

TEST REPORT

FCC Sub6 n26(Part90) Test for SM-X406B
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2506-FC083

DATE OF ISSUE
June 18, 2025

Tested by
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Applicant

SAMSUNG Electronics Co., Ltd.

129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Product Name

Tablet

Model Name

SM-X406B

Date of Test

April 24, 2025 ~ June 13, 2025

FCC ID

A3LSMX406B

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 Classification:

PCS Licensed Transmitter (PCB)

Test Standard Used

FCC Rule Part: § 90, § 22

Test Results

PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	June 18, 2025	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

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

CONTENTS

1. GENERAL INFORMATION	5
1.1. MAXIMUM OUTPUT POWER	6
2. INTRODUCTION	7
2.1. DESCRIPTION OF EUT	7
2.2. MEASURING INSTRUMENT CALIBRATION	7
2.3. TEST FACILITY	7
3. DESCRIPTION OF TESTS	8
3.1 TEST PROCEDURE	8
3.2 CONDUCTED OUTPUT POWER	9
3.3 RADIATED POWER	10
3.4 RADIATED SPURIOUS EMISSIONS	11
3.5 PEAK- TO- AVERAGE RATIO	12
3.6 OCCUPIED BANDWIDTH	13
3.7 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL	14
3.8 CHANNEL EDGE	15
3.9 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE	17
3.10 WORST CASE(RADIATED TEST)	18
3.11 WORST CASE(CONDUCTED TEST)	19
4. LIST OF TEST EQUIPMENT	20
5. MEASUREMENT UNCERTAINTY	21
6. SUMMARY OF TEST RESULTS	22
7. SAMPLE CALCULATION	23
8. TEST DATA	25
8.1 CONDUCTED OUTPUT POWER	25
8.2 EFFECTIVE RADIATED POWER	29
8.3 RADIATED SPURIOUS EMISSIONS	33
8.4 PEAK-TO-AVERAGE RATIO	35
8.5 OCCUPIED BANDWIDTH	36
8.6 CONDUCTED SPURIOUS EMISSIONS	37
8.7 CHANNEL EDGE (Part90)	37
8.8 BAND EDGE(Part22)	37
8.9 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE	38
9. TEST PLOTS	42
10. ANNEX A_ TEST SETUP PHOTO	117

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMX406B
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	§ 90, § 22
EUT Type:	Tablet
Model(s):	SM-X406B
SCS(kHz):	15
Bandwidth(MHz):	5, 10, 15, 20
Waveform:	CP-OFDM, DFT-S-OFDM
Modulation:	DFT-S-OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM
Tx Frequency:	816.5 MHz – 824.0 MHz (Sub6 n26 (5 MHz)) 819.0 MHz – 824.0 MHz (Sub6 n26 (10 MHz)) 821.5 MHz – 824.0 MHz (Sub6 n26 (15 MHz)) 824.0 MHz (Sub6 n26 (20 MHz))
Date(s) of Tests:	April 24, 2025 ~ June 13, 2025
Serial number:	Radiated : R32Y4000YTK Conducted : R32Y40009RL
Antenna Information	Please refer to the Antenna 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 n26 (5)	816.5 – 824.0	4M60G7D	PI/2 BPSK	0.232	23.65
		4M60G7D	QPSK	0.225	23.53
		4M61W7D	16QAM	0.182	22.61
		4M60W7D	64QAM	0.124	20.94
		4M62W7D	256QAM	0.081	19.09
Sub6 n26 (10)	819.0 – 824.0	9M00G7D	PI/2 BPSK	0.228	23.57
		8M99G7D	QPSK	0.235	23.71
		8M98W7D	16QAM	0.179	22.53
		9M01W7D	64QAM	0.124	20.93
		8M97W7D	256QAM	0.079	18.99
Sub6 n26 (15)	821.5 – 824.0	13M5G7D	PI/2 BPSK	0.236	23.72
		13M5G7D	QPSK	0.236	23.72
		13M4W7D	16QAM	0.171	22.33
		13M4W7D	64QAM	0.123	20.89
		13M4W7D	256QAM	0.078	18.93
Sub6 n26 (20)	824.0	17M9G7D	PI/2 BPSK	0.228	23.58
		17M9G7D	QPSK	0.228	23.57
		17M9W7D	16QAM	0.163	22.12
		17M9W7D	64QAM	0.122	20.88
		17M9W7D	256QAM	0.073	18.62

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

Please refer to the [2G3G] Test Report.

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
Channel 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 5.2.4 - ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2
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 Overview

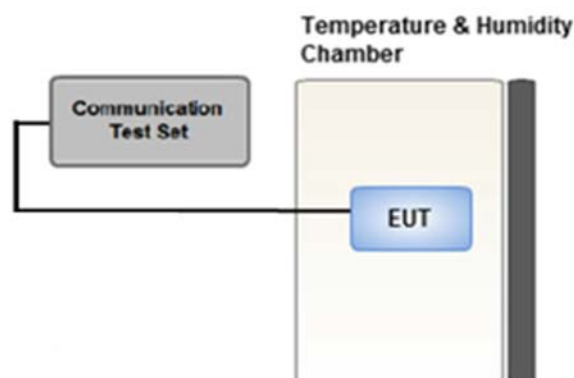
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base station emulator, communications test set, call box, or similar instrumentation that is capable of establishing a communications link with the EUT to enable control over variable parameters (e.g., output power, OBW, etc.).

In some cases, these instruments also include basic digital spectrum analyzer and/or power meter capabilities that can be utilized to measure the RF output power if the specified detectors and requirements can be realized and the measurement functions have been calibrated.

Test Procedure

1. The RF port of the EUT was connected to the Communication Tester via an RF cable.
2. Conducted average power was measured using a calibrated Radio Communication Tester.

Test setup



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 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $>$ 2 x 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;

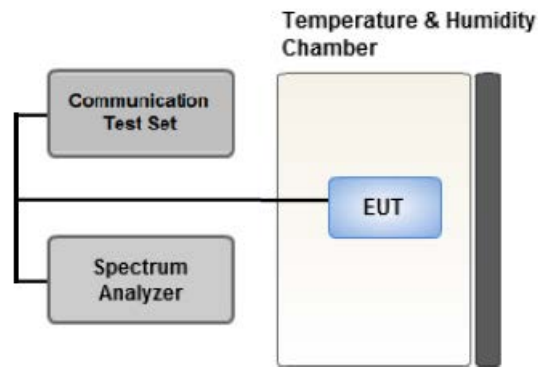
$$\text{Result}_{(\text{dBm})} = P_g_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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



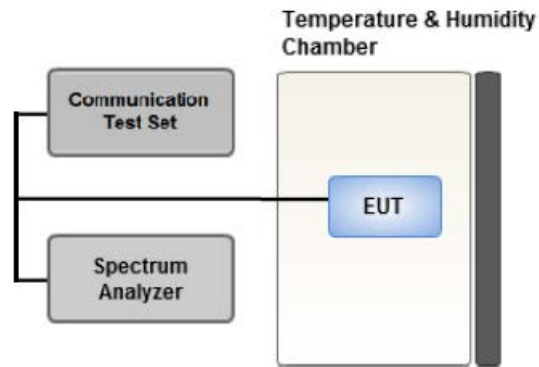
Test setup

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 %.

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.

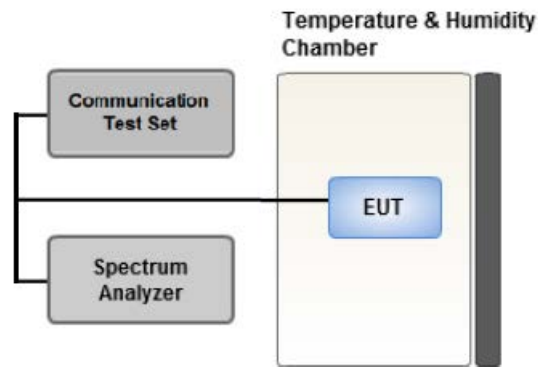
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

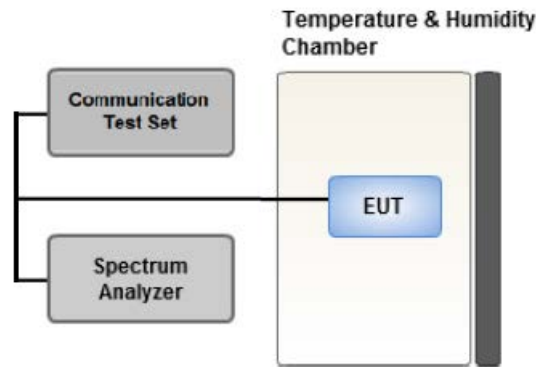
Test Overview

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 $\geq 2 \times \text{Span} / \text{RBW}$

3.8 CHANNEL 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

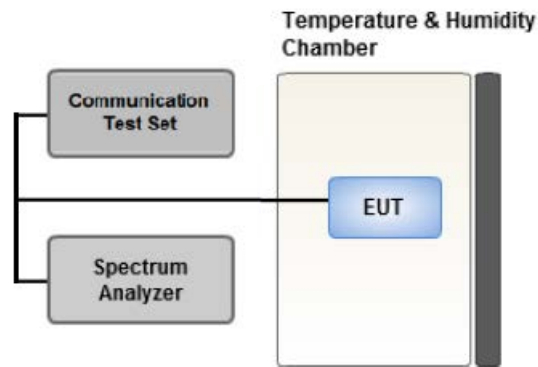
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW :
 - .- EA licensee's frequency block by up to and including 37.5 kHz : 300 Hz
 - .- EA licensee's frequency block greater than 37.5 kHz : 100 kHz
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 > (Number of Points) $\times$ (Symbol Period)
9. The trace was allowed to stabilize

Test Notes

For 90.691(a), RBW=300 Hz for offset less than 37.5 kHz from channel edge and RBW=100 kHz for offsets greater than 37.5 kHz is allowed.

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

3.9 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.

3.10 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- 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 Only
Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
Worst case : Stand alone
- 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.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.
- In the case of radiated spurious emissions, all bandwidth of operation was investigated and the worst case bandwidth results are reported. (Worst case : 10 MHz)

[Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Radiated Power	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	See Section 8.1		X
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 8.2		X

3.11 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 Only
- 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	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	5	High	Full RB	0
	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	10, 15, 20	Mid	Full RB	0
Channel Edge	PI/2 BPSK,	5	Low	1	0
			High	1	24
		10	Mid	1	0
				1	51
		15	Mid	1	0
				1	78
		20	Mid	1	0
				1	105
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK,	5	Low, High	Full RB	0
			Mid	Full RB	0
		10, 15, 20	Low, High	1	1
			Mid	1	1

4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacture	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	04/17/2026	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/23/2027	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/06/2027	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/05/2027	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/17/2027	Biennial
RF Switching System	FBSR-06B (1G HPF + LNA)	T&M SYSTEM	F3L1	05/08/2026	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/08/2026	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/08/2026	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/08/2026	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/07/2025	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/19/2026	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/22/2025	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	02/04/2026	Annual
Chamber	SU-642	ESPEC	93008124	02/11/2026	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	03/21/2026	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/10/2026	Annual
Spectrum Analyzer (10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/04/2026	Annual
Signal & Spectrum Analyzer (2 Hz~67 GHz)	FSW67	REOHDE & SCHWARZ	101736	05/27/2026	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/14/2026	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/08/2026	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/14/2026	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/10/2025	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/26/2025	Annual
Automation Software	FCC NR Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC NR Radiated	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 ($\pm$ kHz)
Occupied Bandwidth	95 (Confidence level about 95 %, $k=2$)
Frequency stability	28 (Confidence level about 95 %, $k=2$)

Parameter	Expanded Uncertainty ($\pm$ dB)
Block Edge	0.70 (Confidence level about 95 %, $k=2$)
Conducted Spurious Emissions	1.18 (Confidence level about 95 %, $k=2$)
Peak- to- Average Ratio	0.68 (Confidence level about 95 %, $k=2$)
Radiated Power	4.74 (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)	5.68 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.75 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.82 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (Above 40 GHz)	5.58 (Confidence level about 95 %, $k=2$)

6. SUMMARY OF TEST RESULTS

-. The decision rule applies 'simple acceptance'

6.1 Test Condition: Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§ 2.1049	N/A	PASS
Channel Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 90.691	< 50 + 10log ₁₀ (P[Watts]) at Band Edge and for all out-of-band emissions within 37.5 kHz of Block Edge	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 22.917(a)	< 43 + 10log ₁₀ (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046 § 90.635	< 100 Watts	PASS
Frequency stability / variation of ambient temperature	§ 2.1055, § 90.213 § 22.355	< 2.5 ppm	PASS

6.2 Test Condition: Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Effective Radiated Power	§ 22.913(a)(5)	< 7 Watts max. ERP (Only 15,20 MHz B.W & Straddle C.H)	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 90.691 § 22.917(a)	< 43 + 10log ₁₀ (P[Watts]) for all out-of band emissions	PASS

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

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm)						Limit (W)
				816.5 MHz		821.5 MHz		824 MHz		
				dBm	W	dBm	W	dBm	W	
5	BPSK	1	1	23.42	0.220	23.60	0.229	23.65	0.232	100
		1	13	23.35	0.216	23.23	0.210	23.57	0.228	100
		1	23	23.37	0.217	23.59	0.229	23.59	0.229	100
		12	0	22.76	0.189	22.89	0.195	22.97	0.198	100
		12	7	23.23	0.210	23.40	0.219	23.57	0.228	100
		12	13	22.67	0.185	22.89	0.195	23.00	0.200	100
		25	0	22.63	0.183	22.93	0.196	22.96	0.198	100
	QPSK	1	1	23.23	0.210	23.43	0.220	23.53	0.225	100
		1	13	22.92	0.196	23.11	0.205	23.43	0.220	100
		1	23	22.85	0.193	23.42	0.220	23.15	0.207	100
		12	0	22.09	0.162	22.30	0.170	22.53	0.179	100
		12	7	23.20	0.209	23.32	0.215	23.38	0.218	100
		12	13	22.14	0.164	22.46	0.176	22.44	0.175	100
		25	0	22.22	0.167	22.40	0.174	22.45	0.176	100
	16QAM	1	1	22.10	0.162	22.57	0.181	22.61	0.182	100
	64QAM	1	1	20.85	0.122	20.71	0.118	20.94	0.124	100
	256QAM	1	1	18.59	0.072	18.53	0.071	19.09	0.081	100

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm)				Limit (W)
				819.0 MHz		824.0 MHz		
				dBm	W	dBm	W	
10	BPSK	1	1	23.31	0.214	23.57	0.228	100
		1	26	23.14	0.206	23.53	0.225	100
		1	50	23.27	0.212	23.56	0.227	100
		25	0	22.85	0.193	22.92	0.196	100
		25	14	23.30	0.214	23.52	0.225	100
		25	27	22.90	0.195	23.03	0.201	100
		50	0	22.80	0.191	22.94	0.197	100
	QPSK	1	1	23.34	0.216	23.71	0.235	100
		1	26	23.04	0.201	23.33	0.215	100
		1	50	23.33	0.215	23.70	0.234	100
		25	0	22.34	0.171	22.55	0.180	100
		25	14	23.22	0.210	23.54	0.226	100
		25	27	22.39	0.173	22.65	0.184	100
		50	0	22.28	0.169	22.53	0.179	100
	16QAM	1	1	22.39	0.173	22.53	0.179	100
	64QAM	1	1	20.64	0.116	20.93	0.124	100
	256QAM	1	1	18.55	0.072	18.99	0.079	100

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm)				Limit (W)
				821.5 MHz		824.0 MHz		
				dBm	W	dBm	W	
15	BPSK	1	1	23.72	0.236	23.62	0.230	100
		1	40	23.43	0.220	23.42	0.220	100
		1	77	23.71	0.235	23.61	0.230	100
		36	0	22.78	0.190	22.92	0.196	100
		36	22	23.40	0.219	23.57	0.228	100
		36	43	22.93	0.196	23.04	0.201	100
		75	0	22.93	0.196	23.06	0.202	100
	QPSK	1	1	23.72	0.236	23.66	0.232	100
		1	40	23.24	0.211	23.26	0.212	100
		1	77	23.71	0.235	23.65	0.232	100
		36	0	22.35	0.172	22.41	0.174	100
		36	22	23.35	0.216	23.57	0.228	100
		36	43	22.50	0.178	22.63	0.183	100
		75	0	22.41	0.174	22.56	0.180	100
	16QAM	1	1	22.33	0.171	22.16	0.164	100
	64QAM	1	1	20.86	0.122	20.89	0.123	100
	256QAM	1	1	18.93	0.078	18.37	0.069	100

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm)		Limit (W)
				824.0 MHz		
				dBm	W	
20	BPSK	1	1	23.58	0.228	100
		1	53	23.57	0.228	100
		1	104	23.56	0.227	100
		50	0	22.89	0.195	100
		50	28	23.46	0.222	100
		50	56	23.11	0.205	100
		100	0	23.00	0.200	100
	QPSK	1	1	23.57	0.228	100
		1	53	23.56	0.227	100
		1	104	23.31	0.214	100
		50	0	22.45	0.176	100
		50	28	23.48	0.223	100
		50	56	22.54	0.179	100
		100	0	22.57	0.181	100
	16QAM	1	1	22.12	0.163	100
	64QAM	1	1	20.88	0.122	100
	256QAM	1	1	18.62	0.073	100

8.2 EFFECTIVE RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
								W	W	dBm	Size	Offset
816.5	Sub6 n26 5 MHz [15 kHz]	PI/2 BPSK	-27.16	33.26	-10.00	1.44	H	< 7.00	0.152	21.82	1	12
		QPSK	-27.19	33.23	-10.00	1.44	H		0.151	21.79		
		16-QAM	-28.04	32.38	-10.00	1.44	H		0.124	20.94		
		64-QAM	-29.75	30.67	-10.00	1.44	H		0.084	19.23		
		256-QAM	-31.67	28.75	-10.00	1.44	H		0.054	17.31		
821.5		PI/2 BPSK	-27.28	33.16	-10.00	1.44	H		0.149	21.72	1	1
		QPSK	-27.29	33.15	-10.00	1.44	H		0.148	21.71		
		16-QAM	-28.28	32.16	-10.00	1.44	H		0.118	20.72		
		64-QAM	-29.77	30.67	-10.00	1.44	H		0.084	19.23		
		256-QAM	-31.81	11.44	-10.00	1.44	H		0.052	17.19		
824.0		PI/2 BPSK	-27.43	33.09	-10.00	1.44	H		0.146	21.65	1	1
		QPSK	-27.44	33.08	-10.00	1.44	H		0.146	21.64		
		16-QAM	-28.46	32.06	-10.00	1.44	H		0.115	20.62		
		64-QAM	-29.93	30.59	-10.00	1.44	H		0.082	19.15		
		256-QAM	-31.93	28.59	-10.00	1.44	H		0.052	17.15		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
								W	W	dBm	Size	Offset
819.0	Sub6 n26 10 MHz [15 kHz]	PI/2 BPSK	-27.13	33.27	-10.00	1.44	H	< 7.00	0.152	21.83	1	1
		QPSK	-27.15	33.25	-10.00	1.44	H		0.152	21.81		
		16-QAM	-28.05	32.35	-10.00	1.44	H		0.123	20.91		
		64-QAM	-29.68	30.72	-10.00	1.44	H		0.085	19.28		
		256-QAM	-31.73	28.67	-10.00	1.44	H		0.053	17.23		
824.0		PI/2 BPSK	-27.27	33.25	-10.00	1.44	H		0.152	21.81	1	1
		QPSK	-27.28	33.24	-10.00	1.44	H		0.151	21.80		
		16-QAM	-28.31	32.21	-10.00	1.44	H		0.119	20.77		
		64-QAM	-29.86	30.66	-10.00	1.44	H		0.084	19.22		
		256-QAM	-31.80	28.72	-10.00	1.44	H		0.053	17.28		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
								W	W	dBm	Size	Offset
821.5	Sub6 n26 15 MHz [15 kHz]	PI/2 BPSK	-27.13	33.31	-10.00	1.44	H	< 7.00	0.154	21.87	1	1
		QPSK	-27.14	33.30	-10.00	1.44	H		0.153	21.86		
		16-QAM	-28.15	32.29	-10.00	1.44	H		0.122	20.85		
		64-QAM	-29.65	30.79	-10.00	1.44	H		0.086	19.35		
		256-QAM	-31.56	28.88	-10.00	1.44	H		0.055	17.44		
824.0		PI/2 BPSK	-27.20	33.32	-10.00	1.44	H		0.154	21.88	1	1
		QPSK	-27.22	33.30	-10.00	1.44	H		0.153	21.86		
		16-QAM	-28.17	32.35	-10.00	1.44	H		0.123	20.91		
		64-QAM	-29.70	30.82	-10.00	1.44	H		0.087	19.38		
		256-QAM	-31.75	28.77	-10.00	1.44	H		0.054	17.33		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
								W	W	dBm	Size	Offset
824.0	Sub6 n26 20 MHz [15 kHz]	PI/2 BPSK	-27.11	33.41	-10.00	1.44	H	< 7.00	0.157	21.97	1	1
		QPSK	-27.13	33.39	-10.00	1.44	H		0.157	21.95		
		16-QAM	-28.04	32.48	-10.00	1.44	H		0.127	21.04		
		64-QAM	-29.64	30.88	-10.00	1.44	H		0.088	19.44		
		256-QAM	-31.64	28.88	-10.00	1.44	H		0.055	17.44		

8.3 RADIATED SPURIOUS EMISSIONS

- ▣ NR Band: N26
- ▣ Bandwidth: 10 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 3 meters
- ▣ SCS: 15 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
163800 (819.0)	1 638.00	-58.43	9.40	-67.08	1.98	V	-59.66	-13.00	1	1
	2 457.00	-60.12	10.90	-64.78	2.56	V	-56.44	-13.00		
	3 276.00	-60.24	11.51	-61.84	2.95	V	-53.28	-13.00		

☐ NR Band: N26
☐ Bandwidth: 20 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 3 meters
☐ SCS: 15 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
164800 (824.0)	1 648.00	-57.63	9.46	-66.61	2.02	V	-59.17	-13.00	1	1
	2 472.00	-59.22	10.80	-63.71	2.59	V	-55.50	-13.00		
	3 296.00	-61.34	11.62	-63.54	2.95	V	-54.87	-13.00		

8.4 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)	Limit (dB)
Sub6 n26	5 MHz	821.5	BPSK	25	0	4.47	13.00
			QPSK			5.62	
			16-QAM			6.14	
			64-QAM			6.41	
			256-QAM			6.59	
	10 MHz	819.0	BPSK	50		4.39	
			QPSK			5.60	
			16-QAM			6.32	
			64-QAM			6.53	
			256-QAM			6.66	
	15 MHz	## 821.5	BPSK	75		4.36	
			QPSK			5.59	
			16-QAM			6.29	
			64-QAM			6.49	
			256-QAM			6.35	
	20 MHz	## 824.0	BPSK	100		4.37	
			QPSK			5.63	
			16-QAM			6.30	
			64-QAM			6.45	
			256-QAM			6.44	

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 43 ~ 62.
2. ##: Straddle Channel
3. Straddle channel does not exceed the Part22 and Part90 limits.

8.5 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Band 26	5 MHz	821.5	BPSK	25	0	4.5963
			QPSK			4.5955
			16QAM			4.6067
			64QAM			4.6018
			256QAM			4.6166
	10 MHz	819.0	BPSK	50		8.9972
			QPSK			8.9874
			16QAM			8.9830
			64QAM			9.0103
			256QAM			8.9732
	15 MHz	## 821.5	BPSK	75		13.497
			QPSK			13.516
			16QAM			13.440
			64QAM			13.425
			256QAM			13.414
	20 MHz	## 824.0	BPSK	100		17.879
			QPSK			17.944
			16QAM			17.882
			64QAM			17.900
			256QAM			17.930

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 63 ~ 82.
2. ##: Straddle Channel
3. Straddle channel does not exceed the Part22 and Part90 limits.

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)
26	5	816.5	3.8984	29.722	-62.516	-32.794	-13.00
		821.5	4.6062	29.722	-63.510	-33.788	
		## 824.0	4.5963	29.722	-63.568	-33.846	
	10	819.0	4.7558	29.722	-63.814	-34.092	
		## 824.0	5.9422	30.315	-63.806	-33.491	
	15	## 821.5	3.9682	29.722	-62.560	-32.838	
		## 824.0	3.6890	29.722	-63.334	-33.612	
	20	## 824.0	8.8335	30.315	-63.291	-32.976	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 83 ~ 90.
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	27.012
1 – 5	29.722
5 – 10	30.315
10 – 15	30.840
15 – 20	31.213
Above 20	31.855

5. ##: Straddle Channel

6. Straddle channel does not exceed the Part22 and Part90 limit

8.7 CHANNEL EDGE (Part90)

- Test Channel : 164800(824.0MHz)
- Plots of the EUT's Band Edge are shown Page 91 ~ 106.

8.8 BAND EDGE(Part22)

- Test Channel : 164800(824.0 MHz)
- Plots of the EUT's Band Edge are shown Page 107 ~ 116.

8.9 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 5 MHz
- ▣ Voltage(100 %): 3.860 VDC
- ▣ Batt. Endpoint: 2.750 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
821.5	100 %	+20(Ref)	821 500 001	0.0	0.000 000	0.000
	100 %	-30	821 500 002	0.4	0.000 000	0.001
	100 %	-20	821 500 001	0.0	0.000 000	0.000
	100 %	-10	821 500 002	1.1	0.000 000	0.001
	100 %	0	821 500 002	0.9	0.000 000	0.001
	100 %	+10	821 500 002	0.4	0.000 000	0.001
	100 %	+30	821 500 003	1.2	0.000 000	0.001
	100 %	+40	821 500 002	1.2	0.000 000	0.001
	100 %	+50	821 500 002	0.4	0.000 000	0.001
	Batt. Endpoint	+20	821 500 002	0.3	0.000 000	0.000

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 3.860 VDC
- ▣ Batt. Endpoint: 2.750 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
819.0	100 %	+20(Ref)	819 000 000	0.0	0.000 000	0.000
	100 %	-30	818 999 999	-0.8	0.000 000	-0.001
	100 %	-20	818 999 999	-0.4	0.000 000	0.000
	100 %	-10	818 999 999	-0.8	0.000 000	-0.001
	100 %	0	819 000 000	0.4	0.000 000	0.000
	100 %	+10	819 000 000	0.4	0.000 000	0.001
	100 %	+30	818 999 999	-0.5	0.000 000	-0.001
	100 %	+40	819 000 000	0.4	0.000 000	0.001
	100 %	+50	819 000 000	-0.2	0.000 000	0.000
	Batt. Endpoint	+20	818 999 999	-0.6	0.000 000	-0.001

☐ BandWidth: 15 MHz
☐ Voltage(100 %): 3.860 VDC
☐ Batt. Endpoint: 2.750 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
#821.5	100 %	+20(Ref)	821 500 000	0.0	0.000 000	0.000
	100 %	-30	821 500 001	0.6	0.000 000	0.001
	100 %	-20	821 500 001	0.4	0.000 000	0.000
	100 %	-10	821 500 000	-0.1	0.000 000	0.000
	100 %	0	821 500 001	0.8	0.000 000	0.001
	100 %	+10	821 500 001	0.3	0.000 000	0.000
	100 %	+30	821 500 000	-0.3	0.000 000	0.000
	100 %	+40	821 500 001	0.5	0.000 000	0.001
	100 %	+50	821 500 002	1.2	0.000 000	0.001
	Batt. Endpoint	+20	821 500 001	0.4	0.000 000	0.000

Note:

1. #: Straddle Channel
2. Straddle channel does not exceed the Part22 and Part90 limits.

☐ BandWidth: 20 MHz
☐ Voltage(100 %): 3.860 VDC
☐ Batt. Endpoint: 2.750 VDC
☐ LIMIT: Emission must remain in band

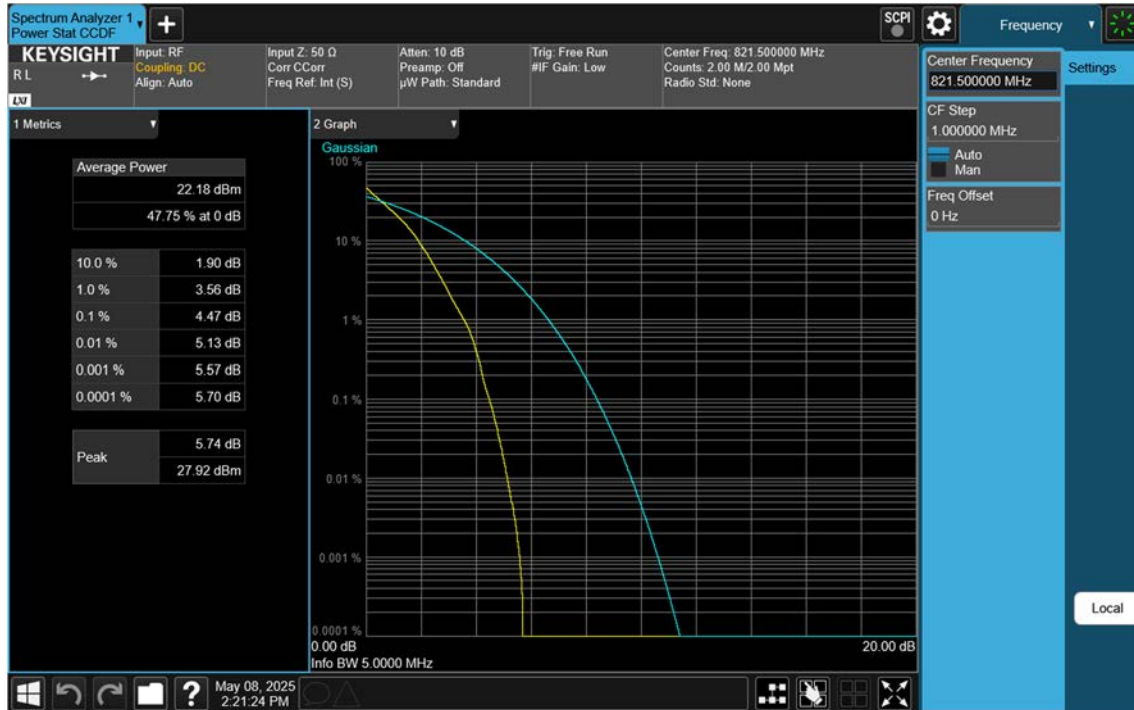
Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
##824.0	100 %	+20(Ref)	824 000 001	0.0	0.000 000	0.000
	100 %	-30	824 000 001	0.1	0.000 000	0.000
	100 %	-20	824 000 000	-0.8	0.000 000	-0.001
	100 %	-10	824 000 000	-0.6	0.000 000	-0.001
	100 %	0	824 000 000	-0.3	0.000 000	0.000
	100 %	+10	824 000 000	-0.3	0.000 000	0.000
	100 %	+30	824 000 000	-0.4	0.000 000	-0.001
	100 %	+40	824 000 001	-0.1	0.000 000	0.000
	100 %	+50	824 000 000	-0.4	0.000 000	-0.001
	Batt. Endpoint	+20	824 000 000	-0.7	0.000 000	-0.001

Note:

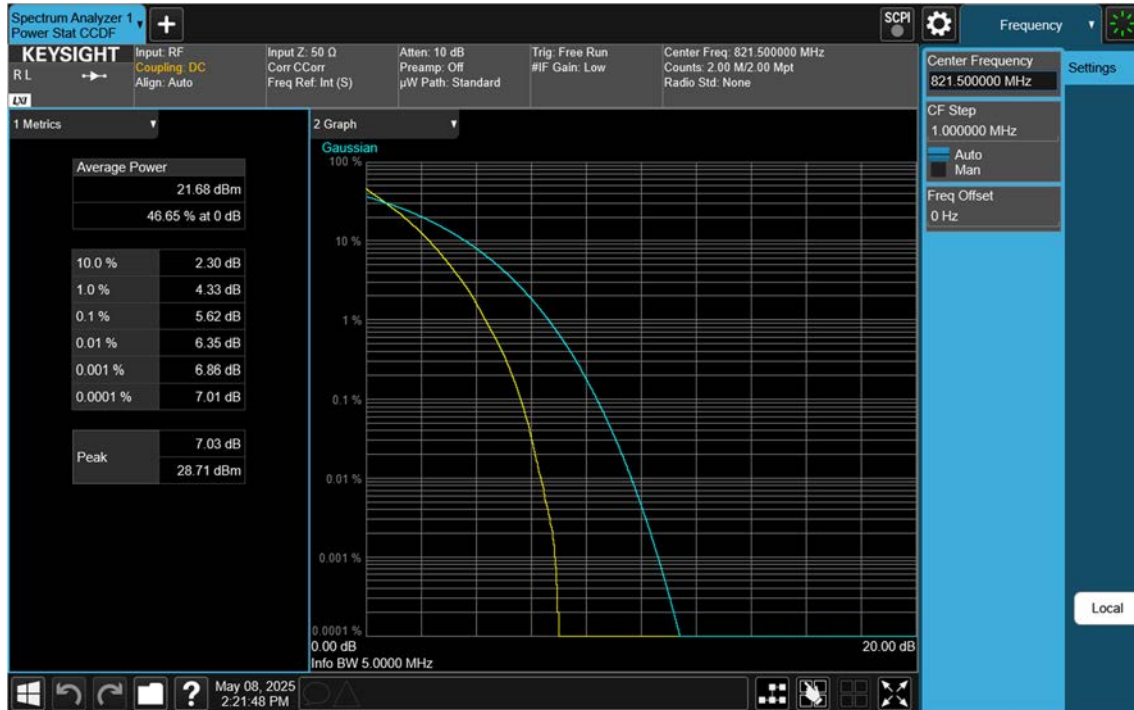
1. ##: Straddle Channel
2. Straddle channel does not exceed the Part22 and Part90 limits.

9. TEST PLOTS

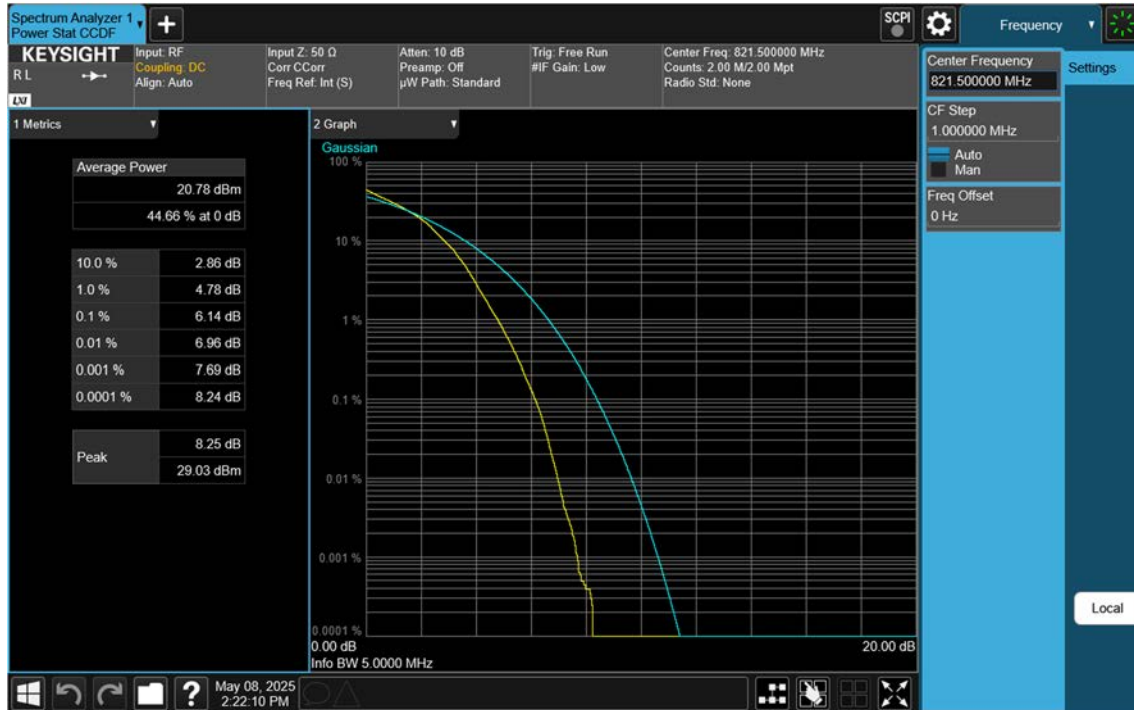
NR26_5 M_PAR_Mid_BPSK_FullRB



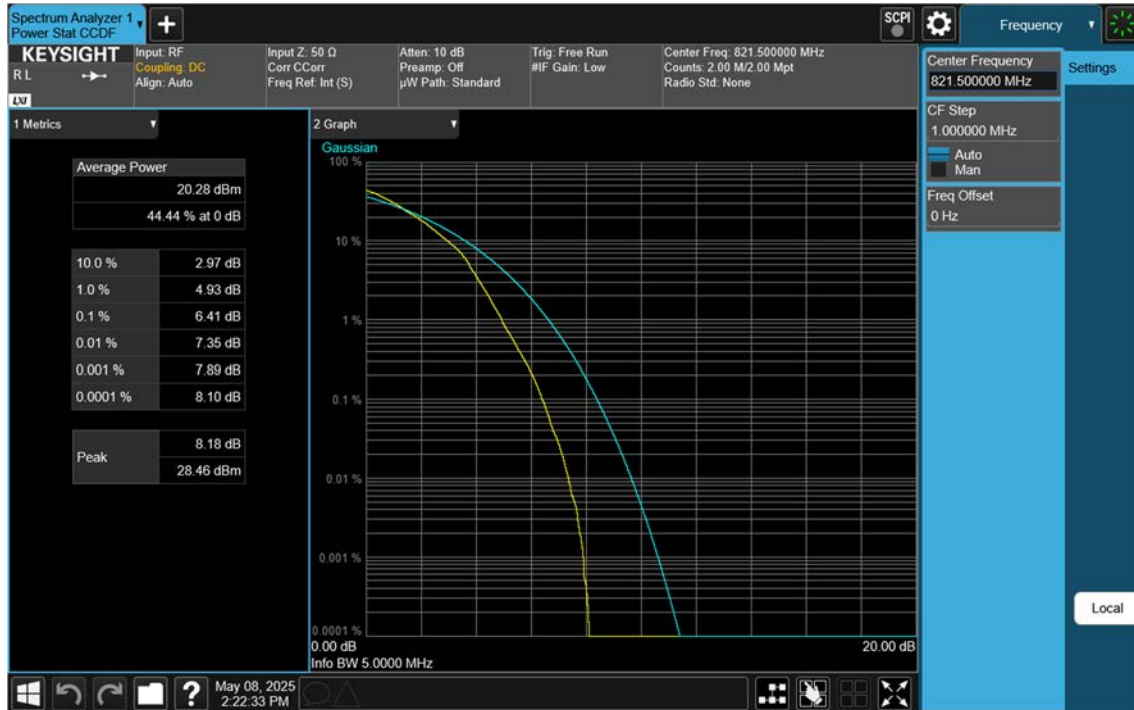
NR26_5 M_PAR_Mid_QPSK_FullIRB



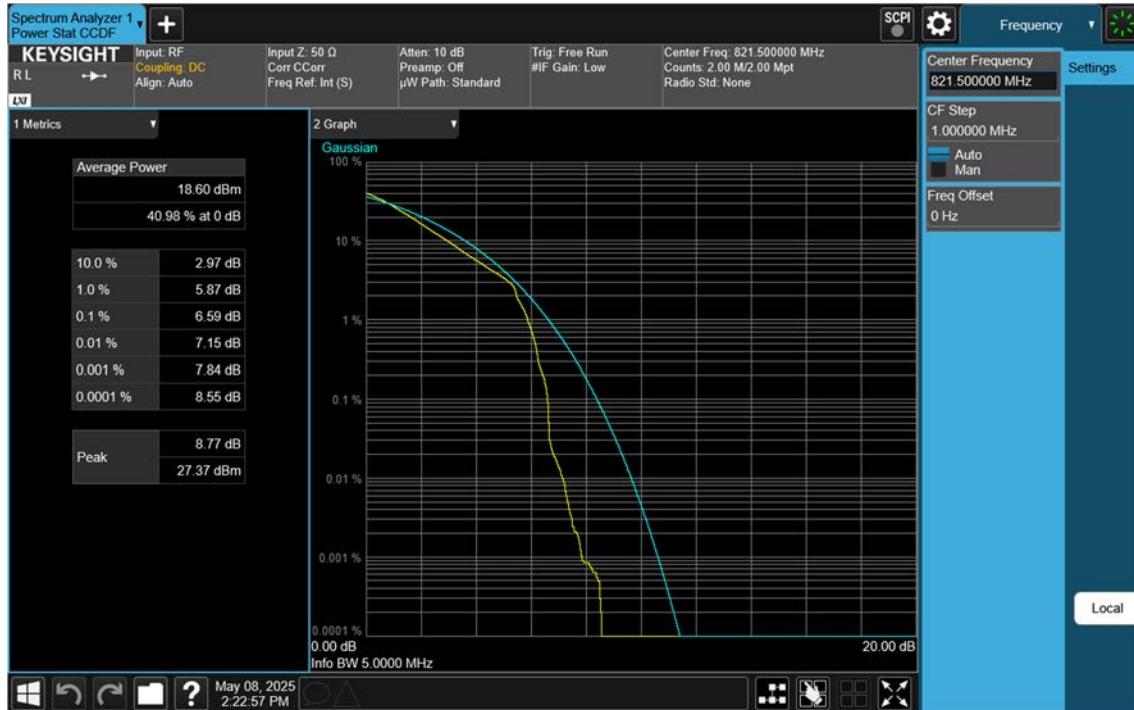
NR26_5 M_PAR_Mid_16QAM_FullRB



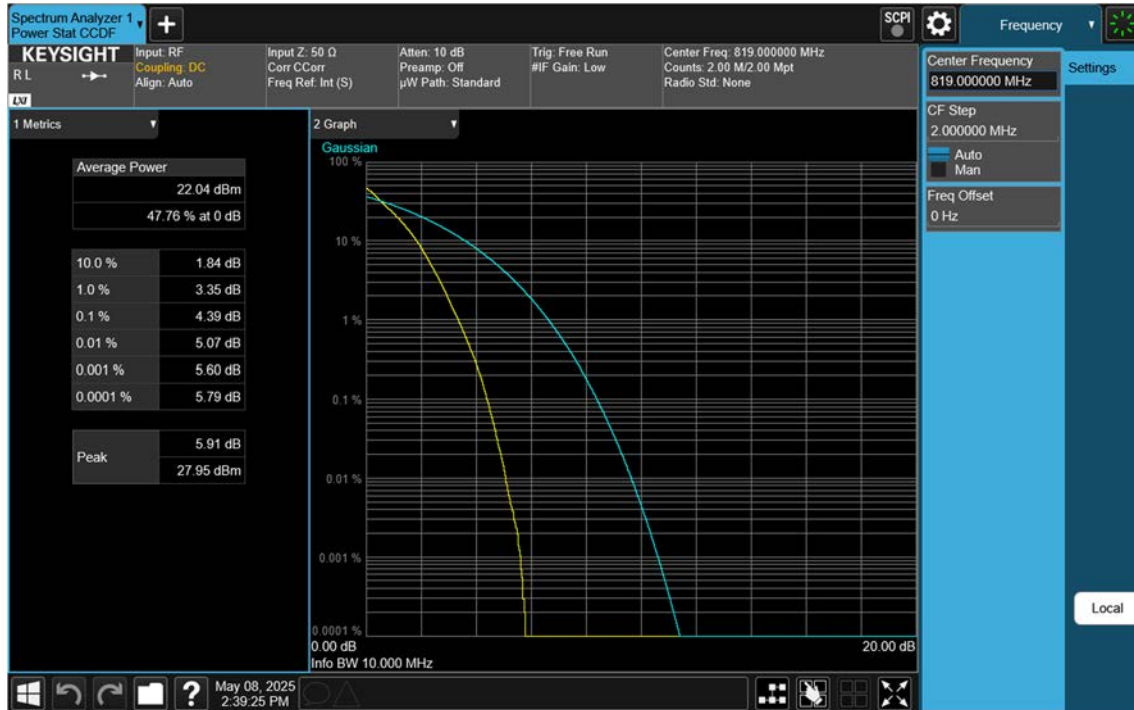
NR26_5 M_PAR_Mid_64QAM_FullRB



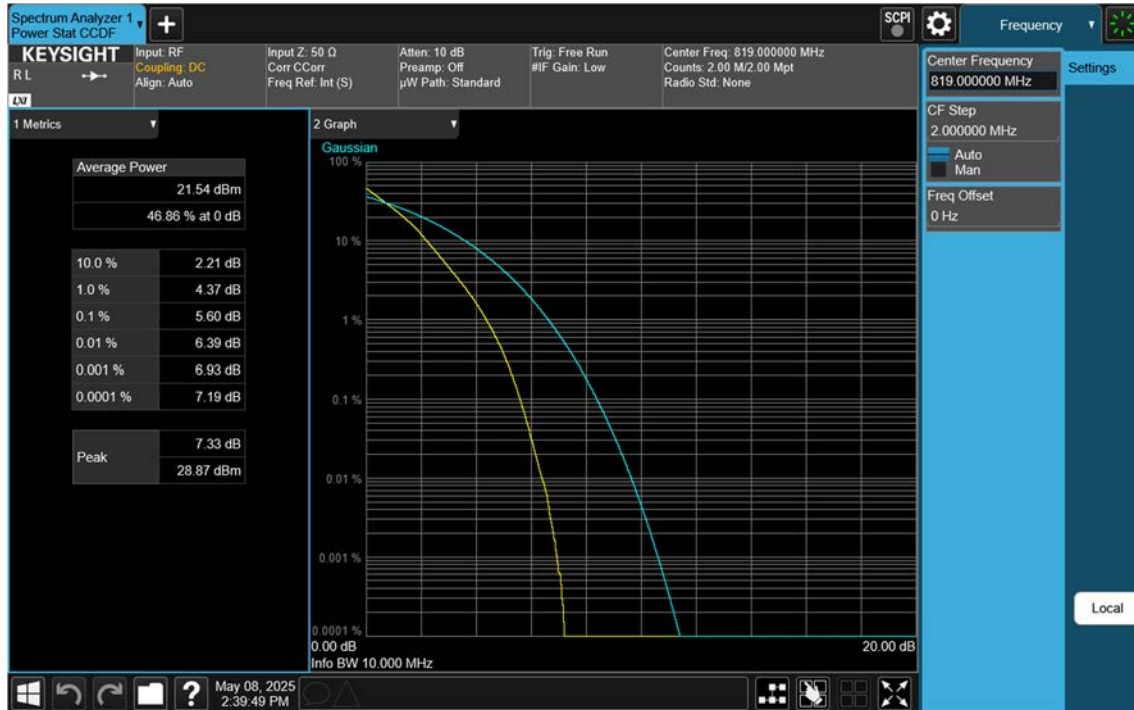
NR26_5 M_PAR_Mid_256QAM_FullRB



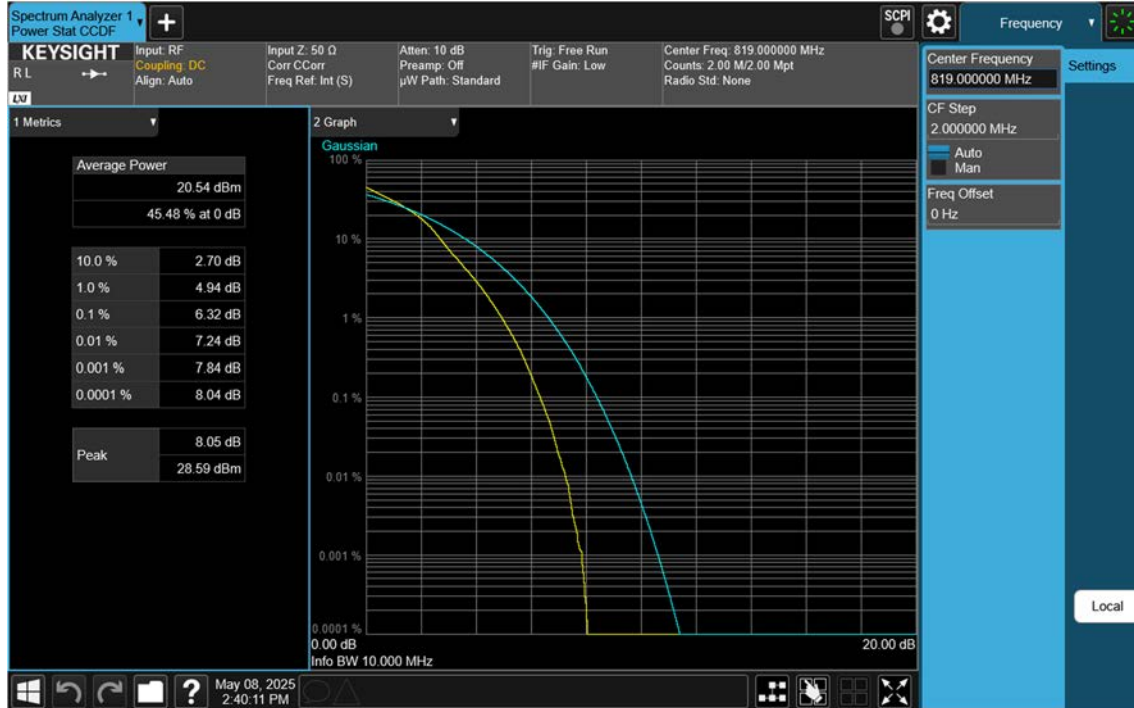
NR26_10 M_PAR_Low_BPSK_FullRB



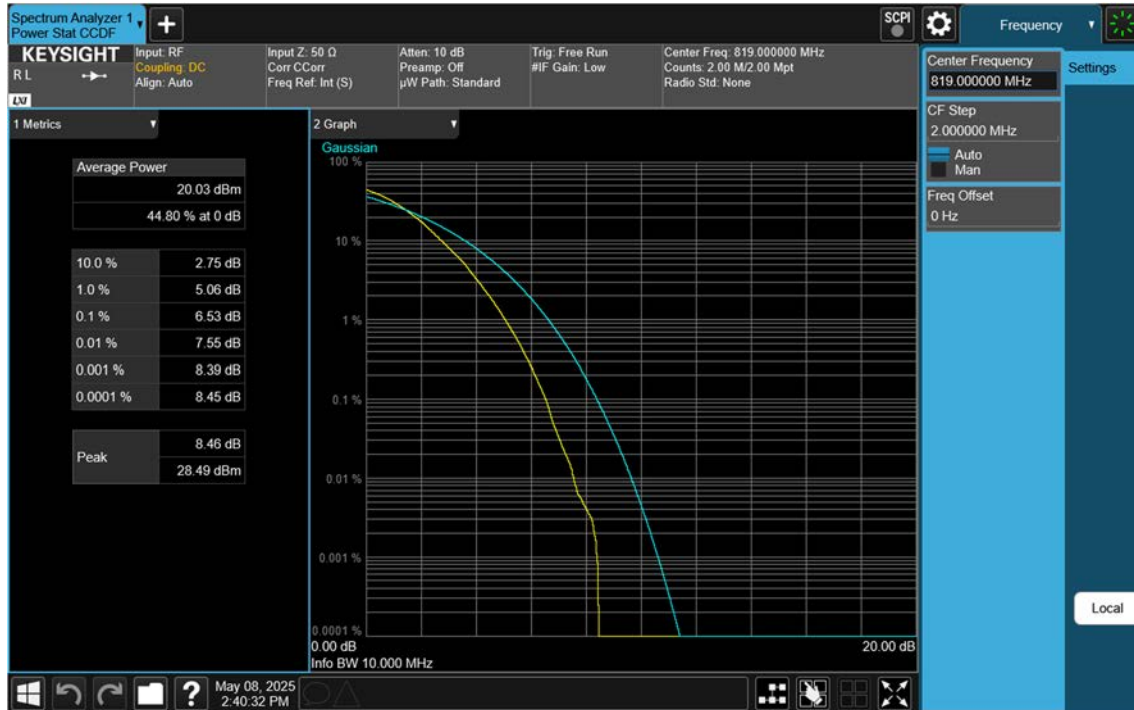
NR26_10 M_PAR_Low_QPSK_FullRB



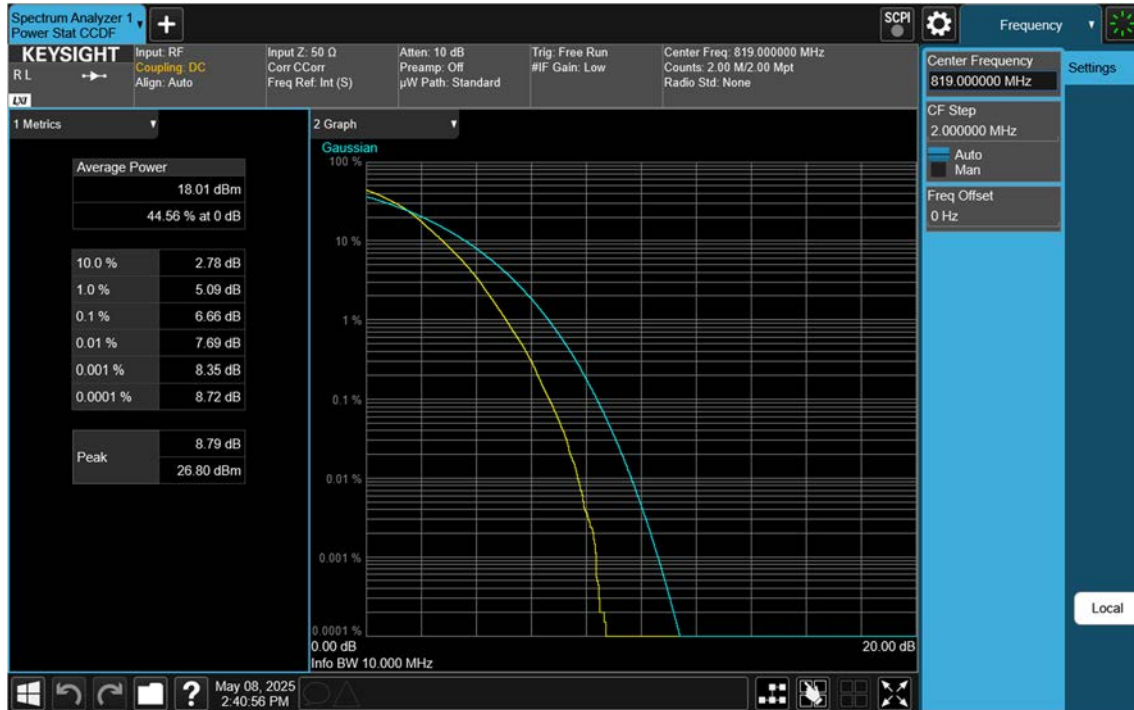
NR26_10 M_PAR_Low_16QAM_FullRB



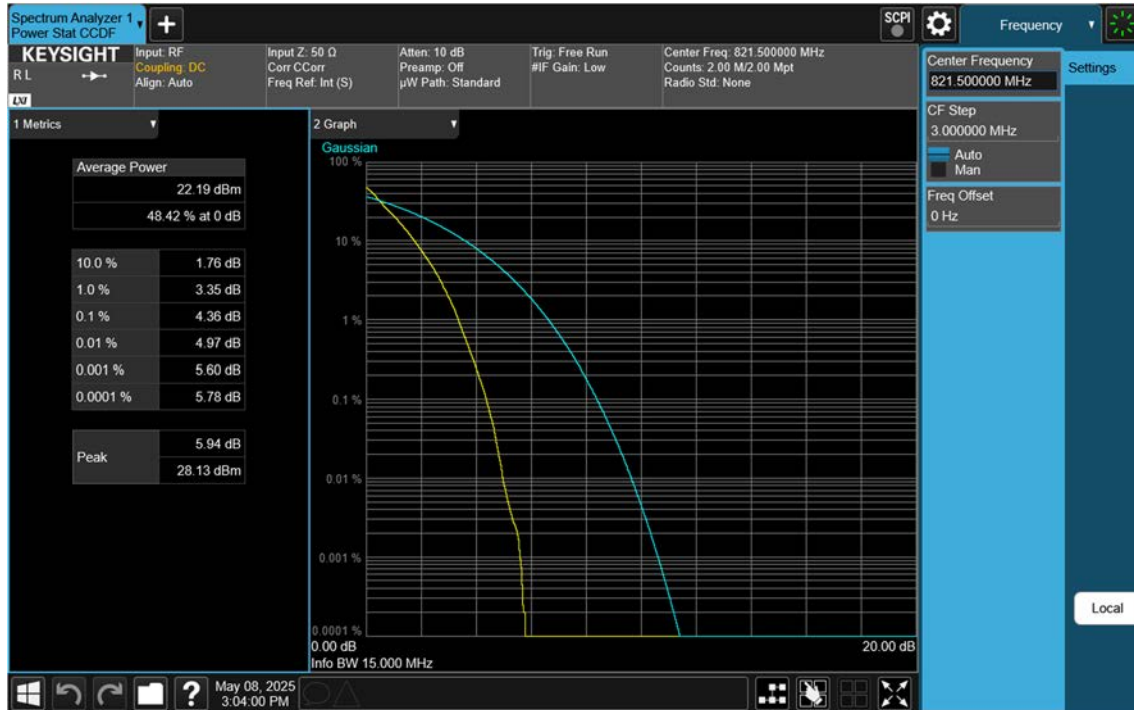
NR26_10 M_PAR_Low_64QAM_FullRB



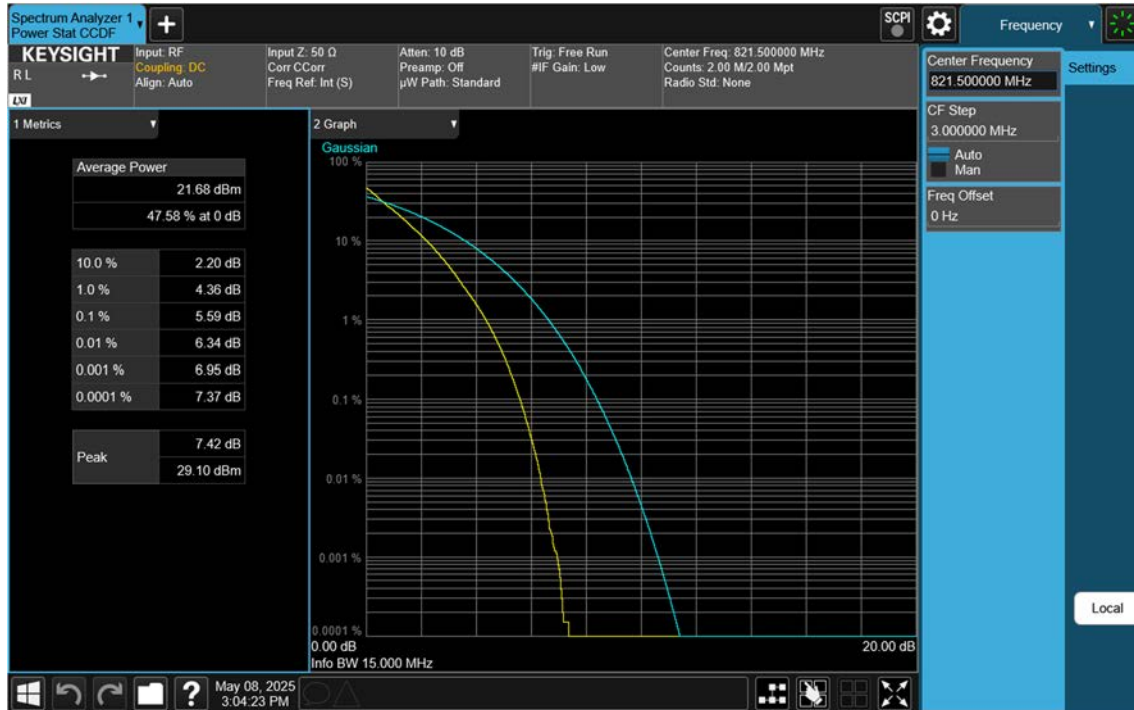
NR26_10 M_PAR_Low_256QAM_FullRB



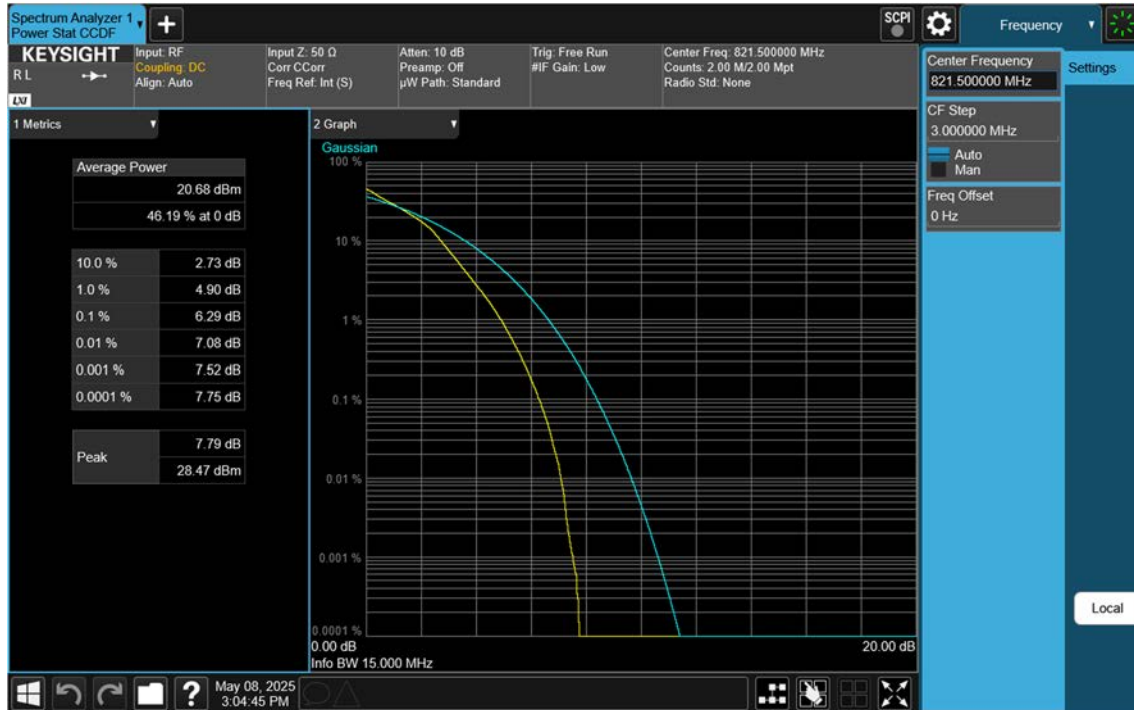
NR26_15 M_PAR_Low_BPSK_FullRB



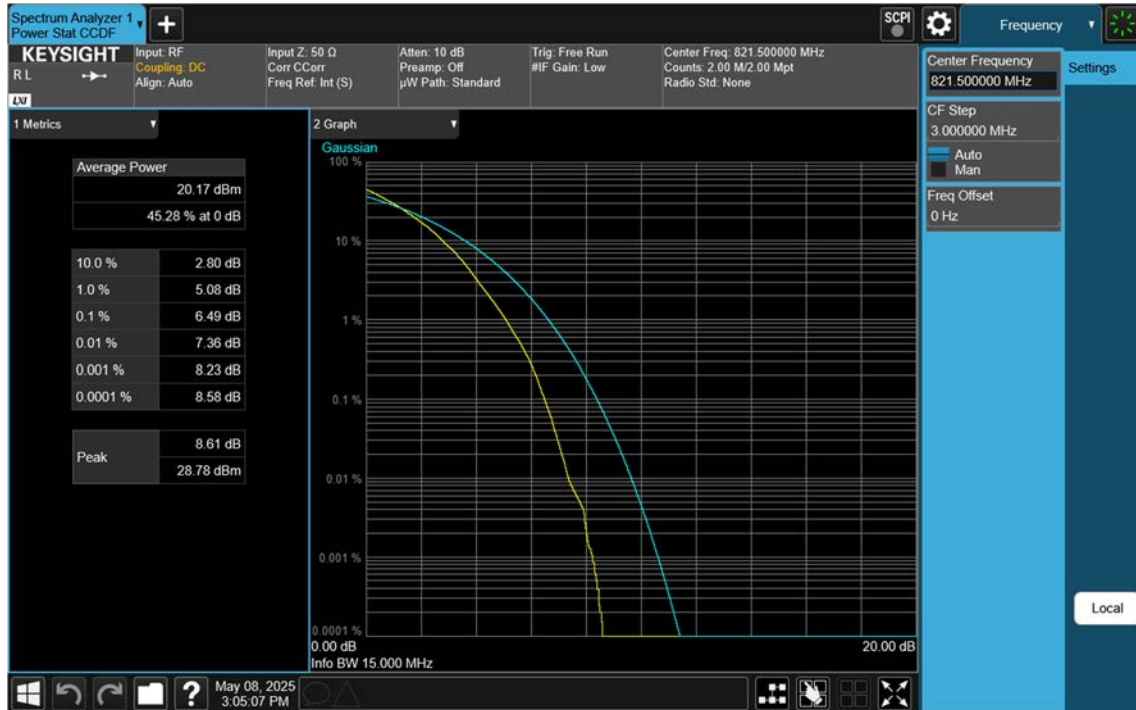
NR26_15 M_PAR_Low_QPSK_FullRB



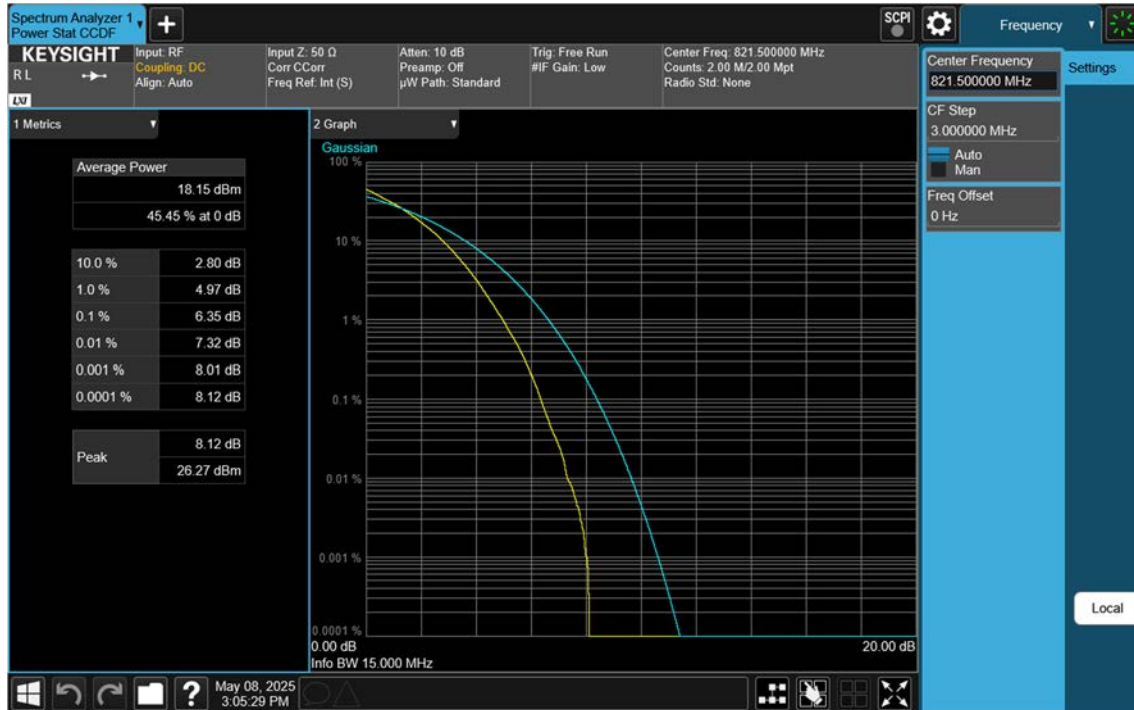
NR26_15 M_PAR_Low_16QAM_FullRB



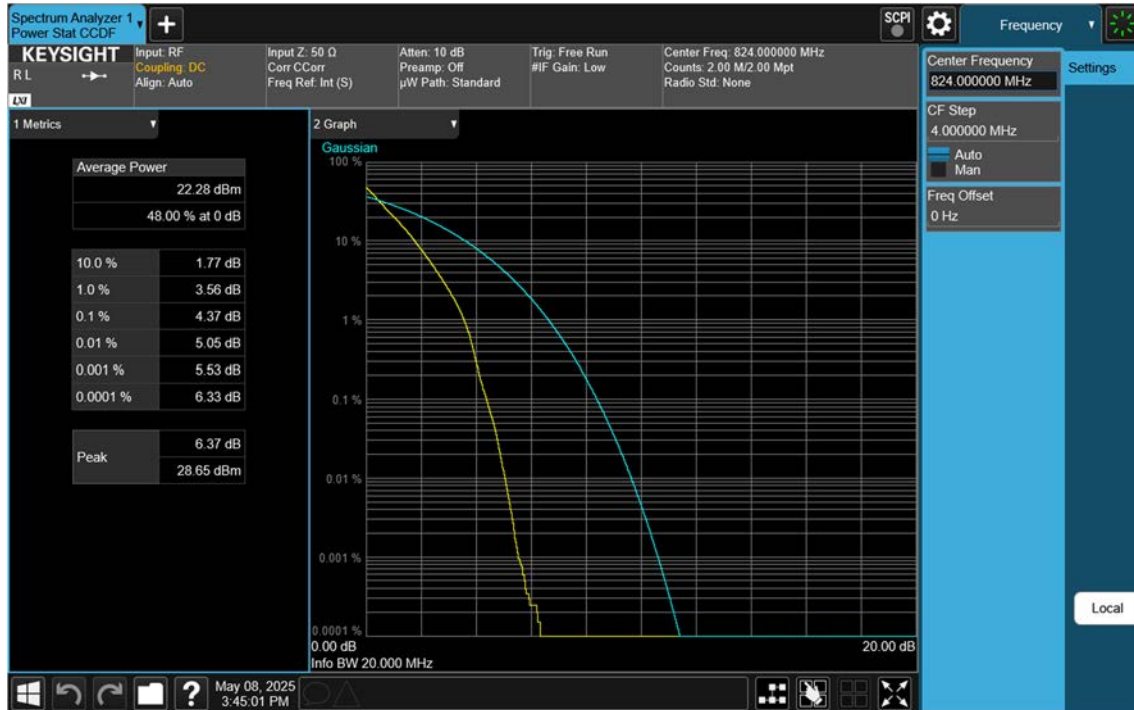
NR26_15 M_PAR_Low_64QAM_FullRB



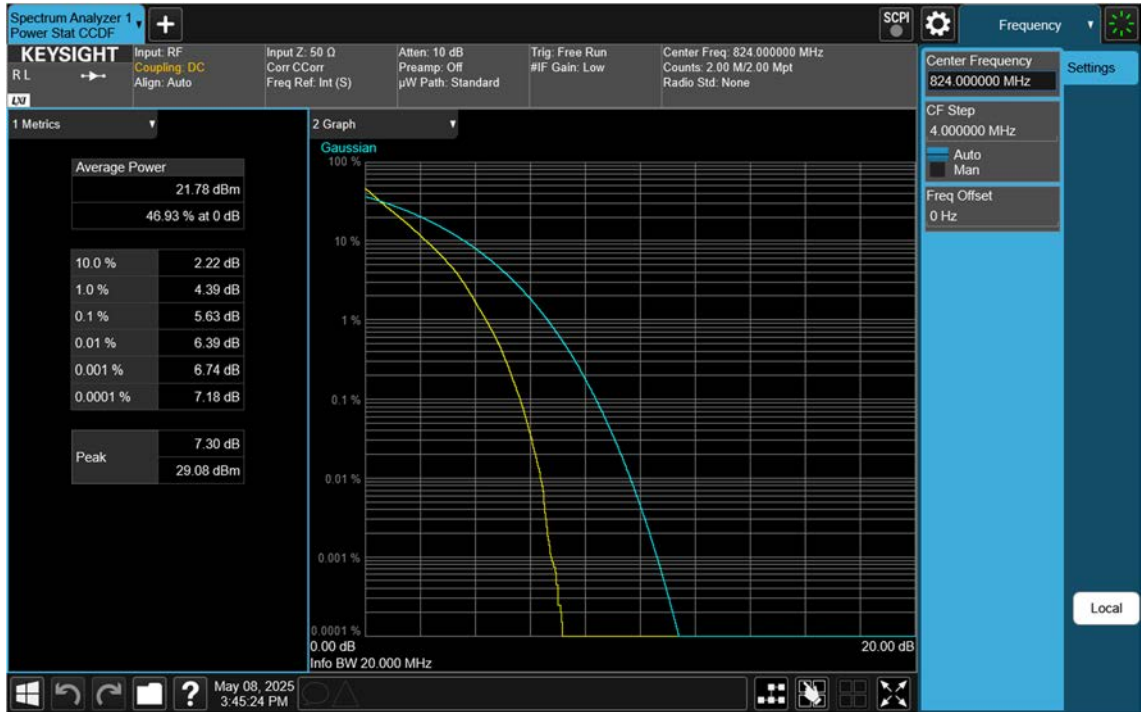
NR26_15 M_PAR_Low_256QAM_FullRB



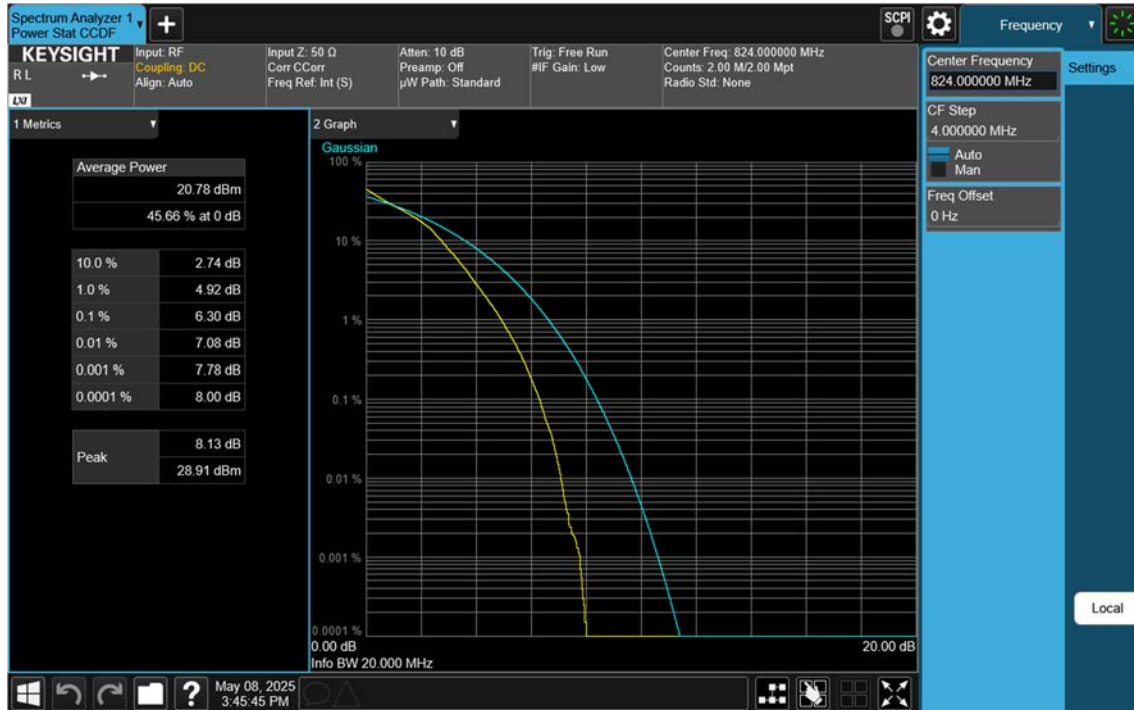
NR26_20 M_PAR_Mid_BPSK_FullRB



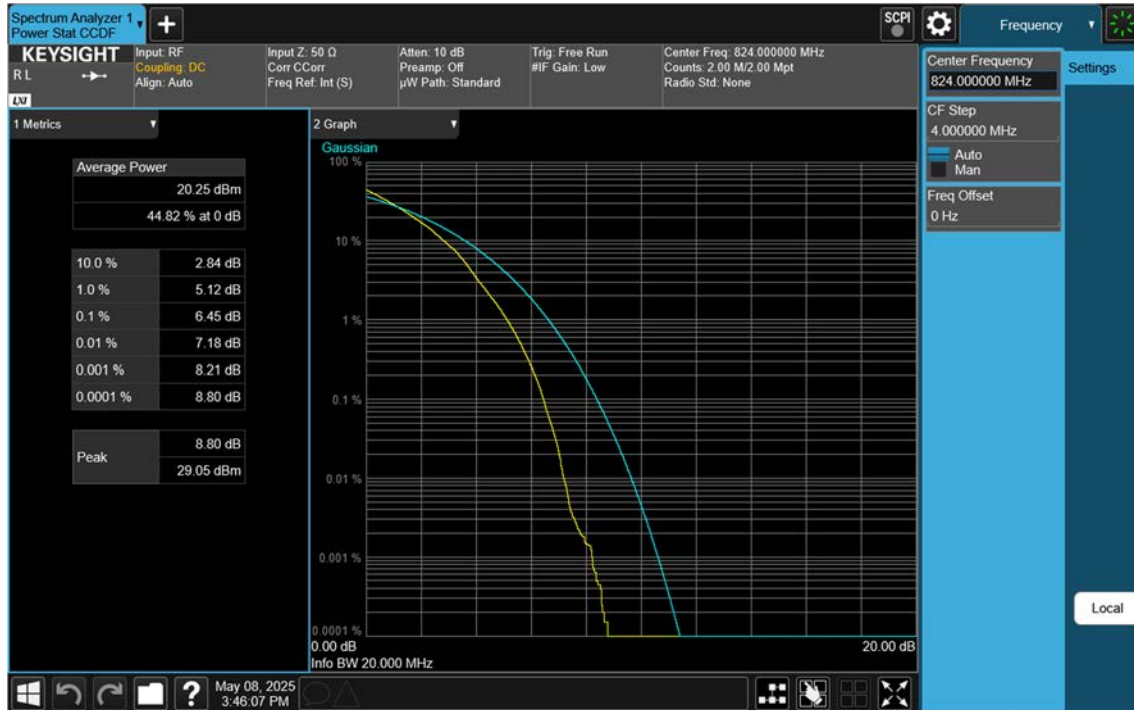
NR26_20 M_PAR_Mid_QPSK_FullRB



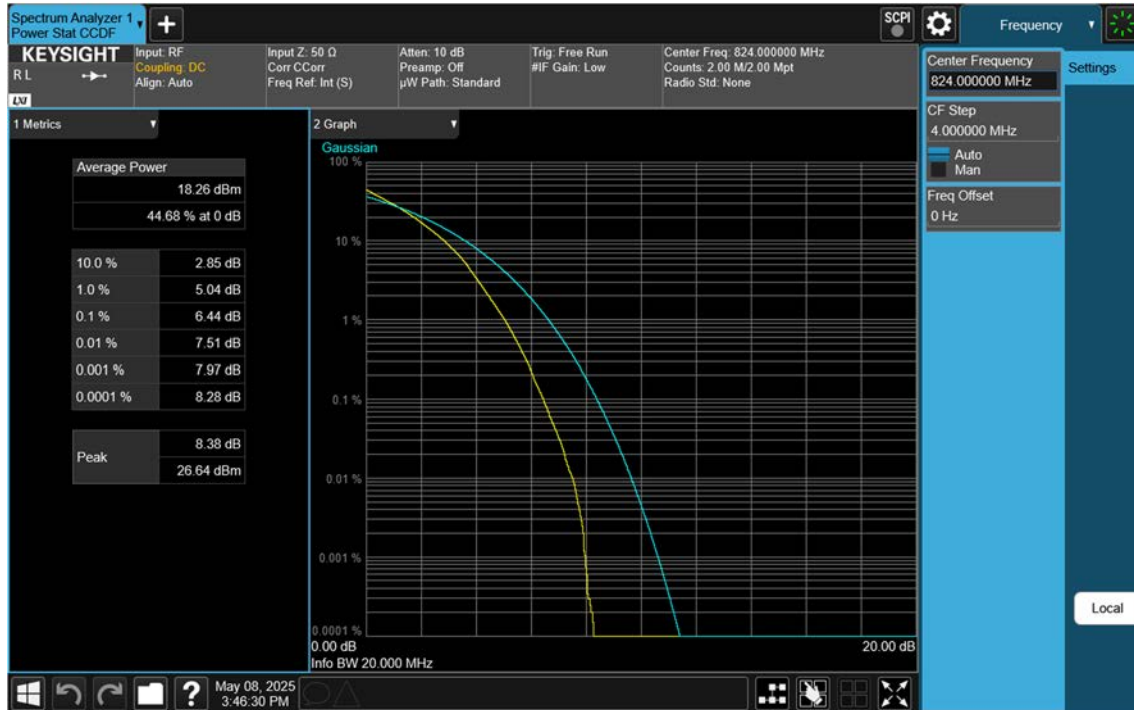
NR26_20 M_PAR_Mid_16QAM_FullRB



NR26_20 M_PAR_Mid_64QAM_FullRB



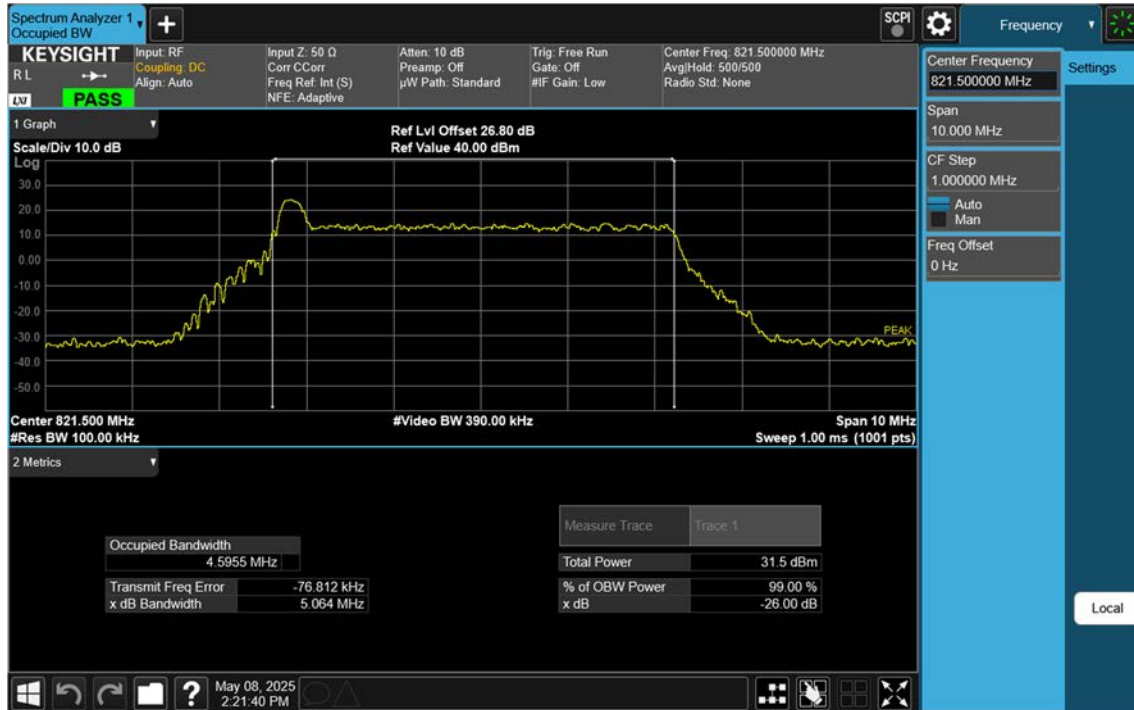
NR26_20 M_PAR_Mid_256QAM_FullRB



NR26_5 M_OBW_Mid_BPSK_FullRB



NR26_5 M_OBW_Mid_QPSK_FullRB



NR26_5 M_OBW_Mid_16QAM_FullRB



NR26_5 M_OBW_Mid_64QAM_FullRB



NR26_5 M_OBW_Mid_256QAM_FullRB



NR26_10 M_OBW_Low_BPSK_FullRB



NR26_10 M_OBW_Low_QPSK_FullRB



NR26_10 M_OBW_Low_16QAM_FullRB



NR26_10 M_OBW_Low_64QAM_FullRB



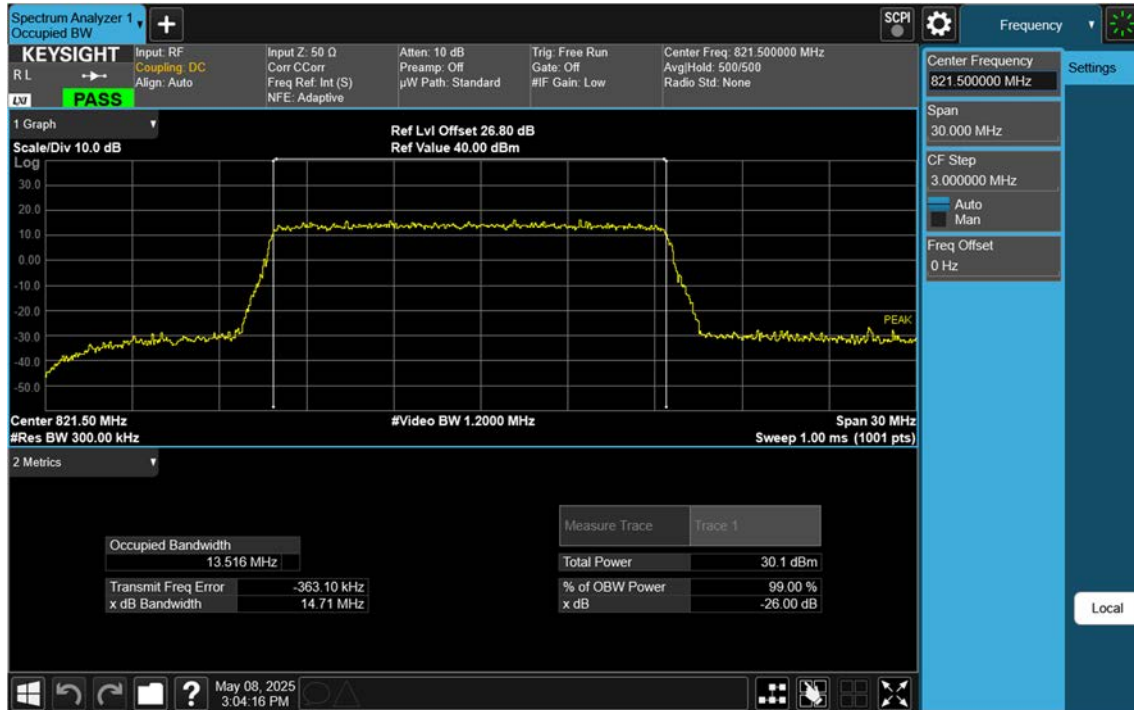
NR26_10 M_OBW_Low_256QAM_FullRB



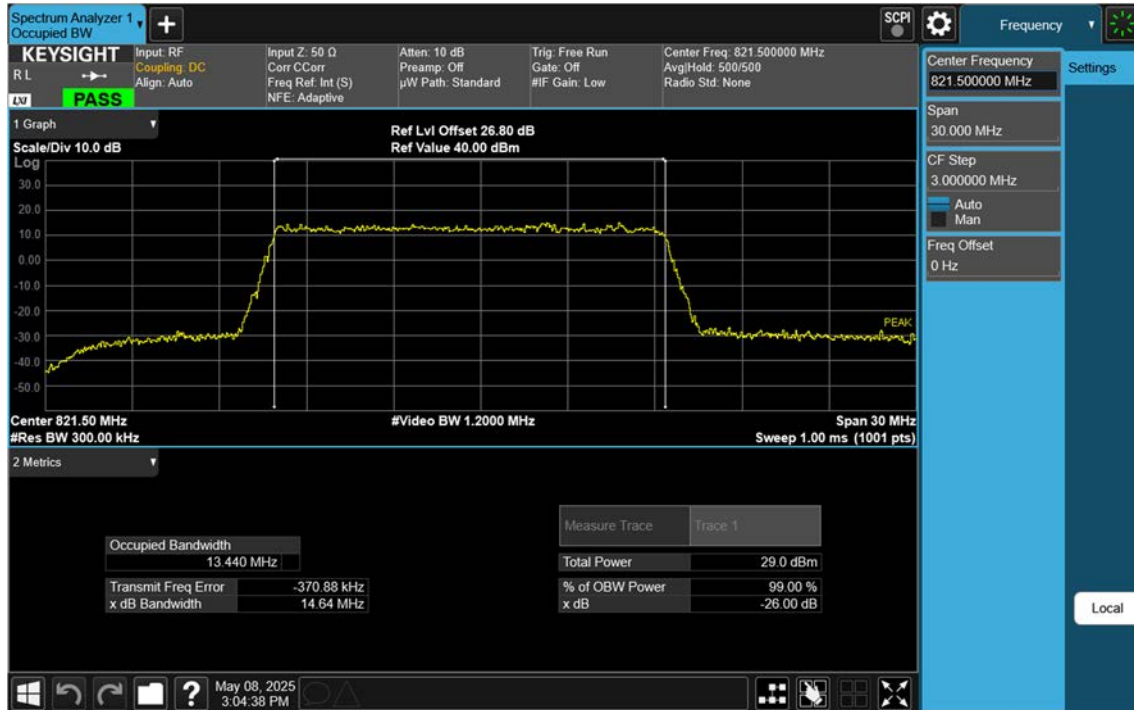
NR26_15 M_OBW_Low_BPSK_FullRB



NR26_15 M_OBW_Low_QPSK_FullRB



NR26_15 M_OBW_Low_16QAM_FullRB



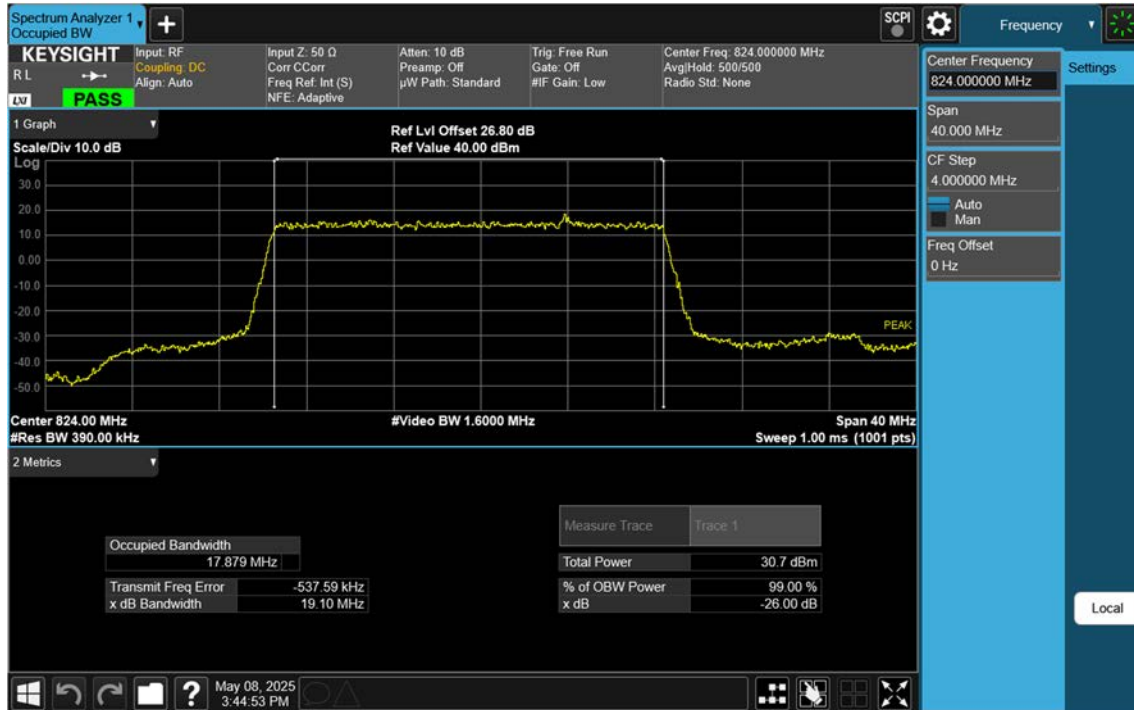
NR26_15 M_OBW_Low_64QAM_FullRB



NR26_15 M_OBW_Low_256QAM_FullRB



NR26_20 M_OBW_Mid_BPSK_FullRB



Spectrum Analyzer 1

Occupied BW

KEYSIGHT

Input RF: Coupling: DC
Align: Auto

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

Atten: 10 dB
Preamp: Off
 μ W Path: Standard

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

Center Freq: 824.000000 MHz
Avg/Hold: 500/500
Radio Std: None

SCPI

Frequency

Center Frequency
824.000000 MHz

Span
40.000 MHz

CF Step
4.000000 MHz

Auto
Man

Freq Offset
0 Hz

Settings

1 Graph

Scale/Div 10.0 dB

Log

Ref Lvl Offset 26.80 dB
Ref Value 40.00 dBm

Center 824.00 MHz
#Res BW 390.00 kHz

#Video BW 1.6000 MHz

Span 40 MHz
Sweep 1.00 ms (1001 pts)

2 Metrics

Occupied Bandwidth
17.944 MHz

Transmit Freq Error
-559.61 kHz

x dB Bandwidth
19.20 MHz

Measure Trace
Trace 1

Total Power
30.2 dBm

% of OBW Power
99.00 %

x dB
-26.00 dB

May 08, 2025
3:45:17 PM

Local

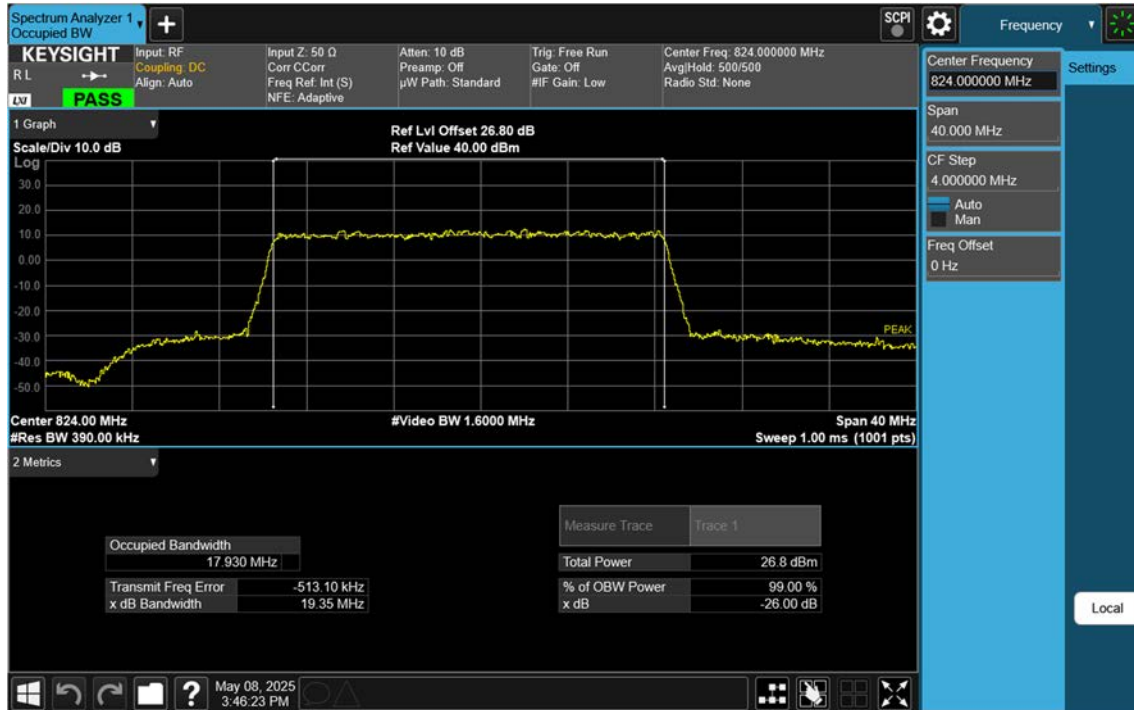
NR26_20 M_OBW_Mid_16QAM_FullRB



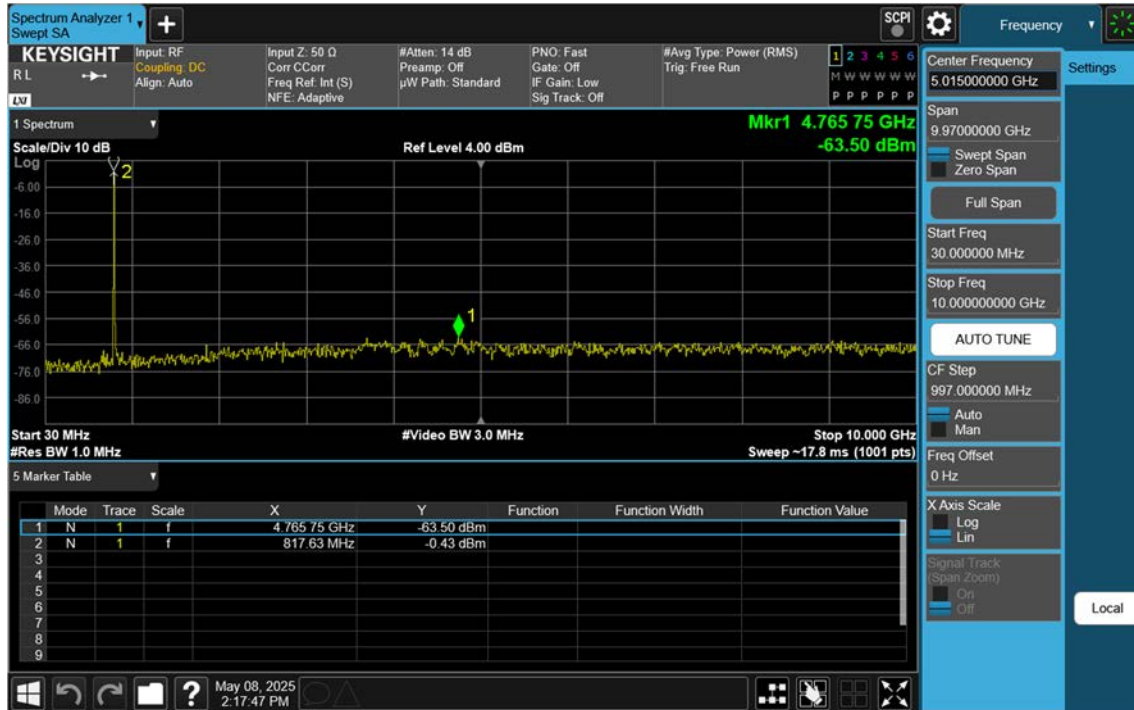
NR26_20 M_OBW_Mid_64QAM_FullRB



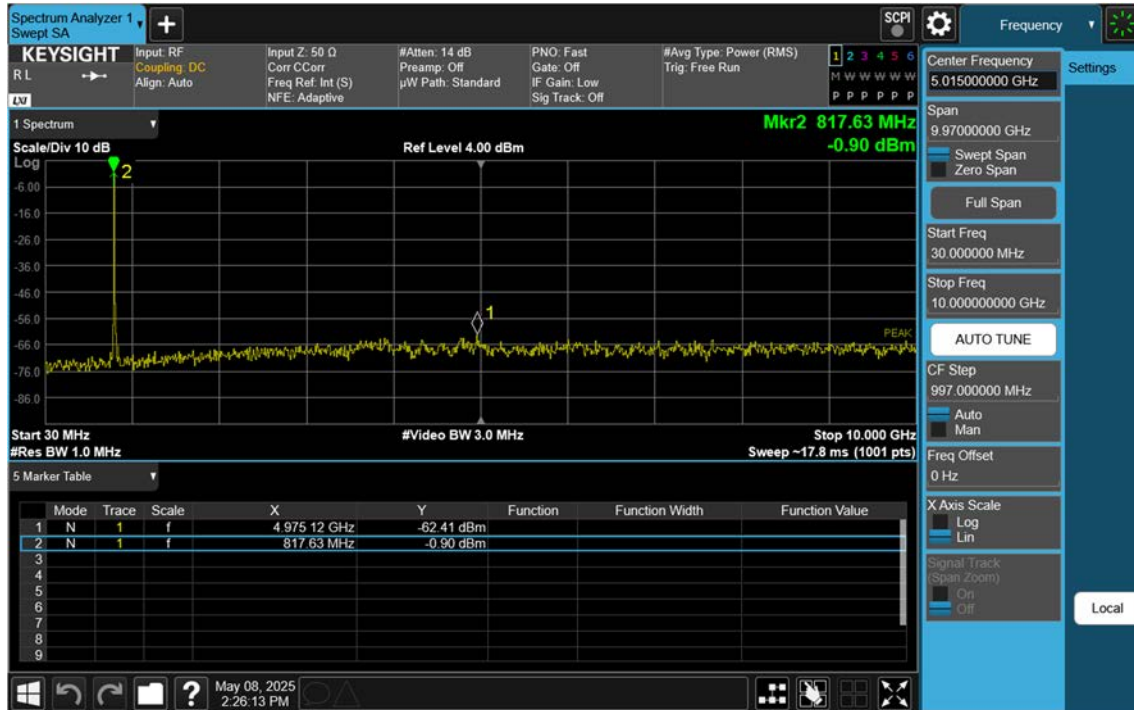
NR26_20 M_OBW_Mid_256QAM_FullRB



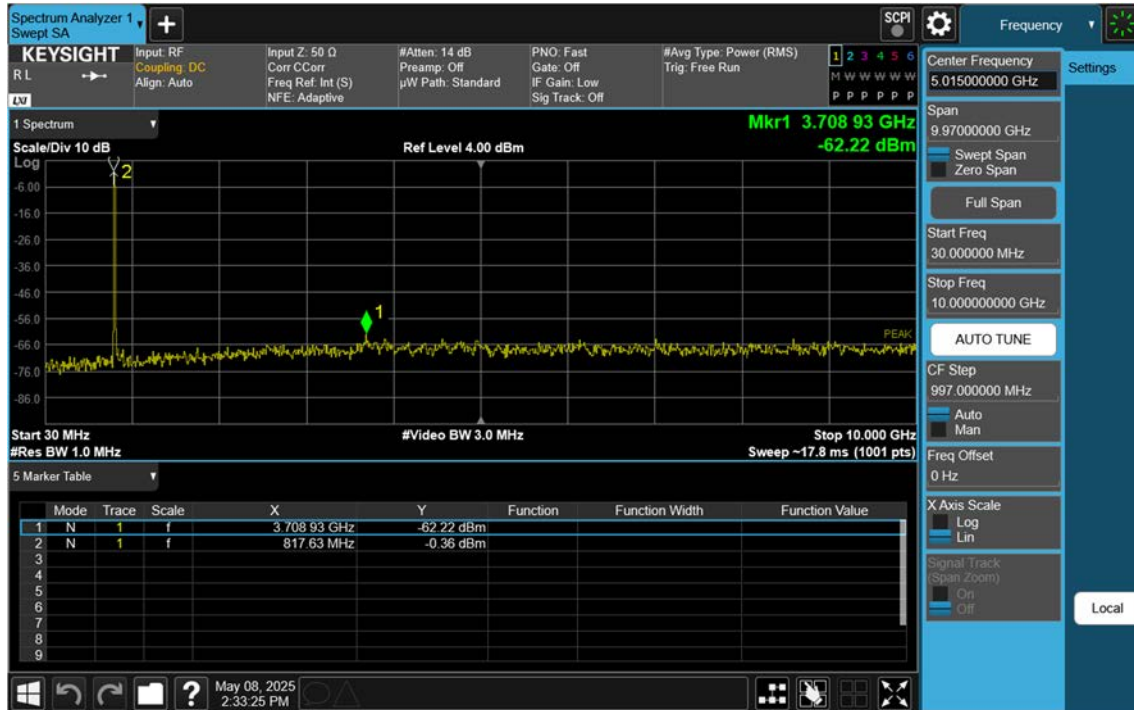
NR26_5 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



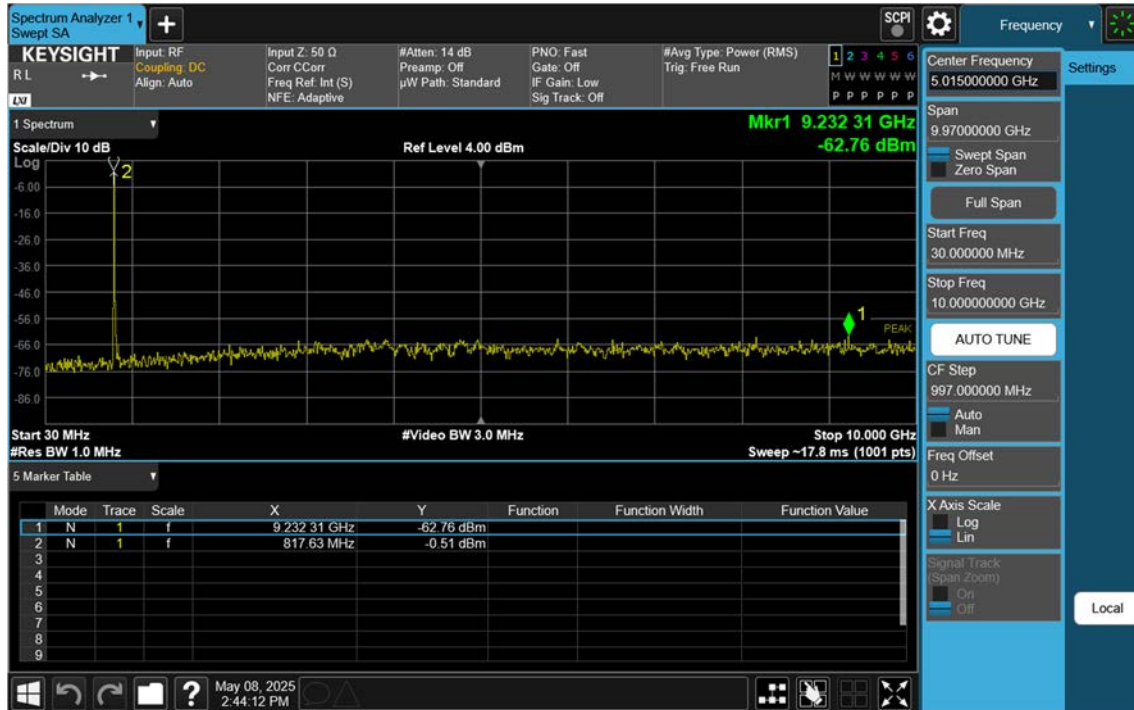
NR26_5 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



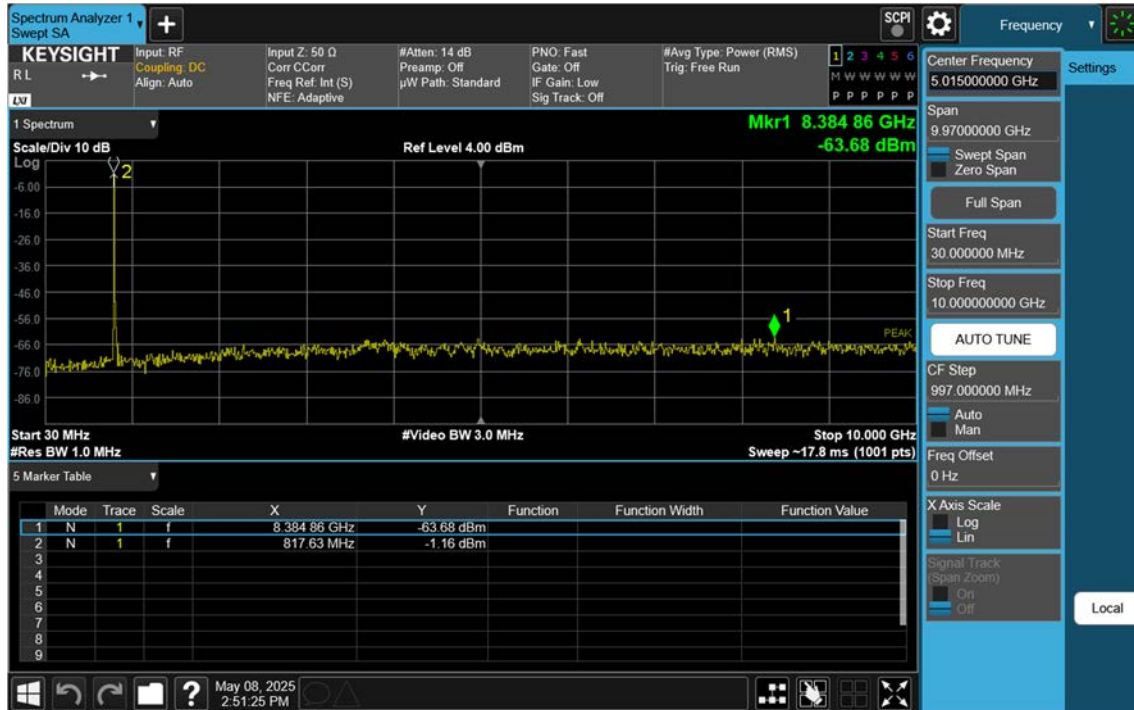
NR26_5 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



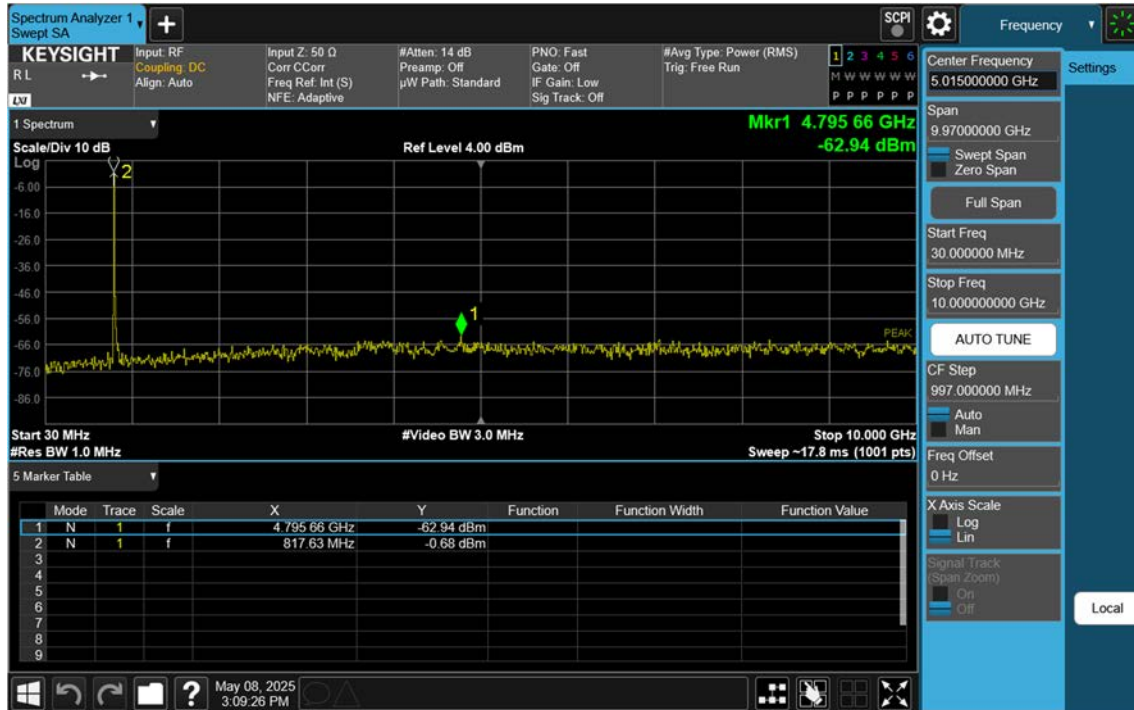
NR26_10 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



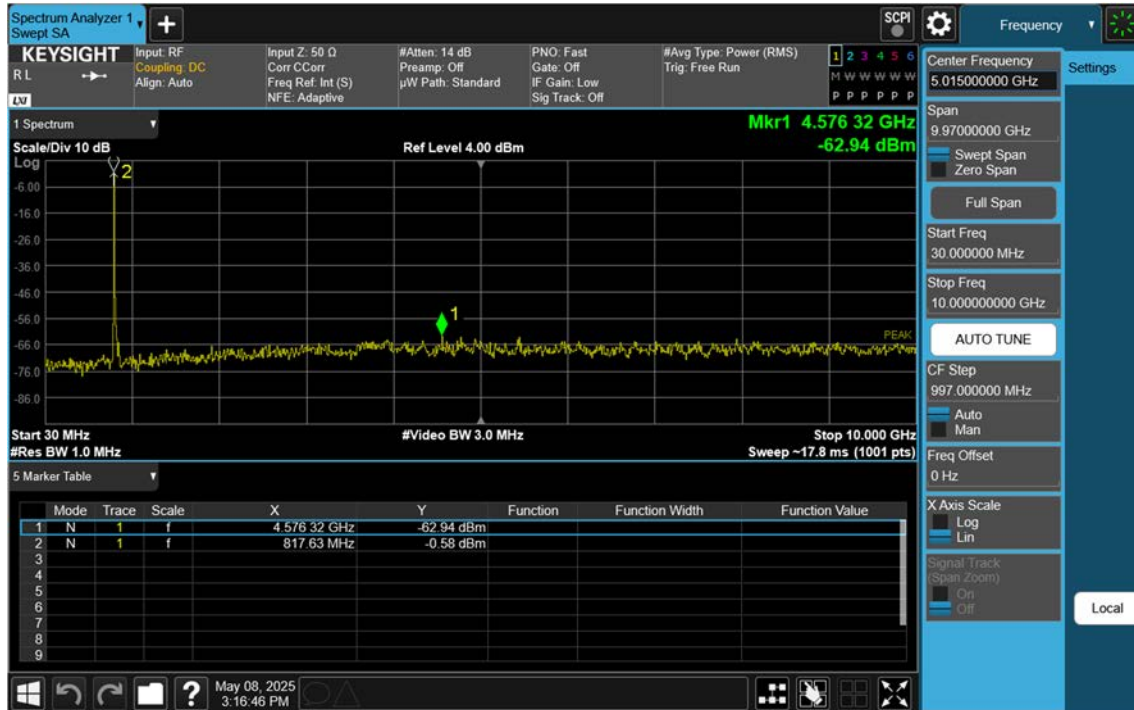
NR26_10 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



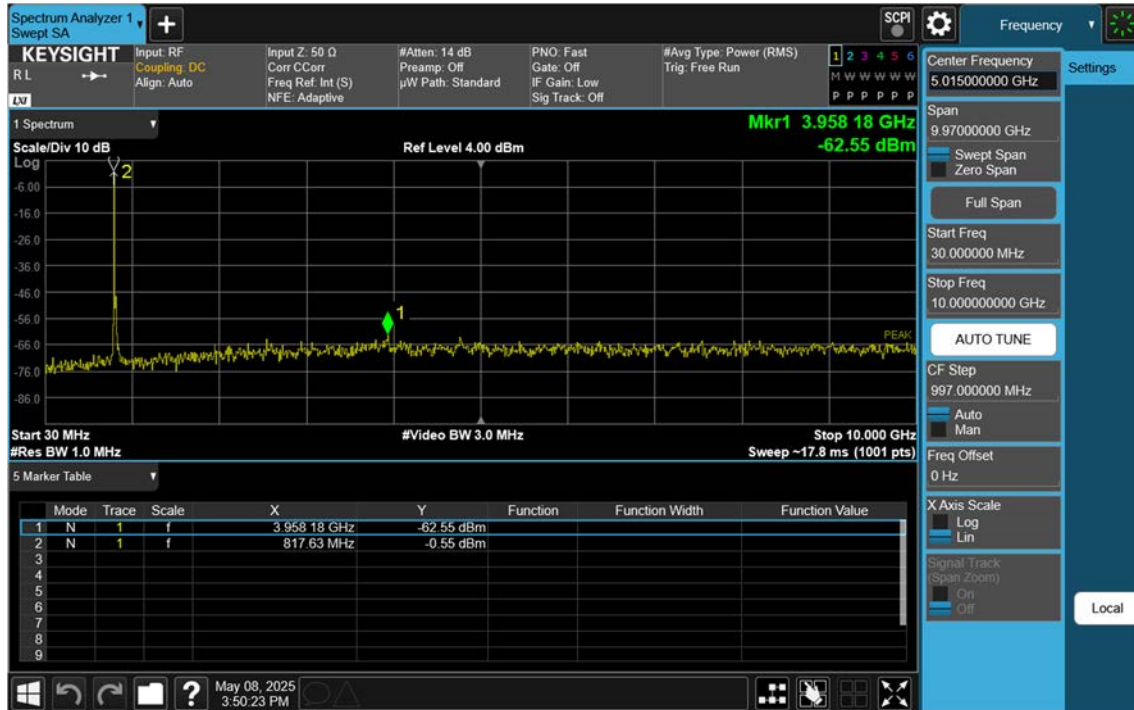
NR26_15 M_Conducted Spurious(30 M-10 G)_Low_BPSK_1RB



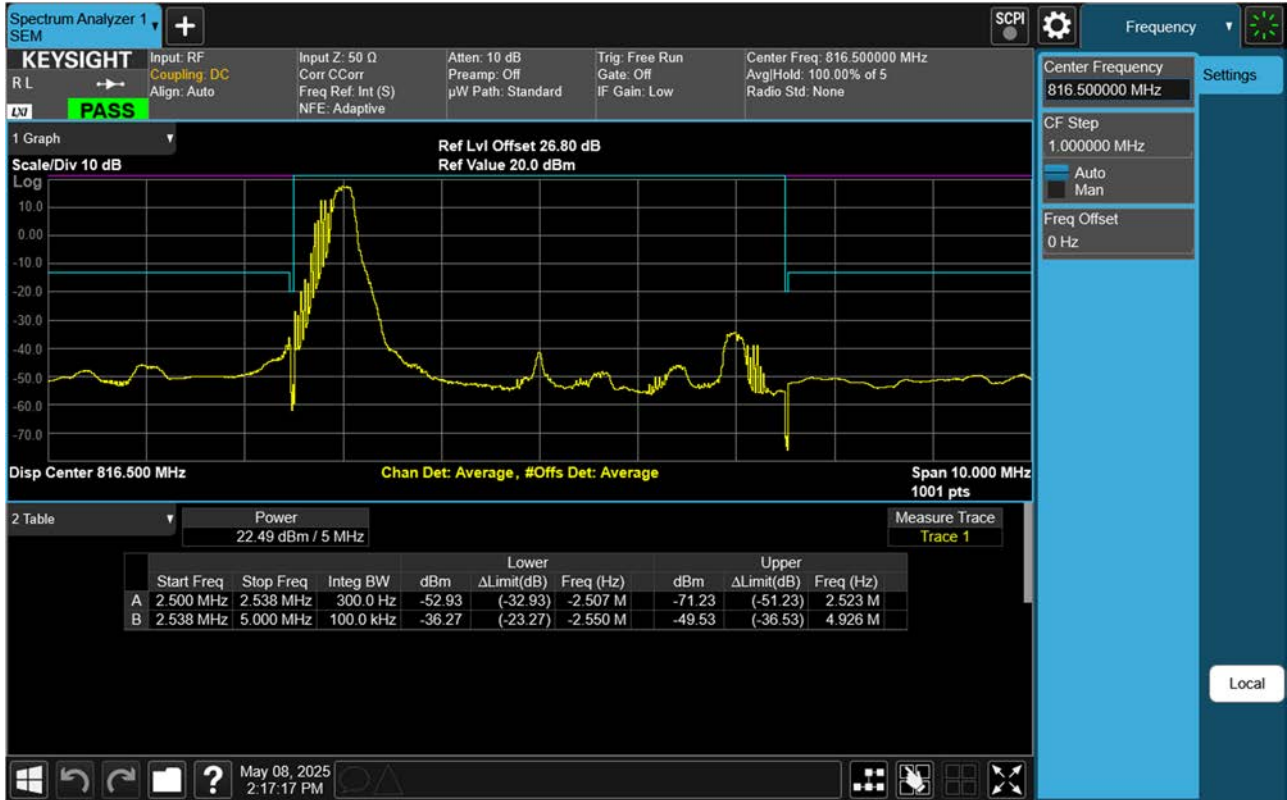
NR26_15 M_Conducted Spurious(30 M-10 G)_High_BPSK_1RB



NR26_20 M_Conducted Spurious(30 M-10 G)_Mid_BPSK_1RB



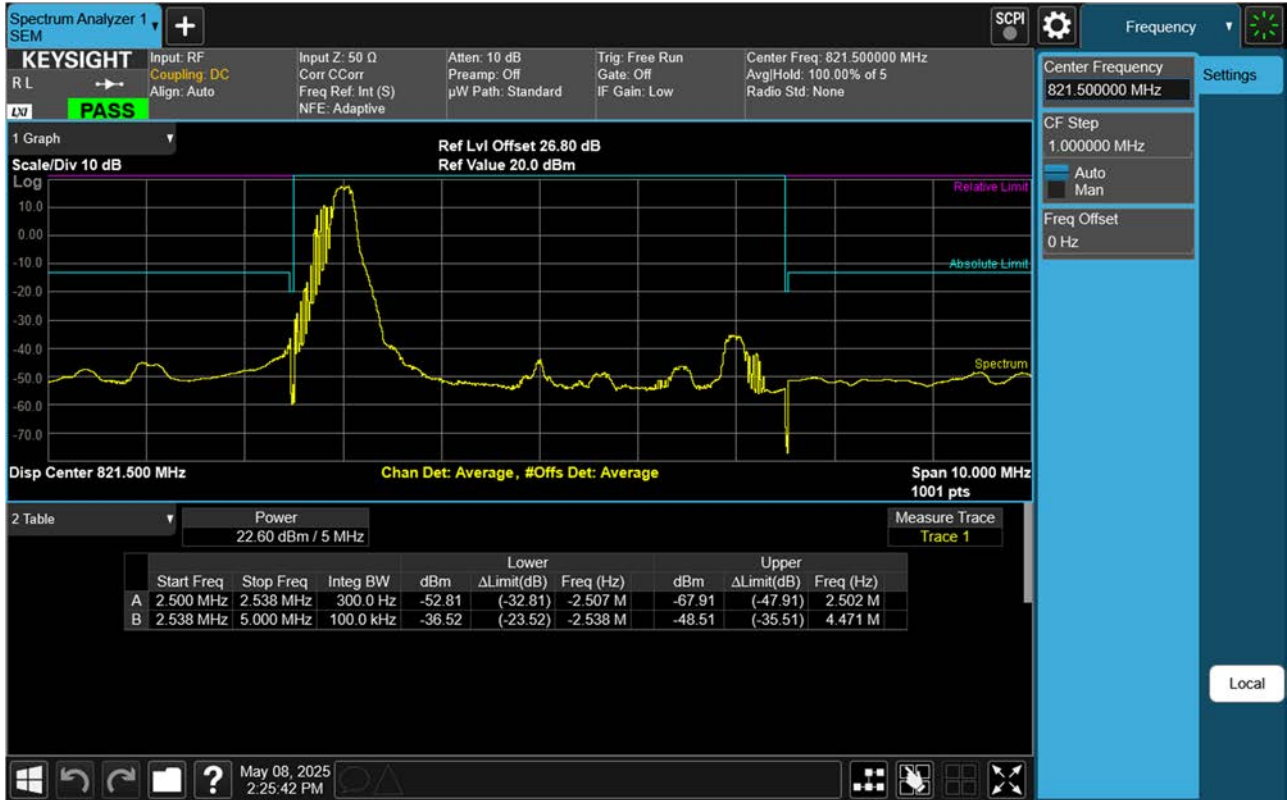
NR26_Lower Channel Edge Plot (5 M BW Ch.163300 BPSK RB 1, Offset 0)



NR26_Lower Channel Edge Plot (5 M BW Ch.163300 BPSK_RB25_Offset 0)



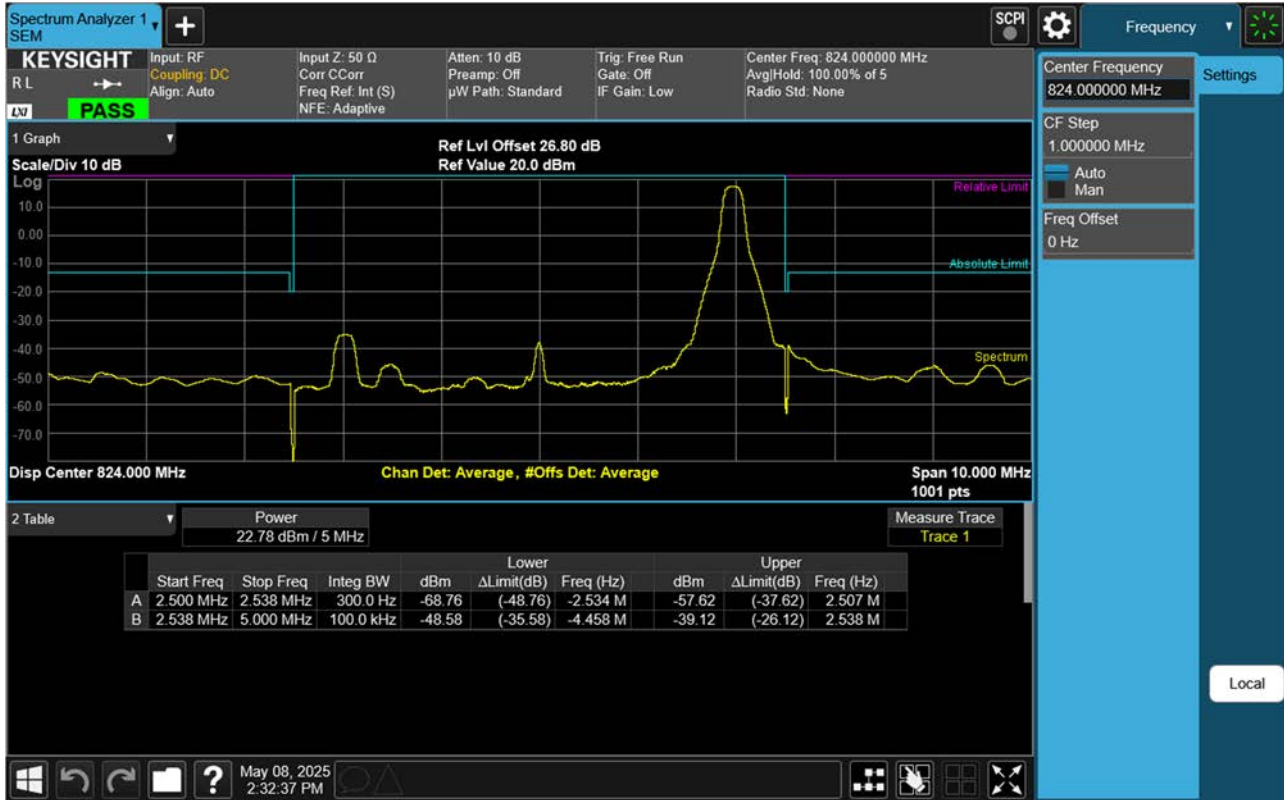
NR26_Mid Channel Edge Plot (5 M BW Ch.164300 BPSK_RB1_Offset 0)



NR26_Mid Channel Edge Plot (5 M BW Ch.164300 BPSK_ RB25_Offset 0)



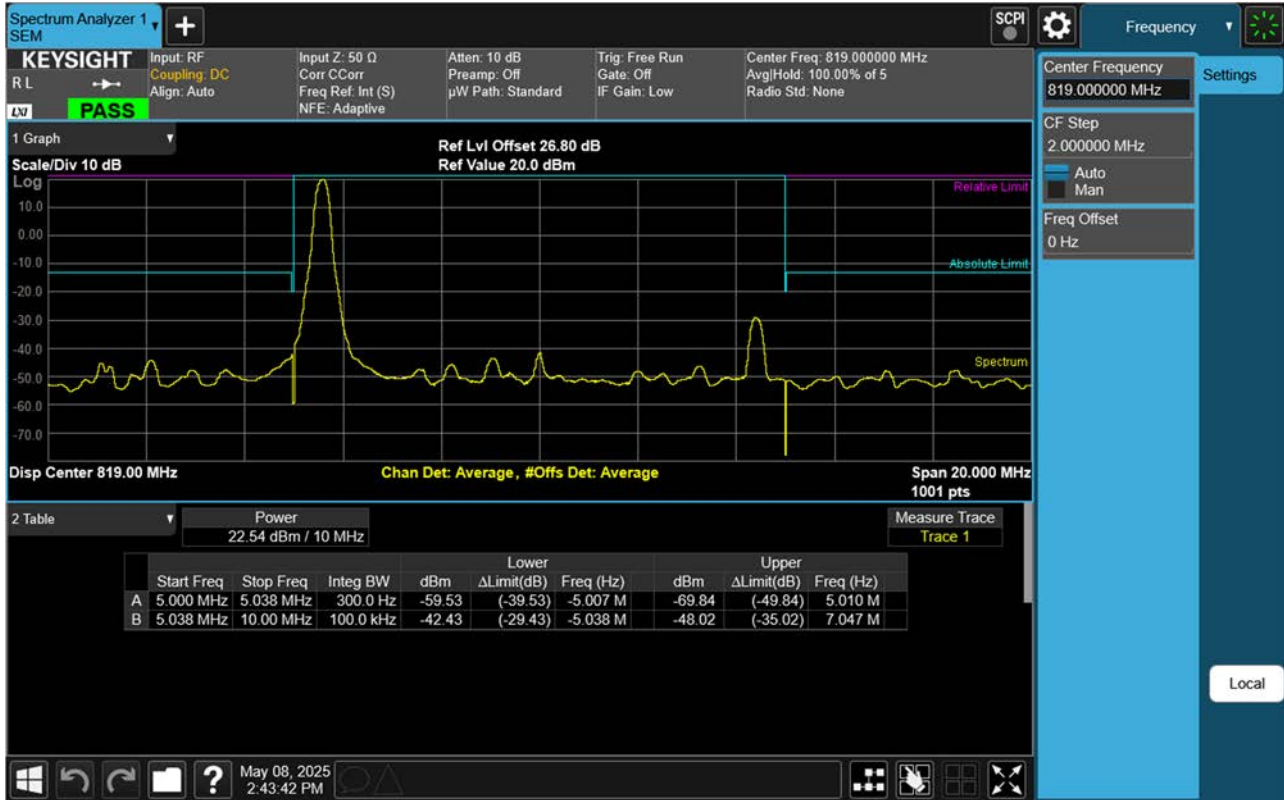
NR26_Upper Channel Edge Plot (5 M BW Ch.164800 BPSK_RB1_Offset 24)



NR26_Upper Channel Edge Plot (5 M BW Ch.164800 BPSK_RB25_Offset 0)



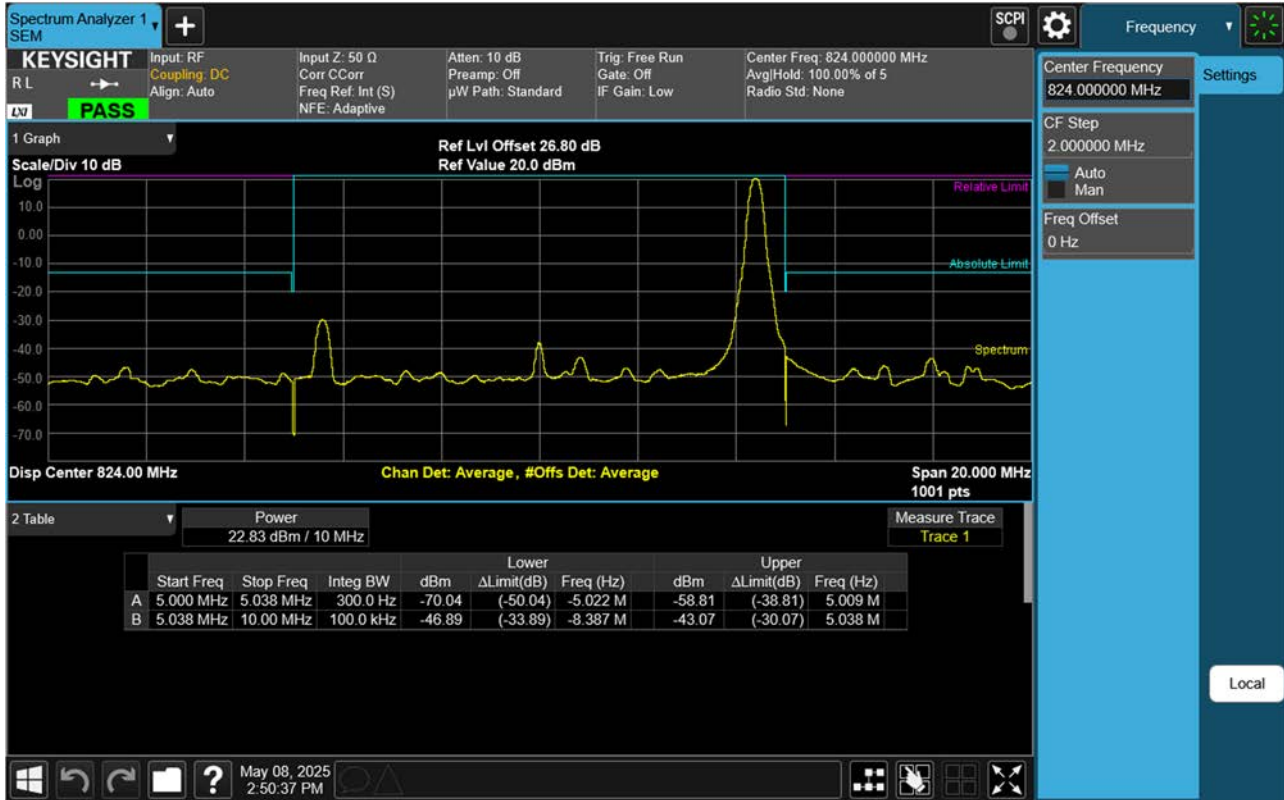
NR26_Low Channel Edge Plot (10 M BW Ch.163800 BPSK RB 1, Offset 0)



NR26_Low Channel Edge Plot (10 M BW Ch.163800 BPSK_RB50_Offset 0)



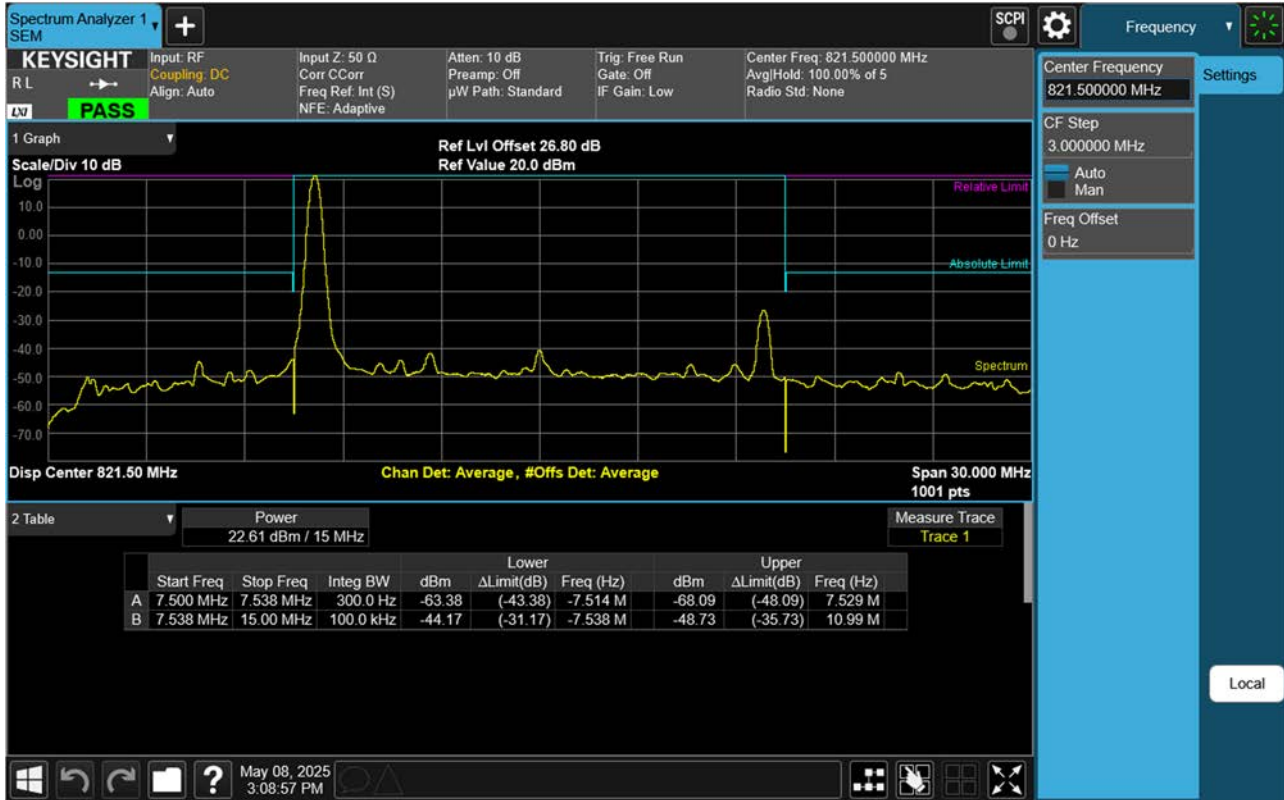
NR26_Upper Channel Edge Plot (10 M BW Ch.164800 BPSK_RB1_Offset 51)



NR26_Upper Channel Edge Plot (10 M BW Ch.164800 BPSK_RB50_Offset 0)



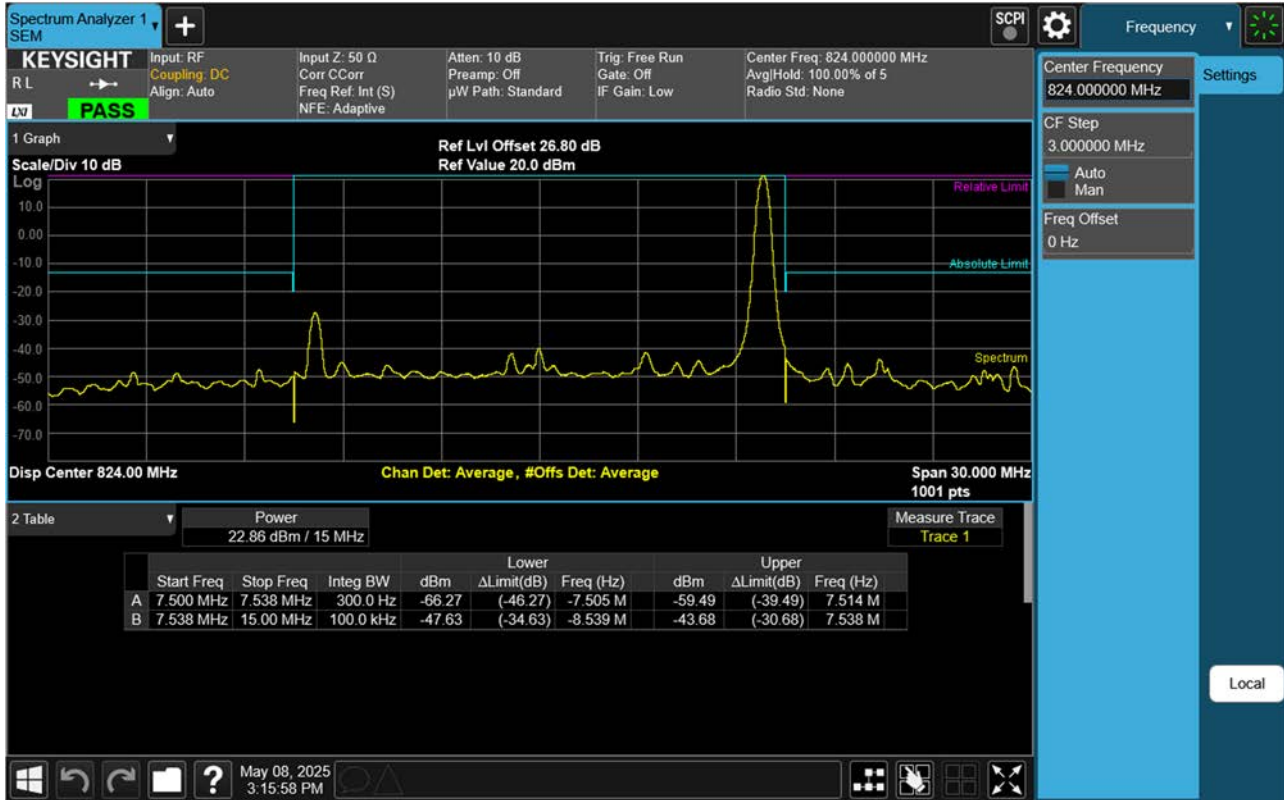
NR26_Low Channel Edge Plot (15 M BW Ch.164300 BPSK RB 1, Offset 0)



NR26_Low Channel Edge Plot (15 M BW Ch.164300 BPSK_RB75_Offset 0)



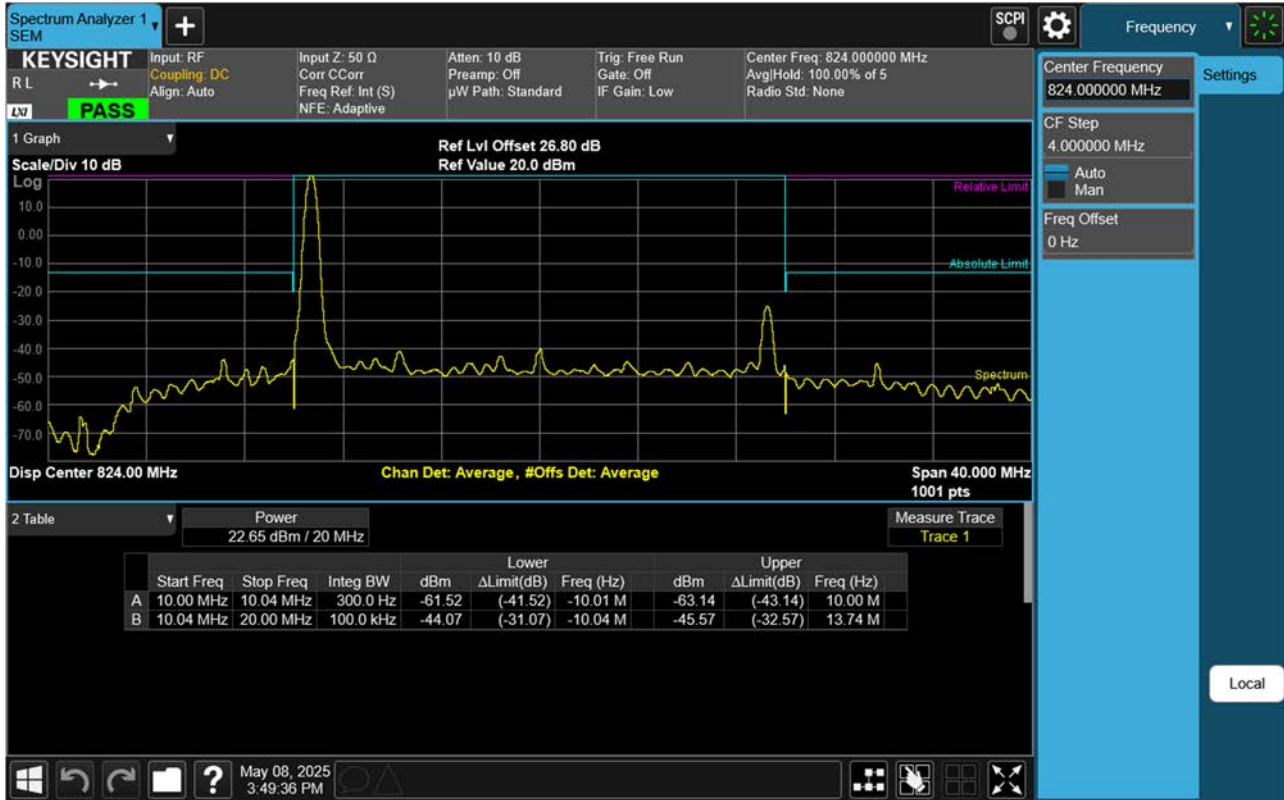
NR26_Upper Channel Edge Plot (15 M BW Ch.164800 BPSK_RB1_Offset 78)



NR26_Upper Channel Edge Plot (15 M BW Ch.164800 BPSK_RB75_Offset 0)



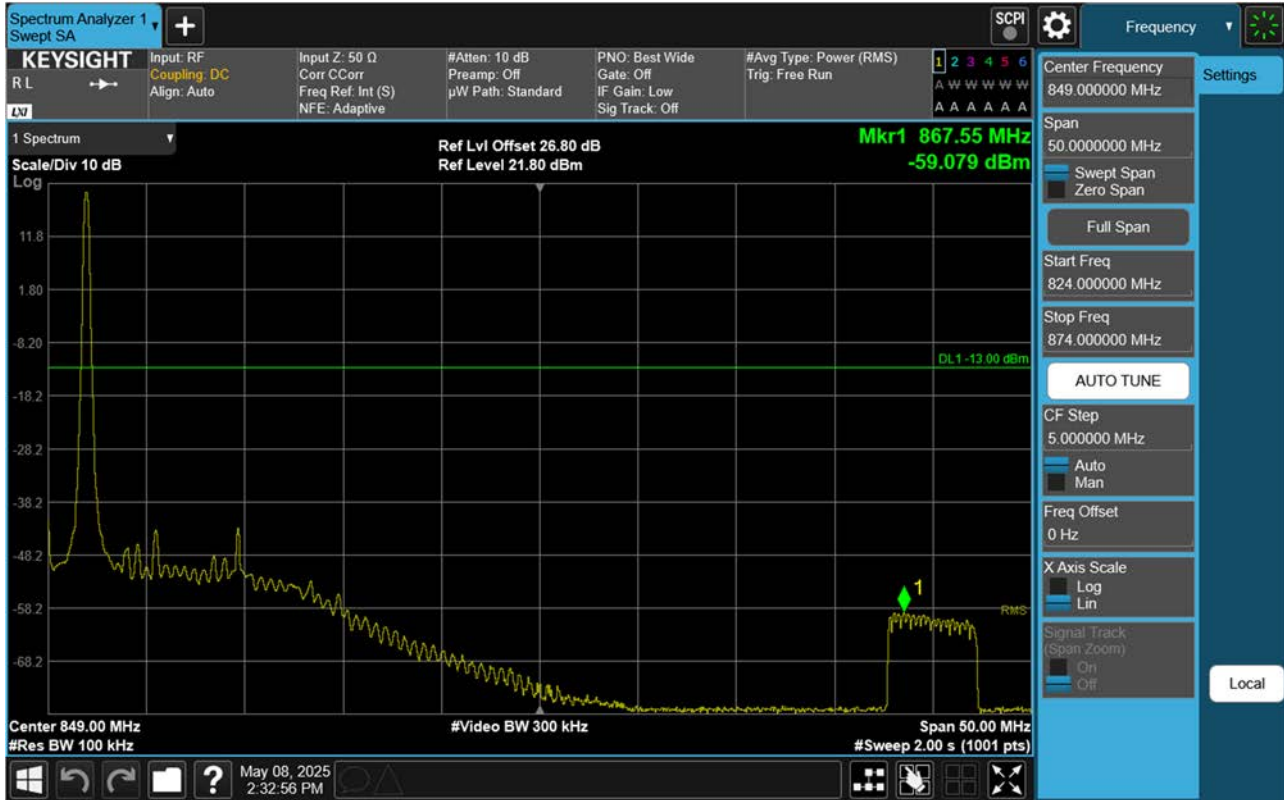
NR26_Mid Channel Edge Plot (20 M BW Ch.164800 QPSK_ RB1_Offset 105)



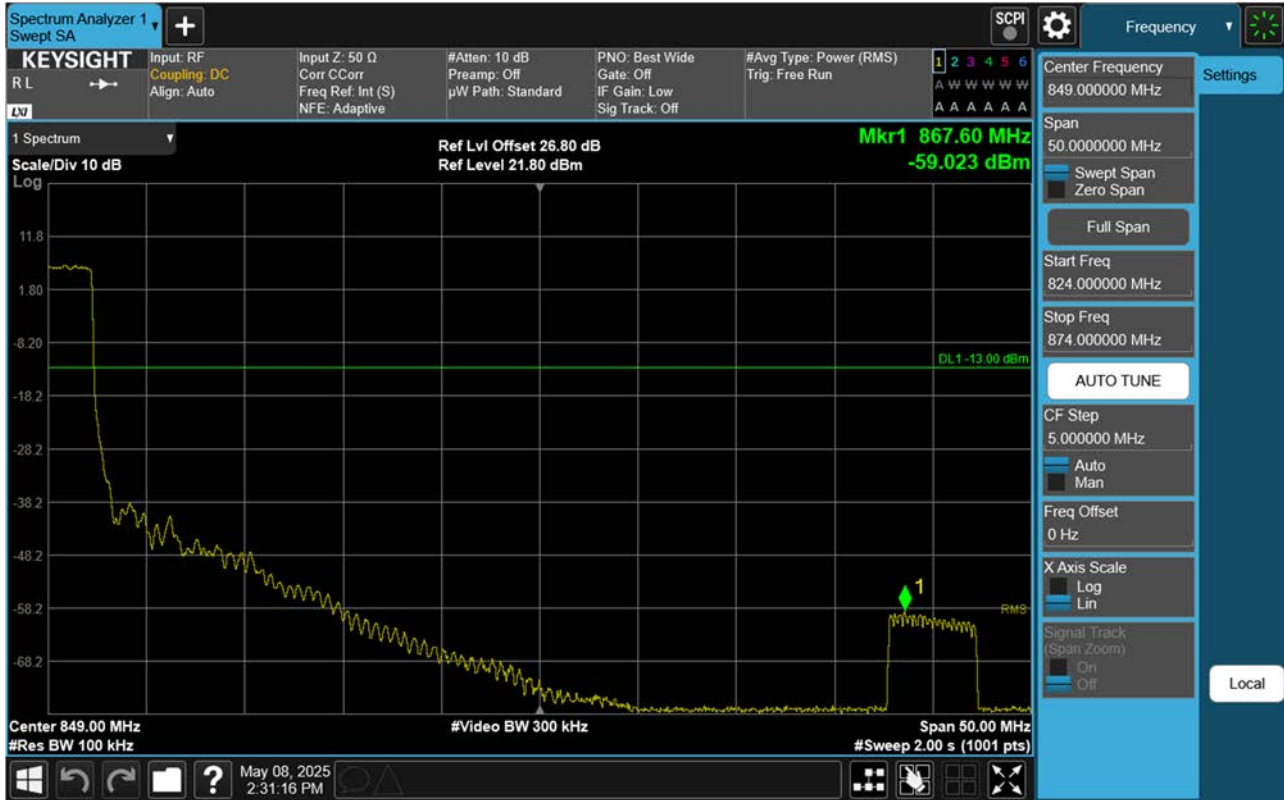
NR26_Mid Channel Edge Plot (20 M BW Ch.164800 BPSK_ RB100_Offset 0)



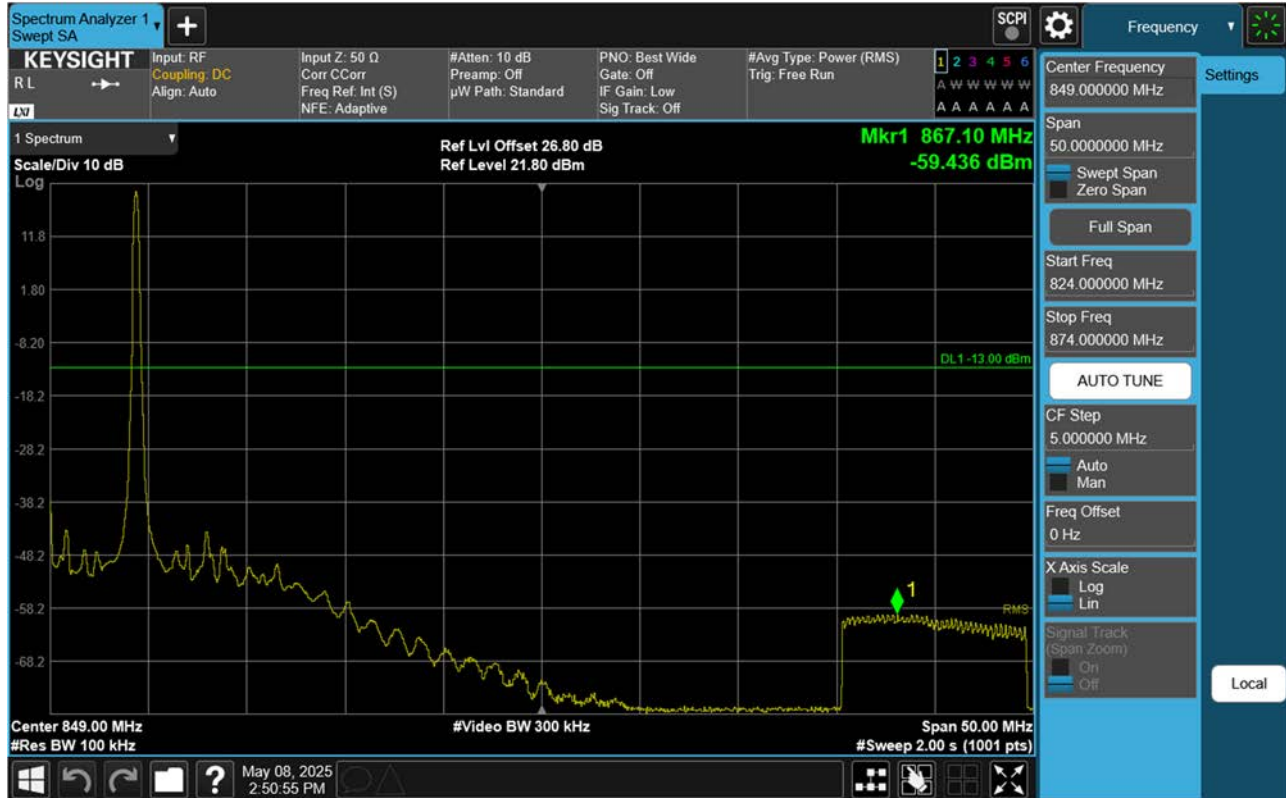
NR26_Upper Band Edge Plot (5 M BW Ch.164800 BPSK_RB1_Offset 24)



NR26_Upper Band Edge Plot (5 M BW Ch.164800 BPSK_RB25_Offset 0)



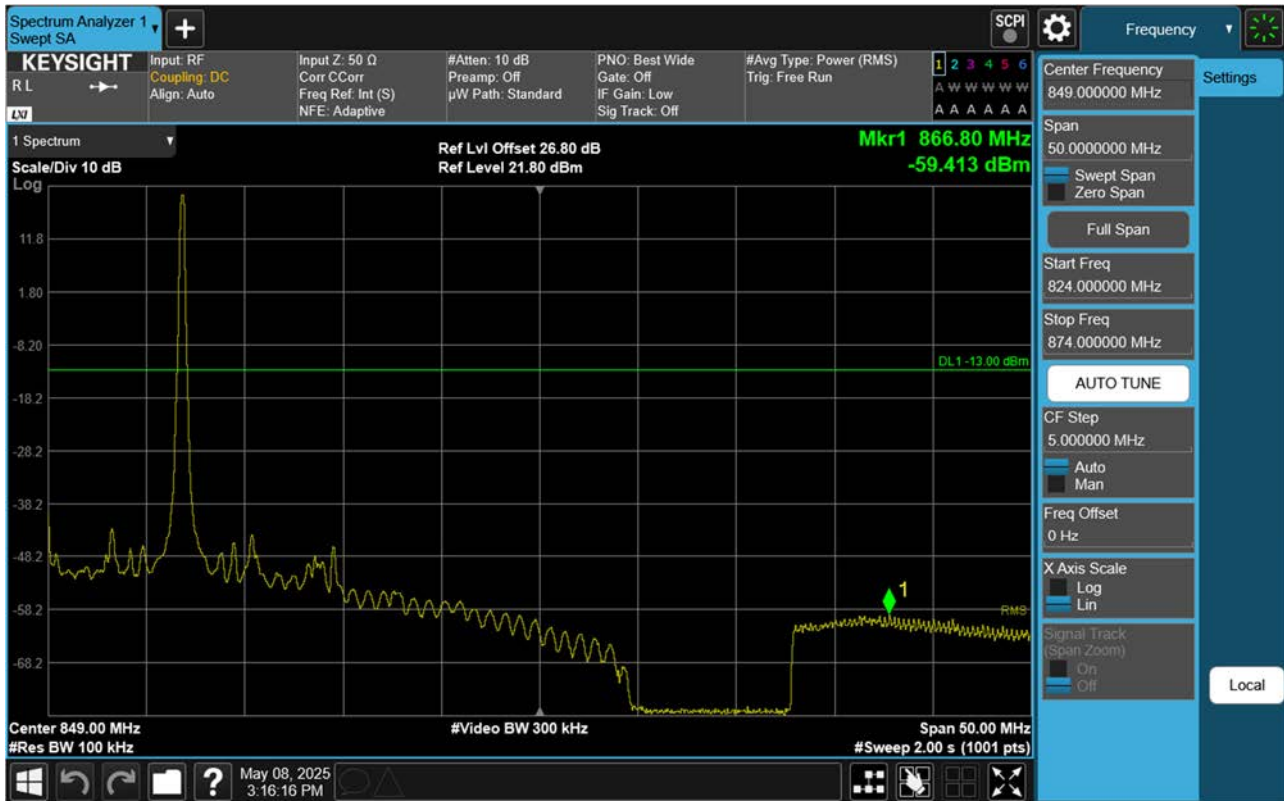
NR26_Upper Band Edge Plot (10 M BW Ch.164800 BPSK_RB1_Offset 51)



NR26_Upper Band Edge Plot (10 M BW Ch.164800 BPSK_RB50_Offset 0)



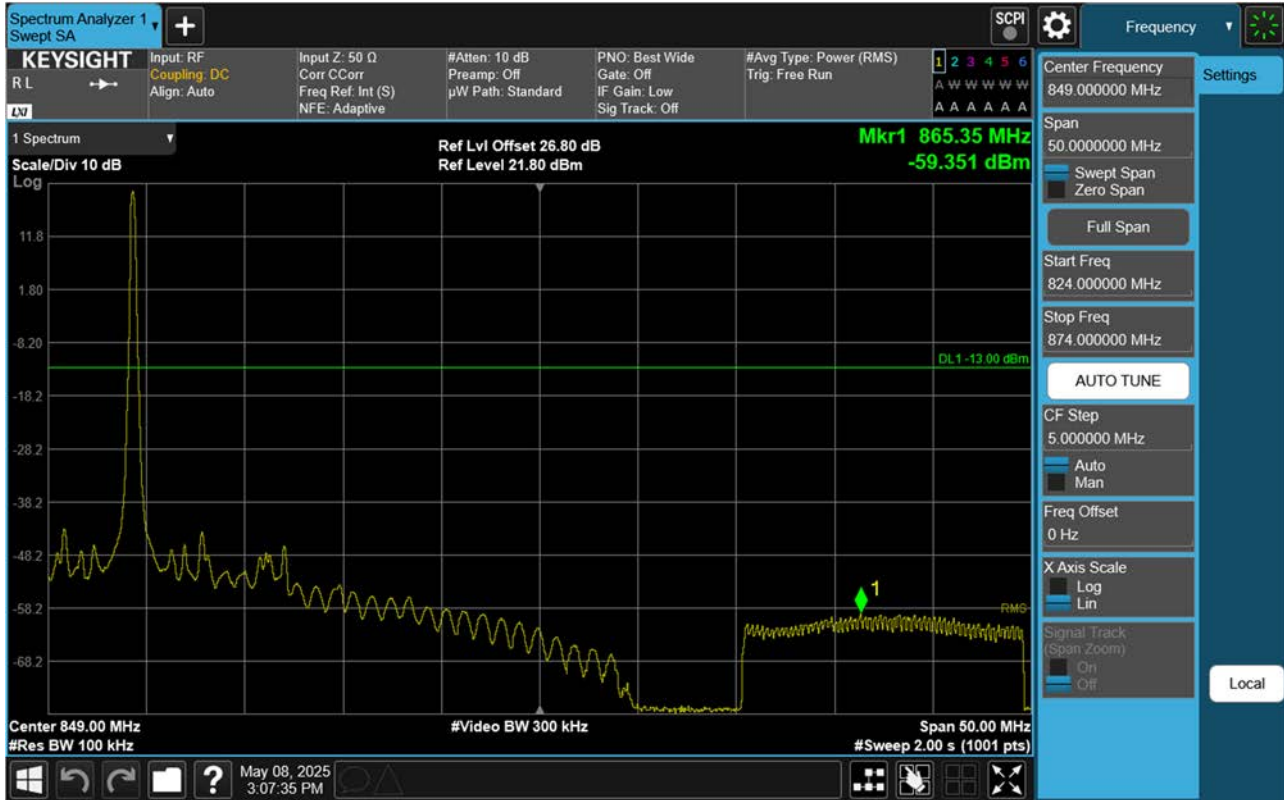
NR26_Lower Band Edge Plot (15 M BW Ch.164300 BPSK_RB1_Offset 78)



NR26_Lower Band Edge Plot (15 M BW Ch.164300 BPSK_RB75_Offset 0)



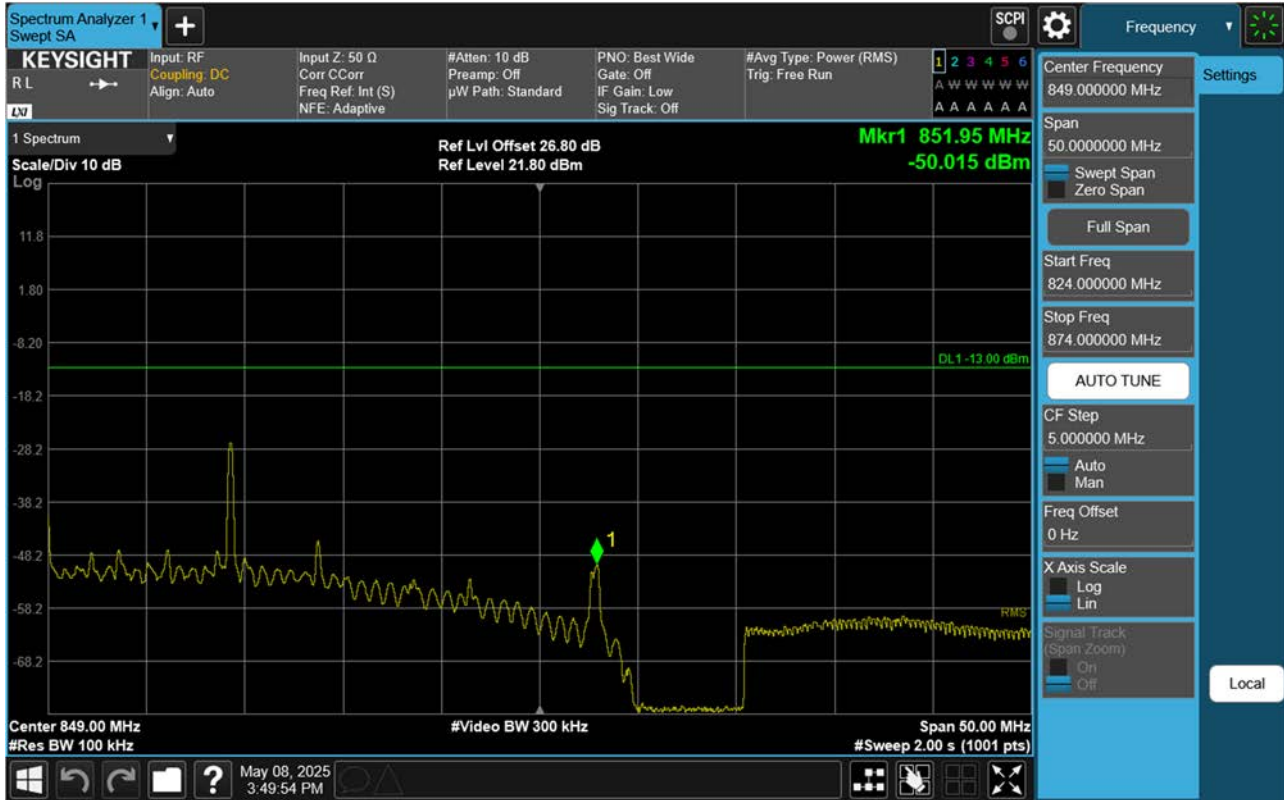
NR26_Upper Band Edge Plot (15 M BW Ch.164800 BPSK_RB1_Offset 78)



NR26_Upper Band Edge Plot (15 M BW Ch.164800 BPSK_RB75_Offset 0)



NR26_Mid Band Edge Plot (20 M BW Ch.164800 BPSK_RB1_Offset 105)



NR26_Mid Band Edge Plot (20 M BW Ch.164800 BPSK_RB100_Offset 0)



10. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2506-FC083-P