



# FCC RF Test Report

APPLICANT : ASUSTeK COMPUTER INC.  
EQUIPMENT : ASUS Phone(Mobile Phone)  
BRAND NAME : ASUS  
MODEL NAME : ASUS\_AI2401\_E  
FCC ID : MSQAI2401  
STANDARD : 47 CFR Part 2, 96  
CLASSIFICATION : Citizens Band End User Devices (CBE)  
EQUIPMENT TYPE : End User Equipment  
TEST DATE(S) : Oct. 31, 2023 ~ Nov. 07, 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.

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

Jason Jia



Approved by: Jason Jia

**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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**Appendix A. Test Results of Conducted Test**

**Appendix B. Test Results of Radiated Test**

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### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.3	§2.1046	Conducted Output Power	Reporting only	-
-	§96.41	Peak-to-Average Ratio	Not Applicable	Not applicable for End User Devices
3.4	§96.41	Maximum E.I.R.P	Pass	-
		Maximum Power Spectral Density	Not Applicable	Not applicable for End User Devices
3.5	§2.1049 §96.41	Occupied Bandwidth	Reporting only	-
3.6	§2.1051 §96.41	Conducted Band Edge Measurement Adjacent Channel Leakage Ratio	Pass	-
3.7	§2.1051 §96.41	Conducted Spurious Emission	Pass	
3.8	§2.1055	Frequency Stability for Temperature & Voltage	Pass	-
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	Under limit 10.10 dB at 14425.60 MHz

**Conformity Assessment Condition:**

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

**Disclaimer:**

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



# 1 General Description

## 1.1 Applicant

ASUSTeK COMPUTER INC.

1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

## 1.2 Manufacturer

ASUSTeK COMPUTER INC.

1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

## 1.3 Feature of Equipment Under Test

Product Feature	
Equipment	ASUS Phone(Mobile Phone)
Brand Name	ASUS
Model Name	ASUS_AI2401_E
FCC ID	MSQAI2401
Tx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
Rx Frequency	5G NR n48: 3550 MHz ~ 3700 MHz
SCS	30kHz
Bandwidth	10MHz / 15MHz / 20MHz / 30 MHz /40MHz
Antenna Gain	<Ant. 7>: -1.00 dBi <Ant. 8>: -2.90 dBi <Ant. 9>: -2.40 dBi <Ant. 10>: -9.00 dBi
Type of Modulation	DFT-s-OFDM (PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM) CP-OFDM (QPSK / 16QAM / 64QAM / 256QAM)
IMEI Code	Conducted: 356313810100658/356313810100666 Radiation: 356313810100674/356313810100682
HW Version	R2.0
SW Version	Android 14
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 only support SA mode.
3. The maximum EIRP is calculated from max output power and antenna gain, only the maximum EIRP of Ant. 7 is shown in the report.
4. There are four SKUs of EUT for this project. The differences between them are summary below, According to the difference, we evaluate SKU1 to perform full test.

Sample list				
	SKU1	SKU2	SKU3	SKU4
Model	ASUS_AI2401_E	ASUS_AI2401_E	ASUS_AI2401_E	ASUS_AI2401_E
Config.	US(Pro)	US(Entry)	US(Pro)	US(Entry)
RF module board	US(Pro)	US(Entry)	US(Pro)	US(Entry)
LCD+Touch front frame module	AI2401 FRONT CASE ASSY			



DDR	16G(HYNIX) HYNIX / H58G76BK8HX095	16G(Micron) Micron / MT62F2G64D8ZA-023 WT:C	16G(HYNIX) HYNIX / H58G76BK8HX095	16G(Micron) Micron / MT62F2G64D8ZA-023 WT:C
UFS	1TB(Samsung) Samsung / KLUGGARHHD-B0G1	512G(HYNIX) (UFS4.0) HYNIX / HN8T274EJKX130	1TB(Samsung) Samsung / KLUGGARHHD-B0G1	512G(HYNIX) (UFS4.0) HYNIX / HN8T274EJKX130
MB	AI2401_MB	AI2401_MB	AI2401_MB	AI2401_MB
Back cover SKU	WW Pro(Mini LED)	WW Entry(LGF)	WW Pro(Mini LED)	WW Entry(LGF)
Battery	SCUD / C21P2301	SCUD / C21P2301	SCUD / C21P2301	SCUD / C21P2301
Main 50+13M	SHINETECH / DDN03B	RAYPRUS / CASDJ-000A	RAYPRUS / CASDJ-000A	SHINETECH / DDN03B
Tele 32M	Kunshan Q-TECH / C3HS01	SHINETECH / DHG01B	SHINETECH / DHG01B	Kunshan Q-TECH / C3HS01
Front 32M	TSPRECISION / TVHF3046	RAYPRUS / CASG-000A	RAYPRUS / CASG-000A	TSPRECISION / TVHF3046
PCB	COMPEQ	COMPEQ	COMPEQ	COMPEQ
CPU	QUALCOMM SM-8650 MPSP1629	QUALCOMM SM-8650 MPSP1629	QUALCOMM SM-8650 MPSP1629	QUALCOMM SM-8650 MPSP1629
WPC antenna	ASAP	INPAQ	INPAQ	ASAP
NFC antenna	ASAP	INPAQ	INPAQ	ASAP
WWAN/WLAN /BT/GPS antenna	INPAQ	ASAP	ASAP	INPAQ

### 1.4 Maximum EIRP Power 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	0.1726	8M56G7D	0.1368	8M59W7D
15	3557.52~3692.50	0.1690	13M6G7D	0.1355	13M6W7D
20	3560.01~3690.00	0.1675	18M2G7D	0.1355	18M2W7D
30	3564.99~3684.99	0.1730	27M9G7D	0.1377	27M8W7D
40	3570.00~3679.98	0.1750	37M8G7D	0.1393	37M9W7D



### 1.5 Testing Site

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

<b>Test Firm</b>	Sporton International Inc. (ShenZhen)		
<b>Test Site Location</b>	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		
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Designation No.</b>	<b>FCC Test Firm Registration No.</b>
	TH01-SZ	CN1256	421272

<b>Test Firm</b>	Sporton International Inc. (ShenZhen)		
<b>Test Site Location</b>	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People’s Republic of China TEL: +86-755-86066985		
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Designation No.</b>	<b>FCC Test Firm Registration No.</b>
	03CH03-SZ	CN1256	421272

### 1.6 Test Software

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



## **1.7 Applied Standards**

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

- ♦ ANSI C63.26-2015
- ♦ 47 CFR Part 2, 96
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 940660 D01 Part 96 CBRS v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

### **Remark:**

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



## 2 Test Configuration of Equipment Under Test

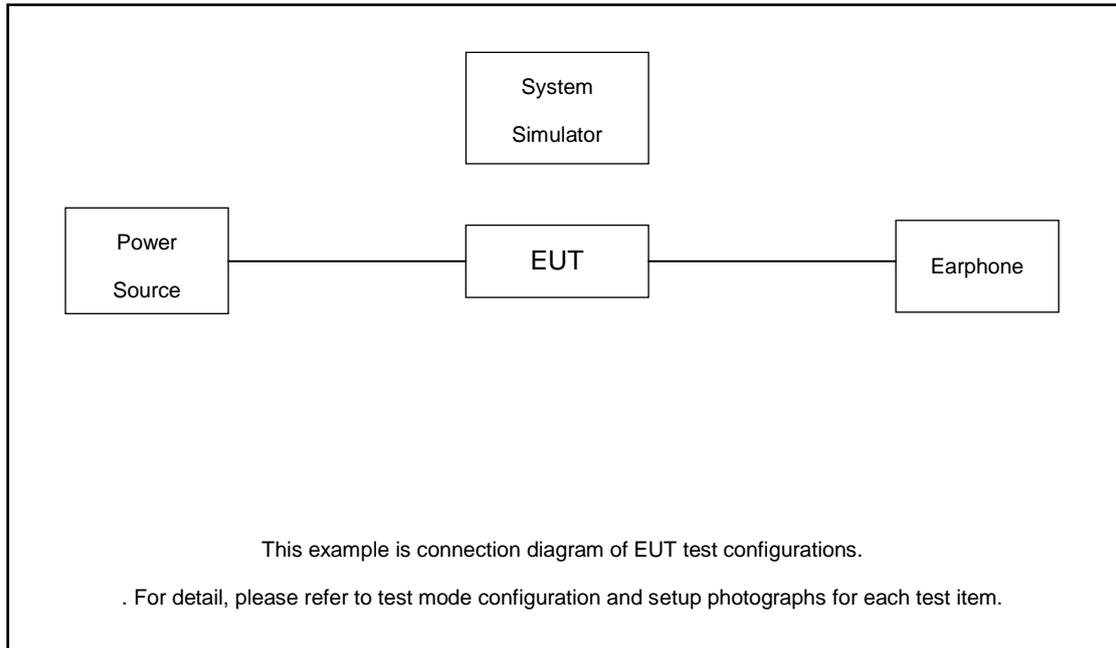
### 2.1 Test Mode

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

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

Test Items	Band	Bandwidth (MHz)						Modulation					RB #		Test Channel			
		5	10	15	20	30	40	PI/2 BPSK	QPSK	16QAM	64QAM	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	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	v	v
Frequency Stability	n48	-			v				v					v			v	
Radiated Spurious Emission	n48	Worst Case															v	
Remark	<ol style="list-style-type: none"> <li>The mark "v" means that this configuration is chosen for testing</li> <li>The mark "-" means that this bandwidth is not supported.</li> <li>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.</li> <li>All test items are based on engineering evaluation.</li> <li>Frequency Stability: Normal Voltage = 7.78V ; Low Voltage =7.3V; High Voltage =8.7V</li> </ol>																	

## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

## 2.4 Measurement Results Explanation Example

### For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

*Offset = RF cable loss.*

Following shows an offset computation example with cable loss 8.90 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 8.90(\text{dB}) \end{aligned}$$



### 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
30	Channel	637666	641666	645666
	Frequency	3564.99	3624.99	3684.99
20	Channel	637334	641666	646000
	Frequency	3560.01	3624.99	3690
15	Channel	637168	641666	646166
	Frequency	3557.52	3624.99	3692.49
10	Channel	637000	641666	646332
	Frequency	3555	3624.99	3694.98

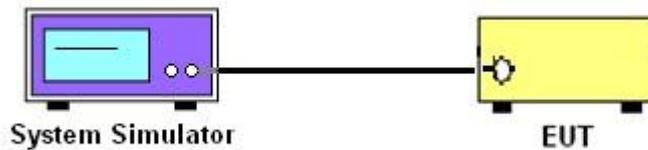
### 3 Conducted Test Items

#### 3.1 Measuring Instruments

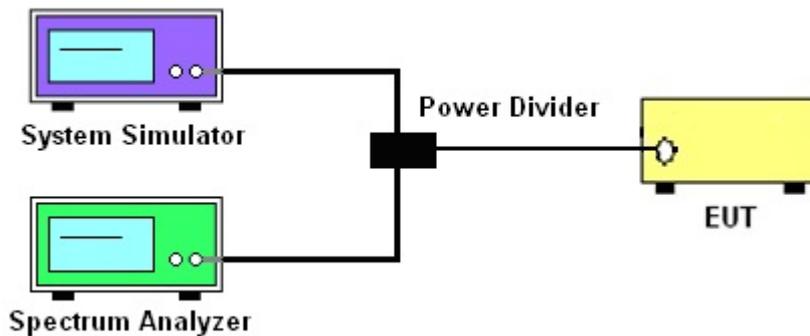
See list of measuring instruments of this test report.

#### 3.2 Test Setup

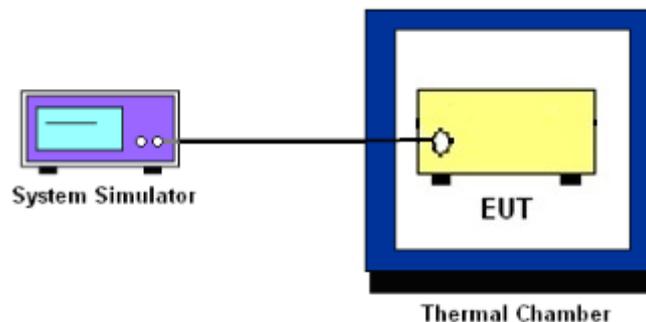
##### 3.2.1 Conducted Output Power / ACLR



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



##### 3.2.3 Frequency Stability



##### 3.2.4 Test Result of Conducted Test

Please refer to Appendix A.



### **3.3 Conducted Output Power**

#### **3.3.1 Description of the Conducted Output Power Measurement**

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

#### **3.3.2 Test Procedures**

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

## 3.4 EIRP

### 3.4.1 Description of the EIRP Measurement

EIRP limits for CBRS equipment as below table:

Device		Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
Applied	End User Device	23	n/a
<input type="checkbox"/>	Category A CBSD	30	20
<input type="checkbox"/>	Category B CBSD	47	37

### 3.4.2 Test Procedures for EIRP

1. Establishing a communications link with the call box (Base station) to measure the Maximum conducted power, the parameters were set to force the EUT transmitting at maximum output power level. Use the average power measurement function to measure total channel power of each channel bandwidth (per ANSI C63.26-2015 Section 5.2.1)
2. Determining ERP and/or EIRP from conducted RF output power measurements (Per ANSI C63.26-2015 Section 5.2.5.5)  
$$\text{EIRP} = P_T + G_T - L_C, \text{ ERP} = \text{EIRP} - 2.15, \text{ where}$$
$$P_T = \text{transmitter output power in dBm}$$
$$G_T = \text{gain of the transmitting antenna in dBi}$$
$$L_C = \text{signal attenuation in the connecting cable between the transmitter and antenna in dB}$$



## 3.5 Occupied Bandwidth

### 3.5.1 Description of Occupied Bandwidth Measurement

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

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

### 3.5.2 Test Procedures

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

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

## 3.6 Conducted Band Edge

### 3.6.1 Description of Conducted Band Edge Measurement

Part 96.41 (e) (1) (ii)

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

Within 0 MHz to B MHz above and below the assigned channel  $\leq -13$  dBm/MHz

Greater than B MHz above and below the assigned channel  $\leq -25$  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

### 3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

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



## 3.7 Conducted Spurious Emission

### 3.7.1 Description of Conducted Spurious Emission Measurement

96.41 (e)(2)

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

### 3.7.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

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

## 3.8 Frequency Stability

### 3.8.1 Description of Frequency Stability Measurement

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

### 3.8.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  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  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

### 3.8.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at  $25\pm 5^{\circ}\text{C}$  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.

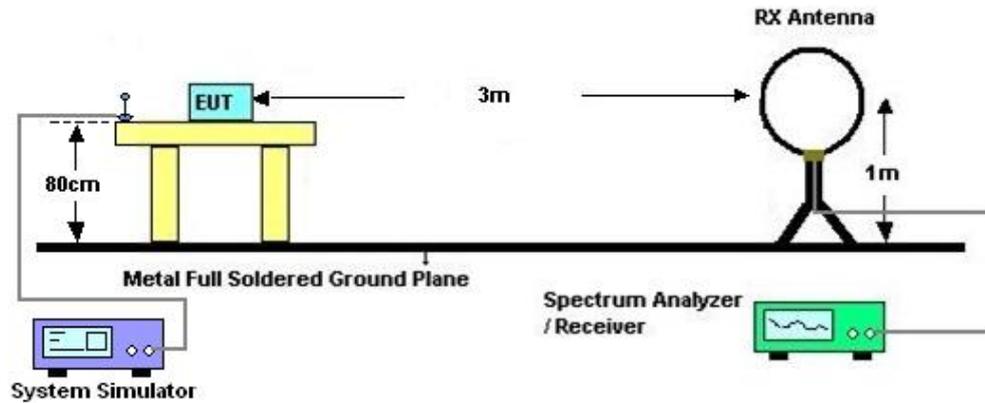
## 4 Radiated Test Items

### 4.1 Measuring Instruments

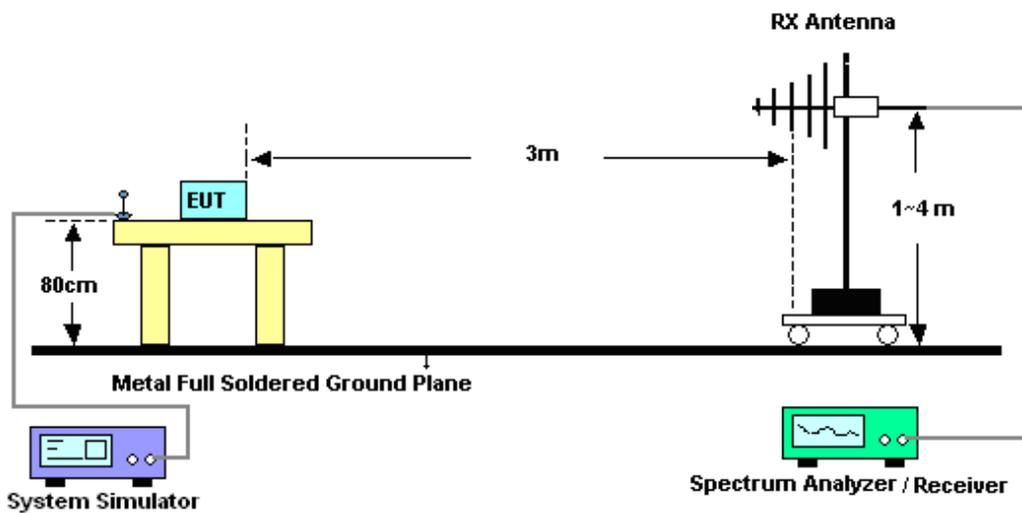
See list of measuring instruments of this test report.

### 4.2 Test Setup

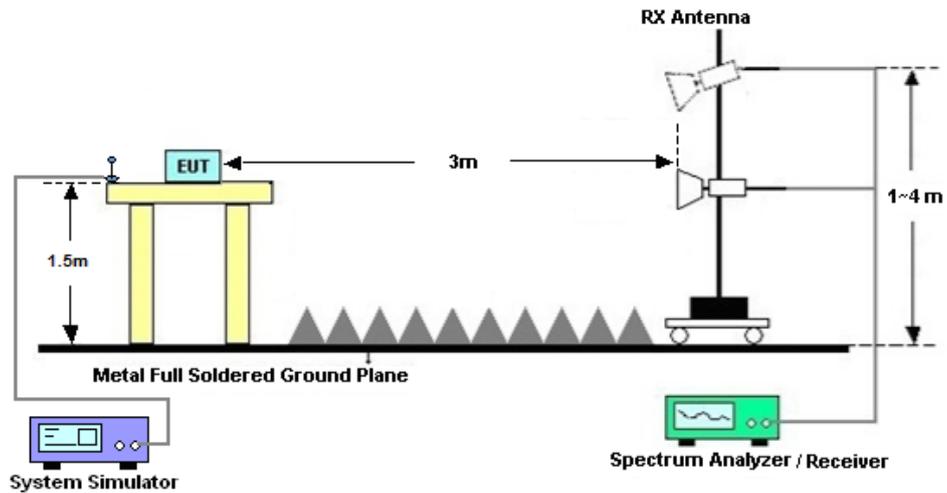
#### 4.2.1 For radiated test below 30MHz



#### 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
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 06, 2023	Oct. 31, 2023	Apr. 05, 2024	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V , 3A	Oct. 16, 2023	Oct. 31, 2023	Oct. 15, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04265	60.06.020.0077	0.4GHz~26.5GHz	Dec. 25, 2022	Oct. 31, 2023	Dec. 24, 2023	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 05, 2023	Oct. 31, 2023	Jul. 04, 2024	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 04, 2023	Nov. 07, 2023	Apr. 03, 2024	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 04, 2023	Nov. 07, 2023	Apr. 03, 2024	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 28, 2022	Nov. 07, 2023	Jun. 27, 2024	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 20, 2023	Nov. 07, 2023	Aug. 19, 2025	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 08, 2023	Nov. 07, 2023	Apr. 07, 2024	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz-40GHz	Apr. 08, 2023	Nov. 07, 2023	Apr. 07, 2024	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz~3000MHz	Oct. 18, 2023	Nov. 07, 2023	Oct. 17, 2024	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 07, 2023	Nov. 07, 2023	Jul.06, 2024	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 26, 2022	Nov. 07, 2023	Dec. 25, 2023	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010002729	N/A	Oct. 18, 2023	Nov. 07, 2023	Oct. 17, 2024	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Nov. 07, 2023	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Nov. 07, 2023	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required



## 6 Measurement Uncertainty

### Uncertainty of Conducted Measurement

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

### Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.0
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.6
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

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



## Appendix A. Test Results of Conducted Test

Test Engineer :	Khan Zhen	Temperature :	22~23°C
		Relative Humidity :	40~42%

# FR1 N48(ANT7)

## Transmitter Conducted Output Power And EIRP, ( $G_T - L_C$ )=-1.0dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@1	23.32	22.32	0.1706
48	30	10	637000	3555.0	DFT-s-OFDM 16 QAM	1@1	22.31	21.31	0.1352
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@1	23.37	22.37	0.1726
48	30	10	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	22.36	21.36	0.1368
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@1	23.22	22.22	0.1667
48	30	10	646332	3694.98	DFT-s-OFDM 16 QAM	1@1	22.31	21.31	0.1352
48	30	15	637168	3557.52	DFT-s-OFDM QPSK	1@1	23.24	22.24	0.1675
48	30	15	637168	3557.52	DFT-s-OFDM 16 QAM	1@1	22.25	21.25	0.1334
48	30	15	641666	3624.99	DFT-s-OFDM QPSK	1@1	23.28	22.28	0.1690
48	30	15	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	22.32	21.32	0.1355
48	30	15	646166	3692.49	DFT-s-OFDM QPSK	1@1	23.23	22.23	0.1671
48	30	15	646166	3692.49	DFT-s-OFDM 16 QAM	1@1	22.29	21.29	0.1346
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@1	23.18	22.18	0.1652
48	30	20	637334	3560.01	DFT-s-OFDM 16 QAM	1@1	22.28	21.28	0.1343
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@1	23.24	22.24	0.1675
48	30	20	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	22.29	21.29	0.1346
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@1	23.22	22.22	0.1667
48	30	20	646000	3690.0	DFT-s-OFDM 16 QAM	1@1	22.32	21.32	0.1355
48	30	30	637668	3565.02	DFT-s-OFDM QPSK	1@1	23.38	22.38	0.1730
48	30	30	637668	3565.02	DFT-s-OFDM 16 QAM	1@1	22.39	21.39	0.1377
48	30	30	641666	3624.99	DFT-s-OFDM QPSK	1@1	23.34	22.34	0.1714
48	30	30	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	22.32	21.32	0.1355
48	30	30	645666	3684.99	DFT-s-OFDM QPSK	1@1	23.37	22.37	0.1726
48	30	30	645666	3684.99	DFT-s-OFDM 16 QAM	1@1	22.27	21.27	0.1340
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	50@25	23.34	22.34	0.1714

48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@1	23.42	22.42	0.1746
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@104	23.29	22.29	0.1694
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	50@25	23.36	22.36	0.1722
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@1	23.31	22.31	0.1702
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@104	23.19	22.19	0.1656
48	30	40	638000	3570.0	DFT-s-OFDM 16 QAM	50@25	22.22	21.22	0.1324
48	30	40	638000	3570.0	DFT-s-OFDM 16 QAM	1@1	22.33	21.33	0.1358
48	30	40	638000	3570.0	DFT-s-OFDM 16 QAM	1@104	22.17	21.17	0.1309
48	30	40	638000	3570.0	DFT-s-OFDM 64 QAM	50@25	20.75	19.75	0.0944
48	30	40	638000	3570.0	DFT-s-OFDM 64 QAM	1@1	20.74	19.74	0.0942
48	30	40	638000	3570.0	DFT-s-OFDM 64 QAM	1@104	20.59	19.59	0.0910
48	30	40	638000	3570.0	DFT-s-OFDM 256 QAM	50@25	18.73	17.73	0.0593
48	30	40	638000	3570.0	DFT-s-OFDM 256 QAM	1@1	18.64	17.64	0.0581
48	30	40	638000	3570.0	DFT-s-OFDM 256 QAM	1@104	18.54	17.54	0.0568
48	30	40	638000	3570.0	CP-OFDM QPSK	53@26	21.79	20.79	0.1199
48	30	40	638000	3570.0	CP-OFDM QPSK	1@1	21.81	20.81	0.1205
48	30	40	638000	3570.0	CP-OFDM QPSK	1@104	21.68	20.68	0.1169
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@25	23.34	22.34	0.1714
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@1	23.39	22.39	0.1734
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@104	23.28	22.28	0.1690
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	50@25	23.33	22.33	0.1710
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@1	23.34	22.34	0.1714
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@104	23.21	22.21	0.1663
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	50@25	22.3	21.3	0.1349
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@1	22.32	21.32	0.1355
48	30	40	641666	3624.99	DFT-s-OFDM 16 QAM	1@104	22.2	21.2	0.1318
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	50@25	20.88	19.88	0.0973
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@1	20.8	19.8	0.0955
48	30	40	641666	3624.99	DFT-s-OFDM 64 QAM	1@104	20.69	19.69	0.0931
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	50@25	18.66	17.66	0.0583
48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@1	18.65	17.65	0.0582

48	30	40	641666	3624.99	DFT-s-OFDM 256 QAM	1@104	18.57	17.57	0.0571
48	30	40	641666	3624.99	CP-OFDM QPSK	53@26	21.68	20.68	0.1169
48	30	40	641666	3624.99	CP-OFDM QPSK	1@1	21.8	20.8	0.1202
48	30	40	641666	3624.99	CP-OFDM QPSK	1@104	21.78	20.78	0.1197
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	50@25	23.38	22.38	0.1730
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@1	23.4	22.4	0.1738
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@104	23.34	22.34	0.1714
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	50@25	23.42	22.42	0.1746
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@1	23.43	22.43	0.1750
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@104	23.32	22.32	0.1706
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	50@25	22.31	21.31	0.1352
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@1	22.44	21.44	0.1393
48	30	40	645332	3679.98	DFT-s-OFDM 16 QAM	1@104	22.32	21.32	0.1355
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	50@25	20.83	19.83	0.0962
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@1	20.86	19.86	0.0968
48	30	40	645332	3679.98	DFT-s-OFDM 64 QAM	1@104	20.72	19.72	0.0938
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	50@25	18.75	17.75	0.0596
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@1	18.73	17.73	0.0593
48	30	40	645332	3679.98	DFT-s-OFDM 256 QAM	1@104	18.58	17.58	0.0573
48	30	40	645332	3679.98	CP-OFDM QPSK	53@26	21.74	20.74	0.1186
48	30	40	645332	3679.98	CP-OFDM QPSK	1@1	21.97	20.97	0.1250
48	30	40	645332	3679.98	CP-OFDM QPSK	1@104	21.86	20.86	0.1219

## 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	0.0023	PASS	NV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0048	PASS	LV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0058	PASS	HV
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0044	PASS	-10°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0065	PASS	0°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0038	PASS	10°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0023	PASS	20°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0044	PASS	30°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0027	PASS	40°C
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	0.0050	PASS	50°C

## 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	8.562	9.788
48	30	10	641666	3624.99	CP-OFDM 16 QAM	24@0	8.5665	9.659
48	30	10	641666	3624.99	CP-OFDM 64 QAM	24@0	8.5564	9.361
48	30	10	641666	3624.99	CP-OFDM 256 QAM	24@0	8.5935	9.758
48	30	15	641666	3624.99	CP-OFDM QPSK	38@0	13.571	14.82
48	30	15	641666	3624.99	CP-OFDM 16 QAM	38@0	13.593	14.87
48	30	15	641666	3624.99	CP-OFDM 64 QAM	38@0	13.542	14.63
48	30	15	641666	3624.99	CP-OFDM 256 QAM	38@0	13.554	14.87
48	30	20	641666	3624.99	CP-OFDM QPSK	51@0	18.213	19.37
48	30	20	641666	3624.99	CP-OFDM 16 QAM	51@0	18.231	19.8
48	30	20	641666	3624.99	CP-OFDM 64 QAM	51@0	18.247	19.3
48	30	20	641666	3624.99	CP-OFDM 256 QAM	51@0	18.189	19.43
48	30	30	641666	3624.99	CP-OFDM QPSK	78@0	27.871	29.4
48	30	30	641666	3624.99	CP-OFDM 16 QAM	78@0	27.789	29.37
48	30	30	641666	3624.99	CP-OFDM 64 QAM	78@0	27.798	29.23
48	30	30	641666	3624.99	CP-OFDM 256 QAM	78@0	27.81	29.41
48	30	40	641666	3624.99	CP-OFDM QPSK	106@0	37.825	39.61
48	30	40	641666	3624.99	CP-OFDM 16 QAM	106@0	37.863	39.57
48	30	40	641666	3624.99	CP-OFDM 64 QAM	106@0	37.77	39.44
48	30	40	641666	3624.99	CP-OFDM 256 QAM	106@0	37.913	39.49

### 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



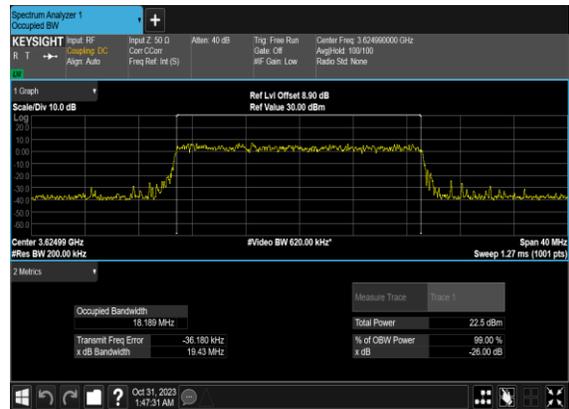
### N48(20M)\_CP-OFDM\_16 QAM\_Outer\_Full\_Mid\_CH



### N48(20M)\_CP-OFDM\_64 QAM\_Outer\_Full\_Mid\_CH



### N48(20M)\_CP-OFDM\_256 QAM\_Outer\_Full\_Mid\_CH



### N48(30M)\_CP-OFDM\_QPSK\_Outer\_Full\_Mid\_CH



### N48(30M)\_CP-OFDM\_16 QAM\_Outer\_Full\_Mid\_CH



### N48(30M)\_CP-OFDM\_64 QAM\_Outer\_Full\_Mid\_CH



### N48(30M)\_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

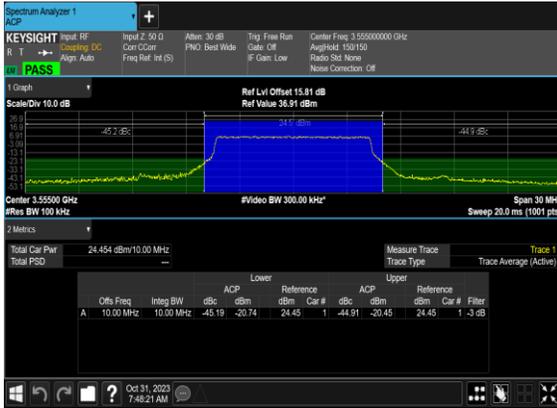


## Adjacent Channel Leakage Ratio

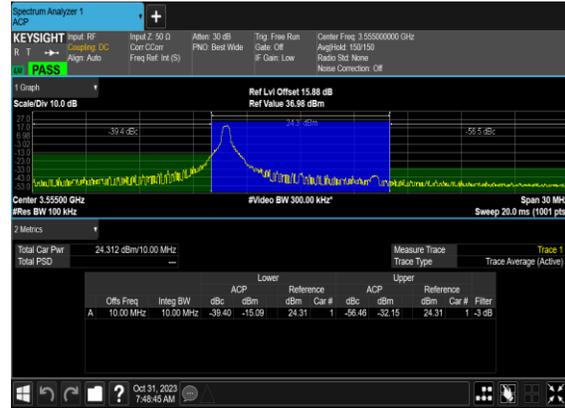
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Lower Margin	Upper Margin	Result	Verdict
48	30	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	24@0	-15.19	-14.91	see graph	PASS
48	30	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	1@0	-9.4	-26.46	see graph	PASS
48	30	10	637000	3555.0	DFT-s-OFDM PI/2 BPSK	1@23	-26.36	-10.76	see graph	PASS
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	24@0	-14.28	-14.73	see graph	PASS
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	-8.9	-24.6	see graph	PASS
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@23	-24.0	-9.3	see graph	PASS
48	30	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	24@0	-14.37	-13.91	see graph	PASS
48	30	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-11.8	-24.41	see graph	PASS
48	30	10	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@23	-23.43	-9.86	see graph	PASS
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	24@0	-14.49	-13.86	see graph	PASS
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@0	-8.62	-22.53	see graph	PASS
48	30	10	641666	3624.99	DFT-s-OFDM QPSK	1@23	-22.1	-8.63	see graph	PASS
48	30	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	24@0	-14.45	-14.98	see graph	PASS
48	30	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	1@0	-9.32	-23.58	see graph	PASS
48	30	10	646332	3694.98	DFT-s-OFDM PI/2 BPSK	1@23	-23.73	-11.38	see graph	PASS
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	24@0	-14.17	-14.44	see graph	PASS
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@0	-8.66	-21.93	see graph	PASS
48	30	10	646332	3694.98	DFT-s-OFDM QPSK	1@23	-21.61	-8.92	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	50@0	-16.55	-22.11	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@0	-11.07	-26.33	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM PI/2 BPSK	1@50	-25.08	-10.93	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	50@0	-16.99	-19.59	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@0	-10.08	-25.03	see graph	PASS
48	30	20	637334	3560.01	DFT-s-OFDM QPSK	1@50	-25.01	-9.46	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	50@0	-16.42	-19.62	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-11.24	-22.36	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@50	-22.06	-11.0	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	50@0	-16.68	-18.43	see graph	PASS
48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@0	-9.41	-20.87	see graph	PASS

48	30	20	641666	3624.99	DFT-s-OFDM QPSK	1@50	-21.07	-9.5	<b>see graph</b>	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	50@0	-15.24	-17.82	<b>see graph</b>	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@0	-10.53	-21.3	<b>see graph</b>	PASS
48	30	20	646000	3690.0	DFT-s-OFDM PI/2 BPSK	1@50	-21.33	-11.4	<b>see graph</b>	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	50@0	-15.54	-17.02	<b>see graph</b>	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	-8.71	-20.52	<b>see graph</b>	PASS
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@50	-20.99	-10.78	<b>see graph</b>	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	100@0	-15.21	-15.83	<b>see graph</b>	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@0	-12.77	-19.37	<b>see graph</b>	PASS
48	30	40	638000	3570.0	DFT-s-OFDM PI/2 BPSK	1@105	-20.76	-13.88	<b>see graph</b>	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	100@0	-16.76	-17.06	<b>see graph</b>	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	-11.02	-19.13	<b>see graph</b>	PASS
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@105	-18.64	-10.2	<b>see graph</b>	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	100@0	-15.58	-14.27	<b>see graph</b>	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@0	-12.96	-19.94	<b>see graph</b>	PASS
48	30	40	641666	3624.99	DFT-s-OFDM PI/2 BPSK	1@105	-20.16	-13.13	<b>see graph</b>	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	100@0	-16.01	-16.04	<b>see graph</b>	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	-9.91	-17.65	<b>see graph</b>	PASS
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@105	-19.27	-11.72	<b>see graph</b>	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	100@0	-15.1	-12.8	<b>see graph</b>	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@0	-11.77	-18.57	<b>see graph</b>	PASS
48	30	40	645332	3679.98	DFT-s-OFDM PI/2 BPSK	1@105	-19.13	-12.48	<b>see graph</b>	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	100@0	-15.78	-15.88	<b>see graph</b>	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	-10.71	-17.83	<b>see graph</b>	PASS
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@105	-18.68	-10.85	<b>see graph</b>	PASS

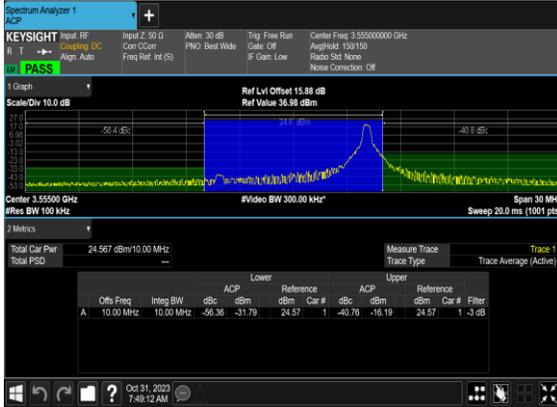
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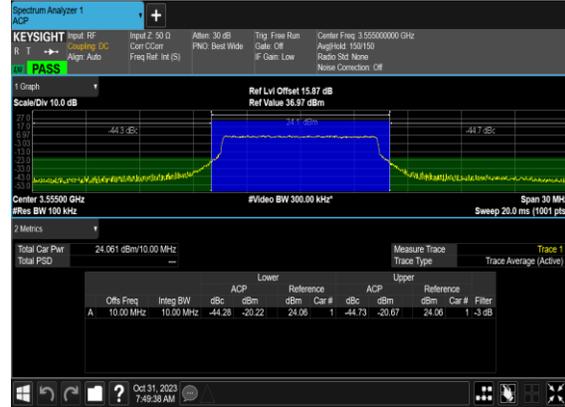
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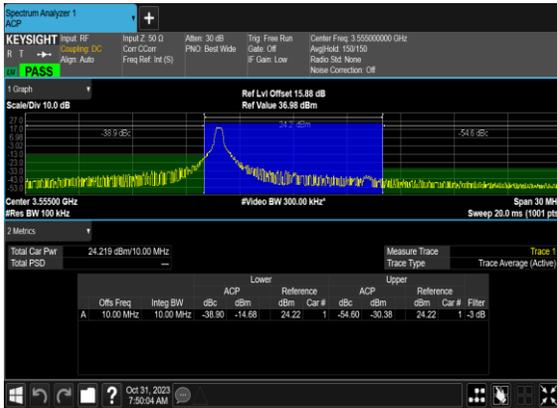
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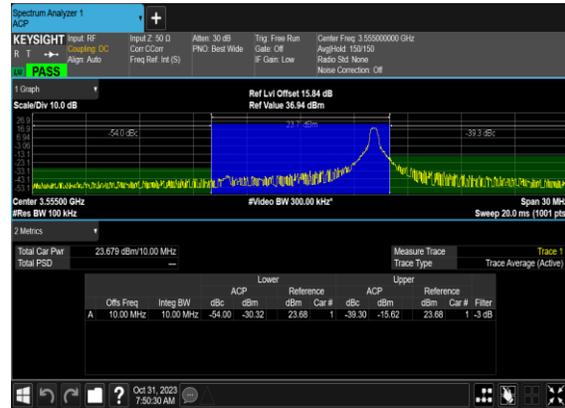
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N48(10M)\_DFT-s-OFDM\_QPSK\_Edge\_1RB\_Left\_Low\_CH



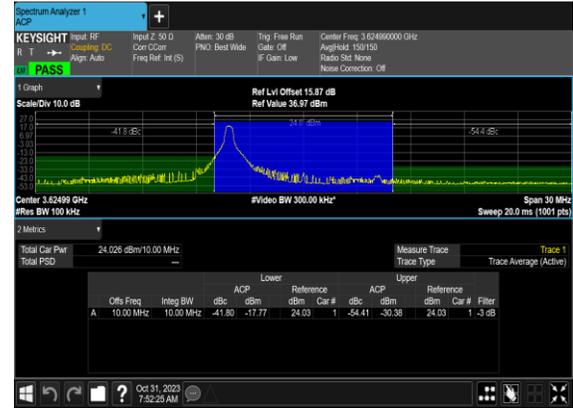
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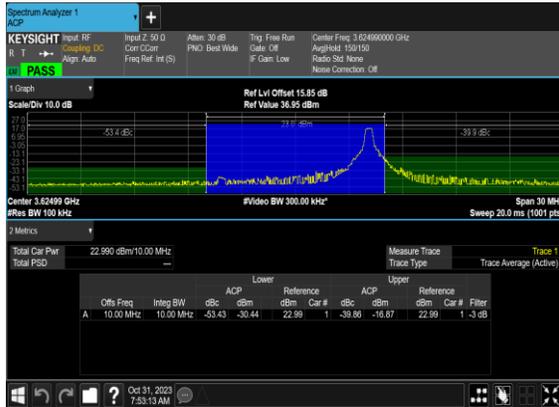
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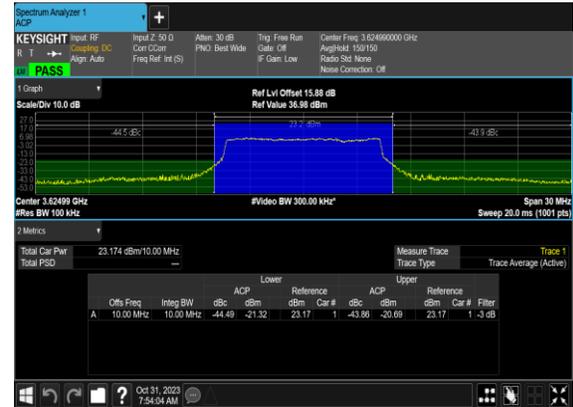
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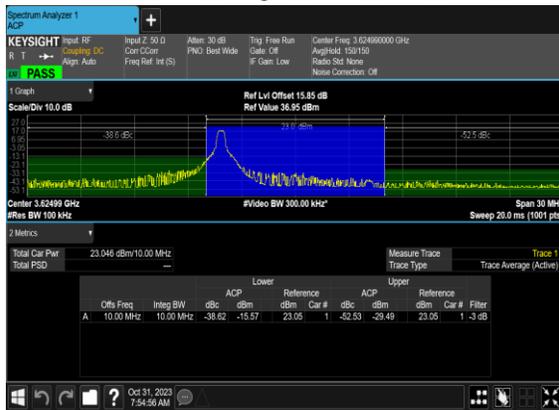
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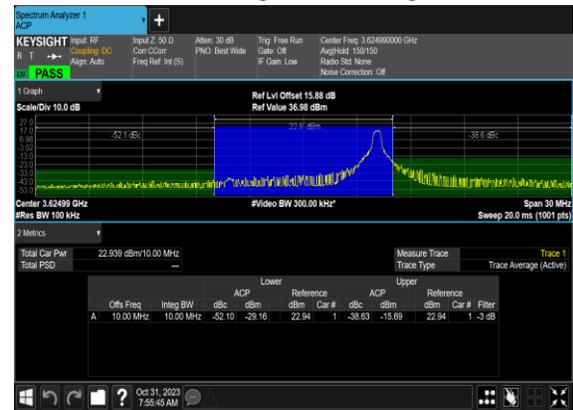
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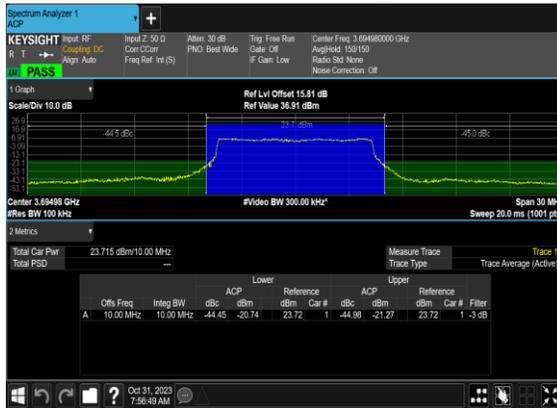
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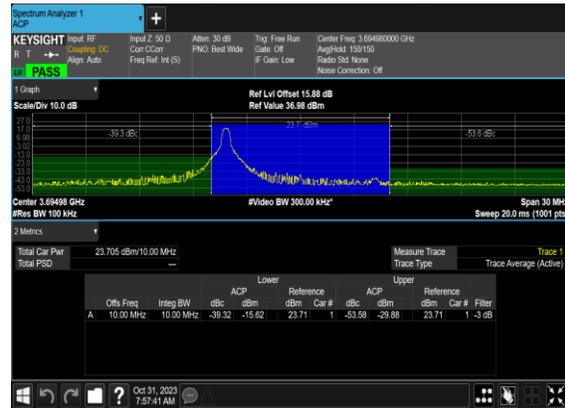
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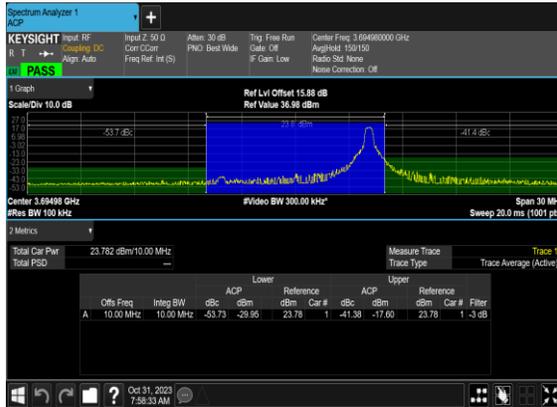
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N48(10M)\_DFT-s-OFDM\_PI\_2-BPSK\_Edge\_1RB\_Left\_High\_CH



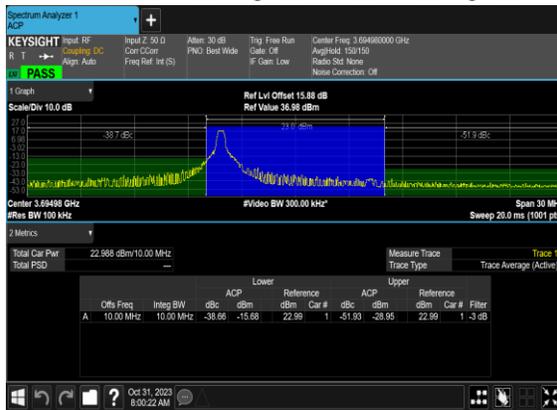
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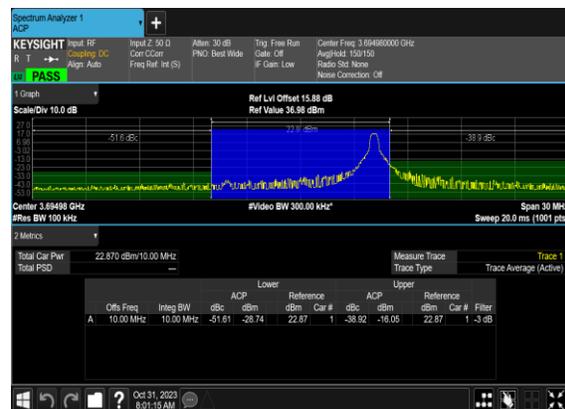
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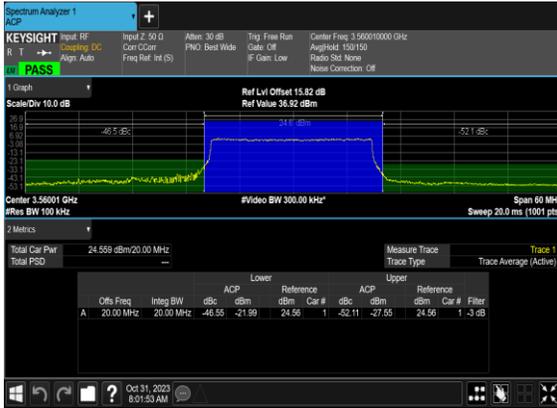
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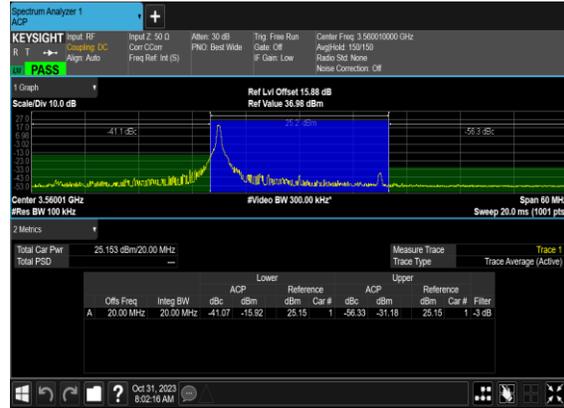
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H



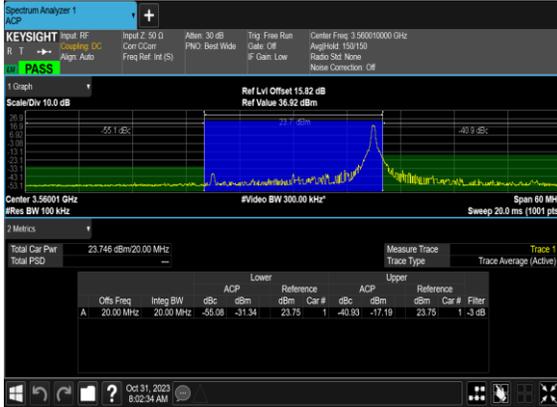
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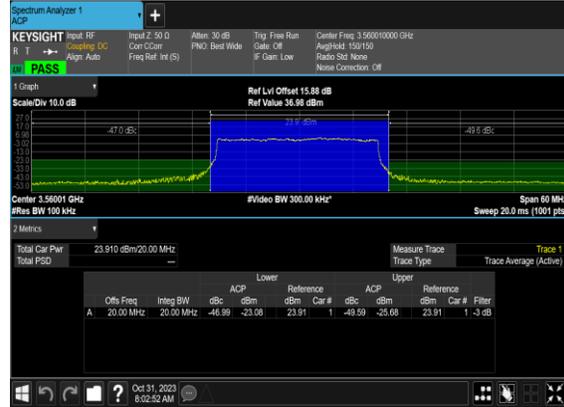
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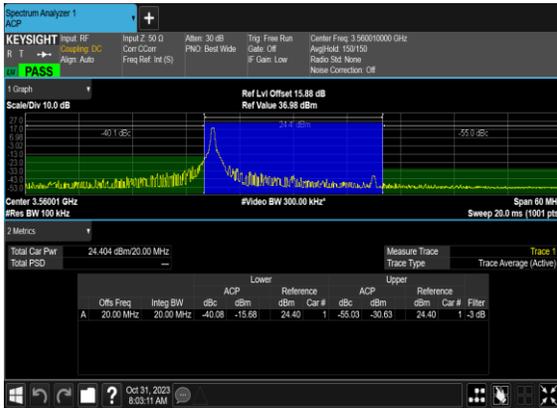
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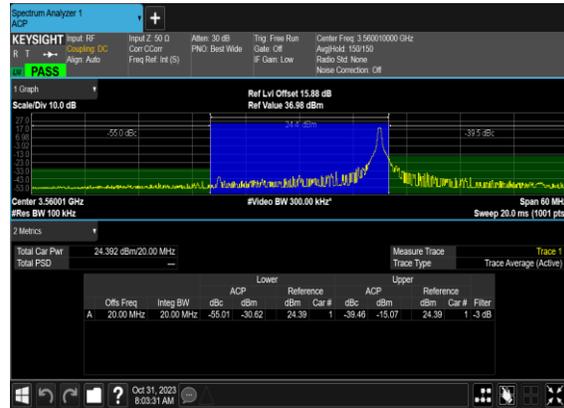
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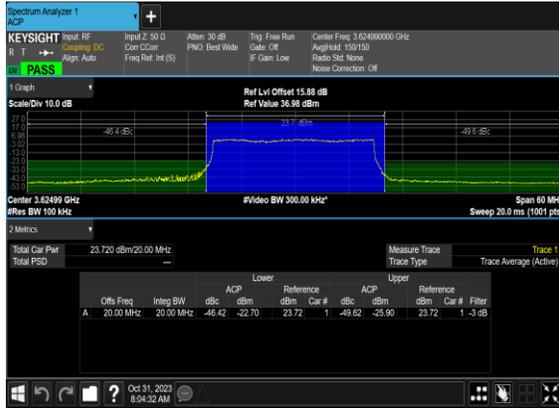
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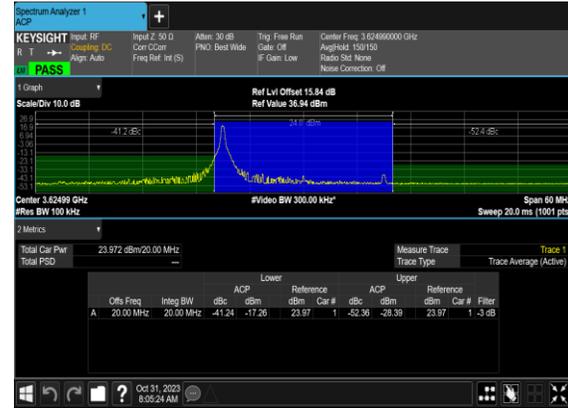
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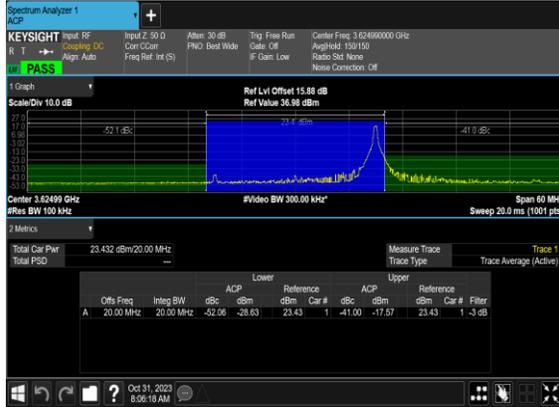
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N48(20M)\_DFT-s-OFDM\_PI\_2-BPSK\_Edge\_1RB\_Left\_Mid\_CH



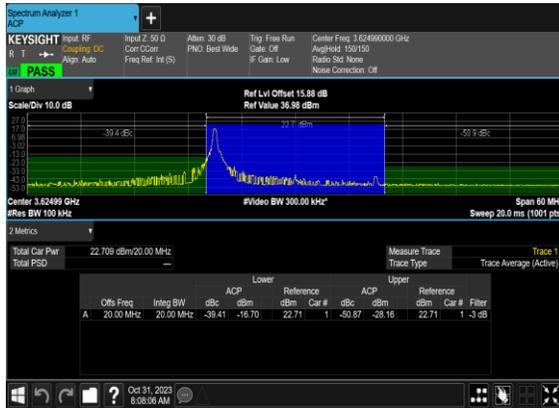
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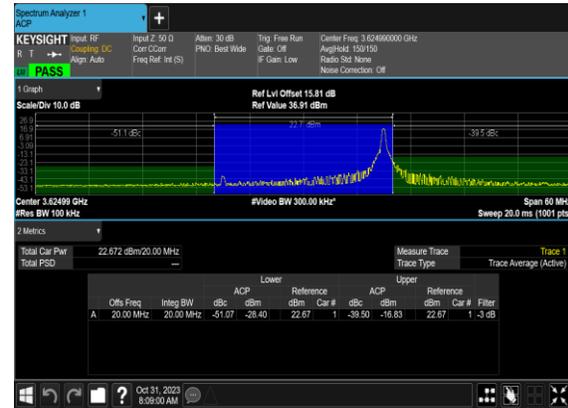
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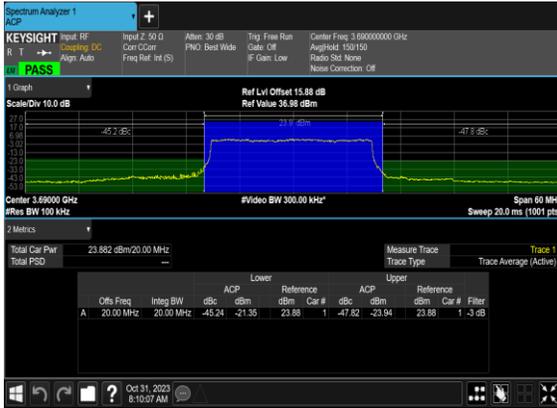
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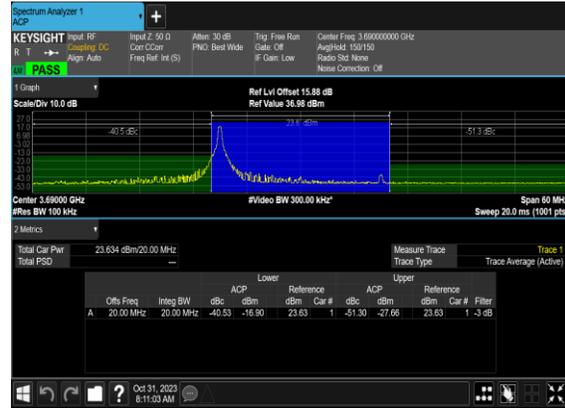
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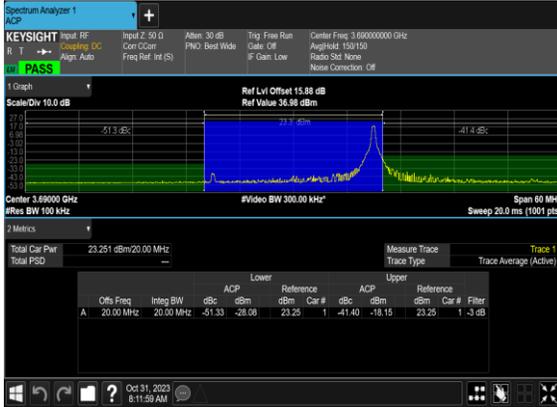
N48(20M)\_DFT-s-OFDM\_PI\_2-BPSK\_Outer\_Full\_High\_CH



N48(20M)\_DFT-s-OFDM\_PI\_2-BPSK\_Edge\_1RB\_Left\_High\_CH



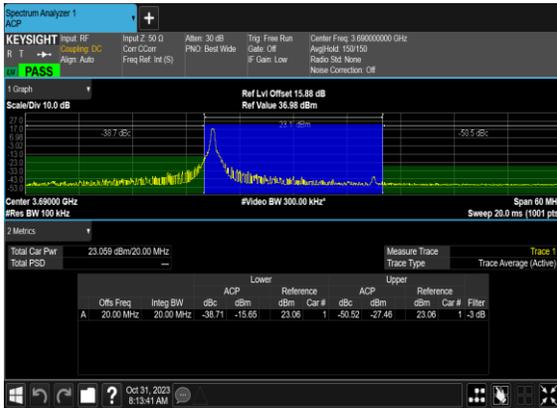
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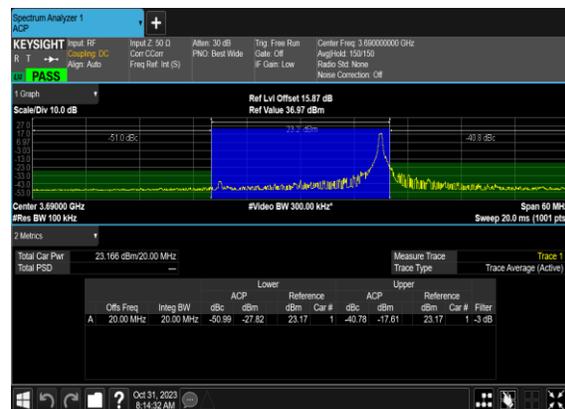
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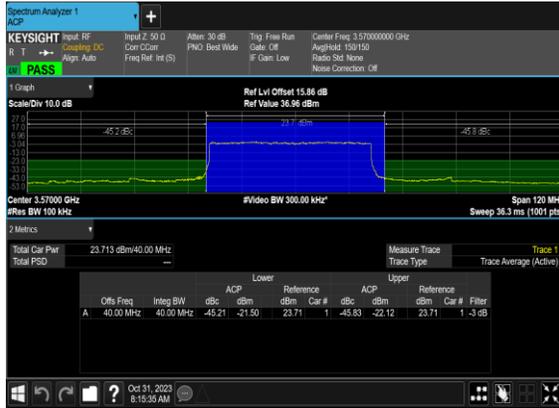
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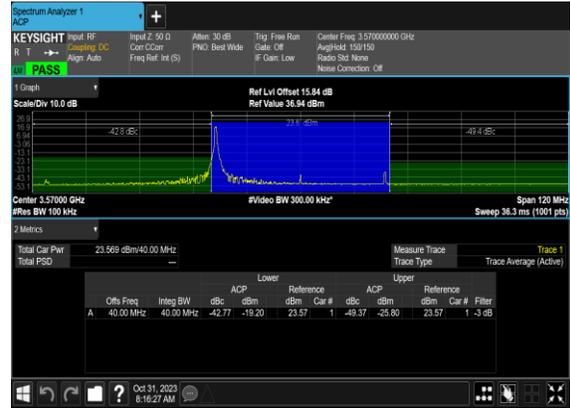
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H



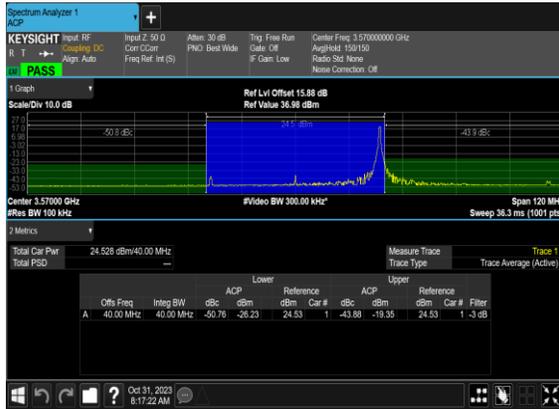
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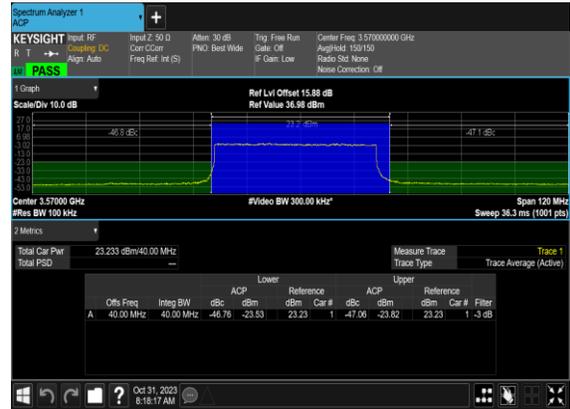
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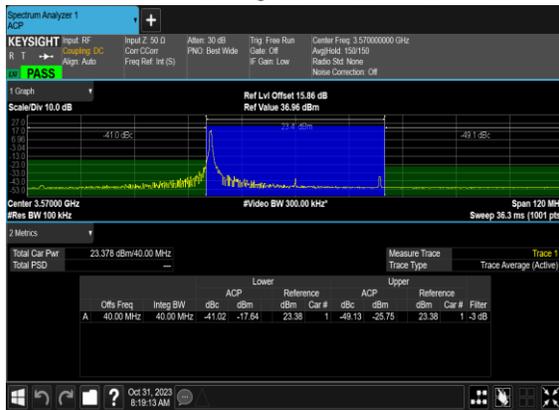
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N48(40M)\_DFT-s-OFDM\_QPSK\_Outer\_Full\_Low\_CH



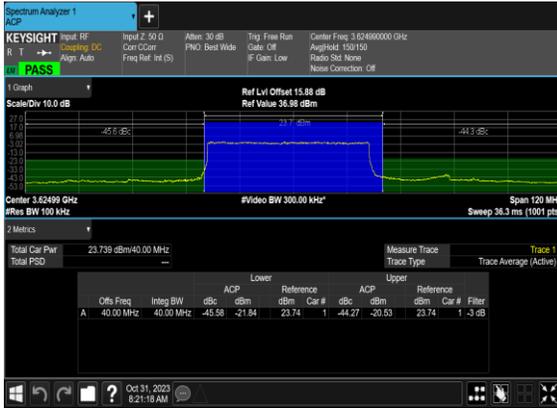
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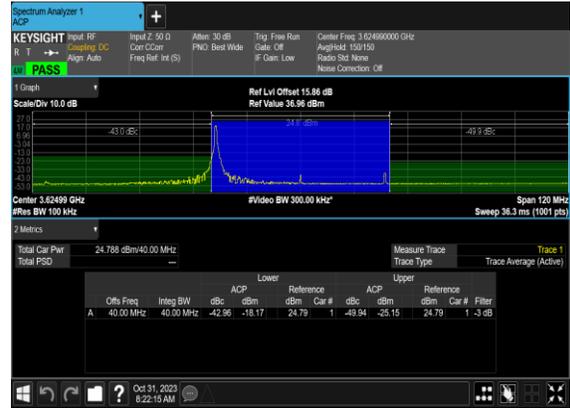
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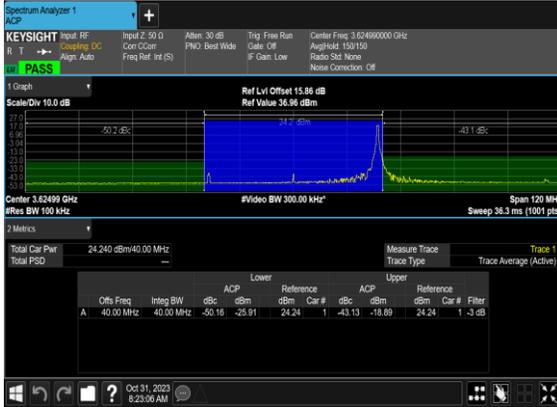
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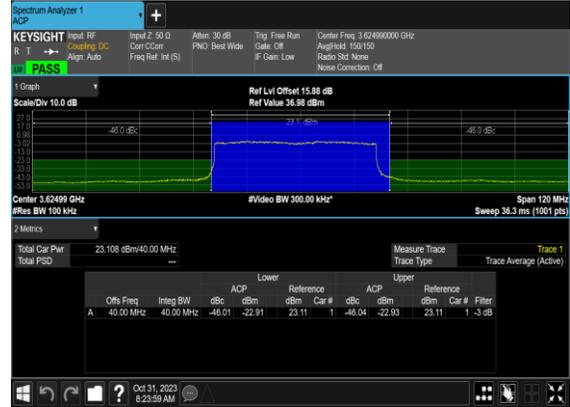
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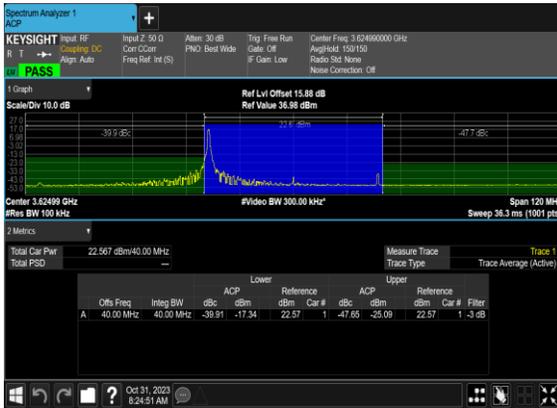
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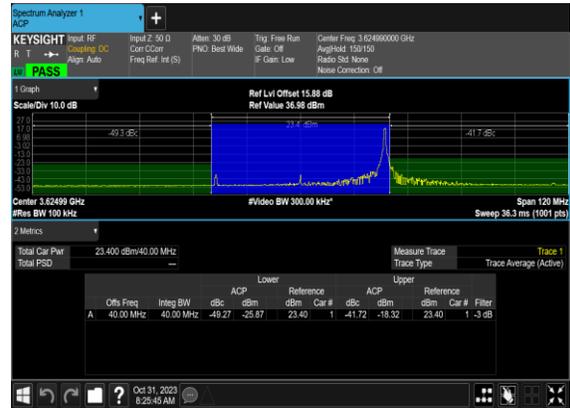
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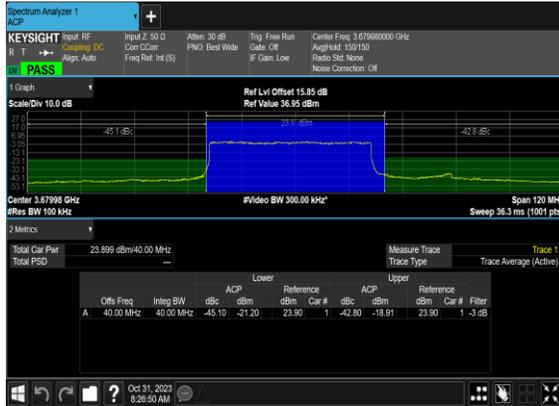
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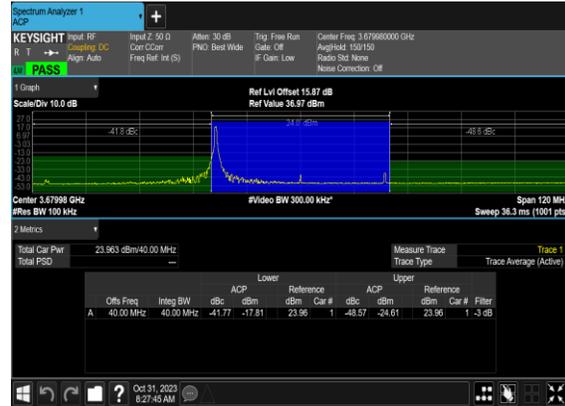
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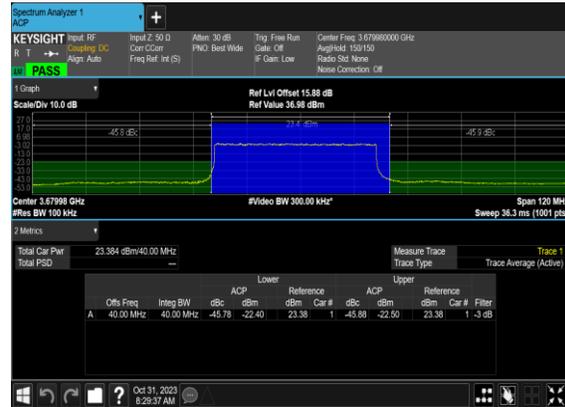
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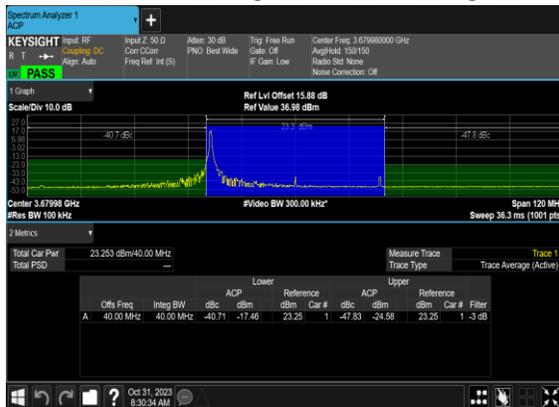
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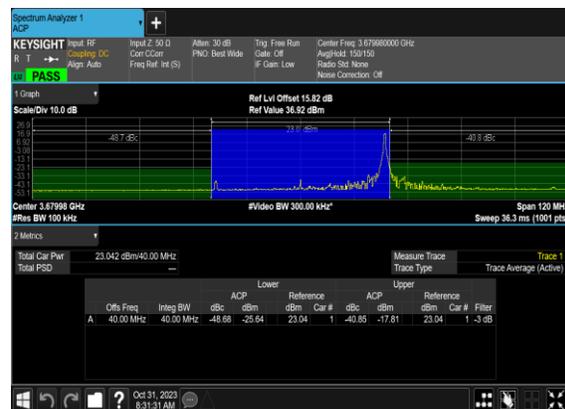
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N48(40M)\_DFT-s-OFDM\_QPSK\_Edge\_1RB\_Left\_High\_CH



N48(40M)\_DFT-s-OFDM\_QPSK\_Edge\_1RB\_Right\_High\_C  
H



## Conducted Spurious Emissions

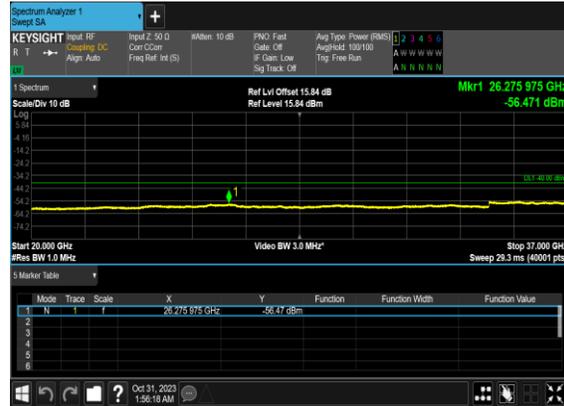
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
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48	30	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	10	637000	3555.0	DFT-s-OFDM BPSK	1@0	see graph	PASS
48	30	10	637000	3555.0	DFT-s-OFDM QPSK	1@0	see graph	---
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	<b>PASS</b>
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	<b>PASS</b>
48	30	20	646000	3690.0	DFT-s-OFDM BPSK	1@0	see graph	<b>PASS</b>
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	<b>PASS</b>
48	30	20	646000	3690.0	DFT-s-OFDM QPSK	1@0	see graph	<b>PASS</b>
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	<b>PASS</b>
48	30	40	638000	3570.0	DFT-s-OFDM BPSK	1@0	see graph	<b>PASS</b>
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	<b>PASS</b>
48	30	40	638000	3570.0	DFT-s-OFDM QPSK	1@0	see graph	<b>PASS</b>
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	<b>PASS</b>
48	30	40	641666	3624.99	DFT-s-OFDM BPSK	1@0	see graph	<b>PASS</b>
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	<b>PASS</b>
48	30	40	641666	3624.99	DFT-s-OFDM QPSK	1@0	see graph	<b>PASS</b>
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	<b>PASS</b>
48	30	40	645332	3679.98	DFT-s-OFDM BPSK	1@0	see graph	<b>PASS</b>
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	<b>PASS</b>
48	30	40	645332	3679.98	DFT-s-OFDM QPSK	1@0	see graph	<b>PASS</b>

N48(10M)\_DFT-s-OFDM\_BPSK\_Edge\_1RB\_Left\_Low\_CH



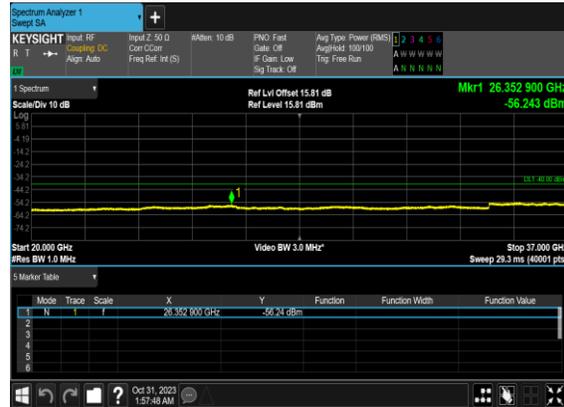
N48(10M)\_DFT-s-OFDM\_BPSK\_Edge\_1RB\_Left\_Low\_CH



N48(10M)\_DFT-s-OFDM\_QPSK\_Edge\_1RB\_Left\_Low\_CH



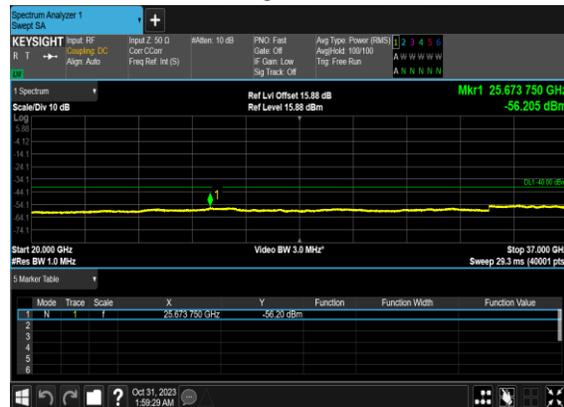
N48(10M)\_DFT-s-OFDM\_QPSK\_Edge\_1RB\_Left\_Low\_CH



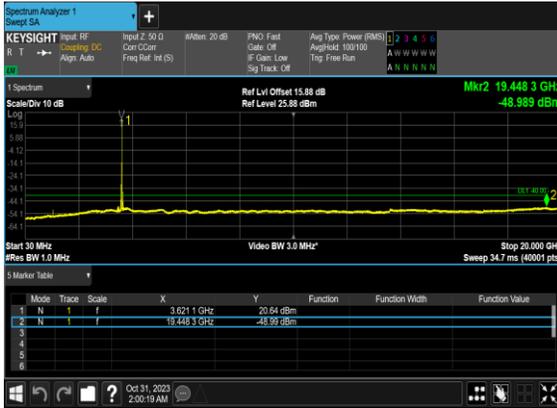
N48(10M)\_DFT-s-OFDM\_BPSK\_Edge\_1RB\_Left\_Mid\_CH



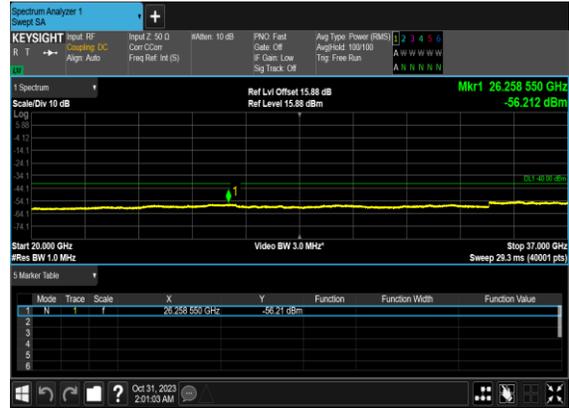
N48(10M)\_DFT-s-OFDM\_BPSK\_Edge\_1RB\_Left\_Mid\_CH



N48(10M)\_DFT-s-OFDM\_QPSK\_Edge\_1RB\_Left\_Mid\_CH



N48(10M)\_DFT-s-OFDM\_QPSK\_Edge\_1RB\_Left\_Mid\_CH



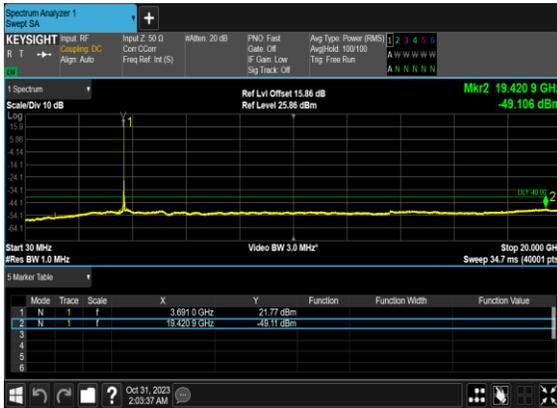
N48(10M)\_DFT-s-OFDM\_BPSK\_Edge\_1RB\_Left\_High\_CH



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

