

FCC Sub6 REPORT

Certification

Applicant Name:

SAMSUNG Electronics Co., Ltd.

Date of Issue:

January 25, 2022

Address:129, Samsung-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Rep. of Korea**Location:**HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA**Report No.:** HCT-RF-2201-FC083-R1**FCC ID:****A3LSMA536U****APPLICANT:****SAMSUNG Electronics Co., Ltd.**

Model(s): SM-A536U
Additional Model(s): SM-A536U1/DS, SM-S536DL, SM-A536W
EUT Type: Mobile phone
FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s): §27, §2

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)

1. 3450 MHz - 3550 MHz

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n77 (10)	3455.01 – 3544.99	8M62G7D	PI/2 BPSK	0.402	26.04
		8M64G7D	QPSK	0.400	26.02
		8M64W7D	16QAM	0.323	25.09
		8M58W7D	64QAM	0.223	23.49
		8M60W7D	256QAM	0.142	21.53
Sub6 n77 (15)	3457.50 – 3542.50	13M0G7D	PI/2 BPSK	0.397	25.99
		13M0G7D	QPSK	0.395	25.97
		12M9W7D	16QAM	0.313	24.96
		12M9W7D	64QAM	0.221	23.44
		12M9W7D	256QAM	0.141	21.49
Sub6 n77 (20)	3460.02 – 3540.00	17M9G7D	PI/2 BPSK	0.386	25.87
		18M0G7D	QPSK	0.385	25.86
		18M0W7D	16QAM	0.310	24.91
		17M9W7D	64QAM	0.208	23.19
		17M9W7D	256QAM	0.140	21.45
Sub6 n77 (25)	3462.50 – 3537.50	23M1G7D	PI/2 BPSK	0.390	25.91
		23M1G7D	QPSK	0.389	25.90
		23M0W7D	16QAM	0.303	24.82
		23M0W7D	64QAM	0.213	23.28
		23M0W7D	256QAM	0.138	21.40
Sub6 n77 (30)	3465.00 – 3534.99	27M0G7D	PI/2 BPSK	0.387	25.88
		27M1G7D	QPSK	0.385	25.86
		27M0W7D	16QAM	0.316	24.99
		27M0W7D	64QAM	0.217	23.36
		27M0W7D	256QAM	0.140	21.47
Sub6 n77 (40)	3470.01 – 3529.98	36M0G7D	PI/2 BPSK	0.399	26.01
		36M1G7D	QPSK	0.398	26.00
		35M9W7D	16QAM	0.321	25.06
		35M9W7D	64QAM	0.220	23.43
		36M0W7D	256QAM	0.142	21.52
Sub6 n77 (50)	3475.02 – 3525.00	45M9G7D	PI/2 BPSK	0.392	25.93
		45M8G7D	QPSK	0.385	25.85
		45M9W7D	16QAM	0.303	24.82
		45M8W7D	64QAM	0.213	23.28
		45M9W7D	256QAM	0.137	21.38
Sub6 n77 (60)	3480.00 – 3519.99	57M9G7D	PI/2 BPSK	0.366	25.64
		57M9G7D	QPSK	0.365	25.62
		58M0W7D	16QAM	0.282	24.51
		58M0W7D	64QAM	0.200	23.01
		58M0W7D	256QAM	0.130	21.13
Sub6 n77 (70)	3485.01 – 3514.98	64M6G7D	PI/2 BPSK	0.357	25.53
		64M5G7D	QPSK	0.354	25.49
		64M7W7D	16QAM	0.284	24.54
		64M6W7D	64QAM	0.194	22.87
		64M5W7D	256QAM	0.127	21.03
Sub6 n77 (80)	3490.02 – 3510.00	77M4G7D	PI/2 BPSK	0.350	25.44
		77M4G7D	QPSK	0.348	25.41
		77M4W7D	16QAM	0.284	24.54
		77M2W7D	64QAM	0.191	22.82
		77M3W7D	256QAM	0.123	20.89
Sub6 n77 (90)	3495.00 – 3504.99	86M8G7D	PI/2 BPSK	0.347	25.40
		86M9G7D	QPSK	0.342	25.34
		87M2W7D	16QAM	0.277	24.43
		86M7W7D	64QAM	0.190	22.78
		87M3W7D	256QAM	0.121	20.81
Sub6 n77 (100)	3500.01	96M5G7D	PI/2 BPSK	0.327	25.15
		96M8G7D	QPSK	0.327	25.14
		96M3W7D	16QAM	0.272	24.34
		96M8W7D	64QAM	0.180	22.55
		96M6W7D	256QAM	0.115	20.62

2. 3700 MHz - 3980 MHz

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n77 (10)	3705.00 – 3975.00	8M61G7D	PI/2 BPSK	0.427	26.30
		8M62G7D	QPSK	0.409	26.12
		8M60W7D	16QAM	0.340	25.32
		8M54W7D	64QAM	0.234	23.70
		8M65W7D	256QAM	0.153	21.85
Sub6 n77 (15)	3707.51 – 3972.48	12M9G7D	PI/2 BPSK	0.417	26.20
		12M9G7D	QPSK	0.415	26.18
		12M9W7D	16QAM	0.334	25.24
		12M9W7D	64QAM	0.225	23.53
		12M9W7D	256QAM	0.152	21.83
Sub6 n77 (20)	3710.01 – 3969.99	17M8G7D	PI/2 BPSK	0.418	26.21
		17M8G7D	QPSK	0.415	26.18
		17M9W7D	16QAM	0.324	25.10
		17M9W7D	64QAM	0.230	23.62
		17M9W7D	256QAM	0.150	21.75
Sub6 n77 (25)	3712.50 – 3967.50	22M9G7D	PI/2 BPSK	0.415	26.18
		23M0G7D	QPSK	0.413	26.16
		23M0W7D	16QAM	0.320	25.05
		23M0W7D	64QAM	0.222	23.47
		23M0W7D	256QAM	0.147	21.66
Sub6 n77 (30)	3715.02 – 3964.98	26M9G7D	PI/2 BPSK	0.422	26.25
		26M9G7D	QPSK	0.419	26.22
		27M0W7D	16QAM	0.328	25.16
		26M9W7D	64QAM	0.229	23.59
		27M0W7D	256QAM	0.150	21.75
Sub6 n77 (40)	3720.00 – 3960.00	35M9G7D	PI/2 BPSK	0.423	26.26
		36M0G7D	QPSK	0.421	26.24
		35M8W7D	16QAM	0.333	25.22
		35M9W7D	64QAM	0.231	23.64
		35M9W7D	256QAM	0.153	21.84
Sub6 n77 (50)	3725.10 – 3954.99	46M0G7D	PI/2 BPSK	0.425	26.28
		45M8G7D	QPSK	0.424	26.27
		45M8W7D	16QAM	0.333	25.23
		45M9W7D	64QAM	0.234	23.70
		45M7W7D	256QAM	0.149	21.74
Sub6 n77 (60)	3730.02 – 3949.98	57M8G7D	PI/2 BPSK	0.439	26.42
		58M1G7D	QPSK	0.437	26.40
		57M8W7D	16QAM	0.336	25.26
		58M0W7D	64QAM	0.234	23.70
		57M9W7D	256QAM	0.156	21.92
Sub6 n77 (70)	3735.00 – 3945.00	64M7G7D	PI/2 BPSK	0.435	26.38
		64M4G7D	QPSK	0.431	26.34
		64M5W7D	16QAM	0.345	25.38
		64M5W7D	64QAM	0.234	23.69
		64M4W7D	256QAM	0.155	21.91
Sub6 n77 (80)	3740.01 – 3939.99	77M7G7D	PI/2 BPSK	0.443	26.46
		77M3G7D	QPSK	0.440	26.43
		77M3W7D	16QAM	0.349	25.43
		77M5W7D	64QAM	0.244	23.87
		77M1W7D	256QAM	0.159	22.02
Sub6 n77 (90)	3745.02 – 3934.98	87M0G7D	PI/2 BPSK	0.460	26.63
		86M9G7D	QPSK	0.458	26.61
		87M0W7D	16QAM	0.358	25.54
		86M7W7D	64QAM	0.254	24.05
		86M8W7D	256QAM	0.162	22.10
Sub6 n77 (100)	3750.00 – 3930.00	96M8G7D	PI/2 BPSK	0.480	26.81
		96M5G7D	QPSK	0.478	26.79
		96M7W7D	16QAM	0.390	25.91
		96M7W7D	64QAM	0.263	24.20
		96M8W7D	256QAM	0.170	22.30

Report No.: HCT-RF-2201-FC083-R1

REVIEWED BY



Report prepared by : Jung Ki Lim
Engineer of Telecommunication Testing Center

Report approved by : Jong Seok Lee
Manager of Telecommunication Testing Center

This test results were applied only to the test methods required by the standard.

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

The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (HCT Accreditation No.: KT197)

* The report shall not be reproduced except in full(only partly) without approval of the laboratory.

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2201-FC083	January 21, 2022	- First Approval Report
HCT-RF-2201-FC083-R1	January 25, 2022	- Revised the EIRP result (Page 2,3,31~38,59,60,62,65,68,69,70)

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

Table of Contents

REVIEWED BY	4
1. GENERAL INFORMATION	7
2. INTRODUCTION	8
2.1. DESCRIPTION OF EUT	8
2.2. MEASURING INSTRUMENT CALIBRATION	8
2.3. TEST FACILITY	8
3. DESCRIPTION OF TESTS.....	9
3.1 TEST PROCEDURE	9
3.2 RADIATED POWER.....	10
3.3 RADIATED SPURIOUS EMISSIONS	11
3.4 PEAK- TO- AVERAGE RATIO.....	12
3.5 OCCUPIED BANDWIDTH.	14
3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL	15
3.7 BAND EDGE	16
3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE	18
3.9 WORST CASE(RADIATED TEST)	19
3.10 WORST CASE(CONDUCTED TEST)	20
4. LIST OF TEST EQUIPMENT	22
5. MEASUREMENT UNCERTAINTY	23
6. SUMMARY OF TEST RESULTS	24
7. SAMPLE CALCULATION	25
8. TEST DATA (3450 MHz - 3550 MHz).....	27
8.1 EQUIVALENT ISOTROPIC RADIATED POWER.....	27
8.2 RADIATED SPURIOUS EMISSIONS	39
8.3 PEAK-TO-AVERAGE RATIO.....	40
8.4 OCCUPIED BANDWIDTH	42
8.5 CONDUCTED SPURIOUS EMISSIONS	44
8.6 BAND EDGE	46
8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE	47
9. TEST DATA (3700 MHz - 3980 MHz).....	59
9.1 EQUIVALENT ISOTROPIC RADIATED POWER.....	59
9.2 RADIATED SPURIOUS EMISSIONS	71
9.3 PEAK-TO-AVERAGE RATIO.....	72
9.4 OCCUPIED BANDWIDTH	74
9.5 CONDUCTED SPURIOUS EMISSIONS	76
9.6 BAND EDGE	78
9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE	79
10. TEST PLOTS(3450 MHz - 3550 MHz)	91
11. TEST PLOTS(3700 MHz - 3980 MHz)	424
12. ANNEX A_ TEST SETUP PHOTO	761

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:	A3LSMA536U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2
EUT Type:	Mobile phone
Model(s):	SM-A536U
Additional Model(s):	SM-A536U1/DS, SM-S536DL, SM-A536W
SCS(kHz):	30
Bandwidth(MHz):	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
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: (3450 MHz - 3550 MHz)	3455.01 MHz – 3544.99 MHz (Sub6 n77(10 MHz)) 3457.50 MHz – 3542.50 MHz (Sub6 n77(15 MHz)) 3460.02 MHz – 3540.00 MHz (Sub6 n77(20 MHz)) 3462.50 MHz – 3537.50 MHz (Sub6 n77(25 MHz)) 3465.00 MHz – 3534.99 MHz (Sub6 n77(30 MHz)) 3470.01 MHz – 3529.98 MHz (Sub6 n77(40 MHz)) 3475.02 MHz – 3525.00 MHz (Sub6 n77(50 MHz)) 3480.00 MHz – 3519.99 MHz (Sub6 n77(60 MHz)) 3485.01 MHz – 3514.98 MHz (Sub6 n77(70 MHz)) 3490.02 MHz – 3510.00 MHz (Sub6 n77(80 MHz)) 3495.00 MHz – 3504.99 MHz (Sub6 n77(90 MHz)) 3500.01 MHz (Sub6 n77(100 MHz))
Tx Frequency: (3700 MHz - 3980 MHz)	3705.00 MHz – 3975.00 MHz (Sub6 n77(10 MHz)) 3707.51 MHz – 3972.48 MHz (Sub6 n77(15 MHz)) 3710.01 MHz – 3969.99 MHz (Sub6 n77(20 MHz)) 3712.50 MHz – 3967.50 MHz (Sub6 n77(25 MHz)) 3715.02 MHz – 3964.98 MHz (Sub6 n77(30 MHz)) 3720.00 MHz – 3960.00 MHz (Sub6 n77(40 MHz)) 3725.10 MHz – 3954.99 MHz (Sub6 n77(50 MHz)) 3730.02 MHz – 3949.98 MHz (Sub6 n77(60 MHz)) 3735.00 MHz – 3945.00 MHz (Sub6 n77(70 MHz)) 3740.01 MHz – 3939.99 MHz (Sub6 n77(80 MHz)) 3745.02 MHz – 3934.98 MHz (Sub6 n77(90 MHz)) 3750.00 MHz – 3930.00 MHz (Sub6 n77(100 MHz))
Date(s) of Tests:	November 15, 2021 ~ January 20, 2022
Serial number:	Radiated: R3CRB0ZAKDW Conducted: 594d1d616f257ece

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE, Sub6.

It also supports IEEE 802.11 a/b/g/n/ac (20/40/80), Bluetooth, BT LE, NFC.

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, 17383, Rep. 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 - ANSI C63.26-2015 – Section 5.2.6(only GSM)
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/ Effective Isotropic Radiated Power	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8 - ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - ANSI/TIA-603-E-2016 – Section 2.2.12

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 in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17.

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 $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $> 2 \times$ 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 according to ANSI/TIA-603-E-2016.

Test Settings

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

Test Note

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

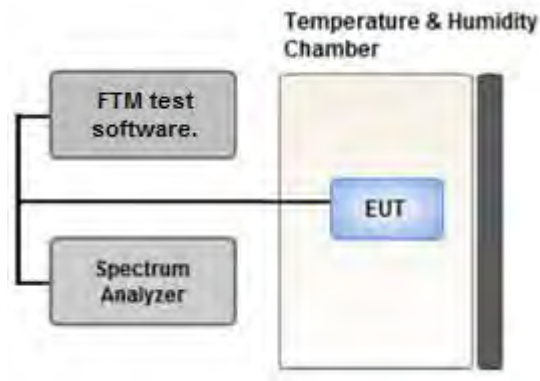
$$\text{Result}_{(\text{dBm})} = P_g_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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

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

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

3.4 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 %.

② Alternate Procedure for PAPR

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

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

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

Test Settings(Peak Power)

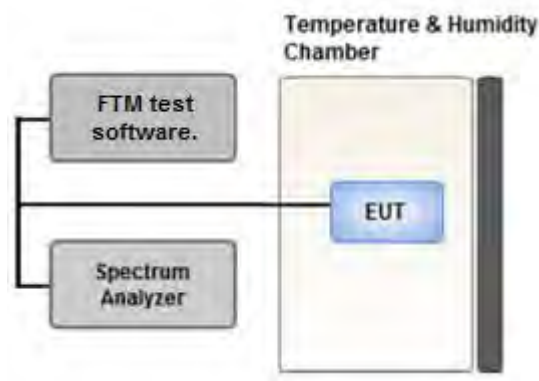
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW $\geq 3 \times$ RBW.

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

Test Settings(Average Power)

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

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.

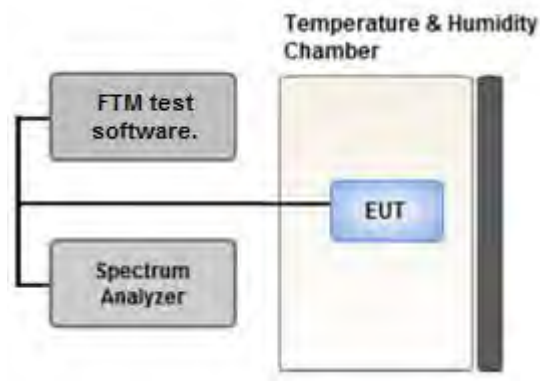
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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 $\geq 3 \times$ 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.

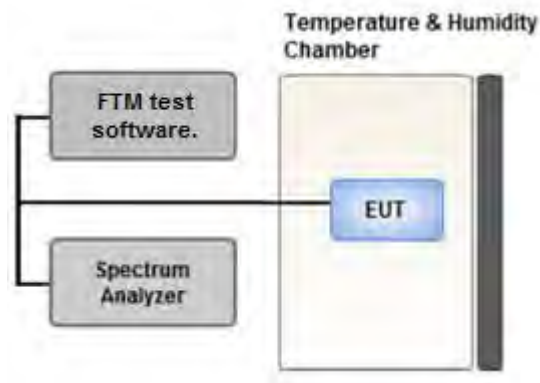
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

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 = RMS
4. Trace Mode = trace average
5. Sweep time = auto
6. Number of points in sweep $\geq 2 \times \text{Span} / \text{RBW}$

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

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.

However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz.

In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

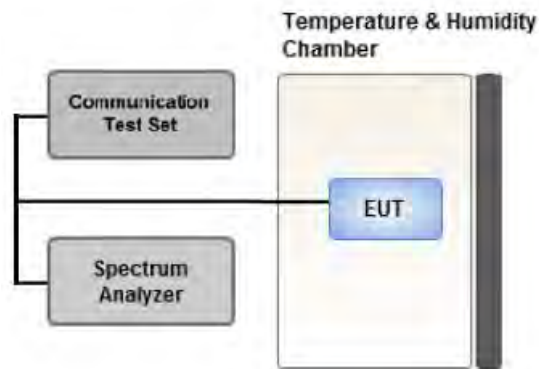
Measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.

However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz.

In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. .

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.
- All modes of operation were investigated and the worst case configuration results are reported.
Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
Worst case : Stand alone
Mode: Power Class 2(SA), Power Class 3(SA/ NSA), SRS
Worst case: Power Class 2(SA)
- We were performed the RSE test in condition of co-location. There has no significant emission raised.
Mode : WWAN + WLAN 5 GHz + BT (Worst case : Stand alone)
- All radiated spurious emissions were investigated and the worst case bandwidth results are reported.
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
Worst case: 2A - n77A(PC3) (10 MHz)
- 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 were investigated and the worst case bandwidth results are reported.
(Worst case : 10 MHz(3450 MHz – 3550 MHz), 100 MHz(3700 MHz – 3980 MHz))
- SM-A536U & additional models were tested and the worst case results are reported.
(Worst case : SM-A536U)

[3450 MHz - 3550 MHz Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Isotropic Radiated Power	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	See Section 8.1		Z
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	1	12	Y

[3700 MHz - 3980 MHz Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Isotropic Radiated Power	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1	1	Z
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	1	1	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: Power Class 2(SA), Power Class 3(SA/ NSA), SRS

Worst case: Power Class 2(SA)

- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.

Please refer to the table below.

- SM-A536U & additional models were tested and the worst case results are reported.

(Worst case : SM-A536U)

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth,	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100	Mid	Full RB	0
Peak-To-Average Ratio	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100	Mid	Full RB	0
Band Edge	PI/2 BPSK	10	Low	1	0
			High	1	23
		15	Low	1	0
			High	1	37
		20	Low	1	0
			High	1	50
		25	Low	1	0
			High	1	64
		30	Low	1	0
			High	1	77
		40	Low	1	0
			High	1	105
		50	Low	1	0
			High	1	132
		60	Low	1	0
			High	1	161
		70	Low	1	0
			High	1	188
		80	Low	1	0
			High	1	216
		90	Low	1	0
			High	1	244
		100	Low	1	0
			High	1	272
		10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100	Low, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100	Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacture	Serial No.	Due to Calibration	Calibration Interval
Precision Dipole Antenna	UHAP	Schwarzbeck	01273	05/30/2022	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	05/30/2022	Biennial
Horn Antenna(1~18GHz)	BBHA 9120D	Schwarzbeck	02289	05/08/2022	Biennial
Horn Antenna(1~18GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	05/04/2022	Biennial
Horn Antenna(15~40GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	10/13/2022	Biennial
Horn Antenna(15~40GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Loop Antenna(9kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	05/18/2022	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/03/2023	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/22/2023	Biennial
High Pass Filter	WHKX10-900-1000-15000-40SS	Wainwright Instruments	15	06/15/2022	Annual
High Pass Filter	WHKX10-2700-3000-18000-40SS	Wainwright Instruments	145	06/15/2022	Annual
High Pass Filter	WHNX6-4740-6000-26500-40CC	Wainwright Instruments	11	06/15/2022	Annual
LOW NOISE AMP (100 MHz ~ 18GHz)	CBLU1183540B-01	CERNEX	26822	06/15/2022	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/02/2022	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/23/2022	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	09/15/2022	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	04/07/2022	Annual
Chamber	SU-642	ESPEC	93008124	03/15/2022	Annual
Signal Analyzer(10Hz~26.5GHz)	N9020A	Agilent	MY51110063	04/22/2022	Annual
ATTENUATOR(20dB)	8493C	Hewlett Packard	17280	06/01/2022	Annual
Spectrum Analyzer(10Hz~40GHz)	FSV40	REOHDE & SCHWARZ	101436	03/02/2022	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/18/2022	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287700	05/25/2022	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/26/2022	Annual
SIGNAL GENERATOR (100kHz~40GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/05/2022	Annual
Signal Analyzer(5Hz~40.0GHz)	N9030B	KEYSIGHT	MY55480167	06/02/2022	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/27/2022	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

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

5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty ($\pm$ dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.82 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (9 kHz ~ 30 MHz)	3.40 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (30 MHz ~ 1 GHz)	4.80 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.70 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.05 (Confidence level about 95 %, $k=2$)

6. SUMMARY OF TEST RESULTS

6.1 Test Condition : Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§2.1051, §27.53(n)(2), §27.53(l)(2)	< -13 dBm	PASS
Conducted Output Power	§2.1046	N/A	<u>See Note1</u>
Peak- to- Average Ratio	§27.50(k)(4), §27.50(j)(4)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§2.1055, §27.54	Emission must remain in band	PASS

Note:

1. See SAR Report
2. All conducted tests were tested using 5G Wireless Tester.

6.2 Test Condition : Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§27.50(k)(3), §27.50(j)(3)	< 1 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§2.1051, §27.53(n)(2), §27.53(l)(2)	< -13 dBm	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
349000	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)

PSK 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 (3450 MHz - 3550 MHz)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3455.01	Sub6 n77/ 10 MHz [30 kHz]	PI/2 BPSK	-21.76	16.24	11.32	3.05	H	< 1.00	0.283	24.52	1	12
		QPSK	-21.79	16.21	11.32	3.05	H		0.281	24.49		
		16-QAM	-22.62	15.38	11.32	3.05	H		0.232	23.66		
		64-QAM	-24.39	13.61	11.32	3.05	H		0.154	21.89		
		256-QAM	-26.26	11.74	11.32	3.05	H		0.100	20.02		
3500.01		PI/2 BPSK	-21.67	16.50	11.50	3.06	H		0.312	24.94	1	12
		QPSK	-21.70	16.47	11.50	3.06	H		0.310	24.91		
		16-QAM	-22.56	15.61	11.50	3.06	H		0.254	24.05		
		64-QAM	-24.33	13.84	11.50	3.06	H		0.169	22.28		
		256-QAM	-26.13	12.04	11.50	3.06	H		0.112	20.48		
3544.99		PI/2 BPSK	-20.73	17.44	11.68	3.08	H		0.402	26.04	1	12
		QPSK	-20.75	17.42	11.68	3.08	H		0.400	26.02		
		16-QAM	-21.68	16.49	11.68	3.08	H		0.323	25.09		
		64-QAM	-23.28	14.89	11.68	3.08	H		0.223	23.49		
		256-QAM	-25.24	12.93	11.68	3.08	H		0.142	21.53		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3457.50	Sub6 n77/ 15 MHz [30 kHz]	PI/2 BPSK	-21.67	16.29	11.34	3.03	H	< 1.00	0.288	24.60	1	19
		QPSK	-21.70	16.26	11.34	3.03	H		0.286	24.57		
		16-QAM	-22.70	15.26	11.34	3.03	H		0.228	23.57		
		64-QAM	-24.23	13.73	11.34	3.03	H		0.160	22.04		
		256-QAM	-26.20	11.76	11.34	3.03	H		0.102	20.07		
3500.01		PI/2 BPSK	-21.46	16.71	11.50	3.06	H		0.327	25.15	1	19
		QPSK	-21.48	16.69	11.50	3.06	H		0.326	25.13		
		16-QAM	-22.32	15.85	11.50	3.06	H		0.268	24.29		
		64-QAM	-24.04	14.13	11.50	3.06	H		0.181	22.57		
		256-QAM	-25.94	12.23	11.50	3.06	H		0.117	20.67		
3542.50		PI/2 BPSK	-20.66	17.40	11.66	3.07	H		0.397	25.99	1	19
		QPSK	-20.68	17.38	11.66	3.07	H		0.395	25.97		
		16-QAM	-21.69	16.37	11.66	3.07	H		0.313	24.96		
		64-QAM	-23.21	14.85	11.66	3.07	H		0.221	23.44		
		256-QAM	-25.16	12.90	11.66	3.07	H		0.141	21.49		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3460.02	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-21.81	16.15	11.34	3.03	H	< 1.00	0.279	24.46	1	25
		QPSK	-21.82	16.14	11.34	3.03	H		0.279	24.45		
		16-QAM	-22.76	15.20	11.34	3.03	H		0.224	23.51		
		64-QAM	-24.39	13.57	11.34	3.03	H		0.154	21.88		
		256-QAM	-26.26	11.70	11.34	3.03	H		0.100	20.01		
3500.01		PI/2 BPSK	-21.50	16.67	11.50	3.06	H		0.324	25.11	1	25
		QPSK	-21.52	16.65	11.50	3.06	H		0.323	25.09		
		16-QAM	-22.42	15.75	11.50	3.06	H		0.262	24.19		
		64-QAM	-24.20	13.97	11.50	3.06	H		0.174	22.41		
		256-QAM	-26.02	12.15	11.50	3.06	H		0.114	20.59		
3540.00		PI/2 BPSK	-20.78	17.28	11.66	3.07	H		0.386	25.87	1	25
		QPSK	-20.79	17.27	11.66	3.07	H		0.385	25.86		
		16-QAM	-21.74	16.32	11.66	3.07	H		0.310	24.91		
		64-QAM	-23.46	14.60	11.66	3.07	H		0.208	23.19		
		256-QAM	-25.20	12.86	11.66	3.07	H		0.140	21.45		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3462.50	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-21.76	16.20	11.34	3.03	H	< 1.00	0.283	24.51	1	32
		QPSK	-21.84	16.12	11.34	3.03	H		0.277	24.43		
		16-QAM	-22.63	15.33	11.34	3.03	H		0.231	23.64		
		64-QAM	-24.37	13.59	11.34	3.03	H		0.155	21.90		
		256-QAM	-26.29	11.67	11.34	3.03	H		0.100	19.98		
3500.01		PI/2 BPSK	-21.55	16.62	11.50	3.06	H		0.321	25.06	1	32
		QPSK	-21.55	16.62	11.50	3.06	H		0.321	25.06		
		16-QAM	-22.42	15.75	11.50	3.06	H		0.262	24.19		
		64-QAM	-24.23	13.94	11.50	3.06	H		0.173	22.38		
		256-QAM	-26.03	12.14	11.50	3.06	H		0.114	20.58		
3537.50		PI/2 BPSK	-20.74	17.32	11.66	3.07	H		0.390	25.91	1	32
		QPSK	-20.75	17.31	11.66	3.07	H		0.389	25.90		
		16-QAM	-21.83	16.23	11.66	3.07	H		0.303	24.82		
		64-QAM	-23.37	14.69	11.66	3.07	H		0.213	23.28		
		256-QAM	-25.25	12.81	11.66	3.07	H		0.138	21.40		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3465.00	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-21.74	16.13	11.36	3.02	H	< 1.00	0.280	24.47	1	39
		QPSK	-21.76	16.11	11.36	3.02	H		0.279	24.45		
		16-QAM	-22.71	15.16	11.36	3.02	H		0.224	23.50		
		64-QAM	-24.34	13.53	11.36	3.02	H		0.154	21.87		
		256-QAM	-26.29	11.58	11.36	3.02	H		0.098	19.92		
3500.01		PI/2 BPSK	-21.50	16.67	11.50	3.06	H		0.324	25.11	1	39
		QPSK	-21.52	16.65	11.50	3.06	H		0.323	25.09		
		16-QAM	-22.52	15.65	11.50	3.06	H		0.256	24.09		
		64-QAM	-24.04	14.13	11.50	3.06	H		0.181	22.57		
		256-QAM	-32.95	5.22	11.50	3.06	H		0.023	13.66		
3534.99		PI/2 BPSK	-20.76	17.29	11.64	3.06	H		0.387	25.88	1	39
		QPSK	-20.78	17.27	11.64	3.06	H		0.385	25.86		
		16-QAM	-21.65	16.40	11.64	3.06	H		0.316	24.99		
		64-QAM	-23.28	14.77	11.64	3.06	H		0.217	23.36		
		256-QAM	-25.17	12.88	11.64	3.06	H		0.140	21.47		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3470.01	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-21.79	15.98	11.38	3.00	H	< 1.00	0.273	24.36	1	53
		QPSK	-21.81	15.96	11.38	3.00	H		0.272	24.34		
		16-QAM	-22.73	15.04	11.38	3.00	H		0.220	23.42		
		64-QAM	-24.36	13.41	11.38	3.00	H		0.151	21.79		
		256-QAM	-26.27	11.50	11.38	3.00	H		0.097	19.88		
3500.01		PI/2 BPSK	-21.44	16.73	11.50	3.06	H		0.329	25.17	1	53
		QPSK	-21.52	16.65	11.50	3.06	H		0.323	25.09		
		16-QAM	-22.45	15.72	11.50	3.06	H		0.260	24.16		
		64-QAM	-24.06	14.11	11.50	3.06	H		0.180	22.55		
		256-QAM	-25.91	12.26	11.50	3.06	H		0.117	20.70		
3529.98		PI/2 BPSK	-20.62	17.43	11.62	3.04	H		0.399	26.01	1	53
		QPSK	-20.63	17.42	11.62	3.04	H		0.398	26.00		
		16-QAM	-21.57	16.48	11.62	3.04	H		0.321	25.06		
		64-QAM	-23.20	14.85	11.62	3.04	H		0.220	23.43		
		256-QAM	-25.11	12.94	11.62	3.04	H		0.142	21.52		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3475.02	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-21.95	15.80	11.40	3.01	H	< 1.00	0.262	24.19	1	66
		QPSK	-21.96	15.79	11.40	3.01	H		0.262	24.18		
		16-QAM	-22.91	14.84	11.40	3.01	H		0.210	23.23		
		64-QAM	-24.61	13.14	11.40	3.01	H		0.142	21.53		
		256-QAM	-26.41	11.34	11.40	3.01	H		0.094	19.73		
3500.01		PI/2 BPSK	-21.51	16.66	11.50	3.06	H		0.323	25.10	1	66
		QPSK	-21.56	16.61	11.50	3.06	H		0.320	25.05		
		16-QAM	-22.48	15.69	11.50	3.06	H		0.259	24.13		
		64-QAM	-24.11	14.06	11.50	3.06	H		0.178	22.50		
		256-QAM	-25.97	12.20	11.50	3.06	H		0.116	20.64		
3525.00		PI/2 BPSK	-20.73	17.38	11.60	3.05	H		0.392	25.93	1	66
		QPSK	-20.81	17.30	11.60	3.05	H		0.385	25.85		
		16-QAM	-21.84	16.27	11.60	3.05	H		0.303	24.82		
		64-QAM	-23.38	14.73	11.60	3.05	H		0.213	23.28		
		256-QAM	-25.28	12.83	11.60	3.05	H		0.137	21.38		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3480.00	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-21.66	16.06	11.42	3.02	H	< 1.00	0.279	24.46	1	82
		QPSK	-21.70	16.02	11.42	3.02	H		0.276	24.42		
		16-QAM	-22.70	15.02	11.42	3.02	H		0.220	23.42		
		64-QAM	-24.29	13.43	11.42	3.02	H		0.152	21.83		
		256-QAM	-26.12	11.60	11.42	3.02	H		0.100	20.00		
3500.01		PI/2 BPSK	-21.43	16.74	11.50	3.06	H		0.330	25.18	1	82
		QPSK	-21.45	16.72	11.50	3.06	H		0.328	25.16		
		16-QAM	-22.44	15.73	11.50	3.06	H		0.261	24.17		
		64-QAM	-24.03	14.14	11.50	3.06	H		0.181	22.58		
		256-QAM	-25.94	12.23	11.50	3.06	H		0.117	20.67		
3519.99		PI/2 BPSK	-21.06	17.11	11.58	3.05	H		0.366	25.64	1	82
		QPSK	-21.08	17.09	11.58	3.05	H		0.365	25.62		
		16-QAM	-22.19	15.98	11.58	3.05	H		0.282	24.51		
		64-QAM	-23.69	14.48	11.58	3.05	H		0.200	23.01		
		256-QAM	-25.57	12.60	11.58	3.05	H		0.130	21.13		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3485.01	Sub6 n77/ 70 MHz [30 kHz]	PI/2 BPSK	-21.59	16.23	11.44	3.04	H	< 1.00	0.291	24.64	1	94
		QPSK	-21.60	16.22	11.44	3.04	H		0.290	24.63		
		16-QAM	-22.48	15.34	11.44	3.04	H		0.237	23.75		
		64-QAM	-24.25	13.57	11.44	3.04	H		0.158	21.98		
		256-QAM	-26.02	11.80	11.44	3.04	H		0.105	20.21		
3500.01		PI/2 BPSK	-21.36	16.81	11.50	3.06	H		0.335	25.25	1	94
		QPSK	-21.46	16.71	11.50	3.06	H		0.327	25.15		
		16-QAM	-22.41	15.76	11.50	3.06	H		0.263	24.20		
		64-QAM	-24.02	14.15	11.50	3.06	H		0.182	22.59		
		256-QAM	-25.94	12.23	11.50	3.06	H		0.117	20.67		
3514.98		PI/2 BPSK	-21.26	17.06	11.52	3.06	H		0.357	25.53	1	94
		QPSK	-21.30	17.02	11.52	3.06	H		0.354	25.49		
		16-QAM	-22.25	16.07	11.52	3.06	H		0.284	24.54		
		64-QAM	-23.92	14.40	11.52	3.06	H		0.194	22.87		
		256-QAM	-25.76	12.56	11.52	3.06	H		0.127	21.03		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3490.02	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-21.62	16.30	11.46	3.05	H	< 1.00	0.296	24.71	1	108
		QPSK	-21.64	16.28	11.46	3.05	H		0.295	24.69		
		16-QAM	-22.45	15.47	11.46	3.05	H		0.245	23.88		
		64-QAM	-24.15	13.77	11.46	3.05	H		0.165	22.18		
		256-QAM	-26.11	11.81	11.46	3.05	H		0.105	20.22		
3500.01		PI/2 BPSK	-21.50	16.67	11.50	3.06	H		0.324	25.11	1	108
		QPSK	-21.53	16.64	11.50	3.06	H		0.322	25.08		
		16-QAM	-22.46	15.71	11.50	3.06	H		0.260	24.15		
		64-QAM	-24.06	14.11	11.50	3.06	H		0.180	22.55		
		256-QAM	-25.97	12.20	11.50	3.06	H		0.116	20.64		
3510.00		PI/2 BPSK	-21.43	16.96	11.54	3.06	H		0.350	25.44	1	108
		QPSK	-21.46	16.93	11.54	3.06	H		0.348	25.41		
		16-QAM	-22.33	16.06	11.54	3.06	H		0.284	24.54		
		64-QAM	-24.05	14.34	11.54	3.06	H		0.191	22.82		
		256-QAM	-25.98	12.41	11.54	3.06	H		0.123	20.89		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3495.00	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-21.61	16.44	11.48	3.06	H	< 1.00	0.306	24.86	1	122
		QPSK	-21.62	16.43	11.48	3.06	H		0.306	24.85		
		16-QAM	-22.65	15.40	11.48	3.06	H		0.241	23.82		
		64-QAM	-24.29	13.76	11.48	3.06	H		0.165	22.18		
		256-QAM	-26.09	11.96	11.48	3.06	H		0.109	20.38		
3500.01		PI/2 BPSK	-21.50	16.67	11.50	3.06	H		0.324	25.11	1	122
		QPSK	-21.49	16.68	11.50	3.06	H		0.325	25.12		
		16-QAM	-22.56	15.61	11.50	3.06	H		0.254	24.05		
		64-QAM	-24.07	14.10	11.50	3.06	H		0.179	22.54		
		256-QAM	-25.94	12.23	11.50	3.06	H		0.117	20.67		
3504.99		PI/2 BPSK	-21.34	16.94	11.52	3.06	H		0.347	25.40	1	122
		QPSK	-21.40	16.88	11.52	3.06	H		0.342	25.34		
		16-QAM	-22.31	15.97	11.52	3.06	H		0.277	24.43		
		64-QAM	-23.96	14.32	11.52	3.06	H		0.190	22.78		
		256-QAM	-25.93	12.35	11.52	3.06	H		0.121	20.81		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3500.01	Sub6 n77/ 100 MHz [30 kHz]	PI/2 BPSK	-21.46	16.71	11.50	3.06	H	< 1.00	0.327	25.15	1	136
		QPSK	-21.47	16.70	11.50	3.06	H		0.327	25.14		
		16-QAM	-22.27	15.90	11.50	3.06	H		0.272	24.34		
		64-QAM	-24.06	14.11	11.50	3.06	H		0.180	22.55		
		256-QAM	-25.99	12.18	11.50	3.06	H		0.115	20.62		

8.2 RADIATED SPURIOUS EMISSIONS

- ☐ NR Band: N77
☐ Bandwidth: 10 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
630334 (3455.01)	6 910.02	-59.25	11.10	-51.91	4.34	V	-45.15	-13.00
	10 365.03	-63.89	11.80	-51.39	5.40	V	-44.98	-13.00
	13 820.04	-58.69	13.06	-45.38	6.44	V	-38.76	-13.00
633334 (3500.01)	7 000.02	-57.83	11.20	-49.21	4.38	H	-42.39	-13.00
	10 500.03	-61.18	11.80	-47.76	5.49	V	-41.45	-13.00
	14 000.04	-60.31	12.90	-47.87	6.48	V	-41.45	-13.00
636322 (3544.99)	7 089.98	-58.62	11.04	-49.75	4.46	H	-43.17	-13.00
	10 634.97	-62.62	11.70	-49.26	5.44	V	-43.00	-13.00
	14 179.96	-60.44	12.96	-48.91	6.50	H	-42.45	-13.00

☐ ENDC-Mode : 2A(10 MHz)-n77A(10 MHz) , PC3

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
18900 (1880.0)	3760.00	-61.83	11.64	-62.06	3.16	V	-53.58	-13.00
	5640.00	-61.69	12.00	-55.51	3.93	V	-47.44	-13.00
	7520.00	-61.58	11.54	-47.13	4.51	V	-40.10	-13.00

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n77	10 MHz	3500.01	BPSK	Full RB	0	4.42
			QPSK			5.53
			16-QAM			6.26
			64-QAM			6.43
			256-QAM			6.40
	15 MHz		BPSK			4.36
			QPSK			5.43
			16-QAM			6.16
			64-QAM			6.40
			256-QAM			6.49
	20 MHz		BPSK			4.28
			QPSK			5.45
			16-QAM			6.18
			64-QAM			6.42
			256-QAM			6.48
	25 MHz		BPSK			4.47
			QPSK			5.54
			16-QAM			6.32
			64-QAM			6.49
			256-QAM			6.52
	30 MHz		BPSK			4.46
			QPSK			5.53
			16-QAM			6.26
			64-QAM			6.50
			256-QAM			6.55
	40 MHz		BPSK			4.56
			QPSK			5.56
			16-QAM			6.30
			64-QAM			6.51
			256-QAM			6.53
	50 MHz		BPSK			4.64

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
			QPSK			5.45
			16-QAM			6.23
			64-QAM			6.44
			256-QAM			6.44
	60 MHz		BPSK			4.57
			QPSK			5.52
			16-QAM			6.24
			64-QAM			6.40
			256-QAM			6.57
	70 MHz		BPSK			5.59
			QPSK			5.87
			16-QAM			6.36
			64-QAM			6.46
			256-QAM			6.65
	80 MHz		BPSK			4.42
			QPSK			5.50
			16-QAM			6.29
			64-QAM			6.34
			256-QAM			6.49
	90 MHz		BPSK			5.15
			QPSK			5.61
			16-QAM			6.29
			64-QAM			6.39
			256-QAM			6.54
	100 MHz		BPSK			5.61
			QPSK			5.84
			16-QAM			6.26
			64-QAM			6.44
			256-QAM			6.53

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 152 ~ 211.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n77	10 MHz	3500.01	BPSK	Full RB	0	8.6167
			QPSK			8.6405
			16-QAM			8.6440
			64-QAM			8.5790
			256-QAM			8.5953
	15 MHz		BPSK			12.958
			QPSK			12.961
			16-QAM			12.928
			64-QAM			12.904
			256-QAM			12.941
	20 MHz		BPSK			17.912
			QPSK			17.975
			16-QAM			17.956
			64-QAM			17.923
			256-QAM			17.927
	25 MHz		BPSK			23.070
			QPSK			23.099
			16-QAM			23.012
			64-QAM			22.976
			256-QAM			23.008
	30 MHz		BPSK			27.041
			QPSK			27.050
			16-QAM			27.012
			64-QAM			27.000
			256-QAM			26.996
	40 MHz		BPSK			35.992
			QPSK			36.056
			16-QAM			35.919
			64-QAM			35.877
			256-QAM			35.962
	50 MHz		BPSK			45.854

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
			QPSK			45.767
			16-QAM			45.873
			64-QAM			45.828
			256-QAM			45.890
	60 MHz		BPSK			57.910
			QPSK			57.872
			16-QAM			57.983
			64-QAM			58.043
			256-QAM			57.996
	70 MHz		BPSK			64.594
			QPSK			64.513
			16-QAM			64.733
			64-QAM			64.576
			256-QAM			64.509
	80 MHz		BPSK			77.387
			QPSK			77.397
			16-QAM			77.428
			64-QAM			77.209
			256-QAM			77.324
	90 MHz		BPSK			86.825
			QPSK			86.942
			16-QAM			87.154
			64-QAM			86.684
			256-QAM			87.272
	100 MHz		BPSK			96.451
			QPSK			96.770
			16-QAM			96.335
			64-QAM			96.818
			256-QAM			96.564

Note:

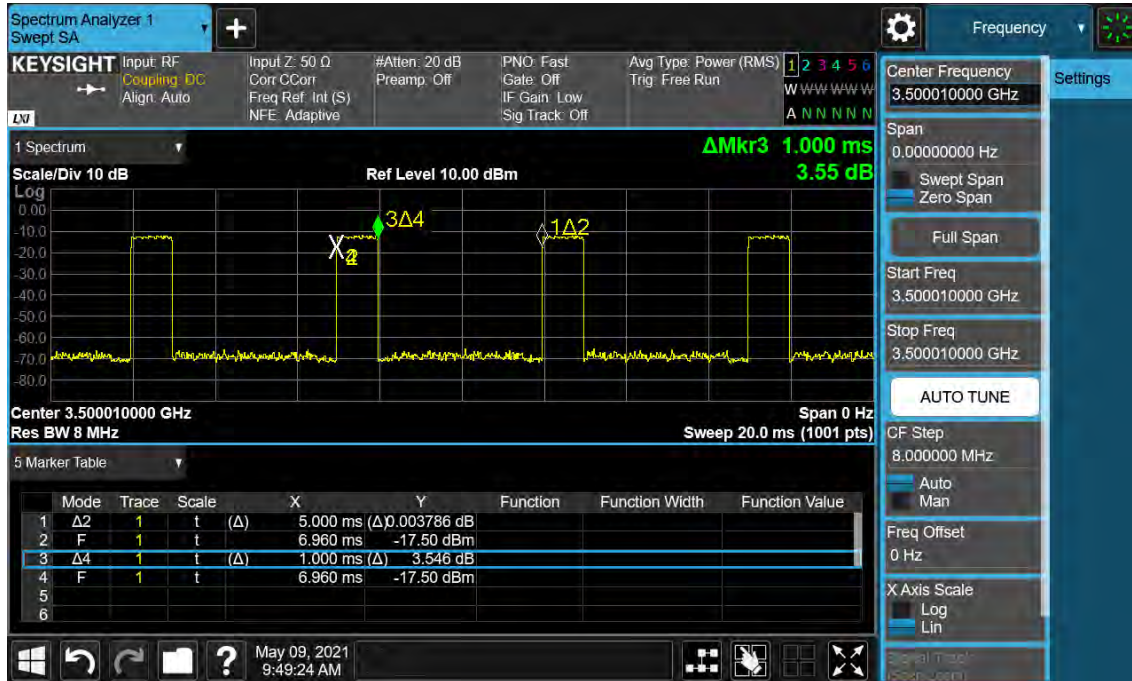
1. Plots of the EUT's Occupied Bandwidth are shown Page 92 ~ 151.

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 n77	10	3455.01	8.8709	37.805	-69.580	-31.775	-13.00
		3500.01	4.9806	37.190	-70.227	-33.037	
		3544.99	8.8579	37.805	-71.114	-33.309	
	15	3457.50	9.1396	37.805	-70.741	-32.936	
		3500.01	8.0045	37.805	-70.418	-32.613	
		3542.50	8.2832	37.805	-70.059	-32.254	
	20	3460.02	8.3026	37.805	-70.097	-32.292	
		3500.01	9.4178	37.805	-70.336	-32.531	
		3540.00	5.7737	37.805	-69.895	-32.090	
	25	3462.50	9.6595	37.805	-69.365	-31.560	
		3500.01	9.4197	37.805	-70.251	-32.446	
		3537.50	8.8430	37.805	-69.455	-31.650	
	30	3465.00	8.2991	37.805	-70.162	-32.357	
		3500.01	8.2772	37.805	-70.268	-32.463	
		3534.99	8.8579	37.805	-69.931	-32.126	
	40	3470.01	8.8574	37.805	-69.762	-31.957	
		3500.01	8.8530	37.805	-70.097	-32.292	
		3529.98	8.8799	37.805	-70.793	-32.988	
	50	3475.02	8.3385	37.805	-70.681	-32.876	
		3500.01	8.0185	37.805	-70.245	-32.440	
		3525.00	7.9960	37.805	-70.454	-32.649	
	60	3480.00	4.9113	37.190	-70.237	-33.047	
		3500.01	9.1850	37.805	-70.698	-32.893	
		3519.99	8.3340	37.805	-70.325	-32.520	
	70	3485.01	9.6655	37.805	-69.824	-32.019	
		3500.01	9.1511	37.805	-70.138	-32.333	
		3514.98	5.2059	37.805	-70.194	-32.389	
	80	3490.02	8.0324	37.805	-69.666	-31.861	
		3500.01	9.1750	37.805	-69.796	-31.991	
		3510.00	9.6805	37.805	-70.068	-32.263	
	90	3495.00	6.0270	37.805	-70.420	-32.615	
		3500.01	9.6894	37.805	-70.472	-32.667	
		3504.99	4.9901	37.190	-70.131	-32.941	
	100	3500.01	5.1800	37.805	-70.950	-33.145	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 356 ~ 423.
2. Duty Cycle factor already applied on the factor.
- Duty Cycle Factor(dB) = 6.990



- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Splitter

- Result(dBm) = Reading + Factor

3. Factor(dB)

Frequency Range (GHz)	Factor [dB]
0.03 – 1	34.484
1 – 5	37.190
5 – 10	37.805
10 – 15	38.330
15 – 20	38.703
Above 20	39.345

8.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 212 ~ 355.
2. Duty Cycle factor already applied on the factor.
 - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Divider
 - Result(dBm) = Reading + Factor
 - Duty Cycle Factor(dB) = 6.990

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3455.010	100 %	+20(Ref)	3455 010 014	0.0	0.000 000	0.000
	100 %	-30	3455 010 022	7.2	0.000 000	0.002
	100 %	-20	3455 010 029	14.3	0.000 000	0.004
	100 %	-10	3455 010 029	14.8	0.000 000	0.004
	100 %	0	3455 010 020	5.9	0.000 000	0.002
	100 %	+10	3455 010 030	15.9	0.000 000	0.005
	100 %	+30	3455 010 021	6.4	0.000 000	0.002
	100 %	+40	3455 010 027	12.9	0.000 000	0.004
	100 %	+50	3455 010 030	16.0	0.000 000	0.005
	Batt. Endpoint	+20	3455 010 018	4.1	0.000 000	0.001
3544.980	100 %	+20(Ref)	3544 980 014	0.0	0.000 000	0.000
	100 %	-30	3544 980 019	5.4	0.000 000	0.002
	100 %	-20	3544 980 023	9.7	0.000 000	0.003
	100 %	-10	3544 980 026	12.7	0.000 000	0.004
	100 %	0	3544 980 031	17.0	0.000 000	0.005
	100 %	+10	3544 980 027	13.0	0.000 000	0.004
	100 %	+30	3544 980 026	12.1	0.000 000	0.003
	100 %	+40	3544 980 031	17.0	0.000 000	0.005
	100 %	+50	3544 980 028	13.8	0.000 000	0.004
	Batt. Endpoint	+20	3544 980 027	13.5	0.000 000	0.004

- ▣ BandWidth: 15 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3457.500	100 %	+20(Ref)	3457 500 005	0.0	0.000 000	0.000
	100 %	-30	3457 500 018	13.0	0.000 000	0.004
	100 %	-20	3457 500 009	3.6	0.000 000	0.001
	100 %	-10	3457 500 016	11.4	0.000 000	0.003
	100 %	0	3457 500 020	15.2	0.000 000	0.004
	100 %	+10	3457 500 021	16.2	0.000 000	0.005
	100 %	+30	3457 500 015	10.3	0.000 000	0.003
	100 %	+40	3457 500 016	10.7	0.000 000	0.003
	100 %	+50	3457 500 011	6.0	0.000 000	0.002
	Batt. Endpoint	+20	3457 500 011	6.2	0.000 000	0.002
3542.490	100 %	+20(Ref)	3542 490 016	0.0	0.000 000	0.000
	100 %	-30	3542 490 033	16.9	0.000 000	0.005
	100 %	-20	3542 490 019	3.3	0.000 000	0.001
	100 %	-10	3542 490 027	10.9	0.000 000	0.003
	100 %	0	3542 490 022	6.5	0.000 000	0.002
	100 %	+10	3542 490 022	6.7	0.000 000	0.002
	100 %	+30	3542 490 024	8.7	0.000 000	0.002
	100 %	+40	3542 490 029	12.8	0.000 000	0.004
	100 %	+50	3542 490 023	7.7	0.000 000	0.002
	Batt. Endpoint	+20	3542 490 022	6.6	0.000 000	0.002

☐ BandWidth: 20 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3460.020	100 %	+20(Ref)	3460 020 007	0.0	0.000 000	0.000
	100 %	-30	3460 020 019	12.1	0.000 000	0.003
	100 %	-20	3460 020 019	12.4	0.000 000	0.004
	100 %	-10	3460 020 017	10.0	0.000 000	0.003
	100 %	0	3460 020 017	10.7	0.000 000	0.003
	100 %	+10	3460 020 018	11.5	0.000 000	0.003
	100 %	+30	3460 020 023	15.8	0.000 000	0.005
	100 %	+40	3460 020 018	11.3	0.000 000	0.003
	100 %	+50	3460 020 011	4.8	0.000 000	0.001
	Batt. Endpoint	+20	3460 020 014	7.7	0.000 000	0.002
3540.000	100 %	+20(Ref)	3540 000 007	0.0	0.000 000	0.000
	100 %	-30	3540 000 022	14.9	0.000 000	0.004
	100 %	-20	3540 000 016	8.5	0.000 000	0.002
	100 %	-10	3540 000 012	4.5	0.000 000	0.001
	100 %	0	3540 000 012	4.1	0.000 000	0.001
	100 %	+10	3540 000 011	3.6	0.000 000	0.001
	100 %	+30	3540 000 016	8.8	0.000 000	0.002
	100 %	+40	3540 000 014	6.4	0.000 000	0.002
	100 %	+50	3540 000 013	5.3	0.000 000	0.002
	Batt. Endpoint	+20	3540 000 023	15.2	0.000 000	0.004

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3462.500	100 %	+20(Ref)	3462 510 012	0.0	0.000 000	0.000
	100 %	-30	3462 510 021	9.0	0.000 000	0.003
	100 %	-20	3462 510 019	6.8	0.000 000	0.002
	100 %	-10	3462 510 022	9.3	0.000 000	0.003
	100 %	0	3462 510 019	6.8	0.000 000	0.002
	100 %	+10	3462 510 028	15.9	0.000 000	0.005
	100 %	+30	3462 510 024	11.2	0.000 000	0.003
	100 %	+40	3462 510 021	8.1	0.000 000	0.002
	100 %	+50	3462 510 020	7.7	0.000 000	0.002
	Batt. Endpoint	+20	3462 510 016	3.9	0.000 000	0.001
3537.500	100 %	+20(Ref)	3537 480 013	0.0	0.000 000	0.000
	100 %	-30	3537 480 025	12.8	0.000 000	0.004
	100 %	-20	3537 480 022	9.5	0.000 000	0.003
	100 %	-10	3537 480 029	16.6	0.000 000	0.005
	100 %	0	3537 480 018	4.8	0.000 000	0.001
	100 %	+10	3537 480 027	14.0	0.000 000	0.004
	100 %	+30	3537 480 021	8.0	0.000 000	0.002
	100 %	+40	3537 480 027	14.7	0.000 000	0.004
	100 %	+50	3537 480 028	15.7	0.000 000	0.004
	Batt. Endpoint	+20	3537 480 021	8.2	0.000 000	0.002

- ▣ BandWidth: 30 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3465.000	100 %	+20(Ref)	3465 000 013	0.0	0.000 000	0.000
	100 %	-30	3465 000 024	10.8	0.000 000	0.003
	100 %	-20	3465 000 023	9.4	0.000 000	0.003
	100 %	-10	3465 000 022	8.7	0.000 000	0.003
	100 %	0	3465 000 024	11.3	0.000 000	0.003
	100 %	+10	3465 000 022	8.9	0.000 000	0.003
	100 %	+30	3465 000 027	13.6	0.000 000	0.004
	100 %	+40	3465 000 028	15.2	0.000 000	0.004
	100 %	+50	3465 000 029	15.8	0.000 000	0.005
	Batt. Endpoint	+20	3465 000 030	16.8	0.000 000	0.005
3534.990	100 %	+20(Ref)	3534 990 012	0.0	0.000 000	0.000
	100 %	-30	3534 990 015	3.0	0.000 000	0.001
	100 %	-20	3534 990 022	9.7	0.000 000	0.003
	100 %	-10	3534 990 018	6.3	0.000 000	0.002
	100 %	0	3534 990 023	11.4	0.000 000	0.003
	100 %	+10	3534 990 024	11.5	0.000 000	0.003
	100 %	+30	3534 990 026	14.4	0.000 000	0.004
	100 %	+40	3534 990 020	7.7	0.000 000	0.002
	100 %	+50	3534 990 020	7.6	0.000 000	0.002
	Batt. Endpoint	+20	3534 990 019	6.7	0.000 000	0.002

- ▣ BandWidth: 40 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3470.010	100 %	+20(Ref)	3470 010 008	0.0	0.000 000	0.000
	100 %	-30	3470 010 012	3.9	0.000 000	0.001
	100 %	-20	3470 010 024	16.4	0.000 000	0.005
	100 %	-10	3470 010 023	15.7	0.000 000	0.005
	100 %	0	3470 010 011	3.3	0.000 000	0.001
	100 %	+10	3470 010 020	12.1	0.000 000	0.003
	100 %	+30	3470 010 021	13.4	0.000 000	0.004
	100 %	+40	3470 010 015	7.2	0.000 000	0.002
	100 %	+50	3470 010 015	7.7	0.000 000	0.002
	Batt. Endpoint	+20	3470 010 024	16.1	0.000 000	0.005
3529.980	100 %	+20(Ref)	3529 980 004	0.0	0.000 000	0.000
	100 %	-30	3529 980 008	3.8	0.000 000	0.001
	100 %	-20	3529 980 015	11.0	0.000 000	0.003
	100 %	-10	3529 980 009	4.7	0.000 000	0.001
	100 %	0	3529 980 015	11.2	0.000 000	0.003
	100 %	+10	3529 980 011	6.5	0.000 000	0.002
	100 %	+30	3529 980 013	8.8	0.000 000	0.003
	100 %	+40	3529 980 007	3.0	0.000 000	0.001
	100 %	+50	3529 980 018	13.4	0.000 000	0.004
	Batt. Endpoint	+20	3529 980 010	5.6	0.000 000	0.002

☐ BandWidth: 50 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3475.020	100 %	+20(Ref)	3475 020 016	0.0	0.000 000	0.000
	100 %	-30	3475 020 019	3.0	0.000 000	0.001
	100 %	-20	3475 020 022	6.2	0.000 000	0.002
	100 %	-10	3475 020 026	10.7	0.000 000	0.003
	100 %	0	3475 020 025	9.6	0.000 000	0.003
	100 %	+10	3475 020 031	15.3	0.000 000	0.004
	100 %	+30	3475 020 021	5.1	0.000 000	0.001
	100 %	+40	3475 020 024	8.6	0.000 000	0.002
	100 %	+50	3475 020 023	7.6	0.000 000	0.002
	Batt. Endpoint	+20	3475 020 024	8.6	0.000 000	0.002
3525.000	100 %	+20(Ref)	3525 000 008	0.0	0.000 000	0.000
	100 %	-30	3525 000 013	4.4	0.000 000	0.001
	100 %	-20	3525 000 025	16.3	0.000 000	0.005
	100 %	-10	3525 000 024	15.5	0.000 000	0.004
	100 %	0	3525 000 015	7.0	0.000 000	0.002
	100 %	+10	3525 000 024	15.9	0.000 000	0.004
	100 %	+30	3525 000 022	13.6	0.000 000	0.004
	100 %	+40	3525 000 024	16.2	0.000 000	0.005
	100 %	+50	3525 000 011	3.2	0.000 000	0.001
	Batt. Endpoint	+20	3525 000 014	6.1	0.000 000	0.002

- ▣ BandWidth: 60 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3480.000	100 %	+20(Ref)	3480 000 008	0.0	0.000 000	0.000
	100 %	-30	3480 000 021	12.5	0.000 000	0.004
	100 %	-20	3480 000 018	9.3	0.000 000	0.003
	100 %	-10	3480 000 017	8.4	0.000 000	0.002
	100 %	0	3480 000 022	13.5	0.000 000	0.004
	100 %	+10	3480 000 022	13.6	0.000 000	0.004
	100 %	+30	3480 000 012	3.5	0.000 000	0.001
	100 %	+40	3480 000 012	4.0	0.000 000	0.001
	100 %	+50	3480 000 020	11.3	0.000 000	0.003
	Batt. Endpoint	+20	3480 000 024	15.8	0.000 000	0.005
3519.990	100 %	+20(Ref)	3519 990 010	0.0	0.000 000	0.000
	100 %	-30	3519 990 014	4.2	0.000 000	0.001
	100 %	-20	3519 990 026	16.4	0.000 000	0.005
	100 %	-10	3519 990 027	16.6	0.000 000	0.005
	100 %	0	3519 990 026	16.2	0.000 000	0.005
	100 %	+10	3519 990 023	13.1	0.000 000	0.004
	100 %	+30	3519 990 020	10.1	0.000 000	0.003
	100 %	+40	3519 990 023	12.8	0.000 000	0.004
	100 %	+50	3519 990 016	5.8	0.000 000	0.002
	Batt. Endpoint	+20	3519 990 023	12.6	0.000 000	0.004

- ▣ BandWidth: 70 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3485.010	100 %	+20(Ref)	3485 010 005	0.0	0.000 000	0.000
	100 %	-30	3485 010 021	16.2	0.000 000	0.005
	100 %	-20	3485 010 018	13.1	0.000 000	0.004
	100 %	-10	3485 010 011	5.5	0.000 000	0.002
	100 %	0	3485 010 009	3.8	0.000 000	0.001
	100 %	+10	3485 010 012	6.5	0.000 000	0.002
	100 %	+30	3485 010 009	4.0	0.000 000	0.001
	100 %	+40	3485 010 013	8.1	0.000 000	0.002
	100 %	+50	3485 010 019	13.5	0.000 000	0.004
	Batt. Endpoint	+20	3485 010 016	11.3	0.000 000	0.003
3514.980	100 %	+20(Ref)	3514 980 005	0.0	0.000 000	0.000
	100 %	-30	3514 980 015	9.4	0.000 000	0.003
	100 %	-20	3514 980 010	4.6	0.000 000	0.001
	100 %	-10	3514 980 012	6.3	0.000 000	0.002
	100 %	0	3514 980 009	3.4	0.000 000	0.001
	100 %	+10	3514 980 014	8.7	0.000 000	0.002
	100 %	+30	3514 980 019	13.8	0.000 000	0.004
	100 %	+40	3514 980 014	8.6	0.000 000	0.002
	100 %	+50	3514 980 012	6.3	0.000 000	0.002
	Batt. Endpoint	+20	3514 980 014	8.6	0.000 000	0.002

☐ BandWidth: 80 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3490.020	100 %	+20(Ref)	3490 020 016	0.0	0.000 000	0.000
	100 %	-30	3490 020 029	13.1	0.000 000	0.004
	100 %	-20	3490 020 030	14.0	0.000 000	0.004
	100 %	-10	3490 020 021	5.0	0.000 000	0.001
	100 %	0	3490 020 031	15.5	0.000 000	0.004
	100 %	+10	3490 020 022	6.3	0.000 000	0.002
	100 %	+30	3490 020 027	11.5	0.000 000	0.003
	100 %	+40	3490 020 020	4.6	0.000 000	0.001
	100 %	+50	3490 020 029	13.4	0.000 000	0.004
	Batt. Endpoint	+20	3490 020 031	15.3	0.000 000	0.004
3510.000	100 %	+20(Ref)	3510 000 010	0.0	0.000 000	0.000
	100 %	-30	3510 000 025	14.7	0.000 000	0.004
	100 %	-20	3510 000 025	15.3	0.000 000	0.004
	100 %	-10	3510 000 014	4.1	0.000 000	0.001
	100 %	0	3510 000 021	10.8	0.000 000	0.003
	100 %	+10	3510 000 017	6.9	0.000 000	0.002
	100 %	+30	3510 000 015	4.7	0.000 000	0.001
	100 %	+40	3510 000 022	12.3	0.000 000	0.004
	100 %	+50	3510 000 026	16.2	0.000 000	0.005
	Batt. Endpoint	+20	3510 000 019	8.9	0.000 000	0.003

☐ BandWidth: 90 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3495.000	100 %	+20(Ref)	3495 000 009	0.0	0.000 000	0.000
	100 %	-30	3495 000 019	10.6	0.000 000	0.003
	100 %	-20	3495 000 015	6.3	0.000 000	0.002
	100 %	-10	3495 000 016	6.8	0.000 000	0.002
	100 %	0	3495 000 015	6.4	0.000 000	0.002
	100 %	+10	3495 000 016	7.3	0.000 000	0.002
	100 %	+30	3495 000 024	15.6	0.000 000	0.004
	100 %	+40	3495 000 013	4.2	0.000 000	0.001
	100 %	+50	3495 000 015	6.5	0.000 000	0.002
	Batt. Endpoint	+20	3495 000 017	8.3	0.000 000	0.002
3504.990	100 %	+20(Ref)	3504 990 008	0.0	0.000 000	0.000
	100 %	-30	3504 990 015	6.8	0.000 000	0.002
	100 %	-20	3504 990 023	15.4	0.000 000	0.004
	100 %	-10	3504 990 021	12.9	0.000 000	0.004
	100 %	0	3504 990 011	3.5	0.000 000	0.001
	100 %	+10	3504 990 021	13.5	0.000 000	0.004
	100 %	+30	3504 990 022	14.1	0.000 000	0.004
	100 %	+40	3504 990 021	13.6	0.000 000	0.004
	100 %	+50	3504 990 013	4.9	0.000 000	0.001
	Batt. Endpoint	+20	3504 990 012	4.7	0.000 000	0.001

☐ BandWidth: 100 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3500.010	100 %	+20(Ref)	3500 010 012	0.0	0.000 000	0.000
	100 %	-30	3500 010 025	12.6	0.000 000	0.004
	100 %	-20	3500 010 017	4.6	0.000 000	0.001
	100 %	-10	3500 010 021	9.3	0.000 000	0.003
	100 %	0	3500 010 016	3.6	0.000 000	0.001
	100 %	+10	3500 010 022	10.0	0.000 000	0.003
	100 %	+30	3500 010 027	14.7	0.000 000	0.004
	100 %	+40	3500 010 017	5.0	0.000 000	0.001
	100 %	+50	3500 010 022	10.3	0.000 000	0.003
	Batt. Endpoint	+20	3500 010 017	4.8	0.000 000	0.001

9. TEST DATA (3700 MHz - 3980 MHz)

9.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3705.00	Sub6 n77/ 10 MHz [30 kHz]	PI/2 BPSK	-20.61	17.73	11.70	3.14	H	< 1.00	0.427	26.30
		QPSK	-20.79	17.55	11.70	3.14	H		0.409	26.12
		16-QAM	-21.59	16.75	11.70	3.14	H		0.340	25.32
		64-QAM	-23.21	15.13	11.70	3.14	H		0.234	23.70
		256-QAM	-25.06	13.28	11.70	3.14	H		0.153	21.85
3840.00		PI/2 BPSK	-21.96	17.96	11.24	3.21	H		0.397	25.99
		QPSK	-22.01	17.91	11.24	3.21	H		0.393	25.94
		16-QAM	-23.06	16.86	11.24	3.21	H		0.308	24.89
		64-QAM	-24.56	15.36	11.24	3.21	H		0.218	23.39
		256-QAM	-26.41	13.51	11.24	3.21	H		0.143	21.54
3975.00		PI/2 BPSK	-21.83	17.80	11.20	3.23	H		0.378	25.77
		QPSK	-21.85	17.78	11.20	3.23	H		0.376	25.75
		16-QAM	-22.87	16.76	11.20	3.23	H		0.297	24.73
		64-QAM	-24.47	15.16	11.20	3.23	H		0.206	23.13
		256-QAM	-26.30	13.33	11.20	3.23	H		0.135	21.30

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3707.51	Sub6 n77/ 15 MHz [30 kHz]	PI/2 BPSK	-20.64	17.65	11.70	3.15	H	< 1.00	0.417	26.20
		QPSK	-20.66	17.63	11.70	3.15	H		0.415	26.18
		16-QAM	-21.60	16.69	11.70	3.15	H		0.334	25.24
		64-QAM	-23.31	14.98	11.70	3.15	H		0.225	23.53
		256-QAM	-25.01	13.28	11.70	3.15	H		0.152	21.83
3840.00		PI/2 BPSK	-21.91	18.01	11.24	3.21	H		0.402	26.04
		QPSK	-21.96	17.96	11.24	3.21	H		0.397	25.99
		16-QAM	-22.81	17.11	11.24	3.21	H		0.327	25.14
		64-QAM	-24.59	15.33	11.24	3.21	H		0.217	23.36
		256-QAM	-26.50	13.42	11.24	3.21	H		0.140	21.45
3972.48		PI/2 BPSK	-21.91	17.74	11.18	3.23	H		0.371	25.69
		QPSK	-21.92	17.73	11.18	3.23	H		0.370	25.68
		16-QAM	-22.91	16.74	11.18	3.23	H		0.295	24.69
		64-QAM	-24.54	15.11	11.18	3.23	H		0.202	23.06
		256-QAM	-26.46	13.19	11.18	3.23	H		0.130	21.14

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3710.01	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-20.63	17.66	11.70	3.15	H	< 1.00	0.418	26.21
		QPSK	-20.66	17.63	11.70	3.15	H		0.415	26.18
		16-QAM	-21.74	16.55	11.70	3.15	H		0.324	25.10
		64-QAM	-23.22	15.07	11.70	3.15	H		0.230	23.62
		256-QAM	-25.09	13.20	11.70	3.15	H		0.150	21.75
3840.00		PI/2 BPSK	-21.97	17.95	11.24	3.21	H		0.396	25.98
		QPSK	-21.99	17.93	11.24	3.21	H		0.395	25.96
		16-QAM	-22.98	16.94	11.24	3.21	H		0.314	24.97
		64-QAM	-24.52	15.40	11.24	3.21	H		0.220	23.43
		256-QAM	-26.46	13.46	11.24	3.21	H		0.141	21.49
3969.99		PI/2 BPSK	-22.05	17.60	11.18	3.23	H		0.359	25.55
		QPSK	-22.06	17.59	11.18	3.23	H		0.358	25.54
		16-QAM	-23.09	16.56	11.18	3.23	H		0.283	24.51
		64-QAM	-24.70	14.95	11.18	3.23	H		0.195	22.90
		256-QAM	-26.49	13.16	11.18	3.23	H		0.129	21.11

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3712.50	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-20.66	17.63	11.70	3.15	H	< 1.00	0.415	26.18
		QPSK	-20.68	17.61	11.70	3.15	H		0.413	26.16
		16-QAM	-21.79	16.50	11.70	3.15	H		0.320	25.05
		64-QAM	-23.37	14.92	11.70	3.15	H		0.222	23.47
		256-QAM	-25.18	13.11	11.70	3.15	H		0.147	21.66
3840.00		PI/2 BPSK	-22.06	17.86	11.24	3.21	H		0.388	25.89
		QPSK	-22.10	17.82	11.24	3.21	H		0.385	25.85
		16-QAM	-23.09	16.83	11.24	3.21	H		0.306	24.86
		64-QAM	-24.63	15.29	11.24	3.21	H		0.215	23.32
		256-QAM	-26.52	13.40	11.24	3.21	H		0.139	21.43
3967.50		PI/2 BPSK	-22.27	17.38	11.18	3.23	H		0.341	25.33
		QPSK	-22.31	17.34	11.18	3.23	H		0.338	25.29
		16-QAM	-23.20	16.45	11.18	3.23	H		0.276	24.40
		64-QAM	-24.95	14.70	11.18	3.23	H		0.184	22.65
		256-QAM	-26.74	12.91	11.18	3.23	H		0.122	20.86

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3715.02	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-20.69	17.73	11.70	3.18	H	< 1.00	0.422	26.25
		QPSK	-20.72	17.70	11.70	3.18	H		0.419	26.22
		16-QAM	-21.78	16.64	11.70	3.18	H		0.328	25.16
		64-QAM	-23.35	15.07	11.70	3.18	H		0.229	23.59
		256-QAM	-25.19	13.23	11.70	3.18	H		0.150	21.75
3840.00		PI/2 BPSK	-22.04	17.88	11.24	3.21	H		0.390	25.91
		QPSK	-22.05	17.87	11.24	3.21	H		0.389	25.90
		16-QAM	-23.17	16.75	11.24	3.21	H		0.301	24.78
		64-QAM	-24.72	15.20	11.24	3.21	H		0.210	23.23
		256-QAM	-26.56	13.36	11.24	3.21	H		0.138	21.39
3964.98		PI/2 BPSK	-22.41	17.26	11.16	3.23	H		0.331	25.19
		QPSK	-22.44	17.23	11.16	3.23	H		0.328	25.16
		16-QAM	-23.35	16.32	11.16	3.23	H		0.266	24.25
		64-QAM	-24.98	14.69	11.16	3.23	H		0.183	22.62
		256-QAM	-26.92	12.75	11.16	3.23	H		0.117	20.68

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3720.00	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-20.78	17.76	11.70	3.20	H	< 1.00	0.423	26.26
		QPSK	-20.80	17.74	11.70	3.20	H		0.421	26.24
		16-QAM	-21.82	16.72	11.70	3.20	H		0.333	25.22
		64-QAM	-23.40	15.14	11.70	3.20	H		0.231	23.64
		256-QAM	-25.20	13.34	11.70	3.20	H		0.153	21.84
3840.00		PI/2 BPSK	-22.17	17.75	11.24	3.21	H		0.378	25.78
		QPSK	-22.23	17.69	11.24	3.21	H		0.373	25.72
		16-QAM	-23.20	16.72	11.24	3.21	H		0.299	24.75
		64-QAM	-24.77	15.15	11.24	3.21	H		0.208	23.18
		256-QAM	-26.72	13.20	11.24	3.21	H		0.133	21.23
3960.00		PI/2 BPSK	-22.59	17.10	11.14	3.23	H		0.317	25.01
		QPSK	-22.62	17.07	11.14	3.23	H		0.315	24.98
		16-QAM	-23.60	16.09	11.14	3.23	H		0.251	24.00
		64-QAM	-25.29	14.40	11.14	3.23	H		0.170	22.31
		256-QAM	-27.16	12.53	11.14	3.23	H		0.111	20.44

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3725.10	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-20.82	17.80	11.70	3.22	H	< 1.00	0.425	26.28
		QPSK	-20.83	17.79	11.70	3.22	H		0.424	26.27
		16-QAM	-21.87	16.75	11.70	3.22	H		0.333	25.23
		64-QAM	-23.40	15.22	11.70	3.22	H		0.234	23.70
		256-QAM	-25.36	13.26	11.70	3.22	H		0.149	21.74
3840.00		PI/2 BPSK	-22.19	17.73	11.24	3.21	H		0.377	25.76
		QPSK	-22.20	17.72	11.24	3.21	H		0.376	25.75
		16-QAM	-23.27	16.65	11.24	3.21	H		0.294	24.68
		64-QAM	-24.81	15.11	11.24	3.21	H		0.206	23.14
		256-QAM	-26.75	13.17	11.24	3.21	H		0.132	21.20
3954.99		PI/2 BPSK	-22.69	17.02	11.12	3.23	H		0.310	24.91
		QPSK	-22.74	16.97	11.12	3.23	H		0.306	24.86
		16-QAM	-23.69	16.02	11.12	3.23	H		0.246	23.91
		64-QAM	-25.41	14.30	11.12	3.23	H		0.166	22.19
		256-QAM	-27.21	12.50	11.12	3.23	H		0.110	20.39

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3730.02	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-20.74	17.96	11.70	3.24	H	< 1.00	0.439	26.42
		QPSK	-20.76	17.94	11.70	3.24	H		0.437	26.40
		16-QAM	-21.90	16.80	11.70	3.24	H		0.336	25.26
		64-QAM	-23.46	15.24	11.70	3.24	H		0.234	23.70
		256-QAM	-25.24	13.46	11.70	3.24	H		0.156	21.92
3840.00		PI/2 BPSK	-22.16	17.76	11.24	3.21	H		0.379	25.79
		QPSK	-22.19	17.73	11.24	3.21	H		0.377	25.76
		16-QAM	-23.28	16.64	11.24	3.21	H		0.293	24.67
		64-QAM	-24.76	15.16	11.24	3.21	H		0.209	23.19
		256-QAM	-26.65	13.27	11.24	3.21	H		0.135	21.30
3949.98		PI/2 BPSK	-22.61	17.12	11.10	3.23	H		0.316	24.99
		QPSK	-22.63	17.10	11.10	3.23	H		0.314	24.97
		16-QAM	-23.78	15.95	11.10	3.23	H		0.241	23.82
		64-QAM	-25.22	14.51	11.10	3.23	H		0.173	22.38
		256-QAM	-27.13	12.60	11.10	3.23	H		0.112	20.47

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3735.00	Sub6 n77/ 70 MHz [30 kHz]	PI/2 BPSK	-20.84	17.92	11.70	3.24	H	< 1.00	0.435	26.38
		QPSK	-20.88	17.88	11.70	3.24	H		0.431	26.34
		16-QAM	-21.84	16.92	11.70	3.24	H		0.345	25.38
		64-QAM	-23.53	15.23	11.70	3.24	H		0.234	23.69
		256-QAM	-25.31	13.45	11.70	3.24	H		0.155	21.91
3840.00		PI/2 BPSK	-22.11	17.81	11.24	3.21	H		0.384	25.84
		QPSK	-22.14	17.78	11.24	3.21	H		0.381	25.81
		16-QAM	-23.02	16.90	11.24	3.21	H		0.311	24.93
		64-QAM	-24.83	15.09	11.24	3.21	H		0.205	23.12
		256-QAM	-26.57	13.35	11.24	3.21	H		0.137	21.38
3945.00		PI/2 BPSK	-22.85	16.89	11.09	3.23	H		0.299	24.75
		QPSK	-22.88	16.86	11.09	3.23	H		0.297	24.72
		16-QAM	-23.89	15.85	11.09	3.23	H		0.235	23.71
		64-QAM	-25.46	14.28	11.09	3.23	H		0.164	22.14
		256-QAM	-27.37	12.37	11.09	3.23	H		0.106	20.23

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3740.01	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-20.83	17.99	11.70	3.23	H	< 1.00	0.443	26.46
		QPSK	-20.86	17.96	11.70	3.23	H		0.440	26.43
		16-QAM	-21.86	16.96	11.70	3.23	H		0.349	25.43
		64-QAM	-23.42	15.40	11.70	3.23	H		0.244	23.87
		256-QAM	-25.27	13.55	11.70	3.23	H		0.159	22.02
3840.00		PI/2 BPSK	-22.05	17.87	11.24	3.21	H		0.389	25.90
		QPSK	-22.06	17.86	11.24	3.21	H		0.388	25.89
		16-QAM	-23.00	16.92	11.24	3.21	H		0.313	24.95
		64-QAM	-24.57	15.35	11.24	3.21	H		0.218	23.38
		256-QAM	-26.58	13.34	11.24	3.21	H		0.137	21.37
3939.99		PI/2 BPSK	-22.72	17.03	11.08	3.23	H		0.308	24.88
		QPSK	-22.74	17.01	11.08	3.23	H		0.306	24.86
		16-QAM	-23.57	16.18	11.08	3.23	H		0.253	24.03
		64-QAM	-25.33	14.42	11.08	3.23	H		0.169	22.27
		256-QAM	-27.24	12.51	11.08	3.23	H		0.109	20.36

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3745.02	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-20.69	18.15	11.70	3.22	H	< 1.00	0.460	26.63
		QPSK	-20.71	18.13	11.70	3.22	H		0.458	26.61
		16-QAM	-21.78	17.06	11.70	3.22	H		0.358	25.54
		64-QAM	-23.27	15.57	11.70	3.22	H		0.254	24.05
		256-QAM	-25.22	13.62	11.70	3.22	H		0.162	22.10
3840.00		PI/2 BPSK	-21.93	17.99	11.24	3.21	H		0.400	26.02
		QPSK	-21.94	17.98	11.24	3.21	H		0.399	26.01
		16-QAM	-23.02	16.90	11.24	3.21	H		0.311	24.93
		64-QAM	-24.53	15.39	11.24	3.21	H		0.220	23.42
		256-QAM	-26.40	13.52	11.24	3.21	H		0.143	21.55
3934.98		PI/2 BPSK	-22.36	17.40	11.07	3.23	H		0.334	25.24
		QPSK	-22.44	17.32	11.07	3.23	H		0.328	25.16
		16-QAM	-23.55	16.21	11.07	3.23	H		0.254	24.05
		64-QAM	-25.02	14.74	11.07	3.23	H		0.181	22.58
		256-QAM	-26.91	12.85	11.07	3.23	H		0.117	20.69

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
3750.00	Sub6 n77/ 100 MHz [30 kHz]	PI/2 BPSK	-20.55	18.31	11.70	3.20	H	< 1.00	0.480	26.81
		QPSK	-20.57	18.29	11.70	3.20	H		0.478	26.79
		16-QAM	-21.45	17.41	11.70	3.20	H		0.390	25.91
		64-QAM	-23.16	15.70	11.70	3.20	H		0.263	24.20
		256-QAM	-25.06	13.80	11.70	3.20	H		0.170	22.30
3840.00		PI/2 BPSK	-21.34	18.58	11.24	3.21	H		0.458	26.61
		QPSK	-21.27	18.65	11.24	3.21	H		0.466	26.68
		16-QAM	-22.25	17.67	11.24	3.21	H		0.372	25.70
		64-QAM	-23.92	16.00	11.24	3.21	H		0.253	24.03
		256-QAM	-25.75	14.17	11.24	3.21	H		0.166	22.20
3930.00	PI/2 BPSK	-22.11	17.48	11.24	3.23	H	0.354	25.49		
	QPSK	-22.12	17.47	11.24	3.23	H	0.353	25.48		
	16-QAM	-22.98	16.61	11.24	3.23	H	0.290	24.62		
	64-QAM	-24.71	14.88	11.24	3.23	H	0.195	22.89		
	256-QAM	-26.63	12.96	11.24	3.23	H	0.125	20.97		

9.2 RADIATED SPURIOUS EMISSIONS

- NR Band: N77(PC2)
- Bandwidth: 100 MHz
- Modulation: PI/2 BPSK
- Distance: 1 meters
- SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
650000 (3750.00)	7 500.00	-53.50	11.50	-43.99	4.54	H	-37.03	-13.00
	11 250.00	-60.08	12.20	-47.20	5.74	H	-40.74	-13.00
	15 000.00	-58.59	14.40	-50.45	6.75	V	-42.80	-13.00
656000 (3840.00)	7 680.00	-52.94	11.54	-43.17	4.60	V	-36.23	-13.00
	11 520.00	-60.27	12.44	-46.33	5.72	V	-39.61	-13.00
	15 360.00	-60.29	15.54	-52.16	6.81	V	-43.43	-13.00
662000 (3930.00)	7 860.00	-55.28	11.00	-45.62	4.71	H	-39.33	-13.00
	11 790.00	-60.64	12.90	-48.26	5.87	H	-41.23	-13.00
	15 720.00	-60.62	16.40	-51.68	6.88	V	-42.16	-13.00

■ ENDC-Mode : 2A(10 MHz)-n77A(100 MHz) , PC3

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
18900 (1880.0)	3760.00	-61.79	11.64	-62.02	3.16	V	-53.54	-13.00
	5640.00	-61.38	12.00	-55.20	3.93	V	-47.13	-13.00
	7520.00	-61.66	11.54	-47.21	4.51	V	-40.18	-13.00

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n77	10 MHz	3840.00	BPSK	Full RB	0	4.35
			QPSK			5.49
			16-QAM			6.26
			64-QAM			6.40
			256-QAM			6.51
	15 MHz		BPSK			4.57
			QPSK			5.37
			16-QAM			6.18
			64-QAM			6.42
			256-QAM			6.47
	20 MHz		BPSK			4.32
			QPSK			5.33
			16-QAM			6.14
			64-QAM			6.41
			256-QAM			6.40
	25 MHz		BPSK			4.38
			QPSK			5.46
			16-QAM			6.28
			64-QAM			6.43
			256-QAM			6.51
	30 MHz		BPSK			4.35
			QPSK			5.42
			16-QAM			6.21
			64-QAM			6.45
			256-QAM			6.51
	40 MHz		BPSK			4.50
			QPSK			5.41
			16-QAM			6.25
			64-QAM			6.44
			256-QAM			6.56

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
	50 MHz		BPSK			5.04
			QPSK			5.47
			16-QAM			6.15
			64-QAM			6.32
			256-QAM			6.48
	60 MHz		BPSK			4.31
			QPSK			5.45
			16-QAM			6.20
			64-QAM			6.37
			256-QAM			6.49
	70 MHz		BPSK			5.27
			QPSK			5.62
			16-QAM			6.18
			64-QAM			6.37
			256-QAM			6.55
	80 MHz		BPSK			4.39
			QPSK			5.48
			16-QAM			6.17
			64-QAM			6.41
			256-QAM			6.52
	90 MHz		BPSK			4.44
			QPSK			5.46
			16-QAM			6.17
			64-QAM			6.39
			256-QAM			6.50
	100 MHz		BPSK			4.99
			QPSK			5.45
			16-QAM			6.17
			64-QAM			6.39
			256-QAM			6.54

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 485 ~ 544.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n77	10 MHz	3840.00	BPSK	Full RB	0	8.6114
			QPSK			8.6203
			16-QAM			8.6037
			64-QAM			8.5412
			256-QAM			8.6476
	15 MHz		BPSK			12.918
			QPSK			12.896
			16-QAM			12.882
			64-QAM			12.924
			256-QAM			12.892
	20 MHz		BPSK			17.844
			QPSK			17.834
			16-QAM			17.890
			64-QAM			17.860
			256-QAM			17.871
	25 MHz		BPSK			22.940
			QPSK			23.043
			16-QAM			23.013
			64-QAM			22.950
			256-QAM			22.966
	30 MHz		BPSK			26.933
			QPSK			26.943
			16-QAM			26.979
			64-QAM			26.940
			256-QAM			26.946
	40 MHz		BPSK			35.856
			QPSK			36.041
			16-QAM			35.822
			64-QAM			35.910
			256-QAM			35.865

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
	50 MHz		BPSK			45.951
			QPSK			45.795
			16-QAM			45.815
			64-QAM			45.944
			256-QAM			45.711
	60 MHz		BPSK			57.801
			QPSK			58.051
			16-QAM			57.762
			64-QAM			58.025
			256-QAM			57.850
	70 MHz		BPSK			64.683
			QPSK			64.408
			16-QAM			64.465
			64-QAM			64.505
			256-QAM			64.359
	80 MHz		BPSK			77.705
			QPSK			77.331
			16-QAM			77.330
			64-QAM			77.522
			256-QAM			77.115
	90 MHz		BPSK			86.957
			QPSK			86.863
			16-QAM			87.042
			64-QAM			86.677
			256-QAM			86.825
	100 MHz		BPSK			96.793
			QPSK			96.455
			16-QAM			96.669
			64-QAM			96.728
			256-QAM			96.783

Note:

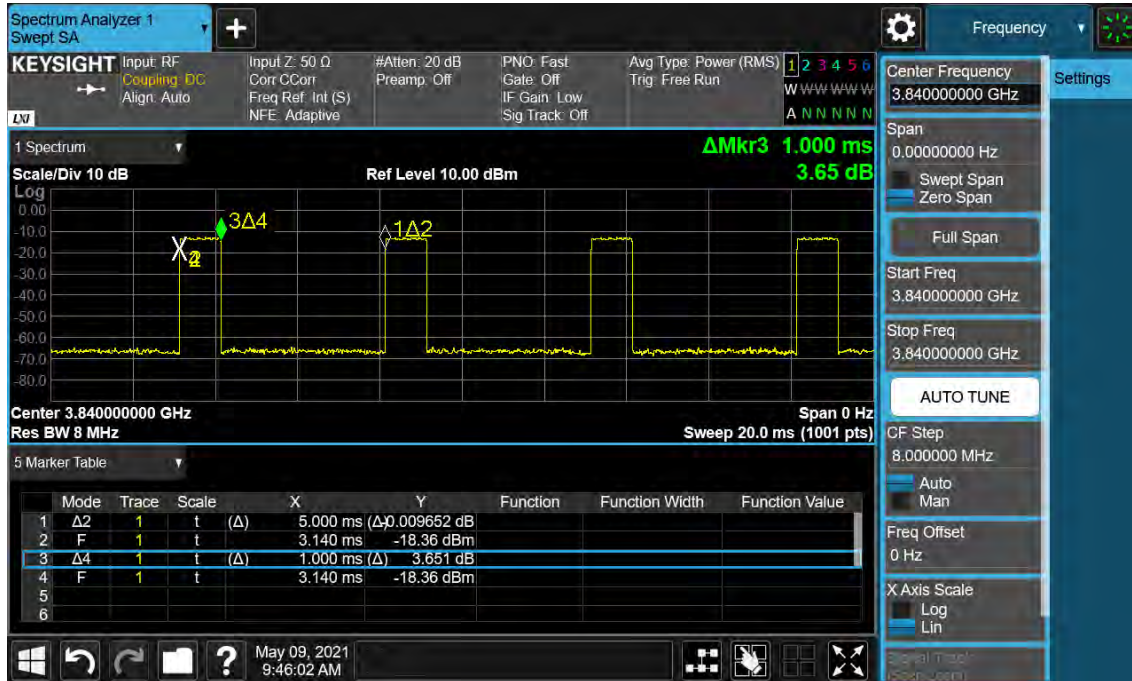
1. Plots of the EUT's Occupied Bandwidth are shown Page 425 ~ 484.

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 n77	10	3705.00	9.6934	37.805	-70.643	-32.838	-13.00
		3840.00	8.2827	37.805	-69.927	-32.122	
		3975.00	9.6874	37.805	-70.731	-32.926	
	15	3707.51	5.9926	37.805	-69.866	-32.061	
		3840.00	8.8604	37.805	-70.492	-32.687	
		3972.48	8.8724	37.805	-70.561	-32.756	
	20	3710.01	8.0239	37.805	-70.541	-32.736	
		3840.00	5.2438	37.805	-70.476	-32.671	
		3969.99	8.2592	37.805	-70.524	-32.719	
	25	3712.50	8.2448	37.805	-70.402	-32.597	
		3840.00	5.2109	37.805	-70.128	-32.323	
		3967.50	5.2269	37.805	-70.365	-32.560	
	30	3715.02	9.9706	37.805	-70.950	-33.145	
		3840.00	8.2677	37.805	-70.010	-32.205	
		3964.98	9.9875	37.805	-71.159	-33.354	
	40	3720.00	8.2473	37.805	-70.736	-32.931	
		3840.00	8.2847	37.805	-70.292	-32.487	
		3960.00	8.8365	37.805	-69.518	-31.713	
	50	3725.10	9.6675	37.805	-69.677	-31.872	
		3840.00	7.4581	37.805	-70.218	-32.413	
		3954.99	8.2782	37.805	-70.253	-32.448	
	60	3730.02	9.1874	37.805	-69.836	-32.031	
		3840.00	5.1975	37.805	-70.344	-32.539	
		3949.98	9.6919	37.805	-70.250	-32.445	
	70	3735.00	5.4856	37.805	-70.058	-32.253	
		3840.00	9.7054	37.805	-70.317	-32.512	
		3945.00	8.3220	37.805	-70.301	-32.496	
	80	3740.01	9.1411	37.805	-70.306	-32.501	
		3840.00	8.8475	37.805	-70.449	-32.644	
		3939.99	9.1645	37.805	-69.902	-32.097	
	90	3745.02	6.3086	37.805	-70.262	-32.457	
		3840.00	8.3086	37.805	-70.220	-32.415	
		3934.98	8.8923	37.805	-69.971	-32.166	
	100	3750.00	9.1590	37.805	-70.316	-32.511	
		3840.00	6.0065	37.805	-70.507	-32.702	
		3930.00	9.7817	37.805	-70.957	-33.152	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 689 ~ 760.
2. Duty Cycle factor already applied on the factor.
 - Duty Cycle Factor(dB) = 6.990



- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Splitter

- Result(dBm) = Reading + Factor

3. Factor(dB)

Frequency Range (GHz)	Factor [dB]
0.03 – 1	34.484
1 – 5	37.190
5 – 10	37.805
10 – 15	38.330
15 – 20	38.703
Above 20	39.345

9.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 545 ~ 688.
2. Duty Cycle factor already applied on the factor.
 - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Divider
 - Result(dBm) = Reading + Factor
 - Duty Cycle Factor(dB) = 6.990

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3705.000	100 %	+20(Ref)	3705 000 005	0.0	0.000 000	0.000
	100 %	-30	3705 000 013	8.0	0.000 000	0.002
	100 %	-20	3705 000 012	7.2	0.000 000	0.002
	100 %	-10	3705 000 019	14.1	0.000 000	0.004
	100 %	0	3705 000 019	14.3	0.000 000	0.004
	100 %	+10	3705 000 015	10.1	0.000 000	0.003
	100 %	+30	3705 000 022	16.6	0.000 000	0.004
	100 %	+40	3705 000 021	16.2	0.000 000	0.004
	100 %	+50	3705 000 010	5.4	0.000 000	0.001
	Batt. Endpoint	+20	3705 000 021	16.0	0.000 000	0.004
3975.000	100 %	+20(Ref)	3975 000 006	0.0	0.000 000	0.000
	100 %	-30	3975 000 015	8.2	0.000 000	0.002
	100 %	-20	3975 000 022	15.4	0.000 000	0.004
	100 %	-10	3975 000 019	12.7	0.000 000	0.003
	100 %	0	3975 000 015	8.3	0.000 000	0.002
	100 %	+10	3975 000 011	5.2	0.000 000	0.001
	100 %	+30	3975 000 016	9.6	0.000 000	0.002
	100 %	+40	3975 000 017	11.0	0.000 000	0.003
	100 %	+50	3975 000 018	11.2	0.000 000	0.003
	Batt. Endpoint	+20	3975 000 019	12.2	0.000 000	0.003

☐ BandWidth: 15 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3707.520	100 %	+20(Ref)	3707 520 010	0.0	0.000 000	0.000
	100 %	-30	3707 520 019	9.8	0.000 000	0.003
	100 %	-20	3707 520 013	3.3	0.000 000	0.001
	100 %	-10	3707 520 016	6.5	0.000 000	0.002
	100 %	0	3707 520 023	13.0	0.000 000	0.004
	100 %	+10	3707 520 020	10.3	0.000 000	0.003
	100 %	+30	3707 520 013	3.6	0.000 000	0.001
	100 %	+40	3707 520 019	9.6	0.000 000	0.003
	100 %	+50	3707 520 016	6.4	0.000 000	0.002
	Batt. Endpoint	+20	3707 520 015	5.6	0.000 000	0.002
3972.480	100 %	+20(Ref)	3972 480 015	0.0	0.000 000	0.000
	100 %	-30	3972 480 018	3.0	0.000 000	0.001
	100 %	-20	3972 480 028	12.7	0.000 000	0.003
	100 %	-10	3972 480 032	16.6	0.000 000	0.004
	100 %	0	3972 480 021	6.0	0.000 000	0.002
	100 %	+10	3972 480 022	7.3	0.000 000	0.002
	100 %	+30	3972 480 029	14.4	0.000 000	0.004
	100 %	+40	3972 480 029	13.7	0.000 000	0.003
	100 %	+50	3972 480 026	11.2	0.000 000	0.003
	Batt. Endpoint	+20	3972 480 021	6.4	0.000 000	0.002

☐ BandWidth: 20 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3710.010	100 %	+20(Ref)	3710 010 016	0.0	0.000 000	0.000
	100 %	-30	3710 010 023	6.7	0.000 000	0.002
	100 %	-20	3710 010 022	5.9	0.000 000	0.002
	100 %	-10	3710 010 027	10.7	0.000 000	0.003
	100 %	0	3710 010 033	16.8	0.000 000	0.005
	100 %	+10	3710 010 033	16.7	0.000 000	0.005
	100 %	+30	3710 010 027	10.2	0.000 000	0.003
	100 %	+40	3710 010 026	10.0	0.000 000	0.003
	100 %	+50	3710 010 030	13.8	0.000 000	0.004
	Batt. Endpoint	+20	3710 010 032	15.3	0.000 000	0.004
3969.990	100 %	+20(Ref)	3969 990 011	0.0	0.000 000	0.000
	100 %	-30	3969 990 022	11.1	0.000 000	0.003
	100 %	-20	3969 990 020	9.1	0.000 000	0.002
	100 %	-10	3969 990 018	7.3	0.000 000	0.002
	100 %	0	3969 990 023	11.7	0.000 000	0.003
	100 %	+10	3969 990 022	10.8	0.000 000	0.003
	100 %	+30	3969 990 022	10.9	0.000 000	0.003
	100 %	+40	3969 990 018	7.2	0.000 000	0.002
	100 %	+50	3969 990 023	12.3	0.000 000	0.003
	Batt. Endpoint	+20	3969 990 025	13.5	0.000 000	0.003

☐ BandWidth: 25 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3712.500	100 %	+20(Ref)	3712 500 016	0.0	0.000 000	0.000
	100 %	-30	3712 500 020	4.8	0.000 000	0.001
	100 %	-20	3712 500 029	13.2	0.000 000	0.004
	100 %	-10	3712 500 024	8.1	0.000 000	0.002
	100 %	0	3712 500 030	14.0	0.000 000	0.004
	100 %	+10	3712 500 020	4.1	0.000 000	0.001
	100 %	+30	3712 500 026	10.7	0.000 000	0.003
	100 %	+40	3712 500 027	11.2	0.000 000	0.003
	100 %	+50	3712 500 020	4.1	0.000 000	0.001
	Batt. Endpoint	+20	3712 500 023	7.1	0.000 000	0.002
3967.500	100 %	+20(Ref)	3967 500 010	0.0	0.000 000	0.000
	100 %	-30	3967 500 017	7.1	0.000 000	0.002
	100 %	-20	3967 500 022	11.8	0.000 000	0.003
	100 %	-10	3967 500 014	3.8	0.000 000	0.001
	100 %	0	3967 500 025	14.7	0.000 000	0.004
	100 %	+10	3967 500 021	11.6	0.000 000	0.003
	100 %	+30	3967 500 019	9.7	0.000 000	0.002
	100 %	+40	3967 500 017	7.1	0.000 000	0.002
	100 %	+50	3967 500 015	4.8	0.000 000	0.001
	Batt. Endpoint	+20	3967 500 023	13.1	0.000 000	0.003

☐ BandWidth: 30 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3715.020	100 %	+20(Ref)	3715 020 014	0.0	0.000 000	0.000
	100 %	-30	3715 020 028	13.8	0.000 000	0.004
	100 %	-20	3715 020 019	4.7	0.000 000	0.001
	100 %	-10	3715 020 029	15.2	0.000 000	0.004
	100 %	0	3715 020 026	11.5	0.000 000	0.003
	100 %	+10	3715 020 029	14.5	0.000 000	0.004
	100 %	+30	3715 020 022	8.2	0.000 000	0.002
	100 %	+40	3715 020 021	6.6	0.000 000	0.002
	100 %	+50	3715 020 018	3.8	0.000 000	0.001
	Batt. Endpoint	+20	3715 020 026	12.0	0.000 000	0.003
3964.980	100 %	+20(Ref)	3964 980 008	0.0	0.000 000	0.000
	100 %	-30	3964 980 024	15.2	0.000 000	0.004
	100 %	-20	3964 980 013	4.9	0.000 000	0.001
	100 %	-10	3964 980 014	5.2	0.000 000	0.001
	100 %	0	3964 980 014	5.2	0.000 000	0.001
	100 %	+10	3964 980 023	15.0	0.000 000	0.004
	100 %	+30	3964 980 017	8.8	0.000 000	0.002
	100 %	+40	3964 980 012	3.2	0.000 000	0.001
	100 %	+50	3964 980 014	5.4	0.000 000	0.001
	Batt. Endpoint	+20	3964 980 013	4.4	0.000 000	0.001

☐ BandWidth: 40 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3720.000	100 %	+20(Ref)	3720 000 015	0.0	0.000 000	0.000
	100 %	-30	3720 000 032	16.3	0.000 000	0.004
	100 %	-20	3720 000 026	11.0	0.000 000	0.003
	100 %	-10	3720 000 025	9.5	0.000 000	0.003
	100 %	0	3720 000 024	9.0	0.000 000	0.002
	100 %	+10	3720 000 022	6.3	0.000 000	0.002
	100 %	+30	3720 000 023	7.6	0.000 000	0.002
	100 %	+40	3720 000 022	6.9	0.000 000	0.002
	100 %	+50	3720 000 032	16.3	0.000 000	0.004
	Batt. Endpoint	+20	3720 000 021	5.2	0.000 000	0.001
3960.000	100 %	+20(Ref)	3960 000 004	0.0	0.000 000	0.000
	100 %	-30	3960 000 016	12.3	0.000 000	0.003
	100 %	-20	3960 000 015	11.1	0.000 000	0.003
	100 %	-10	3960 000 011	6.7	0.000 000	0.002
	100 %	0	3960 000 018	14.1	0.000 000	0.004
	100 %	+10	3960 000 010	6.4	0.000 000	0.002
	100 %	+30	3960 000 021	16.9	0.000 000	0.004
	100 %	+40	3960 000 012	7.8	0.000 000	0.002
	100 %	+50	3960 000 010	6.1	0.000 000	0.002
	Batt. Endpoint	+20	3960 000 007	3.2	0.000 000	0.001

- ▣ BandWidth: 50 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3725.010	100 %	+20(Ref)	3725 010 006	0.0	0.000 000	0.000
	100 %	-30	3725 010 021	14.9	0.000 000	0.004
	100 %	-20	3725 010 023	16.8	0.000 000	0.005
	100 %	-10	3725 010 018	12.5	0.000 000	0.003
	100 %	0	3725 010 022	16.0	0.000 000	0.004
	100 %	+10	3725 010 020	13.8	0.000 000	0.004
	100 %	+30	3725 010 014	7.6	0.000 000	0.002
	100 %	+40	3725 010 014	7.8	0.000 000	0.002
	100 %	+50	3725 010 021	14.6	0.000 000	0.004
	Batt. Endpoint	+20	3725 010 017	11.4	0.000 000	0.003
3954.990	100 %	+20(Ref)	3954 990 012	0.0	0.000 000	0.000
	100 %	-30	3954 990 027	15.1	0.000 000	0.004
	100 %	-20	3954 990 027	14.9	0.000 000	0.004
	100 %	-10	3954 990 021	9.3	0.000 000	0.002
	100 %	0	3954 990 020	8.0	0.000 000	0.002
	100 %	+10	3954 990 026	14.1	0.000 000	0.004
	100 %	+30	3954 990 026	14.4	0.000 000	0.004
	100 %	+40	3954 990 028	16.3	0.000 000	0.004
	100 %	+50	3954 990 026	14.6	0.000 000	0.004
	Batt. Endpoint	+20	3954 990 017	4.9	0.000 000	0.001

- ▣ BandWidth: 60 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3730.020	100 %	+20(Ref)	3730 020 010	0.0	0.000 000	0.000
	100 %	-30	3730 020 013	3.0	0.000 000	0.001
	100 %	-20	3730 020 017	7.0	0.000 000	0.002
	100 %	-10	3730 020 024	14.8	0.000 000	0.004
	100 %	0	3730 020 019	9.0	0.000 000	0.002
	100 %	+10	3730 020 026	16.5	0.000 000	0.004
	100 %	+30	3730 020 022	12.5	0.000 000	0.003
	100 %	+40	3730 020 018	8.2	0.000 000	0.002
	100 %	+50	3730 020 024	14.4	0.000 000	0.004
	Batt. Endpoint	+20	3730 020 019	9.0	0.000 000	0.002
3949.995	100 %	+20(Ref)	3949 995 015	0.0	0.000 000	0.000
	100 %	-30	3949 995 020	5.0	0.000 000	0.001
	100 %	-20	3949 995 022	7.2	0.000 000	0.002
	100 %	-10	3949 995 019	3.8	0.000 000	0.001
	100 %	0	3949 995 020	4.8	0.000 000	0.001
	100 %	+10	3949 995 021	6.5	0.000 000	0.002
	100 %	+30	3949 995 023	8.0	0.000 000	0.002
	100 %	+40	3949 995 028	13.5	0.000 000	0.003
	100 %	+50	3949 995 025	10.8	0.000 000	0.003
	Batt. Endpoint	+20	3949 995 021	6.5	0.000 000	0.002

- ☐ BandWidth: 70 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3735.000	100 %	+20(Ref)	3735 000 006	0.0	0.000 000	0.000
	100 %	-30	3735 000 017	10.7	0.000 000	0.003
	100 %	-20	3735 000 012	6.4	0.000 000	0.002
	100 %	-10	3735 000 015	8.8	0.000 000	0.002
	100 %	0	3735 000 017	10.5	0.000 000	0.003
	100 %	+10	3735 000 016	10.3	0.000 000	0.003
	100 %	+30	3735 000 013	6.8	0.000 000	0.002
	100 %	+40	3735 000 012	6.3	0.000 000	0.002
	100 %	+50	3735 000 013	6.8	0.000 000	0.002
	Batt. Endpoint	+20	3735 000 011	4.7	0.000 000	0.001
3945.000	100 %	+20(Ref)	3945 000 015	0.0	0.000 000	0.000
	100 %	-30	3945 000 026	10.7	0.000 000	0.003
	100 %	-20	3945 000 027	11.4	0.000 000	0.003
	100 %	-10	3945 000 021	5.8	0.000 000	0.001
	100 %	0	3945 000 031	16.1	0.000 000	0.004
	100 %	+10	3945 000 021	5.2	0.000 000	0.001
	100 %	+30	3945 000 025	9.9	0.000 000	0.002
	100 %	+40	3945 000 021	5.2	0.000 000	0.001
	100 %	+50	3945 000 028	13.0	0.000 000	0.003
	Batt. Endpoint	+20	3945 000 022	6.5	0.000 000	0.002

☐ BandWidth: 80 MHz
☐ Voltage(100 %): 4.200 VDC
☐ Batt. Endpoint: 3.400 VDC
☐ LIMIT: Emission must remain in band

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3740.010	100 %	+20(Ref)	3740 010 015	0.0	0.000 000	0.000
	100 %	-30	3740 010 024	9.2	0.000 000	0.002
	100 %	-20	3740 010 030	15.0	0.000 000	0.004
	100 %	-10	3740 010 024	9.1	0.000 000	0.002
	100 %	0	3740 010 028	12.9	0.000 000	0.003
	100 %	+10	3740 010 031	15.8	0.000 000	0.004
	100 %	+30	3740 010 027	11.8	0.000 000	0.003
	100 %	+40	3740 010 030	15.0	0.000 000	0.004
	100 %	+50	3740 010 022	7.4	0.000 000	0.002
	Batt. Endpoint	+20	3740 010 021	5.8	0.000 000	0.002
3939.990	100 %	+20(Ref)	3939 990 007	0.0	0.000 000	0.000
	100 %	-30	3939 990 010	3.8	0.000 000	0.001
	100 %	-20	3939 990 022	15.5	0.000 000	0.004
	100 %	-10	3939 990 018	11.5	0.000 000	0.003
	100 %	0	3939 990 017	10.1	0.000 000	0.003
	100 %	+10	3939 990 011	4.5	0.000 000	0.001
	100 %	+30	3939 990 019	12.2	0.000 000	0.003
	100 %	+40	3939 990 020	13.5	0.000 000	0.003
	100 %	+50	3939 990 013	6.8	0.000 000	0.002
	Batt. Endpoint	+20	3939 990 019	12.8	0.000 000	0.003

- ▣ BandWidth: 90 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

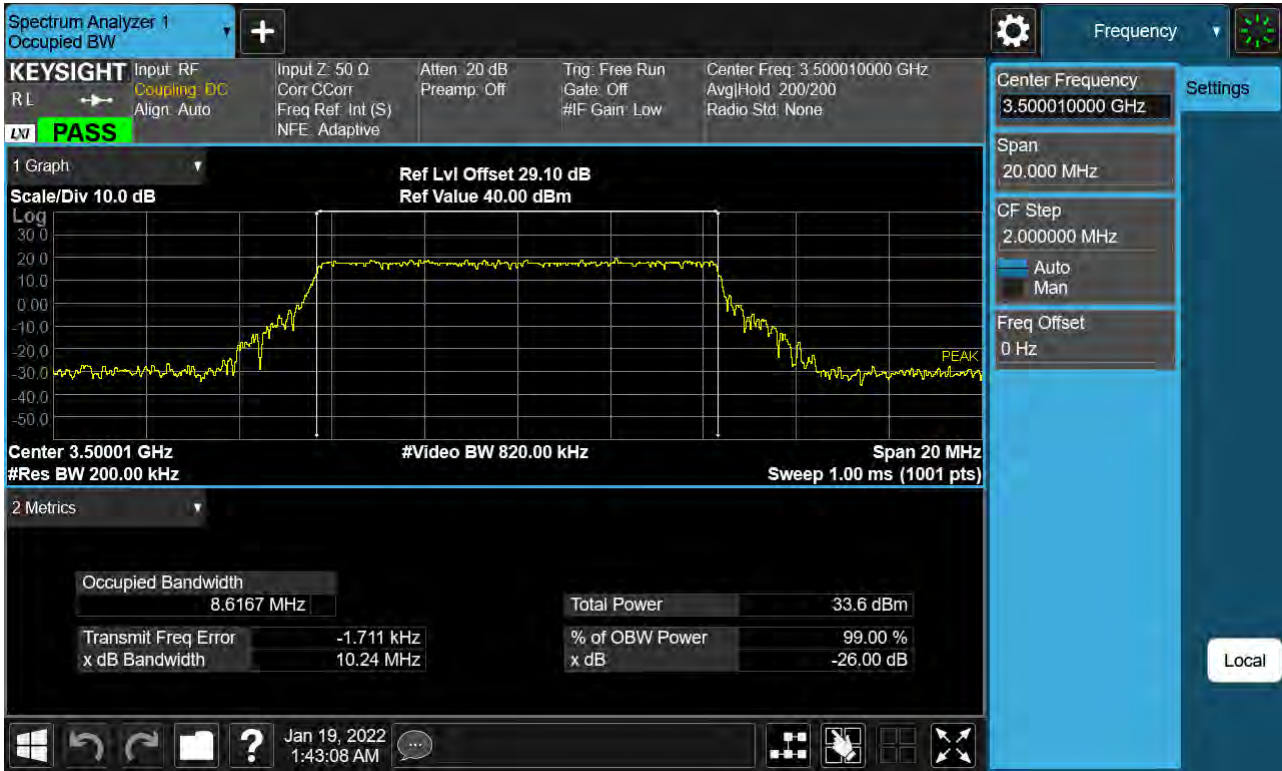
Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3745.020	100 %	+20(Ref)	3745 020 015	0.0	0.000 000	0.000
	100 %	-30	3745 020 023	8.3	0.000 000	0.002
	100 %	-20	3745 020 023	8.1	0.000 000	0.002
	100 %	-10	3745 020 027	12.4	0.000 000	0.003
	100 %	0	3745 020 027	11.8	0.000 000	0.003
	100 %	+10	3745 020 026	11.4	0.000 000	0.003
	100 %	+30	3745 020 022	6.6	0.000 000	0.002
	100 %	+40	3745 020 028	12.8	0.000 000	0.003
	100 %	+50	3745 020 022	6.7	0.000 000	0.002
	Batt. Endpoint	+20	3745 020 019	4.2	0.000 000	0.001
3934.980	100 %	+20(Ref)	3934 980 016	0.0	0.000 000	0.000
	100 %	-30	3934 980 027	11.1	0.000 000	0.003
	100 %	-20	3934 980 029	13.6	0.000 000	0.003
	100 %	-10	3934 980 022	6.1	0.000 000	0.002
	100 %	0	3934 980 026	10.4	0.000 000	0.003
	100 %	+10	3934 980 031	15.8	0.000 000	0.004
	100 %	+30	3934 980 020	4.8	0.000 000	0.001
	100 %	+40	3934 980 019	3.4	0.000 000	0.001
	100 %	+50	3934 980 024	8.6	0.000 000	0.002
	Batt. Endpoint	+20	3934 980 026	10.3	0.000 000	0.003

- ▣ BandWidth: 100 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

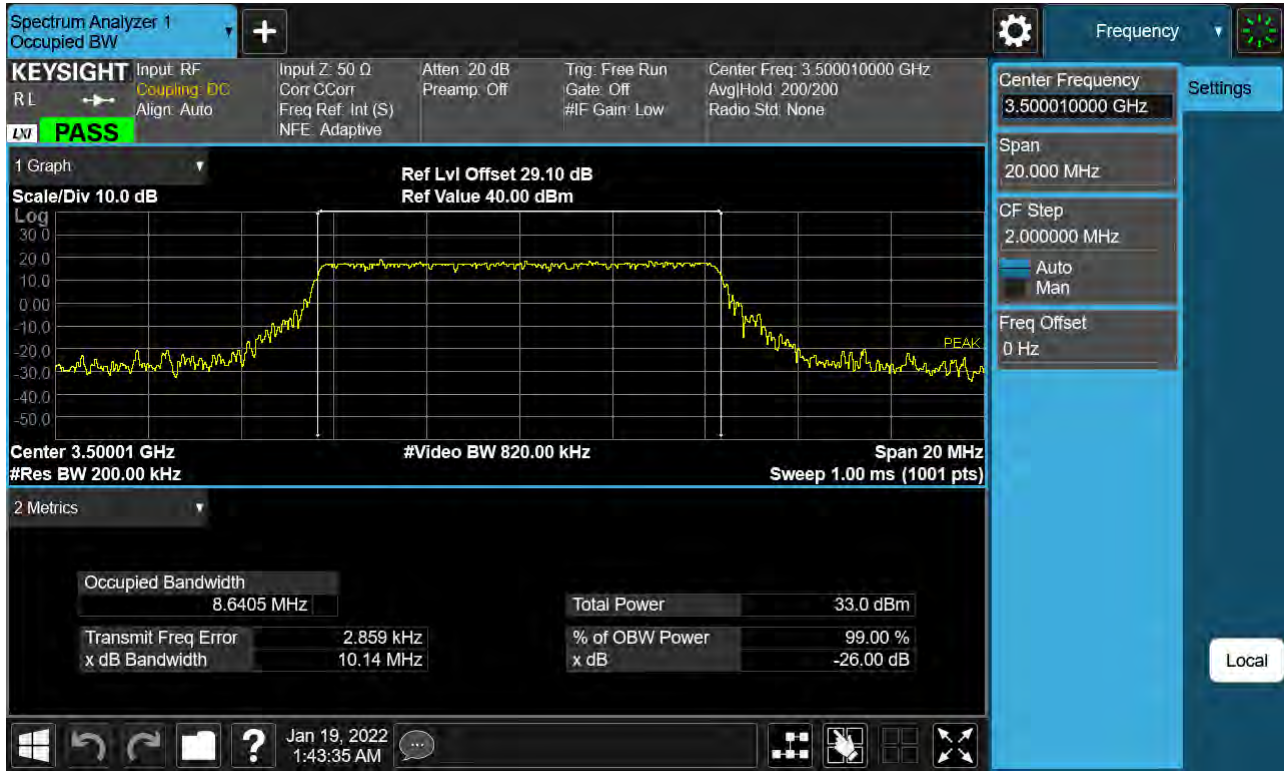
Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3750.000	100 %	+20(Ref)	3750 000 010	0.0	0.000 000	0.000
	100 %	-30	3750 000 023	12.7	0.000 000	0.003
	100 %	-20	3750 000 020	9.4	0.000 000	0.003
	100 %	-10	3750 000 020	9.5	0.000 000	0.003
	100 %	0	3750 000 021	10.6	0.000 000	0.003
	100 %	+10	3750 000 020	10.2	0.000 000	0.003
	100 %	+30	3750 000 027	16.5	0.000 000	0.004
	100 %	+40	3750 000 027	16.9	0.000 000	0.005
	100 %	+50	3750 000 024	13.9	0.000 000	0.004
	Batt. Endpoint	+20	3750 000 016	6.0	0.000 000	0.002
3930.000	100 %	+20(Ref)	3930 000 016	0.0	0.000 000	0.000
	100 %	-30	3930 000 023	7.3	0.000 000	0.002
	100 %	-20	3930 000 032	16.2	0.000 000	0.004
	100 %	-10	3930 000 023	7.3	0.000 000	0.002
	100 %	0	3930 000 022	6.3	0.000 000	0.002
	100 %	+10	3930 000 024	8.2	0.000 000	0.002
	100 %	+30	3930 000 028	12.9	0.000 000	0.003
	100 %	+40	3930 000 026	10.2	0.000 000	0.003
	100 %	+50	3930 000 019	3.7	0.000 000	0.001
	Batt. Endpoint	+20	3930 000 029	13.6	0.000 000	0.003

10. TEST PLOTS(3450 MHz - 3550 MHz)

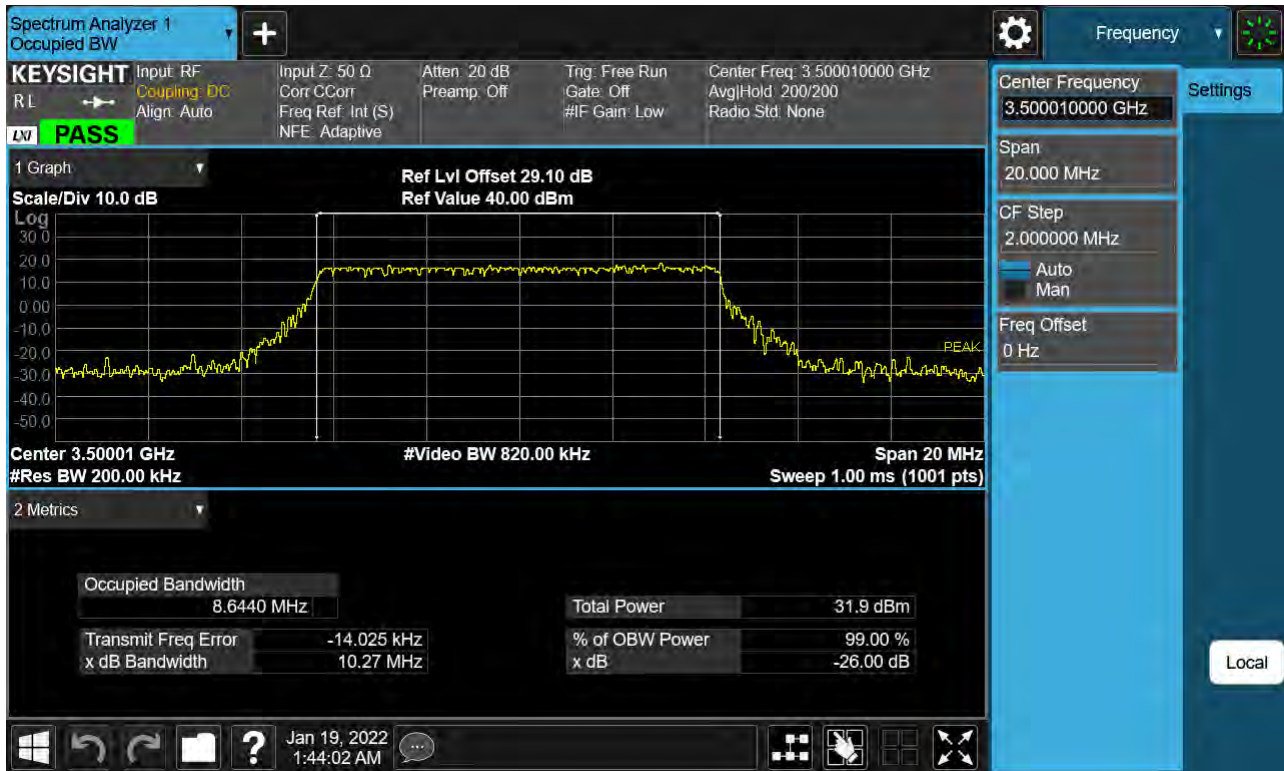
Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 BPSK)



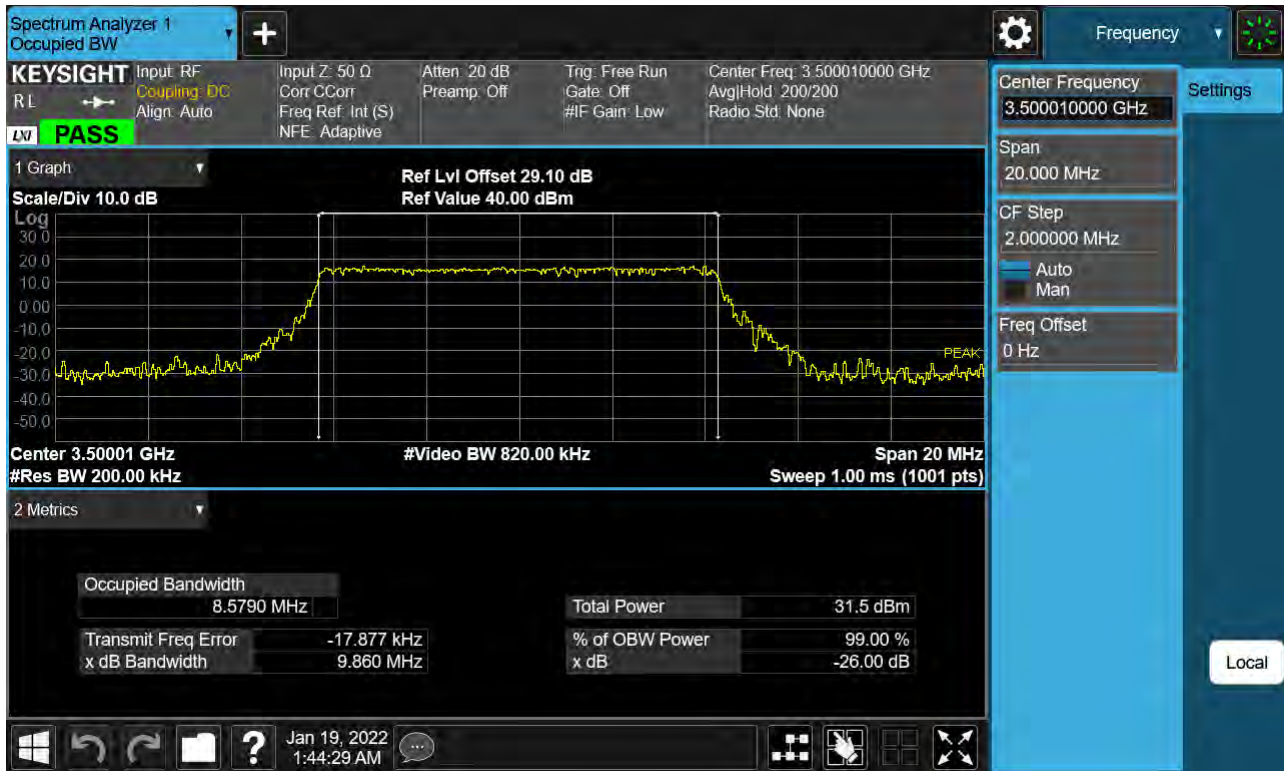
Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 QPSK)



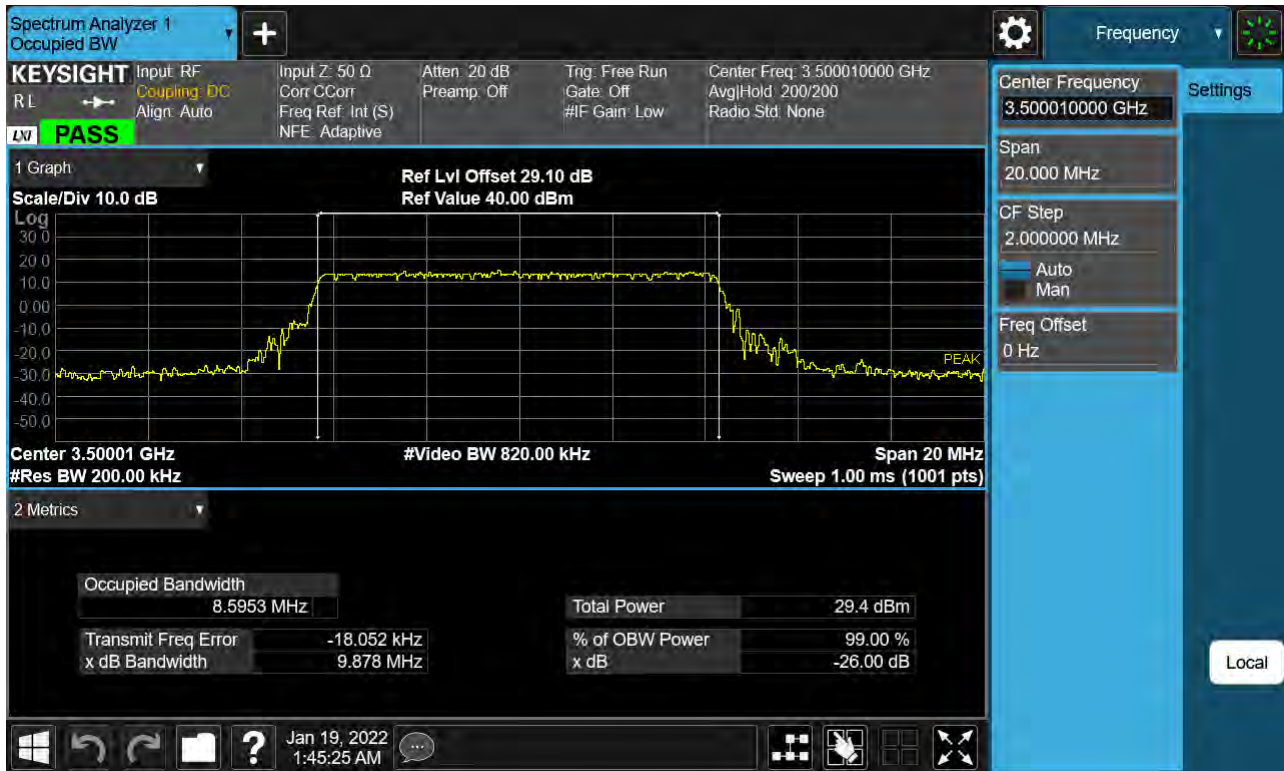
Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 16QAM)



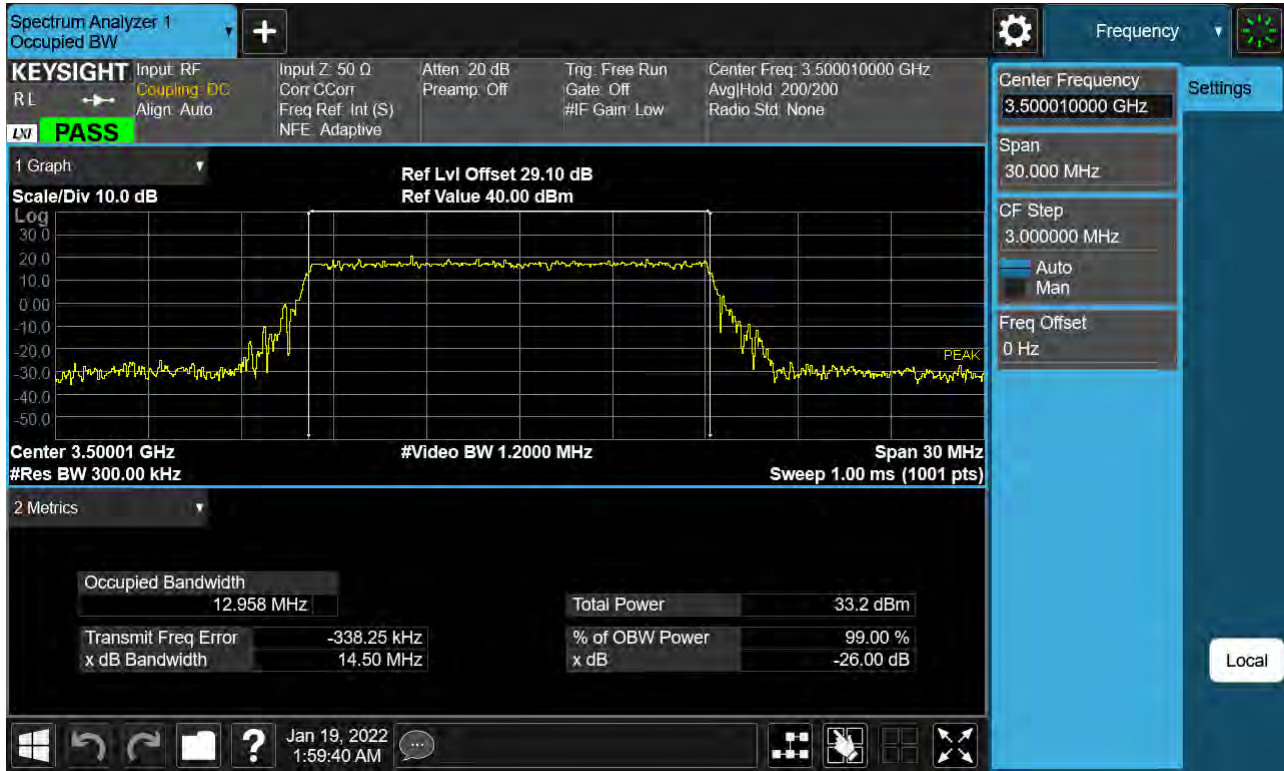
Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 64QAM)



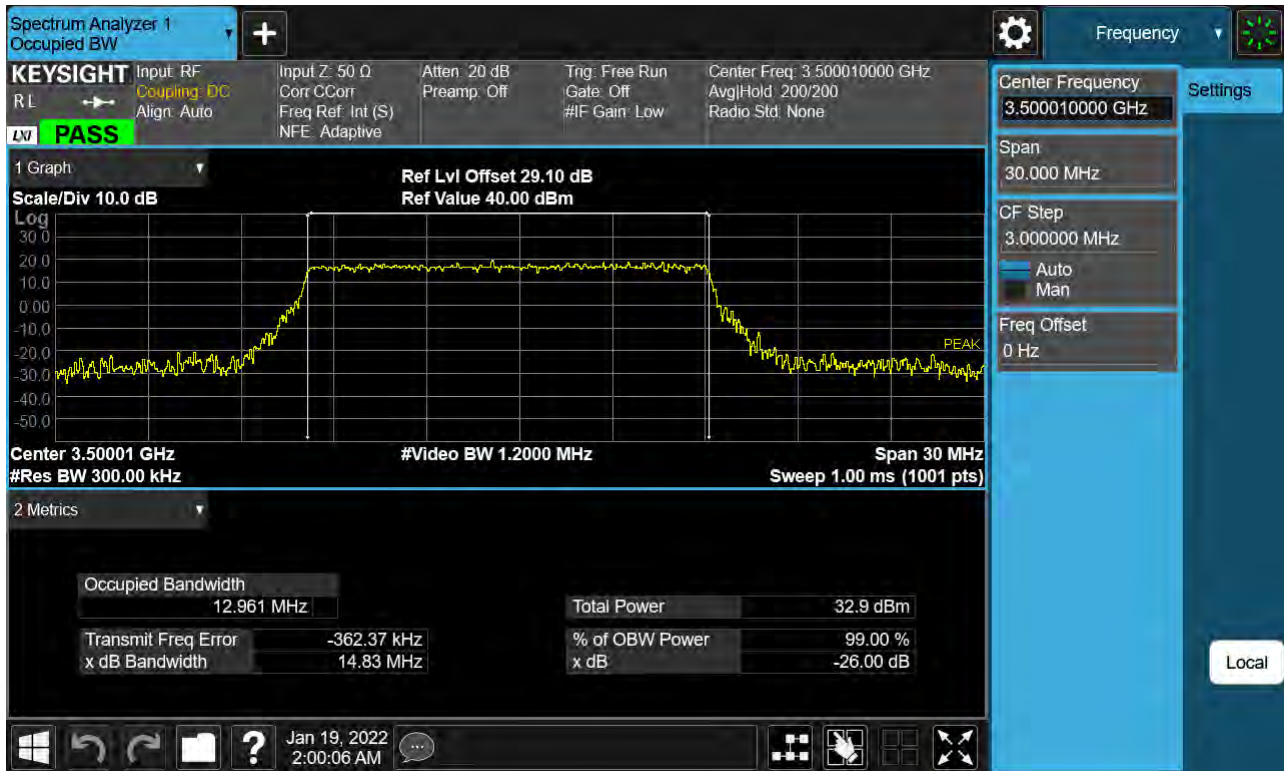
Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 256QAM)



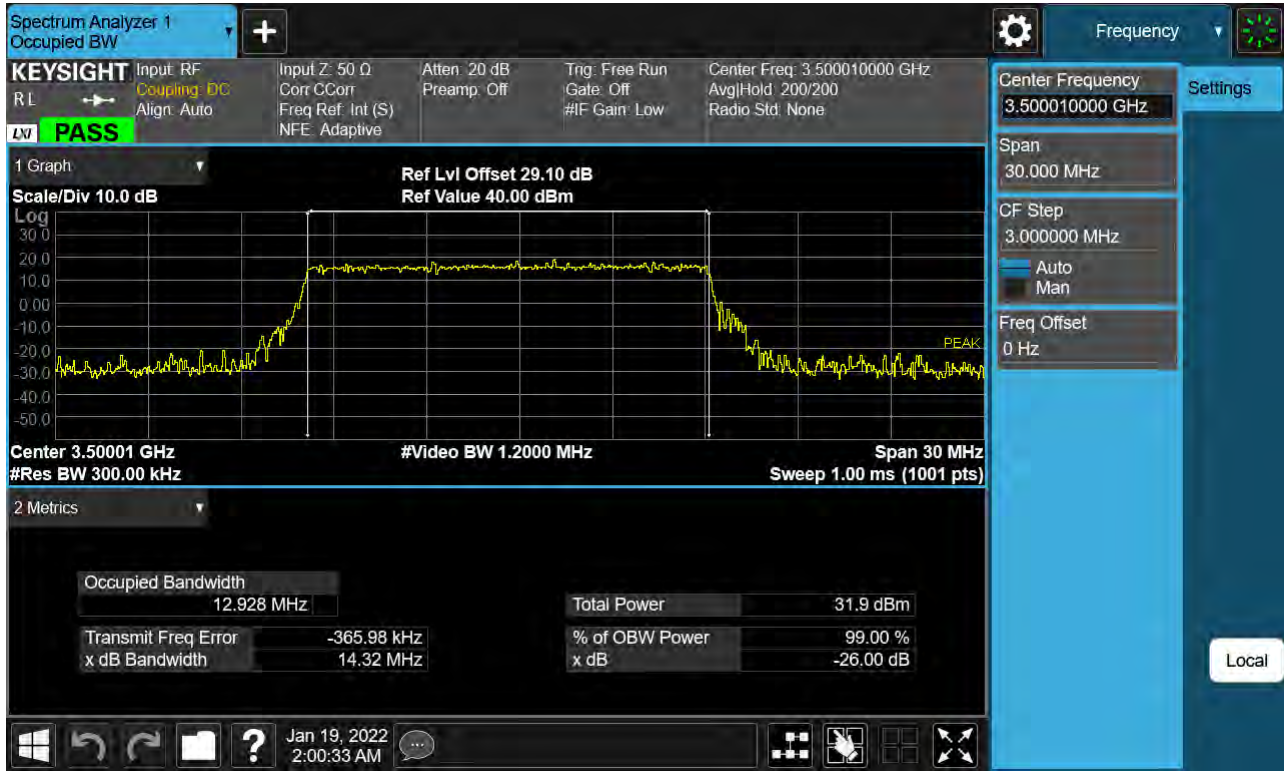
Sub6 n77. Occupied Bandwidth Plot (15 M BW Ch.633334 BPSK)



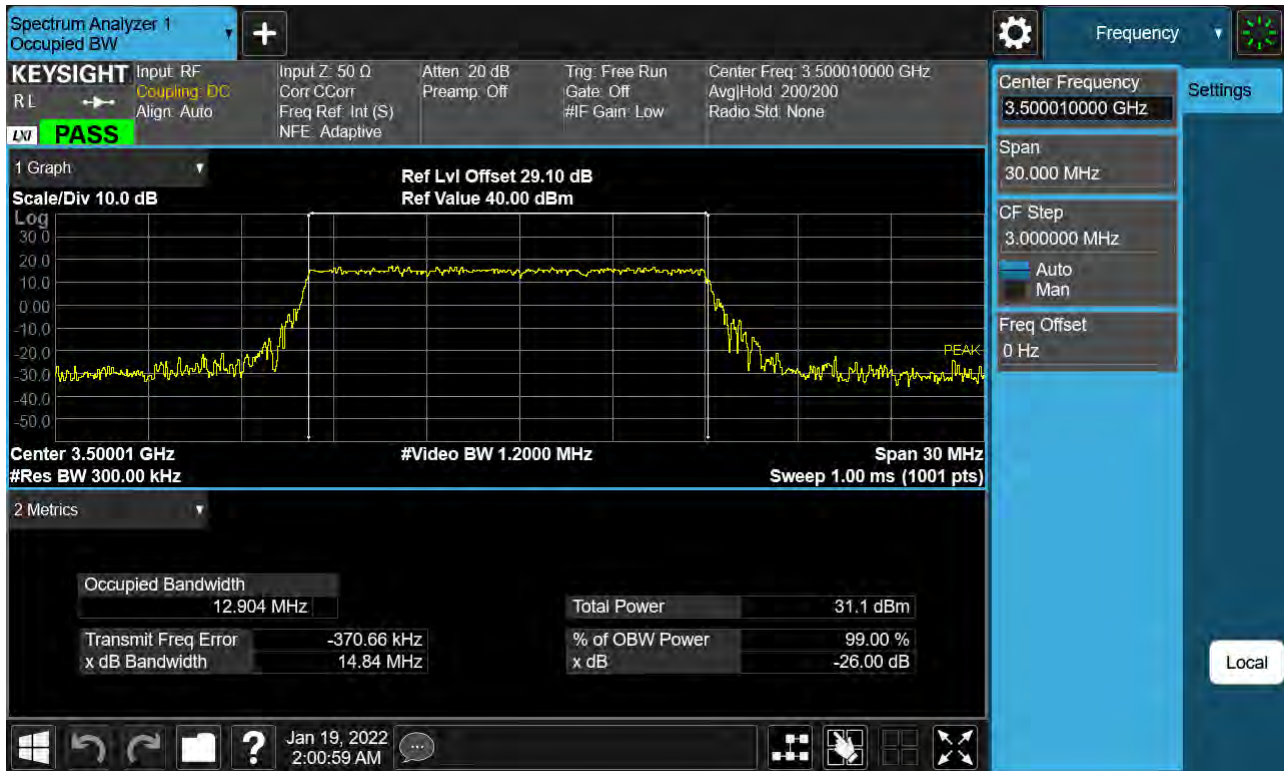
Sub6 n77. Occupied Bandwidth Plot (15 M BW Ch.633334 QPSK)



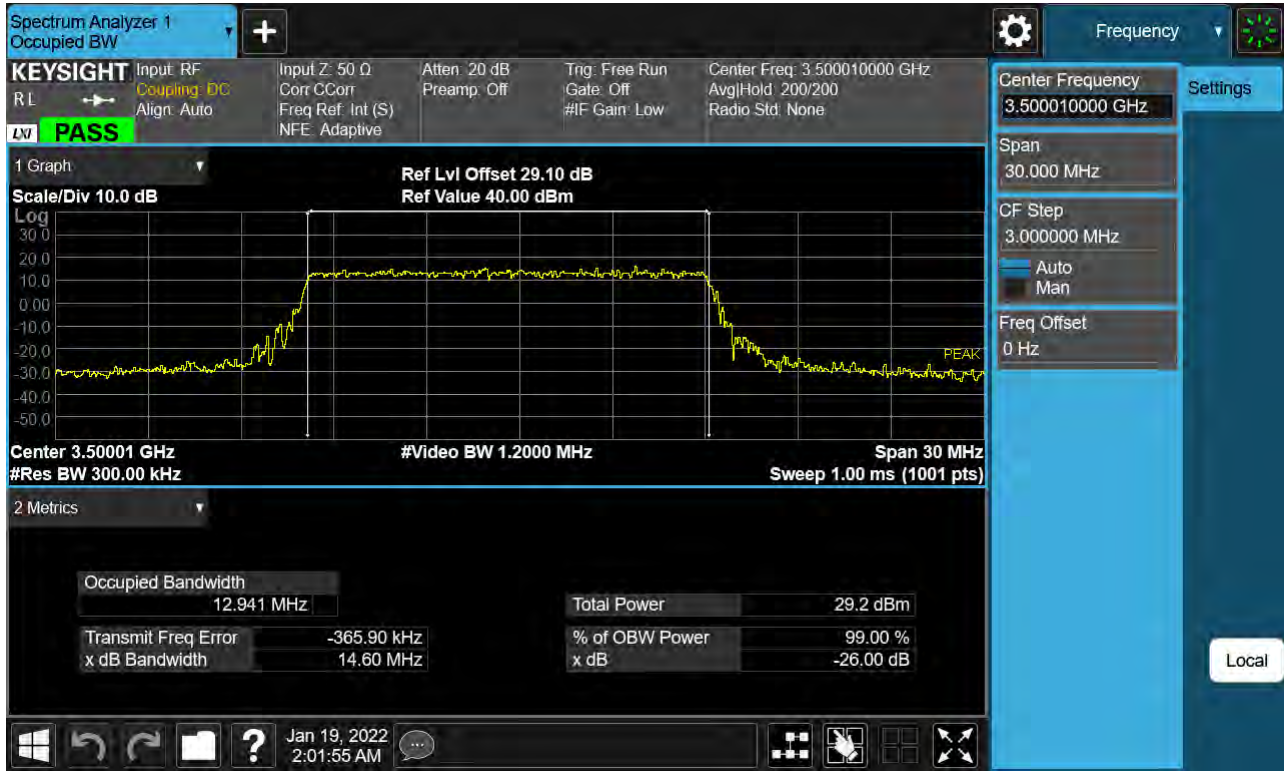
Sub6 n77. Occupied Bandwidth Plot (15 M BW Ch.633334 16QAM)



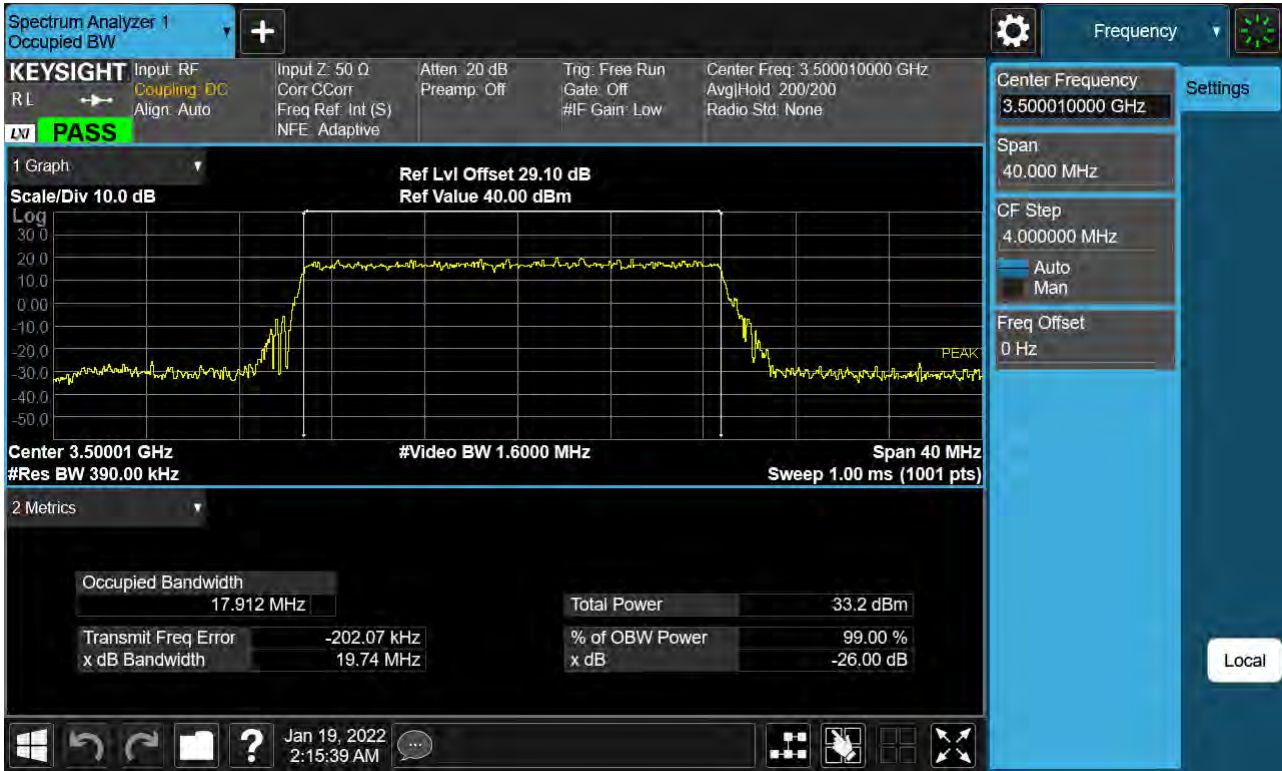
Sub6 n77. Occupied Bandwidth Plot (15 M BW Ch.633334 64QAM)



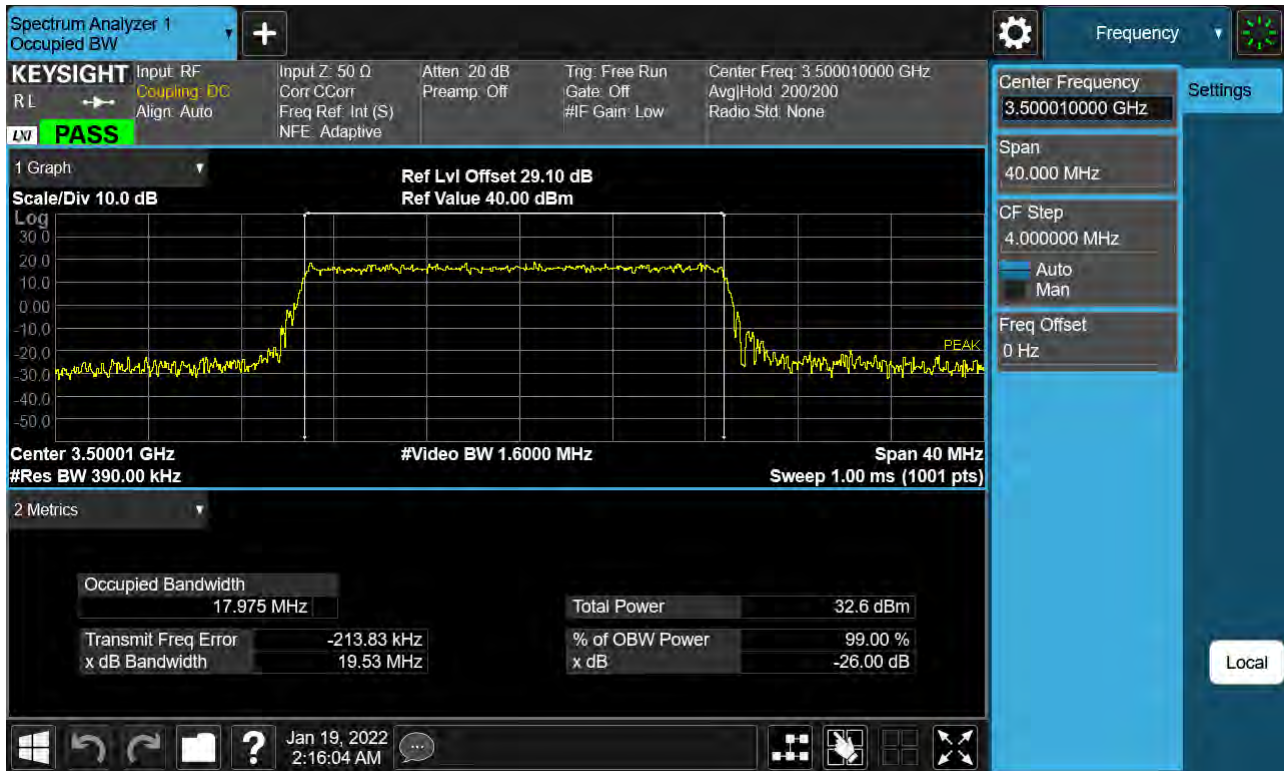
Sub6 n77. Occupied Bandwidth Plot (15 M BW Ch.633334 256QAM)



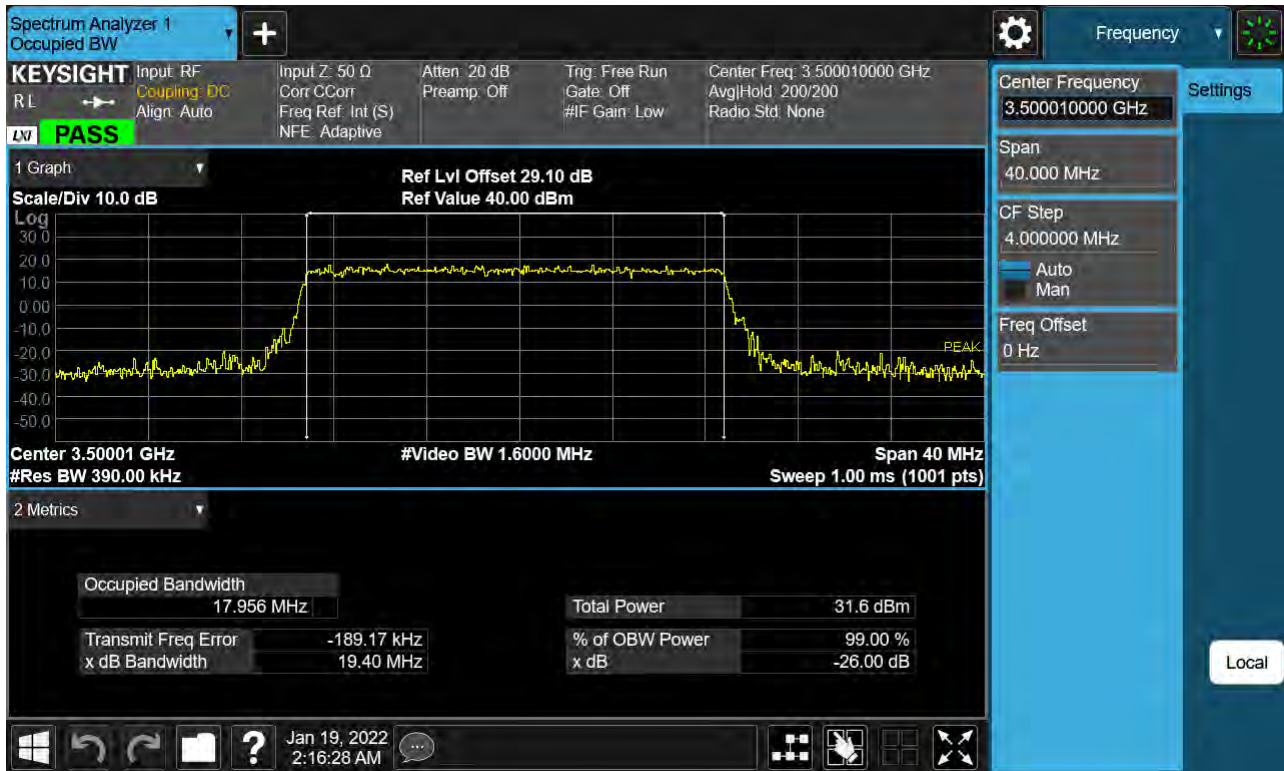
Sub6 n77. Occupied Bandwidth Plot (20 M BW Ch.633334 BPSK)



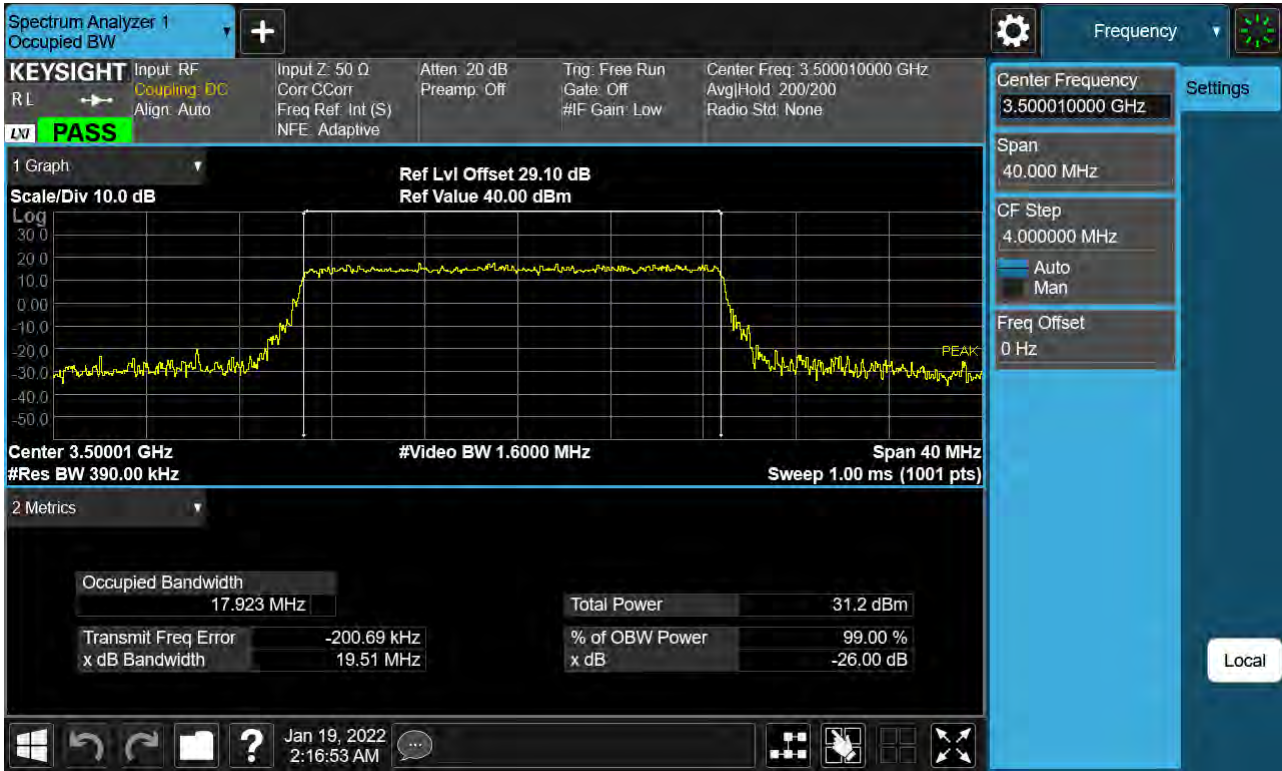
Sub6 n77. Occupied Bandwidth Plot (20 M BW Ch.633334 QPSK)



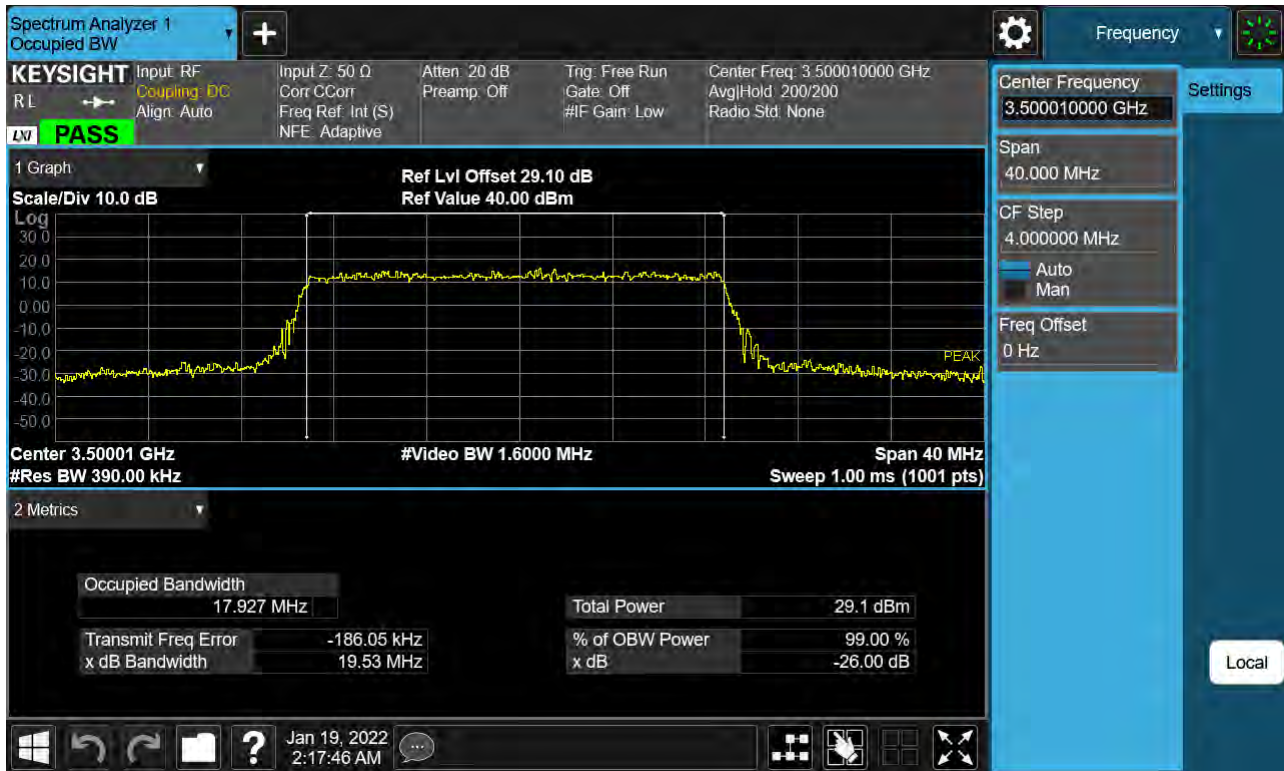
Sub6 n77. Occupied Bandwidth Plot (20 M BW Ch.633334 16QAM)



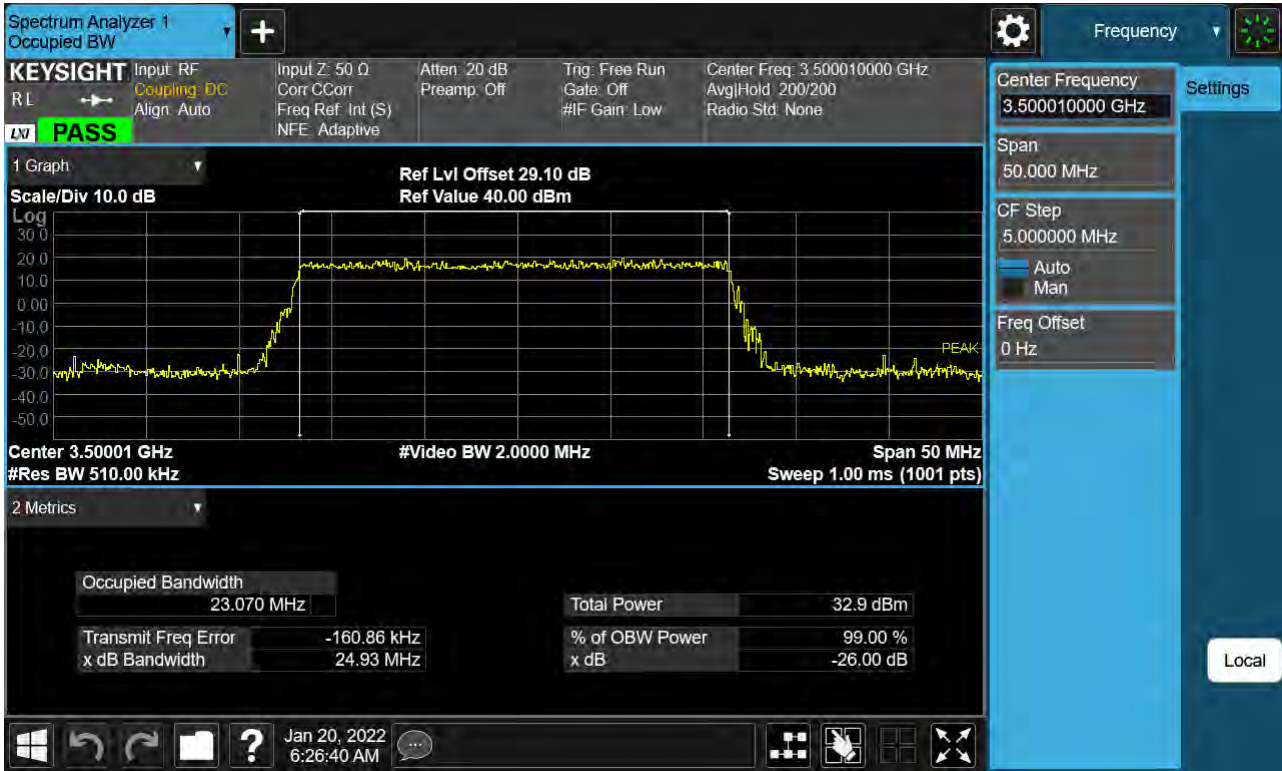
Sub6 n77. Occupied Bandwidth Plot (20 M BW Ch.633334 64QAM)



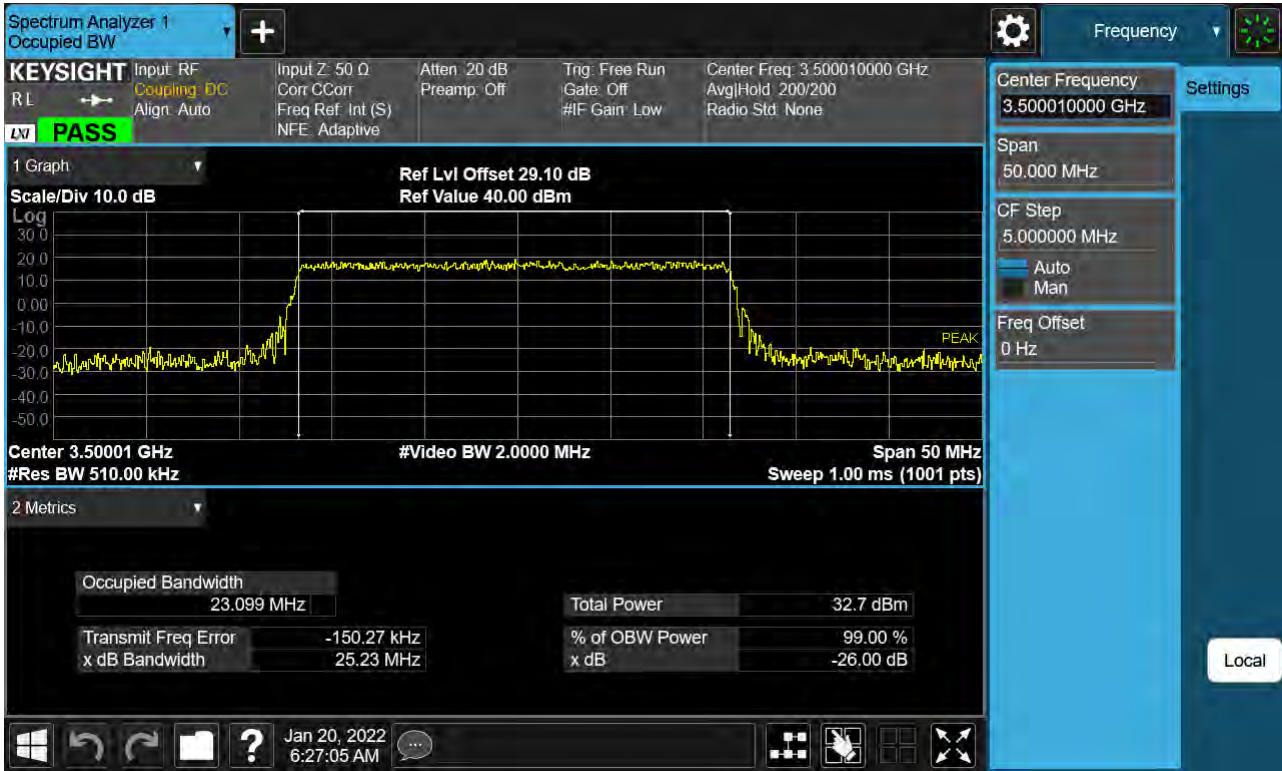
Sub6 n77. Occupied Bandwidth Plot (20 M BW Ch.633334 256QAM)



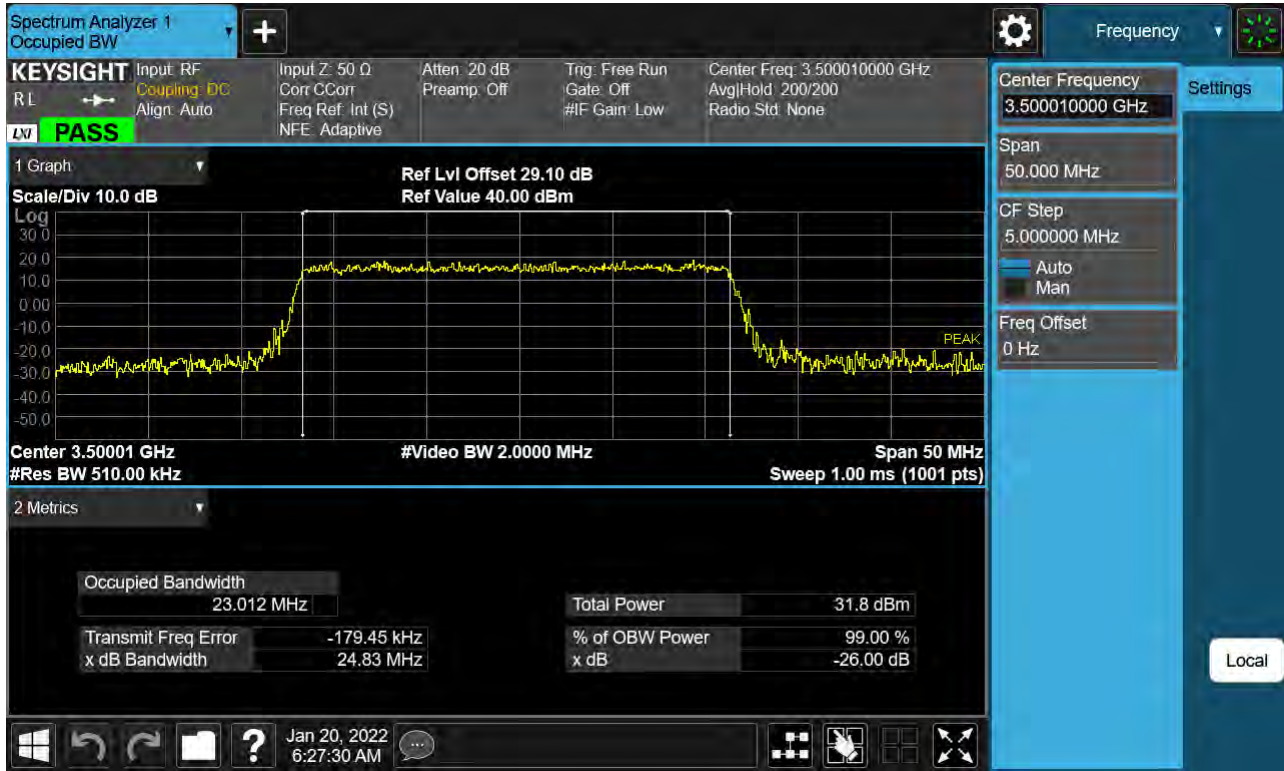
Sub6 n77. Occupied Bandwidth Plot (25 M BW Ch.633334 BPSK)



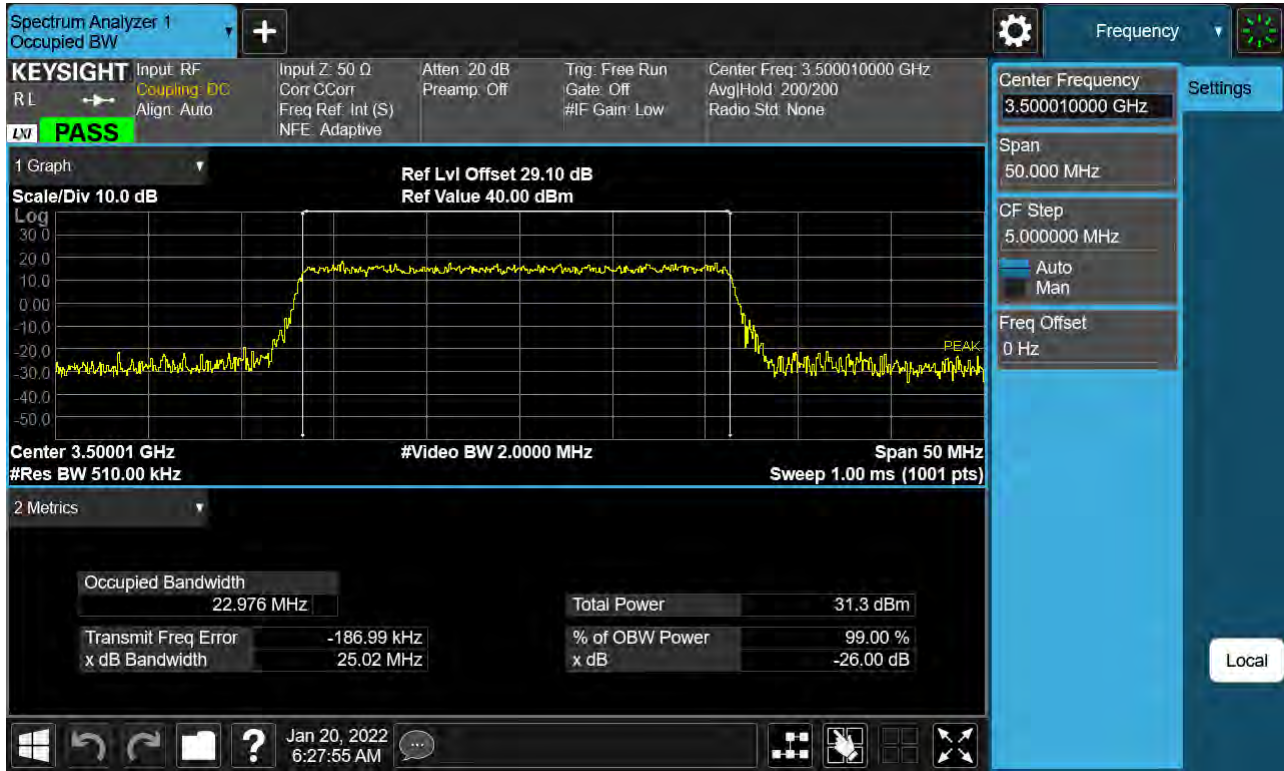
Sub6 n77. Occupied Bandwidth Plot (25 M BW Ch.633334 QPSK)



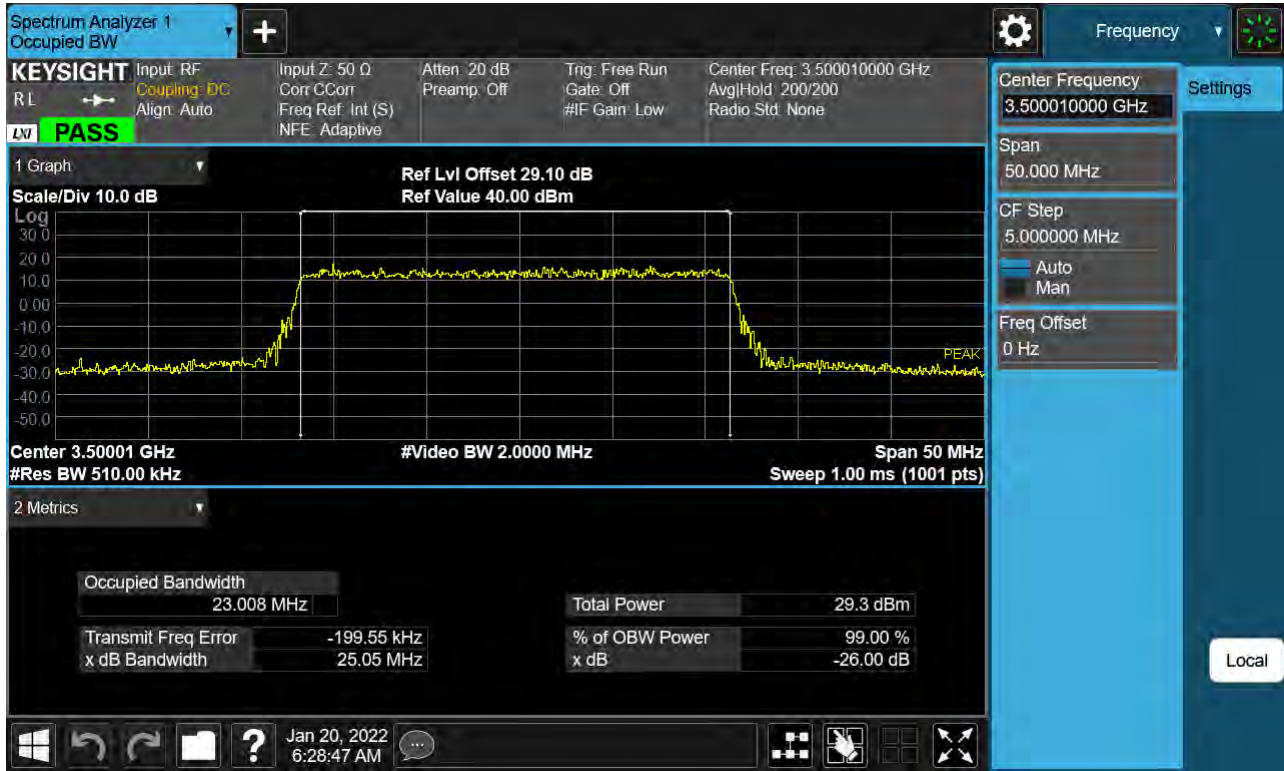
Sub6 n77. Occupied Bandwidth Plot (25 M BW Ch.633334 16QAM)



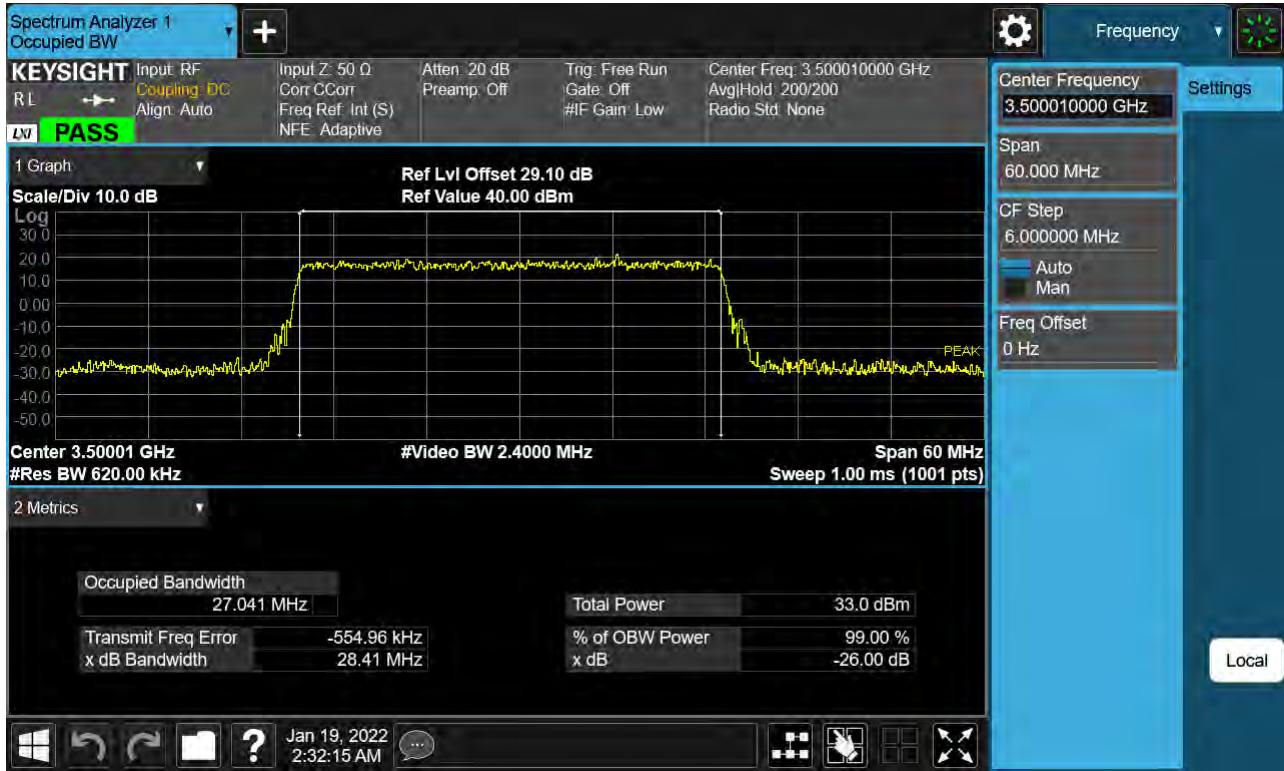
Sub6 n77. Occupied Bandwidth Plot (25 M BW Ch.633334 64QAM)



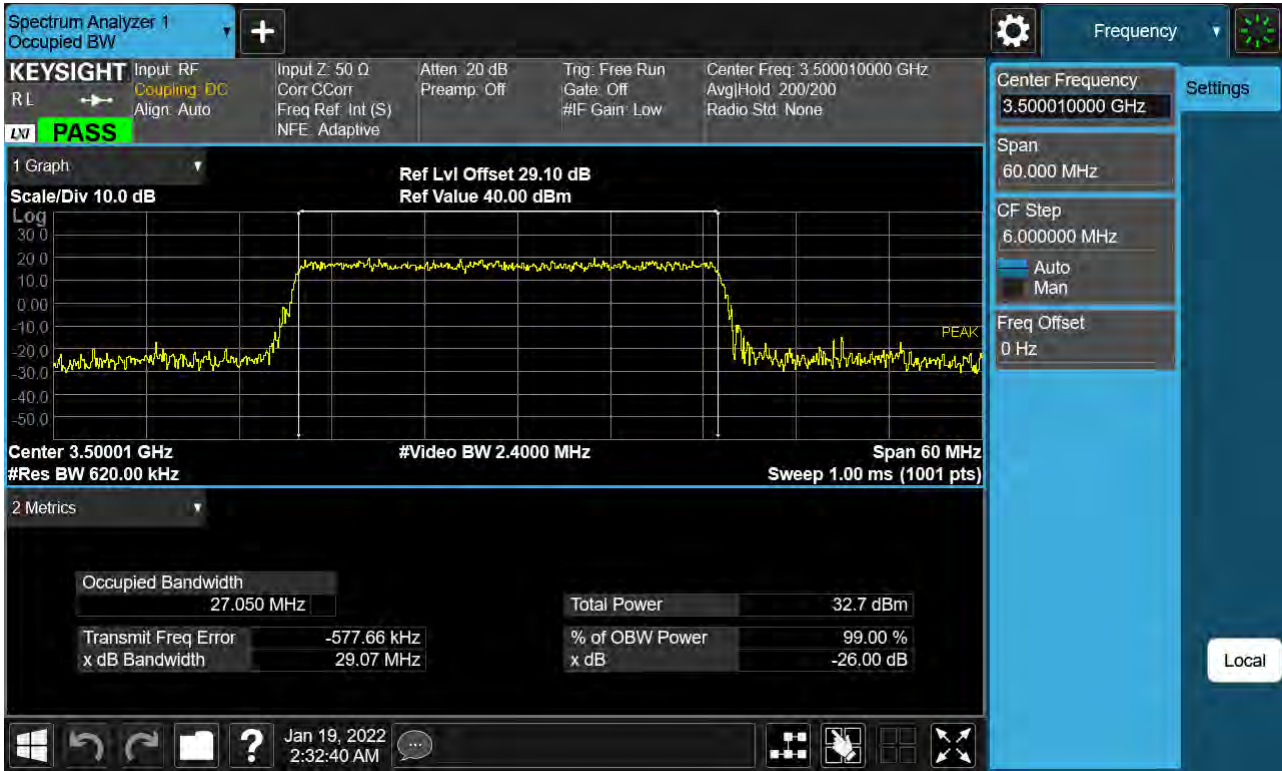
Sub6 n77. Occupied Bandwidth Plot (25 M BW Ch.633334 256QAM)



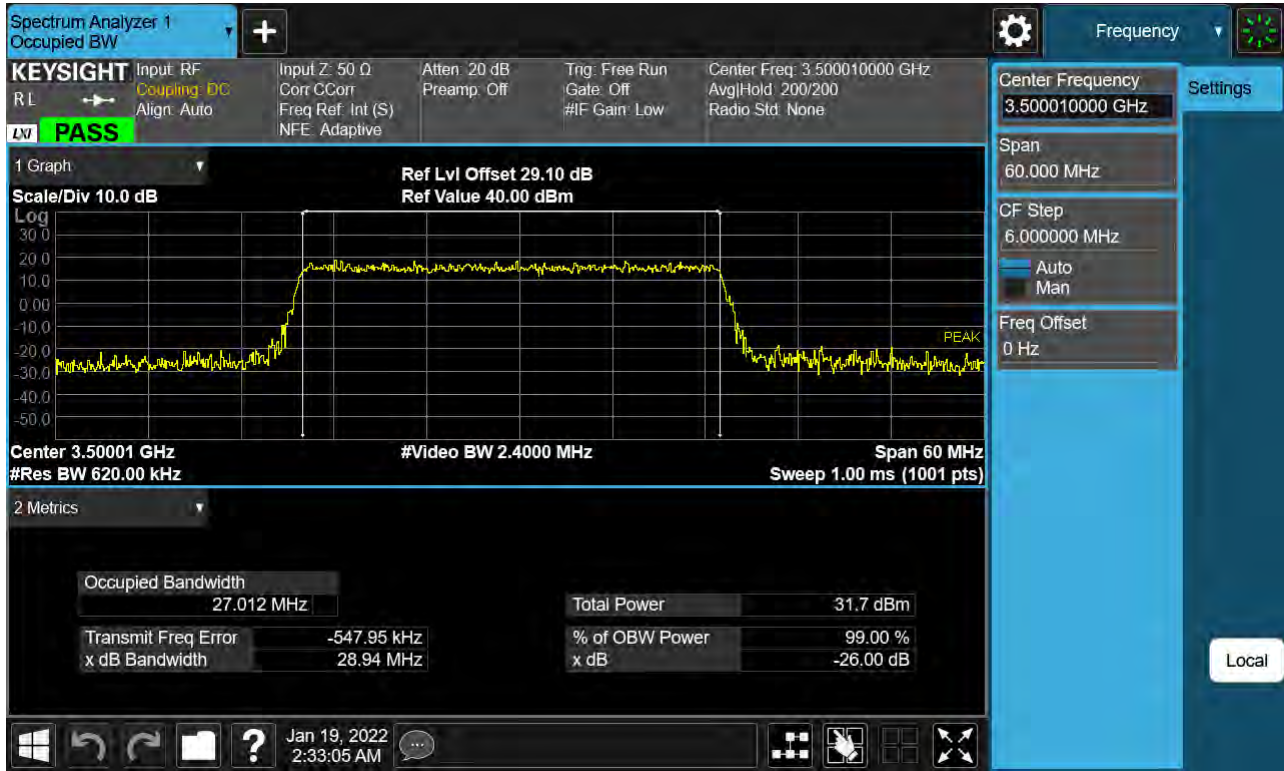
Sub6 n77. Occupied Bandwidth Plot (30 M BW Ch.633334 BPSK)



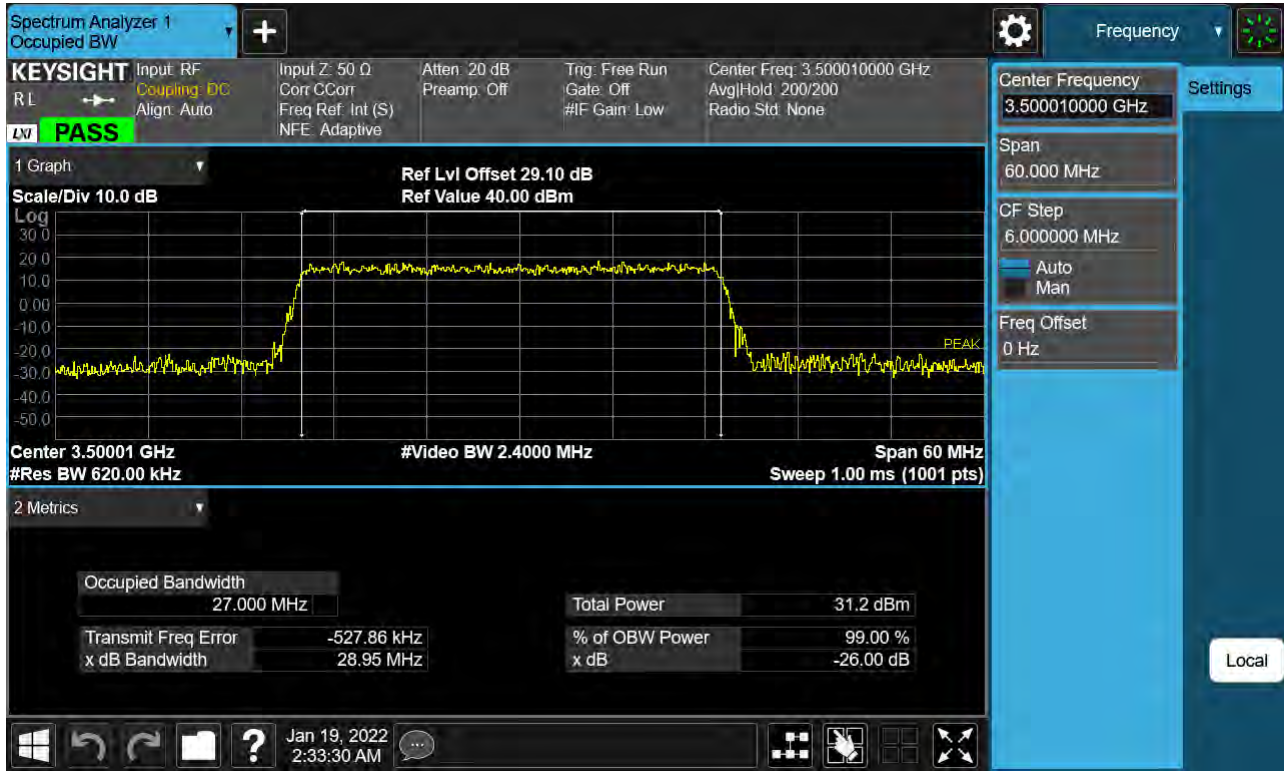
Sub6 n77. Occupied Bandwidth Plot (30 M BW Ch.633334 QPSK)



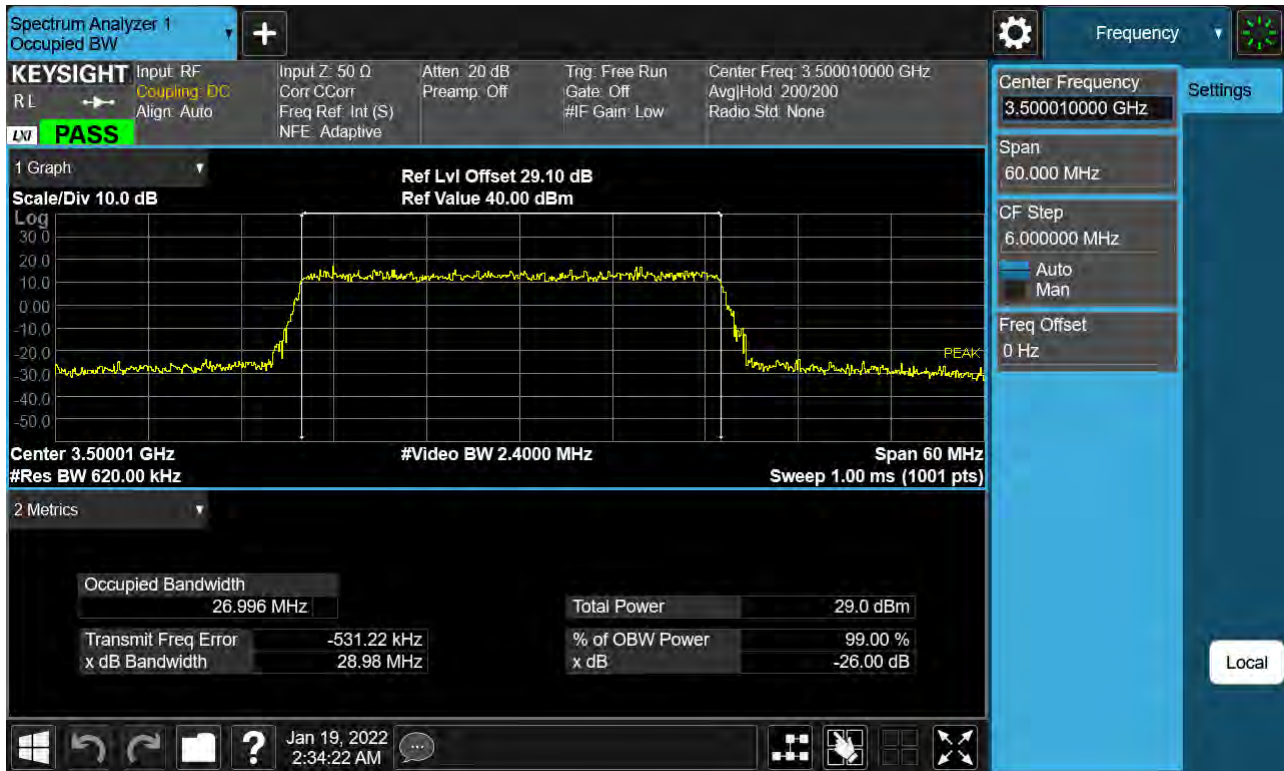
Sub6 n77. Occupied Bandwidth Plot (30 M BW Ch.633334 16QAM)



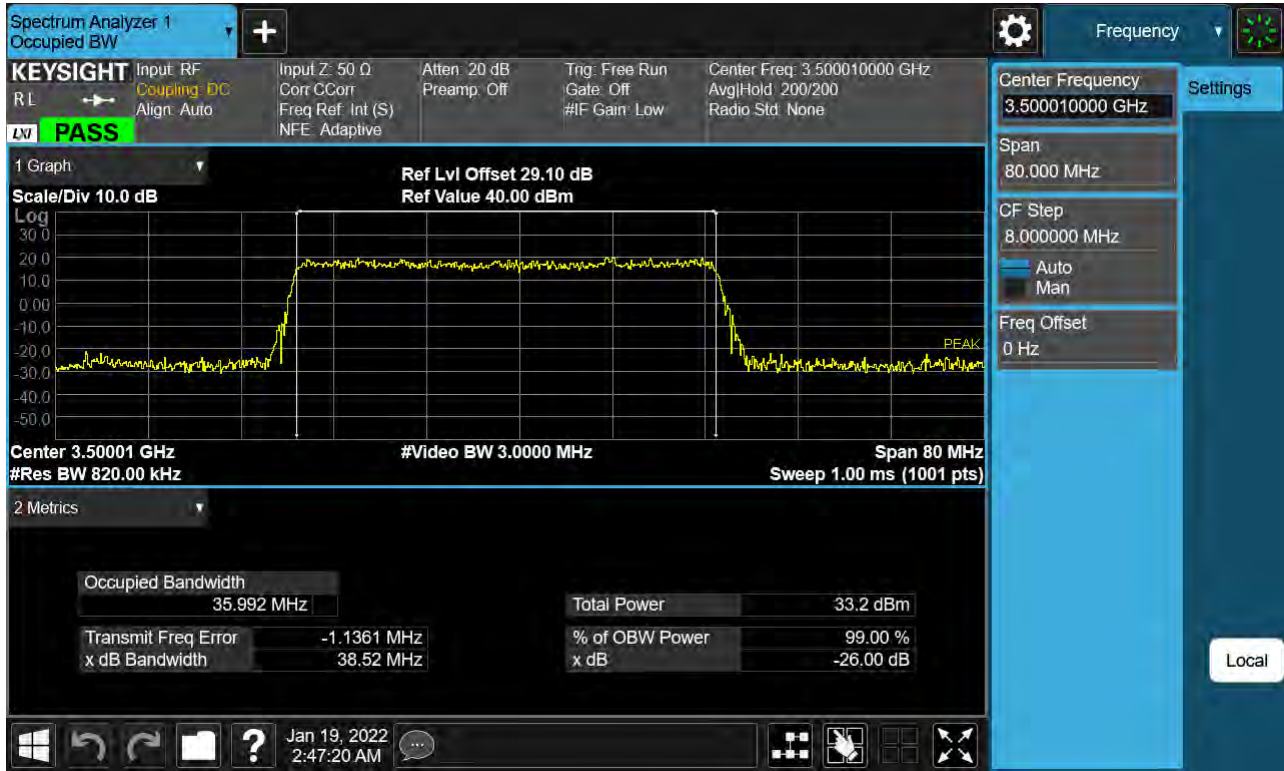
Sub6 n77. Occupied Bandwidth Plot (30 M BW Ch.633334 64QAM)



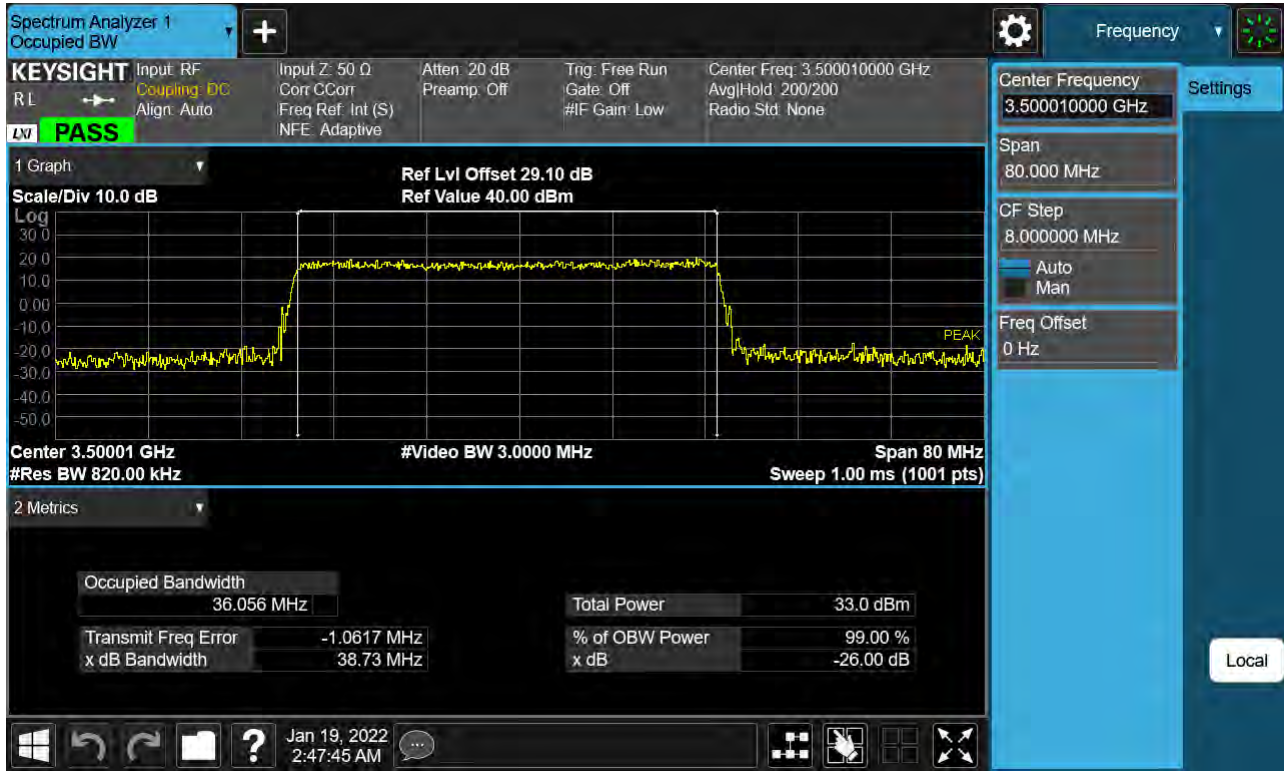
Sub6 n77. Occupied Bandwidth Plot (30 M BW Ch.633334 256QAM)



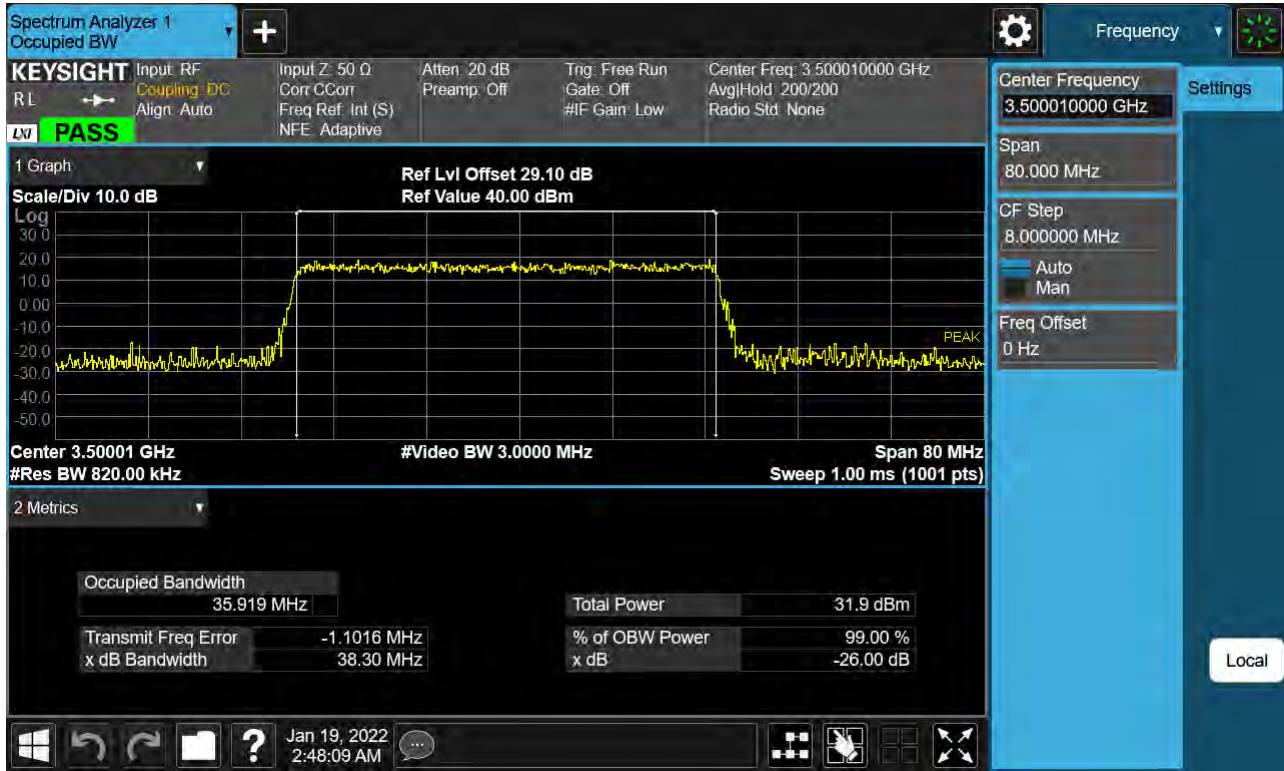
Sub6 n77. Occupied Bandwidth Plot (40 M BW Ch.633334 BPSK)



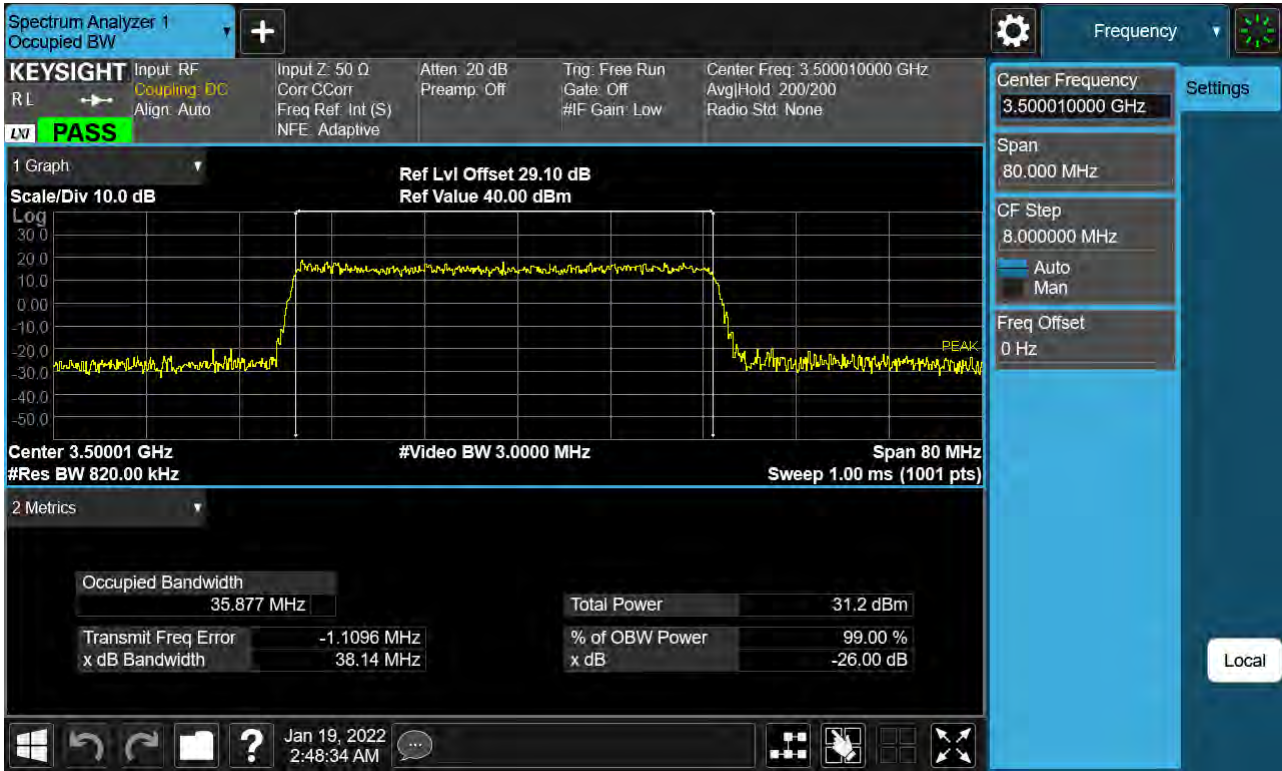
Sub6 n77. Occupied Bandwidth Plot (40 M BW Ch.633334 QPSK)



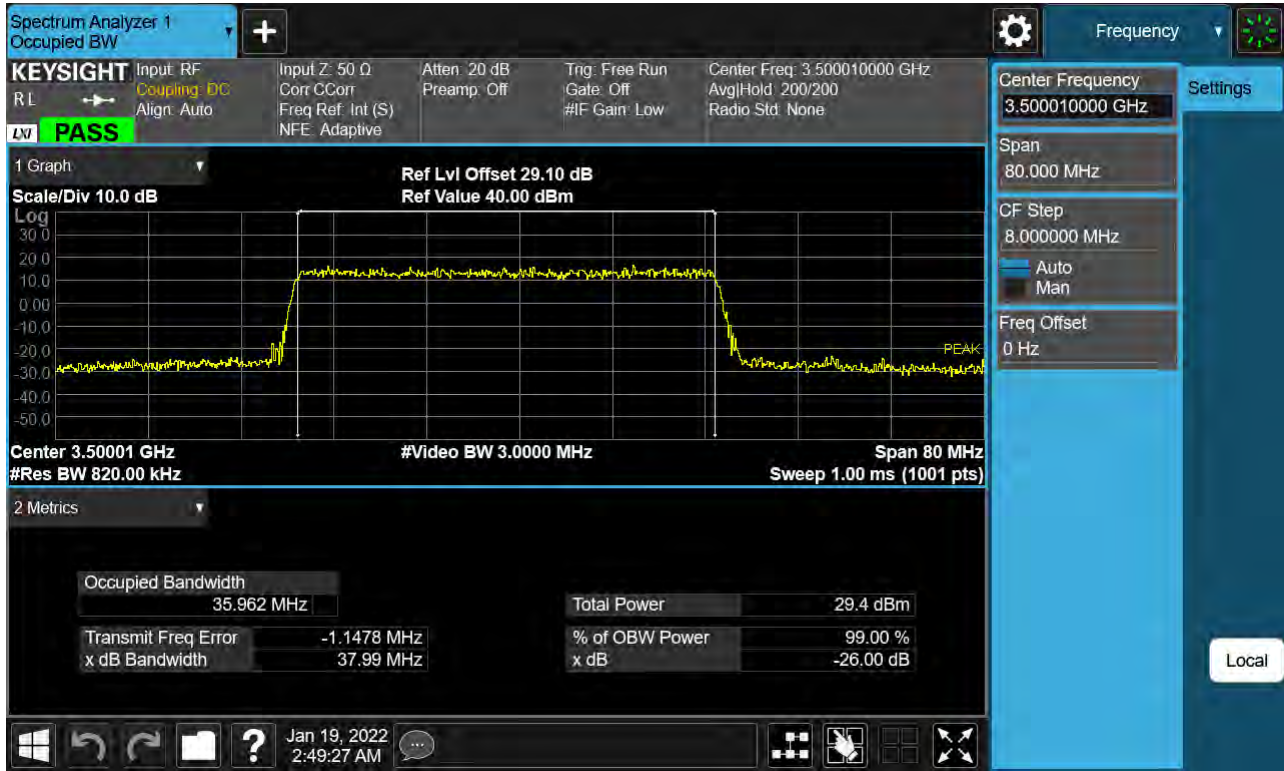
Sub6 n77. Occupied Bandwidth Plot (40 M BW Ch.633334 16QAM)



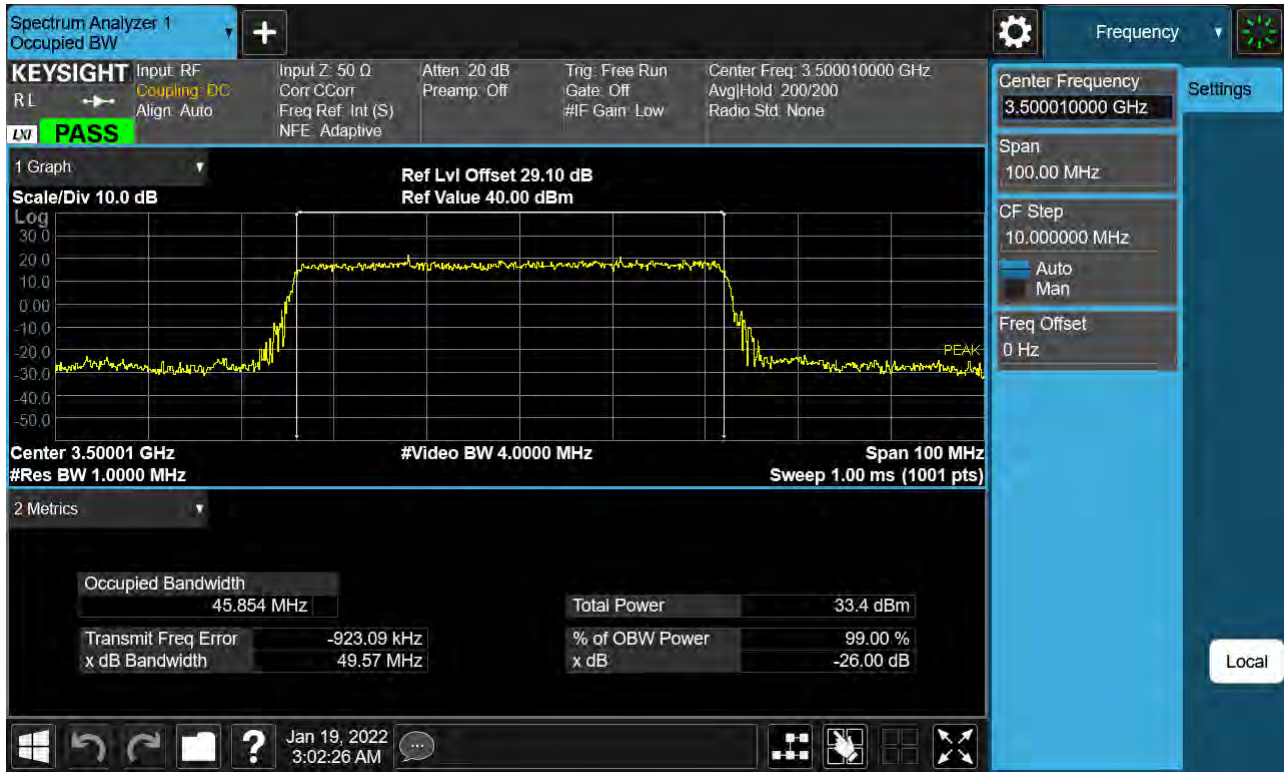
Sub6 n77. Occupied Bandwidth Plot (40 M BW Ch.633334 64QAM)



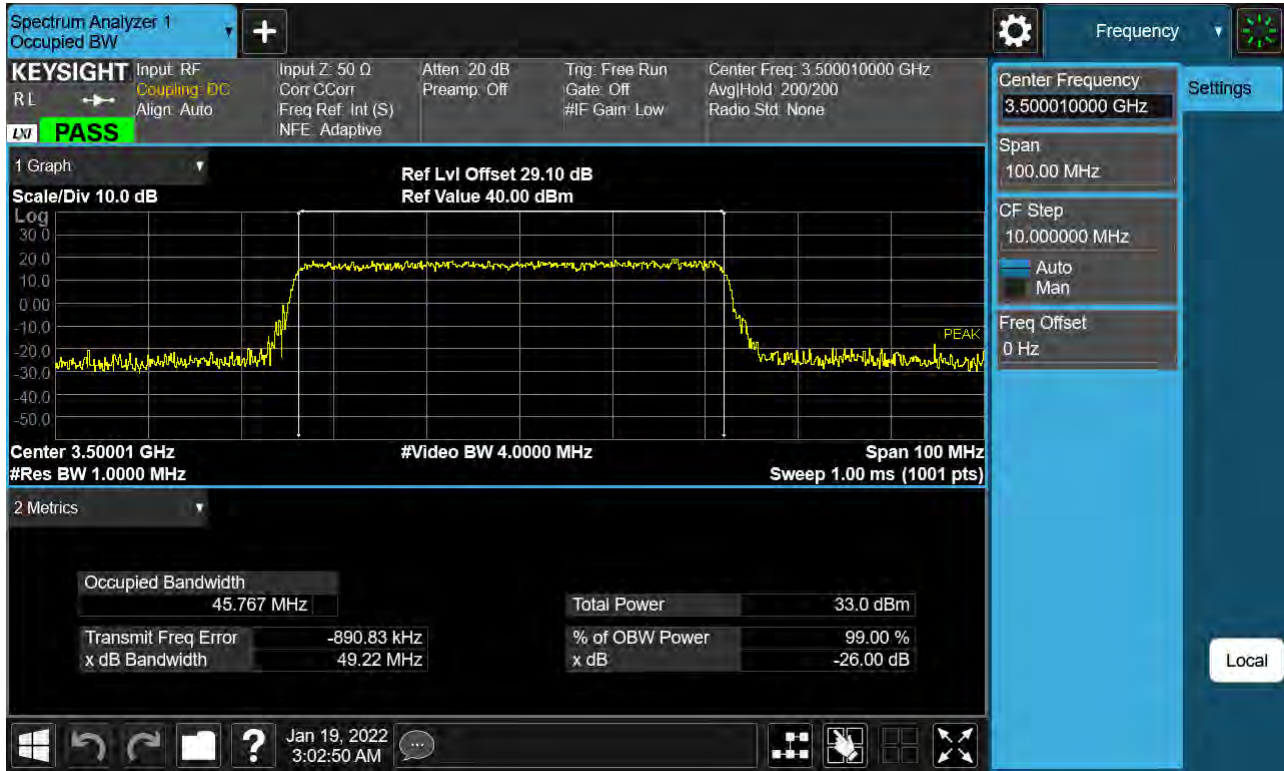
Sub6 n77. Occupied Bandwidth Plot (40 M BW Ch.633334 256QAM)



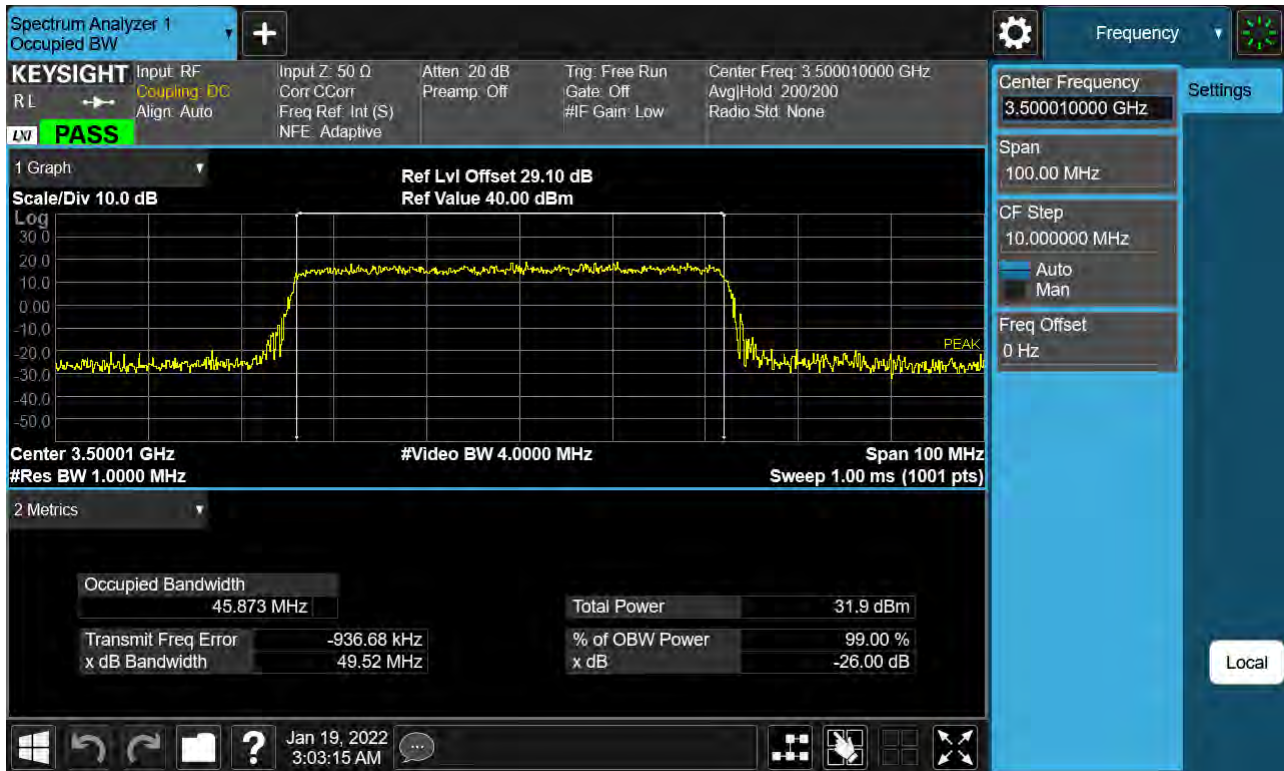
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 BPSK)



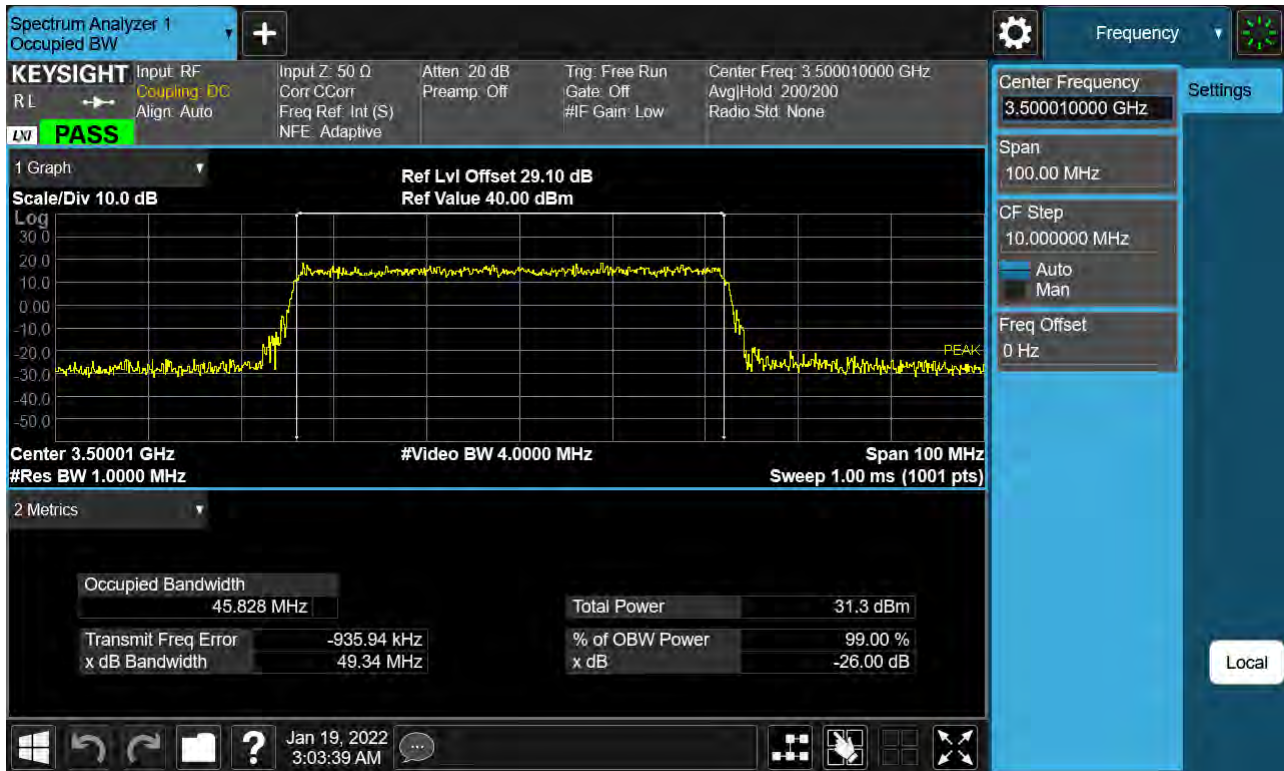
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 QPSK)



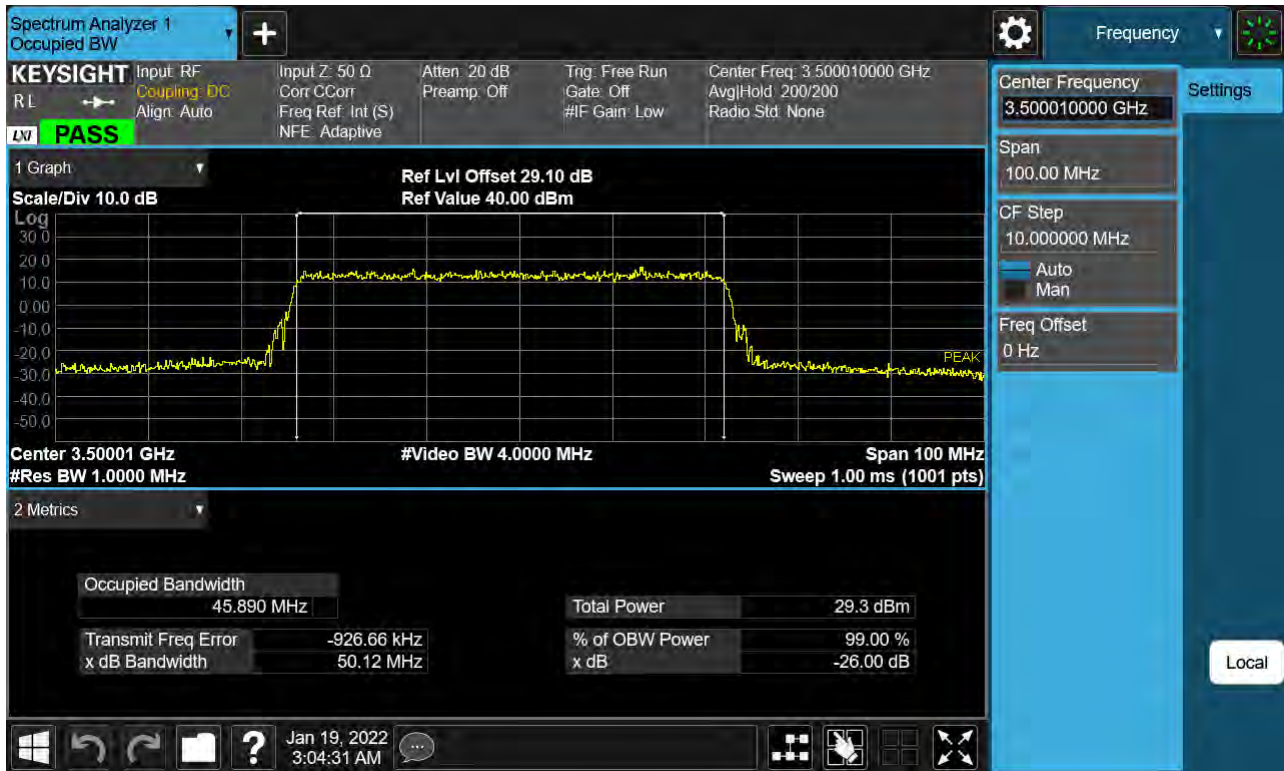
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 16QAM)



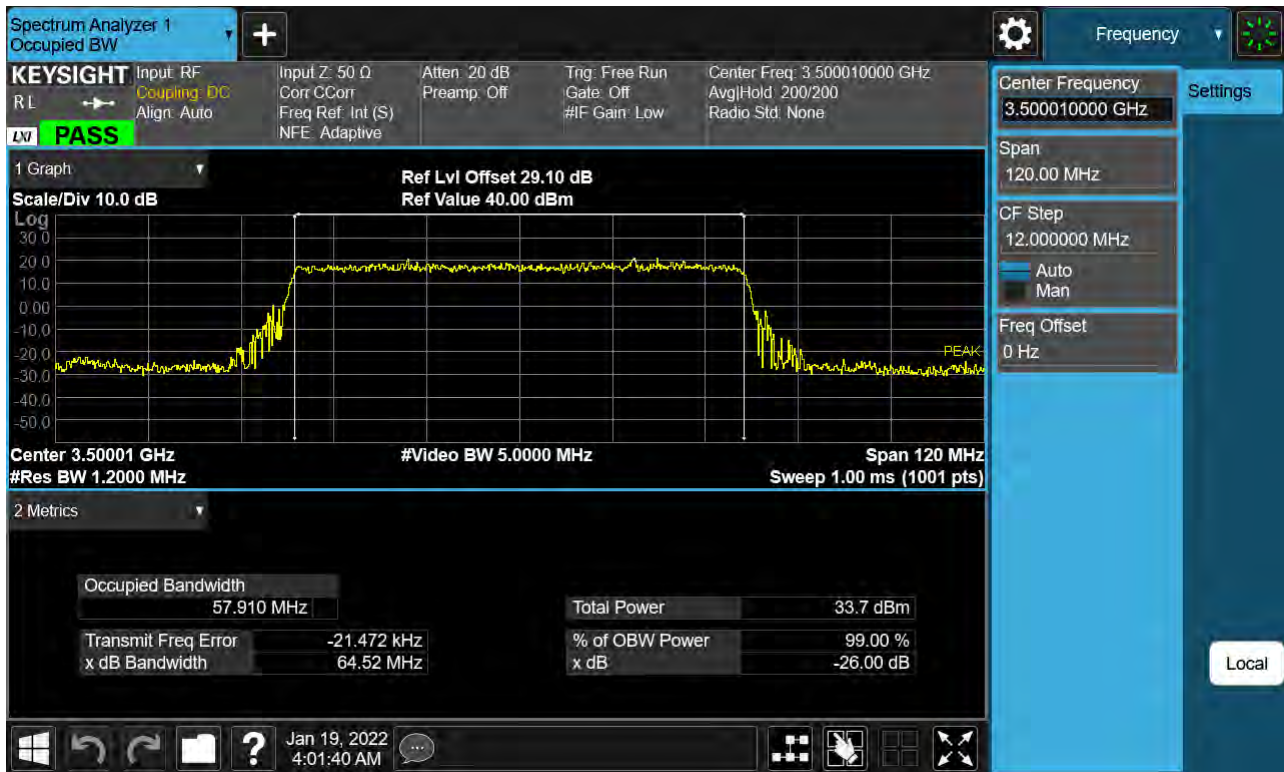
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 64QAM)



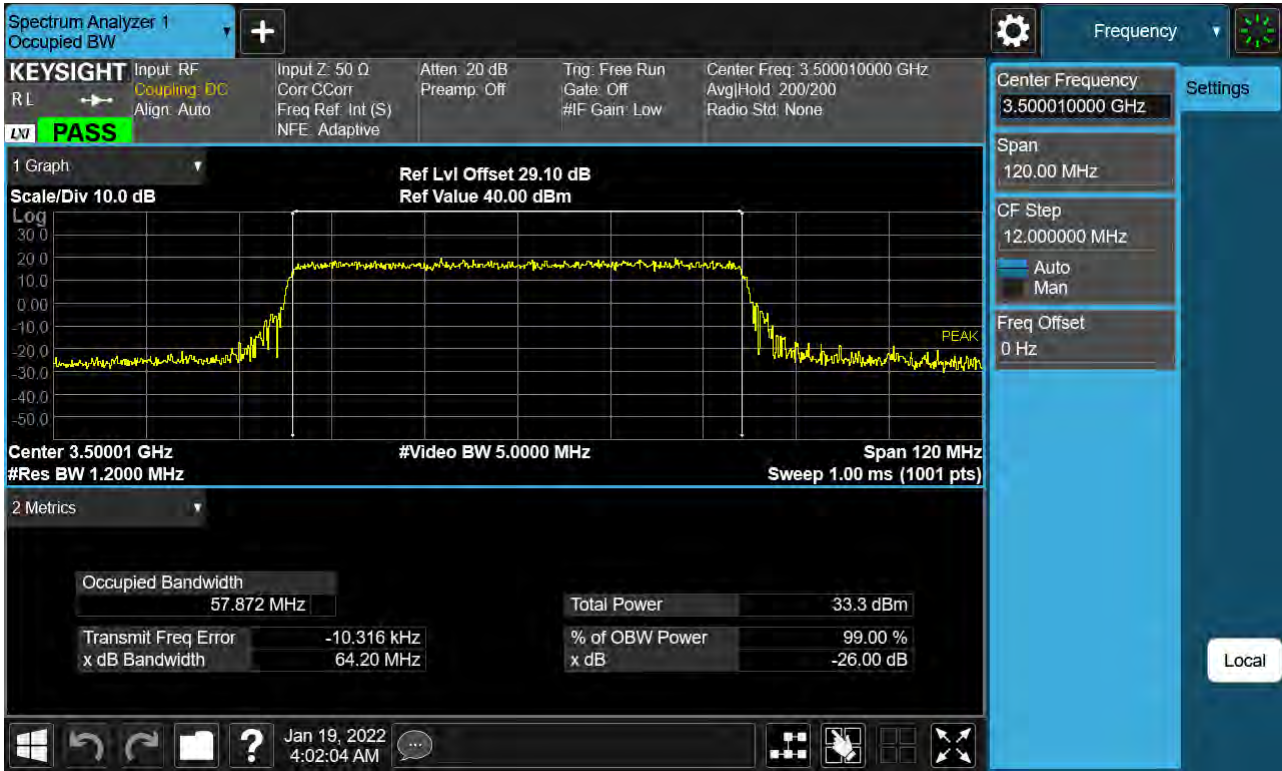
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 256QAM)



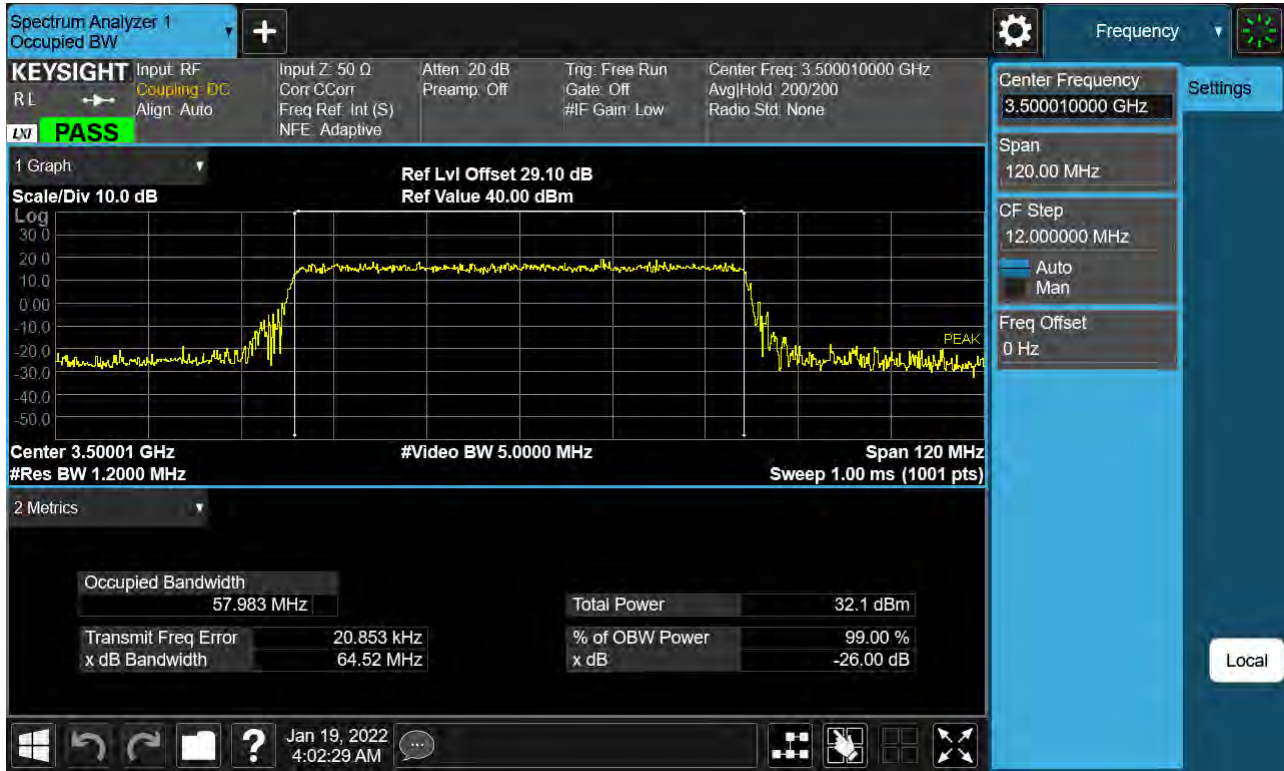
Sub6 n77. Occupied Bandwidth Plot (60 M BW Ch.633334 BPSK)



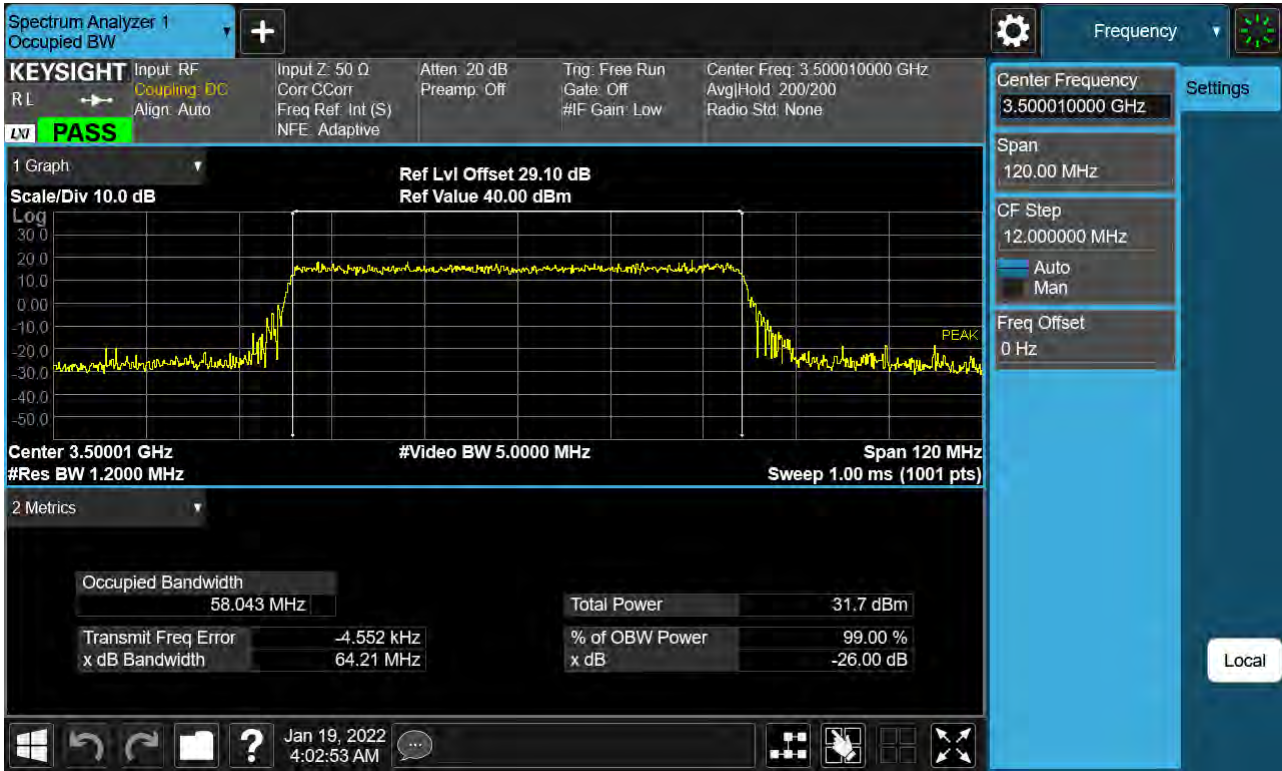
Sub6 n77. Occupied Bandwidth Plot (60 M BW Ch.633334 QPSK)



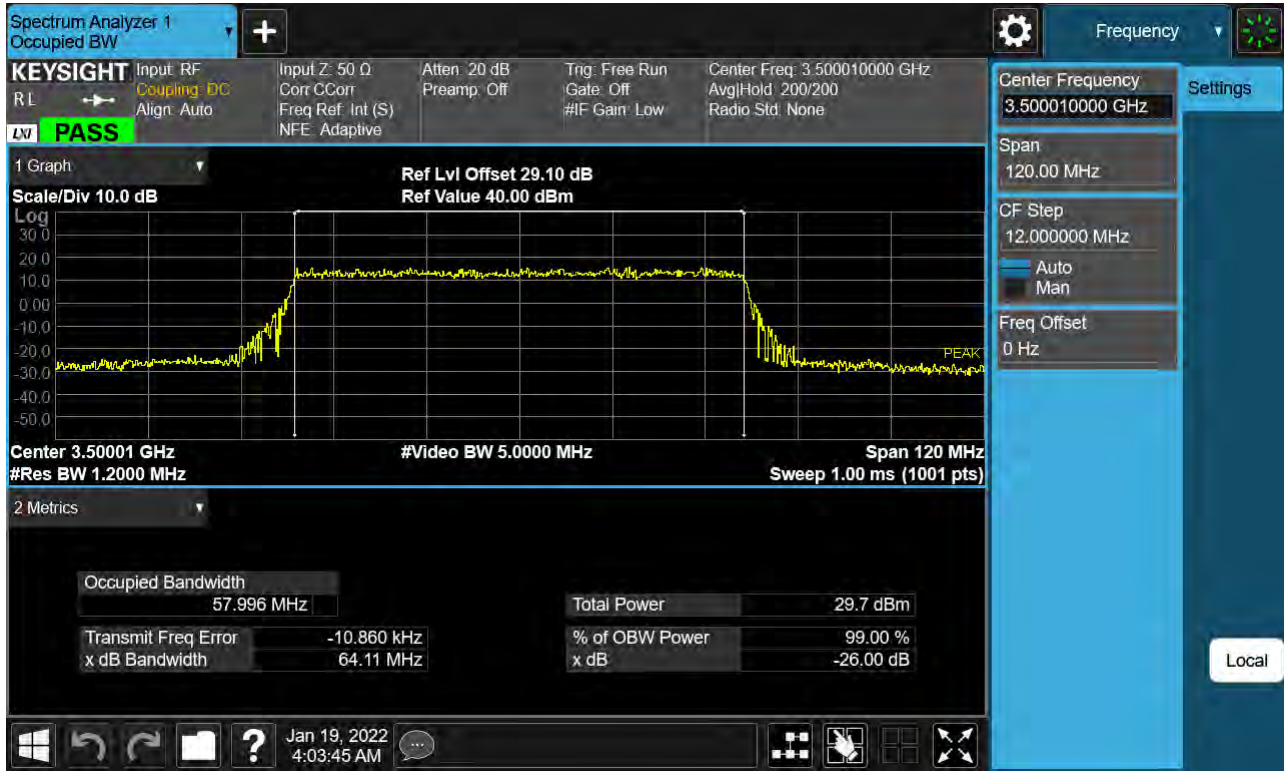
Sub6 n77. Occupied Bandwidth Plot (60 M BW Ch.633334 16QAM)



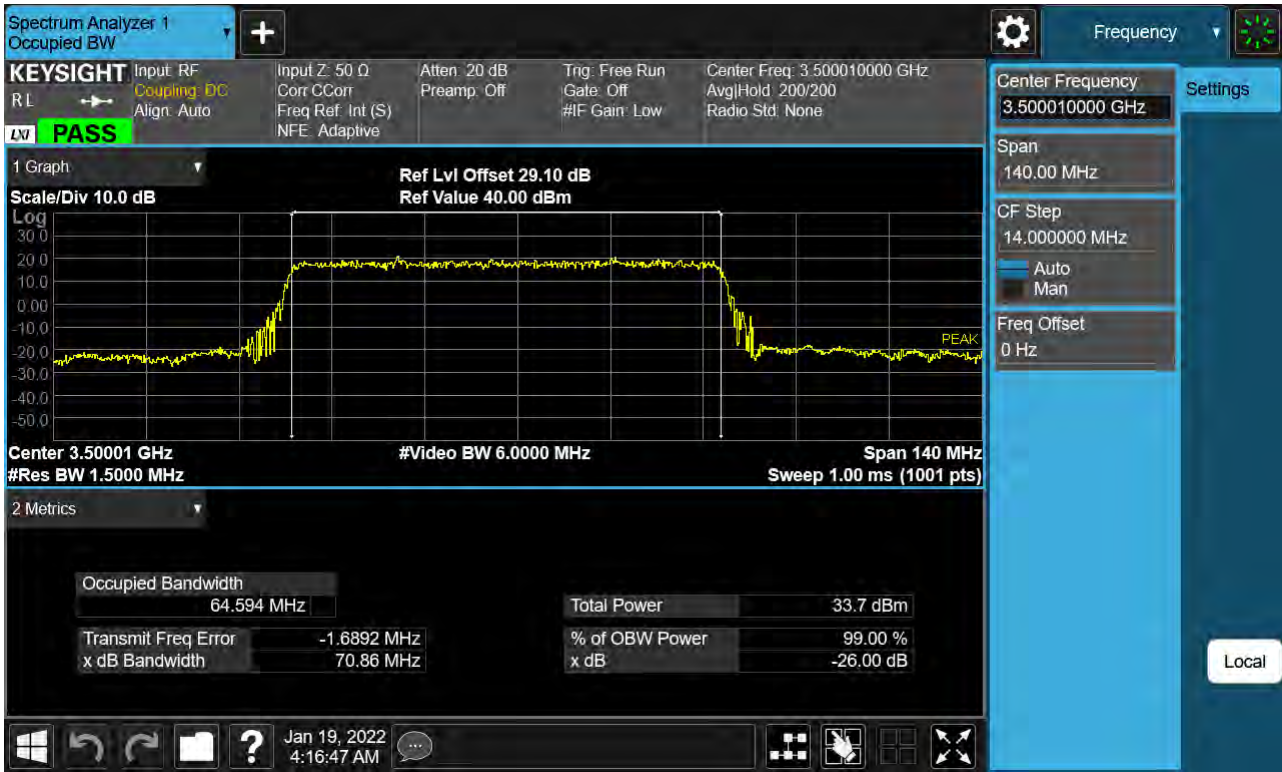
Sub6 n77. Occupied Bandwidth Plot (60 M BW Ch.633334 64QAM)



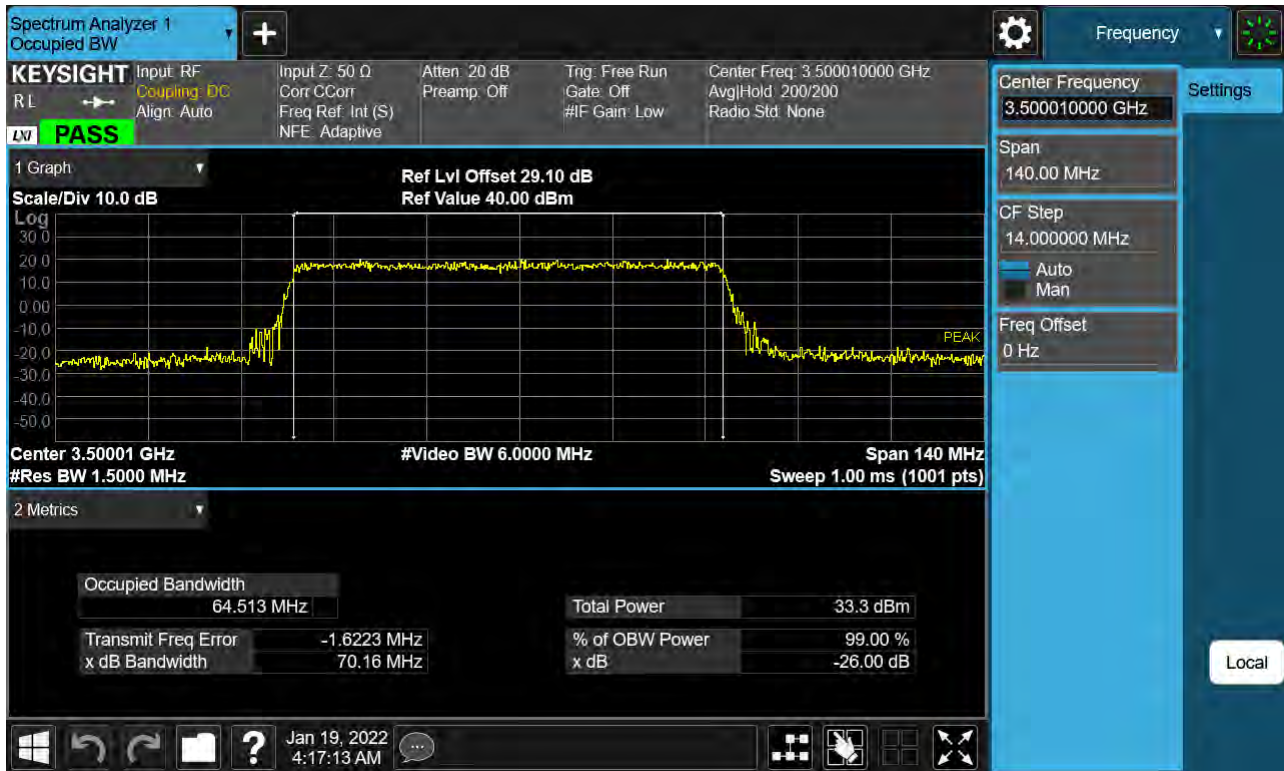
Sub6 n77. Occupied Bandwidth Plot (60 M BW Ch.633334 256QAM)



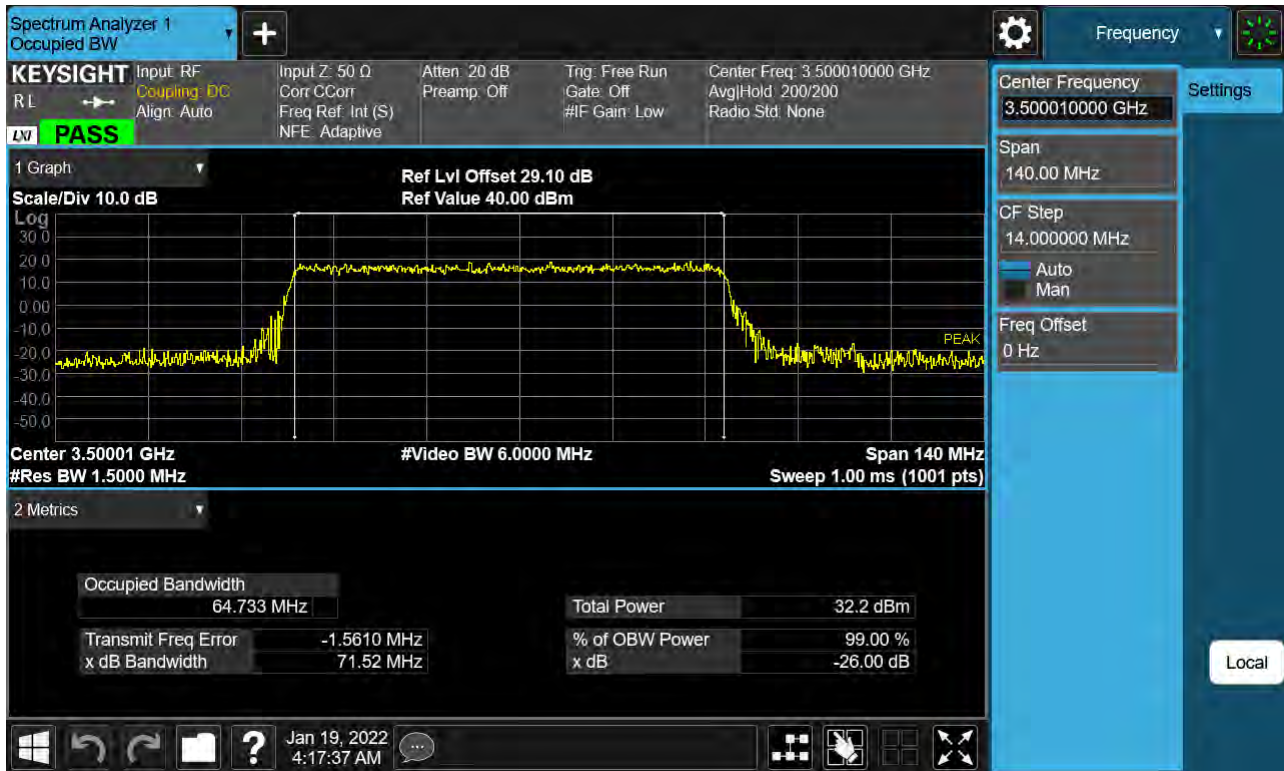
Sub6 n77. Occupied Bandwidth Plot (70 M BW Ch.633334 BPSK)



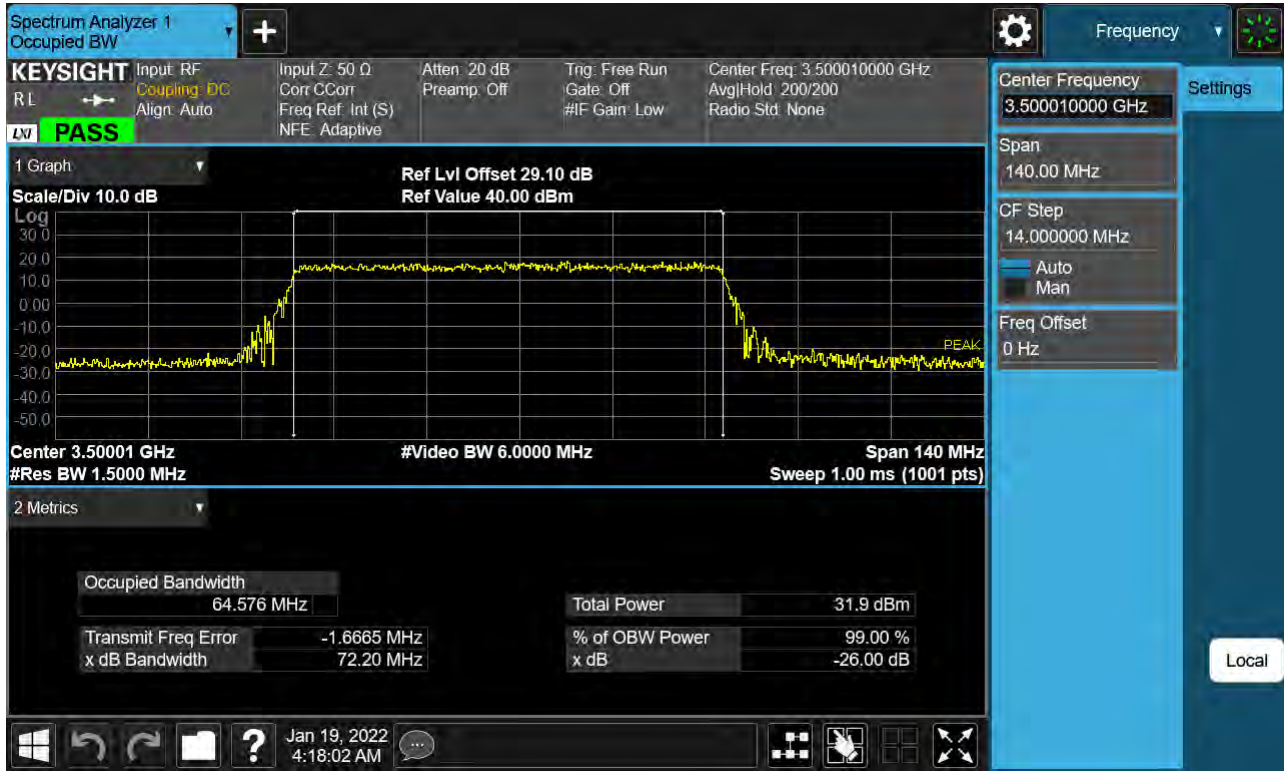
Sub6 n77. Occupied Bandwidth Plot (70 M BW Ch.633334 QPSK)



Sub6 n77. Occupied Bandwidth Plot (70 M BW Ch.633334 16QAM)



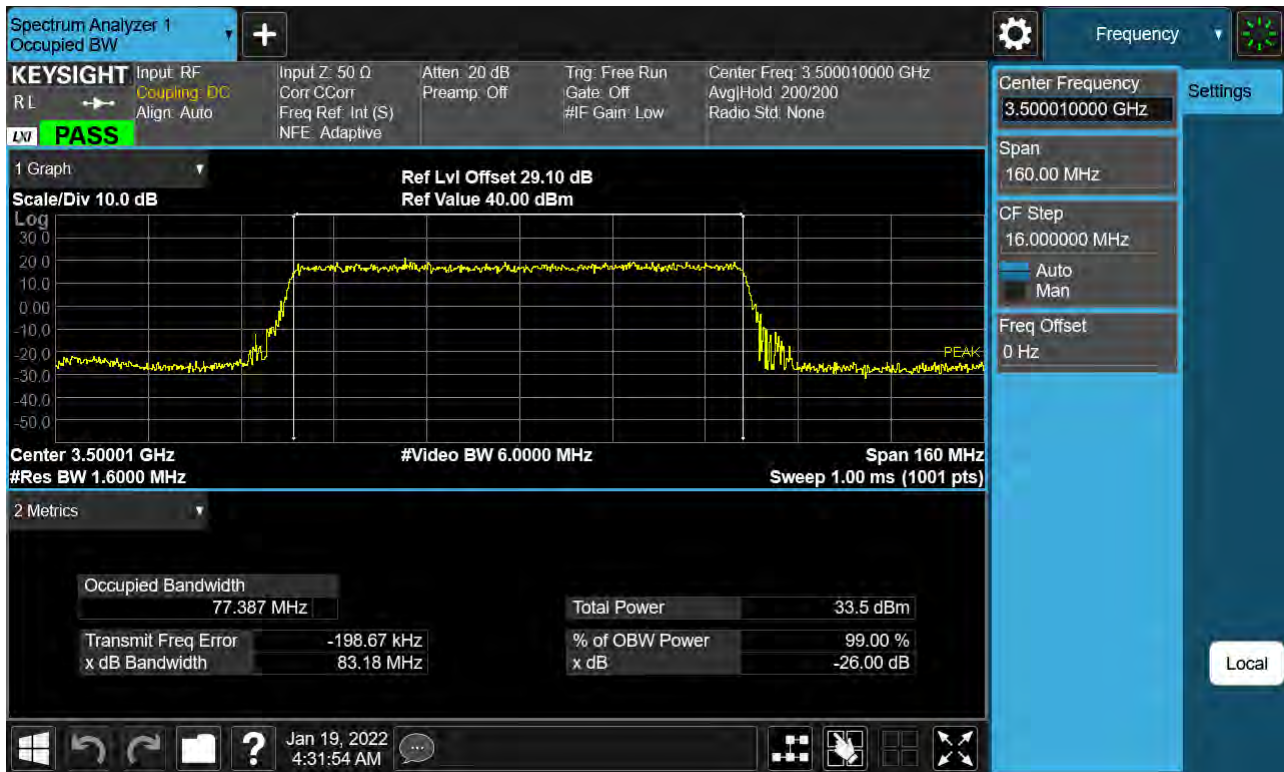
Sub6 n77. Occupied Bandwidth Plot (70 M BW Ch.633334 64QAM)



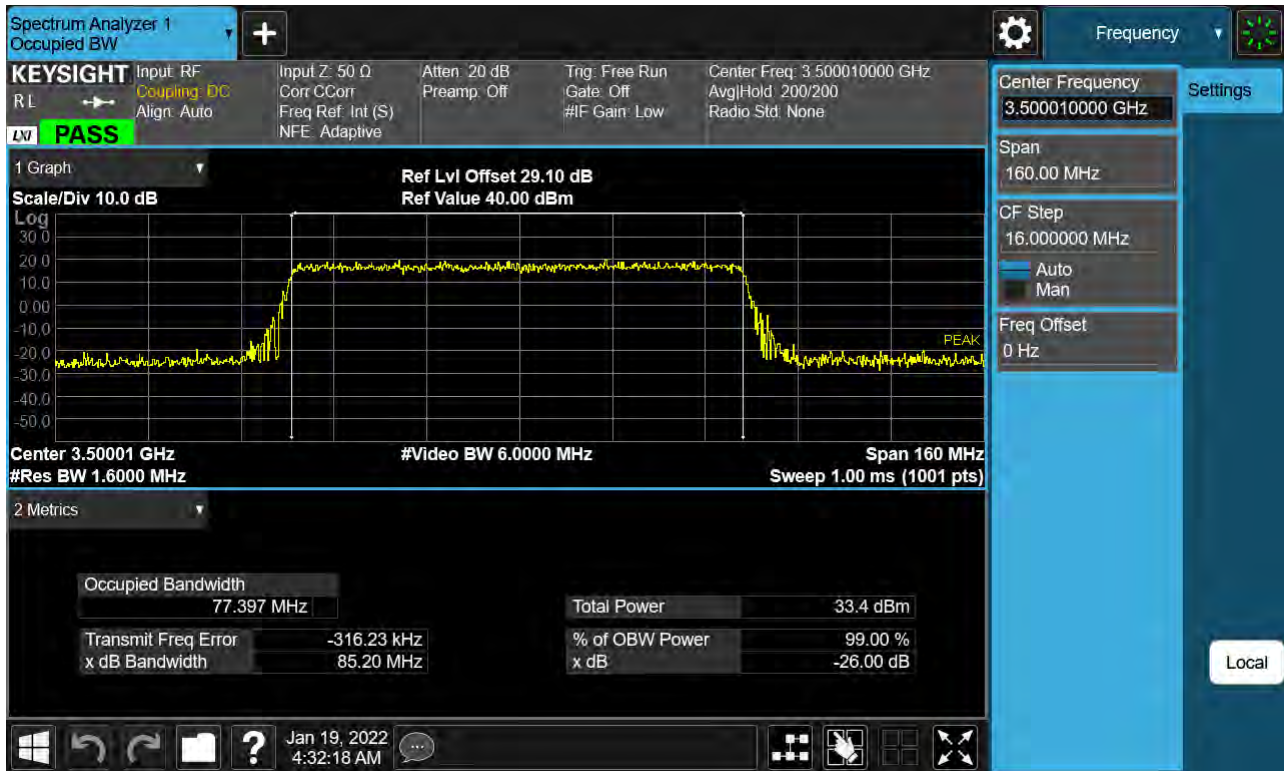
Sub6 n77. Occupied Bandwidth Plot (70 M BW Ch.633334 256QAM)



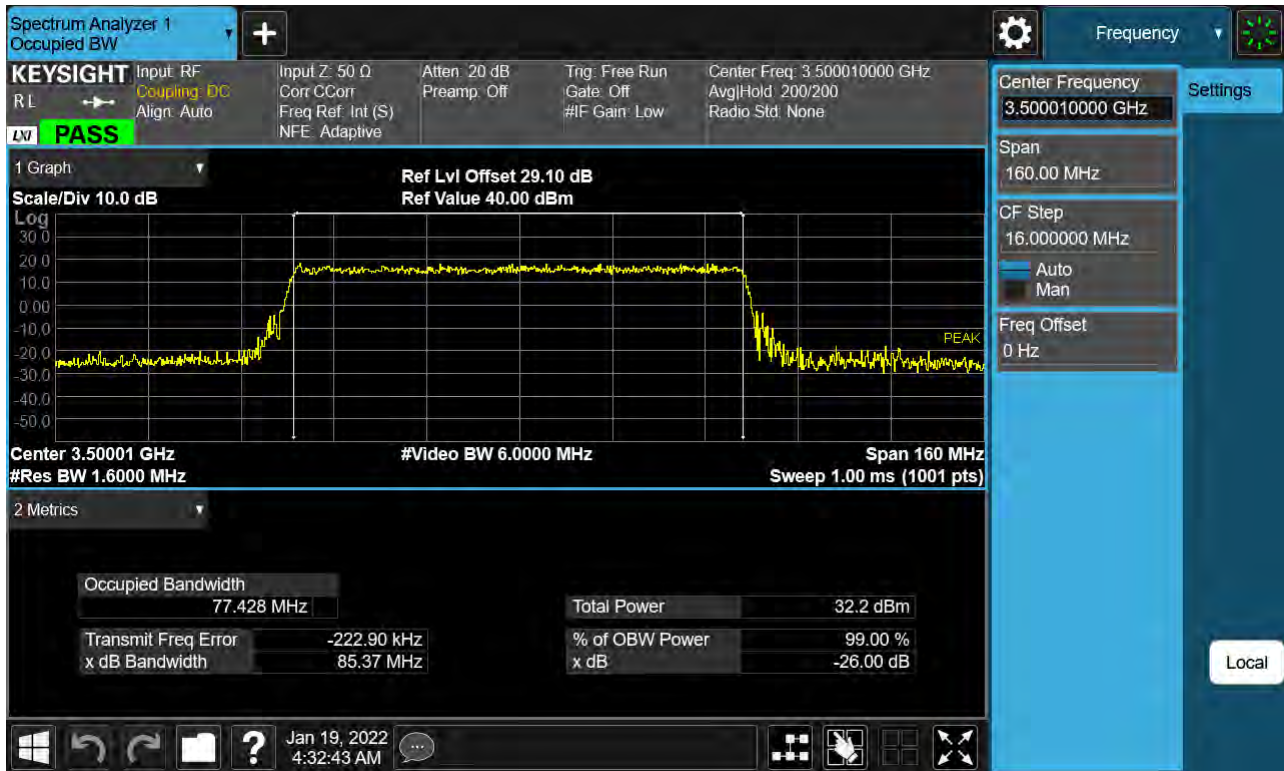
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 BPSK)



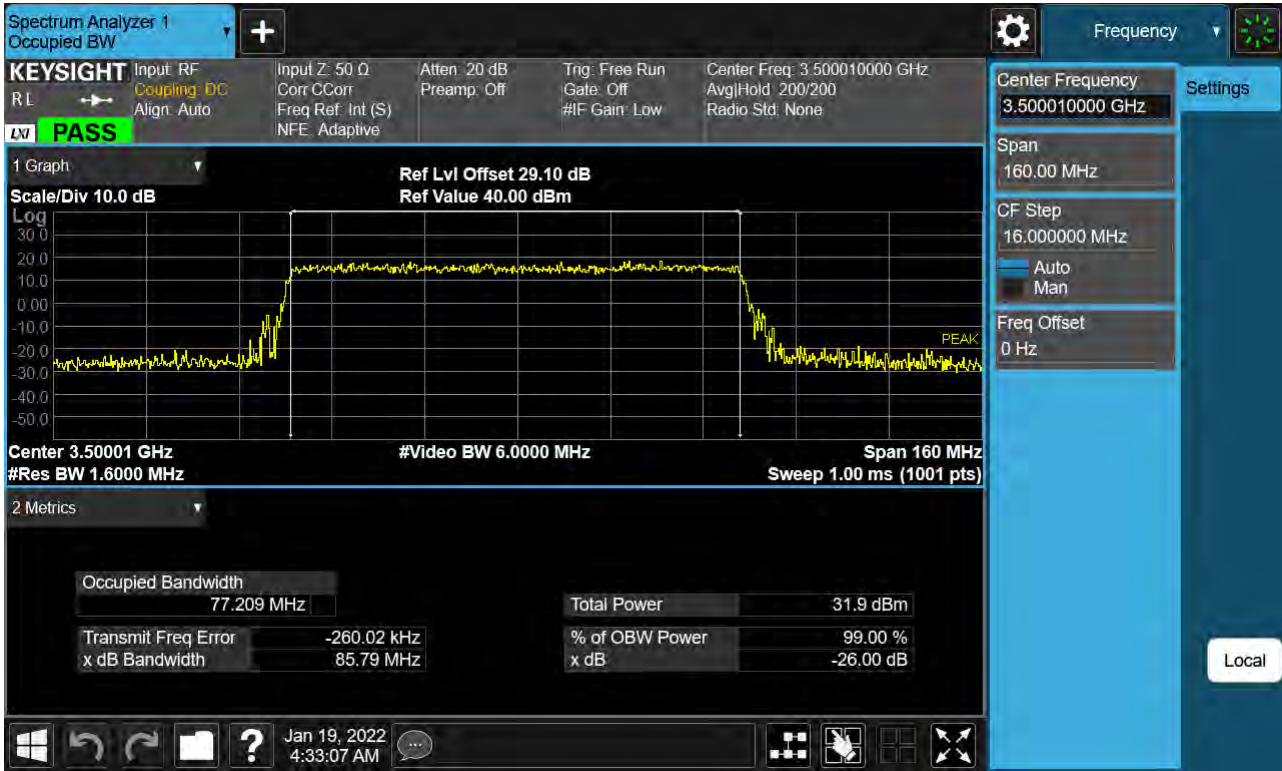
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 QPSK)



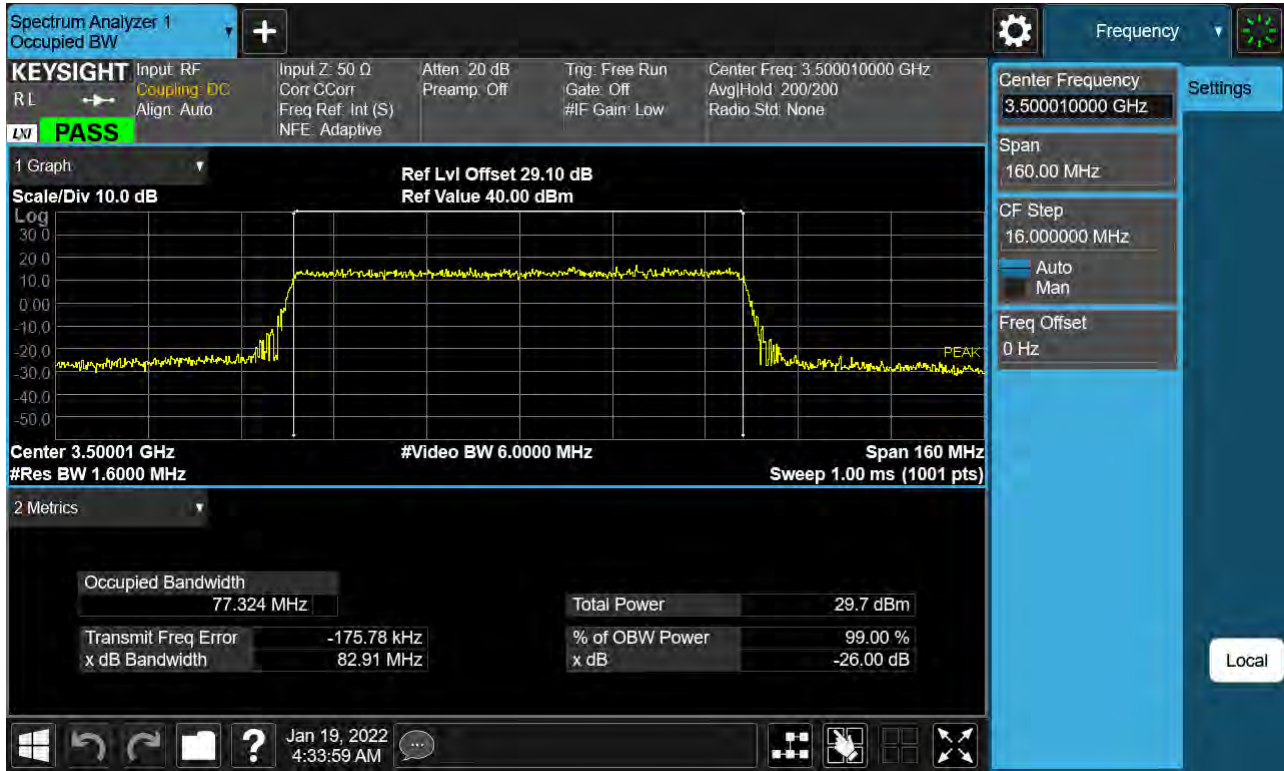
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 16QAM)



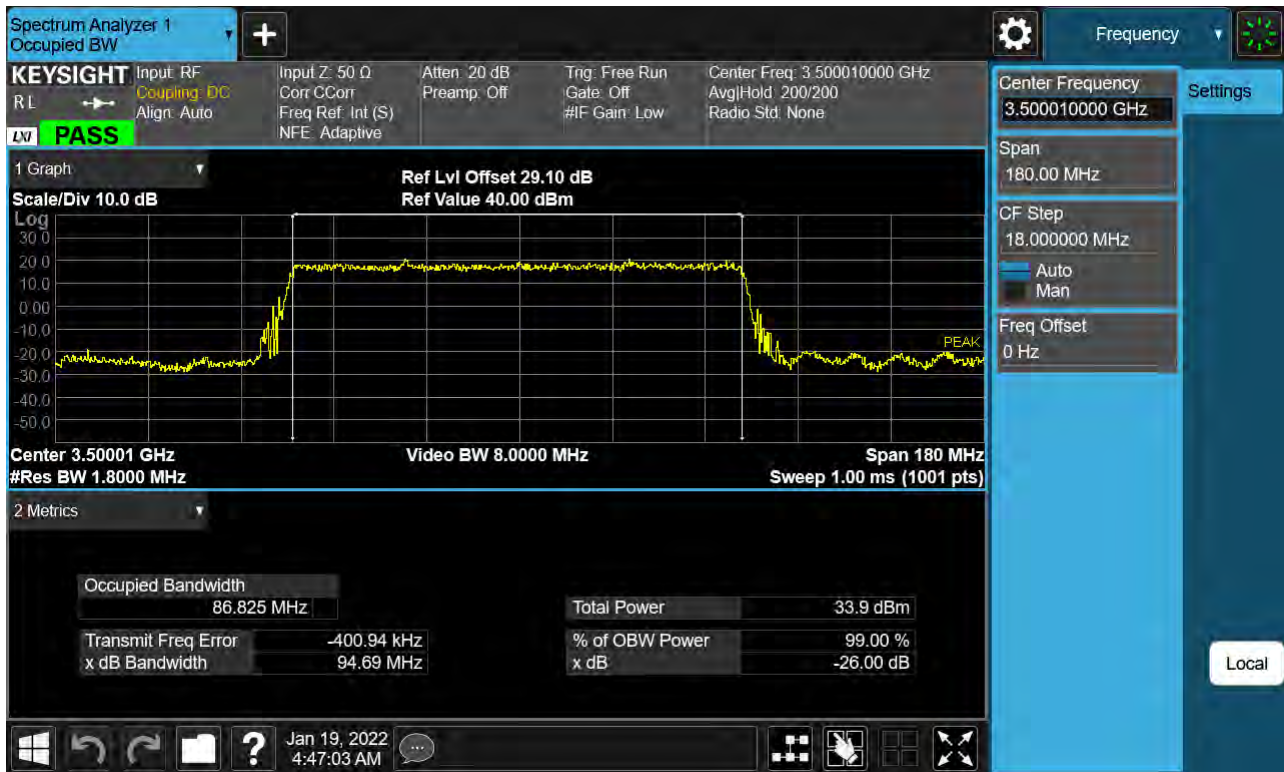
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 64QAM)



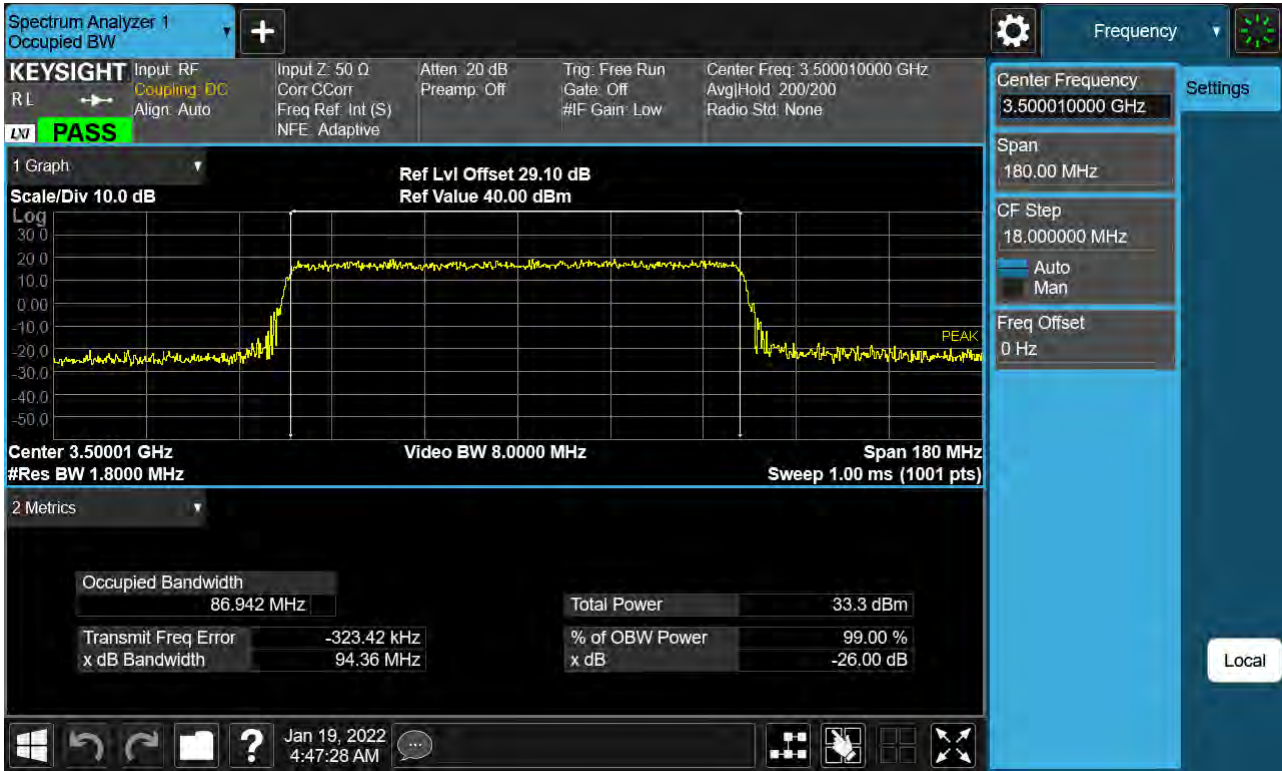
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 256QAM)



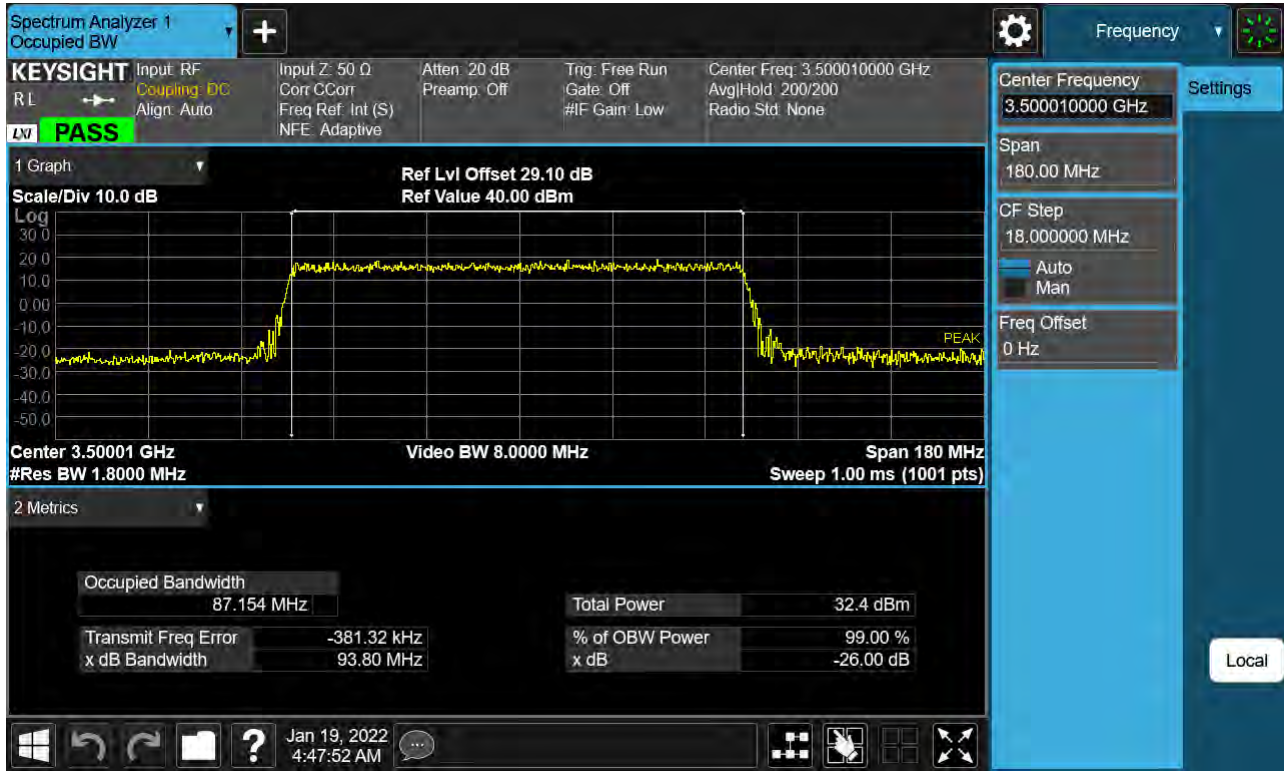
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 BPSK)



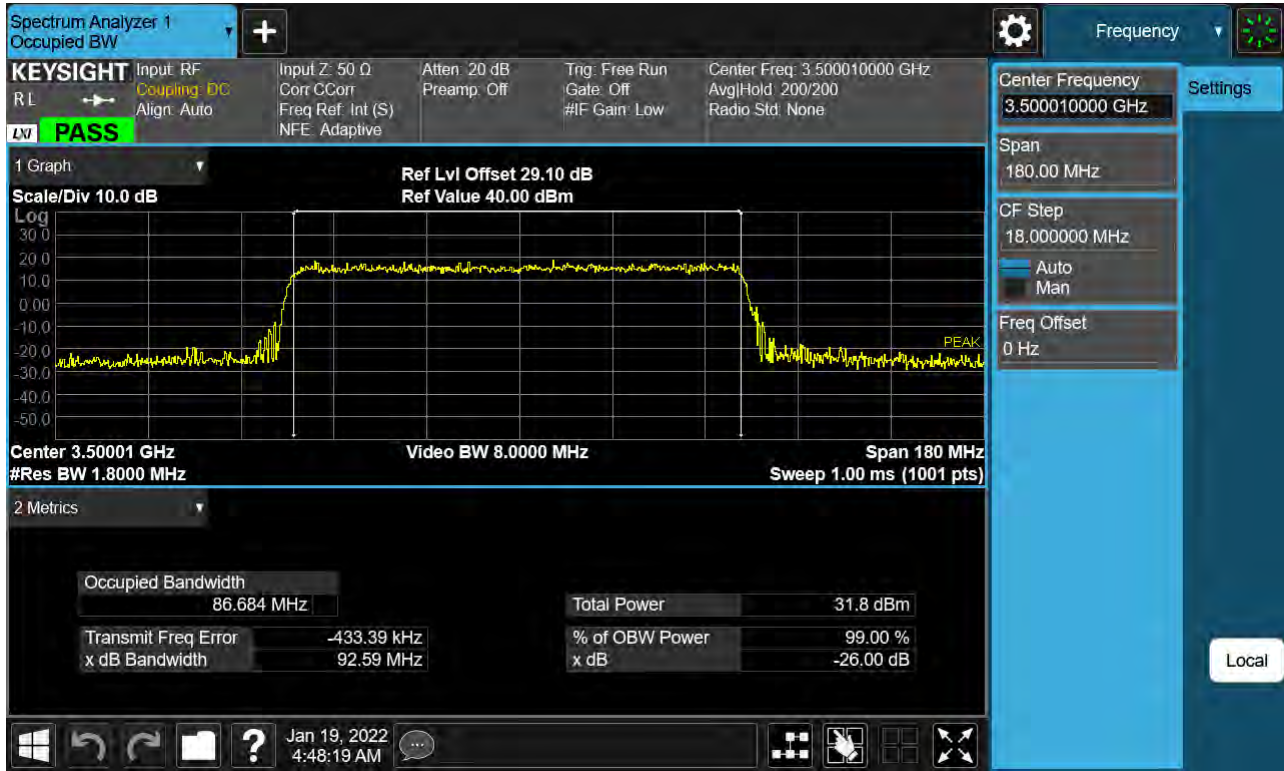
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 QPSK)



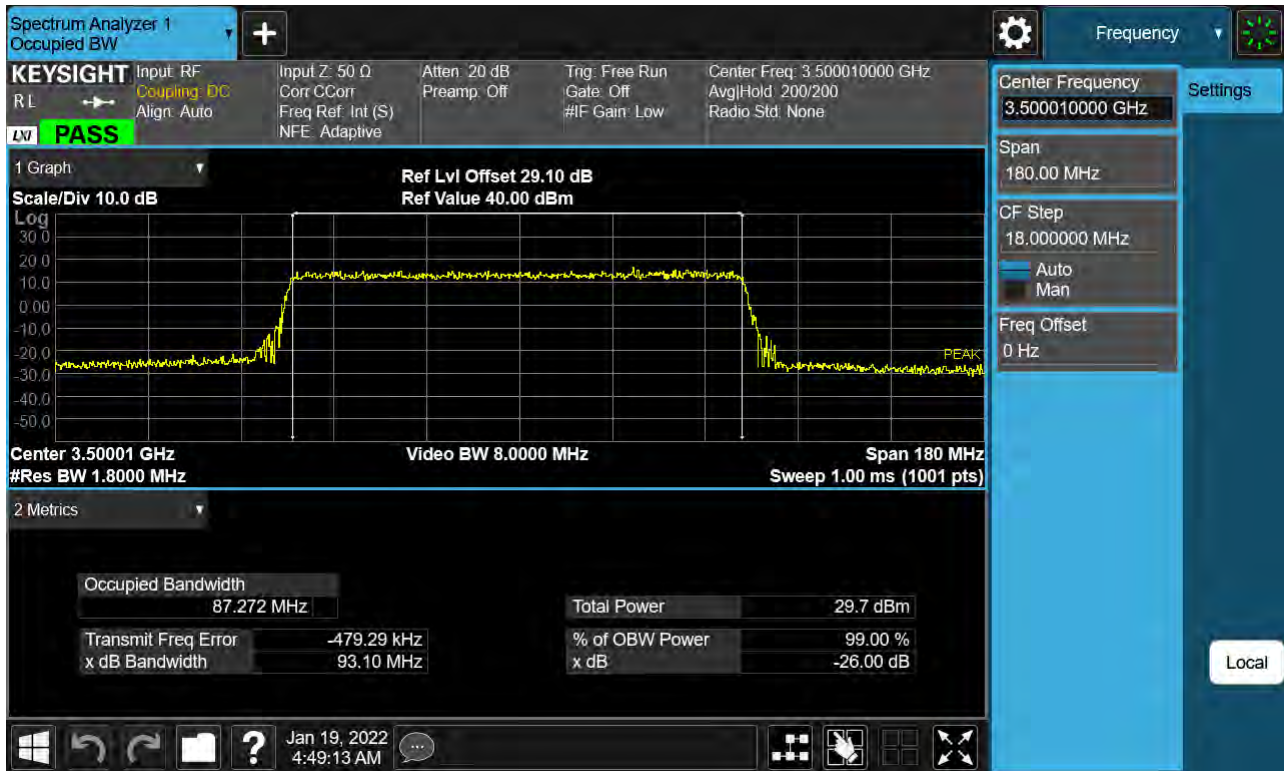
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 16QAM)



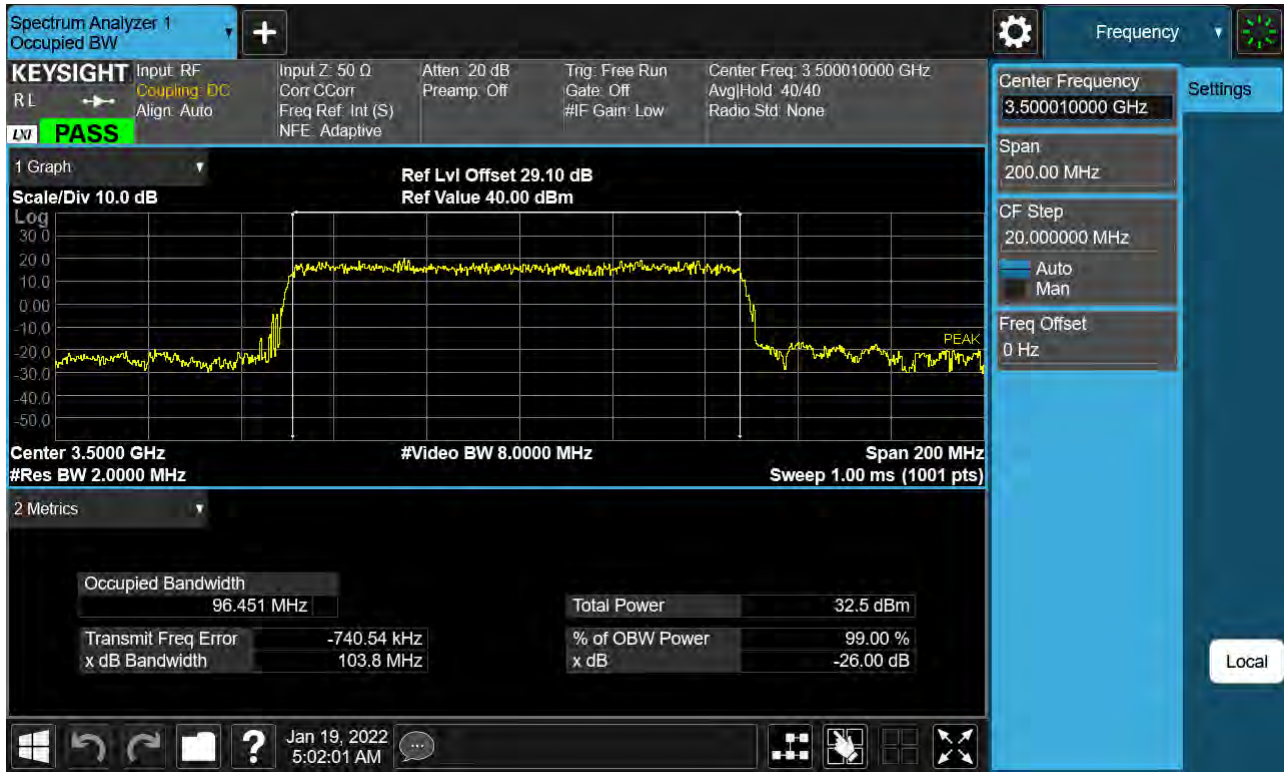
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 64QAM)



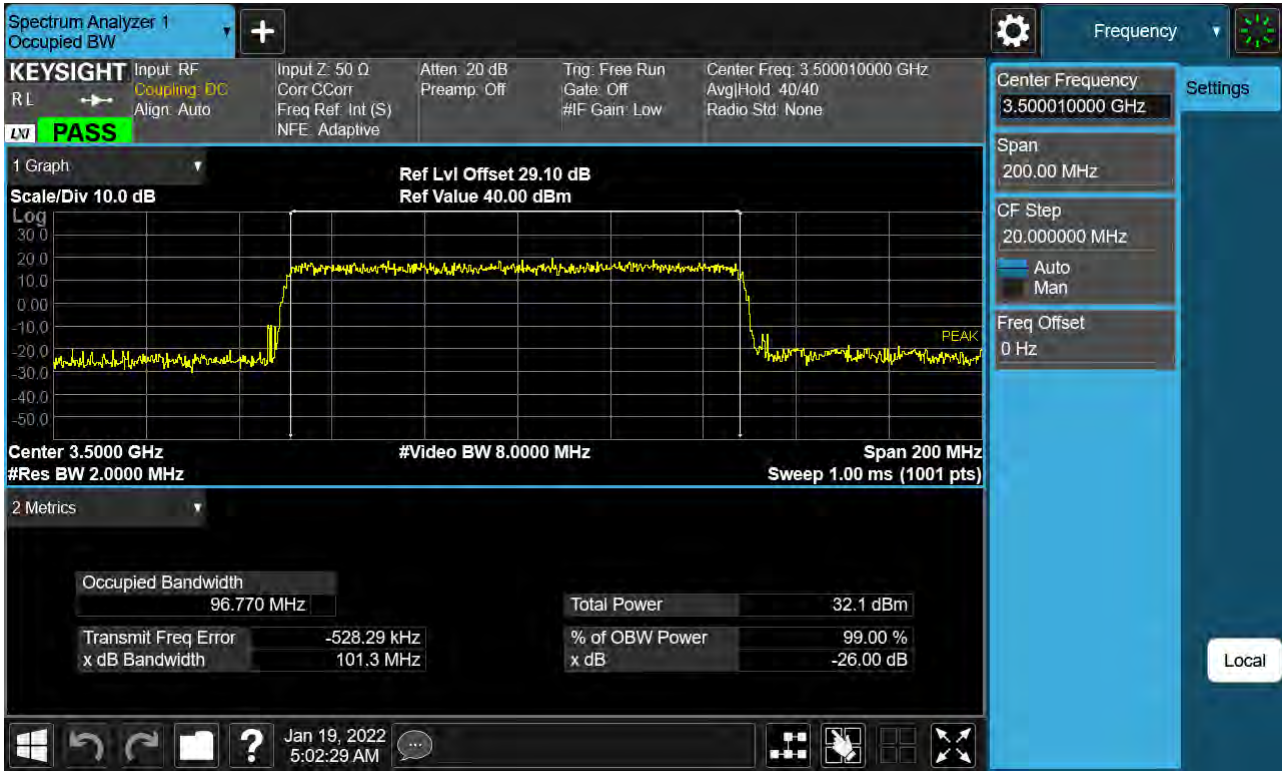
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 256QAM)



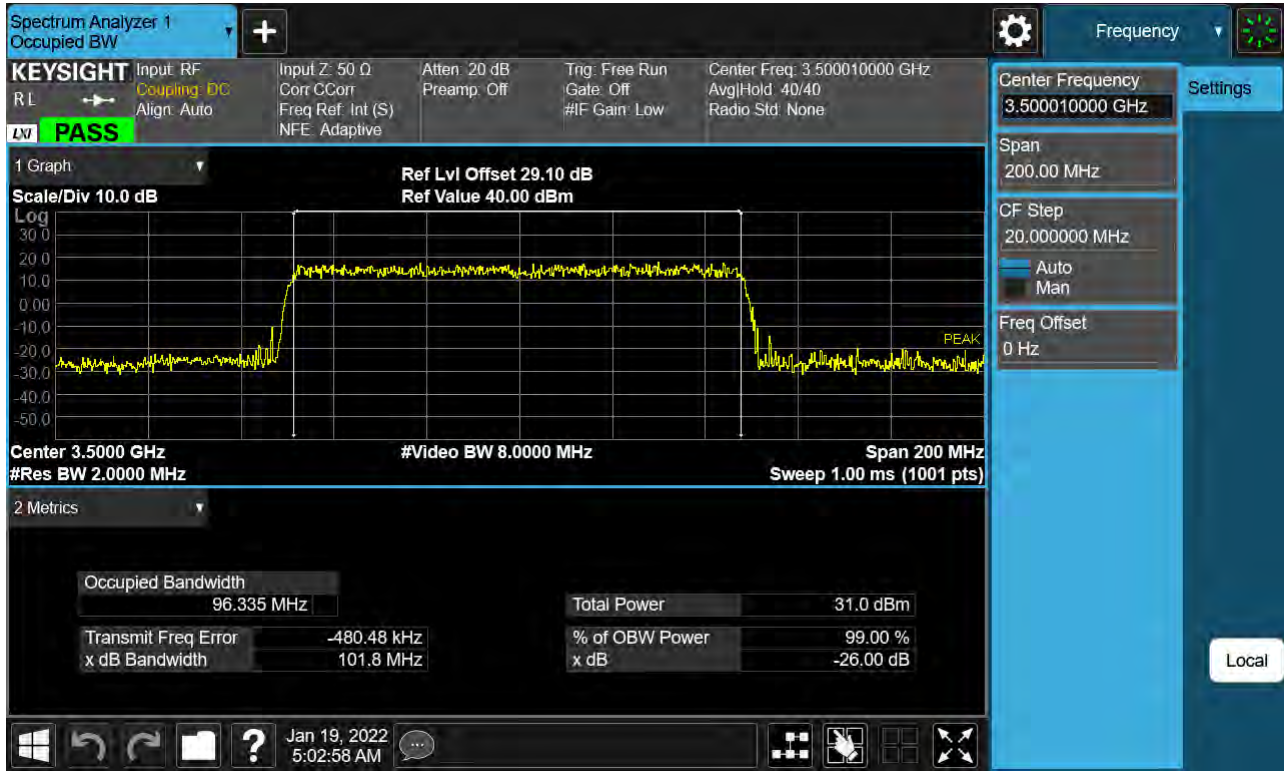
Sub6 n77. Occupied Bandwidth Plot (100 M BW Ch.633334 BPSK)



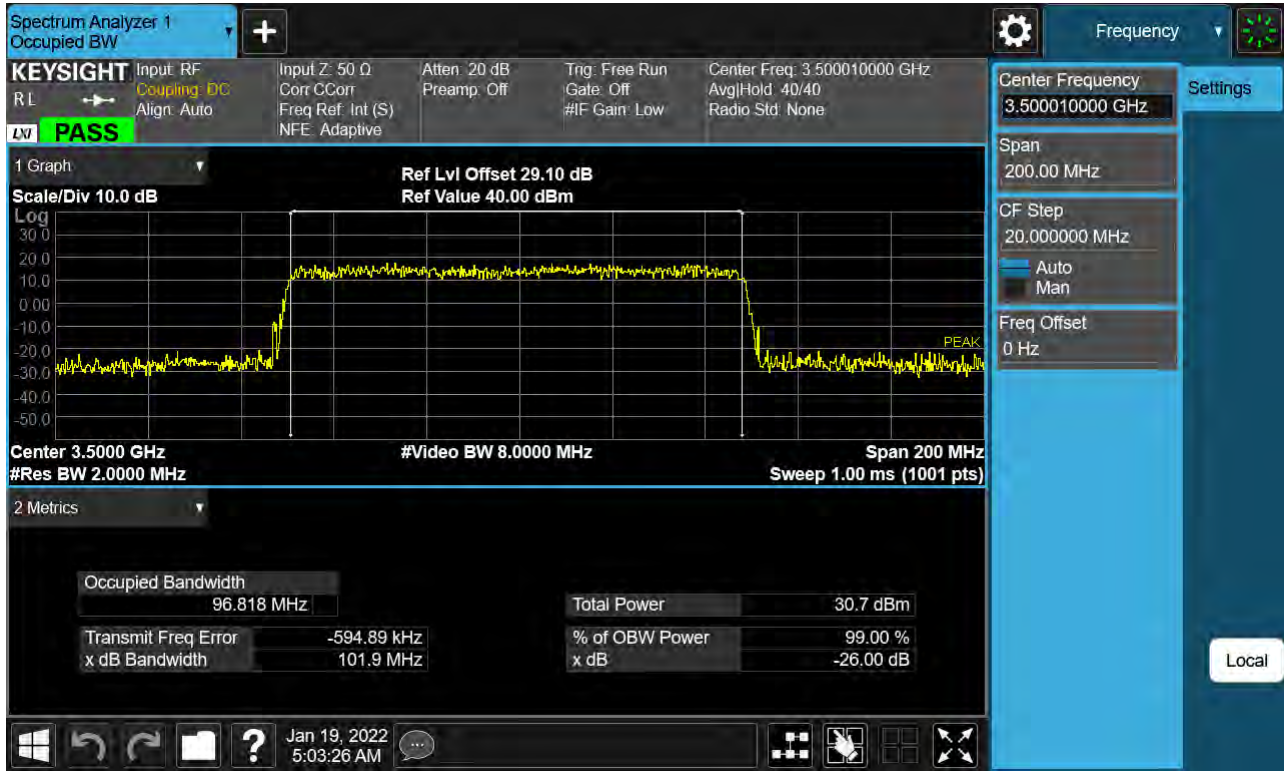
Sub6 n77. Occupied Bandwidth Plot (100 M BW Ch.633334 QPSK)



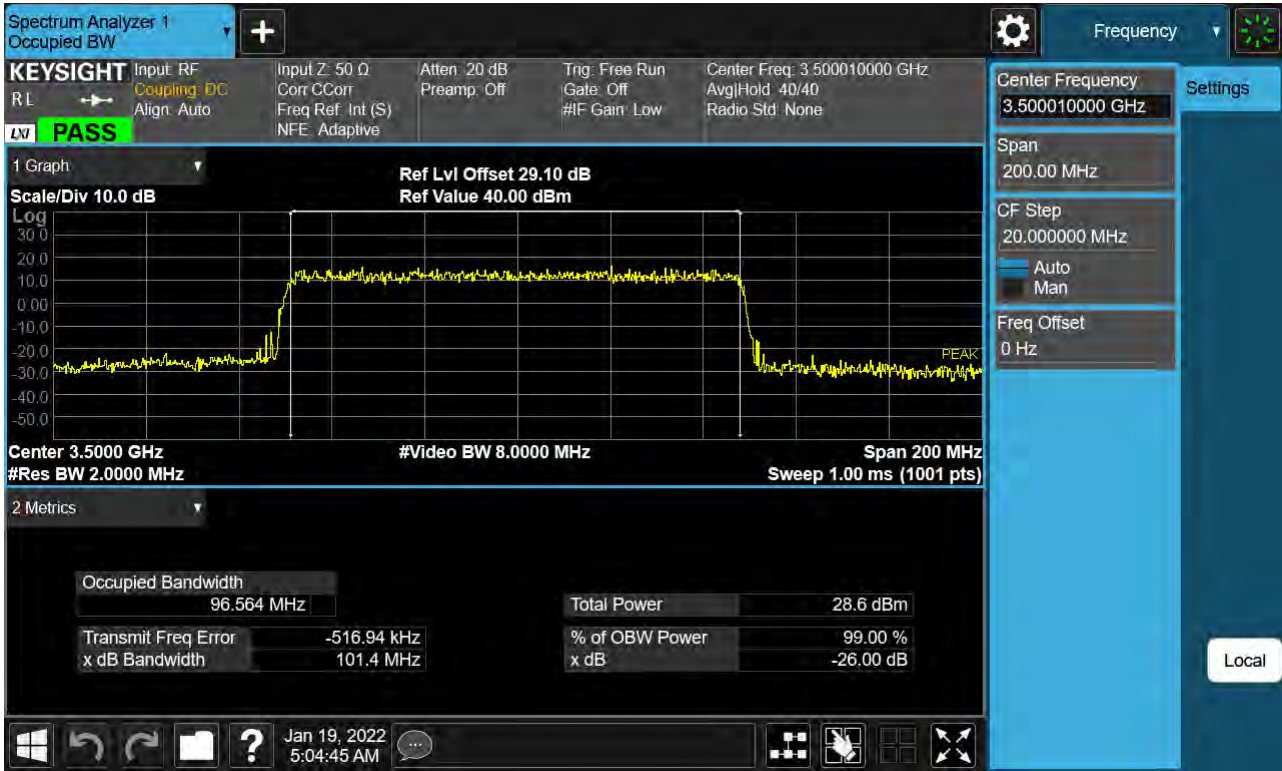
Sub6 n77. Occupied Bandwidth Plot (100 M BW Ch.633334 16QAM)



Sub6 n77. Occupied Bandwidth Plot (100 M BW Ch.633334 64QAM)



Sub6 n77. Occupied Bandwidth Plot (100 M BW Ch.633334 256QAM)



Sub6 n77. PAR Plot (10 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (10 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (10 M BW_Ch.633334_16QAM)



Sub6 n77. PAR Plot (10 M BW_Ch.633334_64QAM)



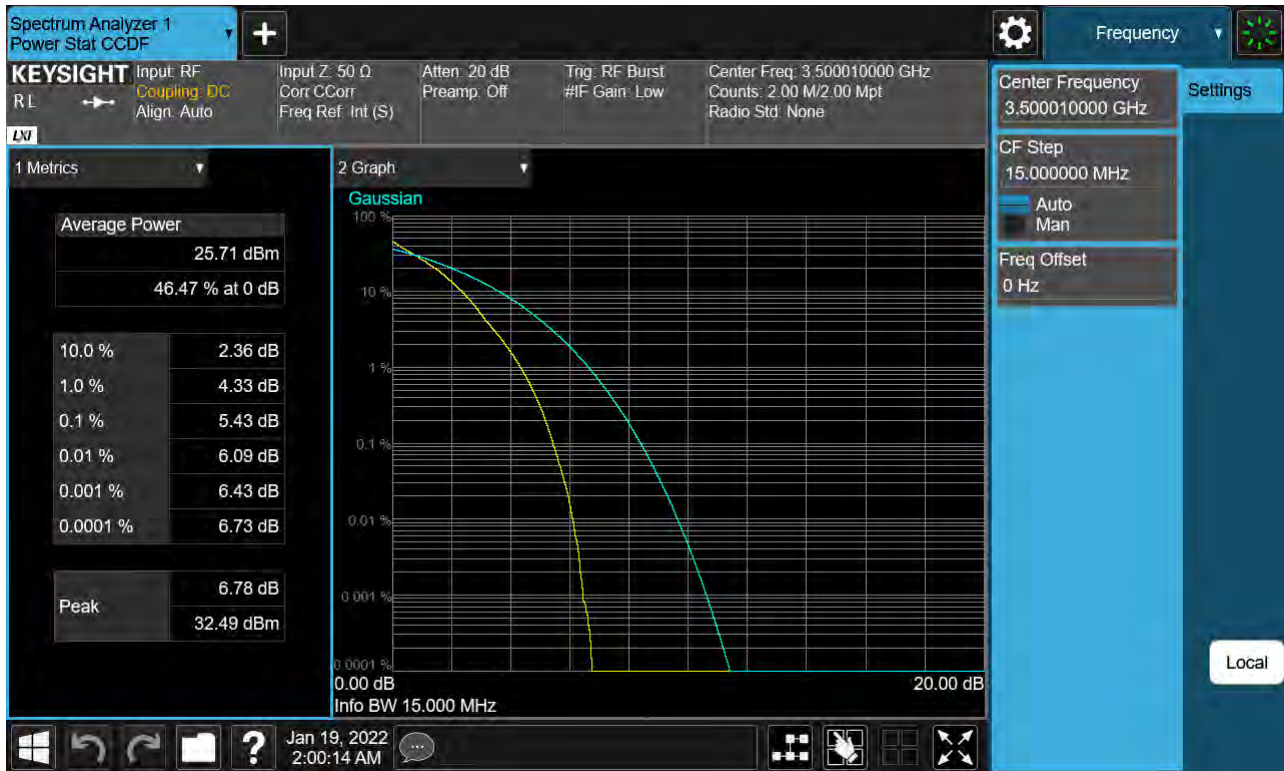
Sub6 n77. PAR Plot (10 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (15 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (15 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (15 M BW_Ch.633334_16QAM)



Sub6 n77. PAR Plot (15 M BW_Ch.633334_64QAM)



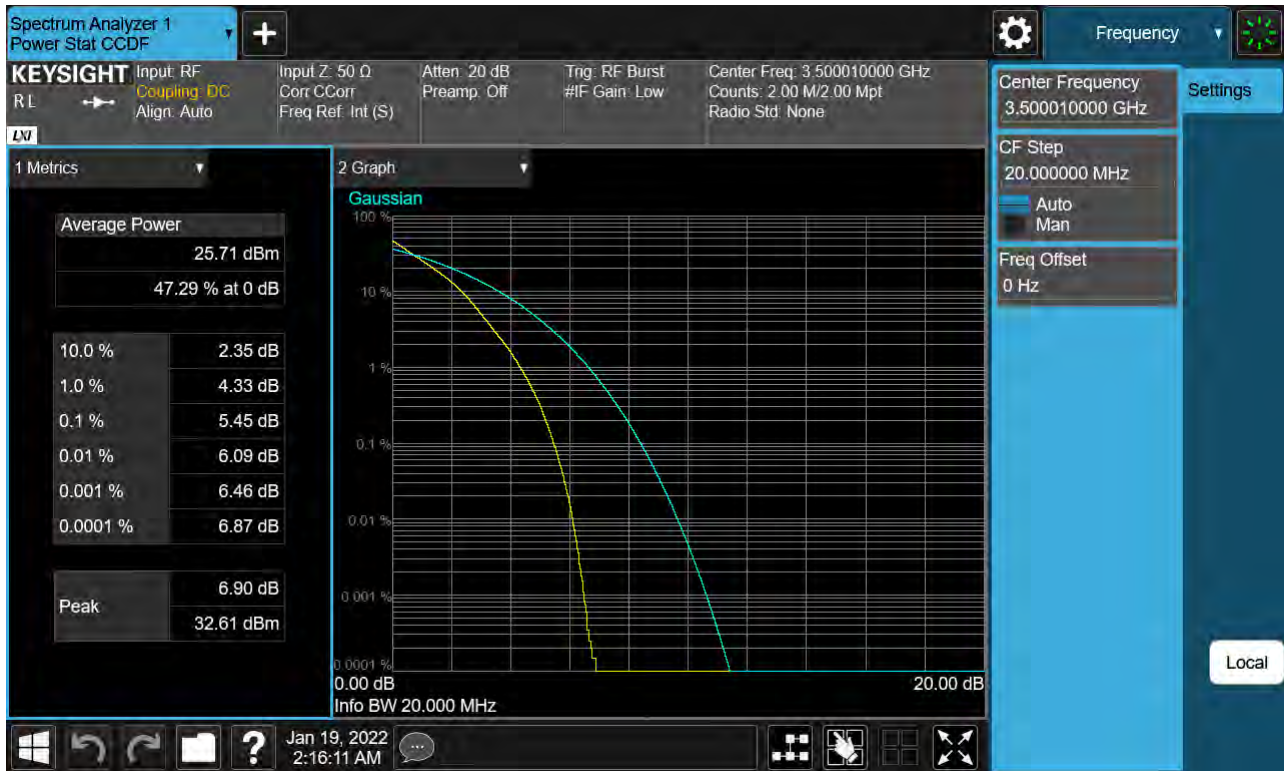
Sub6 n77. PAR Plot (15 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (20 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (20 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (20 M BW_Ch.633334_16QAM)



Sub6 n77. PAR Plot (20 M BW_Ch.633334_64QAM)



Sub6 n77. PAR Plot (20 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (25 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (25 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (25 M BW_Ch.633334_16QAM)



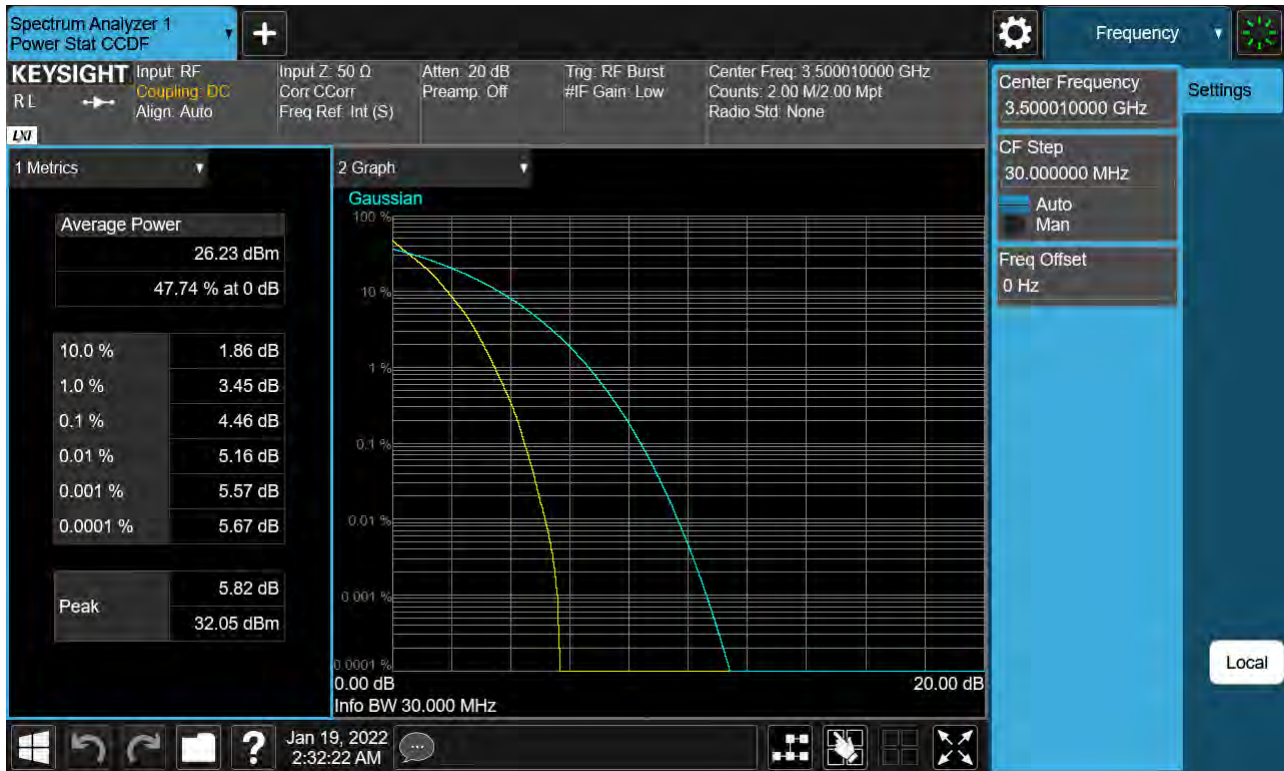
Sub6 n77. PAR Plot (25 M BW_Ch.633334_64QAM)



Sub6 n77. PAR Plot (25 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (30 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (30 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (30 M BW_Ch.633334_16QAM)



Sub6 n77. PAR Plot (30 M BW_Ch.633334_64QAM)



Sub6 n77. PAR Plot (30 M BW_Ch.633334_256QAM)

