HCT CO.,LTD.
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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:
September 27, 2023

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

Report No.: HCT-RF-2309-FC038

FCC ID:	**A3LSMA256U**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s):	SM-A256U
Additional Model(s):	SM-A256U1/DS, SM-S256VL
EUT Type:	Mobile Phone
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2

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

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

1. 3450 MHz - 3550 MHz

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n77 (10)	3455.01 – 3544.99	8M72G7D	PI/2 BPSK	0.179	22.54
		8M69G7D	QPSK	0.177	22.49
		8M70W7D	16QAM	0.138	21.39
		8M69W7D	64QAM	0.101	20.04
		8M72W7D	256QAM	0.064	18.09
Sub6 n77 (15)	3457.50 – 3542.50	13M0G7D	PI/2 BPSK	0.158	22.00
		13M0G7D	QPSK	0.157	21.96
		13M0W7D	16QAM	0.126	21.02
		13M0W7D	64QAM	0.092	19.62
		13M0W7D	256QAM	0.058	17.61
Sub6 n77 (20)	3460.02 – 3540.00	17M9G7D	PI/2 BPSK	0.156	21.92
		17M9G7D	QPSK	0.152	21.83
		17M9W7D	16QAM	0.122	20.85
		17M9W7D	64QAM	0.087	19.42
		17M9W7D	256QAM	0.054	17.31
Sub6 n77 (25)	3462.50 – 3537.50	23M1G7D	PI/2 BPSK	0.192	22.84
		23M1G7D	QPSK	0.191	22.81
		23M0W7D	16QAM	0.152	21.81
		23M0W7D	64QAM	0.110	20.41
		23M0W7D	256QAM	0.070	18.46
Sub6 n77 (30)	3465.00 – 3534.99	27M0G7D	PI/2 BPSK	0.216	23.34
		27M0G7D	QPSK	0.211	23.24
		26M9W7D	16QAM	0.171	22.33
		27M0W7D	64QAM	0.122	20.87
		26M9W7D	256QAM	0.078	18.94
Sub6 n77 (40)	3470.01 – 3529.98	36M1G7D	PI/2 BPSK	0.259	24.14
		36M0G7D	QPSK	0.256	24.09
		35M9W7D	16QAM	0.211	23.24
		36M1W7D	64QAM	0.153	21.84
		35M8W7D	256QAM	0.099	19.94
Sub6 n77 (50)	3475.02 – 3525.00	46M0G7D	PI/2 BPSK	0.204	23.09
		45M9G7D	QPSK	0.201	23.03
		46M1W7D	16QAM	0.162	22.10
		45M8W7D	64QAM	0.113	20.53
		46M4W7D	256QAM	0.072	18.59
Sub6 n77 (60)	3480.00 – 3519.99	58M2G7D	PI/2 BPSK	0.212	23.26
		58M2G7D	QPSK	0.210	23.23
		58M2W7D	16QAM	0.172	22.35
		58M1W7D	64QAM	0.117	20.70
		58M1W7D	256QAM	0.077	18.86
Sub6 n77 (70)	3485.01 – 3514.98	64M8G7D	PI/2 BPSK	0.220	23.43
		64M7G7D	QPSK	0.214	23.31
		64M8W7D	16QAM	0.173	22.39
		64M5W7D	64QAM	0.122	20.87
		65M0W7D	256QAM	0.078	18.94
Sub6 n77 (80)	3490.02 – 3510.00	77M6G7D	PI/2 BPSK	0.222	23.47
		77M6G7D	QPSK	0.220	23.42
		77M6W7D	16QAM	0.173	22.38
		77M7W7D	64QAM	0.122	20.86
		77M6W7D	256QAM	0.080	19.01
Sub6 n77 (90)	3495.00 – 3504.99	87M1G7D	PI/2 BPSK	0.222	23.47
		87M3G7D	QPSK	0.221	23.44
		87M1W7D	16QAM	0.176	22.46
		86M3W7D	64QAM	0.127	21.05
		86M3W7D	256QAM	0.083	19.18
Sub6 n77 (100)	3500.01	97M0G7D	PI/2 BPSK	0.228	23.58
		96M8G7D	QPSK	0.224	23.50
		96M9W7D	16QAM	0.181	22.58
		96M9W7D	64QAM	0.131	21.17
		96M9W7D	256QAM	0.084	19.22

2. 3700 MHz - 3980 MHz

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n77 (10)	3705.00 – 3975.00	8M68G7D	PI/2 BPSK	0.168	22.26
		8M69G7D	QPSK	0.166	22.20
		8M70W7D	16QAM	0.135	21.31
		8M72W7D	64QAM	0.090	19.53
		8M71W7D	256QAM	0.063	17.96
Sub6 n77 (15)	3707.51 – 3972.48	12M9G7D	PI/2 BPSK	0.200	23.01
		13M0G7D	QPSK	0.198	22.97
		13M0W7D	16QAM	0.158	21.99
		13M0W7D	64QAM	0.111	20.46
		12M9W7D	256QAM	0.077	18.86
Sub6 n77 (20)	3710.01 – 3969.99	17M9G7D	PI/2 BPSK	0.196	22.93
		17M9G7D	QPSK	0.195	22.90
		17M9W7D	16QAM	0.156	21.93
		17M9W7D	64QAM	0.109	20.39
		17M9W7D	256QAM	0.077	18.86
Sub6 n77 (25)	3712.50 – 3967.50	23M0G7D	PI/2 BPSK	0.208	23.18
		23M0G7D	QPSK	0.207	23.16
		23M0W7D	16QAM	0.164	22.15
		23M0W7D	64QAM	0.117	20.70
		22M9W7D	256QAM	0.075	18.76
Sub6 n77 (30)	3715.02 – 3964.98	27M0G7D	PI/2 BPSK	0.195	22.89
		27M0G7D	QPSK	0.191	22.82
		27M0W7D	16QAM	0.155	21.90
		27M1W7D	64QAM	0.107	20.30
		27M0W7D	256QAM	0.068	18.32
Sub6 n77 (40)	3720.00 – 3960.00	35M9G7D	PI/2 BPSK	0.226	23.54
		36M0G7D	QPSK	0.223	23.49
		35M9W7D	16QAM	0.181	22.57
		36M0W7D	64QAM	0.128	21.06
		36M0W7D	256QAM	0.090	19.52
Sub6 n77 (50)	3725.10 – 3954.99	46M0G7D	PI/2 BPSK	0.217	23.36
		45M9G7D	QPSK	0.212	23.26
		45M9W7D	16QAM	0.170	22.30
		45M9W7D	64QAM	0.118	20.72
		46M0W7D	256QAM	0.074	18.69
Sub6 n77 (60)	3730.02 – 3949.98	58M1G7D	PI/2 BPSK	0.207	23.16
		58M3G7D	QPSK	0.206	23.13
		58M2W7D	16QAM	0.167	22.22
		58M1W7D	64QAM	0.115	20.59
		57M9W7D	256QAM	0.073	18.63
Sub6 n77 (70)	3735.00 – 3945.00	64M8G7D	PI/2 BPSK	0.206	23.14
		64M8G7D	QPSK	0.203	23.07
		64M6W7D	16QAM	0.157	21.95
		64M7W7D	64QAM	0.116	20.65
		64M7W7D	256QAM	0.072	18.58
Sub6 n77 (80)	3740.01 – 3939.99	77M4G7D	PI/2 BPSK	0.209	23.21
		77M6G7D	QPSK	0.208	23.18
		77M5W7D	16QAM	0.166	22.21
		77M6W7D	64QAM	0.118	20.72
		77M6W7D	256QAM	0.074	18.72
Sub6 n77 (90)	3745.02 – 3934.98	87M0G7D	PI/2 BPSK	0.205	23.12
		87M3G7D	QPSK	0.204	23.10
		87M4W7D	16QAM	0.163	22.12
		87M2W7D	64QAM	0.115	20.60
		87M3W7D	256QAM	0.073	18.62
Sub6 n77 (100)	3750.00 – 3930.00	96M9G7D	PI/2 BPSK	0.208	23.18
		97M2G7D	QPSK	0.207	23.15
		97M0W7D	16QAM	0.165	22.17
		96M8W7D	64QAM	0.117	20.67
		96M7W7D	256QAM	0.073	18.64

REVIEWED BY

Report prepared by : Jung Ki Lim
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.

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

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2309-FC038	September 27, 2023	- First Approval Report

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

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:	A3LSMA256U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2
EUT Type:	Mobile Phone
Model(s):	SM-A256U
Additional Model(s):	SM-A256U1/DS, SM-S256VL
SCS(kHz):	30
Bandwidth(MHz):	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
Waveform:	CP-OFDM, DFT-S-OFDM
Modulation:	DFT-S-OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM
Tx Frequency: **(3450 MHz - 3550 MHz)**	3455.01 MHz – 3544.99 MHz (Sub6 n77(10 MHz)) 3457.50 MHz – 3542.50 MHz (Sub6 n77(15 MHz)) 3460.02 MHz – 3540.00 MHz (Sub6 n77(20 MHz)) 3462.50 MHz – 3537.50 MHz (Sub6 n77(25 MHz)) 3465.00 MHz – 3534.99 MHz (Sub6 n77(30 MHz)) 3470.01 MHz – 3529.98 MHz (Sub6 n77(40 MHz)) 3475.02 MHz – 3525.00 MHz (Sub6 n77(50 MHz)) 3480.00 MHz – 3519.99 MHz (Sub6 n77(60 MHz)) 3485.01 MHz – 3514.98 MHz (Sub6 n77(70 MHz)) 3490.02 MHz – 3510.00 MHz (Sub6 n77(80 MHz)) 3495.00 MHz – 3504.99 MHz (Sub6 n77(90 MHz)) 3500.01 MHz (Sub6 n77(100 MHz))
Tx Frequency: **(3700 MHz - 3980 MHz)**	3705.00 MHz – 3975.00 MHz (Sub6 n77(10 MHz)) 3707.51 MHz – 3972.48 MHz (Sub6 n77(15 MHz)) 3710.01 MHz – 3969.99 MHz (Sub6 n77(20 MHz)) 3712.50 MHz – 3967.50 MHz (Sub6 n77(25 MHz)) 3715.02 MHz – 3964.98 MHz (Sub6 n77(30 MHz)) 3720.00 MHz – 3960.00 MHz (Sub6 n77(40 MHz)) 3725.10 MHz – 3954.99 MHz (Sub6 n77(50 MHz)) 3730.02 MHz – 3949.98 MHz (Sub6 n77(60 MHz)) 3735.00 MHz – 3945.00 MHz (Sub6 n77(70 MHz)) 3740.01 MHz – 3939.99 MHz (Sub6 n77(80 MHz)) 3745.02 MHz – 3934.98 MHz (Sub6 n77(90 MHz)) 3745.02 MHz – 3934.98 MHz (Sub6 n77(90 MHz)) 3750.00 MHz – 3930.00 MHz (Sub6 n77(100 MHz))
Date(s) of Tests:	May 24, 2023 ~ September 22, 2023
Serial number:	Radiated: R3CW50MHDBY Conducted: 74530c340b337ece

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.

2.2. MEASURING INSTRUMENT CALIBRATION

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

2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.**

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- N/A (See SAR Report)
Peak- to- Average Ratio	- KDB 971168 D01 v03r01 – Section 5.7 - ANSI C63.26-2015 – Section 5.2.3.4 - ANSI C63.26-2015 – Section 5.2.6(only GSM)
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/ Effective Isotropic Radiated Power	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8 - ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - ANSI/TIA-603-E-2016 – Section 2.2.12

3.2 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17.

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW, not to exceed 1 MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Note

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

   The power is calculated by the following formula;

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

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

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

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

Test Note

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

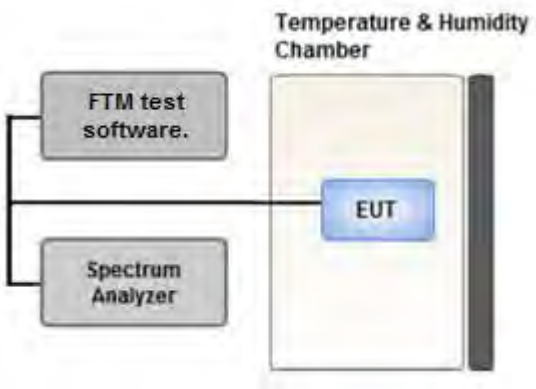
$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

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

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① CCDF Procedure for PAPR

Test Settings

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:

.- for continuous transmissions, set to 1 ms,

.- or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

4. Record the maximum PAPR level associated with a probability of 0.1 %.

② **Alternate Procedure for PAPR**

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

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

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

Test Settings(Peak Power)

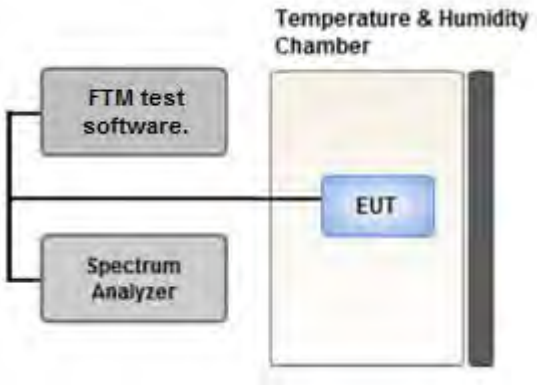
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

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

Test Settings(Average Power)

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

3.5 OCCUPIED BANDWIDTH.



Test setup

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

The EUT makes a call to the communication simulator.

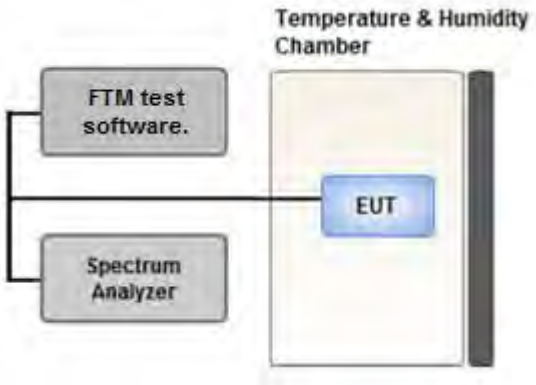
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99 % occupied bandwidth and the 26 dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5 % of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5 % of the 99 % occupied bandwidth observed in Step 7

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

Test Overview

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

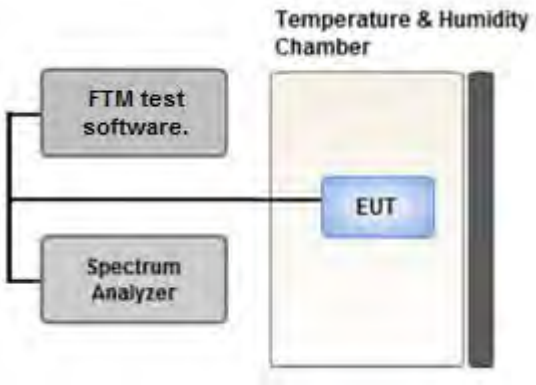
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

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

Test Settings

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

3.7 BAND EDGE



Test setup

Test Overview

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

Test Settings

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

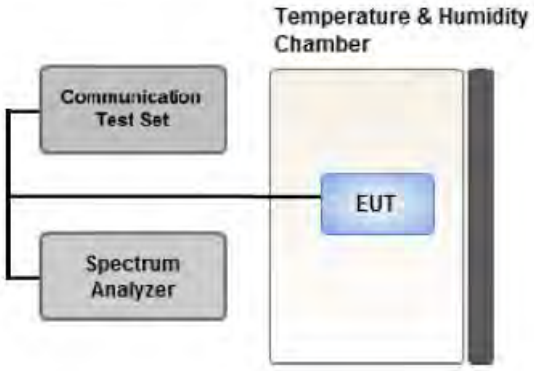
Test Notes

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.
Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.
However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz.
In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz.
Measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.
However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz.
In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. .

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

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

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

The frequency stability of the transmitter is measured by:

1. Temperature:

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

2. Primary Supply Voltage:

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

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

Test Settings

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

3.9 WORST CASE(RADIATED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
  Worst case : Stand alone
  Mode: SA, NSA
  Worst case: SA
- We were performed the RSE test in condition of co-location.
  Mode : Stand alone, Simultaneous transmission scenarios
  Worst case : Stand alone
- All power classes were tested, and the results were reported for the worst case PC2.
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
  (Worst case: 2A - n77A (10 MHz))
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.

-In the case of radiated spurious emissions, all bandwidth of operation were investigated and the worst case bandwidth results are reported.
(Worst case : 40 MHz (3450 MHz – 3550 MHz), 40 MHz(3700 MHz – 3980 MHz))

- SM-A256U & additional models were tested and the worst case results are reported.
  (Worst case : SM-A256U)

[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		X

[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		X

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
  (Worst case: PI/2 BPSK)
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: SA, NSA
  Worst case: SA
- All power classes were tested, and the results were reported for the worst case PC2.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- SM-A256U & additional models were tested and the worst case results are reported.
  (Worst case : SM-A256U)

[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	09/27/2023	Annual
FCC LTE Mobile Conducted RF Automation Test Software	-	HCT CO., LTD.,	-	-	-

Note:

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

5. MEASUREMENT UNCERTAINTY

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

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	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/ 10 MHz [30 kHz]	PI/2 BPSK	-26.71	11.23	11.20	2.96	H	< 1.00	0.089	19.48	1	12
		QPSK	-26.75	11.19	11.20	2.96	H		0.088	19.44		
		16-QAM	-27.69	10.25	11.20	2.96	H		0.071	18.50		
		64-QAM	-29.10	8.84	11.20	2.96	H		0.051	17.09		
		256-QAM	-30.96	6.98	11.20	2.96	H		0.033	15.23		
3500.01		PI/2 BPSK	-24.01	14.24	11.30	3.00	H		0.179	22.54	1	22
		QPSK	-24.06	14.19	11.30	3.00	H		0.177	22.49		
		16-QAM	-25.16	13.09	11.30	3.00	H		0.138	21.39		
		64-QAM	-26.51	11.74	11.30	3.00	H		0.101	20.04		
		256-QAM	-28.46	9.79	11.30	3.00	H		0.064	18.09		
3544.99		PI/2 BPSK	-24.38	13.69	11.35	3.02	H		0.159	22.02	1	1
		QPSK	-24.41	13.66	11.35	3.02	H		0.158	21.99		
		16-QAM	-25.43	12.64	11.35	3.02	H		0.125	20.97		
		64-QAM	-26.87	11.20	11.35	3.02	H		0.090	19.53		
		256-QAM	-28.92	9.15	11.35	3.02	H		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
3457.50	Sub6 n77/ 15 MHz [30 kHz]	PI/2 BPSK	-26.46	11.45	11.20	2.95	H	< 1.00	0.093	19.70	1	1
		QPSK	-26.51	11.40	11.20	2.95	H		0.092	19.65		
		16-QAM	-27.41	10.50	11.20	2.95	H		0.075	18.75		
		64-QAM	-28.90	9.01	11.20	2.95	H		0.053	17.26		
		256-QAM	-30.99	6.92	11.20	2.95	H		0.033	15.17		
3500.01		PI/2 BPSK	-24.85	13.40	11.30	3.00	H		0.148	21.70	1	1
		QPSK	-24.89	13.36	11.30	3.00	H		0.147	21.66		
		16-QAM	-25.89	12.36	11.30	3.00	H		0.116	20.66		
		64-QAM	-27.48	10.77	11.30	3.00	H		0.081	19.07		
		256-QAM	-29.38	8.87	11.30	3.00	H		0.052	17.17		
3542.50		PI/2 BPSK	-24.23	13.72	11.30	3.02	H		0.158	22.00	1	19
		QPSK	-24.27	13.68	11.30	3.02	H		0.157	21.96		
		16-QAM	-25.21	12.74	11.30	3.02	H		0.126	21.02		
		64-QAM	-26.61	11.34	11.30	3.02	H		0.092	19.62		
		256-QAM	-28.62	9.33	11.30	3.02	H		0.058	17.61		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3460.02	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-26.45	11.46	11.20	2.95	H	< 1.00	0.094	19.71	1	1
		QPSK	-26.49	11.42	11.20	2.95	H		0.093	19.67		
		16-QAM	-27.55	10.36	11.20	2.95	H		0.073	18.61		
		64-QAM	-28.91	9.00	11.20	2.95	H		0.053	17.25		
		256-QAM	-30.95	6.96	11.20	2.95	H		0.033	15.21		
3500.01		PI/2 BPSK	-24.86	13.39	11.30	3.00	H		0.148	21.69	1	25
		QPSK	-24.89	13.36	11.30	3.00	H		0.147	21.66		
		16-QAM	-25.82	12.43	11.30	3.00	H		0.118	20.73		
		64-QAM	-27.42	10.83	11.30	3.00	H		0.082	19.13		
		256-QAM	-29.32	8.93	11.30	3.00	H		0.053	17.23		
3540.00		PI/2 BPSK	-24.31	13.64	11.30	3.02	H		0.156	21.92	1	49
		QPSK	-24.40	13.55	11.30	3.02	H		0.152	21.83		
		16-QAM	-25.38	12.57	11.30	3.02	H		0.122	20.85		
		64-QAM	-26.81	11.14	11.30	3.02	H		0.087	19.42		
		256-QAM	-28.92	9.03	11.30	3.02	H		0.054	17.31		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3462.50	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-26.50	11.41	11.20	2.95	H	< 1.00	0.092	19.66	1	32
		QPSK	-26.53	11.38	11.20	2.95	H		0.092	19.63		
		16-QAM	-27.50	10.41	11.20	2.95	H		0.073	18.66		
		64-QAM	-28.94	8.97	11.20	2.95	H		0.053	17.22		
		256-QAM	-30.96	6.95	11.20	2.95	H		0.033	15.20		
3500.01		PI/2 BPSK	-23.71	14.54	11.30	3.00	H		0.192	22.84	1	63
		QPSK	-23.74	14.51	11.30	3.00	H		0.191	22.81		
		16-QAM	-24.74	13.51	11.30	3.00	H		0.152	21.81		
		64-QAM	-26.14	12.11	11.30	3.00	H		0.110	20.41		
		256-QAM	-28.09	10.16	11.30	3.00	H		0.070	18.46		
3537.50		PI/2 BPSK	-24.40	13.55	11.30	3.02	H		0.152	21.83	1	63
		QPSK	-24.42	13.53	11.30	3.02	H		0.152	21.81		
		16-QAM	-25.39	12.56	11.30	3.02	H		0.121	20.84		
		64-QAM	-26.84	11.11	11.30	3.02	H		0.087	19.39		
		256-QAM	-28.68	9.27	11.30	3.02	H		0.057	17.55		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3465.00	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-26.48	11.39	11.20	2.95	H	< 1.00	0.092	19.64	1	1
		QPSK	-26.53	11.34	11.20	2.95	H		0.091	19.59		
		16-QAM	-27.37	10.50	11.20	2.95	H		0.075	18.75		
		64-QAM	-29.06	8.81	11.20	2.95	H		0.051	17.06		
		256-QAM	-30.93	6.94	11.20	2.95	H		0.033	15.19		
3500.01		PI/2 BPSK	-23.21	15.04	11.30	3.00	H		0.216	23.34	1	76
		QPSK	-23.31	14.94	11.30	3.00	H		0.211	23.24		
		16-QAM	-24.22	14.03	11.30	3.00	H		0.171	22.33		
		64-QAM	-25.68	12.57	11.30	3.00	H		0.122	20.87		
		256-QAM	-27.61	10.64	11.30	3.00	H		0.078	18.94		
3534.99		PI/2 BPSK	-24.05	13.86	11.30	3.01	H		0.164	22.16	1	76
		QPSK	-24.17	13.74	11.30	3.01	H		0.160	22.04		
		16-QAM	-25.07	12.84	11.30	3.01	H		0.130	21.14		
		64-QAM	-26.56	11.35	11.30	3.01	H		0.092	19.65		
		256-QAM	-28.49	9.42	11.30	3.01	H		0.059	17.72		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3470.01	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-26.21	11.62	11.20	2.95	H	< 1.00	0.097	19.87	1	104
		QPSK	-26.28	11.55	11.20	2.95	H		0.095	19.80		
		16-QAM	-27.17	10.66	11.20	2.95	H		0.078	18.91		
		64-QAM	-28.63	9.20	11.20	2.95	H		0.056	17.45		
		256-QAM	-30.56	7.27	11.20	2.95	H		0.036	15.52		
3500.01		PI/2 BPSK	-22.41	15.84	11.30	3.00	H		0.259	24.14	1	104
		QPSK	-22.46	15.79	11.30	3.00	H		0.256	24.09		
		16-QAM	-23.31	14.94	11.30	3.00	H		0.211	23.24		
		64-QAM	-24.71	13.54	11.30	3.00	H		0.153	21.84		
		256-QAM	-26.61	11.64	11.30	3.00	H		0.099	19.94		
3529.98		PI/2 BPSK	-23.28	14.60	11.30	2.99	H		0.195	22.91	1	104
		QPSK	-23.36	14.52	11.30	2.99	H		0.192	22.83		
		16-QAM	-24.20	13.68	11.30	2.99	H		0.158	21.99		
		64-QAM	-25.68	12.20	11.30	2.99	H		0.112	20.51		
		256-QAM	-27.62	10.26	11.30	2.99	H		0.072	18.57		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3475.02	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-25.65	12.23	11.20	2.97	H	< 1.00	0.111	20.46	1	131
		QPSK	-25.69	12.19	11.20	2.97	H		0.110	20.42		
		16-QAM	-26.78	11.10	11.20	2.97	H		0.086	19.33		
		64-QAM	-28.23	9.65	11.20	2.97	H		0.061	17.88		
		256-QAM	-30.18	7.70	11.20	2.97	H		0.039	15.93		
3500.01		PI/2 BPSK	-23.46	14.79	11.30	3.00	H		0.204	23.09	1	131
		QPSK	-23.52	14.73	11.30	3.00	H		0.201	23.03		
		16-QAM	-24.45	13.80	11.30	3.00	H		0.162	22.10		
		64-QAM	-26.02	12.23	11.30	3.00	H		0.113	20.53		
		256-QAM	-27.96	10.29	11.30	3.00	H		0.072	18.59		
3525.00		PI/2 BPSK	-24.07	13.83	11.30	2.98	H		0.164	22.15	1	131
		QPSK	-24.13	13.77	11.30	2.98	H		0.162	22.09		
		16-QAM	-25.10	12.80	11.30	2.98	H		0.129	21.12		
		64-QAM	-26.82	11.08	11.30	2.98	H		0.087	19.40		
		256-QAM	-28.67	9.23	11.30	2.98	H		0.057	17.55		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3480.00	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-25.99	11.95	11.20	2.99	H	< 1.00	0.104	20.16	1	81
		QPSK	-26.10	11.84	11.20	2.99	H		0.101	20.05		
		16-QAM	-26.99	10.95	11.20	2.99	H		0.082	19.16		
		64-QAM	-28.47	9.47	11.20	2.99	H		0.059	17.68		
		256-QAM	-30.52	7.42	11.20	2.99	H		0.037	15.63		
3500.01		PI/2 BPSK	-23.29	14.96	11.30	3.00	H		0.212	23.26	1	160
		QPSK	-23.32	14.93	11.30	3.00	H		0.210	23.23		
		16-QAM	-24.20	14.05	11.30	3.00	H		0.172	22.35		
		64-QAM	-25.85	12.40	11.30	3.00	H		0.117	20.70		
		256-QAM	-27.69	10.56	11.30	3.00	H		0.077	18.86		
3519.99		PI/2 BPSK	-24.11	13.81	11.30	2.97	H		0.164	22.14	1	160
		QPSK	-24.13	13.79	11.30	2.97	H		0.163	22.12		
		16-QAM	-24.93	12.99	11.30	2.97	H		0.136	21.32		
		64-QAM	-26.59	11.33	11.30	2.97	H		0.092	19.66		
		256-QAM	-28.70	9.22	11.30	2.97	H		0.057	17.55		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3485.01	Sub6 n77/ 70 MHz [30 kHz]	PI/2 BPSK	-25.13	12.88	11.20	3.00	H	< 1.00	0.128	21.08	1	187
		QPSK	-25.17	12.84	11.20	3.00	H		0.127	21.04		
		16-QAM	-26.20	11.81	11.20	3.00	H		0.100	20.01		
		64-QAM	-27.51	10.50	11.20	3.00	H		0.074	18.70		
		256-QAM	-29.66	8.35	11.20	3.00	H		0.045	16.55		
3500.01		PI/2 BPSK	-23.12	15.13	11.30	3.00	H		0.220	23.43	1	187
		QPSK	-23.24	15.01	11.30	3.00	H		0.214	23.31		
		16-QAM	-24.16	14.09	11.30	3.00	H		0.173	22.39		
		64-QAM	-25.68	12.57	11.30	3.00	H		0.122	20.87		
		256-QAM	-27.61	10.64	11.30	3.00	H		0.078	18.94		
3514.98		PI/2 BPSK	-24.07	13.99	11.30	2.98	H		0.171	22.32	1	187
		QPSK	-24.16	13.90	11.30	2.98	H		0.167	22.23		
		16-QAM	-25.24	12.82	11.30	2.98	H		0.130	21.15		
		64-QAM	-26.60	11.46	11.30	2.98	H		0.095	19.79		
		256-QAM	-28.68	9.38	11.30	2.98	H		0.059	17.71		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3490.02	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-24.47	13.61	11.20	3.00	H	< 1.00	0.152	21.81	1	215
		QPSK	-24.53	13.55	11.20	3.00	H		0.150	21.75		
		16-QAM	-25.47	12.61	11.20	3.00	H		0.121	20.81		
		64-QAM	-27.00	11.08	11.20	3.00	H		0.085	19.28		
		256-QAM	-28.93	9.15	11.20	3.00	H		0.054	17.35		
3500.01		PI/2 BPSK	-23.08	15.17	11.30	3.00	H		0.222	23.47	1	215
		QPSK	-23.13	15.12	11.30	3.00	H		0.220	23.42		
		16-QAM	-24.17	14.08	11.30	3.00	H		0.173	22.38		
		64-QAM	-25.69	12.56	11.30	3.00	H		0.122	20.86		
		256-QAM	-27.54	10.71	11.30	3.00	H		0.080	19.01		
3510.00		PI/2 BPSK	-24.04	14.17	11.30	2.98	H		0.177	22.49	1	215
		QPSK	-24.08	14.13	11.30	2.98	H		0.176	22.45		
		16-QAM	-25.08	13.13	11.30	2.98	H		0.140	21.45		
		64-QAM	-26.55	11.66	11.30	2.98	H		0.100	19.98		
		256-QAM	-28.63	9.58	11.30	2.98	H		0.062	17.90		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3495.00	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-23.91	14.26	11.25	3.00	H	< 1.00	0.178	22.51	1	243
		QPSK	-23.95	14.22	11.25	3.00	H		0.177	22.47		
		16-QAM	-24.78	13.39	11.25	3.00	H		0.146	21.64		
		64-QAM	-26.52	11.65	11.25	3.00	H		0.098	19.90		
		256-QAM	-28.44	9.73	11.25	3.00	H		0.063	17.98		
3500.01		PI/2 BPSK	-23.08	15.17	11.30	3.00	H		0.222	23.47	1	243
		QPSK	-23.11	15.14	11.30	3.00	H		0.221	23.44		
		16-QAM	-24.09	14.16	11.30	3.00	H		0.176	22.46		
		64-QAM	-25.50	12.75	11.30	3.00	H		0.127	21.05		
		256-QAM	-27.37	10.88	11.30	3.00	H		0.083	19.18		
3504.99		PI/2 BPSK	-23.96	14.27	11.30	2.99	H		0.181	22.58	1	243
		QPSK	-23.99	14.24	11.30	2.99	H		0.180	22.55		
		16-QAM	-24.82	13.41	11.30	2.99	H		0.149	21.72		
		64-QAM	-26.48	11.75	11.30	2.99	H		0.101	20.06		
		256-QAM	-28.45	9.78	11.30	2.99	H		0.064	18.09		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3500.01	Sub6 n77/ 100 MHz [30 kHz]	PI/2 BPSK	-22.97	15.28	11.30	3.00	H	< 1.00	0.228	23.58	1	271
		QPSK	-23.05	15.20	11.30	3.00	H		0.224	23.50		
		16-QAM	-23.97	14.28	11.30	3.00	H		0.181	22.58		
		64-QAM	-25.38	12.87	11.30	3.00	H		0.131	21.17		
		256-QAM	-27.33	10.92	11.30	3.00	H		0.084	19.22		

8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77

▣ Anchor Band: B2

▣ Bandwidth: 40 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
631334 (3470.01)	6 940.02	-60.06	10.90	-54.55	4.32	V	-47.97	-13.00	1	104
	10 410.03	-59.43	11.20	-49.57	5.38	V	-43.75	-13.00		
	13 880.04	-59.10	12.40	-48.48	6.33	V	-42.41	-13.00		
	17 350.05	-62.52	16.00	-43.89	7.24	V	-35.13	-13.00		
633334 (3500.01)	7 000.02	-59.77	10.90	-53.85	4.32	V	-47.27	-13.00	1	104
	10 500.03	-61.62	11.30	-51.02	5.41	H	-45.13	-13.00		
	14 000.04	-58.07	12.30	-48.72	6.35	H	-42.77	-13.00		
	17 500.05	-62.49	15.70	-42.40	7.23	H	-33.93	-13.00		
635332 (3529.98)	7 059.96	-61.19	10.70	-54.79	4.33	V	-48.42	-13.00	1	104
	10 589.94	-61.77	11.20	-50.34	5.44	V	-44.58	-13.00		
	14 119.92	-58.95	12.30	-49.90	6.38	V	-43.98	-13.00		
	17 649.90	-62.44	15.00	-38.49	7.36	V	-30.85	-13.00		

▣ ENDC-Mode : 2A(10 MHz)-n77A_DoD(40 MHz)

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
18900 (1880.0)	3760.00	-60.12	11.64	-60.35	3.16	V	-51.87	-13.00
	5640.00	-60.56	12.00	-54.38	3.93	V	-46.31	-13.00
	7520.00	-61.31	11.54	-46.86	4.51	V	-39.83	-13.00

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n77	10 MHz	3500.01	BPSK	Full RB	0	4.36
			QPSK			5.51
			16-QAM			6.24
			64-QAM			6.31
			256-QAM			6.51
	15 MHz		BPSK			4.19
			QPSK			5.38
			16-QAM			6.13
			64-QAM			6.41
			256-QAM			6.43
	20 MHz		BPSK			4.51
			QPSK			5.40
			16-QAM			6.13
			64-QAM			6.31
			256-QAM			6.53
	25 MHz		BPSK			4.35
			QPSK			5.51
			16-QAM			6.15
			64-QAM			6.37
			256-QAM			6.43
	30 MHz		BPSK			4.81
			QPSK			5.51
			16-QAM			6.23
			64-QAM			6.39
			256-QAM			6.46
	40 MHz		BPSK			4.46
			QPSK			5.56
			16-QAM			6.26
			64-QAM			6.33
			256-QAM			6.58

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
	50 MHz		BPSK			4.23
			QPSK			5.46
			16-QAM			6.20
			64-QAM			6.30
			256-QAM			6.40
	60 MHz		BPSK			5.25
			QPSK			5.68
			16-QAM			6.16
			64-QAM			6.39
			256-QAM			6.44
	70 MHz		BPSK			4.35
			QPSK			5.44
			16-QAM			6.18
			64-QAM			6.28
			256-QAM			6.47
	80 MHz		BPSK			4.25
			QPSK			5.44
			16-QAM			6.22
			64-QAM			6.38
			256-QAM			6.41
	90 MHz		BPSK			5.20
			QPSK			5.59
			16-QAM			6.15
			64-QAM			6.31
			256-QAM			6.49
	100 MHz		BPSK			4.60
			QPSK			5.49
			16-QAM			6.17
			64-QAM			6.31
			256-QAM			6.52

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 150 ~ 209.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n77	10 MHz	3500.01	BPSK	Full RB	0	8.7224
			QPSK			8.6878
			16-QAM			8.6997
			64-QAM			8.6915
			256-QAM			8.7227
	15 MHz		BPSK			12.971
			QPSK			12.969
			16-QAM			12.969
			64-QAM			13.003
			256-QAM			12.983
	20 MHz		BPSK			17.930
			QPSK			17.927
			16-QAM			17.935
			64-QAM			17.933
			256-QAM			17.932
	25 MHz		BPSK			23.106
			QPSK			23.051
			16-QAM			23.040
			64-QAM			23.038
			256-QAM			23.013
	30 MHz		BPSK			27.001
			QPSK			26.958
			16-QAM			26.942
			64-QAM			26.988
			256-QAM			26.926
	40 MHz		BPSK			36.100
			QPSK			36.007
			16-QAM			35.910
			64-QAM			36.046
			256-QAM			35.825

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
	50 MHz		BPSK			45.960
			QPSK			45.929
			16-QAM			46.074
			64-QAM			45.840
			256-QAM			46.389
	60 MHz		BPSK			58.217
			QPSK			58.225
			16-QAM			58.158
			64-QAM			58.120
			256-QAM			58.056
	70 MHz		BPSK			64.760
			QPSK			64.664
			16-QAM			64.784
			64-QAM			64.529
			256-QAM			64.999
	80 MHz		BPSK			77.573
			QPSK			77.604
			16-QAM			77.547
			64-QAM			77.726
			256-QAM			77.580
	90 MHz		BPSK			87.133
			QPSK			87.336
			16-QAM			87.123
			64-QAM			87.257
			256-QAM			87.268
	100 MHz		BPSK			96.961
			QPSK			96.843
			16-QAM			96.878
			64-QAM			96.859
			256-QAM			96.919

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 90 ~ 149.

8.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n77	10	3455.01	4.9193	37.190	-70.535	-33.345	-13.00
		3500.01	4.9223	37.190	-70.566	-33.376	
		3544.98	4.3415	37.190	-71.351	-34.161	
	15	3457.50	9.6924	37.805	-70.690	-32.885	
		3500.01	8.2782	37.805	-71.021	-33.216	
		3542.49	7.4691	37.805	-70.731	-32.926	
	20	3460.02	5.9990	37.805	-70.509	-32.704	
		3500.01	8.8086	37.805	-70.534	-32.729	
		3540.00	8.0100	37.805	-70.311	-32.506	
	25	3462.51	8.2667	37.805	-71.249	-33.444	
		3500.01	9.7283	37.805	-70.694	-32.889	
		3537.48	8.2862	37.805	-71.398	-33.593	
	30	3465.00	9.1850	37.805	-70.379	-32.574	
		3500.01	5.4627	37.805	-70.958	-33.153	
		3534.99	9.9521	37.805	-70.825	-33.020	
	40	3470.01	9.9447	37.805	-69.790	-31.985	
		3500.01	6.0155	37.805	-70.633	-32.828	
		3529.98	9.1436	37.805	-69.810	-32.005	
	50	3475.02	5.9856	37.805	-70.428	-32.623	
		3500.01	9.9212	37.805	-69.702	-31.897	
		3525.00	4.9547	37.190	-71.004	-33.814	
	60	3480.00	8.2852	37.805	-70.825	-33.020	
		3500.01	9.1655	37.805	-70.289	-32.484	
		3519.99	5.1750	37.805	-70.742	-32.937	
	70	3485.01	8.8400	37.805	-70.676	-32.871	
		3500.01	8.2677	37.805	-70.730	-32.925	
		3514.98	7.9562	37.805	-70.374	-32.569	
	80	3490.02	8.9168	37.805	-70.640	-32.835	
		3500.01	7.7707	37.805	-70.815	-33.010	
		3510.00	9.9711	37.805	-70.298	-32.493	
	90	3495.00	7.9696	37.805	-70.894	-33.089	
		3500.01	9.1102	37.805	-70.858	-33.053	
		3504.99	5.2019	37.805	-70.713	-32.908	
	100	3500.01	7.1760	37.805	-71.132	-33.327	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 354 ~ 421.

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 210 ~ 353.

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 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3455.010	100 %	+20(Ref)	3455 009 995	0.0	0.000 000	0.000
	100 %	-30	3455 009 992	-3.0	0.000 000	-0.001
	100 %	-20	3455 009 997	1.3	0.000 000	0.000
	100 %	-10	3455 009 993	-2.0	0.000 000	-0.001
	100 %	0	3455 009 993	-2.6	0.000 000	-0.001
	100 %	+10	3455 009 994	-1.3	0.000 000	0.000
	100 %	+30	3455 009 997	1.2	0.000 000	0.000
	100 %	+40	3455 009 993	-2.0	0.000 000	-0.001
	100 %	+50	3455 009 996	0.6	0.000 000	0.000
	Batt. Endpoint	+20	3455 009 993	-2.6	0.000 000	-0.001
3544.980	100 %	+20(Ref)	3544 980 000	0.0	0.000 000	0.000
	100 %	-30	3544 980 000	-0.4	0.000 000	0.000
	100 %	-20	3544 980 001	0.2	0.000 000	0.000
	100 %	-10	3544 980 000	0.0	0.000 000	0.000
	100 %	0	3544 979 997	-3.1	0.000 000	-0.001
	100 %	+10	3544 979 998	-2.0	0.000 000	-0.001
	100 %	+30	3544 979 997	-3.7	0.000 000	-0.001
	100 %	+40	3544 979 998	-2.8	0.000 000	-0.001
	100 %	+50	3544 979 998	-2.5	0.000 000	-0.001
	Batt. Endpoint	+20	3544 979 997	-3.1	0.000 000	-0.001

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 499 998	0.0	0.000 000	0.000
	100 %	-30	3457 499 999	0.5	0.000 000	0.000
	100 %	-20	3457 499 997	-1.2	0.000 000	0.000
	100 %	-10	3457 500 000	1.2	0.000 000	0.000
	100 %	0	3457 499 998	-0.6	0.000 000	0.000
	100 %	+10	3457 499 997	-1.1	0.000 000	0.000
	100 %	+30	3457 500 000	1.3	0.000 000	0.000
	100 %	+40	3457 499 998	-0.6	0.000 000	0.000
	100 %	+50	3457 500 002	3.4	0.000 000	0.001
	Batt. Endpoint	+20	3457 499 993	-5.0	0.000 000	-0.001
3542.490	100 %	+20(Ref)	3542 489 997	0.0	0.000 000	0.000
	100 %	-30	3542 489 993	-4.3	0.000 000	-0.001
	100 %	-20	3542 489 994	-3.2	0.000 000	-0.001
	100 %	-10	3542 489 996	-0.7	0.000 000	0.000
	100 %	0	3542 489 995	-2.3	0.000 000	-0.001
	100 %	+10	3542 489 997	0.0	0.000 000	0.000
	100 %	+30	3542 489 992	-4.7	0.000 000	-0.001
	100 %	+40	3542 489 993	-4.1	0.000 000	-0.001
	100 %	+50	3542 489 995	-2.3	0.000 000	-0.001
	Batt. Endpoint	+20	3542 489 996	-0.5	0.000 000	0.000

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 019 998	0.0	0.000 000	0.000
	100 %	-30	3460 019 996	-2.0	0.000 000	-0.001
	100 %	-20	3460 020 000	1.2	0.000 000	0.000
	100 %	-10	3460 019 998	-0.8	0.000 000	0.000
	100 %	0	3460 019 996	-2.3	0.000 000	-0.001
	100 %	+10	3460 020 000	1.5	0.000 000	0.000
	100 %	+30	3460 019 998	0.2	0.000 000	0.000
	100 %	+40	3460 020 000	1.6	0.000 000	0.000
	100 %	+50	3460 019 995	-3.0	0.000 000	-0.001
	Batt. Endpoint	+20	3460 020 000	1.8	0.000 000	0.001
3540.000	100 %	+20(Ref)	3539 999 998	0.0	0.000 000	0.000
	100 %	-30	3539 999 996	-2.0	0.000 000	-0.001
	100 %	-20	3539 999 997	-1.7	0.000 000	0.000
	100 %	-10	3539 999 994	-4.0	0.000 000	-0.001
	100 %	0	3539 999 998	0.1	0.000 000	0.000
	100 %	+10	3539 999 997	-1.7	0.000 000	0.000
	100 %	+30	3539 999 994	-3.8	0.000 000	-0.001
	100 %	+40	3539 999 997	-1.7	0.000 000	0.000
	100 %	+50	3539 999 996	-2.6	0.000 000	-0.001
	Batt. Endpoint	+20	3539 999 995	-2.9	0.000 000	-0.001

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 509 998	0.0	0.000 000	0.000
	100 %	-30	3462 509 998	0.1	0.000 000	0.000
	100 %	-20	3462 509 995	-3.5	0.000 000	-0.001
	100 %	-10	3462 509 999	0.9	0.000 000	0.000
	100 %	0	3462 509 996	-2.2	0.000 000	-0.001
	100 %	+10	3462 510 000	1.7	0.000 000	0.000
	100 %	+30	3462 509 998	-0.2	0.000 000	0.000
	100 %	+40	3462 509 997	-0.8	0.000 000	0.000
	100 %	+50	3462 509 986	-11.9	0.000 000	-0.003
	Batt. Endpoint	+20	3462 510 001	3.1	0.000 000	0.001
3537.480	100 %	+20(Ref)	3537 480 004	0.0	0.000 000	0.000
	100 %	-30	3537 480 003	-0.5	0.000 000	0.000
	100 %	-20	3537 480 008	4.6	0.000 000	0.001
	100 %	-10	3537 480 008	4.3	0.000 000	0.001
	100 %	0	3537 480 006	2.1	0.000 000	0.001
	100 %	+10	3537 480 008	4.2	0.000 000	0.001
	100 %	+30	3537 480 000	-4.3	0.000 000	-0.001
	100 %	+40	3537 480 004	0.5	0.000 000	0.000
	100 %	+50	3537 480 001	-3.1	0.000 000	-0.001
	Batt. Endpoint	+20	3537 480 003	-0.4	0.000 000	0.000

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 999 997	0.0	0.000 000	0.000
	100 %	-30	3464 999 997	0.1	0.000 000	0.000
	100 %	-20	3464 999 991	-6.3	0.000 000	-0.002
	100 %	-10	3464 999 999	2.2	0.000 000	0.001
	100 %	0	3464 999 997	-0.4	0.000 000	0.000
	100 %	+10	3464 999 998	0.6	0.000 000	0.000
	100 %	+30	3464 999 998	0.8	0.000 000	0.000
	100 %	+40	3464 999 996	-1.4	0.000 000	0.000
	100 %	+50	3465 000 000	2.6	0.000 000	0.001
	Batt. Endpoint	+20	3464 999 996	-1.0	0.000 000	0.000
3534.990	100 %	+20(Ref)	3534 990 000	0.0	0.000 000	0.000
	100 %	-30	3534 990 000	0.1	0.000 000	0.000
	100 %	-20	3534 990 001	0.6	0.000 000	0.000
	100 %	-10	3534 989 999	-1.0	0.000 000	0.000
	100 %	0	3534 990 001	0.8	0.000 000	0.000
	100 %	+10	3534 989 999	-1.6	0.000 000	0.000
	100 %	+30	3534 990 000	-0.4	0.000 000	0.000
	100 %	+40	3534 989 999	-1.0	0.000 000	0.000
	100 %	+50	3534 989 999	-1.1	0.000 000	0.000
	Batt. Endpoint	+20	3534 990 000	0.0	0.000 000	0.000

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 009 999	0.0	0.000 000	0.000
	100 %	-30	3470 009 999	-0.3	0.000 000	0.000
	100 %	-20	3470 009 995	-4.3	0.000 000	-0.001
	100 %	-10	3470 009 997	-2.4	0.000 000	-0.001
	100 %	0	3470 010 000	0.4	0.000 000	0.000
	100 %	+10	3470 009 997	-2.0	0.000 000	-0.001
	100 %	+30	3470 009 995	-4.2	0.000 000	-0.001
	100 %	+40	3470 009 999	-0.5	0.000 000	0.000
	100 %	+50	3470 009 996	-3.2	0.000 000	-0.001
	Batt. Endpoint	+20	3470 009 999	-0.1	0.000 000	0.000
3529.980	100 %	+20(Ref)	3529 980 032	0.0	0.000 000	0.000
	100 %	-30	3529 980 030	-1.5	0.000 000	0.000
	100 %	-20	3529 980 185	153.3	0.000 004	0.043
	100 %	-10	3529 980 029	-2.6	0.000 000	-0.001
	100 %	0	3529 980 032	0.1	0.000 000	0.000
	100 %	+10	3529 980 032	0.0	0.000 000	0.000
	100 %	+30	3529 979 968	-64.3	-0.000 002	-0.018
	100 %	+40	3529 980 030	-2.0	0.000 000	-0.001
	100 %	+50	3529 980 049	17.0	0.000 000	0.005
	Batt. Endpoint	+20	3529 980 030	-2.2	0.000 000	-0.001

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 020 000	0.0	0.000 000	0.000
	100 %	-30	3475 020 000	0.2	0.000 000	0.000
	100 %	-20	3475 020 000	0.0	0.000 000	0.000
	100 %	-10	3475 020 000	-0.5	0.000 000	0.000
	100 %	0	3475 020 295	295.0	0.000 008	0.085
	100 %	+10	3475 019 998	-1.8	0.000 000	-0.001
	100 %	+30	3475 020 000	-0.2	0.000 000	0.000
	100 %	+40	3475 020 002	1.4	0.000 000	0.000
	100 %	+50	3475 019 998	-2.0	0.000 000	-0.001
	Batt. Endpoint	+20	3475 020 000	-0.7	0.000 000	0.000
3525.000	100 %	+20(Ref)	3524 999 997	0.0	0.000 000	0.000
	100 %	-30	3524 999 997	-0.2	0.000 000	0.000
	100 %	-20	3524 999 998	0.2	0.000 000	0.000
	100 %	-10	3524 999 996	-1.5	0.000 000	0.000
	100 %	0	3524 999 997	0.0	0.000 000	0.000
	100 %	+10	3524 999 997	0.0	0.000 000	0.000
	100 %	+30	3524 999 997	-0.3	0.000 000	0.000
	100 %	+40	3524 999 996	-1.4	0.000 000	0.000
	100 %	+50	3524 999 999	1.3	0.000 000	0.000
	Batt. Endpoint	+20	3524 999 997	-0.1	0.000 000	0.000

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 999 999	0.0	0.000 000	0.000
	100 %	-30	3479 999 997	-2.0	0.000 000	-0.001
	100 %	-20	3479 999 996	-2.6	0.000 000	-0.001
	100 %	-10	3479 999 996	-2.3	0.000 000	-0.001
	100 %	0	3479 999 997	-1.8	0.000 000	-0.001
	100 %	+10	3479 999 997	-2.2	0.000 000	-0.001
	100 %	+30	3479 999 999	0.5	0.000 000	0.000
	100 %	+40	3479 999 996	-2.8	0.000 000	-0.001
	100 %	+50	3479 999 999	0.3	0.000 000	0.000
	Batt. Endpoint	+20	3479 999 995	-3.3	0.000 000	-0.001
3519.990	100 %	+20(Ref)	3519 989 998	0.0	0.000 000	0.000
	100 %	-30	3519 989 997	-1.7	0.000 000	0.000
	100 %	-20	3519 989 996	-2.4	0.000 000	-0.001
	100 %	-10	3519 989 995	-3.1	0.000 000	-0.001
	100 %	0	3519 989 999	1.0	0.000 000	0.000
	100 %	+10	3519 989 996	-1.8	0.000 000	-0.001
	100 %	+30	3519 989 997	-0.9	0.000 000	0.000
	100 %	+40	3519 989 997	-1.6	0.000 000	0.000
	100 %	+50	3519 989 995	-2.8	0.000 000	-0.001
	Batt. Endpoint	+20	3519 989 998	-0.3	0.000 000	0.000

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 009 997	0.0	0.000 000	0.000
	100 %	-30	3485 009 998	0.4	0.000 000	0.000
	100 %	-20	3485 009 996	-1.6	0.000 000	0.000
	100 %	-10	3485 009 992	-5.4	0.000 000	-0.002
	100 %	0	3485 009 996	-1.3	0.000 000	0.000
	100 %	+10	3485 009 993	-4.7	0.000 000	-0.001
	100 %	+30	3485 009 997	-0.2	0.000 000	0.000
	100 %	+40	3485 009 994	-3.8	0.000 000	-0.001
	100 %	+50	3485 009 994	-3.3	0.000 000	-0.001
	Batt. Endpoint	+20	3485 009 999	1.2	0.000 000	0.000
3514.980	100 %	+20(Ref)	3514 979 996	0.0	0.000 000	0.000
	100 %	-30	3514 979 994	-2.2	0.000 000	-0.001
	100 %	-20	3514 979 994	-2.4	0.000 000	-0.001
	100 %	-10	3514 979 996	-0.5	0.000 000	0.000
	100 %	0	3514 979 994	-2.2	0.000 000	-0.001
	100 %	+10	3514 979 998	1.3	0.000 000	0.000
	100 %	+30	3514 979 996	-0.4	0.000 000	0.000
	100 %	+40	3514 979 993	-3.3	0.000 000	-0.001
	100 %	+50	3514 979 993	-3.5	0.000 000	-0.001
	Batt. Endpoint	+20	3514 979 995	-1.8	0.000 000	-0.001

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 020 000	0.0	0.000 000	0.000
	100 %	-30	3490 020 000	0.0	0.000 000	0.000
	100 %	-20	3490 019 998	-2.1	0.000 000	-0.001
	100 %	-10	3490 019 998	-2.4	0.000 000	-0.001
	100 %	0	3490 020 000	-0.7	0.000 000	0.000
	100 %	+10	3490 020 000	-0.3	0.000 000	0.000
	100 %	+30	3490 019 999	-1.6	0.000 000	0.000
	100 %	+40	3490 019 999	-1.2	0.000 000	0.000
	100 %	+50	3490 019 997	-3.7	0.000 000	-0.001
	Batt. Endpoint	+20	3490 019 998	-2.6	0.000 000	-0.001
3510.000	100 %	+20(Ref)	3510 000 000	0.0	0.000 000	0.000
	100 %	-30	3510 000 001	1.0	0.000 000	0.000
	100 %	-20	3509 999 997	-2.8	0.000 000	-0.001
	100 %	-10	3509 999 998	-2.1	0.000 000	-0.001
	100 %	0	3510 000 001	0.8	0.000 000	0.000
	100 %	+10	3509 999 998	-1.5	0.000 000	0.000
	100 %	+30	3510 000 000	0.6	0.000 000	0.000
	100 %	+40	3510 000 001	1.2	0.000 000	0.000
	100 %	+50	3510 000 001	1.2	0.000 000	0.000
	Batt. Endpoint	+20	3509 999 999	-1.2	0.000 000	0.000

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 999 998	0.0	0.000 000	0.000
	100 %	-30	3494 999 996	-2.4	0.000 000	-0.001
	100 %	-20	3494 999 997	-1.2	0.000 000	0.000
	100 %	-10	3494 999 997	-1.9	0.000 000	-0.001
	100 %	0	3494 999 996	-2.2	0.000 000	-0.001
	100 %	+10	3494 999 996	-2.8	0.000 000	-0.001
	100 %	+30	3494 999 999	0.8	0.000 000	0.000
	100 %	+40	3494 999 999	0.8	0.000 000	0.000
	100 %	+50	3494 999 997	-1.4	0.000 000	0.000
	Batt. Endpoint	+20	3495 000 000	1.7	0.000 000	0.000
3504.990	100 %	+20(Ref)	3504 989 997	0.0	0.000 000	0.000
	100 %	-30	3504 989 994	-3.2	0.000 000	-0.001
	100 %	-20	3504 989 995	-2.7	0.000 000	-0.001
	100 %	-10	3504 989 995	-2.8	0.000 000	-0.001
	100 %	0	3504 989 994	-3.0	0.000 000	-0.001
	100 %	+10	3504 989 996	-1.1	0.000 000	0.000
	100 %	+30	3504 989 997	-0.3	0.000 000	0.000
	100 %	+40	3504 989 995	-2.0	0.000 000	-0.001
	100 %	+50	3504 989 995	-2.0	0.000 000	-0.001
	Batt. Endpoint	+20	3504 989 994	-3.3	0.000 000	-0.001

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 009 998	0.0	0.000 000	0.000
	100 %	-30	3500 009 995	-2.7	0.000 000	-0.001
	100 %	-20	3500 009 997	-1.4	0.000 000	0.000
	100 %	-10	3500 009 999	1.2	0.000 000	0.000
	100 %	0	3500 009 995	-3.5	0.000 000	-0.001
	100 %	+10	3500 009 992	-5.9	0.000 000	-0.002
	100 %	+30	3500 009 991	-6.8	0.000 000	-0.002
	100 %	+40	3500 009 991	-6.8	0.000 000	-0.002
	100 %	+50	3500 009 996	-2.3	0.000 000	-0.001
	Batt. Endpoint	+20	3500 009 994	-3.9	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/ 10 MHz [30 kHz]	PI/2 BPSK	-24.54	13.95	11.40	3.09	V	< 1.00	0.168	22.26	1	1
		QPSK	-24.60	13.89	11.40	3.09	V		0.166	22.20		
		16-QAM	-25.49	13.00	11.40	3.09	V		0.135	21.31		
		64-QAM	-27.27	11.22	11.40	3.09	V		0.090	19.53		
		256-QAM	-28.84	9.65	11.40	3.09	V		0.063	17.96		
3840.00		PI/2 BPSK	-25.96	13.72	11.10	3.14	V		0.147	21.68	1	1
		QPSK	-26.04	13.64	11.10	3.14	V		0.145	21.60		
		16-QAM	-27.06	12.62	11.10	3.14	V		0.114	20.58		
		64-QAM	-28.48	11.20	11.10	3.14	V		0.082	19.16		
		256-QAM	-30.63	9.05	11.10	3.14	V		0.050	17.01		
3975.00		PI/2 BPSK	-26.29	13.36	10.90	3.20	V		0.128	21.06	1	1
		QPSK	-26.32	13.33	10.90	3.20	V		0.127	21.03		
		16-QAM	-27.20	12.45	10.90	3.20	V		0.104	20.15		
		64-QAM	-28.71	10.94	10.90	3.20	V		0.073	18.64		
		256-QAM	-30.51	9.14	10.90	3.20	V		0.048	16.84		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3707.51	Sub6 n77/ 15 MHz [30 kHz]	PI/2 BPSK	-23.79	14.70	11.40	3.09	V	< 1.00	0.200	23.01	1	19
		QPSK	-23.83	14.66	11.40	3.09	V		0.198	22.97		
		16-QAM	-24.81	13.68	11.40	3.09	V		0.158	21.99		
		64-QAM	-26.34	12.15	11.40	3.09	V		0.111	20.46		
		256-QAM	-27.94	10.55	11.40	3.09	V		0.077	18.86		
3840.00		PI/2 BPSK	-25.97	13.71	11.10	3.14	V		0.147	21.67	1	1
		QPSK	-26.00	13.68	11.10	3.14	V		0.146	21.64		
		16-QAM	-27.00	12.68	11.10	3.14	V		0.116	20.64		
		64-QAM	-28.43	11.25	11.10	3.14	V		0.083	19.21		
		256-QAM	-30.46	9.22	11.10	3.14	V		0.052	17.18		
3972.48		PI/2 BPSK	-26.08	13.57	10.90	3.20	V		0.134	21.27	1	1
		QPSK	-26.12	13.53	10.90	3.20	V		0.133	21.23		
		16-QAM	-27.02	12.63	10.90	3.20	V		0.108	20.33		
		64-QAM	-28.52	11.13	10.90	3.20	V		0.076	18.83		
		256-QAM	-30.30	9.35	10.90	3.20	V		0.051	17.05		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3710.01	Sub6 n77/ 20 MHz [30 kHz]	PI/2 BPSK	-23.88	14.64	11.40	3.11	V	< 1.00	0.196	22.93	1	25
		QPSK	-23.91	14.61	11.40	3.11	V		0.195	22.90		
		16-QAM	-24.88	13.64	11.40	3.11	V		0.156	21.93		
		64-QAM	-26.42	12.10	11.40	3.11	V		0.109	20.39		
		256-QAM	-27.95	10.57	11.40	3.11	V		0.077	18.86		
3840.00		PI/2 BPSK	-25.95	13.73	11.10	3.14	V		0.148	21.69	1	1
		QPSK	-25.98	13.70	11.10	3.14	V		0.147	21.66		
		16-QAM	-27.03	12.65	11.10	3.14	V		0.115	20.61		
		64-QAM	-28.40	11.28	11.10	3.14	V		0.084	19.24		
		256-QAM	-30.52	9.16	11.10	3.14	V		0.052	17.12		
3969.99		PI/2 BPSK	-26.06	13.53	10.90	3.20	V		0.133	21.23	1	1
		QPSK	-26.10	13.49	10.90	3.20	V		0.132	21.19		
		16-QAM	-27.04	12.55	10.90	3.20	V		0.106	20.25		
		64-QAM	-28.57	11.02	10.90	3.20	V		0.074	18.72		
		256-QAM	-30.54	9.05	10.90	3.20	V		0.047	16.75		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3712.50	Sub6 n77/ 25 MHz [30 kHz]	PI/2 BPSK	-23.77	14.90	11.40	3.12	V	< 1.00	0.208	23.18	1	63
		QPSK	-23.79	14.88	11.40	3.12	V		0.207	23.16		
		16-QAM	-24.80	13.87	11.40	3.12	V		0.164	22.15		
		64-QAM	-26.25	12.42	11.40	3.12	V		0.117	20.70		
		256-QAM	-28.19	10.48	11.40	3.12	V		0.075	18.76		
3840.00		PI/2 BPSK	-25.35	14.33	11.10	3.14	V		0.169	22.29	1	1
		QPSK	-25.41	14.27	11.10	3.14	V		0.167	22.23		
		16-QAM	-26.36	13.32	11.10	3.14	V		0.134	21.28		
		64-QAM	-27.96	11.72	11.10	3.14	V		0.093	19.68		
		256-QAM	-29.80	9.88	11.10	3.14	V		0.061	17.84		
3967.50		PI/2 BPSK	-25.54	14.15	10.90	3.21	V		0.153	21.84	1	1
		QPSK	-25.56	14.13	10.90	3.21	V		0.152	21.82		
		16-QAM	-26.53	13.16	10.90	3.21	V		0.122	20.85		
		64-QAM	-28.01	11.68	10.90	3.21	V		0.086	19.37		
		256-QAM	-29.68	10.01	10.90	3.21	V		0.059	17.70		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3715.02	Sub6 n77/ 30 MHz [30 kHz]	PI/2 BPSK	-24.06	14.61	11.40	3.12	V	< 1.00	0.195	22.89	1	39
		QPSK	-24.13	14.54	11.40	3.12	V		0.191	22.82		
		16-QAM	-25.05	13.62	11.40	3.12	V		0.155	21.90		
		64-QAM	-26.65	12.02	11.40	3.12	V		0.107	20.30		
		256-QAM	-28.63	10.04	11.40	3.12	V		0.068	18.32		
3840.00		PI/2 BPSK	-25.82	13.86	11.10	3.14	V		0.152	21.82	1	1
		QPSK	-25.85	13.83	11.10	3.14	V		0.151	21.79		
		16-QAM	-26.79	12.89	11.10	3.14	V		0.122	20.85		
		64-QAM	-28.29	11.39	11.10	3.14	V		0.086	19.35		
		256-QAM	-30.21	9.47	11.10	3.14	V		0.055	17.43		
3964.98		PI/2 BPSK	-25.50	14.19	10.90	3.21	V		0.154	21.88	1	1
		QPSK	-25.53	14.16	10.90	3.21	V		0.153	21.85		
		16-QAM	-26.49	13.20	10.90	3.21	V		0.123	20.89		
		64-QAM	-27.93	11.76	10.90	3.21	V		0.088	19.45		
		256-QAM	-29.59	10.10	10.90	3.21	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
3720.00	Sub6 n77/ 40 MHz [30 kHz]	PI/2 BPSK	-23.41	15.28	11.40	3.14	V	< 1.00	0.226	23.54	1	1
		QPSK	-23.46	15.23	11.40	3.14	V		0.223	23.49		
		16-QAM	-24.38	14.31	11.40	3.14	V		0.181	22.57		
		64-QAM	-25.89	12.80	11.40	3.14	V		0.128	21.06		
		256-QAM	-27.43	11.26	11.40	3.14	V		0.090	19.52		
3840.00		PI/2 BPSK	-24.83	14.85	11.10	3.14	V		0.191	22.81	1	1
		QPSK	-24.94	14.74	11.10	3.14	V		0.186	22.70		
		16-QAM	-25.89	13.79	11.10	3.14	V		0.150	21.75		
		64-QAM	-27.35	12.33	11.10	3.14	V		0.107	20.29		
		256-QAM	-29.28	10.40	11.10	3.14	V		0.069	18.36		
3960.00		PI/2 BPSK	-24.48	15.30	10.90	3.21	V		0.199	22.99	1	1
		QPSK	-24.50	15.28	10.90	3.21	V		0.198	22.97		
		16-QAM	-25.46	14.32	10.90	3.21	V		0.159	22.01		
		64-QAM	-26.83	12.95	10.90	3.21	V		0.116	20.64		
		256-QAM	-28.60	11.18	10.90	3.21	V		0.077	18.87		

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
3725.10	Sub6 n77/ 50 MHz [30 kHz]	PI/2 BPSK	-23.74	15.10	11.40	3.14	V	< 1.00	0.217	23.36	1	66
		QPSK	-23.84	15.00	11.40	3.14	V		0.212	23.26		
		16-QAM	-24.80	14.04	11.40	3.14	V		0.170	22.30		
		64-QAM	-26.38	12.46	11.40	3.14	V		0.118	20.72		
		256-QAM	-28.41	10.43	11.40	3.14	V		0.074	18.69		
3840.00		PI/2 BPSK	-25.26	14.42	11.10	3.14	V		0.173	22.38	1	131
		QPSK	-25.29	14.39	11.10	3.14	V		0.172	22.35		
		16-QAM	-26.23	13.45	11.10	3.14	V		0.138	21.41		
		64-QAM	-27.86	11.82	11.10	3.14	V		0.095	19.78		
		256-QAM	-29.78	9.90	11.10	3.14	V		0.061	17.86		
3954.99		PI/2 BPSK	-25.15	14.64	10.90	3.21	V		0.171	22.33	1	1
		QPSK	-25.25	14.54	10.90	3.21	V		0.167	22.23		
		16-QAM	-26.26	13.53	10.90	3.21	V		0.132	21.22		
		64-QAM	-27.81	11.98	10.90	3.21	V		0.093	19.67		
		256-QAM	-29.49	10.30	10.90	3.21	V		0.063	17.99		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3730.02	Sub6 n77/ 60 MHz [30 kHz]	PI/2 BPSK	-23.96	14.90	11.40	3.14	V	< 1.00	0.207	23.16	1	1
		QPSK	-23.99	14.87	11.40	3.14	V		0.206	23.13		
		16-QAM	-24.90	13.96	11.40	3.14	V		0.167	22.22		
		64-QAM	-26.53	12.33	11.40	3.14	V		0.115	20.59		
		256-QAM	-28.49	10.37	11.40	3.14	V		0.073	18.63		
3840.00		PI/2 BPSK	-25.25	14.43	11.10	3.14	V		0.173	22.39	1	160
		QPSK	-25.28	14.40	11.10	3.14	V		0.172	22.36		
		16-QAM	-26.15	13.53	11.10	3.14	V		0.141	21.49		
		64-QAM	-27.85	11.83	11.10	3.14	V		0.095	19.79		
		256-QAM	-29.78	9.90	11.10	3.14	V		0.061	17.86		
3949.98		PI/2 BPSK	-25.53	14.25	10.90	3.20	V		0.157	21.95	1	81
		QPSK	-25.57	14.21	10.90	3.20	V		0.155	21.91		
		16-QAM	-26.52	13.26	10.90	3.20	V		0.125	20.96		
		64-QAM	-27.97	11.81	10.90	3.20	V		0.089	19.51		
		256-QAM	-30.01	9.77	10.90	3.20	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
3735.00	Sub6 n77/ 70 MHz [30 kHz]	PI/2 BPSK	-24.00	14.86	11.40	3.12	V	< 1.00	0.206	23.14	1	1
		QPSK	-24.07	14.79	11.40	3.12	V		0.203	23.07		
		16-QAM	-25.19	13.67	11.40	3.12	V		0.157	21.95		
		64-QAM	-26.49	12.37	11.40	3.12	V		0.116	20.65		
		256-QAM	-28.56	10.30	11.40	3.12	V		0.072	18.58		
3840.00		PI/2 BPSK	-24.80	14.88	11.10	3.14	V		0.192	22.84	1	187
		QPSK	-24.84	14.84	11.10	3.14	V		0.191	22.80		
		16-QAM	-25.78	13.90	11.10	3.14	V		0.153	21.86		
		64-QAM	-27.40	12.28	11.10	3.14	V		0.106	20.24		
		256-QAM	-29.38	10.30	11.10	3.14	V		0.067	18.26		
3945.00		PI/2 BPSK	-25.36	14.48	10.85	3.18	V		0.164	22.15	1	1
		QPSK	-25.48	14.36	10.85	3.18	V		0.160	22.03		
		16-QAM	-26.44	13.40	10.85	3.18	V		0.128	21.07		
		64-QAM	-28.07	11.77	10.85	3.18	V		0.088	19.44		
		256-QAM	-29.74	10.10	10.85	3.18	V		0.060	17.77		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3740.01	Sub6 n77/ 80 MHz [30 kHz]	PI/2 BPSK	-23.95	14.91	11.40	3.10	V	< 1.00	0.209	23.21	1	1
		QPSK	-23.98	14.88	11.40	3.10	V		0.208	23.18		
		16-QAM	-24.95	13.91	11.40	3.10	V		0.166	22.21		
		64-QAM	-26.44	12.42	11.40	3.10	V		0.118	20.72		
		256-QAM	-28.44	10.42	11.40	3.10	V		0.074	18.72		
3840.00		PI/2 BPSK	-24.53	15.15	11.10	3.14	V		0.205	23.11	1	215
		QPSK	-24.56	15.12	11.10	3.14	V		0.203	23.08		
		16-QAM	-25.47	14.21	11.10	3.14	V		0.165	22.17		
		64-QAM	-27.09	12.59	11.10	3.14	V		0.114	20.55		
		256-QAM	-28.97	10.71	11.10	3.14	V		0.074	18.67		
3939.99		PI/2 BPSK	-25.59	13.27	11.40	3.10	V		0.144	21.57	1	108
		QPSK	-25.61	13.25	11.40	3.10	V		0.143	21.55		
		16-QAM	-26.62	12.24	11.40	3.10	V		0.113	20.54		
		64-QAM	-28.13	10.73	11.40	3.10	V		0.080	19.03		
		256-QAM	-30.09	8.77	11.40	3.10	V		0.051	17.07		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3745.02	Sub6 n77/ 90 MHz [30 kHz]	PI/2 BPSK	-23.88	14.86	11.35	3.09	V	< 1.00	0.205	23.12	1	1
		QPSK	-23.90	14.84	11.35	3.09	V		0.204	23.10		
		16-QAM	-24.88	13.86	11.35	3.09	V		0.163	22.12		
		64-QAM	-26.40	12.34	11.35	3.09	V		0.115	20.60		
		256-QAM	-28.38	10.36	11.35	3.09	V		0.073	18.62		
3840.00		PI/2 BPSK	-24.62	15.06	11.10	3.14	V		0.200	23.02	1	243
		QPSK	-24.66	15.02	11.10	3.14	V		0.199	22.98		
		16-QAM	-25.66	14.02	11.10	3.14	V		0.158	21.98		
		64-QAM	-27.18	12.50	11.10	3.14	V		0.111	20.46		
		256-QAM	-29.06	10.62	11.10	3.14	V		0.072	18.58		
3934.98		PI/2 BPSK	-25.35	14.57	10.80	3.16	V		0.166	22.21	1	1
		QPSK	-25.41	14.51	10.80	3.16	V		0.164	22.15		
		16-QAM	-26.32	13.60	10.80	3.16	V		0.133	21.24		
		64-QAM	-27.94	11.98	10.80	3.16	V		0.092	19.62		
		256-QAM	-29.79	10.13	10.80	3.16	V		0.060	17.77		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
3750.00	Sub6 n77/ 100 MHz [30 kHz]	PI/2 BPSK	-23.67	14.96	11.30	3.08	V	< 1.00	0.208	23.18	1	1
		QPSK	-23.70	14.93	11.30	3.08	V		0.207	23.15		
		16-QAM	-24.68	13.95	11.30	3.08	V		0.165	22.17		
		64-QAM	-26.18	12.45	11.30	3.08	V		0.117	20.67		
		256-QAM	-28.21	10.42	11.30	3.08	V		0.073	18.64		
3840.00		PI/2 BPSK	-24.75	14.93	11.10	3.14	V		0.195	22.89	1	271
		QPSK	-24.79	14.89	11.10	3.14	V		0.193	22.85		
		16-QAM	-25.61	14.07	11.10	3.14	V		0.160	22.03		
		64-QAM	-27.26	12.42	11.10	3.14	V		0.109	20.38		
		256-QAM	-29.35	10.33	11.10	3.14	V		0.067	18.29		
3930.00		PI/2 BPSK	-24.48	15.47	10.80	3.16	V		0.205	23.11	1	1
		QPSK	-24.50	15.45	10.80	3.16	V		0.204	23.09		
		16-QAM	-25.67	14.28	10.80	3.16	V		0.156	21.92		
		64-QAM	-26.92	13.03	10.80	3.16	V		0.117	20.67		
		256-QAM	-29.03	10.92	10.80	3.16	V		0.072	18.56		

9.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N77

▣ Anchor Band: B2

▣ Bandwidth: 40 MHz

▣ Modulation: PI/2 BPSK

▣ Distance: 1 meters

▣ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
348000 (3720.00)	7 440.00	-61.35	10.80	-53.48	4.46	V	-47.14	-13.00	1	1
	11 160.00	-61.11	11.50	-48.70	5.61	V	-42.81	-13.00		
	14 880.00	-54.63	13.30	-49.02	6.60	V	-42.32	-13.00		
356000 (3840.00)	7 680.00	-61.44	11.10	-54.58	4.55	V	-48.03	-13.00	1	1
	11 520.00	-61.97	11.50	-50.83	5.70	V	-45.03	-13.00		
	15 360.00	-58.70	15.10	-52.91	6.72	V	-44.53	-13.00		
664000 (3960.00)	7 920.00	-61.52	10.70	-54.08	4.63	H	-48.01	-13.00	1	1
	11 880.00	-61.40	12.20	-51.36	5.81	H	-44.97	-13.00		
	15 840.00	-59.00	14.90	-51.92	6.84	H	-43.86	-13.00		

▣ ENDC-Mode : 2A(10 MHz)-n77A(40 MHz)

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
138900 (1880.0)	3760.00	-60.44	11.64	-60.67	3.16	V	-52.19	-13.00
	5640.00	-59.88	12.00	-53.70	3.93	V	-45.63	-13.00
	7520.00	-60.68	11.54	-46.23	4.51	V	-39.20	-13.00

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n77	10 MHz	3840.00	BPSK	Full RB	0	4.27
			QPSK			5.46
			16-QAM			6.17
			64-QAM			6.30
			256-QAM			6.39
	15 MHz		BPSK			4.83
			QPSK			5.31
			16-QAM			6.03
			64-QAM			6.12
			256-QAM			6.30
	20 MHz		BPSK			4.34
			QPSK			5.26
			16-QAM			6.04
			64-QAM			6.20
			256-QAM			6.33
	25 MHz		BPSK			5.73
			QPSK			5.85
			16-QAM			6.15
			64-QAM			6.24
			256-QAM			6.37
	30 MHz		BPSK			4.74
			QPSK			5.40
			16-QAM			6.13
			64-QAM			6.32
			256-QAM			6.33
	40 MHz		BPSK			4.51
			QPSK			5.39
			16-QAM			6.12
			64-QAM			6.33
			256-QAM			6.38

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
	50 MHz		BPSK			4.24
			QPSK			5.38
			16-QAM			6.14
			64-QAM			6.22
			256-QAM			6.39
	60 MHz		BPSK			4.28
			QPSK			5.42
			16-QAM			6.12
			64-QAM			6.28
			256-QAM			6.32
	70 MHz		BPSK			4.27
			QPSK			5.40
			16-QAM			6.04
			64-QAM			6.20
			256-QAM			6.33
	80 MHz		BPSK			4.39
			QPSK			5.42
			16-QAM			6.12
			64-QAM			6.26
			256-QAM			6.48
	90 MHz		BPSK			4.55
			QPSK			5.42
			16-QAM			6.12
			64-QAM			6.22
			256-QAM			6.43
	100 MHz		BPSK			4.31
			QPSK			5.44
			16-QAM			6.13
			64-QAM			6.28
			256-QAM			6.35

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 483 ~ 542.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n77	10 MHz	3840.00	BPSK	Full RB	0	8.6822
			QPSK			8.6876
			16-QAM			8.6970
			64-QAM			8.7232
			256-QAM			8.7087
	15 MHz		BPSK			12.929
			QPSK			12.955
			16-QAM			12.977
			64-QAM			12.970
			256-QAM			12.928
	20 MHz		BPSK			17.938
			QPSK			17.919
			16-QAM			17.932
			64-QAM			17.907
			256-QAM			17.928
	25 MHz		BPSK			23.007
			QPSK			22.961
			16-QAM			23.004
			64-QAM			22.973
			256-QAM			22.937
	30 MHz		BPSK			26.954
			QPSK			26.952
			16-QAM			26.979
			64-QAM			27.074
			256-QAM			26.946
	40 MHz		BPSK			35.914
			QPSK			35.997
			16-QAM			35.896
			64-QAM			35.963
			256-QAM			35.973

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
	50 MHz		BPSK			46.035
			QPSK			45.876
			16-QAM			45.888
			64-QAM			45.870
			256-QAM			45.947
	60 MHz		BPSK			58.142
			QPSK			58.258
			16-QAM			58.162
			64-QAM			58.102
			256-QAM			57.932
	70 MHz		BPSK			64.836
			QPSK			64.831
			16-QAM			64.633
			64-QAM			64.693
			256-QAM			64.734
	80 MHz		BPSK			77.424
			QPSK			77.611
			16-QAM			77.479
			64-QAM			77.563
			256-QAM			77.627
	90 MHz		BPSK			87.032
			QPSK			87.278
			16-QAM			87.376
			64-QAM			87.178
			256-QAM			87.258
	100 MHz		BPSK			96.908
			QPSK			97.165
			16-QAM			96.957
			64-QAM			96.803
			256-QAM			96.707

Note:

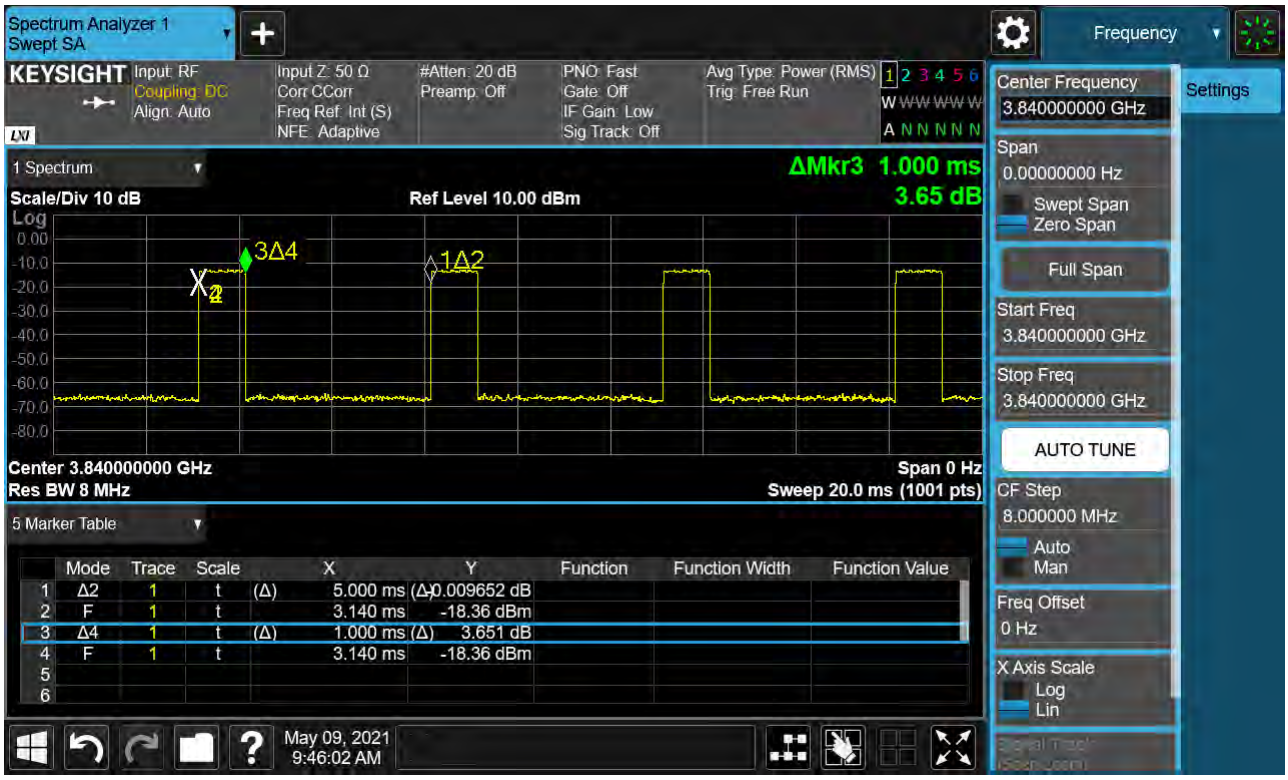
1. Plots of the EUT's Occupied Bandwidth are shown Page 423 ~ 482.

9.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n77	10	3705.00	7.9666	37.805	-71.063	-33.258	-13.00
		3840.00	5.7323	37.805	-70.422	-32.617	
		3975.00	4.9457	37.190	-70.781	-33.591	
	15	3707.52	8.2712	37.805	-70.620	-32.815	
		3840.00	7.9900	37.805	-71.282	-33.477	
		3972.48	8.2677	37.805	-70.663	-32.858	
	20	3710.01	8.5713	37.805	-70.725	-32.920	
		3840.00	4.9322	37.190	-70.822	-33.632	
		3969.99	8.2518	37.805	-70.653	-32.848	
	25	3712.50	7.9841	37.805	-70.902	-33.097	
		3840.00	8.2617	37.805	-70.073	-32.268	
		3967.50	9.6580	37.805	-70.944	-33.139	
	30	3715.02	8.2582	37.805	-70.787	-32.982	
		3840.00	8.0514	37.805	-71.038	-33.233	
		3964.98	6.0270	37.805	-70.794	-32.989	
	40	3720.00	4.5843	37.190	-70.967	-33.777	
		3840.00	8.0165	37.805	-70.215	-32.410	
		3960.00	9.9487	37.805	-71.131	-33.326	
	50	3725.10	8.2308	37.805	-70.334	-32.529	
		3840.00	7.9985	37.805	-70.832	-33.027	
		3954.99	8.2647	37.805	-70.140	-32.335	
	60	3730.02	6.0250	37.805	-70.267	-32.462	
		3840.00	8.2807	37.805	-70.488	-32.683	
		3949.98	8.3046	37.805	-70.510	-32.705	
	70	3735.00	8.0155	37.805	-71.031	-33.226	
		3840.00	9.6730	37.805	-70.360	-32.555	
		3945.00	7.9925	37.805	-70.972	-33.167	
	80	3740.01	9.9551	37.805	-70.839	-33.034	
		3840.00	8.2797	37.805	-70.232	-32.427	
		3939.99	7.9611	37.805	-70.312	-32.507	
	90	3745.02	8.2832	37.805	-70.792	-32.987	
		3840.00	8.3859	37.805	-70.526	-32.721	
		3934.98	8.8794	37.805	-71.118	-33.313	
	100	3750.00	9.7159	37.805	-70.810	-33.005	
		3840.00	8.8789	37.805	-70.671	-32.866	
		3930.00	6.0230	37.805	-70.562	-32.757	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 687 ~ 758.
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 543 ~ 686.
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 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3705.000	100 %	+20(Ref)	3705 000 000	0.0	0.000 000	0.000
	100 %	-30	3705 000 000	0.2	0.000 000	0.000
	100 %	-20	3705 000 001	1.7	0.000 000	0.000
	100 %	-10	3705 000 001	1.3	0.000 000	0.000
	100 %	0	3704 999 998	-1.4	0.000 000	0.000
	100 %	+10	3705 000 001	1.3	0.000 000	0.000
	100 %	+30	3704 999 999	-0.4	0.000 000	0.000
	100 %	+40	3705 000 000	-0.1	0.000 000	0.000
	100 %	+50	3704 999 999	-0.5	0.000 000	0.000
	Batt. Endpoint	+20	3705 000 000	0.0	0.000 000	0.000
3975.000	100 %	+20(Ref)	3974 999 997	0.0	0.000 000	0.000
	100 %	-30	3974 999 996	-0.7	0.000 000	0.000
	100 %	-20	3974 999 994	-2.8	0.000 000	-0.001
	100 %	-10	3974 999 994	-3.1	0.000 000	-0.001
	100 %	0	3974 999 993	-3.6	0.000 000	-0.001
	100 %	+10	3974 999 998	0.9	0.000 000	0.000
	100 %	+30	3974 999 993	-4.0	0.000 000	-0.001
	100 %	+40	3974 999 992	-4.8	0.000 000	-0.001
	100 %	+50	3974 999 995	-2.1	0.000 000	-0.001
	Batt. Endpoint	+20	3974 999 994	-3.3	0.000 000	-0.001

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 519 999	0.0	0.000 000	0.000
	100 %	-30	3707 519 997	-1.4	0.000 000	0.000
	100 %	-20	3707 519 999	0.6	0.000 000	0.000
	100 %	-10	3707 520 001	2.0	0.000 000	0.001
	100 %	0	3707 519 995	-3.6	0.000 000	-0.001
	100 %	+10	3707 519 993	-5.3	0.000 000	-0.001
	100 %	+30	3707 520 000	1.7	0.000 000	0.000
	100 %	+40	3707 519 993	-5.7	0.000 000	-0.002
	100 %	+50	3707 519 997	-1.6	0.000 000	0.000
	Batt. Endpoint	+20	3707 519 996	-2.3	0.000 000	-0.001
3972.480	100 %	+20(Ref)	3972 479 997	0.0	0.000 000	0.000
	100 %	-30	3972 479 997	-0.7	0.000 000	0.000
	100 %	-20	3972 479 995	-2.3	0.000 000	-0.001
	100 %	-10	3972 479 994	-3.8	0.000 000	-0.001
	100 %	0	3972 479 996	-1.8	0.000 000	0.000
	100 %	+10	3972 479 993	-4.7	0.000 000	-0.001
	100 %	+30	3972 479 995	-2.5	0.000 000	-0.001
	100 %	+40	3972 479 993	-4.2	0.000 000	-0.001
	100 %	+50	3972 479 998	0.2	0.000 000	0.000
	Batt. Endpoint	+20	3972 480 000	2.1	0.000 000	0.001

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 009 999	0.0	0.000 000	0.000
	100 %	-30	3710 009 999	0.2	0.000 000	0.000
	100 %	-20	3710 009 996	-3.2	0.000 000	-0.001
	100 %	-10	3710 010 001	2.3	0.000 000	0.001
	100 %	0	3710 009 997	-1.8	0.000 000	0.000
	100 %	+10	3710 009 998	-1.3	0.000 000	0.000
	100 %	+30	3710 009 994	-4.6	0.000 000	-0.001
	100 %	+40	3710 009 996	-2.7	0.000 000	-0.001
	100 %	+50	3710 009 997	-2.2	0.000 000	-0.001
	Batt. Endpoint	+20	3710 009 996	-3.0	0.000 000	-0.001
3969.990	100 %	+20(Ref)	3969 990 000	0.0	0.000 000	0.000
	100 %	-30	3969 990 000	-0.2	0.000 000	0.000
	100 %	-20	3969 989 998	-1.8	0.000 000	0.000
	100 %	-10	3969 990 000	0.2	0.000 000	0.000
	100 %	0	3969 990 000	-0.2	0.000 000	0.000
	100 %	+10	3969 989 996	-3.6	0.000 000	-0.001
	100 %	+30	3969 990 002	1.8	0.000 000	0.000
	100 %	+40	3969 989 998	-1.7	0.000 000	0.000
	100 %	+50	3969 990 000	0.3	0.000 000	0.000
	Batt. Endpoint	+20	3969 990 000	0.2	0.000 000	0.000

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 499 999	0.0	0.000 000	0.000
	100 %	-30	3712 499 996	-2.8	0.000 000	-0.001
	100 %	-20	3712 499 999	0.0	0.000 000	0.000
	100 %	-10	3712 499 997	-1.4	0.000 000	0.000
	100 %	0	3712 499 997	-2.2	0.000 000	-0.001
	100 %	+10	3712 499 997	-1.6	0.000 000	0.000
	100 %	+30	3712 499 998	-1.2	0.000 000	0.000
	100 %	+40	3712 499 997	-1.5	0.000 000	0.000
	100 %	+50	3712 500 000	1.0	0.000 000	0.000
	Batt. Endpoint	+20	3712 499 996	-3.0	0.000 000	-0.001
3967.500	100 %	+20(Ref)	3967 499 997	0.0	0.000 000	0.000
	100 %	-30	3967 499 996	-1.1	0.000 000	0.000
	100 %	-20	3967 499 995	-1.7	0.000 000	0.000
	100 %	-10	3967 499 992	-5.1	0.000 000	-0.001
	100 %	0	3967 499 995	-1.7	0.000 000	0.000
	100 %	+10	3967 499 994	-2.8	0.000 000	-0.001
	100 %	+30	3967 499 996	-1.0	0.000 000	0.000
	100 %	+40	3967 499 995	-1.9	0.000 000	0.000
	100 %	+50	3967 499 993	-3.4	0.000 000	-0.001
	Batt. Endpoint	+20	3967 499 995	-2.4	0.000 000	-0.001

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 019 991	-3.4	0.000 000	-0.001
	100 %	-20	3715 019 991	-3.2	0.000 000	-0.001
	100 %	-10	3715 019 992	-2.5	0.000 000	-0.001
	100 %	0	3715 019 991	-3.1	0.000 000	-0.001
	100 %	+10	3715 019 993	-2.1	0.000 000	-0.001
	100 %	+30	3715 019 991	-3.7	0.000 000	-0.001
	100 %	+40	3715 019 992	-2.9	0.000 000	-0.001
	100 %	+50	3715 019 990	-5.0	0.000 000	-0.001
	Batt. Endpoint	+20	3715 019 991	-3.6	0.000 000	-0.001
3964.980	100 %	+20(Ref)	3964 979 997	0.0	0.000 000	0.000
	100 %	-30	3964 979 995	-1.8	0.000 000	0.000
	100 %	-20	3964 979 994	-2.6	0.000 000	-0.001
	100 %	-10	3964 979 993	-3.8	0.000 000	-0.001
	100 %	0	3964 979 992	-5.2	0.000 000	-0.001
	100 %	+10	3964 979 993	-3.6	0.000 000	-0.001
	100 %	+30	3964 979 997	-0.1	0.000 000	0.000
	100 %	+40	3964 979 995	-1.9	0.000 000	0.000
	100 %	+50	3964 979 997	0.4	0.000 000	0.000
	Batt. Endpoint	+20	3964 980 001	3.7	0.000 000	0.001

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 999 998	0.0	0.000 000	0.000
	100 %	-30	3719 999 997	-0.7	0.000 000	0.000
	100 %	-20	3719 999 997	-1.1	0.000 000	0.000
	100 %	-10	3719 999 998	0.2	0.000 000	0.000
	100 %	0	3719 999 995	-2.5	0.000 000	-0.001
	100 %	+10	3719 999 993	-4.5	0.000 000	-0.001
	100 %	+30	3719 999 994	-3.5	0.000 000	-0.001
	100 %	+40	3719 999 995	-2.7	0.000 000	-0.001
	100 %	+50	3719 999 999	1.5	0.000 000	0.000
	Batt. Endpoint	+20	3719 999 995	-2.7	0.000 000	-0.001
3960.000	100 %	+20(Ref)	3959 999 995	0.0	0.000 000	0.000
	100 %	-30	3959 999 989	-6.2	0.000 000	-0.002
	100 %	-20	3959 999 993	-2.2	0.000 000	-0.001
	100 %	-10	3959 999 994	-1.4	0.000 000	0.000
	100 %	0	3959 999 996	1.0	0.000 000	0.000
	100 %	+10	3959 999 994	-0.9	0.000 000	0.000
	100 %	+30	3959 999 994	-1.3	0.000 000	0.000
	100 %	+40	3959 999 993	-2.3	0.000 000	-0.001
	100 %	+50	3959 999 993	-2.6	0.000 000	-0.001
	Batt. Endpoint	+20	3959 999 995	0.0	0.000 000	0.000

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 010 001	0.0	0.000 000	0.000
	100 %	-30	3725 009 997	-4.4	0.000 000	-0.001
	100 %	-20	3725 009 999	-2.6	0.000 000	-0.001
	100 %	-10	3725 009 998	-3.1	0.000 000	-0.001
	100 %	0	3725 009 998	-3.9	0.000 000	-0.001
	100 %	+10	3725 010 000	-1.6	0.000 000	0.000
	100 %	+30	3725 009 999	-2.6	0.000 000	-0.001
	100 %	+40	3725 010 000	-1.1	0.000 000	0.000
	100 %	+50	3725 009 997	-4.1	0.000 000	-0.001
	Batt. Endpoint	+20	3725 010 000	-1.8	0.000 000	0.000
3954.990	100 %	+20(Ref)	3954 989 996	0.0	0.000 000	0.000
	100 %	-30	3954 989 992	-4.7	0.000 000	-0.001
	100 %	-20	3954 989 996	-0.5	0.000 000	0.000
	100 %	-10	3954 989 993	-3.7	0.000 000	-0.001
	100 %	0	3954 989 996	-0.6	0.000 000	0.000
	100 %	+10	3954 989 995	-1.4	0.000 000	0.000
	100 %	+30	3954 989 992	-4.3	0.000 000	-0.001
	100 %	+40	3954 989 995	-1.2	0.000 000	0.000
	100 %	+50	3954 989 995	-1.6	0.000 000	0.000
	Batt. Endpoint	+20	3954 989 995	-1.2	0.000 000	0.000

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 019 998	0.0	0.000 000	0.000
	100 %	-30	3730 019 994	-3.9	0.000 000	-0.001
	100 %	-20	3730 019 993	-5.0	0.000 000	-0.001
	100 %	-10	3730 019 993	-4.8	0.000 000	-0.001
	100 %	0	3730 019 994	-4.7	0.000 000	-0.001
	100 %	+10	3730 019 997	-1.6	0.000 000	0.000
	100 %	+30	3730 019 995	-3.8	0.000 000	-0.001
	100 %	+40	3730 019 997	-1.2	0.000 000	0.000
	100 %	+50	3730 019 998	-0.1	0.000 000	0.000
	Batt. Endpoint	+20	3730 019 996	-1.9	0.000 000	-0.001
3949.980	100 %	+20(Ref)	3949 979 997	0.0	0.000 000	0.000
	100 %	-30	3949 979 996	-0.8	0.000 000	0.000
	100 %	-20	3949 979 996	-0.8	0.000 000	0.000
	100 %	-10	3949 979 995	-2.1	0.000 000	-0.001
	100 %	0	3949 979 994	-2.6	0.000 000	-0.001
	100 %	+10	3949 979 993	-3.6	0.000 000	-0.001
	100 %	+30	3949 979 997	0.1	0.000 000	0.000
	100 %	+40	3949 979 996	-0.7	0.000 000	0.000
	100 %	+50	3949 979 998	1.0	0.000 000	0.000
	Batt. Endpoint	+20	3949 979 994	-3.1	0.000 000	-0.001

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 999 998	0.0	0.000 000	0.000
	100 %	-30	3734 999 994	-3.9	0.000 000	-0.001
	100 %	-20	3734 999 994	-3.6	0.000 000	-0.001
	100 %	-10	3734 999 994	-3.9	0.000 000	-0.001
	100 %	0	3734 999 996	-2.2	0.000 000	-0.001
	100 %	+10	3734 999 994	-4.0	0.000 000	-0.001
	100 %	+30	3734 999 994	-3.8	0.000 000	-0.001
	100 %	+40	3734 999 997	-1.1	0.000 000	0.000
	100 %	+50	3734 999 995	-3.2	0.000 000	-0.001
	Batt. Endpoint	+20	3734 999 993	-4.4	0.000 000	-0.001
3945.000	100 %	+20(Ref)	3945 000 000	0.0	0.000 000	0.000
	100 %	-30	3944 999 999	-1.1	0.000 000	0.000
	100 %	-20	3945 000 000	0.4	0.000 000	0.000
	100 %	-10	3944 999 997	-3.4	0.000 000	-0.001
	100 %	0	3944 999 997	-3.4	0.000 000	-0.001
	100 %	+10	3944 999 999	-1.3	0.000 000	0.000
	100 %	+30	3945 000 000	0.1	0.000 000	0.000
	100 %	+40	3944 999 996	-4.4	0.000 000	-0.001
	100 %	+50	3944 999 997	-3.2	0.000 000	-0.001
	Batt. Endpoint	+20	3944 999 997	-3.1	0.000 000	-0.001

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 009 998	0.0	0.000 000	0.000
	100 %	-30	3740 009 997	-0.9	0.000 000	0.000
	100 %	-20	3740 009 993	-5.0	0.000 000	-0.001
	100 %	-10	3740 009 996	-1.8	0.000 000	0.000
	100 %	0	3740 009 996	-2.5	0.000 000	-0.001
	100 %	+10	3740 009 992	-6.1	0.000 000	-0.002
	100 %	+30	3740 009 992	-6.1	0.000 000	-0.002
	100 %	+40	3740 009 997	-0.9	0.000 000	0.000
	100 %	+50	3740 009 997	-1.6	0.000 000	0.000
	Batt. Endpoint	+20	3740 009 996	-2.3	0.000 000	-0.001
3939.990	100 %	+20(Ref)	3939 989 998	0.0	0.000 000	0.000
	100 %	-30	3939 989 994	-3.8	0.000 000	-0.001
	100 %	-20	3939 989 998	0.2	0.000 000	0.000
	100 %	-10	3939 989 997	-0.9	0.000 000	0.000
	100 %	0	3939 989 997	-1.1	0.000 000	0.000
	100 %	+10	3939 989 994	-4.2	0.000 000	-0.001
	100 %	+30	3939 989 997	-1.2	0.000 000	0.000
	100 %	+40	3939 989 997	-1.2	0.000 000	0.000
	100 %	+50	3939 989 994	-4.4	0.000 000	-0.001
	Batt. Endpoint	+20	3939 989 995	-2.6	0.000 000	-0.001

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 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 019 998	0.0	0.000 000	0.000
	100 %	-30	3745 019 995	-3.0	0.000 000	-0.001
	100 %	-20	3745 019 995	-3.1	0.000 000	-0.001
	100 %	-10	3745 019 996	-1.2	0.000 000	0.000
	100 %	0	3745 019 998	-0.1	0.000 000	0.000
	100 %	+10	3745 019 996	-2.0	0.000 000	-0.001
	100 %	+30	3745 019 994	-3.9	0.000 000	-0.001
	100 %	+40	3745 019 994	-3.3	0.000 000	-0.001
	100 %	+50	3745 019 998	0.9	0.000 000	0.000
	Batt. Endpoint	+20	3745 019 998	0.9	0.000 000	0.000
3934.980	100 %	+20(Ref)	3934 979 998	0.0	0.000 000	0.000
	100 %	-30	3934 979 997	-1.2	0.000 000	0.000
	100 %	-20	3934 979 995	-2.9	0.000 000	-0.001
	100 %	-10	3934 979 995	-2.9	0.000 000	-0.001
	100 %	0	3934 979 994	-4.6	0.000 000	-0.001
	100 %	+10	3934 979 996	-2.0	0.000 000	-0.001
	100 %	+30	3934 979 996	-2.1	0.000 000	-0.001
	100 %	+40	3934 979 995	-3.4	0.000 000	-0.001
	100 %	+50	3934 979 995	-3.5	0.000 000	-0.001
	Batt. Endpoint	+20	3934 979 995	-3.6	0.000 000	-0.001

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.550 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
3750.000	100 %	+20(Ref)	3749 999 996	0.0	0.000 000	0.000
	100 %	-30	3749 999 993	-3.3	0.000 000	-0.001
	100 %	-20	3749 999 993	-3.3	0.000 000	-0.001
	100 %	-10	3749 999 994	-2.4	0.000 000	-0.001
	100 %	0	3749 999 995	-1.5	0.000 000	0.000
	100 %	+10	3749 999 993	-2.9	0.000 000	-0.001
	100 %	+30	3749 999 993	-3.1	0.000 000	-0.001
	100 %	+40	3749 999 994	-2.2	0.000 000	-0.001
	100 %	+50	3749 999 996	0.1	0.000 000	0.000
	Batt. Endpoint	+20	3749 999 992	-3.9	0.000 000	-0.001
3930.000	100 %	+20(Ref)	3929 999 998	0.0	0.000 000	0.000
	100 %	-30	3929 999 995	-2.6	0.000 000	-0.001
	100 %	-20	3929 999 996	-1.4	0.000 000	0.000
	100 %	-10	3929 999 994	-3.7	0.000 000	-0.001
	100 %	0	3929 999 996	-2.0	0.000 000	0.000
	100 %	+10	3929 999 996	-2.0	0.000 000	0.000
	100 %	+30	3929 999 995	-3.1	0.000 000	-0.001
	100 %	+40	3929 999 995	-2.7	0.000 000	-0.001
	100 %	+50	3929 999 995	-3.2	0.000 000	-0.001
	Batt. Endpoint	+20	3929 999 994	-3.5	0.000 000	-0.001

10. TEST PLOTS(3450 MHz - 3550 MHz)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

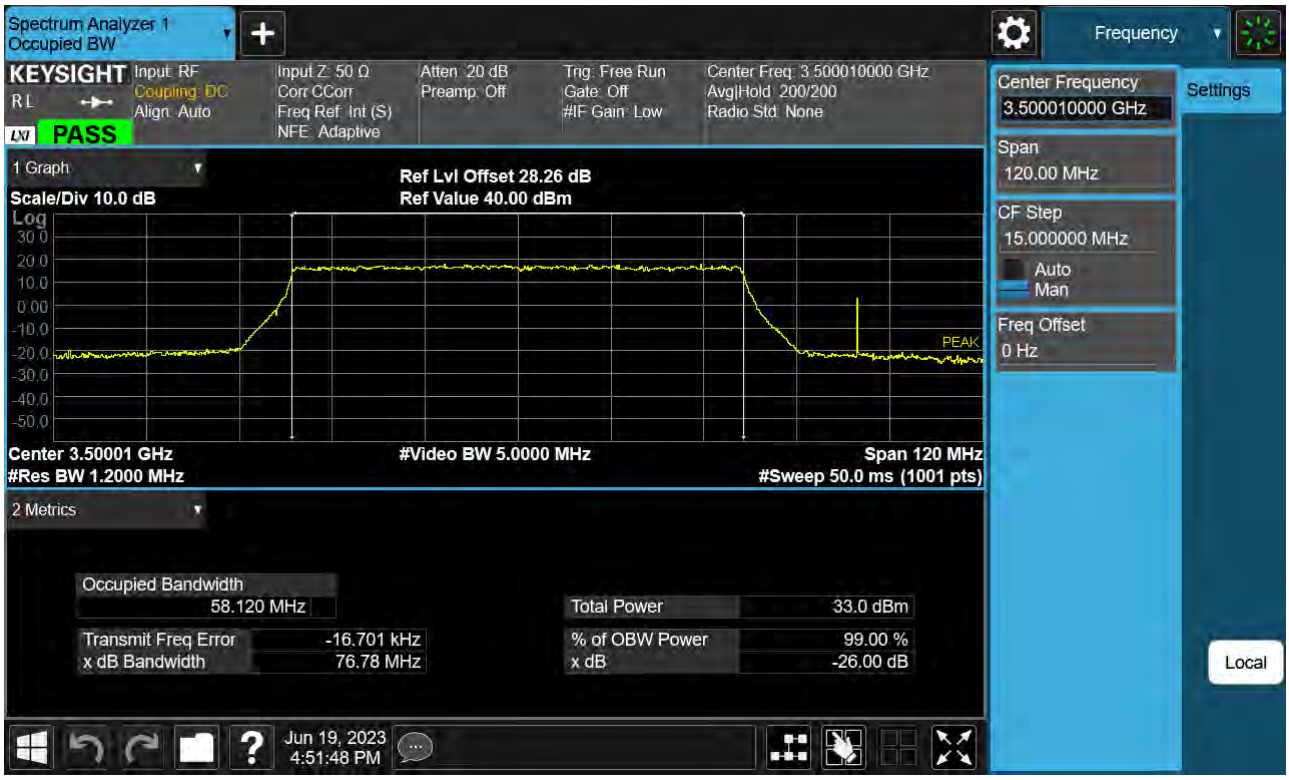
Sub6 n77. Occupied Bandwidth Plot (50 M BW Ch.633334 256QAM)

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

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

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

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



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

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

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

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

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

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

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

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

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

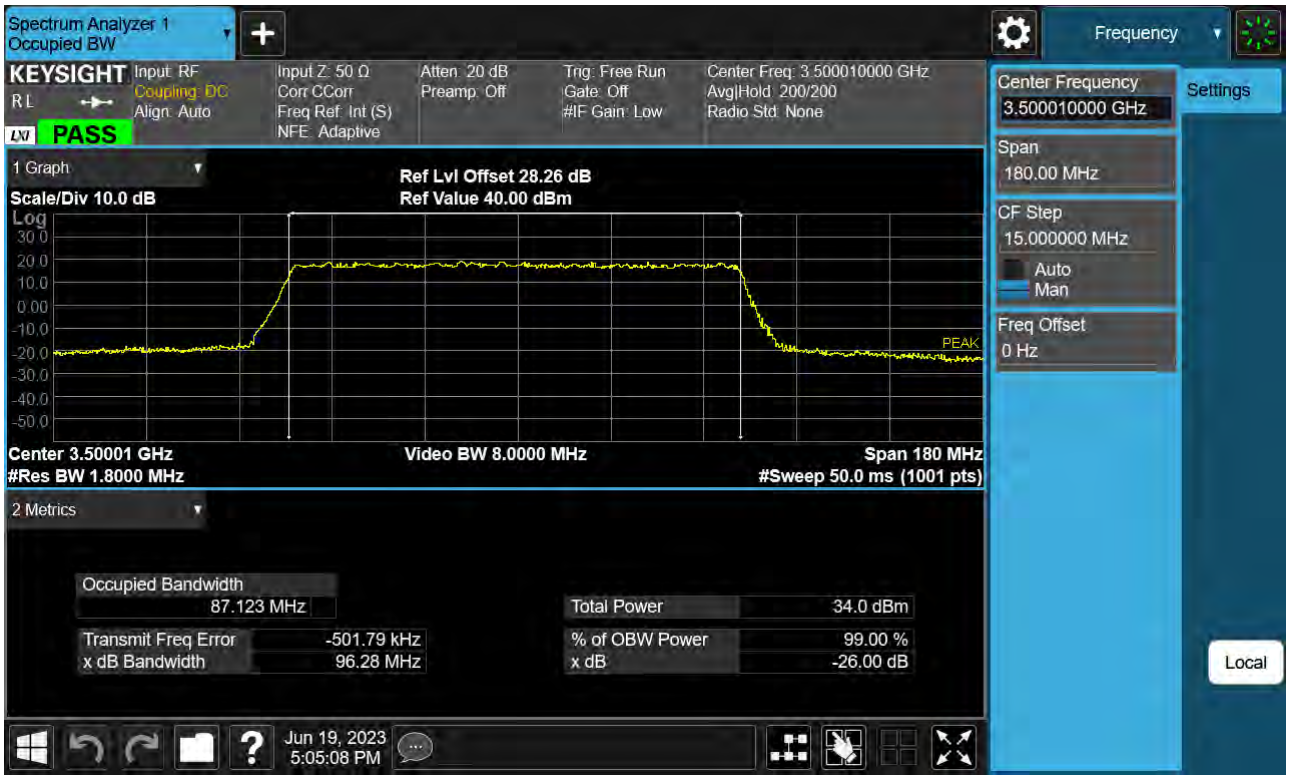
Sub6 n77. Occupied Bandwidth Plot (80 M BW Ch.633334 64QAM)

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

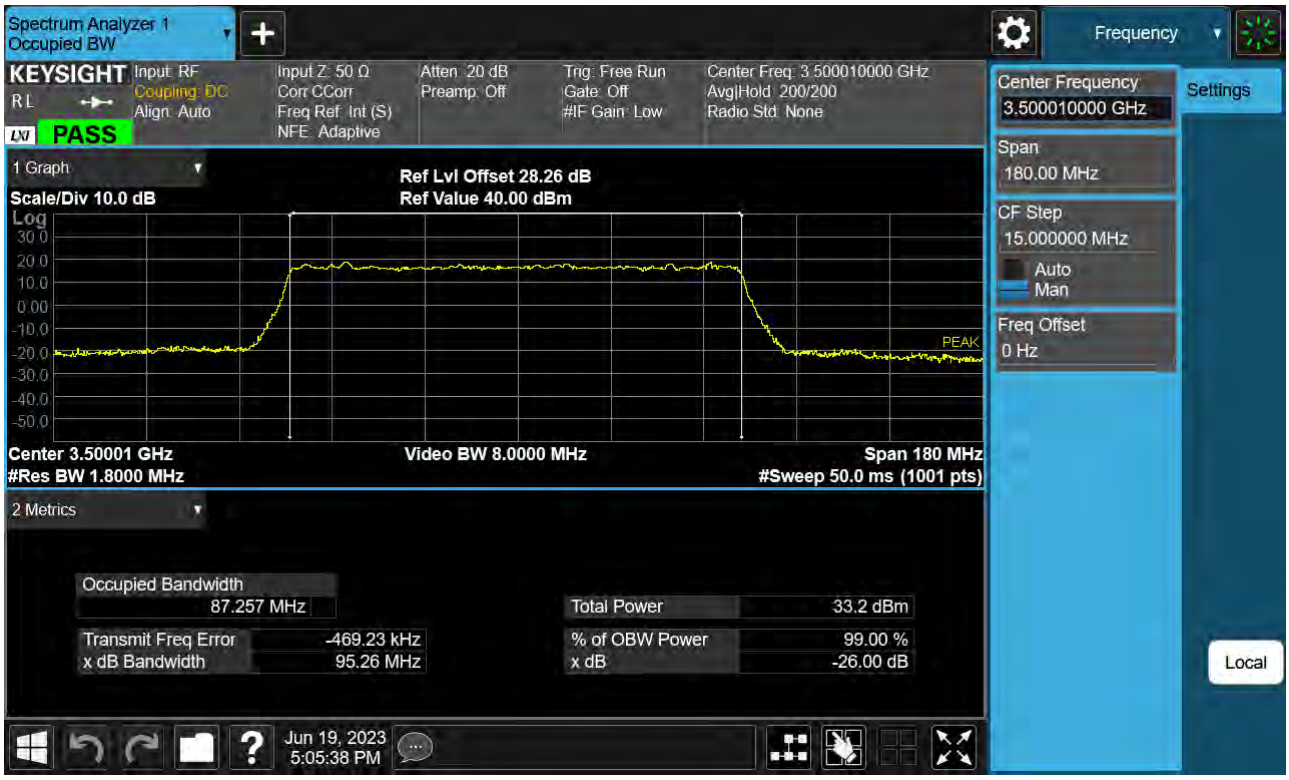
Sub6 n77. Occupied Bandwidth Plot (90 M BW Ch.633334 BPSK)

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

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



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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

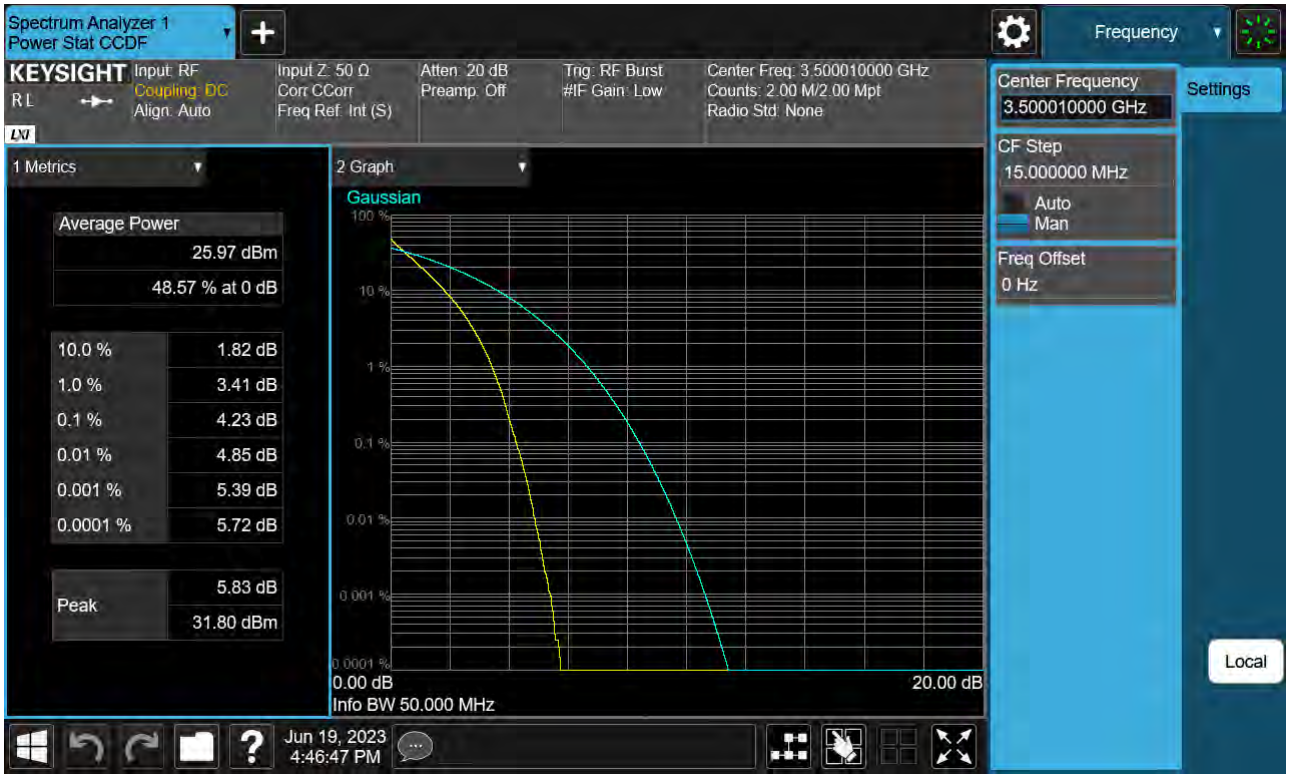
Sub6 n77. PAR Plot (40 M BW_Ch.633334_QPSK)

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

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

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

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



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

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

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

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