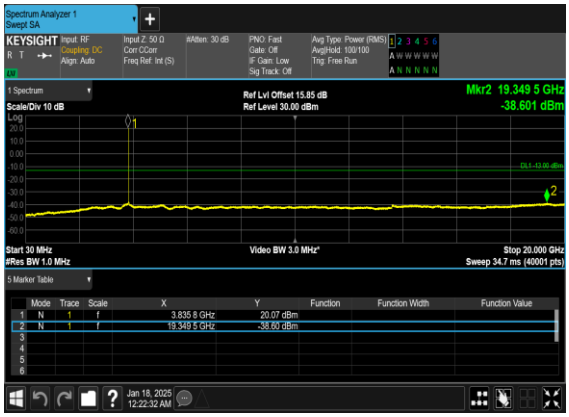
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



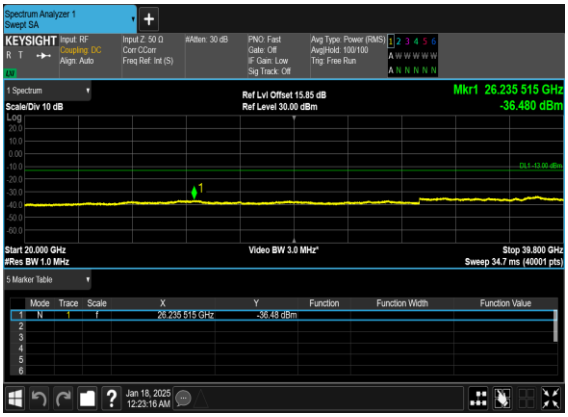
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



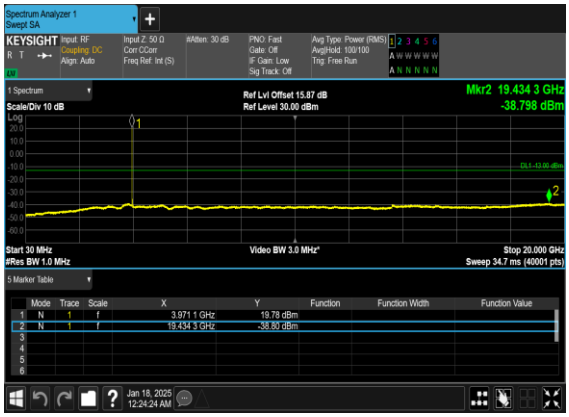
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



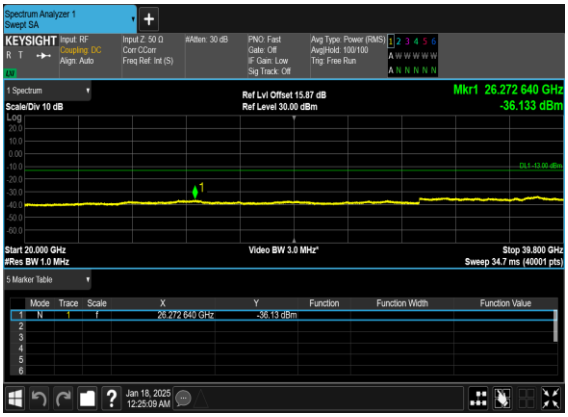
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



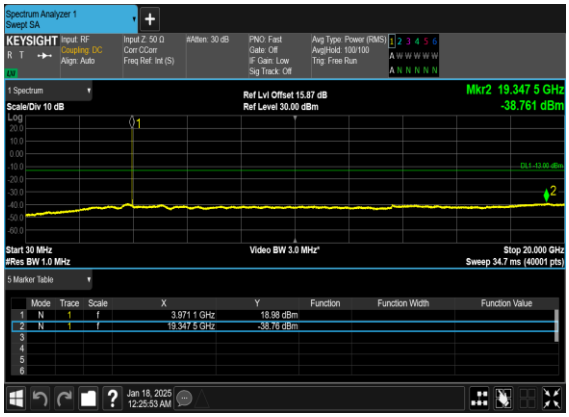
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



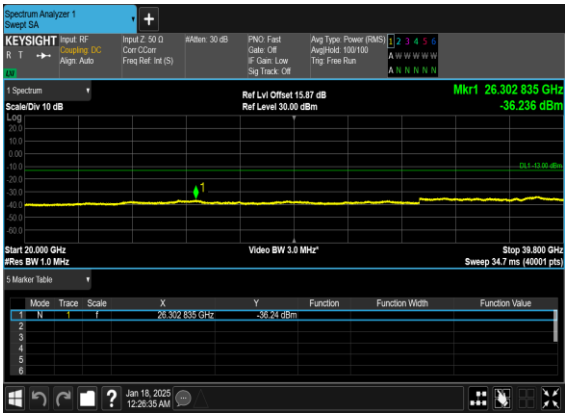
N77(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



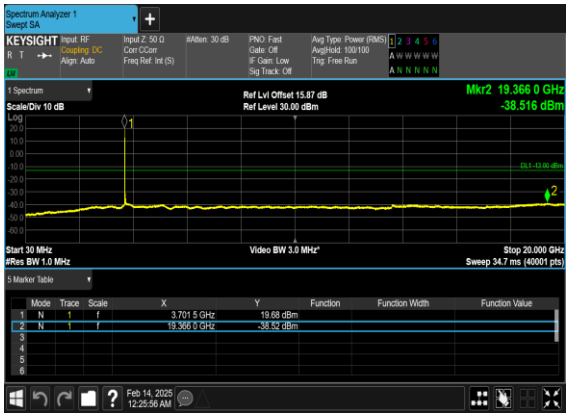
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



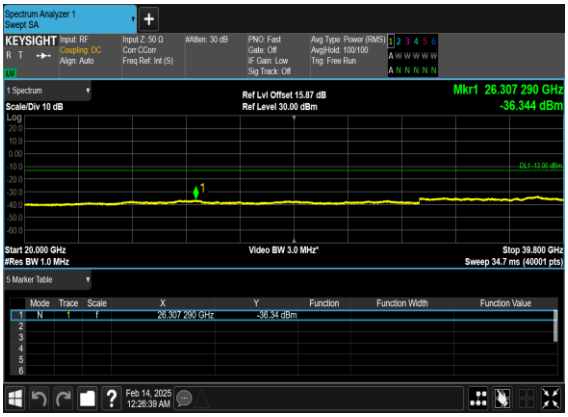
N77(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



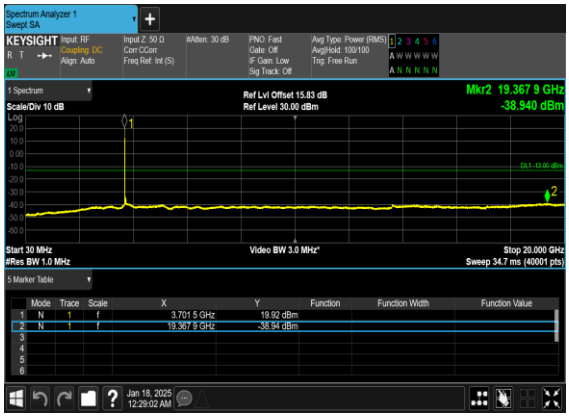
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



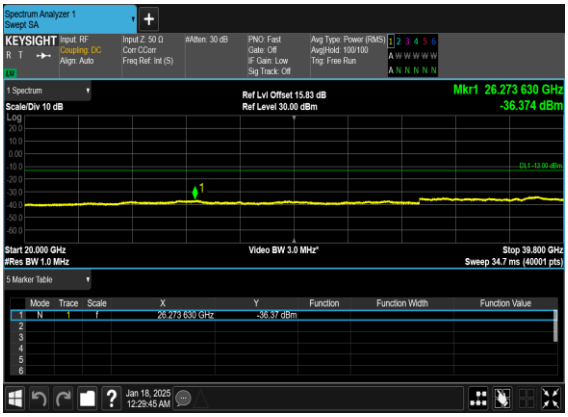
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



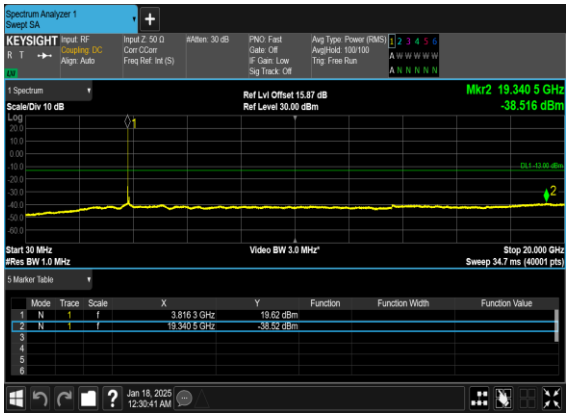
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



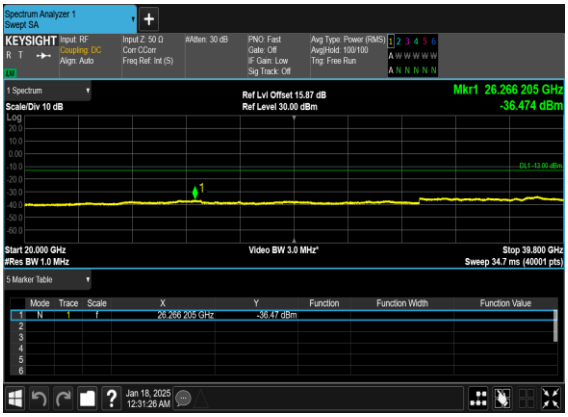
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



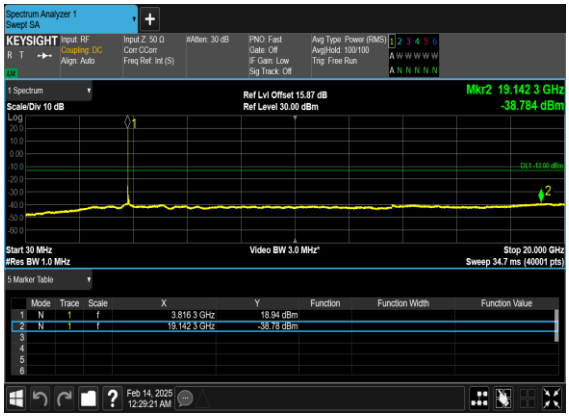
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



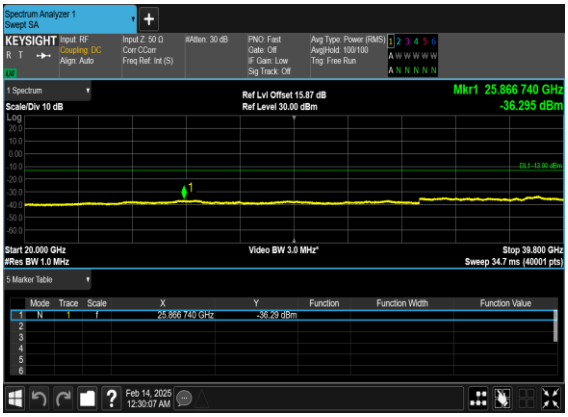
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



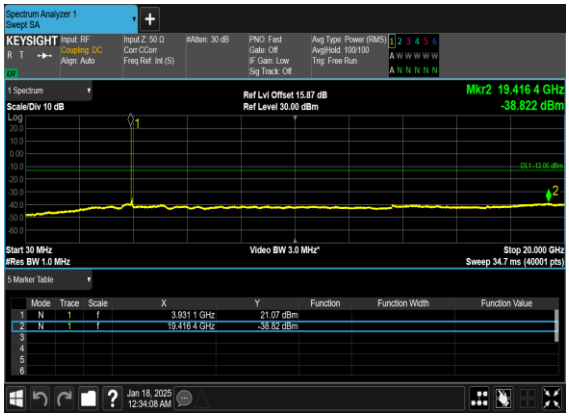
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



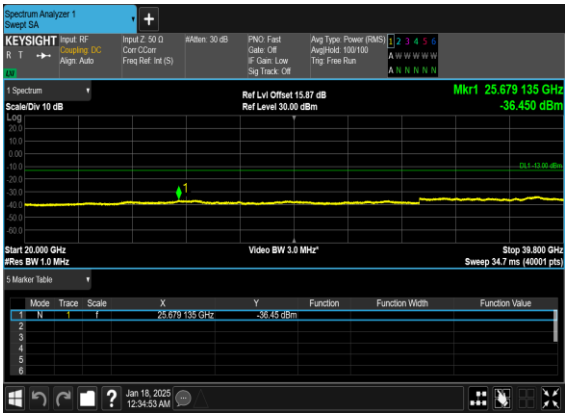
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



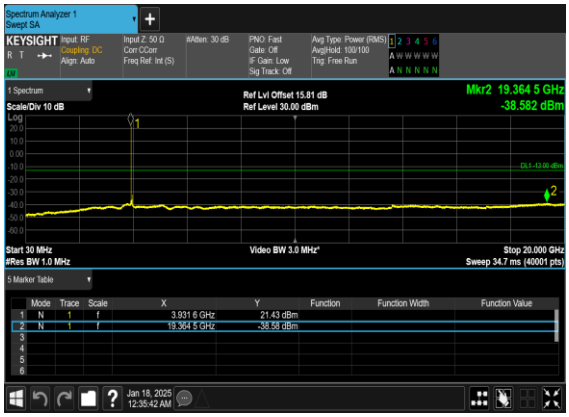
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



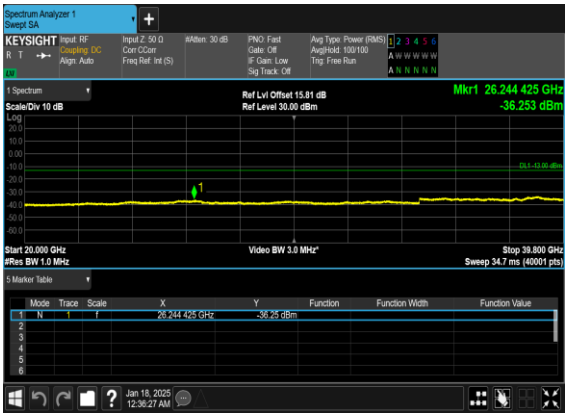
N77(50M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



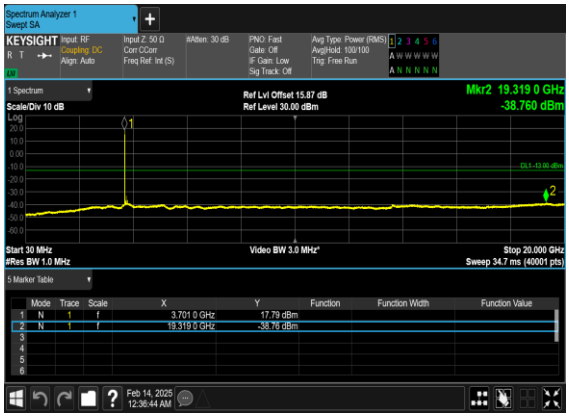
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



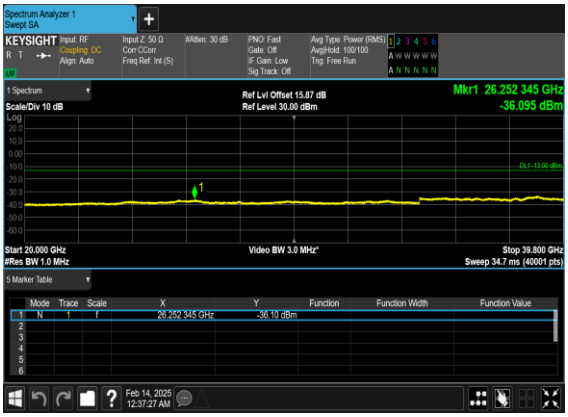
N77(50M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



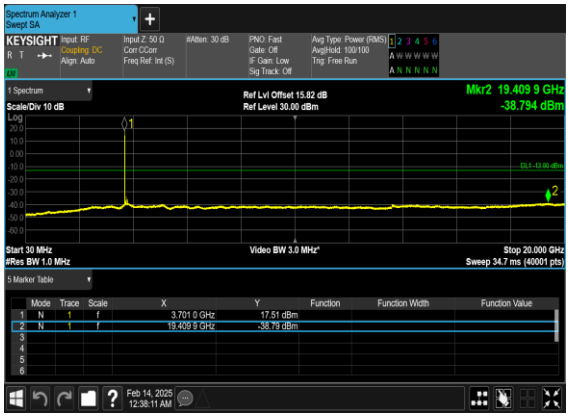
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



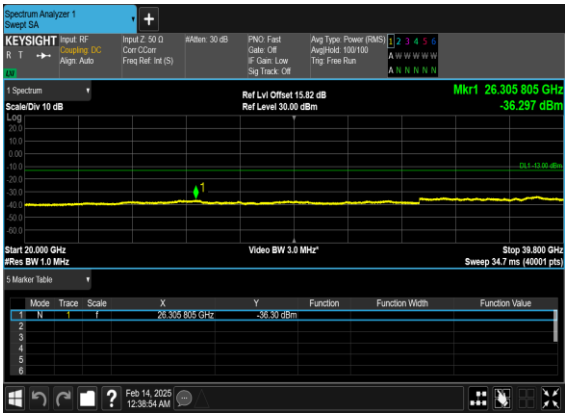
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



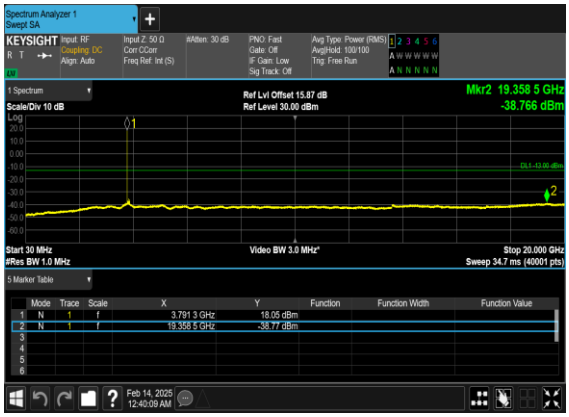
N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



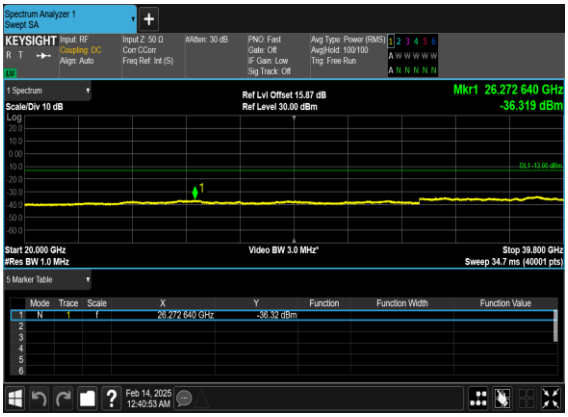
N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



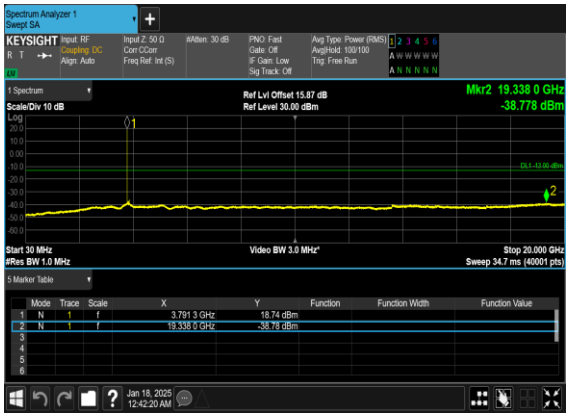
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



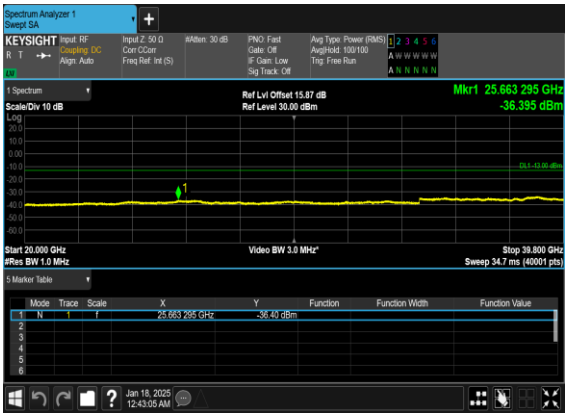
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



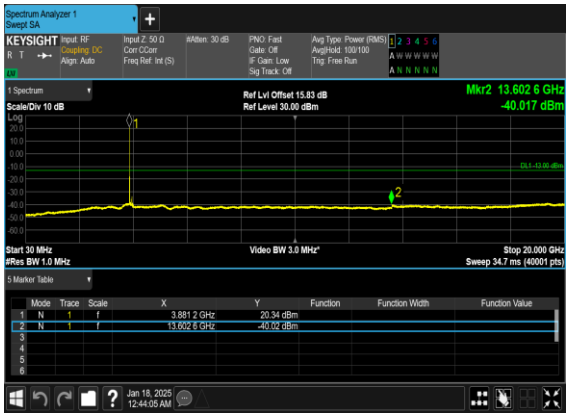
N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



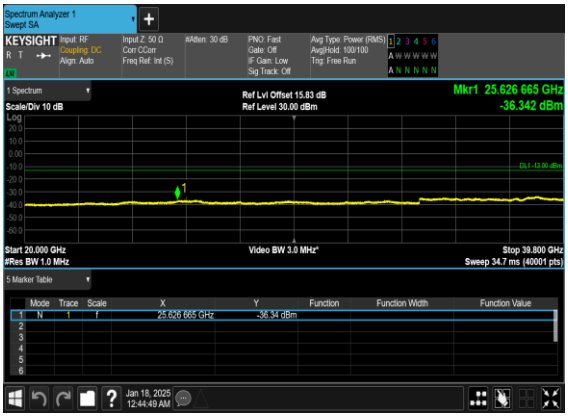
N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



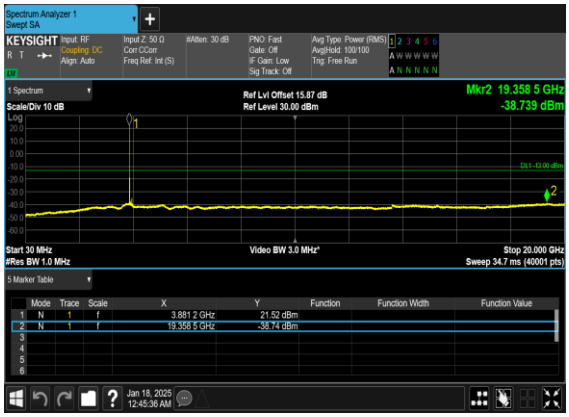
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



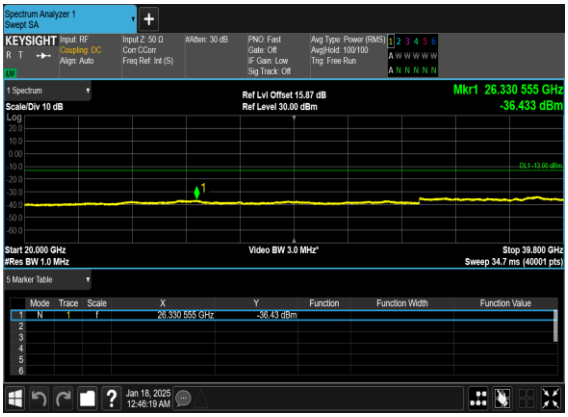
N77(100M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N77(100M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



Conducted Band Edge

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	10	647000	3705.0	DFT-s-OFDM BPSK	24@0	see graph	**PASS**
77	30	10	647000	3705.0	DFT-s-OFDM QPSK	24@0	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	1@23	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	1@23	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM BPSK	24@0	see graph	**PASS**
77	30	10	665000	3975.0	DFT-s-OFDM QPSK	24@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM BPSK	128@0	see graph	**PASS**
77	30	50	648334	3725.01	DFT-s-OFDM QPSK	128@0	see graph	**PASS**
77	30	50	663666	3954.99	DFT-s-OFDM BPSK	1@132	see graph	**PASS**
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	1@132	see graph	**PASS**
77	30	50	663666	3954.99	DFT-s-OFDM BPSK	128@0	see graph	**PASS**
77	30	50	663666	3954.99	DFT-s-OFDM QPSK	128@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	**PASS**
77	30	100	650000	3750.0	DFT-s-OFDM BPSK	270@0	see graph	**PASS**
77	30	100	650000	3750.0	DFT-s-OFDM QPSK	270@0	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	1@272	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	1@272	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM BPSK	270@0	see graph	**PASS**
77	30	100	662000	3930.0	DFT-s-OFDM QPSK	270@0	see graph	**PASS**