FCC RF Test Report

APPLICANT	: Fibocom Wireless Inc.
EQUIPMENT	: 5G Module
BRAND NAME	: Fibocom
MODEL NAME	: FG190W-NA, FG190-NA
FCC ID	: ZMOFG190WNA
STANDARD	: 47 CFR Part 27
CLASSIFICATION	: PCS Licensed Transmitter (PCB)
TEST DATE(S)	: Aug. 03, 2024 ~ Aug. 15, 2024

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

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

Sporton International Inc. (ShenZhen)

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG472418M	Rev. 01	Initial issue of report	Sep. 04, 2024

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(c)(10)	Effective Radiated Power (5G NR n71)	ERP < 3 Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (5G NR n66, n70)	EIRP < 1Watt		
3.5	N/A	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §27.53(h) §27.53(g)	Conducted Band Edge Measurement (5G NR n66, n70) (5G NR n71)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §27.53(h) §27.53(g)	Conducted Spurious Emission (5G NR n66, n70) (5G NR n71)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(h) §27.53(g)	Radiated Spurious Emission (5G NR n66, n70) (5G NR n71)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 11.97 dB at 14482.00 MHz

Conformity Assessment Condition:

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

Disclaimer:

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

1 General Description

1.1 Applicant

Fibocom Wireless Inc.
1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

1.2 Manufacturer

Fibocom Wireless Inc.
1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	5G Module
Brand Name	Fibocom
Model Name	FG190W-NA, FG190-NA
FCC ID	ZMOFG190WNA
IMEI Code	Conducted : 864410070003781 Radiation : 864410070004029
HW Version	V1.3
SW Version	99101.1000.00.01.06.23
EUT Stage	Production Unit

Remark: There are two types of EUT: Sample1(FG190W-NA) and Sample2(FG190-NA) . The difference between them is that Sample1 with RF interface while Sample2 without, all the others are the same. According to the difference, we only evaluated sample 1 to perform full test.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz
Rx Frequency	5G NR n66 : 2110 MHz~ 2200 MHz 5G NR n70 : 1995 MHz ~ 2020 MHz 5G NR n71: 617 MHz ~ 652 MHz
Bandwidth	n66 : 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 35MHz / 40MHz n70 : 5MHz / 10MHz / 15MHz n71 : 5MHz / 10MHz / 15MHz / 20MHz
SCS	15kHz
Antenna Gain	**<Ant. 1>:**

	n66: -2.98 dBi n70: -2.86 dBi n71: 1.61 dBi **<Ant. 8>:** n66: -2.98 dBi n70: -2.86 dBi n71: 1.61 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The maximum ERP/EIRP is calculated from max output power and max antenna gain, only the maximum ERP/EIRP are shown in the report, 5G NR n66/70 for Ant. 1 and n71 for Ant. 8 and n66/70/71_UL MIMO/TX Diversity mode for Ant.(1+8).
2. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown in the report.
3. 5G NR n66/n70/n71 support SCS 15kHz.
4. 5G NR support SA (n66/n70/n71) mode and NSA(n66/n71) mode. According to the maximum power between SA and NSA mode, SA covers NSA mode.
5. 5G NR n66/n70/n71 supports UL MIMO mode and TX Diversity mode, which are PC2 and the two antennas are correlated, the MIMO Antenna gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 /2]$.
6. For n66/n70/n71 MIMO mode, the conducted BE/Spurious are tested at single antenna port and add 10*log(N_{ANT}) according to KDB 662911 D01.
7. The EN-DC mode combination could be referred to the product spec.
8. TX Diversity mode relevant description could refer to the Operation Description.

1.5 Modification of EUT

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

1.6 Maximum Conducted Power and Emission Designator

5G NR n66		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	1712.5 ~ 1777.5	0.4764	4M47G7D	0.3926	4M49W7D
10	1715.0 ~ 1775.0	0.4909	9M29G7D	0.3990	9M31W7D
15	1717.5 ~ 1772.5	0.4898	14M1G7D	0.4009	14M1W7D
20	1720.0 ~ 1770.0	0.4977	18M9G7D	0.3999	19M0W7D
25	1722.5 ~ 1767.5	0.4977	23M8G7D	0.4159	23M8W7D
30	1725.0 ~ 1765.0	0.5152	28M6G7D	0.4064	28M6W7D
35	1727.5 ~ 1762.5	0.5000	33M6G7D	0.4102	33M6W7D
40	1730.0 ~ 1760.0	0.5508	38M7G7D	0.4018	38M7W7D

5G NR n70		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	1697.5 ~ 1707.5	0.4808	4M47G7D	0.3936	4M49W7D
10	1700.0 ~ 1705.0	0.4955	9M28G7D	0.3945	9M30W7D
15	1702.5	0.5333	14M1G7D	0.3784	14M1W7D

5G NR n71		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum Conducted power (W)	Emission Designator (99%OBW)	Maximum Conducted power (W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.5140	4M47G7D	0.4246	4M48W7D
10	668.0 ~ 693.0	0.5212	9M28G7D	0.4169	9M30W7D
15	670.5 ~ 690.5	0.5035	14M1G7D	0.4227	14M1W7D
20	673.0 ~ 688.0	0.5970	19M0G7D	0.4276	19M0W7D

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

1.7 Testing Location

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

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

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

1.8 Test Software

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

1.9 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

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

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

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

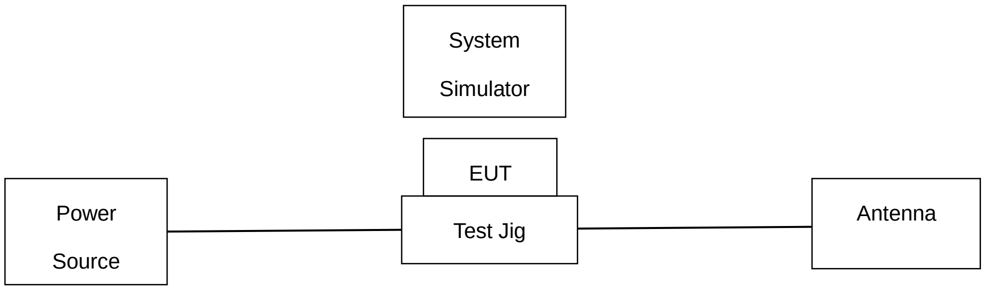
Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
Max. Output Power	n66	v	v	v	v	v	v	v	v	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n71	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	n66				v					-	-	-	-	-	v	v					v		v	
	n70		v		-	-	-	-	-	-	-	-	-	-	v	v					v		v	
	n71				v	-	-	-	-	-	-	-	-	-	v	v					v		v	
26dB and 99% Bandwidth	n66	v	v	v	v	v	v	v	v	-	-	-	-	-		v	v	v	v		v		v	
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
	n71	v	v	v	v	-	-	-	-	-	-	-	-	-		v	v	v	v		v		v	
Conducted Band Edge	n66	v			v				v	-	-	-	-	-	v	v				v	v	v		v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
	n71	v	v		v	-	-	-	-	-	-	-	-	-	v	v				v	v	v		v
Conducted Spurious Emission	n66	v			v				v	-	-	-	-	-	v	v				v		v	v	v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
	n71	v	v		v	-	-	-	-	-	-	-	-	-	v	v				v		v	v	v
Frequency Stability	n66				v					-	-	-	-	-		v					v		v	
	n70		v		-	-	-	-	-	-	-	-	-	-		v					v		v	

Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
	n71				v	-	-	-	-	-	-	-	-	-		v					v		v	
E.R.P / E.I.R.P	n66	v	v	v	v	v	v	v	v	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n70	v	v	v	-	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
	n71	v	v	v	v	-	-	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	n66	Worst Case																					v	
	n70	Worst Case																					v	
	n71	Worst Case																					v	

Note

1. The mark "**v** " means that this configuration is chosen for testing
2. The mark "-" means that this bandwidth is not supported.
3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.
4. Frequency Stability：Normal Voltage = 3.8V ；Low Voltage =3.3V.；High Voltage =4.4V

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
4.	Adapter	N/A	N/A	N/A	N/A	N/A
5.	Test Jig	N/A	N/A	N/A	N/A	N/A
6.	Antenna	N/A	N/A	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss 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 7.5 dB.

Example :

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

= 7.5 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	346000	349000	352000
	Frequency	1730	1745	1760
35	Channel	345500	34900	352500
	Frequency	1727.5	1745	1762.5
30	Channel	345000	349000	353000
	Frequency	1725	1745	1765
25	Channel	344500	349000	353500
	Frequency	1722.5	1745	1767.5
20	Channel	344000	349000	354000
	Frequency	1720	1745	1770
15	Channel	343500	349000	354500
	Frequency	1717.5	1745	1772.5
10	Channel	343000	349000	355000
	Frequency	1715	1745	1775
5	Channel	342500	349000	355500
	Frequency	1712.5	1745	1777.5

5G NR n70 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel		340500	
	Frequency		1702.5	
10	Channel	340000	340500	341000
	Frequency	1700	1702.5	1705
5	Channel	399500	340500	341500
	Frequency	1697.5	1702.5	1707.5

5G NR n71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	134600	136100	137600
	Frequency	673	680.5	688
15	Channel	134100	136100	138100
	Frequency	670.5	680.5	690.5
10	Channel	133600	136100	138600
	Frequency	668	680.5	693
5	Channel	133100	136100	139100
	Frequency	665.5	680.5	695.5

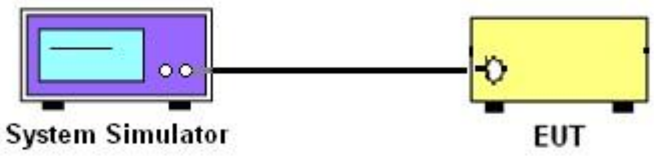
3 Conducted Test Items

3.1 Measuring Instruments

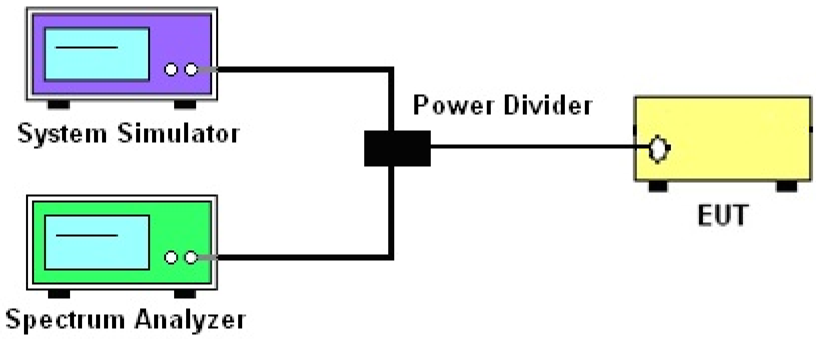
See list of measuring instruments of this test report.

3.2 Test Setup

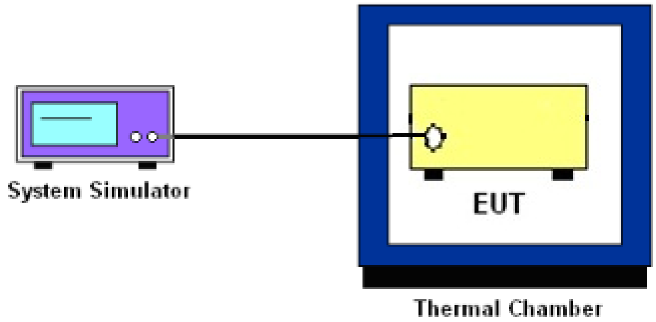
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

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

The ERP of mobile transmitters must not exceed 3 Watts for 5G NR n71.

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n66/n70.

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 Test Procedures

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

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

27.53 (h)

For operations in the 1695 – 1710 MHz and 1710 – 1755 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used (generally limited to no less than 1% of the OBW) and the measured power was integrated over the full required measurement bandwidth.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

   Example:

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

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

3.8.2 Test Procedures

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

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

3.9.2 Test Procedures for Temperature Variation

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

3.9.3 Test Procedures for Voltage Variation

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

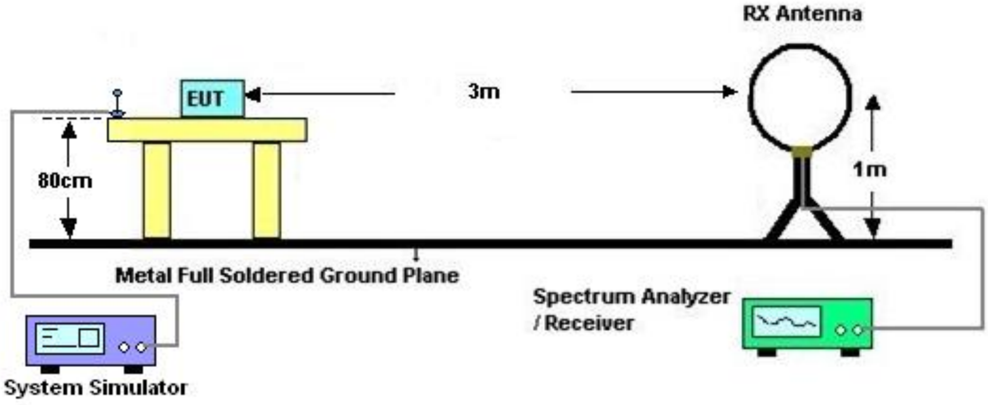
4 Radiated Test Items

4.1 Measuring Instruments

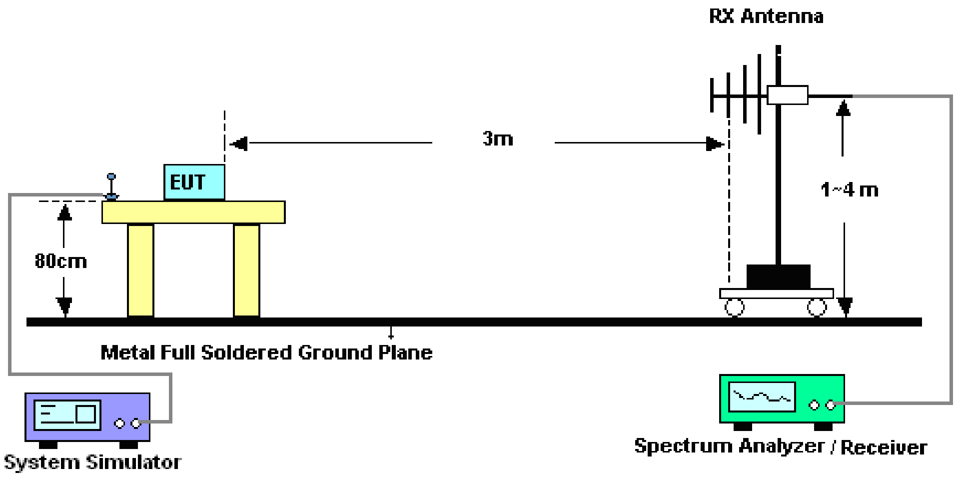
See list of measuring instruments of this test report.

4.2 Test Setup

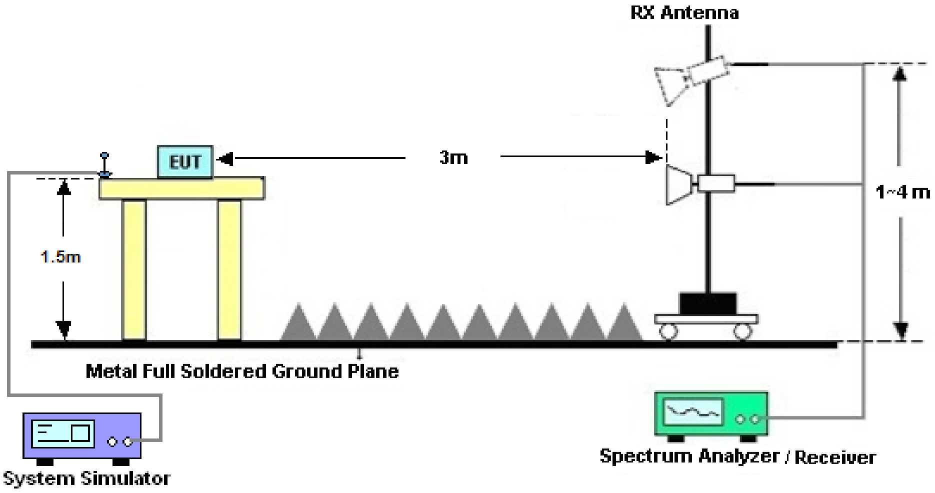
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

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

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

4.4.2 Test Procedures

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

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 09, 2024	Aug. 04, 2024~ Aug. 09, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2023	Aug. 04, 2024~ Aug. 09, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 03, 2024	Aug. 04, 2024~ Aug. 09, 2024	Jul. 02, 2025	Conducted (TH01-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 09, 2024	Aug. 03, 2024~ Aug. 15, 2024	Apr. 08, 2025	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 29, 2023	Aug. 03, 2024~ Aug. 15, 2024	Dec. 28, 2024	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 09, 2024	Aug. 03, 2024~ Aug. 15, 2024	Apr. 08, 2025	Radiation (03CH03-SZ
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Aug. 20, 2023	Aug. 03, 2024~ Aug. 15, 2024	Aug. 19, 2025	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 09, 2024	Aug. 03, 2024~ Aug. 15, 2024	Apr. 08, 2025	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2023	Aug. 03, 2024~ Aug. 15, 2024	Oct. 17, 2024	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 03, 2024	Aug. 03, 2024~ Aug. 15, 2024	Jul. 02, 2025	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Aug. 03, 2024~ Aug. 15, 2024	Apr. 08, 2025	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 27, 2023	Aug. 03, 2024~ Aug. 15, 2024	Dec. 26, 2024	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010002729	N/A	Oct. 18, 2023	Aug. 03, 2024~ Aug. 15, 2024	Oct. 17, 2024	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Aug. 03, 2024~ Aug. 15, 2024	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Aug. 03, 2024~ Aug. 15, 2024	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

6 Measurement Uncertainty

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

Uncertainty of Conducted Measurement

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

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

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

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

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

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

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

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

Appendix A. Test Results of Conducted Test

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

Software Version: 23.06.1602

FR1 N66-SCS 15k

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-2.98dBi

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@1	23.94	20.96	0.1247
66	15	5	342500	1712.5	DFT-s-OFDM 16 QAM	1@1	22.99	20.01	0.1002
66	15	5	349000	1745	DFT-s-OFDM QPSK	1@1	23.73	20.75	0.1189
66	15	5	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.84	19.86	0.0968
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	1@1	23.66	20.68	0.1169
66	15	5	355500	1777.5	DFT-s-OFDM 16 QAM	1@1	22.92	19.94	0.0986
66	15	10	343000	1715	DFT-s-OFDM QPSK	1@1	24.11	21.13	0.1297
66	15	10	343000	1715	DFT-s-OFDM 16 QAM	1@1	22.95	19.97	0.0993
66	15	10	349000	1745	DFT-s-OFDM QPSK	1@1	23.77	20.79	0.1199
66	15	10	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.9	19.92	0.0982
66	15	10	355000	1775	DFT-s-OFDM QPSK	1@1	23.9	20.92	0.1236
66	15	10	355000	1775	DFT-s-OFDM 16 QAM	1@1	22.98	20	0.1000
66	15	15	343500	1717.5	DFT-s-OFDM QPSK	1@1	23.83	20.85	0.1216
66	15	15	343500	1717.5	DFT-s-OFDM 16 QAM	1@1	23.07	20.09	0.1021
66	15	15	349000	1745	DFT-s-OFDM QPSK	1@1	23.72	20.74	0.1186
66	15	15	349000	1745	DFT-s-OFDM 16 QAM	1@1	23	20.02	0.1005
66	15	15	354500	1772.5	DFT-s-OFDM QPSK	1@1	23.68	20.7	0.1175
66	15	15	354500	1772.5	DFT-s-OFDM 16 QAM	1@1	22.96	19.98	0.0995

66	15	20	344000	1720	DFT-s-OFDM QPSK	1@1	23.96	20.98	0.1253
66	15	20	344000	1720	DFT-s-OFDM 16 QAM	1@1	23.07	20.09	0.1021
66	15	20	349000	1745	DFT-s-OFDM QPSK	1@1	23.79	20.81	0.1205
66	15	20	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.89	19.91	0.0979
66	15	20	354000	1770	DFT-s-OFDM QPSK	1@1	24.02	21.04	0.1271
66	15	20	354000	1770	DFT-s-OFDM 16 QAM	1@1	22.85	19.87	0.0971
66	15	25	344500	1722.5	DFT-s-OFDM QPSK	1@1	24.06	21.08	0.1282
66	15	25	344500	1722.5	DFT-s-OFDM 16 QAM	1@1	23.12	20.14	0.1033
66	15	25	349000	1745	DFT-s-OFDM QPSK	1@1	24.01	21.03	0.1268
66	15	25	349000	1745	DFT-s-OFDM 16 QAM	1@1	23.31	20.33	0.1079
66	15	25	353500	1767.5	DFT-s-OFDM QPSK	1@1	23.82	20.84	0.1213
66	15	25	353500	1767.5	DFT-s-OFDM 16 QAM	1@1	22.93	19.95	0.0989
66	15	30	345000	1725	DFT-s-OFDM QPSK	1@1	24.19	21.21	0.1321
66	15	30	345000	1725	DFT-s-OFDM 16 QAM	1@1	23.26	20.28	0.1067
66	15	30	349000	1745	DFT-s-OFDM QPSK	1@1	23.93	20.95	0.1245
66	15	30	349000	1745	DFT-s-OFDM 16 QAM	1@1	23.16	20.18	0.1042
66	15	30	353000	1765	DFT-s-OFDM QPSK	1@1	23.77	20.79	0.1199
66	15	30	353000	1765	DFT-s-OFDM 16 QAM	1@1	22.82	19.84	0.0964
66	15	35	345500	1727.5	DFT-s-OFDM QPSK	1@1	23.97	20.99	0.1256
66	15	35	345500	1727.5	DFT-s-OFDM 16 QAM	1@1	23.06	20.08	0.1019
66	15	35	349000	1745	DFT-s-OFDM QPSK	1@1	23.94	20.96	0.1247
66	15	35	349000	1745	DFT-s-OFDM 16 QAM	1@1	23.18	20.2	0.1047

66	15	35	352500	1762.5	DFT-s-OFDM QPSK	1@1	23.75	20.77	0.1194
66	15	35	352500	1762.5	DFT-s-OFDM 16 QAM	1@1	22.97	19.99	0.0998
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	108@54	24.41	21.43	0.1390
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	1@1	24.48	21.5	0.1413
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	1@214	24.16	21.18	0.1312
66	15	40	346000	1730	DFT-s-OFDM QPSK	108@54	23.91	20.93	0.1239
66	15	40	346000	1730	DFT-s-OFDM QPSK	1@1	23.99	21.01	0.1262
66	15	40	346000	1730	DFT-s-OFDM QPSK	1@214	23.87	20.89	0.1227
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	108@54	22.85	19.87	0.0971
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	1@1	23.06	20.08	0.1019
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	1@214	22.93	19.95	0.0989
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	108@54	21.47	18.49	0.0706
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	1@1	21.5	18.52	0.0711
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	1@214	21.54	18.56	0.0718
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	108@54	18.81	15.83	0.0383
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	1@1	18.71	15.73	0.0374
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	1@214	18.17	15.19	0.0330
66	15	40	346000	1730	CP-OFDM QPSK	108@54	22.26	19.28	0.0847
66	15	40	346000	1730	CP-OFDM QPSK	1@1	22.64	19.66	0.0925
66	15	40	346000	1730	CP-OFDM QPSK	1@214	22.26	19.28	0.0847
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	108@54	24.37	21.39	0.1377
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	24.52	21.54	0.1426
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	1@214	24.34	21.36	0.1368

66	15	40	349000	1745	DFT-s-OFDM QPSK	108@54	23.74	20.76	0.1191
66	15	40	349000	1745	DFT-s-OFDM QPSK	1@1	23.83	20.85	0.1216
66	15	40	349000	1745	DFT-s-OFDM QPSK	1@214	24.01	21.03	0.1268
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	108@54	22.68	19.7	0.0933
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.99	20.01	0.1002
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	1@214	23.07	20.09	0.1021
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	108@54	21.23	18.25	0.0668
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	1@1	21.65	18.67	0.0736
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	1@214	21.42	18.44	0.0698
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	108@54	18.71	15.73	0.0374
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	1@1	18.6	15.62	0.0365
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	1@214	18.33	15.35	0.0343
66	15	40	349000	1745	CP-OFDM QPSK	108@54	22.28	19.3	0.0851
66	15	40	349000	1745	CP-OFDM QPSK	1@1	22.37	19.39	0.0869
66	15	40	349000	1745	CP-OFDM QPSK	1@214	22.25	19.27	0.0845
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	108@54	24.33	21.35	0.1365
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	1@1	24.12	21.14	0.1300
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	1@214	24.3	21.32	0.1355
66	15	40	352000	1760	DFT-s-OFDM QPSK	108@54	23.84	20.86	0.1219
66	15	40	352000	1760	DFT-s-OFDM QPSK	1@1	23.76	20.78	0.1197
66	15	40	352000	1760	DFT-s-OFDM QPSK	1@214	23.72	20.74	0.1186
66	15	40	352000	1760	DFT-s-OFDM 16 QAM	108@54	22.69	19.71	0.0935
66	15	40	352000	1760	DFT-s-OFDM 16 QAM	1@1	22.72	19.74	0.0942

66	15	40	352000	1760	DFT-s-OFDM 16 QAM	1@214	22.91	19.93	0.0984
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	108@54	21.26	18.28	0.0673
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	1@1	21.27	18.29	0.0675
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	1@214	21.4	18.42	0.0695
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	108@54	18.81	15.83	0.0383
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	1@1	18.52	15.54	0.0358
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	1@214	18.38	15.4	0.0347
66	15	40	352000	1760	CP-OFDM QPSK	108@54	22.26	19.28	0.0847
66	15	40	352000	1760	CP-OFDM QPSK	1@1	21.92	18.94	0.0783
66	15	40	352000	1760	CP-OFDM QPSK	1@214	22.17	19.19	0.0830

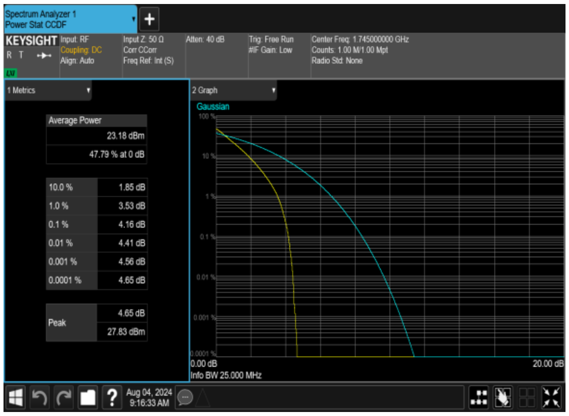
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0020	**PASS**	NV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0048	**PASS**	LV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0035	**PASS**	HV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0052	**PASS**	-30℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0054	**PASS**	-20℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0034	**PASS**	-10℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0035	**PASS**	0℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0067	**PASS**	10℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0020	**PASS**	20℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0057	**PASS**	30℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0058	**PASS**	40℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0033	**PASS**	50℃

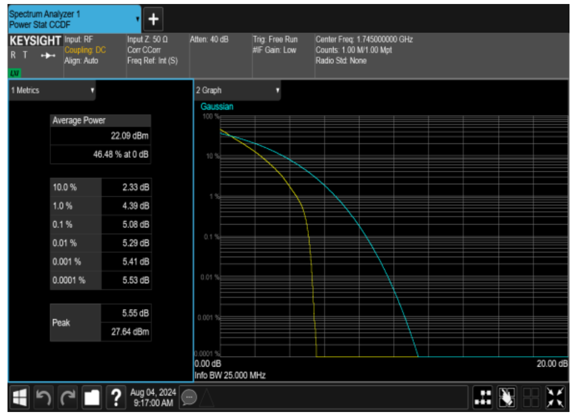
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
66	15	20	349000	1745.0	DFT-s-OFDM PI/2 BPSK	100@0	4.16	13	**PASS**
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	5.08	13	**PASS**

N66(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N66(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

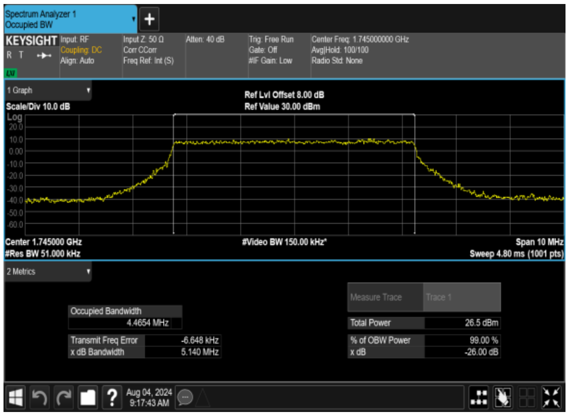


Occupied Bandwidth

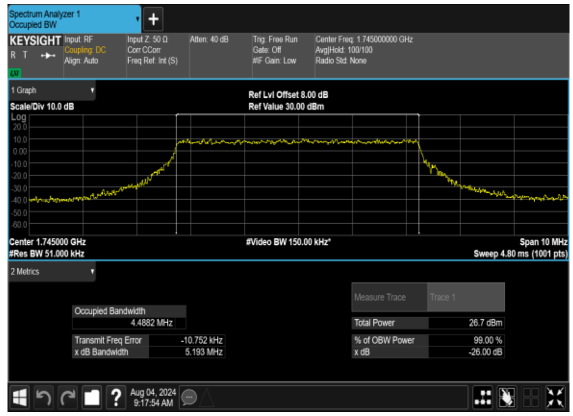
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
66	15	5	349000	1745.0	CP-OFDM QPSK	25@0	4.4654	5.14
66	15	5	349000	1745.0	CP-OFDM 16 QAM	25@0	4.4882	5.193
66	15	5	349000	1745.0	CP-OFDM 64 QAM	25@0	4.4662	5.017
66	15	5	349000	1745.0	CP-OFDM 256 QAM	25@0	4.4765	4.975
66	15	10	349000	1745.0	CP-OFDM QPSK	52@0	9.2829	10.07
66	15	10	349000	1745.0	CP-OFDM 16 QAM	52@0	9.299	9.889
66	15	10	349000	1745.0	CP-OFDM 64 QAM	52@0	9.2793	9.85
66	15	10	349000	1745.0	CP-OFDM 256 QAM	52@0	9.2809	10.0
66	15	15	349000	1745.0	CP-OFDM QPSK	79@0	14.104	14.93
66	15	15	349000	1745.0	CP-OFDM 16 QAM	79@0	14.077	14.84
66	15	15	349000	1745.0	CP-OFDM 64 QAM	79@0	14.124	14.91
66	15	15	349000	1745.0	CP-OFDM 256 QAM	79@0	14.08	14.93
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	18.922	19.9
66	15	20	349000	1745.0	CP-OFDM 16 QAM	106@0	18.878	19.77
66	15	20	349000	1745.0	CP-OFDM 64 QAM	106@0	18.899	19.78
66	15	20	349000	1745.0	CP-OFDM 256 QAM	106@0	18.957	19.88
66	15	25	349000	1745.0	CP-OFDM QPSK	133@0	23.781	24.81
66	15	25	349000	1745.0	CP-OFDM 16 QAM	133@0	23.764	24.91
66	15	25	349000	1745.0	CP-OFDM 64 QAM	133@0	23.794	24.73
66	15	25	349000	1745.0	CP-OFDM 256 QAM	133@0	23.768	24.76
66	15	30	349000	1745.0	CP-OFDM QPSK	160@0	28.583	29.61
66	15	30	349000	1745.0	CP-OFDM 16 QAM	160@0	28.558	29.71

66	15	30	349000	1745.0	CP-OFDM 64 QAM	160@0	28.582	29.56
66	15	30	349000	1745.0	CP-OFDM 256 QAM	160@0	28.543	29.63
66	15	35	349000	1745.0	CP-OFDM QPSK	188@0	33.532	34.86
66	15	35	349000	1745.0	CP-OFDM 16 QAM	188@0	33.539	34.81
66	15	35	349000	1745.0	CP-OFDM 64 QAM	188@0	33.545	34.73
66	15	35	349000	1745.0	CP-OFDM 256 QAM	188@0	33.504	34.79
66	15	40	349000	1745.0	CP-OFDM QPSK	216@0	38.572	39.95
66	15	40	349000	1745.0	CP-OFDM 16 QAM	216@0	38.665	39.94
66	15	40	349000	1745.0	CP-OFDM 64 QAM	216@0	38.585	39.91
66	15	40	349000	1745.0	CP-OFDM 256 QAM	216@0	38.569	40.01

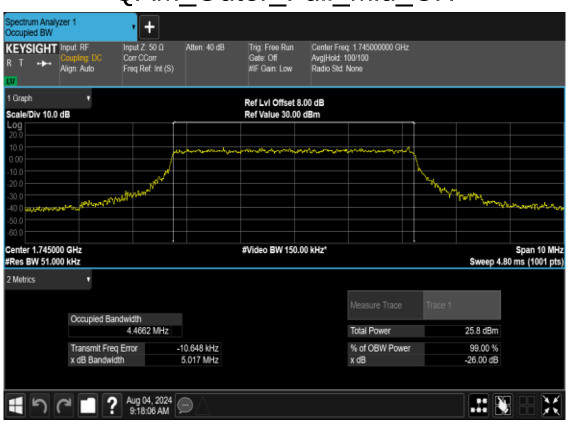
N66(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



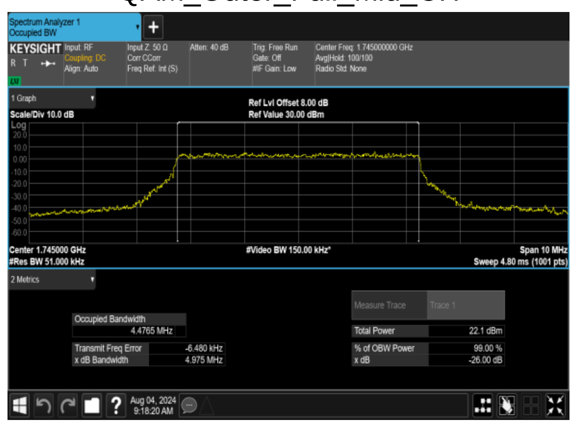
N66(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



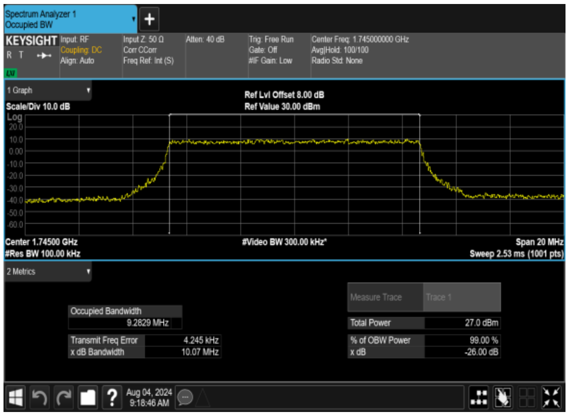
N66(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



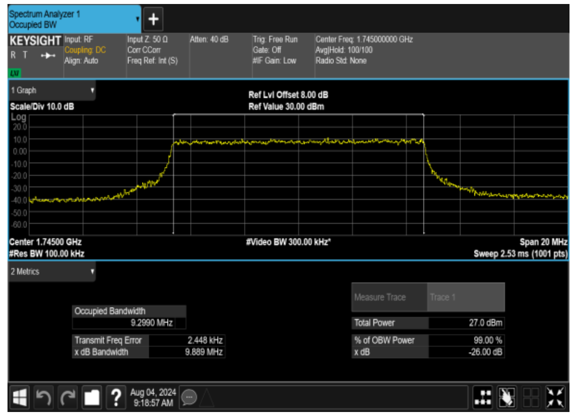
N66(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N66(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



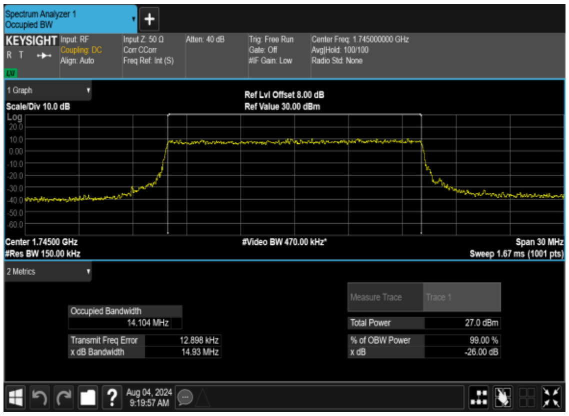
N66(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N66(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

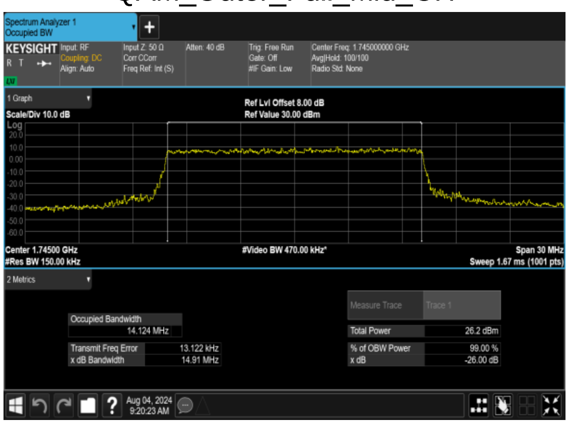
N66(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N66(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N66(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N66(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

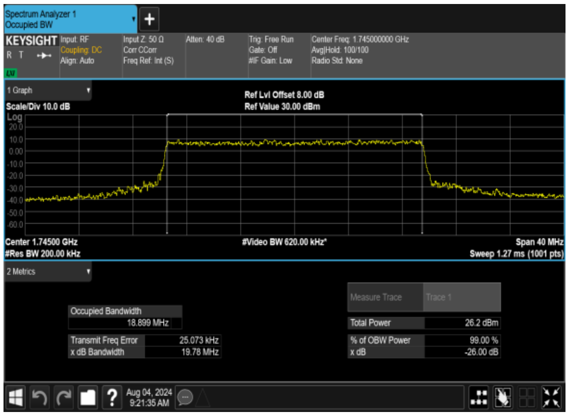


N66(15M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N66(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

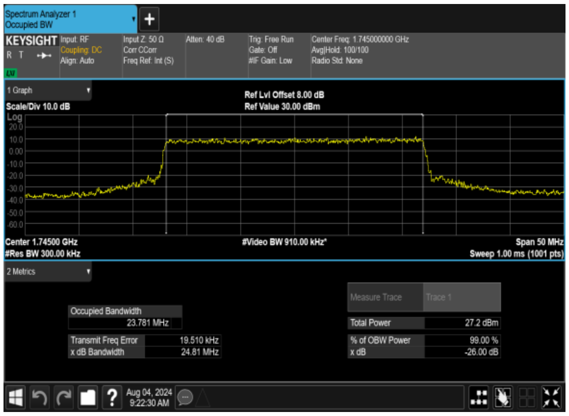
N66(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N66(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



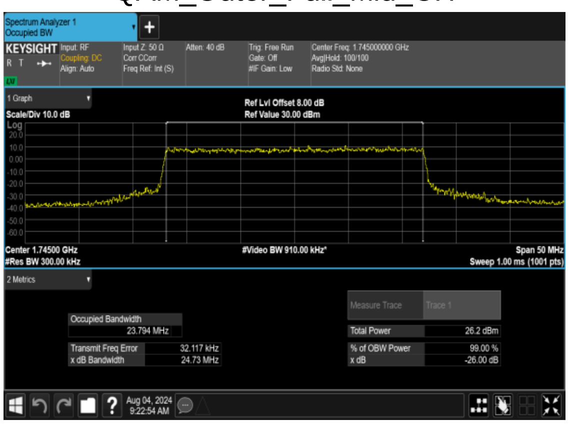
N66(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N66(25M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

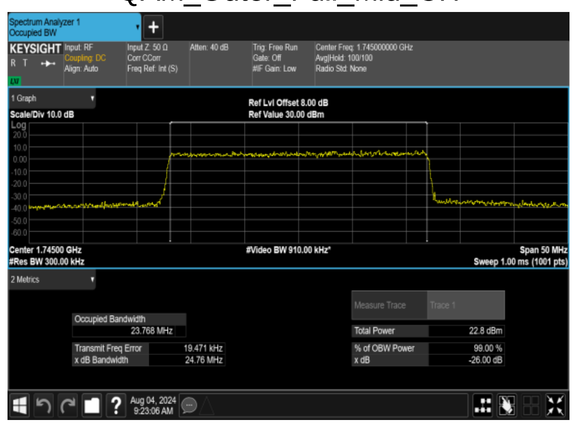


N66(25M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N66(25M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



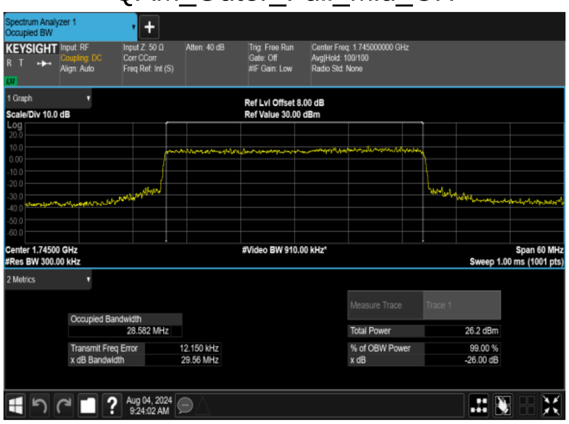
N66(25M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



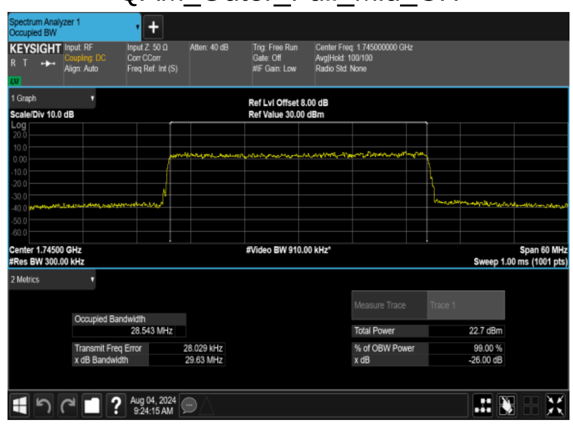
N66(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

N66(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

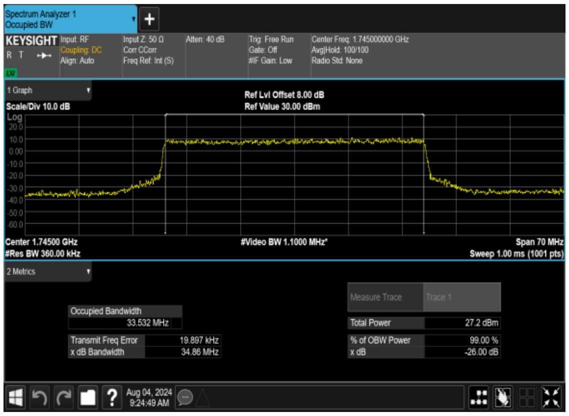
N66(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N66(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

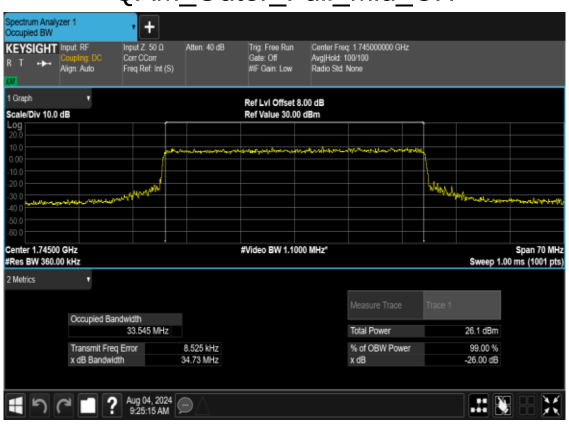


N66(35M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

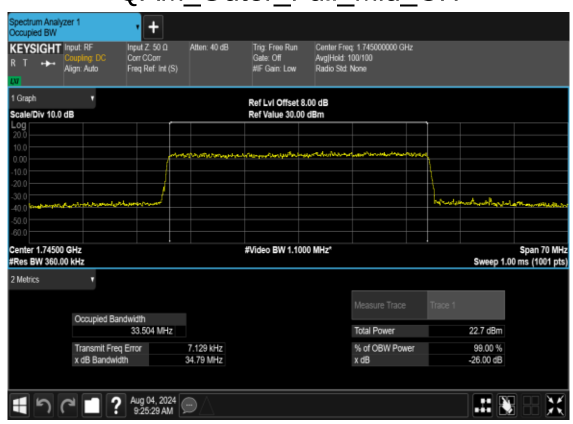


N66(35M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

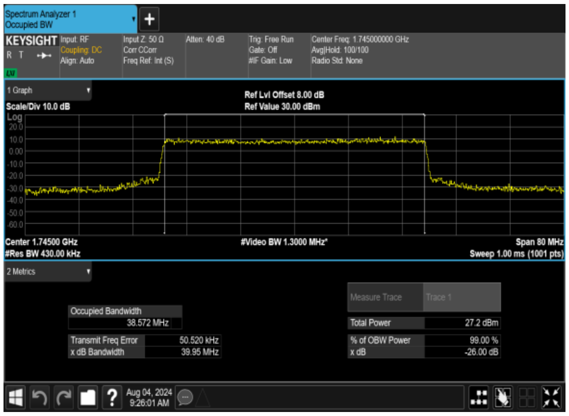
N66(35M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N66(35M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

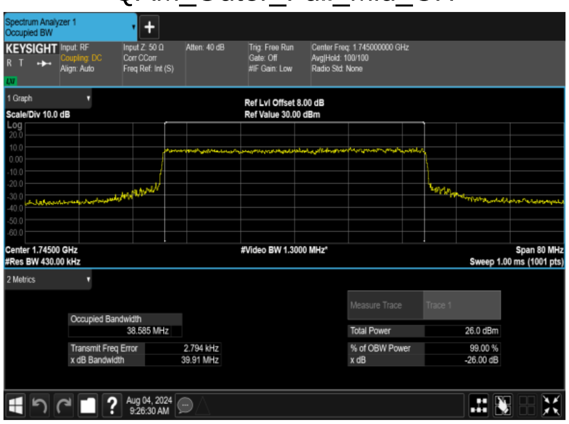


N66(40M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

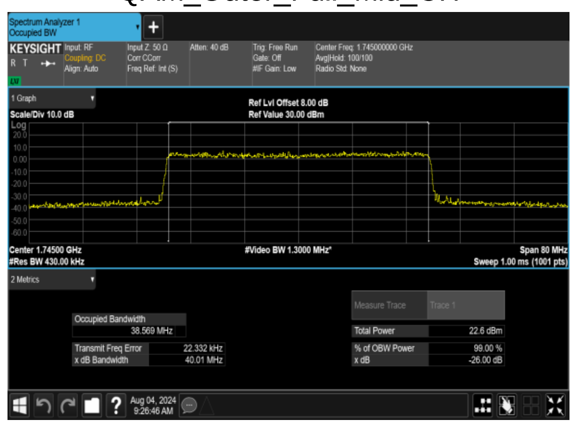


N66(40M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

N66(40M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N66(40M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

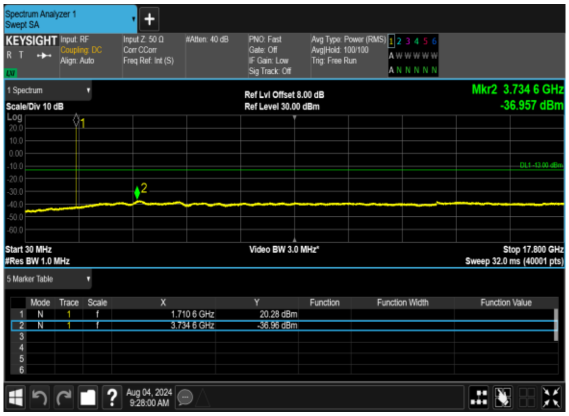


Conducted Spurious Emissions

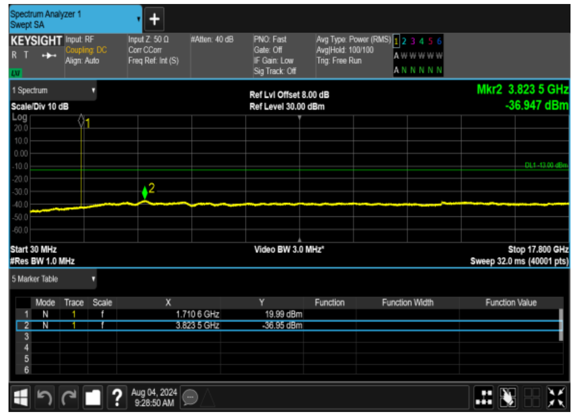
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	5	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	5	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	5	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	5	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	5	355500	1777.5	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	5	355500	1777.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	20	344000	1720.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	20	344000	1720.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	20	344000	1720.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	20	344000	1720.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	20	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	20	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

66	15	20	354000	1770.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	20	354000	1770.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	20	354000	1770.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	20	354000	1770.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	40	346000	1730.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	40	346000	1730.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	40	346000	1730.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	40	346000	1730.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	40	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	40	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	40	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	40	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	40	352000	1760.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	40	352000	1760.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	40	352000	1760.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	40	352000	1760.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

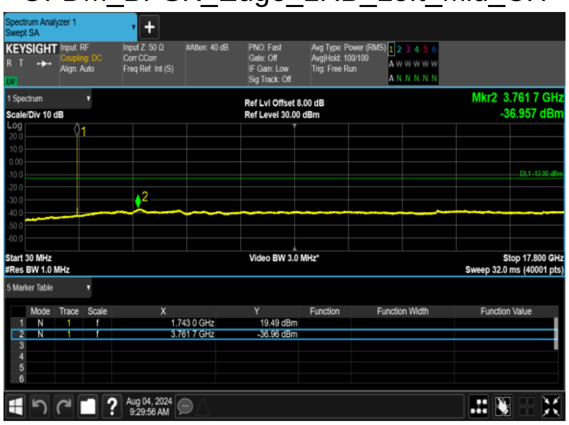
N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



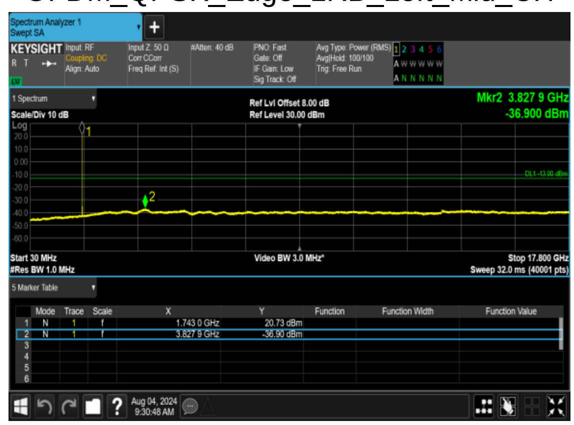
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



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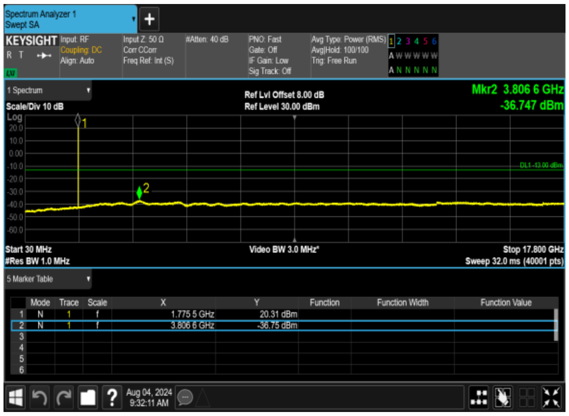
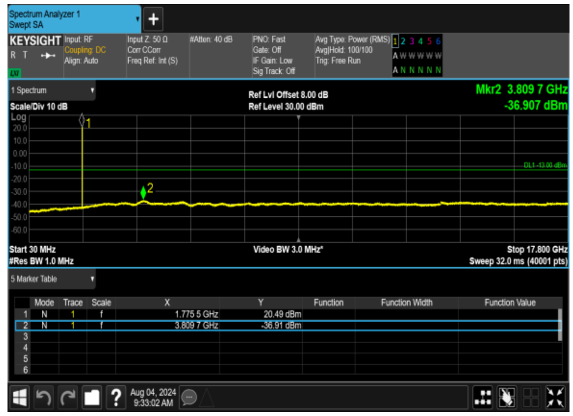
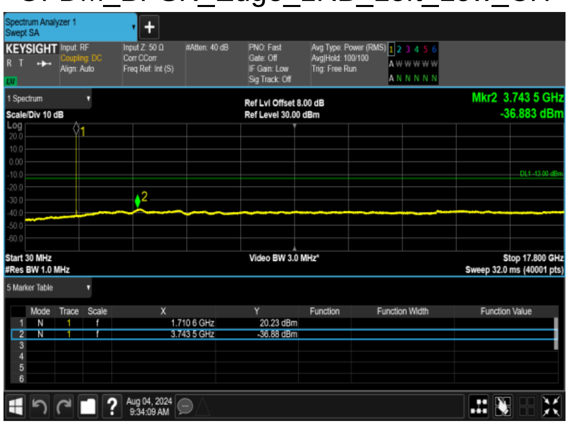
N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



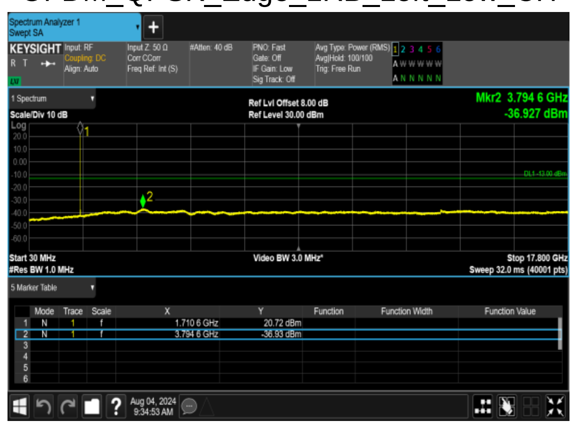
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



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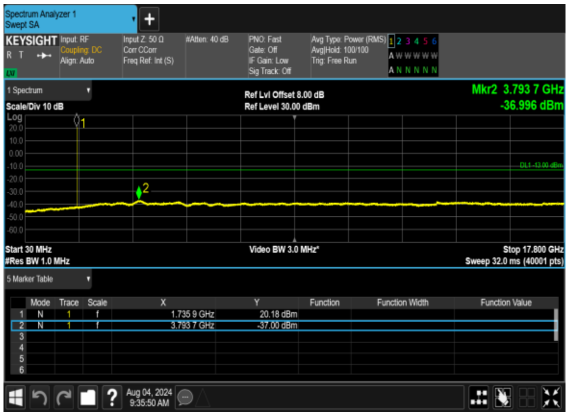
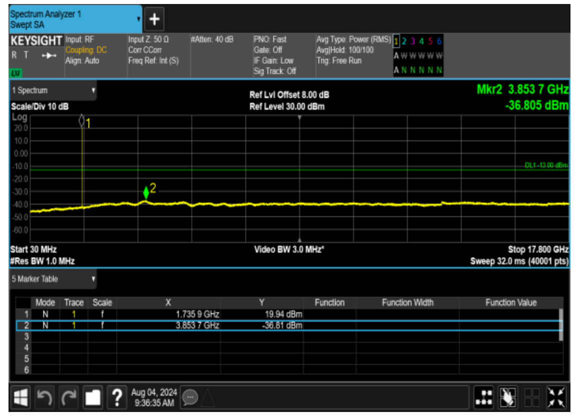
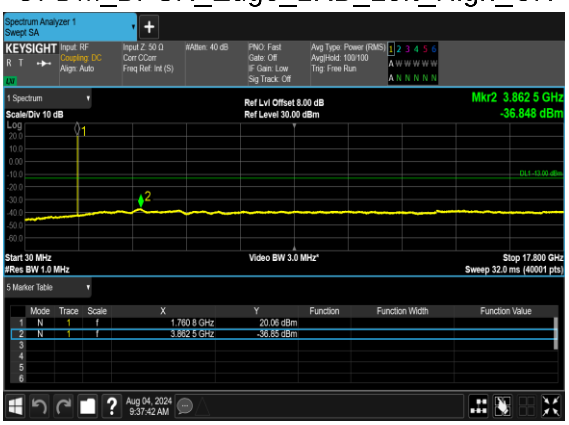
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



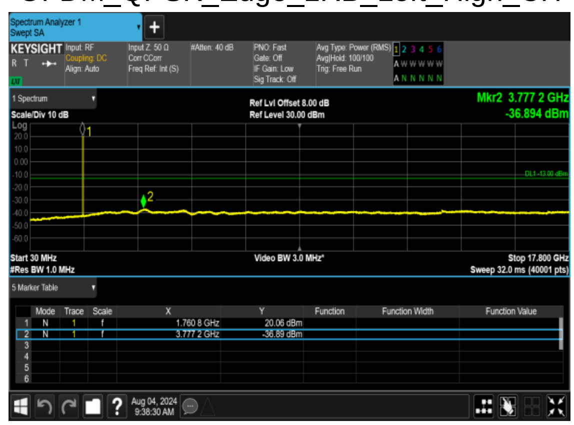
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



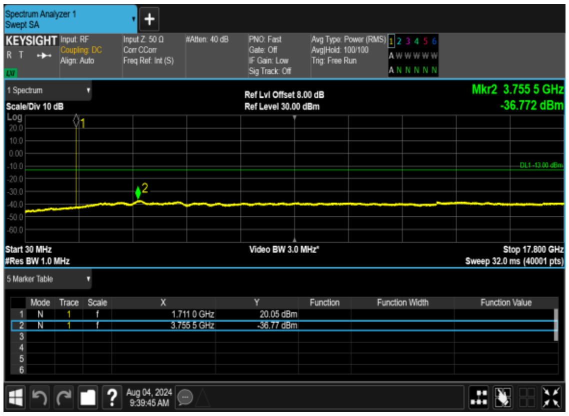
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



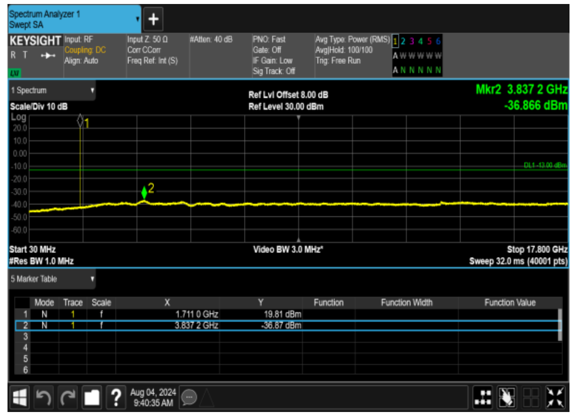
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



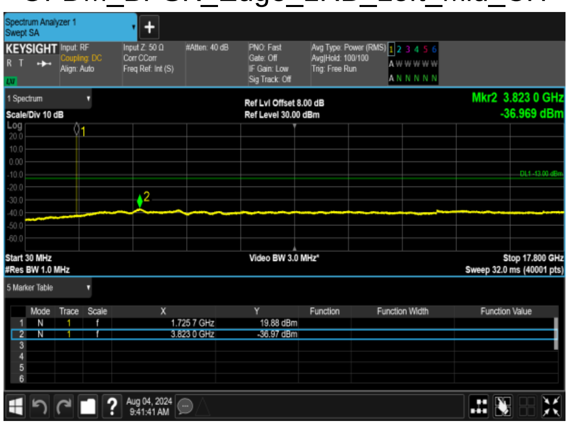
N66(40M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



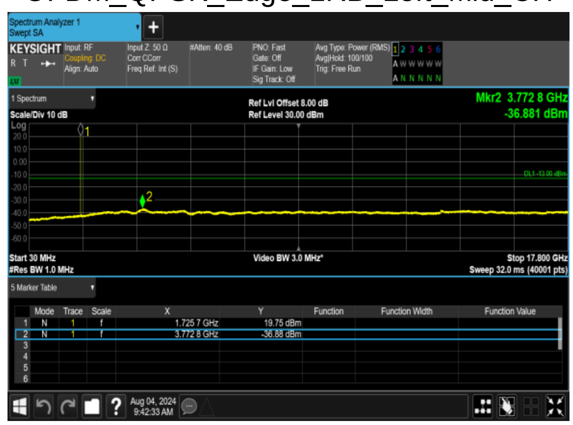
N66(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



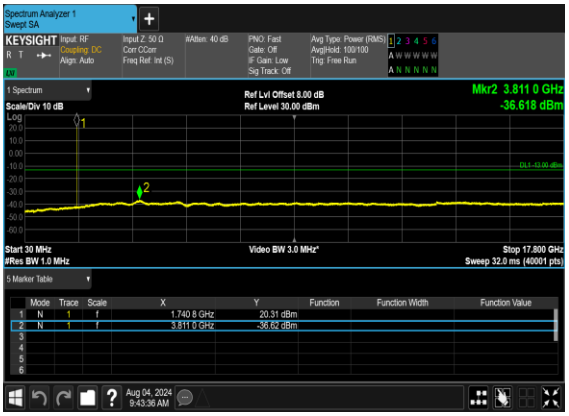
N66(40M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



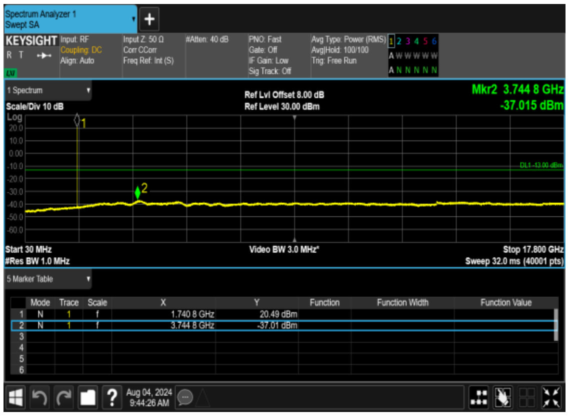
N66(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N66(40M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N66(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

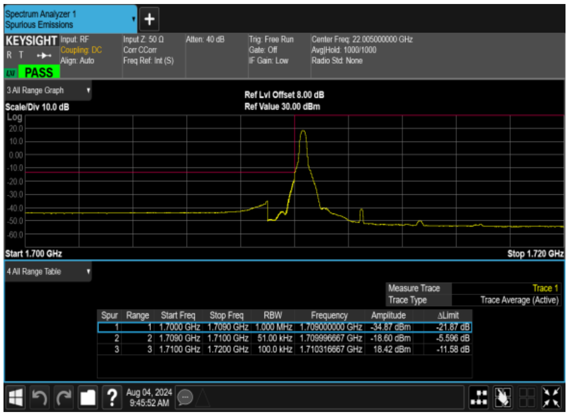


Conducted Band Edge

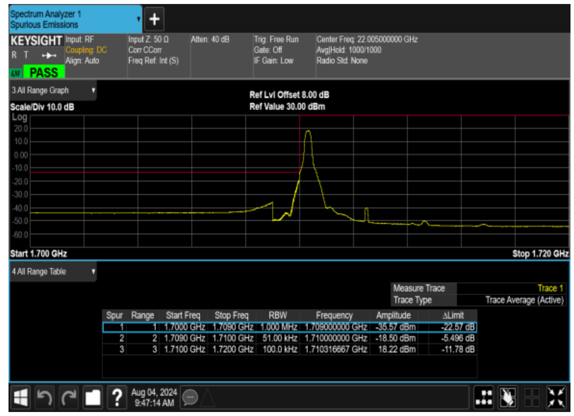
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
66	15	5	355500	1777.5	DFT-s-OFDM BPSK	1@24	see graph	**PASS**
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	1@24	see graph	**PASS**
66	15	5	355500	1777.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	25@0	see graph	**PASS**
66	15	20	344000	1720.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	20	344000	1720.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	20	344000	1720.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
66	15	20	344000	1720.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**
66	15	20	354000	1770.0	DFT-s-OFDM BPSK	1@105	see graph	**PASS**
66	15	20	354000	1770.0	DFT-s-OFDM QPSK	1@105	see graph	**PASS**
66	15	20	354000	1770.0	DFT-s-OFDM BPSK	100@0	see graph	**PASS**
66	15	20	354000	1770.0	DFT-s-OFDM QPSK	100@0	see graph	**PASS**
66	15	40	346000	1730.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	40	346000	1730.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	40	346000	1730.0	DFT-s-OFDM BPSK	216@0	see graph	**PASS**
66	15	40	346000	1730.0	DFT-s-OFDM QPSK	216@0	see graph	**PASS**

66	15	40	352000	1760.0	DFT-s-OFDM BPSK	1@215	see graph	**PASS**
66	15	40	352000	1760.0	DFT-s-OFDM QPSK	1@215	see graph	**PASS**
66	15	40	352000	1760.0	DFT-s-OFDM BPSK	216@0	see graph	**PASS**
66	15	40	352000	1760.0	DFT-s-OFDM QPSK	216@0	see graph	**PASS**

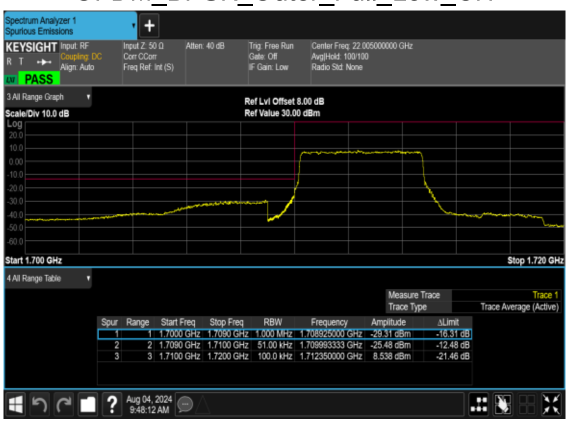
N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



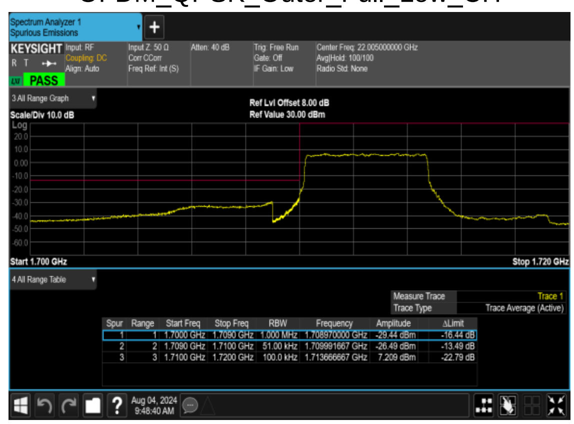
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



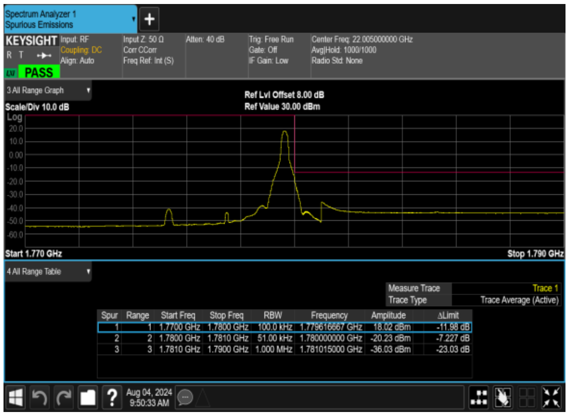
N66(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



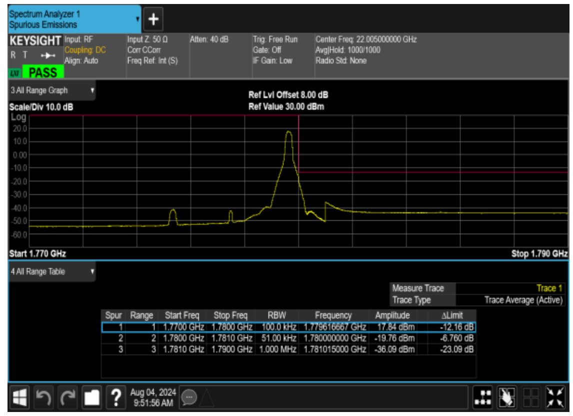
N66(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



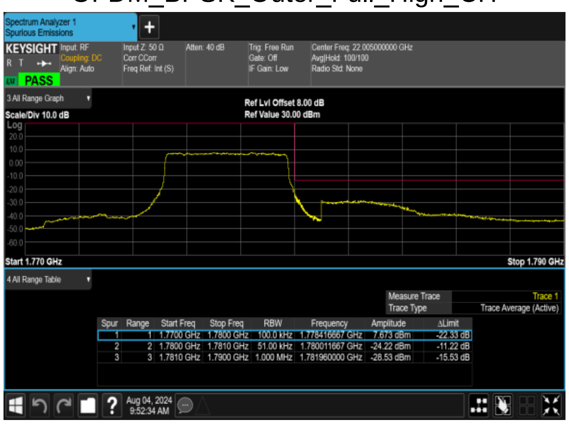
N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



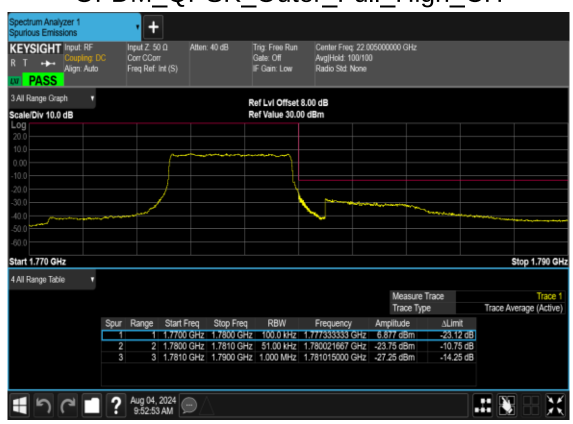
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



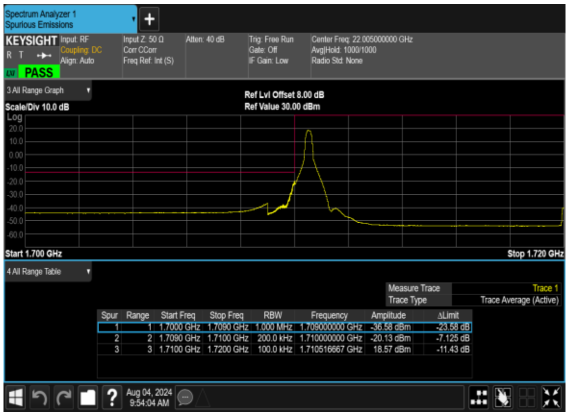
N66(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



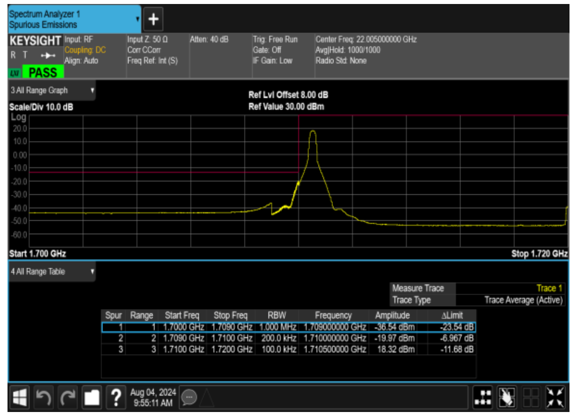
N66(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



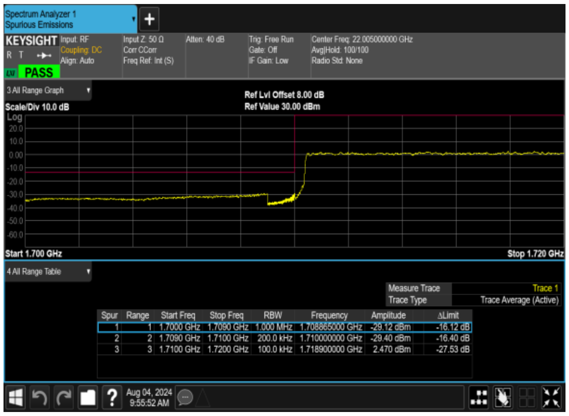
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



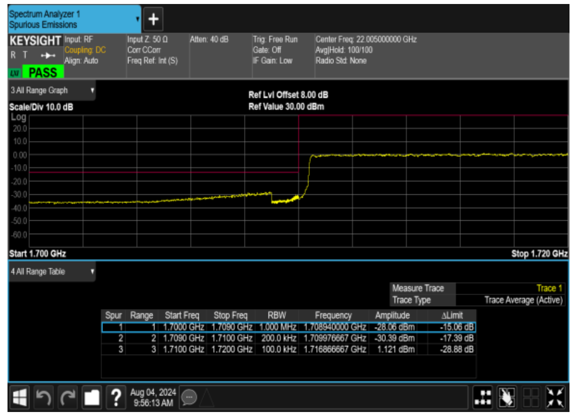
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



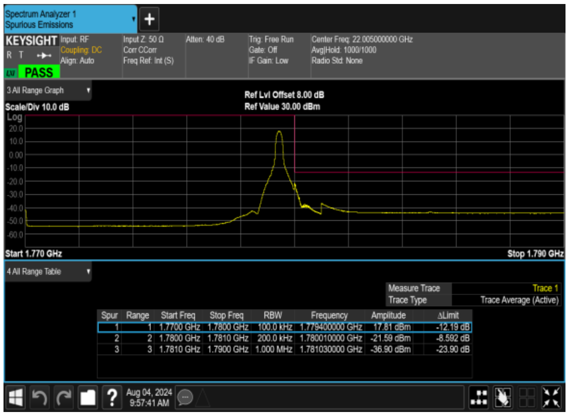
N66(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



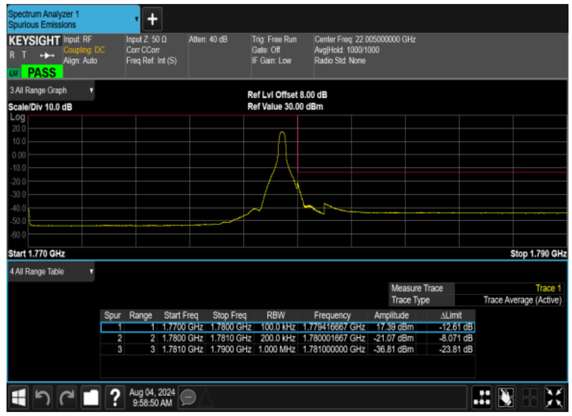
N66(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



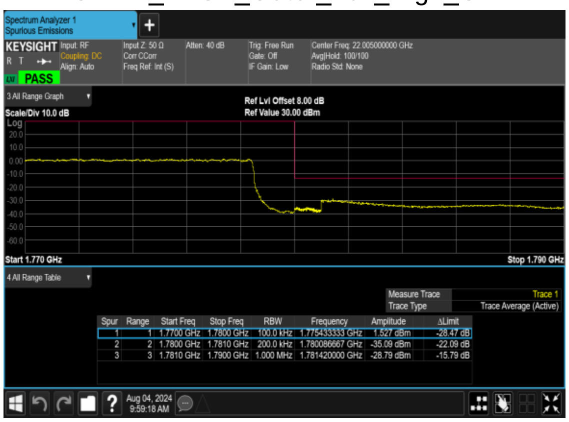
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



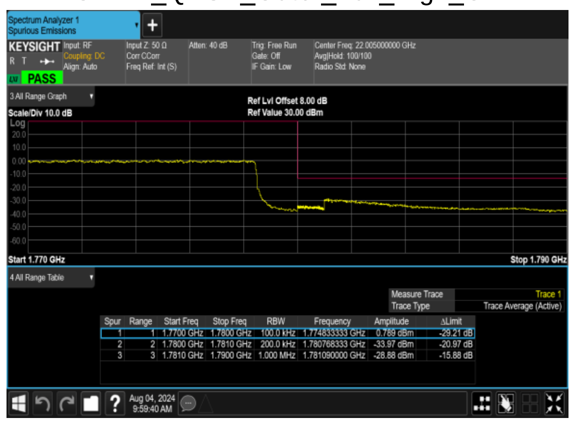
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



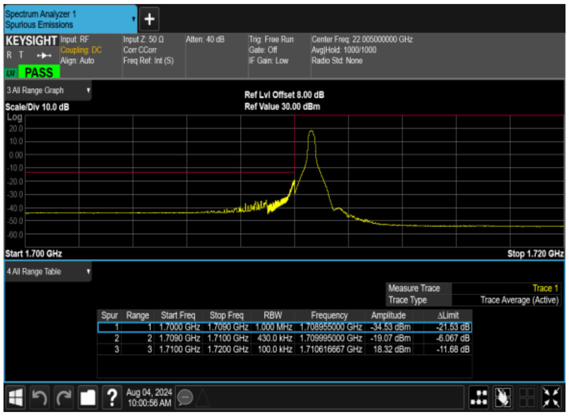
N66(20M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH



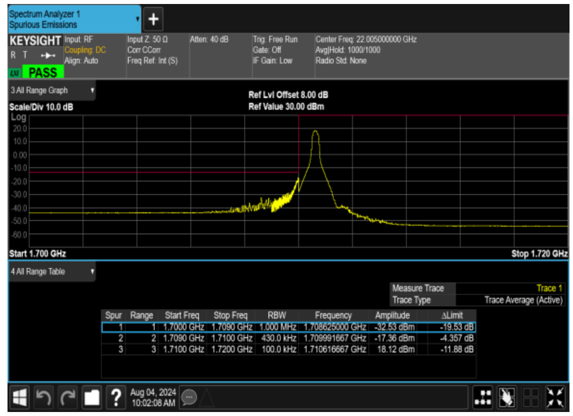
N66(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



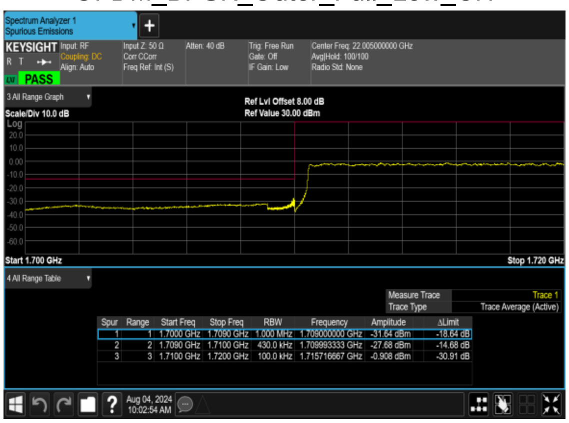
N66(40M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



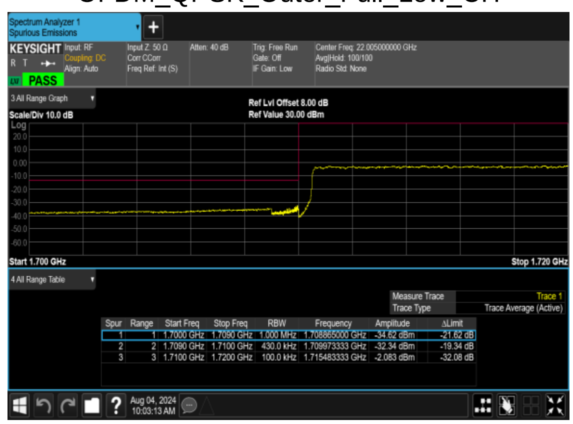
N66(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



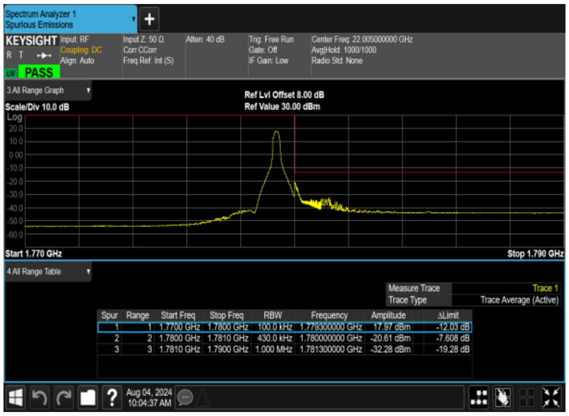
N66(40M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH



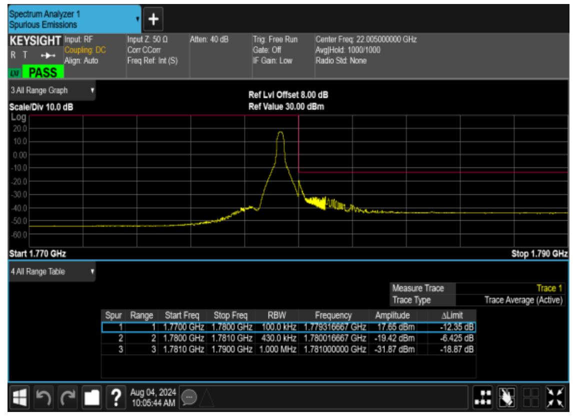
N66(40M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH



N66(40M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



N66(40M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



N66(40M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N66(40M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

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FAX : +86-755-8637-9595

Software Version: 23.06.1602

FR1 N66 TXD-ANT(1+8)

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=0.03dB

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	ANT1 Power(dBm)	ANT8 Power(dBm)	Conducted Power(dBm)	EIRP (dBm)	EIRP (W)
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@1	23.57	23.61	26.60	26.63	0.4603
66	15	5	342500	1712.5	DFT-s-OFDM 16 QAM	1@1	22.67	22.72	25.71	25.74	0.3750
66	15	5	349000	1745	DFT-s-OFDM QPSK	1@1	23.47	23.75	26.62	26.65	0.4624
66	15	5	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.60	22.87	25.74	25.77	0.3776
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	1@1	23.69	23.55	26.63	26.66	0.4634
66	15	5	355500	1777.5	DFT-s-OFDM 16 QAM	1@1	22.67	22.90	25.80	25.83	0.3828
66	15	10	343000	1715	DFT-s-OFDM QPSK	1@1	23.75	23.72	26.75	26.78	0.4764
66	15	10	343000	1715	DFT-s-OFDM 16 QAM	1@1	22.87	22.91	25.90	25.93	0.3917
66	15	10	349000	1745	DFT-s-OFDM QPSK	1@1	23.52	23.91	26.73	26.76	0.4742
66	15	10	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.18	22.86	25.55	25.58	0.3614
66	15	10	355000	1775	DFT-s-OFDM QPSK	1@1	23.56	23.83	26.71	26.74	0.4721
66	15	10	355000	1775	DFT-s-OFDM 16 QAM	1@1	22.66	22.78	25.73	25.76	0.3767
66	15	15	343500	1717.5	DFT-s-OFDM QPSK	1@1	23.64	23.75	26.70	26.73	0.4710
66	15	15	343500	1717.5	DFT-s-OFDM 16 QAM	1@1	22.91	22.91	25.92	25.95	0.3936
66	15	15	349000	1745	DFT-s-OFDM QPSK	1@1	23.51	23.78	26.65	26.68	0.4656
66	15	15	349000	1745	DFT-s-OFDM 16 QAM	1@1	21.66	17.84	23.17	23.2	0.2089
66	15	15	354500	1772.5	DFT-s-OFDM QPSK	1@1	23.41	23.60	26.52	26.55	0.4519
66	15	15	354500	1772.5	DFT-s-OFDM 16 QAM	1@1	22.65	22.72	25.70	25.73	0.3741

66	15	20	344000	1720	DFT-s-OFDM QPSK	1@1	23.73	23.90	26.82	26.85	0.4842
66	15	20	344000	1720	DFT-s-OFDM 16 QAM	1@1	22.76	22.84	25.81	25.84	0.3837
66	15	20	349000	1745	DFT-s-OFDM QPSK	1@1	23.66	23.82	26.75	26.78	0.4764
66	15	20	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.76	22.99	25.88	25.91	0.3899
66	15	20	354000	1770	DFT-s-OFDM QPSK	1@1	23.74	23.70	26.73	26.76	0.4742
66	15	20	354000	1770	DFT-s-OFDM 16 QAM	1@1	22.79	22.77	25.79	25.82	0.3819
66	15	25	344500	1722.5	DFT-s-OFDM QPSK	1@1	23.70	23.77	26.75	26.78	0.4764
66	15	25	344500	1722.5	DFT-s-OFDM 16 QAM	1@1	22.98	23.09	26.04	26.07	0.4046
66	15	25	349000	1745	DFT-s-OFDM QPSK	1@1	23.67	23.91	26.80	26.83	0.4819
66	15	25	349000	1745	DFT-s-OFDM 16 QAM	1@1	23.00	23.08	26.05	26.08	0.4055
66	15	25	353500	1767.5	DFT-s-OFDM QPSK	1@1	23.51	23.67	26.60	26.63	0.4603
66	15	25	353500	1767.5	DFT-s-OFDM 16 QAM	1@1	22.79	22.84	25.82	25.85	0.3846
66	15	30	345000	1725	DFT-s-OFDM QPSK	1@1	23.78	23.90	26.85	26.88	0.4875
66	15	30	345000	1725	DFT-s-OFDM 16 QAM	1@1	22.77	22.91	25.85	25.88	0.3873
66	15	30	349000	1745	DFT-s-OFDM QPSK	1@1	23.85	24.09	26.98	27.01	0.5023
66	15	30	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.75	23.13	25.95	25.98	0.3963
66	15	30	353000	1765	DFT-s-OFDM QPSK	1@1	23.72	23.81	26.78	26.81	0.4797
66	15	30	353000	1765	DFT-s-OFDM 16 QAM	1@1	15.74	22.83	23.60	23.63	0.2307
66	15	35	345500	1727.5	DFT-s-OFDM QPSK	1@1	23.66	23.76	26.72	26.75	0.4732
66	15	35	345500	1727.5	DFT-s-OFDM 16 QAM	1@1	21.30	22.97	25.22	25.25	0.3350
66	15	35	349000	1745	DFT-s-OFDM QPSK	1@1	23.64	24.01	26.84	26.87	0.4864
66	15	35	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.74	23.16	25.96	25.99	0.3972

66	15	35	352500	1762.5	DFT-s-OFDM QPSK	1@1	23.47	23.71	26.60	26.63	0.4603
66	15	35	352500	1762.5	DFT-s-OFDM 16 QAM	1@1	22.58	22.95	25.78	25.81	0.3811
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	108@54	24.13	24.34	27.25	27.28	0.5346
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	1@1	24.09	24.20	27.16	27.19	0.5236
66	15	40	346000	1730	DFT-s-OFDM PI/2 BPSK	1@214	23.90	24.01	26.96	26.99	0.5000
66	15	40	346000	1730	DFT-s-OFDM QPSK	108@54	23.57	23.73	26.66	26.69	0.4667
66	15	40	346000	1730	DFT-s-OFDM QPSK	1@1	23.66	23.73	26.71	26.74	0.4721
66	15	40	346000	1730	DFT-s-OFDM QPSK	1@214	23.62	23.64	26.64	26.67	0.4645
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	108@54	22.50	22.78	25.66	25.69	0.3707
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	1@1	22.73	22.77	25.76	25.79	0.3793
66	15	40	346000	1730	DFT-s-OFDM 16 QAM	1@214	22.66	22.63	25.66	25.69	0.3707
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	108@54	21.14	21.34	24.25	24.28	0.2679
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	1@1	21.23	21.37	24.31	24.34	0.2716
66	15	40	346000	1730	DFT-s-OFDM 64 QAM	1@214	21.11	21.28	24.20	24.23	0.2649
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	108@54	18.45	18.75	21.61	21.64	0.1459
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	1@1	18.49	18.74	21.63	21.66	0.1466
66	15	40	346000	1730	DFT-s-OFDM 256 QAM	1@214	18.03	15.88	20.10	20.13	0.1030
66	15	40	346000	1730	CP-OFDM QPSK	108@54	21.96	22.19	25.09	25.12	0.3251
66	15	40	346000	1730	CP-OFDM QPSK	1@1	22.30	22.56	25.44	25.47	0.3524
66	15	40	346000	1730	CP-OFDM QPSK	1@214	21.79	22.12	24.97	25	0.3162
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	108@54	24.07	24.34	27.22	27.25	0.5309
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.97	24.29	27.14	27.17	0.5212
66	15	40	349000	1745	DFT-s-OFDM PI/2 BPSK	1@214	24.11	24.22	27.17	27.2	0.5248

66	15	40	349000	1745	DFT-s-OFDM QPSK	108@54	23.42	23.73	26.59	26.62	0.4592
66	15	40	349000	1745	DFT-s-OFDM QPSK	1@1	23.53	23.99	26.78	26.81	0.4797
66	15	40	349000	1745	DFT-s-OFDM QPSK	1@214	23.58	23.67	26.64	26.67	0.4645
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	108@54	22.43	22.80	25.63	25.66	0.3681
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.78	23.02	25.91	25.94	0.3926
66	15	40	349000	1745	DFT-s-OFDM 16 QAM	1@214	22.54	22.88	25.72	25.75	0.3758
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	108@54	21.01	21.26	24.15	24.18	0.2618
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	1@1	21.32	21.48	24.41	24.44	0.2780
66	15	40	349000	1745	DFT-s-OFDM 64 QAM	1@214	21.24	21.51	24.39	24.42	0.2767
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	108@54	18.44	19.74	22.15	22.18	0.1652
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	1@1	18.64	18.87	21.77	21.8	0.1514
66	15	40	349000	1745	DFT-s-OFDM 256 QAM	1@214	18.23	18.22	21.24	21.27	0.1340
66	15	40	349000	1745	CP-OFDM QPSK	108@54	21.94	22.16	25.07	25.1	0.3236
66	15	40	349000	1745	CP-OFDM QPSK	1@1	22.19	22.43	25.32	25.35	0.3428
66	15	40	349000	1745	CP-OFDM QPSK	1@214	22.10	22.30	25.21	25.24	0.3342
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	108@54	24.11	24.25	27.19	27.22	0.5272
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	1@1	23.79	24.32	27.08	27.11	0.5140
66	15	40	352000	1760	DFT-s-OFDM PI/2 BPSK	1@214	23.87	24.20	27.05	27.08	0.5105
66	15	40	352000	1760	DFT-s-OFDM QPSK	108@54	23.46	23.66	26.57	26.6	0.4571
66	15	40	352000	1760	DFT-s-OFDM QPSK	1@1	23.38	23.90	26.65	26.68	0.4656
66	15	40	352000	1760	DFT-s-OFDM QPSK	1@214	23.55	23.55	26.56	26.59	0.4560
66	15	40	352000	1760	DFT-s-OFDM 16 QAM	108@54	22.42	22.65	25.54	25.57	0.3606
66	15	40	352000	1760	DFT-s-OFDM 16 QAM	1@1	22.59	22.83	25.72	25.75	0.3758

66	15	40	352000	1760	DFT-s-OFDM 16 QAM	1@214	22.92	22.83	25.88	25.91	0.3899
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	108@54	21.00	21.18	24.10	24.13	0.2588
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	1@1	20.99	21.47	24.25	24.28	0.2679
66	15	40	352000	1760	DFT-s-OFDM 64 QAM	1@214	21.26	21.24	24.26	24.29	0.2685
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	108@54	18.51	18.63	21.58	21.61	0.1449
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	1@1	18.47	18.65	21.57	21.6	0.1445
66	15	40	352000	1760	DFT-s-OFDM 256 QAM	1@214	18.16	18.18	21.18	21.21	0.1321
66	15	40	352000	1760	CP-OFDM QPSK	108@54	21.94	22.15	25.06	25.09	0.3228
66	15	40	352000	1760	CP-OFDM QPSK	1@1	22.20	22.59	25.41	25.44	0.3499
66	15	40	352000	1760	CP-OFDM QPSK	1@214	21.96	21.93	24.96	24.99	0.3155

FR1 N66 TXD-ANT(1+8)_ANT1

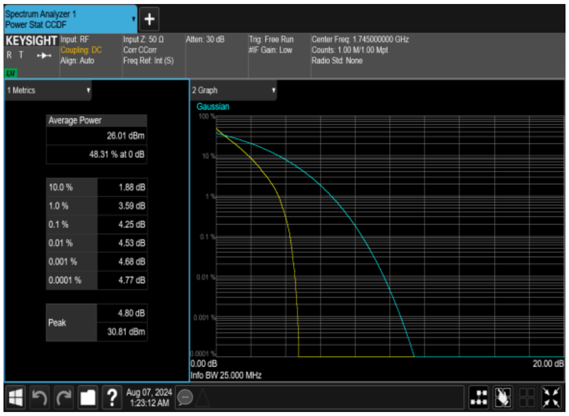
Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0043	**PASS**	NV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0020	**PASS**	LV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0023	**PASS**	HV
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0030	**PASS**	-30℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0065	**PASS**	-20℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0058	**PASS**	-10℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0023	**PASS**	0℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0026	**PASS**	10℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0043	**PASS**	20℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0052	**PASS**	30℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0022	**PASS**	40℃
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	0.0043	**PASS**	50℃

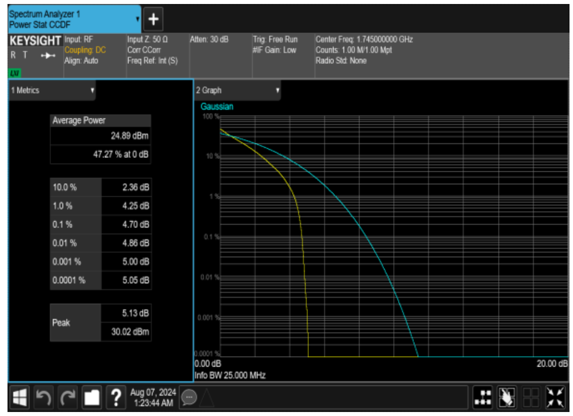
Peak to Average Ratio

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
66	15	20	349000	1745.0	DFT-s-OFDM PI/2 BPSK	100@0	4.25	13	**PASS**
66	15	20	349000	1745.0	DFT-s-OFDM QPSK	100@0	4.7	13	**PASS**

N66(20M)_DFT-s-OFDM_PI_2-BPSK_Outer_Full_Mid_CH



N66(20M)_DFT-s-OFDM_QPSK_Outer_Full_Mid_CH

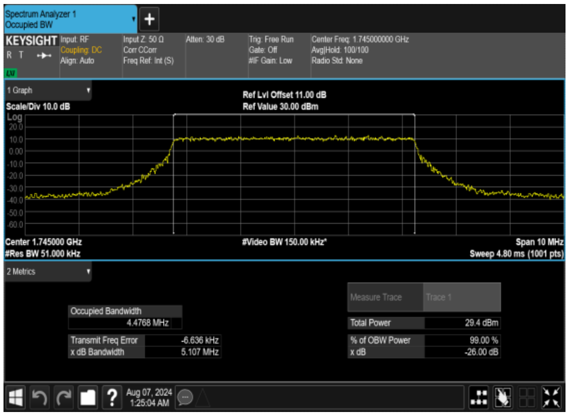


Occupied Bandwidth

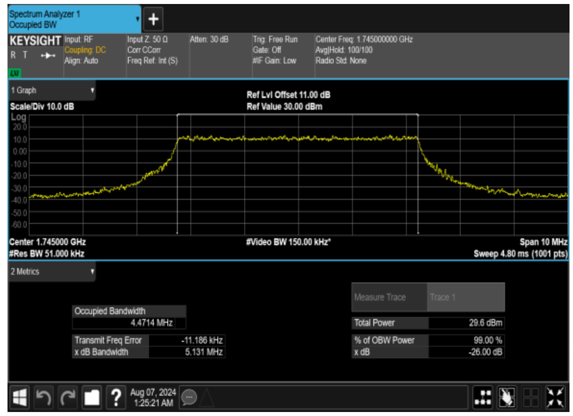
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
66	15	5	349000	1745.0	CP-OFDM QPSK	25@0	4.4768	5.107
66	15	5	349000	1745.0	CP-OFDM 16 QAM	25@0	4.4714	5.131
66	15	5	349000	1745.0	CP-OFDM 64 QAM	25@0	4.4737	5.085
66	15	5	349000	1745.0	CP-OFDM 256 QAM	25@0	4.4741	4.97
66	15	10	349000	1745.0	CP-OFDM QPSK	52@0	9.2847	10.07
66	15	10	349000	1745.0	CP-OFDM 16 QAM	52@0	9.2753	9.951
66	15	10	349000	1745.0	CP-OFDM 64 QAM	52@0	9.2695	10.01
66	15	10	349000	1745.0	CP-OFDM 256 QAM	52@0	9.2778	10.1
66	15	15	349000	1745.0	CP-OFDM QPSK	79@0	14.103	14.94
66	15	15	349000	1745.0	CP-OFDM 16 QAM	79@0	14.083	14.87
66	15	15	349000	1745.0	CP-OFDM 64 QAM	79@0	14.129	14.85
66	15	15	349000	1745.0	CP-OFDM 256 QAM	79@0	14.094	14.81
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	18.915	19.76
66	15	20	349000	1745.0	CP-OFDM 16 QAM	106@0	18.963	19.89
66	15	20	349000	1745.0	CP-OFDM 64 QAM	106@0	18.968	19.94
66	15	20	349000	1745.0	CP-OFDM 256 QAM	106@0	18.965	19.82
66	15	25	349000	1745.0	CP-OFDM QPSK	133@0	23.74	24.86
66	15	25	349000	1745.0	CP-OFDM 16 QAM	133@0	23.764	24.9
66	15	25	349000	1745.0	CP-OFDM 64 QAM	133@0	23.826	24.7
66	15	25	349000	1745.0	CP-OFDM 256 QAM	133@0	23.795	24.86
66	15	30	349000	1745.0	CP-OFDM QPSK	160@0	28.596	29.72
66	15	30	349000	1745.0	CP-OFDM 16 QAM	160@0	28.512	29.56

66	15	30	349000	1745.0	CP-OFDM 64 QAM	160@0	28.59	29.79
66	15	30	349000	1745.0	CP-OFDM 256 QAM	160@0	28.611	29.59
66	15	35	349000	1745.0	CP-OFDM QPSK	188@0	33.619	34.85
66	15	35	349000	1745.0	CP-OFDM 16 QAM	188@0	33.521	34.71
66	15	35	349000	1745.0	CP-OFDM 64 QAM	188@0	33.649	34.75
66	15	35	349000	1745.0	CP-OFDM 256 QAM	188@0	33.578	34.66
66	15	40	349000	1745.0	CP-OFDM QPSK	216@0	38.654	39.95
66	15	40	349000	1745.0	CP-OFDM 16 QAM	216@0	38.652	39.85
66	15	40	349000	1745.0	CP-OFDM 64 QAM	216@0	38.583	39.99
66	15	40	349000	1745.0	CP-OFDM 256 QAM	216@0	38.54	40.03

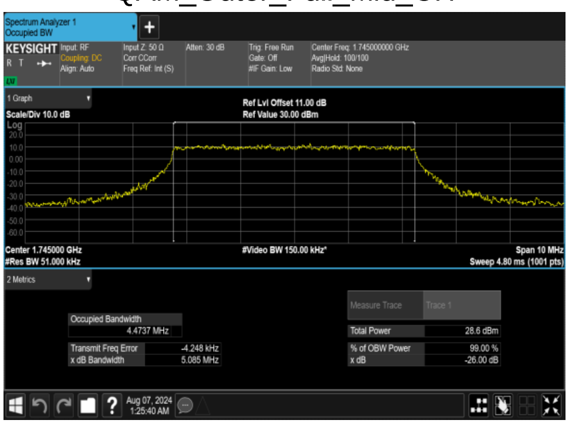
N66(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



N66(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N66(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



N66(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH