

FCC Sub6 REPORT

Certification

Applicant Name:

SAMSUNG Electronics Co., Ltd.

Date of Issue:

January 26, 2022

Location:

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

Report No.: HCT-RF-2201-FC105

FCC ID:

A3LSMA536U

APPLICANT:

SAMSUNG Electronics Co., Ltd.

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

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

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

Main2 Antenna

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n41 (10)	2501.010 – 2685.000	8M66G7D	PI/2 BPSK	0.175	22.42
		8M65G7D	QPSK	0.172	22.36
		8M64W7D	16QAM	0.139	21.42
		8M65W7D	64QAM	0.094	19.72
		8M63W7D	256QAM	0.062	17.92
Sub6 n41 (15)	2503.500 – 2682.480	12M9G7D	PI/2 BPSK	0.171	22.34
		13M0G7D	QPSK	0.165	22.17
		13M0W7D	16QAM	0.131	21.17
		12M9W7D	64QAM	0.091	19.58
		12M9W7D	256QAM	0.058	17.65
Sub6 n41 (20)	2506.020 – 2679.990	18M0G7D	PI/2 BPSK	0.164	22.16
		18M0G7D	QPSK	0.163	22.11
		18M0W7D	16QAM	0.133	21.23
		17M9W7D	64QAM	0.091	19.59
		17M9W7D	256QAM	0.057	17.57
Sub6 n41 (30)	2511.000 – 2674.980	27M0G7D	PI/2 BPSK	0.169	22.27
		27M0G7D	QPSK	0.167	22.24
		27M0W7D	16QAM	0.135	21.31
		27M0W7D	64QAM	0.089	19.50
		27M0W7D	256QAM	0.057	17.53
Sub6 n41 (40)	2516.010 – 2670.000	35M9G7D	PI/2 BPSK	0.178	22.51
		36M0G7D	QPSK	0.177	22.47
		35M9W7D	16QAM	0.135	21.29
		35M8W7D	64QAM	0.100	20.00
		35M9W7D	256QAM	0.060	17.79
Sub6 n41 (50)	2521.020 – 2664.990	45M8G7D	PI/2 BPSK	0.177	22.48
		45M7G7D	QPSK	0.175	22.43
		45M7W7D	16QAM	0.139	21.44
		45M6W7D	64QAM	0.093	19.68
		45M7W7D	256QAM	0.064	18.07
Sub6 n41 (60)	2526.000 – 2659.980	58M1G7D	PI/2 BPSK	0.173	22.37
		57M9G7D	QPSK	0.172	22.36
		57M7W7D	16QAM	0.136	21.33
		58M0W7D	64QAM	0.099	19.94
		57M8W7D	256QAM	0.060	17.78
Sub6 n41 (70)	2531.010 – 2655.000	64M5G7D	PI/2 BPSK	0.176	22.45
		64M3G7D	QPSK	0.174	22.41
		64M3W7D	16QAM	0.134	21.26
		64M5W7D	64QAM	0.097	19.89
		64M4W7D	256QAM	0.060	17.79
Sub6 n41 (80)	2536.020 – 2649.990	77M2G7D	PI/2 BPSK	0.198	22.97
		77M2G7D	QPSK	0.198	22.96
		77M1W7D	16QAM	0.154	21.87
		77M1W7D	64QAM	0.108	20.35
		77M2W7D	256QAM	0.071	18.52
Sub6 n41 (90)	2541.000 – 2644.980	87M0G7D	PI/2 BPSK	0.202	23.05
		86M8G7D	QPSK	0.200	23.02
		87M0W7D	16QAM	0.161	22.08
		87M1W7D	64QAM	0.110	20.43
		86M8W7D	256QAM	0.068	18.34
Sub6 n41 (100)	2546.010 – 2640.000	96M5G7D	PI/2 BPSK	0.194	22.87
		96M7G7D	QPSK	0.190	22.79
		96M5W7D	16QAM	0.152	21.83
		96M4W7D	64QAM	0.104	20.18
		96M4W7D	256QAM	0.068	18.31

Sub2 Antenna

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n41 (10)	2501.010 – 2685.000	8M68G7D	PI/2 BPSK	0.063	17.96
		8M66G7D	QPSK	0.062	17.95
		8M66W7D	16QAM	0.050	16.98
		8M67W7D	64QAM	0.034	15.32
		8M65W7D	256QAM	0.021	13.28
Sub6 n41 (15)	2503.500 – 2682.480	13M0G7D	PI/2 BPSK	0.064	18.08
		13M0G7D	QPSK	0.064	18.05
		13M0W7D	16QAM	0.051	17.08
		12M9W7D	64QAM	0.035	15.44
		12M9W7D	256QAM	0.023	13.53
Sub6 n41 (20)	2506.020 – 2679.990	17M9G7D	PI/2 BPSK	0.065	18.16
		17M8G7D	QPSK	0.065	18.13
		17M9W7D	16QAM	0.051	17.09
		17M9W7D	64QAM	0.035	15.50
		17M9W7D	256QAM	0.023	13.57
Sub6 n41 (30)	2511.000 – 2674.980	26M9G7D	PI/2 BPSK	0.067	18.28
		27M0G7D	QPSK	0.067	18.27
		26M9W7D	16QAM	0.053	17.22
		26M9W7D	64QAM	0.036	15.59
		26M8W7D	256QAM	0.023	13.64
Sub6 n41 (40)	2516.010 – 2670.000	35M9G7D	PI/2 BPSK	0.066	18.17
		35M9G7D	QPSK	0.065	18.15
		36M0W7D	16QAM	0.052	17.18
		35M8W7D	64QAM	0.036	15.52
		35M8W7D	256QAM	0.023	13.61
Sub6 n41 (50)	2521.020 – 2664.990	45M8G7D	PI/2 BPSK	0.067	18.24
		45M6G7D	QPSK	0.066	18.22
		45M8W7D	16QAM	0.054	17.31
		45M8W7D	64QAM	0.036	15.55
		45M7W7D	256QAM	0.023	13.59
Sub6 n41 (60)	2526.000 – 2659.980	57M9G7D	PI/2 BPSK	0.063	18.01
		57M9G7D	QPSK	0.063	17.98
		57M9W7D	16QAM	0.050	17.01
		57M8W7D	64QAM	0.034	15.33
		57M8W7D	256QAM	0.022	13.44
Sub6 n41 (70)	2531.000 – 2655.000	64M6G7D	PI/2 BPSK	0.067	18.25
		64M5G7D	QPSK	0.067	18.23
		64M5W7D	16QAM	0.053	17.28
		64M3W7D	64QAM	0.037	15.68
		64M3W7D	256QAM	0.023	13.71
Sub6 n41 (80)	2536.020 – 2649.990	77M2G7D	PI/2 BPSK	0.065	18.13
		77M0G7D	QPSK	0.065	18.12
		77M1W7D	16QAM	0.051	17.11
		77M1W7D	64QAM	0.035	15.50
		77M2W7D	256QAM	0.023	13.58
Sub6 n41 (90)	2541.000 – 2644.980	87M0G7D	PI/2 BPSK	0.066	18.21
		86M8G7D	QPSK	0.066	18.19
		86M8W7D	16QAM	0.052	17.16
		86M7W7D	64QAM	0.036	15.58
		86M9W7D	256QAM	0.023	13.68
Sub6 n41 (100)	2546.010 – 2640.000	96M6G7D	PI/2 BPSK	0.067	18.26
		96M5G7D	QPSK	0.067	18.25
		96M5W7D	16QAM	0.053	17.26
		96M5W7D	64QAM	0.037	15.66
		96M4W7D	256QAM	0.024	13.78

Report No.: HCT-RF-2201-FC105

REVIEWED BY



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



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

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

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

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

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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2201-FC105	January 26, 2022	- First Approval Report

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

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MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMA536U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2
EUT Type:	Mobile phone
Model(s):	SM-A536U
Additional Model(s):	SM-A536U1/DS, SM-S536DL, SM-A536W
SCS(kHz):	30
Bandwidth(MHz):	10, 15, 20, 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(SCS 30kHz):	2501.010 – 2685.000 : 10 MHz 2503.500 – 2682.480 : 15 MHz 2506.020 – 2679.990 : 20 MHz 2511.000 – 2674.980 : 30 MHz 2516.010 – 2670.000 : 40 MHz 2521.020 – 2664.990 : 50 MHz 2526.000 – 2659.980 : 60 MHz 2531.010 – 2655.000 : 70 MHz 2536.020 – 2649.990 : 80 MHz 2541.000 – 2644.980 : 90 MHz 2546.010 – 2640.000 : 100 MHz
Date(s) of Tests:	November 15, 2021 ~ January 25, 2022
Serial number:	Radiated: R3CRB0ZAKDW (Sub2 Antenna), R3CRA0XAS5M (Main2 Antenna) Conducted: R3CRA0Y7HRZ (Sub2 Antenna), R3CRA0Y7HRZ (Main2 Antenna)

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

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

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

2.2. MEASURING INSTRUMENT CALIBRATION

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

2.3. TEST FACILITY

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

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

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

3.2 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

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

Test Note

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

The power is calculated by the following formula;

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

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

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

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

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

Test Note

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

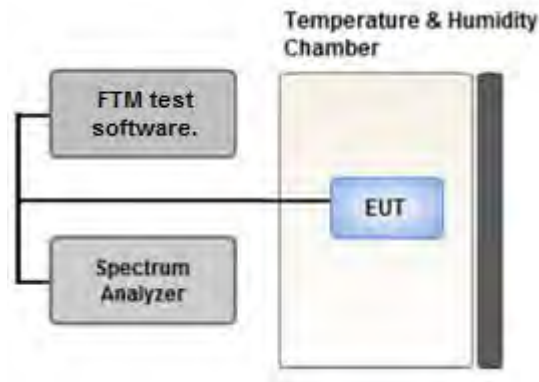
$$\text{Result}_{(\text{dBm})} = \text{Pg}_{(\text{dBm})} - \text{cable loss}_{(\text{dB})} + \text{antenna gain}_{(\text{dBi})}$$

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

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

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

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① CCDF Procedure for PAPR

Test Settings

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:
 - .- for continuous transmissions, set to 1 ms,
 - .- or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
4. Record the maximum PAPR level associated with a probability of 0.1 %.

② Alternate Procedure for PAPR

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

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

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

Test Settings(Peak Power)

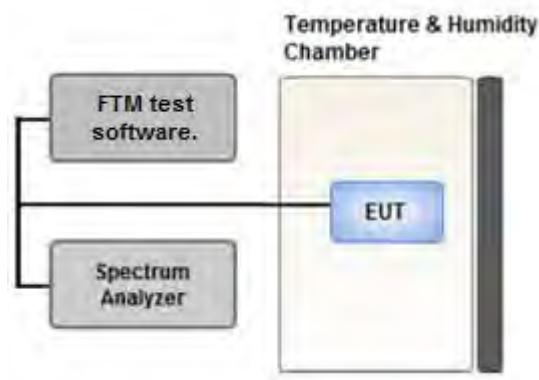
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW $\geq 3 \times$ RBW.

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

Test Settings(Average Power)

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

3.5 OCCUPIED BANDWIDTH.



Test setup

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

The EUT makes a call to the communication simulator.

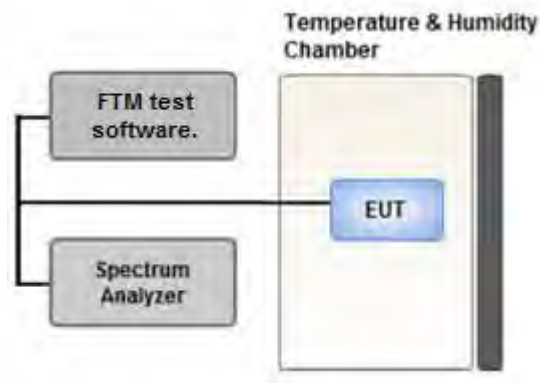
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

Test Settings

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

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

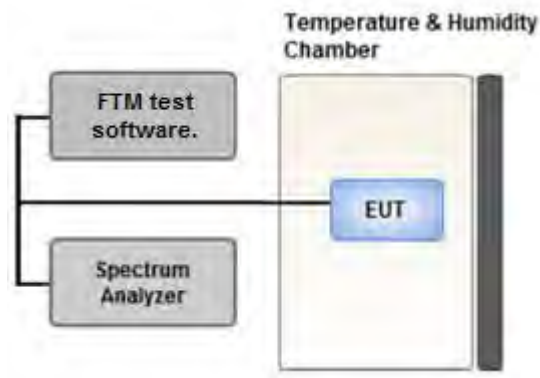
Test Overview

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

Test Settings

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

3.7 CHANNEL 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 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.

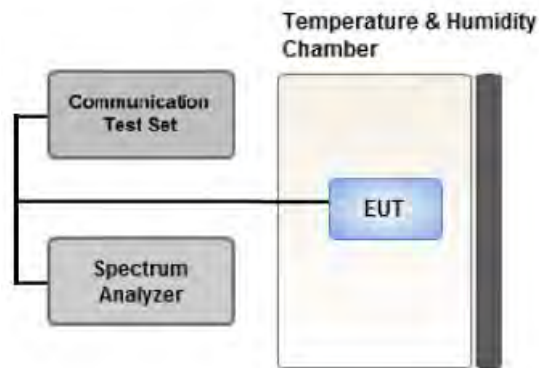
Test Settings

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. Within 1 MHz of the channel edge the RBW should be 2 % of EBW, then 1 MHz after that.
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Notes

1. The attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge,
2. $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge.
3. $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge.
4. The attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz.
5. $55 + 10 \log (P)$ dB at or below 2490.5 MHz.
6. X is the greater of 6MHz or the actual emission bandwidth
7. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer

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: Power Class 2(SA), Power Class 3(SA/ NSA)

Main2 Antenna Worst case: Power Class 2(SA)

Sub2 Antenna Worst case: Power Class 3(NSA)

- Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)

Worst case : Stand alone

- We were performed the RSE test in condition of co-location. There has no significant emission raised.

Mode : WWAN + WLAN 5 GHz + BT (Worst case : Stand alone)

- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).

All EN-DC mode of operation were investigated and the worst case configuration results are reported.

Main2 Antenna Worst case: 12A(10 MHz)-n41A(90 MHz)

Sub2 Antenna Worst case: 2A(10 MHz)-n41A(30 MHz)

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

Please refer to the table below.

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

(Worst case : SM-A536U)

[Main2 Antenna 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		X
Radiated Spurious and Harmonic Emissions	PI/2 BPSK	See Section 8.2		Z

[Sub2 Antenna Worst case]

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

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.

(Worst case: DFT-S-OFDM)

- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.

(Worst case: PI/2 BPSK)

- All modes of operation were investigated and the worst case configuration results are reported.

Mode: Power Class 2(SA), Power Class 3(SA/ NSA)

Main2 Antenna Worst case: Power Class 2(SA)

Sub2 Antenna Worst case: Power Class 3(NSA)

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

Please refer to the table below.

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

(Worst case : SM-A536U)

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth, Peak-To-Average Ratio	PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100	Mid	Full RB	0
Channel 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
		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, 30, 40, 50, 60, 70, 80, 90, 100	Low, Mid High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100	Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

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

Note:

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

5. MEASUREMENT UNCERTAINTY

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

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

6. SUMMARY OF TEST RESULTS

6.1 Test Condition : Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§2.1051, §27.53(m)(4)	■ $< 40 + 10\log_{10} (P[\text{Watts}])$ at Channel edges ■ $< 43 + 10\log_{10} (P[\text{Watts}])$ between 5 and X MHz from Channel edges ■ $< 55 + 10\log_{10} (P[\text{Watts}])$ beyond X MHz beyond from Channel edges ■ $< 43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz	PASS
Conducted Output Power	§2.1046	N/A	<u>See Note1</u>
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(h)(2)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§2.1053, §27.53(m)(4)	$< 55 + 10\log_{10} (P[\text{Watts}])$	PASS

Note:

1. Radiated tests were tested using 5G Wireless Tester.

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

Ch./ Freq.		Measured Level(dBm)	Substitute Level(dBm)	Ant. Gain (dBd)	C.L	Pol.	ERP	
channel	Freq.(MHz)						W	dBm
128	824.20	-21.37	38.40	-10.61	0.95	H	0.483	26.84

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

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

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Level(dBm)	Substitute Level(dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
518598	2593.0	-15.75	18.45	9.90	1.76	H	0.456	26.59

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

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

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

8. TEST DATA(Main2 Antenna)

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
2501.010	Sub6 41/ 10 MHz [30 kHz]	PI/2 BPSK	-22.65	13.83	10.20	2.49	H	< 2.00	0.143	21.54	1	12
		QPSK	-22.66	13.82	10.20	2.49	H		0.142	21.53		
		16-QAM	-23.65	12.83	10.20	2.49	H		0.113	20.54		
		64-QAM	-25.38	11.10	10.20	2.49	H		0.076	18.81		
		256-QAM	-27.23	9.25	10.20	2.49	H		0.050	16.96		
2592.990		PI/2 BPSK	-21.90	14.56	10.42	2.56	H		0.175	22.42	1	1
		QPSK	-21.96	14.50	10.42	2.56	H		0.172	22.36		
		16-QAM	-22.90	13.56	10.42	2.56	H		0.139	21.42		
		64-QAM	-24.60	11.86	10.42	2.56	H		0.094	19.72		
		256-QAM	-26.40	10.06	10.42	2.56	H		0.062	17.92		
2685.000		PI/2 BPSK	-23.47	14.12	10.38	2.64	H		0.153	21.86	1	1
		QPSK	-23.54	14.05	10.38	2.64	H		0.151	21.79		
		16-QAM	-24.54	13.05	10.38	2.64	H		0.120	20.79		
		64-QAM	-26.03	11.56	10.38	2.64	H		0.085	19.30		
		256-QAM	-27.94	9.65	10.38	2.64	H		0.055	17.39		

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
2503.500	Sub6 41/ 15 MHz [30 kHz]	PI/2 BPSK	-22.78	13.77	10.24	2.50	H	< 2.00	0.142	21.51	1	19
		QPSK	-22.82	13.73	10.24	2.50	H		0.140	21.47		
		16-QAM	-23.70	12.85	10.24	2.50	H		0.115	20.59		
		64-QAM	-25.29	11.26	10.24	2.50	H		0.079	19.00		
		256-QAM	-27.56	8.99	10.24	2.50	H		0.047	16.73		
2592.990		PI/2 BPSK	-21.98	14.48	10.42	2.56	H		0.171	22.34	1	1
		QPSK	-22.15	14.31	10.42	2.56	H		0.165	22.17		
		16-QAM	-23.15	13.31	10.42	2.56	H		0.131	21.17		
		64-QAM	-24.74	11.72	10.42	2.56	H		0.091	19.58		
		256-QAM	-26.67	9.79	10.42	2.56	H		0.058	17.65		
2682.480		PI/2 BPSK	-23.37	14.26	10.34	2.64	H		0.157	21.96	1	1
		QPSK	-23.42	14.21	10.34	2.64	H		0.155	21.91		
		16-QAM	-24.53	13.10	10.34	2.64	H		0.120	20.80		
		64-QAM	-25.96	11.67	10.34	2.64	H		0.086	19.37		
		256-QAM	-27.93	9.70	10.34	2.64	H		0.055	17.40		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2506.020	Sub6 41/ 20 MHz [30 kHz]	PI/2 BPSK	-22.48	14.07	10.24	2.50	H	< 2.00	0.152	21.81	1	25
		QPSK	-22.50	14.05	10.24	2.50	H		0.151	21.79		
		16-QAM	-23.51	13.04	10.24	2.50	H		0.120	20.78		
		64-QAM	-24.99	11.56	10.24	2.50	H		0.085	19.30		
		256-QAM	-26.93	9.62	10.24	2.50	H		0.055	17.36		
2592.990		PI/2 BPSK	-22.16	14.30	10.42	2.56	H		0.164	22.16	1	25
		QPSK	-22.21	14.25	10.42	2.56	H		0.163	22.11		
		16-QAM	-23.09	13.37	10.42	2.56	H		0.133	21.23		
		64-QAM	-24.73	11.73	10.42	2.56	H		0.091	19.59		
		256-QAM	-26.75	9.71	10.42	2.56	H		0.057	17.57		
2679.990		PI/2 BPSK	-23.46	14.32	10.34	2.63	H		0.160	22.03	1	25
		QPSK	-23.47	14.31	10.34	2.63	H		0.159	22.02		
		16-QAM	-24.44	13.34	10.34	2.63	H		0.127	21.05		
		64-QAM	-26.07	11.71	10.34	2.63	H		0.088	19.42		
		256-QAM	-28.00	9.78	10.34	2.63	H		0.056	17.49		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2511.000	Sub6 41/ 30 MHz [30 kHz]	PI/2 BPSK	-22.48	14.21	10.20	2.51	H	< 2.00	0.155	21.90	1	39
		QPSK	-22.50	14.19	10.20	2.51	H		0.154	21.88		
		16-QAM	-23.40	13.29	10.20	2.51	H		0.125	20.98		
		64-QAM	-25.15	11.54	10.20	2.51	H		0.084	19.23		
		256-QAM	-27.19	9.50	10.20	2.51	H		0.052	17.19		
2592.990		PI/2 BPSK	-22.05	14.41	10.42	2.56	H		0.169	22.27	1	39
		QPSK	-22.08	14.38	10.42	2.56	H		0.167	22.24		
		16-QAM	-23.01	13.45	10.42	2.56	H		0.135	21.31		
		64-QAM	-24.82	11.64	10.42	2.56	H		0.089	19.50		
		256-QAM	-26.79	9.67	10.42	2.56	H		0.057	17.53		
2674.980		PI/2 BPSK	-23.31	14.02	10.30	2.62	H		0.148	21.70	1	39
		QPSK	-23.32	14.01	10.30	2.62	H		0.148	21.69		
		16-QAM	-24.34	12.99	10.30	2.62	H		0.117	20.67		
		64-QAM	-25.96	11.37	10.30	2.62	H		0.080	19.05		
		256-QAM	-28.14	9.19	10.30	2.62	H		0.049	16.87		

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
2516.010	Sub6 41/ 40 MHz [30 kHz]	PI/2 BPSK	-21.86	14.72	10.32	2.53	H	< 2.00	0.178	22.51	1	53
		QPSK	-21.90	14.68	10.32	2.53	H		0.177	22.47		
		16-QAM	-23.09	13.49	10.32	2.53	H		0.134	21.28		
		64-QAM	-24.37	12.21	10.32	2.53	H		0.100	20.00		
		256-QAM	-26.58	10.00	10.32	2.53	H		0.060	17.79		
2592.990		PI/2 BPSK	-22.08	14.38	10.42	2.56	H		0.168	22.24	1	53
		QPSK	-22.14	14.32	10.42	2.56	H		0.165	22.18		
		16-QAM	-23.03	13.43	10.42	2.56	H		0.135	21.29		
		64-QAM	-24.51	11.95	10.42	2.56	H		0.096	19.81		
		256-QAM	-26.70	9.76	10.42	2.56	H		0.058	17.62		
2670.000		PI/2 BPSK	-23.47	13.40	10.26	2.60	H		0.128	21.06	1	1
		QPSK	-23.58	13.29	10.26	2.60	H		0.124	20.95		
		16-QAM	-24.34	12.53	10.26	2.60	H		0.104	20.19		
		64-QAM	-25.94	10.93	10.26	2.60	H		0.072	18.59		
		256-QAM	-28.24	8.63	10.26	2.60	H		0.043	16.29		

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
2521.020	Sub6 41/ 50 MHz [30 kHz]	PI/2 BPSK	-21.87	14.67	10.36	2.55	H	< 2.00	0.177	22.48	1	66
		QPSK	-21.92	14.62	10.36	2.55	H		0.175	22.43		
		16-QAM	-22.91	13.63	10.36	2.55	H		0.139	21.44		
		64-QAM	-24.67	11.87	10.36	2.55	H		0.093	19.68		
		256-QAM	-26.28	10.26	10.36	2.55	H		0.064	18.07		
2592.990		PI/2 BPSK	-22.15	14.31	10.42	2.56	H		0.165	22.17	1	66
		QPSK	-22.18	14.28	10.42	2.56	H		0.164	22.14		
		16-QAM	-23.17	13.29	10.42	2.56	H		0.130	21.15		
		64-QAM	-24.86	11.60	10.42	2.56	H		0.088	19.46		
		256-QAM	-26.70	9.76	10.42	2.56	H		0.058	17.62		
2664.990		PI/2 BPSK	-23.60	13.24	10.22	2.60	H		0.122	20.86	1	66
		QPSK	-23.64	13.20	10.22	2.60	H		0.121	20.82		
		16-QAM	-24.67	12.17	10.22	2.60	H		0.095	19.79		
		64-QAM	-26.34	10.50	10.22	2.60	H		0.065	18.12		
		256-QAM	-28.20	8.64	10.22	2.60	H		0.042	16.26		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2526.000	Sub6 41/ 60 MHz [30 kHz]	PI/2 BPSK	-21.83	14.53	10.40	2.56	H	< 2.00	0.173	22.37	1	80
		QPSK	-21.84	14.52	10.40	2.56	H		0.172	22.36		
		16-QAM	-22.88	13.48	10.40	2.56	H		0.136	21.32		
		64-QAM	-24.26	12.10	10.40	2.56	H		0.099	19.94		
		256-QAM	-26.42	9.94	10.40	2.56	H		0.060	17.78		
2592.990		PI/2 BPSK	-21.95	14.51	10.42	2.56	H		0.173	22.37	1	1
		QPSK	-22.01	14.45	10.42	2.56	H		0.170	22.31		
		16-QAM	-22.99	13.47	10.42	2.56	H		0.136	21.33		
		64-QAM	-24.51	11.95	10.42	2.56	H		0.096	19.81		
		256-QAM	-26.62	9.84	10.42	2.56	H		0.059	17.70		
2659.980		PI/2 BPSK	-23.39	13.42	10.18	2.60	H		0.126	21.00	1	80
		QPSK	-23.41	13.40	10.18	2.60	H		0.125	20.98		
		16-QAM	-24.49	12.32	10.18	2.60	H		0.098	19.90		
		64-QAM	-26.11	10.70	10.18	2.60	H		0.067	18.28		
		256-QAM	-28.09	8.72	10.18	2.60	H		0.043	16.30		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2531.010	Sub6 41/ 70 MHz [30 kHz]	PI/2 BPSK	-21.60	14.57	10.44	2.56	H	< 2.00	0.176	22.45	1	94
		QPSK	-21.64	14.53	10.44	2.56	H		0.174	22.41		
		16-QAM	-22.79	13.38	10.44	2.56	H		0.134	21.26		
		64-QAM	-24.16	12.01	10.44	2.56	H		0.097	19.89		
		256-QAM	-26.26	9.91	10.44	2.56	H		0.060	17.79		
2592.990		PI/2 BPSK	-22.11	14.35	10.42	2.56	H		0.166	22.21	1	94
		QPSK	-22.12	14.34	10.42	2.56	H		0.166	22.20		
		16-QAM	-23.14	13.32	10.42	2.56	H		0.131	21.18		
		64-QAM	-24.90	11.56	10.42	2.56	H		0.087	19.42		
		256-QAM	-26.80	9.66	10.42	2.56	H		0.057	17.52		
2655.000		PI/2 BPSK	-22.99	13.89	10.54	2.63	H		0.151	21.80	1	1
		QPSK	-23.02	13.86	10.54	2.63	H		0.150	21.77		
		16-QAM	-23.89	12.99	10.54	2.63	H		0.123	20.90		
		64-QAM	-25.77	11.11	10.54	2.63	H		0.080	19.02		
		256-QAM	-27.69	9.19	10.54	2.63	H		0.051	17.10		

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
2536.020	Sub6 41/ 80 MHz [30 kHz]	PI/2 BPSK	-21.37	15.00	10.52	2.55	H	< 2.00	0.198	22.97	1	108
		QPSK	-21.38	14.99	10.52	2.55	H		0.198	22.96		
		16-QAM	-22.47	13.90	10.52	2.55	H		0.154	21.87		
		64-QAM	-23.99	12.38	10.52	2.55	H		0.108	20.35		
		256-QAM	-25.82	10.55	10.52	2.55	H		0.071	18.52		
2592.990		PI/2 BPSK	-22.14	14.32	10.42	2.56	H		0.165	22.18	1	108
		QPSK	-22.24	14.22	10.42	2.56	H		0.161	22.08		
		16-QAM	-23.24	13.22	10.42	2.56	H		0.128	21.08		
		64-QAM	-24.98	11.48	10.42	2.56	H		0.086	19.34		
		256-QAM	-26.58	9.88	10.42	2.56	H		0.059	17.74		
2649.990		PI/2 BPSK	-22.71	13.92	10.13	2.62	H		0.139	21.43	1	1
		QPSK	-22.74	13.89	10.13	2.62	H		0.138	21.40		
		16-QAM	-23.62	13.01	10.13	2.62	H		0.113	20.52		
		64-QAM	-25.27	11.36	10.13	2.62	H		0.077	18.87		
		256-QAM	-27.36	9.27	10.13	2.62	H		0.048	16.78		

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
2541.000	Sub6 41/ 90 MHz [30 kHz]	PI/2 BPSK	-21.33	15.05	10.56	2.56	H	< 2.00	0.202	23.05	1	122
		QPSK	-21.36	15.02	10.56	2.56	H		0.200	23.02		
		16-QAM	-22.30	14.08	10.56	2.56	H		0.161	22.08		
		64-QAM	-23.95	12.43	10.56	2.56	H		0.110	20.43		
		256-QAM	-26.04	10.34	10.56	2.56	H		0.068	18.34		
2592.990		PI/2 BPSK	-21.64	14.82	10.42	2.56	H		0.185	22.68	1	1
		QPSK	-21.67	14.79	10.42	2.56	H		0.184	22.65		
		16-QAM	-22.71	13.75	10.42	2.56	H		0.145	21.61		
		64-QAM	-24.36	12.10	10.42	2.56	H		0.099	19.96		
		256-QAM	-26.11	10.35	10.42	2.56	H		0.066	18.21		
2644.980		PI/2 BPSK	-22.24	14.65	10.16	2.63	H		0.165	22.18	1	1
		QPSK	-22.37	14.52	10.16	2.63	H		0.160	22.05		
		16-QAM	-23.32	13.57	10.16	2.63	H		0.129	21.10		
		64-QAM	-25.03	11.86	10.16	2.63	H		0.087	19.39		
		256-QAM	-26.94	9.95	10.16	2.63	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
2546.010	Sub6 41/ 100 MHz [30 kHz]	PI/2 BPSK	-21.51	14.87	10.56	2.56	H	< 2.00	0.194	22.87	1	136
		QPSK	-21.59	14.79	10.56	2.56	H		0.190	22.79		
		16-QAM	-22.55	13.83	10.56	2.56	H		0.152	21.83		
		64-QAM	-24.20	12.18	10.56	2.56	H		0.104	20.18		
		256-QAM	-26.07	10.31	10.56	2.56	H		0.068	18.31		
2592.990		PI/2 BPSK	-21.61	14.85	10.42	2.56	H		0.187	22.71	1	1
		QPSK	-21.64	14.82	10.42	2.56	H		0.185	22.68		
		16-QAM	-22.63	13.83	10.42	2.56	H		0.148	21.69		
		64-QAM	-24.39	12.07	10.42	2.56	H		0.098	19.93		
		256-QAM	-26.28	10.18	10.42	2.56	H		0.064	18.04		
2640.000		PI/2 BPSK	-22.30	14.59	10.16	2.63	H		0.163	22.12	1	1
		QPSK	-22.40	14.49	10.16	2.63	H		0.159	22.02		
		16-QAM	-23.40	13.49	10.16	2.63	H		0.126	21.02		
		64-QAM	-25.14	11.75	10.16	2.63	H		0.085	19.28		
		256-QAM	-26.87	10.02	10.16	2.63	H		0.057	17.55		

8.2 RADIATED SPURIOUS EMISSIONS

- NR Band: N41
- Bandwidth: 10 MHz
- Modulation: PI/2 BPSK
- Distance: 1 meters
- SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	Detector	RB	
										Size	Offset
500202 (2501.010)	5 002.02	-43.65	10.90	-43.61	3.78	H	-36.49	-25.00	Peak	1	12
	7 503.03	-48.96	11.51	-39.76	4.54	H	-32.79	-25.00	Average		
	10 004.04	-59.71	11.78	-48.62	5.29	H	-42.13	-25.00	Peak		
	12 505.05	-59.46	12.99	-48.07	6.03	H	-41.10	-25.00	Peak		
	15 006.06	-56.11	14.42	-47.89	6.76	V	-40.23	-25.00	Peak		
518598 (2592.990)	5 185.98	-40.63	11.47	-40.28	3.90	H	-32.70	-25.00	Peak	1	1
	7 778.97	-46.79	11.28	-37.37	4.66	H	-30.75	-25.00	Peak		
	10 371.96	-60.45	11.80	-47.75	5.41	H	-41.36	-25.00	Peak		
	12 964.95	-63.50	12.70	-51.22	6.26	V	-44.78	-25.00	Peak		
	15 557.94	-61.14	16.22	-52.71	6.86	V	-43.35	-25.00	Peak		
537000 (2685.000)	5 370.00	-40.79	11.84	-41.20	3.87	H	-33.23	-25.00	Average	1	1
	8 055.00	-44.16	11.30	-34.77	4.73	H	-28.19	-25.00	Peak		
	10 740.00	-58.29	11.70	-44.53	5.48	H	-38.31	-25.00	Peak		
	13 425.00	-62.58	12.50	-49.84	6.34	V	-43.68	-25.00	Peak		
	16 110.00	-64.37	16.50	-52.11	6.98	V	-42.59	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 15 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)	Detector	RB	
										Size	Offset
500700 (2503.500)	5 007.00	-41.74	10.91	-41.45	3.78	H	-34.31	-25.00	Peak	1	19
	7 510.50	-49.16	11.52	-39.68	4.52	H	-32.68	-25.00	Average		
	10 014.00	-60.18	11.77	-49.32	5.30	H	-42.84	-25.00	Peak		
	12 517.50	-59.14	12.97	-47.91	6.06	H	-41.00	-25.00	Peak		
	15 021.00	-56.65	14.48	-48.19	6.74	H	-40.45	-25.00	Peak		
518598 (2592.990)	5 185.98	-36.18	11.47	-35.83	3.90	H	-28.25	-25.00	Peak	1	1
	7 778.97	-47.84	11.28	-38.42	4.66	H	-31.80	-25.00	Peak		
	10 371.96	-60.48	11.80	-47.78	5.41	H	-41.39	-25.00	Peak		
	12 964.95	-64.49	12.70	-52.21	6.26	H	-45.77	-25.00	Peak		
	15 557.94	-62.13	16.22	-53.70	6.86	H	-44.34	-25.00	Peak		
536496 (2682.480)	5 364.96	-40.54	11.83	-40.87	3.86	H	-32.89	-25.00	Average	1	1
	8 047.44	-45.24	11.30	-35.93	4.72	H	-29.35	-25.00	Peak		
	10 729.92	-59.72	11.70	-45.81	5.47	H	-39.58	-25.00	Peak		
	13 412.40	-61.14	12.50	-48.14	6.34	H	-41.98	-25.00	Peak		
	16 094.88	-64.45	16.50	-52.64	7.00	H	-43.13	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 20 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)	Detector	RB	
										Size	Offset
501204 (2506.020)	5 012.04	-42.35	10.92	-41.79	3.77	H	-34.64	-25.00	Peak	1	25
	7 518.06	-49.01	11.54	-39.65	4.51	H	-32.62	-25.00	Average		
	10 024.08	-60.33	11.75	-49.54	5.30	H	-43.09	-25.00	Peak		
	12 530.10	-60.79	12.94	-49.14	6.10	H	-42.30	-25.00	Peak		
	15 036.12	-58.11	14.54	-49.21	6.72	H	-41.39	-25.00	Peak		
518598 (2592.990)	5 185.98	-38.48	11.47	-38.13	3.90	H	-30.55	-25.00	Peak	1	25
	7 778.97	-46.34	11.28	-36.92	4.66	H	-30.30	-25.00	Peak		
	10 371.96	-63.35	11.80	-50.65	5.41	H	-44.26	-25.00	Peak		
	12 964.95	-64.08	12.70	-51.80	6.26	H	-45.36	-25.00	Peak		
	15 557.94	-59.45	16.22	-51.02	6.86	H	-41.66	-25.00	Peak		
535998 (2679.990)	5 359.98	-40.26	11.82	-40.51	3.84	H	-32.53	-25.00	Average	1	25
	8 039.97	-48.46	11.28	-39.22	4.71	H	-32.65	-25.00	Average		
	10 719.96	-59.24	11.70	-45.24	5.48	H	-39.02	-25.00	Peak		
	13 399.95	-61.69	12.50	-48.25	6.33	H	-42.08	-25.00	Peak		
	16 079.94	-64.86	16.50	-53.41	7.00	H	-43.91	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 30 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)	Detector	RB	
										Size	Offset
502200 (2511.000)	5 022.00	-42.92	10.94	-42.76	3.72	H	-35.54	-25.00	Peak	1	39
	7 533.00	-49.11	11.56	-40.26	4.56	H	-33.25	-25.00	Average		
	10 044.00	-60.31	11.71	-49.31	5.29	H	-42.89	-25.00	Peak		
	12 555.00	-60.42	12.90	-48.50	6.17	H	-41.77	-25.00	Peak		
	15 066.00	-58.54	14.66	-50.72	6.76	H	-42.82	-25.00	Peak		
518598 (2592.990)	5 185.98	-38.28	11.47	-37.93	3.90	H	-30.35	-25.00	Peak	1	39
	7 778.97	-44.52	11.28	-35.10	4.66	H	-28.48	-25.00	Peak		
	10 371.96	-59.46	11.80	-46.76	5.41	H	-40.37	-25.00	Peak		
	12 964.95	-64.36	12.70	-52.08	6.26	H	-45.64	-25.00	Peak		
	15 557.94	-63.58	16.22	-55.15	6.86	H	-45.79	-25.00	Peak		
534996 (2674.980)	5 349.96	-40.26	11.80	-40.25	3.79	H	-32.24	-25.00	Average	1	39
	8 024.94	-45.20	11.25	-35.63	4.69	H	-29.07	-25.00	Peak		
	10 699.92	-60.74	11.70	-47.13	5.51	H	-40.94	-25.00	Peak		
	13 374.90	-63.12	12.60	-50.52	6.29	H	-44.21	-25.00	Peak		
	16 049.88	-64.64	16.50	-53.07	6.99	H	-43.56	-25.00	Peak		

☐ NR Band: N41
☐ 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)	Detector	RB	
										Size	Offset
503202 (2516.010)	5 032.02	-42.44	10.96	-42.73	3.66	H	-35.43	-25.00	Peak	1	53
	7 548.03	-48.61	11.58	-39.51	4.63	H	-32.56	-25.00	Average		
	10 064.04	-58.55	11.67	-47.70	5.31	H	-41.34	-25.00	Peak		
	12 580.05	-58.05	12.90	-46.86	6.12	H	-40.08	-25.00	Peak		
	15 096.06	-59.42	14.78	-50.43	6.81	H	-42.46	-25.00	Peak		
518598 (2592.990)	5 185.98	-38.42	11.47	-38.07	3.90	H	-30.49	-25.00	Peak	1	53
	7 778.97	-46.23	11.28	-36.81	4.66	H	-30.19	-25.00	Peak		
	10 371.96	-62.71	11.80	-50.01	5.41	H	-43.62	-25.00	Peak		
	12 964.95	-63.86	12.70	-51.58	6.26	H	-45.14	-25.00	Peak		
	15 557.94	-62.83	16.22	-54.40	6.86	H	-45.04	-25.00	Peak		
534000 (2670.000)	5 340.00	-35.70	11.78	-36.19	3.78	H	-28.19	-25.00	Peak	1	1
	8 010.00	-45.21	11.22	-35.45	4.66	H	-28.89	-25.00	Peak		
	10 680.00	-61.39	11.70	-47.13	5.56	H	-40.99	-25.00	Peak		
	13 350.00	-62.68	12.70	-49.33	6.30	H	-42.93	-25.00	Peak		
	16 020.00	-65.41	16.50	-55.00	6.96	H	-45.46	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 50 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	Detector	RB	
										Size	Offset
504204 (2521.020)	5 042.04	-43.53	10.98	-44.29	3.65	H	-36.96	-25.00	Peak	1	66
	7 563.06	-49.79	11.60	-40.59	4.65	H	-33.63	-25.00	Average		
	10 084.08	-61.38	11.63	-50.34	5.35	H	-44.05	-25.00	Peak		
	12 605.10	-58.83	12.90	-47.08	6.08	H	-40.26	-25.00	Peak		
	15 126.12	-60.32	14.85	-52.24	6.75	H	-44.14	-25.00	Peak		
518598 (2592.990)	5 185.98	-40.28	11.47	-39.93	3.90	H	-32.35	-25.00	Peak	1	66
	7 778.97	-45.70	11.28	-36.28	4.66	H	-29.66	-25.00	Peak		
	10 371.96	-60.80	11.80	-48.10	5.41	H	-41.71	-25.00	Peak		
	12 964.95	-65.01	12.70	-52.73	6.26	H	-46.29	-25.00	Peak		
	15 557.94	-63.93	16.22	-55.50	6.86	H	-46.14	-25.00	Peak		
532998 (2664.990)	5 329.98	-36.64	11.76	-37.03	3.76	H	-29.03	-25.00	Peak	1	66
	7 994.97	-46.32	11.19	-36.72	4.64	H	-30.16	-25.00	Peak		
	10 659.96	-59.44	11.70	-44.91	5.51	H	-38.72	-25.00	Peak		
	13 324.95	-63.88	12.75	-50.23	6.39	H	-43.86	-25.00	Peak		
	15 989.94	-65.15	16.50	-54.31	6.96	H	-44.77	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 60 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)	Detector	RB	
										Size	Offset
505200 (2526.000)	5 052.00	-40.76	11.00	-41.19	3.66	H	-33.85	-25.00	Peak	1	80
	7 578.00	-45.19	11.60	-36.34	4.60	H	-29.34	-25.00	Peak		
	10 104.00	-60.48	11.60	-49.39	5.34	H	-43.12	-25.00	Peak		
	12 630.00	-60.22	12.90	-49.11	6.19	H	-42.40	-25.00	Peak		
	15 156.00	-59.73	14.91	-50.86	6.76	H	-42.70	-25.00	Peak		
518598 (2592.990)	5 185.98	-40.16	11.47	-39.81	3.90	H	-32.23	-25.00	Peak	1	1
	7 778.97	-44.97	11.28	-35.55	4.66	H	-28.93	-25.00	Peak		
	10 371.96	-63.69	11.80	-50.99	5.41	H	-44.60	-25.00	Peak		
	12 964.95	-63.73	12.70	-51.45	6.26	H	-45.01	-25.00	Peak		
	15 557.94	-62.61	16.22	-54.18	6.86	H	-44.82	-25.00	Peak		
531996 (2659.980)	5 319.96	-36.44	11.74	-37.16	3.80	H	-29.22	-25.00	Peak	1	80
	7 979.94	-47.58	11.16	-38.20	4.66	H	-31.70	-25.00	Peak		
	10 639.92	-60.00	11.70	-46.15	5.44	H	-39.89	-25.00	Peak		
	13 299.90	-64.04	12.80	-50.96	6.31	H	-44.47	-25.00	Peak		
	15 959.88	-64.28	16.50	-54.21	6.97	H	-44.68	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 70 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)	Detector	RB	
										Size	Offset
506202 (2531.010)	5 062.02	-38.28	11.04	-38.29	3.70	H	-30.95	-25.00	Peak	1	94
	7 593.03	-44.75	11.60	-36.11	4.58	H	-29.09	-25.00	Peak		
	10 124.04	-59.76	11.60	-48.37	5.32	H	-42.09	-25.00	Peak		
	12 655.05	-60.57	12.88	-48.32	6.22	H	-41.65	-25.00	Peak		
	15 186.06	-61.01	14.97	-52.86	6.78	H	-44.67	-25.00	Peak		
518598 (2592.990)	5 185.98	-39.12	11.47	-38.77	3.90	H	-31.19	-25.00	Peak	1	94
	7 778.97	-45.97	11.28	-36.55	4.66	H	-29.93	-25.00	Peak		
	10 371.96	-59.28	11.80	-46.58	5.41	H	-40.19	-25.00	Peak		
	12 964.95	-63.32	12.70	-51.04	6.26	H	-44.60	-25.00	Peak		
	15 557.94	-63.96	16.22	-55.53	6.86	H	-46.17	-25.00	Peak		
531000 (2655.000)	5 310.00	-38.51	11.72	-38.78	3.87	H	-30.93	-25.00	Peak	1	1
	7 965.00	-49.22	11.13	-39.43	4.73	H	-33.03	-25.00	Average		
	10 620.00	-60.48	11.70	-46.86	5.47	H	-40.63	-25.00	Peak		
	13 275.00	-63.00	12.85	-49.96	6.29	H	-43.39	-25.00	Peak		
	15 930.00	-64.52	16.46	-54.21	6.91	H	-44.66	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 80 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)	Detector	RB	
										Size	Offset
507204 (2536.020)	5 082.00	-39.36	11.12	-39.06	3.74	H	-31.68	-25.00	Peak	1	108
	7 623.00	-44.82	11.60	-35.37	4.55	H	-28.32	-25.00	Peak		
	10 164.00	-60.45	11.60	-48.71	5.35	H	-42.45	-25.00	Peak		
	12 705.00	-62.48	12.69	-49.22	6.17	H	-42.70	-25.00	Peak		
	15 246.00	-59.74	15.09	-51.41	6.76	H	-43.08	-25.00	Peak		
518598 (2592.990)	5 185.98	-37.31	11.47	-36.96	3.90	H	-29.38	-25.00	Peak	1	108
	7 778.97	-44.89	11.28	-35.47	4.66	H	-28.85	-25.00	Peak		
	10 371.96	-60.37	11.80	-47.67	5.41	H	-41.28	-25.00	Peak		
	12 964.95	-63.65	12.70	-51.37	6.26	H	-44.93	-25.00	Peak		
	15 557.94	-62.97	16.22	-54.54	6.86	H	-45.18	-25.00	Peak		
529998 (2649.990)	5 289.96	-37.77	11.68	-37.92	3.90	H	-30.14	-25.00	Peak	1	1
	7 934.94	-48.50	11.07	-39.29	4.69	H	-32.91	-25.00	Peak		
	10 579.92	-60.21	11.70	-47.41	5.51	H	-41.22	-25.00	Peak		
	13 224.90	-62.58	12.90	-49.36	6.32	H	-42.78	-25.00	Peak		
	15 869.88	-60.72	16.40	-51.42	6.95	H	-41.97	-25.00	Peak		

☐ NR Band: N41
☐ Bandwidth: 90 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)	Detector	RB	
										Size	Offset
508200 (2541.000)	5 092.02	-39.71	11.16	-39.80	3.79	H	-32.43	-25.00	Peak	1	122
	7 638.03	-44.01	11.60	-35.18	4.58	H	-28.16	-25.00	Peak		
	10 184.04	-62.55	11.60	-51.02	5.38	H	-44.79	-25.00	Peak		
	12 730.05	-63.32	12.64	-50.29	6.20	H	-43.85	-25.00	Peak		
	15 276.06	-60.35	15.20	-51.75	6.80	H	-43.35	-25.00	Peak		
518598 (2592.990)	5 185.98	-40.93	11.47	-40.58	3.90	H	-33.00	-25.00	Peak	1	1
	7 778.97	-44.85	11.28	-35.43	4.66	H	-28.81	-25.00	Peak		
	10 371.96	-63.04	11.80	-50.34	5.41	H	-43.95	-25.00	Peak		
	12 964.95	-63.71	12.70	-51.43	6.26	H	-44.99	-25.00	Peak		
	15 557.94	-61.14	16.22	-52.71	6.86	H	-43.35	-25.00	Peak		
528996 (2644.980)	5 280.00	-39.41	11.66	-40.11	3.84	H	-32.29	-25.00	Peak	1	1
	7 920.00	-45.53	11.04	-35.99	4.64	H	-29.59	-25.00	Peak		
	10 560.00	-62.81	11.70	-49.68	5.47	H	-43.45	-25.00	Peak		
	13 200.00	-63.09	12.90	-50.89	6.27	H	-44.26	-25.00	Peak		
	15 840.00	-63.75	16.40	-53.64	6.90	H	-44.14	-25.00	Peak		

- ☐ NR Band: N41
☐ Bandwidth: 100 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meters
☐ SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	Detector	RB	
										Size	Offset
509202 (2546.010)	5 092.02	-41.13	11.16	-41.22	3.79	H	-33.85	-25.00	Peak	1	136
	7 638.03	-49.66	11.60	-40.83	4.58	H	-33.81	-25.00	Average		
	10 184.04	-62.60	11.60	-51.07	5.38	H	-44.84	-25.00	Peak		
	12 730.05	-63.82	12.64	-50.79	6.20	H	-44.35	-25.00	Peak		
	15 276.06	-60.91	15.20	-52.31	6.80	H	-43.91	-25.00	Peak		
518598 (2592.990)	5 185.98	-41.33	11.47	-40.98	3.90	H	-33.40	-25.00	Peak	1	1
	7 778.97	-50.46	11.28	-41.04	4.66	H	-34.42	-25.00	Average		
	10 371.96	-63.58	11.80	-50.88	5.41	H	-44.49	-25.00	Peak		
	12 964.95	-61.40	12.70	-49.12	6.26	H	-42.68	-25.00	Peak		
	15 557.94	-62.47	16.22	-54.04	6.86	H	-44.68	-25.00	Peak		
528000 (2640.000)	5 280.00	-38.97	11.66	-39.67	3.84	H	-31.85	-25.00	Peak	1	1
	7 920.00	-45.41	11.04	-35.87	4.64	H	-29.47	-25.00	Peak		
	10 560.00	-61.05	11.70	-47.92	5.47	H	-41.69	-25.00	Peak		
	13 200.00	-63.31	12.90	-51.11	6.27	H	-44.48	-25.00	Peak		
	15 840.00	-63.88	16.40	-53.77	6.90	H	-44.27	-25.00	Peak		

All ENDC of operation were investigated and the worst case configuration results are reported.

(Worst case: 12A(10 MHz)-n41A(90 MHz))

- ▣ NR Band: N41
- ▣ LTE Band(Anchor): B12
- ▣ Bandwidth: 10 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meters
- ▣ SCS: 30 kHz

ENDC-Mode: 12A – n41A (PC3)

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
23095 (707.5)	1 415.00	-61.21	7.61	-67.84	1.87	H	-62.09	-13.00
	2 122.50	-61.35	8.98	-67.17	2.31	H	-60.50	-13.00
	2 830.00	-61.34	10.52	-65.35	2.73	V	-57.56	-13.00

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n41	10 MHz	2592.990	BPSK	24	0	4.26
			QPSK			5.36
			16-QAM			5.83
			64-QAM			6.13
			256-QAM			6.30
	15 MHz		BPSK	36		4.17
			QPSK			5.22
			16-QAM			5.69
			64-QAM			6.01
			256-QAM			6.29
	20 MHz		BPSK	50		4.18
			QPSK			5.25
			16-QAM			5.74
			64-QAM			6.00
			256-QAM			6.30
	30 MHz		BPSK	75		4.32
			QPSK			5.29
			16-QAM			5.77
			64-QAM			6.08
			256-QAM			6.39
	40 MHz		BPSK	100		4.38
			QPSK			5.35
			16-QAM			5.81
			64-QAM			6.14
			256-QAM			6.42
	50 MHz		BPSK	128		4.49
			QPSK			5.17
			16-QAM			5.76
			64-QAM			6.07
			256-QAM			6.34
	60 MHz		BPSK	162		4.13
			QPSK			5.13
			16-QAM			5.75
			64-QAM			6.11
			256-QAM			6.37
	70 MHz		BPSK	180		4.38
			QPSK			5.17
			16-QAM			5.76
			64-QAM			6.09
			256-QAM			6.41
	80 MHz		BPSK	216		4.67
			QPSK			5.19
			16-QAM			5.80
			64-QAM			6.10
			256-QAM			6.38
	90 MHz		BPSK	243		4.25
			QPSK			5.11
			16-QAM			5.72
			64-QAM			6.05
			256-QAM			6.35
	100 MHz		BPSK	270		4.43
			QPSK			5.12
			16-QAM			5.70
			64-QAM			6.04
			256-QAM			6.36

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 167 ~ 221.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n41	10 MHz	2592.990	BPSK	24	0	8.6634
			QPSK			8.6536
			16-QAM			8.6403
			64-QAM			8.6497
			256-QAM			8.6288
	15 MHz		BPSK	36		12.938
			QPSK			12.973
			16-QAM			12.954
			64-QAM			12.916
			256-QAM			12.914
	20 MHz		BPSK	50		17.949
			QPSK			17.963
			16-QAM			17.953
			64-QAM			17.895
			256-QAM			17.899
	30 MHz		BPSK	75		26.982
			QPSK			27.021
			16-QAM			26.972
			64-QAM			26.945
			256-QAM			26.973
	40 MHz		BPSK	100		35.917
			QPSK			35.953
			16-QAM			35.890
			64-QAM			35.823
			256-QAM			35.906
	50 MHz		BPSK	128		45.807
			QPSK			45.744
			16-QAM			45.726
			64-QAM			45.638
			256-QAM			45.717
	60 MHz		BPSK	162		58.083
			QPSK			57.882
			16-QAM			57.743
			64-QAM			57.960
			256-QAM			57.820
	70 MHz		BPSK	180		64.490
			QPSK			64.267
			16-QAM			64.305
			64-QAM			64.506
			256-QAM			64.362
	80 MHz		BPSK	216		77.206
			QPSK			77.215
			16-QAM			77.142
			64-QAM			77.111
			256-QAM			77.185
	90 MHz		BPSK	243		86.973
			QPSK			86.792
			16-QAM			86.946
			64-QAM			87.052
			256-QAM			86.754
	100 MHz		BPSK	270		96.458
			QPSK			96.675
			16-QAM			96.522
			64-QAM			96.376
			256-QAM			96.352

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 112 ~ 166.

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 n41	10	2501.010	8.3096	37.805	-70.402	-32.597	-25.00
		2592.990	8.2722	37.805	-69.143	-31.338	
		2685.000	4.0708	37.190	-69.830	-32.640	
	15	2503.500	4.0020	37.190	-69.992	-32.802	
		2592.990	9.4187	37.805	-69.798	-31.993	
		2682.480	9.1516	37.805	-70.359	-32.554	
	20	2506.020	4.9332	37.190	-69.931	-32.741	
		2592.990	4.0305	37.190	-69.769	-32.579	
		2679.990	8.8988	37.805	-70.449	-32.644	
	30	2511.000	9.7169	37.805	-70.309	-32.504	
		2592.990	3.7907	37.190	-70.255	-33.065	
		2674.980	9.6545	37.805	-70.096	-32.291	
	40	2516.010	4.5524	37.190	-70.281	-33.091	
		2592.990	8.3056	37.805	-70.121	-32.316	
		2670.000	3.7628	37.190	-69.839	-32.649	
	50	2521.020	4.0265	37.190	-70.120	-32.930	
		2592.990	8.8290	37.805	-70.273	-32.468	
		2664.990	9.7104	37.805	-69.456	-31.651	
	60	2526.000	4.8879	37.190	-70.251	-33.061	
		2592.990	8.3410	37.805	-70.254	-32.449	
		2659.980	4.0434	37.190	-69.142	-31.952	
	70	2531.010	9.7478	37.805	-70.395	-32.590	
		2592.990	3.8286	37.190	-70.377	-33.187	
		2655.000	9.1486	37.805	-69.929	-32.124	
	80	2536.020	3.8251	37.190	-70.032	-32.842	
		2592.990	8.8634	37.805	-69.671	-31.866	
		2649.990	4.8914	37.190	-70.153	-32.963	
	90	2541.000	6.0110	37.805	-69.617	-31.812	
		2592.990	9.7203	37.805	-69.556	-31.751	
		2644.980	3.7717	37.190	-69.927	-32.737	
	100	2546.010	3.7807	37.190	-70.309	-33.119	
		2592.990	4.9761	37.190	-70.723	-33.533	
		2640.000	4.0275	37.190	-70.538	-33.348	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 299 ~ 362.

2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.990



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

- 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 CHANNEL EDGE

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	2 495 MHz ~ 2 496 MHz	C.E ~ (C.E +1MHz)	2 490.5 MHz ~ 2 495 MHz	(C.E + 1 MHz) ~ (C.E + 5 MHz)	Below 2 490.5 MHz	(C.E + 5 MHz) ~ (C.E + X MHz)	Above (C.E + X MHz)
				Lower	Upper	Lower	Upper	Lower	Upper	Upper
10	2501.010	BPSK	Full RB	-24.54	-22.24	-27.57	-25.73	-32.66	-27.27	-37.11
15	2503.500	BPSK	Full RB	-25.15	-29.24	-29.36	-30.76	-31.64	-30.53	-41.53
20	2506.020	BPSK	Full RB	-27.61	-28.93	-31.86	-31.39	-33.31	-31.49	-41.24
30	2511.000	BPSK	Full RB	-24.55	-29.22	-28.62	-29.74	-31.39	-29.03	-37.42
40	2520.000	BPSK	Full RB	-23.28	-29.51	-29.44	-30.48	-33.08	-29.16	-38.06
50	2525.010	BPSK	Full RB	-23.07	-28.07	-28.53	-27.98	-29.88	-27.76	-36.81
60	2530.020	BPSK	Full RB	-17.19	-18.08	-25.93	-24.77	-33.50	-28.25	-41.38
70	2531.010	BPSK	Full RB	-21.73	-27.60	-26.86	-29.34	-31.69	-30.28	-38.07
80	2540.010	BPSK	Full RB	-22.74	-20.67	-27.10	-25.56	-32.77	-28.80	-37.65
90	2545.020	BPSK	Full RB	-20.29	-23.16	-27.35	-26.93	-32.38	-29.41	-38.31
100	2550.000	BPSK	Full RB	-20.47	-25.30	-27.46	-28.46	-33.00	-30.35	-38.89
Limit				-13.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	C.E ~ (C.E $\pm$ 1 MHz)		(C.E $\pm$ 1 MHz) ~ (C.E $\pm$ 5 MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-20.17	-19.39	-22.91	-22.24
	2685.000	BPSK	Full RB	0	-19.09	-19.38	-18.56	-19.61
15 MHz	2592.990	BPSK	Full RB	0	-19.55	-25.17	-23.73	-26.60
	2682.480	BPSK	Full RB	0	-18.79	-26.14	-20.89	-26.55
20 MHz	2592.990	BPSK	Full RB	0	-21.24	-24.91	-25.26	-27.38
	2679.990	BPSK	Full RB	0	-20.57	-25.01	-23.52	-26.32
30 MHz	2592.990	BPSK	Full RB	0	-21.11	-27.39	-26.51	-29.35
	2679.990	BPSK	Full RB	0	-20.91	-28.35	-24.74	-28.58
40 MHz	2592.990	BPSK	Full RB	0	-20.99	-28.53	-26.56	-40.73
	2670.000	BPSK	Full RB	0	-20.15	-28.24	-24.50	-28.97
50 MHz	2592.990	BPSK	Full RB	0	-20.17	-28.07	-25.59	-27.51
	2664.990	BPSK	Full RB	0	-20.63	-27.76	-25.56	-25.78
60 MHz	2592.990	BPSK	Full RB	0	-15.26	-18.56	-23.39	-25.84
	2659.980	BPSK	Full RB	0	-15.55	-19.09	-23.46	-26.14
70 MHz	2592.990	BPSK	Full RB	0	-19.82	-29.36	-24.70	-30.05
	2655.000	BPSK	Full RB	0	-19.12	-28.33	-23.93	-29.95
80 MHz	2592.990	BPSK	Full RB	0	-19.76	-22.41	-25.88	-26.81
	2649.990	BPSK	Full RB	0	-18.54	-23.26	-23.52	-26.23
90 MHz	2592.990	BPSK	Full RB	0	-18.84	-25.51	-24.36	-27.94
	2644.980	BPSK	Full RB	0	-17.31	-25.74	-23.66	-28.45
100 MHz	2592.990	BPSK	Full RB	0	-16.91	-25.61	-25.05	-28.45
	2640.000	BPSK	Full RB	0	-15.49	-24.78	-22.53	-27.50
Limit					-10.0		-10.0	

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	(C.E $\pm$ 5 MHz) ~ (C.E $\pm$ X MHz)		Above (C.E $\pm$ X MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-26.14	-25.99	-32.99	-34.45
	2685.000	BPSK	Full RB	0	-18.74	-20.94	-33.50	-36.68
15 MHz	2592.990	BPSK	Full RB	0	-25.96	-24.52	-35.39	-38.94
	2682.480	BPSK	Full RB	0	-22.26	-25.23	-33.68	-38.64
20 MHz	2592.990	BPSK	Full RB	0	-27.06	-26.96	-36.10	-38.95
	2679.990	BPSK	Full RB	0	-25.04	-26.90	-36.70	-40.49
30 MHz	2592.990	BPSK	Full RB	0	-28.14	-28.57	-35.93	-38.02
	2679.990	BPSK	Full RB	0	-27.76	-29.21	-36.97	-45.31
40 MHz	2592.990	BPSK	Full RB	0	-47.00	-46.67	-46.96	-46.70
	2670.000	BPSK	Full RB	0	-26.74	-28.92	-38.10	-46.62
50 MHz	2592.990	BPSK	Full RB	0	-26.38	-26.89	-36.31	-37.26
	2664.990	BPSK	Full RB	0	-25.43	-25.26	-35.54	-46.64
60 MHz	2592.990	BPSK	Full RB	0	-29.42	-29.04	-41.10	-41.82
	2659.980	BPSK	Full RB	0	-25.74	-30.09	-39.92	-46.63
70 MHz	2592.990	BPSK	Full RB	0	-28.24	-30.11	-38.81	-40.16
	2655.000	BPSK	Full RB	0	-27.75	-29.73	-36.13	-46.71
80 MHz	2592.990	BPSK	Full RB	0	-28.78	-27.53	-45.92	-40.53
	2649.990	BPSK	Full RB	0	-23.81	-26.19	-36.83	-46.51
90 MHz	2592.990	BPSK	Full RB	0	-27.83	-30.04	-47.17	-46.98
	2644.980	BPSK	Full RB	0	-27.10	-30.94	-40.20	-46.78
100 MHz	2592.990	BPSK	Full RB	0	-29.65	-28.88	-47.15	-47.06
	2640.000	BPSK	Full RB	0	-25.43	-27.97	-38.51	-47.24
Limit					-13.0		-25.0	

Note:

1. C.E = Channel Edge
2. X = X is the greater of 6 MHz or the actual emission bandwidth
3. 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
4. Plots of the EUT's Channel Edge are shown Page 222 ~ 298. (1RB & Full RB)

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2501.010	100 %	+20(Ref)	2501 010 012	0.0	0.000 000	0.000
	100 %	-30	2501 010 027	15.5	0.000 001	0.006
	100 %	-20	2501 010 021	9.2	0.000 000	0.004
	100 %	-10	2501 010 021	8.7	0.000 000	0.003
	100 %	0	2501 010 020	8.3	0.000 000	0.003
	100 %	+10	2501 010 019	6.9	0.000 000	0.003
	100 %	+30	2501 010 021	8.6	0.000 000	0.003
	100 %	+40	2501 010 019	7.2	0.000 000	0.003
	100 %	+50	2501 010 015	3.1	0.000 000	0.001
	Batt. Endpoint	+20	2501 010 023	10.9	0.000 000	0.004
2685.000	100 %	+20(Ref)	2685 000 013	0.0	0.000 000	0.000
	100 %	-30	2685 000 016	3.9	0.000 000	0.001
	100 %	-20	2685 000 016	3.9	0.000 000	0.001
	100 %	-10	2685 000 017	4.4	0.000 000	0.002
	100 %	0	2685 000 028	15.6	0.000 001	0.006
	100 %	+10	2685 000 019	6.6	0.000 000	0.002
	100 %	+30	2685 000 016	3.0	0.000 000	0.001
	100 %	+40	2685 000 023	10.6	0.000 000	0.004
	100 %	+50	2685 000 021	8.8	0.000 000	0.003
	Batt. Endpoint	+20	2685 000 020	7.5	0.000 000	0.003

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2503.500	100 %	+20(Ref)	2503 500 010	0.0	0.000 000	0.000
	100 %	-30	2503 500 020	10.0	0.000 000	0.004
	100 %	-20	2503 500 016	6.8	0.000 000	0.003
	100 %	-10	2503 500 014	4.3	0.000 000	0.002
	100 %	0	2503 500 022	12.7	0.000 001	0.005
	100 %	+10	2503 500 023	13.4	0.000 001	0.005
	100 %	+30	2503 500 018	8.3	0.000 000	0.003
	100 %	+40	2503 500 020	10.4	0.000 000	0.004
	100 %	+50	2503 500 013	3.7	0.000 000	0.001
	Batt. Endpoint	+20	2503 500 023	13.6	0.000 001	0.005
2682.480	100 %	+20(Ref)	2682 480 015	0.0	0.000 000	0.000
	100 %	-30	2682 480 021	5.8	0.000 000	0.002
	100 %	-20	2682 480 026	11.0	0.000 000	0.004
	100 %	-10	2682 480 028	13.4	0.000 000	0.005
	100 %	0	2682 480 029	13.8	0.000 001	0.005
	100 %	+10	2682 480 025	9.6	0.000 000	0.004
	100 %	+30	2682 480 022	6.6	0.000 000	0.002
	100 %	+40	2682 480 031	16.1	0.000 001	0.006
	100 %	+50	2682 480 019	3.9	0.000 000	0.001
	Batt. Endpoint	+20	2682 480 029	14.3	0.000 001	0.005

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2506.020	100 %	+20(Ref)	2506 020 017	0.0	0.000 000	0.000
	100 %	-30	2506 020 025	8.1	0.000 000	0.003
	100 %	-20	2506 020 024	7.2	0.000 000	0.003
	100 %	-10	2506 020 024	6.6	0.000 000	0.003
	100 %	0	2506 020 034	17.0	0.000 001	0.007
	100 %	+10	2506 020 030	13.3	0.000 001	0.005
	100 %	+30	2506 020 030	13.0	0.000 001	0.005
	100 %	+40	2506 020 027	10.3	0.000 000	0.004
	100 %	+50	2506 020 027	10.3	0.000 000	0.004
	Batt. Endpoint	+20	2506 020 031	13.9	0.000 001	0.006
2679.990	100 %	+20(Ref)	2679 990 005	0.0	0.000 000	0.000
	100 %	-30	2679 990 016	10.9	0.000 000	0.004
	100 %	-20	2679 990 019	14.6	0.000 001	0.005
	100 %	-10	2679 990 017	12.5	0.000 000	0.005
	100 %	0	2679 990 015	10.4	0.000 000	0.004
	100 %	+10	2679 990 012	7.1	0.000 000	0.003
	100 %	+30	2679 990 009	4.0	0.000 000	0.002
	100 %	+40	2679 990 020	14.8	0.000 001	0.006
	100 %	+50	2679 990 017	11.8	0.000 000	0.004
	Batt. Endpoint	+20	2679 990 011	6.5	0.000 000	0.002

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2511.000	100 %	+20(Ref)	2511 000 005	0.0	0.000 000	0.000
	100 %	-30	2511 000 018	13.3	0.000 001	0.005
	100 %	-20	2511 000 012	7.1	0.000 000	0.003
	100 %	-10	2511 000 018	13.1	0.000 001	0.005
	100 %	0	2511 000 009	3.7	0.000 000	0.001
	100 %	+10	2511 000 021	16.1	0.000 001	0.006
	100 %	+30	2511 000 009	4.4	0.000 000	0.002
	100 %	+40	2511 000 013	8.1	0.000 000	0.003
	100 %	+50	2511 000 009	4.6	0.000 000	0.002
	Batt. Endpoint	+20	2511 000 012	6.7	0.000 000	0.003
2674.980	100 %	+20(Ref)	2674 980 017	0.0	0.000 000	0.000
	100 %	-30	2674 980 030	12.8	0.000 000	0.005
	100 %	-20	2674 980 023	6.4	0.000 000	0.002
	100 %	-10	2674 980 020	3.7	0.000 000	0.001
	100 %	0	2674 980 023	6.4	0.000 000	0.002
	100 %	+10	2674 980 027	10.0	0.000 000	0.004
	100 %	+30	2674 980 029	12.7	0.000 000	0.005
	100 %	+40	2674 980 025	8.1	0.000 000	0.003
	100 %	+50	2674 980 030	13.3	0.000 000	0.005
	Batt. Endpoint	+20	2674 980 027	10.3	0.000 000	0.004

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2516.010	100 %	+20(Ref)	2516 010 003	0.0	0.000 000	0.000
	100 %	-30	2516 010 019	15.6	0.000 001	0.006
	100 %	-20	2516 010 008	4.9	0.000 000	0.002
	100 %	-10	2516 010 020	16.2	0.000 001	0.006
	100 %	0	2516 010 011	7.1	0.000 000	0.003
	100 %	+10	2516 010 011	8.0	0.000 000	0.003
	100 %	+30	2516 010 020	16.8	0.000 001	0.007
	100 %	+40	2516 010 016	12.3	0.000 000	0.005
	100 %	+50	2516 010 013	9.5	0.000 000	0.004
	Batt. Endpoint	+20	2516 010 013	9.6	0.000 000	0.004
2670.000	100 %	+20(Ref)	2670 000 016	0.0	0.000 000	0.000
	100 %	-30	2670 000 030	14.7	0.000 001	0.006
	100 %	-20	2670 000 021	5.7	0.000 000	0.002
	100 %	-10	2670 000 028	12.9	0.000 000	0.005
	100 %	0	2670 000 028	12.4	0.000 000	0.005
	100 %	+10	2670 000 019	3.2	0.000 000	0.001
	100 %	+30	2670 000 025	9.5	0.000 000	0.004
	100 %	+40	2670 000 025	9.7	0.000 000	0.004
	100 %	+50	2670 000 023	7.7	0.000 000	0.003
	Batt. Endpoint	+20	2670 000 028	12.5	0.000 000	0.005

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2521.020	100 %	+20(Ref)	2521 020 012	0.0	0.000 000	0.000
	100 %	-30	2521 020 029	16.7	0.000 001	0.007
	100 %	-20	2521 020 017	4.9	0.000 000	0.002
	100 %	-10	2521 020 018	6.1	0.000 000	0.002
	100 %	0	2521 020 025	13.3	0.000 001	0.005
	100 %	+10	2521 020 016	4.5	0.000 000	0.002
	100 %	+30	2521 020 016	3.5	0.000 000	0.001
	100 %	+40	2521 020 018	5.9	0.000 000	0.002
	100 %	+50	2521 020 029	16.9	0.000 001	0.007
	Batt. Endpoint	+20	2521 020 024	12.0	0.000 000	0.005
2664.990	100 %	+20(Ref)	2664 990 011	0.0	0.000 000	0.000
	100 %	-30	2664 990 025	14.0	0.000 001	0.005
	100 %	-20	2664 990 017	5.5	0.000 000	0.002
	100 %	-10	2664 990 018	6.8	0.000 000	0.003
	100 %	0	2664 990 019	7.1	0.000 000	0.003
	100 %	+10	2664 990 020	9.0	0.000 000	0.003
	100 %	+30	2664 990 022	11.1	0.000 000	0.004
	100 %	+40	2664 990 021	9.9	0.000 000	0.004
	100 %	+50	2664 990 016	4.9	0.000 000	0.002
	Batt. Endpoint	+20	2664 990 015	3.7	0.000 000	0.001

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2526.000	100 %	+20(Ref)	2526 000 008	0.0	0.000 000	0.000
	100 %	-30	2526 000 019	11.1	0.000 000	0.004
	100 %	-20	2526 000 018	10.0	0.000 000	0.004
	100 %	-10	2526 000 024	15.5	0.000 001	0.006
	100 %	0	2526 000 017	8.6	0.000 000	0.003
	100 %	+10	2526 000 024	16.0	0.000 001	0.006
	100 %	+30	2526 000 017	8.5	0.000 000	0.003
	100 %	+40	2526 000 021	12.3	0.000 000	0.005
	100 %	+50	2526 000 025	16.9	0.000 001	0.007
	Batt. Endpoint	+20	2526 000 022	13.4	0.000 001	0.005
2659.980	100 %	+20(Ref)	2659 980 007	0.0	0.000 000	0.000
	100 %	-30	2659 980 019	11.4	0.000 000	0.004
	100 %	-20	2659 980 024	16.4	0.000 001	0.006
	100 %	-10	2659 980 011	3.6	0.000 000	0.001
	100 %	0	2659 980 014	6.8	0.000 000	0.003
	100 %	+10	2659 980 022	14.4	0.000 001	0.005
	100 %	+30	2659 980 023	16.1	0.000 001	0.006
	100 %	+40	2659 980 018	10.2	0.000 000	0.004
	100 %	+50	2659 980 023	15.5	0.000 001	0.006
	Batt. Endpoint	+20	2659 980 024	16.8	0.000 001	0.006

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2531.010	100 %	+20(Ref)	2531 010 014	0.0	0.000 000	0.000
	100 %	-30	2531 010 020	5.7	0.000 000	0.002
	100 %	-20	2531 010 027	12.5	0.000 000	0.005
	100 %	-10	2531 010 022	7.7	0.000 000	0.003
	100 %	0	2531 010 021	6.6	0.000 000	0.003
	100 %	+10	2531 010 024	10.0	0.000 000	0.004
	100 %	+30	2531 010 020	6.2	0.000 000	0.002
	100 %	+40	2531 010 029	15.1	0.000 001	0.006
	100 %	+50	2531 010 022	8.0	0.000 000	0.003
	Batt. Endpoint	+20	2531 010 025	10.7	0.000 000	0.004
2655.000	100 %	+20(Ref)	2655 000 014	0.0	0.000 000	0.000
	100 %	-30	2655 000 025	11.2	0.000 000	0.004
	100 %	-20	2655 000 020	6.2	0.000 000	0.002
	100 %	-10	2655 000 031	16.5	0.000 001	0.006
	100 %	0	2655 000 019	5.0	0.000 000	0.002
	100 %	+10	2655 000 029	14.5	0.000 001	0.005
	100 %	+30	2655 000 025	10.9	0.000 000	0.004
	100 %	+40	2655 000 019	4.6	0.000 000	0.002
	100 %	+50	2655 000 020	5.7	0.000 000	0.002
	Batt. Endpoint	+20	2655 000 019	4.8	0.000 000	0.002

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2536.020	100 %	+20(Ref)	2536 020 007	0.0	0.000 000	0.000
	100 %	-30	2536 020 012	4.9	0.000 000	0.002
	100 %	-20	2536 020 016	9.2	0.000 000	0.004
	100 %	-10	2536 020 022	15.5	0.000 001	0.006
	100 %	0	2536 020 023	16.4	0.000 001	0.006
	100 %	+10	2536 020 016	9.5	0.000 000	0.004
	100 %	+30	2536 020 019	11.6	0.000 000	0.005
	100 %	+40	2536 020 015	8.2	0.000 000	0.003
	100 %	+50	2536 020 013	6.5	0.000 000	0.003
	Batt. Endpoint	+20	2536 020 015	8.4	0.000 000	0.003
2649.990	100 %	+20(Ref)	2649 990 009	0.0	0.000 000	0.000
	100 %	-30	2649 990 013	3.4	0.000 000	0.001
	100 %	-20	2649 990 014	4.9	0.000 000	0.002
	100 %	-10	2649 990 017	7.6	0.000 000	0.003
	100 %	0	2649 990 015	5.6	0.000 000	0.002
	100 %	+10	2649 990 026	16.8	0.000 001	0.006
	100 %	+30	2649 990 013	3.5	0.000 000	0.001
	100 %	+40	2649 990 016	6.6	0.000 000	0.002
	100 %	+50	2649 990 023	13.7	0.000 001	0.005
	Batt. Endpoint	+20	2649 990 019	10.2	0.000 000	0.004

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2541.000	100 %	+20(Ref)	2541 000 012	0.0	0.000 000	0.000
	100 %	-30	2541 000 016	4.2	0.000 000	0.002
	100 %	-20	2541 000 028	16.2	0.000 001	0.006
	100 %	-10	2541 000 018	6.4	0.000 000	0.003
	100 %	0	2541 000 024	11.9	0.000 000	0.005
	100 %	+10	2541 000 020	8.2	0.000 000	0.003
	100 %	+30	2541 000 024	12.2	0.000 000	0.005
	100 %	+40	2541 000 018	5.9	0.000 000	0.002
	100 %	+50	2541 000 016	4.1	0.000 000	0.002
	Batt. Endpoint	+20	2541 000 017	4.9	0.000 000	0.002
2644.980	100 %	+20(Ref)	2644 980 014	0.0	0.000 000	0.000
	100 %	-30	2644 980 020	5.8	0.000 000	0.002
	100 %	-20	2644 980 025	10.5	0.000 000	0.004
	100 %	-10	2644 980 021	6.5	0.000 000	0.002
	100 %	0	2644 980 026	11.3	0.000 000	0.004
	100 %	+10	2644 980 027	12.7	0.000 000	0.005
	100 %	+30	2644 980 029	14.6	0.000 001	0.006
	100 %	+40	2644 980 019	4.3	0.000 000	0.002
	100 %	+50	2644 980 029	14.8	0.000 001	0.006
	Batt. Endpoint	+20	2644 980 028	13.8	0.000 001	0.005

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2546.010	100 %	+20(Ref)	2546 010 010	0.0	0.000 000	0.000
	100 %	-30	2546 010 027	16.4	0.000 001	0.006
	100 %	-20	2546 010 016	6.3	0.000 000	0.002
	100 %	-10	2546 010 017	7.0	0.000 000	0.003
	100 %	0	2546 010 026	15.7	0.000 001	0.006
	100 %	+10	2546 010 026	16.0	0.000 001	0.006
	100 %	+30	2546 010 027	16.7	0.000 001	0.007
	100 %	+40	2546 010 023	13.0	0.000 001	0.005
	100 %	+50	2546 010 024	13.6	0.000 001	0.005
	Batt. Endpoint	+20	2546 010 023	12.4	0.000 000	0.005
2640.000	100 %	+20(Ref)	2640 000 015	0.0	0.000 000	0.000
	100 %	-30	2640 000 031	16.0	0.000 001	0.006
	100 %	-20	2640 000 023	8.3	0.000 000	0.003
	100 %	-10	2640 000 031	16.0	0.000 001	0.006
	100 %	0	2640 000 019	3.8	0.000 000	0.001
	100 %	+10	2640 000 023	8.6	0.000 000	0.003
	100 %	+30	2640 000 024	8.8	0.000 000	0.003
	100 %	+40	2640 000 019	4.0	0.000 000	0.002
	100 %	+50	2640 000 018	3.2	0.000 000	0.001
	Batt. Endpoint	+20	2640 000 031	16.1	0.000 001	0.006

9. TEST DATA(Sub2 Antenna)

9.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2501.010	Sub6 41/ 10 MHz [30 kHz]	PI/2 BPSK	-26.23	10.25	10.20	2.49	V	< 2.00	0.063	17.96
		QPSK	-26.24	10.24	10.20	2.49	V		0.062	17.95
		16-QAM	-27.21	9.27	10.20	2.49	V		0.050	16.98
		64-QAM	-28.87	7.61	10.20	2.49	V		0.034	15.32
		256-QAM	-30.92	5.56	10.20	2.49	V		0.021	13.27
2592.990		PI/2 BPSK	-27.06	9.40	10.42	2.56	V		0.053	17.26
		QPSK	-27.07	9.39	10.42	2.56	V		0.053	17.25
		16-QAM	-28.04	8.42	10.42	2.56	V		0.043	16.28
		64-QAM	-29.64	6.82	10.42	2.56	V		0.029	14.68
		256-QAM	-31.56	4.90	10.42	2.56	V		0.019	12.76
2685.000		PI/2 BPSK	-27.56	10.03	10.38	2.64	V		0.061	17.82
		QPSK	-27.52	10.07	10.38	2.64	V		0.060	17.81
		16-QAM	-28.44	9.15	10.38	2.64	V		0.049	16.89
		64-QAM	-30.13	7.46	10.38	2.64	V		0.033	15.20
		256-QAM	-32.05	5.54	10.38	2.64	V		0.021	13.28

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2503.500	Sub6 41/ 15 MHz [30 kHz]	PI/2 BPSK	-26.21	10.34	10.24	2.50	V	< 2.00	0.064	18.08
		QPSK	-26.24	10.31	10.24	2.50	V		0.064	18.05
		16-QAM	-27.21	9.34	10.24	2.50	V		0.051	17.08
		64-QAM	-28.92	7.63	10.24	2.50	V		0.034	15.37
		256-QAM	-30.89	5.66	10.24	2.50	V		0.022	13.40
2592.990		PI/2 BPSK	-27.16	9.30	10.42	2.56	V		0.052	17.16
		QPSK	-27.18	9.28	10.42	2.56	V		0.052	17.14
		16-QAM	-28.19	8.27	10.42	2.56	V		0.041	16.13
		64-QAM	-29.80	6.66	10.42	2.56	V		0.028	14.52
		256-QAM	-31.65	4.81	10.42	2.56	V		0.019	12.67
2682.480		PI/2 BPSK	-27.31	10.32	10.34	2.64	V		0.063	18.02
		QPSK	-27.33	10.30	10.34	2.64	V		0.063	18.00
		16-QAM	-28.36	9.27	10.34	2.64	V		0.050	16.97
		64-QAM	-29.89	7.74	10.34	2.64	V		0.035	15.44
		256-QAM	-31.80	5.83	10.34	2.64	V		0.023	13.53

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2506.020	Sub6 41/ 20 MHz [30 kHz]	PI/2 BPSK	-26.13	10.42	10.24	2.50	V	< 2.00	0.065	18.16
		QPSK	-26.16	10.39	10.24	2.50	V		0.065	18.13
		16-QAM	-27.20	9.35	10.24	2.50	V		0.051	17.09
		64-QAM	-28.82	7.73	10.24	2.50	V		0.035	15.47
		256-QAM	-30.72	5.83	10.24	2.50	V		0.023	13.57
2592.990		PI/2 BPSK	-27.43	9.03	10.42	2.56	V		0.049	16.89
		QPSK	-27.44	9.02	10.42	2.56	V		0.049	16.88
		16-QAM	-28.47	7.99	10.42	2.56	V		0.039	15.85
		64-QAM	-30.04	6.42	10.42	2.56	V		0.027	14.28
		256-QAM	-31.96	4.50	10.42	2.56	V		0.017	12.36
2679.990		PI/2 BPSK	-27.36	10.42	10.34	2.63	V		0.065	18.13
		QPSK	-27.39	10.39	10.34	2.63	V		0.065	18.10
		16-QAM	-28.41	9.37	10.34	2.63	V		0.051	17.08
		64-QAM	-29.99	7.79	10.34	2.63	V		0.035	15.50
		256-QAM	-31.92	5.86	10.34	2.63	V		0.023	13.57

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2511.000	Sub6 41/ 30 MHz [30 kHz]	PI/2 BPSK	-26.10	10.59	10.20	2.51	V	< 2.00	0.067	18.28
		QPSK	-26.11	10.58	10.20	2.51	V		0.067	18.27
		16-QAM	-27.16	9.53	10.20	2.51	V		0.053	17.22
		64-QAM	-28.79	7.90	10.20	2.51	V		0.036	15.59
		256-QAM	-30.74	5.95	10.20	2.51	V		0.023	13.64
2592.990		PI/2 BPSK	-27.23	9.23	10.42	2.56	V		0.051	17.09
		QPSK	-27.25	9.21	10.42	2.56	V		0.051	17.07
		16-QAM	-28.14	8.32	10.42	2.56	V		0.041	16.18
		64-QAM	-29.82	6.64	10.42	2.56	V		0.028	14.50
		256-QAM	-31.72	4.74	10.42	2.56	V		0.018	12.60
2674.980		PI/2 BPSK	-27.02	10.31	10.30	2.62	V		0.063	17.99
		QPSK	-27.05	10.28	10.30	2.62	V		0.063	17.96
		16-QAM	-28.01	9.32	10.30	2.62	V		0.050	17.00
		64-QAM	-29.66	7.67	10.30	2.62	V		0.034	15.35
		256-QAM	-31.56	5.77	10.30	2.62	V		0.022	13.45

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2516.010	Sub6 41/ 40 MHz [30 kHz]	PI/2 BPSK	-26.20	10.38	10.32	2.53	V	< 2.00	0.066	18.17
		QPSK	-26.22	10.36	10.32	2.53	V		0.065	18.15
		16-QAM	-27.19	9.39	10.32	2.53	V		0.052	17.18
		64-QAM	-28.85	7.73	10.32	2.53	V		0.036	15.52
		256-QAM	-30.76	5.82	10.32	2.53	V		0.023	13.61
2592.990		PI/2 BPSK	-27.59	8.87	10.42	2.56	V		0.047	16.73
		QPSK	-27.61	8.85	10.42	2.56	V		0.047	16.71
		16-QAM	-28.52	7.94	10.42	2.56	V		0.038	15.80
		64-QAM	-30.16	6.30	10.42	2.56	V		0.026	14.16
		256-QAM	-32.09	4.37	10.42	2.56	V		0.017	12.23
2670.000		PI/2 BPSK	-26.61	10.26	10.26	2.60	V		0.062	17.92
		QPSK	-26.64	10.23	10.26	2.60	V		0.062	17.89
		16-QAM	-27.68	9.19	10.26	2.60	V		0.048	16.85
		64-QAM	-29.29	7.58	10.26	2.60	V		0.033	15.24
		256-QAM	-31.19	5.68	10.26	2.60	V		0.022	13.34

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2521.020	Sub6 41/ 50 MHz [30 kHz]	PI/2 BPSK	-26.11	10.43	10.36	2.55	V	< 2.00	0.067	18.24
		QPSK	-26.13	10.41	10.36	2.55	V		0.066	18.22
		16-QAM	-27.04	9.50	10.36	2.55	V		0.054	17.31
		64-QAM	-28.80	7.74	10.36	2.55	V		0.036	15.55
		256-QAM	-30.76	5.78	10.36	2.55	V		0.023	13.59
2592.990		PI/2 BPSK	-27.46	9.00	10.42	2.56	V		0.049	16.86
		QPSK	-27.48	8.98	10.42	2.56	V		0.048	16.84
		16-QAM	-28.47	7.99	10.42	2.56	V		0.039	15.85
		64-QAM	-30.04	6.42	10.42	2.56	V		0.027	14.28
		256-QAM	-31.95	4.51	10.42	2.56	V		0.017	12.37
2664.990		PI/2 BPSK	-26.81	10.03	10.22	2.60	V		0.058	17.65
		QPSK	-26.87	9.97	10.22	2.60	V		0.057	17.59
		16-QAM	-27.83	9.01	10.22	2.60	V		0.046	16.63
		64-QAM	-29.51	7.33	10.22	2.60	V		0.031	14.95
		256-QAM	-31.49	5.35	10.22	2.60	V		0.020	12.97

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2526.000	Sub6 41/ 60 MHz [30 kHz]	PI/2 BPSK	-26.19	10.17	10.40	2.56	V	< 2.00	0.063	18.01
		QPSK	-26.22	10.14	10.40	2.56	V		0.063	17.98
		16-QAM	-27.19	9.17	10.40	2.56	V		0.050	17.01
		64-QAM	-28.87	7.49	10.40	2.56	V		0.034	15.33
		256-QAM	-30.76	5.60	10.40	2.56	V		0.022	13.44
2592.990		PI/2 BPSK	-26.96	9.50	10.42	2.56	V		0.055	17.36
		QPSK	-26.97	9.49	10.42	2.56	V		0.054	17.35
		16-QAM	-27.95	8.51	10.42	2.56	V		0.043	16.37
		64-QAM	-29.57	6.89	10.42	2.56	V		0.030	14.75
		256-QAM	-31.47	4.99	10.42	2.56	V		0.019	12.85
2659.980		PI/2 BPSK	-26.71	10.10	10.18	2.60	V		0.059	17.68
		QPSK	-26.76	10.05	10.18	2.60	V		0.058	17.63
		16-QAM	-27.75	9.06	10.18	2.60	V		0.046	16.64
		64-QAM	-29.38	7.43	10.18	2.60	V		0.032	15.01
		256-QAM	-31.27	5.54	10.18	2.60	V		0.021	13.12

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2531.010	Sub6 41/ 70 MHz [30 kHz]	PI/2 BPSK	-26.16	10.01	10.44	2.56	V	< 2.00	0.062	17.89
		QPSK	-26.21	9.96	10.44	2.56	V		0.061	17.84
		16-QAM	-27.13	9.04	10.44	2.56	V		0.049	16.92
		64-QAM	-28.83	7.34	10.44	2.56	V		0.033	15.22
		256-QAM	-30.89	5.28	10.44	2.56	V		0.021	13.16
2592.990		PI/2 BPSK	-26.81	9.65	10.42	2.56	V		0.056	17.51
		QPSK	-26.91	9.55	10.42	2.56	V		0.055	17.41
		16-QAM	-27.89	8.57	10.42	2.56	V		0.044	16.43
		64-QAM	-29.56	6.90	10.42	2.56	V		0.030	14.76
		256-QAM	-31.46	5.00	10.42	2.56	V		0.019	12.86
2655.000		PI/2 BPSK	-26.54	10.34	10.54	2.63	V		0.067	18.25
		QPSK	-26.56	10.32	10.54	2.63	V		0.067	18.23
		16-QAM	-27.51	9.37	10.54	2.63	V		0.053	17.28
		64-QAM	-29.11	7.77	10.54	2.63	V		0.037	15.68
		256-QAM	-31.08	5.80	10.54	2.63	V		0.023	13.71

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2536.020	Sub6 41/ 80 MHz [30 kHz]	PI/2 BPSK	-26.21	10.16	10.52	2.55	V	< 2.00	0.065	18.13
		QPSK	-26.22	10.15	10.52	2.55	V		0.065	18.12
		16-QAM	-27.23	9.14	10.52	2.55	V		0.051	17.11
		64-QAM	-28.84	7.53	10.52	2.55	V		0.035	15.50
		256-QAM	-30.76	5.61	10.52	2.55	V		0.023	13.58
2592.990		PI/2 BPSK	-26.71	9.75	10.42	2.56	V		0.058	17.61
		QPSK	-26.75	9.71	10.42	2.56	V		0.057	17.57
		16-QAM	-27.70	8.76	10.42	2.56	V		0.046	16.62
		64-QAM	-29.39	7.07	10.42	2.56	V		0.031	14.93
		256-QAM	-31.31	5.15	10.42	2.56	V		0.020	13.01
2649.990		PI/2 BPSK	-26.61	10.02	10.13	2.62	V		0.057	17.53
		QPSK	-26.67	9.96	10.13	2.62	V		0.056	17.47
		16-QAM	-27.67	8.96	10.13	2.62	V		0.044	16.47
		64-QAM	-29.29	7.34	10.13	2.62	V		0.031	14.85
		256-QAM	-31.20	5.43	10.13	2.62	V		0.020	12.94

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2541.000	Sub6 41/ 90 MHz [30 kHz]	PI/2 BPSK	-26.22	10.16	10.56	2.56	V	< 2.00	0.066	18.16
		QPSK	-26.24	10.14	10.56	2.56	V		0.065	18.14
		16-QAM	-27.22	9.16	10.56	2.56	V		0.052	17.16
		64-QAM	-28.82	7.56	10.56	2.56	V		0.036	15.56
		256-QAM	-30.79	5.59	10.56	2.56	V		0.023	13.59
2592.990		PI/2 BPSK	-26.11	10.35	10.42	2.56	V		0.066	18.21
		QPSK	-26.13	10.33	10.42	2.56	V		0.066	18.19
		16-QAM	-27.19	9.27	10.42	2.56	V		0.052	17.13
		64-QAM	-28.74	7.72	10.42	2.56	V		0.036	15.58
		256-QAM	-30.64	5.82	10.42	2.56	V		0.023	13.68
2644.980		PI/2 BPSK	-26.86	10.03	10.16	2.63	V		0.057	17.56
		QPSK	-26.87	10.02	10.16	2.63	V		0.057	17.55
		16-QAM	-27.85	9.04	10.16	2.63	V		0.045	16.57
		64-QAM	-29.45	7.44	10.16	2.63	V		0.031	14.97
		256-QAM	-31.38	5.51	10.16	2.63	V		0.020	13.04

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2546.010	Sub6 41/ 100 MHz [30 kHz]	PI/2 BPSK	-26.23	10.15	10.56	2.56	V	< 2.00	0.065	18.15
		QPSK	-26.26	10.12	10.56	2.56	V		0.065	18.12
		16-QAM	-27.28	9.10	10.56	2.56	V		0.051	17.10
		64-QAM	-28.84	7.54	10.56	2.56	V		0.036	15.54
		256-QAM	-30.76	5.62	10.56	2.56	V		0.023	13.62
2592.990		PI/2 BPSK	-26.06	10.40	10.42	2.56	V		0.067	18.26
		QPSK	-26.07	10.39	10.42	2.56	V		0.067	18.25
		16-QAM	-27.06	9.40	10.42	2.56	V		0.053	17.26
		64-QAM	-28.66	7.80	10.42	2.56	V		0.037	15.66
		256-QAM	-30.54	5.92	10.42	2.56	V		0.024	13.78
2640.000		PI/2 BPSK	-27.19	9.70	10.16	2.63	V		0.053	17.23
		QPSK	-27.25	9.64	10.16	2.63	V		0.052	17.17
		16-QAM	-28.24	8.65	10.16	2.63	V		0.042	16.18
		64-QAM	-29.80	7.09	10.16	2.63	V		0.029	14.62
		256-QAM	-31.71	5.18	10.16	2.63	V		0.019	12.71

9.2 RADIATED SPURIOUS EMISSIONS

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 10 MHz
- Modulation: PI/2 BPSK
- Distance: 1 meters
- SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
500202 (2501.010)	5 002.02	-60.09	10.90	-60.05	3.78	H	-52.93	-25.00
	7 503.03	-59.58	11.51	-50.38	4.54	H	-43.41	-25.00
	10 004.04	-63.41	11.78	-52.32	5.29	H	-45.83	-25.00
518598 (2592.990)	5 185.98	-62.06	11.47	-61.71	3.90	H	-54.13	-25.00
	7 778.97	-60.36	11.28	-50.94	4.66	H	-44.32	-25.00
	10 371.96	-63.97	11.80	-51.27	5.41	H	-44.88	-25.00
537000 (2685.000)	5 370.00	-58.59	11.84	-59.00	3.87	V	-51.03	-25.00
	8 055.00	-60.96	11.30	-51.57	4.73	H	-44.99	-25.00
	10 740.00	-64.57	11.70	-50.81	5.48	H	-44.59	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 15 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)
500700 (2503.500)	5 007.00	-60.96	10.91	-60.67	3.78	H	-53.53	-25.00
	7 510.50	-60.07	11.52	-50.59	4.52	H	-43.59	-25.00
	10 014.00	-62.58	11.77	-51.72	5.30	H	-45.24	-25.00
518598 (2592.990)	5 185.98	-61.34	11.47	-60.99	3.90	H	-53.41	-25.00
	7 778.97	-60.15	11.28	-50.73	4.66	H	-44.11	-25.00
	10 371.96	-64.82	11.80	-52.12	5.41	H	-45.73	-25.00
536496 (2682.480)	5 364.96	-61.98	11.83	-62.31	3.86	H	-54.33	-25.00
	8 047.44	-62.23	11.30	-52.92	4.72	H	-46.34	-25.00
	10 729.92	-64.58	11.70	-50.67	5.47	H	-44.44	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 20 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)
501204 (2506.020)	5 012.04	-60.91	10.92	-60.35	3.77	H	-53.20	-25.00
	7 518.06	-60.25	11.54	-50.89	4.51	H	-43.86	-25.00
	10 024.08	-62.48	11.75	-51.69	5.30	H	-45.24	-25.00
518598 (2592.990)	5 185.98	-61.50	11.47	-61.15	3.90	H	-53.57	-25.00
	7 778.97	-60.09	11.28	-50.67	4.66	H	-44.05	-25.00
	10 371.96	-64.60	11.80	-51.90	5.41	H	-45.51	-25.00
535998 (2679.990)	5 359.98	-61.90	11.82	-62.15	3.84	H	-54.17	-25.00
	8 039.97	-62.24	11.28	-53.00	4.71	H	-46.43	-25.00
	10 719.96	-64.78	11.70	-50.78	5.48	H	-44.56	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 30 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)
502200 (2511.000)	5 022.00	-60.90	10.94	-60.74	3.72	H	-53.52	-25.00
	7 533.00	-60.37	11.56	-51.52	4.56	H	-44.51	-25.00
	10 044.00	-62.81	11.71	-51.81	5.29	H	-45.39	-25.00
518598 (2592.990)	5 185.98	-61.32	11.47	-60.97	3.90	H	-53.39	-25.00
	7 778.97	-60.05	11.28	-50.63	4.66	H	-44.01	-25.00
	10 371.96	-64.84	11.80	-52.14	5.41	H	-45.75	-25.00
534996 (2674.980)	5 349.96	-62.01	11.80	-62.00	3.79	H	-53.99	-25.00
	8 024.94	-62.14	11.25	-52.57	4.69	H	-46.01	-25.00
	10 699.92	-64.33	11.70	-50.72	5.51	H	-44.53	-25.00

- NR Band: N41
- LTE Band(Anchor): 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)
503202 (2516.010)	5 032.02	-61.00	10.96	-61.29	3.66	H	-53.99	-25.00
	7 548.03	-60.41	11.58	-51.31	4.63	H	-44.36	-25.00
	10 064.04	-62.91	11.67	-52.06	5.31	H	-45.70	-25.00
518598 (2592.990)	5 185.98	-61.20	11.47	-60.85	3.90	H	-53.27	-25.00
	7 778.97	-60.27	11.28	-50.85	4.66	H	-44.23	-25.00
	10 371.96	-64.62	11.80	-51.92	5.41	H	-45.53	-25.00
534000 (2670.000)	5 340.00	-61.88	11.78	-62.37	3.78	H	-54.37	-25.00
	8 010.00	-62.07	11.22	-52.31	4.66	H	-45.75	-25.00
	10 680.00	-64.42	11.70	-50.16	5.56	H	-44.02	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 50 MHz
- Modulation: PI/2 BPSK
- Distance: 1 meters
- SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
504204 (2521.020)	5 042.04	-61.03	10.98	-61.79	3.65	H	-54.46	-25.00
	7 563.06	-60.21	11.60	-51.01	4.65	H	-44.05	-25.00
	10 084.08	-62.59	11.63	-51.55	5.35	H	-45.26	-25.00
518598 (2592.990)	5 185.98	-61.30	11.47	-60.95	3.90	H	-53.37	-25.00
	7 778.97	-60.32	11.28	-50.90	4.66	H	-44.28	-25.00
	10 371.96	-64.73	11.80	-52.03	5.41	H	-45.64	-25.00
532998 (2664.990)	5 329.98	-61.90	11.76	-62.29	3.76	H	-54.29	-25.00
	7 994.97	-62.25	11.19	-52.65	4.64	H	-46.09	-25.00
	10 659.96	-64.51	11.70	-49.98	5.51	H	-43.79	-25.00

- NR Band: N41
- Bandwidth: 60 MHz
- LTE Band(Anchor): B2
- 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)
505200 (2526.000)	5 052.00	-60.87	11.00	-61.30	3.66	H	-53.96	-25.00
	7 578.00	-60.13	11.60	-51.28	4.60	H	-44.28	-25.00
	10 104.00	-62.46	11.60	-51.37	5.34	H	-45.10	-25.00
518598 (2592.990)	5 185.98	-61.34	11.47	-60.99	3.90	H	-53.41	-25.00
	7 778.97	-60.40	11.28	-50.98	4.66	H	-44.36	-25.00
	10 371.96	-64.74	11.80	-52.04	5.41	H	-45.65	-25.00
531996 (2659.980)	5 319.96	-61.89	11.74	-62.61	3.80	H	-54.67	-25.00
	7 979.94	-62.27	11.16	-52.89	4.66	H	-46.39	-25.00
	10 639.92	-64.41	11.70	-50.56	5.44	H	-44.30	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 70 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)
506200 (2531.010)	5 062.02	-60.78	11.04	-60.79	3.70	H	-53.45	-25.00
	7 593.03	-60.41	11.60	-51.77	4.58	H	-44.75	-25.00
	10 124.04	-62.59	11.60	-51.20	5.32	H	-44.92	-25.00
518598 (2592.990)	5 185.98	-61.23	11.47	-60.88	3.90	H	-53.30	-25.00
	7 778.97	-60.31	11.28	-50.89	4.66	H	-44.27	-25.00
	10 371.96	-64.67	11.80	-51.97	5.41	H	-45.58	-25.00
531000 (2655.000)	5 310.00	-61.94	11.72	-62.21	3.87	H	-54.36	-25.00
	7 965.00	-62.02	11.13	-52.23	4.73	H	-45.83	-25.00
	10 620.00	-64.64	11.70	-51.02	5.47	H	-44.79	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 80 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)
507204 (2536.020)	5 082.00	-61.12	11.12	-60.82	3.74	H	-53.44	-25.00
	7 623.00	-60.27	11.60	-50.82	4.55	H	-43.77	-25.00
	10 164.00	-62.75	11.60	-51.01	5.35	H	-44.75	-25.00
518598 (2592.990)	5 185.98	-61.27	11.47	-60.92	3.90	H	-53.34	-25.00
	7 778.97	-60.22	11.28	-50.80	4.66	H	-44.18	-25.00
	10 371.96	-64.63	11.80	-51.93	5.41	H	-45.54	-25.00
529998 (2649.990)	5 289.96	-61.89	11.68	-62.04	3.90	H	-54.26	-25.00
	7 934.94	-61.88	11.07	-52.67	4.69	H	-46.29	-25.00
	10 579.92	-64.76	11.70	-51.96	5.51	H	-45.77	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 90 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)
508200 (2541.000)	5 092.02	-60.88	11.16	-60.97	3.79	H	-53.60	-25.00
	7 638.03	-60.27	11.60	-51.44	4.58	H	-44.42	-25.00
	10 184.04	-62.93	11.60	-51.40	5.38	H	-45.17	-25.00
518598 (2592.990)	5 185.98	-61.33	11.47	-60.98	3.90	H	-53.40	-25.00
	7 778.97	-60.04	11.28	-50.62	4.66	H	-44.00	-25.00
	10 371.96	-64.71	11.80	-52.01	5.41	H	-45.62	-25.00
528996 (2644.980)	5 280.00	-61.99	11.66	-62.69	3.84	H	-54.87	-25.00
	7 920.00	-62.02	11.04	-52.48	4.64	H	-46.08	-25.00
	10 560.00	-64.63	11.70	-51.50	5.47	H	-45.27	-25.00

- NR Band: N41
- LTE Band(Anchor): B2
- Bandwidth: 100 MHz
- Modulation: PI/2 BPSK
- Distance: 1 meters
- SCS: 30 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
509202 (2546.010)	5 092.02	-60.71	11.16	-60.80	3.79	H	-53.43	-25.00
	7 638.03	-59.98	11.60	-51.15	4.58	H	-44.13	-25.00
	10 184.04	-62.44	11.60	-50.91	5.38	H	-44.68	-25.00
518598 (2592.990)	5 185.98	-61.00	11.47	-60.65	3.90	H	-53.07	-25.00
	7 778.97	-59.98	11.28	-50.56	4.66	H	-43.94	-25.00
	10 371.96	-64.56	11.80	-51.86	5.41	H	-45.47	-25.00
528000 (2640.000)	5 280.00	-61.83	11.66	-62.53	3.84	H	-54.71	-25.00
	7 920.00	-61.86	11.04	-52.32	4.64	H	-45.92	-25.00
	10 560.00	-64.29	11.70	-51.16	5.47	H	-44.93	-25.00

All ENDC of operation were investigated and the worst case configuration results are reported.

(Worst case: 2A(10MHz)-n41A(30MHz))

☐ NR Band: N41
☐ LTE Band(Anchor): B2
☐ Bandwidth: 10 MHz
☐ Modulation: PI/2 BPSK
☐ Distance: 1 meters
☐ SCS: 30 kHz

ENDC-Mode: 2A – n41A (PC3)

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
18900 (1880.0)	3 760.00	-61.71	11.64	-61.94	3.16	V	-53.46	-13.00
	5 640.00	-61.56	12.00	-55.38	3.93	V	-47.31	-13.00
	7 520.00	-61.74	11.54	-47.29	4.51	V	-40.26	-13.00

9.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n41	10 MHz	2592.990	BPSK	24	0	4.48
			QPSK			5.36
			16-QAM			5.85
			64-QAM			6.15
			256-QAM			6.39
	15 MHz		BPSK	36		4.55
			QPSK			5.26
			16-QAM			5.78
			64-QAM			6.09
			256-QAM			6.44
	20 MHz		BPSK	50		4.71
			QPSK			5.25
			16-QAM			5.85
			64-QAM			6.13
			256-QAM			6.33
	30 MHz		BPSK	75		4.44
			QPSK			5.33
			16-QAM			5.91
			64-QAM			6.20
			256-QAM			6.40
	40 MHz		BPSK	100		4.48
			QPSK			5.36
			16-QAM			5.86
			64-QAM			6.18
			256-QAM			6.38
	50 MHz		BPSK	128		4.25
			QPSK			5.26
			16-QAM			5.88
			64-QAM			6.06
			256-QAM			6.34
	60 MHz		BPSK	162		4.23
			QPSK			5.22
			16-QAM			5.84
			64-QAM			6.04
			256-QAM			6.36
	70 MHz		BPSK	180		4.71
			QPSK			5.26
			16-QAM			5.86
			64-QAM			6.05
			256-QAM			6.32
	80 MHz		BPSK	216		4.41
			QPSK			5.21
			16-QAM			5.83
			64-QAM			6.05
			256-QAM			6.35
	90 MHz		BPSK	243		5.44
			QPSK			5.49
			16-QAM			5.89
			64-QAM			6.10
			256-QAM			6.38
	100 MHz		BPSK	270		4.28
			QPSK			5.15
			16-QAM			5.76
			64-QAM			6.02
			256-QAM			6.34

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 419 ~ 473.

9.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n41	10 MHz	2592.990	BPSK	24	0	8.6827
			QPSK			8.6627
			16-QAM			8.6633
			64-QAM			8.6696
			256-QAM			8.6524
	15 MHz		BPSK	36		12.974
			QPSK			12.972
			16-QAM			12.991
			64-QAM			12.924
			256-QAM			12.935
	20 MHz		BPSK	50		17.940
			QPSK			17.828
			16-QAM			17.900
			64-QAM			17.902
			256-QAM			17.845
	30 MHz		BPSK	75		26.885
			QPSK			26.982
			16-QAM			26.861
			64-QAM			26.925
			256-QAM			26.815
	40 MHz		BPSK	100		35.886
			QPSK			35.863
			16-QAM			35.966
			64-QAM			35.787
			256-QAM			35.835
	50 MHz		BPSK	128		45.776
			QPSK			45.594
			16-QAM			45.826
			64-QAM			45.804
			256-QAM			45.695
	60 MHz		BPSK	162		57.863
			QPSK			57.894
			16-QAM			57.917
			64-QAM			57.818
			256-QAM			57.831
	70 MHz		BPSK	180		64.559
			QPSK			64.473
			16-QAM			64.536
			64-QAM			64.308
			256-QAM			64.342
	80 MHz		BPSK	216		77.217
			QPSK			77.015
			16-QAM			77.095
			64-QAM			77.095
			256-QAM			77.167
	90 MHz		BPSK	243		86.987
			QPSK			86.844
			16-QAM			86.745
			64-QAM			86.688
			256-QAM			86.904
	100 MHz		BPSK	270		96.593
			QPSK			96.469
			16-QAM			96.473
			64-QAM			96.454
			256-QAM			96.406

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 364 ~ 418.

9.5 CONDUCTED SPURIOUS EMISSIONS

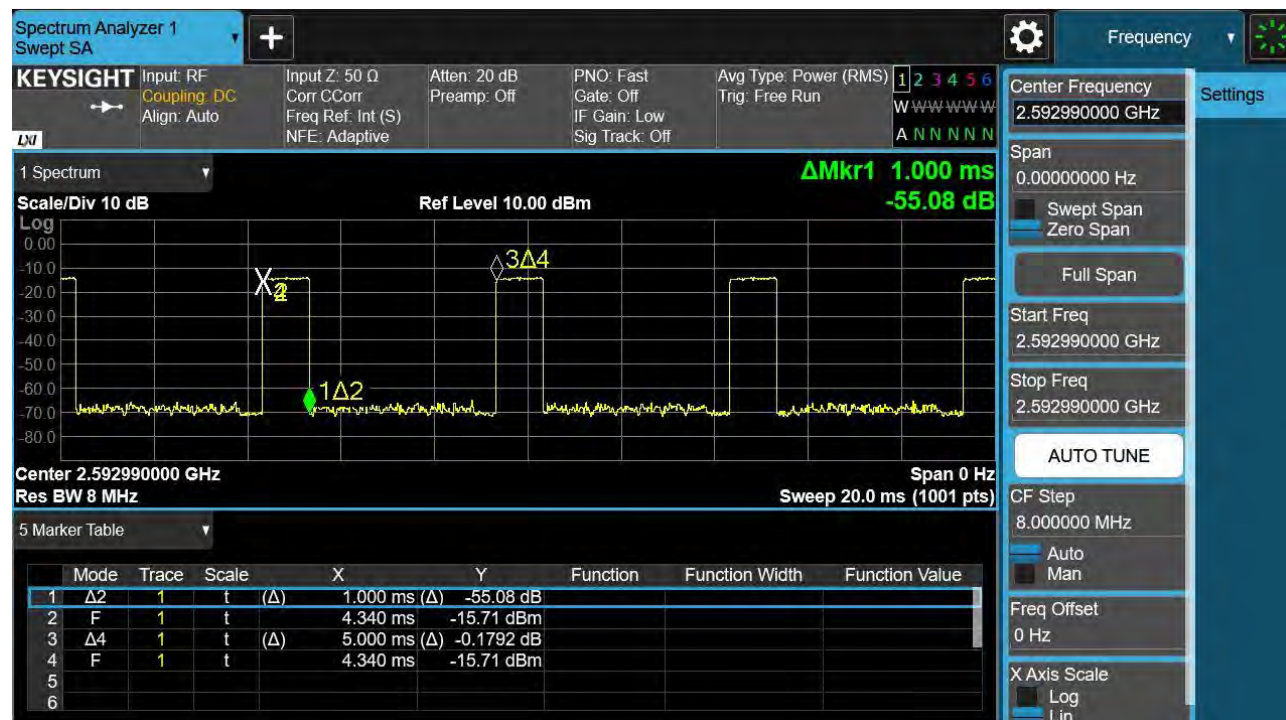
Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
Sub6 n41	10	2501.010	3.7568	37.190	-70.672	-33.482	-25.00
		2592.990	8.8559	37.805	-70.273	-32.468	
		2685.000	4.0270	37.190	-70.136	-32.946	
	15	2503.500	8.8794	37.805	-70.614	-32.809	
		2592.990	9.7139	37.805	-69.900	-32.095	
		2682.480	8.2543	37.805	-69.817	-32.012	
	20	2506.020	3.8091	37.190	-70.727	-33.537	
		2592.990	3.7897	37.190	-69.888	-32.698	
		2679.990	3.8286	37.190	-70.824	-33.634	
	30	2511.000	4.8894	37.190	-70.144	-32.954	
		2592.990	8.0020	37.805	-70.232	-32.427	
		2674.980	9.3973	37.805	-70.339	-32.534	
	40	2516.010	6.0190	37.805	-70.148	-32.343	
		2592.990	5.2254	37.805	-70.297	-32.492	
		2670.000	4.0414	37.190	-70.492	-33.302	
	50	2521.020	9.9168	37.805	-70.319	-32.514	
		2592.990	9.1291	37.805	-69.605	-31.800	
		2664.990	8.8903	37.805	-70.201	-32.396	
	60	2526.000	4.9671	37.190	-70.457	-33.267	
		2592.990	3.7503	37.190	-69.845	-32.655	
		2659.980	8.6117	37.805	-70.152	-32.347	
	70	2531.000	5.2124	37.805	-69.481	-31.676	
		2592.990	4.0484	37.190	-70.105	-32.915	
		2655.000	9.1037	37.805	-70.330	-32.525	
	80	2536.020	8.0210	37.805	-70.020	-32.215	
		2592.990	3.7937	37.190	-69.733	-32.543	
		2649.990	4.9198	37.190	-70.564	-33.374	
	90	2541.000	9.9840	37.805	-69.572	-31.767	
		2592.990	8.2807	37.805	-70.427	-32.622	
		2644.980	5.4736	37.805	-70.378	-32.573	
	100	2546.010	8.3171	37.805	-70.370	-32.565	
		2592.990	4.0499	37.190	-70.862	-33.672	
		2640.000	8.8530	37.805	-70.733	-32.928	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 551 ~ 616.

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 CHANNEL EDGE

BW (MHz)	Frequency (MHz)	Mod	RB (Size/ Offset)	2 495 MHz ~ 2 496 MHz	C.E ~ (C.E +1MHz)	2 490.5 MHz ~ 2 495 MHz	(C.E + 1 MHz) ~ (C.E + 5 MHz)	Below 2 490.5 MHz	(C.E + 5 MHz) ~ (C.E + X MHz)	Above (C.E + X MHz)
				Lower	Upper	Lower	Upper	Lower	Upper	Upper
10	2501.010	BPSK	Full RB	-26.32	-24.57	-28.89	-27.70	-33.53	-29.02	-37.96
15	2503.500	BPSK	Full RB	-25.80	-32.21	-30.15	-30.40	-32.07	-29.16	-40.02
20	2506.020	BPSK	Full RB	-27.50	-29.60	-32.18	-31.78	-34.26	-32.41	-38.97
30	2511.000	BPSK	Full RB	-25.67	-28.79	-29.95	-30.21	-31.53	-29.02	-37.03
40	2520.000	BPSK	Full RB	-25.35	-31.16	-30.30	-31.73	-33.12	-30.69	-41.58
50	2525.010	BPSK	Full RB	-23.34	-27.02	-28.15	-29.66	-34.91	-31.59	-40.75
60	2530.020	BPSK	Full RB	-18.38	-17.60	-26.05	-24.51	-34.01	-29.98	-42.67
70	2531.000	BPSK	Full RB	-22.93	-28.40	-27.89	-30.15	-31.44	-30.51	-39.14
80	2540.010	BPSK	Full RB	-22.62	-23.88	-28.14	-27.34	-32.36	-29.37	-38.90
90	2545.020	BPSK	Full RB	-22.80	-24.23	-28.64	-27.57	-32.06	-29.81	-34.79
100	2550.000	BPSK	Full RB	-20.28	-25.36	-28.31	-28.16	-32.95	-32.01	-43.62
Limit				-13.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	C.E ~ (C.E $\pm$ 1 MHz)		(C.E $\pm$ 1 MHz) ~ (C.E $\pm$ 5 MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-20.52	-21.76	-23.40	-23.85
	2685.000	BPSK	Full RB	0	-20.25	-23.18	-22.56	-24.29
15 MHz	2592.990	BPSK	Full RB	0	-20.73	-27.86	-23.54	-26.36
	2682.480	BPSK	Full RB	0	-15.70	-29.70	-22.62	-26.21
20 MHz	2592.990	BPSK	Full RB	0	-22.64	-25.67	-25.15	-26.96
	2679.990	BPSK	Full RB	0	-22.86	-27.37	-25.13	-28.45
30 MHz	2592.990	BPSK	Full RB	0	-21.74	-30.02	-27.08	-30.50
	2679.990	BPSK	Full RB	0	-22.83	-31.59	-27.40	-31.92
40 MHz	2592.990	BPSK	Full RB	0	-22.12	-31.15	-27.22	-31.64
	2670.000	BPSK	Full RB	0	-21.93	-32.66	-28.07	-32.97
50 MHz	2592.990	BPSK	Full RB	0	-20.84	-28.05	-25.72	-30.19
	2664.990	BPSK	Full RB	0	-21.77	-29.33	-27.40	-32.44
60 MHz	2592.990	BPSK	Full RB	0	-16.79	-15.77	-24.09	-25.89
	2659.980	BPSK	Full RB	0	-15.91	-19.48	-25.18	-27.59
70 MHz	2592.990	BPSK	Full RB	0	-19.72	-29.70	-25.15	-31.32
	2655.000	BPSK	Full RB	0	-19.82	-30.89	-25.56	-32.37
80 MHz	2592.990	BPSK	Full RB	0	-20.10	-25.46	-25.52	-28.66
	2649.990	BPSK	Full RB	0	-19.42	-25.50	-25.95	-29.73
90 MHz	2592.990	BPSK	Full RB	0	-15.17	-25.76	-26.63	-28.95
	2644.980	BPSK	Full RB	0	-19.41	-25.71	-25.38	-29.02
100 MHz	2592.990	BPSK	Full RB	0	-16.04	-24.62	-26.41	-29.15
	2640.000	BPSK	Full RB	0	-17.95	-29.10	-25.66	-30.85
Limit					-10.0		-10.0	

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	(C.E $\pm$ 5 MHz) ~ (C.E $\pm$ X MHz)		Above (C.E $\pm$ X MHz)	
					Lower	Upper	Lower	Upper
10 MHz	2592.990	BPSK	Full RB	0	-26.22	-25.54	-34.00	-36.18
	2685.000	BPSK	Full RB	0	-24.83	-26.49	-33.77	-36.46
15 MHz	2592.990	BPSK	Full RB	0	-25.06	-24.63	-33.47	-37.43
	2682.480	BPSK	Full RB	0	-24.58	-26.38	-32.90	-36.67
20 MHz	2592.990	BPSK	Full RB	0	-27.79	-25.77	-34.32	-36.24
	2679.990	BPSK	Full RB	0	-25.78	-27.28	-34.61	-37.97
30 MHz	2592.990	BPSK	Full RB	0	-28.08	-27.80	-34.65	-38.84
	2679.990	BPSK	Full RB	0	-29.67	-27.74	-36.70	-45.37
40 MHz	2592.990	BPSK	Full RB	0	-30.73	-29.22	-40.24	-41.20
	2670.000	BPSK	Full RB	0	-31.12	-29.69	-40.62	-47.34
50 MHz	2592.990	BPSK	Full RB	0	-31.53	-30.33	-38.46	-41.73
	2664.990	BPSK	Full RB	0	-32.67	-32.42	-37.79	-47.33
60 MHz	2592.990	BPSK	Full RB	0	-28.65	-29.41	-41.12	-43.92
	2659.980	BPSK	Full RB	0	-28.33	-34.10	-40.10	-47.33
70 MHz	2592.990	BPSK	Full RB	0	-29.65	-30.30	-37.03	-41.40
	2655.000	BPSK	Full RB	0	-29.18	-33.19	-36.65	-47.40
80 MHz	2592.990	BPSK	Full RB	0	-30.20	-30.43	-46.68	-42.35
	2649.990	BPSK	Full RB	0	-28.64	-33.46	-38.43	-47.41
90 MHz	2592.990	BPSK	Full RB	0	-30.02	-30.50	-47.38	-47.16
	2644.980	BPSK	Full RB	0	-26.56	-30.46	-36.83	-47.47
100 MHz	2592.990	BPSK	Full RB	0	-29.80	-32.33	-47.46	-47.51
	2640.000	BPSK	Full RB	0	-30.07	-33.03	-43.32	-47.45
Limit					-13.0		-25.0	

Note:

1. C.E = Channel Edge
2. X = X is the greater of 6 MHz or the actual emission bandwidth
3. 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
4. Plots of the EUT's Channel Edge are shown Page 474 ~ 550. (1RB & Full RB)

9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2501.010	100 %	+20(Ref)	2501 010 004	0.0	0.000 000	0.000
	100 %	-30	2501 010 018	14.6	0.000 001	0.006
	100 %	-20	2501 010 015	11.1	0.000 000	0.004
	100 %	-10	2501 010 007	3.7	0.000 000	0.001
	100 %	0	2501 010 010	6.0	0.000 000	0.002
	100 %	+10	2501 010 011	6.9	0.000 000	0.003
	100 %	+30	2501 010 009	5.1	0.000 000	0.002
	100 %	+40	2501 010 015	10.8	0.000 000	0.004
	100 %	+50	2501 010 008	4.1	0.000 000	0.002
	Batt. Endpoint	+20	2501 010 013	9.0	0.000 000	0.004
2685.000	100 %	+20(Ref)	2685 000 013	0.0	0.000 000	0.000
	100 %	-30	2685 000 017	3.9	0.000 000	0.001
	100 %	-20	2685 000 021	7.8	0.000 000	0.003
	100 %	-10	2685 000 018	5.1	0.000 000	0.002
	100 %	0	2685 000 022	8.6	0.000 000	0.003
	100 %	+10	2685 000 022	8.6	0.000 000	0.003
	100 %	+30	2685 000 021	8.1	0.000 000	0.003
	100 %	+40	2685 000 021	7.6	0.000 000	0.003
	100 %	+50	2685 000 017	3.6	0.000 000	0.001
	Batt. Endpoint	+20	2685 000 017	3.8	0.000 000	0.001

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2503.500	100 %	+20(Ref)	2503 500 006	0.0	0.000 000	0.000
	100 %	-30	2503 500 020	14.7	0.000 001	0.006
	100 %	-20	2503 500 018	12.2	0.000 000	0.005
	100 %	-10	2503 500 018	12.0	0.000 000	0.005
	100 %	0	2503 500 016	10.4	0.000 000	0.004
	100 %	+10	2503 500 013	7.0	0.000 000	0.003
	100 %	+30	2503 500 016	10.3	0.000 000	0.004
	100 %	+40	2503 500 016	9.9	0.000 000	0.004
	100 %	+50	2503 500 014	8.5	0.000 000	0.003
	Batt. Endpoint	+20	2503 500 011	5.5	0.000 000	0.002
2682.480	100 %	+20(Ref)	2682 480 005	0.0	0.000 000	0.000
	100 %	-30	2682 480 018	13.6	0.000 001	0.005
	100 %	-20	2682 480 009	5.0	0.000 000	0.002
	100 %	-10	2682 480 015	10.6	0.000 000	0.004
	100 %	0	2682 480 015	10.8	0.000 000	0.004
	100 %	+10	2682 480 019	14.8	0.000 001	0.006
	100 %	+30	2682 480 015	10.5	0.000 000	0.004
	100 %	+40	2682 480 016	11.7	0.000 000	0.004
	100 %	+50	2682 480 021	16.1	0.000 001	0.006
	Batt. Endpoint	+20	2682 480 015	10.5	0.000 000	0.004

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2506.020	100 %	+20(Ref)	2506 020 013	0.0	0.000 000	0.000
	100 %	-30	2506 020 028	14.2	0.000 001	0.006
	100 %	-20	2506 020 030	16.7	0.000 001	0.007
	100 %	-10	2506 020 026	12.1	0.000 000	0.005
	100 %	0	2506 020 027	13.8	0.000 001	0.006
	100 %	+10	2506 020 019	5.6	0.000 000	0.002
	100 %	+30	2506 020 024	10.3	0.000 000	0.004
	100 %	+40	2506 020 025	11.3	0.000 000	0.005
	100 %	+50	2506 020 019	6.1	0.000 000	0.002
	Batt. Endpoint	+20	2506 020 019	5.2	0.000 000	0.002
2679.990	100 %	+20(Ref)	2679 990 009	0.0	0.000 000	0.000
	100 %	-30	2679 990 019	10.7	0.000 000	0.004
	100 %	-20	2679 990 025	16.2	0.000 001	0.006
	100 %	-10	2679 990 015	6.8	0.000 000	0.003
	100 %	0	2679 990 025	16.1	0.000 001	0.006
	100 %	+10	2679 990 023	14.6	0.000 001	0.005
	100 %	+30	2679 990 019	10.3	0.000 000	0.004
	100 %	+40	2679 990 023	14.4	0.000 001	0.005
	100 %	+50	2679 990 024	15.5	0.000 001	0.006
	Batt. Endpoint	+20	2679 990 013	4.0	0.000 000	0.001

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2511.000	100 %	+20(Ref)	2511 000 017	0.0	0.000 000	0.000
	100 %	-30	2511 000 025	8.3	0.000 000	0.003
	100 %	-20	2511 000 032	15.1	0.000 001	0.006
	100 %	-10	2511 000 029	12.7	0.000 001	0.005
	100 %	0	2511 000 031	14.4	0.000 001	0.006
	100 %	+10	2511 000 030	13.7	0.000 001	0.005
	100 %	+30	2511 000 021	4.8	0.000 000	0.002
	100 %	+40	2511 000 026	9.1	0.000 000	0.004
	100 %	+50	2511 000 030	12.9	0.000 001	0.005
	Batt. Endpoint	+20	2511 000 029	12.3	0.000 000	0.005
2674.980	100 %	+20(Ref)	2674 980 015	0.0	0.000 000	0.000
	100 %	-30	2674 980 023	8.1	0.000 000	0.003
	100 %	-20	2674 980 032	16.3	0.000 001	0.006
	100 %	-10	2674 980 022	6.7	0.000 000	0.003
	100 %	0	2674 980 029	14.2	0.000 001	0.005
	100 %	+10	2674 980 020	4.5	0.000 000	0.002
	100 %	+30	2674 980 019	3.6	0.000 000	0.001
	100 %	+40	2674 980 024	8.6	0.000 000	0.003
	100 %	+50	2674 980 019	3.8	0.000 000	0.001
	Batt. Endpoint	+20	2674 980 029	13.9	0.000 001	0.005

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2516.010	100 %	+20(Ref)	2516 010 008	0.0	0.000 000	0.000
	100 %	-30	2516 010 015	6.4	0.000 000	0.003
	100 %	-20	2516 010 018	9.7	0.000 000	0.004
	100 %	-10	2516 010 015	7.2	0.000 000	0.003
	100 %	0	2516 010 019	10.8	0.000 000	0.004
	100 %	+10	2516 010 015	7.1	0.000 000	0.003
	100 %	+30	2516 010 012	4.2	0.000 000	0.002
	100 %	+40	2516 010 019	11.0	0.000 000	0.004
	100 %	+50	2516 010 016	7.4	0.000 000	0.003
	Batt. Endpoint	+20	2516 010 019	10.7	0.000 000	0.004
2670.000	100 %	+20(Ref)	2670 000 015	0.0	0.000 000	0.000
	100 %	-30	2670 000 022	7.4	0.000 000	0.003
	100 %	-20	2670 000 023	8.4	0.000 000	0.003
	100 %	-10	2670 000 027	12.7	0.000 000	0.005
	100 %	0	2670 000 026	11.2	0.000 000	0.004
	100 %	+10	2670 000 030	15.0	0.000 001	0.006
	100 %	+30	2670 000 024	9.4	0.000 000	0.004
	100 %	+40	2670 000 019	4.6	0.000 000	0.002
	100 %	+50	2670 000 021	6.0	0.000 000	0.002
	Batt. Endpoint	+20	2670 000 029	14.2	0.000 001	0.005

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2521.020	100 %	+20(Ref)	2521 020 011	0.0	0.000 000	0.000
	100 %	-30	2521 020 023	12.2	0.000 000	0.005
	100 %	-20	2521 020 027	16.0	0.000 001	0.006
	100 %	-10	2521 020 026	15.4	0.000 001	0.006
	100 %	0	2521 020 027	15.9	0.000 001	0.006
	100 %	+10	2521 020 027	15.9	0.000 001	0.006
	100 %	+30	2521 020 023	11.6	0.000 000	0.005
	100 %	+40	2521 020 026	14.6	0.000 001	0.006
	100 %	+50	2521 020 024	12.8	0.000 001	0.005
	Batt. Endpoint	+20	2521 020 027	15.6	0.000 001	0.006
2664.990	100 %	+20(Ref)	2664 990 008	0.0	0.000 000	0.000
	100 %	-30	2664 990 020	11.5	0.000 000	0.004
	100 %	-20	2664 990 020	11.8	0.000 000	0.004
	100 %	-10	2664 990 024	16.1	0.000 001	0.006
	100 %	0	2664 990 012	3.2	0.000 000	0.001
	100 %	+10	2664 990 024	15.4	0.000 001	0.006
	100 %	+30	2664 990 012	3.2	0.000 000	0.001
	100 %	+40	2664 990 020	11.8	0.000 000	0.004
	100 %	+50	2664 990 020	11.8	0.000 000	0.004
	Batt. Endpoint	+20	2664 990 012	4.1	0.000 000	0.002

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2526.000	100 %	+20(Ref)	2526 000 004	0.0	0.000 000	0.000
	100 %	-30	2526 000 018	14.7	0.000 001	0.006
	100 %	-20	2526 000 008	4.4	0.000 000	0.002
	100 %	-10	2526 000 017	13.3	0.000 001	0.005
	100 %	0	2526 000 018	14.5	0.000 001	0.006
	100 %	+10	2526 000 010	6.2	0.000 000	0.002
	100 %	+30	2526 000 016	12.6	0.000 000	0.005
	100 %	+40	2526 000 017	13.5	0.000 001	0.005
	100 %	+50	2526 000 011	7.2	0.000 000	0.003
	Batt. Endpoint	+20	2526 000 016	12.3	0.000 000	0.005
2659.980	100 %	+20(Ref)	2659 980 008	0.0	0.000 000	0.000
	100 %	-30	2659 980 013	4.8	0.000 000	0.002
	100 %	-20	2659 980 015	6.9	0.000 000	0.003
	100 %	-10	2659 980 023	14.7	0.000 001	0.006
	100 %	0	2659 980 013	5.4	0.000 000	0.002
	100 %	+10	2659 980 020	12.3	0.000 000	0.005
	100 %	+30	2659 980 021	13.0	0.000 000	0.005
	100 %	+40	2659 980 016	7.8	0.000 000	0.003
	100 %	+50	2659 980 018	9.7	0.000 000	0.004
	Batt. Endpoint	+20	2659 980 017	9.2	0.000 000	0.003

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2531.000	100 %	+20(Ref)	2531 010 012	0.0	0.000 000	0.000
	100 %	-30	2531 010 026	14.2	0.000 001	0.006
	100 %	-20	2531 010 028	16.2	0.000 001	0.006
	100 %	-10	2531 010 021	9.2	0.000 000	0.004
	100 %	0	2531 010 023	11.8	0.000 000	0.005
	100 %	+10	2531 010 015	3.5	0.000 000	0.001
	100 %	+30	2531 010 019	7.6	0.000 000	0.003
	100 %	+40	2531 010 016	4.7	0.000 000	0.002
	100 %	+50	2531 010 024	12.5	0.000 000	0.005
	Batt. Endpoint	+20	2531 010 015	3.1	0.000 000	0.001
2655.000	100 %	+20(Ref)	2655 000 005	0.0	0.000 000	0.000
	100 %	-30	2655 000 012	6.7	0.000 000	0.003
	100 %	-20	2655 000 018	12.6	0.000 000	0.005
	100 %	-10	2655 000 015	9.4	0.000 000	0.004
	100 %	0	2655 000 009	3.5	0.000 000	0.001
	100 %	+10	2655 000 009	3.8	0.000 000	0.001
	100 %	+30	2655 000 020	14.8	0.000 001	0.006
	100 %	+40	2655 000 009	3.9	0.000 000	0.001
	100 %	+50	2655 000 018	12.3	0.000 000	0.005
	Batt. Endpoint	+20	2655 000 017	11.6	0.000 000	0.004

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

Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2536.020	100 %	+20(Ref)	2536 020 009	0.0	0.000 000	0.000
	100 %	-30	2536 020 025	16.4	0.000 001	0.006
	100 %	-20	2536 020 020	11.8	0.000 000	0.005
	100 %	-10	2536 020 023	14.6	0.000 001	0.006
	100 %	0	2536 020 017	8.2	0.000 000	0.003
	100 %	+10	2536 020 017	8.5	0.000 000	0.003
	100 %	+30	2536 020 022	13.4	0.000 001	0.005
	100 %	+40	2536 020 025	16.7	0.000 001	0.007
	100 %	+50	2536 020 015	6.2	0.000 000	0.002
	Batt. Endpoint	+20	2536 020 019	10.8	0.000 000	0.004
2649.990	100 %	+20(Ref)	2649 990 003	0.0	0.000 000	0.000
	100 %	-30	2649 990 017	13.9	0.000 001	0.005
	100 %	-20	2649 990 007	3.5	0.000 000	0.001
	100 %	-10	2649 990 008	5.1	0.000 000	0.002
	100 %	0	2649 990 011	7.3	0.000 000	0.003
	100 %	+10	2649 990 012	8.3	0.000 000	0.003
	100 %	+30	2649 990 019	15.3	0.000 001	0.006
	100 %	+40	2649 990 018	14.7	0.000 001	0.006
	100 %	+50	2649 990 011	7.5	0.000 000	0.003
	Batt. Endpoint	+20	2649 990 007	3.2	0.000 000	0.001

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

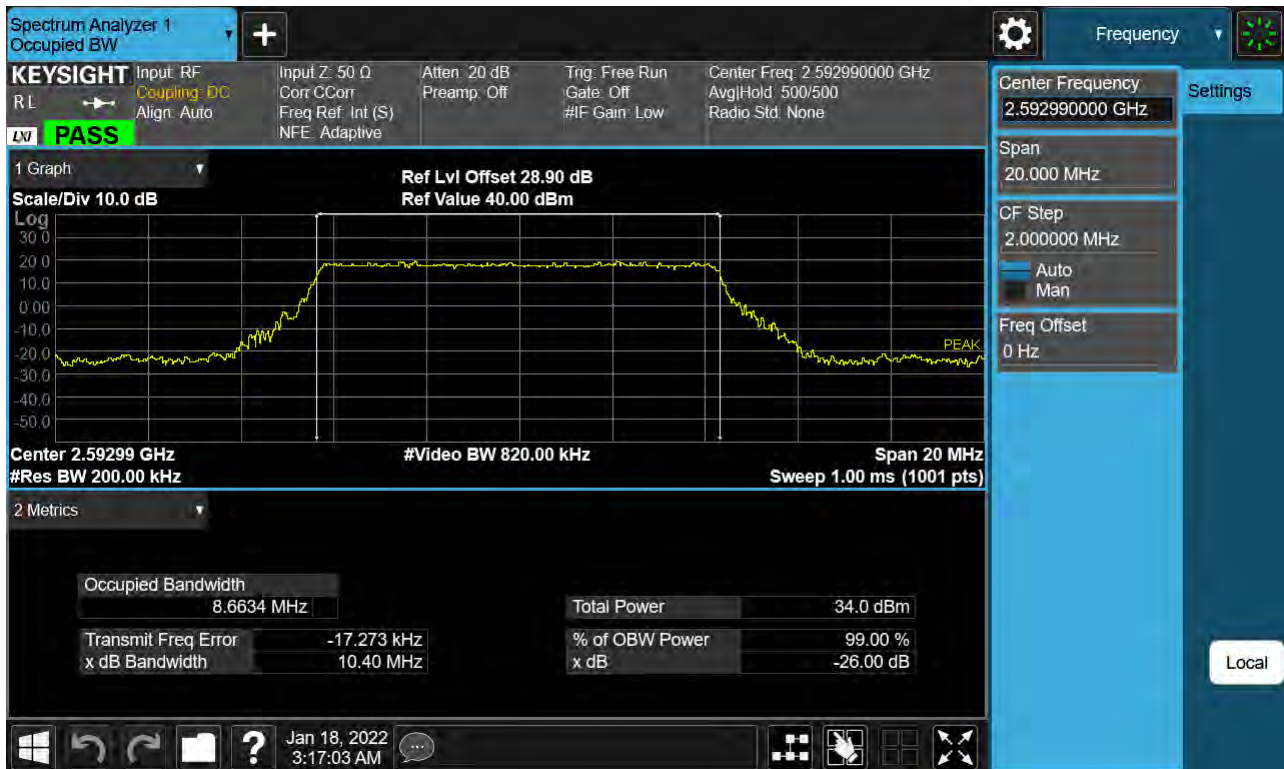
Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2541.000	100 %	+20(Ref)	2541 000 006	0.0	0.000 000	0.000
	100 %	-30	2541 000 011	4.4	0.000 000	0.002
	100 %	-20	2541 000 015	8.7	0.000 000	0.003
	100 %	-10	2541 000 020	13.8	0.000 001	0.005
	100 %	0	2541 000 010	4.0	0.000 000	0.002
	100 %	+10	2541 000 019	12.9	0.000 001	0.005
	100 %	+30	2541 000 017	10.9	0.000 000	0.004
	100 %	+40	2541 000 013	6.4	0.000 000	0.003
	100 %	+50	2541 000 014	8.0	0.000 000	0.003
	Batt. Endpoint	+20	2541 000 013	6.6	0.000 000	0.003
2644.980	100 %	+20(Ref)	2644 980 005	0.0	0.000 000	0.000
	100 %	-30	2644 980 013	8.4	0.000 000	0.003
	100 %	-20	2644 980 017	12.6	0.000 000	0.005
	100 %	-10	2644 980 008	3.1	0.000 000	0.001
	100 %	0	2644 980 019	13.8	0.000 001	0.005
	100 %	+10	2644 980 015	10.5	0.000 000	0.004
	100 %	+30	2644 980 018	12.7	0.000 000	0.005
	100 %	+40	2644 980 015	10.0	0.000 000	0.004
	100 %	+50	2644 980 021	15.7	0.000 001	0.006
	Batt. Endpoint	+20	2644 980 020	14.7	0.000 001	0.006

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

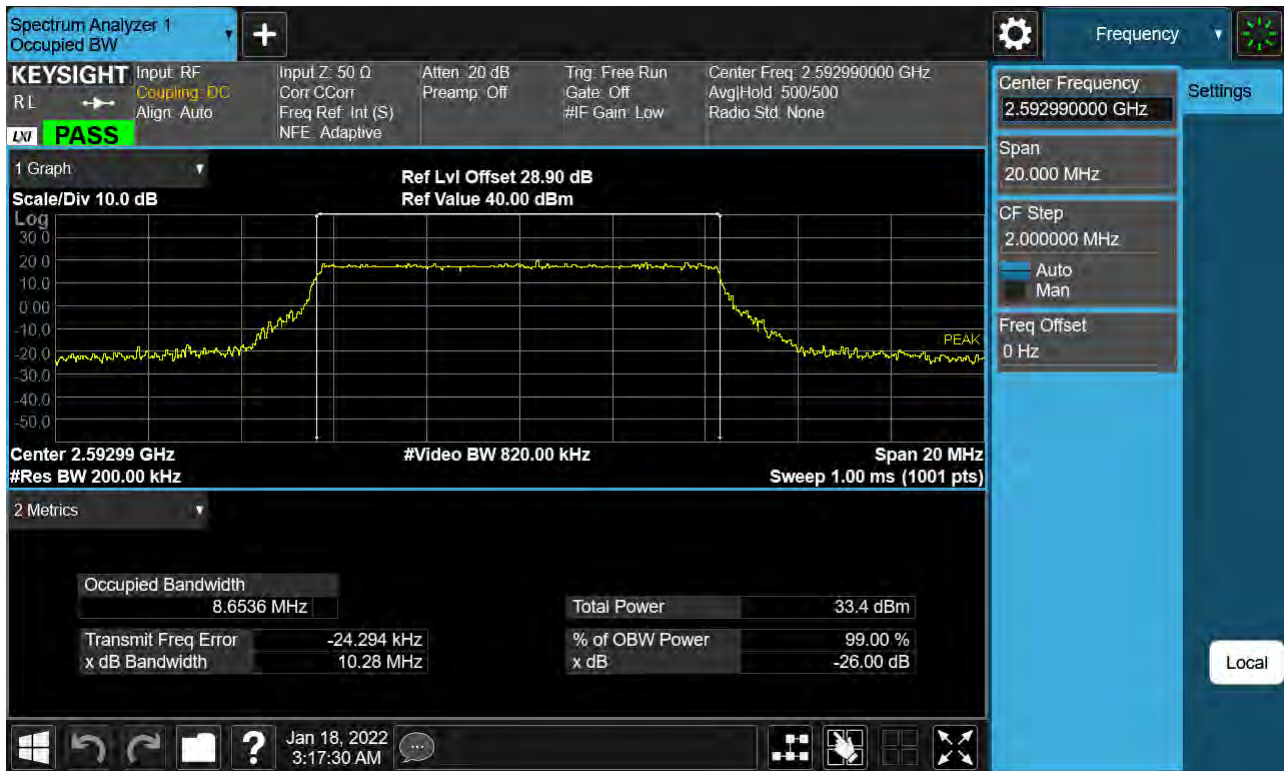
Test. Frequency (MHz)	Voltage (%)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2546.010	100 %	+20(Ref)	2546 010 006	0.0	0.000 000	0.000
	100 %	-30	2546 010 010	4.1	0.000 000	0.002
	100 %	-20	2546 010 016	9.7	0.000 000	0.004
	100 %	-10	2546 010 022	15.8	0.000 001	0.006
	100 %	0	2546 010 016	10.2	0.000 000	0.004
	100 %	+10	2546 010 023	17.0	0.000 001	0.007
	100 %	+30	2546 010 011	4.6	0.000 000	0.002
	100 %	+40	2546 010 012	6.0	0.000 000	0.002
	100 %	+50	2546 010 019	12.7	0.000 000	0.005
	Batt. Endpoint	+20	2546 010 010	4.1	0.000 000	0.002
2640.000	100 %	+20(Ref)	2640 000 010	0.0	0.000 000	0.000
	100 %	-30	2640 000 024	14.3	0.000 001	0.005
	100 %	-20	2640 000 023	12.7	0.000 000	0.005
	100 %	-10	2640 000 021	10.9	0.000 000	0.004
	100 %	0	2640 000 015	5.0	0.000 000	0.002
	100 %	+10	2640 000 027	16.6	0.000 001	0.006
	100 %	+30	2640 000 025	15.2	0.000 001	0.006
	100 %	+40	2640 000 017	7.3	0.000 000	0.003
	100 %	+50	2640 000 016	6.0	0.000 000	0.002
	Batt. Endpoint	+20	2640 000 019	9.3	0.000 000	0.004

10. TEST PLOTS(Main2 Antenna)

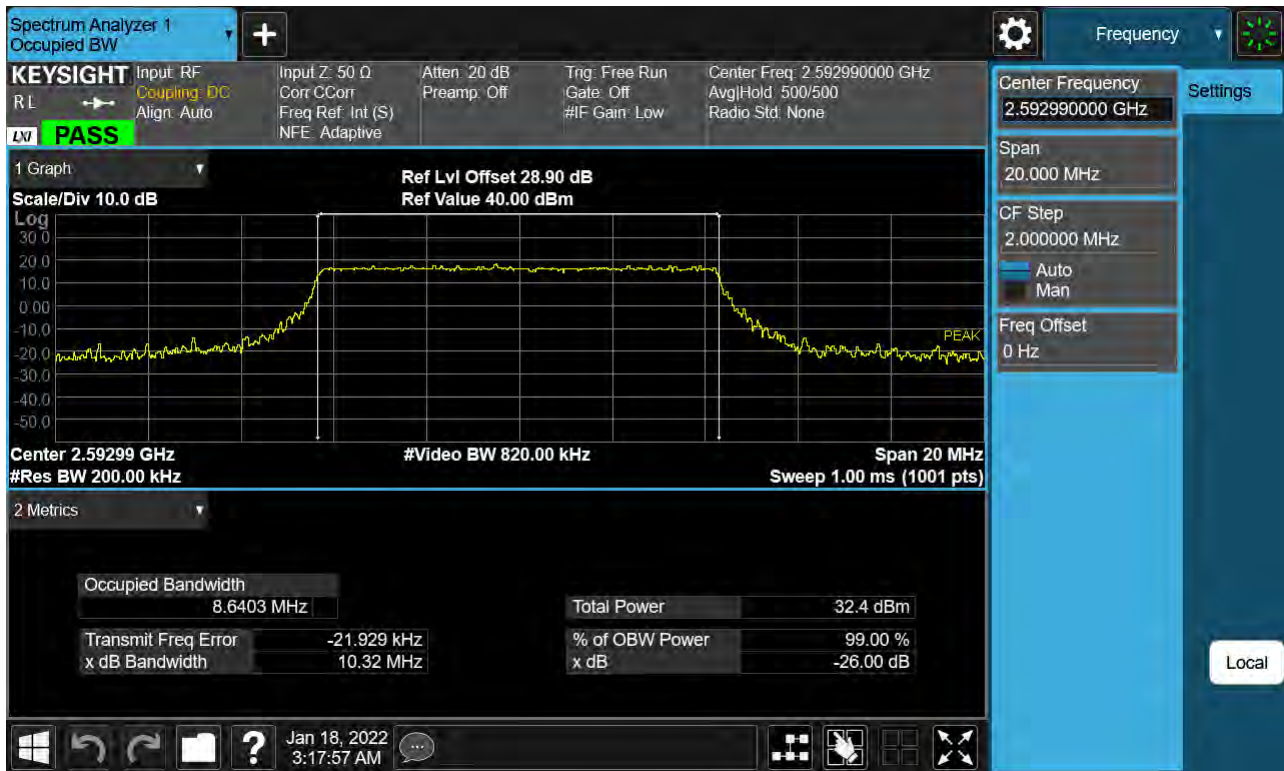
Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 BPSK)



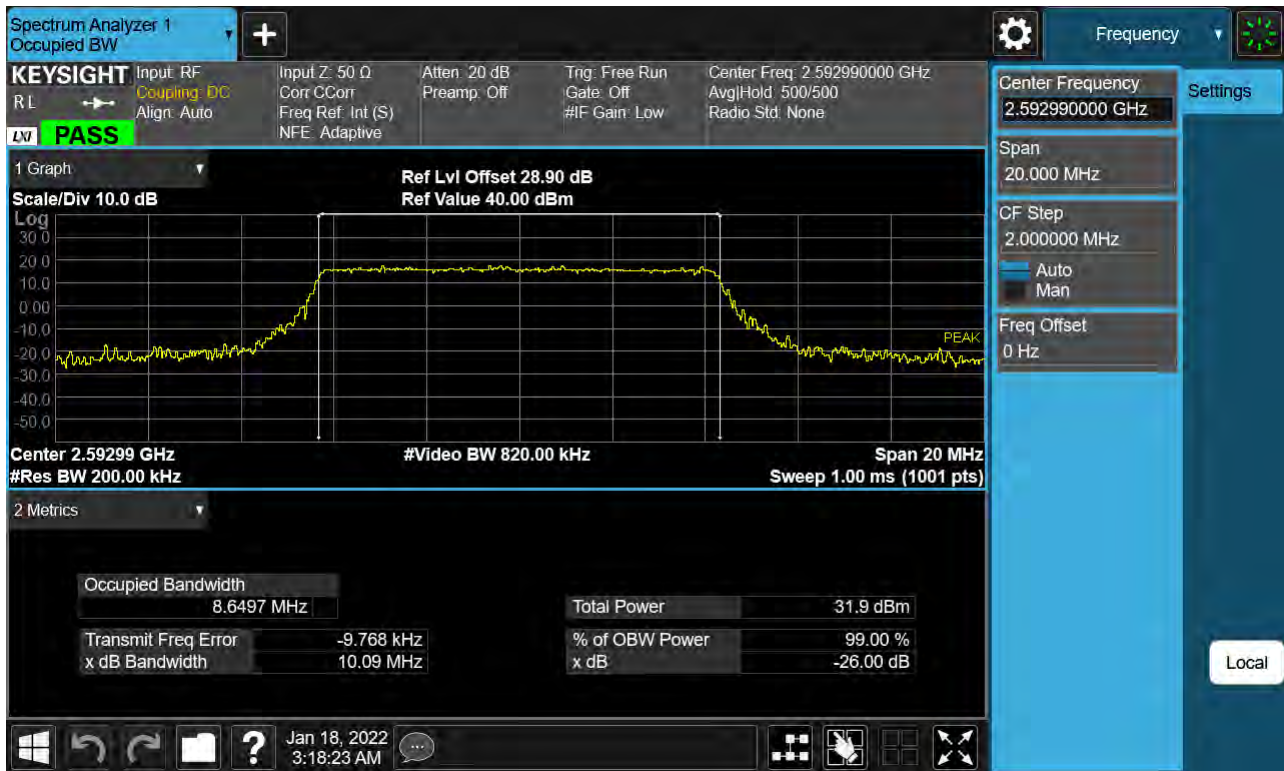
Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 QPSK)



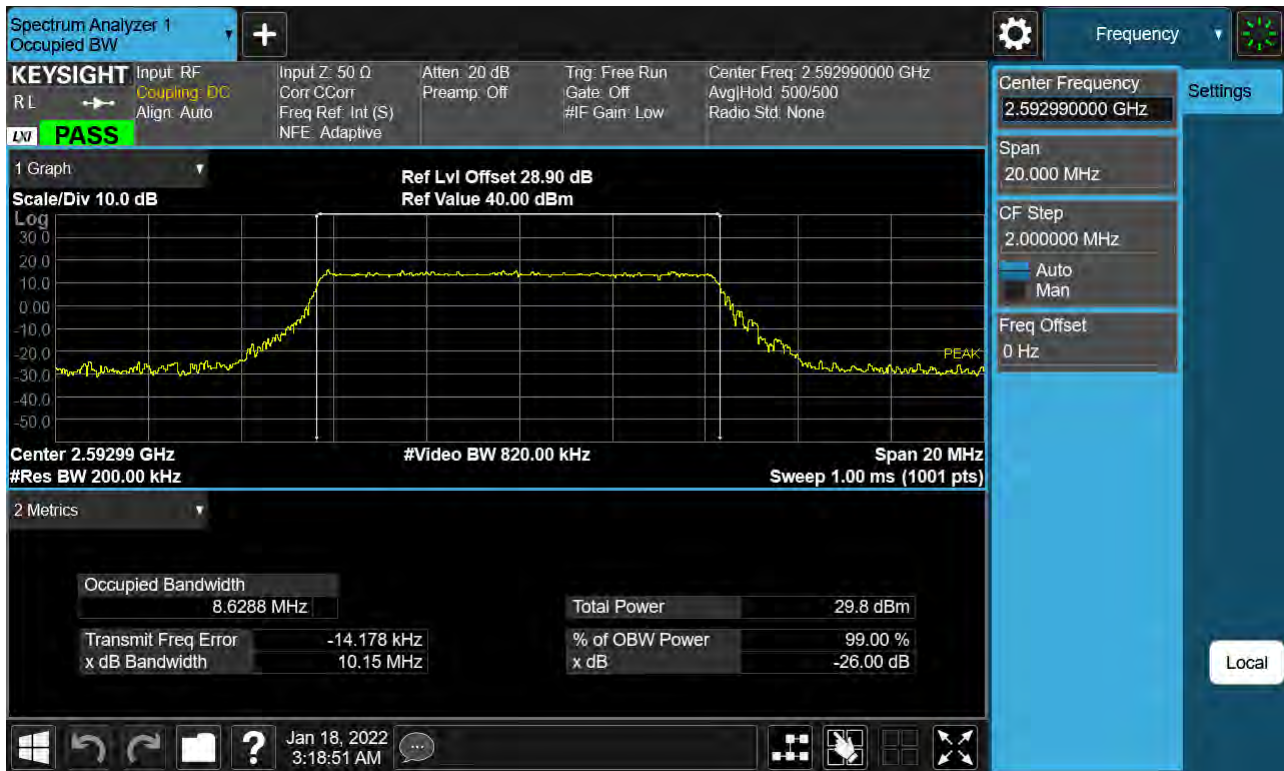
Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 64-QAM)



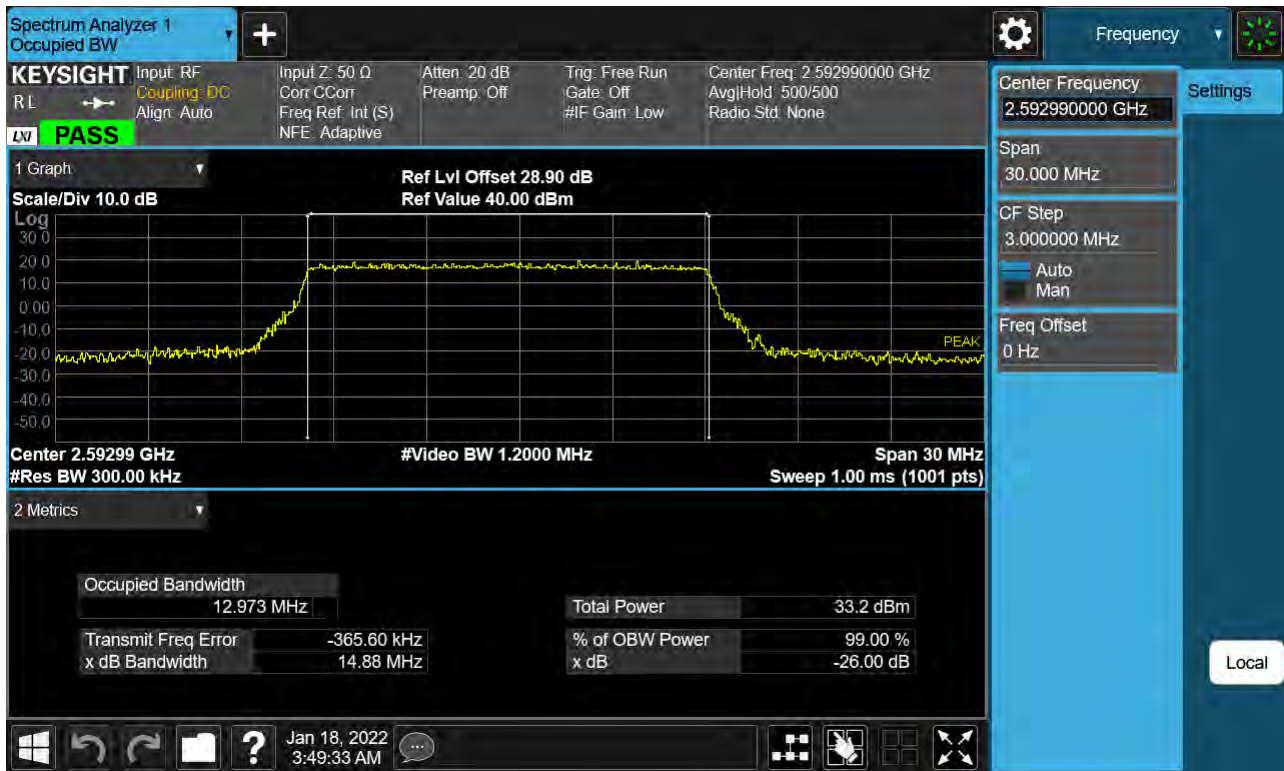
Sub6 n41. Occupied Bandwidth Plot (10 MHz Ch.518598 256-QAM)



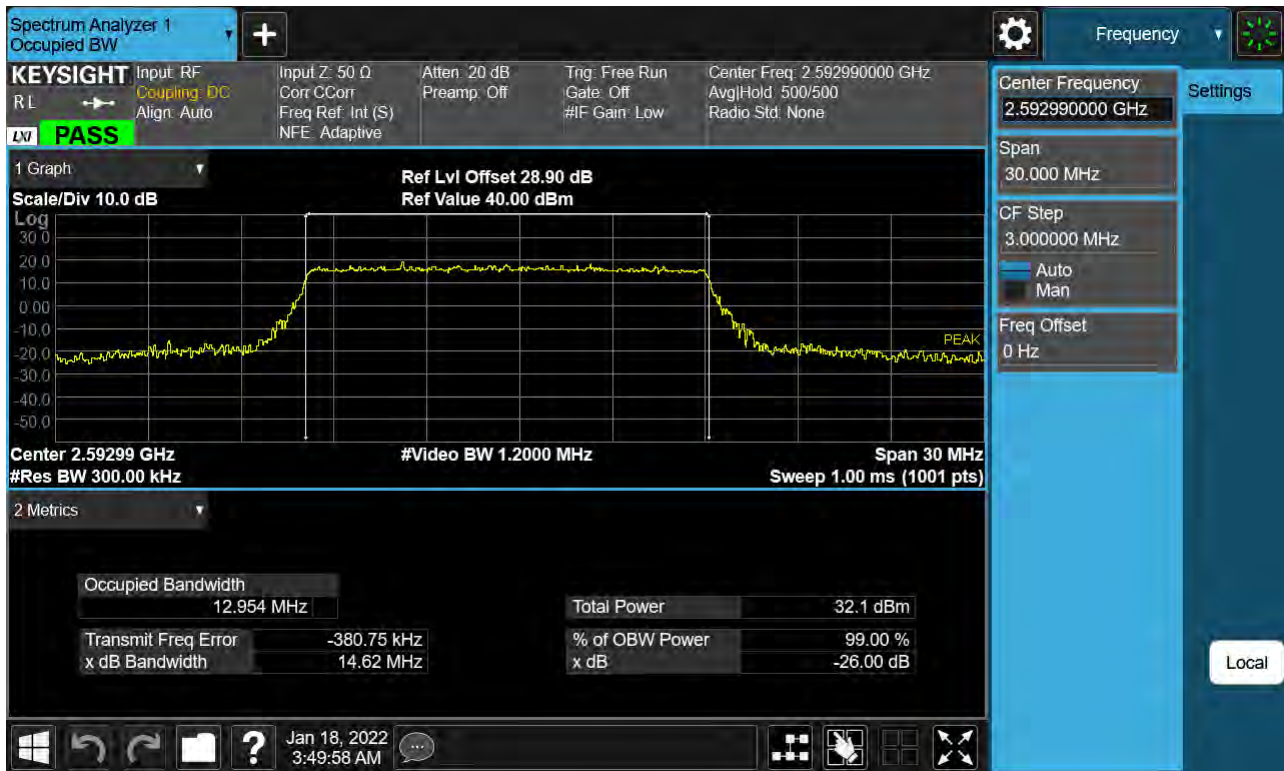
Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 BPSK)



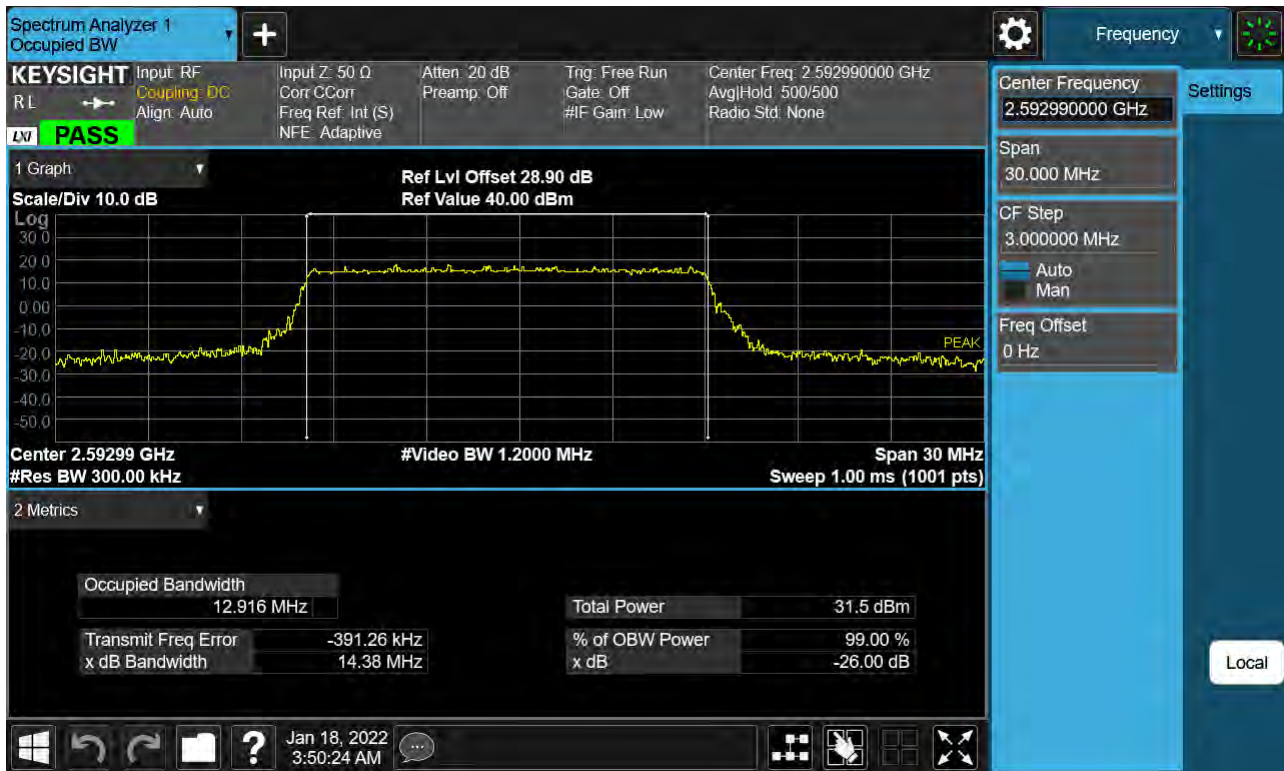
Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 QPSK)



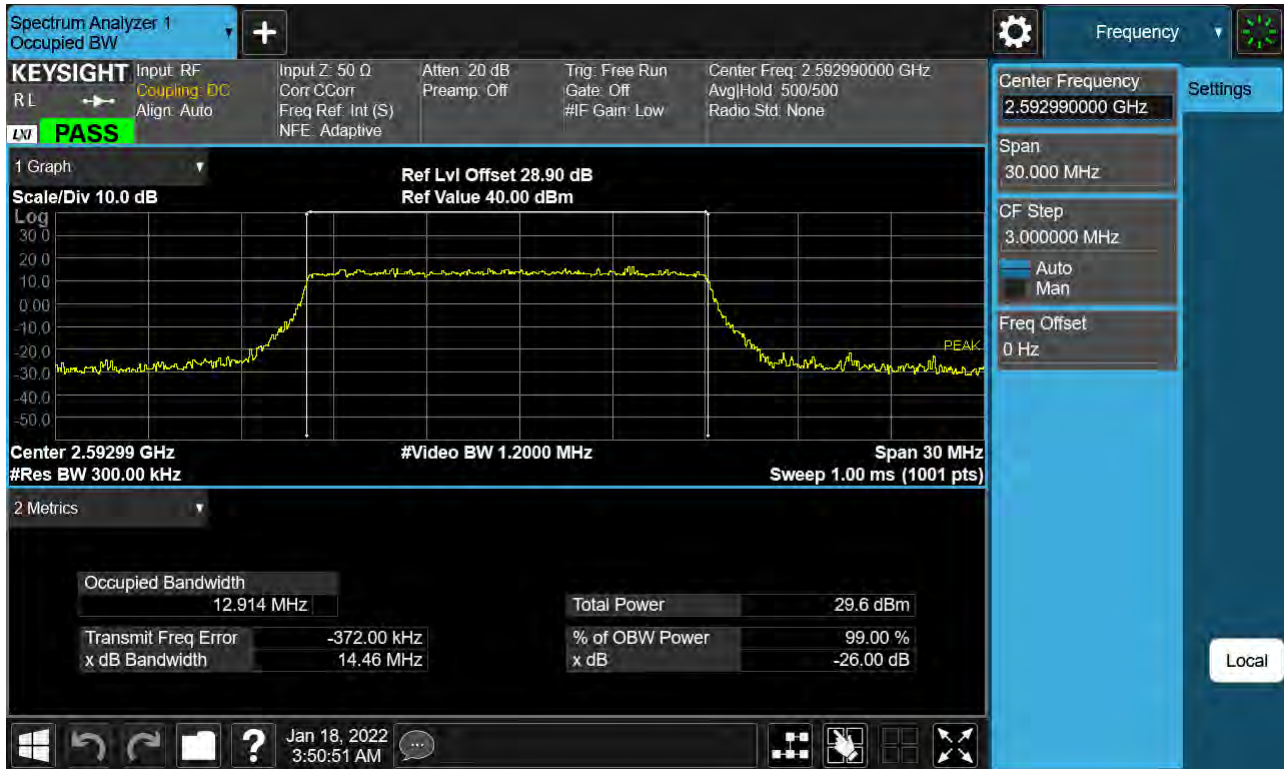
Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 64-QAM)



Sub6 n41. Occupied Bandwidth Plot (15 MHz Ch.518598 256-QAM)



Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 BPSK)



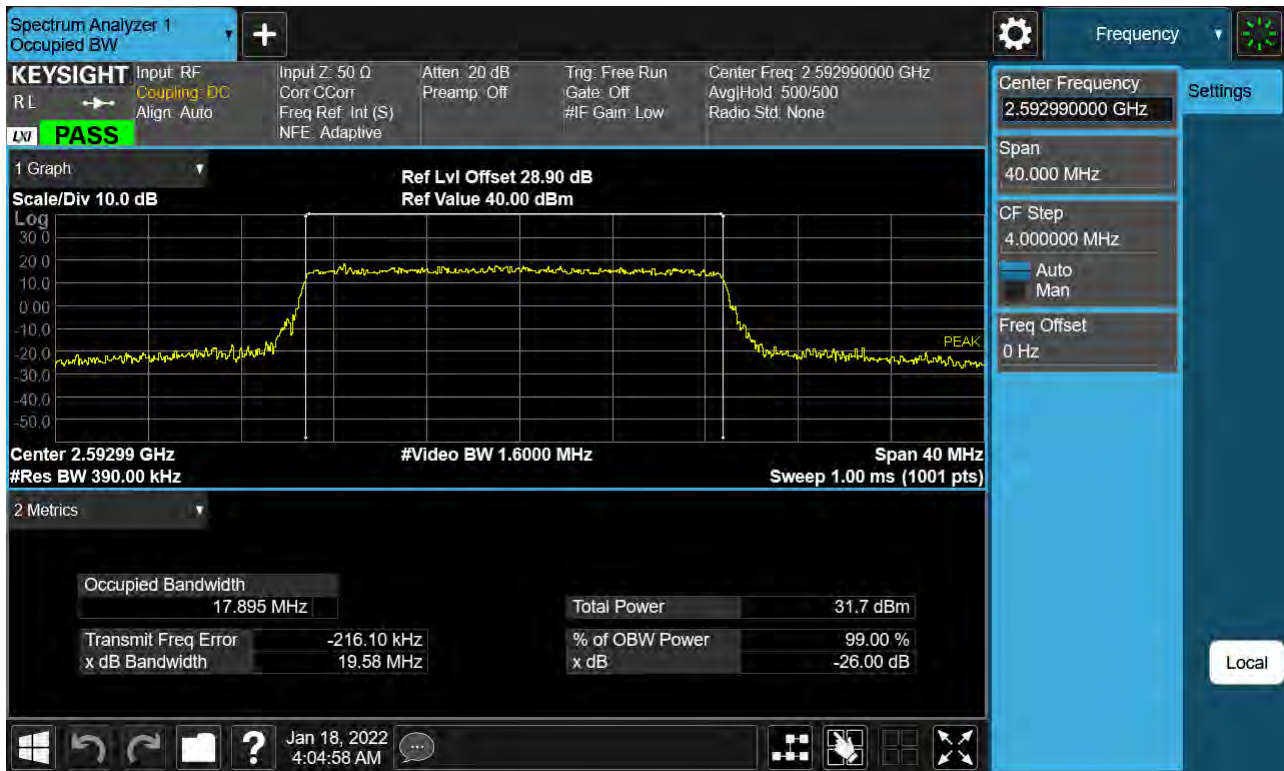
Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 QPSK)



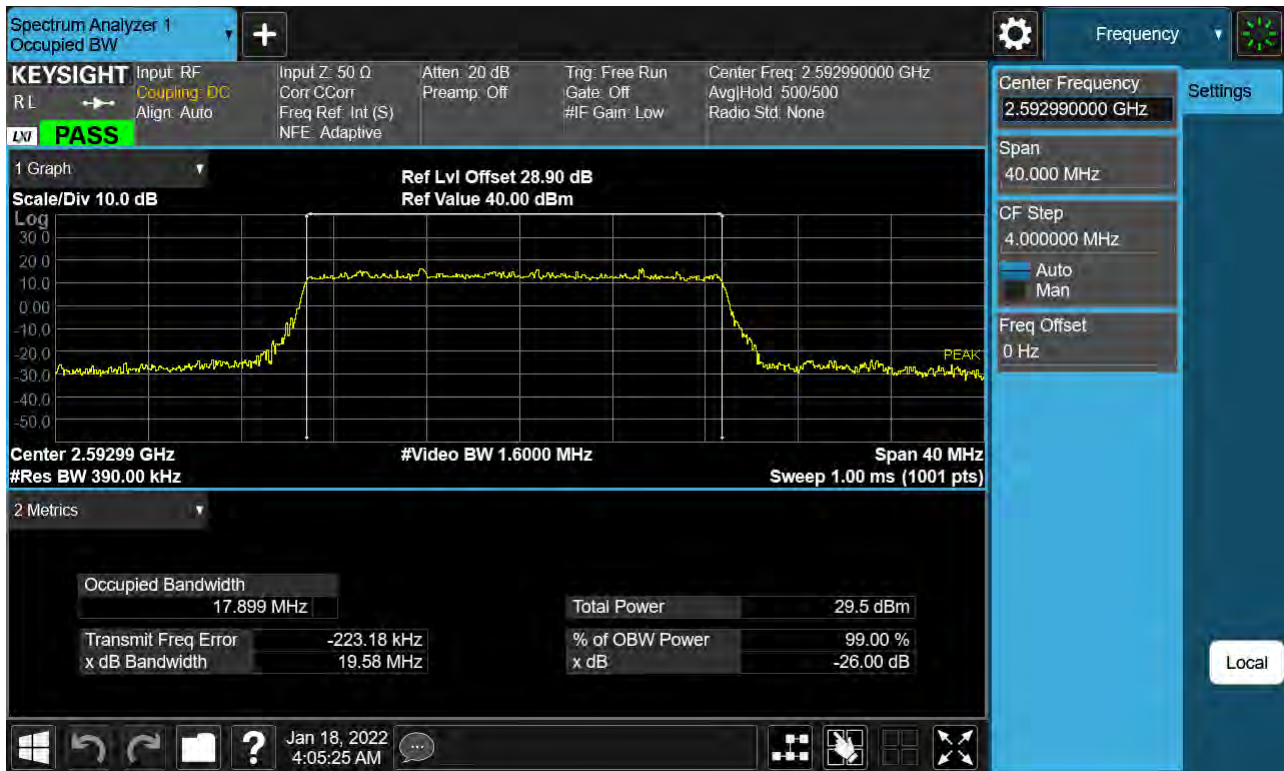
Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 64-QAM)



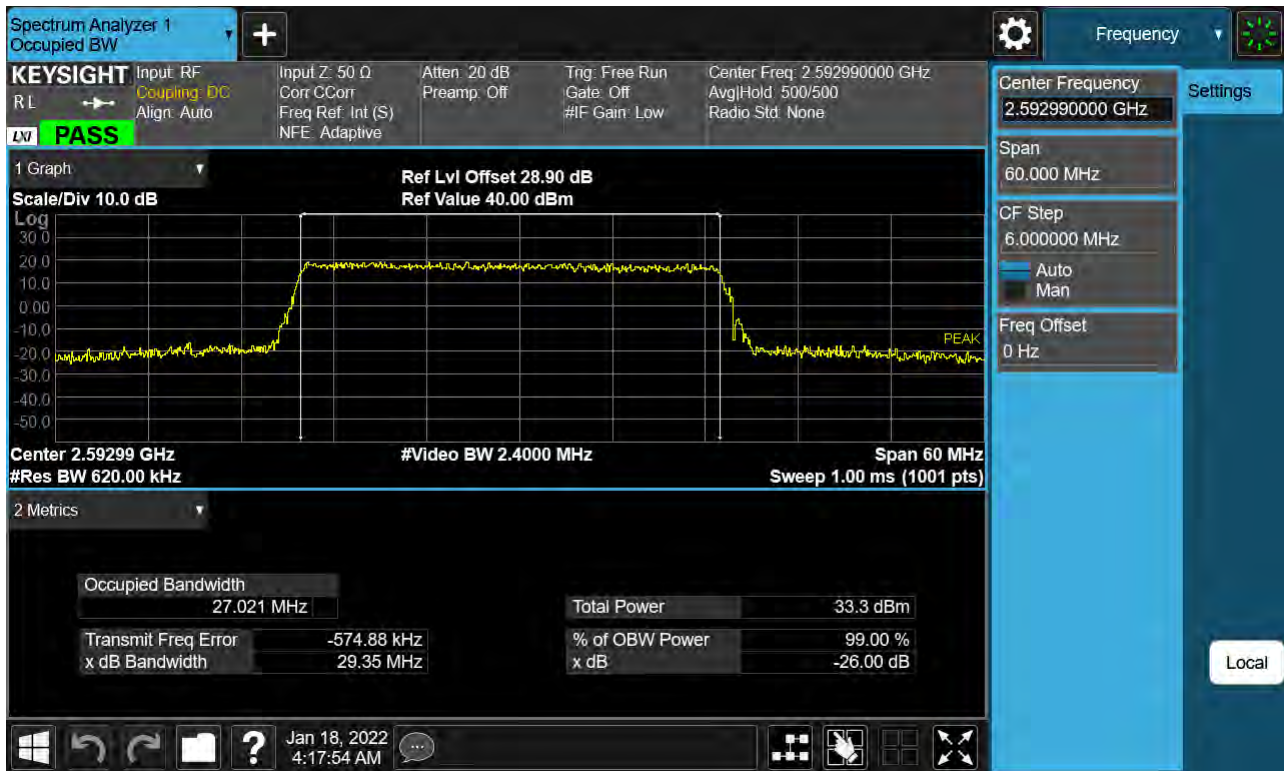
Sub6 n41. Occupied Bandwidth Plot (20 MHz Ch.518598 256-QAM)



Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 BPSK)



Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 QPSK)



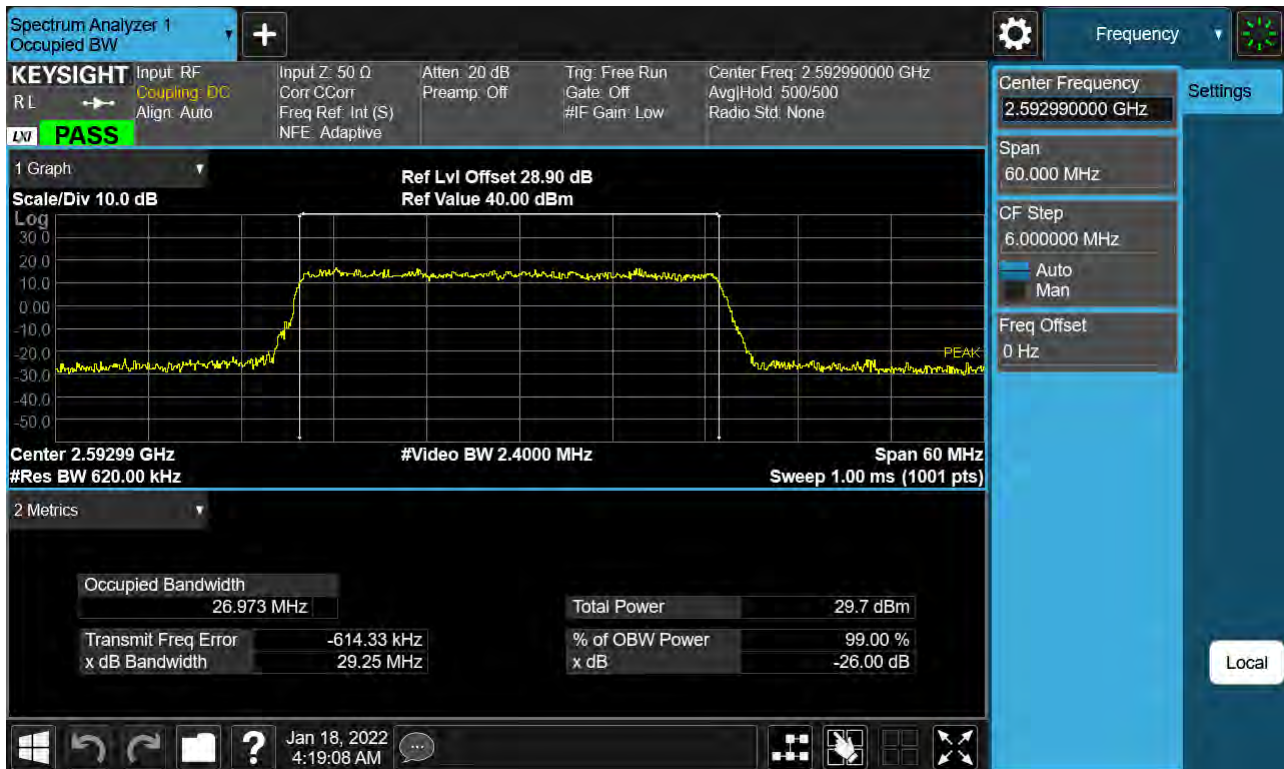
Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 64-QAM)



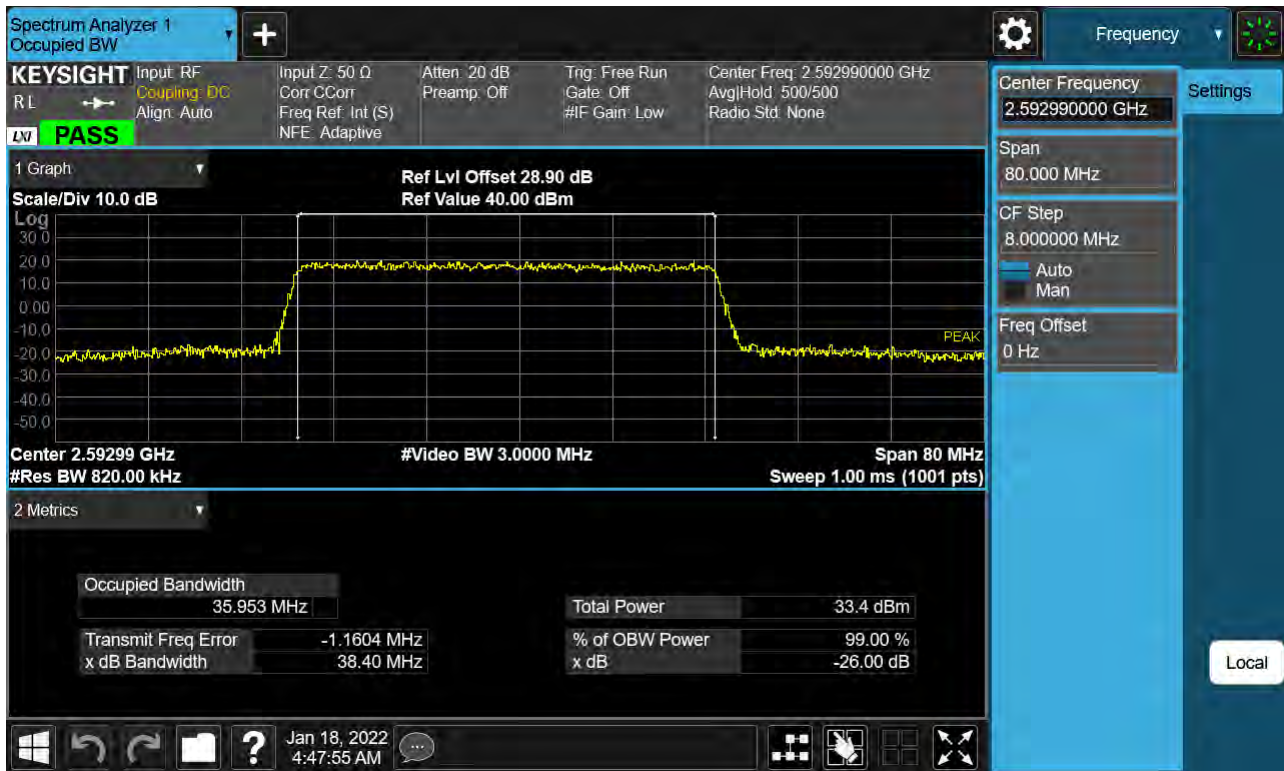
Sub6 n41. Occupied Bandwidth Plot (30 MHz Ch.518598 256-QAM)



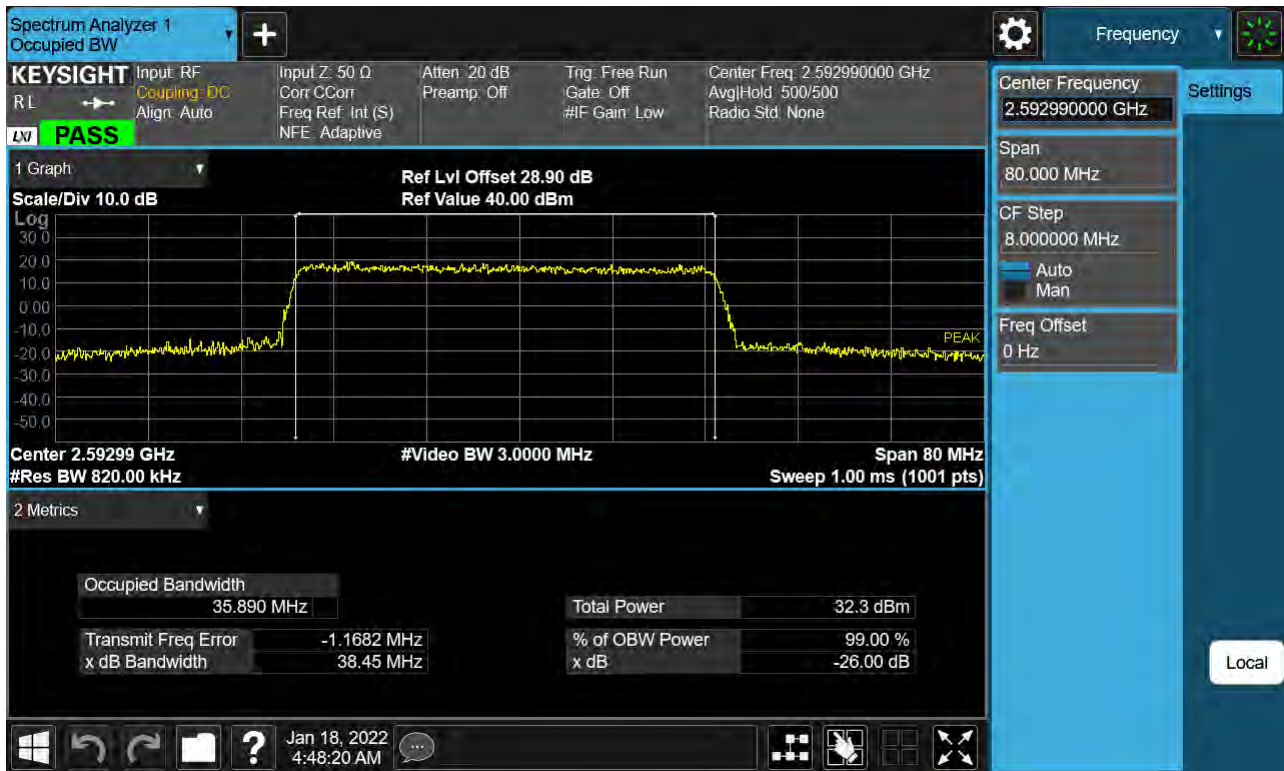
Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 BPSK)



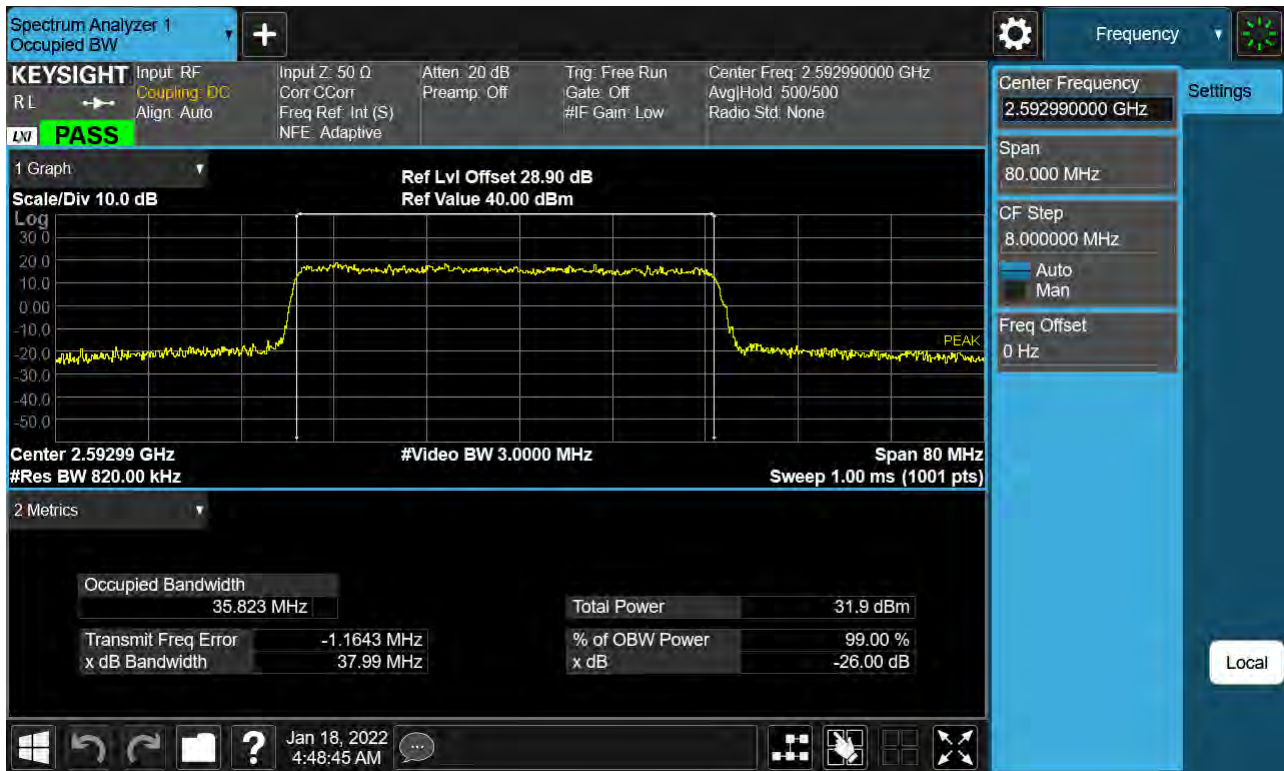
Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 QPSK)



Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 64-QAM)



Sub6 n41. Occupied Bandwidth Plot (40 MHz Ch.518598 256-QAM)



Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 BPSK)



Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 QPSK)



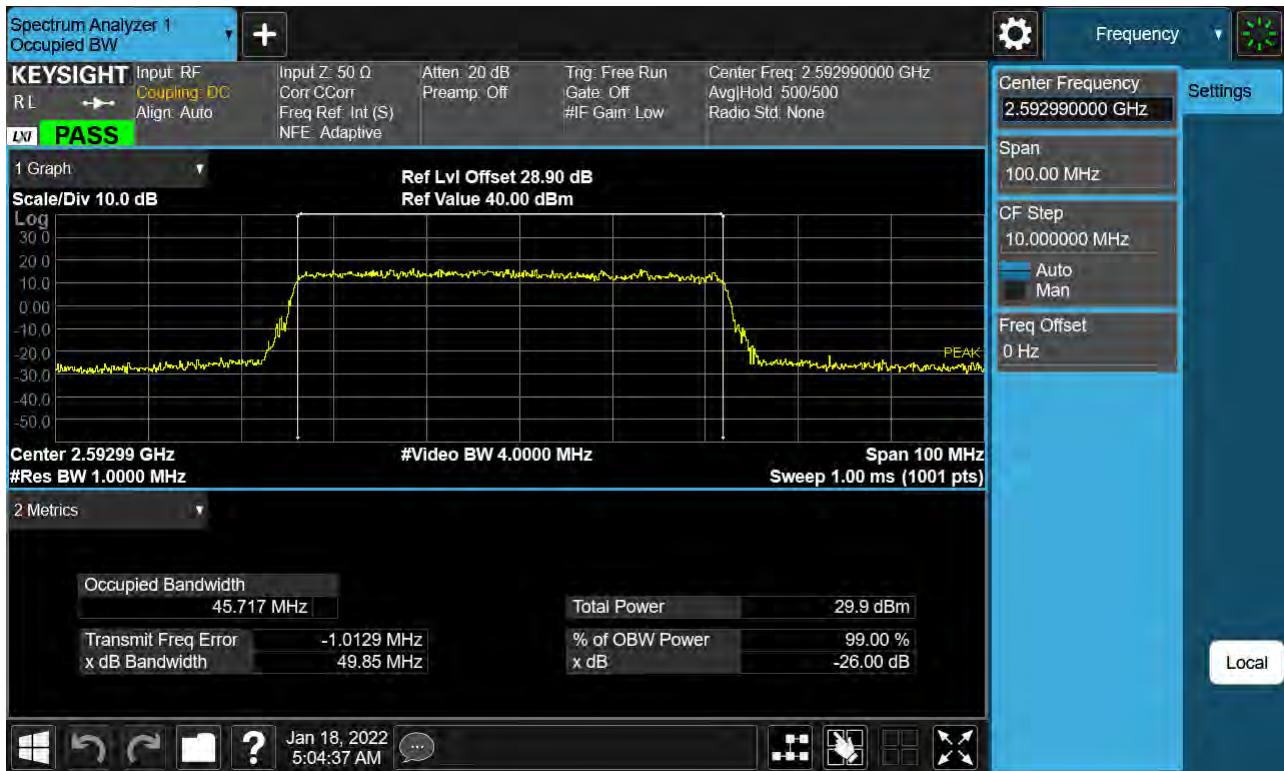
Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 16-QAM)



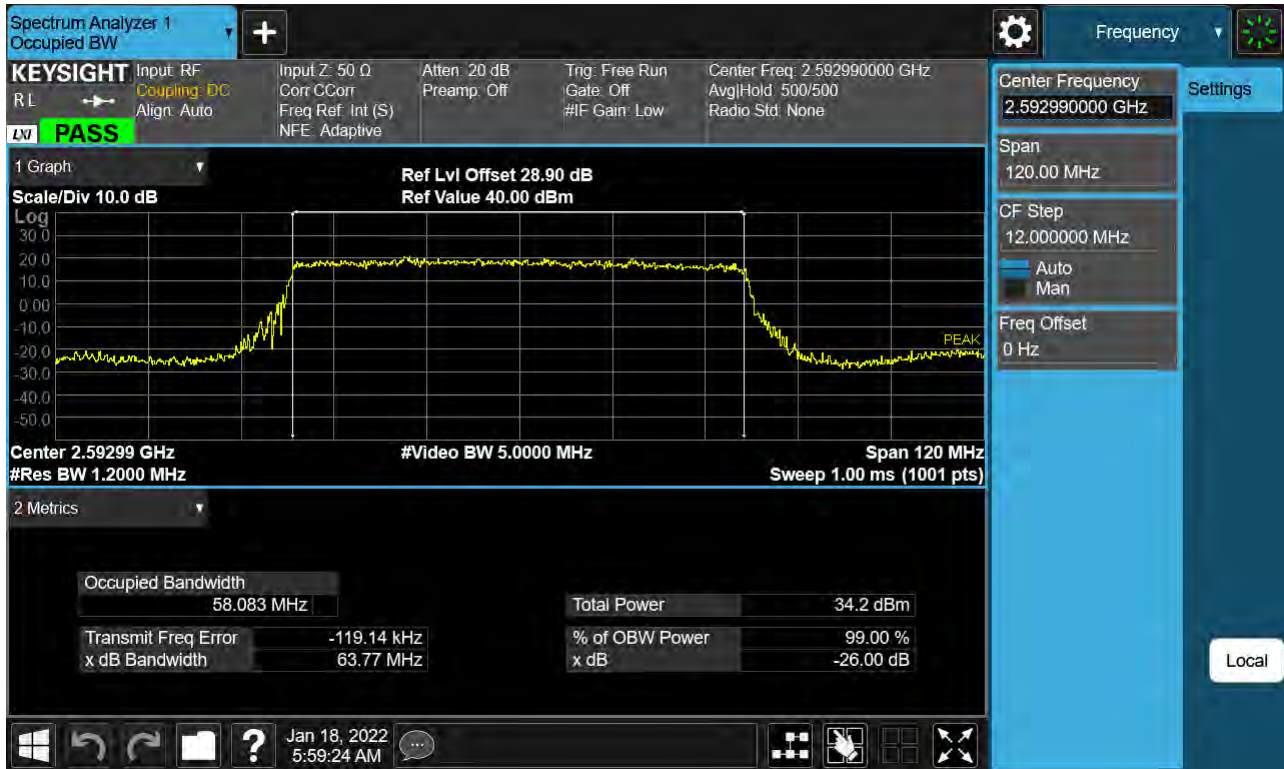
Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 64-QAM)



Sub6 n41. Occupied Bandwidth Plot (50 MHz Ch.518598 256-QAM)



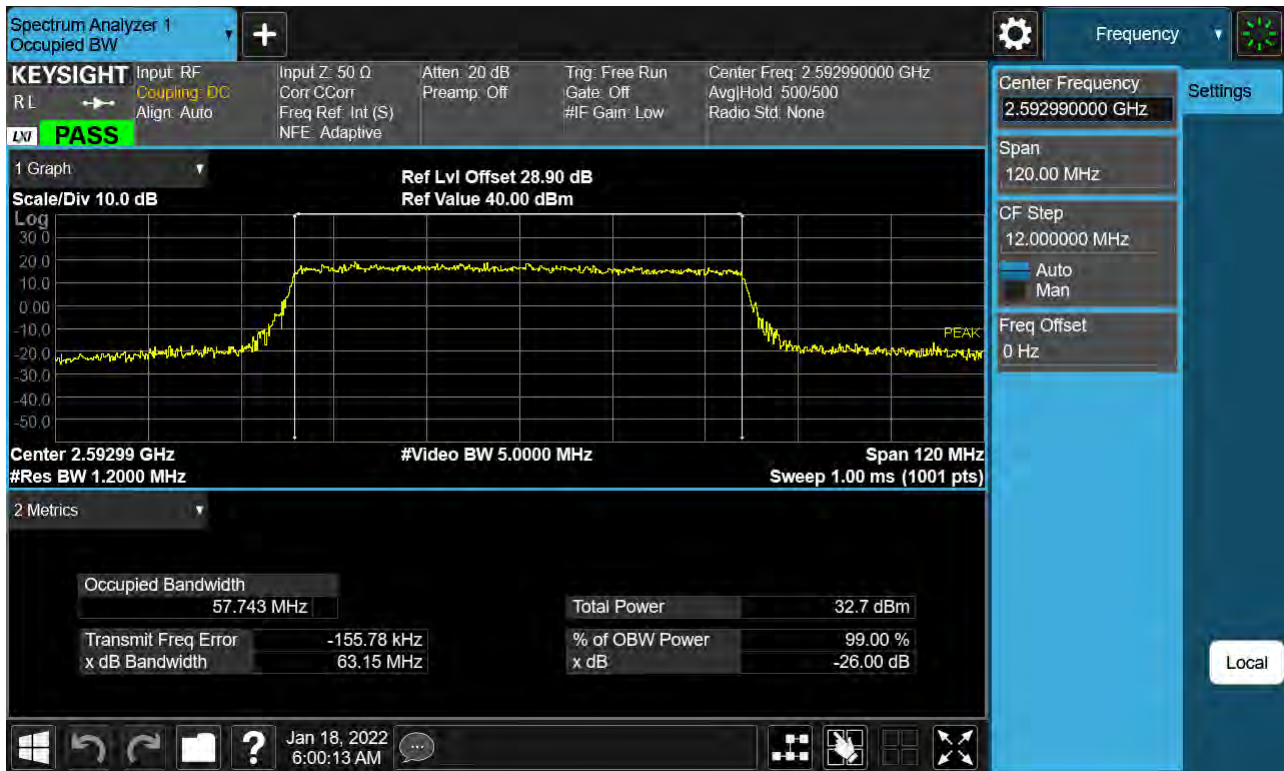
Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 BPSK)



Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 QPSK)



Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 64-QAM)



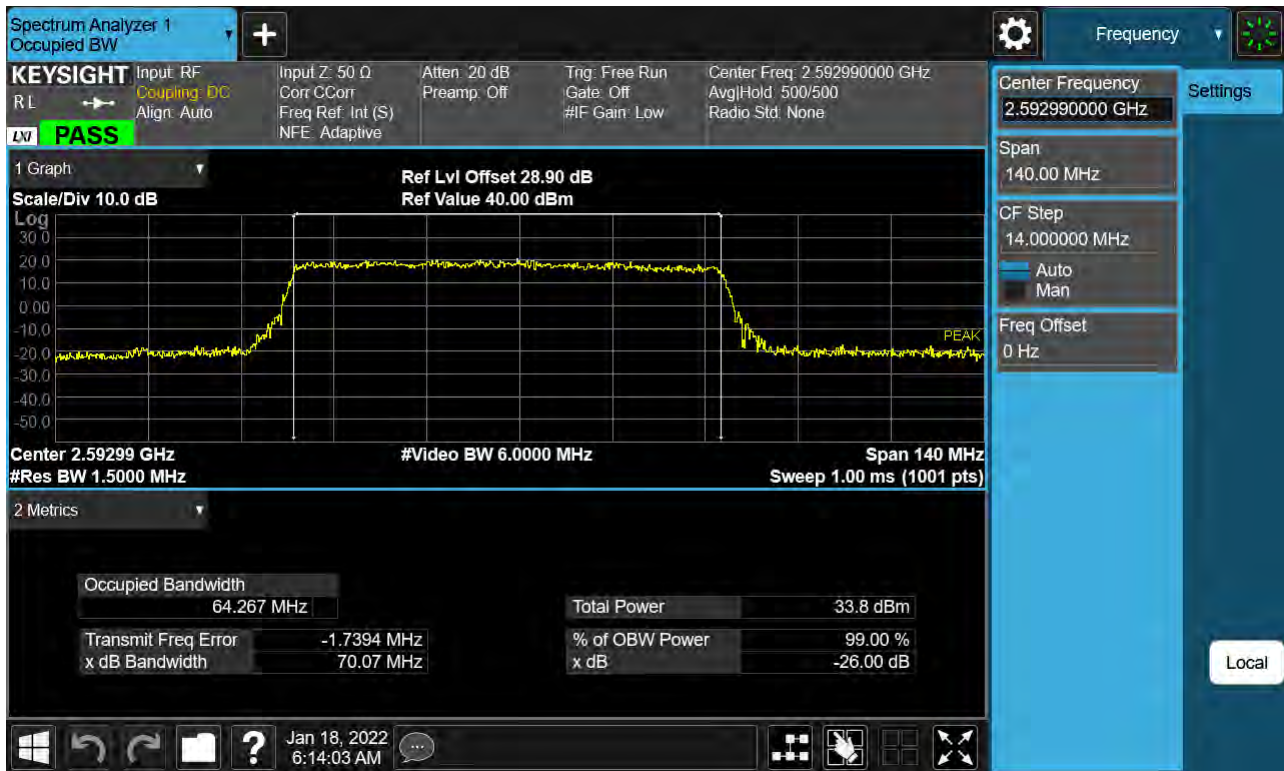
Sub6 n41. Occupied Bandwidth Plot (60 MHz Ch.518598 256-QAM)



Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 BPSK)



Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 QPSK)



Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 64-QAM)



Sub6 n41. Occupied Bandwidth Plot (70 MHz Ch.518598 256-QAM)



Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 BPSK)



Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 QPSK)



Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 16-QAM)



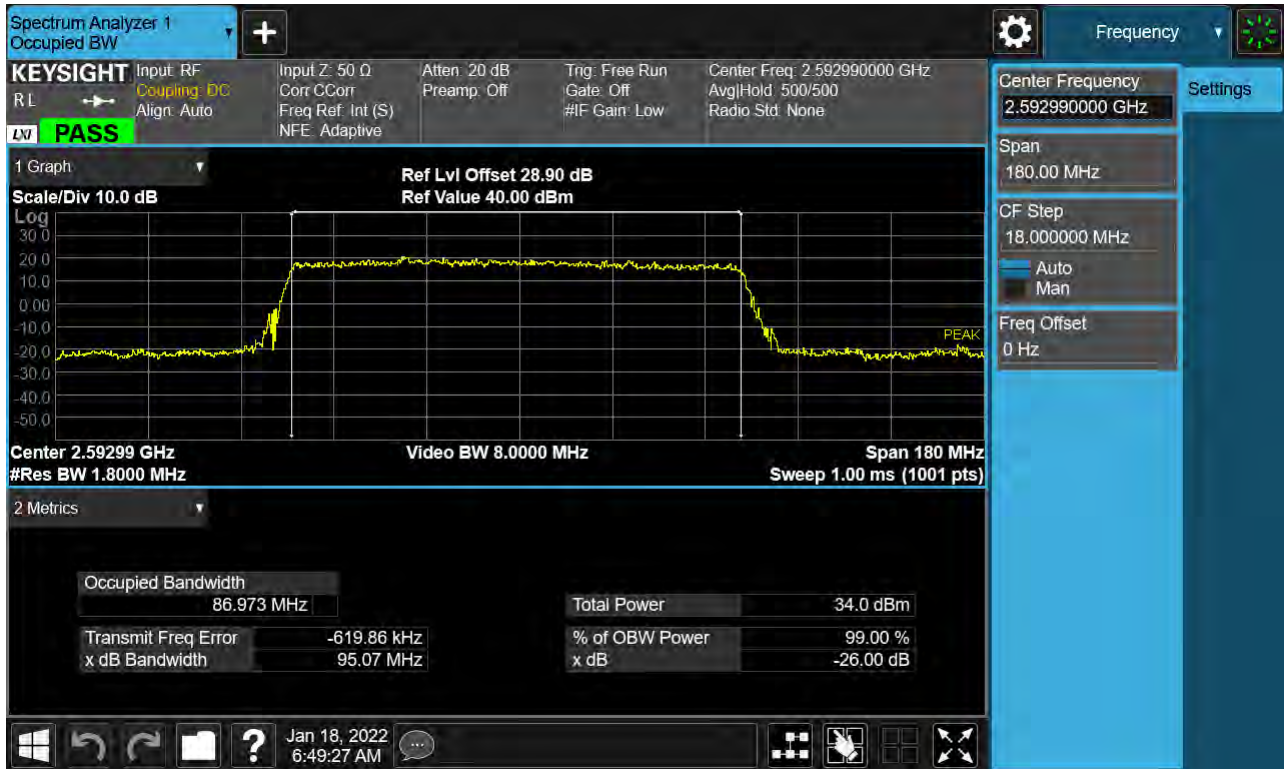
Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 64-QAM)



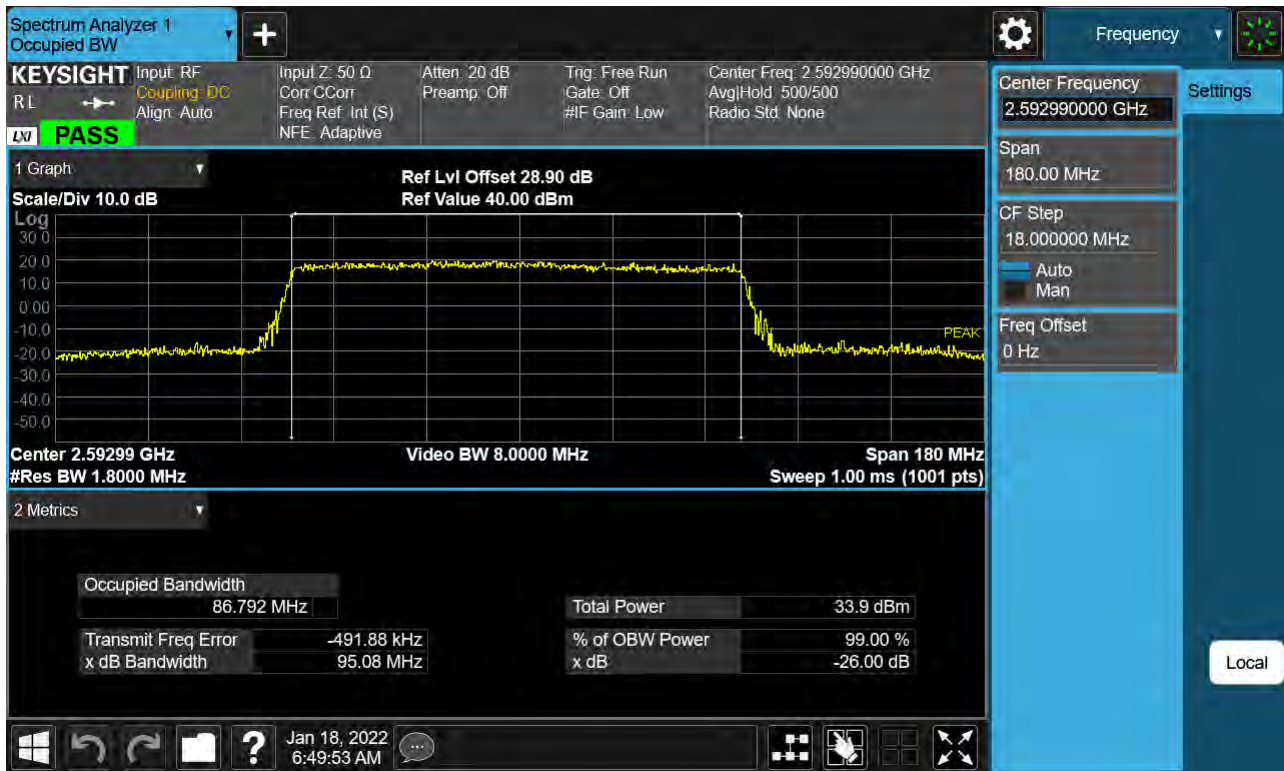
Sub6 n41. Occupied Bandwidth Plot (80 MHz Ch.518598 256-QAM)



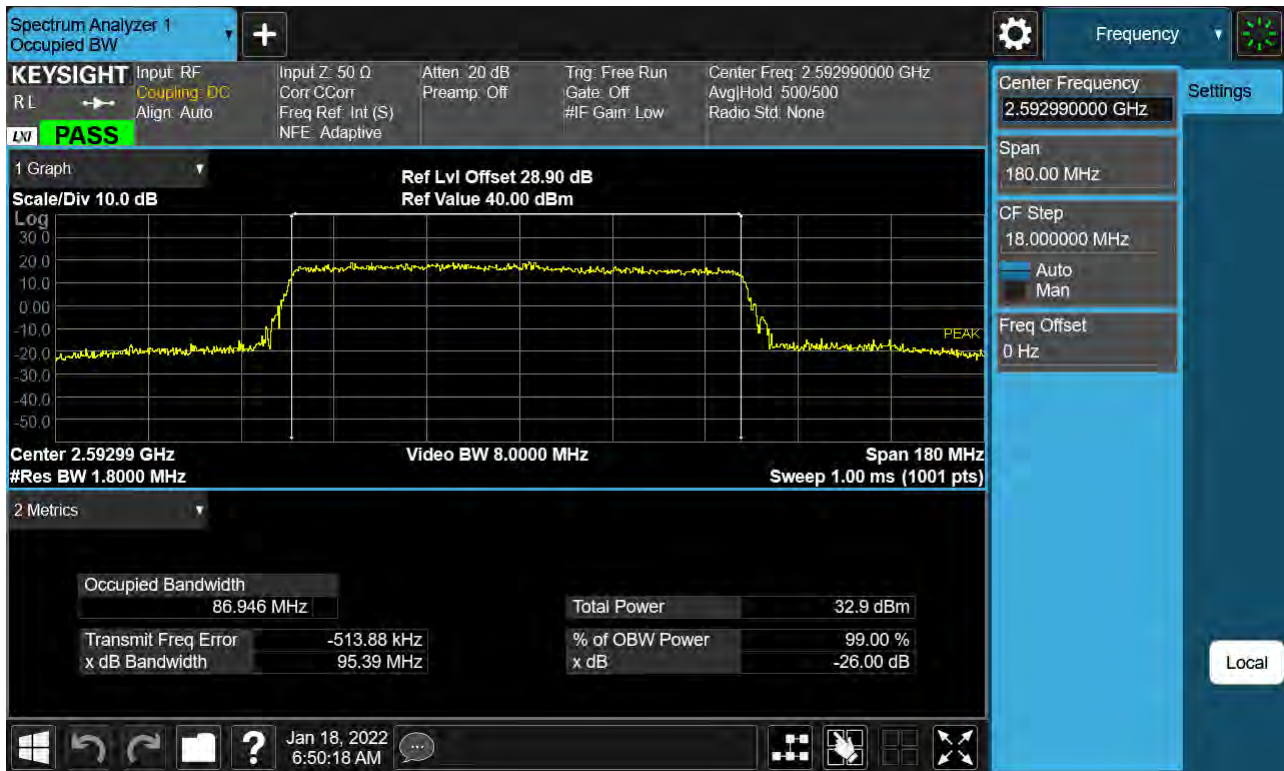
Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 BPSK)



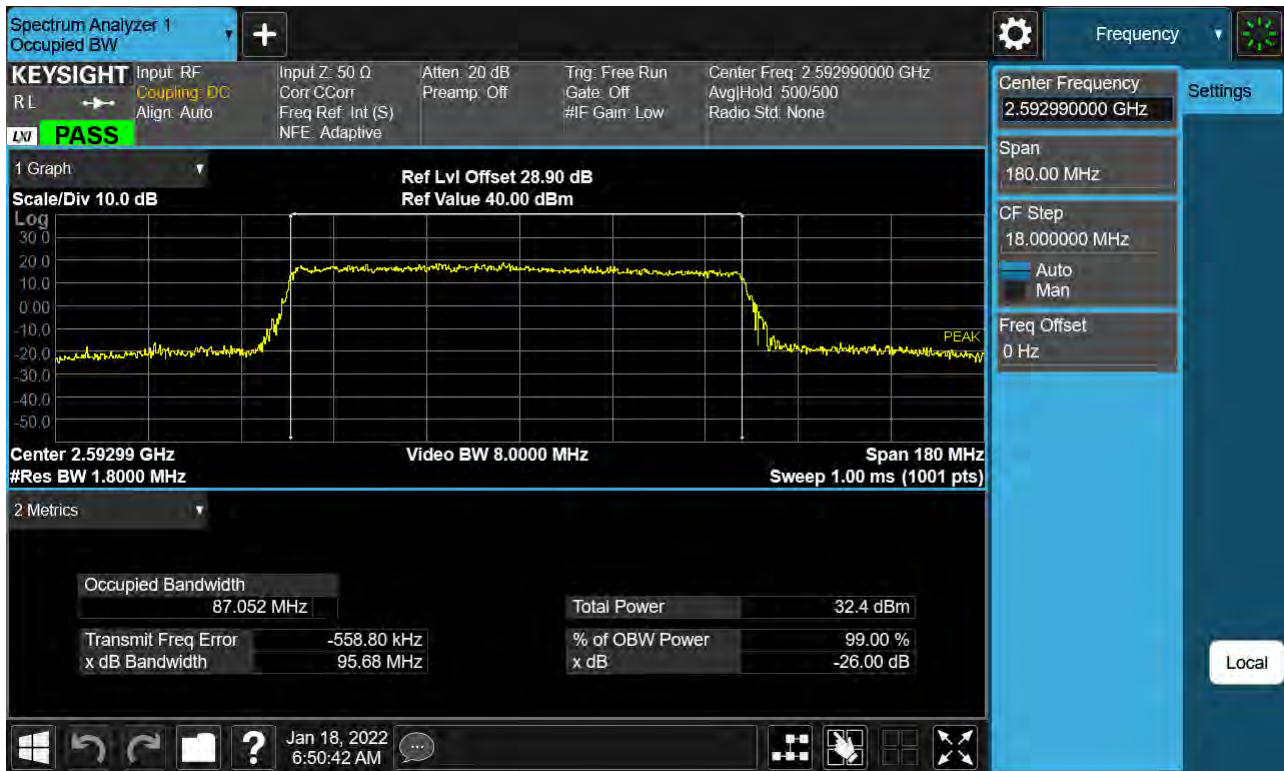
Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 QPSK)



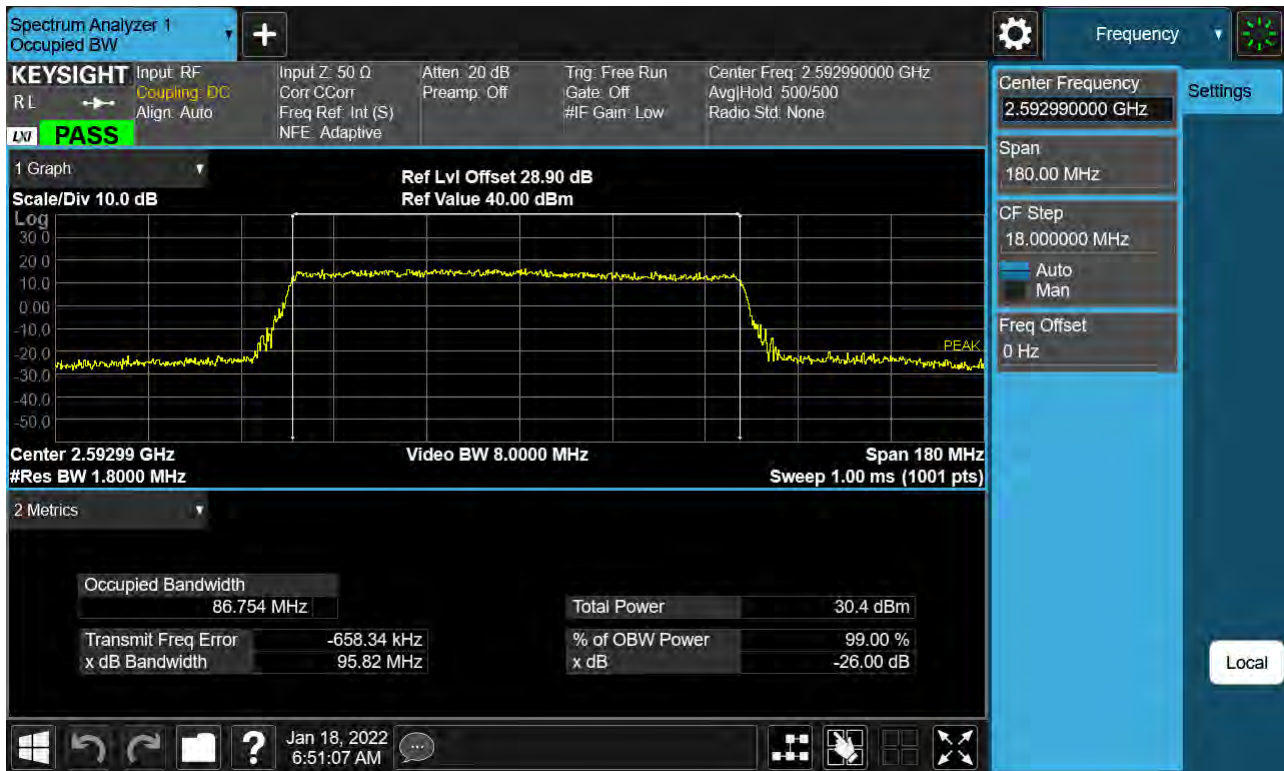
Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 64-QAM)



Sub6 n41. Occupied Bandwidth Plot (90 MHz Ch.518598 256-QAM)



Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 BPSK)



Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 QPSK)



Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 16-QAM)



Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 64-QAM)



Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 256-QAM)



Sub6 n41. PAR Plot (10 M BW_Ch.518598_BPSK)



Sub6 n41. PAR Plot (10 M BW_Ch.518598_QPSK)



Sub6 n41. PAR Plot (10 M BW_Ch.518598_16QAM)



Sub6 n41. PAR Plot (10 M BW_Ch.518598_64QAM)



Sub6 n41. PAR Plot (10 M BW_Ch.518598_256QAM)



Sub6 n41. PAR Plot (15 M BW_Ch.518598_BPSK)



Sub6 n41. PAR Plot (15 M BW_Ch.518598_QPSK)



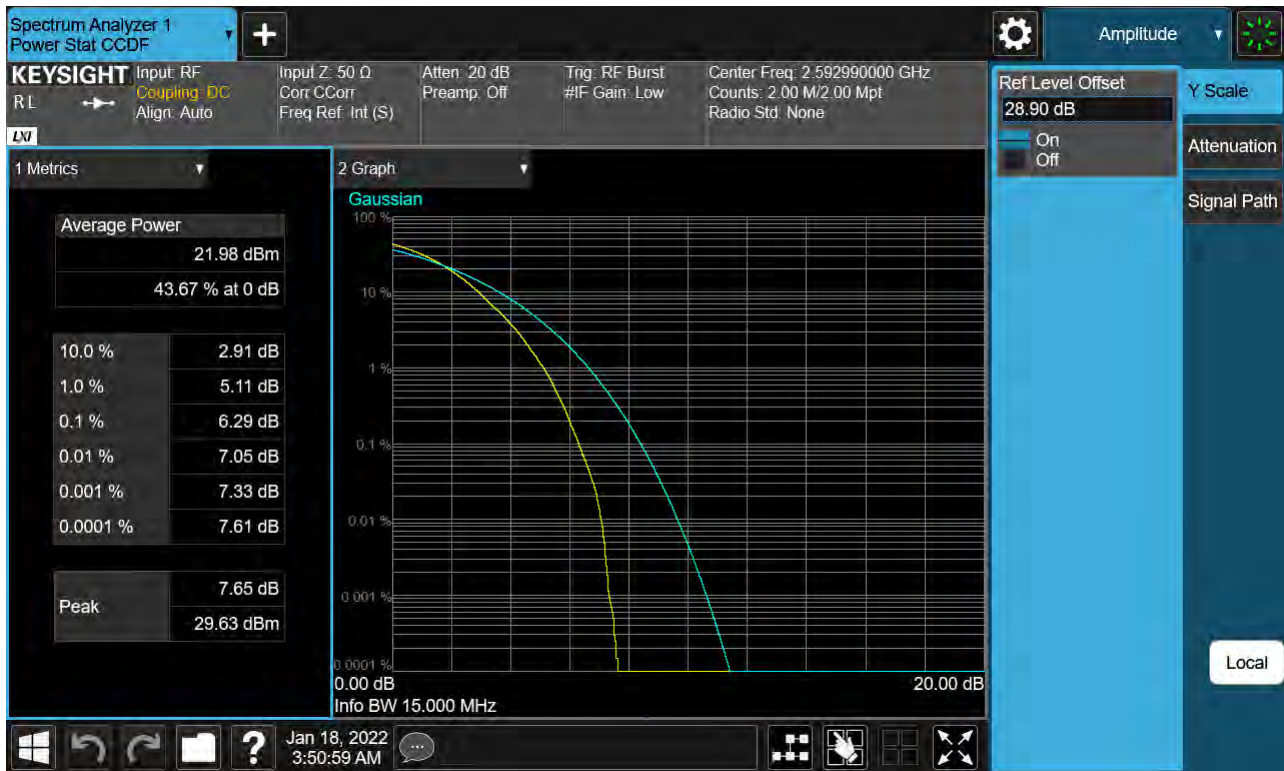
Sub6 n41. PAR Plot (15 M BW_Ch.518598_16QAM)



Sub6 n41. PAR Plot (15 M BW_Ch.518598_64QAM)



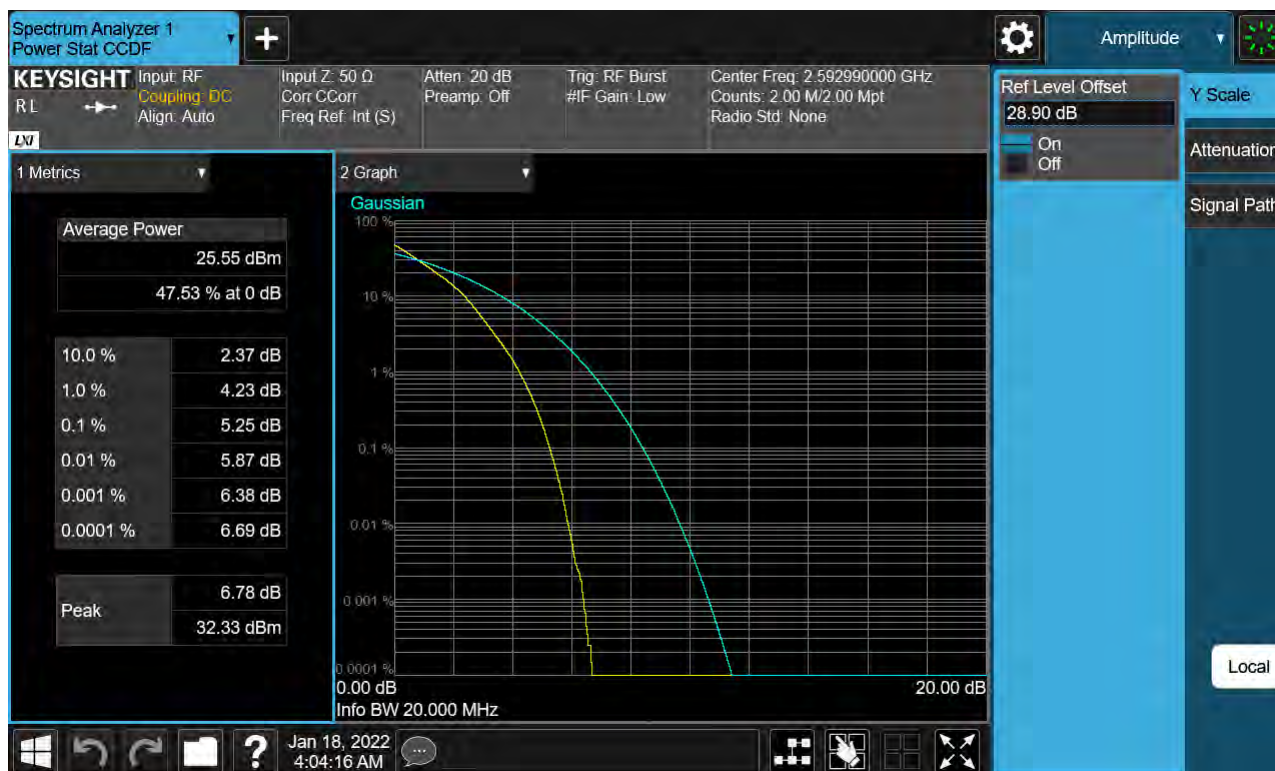
Sub6 n41. PAR Plot (15 M BW_Ch.518598_256QAM)



Sub6 n41. PAR Plot (20 M BW_Ch.518598_BPSK)



Sub6 n41. PAR Plot (20 M BW_Ch.518598_QPSK)



Sub6 n41. PAR Plot (20 M BW_Ch.518598_16QAM)



Sub6 n41. PAR Plot (20 M BW_Ch.518598_64QAM)



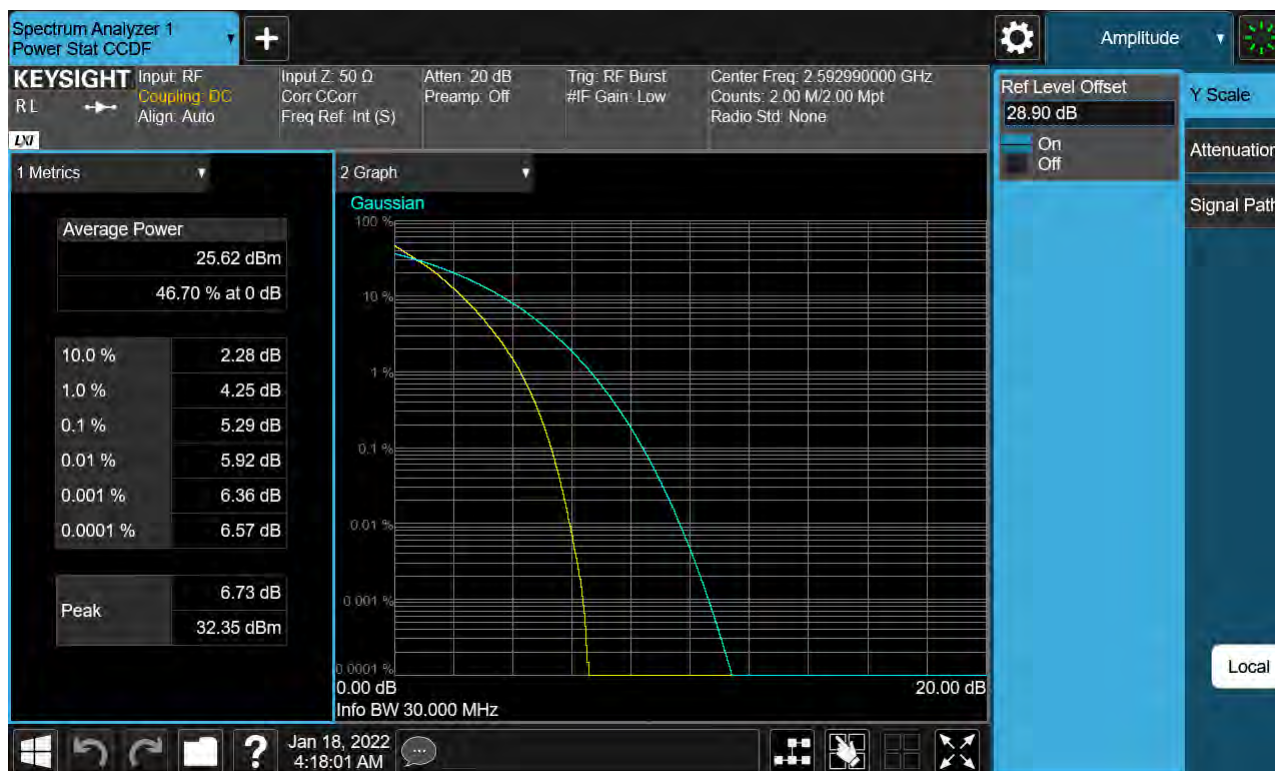
Sub6 n41. PAR Plot (20 M BW_Ch.518598_256QAM)



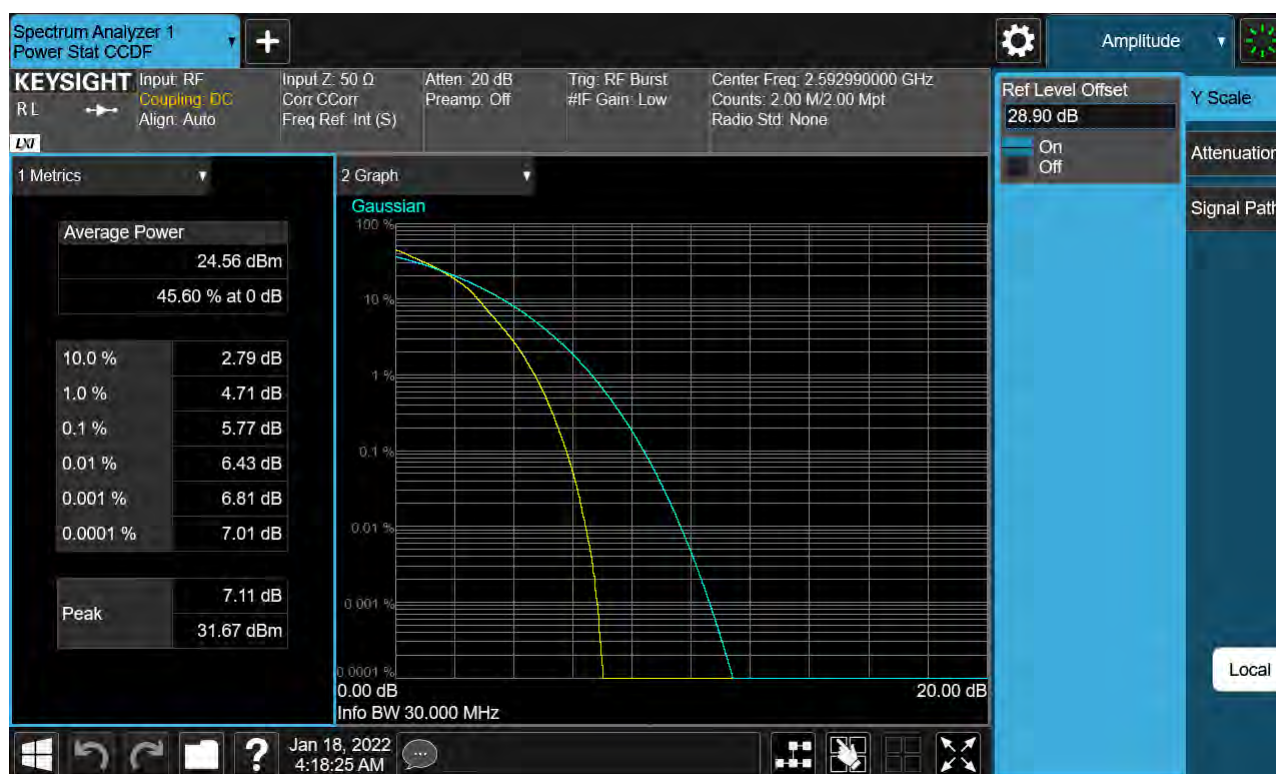
Sub6 n41. PAR Plot (30 M BW_Ch.518598_BPSK)



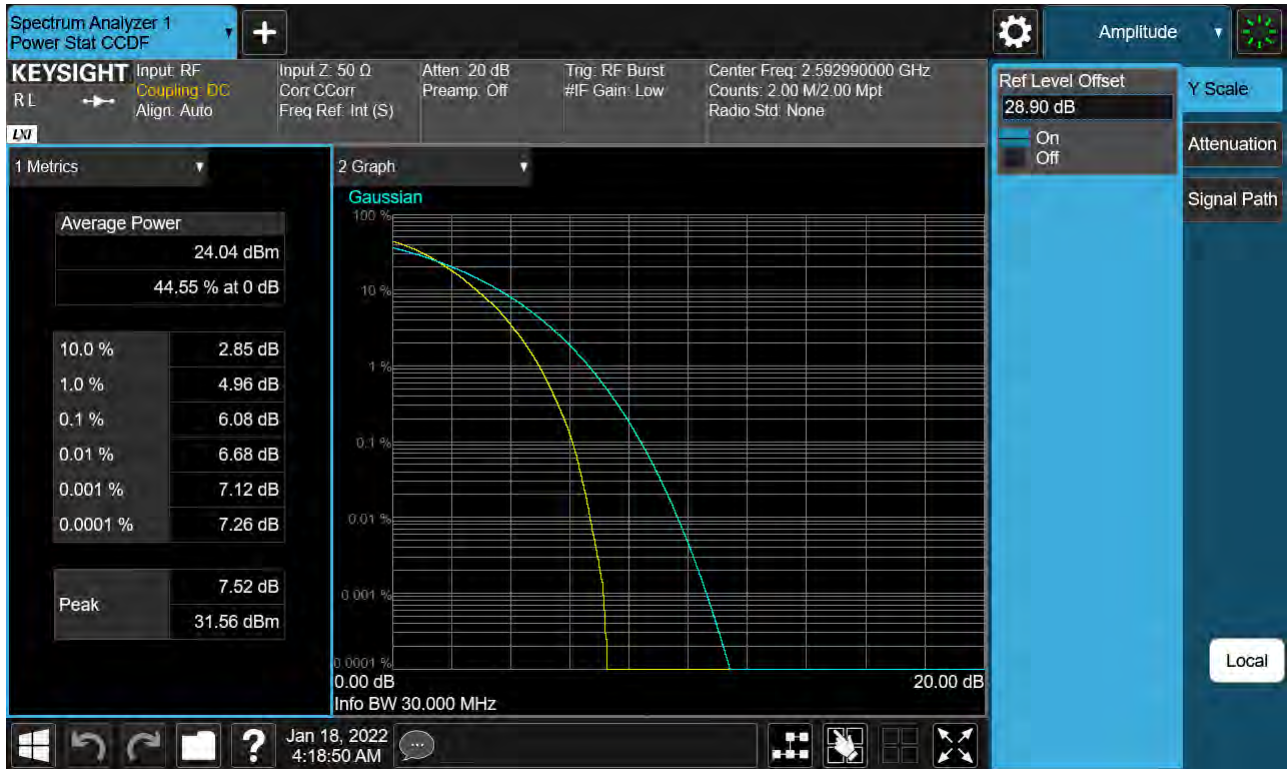
Sub6 n41. PAR Plot (30 M BW_Ch.518598_QPSK)



Sub6 n41. PAR Plot (30 M BW_Ch.518598_16QAM)



Sub6 n41. PAR Plot (30 M BW_Ch.518598_64QAM)



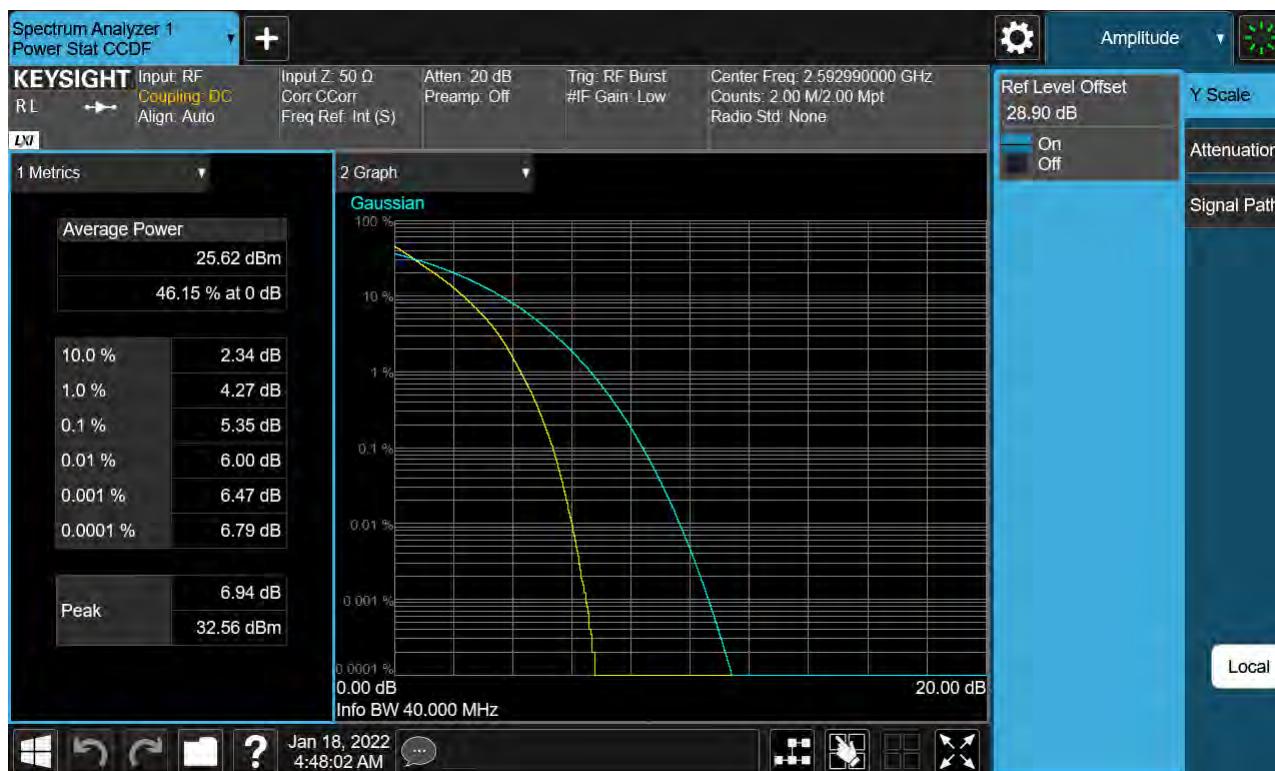
Sub6 n41. PAR Plot (30 M BW_Ch.518598_256QAM)



Sub6 n41. PAR Plot (40 M BW_Ch.518598_BPSK)



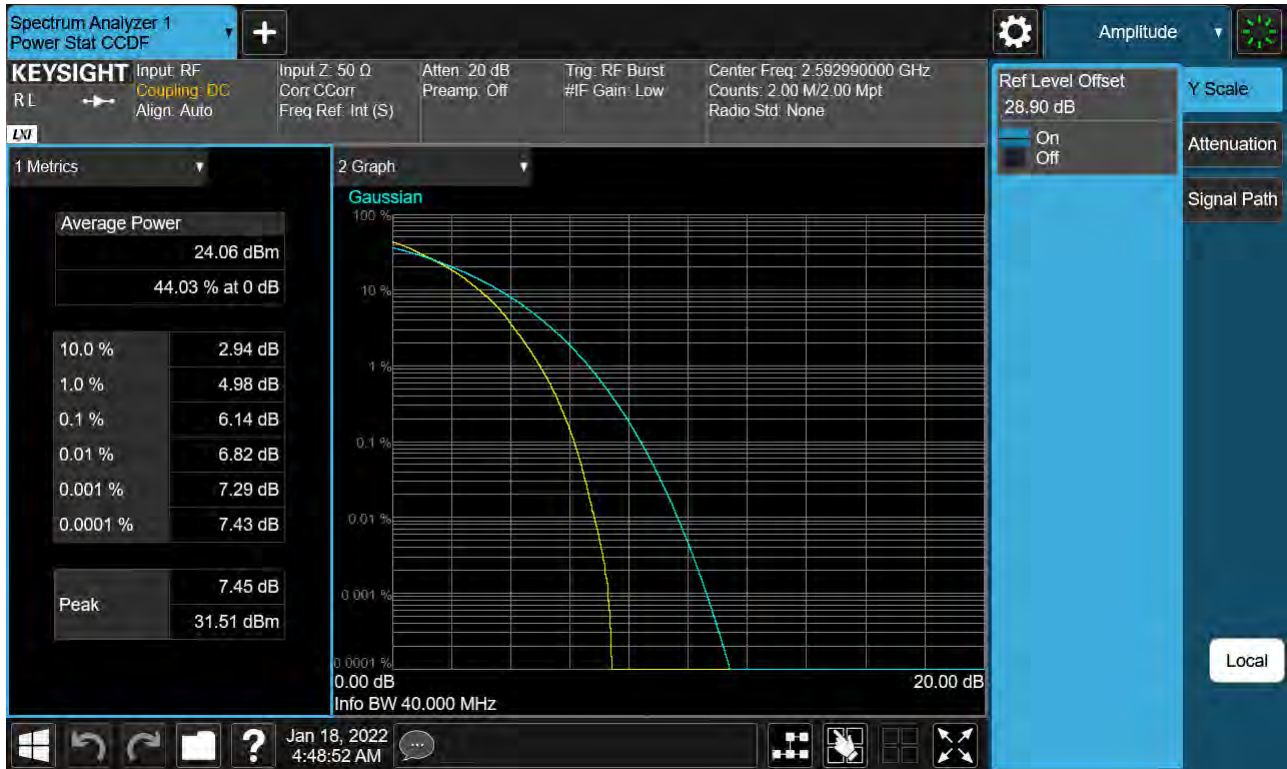
Sub6 n41. PAR Plot (40 M BW_Ch.518598_QPSK)



Sub6 n41. PAR Plot (40 M BW_Ch.518598_16QAM)



Sub6 n41. PAR Plot (40 M BW_Ch.518598_64QAM)



Sub6 n41. PAR Plot (40 M BW_Ch.518598_256QAM)



Sub6 n41. PAR Plot (50 M BW_Ch.518598_BPSK)



Sub6 n41. PAR Plot (50 M BW_Ch.518598_QPSK)

