

TEST REPORT

FCC LTE B26(Part22) Test for SM-F766U
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2504-FC010-R1

DATE OF ISSUE
May 23, 2025

Tested by
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TEST REPORT

REPORT NO.

HCT-RF-2504-FC021-R1

DATE OF ISSUE

May 23, 2025

Additional Model

SM-F766U1

Applicant

SAMSUNG Electronics Co., Ltd.

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

Product Name

Mobile Phone

Model Name

SM-F766U

Date of Test

February 24, 2025 ~ April 21, 2025

FCC ID

A3LSMF766U

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 Held to Ear (PCE)

Test Standard Used

FCC Rule Part: § 22

Test Results

PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	April 22, 2025	Initial Release
1	May 23, 2025	Revised the Power Supply Voltage. (DC 3.88 V → DC 3.90 V)

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).

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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:	A3LSMF766U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 22
EUT Type:	Mobile phone
Model(s):	SM-F766U
Additional Model(s)	SM-F766U1
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:	826.5 MHz – 846.5 MHz (Sub6 n26 (5 MHz)) 829.0 MHz – 844.0 MHz (Sub6 n26 (10 MHz)) 831.5 MHz – 841.5 MHz (Sub6 n26 (15 MHz)) 834.0 MHz – 839.0 MHz (Sub6 n26 (20 MHz))
Date(s) of Tests:	February 24, 2025 ~ April 21, 2025
Serial number:	Radiated : R3CY209A7NT(Main 1), R3CY20MAGN(Sub 1) Conducted : R3CY10XMRGA
Antenna Information	Please refer to the Antenna Specification document.

1.1 MAXIMUM OUTPUT POWER

Main 1 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	ERP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n26 (5)	826.5 – 846.5	4M54G7D	PI/2 BPSK	0.084	19.26
		4M54G7D	QPSK	0.084	19.25
		4M52W7D	16QAM	0.067	18.26
		4M53W7D	64QAM	0.047	16.72
		4M53W7D	256QAM	0.030	14.81
Sub6 n26 (10)	829.0 – 844.0	8M99G7D	PI/2 BPSK	0.086	19.37
		9M00G7D	QPSK	0.086	19.34
		9M00W7D	16QAM	0.070	18.43
		8M97W7D	64QAM	0.049	16.94
		8M97W7D	256QAM	0.031	14.90
Sub6 n26 (15)	831.5 – 841.5	13M5G7D	PI/2 BPSK	0.100	20.00
		13M5G7D	QPSK	0.100	19.98
		13M5W7D	16QAM	0.081	19.07
		13M5W7D	64QAM	0.055	17.44
		13M4W7D	256QAM	0.037	15.65
Sub6 n26 (20)	834.0 – 839.0	18M0G7D	PI/2 BPSK	0.117	20.67
		18M0G7D	QPSK	0.116	20.63
		17M9W7D	16QAM	0.092	19.65
		18M0W7D	64QAM	0.064	18.07
		17M9W7D	256QAM	0.039	15.92

Sub 1 ANT

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	ERP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n26 (5)	826.5 – 846.5	4M55G7D	PI/2 BPSK	0.043	16.29
		4M54G7D	QPSK	0.042	16.28
		4M55W7D	16QAM	0.035	15.38
		4M54W7D	64QAM	0.024	13.75
		4M52W7D	256QAM	0.015	11.68
Sub6 n26 (10)	829.0 – 844.0	9M01G7D	PI/2 BPSK	0.042	16.27
		9M02G7D	QPSK	0.041	16.17
		9M02W7D	16QAM	0.033	15.18
		8M99W7D	64QAM	0.023	13.59
		8M95W7D	256QAM	0.015	11.68
Sub6 n26 (15)	831.5 – 841.5	13M5G7D	PI/2 BPSK	0.041	16.11
		13M5G7D	QPSK	0.040	16.07
		13M5W7D	16QAM	0.033	15.15
		13M5W7D	64QAM	0.024	13.73
		13M4W7D	256QAM	0.015	11.69
Sub6 n26 (20)	834.0 – 839.0	18M0G7D	PI/2 BPSK	0.042	16.22
		18M0G7D	QPSK	0.042	16.19
		18M0W7D	16QAM	0.033	15.17
		17M9W7D	64QAM	0.023	13.64
		18M0W7D	256QAM	0.015	11.85

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
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	- N/A (See SAR Report)
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 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.

3.3 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;

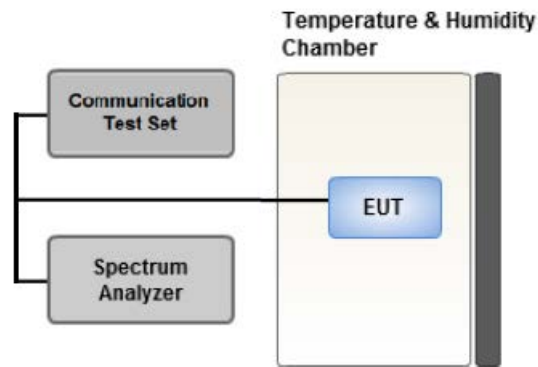
$$\text{Result}_{(\text{dBm})} = \text{Pg}_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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.

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

3.4 PEAK- TO- AVERAGE RATIO



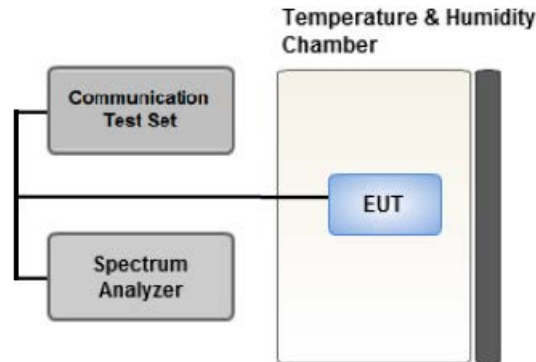
Test setup

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 %.

3.5 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.

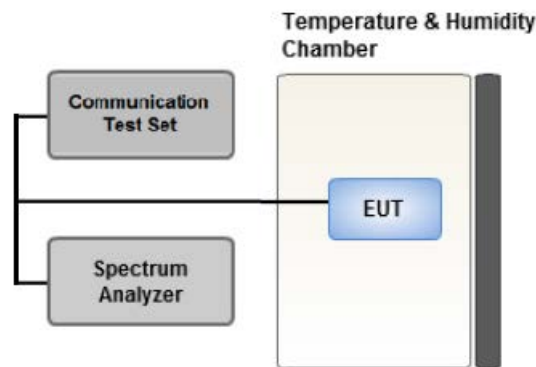
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

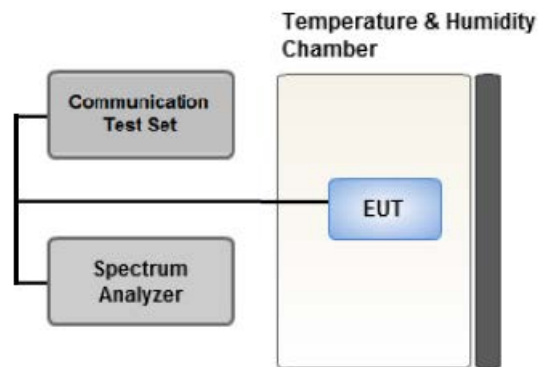
Test Overview

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

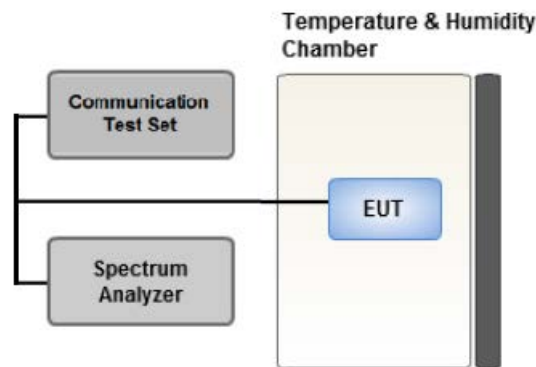
According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

All measurements were done at 2 channels(low and high operational frequency range.)

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)

- 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.
- The EUT was tested in three modes(Open, Half-open, Closed), the worst case configuration results are reported.
- Worst case (Effective Radiated Power)
: Main 1 ANT (Open), Sub 1 ANT (Open)
- Worst case (Radiated Spurious Emissions)
: Main 1 ANT (Open), Sub 1 ANT (Open)
- 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 : 20 MHz(Main 1 ANT), 5 MHz(Sub 1 ANT))
- SM-F766U & additional models were tested and the worst case results are reported.
(Worst case : SM-F766U)

[Main 1 ANT 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

[Sub 1 ANT Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Radiated Power	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	See Section 9.1		X
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 9.2		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 Only
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below..
- SM-F766U & additional models were tested and the worst case results are reported.
(Worst case : SM-F766U)

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth	Pi2/BPSK QPSK, 16QAM, 64QAM, 256QAM	5, 10, 15, 20	Mid	Full RB	0
Peak-To-Average Ratio	Pi2/BPSK QPSK, 16QAM, 64QAM, 256QAM	5, 10, 15, 20	Mid	Full RB	0
Band-edge	Pi2/BPSK	5	Low	1	0
			High	1	24
		10	Low	1	0
			High	1	49
		15	Low	1	0
			High	1	74
		20	Low	1	0
			High	1	99
Spurious and Harmonic Emissions at Antenna Terminal	Pi2/BPSK	5, 10, 15, 20	Low, High	Full RB	0
			Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacture	Serial No.	Due to Calibration	Calibration Interval
RF Switching System	Switch box(1 G HPF+LNA)	HCT CO., LTD.,	F2L2	12/12/2025	Annual
RF Switching System	Switch box(3 G HPF+LNA)	HCT CO., LTD.,	F2L3	12/12/2025	Annual
RF Switching System	Switch box(LNA)	HCT CO., LTD.,	F2L5	12/12/2025	Annual
RF Switching System	Switch box(6 G HPF+LNA)	HCT CO., LTD.,	F2L14	12/12/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/07/2025	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/19/2026	Annual
Power Splitter(DC ~ 26.5 GHz)	11667B	Hewlett Packard	5001	04/10/2026	Annual
DC Power Supply	E3632A	Agilent	MY40010147	08/06/2025	Annual
Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Dipole Antenna	UHAP	Schwarzbeck	01288	08/07/2026	Biennial
Chamber	SU-642	ESPEC	93008124	02/11/2026	Annual
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	03197	11/28/2025	Biennial
Horn Antenna(1 ~ 18 GHz)	BBHA 9120D	Schwarzbeck	03201	11/28/2025	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial
Horn Antenna(15 ~ 40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/23/2027	Biennial
Signal Analyzer(10 Hz ~ 26.5 GHz)	N9020A	Agilent	MY52090906	04/14/2026	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/10/2026	Annual
Spectrum Analyzer(10 Hz ~ 40 GHz)	FSV40	ROHDE & SCHWARZ	101733	09/19/2025	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	Annual
Loop Antenna(9 kHz ~ 30 MHz)	FMZB1513	Schwarzbeck	1513-333	03/07/2026	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	895	08/28/2026	Biennial
Trilog Broadband Antenna	VULB9168	Schwarzbeck	1135	08/19/2026	Biennial
Radio Communication Test Station	MT8000A	Anritsu Corp.	6272613402	08/28/2025	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/26/2025	Annual
Signal Analyzer(5 Hz ~ 40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/17/2025	Annual
Signal Analyzer(2 Hz ~ 50.0 GHz)	N9040B	KEYSIGHT	US55230216	12/09/2025	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/10/2025	Annual
UXM 5G Wireless Test Platform	E7515B	KEYSIGHT	MY60101126	02/10/2026	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

1. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
2. 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
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 22.917(a)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§ 2.1046	N/A	<u>See Note1</u>
Peak- to- Average Ratio	§ 22.913(d)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§ 2.1055, § 22.355	< 2.5 ppm	PASS

Note:

1. See SAR Report
2. Conducted test were tested using 5G Wireless Tester.

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	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 22.917(a)	< 43 + 10log10 (P[Watts]) for all out-of band emissions	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 (Main 1 ANT)

8.1 EFFECTIVE RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
826.5	Sub6 n26 5 MHz [15 kHz]	PI/2 BPSK	-32.26	30.65	-9.95	1.44	H	< 7.00	0.084	19.26	1	1
		QPSK	-32.27	30.64	-9.95	1.44	H		0.084	19.25		
		16-QAM	-33.26	29.65	-9.95	1.44	H		0.067	18.26		
		64-QAM	-34.80	28.11	-9.95	1.44	H		0.047	16.72		
		256-QAM	-36.71	26.20	-9.95	1.44	H		0.030	14.81		
836.5		PI/2 BPSK	-33.66	29.20	-9.90	1.45	H		0.061	17.85	1	1
		QPSK	-33.67	29.19	-9.90	1.45	H		0.061	17.84		
		16-QAM	-34.56	28.30	-9.90	1.45	H		0.050	16.95		
		64-QAM	-36.09	26.77	-9.90	1.45	H		0.035	15.42		
		256-QAM	-38.22	24.64	-9.90	1.45	H		0.021	13.29		
1846.5		PI/2 BPSK	-33.50	29.79	-9.85	1.45	H		0.071	18.49	1	1
		QPSK	-33.56	29.73	-9.85	1.45	H		0.070	18.43		
		16-QAM	-34.32	28.97	-9.85	1.45	H		0.058	17.67		
		64-QAM	-36.07	27.22	-9.85	1.45	H		0.039	15.92		
		256-QAM	-38.06	25.23	-9.85	1.45	H		0.025	13.93		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)					W	dBm	Size	Offset
829.0		PI/2 BPSK	-32.53	30.32	-9.95	1.44	H		0.078	18.93	1	1
		QPSK	-32.55	30.30	-9.95	1.44	H		0.078	18.91		
		16-QAM	-33.50	29.35	-9.95	1.44	H		0.063	17.96		
		64-QAM	-35.04	27.81	-9.95	1.44	H		0.044	16.42		
		256-QAM	-37.06	25.79	-9.95	1.44	H		0.028	14.40		
836.5	Sub6 n26 10 MHz [15 kHz]	PI/2 BPSK	-33.05	29.81	-9.90	1.45	H		0.070	18.46	1	1
		QPSK	-33.12	29.74	-9.90	1.45	H		0.069	18.39		
		16-QAM	-34.19	28.67	-9.90	1.45	H	< 7.00	0.054	17.32		
		64-QAM	-35.73	27.13	-9.90	1.45	H		0.038	15.78		
		256-QAM	-37.67	25.19	-9.90	1.45	H		0.024	13.84		
844.0		PI/2 BPSK	-32.57	30.67	-9.85	1.45	H		0.086	19.37	1	1
		QPSK	-32.60	30.64	-9.85	1.45	H		0.086	19.34		
		16-QAM	-33.51	29.73	-9.85	1.45	H		0.070	18.43		
		64-QAM	-35.00	28.24	-9.85	1.45	H		0.049	16.94		
		256-QAM	-37.04	26.20	-9.85	1.45	H		0.031	14.90		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
831.5		PI/2 BPSK	-32.43	30.33	-9.95	1.45	H	< 7.00	0.078	18.93	1	1
		QPSK	-32.44	30.32	-9.95	1.45	H		0.078	18.92		
		16-QAM	-33.33	29.43	-9.95	1.45	H		0.064	18.03		
		64-QAM	-35.01	27.75	-9.95	1.45	H		0.043	16.35		
		256-QAM	-37.01	25.75	-9.95	1.45	H		0.027	14.35		
836.5	Sub6 n26 15 MHz [15 kHz]	PI/2 BPSK	-32.86	30.00	-9.90	1.45	H	< 7.00	0.073	18.65	1	1
		QPSK	-32.89	29.97	-9.90	1.45	H		0.073	18.62		
		16-QAM	-33.84	29.02	-9.90	1.45	H		0.058	17.67		
		64-QAM	-35.36	27.50	-9.90	1.45	H		0.041	16.15		
		256-QAM	-37.35	25.51	-9.90	1.45	H		0.026	14.16		
841.5		PI/2 BPSK	-31.78	31.30	-9.85	1.45	H	< 7.00	0.100	20.00	1	1
		QPSK	-31.80	31.28	-9.85	1.45	H		0.100	19.98		
		16-QAM	-32.71	30.37	-9.85	1.45	H		0.081	19.07		
		64-QAM	-34.34	28.74	-9.85	1.45	H		0.055	17.44		
		256-QAM	-36.13	26.95	-9.85	1.45	H		0.037	15.65		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
834.0		PI/2 BPSK	-32.31	30.43	-9.95	1.45	H	< 7.00	0.080	19.03	1	1
		QPSK	-32.39	30.35	-9.95	1.45	H		0.079	18.95		
		16-QAM	-33.23	29.51	-9.95	1.45	H		0.065	18.11		
		64-QAM	-34.92	27.82	-9.95	1.45	H		0.044	16.42		
		256-QAM	-36.88	25.86	-9.95	1.45	H		0.028	14.46		
836.5	Sub6 n26 20 MHz [15 kHz]	PI/2 BPSK	-32.60	30.26	-9.90	1.45	H	< 7.00	0.078	18.91	1	1
		QPSK	-32.62	30.24	-9.90	1.45	H		0.077	18.89		
		16-QAM	-33.48	29.38	-9.90	1.45	H		0.064	18.03		
		64-QAM	-35.13	27.73	-9.90	1.45	H		0.043	16.38		
		256-QAM	-36.98	25.88	-9.90	1.45	H		0.028	14.53		
839.0		PI/2 BPSK	-31.05	31.97	-9.85	1.45	H	< 7.00	0.117	20.67	1	1
		QPSK	-31.09	31.93	-9.85	1.45	H		0.116	20.63		
		16-QAM	-32.07	30.95	-9.85	1.45	H		0.092	19.65		
		64-QAM	-33.65	29.37	-9.85	1.45	H		0.064	18.07		
		256-QAM	-35.80	27.22	-9.85	1.45	H		0.039	15.92		

8.2 RADIATED SPURIOUS EMISSIONS

■ NR Band:	<u>N26</u>
■ Bandwidth:	<u>20 MHz</u>
■ Modulation:	<u>PI/2 BPSK</u>
■ Distance:	<u>3 meters</u>
■ SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
166800 (834.0)	1 668.00	-48.18	9.57	-63.42	2.05	V	-55.90	-13.00	1	1
	2 502.00	-39.30	10.27	-50.56	2.50	H	-42.79	-13.00		
	3 336.00	-54.02	11.10	-62.64	2.98	V	-54.52	-13.00		
167300 (836.5)	1 673.00	-49.60	9.60	-64.87	2.05	H	-57.32	-13.00	1	1
	2 509.50	-37.14	10.26	-48.42	2.51	H	-40.67	-13.00		
	3 346.00	-54.86	11.10	-63.52	2.96	V	-55.38	-13.00		
167800 (839.0)	1 678.00	-49.61	9.63	-64.90	2.06	V	-57.33	-13.00	1	1
	2 517.00	-36.82	10.26	-48.11	2.53	H	-40.38	-13.00		
	3 356.00	-54.16	11.11	-62.92	2.95	H	-54.76	-13.00		

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n26	5 MHz	836.5	BPSK	25	0	4.74
			QPSK			5.84
			16-QAM			6.53
			64-QAM			6.87
			256-QAM			6.80
	10 MHz		BPSK	50		4.68
			QPSK			5.75
			16-QAM			6.47
			64-QAM			6.72
			256-QAM			6.98
	15 MHz		BPSK	75		4.63
			QPSK			5.57
			16-QAM			6.38
			64-QAM			6.57
			256-QAM			6.78
	20 MHz		BPSK	100		5.09
			QPSK			5.65
			16-QAM			6.44
			64-QAM			6.67
			256-QAM			6.71

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 70~ 89.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n26	5 MHz	836.5	BPSK	25	0	4.5354
			QPSK			4.5382
			16-QAM			4.5222
			64-QAM			4.5314
			256-QAM			4.5259
	10 MHz		BPSK	50		8.9916
			QPSK			8.9977
			16-QAM			8.9951
			64-QAM			8.9720
			256-QAM			8.9646
	15 MHz		BPSK	75		13.513
			QPSK			13.478
			16-QAM			13.480
			64-QAM			13.488
			256-QAM			13.413
	20 MHz		BPSK	100		17.963
			QPSK			17.969
			16-QAM			17.892
			64-QAM			17.995
			256-QAM			17.897

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 50 ~ 69.

8.5 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 n26	5	826.5	7.0987	30.315	-61.973	-31.658	-13.00
		836.5	3.7787	29.722	-61.015	-31.293	
		846.5	3.7488	29.722	-61.623	-31.901	
	10	829.0	8.5843	30.315	-61.241	-30.926	
		836.5	3.7787	29.722	-60.997	-31.275	
		844.0	4.8954	29.722	-61.356	-31.634	
	15	831.5	3.7588	29.722	-60.470	-30.748	
		836.5	7.6670	30.315	-61.621	-31.306	
		841.5	4.9652	29.722	-59.986	-30.264	
	20	834.0	4.0878	29.722	-61.285	-31.563	
		836.5	3.7588	29.722	-61.311	-31.589	
		839.0	3.7588	29.722	-60.698	-30.976	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 114 ~ 125.
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

8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 90 ~ 113.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 5 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 500 000	0.0	0.000 000	0.000
	100 %	-30	836 500 002	1.4	0.000 000	0.002
	100 %	-20	836 500 003	2.5	0.000 000	0.003
	100 %	-10	836 499 997	-3.6	0.000 000	-0.004
	100 %	0	836 499 997	-3.0	0.000 000	-0.004
	100 %	+10	836 500 001	1.2	0.000 000	0.001
	100 %	+30	836 500 004	3.3	0.000 000	0.004
	100 %	+40	836 500 001	0.8	0.000 000	0.001
	100 %	+50	836 499 999	-1.2	0.000 000	-0.001
	Batt. Endpoint	+20	836 499 999	-0.7	0.000 000	-0.001

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 499 999	0.0	0.000 000	0.000
	100 %	-30	836 499 997	-2.3	0.000 000	-0.003
	100 %	-20	836 499 999	0.0	0.000 000	0.000
	100 %	-10	836 499 997	-1.6	0.000 000	-0.002
	100 %	0	836 499 998	-0.8	0.000 000	-0.001
	100 %	+10	836 499 999	0.3	0.000 000	0.000
	100 %	+30	836 499 995	-4.1	0.000 000	-0.005
	100 %	+40	836 499 997	-2.1	0.000 000	-0.003
	100 %	+50	836 499 998	-1.3	0.000 000	-0.002
	Batt. Endpoint	+20	836 499 997	-2.0	0.000 000	-0.002

- ▣ BandWidth: 15 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 500 001	0.0	0.000 000	0.000
	100 %	-30	836 500 000	-0.7	0.000 000	-0.001
	100 %	-20	836 500 000	-1.2	0.000 000	-0.001
	100 %	-10	836 500 004	2.9	0.000 000	0.004
	100 %	0	836 500 003	1.6	0.000 000	0.002
	100 %	+10	836 500 001	-0.3	0.000 000	0.000
	100 %	+30	836 500 002	1.2	0.000 000	0.001
	100 %	+40	836 500 000	-1.3	0.000 000	-0.001
	100 %	+50	836 500 003	2.1	0.000 000	0.002
	Batt. Endpoint	+20	836 500 001	0.3	0.000 000	0.000

- ▣ BandWidth: 20 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 499 999	0.0	0.000 000	0.000
	100 %	-30	836 499 999	-0.6	0.000 000	-0.001
	100 %	-20	836 499 998	-1.5	0.000 000	-0.002
	100 %	-10	836 499 999	0.1	0.000 000	0.000
	100 %	0	836 499 999	-0.6	0.000 000	-0.001
	100 %	+10	836 500 000	0.5	0.000 000	0.001
	100 %	+30	836 499 999	-0.6	0.000 000	-0.001
	100 %	+40	836 499 998	-0.8	0.000 000	-0.001
	100 %	+50	836 499 999	-0.4	0.000 000	0.000
	Batt. Endpoint	+20	836 499 999	0.3	0.000 000	0.000

9. TEST DATA (Sub 1 ANT)

9.1 EFFECTIVE RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
826.5	Sub6 n26 5 MHz [15 kHz]	PI/2 BPSK	-35.23	27.68	-9.95	1.44	H	< 7.00	0.043	16.29	1	12
		QPSK	-35.24	27.67	-9.95	1.44	H		0.042	16.28		
		16-QAM	-36.14	26.77	-9.95	1.44	H		0.035	15.38		
		64-QAM	-37.77	25.14	-9.95	1.44	H		0.024	13.75		
		256-QAM	-39.84	23.07	-9.95	1.44	H		0.015	11.68		
836.5		PI/2 BPSK	-35.72	27.14	-9.90	1.45	H		0.038	15.79	1	1
		QPSK	-35.73	27.13	-9.90	1.45	H		0.038	15.78		
		16-QAM	-36.61	26.25	-9.90	1.45	H		0.031	14.90		
		64-QAM	-38.27	24.59	-9.90	1.45	H		0.021	13.24		
		256-QAM	-40.12	22.74	-9.90	1.45	H		0.014	11.39		
1846.5		PI/2 BPSK	-36.62	26.67	-9.85	1.45	H		0.034	15.37	1	1
		QPSK	-36.64	26.65	-9.85	1.45	H		0.034	15.35		
		16-QAM	-37.51	25.78	-9.85	1.45	H		0.028	14.48		
		64-QAM	-39.18	24.11	-9.85	1.45	H		0.019	12.81		
		256-QAM	-40.98	22.31	-9.85	1.45	H		0.013	11.01		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
829.0		PI/2 BPSK	-35.19	27.66	-9.95	1.44	H	< 7.00	0.042	16.27	1	26
		QPSK	-35.29	27.56	-9.95	1.44	H		0.041	16.17		
		16-QAM	-36.28	26.57	-9.95	1.44	H		0.033	15.18		
		64-QAM	-37.87	24.98	-9.95	1.44	H		0.023	13.59		
		256-QAM	-39.88	22.97	-9.95	1.44	H		0.014	11.58		
836.5	Sub6 n26 10 MHz [15 kHz]	PI/2 BPSK	-35.45	27.41	-9.90	1.45	H	< 7.00	0.040	16.06	1	1
		QPSK	-35.46	27.40	-9.90	1.45	H		0.040	16.05		
		16-QAM	-36.57	26.29	-9.90	1.45	H		0.031	14.94		
		64-QAM	-38.06	24.80	-9.90	1.45	H		0.022	13.45		
		256-QAM	-39.83	23.03	-9.90	1.45	H		0.015	11.68		
844.0		PI/2 BPSK	-36.13	27.11	-9.85	1.45	H	< 7.00	0.038	15.81	1	1
		QPSK	-36.14	27.10	-9.85	1.45	H		0.038	15.80		
		16-QAM	-37.12	26.12	-9.85	1.45	H		0.030	14.82		
		64-QAM	-38.57	24.67	-9.85	1.45	H		0.022	13.37		
		256-QAM	-40.50	22.74	-9.85	1.45	H		0.014	11.44		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)					W	dBm	Size	Offset
831.5		PI/2 BPSK	-35.32	27.44	-9.95	1.45	H	< 7.00	0.040	16.04	1	1
		QPSK	-35.36	27.40	-9.95	1.45	H		0.040	16.00		
		16-QAM	-36.31	26.45	-9.95	1.45	H		0.032	15.05		
		64-QAM	-37.63	25.13	-9.95	1.45	H		0.024	13.73		
		256-QAM	-39.75	23.01	-9.95	1.45	H		0.014	11.61		
836.5	Sub6 n26 15 MHz [15 kHz]	PI/2 BPSK	-35.44	27.42	-9.90	1.45	H	< 7.00	0.040	16.07	1	1
		QPSK	-35.46	27.40	-9.90	1.45	H		0.040	16.05		
		16-QAM	-36.36	26.50	-9.90	1.45	H		0.033	15.15		
		64-QAM	-37.87	24.99	-9.90	1.45	H		0.023	13.64		
		256-QAM	-39.82	23.04	-9.90	1.45	H		0.015	11.69		
841.5		PI/2 BPSK	-35.67	27.41	-9.85	1.45	H	< 7.00	0.041	16.11	1	1
		QPSK	-35.71	27.37	-9.85	1.45	H		0.040	16.07		
		16-QAM	-36.78	26.30	-9.85	1.45	H		0.032	15.00		
		64-QAM	-38.35	24.73	-9.85	1.45	H		0.022	13.43		
		256-QAM	-40.12	22.96	-9.85	1.45	H		0.015	11.66		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured	Substitute	Ant. Gain (dBd)	C.L	Pol	Limit	ERP		RB	
			Level (dBm)	Level (dBm)				W	W	dBm	Size	Offset
834.0		PI/2 BPSK	-35.33	27.41	-9.95	1.45	H	< 7.00	0.040	16.01	1	1
		QPSK	-35.34	27.40	-9.95	1.45	H		0.040	16.00		
		16-QAM	-36.37	26.37	-9.95	1.45	H		0.031	14.97		
		64-QAM	-37.96	24.78	-9.95	1.45	H		0.022	13.38		
		256-QAM	-39.82	22.92	-9.95	1.45	H		0.014	11.52		
836.5	Sub6 n26 20 MHz [15 kHz]	PI/2 BPSK	-35.40	27.46	-9.90	1.45	H	< 7.00	0.041	16.11	1	1
		QPSK	-35.41	27.45	-9.90	1.45	H		0.041	16.10		
		16-QAM	-36.38	26.48	-9.90	1.45	H		0.033	15.13		
		64-QAM	-38.03	24.83	-9.90	1.45	H		0.022	13.48		
		256-QAM	-39.78	23.08	-9.90	1.45	H		0.015	11.73		
839.0		PI/2 BPSK	-35.50	27.52	-9.85	1.45	H	< 7.00	0.042	16.22	1	1
		QPSK	-35.53	27.49	-9.85	1.45	H		0.042	16.19		
		16-QAM	-36.55	26.47	-9.85	1.45	H		0.033	15.17		
		64-QAM	-38.08	24.94	-9.85	1.45	H		0.023	13.64		
		256-QAM	-39.87	23.15	-9.85	1.45	H		0.015	11.85		

9.2 RADIATED SPURIOUS EMISSIONS

■ NR Band:	<u>N26</u>
■ Bandwidth:	<u>5 MHz</u>
■ Modulation:	<u>PI/2 BPSK</u>
■ Distance:	<u>3 meters</u>
■ SCS:	<u>15 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
165300 (826.5)	1 653.00	-33.95	9.47	-48.98	2.02	H	-41.53	-13.00	1	12
	2 479.50	-34.19	10.32	-45.33	2.55	V	-37.56	-13.00		
	3 306.00	-53.52	11.09	-61.78	2.97	H	-53.66	-13.00		
167300 (836.5)	1 673.00	-35.34	9.60	-50.61	2.05	H	-43.06	-13.00	1	1
	2 509.50	-34.39	10.26	-45.67	2.51	V	-37.92	-13.00		
	3 346.00	-53.49	11.10	-62.15	2.96	H	-54.01	-13.00		
169300 (846.5)	1 693.00	-37.27	9.73	-52.49	2.07	V	-44.83	-13.00	1	1
	2 539.50	-27.87	10.25	-38.97	2.53	V	-31.25	-13.00		
	3 386.00	-53.70	11.18	-62.65	2.99	H	-54.46	-13.00		

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n26	5 MHz	836.5	BPSK	25	0	5.80
			QPSK			6.51
			16-QAM			7.18
			64-QAM			7.28
			256-QAM			6.83
	10 MHz		BPSK	50		6.01
			QPSK			6.18
			16-QAM			6.82
			64-QAM			7.14
			256-QAM			6.74
	15 MHz		BPSK	75		4.73
			QPSK			5.78
			16-QAM			6.67
			64-QAM			6.85
			256-QAM			6.64
	20 MHz		BPSK	100		5.89
			QPSK			5.95
			16-QAM			6.61
			64-QAM			6.72
			256-QAM			6.77

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 147 ~ 166.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n26	5 MHz	836.5	BPSK	25	0	4.5465
			QPSK			4.5423
			16-QAM			4.5480
			64-QAM			4.5440
			256-QAM			4.5179
	10 MHz		BPSK	50		9.0054
			QPSK			9.0190
			16-QAM			9.0149
			64-QAM			8.9907
			256-QAM			8.9503
	15 MHz		BPSK	75		13.534
			QPSK			13.514
			16-QAM			13.505
			64-QAM			13.466
			256-QAM			13.438
	20 MHz		BPSK	100		17.950
			QPSK			17.981
			16-QAM			17.945
			64-QAM			17.896
			256-QAM			17.964

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 127 ~ 146.

9.5 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 n26	5	826.5	4.0579	29.722	-60.159	-30.437	-13.00
		836.5	4.9352	29.722	-58.158	-28.436	
		846.5	6.0519	30.315	-59.736	-29.421	
	10	829.0	3.8086	29.722	-59.390	-29.668	
		836.5	4.9352	29.722	-59.782	-30.060	
		844.0	3.8286	29.722	-59.456	-29.734	
	15	831.5	3.8186	29.722	-59.834	-30.112	
		836.5	8.0957	30.315	-59.517	-29.202	
		841.5	3.8086	29.722	-58.721	-28.999	
	20	834.0	4.9452	29.722	-59.820	-30.098	
		836.5	4.8954	29.722	-59.676	-29.954	
		839.0	3.7787	29.722	-59.343	-29.621	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 191 ~ 202.
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

9.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 167 ~ 190.

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 5 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 500 000	0.0	0.000 000	0.000
	100 %	-30	836 500 000	-0.1	0.000 000	0.000
	100 %	-20	836 500 001	1.7	0.000 000	0.002
	100 %	-10	836 500 000	0.4	0.000 000	0.000
	100 %	0	836 500 000	0.4	0.000 000	0.001
	100 %	+10	836 499 999	-0.5	0.000 000	-0.001
	100 %	+30	836 500 000	0.3	0.000 000	0.000
	100 %	+40	836 500 001	1.2	0.000 000	0.001
	100 %	+50	836 500 000	-0.1	0.000 000	0.000
	Batt. Endpoint	+20	836 500 000	0.2	0.000 000	0.000

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 500 000	0.0	0.000 000	0.000
	100 %	-30	836 499 999	-0.2	0.000 000	0.000
	100 %	-20	836 499 999	-0.4	0.000 000	0.000
	100 %	-10	836 499 999	-0.4	0.000 000	0.000
	100 %	0	836 500 000	0.2	0.000 000	0.000
	100 %	+10	836 500 000	0.1	0.000 000	0.000
	100 %	+30	836 499 999	-0.9	0.000 000	-0.001
	100 %	+40	836 499 999	-1.1	0.000 000	-0.001
	100 %	+50	836 499 999	-0.8	0.000 000	-0.001
	Batt. Endpoint	+20	836 500 000	0.9	0.000 000	0.001

- ▣ BandWidth: 15 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

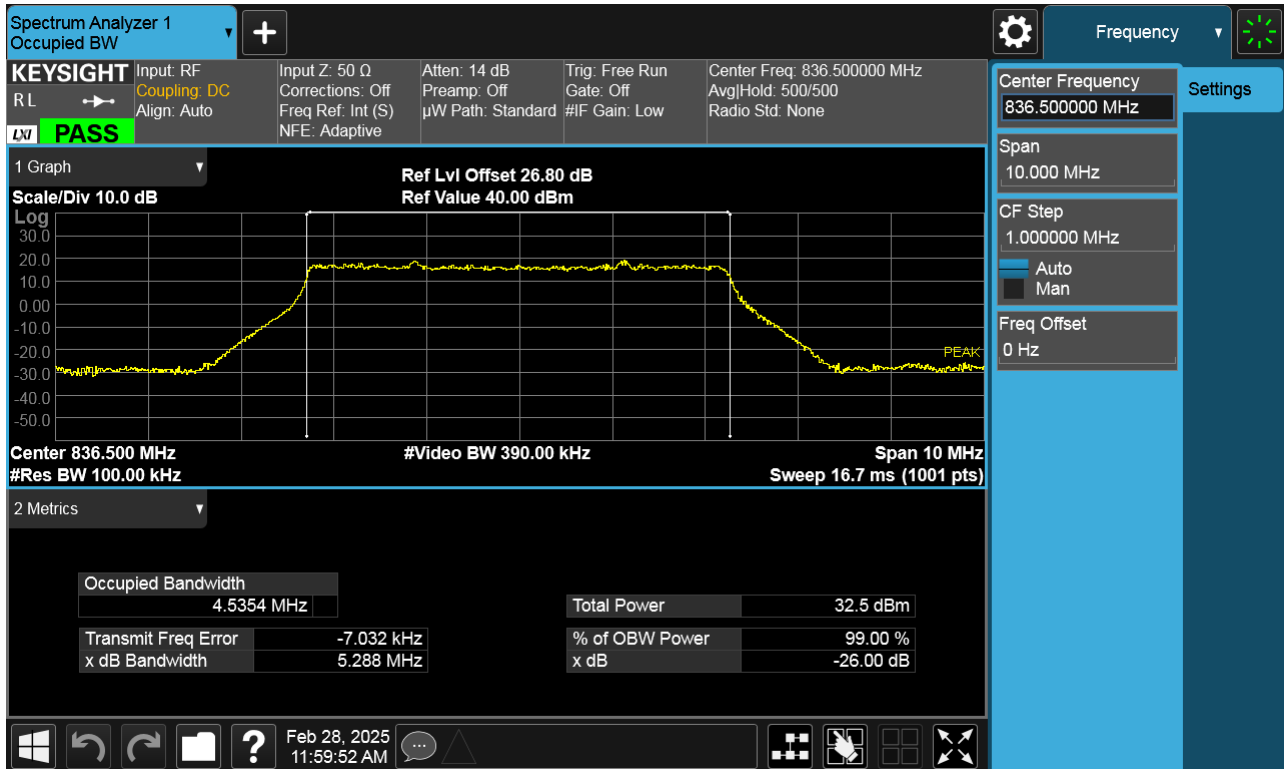
Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 499 999	0.0	0.000 000	0.000
	100 %	-30	836 499 998	-0.5	0.000 000	-0.001
	100 %	-20	836 499 997	-1.4	0.000 000	-0.002
	100 %	-10	836 499 999	0.2	0.000 000	0.000
	100 %	0	836 499 999	-0.2	0.000 000	0.000
	100 %	+10	836 499 997	-1.6	0.000 000	-0.002
	100 %	+30	836 499 996	-2.6	0.000 000	-0.003
	100 %	+40	836 499 999	0.1	0.000 000	0.000
	100 %	+50	836 499 999	-0.1	0.000 000	0.000
	Batt. Endpoint	+20	836 499 997	-1.4	0.000 000	-0.002

- ▣ BandWidth: 20 MHz
- ▣ Voltage(100 %): 3.900 VDC
- ▣ Batt. Endpoint: 3.300 VDC
- ▣ Deviation Limit: ± 0.000 25 % or 2.5 ppm

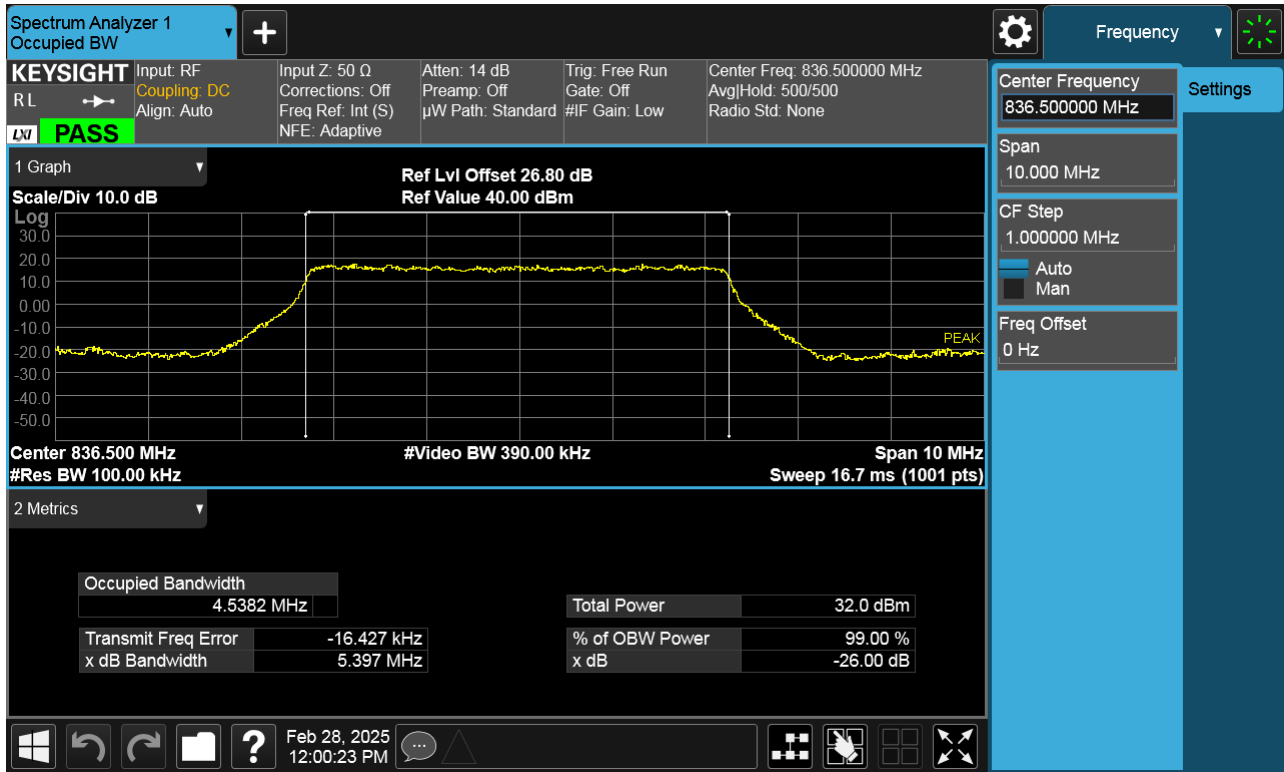
Test. Frequency	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
836.5	100 %	+20(Ref)	836 499 999	0.0	0.000 000	0.000
	100 %	-30	836 499 998	-1.0	0.000 000	-0.001
	100 %	-20	836 499 999	-0.6	0.000 000	-0.001
	100 %	-10	836 499 998	-1.0	0.000 000	-0.001
	100 %	0	836 499 999	-0.6	0.000 000	-0.001
	100 %	+10	836 499 999	-0.5	0.000 000	-0.001
	100 %	+30	836 499 998	-1.0	0.000 000	-0.001
	100 %	+40	836 499 999	-0.4	0.000 000	0.000
	100 %	+50	836 500 000	0.4	0.000 000	0.000
	Batt. Endpoint	+20	836 499 999	-0.3	0.000 000	0.000

10. TEST PLOTS(Main 1 ANT)

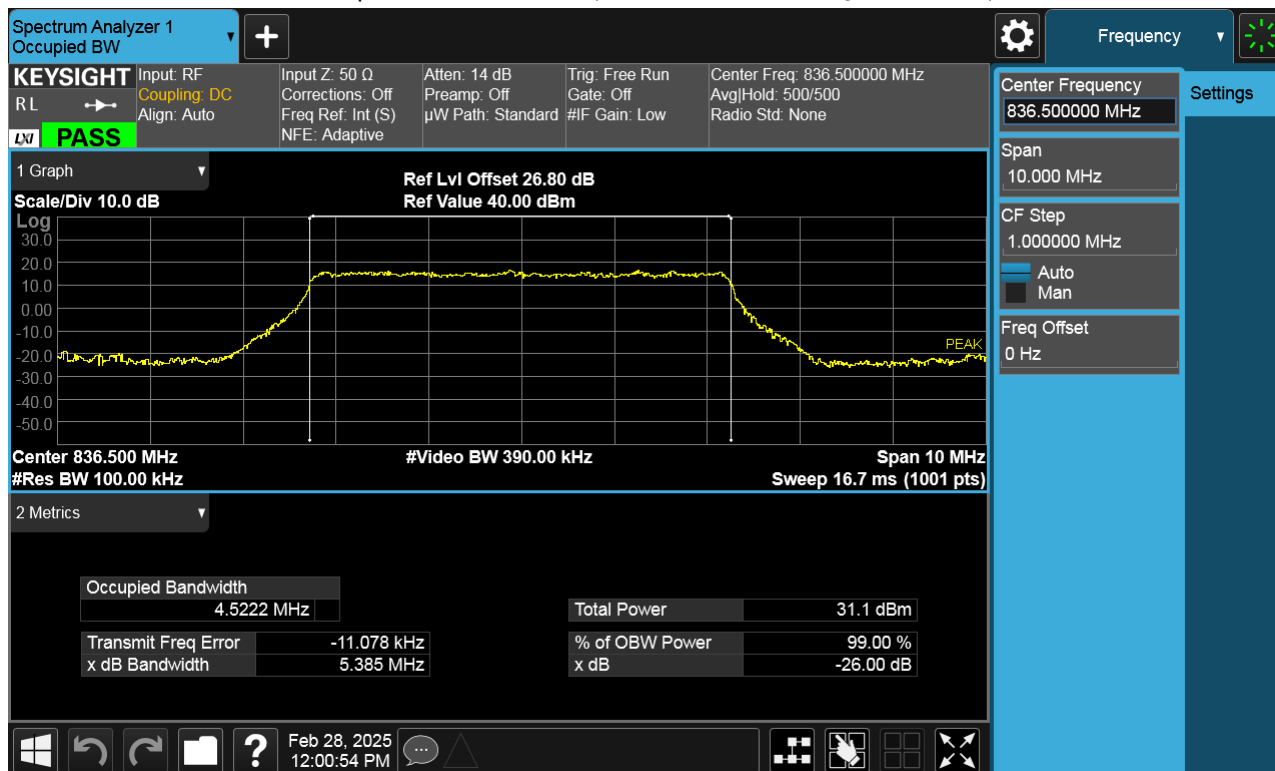
Occupied Bandwidth Plot (5 M BW Ch.167300 BPSK_RB 25_0)



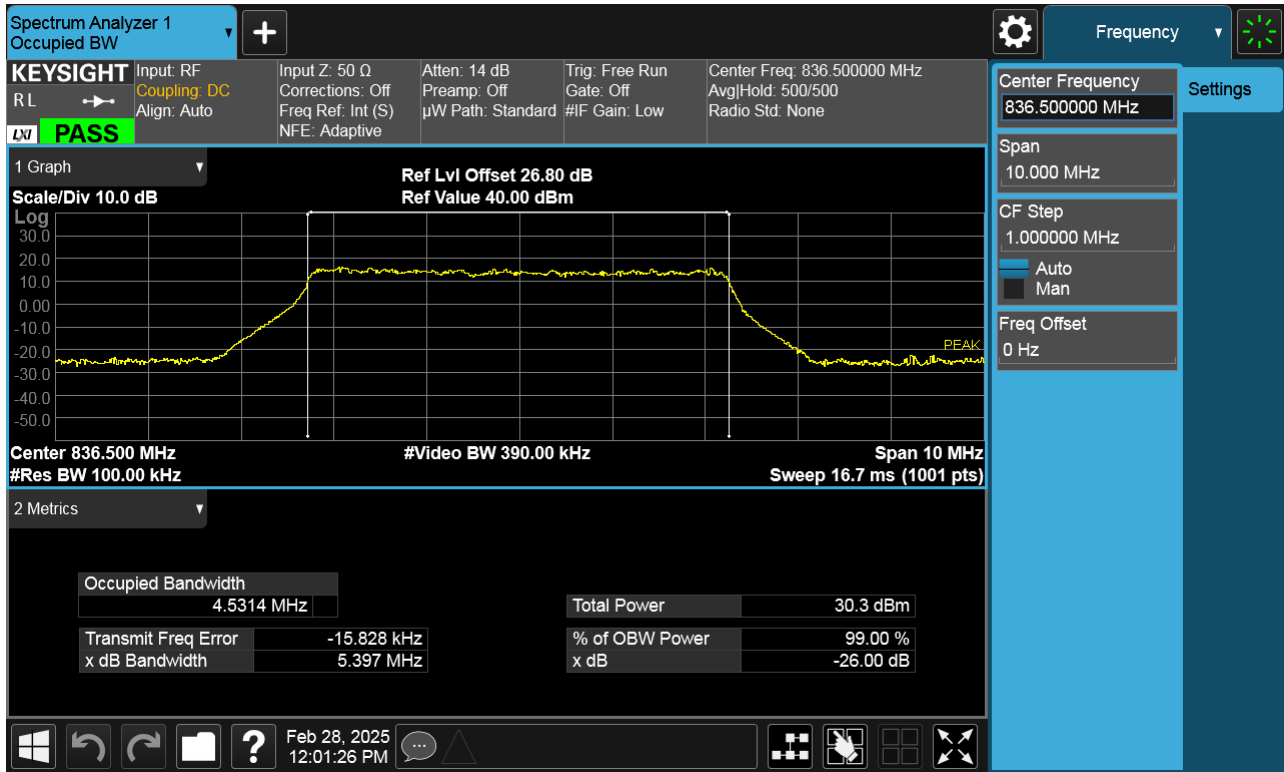
Occupied Bandwidth Plot (5 M BW Ch.167300 QPSK_RB 25_0)



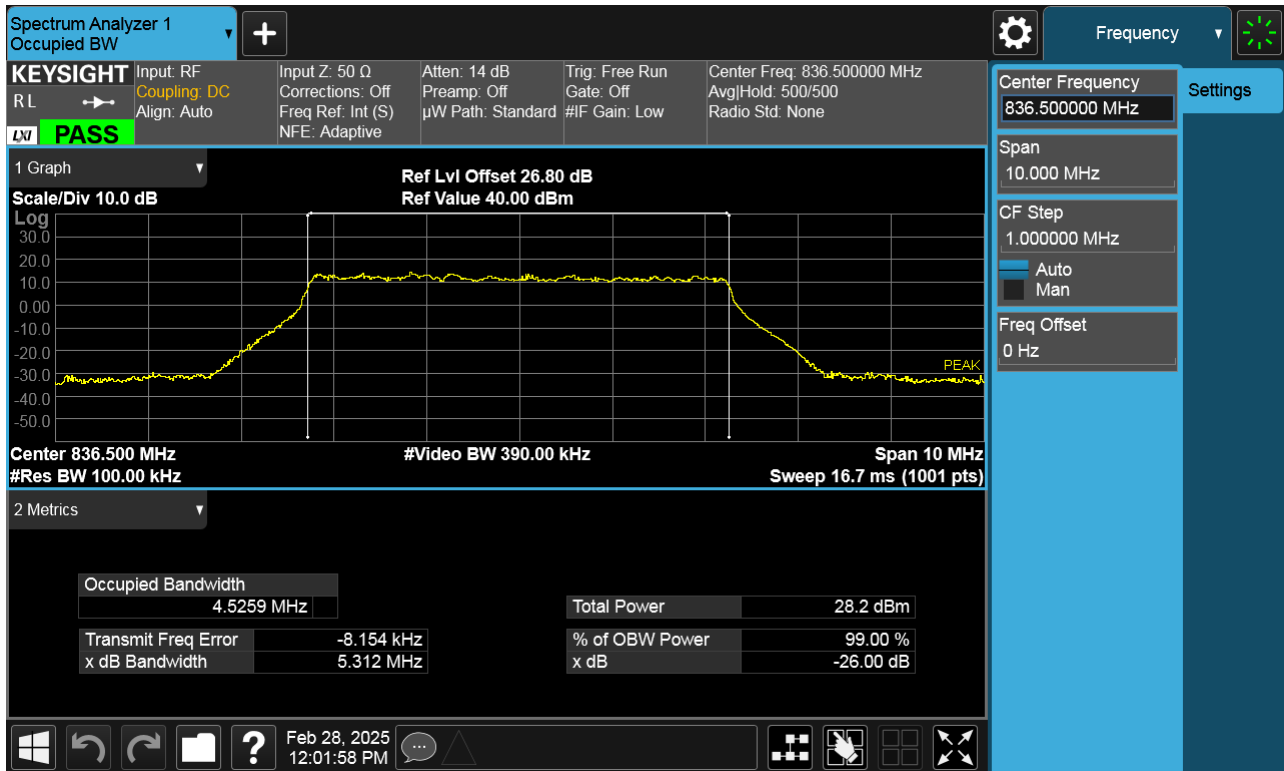
Occupied Bandwidth Plot (5 M BW Ch.167300 16QAM_RB 25_0)



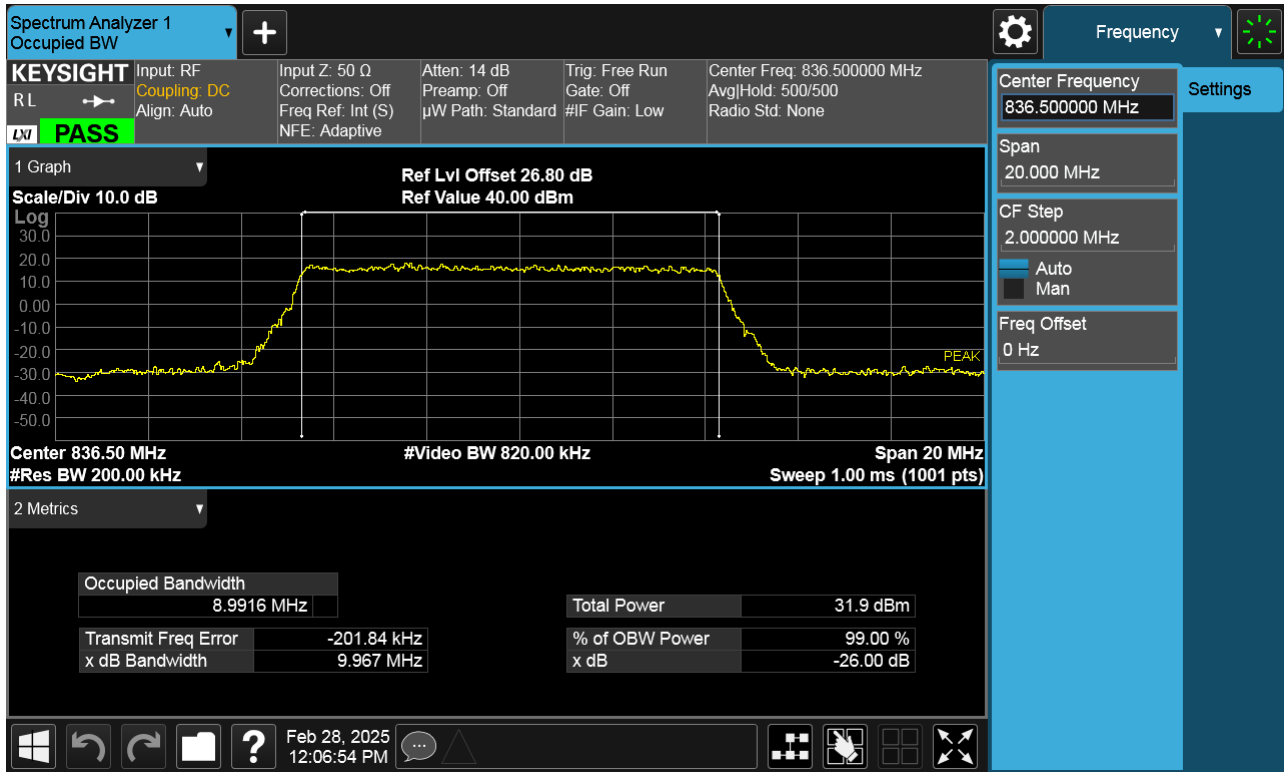
Occupied Bandwidth Plot (5 M BW Ch.167300 64QAM_RB 25_0)



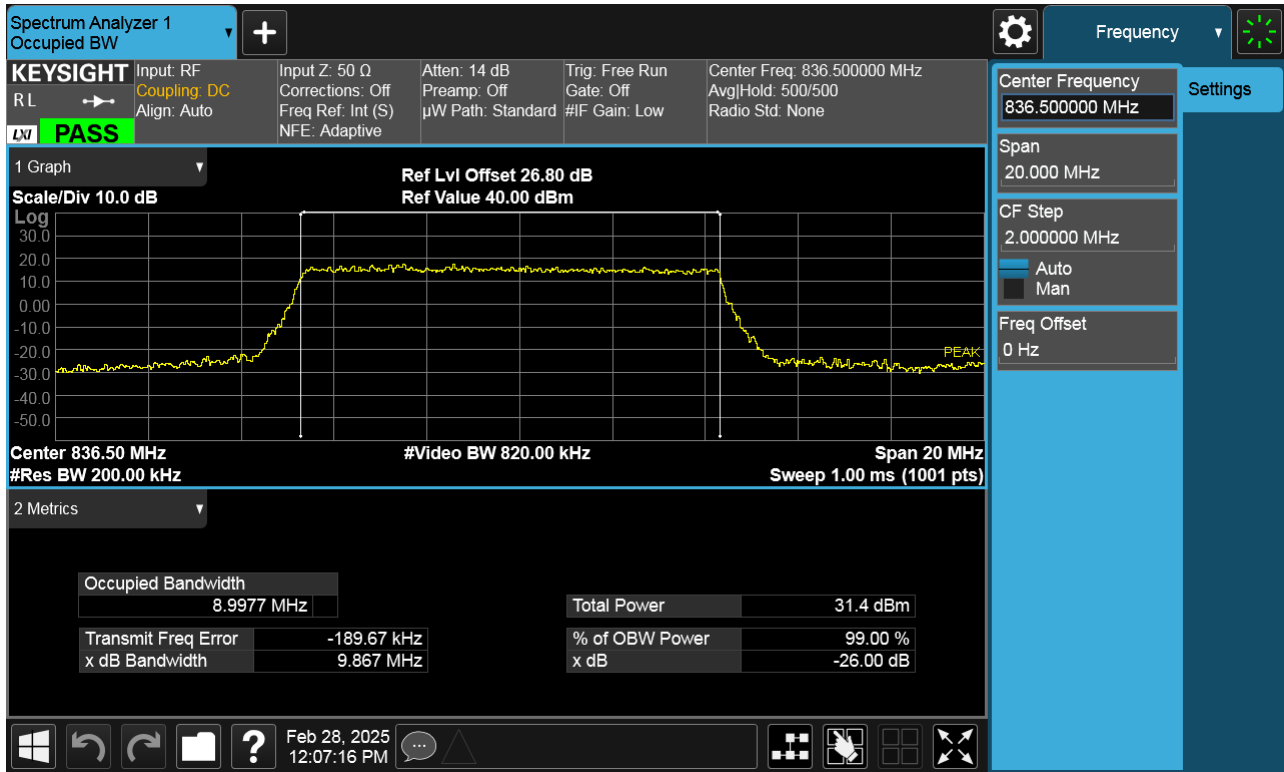
Occupied Bandwidth Plot (5 M BW Ch.167300 256QAM_RB 25_0)



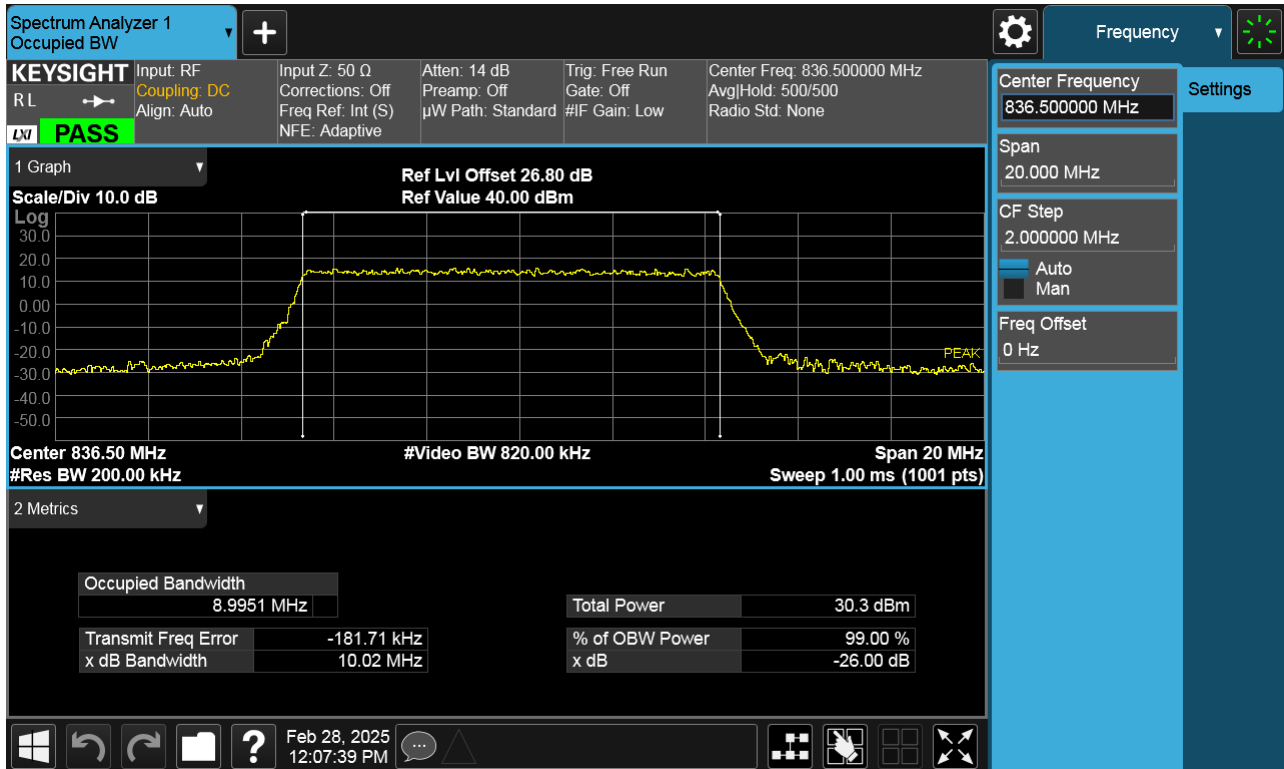
Occupied Bandwidth Plot (10 M BW Ch.167300 BPSK_RB 50_0)



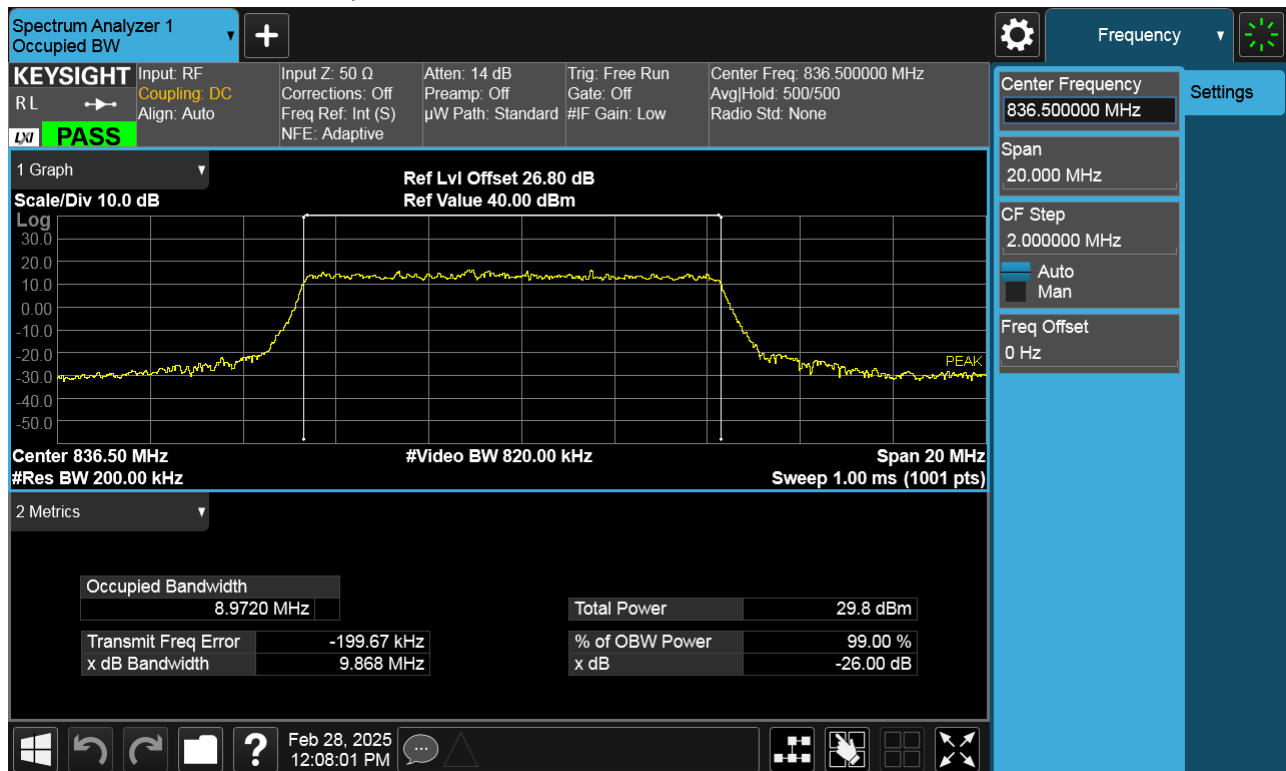
Occupied Bandwidth Plot (10 M BW Ch.167300 QPSK_RB 50_0)



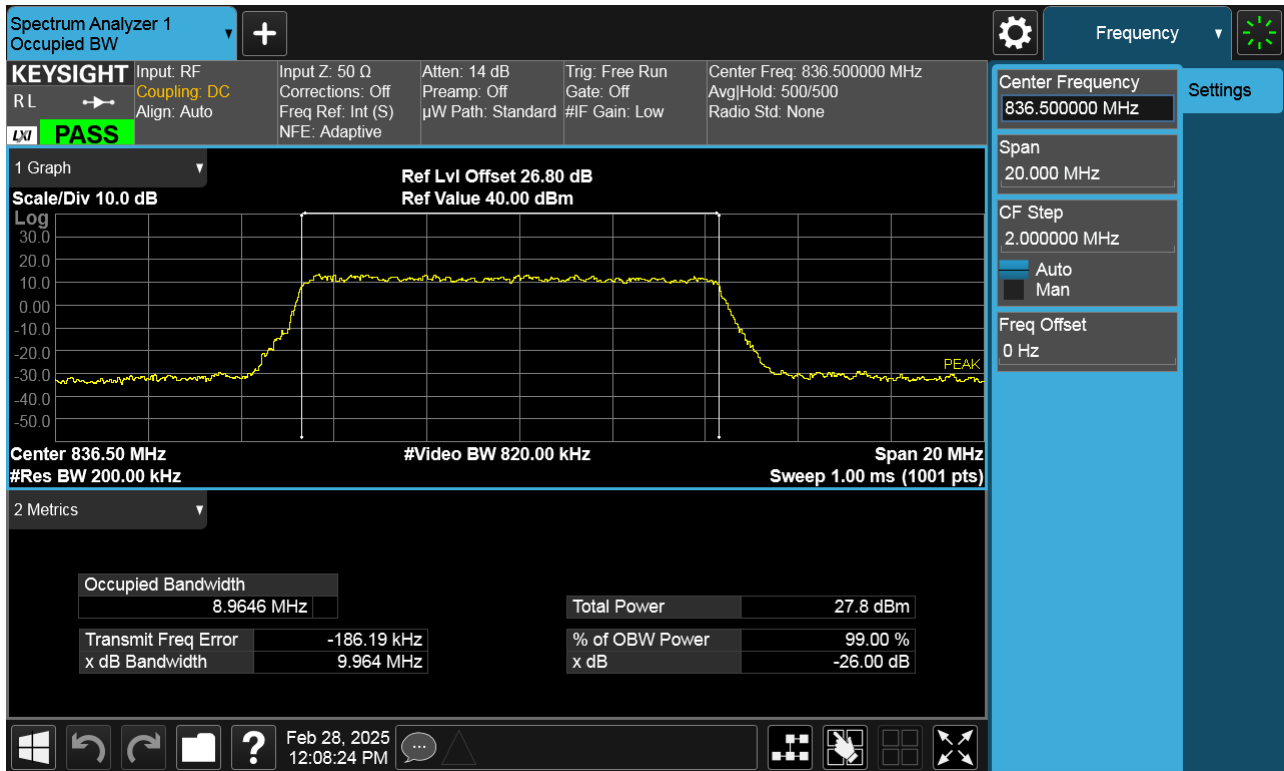
Occupied Bandwidth Plot (10 M BW Ch.167300 16QAM_RB 50_0)



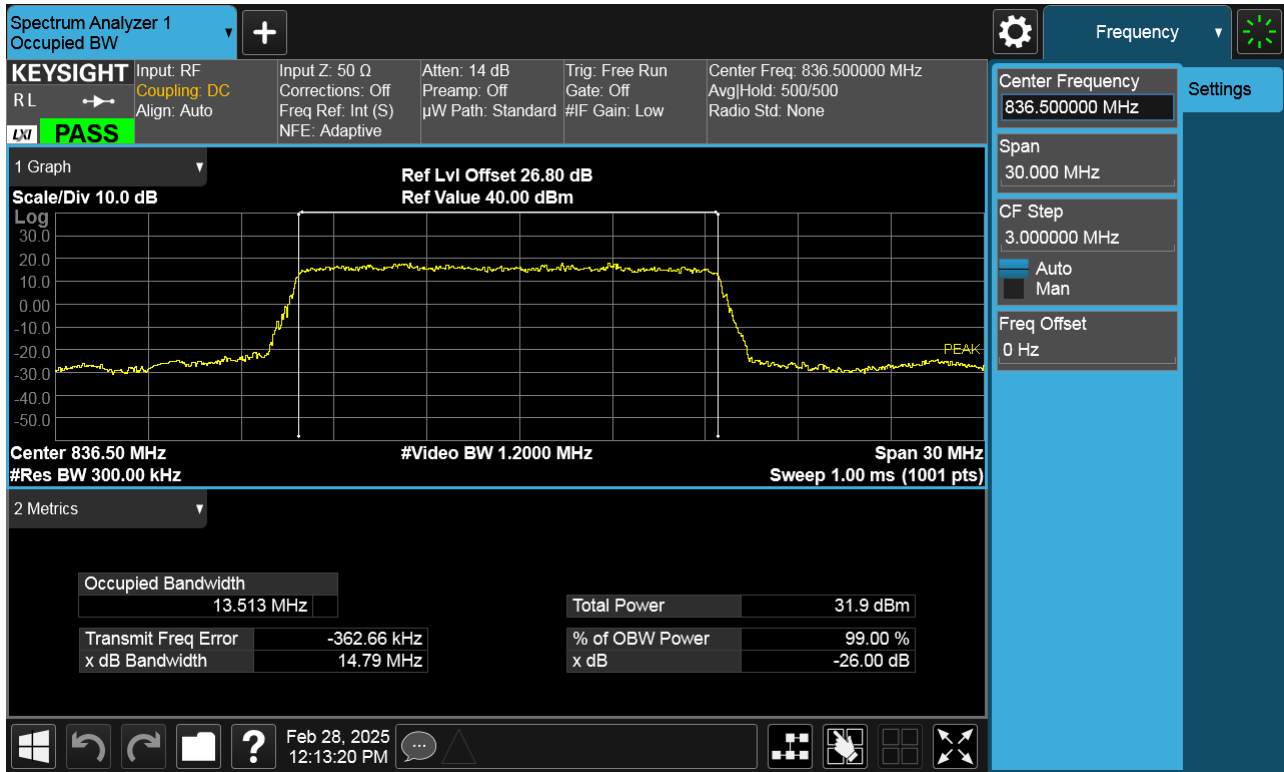
Occupied Bandwidth Plot (10 M BW Ch.167300 64QAM_RB 50_0)



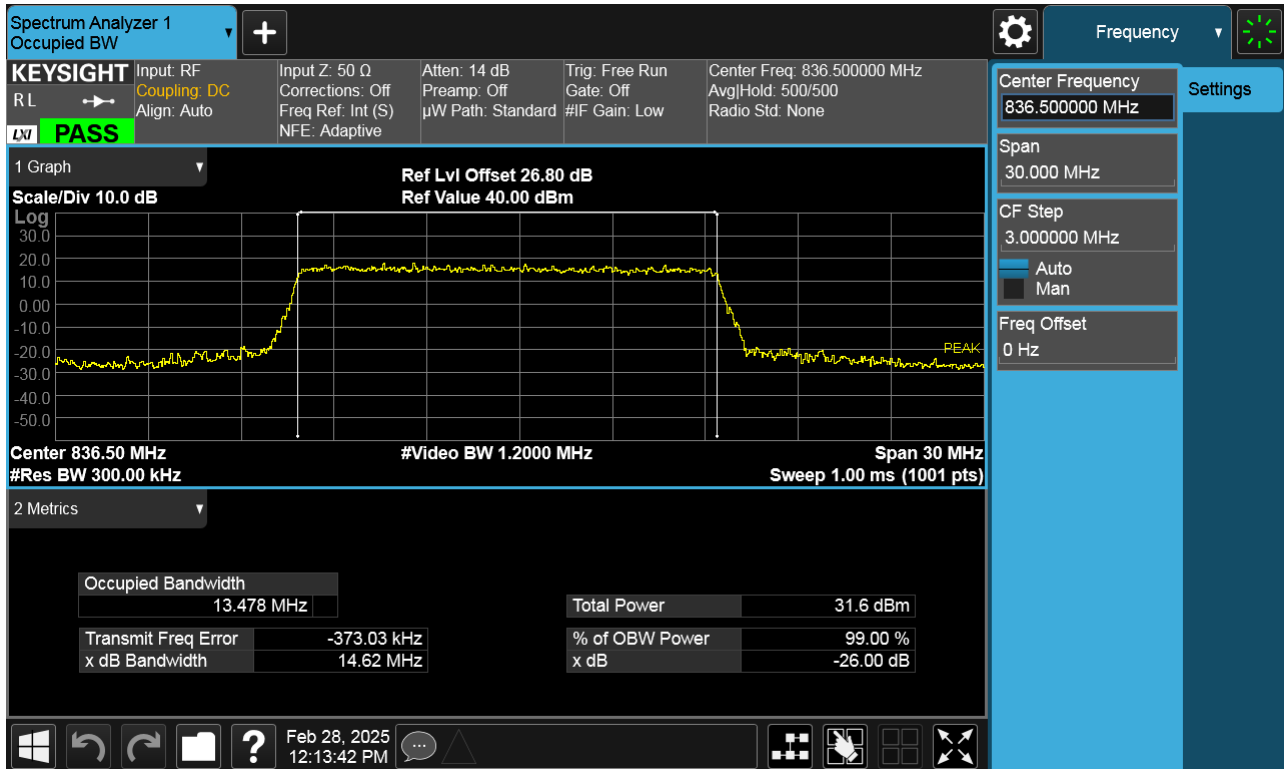
Occupied Bandwidth Plot (10 M BW Ch.167300 256QAM_RB 50_0)



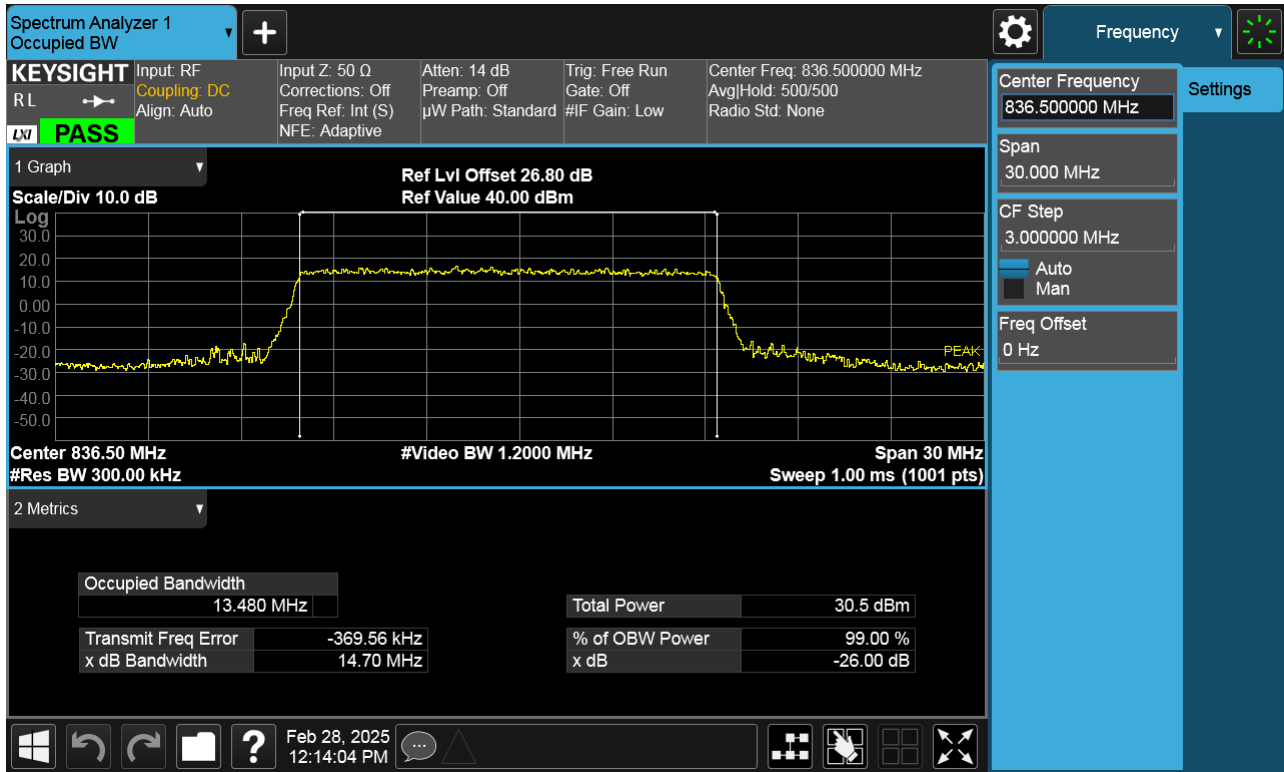
Occupied Bandwidth Plot (15 M BW Ch.167300 BPSK RB 75_0)



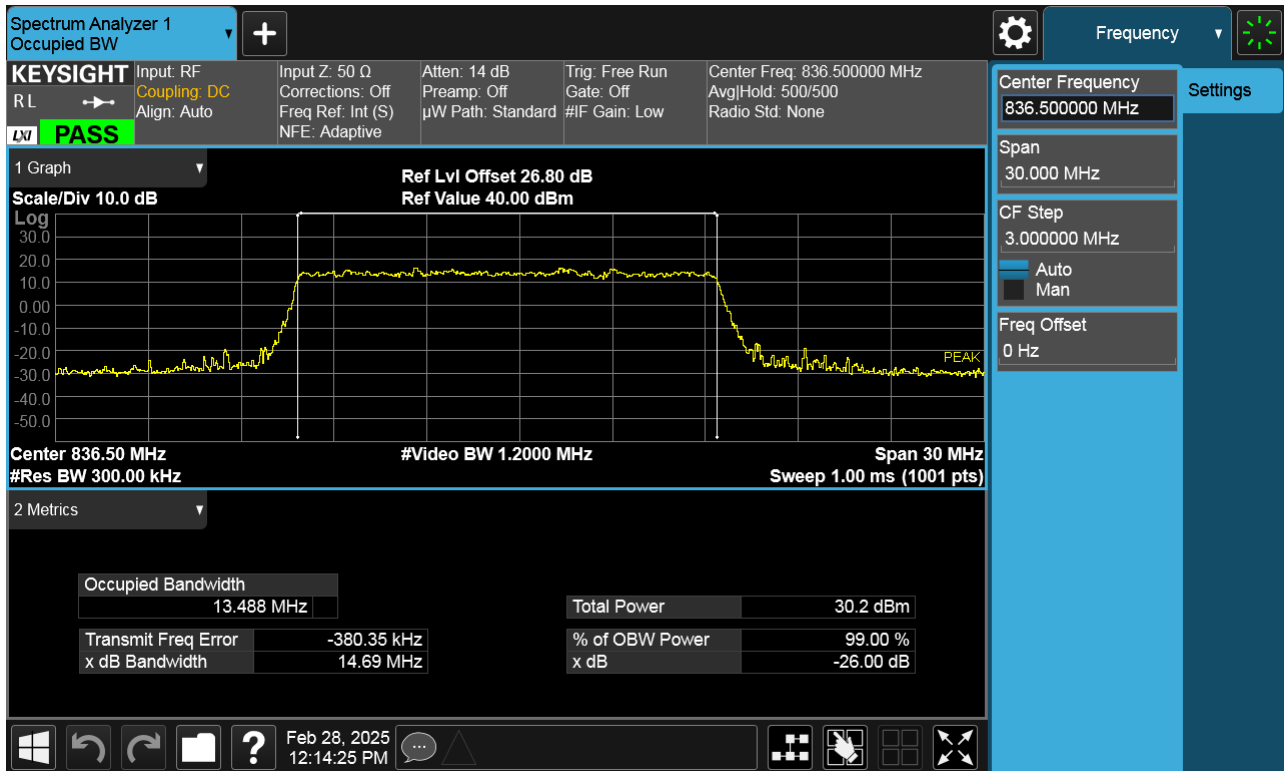
Occupied Bandwidth Plot (15 M BW Ch.167300 QPSK RB 75_0)



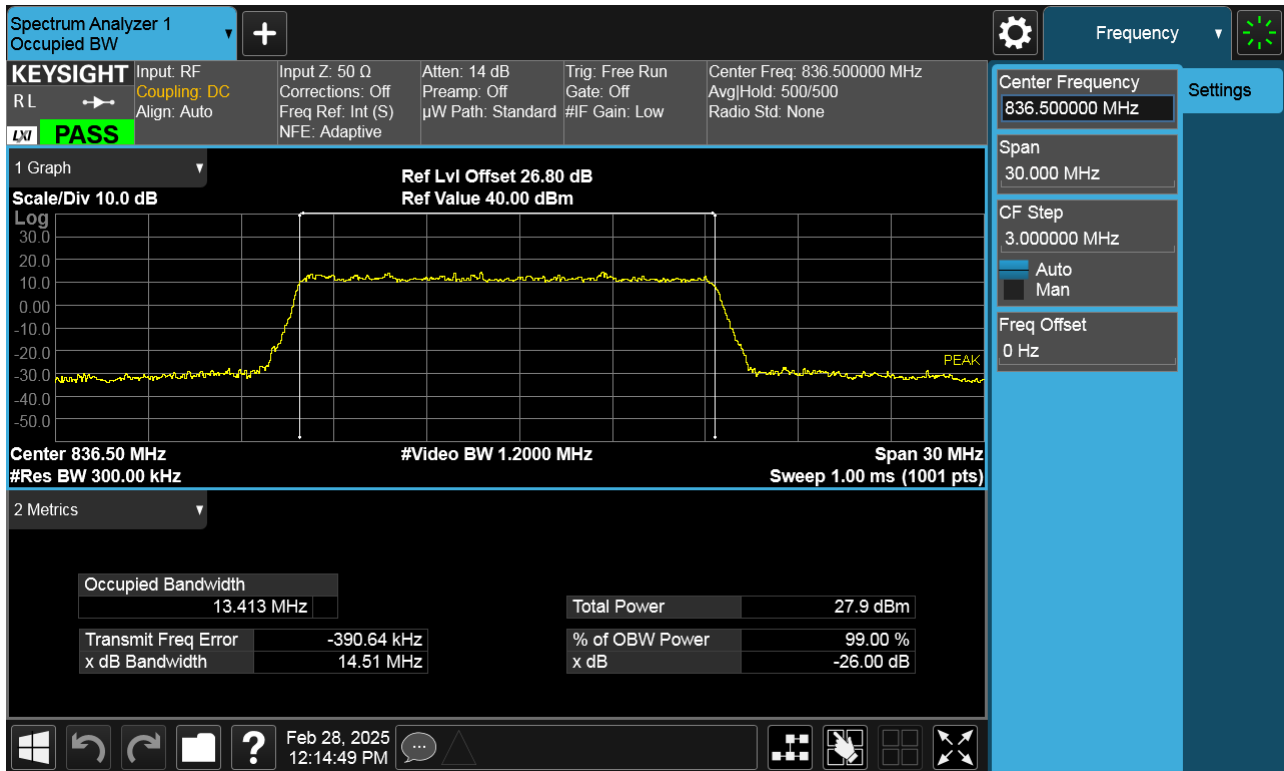
Occupied Bandwidth Plot (15 M BW Ch.167300 16QAM RB 75_0)



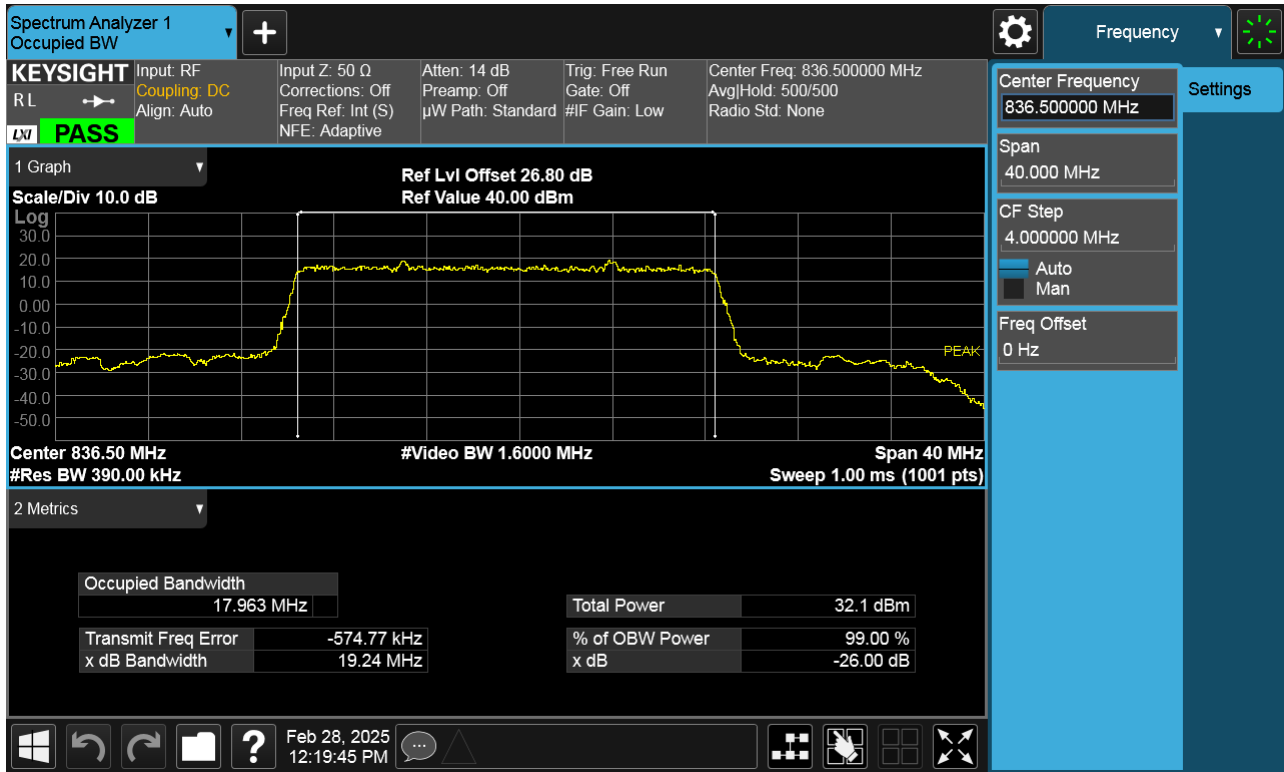
Occupied Bandwidth Plot (15 M BW Ch.167300 64QAM RB 75_0)



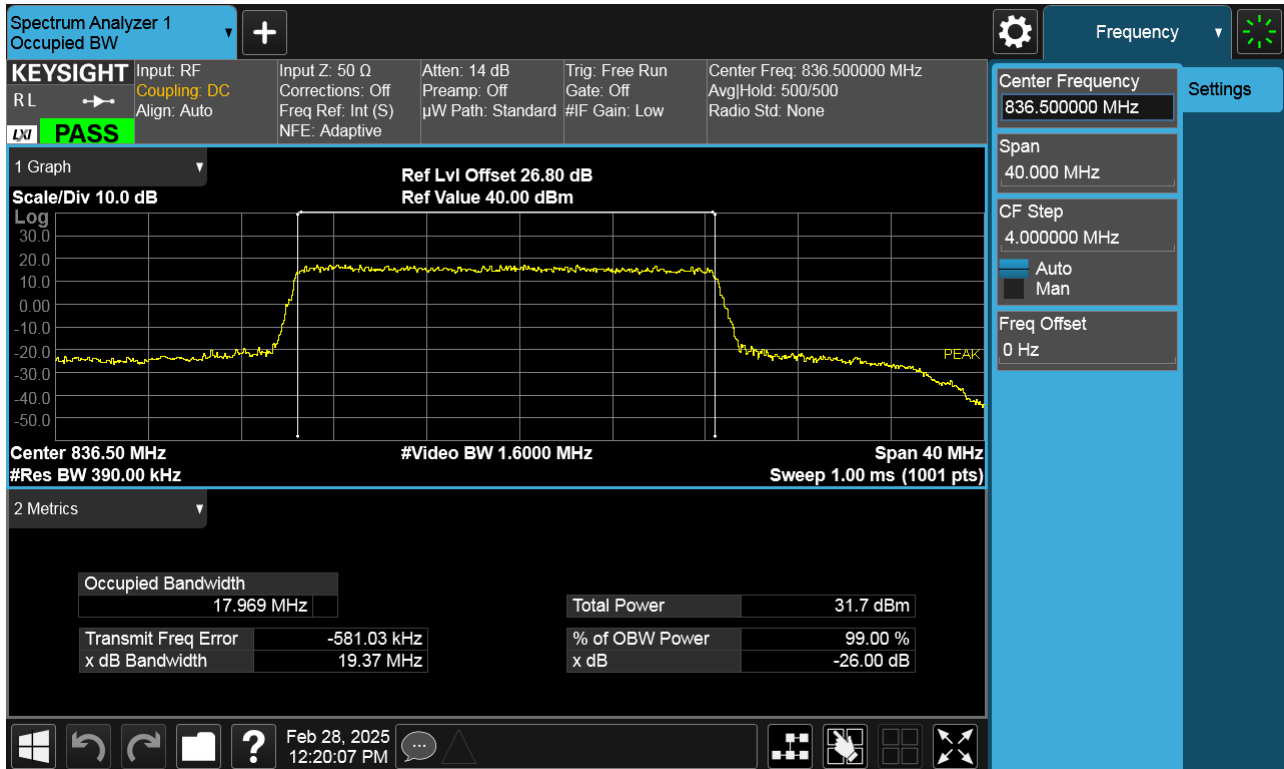
Occupied Bandwidth Plot (15 M BW Ch.167300 256QAM RB 75_0)



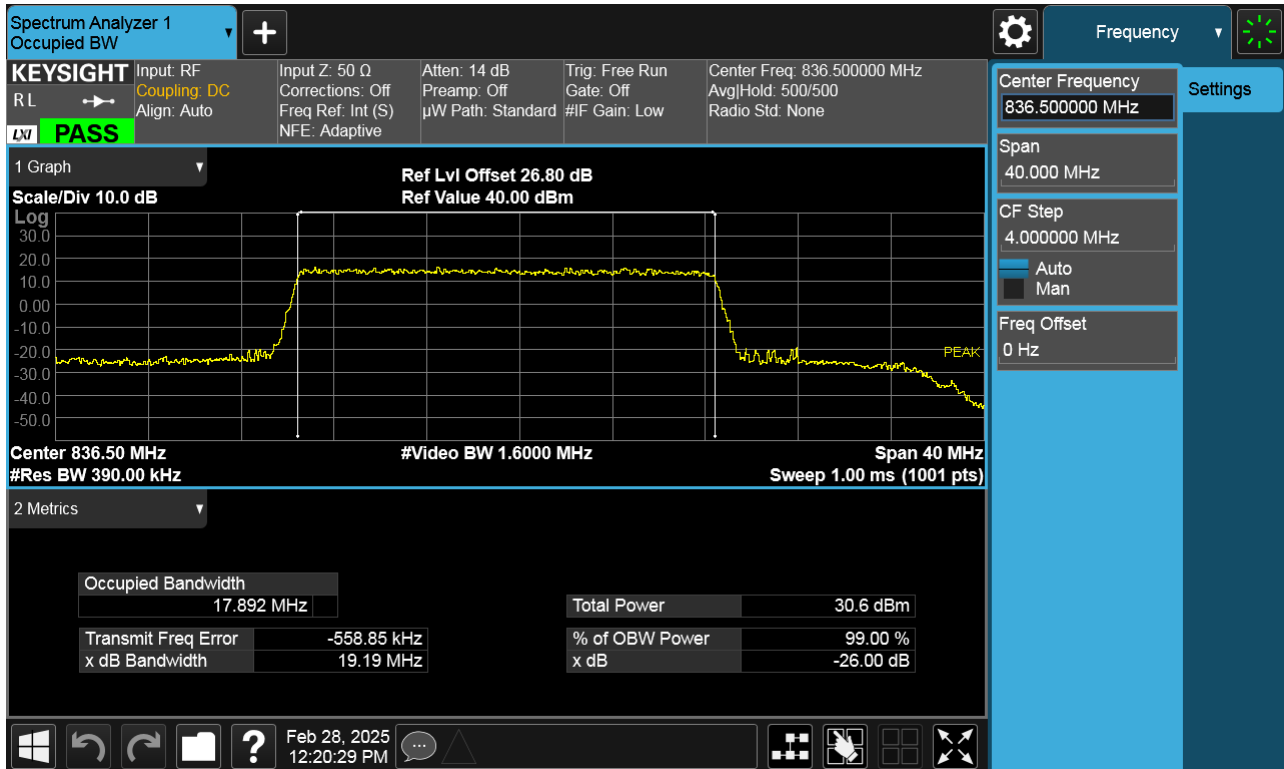
Occupied Bandwidth Plot (20 M BW Ch.167300 BPSK RB 100_0)



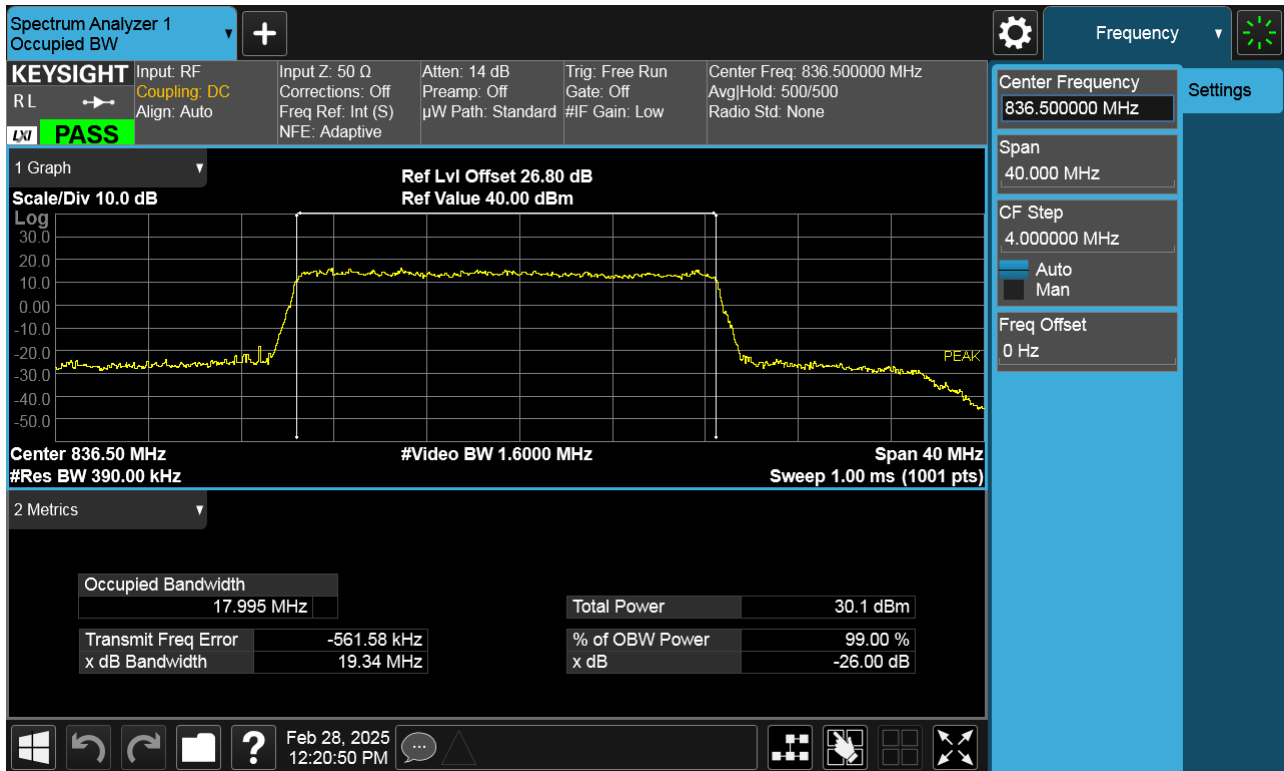
Occupied Bandwidth Plot (20 M BW Ch.167300 QPSK RB 100_0)



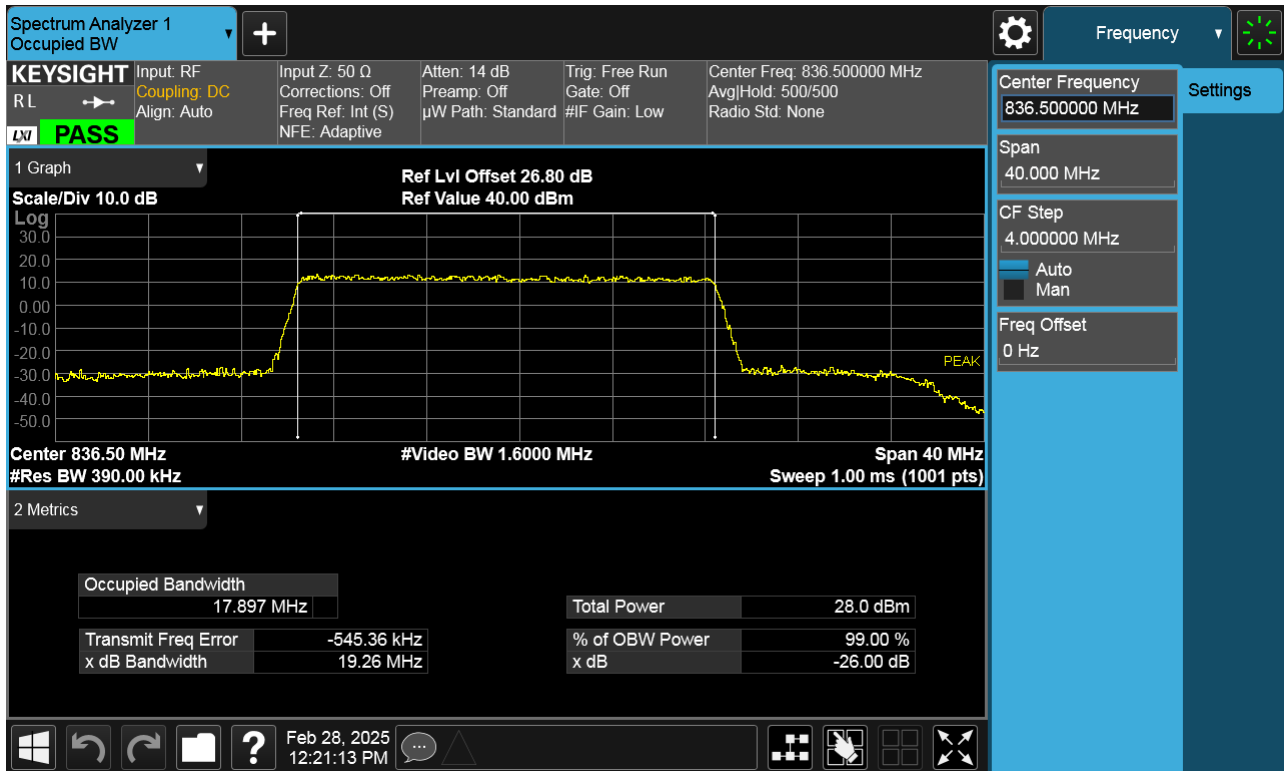
Occupied Bandwidth Plot (20 M BW Ch.167300 16QAM RB 100_0)



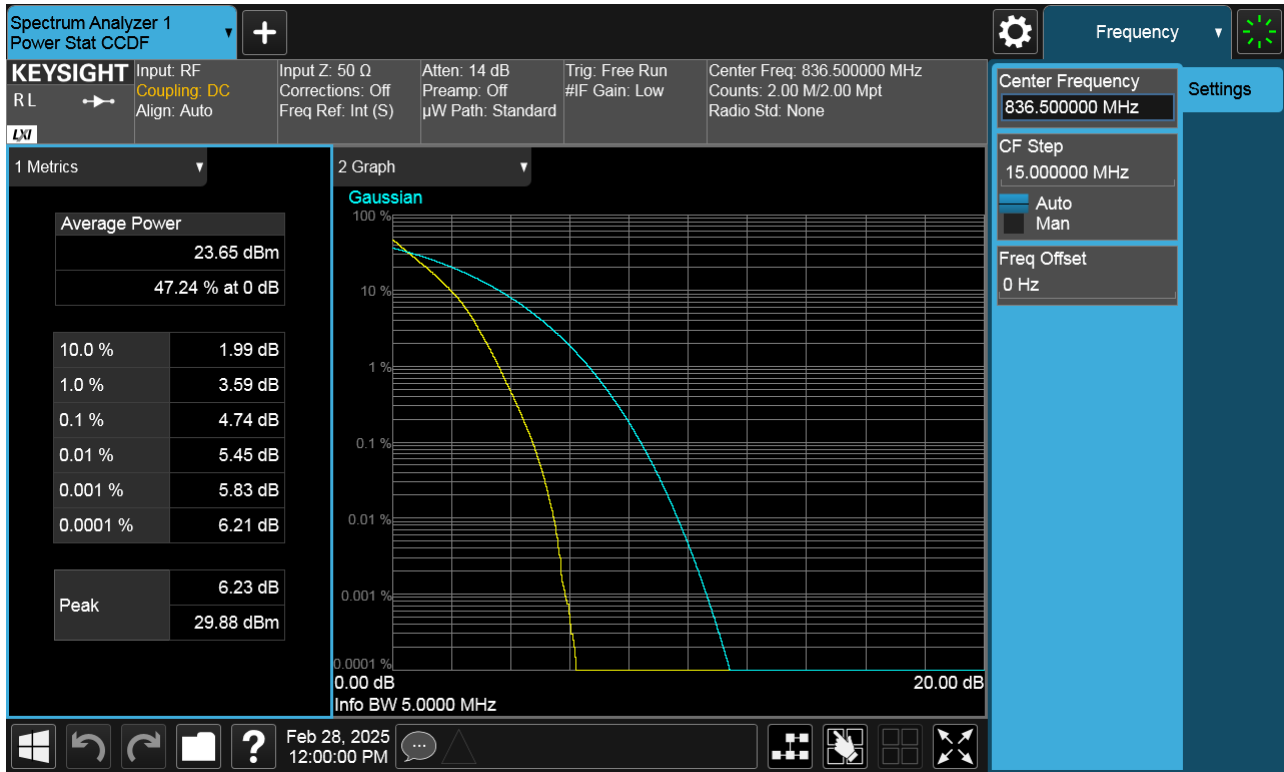
Occupied Bandwidth Plot (20 M BW Ch.167300 64QAM RB 100_0)



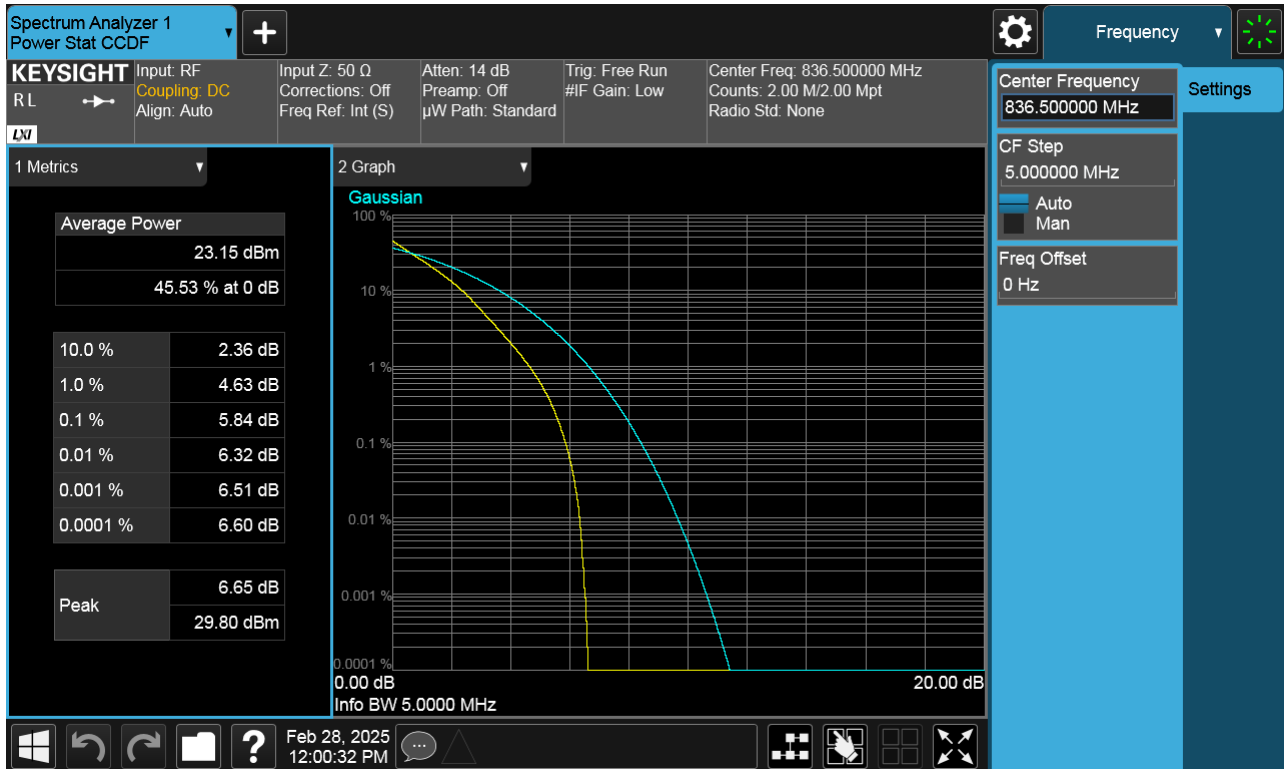
Occupied Bandwidth Plot (20 M BW Ch.167300 256QAM RB 100_0)



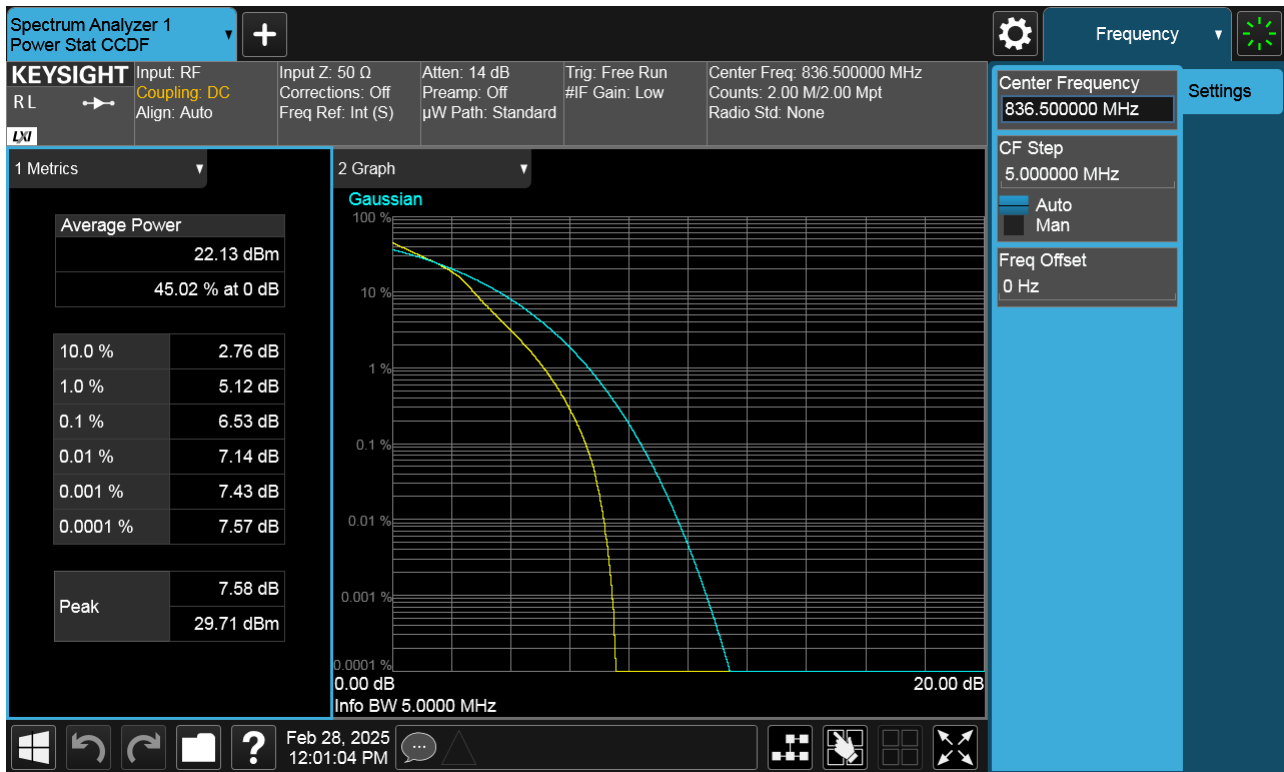
PAR Plot (5 M BW Ch.167300 BPSK_RB 25_0)



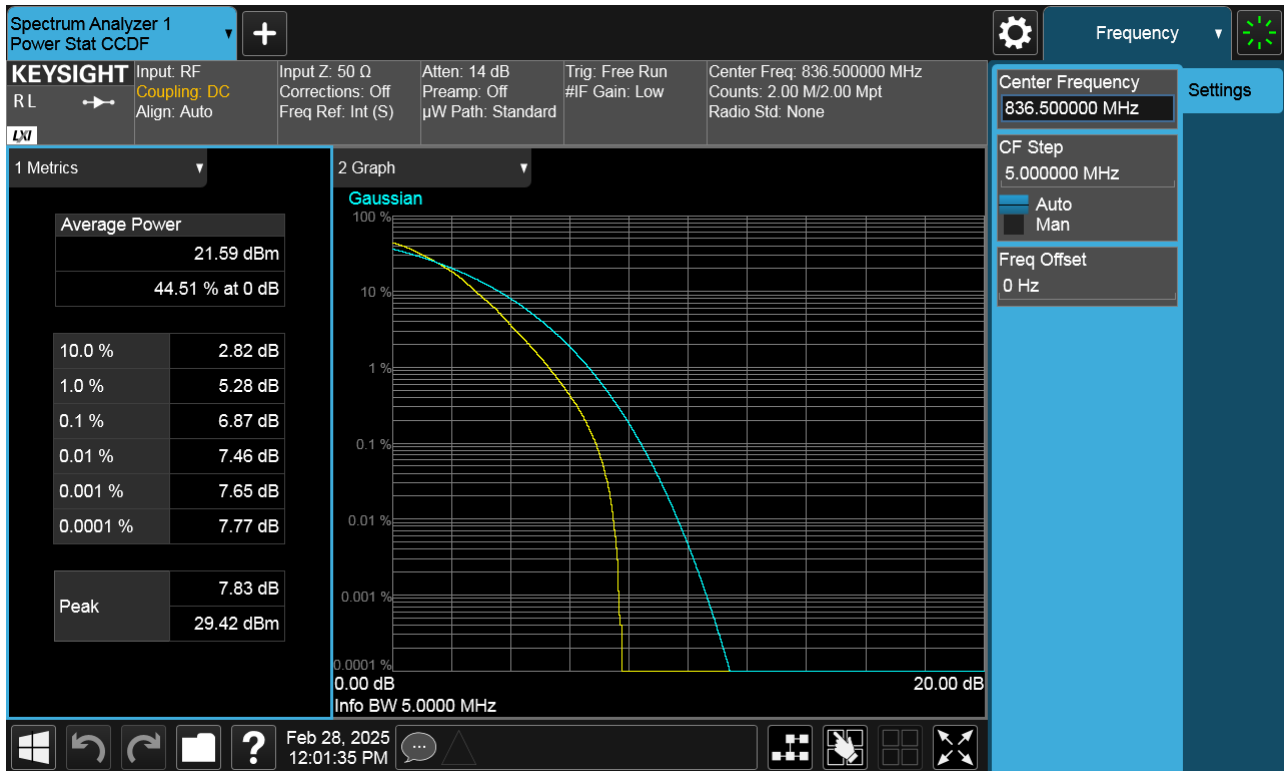
PAR Plot (5 M BW Ch.167300 QPSK_RB 25_0)



PAR Plot (5 M BW Ch.167300 16QAM_RB 25_0)



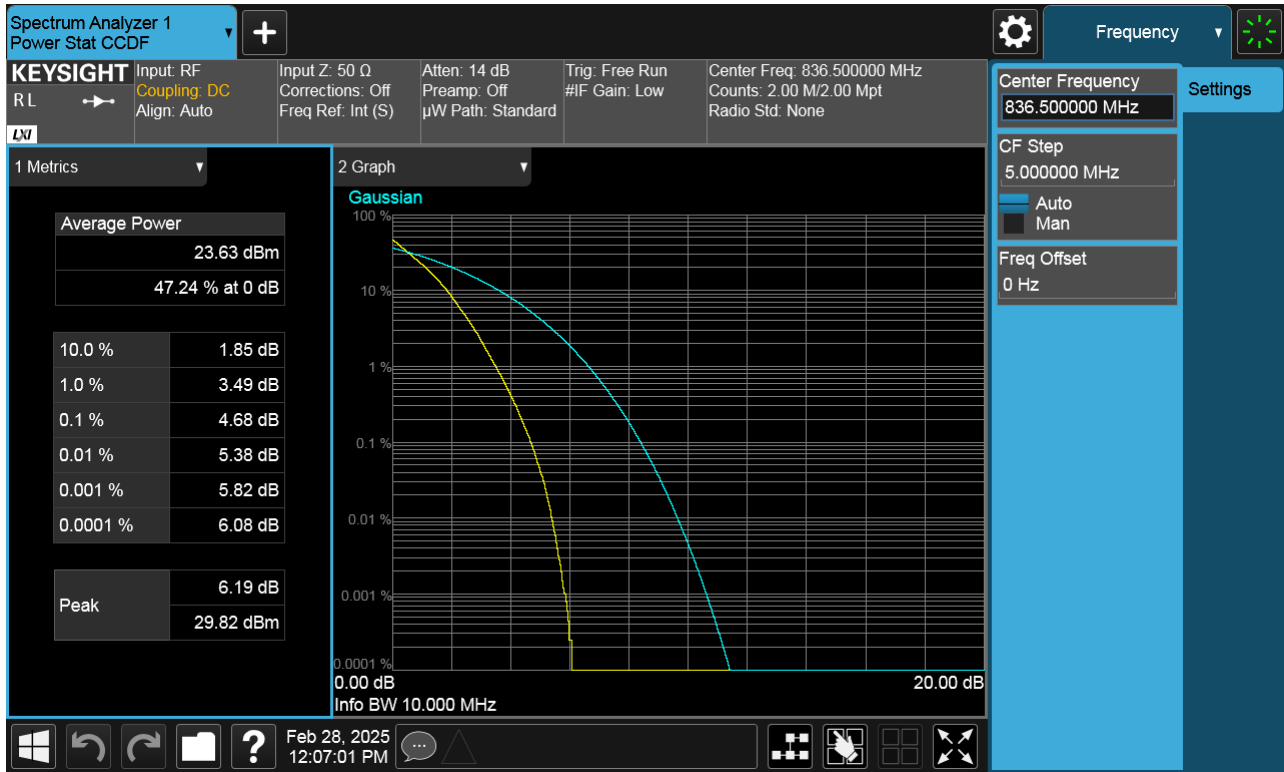
PAR Plot (5 M BW Ch.167300 64QAM_RB 25_0)



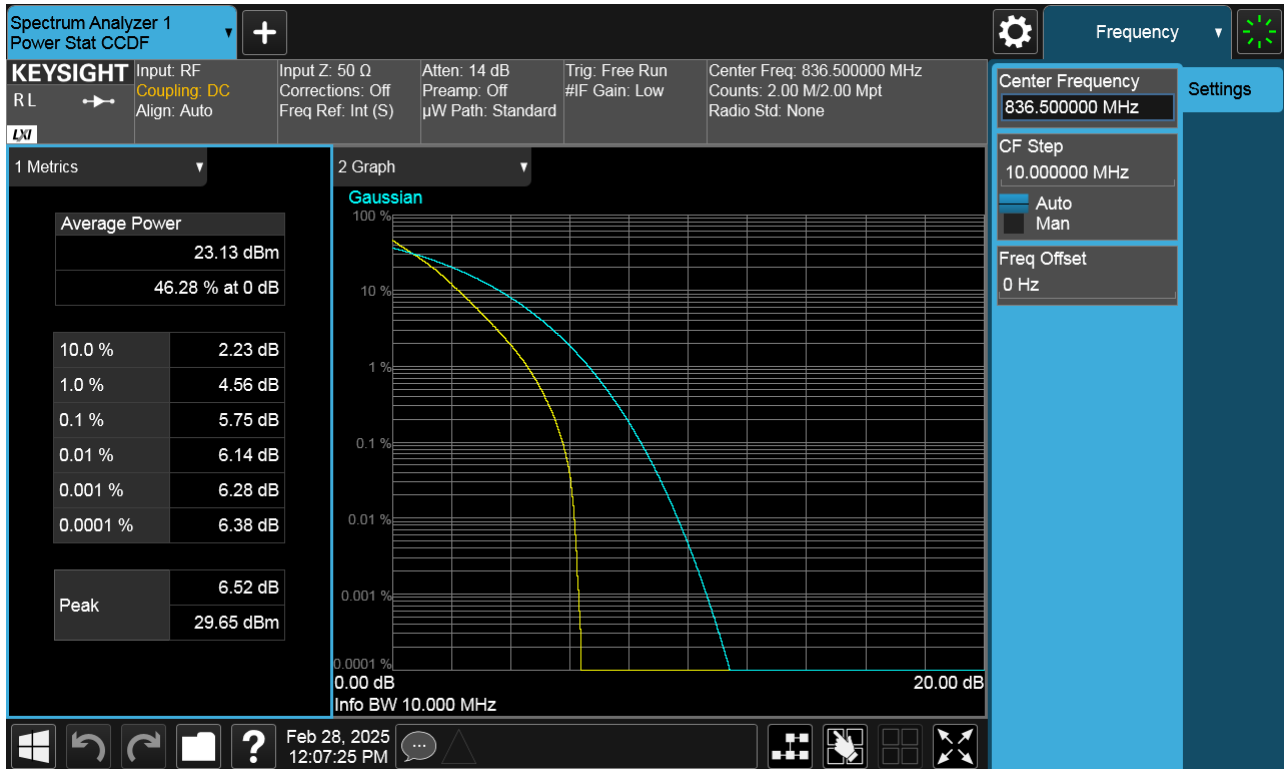
PAR Plot (5 M BW Ch.167300 256QAM_RB 25_0)



PAR Plot (10 M BW Ch.167300 BPSK_RB 50_0)



PAR Plot (10 M BW Ch.167300 QPSK_RB 50_0)



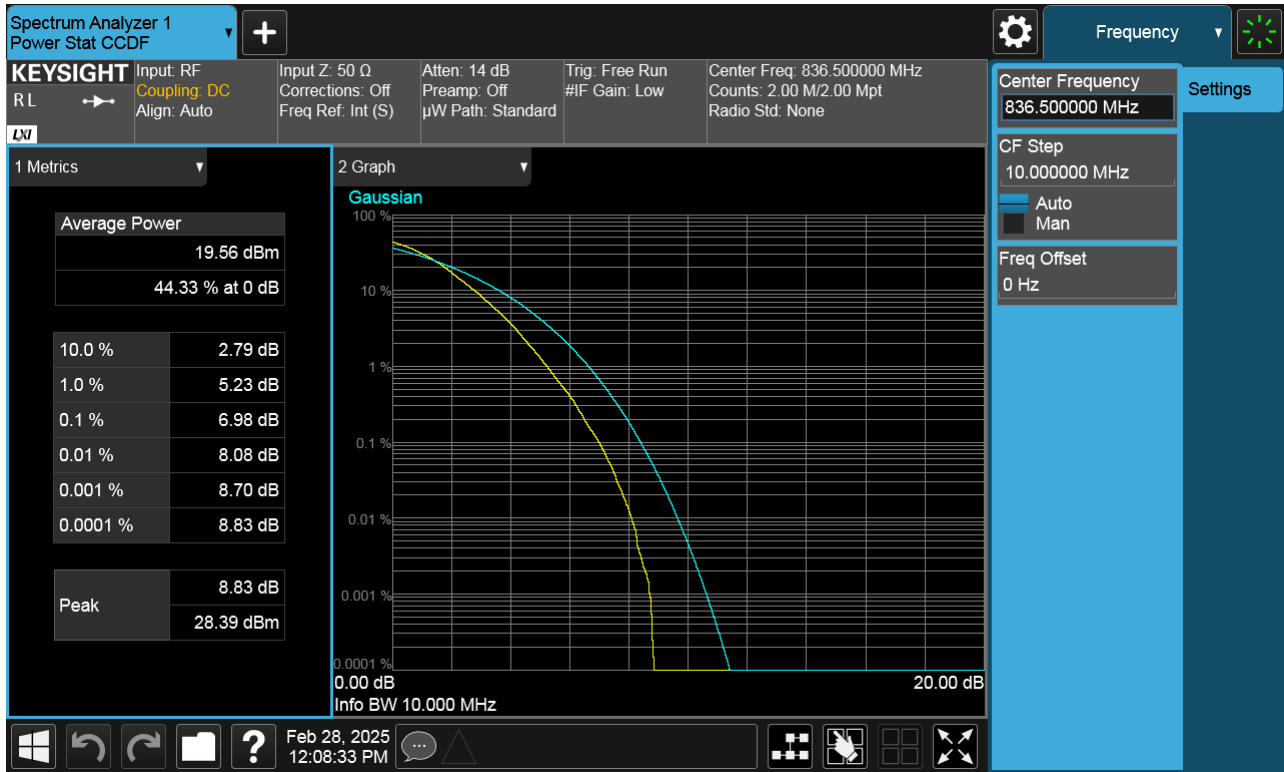
PAR Plot (10 M BW Ch.167300 16QAM_RB 50_0)



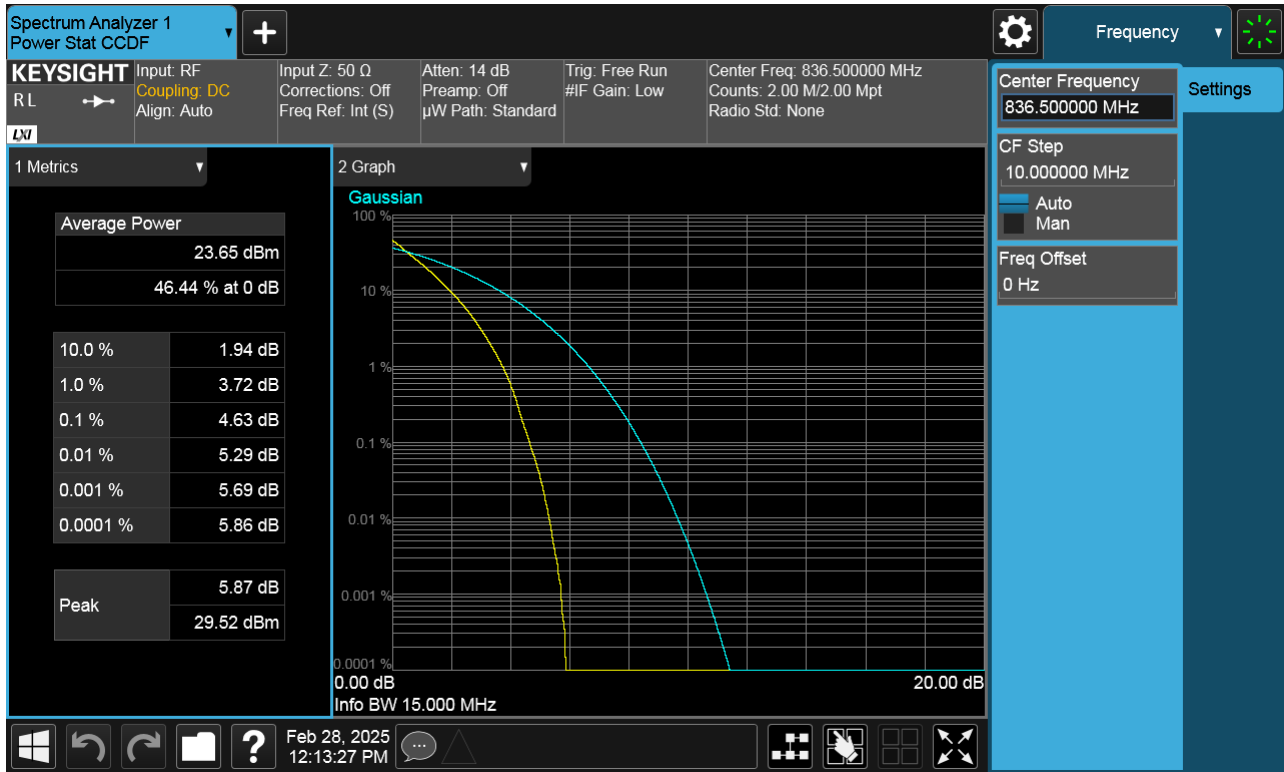
PAR Plot (10 M BW Ch.167300 64QAM_RB 50_0)



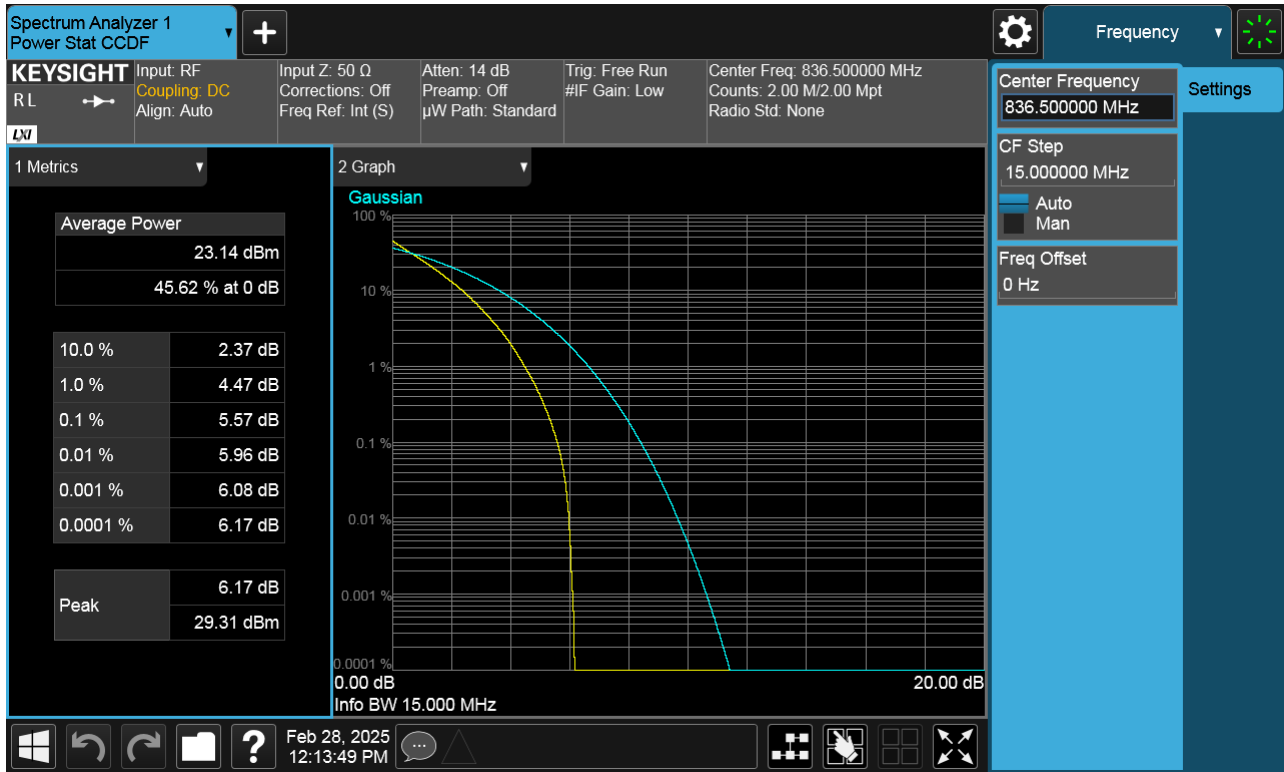
PAR Plot (10 M BW Ch.167300 256QAM_RB 50_0)



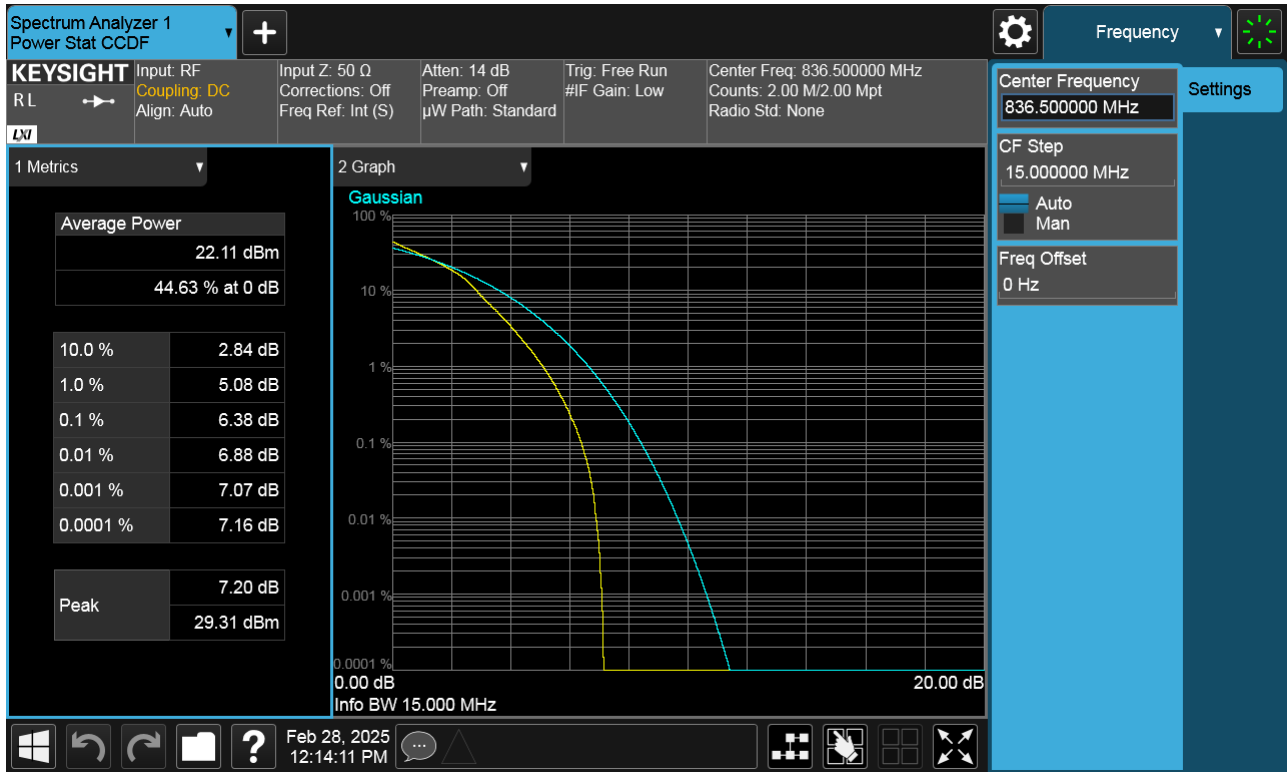
PAR Plot (15 M BW Ch.167300 BPSK RB 75_0)



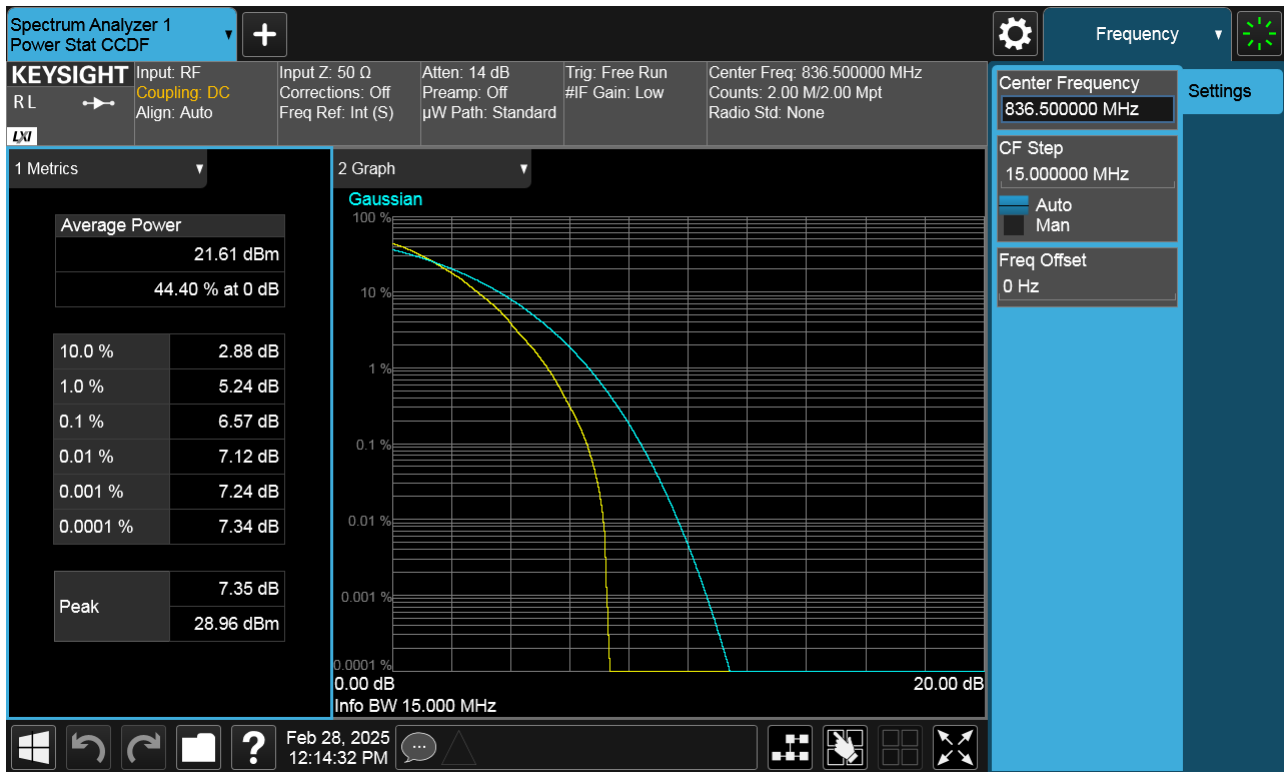
PAR Plot (15 M BW Ch.167300 QPSK RB 75_0)



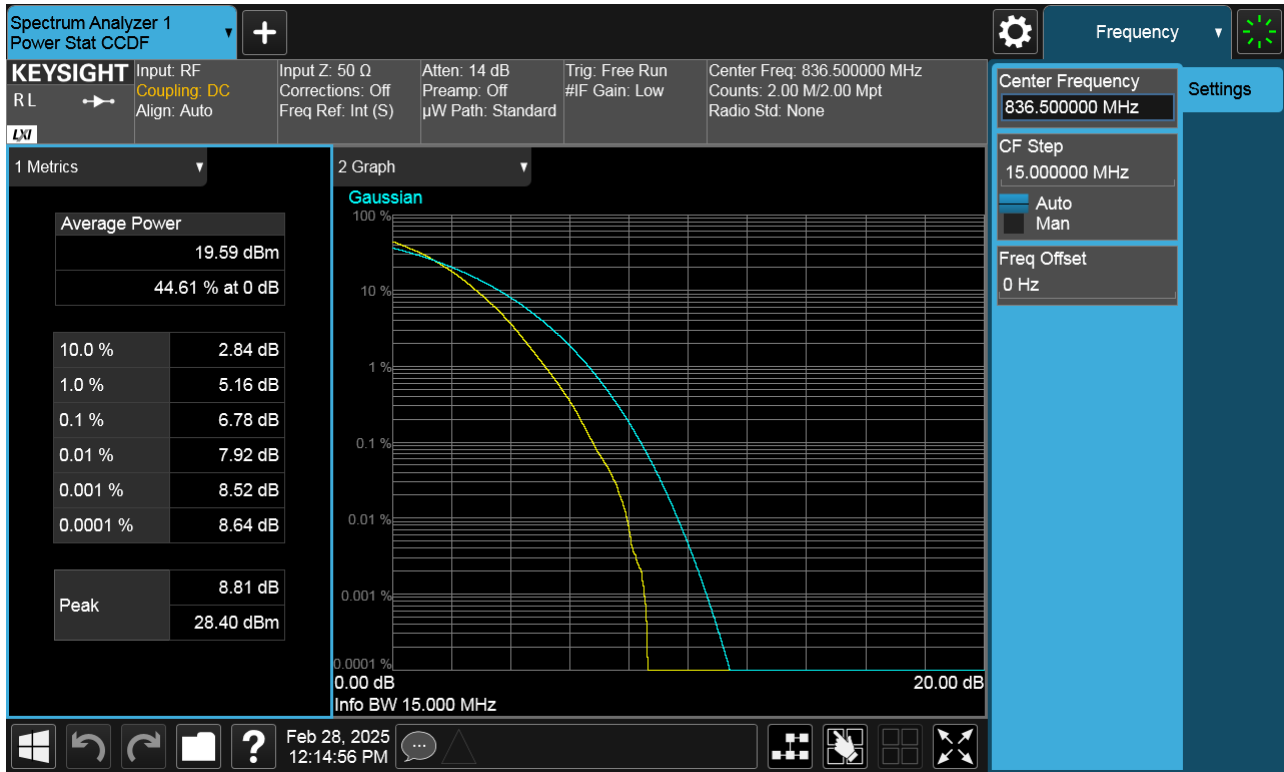
PAR Plot (15 M BW Ch.167300 16QAM RB 75_0)



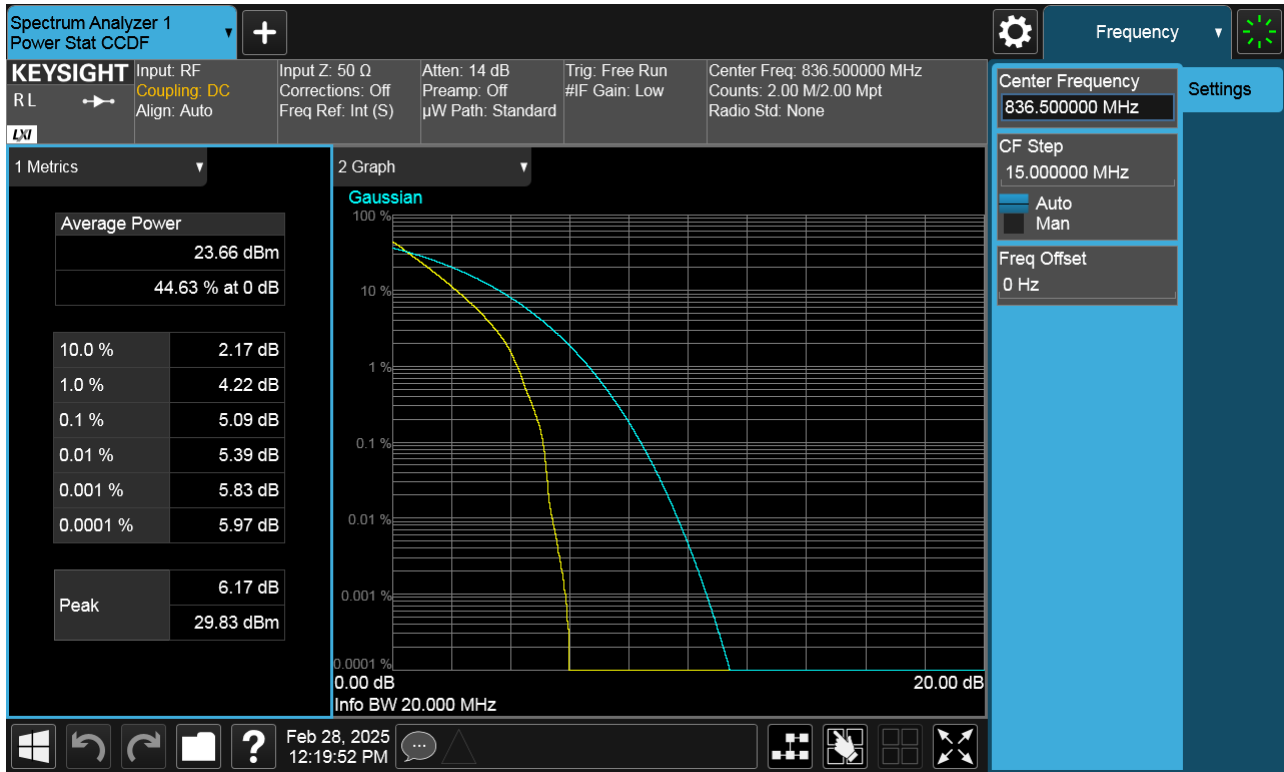
PAR Plot (15 M BW Ch.167300 64QAM RB 75_0)



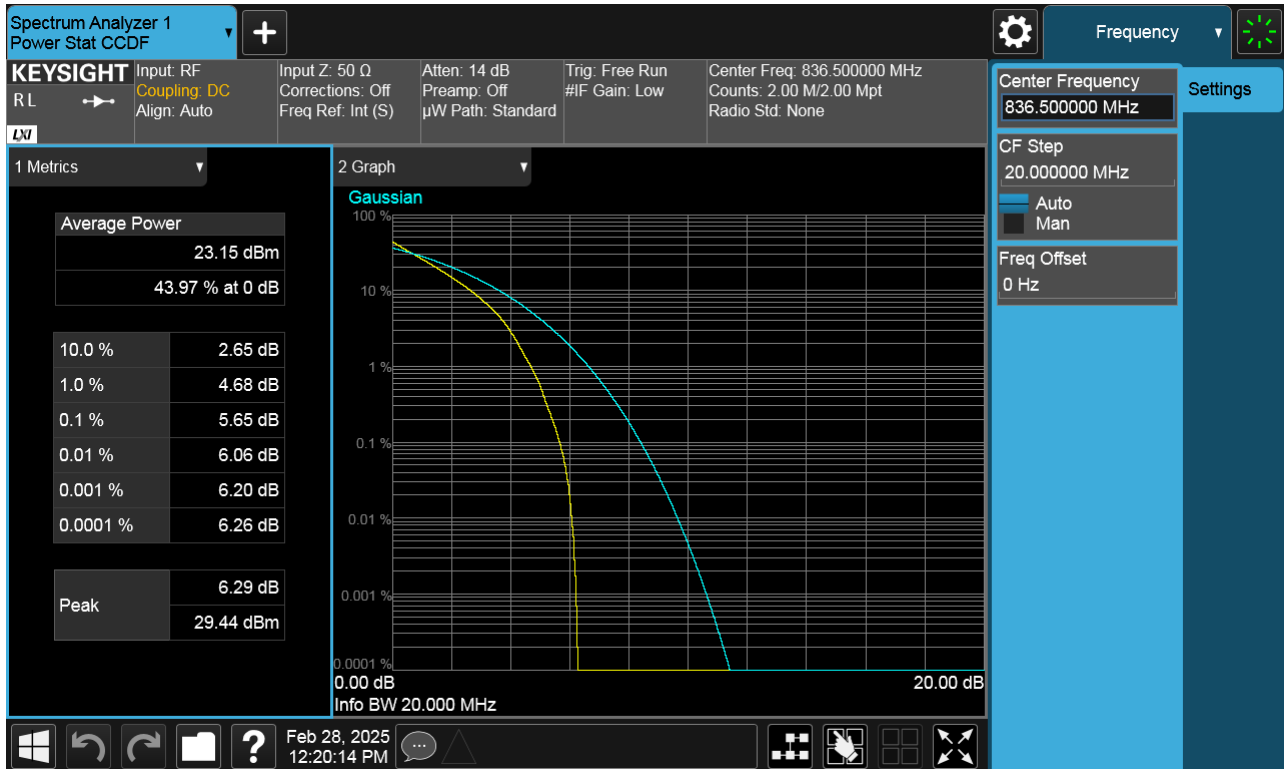
PAR Plot (15 M BW Ch.167300 256QAM RB 75_0)



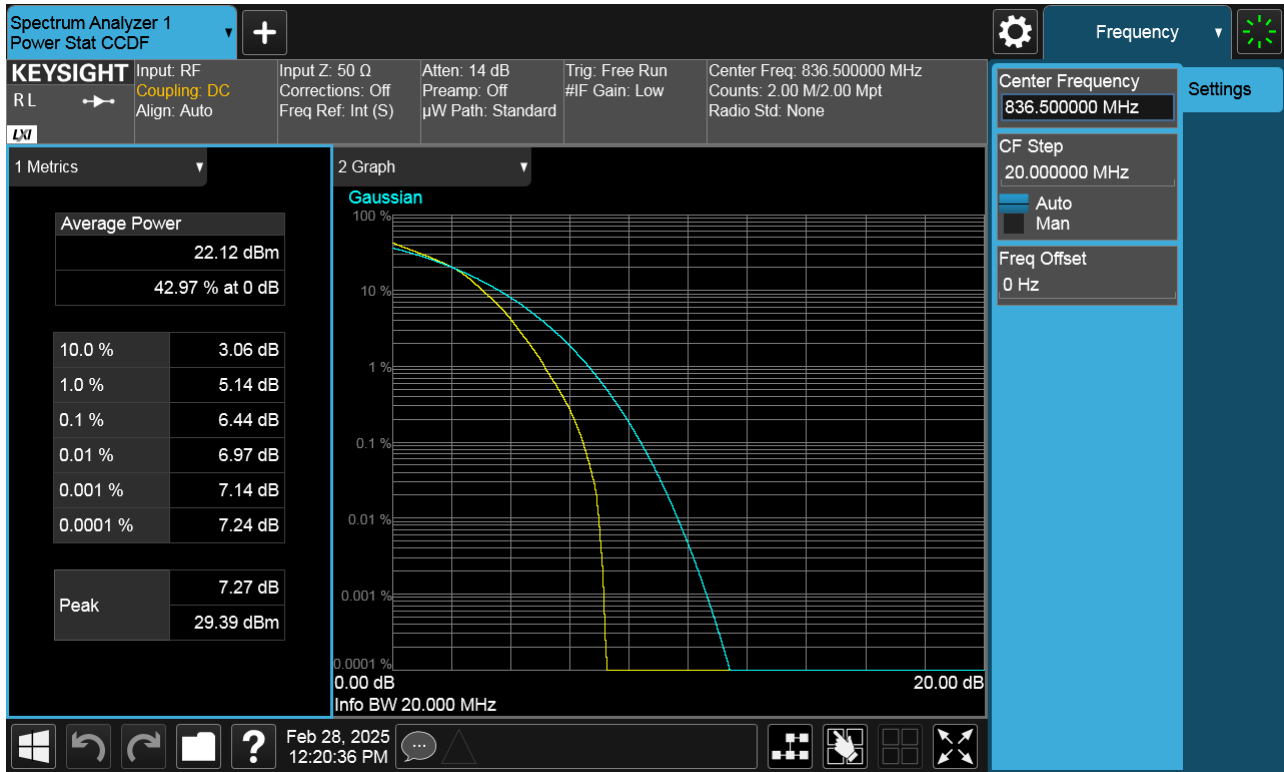
PAR Plot (20 M BW Ch.167300 BPSK RB 100_0)



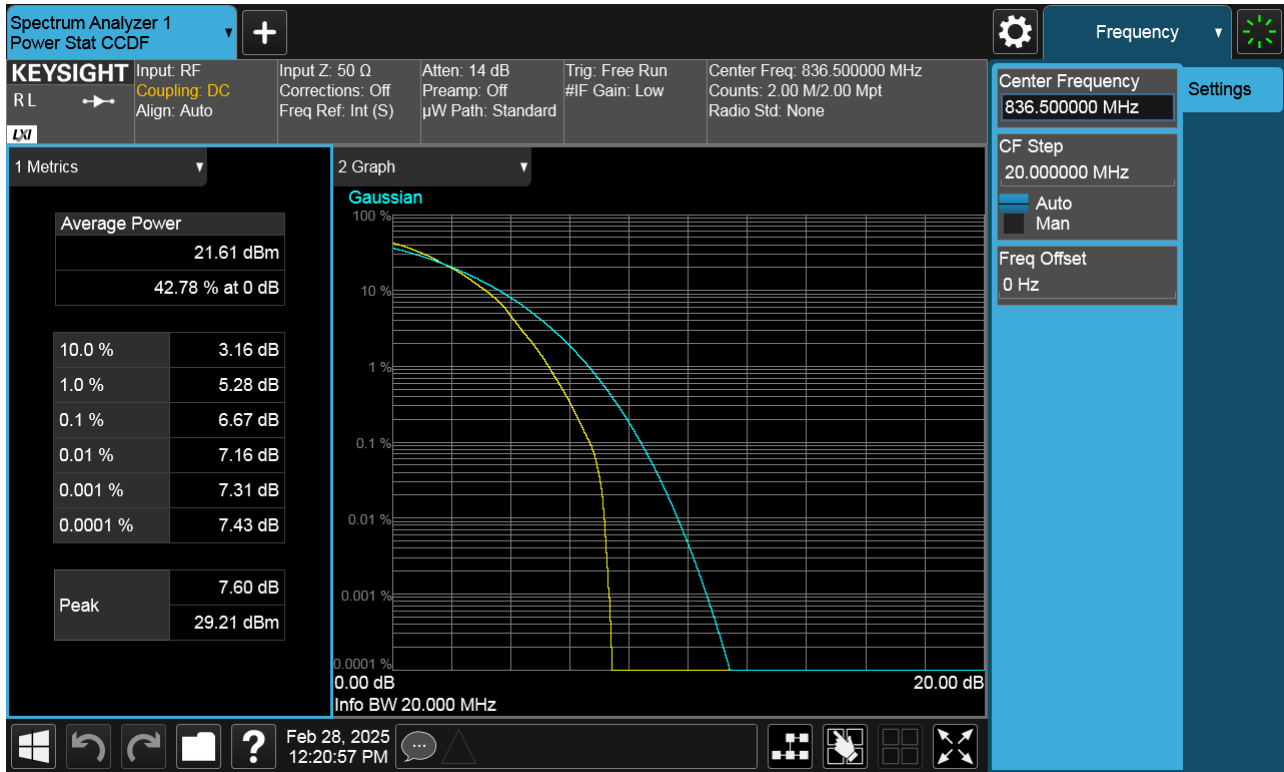
PAR Plot (20 M BW Ch.167300 QPSK RB 100_0)



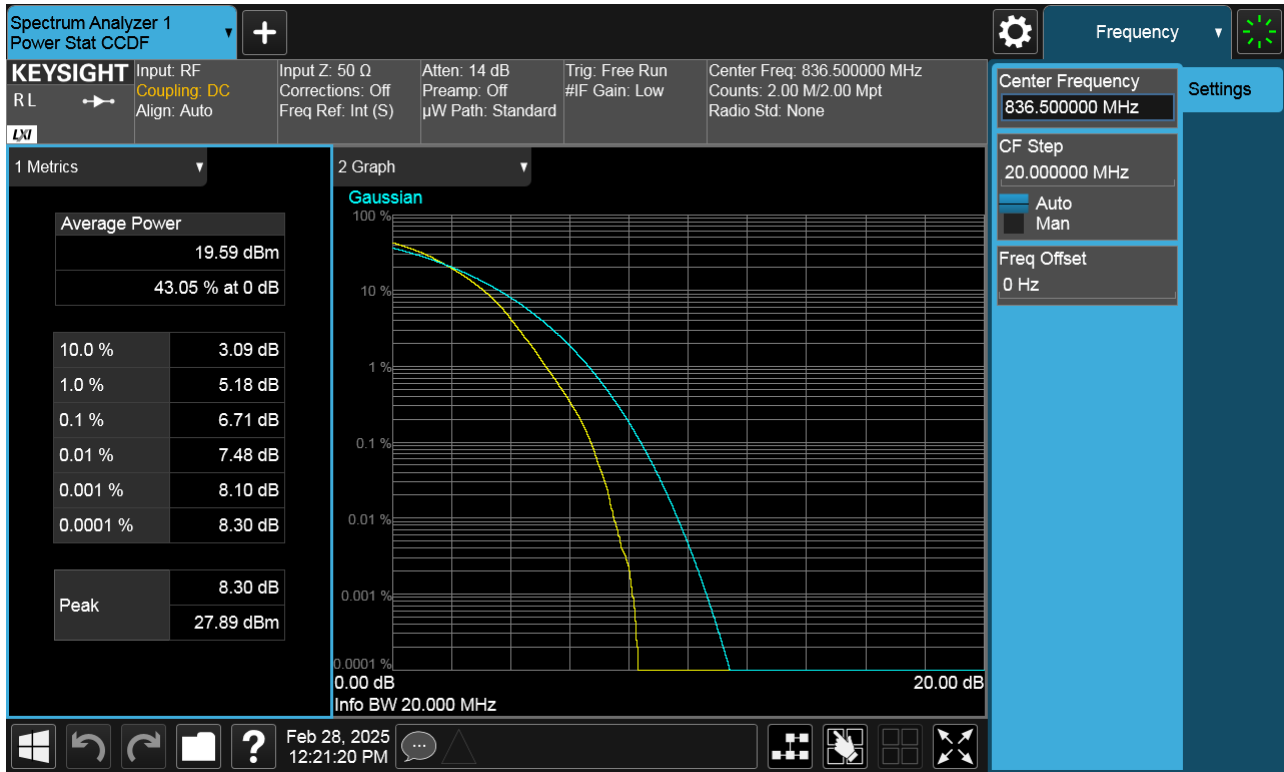
PAR Plot (20 M BW Ch.167300 16QAM RB 100_0)



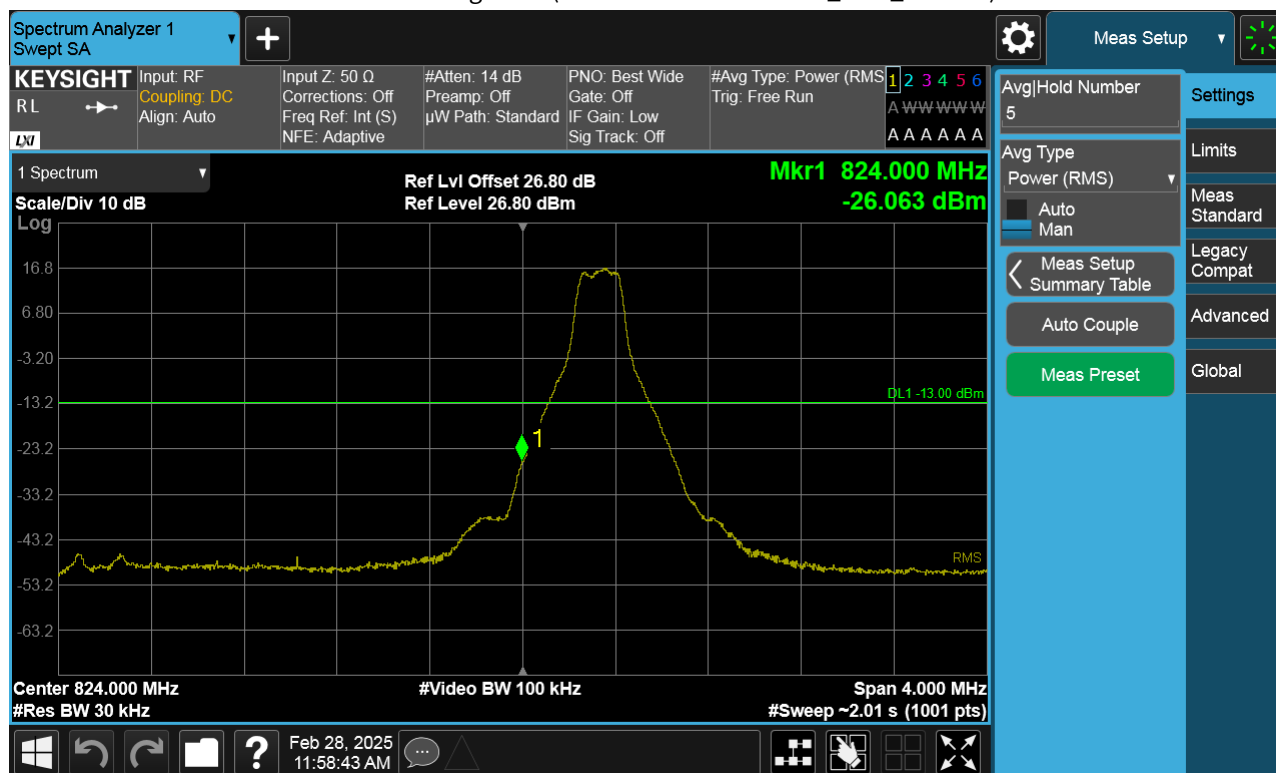
PAR Plot (20 M BW Ch.167300 64QAM RB 100_0)



PAR Plot (20 M BW Ch.167300 256QAM RB 100_0)



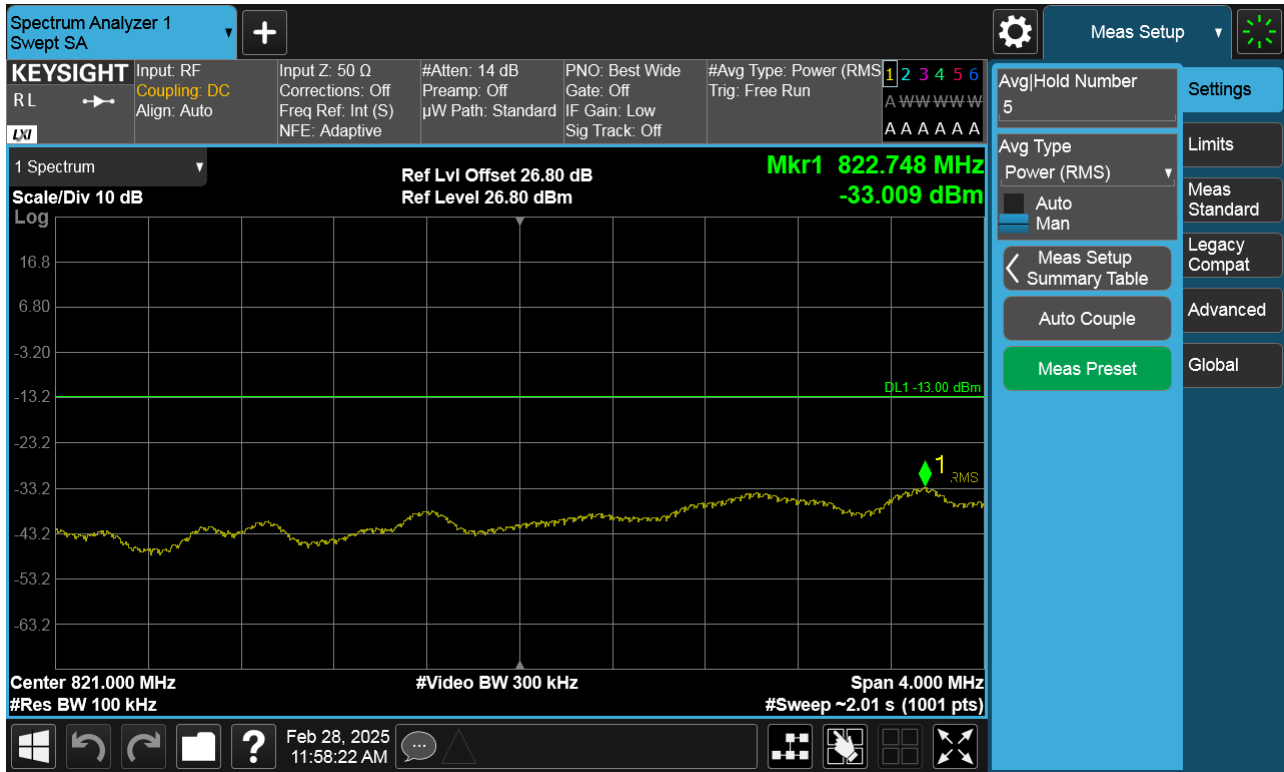
Lower Band Edge Plot (5 M BW Ch.165300 BPSK_RB 1_Offset 0)



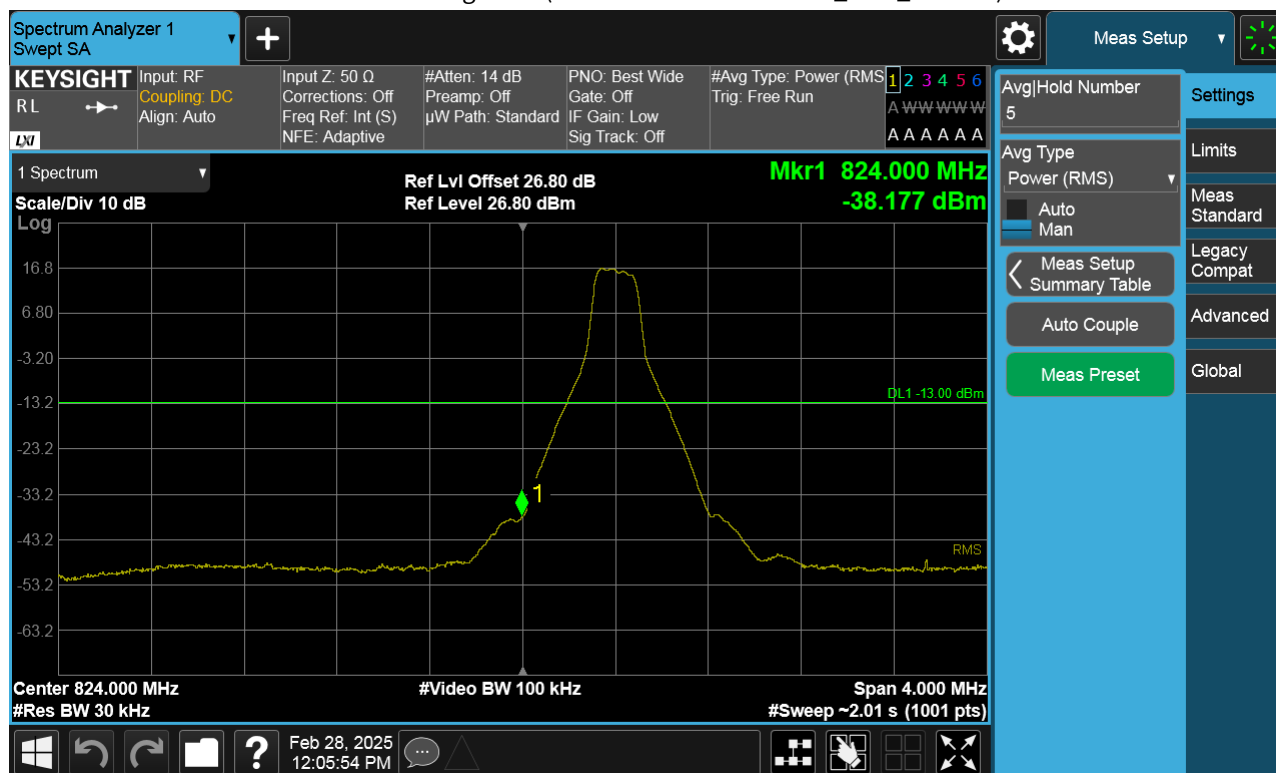
Lower Band Edge Plot (5 M BW Ch.165300 BPSK_RB 25_Offset 0)



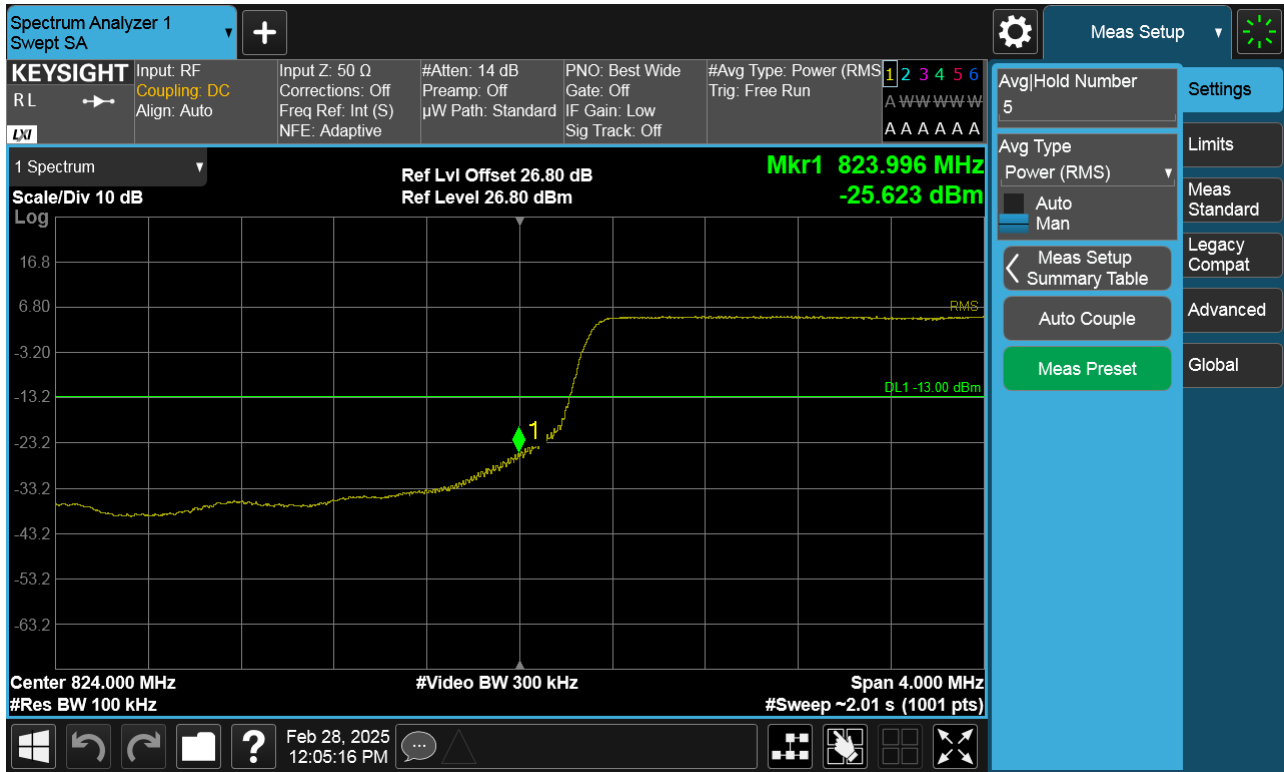
Lower Extended Band Edge Plot (5 M BW Ch.165300 BPSK_RB 25_0)



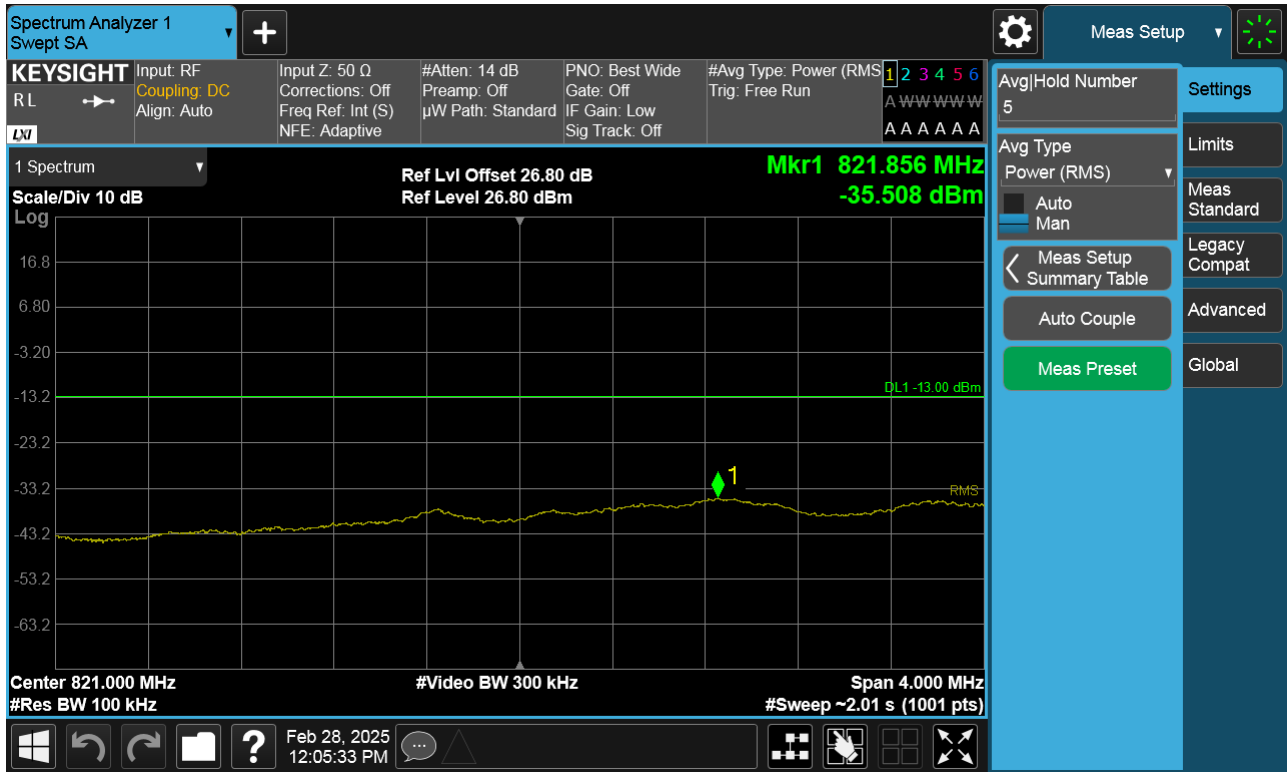
Lower Band Edge Plot (10 M BW Ch.165800 BPSK_RB 1_Offset 0)



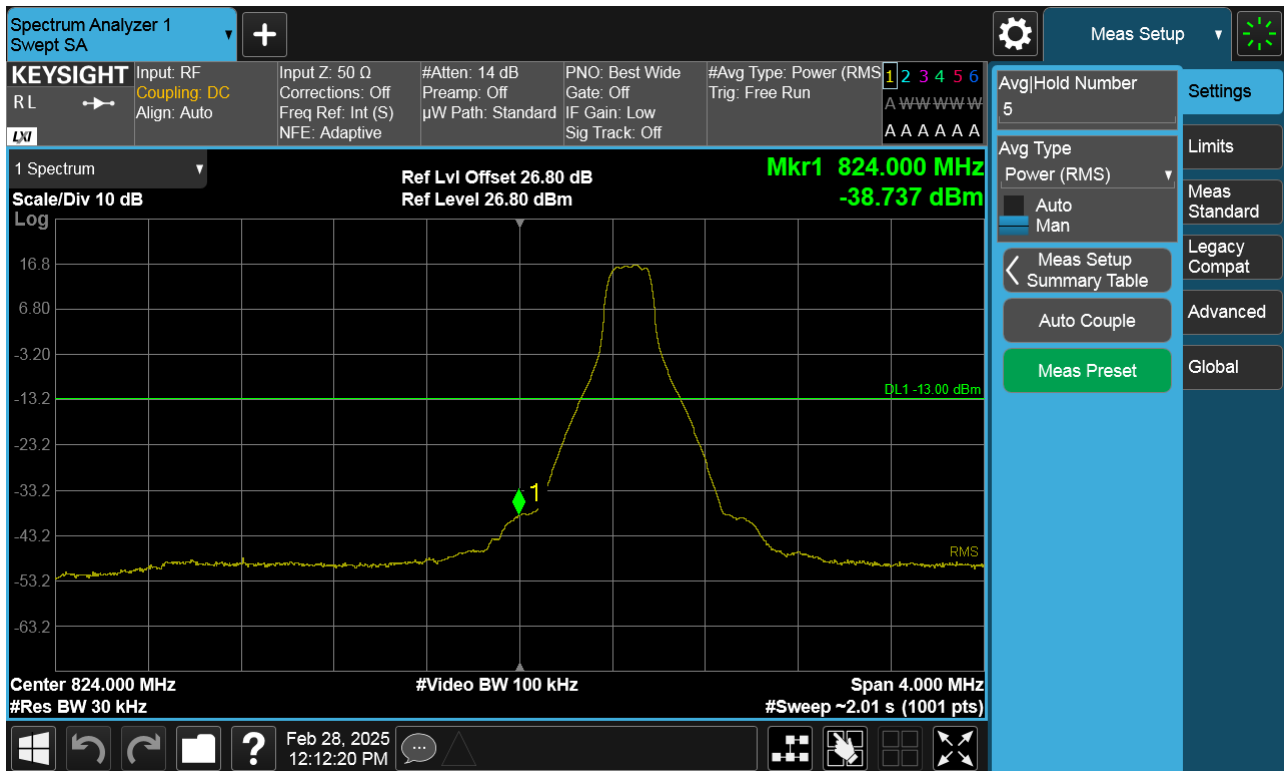
Lower Band Edge Plot (10 M BW Ch.165800 BPSK_RB 50_Offset 0)



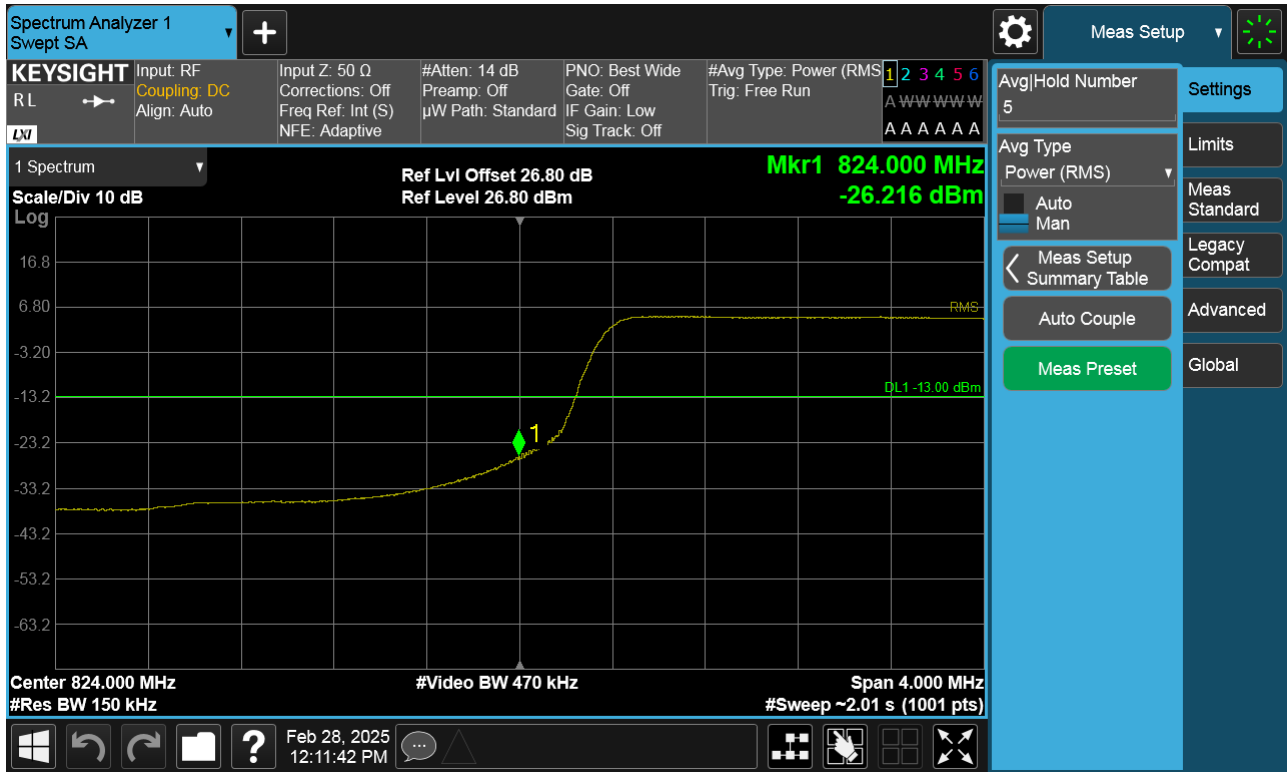
Lower Extended Band Edge Plot (10 M BW Ch.165800 BPSK_RB 50_0)



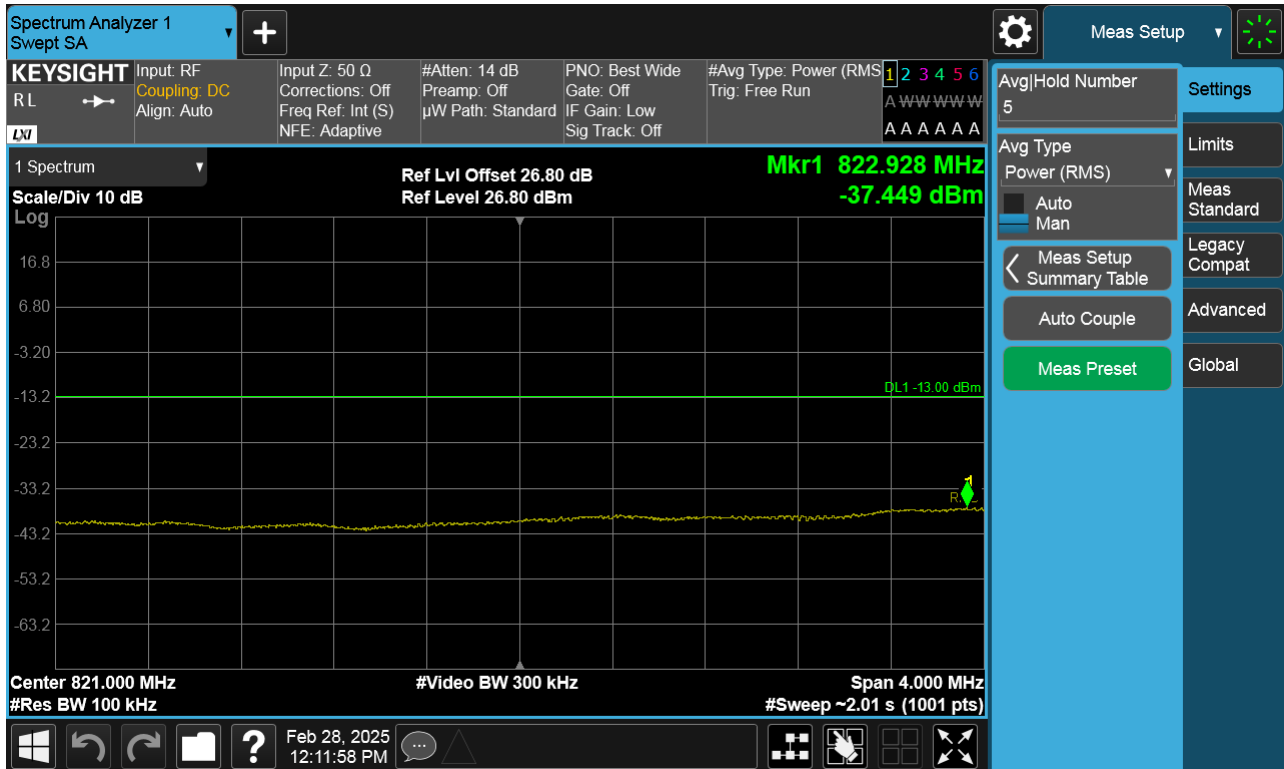
Lower Band Edge Plot (15 M BW Ch.166300 BPSK_RB 1_Offset 0)



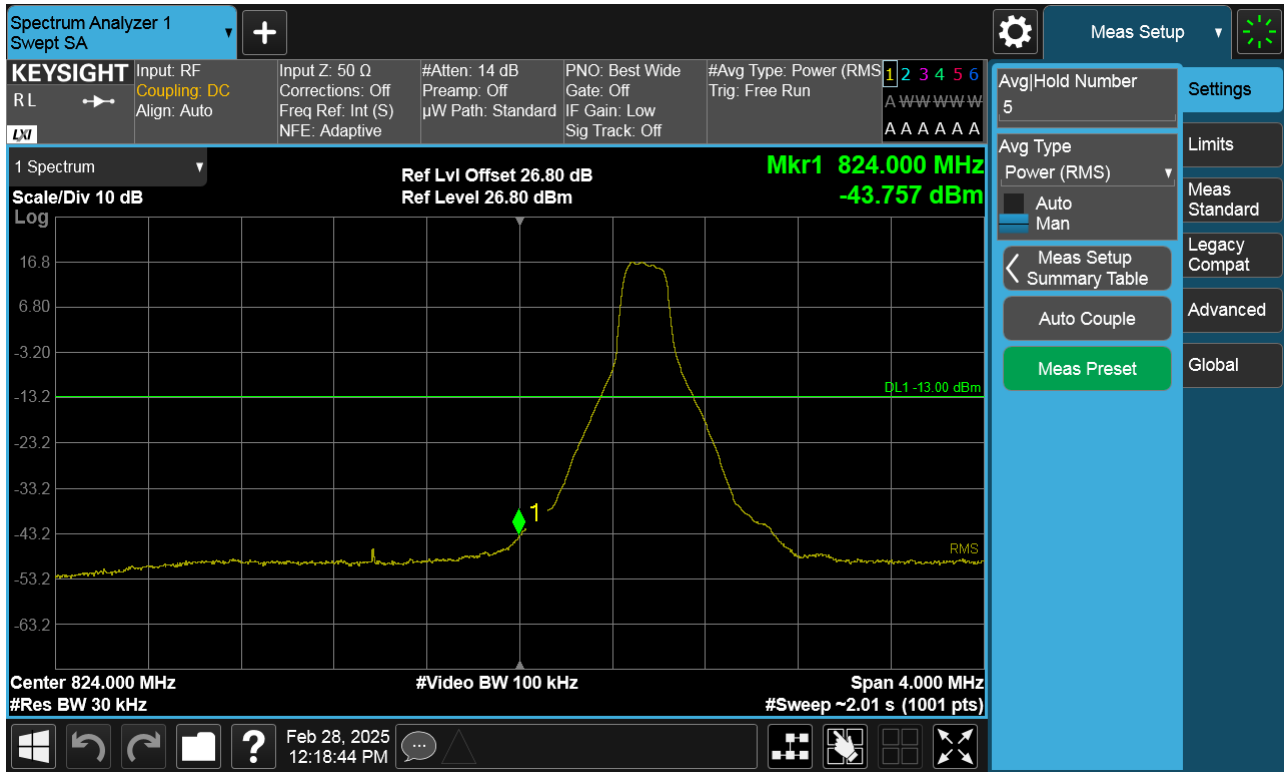
Lower Band Edge Plot (15 M BW Ch.166300 BPSK_RB 75_Offset 0)



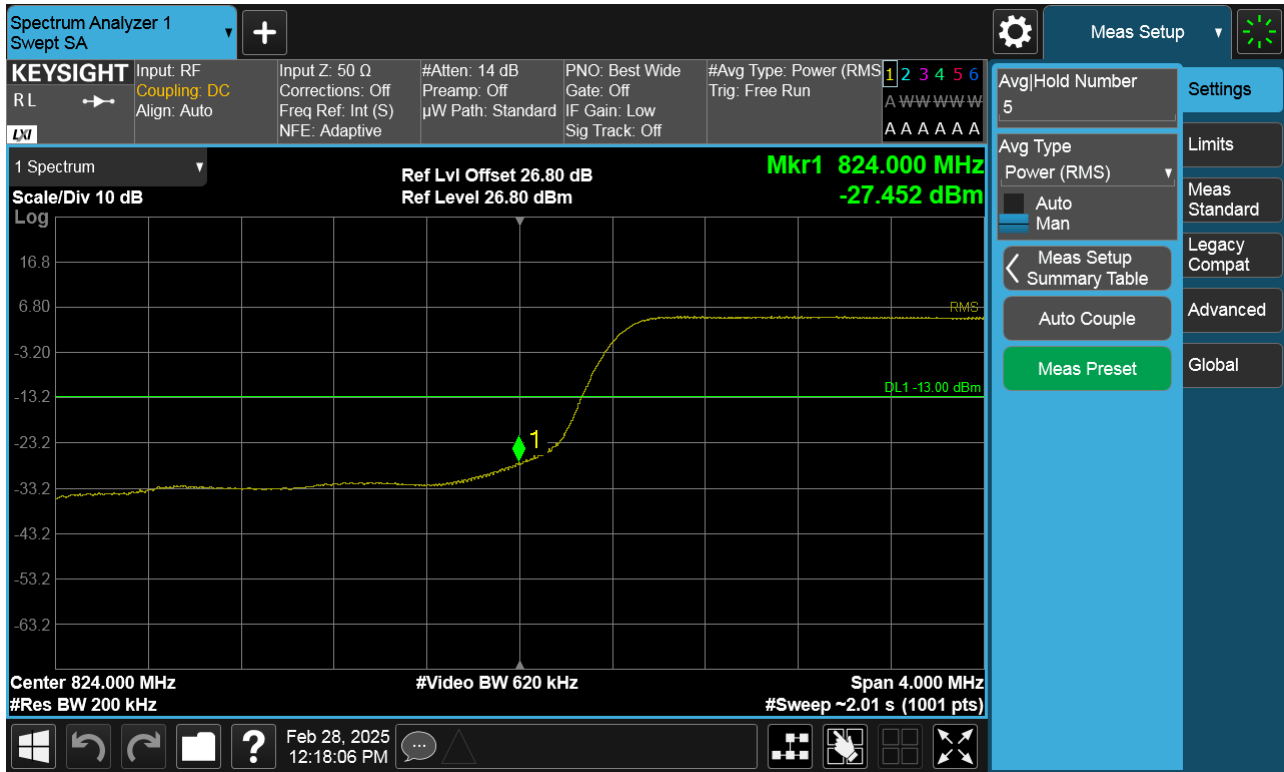
Lower Extended Band Edge Plot (15 M BW Ch.166300 BPSK_RB 75_0)



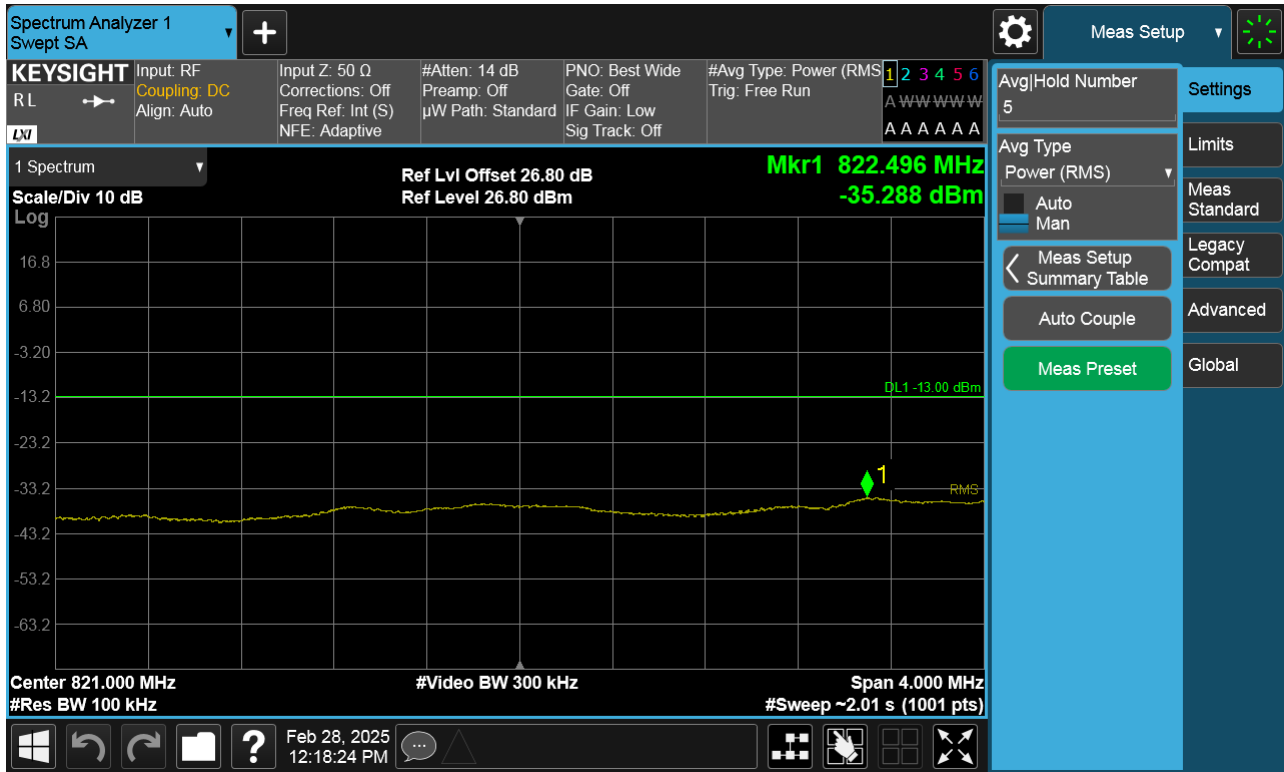
Lower Band Edge Plot (20 M BW Ch.166800 BPSK_RB 1_Offset 0)



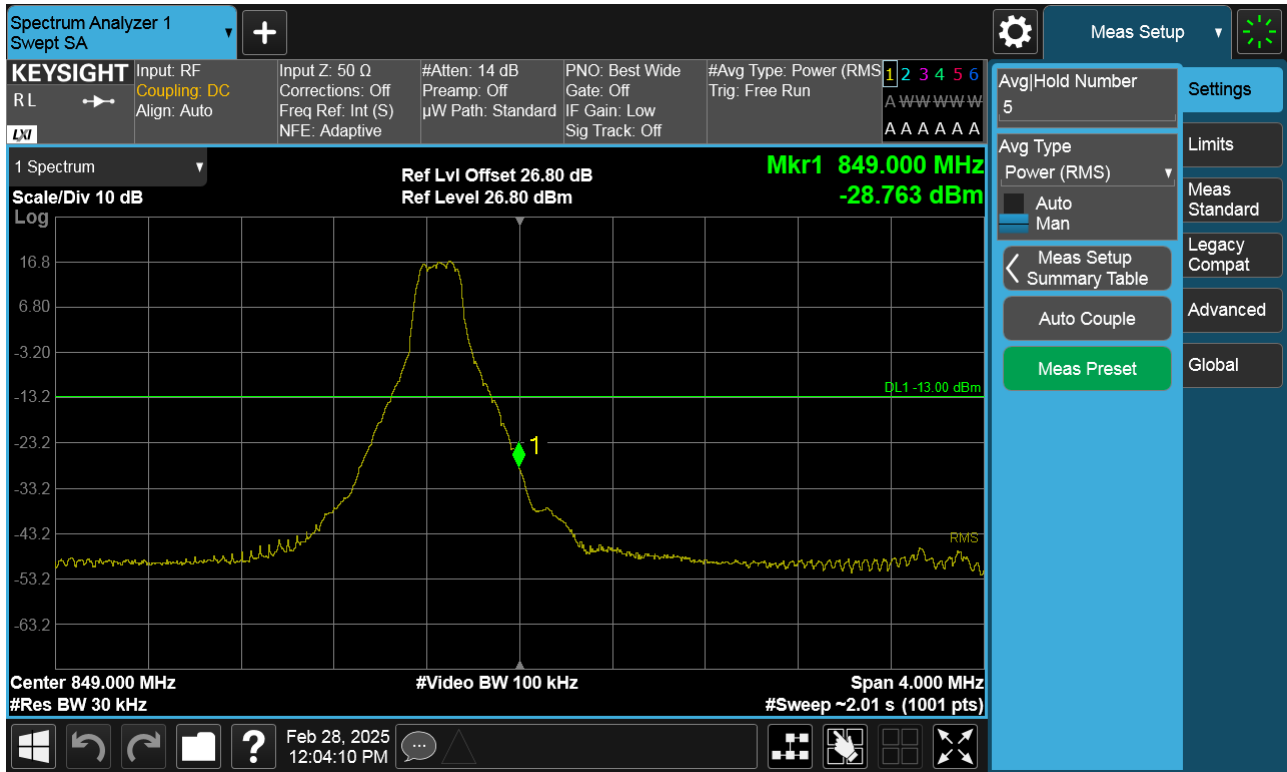
Lower Band Edge Plot (20 M BW Ch.166800 BPSK_RB 100_Offset 0)



Lower Extended Band Edge Plot (20 M BW Ch.166800 BPSK_RB 100_0)



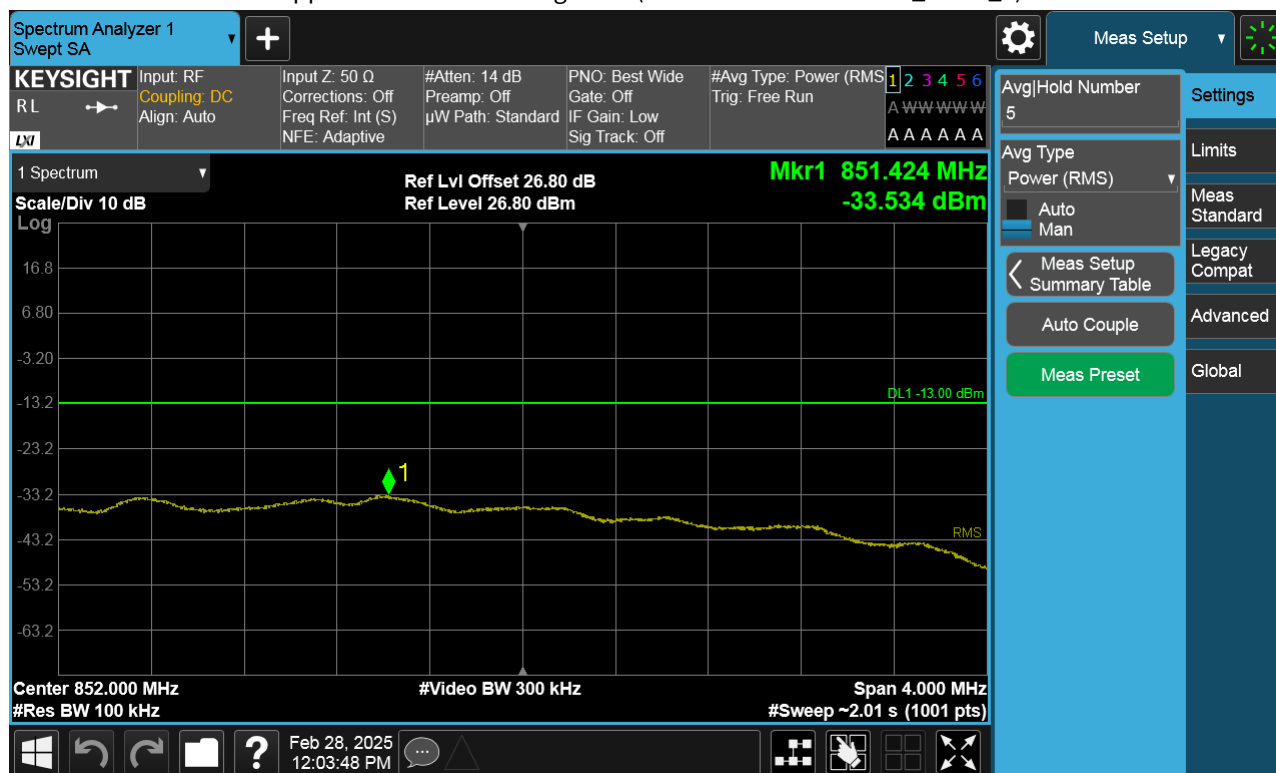
Upper Band Edge Plot (5 M BW Ch.169300 BPSK_RB 1_Offset 24)



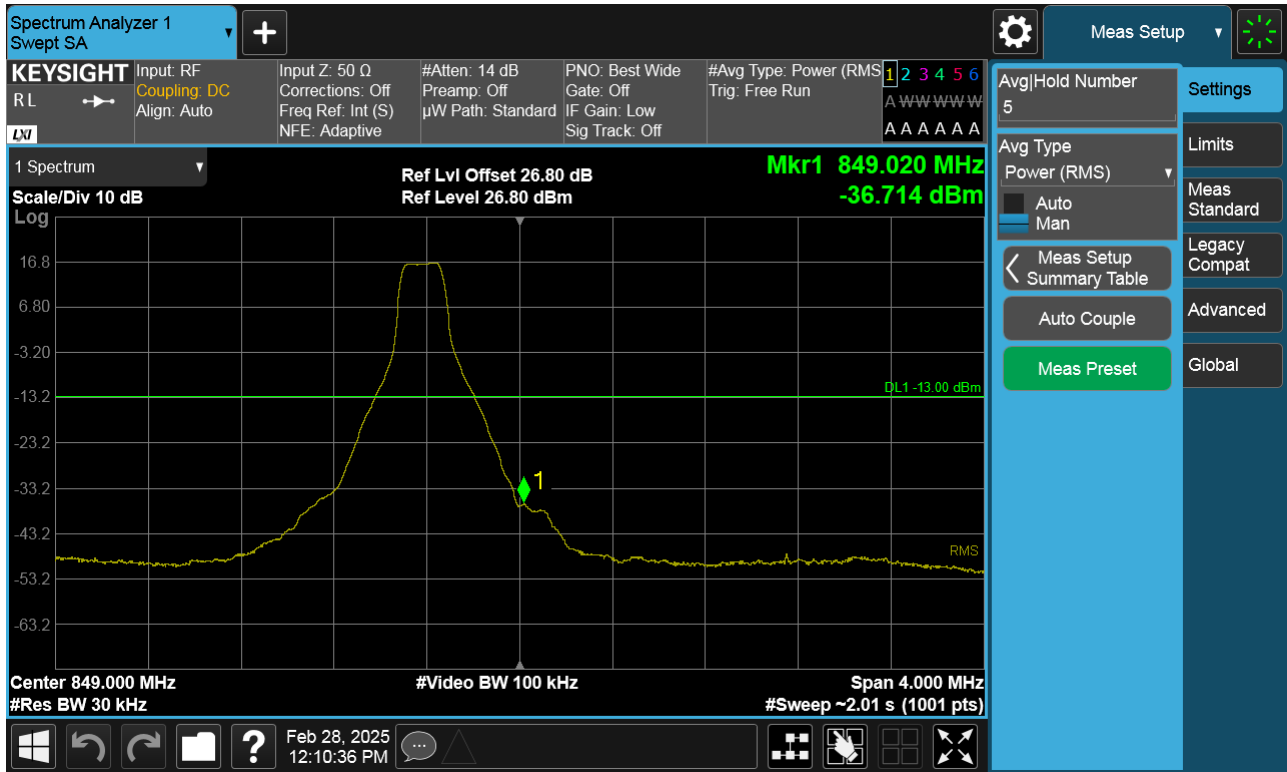
Upper Band Edge Plot (5 M BW Ch.169300 BPSK_RB 25_Offset 0)



Upper Extended Band Edge Plot (5 M BW Ch.169300 BPSK_RB 25_0)



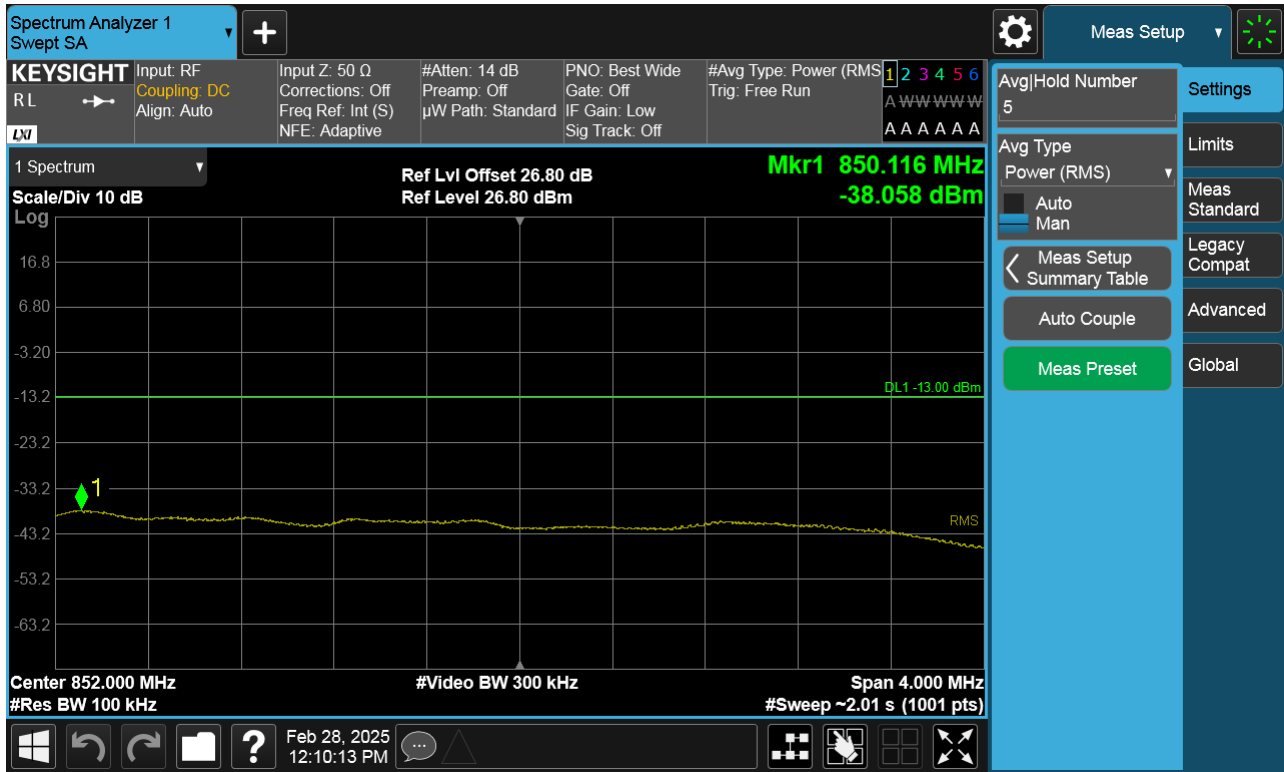
Upper Band Edge Plot (10 M BW Ch.168800 BPSK_RB 1_Offset 49)



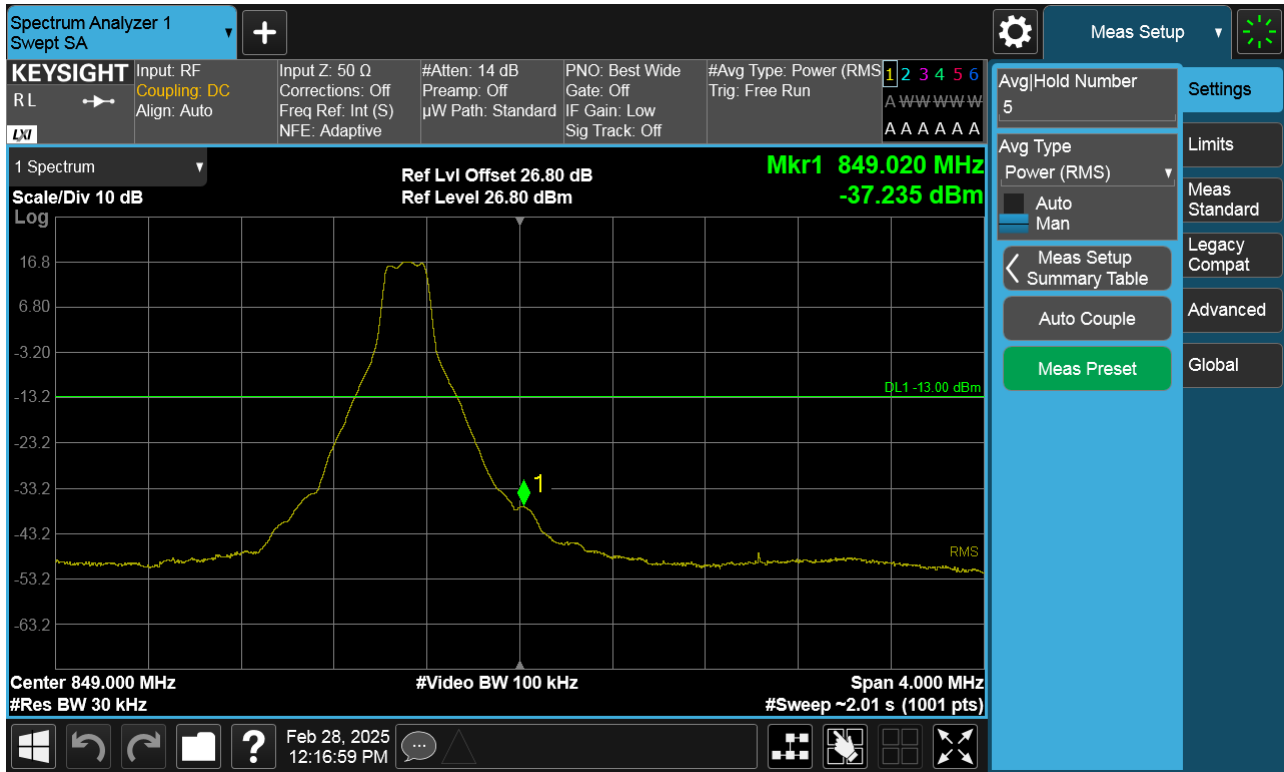
Upper Band Edge Plot (10 M BW Ch.168800 BPSK_RB 50_Offset 0)



Upper Extended Band Edge Plot (10 M BW Ch.168800 BPSK_RB 50_0)



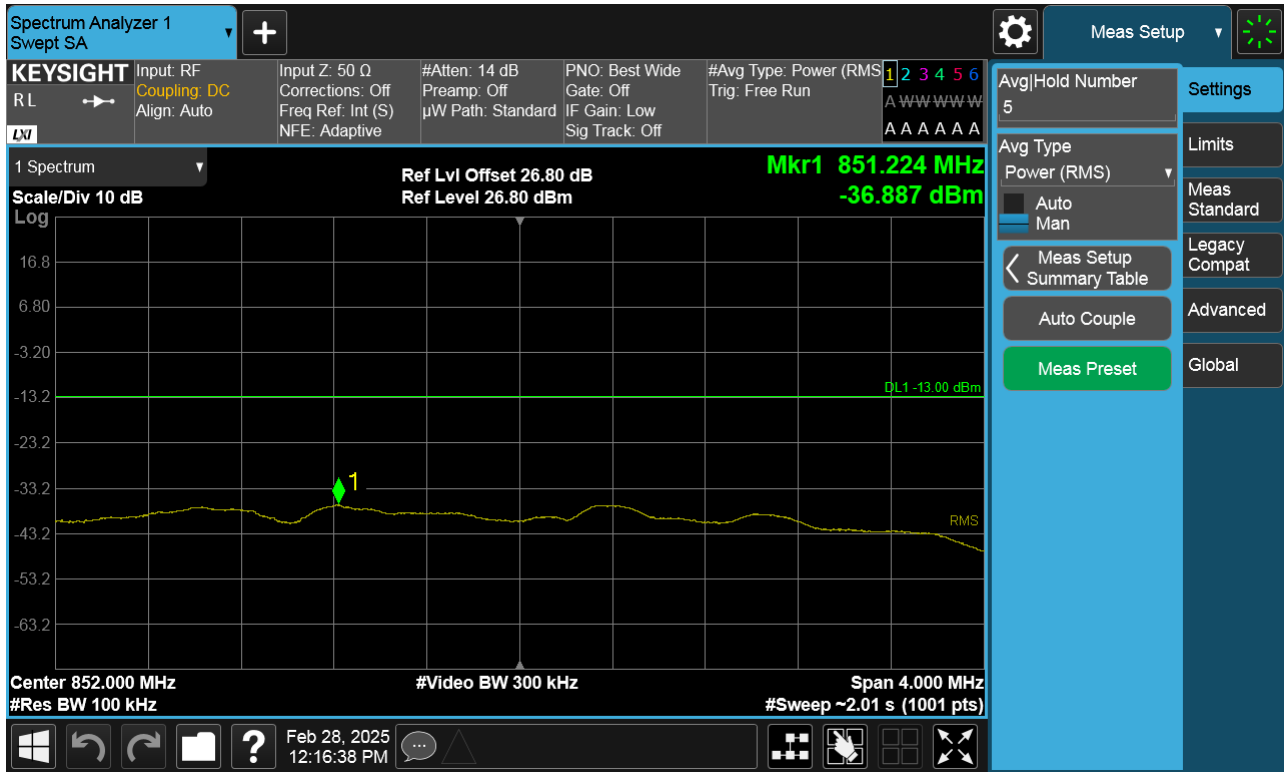
Upper Band Edge Plot (15 M BW Ch.168300 BPSK_RB 1_Offset 74)



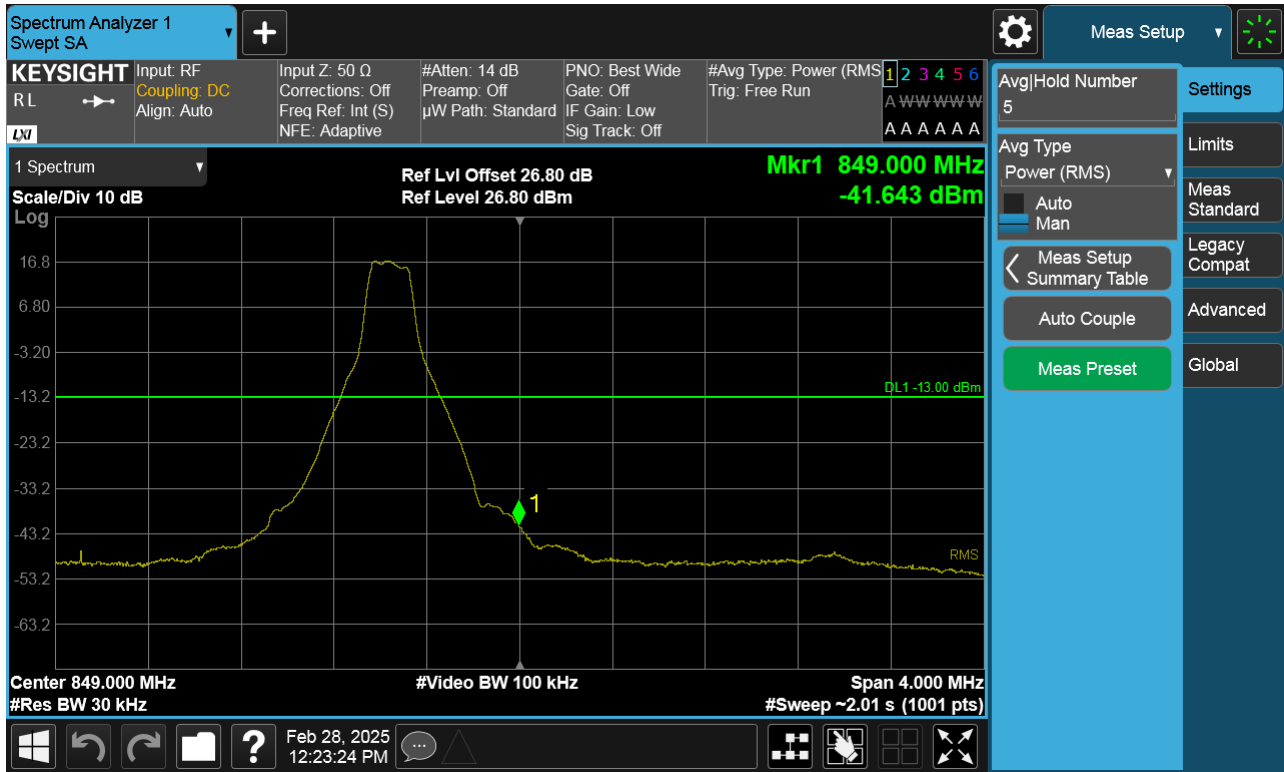
Upper Band Edge Plot (15 M BW Ch.168300 BPSK_RB 75_Offset 0)



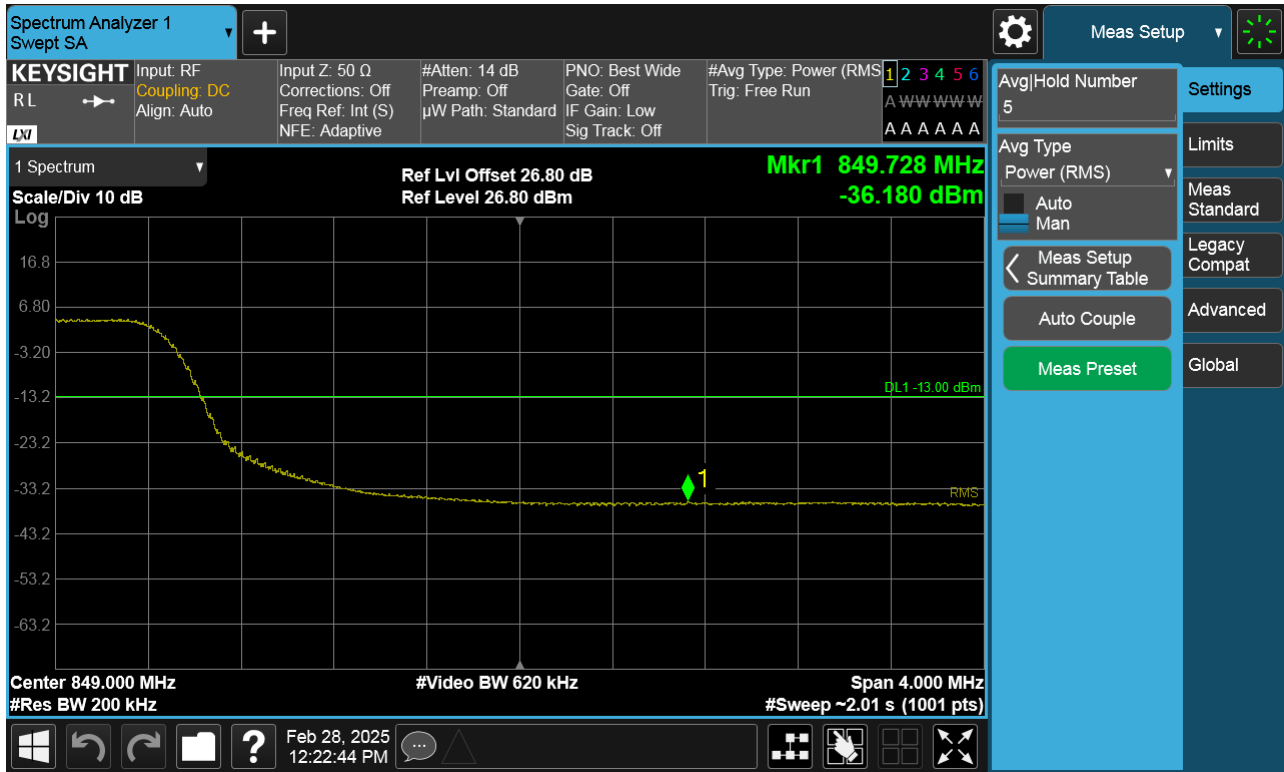
Upper Extended Band Edge Plot (15 M BW Ch.168300 BPSK_RB 75_0)



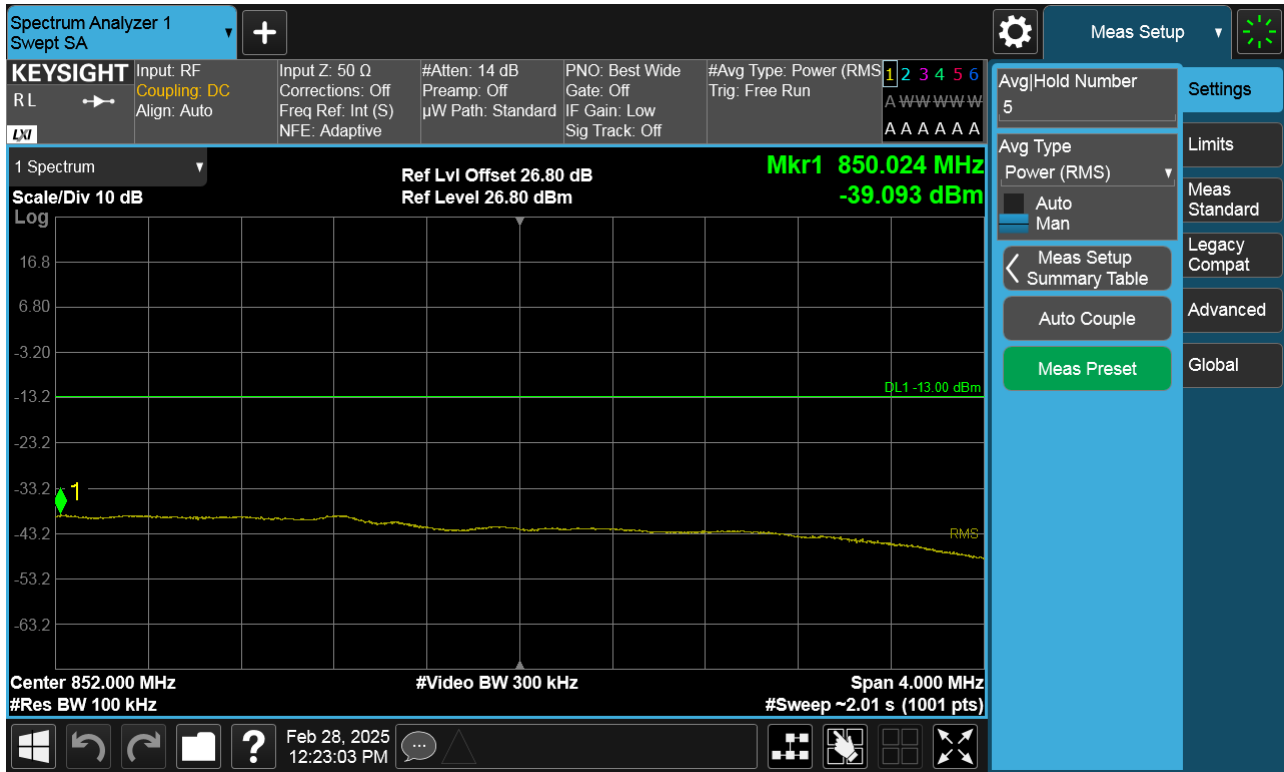
Upper Band Edge Plot (20 M BW Ch.167800 BPSK_RB 1_Offset 99)



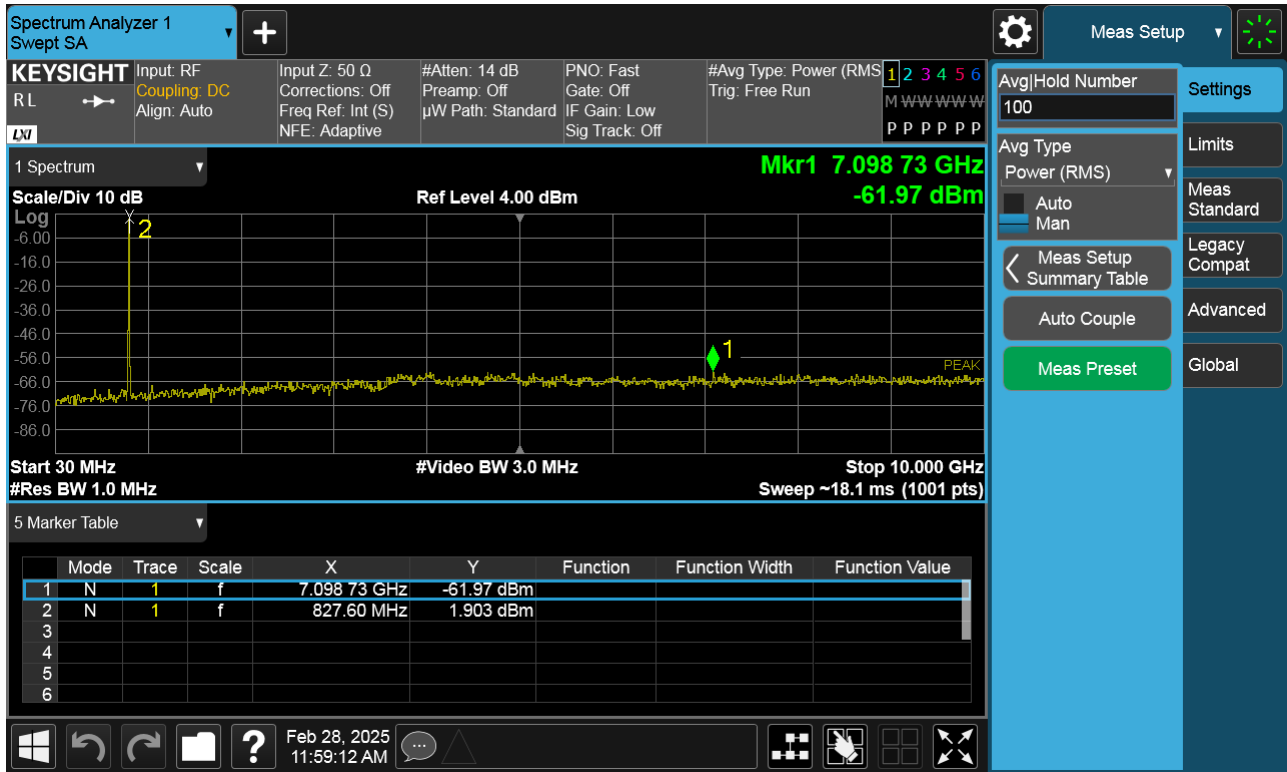
Upper Band Edge Plot (20 M BW Ch.167800 BPSK_RB 100_Offset 0)



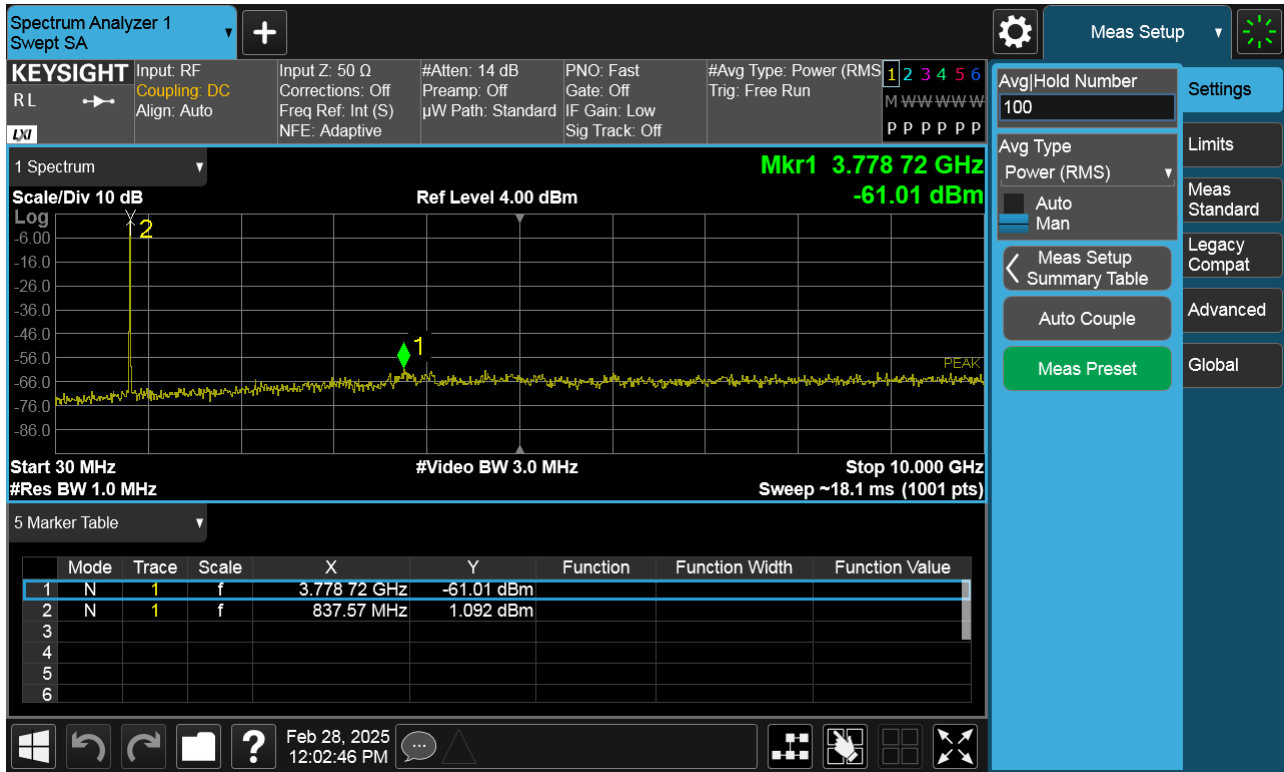
Upper Extended Band Edge Plot (20 M BW Ch.167800 BPSK_RB 100_0)



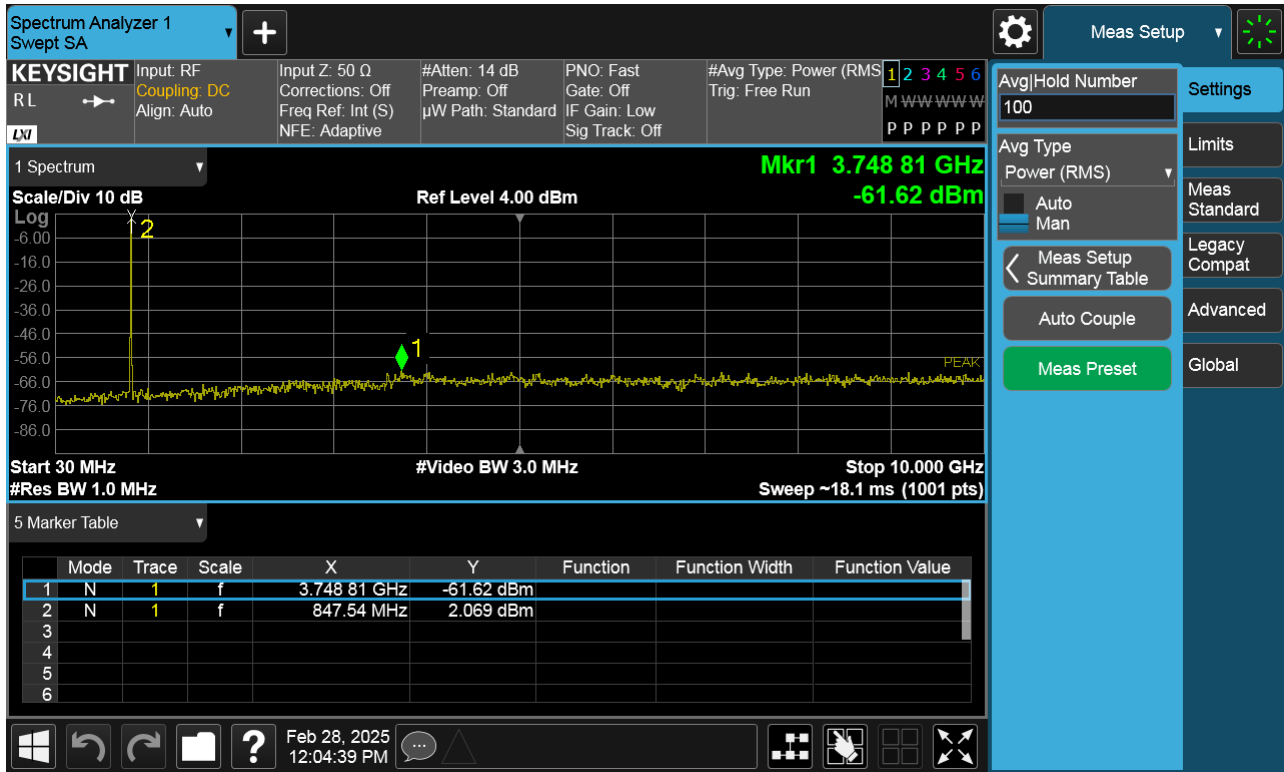
Conducted Spurious Plot (165300ch_5 MHz_BPSK_RB 1_0)



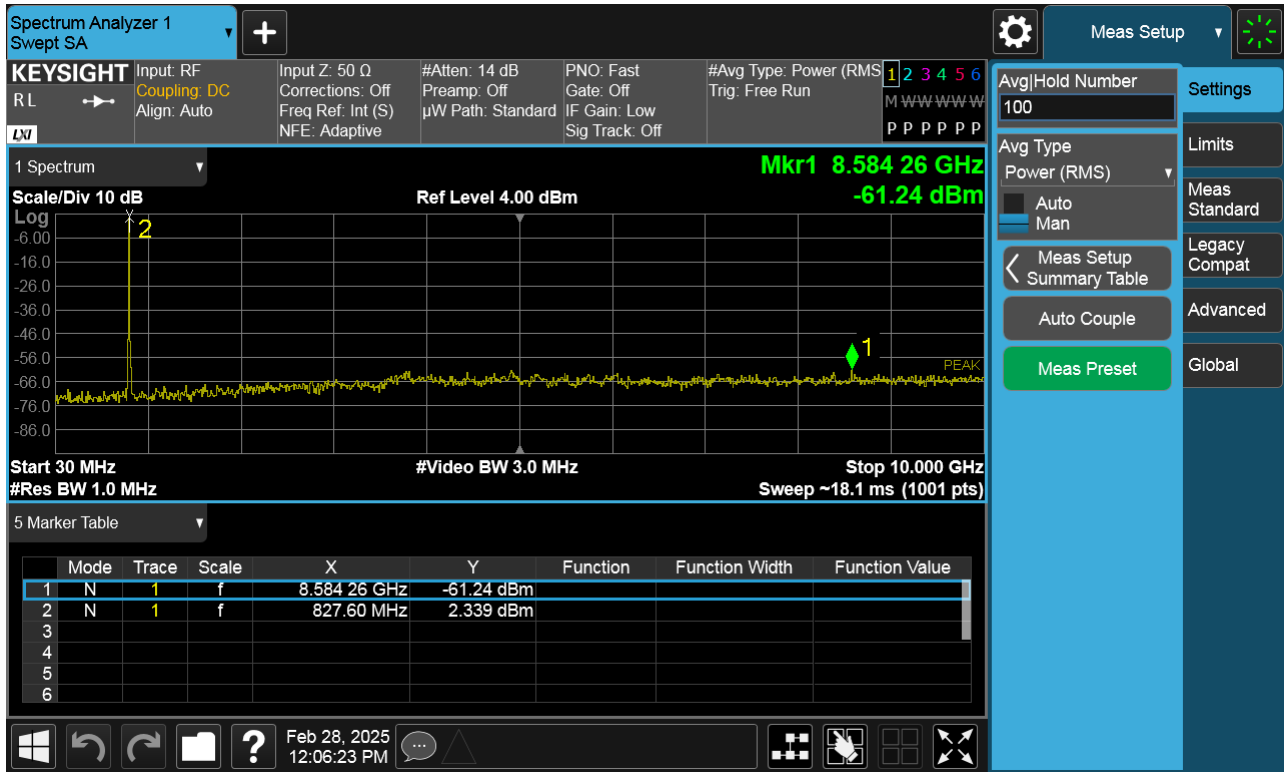
Conducted Spurious Plot (167300ch_5 MHz_BPSK_RB 1_0)



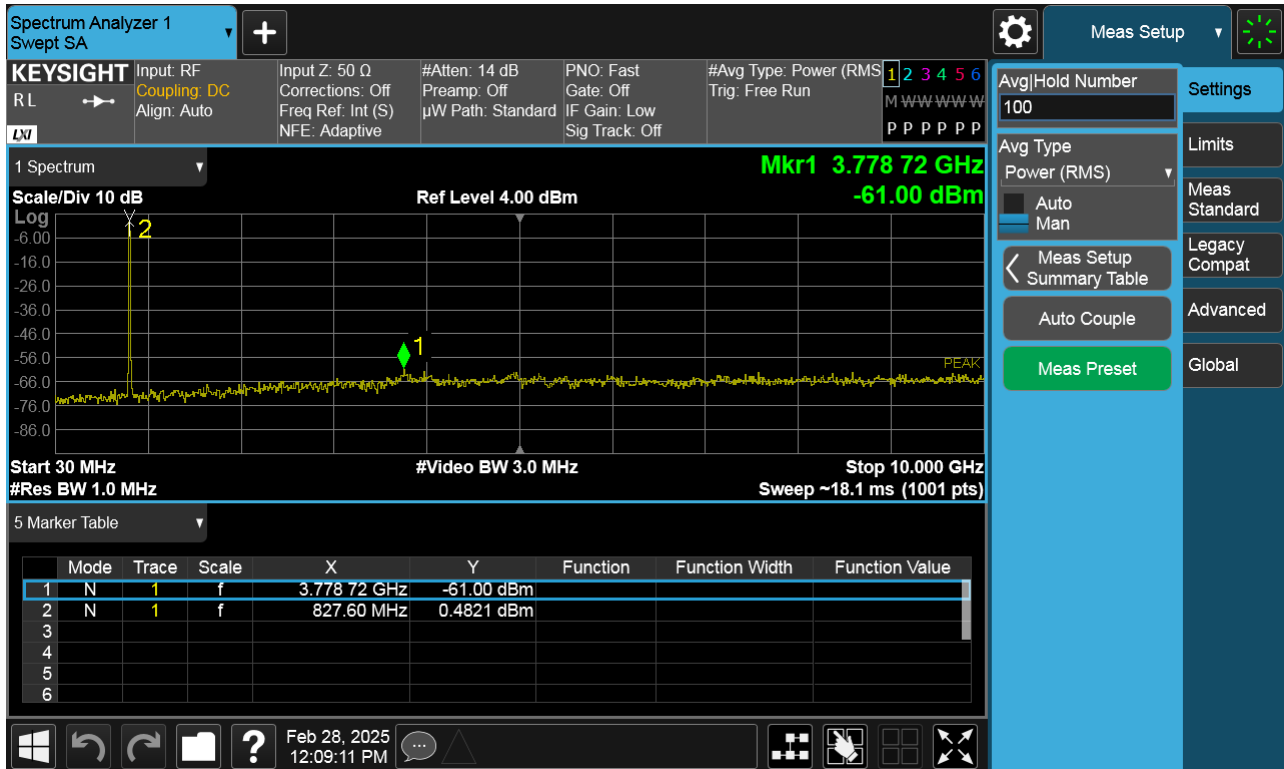
Conducted Spurious Plot (169300ch_5 MHz_BPSK_RB 1_0)



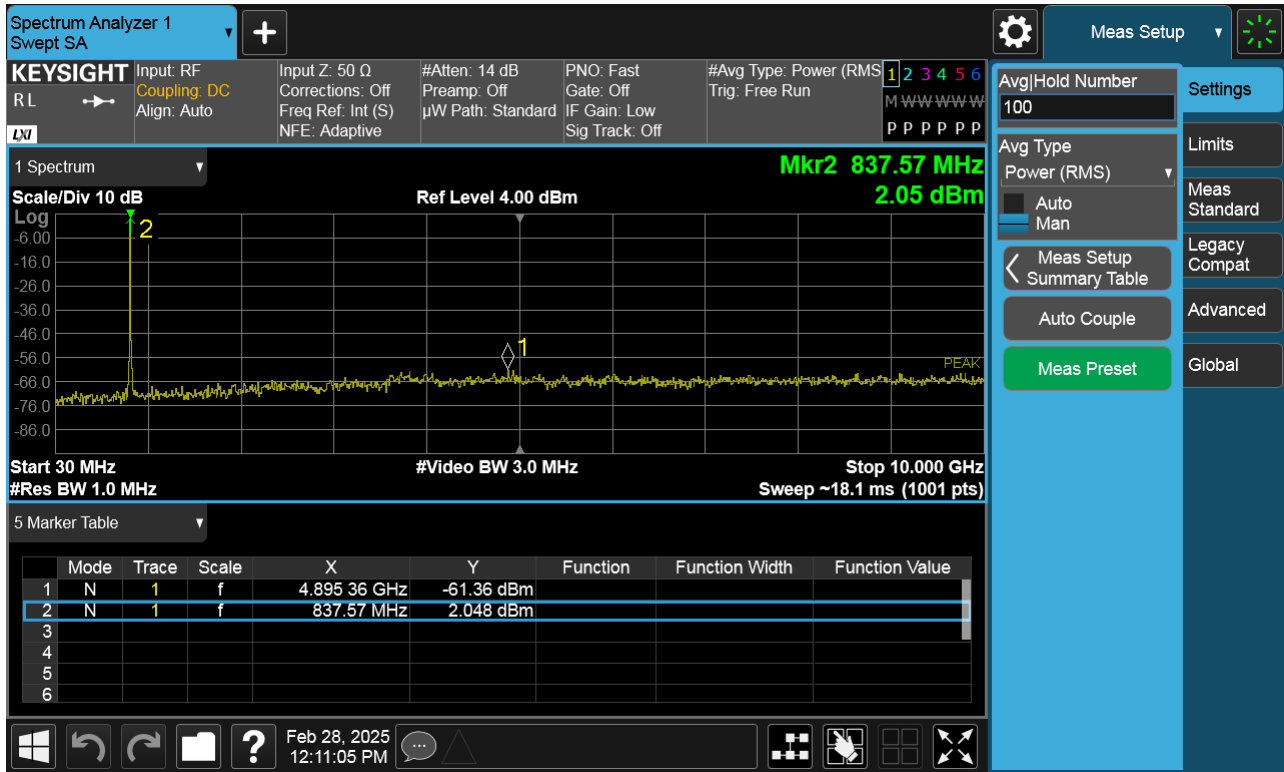
Conducted Spurious Plot (165800ch_10 MHz_BPSK_RB 1_0)



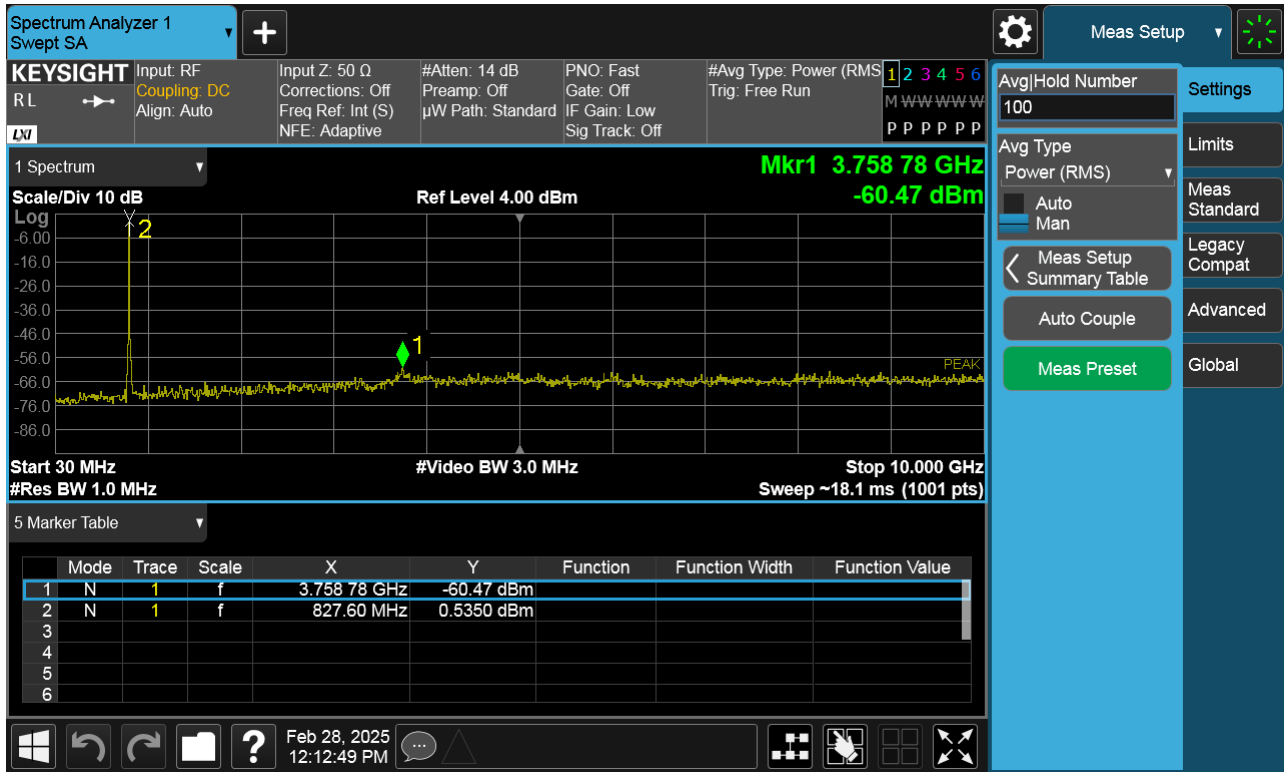
Conducted Spurious Plot (167300ch_10 MHz_BPSK_RB 1_0)



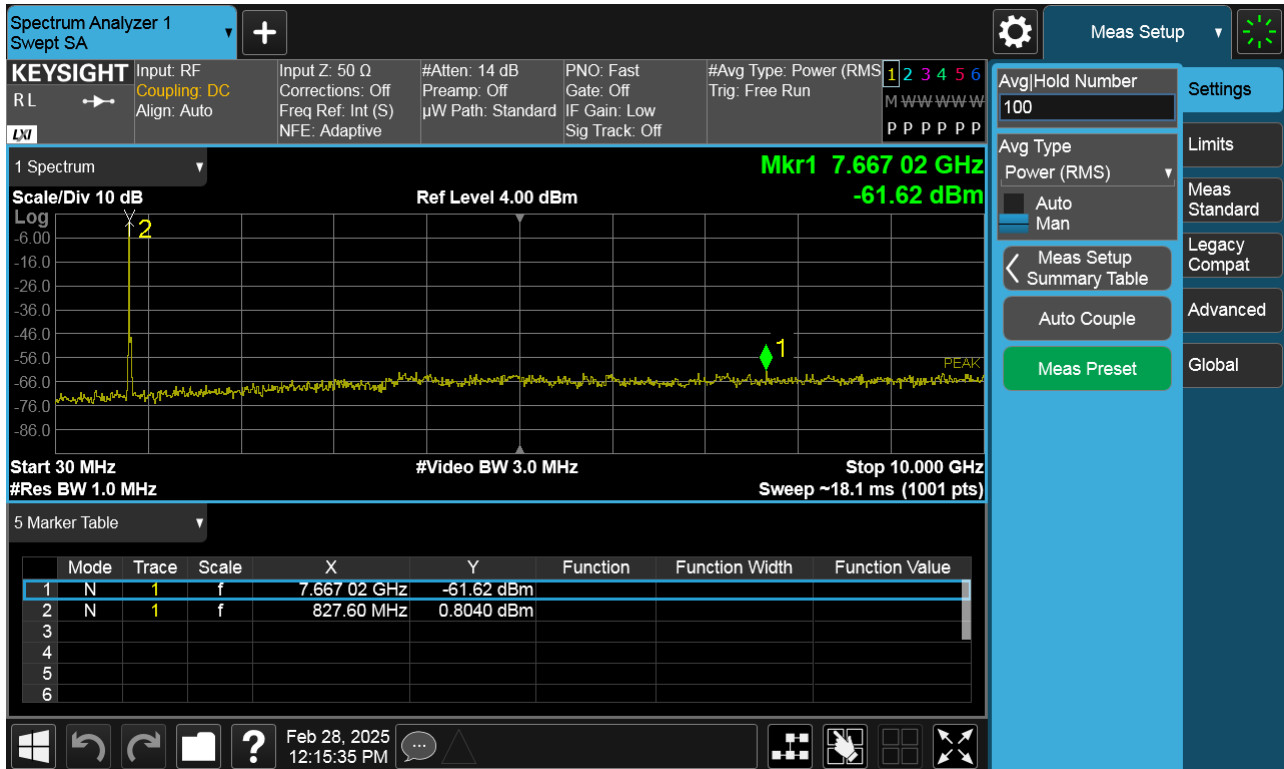
Conducted Spurious Plot (168800ch_10 MHz_BPSK_RB 1_0)



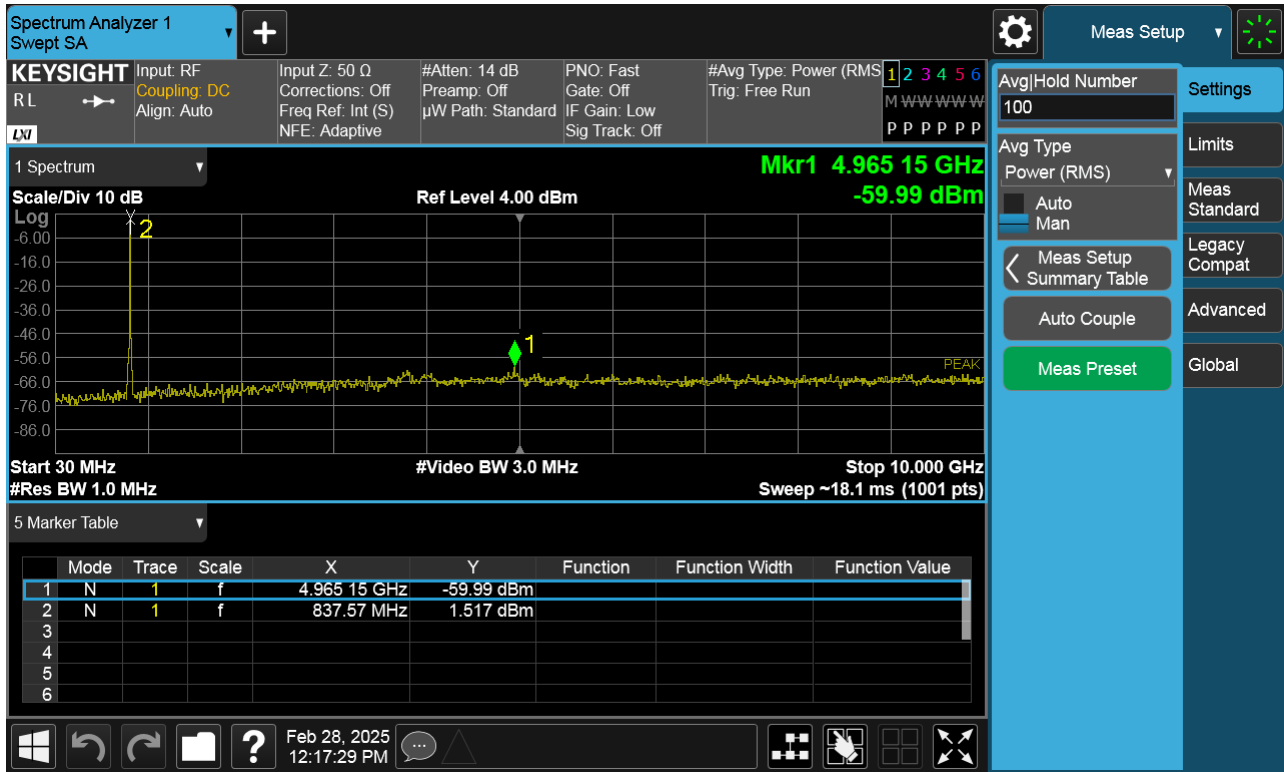
Conducted Spurious (166300ch_15 MHz_BPSK_RB 1_0)



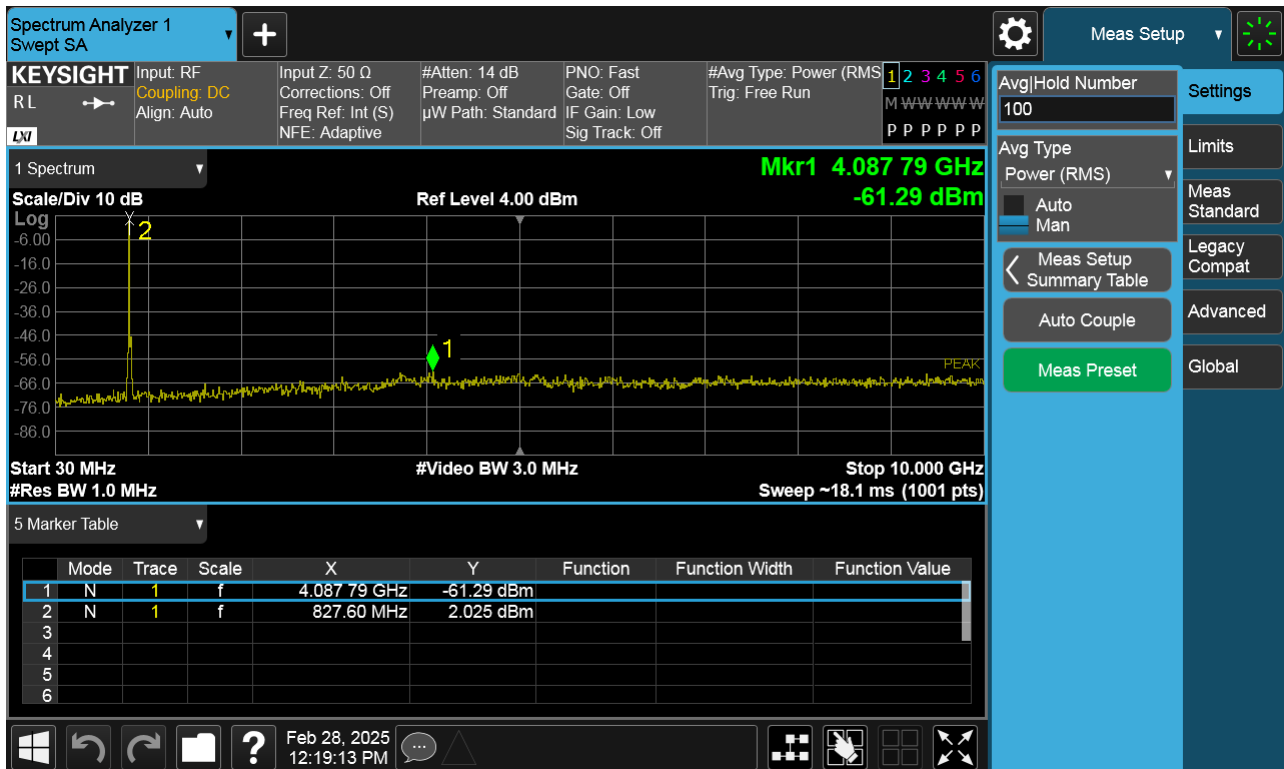
Conducted Spurious (167300ch_15 MHz_BPSK_RB 1_0)



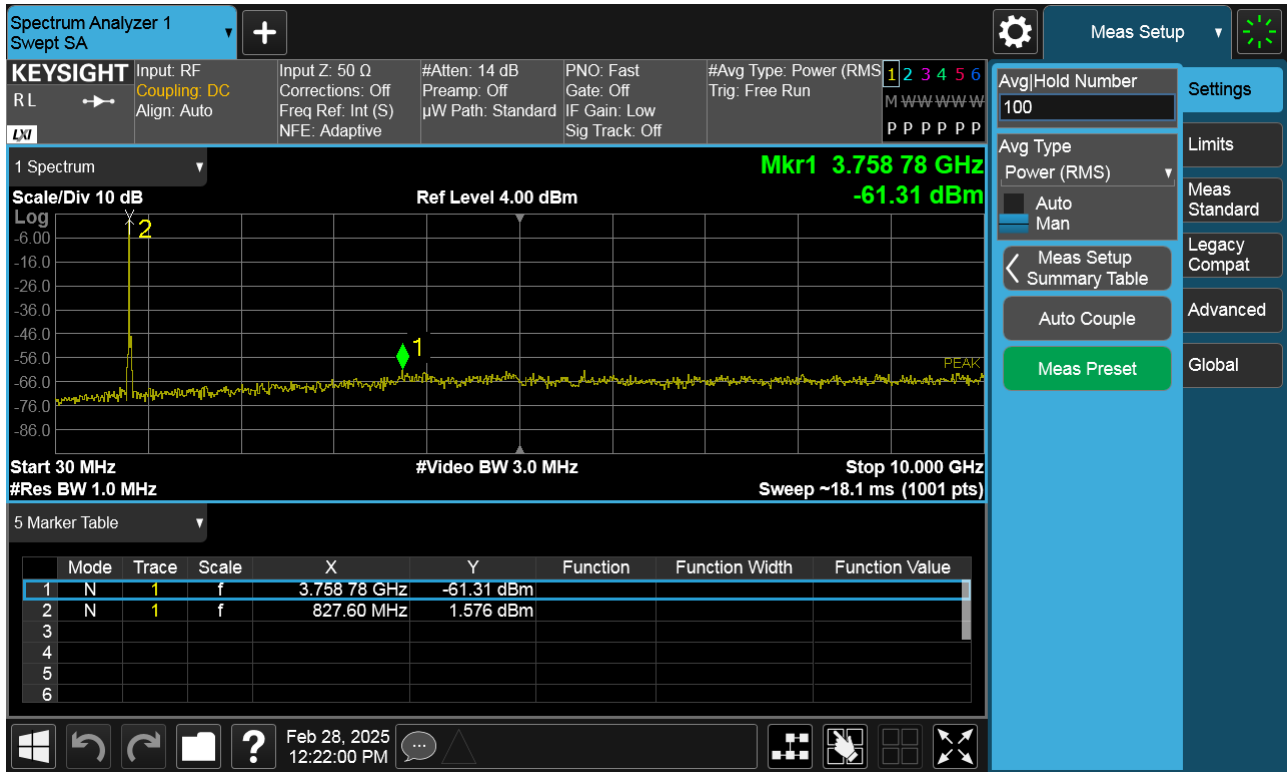
Conducted Spurious (168300ch_15 MHz_BPSK_RB 1_0)



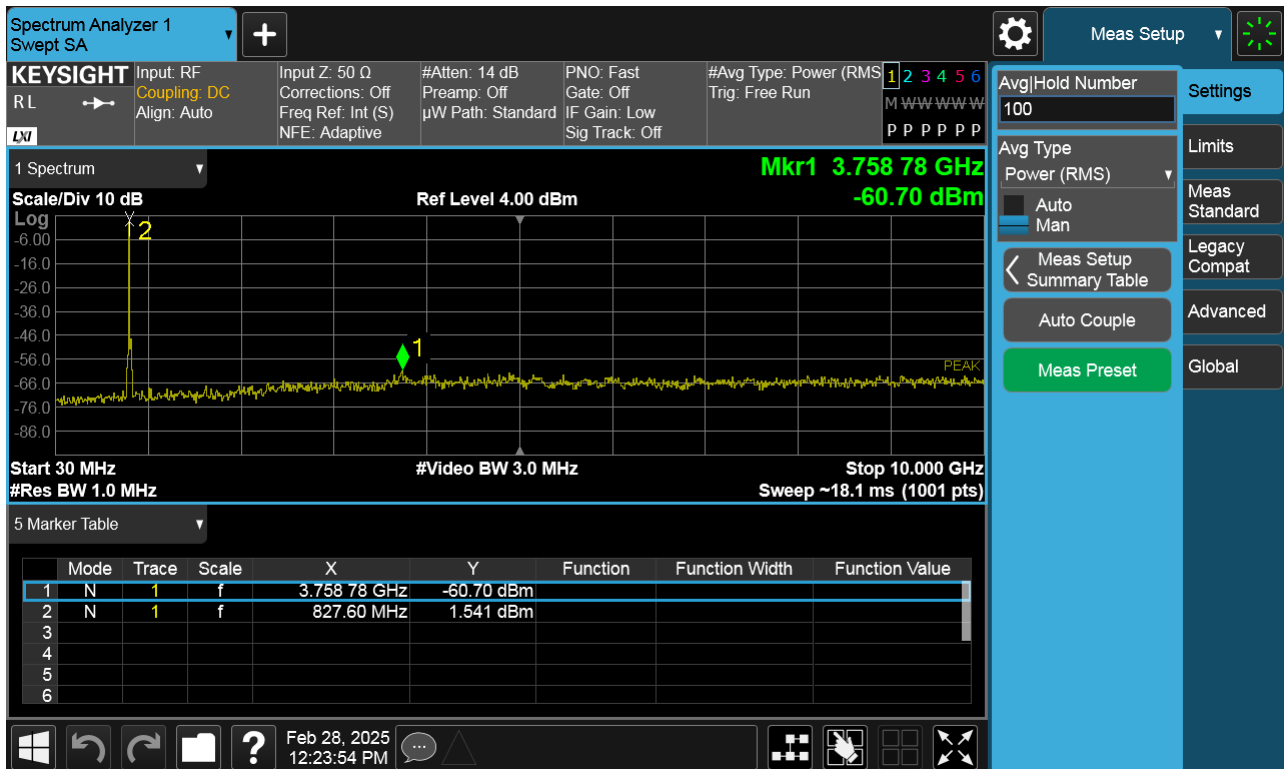
Conducted Spurious (166800ch_20 MHz_BPSK_RB 1_0)



Conducted Spurious (167300ch_20 MHz_BPSK_RB 1_0)

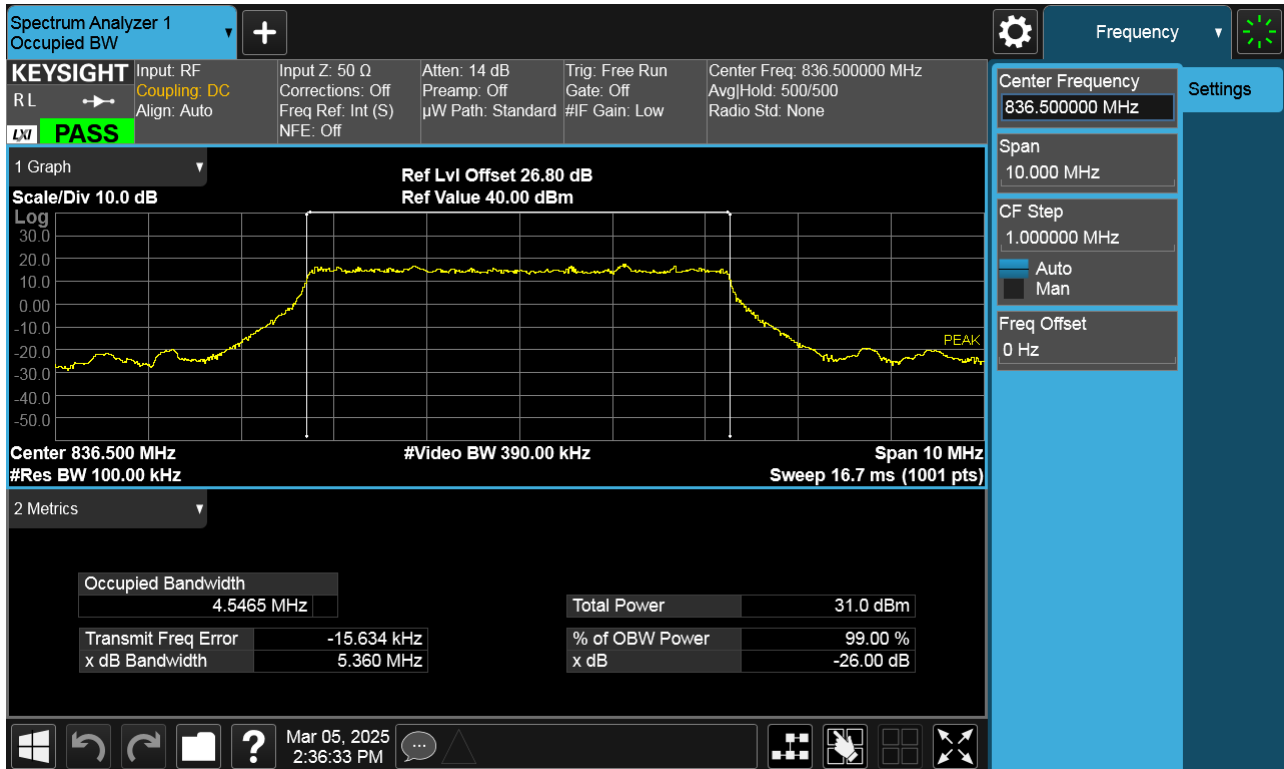


Conducted Spurious (167800ch_20 MHz_BPSK_RB 1_0)

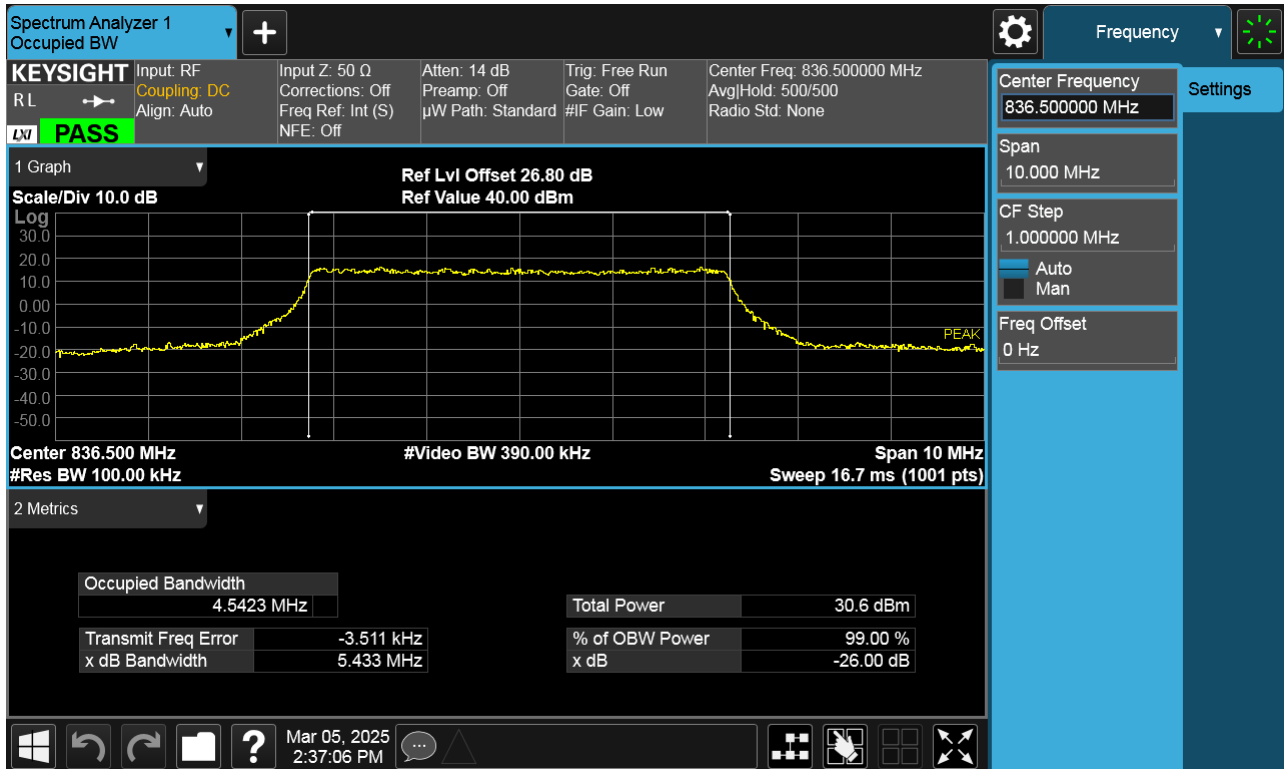


11. TEST PLOTS(Sub 1 ANT)

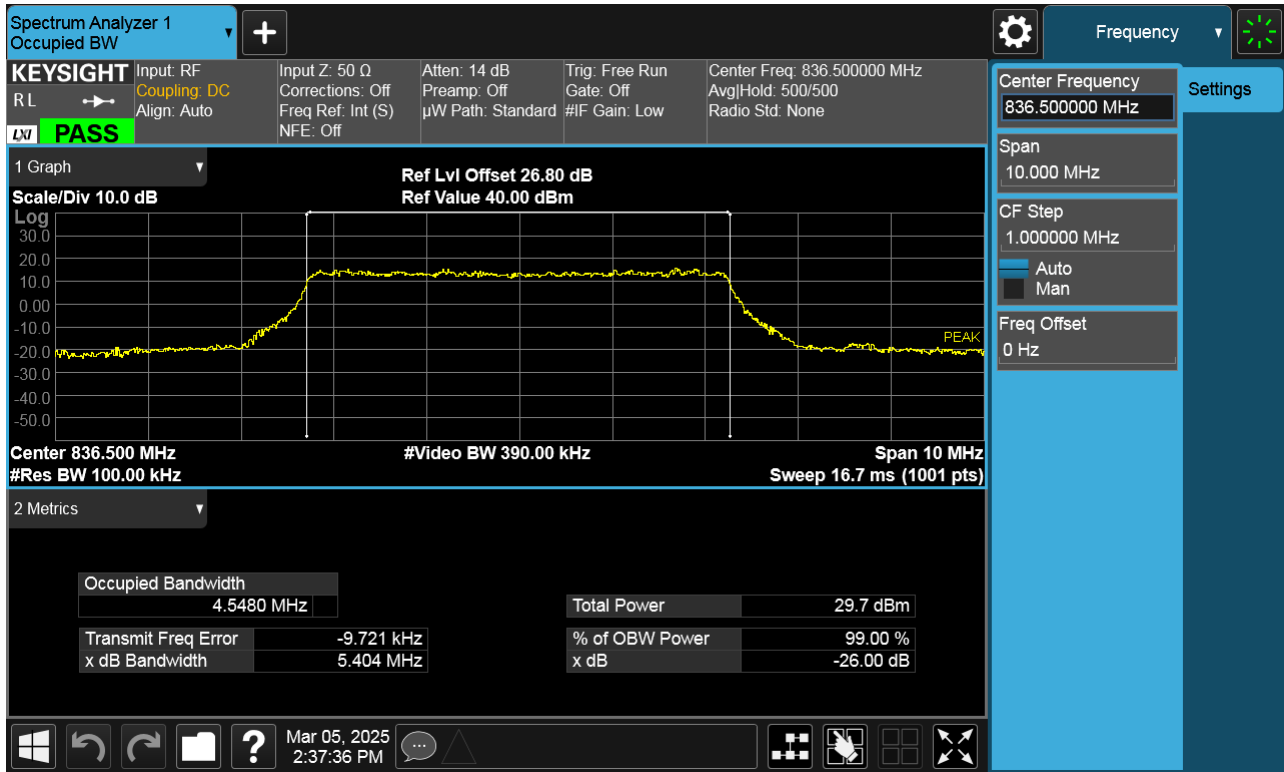
Occupied Bandwidth Plot (5 M BW Ch.167300 BPSK_RB 25_0)



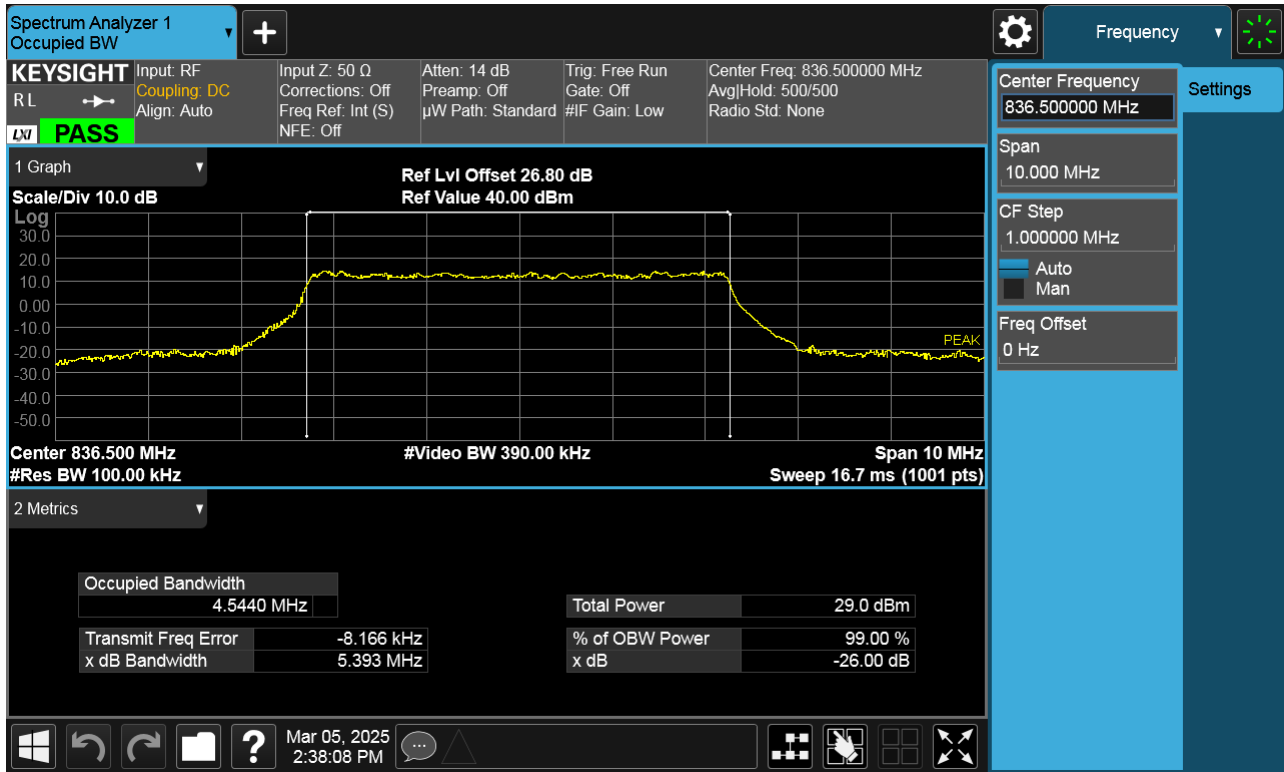
Occupied Bandwidth Plot (5 M BW Ch.167300 QPSK_RB 25_0)



Occupied Bandwidth Plot (5 M BW Ch.167300 16QAM_RB 25_0)



Occupied Bandwidth Plot (5 M BW Ch.167300 64QAM_RB 25_0)



Spectrum Analyzer 1
Occupied BW

KEYSIGHT Input: RF
RL Coupling: DC
Align: Auto

Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
NFE: Off

Atten: 14 dB
Preamp: Off
 μ W Path: Standard

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

Center Freq: 836.500000 MHz
Avg/Hold: 500/500
Radio Std: None

Center Frequency
836.500000 MHz

Span
10.000 MHz

CF Step
1.000000 MHz

☒ Auto
☐ Man

Freq Offset
0 Hz

Settings

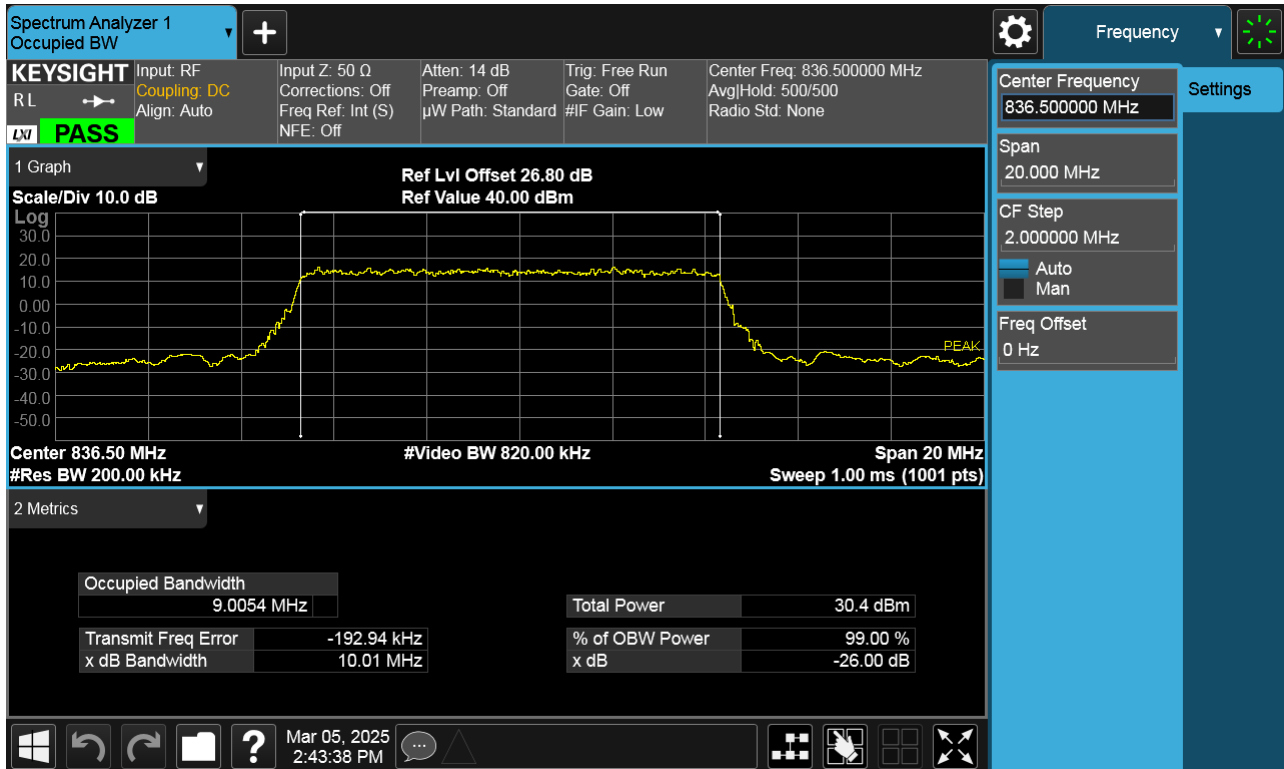
1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 26.80 dB
Ref Value 40.00 dBm

Center 836.500 MHz
#Res BW 100.00 kHz
#Video BW 390.00 kHz
Span 10 MHz
Sweep 16.7 ms (1001 pts)

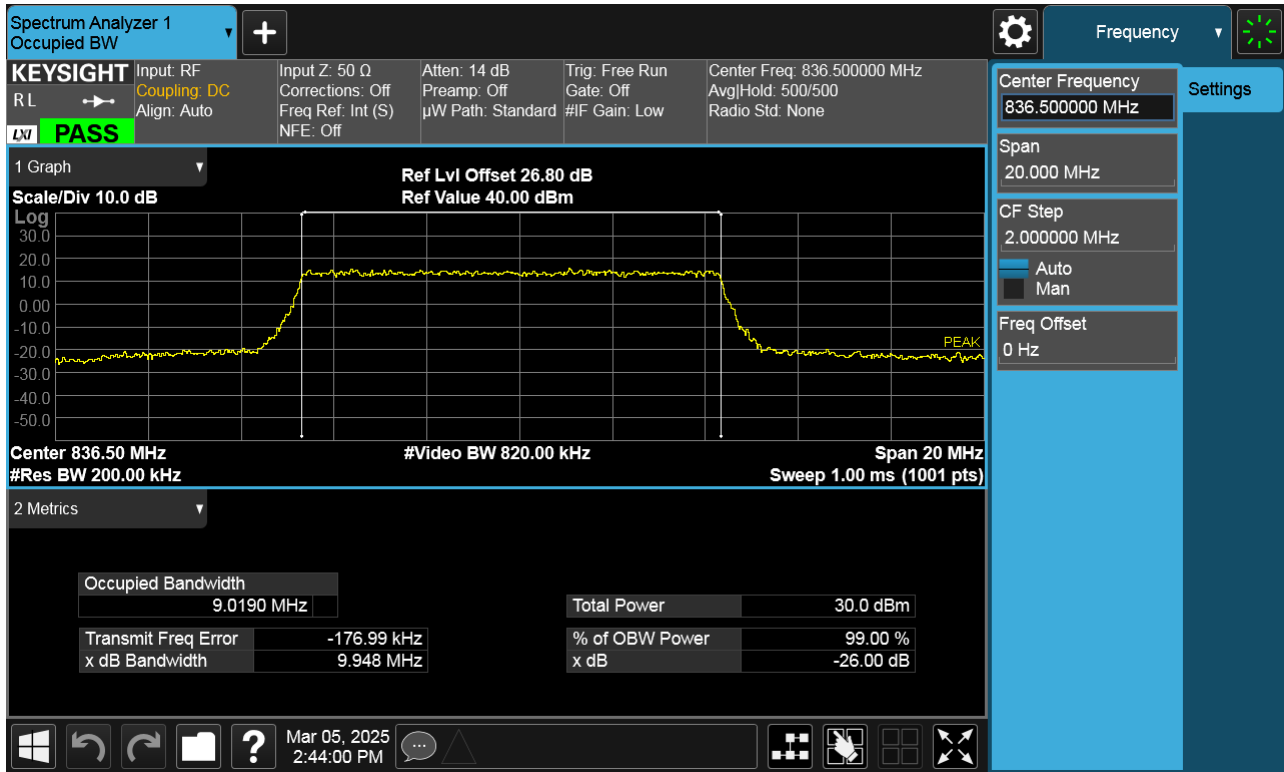
2 Metrics

Occupied Bandwidth	4.5179 MHz	Total Power	26.3 dBm
Transmit Freq Error	-6.065 kHz	% of OBW Power	99.00 %
x dB Bandwidth	5.357 MHz	x dB	-26.00 dB

Occupied Bandwidth Plot (10 M BW Ch.167300 BPSK_RB 50_0)



Occupied Bandwidth Plot (10 M BW Ch.167300 QPSK_RB 50_0)



Occupied Bandwidth Plot (10 M BW Ch.167300 16QAM_RB 50_0)

