FCC RF Test Report

APPLICANT	: Xiaomi Communications Co., Ltd.
EQUIPMENT	: Mobile Phone
BRAND NAME	: Xiaomi
MODEL NAME	: 2407FPN8EG
FCC ID	: 2AFZZPN8EG
STANDARD	: 47 CFR Part 2, 96
CLASSIFICATION	: Citizens Band End User Devices (CBE)
EQUIPMENT TYPE	: End User Equipment
TEST DATE(S)	: Apr. 23, 2024 ~ May 11, 2024

We, Sporton International Inc. (Shenzhen), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)

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People's Republic of China

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History of this test report

Report No.	Version	Description	Issued Date
FG441610L	01	Initial issue of report	May 28, 2024

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.3	§2.1046	Conducted Output Power	Reporting only	-
-	§96.41	Peak-to-Average Ratio	Not Applicable	Not applicable for End User Devices
3.4	§96.41	Maximum E.I.R.P	Pass	-
		Maximum Power Spectral Density	Not Applicable	Not applicable for End User Devices
3.5	§2.1049 §96.41	Occupied Bandwidth	Reporting only	-
3.6	§2.1051 §96.41	Conducted Band Edge Measurement Adjacent Channel Leakage Ratio	Pass	-
3.7	§2.1051 §96.41	Conducted Spurious Emission	Pass	
3.8	§2.1055	Frequency Stability for Temperature & Voltage	Pass	-
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	Under limit 9.59 dB at 14425.60 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

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Manufacturer

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Xiaomi
Model Name	2407FPN8EG
FCC ID	2AFZZPN8EG
Tx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
Rx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
SCS	15kHz, 30kHz
Bandwidth	SCS 15kHz / 30kHz:10MHz / 15MHz / 20MHz / 40MHz
Antenna Gain	<Ant. 6>: -2.7 dBi <Ant. 7>: -0.39 dBi <Ant. 8>: -2.38 dBi <Ant. 9>: -1.67 dBi
Type of Modulation	DFT-s-OFDM (PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM) CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM)
IMEI Code	Conducted: 869018070053667/869018070053675 Radiation: 869018070053741/869018070053758
HW Version	13520N12
SW Version	Xiaomi HyperOS 1.0
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 maximum EIRP is calculated from max output power and antenna gain, only the maximum EIRP of Ant. 7 is shown in the report.
3. 5G NR n48 support SCS 15kHz and 30kHz. According to the maximum power, SCS 15kHz was full test to cover SCS 30kHz.
4. 5G NR n48 only support SA mode.

1.4 Maximum EIRP Power and Emission Designator

5G NR n48-SCS 15kHz		PI/2 BPSK / QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	**3555.00~3694.98**	0.1600	9M27G7D	0.1194	9M31W7D
15	**3557.52~3692.49**	0.1592	14M1G7D	0.1194	14M1W7D
20	**3560.01~3690.00**	0.1603	18M9G7D	0.1189	18M9W7D
40	**3570.00~3679.98**	0.1607	38M5G7D	0.1265	38M6W7D

Note: All modulations have been tested, only the worst test results are shown in the report.

1.5 Testing Site

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

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

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04-SZ	CN1256	421272

1.6 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-SZ	AUDIX	E3	6.2009-8-24

1.7 Applied Standards

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

- ANSI C63.26-2015
- 47 CFR Part 2, 96
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 940660 D01 Part 96 CBRS v03
- 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.

2 Test Configuration of Equipment Under Test

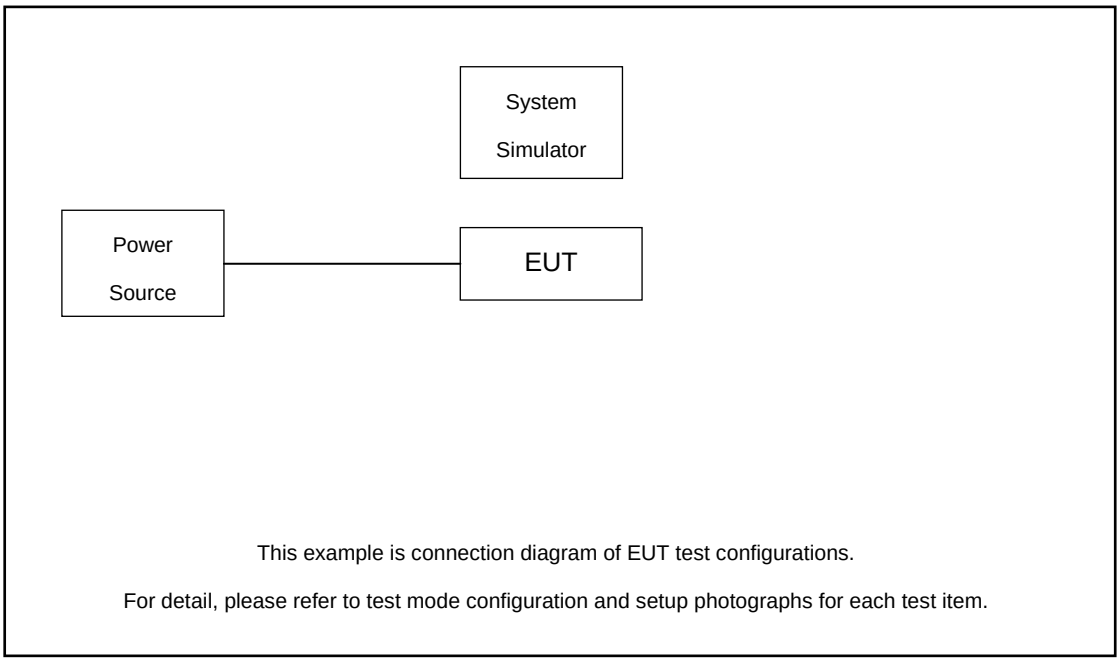
2.1 Test Mode

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.

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

Test Items	Band	Bandwidth (MHz)						Modulation					RB #			Test Channel		
		1.4	3	10	15	20	40	PI/2 BPSK	QPSK	16 QAM	64 QAM	256 QAM	1	Half	Full	L	M	H
Max. Output Power	48	-	-	v	v	v	v	v	v	v	v	v	v		v	v	v	v
Adjacent Channel Leakage Ratio	48	-	-	v		v	v	v	v				v		v	v	v	v
26dB and 99% Bandwidth	48	-	-	v	v	v	v		v	v	v	v			v		v	
Conducted Band Edge	48	-	-	v		v	v		v	v			v		v	v	v	v
Conducted Spurious Emission	48	-	-	v		v	v		v	v			v			v	v	v
E.I.R.P	48	-	-	v	v	v	v	v	v	v	v	v	v		v	v	v	v
Frequency Stability	48	-	-			v			v						v		v	
Radiated Spurious Emission	48	Worst Case															v	
Remark	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. All the radiated test cases were performed with Adapter 1 and USB Cable.																	

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

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

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n48 Channel and Frequency List for SCS 15K & 30K				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
40	Channel	638000	641666	645332
	Frequency	3570	3624.99	3679.98
20	Channel	637334	641666	646000
	Frequency	3560.01	3624.99	3690
15	Channel	637168	641666	646166
	Frequency	3557.52	3624.99	3692.49
10	Channel	637000	641666	646332
	Frequency	3555	3624.99	3694.98

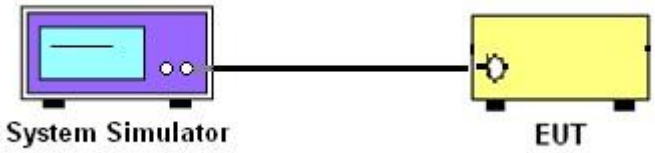
3 Conducted Test Items

3.1 Measuring Instruments

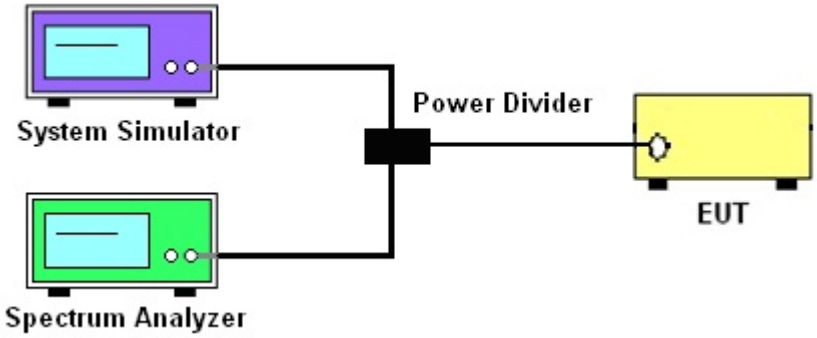
See list of measuring instruments of this test report.

3.2 Test Setup

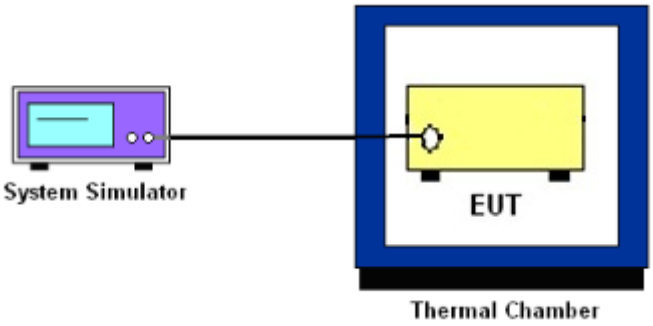
3.2.1 Conducted Output Power / ACLR



3.2.2 26dB & 99% Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.2.4 Test Result of Conducted Test

Please refer to Appendix A.

3.3 Conducted Output Power

3.3.1 Description of the Conducted Output Power 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.

3.3.2 Test Procedures

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

3.4 EIRP

3.4.1 Description of the EIRP Measurement

EIRP limits for CBRS equipment as below table:

Device		Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
Applied	**End User Device**	23	n/a
☐	**Category A CBSD**	30	20
☐	**Category B CBSD**	47	37

Remark: The worst case EIRP shown in this section is found with LTE operating only using 1RB. As such, the EIRP/10MHz and full channel EIRP values will be identical since 1RB is fully contained within all available channel bandwidths for LTE Band 48 (i.e. 5, 10, 15, 20MHz)

3.4.2 Test Procedures for EIRP

1. Establishing a communications link with the call box (Base station) to measure the Maximum conducted power, the parameters were set to force the EUT transmitting at maximum output power level. Use the average power measurement function to measure total channel power of each channel bandwidth (per ANSI C63.26-2015 Section 5.2.1)

2. Determining ERP and/or EIRP from conducted RF output power measurements (Per ANSI C63.26-2015 Section 5.2.5.5)

   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

3.5 Occupied Bandwidth

3.5.1 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.

3.5.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. 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.
3. 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.
4. Set the detection mode to peak, and the trace mode to max hold.
5. 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)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. 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.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.6 Conducted Band Edge

3.6.1 Description of Conducted Band Edge Measurement

Part 96.41 (e) (1) (ii)

For End User Devices the emission limits outside the fundamental are as follows:

Within 0 MHz to B MHz above and below the assigned channel ≤ −13 dBm/MHz

Greater than B MHz above and below the assigned channel ≤ −25 dBm/MHz

where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device.

Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

Part 96.41 (e) (2)

For CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed −25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used
5. Offset has included the duty factor for LTE Band 48. Duty factor =10 log (1/x), where x is the measured duty cycle.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.7 Conducted Spurious Emission

3.7.1 Description of Conducted Spurious Emission Measurement

96.41 (e)(2)

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz.

3.7.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. 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.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
6. Set spectrum analyzer with RMS detector.
7. Taking the record of maximum spurious emission.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. The limit line is −40dBm/MHz.

3.8 Frequency Stability

3.8.1 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.

3.8.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. 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.
3. 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.

3.8.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

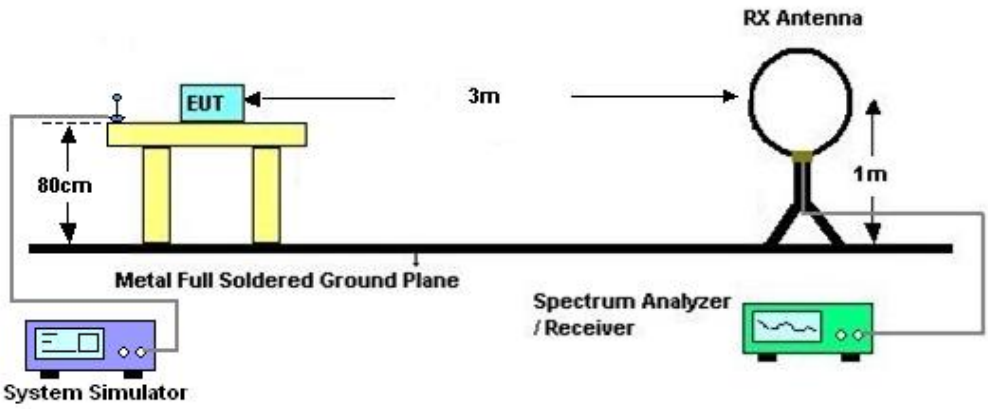
4 Radiated Test Items

4.1 Measuring Instruments

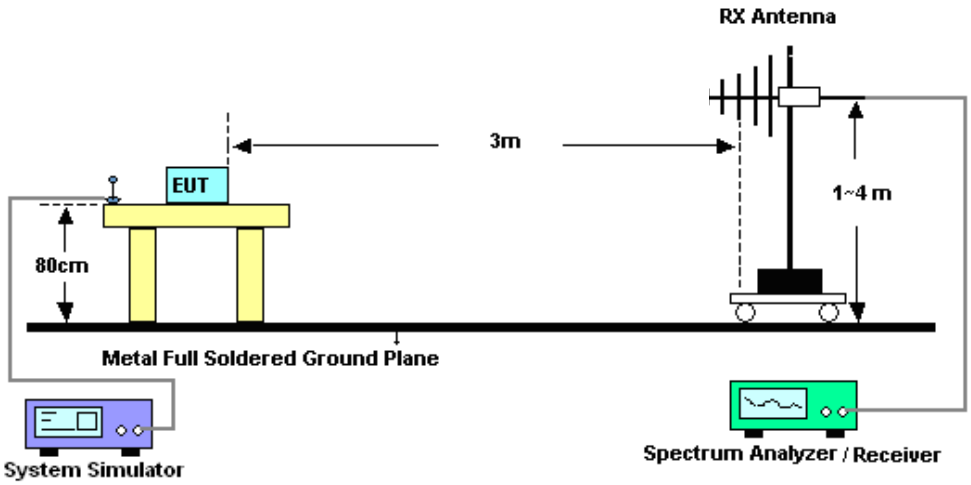
See list of measuring instruments of this test report.

4.2 Test Setup

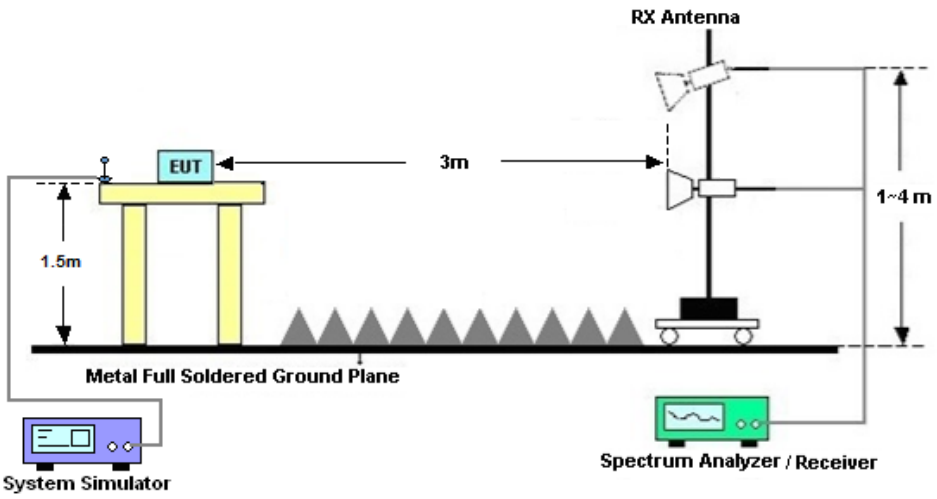
4.2.1 For radiated test below 30MHz



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 Measurement

The radiated spurious emission was measured by substitution method according to ANSI C63.26-2015. 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 -40dBm / MHz.

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

4.4.2 Test Procedures

1. 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.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
   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
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
   The limit line is −40dBm/MHz

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Apr. 23, 2024~ Apr. 27, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 16, 2023	Apr. 23, 2024~ Apr. 27, 2024	Oct. 15, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-0426 5	60.06.020. 0077	0.4GHz~26.5G Hz	Dec. 25, 2023	Apr. 23, 2024~ Apr. 27, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Power Divider	SOLVANG TECHNOLOY	STI08-0055	-	Max 40GHz	Mar. 20, 2024	Apr. 23, 2024~ Apr. 27, 2024	Mar. 19, 2025	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangrou p	LP-150U	H2014081 803	-40~+150°C	Jul. 05, 2023	Apr. 23, 2024~ Apr. 27, 2024	Jul. 04, 2024	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 18, 2023	Apr. 23, 2024~ May 11, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY551502 13	10Hz~44GHz	Jul. 07, 2023	Apr. 23, 2024~ May 11, 2024	Jul. 06, 2024	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 28, 2022	Apr. 23, 2024~ May 11, 2024	Jun. 27, 2024	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	May 14, 2023	Apr. 23, 2024~ May 11, 2024	May 13, 2024	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBE CK	BBHA9120D	9120D-147 4	1GHz~18GHz	Jul. 07, 2023	Apr. 23, 2024~ May 11, 2024	Jul. 06, 2024	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBE CK	BBHA9170	9170#679	15GHz~40GHz	Jul. 08, 2023	Apr. 23, 2024~ May 11, 2024	Jul. 07, 2024	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2023	Apr. 23, 2024~ May 11, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2023	Apr. 23, 2024~ May 11, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 07, 2023	Apr. 23, 2024~ May 11, 2024	Jul. 06, 2024	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY572801 36	500MHz~26.5G Hz	Aug. 21, 2023	Apr. 23, 2024~ May 11, 2024	Aug. 20, 2024	Radiation (03CH04-SZ)
AC Power Source	APC	AFV-S-600B	F11905001 9	N/A	Oct. 18, 2023	Apr. 23, 2024~ May 11, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Apr. 23, 2024~ May 11, 2024	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Apr. 23, 2024~ May 11, 2024	NCR	Radiation (03CH04-SZ)

6 Measurement Uncertainty

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Conducted Power Density	±1.32 dB
Peak to Average Ratio	±1.34 dB
Frequency Stability	±1.3 Hz

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.1 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.9 dB

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Appendix A. Test Results of Conducted Test

Test Engineer :	Lorenzo Liu	**Temperature :**	24~26℃
		Relative Humidity :	50~53%

Software Version: 23.06.1602

FR1 N48 (ANT7)-SCS 15KHz

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-0.39dB

NR Band	SCS	BandWidth	Arfcn	Freq(MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
48	15	10	637000	3555	DFT-s-OFDM QPSK	1@1	22.04	21.65	0.1462
48	15	10	637000	3555	DFT-s-OFDM 16 QAM	1@1	20.81	20.42	0.1102
48	15	10	641666	3624.99	DFT-s-OFDM QPSK	1@1	22.42	22.03	0.1596
48	15	10	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	21.14	20.75	0.1189
48	15	10	646332	3694.98	DFT-s-OFDM QPSK	1@1	22.43	22.04	0.1600
48	15	10	646332	3694.98	DFT-s-OFDM 16 QAM	1@1	21.16	20.77	0.1194
48	15	15	637168	3557.52	DFT-s-OFDM QPSK	1@1	18.24	17.85	0.0610
48	15	15	637168	3557.52	DFT-s-OFDM 16 QAM	1@1	17.18	16.79	0.0478
48	15	15	641666	3624.99	DFT-s-OFDM QPSK	1@1	22.41	22.02	0.1592
48	15	15	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	21.16	20.77	0.1194
48	15	15	646166	3692.49	DFT-s-OFDM QPSK	1@1	22.39	22	0.1585
48	15	15	646166	3692.49	DFT-s-OFDM 16 QAM	1@1	21.11	20.72	0.1180
48	15	20	637334	3560.01	DFT-s-OFDM QPSK	1@1	18.28	17.89	0.0615
48	15	20	637334	3560.01	DFT-s-OFDM 16 QAM	1@1	17.22	16.83	0.0482
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	1@1	22.44	22.05	0.1603
48	15	20	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	21.14	20.75	0.1189
48	15	20	646000	3690	DFT-s-OFDM QPSK	1@1	22.42	22.03	0.1596
48	15	20	646000	3690	DFT-s-OFDM 16 QAM	1@1	21.11	20.72	0.1180
48	15	40	638000	3570	DFT-s-OFDM PI/2 BPSK	108@54	11.88	11.49	0.0141
48	15	40	638000	3570	DFT-s-OFDM PI/2 BPSK	1@1	11.9	11.51	0.0142
48	15	40	638000	3570	DFT-s-OFDM PI/2 BPSK	1@214	11.99	11.6	0.0145
48	15	40	638000	3570	DFT-s-OFDM QPSK	108@54	11.9	11.51	0.0142
48	15	40	638000	3570	DFT-s-OFDM QPSK	1@1	11.85	11.46	0.0140
48	15	40	638000	3570	DFT-s-OFDM QPSK	1@214	11.91	11.52	0.0142
48	15	40	638000	3570	DFT-s-OFDM 16 QAM	108@54	11.4	11.01	0.0126
48	15	40	638000	3570	DFT-s-OFDM 16 QAM	1@1	11.3	10.91	0.0123
48	15	40	638000	3570	DFT-s-OFDM 16 QAM	1@214	11.38	10.99	0.0126
48	15	40	638000	3570	DFT-s-OFDM 64 QAM	108@54	11.37	10.98	0.0125
48	15	40	638000	3570	DFT-s-OFDM 64 QAM	1@1	11.36	10.97	0.0125
48	15	40	638000	3570	DFT-s-OFDM 64 QAM	1@214	11.54	11.15	0.0130
48	15	40	638000	3570	DFT-s-OFDM 256 QAM	108@54	11.39	11	0.0126
48	15	40	638000	3570	DFT-s-OFDM 256 QAM	1@1	11.43	11.04	0.0127
48	15	40	638000	3570	DFT-s-OFDM 256 QAM	1@214	11.64	11.25	0.0133
48	15	40	638000	3570	CP-OFDM QPSK	108@54	10.87	10.48	0.0112
48	15	40	638000	3570	CP-OFDM QPSK	1@1	10.88	10.49	0.0112
48	15	40	638000	3570	CP-OFDM QPSK	1@214	10.92	10.53	0.0113
48	15	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	108@54	22.38	21.99	0.1581
48	15	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@1	18.6	18.21	0.0662

48	15	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@214	18.64	18.25	0.0668
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	108@54	22.45	22.06	0.1607
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	1@1	18.48	18.09	0.0644
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	1@214	18.58	18.19	0.0659
48	15	40	641666	3624.99	DFT-s-OFDM 16 QAM	108@54	21.41	21.02	0.1265
48	15	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	18.44	18.05	0.0638
48	15	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@214	18.53	18.14	0.0652
48	15	40	641666	3624.99	DFT-s-OFDM 64 QAM	108@54	19.85	19.46	0.0883
48	15	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@1	18.63	18.24	0.0667
48	15	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@214	18.57	18.18	0.0658
48	15	40	641666	3624.99	DFT-s-OFDM 256 QAM	108@54	18.17	17.78	0.0600
48	15	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@1	18.14	17.75	0.0596
48	15	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@214	18.3	17.91	0.0618
48	15	40	641666	3624.99	CP-OFDM QPSK	108@54	20.88	20.49	0.1119
48	15	40	641666	3624.99	CP-OFDM QPSK	1@1	18.45	18.06	0.0640
48	15	40	641666	3624.99	CP-OFDM QPSK	1@214	18.58	18.19	0.0659
48	15	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	108@54	12.15	11.76	0.0150
48	15	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@1	12.16	11.77	0.0150
48	15	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@214	12.12	11.73	0.0149
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	108@54	12.18	11.79	0.0151
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	1@1	12.1	11.71	0.0148
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	1@214	12.05	11.66	0.0147
48	15	40	645332	3679.98	DFT-s-OFDM 16 QAM	108@54	11.65	11.26	0.0134
48	15	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@1	11.58	11.19	0.0132
48	15	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@214	11.51	11.12	0.0129
48	15	40	645332	3679.98	DFT-s-OFDM 64 QAM	108@54	11.65	11.26	0.0134
48	15	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@1	11.74	11.35	0.0136
48	15	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@214	11.67	11.28	0.0134
48	15	40	645332	3679.98	DFT-s-OFDM 256 QAM	108@54	11.66	11.27	0.0134
48	15	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@1	11.82	11.43	0.0139
48	15	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@214	11.79	11.4	0.0138
48	15	40	645332	3679.98	CP-OFDM QPSK	108@54	11.13	10.74	0.0119
48	15	40	645332	3679.98	CP-OFDM QPSK	1@1	11.09	10.7	0.0117
48	15	40	645332	3679.98	CP-OFDM QPSK	1@214	11.06	10.67	0.0117

FR1 N48 (ANT6)-SCS 30KHz

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-2.7dB

NR Band	SCS	BandWidth	Arfcn	Freq(MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
48	30	10	637000	3555	DFT-s-OFDM QPSK	1@1	22.98	20.28	0.1067
48	30	10	637000	3555	DFT-s-OFDM 16 QAM	1@1	21.93	19.23	0.0838
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@1	23.04	20.34	0.1081
48	30	10	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	21.99	19.29	0.0849
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@1	23.13	20.43	0.1104
48	30	10	646332	3694.98	DFT-s-OFDM 16 QAM	1@1	22.07	19.37	0.0865
48	30	15	637168	3557.52	DFT-s-OFDM QPSK	1@1	19.29	16.59	0.0456
48	30	15	637168	3557.52	DFT-s-OFDM 16 QAM	1@1	18.25	15.55	0.0359
48	30	15	641666	3624.99	DFT-s-OFDM QPSK	1@1	22.97	20.27	0.1064
48	30	15	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	22.06	19.36	0.0863
48	30	15	646166	3692.49	DFT-s-OFDM QPSK	1@1	23.01	20.31	0.1074
48	30	15	646166	3692.49	DFT-s-OFDM 16 QAM	1@1	22.09	19.39	0.0869
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@1	19.31	16.61	0.0458
48	30	20	637334	3560.01	DFT-s-OFDM 16 QAM	1@1	18.29	15.59	0.0362
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@1	23.06	20.36	0.1086
48	30	20	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	22.09	19.39	0.0869
48	30	20	646000	3690	DFT-s-OFDM QPSK	1@1	23.13	20.43	0.1104
48	30	20	646000	3690	DFT-s-OFDM 16 QAM	1@1	22.14	19.44	0.0879
48	30	40	638000	3570	DFT-s-OFDM PI/2 BPSK	50@25	12.69	9.99	0.0100
48	30	40	638000	3570	DFT-s-OFDM PI/2 BPSK	1@1	12.79	10.09	0.0102
48	30	40	638000	3570	DFT-s-OFDM PI/2 BPSK	1@104	12.61	9.91	0.0098
48	30	40	638000	3570	DFT-s-OFDM QPSK	50@25	12.69	9.99	0.0100
48	30	40	638000	3570	DFT-s-OFDM QPSK	1@1	12.83	10.13	0.0103
48	30	40	638000	3570	DFT-s-OFDM QPSK	1@104	12.65	9.95	0.0099
48	30	40	638000	3570	DFT-s-OFDM 16 QAM	50@25	12.22	9.52	0.0090
48	30	40	638000	3570	DFT-s-OFDM 16 QAM	1@1	12.31	9.61	0.0091
48	30	40	638000	3570	DFT-s-OFDM 16 QAM	1@104	12.18	9.48	0.0089
48	30	40	638000	3570	DFT-s-OFDM 64 QAM	50@25	12.19	9.49	0.0089
48	30	40	638000	3570	DFT-s-OFDM 64 QAM	1@1	12.25	9.55	0.0090
48	30	40	638000	3570	DFT-s-OFDM 64 QAM	1@104	12.02	9.32	0.0086
48	30	40	638000	3570	DFT-s-OFDM 256 QAM	50@25	12.19	9.49	0.0089
48	30	40	638000	3570	DFT-s-OFDM 256 QAM	1@1	12.12	9.42	0.0087
48	30	40	638000	3570	DFT-s-OFDM 256 QAM	1@104	11.95	9.25	0.0084
48	30	40	638000	3570	CP-OFDM QPSK	53@26	11.68	8.98	0.0079
48	30	40	638000	3570	CP-OFDM QPSK	1@1	11.78	9.08	0.0081
48	30	40	638000	3570	CP-OFDM QPSK	1@104	11.56	8.86	0.0077
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@25	23.07	20.37	0.1089

48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@1	19.34	16.64	0.0461
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@104	19.24	16.54	0.0451
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	50@25	23.17	20.47	0.1114
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@1	19.39	16.69	0.0467
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@104	19.27	16.57	0.0454
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	50@25	22.15	19.45	0.0881
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	19.31	16.61	0.0458
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@104	19.23	16.53	0.0450
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	50@25	20.6	17.9	0.0617
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@1	19.35	16.65	0.0462
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@104	19.28	16.58	0.0455
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	50@25	18.86	16.16	0.0413
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@1	18.69	15.99	0.0397
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@104	18.6	15.9	0.0389
48	30	40	641666	3624.99	CP-OFDM QPSK	53@26	21.58	18.88	0.0773
48	30	40	641666	3624.99	CP-OFDM QPSK	1@1	19.34	16.64	0.0461
48	30	40	641666	3624.99	CP-OFDM QPSK	1@104	19.21	16.51	0.0448
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	50@25	13.02	10.32	0.0108
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@1	12.97	10.27	0.0106
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@104	12.86	10.16	0.0104
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	50@25	13.02	10.32	0.0108
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@1	13.07	10.37	0.0109
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@104	12.9	10.2	0.0105
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	50@25	12.51	9.81	0.0096
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@1	12.55	9.85	0.0097
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@104	12.41	9.71	0.0094
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	50@25	12.48	9.78	0.0095
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@1	12.44	9.74	0.0094
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@104	12.31	9.61	0.0091
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	50@25	12.53	9.83	0.0096
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@1	12.35	9.65	0.0092
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@104	12.23	9.53	0.0090
48	30	40	645332	3679.98	CP-OFDM QPSK	53@26	11.97	9.27	0.0085
48	30	40	645332	3679.98	CP-OFDM QPSK	1@1	11.95	9.25	0.0084
48	30	40	645332	3679.98	CP-OFDM QPSK	1@104	11.84	9.14	0.0082

FR1 N48 (ANT7)-SCS 15KHz

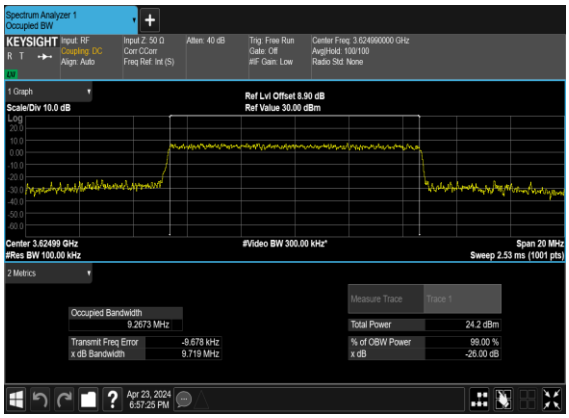
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0046	**PASS**	NV
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0062	**PASS**	LV
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0049	**PASS**	HV
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0047	**PASS**	-30℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0040	**PASS**	-20℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0040	**PASS**	-10℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0039	**PASS**	0℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0061	**PASS**	10℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0046	**PASS**	20℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0052	**PASS**	30℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0044	**PASS**	40℃
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	0.0052	**PASS**	50℃

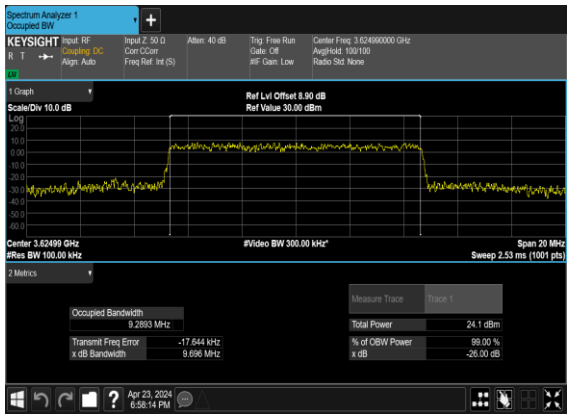
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
48	15	10	641666	3624.99	CP-OFDM QPSK	52@0	9.2673	9.719
48	15	10	641666	3624.99	CP-OFDM 16 QAM	52@0	9.2893	9.696
48	15	10	641666	3624.99	CP-OFDM 64 QAM	52@0	9.3089	9.707
48	15	10	641666	3624.99	CP-OFDM 256 QAM	52@0	9.2687	9.66
48	15	15	641666	3624.99	CP-OFDM QPSK	79@0	14.083	14.64
48	15	15	641666	3624.99	CP-OFDM 16 QAM	79@0	14.123	14.63
48	15	15	641666	3624.99	CP-OFDM 64 QAM	79@0	14.102	14.64
48	15	15	641666	3624.99	CP-OFDM 256 QAM	79@0	14.111	14.6
48	15	20	641666	3624.99	CP-OFDM QPSK	106@0	18.905	19.67
48	15	20	641666	3624.99	CP-OFDM 16 QAM	106@0	18.884	19.57
48	15	20	641666	3624.99	CP-OFDM 64 QAM	106@0	18.889	19.56
48	15	20	641666	3624.99	CP-OFDM 256 QAM	106@0	18.865	19.53
48	15	40	641666	3624.99	CP-OFDM QPSK	216@0	38.479	39.82
48	15	40	641666	3624.99	CP-OFDM 16 QAM	216@0	38.457	39.74
48	15	40	641666	3624.99	CP-OFDM 64 QAM	216@0	38.615	39.78
48	15	40	641666	3624.99	CP-OFDM 256 QAM	216@0	38.529	39.82

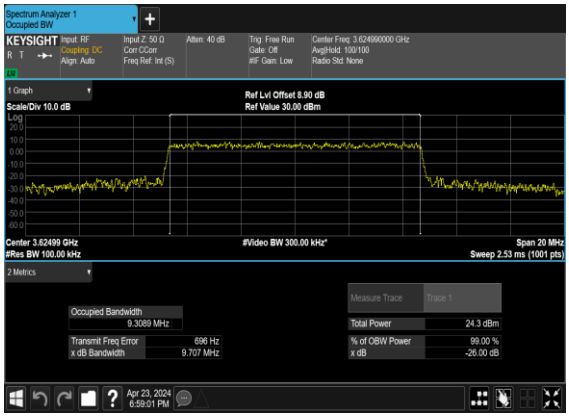
N48(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



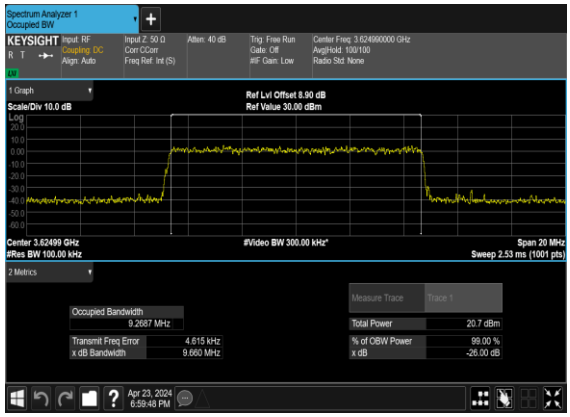
N48(10M)_CP-OFDM_16QAM_Outer_Full_Mid_CH



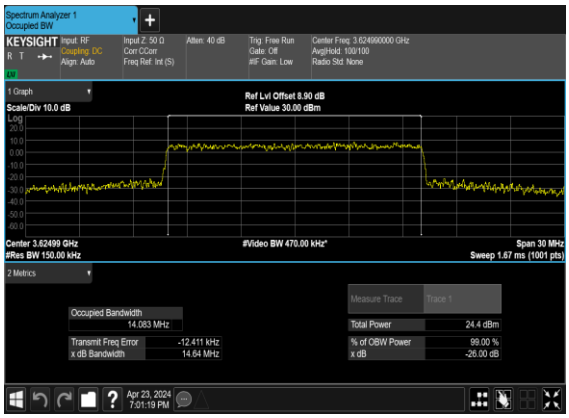
N48(10M)_CP-OFDM_64QAM_Outer_Full_Mid_CH



N48(10M)_CP-OFDM_256QAM_Outer_Full_Mid_CH

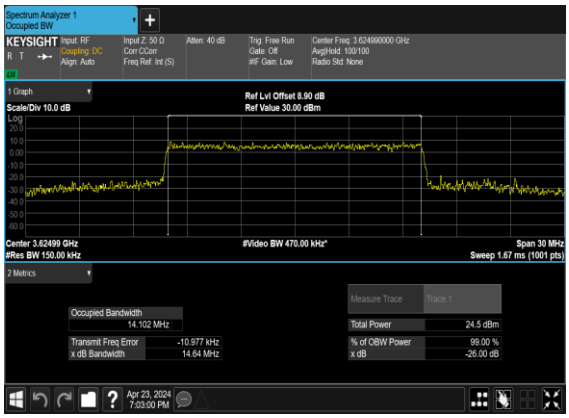


N48(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

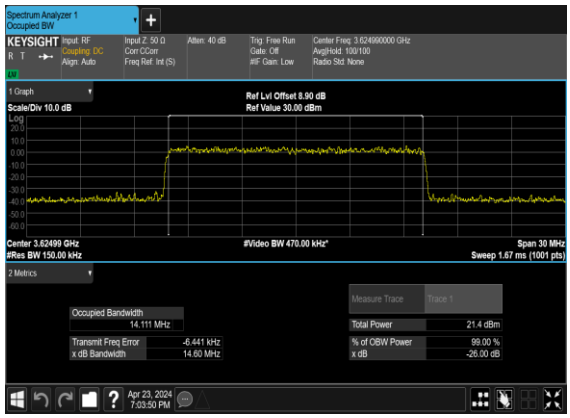


N48(15M)_CP-OFDM_16QAM_Outer_Full_Mid_CH

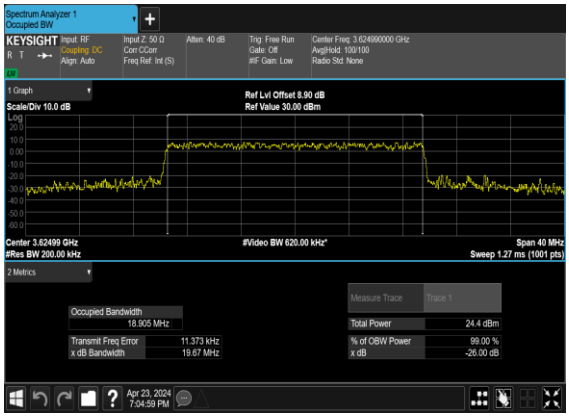
N48(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N48(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

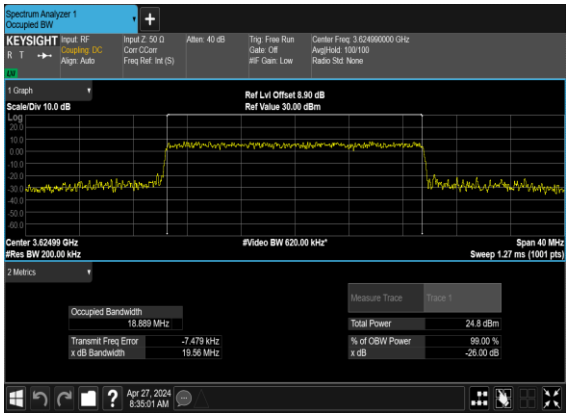


N48(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

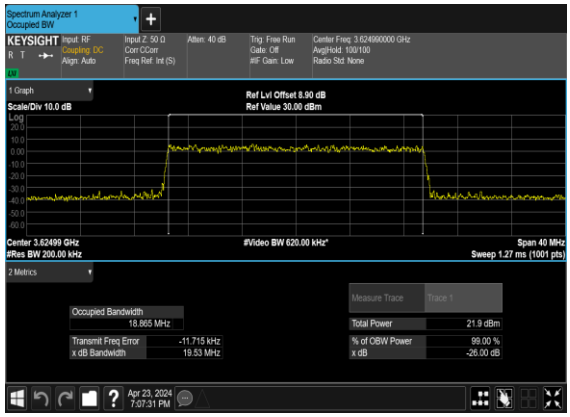


N48(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

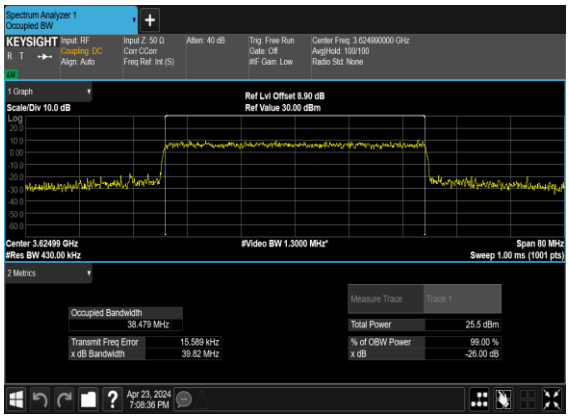
N48(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N48(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



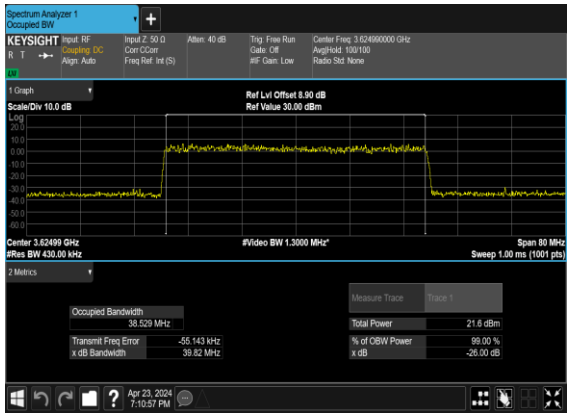
N48(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N48(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N48(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N48(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

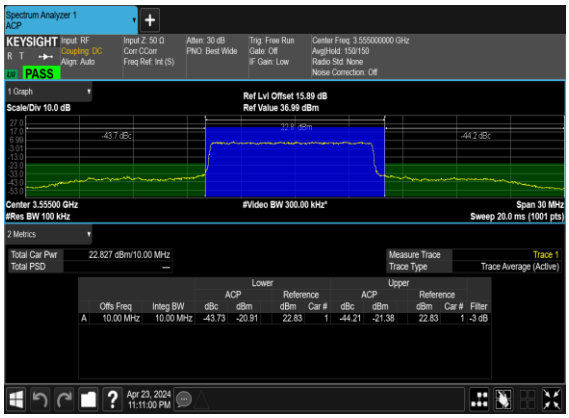


Adjacent Channel Leakage Ratio

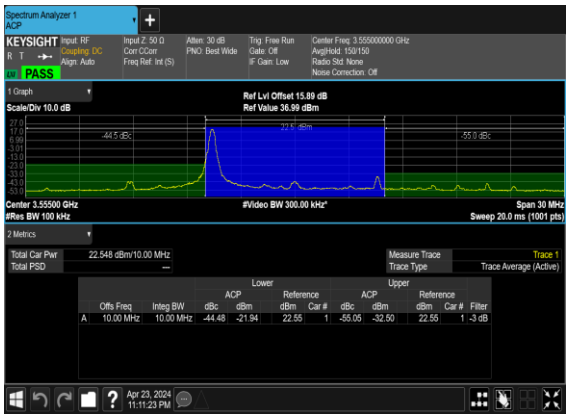
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Lower Margin	Upper Margin	Result	Verdict
48	15	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	50@0	-13.73	-14.21	**see graph**	PASS
48	15	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	1@0	-14.48	-25.05	**see graph**	PASS
48	15	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	1@51	-25.48	-18.47	**see graph**	PASS
48	15	10	637000	3555.0	DFT-s-OFDM QPSK	50@0	-10.64	-10.79	**see graph**	PASS
48	15	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	-17.09	-24.38	**see graph**	PASS
48	15	10	637000	3555.0	DFT-s-OFDM QPSK	1@51	-24.25	-17.86	**see graph**	PASS
48	15	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@0	-12.46	-14.18	**see graph**	PASS
48	15	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-16.26	-24.02	**see graph**	PASS
48	15	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@51	-21.36	-17.12	**see graph**	PASS
48	15	10	641666	3624.99	DFT-s-OFDM QPSK	50@0	-10.92	-12.06	**see graph**	PASS
48	15	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	-16.07	-22.37	**see graph**	PASS
48	15	10	641666	3624.99	DFT-s-OFDM QPSK	1@51	-20.52	-17.31	**see graph**	PASS
48	15	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	50@0	-13.62	-14.79	**see graph**	PASS
48	15	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	1@0	-16.74	-22.25	**see graph**	PASS
48	15	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	1@51	-22.04	-17.45	**see graph**	PASS
48	15	10	646332	3694.98	DFT-s-OFDM QPSK	50@0	-10.41	-11.14	**see graph**	PASS
48	15	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	-17.61	-21.73	**see graph**	PASS
48	15	10	646332	3694.98	DFT-s-OFDM QPSK	1@51	-21.5	-17.46	**see graph**	PASS
48	15	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	100@0	-14.38	-14.96	**see graph**	PASS
48	15	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@0	-18.87	-22.73	**see graph**	PASS
48	15	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@105	-22.33	-19.67	**see graph**	PASS
48	15	20	637334	3560.01	DFT-s-OFDM QPSK	100@0	-9.97	-10.55	**see graph**	PASS
48	15	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	-18.18	-22.25	**see graph**	PASS
48	15	20	637334	3560.01	DFT-s-OFDM QPSK	1@105	-22.64	-19.45	**see graph**	PASS
48	15	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	100@0	-11.77	-12.91	**see graph**	PASS
48	15	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-17.08	-18.71	**see graph**	PASS
48	15	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@105	-20.91	-19.07	**see graph**	PASS
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	100@0	-8.48	-9.28	**see graph**	PASS
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	-17.63	-19.33	**see graph**	PASS

48	15	20	641666	3624.99	DFT-s-OFDM QPSK	1@105	-20.76	-18.26	**see graph**	PASS
48	15	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	100@0	-14.4	-14.43	**see graph**	PASS
48	15	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@0	-16.12	-18.17	**see graph**	PASS
48	15	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@105	-20.81	-18.67	**see graph**	PASS
48	15	20	646000	3690.0	DFT-s-OFDM QPSK	100@0	-9.82	-9.96	**see graph**	PASS
48	15	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	-16.98	-19.17	**see graph**	PASS
48	15	20	646000	3690.0	DFT-s-OFDM QPSK	1@105	-19.54	-17.85	**see graph**	PASS
48	15	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	216@0	-8.48	-7.99	**see graph**	PASS
48	15	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@0	-7.72	-8.17	**see graph**	PASS
48	15	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@215	-9.03	-8.2	**see graph**	PASS
48	15	40	638000	3570.0	DFT-s-OFDM QPSK	216@0	-8.34	-7.86	**see graph**	PASS
48	15	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	-7.82	-8.04	**see graph**	PASS
48	15	40	638000	3570.0	DFT-s-OFDM QPSK	1@215	-8.37	-7.6	**see graph**	PASS
48	15	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	216@0	-13.26	-13.06	**see graph**	PASS
48	15	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-11.59	-13.6	**see graph**	PASS
48	15	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@215	-14.79	-12.3	**see graph**	PASS
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	216@0	-12.81	-12.85	**see graph**	PASS
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	-10.89	-11.91	**see graph**	PASS
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	1@215	-14.08	-12.22	**see graph**	PASS
48	15	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	216@0	-7.96	-7.02	**see graph**	PASS
48	15	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@0	-7.03	-6.48	**see graph**	PASS
48	15	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@215	-7.71	-6.46	**see graph**	PASS
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	216@0	-7.86	-6.94	**see graph**	PASS
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	-7.59	-7.48	**see graph**	PASS
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	1@215	-8.51	-7.33	**see graph**	PASS

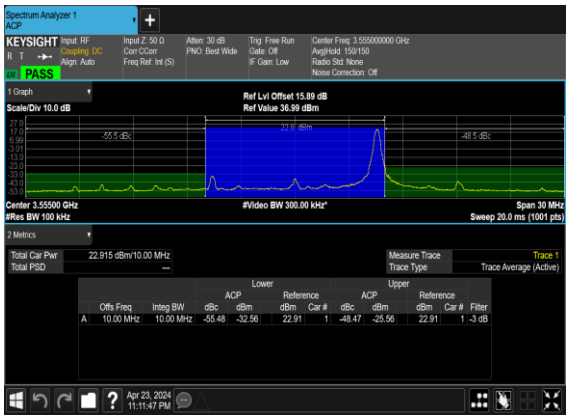
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



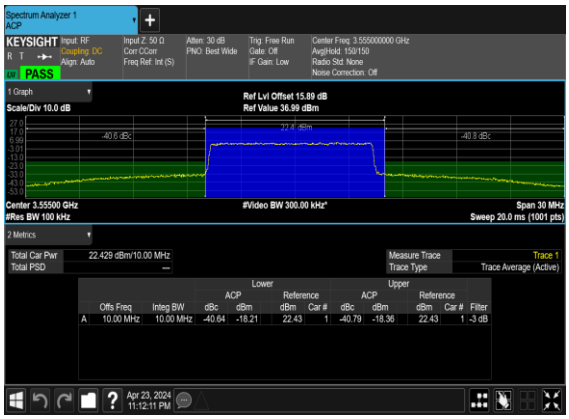
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



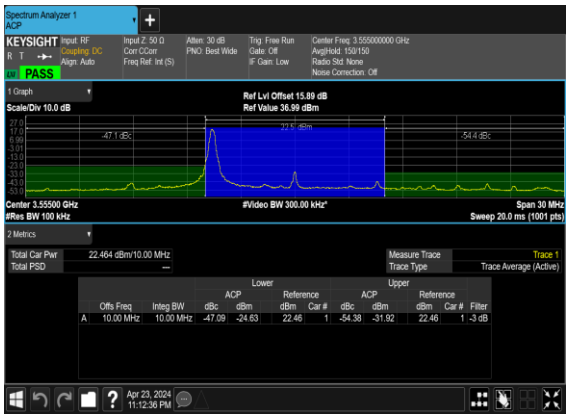
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH



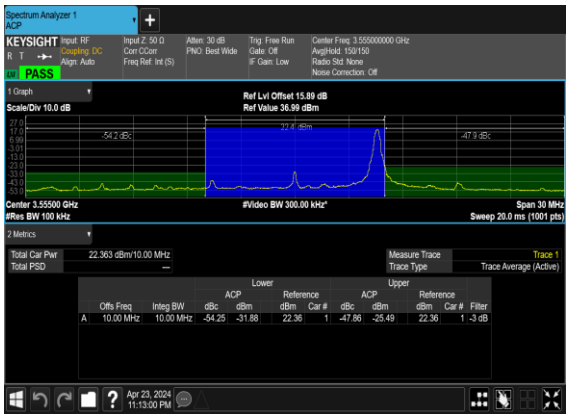
N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



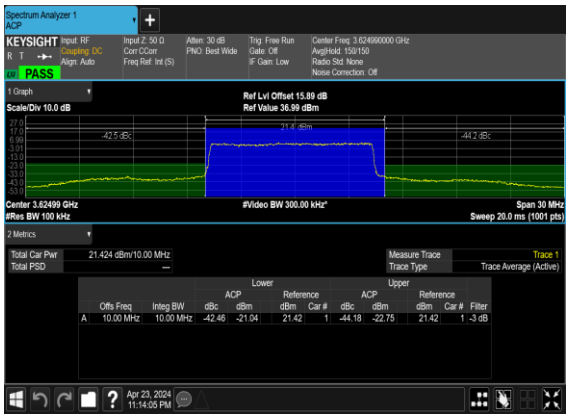
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



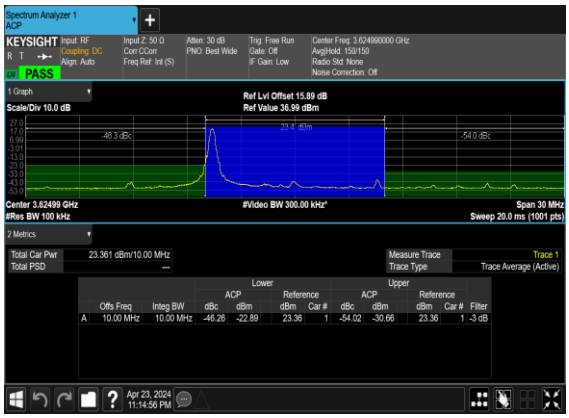
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH



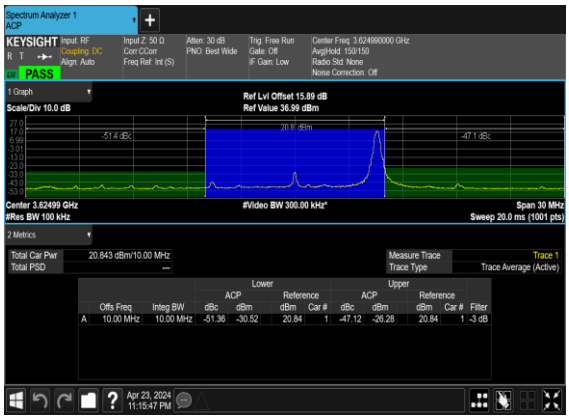
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



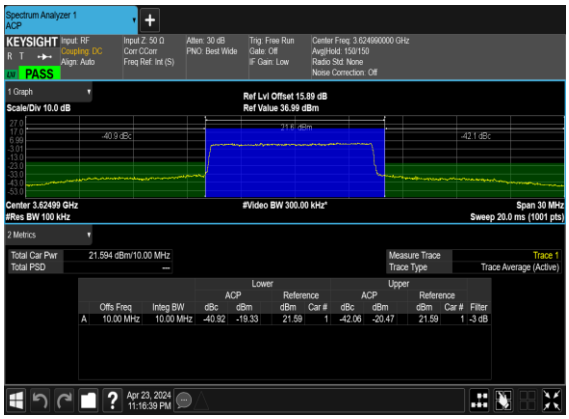
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



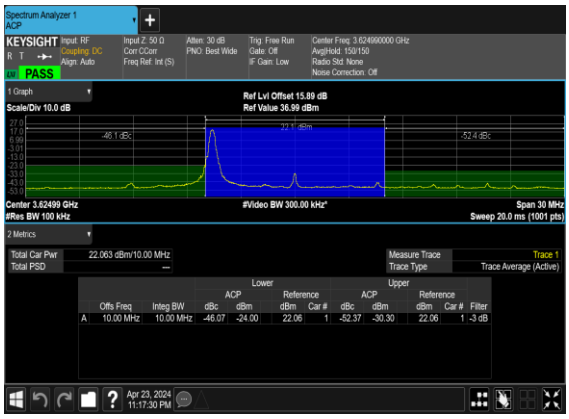
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Mid_CH



N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

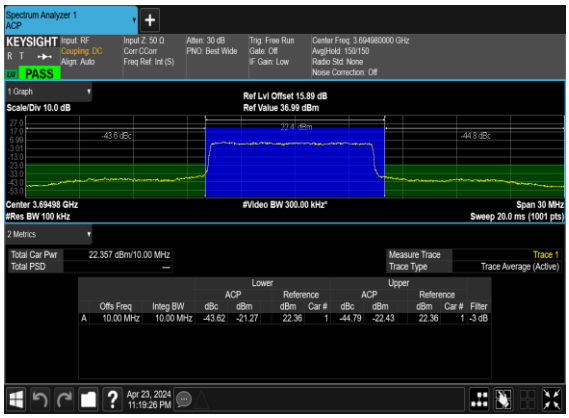


N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

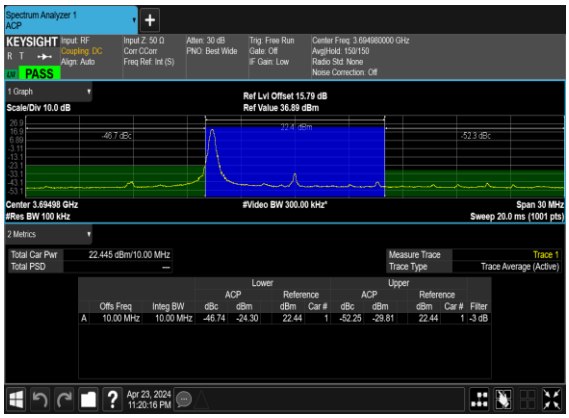


N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH

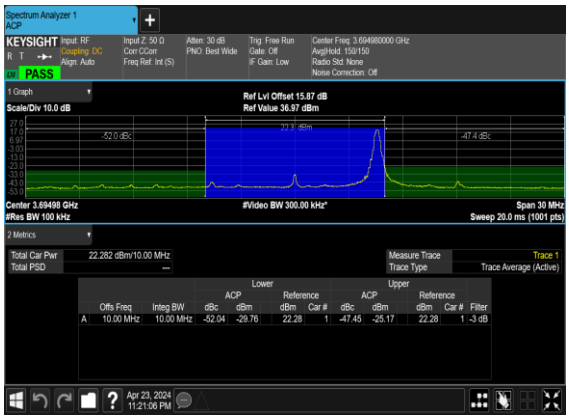
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



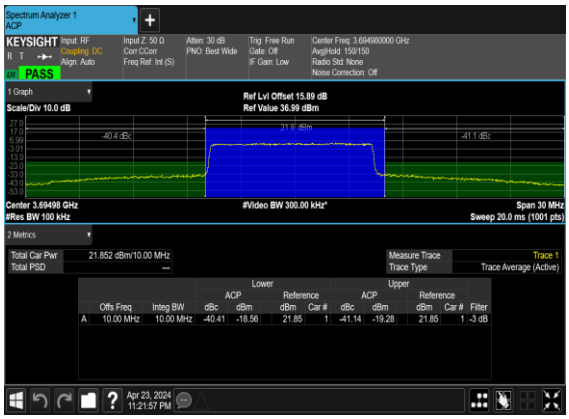
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



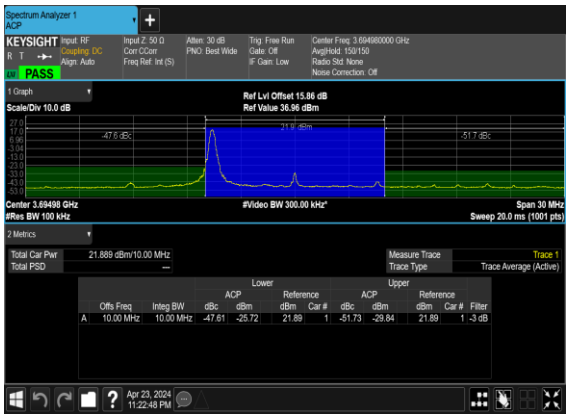
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH



N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

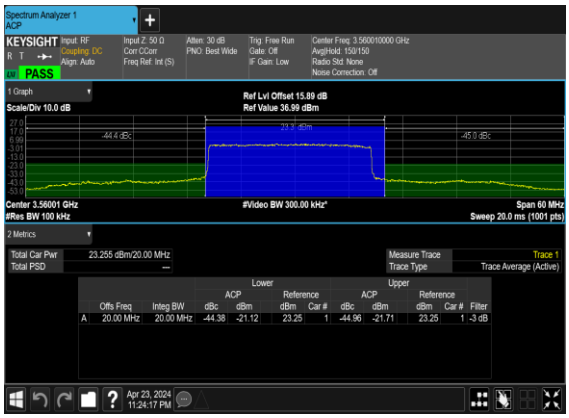


N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

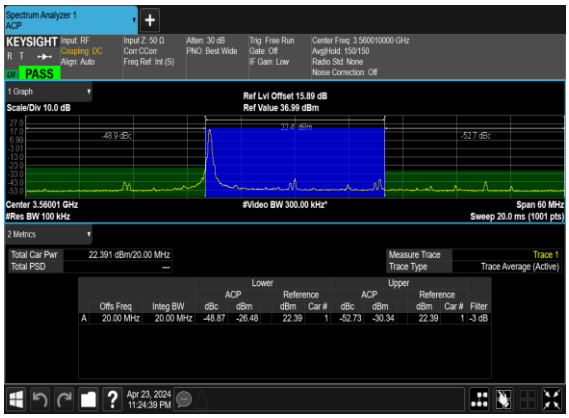


N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH

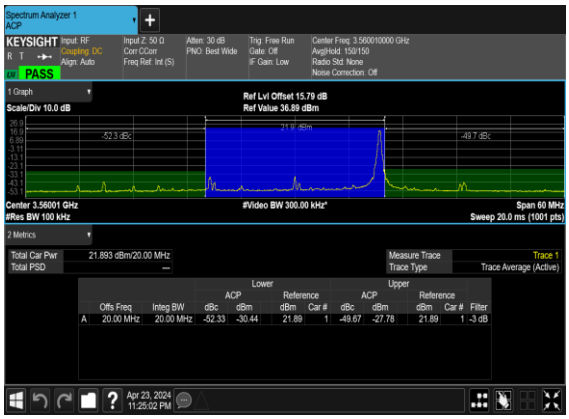
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



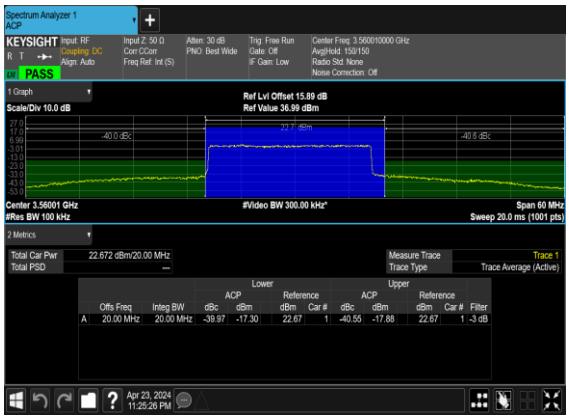
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



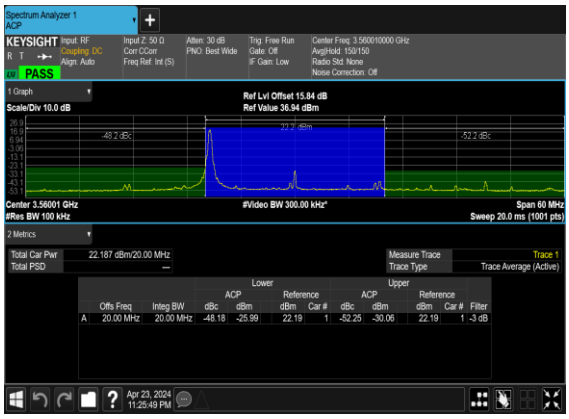
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH



N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

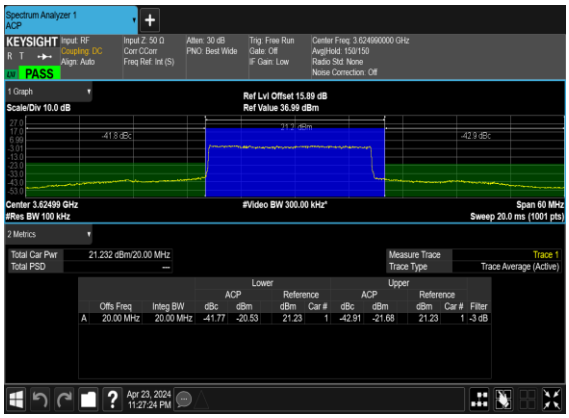


N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

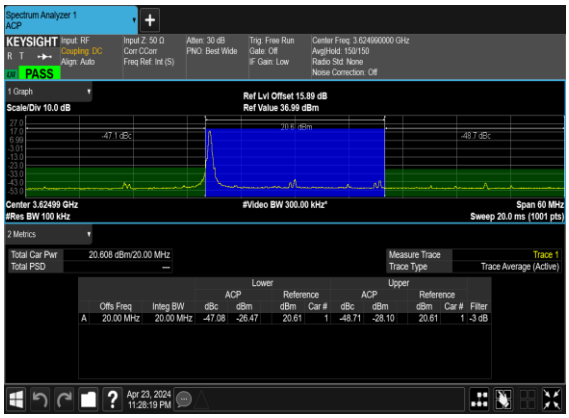


N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH

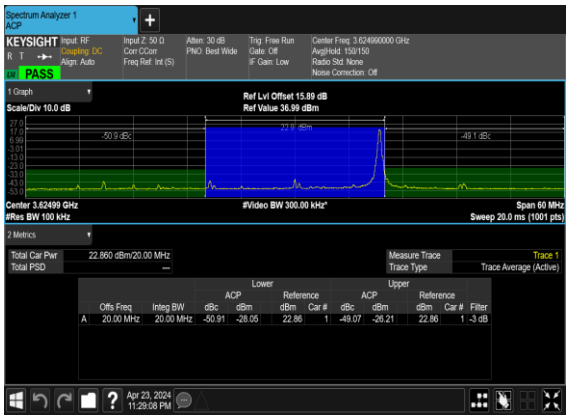
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



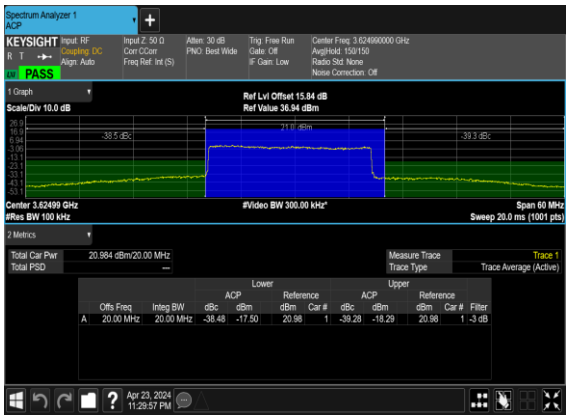
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



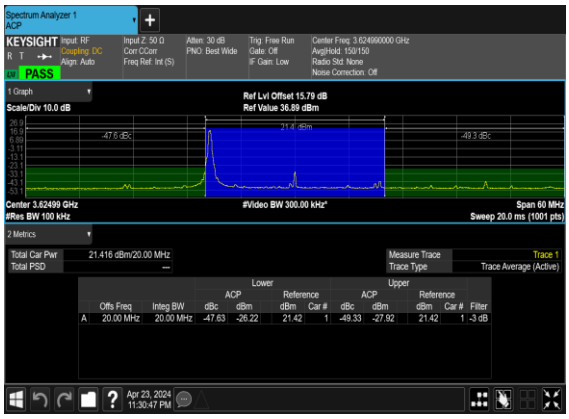
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Mid_CH



N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

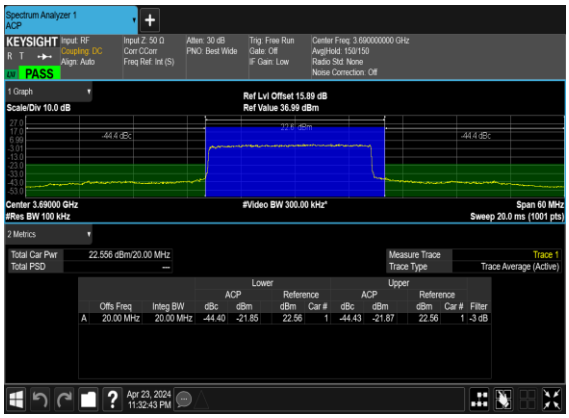


N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

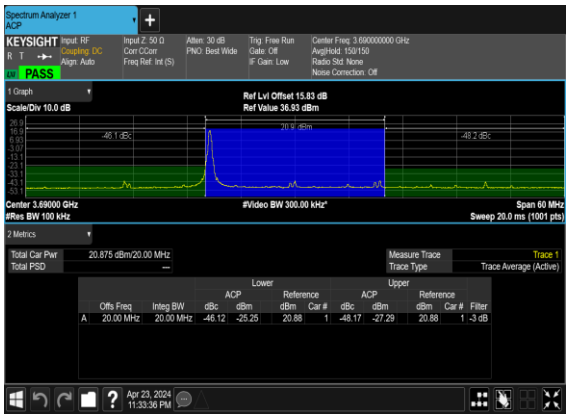


N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH

N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

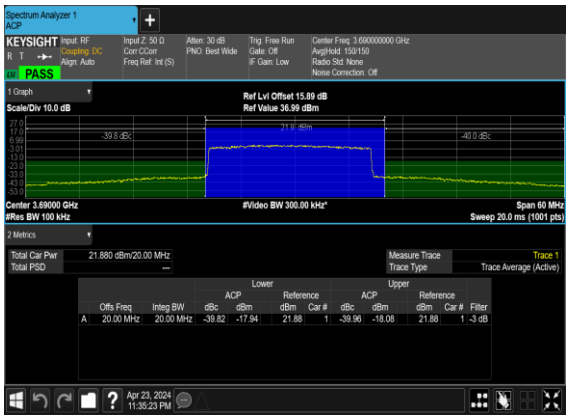


N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH

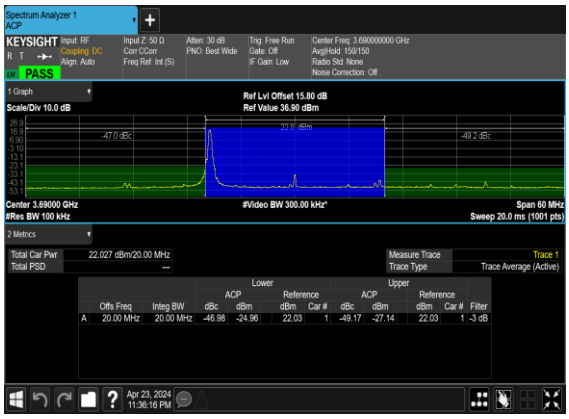


N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH

N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

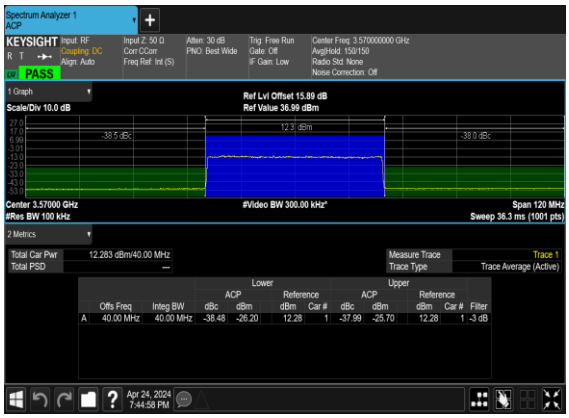


N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

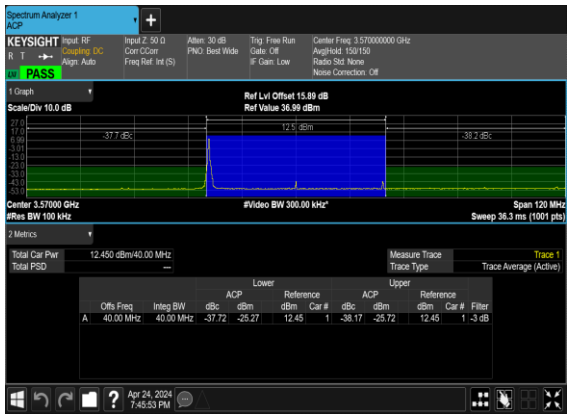


N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH

N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH

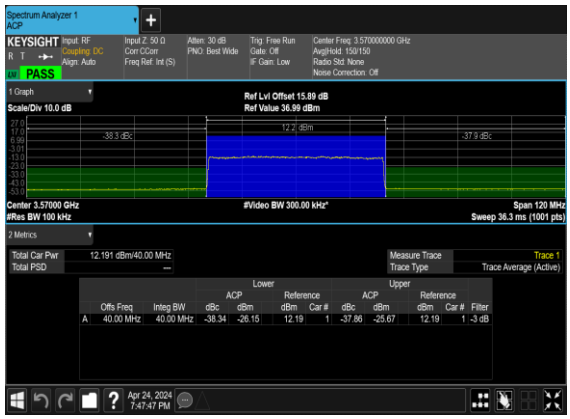


N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH

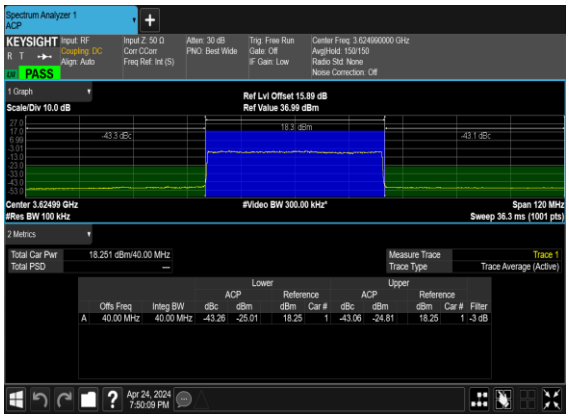
N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

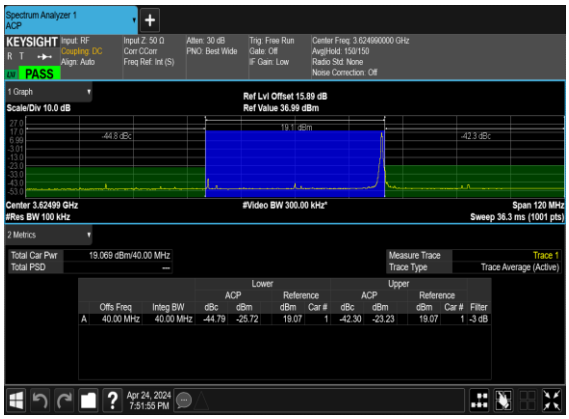
N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH

N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH

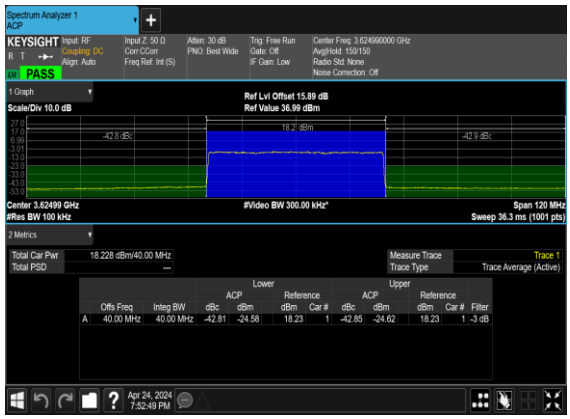


N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH

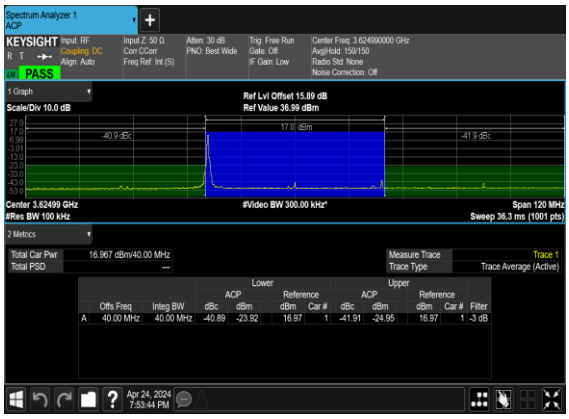
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Mid_CH



N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

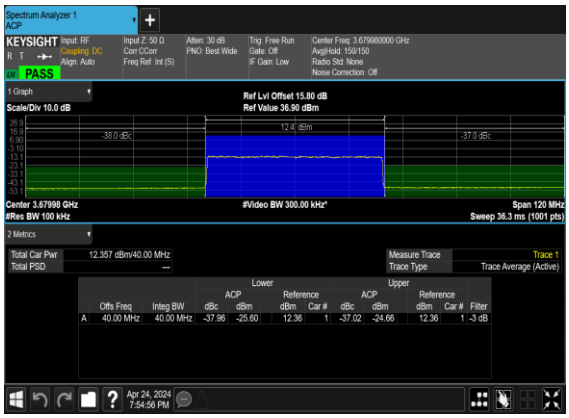


N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

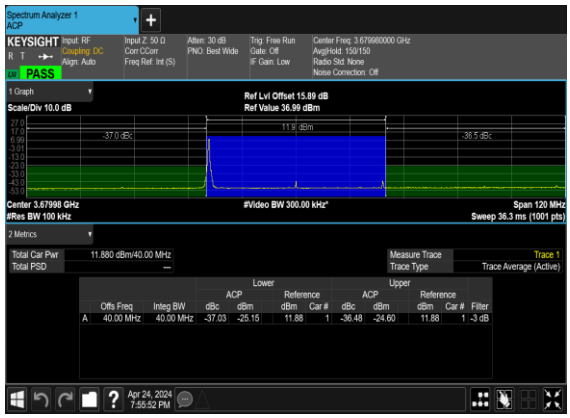


N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH

N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

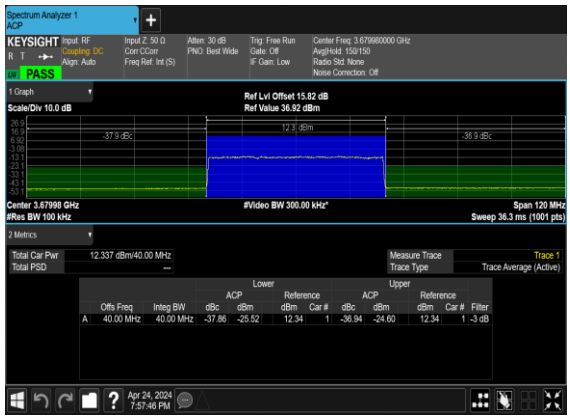


N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



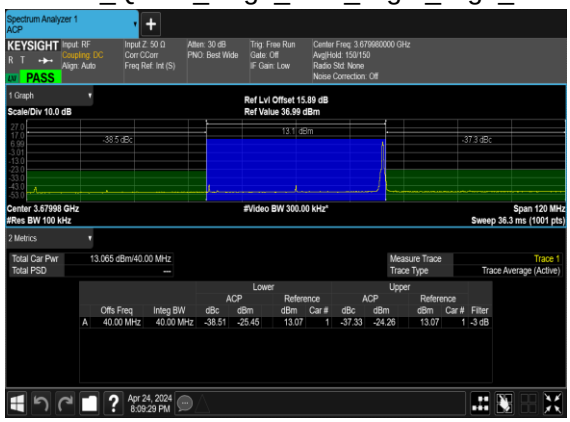
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH

N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH

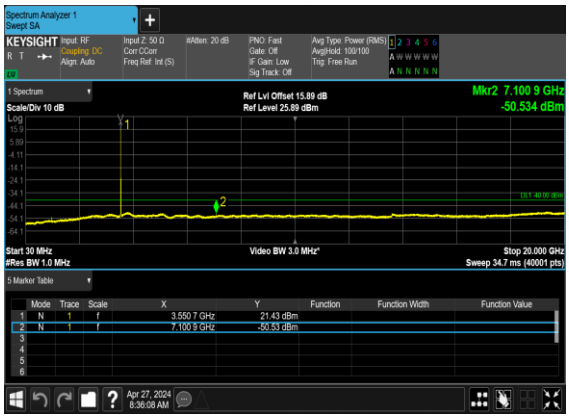


Conducted Spurious Emissions

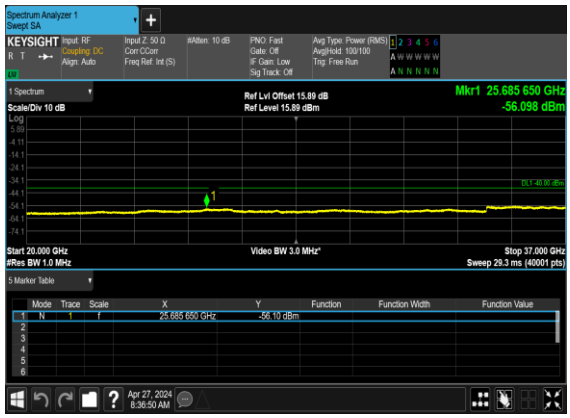
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
48	15	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	10	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	10	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	10	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	10	646332	3694.98	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	10	646332	3694.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	10	646332	3694.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	20	637334	3560.01	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	20	637334	3560.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	20	637334	3560.01	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

48	15	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	15	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	15	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

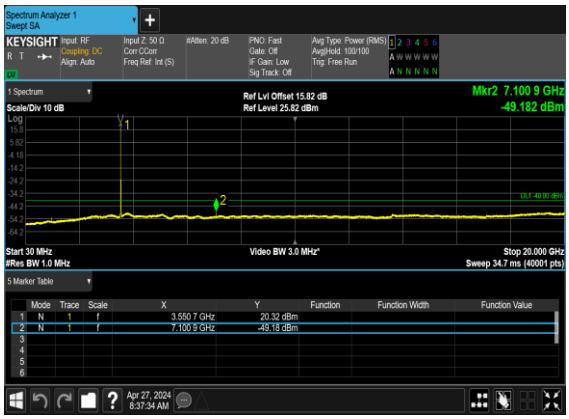
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH

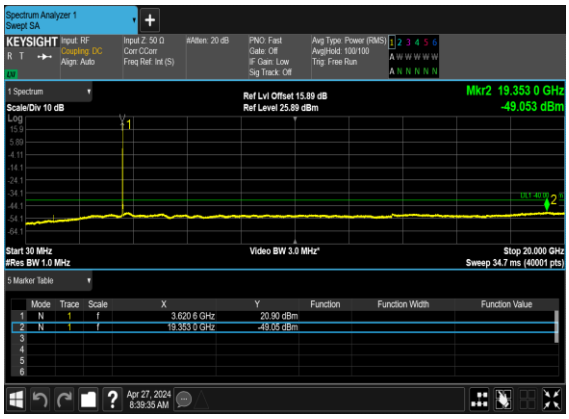


N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



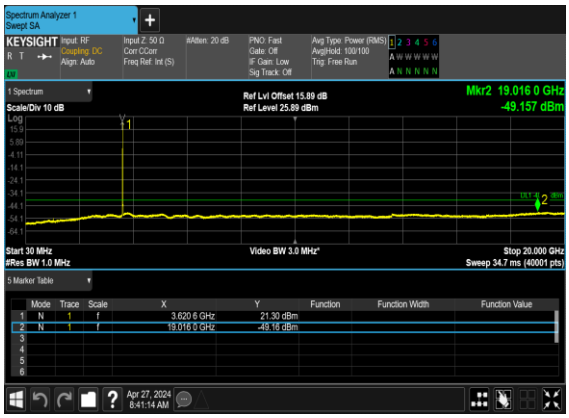
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

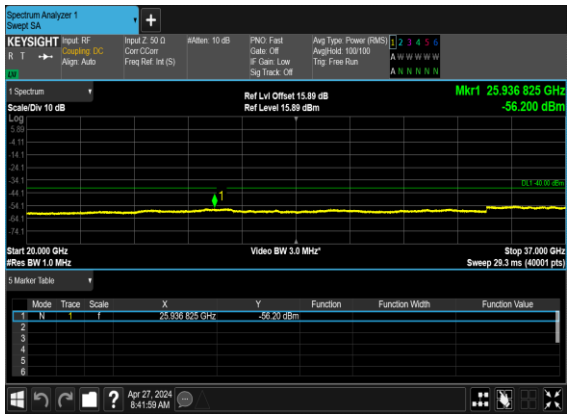


N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH

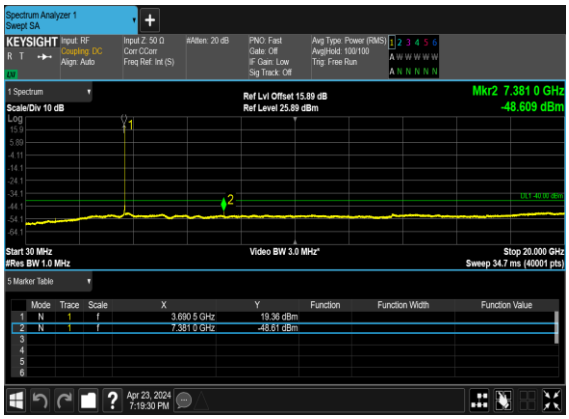
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH

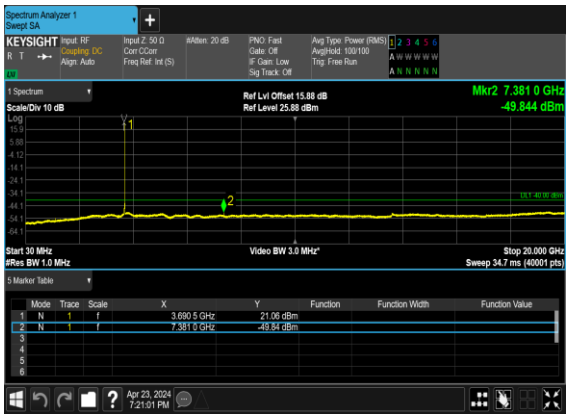


N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



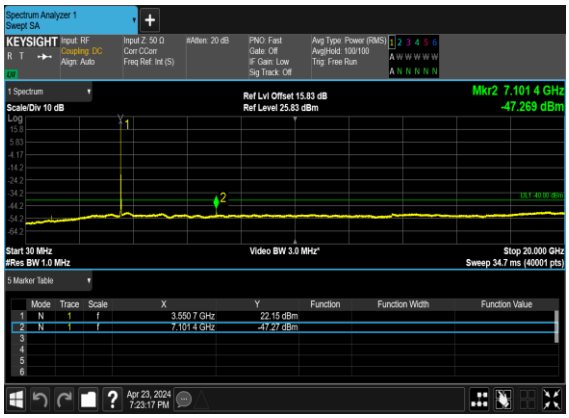
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH

N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

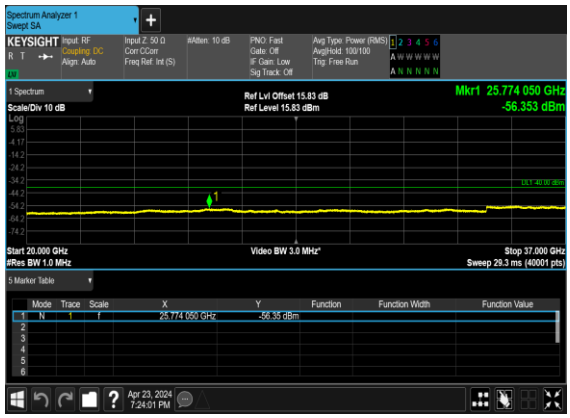


N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

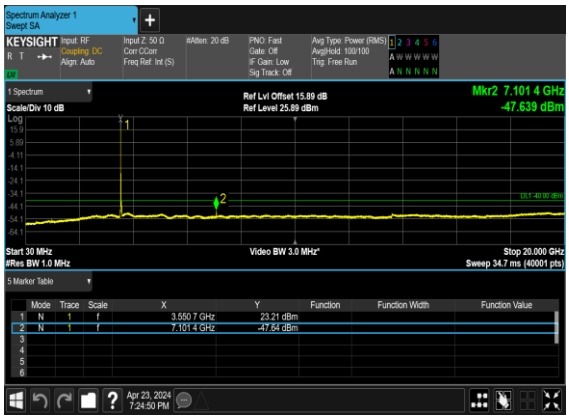
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



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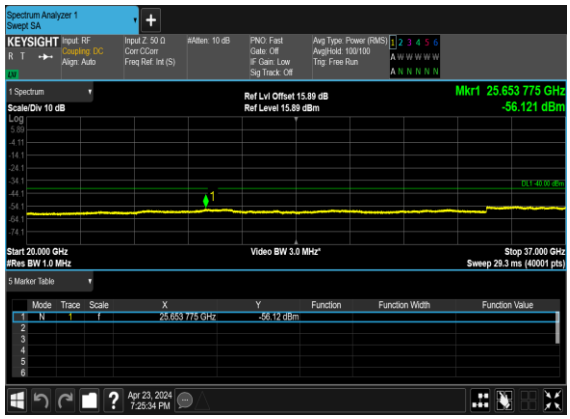
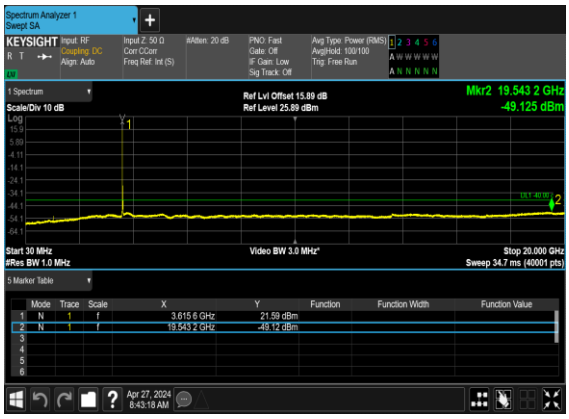


N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH