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FCC Sub6 REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

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

Date of Issue:
May 19, 2022

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

Report No.: HCT-RF-2205-FC036-R1

FCC ID:	**A3LSMG990U2**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s):	SM-G990U2
Additional Model(s):	SM-G990U3/DS
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)

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
Sub6 n41 (20)	2506.020 – 2679.990	17M9G7D	PI/2 BPSK	0.231	23.63
		17M9G7D	QPSK	0.230	23.61
		17M9W7D	16QAM	0.185	22.67
		17M9W7D	64QAM	0.130	21.13
		17M9W7D	256QAM	0.077	18.87
Sub6 n41 (30)	2511.000 – 2674.980	26M9G7D	PI/2 BPSK	0.261	24.16
		27M0G7D	QPSK	0.258	24.11
		27M0W7D	16QAM	0.209	23.21
		26M9W7D	64QAM	0.146	21.64
		26M9W7D	256QAM	0.087	19.38
Sub6 n41 (40)	2516.010 – 2670.000	35M8G7D	PI/2 BPSK	0.247	23.93
		35M7G7D	QPSK	0.243	23.86
		35M8W7D	16QAM	0.197	22.94
		35M8W7D	64QAM	0.135	21.31
		35M8W7D	256QAM	0.080	19.05
Sub6 n41 (50)	2521.020 – 2664.990	45M9G7D	PI/2 BPSK	0.234	23.70
		45M9G7D	QPSK	0.233	23.68
		45M8W7D	16QAM	0.186	22.70
		45M9W7D	64QAM	0.129	21.09
		45M8W7D	256QAM	0.077	18.85
Sub6 n41 (60)	2526.000 – 2659.980	57M8G7D	PI/2 BPSK	0.242	23.83
		57M9G7D	QPSK	0.241	23.82
		58M0W7D	16QAM	0.190	22.78
		57M9W7D	64QAM	0.134	21.27
		58M0W7D	256QAM	0.081	19.06
Sub6 n41 (80)	2536.020 – 2649.990	77M3G7D	PI/2 BPSK	0.243	23.85
		77M4G7D	QPSK	0.241	23.82
		77M1W7D	16QAM	0.189	22.77
		77M2W7D	64QAM	0.135	21.30
		77M4W7D	256QAM	0.081	19.07
Sub6 n41 (90)	2541.000 – 2644.980	86M9G7D	PI/2 BPSK	0.244	23.87
		87M0G7D	QPSK	0.242	23.83
		86M8W7D	16QAM	0.191	22.82
		86M7W7D	64QAM	0.136	21.33
		86M9W7D	256QAM	0.081	19.08
Sub6 n41 (100)	2546.010 – 2640.000	96M7G7D	PI/2 BPSK	0.239	23.78
		96M4G7D	QPSK	0.237	23.75
		96M2W7D	16QAM	0.185	22.67
		96M4W7D	64QAM	0.133	21.23
		96M1W7D	256QAM	0.080	19.01

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)

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2205-FC036	May 13, 2022	- First Approval Report
HCT-RF-2205-FC036-R1	May 19, 2022	- Revised the Section 3.9. (Page 18.) - Added the Title for EN-DC 2A-n41A data. (Page 42.)

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

Table of Contents

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMG990U2
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-G990U2
Additional Model(s):	SM-G990U3/DS
SCS(kHz):	30
Bandwidth(MHz):	20, 30, 40, 50, 60, 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):	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 2536.020 – 2649.990 : 80 MHz 2541.000 – 2644.980 : 90 MHz 2546.010 – 2640.000 : 100 MHz
Date(s) of Tests:	April 08, 2022 ~ May 04, 2022
Serial number:	Radiated: R3CT30Q0QVR Conducted: R3CT30Q0RQT

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS, CDMA(BC0, 1, 10) and LTE, Sub6.

It also supports IEEE 802.11 a/b/g/n/ac/ax (20/40/80), Bluetooth, BT LE, NFC, AIT, WPT, mmWave(n260/261).

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

Test Note

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

   The power is calculated by the following formula;

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

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

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

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

Test Note

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

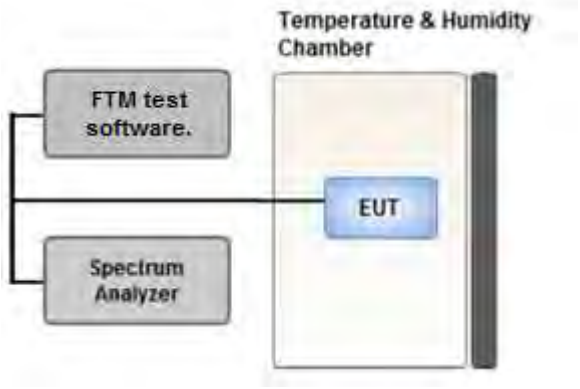
$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

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

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① CCDF Procedure for PAPR

Test Settings

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

② Alternate Procedure for PAPR

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

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

Test Settings(Peak Power)

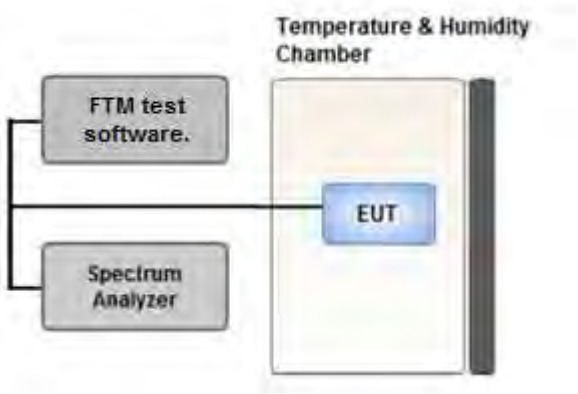
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

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

Test Settings(Average Power)

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

3.5 OCCUPIED BANDWIDTH.



Test setup

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

The EUT makes a call to the communication simulator.

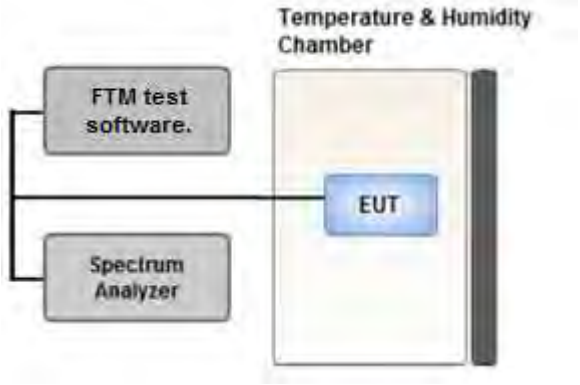
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

Test Settings

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

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

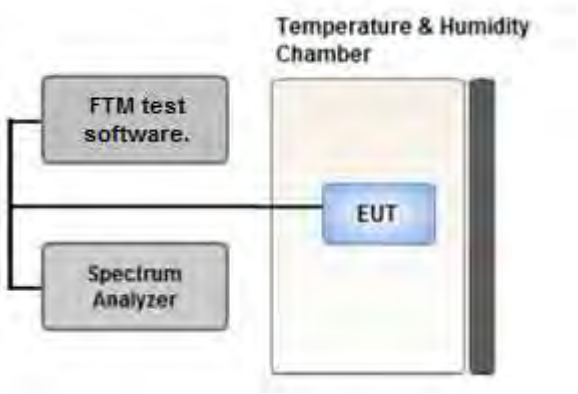
Test Overview

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

Test Settings

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

3.7 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.

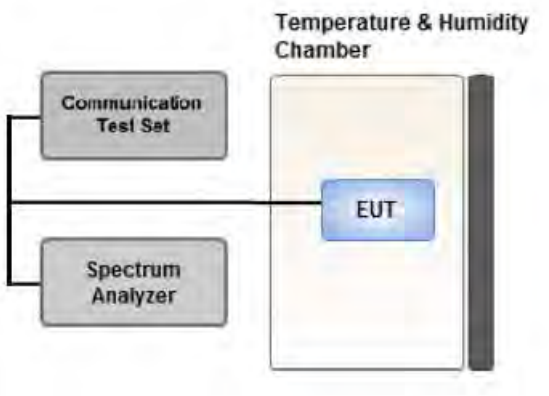
Test Settings

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 ≥ 2 x 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 that 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: SA(PC2, PC3), NSA(PC3)
  Worst case: SA(PC2)
  Mode : Stand alone, Stand alone + External accessories (Earphone, AC adapter, etc)
  Worst case : Stand alone
- We were performed the RSE test in condition of co-location.
  Mode : Stand alone, Simultaneous transmission scenarios
  Worst case : Stand alone
- 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.
  (Worst case: 2A-n41A (10 MHz))
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- SM-G990U2 & additional models were tested and the worst case results are reported.
  (Worst case : SM-G990U2)

[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		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: SA(PC2, PC3), NSA(PC3)
  Worst case: SA(PC2)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- SM-G990U2 & additional models were tested and the worst case results are reported.
  (Worst case : SM-G990U2)

[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	20, 30, 40, 50, 60, 80, 90, 100	Mid	Full RB	0
Channel Edge	PI/2 BPSK	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
		80	Low	1	0
			High	1	216
		90	Low	1	0
			High	1	244
		100	Low	1	0
			High	1	272
		20, 30, 40, 50, 60, 80, 90, 100	Low, Mid High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	20, 30, 40, 50, 60, 80, 90, 100	Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacture	Serial No.	Due to Calibration	Calibration Interval
Precision Dipole Antenna	UHAP	Schwarzbeck	01273	03/27/2024	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	03/27/2024	Biennial
Horn Antenna(1~18GHz)	BBHA 9120D	Schwarzbeck	02289	03/21/2024	Biennial
Horn Antenna(1~18GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	05/04/2023	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	06/04/2023	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/03/2023	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/22/2023	Biennial
High Pass Filter	WHKX10-900-1000-15000-40SS	Wainwright Instruments	15	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	03/11/2023	Annual
DC Power Supply	E3632A	Hewlett Packard	MY40004427	09/15/2022	Annual
Power Splitter(DC~26.5 GHz)	11667B	Hewlett Packard	11275	03/11/2023	Annual
Chamber	SU-642	ESPEC	93008124	03/04/2023	Annual
Signal Analyzer(10Hz~26.5GHz)	N9020A	Agilent	MY51110063	04/19/2023	Annual
ATTENUATOR(20dB)	8493C	Hewlett Packard	17280	06/01/2022	Annual
Spectrum Analyzer(10Hz~40GHz)	FSV40	REOHDE & SCHWARZ	101436	02/25/2023	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:

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

5. MEASUREMENT UNCERTAINTY

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

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	2.00 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.40 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.74 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.51 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.92 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.48 (Confidence level about 95 %, k=2)

6. SUMMARY OF TEST RESULTS

6.1 Test Condition : Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§2.1051, §27.53(m)(4)	■ < 40 + 10log10 (P[Watts]) at Channel edges ■ < 43 + 10log10 (P[Watts]) between 5 and X MHz from Channel edges ■ < 55 + 10log10 (P[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	See Note1
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 + 10log10 (P[Watts])	PASS

Note:

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

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

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

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

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

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

3) Record the field strength meter's level.

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

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

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

7.2 EIRP Sample Calculation

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

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

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

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

3) Record the field strength meter's level.

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

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

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

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

8. TEST DATA

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2506.020	Sub6 41/ 20 MHz [30 kHz]	PI/2 BPSK	-21.99	14.56	10.24	2.50	H	< 2.00	0.170	22.30	1	25
		QPSK	-22.01	14.54	10.24	2.50	H		0.169	22.28		
		16-QAM	-23.11	13.44	10.24	2.50	H		0.131	21.18		
		64-QAM	-24.56	11.99	10.24	2.50	H		0.094	19.73		
		256-QAM	-26.86	9.69	10.24	2.50	H		0.055	17.43		
2510.010		PI/2 BPSK	-20.88	15.73	10.28	2.51	H		0.224	23.50	1	1
		QPSK	-20.92	15.69	10.28	2.51	H		0.222	23.46		
		16-QAM	-21.87	14.74	10.28	2.51	H		0.178	22.51		
		64-QAM	-23.42	13.19	10.28	2.51	H		0.125	20.96		
		256-QAM	-25.73	10.88	10.28	2.51	H		0.073	18.65		
2592.990		PI/2 BPSK	-20.69	15.77	10.42	2.56	H		0.231	23.63	1	1
		QPSK	-20.71	15.75	10.42	2.56	H		0.230	23.61		
		16-QAM	-21.65	14.81	10.42	2.56	H		0.185	22.67		
		64-QAM	-23.19	13.27	10.42	2.56	H		0.130	21.13		
		256-QAM	-25.45	11.01	10.42	2.56	H		0.077	18.87		
2679.990		PI/2 BPSK	-23.69	14.09	10.34	2.63	H		0.151	21.80	1	1
		QPSK	-23.72	14.06	10.34	2.63	H		0.150	21.77		
		16-QAM	-24.61	13.17	10.34	2.63	H		0.122	20.88		
		64-QAM	-26.24	11.54	10.34	2.63	H		0.084	19.25		
		256-QAM	-28.59	9.19	10.34	2.63	H		0.049	16.90		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2511.000	Sub6 41/ 30 MHz [30 kHz]	PI/2 BPSK	-21.71	14.98	10.20	2.51	H	< 2.00	0.185	22.67	1	39
		QPSK	-21.72	14.97	10.20	2.51	H		0.185	22.66		
		16-QAM	-22.75	13.94	10.20	2.51	H		0.146	21.63		
		64-QAM	-24.25	12.44	10.20	2.51	H		0.103	20.13		
		256-QAM	-26.57	10.12	10.20	2.51	H		0.060	17.81		
2515.020		PI/2 BPSK	-20.83	15.75	10.32	2.53	H		0.226	23.54	1	1
		QPSK	-20.89	15.69	10.32	2.53	H		0.223	23.48		
		16-QAM	-21.92	14.66	10.32	2.53	H		0.176	22.45		
		64-QAM	-23.39	13.19	10.32	2.53	H		0.125	20.98		
		256-QAM	-25.69	10.89	10.32	2.53	H		0.074	18.68		
2592.990		PI/2 BPSK	-20.16	16.30	10.42	2.56	H		0.261	24.16	1	1
		QPSK	-20.21	16.25	10.42	2.56	H		0.258	24.11		
		16-QAM	-21.11	15.35	10.42	2.56	H		0.209	23.21		
		64-QAM	-22.68	13.78	10.42	2.56	H		0.146	21.64		
		256-QAM	-24.94	11.52	10.42	2.56	H		0.087	19.38		
2674.980		PI/2 BPSK	-23.37	13.96	10.30	2.62	H		0.146	21.64	1	1
		QPSK	-23.48	13.85	10.30	2.62	H		0.142	21.53		
		16-QAM	-24.33	13.00	10.30	2.62	H		0.117	20.68		
		64-QAM	-26.06	11.27	10.30	2.62	H		0.079	18.95		
		256-QAM	-28.30	9.03	10.30	2.62	H		0.047	16.71		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2516.010	Sub6 41/ 40 MHz [30 kHz]	PI/2 BPSK	-21.17	15.41	10.32	2.53	H	< 2.00	0.209	23.20	1	53
		QPSK	-21.19	15.39	10.32	2.53	H		0.208	23.18		
		16-QAM	-22.24	14.34	10.32	2.53	H		0.163	22.13		
		64-QAM	-23.67	12.91	10.32	2.53	H		0.118	20.70		
		256-QAM	-25.95	10.63	10.32	2.53	H		0.070	18.42		
2520.000		PI/2 BPSK	-20.78	15.76	10.36	2.55	H		0.228	23.57	1	1
		QPSK	-20.87	15.67	10.36	2.55	H		0.223	23.48		
		16-QAM	-21.85	14.69	10.36	2.55	H		0.178	22.50		
		64-QAM	-23.37	13.17	10.36	2.55	H		0.125	20.98		
		256-QAM	-25.65	10.89	10.36	2.55	H		0.074	18.70		
2592.990		PI/2 BPSK	-20.39	16.07	10.42	2.56	H		0.247	23.93	1	1
		QPSK	-20.46	16.00	10.42	2.56	H		0.243	23.86		
		16-QAM	-21.38	15.08	10.42	2.56	H		0.197	22.94		
		64-QAM	-23.01	13.45	10.42	2.56	H		0.135	21.31		
		256-QAM	-25.27	11.19	10.42	2.56	H		0.080	19.05		
2670.000		PI/2 BPSK	-22.98	13.89	10.26	2.60	H		0.143	21.55	1	1
		QPSK	-23.04	13.83	10.26	2.60	H		0.141	21.49		
		16-QAM	-24.06	12.81	10.26	2.60	H		0.111	20.47		
		64-QAM	-25.45	11.42	10.26	2.60	H		0.081	19.08		
		256-QAM	-27.77	9.10	10.26	2.60	H		0.047	16.76		

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	-20.96	15.58	10.36	2.55	H	< 2.00	0.219	23.39	1	66
		QPSK	-21.11	15.43	10.36	2.55	H		0.211	23.24		
		16-QAM	-22.06	14.48	10.36	2.55	H		0.170	22.29		
		64-QAM	-23.66	12.88	10.36	2.55	H		0.117	20.69		
		256-QAM	-25.87	10.67	10.36	2.55	H		0.071	18.48		
2525.010		PI/2 BPSK	-20.88	15.48	10.40	2.56	H		0.215	23.32	1	1
		QPSK	-20.91	15.45	10.40	2.56	H		0.213	23.29		
		16-QAM	-21.94	14.42	10.40	2.56	H		0.168	22.26		
		64-QAM	-23.38	12.98	10.40	2.56	H		0.121	20.82		
		256-QAM	-25.69	10.67	10.40	2.56	H		0.071	18.51		
2592.990		PI/2 BPSK	-20.62	15.84	10.42	2.56	H		0.234	23.70	1	1
		QPSK	-20.64	15.82	10.42	2.56	H		0.233	23.68		
		16-QAM	-21.62	14.84	10.42	2.56	H		0.186	22.70		
		64-QAM	-23.23	13.23	10.42	2.56	H		0.129	21.09		
		256-QAM	-25.47	10.99	10.42	2.56	H		0.077	18.85		
2664.990		PI/2 BPSK	-23.24	13.60	10.22	2.60	H		0.132	21.22	1	1
		QPSK	-23.26	13.58	10.22	2.60	H		0.132	21.20		
		16-QAM	-24.28	12.56	10.22	2.60	H		0.104	20.18		
		64-QAM	-25.83	11.01	10.22	2.60	H		0.073	18.63		
		256-QAM	-28.10	8.74	10.22	2.60	H		0.043	16.36		

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	-20.94	15.42	10.40	2.56	H	< 2.00	0.212	23.26	1	81
		QPSK	-20.97	15.39	10.40	2.56	H		0.210	23.23		
		16-QAM	-21.92	14.44	10.40	2.56	H		0.169	22.28		
		64-QAM	-23.55	12.81	10.40	2.56	H		0.116	20.65		
		256-QAM	-25.83	10.53	10.40	2.56	H		0.069	18.37		
2530.020		PI/2 BPSK	-20.82	15.35	10.44	2.56	H		0.211	23.23	1	1
		QPSK	-20.91	15.26	10.44	2.56	H		0.206	23.14		
		16-QAM	-21.87	14.30	10.44	2.56	H		0.165	22.18		
		64-QAM	-23.43	12.74	10.44	2.56	H		0.115	20.62		
		256-QAM	-25.72	10.45	10.44	2.56	H		0.068	18.33		
2592.990		PI/2 BPSK	-20.49	15.97	10.42	2.56	H		0.242	23.83	1	1
		QPSK	-20.50	15.96	10.42	2.56	H		0.241	23.82		
		16-QAM	-21.54	14.92	10.42	2.56	H		0.190	22.78		
		64-QAM	-23.05	13.41	10.42	2.56	H		0.134	21.27		
		256-QAM	-25.26	11.20	10.42	2.56	H		0.081	19.06		
2659.980		PI/2 BPSK	-22.98	13.83	10.18	2.60	H		0.139	21.41	1	1
		QPSK	-22.99	13.82	10.18	2.60	H		0.138	21.40		
		16-QAM	-23.99	12.82	10.18	2.60	H		0.110	20.40		
		64-QAM	-25.50	11.31	10.18	2.60	H		0.077	18.89		
		256-QAM	-27.68	9.13	10.18	2.60	H		0.047	16.71		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2536.020	Sub6 41/ 80 MHz [30 kHz]	PI/2 BPSK	-20.67	15.70	10.52	2.55	H	< 2.00	0.233	23.67	1	108
		QPSK	-20.78	15.59	10.52	2.55	H		0.227	23.56		
		16-QAM	-21.57	14.80	10.52	2.55	H		0.189	22.77		
		64-QAM	-23.25	13.12	10.52	2.55	H		0.128	21.09		
		256-QAM	-25.56	10.81	10.52	2.55	H		0.076	18.78		
2540.010		PI/2 BPSK	-20.77	15.60	10.52	2.55	H		0.227	23.57	1	1
		QPSK	-20.79	15.58	10.52	2.55	H		0.226	23.55		
		16-QAM	-21.67	14.70	10.52	2.55	H		0.185	22.67		
		64-QAM	-23.36	13.01	10.52	2.55	H		0.125	20.98		
		256-QAM	-25.63	10.74	10.52	2.55	H		0.074	18.71		
2592.990		PI/2 BPSK	-20.47	15.99	10.42	2.56	H		0.243	23.85	1	108
		QPSK	-20.50	15.96	10.42	2.56	H		0.241	23.82		
		16-QAM	-21.58	14.88	10.42	2.56	H		0.188	22.74		
		64-QAM	-23.02	13.44	10.42	2.56	H		0.135	21.30		
		256-QAM	-25.25	11.21	10.42	2.56	H		0.081	19.07		
2649.990		PI/2 BPSK	-22.34	14.29	10.13	2.62	H		0.151	21.80	1	1
		QPSK	-22.46	14.17	10.13	2.62	H		0.147	21.68		
		16-QAM	-23.44	13.19	10.13	2.62	H		0.118	20.70		
		64-QAM	-24.96	11.67	10.13	2.62	H		0.083	19.18		
		256-QAM	-27.24	9.39	10.13	2.62	H		0.049	16.90		

Freq (MHz)	Mod/ Bandwidth [SCS (kHz)]	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP		RB	
								W	W	dBm	Size	Offset
2541.000	Sub6 41/ 90 MHz [30 kHz]	PI/2 BPSK	-20.69	15.69	10.56	2.56	H	< 2.00	0.234	23.69	1	122
		QPSK	-20.73	15.65	10.56	2.56	H		0.232	23.65		
		16-QAM	-21.65	14.73	10.56	2.56	H		0.188	22.73		
		64-QAM	-23.24	13.14	10.56	2.56	H		0.130	21.14		
		256-QAM	-25.52	10.86	10.56	2.56	H		0.077	18.86		
2545.020		PI/2 BPSK	-20.72	15.66	10.56	2.56	H		0.232	23.66	1	1
		QPSK	-20.80	15.58	10.56	2.56	H		0.228	23.58		
		16-QAM	-21.77	14.61	10.56	2.56	H		0.182	22.61		
		64-QAM	-23.28	13.10	10.56	2.56	H		0.129	21.10		
		256-QAM	-25.58	10.80	10.56	2.56	H		0.076	18.80		
2592.990		PI/2 BPSK	-20.45	16.01	10.42	2.56	H		0.244	23.87	1	122
		QPSK	-20.49	15.97	10.42	2.56	H		0.242	23.83		
		16-QAM	-21.50	14.96	10.42	2.56	H		0.191	22.82		
		64-QAM	-22.99	13.47	10.42	2.56	H		0.136	21.33		
		256-QAM	-25.24	11.22	10.42	2.56	H		0.081	19.08		
2644.980		PI/2 BPSK	-22.52	14.37	10.16	2.63	H		0.155	21.90	1	1
		QPSK	-22.55	14.34	10.16	2.63	H		0.154	21.87		
		16-QAM	-23.46	13.43	10.16	2.63	H		0.125	20.96		
		64-QAM	-25.04	11.85	10.16	2.63	H		0.087	19.38		
		256-QAM	-27.27	9.62	10.16	2.63	H		0.052	17.15		

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	-20.98	15.40	10.56	2.56	H	< 2.00	0.219	23.40	1	136
		QPSK	-21.04	15.34	10.56	2.56	H		0.216	23.34		
		16-QAM	-22.05	14.33	10.56	2.56	H		0.171	22.33		
		64-QAM	-23.46	12.92	10.56	2.56	H		0.124	20.92		
		256-QAM	-25.79	10.59	10.56	2.56	H		0.072	18.59		
2550.000		PI/2 BPSK	-20.64	15.77	10.58	2.57	H		0.239	23.78	1	1
		QPSK	-20.73	15.68	10.58	2.57	H		0.234	23.69		
		16-QAM	-21.75	14.66	10.58	2.57	H		0.185	22.67		
		64-QAM	-23.31	13.10	10.58	2.57	H		0.129	21.11		
		256-QAM	-25.60	10.81	10.58	2.57	H		0.076	18.82		
2592.990		PI/2 BPSK	-20.55	15.91	10.42	2.56	H		0.238	23.77	1	136
		QPSK	-20.57	15.89	10.42	2.56	H		0.237	23.75		
		16-QAM	-21.65	14.81	10.42	2.56	H		0.185	22.67		
		64-QAM	-23.09	13.37	10.42	2.56	H		0.133	21.23		
		256-QAM	-25.31	11.15	10.42	2.56	H		0.080	19.01		
2640.000		PI/2 BPSK	-22.81	14.08	10.16	2.63	H		0.145	21.61	1	1
		QPSK	-22.86	14.03	10.16	2.63	H		0.143	21.56		
		16-QAM	-23.85	13.04	10.16	2.63	H		0.114	20.57		
		64-QAM	-25.45	11.44	10.16	2.63	H		0.079	18.97		
		256-QAM	-27.68	9.21	10.16	2.63	H		0.047	16.74		

8.2 RADIATED SPURIOUS EMISSIONS

▣ 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)	RB	
									Size	Offset
501204 (2506.020)	5 012.04	-59.90	10.92	-59.34	3.77	V	-52.19	-25.00	1	25
	7 518.06	-56.01	11.54	-46.65	4.51	H	-39.62	-25.00		
	10 024.08	-56.12	11.75	-45.33	5.30	V	-38.88	-25.00		
	12 530.10	-61.45	12.94	-49.80	6.10	V	-42.96	-25.00		
	15 036.12	-56.19	14.54	-47.29	6.72	V	-39.47	-25.00		
502002 (2510.010)	5 020.02	-60.56	10.94	-60.40	3.72	H	-53.18	-25.00	1	1
	7 530.03	-62.01	11.56	-53.11	4.54	H	-46.09	-25.00		
	10 040.04	-55.99	11.72	-44.78	5.29	H	-38.35	-25.00		
	12 550.05	-62.69	12.90	-50.66	6.16	H	-43.92	-25.00		
	15 060.06	-57.63	14.64	-49.82	6.74	H	-41.92	-25.00		
518598 (2592.990)	5 185.98	-59.84	11.47	-59.49	3.90	H	-51.91	-25.00	1	1
	7 778.97	-56.89	11.28	-47.47	4.66	V	-40.85	-25.00		
	10 371.96	-62.15	11.80	-49.45	5.41	V	-43.06	-25.00		
	12 964.95	-62.36	12.70	-50.08	6.26	V	-43.64	-25.00		
	15 557.94	-58.61	16.22	-50.18	6.86	H	-40.82	-25.00		
535998 (2679.990)	5 359.98	-60.92	11.82	-61.17	3.84	H	-53.19	-25.00	1	1
	8 039.97	-59.16	11.28	-49.92	4.71	V	-43.35	-25.00		
	10 719.96	-58.78	11.70	-44.78	5.48	H	-38.56	-25.00		
	13 399.95	-58.60	12.50	-45.16	6.33	H	-38.99	-25.00		
	16 079.94	-59.40	16.50	-47.95	7.00	H	-38.45	-25.00		

▣ 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)	RB	
									Size	Offset
502200 (2511.000)	5 022.00	-61.55	10.94	-61.39	3.72	H	-54.17	-25.00	1	39
	7 533.00	-58.84	11.56	-49.99	4.56	H	-42.98	-25.00		
	10 044.00	-57.53	11.71	-46.53	5.29	H	-40.11	-25.00		
	12 555.00	-63.49	12.90	-51.57	6.17	H	-44.84	-25.00		
	15 066.00	-57.04	14.66	-49.22	6.76	H	-41.32	-25.00		
503004 (2515.020)	5 030.04	-60.64	10.96	-60.93	3.66	H	-53.63	-25.00	1	1
	7 545.06	-62.38	11.59	-53.44	4.60	H	-46.45	-25.00		
	10 060.08	-57.07	11.68	-46.23	5.30	H	-39.85	-25.00		
	12 575.10	-61.40	12.90	-50.20	6.14	H	-43.44	-25.00		
	15 090.12	-57.44	14.76	-48.46	6.80	H	-40.50	-25.00		
518598 (2592.990)	5 185.98	-60.35	11.47	-60.00	3.90	H	-52.42	-25.00	1	1
	7 778.97	-59.35	11.28	-49.93	4.66	H	-43.31	-25.00		
	10 371.96	-63.56	11.80	-50.86	5.41	H	-44.47	-25.00		
	12 964.95	-64.16	12.70	-51.88	6.26	H	-45.44	-25.00		
	15 557.94	-60.83	16.22	-52.40	6.86	H	-43.04	-25.00		
534996 (2674.980)	5 349.96	-61.54	11.80	-61.53	3.79	H	-53.52	-25.00	1	1
	8 024.94	-60.35	11.25	-50.78	4.69	H	-44.22	-25.00		
	10 699.92	-63.16	11.70	-49.55	5.51	H	-43.36	-25.00		
	13 374.90	-60.77	12.60	-48.17	6.29	H	-41.86	-25.00		
	16 049.88	-56.51	16.50	-44.94	6.99	H	-35.43	-25.00		

▣ 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)	RB	
									Size	Offset
503202 (2516.010)	5 032.02	-60.61	10.96	-60.90	3.66	H	-53.60	-25.00	1	53
	7 548.03	-57.07	11.58	-47.97	4.63	H	-41.02	-25.00		
	10 064.04	-57.38	11.67	-46.53	5.31	H	-40.17	-25.00		
	12 580.05	-62.15	12.90	-50.96	6.12	H	-44.18	-25.00		
	15 096.06	-57.05	14.78	-48.06	6.81	H	-40.09	-25.00		
504000 (2520.000)	5 040.00	-60.77	10.98	-61.53	3.65	H	-54.20	-25.00	1	1
	7 560.00	-61.17	11.60	-51.94	4.65	H	-44.99	-25.00		
	10 080.00	-56.93	11.64	-45.80	5.34	H	-39.50	-25.00		
	12 600.00	-63.27	12.90	-51.36	6.07	H	-44.53	-25.00		
	15 120.00	-57.42	14.84	-49.44	6.76	H	-41.36	-25.00		
518598 (2592.990)	5 185.98	-60.87	11.47	-60.52	3.90	H	-52.94	-25.00	1	1
	7 778.97	-59.35	11.28	-49.93	4.66	H	-43.31	-25.00		
	10 371.96	-61.70	11.80	-49.00	5.41	H	-42.61	-25.00		
	12 964.95	-64.30	12.70	-52.02	6.26	H	-45.58	-25.00		
	15 557.94	-60.85	16.22	-52.42	6.86	H	-43.06	-25.00		
534000 (2670.000)	5 340.00	-60.71	11.78	-61.20	3.78	H	-53.20	-25.00	1	1
	8 010.00	-59.59	11.22	-49.83	4.66	H	-43.27	-25.00		
	10 680.00	-60.93	11.70	-46.67	5.56	H	-40.53	-25.00		
	13 350.00	-57.39	12.70	-44.04	6.30	H	-37.64	-25.00		
	16 020.00	-58.01	16.50	-47.60	6.96	H	-38.06	-25.00		

▣ 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)	RB	
									Size	Offset
504204 (2521.020)	5 042.04	-61.10	10.98	-61.86	3.65	H	-54.53	-25.00	1	66
	7 563.06	-59.27	11.60	-50.07	4.65	H	-43.11	-25.00		
	10 084.08	-56.97	11.63	-45.93	5.35	H	-39.64	-25.00		
	12 605.10	-63.14	12.90	-51.39	6.08	H	-44.57	-25.00		
	15 126.12	-57.16	14.85	-49.08	6.75	H	-40.98	-25.00		
505002 (2525.010)	5 050.02	-60.99	11.00	-61.42	3.66	H	-54.08	-25.00	1	1
	7 575.03	-59.98	11.60	-50.96	4.62	H	-43.98	-25.00		
	10 100.04	-57.51	11.60	-46.32	5.34	H	-40.06	-25.00		
	12 625.05	-63.47	12.90	-52.26	6.15	H	-45.51	-25.00		
	15 150.06	-57.46	14.90	-48.51	6.76	H	-40.37	-25.00		
518598 (2592.990)	5 185.98	-60.61	11.47	-60.26	3.90	H	-52.68	-25.00	1	1
	7 778.97	-59.80	11.28	-50.38	4.66	H	-43.76	-25.00		
	10 371.96	-61.98	11.80	-49.28	5.41	H	-42.89	-25.00		
	12 964.95	-63.83	12.70	-51.55	6.26	H	-45.11	-25.00		
	15 557.94	-59.27	16.22	-50.84	6.86	H	-41.48	-25.00		
532998 (2664.990)	5 329.98	-61.17	11.76	-61.56	3.76	H	-53.56	-25.00	1	1
	7 994.97	-59.62	11.19	-50.02	4.64	H	-43.46	-25.00		
	10 659.96	-61.00	11.70	-46.47	5.51	H	-40.28	-25.00		
	13 324.95	-62.76	12.75	-49.11	6.39	H	-42.74	-25.00		
	15 989.94	-58.12	16.50	-47.28	6.96	H	-37.74	-25.00		

▣ 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)	RB	
									Size	Offset
505200 (2526.000)	5 052.00	-59.14	11.00	-59.57	3.66	H	-52.23	-25.00	1	81
	7 578.00	-57.86	11.60	-49.01	4.60	H	-42.01	-25.00		
	10 104.00	-59.70	11.60	-48.61	5.34	H	-42.34	-25.00		
	12 630.00	-64.24	12.90	-53.13	6.19	H	-46.42	-25.00		
	15 156.00	-57.51	14.91	-48.64	6.76	H	-40.48	-25.00		
506004 (2530.02)	5 060.04	-60.70	11.04	-60.71	3.70	H	-53.37	-25.00	1	1
	7 590.06	-60.82	11.60	-52.18	4.58	H	-45.16	-25.00		
	10 120.08	-58.71	11.60	-47.24	5.32	H	-40.96	-25.00		
	12 650.10	-62.35	12.90	-50.30	6.22	H	-43.62	-25.00		
	15 180.12	-57.86	14.96	-49.75	6.77	H	-41.56	-25.00		
518598 (2592.990)	5 185.98	-61.23	11.47	-60.88	3.90	H	-53.30	-25.00	1	1
	7 778.97	-59.39	11.28	-49.97	4.66	H	-43.35	-25.00		
	10 371.96	-62.67	11.80	-49.97	5.41	H	-43.58	-25.00		
	12 964.95	-64.87	12.70	-52.59	6.26	H	-46.15	-25.00		
	15 557.94	-60.64	16.22	-52.21	6.86	H	-42.85	-25.00		
531996 (2659.980)	5 319.96	-61.25	11.74	-61.97	3.80	H	-54.03	-25.00	1	1
	7 979.94	-60.75	11.16	-51.37	4.66	H	-44.87	-25.00		
	10 639.92	-59.22	11.70	-45.37	5.44	H	-39.11	-25.00		
	13 299.90	-64.27	12.80	-51.19	6.31	H	-44.70	-25.00		
	15 959.88	-56.38	16.50	-46.31	6.97	H	-36.78	-25.00		

▣ 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)	RB	
									Size	Offset
507204 (2536.020)	5 072.04	-61.85	11.08	-61.46	3.73	H	-54.11	-25.00	1	108
	7 608.06	-57.45	11.60	-48.31	4.54	H	-41.25	-25.00		
	10 144.08	-58.36	11.60	-46.82	5.33	H	-40.54	-25.00		
	12 680.10	-63.91	12.78	-51.56	6.16	H	-44.94	-25.00		
	15 216.12	-56.87	15.03	-48.01	6.78	H	-39.76	-25.00		
508002 (2540.010)	5 080.02	-60.58	11.12	-60.28	3.74	H	-52.90	-25.00	1	1
	7 620.03	-58.08	11.60	-48.52	4.55	H	-41.47	-25.00		
	10 160.04	-58.79	11.60	-47.02	5.34	H	-40.76	-25.00		
	12 700.05	-63.18	12.70	-50.10	6.16	H	-43.56	-25.00		
	15 240.06	-56.49	15.08	-48.37	6.75	H	-40.04	-25.00		
518598 (2592.990)	5 185.98	-61.44	11.47	-61.09	3.90	H	-53.51	-25.00	1	108
	7 778.97	-59.68	11.28	-50.26	4.66	H	-43.64	-25.00		
	10 371.96	-64.54	11.80	-51.84	5.41	H	-45.45	-25.00		
	12 964.95	-64.87	12.70	-52.59	6.26	H	-46.15	-25.00		
	15 557.94	-61.16	16.22	-52.73	6.86	H	-43.37	-25.00		
529998 (2649.990)	5 299.98	-61.06	11.70	-61.22	3.91	H	-53.43	-25.00	1	1
	7 949.97	-61.12	11.10	-51.21	4.74	H	-44.85	-25.00		
	10 599.96	-57.76	11.70	-44.40	5.53	H	-38.23	-25.00		
	13 249.95	-63.47	12.90	-51.32	6.31	H	-44.73	-25.00		
	15 899.94	-57.98	16.40	-47.48	6.95	H	-38.03	-25.00		

▣ 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)	RB	
									Size	Offset
508200 (2541.000)	5 082.00	-61.80	11.16	-61.89	3.79	H	-54.52	-25.00	1	122
	7 623.00	-57.14	11.60	-48.31	4.58	H	-41.29	-25.00		
	10 164.00	-59.58	11.60	-48.05	5.38	H	-41.82	-25.00		
	12 705.00	-62.33	12.64	-49.30	6.20	H	-42.86	-25.00		
	15 246.00	-56.33	15.20	-47.73	6.80	H	-39.33	-25.00		
509004 (2545.020)	5 090.04	-61.20	11.16	-61.29	3.79	H	-53.92	-25.00	1	1
	7 635.06	-58.78	11.60	-49.70	4.56	H	-42.66	-25.00		
	10 180.08	-60.80	11.60	-49.11	5.37	H	-42.88	-25.00		
	12 725.10	-62.01	12.65	-48.60	6.20	H	-42.15	-25.00		
	15 270.12	-57.73	15.18	-48.95	6.79	H	-40.56	-25.00		
518598 (2592.990)	5 185.98	-61.89	11.47	-61.54	3.90	H	-53.96	-25.00	1	122
	7 778.97	-59.28	11.28	-49.86	4.66	H	-43.24	-25.00		
	10 371.96	-63.23	11.80	-50.53	5.41	H	-44.14	-25.00		
	12 964.95	-64.03	12.70	-51.75	6.26	H	-45.31	-25.00		
	15 557.94	-61.95	16.22	-53.52	6.86	H	-44.16	-25.00		
528996 (2644.980)	5 289.96	-61.86	11.66	-62.56	3.84	H	-54.74	-25.00	1	1
	7 934.94	-62.03	11.04	-52.49	4.64	H	-46.09	-25.00		
	10 579.92	-60.15	11.70	-47.02	5.47	H	-40.79	-25.00		
	13 224.90	-64.14	12.90	-51.94	6.27	H	-45.31	-25.00		
	15 869.88	-57.54	16.40	-47.43	6.90	H	-37.93	-25.00		

▣ 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)	RB	
									Size	Offset
509202 (2546.010)	5 092.02	-62.06	11.16	-62.15	3.79	H	-54.78	-25.00	1	136
	7 638.03	-57.44	11.60	-48.61	4.58	H	-41.59	-25.00		
	10 184.04	-63.23	11.60	-51.70	5.38	H	-45.47	-25.00		
	12 730.05	-63.41	12.64	-50.38	6.20	H	-43.94	-25.00		
	15 276.06	-57.16	15.20	-48.56	6.80	H	-40.16	-25.00		
510000 (2550.000)	5 100.00	-61.20	11.20	-61.21	3.84	H	-53.85	-25.00	1	1
	7 650.00	-60.41	11.60	-51.89	4.61	H	-44.90	-25.00		
	10 200.00	-61.15	11.60	-49.31	5.39	H	-43.10	-25.00		
	12 750.00	-63.70	12.60	-50.93	6.22	H	-44.55	-25.00		
	15 300.00	-58.18	15.30	-50.13	6.82	H	-41.65	-25.00		
518598 (2592.990)	5 185.98	-61.35	11.47	-61.00	3.90	H	-53.42	-25.00	1	136
	7 778.97	-61.03	11.28	-51.61	4.66	H	-44.99	-25.00		
	10 371.96	-63.00	11.80	-50.30	5.41	H	-43.91	-25.00		
	12 964.95	-63.37	12.70	-51.09	6.26	H	-44.65	-25.00		
	15 557.94	-61.05	16.22	-52.62	6.86	H	-43.26	-25.00		
528000 (2640.000)	5 280.00	-61.09	11.66	-61.79	3.84	H	-53.97	-25.00	1	1
	7 920.00	-60.58	11.04	-51.04	4.64	H	-44.64	-25.00		
	10 560.00	-61.62	11.70	-48.49	5.47	H	-42.26	-25.00		
	13 200.00	-64.05	12.90	-51.85	6.27	H	-45.22	-25.00		
	15 840.00	-56.94	16.40	-46.83	6.90	H	-37.33	-25.00		

▣ ENDC-Mode : 2A(10 MHz)-n41A(30 MHz)

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)
18900 (1880.0)	3760.00	-60.59	11.64	-60.82	3.16	V	-52.34	-13.00
	5640.00	-61.67	12.00	-55.49	3.93	V	-47.42	-13.00
	7520.00	-61.37	11.54	-46.92	4.51	V	-39.89	-13.00

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n41	20 MHz	2592.990	BPSK	50	0	4.32
			QPSK			5.30
			16-QAM			6.11
			64-QAM			6.39
			256-QAM			6.68
	30 MHz		BPSK	75		4.14
			QPSK			5.25
			16-QAM			6.04
			64-QAM			6.27
			256-QAM			6.62
	40 MHz		BPSK	100		3.95
			QPSK			5.22
			16-QAM			6.03
			64-QAM			6.31
			256-QAM			6.60
	50 MHz		BPSK	128		4.30
			QPSK			5.30
			16-QAM			6.05
			64-QAM			6.31
			256-QAM			6.65
	60 MHz		BPSK	162		4.08
			QPSK			5.25
			16-QAM			5.99
			64-QAM			6.31
			256-QAM			6.62
	80 MHz		BPSK	216		4.06
			QPSK			5.12
			16-QAM			5.93
			64-QAM			6.17
			256-QAM			6.62
	90 MHz		BPSK	243		3.83
			QPSK			5.02
			16-QAM			5.87
			64-QAM			6.22
			256-QAM			6.63
	100 MHz		BPSK	270		3.93
			QPSK			5.01
			16-QAM			5.84
			64-QAM			6.11
			256-QAM			6.58

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 99 ~ 138.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n41	20 MHz	2592.990	BPSK	50	0	17.907
			QPSK			17.876
			16-QAM			17.909
			64-QAM			17.909
			256-QAM			17.902
	30 MHz		BPSK	75		26.867
			QPSK			26.990
			16-QAM			26.956
			64-QAM			26.886
			256-QAM			26.904
	40 MHz		BPSK	100		35.803
			QPSK			35.742
			16-QAM			35.818
			64-QAM			35.794
			256-QAM			35.750
	50 MHz		BPSK	128		45.927
			QPSK			45.884
			16-QAM			45.816
			64-QAM			45.873
			256-QAM			45.780
	60 MHz		BPSK	162		57.803
			QPSK			57.925
			16-QAM			57.986
			64-QAM			57.939
			256-QAM			58.040
	80 MHz		BPSK	216		77.260
			QPSK			77.345
			16-QAM			77.113
			64-QAM			77.159
			256-QAM			77.339
	90 MHz		BPSK	243		86.919
			QPSK			87.031
			16-QAM			86.793
			64-QAM			86.744
			256-QAM			86.895
	100 MHz		BPSK	270		96.658
			QPSK			96.406
			16-QAM			96.236
			64-QAM			96.414
			256-QAM			96.127

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 59 ~ 98.

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	20	2506.020	9.1934	37.805	-70.355	-32.550	-25.00
		2510.010	4.9706	37.190	-69.407	-32.217	
		2592.990	4.5659	37.190	-70.452	-33.262	
		2679.990	8.0349	37.805	-69.466	-31.661	
	30	2511.000	7.9816	37.805	-69.853	-32.048	
		2515.000	4.0305	37.190	-70.177	-32.987	
		2592.990	6.0339	37.805	-70.385	-32.580	
		2674.980	4.0679	37.190	-70.248	-33.058	
	40	2516.010	9.9831	37.805	-70.135	-32.330	
		2520.000	9.7174	37.805	-70.243	-32.438	
		2592.990	8.0115	37.805	-70.017	-32.212	
		2670.000	8.2727	37.805	-69.998	-32.193	
	50	2521.020	4.0873	37.190	-70.062	-32.872	
		2525.010	9.9581	37.805	-69.902	-32.097	
		2592.990	9.4816	37.805	-70.272	-32.467	
		2664.990	7.1735	37.805	-70.113	-32.308	
	60	2526.000	9.6994	37.805	-70.102	-32.297	
		2530.020	3.7304	37.190	-69.759	-32.569	
		2592.990	9.7069	37.805	-70.463	-32.658	
		2659.980	8.2592	37.805	-70.408	-32.603	
	80	2536.020	8.2727	37.805	-70.186	-32.381	
		2540.010	3.7837	37.190	-70.393	-33.203	
		2592.990	8.3096	37.805	-70.250	-32.445	
		2649.990	3.8186	37.190	-70.898	-33.708	
	90	2541.000	4.9238	37.190	-70.094	-32.904	
		2545.020	8.2986	37.805	-69.960	-32.155	
		2592.990	3.8360	37.190	-70.539	-33.349	
		2644.980	4.0589	37.190	-69.979	-32.789	
	100	2546.010	8.5912	37.805	-70.005	-32.200	
		2550.000	7.9970	37.805	-69.098	-31.293	
		2592.990	8.8834	37.805	-69.985	-32.180	
		2640.000	6.2942	37.805	-69.589	-31.784	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 227 ~ 290.

2. Duty Cycle factor already applied on the factor.

- Duty Cycle Factor(dB) = 6.99

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

- Result(dBm) = Reading + Factor

3. Factor(dB)

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

8.6 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
20	2506.020	BPSK	Full RB	-24.26	-26.44	-24.82	-24.72	-27.93	-26.54	-34.46
30	2511.000	BPSK	Full RB	-27.02	-28.10	-28.07	-28.09	-30.02	-28.13	-37.61
40	2520.000	BPSK	Full RB	-26.50	-30.31	-29.54	-30.34	-31.30	-29.37	-38.64
50	2525.010	BPSK	Full RB	-26.19	-25.30	-29.39	-24.64	-26.52	-23.64	-36.11
60	2530.020	BPSK	Full RB	-18.08	-18.98	-31.34	-29.67	-33.42	-27.64	-38.54
80	2540.010	BPSK	Full RB	-25.13	-27.53	-31.34	-29.49	-32.50	-28.07	-39.01
90	2545.020	BPSK	Full RB	-23.05	-29.57	-31.16	-30.17	-31.83	-28.43	-40.36
100	2550.000	BPSK	Full RB	-21.66	-27.98	-30.13	-27.49	-29.46	-27.79	-39.98
Limit				-13.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

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
20	2510.010	BPSK	Full RB	-24.67	-27.49	-26.86	-25.63	-28.48	-26.14	-34.34
30	2515.000	BPSK	Full RB	-26.07	-27.70	-28.69	-27.89	-29.32	-27.75	-37.96
40	2520.000	BPSK	Full RB	-27.22	-29.93	-31.13	-29.26	-31.19	-28.05	-38.45
50	2525.010	BPSK	Full RB	-26.40	-26.92	-31.71	-28.20	-31.46	-28.19	-37.78
60	2530.020	BPSK	Full RB	-18.75	-20.86	-30.12	-28.74	-32.61	-23.01	-36.23
80	2540.010	BPSK	Full RB	-24.51	-28.12	-31.65	-30.06	-32.70	-27.98	-39.44
90	2545.020	BPSK	Full RB	-23.54	-28.29	-30.02	-28.51	-32.88	-28.92	-40.56
100	2550.000	BPSK	Full RB	-21.79	-29.07	-30.59	-30.47	-32.84	-28.90	-41.26
Limit				-13.0	-10.0	-13.0	-10.0	-25.0	-13.0	-25.0

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resoure Block Offset	C.E ~ (C.E ± 1 MHz)		(C.E ± 1 MHz) ~ (C.E ± 5 MHz)	
					Lower	Upper	Lower	Upper
20 MHz	2592.990	BPSK	Full RB	0	-24.62	-27.22	-24.12	-25.39
	2679.990	BPSK	Full RB	0	-24.45	-28.51	-23.83	-26.28
30 MHz	2592.990	BPSK	Full RB	0	-23.71	-27.41	-24.97	-28.75
	2679.990	BPSK	Full RB	0	-24.34	-30.43	-25.42	-30.17
40 MHz	2592.990	BPSK	Full RB	0	-24.81	-29.05	-26.09	-29.94
	2670.000	BPSK	Full RB	0	-24.73	-29.24	-26.05	-30.55
50 MHz	2592.990	BPSK	Full RB	0	-24.00	-30.06	-27.27	-28.40
	2664.990	BPSK	Full RB	0	-24.33	-27.95	-27.01	-25.38
60 MHz	2592.990	BPSK	Full RB	0	-17.52	-19.67	-27.19	-28.01
	2659.980	BPSK	Full RB	0	-16.84	-20.14	-28.38	-30.85
80 MHz	2592.990	BPSK	Full RB	0	-23.66	-30.55	-29.78	-31.64
	2649.990	BPSK	Full RB	0	-21.83	-29.62	-29.88	-30.66
90 MHz	2592.990	BPSK	Full RB	0	-21.51	-32.77	-29.64	-31.42
	2644.980	BPSK	Full RB	0	-22.59	-31.26	-30.62	-32.43
100 MHz	2592.990	BPSK	Full RB	0	-21.00	-31.52	-29.34	-29.89
	2640.000	BPSK	Full RB	0	-21.64	-29.10	-29.78	-29.13
Limit					-10.0		-10.0	

Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resoure Block Offset	(C.E ± 5 MHz) ~ (C.E ± X MHz)		Above (C.E ± X MHz)	
					Lower	Upper	Lower	Upper
20 MHz	2592.990	BPSK	Full RB	0	-23.94	-24.75	-37.08	-35.94
	2679.990	BPSK	Full RB	0	-22.81	-25.21	-37.32	-38.53
30 MHz	2592.990	BPSK	Full RB	0	-27.21	-27.65	-41.47	-39.82
	2679.990	BPSK	Full RB	0	-26.62	-29.03	-39.90	-42.83
40 MHz	2592.990	BPSK	Full RB	0	-28.83	-28.57	-43.41	-41.55
	2670.000	BPSK	Full RB	0	-28.36	-30.62	-41.33	-46.32
50 MHz	2592.990	BPSK	Full RB	0	-24.95	-27.83	-40.80	-38.31
	2664.990	BPSK	Full RB	0	-23.95	-24.62	-39.99	-47.22
60 MHz	2592.990	BPSK	Full RB	0	-29.22	-29.15	-43.69	-41.40
	2659.980	BPSK	Full RB	0	-27.88	-31.23	-42.06	-47.07
80 MHz	2592.990	BPSK	Full RB	0	-30.00	-32.85	-43.87	-41.21
	2649.990	BPSK	Full RB	0	-30.16	-28.00	-40.63	-47.05
90 MHz	2592.990	BPSK	Full RB	0	-30.48	-30.63	-47.20	-45.84
	2644.980	BPSK	Full RB	0	-28.90	-33.19	-41.29	-47.09
100 MHz	2592.990	BPSK	Full RB	0	-28.29	-29.63	-47.35	-46.94
	2640.000	BPSK	Full RB	0	-28.64	-28.52	-42.90	-47.04
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) = 6.99
4. Plots of the EUT's Channel Edge are shown Page 139 ~ 226. (1RB & Full RB)

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	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 020 025	11.6	0.000 000	0.005
	100%	-20	2506 020 017	3.5	0.000 000	0.001
	100%	-10	2506 020 022	8.6	0.000 000	0.003
	100%	0	2506 020 018	5.3	0.000 000	0.002
	100%	+10	2506 020 024	11.0	0.000 000	0.004
	100%	+30	2506 020 028	14.6	0.000 001	0.006
	100%	+40	2506 020 021	8.0	0.000 000	0.003
	100%	+50	2506 020 019	6.2	0.000 000	0.002
	Batt. Endpoint	+20	2506 020 025	12.4	0.000 000	0.005
2510.010	100 %	+20(Ref)	2510 010 006	0.0	0.000 000	0.000
	100 %	-30	2510 010 016	10.4	0.000 000	0.004
	100 %	-20	2510 010 022	16.2	0.000 001	0.006
	100 %	-10	2510 010 020	13.9	0.000 001	0.006
	100 %	0	2510 010 009	3.3	0.000 000	0.001
	100 %	+10	2510 010 017	11.5	0.000 000	0.005
	100 %	+30	2510 010 018	12.1	0.000 000	0.005
	100 %	+40	2510 010 012	6.4	0.000 000	0.003
	100 %	+50	2510 010 015	9.5	0.000 000	0.004
	Batt. Endpoint	+20	2510 010 022	15.7	0.000 001	0.006
2679.990	100%	+20(Ref)	2679 990 009	0.0	0.000 000	0.000
	100%	-30	2679 990 017	8.0	0.000 000	0.003
	100%	-20	2679 990 020	10.2	0.000 000	0.004
	100%	-10	2679 990 014	4.3	0.000 000	0.002
	100%	0	2679 990 024	14.6	0.000 001	0.005
	100%	+10	2679 990 025	15.3	0.000 001	0.006
	100%	+30	2679 990 018	9.1	0.000 000	0.003
	100%	+40	2679 990 021	12.0	0.000 000	0.004
	100%	+50	2679 990 026	16.2	0.000 001	0.006
	Batt. Endpoint	+20	2679 990 014	4.4	0.000 000	0.002

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	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 000 011	6.5	0.000 000	0.003
	100%	-20	2511 000 017	11.9	0.000 000	0.005
	100%	-10	2511 000 011	6.3	0.000 000	0.003
	100%	0	2511 000 010	5.7	0.000 000	0.002
	100%	+10	2511 000 012	7.3	0.000 000	0.003
	100%	+30	2511 000 018	13.2	0.000 001	0.005
	100%	+40	2511 000 017	12.2	0.000 000	0.005
	100%	+50	2511 000 015	10.0	0.000 000	0.004
	Batt. Endpoint	+20	2511 000 021	16.0	0.000 001	0.006
2515.000	100 %	+20(Ref)	2515 000 010	0.0	0.000 000	0.000
	100 %	-30	2515 000 022	11.6	0.000 000	0.005
	100 %	-20	2515 000 013	3.4	0.000 000	0.001
	100 %	-10	2515 000 023	13.5	0.000 001	0.005
	100 %	0	2515 000 021	11.4	0.000 000	0.005
	100 %	+10	2515 000 025	15.4	0.000 001	0.006
	100 %	+30	2515 000 018	7.8	0.000 000	0.003
	100 %	+40	2515 000 013	3.1	0.000 000	0.001
	100 %	+50	2515 000 020	9.5	0.000 000	0.004
	Batt. Endpoint	+20	2515 000 019	9.5	0.000 000	0.004
2674.980	100%	+20(Ref)	2674 980 012	0.0	0.000 000	0.000
	100%	-30	2674 980 021	9.0	0.000 000	0.003
	100%	-20	2674 980 019	7.1	0.000 000	0.003
	100%	-10	2674 980 022	10.2	0.000 000	0.004
	100%	0	2674 980 017	4.7	0.000 000	0.002
	100%	+10	2674 980 027	15.1	0.000 001	0.006
	100%	+30	2674 980 019	6.8	0.000 000	0.003
	100%	+40	2674 980 023	11.6	0.000 000	0.004
	100%	+50	2674 980 015	3.1	0.000 000	0.001
	Batt. Endpoint	+20	2674 980 024	11.7	0.000 000	0.004

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2516.010	100%	+20(Ref)	2516 010 005	0.0	0.000 000	0.000
	100%	-30	2516 010 012	6.5	0.000 000	0.003
	100%	-20	2516 010 014	8.7	0.000 000	0.003
	100%	-10	2516 010 018	12.8	0.000 001	0.005
	100%	0	2516 010 010	5.0	0.000 000	0.002
	100%	+10	2516 010 015	9.6	0.000 000	0.004
	100%	+30	2516 010 011	5.4	0.000 000	0.002
	100%	+40	2516 010 016	10.5	0.000 000	0.004
	100%	+50	2516 010 020	15.1	0.000 001	0.006
	Batt. Endpoint	+20	2516 010 018	12.4	0.000 000	0.005
2520.000	100 %	+20(Ref)	2520 000 014	0.0	0.000 000	0.000
	100 %	-30	2520 000 020	5.6	0.000 000	0.002
	100 %	-20	2520 000 021	7.1	0.000 000	0.003
	100 %	-10	2520 000 020	5.7	0.000 000	0.002
	100 %	0	2520 000 029	15.3	0.000 001	0.006
	100 %	+10	2520 000 017	3.4	0.000 000	0.001
	100 %	+30	2520 000 022	8.5	0.000 000	0.003
	100 %	+40	2520 000 018	4.4	0.000 000	0.002
	100 %	+50	2520 000 023	9.4	0.000 000	0.004
	Batt. Endpoint	+20	2520 000 030	16.3	0.000 001	0.006
2670.000	100%	+20(Ref)	2670 000 007	0.0	0.000 000	0.000
	100%	-30	2670 000 018	11.0	0.000 000	0.004
	100%	-20	2670 000 024	16.4	0.000 001	0.006
	100%	-10	2670 000 019	12.4	0.000 000	0.005
	100%	0	2670 000 020	13.2	0.000 000	0.005
	100%	+10	2670 000 012	5.0	0.000 000	0.002
	100%	+30	2670 000 013	6.1	0.000 000	0.002
	100%	+40	2670 000 013	6.0	0.000 000	0.002
	100%	+50	2670 000 015	8.0	0.000 000	0.003
	Batt. Endpoint	+20	2670 000 020	12.8	0.000 000	0.005

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2521.020	100%	+20(Ref)	2521 020 014	0.0	0.000 000	0.000
	100%	-30	2521 020 028	14.9	0.000 001	0.006
	100%	-20	2521 020 021	7.7	0.000 000	0.003
	100%	-10	2521 020 022	8.8	0.000 000	0.003
	100%	0	2521 020 024	10.7	0.000 000	0.004
	100%	+10	2521 020 024	10.6	0.000 000	0.004
	100%	+30	2521 020 020	6.5	0.000 000	0.003
	100%	+40	2521 020 028	14.7	0.000 001	0.006
	100%	+50	2521 020 020	6.0	0.000 000	0.002
	Batt. Endpoint	+20	2521 020 023	9.6	0.000 000	0.004
2525.010	100 %	+20(Ref)	2525 010 007	0.0	0.000 000	0.000
	100 %	-30	2525 010 020	12.4	0.000 000	0.005
	100 %	-20	2525 010 011	3.4	0.000 000	0.001
	100 %	-10	2525 010 020	13.3	0.000 001	0.005
	100 %	0	2525 010 010	3.3	0.000 000	0.001
	100 %	+10	2525 010 013	5.7	0.000 000	0.002
	100 %	+30	2525 010 016	8.7	0.000 000	0.003
	100 %	+40	2525 010 020	13.2	0.000 001	0.005
	100 %	+50	2525 010 024	16.8	0.000 001	0.007
	Batt. Endpoint	+20	2525 010 020	13.2	0.000 001	0.005
2664.990	100%	+20(Ref)	2664 990 014	0.0	0.000 000	0.000
	100%	-30	2664 990 023	9.8	0.000 000	0.004
	100%	-20	2664 990 026	12.1	0.000 000	0.005
	100%	-10	2664 990 020	6.7	0.000 000	0.003
	100%	0	2664 990 020	6.7	0.000 000	0.003
	100%	+10	2664 990 026	12.6	0.000 000	0.005
	100%	+30	2664 990 028	14.4	0.000 001	0.005
	100%	+40	2664 990 029	14.9	0.000 001	0.006
	100%	+50	2664 990 020	6.2	0.000 000	0.002
	Batt. Endpoint	+20	2664 990 029	14.9	0.000 001	0.006

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2526.000	100%	+20(Ref)	2526 000 003	0.0	0.000 000	0.000
	100%	-30	2526 000 015	11.8	0.000 000	0.005
	100%	-20	2526 000 013	9.3	0.000 000	0.004
	100%	-10	2526 000 019	15.5	0.000 001	0.006
	100%	0	2526 000 008	4.6	0.000 000	0.002
	100%	+10	2526 000 013	9.3	0.000 000	0.004
	100%	+30	2526 000 020	16.4	0.000 001	0.006
	100%	+40	2526 000 017	13.6	0.000 001	0.005
	100%	+50	2526 000 012	8.3	0.000 000	0.003
	Batt. Endpoint	+20	2526 000 020	16.5	0.000 001	0.007
2530.020	100 %	+20(Ref)	2530 020 015	0.0	0.000 000	0.000
	100 %	-30	2530 020 031	15.9	0.000 001	0.006
	100 %	-20	2530 020 031	15.7	0.000 001	0.006
	100 %	-10	2530 020 023	7.8	0.000 000	0.003
	100 %	0	2530 020 020	4.8	0.000 000	0.002
	100 %	+10	2530 020 022	7.1	0.000 000	0.003
	100 %	+30	2530 020 024	8.6	0.000 000	0.003
	100 %	+40	2530 020 021	5.6	0.000 000	0.002
	100 %	+50	2530 020 021	5.5	0.000 000	0.002
	Batt. Endpoint	+20	2530 020 028	13.1	0.000 001	0.005
2659.980	100%	+20(Ref)	2659 980 012	0.0	0.000 000	0.000
	100%	-30	2659 980 018	5.9	0.000 000	0.002
	100%	-20	2659 980 029	16.3	0.000 001	0.006
	100%	-10	2659 980 020	7.7	0.000 000	0.003
	100%	0	2659 980 016	3.4	0.000 000	0.001
	100%	+10	2659 980 027	14.6	0.000 001	0.005
	100%	+30	2659 980 016	3.2	0.000 000	0.001
	100%	+40	2659 980 022	9.1	0.000 000	0.003
	100%	+50	2659 980 022	9.2	0.000 000	0.003
	Batt. Endpoint	+20	2659 980 023	10.1	0.000 000	0.004

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2536.020	100%	+20(Ref)	2536 020 015	0.0	0.000 000	0.000
	100%	-30	2536 020 021	5.5	0.000 000	0.002
	100%	-20	2536 020 024	8.6	0.000 000	0.003
	100%	-10	2536 020 029	13.6	0.000 001	0.005
	100%	0	2536 020 027	11.9	0.000 000	0.005
	100%	+10	2536 020 027	11.8	0.000 000	0.005
	100%	+30	2536 020 030	15.0	0.000 001	0.006
	100%	+40	2536 020 029	13.7	0.000 001	0.005
	100%	+50	2536 020 019	4.3	0.000 000	0.002
	Batt. Endpoint	+20	2536 020 032	16.6	0.000 001	0.007
2540.010	100 %	+20(Ref)	2540 010 009	0.0	0.000 000	0.000
	100 %	-30	2540 010 026	16.7	0.000 001	0.007
	100 %	-20	2540 010 018	9.2	0.000 000	0.004
	100 %	-10	2540 010 023	13.6	0.000 001	0.005
	100 %	0	2540 010 019	9.5	0.000 000	0.004
	100 %	+10	2540 010 021	11.4	0.000 000	0.005
	100 %	+30	2540 010 016	7.1	0.000 000	0.003
	100 %	+40	2540 010 023	14.2	0.000 001	0.006
	100 %	+50	2540 010 016	6.8	0.000 000	0.003
	Batt. Endpoint	+20	2540 010 015	5.5	0.000 000	0.002
2649.990	100%	+20(Ref)	2649 990 006	0.0	0.000 000	0.000
	100%	-30	2649 990 020	13.8	0.000 001	0.005
	100%	-20	2649 990 015	8.2	0.000 000	0.003
	100%	-10	2649 990 020	13.4	0.000 001	0.005
	100%	0	2649 990 018	11.7	0.000 000	0.004
	100%	+10	2649 990 010	3.7	0.000 000	0.001
	100%	+30	2649 990 022	15.7	0.000 001	0.006
	100%	+40	2649 990 015	8.2	0.000 000	0.003
	100%	+50	2649 990 010	3.0	0.000 000	0.001
	Batt. Endpoint	+20	2649 990 012	5.4	0.000 000	0.002

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2541.000	100%	+20(Ref)	2541 000 010	0.0	0.000 000	0.000
	100%	-30	2541 000 018	8.2	0.000 000	0.003
	100%	-20	2541 000 021	11.3	0.000 000	0.004
	100%	-10	2541 000 025	14.5	0.000 001	0.006
	100%	0	2541 000 024	14.3	0.000 001	0.006
	100%	+10	2541 000 017	6.7	0.000 000	0.003
	100%	+30	2541 000 025	15.3	0.000 001	0.006
	100%	+40	2541 000 024	14.2	0.000 001	0.006
	100%	+50	2541 000 014	4.1	0.000 000	0.002
	Batt. Endpoint	+20	2541 000 023	12.7	0.000 001	0.005
2545.020	100 %	+20(Ref)	2545 020 005	0.0	0.000 000	0.000
	100 %	-30	2545 020 018	12.7	0.000 001	0.005
	100 %	-20	2545 020 016	10.5	0.000 000	0.004
	100 %	-10	2545 020 016	10.5	0.000 000	0.004
	100 %	0	2545 020 015	10.2	0.000 000	0.004
	100 %	+10	2545 020 015	9.5	0.000 000	0.004
	100 %	+30	2545 020 009	3.7	0.000 000	0.001
	100 %	+40	2545 020 013	7.4	0.000 000	0.003
	100 %	+50	2545 020 008	3.1	0.000 000	0.001
	Batt. Endpoint	+20	2545 020 010	5.3	0.000 000	0.002
2644.980	100%	+20(Ref)	2644 980 007	0.0	0.000 000	0.000
	100%	-30	2644 980 017	10.9	0.000 000	0.004
	100%	-20	2644 980 017	11.0	0.000 000	0.004
	100%	-10	2644 980 018	11.4	0.000 000	0.004
	100%	0	2644 980 013	6.6	0.000 000	0.002
	100%	+10	2644 980 022	15.1	0.000 001	0.006
	100%	+30	2644 980 015	8.4	0.000 000	0.003
	100%	+40	2644 980 010	3.7	0.000 000	0.001
	100%	+50	2644 980 010	3.1	0.000 000	0.001
	Batt. Endpoint	+20	2644 980 021	14.7	0.000 001	0.006

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 3.880 VDC

▣ Batt. Endpoint: 3.650 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
2546.010	100%	+20(Ref)	2546 010 005	0.0	0.000 000	0.000
	100%	-30	2546 010 017	11.8	0.000 000	0.005
	100%	-20	2546 010 021	16.2	0.000 001	0.006
	100%	-10	2546 010 011	5.4	0.000 000	0.002
	100%	0	2546 010 013	7.5	0.000 000	0.003
	100%	+10	2546 010 020	14.8	0.000 001	0.006
	100%	+30	2546 010 014	8.8	0.000 000	0.003
	100%	+40	2546 010 017	12.1	0.000 000	0.005
	100%	+50	2546 010 015	9.9	0.000 000	0.004
	Batt. Endpoint	+20	2546 010 016	10.7	0.000 000	0.004
2550.000	100 %	+20(Ref)	2550 000 009	0.0	0.000 000	0.000
	100 %	-30	2550 000 021	11.9	0.000 000	0.005
	100 %	-20	2550 000 022	13.3	0.000 001	0.005
	100 %	-10	2550 000 020	10.8	0.000 000	0.004
	100 %	0	2550 000 021	11.8	0.000 000	0.005
	100 %	+10	2550 000 021	11.6	0.000 000	0.005
	100 %	+30	2550 000 014	4.6	0.000 000	0.002
	100 %	+40	2550 000 020	11.2	0.000 000	0.004
	100 %	+50	2550 000 022	13.3	0.000 001	0.005
	Batt. Endpoint	+20	2550 000 021	11.6	0.000 000	0.005
2640.000	100%	+20(Ref)	2640 000 007	0.0	0.000 000	0.000
	100%	-30	2640 000 020	13.0	0.000 000	0.005
	100%	-20	2640 000 019	11.3	0.000 000	0.004
	100%	-10	2640 000 022	15.2	0.000 001	0.006
	100%	0	2640 000 013	6.1	0.000 000	0.002
	100%	+10	2640 000 014	6.9	0.000 000	0.003
	100%	+30	2640 000 013	5.5	0.000 000	0.002
	100%	+40	2640 000 017	10.0	0.000 000	0.004
	100%	+50	2640 000 015	7.3	0.000 000	0.003
	Batt. Endpoint	+20	2640 000 019	11.7	0.000 000	0.004

9. TEST PLOTS

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 (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)

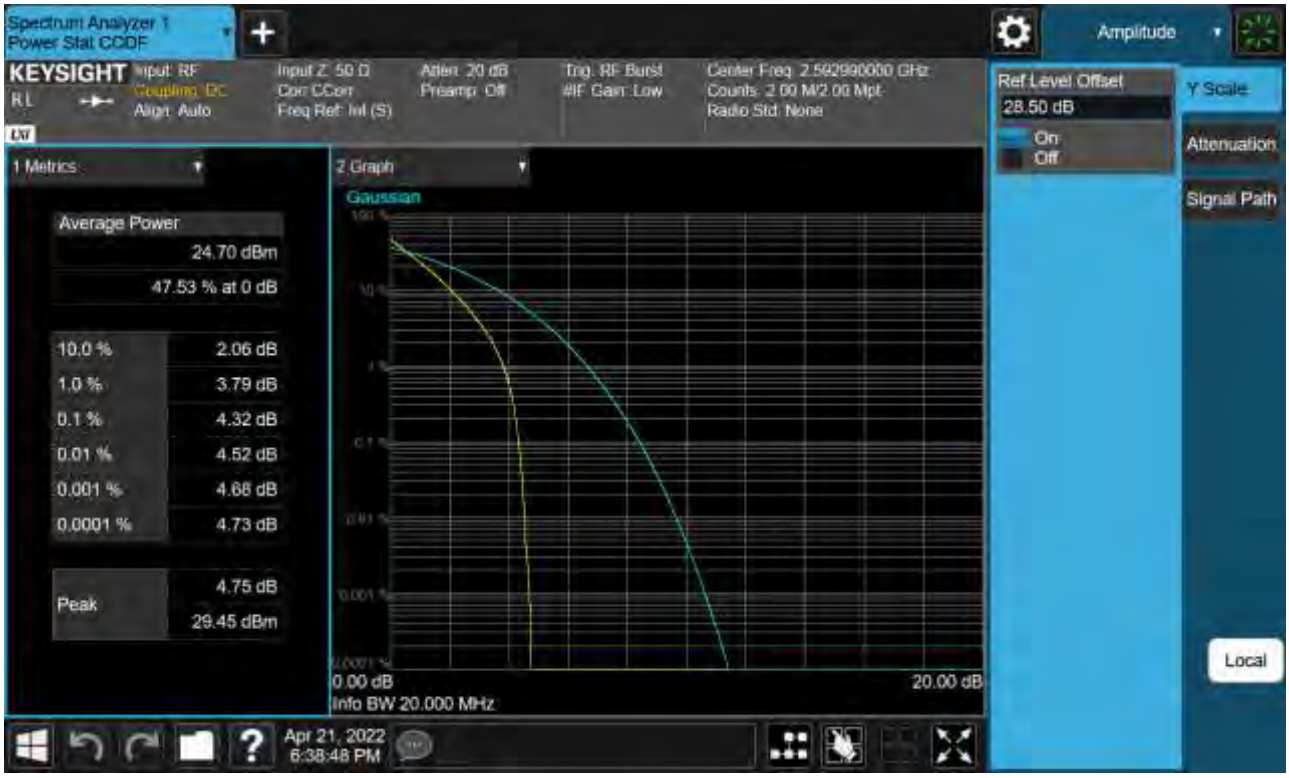
Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 QPSK)

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

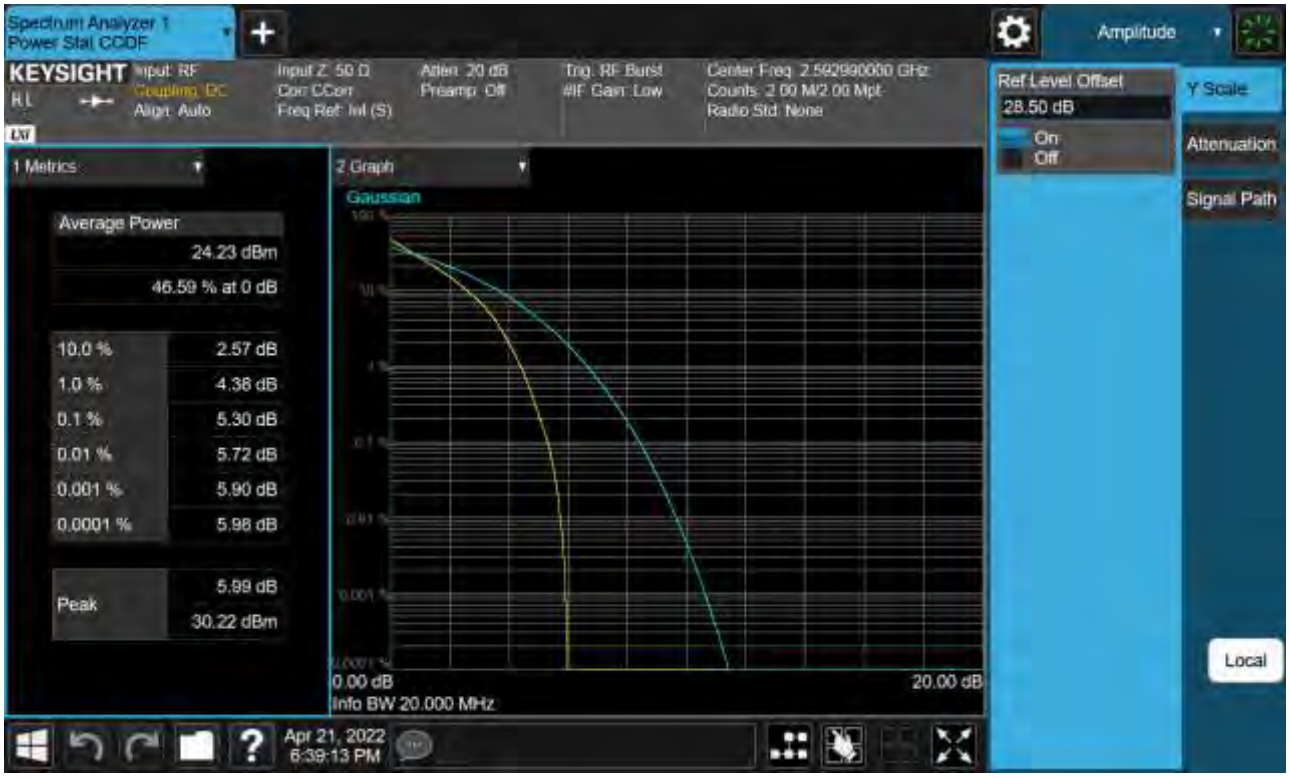
Sub6 n41. Occupied Bandwidth Plot (100 MHz Ch.518598 64-QAM)

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

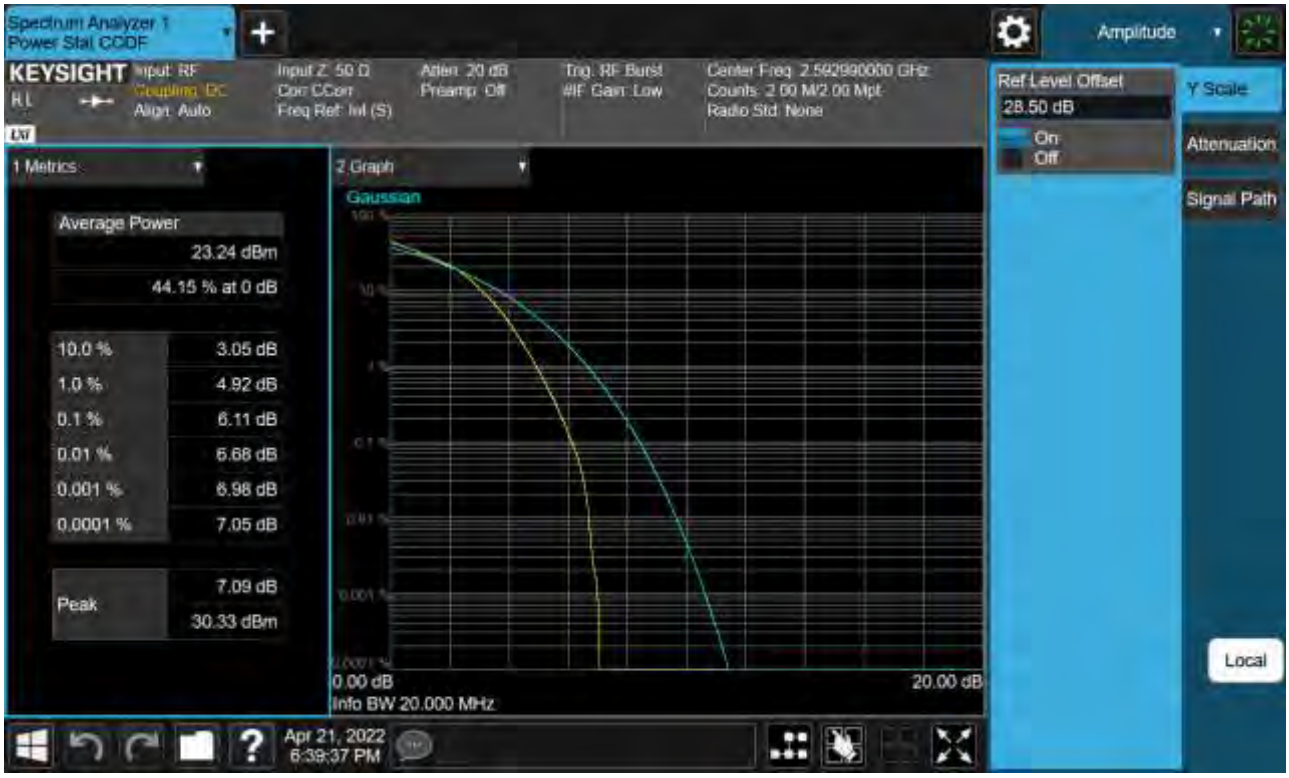
Sub6 n41. PAR Plot (20 M BW_Ch.518598_BPSK)



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



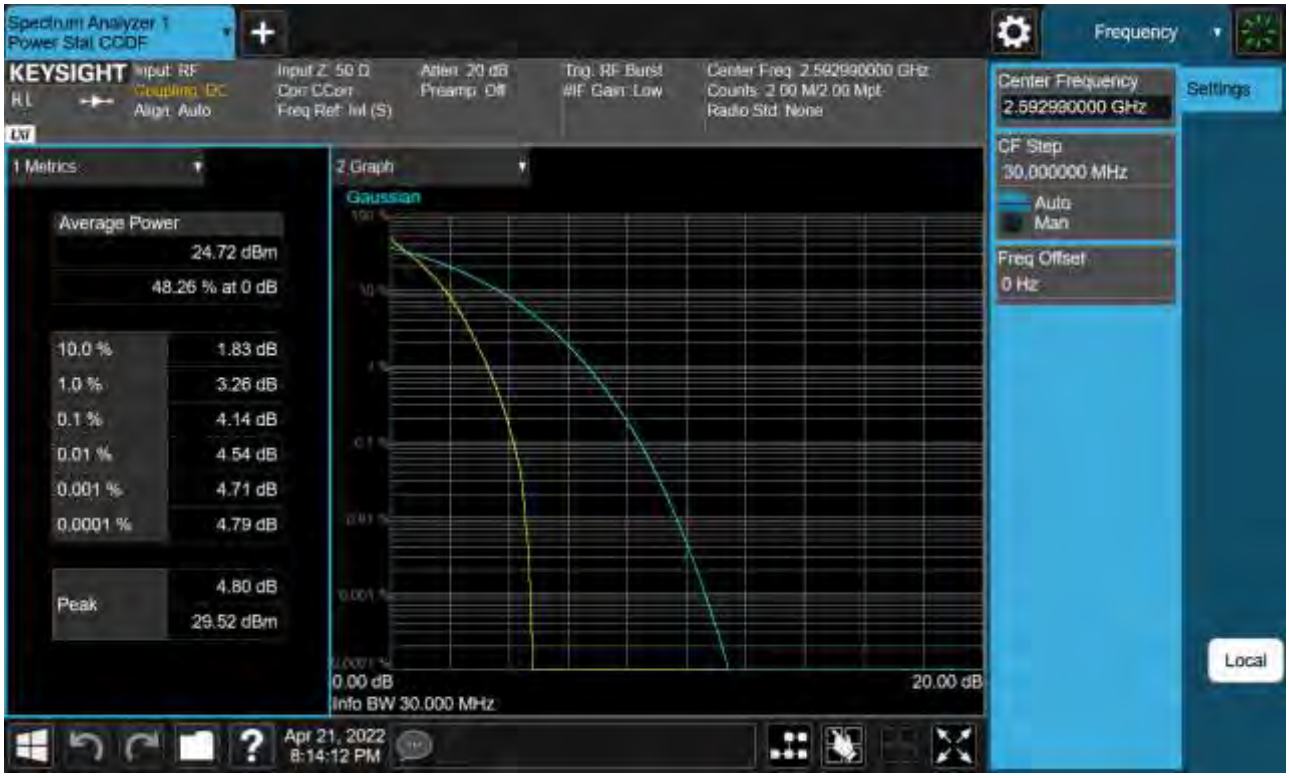
Sub6 n41. PAR Plot (20 M BW_Ch.518598_16QAM)



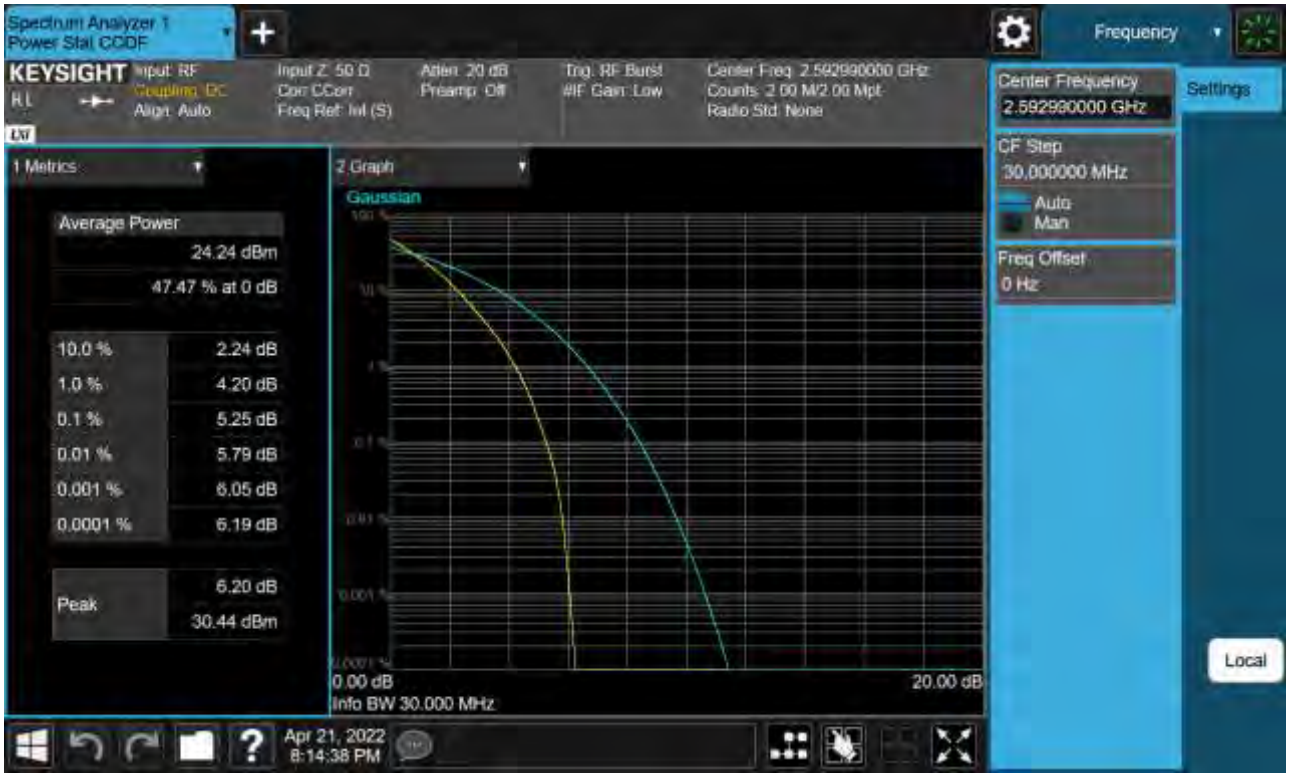
Sub6 n41. PAR Plot (20 M BW_Ch.518598_64QAM)

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

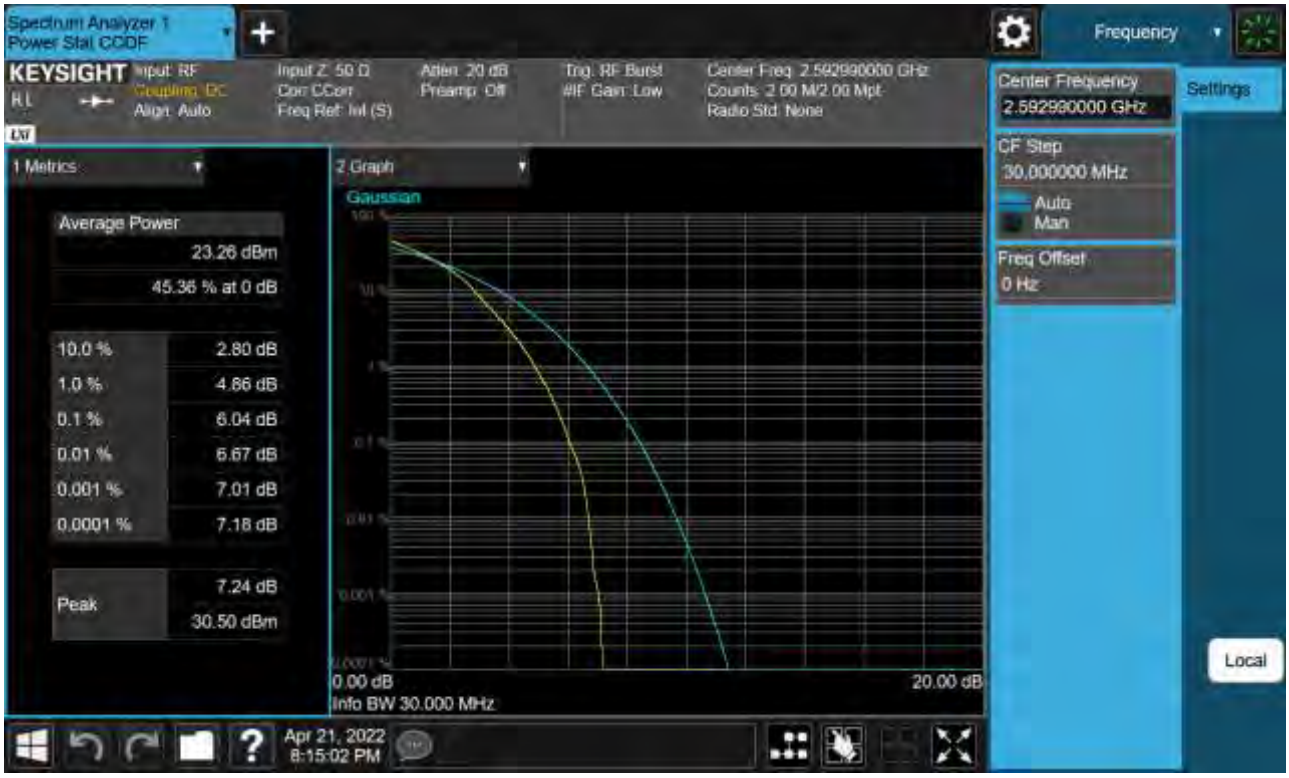
Sub6 n41. PAR Plot (30 M BW_Ch.518598_BPSK)



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

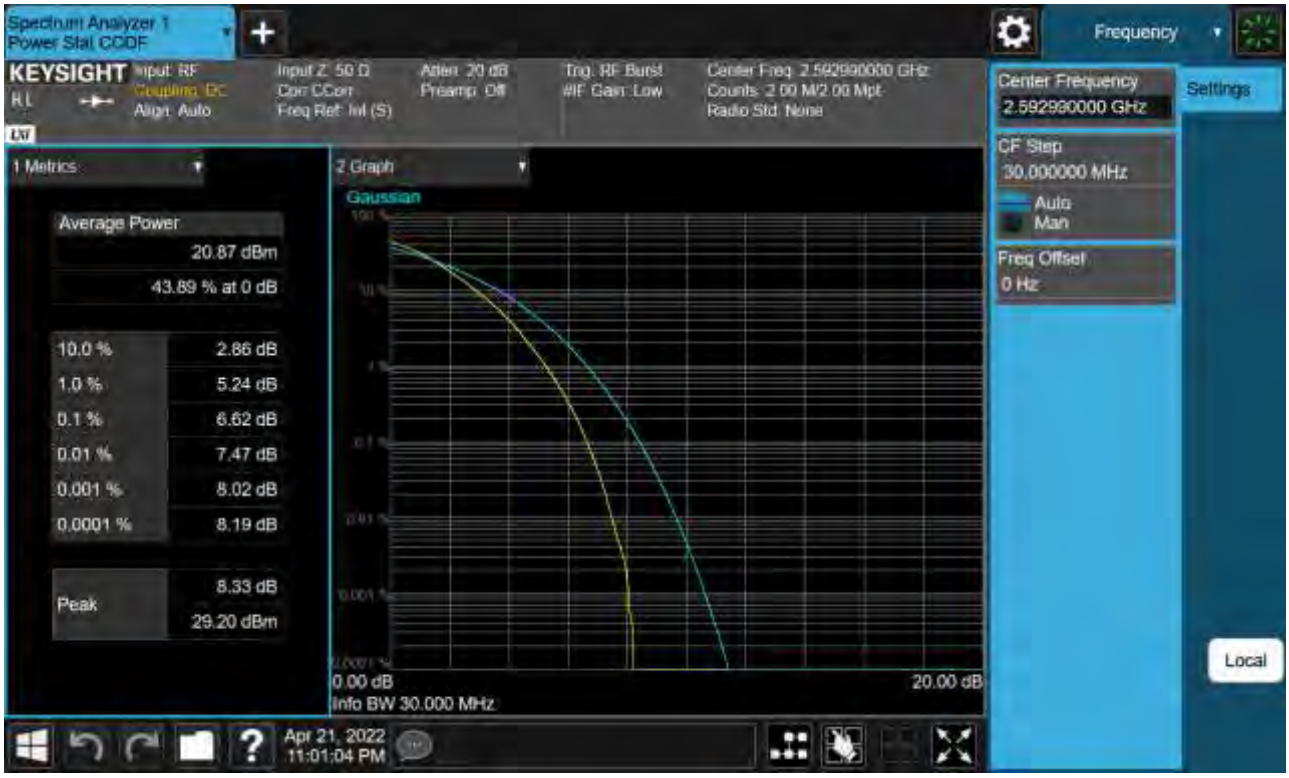


Sub6 n41. PAR Plot (30 M BW_Ch.518598_16QAM)

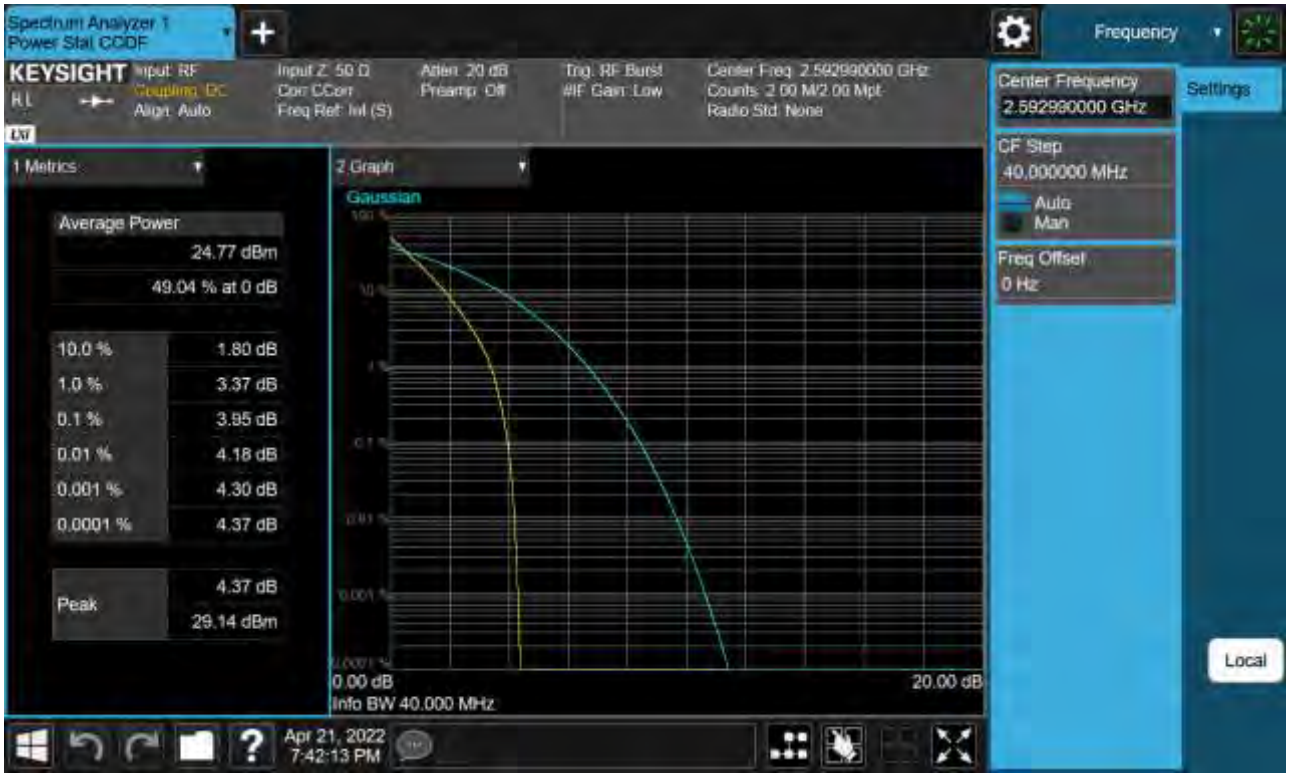


Sub6 n41. PAR Plot (30 M BW_Ch.518598_64QAM)

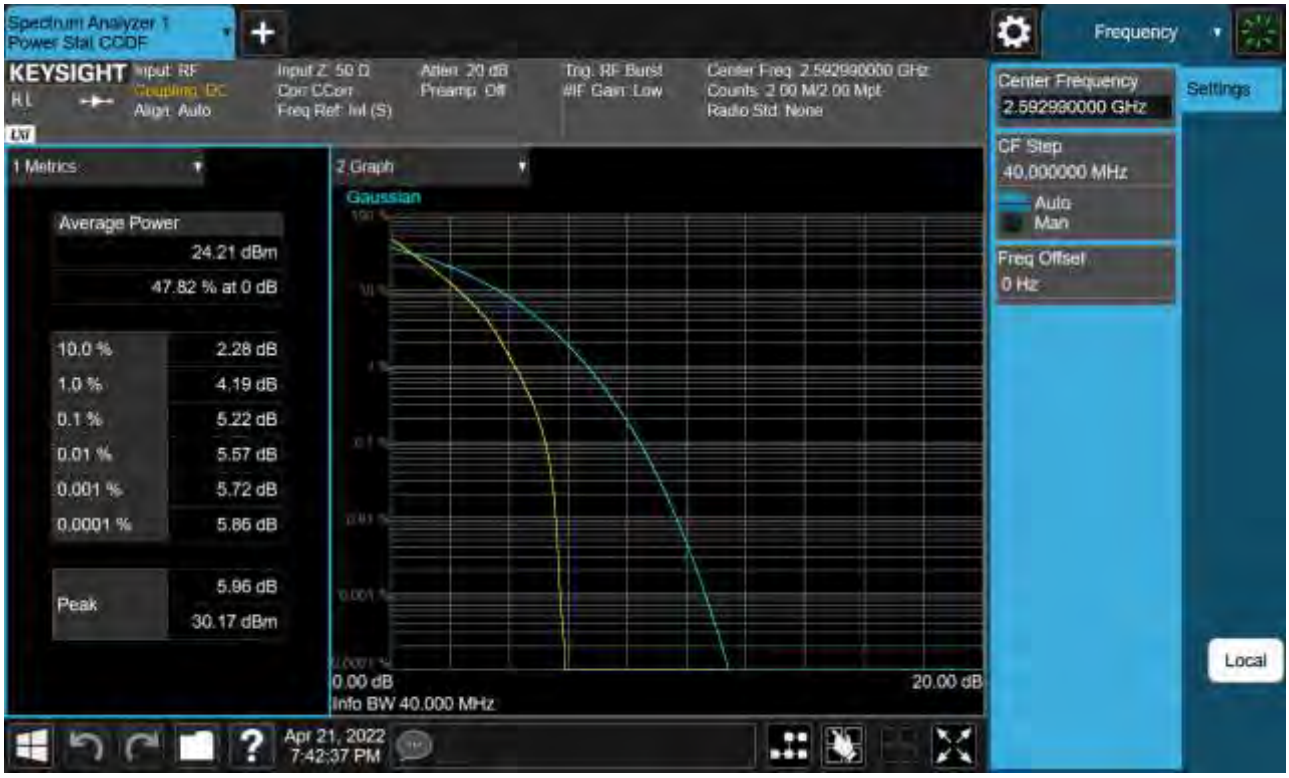
Sub6 n41. PAR Plot (30 M BW_Ch.518598_256QAM)



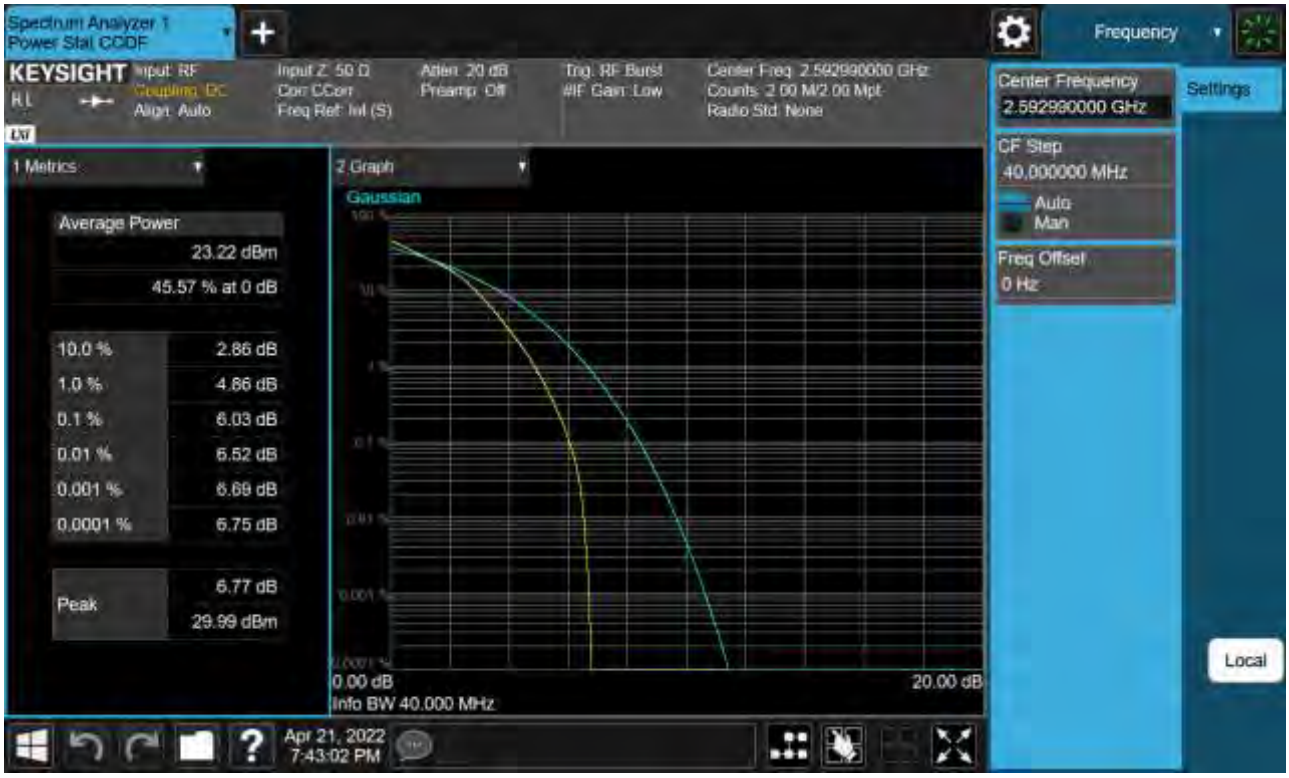
Sub6 n41. PAR Plot (40 M BW_Ch.518598_BPSK)



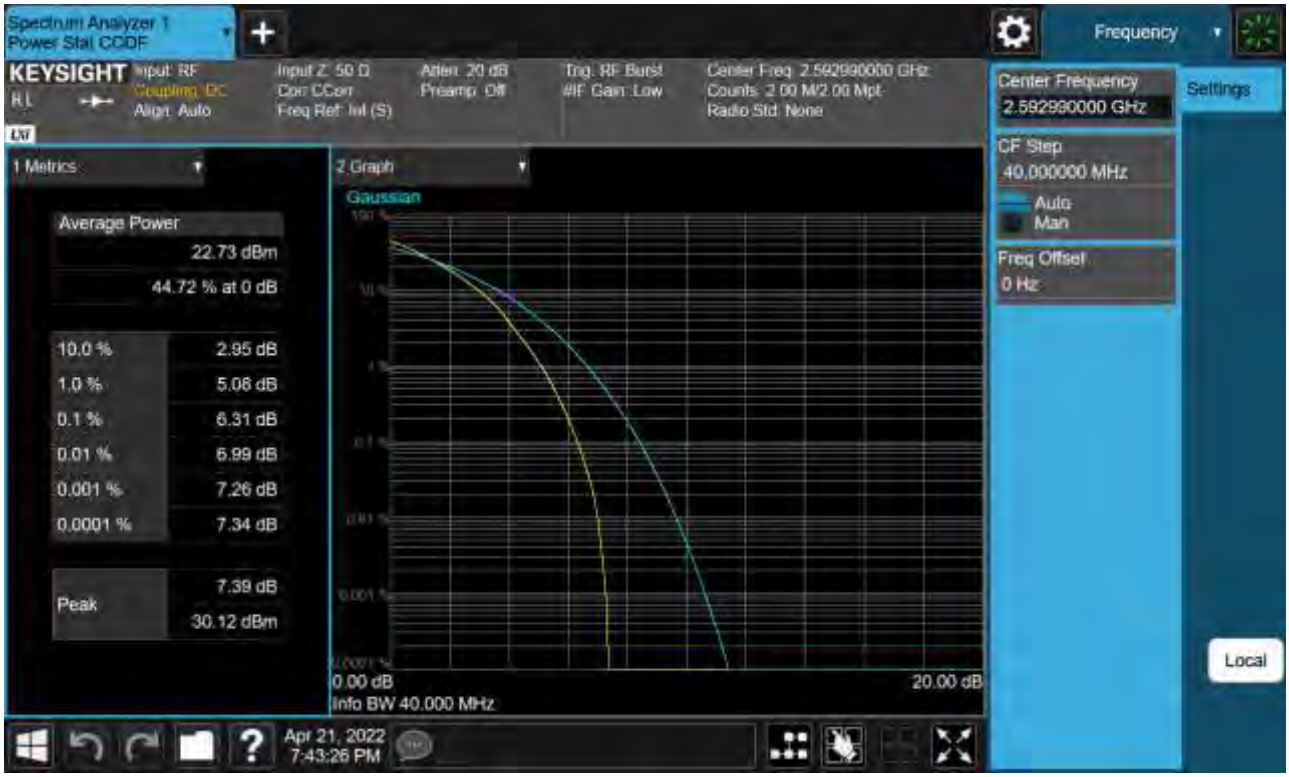
Sub6 n41. PAR Plot (40 M BW_Ch.518598_QPSK)



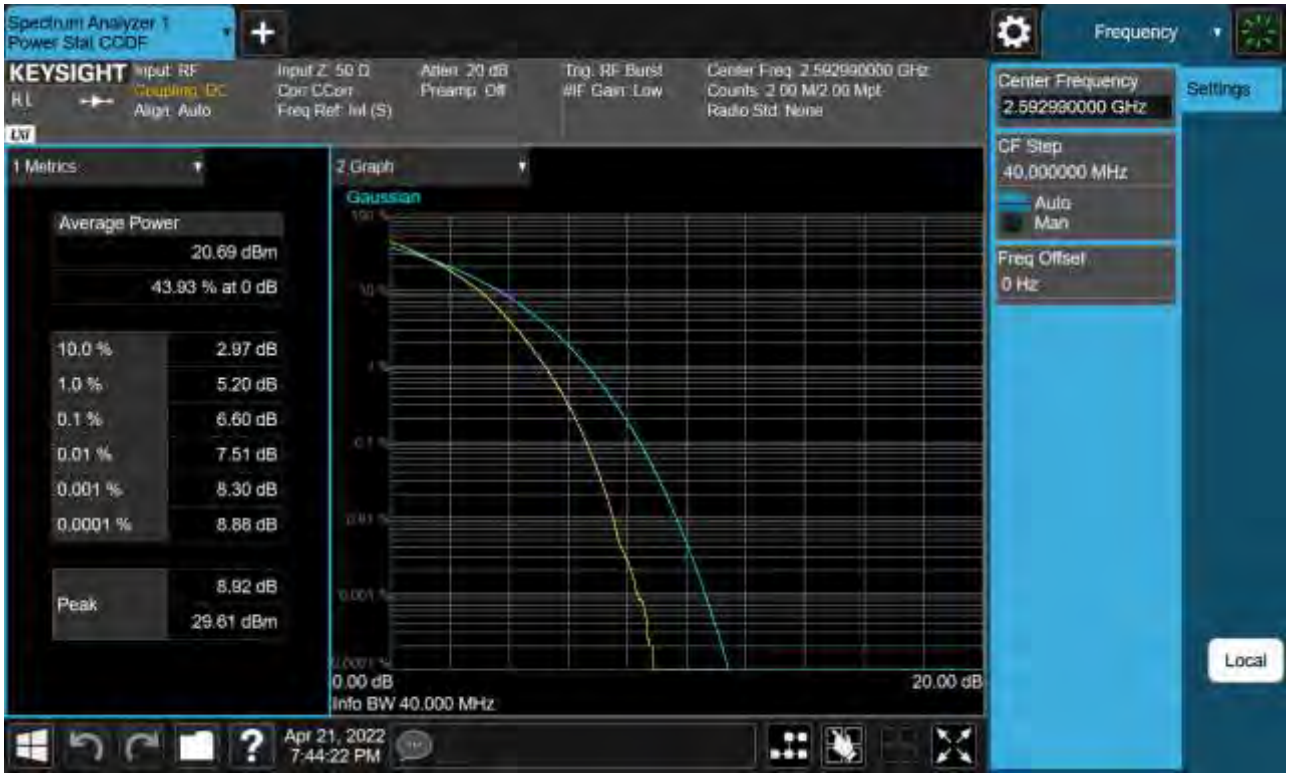
Sub6 n41. PAR Plot (40 M BW_Ch.518598_16QAM)



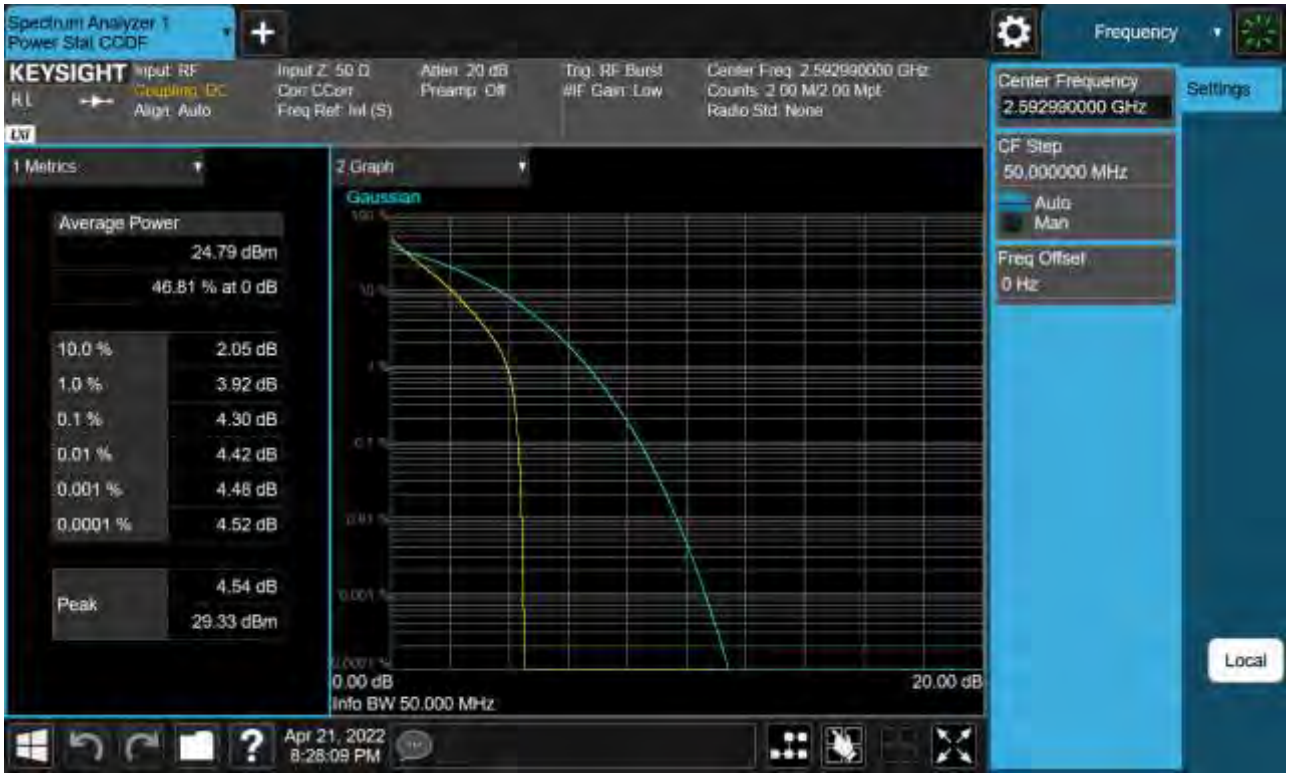
Sub6 n41. PAR Plot (40 M BW_Ch.518598_64QAM)



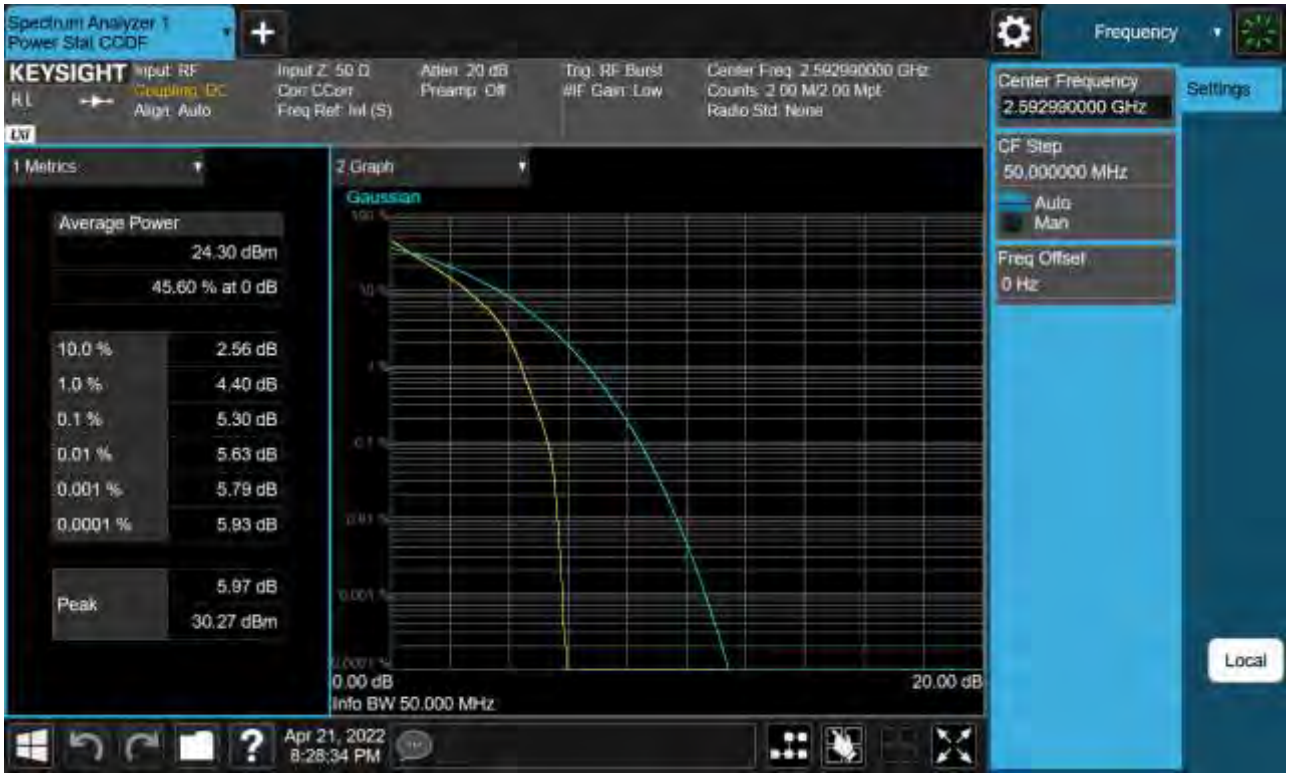
Sub6 n41. PAR Plot (40 M BW_Ch.518598_256QAM)



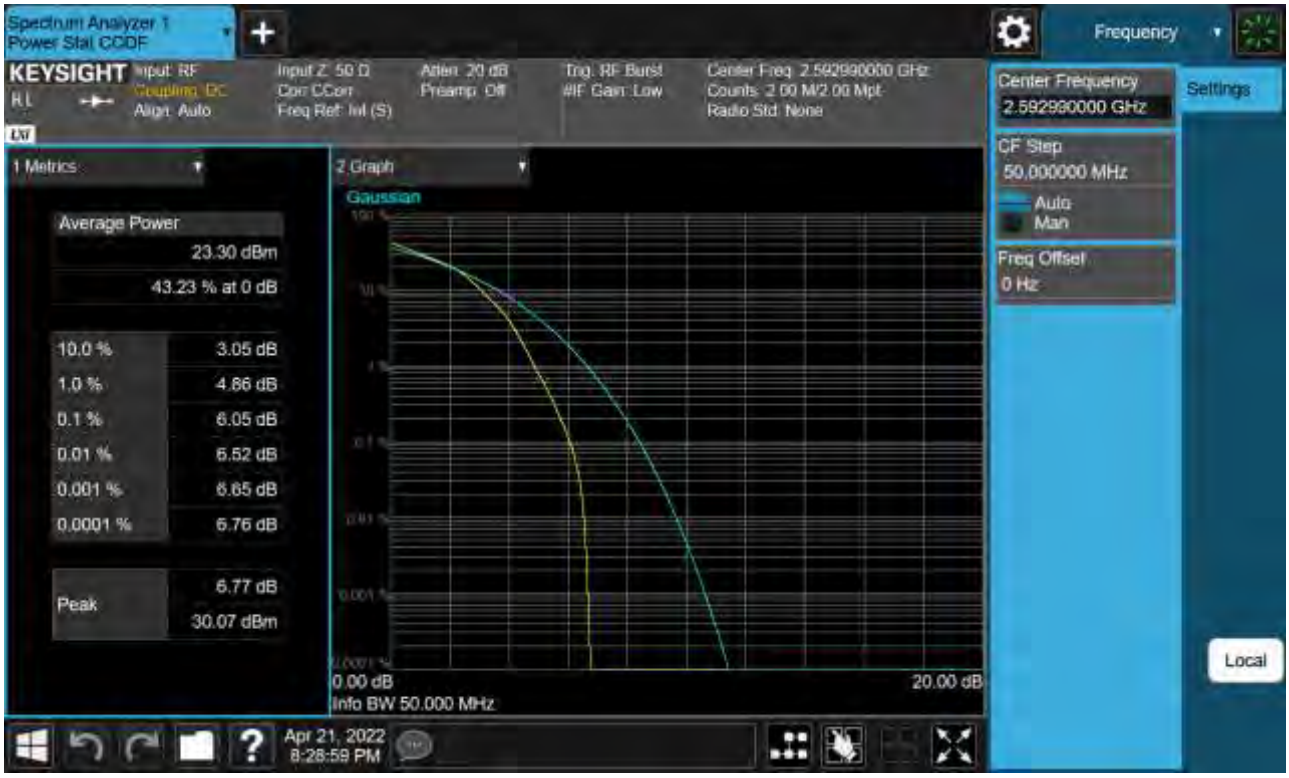
Sub6 n41. PAR Plot (50 M BW_Ch.518598_BPSK)



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



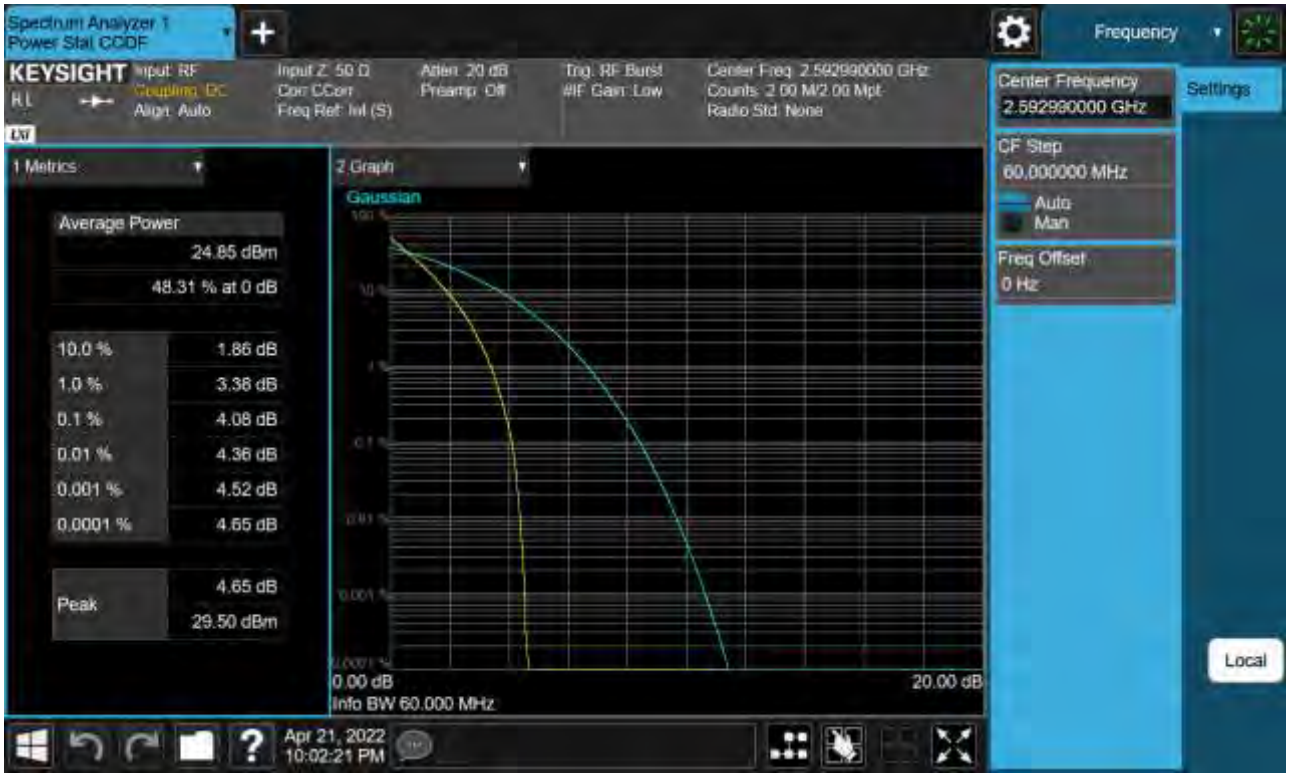
Sub6 n41. PAR Plot (50 M BW_Ch.518598_16QAM)



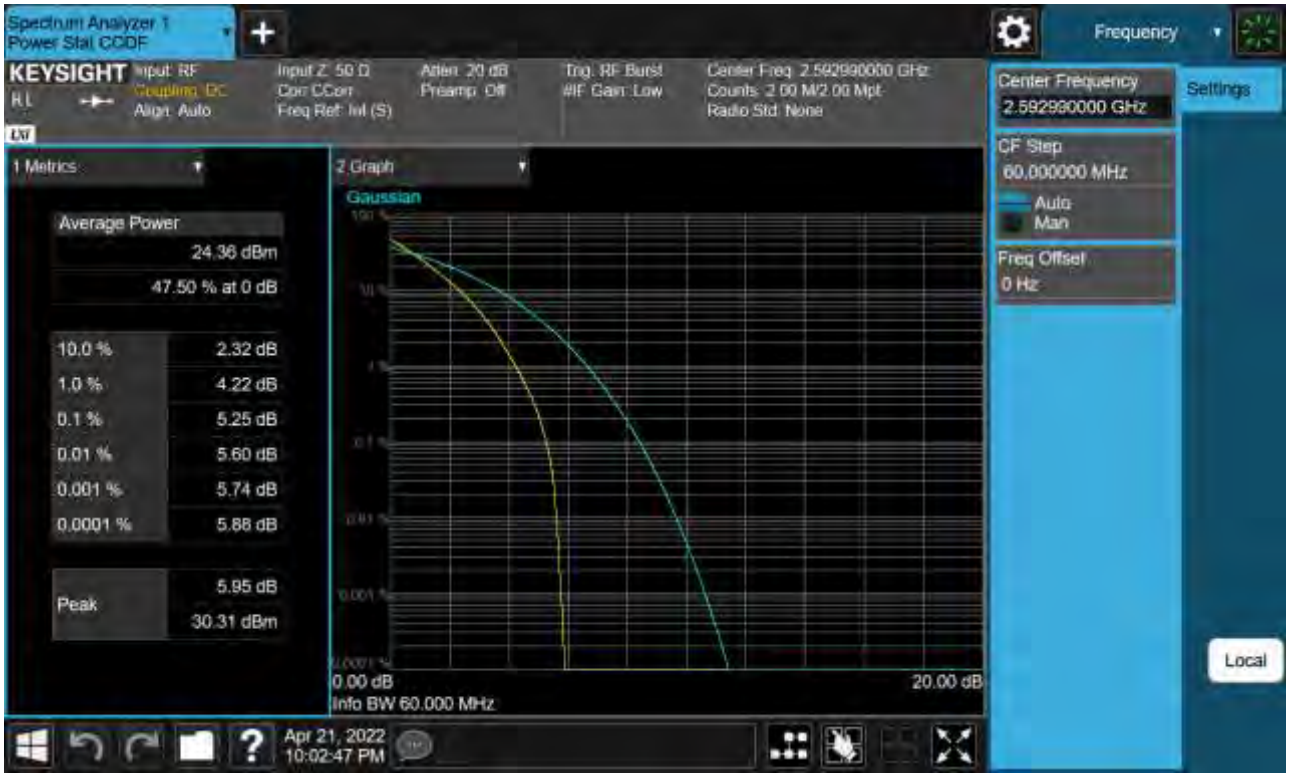
Sub6 n41. PAR Plot (50 M BW_Ch.518598_64QAM)

Sub6 n41. PAR Plot (50 M BW_Ch.518598_256QAM)

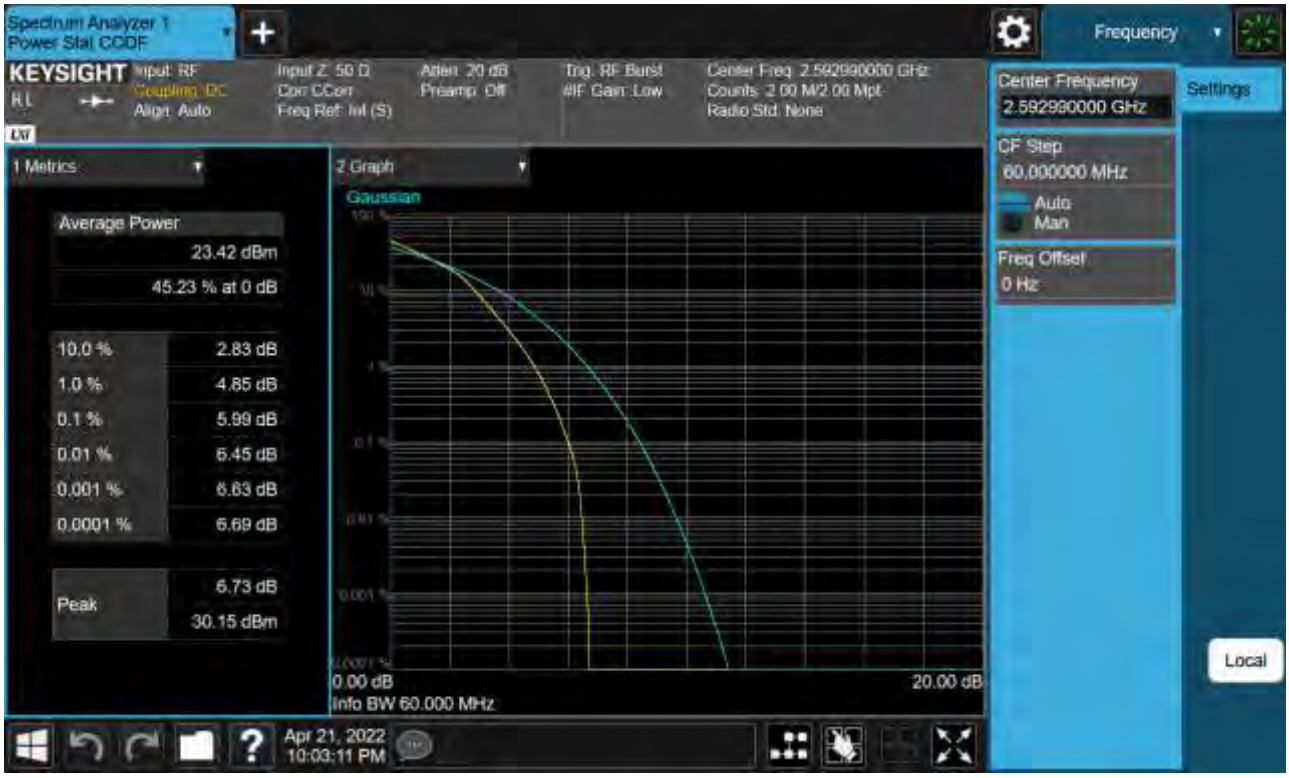
Sub6 n41. PAR Plot (60 M BW_Ch.518598_BPSK)



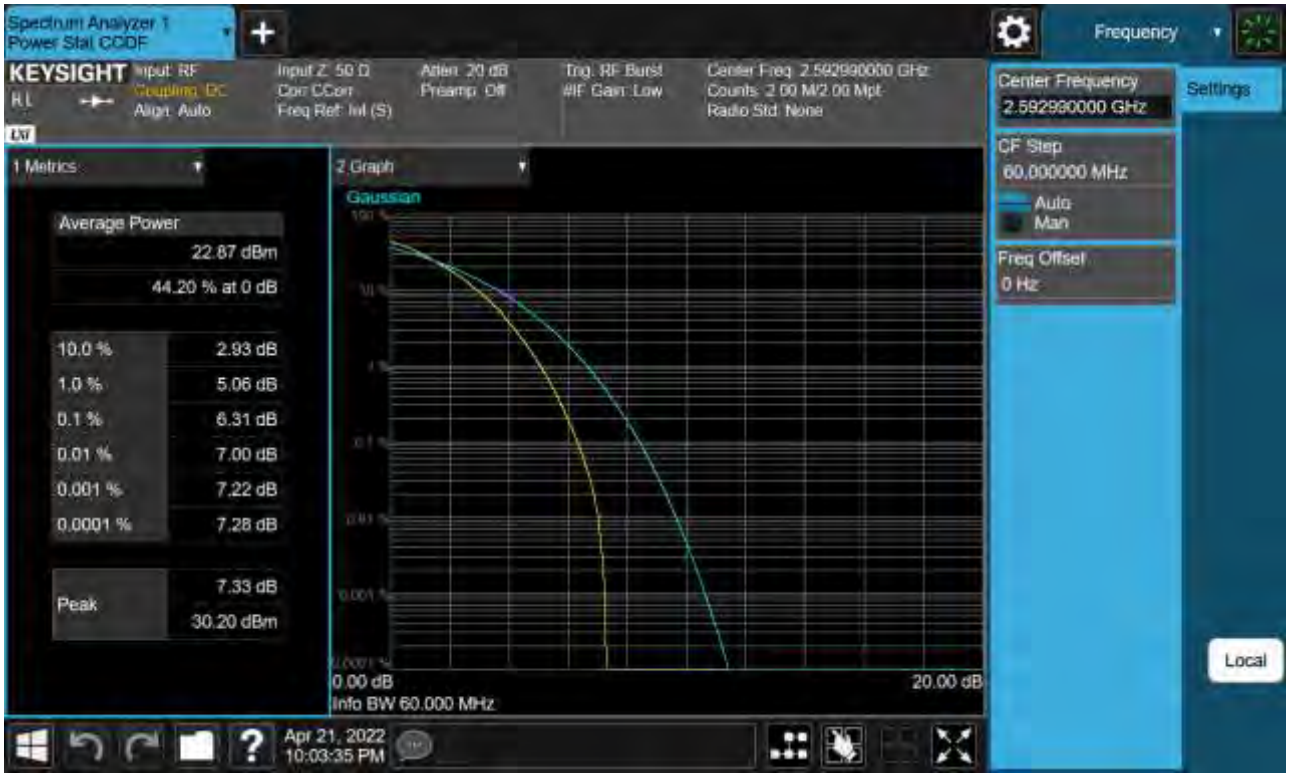
Sub6 n41. PAR Plot (60 M BW_Ch.518598_QPSK)



Sub6 n41. PAR Plot (60 M BW_Ch.518598_16QAM)

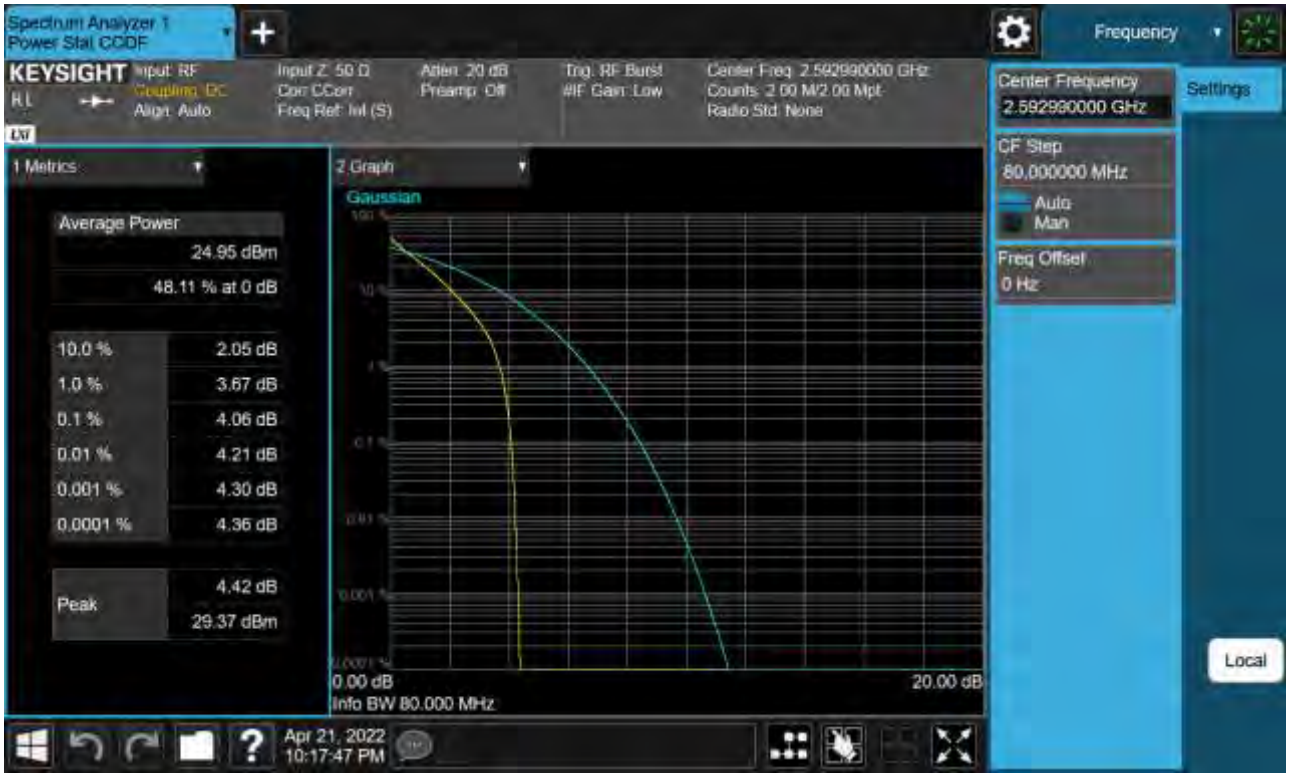


Sub6 n41. PAR Plot (60 M BW_Ch.518598_64QAM)

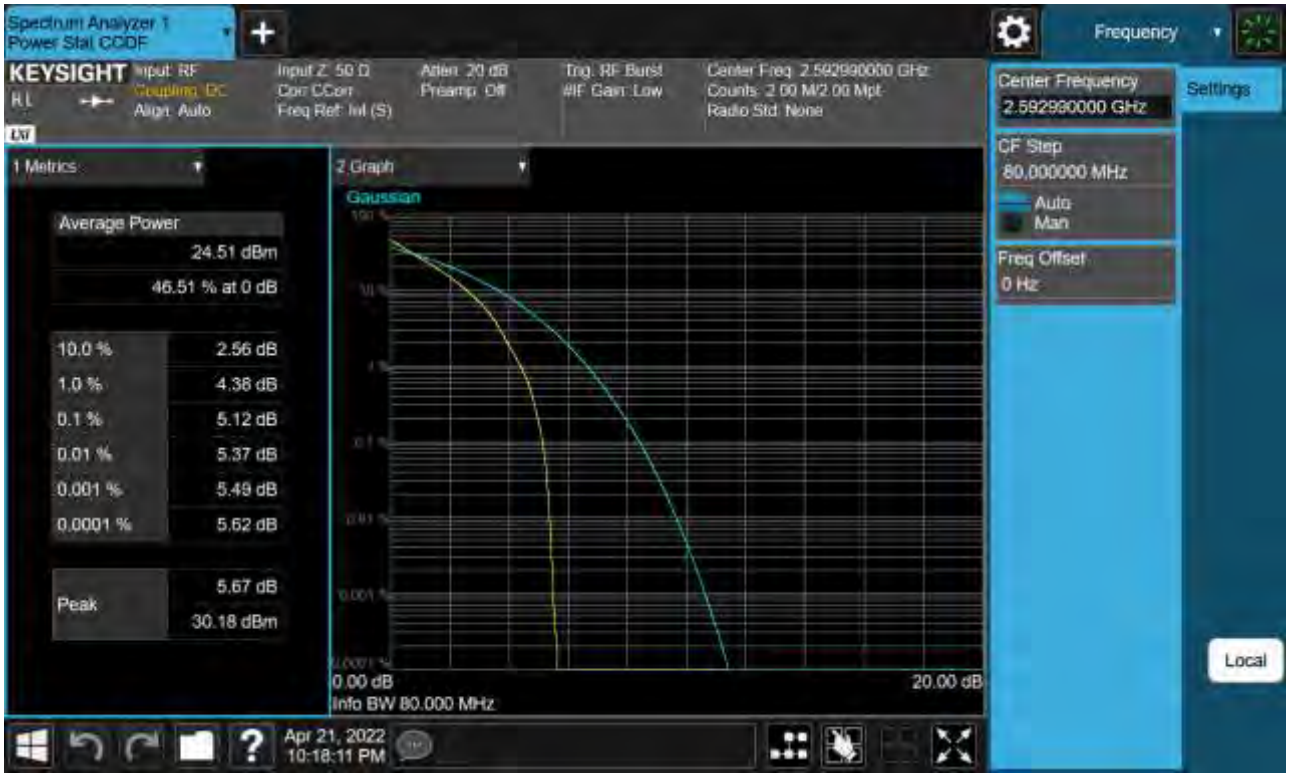


Sub6 n41. PAR Plot (60 M BW_Ch.518598_256QAM)

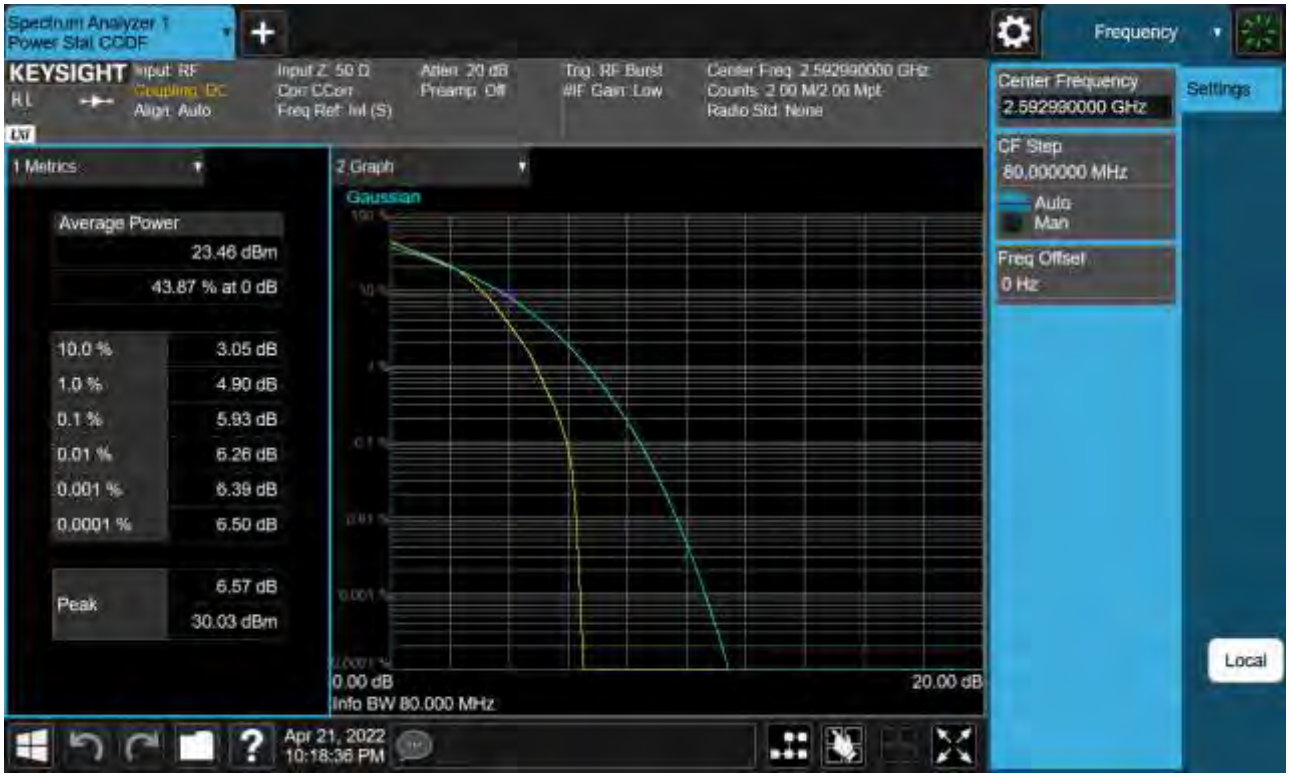
Sub6 n41. PAR Plot (80 M BW_Ch.518598_BPSK)



Sub6 n41. PAR Plot (80 M BW_Ch.518598_QPSK)

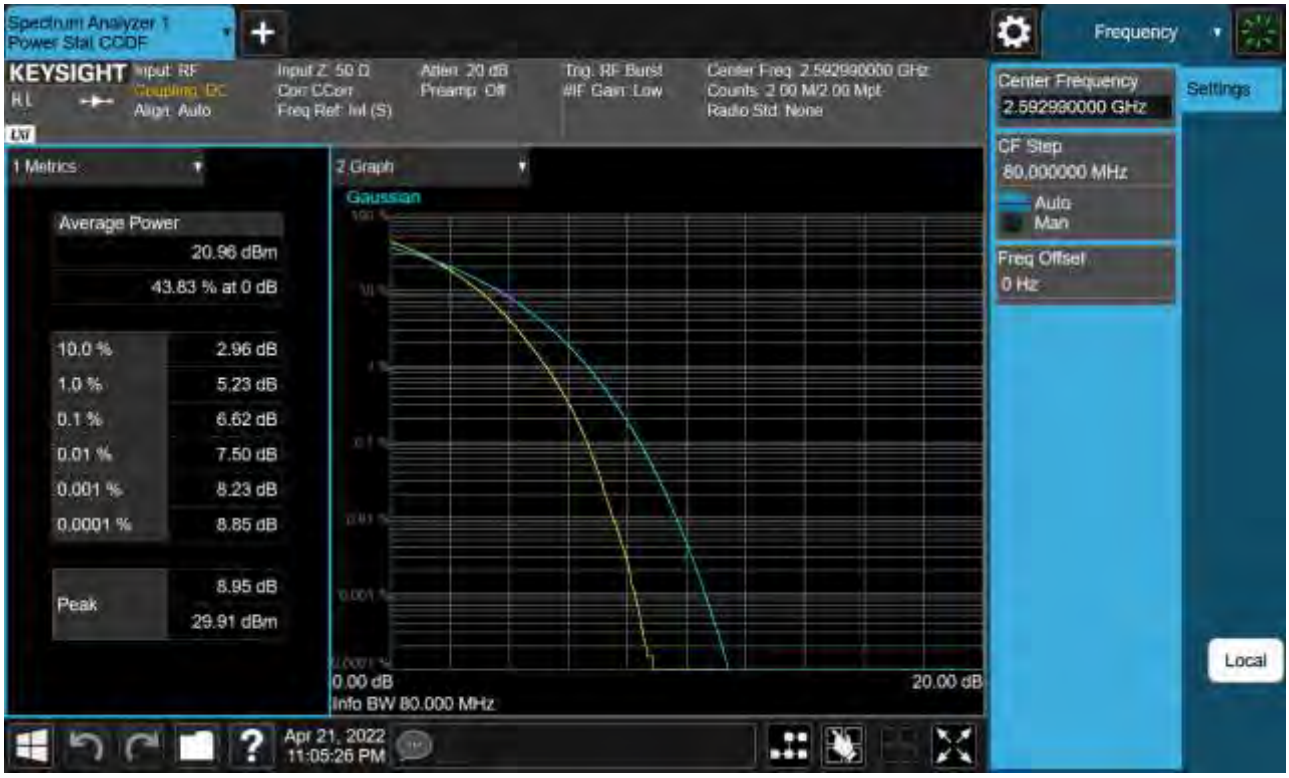


Sub6 n41. PAR Plot (80 M BW_Ch.518598_16QAM)

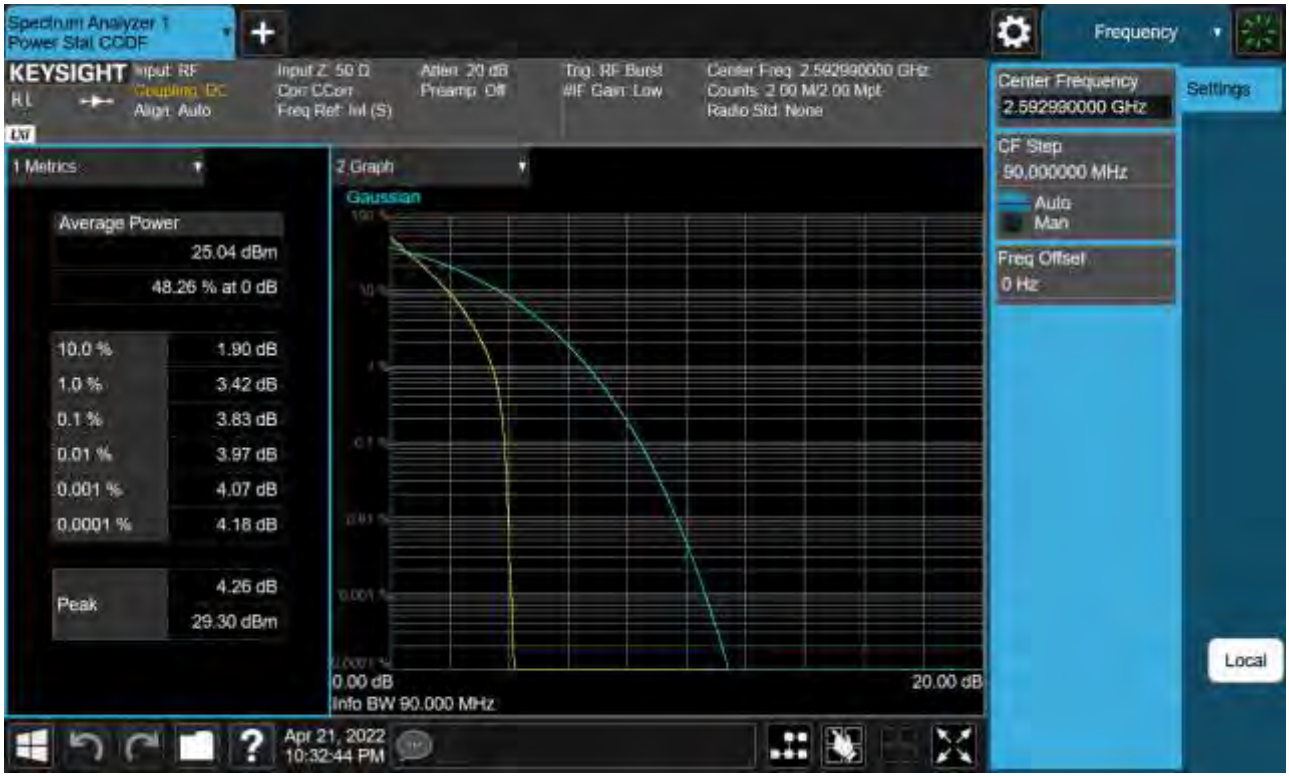


Sub6 n41. PAR Plot (80 M BW_Ch.518598_64QAM)

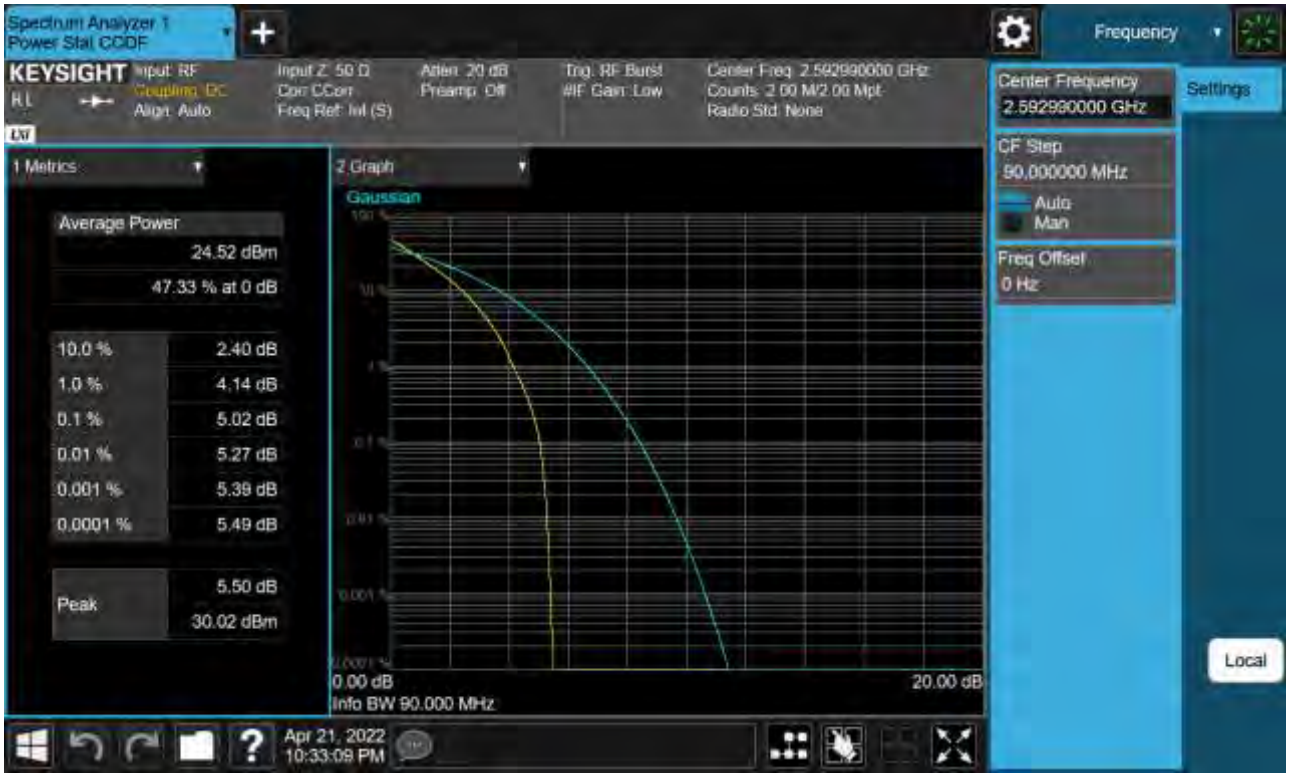
Sub6 n41. PAR Plot (80 M BW_Ch.518598_256QAM)



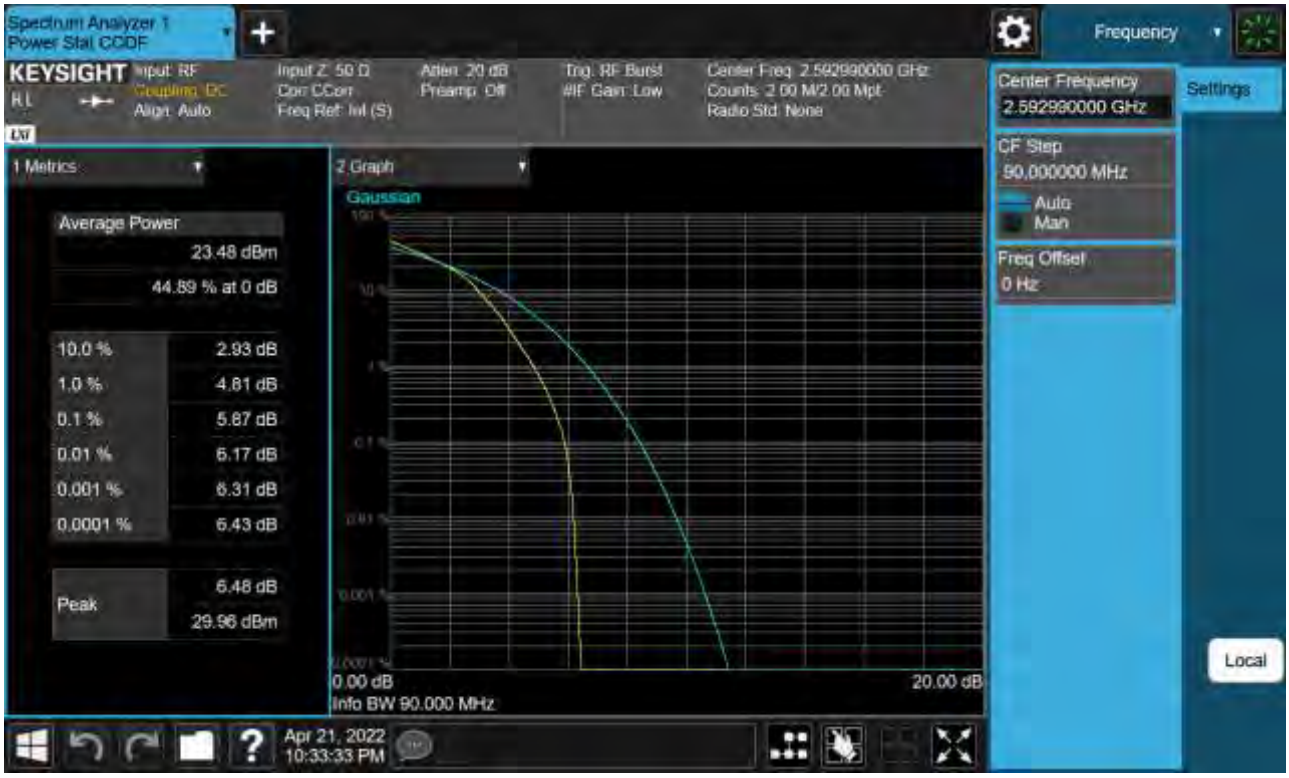
Sub6 n41. PAR Plot (90 M BW_Ch.518598_BPSK)



Sub6 n41. PAR Plot (90 M BW_Ch.518598_QPSK)

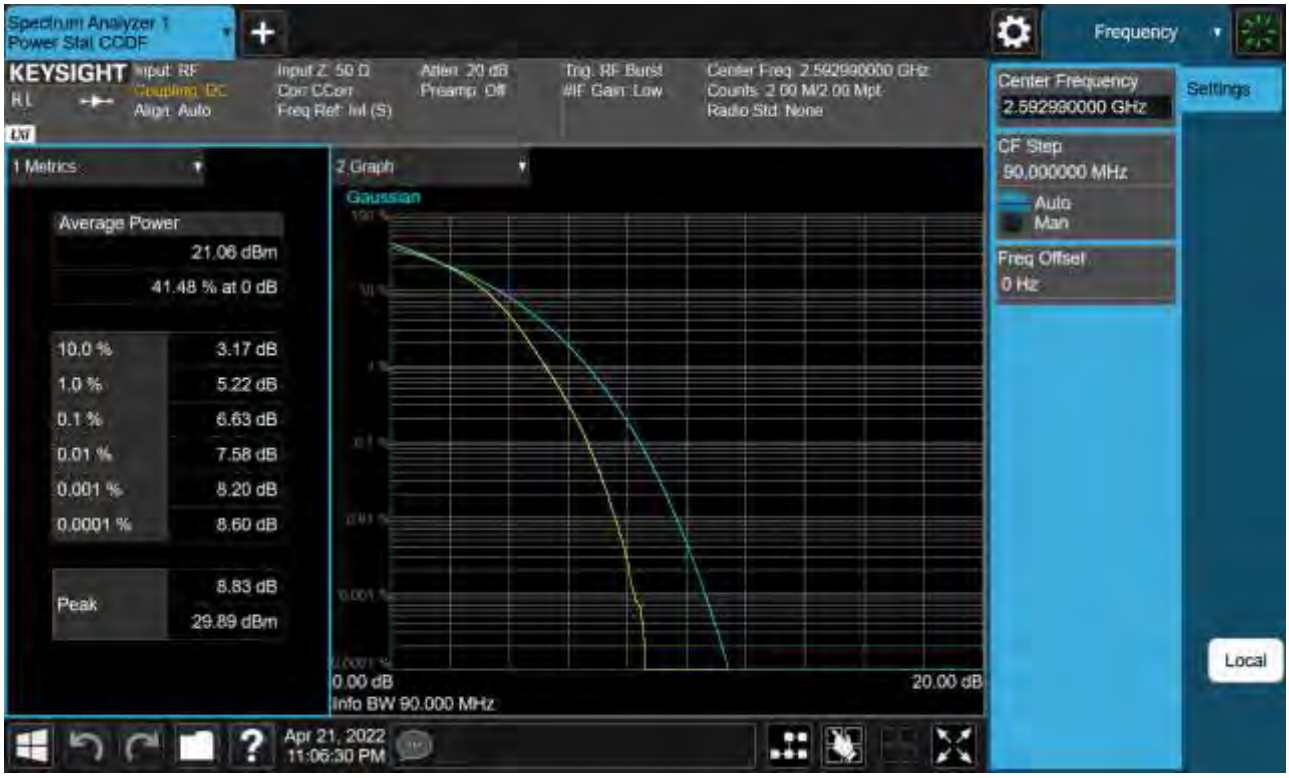


Sub6 n41. PAR Plot (90 M BW_Ch.518598_16QAM)

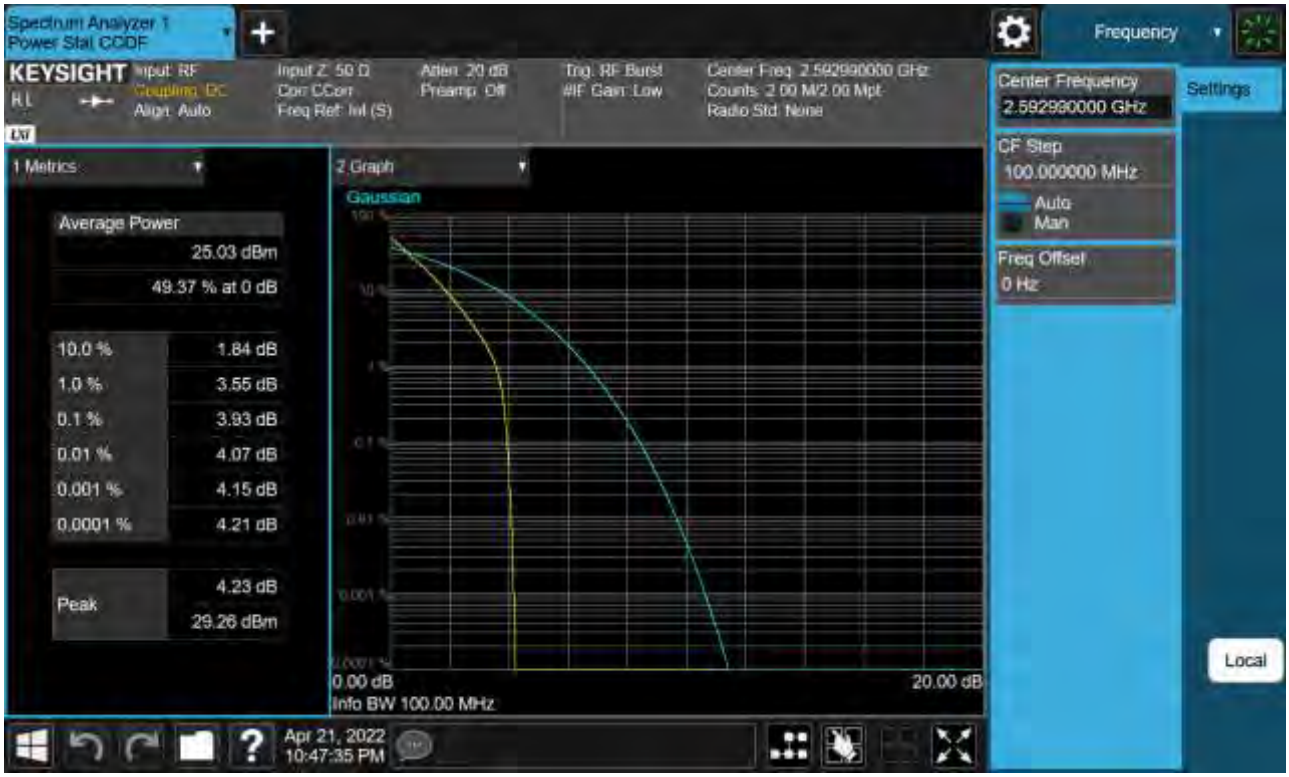


Sub6 n41. PAR Plot (90 M BW_Ch.518598_64QAM)

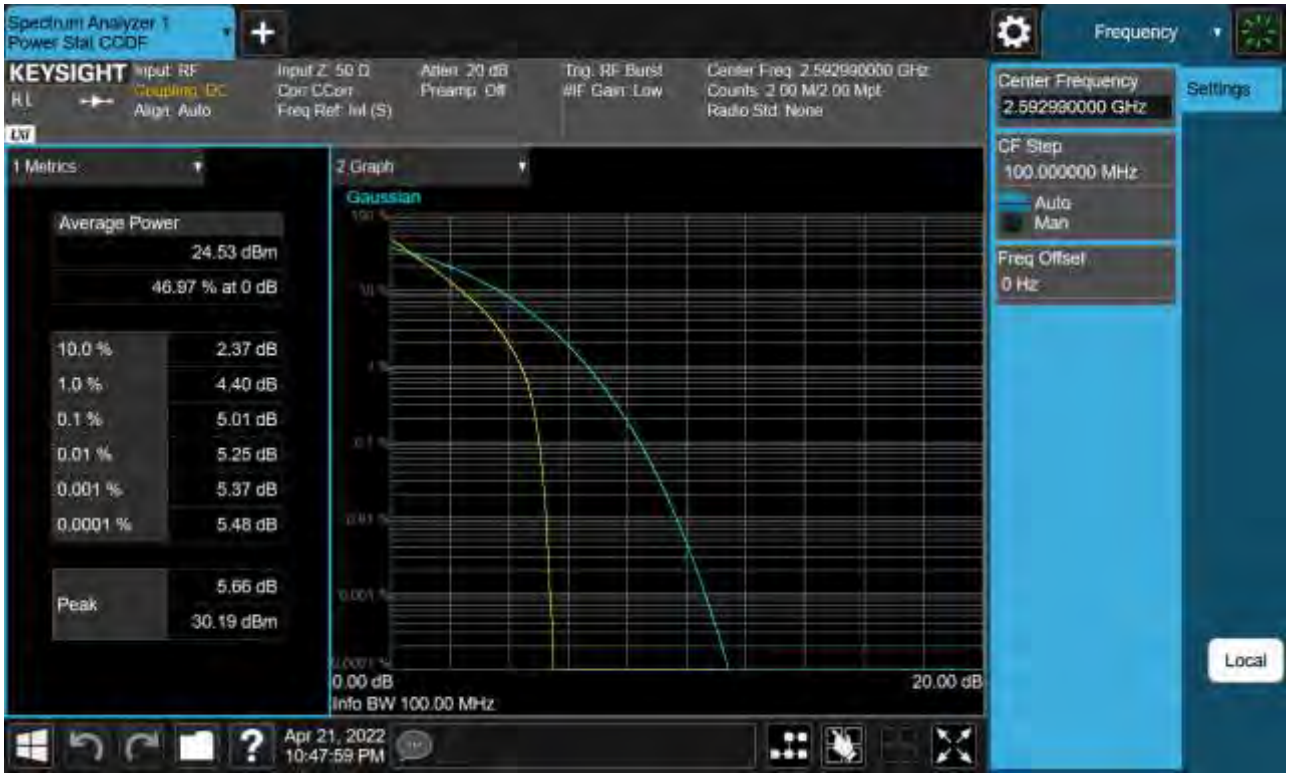
Sub6 n41. PAR Plot (90 M BW_Ch.518598_256QAM)



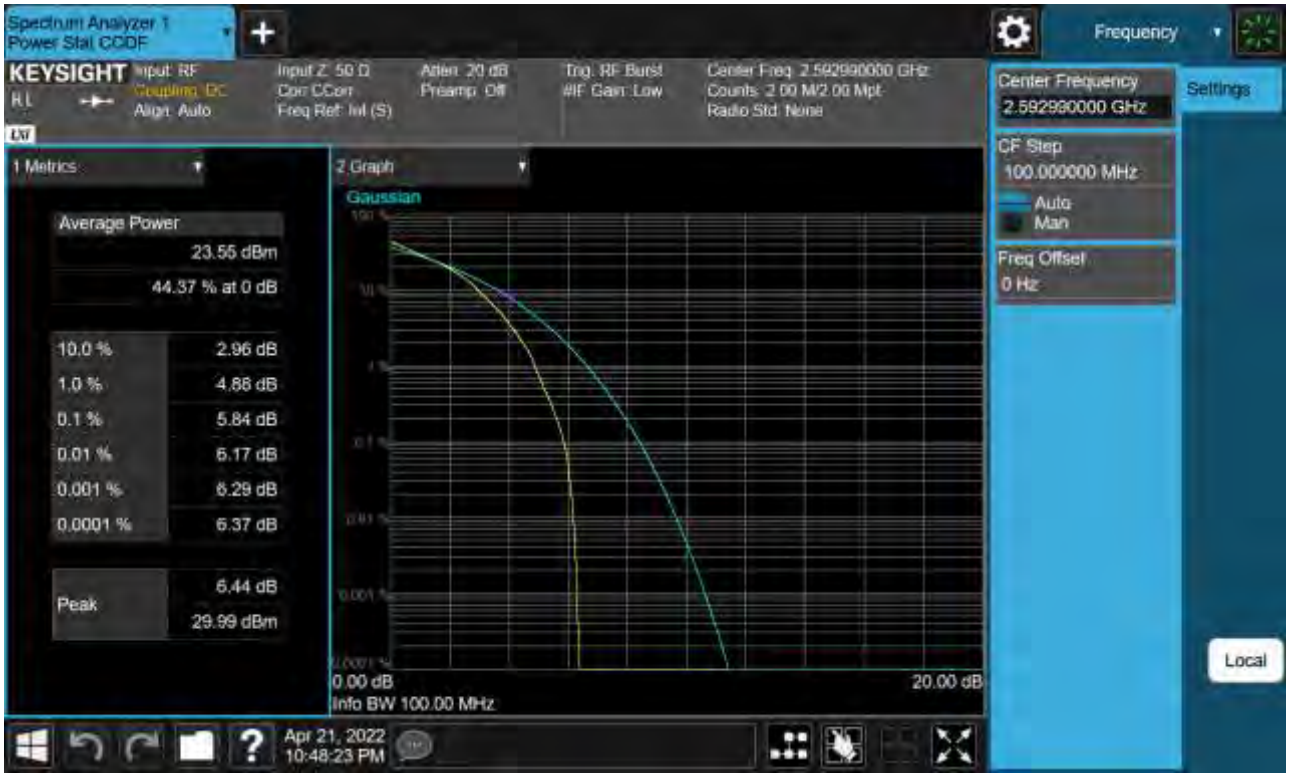
Sub6 n41. PAR Plot (100 M BW_Ch.518598_BPSK)



Sub6 n41. PAR Plot (100 M BW_Ch.518598_QPSK)

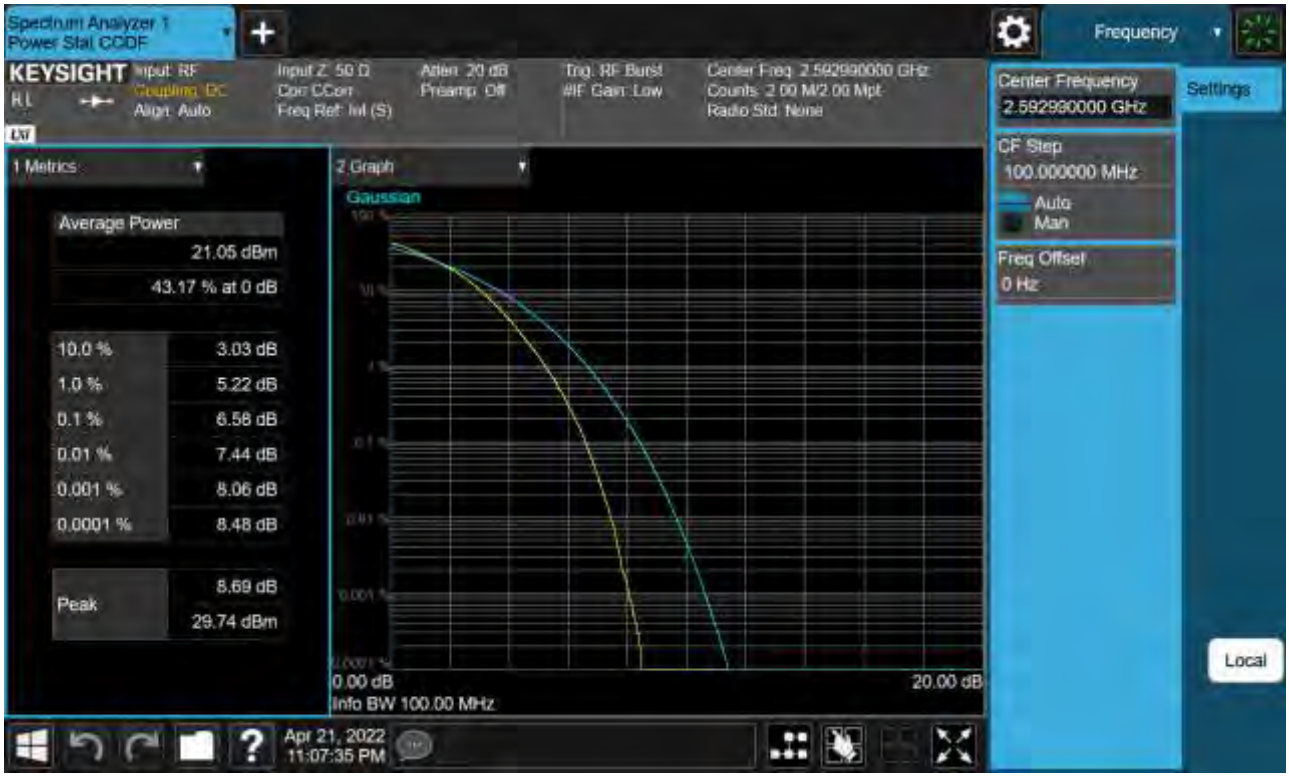


Sub6 n41. PAR Plot (100 M BW_Ch.518598_16QAM)



Sub6 n41. PAR Plot (100 M BW_Ch.518598_64QAM)

Sub6 n41. PAR Plot (100 M BW_Ch.518598_256QAM)



Sub6 n41. Low Channel Edge Plot (20 MHz Ch.501204 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (20 MHz Ch.501204 BPSK)-1

Sub6 n41. Low Channel Edge Plot (20 MHz Ch.501204 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (20 MHz Ch.501204 BPSK)-2

Sub6 n41. Low Channel Edge Plot (20 MHz Ch. 502002 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (20 MHz Ch.502002 BPSK)-1

Sub6 n41. Low Channel Edge Plot (20 MHz Ch.502002 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (20 MHz Ch.502002 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (20 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (20 MHz Ch.535998 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (20 MHz Ch.535998 BPSK)

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.502200 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.502200 BPSK)-1

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.502200 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.502200 BPSK)-2

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.503004 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.503004 BPSK)-1

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.503004 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (30 MHz Ch.503004 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (30 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (30 MHz Ch.534996 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (30 MHz Ch.534996 BPSK)

Sub6 n41. Low Channel Edge Plot (40 MHz Ch.503202 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (40 MHz Ch.503202 BPSK)-1

Sub6 n41. Low Channel Edge Plot (40 MHz Ch.503202 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (40 MHz Ch.503202 BPSK)-2

Sub6 n41. Low Channel Edge Plot (40 MHz Ch.504000 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (40 MHz Ch.504000 BPSK)-1

Sub6 n41. Low Channel Edge Plot (40 MHz Ch.504000 BPSK_RB1)-2

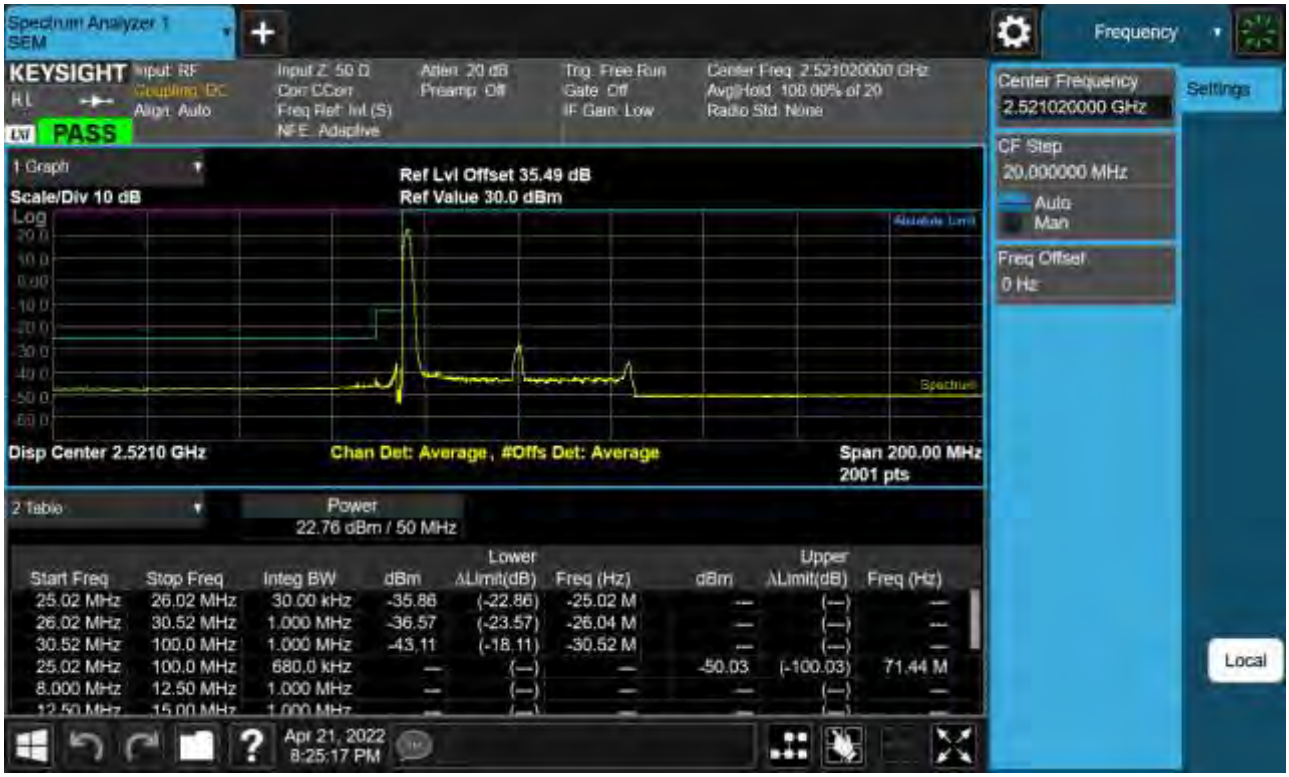
Sub6 n41. Low Channel Edge Plot (40 MHz Ch.504000 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (40 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (40 MHz Ch.534000 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (40 MHz Ch.534000 BPSK)

Sub6 n41. Low Channel Edge Plot (50 MHz Ch.504204 BPSK RB 1)-1



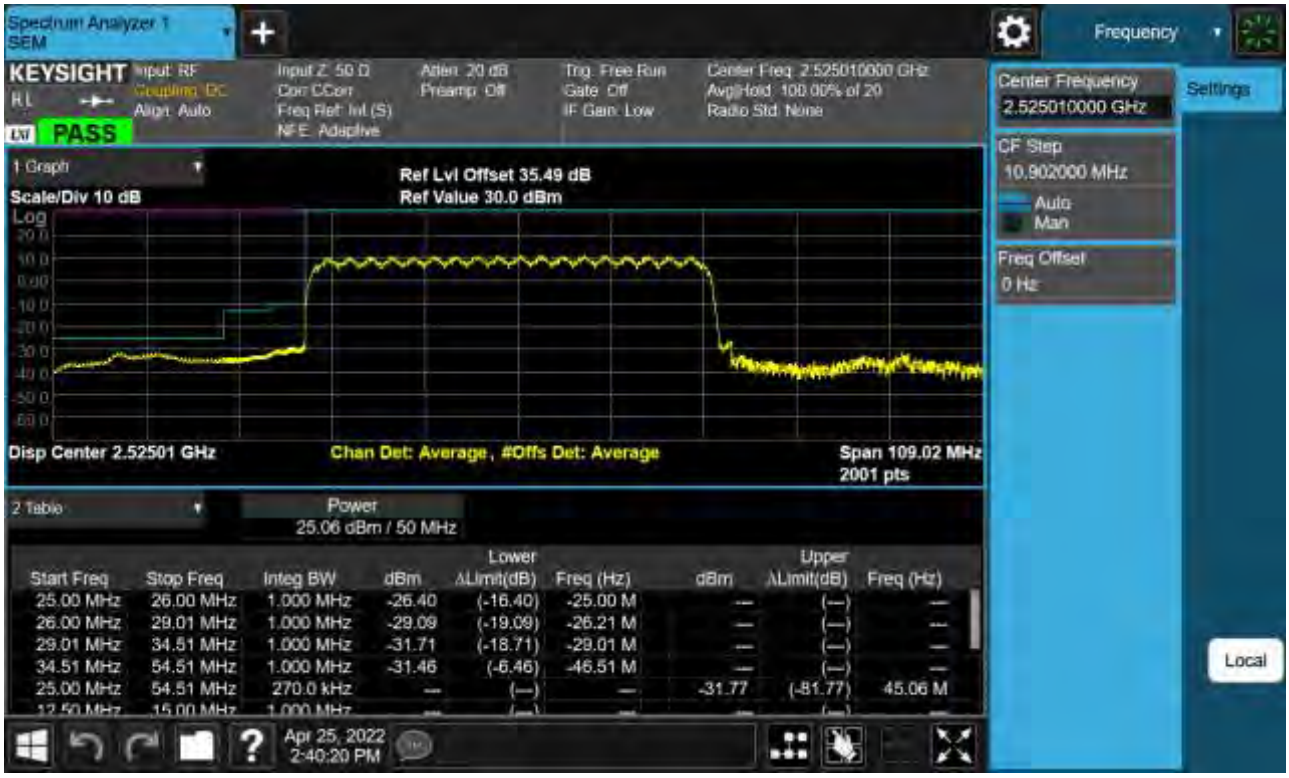
Sub6 n41. Low Channel Edge Plot (50 MHz Ch.504204 BPSK)-1

Sub6 n41. Low Channel Edge Plot (50 MHz Ch.504204 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (50 MHz Ch.504204 BPSK)-2

Sub6 n41. Low Channel Edge Plot (50 MHz Ch.505002 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (50 MHz Ch.505002 BPSK)-1



Sub6 n41. Low Channel Edge Plot (50 MHz Ch.505002 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (50 MHz Ch.505002 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (50 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (50 MHz Ch.532998 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (50 MHz Ch.532998 BPSK)

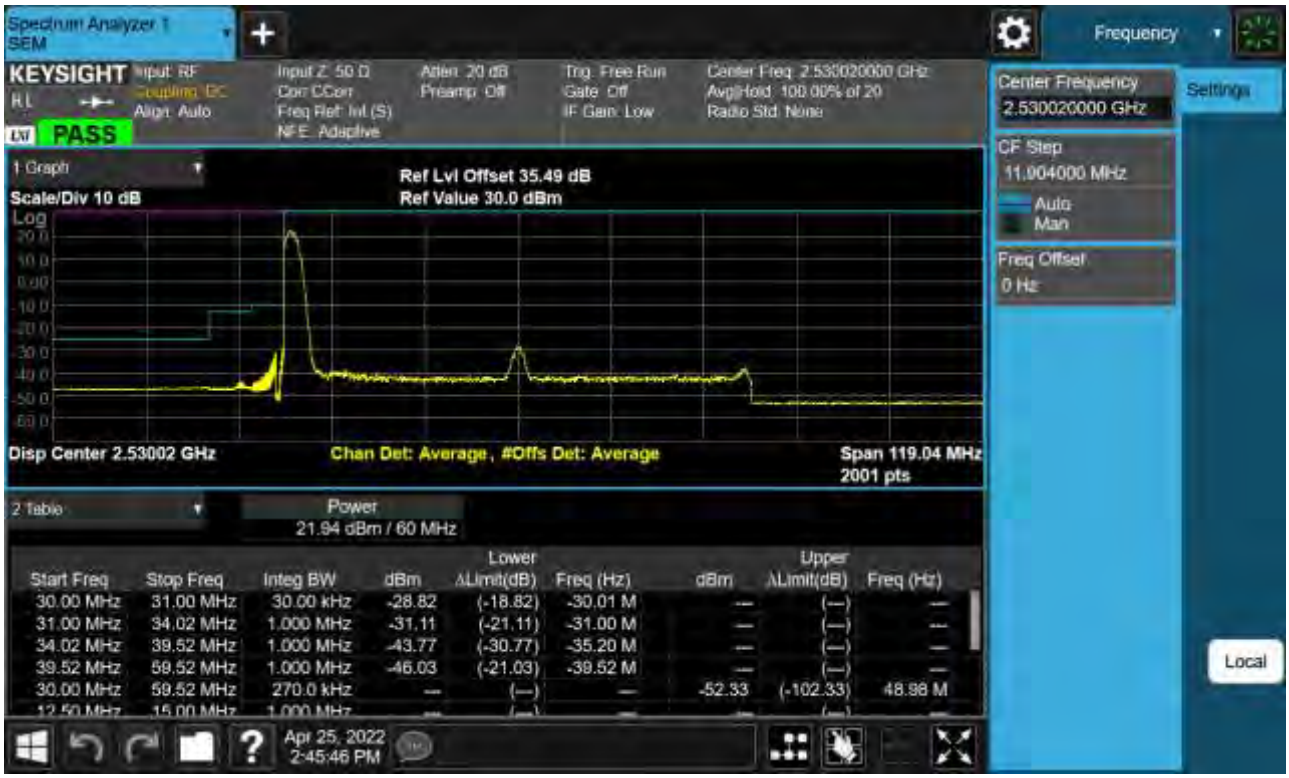
Sub6 n41. Low Channel Edge Plot (60 MHz Ch.505200 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (60 MHz Ch.505200 BPSK)-1

Sub6 n41. Low Channel Edge Plot (60 MHz Ch.505200 BPSK_RB1)-2

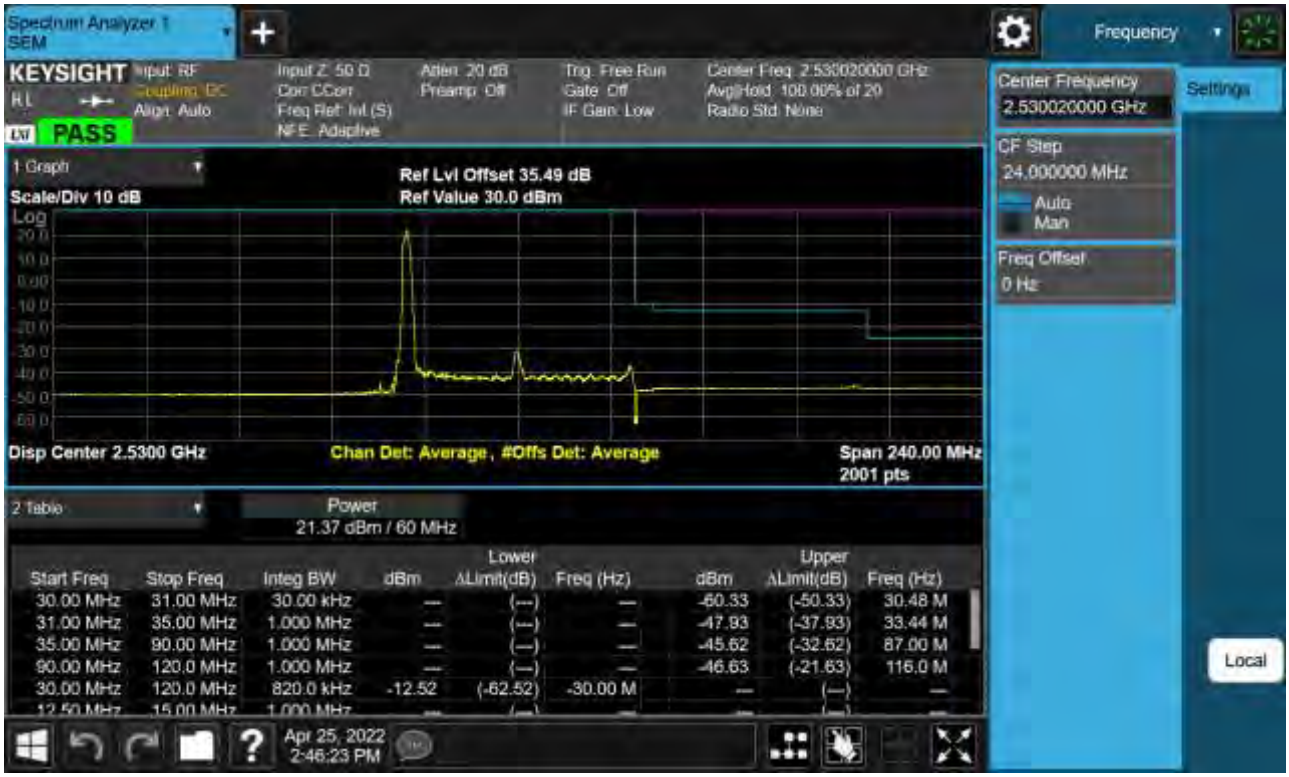
Sub6 n41. Low Channel Edge Plot (60 MHz Ch.505200 BPSK)-2

Sub6 n41. Low Channel Edge Plot (60 MHz Ch.506004 BPSK RB 1)-1



Sub6 n41. Low Channel Edge Plot (60 MHz Ch.506004 BPSK)-1

Sub6 n41. Low Channel Edge Plot (60 MHz Ch.506004 BPSK_RB1)-2



Sub6 n41. Low Channel Edge Plot (60 MHz Ch.506004 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (60 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (60 MHz Ch.531996 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (60 MHz Ch.531996 BPSK)

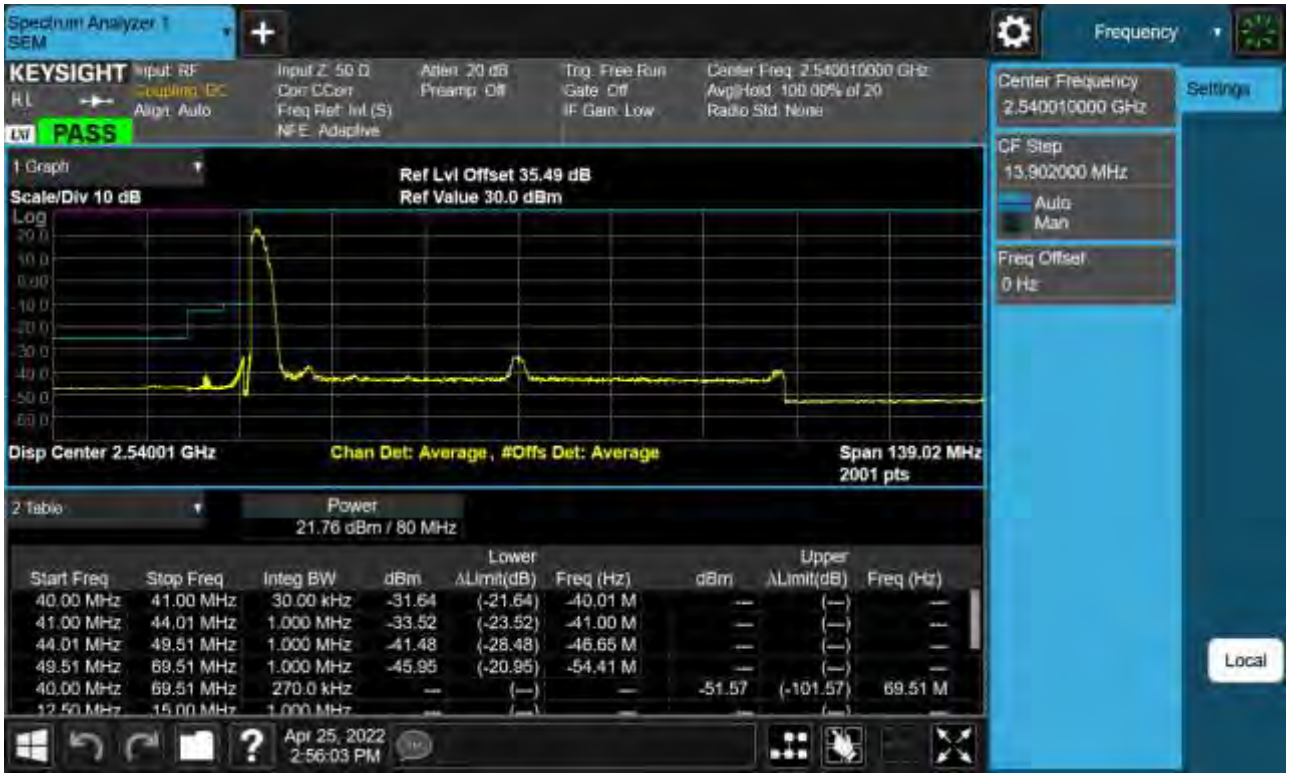
Sub6 n41. Low Channel Edge Plot (80 MHz Ch.507204 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (80 MHz Ch.507204 BPSK)-1

Sub6 n41. Low Channel Edge Plot (80 MHz Ch.507204 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (80 MHz Ch.507204 BPSK)-2

Sub6 n41. Low Channel Edge Plot (80 MHz Ch.508002 BPSK RB 1)-1



Sub6 n41. Low Channel Edge Plot (80 MHz Ch.508002 BPSK)-1

Sub6 n41. Low Channel Edge Plot (80 MHz Ch.508002 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (80 MHz Ch.508002 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (80 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (80 MHz Ch.529998 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (80 MHz Ch.529998 BPSK)

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.508200 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.508200 BPSK)-1

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.508200 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.508200 BPSK)-2

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.509004 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.509004 BPSK)-1

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.509004 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (90 MHz Ch.509004 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (90 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (90 MHz Ch.528996 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (90 MHz Ch.528996 BPSK)

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.509202 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.509202 BPSK)-1

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.509202 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.509202 BPSK)-2

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.510000 BPSK RB 1)-1

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.510000 BPSK)-1

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.510000 BPSK_RB1)-2

Sub6 n41. Low Channel Edge Plot (100 MHz Ch.510000 BPSK)-2

Sub6 n41. Mid Channel Edge Plot (100 MHz Ch.518598 BPSK)

Sub6 n41. High Channel Edge Plot (100 MHz Ch.528000 BPSK RB 1)

Sub6 n41. High Channel Edge Plot (100 MHz Ch.528000 BPSK)

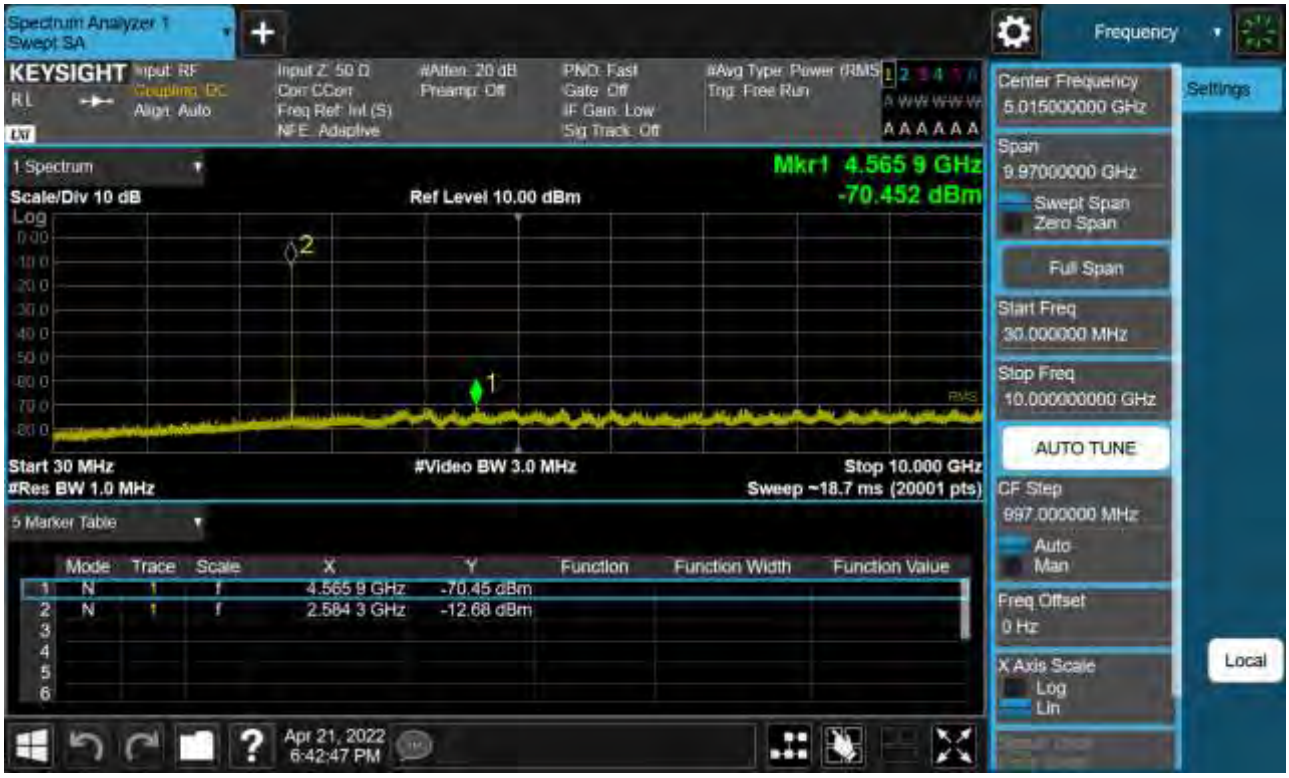
Sub6 n41. Conducted Spurious Plot 1 (20 MHz Ch.501204 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 2 (20 MHz Ch.501204 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (20 MHz Ch.502002 BPSK RB 1)

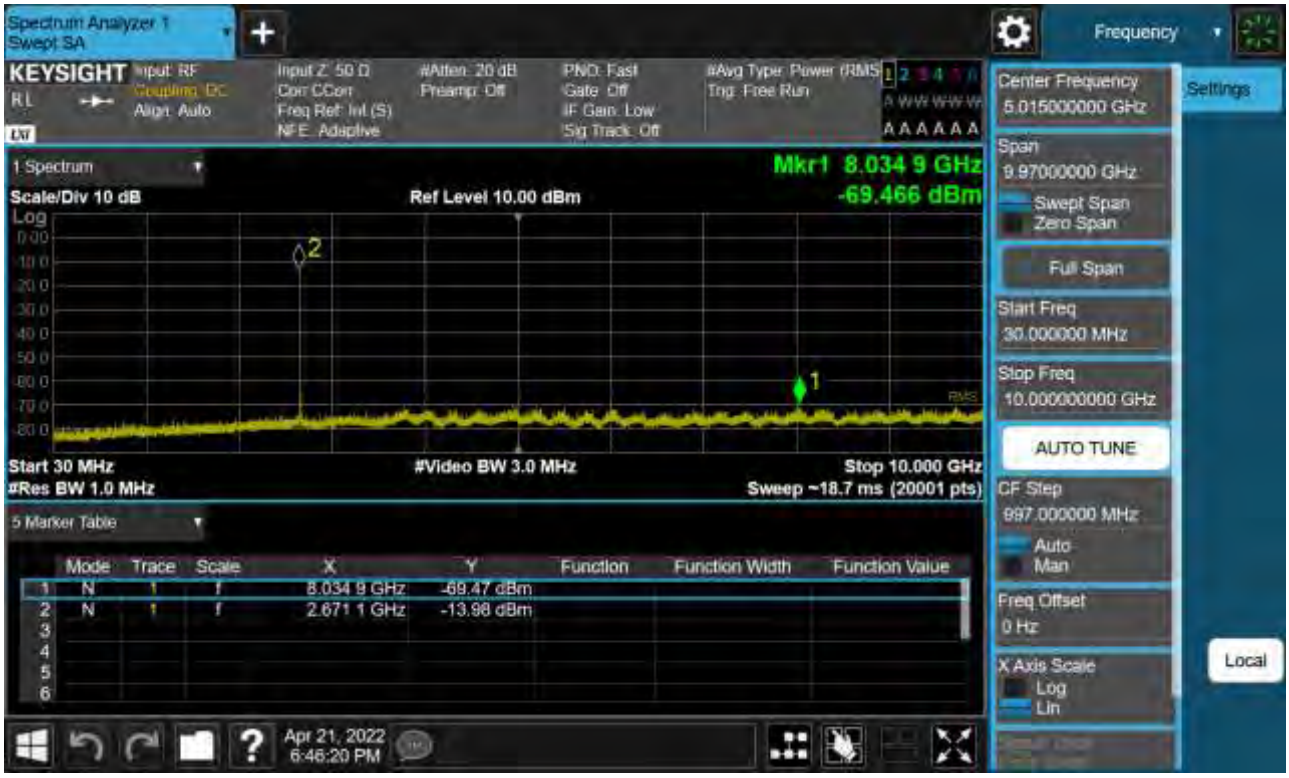
Sub6 n41. Conducted Spurious Plot 2 (20 MHz Ch.502002 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (20 MHz Ch.518598 BPSK RB 1)



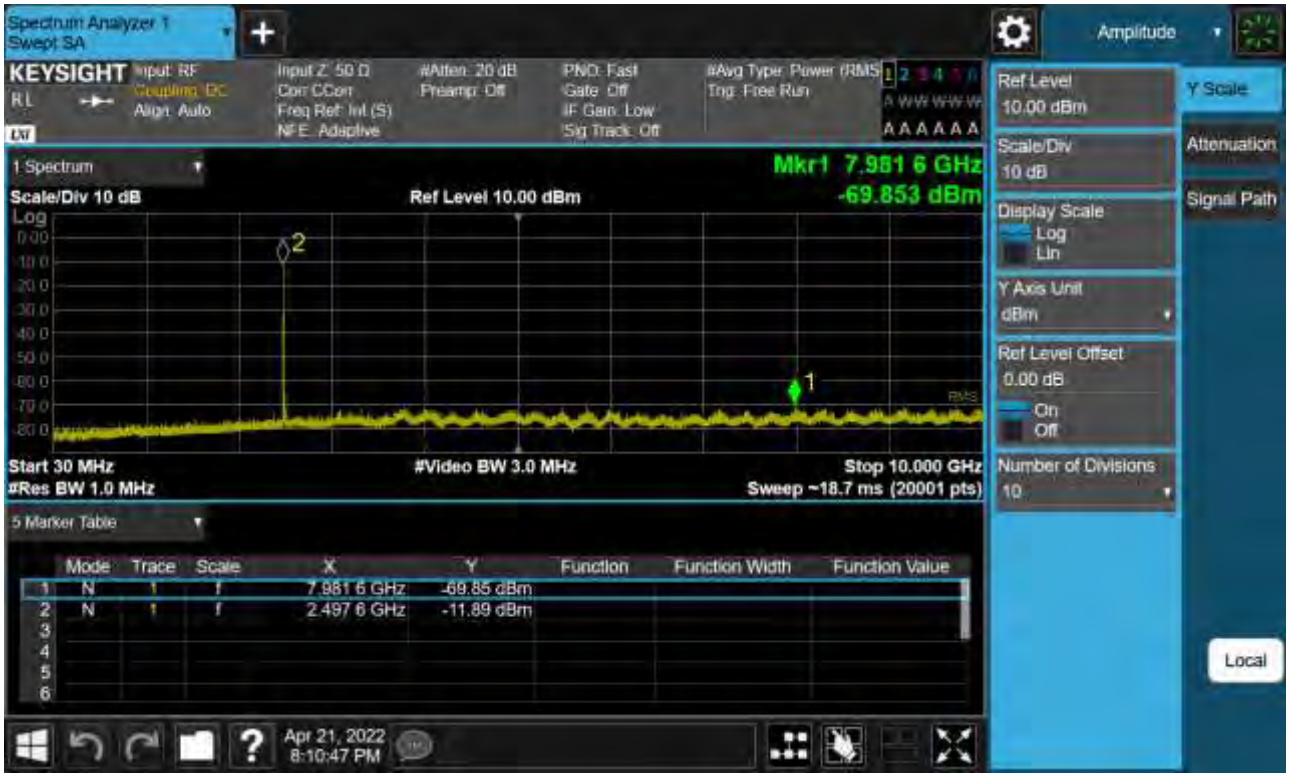
Sub6 n41. Conducted Spurious Plot 2 (20 MHz Ch. 518598 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (20 MHz Ch.535998 BPSK RB 1)



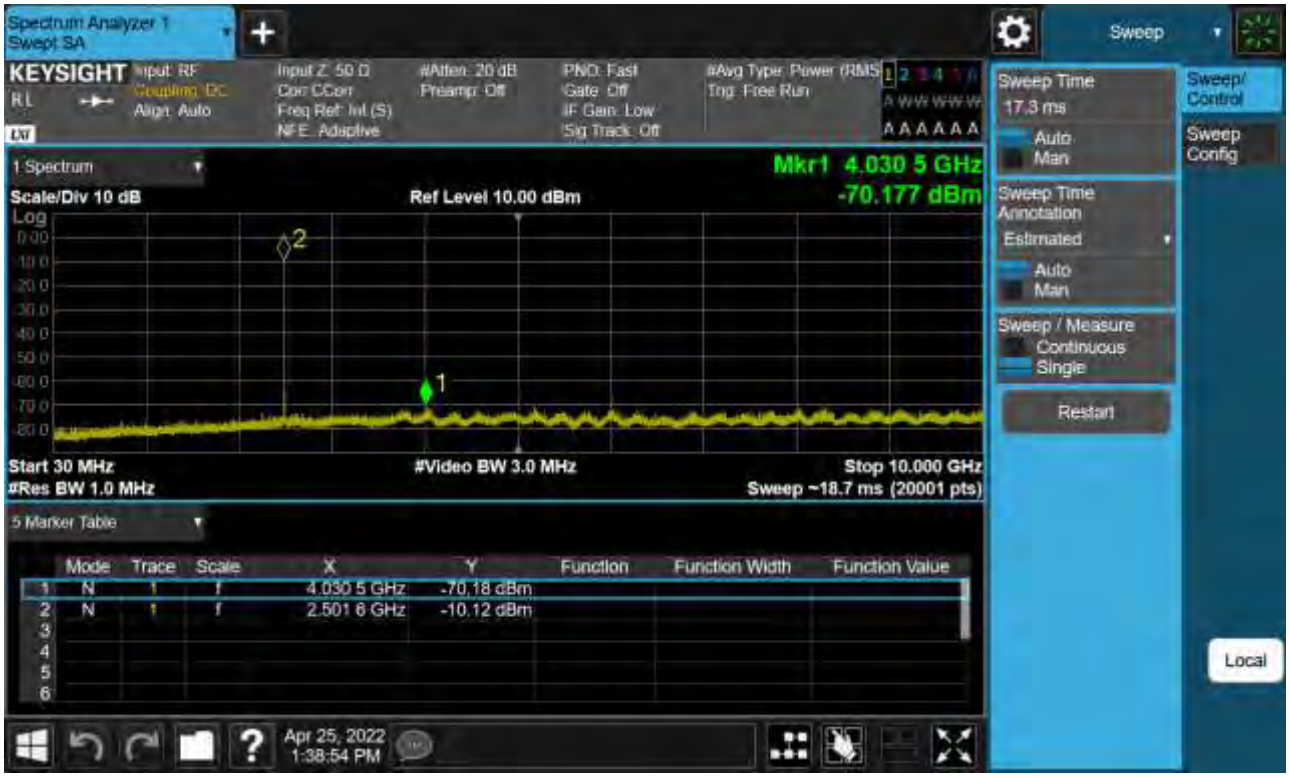
Sub6 n41. Conducted Spurious Plot 2 (20 MHz Ch.535998 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (30 MHz Ch.502200 BPSK RB 1)



Sub6 n41. Conducted Spurious Plot 2 (30 MHz Ch.502200 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (30 MHz Ch.503004 BPSK RB 1)

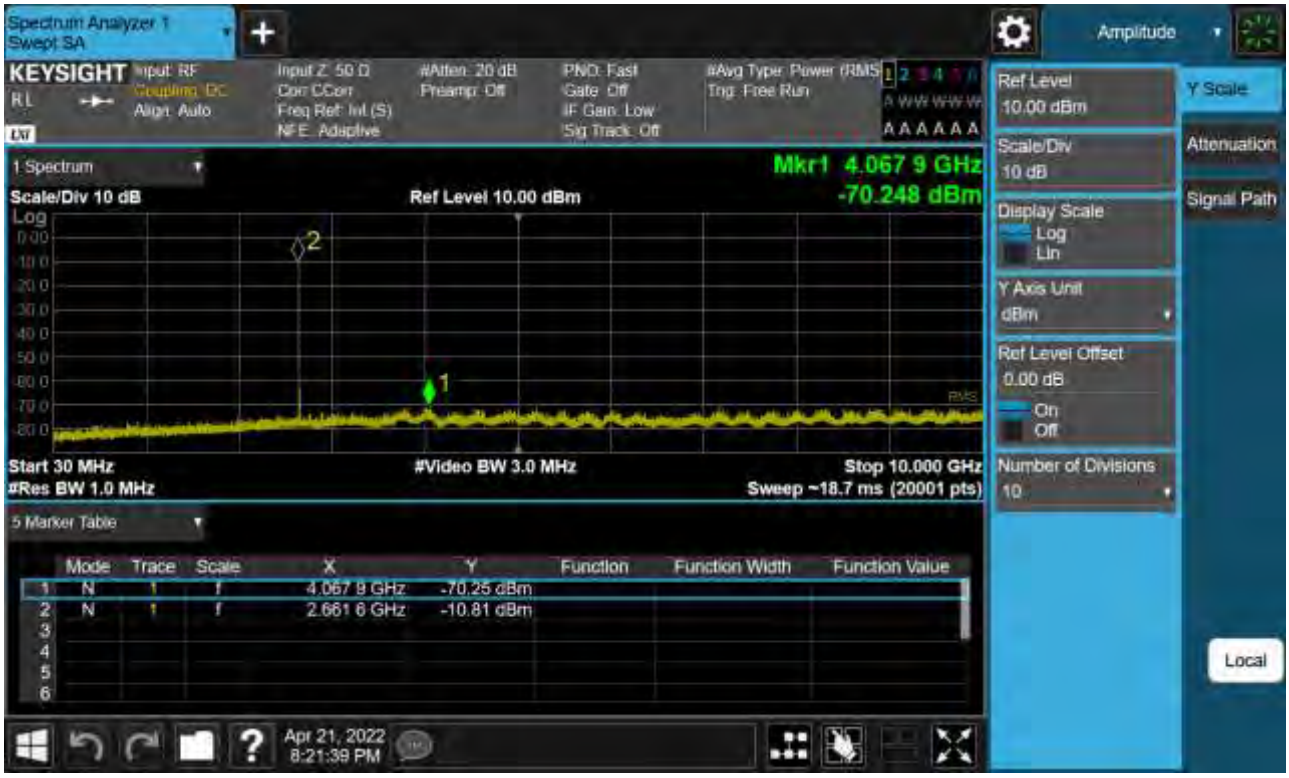


Sub6 n41. Conducted Spurious Plot 2 (30 MHz Ch.503004 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (30 MHz Ch.518598 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 2 (30 MHz Ch. 518598 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (30 MHz Ch.534996 BPSK RB 1)



Sub6 n41. Conducted Spurious Plot 2 (30 MHz Ch.534996 BPSK RB 1)

Sub6 n41. Conducted Spurious Plot 1 (40 MHz Ch.503202 BPSK RB 1)