FCC RF Test Report

APPLICANT	: Sonim Technologies, Inc.
EQUIPMENT	: Smartphone
BRAND NAME	: Sonim
MODEL NAME	: X802
FCC ID	: WYPS3111
STANDARD	: 47 CFR Part 27(L), 27(N)
CLASSIFICATION	: PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S)	: Nov. 16, 2024 ~ May 08, 2025

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

This report contains data that were produced under subcontract by Sporton International Inc. (ShenZhen)

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

Sporton International Inc. (Kunshan)

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300

People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG4O2403M	Rev. 01	Initial issue of report	May 22, 2025

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	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	-	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	§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 32.84 dB at 1342.00 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

Sonim Technologies, Inc.
4445 Eastgate Mall,Suite200,San Diego,CA92121,USA

1.2 Manufacturer

Sonim Technologies, Inc.
4445 Eastgate Mall,Suite200,San Diego,CA92121,USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Brand Name	Sonim
Model Name	X802
FCC ID	WYPS3111
HW Version	V1.0
SW Version	X80.0-01-14.0-42.18.00
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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 n70 : 5MHz / 10MHz / 15MHz n71 : 5MHz / 10MHz / 15MHz / 20MHz
SCS	15kHz,
Antenna Gain	**<Ant. 2>:** n66 : -0.18 dBi **<Ant. 5>:** n70 : -3.02 dBi **<Ant. 1>:** n71 : -6.75 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. 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 for n66/n71.
2. The device supports two PAs for 5G NR n66 (main PA, and other PA for NSA mode only), both the

PAs are full tested, only the worst EIRP are shown in the report.

3. All the supported ENDC combinations are verified conducted power, only the ENDC combination with highest power are shown in the report.
4. The EN-DC mode combination could be referred to the product spec.

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP and Emission Designator

5G NR n66		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)
5	1712.5 ~ 1777.5	0.2455	4M48G7D	0.1919	4M49W7D
10	1715.0 ~ 1775.0	0.2366	9M28G7D	0.1879	9M29W7D
15	1717.5 ~ 1772.5	0.2495	14M1G7D	0.1959	14M1W7D
20	1720.0 ~ 1770.0	0.2477	18M9G7D	0.1941	19M0W7D
25	1722.5 ~ 1767.5	0.2518	23M7G7D	0.2000	23M7W7D
30	1725.0 ~ 1765.0	0.2512	28M6G7D	0.1959	28M6W7D

5G NR n70		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)
5	1697.5 ~ 1707.5	0.0710	4M46G7D	0.0592	4M49W7D
10	1700.0 ~ 1705.0	0.0695	9M28G7D	0.0579	9M28W7D
15	1702.5	0.0721	14M1G7D	0.0594	14M1W7D

5G NR n71		PI/2 BPSK / QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.0345	4M46G7D	0.0274	4M48W7D
10	668.0 ~ 693.0	0.0351	9M25G7D	0.0275	9M26W7D
15	670.5 ~ 690.5	0.0352	14M0G7D	0.0277	14M1W7D
20	673.0 ~ 688.0	0.0352	18M8G7D	0.0280	18M9W7D

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

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

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	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.**
	03CH01-SZ	CN1256	421272

Test data subcontracted: Radiated Spurious Emission test case in section 4.4 of this report

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-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(L), 27(N)
- 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 were recorded in this report.

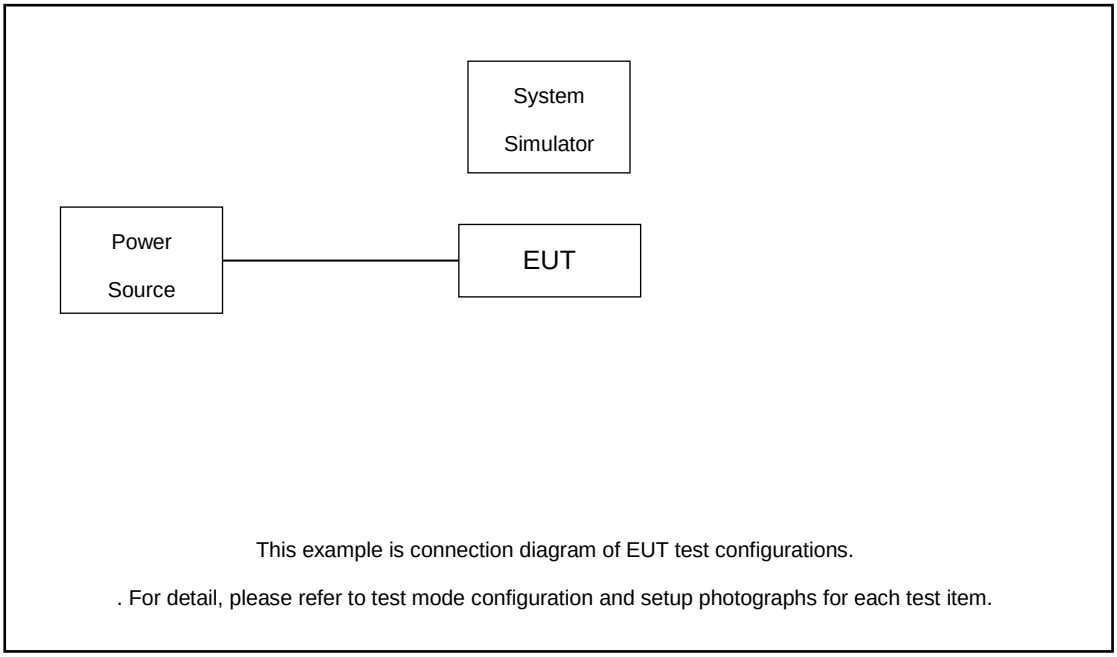
The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	45	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
	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	
	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

Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #		Test Channel		
		5	10	15	20	25	30	35	40	45	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H
Frequency Stability	n66				v			-	-	-	-	-	-	-		v					v		v	
	n70		v		-	-	-	-	-	-	-	-	-	-		v					v		v	
	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
	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	v	v
	n70	Worst Case																				v	v	v
	n71	Worst Case																				v	v	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 = 3.87V ；Low Voltage =3.65V.；High Voltage =4.45V																							

2.2 Connection Diagram of Test System



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

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.0 dB and 20dB attenuator.

Example :

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

= 4.0 + 20 = 24.0 (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**
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

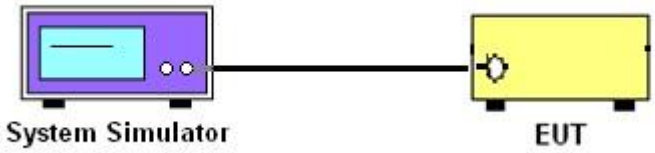
3 Conducted Test Items

3.1 Measuring Instruments

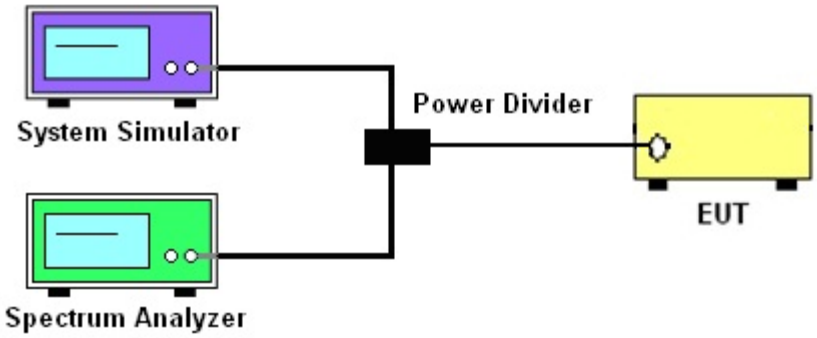
See list of measuring instruments of this test report.

3.2 Test Setup

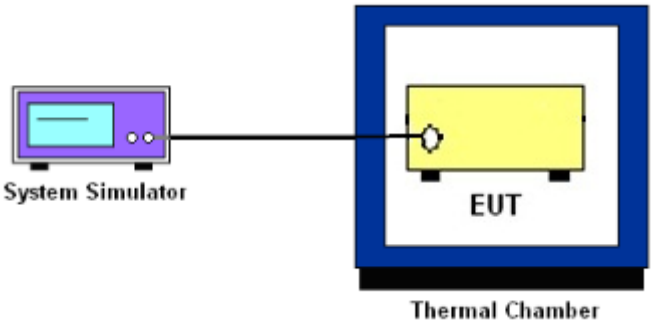
3.2.1 Conducted Output Power



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 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 power divider. The path loss was compensated to the results for each measurement.
   Path Loss Factor = Cable + Power Divider, Where the cable and power divider are the total path loss for the system calibration.
4. The low/middle/high 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.

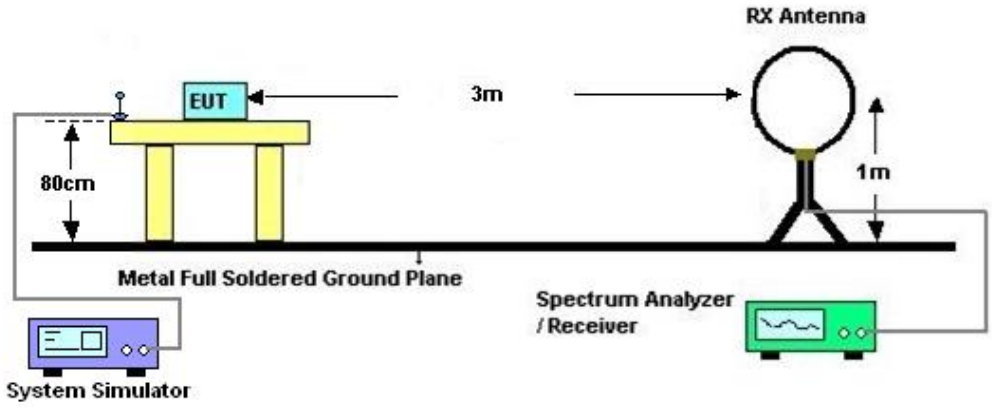
4 Radiated Test Items

4.1 Measuring Instruments

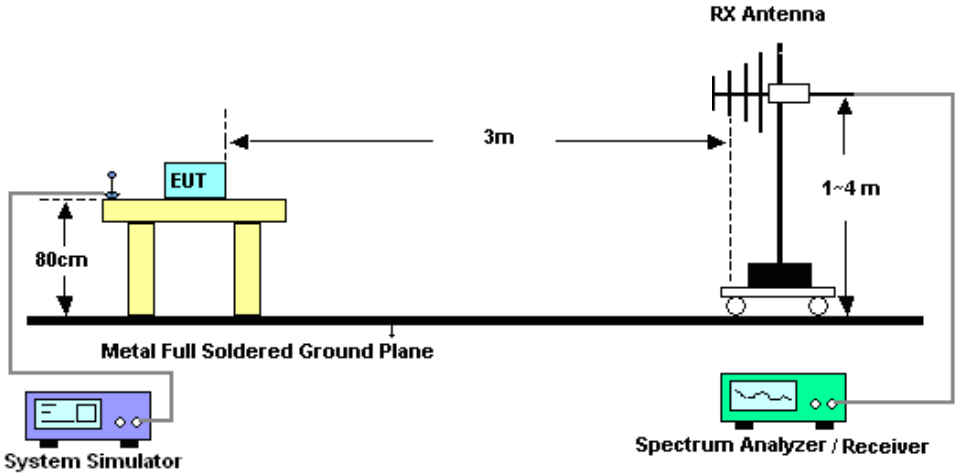
See list of measuring instruments of this test report.

4.2 Test Setup

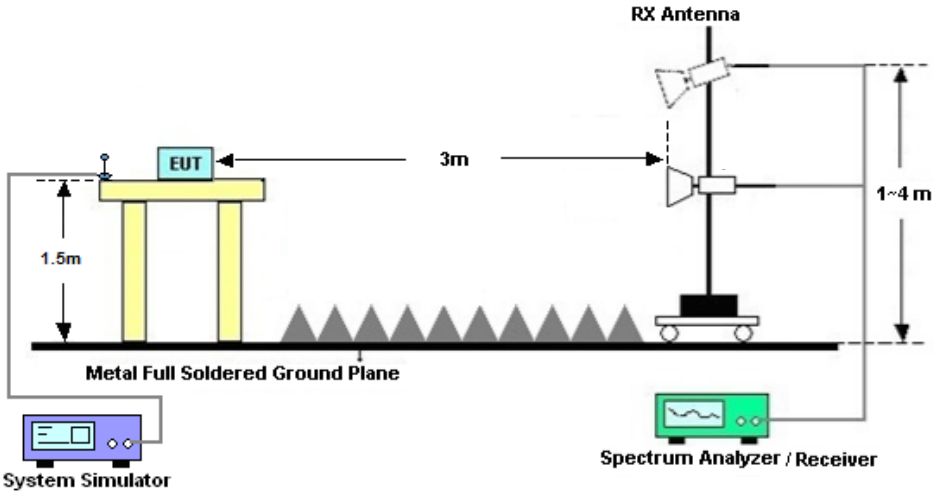
4.2.1 For radiated test below 30MHz



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	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 16, 2024~ May 08, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Nov. 16, 2024~ May 08, 2025	NCR	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Nov. 16, 2024~ May 08, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY551502213	10Hz~44GHz	Jul. 03, 2024	Feb. 10, 2025	Jul. 02, 2025	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Feb. 10, 2025	Dec. 27, 2025	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY532701005	0.5GHz~26.5Ghz	Oct. 14, 2024	Feb. 10, 2025	Oct. 13, 2025	Radiation (03CH01-SZ
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Feb. 10, 2025	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Feb. 10, 2025	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Feb. 10, 2025	Apr. 08, 2025	Radiation (03CH01-SZ)
LF Amplifier	EM Electronics	EM330	060788	20MHz-3GHz	Dec. 25, 2024	Feb. 10, 2025	Dec. 24, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Feb. 10, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Feb. 10, 2025	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 14, 2024	Feb. 10, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 10, 2025	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 10, 2025	NCR	Radiation (03CH01-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	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.90 dB
Frequency Stability	±0.04ppm

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

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

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

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

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

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

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

Appendix A. Test Results of Conducted Test

Test Engineer :	Simle Wang	**Temperature :**	22~23℃
		Relative Humidity :	40~42%

Software Version: 23.06.1602

FR1 N66 ANT2

Transmitter Conducted Output Power And EIRP, (G_T - L_C)=-0.18dB

NR Band	SCS	BandWidth	Arfcn	Freq(MHz)	Modulation	RB	Conducted Power(dBm)	EIRP(dBm)	EIRP(W)
66	15	30	345000	1725	DFT-s-OFDM PI/2 BPSK	80@40	23.90	23.72	0.2355
66	15	30	345000	1725	DFT-s-OFDM PI/2 BPSK	1@1	22.92	22.74	0.1879
66	15	30	345000	1725	DFT-s-OFDM PI/2 BPSK	1@158	23.85	23.67	0.2328
66	15	30	345000	1725	DFT-s-OFDM QPSK	80@40	23.44	23.26	0.2118
66	15	30	345000	1725	DFT-s-OFDM QPSK	1@1	22.73	22.55	0.1799
66	15	30	345000	1725	DFT-s-OFDM QPSK	1@158	23.67	23.49	0.2234
66	15	30	345000	1725	DFT-s-OFDM 16 QAM	80@40	22.52	22.34	0.1714
66	15	30	345000	1725	DFT-s-OFDM 16 QAM	1@1	21.79	21.61	0.1449
66	15	30	345000	1725	DFT-s-OFDM 16 QAM	1@158	22.85	22.67	0.1849
66	15	30	345000	1725	DFT-s-OFDM 64 QAM	80@40	21.30	21.12	0.1294
66	15	30	345000	1725	DFT-s-OFDM 64 QAM	1@1	21.25	21.07	0.1279
66	15	30	345000	1725	DFT-s-OFDM 64 QAM	1@158	21.71	21.53	0.1422
66	15	30	345000	1725	DFT-s-OFDM 256 QAM	80@40	19.71	19.53	0.0897
66	15	30	345000	1725	DFT-s-OFDM 256 QAM	1@1	18.94	18.76	0.0752
66	15	30	345000	1725	DFT-s-OFDM 256 QAM	1@158	19.03	18.85	0.0767
66	15	30	345000	1725	CP-OFDM QPSK	80@40	22.04	21.86	0.1535
66	15	30	345000	1725	CP-OFDM QPSK	1@1	21.42	21.24	0.1330
66	15	30	345000	1725	CP-OFDM QPSK	1@158	22.43	22.25	0.1679
66	15	30	349000	1745	DFT-s-OFDM PI/2 BPSK	80@40	23.95	23.77	0.2382
66	15	30	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.82	23.64	0.2312
66	15	30	349000	1745	DFT-s-OFDM PI/2 BPSK	1@158	23.96	23.78	0.2388
66	15	30	349000	1745	DFT-s-OFDM QPSK	80@40	23.98	23.80	0.2399
66	15	30	349000	1745	DFT-s-OFDM QPSK	1@1	23.60	23.42	0.2198
66	15	30	349000	1745	DFT-s-OFDM QPSK	1@158	24.03	23.85	0.2427
66	15	30	349000	1745	DFT-s-OFDM 16 QAM	80@40	22.97	22.79	0.1901
66	15	30	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.67	22.49	0.1774
66	15	30	349000	1745	DFT-s-OFDM 16 QAM	1@158	22.98	22.80	0.1905
66	15	30	349000	1745	DFT-s-OFDM 64 QAM	80@40	21.51	21.33	0.1358
66	15	30	349000	1745	DFT-s-OFDM 64 QAM	1@1	21.69	21.51	0.1416
66	15	30	349000	1745	DFT-s-OFDM 64 QAM	1@158	21.74	21.56	0.1432
66	15	30	349000	1745	DFT-s-OFDM 256 QAM	80@40	19.55	19.37	0.0865

66	15	30	349000	1745	DFT-s-OFDM 256 QAM	1@1	19.11	18.93	0.0782
66	15	30	349000	1745	DFT-s-OFDM 256 QAM	1@158	19.07	18.89	0.0774
66	15	30	349000	1745	CP-OFDM QPSK	80@40	22.47	22.29	0.1694
66	15	30	349000	1745	CP-OFDM QPSK	1@1	22.44	22.26	0.1683
66	15	30	349000	1745	CP-OFDM QPSK	1@158	22.36	22.18	0.1652
66	15	30	353000	1765	DFT-s-OFDM PI/2 BPSK	80@40	24.18	24.00	0.2512
66	15	30	353000	1765	DFT-s-OFDM PI/2 BPSK	1@1	24.05	23.87	0.2438
66	15	30	353000	1765	DFT-s-OFDM PI/2 BPSK	1@158	24.02	23.84	0.2421
66	15	30	353000	1765	DFT-s-OFDM QPSK	80@40	24.09	23.91	0.2460
66	15	30	353000	1765	DFT-s-OFDM QPSK	1@1	24.11	23.93	0.2472
66	15	30	353000	1765	DFT-s-OFDM QPSK	1@158	24.11	23.93	0.2472
66	15	30	353000	1765	DFT-s-OFDM 16 QAM	80@40	23.10	22.92	0.1959
66	15	30	353000	1765	DFT-s-OFDM 16 QAM	1@1	23.03	22.85	0.1928
66	15	30	353000	1765	DFT-s-OFDM 16 QAM	1@158	23.10	22.92	0.1959
66	15	30	353000	1765	DFT-s-OFDM 64 QAM	80@40	21.63	21.45	0.1396
66	15	30	353000	1765	DFT-s-OFDM 64 QAM	1@1	21.64	21.46	0.1400
66	15	30	353000	1765	DFT-s-OFDM 64 QAM	1@158	21.84	21.66	0.1466
66	15	30	353000	1765	DFT-s-OFDM 256 QAM	80@40	19.78	19.60	0.0912
66	15	30	353000	1765	DFT-s-OFDM 256 QAM	1@1	19.18	19.00	0.0794
66	15	30	353000	1765	DFT-s-OFDM 256 QAM	1@158	19.22	19.04	0.0802
66	15	30	353000	1765	CP-OFDM QPSK	80@40	22.66	22.48	0.1770
66	15	30	353000	1765	CP-OFDM QPSK	1@1	22.59	22.41	0.1742
66	15	30	353000	1765	CP-OFDM QPSK	1@158	22.45	22.27	0.1687
66	15	5	342500	1712.5	DFT-s-OFDM PI/2 BPSK	1@1	23.50	23.32	0.2148
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@1	23.22	23.04	0.2014
66	15	5	342500	1712.5	DFT-s-OFDM 16 QAM	1@1	22.27	22.09	0.1618
66	15	5	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.85	23.67	0.2328
66	15	5	349000	1745	DFT-s-OFDM QPSK	1@1	23.90	23.72	0.2355
66	15	5	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.77	22.59	0.1816
66	15	5	355500	1777.5	DFT-s-OFDM PI/2 BPSK	1@1	24.08	23.90	0.2455
66	15	5	355500	1777.5	DFT-s-OFDM QPSK	1@1	24.08	23.90	0.2455
66	15	5	355500	1777.5	DFT-s-OFDM 16 QAM	1@1	23.01	22.83	0.1919
66	15	10	343000	1715	DFT-s-OFDM PI/2 BPSK	1@1	23.69	23.51	0.2244
66	15	10	343000	1715	DFT-s-OFDM QPSK	1@1	23.44	23.26	0.2118
66	15	10	343000	1715	DFT-s-OFDM 16 QAM	1@1	22.46	22.28	0.1690
66	15	10	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.76	23.58	0.2280
66	15	10	349000	1745	DFT-s-OFDM QPSK	1@1	23.90	23.72	0.2355

66	15	10	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.79	22.61	0.1824
66	15	10	355000	1775	DFT-s-OFDM PI/2 BPSK	1@1	23.92	23.74	0.2366
66	15	10	355000	1775	DFT-s-OFDM QPSK	1@1	23.91	23.73	0.2360
66	15	10	355000	1775	DFT-s-OFDM 16 QAM	1@1	22.92	22.74	0.1879
66	15	15	343500	1717.5	DFT-s-OFDM PI/2 BPSK	1@1	23.62	23.44	0.2208
66	15	15	343500	1717.5	DFT-s-OFDM QPSK	1@1	23.37	23.19	0.2084
66	15	15	343500	1717.5	DFT-s-OFDM 16 QAM	1@1	22.38	22.20	0.1660
66	15	15	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	24.01	23.83	0.2415
66	15	15	349000	1745	DFT-s-OFDM QPSK	1@1	24.11	23.93	0.2472
66	15	15	349000	1745	DFT-s-OFDM 16 QAM	1@1	23.00	22.82	0.1914
66	15	15	354500	1772.5	DFT-s-OFDM PI/2 BPSK	1@1	24.06	23.88	0.2443
66	15	15	354500	1772.5	DFT-s-OFDM QPSK	1@1	24.15	23.97	0.2495
66	15	15	354500	1772.5	DFT-s-OFDM 16 QAM	1@1	23.10	22.92	0.1959
66	15	20	344000	1720	DFT-s-OFDM PI/2 BPSK	1@1	23.61	23.43	0.2203
66	15	20	344000	1720	DFT-s-OFDM QPSK	1@1	23.35	23.17	0.2075
66	15	20	344000	1720	DFT-s-OFDM 16 QAM	1@1	22.38	22.20	0.1660
66	15	20	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	24.08	23.90	0.2455
66	15	20	349000	1745	DFT-s-OFDM QPSK	1@1	23.86	23.68	0.2333
66	15	20	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.90	22.72	0.1871
66	15	20	354000	1770	DFT-s-OFDM PI/2 BPSK	1@1	24.04	23.86	0.2432
66	15	20	354000	1770	DFT-s-OFDM QPSK	1@1	24.12	23.94	0.2477
66	15	20	354000	1770	DFT-s-OFDM 16 QAM	1@1	23.06	22.88	0.1941
66	15	25	344500	1722.5	DFT-s-OFDM PI/2 BPSK	1@1	23.12	22.94	0.1968
66	15	25	344500	1722.5	DFT-s-OFDM QPSK	1@1	22.86	22.68	0.1854
66	15	25	344500	1722.5	DFT-s-OFDM 16 QAM	1@1	21.86	21.68	0.1472
66	15	25	349000	1745	DFT-s-OFDM PI/2 BPSK	1@1	23.91	23.73	0.2360
66	15	25	349000	1745	DFT-s-OFDM QPSK	1@1	23.73	23.55	0.2265
66	15	25	349000	1745	DFT-s-OFDM 16 QAM	1@1	22.73	22.55	0.1799
66	15	25	353500	1767.5	DFT-s-OFDM PI/2 BPSK	1@1	24.19	24.01	0.2518
66	15	25	353500	1767.5	DFT-s-OFDM QPSK	1@1	24.18	24.00	0.2512
66	15	25	353500	1767.5	DFT-s-OFDM 16 QAM	1@1	23.19	23.01	0.2000

Frequency Stability

NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Deviation (ppm)	Verdict	Environment
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	0.0016	**PASS**	NV
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	-0.0019	**PASS**	LV
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	0.0022	**PASS**	HV
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	0.0025	**PASS**	-30℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	-0.0031	**PASS**	-20℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	0.0037	**PASS**	-10℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	0.0029	**PASS**	0℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	-0.0022	**PASS**	10℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	-0.0014	**PASS**	20℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	-0.0012	**PASS**	30℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	-0.0008	**PASS**	40℃
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	0.0051	**PASS**	50℃

Peak to Average Ratio

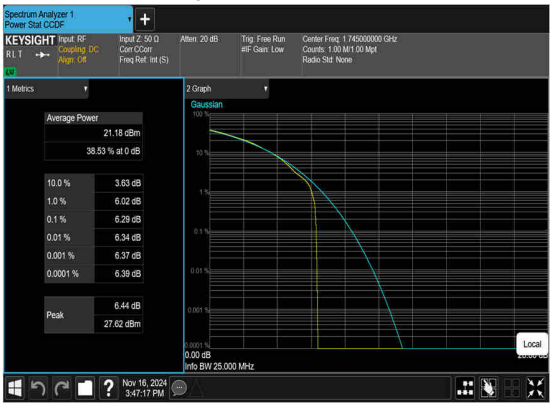
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	6.88	13	**PASS**
66	15	20	349000	1745.0	CP-OFDM QPSK	1@0	5.64	13	**PASS**
66	15	20	349000	1745.0	CP-OFDM 16 QAM	106@0	6.85	13	**PASS**
66	15	20	349000	1745.0	CP-OFDM 16 QAM	1@0	6.29	13	**PASS**

N66(20M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

N66(20M)_CP-OFDM_QPSK_Edge_1RB_Left_Mid_CH

N66(20M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

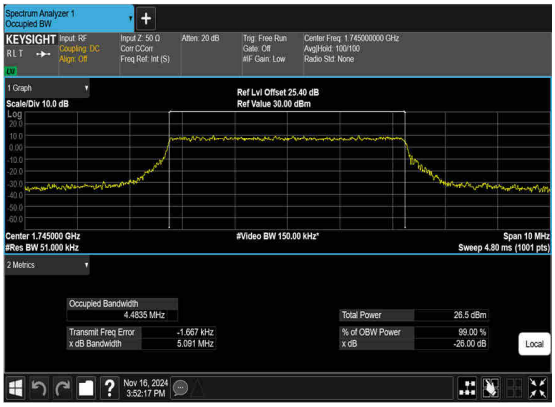
N66(20M)_CP-OFDM_16 QAM_Edge_1RB_Left_Mid_CH



Occupied Bandwidth

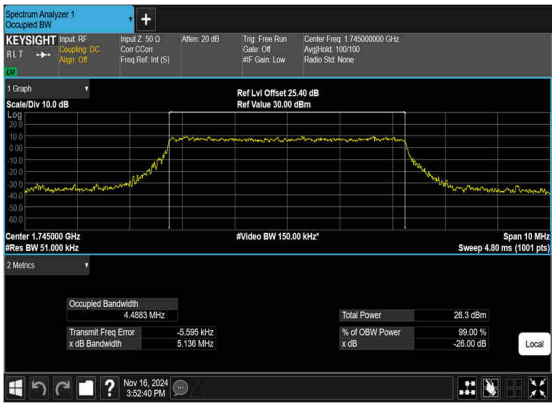
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
66	15	5	349000	1745.0	CP-OFDM QPSK	25@0	4.4835	5.091
66	15	5	349000	1745.0	CP-OFDM 16 QAM	25@0	4.4824	5.028
66	15	5	349000	1745.0	CP-OFDM 64 QAM	25@0	4.4883	5.136
66	15	5	349000	1745.0	CP-OFDM 256 QAM	25@0	4.472	5.046
66	15	10	349000	1745.0	CP-OFDM QPSK	52@0	9.2805	10.04
66	15	10	349000	1745.0	CP-OFDM 16 QAM	52@0	9.2726	9.974
66	15	10	349000	1745.0	CP-OFDM 64 QAM	52@0	9.2809	9.956
66	15	10	349000	1745.0	CP-OFDM 256 QAM	52@0	9.2855	9.865
66	15	15	349000	1745.0	CP-OFDM QPSK	79@0	14.087	14.85
66	15	15	349000	1745.0	CP-OFDM 16 QAM	79@0	14.08	14.92
66	15	15	349000	1745.0	CP-OFDM 64 QAM	79@0	14.114	14.87
66	15	15	349000	1745.0	CP-OFDM 256 QAM	79@0	14.097	14.86
66	15	20	349000	1745.0	CP-OFDM QPSK	106@0	18.926	19.89
66	15	20	349000	1745.0	CP-OFDM 16 QAM	106@0	18.906	19.94
66	15	20	349000	1745.0	CP-OFDM 64 QAM	106@0	18.922	19.78
66	15	20	349000	1745.0	CP-OFDM 256 QAM	106@0	18.95	19.82
66	15	25	349000	1745.0	CP-OFDM QPSK	133@0	23.722	24.9
66	15	25	349000	1745.0	CP-OFDM 16 QAM	133@0	23.771	24.7
66	15	25	349000	1745.0	CP-OFDM 64 QAM	133@0	23.725	24.88
66	15	25	349000	1745.0	CP-OFDM 256 QAM	133@0	23.718	24.81
66	15	30	349000	1745.0	CP-OFDM QPSK	160@0	28.566	29.63
66	15	30	349000	1745.0	CP-OFDM 16 QAM	160@0	28.557	29.6
66	15	30	349000	1745.0	CP-OFDM 64 QAM	160@0	28.52	29.67
66	15	30	349000	1745.0	CP-OFDM 256 QAM	160@0	28.52	29.65

N66(5M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

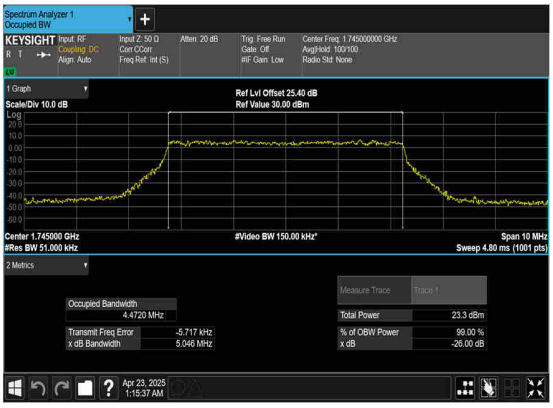


N66(5M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

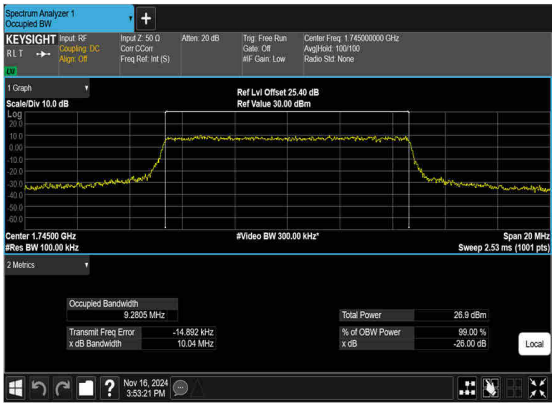
N66(5M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH



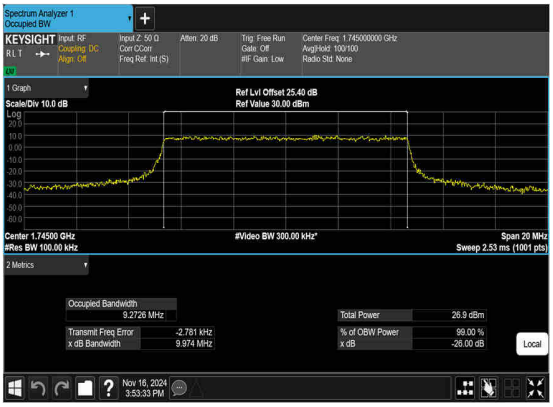
N66(5M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N66(10M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



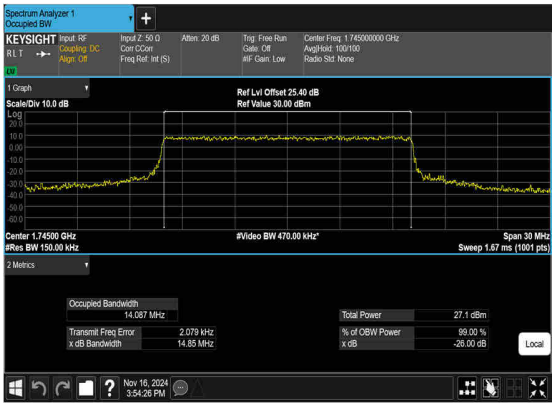
N66(10M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



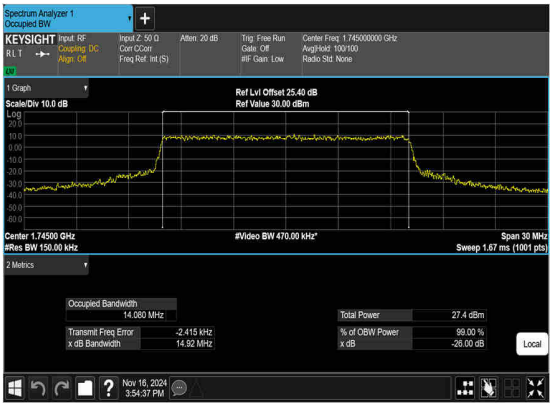
N66(10M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N66(10M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

N66(15M)_CP-OFDM_QPSK_Outer_Full_Mid_CH



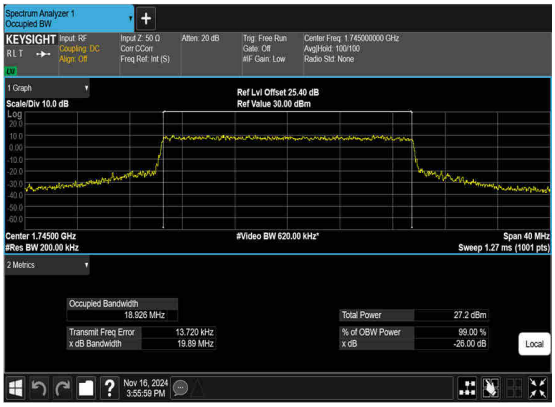
N66(15M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



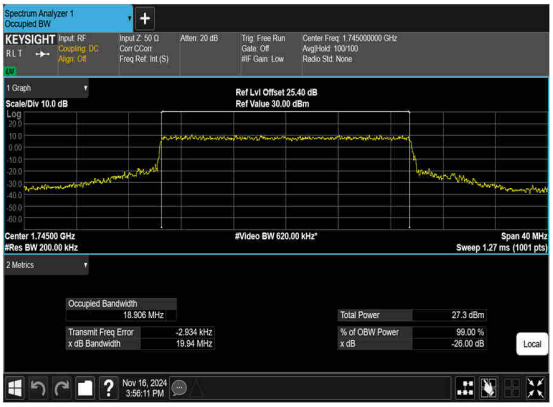
N66(15M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

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

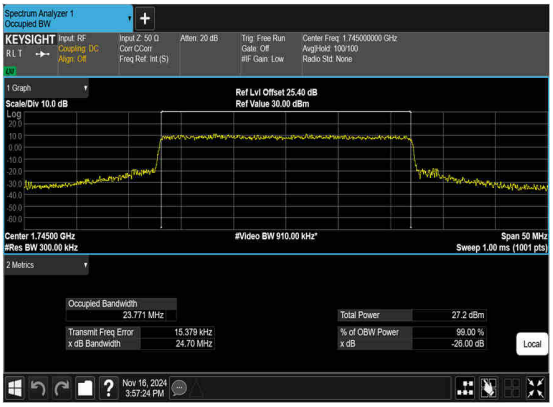


N66(20M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N66(20M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

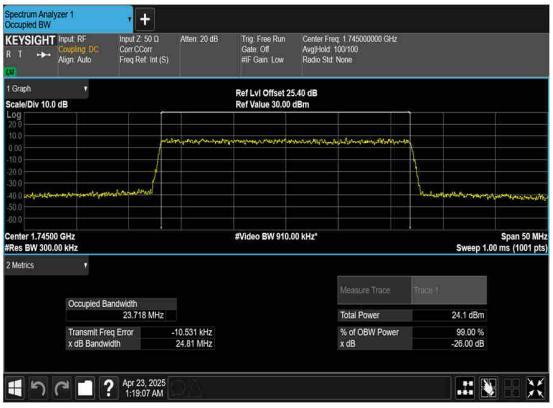
N66(25M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

N66(25M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH

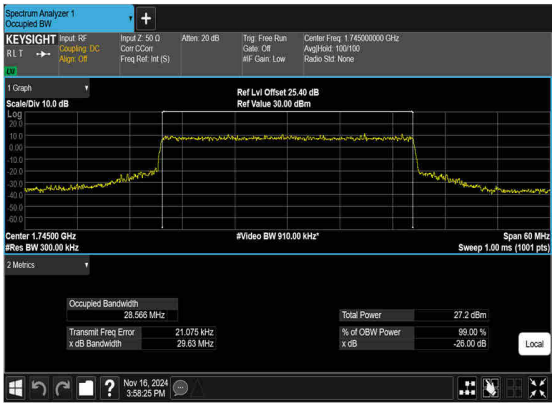


N66(25M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

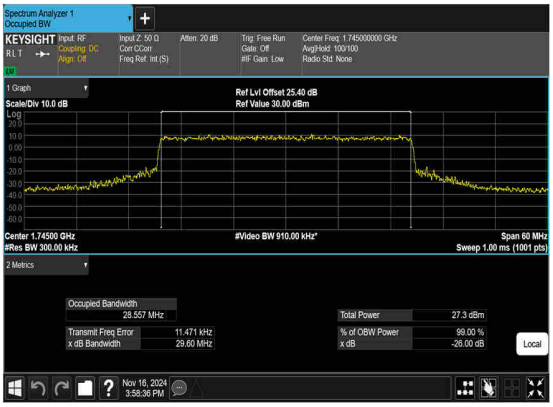
N66(25M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH



N66(30M)_CP-OFDM_QPSK_Outer_Full_Mid_CH

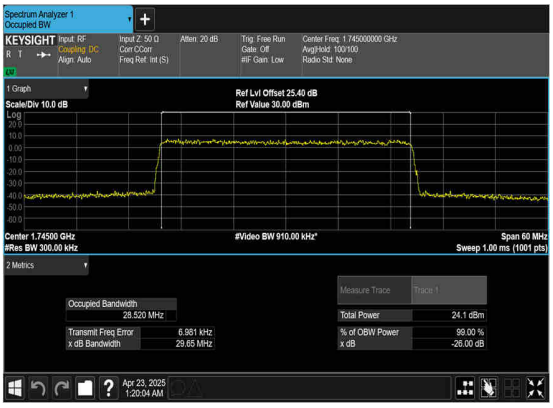


N66(30M)_CP-OFDM_16 QAM_Outer_Full_Mid_CH



N66(30M)_CP-OFDM_64 QAM_Outer_Full_Mid_CH

N66(30M)_CP-OFDM_256 QAM_Outer_Full_Mid_CH

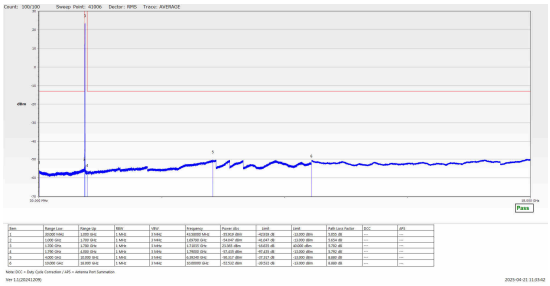


Conducted Spurious Emissions

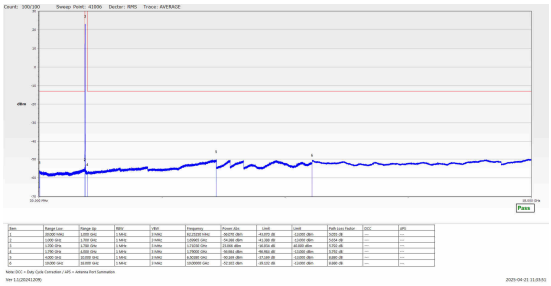
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	**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	30	345000	1725.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	30	345000	1725.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	30	345000	1725.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	30	345000	1725.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	30	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	30	349000	1745.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	30	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	30	349000	1745.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	30	353000	1765.0	DFT-s-OFDM BPSK	1@0	see graph	---
66	15	30	353000	1765.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	30	353000	1765.0	DFT-s-OFDM QPSK	1@0	see graph	---
66	15	30	353000	1765.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**

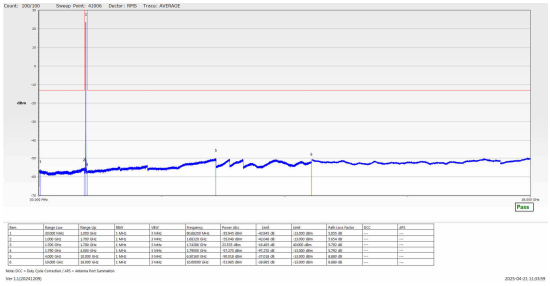
N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



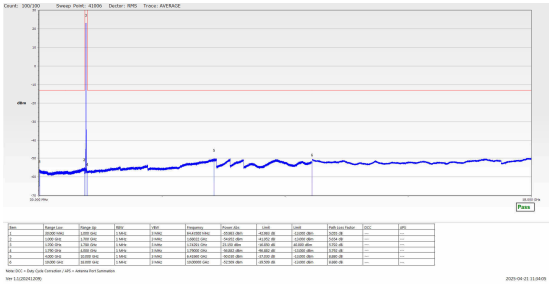
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



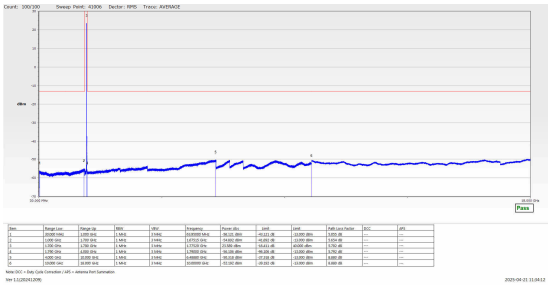
N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



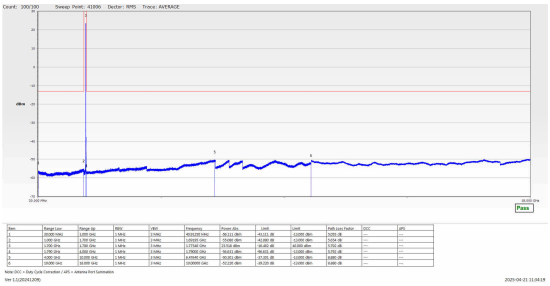
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



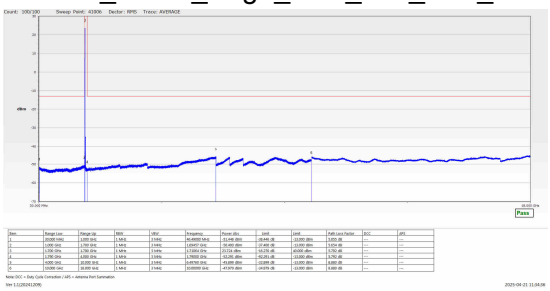
N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



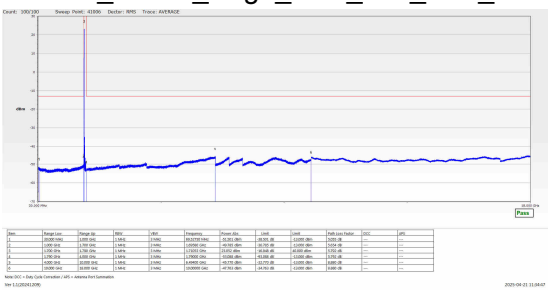
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



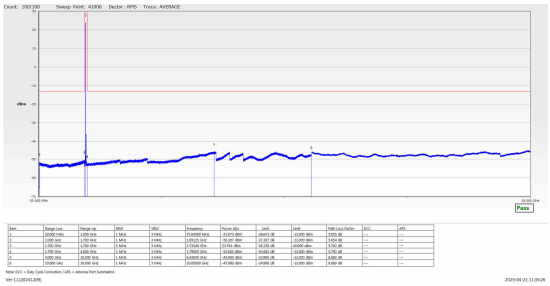
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



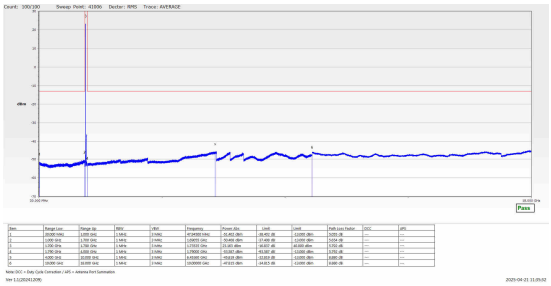
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



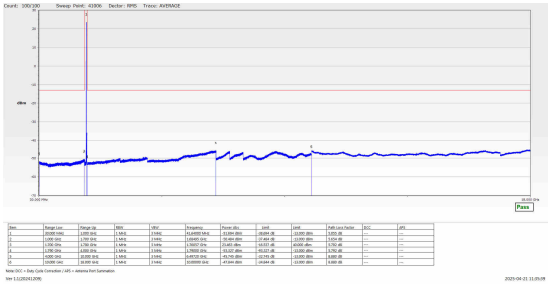
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



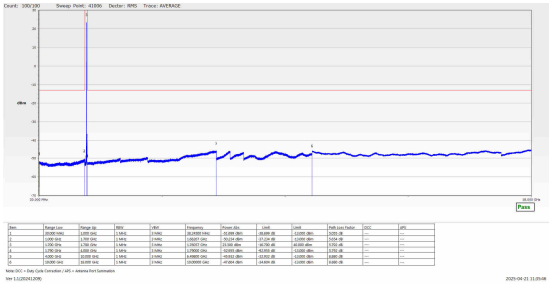
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



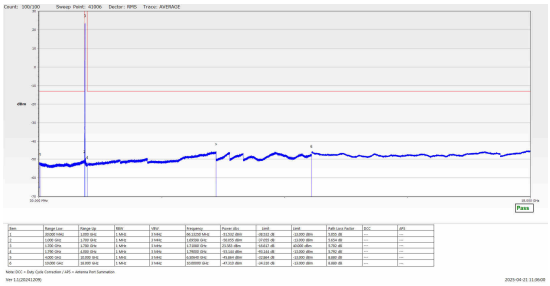
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



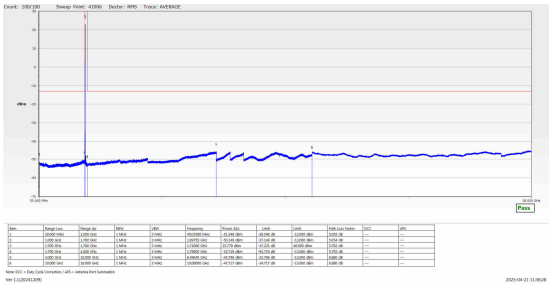
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH



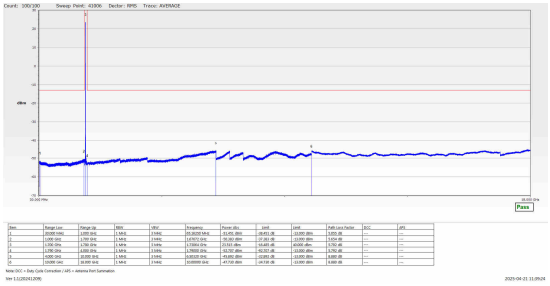
N66(30M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



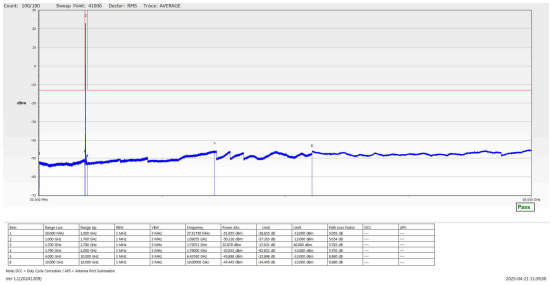
N66(30M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



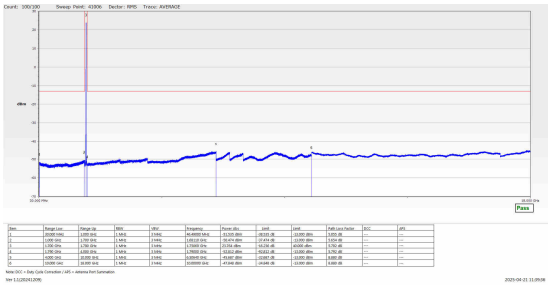
N66(30M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Mid_CH



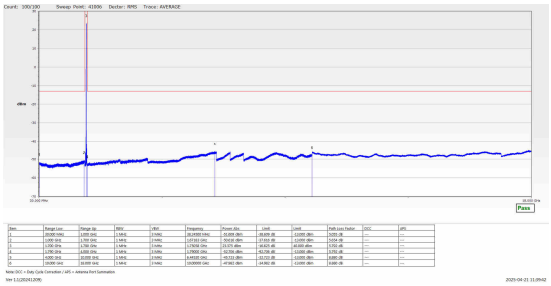
N66(30M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Mid_CH



N66(30M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_High_CH



N66(30M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_High_CH

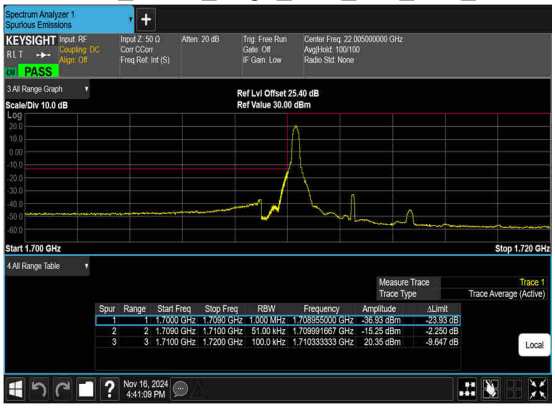


Conducted Band Edge

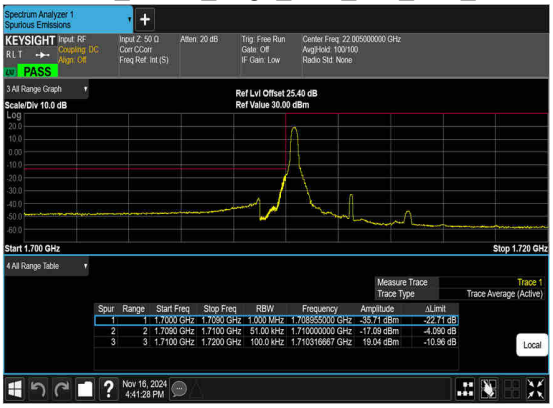
NR Band	SCS (kHz)	Bandwidth (MHz)	Arfcn	Freq (MHz)	Modulation	RB	Result	Verdict
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM BPSK	25@0	see graph	**PASS**
66	15	5	342500	1712.5	DFT-s-OFDM QPSK	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	30	345000	1725.0	DFT-s-OFDM BPSK	1@0	see graph	**PASS**
66	15	30	345000	1725.0	DFT-s-OFDM QPSK	1@0	see graph	**PASS**
66	15	30	345000	1725.0	DFT-s-OFDM BPSK	160@0	see graph	**PASS**
66	15	30	345000	1725.0	DFT-s-OFDM QPSK	160@0	see graph	**PASS**
66	15	30	353000	1765.0	DFT-s-OFDM BPSK	1@159	see graph	**PASS**
66	15	30	353000	1765.0	DFT-s-OFDM QPSK	1@159	see graph	**PASS**
66	15	30	353000	1765.0	DFT-s-OFDM BPSK	160@0	see graph	**PASS**
66	15	30	353000	1765.0	DFT-s-OFDM QPSK	160@0	see graph	**PASS**

N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



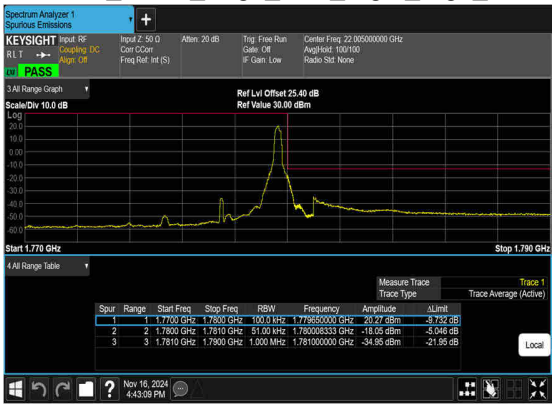
N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



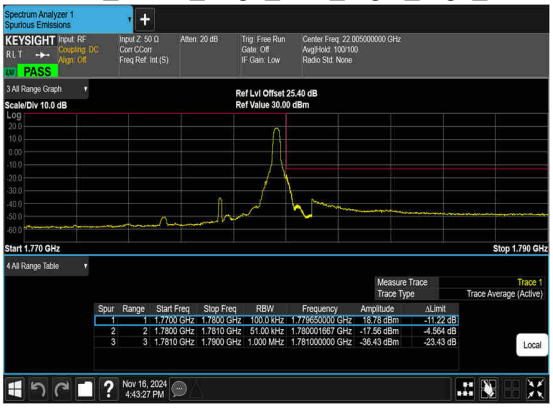
N66(5M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

N66(5M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

N66(5M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH

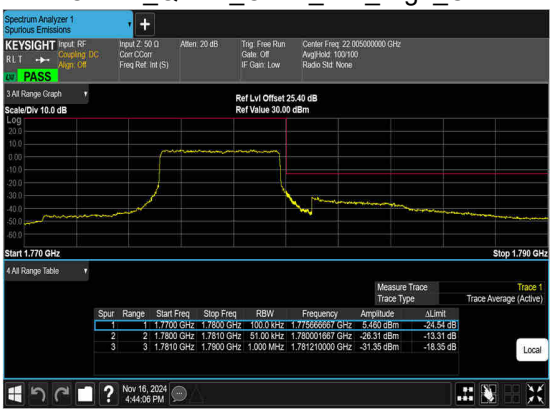


N66(5M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH

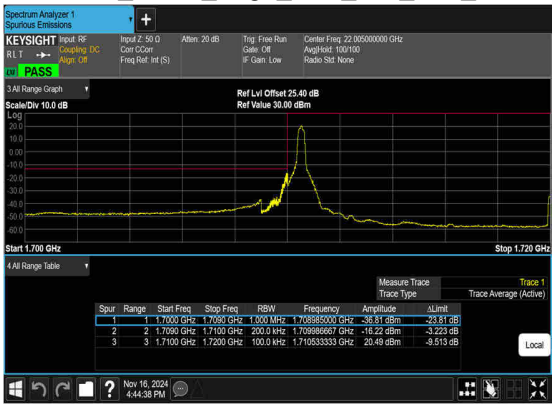


N66(5M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

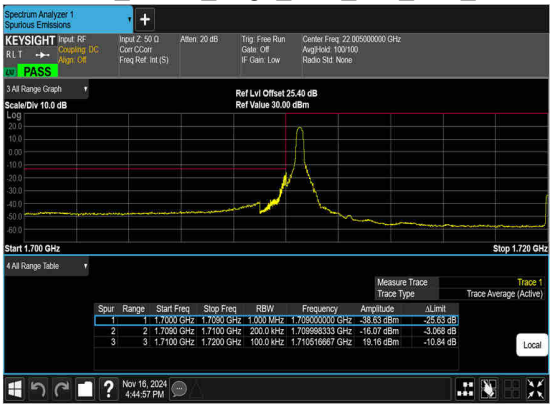
N66(5M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH



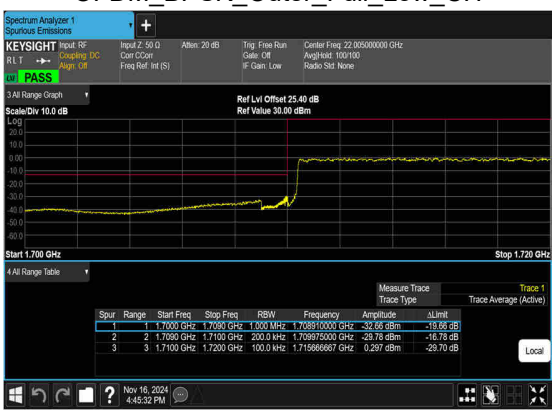
N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH

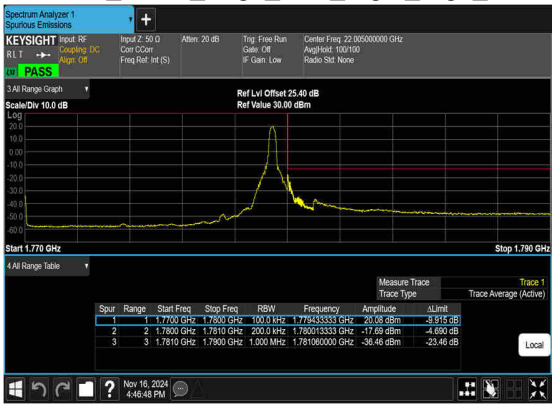


N66(20M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

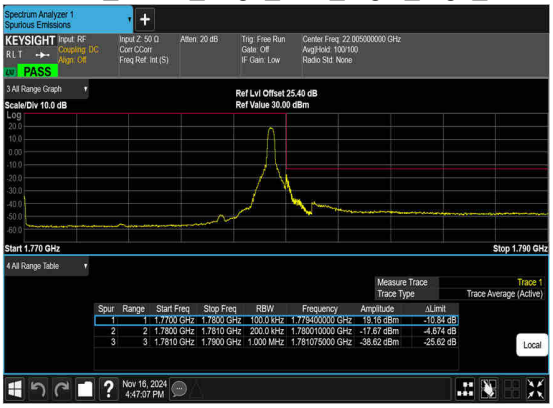


N66(20M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH

N66(20M)_DFT-s-OFDM_BPSK_Edge_1RB_Right_High_CH



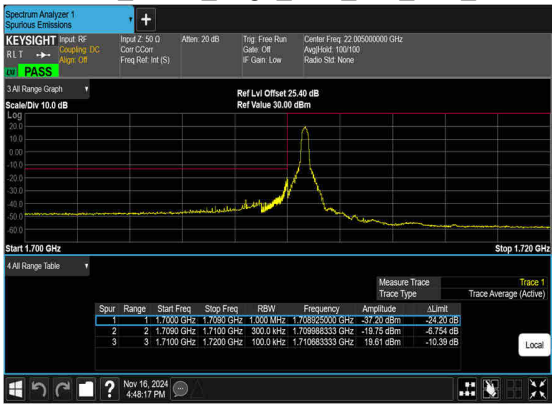
N66(20M)_DFT-s-OFDM_QPSK_Edge_1RB_Right_High_CH



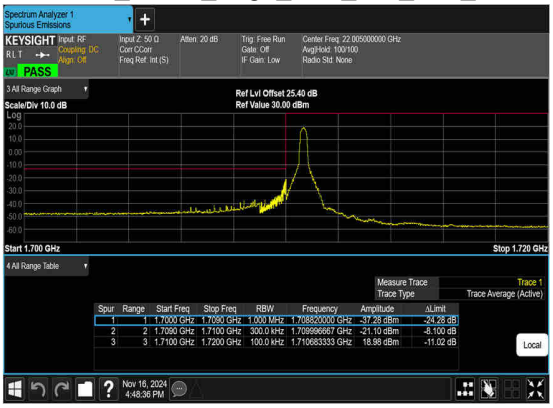
N66(20M)_DFT-s-OFDM_BPSK_Outer_Full_High_CH

N66(20M)_DFT-s-OFDM_QPSK_Outer_Full_High_CH

N66(30M)_DFT-s-OFDM_BPSK_Edge_1RB_Left_Low_CH



N66(30M)_DFT-s-OFDM_QPSK_Edge_1RB_Left_Low_CH



N66(30M)_DFT-s-OFDM_BPSK_Outer_Full_Low_CH

N66(30M)_DFT-s-OFDM_QPSK_Outer_Full_Low_CH