



FCC RF Test Report

APPLICANT : Quectel Wireless Solutions Co., Ltd.
EQUIPMENT : 5G NR Module
BRAND NAME : QUECTEL
MODEL NAME : AG555Q-GL
FCC ID : XMR2024AG555QGL
STANDARD : 47 CFR Part 2, 96
CLASSIFICATION : Citizens Band End User Devices (CBE)
EQUIPMENT TYPE : End User Equipment
TEST DATE(S) : Mar. 10, 2024 ~ Apr. 09, 2024

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 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. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China



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History of this test report

Report No.	Version	Description	Issued Date
FG3D1801N	01	Initial issue of report	Jun. 06, 2024

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
-	§96.41	Peak-to-Average Ratio	Not Applicable	Not applicable for End User Devices
3.3	§96.41	Maximum E.I.R.P	Pass	-
		Maximum Power Spectral Density	Not Applicable	Not applicable for End User Devices
3.4	§2.1049 §96.41	Occupied Bandwidth	Reporting only	-
3.5	§2.1051 §96.41	Conducted Band Edge Measurement Adjacent Channel Leakage Ratio	Pass	-
3.6	§2.1051 §96.41	Conducted Spurious Emission	Pass	
3.7	§2.1055	Frequency Stability for Temperature & Voltage	Pass	-
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	Under limit 5.50 dB at 7099.000 MHz

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture 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

Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, 200233, China

1.2 Manufacturer

Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, 200233, China

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	5G NR Module
Brand Name	QUECTEL
Model Name	AG555Q-GL
FCC ID	XMR2024AG555QGL
Tx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
Rx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
SCS	30kHz
Bandwidth	20MHz / 40MHz
Antenna Gain	5G NR n48: -3.65 dBi
Type of Modulation	DFT-s-OFDM (PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM) CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM)
IMEI Code	Conducted: 868637060025178 Radiation: 868637060025087
HW Version	R1.0
SW Version	BYA555QGLABR01A01M8G_OCPU
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. 5G NR n48 supports SA Mode only.



1.4 Maximum Conducted Power and Emission Designator

5G NR n48		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power(W)	Emission Designator (99%OBW)	Maximum Conducted power(W)	Emission Designator (99%OBW)
20	3560.01~3690.00	0.1306	18M2G7D	0.0982	18M2W7D
40	3570.00~3679.98	0.1374	37M9G7D	0.1276	37M8W7D

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

1.5 Testing Site

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

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.6 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC_5GNR_China_201027	1.0
2.	03CH04-KS	AUDIX	E3	210616



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

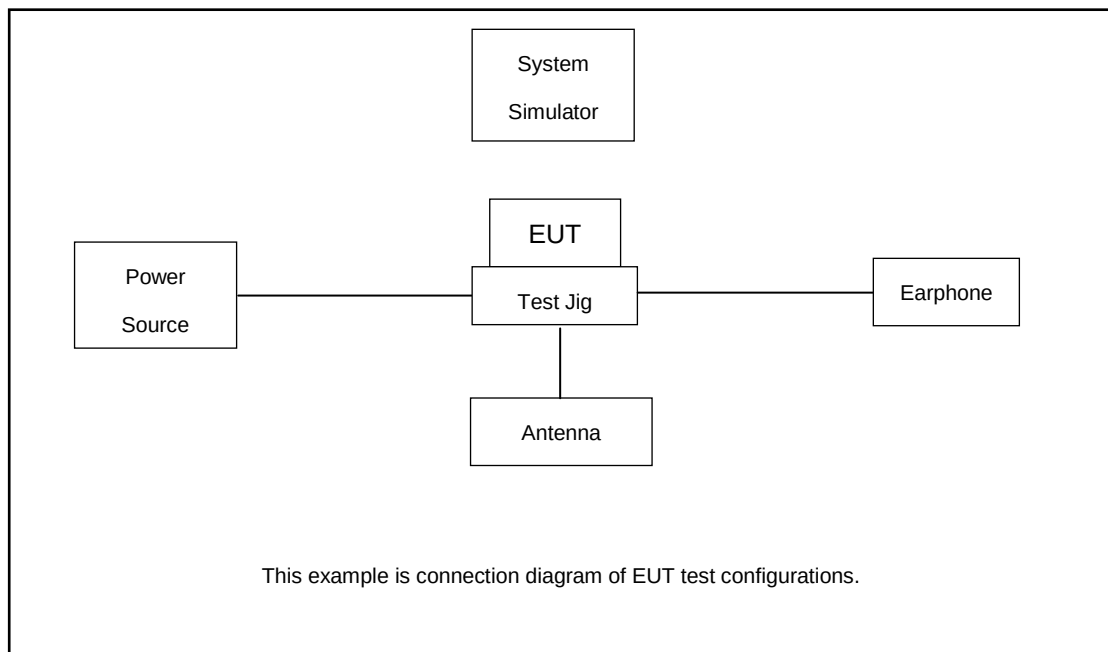
2.1 Test Mode

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 (X plane) were recorded in this report.

Test Items	Band	Bandwidth (MHz)						Modulation					RB #			Test Channel		
		5	10	15	20	30	40	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	half	Full	L	M	H
Max. Output Power	n48	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v
26dB and 99% Bandwidth	n48	-	-	-	v	-	v		v	v	v	v			v		v	
Adjacent Channel Leakage Ratio	n48	-	-	-	v	-	v	v	v				v		v	v	v	v
Conducted Band Edge	n48	-	-	-	v	-	v	v	v				v		v	v	v	v
Conducted Spurious Emission	n48	-	-	-	v	-	v	v	v				v			v	v	v
E.I.R.P	n48	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v
Frequency Stability	n48	-	-	-	v	-			v						v		v	
Radiated Spurious Emission	n48	Worst Case														v	v	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 test items are based on engineering evaluation. 5. Frequency Stability: Normal Voltage = 3.80V ; Low Voltage =3.30V; High Voltage =4.30V																	

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.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GW INSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
3.	Adapter	N/A	N/A	N/A	N/A	N/A
4.	Test Jig	N/A	N/A	N/A	N/A	N/A
5.	Antenna	N/A	N/A	N/A	N/A	N/A
6.	Earphone	N/A	N/A	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 6.5 dB and 20dB attenuator.

Example :

$$\begin{aligned} Offset(dB) &= RF\ cable\ loss(dB) + attenuator\ factor(dB). \\ &= 6.5 + 20 = 26.5\ (dB) \end{aligned}$$

2.5 Frequency List of Low/Middle/High Channels

5G NR n48 Channel and Frequency List				
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

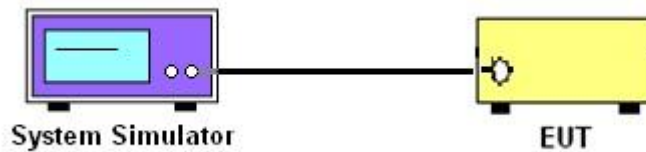
3 Conducted Test Items

3.1 Measuring Instruments

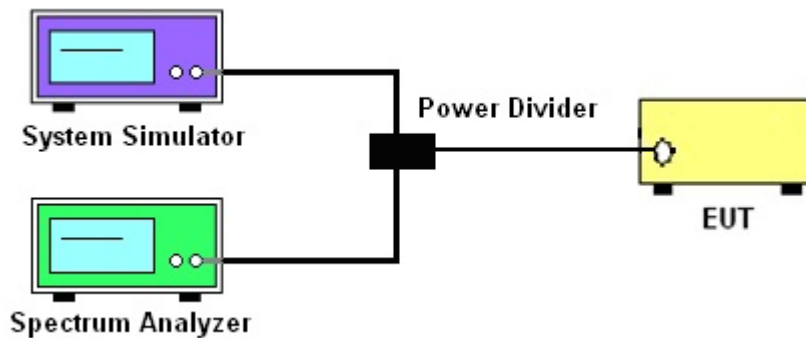
See list of measuring instruments of this test report.

3.1.1 Test Setup

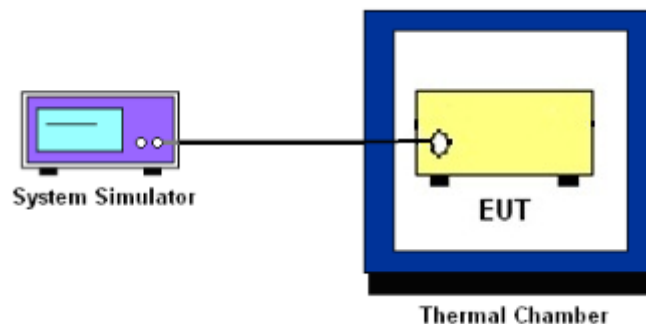
3.1.2 Conducted Output Power / ACLR



3.1.3 26dB & 99% Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power

3.2.1 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.

3.2.2 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.

3.3 EIRP

3.3.1 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 NR 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 NR n48 (i.e. 10, 20, 30, 40MHz)

3.3.2 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)

$$\text{EIRP} = P_T + G_T - L_C, \text{ ERP} = \text{EIRP} - 2.15, \text{ where}$$

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 Occupied Bandwidth

3.4.1 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.

3.4.2 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.

3.5 Conducted Band Edge

3.5.1 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 -40 dBm/MHz

3.5.2 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 $\geq 1\%$ 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 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.
5. Offset has included the duty factor for Band n48. 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.



3.6 Conducted Spurious Emission

3.6.1 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.

3.6.2 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 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.



3.7 Frequency Stability

3.7.1 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

3.7.2 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.

3.7.3 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.

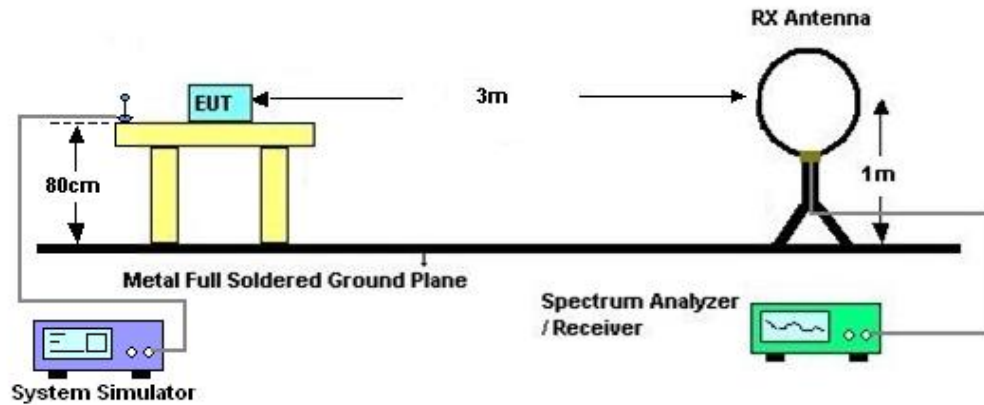
4 Radiated Test Items

4.1 Measuring Instruments

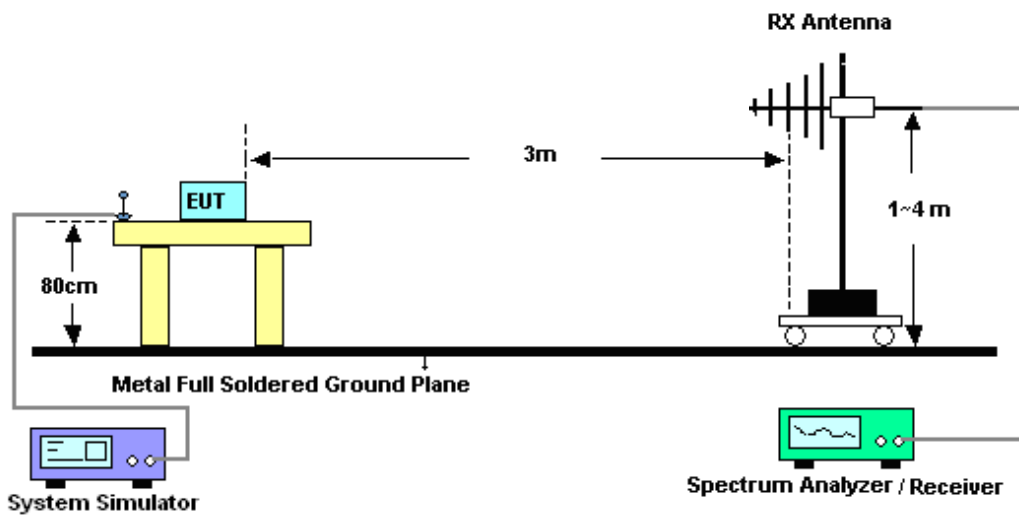
See list of measuring instruments of this test report.

4.2 Test Setup

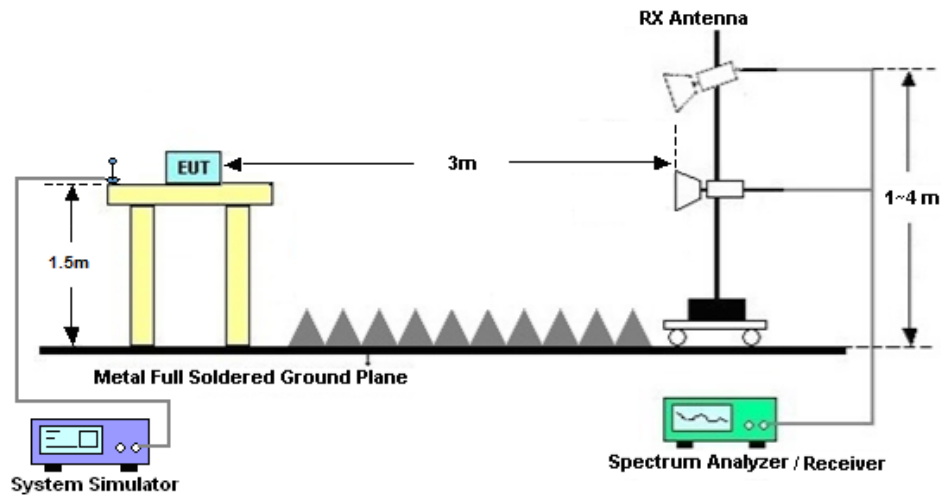
4.2.1 For radiated test below 30MHz



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. 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.
$$\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$$
$$\text{ERP (dBm)} = \text{EIRP} - 2.15$$
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
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 10, 2023	Apr. 09, 2024	Oct. 09, 2024	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Apr. 09, 2024	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 06, 2023	Apr. 09, 2024	Jul. 05, 2024	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 10, 2023	Mar. 10, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 11, 2023	Mar. 10, 2024	Sep. 10, 2024	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	Apr. 09, 2023	Mar. 10, 2024	Apr. 08, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00251694	1GHz~18GHz	Jul. 12, 2023	Mar. 10, 2024	Jul. 11, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2024	Mar. 10, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380827	9KHz-1GHz	Jul. 06, 2023	Mar. 10, 2024	Jul. 05, 2024	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 05, 2024	Mar. 10, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 10, 2023	Mar. 10, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 10, 2023	Mar. 10, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 10, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 10, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 10, 2024	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Measurement Uncertainty

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	± 2.26 dB
Occupied Channel Bandwidth	$\pm 0.1\%$
Conducted Power	± 0.46 dB
Frequency Stability	± 0.4 Hz

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.82 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.56 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

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



Appendix A. Test Results of Conducted Test

Test Engineer :	Simle Wang	Temperature :	22~23°C
		Relative Humidity :	40~42%

FR1 N48

Transmitter Conducted Output Power And EIRP, ($G_T - L_C$)=-3.65dB

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				638000	641666	645332	L	M	H
Frequency (MHz)				3570	3624.99	3679.98			
40	PI/2 BPSK	1	1	21.38	21.27	21.19	0.0593	0.0578	0.0568
40	PI/2 BPSK	1	104	21.06	21.09	20.83	0.0551	0.0555	0.0522
40	PI/2 BPSK	1	105	20.43	20.56	20.36	0.0476	0.0491	0.0469
40	PI/2 BPSK	1	0	20.79	20.69	20.61	0.0518	0.0506	0.0497
40	PI/2 BPSK	50	25	21.03	21.03	20.87	0.0547	0.0547	0.0527
40	PI/2 BPSK	100	0	20.59	20.59	20.43	0.0494	0.0494	0.0476
40	QPSK	1	1	21.27	21.16	21.03	0.0578	0.0564	0.0547
40	QPSK	1	104	20.93	21.06	20.82	0.0535	0.0551	0.0521
40	QPSK	1	105	20.03	19.93	19.84	0.0435	0.0425	0.0416
40	QPSK	1	0	20.29	20.16	20.06	0.0461	0.0448	0.0438
40	QPSK	50	25	21.11	21.03	20.84	0.0557	0.0547	0.0524
40	QPSK	100	0	20.09	20.11	19.92	0.0441	0.0443	0.0424
40	16QAM	1	1	20.37	20.13	21.06	0.0470	0.0445	0.0551
40	64QAM	1	1	18.71	18.47	18.57	0.0321	0.0303	0.0310
40	256QAM	1	1	16.71	16.76	16.62	0.0202	0.0205	0.0198
Channel				637334	641666	646000	L	M	H
Frequency (MHz)				3560.01	3624.99	3690			
20	PI/2 BPSK	1	1	21.16	20.95	20.81	0.0564	0.0537	0.0520
20	QPSK	1	1	21.06	20.91	20.71	0.0551	0.0532	0.0508
20	16QAM	1	1	19.92	19.74	19.78	0.0424	0.0406	0.0410

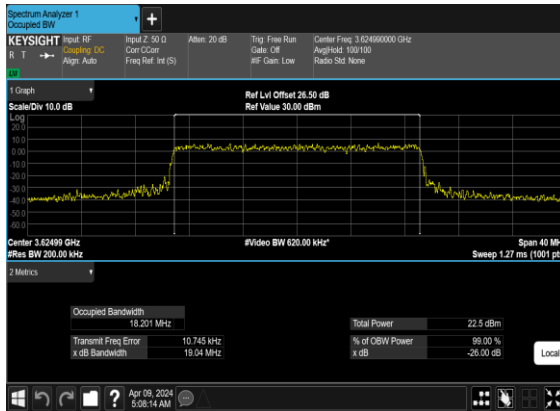
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00303	PASS	NV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00211	PASS	LV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	-0.00216	PASS	HV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00101	PASS	-30°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00352	PASS	-20°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00312	PASS	-10°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00123	PASS	0°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	-0.00625	PASS	10°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00369	PASS	20°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	-0.00421	PASS	30°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00326	PASS	40°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.00142	PASS	50°C

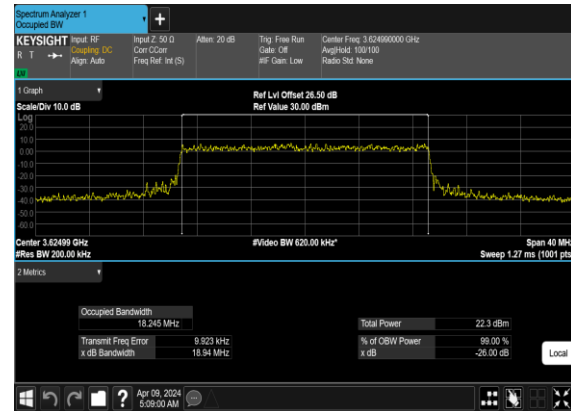
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
48	30	20	641666	3624.99	CP-OFDM QPSK	51@0	18.201	19.04
48	30	20	641666	3624.99	CP-OFDM 16 QAM	51@0	18.245	18.94
48	30	20	641666	3624.99	CP-OFDM 64 QAM	51@0	18.218	18.95
48	30	20	641666	3624.99	CP-OFDM 256 QAM	51@0	18.197	19.2
48	30	40	641666	3624.99	CP-OFDM QPSK	106@0	37.947	39.24
48	30	40	641666	3624.99	CP-OFDM 16 QAM	106@0	37.827	39.22
48	30	40	641666	3624.99	CP-OFDM 64 QAM	106@0	37.779	39.14
48	30	40	641666	3624.99	CP-OFDM 256 QAM	106@0	37.785	39.37

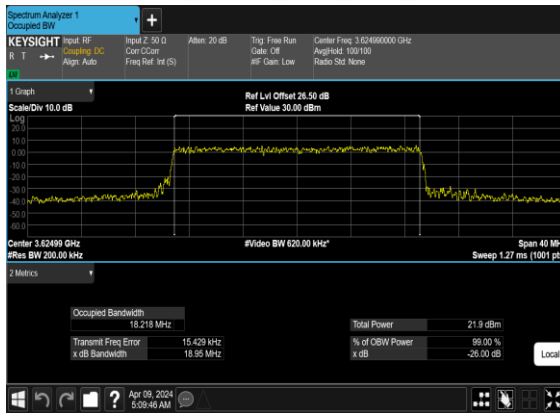
N48(20M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



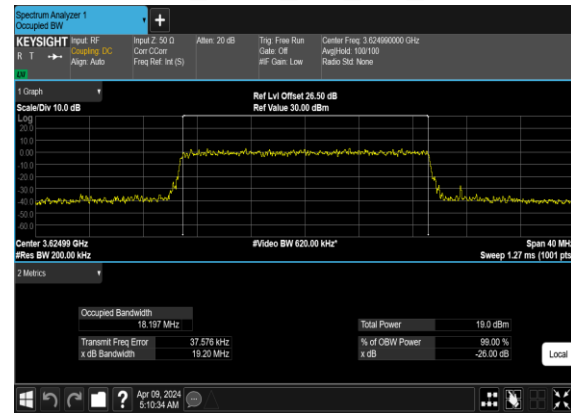
N48(20M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



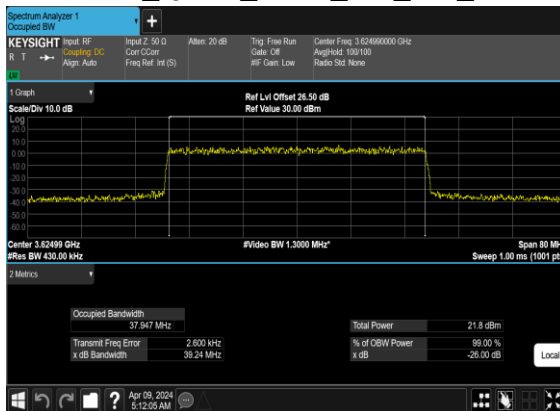
N48(20M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



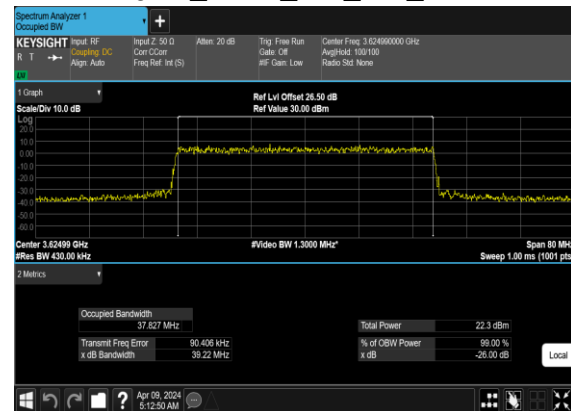
N48(20M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH



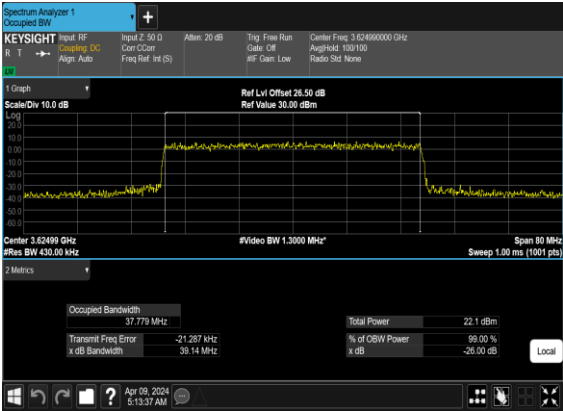
N48(40M)_CP-
OFDM_QPSK_Outer_Full_Mid_CH



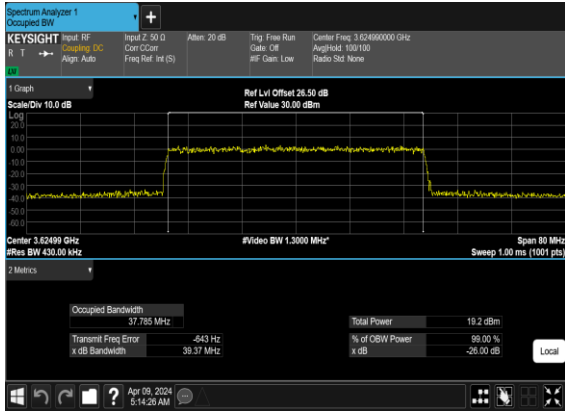
N48(40M)_CP-OFDM_16
QAM_Outer_Full_Mid_CH



N48(40M)_CP-OFDM_64
QAM_Outer_Full_Mid_CH



N48(40M)_CP-OFDM_256
QAM_Outer_Full_Mid_CH

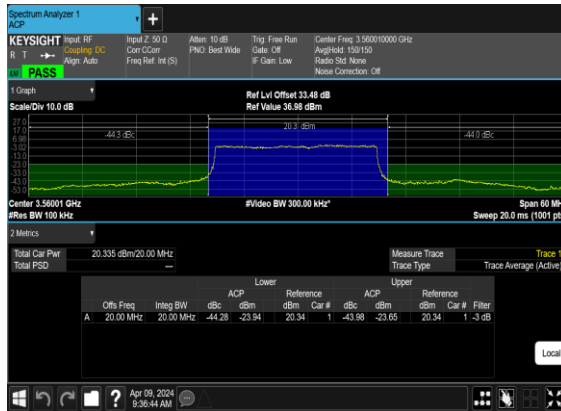


Adjacent Channel Leakage Ratio

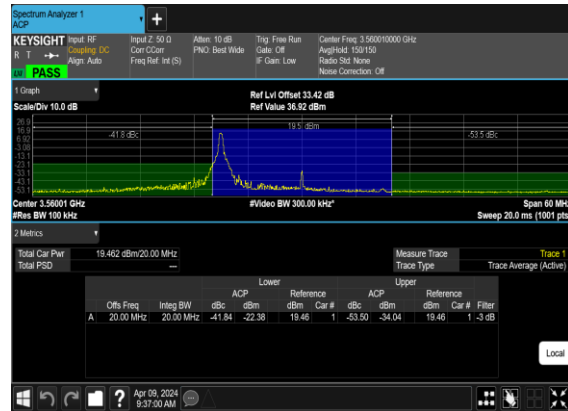
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Lower Margin	Upper Margin	Result	Verdict
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	50@0	-14.28	-13.98	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@0	-11.84	-23.5	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@50	-26.05	-13.47	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	50@0	-11.72	-11.42	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	-11.66	-24.09	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@50	-23.94	-13.07	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@0	-16.35	-17.01	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-12.25	-21.07	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@50	-21.86	-11.86	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	-14.57	-15.62	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	-11.81	-21.6	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@50	-22.34	-12.81	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	50@0	-17.55	-17.76	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@0	-11.05	-20.5	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@50	-20.79	-12.46	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	50@0	-15.72	-16.25	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	-11.22	-20.08	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@50	-20.23	-11.29	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	100@0	-15.4	-12.63	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@0	-15.16	-19.87	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@105	-20.68	-16.06	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	100@0	-12.73	-10.88	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	-14.04	-18.87	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@105	-18.31	-14.31	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	100@0	-16.82	-15.73	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-15.08	-18.25	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@105	-18.93	-14.29	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	100@0	-14.76	-14.72	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	-13.3	-16.1	see graph	PASS

48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@105	-19.39	-14.97	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	100@0	-17.08	-16.78	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@0	-13.99	-18.14	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@105	-19.5	-15.15	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	100@0	-15.47	-15.52	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	-13.49	-17.4	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@105	-18.7	-14.05	see graph	PASS

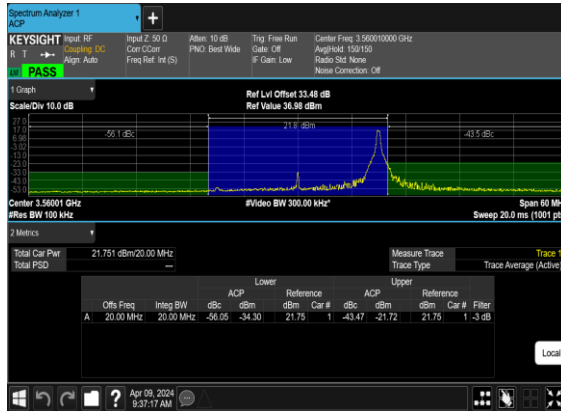
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



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



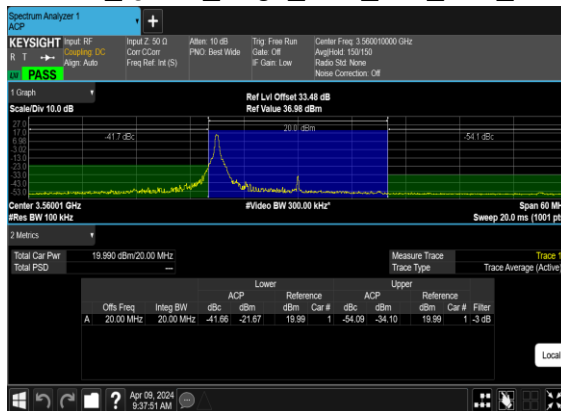
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH



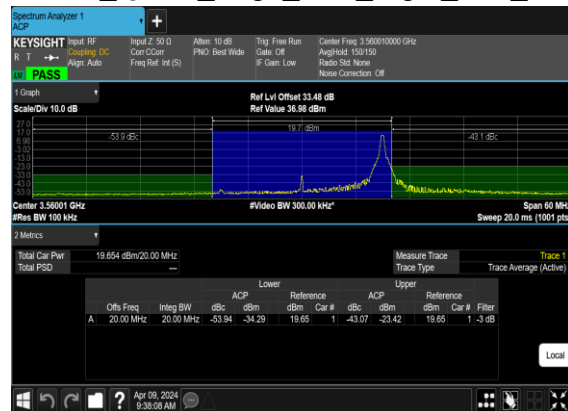
N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH



Spectrum Analyzer 1 ACP

KEYSIGHT Input: RF Input: Z 50 Ω Att: 10 dB Trig: Free Run Center Freq: 3.62490000 GHz
 R T →→→ Corr: CCW PNO: Best Wide Gate: Off Arg: 142.150150 Hz
 Agg: Auto Freq Ref: Int (s) IF Gain: Low Ratio Std: None Noise Correction: Off

dB PASS

1 Graph
 Scale/Div: 10.0 dB
 Ref Lvl Offset: 33.47 dB
 Ref Value: 36.97 dBm

Span: 60 MHz
 Sweep: 20.0 ms (1000 pts)

2 Metrics

Total Car Pwr	19.719 dBm/20.00 MHz	Measure Trace	Trace Type	Trace Average (Active)
Total PSD	-			

Offs Freq	Integ BW	Lower		Reference		Upper		Filter	
		dBc	dBm	dBm	Car #	dBc	dBm		
A 20.00 MHz	20.00 MHz	-46.35	-26.64	19.72	1	-47.01	-27.29	19.72	1 -3 dB

Spectrum Analyzer 1
ACQP

KEYSTONE Input: RF, Output: DC, Auto: Auto, Alarm: 10 dB, PNO: Best Wide, Trig: Free Run, Gate: Off, I/F Gain: Low, Center Freq: 3.62450000 GHz, Assigned: 153150, Ratio Set: None, Noise Correction: Off

Graph
Scale/Div: 10.0 dB
Ref Level: 33.47 dBm
Ref Value: 36.87 dBm

Center 3.63499 MHz
#Res BW 100 MHz
Span 60 MHz
Sweep 20.0 ms (1001 pts)

Metrics

Total Car Pair	19.991 dBm/20.00 MHz	Measure Trace Type	Trace Average (Active)
Total PSD	---		

Lower				Upper				
Offs Freq	Integ BW	dBc	dBm	Reference	ACB	Reference	ACB	
				dBm	dBm	dBm	dBm	
A	20.00 MHz	20.00 MHz	-42.25	-22.86	19.39	1	-51.07	-31.68
							19.39	1 -3 dB

Local

Spectrum Analyzer 1 ACP

KEYSIGHT Input: RF Center Freq: 3.62496000 GHz
 R T → Align Auto Arg4444: 131135
 dB PASS Rate: Std None Noise Correction: Off

Input Z: 50 Ω Alt: 10 dB Trig: Free Run
 Corr: CCW PNO: Best Wide Gate: Off
 Freq Ref: Int (S) IF: Clean: Low Noise Correction: Off

1 Graph Ref Lvl Offset: 33.48 dB
 Scale/Div 10.0 dB Ref Value: 58.58 dBm

19.8 dBm
 -51.9 dBc
 -41.9 dBc

Center: 3.62496 GHz Span: 60 MHz
 #Res BW: 100 kHz #Video BW: 300.0 kHz Sweep: 20.0 ms (1001 pts)

2 Metrics

Total Car Power	19.881 dBm/20 MHz	Measure Trace	Trace Type	Trace Average (Ave)
Total PSD	---			

Lower				Upper			
Offs Freq	Integ BW	dBc	dBm	ACP	Reference	dBm	Filter
20.00 MHz	20.00 MHz	-51.86	-31.97	19.88	1	-41.86	-31.98
						19.88	1 -3 dB

Local

Spectrum Analyzer 1
ACP

KEYSIGHT Input RF, Center Freq 3.63499 GHz, Span 60 MHz, Res BW 100 kHz, Sweep 20.0 ms

1 Graph
Scale/Div 10.0 dB

Center 3.63499 GHz
#Video BW 100 kHz

2 Metrics

Total Car Pair	19.536 dBm/20.00 MHz	ACP	Lower	Reference	Upper	Measure Trace	Trace Type	Trace Average (Aver)							
Total PSD															
Offs Freq	20.00 MHz	Integ BW	20.00 MHz	dBc	-44.57	-25.03	19.54	1	-45.62	-26.08	19.54	1	-3	dB	Filter

Spectrum Analyzer 1
ACP

KEYSIGHT Input RF
R T → Creating DC
Align Auto

Input Z: 50 Ohm
Corr: CO
Freq Ref: 10 (S)

Att: 10 dB
PNO: Best Wide

Trig: Free Run
Gate: Off
IF Gain: Low

Center Freq: 3.624900000 GHz
Aval: 144.150150
Stats: Std Norm
Noise Correction: Off

1 Graph
Scale/Div 10.0 dB

Ref Lvl Offset 33.42 dB
Ref Value 36.82 dBm

19.838 dBm
-119.8 dBm
511.8 dBm

Center 3.62490 GHz
BW 190.0 MHz
IVideo BW 300.00 MHz

Span 60 MHz
Sweep 20.0 ms (1001 pts)

2 Metrics

Total Car Pwr 19.838 dBm/200 MHz
Total PSD

Measure Trace
Trace Type Trace Average (Active)

Lower				Upper							
Offs Freq	Integ BW	ACP	Reference	ACP	Reference	Filter					
		dBm	dBm	dBm	dBm						
A	20.00 MHz	20.00 MHz	-41.81	-21.97	19.84	1	-51.60	-31.76	19.84	1	-3 dB

Local

Spectrum Analyzer 1
ACP

KEYSIGHT Input RF: Coupling: Auto, Att: 0 dB, PNO: Best Wld, Trig: Free Run, Gate: Off, IF: Gain: Low, Center Freq: 3.624900000 GHz, Avg/Intd: 150/150, Ratio: Sd: None, Noise Correction: Off

1 Graph
Scale/Div: 10.0 dB

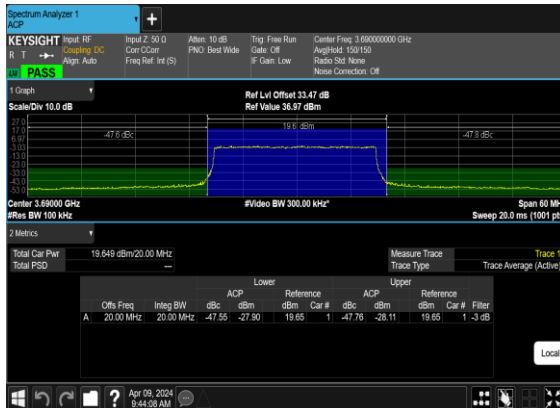
Center: 3.624900 GHz
Span: 60 MHz
BW: 300.0 kHz
Sweep: 20.0 ms (1001 pts)

2 Metrics

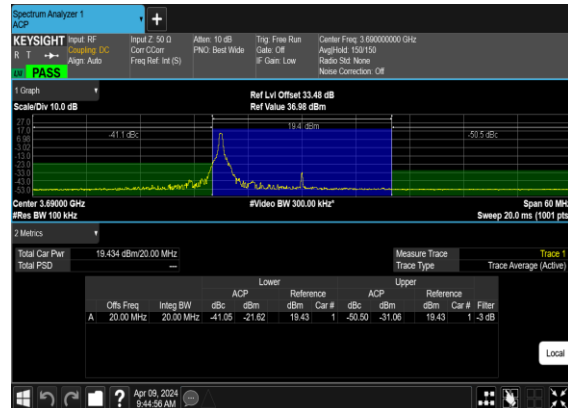
Total Car Pwr		20.213 dBm/20.00 MHz		Measure Trace		Trace Type		Trace Average (Active)	
Total PSD		---		Lower		Upper			
Offs Freq	Integ BW	dBc	dBm	Reference	ACP	Reference	ACP	Car #	Filter
A: 20.00 MHz	20.00 MHz	-52.34	-32.13	20.21	-42.81	-22.59	20.21	1	-3 dB

Local

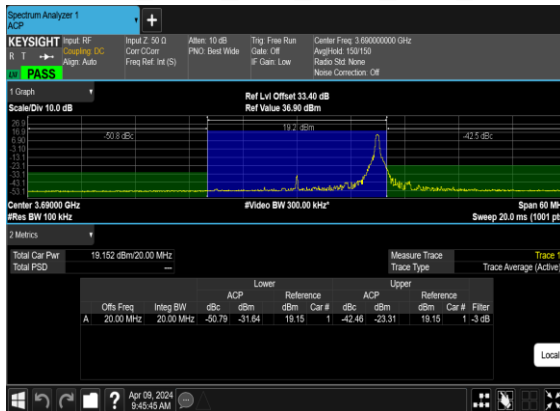
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



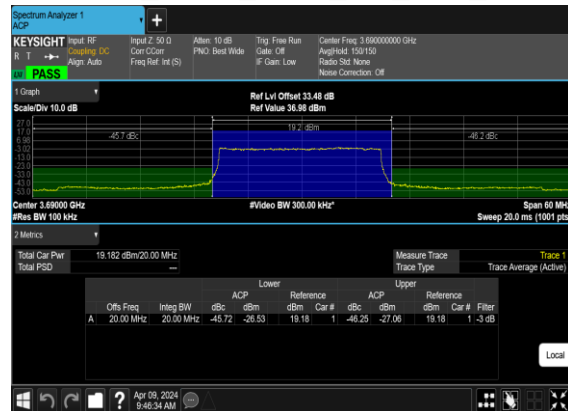
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



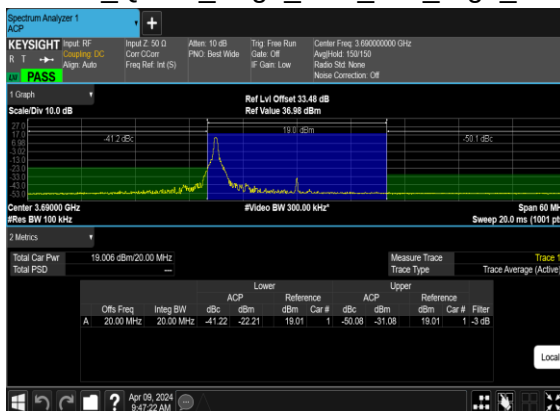
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH



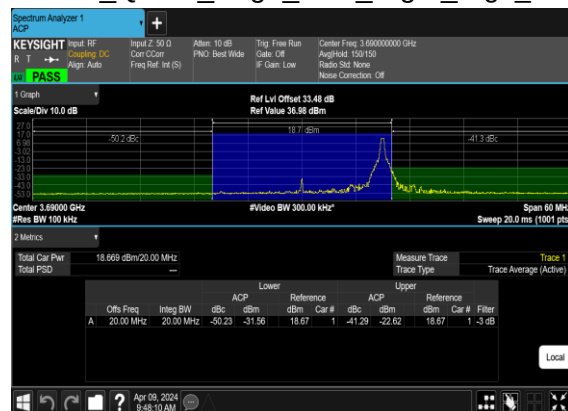
N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



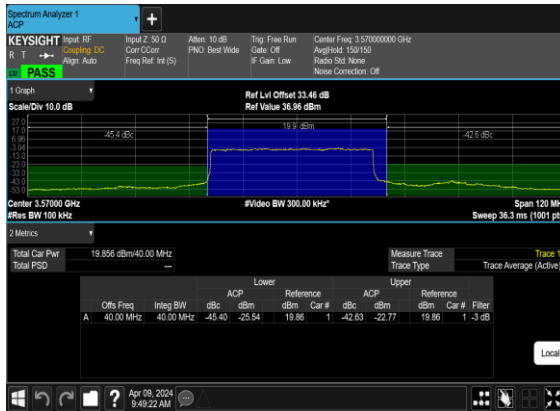
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



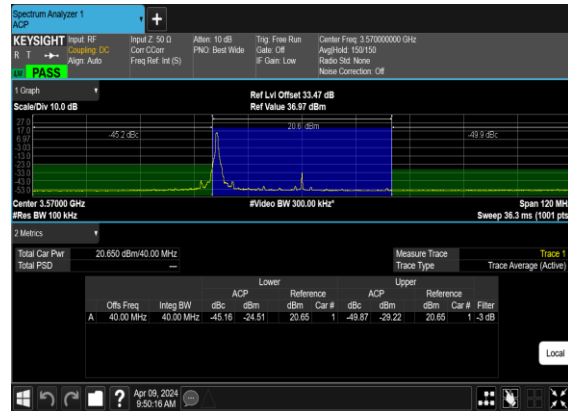
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



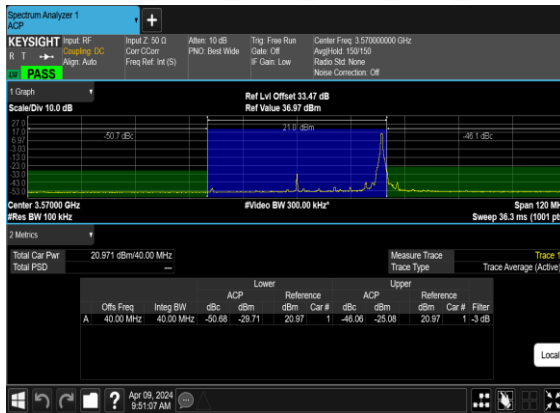
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



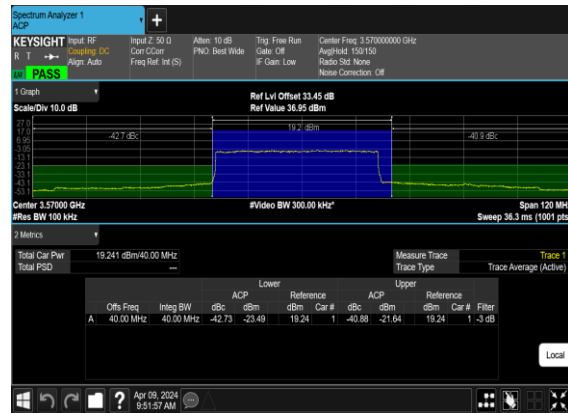
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



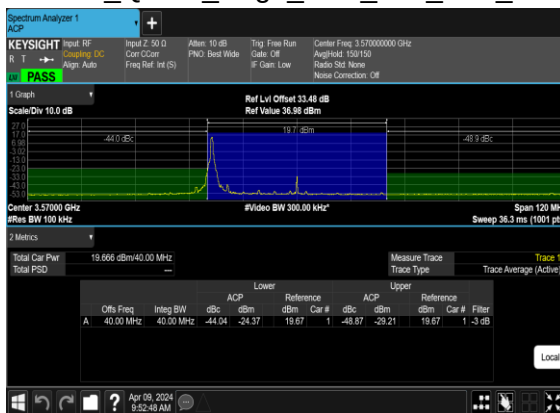
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH



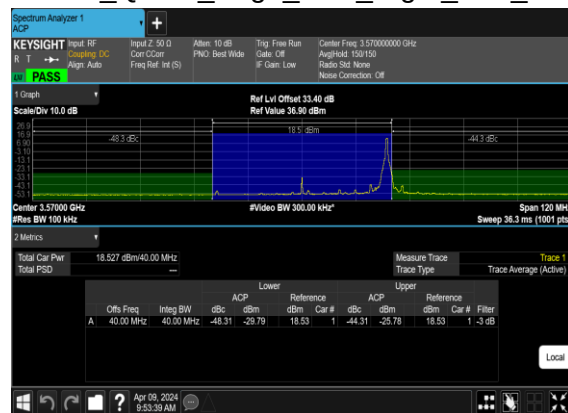
N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH



Spectrum Analyzer 1
ACP

KEYSIGHT Input: RF
R T → → Aligning DC
Auto Auto

Input Z: 50 Ω
Port C: Car
Freq Ref: (s)

Att: 10 dB
P/N: Best Wide

Trig: Free Run
Gate: Off
IF Gain: Low

Center Freq: 3.62490000 GHz
Amp: 44.1501
Ratio: Std None
Noise Correction: Off

1 Graph
Scale/Div: 10.0 dB
Ref Lvl Offset: 33.48 dBm
Ref Value: 36.98 dBm

Center: 3.62490 GHz
#Res BW: 100 kHz
Span: 120 MHz
Sweep: 36.3 ms (1001 pt)

2 Metrics

Total Car Pwr	19.903 dBm/40.00 MHz
Total PSD	—

		ACP		Lower	Reference	ACP		Upper	Reference		
Offs Freq	Integ BW	dBc	dBm	dBm	Car #	dBc	dBm	dBm	Car #	Filter	
A	40.00 MHz	40.00 MHz	-46.82	-26.92	19.90	1	-45.73	-25.83	19.90	1	-3 dB

Trace Type: Measure Trace
Trace Average: Active

Local

Spectrum Analyzer 1
ACP

KEYSIGHT Input: RF, Output: DC, Acp: Auto, R: T, Freq Ref: 1st (S)

Att: 10 dB, PNO: Best Wide, Trig: Free Run, Gate: Off, F: Gain: Low, Center Freq: 3.624500000 GHz, Aligned: 151150, Ratio: Std: None, Noise Correction: Off

1 Graph, Scale Div: 10.0 dB, Ref Level Offset: 33.45 dB, Ref Value: 36.96 dBm

Span: 120 MHz, Sweep: 36.3 ms (1001 pts)

2 Metrics

Total	Car Pair	Trace Type	Trace Average (Active)
Total PSD	19.630 dBm/40.00 MHz		

Lower				Upper								
Offs Freq	Integ BW	dBc	dBm	Reference	dBc	Reference	Filter					
				dBm	Car #	dBm	Car #					
A	40.00 MHz	40.00 MHz	-45.08	-25.45	19.63	1	-48.25	-28.62	19.63	1	-3	dB

Local

Spectrum Analyzer 1 ACP

KEYSIGHT Input RF: **AC** Input 2: 50.0 dBm P1dB Best Wide Trig: Free Run Gate: Off Center Freq: 3.624990000 GHz
 R T → Align Auto Corr CCW: Int (S) IF Gain: Low Rate Std: None Noise Correction: Off
PASS

1 Graph
 Scale/Div 10.0 dB
 Ref Lvl Offset: 33.47 dB
 Ref Value: 36.97 dBm

Span 120 MHz
 Sweep 36.3 ms (1001 pts)

2 Metrics

Total Car Power	19.40 dBm (40.00 MHz)	Measure Trace	Trace Type	Trace Average (Ave)
Total PSD	---			

Lower				Upper			
Offs Freq	Integ BW	dBc	dBm	ACP	Reference	dBm	Car #
40.00 MHz	40.00 MHz	-48.93	-29.47	19.46	1	-44.29	-24.83
						19.46	1 -3 dB

Local

Spectrum Analyzer 1
ACP

KEYSIGHT Input RF
R T → **Align** **DC**
Align Auto

Input Z: 50 Ω
Cntr C-Ctr
Freq Ref: 1st (S)

Attn: 10 dB
PNO: Best Wide

Trig: Free Run
Gate: Off
S: Gain Low

Center Freq: 3.624960000 GHz
Assigned: 1011510
Ratio: Std: None
Noise Correction: Off

IN PASS

1 Graph
Scale/Div: 10.0 dB
Ref Lvl Offset: 33.46 dBm
Ref Value: 36.96 dBm

27.0
17.0
7.0
-3.0
-13.0
-23.0
-33.0
-43.0

-44.8 (SE)

19.7 (dBm)

-44.7 (SE)

Center 3.63499 GHz
#Span 120 MHz
#Video BW 300.00 kHz
Sweep 36.3 ms (1001 pts)

2 Metrics

Total Cntr Pwr: 19.494 dBm/40.00 MHz
Total PSD: —

Measure Trace
Trace Type: Trace 1
Trace Average (Active)

Lower				Upper			
Offs Freq	Integ BW	dBc	dBm	Reference	ACB	Reference	ACB
Car #				Car #		Car #	
1	40.00 MHz	-44.76	-25.27	19.49	1	-44.72	-25.23
1	40.00 MHz	-44.76	-25.27	19.49	1	-44.72	-25.23

Local

Spectrum Analyzer 1 ACP

KEYSIGHT Input RF: **Creating DC** Input Z: 50 Ω Corr: CCorr Freq Ref: Int (S) Att: 10 dB PNO: Best Wide Trig: Freq Run Gate: Off IF Gain: Low Center Freq: 3.624900000 GHz Arg1/4d: 150/150 States: Std None Noise Correction: Off

1 Graph
Scale/Div: 10.0 dB
Ref Lvl Offset: 33.47 dB
Ref Value: 36.87 dBm

Center: 3.62499 GHz Span: 120 MHz
BW: 100 MHz Sweep: 36.3 ms (1001 pts)

2 Metrics
Total Car Pwr: 17.478 dBm/40.0 MHz
Total PSD: ---

Lower				Upper								
Offs Freq	Integ BW	dBc	ACP	Reference	ACP	Reference	Filter					
		dBm	dBm	dBm	dBm	dBm						
A	40.00 MHz	40.00 MHz	-43.30	-25.82	17.48	1	-46.10	-26.62	17.48	1	-3	dB

Trace Average (Active)

Local

Spectrum Analyzer 1
ACP

KEYSIGHT Input RF: **Coupling** Auto
R 1 → **APPr** Auto
IN PASS

Att: 10 dB
PNO: Best Wide
Trig: Free Run
Gate: Off
IF: Gain Low
Center Freq: 3.62499000 GHz
Amplitude: 150 dBm
Ratio: S&B None
Noise Correction: Off

1 Graph
Scale/Div: 10.0 dB

Ref Lvl Offset: 33.42 dB
Ref Lvl: 56.92 dBm

Center: 3.62499 GHz
dBm BW: 100 kHz

Video BW: 300.0 kHz

Span: 120 MHz
Sweep: 36.3 ms (1001 pts)

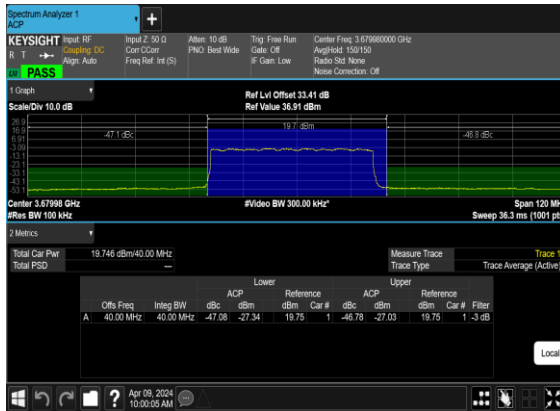
2 Metrics

Total Car Pwr		Measure Trace							
Total PSD		Trace Type							
19.85 dBm/40.0 MHz		Trace Average (Active)							
		Lower							
Offs Freq	Integ BW	dBc	dBm	Reference	Car #	ACP	Reference	Car #	Filter
A 40.0 MHz	40.0 MHz	-49.39	-29.54	19.85	1	-44.97	-25.11	19.85	1 -3 dB

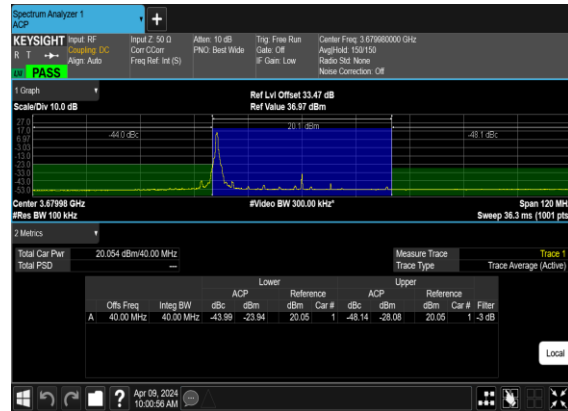
Local

Apr 19, 2024
3:58:23 AM

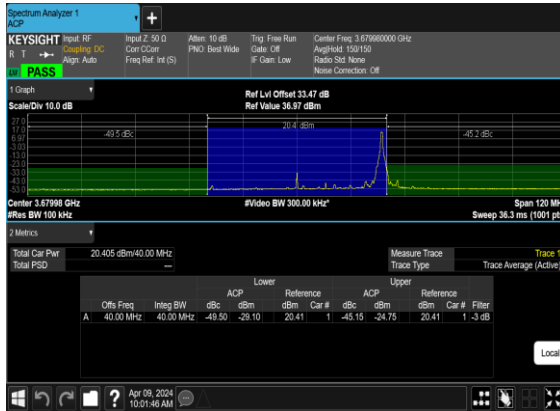
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



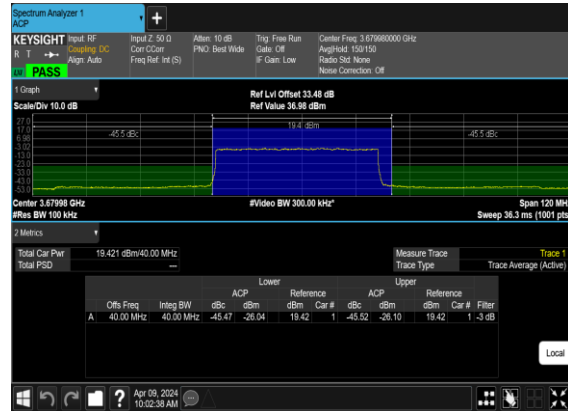
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



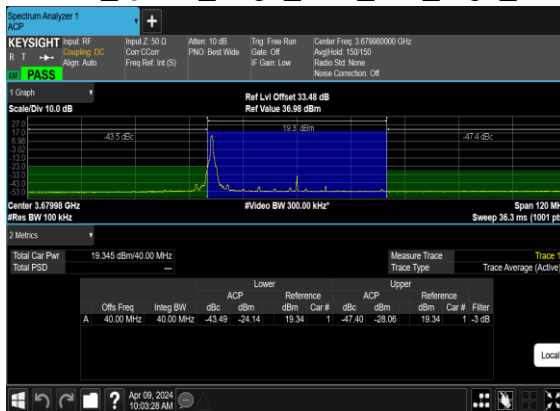
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH



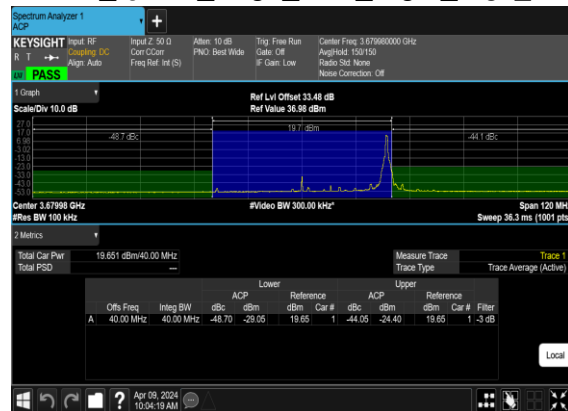
N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH

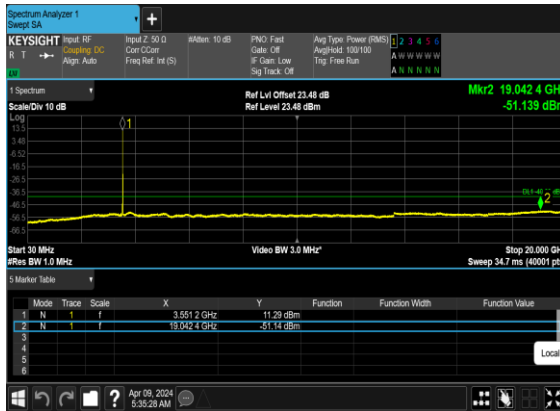


Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
48	30	20	637334	3560.01	DFT-s-OFDM BPSK	1@0	see graph	---
48	30	20	637334	3560.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	---
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	---
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	---
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	---
48	30	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	---
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	---
48	30	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	---

48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	---
48	30	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	---
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	---
48	30	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	---
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	PASS

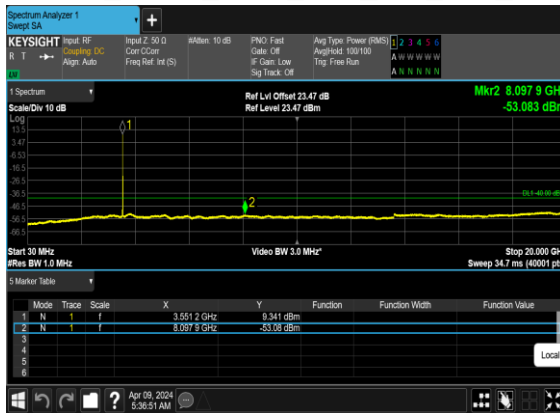
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



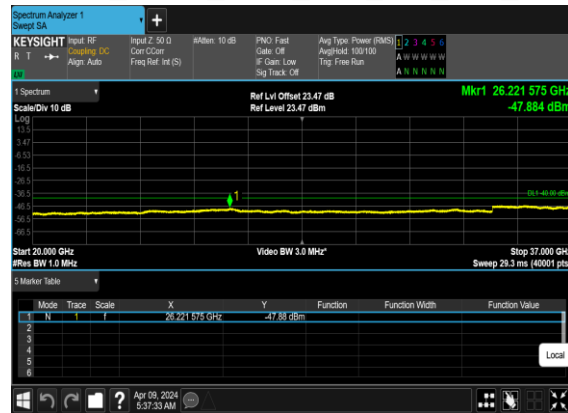
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



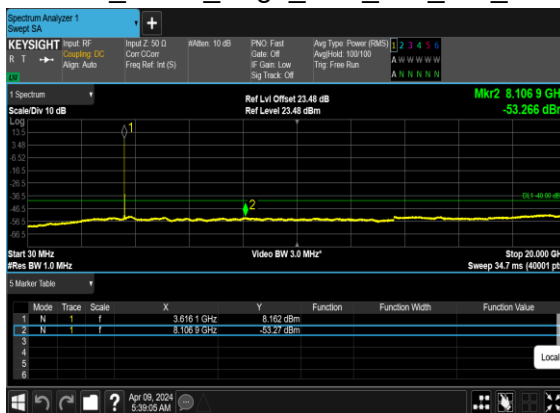
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



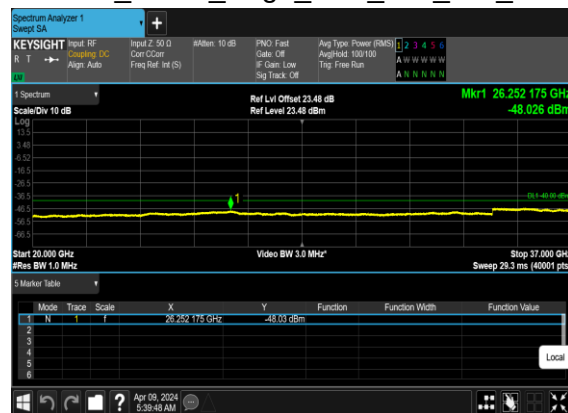
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



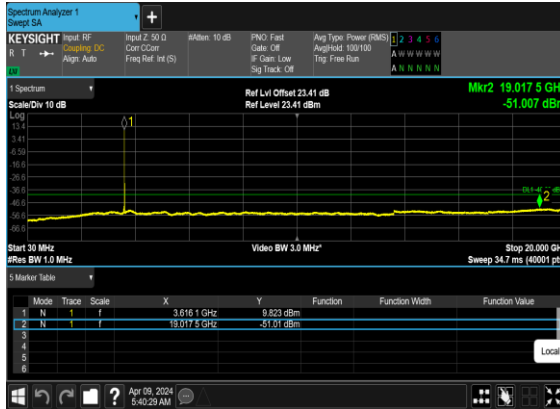
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



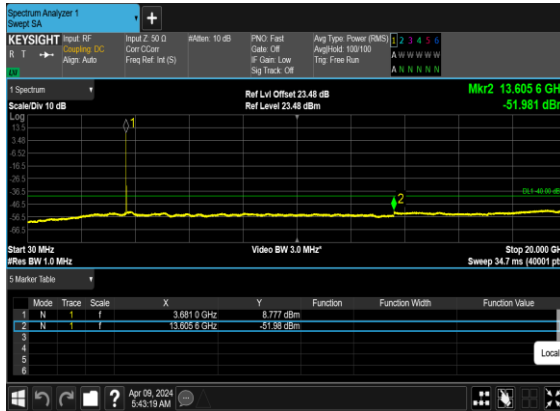
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



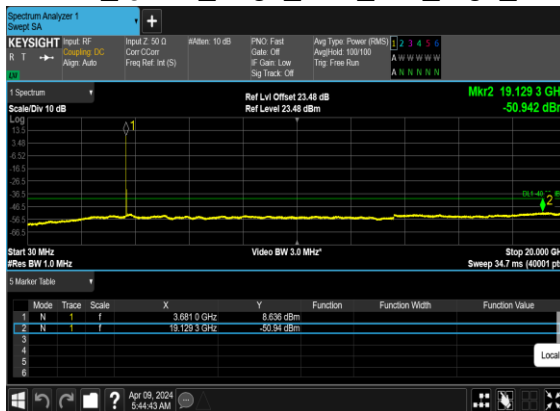
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



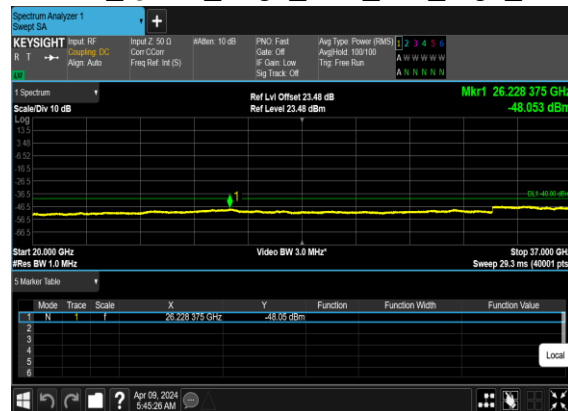
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



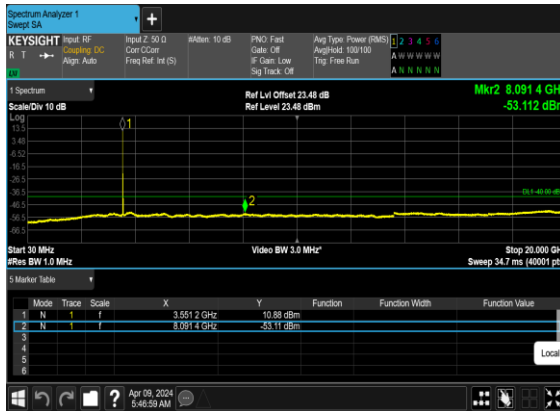
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



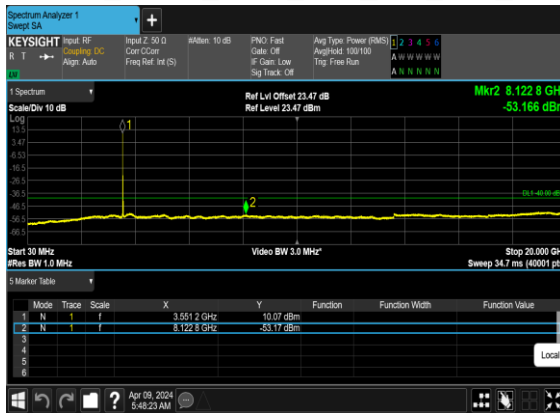
N48(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



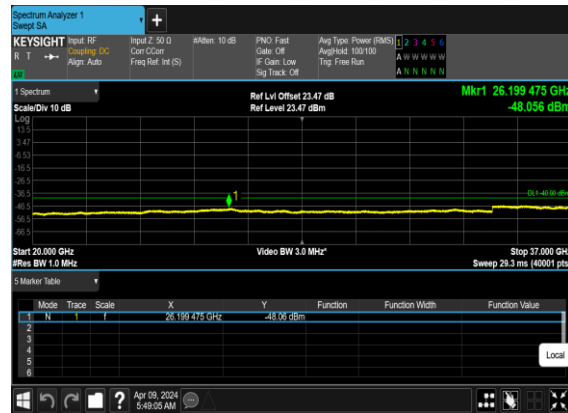
N48(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Low_CH



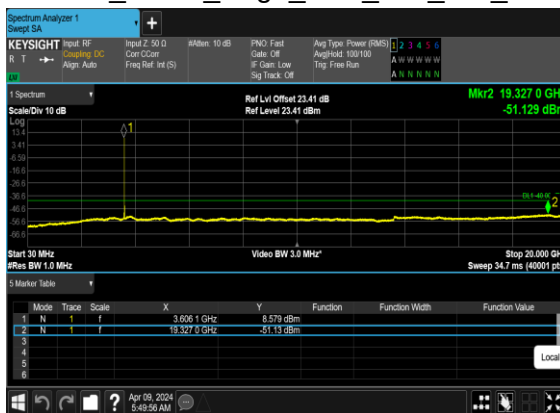
N48(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



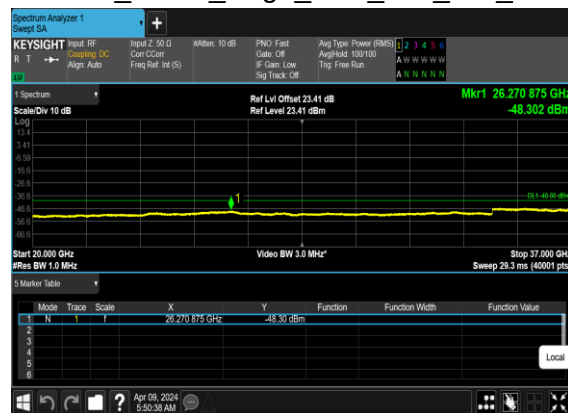
N48(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Low_CH



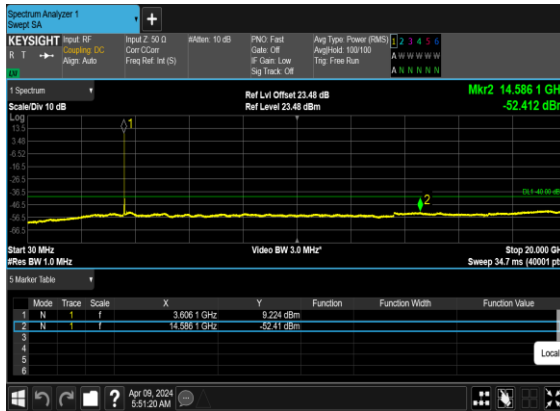
N48(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



N48(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_Mid_CH



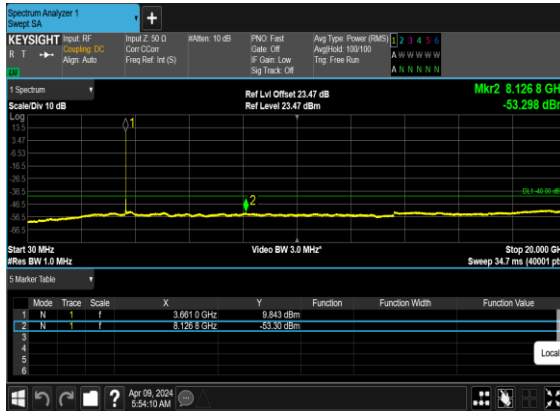
N48(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_Mid_CH



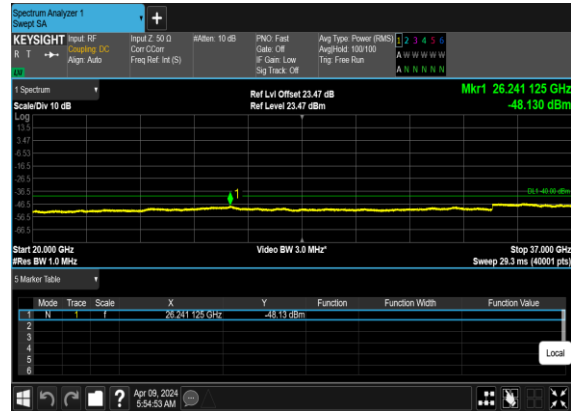
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OFDM_QPSK_Edge_1RB_Left_Mid_CH



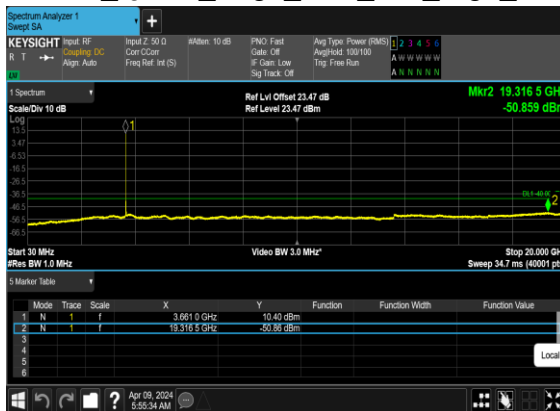
N48(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



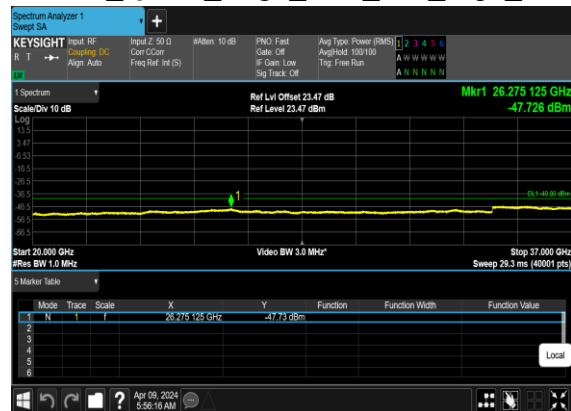
N48(40M)_DFT-s-
OFDM_BPSK_Edge_1RB_Left_High_CH



N48(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH



N48(40M)_DFT-s-
OFDM_QPSK_Edge_1RB_Left_High_CH

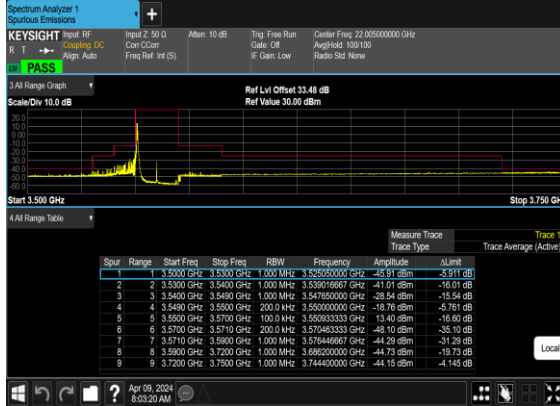


Conducted Band Edge

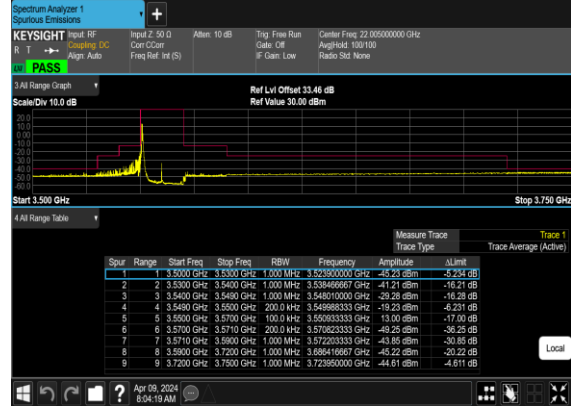
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
48	30	20	637334	3560.01	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM BPSK	1@50	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@50	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM BPSK	50@0	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	50@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@50	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@50	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	50@0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM BPSK	1@50	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@50	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM BPSK	50@0	see graph	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	50@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM BPSK	1@105	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@105	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM BPSK	100@0	see graph	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	100@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM BPSK	1@105	see graph	PASS

48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@105	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM BPSK	100@0	see graph	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	100@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM BPSK	1@105	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@105	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM BPSK	100@0	see graph	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	100@0	see graph	PASS

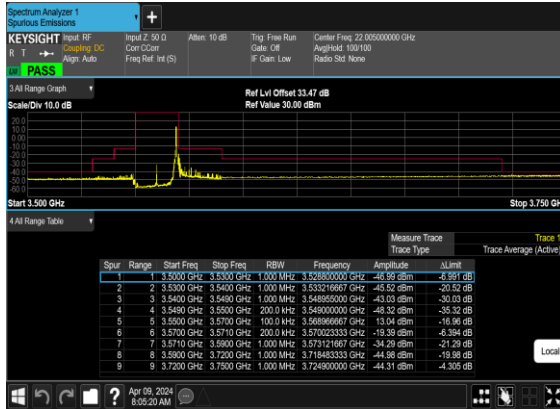
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



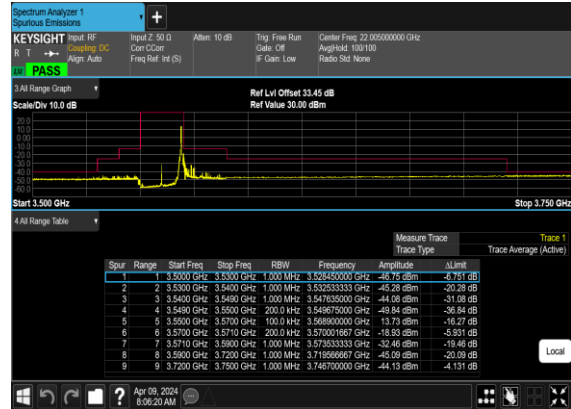
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



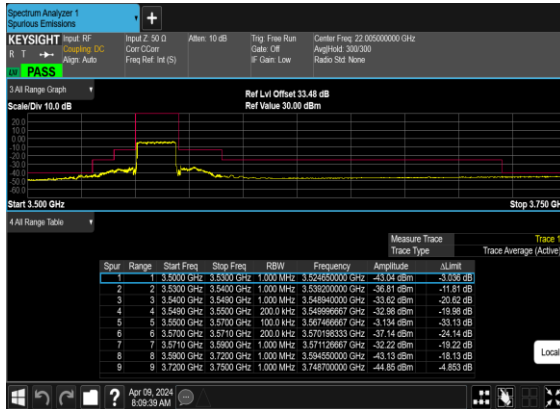
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_Low_CH



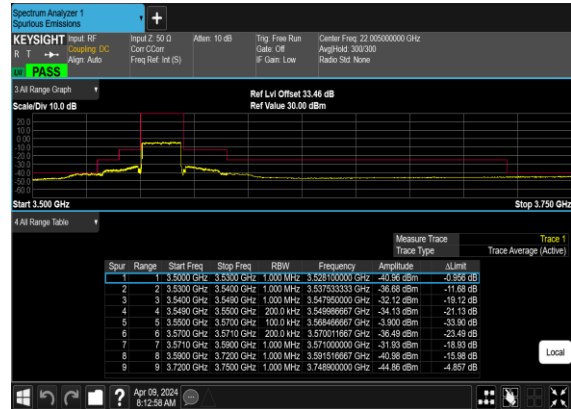
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH



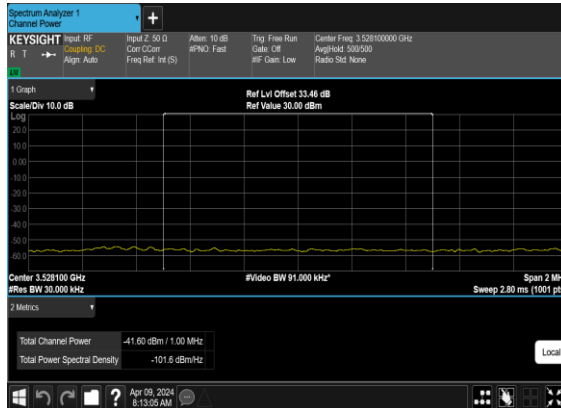
N48(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



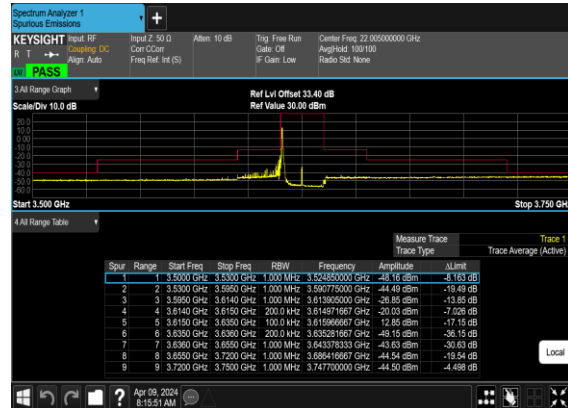
N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



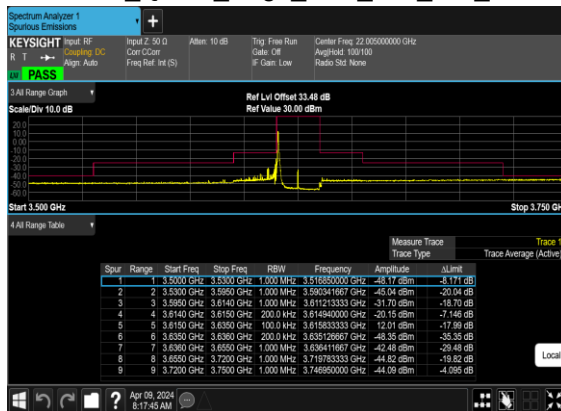
N48(20M)_DFT-s- OFDM_QPSK_Outer_Full_Low_CH_CHP_PASS



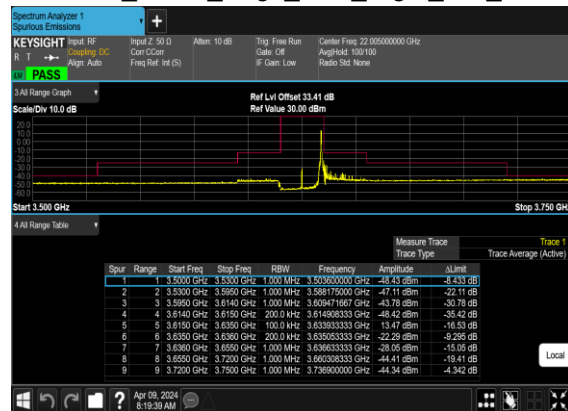
N48(20M)_DFT-s- OFDM_BPSK_Edge_1RB_Left_Mid_CH



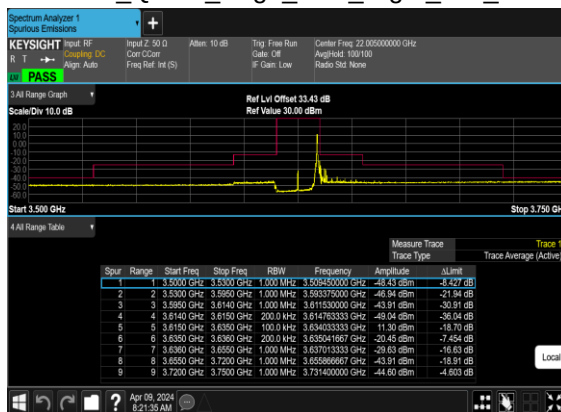
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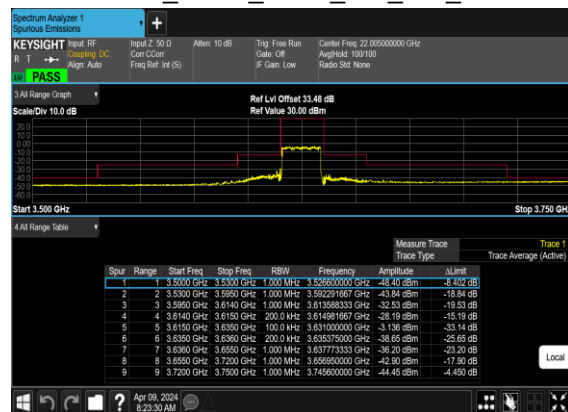
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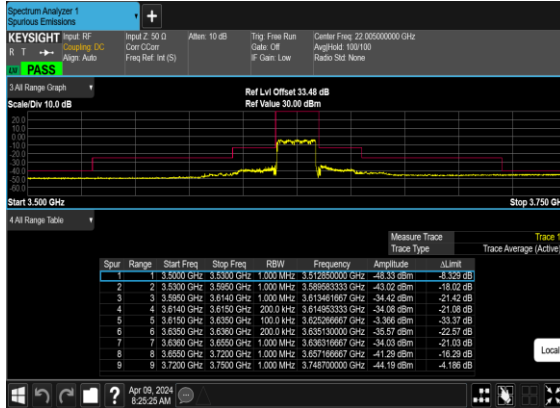
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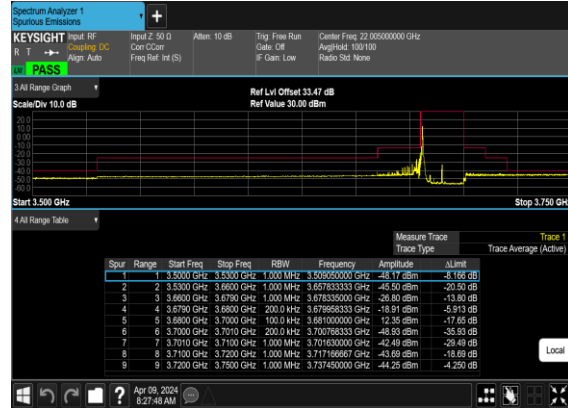
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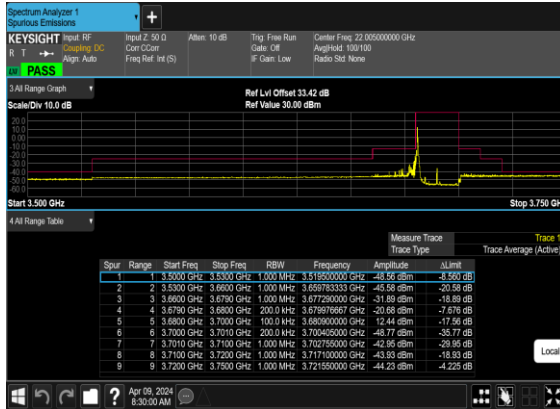
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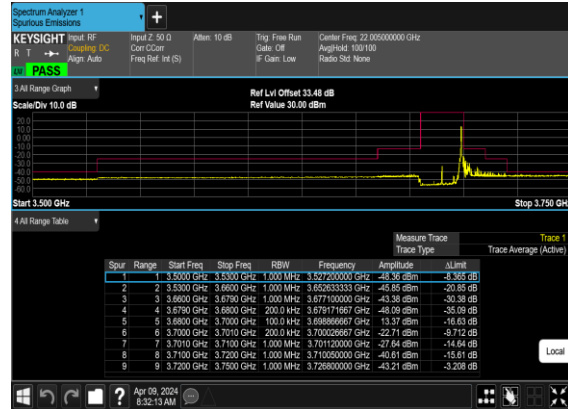
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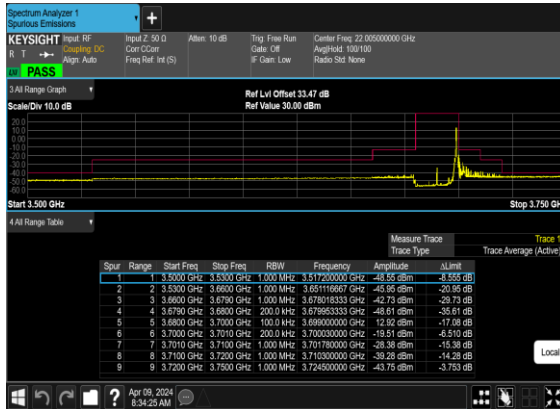
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N48(20M)_DFT-s- OFDM_BPSK_Edge_1RB_Right_High_CH



N48(20M)_DFT-s- OFDM_QPSK_Edge_1RB_Right_High_CH



N48(20M)_DFT-s- OFDM_BPSK_Outer_Full_High_CH

