

TEST REPORT

FCC Sub6 n41 Test for TM19FNEUHD2
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2412-FC059

DATE OF ISSUE
December 20, 2024

Tested by
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Technical Manager
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Accredited by KOLAS, Republic of KOREA

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Applicant

LG Electronics Inc.

128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea

Product Name

Telematics

Model Name

TM19FNEUHD2

Date of Test

September 30, 2024 ~ December 16, 2024

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing

(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)

FCC ID

BEJTM19FNEUHD2

FCC Classification

PCS Licensed Transmitter (PCB)

Test Standard Used

FCC Rule Part(s) : § 27

Test Results

PASS

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	December 20, 2024	Initial Release

Notice

Content

The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S.C. 853(a)

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked *.

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.
(KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)

CONTENTS

1. GENERAL INFORMATION.....	5
1.1. MAXIMUM OUTPUT POWER	6
2. INTRODUCTION.....	8
2.1. DESCRIPTION OF EUT.....	8
2.2. MEASURING INSTRUMENT CALIBRATION	8
2.3. TEST FACILITY.....	8
3. DESCRIPTION OF TESTS	9
3.1 TEST PROCEDURE	9
3.2 CONDUCTED OUTPUT POWER.....	10
3.3 RADIATED POWER.....	11
3.4 RADIATED SPURIOUS EMISSIONS	12
3.5 PEAK- TO- AVERAGE RATIO	13
3.6 OCCUPIED BANDWIDTH.....	15
3.7 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL	16
3.7 BAND EDGE.....	17
3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE	19
3.9 WORST CASE(RADIATED TEST)	20
3.10 WORST CASE(CONDUCTED TEST)	21
4. LIST OF TEST EQUIPMENT	22
5. MEASUREMENT UNCERTAINTY	23
6. SUMMARY OF TEST RESULTS	24
7. SAMPLE CALCULATION	25
8. TEST DATA.....	27
8.1 Conducted Output Power.....	27
8.2 EQUIVALENT ISOTROPIC RADIATED POWER	36
8.3 RADIATED SPURIOUS EMISSIONS	45
8.4 PEAK-TO-AVERAGE RATIO	54
8.5 OCCUPIED BANDWIDTH	56
8.6 CONDUCTED SPURIOUS EMISSIONS.....	58
8.7 CHANNEL EDGE	59
8.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE	60
9. TEST PLOTS.....	69
10. ANNEX A_ TEST SETUP PHOTO.....	277

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	LG Electronics Inc.
Address:	128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
FCC ID:	BEJTM19FNEUHD2
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	§ 27
EUT Type:	Telematics
Model(s):	TM19FNEUHD2
SCS(kHz):	30
Bandwidth(MHz):	20,30,40,50,60,70,80,90,100
Waveform:	CP-OFDM, DFT-S-OFDM
Modulation:	DFT-S-OFDM: PI/2 BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM CP-OFDM: QPSK, 16 QAM, 64 QAM, 256 QAM
Tx Frequency:	2506.020 – 2679.990 : 20 MHz(Sub6 n41) 2511.000 – 2674.980 : 30 MHz(Sub6 n41) 2516.010 – 2670.000 : 40 MHz(Sub6 n41) 2521.020 – 2664.990 : 50 MHz(Sub6 n41) 2526.000 – 2659.980 : 60 MHz(Sub6 n41) 2531.010 – 2655.000 : 70 MHz(Sub6 n41) 2536.020 – 2649.990 : 80 MHz(Sub6 n41) 2541.000 – 2644.980 : 90 MHz(Sub6 n41) 2546.010 – 2640.000 : 100 MHz(Sub6 n41)
Date(s) of Tests:	September 30, 2024 ~ December 16, 2024
Serial number:	Radiated : Honda MY26 #22 Conducted : Honda MY26 #23
Antenna Information	Please refer to the Antenna Approval Specification document.

1.1. MAXIMUM OUTPUT POWER

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	Conducted Output Power	
				Max. Power (W)	Max. Power (dBm)
Sub6 n41 (20)	2506.020 – 2679.990	18M0G7D	PI/2 BPSK	0.187	22.71
		17M9G7D	QPSK	0.185	22.67
		17M9W7D	16QAM	0.142	21.53
		17M9W7D	64QAM	0.100	20.01
		17M9W7D	256QAM	0.064	18.08
Sub6 n41 (30)	2511.000 – 2674.980	26M9G7D	PI/2 BPSK	0.196	22.92
		26M9G7D	QPSK	0.195	22.90
		26M9W7D	16QAM	0.149	21.72
		26M9W7D	64QAM	0.105	20.20
		26M9W7D	256QAM	0.067	18.25
Sub6 n41 (40)	2516.010 – 2670.000	35M9G7D	PI/2 BPSK	0.192	22.83
		35M9G7D	QPSK	0.192	22.83
		35M8W7D	16QAM	0.148	21.69
		35M8W7D	64QAM	0.105	20.21
		35M8W7D	256QAM	0.066	18.20
Sub6 n41 (50)	2521.020 – 2664.990	45M9G7D	PI/2 BPSK	0.193	22.85
		45M8G7D	QPSK	0.192	22.83
		45M8W7D	16QAM	0.151	21.80
		45M8W7D	64QAM	0.107	20.31
		45M9W7D	256QAM	0.068	18.30
Sub6 n41 (60)	2526.000 – 2659.980	58M1G7D	PI/2 BPSK	0.189	22.77
		58M0G7D	QPSK	0.189	22.77
		58M0W7D	16QAM	0.149	21.72
		57M9W7D	64QAM	0.105	20.23
		57M9W7D	256QAM	0.067	18.23
Sub6 n41 (70)	2531.010 – 2655.000	64M6G7D	PI/2 BPSK	0.191	22.81
		64M6G7D	QPSK	0.189	22.77
		64M5W7D	16QAM	0.147	21.66
		64M5W7D	64QAM	0.105	20.21
		64M4W7D	256QAM	0.066	18.22
Sub6 n41 (80)	2536.020 – 2649.990	77M3G7D	PI/2 BPSK	0.193	22.85
		77M2G7D	QPSK	0.191	22.80
		77M2W7D	16QAM	0.150	21.77
		77M3W7D	64QAM	0.106	20.26
		77M3W7D	256QAM	0.067	18.27

Sub6 n41 (90)	2541.000 – 2644.980	87M0G7D	PI/2 BPSK	0.210	23.23
		87M0G7D	QPSK	0.209	23.21
		87M0W7D	16QAM	0.166	22.21
		86M8W7D	64QAM	0.119	20.74
		86M9W7D	256QAM	0.074	18.71
Sub6 n41 (100)	2546.010 – 2640.000	96M7G7D	PI/2 BPSK	0.209	23.20
		96M5G7D	QPSK	0.207	23.17
		96M4W7D	16QAM	0.165	22.17
		96M5W7D	64QAM	0.117	20.70
		96M5W7D	256QAM	0.074	18.70

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Telematics with GSM/GPRS/EGPRS/UMTS and LTE, Sub 6.

2.2. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

2.3. TEST FACILITY

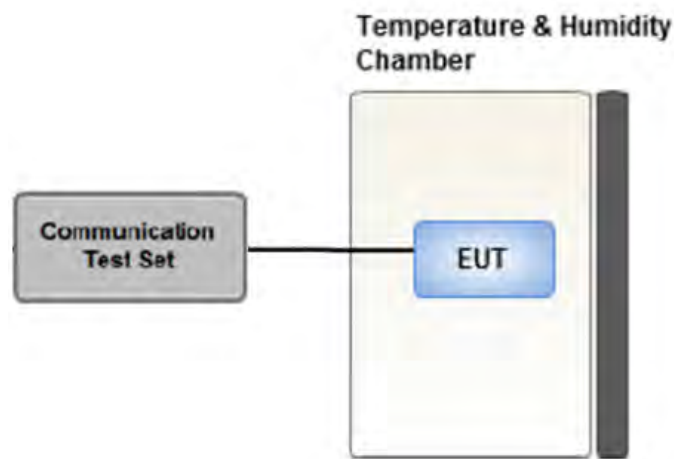
The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea**

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- KDB 971168 D01 v03r01 – Section 5.2
Peak- to- Average Ratio	- KDB 971168 D01 v03r01 – Section 5.7 - ANSI C63.26-2015 – Section 5.2.3.4
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Radiated Power	- ANSI C63.26-2015 – Section 5.2.4.4 - KDB 971168 D01 v03r01 – Section 5.8
Radiated Spurious and Harmonic Emissions	- ANSI C63.26-2015 – Section 5.5.3 - KDB 971168 D01 v03r01 – Section 5.8

3.2 CONDUCTED OUTPUT POWER



Test setup

Test Overview

When an average power meter is used to perform RF output power measurements, the fundamental condition that measurements be performed only over durations of active transmissions at maximum output power level applies.

Conducted Output Power was tested in accordance with KDB971168 D01 Power Meas License Digital Systems v03r01, Section 5.2.

3.3 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna.

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW, not to exceed 1 MHz
3. VBW $\geq$ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $>$ 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Note

1. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission.
2. A half wave dipole is then substituted in place of the EUT. For emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.

The power is calculated by the following formula;

$$P_d \text{ (dBm)} = P_g \text{ (dBm)} - \text{cable loss (dB)} + \text{antenna gain (dB)}$$

Where: P_d is the dipole equivalent power and P_g is the generator output power into the substitution antenna.

3. The maximum value is calculated by adding the forward power to the calibrated source plus its appropriate gain value.
These steps are repeated with the receiving antenna in both vertical and horizontal polarization. the difference between the gain of the horn and an isotropic antenna are taken into consideration
4. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
5. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

3.4 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method.

Test Settings

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
2. VBW $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $> 2 \times$ span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to 10th harmonics from 9 kHz.

Test Note

1. Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data
3. For spurious emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.

The spurious emissions is calculated by the following formula;

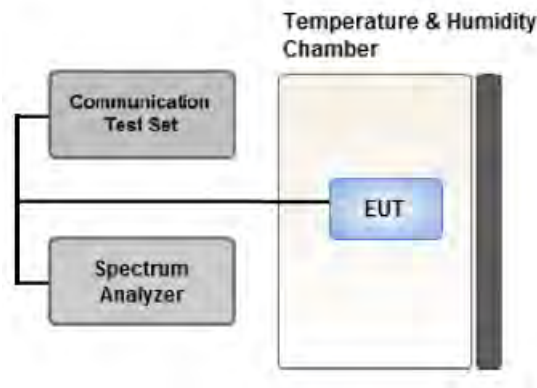
$$\text{Result}_{(\text{dBm})} = P_g_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

Where: P_g is the generator output power into the substitution antenna.

If the fundamental frequency is below 1 GHz, RF output power has been converted to EIRP.

$$\text{EIRP}_{(\text{dBm})} = \text{ERP}_{(\text{dBm})} + 2.15$$

3.5 PEAK- TO- AVERAGE RATIO



Test setup

① CCDF Procedure for PAPR

Test Settings

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:
 - .- for continuous transmissions, set to 1 ms,
 - .- or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
4. Record the maximum PAPR level associated with a probability of 0.1 %.

② Alternate Procedure for PAPR

Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as P_{Pk} .

Use one of the applicable procedures presented 5.2(ANSI C63.26-2015) to measure the total average power and record as P_{Avg} . Determine the P.A.R. from:

$$P.A.R. (dB) = P_{Pk} (dBm) - P_{Avg} (dBm) \quad (P_{Avg} = \text{Average Power} + \text{Duty cycle Factor})$$

Test Settings(Peak Power)

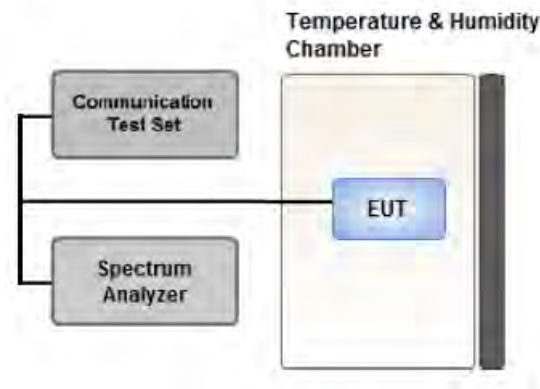
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW $\geq 3 \times$ RBW.

1. Set the RBW $\geq$ OBW.
2. Set VBW $\geq 3 \times$ RBW.
3. Set span $\geq 2 \times$ OBW.
4. Sweep time $\geq 10 \times$ (number of points in sweep) $\times$ (transmission symbol period).
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the peak amplitude level.

Test Settings(Average Power)

1. Set span to $2 \times$ to $3 \times$ the OBW.
2. Set RBW $\geq$ OBW.
3. Set VBW $\geq 3 \times$ RBW.
4. Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
5. Sweep time:
Set $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission period})]$ for single sweep (automation-compatible) measurement. The transmission period is the (on + off) time.
6. Detector = power averaging (rms).
7. Set sweep trigger to "free run."
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. (To accurately determine the average power over the on and off period of the transmitter, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.)
9. Use the peak marker function to determine the maximum amplitude level.
10. Add $[10 \log (1/\text{duty cycle})]$ to the measured maximum power level to compute the average power during continuous transmission. For example, add $[10 \log (1/0.25)] = 6$ dB if the duty cycle is a constant 25 %.

3.6 OCCUPIED BANDWIDTH.



Test setup

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 power of a given emission.

The EUT makes a call to the communication simulator.

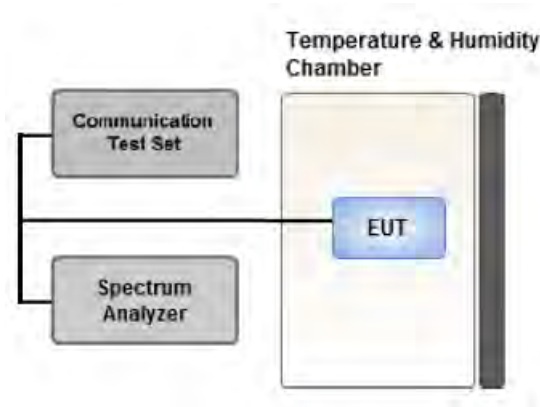
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99 % occupied bandwidth and the 26 dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5 % of the expected OBW
3. VBW $\geq$ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5 % of the 99 % occupied bandwidth observed in Step 7

3.7 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

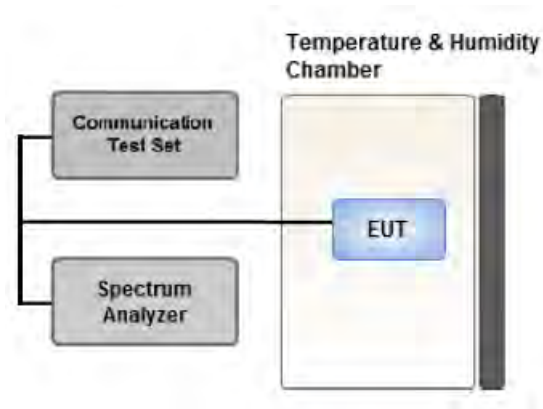
Test Overview

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Settings

1. RBW = 1 MHz
2. VBW $\geq$ 3 MHz
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep time = auto
6. Number of points in sweep $\geq$ 2 x Span / RBW

3.7 BAND EDGE



Test setup

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Settings

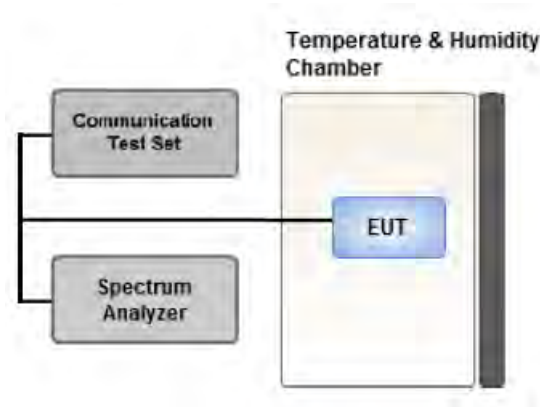
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Notes

1. The attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge,
2. $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge.
3. $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge.
4. The attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz.
5. $55 + 10 \log (P)$ dB at or below 2490.5 MHz.
6. X is the greater of 6MHz or the actual emission bandwidth
7. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer

Where Margin < 1 dB the emission level is either corrected by $10 \log(1 \text{ MHz} / \text{RB})$ or the emission is integrated over a 1 MHz bandwidth to determine the final result. When using the integration method the integration window is either centered on the emission or, for emissions at the band edge, centered by an offset of 500 kHz from the block edge so that the integration window is the 1 MHz adjacent to the block edge.

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.

The frequency stability of the transmitter is measured by:

1. Temperature:

The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.

2. Primary Supply Voltage:

- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
- 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.

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20 °C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter.
Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10 °C intervals ranging from -30 °C to +50 °C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

3.9 WORST CASE(RADIATED TEST)

- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
Mode : SA, NSA
Worst case : SA
- All simultaneous transmission scenarios of operation were investigated, and the test results showed no additional significant emissions relative to the least restrictive limit were observed.
Therefore, only the worst case(stand-alone) results were reported.
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.

[Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Equivalent Isotropic Radiated Power	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	See Section 8.2		Z
Radiated Spurious Emissions	PI/2 BPSK	See Section 8.3		Z

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
(Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
Mode : SA, NSA
Worst case : SA
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.

[Worst case]					
Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth, Peak-To-Average Ratio	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	20, 30, 40, 50, 60, 70, 80, 90, 100	Mid	Full RB	0
Channel Edge	PI/2 BPSK	20	Low	1	0
			High	1	50
		30	Low	1	0
			High	1	77
		40	Low	1	0
			High	1	105
		50	Low	1	0
			High	1	132
		60	Low	1	0
			High	1	161
		70	Low	1	0
			High	1	188
		80	Low	1	0
			High	1	216
		90	Low	1	0
			High	1	244
		100	Low	1	0
			High	1	272
		20, 30, 40, 50, 60, 70, 80, 90, 100	Low, Mid, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	20, 30, 40, 50, 60, 70, 80, 90, 100	Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Precision Dipole Antenna	UHAP	Schwarzbeck	01273	03/10/2026	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	02289	02/14/2026	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	04/27/2025	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/16/2025	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/09/2025	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/24/2025	Biennial
RF Switching System	FBSR-06B (1G HPF + LNA)	T&M SYSTEM	F3L1	05/14/2025	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/14/2025	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/14/2025	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/14/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/07/2025	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/26/2025	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/22/2025	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	02/29/2025	Annual
Chamber	SU-642	ESPEC	93008124	02/19/2025	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/04/2025	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/17/2025	Annual
Spectrum Analyzer (10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/13/2025	Annual
Signal & Spectrum Analyzer (2 Hz~67 GHz)	FSW67	REOHDE & SCHWARZ	101736	23/05/2025	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/16/2025	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/14/2025	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/17/2025	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/10/2025	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

- Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
- Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014.

All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty ($\pm$ dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.98 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.36 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.70 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.52 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.66 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (Above 40 GHz)	5.58 (Confidence level about 95 %, $k=2$)

6. SUMMARY OF TEST RESULTS

6.1 Test Condition : Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§ 2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 27.53(m)(4)	■ $< 40 + 10\log_{10} (P[\text{Watts}])$ at Channel edges ■ $< 43 + 10\log_{10} (P[\text{Watts}])$ between 5 and X MHz from Channel edges ■ $< 55 + 10\log_{10} (P[\text{Watts}])$ beyond X MHz beyond from Channel edges ■ $< 43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz	PASS
Conducted Output Power	§ 2.1046	N/A	PASS
Frequency stability / variation of ambient temperature	§ 2.1055, § 27.54	Emission must remain in band	PASS

Note:

1. Conducted test were tested using 5G Wireless Tester.

6.2 Test Condition : Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§ 27.50(h)(2)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 27.53(m)(4)	$< 55 + 10\log_{10} (P[\text{Watts}])$	PASS

Note:

1. Radiated tests were tested using 5G Wireless Tester.

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

Ch./ Freq.		Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol.	ERP	
channel	Freq.(MHz)						W	dBm
128	824.20	-21.37	38.40	-10.61	0.95	H	0.483	26.84

$$\text{ERP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
- 2) During the test, the turn table is rotated until the maximum signal is found.
- 3) Record the field strength meter's level.
- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
- 6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
20175	1,732.50	-15.75	18.45	9.90	1.76	H	0.456	26.59

$$\text{EIRP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
- 2) During the test, the turn table is rotated until the maximum signal is found.
- 3) Record the field strength meter's level.
- 4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
- 5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
- 6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

8. TEST DATA

8.1 Conducted Output Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						501204	518598	535998
						2506.02 MHz	2592.99 MHz	2679.99 MHz
20MHz	30	DFT-s	pi/2 BPSK	1	1	22.60	22.64	22.36
				1	26	22.56	22.51	22.25
				1	49	22.71	22.56	22.40
				25	0	22.21	22.14	21.86
				25	13	22.66	22.61	22.37
				25	26	22.21	22.11	21.93
				50	0	22.17	22.11	21.84
			QPSK	1	1	22.60	22.62	22.36
				1	26	22.52	22.50	22.24
				1	49	22.67	22.55	22.38
				25	0	21.68	21.65	21.40
				25	13	22.65	22.61	22.38
				25	26	21.73	21.60	21.45
				50	0	21.68	21.65	21.37
			16QAM	1	1	21.50	21.53	21.26
			64QAM	1	1	20.01	20.01	19.77
			256QAM	1	1	18.08	18.03	17.76
		CP	QPSK	1	1	21.12	21.04	20.84

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						502200	518598	534996
						2511 MHz	2592.99 MHz	2674.98 MHz
30MHz	30	DFT-s	pi/2 BPSK	1	1	22.81	22.74	22.57
				1	39	22.74	22.68	22.59
				1	76	22.92	22.75	22.70
				36	0	22.25	22.17	22.02
				36	21	22.80	22.72	22.50
				36	42	22.44	22.25	22.17
				75	0	22.32	22.25	22.05
			QPSK	1	1	22.77	22.71	22.54
				1	39	22.71	22.67	22.52
				1	76	22.90	22.74	22.65
				36	0	21.75	21.67	21.52
				36	21	22.79	22.70	22.48
				36	42	21.93	21.74	21.67
				75	0	21.85	21.75	21.55
			16QAM	1	1	21.72	21.64	21.56
			64QAM	1	1	20.20	20.18	20.07
			256QAM	1	1	18.25	18.17	18.05
		CP	QPSK	1	1	21.26	21.16	21.04

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						503202	518598	534000
						2516.01 MHz	2592.99 MHz	2670 MHz
40MHz	30	DFT-s	pi/2 BPSK	1	1	22.81	22.67	22.52
				1	53	22.62	22.66	22.42
				1	104	22.81	22.83	22.65
				50	0	22.33	22.24	22.03
				50	28	22.77	22.77	22.52
				50	56	22.34	22.28	22.14
				100	0	22.28	22.29	22.04
			QPSK	1	1	22.81	22.66	22.48
				1	53	22.62	22.66	22.39
				1	104	22.83	22.80	22.61
				50	0	21.83	21.72	21.54
				50	28	22.75	22.76	22.50
				50	56	21.84	21.78	21.65
				100	0	21.79	21.81	21.56
			16QAM	1	1	21.68	21.69	21.43
			64QAM	1	1	20.21	20.17	19.94
			256QAM	1	1	18.20	18.18	17.94
		CP	QPSK	1	1	21.15	21.24	20.92

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						504204	518598	532998
						2521.02 MHz	2592.99 MHz	2664.99 MHz
50MHz	30	DFT-s	pi/2 BPSK	1	1	22.77	22.62	22.31
				1	67	22.82	22.58	22.41
				1	131	22.82	22.65	22.57
				64	0	22.29	22.19	21.87
				64	35	22.85	22.65	22.47
				64	69	22.29	22.26	22.11
				128	0	22.27	22.19	21.99
			QPSK	1	1	22.74	22.60	22.29
				1	67	22.74	22.57	22.34
				1	131	22.76	22.64	22.54
				64	0	21.79	21.71	21.38
				64	35	22.83	22.64	22.43
				64	69	21.78	21.76	21.60
				128	0	21.75	21.68	21.48
			16QAM	1	1	21.80	21.61	21.38
			64QAM	1	1	20.31	20.09	19.89
			256QAM	1	1	18.30	18.06	17.94
		CP	QPSK	1	1	21.39	21.15	20.98

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						505200	518598	531996
						2526 MHz	2592.99 MHz	2659.98 MHz
60MHz	30	DFT-s	pi/2 BPSK	1	1	22.72	22.56	22.43
				1	81	22.72	22.65	22.41
				1	160	22.71	22.62	22.52
				81	0	22.29	22.18	21.92
				81	41	22.77	22.72	22.36
				81	81	22.27	22.30	21.96
				162	0	22.29	22.24	21.90
			QPSK	1	1	22.69	22.54	22.37
				1	81	22.69	22.62	22.33
				1	160	22.67	22.62	22.44
				81	0	21.77	21.66	21.42
				81	41	22.77	22.70	22.35
				81	81	21.79	21.78	21.46
				162	0	21.77	21.74	21.40
			16QAM	1	1	21.72	21.64	21.39
			64QAM	1	1	20.23	20.18	19.91
			256QAM	1	1	18.23	18.15	17.86
		CP	QPSK	1	1	21.27	21.18	20.89

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						506202	518598	531000
						2531.01 MHz	2592.99 MHz	2655.00 MHz
70MHz	30	DFT-s	pi/2 BPSK	1	1	22.75	22.53	22.56
				1	81	22.74	22.57	22.40
				1	160	22.72	22.64	22.50
				81	0	22.28	22.11	22.04
				81	41	22.81	22.66	22.48
				81	81	22.29	22.19	22.04
				162	0	22.30	22.17	22.03
			QPSK	1	1	22.73	22.52	22.59
				1	81	22.71	22.57	22.38
				1	160	22.71	22.61	22.50
				81	0	21.73	21.62	21.57
				81	41	22.77	22.37	22.49
				81	81	21.76	21.74	21.53
				162	0	21.76	21.67	21.54
			16QAM	1	1	21.66	21.54	21.63
			64QAM	1	1	20.21	20.07	20.07
			256QAM	1	1	18.22	18.08	18.08
		CP	QPSK	1	1	21.20	21.11	21.14

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						507204	518598	529998
						2536.02 MHz	2592.99 MHz	2649.99 MHz
80MHz	30	DFT-s	pi/2 BPSK	1	1	22.85	22.65	22.66
				1	109	22.72	22.72	22.49
				1	215	22.58	22.59	22.20
				108	0	22.27	22.13	22.10
				108	55	22.80	22.74	22.56
				108	109	22.20	22.27	22.09
				216	0	22.29	22.18	22.11
			QPSK	1	1	22.80	22.63	22.70
				1	109	22.71	22.68	22.47
				1	215	22.58	22.62	22.06
				108	0	21.74	21.63	21.59
				108	55	22.78	22.67	22.56
				108	109	21.71	21.76	21.60
				216	0	21.81	21.67	21.60
			16QAM	1	1	21.77	21.65	21.46
			64QAM	1	1	20.26	20.18	19.98
			256QAM	1	1	18.27	18.22	18.01
		CP	QPSK	1	1	21.30	21.33	21.04

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						508200	518598	528996
						2541 MHz	2592.99 MHz	2644.98 MHz
90MHz	30	DFT-s	pi/2 BPSK	1	1	22.84	22.62	22.62
				1	123	22.78	22.64	22.58
				1	243	22.69	22.59	22.13
				120	0	22.26	22.17	22.07
				120	63	22.79	22.68	22.53
				120	125	22.25	22.24	22.21
				243	0	22.31	22.16	22.11
			QPSK	1	1	22.77	22.63	22.65
				1	123	22.72	22.62	22.53
				1	243	22.65	22.64	22.10
				120	0	21.76	21.67	21.58
				120	63	22.79	22.68	22.53
				120	125	21.77	21.77	21.69
				243	0	21.78	21.66	21.59
			16QAM	1	1	21.78	21.63	21.51
			64QAM	1	1	20.29	20.15	19.99
			256QAM	1	1	18.25	18.14	18.10
		CP	QPSK	1	1	21.36	21.19	21.15

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power (dBm)		
						509202	518598	528000
						2546.01 MHz	2592.99 MHz	2640.0 MHz
100MHz	30	DFT-s	pi/2 BPSK	1	1	22.86	22.63	22.64
				1	137	22.67	22.62	22.46
				1	271	22.55	22.51	22.20
				135	0	22.32	22.19	22.19
				135	69	22.71	22.66	22.57
				135	138	22.01	22.24	22.15
				270	0	22.00	22.18	22.12
			QPSK	1	1	22.82	22.63	22.64
				1	137	22.62	22.61	22.45
				1	271	22.54	22.58	22.15
				135	0	21.73	21.70	21.68
				135	69	22.66	22.69	22.55
				135	138	21.52	21.72	21.65
				270	0	21.48	21.69	21.63
			16QAM	1	1	21.65	21.63	21.46
			64QAM	1	1	20.20	20.13	20.11
			256QAM	1	1	18.18	18.15	18.05
		CP	QPSK	1	1	21.12	21.13	21.03

8.2 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2506.020		PI/2 BPSK	-21.77	15.09	10.58	2.51	H		0.207	23.16	1	1
		QPSK	-21.81	15.05	10.58	2.51	H		0.205	23.12		
		16-QAM	-22.75	14.11	10.58	2.51	H		0.165	22.18		
		64-QAM	-24.28	12.58	10.58	2.51	H		0.116	20.65		
		256-QAM	-26.27	10.59	10.58	2.51	H		0.074	18.66		
2592.990	Sub6 n41 / 20 MHz [30 kHz]	PI/2 BPSK	-22.94	13.77	11.00	2.55	H	< 2.00	0.167	22.22	1	1
		QPSK	-22.97	13.74	11.00	2.55	H		0.166	22.19		
		16-QAM	-23.99	12.72	11.00	2.55	H		0.131	21.17		
		64-QAM	-24.36	12.35	11.00	2.55	H		0.120	20.80		
		256-QAM	-27.48	9.23	11.00	2.55	H		0.059	17.68		
2679.990		PI/2 BPSK	-23.93	13.74	10.84	2.61	H		0.157	21.97	1	1
		QPSK	-23.98	13.69	10.84	2.61	H		0.156	21.92		
		16-QAM	-24.99	12.68	10.84	2.61	H		0.123	20.91		
		64-QAM	-26.51	11.16	10.84	2.61	H		0.087	19.39		
		256-QAM	-28.48	9.19	10.84	2.61	H		0.055	17.42		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
2511.000		PI/2 BPSK	-21.38	15.54	10.55	2.51	H	< 2.00	0.228	23.58	1	76
		QPSK	-21.44	15.48	10.55	2.51	H		0.225	23.52		
		16-QAM	-22.41	14.51	10.55	2.51	H		0.180	22.55		
		64-QAM	-23.91	13.01	10.55	2.51	H		0.127	21.05		
		256-QAM	-25.90	11.02	10.55	2.51	H		0.081	19.06		
2592.990	Sub6 n41 / 30 MHz [30 kHz]	PI/2 BPSK	-22.57	14.14	11.00	2.55	H	< 2.00	0.182	22.59	1	1
		QPSK	-22.68	14.03	11.00	2.55	H		0.177	22.48		
		16-QAM	-23.49	13.22	11.00	2.55	H		0.147	21.67		
		64-QAM	-25.06	11.65	11.00	2.55	H		0.102	20.10		
		256-QAM	-27.05	9.66	11.00	2.55	H		0.065	18.11		
2674.980		PI/2 BPSK	-23.61	13.68	10.85	2.62	H	< 2.00	0.155	21.91	1	76
		QPSK	-23.65	13.64	10.85	2.62	H		0.154	21.87		
		16-QAM	-24.61	12.68	10.85	2.62	H		0.123	20.91		
		64-QAM	-26.11	11.18	10.85	2.62	H		0.087	19.41		
		256-QAM	-28.11	9.18	10.85	2.62	H		0.055	17.41		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
2516.010		PI/2 BPSK	-21.19	15.74	10.52	2.53	H	< 2.00	0.236	23.73	1	1
		QPSK	-21.28	15.65	10.52	2.53	H		0.231	23.64		
		16-QAM	-22.26	14.67	10.52	2.53	H		0.185	22.66		
		64-QAM	-23.74	13.19	10.52	2.53	H		0.131	21.18		
		256-QAM	-25.76	11.17	10.52	2.53	H		0.082	19.16		
2592.990	Sub6 n41 / 40 MHz [30 kHz]	-20.43	-22.50	14.21	11.00	2.55	H	< 2.00	0.185	22.66	1	1
		-20.50	-22.56	14.15	11.00	2.55	H		0.182	22.60		
		-21.70	-23.51	13.20	11.00	2.55	H		0.146	21.65		
		-22.96	-25.03	11.68	11.00	2.55	H		0.103	20.13		
		-25.24	-27.02	9.69	11.00	2.55	H		0.065	18.14		
2670.000		PI/2 BPSK	-23.46	13.44	10.87	2.62	H	< 2.00	0.148	21.69	1	104
		QPSK	-23.49	13.41	10.87	2.62	H		0.147	21.66		
		16-QAM	-24.47	12.43	10.87	2.62	H		0.117	20.68		
		64-QAM	-25.94	10.96	10.87	2.62	H		0.083	19.21		
		256-QAM	-27.97	8.93	10.87	2.62	H		0.052	17.18		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2521.020	Sub6 n41 / 50 MHz [30 kHz]	PI/2 BPSK	-21.27	15.66	10.49	2.54	H	< 2.00	0.230	23.61	1	1
		QPSK	-21.31	15.62	10.49	2.54	H		0.228	23.57		
		16-QAM	-22.26	14.67	10.49	2.54	H		0.183	22.62		
		64-QAM	-23.79	13.14	10.49	2.54	H		0.129	21.09		
		256-QAM	-25.77	11.16	10.49	2.54	H		0.082	19.11		
2592.990		-20.43	-22.65	14.06	11.00	2.55	H		0.178	22.51	1	1
		-20.50	-22.72	13.99	11.00	2.55	H		0.175	22.44		
		-21.70	-23.67	13.04	11.00	2.55	H		0.141	21.49		
		-22.96	-25.16	11.55	11.00	2.55	H		0.100	20.00		
		-25.24	-27.16	9.55	11.00	2.55	H		0.063	18.00		
2664.990		PI/2 BPSK	-23.62	13.33	10.88	2.64	H	< 2.00	0.144	21.57	1	131
		QPSK	-23.65	13.30	10.88	2.64	H		0.143	21.54		
		16-QAM	-24.61	12.34	10.88	2.64	H		0.114	20.58		
		64-QAM	-26.10	10.85	10.88	2.64	H		0.081	19.09		
		256-QAM	-28.11	8.84	10.88	2.64	H		0.051	17.08		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2526.000	Sub6 41/ 60 MHz [30 kHz]	PI/2 BPSK	-21.40	15.23	10.52	2.54	H	<2.00	0.209	23.21	1	1
		QPSK	-21.42	15.21	10.52	2.54	H		0.208	23.19		
		16-QAM	-22.38	14.25	10.52	2.54	H		0.167	22.23		
		64-QAM	-23.88	12.75	10.52	2.54	H		0.118	20.73		
		256-QAM	-25.88	10.75	10.52	2.54	H		0.075	18.73		
2592.990		PI/2 BPSK	-22.49	14.22	11.00	2.55	H		0.185	22.67	1	1
		QPSK	-22.55	14.16	11.00	2.55	H		0.182	22.61		
		16-QAM	-23.45	13.26	11.00	2.55	H		0.148	21.71		
		64-QAM	-24.98	11.73	11.00	2.55	H		0.104	20.18		
		256-QAM	-26.97	9.74	11.00	2.55	H		0.066	18.19		
2659.980		PI/2 BPSK	-23.80	13.21	10.90	2.67	H		0.139	21.44	1	1
		QPSK	-23.85	13.16	10.90	2.67	H		0.138	21.39		
		16-QAM	-24.79	12.22	10.90	2.67	H		0.111	20.45		
		64-QAM	-26.31	10.70	10.90	2.67	H		0.078	18.93		
		256-QAM	-28.31	8.70	10.90	2.67	H		0.049	16.93		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	W dBm	Size	Offset
2531.010		PI/2 BPSK	-21.26	15.07	10.56	2.54	H		0.204	23.09	1	1
		QPSK	-21.31	15.02	10.56	2.54	H		0.201	23.04		
		16-QAM	-22.30	14.03	10.56	2.54	H		0.160	22.05		
		64-QAM	-23.77	12.56	10.56	2.54	H		0.114	20.58		
		256-QAM	-25.78	10.55	10.56	2.54	H		0.072	18.57		
2592.990	Sub6 41/ 70 MHz [30 kHz]	PI/2 BPSK	-22.61	14.10	11.00	2.55	H	< 2.00	0.180	22.55	1	1
		QPSK	-22.65	14.06	11.00	2.55	H		0.178	22.51		
		16-QAM	-23.57	13.14	11.00	2.55	H		0.144	21.59		
		64-QAM	-25.10	11.61	11.00	2.55	H		0.101	20.06		
		256-QAM	-27.12	9.59	11.00	2.55	H		0.064	18.04		
2655.000		PI/2 BPSK	-23.22	13.69	10.91	2.68	H		0.156	21.92	1	1
		QPSK	-23.25	13.66	10.91	2.68	H		0.155	21.89		
		16-QAM	-24.21	12.70	10.91	2.68	H		0.124	20.93		
		64-QAM	-25.73	11.18	10.91	2.68	H		0.087	19.41		
		256-QAM	-27.74	9.17	10.91	2.68	H		0.055	17.40		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2536.020	Sub6 41/ 80 MHz [30 kHz]	PI/2 BPSK	-21.42	15.04	10.59	2.54	H	< 2.00	0.204	23.09	1	1
		QPSK	-21.46	15.00	10.59	2.54	H		0.202	23.05		
		16-QAM	-22.44	14.02	10.59	2.54	H		0.161	22.07		
		64-QAM	-23.92	12.54	10.59	2.54	H		0.115	20.59		
		256-QAM	-25.92	10.54	10.59	2.54	H		0.072	18.59		
2592.990		PI/2 BPSK	-22.85	13.86	11.00	2.55	H		0.170	22.31	1	1
		QPSK	-22.87	13.84	11.00	2.55	H		0.169	22.29		
		16-QAM	-23.84	12.87	11.00	2.55	H		0.136	21.32		
		64-QAM	-25.32	11.39	11.00	2.55	H		0.096	19.84		
		256-QAM	-27.32	9.39	11.00	2.55	H		0.061	17.84		
2649.990		PI/2 BPSK	-22.91	13.88	10.93	2.69	H		0.163	22.12	1	1
		QPSK	-22.95	13.84	10.93	2.69	H		0.161	22.08		
		16-QAM	-23.90	12.89	10.93	2.69	H		0.130	21.13		
		64-QAM	-25.37	11.42	10.93	2.69	H		0.093	19.66		
		256-QAM	-27.41	9.38	10.93	2.69	H		0.058	17.62		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBi)	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)					W	W dBm	Size	Offset
2541.000		PI/2 BPSK	-21.44	15.14	10.62	2.53	H		0.210	23.23	1	1
		QPSK	-21.46	15.12	10.62	2.53	H		0.209	23.21		
		16-QAM	-22.46	14.12	10.62	2.53	H		0.166	22.21		
		64-QAM	-23.93	12.65	10.62	2.53	H		0.119	20.74		
		256-QAM	-25.96	10.62	10.62	2.53	H		0.074	18.71		
2592.990	Sub6 41/ 90 MHz [30 kHz]	PI/2 BPSK	-22.39	14.32	11.00	2.55	H	< 2.00	0.189	22.77	1	1
		QPSK	-22.43	14.28	11.00	2.55	H		0.188	22.73		
		16-QAM	-23.38	13.33	11.00	2.55	H		0.151	21.78		
		64-QAM	-24.89	11.82	11.00	2.55	H		0.106	20.27		
		256-QAM	-26.90	9.81	11.00	2.55	H		0.067	18.26		
2644.980		PI/2 BPSK	-23.01	14.10	10.95	2.68	H		0.173	22.37	1	1
		QPSK	-23.13	13.98	10.95	2.68	H		0.168	22.25		
		16-QAM	-24.00	13.11	10.95	2.68	H		0.137	21.38		
		64-QAM	-25.51	11.60	10.95	2.68	H		0.097	19.87		
		256-QAM	-27.52	9.59	10.95	2.68	H		0.061	17.86		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant.	C.L	Pol	Limit	EIRP		RB	
			Level (dBm)	Level (dBm)	Gain (dBi)				W	W	dBm	Size
2546.010	Sub6 41/ 100 MHz [30 kHz]	PI/2 BPSK	-21.48	15.07	10.66	2.53	H	< 2.00	0.209	23.20	1	1
		QPSK	-21.51	15.04	10.66	2.53	H		0.208	23.17		
		16-QAM	-22.51	14.04	10.66	2.53	H		0.165	22.17		
		64-QAM	-23.98	12.57	10.66	2.53	H		0.118	20.70		
		256-QAM	-25.98	10.57	10.66	2.53	H		0.074	18.70		
2592.990		PI/2 BPSK	-22.47	14.24	11.00	2.55	H		0.186	22.69	1	1
		QPSK	-22.51	14.20	11.00	2.55	H		0.184	22.65		
		16-QAM	-23.51	13.20	11.00	2.55	H		0.146	21.65		
		64-QAM	-24.97	11.74	11.00	2.55	H		0.105	20.19		
		256-QAM	-27.00	9.71	11.00	2.55	H		0.066	18.16		
2640.000		PI/2 BPSK	-23.20	14.24	10.96	2.68	H		0.179	22.52	1	1
		QPSK	-23.22	14.22	10.96	2.68	H		0.178	22.50		
		16-QAM	-24.17	13.27	10.96	2.68	H		0.143	21.55		
		64-QAM	-25.67	11.77	10.96	2.68	H		0.101	20.05		
		256-QAM	-27.69	9.75	10.96	2.68	H		0.064	18.03		

8.3 RADIATED SPURIOUS EMISSIONS

■ NR Band:	<u>N41</u>
■ Bandwidth:	<u>20 MHz</u>
■ Modulation:	<u>QPSK</u>
■ Distance:	<u>3 meters</u>
■ SCS:	<u>30 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
501204 (2506.020)	5 012.04	-62.51	11.18	-63.65	3.72	V	-56.19	-25.00	1	1
	7 518.06	-63.34	11.56	-55.70	4.61	V	-48.75	-25.00		
	10 024.08	-62.30	11.46	-52.95	5.47	V	-46.96	-25.00		
518598 (2592.990)	5 185.98	-62.29	11.61	-63.46	3.80	V	-55.65	-25.00	1	1
	7 778.97	-64.51	11.26	-57.44	4.70	V	-50.88	-25.00		
	10 371.96	-63.48	11.68	-52.39	5.55	V	-46.26	-25.00		
535998 (2679.990)	5 359.98	-63.46	11.95	-64.89	3.90	V	-56.84	-25.00	1	1
	8 039.97	-61.29	11.22	-53.98	4.80	V	-47.56	-25.00		
	10 719.96	-63.19	11.56	-51.54	5.64	V	-45.62	-25.00		

☐ NR Band: N41
☐ Bandwidth: 30 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
502200 (2511.000)	5 022.00	-63.61	11.17	-64.31	3.69	V	-56.83	-25.00	1	76
	7 533.00	-64.79	11.57	-57.19	4.61	V	-50.23	-25.00		
	10 044.00	-64.99	11.44	-55.67	5.48	V	-49.71	-25.00		
518598 (2592.990)	5 185.98	-63.92	11.61	-65.09	3.80	V	-57.28	-25.00	1	1
	7 778.97	-64.83	11.26	-57.76	4.70	V	-51.20	-25.00		
	10 371.96	-65.22	11.68	-54.13	5.55	V	-48.00	-25.00		
534996 (2674.980)	5 349.96	-62.98	11.94	-64.67	3.85	V	-56.58	-25.00	1	76
	8 024.94	-63.79	11.20	-56.54	4.79	V	-50.13	-25.00		
	10 699.92	-63.98	11.57	-51.98	5.67	V	-46.08	-25.00		

☐ NR Band: N41
☐ Bandwidth: 40 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
503202 (2516.010)	5 032.02	-63.10	11.19	-63.94	3.67	V	-56.42	-25.00	1	1
	7 548.03	-64.79	11.59	-57.42	4.63	V	-50.46	-25.00		
	10 064.04	-63.51	11.42	-54.29	5.47	V	-48.34	-25.00		
518598 (2592.990)	5 185.98	-63.34	11.61	-64.51	3.80	V	-56.70	-25.00	1	1
	7 778.97	-66.70	11.26	-59.63	4.70	V	-53.07	-25.00		
	10 371.96	-64.80	11.68	-53.71	5.55	V	-47.58	-25.00		
534000 (2670.000)	5 340.00	-63.28	11.93	-65.26	3.80	V	-57.13	-25.00	1	104
	8 010.00	-64.71	11.17	-57.39	4.77	V	-50.99	-25.00		
	10 680.00	-65.12	11.57	-52.54	5.71	V	-46.68	-25.00		

☐ NR Band: N41
☐ Bandwidth: 50 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
504204 (2521.020)	5 042.04	-62.90	11.20	-63.94	3.68	V	-56.42	-25.00	1	1
	7 563.06	-65.67	11.60	-58.14	4.64	V	-51.18	-25.00		
	10 084.08	-63.90	11.40	-54.67	5.46	V	-48.73	-25.00		
518598 (2592.990)	5 185.98	-63.01	11.61	-64.18	3.80	V	-56.37	-25.00	1	1
	7 778.97	-64.79	11.26	-57.72	4.70	V	-51.16	-25.00		
	10 371.96	-64.14	11.68	-53.05	5.55	V	-46.92	-25.00		
532998 (2664.990)	5 329.98	-62.79	11.92	-64.52	3.77	V	-56.37	-25.00	1	131
	7 994.97	-64.23	11.13	-56.68	4.77	V	-50.32	-25.00		
	10 659.96	-65.08	11.58	-52.68	5.67	V	-46.77	-25.00		

☐ NR Band: N41
☐ Bandwidth: 60 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
505200 (2526.000)	5 052.00	-61.69	11.22	-63.16	3.73	V	-55.67	-25.00	1	1
	7 578.00	-64.33	11.61	-56.67	4.65	V	-49.71	-25.00		
	10 104.00	-65.29	11.39	-55.73	5.46	V	-49.80	-25.00		
518598 (2592.990)	5 185.98	-62.17	11.61	-63.34	3.80	V	-55.53	-25.00	1	1
	7 778.97	-63.45	11.26	-56.38	4.70	V	-49.82	-25.00		
	10 371.96	-64.71	11.68	-53.62	5.55	V	-47.49	-25.00		
531996 (2659.980)	5 319.96	-63.12	11.91	-64.67	3.79	V	-56.55	-25.00	1	1
	7 979.94	-65.05	11.10	-57.35	4.79	V	-51.04	-25.00		
	10 639.92	-64.78	11.58	-52.40	5.61	V	-46.43	-25.00		

☐ NR Band: N41
☐ Bandwidth: 70 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
506202 (2531.010)	5 062.02	-62.59	11.24	-63.96	3.78	V	-56.50	-25.00	1	1
	7 593.03	-64.98	11.62	-57.70	4.64	V	-50.72	-25.00		
	10 124.04	-63.75	11.37	-54.06	5.47	V	-48.16	-25.00		
518598 (2592.990)	5 185.98	-62.71	11.61	-63.88	3.80	V	-56.07	-25.00	1	1
	7 778.97	-64.56	11.26	-57.49	4.70	V	-50.93	-25.00		
	10 371.96	-64.67	11.68	-53.58	5.55	V	-47.45	-25.00		
531000 (2655.000)	5 310.00	-62.88	11.91	-63.99	3.82	V	-55.90	-25.00	1	1
	7 965.00	-64.73	11.07	-56.91	4.80	V	-50.64	-25.00		
	10 620.00	-64.59	11.58	-52.55	5.65	V	-46.62	-25.00		

☐ NR Band: N41
☐ Bandwidth: 80 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
507204 (2536.020)	5 072.04	-62.23	11.25	-63.39	3.80	V	-55.94	-25.00	1	1
	7 608.06	-65.08	11.60	-58.20	4.64	V	-51.24	-25.00		
	10 144.08	-64.33	11.36	-54.72	5.48	V	-48.84	-25.00		
518598 (2592.990)	5 185.98	-62.23	11.61	-63.40	3.80	V	-55.59	-25.00	1	1
	7 778.97	-64.41	11.26	-57.34	4.70	V	-50.78	-25.00		
	10 371.96	-63.76	11.68	-52.67	5.55	V	-46.54	-25.00		
529998 (2649.990)	5 299.98	-63.51	11.90	-65.01	3.83	V	-56.94	-25.00	1	1
	7 949.97	-65.67	11.03	-58.02	4.78	V	-51.77	-25.00		
	10 599.96	-64.26	11.58	-52.97	5.67	V	-47.06	-25.00		

☐ NR Band: N41
☐ Bandwidth: 90 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
508200 (2541.000)	5 082.00	-64.44	11.27	-65.24	3.81	V	-57.78	-25.00	1	1
	7 623.00	-65.23	11.57	-58.29	4.65	V	-51.37	-25.00		
	10 164.00	-63.65	11.34	-53.79	5.50	V	-47.95	-25.00		
518598 (2592.990)	5 185.98	-63.31	11.61	-64.48	3.80	V	-56.67	-25.00	1	1
	7 778.97	-65.73	11.26	-58.66	4.70	V	-52.10	-25.00		
	10 371.96	-64.67	11.68	-53.58	5.55	V	-47.45	-25.00		
528996 (2644.980)	5 289.96	-62.40	11.89	-63.98	3.83	V	-55.92	-25.00	1	1
	7 934.94	-63.88	11.01	-56.50	4.77	V	-50.26	-25.00		
	10 579.92	-64.79	11.62	-53.64	5.65	V	-47.67	-25.00		

☐ NR Band: N41
☐ Bandwidth: 100 MHz
☐ Modulation: QPSK
☐ Distance: 3 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
509202 (2546.010)	5 092.02	-62.17	11.29	-63.05	3.78	V	-55.54	-25.00	1	1
	7 638.03	-64.82	11.54	-57.85	4.68	V	-50.99	-25.00		
	10 184.04	-65.60	11.35	-55.56	5.52	V	-49.73	-25.00		
518598 (2592.990)	5 185.98	-62.40	11.61	-63.57	3.80	V	-55.76	-25.00	1	1
	7 778.97	-63.88	11.26	-56.81	4.70	V	-50.25	-25.00		
	10 371.96	-64.47	11.68	-53.38	5.55	V	-47.25	-25.00		
528000 (2640.000)	5 280.00	-62.25	11.88	-64.27	3.80	V	-56.19	-25.00	1	1
	7 920.00	-62.31	11.02	-54.89	4.77	V	-48.64	-25.00		
	10 560.00	-64.83	11.65	-53.89	5.63	V	-47.87	-25.00		

8.4 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n41	20 MHz	2592.99	BPSK	50	0	3.91
			QPSK			4.56
			16-QAM			5.59
			64-QAM			6.07
			256-QAM			6.65
	30 MHz		BPSK	75		4.05
			QPSK			4.59
			16-QAM			5.62
			64-QAM			6.18
			256-QAM			6.67
	40 MHz		BPSK	100		3.95
			QPSK			4.56
			16-QAM			5.62
			64-QAM			6.08
			256-QAM			6.64
	50 MHz		BPSK	128		4.18
			QPSK			4.64
			16-QAM			5.60
			64-QAM			6.13
			256-QAM			6.72
	60 MHz		BPSK	162		4.37
			QPSK			4.81
			16-QAM			5.79
			64-QAM			6.31
			256-QAM			6.74
	70 MHz		BPSK	180		4.39
			QPSK			4.85
			16-QAM			5.88
			64-QAM			6.36
			256-QAM			6.79

Sub6 n41	80 MHz		BPSK	216		4.59	
			QPSK			5.09	
			16-QAM			5.93	
			64-QAM			6.20	
			256-QAM			6.60	
		90 MHz	2592.99	BPSK	243	0	4.48
				QPSK			5.04
				16-QAM			6.04
				64-QAM			6.25
				256-QAM			6.62
100 MHz		BPSK		270	4.52		
		QPSK			5.16		
		16-QAM			6.02		
		64-QAM			6.22		
		256-QAM			6.59		

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 70 ~ 114.

8.5 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n41	20 MHz	2592.99	BPSK	50	0	17.950
			QPSK			17.922
			16-QAM			17.909
			64-QAM			17.929
			256-QAM			17.941
	30 MHz		BPSK	75		26.908
			QPSK			26.892
			16-QAM			26.908
			64-QAM			26.873
			256-QAM			26.868
	40 MHz		BPSK	100		35.850
			QPSK			35.849
			16-QAM			35.761
			64-QAM			35.804
			256-QAM			35.763
	50 MHz		BPSK	128		45.931
			QPSK			45.843
			16-QAM			45.839
			64-QAM			45.817
			256-QAM			45.859
	60 MHz		BPSK	162		58.082
			QPSK			57.978
			16-QAM			57.950
			64-QAM			57.924
			256-QAM			57.919
	70 MHz		BPSK	180		64.553
			QPSK			64.573
			16-QAM			64.538
			64-QAM			64.531
			256-QAM			64.383

	80 MHz		BPSK	216		77.323
			QPSK			77.186
			16-QAM			77.194
			64-QAM			77.259
			256-QAM			77.281
Sub6 n41	90 MHz	2592.99	BPSK	243	0	86.979
			QPSK			87.005
			16-QAM			86.947
			64-QAM			86.823
			256-QAM			86.891
	100 MHz		BPSK	270		96.701
			QPSK			96.509
			16-QAM			96.381
			64-QAM			96.524
			256-QAM			96.469

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 115 ~ 159.

8.6 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n41	20	2506.020	5.2543	30.815	-64.001	-33.186	-25.00
		2592.990	4.0579	30.200	-62.791	-32.591	
		2679.990	3.7289	30.200	-63.349	-33.149	
	30	2511.000	9.7109	30.815	-63.419	-32.604	
		2592.990	9.6112	30.815	-64.092	-33.277	
		2674.980	9.9601	30.815	-63.570	-32.755	
	40	2516.010	9.7109	30.815	-63.471	-32.656	
		2592.990	8.3350	30.815	-63.197	-32.382	
		2670.000	6.0519	30.815	-62.277	-31.462	
	50	2521.020	9.1226	30.815	-62.754	-31.939	
		2592.990	8.8834	30.815	-63.601	-32.786	
		2664.990	4.9851	30.200	-63.744	-33.544	
	60	2526.000	4.0579	30.200	-63.769	-33.569	
		2592.990	8.2453	30.815	-62.940	-32.125	
		2659.980	4.0579	30.200	-63.396	-33.196	
	70	2531.010	4.0379	30.200	-63.400	-33.200	
		2592.990	9.0927	30.815	-63.160	-32.345	
		2655.000	8.0658	30.815	-63.341	-32.526	
	80	2536.020	5.2044	30.815	-62.792	-31.977	
		2592.990	3.7787	30.200	-63.493	-33.293	
		2649.990	9.1226	30.815	-62.222	-31.407	
	90	2541.000	3.8186	30.200	-63.732	-33.532	
		2592.990	8.9532	30.815	-63.653	-32.838	
		2644.980	3.7588	30.200	-62.927	-32.727	
	100	2546.010	9.0828	30.815	-63.694	-32.879	
		2592.990	3.9981	30.200	-61.946	-31.746	
		2640.000	3.7887	30.200	-62.363	-32.163	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 160 ~ 213.
2. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
3. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 – 1	27.494
1 – 5	30.200
5 – 10	30.815
10 – 15	31.340
15 – 20	31.713
Above 20	32.355

8.7 CHANNEL EDGE

- Plots of the EUT's CHANNEL EDGE are shown Page 214 ~ 276.

8.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

■ BandWidth: 20 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2506.020	100 %	+20(Ref)	2506 019 981	0.0	0.000 000	0.000
	100 %	-30	2506 019 945	-36.3	-0.000 001	-0.014
	100 %	-20	2506 019 946	-35.2	-0.000 001	-0.014
	100 %	-10	2506 019 948	-33.1	-0.000 001	-0.013
	100 %	0	2506 019 949	-32.2	-0.000 001	-0.013
	100 %	+10	2506 019 953	-28.5	-0.000 001	-0.011
	100 %	+30	2506 019 954	-27.1	-0.000 001	-0.011
	100 %	+40	2506 019 956	-25.7	-0.000 001	-0.010
	100 %	+50	2506 019 959	-22.6	-0.000 001	-0.009
	85%	+20	2506 019 960	-21.6	-0.000 001	-0.009
	115%	+20	2506 019 960	-21.3	-0.000 001	-0.008
2679.990	100 %	+20(Ref)	2679 989 981	0.0	0.000 000	0.000
	100 %	-30	2679 989 959	-21.6	-0.000 001	-0.008
	100 %	-20	2679 989 957	-24.3	-0.000 001	-0.009
	100 %	-10	2679 989 955	-26.2	-0.000 001	-0.010
	100 %	0	2679 989 956	-25.2	-0.000 001	-0.009
	100 %	+10	2679 989 956	-24.8	-0.000 001	-0.009
	100 %	+30	2679 989 955	-25.8	-0.000 001	-0.010
	100 %	+40	2679 989 979	-1.7	0.000 000	-0.001
	100 %	+50	2679 989 957	-23.8	-0.000 001	-0.009
	85%	+20	2679 989 958	-22.8	-0.000 001	-0.009
	115%	+20	2679 989 957	-23.7	-0.000 001	-0.009

■ BandWidth: 30 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2511.000	100 %	+20(Ref)	2510 999 987	0.0	0.000 000	0.000
	100 %	-30	2510 999 974	-12.9	-0.000 001	-0.005
	100 %	-20	2510 999 974	-13.1	-0.000 001	-0.005
	100 %	-10	2510 999 972	-14.5	-0.000 001	-0.006
	100 %	0	2510 999 952	-34.4	-0.000 001	-0.014
	100 %	+10	2510 999 970	-17.3	-0.000 001	-0.007
	100 %	+30	2510 999 971	-16.3	-0.000 001	-0.007
	100 %	+40	2510 999 972	-14.8	-0.000 001	-0.006
	100 %	+50	2510 999 970	-16.8	-0.000 001	-0.007
	85%	+20	2510 999 971	-15.8	-0.000 001	-0.006
	115%	+20	2510 999 967	-20.2	-0.000 001	-0.008
2674.980	100 %	+20(Ref)	2674 980 003	0.0	0.000 000	0.000
	100 %	-30	2674 979 983	-20.0	-0.000 001	-0.007
	100 %	-20	2674 979 984	-18.9	-0.000 001	-0.007
	100 %	-10	2674 979 983	-20.0	-0.000 001	-0.007
	100 %	0	2674 980 007	4.2	0.000 000	0.002
	100 %	+10	2674 979 983	-19.5	-0.000 001	-0.007
	100 %	+30	2674 979 985	-17.7	-0.000 001	-0.007
	100 %	+40	2674 979 984	-18.3	-0.000 001	-0.007
	100 %	+50	2674 979 986	-17.0	-0.000 001	-0.006
	85%	+20	2674 979 987	-16.0	-0.000 001	-0.006
	115%	+20	2674 979 983	-19.8	-0.000 001	-0.007

■ BandWidth: 40 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2516.010	100 %	+20(Ref)	2516 009 967	0.0	0.000 000	0.000
	100 %	-30	2516 009 935	-32.7	-0.000 001	-0.013
	100 %	-20	2516 009 936	-31.5	-0.000 001	-0.013
	100 %	-10	2516 009 934	-33.3	-0.000 001	-0.013
	100 %	0	2516 009 934	-32.8	-0.000 001	-0.013
	100 %	+10	2516 009 935	-32.6	-0.000 001	-0.013
	100 %	+30	2516 009 957	-10.7	0.000 000	-0.004
	100 %	+40	2516 009 932	-35.0	-0.000 001	-0.014
	100 %	+50	2516 009 932	-34.8	-0.000 001	-0.014
	85%	+20	2516 009 933	-33.8	-0.000 001	-0.013
	115%	+20	2516 009 928	-39.4	-0.000 002	-0.016
2670.000	100 %	+20(Ref)	2669 999 981	0.0	0.000 000	0.000
	100 %	-30	2669 999 958	-23.1	-0.000 001	-0.009
	100 %	-20	2669 999 960	-21.4	-0.000 001	-0.008
	100 %	-10	2669 999 960	-21.4	-0.000 001	-0.008
	100 %	0	2669 999 957	-24.4	-0.000 001	-0.009
	100 %	+10	2669 999 957	-24.1	-0.000 001	-0.009
	100 %	+30	2669 999 959	-21.9	-0.000 001	-0.008
	100 %	+40	2669 999 955	-25.9	-0.000 001	-0.010
	100 %	+50	2669 999 976	-4.9	0.000 000	-0.002
	85%	+20	2669 999 977	-3.9	0.000 000	-0.001
	115%	+20	2669 999 954	-26.7	-0.000 001	-0.010

■ BandWidth: 50 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2521.020	100 %	+20(Ref)	2521 019 979	0.0	0.000 000	0.000
	100 %	-30	2521 019 939	-39.7	-0.000 002	-0.016
	100 %	-20	2521 019 937	-42.1	-0.000 002	-0.017
	100 %	-10	2521 019 955	-23.9	-0.000 001	-0.009
	100 %	0	2521 019 956	-22.9	-0.000 001	-0.009
	100 %	+10	2521 019 956	-22.6	-0.000 001	-0.009
	100 %	+30	2521 019 958	-20.8	-0.000 001	-0.008
	100 %	+40	2521 019 957	-22.1	-0.000 001	-0.009
	100 %	+50	2521 019 955	-23.6	-0.000 001	-0.009
	85%	+20	2521 019 956	-22.6	-0.000 001	-0.009
	115%	+20	2521 019 957	-22.2	-0.000 001	-0.009
	100 %	+20(Ref)	2664 989 982	0.0	0.000 000	0.000
2664.990	100 %	-30	2664 989 962	-20.2	-0.000 001	-0.008
	100 %	-20	2664 989 960	-22.2	-0.000 001	-0.008
	100 %	-10	2664 989 964	-18.3	-0.000 001	-0.007
	100 %	0	2664 989 961	-20.8	-0.000 001	-0.008
	100 %	+10	2664 989 958	-23.9	-0.000 001	-0.009
	100 %	+30	2664 989 957	-24.4	-0.000 001	-0.009
	100 %	+40	2664 989 960	-22.2	-0.000 001	-0.008
	100 %	+50	2664 989 958	-24.2	-0.000 001	-0.009
	85%	+20	2664 989 959	-23.2	-0.000 001	-0.009
	115%	+20	2664 989 980	-2.2	0.000 000	-0.001

■ BandWidth: 60 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2526.000	100 %	+20(Ref)	2525 999 986	0.0	0.000 000	0.000
	100 %	-30	2525 999 952	-34.3	-0.000 001	-0.014
	100 %	-20	2525 999 971	-14.9	-0.000 001	-0.006
	100 %	-10	2525 999 973	-13.0	-0.000 001	-0.005
	100 %	0	2525 999 974	-11.7	0.000 000	-0.005
	100 %	+10	2525 999 972	-14.5	-0.000 001	-0.006
	100 %	+30	2525 999 972	-14.4	-0.000 001	-0.006
	100 %	+40	2525 999 952	-33.9	-0.000 001	-0.013
	100 %	+50	2525 999 970	-15.9	-0.000 001	-0.006
	85%	+20	2525 999 971	-14.9	-0.000 001	-0.006
	115%	+20	2525 999 949	-37.5	-0.000 001	-0.015
2659.980	100 %	+20(Ref)	2659 979 981	0.0	0.000 000	0.000
	100 %	-30	2659 979 984	2.8	0.000 000	0.001
	100 %	-20	2659 979 981	-0.3	0.000 000	0.000
	100 %	-10	2659 979 959	-22.1	-0.000 001	-0.008
	100 %	0	2659 979 955	-25.6	-0.000 001	-0.010
	100 %	+10	2659 979 982	1.2	0.000 000	0.000
	100 %	+30	2659 979 982	0.9	0.000 000	0.000
	100 %	+40	2659 979 958	-23.0	-0.000 001	-0.009
	100 %	+50	2659 979 956	-24.4	-0.000 001	-0.009
	85%	+20	2659 979 957	-23.4	-0.000 001	-0.009
	115%	+20	2659 979 954	-27.1	-0.000 001	-0.010

■ BandWidth: 70 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2531.010	100 %	+20(Ref)	2531 009 972	0.0	0.000 000	0.000
	100 %	-30	2531 009 944	-28.7	-0.000 001	-0.011
	100 %	-20	2531 009 940	-32.2	-0.000 001	-0.013
	100 %	-10	2531 009 960	-12.7	-0.000 001	-0.005
	100 %	0	2531 009 956	-16.9	-0.000 001	-0.007
	100 %	+10	2531 009 935	-37.8	-0.000 001	-0.015
	100 %	+30	2531 009 950	-22.0	-0.000 001	-0.009
	100 %	+40	2531 009 952	-20.2	-0.000 001	-0.008
	100 %	+50	2531 009 949	-23.9	-0.000 001	-0.009
	85%	+20	2531 009 950	-22.9	-0.000 001	-0.009
	115%	+20	2531 009 949	-23.9	-0.000 001	-0.009
2655.000	100 %	+20(Ref)	2654 999 972	0.0	0.000 000	0.000
	100 %	-30	2654 999 944	-28.1	-0.000 001	-0.011
	100 %	-20	2654 999 940	-32.0	-0.000 001	-0.012
	100 %	-10	2654 999 940	-31.5	-0.000 001	-0.012
	100 %	0	2654 999 961	-11.0	0.000 000	-0.004
	100 %	+10	2654 999 959	-13.2	0.000 000	-0.005
	100 %	+30	2654 999 931	-40.6	-0.000 002	-0.015
	100 %	+40	2654 999 957	-14.9	-0.000 001	-0.006
	100 %	+50	2654 999 957	-14.9	-0.000 001	-0.006
	85%	+20	2654 999 958	-13.9	-0.000 001	-0.005
	115%	+20	2654 999 956	-16.3	-0.000 001	-0.006

■ BandWidth: 80 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2536.020	100 %	+20(Ref)	2536 019 973	0.0	0.000 000	0.000
	100 %	-30	2536 019 948	-25.9	-0.000 001	-0.010
	100 %	-20	2536 019 944	-29.6	-0.000 001	-0.012
	100 %	-10	2536 019 944	-29.2	-0.000 001	-0.012
	100 %	0	2536 019 945	-28.4	-0.000 001	-0.011
	100 %	+10	2536 019 942	-30.9	-0.000 001	-0.012
	100 %	+30	2536 019 943	-30.6	-0.000 001	-0.012
	100 %	+40	2536 019 941	-32.6	-0.000 001	-0.013
	100 %	+50	2536 019 940	-33.0	-0.000 001	-0.013
	85%	+20	2536 019 941	-32.0	-0.000 001	-0.013
	115%	+20	2536 019 940	-33.0	-0.000 001	-0.013
2649.990	100 %	+20(Ref)	2649 989 994	0.0	0.000 000	0.000
	100 %	-30	2649 989 986	-8.0	0.000 000	-0.003
	100 %	-20	2649 989 986	-7.3	0.000 000	-0.003
	100 %	-10	2649 989 988	-5.9	0.000 000	-0.002
	100 %	0	2649 989 983	-10.4	0.000 000	-0.004
	100 %	+10	2649 989 984	-10.0	0.000 000	-0.004
	100 %	+30	2649 989 978	-15.6	-0.000 001	-0.006
	100 %	+40	2649 989 979	-14.9	-0.000 001	-0.006
	100 %	+50	2649 989 979	-14.9	-0.000 001	-0.006
	85%	+20	2649 989 980	-13.9	-0.000 001	-0.005
	115%	+20	2649 989 977	-16.7	-0.000 001	-0.006

■ BandWidth: 90 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2541.000	100 %	+20(Ref)	2540 999 984	0.0	0.000 000	0.000
	100 %	-30	2540 999 967	-17.4	-0.000 001	-0.007
	100 %	-20	2540 999 965	-18.8	-0.000 001	-0.007
	100 %	-10	2540 999 963	-20.8	-0.000 001	-0.008
	100 %	0	2540 999 964	-20.1	-0.000 001	-0.008
	100 %	+10	2540 999 962	-22.0	-0.000 001	-0.009
	100 %	+30	2540 999 962	-21.6	-0.000 001	-0.009
	100 %	+40	2540 999 963	-21.4	-0.000 001	-0.008
	100 %	+50	2540 999 959	-25.3	-0.000 001	-0.010
	85%	+20	2540 999 960	-24.3	-0.000 001	-0.010
	115%	+20	2540 999 959	-25.5	-0.000 001	-0.010
2644.980	100 %	+20(Ref)	2644 979 977	0.0	0.000 000	0.000
	100 %	-30	2644 979 953	-23.7	-0.000 001	-0.009
	100 %	-20	2644 979 952	-25.2	-0.000 001	-0.010
	100 %	-10	2644 979 950	-27.3	-0.000 001	-0.010
	100 %	0	2644 979 948	-29.4	-0.000 001	-0.011
	100 %	+10	2644 979 972	-4.9	0.000 000	-0.002
	100 %	+30	2644 979 971	-6.4	0.000 000	-0.002
	100 %	+40	2644 979 967	-9.9	0.000 000	-0.004
	100 %	+50	2644 979 970	-7.3	0.000 000	-0.003
	85%	+20	2644 979 971	-6.3	0.000 000	-0.002
	115%	+20	2644 979 970	-7.3	0.000 000	-0.003

■ BandWidth: 100 MHz
 ■ Voltage(100 %): 13.200 VDC
 ■ Deviation Limit: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2546.010	100 %	+20(Ref)	2546 009 970	0.0	0.000 000	0.000
	100 %	-30	2546 009 938	-33.0	-0.000 001	-0.013
	100 %	-20	2546 009 936	-34.4	-0.000 001	-0.014
	100 %	-10	2546 009 953	-17.0	-0.000 001	-0.007
	100 %	0	2546 009 937	-33.6	-0.000 001	-0.013
	100 %	+10	2546 009 933	-37.4	-0.000 001	-0.015
	100 %	+30	2546 009 954	-16.3	-0.000 001	-0.006
	100 %	+40	2546 009 948	-22.5	-0.000 001	-0.009
	100 %	+50	2546 009 948	-22.5	-0.000 001	-0.009
	85%	+20	2546 009 949	-21.5	-0.000 001	-0.008
	115%	+20	2546 009 932	-38.5	-0.000 002	-0.015
2640.000	100 %	+20(Ref)	2639 999 980	0.0	0.000 000	0.000
	100 %	-30	2639 999 962	-17.9	-0.000 001	-0.007
	100 %	-20	2639 999 962	-17.9	-0.000 001	-0.007
	100 %	-10	2639 999 941	-38.4	-0.000 001	-0.015
	100 %	0	2639 999 973	-6.8	0.000 000	-0.003
	100 %	+10	2639 999 956	-23.5	-0.000 001	-0.009
	100 %	+30	2639 999 959	-20.9	-0.000 001	-0.008
	100 %	+40	2639 999 957	-22.4	-0.000 001	-0.008
	100 %	+50	2639 999 958	-22.0	-0.000 001	-0.008
	85%	+20	2639 999 959	-21.0	-0.000 001	-0.008
	115%	+20	2639 999 957	-22.6	-0.000 001	-0.009

9. TEST PLOTS

NR41_20 M_PAR_Mid_BPSK_FullIRB



NR41_20 M_PAR_Mid_QPSK_FullRB



NR41_20 M_PAR_Mid_16QAM_FullRB



NR41_20 M_PAR_Mid_64QAM_FullRB



NR41_20 M_PAR_Mid_256QAM_FullRB



NR41_30 M_PAR_Mid_BPSK_FullIRB



NR41_30 M_PAR_Mid_QPSK_FullRB



NR41_30 M_PAR_Mid_16QAM_FullRB



NR41_30 M_PAR_Mid_64QAM_FullRB



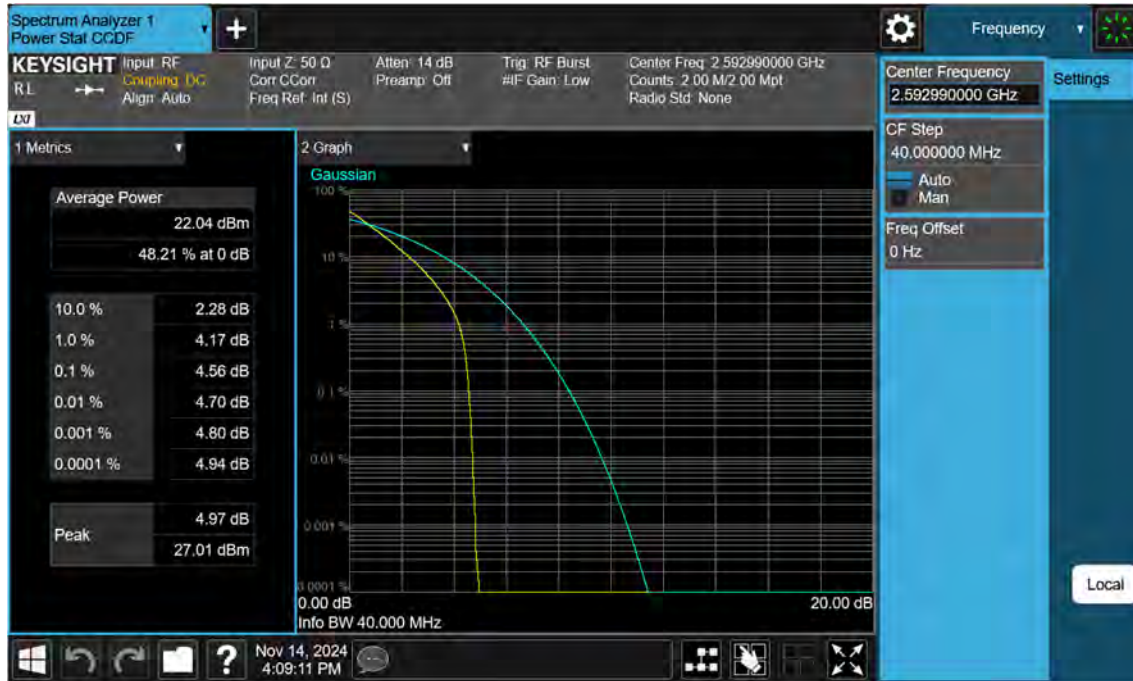
NR41_30 M_PAR_Mid_256QAM_FullRB



NR41_40 M_PAR_Mid_BPSK_FullIRB



NR41_40 M_PAR_Mid_QPSK_FullRB



NR41_40 M_PAR_Mid_16QAM_FullRB



NR41_40 M_PAR_Mid_64QAM_FullRB



NR41_40 M_PAR_Mid_256QAM_FullRB



NR41_50 M_PAR_Mid_BPSK_FullIRB



NR41_50 M_PAR_Mid_QPSK_FullRB



NR41_50 M_PAR_Mid_16QAM_FullRB



NR41_50 M_PAR_Mid_64QAM_FullRB



NR41_50 M_PAR_Mid_256QAM_FullRB



NR41_60 M_PAR_Mid_BPSK_FullIRB



NR41_60 M_PAR_Mid_QPSK_FullRB



NR41_60 M_PAR_Mid_16QAM_FullRB



NR41_60 M_PAR_Mid_64QAM_FullRB



NR41_60 M_PAR_Mid_256QAM_FullRB



NR41_70 M_PAR_Mid_BPSK_FullRB



NR41_70 M_PAR_Mid_QPSK_FullRB



NR41_70 M_PAR_Mid_16QAM_FullRB



NR41_70 M_PAR_Mid_64QAM_FullRB



NR41_70 M_PAR_Mid_256QAM_FullRB



NR41_80 M_PAR_Mid_BPSK_FullIRB



NR41_80 M_PAR_Mid_QPSK_FullRB



NR41_80 M_PAR_Mid_16QAM_FullRB



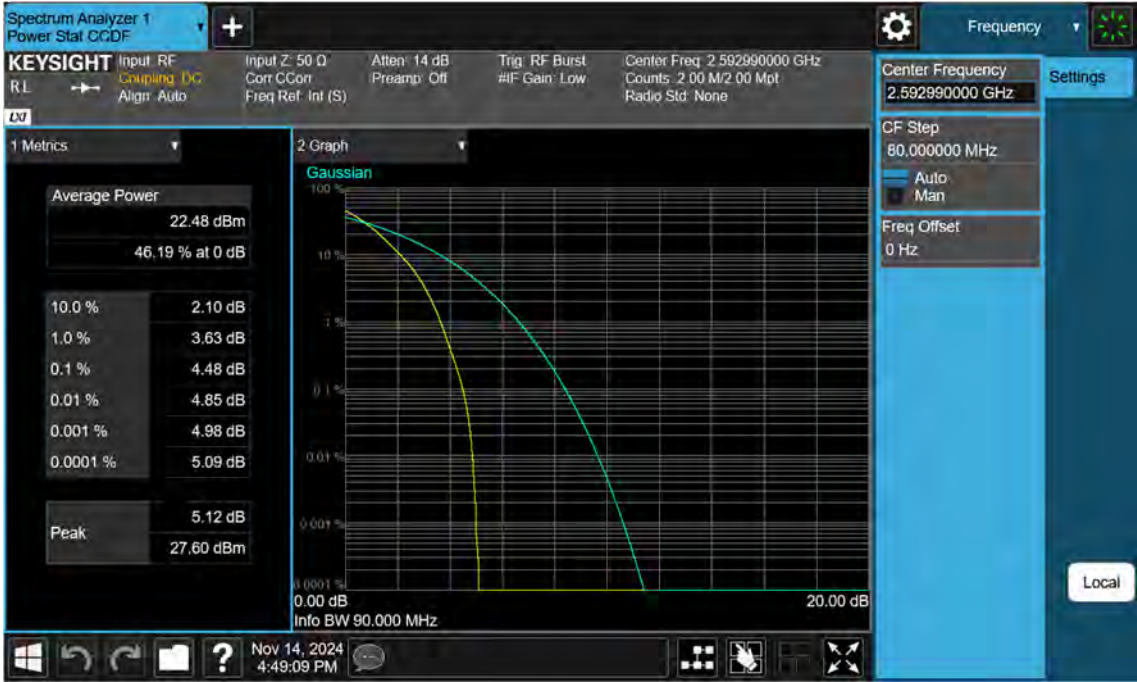
NR41_80 M_PAR_Mid_64QAM_FullRB



NR41_80 M_PAR_Mid_256QAM_FullRB



NR41_90 M_PAR_Mid_BPSK_FullIRB



NR41_90 M_PAR_Mid_QPSK_FullRB



NR41_90 M_PAR_Mid_16QAM_FullRB



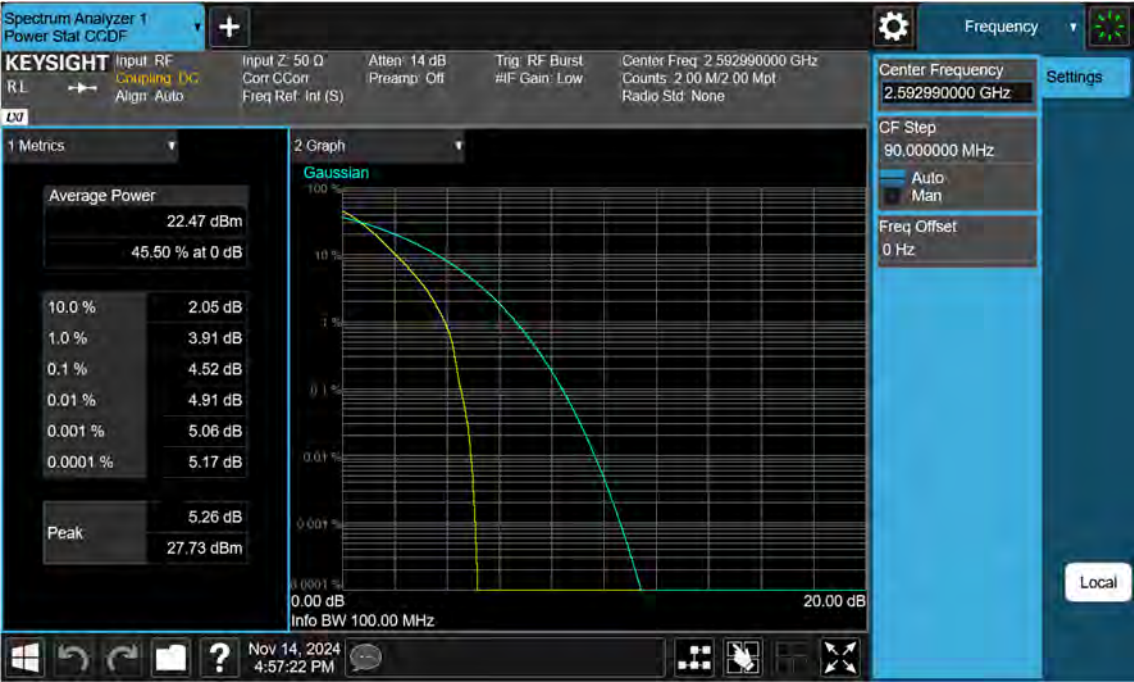
NR41_90 M_PAR_Mid_64QAM_FullRB



NR41_90 M_PAR_Mid_256QAM_FullRB



NR41_100 M_PAR_Mid_BPSK_FullRB



NR41_100 M_PAR_Mid_QPSK_FullRB



NR41_100 M_PAR_Mid_16QAM_FullRB



NR41_100 M_PAR_Mid_64QAM_FullRB



NR41_100 M_PAR_Mid_256QAM_FullRB



NR41_20 M_OBW_Mid_BPSK_FullRB



Spectrum Analyzer 1
Occupied BW

KEYSIGHT Input: RF
RL → Coupling: DC
Align: Auto

Input Z: 50 Ω
Corr: Corr
Freq Ref: Int (S)
NFE: Adaptive

Atten: 14 dB
Preamp: Off

Trig: Free Run
Gate: Off
#F Gain: Low

Center Freq: 2.592990000 GHz
Avg/Hold: 500/500
Radio Std: None

Center Frequency
2.592990000 GHz

Span
40.000 MHz

CF Step
4.0000000 MHz
Auto
Man

Freq Offset
0 Hz

1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 28.87 dB
Ref Value 40.00 dBm

Center 2.59299 GHz
#Res BW 390.0 kHz
#Video BW 1.5000 MHz
Span 40 MHz
#Sweep 50.0 ms (1001 pts)

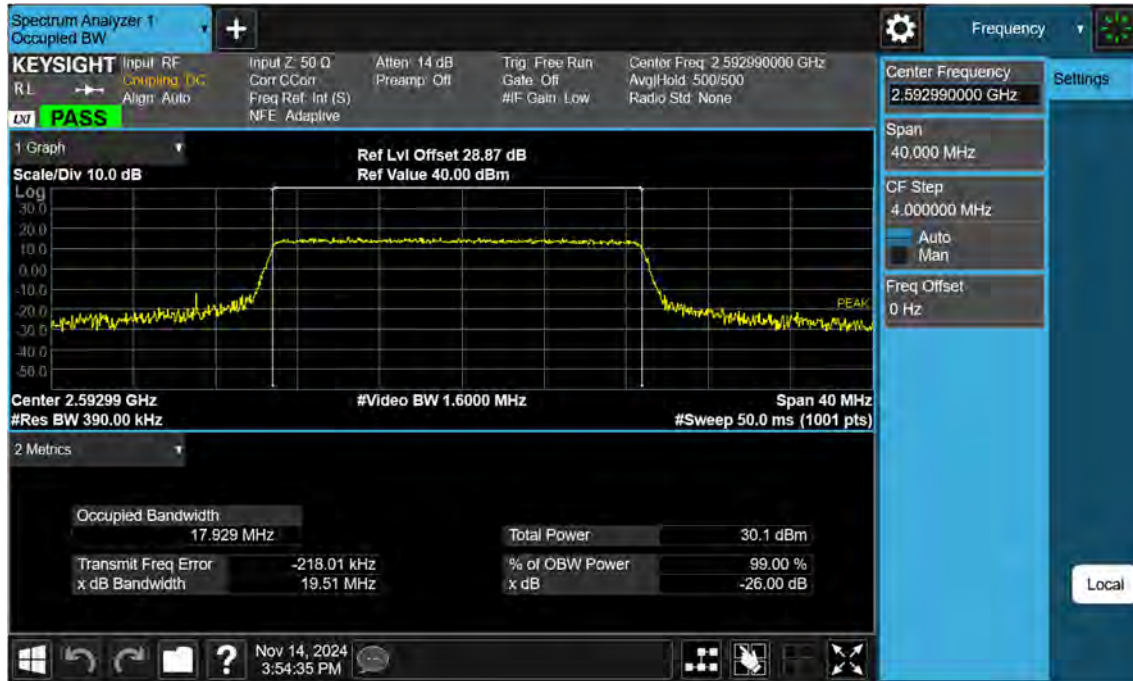
2 Metrics

Metric	Value
Occupied Bandwidth	17.922 MHz
Total Power	31.4 dBm
Transmit Freq Error	-209.74 kHz
% of OBW Power	99.00 %
x dB Bandwidth	19.51 MHz
x dB	-26.00 dB

NR41_20 M_OBW_Mid_16QAM_FullRB



NR41_20 M_OBW_Mid_64QAM_FullRB



NR41_20 M_OBW_Mid_256QAM_FullRB



NR41_30 M_OBW_Mid_BPSK_FullRB



NR41_30 M_OBW_Mid_QPSK_FullIRB



NR41_30 M_OBW_Mid_16QAM_FullRB



NR41_30 M_OBW_Mid_64QAM_FullRB



NR41_30 M_OBW_Mid_256QAM_FullRB



NR41_40 M_OBW_Mid_BPSK_FullRB



NR41_40 M_OBW_Mid_QPSK_FullIRB



NR41_40 M_OBW_Mid_16QAM_FullRB



NR41_40 M_OBW_Mid_64QAM_FullRB



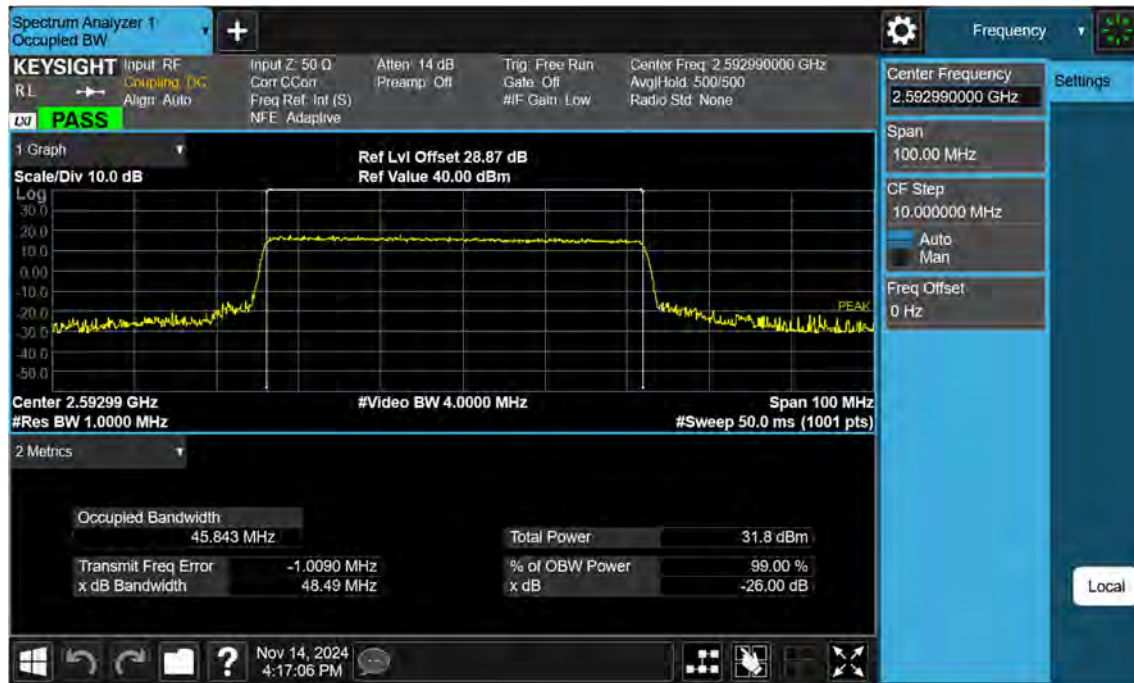
NR41_40 M_OBW_Mid_256QAM_FullRB



NR41_50 M_OBW_Mid_BPSK_FullRB



NR41_50 M_OBW_Mid_QPSK_FullRB



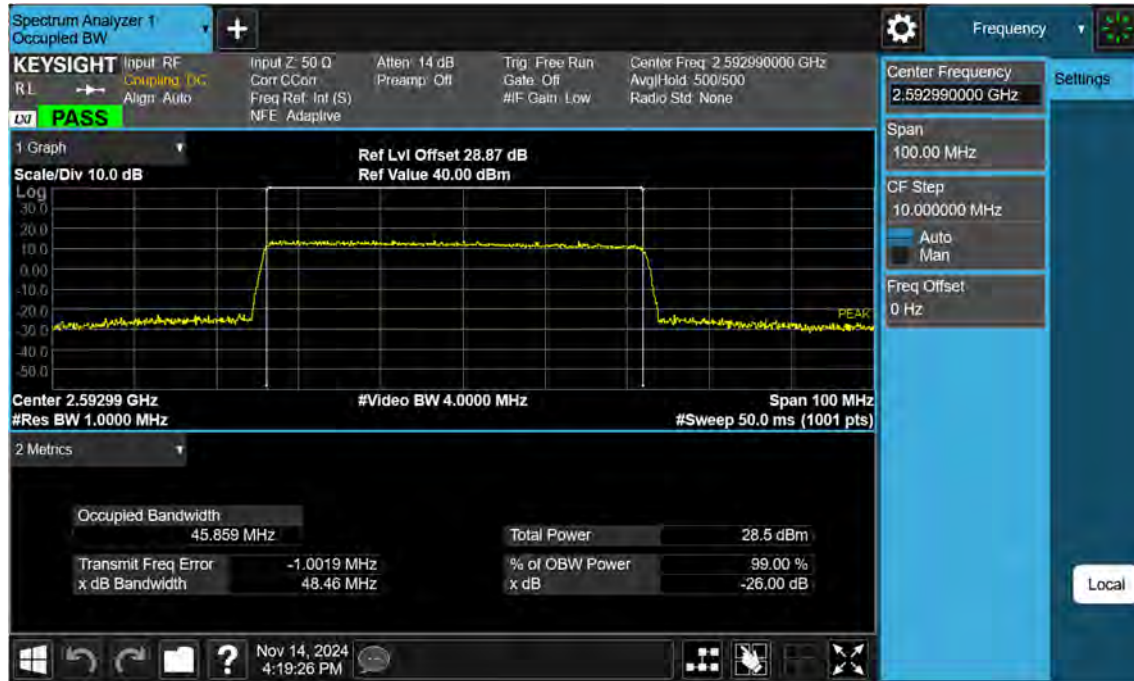
NR41_50 M_OBW_Mid_16QAM_FullRB



NR41_50 M_OBW_Mid_64QAM_FullRB



NR41_50 M_OBW_Mid_256QAM_FullRB



NR41_60 M_OBW_Mid_BPSK_FullRB



NR41_60 M_OBW_Mid_QPSK_FullIRB



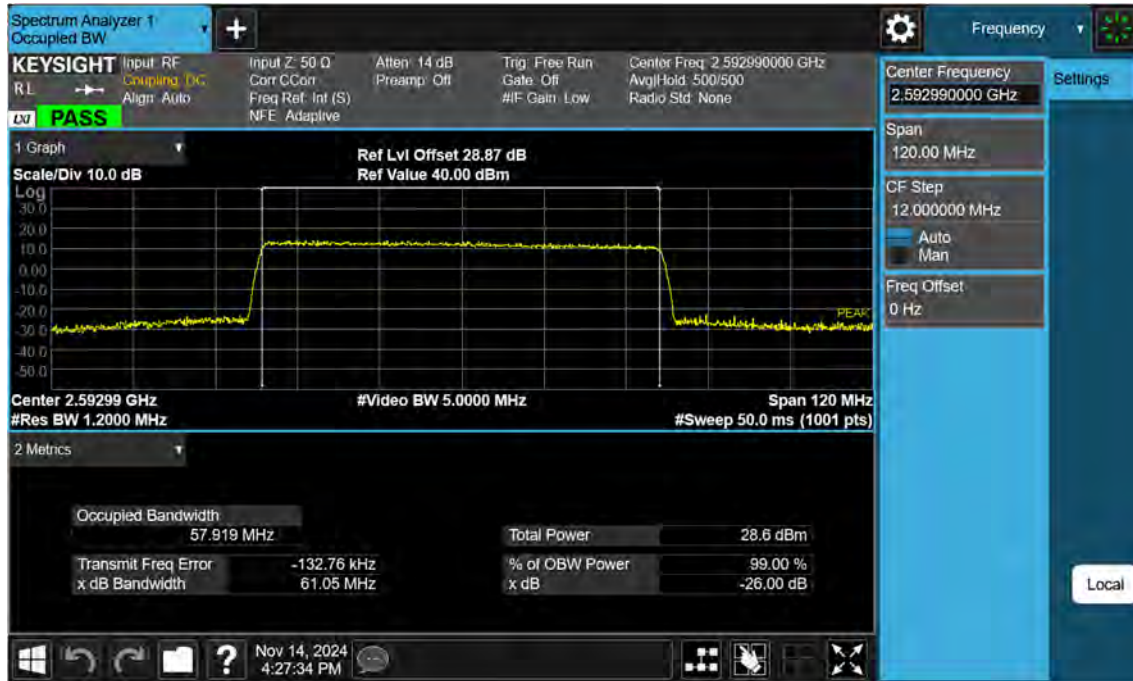
NR41_60 M_OBW_Mid_16QAM_FullRB



NR41_60 M_OBW_Mid_64QAM_FullRB



NR41_60 M_OBW_Mid_256QAM_FullRB



NR41_70 M_OBW_Mid_BPSK_FullRB



NR41_70 M_OBW_Mid_QPSK_FullIRB



NR41_70 M_OBW_Mid_16QAM_FullRB



NR41_70 M_OBW_Mid_64QAM_FullRB



The screenshot displays a Spectrum Analyzer interface. At the top left, the title bar reads "Spectrum Analyzer 1" and "Occupied BW". Below it, the "KEY SIGHT" section shows input parameters: Input RF Coupling: DC, Align: Auto, Input Z: 50 Ω, Corr CCoin, Freq Ref: Int (S), NFE: Adaptive, Atten: 14 dB, Preampl: Off, Trig: Free Run, Gate: Off, #F Gain: Low, Center Freq: 2.592990000 GHz, Avg/Hold: 500/500, Radio Std: None.

The main plot area shows a frequency spectrum. The x-axis is labeled "Center Frequency" and ranges from 2.592990000 GHz to 2.593090000 GHz. The y-axis is labeled "Scale/Div 10.0 dB" and ranges from -50.0 dBm to 30.0 dBm. A yellow trace shows a signal centered at approximately 2.59304 GHz with a peak level of about 10 dBm. The signal has a bandwidth of approximately 10 MHz. The plot is titled "Ref Lvl Offset 28.87 dB" and "Ref Value 40.00 dBm".

On the right side, there are several control panels:

- Frequency Settings:** Center Frequency: 2.592990000 GHz, Span: 140.00 MHz, CF Step: 14.000000 MHz, Auto Man (Auto selected), Freq Offset: 0 Hz.
- Video Bandwidth:** Video BW: 6.0000 MHz.
- Sweep Parameters:** Sweep BW: 1.5000 MHz, Sweep Time: 50.0 ms (1001 pts).
- Metric Display:** Occupied Bandwidth: 64.383 MHz, Total Power: 28.7 dBm, % of OBW Power: 99.00 %, x dB Bandwidth: 68.08 MHz, x dB: -26.00 dB.

At the bottom, there is a Windows taskbar showing the date and time as Nov 14, 2024, 4:35:42 PM.

NR41_80 M_OBW_Mid_BPSK_FullRB



NR41_80 M_OBW_Mid_QPSK_FullIRB



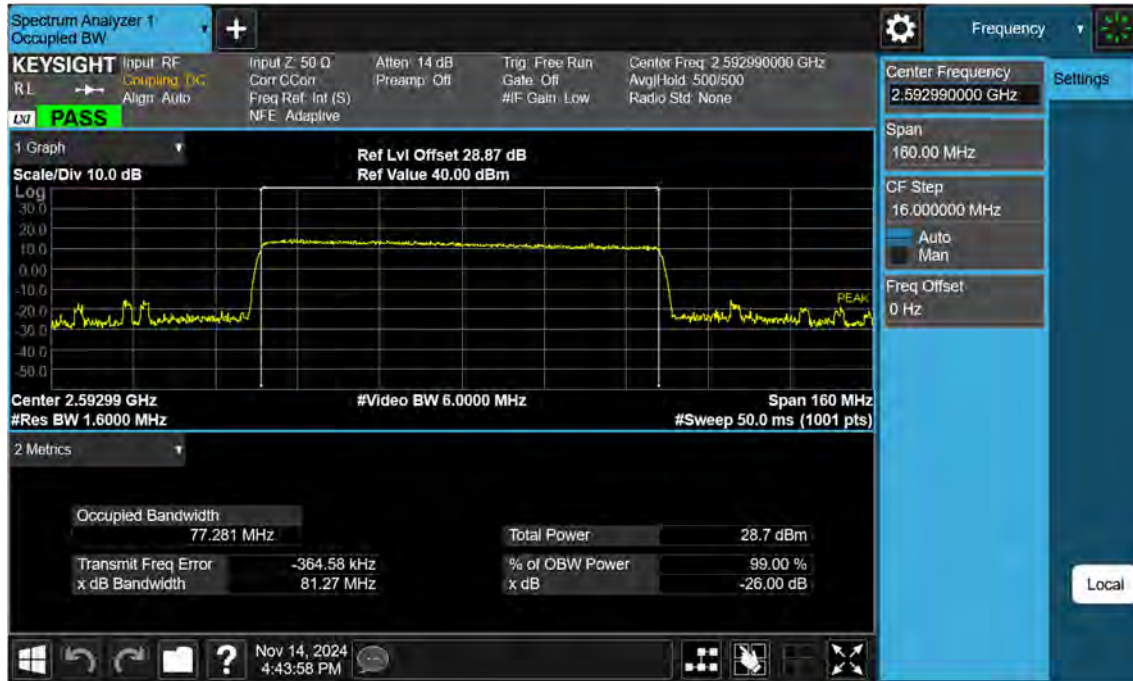
NR41_80 M_OBW_Mid_16QAM_FullRB



NR41_80 M_OBW_Mid_64QAM_FullRB



NR41_80 M_OBW_Mid_256QAM_FullRB



NR41_90 M_OBW_Mid_BPSK_FullRB



NR41_90 M_OBW_Mid_QPSK_FullIRB



NR41_90 M_OBW_Mid_16QAM_FullRB



NR41_90 M_OBW_Mid_64QAM_FullRB



Spectrum Analyzer 1
Occupied BW

Center Frequency: 2.592990000 GHz
Span: 180.00 MHz
CF Step: 18.000000 MHz
Auto
Man
Freq Offset: 0 Hz

Input RF
Coupling: DC
Align: Auto

Input Z: 50 Ω
Corr CC0n
Freq Ref: Int (S)
NFE: Adaptive

Atten: 14 dB
Preamp: Off

Trig: Free Run
Gate: Off
#F Gain: Low

Center Freq: 2.592990000 GHz
Avg/Hold: 500/500
Radio Std: None

1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 28.87 dB
Ref Value 40.00 dBm

Center 2.59299 GHz
#Res BW 1.8000 MHz
Video BW 8.0000 MHz
Span 180 MHz
#Sweep 50.0 ms (1001 pts)

2 Metrics

Occupied Bandwidth	86.891 MHz	Total Power	28.8 dBm
Transmit Freq Error	-601.04 kHz	% of OBW Power	99.00 %
x dB Bandwidth	91.27 MHz	x dB	-26.00 dB

NR41_100 M_OBW_Mid_BPSK_FullRB



NR41_100 M_OBW_Mid_QPSK_FullRB



NR41_100 M_OBW_Mid_16QAM_FullRB



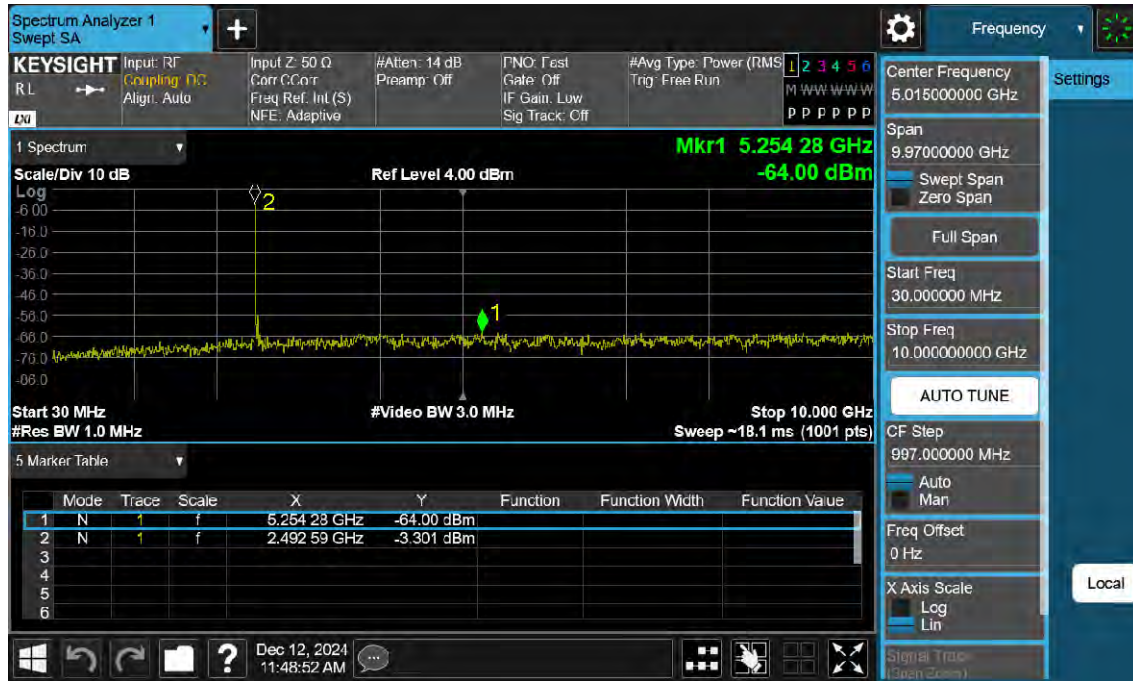
NR41_100 M_OBW_Mid_64QAM_FullRB



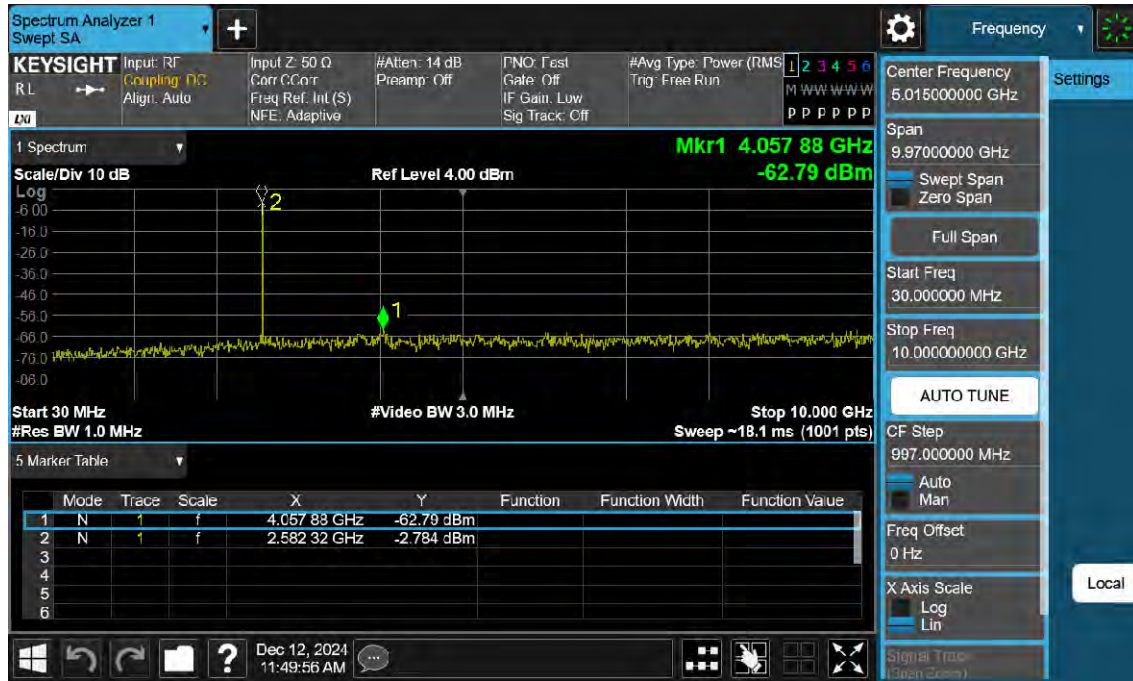
NR41_100 M_OBW_Mid_256QAM_FullRB



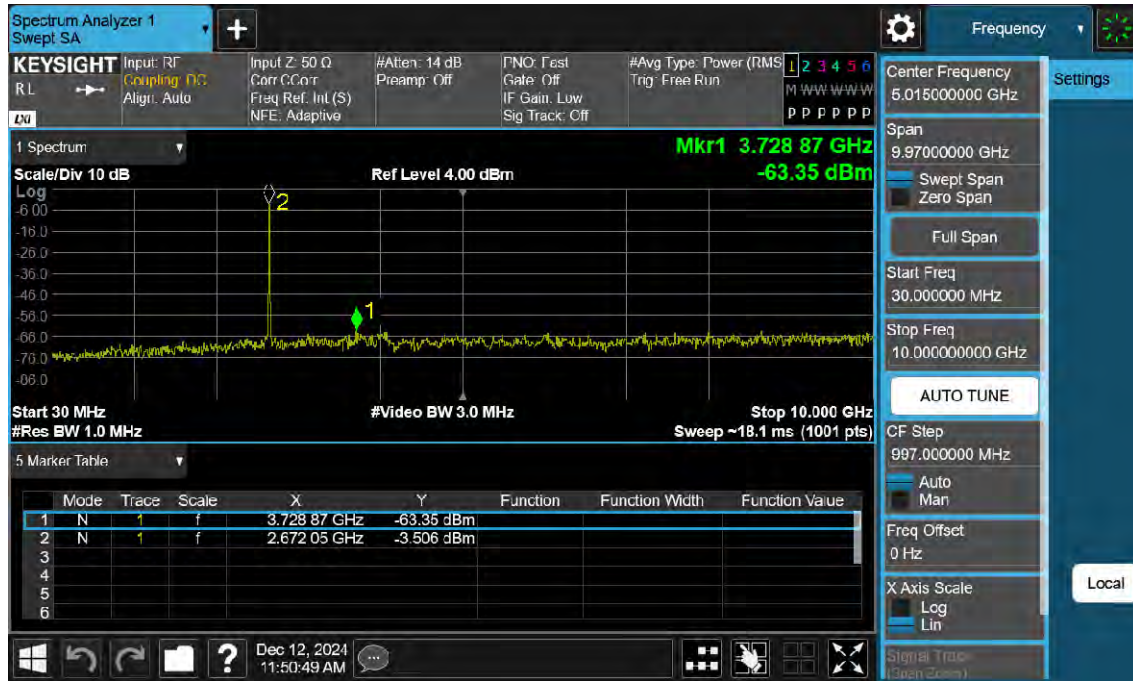
NR41_20 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



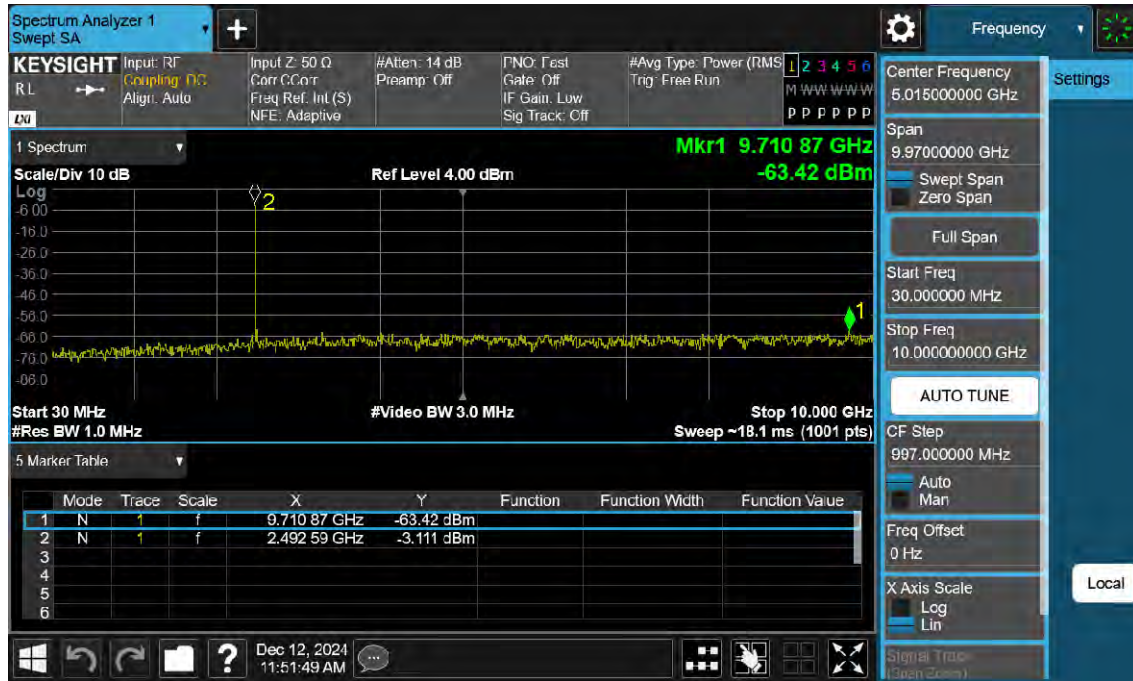
NR41_20 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



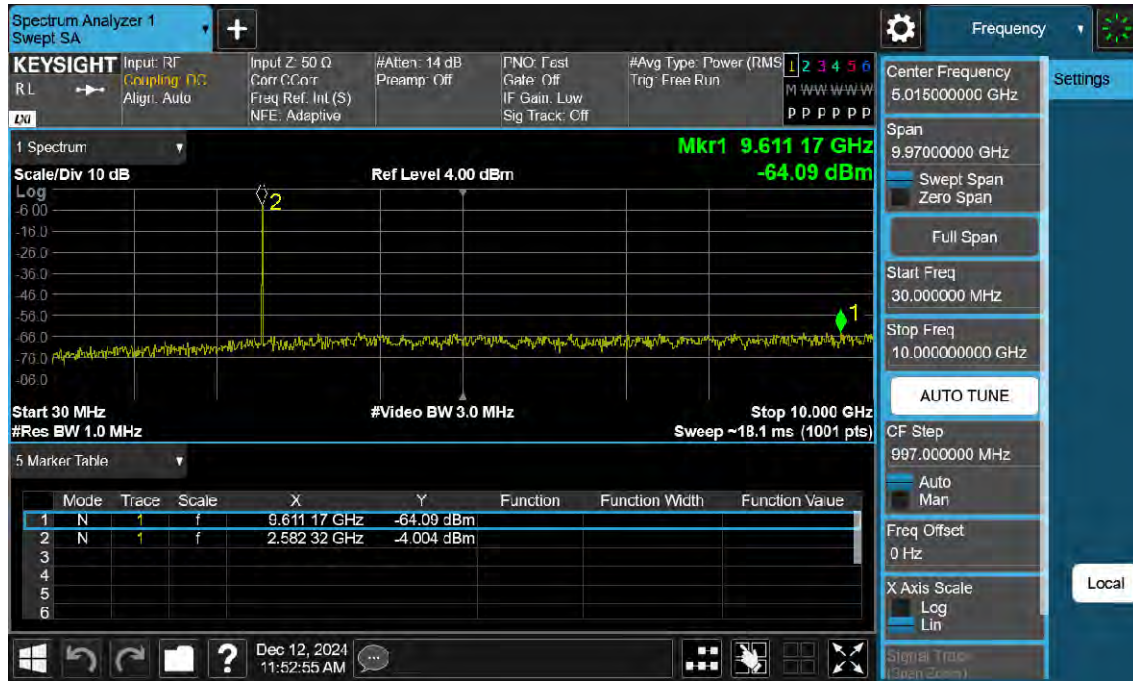
NR41_20 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



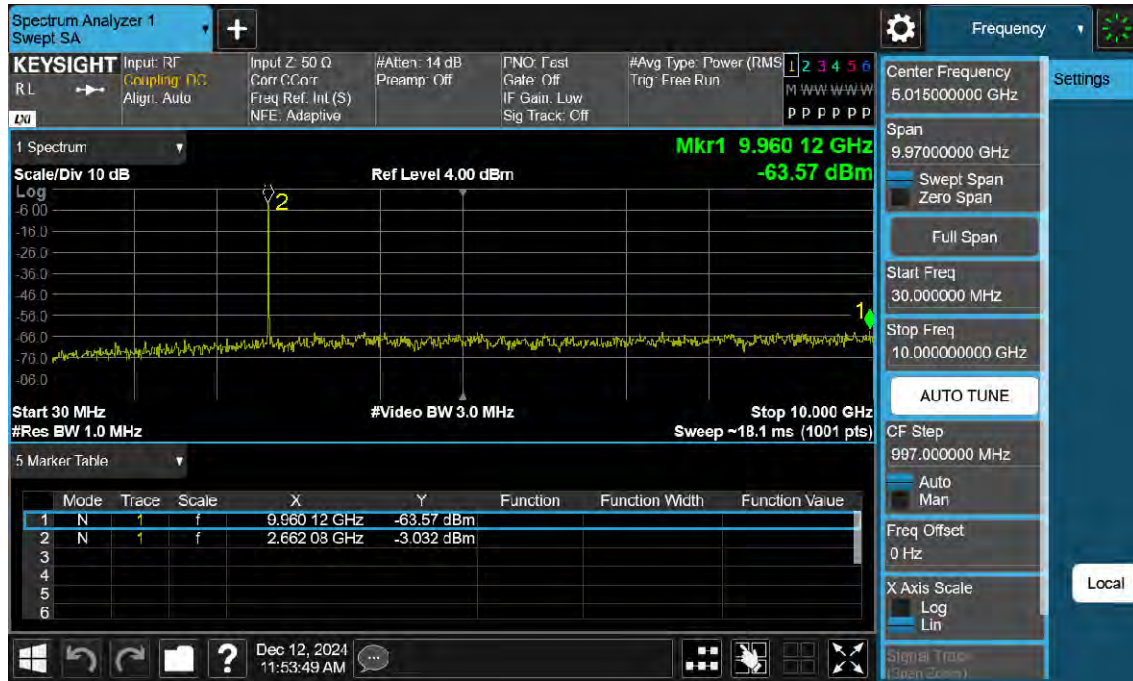
NR41_30 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



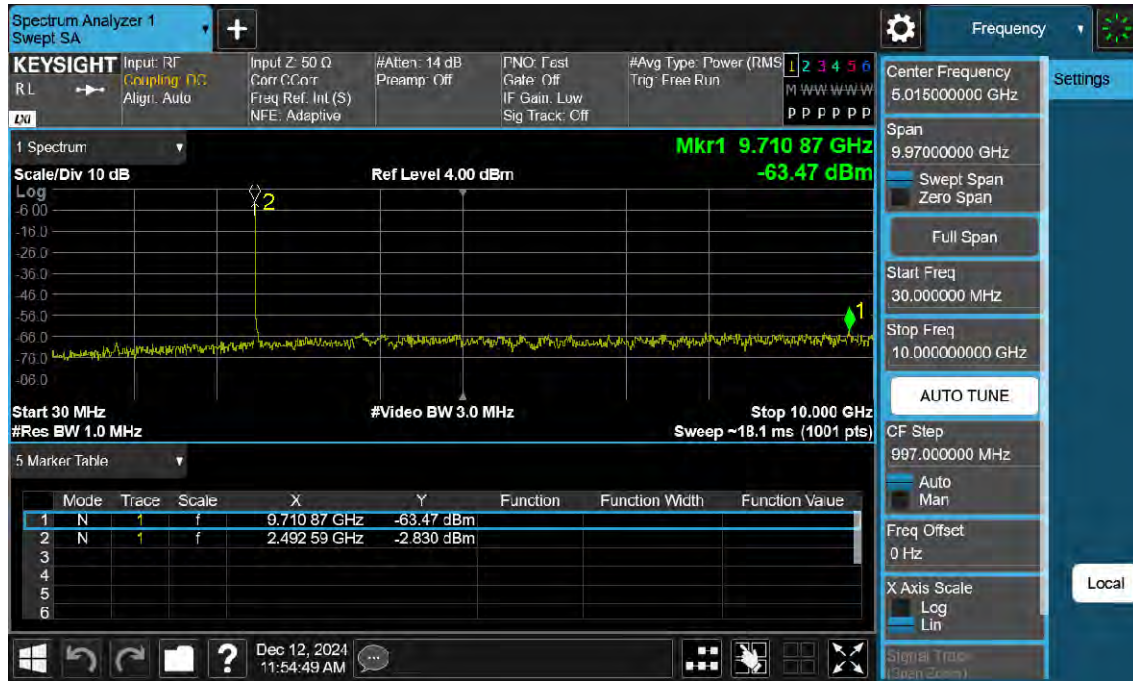
NR41_30 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



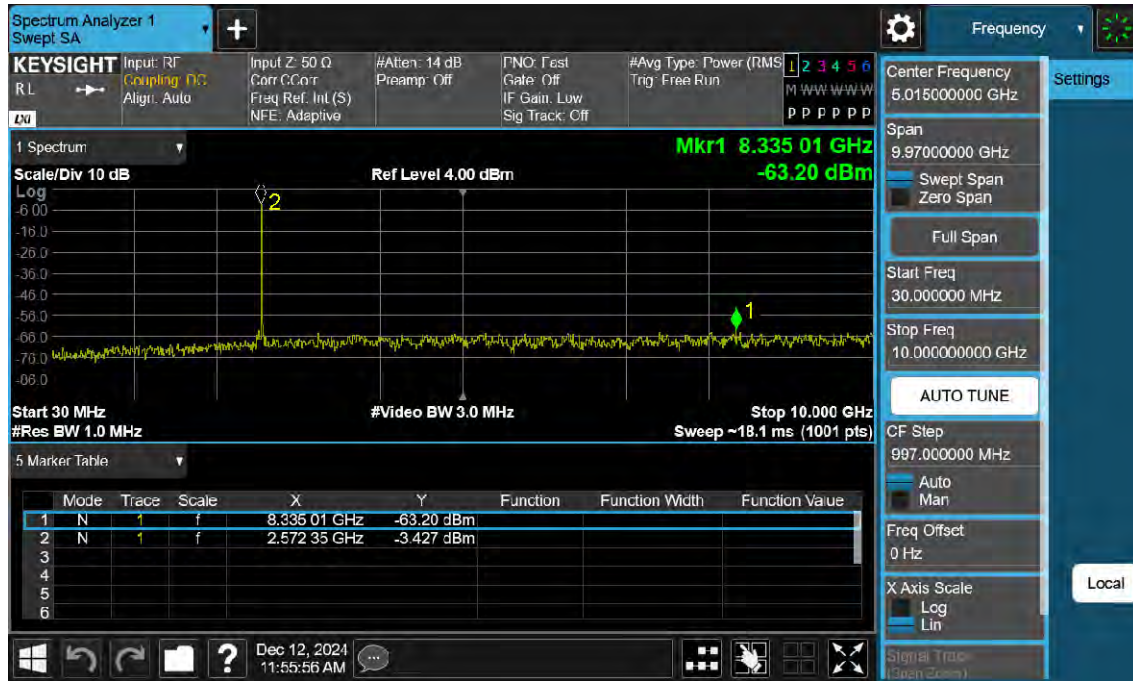
NR41_30 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



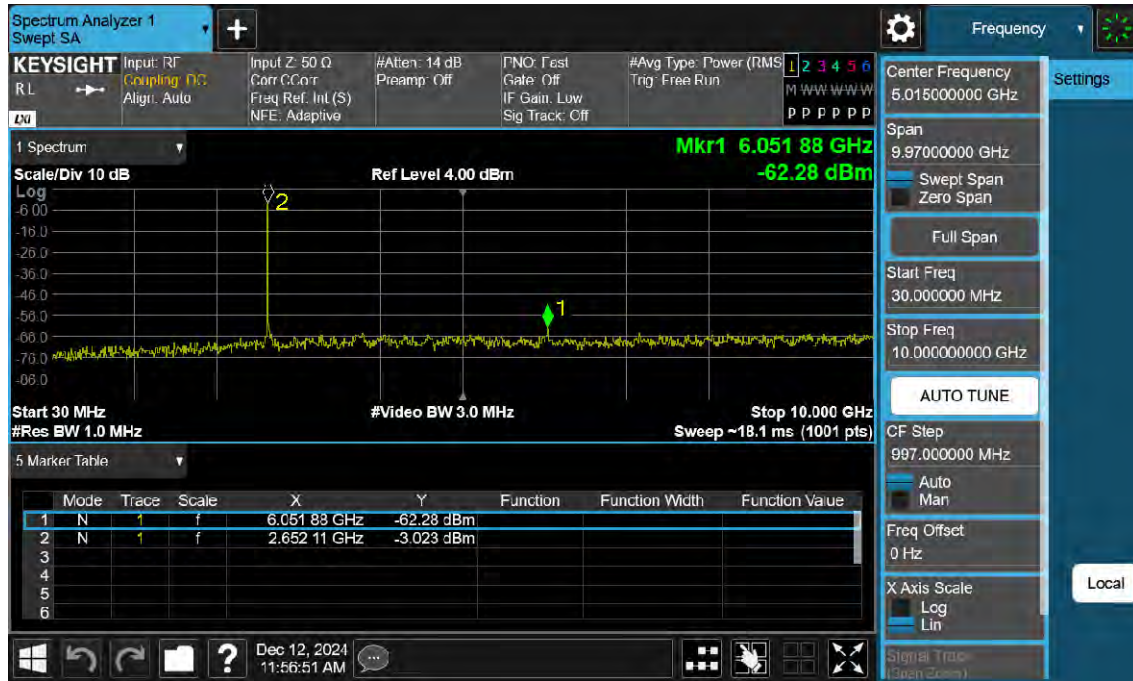
NR41_40 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



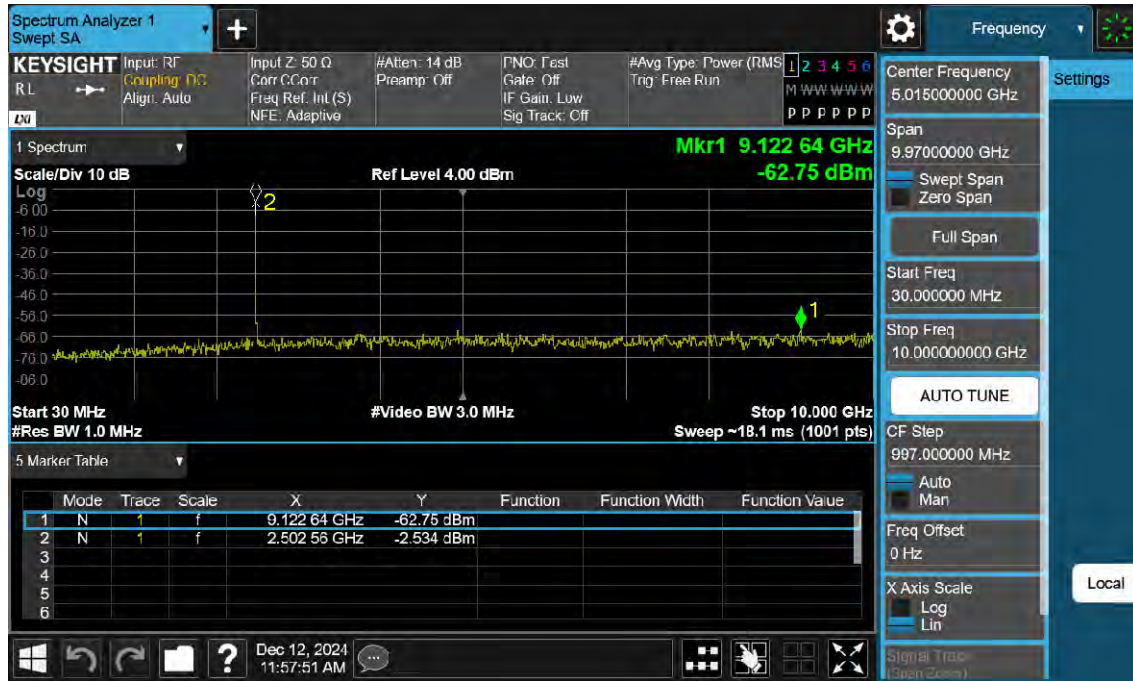
NR41_40 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



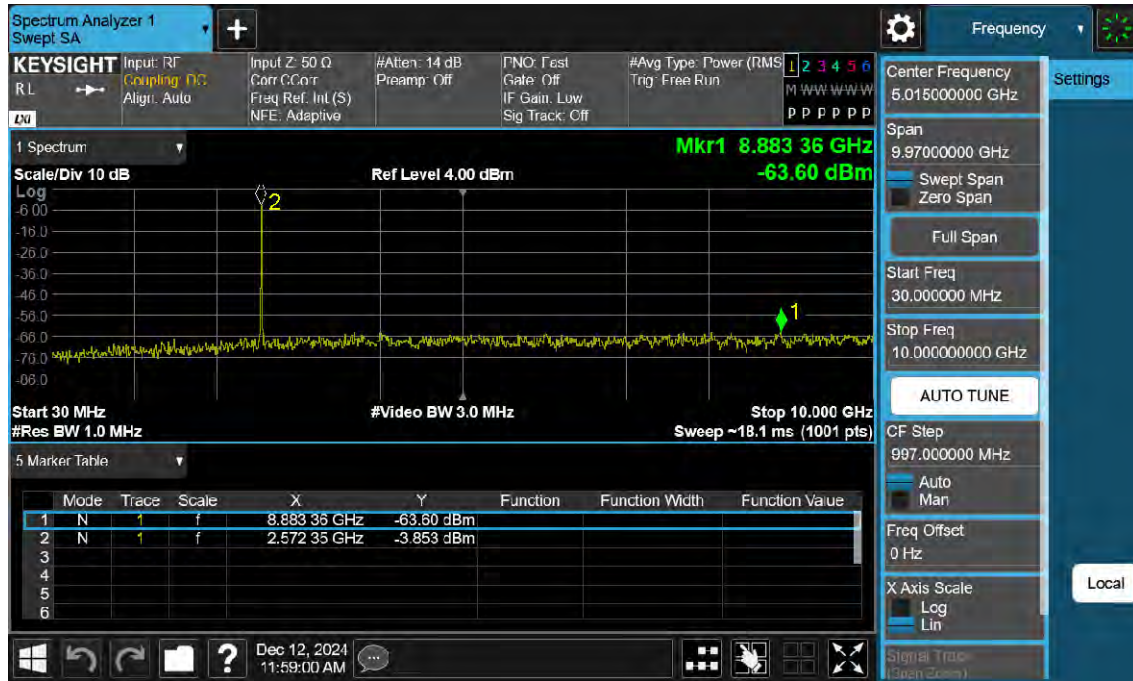
NR41_40 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



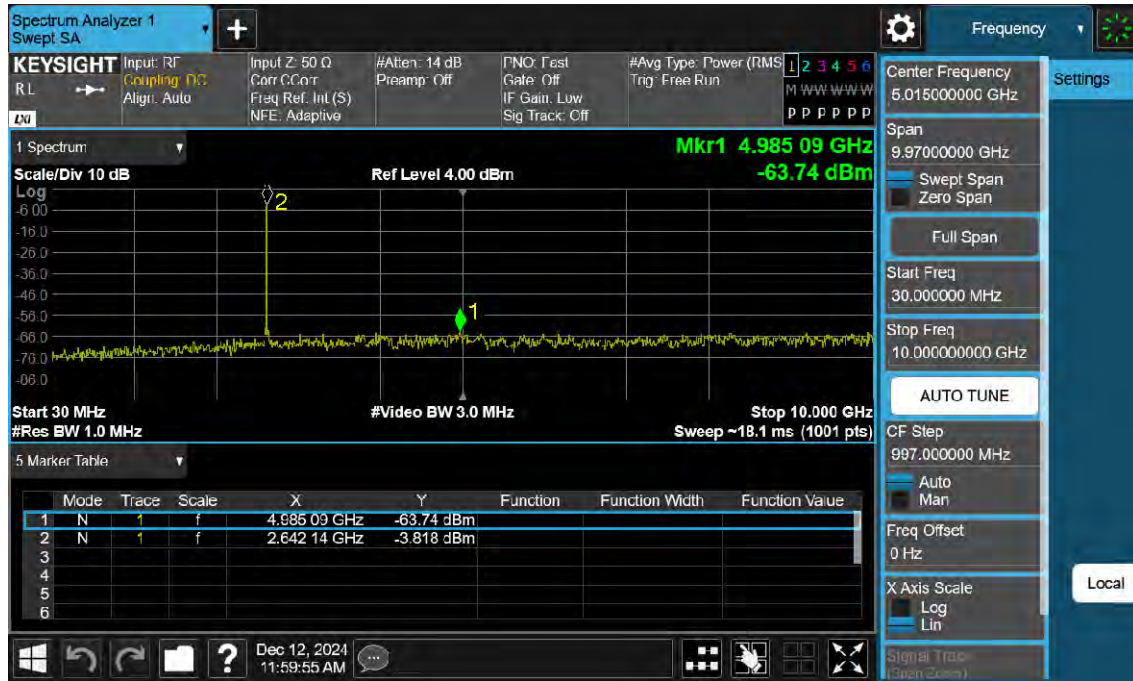
NR41_50 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



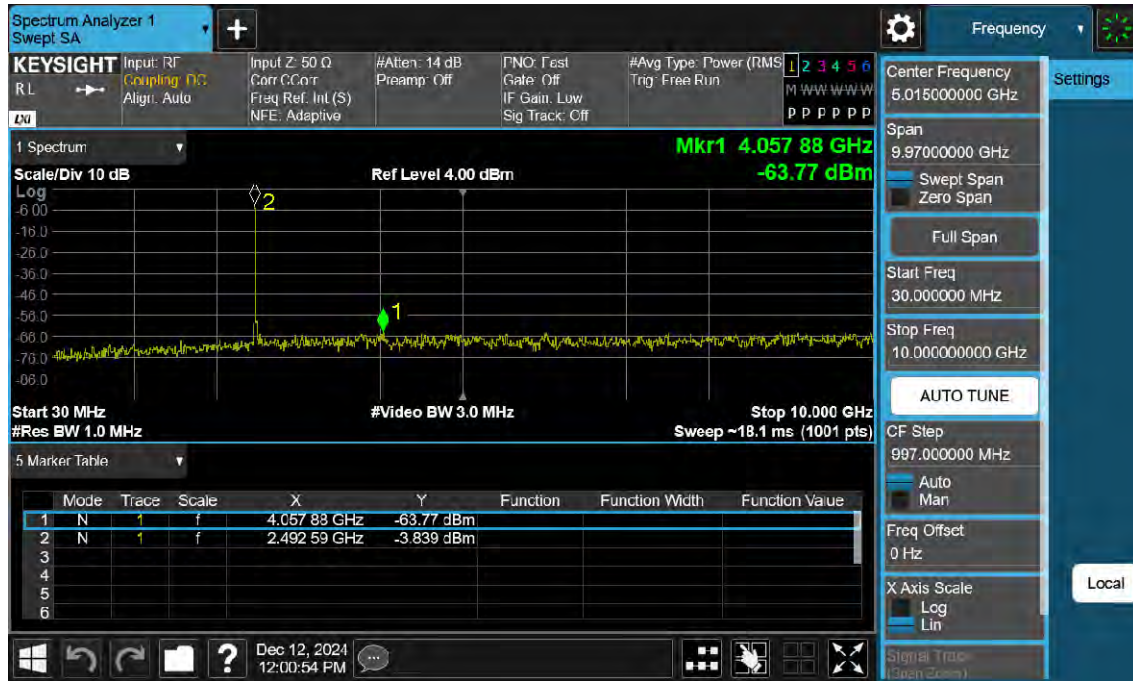
NR41_50 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



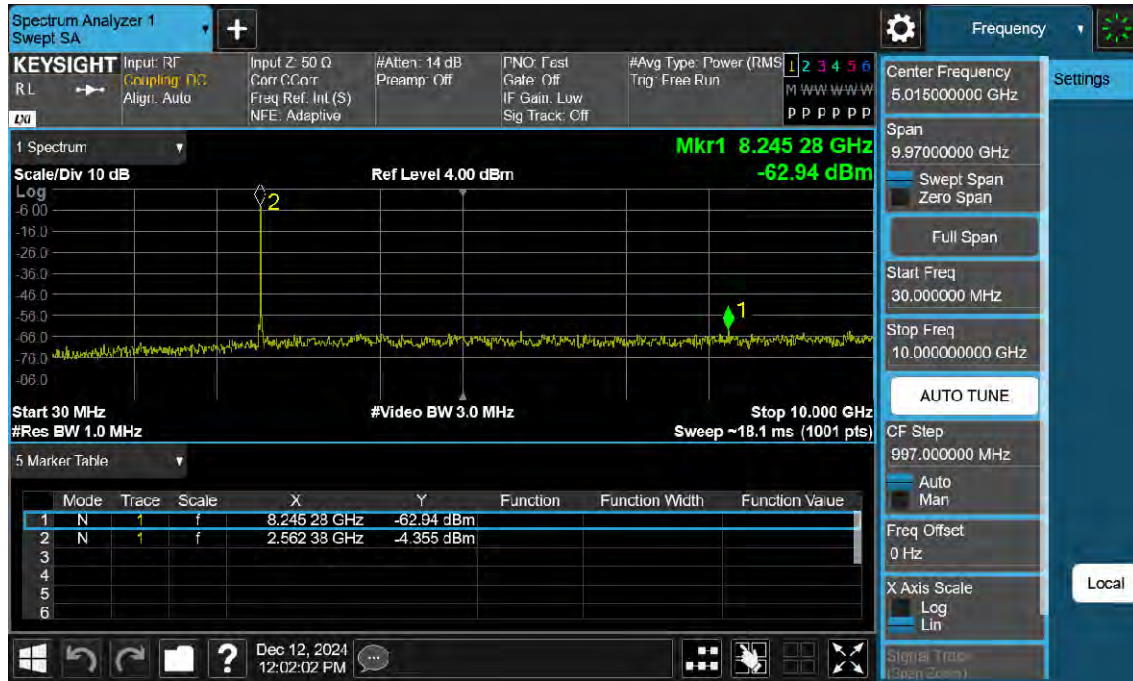
NR41_50 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



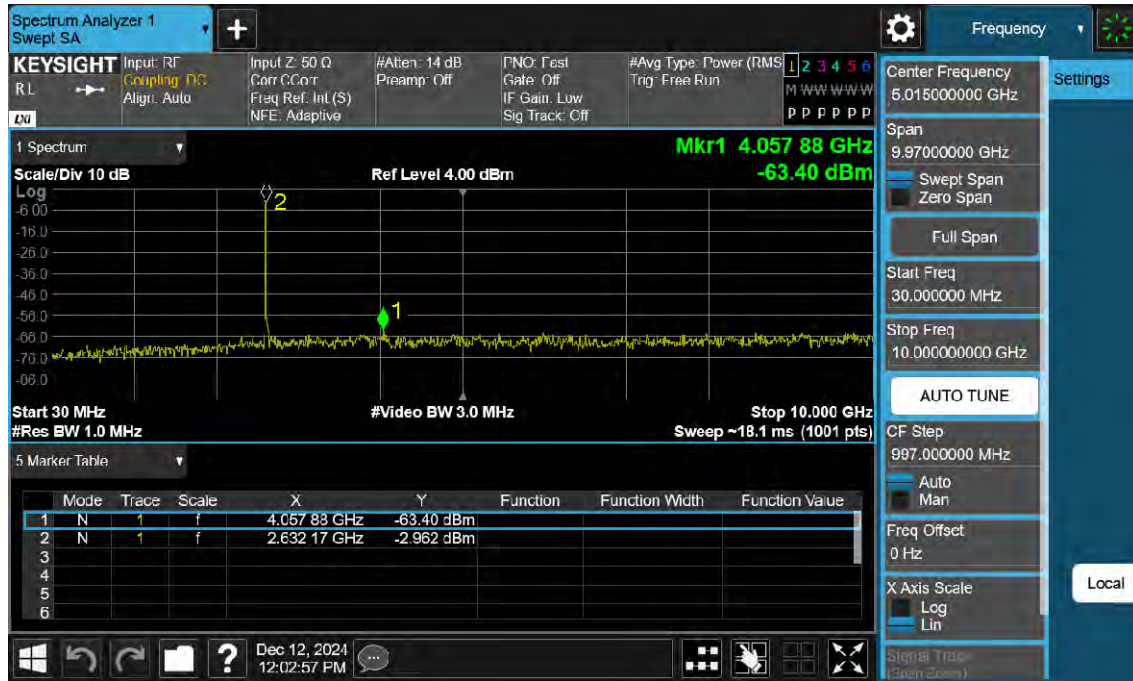
NR41_60 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



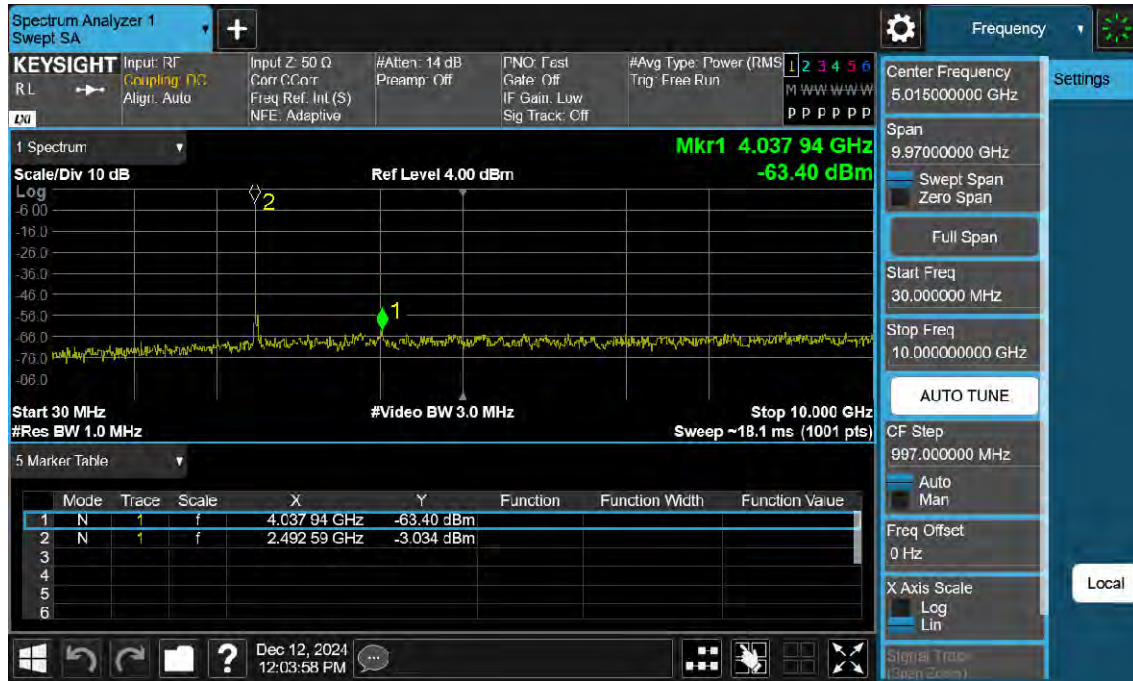
NR41_60 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



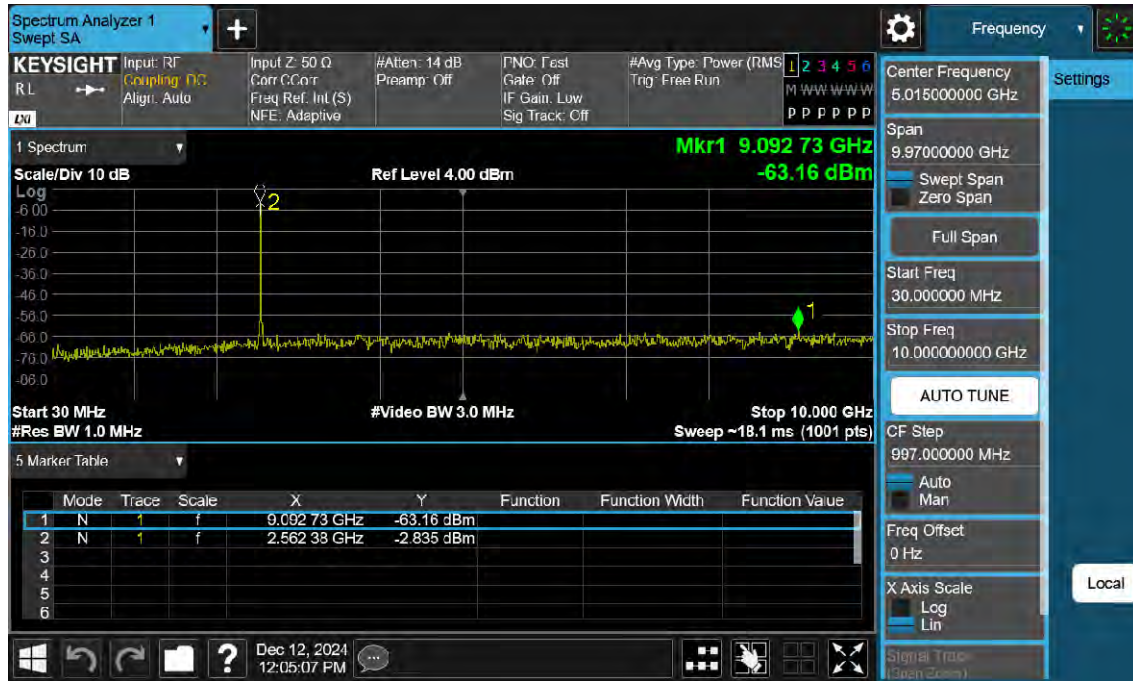
NR41_60 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



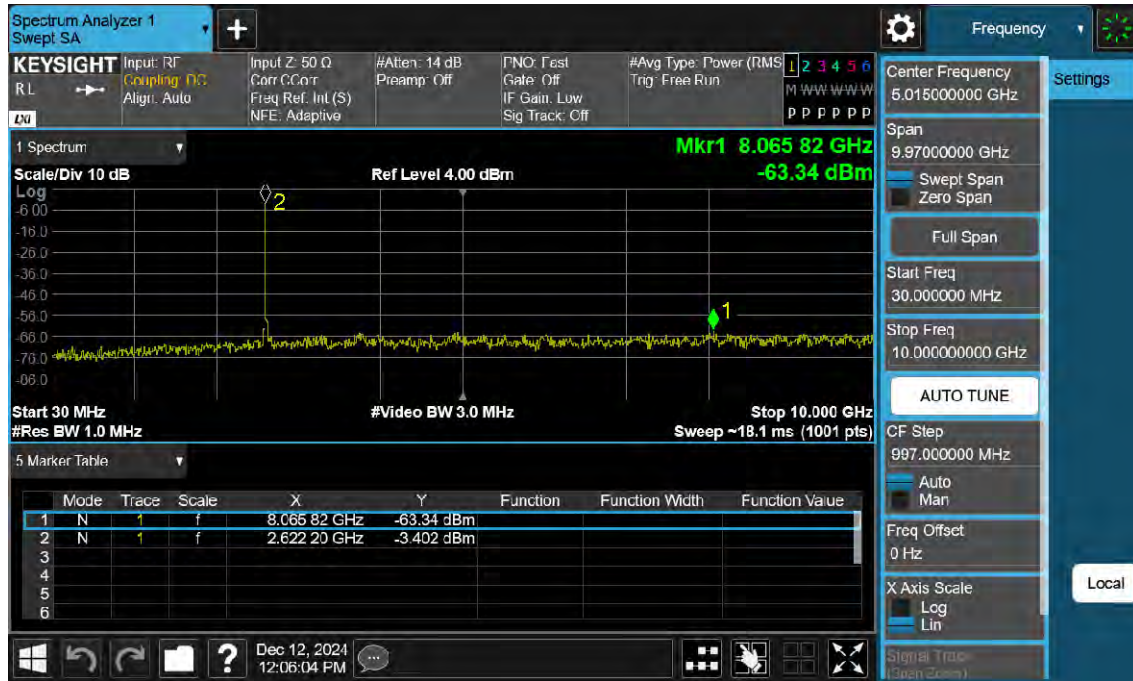
NR41_70 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



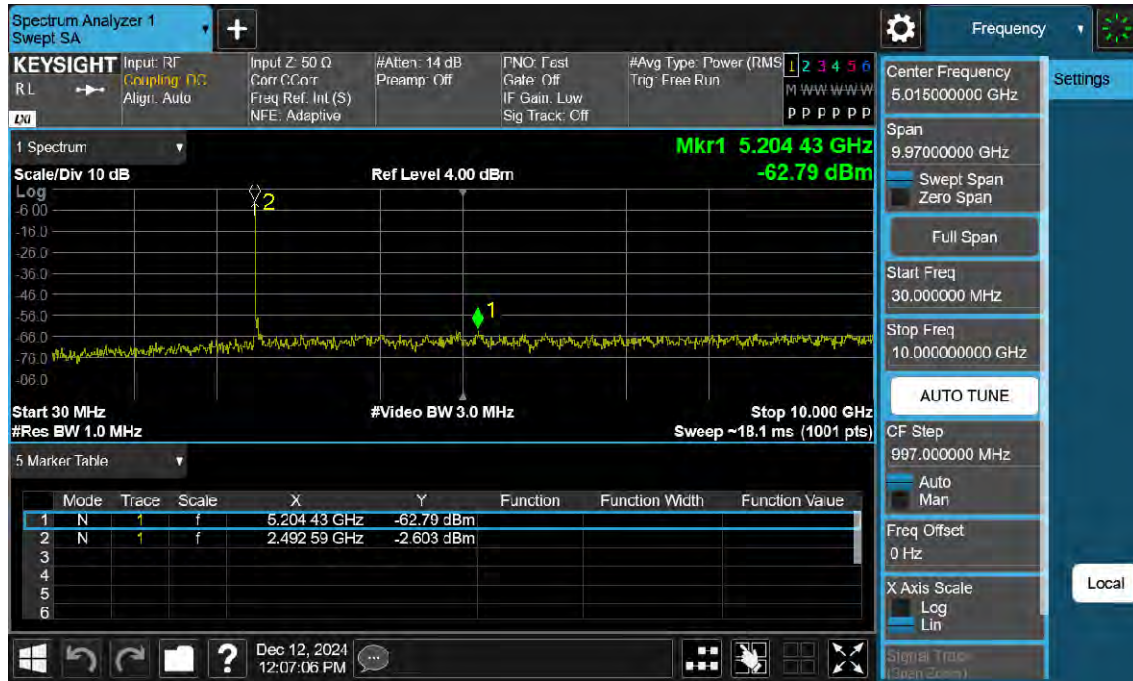
NR41_70 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



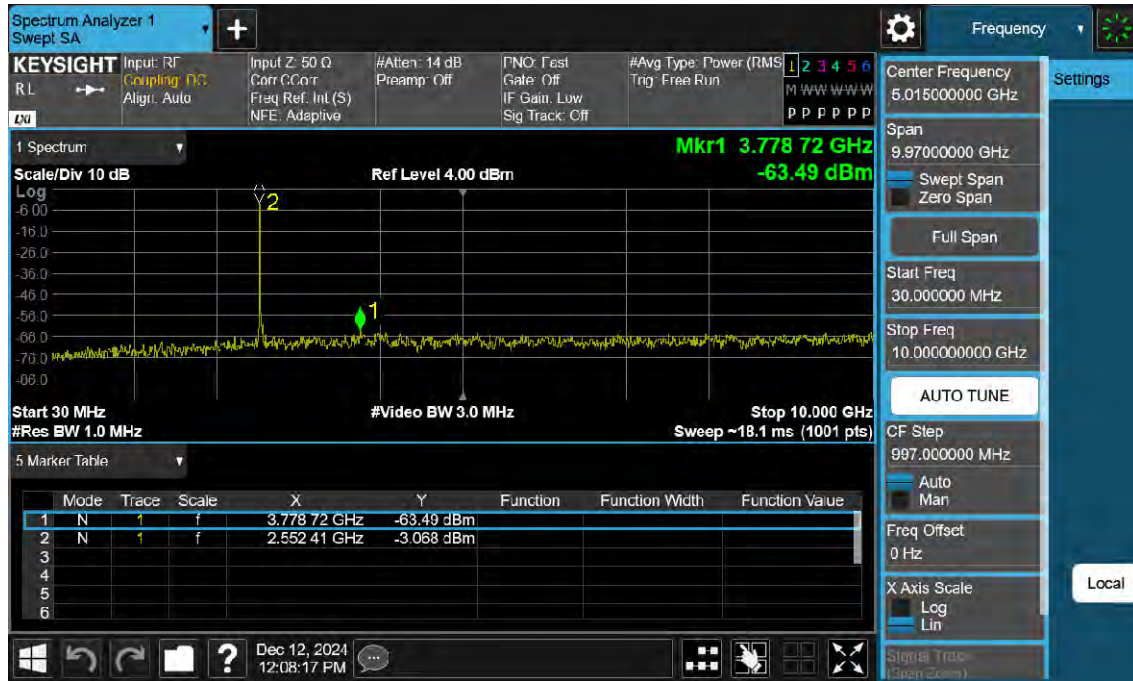
NR41_70 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



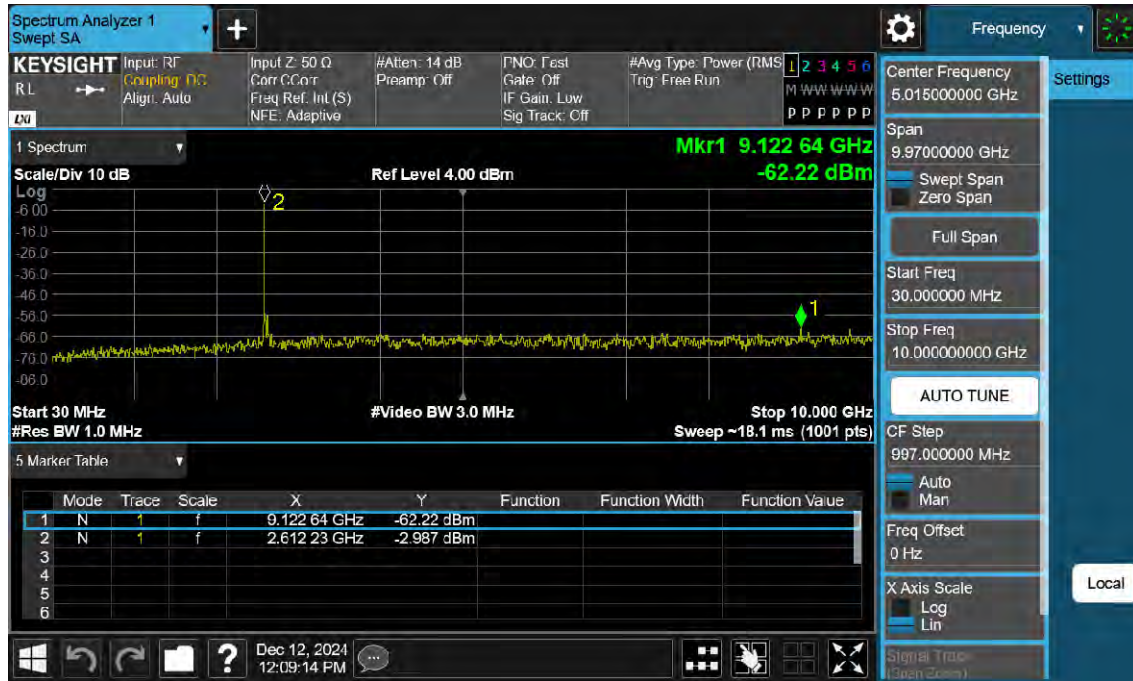
NR41_80 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



NR41_80 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



NR41_80 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



NR41_90 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB

