TEST REPORT

FCC Sub6 n26(Part90) Test for TM19FNEUHD2
Class II Permissive Change

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2501-FC056

DATE OF ISSUE
January 23, 2025

Tested by
Jung Ki Lim

Technical Manager
Jong Seok Lee

Accredited by KOLAS, Republic of KOREA

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BongJai Huh / CEO

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Applicant	**LG Electronics Inc.** 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
Product Name Model Name	Telematics TM19FNEUHD2
Date of Test	January 02, 2025 ~ January 23, 2025
FCC ID	BEJTM19FNEUHD2
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	January 23, 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 This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA. (KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)

CONTENTS

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	LG Electronics Inc.
Address:	128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
FCC ID:	BEJTM19FNEUHD2
Application Type:	Class II Permissive Change
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	§ 90, § 22
EUT Type:	Telematics
Model(s):	TM19FNEUHD2
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:	January 02, 2025 ~ January 23, 2025
Serial number:	Radiated : Honda MY26 #22 Conducted : Honda MY26 #22

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	4M51G7D	PI/2 BPSK	0.213	23.28
		4M50G7D	QPSK	0.204	23.10
		4M50W7D	16QAM	0.156	21.93
		4M50W7D	64QAM	0.114	20.58
		4M50W7D	256QAM	0.075	18.73
Sub6 n26 (10)	819.0 – 824.0	8M99G7D	PI/2 BPSK	0.216	23.34
		8M97G7D	QPSK	0.207	23.16
		8M97W7D	16QAM	0.172	22.35
		8M99W7D	64QAM	0.118	20.70
		8M98W7D	256QAM	0.071	18.54
Sub6 n26 (15)	821.5 – 824.0	13M5G7D	PI/2 BPSK	0.202	23.05
		13M4G7D	QPSK	0.198	22.98
		13M4W7D	16QAM	0.177	22.47
		13M4W7D	64QAM	0.116	20.65
		13M4W7D	256QAM	0.076	18.78
Sub6 n26 (20)	824.0	17M9G7D	PI/2 BPSK	0.206	23.13
		17M9G7D	QPSK	0.199	22.98
		17M9W7D	16QAM	0.158	21.99
		17M9W7D	64QAM	0.120	20.81
		17M9W7D	256QAM	0.077	18.85

2. INTRODUCTION

2.1 DESCRIPTION OF EUT

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

2.2 MEASURING INSTRUMENT CALIBRATION

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

2.3 TEST FACILITY

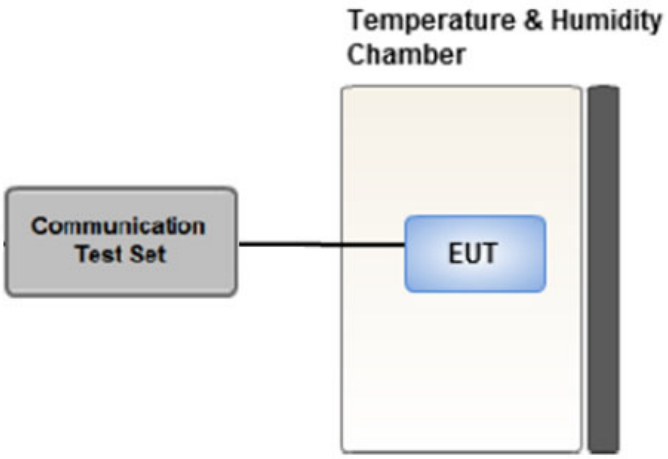
The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea**

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

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

3.2 CONDUCTED OUTPUT POWER



Test setup

Test Overview

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

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

3.3 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.
The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna.

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW, not to exceed 1 MHz
3. VBW ≥ 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;

$$P_{d\ (dBm)} = Pg_{\ (dBm)} - \text{cable loss}_{\ (dB)} + \text{antenna gain}_{\ (dB)}$$

   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 ≥ 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 10^{th} 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;

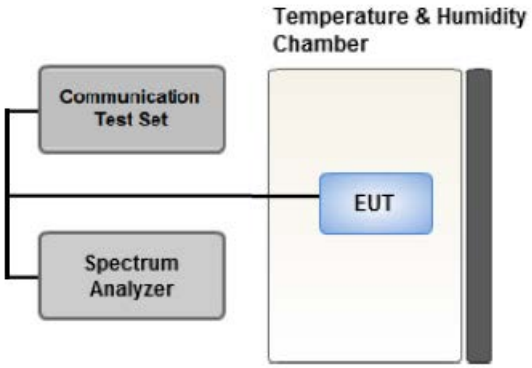
$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

   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.

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

3.5 OCCUPIED BANDWIDTH.



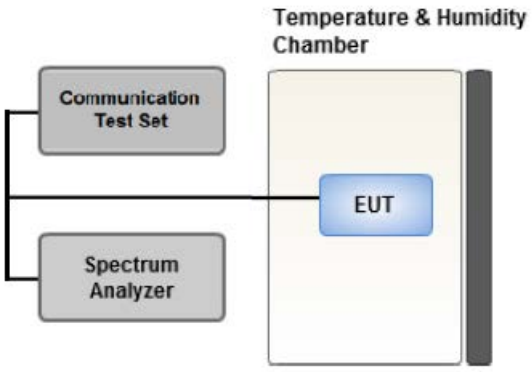
Test setup

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 ≥ 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

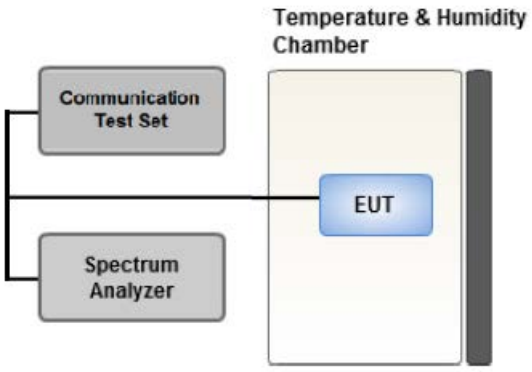
Test Overview

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 ≥ 3 MHz
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep time = auto
6. Number of points in sweep ≥ 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

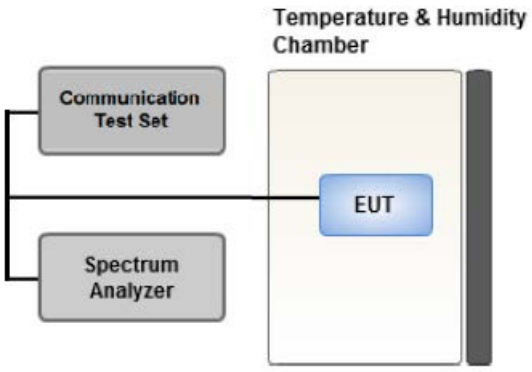
1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW :
   .- EA licensee's frequency block by up to and including 37.5 kHz : 300 Hz
   .- EA licensee's frequency block greater than 37.5 kHz : 100 kHz
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
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 MHz/ RB) or the emission is integrated over a 1 MHz bandwidth to determine the final result. When using the integration method the integration window is either centered on the emission or, for emissions at the band edge, centered by an offset of 500 kHz from the block edge so that the integration window is the 1 MHz adjacent to the block edge

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.
The frequency stability of the transmitter is measured by:

1. Temperature:
   The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.
2. Primary Supply Voltage:
   .- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
   .- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

Test Settings

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

3.9 WORST CASE(RADIATED TEST)

- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode : SA, NSA
  Worst case : SA
- All simultaneous transmission scenarios of operation were investigated, and the test results showed no additional significant emissions relative to the least restrictive limit were observed.
  Therefore, only the worst case(stand-alone) results were reported.
- 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 : 5, 20 MHz)
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
  All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
  The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data.

[Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Radiated Power	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	See Section 8.2		Y
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 8.3		Y

3.10 WORST CASE(CONDUCTED TEST)

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

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth	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
		5	Low, High	Full RB	0
		10, 15, 20	Mid	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK,	5	Low, High	1	1
		10, 15, 20	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	04/27/2025	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/06/2027	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/09/2025	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/24/2025	Biennial
RF Switching System	FBSR-06B (1G HPF + LNA)	T&M SYSTEM	F3L1	05/14/2025	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/14/2025	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/14/2025	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/14/2025	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/07/2025	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/26/2025	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/22/2025	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	02/29/2025	Annual
Chamber	SU-642	ESPEC	93008124	02/19/2025	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/04/2025	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/17/2025	Annual
Spectrum Analyzer (10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/13/2025	Annual
Signal & Spectrum Analyzer (2 Hz~67 GHz)	FSW67	REOHDE & SCHWARZ	101736	23/05/2025	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/05/2025	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/16/2025	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/14/2025	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/17/2025	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/10/2025	Annual
SIGNAL GENERATOR (100 kHz ~ 40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/26/2025	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 (±kHz)
Occupied Bandwidth	95 (Confidence level about 95 %, k=2)
Frequency stability	28 (Confidence level about 95 %, k=2)

Parameter	Expanded Uncertainty (±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)	5.70 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.52 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.66 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.58 (Confidence level about 95 %, k=2)

6. SUMMARY OF TEST RESULTS

6.1 Test Condition: Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§ 2.1049	N/A	PASS
Channel Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 90.691	< 50 + 10log10 (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 + 10log10 (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

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

6.2 Test Condition: Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Effective Radiated Power	§ 22.913(a)(5)	< 7 Watts max. ERP (Only 15 MHz B.W)	PASS
Radiated Spurious and Harmonic Emissions	§ 2.1053, § 90.691 § 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

ERP = Substitute LEVEL(dBm) + Ant. Gain – 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

EIRP = Substitute LEVEL(dBm) + Ant. Gain – 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	23.05	0.202	23.28	0.213	23.14	0.206	100
		1	13	22.84	0.192	22.98	0.199	22.92	0.196	100
		1	23	22.91	0.196	23.05	0.202	22.89	0.194	100
		12	0	22.44	0.175	22.30	0.170	22.42	0.175	100
		12	7	22.81	0.191	22.96	0.198	22.80	0.191	100
		12	13	22.41	0.174	22.35	0.172	22.27	0.169	100
		25	0	22.38	0.173	22.36	0.172	22.45	0.176	100
	QPSK	1	1	22.94	0.197	23.10	0.204	23.04	0.201	100
		1	13	22.72	0.187	22.88	0.194	23.02	0.200	100
		1	23	22.98	0.199	22.73	0.188	23.09	0.204	100
		12	0	22.06	0.161	21.89	0.155	21.84	0.153	100
		12	7	22.81	0.191	23.05	0.202	22.79	0.190	100
		12	13	21.87	0.154	21.87	0.154	21.77	0.150	100
		25	0	21.90	0.155	21.93	0.156	21.89	0.155	100
	16QAM	1	1	21.93	0.156	21.65	0.146	21.76	0.150	100
	64QAM	1	1	20.00	0.100	20.58	0.114	20.06	0.101	100
	256QAM	1	1	18.73	0.075	17.88	0.061	18.50	0.071	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	23.34	0.216	23.31	0.214	100
		1	26	23.24	0.211	23.08	0.203	100
		1	50	23.33	0.215	22.97	0.198	100
		25	0	22.27	0.169	22.48	0.177	100
		25	14	22.88	0.194	22.79	0.190	100
		25	27	22.35	0.172	22.35	0.172	100
		50	0	22.37	0.173	22.32	0.170	100
	QPSK	1	1	23.08	0.203	23.05	0.202	100
		1	26	22.86	0.193	23.16	0.207	100
		1	50	23.00	0.199	23.02	0.200	100
		25	0	21.95	0.157	21.95	0.157	100
		25	14	22.86	0.193	22.89	0.194	100
		25	27	21.89	0.154	21.88	0.154	100
		50	0	21.90	0.155	21.92	0.156	100
	16QAM	1	1	22.35	0.172	22.04	0.160	100
	64QAM	1	1	20.57	0.114	20.70	0.118	100
	256QAM	1	1	18.54	0.071	18.42	0.070	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	23.05	0.202	23.04	0.201	100
		1	40	22.53	0.179	22.69	0.186	100
		1	77	22.70	0.186	22.72	0.187	100
		36	0	22.45	0.176	22.43	0.175	100
		36	22	22.94	0.197	22.96	0.198	100
		36	43	22.48	0.177	22.43	0.175	100
		75	0	22.43	0.175	22.51	0.178	100
	QPSK	1	1	22.89	0.194	22.97	0.198	100
		1	40	22.67	0.185	22.86	0.193	100
		1	77	22.76	0.189	22.95	0.197	100
		36	0	21.95	0.157	22.04	0.160	100
		36	22	22.88	0.194	22.98	0.198	100
		36	43	21.98	0.158	22.09	0.162	100
		75	0	21.96	0.157	21.99	0.158	100
	16QAM	1	1	22.16	0.164	22.47	0.177	100
	64QAM	1	1	20.65	0.116	20.43	0.110	100
	256QAM	1	1	18.78	0.076	18.38	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	23.13	0.206	100
		1	53	22.69	0.186	100
		1	104	22.70	0.186	100
		50	0	22.38	0.173	100
		50	28	22.97	0.198	100
		50	56	22.59	0.182	100
		100	0	22.45	0.176	100
	QPSK	1	1	22.95	0.197	100
		1	53	22.98	0.199	100
		1	104	22.71	0.187	100
		50	0	22.03	0.160	100
		50	28	22.91	0.195	100
		50	56	21.98	0.158	100
		100	0	22.00	0.158	100
	16QAM	1	1	21.99	0.158	100
	64QAM	1	1	20.81	0.120	100
	256QAM	1	1	18.85	0.077	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	-27.30	33.12	-10.00	1.44	H	< 7.00	0.147	21.68	1	1
		QPSK	-27.35	33.07	-10.00	1.44	H		0.146	21.63		
		16-QAM	-28.35	32.07	-10.00	1.44	H		0.116	20.63		
		64-QAM	-29.80	30.62	-10.00	1.44	H		0.083	19.18		
		256-QAM	-31.79	28.63	-10.00	1.44	H		0.052	17.19		
821.5		PI/2 BPSK	-27.60	32.84	-10.00	1.44	H		0.138	21.40	1	1
		QPSK	-27.62	32.82	-10.00	1.44	H		0.137	21.38		
		16-QAM	-28.62	31.82	-10.00	1.44	H		0.109	20.38		
		64-QAM	-30.09	30.35	-10.00	1.44	H		0.078	18.91		
		256-QAM	-32.08	11.44	-10.00	1.44	H		0.049	16.92		
824.0		PI/2 BPSK	-27.75	32.41	-10.00	1.44	H		0.125	20.97	1	1
		QPSK	-27.85	32.31	-10.00	1.44	H		0.122	20.87		
		16-QAM	-28.74	31.42	-10.00	1.44	H		0.100	19.98		
		64-QAM	-30.23	29.93	-10.00	1.44	H		0.071	18.49		
		256-QAM	-32.18	27.98	-10.00	1.44	H		0.045	16.54		

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	-27.31	33.09	-10.00	1.44	H	< 7.00	0.146	21.65	1	1
		QPSK	-27.42	32.98	-10.00	1.44	H		0.143	21.54		
		16-QAM	-28.34	32.06	-10.00	1.44	H		0.115	20.62		
		64-QAM	-29.82	30.58	-10.00	1.44	H		0.082	19.14		
		256-QAM	-31.92	28.48	-10.00	1.44	H		0.051	17.04		
824.0		PI/2 BPSK	-27.38	32.78	-10.00	1.44	H		0.136	21.34	1	1
		QPSK	-27.46	32.70	-10.00	1.44	H		0.134	21.26		
		16-QAM	-28.43	31.73	-10.00	1.44	H		0.107	20.29		
		64-QAM	-29.91	30.25	-10.00	1.44	H		0.076	18.81		
		256-QAM	-31.94	28.22	-10.00	1.44	H		0.048	16.78		

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	-27.03	33.26	-10.00	1.44	H	< 7.00	0.152	21.82	1	1
		QPSK	-27.11	33.18	-10.00	1.44	H		0.149	21.74		
		16-QAM	-28.08	32.21	-10.00	1.44	H		0.119	20.77		
		64-QAM	-29.53	30.76	-10.00	1.44	H		0.086	19.32		
		256-QAM	-31.48	28.81	-10.00	1.44	H		0.055	17.37		
824.0		PI/2 BPSK	-27.21	32.95	-10.00	1.44	H		0.142	21.51	1	1
		QPSK	-27.30	32.86	-10.00	1.44	H		0.139	21.42		
		16-QAM	-28.30	31.86	-10.00	1.44	H		0.110	20.42		
		64-QAM	-29.76	30.40	-10.00	1.44	H		0.079	18.96		
		256-QAM	-31.72	28.44	-10.00	1.44	H		0.050	17.00		

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	-27.01	33.51	-10.00	1.44	H	< 7.00	0.161	22.07	1	1
		QPSK	-27.07	33.45	-10.00	1.44	H		0.159	22.01		
		16-QAM	-28.06	32.46	-10.00	1.44	H		0.127	21.02		
		64-QAM	-29.54	30.98	-10.00	1.44	H		0.090	19.54		
		256-QAM	-31.50	29.02	-10.00	1.44	H		0.057	17.58		

8.3 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N26

▣ Bandwidth: 5 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
163300 (816.5)	1 633.00	-23.02	9.37	-31.39	1.98	H	-24.00	-13.00	1	1
	2 449.50	-53.32	10.93	-57.85	2.53	H	-49.45	-13.00		
	3 266.00	-59.16	11.45	-60.67	2.95	V	-52.17	-13.00		
164300 (821.5)	1 643.00	-24.40	9.43	-33.22	2.00	H	-25.79	-13.00	1	1
	2 464.50	-55.62	10.84	-60.26	2.59	H	-52.01	-13.00		
	3 286.00	-60.44	11.58	-62.32	2.95	H	-53.69	-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	-23.67	9.46	-32.65	2.02	H	-25.21	-13.00	1	1
	2 472.00	-51.32	10.80	-55.81	2.59	V	-47.60	-13.00		
	3 296.00	-60.28	11.62	-62.48	2.95	H	-53.81	-13.00		

8.4 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	4.5056
			QPSK			4.5034
			16QAM			4.4998
			64QAM			4.5008
			256QAM			4.5010
	10 MHz	819.0	BPSK	50		8.9880
			QPSK			8.9660
			16QAM			8.9694
			64QAM			8.9899
			256QAM			8.9760
	15 MHz	## 821.5	BPSK	75		13.474
			QPSK			13.433
			16QAM			13.423
			64QAM			13.439
			256QAM			13.433
	20 MHz	## 824.0	BPSK	100		17.883
			QPSK			17.910
			16QAM			17.891
			64QAM			17.864
			256QAM			17.908

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 42 ~ 61.
2. ##: Straddle Channel
3. Straddle channel does not exceed the Part22 and Part90 limits.

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)
26	5	816.5	4.1077	30.200	-62.648	-32.448	-13.00
		821.5	8.2154	30.815	-63.519	-32.704	
		** 824.0	3.7887	30.200	-62.095	-31.895	
	10	819.0	8.8535	30.815	-62.930	-32.115	
		** 824.0	5.2244	30.815	-62.923	-32.108	
	15	** 821.5	6.0419	30.815	-62.559	-31.744	
		** 824.0	4.9652	30.200	-63.450	-33.250	
	20	** 824.0	4.0579	30.200	-62.360	-32.160	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 88~ 95.
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

5. ##: Straddle Channel
6. Straddle channel does not exceed the Part22 and Part90 limit

8.6 CHANNEL EDGE (Part90)

- Test Channel : 164800(824.0MHz)
- Plots of the EUT's Band Edge are shown Page 62 ~ 77.

8.7 BAND EDGE(Part22)

- Test Channel : 164800(824.0 MHz)
- Plots of the EUT's Band Edge are shown Page 78 ~ 87.

8.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 5 MHz

▣ Voltage(100 %): 13.200 VDC

▣ Batt. Endpoint: 6.000 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
821.5	100 %	+20(Ref)	821 499 998	0.0	0.000 000	0.000
	100 %	-30	821 499 996	-1.7	0.000 000	-0.002
	100 %	-20	821 499 996	-1.8	0.000 000	-0.002
	100 %	-10	821 499 996	-1.8	0.000 000	-0.002
	100 %	0	821 499 996	-2.0	0.000 000	-0.002
	100 %	+10	821 499 996	-2.3	0.000 000	-0.003
	100 %	+30	821 499 995	-2.5	0.000 000	-0.003
	100 %	+40	821 499 995	-2.7	0.000 000	-0.003
	100 %	+50	821 499 995	-3.1	0.000 000	-0.004
	Batt. Endpoint	+20	821 499 994	-3.8	0.000 000	-0.005

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 13.200 VDC

▣ Batt. Endpoint: 6.000 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
819.0	100 %	+20(Ref)	819 000 003	0.0	0.000 000	0.000
	100 %	-30	819 000 006	2.6	0.000 000	0.003
	100 %	-20	819 000 006	2.5	0.000 000	0.003
	100 %	-10	819 000 014	11.0	0.000 001	0.013
	100 %	0	819 000 005	1.6	0.000 000	0.002
	100 %	+10	819 000 004	0.5	0.000 000	0.001
	100 %	+30	819 000 011	7.3	0.000 001	0.009
	100 %	+40	819 000 012	8.3	0.000 001	0.010
	100 %	+50	819 000 010	7.1	0.000 001	0.009
	Batt. Endpoint	+20	819 000 009	6.2	0.000 001	0.008

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 13.200 VDC

▣ Batt. Endpoint: 6.000 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
** 821.5	100 %	+20(Ref)	821 500 003	0.0	0.000 000	0.000
	100 %	-30	821 500 006	3.3	0.000 000	0.004
	100 %	-20	821 500 007	3.7	0.000 000	0.005
	100 %	-10	821 500 007	4.0	0.000 000	0.005
	100 %	0	821 500 007	3.5	0.000 000	0.004
	100 %	+10	821 500 006	2.9	0.000 000	0.004
	100 %	+30	821 500 006	2.9	0.000 000	0.004
	100 %	+40	821 500 006	2.4	0.000 000	0.003
	100 %	+50	821 500 005	2.2	0.000 000	0.003
	Batt. Endpoint	+20	821 500 005	1.5	0.000 000	0.002

Note:

1. ##: Straddle Channel

2. Straddle channel does not exceed the Part22 and Part90 limits.

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 13.200 VDC

▣ Batt. Endpoint: 6.000 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy	Voltage	Temp.	Frequency	Frequency Error	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	(Hz)	(%)	
** 824.0	100 %	+20(Ref)	824 000 004	0.0	0.000 000	0.000
	100 %	-30	824 000 008	3.6	0.000 000	0.004
	100 %	-20	824 000 007	3.2	0.000 000	0.004
	100 %	-10	824 000 007	3.4	0.000 000	0.004
	100 %	0	824 000 007	3.0	0.000 000	0.004
	100 %	+10	824 000 007	2.6	0.000 000	0.003
	100 %	+30	824 000 006	1.8	0.000 000	0.002
	100 %	+40	824 000 006	1.6	0.000 000	0.002
	100 %	+50	824 000 005	1.1	0.000 000	0.001
	Batt. Endpoint	+20	824 000 005	0.8	0.000 000	0.001

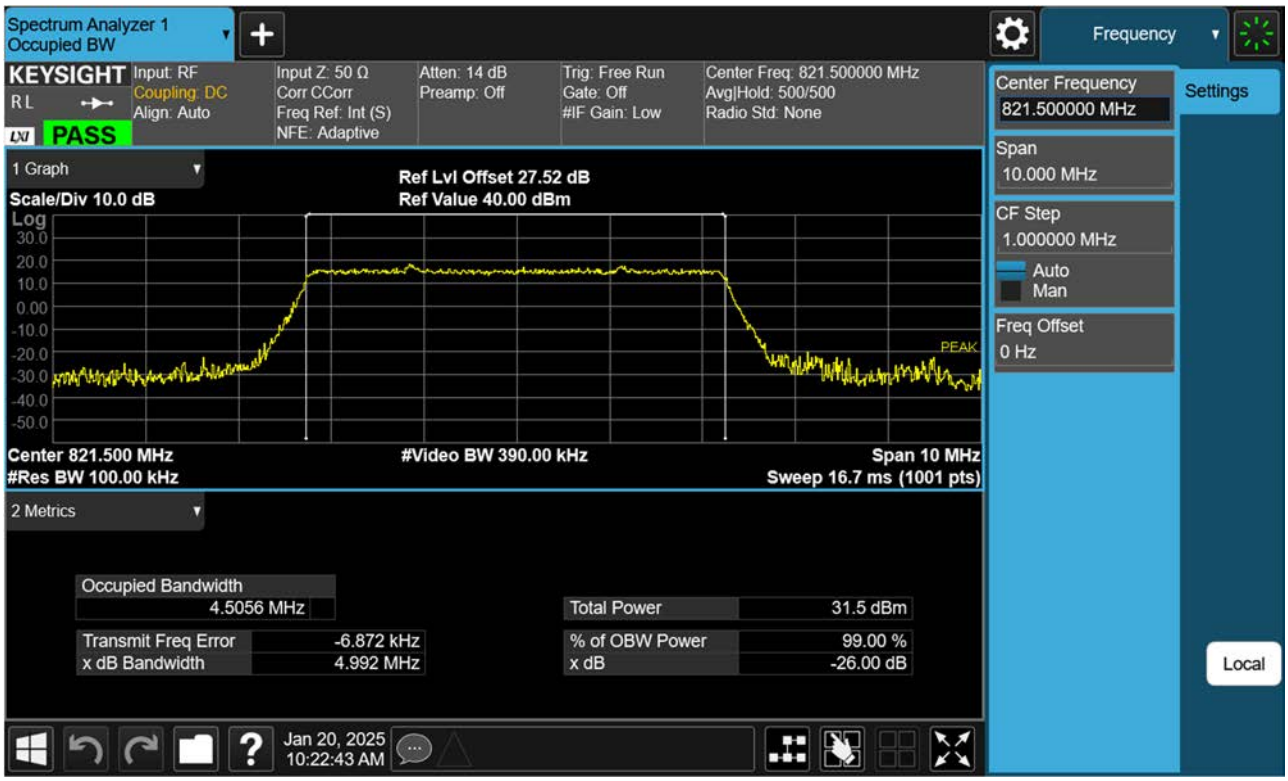
Note:

1. ##: Straddle Channel

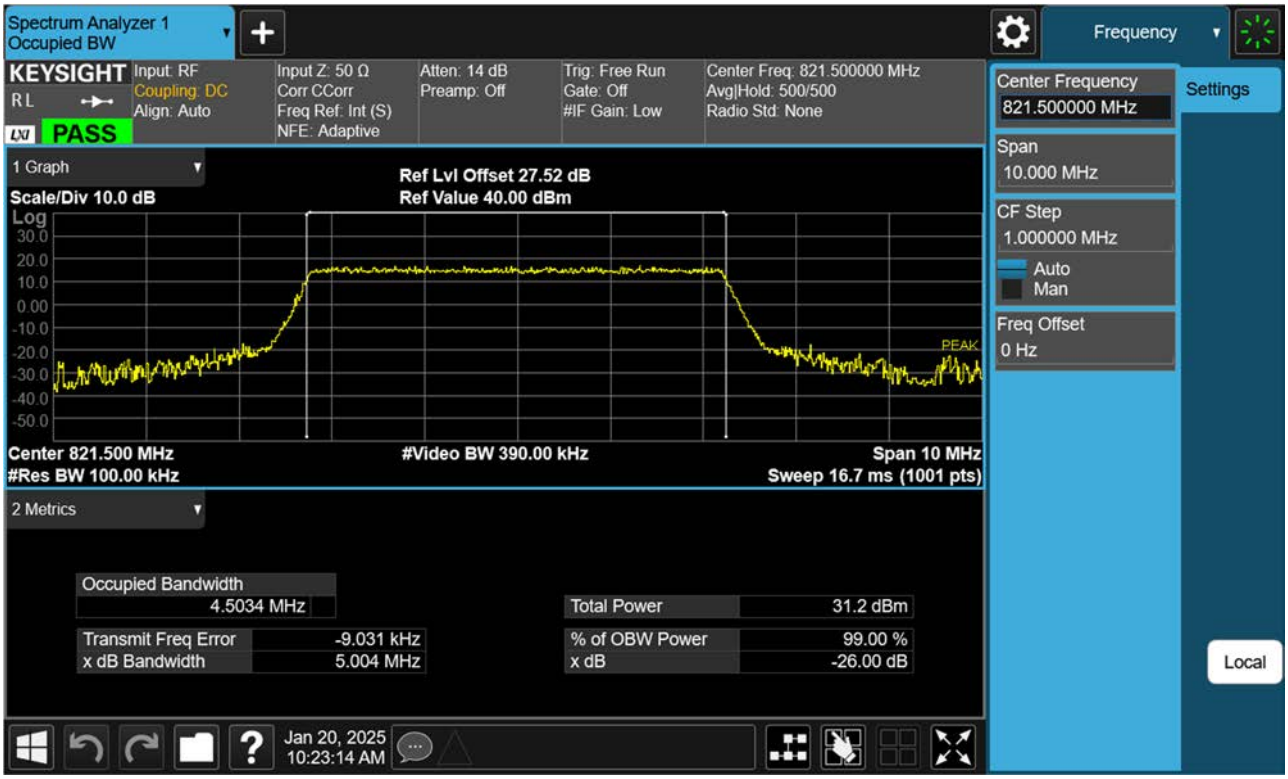
2. Straddle channel does not exceed the Part22 and Part90 limits.

9. TEST PLOTS

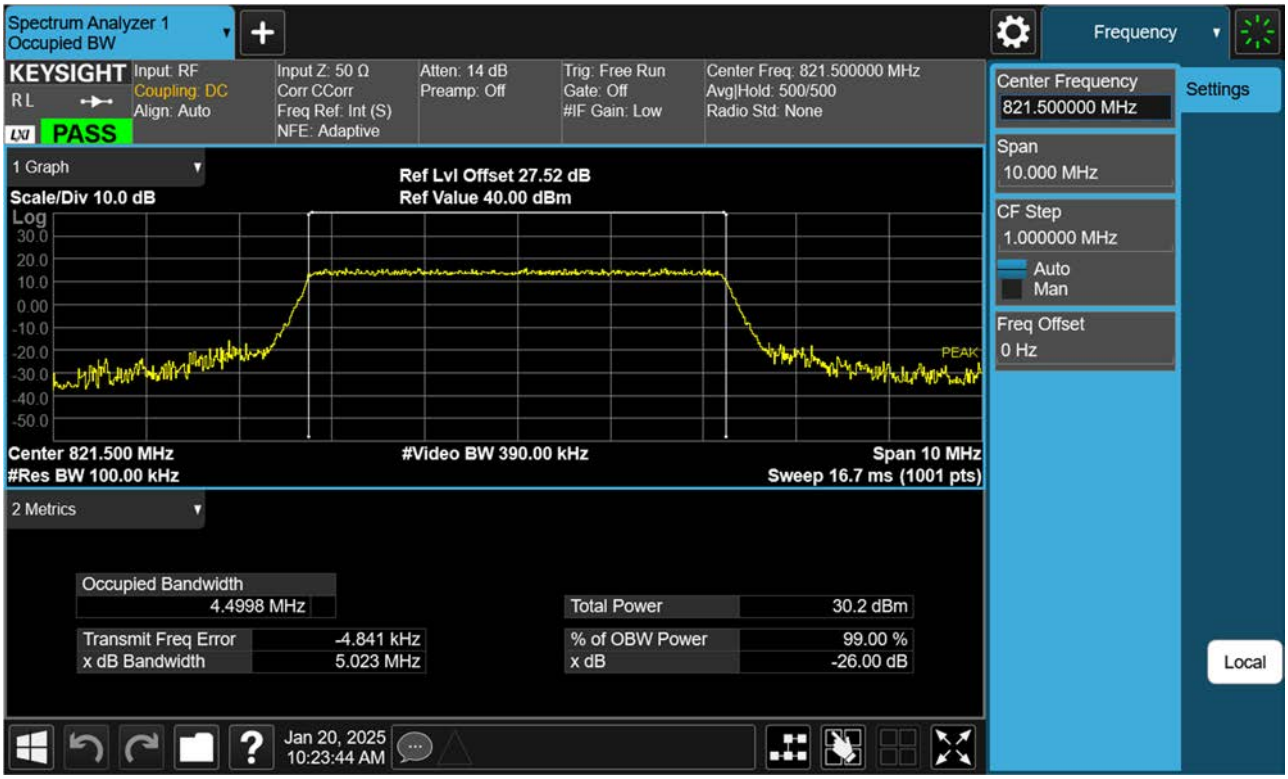
Sub6 n26. Occupied Bandwidth Plot (5 M BW Ch.164300 BPSK RB 25_0)



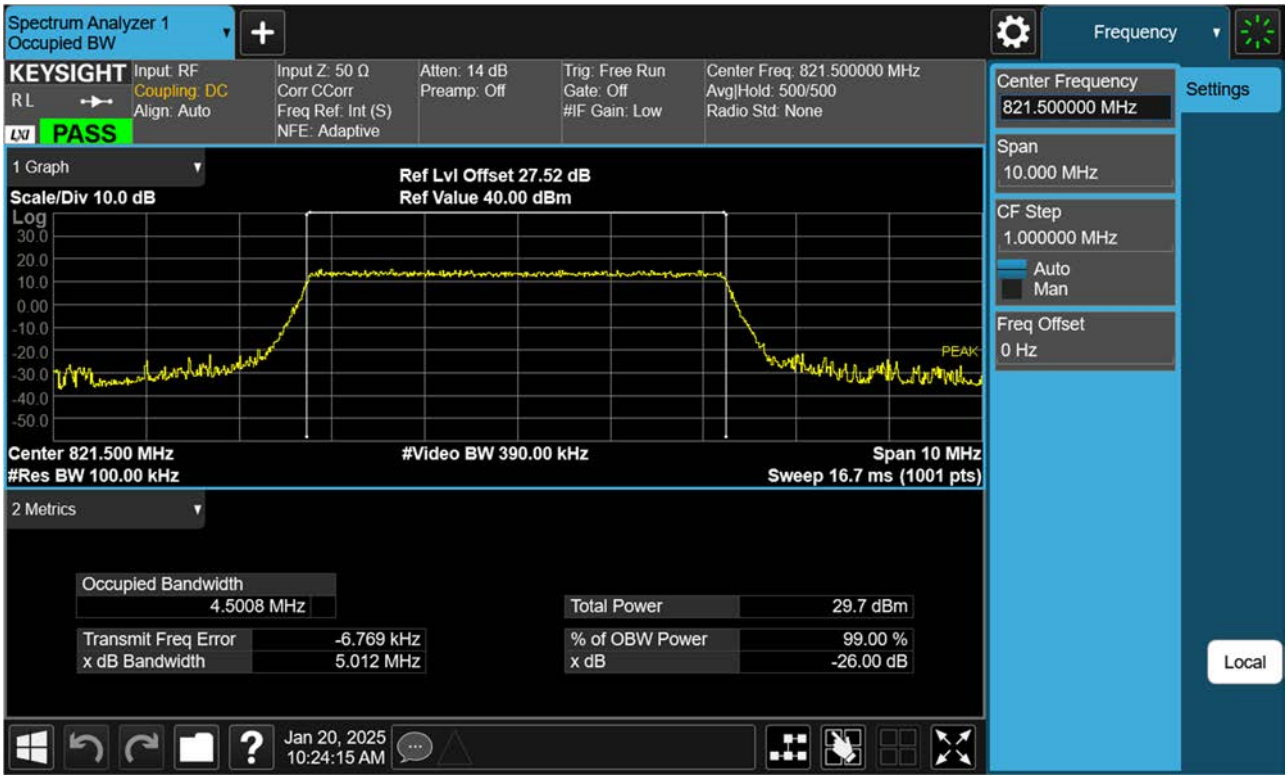
Sub6 n26. Occupied Bandwidth Plot (5 M BW Ch.164300 QPSK RB 25_0)



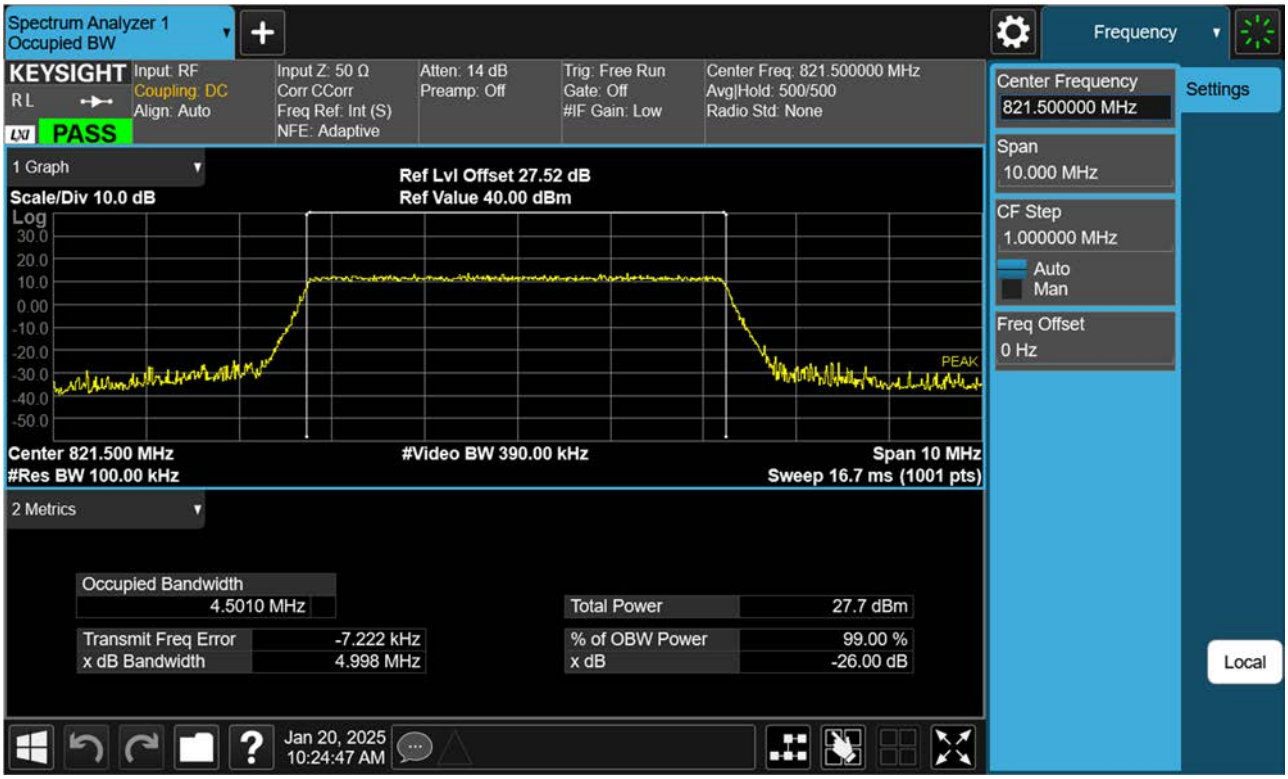
Sub6 n26. Occupied Bandwidth Plot (5 M BW Ch.164300 16QAM RB 25_0)



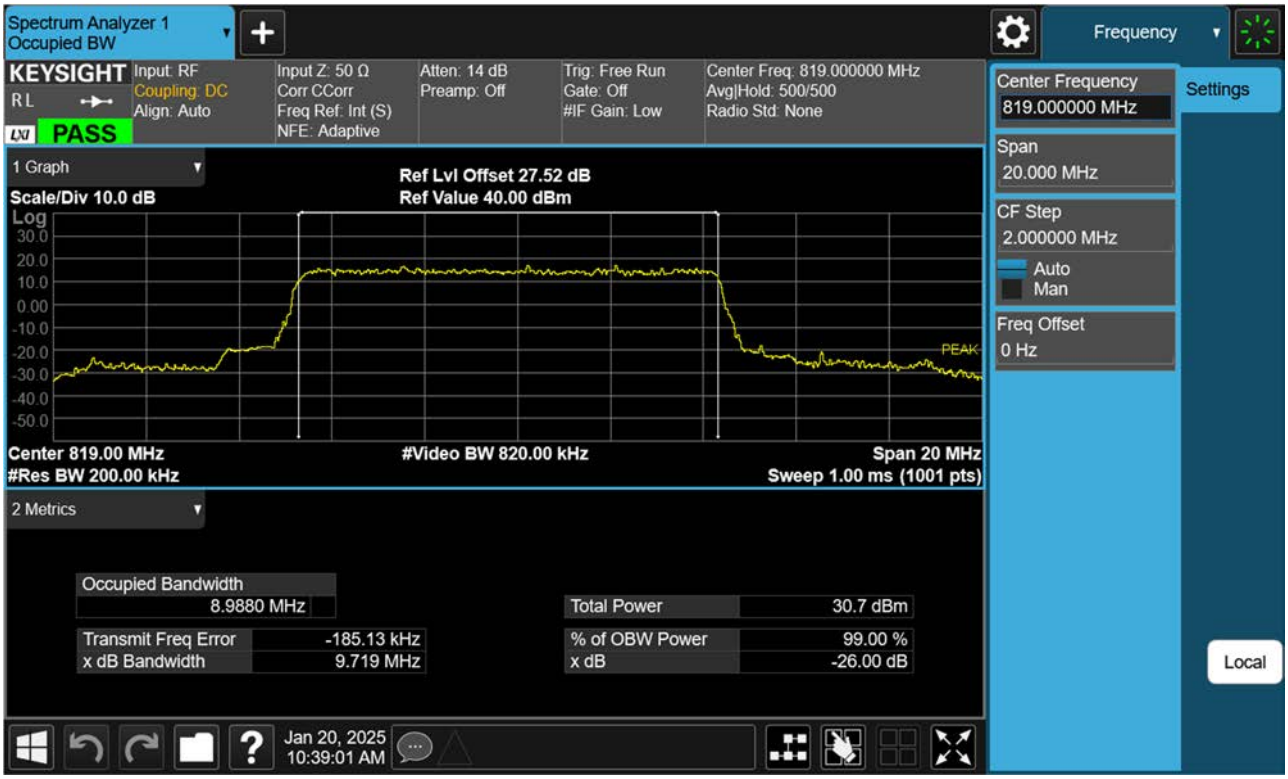
Sub6 n26. Occupied Bandwidth Plot (5 M BW Ch.164300 64QAM RB 25_0)



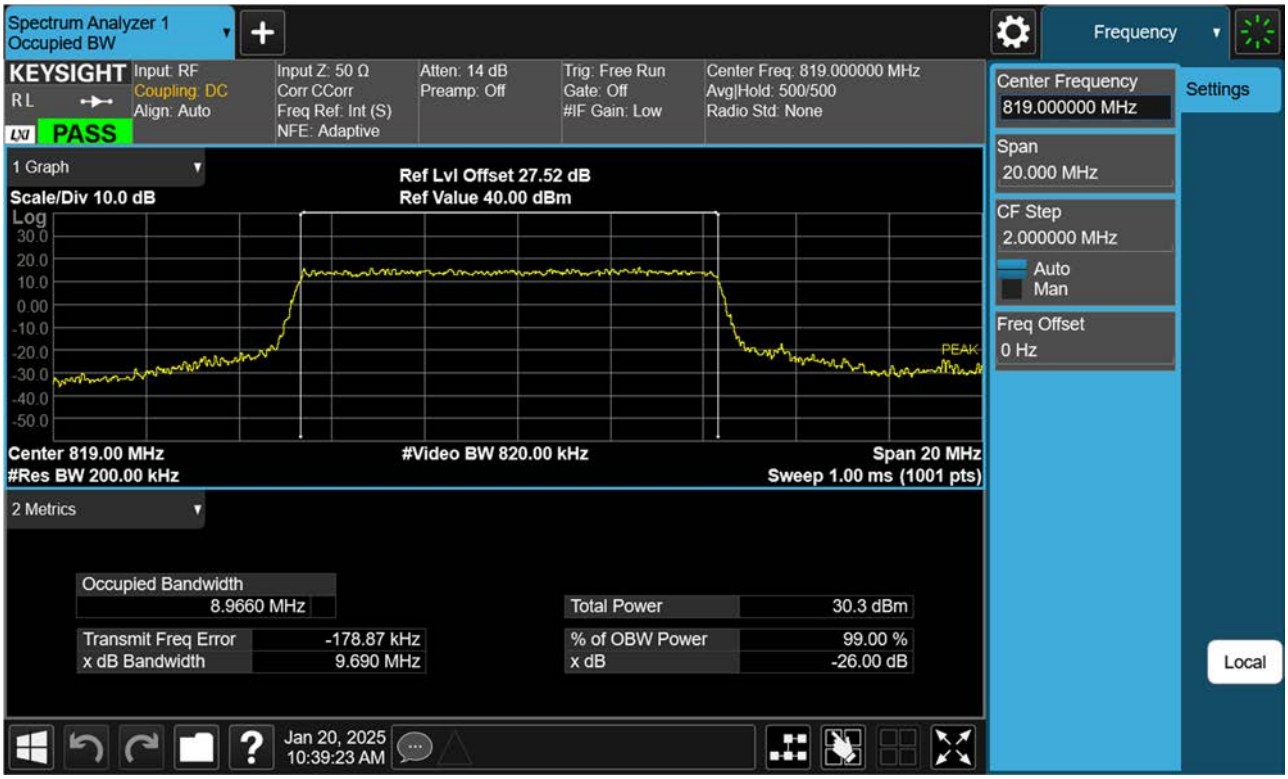
Sub6 n26. Occupied Bandwidth Plot (5 M BW Ch.164300 256QAM RB 25_0)



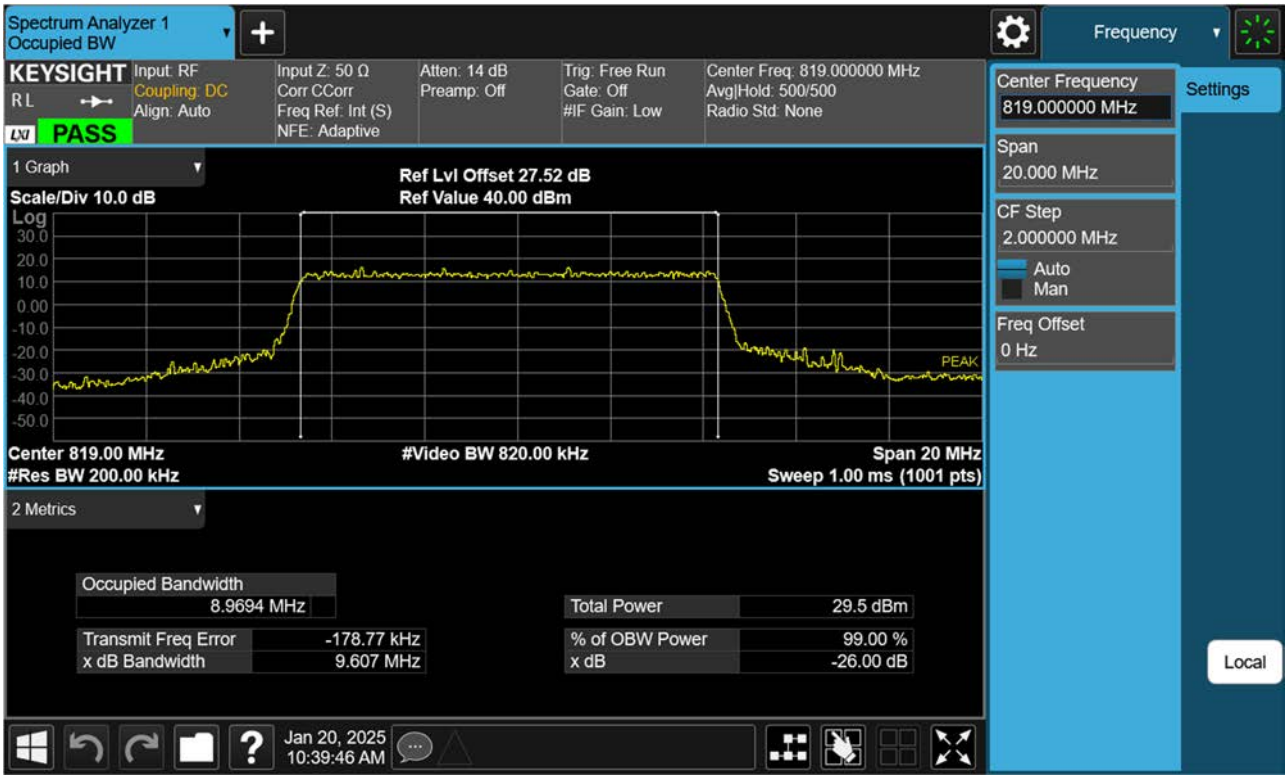
Sub6 n26. Occupied Bandwidth Plot (10 M BW Ch.163800 BPSK RB 50_0)



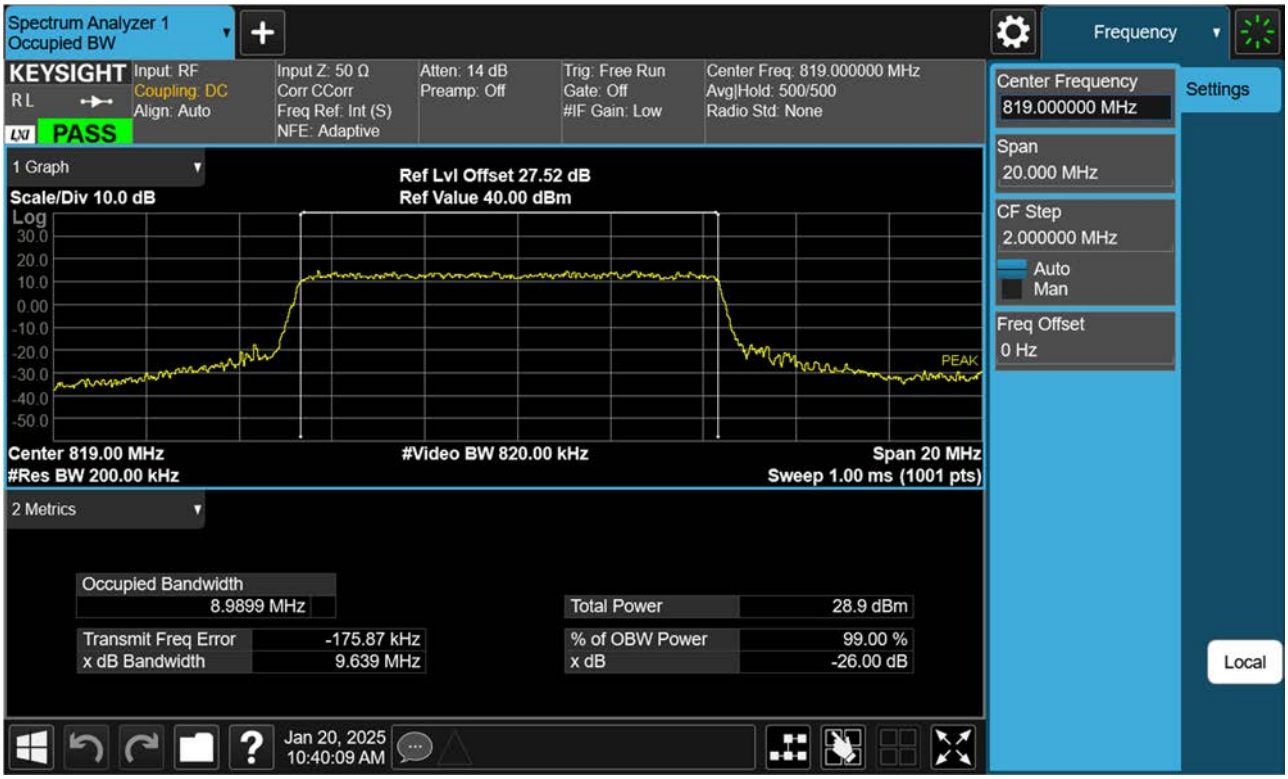
Sub6 n26. Occupied Bandwidth Plot (10 M BW Ch.163800 QPSK RB 50_0)



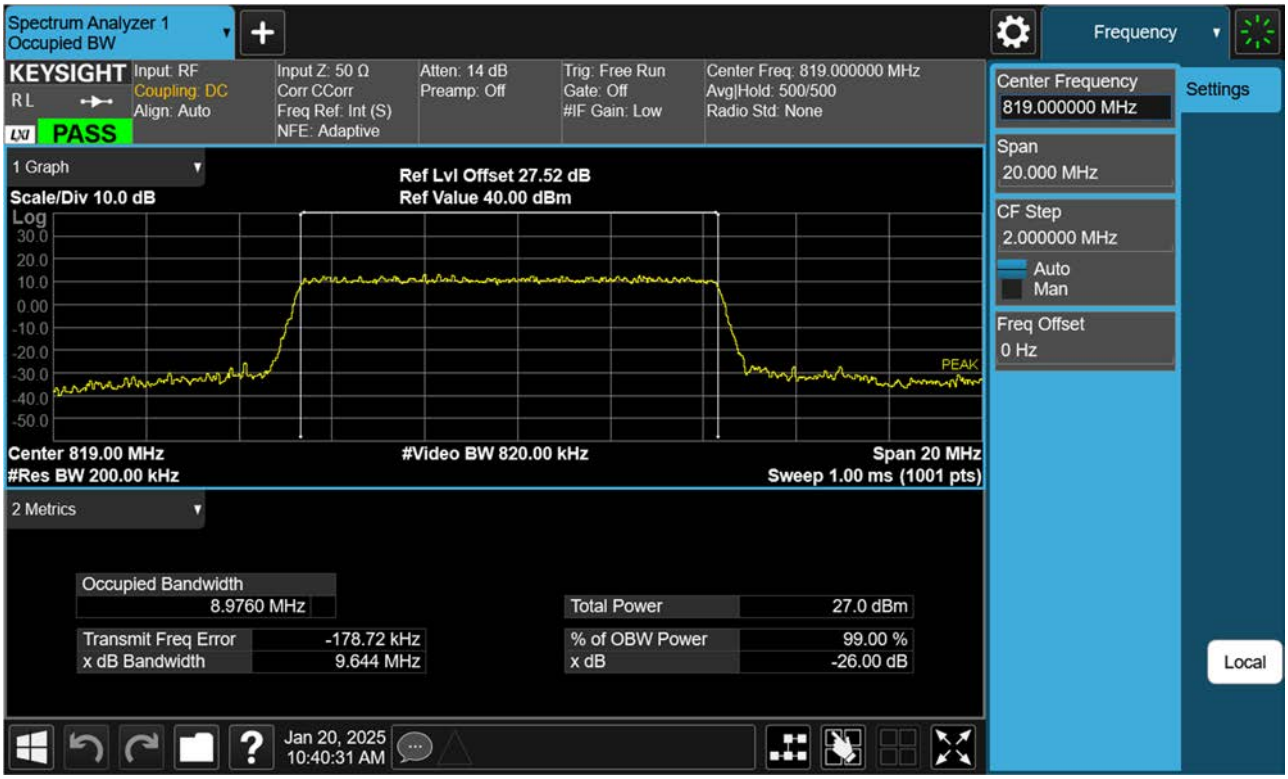
Sub6 n26. Occupied Bandwidth Plot (10 M BW Ch.163800 16QAM RB 50_0)



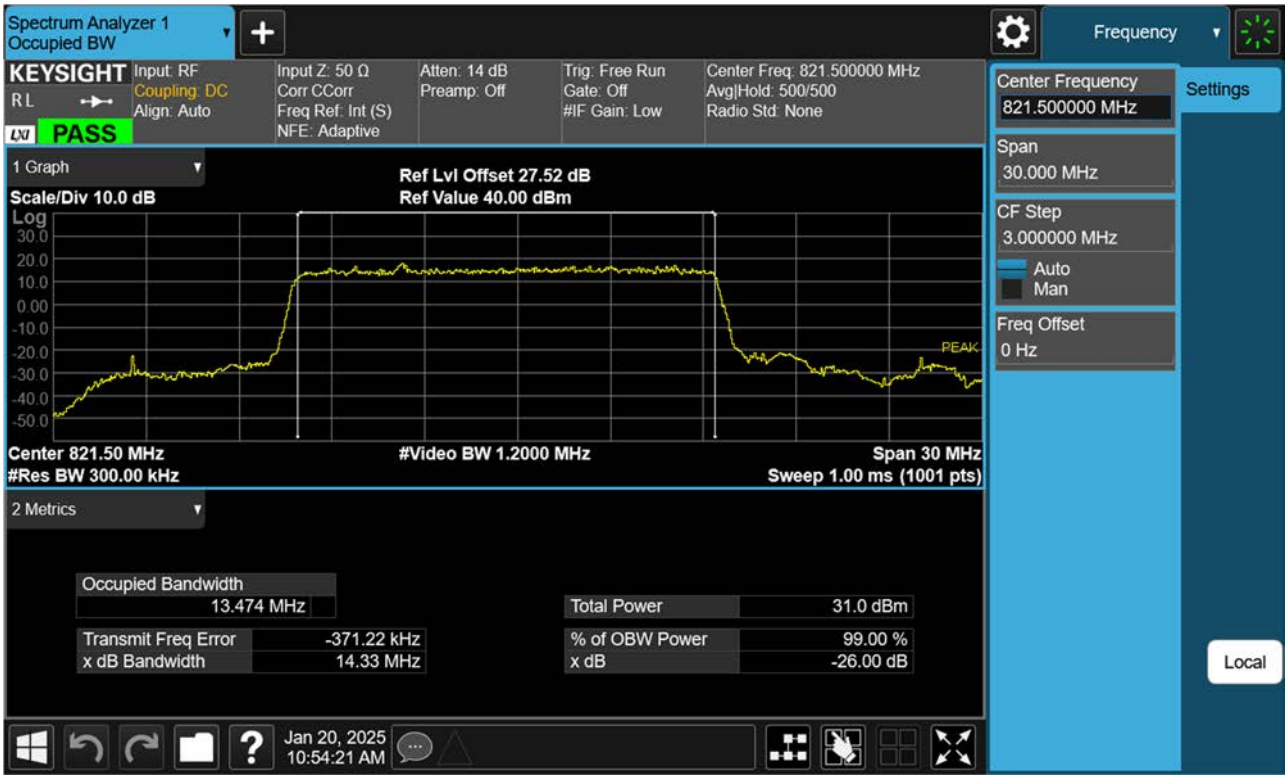
Sub6 n26. Occupied Bandwidth Plot (10 M BW Ch.163800 64QAM RB 50_0)



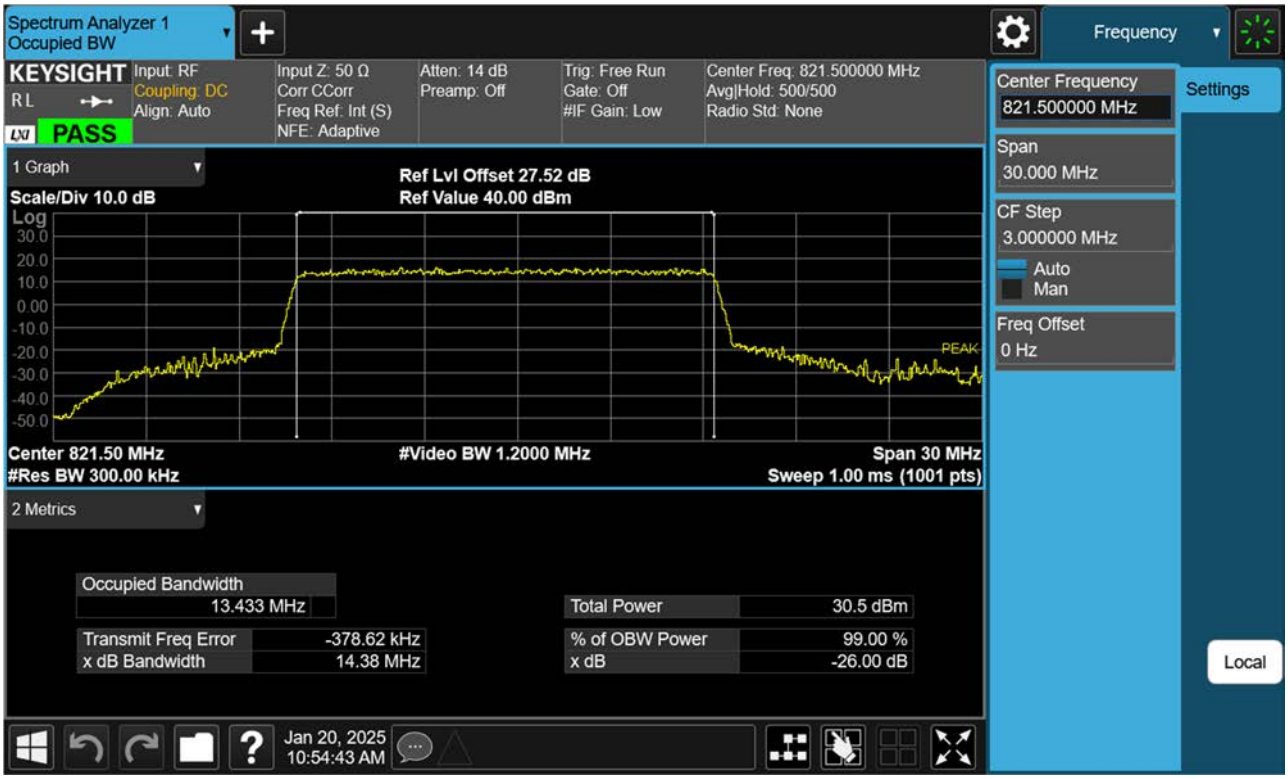
Sub6 n26. Occupied Bandwidth Plot (10 M BW Ch.163800 256QAM RB 50_0)



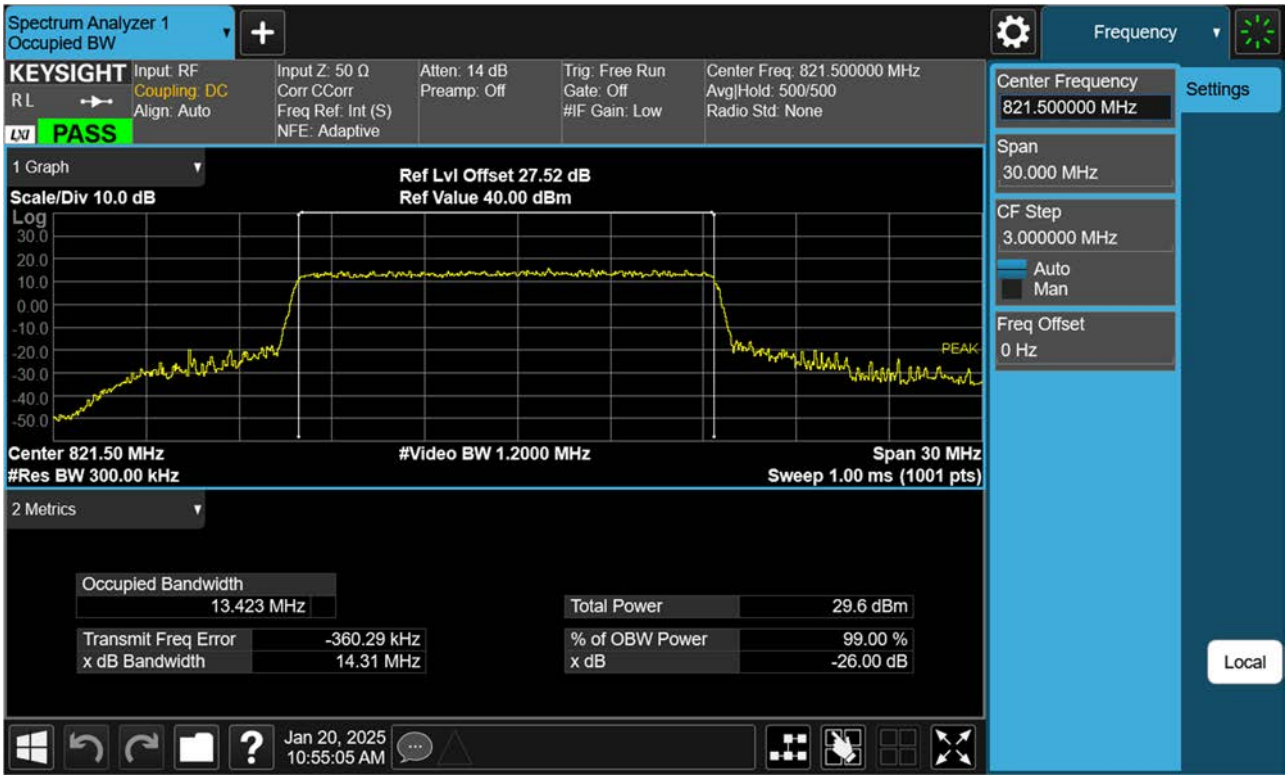
Sub6 n26. Occupied Bandwidth Plot (15 M BW Ch.164300 BPSK RB 75_0)



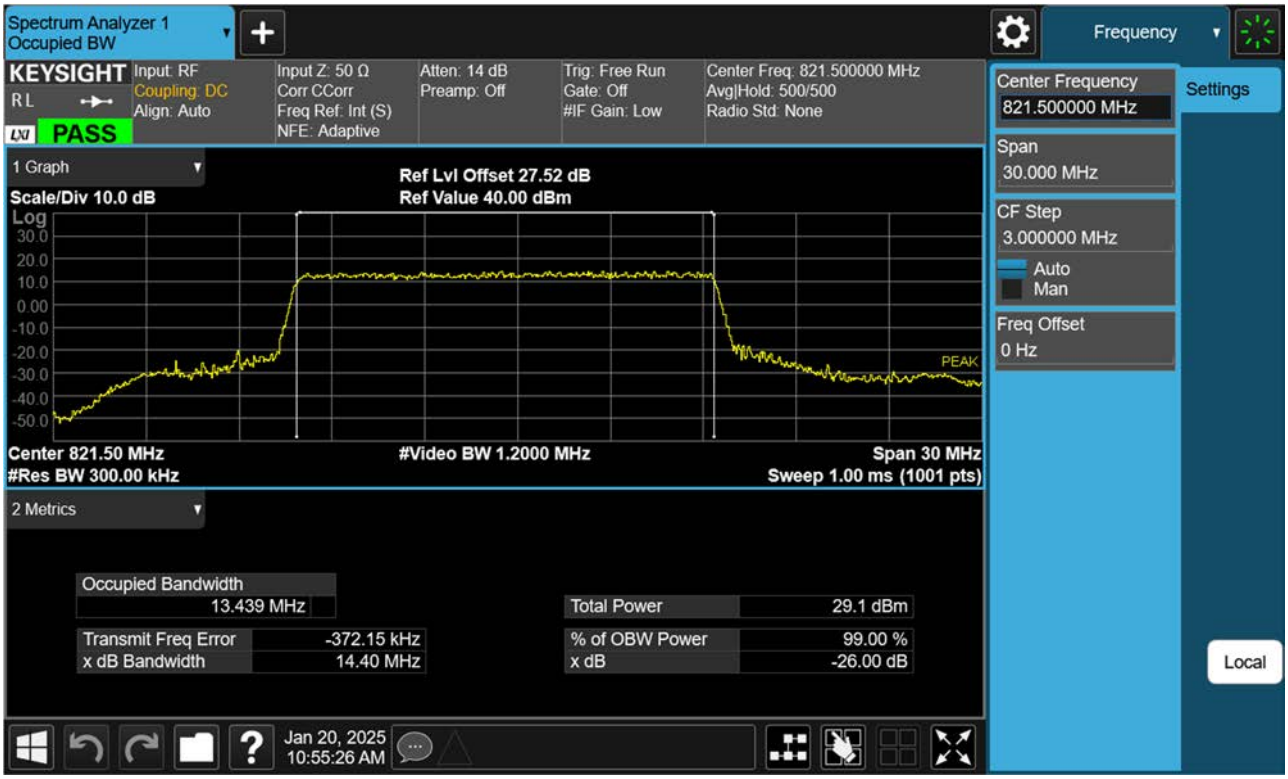
Sub6 n26. Occupied Bandwidth Plot (15 M BW Ch.164300 QPSK RB 75_0)



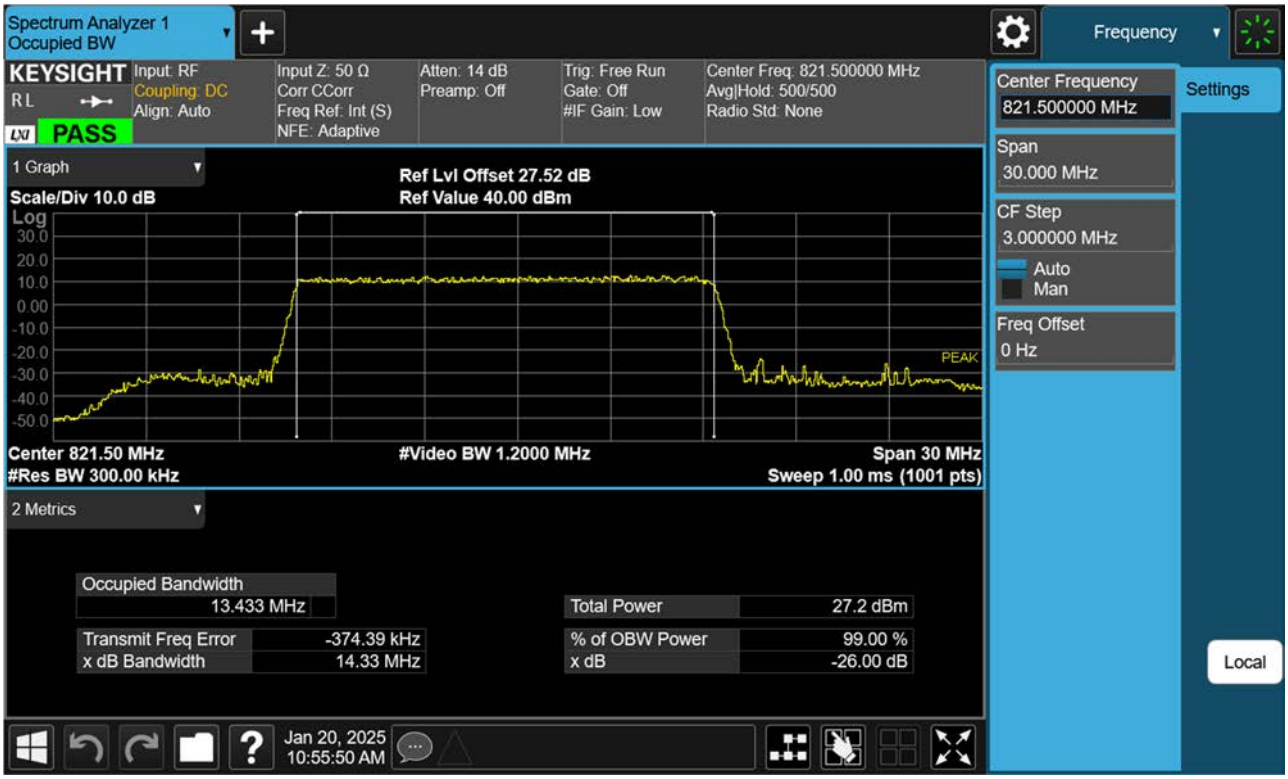
Sub6 n26. Occupied Bandwidth Plot (15 M BW Ch.164300 16QAM RB 75_0)



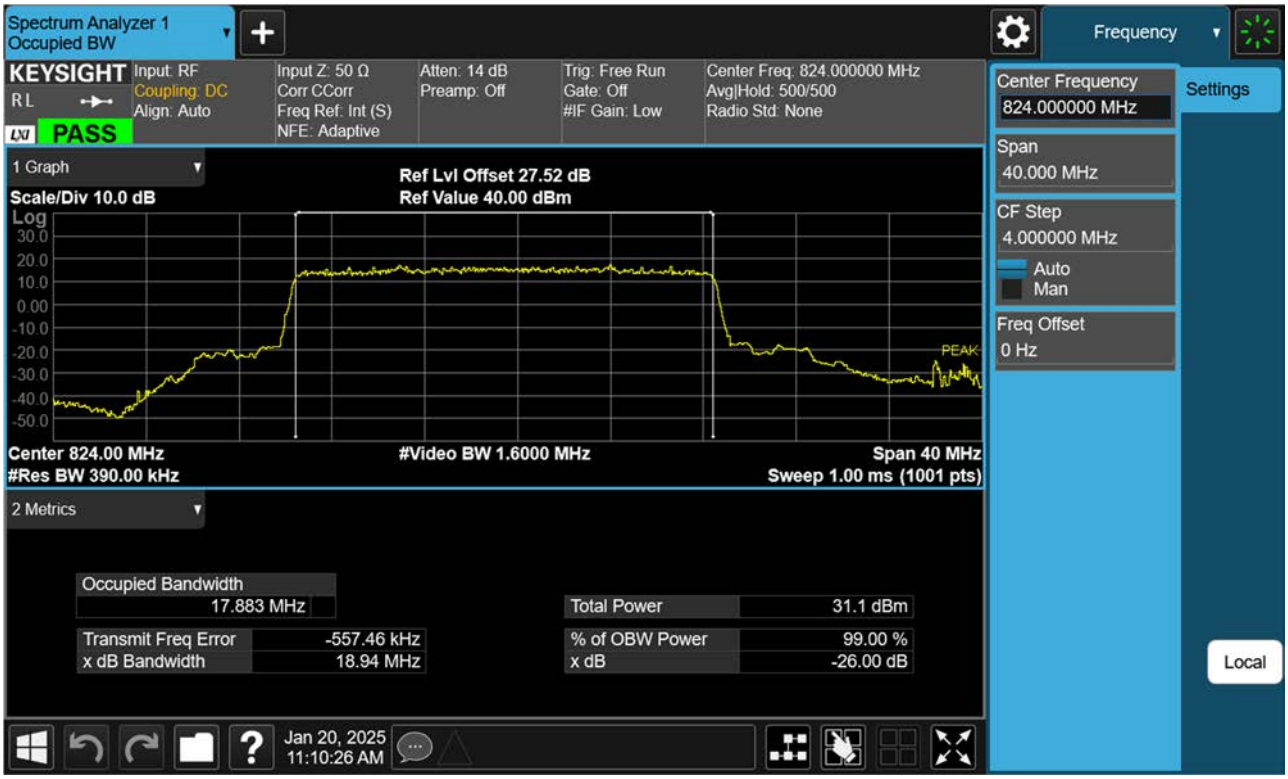
Sub6 n26. Occupied Bandwidth Plot (15 M BW Ch.164300 64QAM RB 75_0)



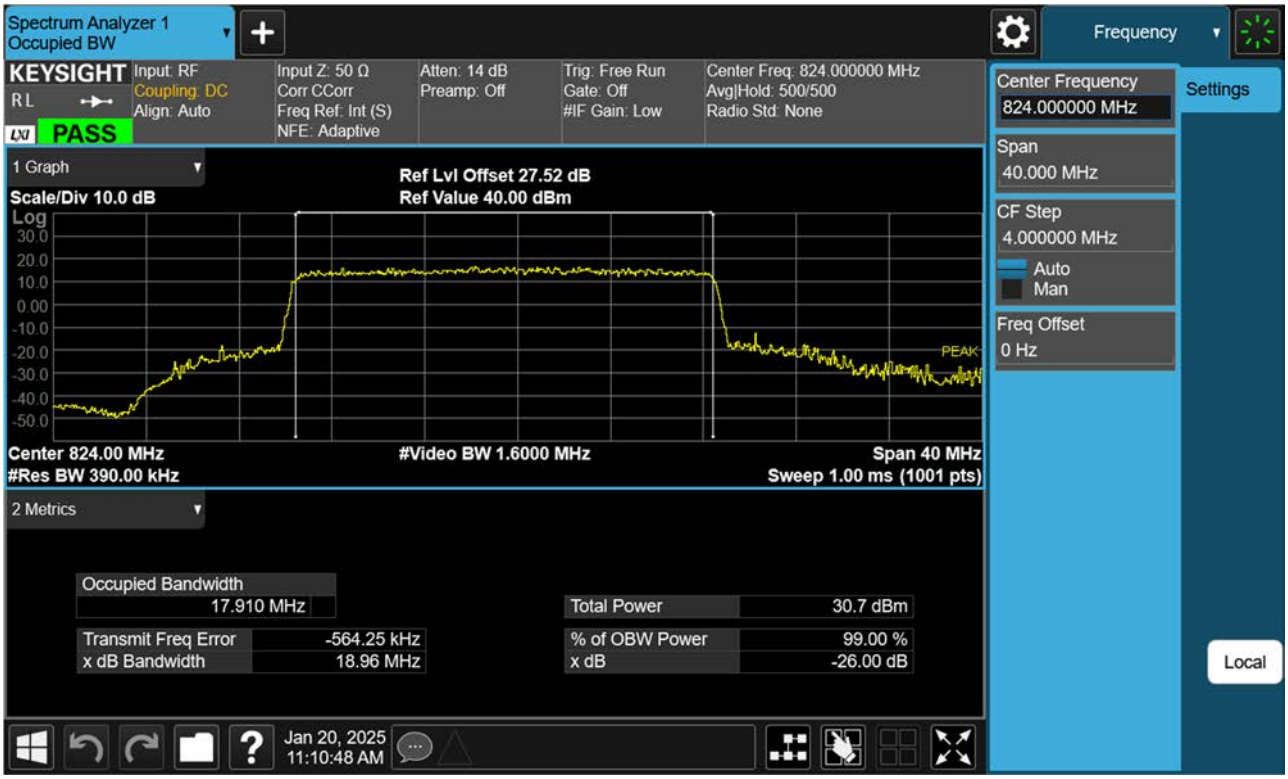
Sub6 n26. Occupied Bandwidth Plot (15 M BW Ch.164300 256QAM RB 100_0)



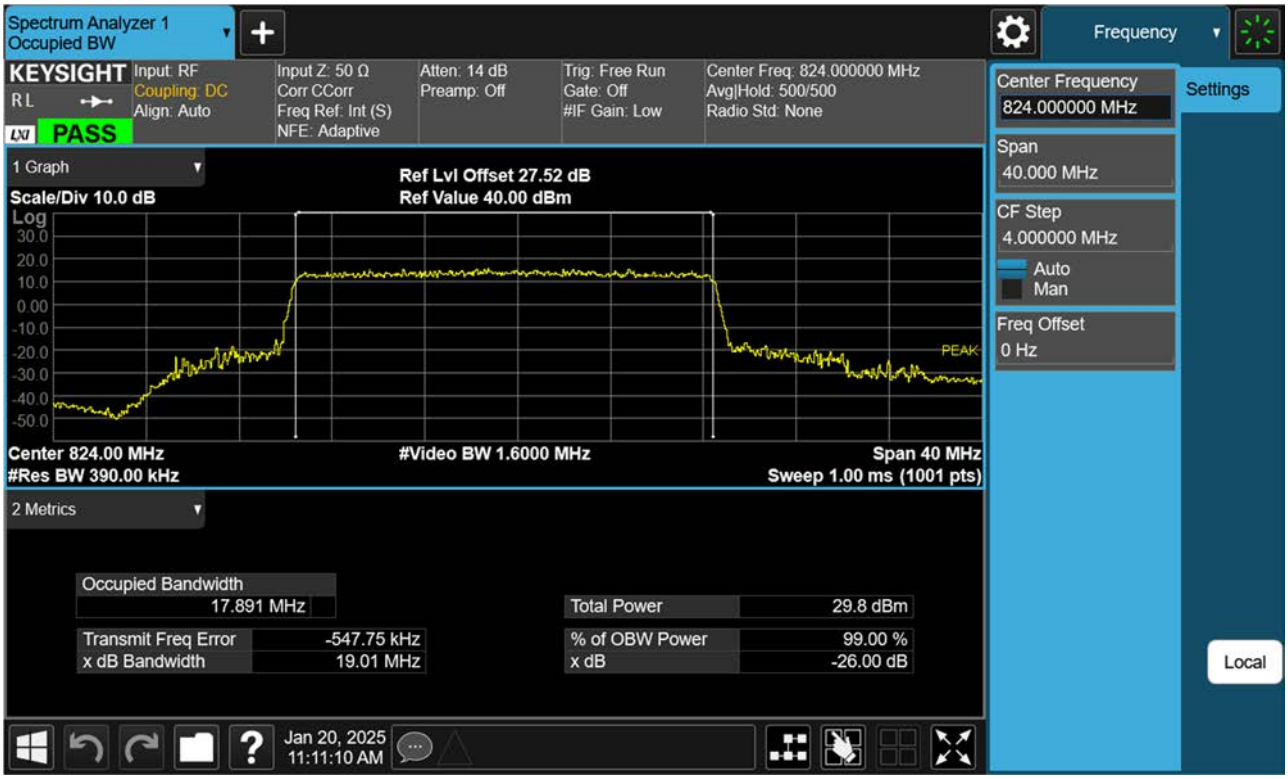
Sub6 n26. Occupied Bandwidth Plot (20 M BW Ch.164800 BPSK RB 100_0)



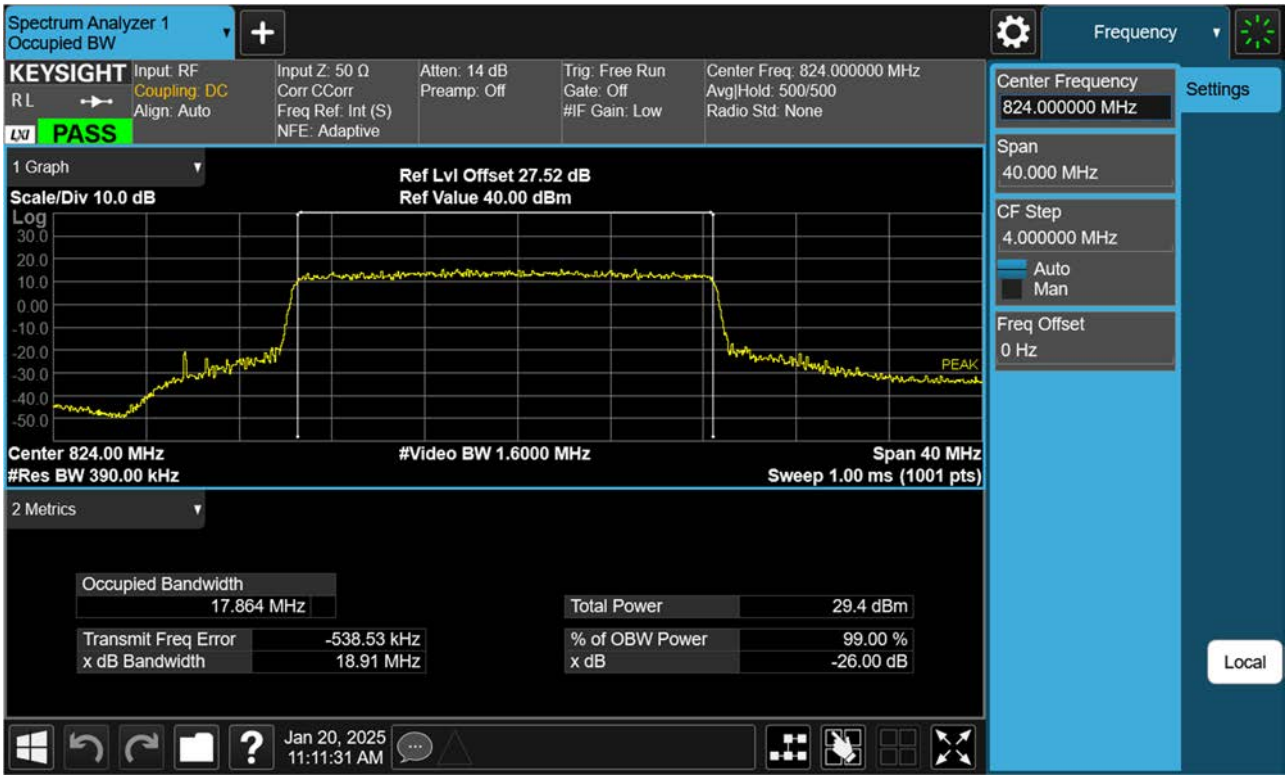
Sub6 n26. Occupied Bandwidth Plot (20 M BW Ch.164800 QPSK RB 100_0)



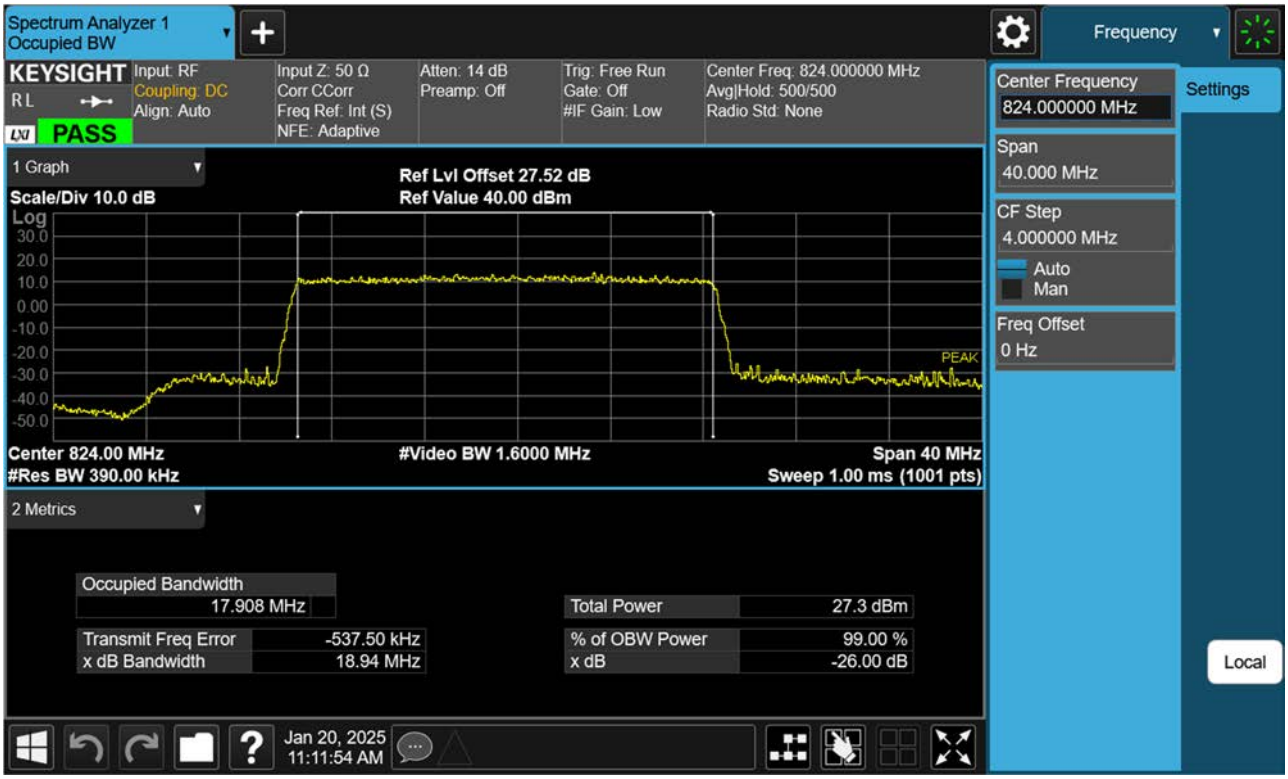
Sub6 n26. Occupied Bandwidth Plot (20 M BW Ch.164800 16QAM RB 100_0)



Sub6 n26. Occupied Bandwidth Plot (20 M BW Ch.164800 64QAM RB 100_0)



Sub6 n26. Occupied Bandwidth Plot (20 M BW Ch.164800 256QAM RB 100_0)



Sub6 n26. Lower Channel Edge Plot (5 M BW Ch.163300 BPSK RB 1, Offset 0)

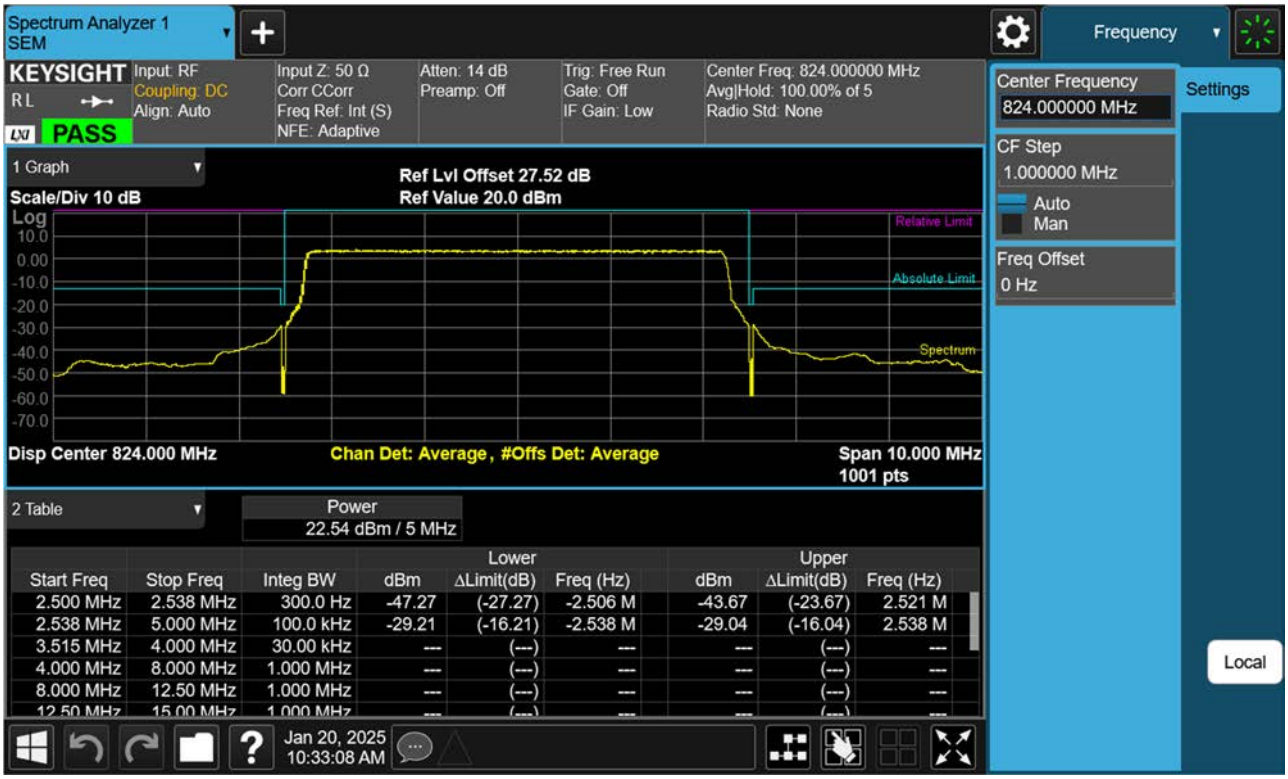
Sub6 n26. Lower Channel Edge Plot (5 M BW Ch.163300 BPSK_RB25_Offset 0)

Sub6 n26. Mid Channel Edge Plot (5 M BW Ch.164300 BPSK_RB1_Offset 0)

Sub6 n26. Mid Channel Edge Plot (5 M BW Ch.164300 BPSK_ RB25_Offset 0)

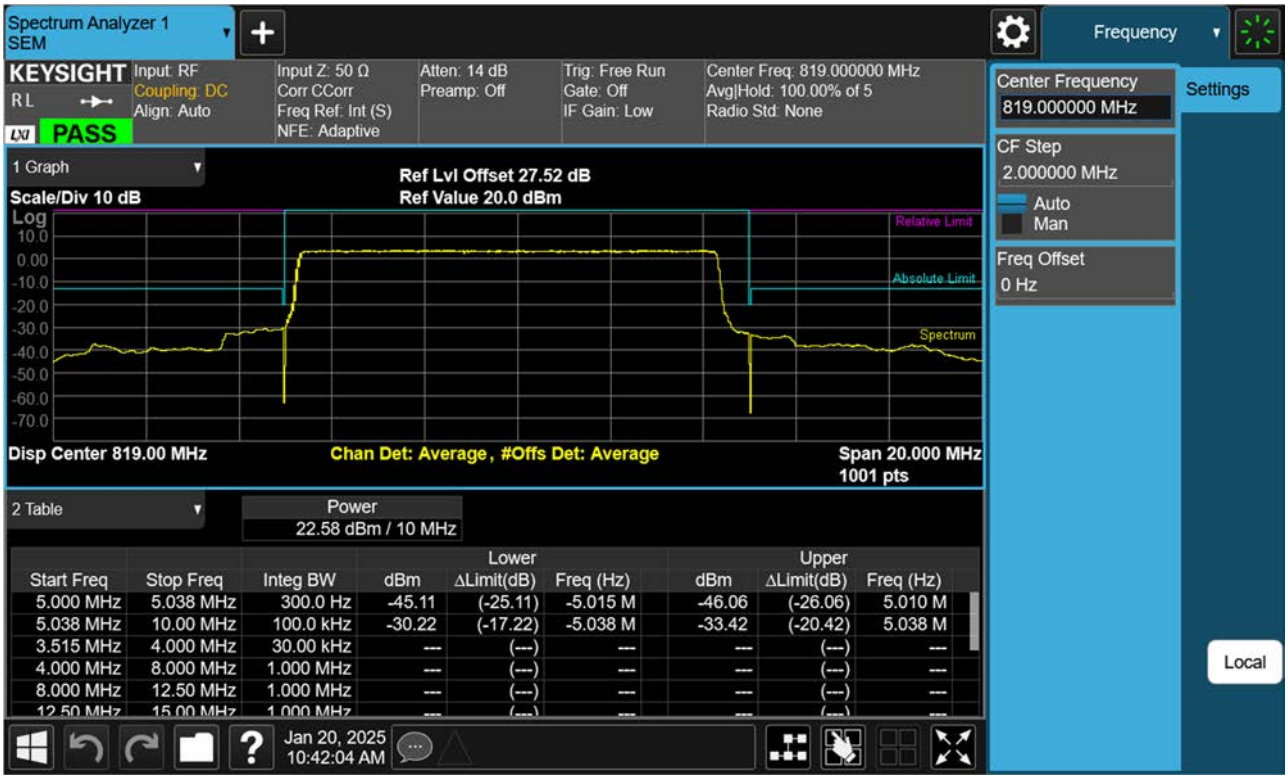
Sub6 n26. Upper Channel Edge Plot (5 M BW Ch.164800 BPSK_RB1_Offset 24)

Sub6 n26. Upper Channel Edge Plot (5 M BW Ch.164800 BPSK_RB25_Offset 0)



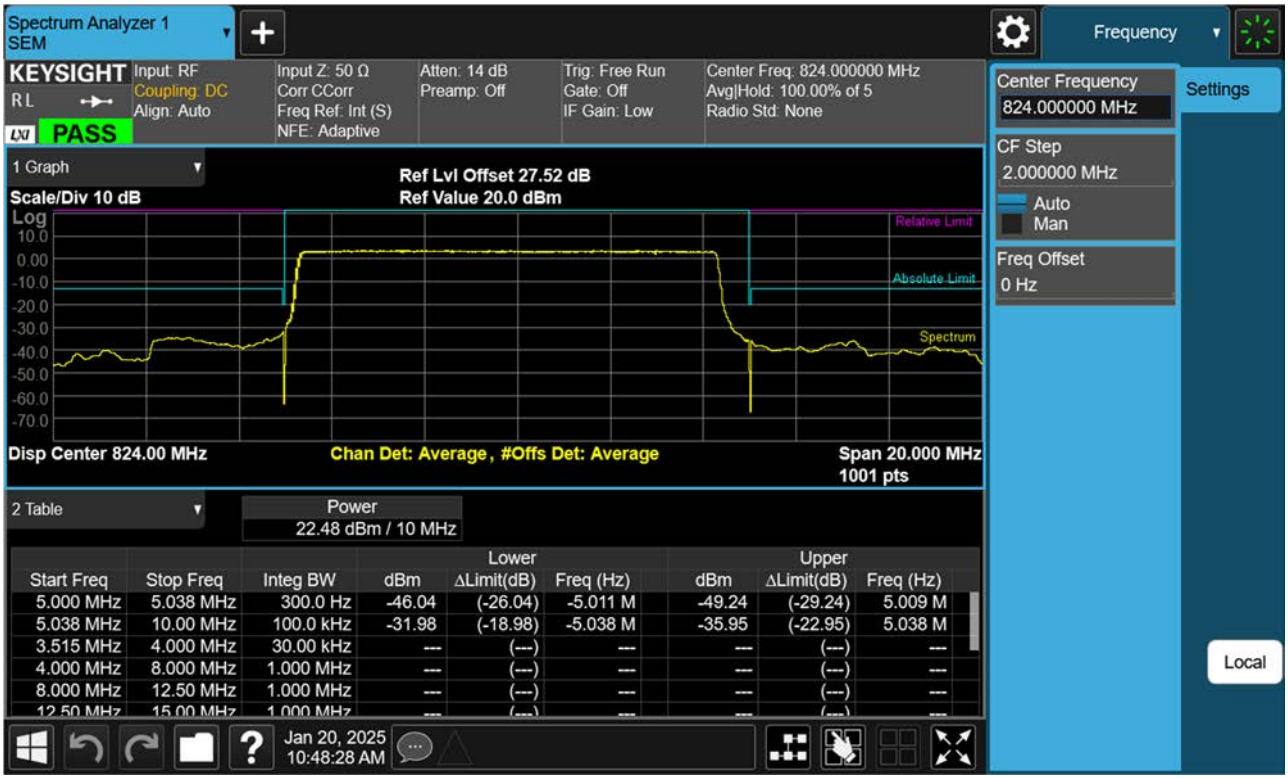
Sub6 n26. Low Channel Edge Plot (10 M BW Ch.163800 BPSK RB 1, Offset 0)

Sub6 n26. Low Channel Edge Plot (10 M BW Ch.163800 BPSK_RB50_Offset 0)



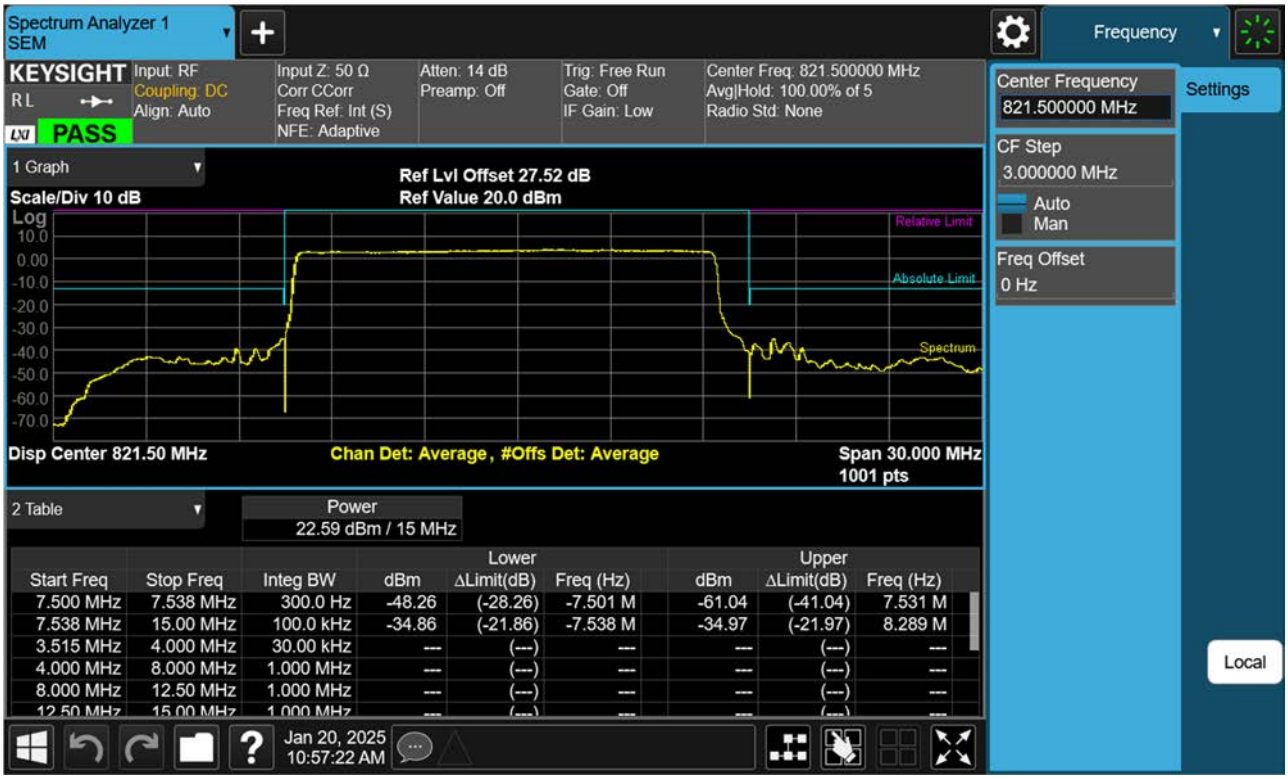
Sub6 n26. Upper Channel Edge Plot (10 M BW Ch.164800 BPSK_RB1_Offset 51)

Sub6 n26. Upper Channel Edge Plot (10 M BW Ch.164800 BPSK_RB50_Offset 0)

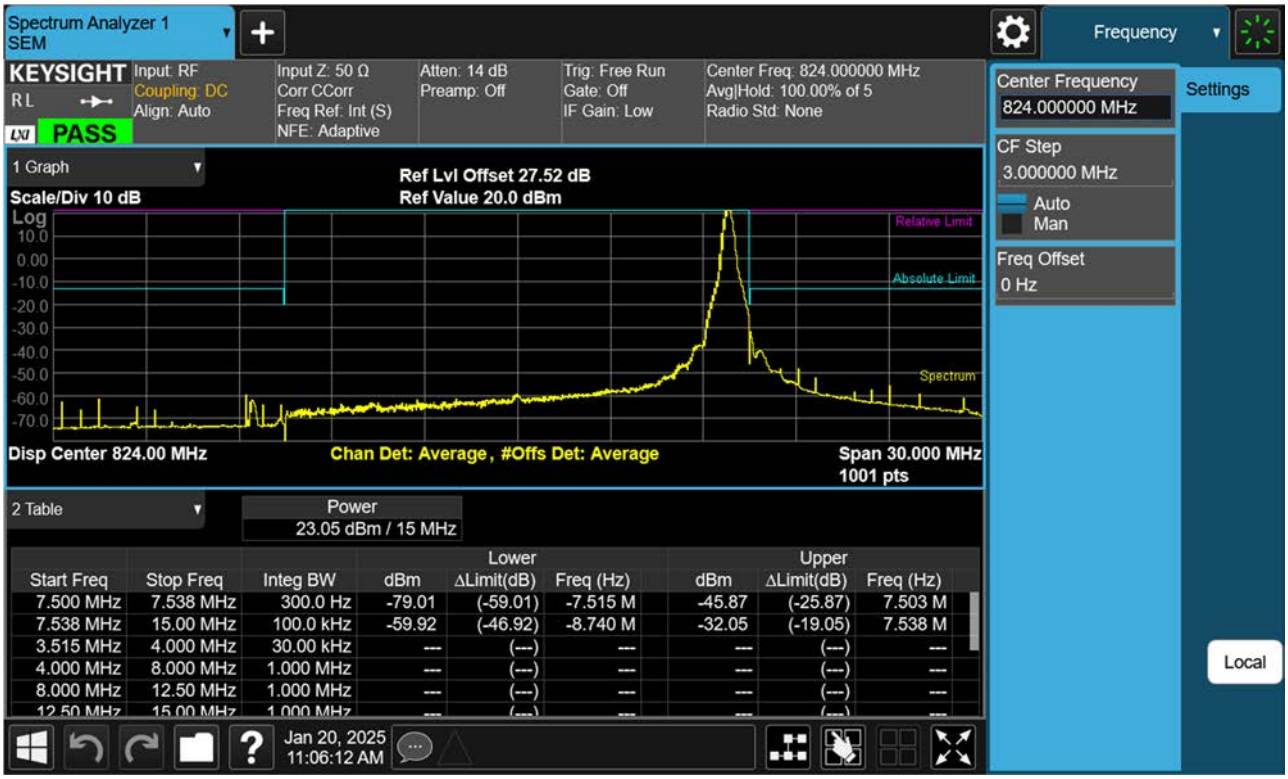


Sub6 n26. Low Channel Edge Plot (15 M BW Ch.164300 BPSK RB 1, Offset 0)

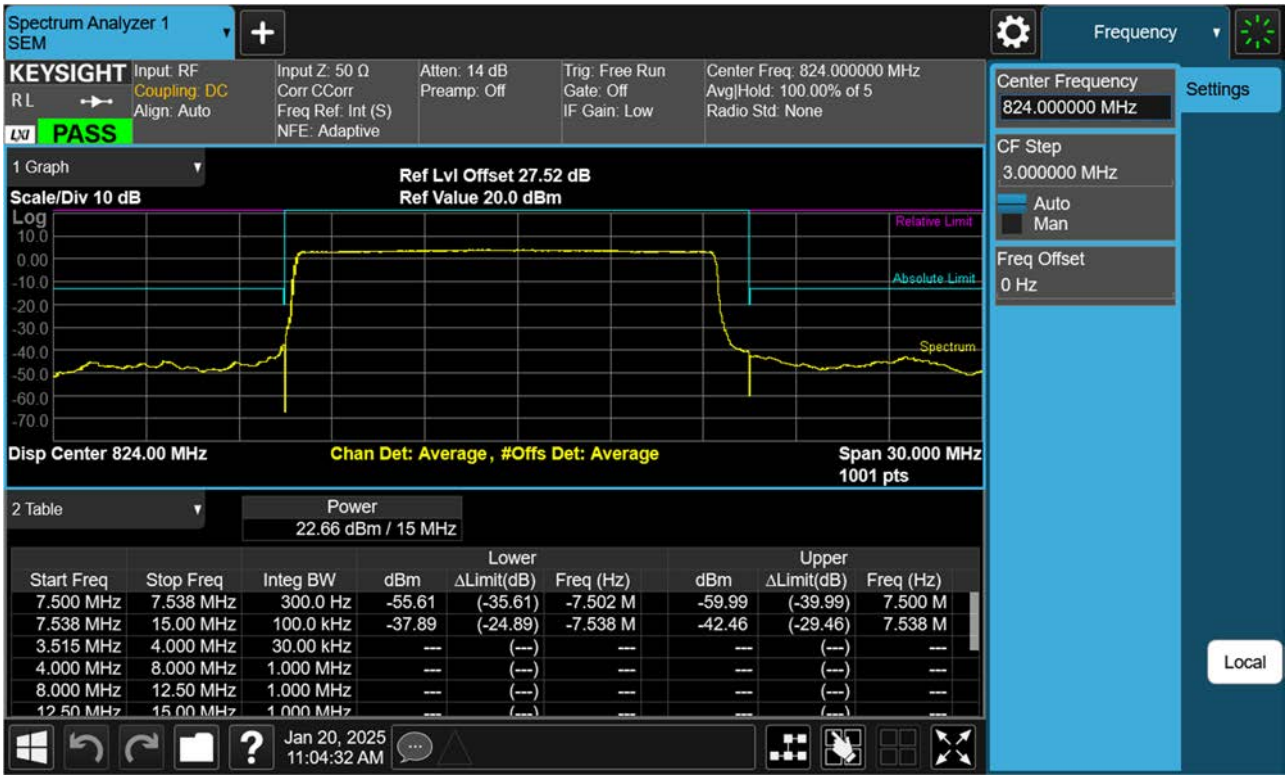
Sub6 n26. Low Channel Edge Plot (15 M BW Ch.164300 BPSK_RB75_Offset 0)



Sub6 n26. Upper Channel Edge Plot (15 M BW Ch.164800 BPSK_RB1_Offset 78)

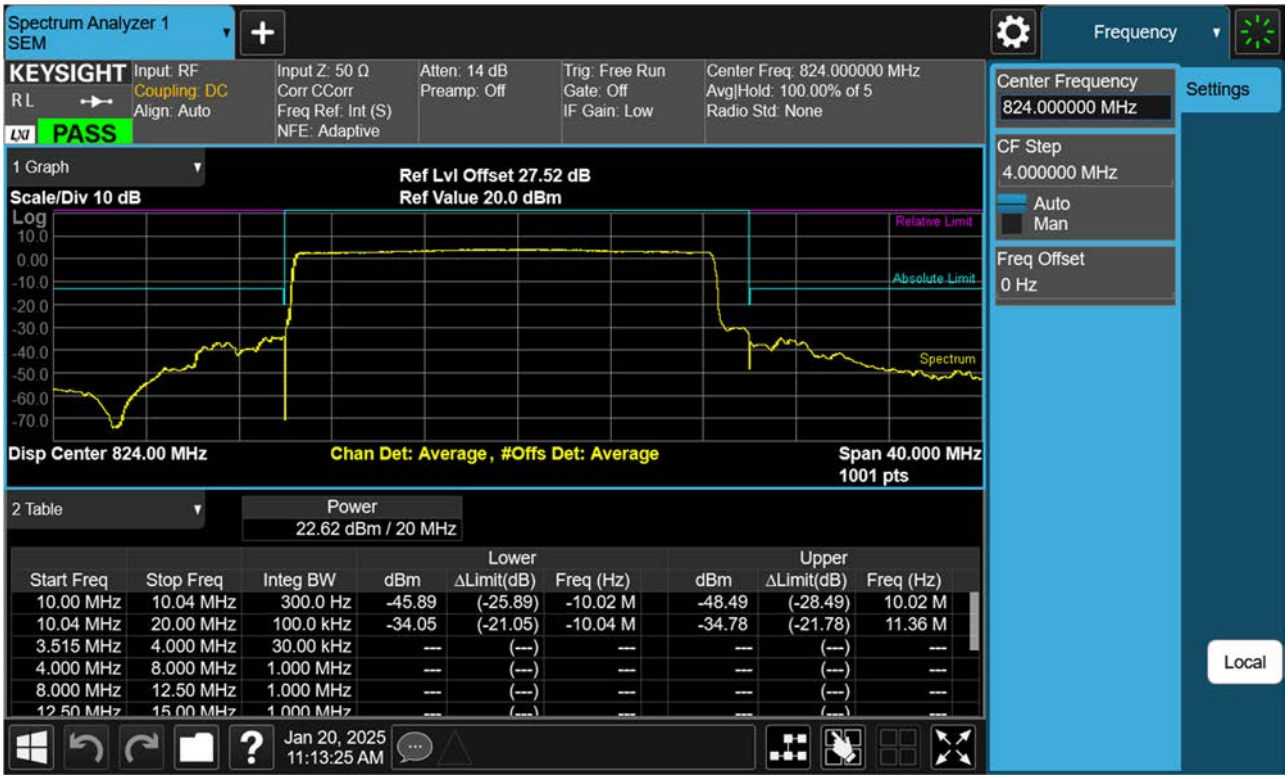


Sub6 n26. Upper Channel Edge Plot (15 M BW Ch.164800 BPSK_RB75_Offset 0)

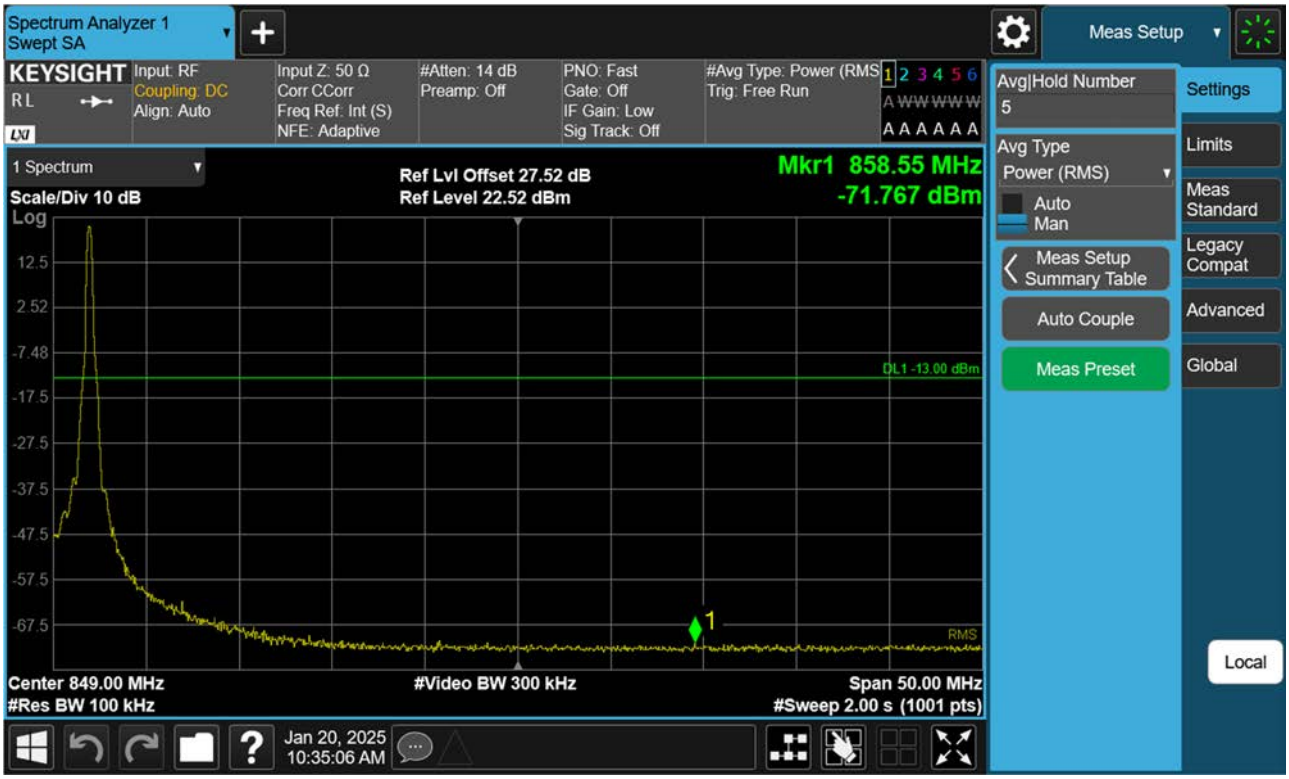


Sub6 n26. Mid Channel Edge Plot (20 M BW Ch.164800 QPSK_ RB1_Offset 105)

Sub6 n26. Mid Channel Edge Plot (20 M BW Ch.164800 BPSK_ RB100_Offset 0)



Sub6 n26. Upper Band Edge Plot (5 M BW Ch.164800 BPSK_RB1_Offset 24)



Sub6 n26. Upper Band Edge Plot (5 M BW Ch.164800 BPSK_RB25_Offset 0)

Sub6 n26. Upper Band Edge Plot (10 M BW Ch.164800 BPSK_RB1_Offset 51)

Sub6 n26. Upper Band Edge Plot (10 M BW Ch.164800 BPSK_RB50_Offset 0)

Sub6 n26. Lower Band Edge Plot (15 M BW Ch.164300 BPSK_RB1_Offset 78)

Sub6 n26. Lower Band Edge Plot (15 M BW Ch.164300 BPSK_RB75_Offset 0)

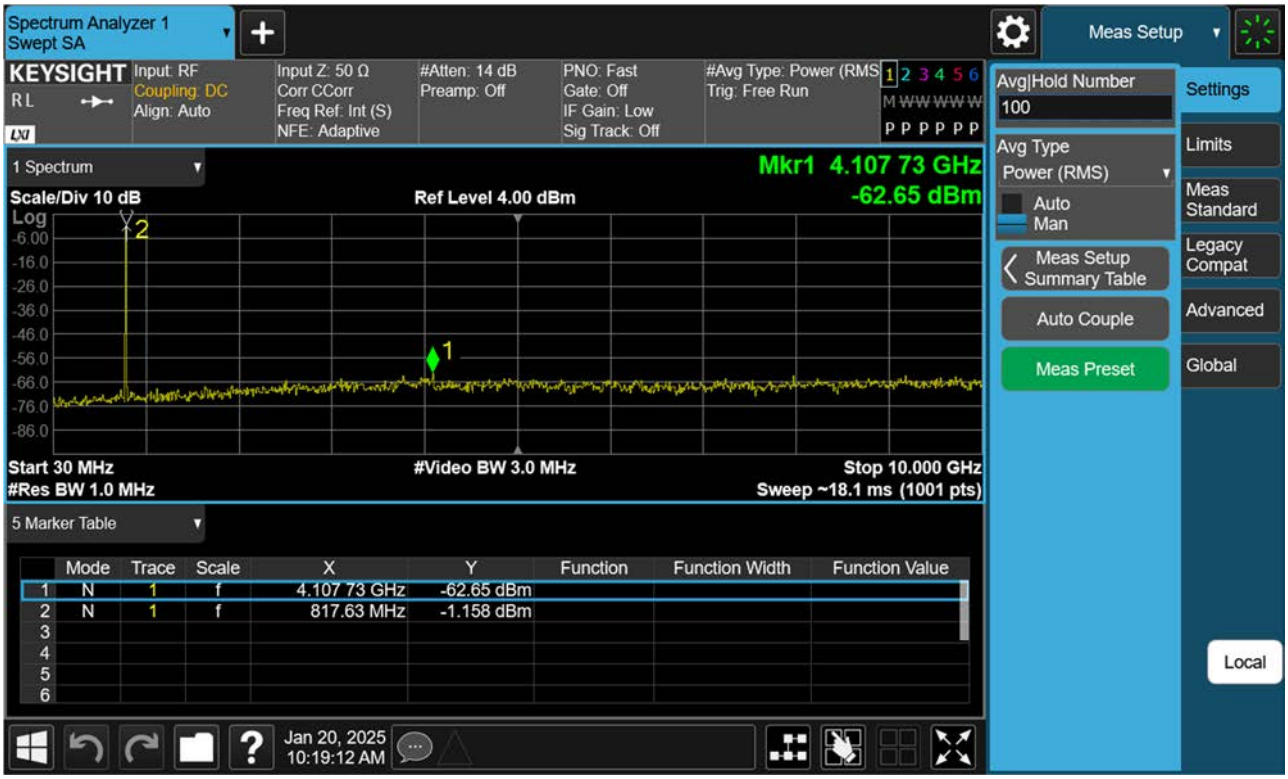
Sub6 n26. Upper Band Edge Plot (15 M BW Ch.164800 BPSK_RB1_Offset 78)

Sub6 n26. Upper Band Edge Plot (15 M BW Ch.164800 BPSK_RB75_Offset 0)

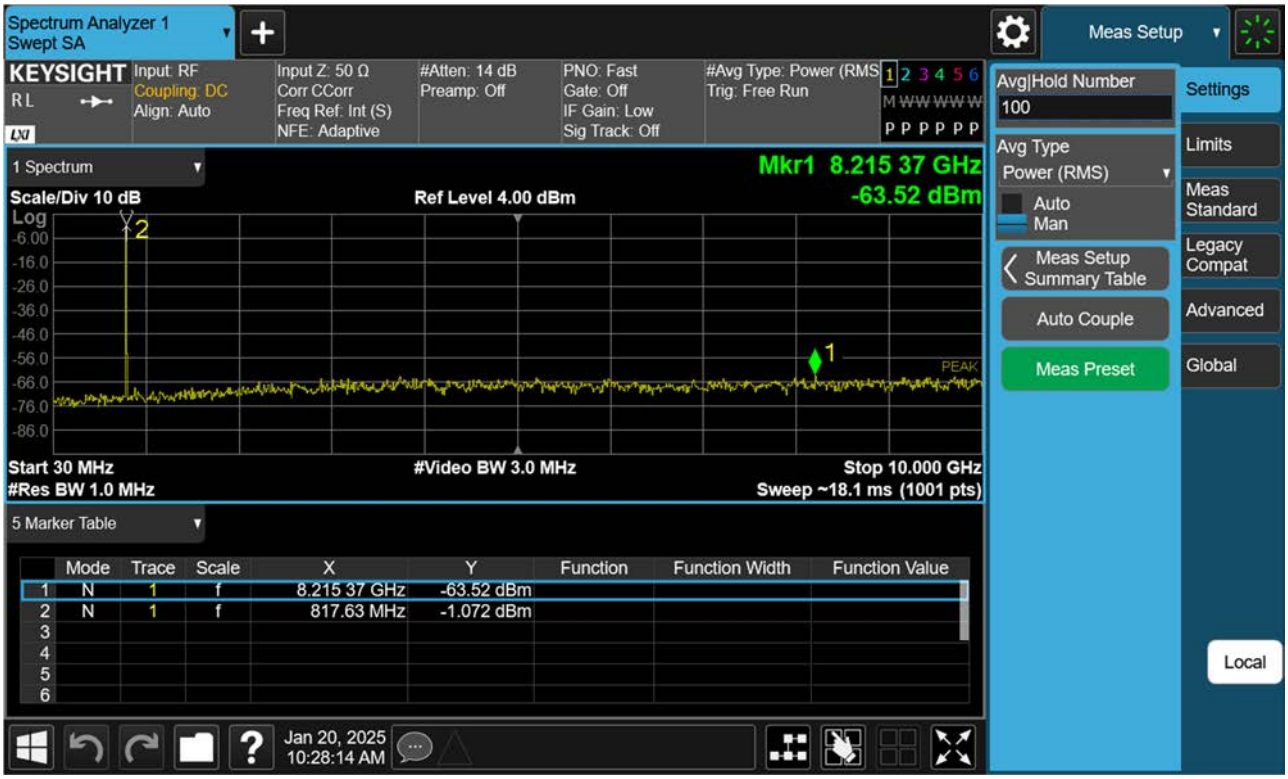
Sub6 n26. Mid Band Edge Plot (20 M BW Ch.164800 BPSK_RB1_Offset 105)

Sub6 n26. Mid Band Edge Plot (20 M BW Ch.164800 BPSK_RB100_Offset 0)

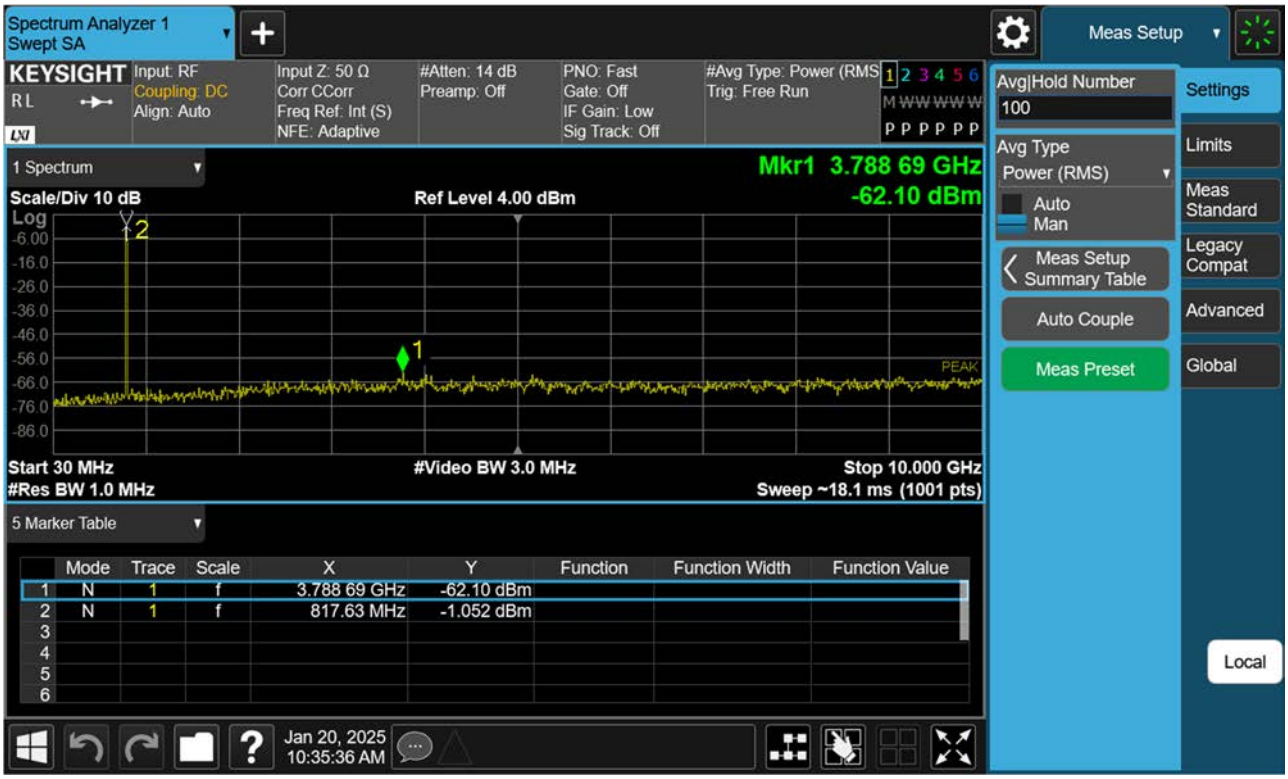
Sub6 n26. Conducted Spurious (163300 ch_5 MHz_ BPSK_RB 1_1)



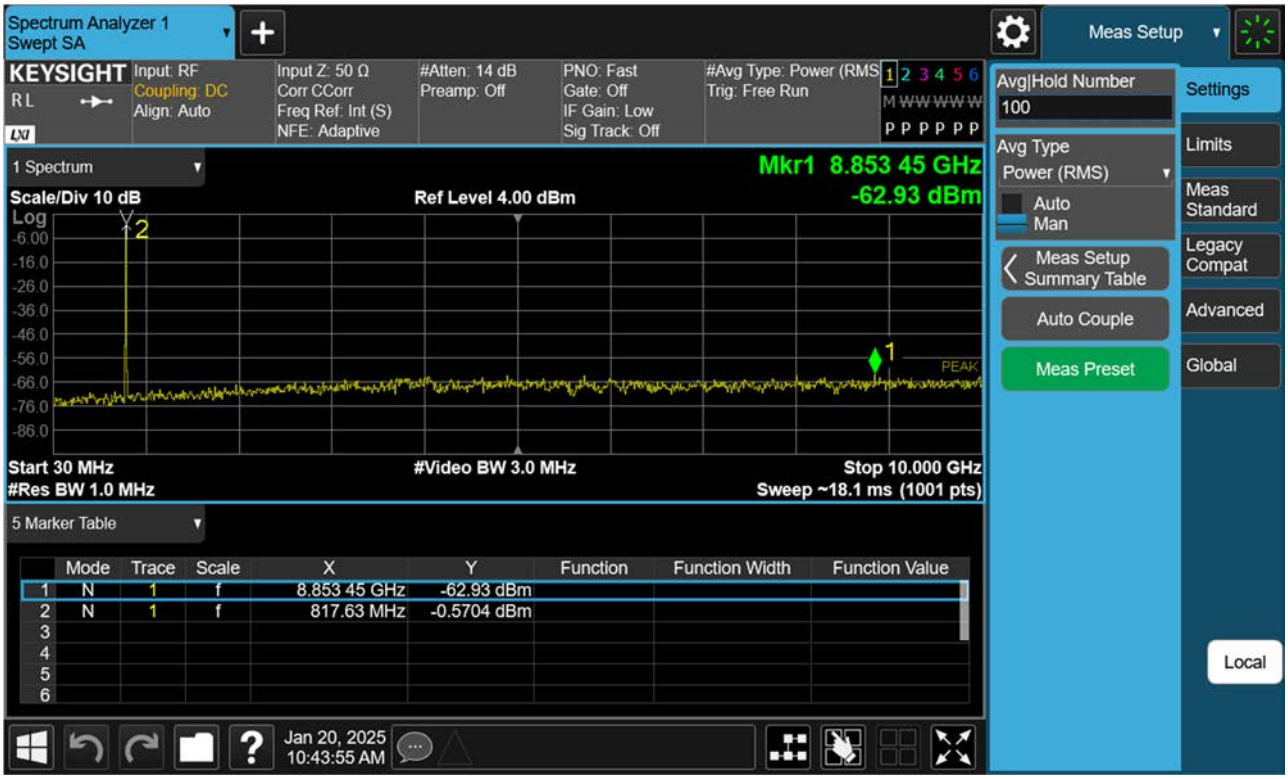
Sub6 n26. Conducted Spurious (164300 ch_5 MHz_ BPSK_RB 1_1)



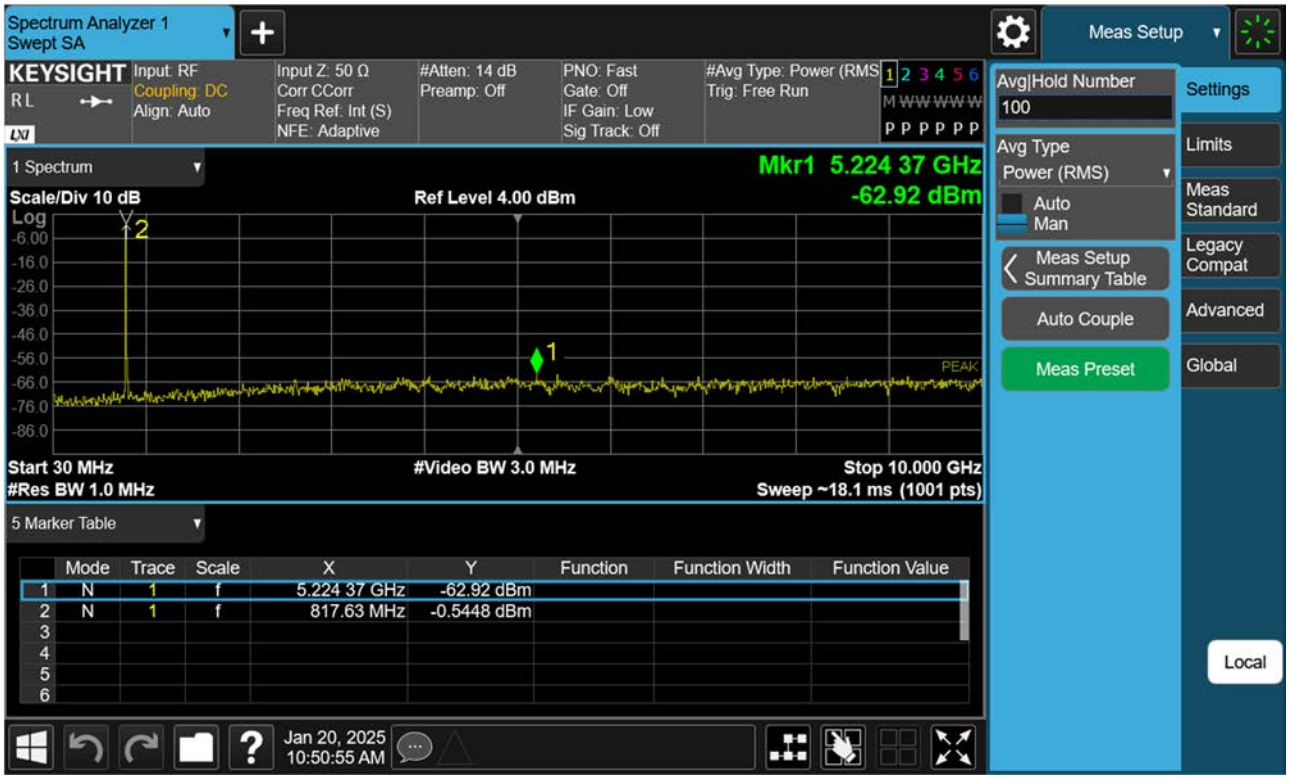
Sub6 n26. Conducted Spurious (164800 ch_5 MHz_ BPSK_RB 1_1)



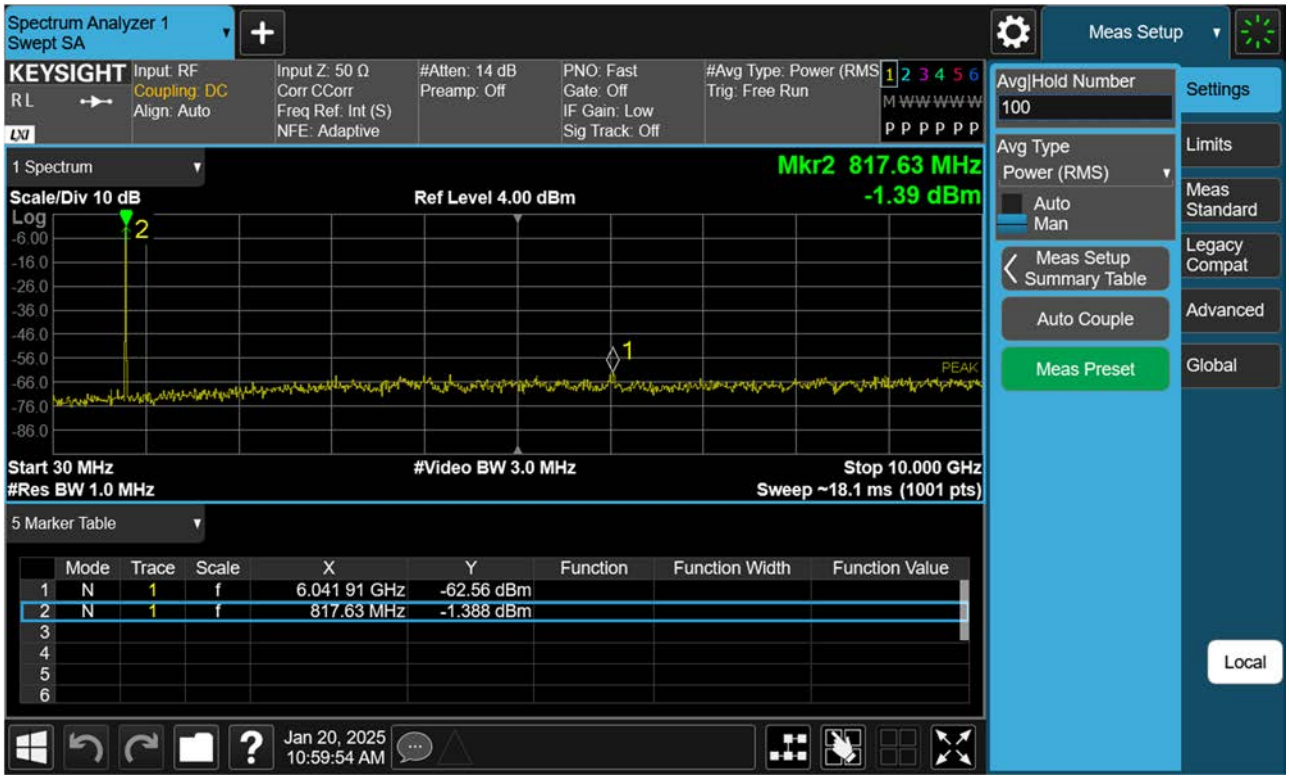
Sub6 n26. Conducted Spurious (163800 ch_10 MHz_ BPSK_RB 1_1)



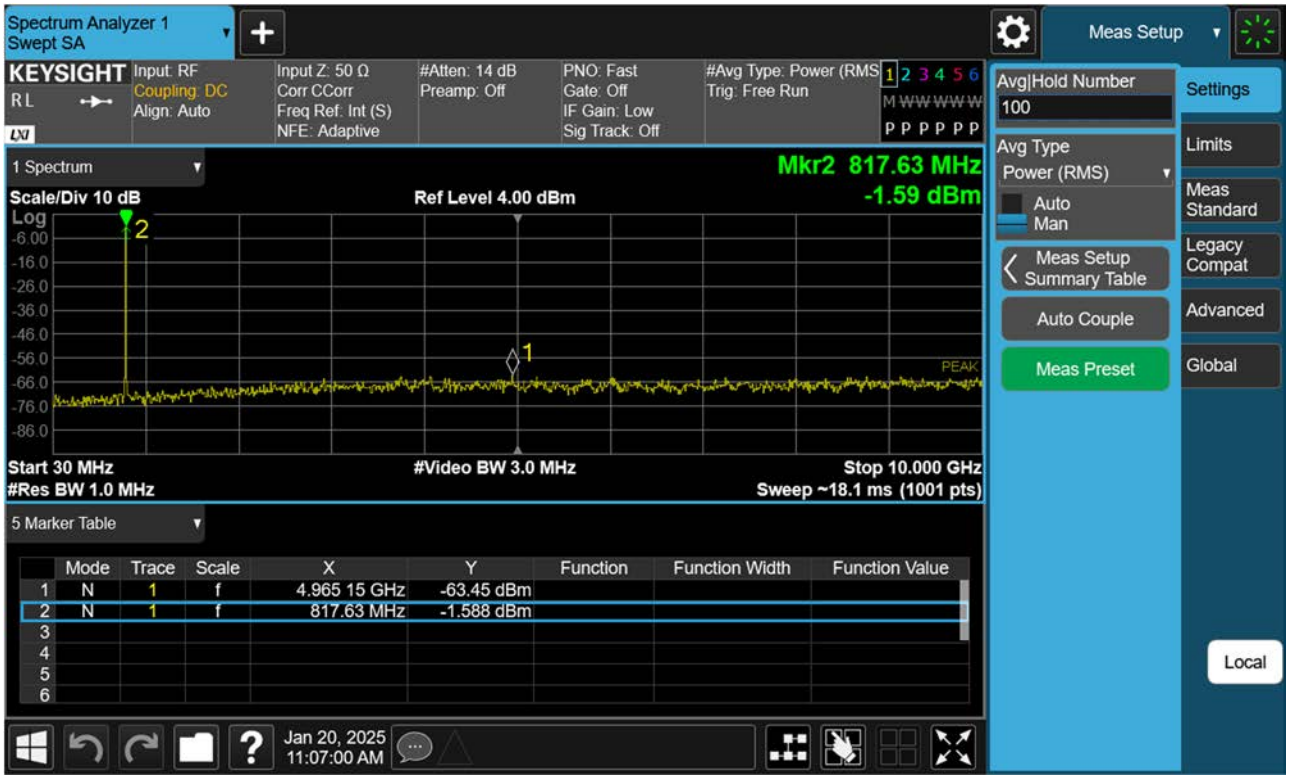
Sub6 n26. Conducted Spurious (164800 ch_10 MHz_ BPSK_RB 1_1)



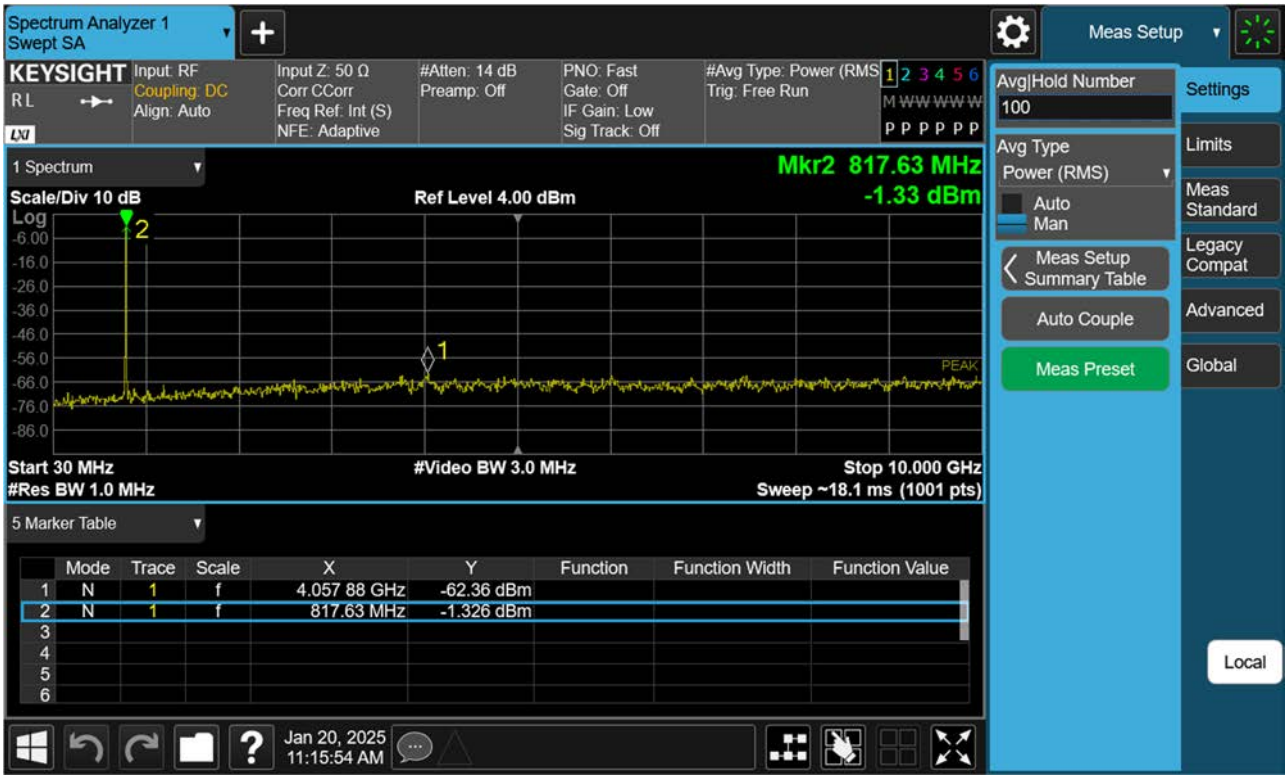
Sub6 n26. Conducted Spurious (164300 ch_15 MHz_ BPSK_RB 1_1)



Sub6 n26. Conducted Spurious (164800 ch_15 MHz_ BPSK_RB 1_1)



Sub6 n26. Conducted Spurious (164800 ch_20 MHz_ BPSK_RB 1_1)



10. ANNEX A_ TEST SETUP PHOTO

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

No.	Description
1	HCT-RF-2501-FC056-P