

TEST REPORT

FCC Sub6 n77 Test for SM-M356B/DS
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2403-FC013

DATE OF ISSUE
March 21, 2024

Tested by
Jung Ki Lim



Technical Manager
Jong Seok Lee



HCT CO., LTD.
Bongjai Huh
BongJai Huh / CEO



HCT CO.,LTD.

2-6, 73, 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Tel. +82 31 645 6300 Fax. +82 31 645 6401

TEST REPORT	REPORT NO. HCT-RF-2403-FC013
	DATE OF ISSUE March 21, 2024
	Additional Model -

Applicant	SAMSUNG Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Product Name	Mobile Phone
Model Name	SM-M356B/DS
Date of Test	February 19, 2024 ~ March 18, 2024
FCC ID	A3LSMM356B
Location of Test	<input checked="" type="checkbox"/> Permanent Testing Lab <input type="checkbox"/> On Site Testing (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 Republic of Korea)
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 27

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	March 21, 2024	Initial Release

Notice

Content

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

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

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

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

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

Information provided by the applicant is marked **.

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

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

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

CONTENTS

1. GENERAL INFORMATION	5
1.1. MAXIMUM OUTPUT POWER.....	6
2. INTRODUCTION	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)	21
4. LIST OF TEST EQUIPMENT	23
5. MEASUREMENT UNCERTAINTY	24
6. SUMMARY OF TEST RESULTS.....	25
7. SAMPLE CALCULATION	26
8. TEST DATA.....	28
8.1 EQUIVALENT ISOTROPIC RADIATED POWER	28
8.2 RADIATED SPURIOUS EMISSIONS	40
8.3 PEAK-TO-AVERAGE RATIO.....	41
8.4 OCCUPIED BANDWIDTH	43
8.5 CONDUCTED SPURIOUS EMISSIONS.....	45
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	77
9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE.....	78
10. TEST PLOTS(3450 MHz - 3550 MHz).....	90
11. TEST PLOTS(3700 MHz - 3980 MHz).....	423
12. ANNEX A_ TEST SETUP PHOTO	760

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:	A3LSMM356B
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§ 27
EUT Type:	Mobile phone
Model(s):	SM-M356B/DS
Additional Model(s)	-
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)) 3745.02 MHz – 3934.98 MHz (Sub6 n77(90 MHz)) 3750.00 MHz – 3930.00 MHz (Sub6 n77(100 MHz))
Date(s) of Tests:	February 19, 2024 ~ March 18, 2024
Serial number:	Radiated : R3CX20420SV Conducted : R3CX2042JMR

1.1. MAXIMUM OUTPUT POWER
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	8M68G7D	PI/2 BPSK	0.187	22.73
		8M70G7D	QPSK	0.187	22.72
		8M69W7D	16QAM	0.144	21.57
		8M67W7D	64QAM	0.108	20.35
		8M67W7D	256QAM	0.065	18.13
Sub6 n77 (15)	3457.50 – 3542.50	13M0G7D	PI/2 BPSK	0.182	22.60
		13M0G7D	QPSK	0.181	22.58
		13M0W7D	16QAM	0.144	21.59
		13M0W7D	64QAM	0.100	20.02
		12M9W7D	256QAM	0.063	17.96
Sub6 n77 (20)	3460.02 – 3540.00	18M0G7D	PI/2 BPSK	0.179	22.54
		18M0G7D	QPSK	0.179	22.52
		18M0W7D	16QAM	0.144	21.58
		18M0W7D	64QAM	0.101	20.05
		17M9W7D	256QAM	0.063	18.01
Sub6 n77 (25)	3462.50 – 3537.50	23M0G7D	PI/2 BPSK	0.177	22.47
		23M0G7D	QPSK	0.176	22.46
		23M0W7D	16QAM	0.138	21.39
		23M0W7D	64QAM	0.099	19.97
		23M0W7D	256QAM	0.061	17.84
Sub6 n77 (30)	3465.00 – 3534.99	27M1G7D	PI/2 BPSK	0.186	22.70
		27M1G7D	QPSK	0.184	22.65
		26M9W7D	16QAM	0.145	21.61
		27M0W7D	64QAM	0.102	20.09
		27M0W7D	256QAM	0.064	18.03
Sub6 n77 (40)	3470.01 – 3529.98	35M9G7D	PI/2 BPSK	0.184	22.65
		35M9G7D	QPSK	0.179	22.54
		35M9W7D	16QAM	0.144	21.59
		35M8W7D	64QAM	0.105	20.20
		36M0W7D	256QAM	0.062	17.95
Sub6 n77 (50)	3475.02 – 3525.00	46M0G7D	PI/2 BPSK	0.177	22.48
		46M0G7D	QPSK	0.176	22.46
		45M9W7D	16QAM	0.137	21.38
		45M9W7D	64QAM	0.095	19.77
		45M9W7D	256QAM	0.061	17.88
Sub6 n77 (60)	3480.00 – 3519.99	58M2G7D	PI/2 BPSK	0.167	22.24
		58M3G7D	QPSK	0.167	22.22
		58M1W7D	16QAM	0.130	21.14
		58M2W7D	64QAM	0.092	19.64
		58M2W7D	256QAM	0.060	17.75
Sub6 n77 (70)	3485.01 – 3514.98	64M7G7D	PI/2 BPSK	0.174	22.40
		64M9G7D	QPSK	0.173	22.37
		64M7W7D	16QAM	0.136	21.33
		64M6W7D	64QAM	0.096	19.84
		65M0W7D	256QAM	0.059	17.69
Sub6 n77 (80)	3490.02 – 3510.00	77M6G7D	PI/2 BPSK	0.177	22.49
		77M5G7D	QPSK	0.177	22.48
		77M3W7D	16QAM	0.137	21.36
		77M4W7D	64QAM	0.095	19.80
		77M3W7D	256QAM	0.060	17.77
Sub6 n77 (90)	3495.00 – 3504.99	87M2G7D	PI/2 BPSK	0.182	22.60
		87M2G7D	QPSK	0.181	22.57
		87M2W7D	16QAM	0.143	21.56
		87M1W7D	64QAM	0.102	20.09
		87M2W7D	256QAM	0.063	18.01
Sub6 n77 (100)	3500.01	97M7G7D	PI/2 BPSK	0.184	22.66
		96M8G7D	QPSK	0.184	22.65
		96M5W7D	16QAM	0.146	21.64
		96M6W7D	64QAM	0.104	20.15
		96M8W7D	256QAM	0.064	18.08

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	8M63G7D	PI/2 BPSK	0.171	22.33
		8M67G7D	QPSK	0.170	22.31
		8M72W7D	16QAM	0.131	21.18
		8M64W7D	64QAM	0.097	19.88
		8M66W7D	256QAM	0.060	17.76
Sub6 n77 (15)	3707.51 – 3972.48	13M0G7D	PI/2 BPSK	0.171	22.33
		13M0G7D	QPSK	0.170	22.30
		13M0W7D	16QAM	0.133	21.24
		12M9W7D	64QAM	0.093	19.67
		13M1W7D	256QAM	0.058	17.60
Sub6 n77 (20)	3710.01 – 3969.99	18M0G7D	PI/2 BPSK	0.164	22.16
		17M9G7D	QPSK	0.161	22.08
		18M0W7D	16QAM	0.129	21.09
		17M9W7D	64QAM	0.090	19.52
		18M0W7D	256QAM	0.058	17.60
Sub6 n77 (25)	3712.50 – 3967.50	23M0G7D	PI/2 BPSK	0.166	22.21
		23M0G7D	QPSK	0.165	22.17
		23M0W7D	16QAM	0.132	21.20
		23M0W7D	64QAM	0.091	19.60
		22M9W7D	256QAM	0.058	17.63
Sub6 n77 (30)	3715.02 – 3964.98	26M9G7D	PI/2 BPSK	0.166	22.19
		26M9G7D	QPSK	0.164	22.14
		26M9W7D	16QAM	0.130	21.15
		27M0W7D	64QAM	0.091	19.59
		26M9W7D	256QAM	0.056	17.47
Sub6 n77 (40)	3720.00 – 3960.00	35M9G7D	PI/2 BPSK	0.165	22.17
		35M9G7D	QPSK	0.163	22.13
		35M9W7D	16QAM	0.130	21.15
		36M0W7D	64QAM	0.090	19.54
		35M9W7D	256QAM	0.057	17.53
Sub6 n77 (50)	3725.10 – 3954.99	45M9G7D	PI/2 BPSK	0.163	22.13
		46M0G7D	QPSK	0.163	22.12
		45M9W7D	16QAM	0.126	20.99
		45M9W7D	64QAM	0.087	19.39
		45M8W7D	256QAM	0.056	17.52
Sub6 n77 (60)	3730.02 – 3949.98	58M1G7D	PI/2 BPSK	0.168	22.26
		58M3G7D	QPSK	0.167	22.24
		58M3W7D	16QAM	0.133	21.25
		58M1W7D	64QAM	0.094	19.73
		58M3W7D	256QAM	0.058	17.65
Sub6 n77 (70)	3735.00 – 3945.00	64M7G7D	PI/2 BPSK	0.173	22.37
		64M7G7D	QPSK	0.171	22.33
		64M7W7D	16QAM	0.136	21.35
		64M6W7D	64QAM	0.094	19.71
		64M7W7D	256QAM	0.059	17.68
Sub6 n77 (80)	3740.01 – 3939.99	77M6G7D	PI/2 BPSK	0.180	22.55
		77M4G7D	QPSK	0.179	22.54
		77M4W7D	16QAM	0.145	21.60
		77M6W7D	64QAM	0.101	20.03
		77M6W7D	256QAM	0.062	17.94
Sub6 n77 (90)	3745.02 – 3934.98	87M1G7D	PI/2 BPSK	0.184	22.64
		87M0G7D	QPSK	0.183	22.62
		87M2W7D	16QAM	0.147	21.67
		87M3W7D	64QAM	0.102	20.09
		87M2W7D	256QAM	0.063	17.96
Sub6 n77 (100)	3750.00 – 3930.00	96M5G7D	PI/2 BPSK	0.191	22.82
		96M8G7D	QPSK	0.189	22.76
		96M6W7D	16QAM	0.144	21.58
		96M7W7D	64QAM	0.106	20.25
		96M8W7D	256QAM	0.067	18.29

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE, Sub 6. It also supports IEEE 802.11 a/b/g/n/ac (20/40/80 MHz), Bluetooth, BT LE, iPA, 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 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Note

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

The power is calculated by the following formula;

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

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

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

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA-603-E-2016.

Test Settings

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

Test Note

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

The spurious emissions is calculated by the following formula;

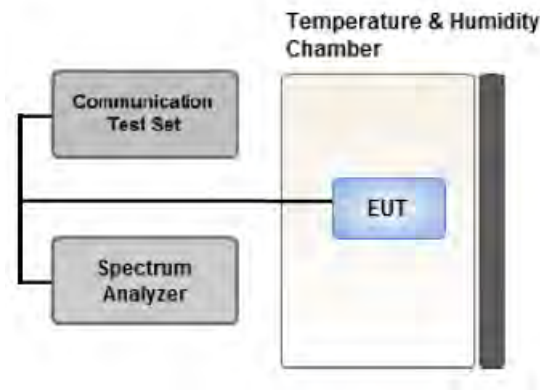
$$\text{Result}_{(dBm)} = P_g_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

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

3.4 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)

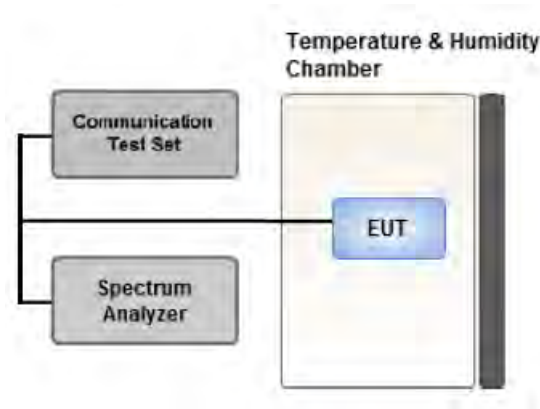
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW $\geq 3 \times$ RBW.

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 $\geq [10 \times$ (number of points in sweep) \times (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.

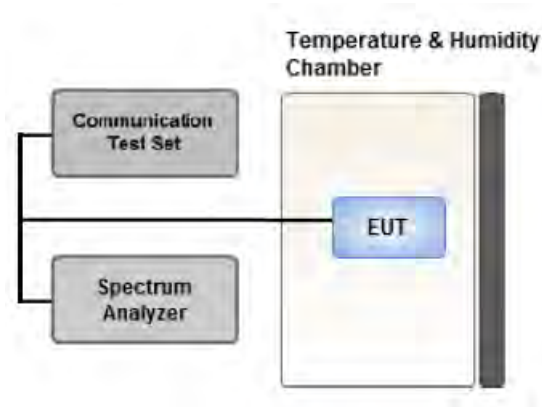
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 - 7 were repeated after changing the RBW such that it would be within 1 - 5 % of the 99 % occupied bandwidth observed in Step 7

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

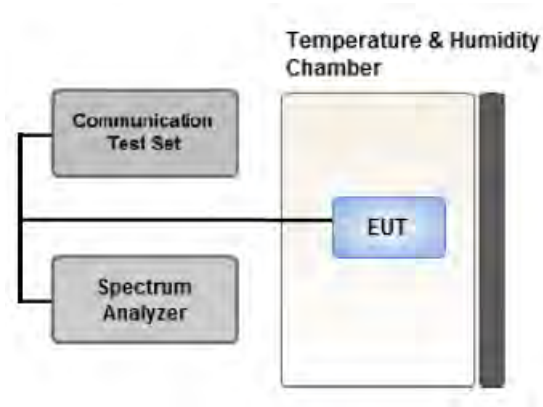
Test Overview

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

Test Settings

1. RBW = 1 MHz
2. VBW \geq 3 MHz
3. Detector = RMS
4. Trace Mode = trace average
5. Sweep time = auto
6. Number of points in sweep \geq 2 x Span / RBW

3.7 BAND EDGE



Test setup

Test Overview

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

Test Settings

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

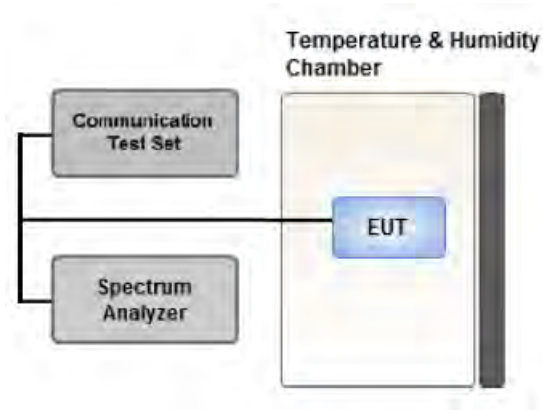
However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz.

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. .

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

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

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

The frequency stability of the transmitter is measured by:

1. Temperature:

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

2. Primary Supply Voltage:

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

- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20 °C to provide a reference).

2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter.

Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.

3. Frequency measurements are made at 10 °C intervals ranging from -30 °C to +50 °C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
Mode: NSA. SA
Worst case: SA
Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
Worst case : Stand alone
- We were performed the RSE test in condition of co-location.
Mode : Stand alone, Simultaneous transmission scenarios
Worst case : Stand alone
- All power classes were tested, and the results were reported for the worst case PC2.
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- 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))

[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	See Section 8.2		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	See Section 9.1		Z
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 9.2		Y

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
(Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
(Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
Mode: NSA, SA
Worst case: SA
- All power classes were tested, and the results were reported for the worst case PC2.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
Please refer to the table below.

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth,	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	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	03/10/2026	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	03/10/2026	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	02289	02/14/2026	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	04/27/2025	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/16/2025	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/09/2025	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/24/2025	Biennial
RF Switching System	FBSR-06B (1G HPF + LNA)	T&M SYSTEM	F3L1	05/22/2024	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/22/2024	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/22/2024	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/22/2024	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/17/2024	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/26/2025	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/25/2024	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	02/29/2025	Annual
Chamber	SU-642	ESPEC	93008124	02/19/2025	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/11/2024	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/19/2024	Annual
Spectrum Analyzer(10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/13/2025	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/10/2024	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/22/2024	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/23/2024	Annual
SIGNAL GENERATOR (100 kHz~40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	06/22/2024	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/24/2024	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/19/2024	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

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

5. MEASUREMENT UNCERTAINTY

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

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

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

6. SUMMARY OF TEST RESULTS

6.1 Test Condition : Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§ 2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§ 2.1051, § 27.53(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
20175	1,732.50	-15.75	18.45	9.90	1.76	H	0.456	26.59

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

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

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

8. TEST DATA

8.1 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
3455.01		PI/2 BPSK	-24.11	13.83	11.20	2.96	H		0.161	22.08	1	22
		QPSK	-24.16	13.78	11.20	2.96	H		0.160	22.03		
		16-QAM	-25.11	12.83	11.20	2.96	H		0.128	21.08		
		64-QAM	-26.55	11.39	11.20	2.96	H		0.092	19.64		
		256-QAM	-28.86	9.08	11.20	2.96	H		0.054	17.33		
3500.01	Sub6 n77/ 10 MHz [30 kHz]	PI/2 BPSK	-24.21	14.04	11.30	3.00	H	< 1.00	0.171	22.34	1	1
		QPSK	-24.23	14.02	11.30	3.00	H		0.171	22.32		
		16-QAM	-25.20	13.05	11.30	3.00	H		0.136	21.35		
		64-QAM	-26.68	11.57	11.30	3.00	H		0.097	19.87		
		256-QAM	-28.86	9.39	11.30	3.00	H		0.059	17.69		
3544.99		PI/2 BPSK	-23.67	14.40	11.35	3.02	H		0.187	22.73	1	1
		QPSK	-23.68	14.39	11.35	3.02	H		0.187	22.72		
		16-QAM	-24.83	13.24	11.35	3.02	H		0.144	21.57		
		64-QAM	-26.05	12.02	11.35	3.02	H		0.108	20.35		
		256-QAM	-28.27	9.80	11.35	3.02	H		0.065	18.13		

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
3457.50	Sub6 n77/ 15 MHz [30 kHz]	PI/2 BPSK	-24.12	13.79	11.20	2.95	H	< 1.00	0.160	22.04	1	36
		QPSK	-24.15	13.76	11.20	2.95	H		0.159	22.01		
		16-QAM	-25.13	12.78	11.20	2.95	H		0.127	21.03		
		64-QAM	-26.67	11.24	11.20	2.95	H		0.089	19.49		
		256-QAM	-28.62	9.29	11.20	2.95	H		0.057	17.54		
3500.01		PI/2 BPSK	-24.21	14.04	11.30	3.00	H		0.171	22.34	1	1
		QPSK	-24.24	14.01	11.30	3.00	H		0.170	22.31		
		16-QAM	-25.31	12.94	11.30	3.00	H		0.133	21.24		
		64-QAM	-26.75	11.50	11.30	3.00	H		0.095	19.80		
		256-QAM	-28.78	9.47	11.30	3.00	H		0.060	17.77		
3542.50	PI/2 BPSK	-23.63	14.32	11.30	3.02	H	0.182	22.60	1	1		
	QPSK	-23.65	14.30	11.30	3.02	H	0.181	22.58				
	16-QAM	-24.64	13.31	11.30	3.02	H	0.144	21.59				
	64-QAM	-26.21	11.74	11.30	3.02	H	0.100	20.02				
	256-QAM	-28.27	9.68	11.30	3.02	H	0.063	17.96				

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		PI/2 BPSK	-24.18	13.73	11.20	2.95	H	< 1.00	0.158	21.98	1	49
		QPSK	-24.27	13.64	11.20	2.95	H		0.155	21.89		
		16-QAM	-25.24	12.67	11.20	2.95	H		0.124	20.92		
		64-QAM	-26.68	11.23	11.20	2.95	H		0.089	19.48		
		256-QAM	-28.74	9.17	11.20	2.95	H		0.055	17.42		
3500.01	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-24.12	14.13	11.30	3.00	H	< 1.00	0.175	22.43	1	1
		QPSK	-24.15	14.10	11.30	3.00	H		0.174	22.40		
		16-QAM	-25.18	13.07	11.30	3.00	H		0.137	21.37		
		64-QAM	-26.64	11.61	11.30	3.00	H		0.098	19.91		
		256-QAM	-28.67	9.58	11.30	3.00	H		0.061	17.88		
3540.00		PI/2 BPSK	-23.69	14.26	11.30	3.02	H	< 1.00	0.179	22.54	1	49
		QPSK	-23.71	14.24	11.30	3.02	H		0.179	22.52		
		16-QAM	-24.65	13.30	11.30	3.02	H		0.144	21.58		
		64-QAM	-26.18	11.77	11.30	3.02	H		0.101	20.05		
		256-QAM	-28.22	9.73	11.30	3.02	H		0.063	18.01		

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
3462.50		PI/2 BPSK	-24.02	13.89	11.20	2.95	H	< 1.00	0.164	22.14	1	32
		QPSK	-24.11	13.80	11.20	2.95	H		0.160	22.05		
		16-QAM	-25.11	12.80	11.20	2.95	H		0.127	21.05		
		64-QAM	-26.70	11.21	11.20	2.95	H		0.088	19.46		
		256-QAM	-28.63	9.28	11.20	2.95	H		0.057	17.53		
3500.01	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-24.20	14.05	11.30	3.00	H	< 1.00	0.172	22.35	1	1
		QPSK	-24.22	14.03	11.30	3.00	H		0.171	22.33		
		16-QAM	-25.27	12.98	11.30	3.00	H		0.134	21.28		
		64-QAM	-26.74	11.51	11.30	3.00	H		0.096	19.81		
		256-QAM	-28.84	9.41	11.30	3.00	H		0.059	17.71		
3537.50		PI/2 BPSK	-23.76	14.19	11.30	3.02	H	< 1.00	0.177	22.47	1	1
		QPSK	-23.77	14.18	11.30	3.02	H		0.176	22.46		
		16-QAM	-24.84	13.11	11.30	3.02	H		0.138	21.39		
		64-QAM	-26.26	11.69	11.30	3.02	H		0.099	19.97		
		256-QAM	-28.39	9.56	11.30	3.02	H		0.061	17.84		

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
3465.00		PI/2 BPSK	-24.07	13.80	11.20	2.95	H	< 1.00	0.160	22.05	1	39
		QPSK	-24.21	13.66	11.20	2.95	H		0.155	21.91		
		16-QAM	-25.17	12.70	11.20	2.95	H		0.124	20.95		
		64-QAM	-26.79	11.08	11.20	2.95	H		0.086	19.33		
		256-QAM	-28.80	9.07	11.20	2.95	H		0.054	17.32		
3500.01	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-24.22	14.03	11.30	3.00	H	< 1.00	0.171	22.33	1	1
		QPSK	-24.24	14.01	11.30	3.00	H		0.170	22.31		
		16-QAM	-25.23	13.02	11.30	3.00	H		0.136	21.32		
		64-QAM	-26.62	11.63	11.30	3.00	H		0.098	19.93		
		256-QAM	-28.63	9.62	11.30	3.00	H		0.062	17.92		
3534.99		PI/2 BPSK	-23.51	14.40	11.30	3.01	H	< 1.00	0.186	22.70	1	39
		QPSK	-23.56	14.35	11.30	3.01	H		0.184	22.65		
		16-QAM	-24.60	13.31	11.30	3.01	H		0.145	21.61		
		64-QAM	-26.12	11.79	11.30	3.01	H		0.102	20.09		
		256-QAM	-28.18	9.73	11.30	3.01	H		0.064	18.03		

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
3470.01		PI/2 BPSK	-24.11	13.72	11.20	2.95	H	< 1.00	0.157	21.97	1	1
		QPSK	-24.12	13.71	11.20	2.95	H		0.157	21.96		
		16-QAM	-25.13	12.70	11.20	2.95	H		0.124	20.95		
		64-QAM	-26.59	11.24	11.20	2.95	H		0.089	19.49		
		256-QAM	-28.53	9.30	11.20	2.95	H		0.057	17.55		
3500.01	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-24.19	14.06	11.30	3.00	H	< 1.00	0.172	22.36	1	1
		QPSK	-24.22	14.03	11.30	3.00	H		0.171	22.33		
		16-QAM	-25.20	13.05	11.30	3.00	H		0.136	21.35		
		64-QAM	-26.88	11.37	11.30	3.00	H		0.093	19.67		
		256-QAM	-28.72	9.53	11.30	3.00	H		0.061	17.83		
3529.98		PI/2 BPSK	-23.54	14.34	11.30	2.99	H	< 1.00	0.184	22.65	1	53
		QPSK	-23.65	14.23	11.30	2.99	H		0.179	22.54		
		16-QAM	-24.60	13.28	11.30	2.99	H		0.144	21.59		
		64-QAM	-25.99	11.89	11.30	2.99	H		0.105	20.20		
		256-QAM	-28.24	9.64	11.30	2.99	H		0.062	17.95		

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
3475.02		PI/2 BPSK	-24.09	13.79	11.20	2.97	H	< 1.00	0.159	22.02	1	66
		QPSK	-24.20	13.68	11.20	2.97	H		0.155	21.91		
		16-QAM	-25.22	12.66	11.20	2.97	H		0.123	20.89		
		64-QAM	-26.80	11.08	11.20	2.97	H		0.085	19.31		
		256-QAM	-28.80	9.08	11.20	2.97	H		0.054	17.31		
3500.01	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-24.21	14.04	11.30	3.00	H	< 1.00	0.171	22.34	1	1
		QPSK	-24.24	14.01	11.30	3.00	H		0.170	22.31		
		16-QAM	-25.31	12.94	11.30	3.00	H		0.133	21.24		
		64-QAM	-26.89	11.36	11.30	3.00	H		0.092	19.66		
		256-QAM	-28.67	9.58	11.30	3.00	H		0.061	17.88		
3525.00		PI/2 BPSK	-23.74	14.16	11.30	2.98	H	< 1.00	0.177	22.48	1	66
		QPSK	-23.76	14.14	11.30	2.98	H		0.176	22.46		
		16-QAM	-24.84	13.06	11.30	2.98	H		0.137	21.38		
		64-QAM	-26.45	11.45	11.30	2.98	H		0.095	19.77		
		256-QAM	-28.41	9.49	11.30	2.98	H		0.060	17.81		

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
3480.00		PI/2 BPSK	-24.06	13.88	11.20	2.99	H	< 1.00	0.162	22.09	1	1
		QPSK	-24.08	13.86	11.20	2.99	H		0.161	22.07		
		16-QAM	-25.17	12.77	11.20	2.99	H		0.125	20.98		
		64-QAM	-26.62	11.32	11.20	2.99	H		0.090	19.53		
		256-QAM	-28.81	9.13	11.20	2.99	H		0.054	17.34		
3500.01	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-24.31	13.94	11.30	3.00	H	< 1.00	0.167	22.24	1	1
		QPSK	-24.33	13.92	11.30	3.00	H		0.167	22.22		
		16-QAM	-25.41	12.84	11.30	3.00	H		0.130	21.14		
		64-QAM	-26.91	11.34	11.30	3.00	H		0.092	19.64		
		256-QAM	-28.80	9.45	11.30	3.00	H		0.060	17.75		
3519.99		PI/2 BPSK	-24.12	13.80	11.30	2.97	H	< 1.00	0.163	22.13	1	1
		QPSK	-24.16	13.76	11.30	2.97	H		0.162	22.09		
		16-QAM	-25.22	12.70	11.30	2.97	H		0.127	21.03		
		64-QAM	-26.77	11.15	11.30	2.97	H		0.089	19.48		
		256-QAM	-28.80	9.12	11.30	2.97	H		0.056	17.45		

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
3485.01	Sub6 n77/ 70 MHz [30 kHz]	PI/2 BPSK	-24.06	13.95	11.20	3.00	H	< 1.00	0.164	22.15	1	1
		QPSK	-24.10	13.91	11.20	3.00	H		0.163	22.11		
		16-QAM	-25.12	12.89	11.20	3.00	H		0.129	21.09		
		64-QAM	-26.56	11.45	11.20	3.00	H		0.092	19.65		
		256-QAM	-28.71	9.30	11.20	3.00	H		0.056	17.50		
3500.01		PI/2 BPSK	-24.15	14.10	11.30	3.00	H		0.174	22.40	1	1
		QPSK	-24.18	14.07	11.30	3.00	H		0.173	22.37		
		16-QAM	-25.22	13.03	11.30	3.00	H		0.136	21.33		
		64-QAM	-26.71	11.54	11.30	3.00	H		0.096	19.84		
		256-QAM	-28.86	9.39	11.30	3.00	H		0.059	17.69		
3514.98	PI/2 BPSK	-24.19	13.87	11.30	2.98	H	0.166	22.20	1	1		
	QPSK	-24.21	13.85	11.30	2.98	H	0.165	22.18				
	16-QAM	-25.30	12.76	11.30	2.98	H	0.129	21.09				
	64-QAM	-26.67	11.39	11.30	2.98	H	0.094	19.72				
	256-QAM	-28.70	9.36	11.30	2.98	H	0.059	17.69				

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
3490.02		PI/2 BPSK	-24.01	14.07	11.20	3.00	H	< 1.00	0.169	22.27	1	1
		QPSK	-24.04	14.04	11.20	3.00	H		0.167	22.24		
		16-QAM	-25.08	13.00	11.20	3.00	H		0.132	21.20		
		64-QAM	-26.71	11.37	11.20	3.00	H		0.091	19.57		
		256-QAM	-28.61	9.47	11.20	3.00	H		0.058	17.67		
3500.01	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-24.06	14.19	11.30	3.00	H	< 1.00	0.177	22.49	1	1
		QPSK	-24.07	14.18	11.30	3.00	H		0.177	22.48		
		16-QAM	-25.19	13.06	11.30	3.00	H		0.137	21.36		
		64-QAM	-26.75	11.50	11.30	3.00	H		0.095	19.80		
		256-QAM	-28.78	9.47	11.30	3.00	H		0.060	17.77		
3510.00		PI/2 BPSK	-24.21	14.00	11.30	2.98	H	< 1.00	0.171	22.32	1	1
		QPSK	-24.24	13.97	11.30	2.98	H		0.169	22.29		
		16-QAM	-25.29	12.92	11.30	2.98	H		0.133	21.24		
		64-QAM	-26.78	11.43	11.30	2.98	H		0.094	19.75		
		256-QAM	-28.81	9.40	11.30	2.98	H		0.059	17.72		

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
3495.00		PI/2 BPSK	-23.98	14.19	11.25	3.00	H	< 1.00	0.175	22.44	1	1
		QPSK	-24.00	14.17	11.25	3.00	H		0.175	22.42		
		16-QAM	-24.98	13.19	11.25	3.00	H		0.139	21.44		
		64-QAM	-26.55	11.62	11.25	3.00	H		0.097	19.87		
		256-QAM	-28.50	9.67	11.25	3.00	H		0.062	17.92		
3500.01	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-23.95	14.30	11.30	3.00	H	< 1.00	0.182	22.60	1	1
		QPSK	-23.98	14.27	11.30	3.00	H		0.181	22.57		
		16-QAM	-24.99	13.26	11.30	3.00	H		0.143	21.56		
		64-QAM	-26.49	11.76	11.30	3.00	H		0.101	20.06		
		256-QAM	-28.54	9.71	11.30	3.00	H		0.063	18.01		
3504.99		PI/2 BPSK	-23.99	14.24	11.30	2.99	H	< 1.00	0.180	22.55	1	1
		QPSK	-24.01	14.22	11.30	2.99	H		0.179	22.53		
		16-QAM	-25.11	13.12	11.30	2.99	H		0.139	21.43		
		64-QAM	-26.45	11.78	11.30	2.99	H		0.102	20.09		
		256-QAM	-28.65	9.58	11.30	2.99	H		0.062	17.89		

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
3500.01	Sub6 n77/ 100 MHz [30 kHz]	PI/2 BPSK	-23.95	14.30	11.30	3.00	H	< 1.00	0.184	22.66	1	1
		QPSK	-23.90	14.35	11.30	3.00	H		0.184	22.65		
		16-QAM	-24.91	13.34	11.30	3.00	H		0.146	21.64		
		64-QAM	-26.40	11.85	11.30	3.00	H		0.104	20.15		
		256-QAM	-28.47	9.78	11.30	3.00	H		0.064	18.08		

8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band:	<u>N77</u>
▣ Bandwidth:	<u>10 MHz</u>
▣ Modulation:	<u>PI/2 BPSK</u>
▣ Distance:	<u>1 meters</u>
▣ SCS:	<u>30 kHz</u>

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
630334 (3455.01)	6 910.02	-48.25	10.90	-42.62	4.32	H	-36.04	-13.00	1	22
	10 365.03	-51.38	11.20	-40.62	5.40	V	-34.81	-13.00		
	13 820.04	-62.13	12.40	-50.44	6.33	V	-44.37	-13.00		
	17 275.05	-65.93	16.10	-47.78	7.23	V	-38.91	-13.00		
633334 (3500.01)	7 000.02	-49.37	10.90	-43.45	4.32	V	-36.87	-13.00	1	1
	10 500.03	-55.33	11.30	-44.73	5.41	V	-38.84	-13.00		
	14 000.04	-59.95	12.30	-50.60	6.35	V	-44.65	-13.00		
	17 500.05	-67.26	15.70	-47.17	7.23	V	-38.70	-13.00		
636322 (3544.99)	7 089.98	-47.07	10.70	-39.97	4.35	V	-33.62	-13.00	1	1
	10 634.97	-60.62	11.20	-49.73	5.47	H	-44.00	-13.00		
	14 179.96	-60.16	12.30	-51.22	6.43	V	-45.35	-13.00		
	17 724.95	-66.75	14.60	-43.28	7.34	V	-36.02	-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	4.51
			QPSK			5.82
			16-QAM			6.37
			64-QAM			6.41
			256-QAM			6.79
	15 MHz		BPSK			5.27
			QPSK			5.68
			16-QAM			6.47
			64-QAM			6.27
			256-QAM			6.65
	20 MHz		BPSK			5.62
			QPSK			5.85
			16-QAM			6.45
			64-QAM			6.58
			256-QAM			6.65
	25 MHz		BPSK			4.58
			QPSK			5.75
			16-QAM			6.60
			64-QAM			6.41
			256-QAM			6.73
	30 MHz		BPSK			4.65
			QPSK			5.79
			16-QAM			6.46
			64-QAM			6.52
			256-QAM			6.66
	40 MHz		BPSK			6.12
			QPSK			6.29
			16-QAM			6.65
			64-QAM			6.58
			256-QAM			6.79
	50 MHz		BPSK			4.56
			QPSK			5.79
16-QAM		6.51				
64-QAM		6.47				
256-QAM		6.77				
60 MHz	BPSK	4.60				
	QPSK	5.75				
	16-QAM	6.41				
	64-QAM	6.46				
	256-QAM	6.77				
70 MHz	BPSK	4.82				
	QPSK	5.77				
	16-QAM	6.41				
	64-QAM	6.47				
	256-QAM	6.68				

80 MHz	BPSK	5.14
	QPSK	5.74
	16-QAM	6.46
	64-QAM	6.42
	256-QAM	6.71
90 MHz	BPSK	4.90
	QPSK	5.76
	16-QAM	6.47
	64-QAM	6.45
	256-QAM	6.75
100 MHz	BPSK	4.59
	QPSK	5.74
	16-QAM	6.44
	64-QAM	6.45
	256-QAM	6.64

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 151 ~ 210.

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	8.6812
			QPSK			8.7019
			16-QAM			8.6865
			64-QAM			8.6735
			256-QAM			8.6706
	15 MHz		BPSK			13.011
			QPSK			12.964
			16-QAM			12.997
			64-QAM			13.000
			256-QAM			12.918
	20 MHz		BPSK			17.980
			QPSK			18.001
			16-QAM			17.963
			64-QAM			17.988
			256-QAM			17.920
	25 MHz		BPSK			22.992
			QPSK			23.025
			16-QAM			23.006
			64-QAM			22.950
			256-QAM			22.968
	30 MHz		BPSK			27.060
			QPSK			27.053
			16-QAM			26.934
			64-QAM			26.961
			256-QAM			26.945
	40 MHz		BPSK			35.917
			QPSK			35.910
			16-QAM			35.886
			64-QAM			35.821
			256-QAM			35.989
	50 MHz		BPSK			45.966
			QPSK			45.962
16-QAM		45.942				
64-QAM		45.931				
256-QAM		45.925				
60 MHz	BPSK	58.215				
	QPSK	58.249				
	16-QAM	58.110				
	64-QAM	58.210				
	256-QAM	58.185				
70 MHz	BPSK	64.716				
	QPSK	64.861				
	16-QAM	64.663				
	64-QAM	64.636				
	256-QAM	64.957				

80 MHz	BPSK	77.621
	QPSK	77.496
	16-QAM	77.309
	64-QAM	77.408
	256-QAM	77.309
90 MHz	BPSK	87.219
	QPSK	87.187
	16-QAM	87.177
	64-QAM	87.095
	256-QAM	87.204
100 MHz	BPSK	96.721
	QPSK	96.817
	16-QAM	96.505
	64-QAM	96.575
	256-QAM	96.777

Note:

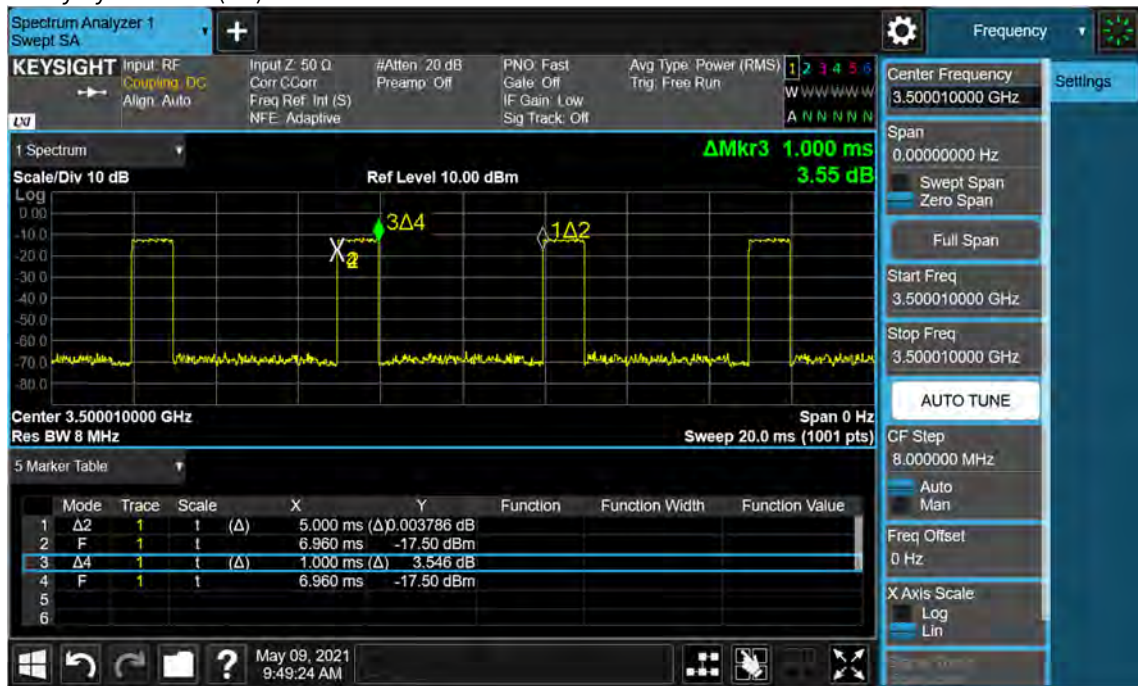
1. Plots of the EUT's Occupied Bandwidth are shown Page 91 ~ 150.

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	6.0190	37.805	-70.589	-32.784	-13.00
		3500.01	8.2453	37.805	-70.070	-32.265	
		3544.98	8.2956	37.805	-69.595	-31.790	
	15	3457.50	5.5005	37.805	-70.268	-32.463	
		3500.01	8.3061	37.805	-69.497	-31.692	
		3542.49	5.1421	37.805	-70.030	-32.225	
	20	3460.02	5.2483	37.805	-70.638	-32.833	
		3500.01	9.2004	37.805	-70.241	-32.436	
		3540.00	8.5738	37.805	-70.406	-32.601	
	25	3462.51	8.3126	37.805	-70.089	-32.284	
		3500.01	9.0848	37.805	-69.757	-31.952	
		3537.48	8.8834	37.805	-69.957	-32.152	
	30	3465.00	9.7503	37.805	-70.618	-32.813	
		3500.01	9.6835	37.805	-70.532	-32.727	
		3534.99	4.9911	37.190	-70.740	-33.550	
	40	3470.01	8.2548	37.805	-70.561	-32.756	
		3500.01	4.9477	37.190	-70.405	-33.215	
		3529.98	4.9726	37.190	-70.561	-33.371	
	50	3475.02	8.2862	37.805	-70.745	-32.940	
		3500.01	9.9561	37.805	-70.337	-32.532	
		3525.00	4.8759	37.190	-70.329	-33.139	
	60	3480.00	8.3111	37.805	-69.854	-32.049	
		3500.01	8.2946	37.805	-70.236	-32.431	
		3519.99	8.2238	37.805	-70.156	-32.351	
	70	3485.01	8.2677	37.805	-71.203	-33.398	
		3500.01	8.0185	37.805	-71.023	-33.218	
		3514.98	9.7587	37.805	-70.364	-32.559	
	80	3490.02	9.9711	37.805	-71.257	-33.452	
		3500.01	9.7248	37.805	-70.743	-32.938	
		3510.00	8.3161	37.805	-70.290	-32.485	
90	3495.00	8.2837	37.805	-70.575	-32.770		
	3500.01	9.6884	37.805	-70.763	-32.958		
	3504.99	9.6685	37.805	-69.875	-32.070		
100	3500.01	9.4312	37.805	-70.594	-32.789		

Note:

1. Plots of the EUT’s Conducted Spurious Emissions are shown Page 355 ~ 422.
2. Duty Cycle factor already applied on the factor.
 - Duty Cycle Factor(dB) = 6.990



- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power 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 211 ~ 354.
2. Duty Cycle factor already applied on the factor.
 - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
 - Result(dBm) = Reading + Factor
 - Duty Cycle Factor(dB) = 6.990

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 3.850 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 009 996	0.0	0.000 000	0.000
	100%	-30	3455 009 993	-2.6	0.000 000	-0.001
	100%	-20	3455 009 992	-4.3	0.000 000	-0.001
	100%	-10	3455 009 991	-4.8	0.000 000	-0.001
	100%	0	3455 009 992	-4.1	0.000 000	-0.001
	100%	+10	3455 009 994	-2.2	0.000 000	-0.001
	100%	+30	3455 009 993	-3.0	0.000 000	-0.001
	100%	+40	3455 009 993	-3.1	0.000 000	-0.001
	100%	+50	3455 009 992	-3.8	0.000 000	-0.001
	Batt. Endpoint	+20	3455 009 991	-4.5	0.000 000	-0.001
3544.980	100%	+20(Ref)	3544 979 997	0.0	0.000 000	0.000
	100%	-30	3544 979 995	-2.3	0.000 000	-0.001
	100%	-20	3544 979 992	-5.3	0.000 000	-0.002
	100%	-10	3544 979 994	-2.7	0.000 000	-0.001
	100%	0	3544 979 994	-2.9	0.000 000	-0.001
	100%	+10	3544 979 995	-1.7	0.000 000	0.000
	100%	+30	3544 979 994	-2.8	0.000 000	-0.001
	100%	+40	3544 979 995	-2.0	0.000 000	-0.001
	100%	+50	3544 979 996	-1.2	0.000 000	0.000
	Batt. Endpoint	+20	3544 979 993	-4.3	0.000 000	-0.001

- ▣ BandWidth: 15 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3457.500	100%	+20(Ref)	3457 499 998	0.0	0.000 000	0.000
	100%	-30	3457 499 994	-3.3	0.000 000	-0.001
	100%	-20	3457 499 995	-2.8	0.000 000	-0.001
	100%	-10	3457 499 995	-2.4	0.000 000	-0.001
	100%	0	3457 499 994	-4.1	0.000 000	-0.001
	100%	+10	3457 499 994	-3.6	0.000 000	-0.001
	100%	+30	3457 499 994	-4.1	0.000 000	-0.001
	100%	+40	3457 499 993	-4.7	0.000 000	-0.001
	100%	+50	3457 499 994	-3.5	0.000 000	-0.001
	Batt. Endpoint	+20	3457 499 995	-2.5	0.000 000	-0.001
3542.490	100%	+20(Ref)	3542 489 995	0.0	0.000 000	0.000
	100%	-30	3542 489 990	-5.3	0.000 000	-0.001
	100%	-20	3542 489 992	-3.8	0.000 000	-0.001
	100%	-10	3542 489 993	-2.9	0.000 000	-0.001
	100%	0	3542 489 993	-2.0	0.000 000	-0.001
	100%	+10	3542 489 992	-3.7	0.000 000	-0.001
	100%	+30	3542 489 993	-2.4	0.000 000	-0.001
	100%	+40	3542 489 991	-4.7	0.000 000	-0.001
	100%	+50	3542 489 990	-5.8	0.000 000	-0.002
	Batt. Endpoint	+20	3542 489 994	-1.7	0.000 000	0.000

- ▣ BandWidth: 20 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3460.020	100%	+20(Ref)	3460 019 997	0.0	0.000 000	0.000
	100%	-30	3460 019 994	-2.5	0.000 000	-0.001
	100%	-20	3460 019 993	-3.8	0.000 000	-0.001
	100%	-10	3460 019 996	-1.0	0.000 000	0.000
	100%	0	3460 019 993	-3.6	0.000 000	-0.001
	100%	+10	3460 019 992	-4.4	0.000 000	-0.001
	100%	+30	3460 019 992	-4.7	0.000 000	-0.001
	100%	+40	3460 019 993	-4.1	0.000 000	-0.001
	100%	+50	3460 019 995	-2.4	0.000 000	-0.001
	Batt. Endpoint	+20	3460 019 993	-3.5	0.000 000	-0.001
3540.000	100%	+20(Ref)	3539 999 997	0.0	0.000 000	0.000
	100%	-30	3539 999 995	-2.5	0.000 000	-0.001
	100%	-20	3539 999 993	-4.3	0.000 000	-0.001
	100%	-10	3539 999 993	-3.8	0.000 000	-0.001
	100%	0	3539 999 994	-3.6	0.000 000	-0.001
	100%	+10	3539 999 995	-2.0	0.000 000	-0.001
	100%	+30	3539 999 992	-5.6	0.000 000	-0.002
	100%	+40	3539 999 995	-2.4	0.000 000	-0.001
	100%	+50	3539 999 995	-2.3	0.000 000	-0.001
	Batt. Endpoint	+20	3539 999 994	-3.7	0.000 000	-0.001

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3462.510	100%	+20(Ref)	3462 509 997	0.0	0.000 000	0.000
	100%	-30	3462 509 992	-5.1	0.000 000	-0.001
	100%	-20	3462 509 994	-2.8	0.000 000	-0.001
	100%	-10	3462 509 993	-3.8	0.000 000	-0.001
	100%	0	3462 509 993	-3.9	0.000 000	-0.001
	100%	+10	3462 509 995	-2.0	0.000 000	-0.001
	100%	+30	3462 509 996	-1.3	0.000 000	0.000
	100%	+40	3462 509 993	-3.5	0.000 000	-0.001
	100%	+50	3462 509 993	-4.0	0.000 000	-0.001
	Batt. Endpoint	+20	3462 509 993	-3.6	0.000 000	-0.001
3537.480	100%	+20(Ref)	3537 479 999	0.0	0.000 000	0.000
	100%	-30	3537 479 995	-3.8	0.000 000	-0.001
	100%	-20	3537 479 995	-3.5	0.000 000	-0.001
	100%	-10	3537 479 996	-2.5	0.000 000	-0.001
	100%	0	3537 479 996	-2.9	0.000 000	-0.001
	100%	+10	3537 479 998	-1.1	0.000 000	0.000
	100%	+30	3537 479 996	-3.0	0.000 000	-0.001
	100%	+40	3537 479 998	-1.1	0.000 000	0.000
	100%	+50	3537 479 999	0.2	0.000 000	0.000
	Batt. Endpoint	+20	3537 479 997	-1.6	0.000 000	0.000

- ▣ BandWidth: 30 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3465.000	100%	+20(Ref)	3464 999 997	0.0	0.000 000	0.000
	100%	-30	3464 999 995	-2.6	0.000 000	-0.001
	100%	-20	3464 999 993	-4.4	0.000 000	-0.001
	100%	-10	3464 999 994	-3.1	0.000 000	-0.001
	100%	0	3464 999 995	-2.8	0.000 000	-0.001
	100%	+10	3464 999 996	-0.9	0.000 000	0.000
	100%	+30	3464 999 994	-3.6	0.000 000	-0.001
	100%	+40	3464 999 994	-3.0	0.000 000	-0.001
	100%	+50	3464 999 995	-1.9	0.000 000	-0.001
	Batt. Endpoint	+20	3464 999 993	-4.1	0.000 000	-0.001
3534.990	100%	+20(Ref)	3534 989 996	0.0	0.000 000	0.000
	100%	-30	3534 989 992	-4.1	0.000 000	-0.001
	100%	-20	3534 989 993	-3.8	0.000 000	-0.001
	100%	-10	3534 989 993	-3.3	0.000 000	-0.001
	100%	0	3534 989 993	-3.6	0.000 000	-0.001
	100%	+10	3534 989 994	-2.5	0.000 000	-0.001
	100%	+30	3534 989 994	-2.8	0.000 000	-0.001
	100%	+40	3534 989 994	-2.8	0.000 000	-0.001
	100%	+50	3534 989 993	-3.9	0.000 000	-0.001
	Batt. Endpoint	+20	3534 989 995	-1.7	0.000 000	0.000

- ▣ BandWidth: 40 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3470.010	100%	+20(Ref)	3470 009 996	0.0	0.000 000	0.000
	100%	-30	3470 009 992	-3.9	0.000 000	-0.001
	100%	-20	3470 009 994	-2.3	0.000 000	-0.001
	100%	-10	3470 009 994	-1.7	0.000 000	0.000
	100%	0	3470 009 992	-4.3	0.000 000	-0.001
	100%	+10	3470 009 991	-5.0	0.000 000	-0.001
	100%	+30	3470 009 991	-5.0	0.000 000	-0.001
	100%	+40	3470 009 993	-2.9	0.000 000	-0.001
	100%	+50	3470 009 991	-4.6	0.000 000	-0.001
	Batt. Endpoint	+20	3470 009 990	-5.8	0.000 000	-0.002
3529.980	100%	+20(Ref)	3529 979 999	0.0	0.000 000	0.000
	100%	-30	3529 979 997	-2.9	0.000 000	-0.001
	100%	-20	3529 979 994	-5.0	0.000 000	-0.001
	100%	-10	3529 979 995	-4.0	0.000 000	-0.001
	100%	0	3529 979 996	-3.3	0.000 000	-0.001
	100%	+10	3529 979 996	-3.3	0.000 000	-0.001
	100%	+30	3529 979 995	-4.3	0.000 000	-0.001
	100%	+40	3529 979 996	-3.8	0.000 000	-0.001
	100%	+50	3529 979 994	-5.8	0.000 000	-0.002
	Batt. Endpoint	+20	3529 979 995	-4.3	0.000 000	-0.001

- ▣ BandWidth: 50 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3475.020	100%	+20(Ref)	3475 019 996	0.0	0.000 000	0.000
	100%	-30	3475 019 991	-4.9	0.000 000	-0.001
	100%	-20	3475 019 992	-3.9	0.000 000	-0.001
	100%	-10	3475 019 993	-3.0	0.000 000	-0.001
	100%	0	3475 019 993	-2.7	0.000 000	-0.001
	100%	+10	3475 019 993	-2.3	0.000 000	-0.001
	100%	+30	3475 019 993	-2.3	0.000 000	-0.001
	100%	+40	3475 019 991	-4.6	0.000 000	-0.001
	100%	+50	3475 019 992	-3.5	0.000 000	-0.001
	Batt. Endpoint	+20	3475 019 994	-1.2	0.000 000	0.000
3525.000	100%	+20(Ref)	3525 000 002	0.0	0.000 000	0.000
	100%	-30	3525 000 002	-0.1	0.000 000	0.000
	100%	-20	3524 999 999	-2.8	0.000 000	-0.001
	100%	-10	3524 999 997	-5.1	0.000 000	-0.001
	100%	0	3524 999 999	-3.0	0.000 000	-0.001
	100%	+10	3524 999 999	-2.8	0.000 000	-0.001
	100%	+30	3525 000 001	-1.1	0.000 000	0.000
	100%	+40	3524 999 999	-2.4	0.000 000	-0.001
	100%	+50	3524 999 998	-3.4	0.000 000	-0.001
	Batt. Endpoint	+20	3524 999 998	-3.6	0.000 000	-0.001

- ▣ BandWidth: 60 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3480.000	100%	+20(Ref)	3479 999 996	0.0	0.000 000	0.000
	100%	-30	3479 999 993	-3.2	0.000 000	-0.001
	100%	-20	3479 999 990	-5.6	0.000 000	-0.002
	100%	-10	3479 999 994	-1.8	0.000 000	-0.001
	100%	0	3479 999 993	-2.6	0.000 000	-0.001
	100%	+10	3479 999 992	-3.6	0.000 000	-0.001
	100%	+30	3479 999 992	-3.2	0.000 000	-0.001
	100%	+40	3479 999 992	-3.8	0.000 000	-0.001
	100%	+50	3479 999 992	-4.2	0.000 000	-0.001
	Batt. Endpoint	+20	3479 999 992	-3.8	0.000 000	-0.001
3519.990	100%	+20(Ref)	3519 989 996	0.0	0.000 000	0.000
	100%	-30	3519 989 993	-2.5	0.000 000	-0.001
	100%	-20	3519 989 993	-2.8	0.000 000	-0.001
	100%	-10	3519 989 993	-3.1	0.000 000	-0.001
	100%	0	3519 989 993	-3.4	0.000 000	-0.001
	100%	+10	3519 989 993	-3.5	0.000 000	-0.001
	100%	+30	3519 989 991	-4.7	0.000 000	-0.001
	100%	+40	3519 989 989	-6.7	0.000 000	-0.002
	100%	+50	3519 989 993	-3.4	0.000 000	-0.001
	Batt. Endpoint	+20	3519 989 991	-4.8	0.000 000	-0.001

- ▣ BandWidth: 70 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3485.010	100%	+20(Ref)	3485 009 994	0.0	0.000 000	0.000
	100%	-30	3485 009 991	-3.2	0.000 000	-0.001
	100%	-20	3485 009 990	-3.7	0.000 000	-0.001
	100%	-10	3485 009 988	-6.1	0.000 000	-0.002
	100%	0	3485 009 988	-6.0	0.000 000	-0.002
	100%	+10	3485 009 991	-2.9	0.000 000	-0.001
	100%	+30	3485 009 991	-3.3	0.000 000	-0.001
	100%	+40	3485 009 989	-5.0	0.000 000	-0.001
	100%	+50	3485 009 987	-6.4	0.000 000	-0.002
	Batt. Endpoint	+20	3485 009 987	-6.5	0.000 000	-0.002
3514.980	100%	+20(Ref)	3514 979 995	0.0	0.000 000	0.000
	100%	-30	3514 979 993	-1.3	0.000 000	0.000
	100%	-20	3514 979 990	-4.4	0.000 000	-0.001
	100%	-10	3514 979 991	-3.4	0.000 000	-0.001
	100%	0	3514 979 991	-3.4	0.000 000	-0.001
	100%	+10	3514 979 991	-3.5	0.000 000	-0.001
	100%	+30	3514 979 989	-5.3	0.000 000	-0.002
	100%	+40	3514 979 992	-2.6	0.000 000	-0.001
	100%	+50	3514 979 990	-4.9	0.000 000	-0.001
	Batt. Endpoint	+20	3514 979 991	-3.4	0.000 000	-0.001

- ▣ BandWidth: 80 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3490.020	100%	+20(Ref)	3490 019 997	0.0	0.000 000	0.000
	100%	-30	3490 019 992	-4.3	0.000 000	-0.001
	100%	-20	3490 019 992	-4.3	0.000 000	-0.001
	100%	-10	3490 019 993	-3.8	0.000 000	-0.001
	100%	0	3490 019 991	-5.4	0.000 000	-0.002
	100%	+10	3490 019 994	-2.6	0.000 000	-0.001
	100%	+30	3490 019 992	-4.7	0.000 000	-0.001
	100%	+40	3490 019 993	-4.1	0.000 000	-0.001
	100%	+50	3490 019 991	-5.3	0.000 000	-0.002
	Batt. Endpoint	+20	3490 019 993	-3.7	0.000 000	-0.001
3510.000	100%	+20(Ref)	3509 999 995	0.0	0.000 000	0.000
	100%	-30	3509 999 992	-3.3	0.000 000	-0.001
	100%	-20	3509 999 992	-3.1	0.000 000	-0.001
	100%	-10	3509 999 991	-4.1	0.000 000	-0.001
	100%	0	3509 999 990	-5.3	0.000 000	-0.002
	100%	+10	3509 999 991	-4.7	0.000 000	-0.001
	100%	+30	3509 999 990	-5.4	0.000 000	-0.002
	100%	+40	3509 999 992	-3.6	0.000 000	-0.001
	100%	+50	3509 999 991	-4.3	0.000 000	-0.001
	Batt. Endpoint	+20	3509 999 990	-4.9	0.000 000	-0.001

- ▣ BandWidth: 90 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3495.000	100%	+20(Ref)	3494 999 996	0.0	0.000 000	0.000
	100%	-30	3494 999 992	-3.9	0.000 000	-0.001
	100%	-20	3494 999 992	-4.2	0.000 000	-0.001
	100%	-10	3494 999 991	-4.3	0.000 000	-0.001
	100%	0	3494 999 993	-2.9	0.000 000	-0.001
	100%	+10	3494 999 992	-3.9	0.000 000	-0.001
	100%	+30	3494 999 993	-2.7	0.000 000	-0.001
	100%	+40	3494 999 992	-4.0	0.000 000	-0.001
	100%	+50	3494 999 992	-4.0	0.000 000	-0.001
	Batt. Endpoint	+20	3494 999 993	-3.2	0.000 000	-0.001
3504.990	100%	+20(Ref)	3504 989 998	0.0	0.000 000	0.000
	100%	-30	3504 989 994	-3.8	0.000 000	-0.001
	100%	-20	3504 989 994	-4.4	0.000 000	-0.001
	100%	-10	3504 989 994	-4.4	0.000 000	-0.001
	100%	0	3504 989 994	-3.7	0.000 000	-0.001
	100%	+10	3504 989 995	-2.6	0.000 000	-0.001
	100%	+30	3504 989 995	-2.7	0.000 000	-0.001
	100%	+40	3504 989 995	-2.9	0.000 000	-0.001
	100%	+50	3504 989 995	-2.8	0.000 000	-0.001
	Batt. Endpoint	+20	3504 989 993	-4.6	0.000 000	-0.001

- ▣ BandWidth: 100 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3500.010	100%	+20(Ref)	3500 009 997	0.0	0.000 000	0.000
	100%	-30	3500 009 993	-4.1	0.000 000	-0.001
	100%	-20	3500 009 993	-4.2	0.000 000	-0.001
	100%	-10	3500 009 992	-5.1	0.000 000	-0.001
	100%	0	3500 009 992	-5.1	0.000 000	-0.001
	100%	+10	3500 009 994	-2.6	0.000 000	-0.001
	100%	+30	3500 009 995	-1.6	0.000 000	0.000
	100%	+40	3500 009 993	-4.1	0.000 000	-0.001
	100%	+50	3500 009 991	-5.7	0.000 000	-0.002
	Batt. Endpoint	+20	3500 009 993	-3.6	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		RB	
									W	W	dBm	Size
3705.00	Sub6 n77/ 10 MHz [30 kHz]	PI/2 BPSK	-24.99	13.50	11.40	3.09	H	< 1.00	0.152	21.81	1	1
		QPSK	-25.01	13.48	11.40	3.09	H		0.151	21.79		
		16-QAM	-25.95	12.54	11.40	3.09	H		0.122	20.85		
		64-QAM	-27.62	10.87	11.40	3.09	H		0.083	19.18		
		256-QAM	-29.69	8.80	11.40	3.09	H		0.051	17.11		
3840.00		PI/2 BPSK	-25.31	14.37	11.10	3.14	H		0.171	22.33	1	22
		QPSK	-25.33	14.35	11.10	3.14	H		0.170	22.31		
		16-QAM	-26.46	13.22	11.10	3.14	H		0.131	21.18		
		64-QAM	-27.76	11.92	11.10	3.14	H		0.097	19.88		
		256-QAM	-29.88	9.80	11.10	3.14	H		0.060	17.76		
3975.00	PI/2 BPSK	-26.36	13.29	10.90	3.20	H	0.126	20.99	1	1		
	QPSK	-26.41	13.24	10.90	3.20	H	0.124	20.94				
	16-QAM	-27.50	12.15	10.90	3.20	H	0.097	19.85				
	64-QAM	-28.97	10.68	10.90	3.20	H	0.069	18.38				
	256-QAM	-30.82	8.83	10.90	3.20	H	0.045	16.53				

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
3707.51		PI/2 BPSK	-25.03	13.46	11.40	3.09	H	< 1.00	0.150	21.77	1	1
		QPSK	-25.04	13.45	11.40	3.09	H		0.150	21.76		
		16-QAM	-26.10	12.39	11.40	3.09	H		0.117	20.70		
		64-QAM	-27.64	10.85	11.40	3.09	H		0.082	19.16		
		256-QAM	-29.61	8.88	11.40	3.09	H		0.052	17.19		
3840.00	Sub6 n77/ 15 MHz [30 kHz]	PI/2 BPSK	-25.31	14.37	11.10	3.14	H	< 1.00	0.171	22.33	1	36
		QPSK	-25.34	14.34	11.10	3.14	H		0.170	22.30		
		16-QAM	-26.40	13.28	11.10	3.14	H		0.133	21.24		
		64-QAM	-27.97	11.71	11.10	3.14	H		0.093	19.67		
		256-QAM	-30.04	9.64	11.10	3.14	H		0.058	17.60		
3972.48		PI/2 BPSK	-26.51	13.14	10.90	3.20	H	< 1.00	0.121	20.84	1	1
		QPSK	-26.54	13.11	10.90	3.20	H		0.121	20.81		
		16-QAM	-27.65	12.00	10.90	3.20	H		0.093	19.70		
		64-QAM	-29.17	10.48	10.90	3.20	H		0.066	18.18		
		256-QAM	-31.08	8.57	10.90	3.20	H		0.042	16.27		

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
3710.01		PI/2 BPSK	-25.01	13.51	11.40	3.11	H	< 1.00	0.151	21.80	1	1
		QPSK	-25.03	13.49	11.40	3.11	H		0.151	21.78		
		16-QAM	-26.10	12.42	11.40	3.11	H		0.118	20.71		
		64-QAM	-27.63	10.89	11.40	3.11	H		0.083	19.18		
		256-QAM	-29.54	8.98	11.40	3.11	H		0.053	17.27		
3840.00	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-25.48	14.20	11.10	3.14	H	< 1.00	0.164	22.16	1	1
		QPSK	-25.56	14.12	11.10	3.14	H		0.161	22.08		
		16-QAM	-26.55	13.13	11.10	3.14	H		0.129	21.09		
		64-QAM	-28.12	11.56	11.10	3.14	H		0.090	19.52		
		256-QAM	-30.04	9.64	11.10	3.14	H		0.058	17.60		
3969.99		PI/2 BPSK	-26.51	13.11	10.90	3.20	H	< 1.00	0.121	20.81	1	49
		QPSK	-26.53	13.09	10.90	3.20	H		0.120	20.79		
		16-QAM	-27.52	12.10	10.90	3.20	H		0.095	19.80		
		64-QAM	-29.06	10.56	10.90	3.20	H		0.067	18.26		
		256-QAM	-31.09	8.53	10.90	3.20	H		0.042	16.23		

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
3712.50		PI/2 BPSK	-25.03	13.64	11.40	3.12	H	< 1.00	0.156	21.92	1	1
		QPSK	-25.05	13.62	11.40	3.12	H		0.155	21.90		
		16-QAM	-26.04	12.63	11.40	3.12	H		0.123	20.91		
		64-QAM	-27.51	11.16	11.40	3.12	H		0.088	19.44		
		256-QAM	-29.61	9.06	11.40	3.12	H		0.054	17.34		
3840.00	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-25.43	14.25	11.10	3.14	H	< 1.00	0.166	22.21	1	1
		QPSK	-25.47	14.21	11.10	3.14	H		0.165	22.17		
		16-QAM	-26.44	13.24	11.10	3.14	H		0.132	21.20		
		64-QAM	-28.04	11.64	11.10	3.14	H		0.091	19.60		
		256-QAM	-30.01	9.67	11.10	3.14	H		0.058	17.63		
3967.50		PI/2 BPSK	-26.58	13.11	10.90	3.21	H	< 1.00	0.120	20.80	1	63
		QPSK	-26.60	13.09	10.90	3.21	H		0.120	20.78		
		16-QAM	-27.61	12.08	10.90	3.21	H		0.095	19.77		
		64-QAM	-29.03	10.66	10.90	3.21	H		0.068	18.35		
		256-QAM	-31.04	8.65	10.90	3.21	H		0.043	16.34		

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
3715.02		PI/2 BPSK	-25.04	13.63	11.40	3.12	H	< 1.00	0.155	21.91	1	1
		QPSK	-25.05	13.62	11.40	3.12	H		0.155	21.90		
		16-QAM	-26.06	12.61	11.40	3.12	H		0.123	20.89		
		64-QAM	-27.58	11.09	11.40	3.12	H		0.086	19.37		
		256-QAM	-29.66	9.01	11.40	3.12	H		0.054	17.29		
3840.00	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-25.45	14.23	11.10	3.14	H	< 1.00	0.166	22.19	1	1
		QPSK	-25.50	14.18	11.10	3.14	H		0.164	22.14		
		16-QAM	-26.49	13.19	11.10	3.14	H		0.130	21.15		
		64-QAM	-28.05	11.63	11.10	3.14	H		0.091	19.59		
		256-QAM	-30.17	9.51	11.10	3.14	H		0.056	17.47		
3964.98		PI/2 BPSK	-26.54	13.15	10.90	3.21	H	< 1.00	0.121	20.84	1	76
		QPSK	-26.58	13.11	10.90	3.21	H		0.120	20.80		
		16-QAM	-27.52	12.17	10.90	3.21	H		0.097	19.86		
		64-QAM	-29.12	10.57	10.90	3.21	H		0.067	18.26		
		256-QAM	-31.16	8.53	10.90	3.21	H		0.042	16.22		

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
3720.00		PI/2 BPSK	-25.06	13.63	11.40	3.14	H	< 1.00	0.155	21.89	1	1
		QPSK	-25.11	13.58	11.40	3.14	H		0.153	21.84		
		16-QAM	-26.03	12.66	11.40	3.14	H		0.124	20.92		
		64-QAM	-27.55	11.14	11.40	3.14	H		0.087	19.40		
		256-QAM	-29.66	9.03	11.40	3.14	H		0.054	17.29		
3840.00	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-25.47	14.21	11.10	3.14	H	< 1.00	0.165	22.17	1	1
		QPSK	-25.51	14.17	11.10	3.14	H		0.163	22.13		
		16-QAM	-26.49	13.19	11.10	3.14	H		0.130	21.15		
		64-QAM	-28.10	11.58	11.10	3.14	H		0.090	19.54		
		256-QAM	-30.11	9.57	11.10	3.14	H		0.057	17.53		
3960.00		PI/2 BPSK	-26.55	13.23	10.90	3.21	H	< 1.00	0.124	20.92	1	104
		QPSK	-26.56	13.22	10.90	3.21	H		0.123	20.91		
		16-QAM	-27.59	12.19	10.90	3.21	H		0.097	19.88		
		64-QAM	-29.19	10.59	10.90	3.21	H		0.067	18.28		
		256-QAM	-31.10	8.68	10.90	3.21	H		0.043	16.37		

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
3725.10		PI/2 BPSK	-25.06	13.78	11.40	3.14	H	< 1.00	0.160	22.04	1	1
		QPSK	-25.09	13.75	11.40	3.14	H		0.159	22.01		
		16-QAM	-26.12	12.72	11.40	3.14	H		0.125	20.98		
		64-QAM	-27.71	11.13	11.40	3.14	H		0.087	19.39		
		256-QAM	-29.58	9.26	11.40	3.14	H		0.056	17.52		
3840.00	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-25.51	14.17	11.10	3.14	H	< 1.00	0.163	22.13	1	1
		QPSK	-25.52	14.16	11.10	3.14	H		0.163	22.12		
		16-QAM	-26.65	13.03	11.10	3.14	H		0.126	20.99		
		64-QAM	-28.28	11.40	11.10	3.14	H		0.086	19.36		
		256-QAM	-30.18	9.50	11.10	3.14	H		0.056	17.46		
3954.99		PI/2 BPSK	-26.56	13.23	10.90	3.21	H	< 1.00	0.124	20.92	1	131
		QPSK	-26.61	13.18	10.90	3.21	H		0.122	20.87		
		16-QAM	-27.59	12.20	10.90	3.21	H		0.097	19.89		
		64-QAM	-29.04	10.75	10.90	3.21	H		0.070	18.44		
		256-QAM	-31.16	8.63	10.90	3.21	H		0.043	16.32		

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
3730.02		PI/2 BPSK	-25.13	13.73	11.40	3.14	H	< 1.00	0.161	22.06	1	1
		QPSK	-25.09	13.77	11.40	3.14	H		0.160	22.03		
		16-QAM	-26.15	12.71	11.40	3.14	H		0.125	20.97		
		64-QAM	-27.66	11.20	11.40	3.14	H		0.088	19.46		
		256-QAM	-29.66	9.20	11.40	3.14	H		0.056	17.46		
3840.00	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-25.38	14.30	11.10	3.14	H	< 1.00	0.168	22.26	1	1
		QPSK	-25.40	14.28	11.10	3.14	H		0.167	22.24		
		16-QAM	-26.39	13.29	11.10	3.14	H		0.133	21.25		
		64-QAM	-27.91	11.77	11.10	3.14	H		0.094	19.73		
		256-QAM	-29.99	9.69	11.10	3.14	H		0.058	17.65		
3949.98		PI/2 BPSK	-25.78	14.00	10.90	3.20	H	< 1.00	0.148	21.70	1	1
		QPSK	-25.80	13.98	10.90	3.20	H		0.147	21.68		
		16-QAM	-26.71	13.07	10.90	3.20	H		0.119	20.77		
		64-QAM	-28.24	11.54	10.90	3.20	H		0.084	19.24		
		256-QAM	-30.44	9.34	10.90	3.20	H		0.051	17.04		

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
3735.00		PI/2 BPSK	-25.06	13.80	11.40	3.12	H	< 1.00	0.161	22.08	1	1
		QPSK	-25.10	13.76	11.40	3.12	H		0.160	22.04		
		16-QAM	-25.95	12.91	11.40	3.12	H		0.132	21.19		
		64-QAM	-27.66	11.20	11.40	3.12	H		0.089	19.48		
		256-QAM	-29.61	9.25	11.40	3.12	H		0.057	17.53		
3840.00	Sub6 n77/ 70 MHz [30 kHz]	PI/2 BPSK	-25.27	14.41	11.10	3.14	H	< 1.00	0.173	22.37	1	1
		QPSK	-25.31	14.37	11.10	3.14	H		0.171	22.33		
		16-QAM	-26.29	13.39	11.10	3.14	H		0.136	21.35		
		64-QAM	-27.93	11.75	11.10	3.14	H		0.094	19.71		
		256-QAM	-29.96	9.72	11.10	3.14	H		0.059	17.68		
3945.00		PI/2 BPSK	-25.71	14.13	10.85	3.18	H	< 1.00	0.151	21.80	1	1
		QPSK	-25.74	14.10	10.85	3.18	H		0.150	21.77		
		16-QAM	-26.74	13.10	10.85	3.18	H		0.119	20.77		
		64-QAM	-28.41	11.43	10.85	3.18	H		0.081	19.10		
		256-QAM	-30.21	9.63	10.85	3.18	H		0.054	17.30		

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
3740.01		PI/2 BPSK	-25.06	13.80	11.40	3.10	H	< 1.00	0.162	22.10	1	1
		QPSK	-25.09	13.77	11.40	3.10	H		0.161	22.07		
		16-QAM	-26.07	12.79	11.40	3.10	H		0.129	21.09		
		64-QAM	-27.50	11.36	11.40	3.10	H		0.092	19.66		
		256-QAM	-29.62	9.24	11.40	3.10	H		0.057	17.54		
3840.00	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-25.09	14.59	11.10	3.14	H	< 1.00	0.180	22.55	1	1
		QPSK	-25.10	14.58	11.10	3.14	H		0.179	22.54		
		16-QAM	-26.04	13.64	11.10	3.14	H		0.145	21.60		
		64-QAM	-27.61	12.07	11.10	3.14	H		0.101	20.03		
		256-QAM	-29.70	9.98	11.10	3.14	H		0.062	17.94		
3939.99		PI/2 BPSK	-25.55	13.68	11.40	3.10	H	< 1.00	0.158	21.98	1	1
		QPSK	-25.61	13.62	11.40	3.10	H		0.156	21.92		
		16-QAM	-26.51	12.72	11.40	3.10	H		0.126	21.02		
		64-QAM	-28.15	11.08	11.40	3.10	H		0.087	19.38		
		256-QAM	-30.22	9.01	11.40	3.10	H		0.054	17.31		

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
3745.02		PI/2 BPSK	-25.01	13.73	11.35	3.09	H	< 1.00	0.158	21.99	1	1
		QPSK	-25.03	13.71	11.35	3.09	H		0.157	21.97		
		16-QAM	-25.97	12.77	11.35	3.09	H		0.127	21.03		
		64-QAM	-27.51	11.23	11.35	3.09	H		0.089	19.49		
		256-QAM	-29.46	9.28	11.35	3.09	H		0.057	17.54		
3840.00	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-25.00	14.68	11.10	3.14	H	< 1.00	0.184	22.64	1	1
		QPSK	-25.02	14.66	11.10	3.14	H		0.183	22.62		
		16-QAM	-25.97	13.71	11.10	3.14	H		0.147	21.67		
		64-QAM	-27.55	12.13	11.10	3.14	H		0.102	20.09		
		256-QAM	-29.68	10.00	11.10	3.14	H		0.063	17.96		
3934.98		PI/2 BPSK	-25.35	14.57	10.80	3.16	H	< 1.00	0.166	22.21	1	1
		QPSK	-25.37	14.55	10.80	3.16	H		0.166	22.19		
		16-QAM	-26.20	13.72	10.80	3.16	H		0.137	21.36		
		64-QAM	-27.85	12.07	10.80	3.16	H		0.094	19.71		
		256-QAM	-29.84	10.08	10.80	3.16	H		0.059	17.72		

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
3750.00		PI/2 BPSK	-24.94	13.69	11.30	3.08	H	< 1.00	0.155	21.91	1	1
		QPSK	-24.99	13.64	11.30	3.08	H		0.153	21.86		
		16-QAM	-26.01	12.62	11.30	3.08	H		0.121	20.84		
		64-QAM	-27.53	11.10	11.30	3.08	H		0.086	19.32		
		256-QAM	-29.51	9.12	11.30	3.08	H		0.054	17.34		
3840.00	Sub6 n77/ 100 MHz [30 kHz]	PI/2 BPSK	-24.82	14.86	11.10	3.14	H	< 1.00	0.191	22.82	1	1
		QPSK	-24.88	14.80	11.10	3.14	H		0.189	22.76		
		16-QAM	-26.06	13.62	11.10	3.14	H		0.144	21.58		
		64-QAM	-27.39	12.29	11.10	3.14	H		0.106	20.25		
		256-QAM	-29.35	10.33	11.10	3.14	H		0.067	18.29		
3930.00		PI/2 BPSK	-25.20	14.75	10.80	3.16	H	< 1.00	0.173	22.39	1	1
		QPSK	-25.22	14.73	10.80	3.16	H		0.173	22.37		
		16-QAM	-26.25	13.70	10.80	3.16	H		0.136	21.34		
		64-QAM	-27.65	12.30	10.80	3.16	H		0.099	19.94		
		256-QAM	-29.87	10.08	10.80	3.16	H		0.059	17.72		

9.2 RADIATED SPURIOUS EMISSIONS

- ▣ NR Band: N77
- ▣ 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)	RB	
									Size	Offset
650000 (3750.00)	7 500.00	-54.65	11.10	-47.54	4.50	H	-40.94	-13.00	1	1
	11 250.00	-64.53	11.40	-53.99	5.64	V	-48.23	-13.00		
	15 000.00	-58.21	13.80	-51.72	6.65	V	-44.57	-13.00		
656000 (3840.00)	7 680.00	-49.06	11.10	-42.20	4.55	V	-35.65	-13.00	1	1
	11 520.00	-64.51	11.50	-53.37	5.70	V	-47.57	-13.00		
	15 360.00	-56.27	15.10	-50.48	6.72	H	-42.10	-13.00		
662000 (3930.00)	7 860.00	-48.47	10.60	-41.11	4.61	H	-35.12	-13.00	1	1
	11 790.00	-61.38	12.20	-51.42	5.78	V	-45.00	-13.00		
	15 720.00	-61.82	15.10	-56.26	6.82	V	-47.98	-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	5.43
			QPSK			5.74
			16-QAM			6.32
			64-QAM			6.36
			256-QAM			6.41
	15 MHz		BPSK			4.32
			QPSK			5.59
			16-QAM			6.30
			64-QAM			6.48
			256-QAM			6.56
	20 MHz		BPSK			4.59
			QPSK			5.60
			16-QAM			6.28
			64-QAM			6.49
			256-QAM			6.53
	25 MHz		BPSK			6.03
			QPSK			6.13
			16-QAM			6.38
			64-QAM			6.43
			256-QAM			6.55
	30 MHz		BPSK			4.40
			QPSK			5.58
			16-QAM			6.33
			64-QAM			6.41
			256-QAM			6.62
	40 MHz		BPSK			5.05
			QPSK			5.55
			16-QAM			6.23
			64-QAM			6.44
			256-QAM			6.53
	50 MHz		BPSK			4.67
			QPSK			5.62
			16-QAM			6.24
			64-QAM			6.37
			256-QAM			6.55
	60 MHz		BPSK			4.60
			QPSK			5.62
			16-QAM			6.29
			64-QAM			6.39
			256-QAM			6.57
70 MHz	BPSK	5.88				
	QPSK	6.06				
	16-QAM	6.39				
	64-QAM	6.53				
	256-QAM	6.56				

80 MHz	BPSK	4.38
	QPSK	5.60
	16-QAM	6.29
	64-QAM	6.39
	256-QAM	6.58
90 MHz	BPSK	4.46
	QPSK	5.58
	16-QAM	6.34
	64-QAM	6.42
	256-QAM	6.59
100 MHz	BPSK	4.37
	QPSK	5.58
	16-QAM	6.42
	64-QAM	6.48
	256-QAM	6.62

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 484 ~ 543.

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	8.6294
			QPSK			8.6680
			16-QAM			8.7239
			64-QAM			8.6371
			256-QAM			8.6554
	15 MHz		BPSK			12.954
			QPSK			12.962
			16-QAM			12.963
			64-QAM			12.933
			256-QAM			13.074
	20 MHz		BPSK			17.990
			QPSK			17.922
			16-QAM			17.984
			64-QAM			17.931
			256-QAM			17.953
	25 MHz		BPSK			23.003
			QPSK			22.980
			16-QAM			22.973
			64-QAM			22.978
			256-QAM			22.887
	30 MHz		BPSK			26.904
			QPSK			26.914
			16-QAM			26.923
			64-QAM			26.968
			256-QAM			26.938
	40 MHz		BPSK			35.851
			QPSK			35.915
			16-QAM			35.873
			64-QAM			35.999
			256-QAM			35.874
	50 MHz		BPSK			45.885
			QPSK			45.952
16-QAM		45.878				
64-QAM		45.923				
256-QAM		45.753				
60 MHz	BPSK	58.126				
	QPSK	58.253				
	16-QAM	58.297				
	64-QAM	58.057				
	256-QAM	58.285				
70 MHz	BPSK	64.702				
	QPSK	64.687				
	16-QAM	64.654				
	64-QAM	64.566				
	256-QAM	64.734				

80 MHz	BPSK	77.632
	QPSK	77.443
	16-QAM	77.350
	64-QAM	77.553
	256-QAM	77.587
90 MHz	BPSK	87.136
	QPSK	87.028
	16-QAM	87.160
	64-QAM	87.304
	256-QAM	87.219
100 MHz	BPSK	96.472
	QPSK	96.765
	16-QAM	96.607
	64-QAM	96.667
	256-QAM	96.840

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 424 ~ 483.

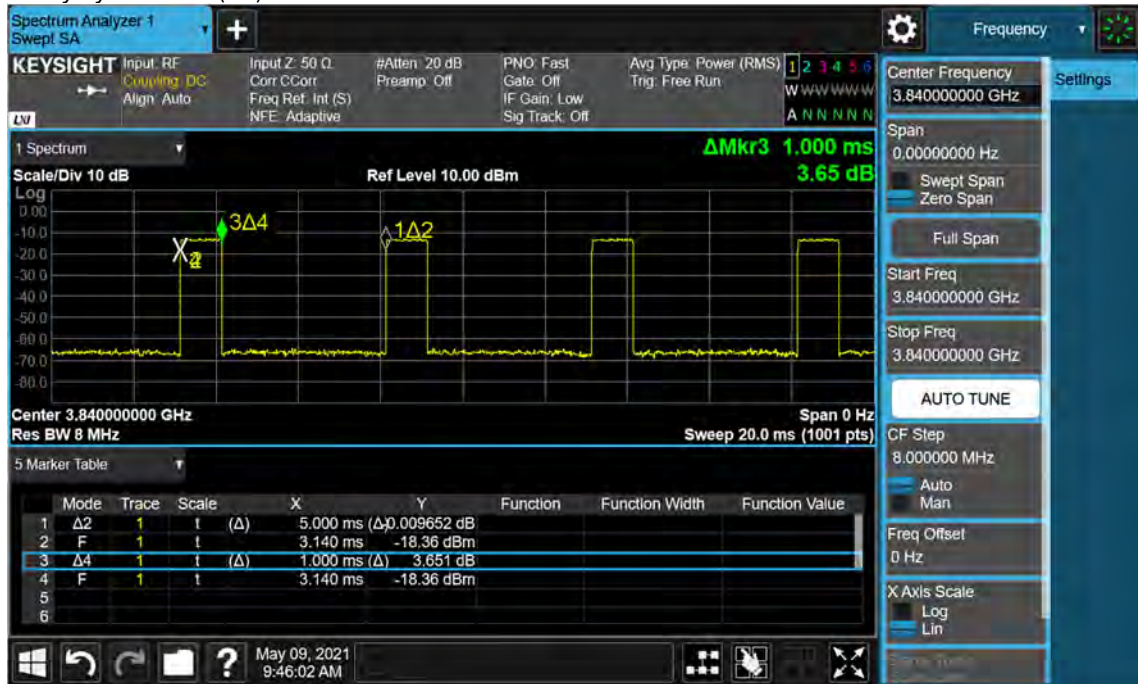
9.5 CONDUCTED SPURIOUS EMISSIONS

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	9.7522	37.805	-69.865	-32.060	-13.00
		3840.00	8.5987	37.805	-70.786	-32.981	
		3975.00	9.1680	37.805	-70.862	-33.057	
	15	3707.52	8.2926	37.805	-70.941	-33.136	
		3840.00	9.9207	37.805	-70.854	-33.049	
		3972.48	8.2777	37.805	-70.942	-33.137	
	20	3710.01	8.2767	37.805	-69.800	-31.995	
		3840.00	9.7856	37.805	-71.185	-33.380	
		3969.99	9.7343	37.805	-70.123	-32.318	
	25	3712.50	8.8525	37.805	-69.874	-32.069	
		3840.00	9.1431	37.805	-70.170	-32.365	
		3967.50	5.1855	37.805	-70.239	-32.434	
	30	3715.02	5.1850	37.805	-70.614	-32.809	
		3840.00	8.2373	37.805	-70.094	-32.289	
		3964.98	8.2712	37.805	-70.544	-32.739	
	40	3720.00	8.8111	37.805	-70.229	-32.424	
		3840.00	4.9507	37.190	-70.428	-33.238	
		3960.00	7.9950	37.805	-70.994	-33.189	
	50	3725.10	8.0354	37.805	-70.633	-32.828	
		3840.00	8.2936	37.805	-70.390	-32.585	
		3954.99	4.9173	37.190	-70.820	-33.630	
	60	3730.02	5.1975	37.805	-70.510	-32.705	
		3840.00	8.2652	37.805	-70.614	-32.809	
		3949.98	9.7886	37.805	-70.499	-32.694	
	70	3735.00	9.6795	37.805	-70.110	-32.305	
		3840.00	9.9831	37.805	-70.152	-32.347	
		3945.00	8.0180	37.805	-71.225	-33.420	
	80	3740.01	9.0917	37.805	-70.256	-32.451	
		3840.00	8.2707	37.805	-70.982	-33.177	
		3939.99	9.6869	37.805	-70.359	-32.554	
90	3745.02	7.7343	37.805	-70.693	-32.888		
	3840.00	4.8485	37.190	-70.872	-33.682		
	3934.98	8.5534	37.805	-70.666	-32.861		
100	3750.00	9.6316	37.805	-70.979	-33.174		
	3840.00	5.2209	37.805	-70.511	-32.706		
	3930.00	8.2867	37.805	-70.901	-33.096		

Note:

1. Plots of the EUT’s Conducted Spurious Emissions are shown Page 688 ~ 759.
2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.990



- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power 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 544 ~ 687.
 2. Duty Cycle factor already applied on the factor.
- Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
 - Result(dBm) = Reading + Factor
 - Duty Cycle Factor(dB) = 6.990

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3705.000	100%	+20(Ref)	3704 999 997	0.0	0.000 000	0.000
	100%	-30	3704 999 992	-4.9	0.000 000	-0.001
	100%	-20	3704 999 993	-3.5	0.000 000	-0.001
	100%	-10	3704 999 993	-3.5	0.000 000	-0.001
	100%	0	3704 999 992	-5.0	0.000 000	-0.001
	100%	+10	3704 999 994	-3.1	0.000 000	-0.001
	100%	+30	3704 999 994	-2.4	0.000 000	-0.001
	100%	+40	3704 999 992	-4.8	0.000 000	-0.001
	100%	+50	3704 999 992	-4.7	0.000 000	-0.001
	Batt. Endpoint	+20	3704 999 994	-3.2	0.000 000	-0.001
3975.000	100%	+20(Ref)	3974 999 999	0.0	0.000 000	0.000
	100%	-30	3974 999 995	-3.6	0.000 000	-0.001
	100%	-20	3974 999 997	-1.2	0.000 000	0.000
	100%	-10	3974 999 996	-2.5	0.000 000	-0.001
	100%	0	3974 999 996	-2.4	0.000 000	-0.001
	100%	+10	3974 999 995	-3.6	0.000 000	-0.001
	100%	+30	3974 999 995	-3.6	0.000 000	-0.001
	100%	+40	3974 999 997	-1.9	0.000 000	0.000
	100%	+50	3974 999 997	-1.2	0.000 000	0.000
	Batt. Endpoint	+20	3974 999 997	-1.7	0.000 000	0.000

- ▣ BandWidth: 15 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3707.520	100%	+20(Ref)	3707 519 998	0.0	0.000 000	0.000
	100%	-30	3707 519 995	-3.2	0.000 000	-0.001
	100%	-20	3707 519 996	-2.5	0.000 000	-0.001
	100%	-10	3707 519 995	-3.2	0.000 000	-0.001
	100%	0	3707 519 996	-2.7	0.000 000	-0.001
	100%	+10	3707 519 996	-2.8	0.000 000	-0.001
	100%	+30	3707 519 995	-3.7	0.000 000	-0.001
	100%	+40	3707 519 995	-3.6	0.000 000	-0.001
	100%	+50	3707 519 994	-4.1	0.000 000	-0.001
	Batt. Endpoint	+20	3707 519 994	-4.7	0.000 000	-0.001
3972.480	100%	+20(Ref)	3972 479 997	0.0	0.000 000	0.000
	100%	-30	3972 479 993	-3.7	0.000 000	-0.001
	100%	-20	3972 479 996	-1.7	0.000 000	0.000
	100%	-10	3972 479 992	-5.0	0.000 000	-0.001
	100%	0	3972 479 996	-1.5	0.000 000	0.000
	100%	+10	3972 479 993	-4.0	0.000 000	-0.001
	100%	+30	3972 479 993	-4.5	0.000 000	-0.001
	100%	+40	3972 479 995	-2.1	0.000 000	-0.001
	100%	+50	3972 479 993	-3.8	0.000 000	-0.001
	Batt. Endpoint	+20	3972 479 995	-2.6	0.000 000	-0.001

- ▣ BandWidth: 20 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3710.010	100%	+20(Ref)	3710 009 994	0.0	0.000 000	0.000
	100%	-30	3710 009 988	-6.1	0.000 000	-0.002
	100%	-20	3710 009 988	-5.8	0.000 000	-0.002
	100%	-10	3710 009 989	-4.9	0.000 000	-0.001
	100%	0	3710 009 989	-4.5	0.000 000	-0.001
	100%	+10	3710 009 990	-3.9	0.000 000	-0.001
	100%	+30	3710 009 989	-5.3	0.000 000	-0.001
	100%	+40	3710 009 989	-5.0	0.000 000	-0.001
	100%	+50	3710 009 991	-2.8	0.000 000	-0.001
	Batt. Endpoint	+20	3710 009 989	-5.2	0.000 000	-0.001
3969.990	100%	+20(Ref)	3969 989 995	0.0	0.000 000	0.000
	100%	-30	3969 989 990	-4.7	0.000 000	-0.001
	100%	-20	3969 989 991	-4.3	0.000 000	-0.001
	100%	-10	3969 989 992	-3.5	0.000 000	-0.001
	100%	0	3969 989 994	-1.5	0.000 000	0.000
	100%	+10	3969 989 992	-2.6	0.000 000	-0.001
	100%	+30	3969 989 992	-2.9	0.000 000	-0.001
	100%	+40	3969 989 993	-2.0	0.000 000	-0.001
	100%	+50	3969 989 992	-3.3	0.000 000	-0.001
	Batt. Endpoint	+20	3969 989 994	-1.0	0.000 000	0.000

- ▣ BandWidth: 25 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3712.500	100%	+20(Ref)	3712 499 998	0.0	0.000 000	0.000
	100%	-30	3712 499 994	-3.8	0.000 000	-0.001
	100%	-20	3712 499 994	-3.7	0.000 000	-0.001
	100%	-10	3712 499 994	-3.2	0.000 000	-0.001
	100%	0	3712 499 993	-4.7	0.000 000	-0.001
	100%	+10	3712 499 993	-4.4	0.000 000	-0.001
	100%	+30	3712 499 995	-2.8	0.000 000	-0.001
	100%	+40	3712 499 994	-3.9	0.000 000	-0.001
	100%	+50	3712 499 996	-1.9	0.000 000	0.000
	Batt. Endpoint	+20	3712 499 994	-3.6	0.000 000	-0.001
3967.500	100%	+20(Ref)	3967 499 998	0.0	0.000 000	0.000
	100%	-30	3967 499 993	-4.5	0.000 000	-0.001
	100%	-20	3967 499 998	-0.2	0.000 000	0.000
	100%	-10	3967 499 996	-2.2	0.000 000	-0.001
	100%	0	3967 499 995	-3.0	0.000 000	-0.001
	100%	+10	3967 499 996	-2.2	0.000 000	-0.001
	100%	+30	3967 499 996	-1.4	0.000 000	0.000
	100%	+40	3967 499 996	-2.3	0.000 000	-0.001
	100%	+50	3967 499 995	-3.3	0.000 000	-0.001
	Batt. Endpoint	+20	3967 499 993	-4.6	0.000 000	-0.001

- ▣ BandWidth: 30 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3715.020	100%	+20(Ref)	3715 019 995	0.0	0.000 000	0.000
	100%	-30	3715 019 990	-5.4	0.000 000	-0.001
	100%	-20	3715 019 991	-4.8	0.000 000	-0.001
	100%	-10	3715 019 992	-3.5	0.000 000	-0.001
	100%	0	3715 019 990	-5.0	0.000 000	-0.001
	100%	+10	3715 019 991	-4.8	0.000 000	-0.001
	100%	+30	3715 019 990	-5.1	0.000 000	-0.001
	100%	+40	3715 019 991	-4.7	0.000 000	-0.001
	100%	+50	3715 019 994	-1.9	0.000 000	0.000
	Batt. Endpoint	+20	3715 019 989	-6.7	0.000 000	-0.002
3964.980	100%	+20(Ref)	3964 979 996	0.0	0.000 000	0.000
	100%	-30	3964 979 995	-0.3	0.000 000	0.000
	100%	-20	3964 979 993	-3.2	0.000 000	-0.001
	100%	-10	3964 979 992	-4.2	0.000 000	-0.001
	100%	0	3964 979 994	-2.2	0.000 000	-0.001
	100%	+10	3964 979 994	-1.9	0.000 000	0.000
	100%	+30	3964 979 993	-2.7	0.000 000	-0.001
	100%	+40	3964 979 994	-1.7	0.000 000	0.000
	100%	+50	3964 979 995	-0.6	0.000 000	0.000
	Batt. Endpoint	+20	3964 979 994	-1.8	0.000 000	0.000

- ▣ BandWidth: 40 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3720.000	100%	+20(Ref)	3719 999 998	0.0	0.000 000	0.000
	100%	-30	3719 999 996	-1.5	0.000 000	0.000
	100%	-20	3719 999 991	-6.1	0.000 000	-0.002
	100%	-10	3719 999 995	-2.2	0.000 000	-0.001
	100%	0	3719 999 997	-1.0	0.000 000	0.000
	100%	+10	3719 999 994	-3.1	0.000 000	-0.001
	100%	+30	3719 999 995	-2.9	0.000 000	-0.001
	100%	+40	3719 999 993	-4.9	0.000 000	-0.001
	100%	+50	3719 999 994	-3.3	0.000 000	-0.001
	Batt. Endpoint	+20	3719 999 993	-4.2	0.000 000	-0.001
3960.000	100%	+20(Ref)	3959 999 995	0.0	0.000 000	0.000
	100%	-30	3959 999 992	-3.4	0.000 000	-0.001
	100%	-20	3959 999 992	-2.4	0.000 000	-0.001
	100%	-10	3959 999 992	-3.1	0.000 000	-0.001
	100%	0	3959 999 993	-2.0	0.000 000	-0.001
	100%	+10	3959 999 992	-3.3	0.000 000	-0.001
	100%	+30	3959 999 991	-3.5	0.000 000	-0.001
	100%	+40	3959 999 991	-3.6	0.000 000	-0.001
	100%	+50	3959 999 991	-3.7	0.000 000	-0.001
	Batt. Endpoint	+20	3959 999 994	-1.0	0.000 000	0.000

- ▣ BandWidth: 50 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3725.010	100%	+20(Ref)	3725 009 996	0.0	0.000 000	0.000
	100%	-30	3725 009 993	-3.3	0.000 000	-0.001
	100%	-20	3725 009 992	-3.6	0.000 000	-0.001
	100%	-10	3725 009 993	-3.3	0.000 000	-0.001
	100%	0	3725 009 993	-3.1	0.000 000	-0.001
	100%	+10	3725 009 990	-6.4	0.000 000	-0.002
	100%	+30	3725 009 992	-4.2	0.000 000	-0.001
	100%	+40	3725 009 994	-2.0	0.000 000	-0.001
	100%	+50	3725 009 991	-4.9	0.000 000	-0.001
	Batt. Endpoint	+20	3725 009 993	-3.3	0.000 000	-0.001
3954.990	100%	+20(Ref)	3954 989 998	0.0	0.000 000	0.000
	100%	-30	3954 989 998	-0.9	0.000 000	0.000
	100%	-20	3954 989 996	-2.7	0.000 000	-0.001
	100%	-10	3954 989 996	-2.5	0.000 000	-0.001
	100%	0	3954 989 996	-2.2	0.000 000	-0.001
	100%	+10	3954 989 996	-2.1	0.000 000	-0.001
	100%	+30	3954 989 997	-1.6	0.000 000	0.000
	100%	+40	3954 989 997	-1.4	0.000 000	0.000
	100%	+50	3954 989 998	-0.6	0.000 000	0.000
	Batt. Endpoint	+20	3954 989 996	-2.2	0.000 000	-0.001

- ▣ BandWidth: 60 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3730.020	100%	+20(Ref)	3730 019 994	0.0	0.000 000	0.000
	100%	-30	3730 019 991	-3.3	0.000 000	-0.001
	100%	-20	3730 019 991	-3.8	0.000 000	-0.001
	100%	-10	3730 019 989	-5.5	0.000 000	-0.001
	100%	0	3730 019 993	-1.6	0.000 000	0.000
	100%	+10	3730 019 991	-3.4	0.000 000	-0.001
	100%	+30	3730 019 989	-5.7	0.000 000	-0.002
	100%	+40	3730 019 989	-5.0	0.000 000	-0.001
	100%	+50	3730 019 988	-6.1	0.000 000	-0.002
	Batt. Endpoint	+20	3730 019 989	-5.5	0.000 000	-0.001
3949.980	100%	+20(Ref)	3949 979 996	0.0	0.000 000	0.000
	100%	-30	3949 979 994	-2.1	0.000 000	-0.001
	100%	-20	3949 979 993	-2.8	0.000 000	-0.001
	100%	-10	3949 979 993	-3.5	0.000 000	-0.001
	100%	0	3949 979 996	-0.3	0.000 000	0.000
	100%	+10	3949 979 992	-3.7	0.000 000	-0.001
	100%	+30	3949 979 993	-2.7	0.000 000	-0.001
	100%	+40	3949 979 992	-4.1	0.000 000	-0.001
	100%	+50	3949 979 994	-2.3	0.000 000	-0.001
	Batt. Endpoint	+20	3949 979 992	-4.3	0.000 000	-0.001

- ▣ BandWidth: 70 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3735.000	100%	+20(Ref)	3734 999 994	0.0	0.000 000	0.000
	100%	-30	3734 999 987	-6.8	0.000 000	-0.002
	100%	-20	3734 999 987	-6.4	0.000 000	-0.002
	100%	-10	3734 999 989	-5.1	0.000 000	-0.001
	100%	0	3734 999 990	-3.9	0.000 000	-0.001
	100%	+10	3734 999 988	-6.0	0.000 000	-0.002
	100%	+30	3734 999 988	-6.0	0.000 000	-0.002
	100%	+40	3734 999 987	-7.2	0.000 000	-0.002
	100%	+50	3734 999 988	-5.4	0.000 000	-0.001
	Batt. Endpoint	+20	3734 999 988	-6.1	0.000 000	-0.002
3945.000	100%	+20(Ref)	3944 999 996	0.0	0.000 000	0.000
	100%	-30	3944 999 992	-3.5	0.000 000	-0.001
	100%	-20	3944 999 992	-3.5	0.000 000	-0.001
	100%	-10	3944 999 995	-0.9	0.000 000	0.000
	100%	0	3944 999 994	-1.9	0.000 000	0.000
	100%	+10	3944 999 992	-3.5	0.000 000	-0.001
	100%	+30	3944 999 990	-5.3	0.000 000	-0.001
	100%	+40	3944 999 990	-6.0	0.000 000	-0.002
	100%	+50	3944 999 992	-3.9	0.000 000	-0.001
	Batt. Endpoint	+20	3944 999 993	-2.5	0.000 000	-0.001

- ▣ BandWidth: 80 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3740.010	100%	+20(Ref)	3740 009 992	0.0	0.000 000	0.000
	100%	-30	3740 009 988	-4.3	0.000 000	-0.001
	100%	-20	3740 009 986	-6.0	0.000 000	-0.002
	100%	-10	3740 009 987	-5.4	0.000 000	-0.001
	100%	0	3740 009 988	-4.1	0.000 000	-0.001
	100%	+10	3740 009 989	-3.4	0.000 000	-0.001
	100%	+30	3740 009 989	-3.3	0.000 000	-0.001
	100%	+40	3740 009 988	-4.4	0.000 000	-0.001
	100%	+50	3740 009 987	-4.8	0.000 000	-0.001
	Batt. Endpoint	+20	3740 009 987	-5.2	0.000 000	-0.001
3939.990	100%	+20(Ref)	3939 989 998	0.0	0.000 000	0.000
	100%	-30	3939 989 995	-2.4	0.000 000	-0.001
	100%	-20	3939 989 994	-4.1	0.000 000	-0.001
	100%	-10	3939 989 995	-2.2	0.000 000	-0.001
	100%	0	3939 989 995	-3.0	0.000 000	-0.001
	100%	+10	3939 989 996	-1.7	0.000 000	0.000
	100%	+30	3939 989 994	-3.2	0.000 000	-0.001
	100%	+40	3939 989 995	-2.5	0.000 000	-0.001
	100%	+50	3939 989 996	-1.8	0.000 000	0.000
	Batt. Endpoint	+20	3939 989 996	-1.8	0.000 000	0.000

- ▣ BandWidth: 90 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3745.020	100%	+20(Ref)	3745 019 997	0.0	0.000 000	0.000
	100%	-30	3745 019 990	-7.6	0.000 000	-0.002
	100%	-20	3745 019 994	-3.5	0.000 000	-0.001
	100%	-10	3745 019 993	-4.4	0.000 000	-0.001
	100%	0	3745 019 993	-4.4	0.000 000	-0.001
	100%	+10	3745 019 992	-5.3	0.000 000	-0.001
	100%	+30	3745 019 993	-3.7	0.000 000	-0.001
	100%	+40	3745 019 993	-4.1	0.000 000	-0.001
	100%	+50	3745 019 991	-5.8	0.000 000	-0.002
	Batt. Endpoint	+20	3745 019 995	-2.1	0.000 000	-0.001
3934.980	100%	+20(Ref)	3934 979 996	0.0	0.000 000	0.000
	100%	-30	3934 979 993	-2.8	0.000 000	-0.001
	100%	-20	3934 979 990	-5.4	0.000 000	-0.001
	100%	-10	3934 979 993	-2.4	0.000 000	-0.001
	100%	0	3934 979 990	-5.6	0.000 000	-0.001
	100%	+10	3934 979 990	-5.5	0.000 000	-0.001
	100%	+30	3934 979 992	-3.3	0.000 000	-0.001
	100%	+40	3934 979 990	-5.2	0.000 000	-0.001
	100%	+50	3934 979 989	-6.7	0.000 000	-0.002
	Batt. Endpoint	+20	3934 979 990	-5.6	0.000 000	-0.001

- ▣ BandWidth: 100 MHz
- ▣ Voltage(100 %): 3.850 VDC
- ▣ Batt. Endpoint: 3.400 VDC
- ▣ LIMIT: Emission must remain in band

Test. Frequency	Voltage	Temp.	Frequency	Frequency	Deviation	ppm
(MHz)	(%)	(°C)	(Hz)	Error (Hz)	(%)	
3750.000	100%	+20(Ref)	3749 999 994	0.0	0.000 000	0.000
	100%	-30	3749 999 988	-6.5	0.000 000	-0.002
	100%	-20	3749 999 991	-3.3	0.000 000	-0.001
	100%	-10	3749 999 989	-5.4	0.000 000	-0.001
	100%	0	3749 999 989	-4.7	0.000 000	-0.001
	100%	+10	3749 999 991	-3.2	0.000 000	-0.001
	100%	+30	3749 999 991	-3.5	0.000 000	-0.001
	100%	+40	3749 999 990	-4.4	0.000 000	-0.001
	100%	+50	3749 999 988	-5.8	0.000 000	-0.002
	Batt. Endpoint	+20	3749 999 988	-5.8	0.000 000	-0.002
3930.000	100%	+20(Ref)	3929 999 996	0.0	0.000 000	0.000
	100%	-30	3929 999 992	-4.0	0.000 000	-0.001
	100%	-20	3929 999 991	-4.8	0.000 000	-0.001
	100%	-10	3929 999 991	-4.7	0.000 000	-0.001
	100%	0	3929 999 993	-2.6	0.000 000	-0.001
	100%	+10	3929 999 994	-2.4	0.000 000	-0.001
	100%	+30	3929 999 991	-4.8	0.000 000	-0.001
	100%	+40	3929 999 991	-5.3	0.000 000	-0.001
	100%	+50	3929 999 992	-3.7	0.000 000	-0.001
	Batt. Endpoint	+20	3929 999 992	-3.7	0.000 000	-0.001

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)



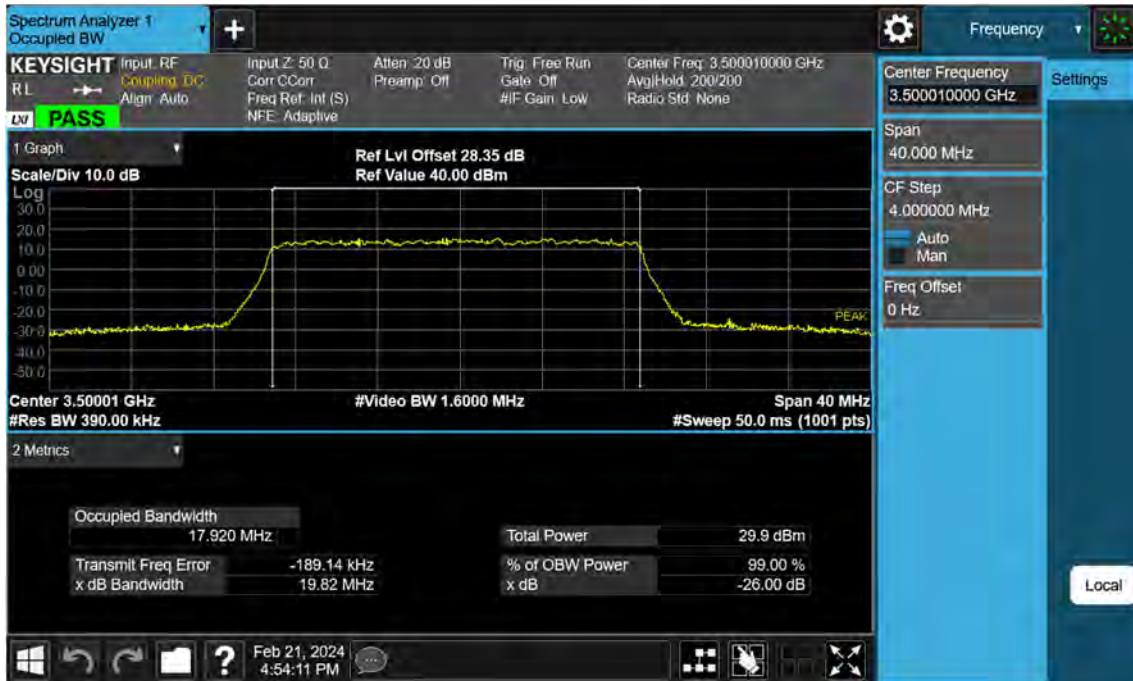
Sub6 n77. Occupied Bandwidth Plot (20 M BW Ch.633334 16QAM)



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)



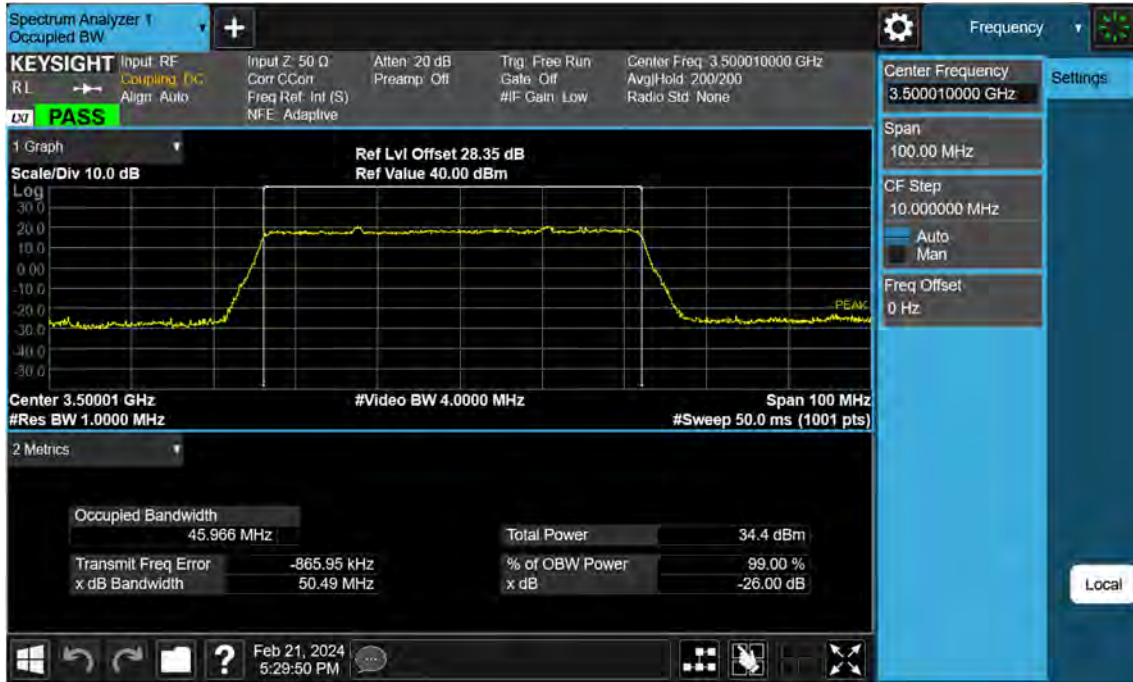
Sub6 n77. Occupied Bandwidth Plot (40 M BW Ch.633334 64QAM)



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)



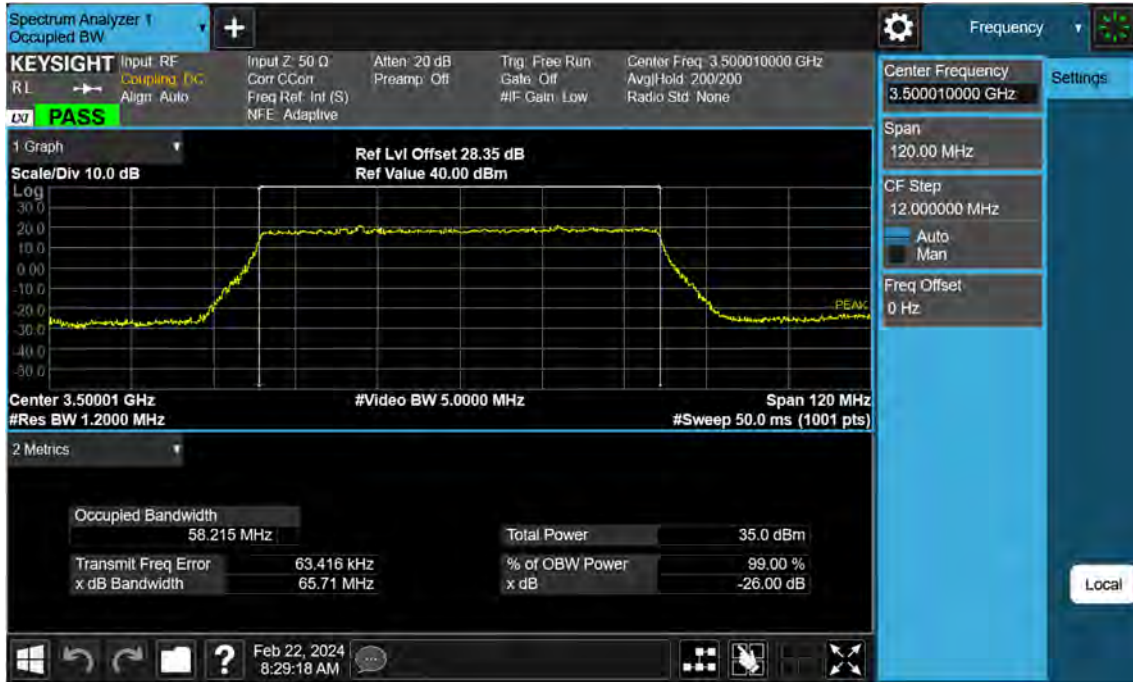
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 64QAM)



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)



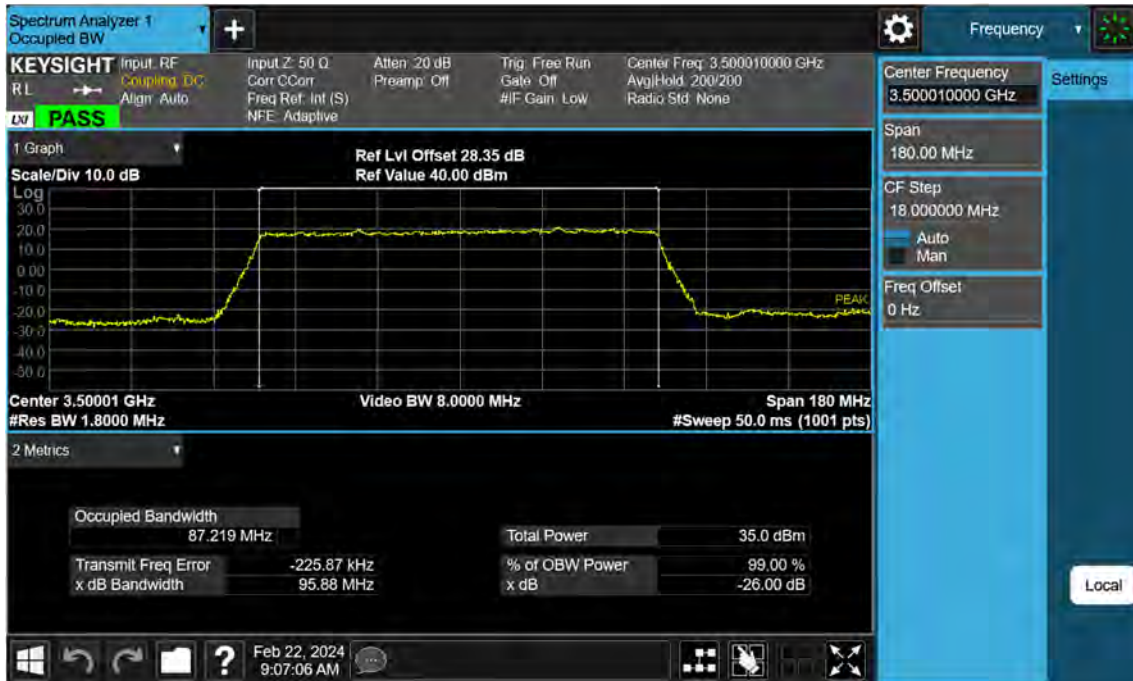
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 64QAM)



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



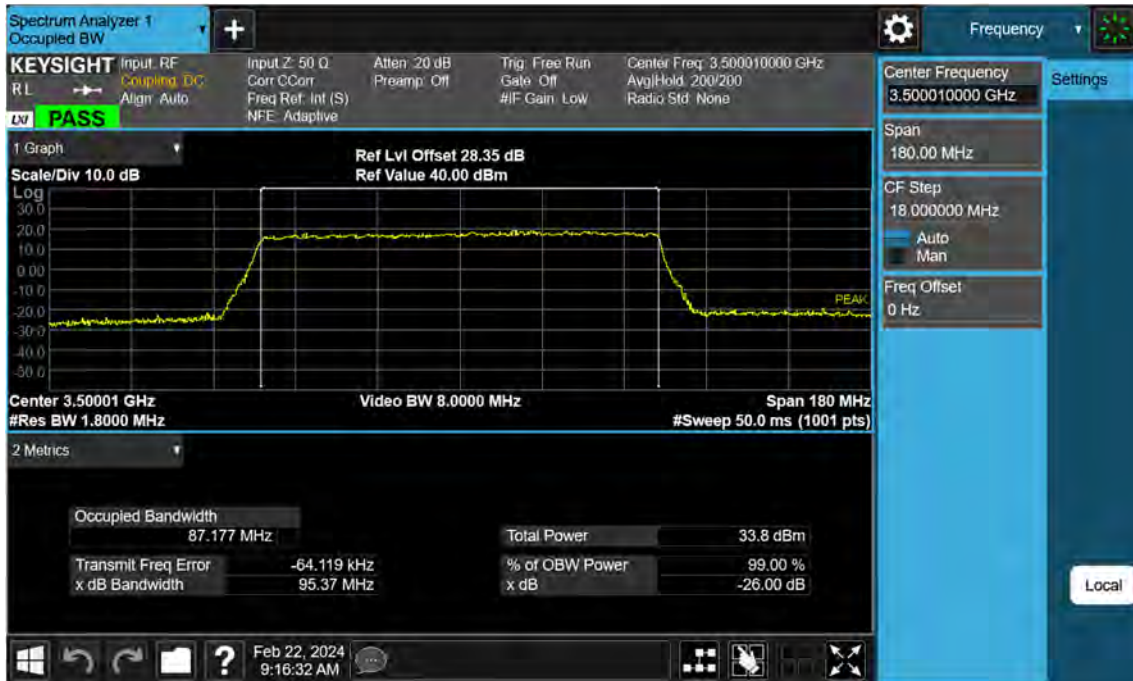
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 BPSK)



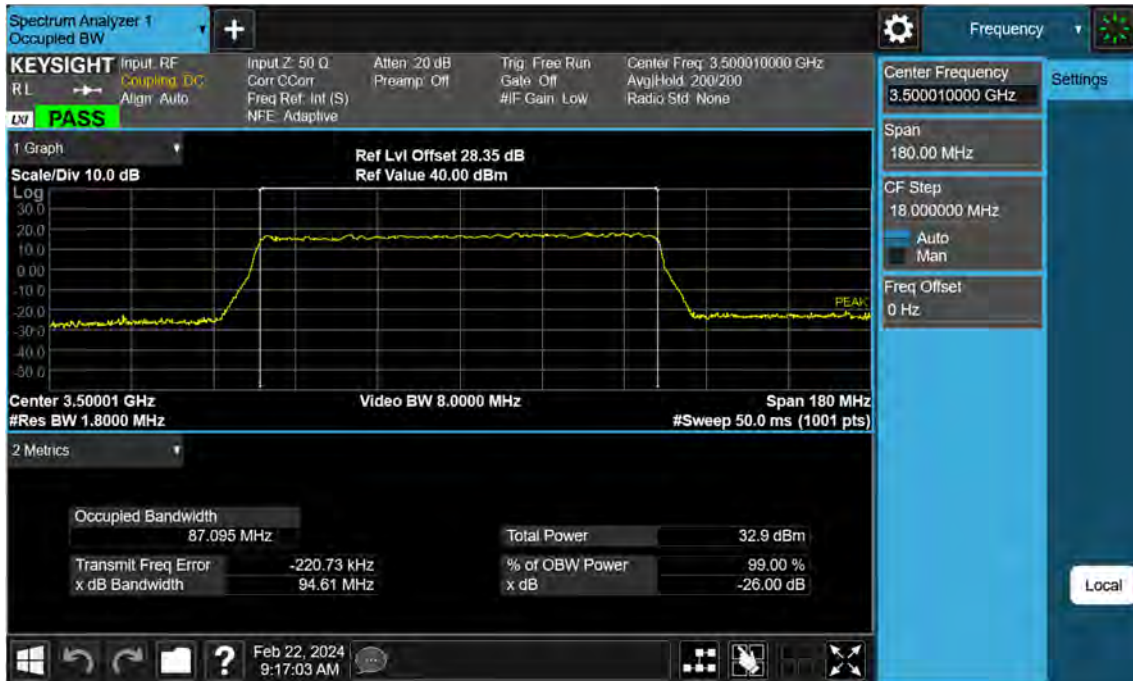
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 QPSK)



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



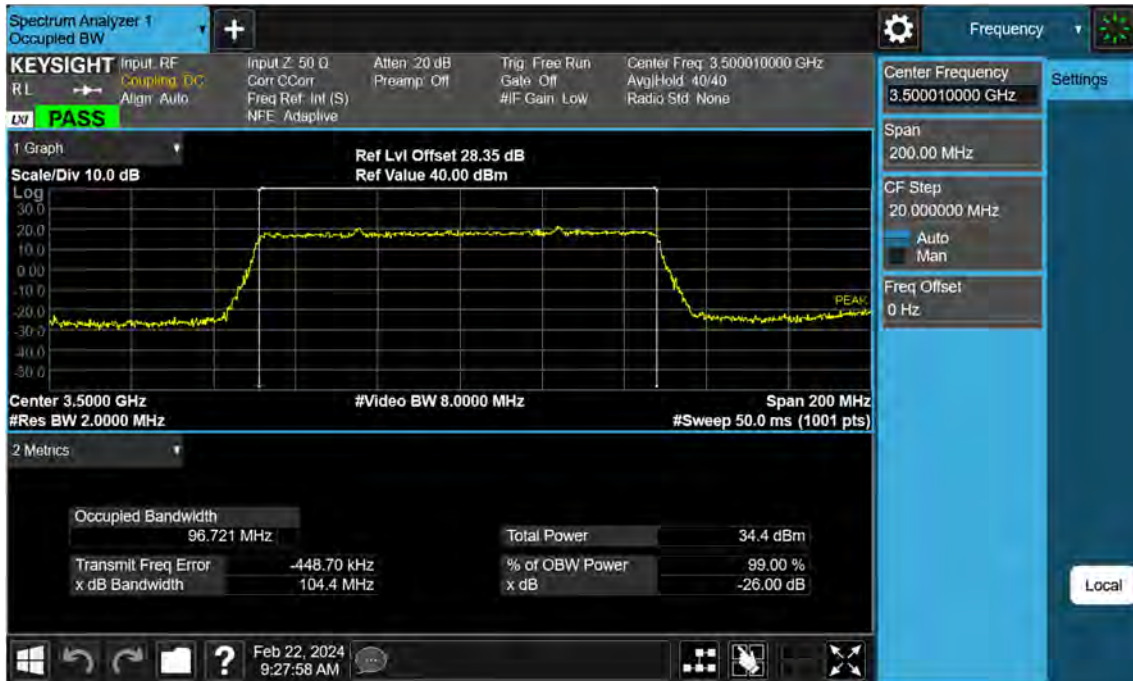
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 64QAM)



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)



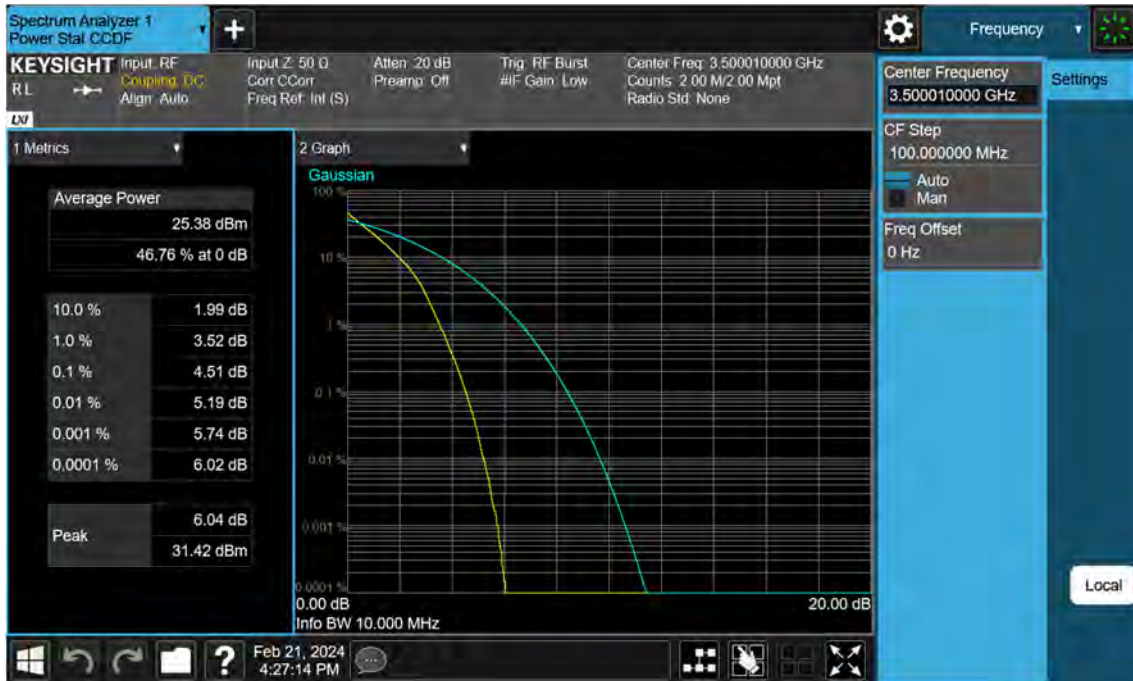
Sub6 n77. Occupied Bandwidth Plot (100 M BW Ch.633334 64QAM)



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)



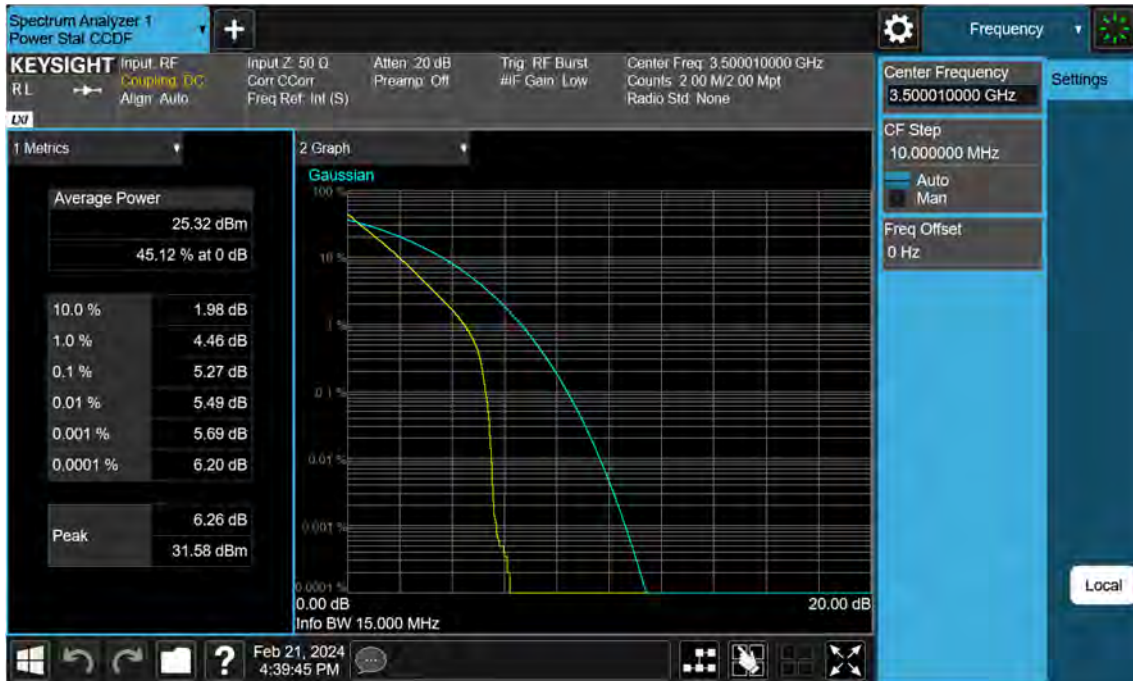
Sub6 n77. PAR Plot (10 M BW_Ch.633334_64QAM)



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)



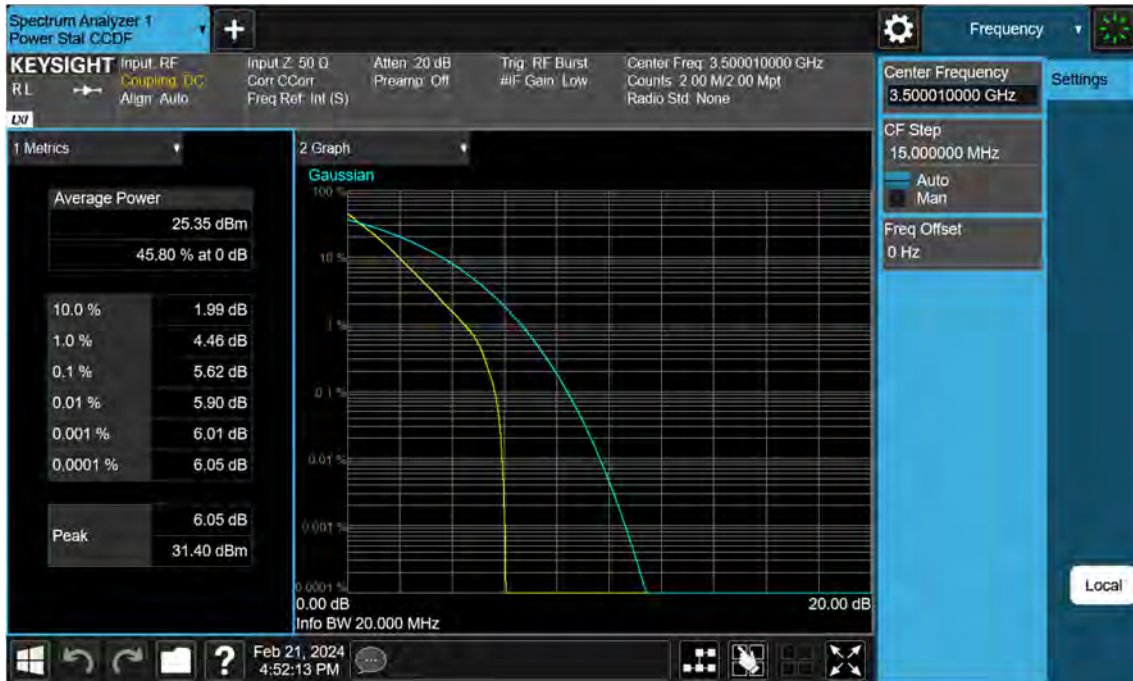
Sub6 n77. PAR Plot (15 M BW_Ch.633334_64QAM)



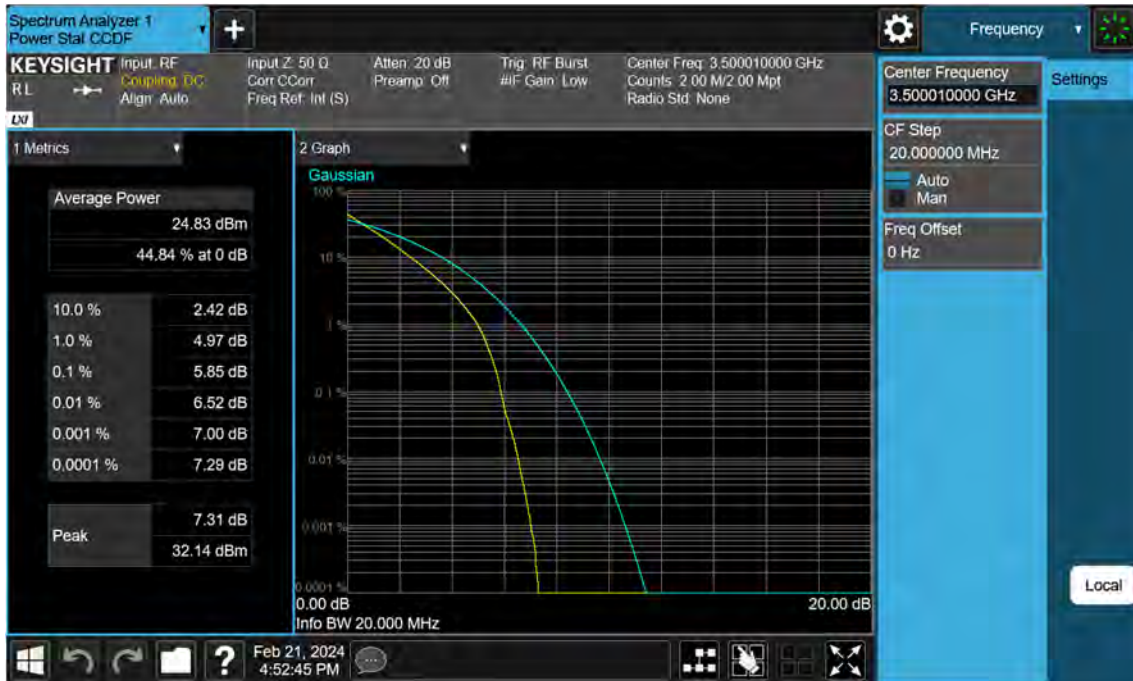
Sub6 n77. PAR Plot (15 M BW_Ch.633334_256QAM)



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)



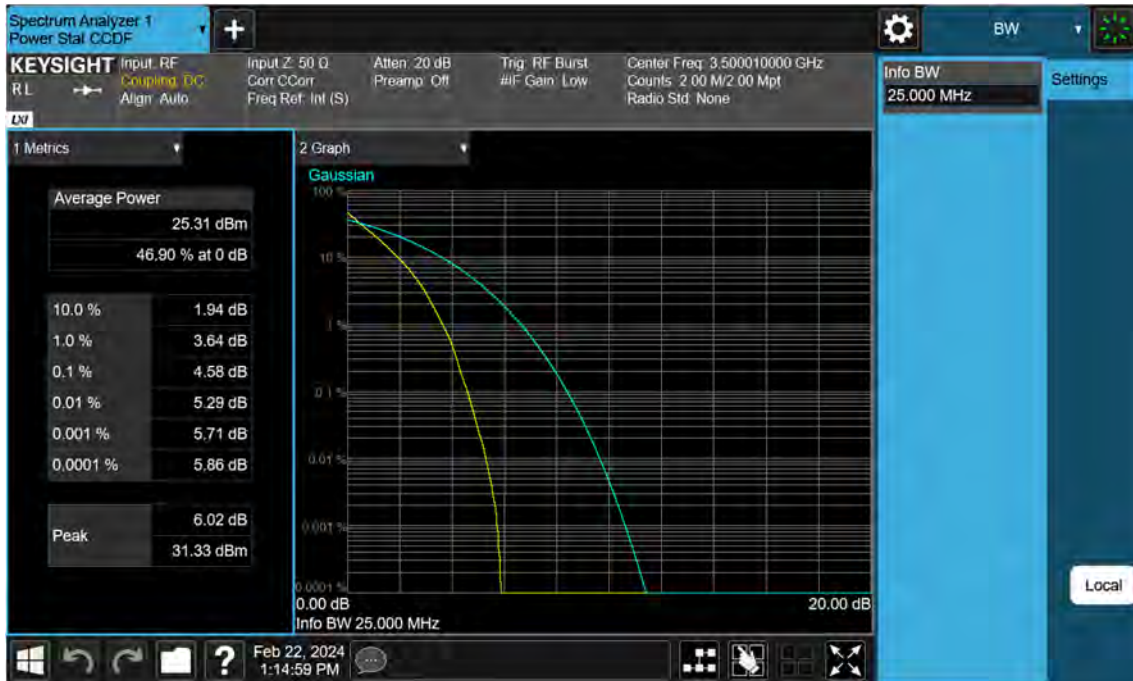
Sub6 n77. PAR Plot (20 M BW_Ch.633334_64QAM)



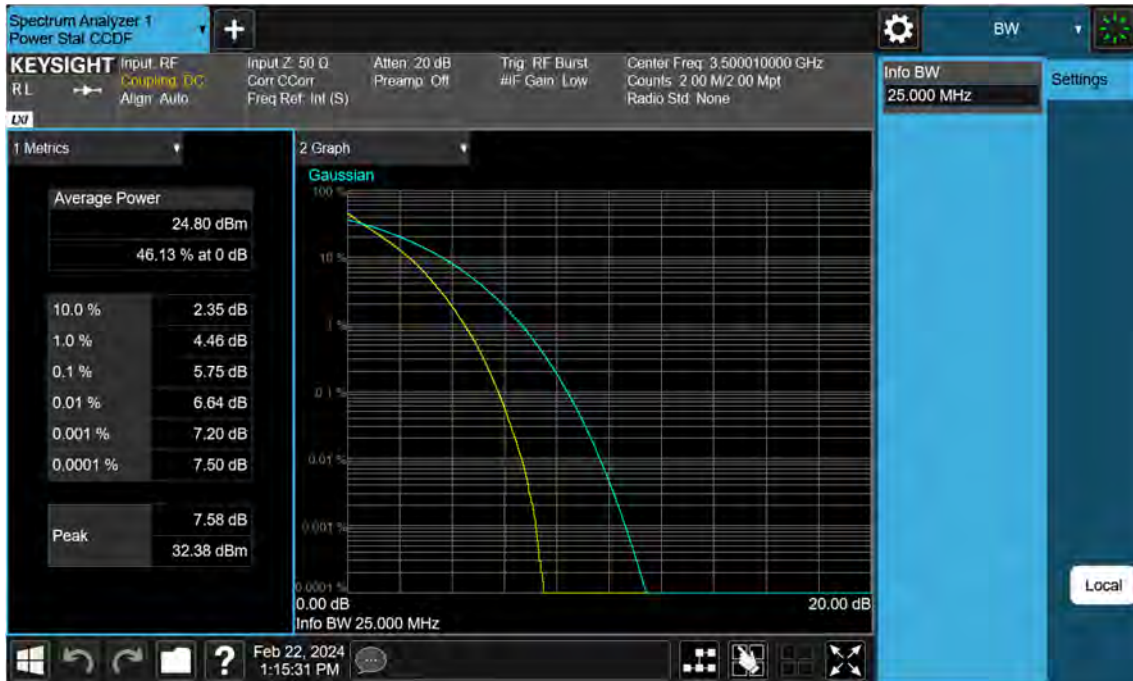
Sub6 n77. PAR Plot (20 M BW_Ch.633334_256QAM)



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)



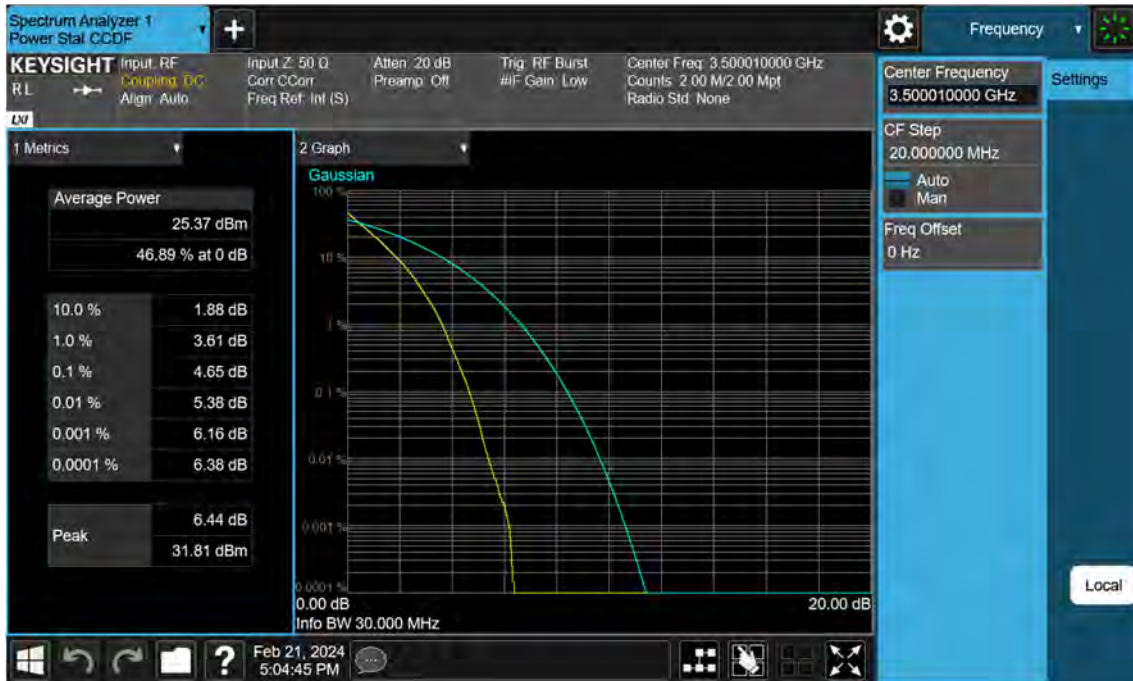
Sub6 n77. PAR Plot (25 M BW_Ch.633334_64QAM)



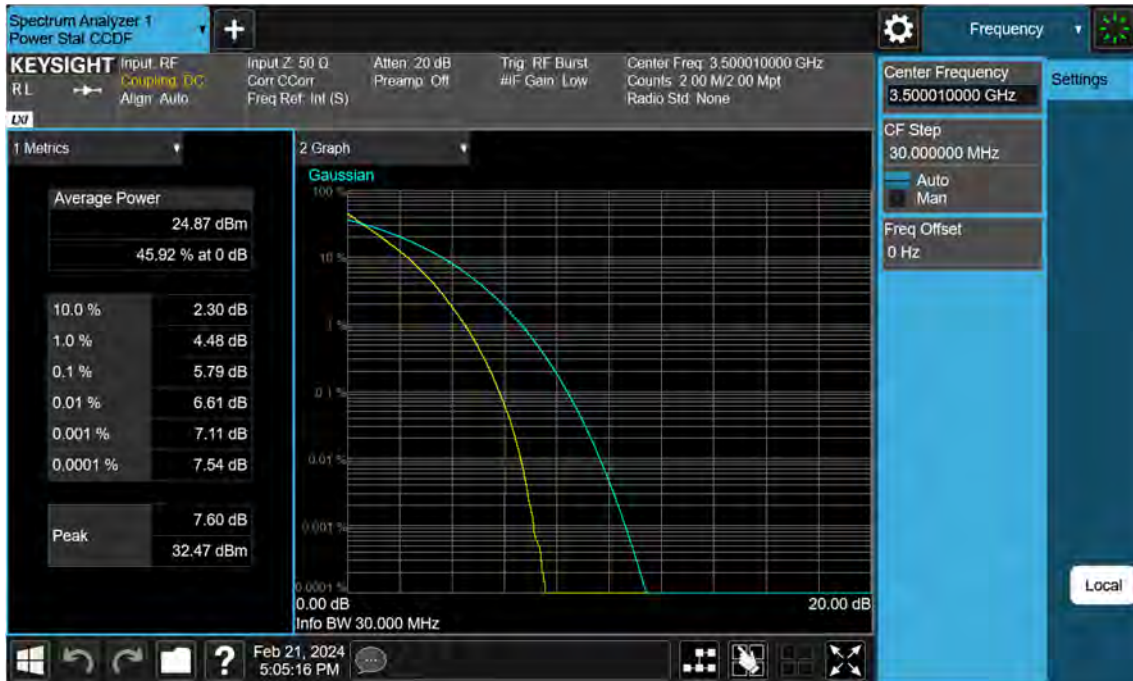
Sub6 n77. PAR Plot (25 M BW_Ch.633334_256QAM)



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



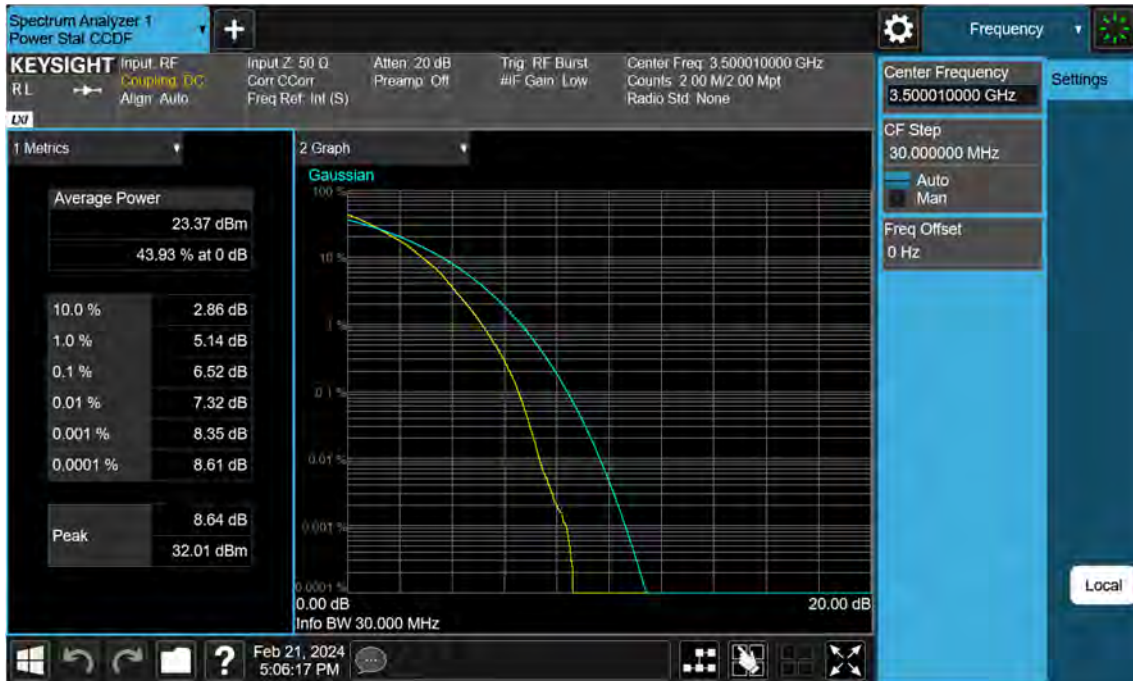
Sub6 n77. PAR Plot (30 M BW_Ch.633334_QPSK)



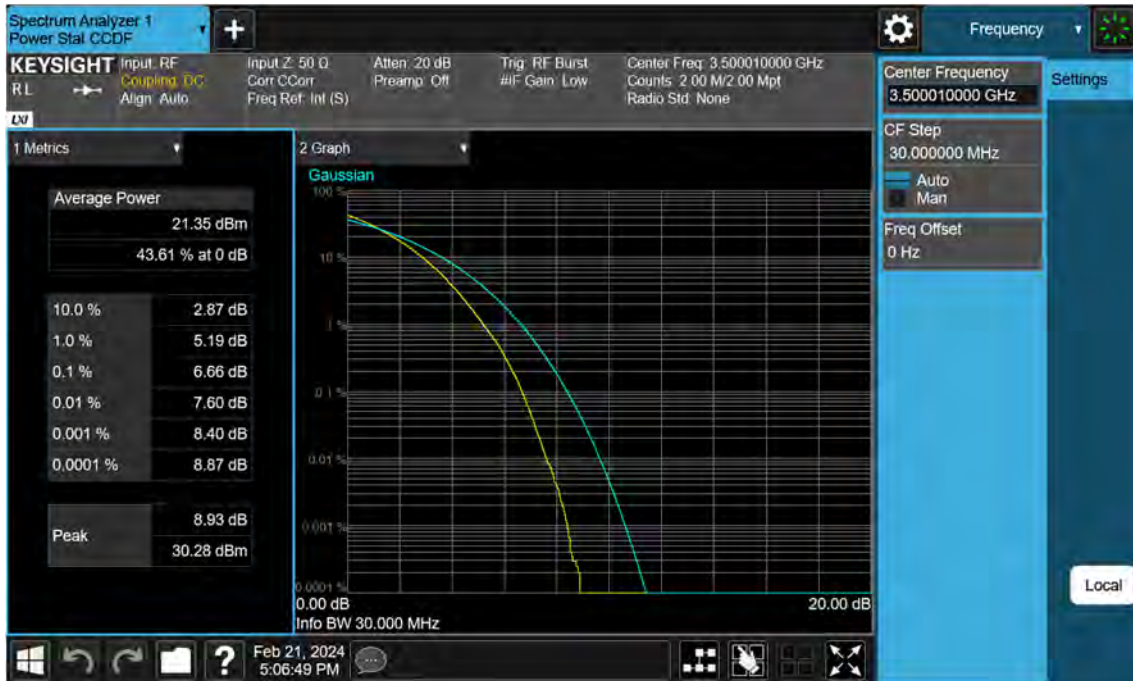
Sub6 n77. PAR Plot (30 M BW_Ch.633334_16QAM)



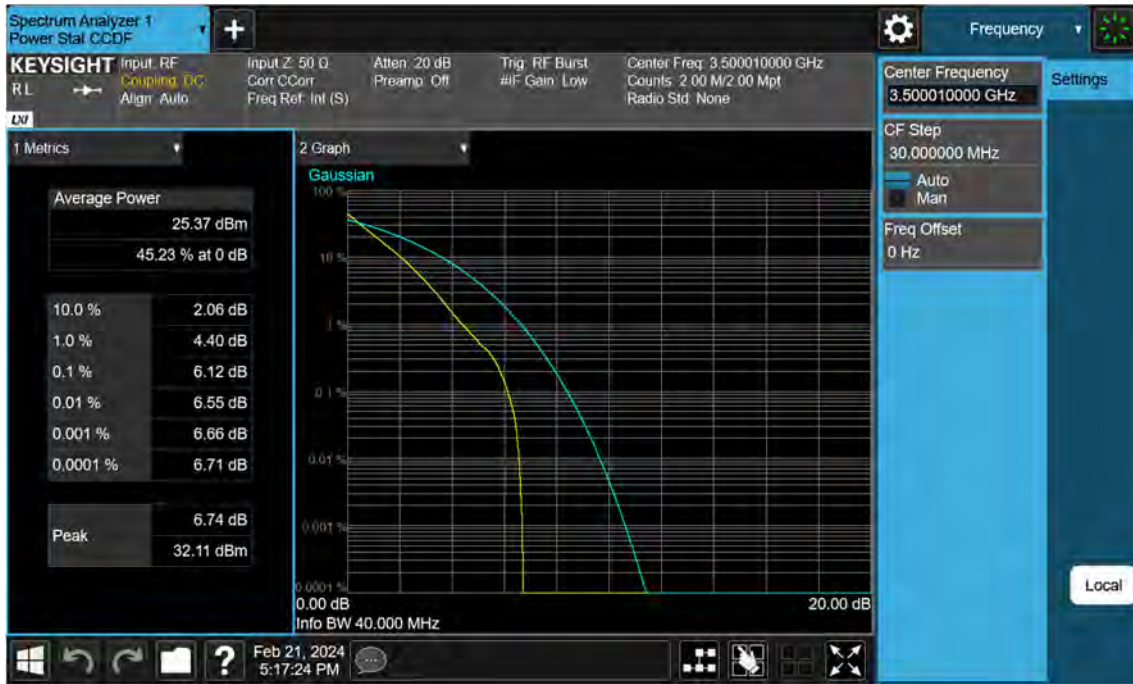
Sub6 n77. PAR Plot (30 M BW_Ch.633334_64QAM)



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



Sub6 n77. PAR Plot (40 M BW_Ch.633334_ BPSK)



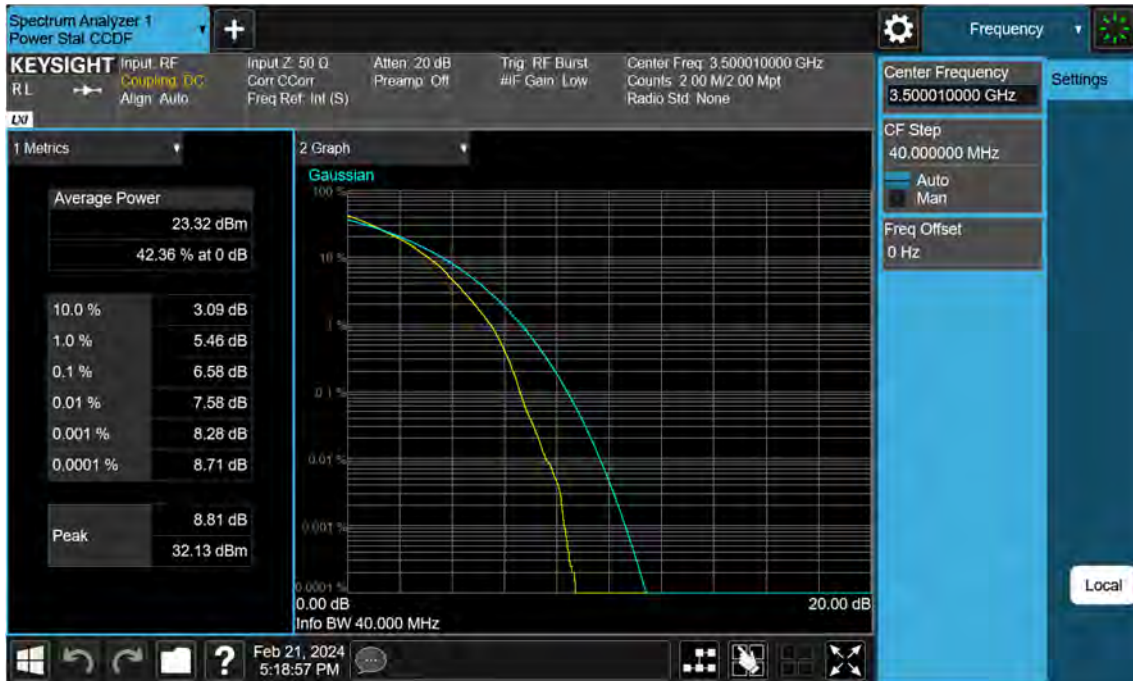
Sub6 n77. PAR Plot (40 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (40 M BW_Ch.633334_16QAM)



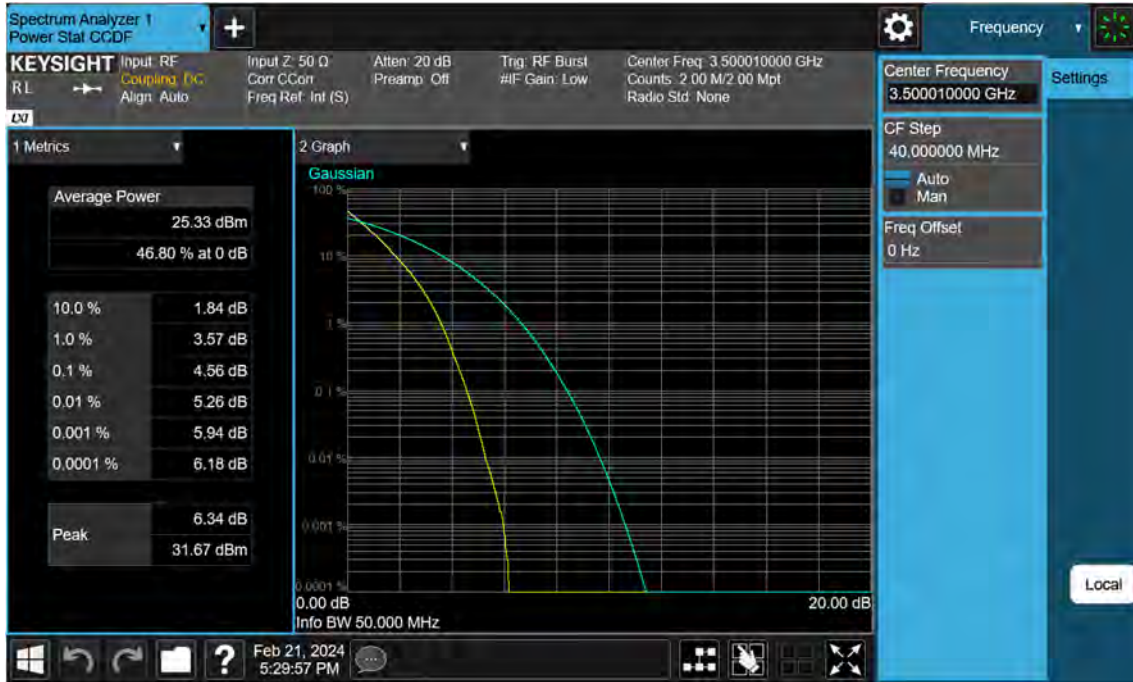
Sub6 n77. PAR Plot (40 M BW_Ch.633334_64QAM)



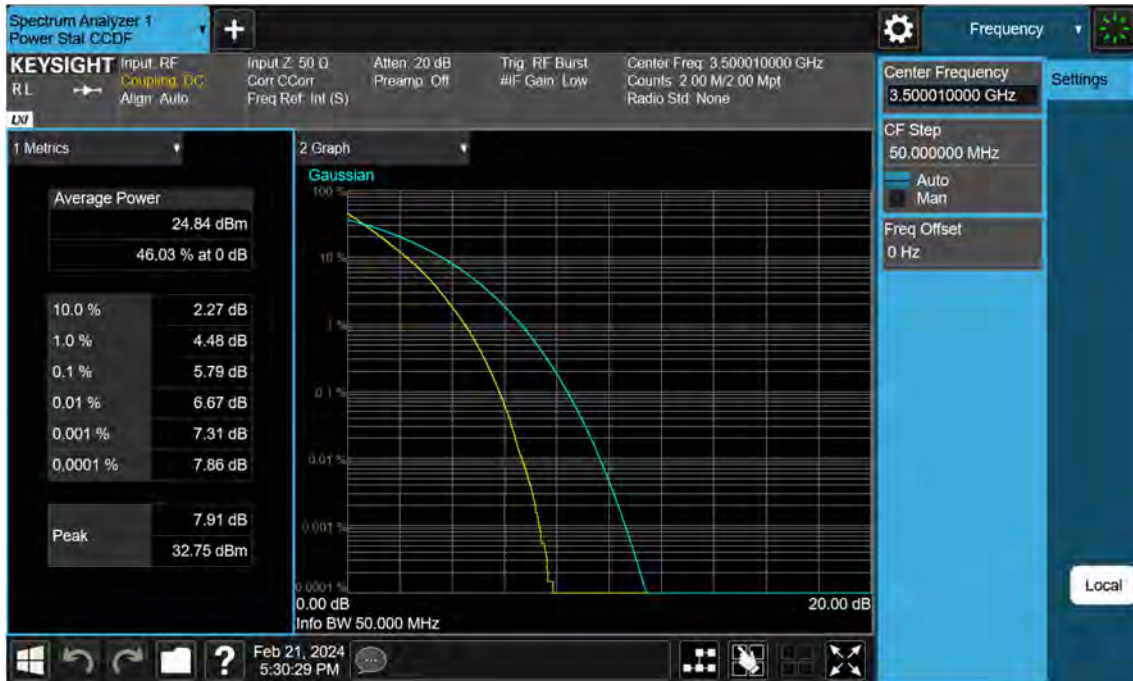
Sub6 n77. PAR Plot (40 M BW_Ch.633334_256QAM)



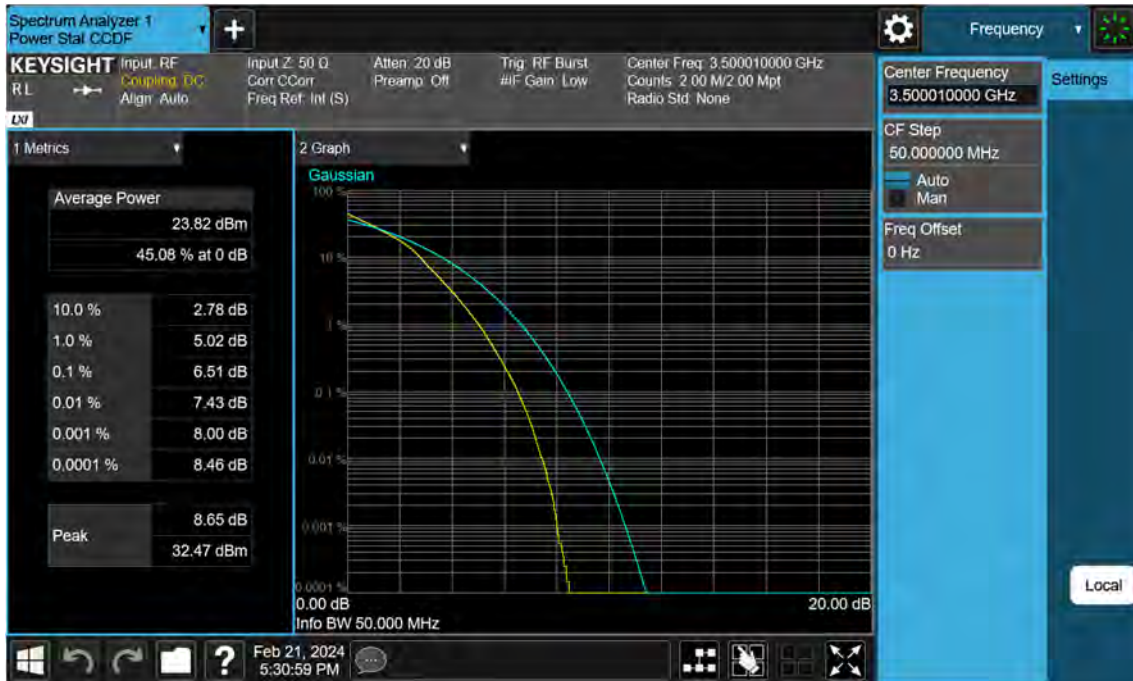
Sub6 n77. PAR Plot (50 M BW_Ch.633334_ BPSK)



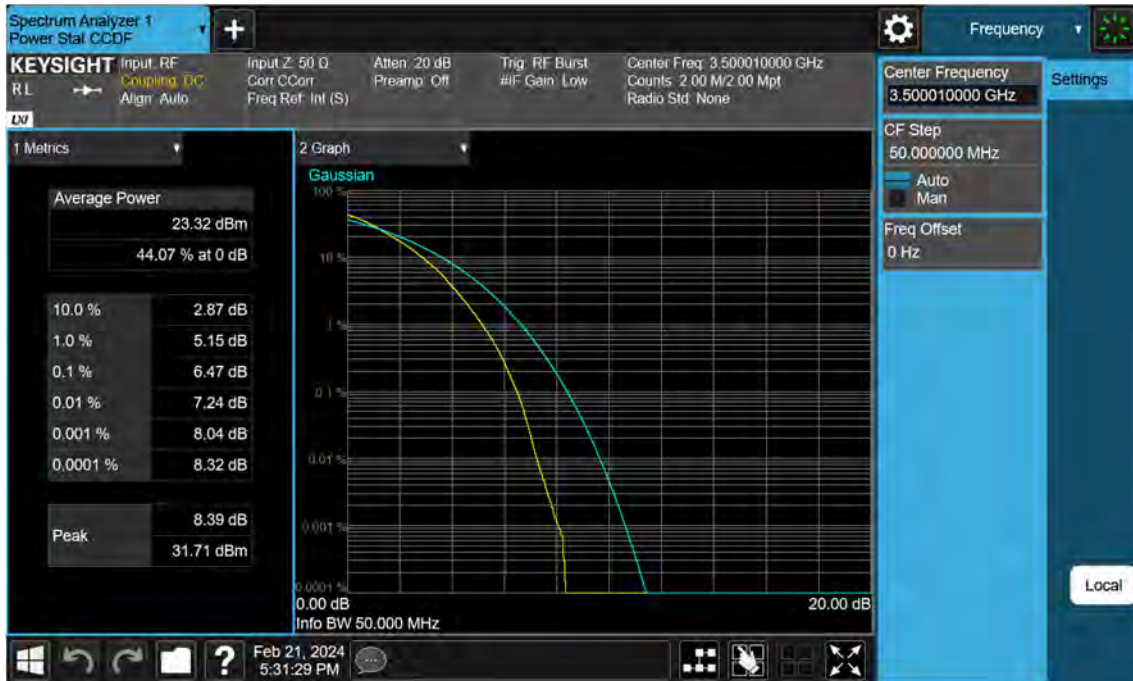
Sub6 n77. PAR Plot (50 M BW_Ch.633334_QPSK)



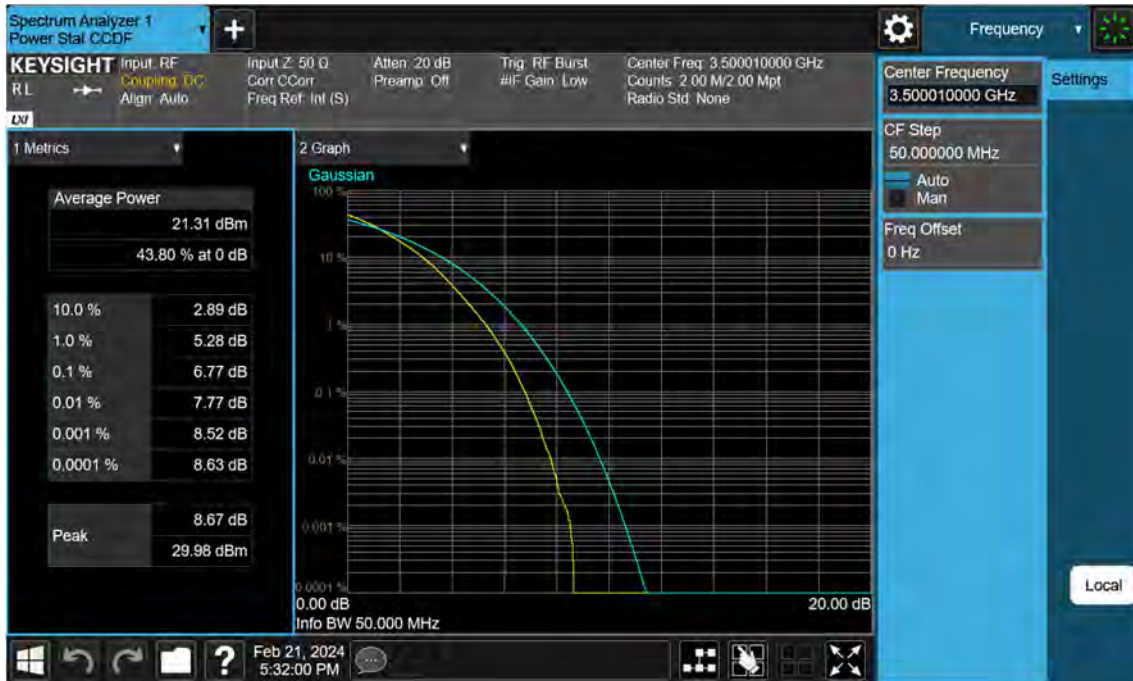
Sub6 n77. PAR Plot (50 M BW_Ch.633334_16QAM)



Sub6 n77. PAR Plot (50 M BW_Ch.633334_64QAM)



Sub6 n77. PAR Plot (50 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (60 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (60 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (60 M BW_Ch.633334_16QAM)



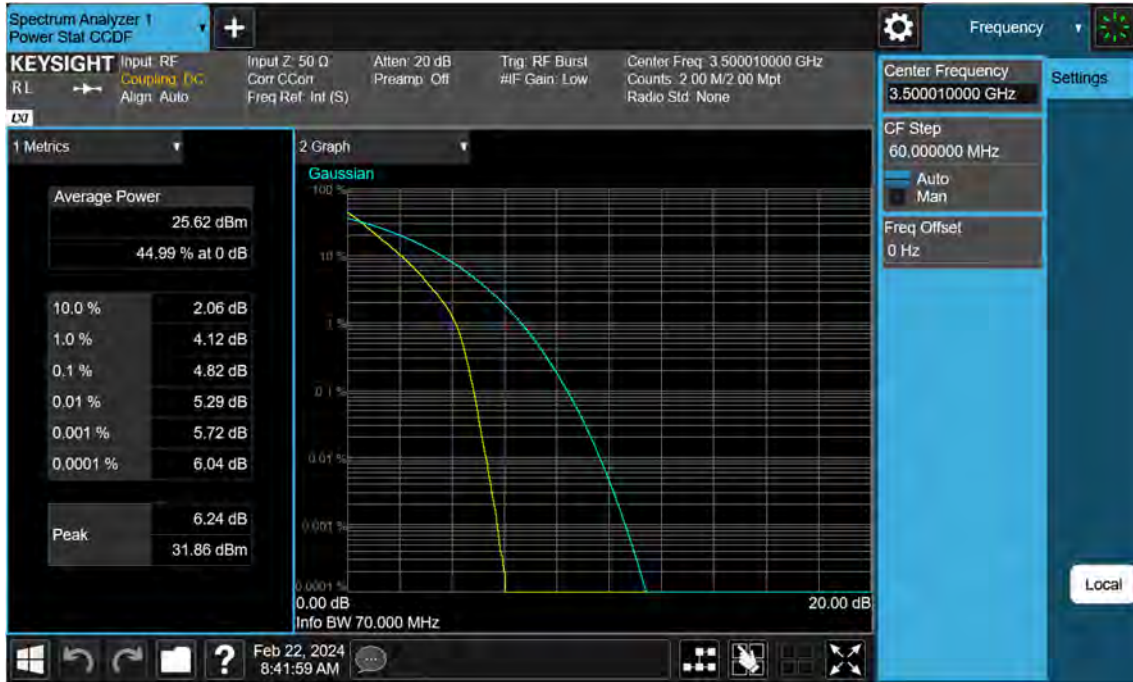
Sub6 n77. PAR Plot (60 M BW_Ch.633334_64QAM)



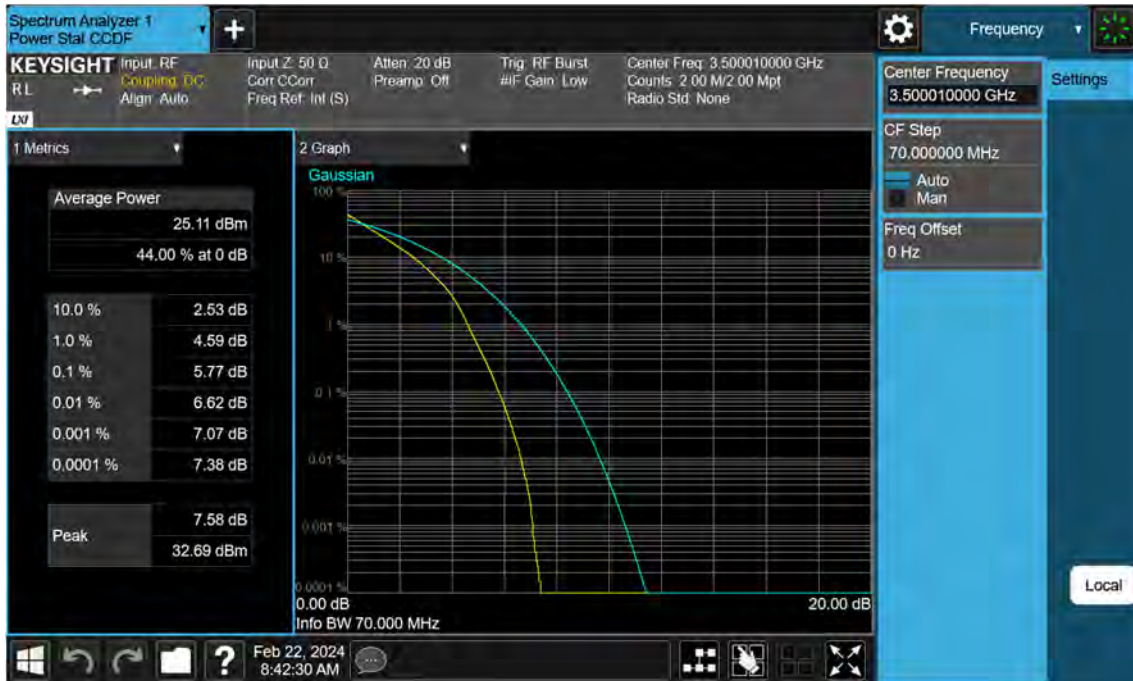
Sub6 n77. PAR Plot (60 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (70 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (70 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (70 M BW_Ch.633334_16QAM)



Sub6 n77. PAR Plot (70 M BW_Ch.633334_64QAM)



Sub6 n77. PAR Plot (70 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (80 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (80 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (80 M BW_Ch.633334_16QAM)



Sub6 n77. PAR Plot (80 M BW_Ch.633334_64QAM)



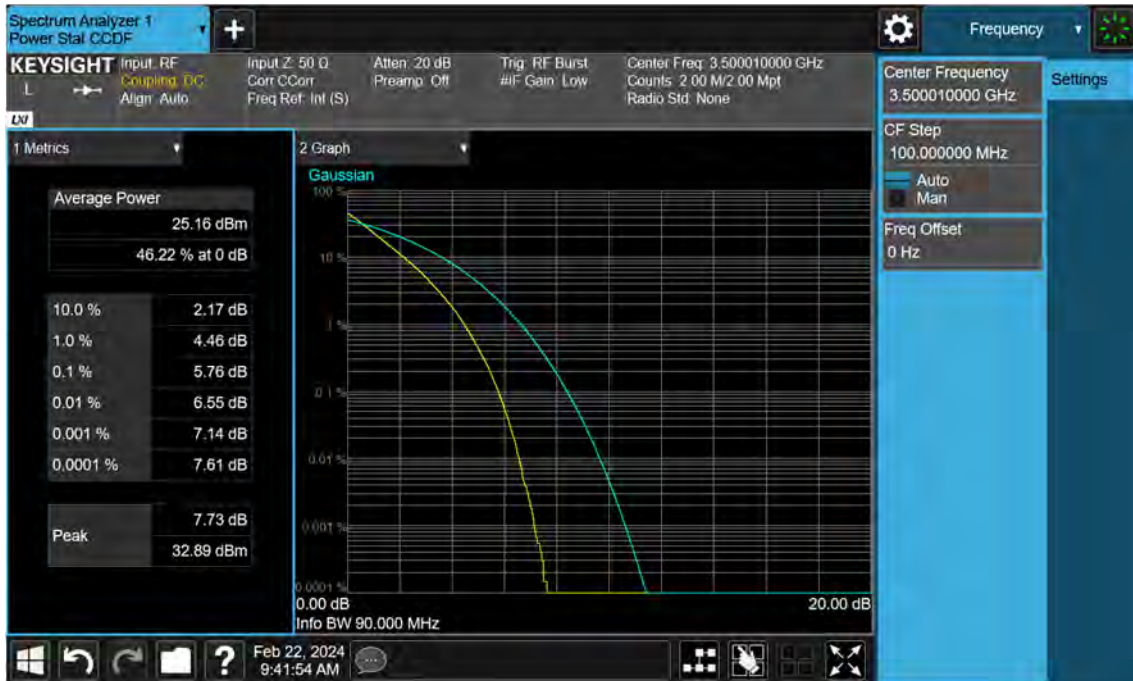
Sub6 n77. PAR Plot (80 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (90 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (90 M BW_Ch.633334_QPSK)



Sub6 n77. PAR Plot (90 M BW_Ch.633334_16QAM)



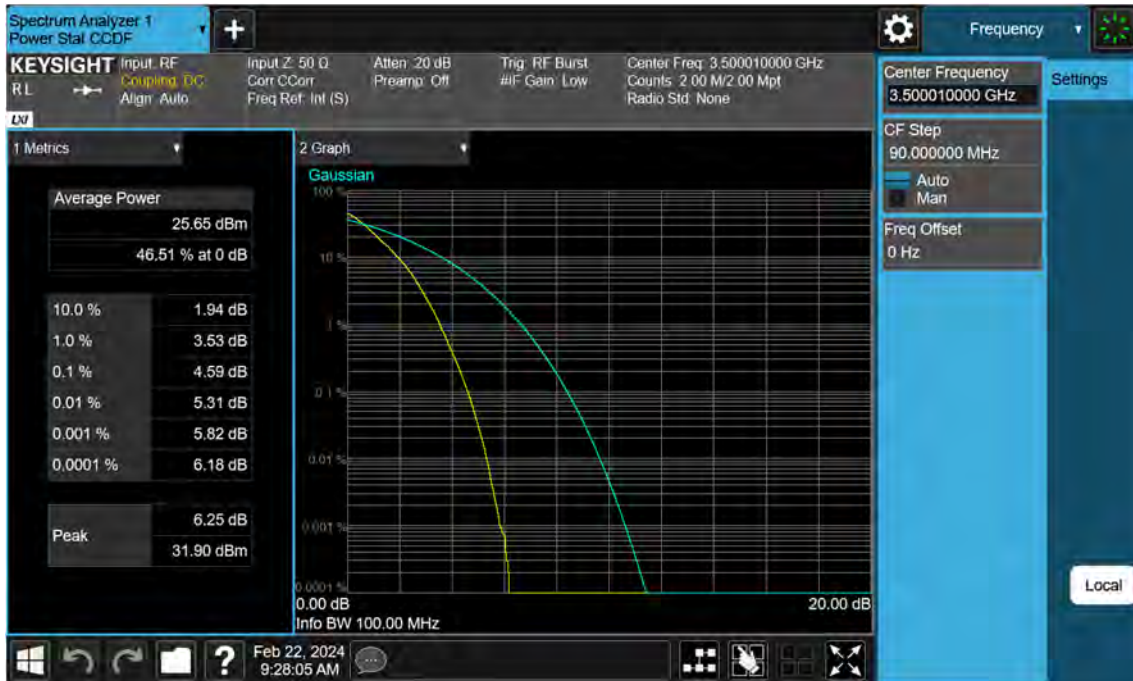
Sub6 n77. PAR Plot (90 M BW_Ch.633334_64QAM)



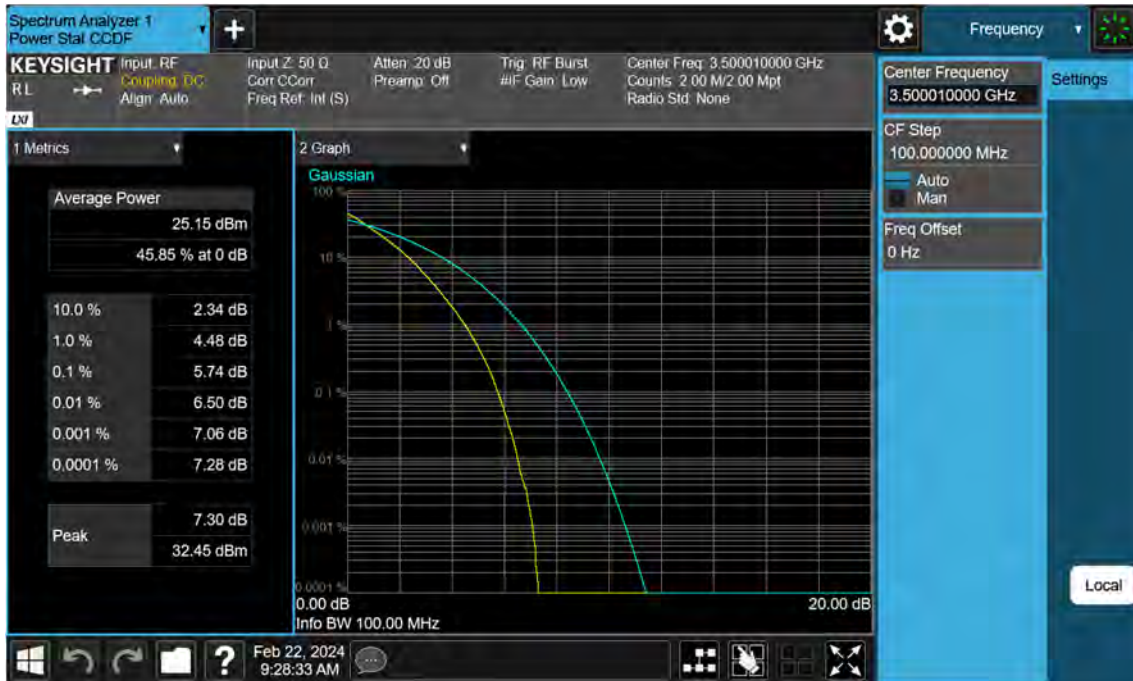
Sub6 n77. PAR Plot (90 M BW_Ch.633334_256QAM)



Sub6 n77. PAR Plot (100 M BW_Ch.633334_ BPSK)



Sub6 n77. PAR Plot (100 M BW_Ch.633334_QPSK)



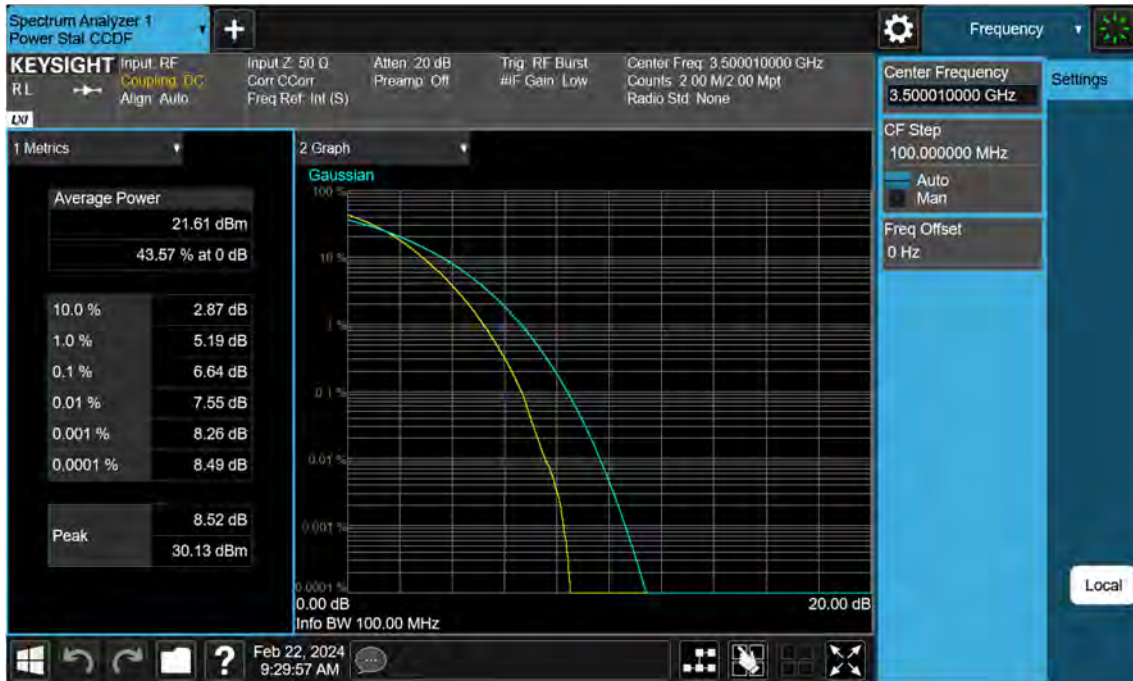
Sub6 n77. PAR Plot (100 M BW_Ch.633334_16QAM)



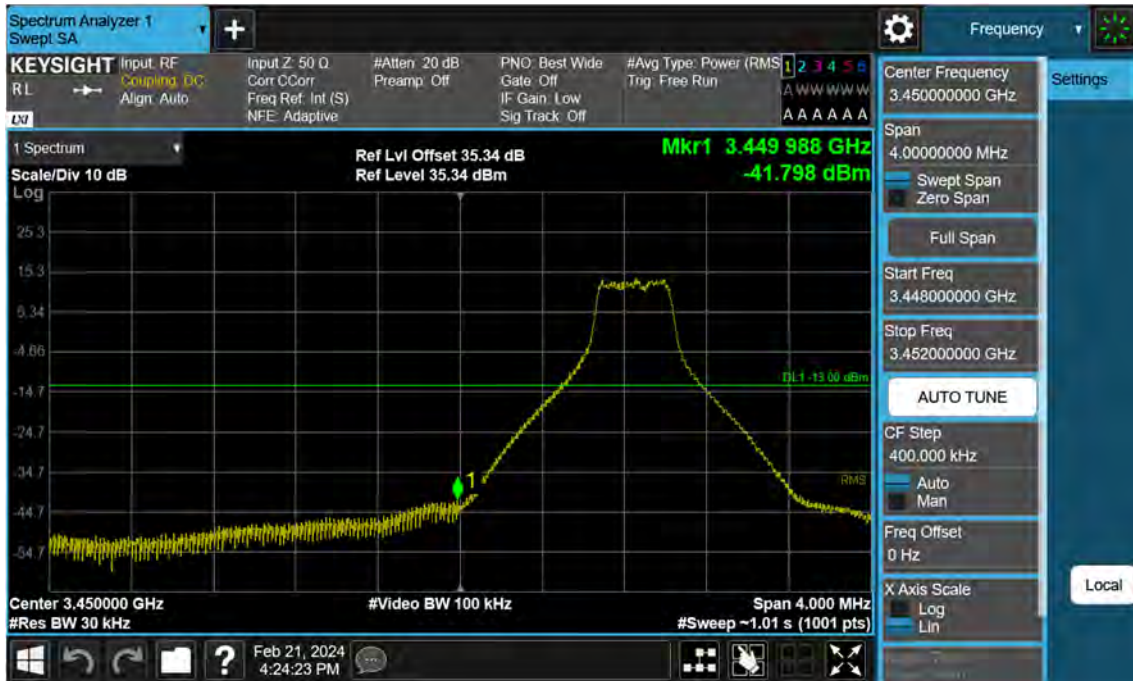
Sub6 n77. PAR Plot (100 M BW_Ch.633334_64QAM)



Sub6 n77. PAR Plot (100 M BW_Ch.633334_256QAM)



Sub6 n77. Low Band Edge Plot (10 M BW Ch.630334 BPSK 1RB)(1)



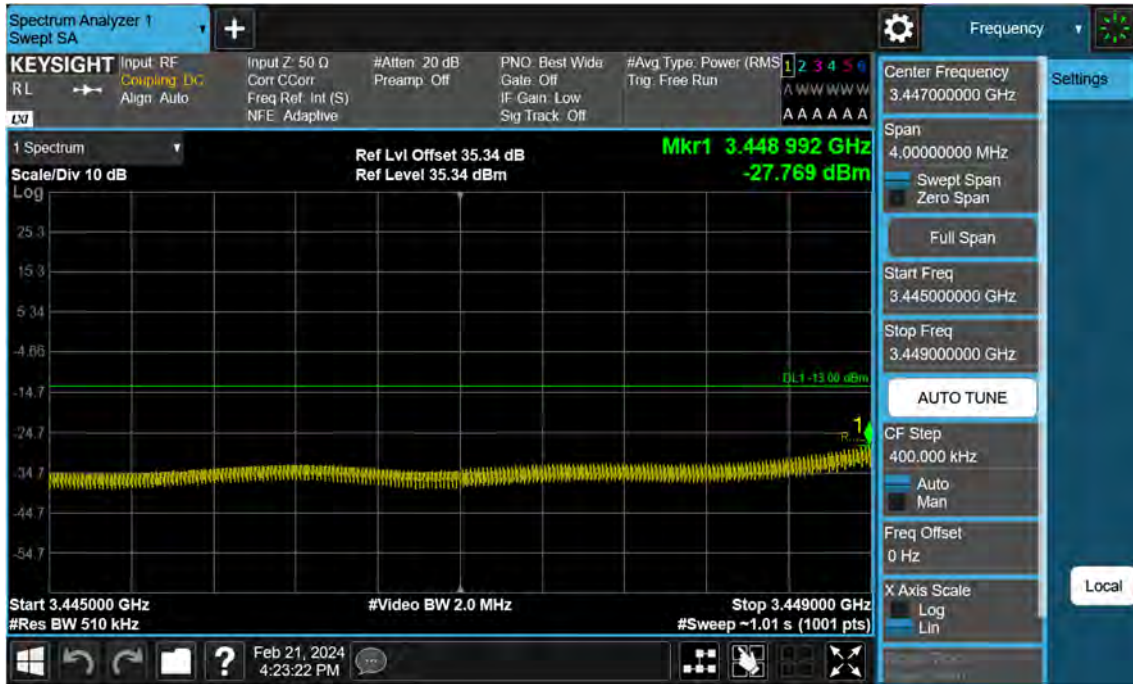
Sub6 n77. Low Band Edge Plot (10 M BW Ch.630334 BPSK FullRB)(1)



Sub6 n77. Low Band Edge Plot (10 M BW Ch.630334 BPSK 1RB)(2)



Sub6 n77. Low Band Edge Plot (10 M BW Ch.630334 BPSK FullRB)(2)



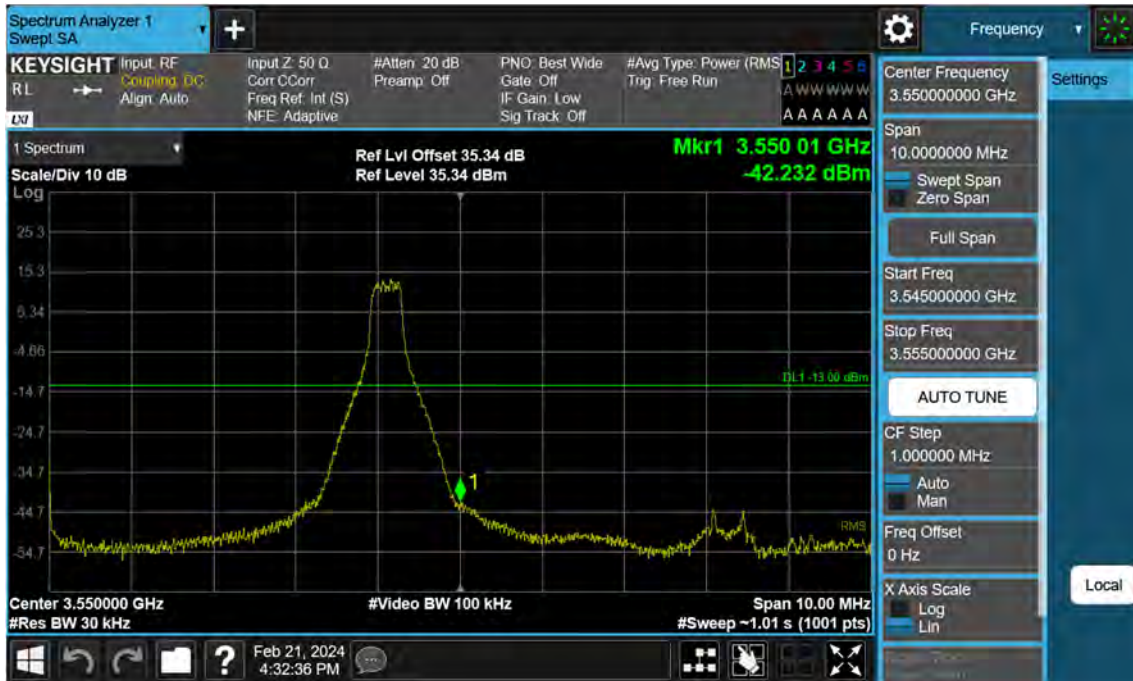
Sub6 n77. Low Band Edge Plot (10 M BW Ch.630334 BPSK 1RB)(3)



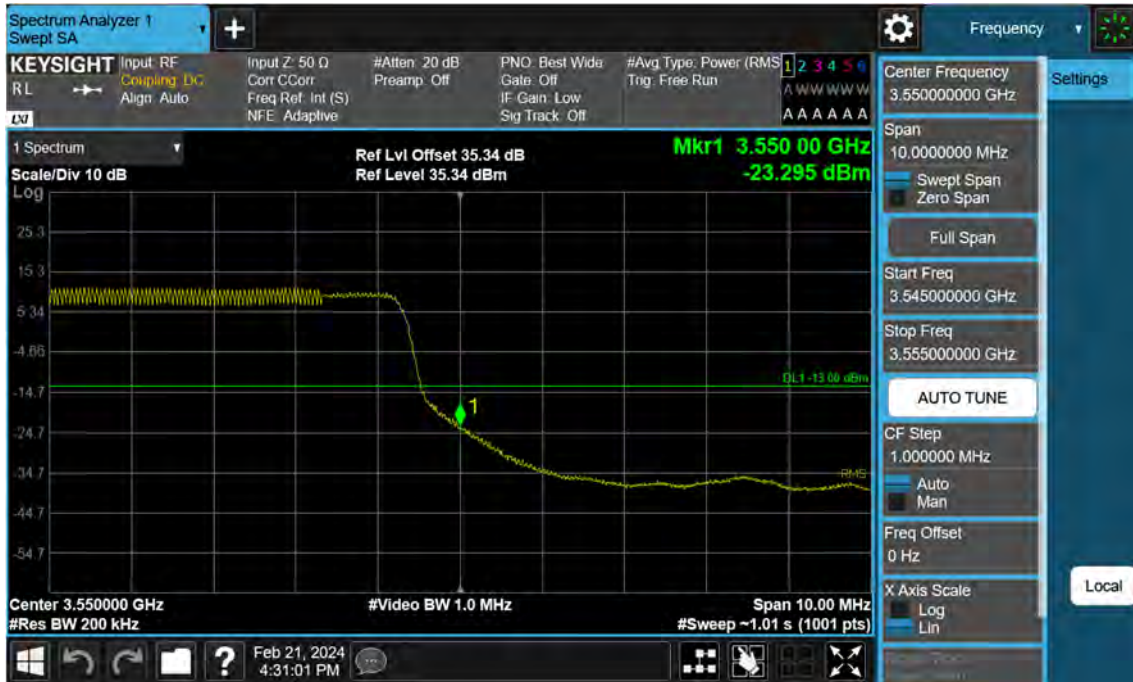
Sub6 n77. Low Band Edge Plot (10 M BW Ch.630334 BPSK FullRB)(3)



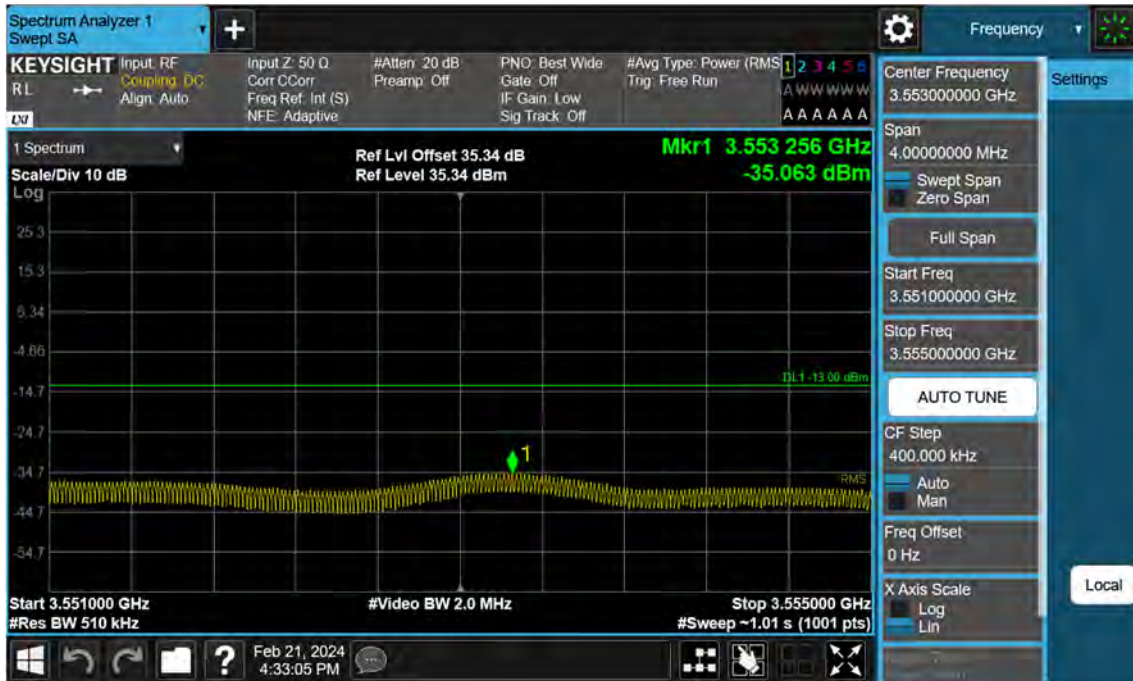
Sub6 n77. High Band Edge Plot (10 M BW Ch.636322 BPSK 1RB)(1)



Sub6 n77. High Band Edge Plot (10 M BW Ch.636322 BPSK FullRB)(1)



Sub6 n77. High Band Edge Plot (10 M BW Ch.636322 BPSK 1RB)(2)



Sub6 n77. High Band Edge Plot (10 M BW Ch.636322 BPSK FullRB)(2)



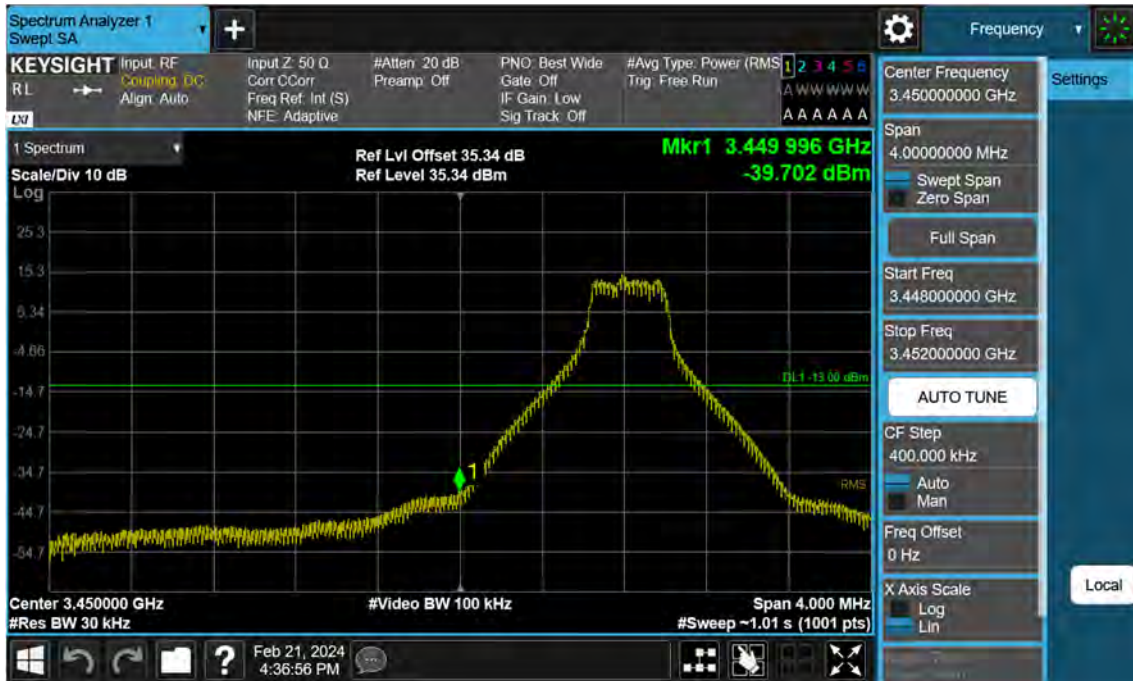
Sub6 n77. High Band Edge Plot (10 M BW Ch.636322 BPSK 1RB)(3)



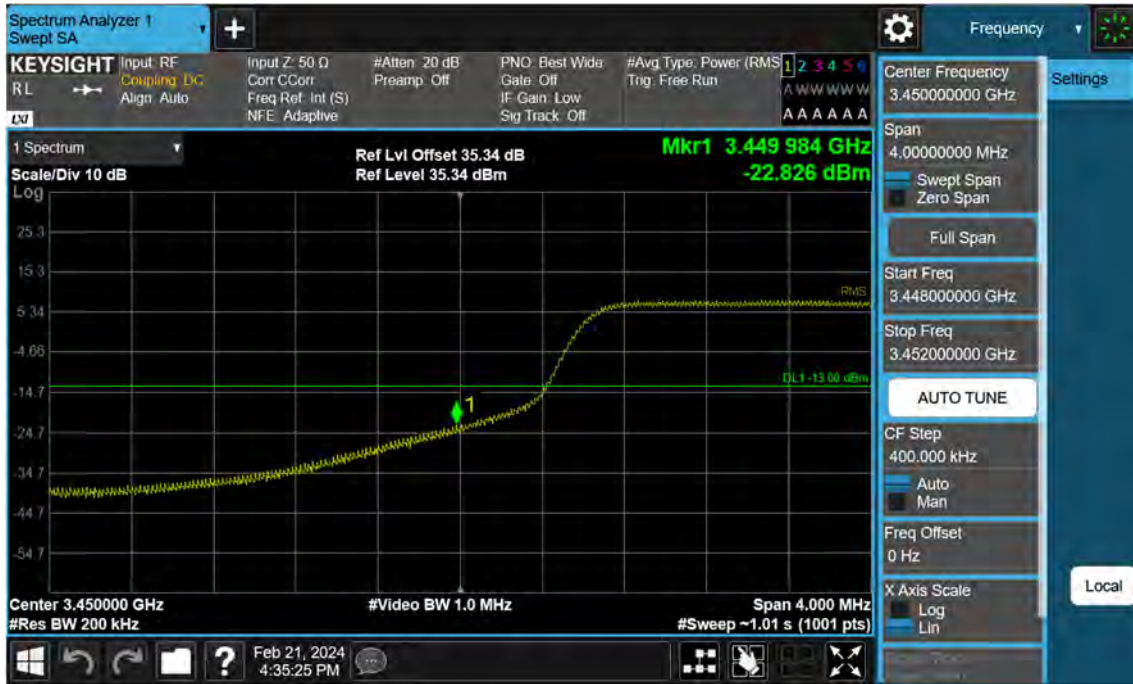
Sub6 n77. High Band Edge Plot (10 M BW Ch.636322 BPSK FullRB)(3)



Sub6 n77. Low Band Edge Plot (15 M BW Ch.630500 BPSK 1RB)(1)



Sub6 n77. Low Band Edge Plot (15 M BW Ch.630500 BPSK FullRB)(1)



Sub6 n77. Low Band Edge Plot (15 M BW Ch.630500 BPSK 1RB)(2)



Sub6 n77. Low Band Edge Plot (15 M BW Ch.630500 BPSK FullRB)(2)



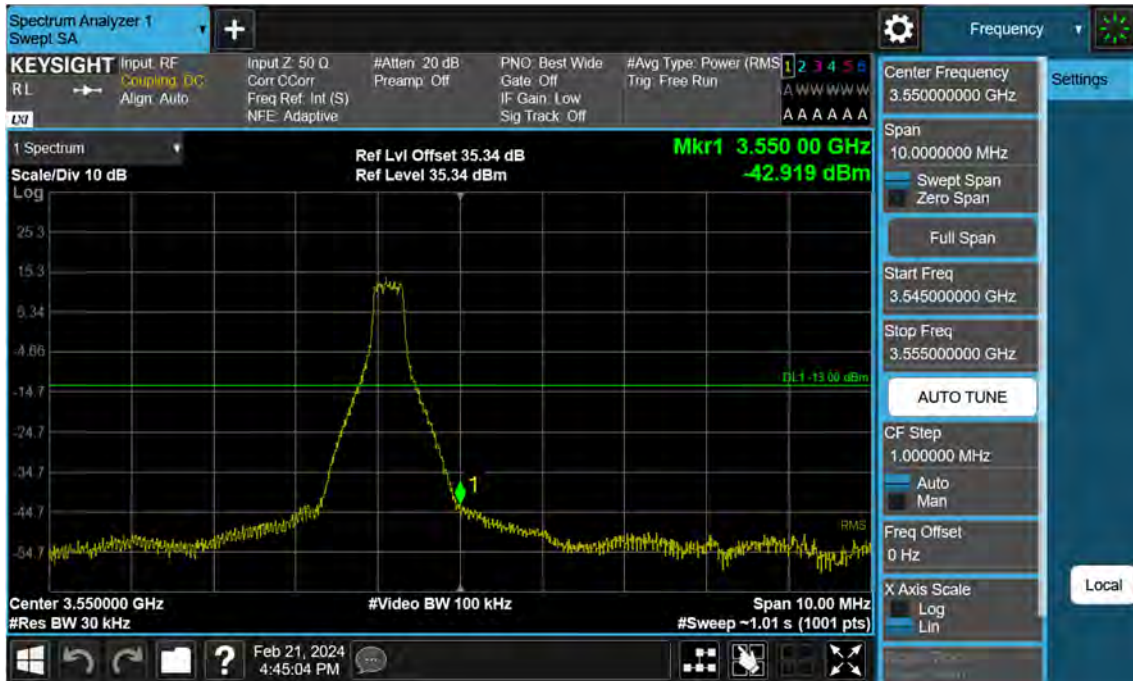
Sub6 n77. Low Band Edge Plot (15 M BW Ch.630500 BPSK 1RB)(3)



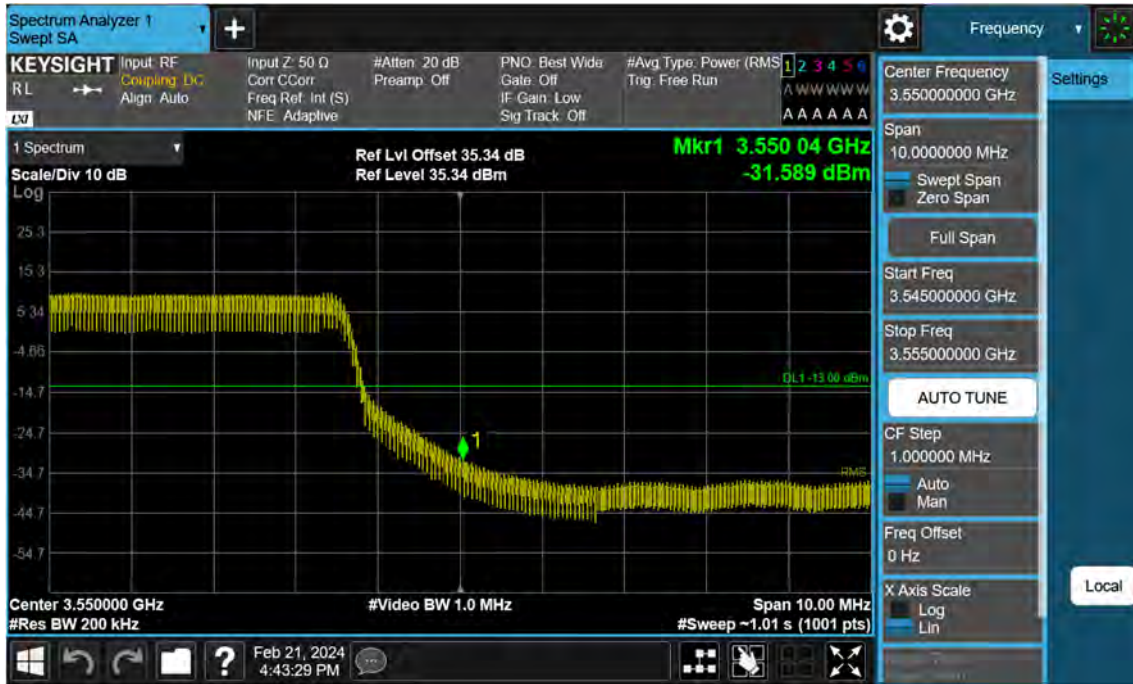
Sub6 n77. Low Band Edge Plot (15 M BW Ch.630500 BPSK FullRB)(3)



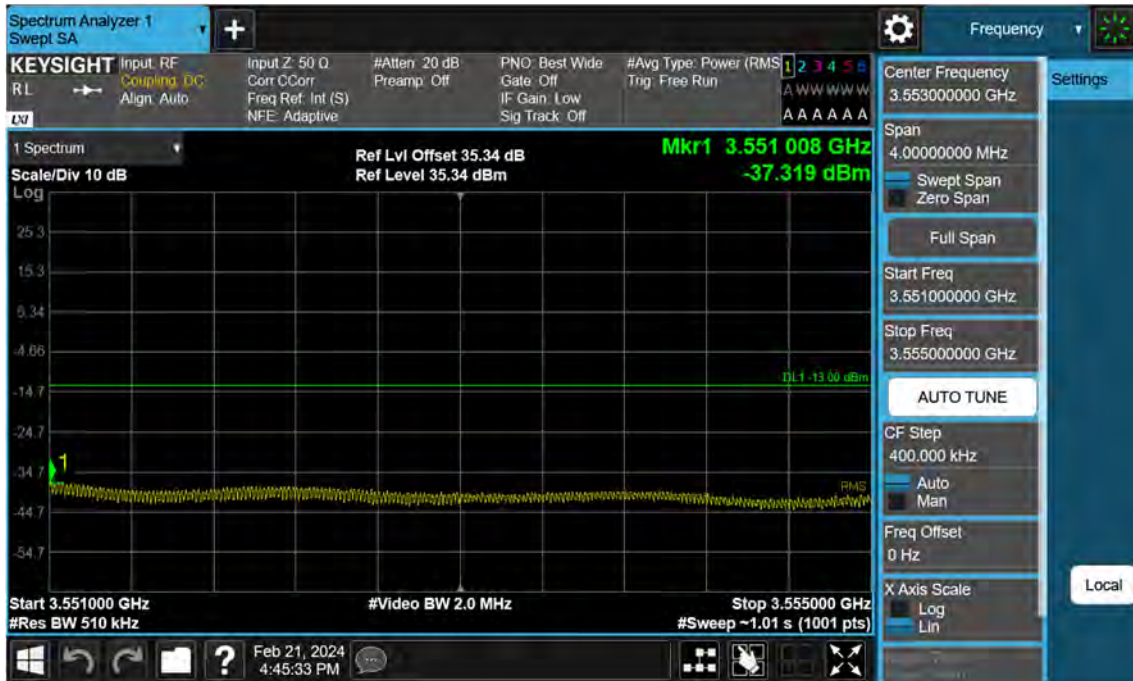
Sub6 n77. High Band Edge Plot (15 M BW Ch.636166 BPSK 1RB)(1)



Sub6 n77. High Band Edge Plot (15 M BW Ch.636166 BPSK FullRB)(1)



Sub6 n77. High Band Edge Plot (15 M BW Ch.636166 BPSK 1RB)(2)



Sub6 n77. High Band Edge Plot (15 M BW Ch.636166 BPSK FullRB)(2)



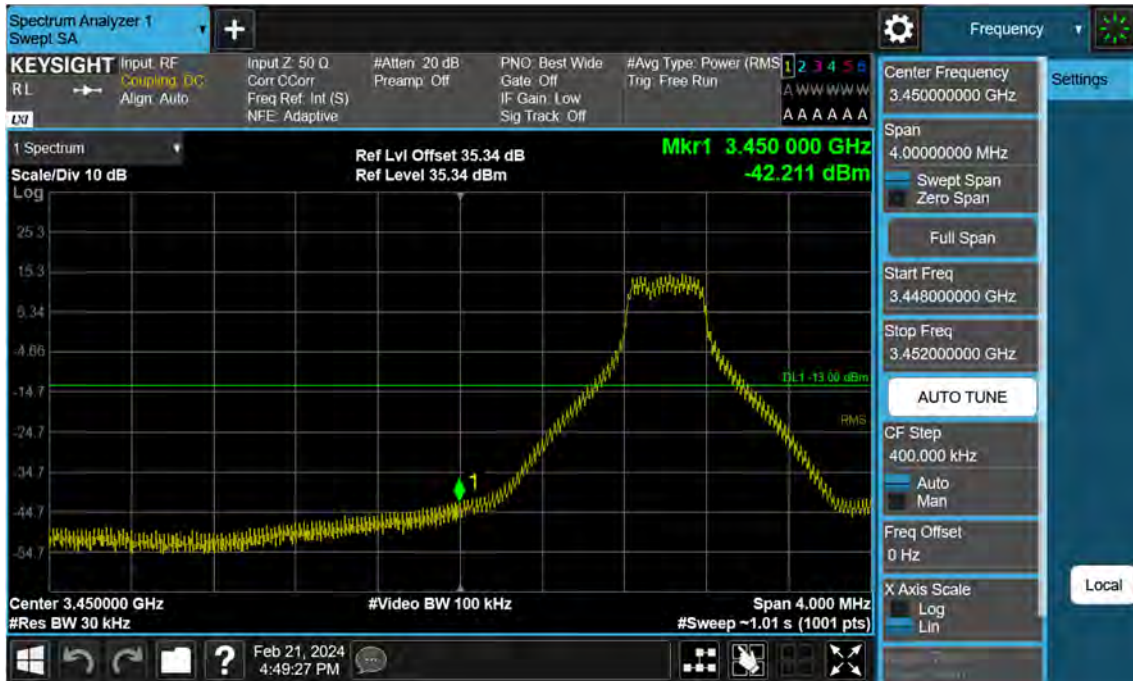
Sub6 n77. High Band Edge Plot (15 M BW Ch.636166 BPSK 1RB)(3)



Sub6 n77. High Band Edge Plot (15 M BW Ch.636166 BPSK FullRB)(3)



Sub6 n77. Low Band Edge Plot (20 M BW Ch.630668 BPSK 1RB)(1)



Sub6 n77. Low Band Edge Plot (20 M BW Ch.630668 BPSK FullRB)(1)



Sub6 n77. Low Band Edge Plot (20 M BW Ch.630668 BPSK 1RB)(2)



Sub6 n77. Low Band Edge Plot (20 M BW Ch.630668 BPSK FullRB)(2)



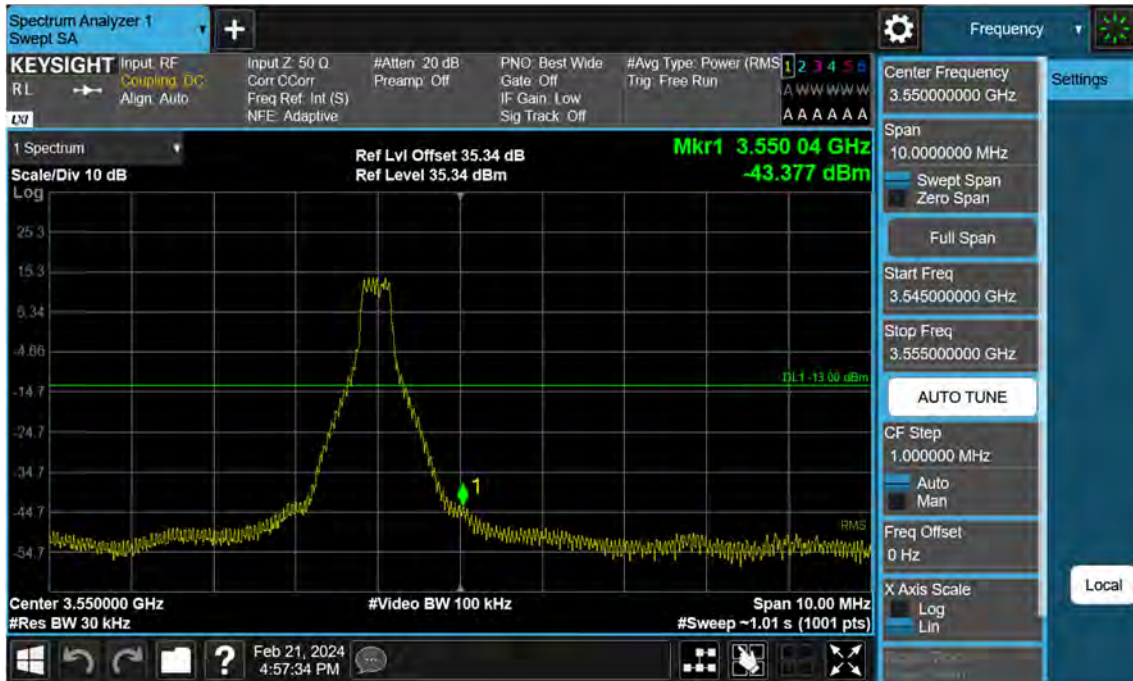
Sub6 n77. Low Band Edge Plot (20 M BW Ch.630668 BPSK 1RB)(3)



Sub6 n77. Low Band Edge Plot (20 M BW Ch.630668 BPSK FullRB)(3)



Sub6 n77. High Band Edge Plot (20 M BW Ch.636000 BPSK 1RB)(1)



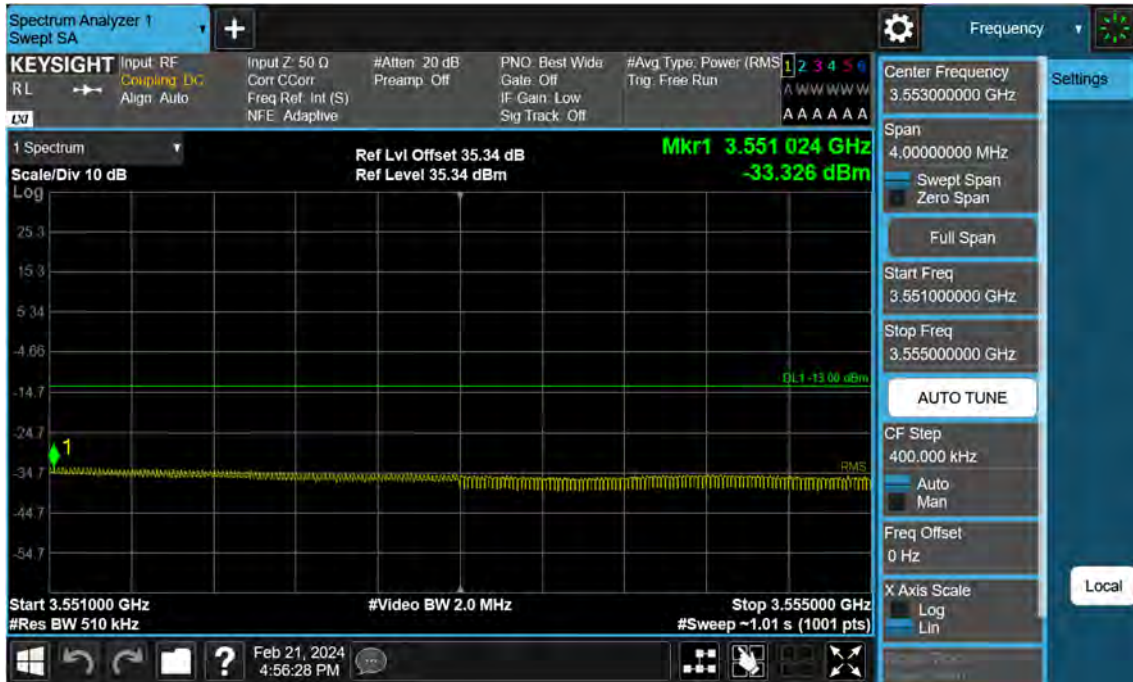
Sub6 n77. High Band Edge Plot (20 M BW Ch.636000 BPSK FullRB)(1)



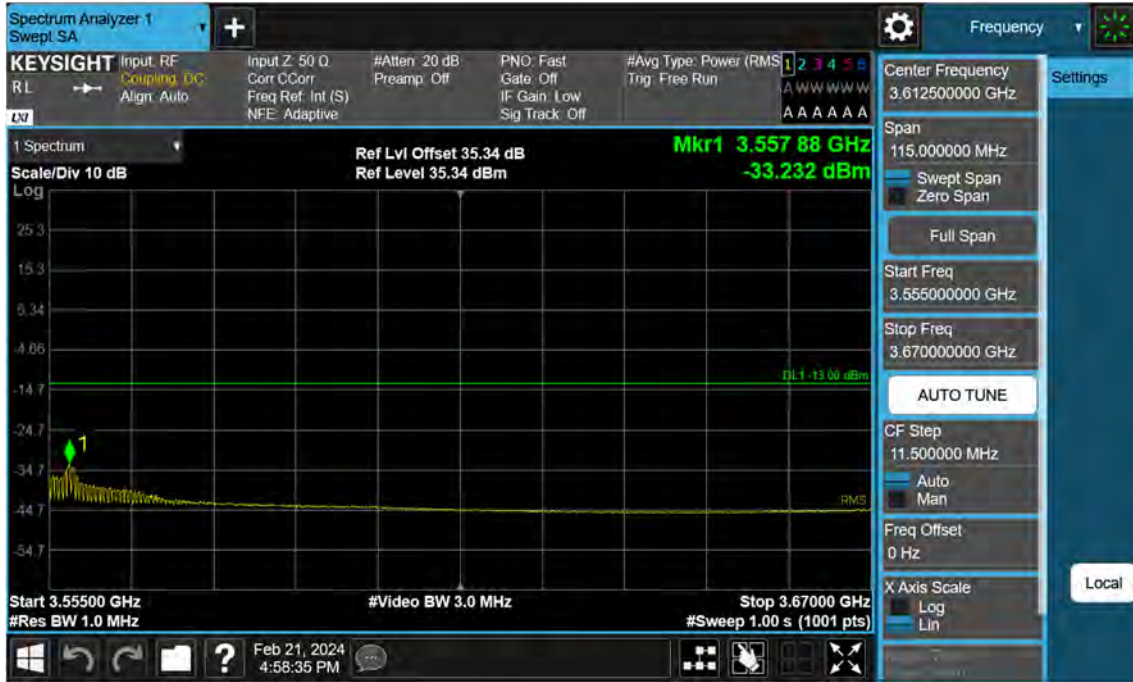
Sub6 n77. High Band Edge Plot (20 M BW Ch.636000 BPSK 1RB)(2)



Sub6 n77. High Band Edge Plot (20 M BW Ch.636000 BPSK FullRB)(2)



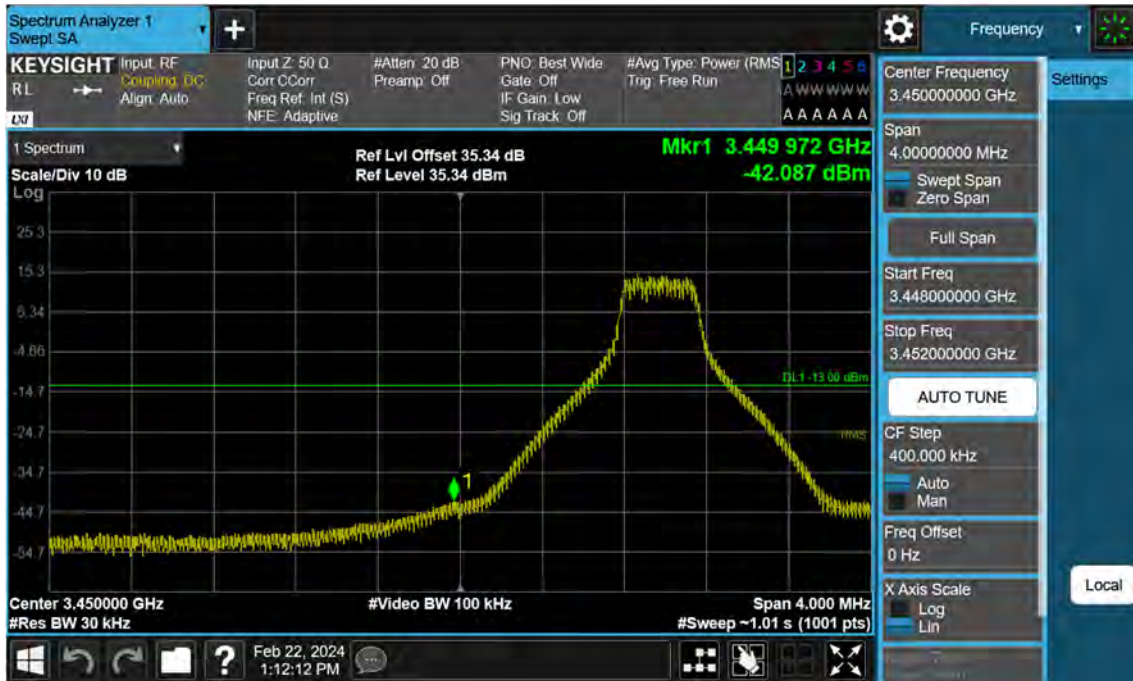
Sub6 n77. High Band Edge Plot (20 M BW Ch.636000 BPSK 1RB)(3)



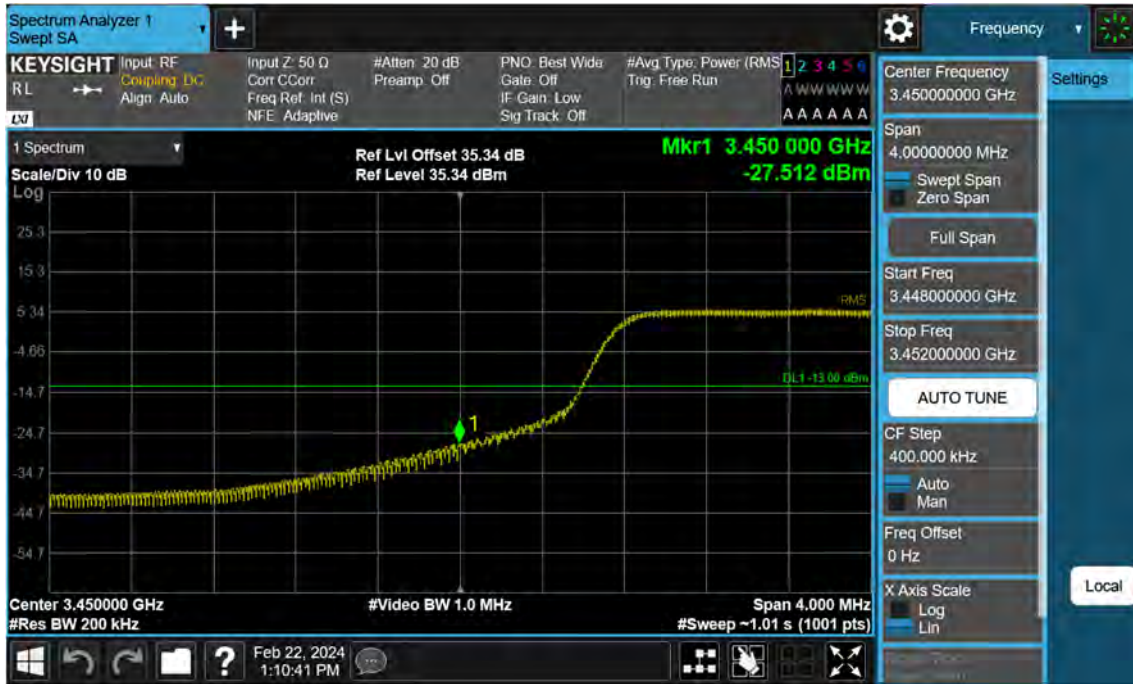
Sub6 n77. High Band Edge Plot (20 M BW Ch.636000 BPSK FullRB)(3)



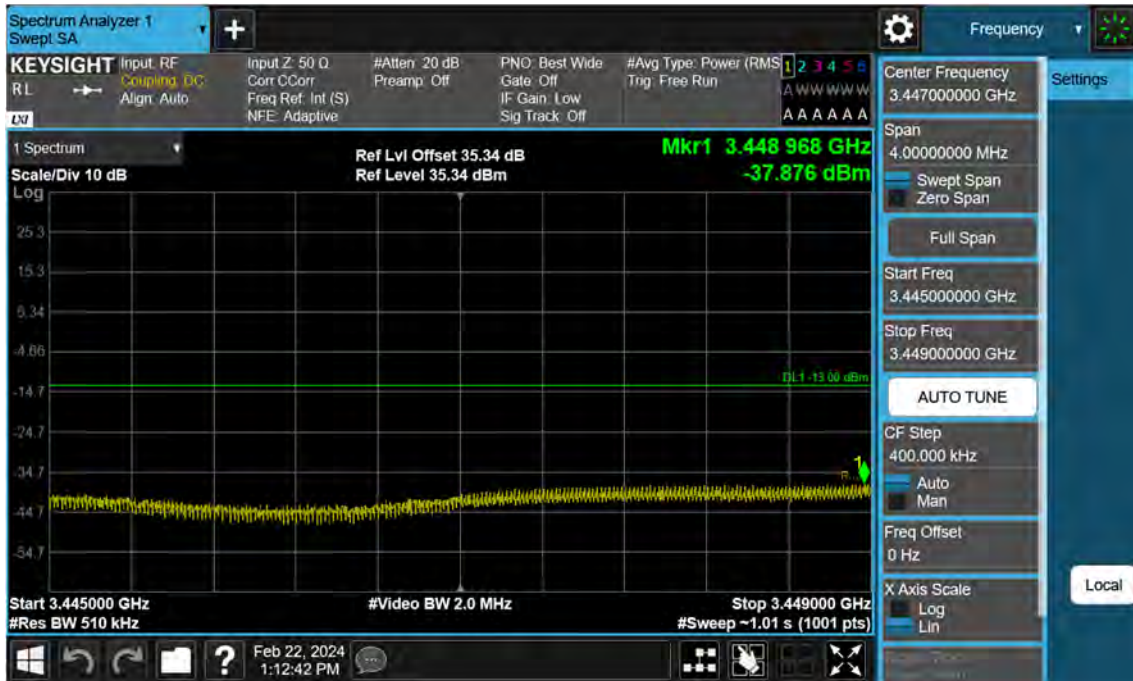
Sub6 n77. Low Band Edge Plot (25 M BW Ch.630836 BPSK 1RB)(1)



Sub6 n77. Low Band Edge Plot (25 M BW Ch.630836 BPSK FullRB)(1)



Sub6 n77. Low Band Edge Plot (25 M BW Ch.630836 BPSK 1RB)(2)



Sub6 n77. Low Band Edge Plot (25 M BW Ch.630836 BPSK FullRB)(2)

