FCC RF Test Report

APPLICANT	:	**Motorola Mobility LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
MODEL NAME	:	**XT2415-1, XT2415-3, XT2415-5, XT2415V**
FCC ID	:	**IHDT56AN5**
STANDARD	:	**47 CFR Part 2, 96**
CLASSIFICATION	:	**Citizens Band End User Devices (CBE)**
EQUIPMENT TYPE	:	**End User Equipment**
TEST DATE(S)	:	**Sep. 24, 2023 ~ Nov. 06, 2023**

We, Sporton International Inc. (Shenzhen), 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.

Jason Jia

Approved by: Jason Jia

Cert #5145.01

Sporton International Inc. (ShenZhen)
1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China

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History of this test report

Report No.	Version	Description	Issued Date
FG391202O	01	Initial issue of report	Nov. 07, 2023

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 12.31 dB at 14424.920 MHz

Conformity Assessment Condition:

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

Disclaimer:

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

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2415-1, XT2415-3, XT2415-5, XT2415V
FCC ID	IHDT56AN5
Tx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
Rx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
Bandwidth	10MHz / 15MHz / 20MHz / 40MHz
SCS	30kHz
Antenna Gain	**<Ant. 5>:** -0.90 dBi
Type of Modulation	DFT-s-OFDM (PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM) CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM)
IMEI Code	Conducted : 357534480030391/357534480030409 Radiation : 357534480030573/357534480030581
HW Version	DVT2
SW Version	UUD34.38
EUT Stage	Identical Prototype

Remark:

1. The four model names are only for market segment purpose, there is no other difference.
2. 5G NR n48 supports SA and NSA mode. According to the maximum power between SA and NSA mode, SA covers NSA mode for conducted test items.

1.4 Modification of EUT

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

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-101
AC Adapter 2	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-101
AC Adapter 3	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-101
Battery 1	**Brand Name**	Motorola (ATL)	**Model Name**	QA50
USB Cable 1	**Brand Name**	Motorola (WASHIN)	**Model Name**	S928D98335
USB Cable 2	**Brand Name**	Motorola (Saibao)	**Model Name**	S928D98333
USB Cable 3	**Brand Name**	Motorola (Saibao)	**Model Name**	S928D98334

1.6 Maximum EIRP and Emission Designator

5G NR n48		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**	0.1528	8M56G7D	0.1242	8M59W7D
15	**3557.52~3692.49**	0.1531	13M6G7D	0.1230	13M6W7D
20	**3560.01~3690.00**	0.1514	18M2G7D	0.1211	18M2W7D
40	**3570.00~3679.98**	0.1535	37M9G7D	0.1216	37M9W7D

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

1.7 Testing Site

Sporton International Inc. (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 China 518103 TEL: +86-755-33202398		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH01-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24

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

2 Test Configuration of Equipment Under Test

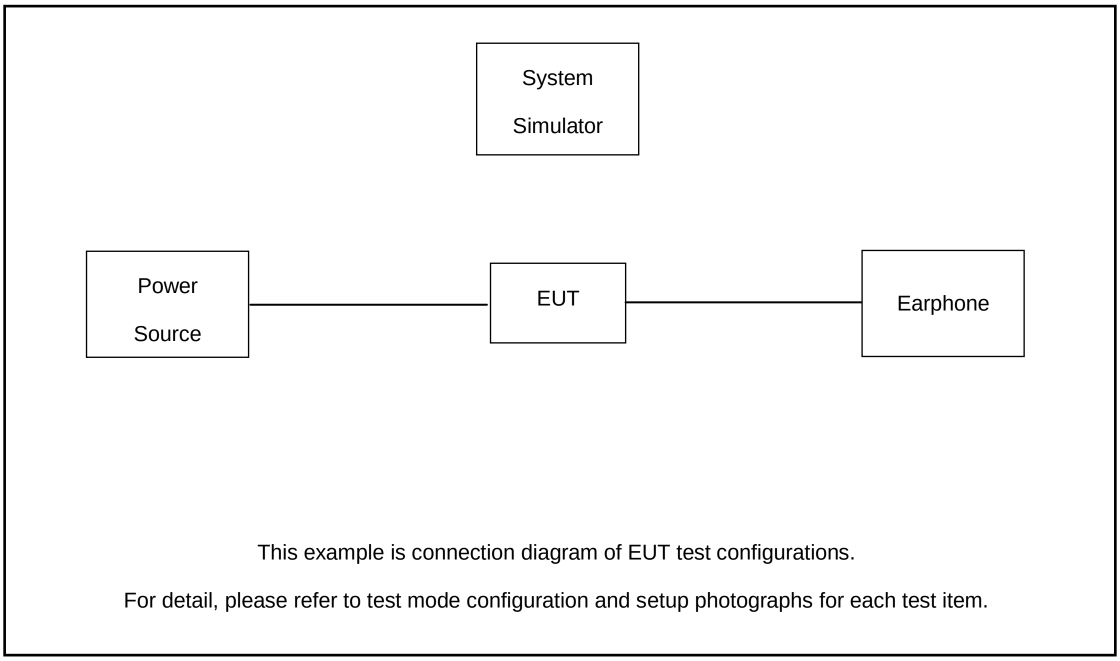
2.1 Test Mode

Antenna port conducted and radiated test items 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		
		10	15	20	25	30	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16 QAM	64 QAM	256 QAM	1	Full	L	M	H
Max. Output Power	n48	v	v	v	-	-	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
Peak to Average Ratio	n48			v	-	-		-	-	-	-	-	-	v	v				v	v		v	
26dB and 99% Bandwidth	n48	v	v	v	-	-	v	-	-	-	-	-	-	v	v	v	v	v		v		v	
Adjacent Channel Leakage Ratio	n48	v		v	-	-	v	-	-	-	-	-	-	v	v				v	v	v	v	v
Conducted Band Edge	n48	v		v	-	-	v	-	-	-	-	-	-	v	v				v	v	v	v	v
Conducted Spurious Emission	n48	v		v	-	-	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	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 the radiated test cases were performed with Adapter 1 and USB Cable 1. 5. Frequency Stability：Normal Voltage = 3.91V ；Low Voltage =3.6V.；High Voltage =4.45V																						

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.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
3.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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 5.88 dB and 10dB attenuator.

Example :

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

= 5.88 + 10 = 15.88 (dB)

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	3570.00	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	3555.0	3624.99	3694.98

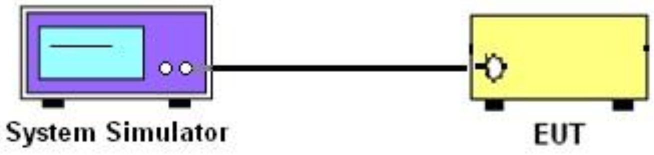
3 Conducted Test Items

3.1 Measuring Instruments

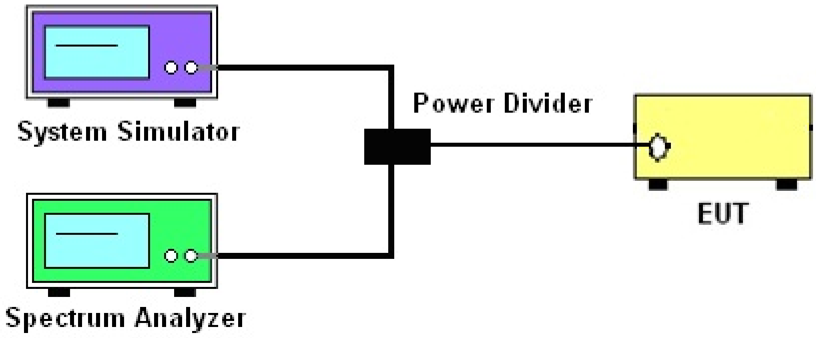
See list of measuring instruments of this test report.

3.1.1 Test Setup

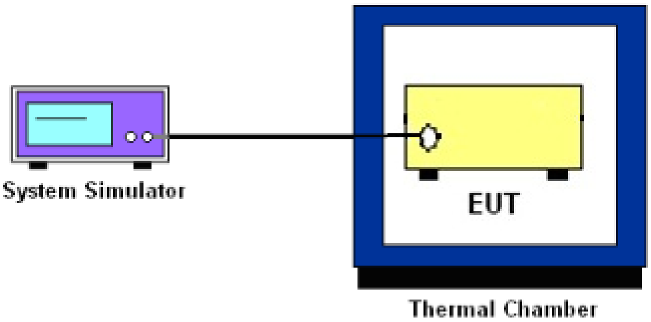
3.1.2 Conducted Output Power



3.1.3 PSD, Peak-to-Average Ratio, 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 (i.e. 5, 10, 15, 20MHz).

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)

   $EIRP = P_T + G_T – L_C$, $ERP = EIRP - 2.15$, where

   P_T = transmitter output power in dBm

   G_T = gain of the transmitting antenna in dBi

   L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4 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) (i)

For CBSD the emission limits outside the fundamental are as follows:

Within 0 MHz to 10 MHz above and below the assigned channel ≤ −13 dBm/MHz

Greater than 10 MHz above and below the assigned channel ≤ −25 dBm/MHz

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

3.5.2 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 >= 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. 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. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency

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.

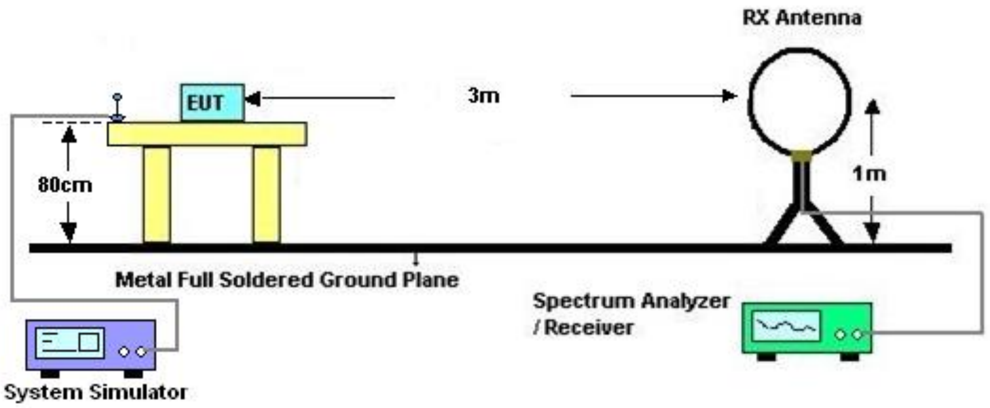
4 Radiated Test Items

4.1 Measuring Instruments

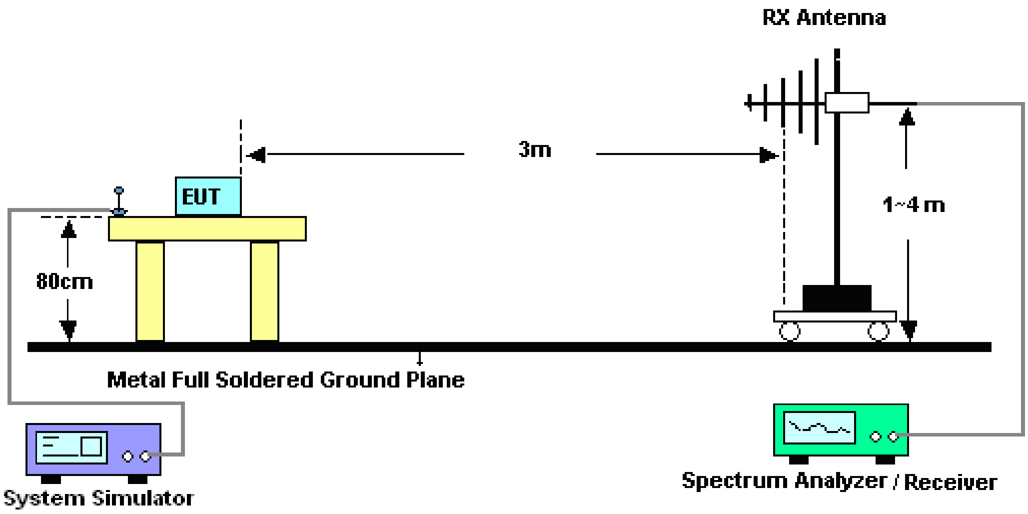
See list of measuring instruments of this test report.

4.2 Test Setup

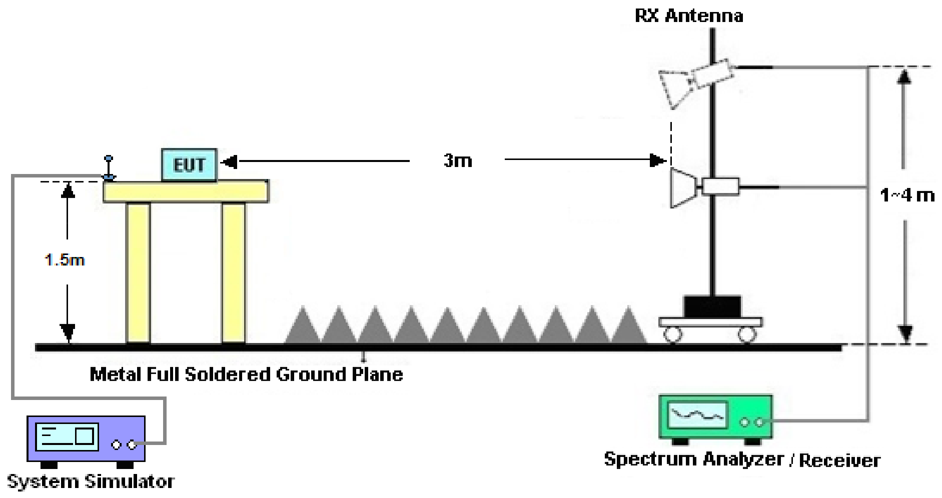
4.2.1 For radiated test below 30MHz



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.
   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. 06, 2023	Sep. 24, 2023~ Nov. 06, 2023	Apr. 05, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2022	Sep. 24, 2023~ Nov. 06, 2023	Dec. 24, 2023	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 05, 2023	Sep. 24, 2023~ Nov. 06, 2023	Jul. 04, 2024	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 26, 2022	Nov. 06, 2023	Dec. 25, 2023	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 28, 2022	Nov. 06, 2023	Jul. 27, 2024	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18, 2023	Nov. 06, 2023	Oct. 17, 2024	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Sep. 27, 2023	Nov. 06, 2023	Sep. 26, 2024	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 06, 2023	Nov. 06, 2023	Jul. 05, 2024	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 08, 2023	Nov. 06, 2023	Apr. 07, 2024	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 04, 2023	Nov. 06, 2023	Apr. 03, 2024	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 18, 2023	Nov. 06, 2023	Oct. 17, 2024	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 05, 2023	Nov. 06, 2023	Jul. 04, 2024	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Nov. 10, 2022	Nov. 06, 2023	Nov. 09, 2023	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Nov. 06, 2023	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Nov. 06, 2023	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required.

6 Uncertainty of Evaluation

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±1.34 dB
Conducted Emissions	±1.34 dB
Occupied Channel Bandwidth	±0.13 %

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.48 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.53 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.02 dB

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

Appendix A. Test Results of Conducted Test

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

Software Version: 23.06.1602

FR1 N48

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-0.9dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
48	30	10	637000	3555	DFT-s-OFDM QPSK	1@1	22.61	21.71	0.1483
48	30	10	637000	3555	DFT-s-OFDM 16 QAM	1@1	21.73	20.83	0.1211
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@1	22.74	21.84	0.1528
48	30	10	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	21.84	20.94	0.1242
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@1	22.66	21.76	0.1500
48	30	10	646332	3694.98	DFT-s-OFDM 16 QAM	1@1	21.74	20.84	0.1213
48	30	15	637168	3557.52	DFT-s-OFDM QPSK	1@1	22.59	21.69	0.1476
48	30	15	637168	3557.52	DFT-s-OFDM 16 QAM	1@1	21.67	20.77	0.1194
48	30	15	641666	3624.99	DFT-s-OFDM QPSK	1@1	22.75	21.85	0.1531
48	30	15	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	21.8	20.9	0.1230
48	30	15	646166	3692.49	DFT-s-OFDM QPSK	1@1	22.64	21.74	0.1493
48	30	15	646166	3692.49	DFT-s-OFDM 16 QAM	1@1	21.67	20.77	0.1194
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@1	22.54	21.64	0.1459
48	30	20	637334	3560.01	DFT-s-OFDM 16 QAM	1@1	21.61	20.71	0.1178
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@1	22.7	21.8	0.1514
48	30	20	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	21.73	20.83	0.1211
48	30	20	646000	3690	DFT-s-OFDM QPSK	1@1	22.57	21.67	0.1469
48	30	20	646000	3690	DFT-s-OFDM 16 QAM	1@1	21.62	20.72	0.1180
48	30	40	638000	3570	DFT-s-OFDM PI/2 BPSK	50@25	22.76	21.86	0.1535
48	30	40	638000	3570	DFT-s-OFDM PI/2 BPSK	1@1	21.83	20.93	0.1239
48	30	40	638000	3570	DFT-s-OFDM PI/2 BPSK	1@104	21.56	20.66	0.1164
48	30	40	638000	3570	DFT-s-OFDM QPSK	50@25	22.74	21.84	0.1528
48	30	40	638000	3570	DFT-s-OFDM QPSK	1@1	21.7	20.8	0.1202
48	30	40	638000	3570	DFT-s-OFDM QPSK	1@104	21.65	20.75	0.1189
48	30	40	638000	3570	DFT-s-OFDM 16 QAM	50@25	21.71	20.81	0.1205
48	30	40	638000	3570	DFT-s-OFDM 16 QAM	1@1	20.86	19.96	0.0991
48	30	40	638000	3570	DFT-s-OFDM 16 QAM	1@104	20.64	19.74	0.0942
48	30	40	638000	3570	DFT-s-OFDM 64 QAM	50@25	20.14	19.24	0.0839
48	30	40	638000	3570	DFT-s-OFDM 64 QAM	1@1	19.07	18.17	0.0656

48	30	40	638000	3570	DFT-s-OFDM 64 QAM	1@104	19.04	18.14	0.0652
48	30	40	638000	3570	DFT-s-OFDM 256 QAM	50@25	18.16	17.26	0.0532
48	30	40	638000	3570	DFT-s-OFDM 256 QAM	1@1	17.34	16.44	0.0441
48	30	40	638000	3570	DFT-s-OFDM 256 QAM	1@104	17.18	16.28	0.0425
48	30	40	638000	3570	CP-OFDM QPSK	53@26	21.21	20.31	0.1074
48	30	40	638000	3570	CP-OFDM QPSK	1@1	20.15	19.25	0.0841
48	30	40	638000	3570	CP-OFDM QPSK	1@104	20.19	19.29	0.0849
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@25	22.64	21.74	0.1493
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@1	21.93	21.03	0.1268
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@104	21.46	20.56	0.1138
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	50@25	22.67	21.77	0.1503
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@1	21.83	20.93	0.1239
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@104	21.5	20.6	0.1148
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	50@25	21.75	20.85	0.1216
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	20.82	19.92	0.0982
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@104	20.55	19.65	0.0923
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	50@25	20.2	19.3	0.0851
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@1	19.2	18.3	0.0676
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@104	18.87	17.97	0.0627
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	50@25	18.12	17.22	0.0527
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@1	17.33	16.43	0.0440
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@104	17.03	16.13	0.0410
48	30	40	641666	3624.99	CP-OFDM QPSK	53@26	21.11	20.21	0.1050
48	30	40	641666	3624.99	CP-OFDM QPSK	1@1	20.32	19.42	0.0875
48	30	40	641666	3624.99	CP-OFDM QPSK	1@104	20.06	19.16	0.0824
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	50@25	22.7	21.8	0.1514
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@1	21.79	20.89	0.1227
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@104	21.46	20.56	0.1138
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	50@25	22.7	21.8	0.1514
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@1	21.79	20.89	0.1227
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@104	21.52	20.62	0.1153
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	50@25	21.66	20.76	0.1191
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@1	20.87	19.97	0.0993
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@104	20.47	19.57	0.0906
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	50@25	20.13	19.23	0.0838

48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@1	19.1	18.2	0.0661
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@104	18.85	17.95	0.0624
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	50@25	18.1	17.2	0.0525
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@1	17.34	16.44	0.0441
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@104	17.2	16.3	0.0427
48	30	40	645332	3679.98	CP-OFDM QPSK	53@26	21.11	20.21	0.1050
48	30	40	645332	3679.98	CP-OFDM QPSK	1@1	20.25	19.35	0.0861
48	30	40	645332	3679.98	CP-OFDM QPSK	1@104	19.92	19.02	0.0798

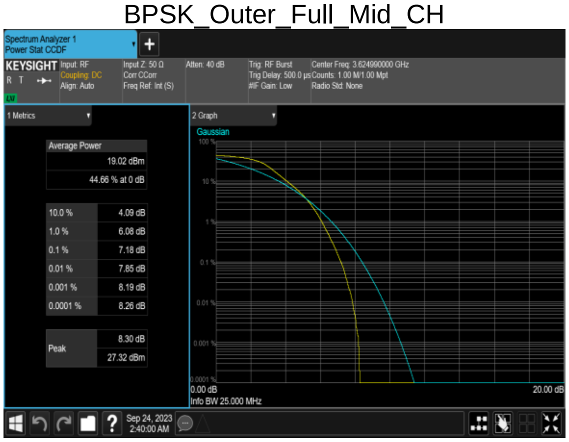
Frequency Stability

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	0.0041	**PASS**	NV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0033	**PASS**	LV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0030	**PASS**	HV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0058	**PASS**	-30℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0048	**PASS**	-20℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0021	**PASS**	-10℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0057	**PASS**	0℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0059	**PASS**	10℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0041	**PASS**	20℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0056	**PASS**	30℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0063	**PASS**	40℃
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0027	**PASS**	50℃

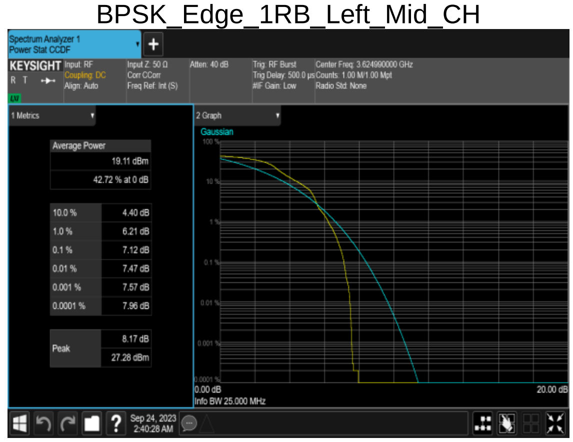
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@0	7.18	13	**PASS**
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	7.12	13	**PASS**
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	8.31	13	**PASS**
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	9.39	13	**PASS**

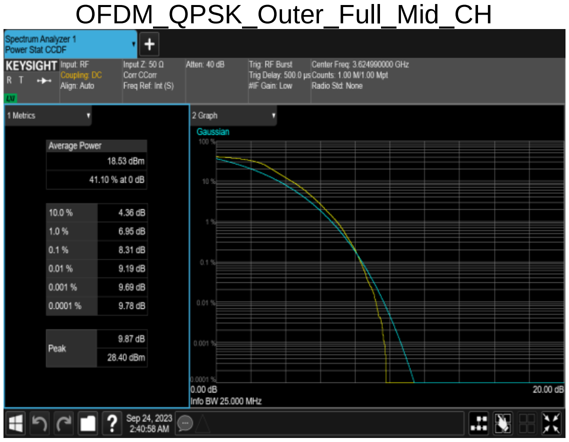
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



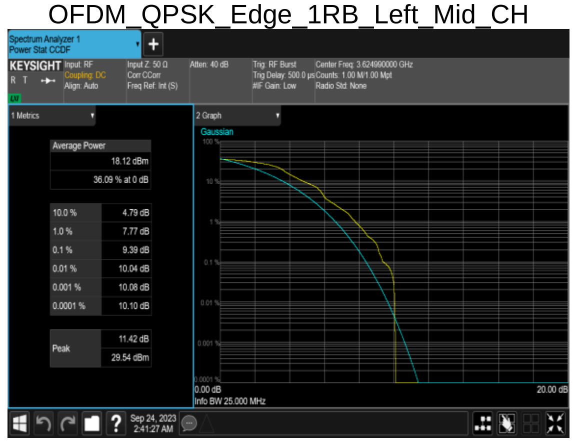
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



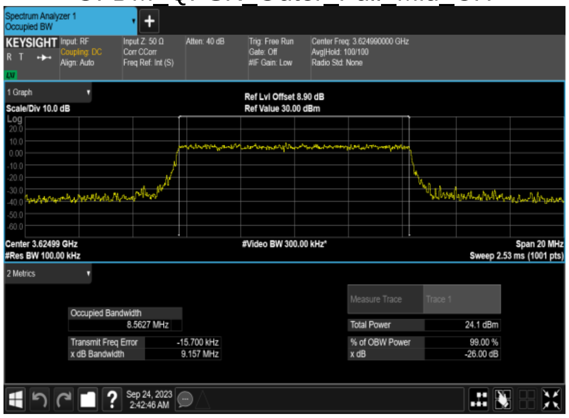
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



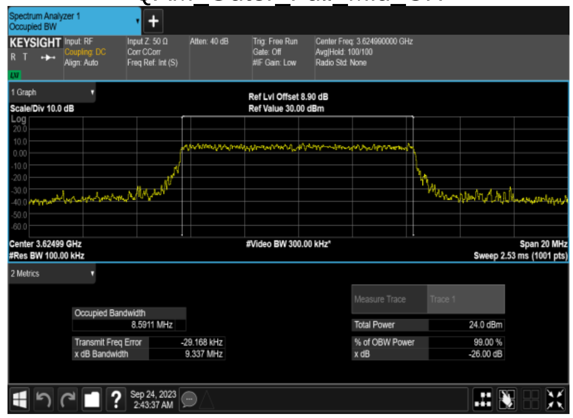
Occupied Bandwidth

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
48	30	10	641666	3624.99	CP-OFDM QPSK	24@0	8.5627	9.157
48	30	10	641666	3624.99	CP-OFDM 16 QAM	24@0	8.5911	9.337
48	30	10	641666	3624.99	CP-OFDM 64 QAM	24@0	8.5549	9.172
48	30	10	641666	3624.99	CP-OFDM 256 QAM	24@0	8.5752	9.321
48	30	15	641666	3624.99	CP-OFDM QPSK	38@0	13.564	14.49
48	30	15	641666	3624.99	CP-OFDM 16 QAM	38@0	13.524	14.49
48	30	15	641666	3624.99	CP-OFDM 64 QAM	38@0	13.485	14.52
48	30	15	641666	3624.99	CP-OFDM 256 QAM	38@0	13.583	14.52
48	30	20	641666	3624.99	CP-OFDM QPSK	51@0	18.196	19.1
48	30	20	641666	3624.99	CP-OFDM 16 QAM	51@0	18.178	18.97
48	30	20	641666	3624.99	CP-OFDM 64 QAM	51@0	18.211	19.22
48	30	20	641666	3624.99	CP-OFDM 256 QAM	51@0	18.224	18.99
48	30	40	641666	3624.99	CP-OFDM QPSK	106@0	37.884	39.07
48	30	40	641666	3624.99	CP-OFDM 16 QAM	106@0	37.892	39.17
48	30	40	641666	3624.99	CP-OFDM 64 QAM	106@0	37.87	39.27
48	30	40	641666	3624.99	CP-OFDM 256 QAM	106@0	37.778	39.22

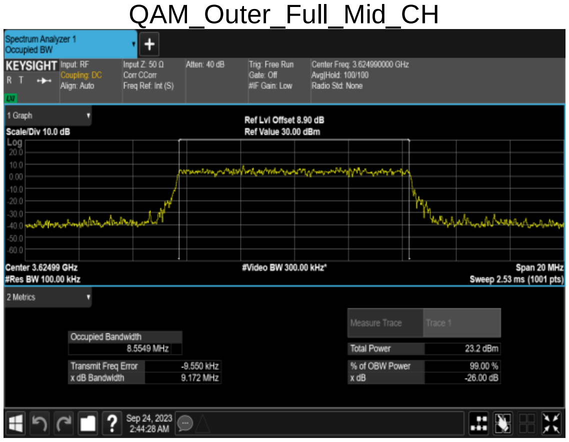
N48(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



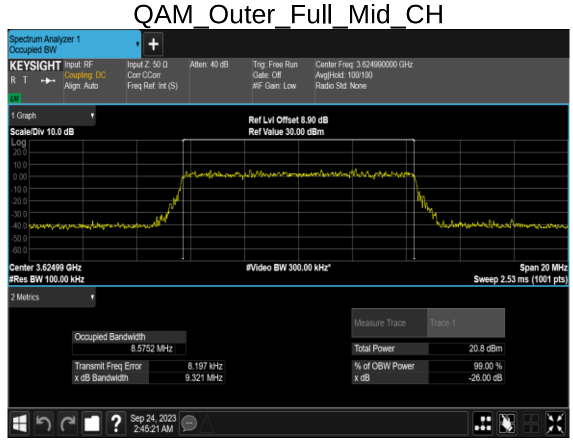
N48(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



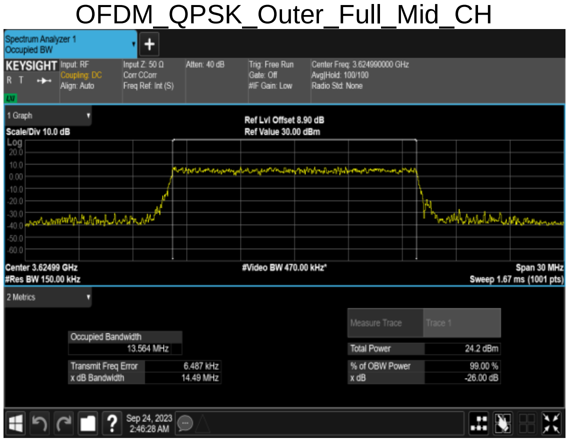
N48(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



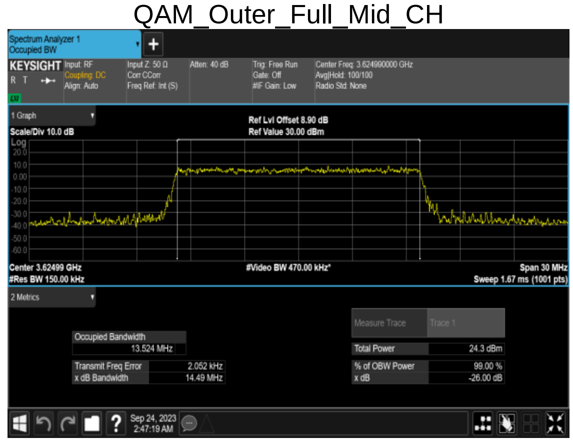
N48(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



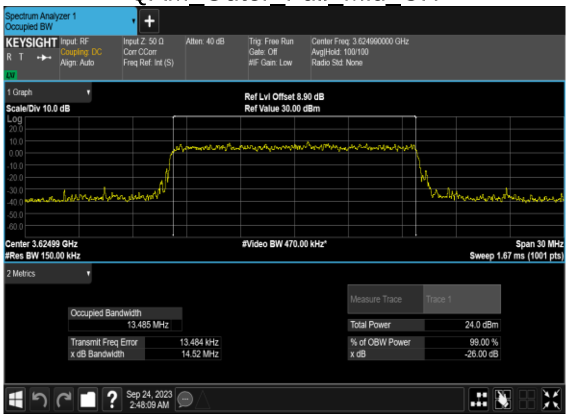
N48(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



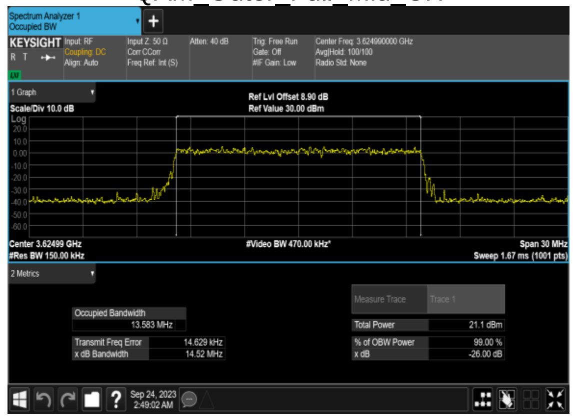
N48(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



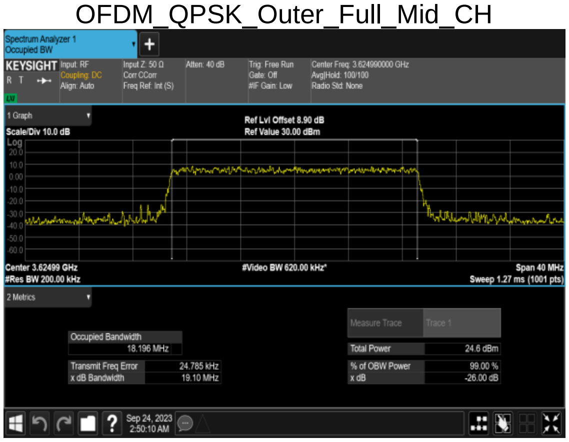
N48(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



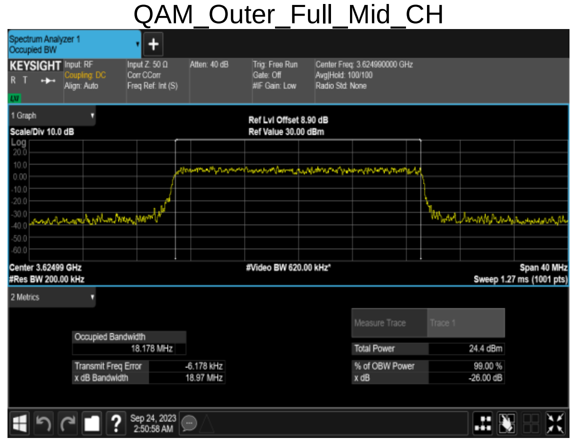
N48(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



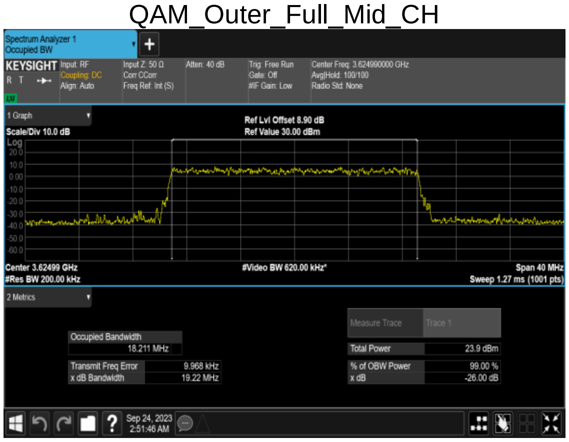
N48(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



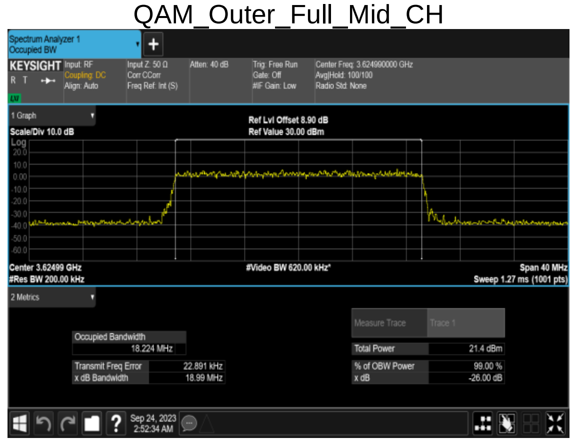
N48(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



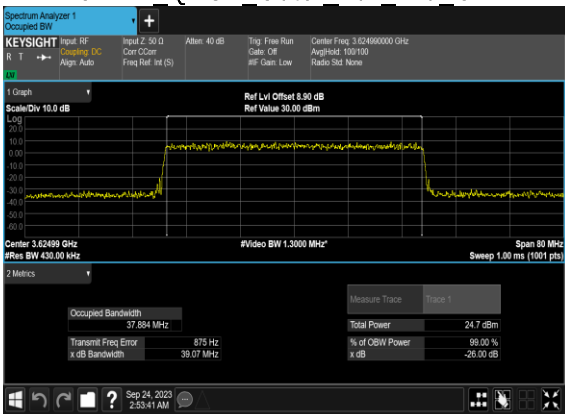
N48(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



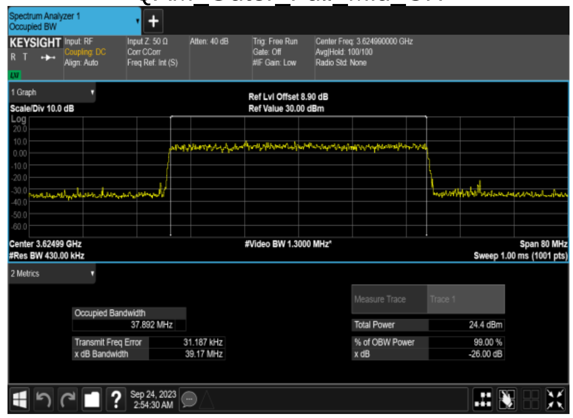
N48(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N48(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N48(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



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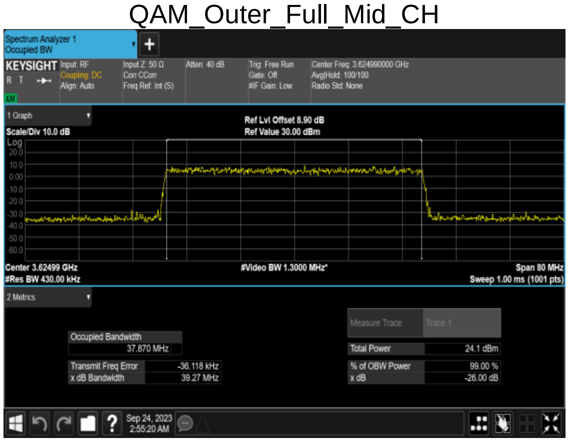
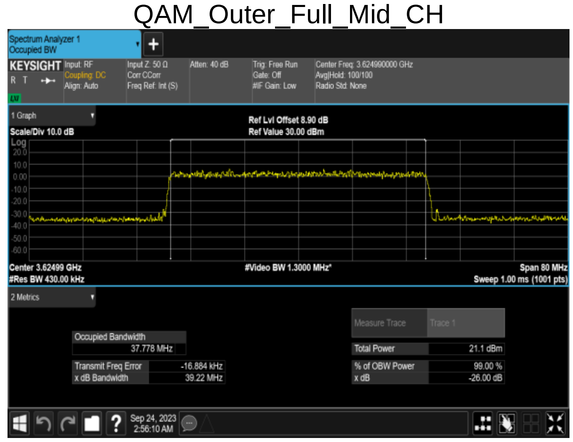


N48(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



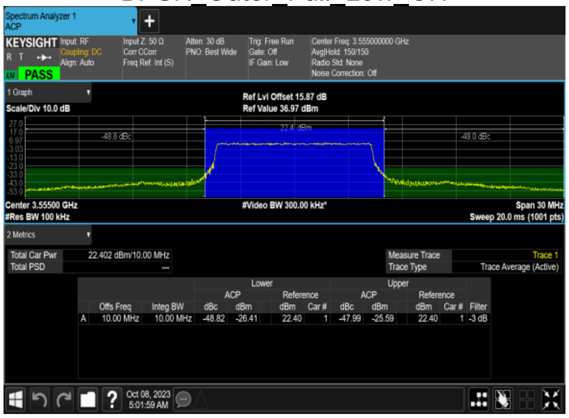
Adjacent Channel Leakage Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Lower Margin	Upper Margin	Result	Verdict
48	30	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	24@0	-18.82	-17.99	**see graph**	PASS
48	30	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	1@0	-12.75	-23.58	**see graph**	PASS
48	30	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	1@23	-23.25	-13.45	**see graph**	PASS
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	24@0	-16.95	-16.69	**see graph**	PASS
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	-12.91	-23.33	**see graph**	PASS
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@23	-23.07	-14.21	**see graph**	PASS
48	30	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	24@0	-16.31	-15.64	**see graph**	PASS
48	30	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-6.77	-18.33	**see graph**	PASS
48	30	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@23	-21.71	-12.93	**see graph**	PASS
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	24@0	-16.09	-17.07	**see graph**	PASS
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	-13.9	-21.39	**see graph**	PASS
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@23	-21.59	-13.83	**see graph**	PASS
48	30	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	24@0	-17.47	-17.51	**see graph**	PASS
48	30	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	1@0	-12.12	-19.6	**see graph**	PASS
48	30	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	1@23	-20.44	-12.76	**see graph**	PASS
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	24@0	-16.43	-16.6	**see graph**	PASS
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	-12.67	-19.85	**see graph**	PASS
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@23	-20.03	-12.91	**see graph**	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	50@0	-19.34	-19.53	**see graph**	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@0	-11.32	-22.15	**see graph**	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@50	-22.7	-13.12	**see graph**	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	50@0	-17.17	-17.26	**see graph**	PASS

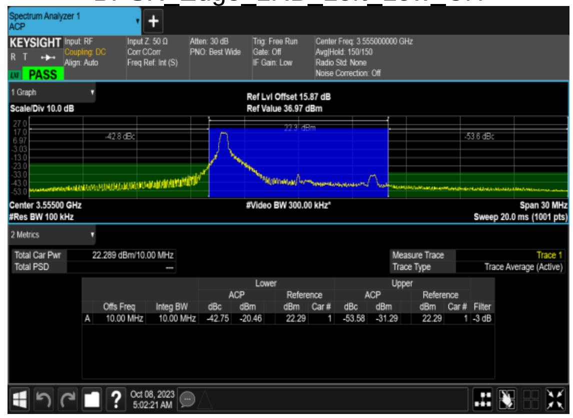
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	-11.2	-22.2	**see graph**	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@50	-21.11	-10.28	**see graph**	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@0	-16.97	-16.39	**see graph**	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-9.61	-19.83	**see graph**	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@50	-20.25	-13.35	**see graph**	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	-16.11	-16.48	**see graph**	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	-11.46	-18.93	**see graph**	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@50	-19.84	-13.09	**see graph**	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	50@0	-16.68	-17.53	**see graph**	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@0	-11.87	-18.43	**see graph**	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@50	-18.94	-12.19	**see graph**	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	50@0	-16.07	-16.47	**see graph**	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	-11.32	-17.54	**see graph**	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@50	-17.96	-11.39	**see graph**	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	100@0	-16.01	-16.2	**see graph**	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@0	-11.07	-16.78	**see graph**	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@105	-17.48	-12.29	**see graph**	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	100@0	-14.41	-14.62	**see graph**	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	-11.23	-16.7	**see graph**	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@105	-16.74	-9.17	**see graph**	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	100@0	-15.56	-15.74	**see graph**	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-10.54	-16.82	**see graph**	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@105	-17.97	-10.61	**see graph**	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	100@0	-15.02	-14.91	**see graph**	PASS

48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	-10.72	-15.3	**see graph**	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@105	-15.92	-10.89	**see graph**	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	100@0	-15.59	-15.57	**see graph**	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@0	-11.15	-15.08	**see graph**	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@105	-16.25	-11.19	**see graph**	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	100@0	-14.66	-14.64	**see graph**	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	-11.19	-15.21	**see graph**	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@105	-15.74	-10.98	**see graph**	PASS

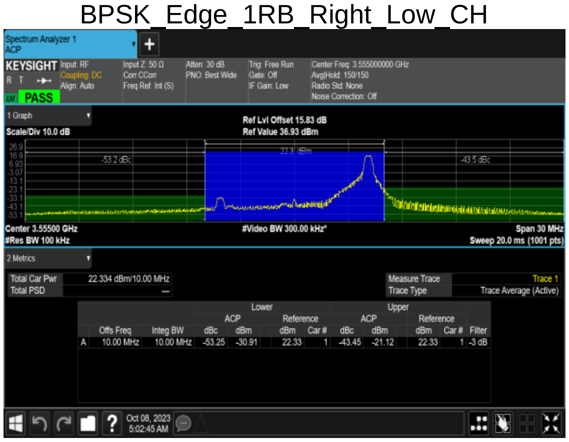
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



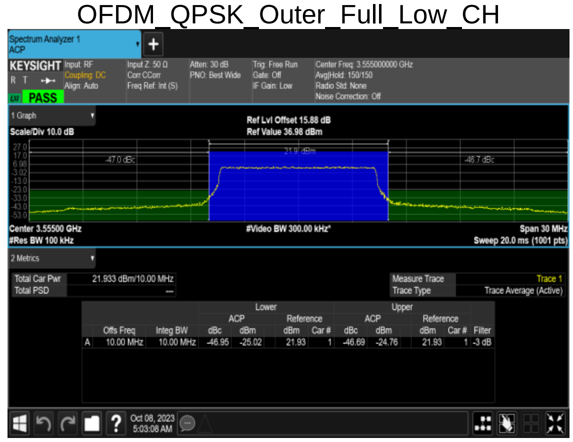
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



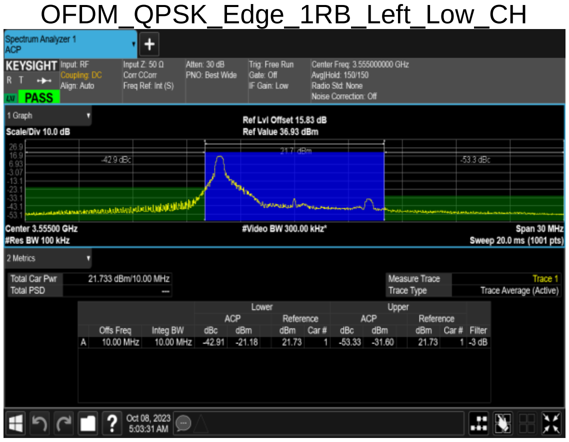
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH



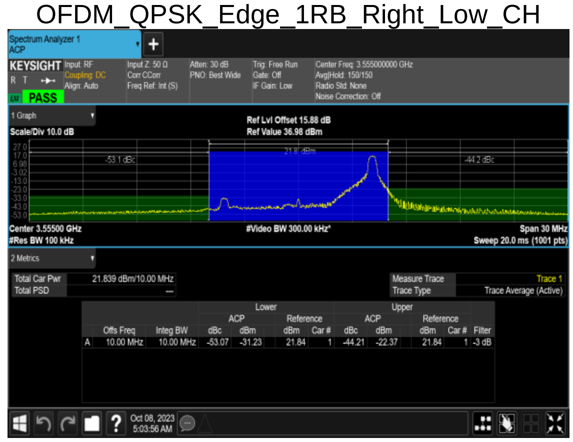
N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



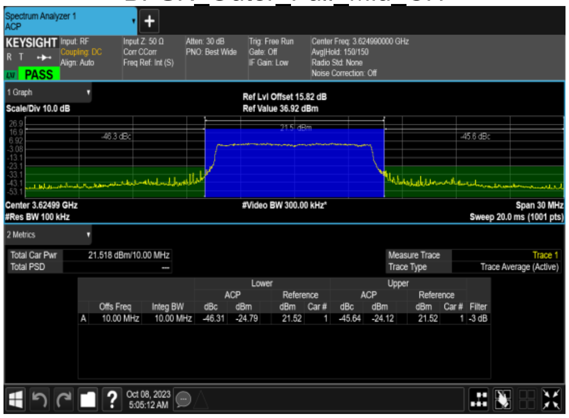
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



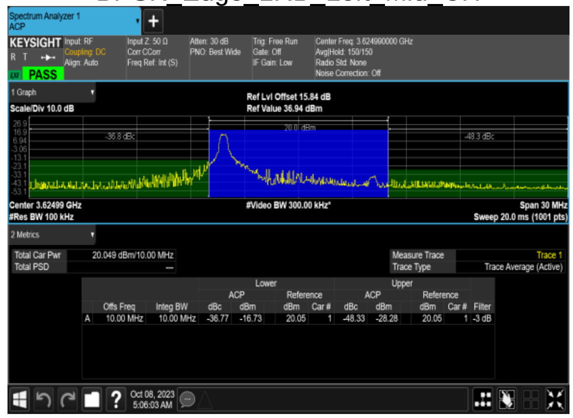
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH



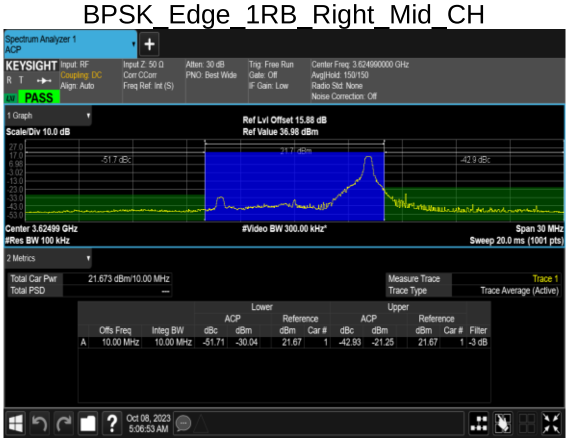
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



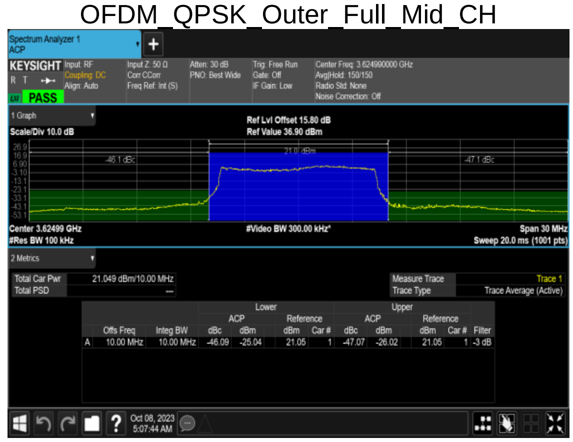
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



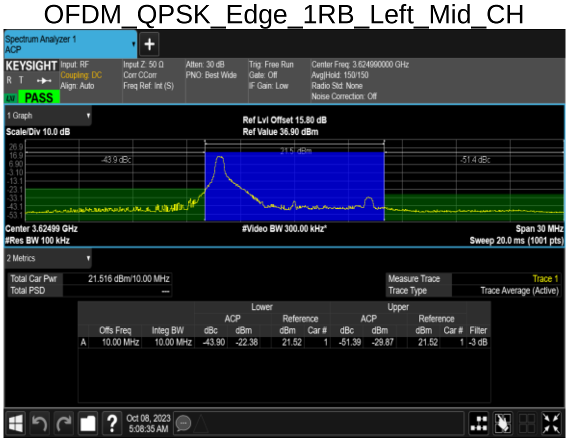
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Mid_CH



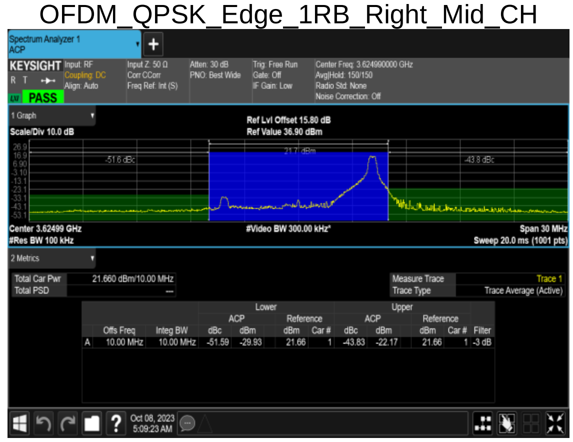
N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



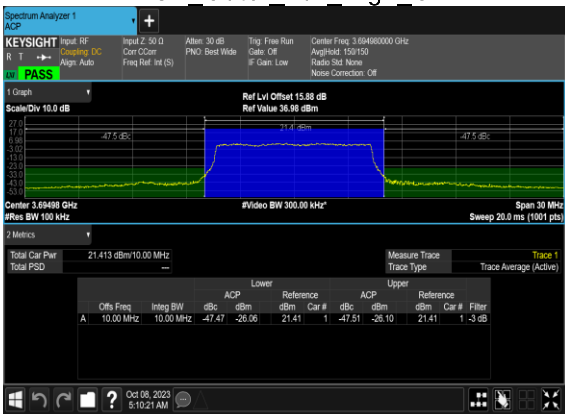
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



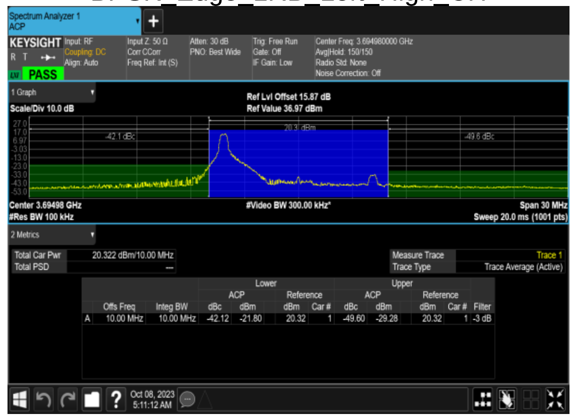
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH



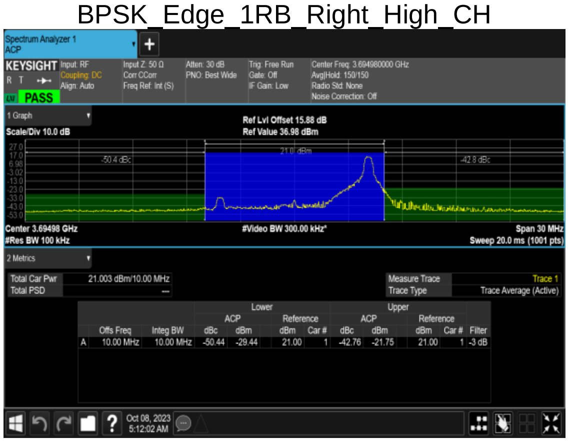
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



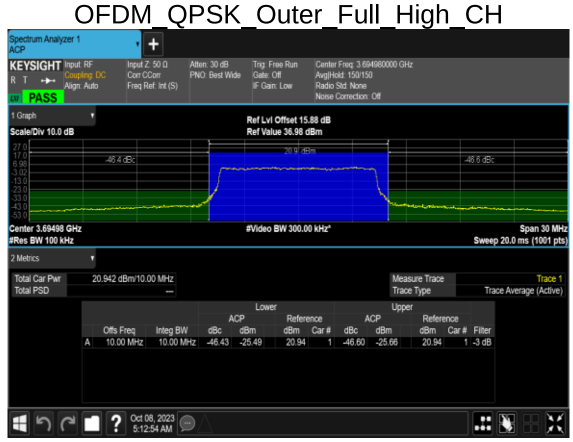
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



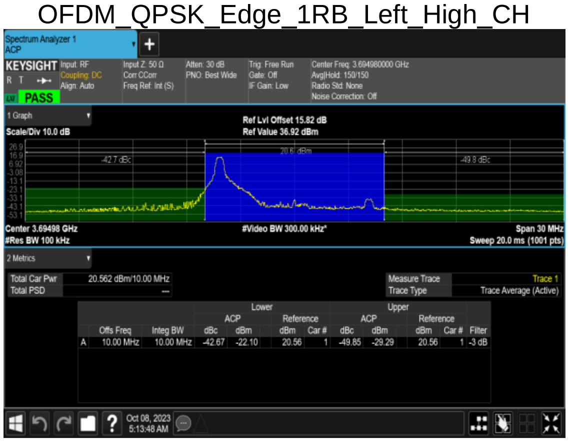
N48(10M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH



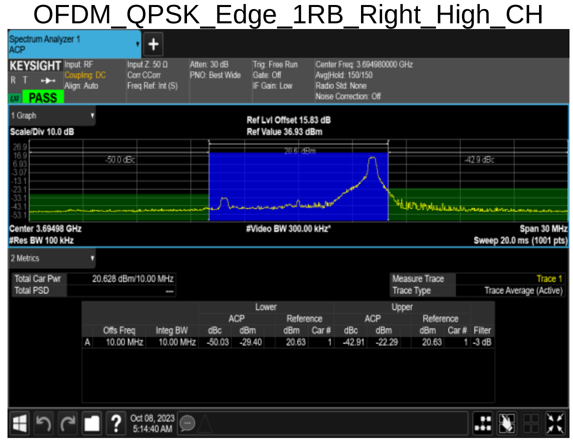
N48(10M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



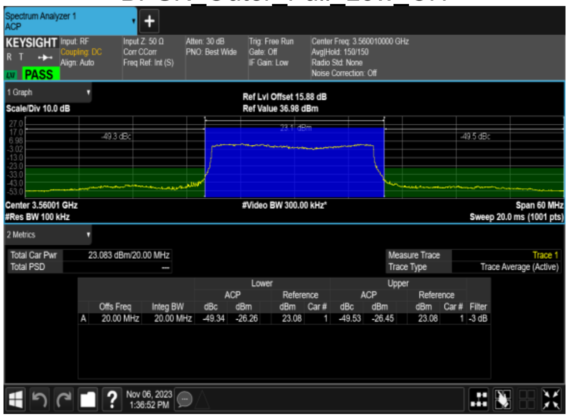
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



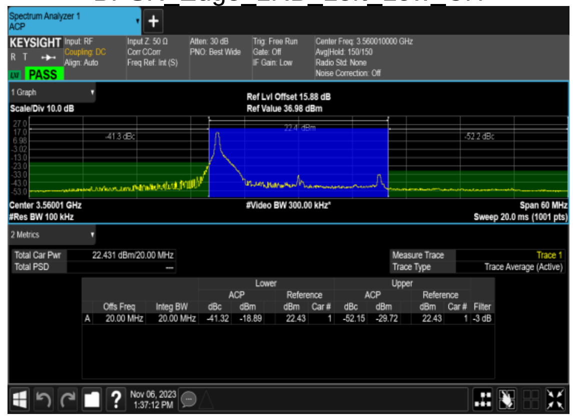
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



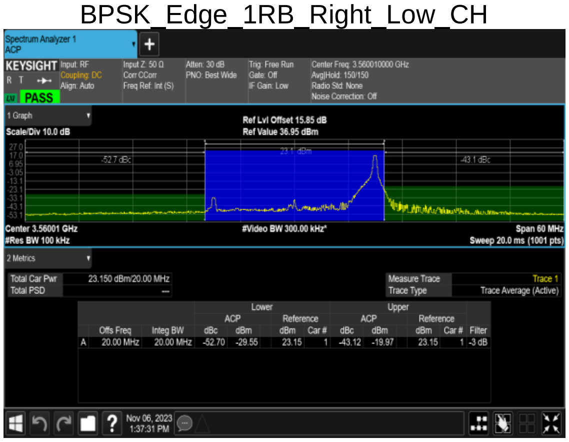
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



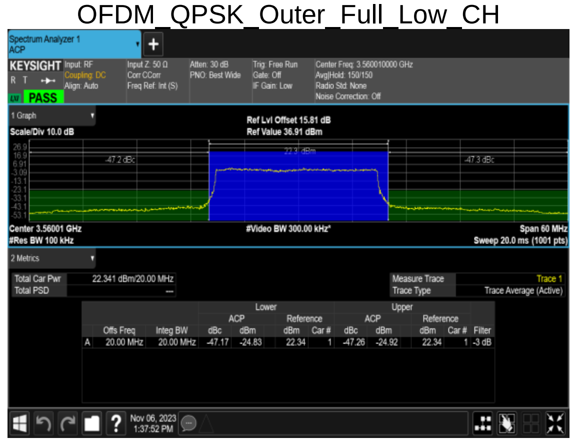
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



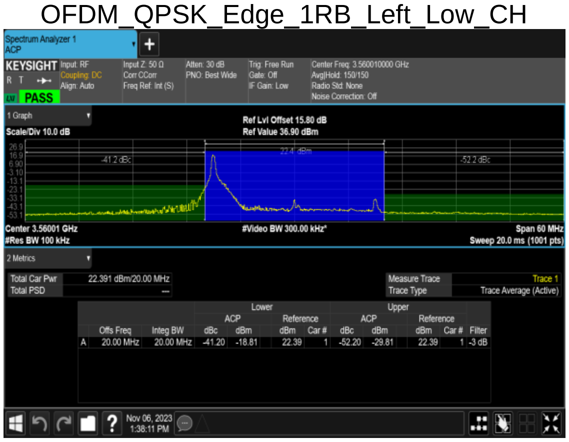
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH



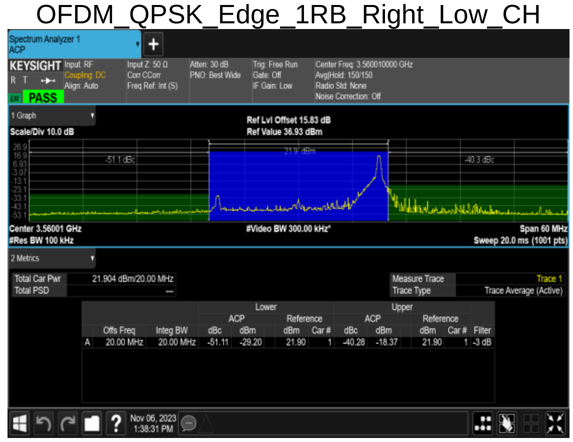
N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



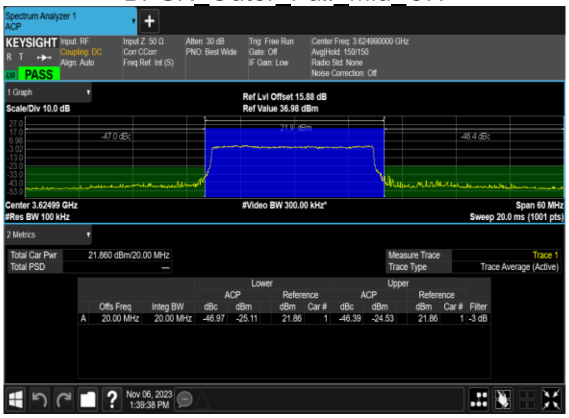
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



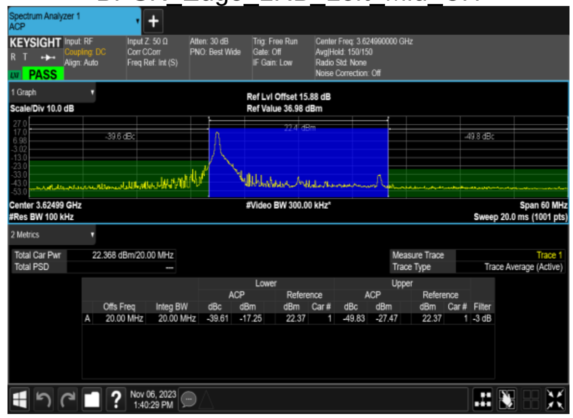
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH



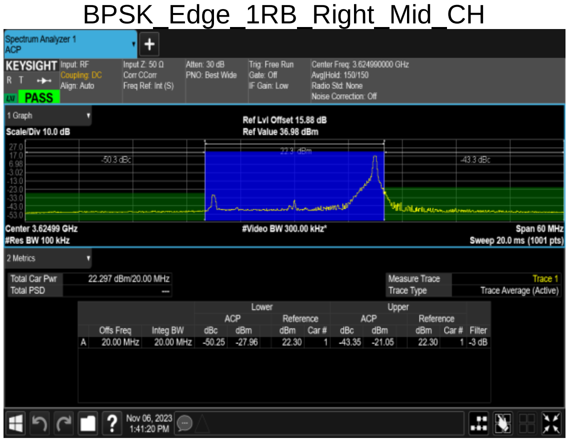
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



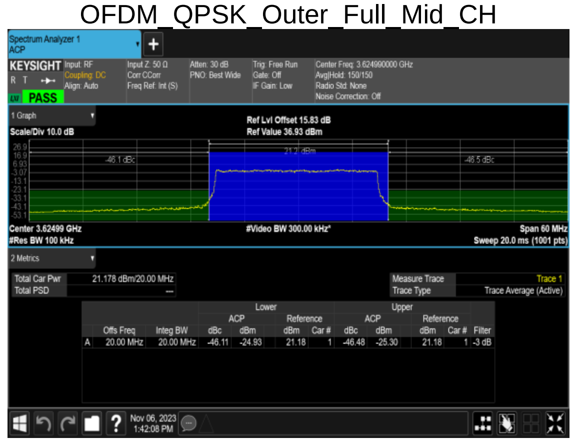
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



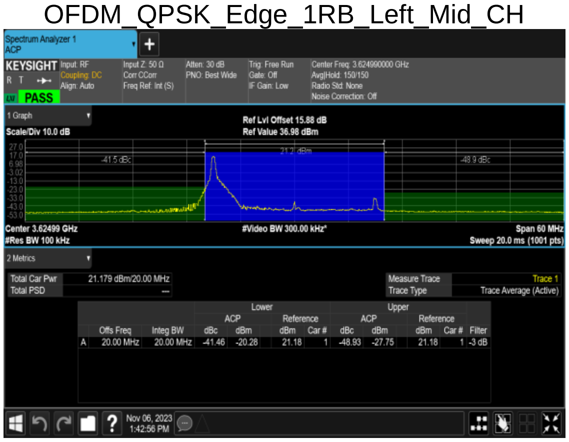
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Mid_CH



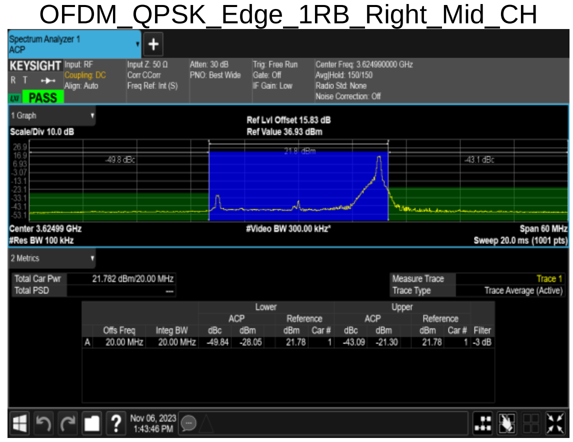
N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



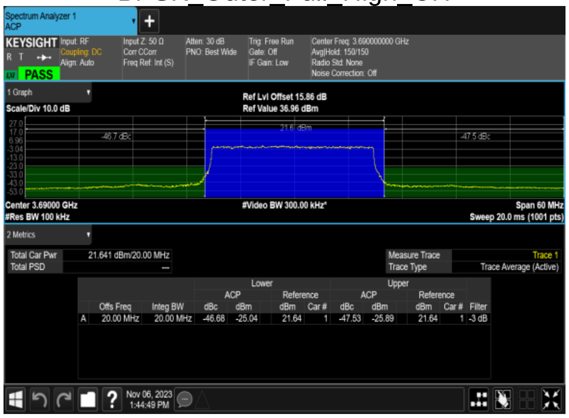
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



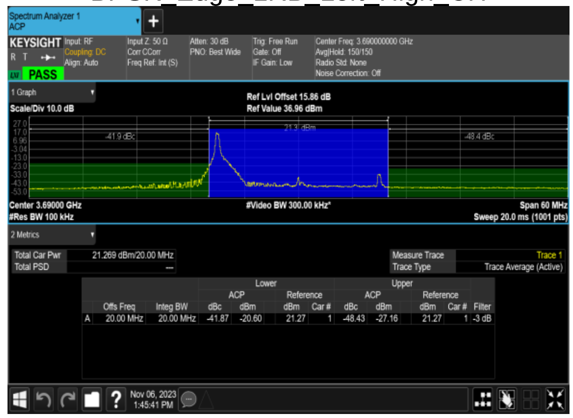
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH



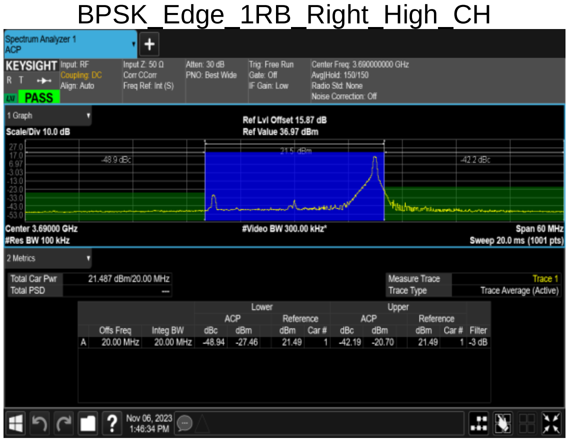
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH



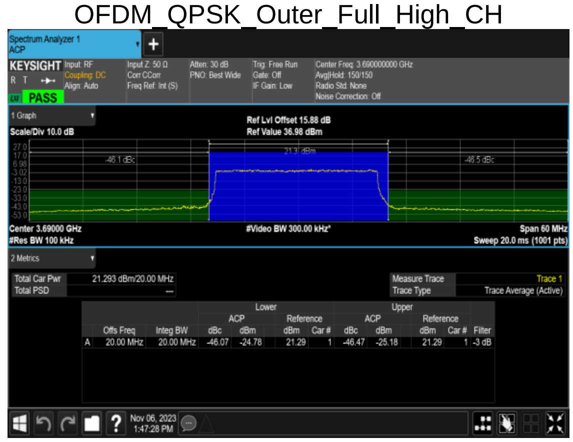
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH



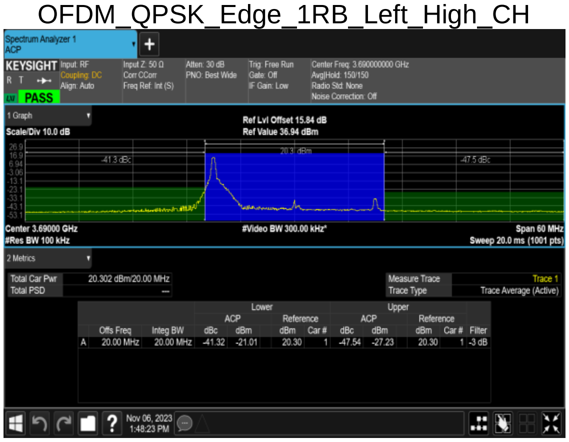
N48(20M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH



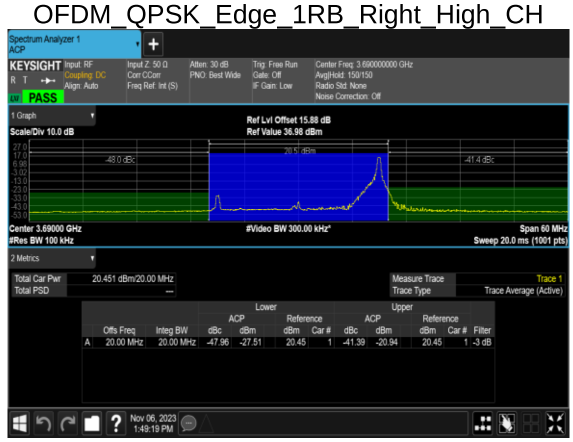
N48(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



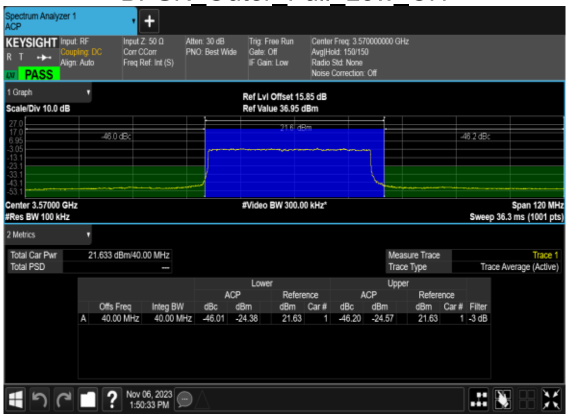
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



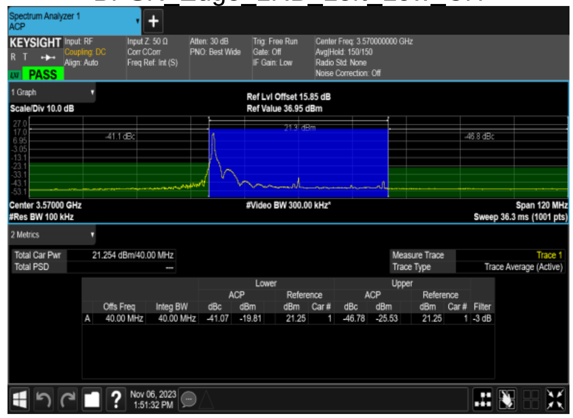
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



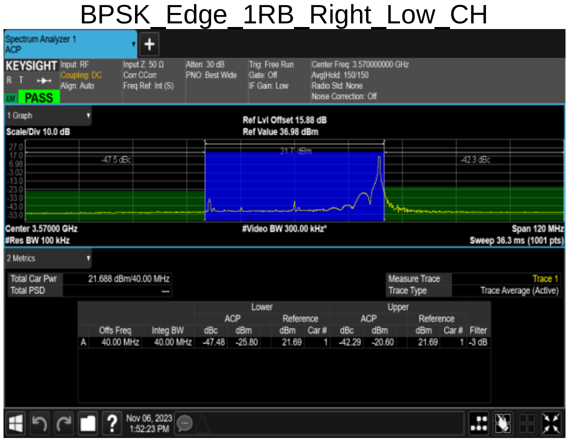
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Low_CH



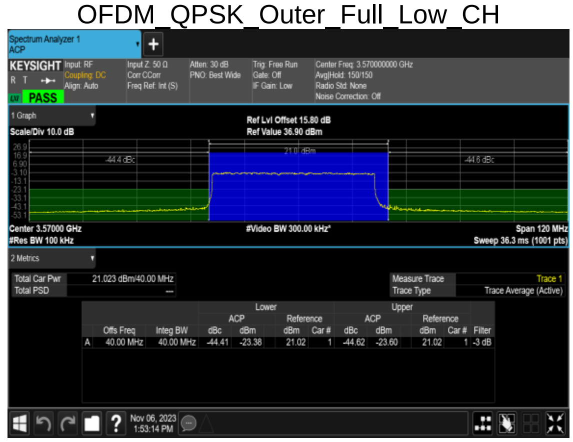
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Low_CH



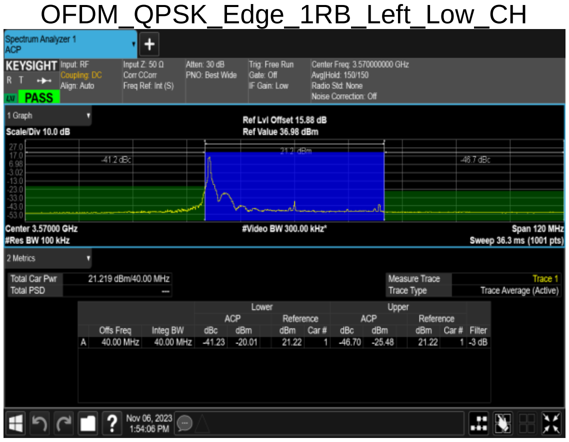
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Low_CH



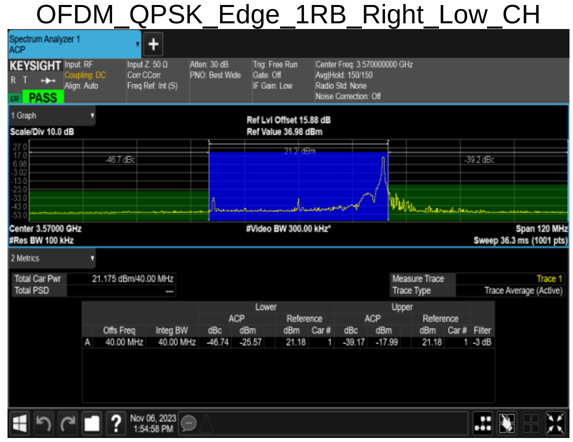
N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



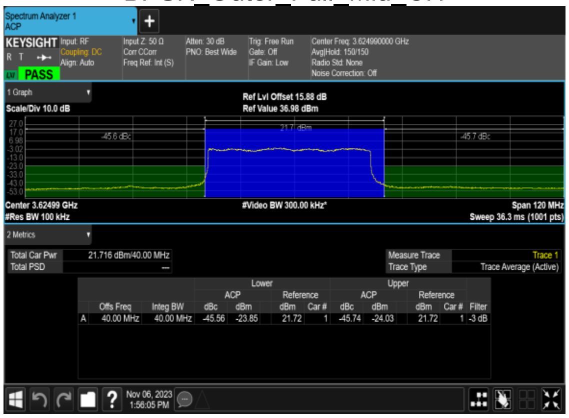
N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



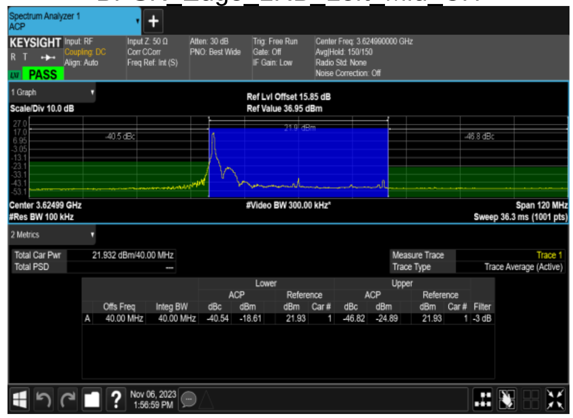
N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Low_CH



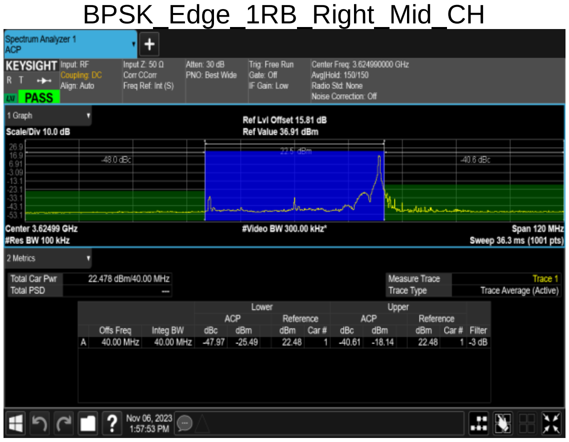
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



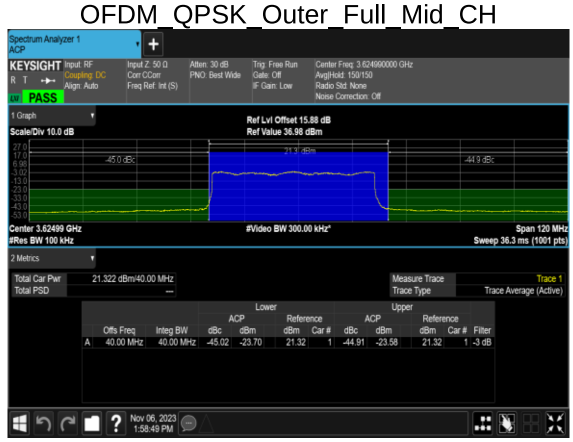
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_Mid_CH



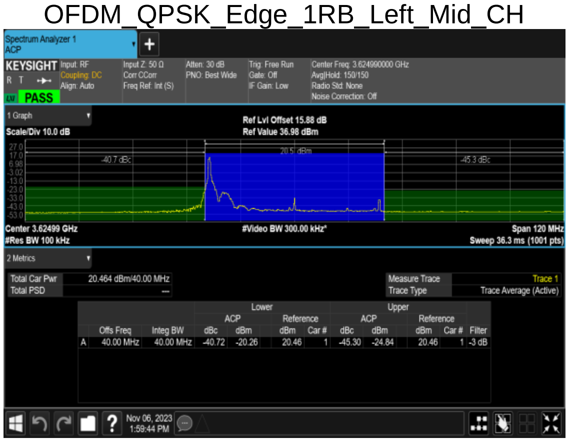
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_Mid_CH



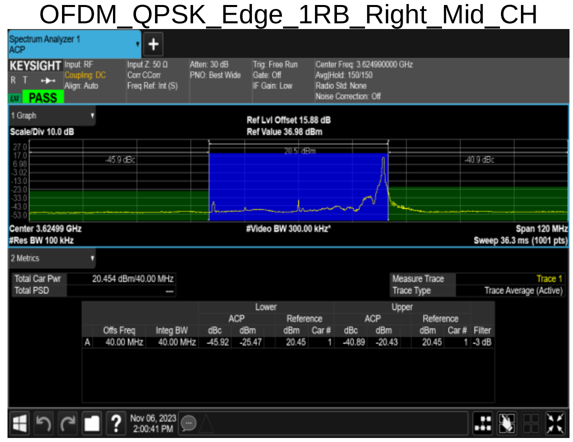
N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH



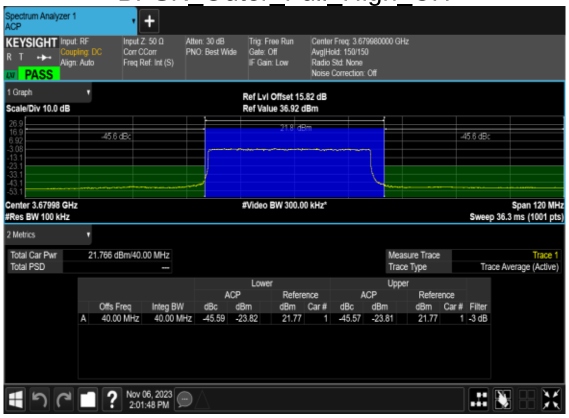
N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_Mid_CH

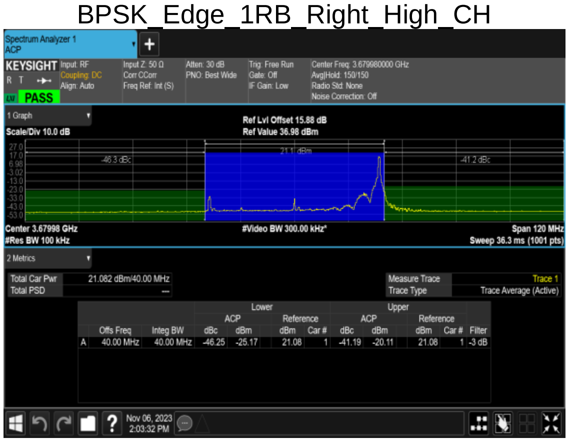


N48(40M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_High_CH

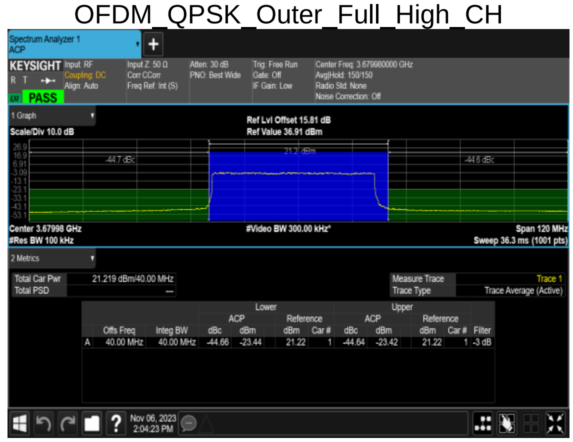


N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Left_High_CH

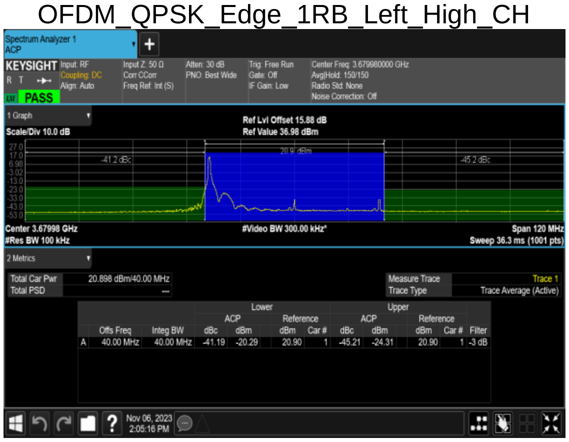
N48(40M)_DFT-s-OFDM_PI_2-BPSK_Edge_1RB_Right_High_CH



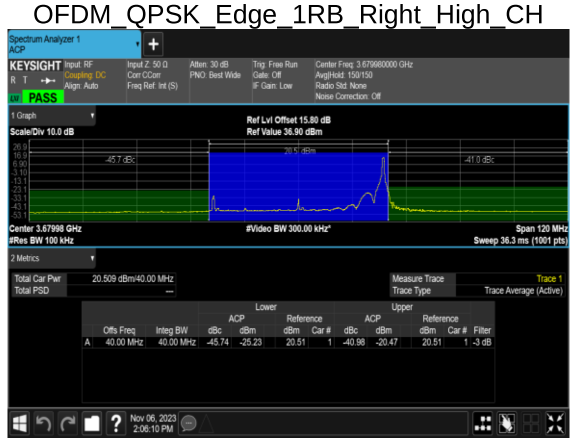
N48(40M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N48(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



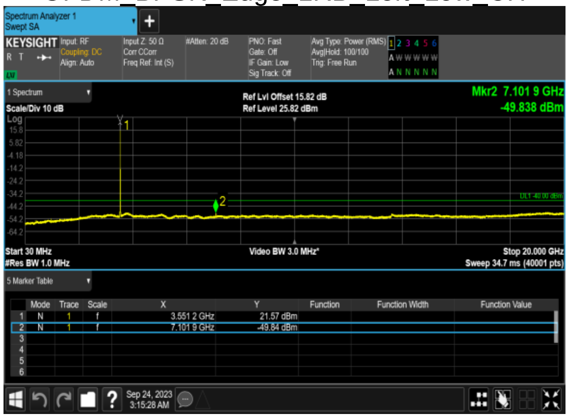
Conducted Spurious Emissions

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
48	30	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	30	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	30	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	30	10	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	30	10	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	30	10	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	30	10	646332	3694.98	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	30	10	646332	3694.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	30	10	646332	3694.98	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	see graph	**---**
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
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	**---**

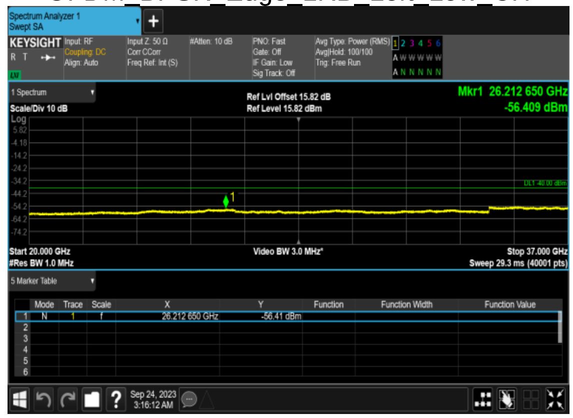
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**---**
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
48	30	20	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	**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**

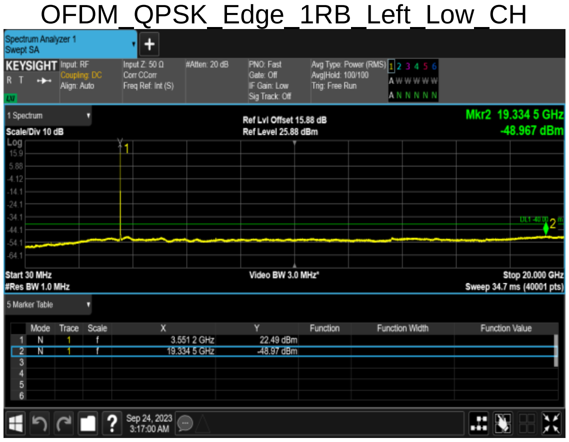
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



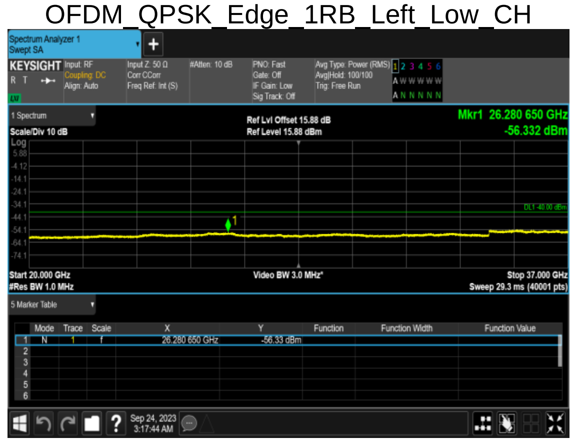
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



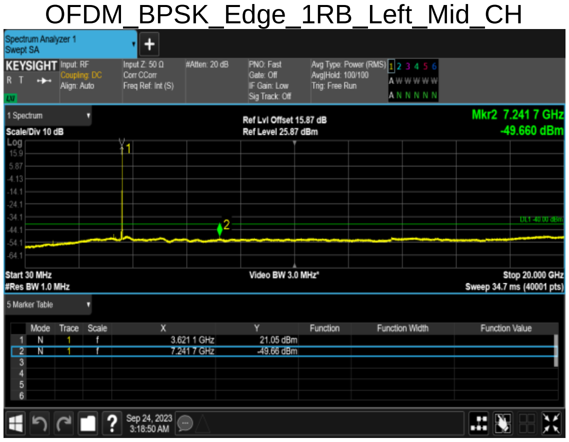
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



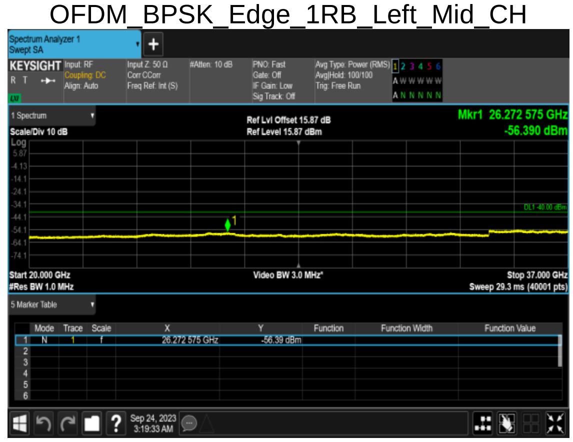
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



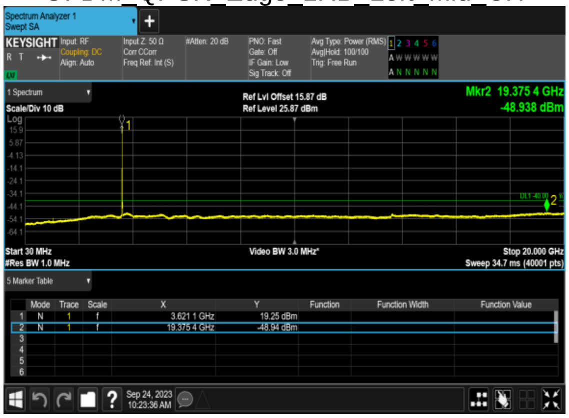
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



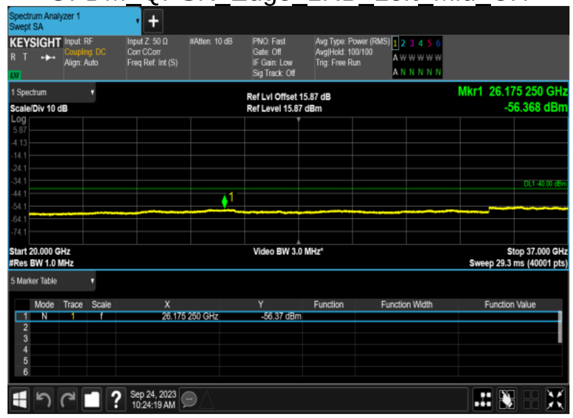
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



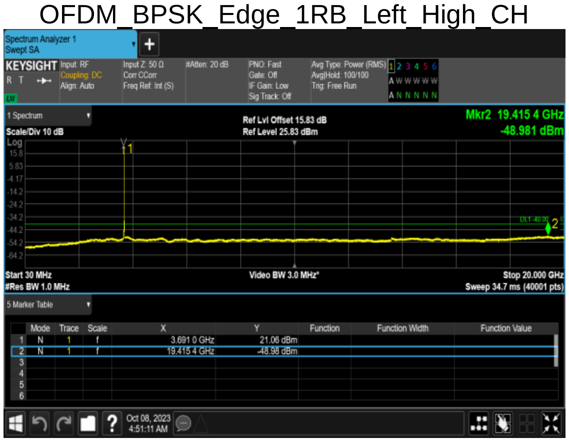
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



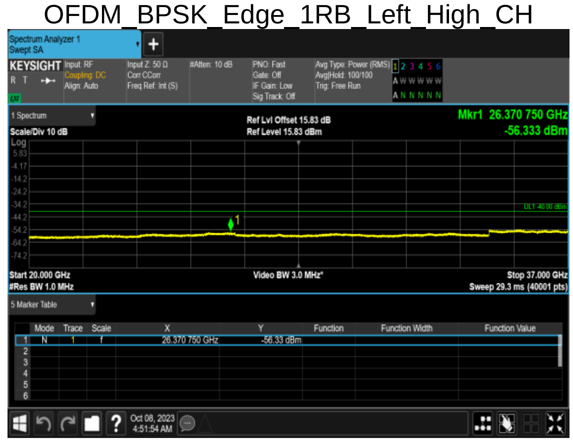
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



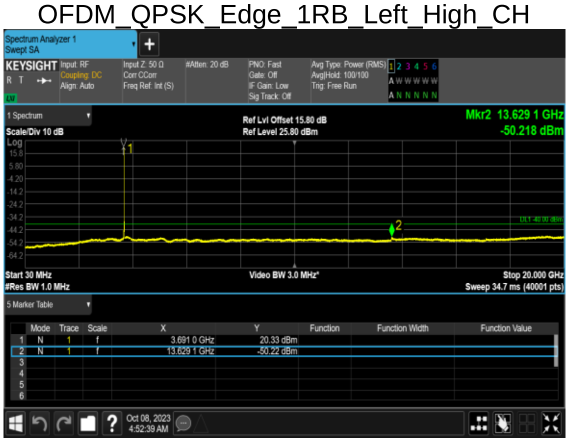
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



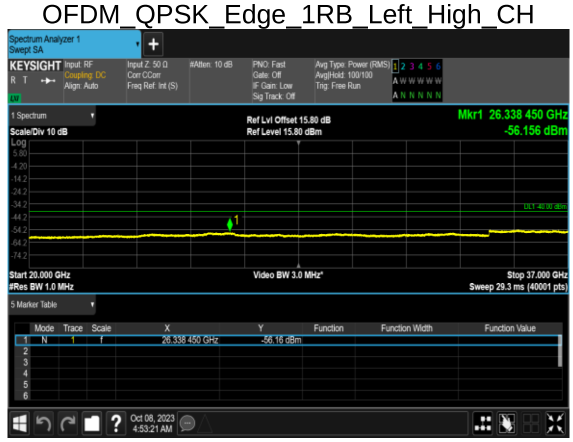
N48(10M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



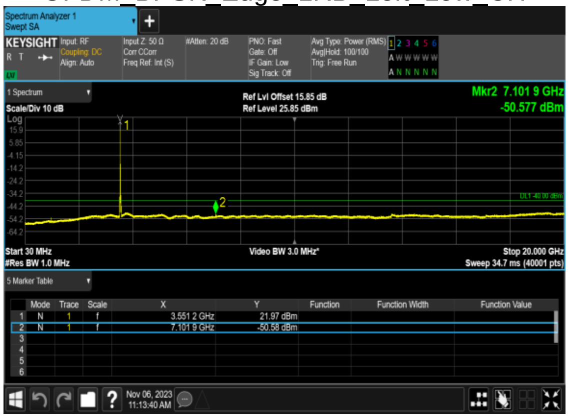
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



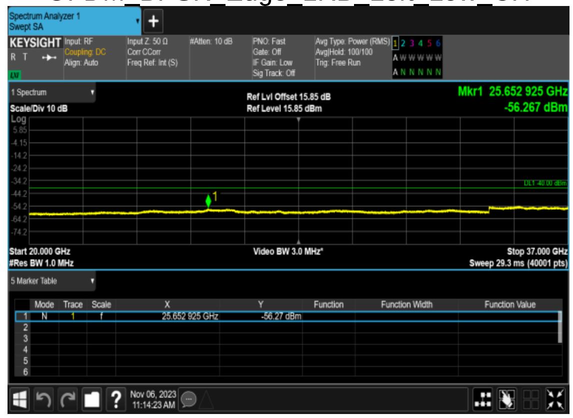
N48(10M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



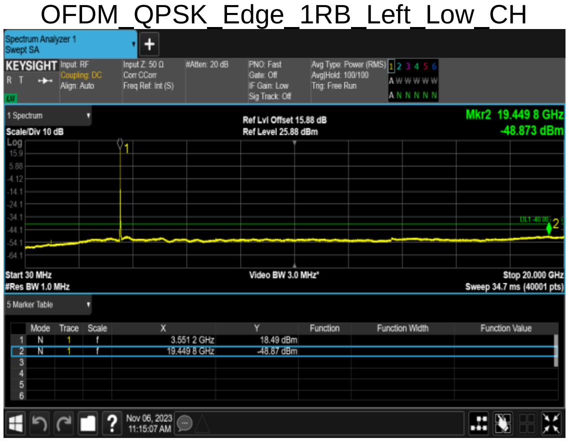
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



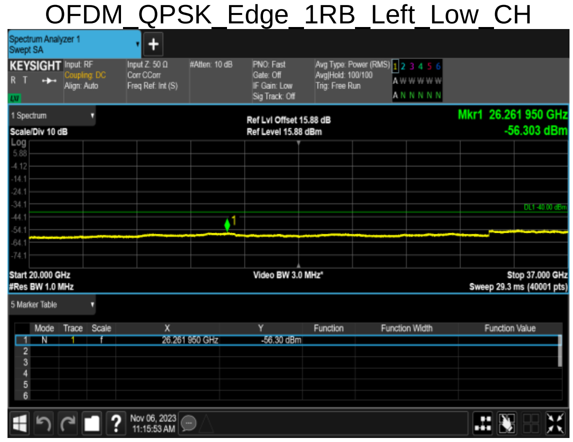
N48(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



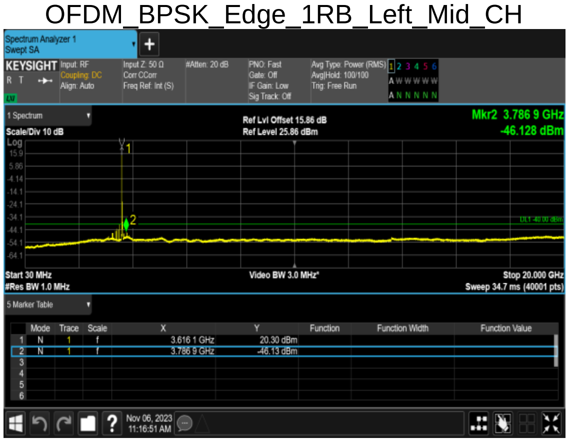
N48(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



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