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FCC Sub6 REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

Address:
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Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Date of Issue:
December 27, 2022

Location:
HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

Report No.: HCT-RF-2212-FC015

FCC ID:	**A3LSMM146B**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s):	SM-M146B/DSN
EUT Type:	Mobile Phone
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2

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

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

1. 3450 MHz - 3550 MHz

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n77 (10)	3455.01 – 3544.99	8M69G7D	PI/2 BPSK	0.147	21.66
		8M68G7D	QPSK	0.146	21.63
		8M69W7D	16QAM	0.111	20.45
		8M70W7D	64QAM	0.080	19.03
		8M71W7D	256QAM	0.050	16.99
Sub6 n77 (15)	3457.50 – 3542.50	13M0G7D	PI/2 BPSK	0.140	21.47
		13M0G7D	QPSK	0.139	21.44
		13M0W7D	16QAM	0.113	20.52
		13M0W7D	64QAM	0.078	18.90
		13M0W7D	256QAM	0.049	16.88
Sub6 n77 (20)	3460.02 – 3540.00	18M0G7D	PI/2 BPSK	0.150	21.75
		18M0G7D	QPSK	0.149	21.73
		18M0W7D	16QAM	0.114	20.55
		18M0W7D	64QAM	0.079	18.95
		18M0W7D	256QAM	0.051	17.05
Sub6 n77 (25)	3462.50 – 3537.50	23M0G7D	PI/2 BPSK	0.148	21.70
		23M0G7D	QPSK	0.147	21.66
		23M0W7D	16QAM	0.117	20.67
		23M0W7D	64QAM	0.077	18.85
		22M9W7D	256QAM	0.052	17.15
Sub6 n77 (30)	3465.00 – 3534.99	27M0G7D	PI/2 BPSK	0.147	21.66
		27M0G7D	QPSK	0.146	21.63
		27M0W7D	16QAM	0.116	20.64
		27M0W7D	64QAM	0.081	19.06
		27M0W7D	256QAM	0.050	17.02
Sub6 n77 (40)	3470.01 – 3529.98	36M0G7D	PI/2 BPSK	0.137	21.37
		36M0G7D	QPSK	0.136	21.32
		36M0W7D	16QAM	0.109	20.39
		35M9W7D	64QAM	0.076	18.82
		35M9W7D	256QAM	0.048	16.79
Sub6 n77 (50)	3475.02 – 3525.00	46M0G7D	PI/2 BPSK	0.136	21.32
		46M0G7D	QPSK	0.135	21.29
		45M9W7D	16QAM	0.106	20.25
		45M9W7D	64QAM	0.076	18.78
		46M1W7D	256QAM	0.047	16.73
Sub6 n77 (60)	3480.00 – 3519.99	58M4G7D	PI/2 BPSK	0.136	21.35
		58M2G7D	QPSK	0.136	21.34
		58M1W7D	16QAM	0.107	20.31
		58M1W7D	64QAM	0.077	18.85
		58M2W7D	256QAM	0.047	16.68
Sub6 n77 (70)	3485.01 – 3514.98	64M8G7D	PI/2 BPSK	0.143	21.54
		65M0G7D	QPSK	0.142	21.52
		64M8W7D	16QAM	0.110	20.41
		64M8W7D	64QAM	0.077	18.85
		64M8W7D	256QAM	0.050	16.95
Sub6 n77 (80)	3490.02 – 3510.00	77M7G7D	PI/2 BPSK	0.148	21.69
		77M7G7D	QPSK	0.147	21.68
		77M6W7D	16QAM	0.115	20.62
		77M7W7D	64QAM	0.085	19.27
		77M6W7D	256QAM	0.052	17.14
Sub6 n77 (90)	3495.00 – 3504.99	87M3G7D	PI/2 BPSK	0.153	21.86
		87M3G7D	QPSK	0.151	21.80
		87M2W7D	16QAM	0.117	20.69
		87M5W7D	64QAM	0.085	19.27
		87M3W7D	256QAM	0.052	17.20
Sub6 n77 (100)	3500.01	96M9G7D	PI/2 BPSK	0.154	21.87
		96M8G7D	QPSK	0.149	21.74
		96M6W7D	16QAM	0.117	20.68
		96M7W7D	64QAM	0.085	19.29
		96M9W7D	256QAM	0.053	17.25

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	8M69G7D	PI/2 BPSK	0.096	19.83
		8M70G7D	QPSK	0.094	19.74
		8M65W7D	16QAM	0.077	18.86
		8M68W7D	64QAM	0.054	17.35
		8M64W7D	256QAM	0.033	15.14
Sub6 n77 (15)	3707.51 – 3972.48	13M0G7D	PI/2 BPSK	0.095	19.79
		13M0G7D	QPSK	0.095	19.76
		13M0W7D	16QAM	0.080	19.01
		13M0W7D	64QAM	0.053	17.21
		13M0W7D	256QAM	0.033	15.19
Sub6 n77 (20)	3710.01 – 3969.99	18M0G7D	PI/2 BPSK	0.098	19.90
		17M9G7D	QPSK	0.097	19.88
		18M0W7D	16QAM	0.077	18.84
		18M0W7D	64QAM	0.055	17.42
		18M0W7D	256QAM	0.033	15.22
Sub6 n77 (25)	3712.50 – 3967.50	23M0G7D	PI/2 BPSK	0.106	20.24
		23M0G7D	QPSK	0.105	20.20
		23M0W7D	16QAM	0.083	19.19
		22M9W7D	64QAM	0.061	17.84
		23M0W7D	256QAM	0.035	15.47
Sub6 n77 (30)	3715.02 – 3964.98	27M0G7D	PI/2 BPSK	0.107	20.31
		27M0G7D	QPSK	0.107	20.29
		26M9W7D	16QAM	0.079	18.99
		26M9W7D	64QAM	0.056	17.45
		27M0W7D	256QAM	0.036	15.62
Sub6 n77 (40)	3720.00 – 3960.00	35M9G7D	PI/2 BPSK	0.109	20.36
		35M9G7D	QPSK	0.104	20.17
		35M8W7D	16QAM	0.082	19.12
		36M0W7D	64QAM	0.062	17.90
		35M9W7D	256QAM	0.037	15.69
Sub6 n77 (50)	3725.10 – 3954.99	45M9G7D	PI/2 BPSK	0.114	20.57
		45M9G7D	QPSK	0.111	20.46
		45M9W7D	16QAM	0.086	19.34
		45M9W7D	64QAM	0.064	18.09
		45M9W7D	256QAM	0.039	15.90
Sub6 n77 (60)	3730.02 – 3949.98	58M2G7D	PI/2 BPSK	0.113	20.53
		58M2G7D	QPSK	0.113	20.52
		58M3W7D	16QAM	0.088	19.45
		58M1W7D	64QAM	0.066	18.21
		58M3W7D	256QAM	0.041	16.16
Sub6 n77 (70)	3735.00 – 3945.00	64M7G7D	PI/2 BPSK	0.111	20.47
		64M8G7D	QPSK	0.110	20.43
		64M7W7D	16QAM	0.090	19.53
		64M6W7D	64QAM	0.063	18.00
		64M7W7D	256QAM	0.038	15.80
Sub6 n77 (80)	3740.01 – 3939.99	77M5G7D	PI/2 BPSK	0.112	20.48
		77M5G7D	QPSK	0.111	20.45
		77M4W7D	16QAM	0.092	19.63
		77M5W7D	64QAM	0.062	17.95
		77M6W7D	256QAM	0.039	15.86
Sub6 n77 (90)	3745.02 – 3934.98	87M1G7D	PI/2 BPSK	0.107	20.29
		87M1G7D	QPSK	0.103	20.12
		87M4W7D	16QAM	0.083	19.18
		87M3W7D	64QAM	0.059	17.69
		87M2W7D	256QAM	0.036	15.59
Sub6 n77 (100)	3750.00 – 3930.00	96M7G7D	PI/2 BPSK	0.099	19.95
		96M7G7D	QPSK	0.098	19.93
		96M6W7D	16QAM	0.077	18.88
		96M7W7D	64QAM	0.056	17.49
		96M8W7D	256QAM	0.034	15.28

REVIEWED BY

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

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

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

This laboratory is not accredited for the test results marked *.
The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (HCT Accreditation No.: KT197)

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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2212-FC015	December 27, 2022	- First Approval Report

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

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MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMM146B
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2
EUT Type:	Mobile phone
Model(s):	SM-M146B/DSN
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:	November 25, 2022 ~ December 23, 2022
Serial number:	Radiated: R3CTA0GVSYB Conducted: R3CTA0GW2KB

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

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

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

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 ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Note

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

   The power is calculated by the following formula;

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

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

3.3 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 ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to 10^{th} harmonics from 9 kHz.

Test Note

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

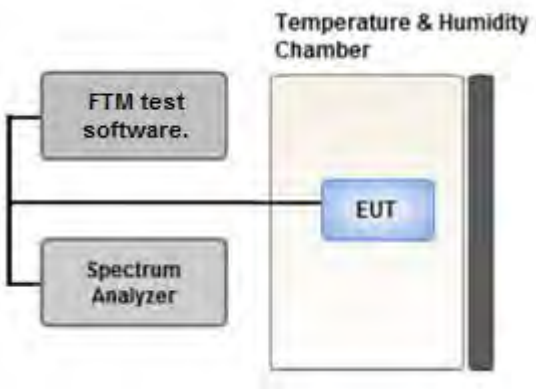
$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

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

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① **CCDF Procedure for PAPR**

Test Settings

1. Set resolution/measurement bandwidth ≥ 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:

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

Test Settings(Peak Power)

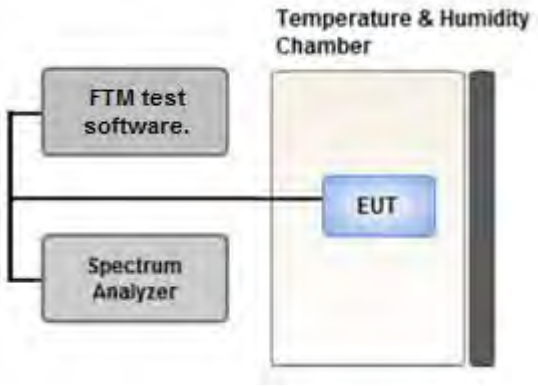
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

1. Set the RBW ≥ OBW.
2. Set VBW ≥ 3 × RBW.
3. Set span ≥ 2 × OBW.
4. Sweep time ≥ 10 × (number of points in sweep) × (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 × to 3 × the OBW.
2. Set RBW ≥ OBW.
3. Set VBW ≥ 3 × RBW.
4. Set number of measurement points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   Set ≥ [10 × (number of points in sweep) × (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/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 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.

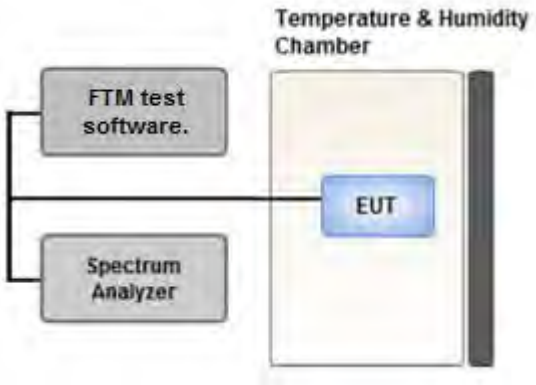
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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 ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5 % of the 99 % occupied bandwidth observed in Step 7

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

Test Overview

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic.

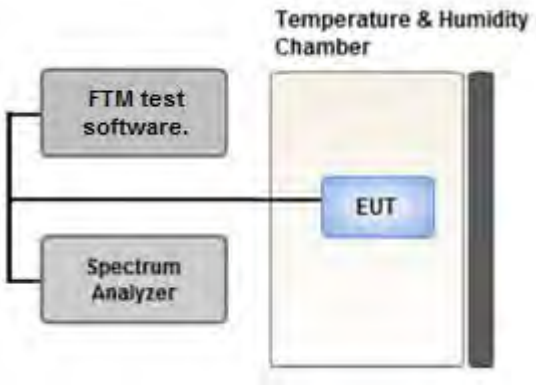
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Settings

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

3.7 BAND EDGE



Test setup

Test Overview

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

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

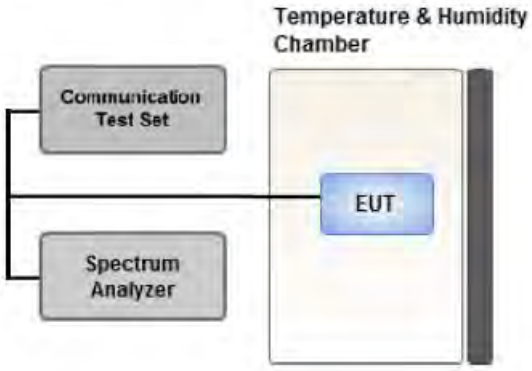
Test Notes

For 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 MHz/ RB) or the emission is integrated over a 1 MHz bandwidth to determine the final result. When using the integration method the integration window is either centered on the emission or, for emissions at the band edge, centered by an offset of 500 kHz from the block edge so that the integration window is the 1 MHz adjacent to the block edge.

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

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

The frequency stability of the transmitter is measured by:

1. Temperature:

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

2. Primary Supply Voltage:

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

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

Test Settings

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

3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
  Worst case : Stand alone
  Mode: SA, NSA
  Worst case: NSA (5A - n77)
- We were performed the RSE test in condition of co-location.
  Mode : Stand alone, Simultaneous transmission scenarios
  Worst case : Stand alone
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
  (Worst case: 5A - n77A)
- 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 : 100 MHz(3450 MHz – 3550 MHz), 50 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		Z

[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		Z

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
  (Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: SA, NSA
  Worst case: NSA (5A - n77)
- 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	03/27/2024	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	03/27/2024	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	02289	03/21/2024	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	05/04/2023	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	06/04/2023	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/03/2023	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/22/2023	Biennial
High Pass Filter	WHKX10-900-1000-15000-40SS	Wainwright Instruments	15	05/18/2023	Annual
High Pass Filter	WHKX10-2700-3000-18000-40SS	Wainwright Instruments	145	05/18/2023	Annual
High Pass Filter	WHNX6-4740-6000-26500-40CC	Wainwright Instruments	11	05/18/2023	Annual
LOW NOISE AMP (100 MHz ~ 18 GHz)	CBLU1183540B-01	CERNEX	26822	05/18/2023	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/11/2023	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	09/05/2023	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	03/11/2023	Annual
Chamber	SU-642	ESPEC	93008124	03/04/2023	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/19/2023	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	05/18/2023	Annual
Spectrum Analyzer(10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/25/2023	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/18/2023	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287700	05/19/2023	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/18/2023	Annual
SIGNAL GENERATOR (100 kHz~40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/05/2023	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/30/2023	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/27/2023	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 (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	2.00 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.40 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.74 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.51 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.92 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.48 (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	**See Note1**
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

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

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.

2) During the test , the turn table is rotated until the maximum signal is found.

3) Record the field strength meter's level.

4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.

5) Increase the signal generator output till the field strength meter's level is equal to the item (3).

6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Level(dBm)	Substitute Level(dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
349000	1,732.50	-15.75	18.45	9.90	1.76	H	0.456	26.59

EIRP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.

2) During the test , the turn table is rotated until the maximum signal is found.

3) Record the field strength meter's level.

4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.

5) Increase the signal generator output till the field strength meter's level is equal to the item (3).

6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

PSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

8. TEST DATA (3450 MHz - 3550 MHz)

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3455.01	Sub6 n77/ 10 MHz [30 kHz]	PI/2 BPSK	-24.53	13.41	11.20	2.96	V	< 1.00	0.147	21.66	1	1
		QPSK	-24.56	13.38	11.20	2.96	V		0.146	21.63		
		16-QAM	-25.74	12.20	11.20	2.96	V		0.111	20.45		
		64-QAM	-27.16	10.78	11.20	2.96	V		0.080	19.03		
		256-QAM	-29.20	8.74	11.20	2.96	V		0.050	16.99		
3500.01		PI/2 BPSK	-25.43	12.82	11.30	3.00	V		0.129	21.12	1	12
		QPSK	-25.44	12.81	11.30	3.00	V		0.129	21.11		
		16-QAM	-26.61	11.64	11.30	3.00	V		0.099	19.94		
		64-QAM	-27.97	10.28	11.30	3.00	V		0.072	18.58		
		256-QAM	-29.99	8.26	11.30	3.00	V		0.045	16.56		
3544.99		PI/2 BPSK	-26.21	11.86	11.35	3.02	V		0.104	20.19	1	12
		QPSK	-26.23	11.84	11.35	3.02	V		0.104	20.17		
		16-QAM	-27.31	10.76	11.35	3.02	V		0.081	19.09		
		64-QAM	-28.55	9.52	11.35	3.02	V		0.061	17.85		
		256-QAM	-30.49	7.58	11.35	3.02	V		0.039	15.91		

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	-24.69	13.22	11.20	2.95	V	< 1.00	0.140	21.47	1	1
		QPSK	-24.72	13.19	11.20	2.95	V		0.139	21.44		
		16-QAM	-25.64	12.27	11.20	2.95	V		0.113	20.52		
		64-QAM	-27.26	10.65	11.20	2.95	V		0.078	18.90		
		256-QAM	-29.28	8.63	11.20	2.95	V		0.049	16.88		
3500.01		PI/2 BPSK	-25.59	12.66	11.30	3.00	V		0.125	20.96	1	1
		QPSK	-25.61	12.64	11.30	3.00	V		0.124	20.94		
		16-QAM	-26.62	11.63	11.30	3.00	V		0.098	19.93		
		64-QAM	-28.05	10.20	11.30	3.00	V		0.071	18.50		
		256-QAM	-30.10	8.15	11.30	3.00	V		0.044	16.45		
3542.50		PI/2 BPSK	-26.14	11.81	11.30	3.02	V		0.102	20.09	1	1
		QPSK	-26.16	11.79	11.30	3.02	V		0.102	20.07		
		16-QAM	-27.03	10.92	11.30	3.02	V		0.083	19.20		
		64-QAM	-28.71	9.24	11.30	3.02	V		0.057	17.52		
		256-QAM	-30.61	7.34	11.30	3.02	V		0.036	15.62		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3460.02	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-24.41	13.50	11.20	2.95	V	< 1.00	0.150	21.75	1	1
		QPSK	-24.43	13.48	11.20	2.95	V		0.149	21.73		
		16-QAM	-25.61	12.30	11.20	2.95	V		0.114	20.55		
		64-QAM	-27.21	10.70	11.20	2.95	V		0.079	18.95		
		256-QAM	-29.11	8.80	11.20	2.95	V		0.051	17.05		
3500.01		PI/2 BPSK	-25.29	12.96	11.30	3.00	V		0.134	21.26	1	1
		QPSK	-25.31	12.94	11.30	3.00	V		0.133	21.24		
		16-QAM	-26.21	12.04	11.30	3.00	V		0.108	20.34		
		64-QAM	-27.68	10.57	11.30	3.00	V		0.077	18.87		
		256-QAM	-29.79	8.46	11.30	3.00	V		0.047	16.76		
3540.00		PI/2 BPSK	-25.80	12.15	11.30	3.02	V		0.110	20.43	1	1
		QPSK	-25.81	12.14	11.30	3.02	V		0.110	20.42		
		16-QAM	-26.76	11.19	11.30	3.02	V		0.089	19.47		
		64-QAM	-28.29	9.66	11.30	3.02	V		0.062	17.94		
		256-QAM	-30.18	7.77	11.30	3.02	V		0.040	16.05		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3462.50	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-24.46	13.45	11.20	2.95	V	< 1.00	0.148	21.70	1	1
		QPSK	-24.50	13.41	11.20	2.95	V		0.147	21.66		
		16-QAM	-25.49	12.42	11.20	2.95	V		0.117	20.67		
		64-QAM	-27.31	10.60	11.20	2.95	V		0.077	18.85		
		256-QAM	-29.01	8.90	11.20	2.95	V		0.052	17.15		
3500.01		PI/2 BPSK	-25.27	12.98	11.30	3.00	V		0.134	21.28	1	1
		QPSK	-25.29	12.96	11.30	3.00	V		0.134	21.26		
		16-QAM	-26.36	11.89	11.30	3.00	V		0.105	20.19		
		64-QAM	-27.75	10.50	11.30	3.00	V		0.076	18.80		
		256-QAM	-29.86	8.39	11.30	3.00	V		0.047	16.69		
3537.50		PI/2 BPSK	-25.64	12.31	11.30	3.02	V		0.115	20.59	1	1
		QPSK	-25.67	12.28	11.30	3.02	V		0.114	20.56		
		16-QAM	-27.01	10.94	11.30	3.02	V		0.084	19.22		
		64-QAM	-28.31	9.64	11.30	3.02	V		0.062	17.92		
		256-QAM	-30.39	7.56	11.30	3.02	V		0.038	15.84		

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	Offset
3465.00	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-24.46	13.41	11.20	2.95	H	< 1.00	0.147	21.66	1	1
		QPSK	-24.49	13.38	11.20	2.95	H		0.145	21.63		
		16-QAM	-25.48	12.39	11.20	2.95	H		0.116	20.64		
		64-QAM	-27.06	10.81	11.20	2.95	H		0.081	19.06		
		256-QAM	-29.10	8.77	11.20	2.95	H		0.050	17.02		
3500.01		PI/2 BPSK	-25.31	12.94	11.30	3.00	H		0.133	21.24	1	1
		QPSK	-25.34	12.91	11.30	3.00	H		0.132	21.21		
		16-QAM	-26.26	11.99	11.30	3.00	H		0.107	20.29		
		64-QAM	-28.01	10.24	11.30	3.00	H		0.071	18.54		
		256-QAM	-29.89	8.36	11.30	3.00	H		0.046	16.66		
3534.99		PI/2 BPSK	-25.60	12.31	11.30	3.01	H		0.115	20.61	1	1
		QPSK	-25.62	12.29	11.30	3.01	H		0.115	20.59		
		16-QAM	-26.82	11.09	11.30	3.01	H		0.087	19.39		
		64-QAM	-28.22	9.69	11.30	3.01	H		0.063	17.99		
		256-QAM	-30.21	7.70	11.30	3.01	H		0.040	16.00		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3470.01	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-24.71	13.12	11.20	2.95	V	< 1.00	0.137	21.37	1	1
		QPSK	-24.76	13.07	11.20	2.95	V		0.136	21.32		
		16-QAM	-25.69	12.14	11.20	2.95	V		0.109	20.39		
		64-QAM	-27.26	10.57	11.20	2.95	V		0.076	18.82		
		256-QAM	-29.29	8.54	11.20	2.95	V		0.048	16.79		
3500.01		PI/2 BPSK	-25.39	12.86	11.30	3.00	V		0.131	21.16	1	1
		QPSK	-25.41	12.84	11.30	3.00	V		0.130	21.14		
		16-QAM	-26.43	11.82	11.30	3.00	V		0.103	20.12		
		64-QAM	-27.96	10.29	11.30	3.00	V		0.072	18.59		
		256-QAM	-29.87	8.38	11.30	3.00	V		0.047	16.68		
3529.98		PI/2 BPSK	-25.67	12.21	11.30	2.99	V		0.113	20.52	1	1
		QPSK	-25.69	12.19	11.30	2.99	V		0.112	20.50		
		16-QAM	-26.74	11.14	11.30	2.99	V		0.088	19.45		
		64-QAM	-28.20	9.68	11.30	2.99	V		0.063	17.99		
		256-QAM	-30.26	7.62	11.30	2.99	V		0.039	15.93		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3475.02	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-24.79	13.09	11.20	2.97	V	< 1.00	0.136	21.32	1	1
		QPSK	-24.82	13.06	11.20	2.97	V		0.135	21.29		
		16-QAM	-25.86	12.02	11.20	2.97	V		0.106	20.25		
		64-QAM	-27.33	10.55	11.20	2.97	V		0.076	18.78		
		256-QAM	-29.38	8.50	11.20	2.97	V		0.047	16.73		
3500.01		PI/2 BPSK	-25.39	12.86	11.30	3.00	V		0.131	21.16	1	1
		QPSK	-25.44	12.81	11.30	3.00	V		0.129	21.11		
		16-QAM	-26.45	11.80	11.30	3.00	V		0.102	20.10		
		64-QAM	-27.93	10.32	11.30	3.00	V		0.073	18.62		
		256-QAM	-29.85	8.40	11.30	3.00	V		0.047	16.70		
3525.00		PI/2 BPSK	-25.69	12.21	11.30	2.98	V		0.113	20.53	1	1
		QPSK	-25.71	12.19	11.30	2.98	V		0.112	20.51		
		16-QAM	-26.76	11.14	11.30	2.98	V		0.088	19.46		
		64-QAM	-28.26	9.64	11.30	2.98	V		0.063	17.96		
		256-QAM	-30.25	7.65	11.30	2.98	V		0.040	15.97		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3480.00	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-24.80	13.14	11.20	2.99	V	< 1.00	0.136	21.35	1	1
		QPSK	-24.81	13.13	11.20	2.99	V		0.136	21.34		
		16-QAM	-25.94	12.00	11.20	2.99	V		0.105	20.21		
		64-QAM	-27.41	10.53	11.20	2.99	V		0.075	18.74		
		256-QAM	-29.47	8.47	11.20	2.99	V		0.047	16.68		
3500.01		PI/2 BPSK	-25.31	12.94	11.30	3.00	V		0.133	21.24	1	1
		QPSK	-25.33	12.92	11.30	3.00	V		0.132	21.22		
		16-QAM	-26.24	12.01	11.30	3.00	V		0.107	20.31		
		64-QAM	-27.70	10.55	11.30	3.00	V		0.077	18.85		
		256-QAM	-29.89	8.36	11.30	3.00	V		0.046	16.66		
3519.99		PI/2 BPSK	-25.59	12.33	11.30	2.97	V		0.116	20.66	1	1
		QPSK	-25.61	12.31	11.30	2.97	V		0.116	20.64		
		16-QAM	-26.77	11.15	11.30	2.97	V		0.089	19.48		
		64-QAM	-28.21	9.71	11.30	2.97	V		0.064	18.04		
		256-QAM	-29.99	7.93	11.30	2.97	V		0.042	16.26		

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	-24.76	13.25	11.20	3.00	H	< 1.00	0.140	21.45	1	1
		QPSK	-24.81	13.20	11.20	3.00	H		0.138	21.40		
		16-QAM	-25.93	12.08	11.20	3.00	H		0.107	20.28		
		64-QAM	-27.45	10.56	11.20	3.00	H		0.075	18.76		
		256-QAM	-29.26	8.75	11.20	3.00	H		0.050	16.95		
3500.01		PI/2 BPSK	-25.01	13.24	11.30	3.00	H		0.143	21.54	1	1
		QPSK	-25.03	13.22	11.30	3.00	H		0.142	21.52		
		16-QAM	-26.14	12.11	11.30	3.00	H		0.110	20.41		
		64-QAM	-27.70	10.55	11.30	3.00	H		0.077	18.85		
		256-QAM	-29.71	8.54	11.30	3.00	H		0.048	16.84		
3514.98		PI/2 BPSK	-25.51	12.55	11.30	2.98	H		0.122	20.88	1	1
		QPSK	-25.56	12.50	11.30	2.98	H		0.121	20.83		
		16-QAM	-26.55	11.51	11.30	2.98	H		0.096	19.84		
		64-QAM	-27.96	10.10	11.30	2.98	H		0.070	18.43		
		256-QAM	-30.13	7.93	11.30	2.98	H		0.042	16.26		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3490.02	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-24.80	13.28	11.20	3.00	V	< 1.00	0.141	21.48	1	1
		QPSK	-24.83	13.25	11.20	3.00	V		0.140	21.45		
		16-QAM	-25.84	12.24	11.20	3.00	V		0.111	20.44		
		64-QAM	-27.43	10.65	11.20	3.00	V		0.077	18.85		
		256-QAM	-29.28	8.80	11.20	3.00	V		0.050	17.00		
3500.01		PI/2 BPSK	-24.86	13.39	11.30	3.00	V		0.148	21.69	1	1
		QPSK	-24.87	13.38	11.30	3.00	V		0.147	21.68		
		16-QAM	-25.93	12.32	11.30	3.00	V		0.115	20.62		
		64-QAM	-27.28	10.97	11.30	3.00	V		0.085	19.27		
		256-QAM	-29.41	8.84	11.30	3.00	V		0.052	17.14		
3510.00		PI/2 BPSK	-25.30	12.91	11.30	2.98	V		0.133	21.23	1	1
		QPSK	-25.31	12.90	11.30	2.98	V		0.132	21.22		
		16-QAM	-26.34	11.87	11.30	2.98	V		0.105	20.19		
		64-QAM	-27.79	10.42	11.30	2.98	V		0.075	18.74		
		256-QAM	-29.80	8.41	11.30	2.98	V		0.047	16.73		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3495.00	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-24.75	13.42	11.25	3.00	V	< 1.00	0.147	21.67	1	1
		QPSK	-24.77	13.40	11.25	3.00	V		0.146	21.65		
		16-QAM	-25.89	12.28	11.25	3.00	V		0.113	20.53		
		64-QAM	-27.39	10.78	11.25	3.00	V		0.080	19.03		
		256-QAM	-29.29	8.88	11.25	3.00	V		0.052	17.13		
3500.01		PI/2 BPSK	-24.69	13.56	11.30	3.00	V		0.153	21.86	1	1
		QPSK	-24.75	13.50	11.30	3.00	V		0.151	21.80		
		16-QAM	-26.01	12.24	11.30	3.00	V		0.113	20.54		
		64-QAM	-27.29	10.96	11.30	3.00	V		0.084	19.26		
		256-QAM	-29.46	8.79	11.30	3.00	V		0.051	17.09		
3504.99		PI/2 BPSK	-24.83	13.40	11.30	2.99	V		0.148	21.71	1	1
		QPSK	-24.89	13.34	11.30	2.99	V		0.146	21.65		
		16-QAM	-25.85	12.38	11.30	2.99	V		0.117	20.69		
		64-QAM	-27.27	10.96	11.30	2.99	V		0.085	19.27		
		256-QAM	-29.34	8.89	11.30	2.99	V		0.052	17.20		

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	-24.68	13.57	11.30	3.00	V	< 1.00	0.154	21.87	1	1
		QPSK	-24.81	13.44	11.30	3.00	V		0.149	21.74		
		16-QAM	-25.87	12.38	11.30	3.00	V		0.117	20.68		
		64-QAM	-27.26	10.99	11.30	3.00	V		0.085	19.29		
		256-QAM	-29.30	8.95	11.30	3.00	V		0.053	17.25		

8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77

▣ Anchor Band: B5

▣ 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
633334 (3500.01)	7 000.02	-62.92	10.90	-57.00	4.32	H	-50.42	-13.00	1	1
	10 500.03	-64.00	11.30	-53.40	5.41	H	-47.51	-13.00		
	14 000.04	-57.89	12.30	-48.54	6.35	H	-42.59	-13.00		
	17,500.05	-65.17	15.70	-45.08	7.23	H	-36.61	-13.00		

▣ ENDC-Mode : 5A(10 MHz)-n77A_DoD(100 MHz)

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
20525 (836.5)	1673.00	-59.88	9.52	-69.53	2.03	V	-62.04	-13.00
	2509.50	-60.35	10.28	-65.33	2.51	H	-57.56	-13.00
	3346.00	-61.25	11.28	-64.03	2.99	H	-55.74	-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	4.50
			QPSK			5.76
			16-QAM			6.50
			64-QAM			6.72
			256-QAM			6.50
	15 MHz		BPSK			4.52
			QPSK			5.80
			16-QAM			6.56
			64-QAM			6.80
			256-QAM			6.51
	20 MHz		BPSK			4.65
			QPSK			5.88
			16-QAM			6.63
			64-QAM			6.71
			256-QAM			6.53
	25 MHz		BPSK			4.62
			QPSK			5.82
			16-QAM			6.54
			64-QAM			6.59
			256-QAM			6.58
	30 MHz		BPSK			4.67
			QPSK			5.89
			16-QAM			6.56
			64-QAM			6.82
			256-QAM			6.54
	40 MHz		BPSK			5.19
			QPSK			5.86
			16-QAM			6.49
			64-QAM			6.73
			256-QAM			6.53

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
	50 MHz		BPSK			4.63
			QPSK			5.81
			16-QAM			6.64
			64-QAM			6.72
			256-QAM			6.59
	60 MHz		BPSK			4.87
			QPSK			5.86
			16-QAM			6.70
			64-QAM			6.77
			256-QAM			6.64
	70 MHz		BPSK			4.93
			QPSK			5.84
			16-QAM			6.56
			64-QAM			6.70
			256-QAM			6.68
	80 MHz		BPSK			4.58
			QPSK			5.86
			16-QAM			6.55
			64-QAM			6.67
			256-QAM			6.56
	90 MHz		BPSK			4.67
			QPSK			5.86
			16-QAM			6.60
			64-QAM			6.65
			256-QAM			6.58
	100 MHz		BPSK			4.63
			QPSK			5.80
			16-QAM			6.58
			64-QAM			6.70
			256-QAM			6.66

Note:

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

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n77	10 MHz	3500.01	BPSK	Full RB	0	8.6846
			QPSK			8.6782
			16-QAM			8.6931
			64-QAM			8.7000
			256-QAM			8.7048
	15 MHz		BPSK			12.957
			QPSK			12.989
			16-QAM			12.963
			64-QAM			12.972
			256-QAM			12.968
	20 MHz		BPSK			17.976
			QPSK			18.010
			16-QAM			17.956
			64-QAM			17.953
			256-QAM			17.967
	25 MHz		BPSK			23.015
			QPSK			23.039
			16-QAM			23.032
			64-QAM			23.009
			256-QAM			22.938
	30 MHz		BPSK			27.010
			QPSK			26.987
			16-QAM			26.953
			64-QAM			26.962
			256-QAM			26.990
	40 MHz		BPSK			35.946
			QPSK			35.954
			16-QAM			35.950
			64-QAM			35.920
			256-QAM			35.917

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
	50 MHz		BPSK			45.959
			QPSK			45.955
			16-QAM			45.864
			64-QAM			45.847
			256-QAM			46.058
	60 MHz		BPSK			58.396
			QPSK			58.238
			16-QAM			58.121
			64-QAM			58.134
			256-QAM			58.229
	70 MHz		BPSK			64.831
			QPSK			64.976
			16-QAM			64.671
			64-QAM			64.798
			256-QAM			64.810
	80 MHz		BPSK			77.664
			QPSK			77.666
			16-QAM			77.582
			64-QAM			77.659
			256-QAM			77.563
	90 MHz		BPSK			87.279
			QPSK			87.229
			16-QAM			87.174
			64-QAM			87.456
			256-QAM			87.253
	100 MHz		BPSK			96.862
			QPSK			96.761
			16-QAM			96.551
			64-QAM			96.698
			256-QAM			96.903

Note:

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

8.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n77	10	3455.01	8.8719	36.805	-71.060	-34.255	-13.00
		3500.01	9.7243	36.805	-71.287	-34.482	
		3544.98	9.7019	36.805	-70.690	-33.885	
	15	3457.50	8.8883	36.805	-70.305	-33.500	
		3500.01	8.2772	36.805	-71.199	-34.394	
		3542.49	7.1880	36.805	-71.438	-34.633	
	20	3460.02	6.0225	36.805	-70.905	-34.100	
		3500.01	8.0339	36.805	-70.270	-33.465	
		3540.00	9.9556	36.805	-70.470	-33.665	
	25	3462.51	9.3315	36.805	-71.218	-34.413	
		3500.01	8.2448	36.805	-70.609	-33.804	
		3537.48	7.1640	36.805	-70.623	-33.818	
	30	3465.00	8.5868	36.805	-70.790	-33.985	
		3500.01	4.9352	36.190	-71.111	-34.921	
		3534.99	8.3081	36.805	-70.949	-34.144	
	40	3470.01	7.9950	36.805	-70.217	-33.412	
		3500.01	7.4621	36.805	-70.992	-34.187	
		3529.98	5.1935	36.805	-70.977	-34.172	
	50	3475.02	5.2309	36.805	-70.912	-34.107	
		3500.01	6.0354	36.805	-69.960	-33.155	
		3525.00	8.3016	36.805	-70.687	-33.882	
	60	3480.00	9.9791	36.805	-69.893	-33.088	
		3500.01	8.0324	36.805	-70.438	-33.633	
		3519.99	9.4362	36.805	-70.579	-33.774	
	70	3485.01	9.6710	36.805	-70.927	-34.122	
		3500.01	9.7089	36.805	-71.054	-34.249	
		3514.98	8.5972	36.805	-70.715	-33.910	
	80	3490.02	4.9866	36.190	-70.359	-34.169	
		3500.01	9.7089	36.805	-71.029	-34.224	
		3510.00	8.0314	36.805	-70.602	-33.797	
	90	3495.00	9.1625	36.805	-70.942	-34.137	
		3500.01	9.1540	36.805	-71.371	-34.566	
		3504.99	8.5887	36.805	-70.429	-33.624	
	100	3500.01	8.6082	36.805	-70.863	-34.058	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 356 ~ 423.

2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.990

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

- Result(dBm) = Reading + Factor

3. Factor(dB)

Frequency Range (GHz)	Factor [dB]
0.03 – 1	33.484
1 – 5	36.190
5 – 10	36.805
10 – 15	37.330
15 – 20	37.703
Above 20	38.345

8.6 BAND EDGE

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

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3455.010	100 %	+20(Ref)	3455 009 995	0.0	0.000 000	0.000
	100 %	-30	3455 009 989	-6.4	0.000 000	-0.002
	100 %	-20	3455 009 992	-3.8	0.000 000	-0.001
	100 %	-10	3455 009 986	-9.6	0.000 000	-0.003
	100 %	0	3455 009 988	-7.0	0.000 000	-0.002
	100 %	+10	3455 009 989	-6.4	0.000 000	-0.002
	100 %	+30	3455 009 989	-6.3	0.000 000	-0.002
	100 %	+40	3455 009 990	-5.3	0.000 000	-0.002
	100 %	+50	3455 009 987	-8.4	0.000 000	-0.002
	Batt. Endpoint	+20	3455 009 990	-4.9	0.000 000	-0.001
3544.980	100 %	+20(Ref)	3544 979 993	0.0	0.000 000	0.000
	100 %	-30	3544 979 986	-7.0	0.000 000	-0.002
	100 %	-20	3544 979 991	-2.3	0.000 000	-0.001
	100 %	-10	3544 979 988	-4.6	0.000 000	-0.001
	100 %	0	3544 979 987	-5.8	0.000 000	-0.002
	100 %	+10	3544 979 988	-5.0	0.000 000	-0.001
	100 %	+30	3544 979 988	-5.3	0.000 000	-0.001
	100 %	+40	3544 979 986	-6.8	0.000 000	-0.002
	100 %	+50	3544 979 989	-3.9	0.000 000	-0.001
	Batt. Endpoint	+20	3544 979 986	-7.0	0.000 000	-0.002

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3457.500	100 %	+20(Ref)	3457 499 994	0.0	0.000 000	0.000
	100 %	-30	3457 499 990	-3.5	0.000 000	-0.001
	100 %	-20	3457 499 988	-5.8	0.000 000	-0.002
	100 %	-10	3457 499 990	-3.8	0.000 000	-0.001
	100 %	0	3457 499 990	-3.9	0.000 000	-0.001
	100 %	+10	3457 499 986	-7.9	0.000 000	-0.002
	100 %	+30	3457 499 989	-4.5	0.000 000	-0.001
	100 %	+40	3457 499 987	-7.0	0.000 000	-0.002
	100 %	+50	3457 499 987	-6.2	0.000 000	-0.002
	Batt. Endpoint	+20	3457 499 988	-6.0	0.000 000	-0.002
3542.490	100 %	+20(Ref)	3542 489 992	0.0	0.000 000	0.000
	100 %	-30	3542 489 986	-5.6	0.000 000	-0.002
	100 %	-20	3542 489 987	-4.6	0.000 000	-0.001
	100 %	-10	3542 489 988	-3.9	0.000 000	-0.001
	100 %	0	3542 489 985	-6.7	0.000 000	-0.002
	100 %	+10	3542 489 987	-5.3	0.000 000	-0.002
	100 %	+30	3542 489 987	-5.2	0.000 000	-0.001
	100 %	+40	3542 489 989	-3.5	0.000 000	-0.001
	100 %	+50	3542 489 986	-6.4	0.000 000	-0.002
	Batt. Endpoint	+20	3542 489 986	-5.9	0.000 000	-0.002

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3460.020	100 %	+20(Ref)	3460 019 992	0.0	0.000 000	0.000
	100 %	-30	3460 019 990	-2.3	0.000 000	-0.001
	100 %	-20	3460 019 986	-6.1	0.000 000	-0.002
	100 %	-10	3460 019 986	-6.5	0.000 000	-0.002
	100 %	0	3460 019 983	-9.0	0.000 000	-0.003
	100 %	+10	3460 019 986	-6.8	0.000 000	-0.002
	100 %	+30	3460 019 984	-8.0	0.000 000	-0.002
	100 %	+40	3460 019 988	-4.6	0.000 000	-0.001
	100 %	+50	3460 019 986	-6.0	0.000 000	-0.002
	Batt. Endpoint	+20	3460 019 987	-5.4	0.000 000	-0.002
3540.000	100 %	+20(Ref)	3539 999 994	0.0	0.000 000	0.000
	100 %	-30	3539 999 988	-6.0	0.000 000	-0.002
	100 %	-20	3539 999 990	-3.4	0.000 000	-0.001
	100 %	-10	3539 999 992	-1.7	0.000 000	0.000
	100 %	0	3539 999 987	-7.1	0.000 000	-0.002
	100 %	+10	3539 999 987	-7.0	0.000 000	-0.002
	100 %	+30	3539 999 989	-5.2	0.000 000	-0.001
	100 %	+40	3539 999 988	-5.8	0.000 000	-0.002
	100 %	+50	3539 999 987	-6.8	0.000 000	-0.002
	Batt. Endpoint	+20	3539 999 986	-7.6	0.000 000	-0.002

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3462.510	100 %	+20(Ref)	3462 509 993	0.0	0.000 000	0.000
	100 %	-30	3462 509 987	-5.3	0.000 000	-0.002
	100 %	-20	3462 509 984	-8.7	0.000 000	-0.003
	100 %	-10	3462 509 985	-7.4	0.000 000	-0.002
	100 %	0	3462 509 986	-6.9	0.000 000	-0.002
	100 %	+10	3462 509 984	-8.2	0.000 000	-0.002
	100 %	+30	3462 509 987	-5.5	0.000 000	-0.002
	100 %	+40	3462 509 987	-5.9	0.000 000	-0.002
	100 %	+50	3462 509 985	-8.0	0.000 000	-0.002
	Batt. Endpoint	+20	3462 509 987	-5.5	0.000 000	-0.002
3537.480	100 %	+20(Ref)	3537 479 996	0.0	0.000 000	0.000
	100 %	-30	3537 479 991	-5.3	0.000 000	-0.001
	100 %	-20	3537 479 992	-4.7	0.000 000	-0.001
	100 %	-10	3537 479 992	-4.8	0.000 000	-0.001
	100 %	0	3537 479 991	-5.4	0.000 000	-0.002
	100 %	+10	3537 479 989	-7.2	0.000 000	-0.002
	100 %	+30	3537 479 990	-5.9	0.000 000	-0.002
	100 %	+40	3537 479 991	-5.1	0.000 000	-0.001
	100 %	+50	3537 479 989	-7.0	0.000 000	-0.002
	Batt. Endpoint	+20	3537 479 990	-6.2	0.000 000	-0.002

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3465.000	100 %	+20(Ref)	3464 999 993	0.0	0.000 000	0.000
	100 %	-30	3464 999 988	-5.5	0.000 000	-0.002
	100 %	-20	3464 999 985	-7.9	0.000 000	-0.002
	100 %	-10	3464 999 987	-5.9	0.000 000	-0.002
	100 %	0	3464 999 985	-8.6	0.000 000	-0.002
	100 %	+10	3464 999 988	-5.5	0.000 000	-0.002
	100 %	+30	3464 999 987	-6.2	0.000 000	-0.002
	100 %	+40	3464 999 985	-8.2	0.000 000	-0.002
	100 %	+50	3464 999 989	-3.7	0.000 000	-0.001
	Batt. Endpoint	+20	3464 999 986	-6.9	0.000 000	-0.002
3534.990	100 %	+20(Ref)	3534 989 994	0.0	0.000 000	0.000
	100 %	-30	3534 989 988	-6.0	0.000 000	-0.002
	100 %	-20	3534 989 989	-5.5	0.000 000	-0.002
	100 %	-10	3534 989 988	-6.0	0.000 000	-0.002
	100 %	0	3534 989 989	-5.5	0.000 000	-0.002
	100 %	+10	3534 989 992	-2.5	0.000 000	-0.001
	100 %	+30	3534 989 986	-8.3	0.000 000	-0.002
	100 %	+40	3534 989 987	-7.2	0.000 000	-0.002
	100 %	+50	3534 989 989	-5.3	0.000 000	-0.002
	Batt. Endpoint	+20	3534 989 989	-5.8	0.000 000	-0.002

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3470.010	100 %	+20(Ref)	3470 009 993	0.0	0.000 000	0.000
	100 %	-30	3470 009 985	-7.6	0.000 000	-0.002
	100 %	-20	3470 009 985	-7.6	0.000 000	-0.002
	100 %	-10	3470 009 986	-6.9	0.000 000	-0.002
	100 %	0	3470 009 986	-6.7	0.000 000	-0.002
	100 %	+10	3470 009 986	-7.1	0.000 000	-0.002
	100 %	+30	3470 009 988	-4.6	0.000 000	-0.001
	100 %	+40	3470 009 986	-7.0	0.000 000	-0.002
	100 %	+50	3470 009 986	-7.2	0.000 000	-0.002
	Batt. Endpoint	+20	3470 009 986	-6.7	0.000 000	-0.002
3529.980	100 %	+20(Ref)	3529 979 993	0.0	0.000 000	0.000
	100 %	-30	3529 979 987	-6.6	0.000 000	-0.002
	100 %	-20	3529 979 988	-5.0	0.000 000	-0.001
	100 %	-10	3529 979 986	-7.1	0.000 000	-0.002
	100 %	0	3529 979 988	-4.9	0.000 000	-0.001
	100 %	+10	3529 979 988	-5.2	0.000 000	-0.001
	100 %	+30	3529 979 988	-5.6	0.000 000	-0.002
	100 %	+40	3529 979 986	-7.1	0.000 000	-0.002
	100 %	+50	3529 979 988	-5.7	0.000 000	-0.002
	Batt. Endpoint	+20	3529 979 988	-5.8	0.000 000	-0.002

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3475.020	100 %	+20(Ref)	3475 019 990	0.0	0.000 000	0.000
	100 %	-30	3475 019 982	-7.9	0.000 000	-0.002
	100 %	-20	3475 019 982	-7.8	0.000 000	-0.002
	100 %	-10	3475 019 980	-9.9	0.000 000	-0.003
	100 %	0	3475 019 982	-7.8	0.000 000	-0.002
	100 %	+10	3475 019 981	-8.8	0.000 000	-0.003
	100 %	+30	3475 019 983	-7.0	0.000 000	-0.002
	100 %	+40	3475 019 982	-7.4	0.000 000	-0.002
	100 %	+50	3475 019 981	-8.8	0.000 000	-0.003
	Batt. Endpoint	+20	3475 019 982	-7.9	0.000 000	-0.002
3525.000	100 %	+20(Ref)	3524 999 995	0.0	0.000 000	0.000
	100 %	-30	3524 999 989	-6.0	0.000 000	-0.002
	100 %	-20	3524 999 989	-6.1	0.000 000	-0.002
	100 %	-10	3524 999 990	-5.3	0.000 000	-0.002
	100 %	0	3524 999 990	-4.5	0.000 000	-0.001
	100 %	+10	3524 999 991	-4.2	0.000 000	-0.001
	100 %	+30	3524 999 989	-5.7	0.000 000	-0.002
	100 %	+40	3524 999 989	-5.6	0.000 000	-0.002
	100 %	+50	3524 999 990	-4.7	0.000 000	-0.001
	Batt. Endpoint	+20	3524 999 990	-4.8	0.000 000	-0.001

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3480.000	100 %	+20(Ref)	3479 999 994	0.0	0.000 000	0.000
	100 %	-30	3479 999 988	-5.9	0.000 000	-0.002
	100 %	-20	3479 999 988	-6.3	0.000 000	-0.002
	100 %	-10	3479 999 988	-5.9	0.000 000	-0.002
	100 %	0	3479 999 988	-6.0	0.000 000	-0.002
	100 %	+10	3479 999 987	-6.9	0.000 000	-0.002
	100 %	+30	3479 999 986	-8.3	0.000 000	-0.002
	100 %	+40	3479 999 987	-6.8	0.000 000	-0.002
	100 %	+50	3479 999 987	-6.6	0.000 000	-0.002
	Batt. Endpoint	+20	3479 999 987	-6.6	0.000 000	-0.002
3519.990	100 %	+20(Ref)	3519 989 991	0.0	0.000 000	0.000
	100 %	-30	3519 989 984	-7.6	0.000 000	-0.002
	100 %	-20	3519 989 985	-6.9	0.000 000	-0.002
	100 %	-10	3519 989 984	-7.6	0.000 000	-0.002
	100 %	0	3519 989 985	-6.1	0.000 000	-0.002
	100 %	+10	3519 989 985	-6.6	0.000 000	-0.002
	100 %	+30	3519 989 985	-6.6	0.000 000	-0.002
	100 %	+40	3519 989 984	-7.5	0.000 000	-0.002
	100 %	+50	3519 989 985	-6.4	0.000 000	-0.002
	Batt. Endpoint	+20	3519 989 984	-6.9	0.000 000	-0.002

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3485.010	100 %	+20(Ref)	3485 009 994	0.0	0.000 000	0.000
	100 %	-30	3485 009 985	-8.4	0.000 000	-0.002
	100 %	-20	3485 009 988	-5.9	0.000 000	-0.002
	100 %	-10	3485 009 986	-7.8	0.000 000	-0.002
	100 %	0	3485 009 987	-6.6	0.000 000	-0.002
	100 %	+10	3485 009 985	-8.9	0.000 000	-0.003
	100 %	+30	3485 009 988	-5.8	0.000 000	-0.002
	100 %	+40	3485 009 987	-6.5	0.000 000	-0.002
	100 %	+50	3485 009 986	-7.5	0.000 000	-0.002
	Batt. Endpoint	+20	3485 009 988	-6.0	0.000 000	-0.002
3514.980	100 %	+20(Ref)	3514 979 995	0.0	0.000 000	0.000
	100 %	-30	3514 979 988	-7.3	0.000 000	-0.002
	100 %	-20	3514 979 985	-9.5	0.000 000	-0.003
	100 %	-10	3514 979 986	-8.5	0.000 000	-0.002
	100 %	0	3514 979 989	-6.3	0.000 000	-0.002
	100 %	+10	3514 979 988	-7.2	0.000 000	-0.002
	100 %	+30	3514 979 989	-5.5	0.000 000	-0.002
	100 %	+40	3514 979 987	-8.3	0.000 000	-0.002
	100 %	+50	3514 979 986	-9.1	0.000 000	-0.003
	Batt. Endpoint	+20	3514 979 987	-7.7	0.000 000	-0.002

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3490.020	100 %	+20(Ref)	3490 019 993	0.0	0.000 000	0.000
	100 %	-30	3490 019 986	-7.4	0.000 000	-0.002
	100 %	-20	3490 019 986	-7.7	0.000 000	-0.002
	100 %	-10	3490 019 987	-6.5	0.000 000	-0.002
	100 %	0	3490 019 987	-6.5	0.000 000	-0.002
	100 %	+10	3490 019 988	-5.2	0.000 000	-0.001
	100 %	+30	3490 019 988	-5.6	0.000 000	-0.002
	100 %	+40	3490 019 987	-6.5	0.000 000	-0.002
	100 %	+50	3490 019 985	-8.0	0.000 000	-0.002
	Batt. Endpoint	+20	3490 019 985	-8.5	0.000 000	-0.002
3510.000	100 %	+20(Ref)	3509 999 992	0.0	0.000 000	0.000
	100 %	-30	3509 999 986	-5.9	0.000 000	-0.002
	100 %	-20	3509 999 986	-6.5	0.000 000	-0.002
	100 %	-10	3509 999 986	-6.1	0.000 000	-0.002
	100 %	0	3509 999 987	-5.6	0.000 000	-0.002
	100 %	+10	3509 999 987	-5.6	0.000 000	-0.002
	100 %	+30	3509 999 985	-7.3	0.000 000	-0.002
	100 %	+40	3509 999 987	-5.4	0.000 000	-0.002
	100 %	+50	3509 999 986	-6.3	0.000 000	-0.002
	Batt. Endpoint	+20	3509 999 986	-6.7	0.000 000	-0.002

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3495.000	100 %	+20(Ref)	3494 999 994	0.0	0.000 000	0.000
	100 %	-30	3494 999 989	-5.6	0.000 000	-0.002
	100 %	-20	3494 999 986	-8.4	0.000 000	-0.002
	100 %	-10	3494 999 987	-7.4	0.000 000	-0.002
	100 %	0	3494 999 986	-8.1	0.000 000	-0.002
	100 %	+10	3494 999 987	-7.1	0.000 000	-0.002
	100 %	+30	3494 999 986	-8.5	0.000 000	-0.002
	100 %	+40	3494 999 984	-10.2	0.000 000	-0.003
	100 %	+50	3494 999 987	-7.1	0.000 000	-0.002
	Batt. Endpoint	+20	3494 999 987	-7.1	0.000 000	-0.002
3504.990	100 %	+20(Ref)	3504 989 993	0.0	0.000 000	0.000
	100 %	-30	3504 989 985	-8.3	0.000 000	-0.002
	100 %	-20	3504 989 986	-7.2	0.000 000	-0.002
	100 %	-10	3504 989 986	-7.2	0.000 000	-0.002
	100 %	0	3504 989 986	-6.4	0.000 000	-0.002
	100 %	+10	3504 989 986	-7.2	0.000 000	-0.002
	100 %	+30	3504 989 985	-7.4	0.000 000	-0.002
	100 %	+40	3504 989 985	-8.1	0.000 000	-0.002
	100 %	+50	3504 989 987	-6.0	0.000 000	-0.002
	Batt. Endpoint	+20	3504 989 988	-5.1	0.000 000	-0.001

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3500.010	100 %	+20(Ref)	3500 009 993	0.0	0.000 000	0.000
	100 %	-30	3500 009 987	-6.6	0.000 000	-0.002
	100 %	-20	3500 009 983	-10.9	0.000 000	-0.003
	100 %	-10	3500 009 985	-8.3	0.000 000	-0.002
	100 %	0	3500 009 986	-7.1	0.000 000	-0.002
	100 %	+10	3500 009 986	-7.1	0.000 000	-0.002
	100 %	+30	3500 009 985	-8.5	0.000 000	-0.002
	100 %	+40	3500 009 984	-9.3	0.000 000	-0.003
	100 %	+50	3500 009 986	-7.5	0.000 000	-0.002
	Batt. Endpoint	+20	3500 009 986	-7.1	0.000 000	-0.002

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	Offset
3705.00	Sub6 n77/ 10 MHz [30 kHz]	PI/2 BPSK	-26.97	11.52	11.40	3.09	H	< 1.00	0.096	19.83	1	12
		QPSK	-27.06	11.43	11.40	3.09	H		0.094	19.74		
		16-QAM	-27.94	10.55	11.40	3.09	H		0.077	18.86		
		64-QAM	-29.45	9.04	11.40	3.09	H		0.054	17.35		
		256-QAM	-31.66	6.83	11.40	3.09	H		0.033	15.14		
3840.00		PI/2 BPSK	-28.69	10.99	11.10	3.14	H		0.079	18.95	1	1
		QPSK	-28.74	10.94	11.10	3.14	H		0.078	18.90		
		16-QAM	-29.84	9.84	11.10	3.14	H		0.060	17.80		
		64-QAM	-31.38	8.30	11.10	3.14	H		0.042	16.26		
		256-QAM	-33.26	6.42	11.10	3.14	H		0.027	14.38		
3975.00		PI/2 BPSK	-30.65	9.00	10.90	3.20	H		0.047	16.70	1	1
		QPSK	-30.66	8.99	10.90	3.20	H		0.047	16.69		
		16-QAM	-31.76	7.89	10.90	3.20	H		0.036	15.59		
		64-QAM	-33.18	6.47	10.90	3.20	H		0.026	14.17		
		256-QAM	-35.14	4.51	10.90	3.20	H		0.017	12.21		

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
3707.51	Sub6 n77/ 15 MHz [30 kHz]	PI/2 BPSK	-27.01	11.48	11.40	3.09	H	< 1.00	0.095	19.79	1	19
		QPSK	-27.04	11.45	11.40	3.09	H		0.095	19.76		
		16-QAM	-27.79	10.70	11.40	3.09	H		0.080	19.01		
		64-QAM	-29.59	8.90	11.40	3.09	H		0.053	17.21		
		256-QAM	-31.61	6.88	11.40	3.09	H		0.033	15.19		
3840.00		PI/2 BPSK	-28.46	11.22	11.10	3.14	H		0.083	19.18	1	1
		QPSK	-28.51	11.17	11.10	3.14	H		0.082	19.13		
		16-QAM	-29.61	10.07	11.10	3.14	H		0.064	18.03		
		64-QAM	-31.23	8.45	11.10	3.14	H		0.044	16.41		
		256-QAM	-33.09	6.59	11.10	3.14	H		0.029	14.55		
3972.48		PI/2 BPSK	-30.47	9.18	10.90	3.20	H		0.049	16.88	1	1
		QPSK	-30.49	9.16	10.90	3.20	H		0.049	16.86		
		16-QAM	-31.59	8.06	10.90	3.20	H		0.038	15.76		
		64-QAM	-33.19	6.46	10.90	3.20	H		0.026	14.16		
		256-QAM	-35.05	4.60	10.90	3.20	H		0.017	12.30		

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	Offset
3710.01	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-26.91	11.61	11.40	3.11	H	< 1.00	0.098	19.90	1	25
		QPSK	-26.93	11.59	11.40	3.11	H		0.097	19.88		
		16-QAM	-27.97	10.55	11.40	3.11	H		0.077	18.84		
		64-QAM	-29.39	9.13	11.40	3.11	H		0.055	17.42		
		256-QAM	-31.59	6.93	11.40	3.11	H		0.033	15.22		
3840.00		PI/2 BPSK	-28.31	11.37	11.10	3.14	H		0.086	19.33	1	1
		QPSK	-28.32	11.36	11.10	3.14	H		0.086	19.32		
		16-QAM	-29.21	10.47	11.10	3.14	H		0.070	18.43		
		64-QAM	-30.91	8.77	11.10	3.14	H		0.047	16.73		
		256-QAM	-32.96	6.72	11.10	3.14	H		0.029	14.68		
3969.99		PI/2 BPSK	-30.38	9.21	10.90	3.20	H		0.049	16.91	1	1
		QPSK	-30.47	9.12	10.90	3.20	H		0.048	16.82		
		16-QAM	-31.46	8.13	10.90	3.20	H		0.038	15.83		
		64-QAM	-33.01	6.58	10.90	3.20	H		0.027	14.28		
		256-QAM	-34.96	4.63	10.90	3.20	H		0.017	12.33		

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
3712.50	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-26.71	11.96	11.40	3.12	H	< 1.00	0.106	20.24	1	32
		QPSK	-26.75	11.92	11.40	3.12	H		0.105	20.20		
		16-QAM	-27.76	10.91	11.40	3.12	H		0.083	19.19		
		64-QAM	-29.11	9.56	11.40	3.12	H		0.061	17.84		
		256-QAM	-31.48	7.19	11.40	3.12	H		0.035	15.47		
3840.00		PI/2 BPSK	-28.09	11.59	11.10	3.14	H		0.090	19.55	1	1
		QPSK	-28.11	11.57	11.10	3.14	H		0.090	19.53		
		16-QAM	-29.19	10.49	11.10	3.14	H		0.070	18.45		
		64-QAM	-30.49	9.19	11.10	3.14	H		0.052	17.15		
		256-QAM	-32.59	7.09	11.10	3.14	H		0.032	15.05		
3967.50		PI/2 BPSK	-30.48	9.21	10.90	3.21	H		0.049	16.90	1	1
		QPSK	-30.50	9.19	10.90	3.21	H		0.049	16.88		
		16-QAM	-31.68	8.01	10.90	3.21	H		0.037	15.70		
		64-QAM	-33.01	6.68	10.90	3.21	H		0.027	14.37		
		256-QAM	-35.06	4.63	10.90	3.21	H		0.017	12.32		

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	Offset
3715.02	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-26.64	12.03	11.40	3.12	H	< 1.00	0.107	20.31	1	39
		QPSK	-26.66	12.01	11.40	3.12	H		0.107	20.29		
		16-QAM	-27.96	10.71	11.40	3.12	H		0.079	18.99		
		64-QAM	-29.50	9.17	11.40	3.12	H		0.056	17.45		
		256-QAM	-31.33	7.34	11.40	3.12	H		0.036	15.62		
3840.00		PI/2 BPSK	-28.02	11.66	11.10	3.14	H		0.092	19.62	1	1
		QPSK	-28.07	11.61	11.10	3.14	H		0.091	19.57		
		16-QAM	-29.15	10.53	11.10	3.14	H		0.071	18.49		
		64-QAM	-30.64	9.04	11.10	3.14	H		0.050	17.00		
		256-QAM	-32.59	7.09	11.10	3.14	H		0.032	15.05		
3964.98		PI/2 BPSK	-30.41	9.28	10.90	3.21	H		0.050	16.97	1	39
		QPSK	-30.46	9.23	10.90	3.21	H		0.049	16.92		
		16-QAM	-31.59	8.10	10.90	3.21	H		0.038	15.79		
		64-QAM	-33.01	6.68	10.90	3.21	H		0.027	14.37		
		256-QAM	-35.05	4.64	10.90	3.21	H		0.017	12.33		

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
3720.00	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-26.59	12.10	11.40	3.14	H	< 1.00	0.109	20.36	1	53
		QPSK	-26.78	11.91	11.40	3.14	H		0.104	20.17		
		16-QAM	-27.83	10.86	11.40	3.14	H		0.082	19.12		
		64-QAM	-29.05	9.64	11.40	3.14	H		0.062	17.90		
		256-QAM	-31.26	7.43	11.40	3.14	H		0.037	15.69		
3840.00		PI/2 BPSK	-27.63	12.05	11.10	3.14	H		0.100	20.01	1	1
		QPSK	-27.69	11.99	11.10	3.14	H		0.099	19.95		
		16-QAM	-28.60	11.08	11.10	3.14	H		0.080	19.04		
		64-QAM	-30.12	9.56	11.10	3.14	H		0.057	17.52		
		256-QAM	-32.16	7.52	11.10	3.14	H		0.035	15.48		
3960.00		PI/2 BPSK	-30.33	9.45	10.90	3.21	H		0.052	17.14	1	53
		QPSK	-30.34	9.44	10.90	3.21	H		0.052	17.13		
		16-QAM	-31.46	8.32	10.90	3.21	H		0.040	16.01		
		64-QAM	-32.91	6.87	10.90	3.21	H		0.029	14.56		
		256-QAM	-34.74	5.04	10.90	3.21	H		0.019	12.73		

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
3725.10	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-26.53	12.31	11.40	3.14	H	< 1.00	0.114	20.57	1	66
		QPSK	-26.64	12.20	11.40	3.14	H		0.111	20.46		
		16-QAM	-27.76	11.08	11.40	3.14	H		0.086	19.34		
		64-QAM	-29.01	9.83	11.40	3.14	H		0.064	18.09		
		256-QAM	-31.20	7.64	11.40	3.14	H		0.039	15.90		
3840.00		PI/2 BPSK	-27.48	12.20	11.10	3.14	H		0.104	20.16	1	1
		QPSK	-27.50	12.18	11.10	3.14	H		0.103	20.14		
		16-QAM	-28.40	11.28	11.10	3.14	H		0.084	19.24		
		64-QAM	-30.24	9.44	11.10	3.14	H		0.055	17.40		
		256-QAM	-32.01	7.67	11.10	3.14	H		0.037	15.63		
3954.99		PI/2 BPSK	-30.49	9.30	10.90	3.21	H		0.050	16.99	1	66
		QPSK	-30.51	9.28	10.90	3.21	H		0.050	16.97		
		16-QAM	-31.51	8.28	10.90	3.21	H		0.040	15.97		
		64-QAM	-33.01	6.78	10.90	3.21	H		0.028	14.47		
		256-QAM	-34.83	4.96	10.90	3.21	H		0.018	12.65		

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
3730.02	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-26.59	12.27	11.40	3.14	H	< 1.00	0.113	20.53	1	81
		QPSK	-26.60	12.26	11.40	3.14	H		0.113	20.52		
		16-QAM	-27.67	11.19	11.40	3.14	H		0.088	19.45		
		64-QAM	-28.91	9.95	11.40	3.14	H		0.066	18.21		
		256-QAM	-30.96	7.90	11.40	3.14	H		0.041	16.16		
3840.00		PI/2 BPSK	-27.41	12.27	11.10	3.14	H		0.106	20.23	1	1
		QPSK	-27.43	12.25	11.10	3.14	H		0.105	20.21		
		16-QAM	-28.51	11.17	11.10	3.14	H		0.082	19.13		
		64-QAM	-29.98	9.70	11.10	3.14	H		0.058	17.66		
		256-QAM	-31.89	7.79	11.10	3.14	H		0.038	15.75		
3949.98		PI/2 BPSK	-30.41	9.37	10.90	3.20	H		0.051	17.07	1	81
		QPSK	-30.54	9.24	10.90	3.20	H		0.049	16.94		
		16-QAM	-31.69	8.09	10.90	3.20	H		0.038	15.79		
		64-QAM	-32.91	6.87	10.90	3.20	H		0.029	14.57		
		256-QAM	-34.98	4.80	10.90	3.20	H		0.018	12.50		

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
3735.00	Sub6 n77/ 70 MHz [30 kHz]	PI/2 BPSK	-26.67	12.19	11.40	3.12	H	< 1.00	0.111	20.47	1	94
		QPSK	-26.71	12.15	11.40	3.12	H		0.110	20.43		
		16-QAM	-27.61	11.25	11.40	3.12	H		0.090	19.53		
		64-QAM	-29.14	9.72	11.40	3.12	H		0.063	18.00		
		256-QAM	-31.34	7.52	11.40	3.12	H		0.038	15.80		
3840.00		PI/2 BPSK	-27.49	12.19	11.10	3.14	H		0.104	20.15	1	1
		QPSK	-27.51	12.17	11.10	3.14	H		0.103	20.13		
		16-QAM	-28.56	11.12	11.10	3.14	H		0.081	19.08		
		64-QAM	-30.11	9.57	11.10	3.14	H		0.057	17.53		
		256-QAM	-32.01	7.67	11.10	3.14	H		0.037	15.63		
3945.00		PI/2 BPSK	-30.61	9.23	10.85	3.18	H		0.049	16.90	1	94
		QPSK	-30.68	9.16	10.85	3.18	H		0.048	16.83		
		16-QAM	-31.81	8.03	10.85	3.18	H		0.037	15.70		
		64-QAM	-33.26	6.58	10.85	3.18	H		0.027	14.25		
		256-QAM	-35.16	4.68	10.85	3.18	H		0.017	12.35		

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
3740.01	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-26.68	12.18	11.40	3.10	H	< 1.00	0.112	20.48	1	108
		QPSK	-26.71	12.15	11.40	3.10	H		0.111	20.45		
		16-QAM	-27.53	11.33	11.40	3.10	H		0.092	19.63		
		64-QAM	-29.21	9.65	11.40	3.10	H		0.062	17.95		
		256-QAM	-31.30	7.56	11.40	3.10	H		0.039	15.86		
3840.00		PI/2 BPSK	-27.67	12.01	11.10	3.14	H		0.099	19.97	1	1
		QPSK	-27.69	11.99	11.10	3.14	H		0.099	19.95		
		16-QAM	-28.71	10.97	11.10	3.14	H		0.078	18.93		
		64-QAM	-30.30	9.38	11.10	3.14	H		0.054	17.34		
		256-QAM	-32.27	7.41	11.10	3.14	H		0.035	15.37		
3939.99		PI/2 BPSK	-30.84	8.02	11.40	3.10	H		0.043	16.32	1	108
		QPSK	-30.86	8.00	11.40	3.10	H		0.043	16.30		
		16-QAM	-32.00	6.86	11.40	3.10	H		0.033	15.16		
		64-QAM	-33.27	5.59	11.40	3.10	H		0.025	13.89		
		256-QAM	-35.41	3.45	11.40	3.10	H		0.015	11.75		

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
3745.02	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-26.71	12.03	11.35	3.09	H	< 1.00	0.107	20.29	1	122
		QPSK	-26.88	11.86	11.35	3.09	H		0.103	20.12		
		16-QAM	-27.82	10.92	11.35	3.09	H		0.083	19.18		
		64-QAM	-29.31	9.43	11.35	3.09	H		0.059	17.69		
		256-QAM	-31.41	7.33	11.35	3.09	H		0.036	15.59		
3840.00		PI/2 BPSK	-27.73	11.95	11.10	3.14	H		0.098	19.91	1	1
		QPSK	-27.76	11.92	11.10	3.14	H		0.097	19.88		
		16-QAM	-28.90	10.78	11.10	3.14	H		0.075	18.74		
		64-QAM	-30.26	9.42	11.10	3.14	H		0.055	17.38		
		256-QAM	-32.30	7.38	11.10	3.14	H		0.034	15.34		
3934.98		PI/2 BPSK	-30.70	9.22	10.80	3.16	H		0.049	16.86	1	1
		QPSK	-30.71	9.21	10.80	3.16	H		0.048	16.85		
		16-QAM	-31.73	8.19	10.80	3.16	H		0.038	15.83		
		64-QAM	-33.18	6.74	10.80	3.16	H		0.027	14.38		
		256-QAM	-35.21	4.71	10.80	3.16	H		0.017	12.35		

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
3750.00	Sub6 n77/ 100 MHz [30 kHz]	PI/2 BPSK	-26.90	11.73	11.30	3.08	H	< 1.00	0.099	19.95	1	136
		QPSK	-26.92	11.71	11.30	3.08	H		0.098	19.93		
		16-QAM	-28.07	10.56	11.30	3.08	H		0.075	18.78		
		64-QAM	-29.36	9.27	11.30	3.08	H		0.056	17.49		
		256-QAM	-31.58	7.05	11.30	3.08	H		0.034	15.27		
3840.00		PI/2 BPSK	-27.82	11.86	11.10	3.14	H		0.096	19.82	1	1
		QPSK	-27.85	11.83	11.10	3.14	H		0.095	19.79		
		16-QAM	-28.76	10.92	11.10	3.14	H		0.077	18.88		
		64-QAM	-30.26	9.42	11.10	3.14	H		0.055	17.38		
		256-QAM	-32.36	7.32	11.10	3.14	H		0.034	15.28		
3930.00		PI/2 BPSK	-30.39	9.56	10.80	3.16	H		0.052	17.20	1	1
		QPSK	-30.41	9.54	10.80	3.16	H		0.052	17.18		
		16-QAM	-31.39	8.56	10.80	3.16	H		0.042	16.20		
		64-QAM	-32.91	7.04	10.80	3.16	H		0.029	14.68		
		256-QAM	-34.91	5.04	10.80	3.16	H		0.019	12.68		

9.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77

▣ Anchor Band: B5

▣ Bandwidth: 50 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
648334 (3725.01)	7 450.02	-63.81	10.90	-56.24	4.46	H	-49.80	-13.00	1	66
	11 175.03	-64.34	11.50	-53.10	5.61	H	-47.21	-13.00		
	14 900.04	-57.09	13.40	-51.17	6.62	H	-44.39	-13.00		
656000 (3840.00)	7 680.00	-63.42	11.10	-56.56	4.55	V	-50.01	-13.00	1	1
	11 520.00	-63.47	11.50	-52.33	5.70	V	-46.53	-13.00		
	15 360.00	-59.46	15.10	-53.67	6.72	V	-45.29	-13.00		
663666 (3954.99)	7 909.98	-63.06	10.70	-55.84	4.62	V	-49.76	-13.00	1	66
	11 864.97	-64.05	12.20	-53.87	5.82	V	-47.49	-13.00		
	15 819.96	-63.42	14.90	-56.29	6.84	V	-48.23	-13.00		

▣ ENDC-Mode : 5A(10 MHz)-n77A(50 MHz)

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
20525 (836.5)	1673.00	-59.24	9.52	-68.89	2.03	V	-61.40	-13.00
	2509.50	-60.11	10.28	-65.09	2.51	V	-57.32	-13.00
	3346.00	-59.68	11.28	-62.46	2.99	V	-54.17	-13.00

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n77	10 MHz	3840.00	BPSK	Full RB	0	4.54
			QPSK			5.82
			16-QAM			6.48
			64-QAM			6.72
			256-QAM			6.65
	15 MHz		BPSK			4.50
			QPSK			5.75
			16-QAM			6.49
			64-QAM			6.66
			256-QAM			6.65
	20 MHz		BPSK			4.59
			QPSK			5.82
			16-QAM			6.52
			64-QAM			6.57
			256-QAM			6.47
	25 MHz		BPSK			6.09
			QPSK			6.21
			16-QAM			6.55
			64-QAM			6.66
			256-QAM			6.66
	30 MHz		BPSK			4.57
			QPSK			5.85
			16-QAM			6.47
			64-QAM			6.67
			256-QAM			6.77
	40 MHz		BPSK			5.00
			QPSK			5.74
			16-QAM			6.46
			64-QAM			6.66
			256-QAM			6.56

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
	50 MHz		BPSK			4.79
			QPSK			5.81
			16-QAM			6.58
			64-QAM			6.61
			256-QAM			6.58
	60 MHz		BPSK			4.72
			QPSK			5.79
			16-QAM			6.57
			64-QAM			6.60
			256-QAM			6.61
	70 MHz		BPSK			5.86
			QPSK			6.14
			16-QAM			6.59
			64-QAM			6.69
			256-QAM			6.55
	80 MHz		BPSK			4.57
			QPSK			5.77
			16-QAM			6.50
			64-QAM			6.59
			256-QAM			6.57
	90 MHz		BPSK			4.59
			QPSK			5.79
			16-QAM			6.55
			64-QAM			6.62
			256-QAM			6.58
	100 MHz		BPSK			4.53
			QPSK			5.75
			16-QAM			6.65
			64-QAM			6.65
			256-QAM			6.61

Note:

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

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n77	10 MHz	3840.00	BPSK	Full RB	0	8.6884
			QPSK			8.6977
			16-QAM			8.6509
			64-QAM			8.6840
			256-QAM			8.6404
	15 MHz		BPSK			12.954
			QPSK			12.997
			16-QAM			12.962
			64-QAM			12.951
			256-QAM			12.951
	20 MHz		BPSK			17.965
			QPSK			17.938
			16-QAM			17.984
			64-QAM			17.965
			256-QAM			18.012
	25 MHz		BPSK			22.995
			QPSK			22.977
			16-QAM			23.005
			64-QAM			22.928
			256-QAM			22.986
	30 MHz		BPSK			26.995
			QPSK			26.950
			16-QAM			26.944
			64-QAM			26.912
			256-QAM			26.982
	40 MHz		BPSK			35.897
			QPSK			35.904
			16-QAM			35.844
			64-QAM			35.975
			256-QAM			35.910

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
	50 MHz		BPSK			45.868
			QPSK			45.938
			16-QAM			45.855
			64-QAM			45.917
			256-QAM			45.863
	60 MHz		BPSK			58.145
			QPSK			58.204
			16-QAM			58.338
			64-QAM			58.087
			256-QAM			58.252
	70 MHz		BPSK			64.737
			QPSK			64.831
			16-QAM			64.672
			64-QAM			64.581
			256-QAM			64.712
	80 MHz		BPSK			77.544
			QPSK			77.508
			16-QAM			77.351
			64-QAM			77.463
			256-QAM			77.573
	90 MHz		BPSK			87.070
			QPSK			87.080
			16-QAM			87.375
			64-QAM			87.309
			256-QAM			87.186
	100 MHz		BPSK			96.683
			QPSK			96.669
			16-QAM			96.576
			64-QAM			96.653
			256-QAM			96.834

Note:

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

9.5 CONDUCTED SPURIOUS EMISSIONS

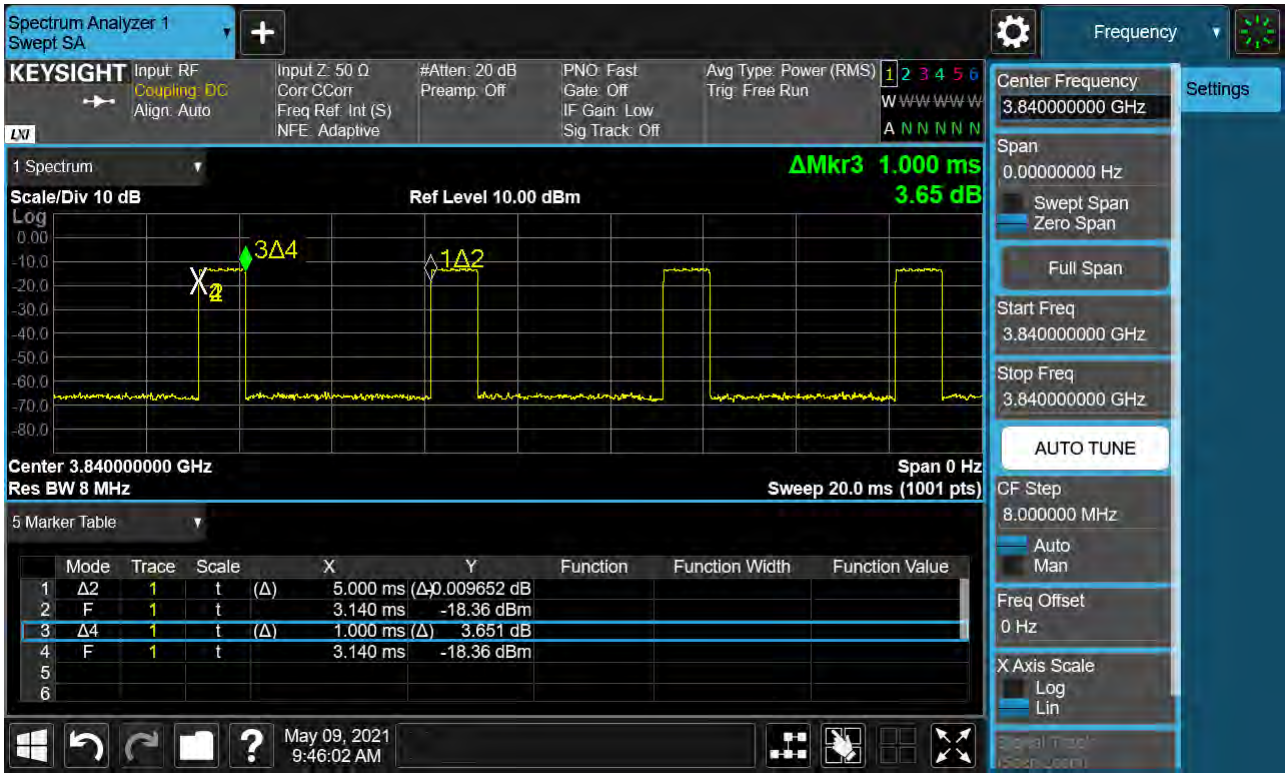
Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n77	10	3705.00	9.0897	36.805	-70.563	-33.758	-13.00
		3840.00	8.8634	36.805	-70.534	-33.729	
		3975.00	8.2762	36.805	-71.680	-34.875	
	15	3707.52	4.9751	36.805	-70.147	-33.342	
		3840.00	9.7503	36.805	-70.766	-33.961	
		3972.48	6.0299	36.805	-70.927	-34.122	
	20	3710.01	9.1446	36.805	-70.748	-33.943	
		3840.00	8.3250	36.805	-70.637	-33.832	
		3969.99	8.2837	36.805	-69.740	-32.935	
	25	3712.50	9.4292	36.805	-70.089	-33.284	
		3840.00	8.8888	36.805	-70.609	-33.804	
		3967.50	8.8370	36.805	-70.264	-33.459	
	30	3715.02	9.9397	36.805	-70.078	-33.273	
		3840.00	8.2528	36.805	-70.792	-33.987	
		3964.98	9.7198	36.805	-70.404	-33.599	
	40	3720.00	9.3858	36.805	-70.531	-33.726	
		3840.00	9.7273	36.805	-70.475	-33.670	
		3960.00	7.9955	36.805	-70.866	-34.061	
	50	3725.10	8.0334	36.805	-70.192	-33.387	
		3840.00	3.0953	36.190	-67.359	-31.169	
		3954.99	9.4392	36.805	-70.427	-33.622	
	60	3730.02	6.0060	36.805	-70.416	-33.611	
		3840.00	6.0110	36.805	-70.566	-33.761	
		3949.98	9.1451	36.805	-70.298	-33.493	
	70	3735.00	9.7039	36.805	-70.676	-33.871	
		3840.00	8.8390	36.805	-69.226	-32.421	
		3945.00	8.2921	36.805	-70.049	-33.244	
	80	3740.01	9.9651	36.805	-71.170	-34.365	
		3840.00	5.2004	36.805	-70.333	-33.528	
		3939.99	8.5823	36.805	-70.844	-34.039	
	90	3745.02	9.6550	36.805	-70.152	-33.347	
		3840.00	8.8275	36.805	-69.847	-33.042	
		3934.98	9.1082	36.805	-70.896	-34.091	
	100	3750.00	9.6725	36.805	-70.964	-34.159	
		3840.00	9.4282	36.805	-71.342	-34.537	
		3930.00	7.9811	36.805	-71.417	-34.612	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 689 ~ 761.

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	33.484
1 – 5	36.190
5 – 10	36.805
10 – 15	37.330
15 – 20	37.703
Above 20	38.345

9.6 BAND EDGE

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

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3705.000	100 %	+20(Ref)	3704 999 997	0.0	0.000 000	0.000
	100 %	-30	3704 999 992	-5.1	0.000 000	-0.001
	100 %	-20	3704 999 992	-5.1	0.000 000	-0.001
	100 %	-10	3704 999 993	-3.9	0.000 000	-0.001
	100 %	0	3704 999 994	-3.5	0.000 000	-0.001
	100 %	+10	3704 999 995	-2.3	0.000 000	-0.001
	100 %	+30	3704 999 991	-5.7	0.000 000	-0.002
	100 %	+40	3704 999 992	-4.7	0.000 000	-0.001
	100 %	+50	3704 999 992	-5.4	0.000 000	-0.001
	Batt. Endpoint	+20	3704 999 992	-4.6	0.000 000	-0.001
3975.000	100 %	+20(Ref)	3974 999 996	0.0	0.000 000	0.000
	100 %	-30	3974 999 994	-1.8	0.000 000	0.000
	100 %	-20	3974 999 993	-2.9	0.000 000	-0.001
	100 %	-10	3974 999 994	-1.7	0.000 000	0.000
	100 %	0	3974 999 993	-3.0	0.000 000	-0.001
	100 %	+10	3974 999 993	-2.3	0.000 000	-0.001
	100 %	+30	3974 999 994	-2.2	0.000 000	-0.001
	100 %	+40	3974 999 991	-4.6	0.000 000	-0.001
	100 %	+50	3974 999 994	-1.7	0.000 000	0.000
	Batt. Endpoint	+20	3974 999 994	-2.0	0.000 000	0.000

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3707.520	100 %	+20(Ref)	3707 519 994	0.0	0.000 000	0.000
	100 %	-30	3707 519 990	-3.4	0.000 000	-0.001
	100 %	-20	3707 519 991	-2.8	0.000 000	-0.001
	100 %	-10	3707 519 989	-5.0	0.000 000	-0.001
	100 %	0	3707 519 989	-4.7	0.000 000	-0.001
	100 %	+10	3707 519 989	-4.9	0.000 000	-0.001
	100 %	+30	3707 519 991	-2.8	0.000 000	-0.001
	100 %	+40	3707 519 991	-3.4	0.000 000	-0.001
	100 %	+50	3707 519 988	-6.0	0.000 000	-0.002
	Batt. Endpoint	+20	3707 519 989	-4.7	0.000 000	-0.001
3972.480	100 %	+20(Ref)	3972 479 998	0.0	0.000 000	0.000
	100 %	-30	3972 479 994	-3.5	0.000 000	-0.001
	100 %	-20	3972 479 995	-2.9	0.000 000	-0.001
	100 %	-10	3972 479 994	-3.7	0.000 000	-0.001
	100 %	0	3972 479 992	-6.1	0.000 000	-0.002
	100 %	+10	3972 479 996	-2.3	0.000 000	-0.001
	100 %	+30	3972 479 996	-2.1	0.000 000	-0.001
	100 %	+40	3972 479 995	-2.7	0.000 000	-0.001
	100 %	+50	3972 479 994	-3.6	0.000 000	-0.001
	Batt. Endpoint	+20	3972 479 996	-2.1	0.000 000	-0.001

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3710.010	100 %	+20(Ref)	3710 009 994	0.0	0.000 000	0.000
	100 %	-30	3710 009 989	-5.1	0.000 000	-0.001
	100 %	-20	3710 009 989	-5.2	0.000 000	-0.001
	100 %	-10	3710 009 989	-4.7	0.000 000	-0.001
	100 %	0	3710 009 986	-7.4	0.000 000	-0.002
	100 %	+10	3710 009 990	-4.2	0.000 000	-0.001
	100 %	+30	3710 009 989	-4.9	0.000 000	-0.001
	100 %	+40	3710 009 987	-6.8	0.000 000	-0.002
	100 %	+50	3710 009 989	-5.0	0.000 000	-0.001
	Batt. Endpoint	+20	3710 009 989	-5.3	0.000 000	-0.001
3969.990	100 %	+20(Ref)	3969 989 999	0.0	0.000 000	0.000
	100 %	-30	3969 989 994	-4.7	0.000 000	-0.001
	100 %	-20	3969 989 996	-2.7	0.000 000	-0.001
	100 %	-10	3969 989 995	-3.9	0.000 000	-0.001
	100 %	0	3969 989 994	-4.8	0.000 000	-0.001
	100 %	+10	3969 989 995	-3.5	0.000 000	-0.001
	100 %	+30	3969 989 993	-5.5	0.000 000	-0.001
	100 %	+40	3969 989 997	-2.1	0.000 000	-0.001
	100 %	+50	3969 989 997	-2.2	0.000 000	-0.001
	Batt. Endpoint	+20	3969 989 997	-1.6	0.000 000	0.000

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3712.500	100 %	+20(Ref)	3712 499 997	0.0	0.000 000	0.000
	100 %	-30	3712 499 992	-5.1	0.000 000	-0.001
	100 %	-20	3712 499 992	-4.6	0.000 000	-0.001
	100 %	-10	3712 499 991	-5.4	0.000 000	-0.001
	100 %	0	3712 499 992	-4.5	0.000 000	-0.001
	100 %	+10	3712 499 991	-5.5	0.000 000	-0.001
	100 %	+30	3712 499 995	-1.5	0.000 000	0.000
	100 %	+40	3712 499 992	-4.7	0.000 000	-0.001
	100 %	+50	3712 499 992	-4.3	0.000 000	-0.001
	Batt. Endpoint	+20	3712 499 995	-1.7	0.000 000	0.000
3967.500	100 %	+20(Ref)	3967 499 996	0.0	0.000 000	0.000
	100 %	-30	3967 499 988	-7.3	0.000 000	-0.002
	100 %	-20	3967 499 992	-3.4	0.000 000	-0.001
	100 %	-10	3967 499 993	-2.7	0.000 000	-0.001
	100 %	0	3967 499 992	-3.5	0.000 000	-0.001
	100 %	+10	3967 499 991	-4.7	0.000 000	-0.001
	100 %	+30	3967 499 993	-2.5	0.000 000	-0.001
	100 %	+40	3967 499 991	-4.5	0.000 000	-0.001
	100 %	+50	3967 499 992	-4.0	0.000 000	-0.001
	Batt. Endpoint	+20	3967 499 993	-2.8	0.000 000	-0.001

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3715.020	100 %	+20(Ref)	3715 019 994	0.0	0.000 000	0.000
	100 %	-30	3715 019 989	-5.3	0.000 000	-0.001
	100 %	-20	3715 019 989	-5.9	0.000 000	-0.002
	100 %	-10	3715 019 989	-5.6	0.000 000	-0.002
	100 %	0	3715 019 989	-5.9	0.000 000	-0.002
	100 %	+10	3715 019 989	-5.9	0.000 000	-0.002
	100 %	+30	3715 019 991	-3.2	0.000 000	-0.001
	100 %	+40	3715 019 991	-3.9	0.000 000	-0.001
	100 %	+50	3715 019 990	-4.4	0.000 000	-0.001
	Batt. Endpoint	+20	3715 019 990	-4.6	0.000 000	-0.001
3964.980	100 %	+20(Ref)	3964 979 997	0.0	0.000 000	0.000
	100 %	-30	3964 979 993	-3.7	0.000 000	-0.001
	100 %	-20	3964 979 994	-2.6	0.000 000	-0.001
	100 %	-10	3964 979 993	-3.9	0.000 000	-0.001
	100 %	0	3964 979 994	-2.5	0.000 000	-0.001
	100 %	+10	3964 979 992	-4.9	0.000 000	-0.001
	100 %	+30	3964 979 995	-2.3	0.000 000	-0.001
	100 %	+40	3964 979 992	-4.7	0.000 000	-0.001
	100 %	+50	3964 979 994	-3.1	0.000 000	-0.001
	Batt. Endpoint	+20	3964 979 994	-2.9	0.000 000	-0.001

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3720.000	100 %	+20(Ref)	3719 999 996	0.0	0.000 000	0.000
	100 %	-30	3719 999 991	-5.1	0.000 000	-0.001
	100 %	-20	3719 999 992	-3.6	0.000 000	-0.001
	100 %	-10	3719 999 991	-5.0	0.000 000	-0.001
	100 %	0	3719 999 991	-5.2	0.000 000	-0.001
	100 %	+10	3719 999 992	-4.3	0.000 000	-0.001
	100 %	+30	3719 999 992	-4.2	0.000 000	-0.001
	100 %	+40	3719 999 992	-4.0	0.000 000	-0.001
	100 %	+50	3719 999 992	-4.2	0.000 000	-0.001
	Batt. Endpoint	+20	3719 999 992	-3.7	0.000 000	-0.001
3960.000	100 %	+20(Ref)	3959 999 997	0.0	0.000 000	0.000
	100 %	-30	3959 999 992	-4.9	0.000 000	-0.001
	100 %	-20	3959 999 994	-3.6	0.000 000	-0.001
	100 %	-10	3959 999 993	-4.7	0.000 000	-0.001
	100 %	0	3959 999 996	-1.6	0.000 000	0.000
	100 %	+10	3959 999 994	-3.5	0.000 000	-0.001
	100 %	+30	3959 999 995	-2.7	0.000 000	-0.001
	100 %	+40	3959 999 995	-2.3	0.000 000	-0.001
	100 %	+50	3959 999 992	-5.0	0.000 000	-0.001
	Batt. Endpoint	+20	3959 999 995	-2.8	0.000 000	-0.001

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3725.010	100 %	+20(Ref)	3725 009 993	0.0	0.000 000	0.000
	100 %	-30	3725 009 987	-5.8	0.000 000	-0.002
	100 %	-20	3725 009 989	-4.2	0.000 000	-0.001
	100 %	-10	3725 009 987	-6.1	0.000 000	-0.002
	100 %	0	3725 009 990	-3.2	0.000 000	-0.001
	100 %	+10	3725 009 990	-3.3	0.000 000	-0.001
	100 %	+30	3725 009 988	-5.1	0.000 000	-0.001
	100 %	+40	3725 009 987	-5.7	0.000 000	-0.002
	100 %	+50	3725 009 989	-4.1	0.000 000	-0.001
	Batt. Endpoint	+20	3725 009 988	-5.1	0.000 000	-0.001
3954.990	100 %	+20(Ref)	3954 989 994	0.0	0.000 000	0.000
	100 %	-30	3954 989 989	-4.1	0.000 000	-0.001
	100 %	-20	3954 989 989	-4.2	0.000 000	-0.001
	100 %	-10	3954 989 990	-3.9	0.000 000	-0.001
	100 %	0	3954 989 989	-4.4	0.000 000	-0.001
	100 %	+10	3954 989 992	-1.5	0.000 000	0.000
	100 %	+30	3954 989 991	-3.1	0.000 000	-0.001
	100 %	+40	3954 989 989	-4.9	0.000 000	-0.001
	100 %	+50	3954 989 990	-4.0	0.000 000	-0.001
	Batt. Endpoint	+20	3954 989 990	-3.6	0.000 000	-0.001

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3730.020	100 %	+20(Ref)	3730 019 994	0.0	0.000 000	0.000
	100 %	-30	3730 019 988	-5.9	0.000 000	-0.002
	100 %	-20	3730 019 988	-5.9	0.000 000	-0.002
	100 %	-10	3730 019 990	-4.0	0.000 000	-0.001
	100 %	0	3730 019 988	-6.2	0.000 000	-0.002
	100 %	+10	3730 019 988	-6.3	0.000 000	-0.002
	100 %	+30	3730 019 988	-6.1	0.000 000	-0.002
	100 %	+40	3730 019 988	-6.3	0.000 000	-0.002
	100 %	+50	3730 019 987	-6.8	0.000 000	-0.002
	Batt. Endpoint	+20	3730 019 988	-5.8	0.000 000	-0.002
3949.980	100 %	+20(Ref)	3949 979 995	0.0	0.000 000	0.000
	100 %	-30	3949 979 992	-2.7	0.000 000	-0.001
	100 %	-20	3949 979 992	-2.6	0.000 000	-0.001
	100 %	-10	3949 979 991	-3.5	0.000 000	-0.001
	100 %	0	3949 979 991	-3.4	0.000 000	-0.001
	100 %	+10	3949 979 993	-1.8	0.000 000	0.000
	100 %	+30	3949 979 990	-4.3	0.000 000	-0.001
	100 %	+40	3949 979 991	-3.7	0.000 000	-0.001
	100 %	+50	3949 979 991	-3.3	0.000 000	-0.001
	Batt. Endpoint	+20	3949 979 992	-3.0	0.000 000	-0.001

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3735.000	100 %	+20(Ref)	3734 999 995	0.0	0.000 000	0.000
	100 %	-30	3734 999 987	-7.8	0.000 000	-0.002
	100 %	-20	3734 999 990	-4.7	0.000 000	-0.001
	100 %	-10	3734 999 988	-7.1	0.000 000	-0.002
	100 %	0	3734 999 989	-5.3	0.000 000	-0.001
	100 %	+10	3734 999 989	-5.4	0.000 000	-0.001
	100 %	+30	3734 999 991	-4.1	0.000 000	-0.001
	100 %	+40	3734 999 990	-4.7	0.000 000	-0.001
	100 %	+50	3734 999 989	-5.6	0.000 000	-0.002
	Batt. Endpoint	+20	3734 999 989	-5.6	0.000 000	-0.002
3945.000	100 %	+20(Ref)	3944 999 995	0.0	0.000 000	0.000
	100 %	-30	3944 999 990	-4.4	0.000 000	-0.001
	100 %	-20	3944 999 990	-4.8	0.000 000	-0.001
	100 %	-10	3944 999 990	-4.4	0.000 000	-0.001
	100 %	0	3944 999 992	-2.8	0.000 000	-0.001
	100 %	+10	3944 999 994	-1.1	0.000 000	0.000
	100 %	+30	3944 999 990	-4.5	0.000 000	-0.001
	100 %	+40	3944 999 991	-4.2	0.000 000	-0.001
	100 %	+50	3944 999 990	-5.0	0.000 000	-0.001
	Batt. Endpoint	+20	3944 999 992	-3.2	0.000 000	-0.001

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3740.010	100 %	+20(Ref)	3740 009 995	0.0	0.000 000	0.000
	100 %	-30	3740 009 990	-5.0	0.000 000	-0.001
	100 %	-20	3740 009 988	-7.0	0.000 000	-0.002
	100 %	-10	3740 009 991	-4.1	0.000 000	-0.001
	100 %	0	3740 009 989	-5.6	0.000 000	-0.001
	100 %	+10	3740 009 990	-4.5	0.000 000	-0.001
	100 %	+30	3740 009 988	-6.8	0.000 000	-0.002
	100 %	+40	3740 009 988	-6.3	0.000 000	-0.002
	100 %	+50	3740 009 988	-6.3	0.000 000	-0.002
	Batt. Endpoint	+20	3740 009 990	-4.6	0.000 000	-0.001
3939.990	100 %	+20(Ref)	3939 989 995	0.0	0.000 000	0.000
	100 %	-30	3939 989 990	-5.5	0.000 000	-0.001
	100 %	-20	3939 989 990	-5.3	0.000 000	-0.001
	100 %	-10	3939 989 993	-2.5	0.000 000	-0.001
	100 %	0	3939 989 992	-3.2	0.000 000	-0.001
	100 %	+10	3939 989 995	-0.2	0.000 000	0.000
	100 %	+30	3939 989 993	-2.2	0.000 000	-0.001
	100 %	+40	3939 989 993	-2.1	0.000 000	-0.001
	100 %	+50	3939 989 993	-2.1	0.000 000	-0.001
	Batt. Endpoint	+20	3939 989 991	-4.4	0.000 000	-0.001

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3745.020	100 %	+20(Ref)	3745 019 994	0.0	0.000 000	0.000
	100 %	-30	3745 019 989	-5.6	0.000 000	-0.001
	100 %	-20	3745 019 988	-6.0	0.000 000	-0.002
	100 %	-10	3745 019 989	-5.9	0.000 000	-0.002
	100 %	0	3745 019 988	-6.9	0.000 000	-0.002
	100 %	+10	3745 019 991	-3.9	0.000 000	-0.001
	100 %	+30	3745 019 988	-6.9	0.000 000	-0.002
	100 %	+40	3745 019 989	-5.0	0.000 000	-0.001
	100 %	+50	3745 019 989	-5.5	0.000 000	-0.001
	Batt. Endpoint	+20	3745 019 989	-5.5	0.000 000	-0.001
3934.980	100 %	+20(Ref)	3934 979 992	0.0	0.000 000	0.000
	100 %	-30	3934 979 987	-5.4	0.000 000	-0.001
	100 %	-20	3934 979 987	-4.7	0.000 000	-0.001
	100 %	-10	3934 979 989	-2.9	0.000 000	-0.001
	100 %	0	3934 979 987	-5.4	0.000 000	-0.001
	100 %	+10	3934 979 990	-1.8	0.000 000	0.000
	100 %	+30	3934 979 989	-2.6	0.000 000	-0.001
	100 %	+40	3934 979 989	-2.6	0.000 000	-0.001
	100 %	+50	3934 979 989	-3.3	0.000 000	-0.001
	Batt. Endpoint	+20	3934 979 987	-5.3	0.000 000	-0.001

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

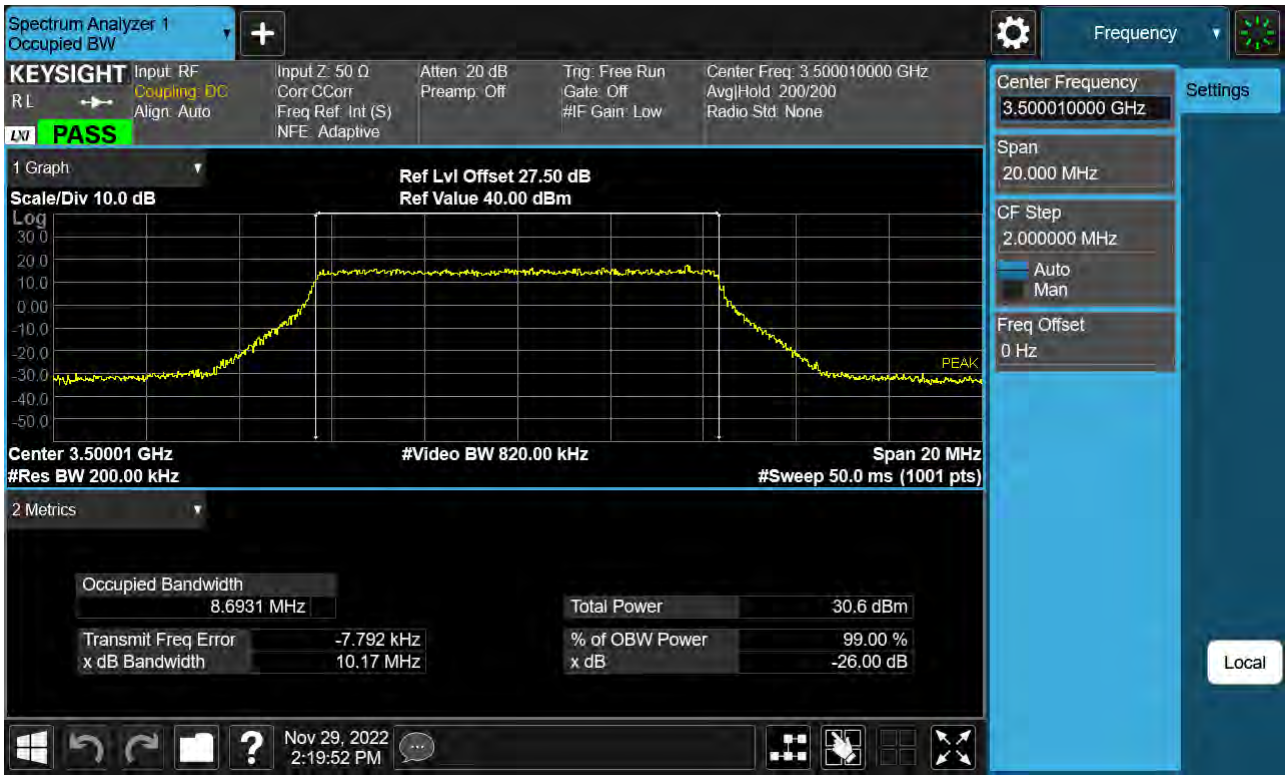
Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3750.000	100 %	+20(Ref)	3749 999 996	0.0	0.000 000	0.000
	100 %	-30	3749 999 990	-5.7	0.000 000	-0.002
	100 %	-20	3749 999 990	-6.3	0.000 000	-0.002
	100 %	-10	3749 999 990	-6.0	0.000 000	-0.002
	100 %	0	3749 999 990	-6.0	0.000 000	-0.002
	100 %	+10	3749 999 988	-7.6	0.000 000	-0.002
	100 %	+30	3749 999 992	-4.1	0.000 000	-0.001
	100 %	+40	3749 999 992	-4.1	0.000 000	-0.001
	100 %	+50	3749 999 989	-7.3	0.000 000	-0.002
	Batt. Endpoint	+20	3749 999 989	-6.8	0.000 000	-0.002
3930.000	100 %	+20(Ref)	3929 999 994	0.0	0.000 000	0.000
	100 %	-30	3929 999 987	-7.0	0.000 000	-0.002
	100 %	-20	3929 999 989	-5.4	0.000 000	-0.001
	100 %	-10	3929 999 991	-3.7	0.000 000	-0.001
	100 %	0	3929 999 990	-4.8	0.000 000	-0.001
	100 %	+10	3929 999 990	-4.9	0.000 000	-0.001
	100 %	+30	3929 999 989	-5.8	0.000 000	-0.001
	100 %	+40	3929 999 989	-5.8	0.000 000	-0.001
	100 %	+50	3929 999 989	-5.0	0.000 000	-0.001
	Batt. Endpoint	+20	3929 999 988	-6.7	0.000 000	-0.002

10. TEST PLOTS(3450 MHz - 3550 MHz)

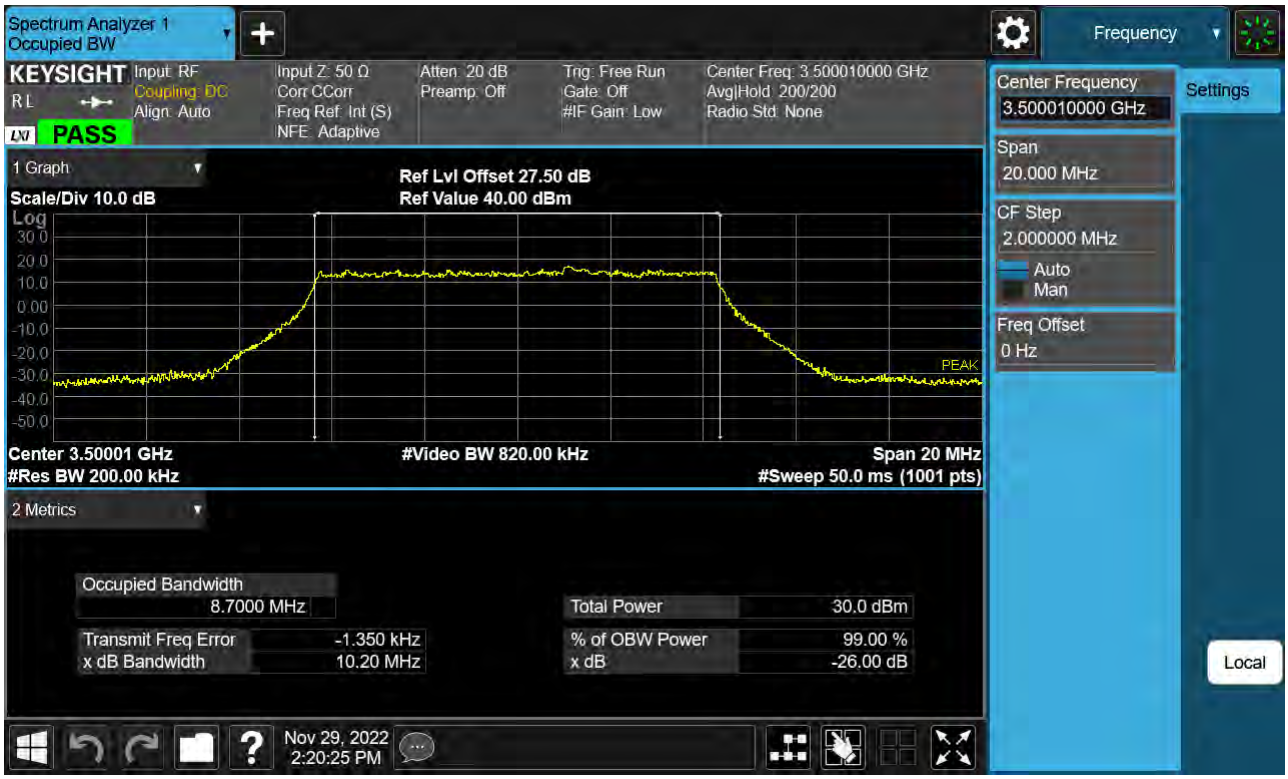
Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 BPSK)

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

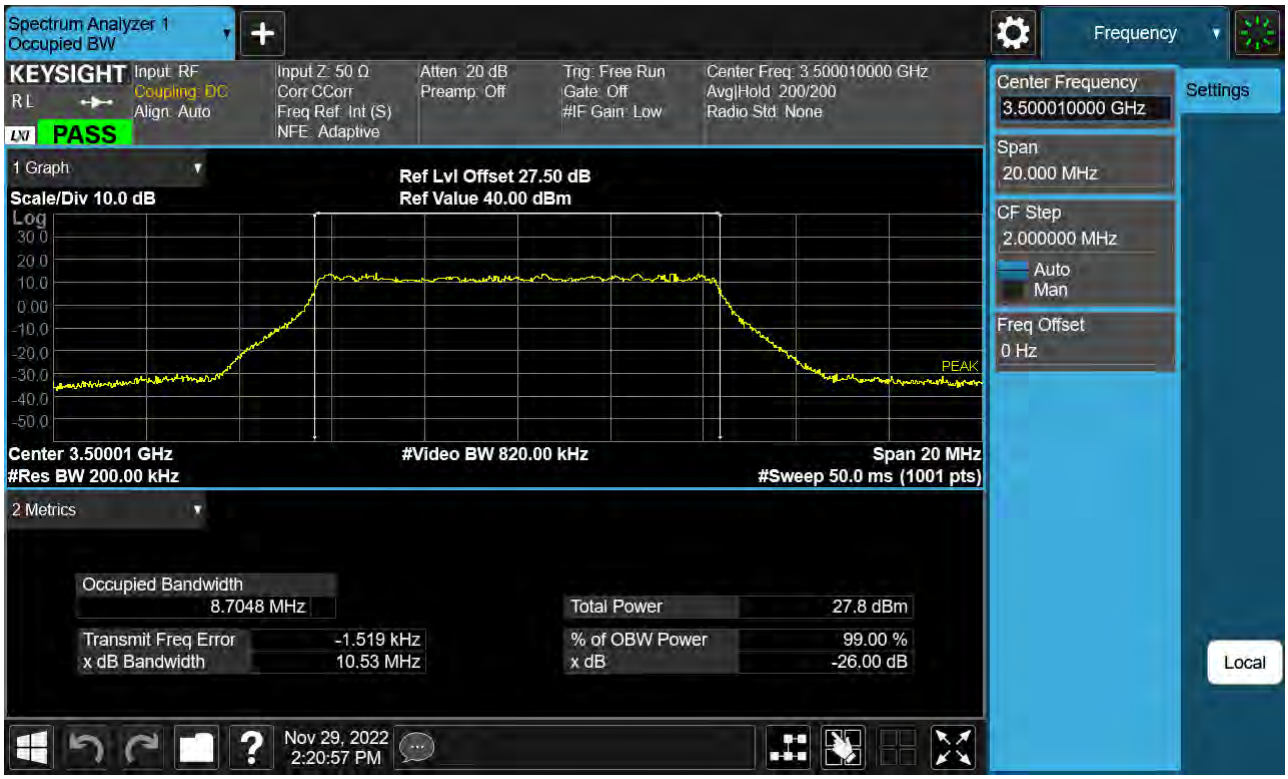
Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 16QAM)



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

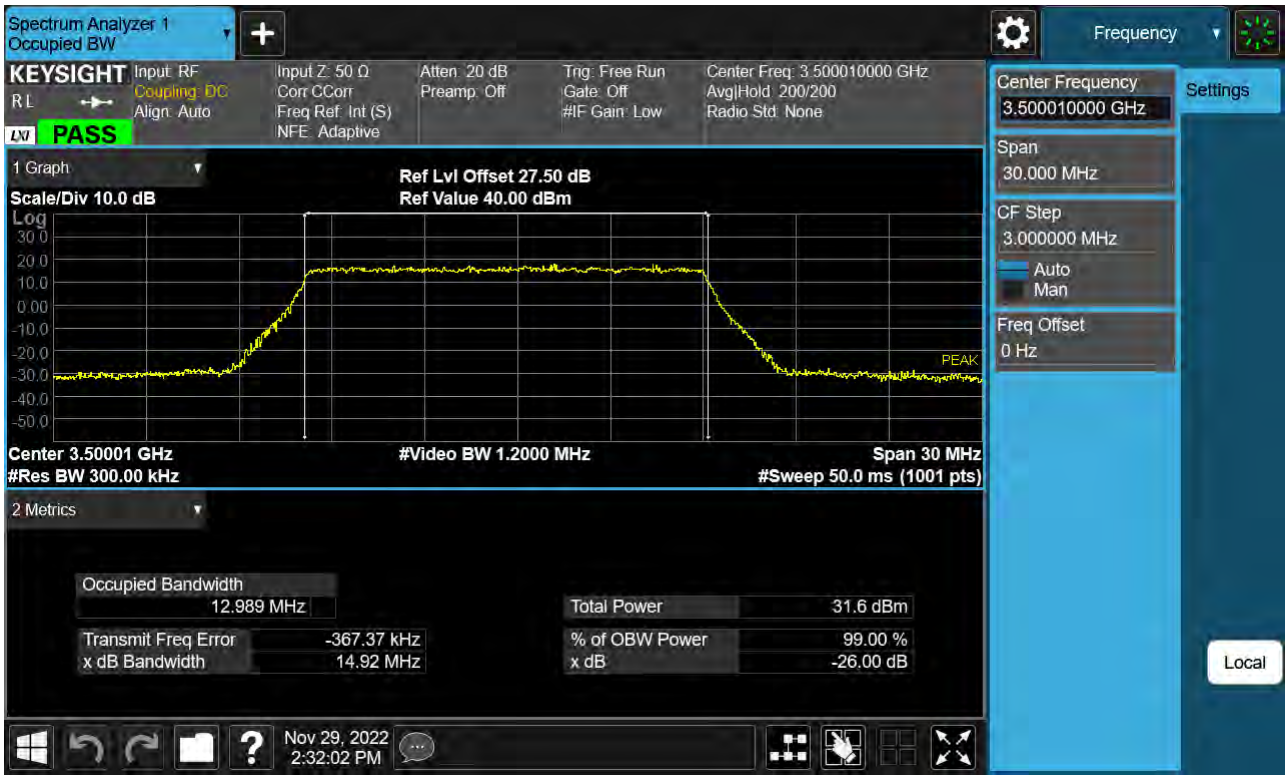


Sub6 n77. Occupied Bandwidth Plot (10 M BW Ch.633334 256QAM)



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

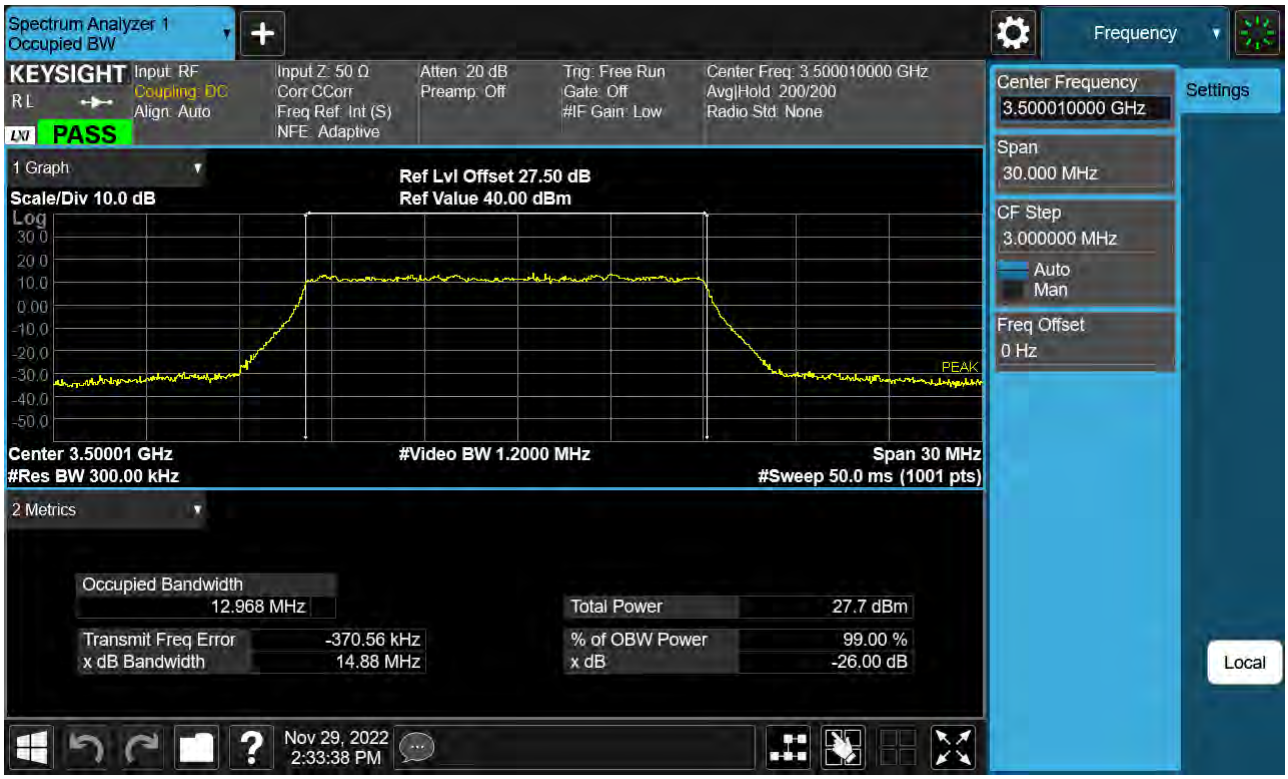
Sub6 n77. Occupied Bandwidth Plot (15 M BW Ch.633334 QPSK)



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

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

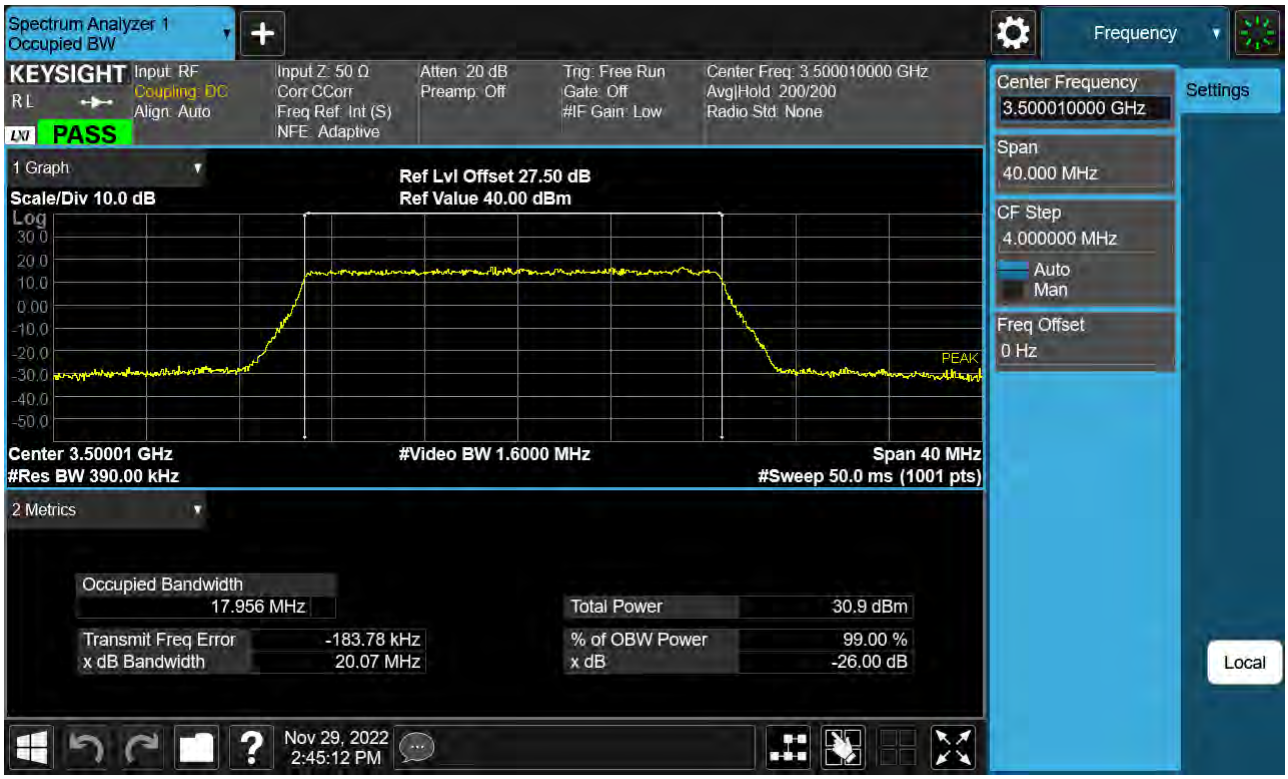
Sub6 n77. Occupied Bandwidth Plot (15 M BW Ch.633334 256QAM)



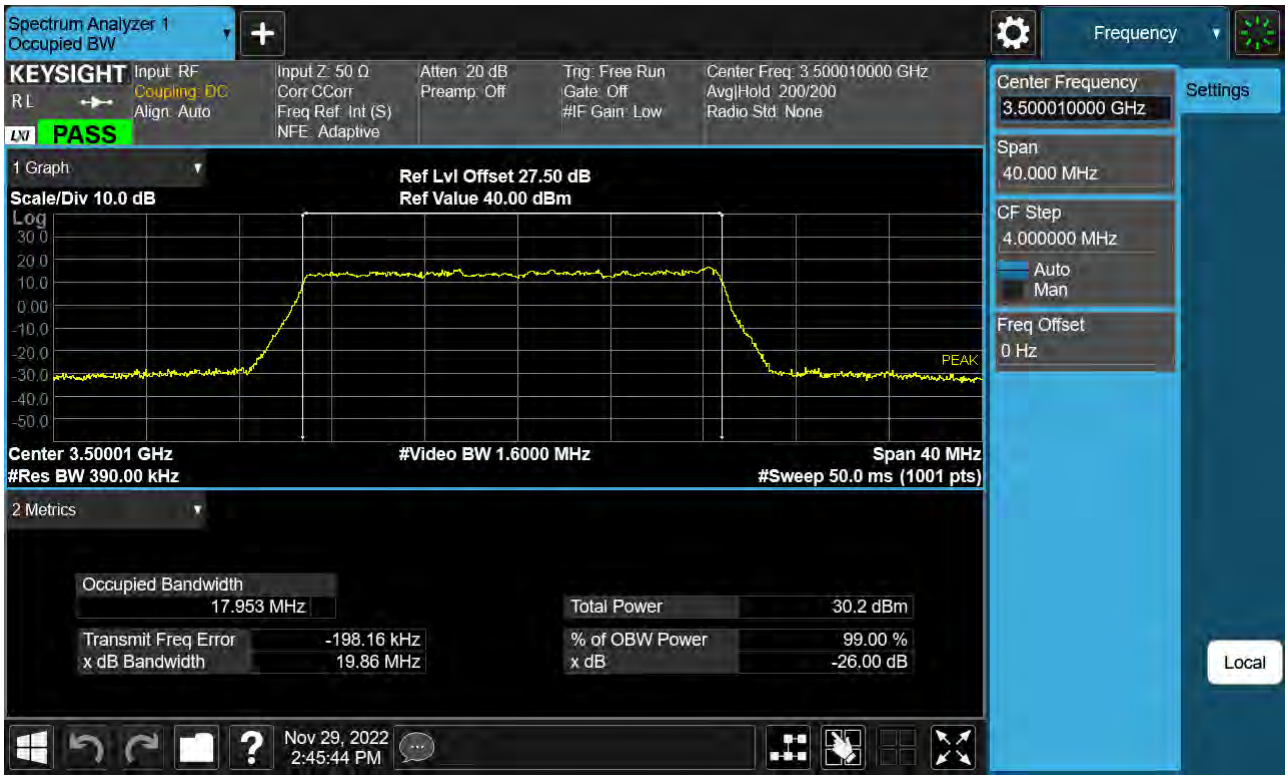
Sub6 n77. Occupied Bandwidth Plot (20 M BW Ch.633334 BPSK)

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)

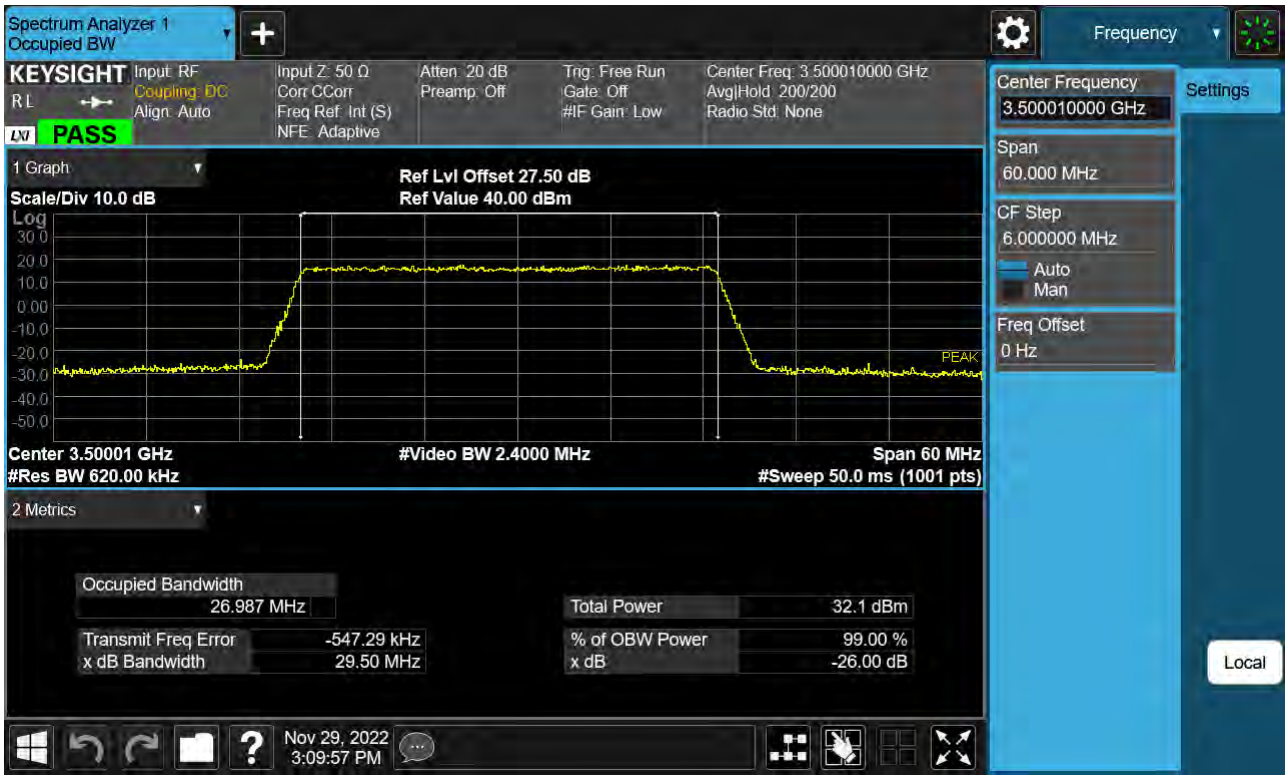
Sub6 n77. Occupied Bandwidth Plot (25 M BW Ch.633334 16QAM)

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

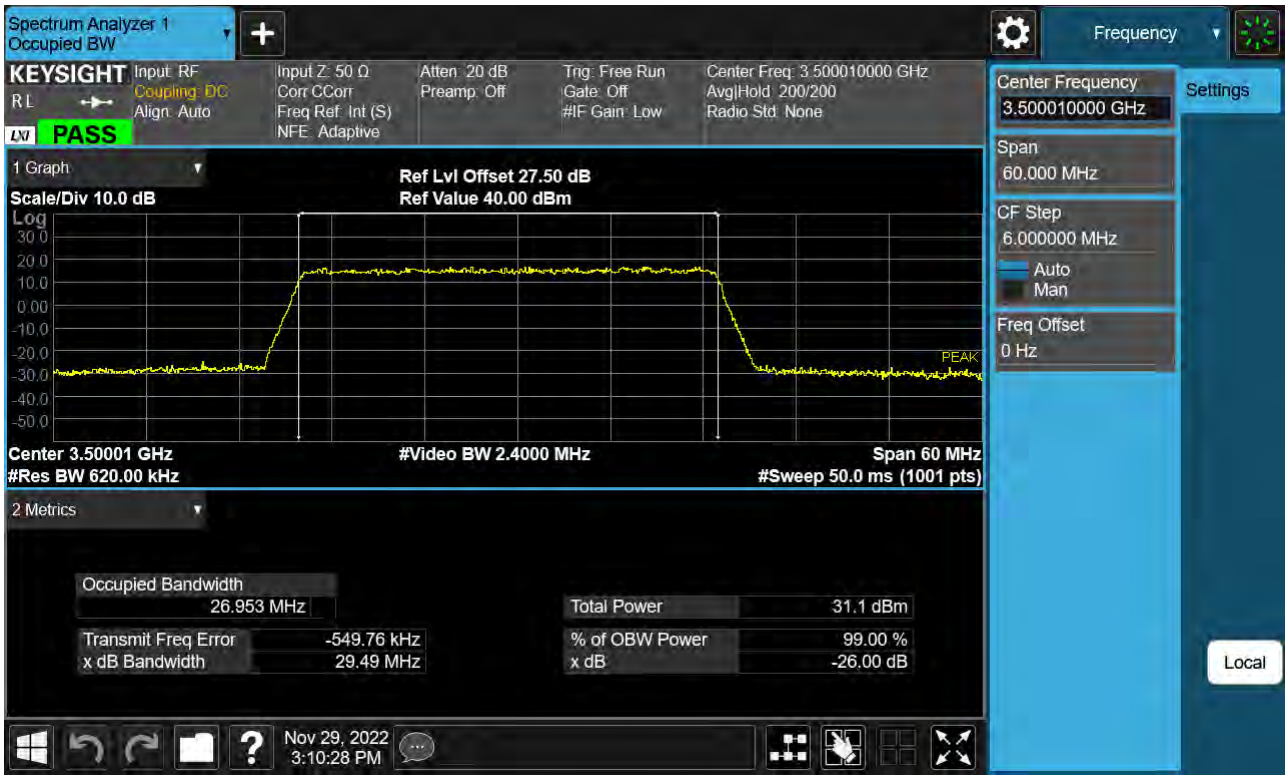
Sub6 n77. Occupied Bandwidth Plot (25 M BW Ch.633334 256QAM)

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

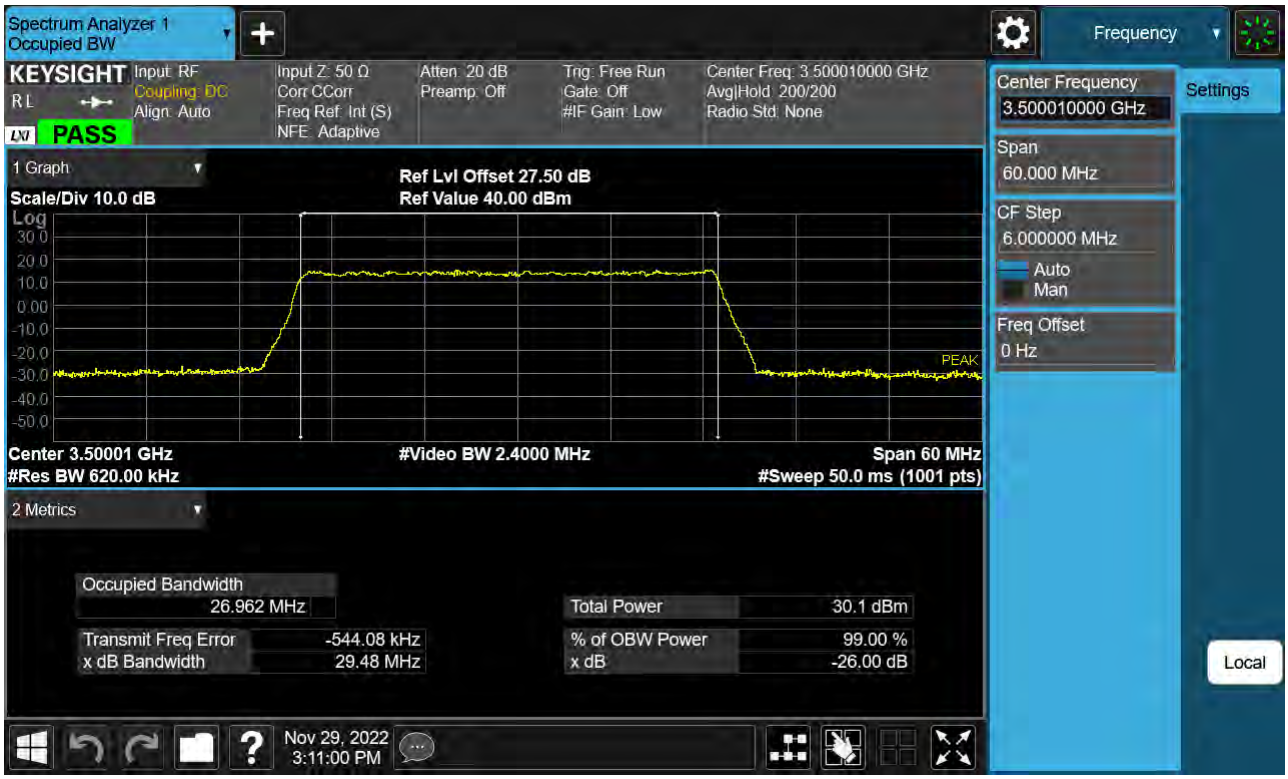
Sub6 n77. Occupied Bandwidth Plot (30 M BW Ch.633334 QPSK)



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



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



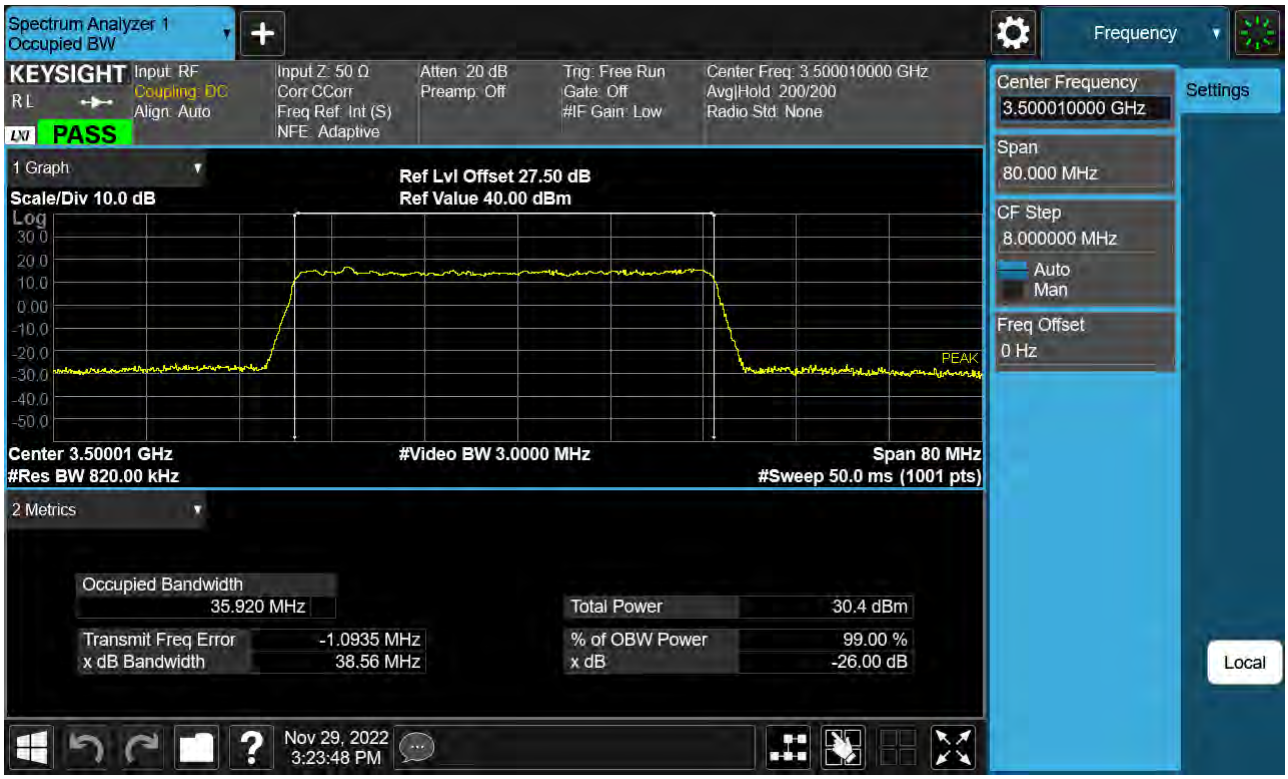
Sub6 n77. Occupied Bandwidth Plot (30 M BW Ch.633334 256QAM)

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)

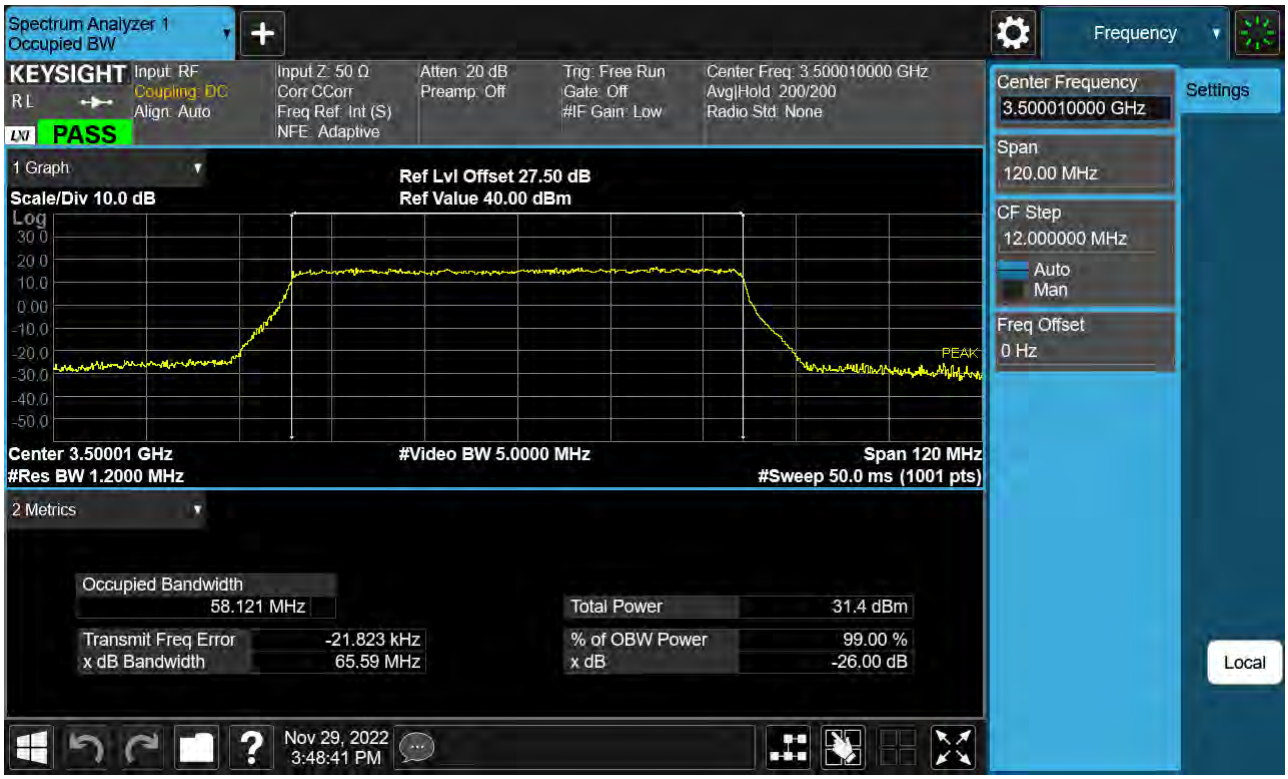
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 64QAM)

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)

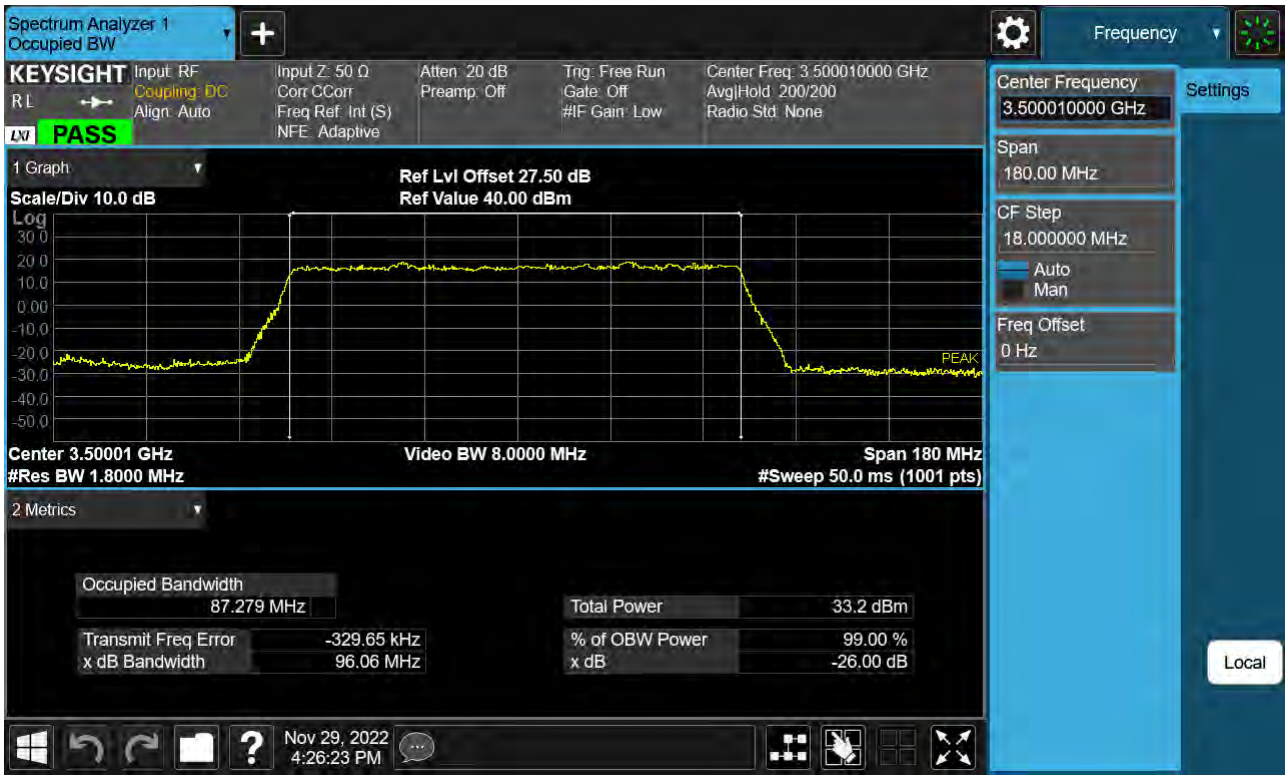
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 QPSK)

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

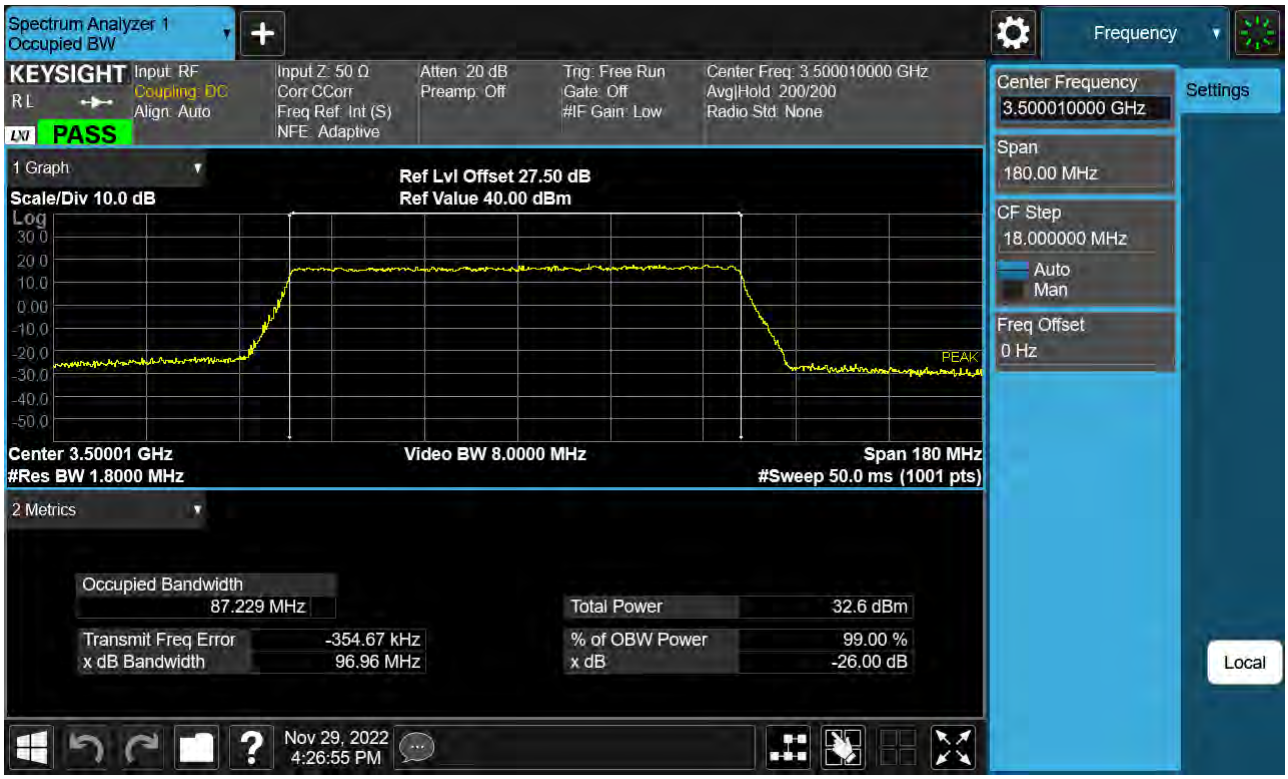
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 64QAM)

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

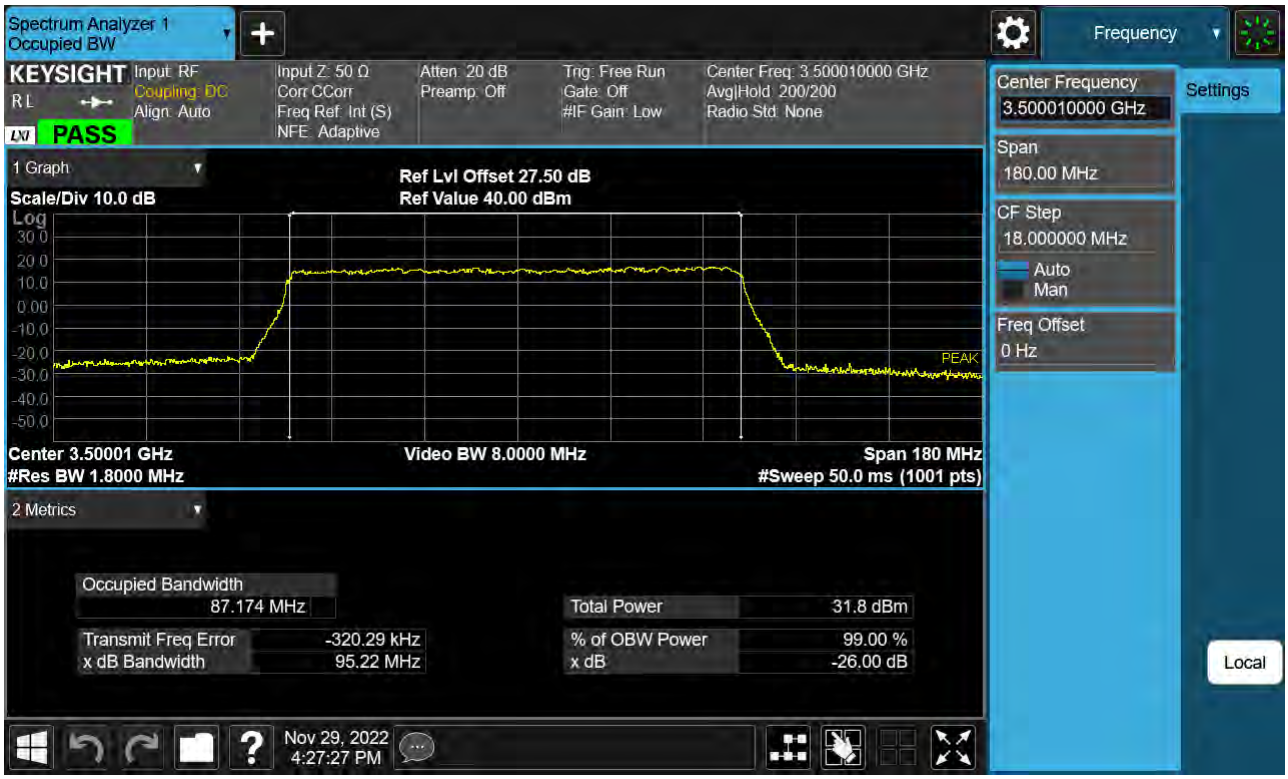
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 BPSK)



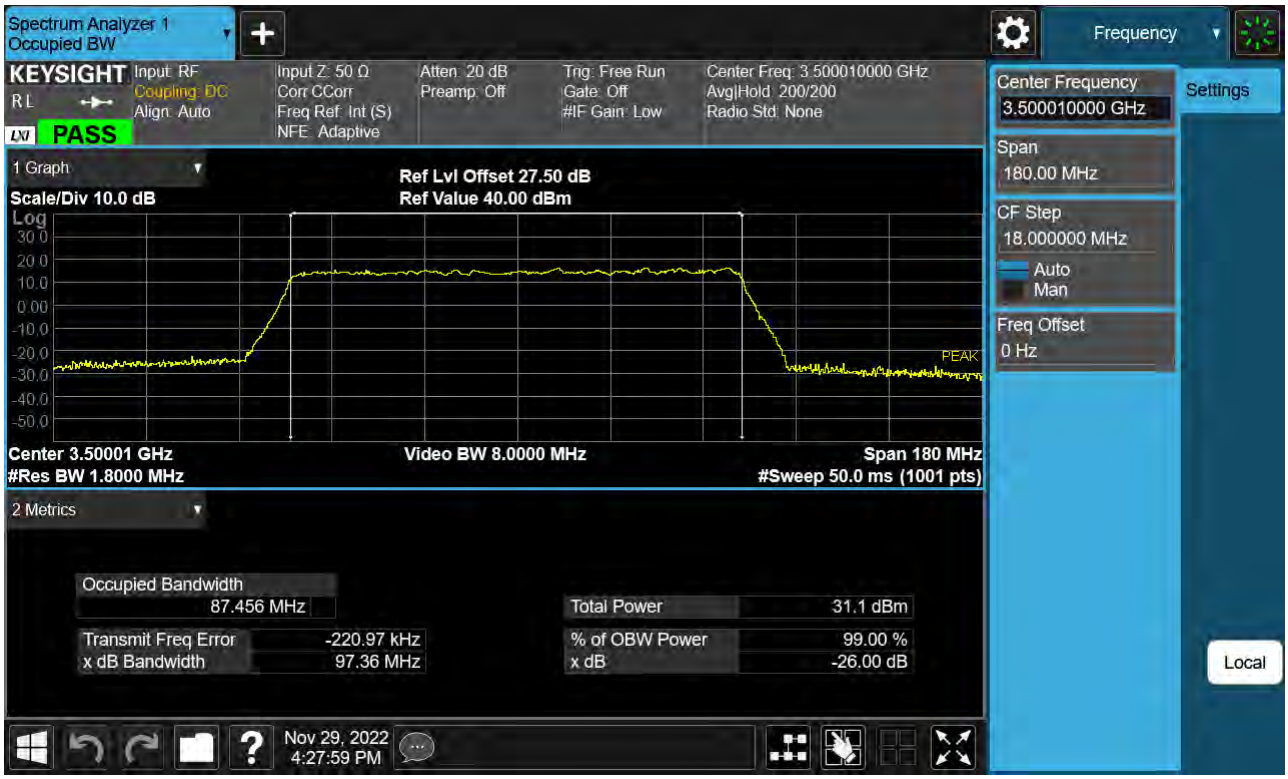
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 QPSK)



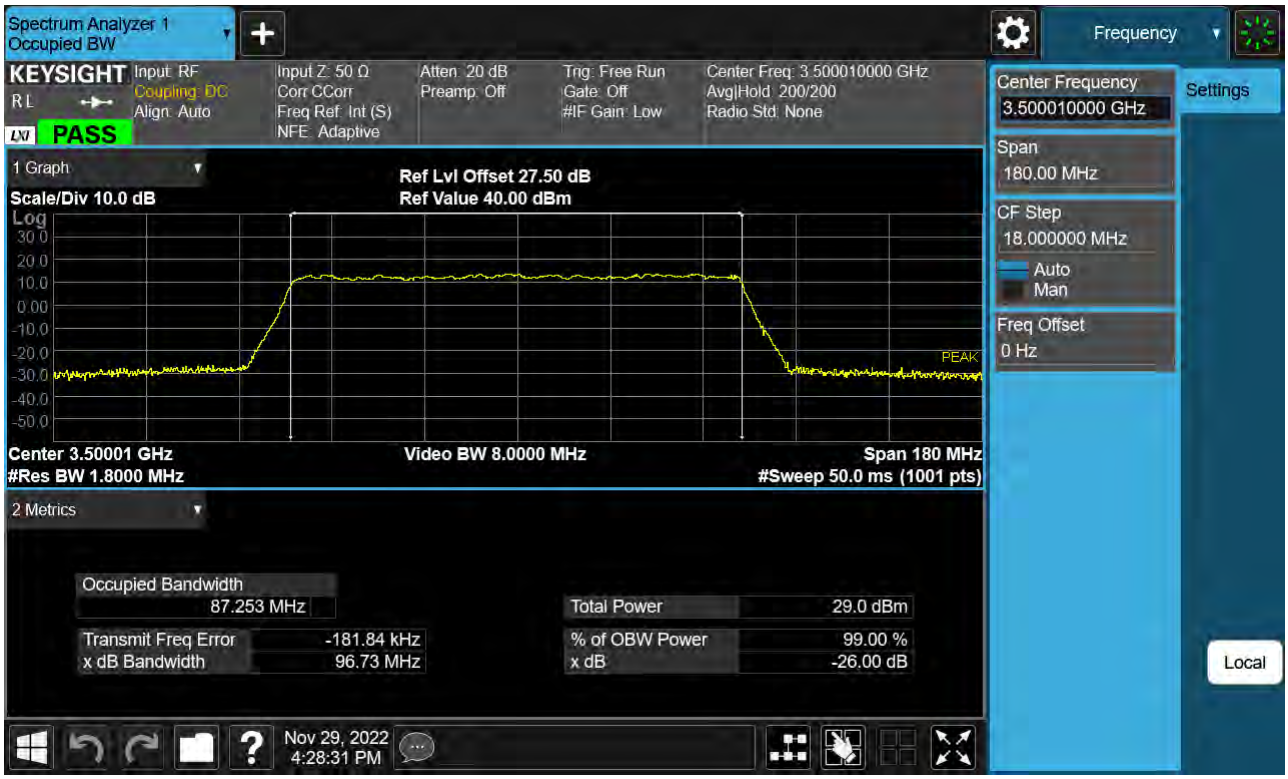
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 16QAM)



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)

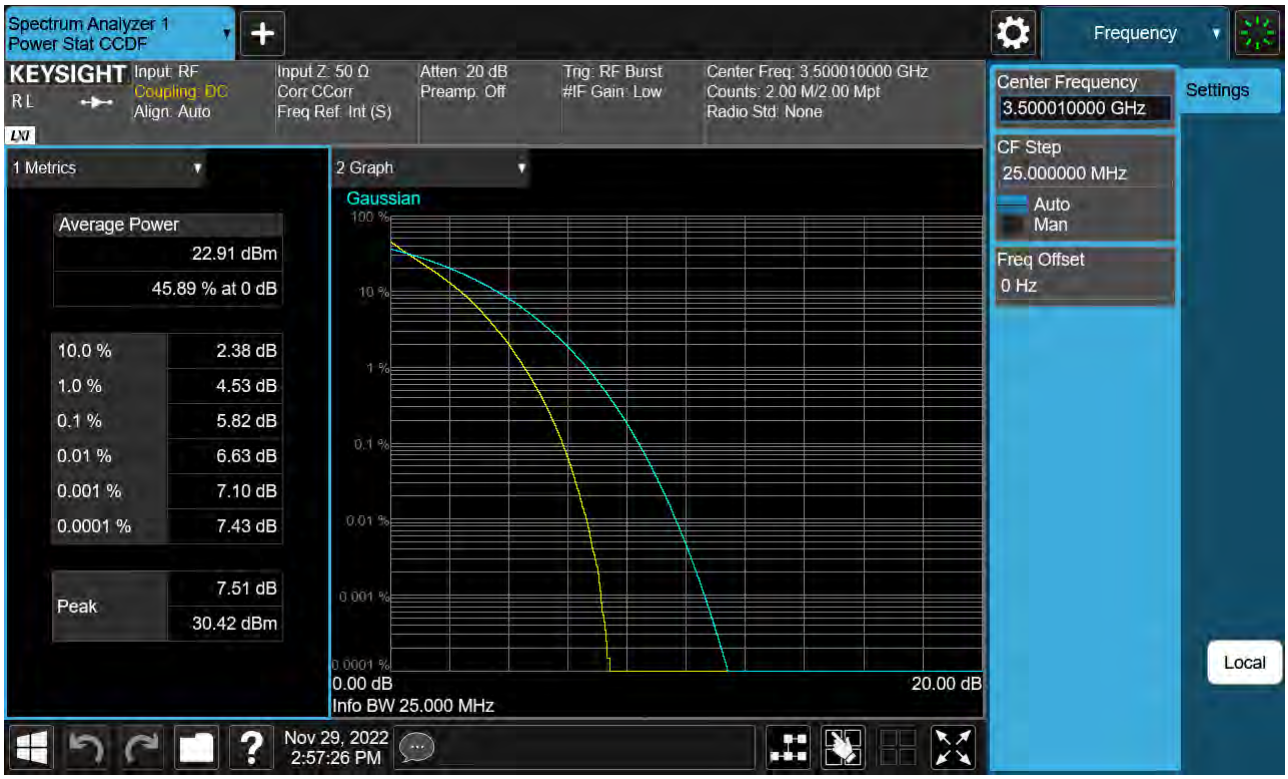
Sub6 n77. PAR Plot (20 M BW_Ch.633334_16QAM)

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)



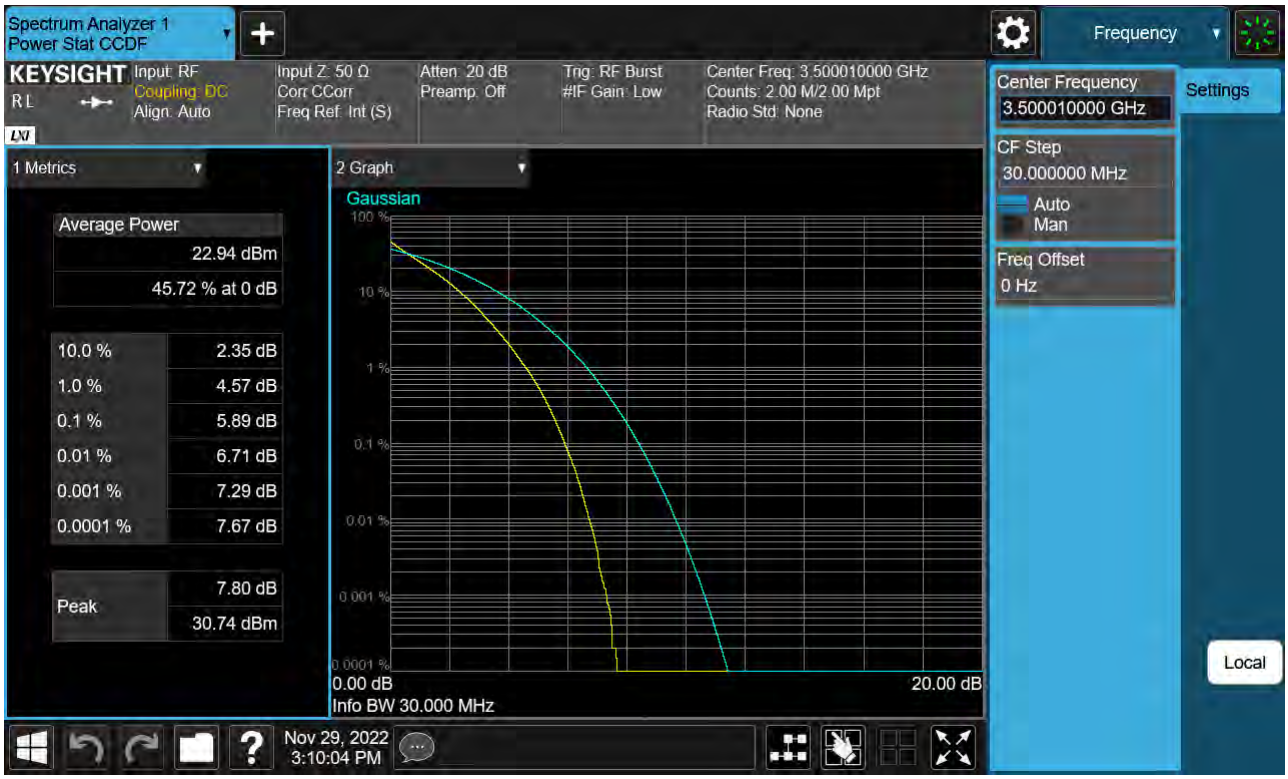
Sub6 n77. PAR Plot (25 M BW_Ch.633334_16QAM)

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)



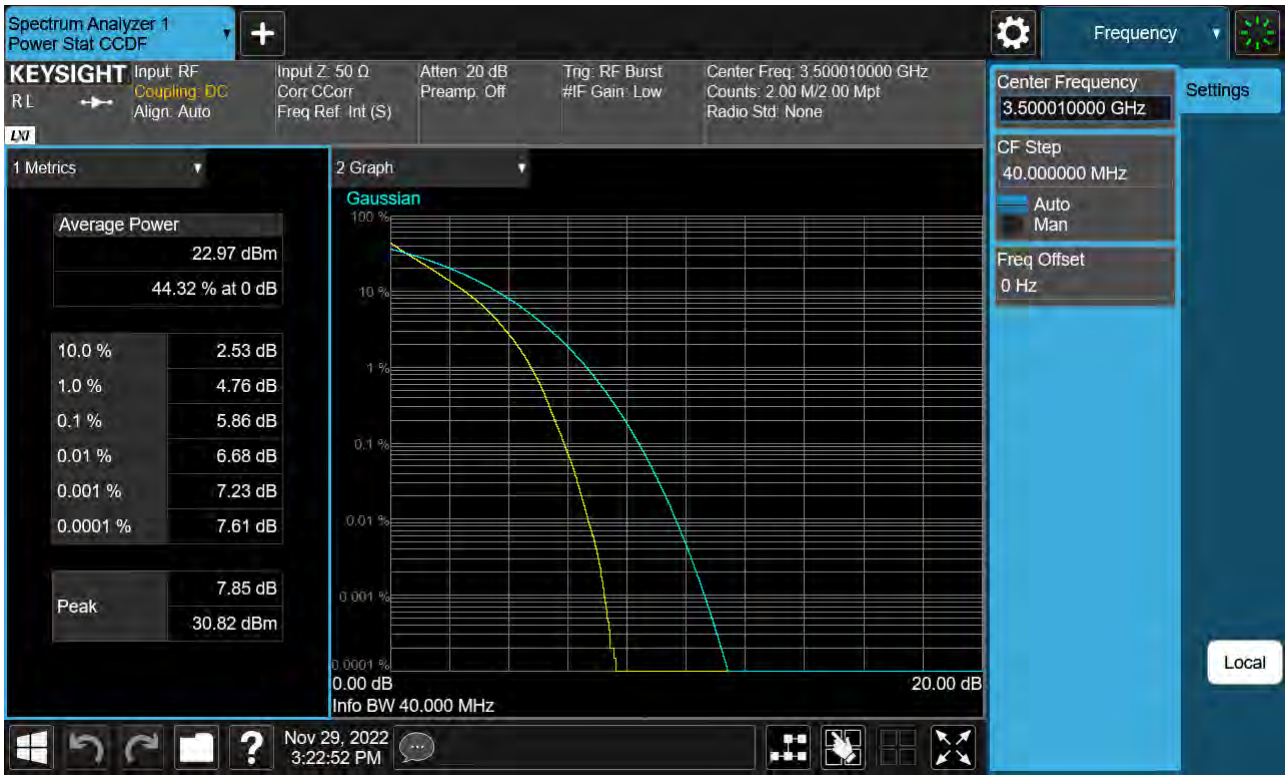
Sub6 n77. PAR Plot (30 M BW_Ch.633334_16QAM)

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)