74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA
TEL: +82-31-645-6300 FAX: +82-31-645-6401

FCC Sub6 REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

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

Date of Issue:
November 13, 2023

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

Report No.: HCT-RF-2311-FC036

FCC ID:	**A3LSMG556B**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s):	SM-G556B
EUT Type:	Mobile Phone
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27

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(78) (10)	3455.01 – 3544.99	8M65G7D	PI/2 BPSK	0.169	22.29
		8M64G7D	QPSK	0.167	22.24
		8M63W7D	16QAM	0.136	21.34
		8M63W7D	64QAM	0.095	19.79
		8M58W7D	256QAM	0.056	17.46
Sub6 n77(78) (15)	3457.50 – 3542.50	12M9G7D	PI/2 BPSK	0.166	22.20
		12M9G7D	QPSK	0.164	22.15
		12M9W7D	16QAM	0.132	21.21
		13M0W7D	64QAM	0.095	19.80
		13M0W7D	256QAM	0.057	17.58
Sub6 n77(78) (20)	3460.02 – 3540.00	18M0G7D	PI/2 BPSK	0.163	22.11
		17M9G7D	QPSK	0.160	22.04
		17M9W7D	16QAM	0.129	21.10
		17M9W7D	64QAM	0.092	19.65
		17M9W7D	256QAM	0.056	17.51
Sub6 n77(78) (25)	3462.50 – 3537.50	23M0G7D	PI/2 BPSK	0.156	21.92
		23M0G7D	QPSK	0.154	21.88
		22M9W7D	16QAM	0.124	20.94
		22M9W7D	64QAM	0.089	19.49
		22M9W7D	256QAM	0.053	17.23
Sub6 n77(78) (30)	3465.00 – 3534.99	26M9G7D	PI/2 BPSK	0.157	21.95
		26M9G7D	QPSK	0.155	21.91
		26M8W7D	16QAM	0.124	20.94
		26M9W7D	64QAM	0.089	19.51
		26M9W7D	256QAM	0.053	17.23
Sub6 n77(78) (40)	3470.01 – 3529.98	35M9G7D	PI/2 BPSK	0.155	21.90
		35M8G7D	QPSK	0.153	21.86
		35M8W7D	16QAM	0.124	20.92
		35M9W7D	64QAM	0.089	19.48
		35M8W7D	256QAM	0.053	17.23
Sub6 n77(78) (50)	3475.02 – 3525.00	46M0G7D	PI/2 BPSK	0.156	21.94
		46M0G7D	QPSK	0.154	21.88
		45M7W7D	16QAM	0.124	20.95
		45M9W7D	64QAM	0.089	19.47
		45M7W7D	256QAM	0.053	17.26
Sub6 n77(78) (60)	3480.00 – 3519.99	58M0G7D	PI/2 BPSK	0.162	22.09
		57M9G7D	QPSK	0.159	22.01
		58M2W7D	16QAM	0.127	21.03
		57M9W7D	64QAM	0.091	19.60
		58M1W7D	256QAM	0.055	17.39
Sub6 n77(78) (70)	3485.01 – 3514.98	64M6G7D	PI/2 BPSK	0.164	22.16
		64M3G7D	QPSK	0.163	22.13
		64M4W7D	16QAM	0.132	21.20
		64M4W7D	64QAM	0.092	19.66
		64M6W7D	256QAM	0.056	17.50
Sub6 n77(78) (80)	3490.02 – 3510.00	77M4G7D	PI/2 BPSK	0.171	22.34
		77M6G7D	QPSK	0.170	22.31
		77M3W7D	16QAM	0.136	21.34
		77M5W7D	64QAM	0.096	19.84
		77M4W7D	256QAM	0.058	17.62
Sub6 n77(78) (90)	3495.00 – 3504.99	87M0G7D	PI/2 BPSK	0.171	22.32
		86M9G7D	QPSK	0.169	22.29
		87M2W7D	16QAM	0.137	21.36
		87M2W7D	64QAM	0.099	19.94
		87M0W7D	256QAM	0.059	17.68
Sub6 n77(78) (100)	3500.01	96M7G7D	PI/2 BPSK	0.171	22.32
		96M5G7D	QPSK	0.169	22.28
		96M7W7D	16QAM	0.137	21.36
		96M5W7D	64QAM	0.096	19.84
		96M8W7D	256QAM	0.058	17.63

2. 3700 MHz - 3980 MHz

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n77(78) (10)	3705.00 – 3975.00	8M62G7D	PI/2 BPSK	0.203	23.08
		8M63G7D	QPSK	0.203	23.07
		8M60W7D	16QAM	0.157	21.97
		8M60W7D	64QAM	0.108	20.33
		8M58W7D	256QAM	0.066	18.18
Sub6 n77(78) (15)	3707.51 – 3972.48	12M9G7D	PI/2 BPSK	0.202	23.06
		12M9G7D	QPSK	0.200	23.00
		12M9W7D	16QAM	0.158	21.99
		12M9W7D	64QAM	0.116	20.63
		12M9W7D	256QAM	0.068	18.30
Sub6 n77(78) (20)	3710.01 – 3969.99	17M9G7D	PI/2 BPSK	0.204	23.10
		17M9G7D	QPSK	0.202	23.06
		17M9W7D	16QAM	0.159	22.01
		17M9W7D	64QAM	0.116	20.66
		17M9W7D	256QAM	0.069	18.41
Sub6 n77(78) (25)	3712.50 – 3967.50	22M9G7D	PI/2 BPSK	0.217	23.37
		22M9G7D	QPSK	0.216	23.34
		22M9W7D	16QAM	0.175	22.44
		23M0W7D	64QAM	0.126	21.00
		22M9W7D	256QAM	0.076	18.78
Sub6 n77(78) (30)	3715.02 – 3964.98	27M0G7D	PI/2 BPSK	0.210	23.23
		27M0G7D	QPSK	0.206	23.14
		26M9W7D	16QAM	0.167	22.22
		26M9W7D	64QAM	0.118	20.72
		26M8W7D	256QAM	0.070	18.45
Sub6 n77(78) (40)	3720.00 – 3960.00	35M8G7D	PI/2 BPSK	0.210	23.22
		35M8G7D	QPSK	0.206	23.13
		35M7W7D	16QAM	0.164	22.14
		35M8W7D	64QAM	0.117	20.68
		35M9W7D	256QAM	0.068	18.35
Sub6 n77(78) (50)	3725.10 – 3954.99	45M9G7D	PI/2 BPSK	0.204	23.09
		45M9G7D	QPSK	0.201	23.04
		45M7W7D	16QAM	0.164	22.14
		45M8W7D	64QAM	0.117	20.70
		45M8W7D	256QAM	0.069	18.40
Sub6 n77(78) (60)	3730.02 – 3949.98	57M9G7D	PI/2 BPSK	0.220	23.42
		57M9G7D	QPSK	0.215	23.33
		57M9W7D	16QAM	0.173	22.37
		58M0W7D	64QAM	0.122	20.86
		58M0W7D	256QAM	0.076	18.79
Sub6 n77(78) (70)	3735.00 – 3945.00	64M6G7D	PI/2 BPSK	0.217	23.37
		64M5G7D	QPSK	0.215	23.33
		64M5W7D	16QAM	0.177	22.48
		64M5W7D	64QAM	0.123	20.90
		64M4W7D	256QAM	0.074	18.71
Sub6 n77(78) (80)	3740.01 – 3939.99	77M4G7D	PI/2 BPSK	0.219	23.41
		77M2G7D	QPSK	0.215	23.33
		77M2W7D	16QAM	0.177	22.48
		77M2W7D	64QAM	0.122	20.87
		77M1W7D	256QAM	0.079	18.97
Sub6 n77(78) (90)	3745.02 – 3934.98	87M1G7D	PI/2 BPSK	0.217	23.37
		87M0G7D	QPSK	0.215	23.32
		87M2W7D	16QAM	0.173	22.39
		87M0W7D	64QAM	0.125	20.98
		87M0W7D	256QAM	0.071	18.49
Sub6 n77(78) (100)	3750.00 – 3930.00	96M7G7D	PI/2 BPSK	0.221	23.45
		96M5G7D	QPSK	0.219	23.41
		96M7W7D	16QAM	0.177	22.49
		96M4W7D	64QAM	0.129	21.10
		96M8W7D	256QAM	0.071	18.54

REVIEWED BY

Report prepared by : Jae Ryang Do
Engineer of Telecommunication Testing Center

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

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

Test Report Statement:
The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2311-FC036	November 13, 2023	- First Approval Report

Table of Contents

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:	A3LSMG556B
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27
EUT Type:	Mobile Phone
Model(s):	SM-G556B
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(78)(10 MHz)) 3457.50 MHz – 3542.50 MHz (Sub6 n77(78)(15 MHz)) 3460.02 MHz – 3540.00 MHz (Sub6 n77(78)(20 MHz)) 3462.50 MHz – 3537.50 MHz (Sub6 n77(78)(25 MHz)) 3465.00 MHz – 3534.99 MHz (Sub6 n77(78)(30 MHz)) 3470.01 MHz – 3529.98 MHz (Sub6 n77(78)(40 MHz)) 3475.02 MHz – 3525.00 MHz (Sub6 n77(78)(50 MHz)) 3480.00 MHz – 3519.99 MHz (Sub6 n77(78)(60 MHz)) 3485.01 MHz – 3514.98 MHz (Sub6 n77(78)(70 MHz)) 3490.02 MHz – 3510.00 MHz (Sub6 n77(78)(80 MHz)) 3495.00 MHz – 3504.99 MHz (Sub6 n77(78)(90 MHz)) 3500.01 MHz (Sub6 n77(78)(100 MHz))
Tx Frequency: **(3700 MHz - 3980 MHz)**	3705.00 MHz – 3975.00 MHz (Sub6 n77(78)(10 MHz)) 3707.51 MHz – 3972.48 MHz (Sub6 n77(78)(15 MHz)) 3710.01 MHz – 3969.99 MHz (Sub6 n77(78)(20 MHz)) 3712.50 MHz – 3967.50 MHz (Sub6 n77(78)(25 MHz)) 3715.02 MHz – 3964.98 MHz (Sub6 n77(78)(30 MHz)) 3720.00 MHz – 3960.00 MHz (Sub6 n77(78)(40 MHz)) 3725.10 MHz – 3954.99 MHz (Sub6 n77(78)(50 MHz)) 3730.02 MHz – 3949.98 MHz (Sub6 n77(78)(60 MHz)) 3735.00 MHz – 3945.00 MHz (Sub6 n77(78)(70 MHz)) 3740.01 MHz – 3939.99 MHz (Sub6 n77(78)(80 MHz)) 3745.02 MHz – 3934.98 MHz (Sub6 n77(78)(90 MHz)) 3745.02 MHz – 3934.98 MHz (Sub6 n77(78)(90 MHz)) 3750.00 MHz – 3930.00 MHz (Sub6 n77(78)(100 MHz))
Date(s) of Tests:	September 27, 2023 ~ November 13, 2023
Serial number:	Radiated: 7A35E6B174357ECE Conducted: R3CW908NHWB(DoD), R3CW908NEKY

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), Bluetooth, BT LE, NFC, AIT.

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;

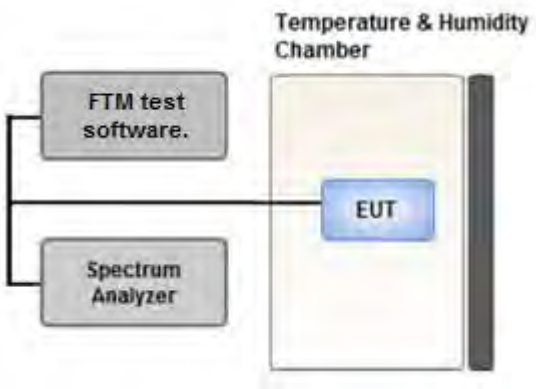
$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

   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.

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

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)

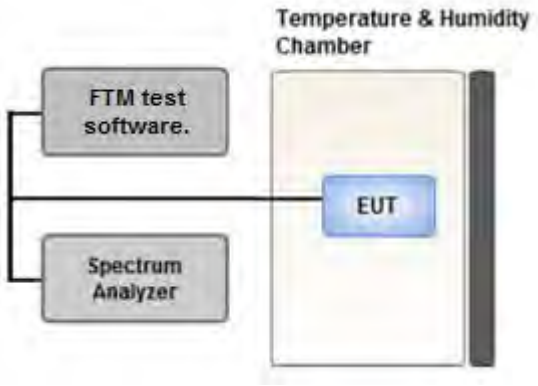
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

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.

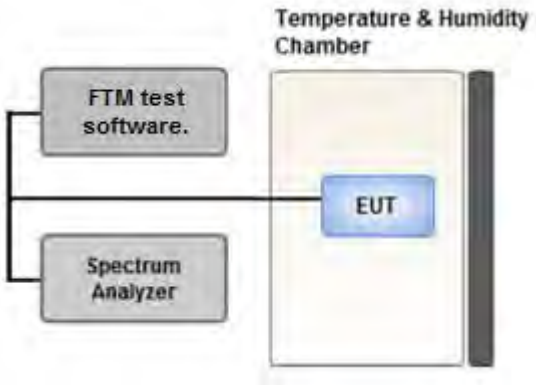
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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.

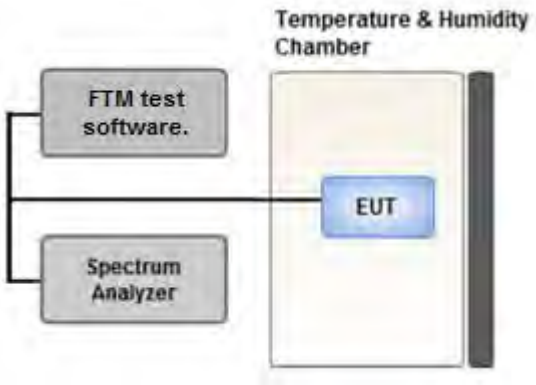
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

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

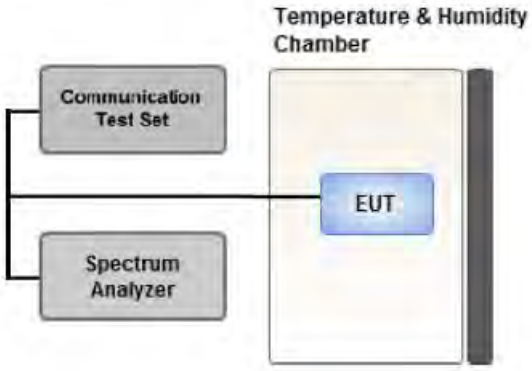
Test Notes

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.
- NR n77 (3450 – 3550 MHz / 3700 – 3980 MHz) overlaps the entire frequency range of NR n78 (3450 - 3550 MHz / 3700 – 3800 MHz) and they have the same Tune-up power.

Therefore, test data provided in this report covers n78 as well as n77.

- 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, SRS(n78 only)
  Worst case: SA
- 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).
  All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
  The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.

-In the case of radiated spurious emissions, all bandwidth of operation was investigated and the worst case bandwidth results are reported.
(Worst case : 80 MHz (3450 MHz – 3550 MHz), 100 MHz(3700 MHz – 3980 MHz))

[3450 MHz - 3550 MHz Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Isotropic Radiated Power	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	See Section 8.1		Z
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 8.2		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		Y

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
  (Worst case: PI/2 BPSK)
- NR n77 (3450 – 3550 MHz / 3700 – 3980 MHz) overlaps the entire frequency range of NR n78 (3450 - 3550 MHz / 3700 – 3800 MHz) and they have the same Tune-up power.

Therefore, test data provided in this report covers n78 as well as n77.

- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: SA, NSA, SRS(n78 only)
  Worst case: SA
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth,	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	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	04/27/2025	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	03/28/2025	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	01/16/2025	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/09/2025	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/24/2025	Biennial
RF Switching System	FBSR-06B (1G HPF + LNA)	T&M SYSTEM	F3L1	05/22/2024	Annual
RF Switching System	FBSR-06B (3G HPF + LNA)	T&M SYSTEM	F3L2	05/22/2024	Annual
RF Switching System	FBSR-06B (6G HPF + LNA)	T&M SYSTEM	F3L3	05/22/2024	Annual
RF Switching System	FBSR-06B (LNA)	T&M SYSTEM	F3L4	05/22/2024	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/02/2024	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	08/25/2024	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	03/02/2024	Annual
Chamber	SU-642	ESPEC	93008124	02/22/2024	Annual
Signal Analyzer(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/11/2024	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	04/19/2024	Annual
Spectrum Analyzer(10 Hz~40 GHz)	FSV40	REOHDE & SCHWARZ	101436	02/22/2024	Annual
Base Station	8960 (E5515C)	Agilent	MY48360800	08/10/2024	Annual
Wideband Radio Communication Tester	MT8821C	Anritsu Corp.	6262287701	05/22/2024	Annual
Wideband Radio Communication Tester	MT8000A	Anritsu Corp.	6262302511	05/23/2024	Annual
SIGNAL GENERATOR (100 kHz~40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	06/22/2024	Annual
Signal Analyzer(5 Hz~40.0 GHz)	N9030B	KEYSIGHT	MY55480167	05/24/2024	Annual
4-Way Divider	ZC4PD-K1844+	Mini-Circuits	942907	09/19/2024	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

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

5. MEASUREMENT UNCERTAINTY

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

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.90 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.14 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.16 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.57 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.76 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.52 (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(78)/ 10 MHz [30 kHz]	PI/2 BPSK	-24.30	13.64	11.20	2.96	H	< 1.00	0.155	21.89	1	1
		QPSK	-24.39	13.55	11.20	2.96	H		0.151	21.80		
		16-QAM	-25.31	12.63	11.20	2.96	H		0.122	20.88		
		64-QAM	-26.68	11.26	11.20	2.96	H		0.089	19.51		
		256-QAM	-28.96	8.98	11.20	2.96	H		0.053	17.23		
3500.01		PI/2 BPSK	-24.90	13.35	11.30	3.00	H		0.146	21.65	1	22
		QPSK	-24.95	13.30	11.30	3.00	H		0.145	21.60		
		16-QAM	-25.94	12.31	11.30	3.00	H		0.115	20.61		
		64-QAM	-27.35	10.90	11.30	3.00	H		0.083	19.20		
		256-QAM	-29.63	8.62	11.30	3.00	H		0.049	16.92		
3544.99		PI/2 BPSK	-24.11	13.96	11.35	3.02	H		0.169	22.29	1	12
		QPSK	-24.16	13.91	11.35	3.02	H		0.167	22.24		
		16-QAM	-25.06	13.01	11.35	3.02	H		0.136	21.34		
		64-QAM	-26.61	11.46	11.35	3.02	H		0.095	19.79		
		256-QAM	-28.94	9.13	11.35	3.02	H		0.056	17.46		

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(78)/ 15 MHz [30 kHz]	PI/2 BPSK	-24.46	13.45	11.20	2.95	H	< 1.00	0.148	21.70	1	36
		QPSK	-24.53	13.38	11.20	2.95	H		0.145	21.63		
		16-QAM	-25.46	12.45	11.20	2.95	H		0.117	20.70		
		64-QAM	-26.77	11.14	11.20	2.95	H		0.087	19.39		
		256-QAM	-29.01	8.90	11.20	2.95	H		0.052	17.15		
3500.01		PI/2 BPSK	-24.35	13.90	11.30	3.00	H		0.166	22.20	1	19
		QPSK	-24.40	13.85	11.30	3.00	H		0.164	22.15		
		16-QAM	-25.34	12.91	11.30	3.00	H		0.132	21.21		
		64-QAM	-26.75	11.50	11.30	3.00	H		0.095	19.80		
		256-QAM	-28.97	9.28	11.30	3.00	H		0.057	17.58		
3542.50		PI/2 BPSK	-24.24	13.71	11.30	3.02	H		0.158	21.99	1	36
		QPSK	-24.28	13.67	11.30	3.02	H		0.157	21.95		
		16-QAM	-25.25	12.70	11.30	3.02	H		0.125	20.98		
		64-QAM	-26.70	11.25	11.30	3.02	H		0.090	19.53		
		256-QAM	-28.85	9.10	11.30	3.02	H		0.055	17.38		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3460.02	Sub6 n77(78)/ 20 MHz [30 kHz]	PI/2 BPSK	-24.36	13.55	11.20	2.95	H	< 1.00	0.151	21.80	1	1
		QPSK	-24.41	13.50	11.20	2.95	H		0.150	21.75		
		16-QAM	-25.29	12.62	11.20	2.95	H		0.122	20.87		
		64-QAM	-26.62	11.29	11.20	2.95	H		0.090	19.54		
		256-QAM	-28.89	9.02	11.20	2.95	H		0.053	17.27		
3500.01		PI/2 BPSK	-24.88	13.37	11.30	3.00	H		0.147	21.67	1	49
		QPSK	-24.91	13.34	11.30	3.00	H		0.146	21.64		
		16-QAM	-25.86	12.39	11.30	3.00	H		0.117	20.69		
		64-QAM	-27.22	11.03	11.30	3.00	H		0.086	19.33		
		256-QAM	-29.44	8.81	11.30	3.00	H		0.051	17.11		
3540.00		PI/2 BPSK	-24.12	13.83	11.30	3.02	H		0.163	22.11	1	49
		QPSK	-24.19	13.76	11.30	3.02	H		0.160	22.04		
		16-QAM	-25.13	12.82	11.30	3.02	H		0.129	21.10		
		64-QAM	-26.58	11.37	11.30	3.02	H		0.092	19.65		
		256-QAM	-28.72	9.23	11.30	3.02	H		0.056	17.51		

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(78)/ 25 MHz [30 kHz]	PI/2 BPSK	-24.44	13.47	11.20	2.95	H	< 1.00	0.149	21.72	1	1
		QPSK	-24.51	13.40	11.20	2.95	H		0.146	21.65		
		16-QAM	-25.48	12.43	11.20	2.95	H		0.117	20.68		
		64-QAM	-26.79	11.12	11.20	2.95	H		0.086	19.37		
		256-QAM	-29.00	8.91	11.20	2.95	H		0.052	17.16		
3500.01		PI/2 BPSK	-24.95	13.30	11.30	3.00	H		0.145	21.60	1	63
		QPSK	-24.97	13.28	11.30	3.00	H		0.144	21.58		
		16-QAM	-25.93	12.32	11.30	3.00	H		0.115	20.62		
		64-QAM	-27.28	10.97	11.30	3.00	H		0.085	19.27		
		256-QAM	-29.54	8.71	11.30	3.00	H		0.050	17.01		
3537.50		PI/2 BPSK	-24.31	13.64	11.30	3.02	H		0.156	21.92	1	63
		QPSK	-24.35	13.60	11.30	3.02	H		0.154	21.88		
		16-QAM	-25.29	12.66	11.30	3.02	H		0.124	20.94		
		64-QAM	-26.74	11.21	11.30	3.02	H		0.089	19.49		
		256-QAM	-29.00	8.95	11.30	3.02	H		0.053	17.23		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3465.00	Sub6 n77(78)/ 30 MHz [30 kHz]	PI/2 BPSK	-24.41	13.46	11.20	2.95	H	< 1.00	0.148	21.71	1	1
		QPSK	-24.51	13.36	11.20	2.95	H		0.145	21.61		
		16-QAM	-25.41	12.46	11.20	2.95	H		0.118	20.71		
		64-QAM	-26.82	11.05	11.20	2.95	H		0.085	19.30		
		256-QAM	-28.98	8.89	11.20	2.95	H		0.052	17.14		
3500.01		PI/2 BPSK	-24.81	13.44	11.30	3.00	H		0.149	21.74	1	76
		QPSK	-24.88	13.37	11.30	3.00	H		0.147	21.67		
		16-QAM	-25.81	12.44	11.30	3.00	H		0.119	20.74		
		64-QAM	-27.29	10.96	11.30	3.00	H		0.084	19.26		
		256-QAM	-29.53	8.72	11.30	3.00	H		0.050	17.02		
3534.99		PI/2 BPSK	-24.26	13.65	11.30	3.01	H		0.157	21.95	1	76
		QPSK	-24.30	13.61	11.30	3.01	H		0.155	21.91		
		16-QAM	-25.27	12.64	11.30	3.01	H		0.124	20.94		
		64-QAM	-26.70	11.21	11.30	3.01	H		0.089	19.51		
		256-QAM	-28.98	8.93	11.30	3.01	H		0.053	17.23		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3470.01	Sub6 n77(78)/ 40 MHz [30 kHz]	PI/2 BPSK	-24.41	13.42	11.20	2.95	H	< 1.00	0.147	21.67	1	1
		QPSK	-24.46	13.37	11.20	2.95	H		0.145	21.62		
		16-QAM	-25.43	12.40	11.20	2.95	H		0.116	20.65		
		64-QAM	-26.87	10.96	11.20	2.95	H		0.083	19.21		
		256-QAM	-29.00	8.83	11.20	2.95	H		0.051	17.08		
3500.01		PI/2 BPSK	-24.73	13.52	11.30	3.00	H		0.152	21.82	1	104
		QPSK	-24.82	13.43	11.30	3.00	H		0.149	21.73		
		16-QAM	-25.77	12.48	11.30	3.00	H		0.120	20.78		
		64-QAM	-27.30	10.95	11.30	3.00	H		0.084	19.25		
		256-QAM	-29.44	8.81	11.30	3.00	H		0.051	17.11		
3529.98		PI/2 BPSK	-24.29	13.59	11.30	2.99	H		0.155	21.90	1	104
		QPSK	-24.33	13.55	11.30	2.99	H		0.153	21.86		
		16-QAM	-25.27	12.61	11.30	2.99	H		0.124	20.92		
		64-QAM	-26.71	11.17	11.30	2.99	H		0.089	19.48		
		256-QAM	-28.96	8.92	11.30	2.99	H		0.053	17.23		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3475.02	Sub6 n77(78)/ 50 MHz [30 kHz]	PI/2 BPSK	-24.46	13.42	11.20	2.97	H	< 1.00	0.146	21.65	1	1
		QPSK	-24.49	13.39	11.20	2.97	H		0.145	21.62		
		16-QAM	-25.41	12.47	11.20	2.97	H		0.117	20.70		
		64-QAM	-26.86	11.02	11.20	2.97	H		0.084	19.25		
		256-QAM	-29.05	8.83	11.20	2.97	H		0.051	17.06		
3500.01		PI/2 BPSK	-24.61	13.64	11.30	3.00	H		0.156	21.94	1	131
		QPSK	-24.67	13.58	11.30	3.00	H		0.154	21.88		
		16-QAM	-25.61	12.64	11.30	3.00	H		0.124	20.94		
		64-QAM	-27.08	11.17	11.30	3.00	H		0.089	19.47		
		256-QAM	-29.34	8.91	11.30	3.00	H		0.053	17.21		
3525.00		PI/2 BPSK	-24.29	13.61	11.30	2.98	H		0.156	21.93	1	131
		QPSK	-24.35	13.55	11.30	2.98	H		0.154	21.87		
		16-QAM	-25.27	12.63	11.30	2.98	H		0.124	20.95		
		64-QAM	-26.79	11.11	11.30	2.98	H		0.088	19.43		
		256-QAM	-28.96	8.94	11.30	2.98	H		0.053	17.26		

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
3480.00	Sub6 n77(78)/ 60 MHz [30 kHz]	PI/2 BPSK	-24.49	13.45	11.20	2.99	H	< 1.00	0.147	21.66	1	1
		QPSK	-24.53	13.41	11.20	2.99	H		0.145	21.62		
		16-QAM	-25.46	12.48	11.20	2.99	H		0.117	20.69		
		64-QAM	-26.86	11.08	11.20	2.99	H		0.085	19.29		
		256-QAM	-29.05	8.89	11.20	2.99	H		0.051	17.10		
3500.01		PI/2 BPSK	-24.46	13.79	11.30	3.00	H		0.162	22.09	1	160
		QPSK	-24.54	13.71	11.30	3.00	H		0.159	22.01		
		16-QAM	-25.52	12.73	11.30	3.00	H		0.127	21.03		
		64-QAM	-26.95	11.30	11.30	3.00	H		0.091	19.60		
		256-QAM	-29.16	9.09	11.30	3.00	H		0.055	17.39		
3519.99		PI/2 BPSK	-24.31	13.61	11.30	2.97	H		0.156	21.94	1	160
		QPSK	-24.36	13.56	11.30	2.97	H		0.155	21.89		
		16-QAM	-25.27	12.65	11.30	2.97	H		0.125	20.98		
		64-QAM	-26.76	11.16	11.30	2.97	H		0.089	19.49		
		256-QAM	-29.02	8.90	11.30	2.97	H		0.053	17.23		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3485.01	Sub6 n77(78)/ 70 MHz [30 kHz]	PI/2 BPSK	-24.37	13.64	11.20	3.00	H	< 1.00	0.153	21.84	1	1
		QPSK	-24.46	13.55	11.20	3.00	H		0.150	21.75		
		16-QAM	-25.34	12.67	11.20	3.00	H		0.122	20.87		
		64-QAM	-26.78	11.23	11.20	3.00	H		0.088	19.43		
		256-QAM	-28.91	9.10	11.20	3.00	H		0.054	17.30		
3500.01		PI/2 BPSK	-24.39	13.86	11.30	3.00	H		0.164	22.16	1	187
		QPSK	-24.42	13.83	11.30	3.00	H		0.163	22.13		
		16-QAM	-25.35	12.90	11.30	3.00	H		0.132	21.20		
		64-QAM	-26.89	11.36	11.30	3.00	H		0.092	19.66		
		256-QAM	-29.05	9.20	11.30	3.00	H		0.056	17.50		
3514.98		PI/2 BPSK	-24.26	13.80	11.30	2.98	H		0.163	22.13	1	187
		QPSK	-24.31	13.75	11.30	2.98	H		0.161	22.08		
		16-QAM	-25.20	12.86	11.30	2.98	H		0.132	21.19		
		64-QAM	-26.75	11.31	11.30	2.98	H		0.092	19.64		
		256-QAM	-28.90	9.16	11.30	2.98	H		0.056	17.49		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3490.02	Sub6 n77(78)/ 80 MHz [30 kHz]	PI/2 BPSK	-24.39	13.69	11.20	3.00	H	< 1.00	0.155	21.89	1	215
		QPSK	-24.46	13.62	11.20	3.00	H		0.152	21.82		
		16-QAM	-25.40	12.68	11.20	3.00	H		0.122	20.88		
		64-QAM	-26.84	11.24	11.20	3.00	H		0.088	19.44		
		256-QAM	-29.10	8.98	11.20	3.00	H		0.052	17.18		
3500.01		PI/2 BPSK	-24.29	13.96	11.30	3.00	H		0.168	22.26	1	215
		QPSK	-24.30	13.95	11.30	3.00	H		0.168	22.25		
		16-QAM	-25.28	12.97	11.30	3.00	H		0.134	21.27		
		64-QAM	-26.77	11.48	11.30	3.00	H		0.095	19.78		
		256-QAM	-28.93	9.32	11.30	3.00	H		0.058	17.62		
3510.00		PI/2 BPSK	-24.19	14.02	11.30	2.98	H		0.171	22.34	1	215
		QPSK	-24.22	13.99	11.30	2.98	H		0.170	22.31		
		16-QAM	-25.19	13.02	11.30	2.98	H		0.136	21.34		
		64-QAM	-26.69	11.52	11.30	2.98	H		0.096	19.84		
		256-QAM	-28.99	9.22	11.30	2.98	H		0.057	17.54		

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(78)/ 90 MHz [30 kHz]	PI/2 BPSK	-24.27	13.90	11.25	3.00	H	< 1.00	0.164	22.15	1	243
		QPSK	-24.32	13.85	11.25	3.00	H		0.162	22.10		
		16-QAM	-25.29	12.88	11.25	3.00	H		0.130	21.13		
		64-QAM	-26.79	11.38	11.25	3.00	H		0.092	19.63		
		256-QAM	-28.96	9.21	11.25	3.00	H		0.056	17.46		
3500.01		PI/2 BPSK	-24.23	14.02	11.30	3.00	H		0.171	22.32	1	243
		QPSK	-24.26	13.99	11.30	3.00	H		0.169	22.29		
		16-QAM	-25.21	13.04	11.30	3.00	H		0.136	21.34		
		64-QAM	-26.61	11.64	11.30	3.00	H		0.099	19.94		
		256-QAM	-28.87	9.38	11.30	3.00	H		0.059	17.68		
3504.99		PI/2 BPSK	-24.22	14.01	11.30	2.99	H		0.171	22.32	1	243
		QPSK	-24.26	13.97	11.30	2.99	H		0.169	22.28		
		16-QAM	-25.18	13.05	11.30	2.99	H		0.137	21.36		
		64-QAM	-26.68	11.55	11.30	2.99	H		0.097	19.86		
		256-QAM	-28.94	9.29	11.30	2.99	H		0.058	17.60		

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(78)/ 100 MHz [30 kHz]	PI/2 BPSK	-24.23	14.02	11.30	3.00	H	< 1.00	0.171	22.32	1	271
		QPSK	-24.27	13.98	11.30	3.00	H		0.169	22.28		
		16-QAM	-25.19	13.06	11.30	3.00	H		0.137	21.36		
		64-QAM	-26.71	11.54	11.30	3.00	H		0.096	19.84		
		256-QAM	-28.92	9.33	11.30	3.00	H		0.058	17.63		

8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77(78)

▣ Bandwidth: 80 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meter

▣ 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
632668 (3490.02)	6 980.04	-53.28	10.90	-47.36	4.30	H	-40.76	-13.00	1	1
	10 470.06	-60.10	11.30	-49.95	5.43	H	-44.08	-13.00		
	13 960.08	-59.24	12.30	-49.59	6.37	V	-43.66	-13.00		
	17 450.10	-63.88	15.80	-44.40	7.26	V	-35.86	-13.00		
633334 (3500.01)	7 000.02	-49.77	10.90	-43.85	4.32	V	-37.27	-13.00	1	215
	10 500.03	-61.59	11.30	-50.99	5.41	V	-45.10	-13.00		
	14 000.04	-57.87	12.30	-48.52	6.35	H	-42.57	-13.00		
	17 500.05	-64.99	15.70	-44.90	7.23	H	-36.43	-13.00		
634000 (3510.0)	7 020.00	-50.76	10.90	-44.32	4.36	V	-37.78	-13.00	1	215
	10 530.00	-61.55	11.30	-50.85	5.41	H	-44.96	-13.00		
	14 040.00	-59.85	12.30	-50.66	6.40	V	-44.76	-13.00		
	17 550.00	-66.61	15.40	-44.80	7.31	V	-36.71	-13.00		

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n77(78)	10 MHz	3500.01	BPSK	Full RB	0	4.49
			QPSK			5.57
			16-QAM			6.44
			64-QAM			6.63
			256-QAM			6.43
	15 MHz		BPSK			4.40
			QPSK			5.61
			16-QAM			6.22
			64-QAM			6.51
			256-QAM			6.57
	20 MHz		BPSK			4.44
			QPSK			5.48
			16-QAM			6.27
			64-QAM			6.46
			256-QAM			6.60
	25 MHz		BPSK			4.45
			QPSK			5.70
			16-QAM			6.26
			64-QAM			6.53
			256-QAM			6.51
	30 MHz		BPSK			4.34
			QPSK			5.58
			16-QAM			6.31
			64-QAM			6.44
			256-QAM			6.53
	40 MHz		BPSK			4.78
			QPSK			5.56
			16-QAM			6.16
			64-QAM			6.44
			256-QAM			6.43

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
	50 MHz		BPSK			4.70
			QPSK			5.60
			16-QAM			6.24
			64-QAM			6.32
			256-QAM			6.51
	60 MHz		BPSK			4.60
			QPSK			5.52
			16-QAM			6.27
			64-QAM			6.42
			256-QAM			6.48
	70 MHz		BPSK			5.70
			QPSK			5.99
			16-QAM			6.38
			64-QAM			6.53
			256-QAM			6.50
	80 MHz		BPSK			4.44
			QPSK			5.57
			16-QAM			6.27
			64-QAM			6.40
			256-QAM			6.54
	90 MHz		BPSK			4.60
			QPSK			5.57
			16-QAM			6.36
			64-QAM			6.43
			256-QAM			6.56
	100 MHz		BPSK			4.56
			QPSK			5.60
			16-QAM			6.34
			64-QAM			6.50
			256-QAM			6.49

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(78)	10 MHz	3500.01	BPSK	Full RB	0	8.6527
			QPSK			8.6351
			16-QAM			8.6342
			64-QAM			8.6252
			256-QAM			8.5770
	15 MHz		BPSK			12.930
			QPSK			12.934
			16-QAM			12.887
			64-QAM			12.965
			256-QAM			13.036
	20 MHz		BPSK			17.960
			QPSK			17.936
			16-QAM			17.885
			64-QAM			17.912
			256-QAM			17.864
	25 MHz		BPSK			22.958
			QPSK			22.955
			16-QAM			22.912
			64-QAM			22.942
			256-QAM			22.937
	30 MHz		BPSK			26.885
			QPSK			26.865
			16-QAM			26.798
			64-QAM			26.944
			256-QAM			26.850
	40 MHz		BPSK			35.898
			QPSK			35.839
			16-QAM			35.827
			64-QAM			35.878
			256-QAM			35.754

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
	50 MHz		BPSK			45.956
			QPSK			45.945
			16-QAM			45.704
			64-QAM			45.916
			256-QAM			45.718
	60 MHz		BPSK			57.980
			QPSK			57.911
			16-QAM			58.149
			64-QAM			57.905
			256-QAM			58.090
	70 MHz		BPSK			64.587
			QPSK			64.279
			16-QAM			64.381
			64-QAM			64.423
			256-QAM			64.601
	80 MHz		BPSK			77.439
			QPSK			77.623
			16-QAM			77.281
			64-QAM			77.543
			256-QAM			77.441
	90 MHz		BPSK			87.001
			QPSK			86.899
			16-QAM			87.224
			64-QAM			87.205
			256-QAM			87.022
	100 MHz		BPSK			96.700
			QPSK			96.475
			16-QAM			96.708
			64-QAM			96.464
			256-QAM			96.773

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(78)	10	3455.01	8.8440	37.805	-70.681	-32.876	-13.00
		3500.01	8.2478	37.805	-71.140	-33.335	
		3544.98	9.7557	37.805	-71.204	-33.399	
	15	3457.50	5.2084	37.805	-71.783	-33.978	
		3500.01	9.1311	37.805	-70.345	-32.540	
		3542.49	5.2279	37.805	-71.301	-33.496	
	20	3460.02	9.9302	37.805	-71.139	-33.334	
		3500.01	5.1900	37.805	-71.094	-33.289	
		3540.00	8.8769	37.805	-71.183	-33.378	
	25	3462.510	9.1456	37.805	-70.857	-33.052	
		3500.010	8.5683	37.805	-70.049	-32.244	
		3537.480	9.9895	37.805	-70.495	-32.690	
	30	3465.00	7.9905	37.805	-70.474	-32.669	
		3500.01	8.9367	37.805	-71.269	-33.464	
		3534.99	9.8754	37.805	-71.130	-33.325	
	40	3470.01	8.2847	37.805	-71.410	-33.605	
		3500.01	8.0379	37.805	-71.431	-33.626	
		3529.98	8.3415	37.805	-71.120	-33.315	
	50	3475.02	8.2906	37.805	-71.200	-33.395	
		3500.01	8.0858	37.805	-71.337	-33.532	
		3525.00	8.0065	37.805	-70.765	-32.960	
	60	3480.00	5.2084	37.805	-69.852	-32.047	
		3500.01	8.2777	37.805	-70.773	-32.968	
		3519.99	8.2488	37.805	-70.630	-32.825	
	70	3485.01	7.1890	37.805	-71.068	-33.263	
		3500.01	9.7109	37.805	-70.736	-32.931	
		3514.98	7.4267	37.805	-70.483	-32.678	
	80	3490.02	9.7283	37.805	-70.301	-32.496	
		3500.01	8.2971	37.805	-70.379	-32.574	
		3510.00	9.0942	37.805	-70.254	-32.449	
	90	3495.00	8.2842	37.805	-70.750	-32.945	
		3500.01	4.9447	37.190	-70.712	-33.522	
		3504.99	5.1945	37.805	-70.329	-32.524	
	100	3500.01	8.0215	37.805	-70.847	-33.042	

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	34.484
1 – 5	37.190
5 – 10	37.805
10 – 15	38.330
15 – 20	38.703
Above 20	39.345

8.6 BAND EDGE

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

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.850 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3455.010	100 %	+20(Ref)	3455 009 992	0.0	0.000 000	0.000
	100 %	-30	3455 009 983	-8.5	0.000 000	-0.002
	100 %	-20	3455 009 987	-4.3	0.000 000	-0.001
	100 %	-10	3455 009 984	-7.8	0.000 000	-0.002
	100 %	0	3455 009 986	-6.0	0.000 000	-0.002
	100 %	+10	3455 009 985	-6.8	0.000 000	-0.002
	100 %	+30	3455 009 985	-6.6	0.000 000	-0.002
	100 %	+40	3455 009 982	-9.3	0.000 000	-0.003
	100 %	+50	3455 009 988	-3.9	0.000 000	-0.001
	Batt. Endpoint	+20	3455 009 987	-4.5	0.000 000	-0.001
3544.980	100 %	+20(Ref)	3544 979 994	0.0	0.000 000	0.000
	100 %	-30	3544 979 987	-7.0	0.000 000	-0.002
	100 %	-20	3544 979 986	-7.7	0.000 000	-0.002
	100 %	-10	3544 979 989	-5.2	0.000 000	-0.001
	100 %	0	3544 979 987	-7.2	0.000 000	-0.002
	100 %	+10	3544 979 987	-7.1	0.000 000	-0.002
	100 %	+30	3544 979 989	-5.4	0.000 000	-0.002
	100 %	+40	3544 979 991	-2.9	0.000 000	-0.001
	100 %	+50	3544 979 990	-4.4	0.000 000	-0.001
	Batt. Endpoint	+20	3544 979 985	-9.4	0.000 000	-0.003

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.850 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 499 992	0.0	0.000 000	0.000
	100 %	-30	3457 499 986	-6.7	0.000 000	-0.002
	100 %	-20	3457 499 986	-6.1	0.000 000	-0.002
	100 %	-10	3457 499 984	-8.5	0.000 000	-0.002
	100 %	0	3457 499 988	-4.0	0.000 000	-0.001
	100 %	+10	3457 499 985	-7.0	0.000 000	-0.002
	100 %	+30	3457 499 985	-7.7	0.000 000	-0.002
	100 %	+40	3457 499 987	-5.1	0.000 000	-0.001
	100 %	+50	3457 499 985	-7.3	0.000 000	-0.002
	Batt. Endpoint	+20	3457 499 986	-6.4	0.000 000	-0.002
3542.490	100 %	+20(Ref)	3542 489 995	0.0	0.000 000	0.000
	100 %	-30	3542 489 989	-6.2	0.000 000	-0.002
	100 %	-20	3542 489 991	-4.5	0.000 000	-0.001
	100 %	-10	3542 489 988	-7.3	0.000 000	-0.002
	100 %	0	3542 489 989	-6.8	0.000 000	-0.002
	100 %	+10	3542 489 988	-6.9	0.000 000	-0.002
	100 %	+30	3542 489 987	-7.9	0.000 000	-0.002
	100 %	+40	3542 489 989	-6.3	0.000 000	-0.002
	100 %	+50	3542 489 989	-5.8	0.000 000	-0.002
	Batt. Endpoint	+20	3542 489 989	-6.5	0.000 000	-0.002

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.850 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 019 986	-6.4	0.000 000	-0.002
	100 %	-20	3460 019 990	-2.0	0.000 000	-0.001
	100 %	-10	3460 019 985	-7.1	0.000 000	-0.002
	100 %	0	3460 019 986	-5.9	0.000 000	-0.002
	100 %	+10	3460 019 986	-6.3	0.000 000	-0.002
	100 %	+30	3460 019 985	-7.6	0.000 000	-0.002
	100 %	+40	3460 019 986	-6.8	0.000 000	-0.002
	100 %	+50	3460 019 981	-11.1	0.000 000	-0.003
	Batt. Endpoint	+20	3460 019 987	-5.0	0.000 000	-0.001
3540.000	100 %	+20(Ref)	3539 999 993	0.0	0.000 000	0.000
	100 %	-30	3539 999 988	-5.2	0.000 000	-0.001
	100 %	-20	3539 999 986	-7.2	0.000 000	-0.002
	100 %	-10	3539 999 988	-5.2	0.000 000	-0.001
	100 %	0	3539 999 988	-5.3	0.000 000	-0.001
	100 %	+10	3539 999 988	-4.6	0.000 000	-0.001
	100 %	+30	3539 999 987	-5.9	0.000 000	-0.002
	100 %	+40	3539 999 986	-7.2	0.000 000	-0.002
	100 %	+50	3539 999 985	-7.8	0.000 000	-0.002
	Batt. Endpoint	+20	3539 999 986	-6.7	0.000 000	-0.002

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 3.850 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 509 988	-5.1	0.000 000	-0.001
	100 %	-20	3462 509 988	-5.2	0.000 000	-0.001
	100 %	-10	3462 509 988	-5.6	0.000 000	-0.002
	100 %	0	3462 509 988	-5.6	0.000 000	-0.002
	100 %	+10	3462 509 987	-6.0	0.000 000	-0.002
	100 %	+30	3462 509 987	-6.2	0.000 000	-0.002
	100 %	+40	3462 509 987	-6.9	0.000 000	-0.002
	100 %	+50	3462 509 987	-6.6	0.000 000	-0.002
	Batt. Endpoint	+20	3462 509 989	-4.7	0.000 000	-0.001
3537.480	100 %	+20(Ref)	3537 479 994	0.0	0.000 000	0.000
	100 %	-30	3537 479 984	-9.7	0.000 000	-0.003
	100 %	-20	3537 479 987	-7.2	0.000 000	-0.002
	100 %	-10	3537 479 990	-4.2	0.000 000	-0.001
	100 %	0	3537 479 987	-6.7	0.000 000	-0.002
	100 %	+10	3537 479 989	-5.2	0.000 000	-0.001
	100 %	+30	3537 479 989	-4.6	0.000 000	-0.001
	100 %	+40	3537 479 989	-4.3	0.000 000	-0.001
	100 %	+50	3537 479 987	-6.9	0.000 000	-0.002
	Batt. Endpoint	+20	3537 479 990	-4.2	0.000 000	-0.001

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.850 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3465.000	100 %	+20(Ref)	3464 999 994	0.0	0.000 000	0.000
	100 %	-30	3464 999 986	-8.2	0.000 000	-0.002
	100 %	-20	3464 999 988	-6.2	0.000 000	-0.002
	100 %	-10	3464 999 989	-5.2	0.000 000	-0.002
	100 %	0	3464 999 985	-9.6	0.000 000	-0.003
	100 %	+10	3464 999 989	-5.2	0.000 000	-0.002
	100 %	+30	3464 999 988	-6.8	0.000 000	-0.002
	100 %	+40	3464 999 989	-5.2	0.000 000	-0.002
	100 %	+50	3464 999 986	-8.1	0.000 000	-0.002
	Batt. Endpoint	+20	3464 999 986	-8.0	0.000 000	-0.002
3534.990	100 %	+20(Ref)	3534 989 991	0.0	0.000 000	0.000
	100 %	-30	3534 989 983	-7.9	0.000 000	-0.002
	100 %	-20	3534 989 986	-5.3	0.000 000	-0.001
	100 %	-10	3534 989 985	-6.5	0.000 000	-0.002
	100 %	0	3534 989 986	-5.3	0.000 000	-0.002
	100 %	+10	3534 989 986	-5.2	0.000 000	-0.001
	100 %	+30	3534 989 984	-6.9	0.000 000	-0.002
	100 %	+40	3534 989 986	-5.5	0.000 000	-0.002
	100 %	+50	3534 989 984	-6.6	0.000 000	-0.002
	Batt. Endpoint	+20	3534 989 983	-8.3	0.000 000	-0.002

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.850 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 009 994	0.0	0.000 000	0.000
	100 %	-30	3470 009 988	-6.7	0.000 000	-0.002
	100 %	-20	3470 009 986	-8.6	0.000 000	-0.002
	100 %	-10	3470 009 990	-4.8	0.000 000	-0.001
	100 %	0	3470 009 989	-5.6	0.000 000	-0.002
	100 %	+10	3470 009 987	-7.8	0.000 000	-0.002
	100 %	+30	3470 009 988	-6.1	0.000 000	-0.002
	100 %	+40	3470 009 989	-5.6	0.000 000	-0.002
	100 %	+50	3470 009 988	-6.8	0.000 000	-0.002
	Batt. Endpoint	+20	3470 009 991	-3.8	0.000 000	-0.001
3529.980	100 %	+20(Ref)	3529 979 993	0.0	0.000 000	0.000
	100 %	-30	3529 979 986	-6.6	0.000 000	-0.002
	100 %	-20	3529 979 984	-8.5	0.000 000	-0.002
	100 %	-10	3529 979 983	-9.9	0.000 000	-0.003
	100 %	0	3529 979 984	-8.9	0.000 000	-0.003
	100 %	+10	3529 979 985	-7.6	0.000 000	-0.002
	100 %	+30	3529 979 986	-6.4	0.000 000	-0.002
	100 %	+40	3529 979 985	-7.4	0.000 000	-0.002
	100 %	+50	3529 979 986	-6.4	0.000 000	-0.002
	Batt. Endpoint	+20	3529 979 986	-7.1	0.000 000	-0.002

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.850 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 019 995	0.0	0.000 000	0.000
	100 %	-30	3475 019 986	-8.8	0.000 000	-0.003
	100 %	-20	3475 019 989	-5.2	0.000 000	-0.002
	100 %	-10	3475 019 988	-6.8	0.000 000	-0.002
	100 %	0	3475 019 987	-7.5	0.000 000	-0.002
	100 %	+10	3475 019 989	-6.0	0.000 000	-0.002
	100 %	+30	3475 019 987	-7.3	0.000 000	-0.002
	100 %	+40	3475 019 989	-5.3	0.000 000	-0.002
	100 %	+50	3475 019 988	-6.5	0.000 000	-0.002
	Batt. Endpoint	+20	3475 019 988	-6.8	0.000 000	-0.002
3525.000	100 %	+20(Ref)	3524 999 991	0.0	0.000 000	0.000
	100 %	-30	3524 999 982	-9.3	0.000 000	-0.003
	100 %	-20	3524 999 982	-9.4	0.000 000	-0.003
	100 %	-10	3524 999 984	-6.9	0.000 000	-0.002
	100 %	0	3524 999 983	-8.2	0.000 000	-0.002
	100 %	+10	3524 999 986	-5.0	0.000 000	-0.001
	100 %	+30	3524 999 983	-7.9	0.000 000	-0.002
	100 %	+40	3524 999 987	-4.0	0.000 000	-0.001
	100 %	+50	3524 999 986	-5.0	0.000 000	-0.001
	Batt. Endpoint	+20	3524 999 987	-4.2	0.000 000	-0.001

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.850 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3480.000	100 %	+20(Ref)	3479 999 995	0.0	0.000 000	0.000
	100 %	-30	3479 999 987	-7.2	0.000 000	-0.002
	100 %	-20	3479 999 989	-5.8	0.000 000	-0.002
	100 %	-10	3479 999 988	-6.7	0.000 000	-0.002
	100 %	0	3479 999 988	-6.7	0.000 000	-0.002
	100 %	+10	3479 999 987	-7.7	0.000 000	-0.002
	100 %	+30	3479 999 987	-7.5	0.000 000	-0.002
	100 %	+40	3479 999 989	-5.8	0.000 000	-0.002
	100 %	+50	3479 999 990	-5.0	0.000 000	-0.001
	Batt. Endpoint	+20	3479 999 989	-5.1	0.000 000	-0.001
3519.990	100 %	+20(Ref)	3519 989 993	0.0	0.000 000	0.000
	100 %	-30	3519 989 988	-5.4	0.000 000	-0.002
	100 %	-20	3519 989 988	-5.9	0.000 000	-0.002
	100 %	-10	3519 989 991	-3.0	0.000 000	-0.001
	100 %	0	3519 989 986	-7.3	0.000 000	-0.002
	100 %	+10	3519 989 987	-6.6	0.000 000	-0.002
	100 %	+30	3519 989 985	-9.0	0.000 000	-0.003
	100 %	+40	3519 989 987	-6.8	0.000 000	-0.002
	100 %	+50	3519 989 987	-6.3	0.000 000	-0.002
	Batt. Endpoint	+20	3519 989 985	-8.2	0.000 000	-0.002

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 3.850 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 009 995	0.0	0.000 000	0.000
	100 %	-30	3485 009 989	-5.3	0.000 000	-0.002
	100 %	-20	3485 009 989	-6.0	0.000 000	-0.002
	100 %	-10	3485 009 990	-5.2	0.000 000	-0.001
	100 %	0	3485 009 987	-7.9	0.000 000	-0.002
	100 %	+10	3485 009 989	-5.5	0.000 000	-0.002
	100 %	+30	3485 009 990	-5.0	0.000 000	-0.001
	100 %	+40	3485 009 987	-7.4	0.000 000	-0.002
	100 %	+50	3485 009 986	-9.2	0.000 000	-0.003
	Batt. Endpoint	+20	3485 009 989	-5.4	0.000 000	-0.002
3514.980	100 %	+20(Ref)	3514 979 993	0.0	0.000 000	0.000
	100 %	-30	3514 979 986	-7.8	0.000 000	-0.002
	100 %	-20	3514 979 986	-7.2	0.000 000	-0.002
	100 %	-10	3514 979 986	-7.6	0.000 000	-0.002
	100 %	0	3514 979 986	-7.3	0.000 000	-0.002
	100 %	+10	3514 979 991	-2.4	0.000 000	-0.001
	100 %	+30	3514 979 988	-5.8	0.000 000	-0.002
	100 %	+40	3514 979 991	-2.7	0.000 000	-0.001
	100 %	+50	3514 979 986	-7.8	0.000 000	-0.002
	Batt. Endpoint	+20	3514 979 987	-6.7	0.000 000	-0.002

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.850 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 019 989	-3.9	0.000 000	-0.001
	100 %	-20	3490 019 984	-8.4	0.000 000	-0.002
	100 %	-10	3490 019 986	-6.2	0.000 000	-0.002
	100 %	0	3490 019 988	-4.5	0.000 000	-0.001
	100 %	+10	3490 019 989	-3.9	0.000 000	-0.001
	100 %	+30	3490 019 985	-7.8	0.000 000	-0.002
	100 %	+40	3490 019 988	-4.2	0.000 000	-0.001
	100 %	+50	3490 019 985	-7.5	0.000 000	-0.002
	Batt. Endpoint	+20	3490 019 989	-3.7	0.000 000	-0.001
3510.000	100 %	+20(Ref)	3509 999 996	0.0	0.000 000	0.000
	100 %	-30	3509 999 991	-5.0	0.000 000	-0.001
	100 %	-20	3509 999 991	-5.3	0.000 000	-0.002
	100 %	-10	3509 999 991	-5.3	0.000 000	-0.002
	100 %	0	3509 999 991	-5.3	0.000 000	-0.002
	100 %	+10	3509 999 989	-7.4	0.000 000	-0.002
	100 %	+30	3509 999 986	-9.9	0.000 000	-0.003
	100 %	+40	3509 999 988	-7.5	0.000 000	-0.002
	100 %	+50	3509 999 990	-6.2	0.000 000	-0.002
	Batt. Endpoint	+20	3509 999 989	-7.1	0.000 000	-0.002

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 3.850 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 999 992	0.0	0.000 000	0.000
	100 %	-30	3494 999 987	-4.8	0.000 000	-0.001
	100 %	-20	3494 999 985	-7.0	0.000 000	-0.002
	100 %	-10	3494 999 986	-6.4	0.000 000	-0.002
	100 %	0	3494 999 984	-7.9	0.000 000	-0.002
	100 %	+10	3494 999 987	-5.2	0.000 000	-0.001
	100 %	+30	3494 999 985	-7.0	0.000 000	-0.002
	100 %	+40	3494 999 985	-7.0	0.000 000	-0.002
	100 %	+50	3494 999 986	-6.2	0.000 000	-0.002
	Batt. Endpoint	+20	3494 999 984	-7.9	0.000 000	-0.002
3504.990	100 %	+20(Ref)	3504 989 994	0.0	0.000 000	0.000
	100 %	-30	3504 989 991	-3.4	0.000 000	-0.001
	100 %	-20	3504 989 989	-5.5	0.000 000	-0.002
	100 %	-10	3504 989 985	-8.7	0.000 000	-0.002
	100 %	0	3504 989 987	-7.3	0.000 000	-0.002
	100 %	+10	3504 989 987	-7.3	0.000 000	-0.002
	100 %	+30	3504 989 991	-2.9	0.000 000	-0.001
	100 %	+40	3504 989 985	-9.4	0.000 000	-0.003
	100 %	+50	3504 989 986	-8.3	0.000 000	-0.002
	Batt. Endpoint	+20	3504 989 986	-7.7	0.000 000	-0.002

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 3.850 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 009 994	0.0	0.000 000	0.000
	100 %	-30	3500 009 989	-5.0	0.000 000	-0.001
	100 %	-20	3500 009 987	-6.5	0.000 000	-0.002
	100 %	-10	3500 009 987	-6.2	0.000 000	-0.002
	100 %	0	3500 009 988	-5.8	0.000 000	-0.002
	100 %	+10	3500 009 987	-6.6	0.000 000	-0.002
	100 %	+30	3500 009 988	-5.3	0.000 000	-0.002
	100 %	+40	3500 009 984	-9.3	0.000 000	-0.003
	100 %	+50	3500 009 987	-6.4	0.000 000	-0.002
	Batt. Endpoint	+20	3500 009 989	-4.5	0.000 000	-0.001

9. TEST DATA (3700 MHz - 3980 MHz)

9.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3705.00	Sub6 n77(78)/ 10 MHz [30 kHz]	PI/2 BPSK	-23.99	14.50	11.40	3.09	V	< 1.00	0.191	22.81	1	22
		QPSK	-24.03	14.46	11.40	3.09	V		0.189	22.77		
		16-QAM	-25.05	13.44	11.40	3.09	V		0.150	21.75		
		64-QAM	-26.47	12.02	11.40	3.09	V		0.108	20.33		
		256-QAM	-28.66	9.83	11.40	3.09	V		0.065	18.14		
3840.00		PI/2 BPSK	-24.56	15.12	11.10	3.14	V		0.203	23.08	1	1
		QPSK	-24.57	15.11	11.10	3.14	V		0.203	23.07		
		16-QAM	-25.67	14.01	11.10	3.14	V		0.157	21.97		
		64-QAM	-27.37	12.31	11.10	3.14	V		0.106	20.27		
		256-QAM	-29.46	10.22	11.10	3.14	V		0.066	18.18		
3975.00		PI/2 BPSK	-25.16	14.49	10.90	3.20	V		0.166	22.19	1	1
		QPSK	-25.26	14.39	10.90	3.20	V		0.162	22.09		
		16-QAM	-26.21	13.44	10.90	3.20	V		0.130	21.14		
		64-QAM	-27.61	12.04	10.90	3.20	V		0.094	19.74		
		256-QAM	-29.76	9.89	10.90	3.20	V		0.057	17.59		

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(78)/ 15 MHz [30 kHz]	PI/2 BPSK	-23.82	14.67	11.40	3.09	V	< 1.00	0.199	22.98	1	36
		QPSK	-23.87	14.62	11.40	3.09	V		0.196	22.93		
		16-QAM	-24.85	13.64	11.40	3.09	V		0.157	21.95		
		64-QAM	-26.23	12.26	11.40	3.09	V		0.114	20.57		
		256-QAM	-28.50	9.99	11.40	3.09	V		0.068	18.30		
3840.00		PI/2 BPSK	-24.58	15.10	11.10	3.14	V		0.202	23.06	1	1
		QPSK	-24.64	15.04	11.10	3.14	V		0.200	23.00		
		16-QAM	-25.65	14.03	11.10	3.14	V		0.158	21.99		
		64-QAM	-27.01	12.67	11.10	3.14	V		0.116	20.63		
		256-QAM	-29.43	10.25	11.10	3.14	V		0.066	18.21		
3972.48		PI/2 BPSK	-25.12	14.53	10.90	3.20	V		0.167	22.23	1	19
		QPSK	-25.19	14.46	10.90	3.20	V		0.164	22.16		
		16-QAM	-26.19	13.46	10.90	3.20	V		0.131	21.16		
		64-QAM	-27.63	12.02	10.90	3.20	V		0.094	19.72		
		256-QAM	-29.48	10.17	10.90	3.20	V		0.061	17.87		

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(78)/ 20 MHz [30 kHz]	PI/2 BPSK	-23.71	14.81	11.40	3.11	V	< 1.00	0.204	23.10	1	49
		QPSK	-23.75	14.77	11.40	3.11	V		0.202	23.06		
		16-QAM	-24.80	13.72	11.40	3.11	V		0.159	22.01		
		64-QAM	-26.15	12.37	11.40	3.11	V		0.116	20.66		
		256-QAM	-28.40	10.12	11.40	3.11	V		0.069	18.41		
3840.00		PI/2 BPSK	-24.65	15.03	11.10	3.14	V		0.199	22.99	1	1
		QPSK	-24.68	15.00	11.10	3.14	V		0.198	22.96		
		16-QAM	-25.65	14.03	11.10	3.14	V		0.158	21.99		
		64-QAM	-27.03	12.65	11.10	3.14	V		0.115	20.61		
		256-QAM	-29.52	10.16	11.10	3.14	V		0.065	18.12		
3969.99		PI/2 BPSK	-25.21	14.41	10.90	3.20	V		0.163	22.11	1	1
		QPSK	-25.28	14.34	10.90	3.20	V		0.160	22.04		
		16-QAM	-26.28	13.34	10.90	3.20	V		0.127	21.04		
		64-QAM	-27.73	11.89	10.90	3.20	V		0.091	19.59		
		256-QAM	-29.89	9.73	10.90	3.20	V		0.055	17.43		

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(78)/ 25 MHz [30 kHz]	PI/2 BPSK	-23.58	15.09	11.40	3.12	V	< 1.00	0.217	23.37	1	63
		QPSK	-23.61	15.06	11.40	3.12	V		0.216	23.34		
		16-QAM	-24.51	14.16	11.40	3.12	V		0.175	22.44		
		64-QAM	-25.95	12.72	11.40	3.12	V		0.126	21.00		
		256-QAM	-28.17	10.50	11.40	3.12	V		0.076	18.78		
3840.00		PI/2 BPSK	-24.65	15.03	11.10	3.14	V		0.199	22.99	1	1
		QPSK	-24.61	15.07	11.10	3.14	V		0.201	23.03		
		16-QAM	-25.62	14.06	11.10	3.14	V		0.159	22.02		
		64-QAM	-26.99	12.69	11.10	3.14	V		0.116	20.65		
		256-QAM	-29.50	10.18	11.10	3.14	V		0.065	18.14		
3967.50		PI/2 BPSK	-25.31	14.38	10.90	3.21	V		0.161	22.07	1	1
		QPSK	-25.35	14.34	10.90	3.21	V		0.160	22.03		
		16-QAM	-26.29	13.40	10.90	3.21	V		0.129	21.09		
		64-QAM	-27.75	11.94	10.90	3.21	V		0.092	19.63		
		256-QAM	-29.90	9.79	10.90	3.21	V		0.056	17.48		

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(78)/ 30 MHz [30 kHz]	PI/2 BPSK	-23.72	14.95	11.40	3.12	V	< 1.00	0.210	23.23	1	76
		QPSK	-23.81	14.86	11.40	3.12	V		0.206	23.14		
		16-QAM	-24.73	13.94	11.40	3.12	V		0.167	22.22		
		64-QAM	-26.23	12.44	11.40	3.12	V		0.118	20.72		
		256-QAM	-28.50	10.17	11.40	3.12	V		0.070	18.45		
3840.00		PI/2 BPSK	-24.66	15.02	11.10	3.14	V		0.199	22.98	1	1
		QPSK	-24.73	14.95	11.10	3.14	V		0.195	22.91		
		16-QAM	-25.71	13.97	11.10	3.14	V		0.156	21.93		
		64-QAM	-27.10	12.58	11.10	3.14	V		0.113	20.54		
		256-QAM	-29.50	10.18	11.10	3.14	V		0.065	18.14		
3964.98		PI/2 BPSK	-25.35	14.34	10.90	3.21	V		0.160	22.03	1	39
		QPSK	-25.44	14.25	10.90	3.21	V		0.156	21.94		
		16-QAM	-26.46	13.23	10.90	3.21	V		0.124	20.92		
		64-QAM	-27.85	11.84	10.90	3.21	V		0.090	19.53		
		256-QAM	-29.73	9.96	10.90	3.21	V		0.058	17.65		

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
3720.00	Sub6 n77(78)/ 40 MHz [30 kHz]	PI/2 BPSK	-23.73	14.96	11.40	3.14	V	< 1.00	0.210	23.22	1	104
		QPSK	-23.82	14.87	11.40	3.14	V		0.206	23.13		
		16-QAM	-24.81	13.88	11.40	3.14	V		0.164	22.14		
		64-QAM	-26.27	12.42	11.40	3.14	V		0.117	20.68		
		256-QAM	-28.60	10.09	11.40	3.14	V		0.068	18.35		
3840.00		PI/2 BPSK	-24.56	15.12	11.10	3.14	V		0.203	23.08	1	1
		QPSK	-24.64	15.04	11.10	3.14	V		0.200	23.00		
		16-QAM	-25.63	14.05	11.10	3.14	V		0.159	22.01		
		64-QAM	-27.11	12.57	11.10	3.14	V		0.113	20.53		
		256-QAM	-29.44	10.24	11.10	3.14	V		0.066	18.20		
3960.00		PI/2 BPSK	-25.39	14.39	10.90	3.21	V		0.161	22.08	1	53
		QPSK	-25.42	14.36	10.90	3.21	V		0.160	22.05		
		16-QAM	-26.38	13.40	10.90	3.21	V		0.129	21.09		
		64-QAM	-27.91	11.87	10.90	3.21	V		0.090	19.56		
		256-QAM	-30.04	9.74	10.90	3.21	V		0.055	17.43		

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(78)/ 50 MHz [30 kHz]	PI/2 BPSK	-24.01	14.83	11.40	3.14	V	< 1.00	0.204	23.09	1	131
		QPSK	-24.06	14.78	11.40	3.14	V		0.201	23.04		
		16-QAM	-24.96	13.88	11.40	3.14	V		0.164	22.14		
		64-QAM	-26.40	12.44	11.40	3.14	V		0.117	20.70		
		256-QAM	-28.70	10.14	11.40	3.14	V		0.069	18.40		
3840.00		PI/2 BPSK	-24.66	15.02	11.10	3.14	V		0.199	22.98	1	1
		QPSK	-24.72	14.96	11.10	3.14	V		0.196	22.92		
		16-QAM	-25.63	14.05	11.10	3.14	V		0.159	22.01		
		64-QAM	-27.08	12.60	11.10	3.14	V		0.114	20.56		
		256-QAM	-29.48	10.20	11.10	3.14	V		0.065	18.16		
3954.99		PI/2 BPSK	-25.19	14.60	10.90	3.21	V		0.169	22.29	1	66
		QPSK	-25.25	14.54	10.90	3.21	V		0.167	22.23		
		16-QAM	-26.34	13.45	10.90	3.21	V		0.130	21.14		
		64-QAM	-27.59	12.20	10.90	3.21	V		0.097	19.89		
		256-QAM	-29.82	9.97	10.90	3.21	V		0.058	17.66		

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(78)/ 60 MHz [30 kHz]	PI/2 BPSK	-23.70	15.16	11.40	3.14	V	< 1.00	0.220	23.42	1	81
		QPSK	-23.79	15.07	11.40	3.14	V		0.215	23.33		
		16-QAM	-24.75	14.11	11.40	3.14	V		0.173	22.37		
		64-QAM	-26.26	12.60	11.40	3.14	V		0.122	20.86		
		256-QAM	-28.33	10.53	11.40	3.14	V		0.076	18.79		
3840.00		PI/2 BPSK	-24.48	15.20	11.10	3.14	V		0.207	23.16	1	1
		QPSK	-24.59	15.09	11.10	3.14	V		0.202	23.05		
		16-QAM	-25.56	14.12	11.10	3.14	V		0.161	22.08		
		64-QAM	-27.00	12.68	11.10	3.14	V		0.116	20.64		
		256-QAM	-29.47	10.21	11.10	3.14	V		0.066	18.17		
3949.98		PI/2 BPSK	-25.41	14.37	10.90	3.20	V		0.161	22.07	1	81
		QPSK	-25.45	14.33	10.90	3.20	V		0.160	22.03		
		16-QAM	-26.52	13.26	10.90	3.20	V		0.125	20.96		
		64-QAM	-27.93	11.85	10.90	3.20	V		0.090	19.55		
		256-QAM	-29.69	10.09	10.90	3.20	V		0.060	17.79		

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(78)/ 70 MHz [30 kHz]	PI/2 BPSK	-23.77	15.09	11.40	3.12	V	< 1.00	0.217	23.37	1	94
		QPSK	-23.81	15.05	11.40	3.12	V		0.215	23.33		
		16-QAM	-24.66	14.20	11.40	3.12	V		0.177	22.48		
		64-QAM	-26.24	12.62	11.40	3.12	V		0.123	20.90		
		256-QAM	-28.43	10.43	11.40	3.12	V		0.074	18.71		
3840.00		PI/2 BPSK	-24.37	15.31	11.10	3.14	V		0.212	23.27	1	1
		QPSK	-24.47	15.21	11.10	3.14	V		0.207	23.17		
		16-QAM	-25.43	14.25	11.10	3.14	V		0.166	22.21		
		64-QAM	-26.86	12.82	11.10	3.14	V		0.120	20.78		
		256-QAM	-29.26	10.42	11.10	3.14	V		0.069	18.38		
3945.00		PI/2 BPSK	-25.36	14.48	10.85	3.18	V		0.164	22.15	1	94
		QPSK	-25.45	14.39	10.85	3.18	V		0.161	22.06		
		16-QAM	-26.25	13.59	10.85	3.18	V		0.134	21.26		
		64-QAM	-27.70	12.14	10.85	3.18	V		0.096	19.81		
		256-QAM	-29.91	9.93	10.85	3.18	V		0.058	17.60		

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(78)/ 80 MHz [30 kHz]	PI/2 BPSK	-23.75	15.11	11.40	3.10	V	< 1.00	0.219	23.41	1	108
		QPSK	-23.83	15.03	11.40	3.10	V		0.215	23.33		
		16-QAM	-24.68	14.18	11.40	3.10	V		0.177	22.48		
		64-QAM	-26.29	12.57	11.40	3.10	V		0.122	20.87		
		256-QAM	-28.19	10.67	11.40	3.10	V		0.079	18.97		
3840.00		PI/2 BPSK	-24.33	15.35	11.10	3.14	V		0.214	23.31	1	1
		QPSK	-24.40	15.28	11.10	3.14	V		0.211	23.24		
		16-QAM	-25.30	14.38	11.10	3.14	V		0.171	22.34		
		64-QAM	-26.78	12.90	11.10	3.14	V		0.122	20.86		
		256-QAM	-29.22	10.46	11.10	3.14	V		0.070	18.42		
3939.99		PI/2 BPSK	-25.16	14.07	11.40	3.10	V		0.173	22.37	1	108
		QPSK	-25.26	13.97	11.40	3.10	V		0.169	22.27		
		16-QAM	-26.29	12.94	11.40	3.10	V		0.133	21.24		
		64-QAM	-27.58	11.65	11.40	3.10	V		0.099	19.95		
		256-QAM	-29.68	9.55	11.40	3.10	V		0.061	17.85		

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(78)/ 90 MHz [30 kHz]	PI/2 BPSK	-23.83	14.91	11.35	3.09	V	< 1.00	0.207	23.17	1	122
		QPSK	-23.94	14.80	11.35	3.09	V		0.202	23.06		
		16-QAM	-24.89	13.85	11.35	3.09	V		0.163	22.11		
		64-QAM	-26.36	12.38	11.35	3.09	V		0.116	20.64		
		256-QAM	-28.56	10.18	11.35	3.09	V		0.070	18.44		
3840.00		PI/2 BPSK	-24.27	15.41	11.10	3.14	V		0.217	23.37	1	1
		QPSK	-24.32	15.36	11.10	3.14	V		0.215	23.32		
		16-QAM	-25.25	14.43	11.10	3.14	V		0.173	22.39		
		64-QAM	-26.66	13.02	11.10	3.14	V		0.125	20.98		
		256-QAM	-29.15	10.53	11.10	3.14	V		0.071	18.49		
3934.98		PI/2 BPSK	-25.33	14.59	10.80	3.16	V		0.167	22.23	1	122
		QPSK	-25.37	14.55	10.80	3.16	V		0.166	22.19		
		16-QAM	-26.31	13.61	10.80	3.16	V		0.133	21.25		
		64-QAM	-27.81	12.11	10.80	3.16	V		0.094	19.75		
		256-QAM	-30.09	9.83	10.80	3.16	V		0.056	17.47		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3750.00	Sub6 n77(78)/ 100 MHz [30 kHz]	PI/2 BPSK	-23.76	14.87	11.30	3.08	V	< 1.00	0.204	23.09	1	136
		QPSK	-23.78	14.85	11.30	3.08	V		0.203	23.07		
		16-QAM	-24.81	13.82	11.30	3.08	V		0.160	22.04		
		64-QAM	-26.25	12.38	11.30	3.08	V		0.115	20.60		
		256-QAM	-28.56	10.07	11.30	3.08	V		0.067	18.29		
3840.00		PI/2 BPSK	-24.19	15.49	11.10	3.14	V		0.221	23.45	1	1
		QPSK	-24.23	15.45	11.10	3.14	V		0.219	23.41		
		16-QAM	-25.15	14.53	11.10	3.14	V		0.177	22.49		
		64-QAM	-26.54	13.14	11.10	3.14	V		0.129	21.10		
		256-QAM	-29.10	10.58	11.10	3.14	V		0.071	18.54		
3930.00		PI/2 BPSK	-25.42	14.53	10.80	3.16	V		0.165	22.17	1	271
		QPSK	-25.50	14.45	10.80	3.16	V		0.162	22.09		
		16-QAM	-26.49	13.46	10.80	3.16	V		0.129	21.10		
		64-QAM	-27.89	12.06	10.80	3.16	V		0.093	19.70		
		256-QAM	-30.00	9.95	10.80	3.16	V		0.057	17.59		

9.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77(78)

▣ Bandwidth: 100 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meter

▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
650000 (3750.00)	7 500.00	-48.87	11.10	-41.76	4.50	V	-35.16	-13.00	1	136
	11 250.00	-62.99	11.40	-52.45	5.64	V	-46.69	-13.00		
	15 000.00	-55.98	13.80	-49.49	6.65	V	-42.34	-13.00		
656000 (3840.00)	7 680.00	-50.34	11.10	-43.48	4.55	H	-36.93	-13.00	1	1
	11 520.00	-60.95	11.50	-49.81	5.70	H	-44.01	-13.00		
	15 360.00	-61.54	15.10	-55.75	6.72	V	-47.37	-13.00		
662000 (3930.00)	7 860.00	-51.35	10.60	-43.99	4.61	H	-38.00	-13.00	1	271
	11 790.00	-63.83	12.20	-53.87	5.78	H	-47.45	-13.00		
	15 720.00	-58.04	15.10	-52.48	6.82	H	-44.20	-13.00		

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n77(78)	10 MHz	3840.00	BPSK	Full RB	0	4.41
			QPSK			5.55
			16-QAM			6.23
			64-QAM			6.44
			256-QAM			6.72
	15 MHz		BPSK			5.00
			QPSK			5.46
			16-QAM			6.25
			64-QAM			6.27
			256-QAM			6.51
	20 MHz		BPSK			5.18
			QPSK			5.51
			16-QAM			6.22
			64-QAM			6.56
			256-QAM			6.59
	25 MHz		BPSK			4.38
			QPSK			5.53
			16-QAM			6.25
			64-QAM			6.48
			256-QAM			6.62
	30 MHz		BPSK			4.36
			QPSK			5.39
			16-QAM			6.15
			64-QAM			6.43
			256-QAM			6.53
	40 MHz		BPSK			5.49
			QPSK			5.70
			16-QAM			6.23
			64-QAM			6.46
			256-QAM			6.57

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
	50 MHz		BPSK			4.36
			QPSK			5.52
			16-QAM			6.23
			64-QAM			6.44
			256-QAM			6.65
	60 MHz		BPSK			4.39
			QPSK			5.48
			16-QAM			6.23
			64-QAM			6.44
			256-QAM			6.69
	70 MHz		BPSK			4.59
			QPSK			5.53
			16-QAM			6.16
			64-QAM			6.45
			256-QAM			6.59
	80 MHz		BPSK			4.92
			QPSK			5.53
			16-QAM			6.28
			64-QAM			6.42
			256-QAM			6.61
	90 MHz		BPSK			4.67
			QPSK			5.48
			16-QAM			6.22
			64-QAM			6.41
			256-QAM			6.66
	100 MHz		BPSK			4.52
			QPSK			5.51
			16-QAM			6.27
			64-QAM			6.49
			256-QAM			6.59

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(78)	10 MHz	3840.00	BPSK	Full RB	0	8.6231
			QPSK			8.6294
			16-QAM			8.6019
			64-QAM			8.5984
			256-QAM			8.5821
	15 MHz		BPSK			12.882
			QPSK			12.942
			16-QAM			12.937
			64-QAM			12.934
			256-QAM			12.897
	20 MHz		BPSK			17.929
			QPSK			17.899
			16-QAM			17.885
			64-QAM			17.891
			256-QAM			17.851
	25 MHz		BPSK			22.910
			QPSK			22.913
			16-QAM			22.934
			64-QAM			22.971
			256-QAM			22.889
	30 MHz		BPSK			26.960
			QPSK			26.963
			16-QAM			26.880
			64-QAM			26.883
			256-QAM			26.832
	40 MHz		BPSK			35.820
			QPSK			35.787
			16-QAM			35.721
			64-QAM			35.762
			256-QAM			35.867

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
	50 MHz		BPSK			45.924
			QPSK			45.845
			16-QAM			45.730
			64-QAM			45.833
			256-QAM			45.788
	60 MHz		BPSK			57.941
			QPSK			57.940
			16-QAM			57.901
			64-QAM			57.955
			256-QAM			57.985
	70 MHz		BPSK			64.607
			QPSK			64.508
			16-QAM			64.493
			64-QAM			64.469
			256-QAM			64.409
	80 MHz		BPSK			77.353
			QPSK			77.219
			16-QAM			77.162
			64-QAM			77.223
			256-QAM			77.137
	90 MHz		BPSK			87.052
			QPSK			87.040
			16-QAM			87.205
			64-QAM			86.995
			256-QAM			87.040
	100 MHz		BPSK			96.673
			QPSK			96.513
			16-QAM			96.691
			64-QAM			96.421
			256-QAM			96.793

Note:

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

9.5 CONDUCTED SPURIOUS EMISSIONS

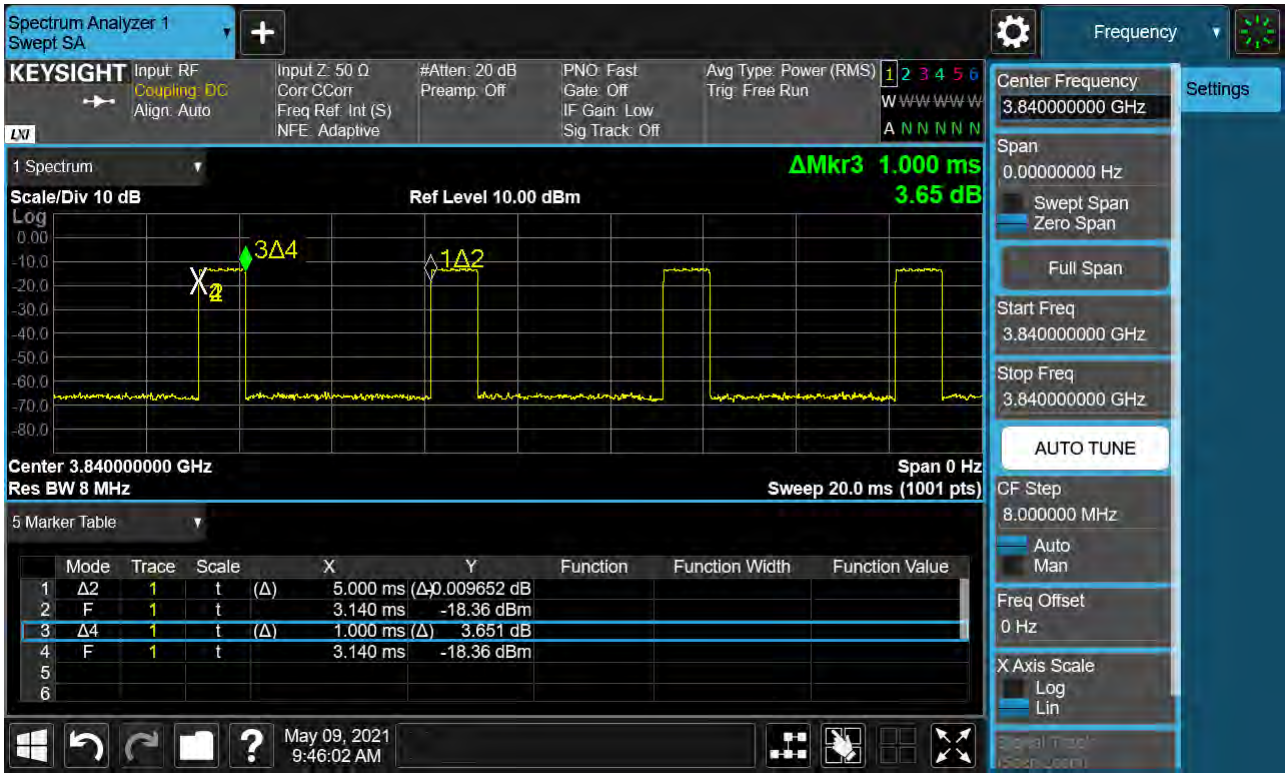
Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n77(78)	10	3705.000	4.9288	37.190	-70.401	-33.211	-13.00
		3840.000	8.2508	37.805	-70.808	-33.003	
		3975.000	9.7278	37.805	-70.198	-32.393	
	15	3707.520	8.2627	37.805	-71.604	-33.799	
		3840.000	7.9980	37.805	-71.360	-33.555	
		3972.480	8.2931	37.805	-69.871	-32.066	
	20	3710.010	8.2742	37.805	-70.896	-33.091	
		3840.000	9.1869	37.805	-71.025	-33.220	
		3969.990	8.0030	37.805	-71.399	-33.594	
	25	3712.500	8.2772	37.805	-70.391	-32.586	
		3840.000	4.3131	37.190	-71.119	-33.929	
		3967.500	8.2443	37.805	-70.774	-32.969	
	30	3715.020	9.1256	37.805	-70.458	-32.653	
		3840.000	9.1575	37.805	-70.953	-33.148	
		3964.980	6.0434	37.805	-70.756	-32.951	
	40	3720.000	8.2408	37.805	-71.245	-33.440	
		3840.000	7.4756	37.805	-70.570	-32.765	
		3960.000	9.7228	37.805	-71.286	-33.481	
	50	3725.010	8.3016	37.805	-70.002	-32.197	
		3840.000	8.2951	37.805	-70.593	-32.788	
		3954.990	9.9487	37.805	-70.179	-32.374	
	60	3730.020	9.4267	37.805	-70.370	-32.565	
		3840.000	4.9253	37.190	-70.828	-33.638	
		3949.980	9.9292	37.805	-70.895	-33.090	
	70	3735.000	9.1216	37.805	-70.714	-32.909	
		3840.000	9.9521	37.805	-71.223	-33.418	
		3945.000	9.9447	37.805	-70.654	-32.849	
	80	3740.010	5.2119	37.805	-69.043	-31.238	
		3840.000	7.2189	37.805	-71.221	-33.416	
		3939.990	7.7184	37.805	-71.160	-33.355	
	90	3745.020	5.1905	37.805	-70.410	-32.605	
		3840.000	9.6889	37.805	-70.403	-32.598	
		3934.980	9.9611	37.805	-70.652	-32.847	
	100	3750.000	8.2632	37.805	-71.196	-33.391	
		3840.000	9.1336	37.805	-70.327	-32.522	
		3930.000	9.4013	37.805	-70.175	-32.370	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 689 ~ 760.

2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.990



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

- Result(dBm) = Reading + Factor

3. Factor(dB)

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

9.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 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 %): 3.850 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 999 996	0.0	0.000 000	0.000
	100 %	-30	3704 999 988	-7.3	0.000 000	-0.002
	100 %	-20	3704 999 988	-7.2	0.000 000	-0.002
	100 %	-10	3704 999 988	-7.1	0.000 000	-0.002
	100 %	0	3704 999 991	-5.0	0.000 000	-0.001
	100 %	+10	3704 999 989	-7.0	0.000 000	-0.002
	100 %	+30	3704 999 991	-4.4	0.000 000	-0.001
	100 %	+40	3704 999 985	-10.2	0.000 000	-0.003
	100 %	+50	3704 999 988	-7.5	0.000 000	-0.002
	Batt. Endpoint	+20	3704 999 989	-6.9	0.000 000	-0.002
3975.000	100 %	+20(Ref)	3974 999 992	0.0	0.000 000	0.000
	100 %	-30	3974 999 985	-7.1	0.000 000	-0.002
	100 %	-20	3974 999 984	-8.0	0.000 000	-0.002
	100 %	-10	3974 999 988	-3.8	0.000 000	-0.001
	100 %	0	3974 999 988	-4.3	0.000 000	-0.001
	100 %	+10	3974 999 990	-1.8	0.000 000	0.000
	100 %	+30	3974 999 986	-5.6	0.000 000	-0.001
	100 %	+40	3974 999 985	-6.9	0.000 000	-0.002
	100 %	+50	3974 999 991	-0.9	0.000 000	0.000
	Batt. Endpoint	+20	3974 999 989	-3.1	0.000 000	-0.001

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.850 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. 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 519 987	-7.2	0.000 000	-0.002
	100 %	-20	3707 519 986	-8.4	0.000 000	-0.002
	100 %	-10	3707 519 989	-5.5	0.000 000	-0.001
	100 %	0	3707 519 986	-8.7	0.000 000	-0.002
	100 %	+10	3707 519 987	-7.7	0.000 000	-0.002
	100 %	+30	3707 519 988	-5.8	0.000 000	-0.002
	100 %	+40	3707 519 987	-7.2	0.000 000	-0.002
	100 %	+50	3707 519 988	-6.7	0.000 000	-0.002
	Batt. Endpoint	+20	3707 519 991	-3.1	0.000 000	-0.001
3972.480	100 %	+20(Ref)	3972 479 997	0.0	0.000 000	0.000
	100 %	-30	3972 479 991	-5.6	0.000 000	-0.001
	100 %	-20	3972 479 992	-4.2	0.000 000	-0.001
	100 %	-10	3972 479 993	-4.0	0.000 000	-0.001
	100 %	0	3972 479 994	-2.4	0.000 000	-0.001
	100 %	+10	3972 479 992	-4.3	0.000 000	-0.001
	100 %	+30	3972 479 993	-3.7	0.000 000	-0.001
	100 %	+40	3972 479 995	-1.9	0.000 000	0.000
	100 %	+50	3972 479 989	-7.8	0.000 000	-0.002
	Batt. Endpoint	+20	3972 479 990	-6.5	0.000 000	-0.002

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.850 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 009 987	-6.8	0.000 000	-0.002
	100 %	-20	3710 009 989	-5.1	0.000 000	-0.001
	100 %	-10	3710 009 987	-7.6	0.000 000	-0.002
	100 %	0	3710 009 986	-7.9	0.000 000	-0.002
	100 %	+10	3710 009 986	-7.8	0.000 000	-0.002
	100 %	+30	3710 009 990	-4.4	0.000 000	-0.001
	100 %	+40	3710 009 986	-8.0	0.000 000	-0.002
	100 %	+50	3710 009 986	-7.7	0.000 000	-0.002
	Batt. Endpoint	+20	3710 009 987	-6.9	0.000 000	-0.002
3969.990	100 %	+20(Ref)	3969 989 995	0.0	0.000 000	0.000
	100 %	-30	3969 989 985	-10.0	0.000 000	-0.003
	100 %	-20	3969 989 989	-6.3	0.000 000	-0.002
	100 %	-10	3969 989 989	-7.0	0.000 000	-0.002
	100 %	0	3969 989 995	-0.8	0.000 000	0.000
	100 %	+10	3969 989 988	-7.4	0.000 000	-0.002
	100 %	+30	3969 989 990	-5.9	0.000 000	-0.001
	100 %	+40	3969 989 990	-5.7	0.000 000	-0.001
	100 %	+50	3969 989 989	-6.5	0.000 000	-0.002
	Batt. Endpoint	+20	3969 989 991	-4.6	0.000 000	-0.001

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 3.850 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3712.500	100 %	+20(Ref)	3712 499 992	0.0	0.000 000	0.000
	100 %	-30	3712 499 987	-4.5	0.000 000	-0.001
	100 %	-20	3712 499 980	-11.4	0.000 000	-0.003
	100 %	-10	3712 499 985	-6.5	0.000 000	-0.002
	100 %	0	3712 499 984	-7.7	0.000 000	-0.002
	100 %	+10	3712 499 984	-7.6	0.000 000	-0.002
	100 %	+30	3712 499 983	-8.9	0.000 000	-0.002
	100 %	+40	3712 499 983	-8.1	0.000 000	-0.002
	100 %	+50	3712 499 985	-6.2	0.000 000	-0.002
	Batt. Endpoint	+20	3712 499 984	-7.4	0.000 000	-0.002
3967.500	100 %	+20(Ref)	3967 499 993	0.0	0.000 000	0.000
	100 %	-30	3967 499 986	-7.7	0.000 000	-0.002
	100 %	-20	3967 499 986	-7.0	0.000 000	-0.002
	100 %	-10	3967 499 991	-2.4	0.000 000	-0.001
	100 %	0	3967 499 987	-6.5	0.000 000	-0.002
	100 %	+10	3967 499 987	-6.8	0.000 000	-0.002
	100 %	+30	3967 499 986	-7.8	0.000 000	-0.002
	100 %	+40	3967 499 987	-6.7	0.000 000	-0.002
	100 %	+50	3967 499 986	-7.4	0.000 000	-0.002
	Batt. Endpoint	+20	3967 499 987	-6.3	0.000 000	-0.002

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.850 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 019 995	0.0	0.000 000	0.000
	100 %	-30	3715 019 990	-5.6	0.000 000	-0.001
	100 %	-20	3715 019 990	-5.3	0.000 000	-0.001
	100 %	-10	3715 019 986	-9.2	0.000 000	-0.002
	100 %	0	3715 019 992	-3.2	0.000 000	-0.001
	100 %	+10	3715 019 990	-5.0	0.000 000	-0.001
	100 %	+30	3715 019 992	-3.3	0.000 000	-0.001
	100 %	+40	3715 019 993	-2.2	0.000 000	-0.001
	100 %	+50	3715 019 991	-4.2	0.000 000	-0.001
	Batt. Endpoint	+20	3715 019 988	-6.9	0.000 000	-0.002
3964.980	100 %	+20(Ref)	3964 979 994	0.0	0.000 000	0.000
	100 %	-30	3964 979 990	-4.2	0.000 000	-0.001
	100 %	-20	3964 979 987	-6.7	0.000 000	-0.002
	100 %	-10	3964 979 986	-7.5	0.000 000	-0.002
	100 %	0	3964 979 984	-9.3	0.000 000	-0.002
	100 %	+10	3964 979 987	-6.4	0.000 000	-0.002
	100 %	+30	3964 979 990	-3.5	0.000 000	-0.001
	100 %	+40	3964 979 989	-5.0	0.000 000	-0.001
	100 %	+50	3964 979 988	-6.1	0.000 000	-0.002
	Batt. Endpoint	+20	3964 979 986	-8.0	0.000 000	-0.002

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.850 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 999 995	0.0	0.000 000	0.000
	100 %	-30	3719 999 988	-7.2	0.000 000	-0.002
	100 %	-20	3719 999 988	-6.6	0.000 000	-0.002
	100 %	-10	3719 999 989	-5.6	0.000 000	-0.002
	100 %	0	3719 999 990	-5.0	0.000 000	-0.001
	100 %	+10	3719 999 987	-7.7	0.000 000	-0.002
	100 %	+30	3719 999 985	-9.9	0.000 000	-0.003
	100 %	+40	3719 999 988	-6.8	0.000 000	-0.002
	100 %	+50	3719 999 989	-6.3	0.000 000	-0.002
	Batt. Endpoint	+20	3719 999 987	-8.5	0.000 000	-0.002
3960.000	100 %	+20(Ref)	3959 999 995	0.0	0.000 000	0.000
	100 %	-30	3959 999 985	-9.7	0.000 000	-0.002
	100 %	-20	3959 999 987	-8.0	0.000 000	-0.002
	100 %	-10	3959 999 989	-5.3	0.000 000	-0.001
	100 %	0	3959 999 992	-3.1	0.000 000	-0.001
	100 %	+10	3959 999 990	-4.3	0.000 000	-0.001
	100 %	+30	3959 999 987	-8.3	0.000 000	-0.002
	100 %	+40	3959 999 987	-7.9	0.000 000	-0.002
	100 %	+50	3959 999 988	-6.3	0.000 000	-0.002
	Batt. Endpoint	+20	3959 999 988	-6.8	0.000 000	-0.002

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.850 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 009 988	-5.8	0.000 000	-0.002
	100 %	-20	3725 009 986	-7.0	0.000 000	-0.002
	100 %	-10	3725 009 985	-8.4	0.000 000	-0.002
	100 %	0	3725 009 987	-6.1	0.000 000	-0.002
	100 %	+10	3725 009 986	-7.4	0.000 000	-0.002
	100 %	+30	3725 009 988	-5.6	0.000 000	-0.002
	100 %	+40	3725 009 988	-5.3	0.000 000	-0.001
	100 %	+50	3725 009 988	-5.4	0.000 000	-0.001
	Batt. Endpoint	+20	3725 009 988	-5.4	0.000 000	-0.001
3954.990	100 %	+20(Ref)	3954 989 995	0.0	0.000 000	0.000
	100 %	-30	3954 989 989	-6.0	0.000 000	-0.002
	100 %	-20	3954 989 988	-6.5	0.000 000	-0.002
	100 %	-10	3954 989 987	-7.6	0.000 000	-0.002
	100 %	0	3954 989 987	-7.9	0.000 000	-0.002
	100 %	+10	3954 989 988	-6.9	0.000 000	-0.002
	100 %	+30	3954 989 991	-4.0	0.000 000	-0.001
	100 %	+40	3954 989 989	-5.3	0.000 000	-0.001
	100 %	+50	3954 989 988	-6.6	0.000 000	-0.002
	Batt. Endpoint	+20	3954 989 985	-9.4	0.000 000	-0.002

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.850 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 019 993	0.0	0.000 000	0.000
	100 %	-30	3730 019 986	-6.5	0.000 000	-0.002
	100 %	-20	3730 019 987	-6.3	0.000 000	-0.002
	100 %	-10	3730 019 984	-8.7	0.000 000	-0.002
	100 %	0	3730 019 992	-1.1	0.000 000	0.000
	100 %	+10	3730 019 986	-6.5	0.000 000	-0.002
	100 %	+30	3730 019 987	-5.7	0.000 000	-0.002
	100 %	+40	3730 019 988	-4.6	0.000 000	-0.001
	100 %	+50	3730 019 988	-4.9	0.000 000	-0.001
	Batt. Endpoint	+20	3730 019 986	-6.6	0.000 000	-0.002
3949.980	100 %	+20(Ref)	3949 979 993	0.0	0.000 000	0.000
	100 %	-30	3949 979 988	-5.2	0.000 000	-0.001
	100 %	-20	3949 979 986	-7.2	0.000 000	-0.002
	100 %	-10	3949 979 987	-6.1	0.000 000	-0.002
	100 %	0	3949 979 989	-4.1	0.000 000	-0.001
	100 %	+10	3949 979 986	-7.4	0.000 000	-0.002
	100 %	+30	3949 979 986	-7.0	0.000 000	-0.002
	100 %	+40	3949 979 983	-10.0	0.000 000	-0.003
	100 %	+50	3949 979 987	-6.0	0.000 000	-0.002
	Batt. Endpoint	+20	3949 979 988	-5.8	0.000 000	-0.001

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 3.850 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3735.000	100 %	+20(Ref)	3734 999 993	0.0	0.000 000	0.000
	100 %	-30	3734 999 985	-8.1	0.000 000	-0.002
	100 %	-20	3734 999 983	-9.3	0.000 000	-0.002
	100 %	-10	3734 999 985	-7.9	0.000 000	-0.002
	100 %	0	3734 999 982	-10.3	0.000 000	-0.003
	100 %	+10	3734 999 982	-11.0	0.000 000	-0.003
	100 %	+30	3734 999 982	-11.2	0.000 000	-0.003
	100 %	+40	3734 999 985	-8.1	0.000 000	-0.002
	100 %	+50	3734 999 986	-6.5	0.000 000	-0.002
	Batt. Endpoint	+20	3734 999 985	-7.9	0.000 000	-0.002
3945.000	100 %	+20(Ref)	3944 999 992	0.0	0.000 000	0.000
	100 %	-30	3944 999 986	-5.5	0.000 000	-0.001
	100 %	-20	3944 999 983	-8.6	0.000 000	-0.002
	100 %	-10	3944 999 985	-6.3	0.000 000	-0.002
	100 %	0	3944 999 991	-1.0	0.000 000	0.000
	100 %	+10	3944 999 985	-6.9	0.000 000	-0.002
	100 %	+30	3944 999 985	-6.9	0.000 000	-0.002
	100 %	+40	3944 999 985	-6.5	0.000 000	-0.002
	100 %	+50	3944 999 984	-8.1	0.000 000	-0.002
	Batt. Endpoint	+20	3944 999 984	-7.6	0.000 000	-0.002

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.850 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 009 992	0.0	0.000 000	0.000
	100 %	-30	3740 009 986	-6.3	0.000 000	-0.002
	100 %	-20	3740 009 986	-6.5	0.000 000	-0.002
	100 %	-10	3740 009 986	-6.5	0.000 000	-0.002
	100 %	0	3740 009 987	-5.7	0.000 000	-0.002
	100 %	+10	3740 009 984	-8.7	0.000 000	-0.002
	100 %	+30	3740 009 982	-10.3	0.000 000	-0.003
	100 %	+40	3740 009 988	-4.8	0.000 000	-0.001
	100 %	+50	3740 009 985	-7.6	0.000 000	-0.002
	Batt. Endpoint	+20	3740 009 986	-6.3	0.000 000	-0.002
3939.990	100 %	+20(Ref)	3939 989 994	0.0	0.000 000	0.000
	100 %	-30	3939 989 990	-3.4	0.000 000	-0.001
	100 %	-20	3939 989 989	-4.3	0.000 000	-0.001
	100 %	-10	3939 989 987	-6.8	0.000 000	-0.002
	100 %	0	3939 989 986	-7.7	0.000 000	-0.002
	100 %	+10	3939 989 986	-7.8	0.000 000	-0.002
	100 %	+30	3939 989 990	-3.9	0.000 000	-0.001
	100 %	+40	3939 989 986	-8.0	0.000 000	-0.002
	100 %	+50	3939 989 985	-8.3	0.000 000	-0.002
	Batt. Endpoint	+20	3939 989 988	-6.3	0.000 000	-0.002

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 3.850 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 019 993	0.0	0.000 000	0.000
	100 %	-30	3745 019 986	-7.2	0.000 000	-0.002
	100 %	-20	3745 019 987	-6.3	0.000 000	-0.002
	100 %	-10	3745 019 988	-5.3	0.000 000	-0.001
	100 %	0	3745 019 988	-5.3	0.000 000	-0.001
	100 %	+10	3745 019 987	-6.1	0.000 000	-0.002
	100 %	+30	3745 019 983	-9.8	0.000 000	-0.003
	100 %	+40	3745 019 985	-7.5	0.000 000	-0.002
	100 %	+50	3745 019 985	-7.6	0.000 000	-0.002
	Batt. Endpoint	+20	3745 019 988	-5.3	0.000 000	-0.001
3934.980	100 %	+20(Ref)	3934 979 993	0.0	0.000 000	0.000
	100 %	-30	3934 979 988	-5.0	0.000 000	-0.001
	100 %	-20	3934 979 988	-5.0	0.000 000	-0.001
	100 %	-10	3934 979 986	-6.3	0.000 000	-0.002
	100 %	0	3934 979 986	-7.3	0.000 000	-0.002
	100 %	+10	3934 979 988	-4.7	0.000 000	-0.001
	100 %	+30	3934 979 988	-4.8	0.000 000	-0.001
	100 %	+40	3934 979 992	-1.1	0.000 000	0.000
	100 %	+50	3934 979 986	-6.7	0.000 000	-0.002
	Batt. Endpoint	+20	3934 979 988	-4.9	0.000 000	-0.001

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 3.850 VDC

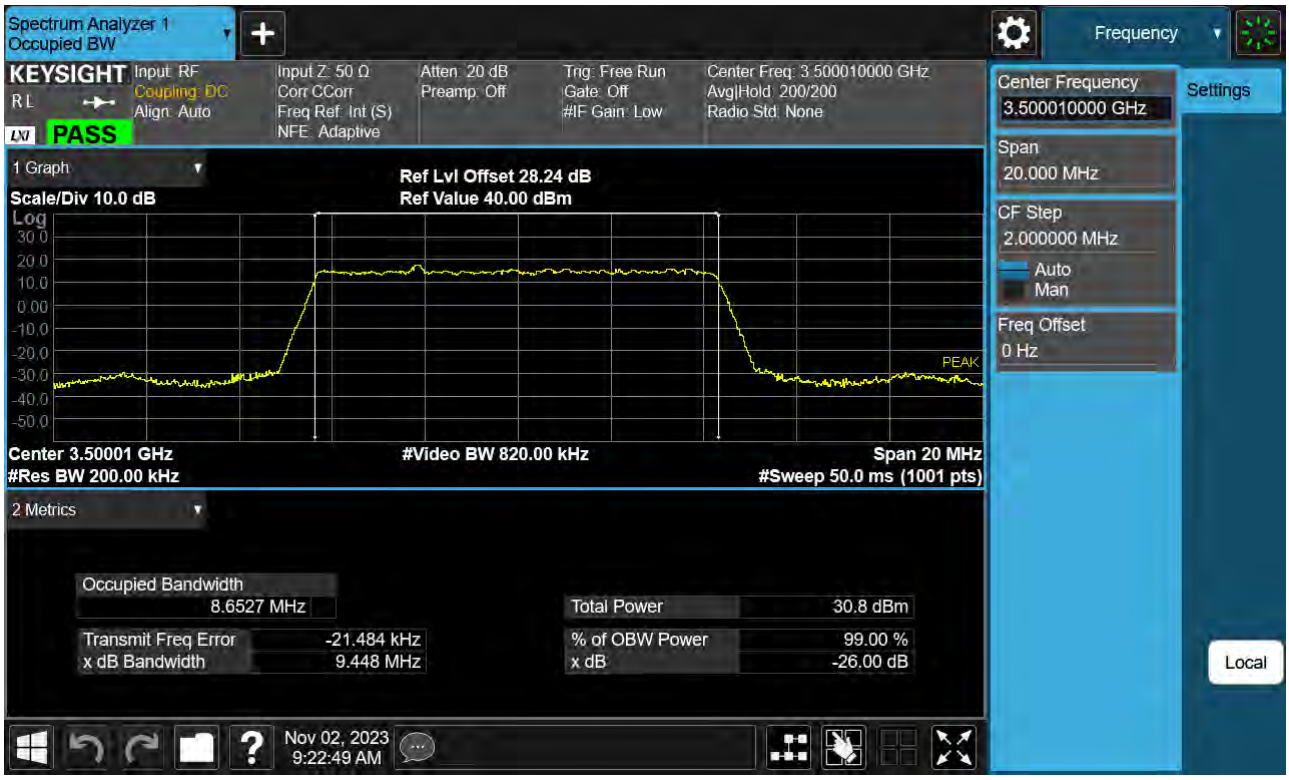
▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3750.000	100 %	+20(Ref)	3749 999 993	0.0	0.000 000	0.000
	100 %	-30	3749 999 988	-5.6	0.000 000	-0.001
	100 %	-20	3749 999 987	-6.6	0.000 000	-0.002
	100 %	-10	3749 999 989	-4.3	0.000 000	-0.001
	100 %	0	3749 999 988	-5.6	0.000 000	-0.001
	100 %	+10	3749 999 982	-10.9	0.000 000	-0.003
	100 %	+30	3749 999 985	-7.9	0.000 000	-0.002
	100 %	+40	3749 999 988	-5.0	0.000 000	-0.001
	100 %	+50	3749 999 985	-8.7	0.000 000	-0.002
	Batt. Endpoint	+20	3749 999 984	-8.8	0.000 000	-0.002
3930.000	100 %	+20(Ref)	3929 999 994	0.0	0.000 000	0.000
	100 %	-30	3929 999 984	-9.4	0.000 000	-0.002
	100 %	-20	3929 999 988	-6.0	0.000 000	-0.002
	100 %	-10	3929 999 990	-3.2	0.000 000	-0.001
	100 %	0	3929 999 991	-2.6	0.000 000	-0.001
	100 %	+10	3929 999 985	-8.7	0.000 000	-0.002
	100 %	+30	3929 999 991	-2.4	0.000 000	-0.001
	100 %	+40	3929 999 991	-2.4	0.000 000	-0.001
	100 %	+50	3929 999 989	-4.5	0.000 000	-0.001
	Batt. Endpoint	+20	3929 999 990	-3.3	0.000 000	-0.001

10. TEST PLOTS(3450 MHz - 3550 MHz)

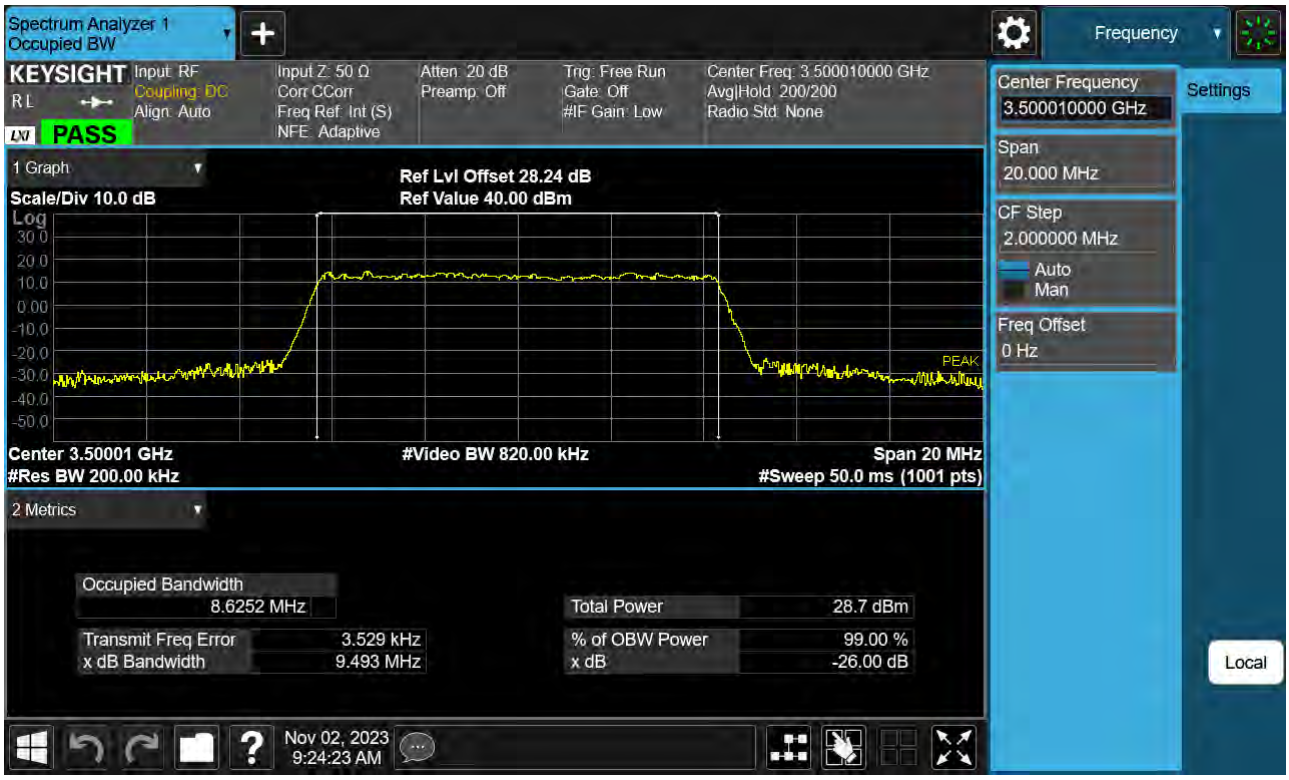
Sub6 n77(78). Occupied Bandwidth Plot (10 M BW Ch.633334 BPSK)



Sub6 n77(78). Occupied Bandwidth Plot (10 M BW Ch.633334 QPSK)

Sub6 n77(78). Occupied Bandwidth Plot (10 M BW Ch.633334 16QAM)

Sub6 n77(78). Occupied Bandwidth Plot (10 M BW Ch.633334 64QAM)



Sub6 n77(78). Occupied Bandwidth Plot (10 M BW Ch.633334 256QAM)

Sub6 n77(78). Occupied Bandwidth Plot (15 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (15 M BW Ch.633334 QPSK)

Sub6 n77(78). Occupied Bandwidth Plot (15 M BW Ch.633334 16QAM)

Sub6 n77(78). Occupied Bandwidth Plot (15 M BW Ch.633334 64QAM)

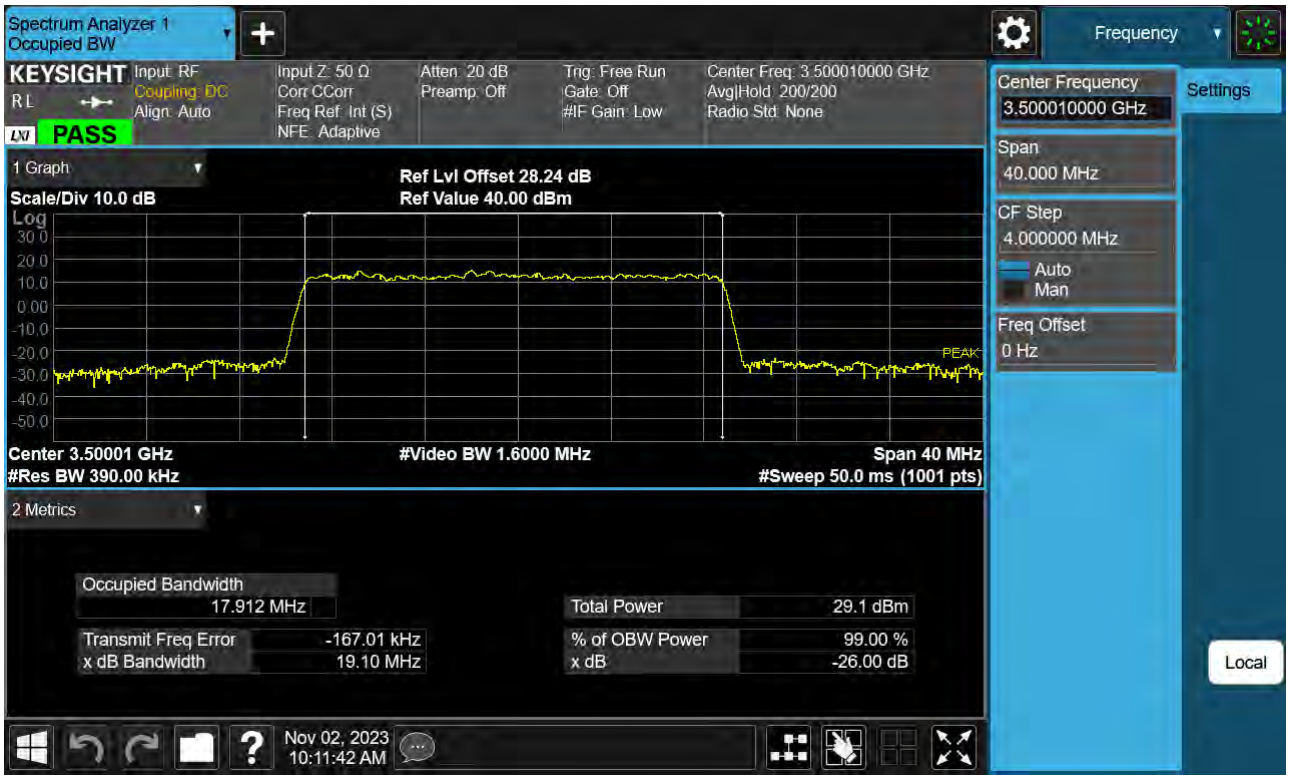
Sub6 n77(78). Occupied Bandwidth Plot (15 M BW Ch.633334 256QAM)

Sub6 n77(78). Occupied Bandwidth Plot (20 M BW Ch.633334 BPSK)

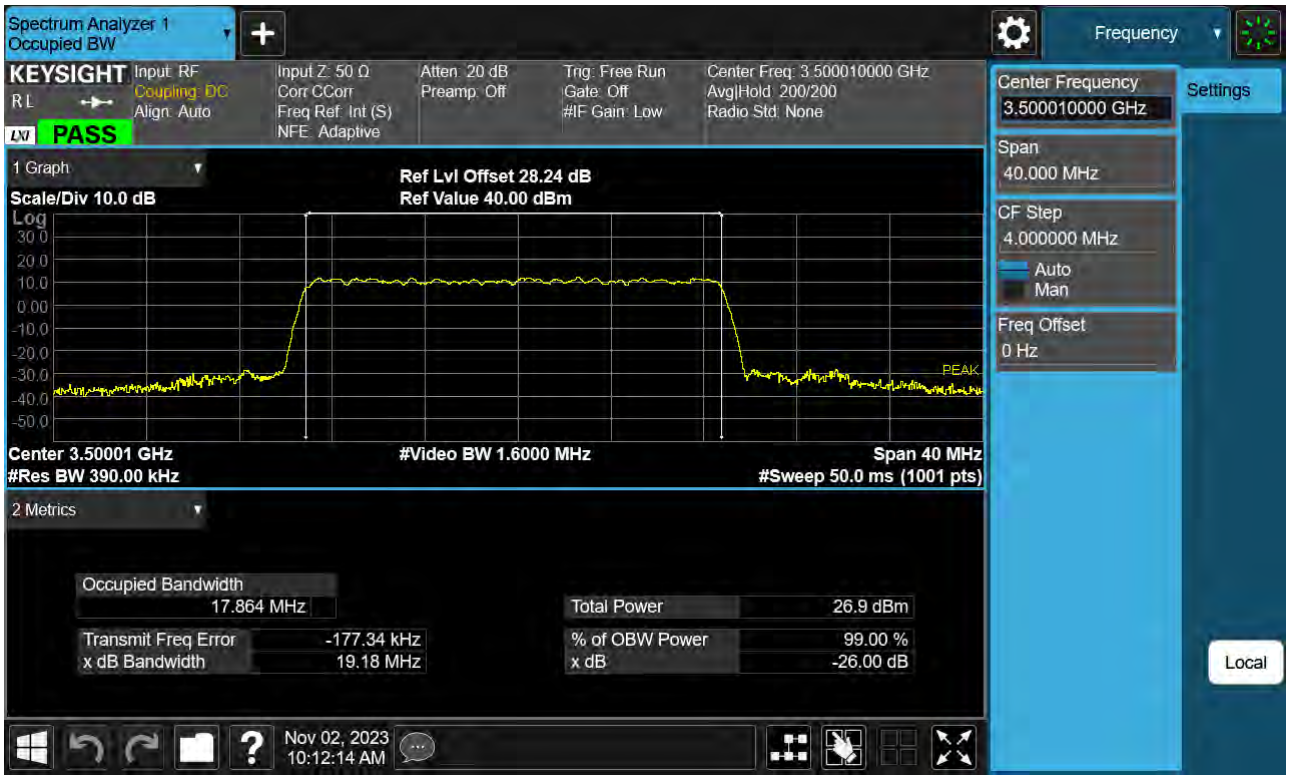
Sub6 n77(78). Occupied Bandwidth Plot (20 M BW Ch.633334 QPSK)

Sub6 n77(78). Occupied Bandwidth Plot (20 M BW Ch.633334 16QAM)

Sub6 n77(78). Occupied Bandwidth Plot (20 M BW Ch.633334 64QAM)

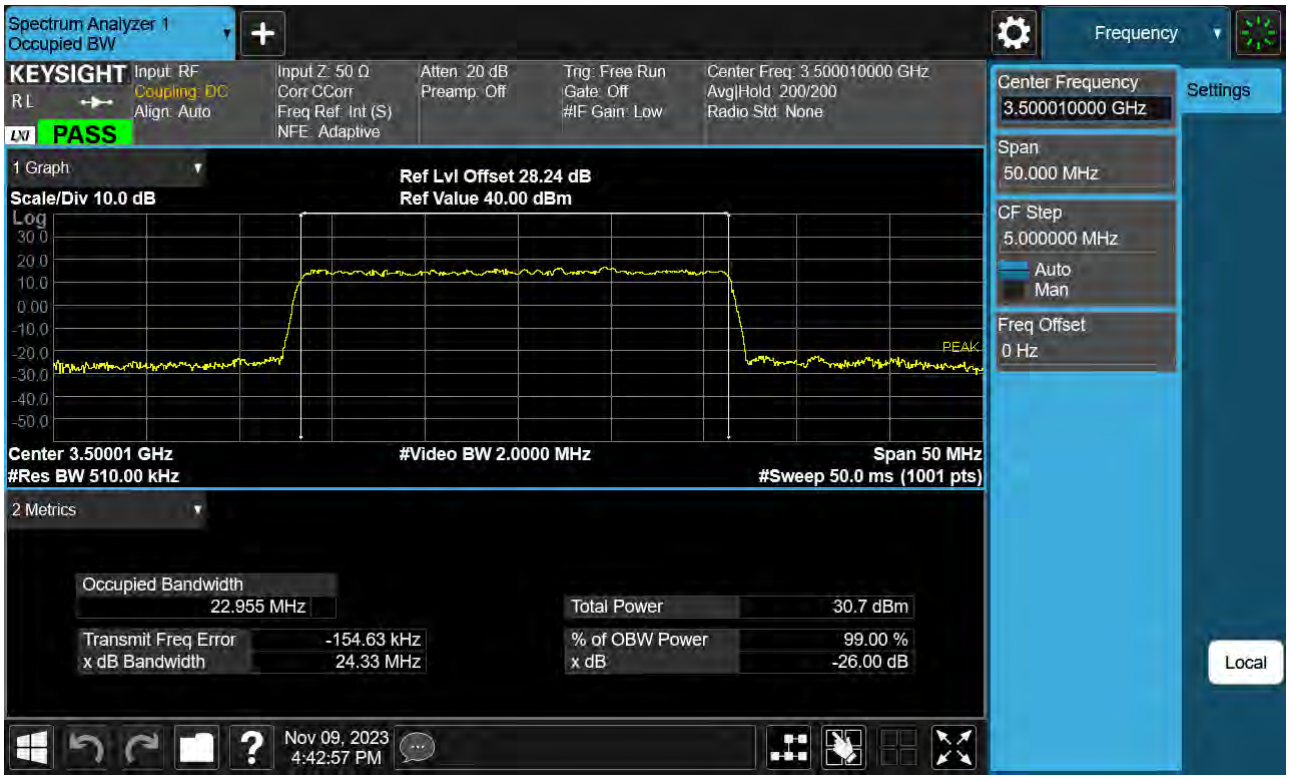


Sub6 n77(78). Occupied Bandwidth Plot (20 M BW Ch.633334 256QAM)



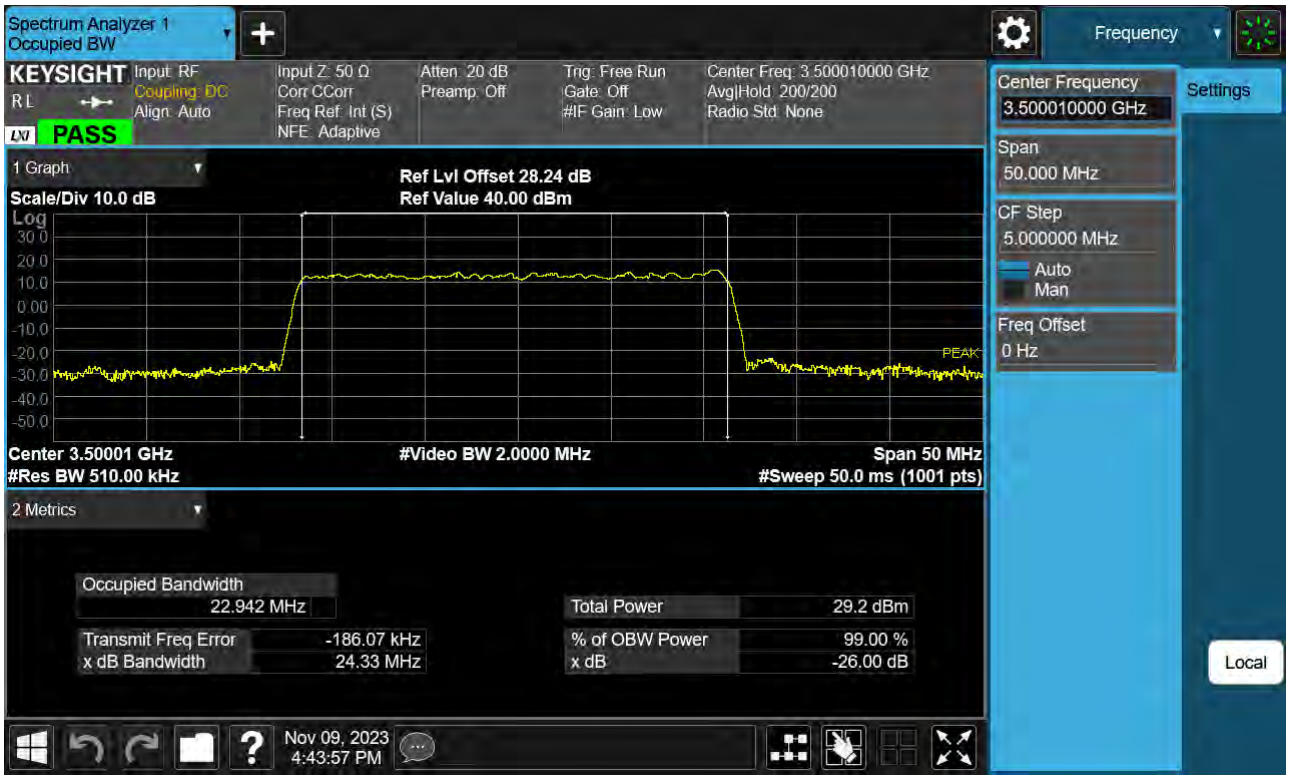
Sub6 n77(78). Occupied Bandwidth Plot (25 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (25 M BW Ch.633334 QPSK)

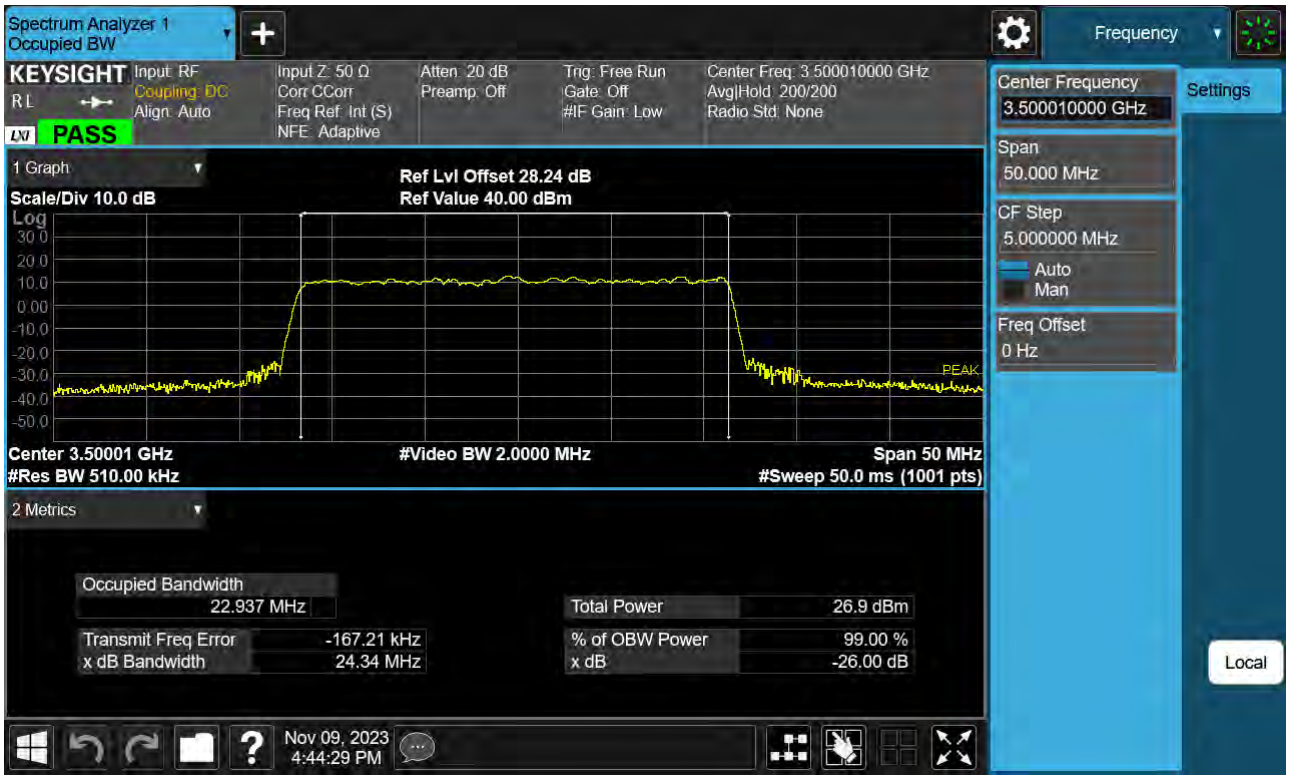


Sub6 n77(78). Occupied Bandwidth Plot (25 M BW Ch.633334 16QAM)

Sub6 n77(78). Occupied Bandwidth Plot (25 M BW Ch.633334 64QAM)



Sub6 n77(78). Occupied Bandwidth Plot (25 M BW Ch.633334 256QAM)

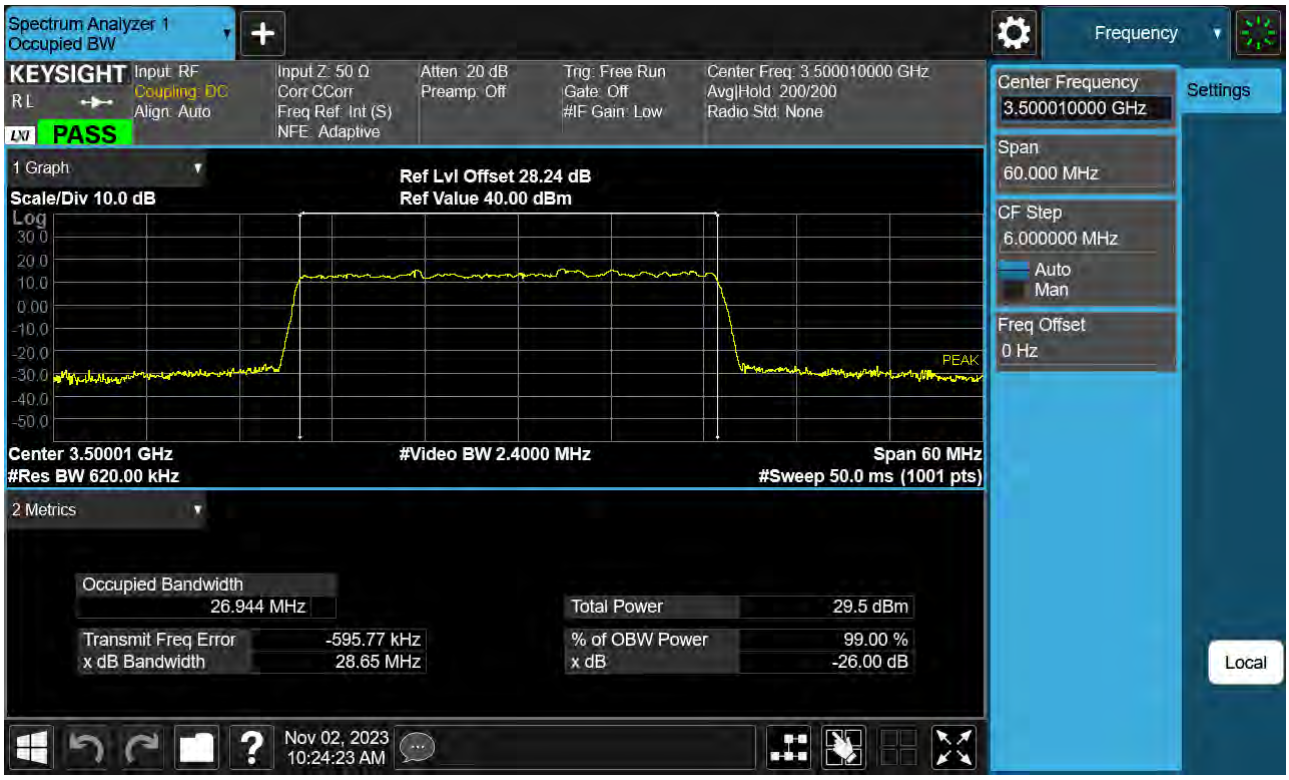


Sub6 n77(78). Occupied Bandwidth Plot (30 M BW Ch.633334 BPSK)

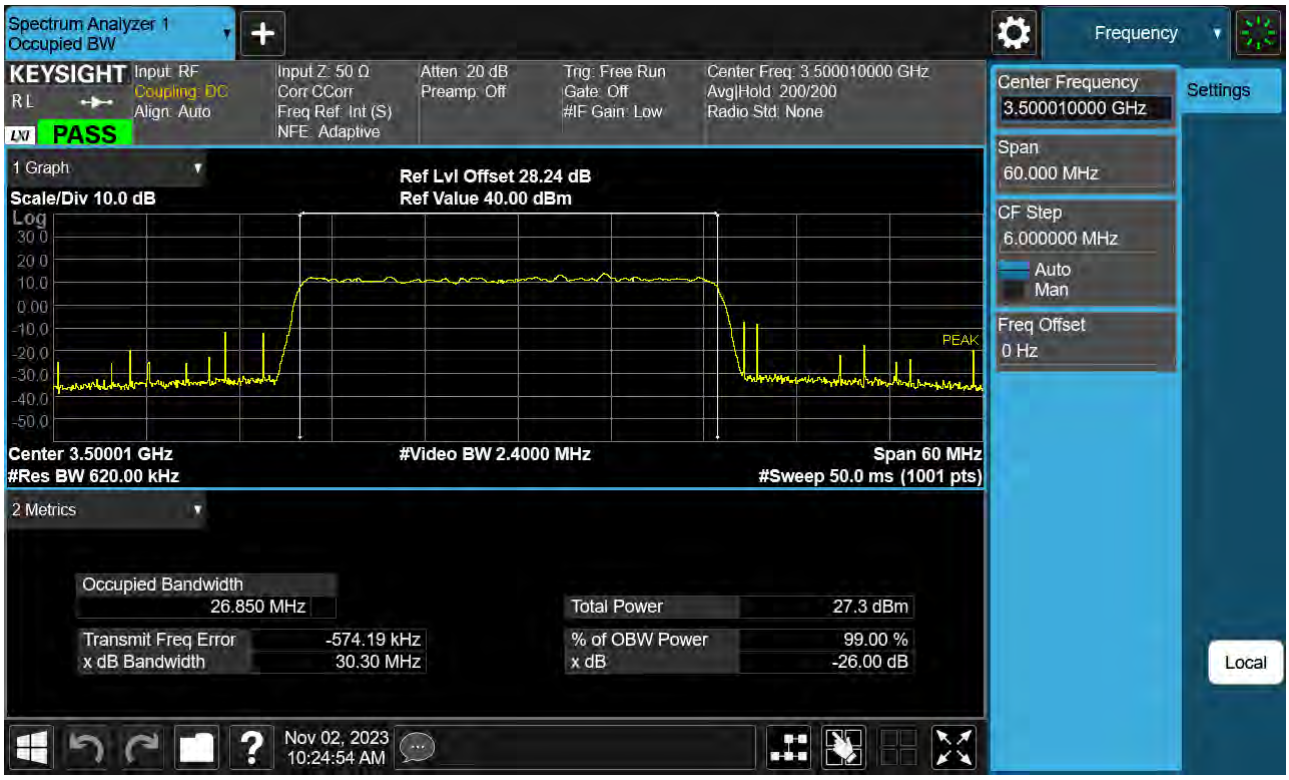
Sub6 n77(78). Occupied Bandwidth Plot (30 M BW Ch.633334 QPSK)

Sub6 n77(78). Occupied Bandwidth Plot (30 M BW Ch.633334 16QAM)

Sub6 n77(78). Occupied Bandwidth Plot (30 M BW Ch.633334 64QAM)

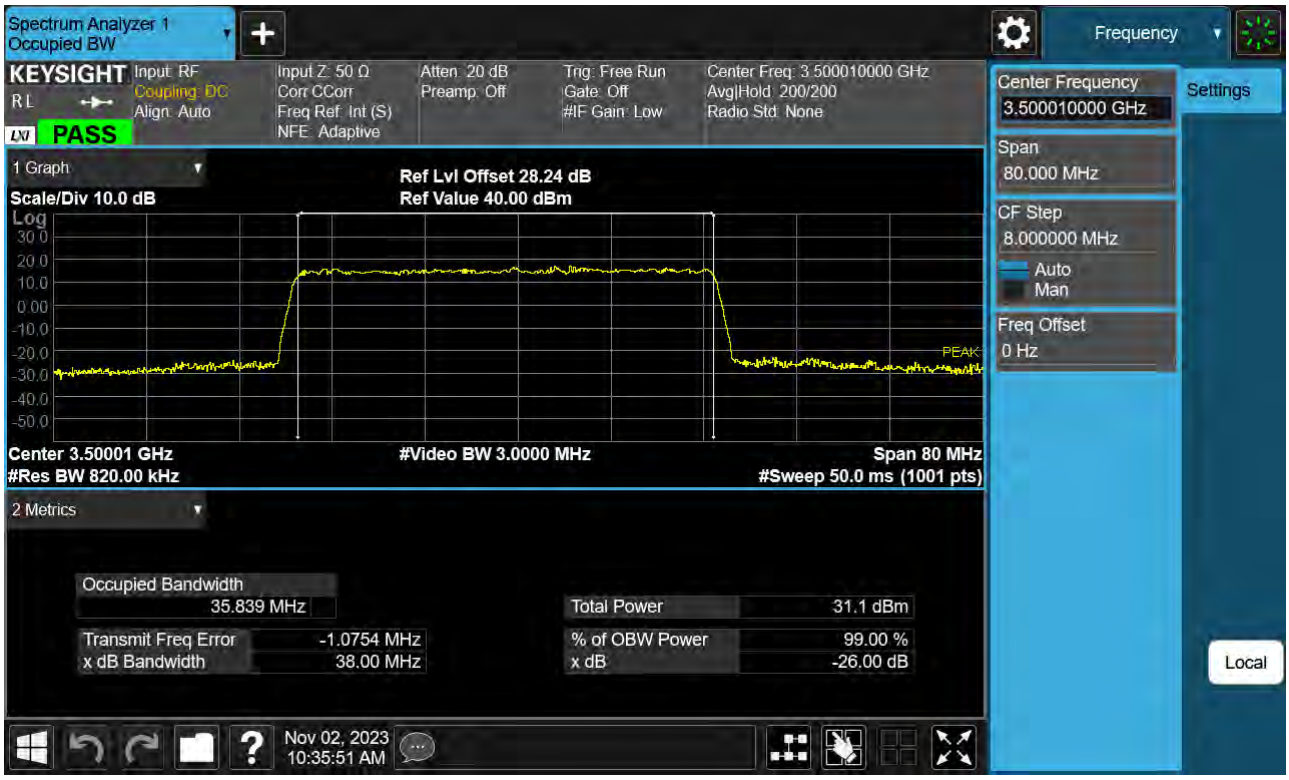


Sub6 n77(78). Occupied Bandwidth Plot (30 M BW Ch.633334 256QAM)



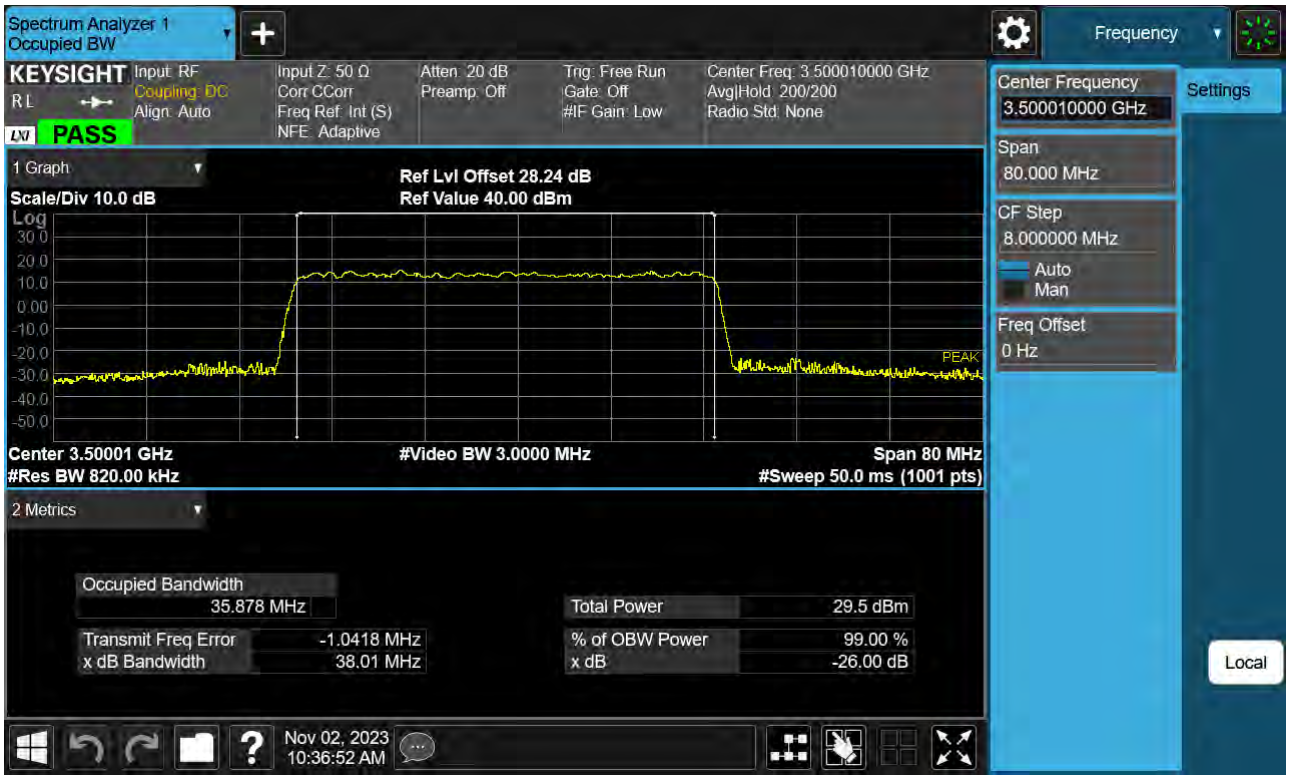
Sub6 n77(78). Occupied Bandwidth Plot (40 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (40 M BW Ch.633334 QPSK)



Sub6 n77(78). Occupied Bandwidth Plot (40 M BW Ch.633334 16QAM)

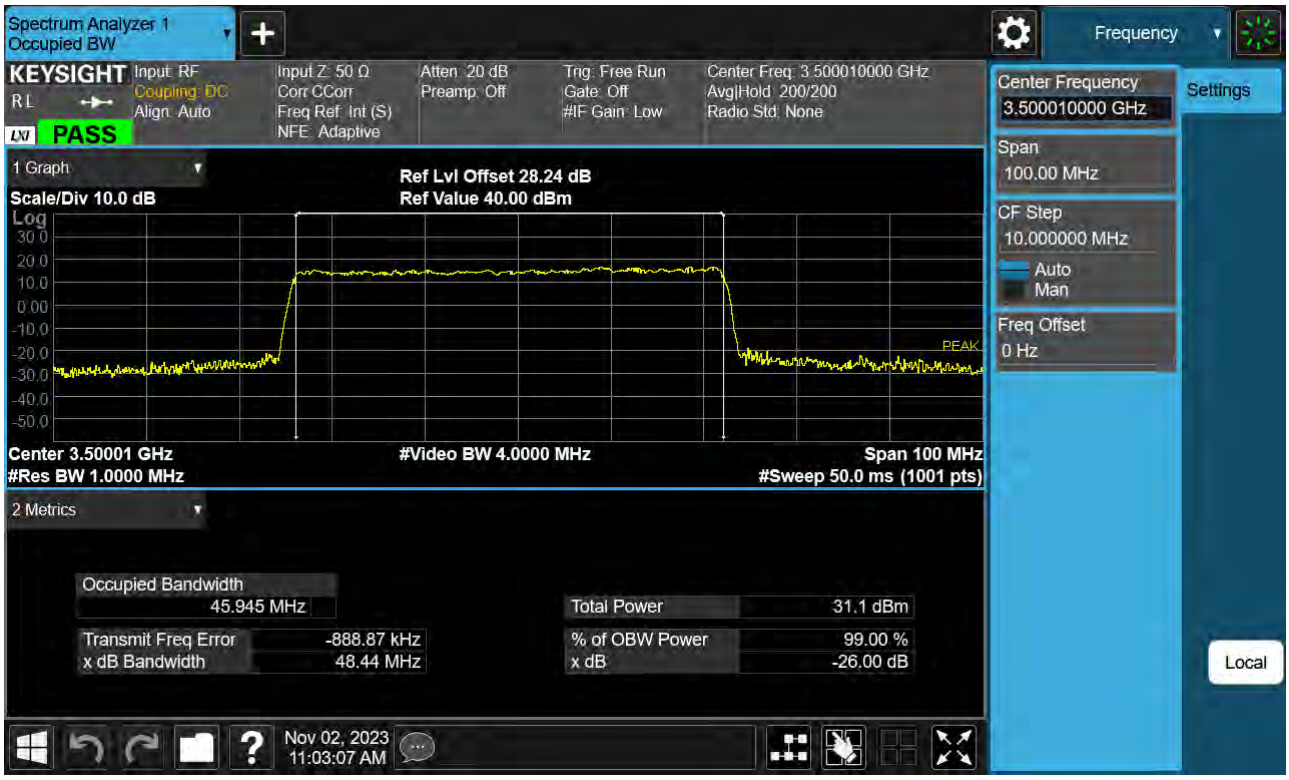
Sub6 n77(78). Occupied Bandwidth Plot (40 M BW Ch.633334 64QAM)



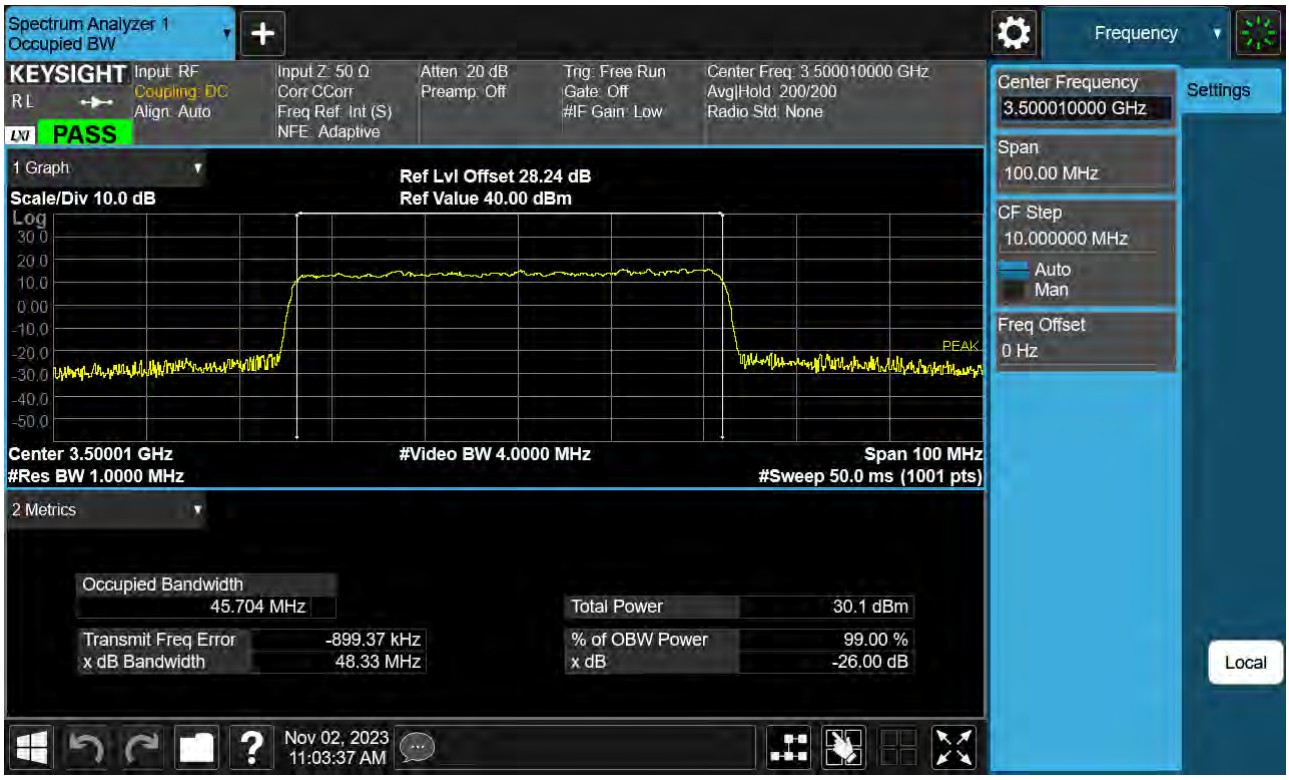
Sub6 n77(78). Occupied Bandwidth Plot (40 M BW Ch.633334 256QAM)

Sub6 n77(78). Occupied Bandwidth Plot (50 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (50 M BW Ch.633334 QPSK)

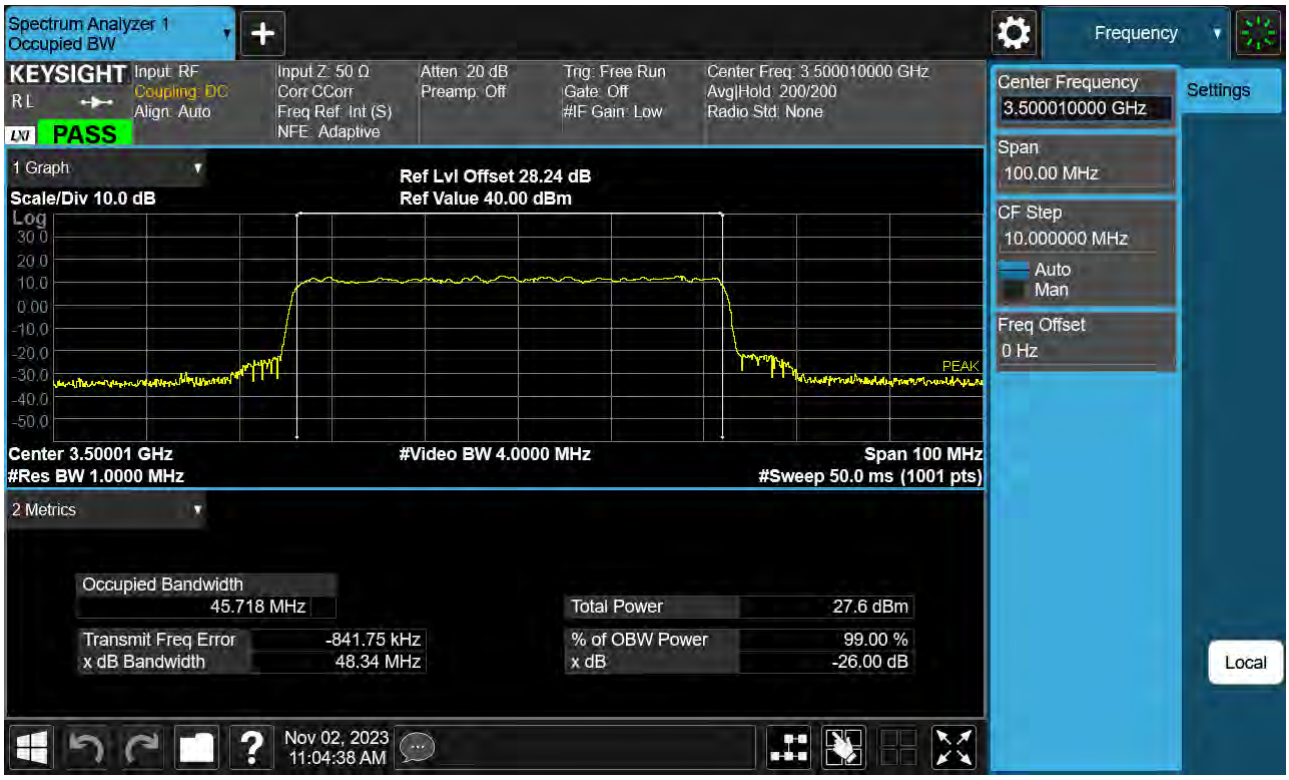


Sub6 n77(78). Occupied Bandwidth Plot (50 M BW Ch.633334 16QAM)



Sub6 n77(78). Occupied Bandwidth Plot (50 M BW Ch.633334 64QAM)

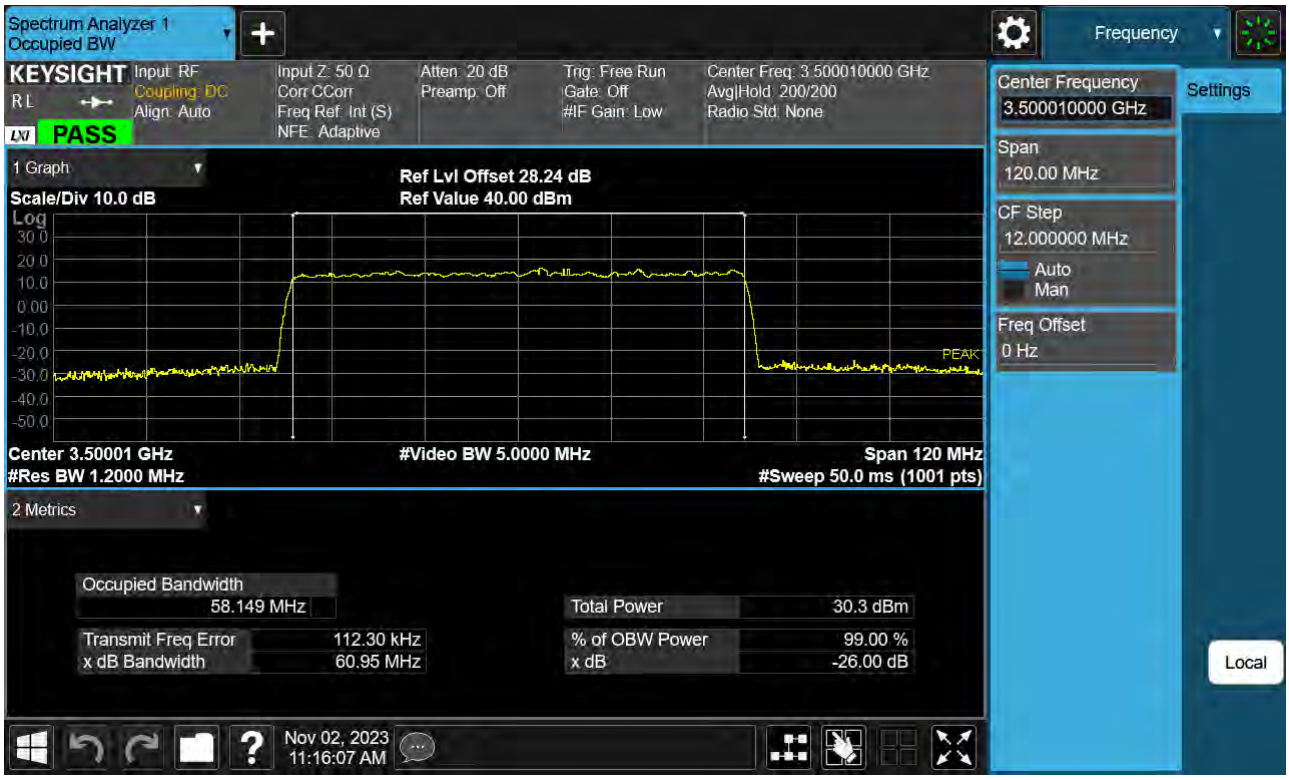
Sub6 n77(78). Occupied Bandwidth Plot (50 M BW Ch.633334 256QAM)



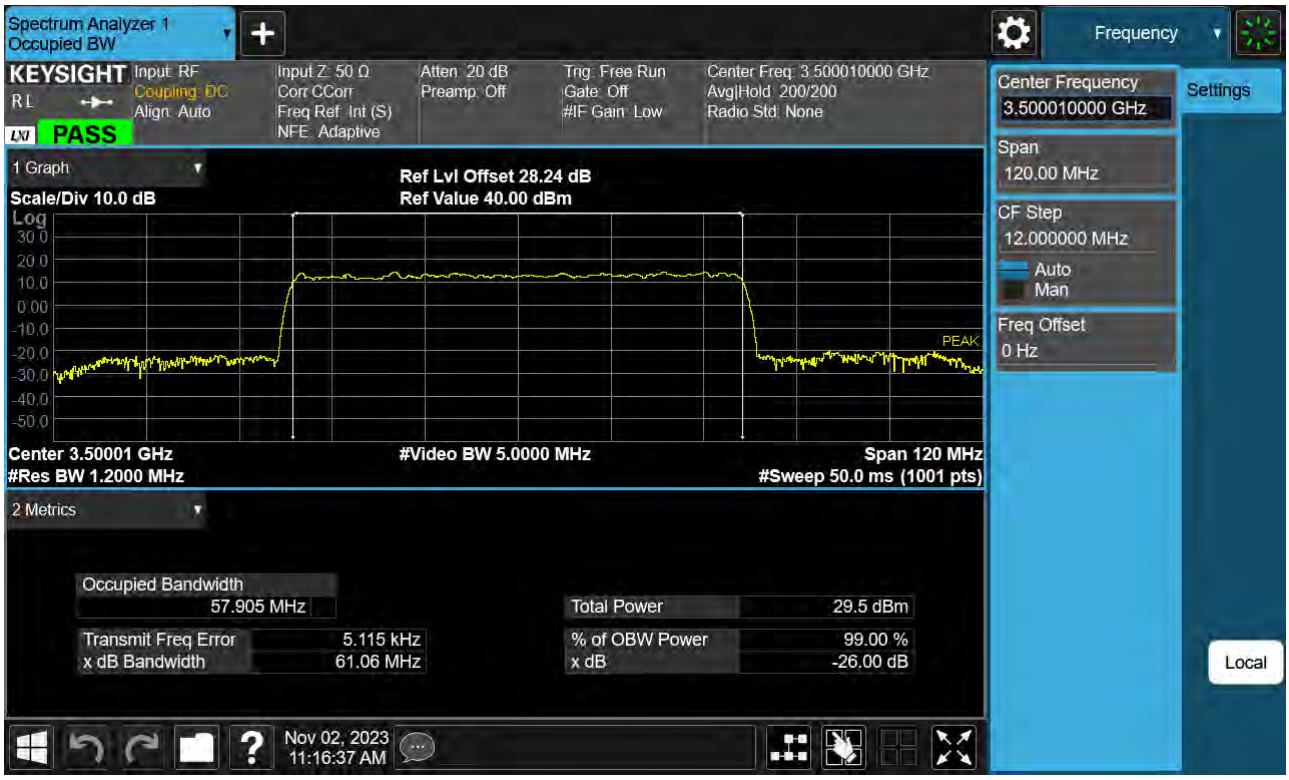
Sub6 n77(78). Occupied Bandwidth Plot (60 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (60 M BW Ch.633334 QPSK)

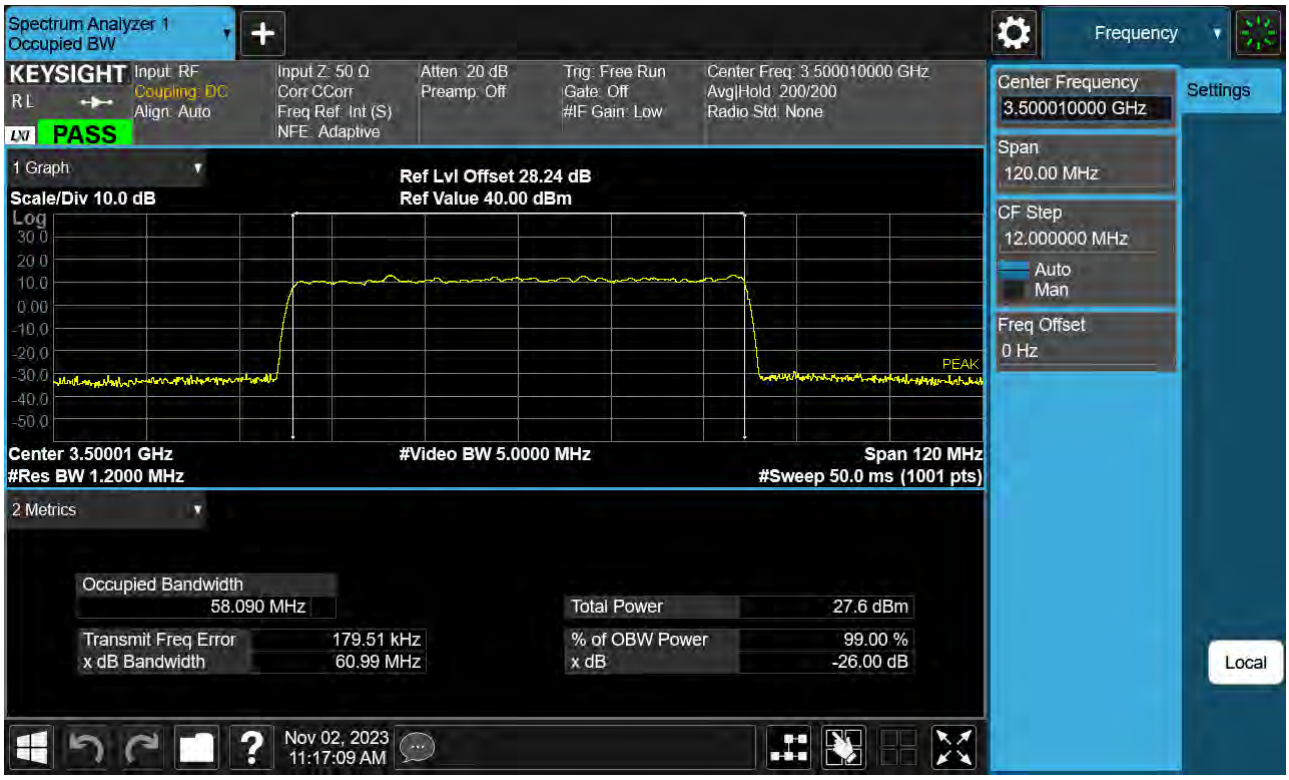
Sub6 n77(78). Occupied Bandwidth Plot (60 M BW Ch.633334 16QAM)



Sub6 n77(78). Occupied Bandwidth Plot (60 M BW Ch.633334 64QAM)



Sub6 n77(78). Occupied Bandwidth Plot (60 M BW Ch.633334 256QAM)



Sub6 n77(78). Occupied Bandwidth Plot (70 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (70 M BW Ch.633334 QPSK)

Sub6 n77(78). Occupied Bandwidth Plot (70 M BW Ch.633334 16QAM)

Sub6 n77(78). Occupied Bandwidth Plot (70 M BW Ch.633334 64QAM)

Sub6 n77(78). Occupied Bandwidth Plot (70 M BW Ch.633334 256QAM)

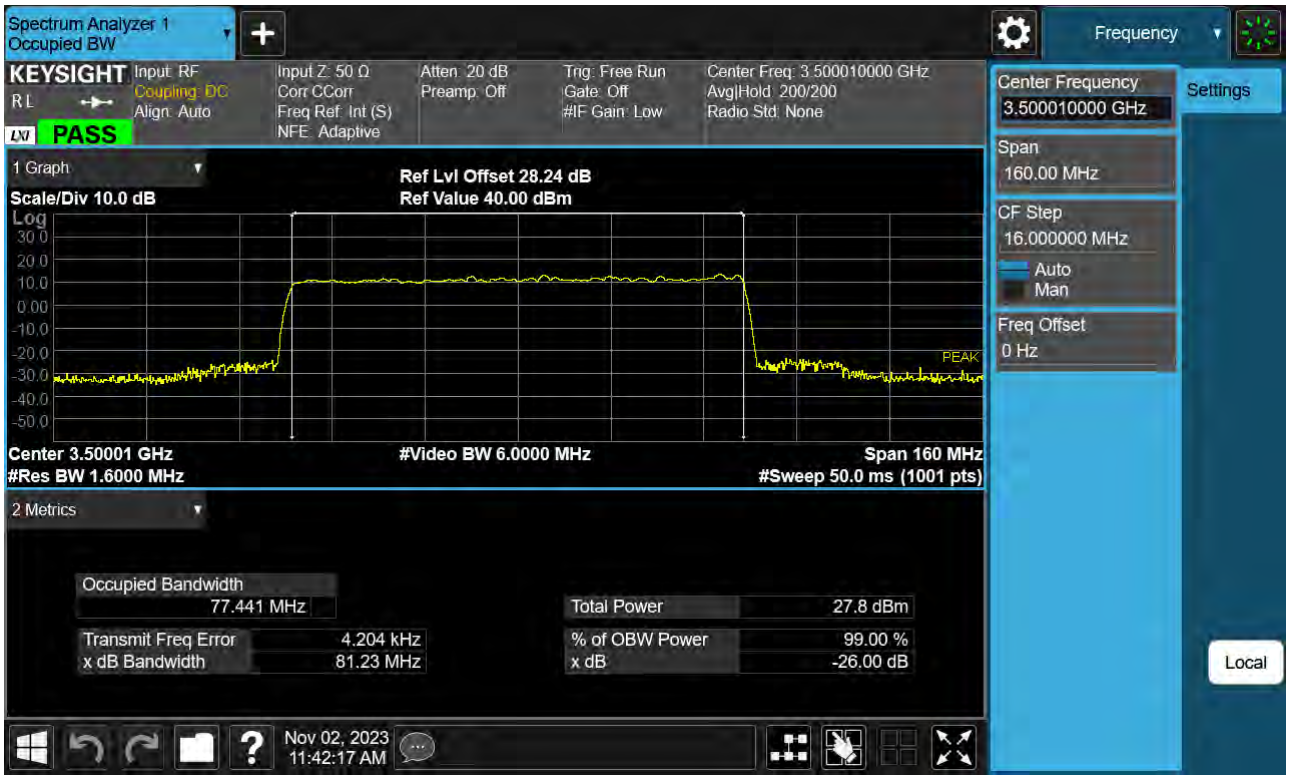
Sub6 n77(78). Occupied Bandwidth Plot (80 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (80 M BW Ch.633334 QPSK)

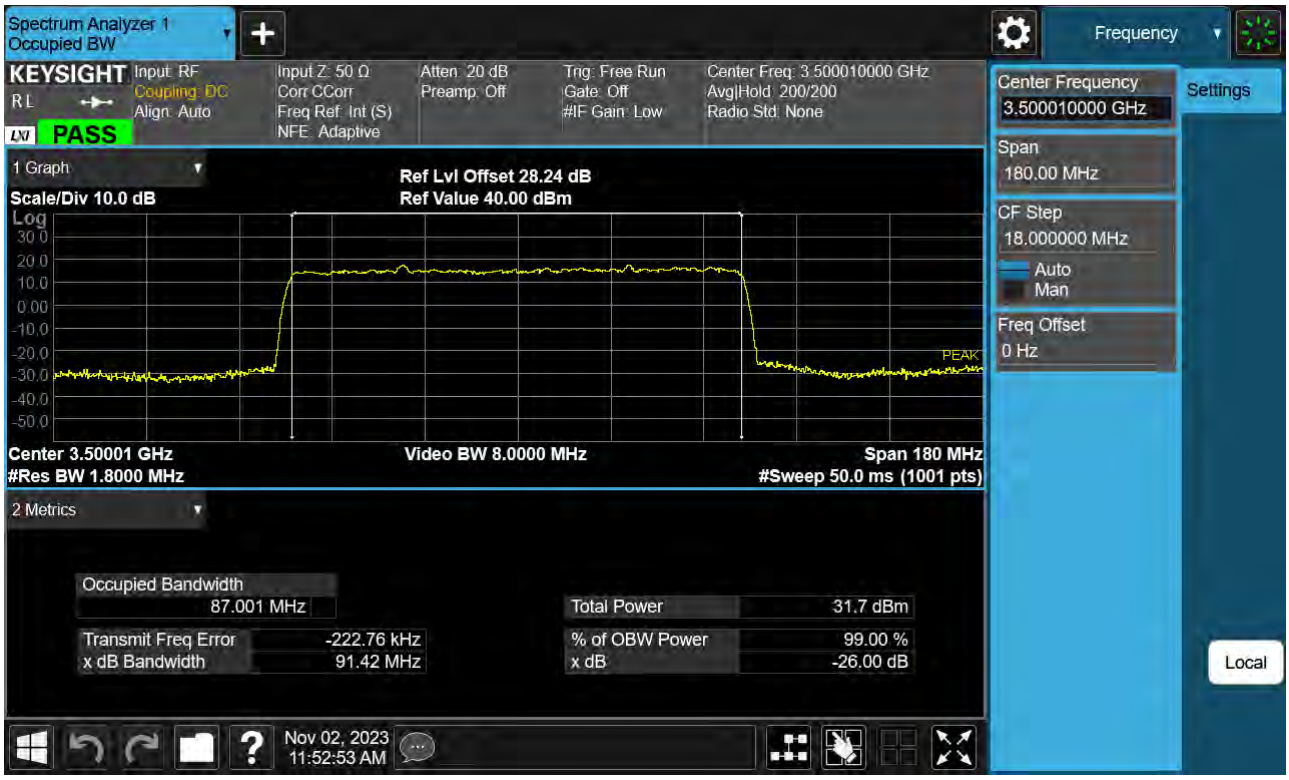
Sub6 n77(78). Occupied Bandwidth Plot (80 M BW Ch.633334 16QAM)

Sub6 n77(78). Occupied Bandwidth Plot (80 M BW Ch.633334 64QAM)

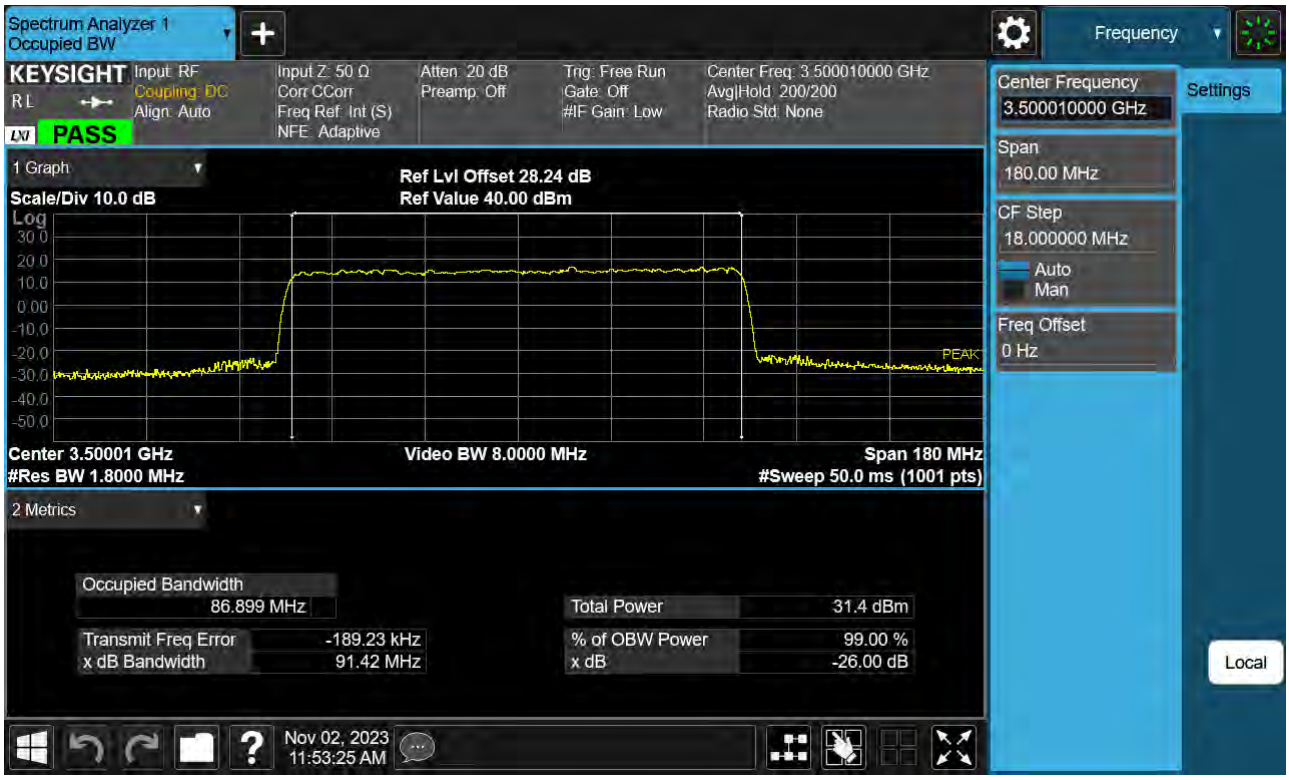
Sub6 n77(78). Occupied Bandwidth Plot (80 M BW Ch.633334 256QAM)



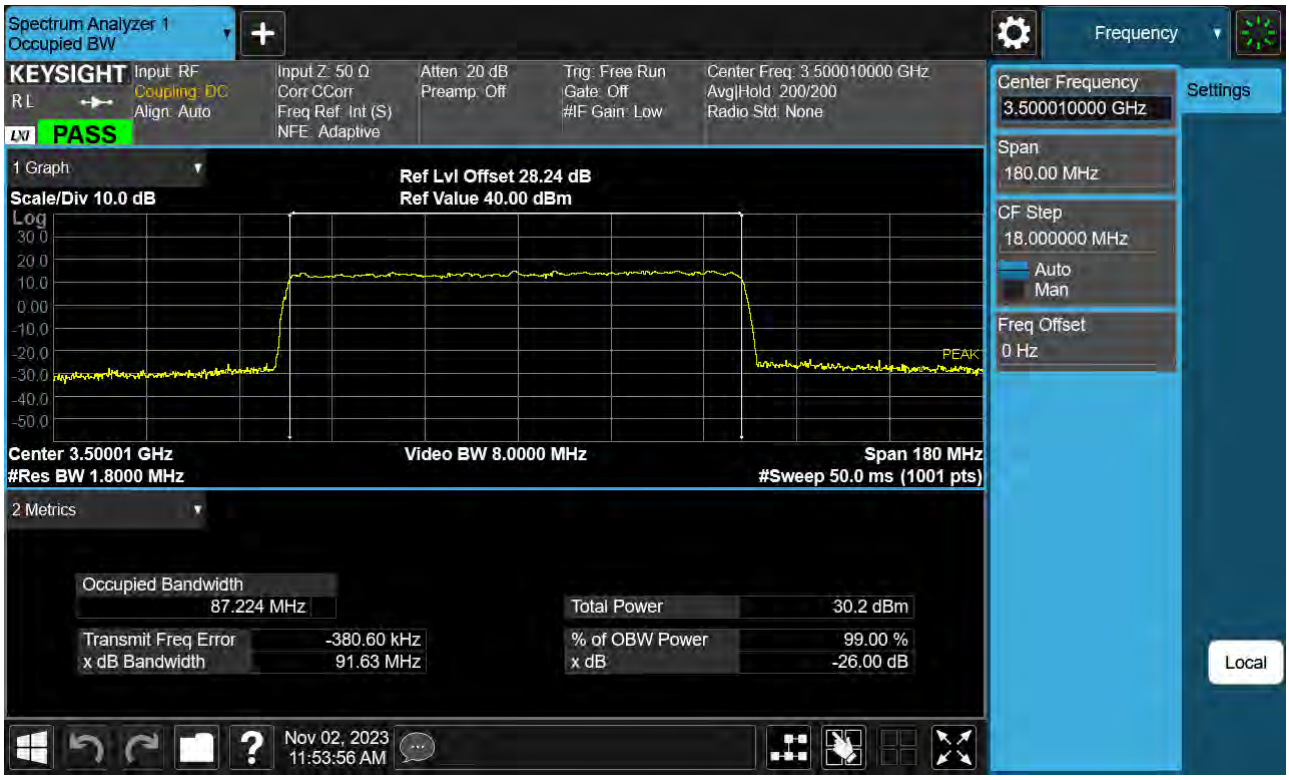
Sub6 n77(78). Occupied Bandwidth Plot (90 M BW Ch.633334 BPSK)



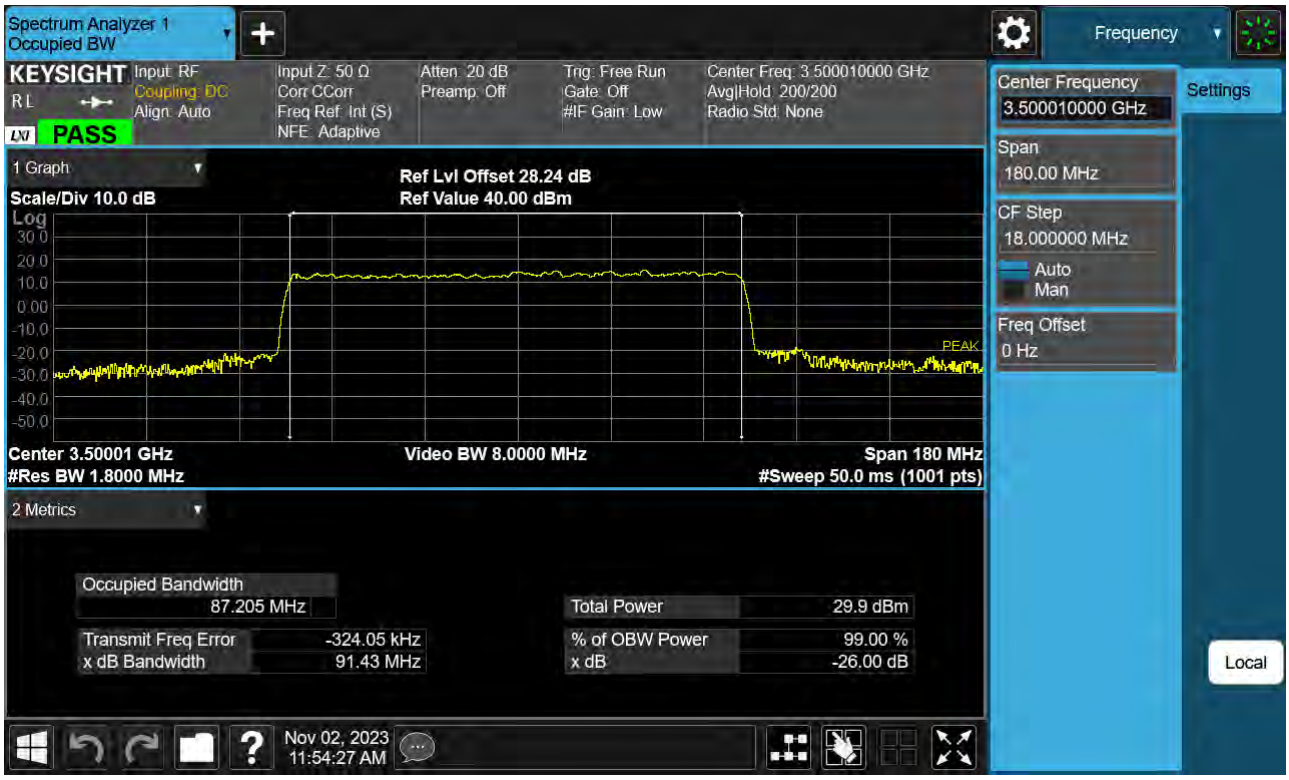
Sub6 n77(78). Occupied Bandwidth Plot (90 M BW Ch.633334 QPSK)



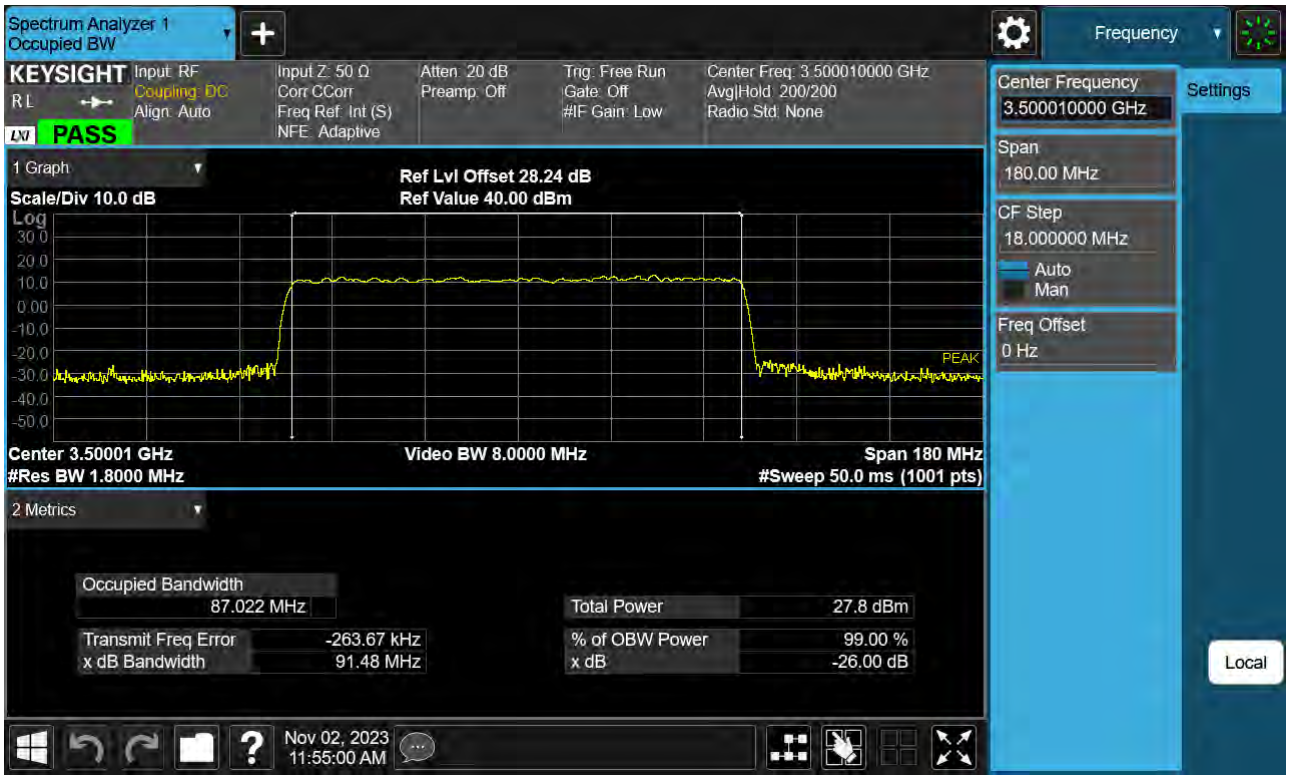
Sub6 n77(78). Occupied Bandwidth Plot (90 M BW Ch.633334 16QAM)



Sub6 n77(78). Occupied Bandwidth Plot (90 M BW Ch.633334 64QAM)



Sub6 n77(78). Occupied Bandwidth Plot (90 M BW Ch.633334 256QAM)



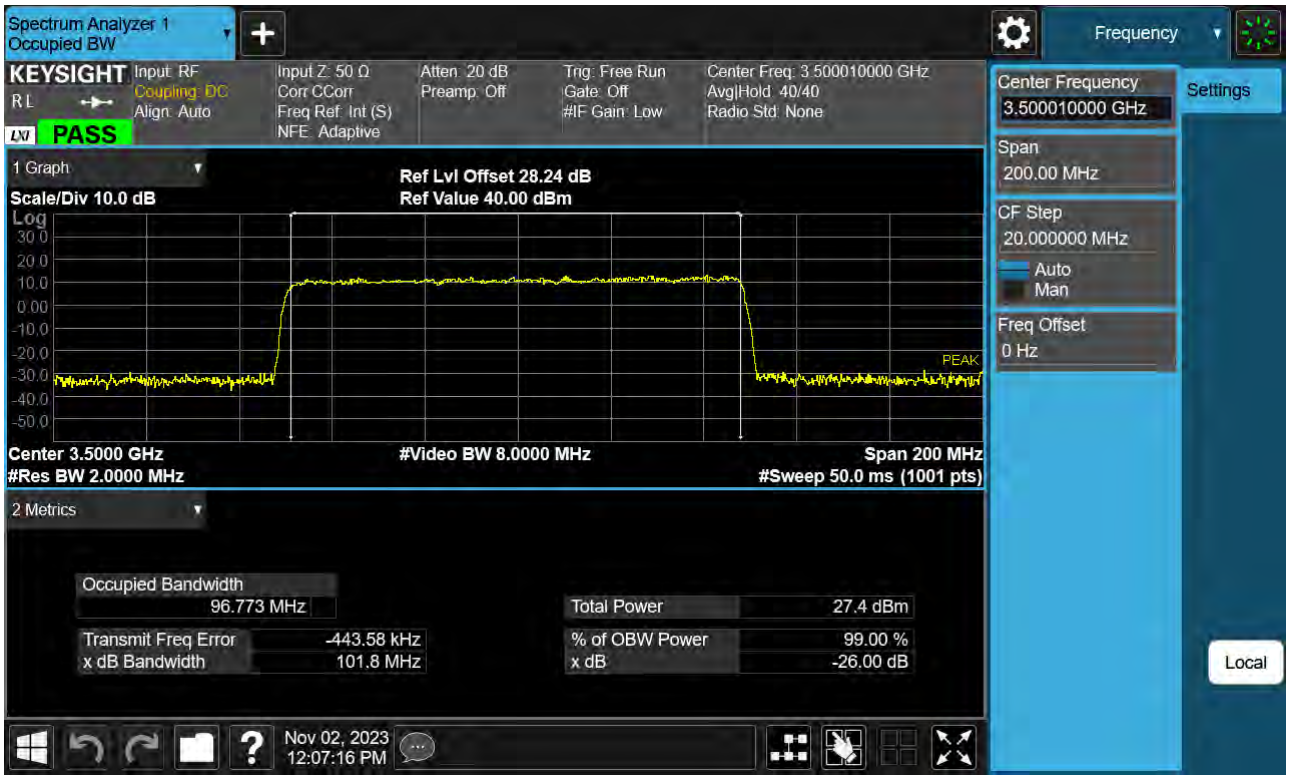
Sub6 n77(78). Occupied Bandwidth Plot (100 M BW Ch.633334 BPSK)

Sub6 n77(78). Occupied Bandwidth Plot (100 M BW Ch.633334 QPSK)

Sub6 n77(78). Occupied Bandwidth Plot (100 M BW Ch.633334 16QAM)

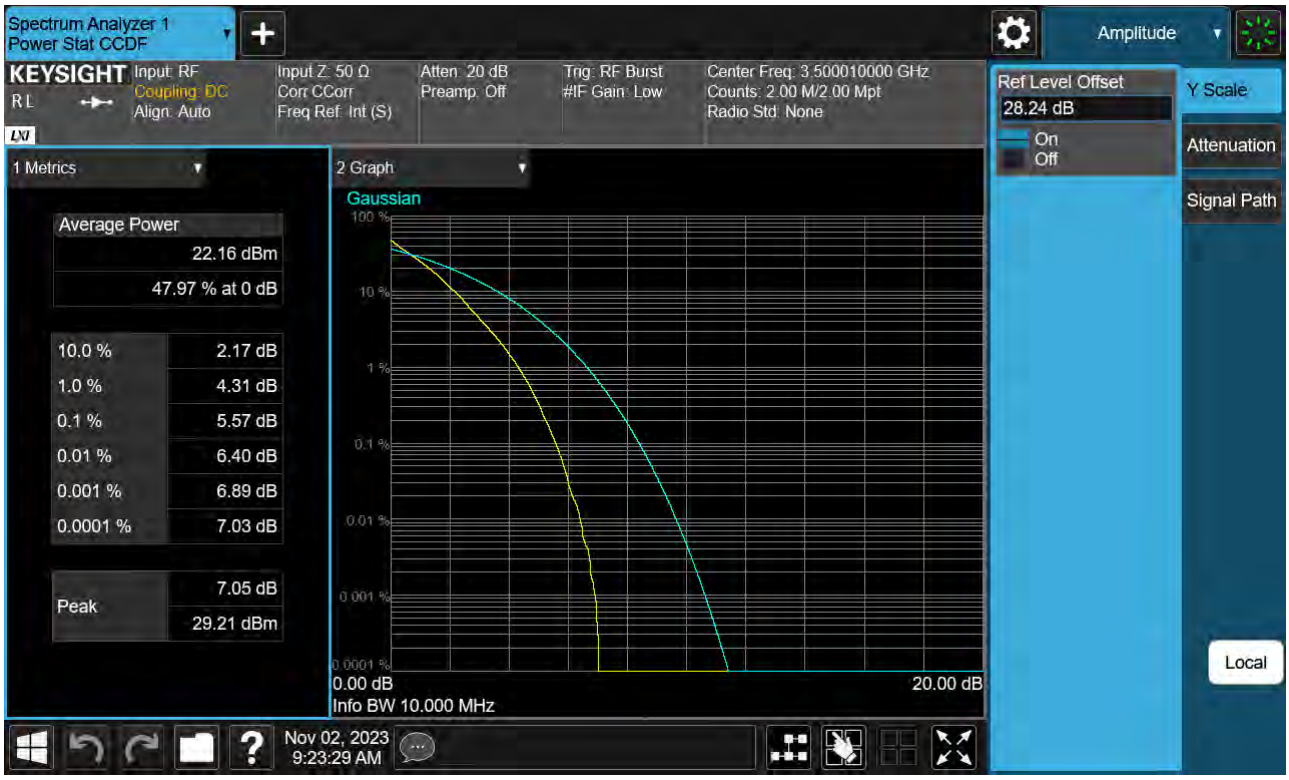
Sub6 n77(78). Occupied Bandwidth Plot (100 M BW Ch.633334 64QAM)

Sub6 n77(78). Occupied Bandwidth Plot (100 M BW Ch.633334 256QAM)

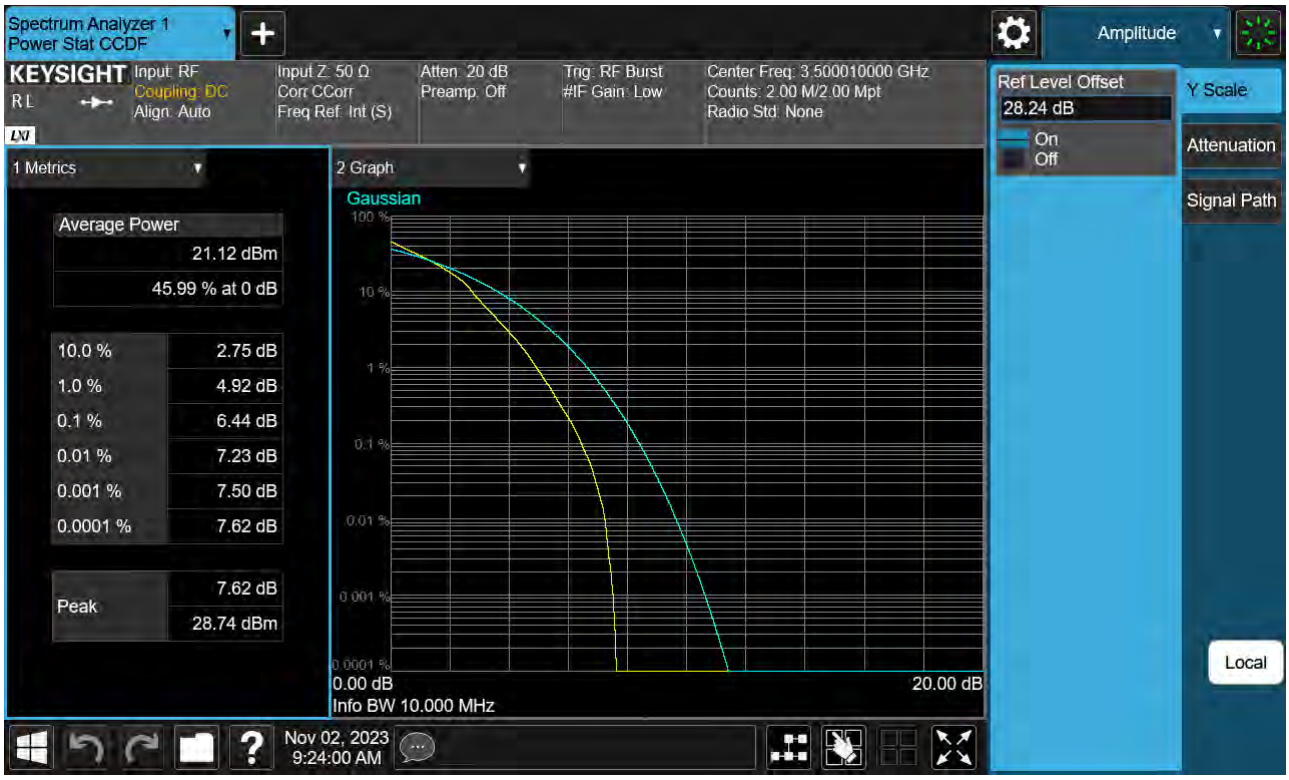


Sub6 n77(78). PAR Plot (10 M BW_Ch.633334_ BPSK)

Sub6 n77(78). PAR Plot (10 M BW_Ch.633334_QPSK)



Sub6 n77(78). PAR Plot (10 M BW_Ch.633334_16QAM)



Sub6 n77(78). PAR Plot (10 M BW_Ch.633334_64QAM)

Sub6 n77(78). PAR Plot (10 M BW_Ch.633334_256QAM)

Sub6 n77(78). PAR Plot (15 M BW_Ch.633334_ BPSK)

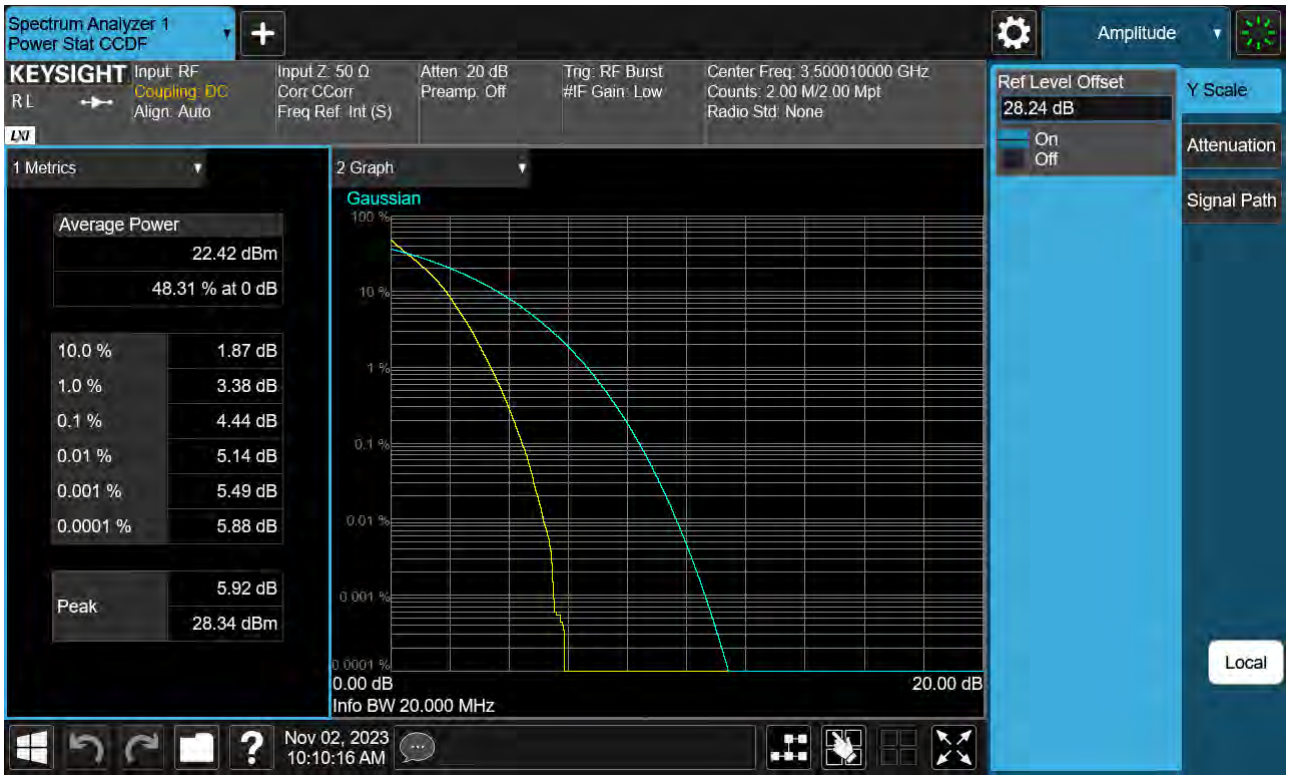
Sub6 n77(78). PAR Plot (15 M BW_Ch.633334_QPSK)

Sub6 n77(78). PAR Plot (15 M BW_Ch.633334_16QAM)

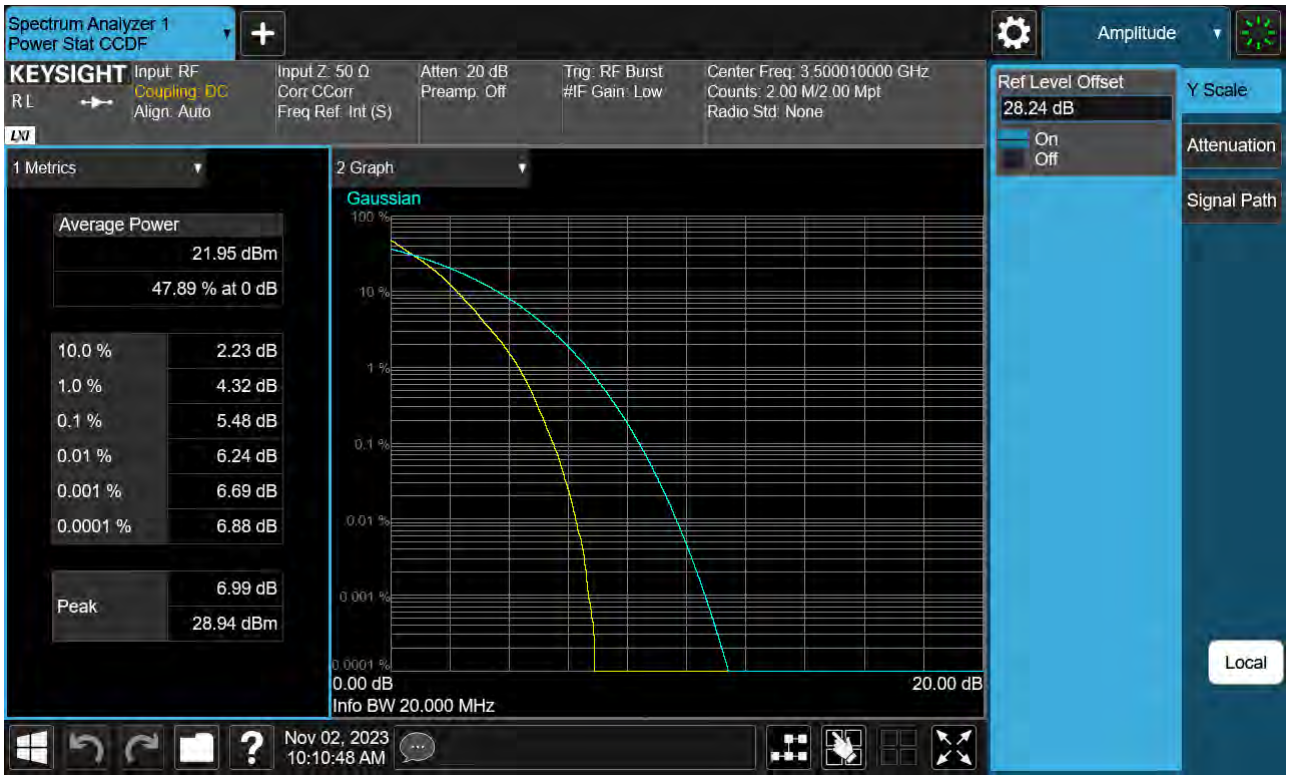
Sub6 n77(78). PAR Plot (15 M BW_Ch.633334_64QAM)

Sub6 n77(78). PAR Plot (15 M BW_Ch.633334_256QAM)

Sub6 n77(78). PAR Plot (20 M BW_Ch.633334_ BPSK)



Sub6 n77(78). PAR Plot (20 M BW_Ch.633334_QPSK)

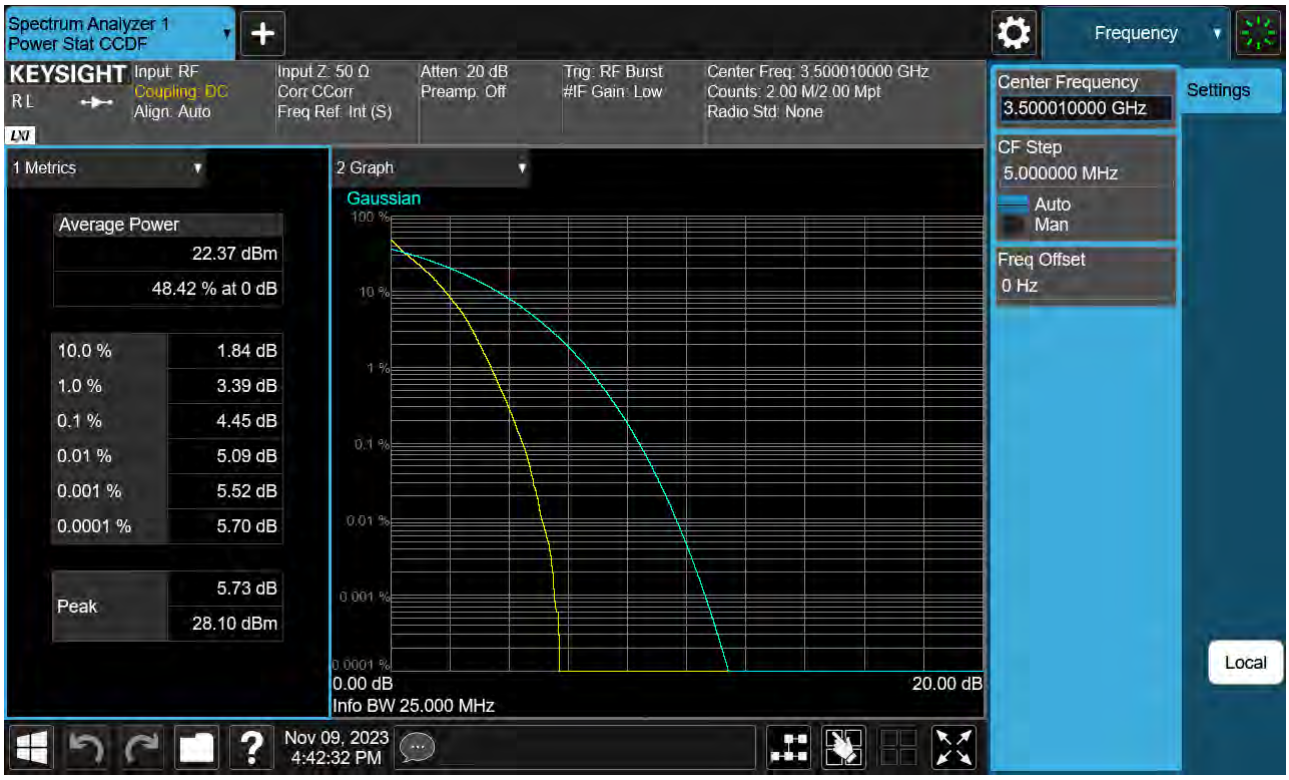


Sub6 n77(78). PAR Plot (20 M BW_Ch.633334_16QAM)

Sub6 n77(78). PAR Plot (20 M BW_Ch.633334_64QAM)

Sub6 n77(78). PAR Plot (20 M BW_Ch.633334_256QAM)

Sub6 n77(78). PAR Plot (25 M BW_Ch.633334_ BPSK)



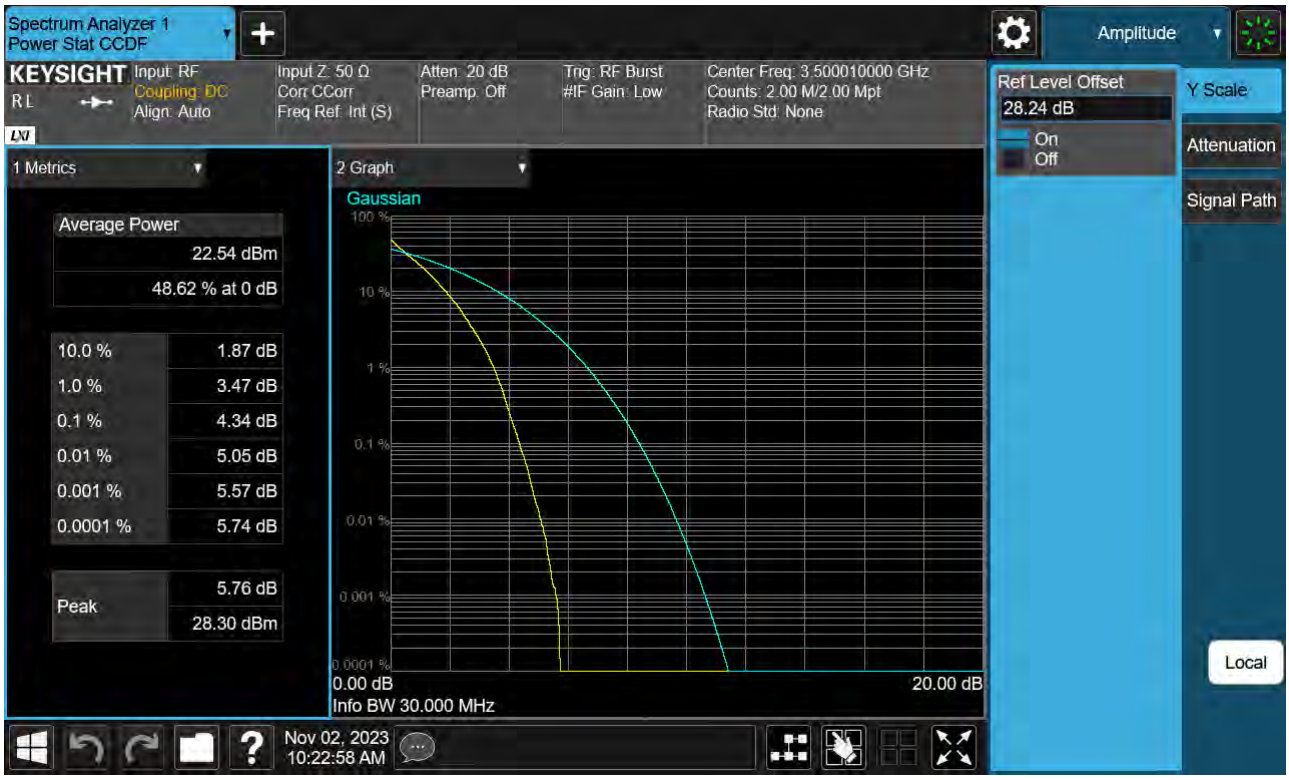
Sub6 n77(78). PAR Plot (25 M BW_Ch.633334_QPSK)

Sub6 n77(78). PAR Plot (25 M BW_Ch.633334_16QAM)

Sub6 n77(78). PAR Plot (25 M BW_Ch.633334_64QAM)

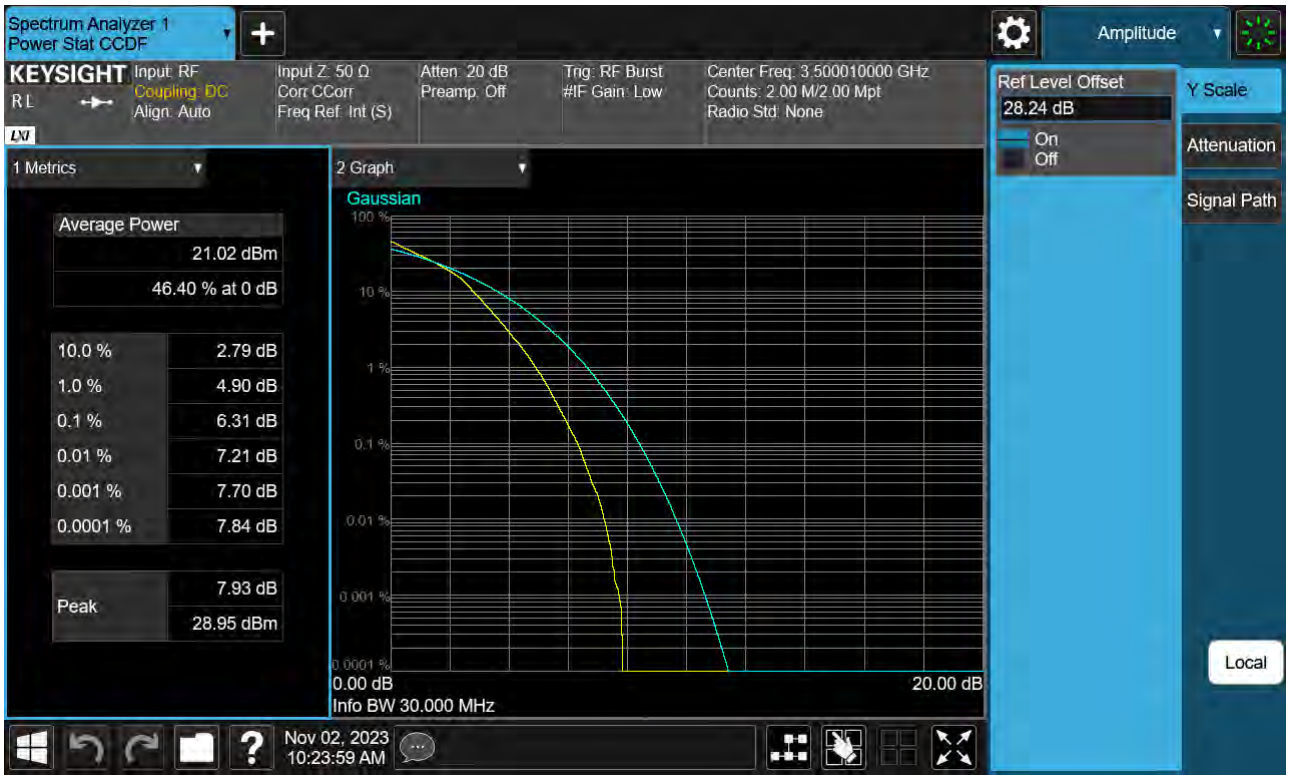
Sub6 n77(78). PAR Plot (25 M BW_Ch.633334_256QAM)

Sub6 n77(78). PAR Plot (30 M BW_Ch.633334_ BPSK)



Sub6 n77(78). PAR Plot (30 M BW_Ch.633334_QPSK)

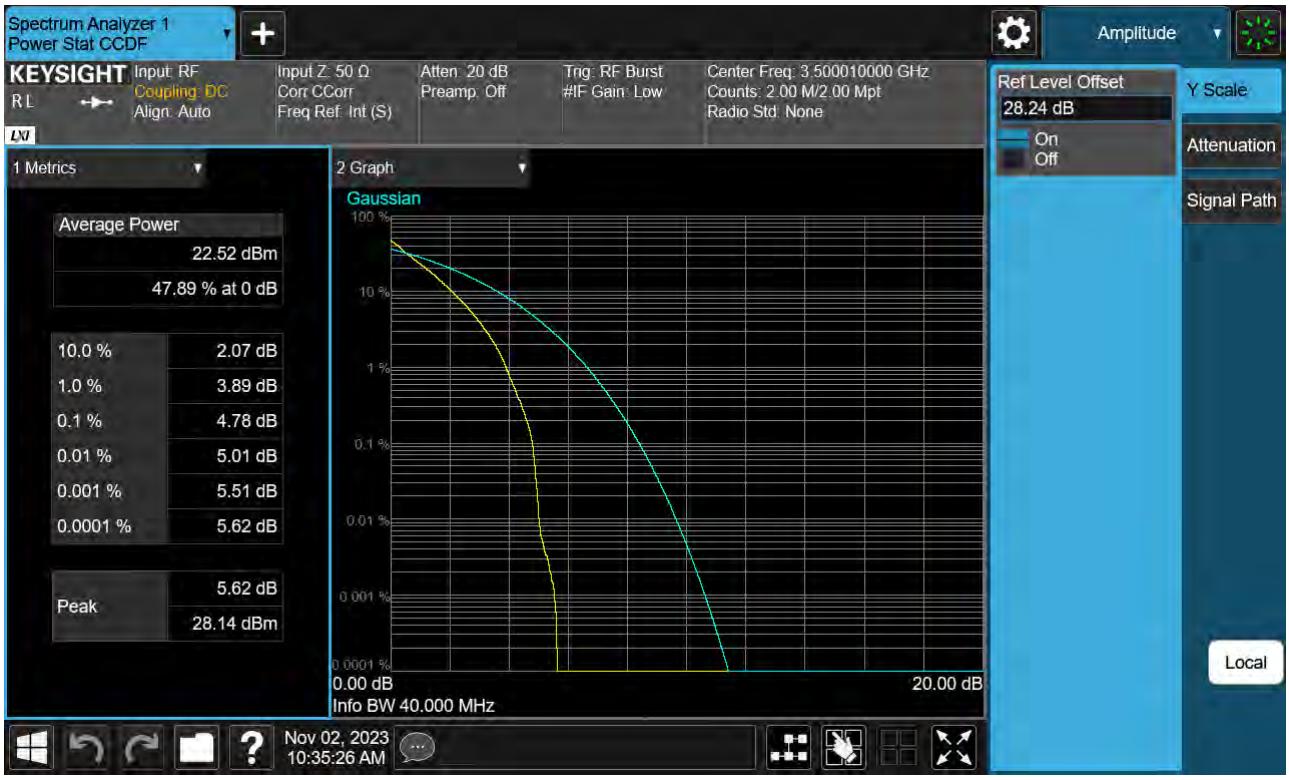
Sub6 n77(78). PAR Plot (30 M BW_Ch.633334_16QAM)



Sub6 n77(78). PAR Plot (30 M BW_Ch.633334_64QAM)

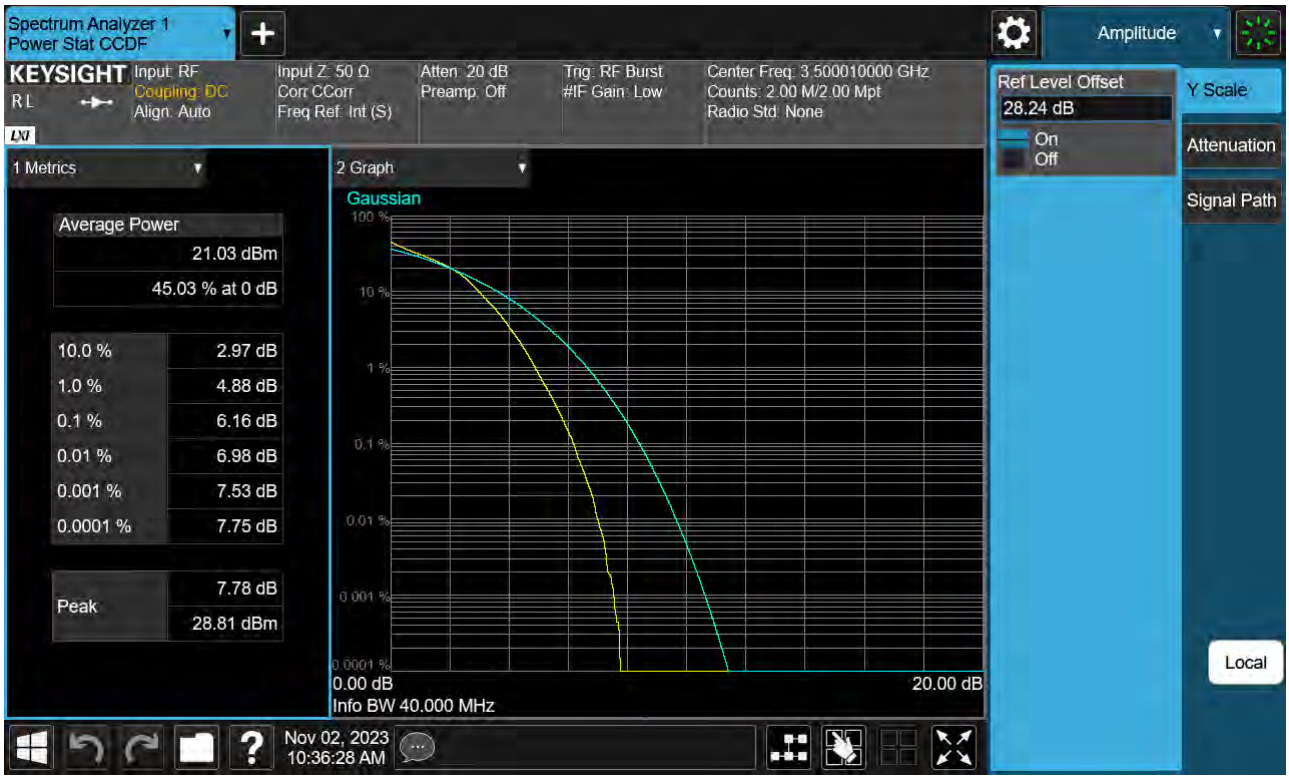
Sub6 n77(78). PAR Plot (30 M BW_Ch.633334_256QAM)

Sub6 n77(78). PAR Plot (40 M BW_Ch.633334_ BPSK)

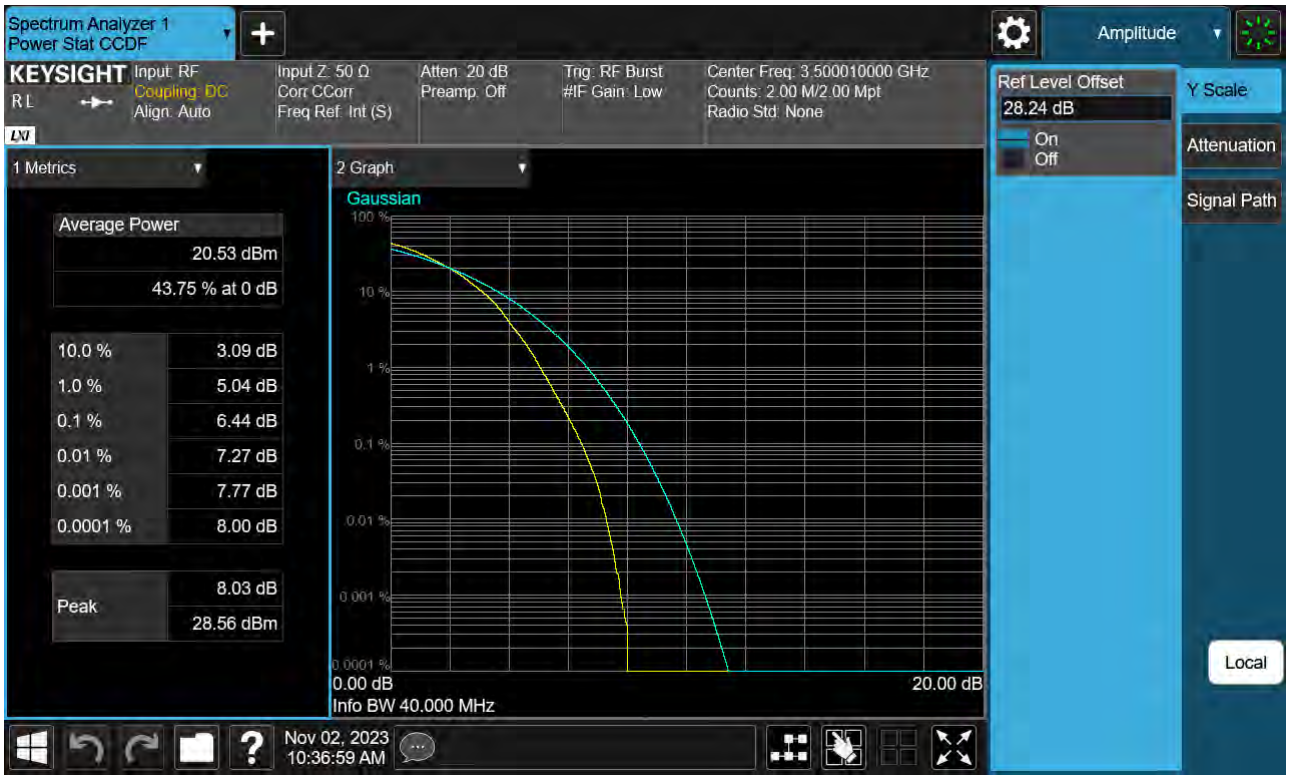


Sub6 n77(78). PAR Plot (40 M BW_Ch.633334_QPSK)

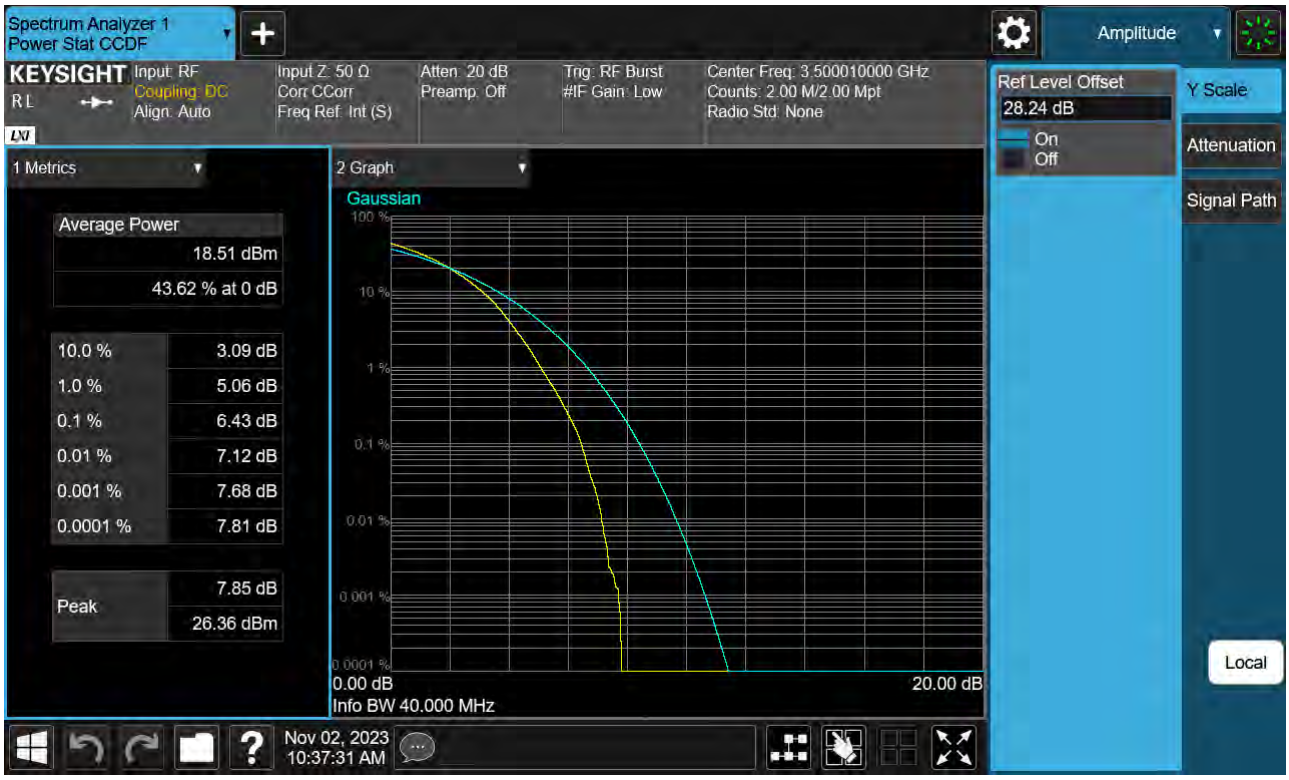
Sub6 n77(78). PAR Plot (40 M BW_Ch.633334_16QAM)



Sub6 n77(78). PAR Plot (40 M BW_Ch.633334_64QAM)



Sub6 n77(78). PAR Plot (40 M BW_Ch.633334_256QAM)



Sub6 n77(78). PAR Plot (50 M BW_Ch.633334_ BPSK)