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

FCC Sub6 REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

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

Date of Issue:
May 16, 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-FC068

FCC ID:	**A3LSMG736U**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s):	SM-G736U
Additional Model(s):	SM-G736U1
EUT Type:	Mobile Phone
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§24, §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 n25(2) (5)	1852.5 - 1912.5	4M51G7D	PI/2 BPSK	0.269	24.29
		4M49G7D	QPSK	0.264	24.21
		4M51W7D	16QAM	0.207	23.17
		4M49W7D	64QAM	0.147	21.67
		4M51W7D	256QAM	0.086	19.35
Sub6 n25(2) (10)	1855.0 - 1910.0	8M98G7D	PI/2 BPSK	0.225	23.52
		8M96G7D	QPSK	0.224	23.50
		8M97W7D	16QAM	0.180	22.55
		8M96W7D	64QAM	0.129	21.12
		9M00W7D	256QAM	0.070	18.45
Sub6 n25(2) (15)	1857.5 - 1907.5	13M5G7D	PI/2 BPSK	0.224	23.50
		13M4G7D	QPSK	0.223	23.48
		13M5W7D	16QAM	0.176	22.46
		13M5W7D	64QAM	0.126	21.02
		13M4W7D	256QAM	0.070	18.44
Sub6 n25(2) (20)	1860.0 - 1905.0	17M9G7D	PI/2 BPSK	0.220	23.43
		17M8G7D	QPSK	0.220	23.42
		17M9W7D	16QAM	0.172	22.36
		17M9W7D	64QAM	0.124	20.94
		17M9W7D	256QAM	0.070	18.42
Sub6 n25 (25)	1862.5 – 1902.5	22M9G7D	PI/2 BPSK	0.196	22.93
		22M8G7D	QPSK	0.193	22.85
		22M9W7D	16QAM	0.152	21.81
		22M9W7D	64QAM	0.112	20.50
		22M9W7D	256QAM	0.063	17.98
Sub6 n25 (30)	1865.0 – 1900.0	28M5G7D	PI/2 BPSK	0.210	23.22
		28M7G7D	QPSK	0.206	23.14
		28M6W7D	16QAM	0.171	22.32
		28M5W7D	64QAM	0.117	20.69
		28M6W7D	256QAM	0.067	18.25
Sub6 n25 (40)	1870.0 – 1895.0	38M6G7D	PI/2 BPSK	0.224	23.51
		38M8G7D	QPSK	0.221	23.45
		38M7W7D	16QAM	0.173	22.39
		38M7W7D	64QAM	0.128	21.07
		38M6W7D	256QAM	0.071	18.49

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-FC068	May 16, 2022	- First Approval Report

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

Table of Contents

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMG736U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§24, §2
EUT Type:	Mobile Phone
Model(s):	SM-G736U
Additional Model(s):	SM-G736U1
SCS(kHz):	15
Bandwidth(MHz):	5, 10, 15, 20, 25, 30, 40
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:	1852.5 MHz – 1912.5 MHz (Sub6 n25(2) (5 MHz)) 1855.0 MHz – 1910.0 MHz (Sub6 n25(2) (10 MHz)) 1857.5 MHz – 1907.5 MHz (Sub6 n25(2) (15 MHz)) 1860.0 MHz – 1905.0 MHz (Sub6 n25(2) (20 MHz)) 1862.5 MHz – 1902.5 MHz (Sub6 n25 (25 MHz)) 1865.0 MHz – 1900.0 MHz (Sub6 n25 (30 MHz)) 1870.0 MHz – 1895.0 MHz (Sub6 n25 (40 MHz))
Date(s) of Tests:	April 01, 2022 ~ May 13, 2022
Serial number:	Radiated: R3CT30RXMHR Conducted: R3CT30RXJZD

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/ax (20/40/80/160), Bluetooth, BT LE, NFC, WIFI 6E.

2.2. MEASURING INSTRUMENT CALIBRATION

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

2.3. TEST FACILITY

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

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

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

3.2 RADIATED POWER

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

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

Test Note

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

   The power is calculated by the following formula;

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

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

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

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

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

Test Settings

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

Test Note

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

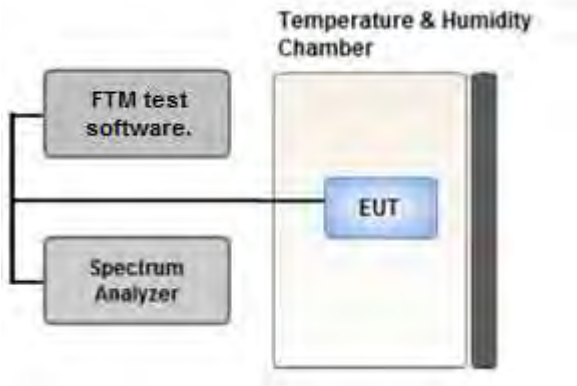
$$Result_{(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

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

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

$$EIRP_{(dBm)} = ERP_{(dBm)} + 2.15$$

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)

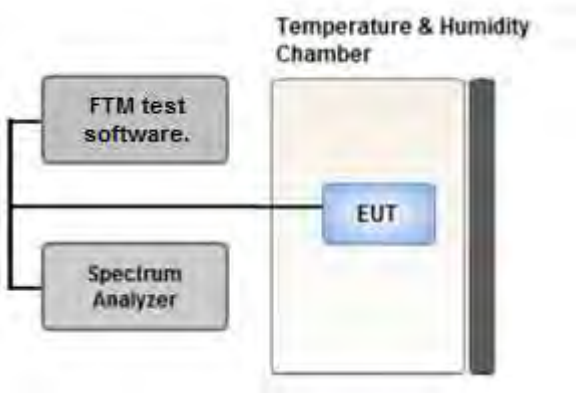
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

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.

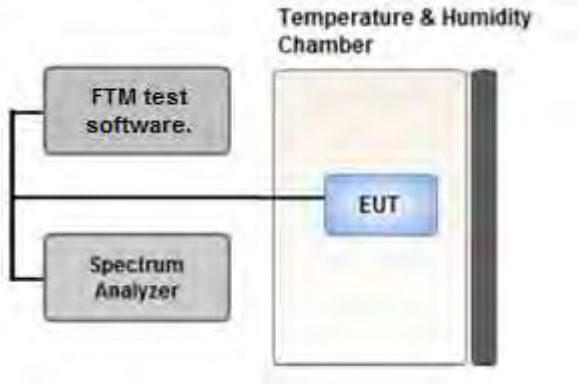
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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 26dB 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

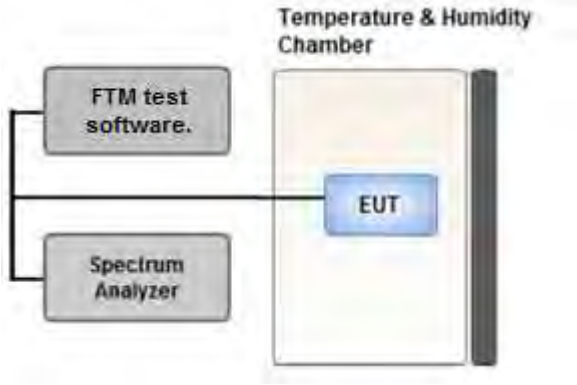
Test Overview

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 = Average
5. Sweep time = auto
6. Number of points in sweep ≥ 2 * Span / RBW

3.7 BAND EDGE



Test setup

Test Overview

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

Test Settings

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

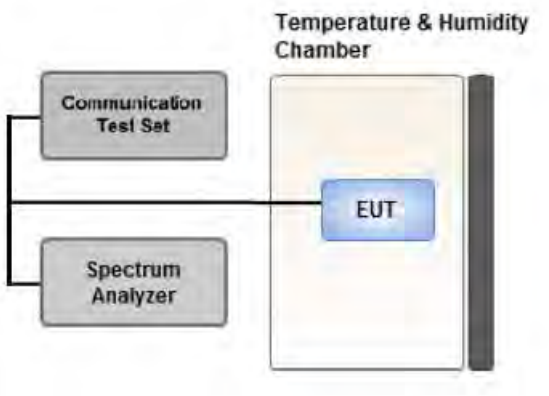
Test Notes

According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of The authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

All measurements were done at 2 channels(low and high operational frequency range.)

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)
- BAND 25 (1850 – 1915 MHz) overlaps the entire frequency range of BAND 2 (1850 - 1910 MHz) and they have the same Tune-up power. Therefore, test data provided in this report covers BAND 2 as well as BAND 25.
- 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, NSA
  Worst case: NSA (12A-n25A)
  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.
  (Worst case: 12A-n25A(BW 10 MHz))
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- In the case of radiated spurious emissions, all bandwidth of operation were investigated and the worst case bandwidth results are reported.
  (Worst case : 5 MHz)
- SM-G736U & additional models were tested and the worst case results are reported.
  (Worst case : SM-G736U)

[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	QPSK	See Section 8.2		X

3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported.
  (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported.
  (Worst case: PI/2 BPSK)
- BAND 25 (1850 – 1915 MHz) overlaps the entire frequency range of BAND 2 (1850 - 1910 MHz) and they have the same Tune-up power. Therefore, test data provided in this report covers BAND 2 as well as BAND 25.
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: SA, NSA
  Worst case: NSA (12A-n25A)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- SM-G736U & additional models were tested and the worst case results are reported.

(Worst case : SM-G736U)

[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	5, 10, 15, 20, 25,30, 40	Mid	Full RB	0
Band Edge	PI/2 BPSK	5	Low	1	0
			High	1	24
		10	Low	1	0
			High	1	51
		15	Low	1	0
			High	1	78
		20	Low	1	0
			High	1	105
		25	Low	1	0
			High	1	132
		30	Low	1	0
			High	1	159
		40	Low	1	0
			High	1	215
		5, 10, 15, 20, 25,30, 40	Low, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	PI/2 BPSK	5, 10, 15, 20, 25,30, 40	Low, Mid, High	1	1

4. LIST OF TEST EQUIPMENT

Equipment	Model	Manufacture	Serial No.	Due to Calibration	Calibration Interval
Precision Dipole Antenna	UHAP	Schwarzbeck	01273	03/27/2024	Biennial
Precision Dipole Antenna	UHAP	Schwarzbeck	01274	03/27/2024	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	02289	03/21/2024	Biennial
Horn Antenna(1~18 GHz)	BBHA 9120D	Schwarzbeck	9120D-1299	05/04/2023	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170342	10/13/2022	Biennial
Horn Antenna(15~40 GHz)	BBHA 9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Loop Antenna(9 kHz~30 MHz)	FMZB1513	Rohde & Schwarz	1513-175	06/04/2023	Biennial
Bilog Antenna	VULB9160	Schwarzbeck	3150	03/03/2023	Biennial
Hybrid Antenna	VULB9160	Schwarzbeck	760	02/22/2023	Biennial
High Pass Filter	WHKX10-900-1000-15000-40SS	Wainwright Instruments	15	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 ~ 18 GHz)	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(10 Hz~26.5 GHz)	N9020A	Agilent	MY51110063	04/19/2023	Annual
ATTENUATOR(20 dB)	8493C	Hewlett Packard	17280	06/01/2022	Annual
Spectrum Analyzer(10 Hz~40 GHz)	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 (100 kHz~40 GHz)	SMB100A	REOHDE & SCHWARZ	177633	07/05/2022	Annual
Signal Analyzer(5 Hz~40.0 GHz)	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, §24.238(a)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§2.1046	N/A	**See Note1**
Peak- to- Average Ratio	§24.232(d)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§24.235	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	§24.232(c)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§2.1053, §24.238(a)	< 43 + 10log10 (P[Watts]) for all out-of band emissions	PASS

Note:

1. Radiated tests were tested using 5G Wireless Tester

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

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

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

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

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

3) Record the field strength meter's level.

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

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

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

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Level(dBm)	Substitute Level(dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
20175	1,732.50	-15.75	18.45	9.90	1.76	H	0.456	26.59

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

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

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

3) Record the field strength meter's level.

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

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

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

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4 M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4 M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4 M48W7D

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
1852.5	Sub6 n25(2)/ 5 MHz [15 kHz]	PI/2 BPSK	-17.38	16.34	10.10	2.15	H	< 2.00	0.269	24.29	1	12
		QPSK	-17.46	16.26	10.10	2.15	H		0.264	24.21		
		16-QAM	-18.50	15.22	10.10	2.15	H		0.207	23.17		
		64-QAM	-20.00	13.72	10.10	2.15	H		0.147	21.67		
		256-QAM	-22.32	11.40	10.10	2.15	H		0.086	19.35		
1882.5		PI/2 BPSK	-17.36	15.83	9.98	2.25	H		0.227	23.56	1	1
		QPSK	-17.41	15.78	9.98	2.25	H		0.224	23.51		
		16-QAM	-18.36	14.83	9.98	2.25	H		0.180	22.56		
		64-QAM	-19.85	13.34	9.98	2.25	H		0.128	21.07		
		256-QAM	-22.43	10.76	9.98	2.25	H		0.071	18.49		
1912.5		PI/2 BPSK	-18.30	15.49	9.88	2.17	H		0.209	23.20	1	1
		QPSK	-18.39	15.40	9.88	2.17	H		0.205	23.11		
		16-QAM	-19.35	14.44	9.88	2.17	H		0.164	22.15		
		64-QAM	-20.77	13.02	9.88	2.17	H		0.118	20.73		
		256-QAM	-23.32	10.47	9.88	2.17	H		0.066	18.18		

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
1855.0	Sub6 n25(2)/ 10 MHz [15 kHz]	PI/2 BPSK	-17.80	15.61	10.08	2.17	H	< 2.00	0.225	23.52	1	1
		QPSK	-17.82	15.59	10.08	2.17	H		0.224	23.50		
		16-QAM	-18.77	14.64	10.08	2.17	H		0.180	22.55		
		64-QAM	-20.20	13.21	10.08	2.17	H		0.129	21.12		
		256-QAM	-22.87	10.54	10.08	2.17	H		0.070	18.45		
1882.5		PI/2 BPSK	-17.75	15.44	9.98	2.25	H		0.207	23.17	1	1
		QPSK	-17.77	15.42	9.98	2.25	H		0.207	23.15		
		16-QAM	-18.67	14.52	9.98	2.25	H		0.168	22.25		
		64-QAM	-20.11	13.08	9.98	2.25	H		0.121	20.81		
		256-QAM	-22.70	10.49	9.98	2.25	H		0.066	18.22		
1910.0		PI/2 BPSK	-18.47	15.31	9.89	2.17	H		0.201	23.03	1	26
		QPSK	-18.52	15.26	9.89	2.17	H		0.198	22.98		
		16-QAM	-19.58	14.20	9.89	2.17	H		0.155	21.92		
		64-QAM	-20.98	12.80	9.89	2.17	H		0.113	20.52		
		256-QAM	-23.55	10.23	9.89	2.17	H		0.062	17.95		

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
1857.5	Sub6 n25(2)/ 15 MHz [15 kHz]	PI/2 BPSK	-17.80	15.29	10.06	2.19	H	< 2.00	0.207	23.16	1	1
		QPSK	-17.85	15.24	10.06	2.19	H		0.205	23.11		
		16-QAM	-18.85	14.24	10.06	2.19	H		0.163	22.11		
		64-QAM	-20.13	12.96	10.06	2.19	H		0.121	20.83		
		256-QAM	-22.85	10.24	10.06	2.19	H		0.065	18.11		
1882.5		PI/2 BPSK	-17.64	15.55	9.98	2.25	H		0.213	23.28	1	1
		QPSK	-17.68	15.51	9.98	2.25	H		0.211	23.24		
		16-QAM	-18.71	14.48	9.98	2.25	H		0.166	22.21		
		64-QAM	-20.08	13.11	9.98	2.25	H		0.121	20.84		
		256-QAM	-22.73	10.46	9.98	2.25	H		0.066	18.19		
1907.5		PI/2 BPSK	-18.00	15.77	9.90	2.17	H		0.224	23.50	1	1
		QPSK	-18.02	15.75	9.90	2.17	H		0.223	23.48		
		16-QAM	-19.04	14.73	9.90	2.17	H		0.176	22.46		
		64-QAM	-20.48	13.29	9.90	2.17	H		0.126	21.02		
		256-QAM	-23.06	10.71	9.90	2.17	H		0.070	18.44		

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
1860.0	Sub6 n25(2)/ 20 MHz [15 kHz]	PI/2 BPSK	-17.80	15.29	10.06	2.19	H	< 2.00	0.207	23.16	1	1
		QPSK	-17.84	15.25	10.06	2.19	H		0.205	23.12		
		16-QAM	-18.92	14.17	10.06	2.19	H		0.160	22.04		
		64-QAM	-20.18	12.91	10.06	2.19	H		0.120	20.78		
		256-QAM	-22.78	10.31	10.06	2.19	H		0.066	18.18		
1882.5		PI/2 BPSK	-17.75	15.44	9.98	2.25	H		0.207	23.17	1	1
		QPSK	-17.80	15.39	9.98	2.25	H		0.205	23.12		
		16-QAM	-18.80	14.39	9.98	2.25	H		0.163	22.12		
		64-QAM	-20.27	12.92	9.98	2.25	H		0.116	20.65		
		256-QAM	-22.70	10.49	9.98	2.25	H		0.066	18.22		
1905.0		PI/2 BPSK	-17.99	15.72	9.89	2.19	H		0.220	23.43	1	1
		QPSK	-18.00	15.71	9.89	2.19	H		0.220	23.42		
		16-QAM	-19.06	14.65	9.89	2.19	H		0.172	22.36		
		64-QAM	-20.48	13.23	9.89	2.19	H		0.124	20.94		
		256-QAM	-23.00	10.71	9.89	2.19	H		0.070	18.42		

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
1862.5	Sub6 n25/ 25 MHz [15 kHz]	PI/2 BPSK	-18.18	14.91	10.06	2.19	H	< 2.00	0.190	22.78	1	1
		QPSK	-18.20	14.89	10.06	2.19	H		0.189	22.76		
		16-QAM	-19.21	13.88	10.06	2.19	H		0.150	21.75		
		64-QAM	-20.48	12.61	10.06	2.19	H		0.112	20.48		
		256-QAM	-23.11	9.98	10.06	2.19	H		0.061	17.85		
1882.5		PI/2 BPSK	-18.15	15.04	9.98	2.25	H		0.189	22.77	1	1
		QPSK	-18.19	15.00	9.98	2.25	H		0.188	22.73		
		16-QAM	-19.25	13.94	9.98	2.25	H		0.147	21.67		
		64-QAM	-20.54	12.65	9.98	2.25	H		0.109	20.38		
		256-QAM	-23.10	10.09	9.98	2.25	H		0.061	17.82		
1902.5		PI/2 BPSK	-18.41	15.23	9.90	2.20	H		0.196	22.93	1	1
		QPSK	-18.49	15.15	9.90	2.20	H		0.193	22.85		
		16-QAM	-19.53	14.11	9.90	2.20	H		0.152	21.81		
		64-QAM	-20.84	12.80	9.90	2.20	H		0.112	20.50		
		256-QAM	-23.36	10.28	9.90	2.20	H		0.063	17.98		

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
1865.0	Sub6 n25/ 30 MHz [15 kHz]	PI/2 BPSK	-18.12	15.30	10.04	2.22	H	< 2.00	0.205	23.12	1	1
		QPSK	-18.15	15.27	10.04	2.22	H		0.204	23.09		
		16-QAM	-19.22	14.20	10.04	2.22	H		0.159	22.02		
		64-QAM	-20.55	12.87	10.04	2.22	H		0.117	20.69		
		256-QAM	-23.14	10.28	10.04	2.22	H		0.065	18.10		
1882.5		PI/2 BPSK	-18.18	15.01	9.98	2.25	H		0.188	22.74	1	1
		QPSK	-18.27	14.92	9.98	2.25	H		0.184	22.65		
		16-QAM	-19.27	13.92	9.98	2.25	H		0.146	21.65		
		64-QAM	-20.72	12.47	9.98	2.25	H		0.105	20.20		
		256-QAM	-23.17	10.02	9.98	2.25	H		0.060	17.75		
1900.0		PI/2 BPSK	-18.12	15.52	9.90	2.20	H		0.210	23.22	1	1
		QPSK	-18.20	15.44	9.90	2.20	H		0.206	23.14		
		16-QAM	-19.02	14.62	9.90	2.20	H		0.171	22.32		
		64-QAM	-21.10	12.54	9.90	2.20	H		0.106	20.24		
		256-QAM	-23.09	10.55	9.90	2.20	H		0.067	18.25		

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
1870.0	Sub6 n25/ 40 MHz [15 kHz]	PI/2 BPSK	-18.15	15.60	10.02	2.24	H	< 2.00	0.218	23.38	1	1
		QPSK	-18.22	15.53	10.02	2.24	H		0.214	23.31		
		16-QAM	-19.25	14.50	10.02	2.24	H		0.169	22.28		
		64-QAM	-20.48	13.27	10.02	2.24	H		0.127	21.05		
		256-QAM	-23.11	10.64	10.02	2.24	H		0.069	18.42		
1882.5		PI/2 BPSK	-18.60	14.59	9.98	2.25	H		0.171	22.32	1	1
		QPSK	-18.62	14.57	9.98	2.25	H		0.170	22.30		
		16-QAM	-19.66	13.53	9.98	2.25	H		0.134	21.26		
		64-QAM	-21.02	12.17	9.98	2.25	H		0.098	19.90		
		256-QAM	-23.55	9.64	9.98	2.25	H		0.055	17.37		
1895.0		PI/2 BPSK	-18.01	15.80	9.92	2.21	H		0.224	23.51	1	1
		QPSK	-18.07	15.74	9.92	2.21	H		0.221	23.45		
		16-QAM	-19.13	14.68	9.92	2.21	H		0.173	22.39		
		64-QAM	-20.45	13.36	9.92	2.21	H		0.128	21.07		
		256-QAM	-23.03	10.78	9.92	2.21	H		0.071	18.49		

8.2 RADIATED SPURIOUS EMISSIONS

▣ NR Band: N25(2)
▣ LTE Band(Anchor): B12
▣ Bandwidth: 5 MHz
▣ Modulation: PI/2 BPSK
▣ Distance: 3 meters
▣ SCS: 15 kHz

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit (dBm)	RB	
									Size	Offset
370500 (1852.5)	3 705.00	-59.98	11.70	-60.82	3.12	H	-52.24	-13.00	1	12
	5 557.50	-61.19	12.08	-55.97	3.88	H	-47.77	-13.00		
	7 410.00	-62.67	11.24	-47.71	4.41	H	-40.88	-13.00		
	9 262.50	-60.40	11.24	-45.67	5.03	H	-39.46	-13.00		
	11 115.00	-64.45	12.30	-46.01	5.61	H	-39.31	-13.00		
376500 (1882.5)	3 765.00	-59.83	11.61	-59.83	3.16	H	-51.37	-13.00	1	1
	5 647.50	-61.89	12.00	-56.04	3.94	H	-47.98	-13.00		
	7 530.00	-63.78	11.56	-49.97	4.54	H	-42.95	-13.00		
	9 412.50	-62.12	11.20	-47.02	5.17	H	-40.99	-13.00		
	11 295.00	-63.93	12.11	-45.16	5.68	H	-38.73	-13.00		
382500 (1912.5)	3 825.00	-59.86	11.30	-59.31	3.19	H	-51.20	-13.00	1	1
	5 737.50	-62.49	11.72	-55.82	3.89	H	-47.99	-13.00		
	7 650.00	-64.83	11.60	-51.30	4.61	H	-44.31	-13.00		
	9 562.50	-64.49	11.34	-48.67	5.15	H	-42.48	-13.00		
	11 475.00	-66.35	12.30	-46.82	5.85	H	-40.36	-13.00		

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	-59.65	7.61	-66.28	1.87	V	-60.53	-13.00
	2,122.50	-59.74	8.98	-65.56	2.31	V	-58.89	-13.00
	2,830.00	-58.91	10.52	-62.92	2.73	V	-55.13	-13.00

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n25(2)	5 MHz	1882.5	BPSK	25	0	3.91
			QPSK			5.03
			16-QAM			5.88
			64-QAM			6.10
			256-QAM			6.35
	10 MHz		BPSK	50		4.02
			QPSK			5.02
			16-QAM			5.79
			64-QAM			6.16
			256-QAM			6.58
	15 MHz		BPSK	75		3.71
			QPSK			4.84
			16-QAM			5.69
			64-QAM			6.00
			256-QAM			6.29
	20 MHz		BPSK	100		3.98
			QPSK			5.38
			16-QAM			5.92
			64-QAM			6.13
			256-QAM			6.65

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
Sub6 n25	25 MHz	1882.5	BPSK	128	0	4.01
			QPSK			5.04
			16-QAM			5.92
			64-QAM			6.01
			256-QAM			6.33
	30 MHz		BPSK	160		3.71
			QPSK			4.93
			16-QAM			5.83
			64-QAM			6.04
			256-QAM			6.31
	40 MHz		BPSK	216		4.29
			QPSK			5.19
			16-QAM			6.03
			64-QAM			6.06
			256-QAM			6.41

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 81 ~ 115.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n25(2)	5 MHz	1882.5	BPSK	25	0	4.5082
			QPSK			4.4877
			16-QAM			4.5052
			64-QAM			4.4911
			256-QAM			4.5092
	10 MHz		BPSK	50		8.9834
			QPSK			8.9625
			16-QAM			8.9692
			64-QAM			8.9619
			256-QAM			8.9997
	15 MHz		BPSK	75		13.456
			QPSK			13.425
			16-QAM			13.458
			64-QAM			13.459
			256-QAM			13.429
	20 MHz		BPSK	100		17.872
			QPSK			17.833
			16-QAM			17.917
			64-QAM			17.863
			256-QAM			17.873

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Sub6 n25	25 MHz	1882.5	BPSK	128	0	22.936
			QPSK			22.823
			16-QAM			22.866
			64-QAM			22.877
			256-QAM			22.855
	30 MHz		BPSK	160		28.540
			QPSK			28.722
			16-QAM			28.571
			64-QAM			28.479
			256-QAM			28.577
	40 MHz		BPSK	216		38.614
			QPSK			38.798
			16-QAM			38.692
			64-QAM			38.651
			256-QAM			38.635

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 46 ~ 80.

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 n25(2)	5	1852.5	8.2986	30.815	-70.427	-39.612	-13.00
		1882.5	4.9711	30.200	-70.120	-39.920	
		1912.5	9.6640	30.815	-70.646	-39.831	
	10	1855.0	8.3166	30.815	-70.009	-39.194	
		1882.5	8.0030	30.815	-69.911	-39.096	
		1910.0	3.8246	30.200	-69.720	-39.520	
	15	1857.5	5.4741	30.815	-70.228	-39.413	
		1882.5	8.0160	30.815	-69.645	-38.830	
		1907.5	6.0314	30.815	-70.151	-39.336	
	20	1860.0	9.6710	30.815	-70.187	-39.372	
		1882.5	8.2966	30.815	-70.272	-39.457	
		1905.0	4.8869	30.200	-69.951	-39.751	
Sub6 n25	25	1862.5	3.8156	30.200	-70.288	-40.088	
		1882.5	8.2283	30.815	-70.970	-40.155	
		1902.5	9.9432	30.815	-70.982	-40.167	
	30	1865.0	9.1221	30.815	-70.544	-39.729	
		1882.5	8.2772	30.815	-70.714	-39.899	
		1900.0	9.6725	30.815	-70.845	-40.030	
	40	1870.0	9.6805	30.815	-69.016	-38.201	
		1882.5	9.4342	30.815	-69.697	-38.882	
		1895.0	4.0399	30.200	-69.934	-39.734	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 158 ~ 199.

2. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)

3. Factor(dB) = Cable Loss + Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 – 1	27.494
1 – 5	30.200
5 – 10	30.815
10 – 15	31.340
15 – 20	31.713
Above 20	32.355

8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 116 ~ 157.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ BandWidth: 5 MHz

▣ Voltage(100 %): 3.860 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
1852.5	100 %	+20(Ref)	1852 500 014	0.0	0.000 000	0.000
	100 %	-30	1852 500 019	5.5	0.000 000	0.003
	100 %	-20	1852 500 024	10.1	0.000 001	0.005
	100 %	-10	1852 500 026	12.0	0.000 001	0.006
	100 %	0	1852 500 018	3.8	0.000 000	0.002
	100 %	+10	1852 500 019	5.4	0.000 000	0.003
	100 %	+30	1852 500 026	12.7	0.000 001	0.007
	100 %	+40	1852 500 021	7.4	0.000 000	0.004
	100 %	+50	1852 500 019	5.0	0.000 000	0.003
	Batt. Endpoint	+20	1852 500 020	6.1	0.000 000	0.003
1912.5	100 %	+20(Ref)	1912 500 015	0.0	0.000 000	0.000
	100 %	-30	1912 500 020	4.5	0.000 000	0.002
	100 %	-20	1912 500 030	14.9	0.000 001	0.008
	100 %	-10	1912 500 029	14.3	0.000 001	0.008
	100 %	0	1912 500 020	5.3	0.000 000	0.003
	100 %	+10	1912 500 024	9.3	0.000 000	0.005
	100 %	+30	1912 500 030	14.9	0.000 001	0.008
	100 %	+40	1912 500 025	9.4	0.000 000	0.005
	100 %	+50	1912 500 031	15.6	0.000 001	0.008
	Batt. Endpoint	+20	1912 500 021	6.0	0.000 000	0.003

▣ BandWidth: 10 MHz

▣ Voltage(100 %): 3.860 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
1855.0	100 %	+20(Ref)	1855 000 011	0.0	0.000 000	0.000
	100 %	-30	1855 000 019	8.5	0.000 000	0.005
	100 %	-20	1855 000 021	9.8	0.000 001	0.005
	100 %	-10	1855 000 020	8.6	0.000 000	0.005
	100 %	0	1855 000 027	15.9	0.000 001	0.009
	100 %	+10	1855 000 022	11.5	0.000 001	0.006
	100 %	+30	1855 000 016	4.9	0.000 000	0.003
	100 %	+40	1855 000 017	6.5	0.000 000	0.003
	100 %	+50	1855 000 026	14.9	0.000 001	0.008
	Batt. Endpoint	+20	1855 000 024	13.2	0.000 001	0.007
1910.0	100 %	+20(Ref)	1910 000 005	0.0	0.000 000	0.000
	100 %	-30	1910 000 008	3.4	0.000 000	0.002
	100 %	-20	1910 000 020	15.1	0.000 001	0.008
	100 %	-10	1910 000 018	13.3	0.000 001	0.007
	100 %	0	1910 000 015	9.8	0.000 001	0.005
	100 %	+10	1910 000 010	5.7	0.000 000	0.003
	100 %	+30	1910 000 015	9.9	0.000 001	0.005
	100 %	+40	1910 000 021	16.5	0.000 001	0.009
	100 %	+50	1910 000 020	15.7	0.000 001	0.008
	Batt. Endpoint	+20	1910 000 009	3.9	0.000 000	0.002

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 3.860 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
1857.5	100 %	+20(Ref)	1857 500 003	0.0	0.000 000	0.000
	100 %	-30	1857 500 011	8.0	0.000 000	0.004
	100 %	-20	1857 500 018	15.1	0.000 001	0.008
	100 %	-10	1857 500 019	15.4	0.000 001	0.008
	100 %	0	1857 500 009	6.1	0.000 000	0.003
	100 %	+10	1857 500 012	8.9	0.000 000	0.005
	100 %	+30	1857 500 014	10.8	0.000 001	0.006
	100 %	+40	1857 500 011	7.9	0.000 000	0.004
	100 %	+50	1857 500 016	12.6	0.000 001	0.007
	Batt. Endpoint	+20	1857 500 019	15.9	0.000 001	0.009
1907.5	100 %	+20(Ref)	1907 500 013	0.0	0.000 000	0.000
	100 %	-30	1907 500 022	8.9	0.000 000	0.005
	100 %	-20	1907 500 020	6.7	0.000 000	0.003
	100 %	-10	1907 500 027	13.2	0.000 001	0.007
	100 %	0	1907 500 019	5.4	0.000 000	0.003
	100 %	+10	1907 500 024	10.5	0.000 001	0.006
	100 %	+30	1907 500 019	5.9	0.000 000	0.003
	100 %	+40	1907 500 027	13.1	0.000 001	0.007
	100 %	+50	1907 500 023	9.9	0.000 001	0.005
	Batt. Endpoint	+20	1907 500 017	3.8	0.000 000	0.002

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 3.860 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
1860.0	100 %	+20(Ref)	1860 000 015	0.0	0.000 000	0.000
	100 %	-30	1860 000 024	9.0	0.000 000	0.005
	100 %	-20	1860 000 025	10.3	0.000 001	0.006
	100 %	-10	1860 000 019	4.0	0.000 000	0.002
	100 %	0	1860 000 029	14.8	0.000 001	0.008
	100 %	+10	1860 000 019	4.4	0.000 000	0.002
	100 %	+30	1860 000 027	12.2	0.000 001	0.007
	100 %	+40	1860 000 023	8.0	0.000 000	0.004
	100 %	+50	1860 000 024	9.8	0.000 001	0.005
	Batt. Endpoint	+20	1860 000 030	15.6	0.000 001	0.008
1905.0	100 %	+20(Ref)	1905 000 007	0.0	0.000 000	0.000
	100 %	-30	1905 000 019	11.7	0.000 001	0.006
	100 %	-20	1905 000 018	11.0	0.000 001	0.006
	100 %	-10	1905 000 011	4.3	0.000 000	0.002
	100 %	0	1905 000 011	4.5	0.000 000	0.002
	100 %	+10	1905 000 022	14.8	0.000 001	0.008
	100 %	+30	1905 000 015	8.5	0.000 000	0.004
	100 %	+40	1905 000 019	12.1	0.000 001	0.006
	100 %	+50	1905 000 011	4.1	0.000 000	0.002
	Batt. Endpoint	+20	1905 000 022	14.9	0.000 001	0.008

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 3.860 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
1862.5	100 %	+20(Ref)	1862 500 013	0.0	0.000 000	0.000
	100 %	-30	1862 500 022	9.6	0.000 001	0.005
	100 %	-20	1862 500 022	9.6	0.000 001	0.005
	100 %	-10	1862 500 021	8.5	0.000 000	0.005
	100 %	0	1862 500 023	10.8	0.000 001	0.006
	100 %	+10	1862 500 026	13.6	0.000 001	0.007
	100 %	+30	1862 500 019	6.5	0.000 000	0.003
	100 %	+40	1862 500 024	11.5	0.000 001	0.006
	100 %	+50	1862 500 017	4.4	0.000 000	0.002
	Batt. Endpoint	+20	1862 500 018	5.0	0.000 000	0.003
1902.5	100 %	+20(Ref)	1902 500 007	0.0	0.000 000	0.000
	100 %	-30	1902 500 024	16.3	0.000 001	0.009
	100 %	-20	1902 500 013	6.1	0.000 000	0.003
	100 %	-10	1902 500 015	7.7	0.000 000	0.004
	100 %	0	1902 500 023	16.0	0.000 001	0.008
	100 %	+10	1902 500 021	13.5	0.000 001	0.007
	100 %	+30	1902 500 021	14.0	0.000 001	0.007
	100 %	+40	1902 500 021	14.1	0.000 001	0.007
	100 %	+50	1902 500 011	4.1	0.000 000	0.002
	Batt. Endpoint	+20	1902 500 021	14.1	0.000 001	0.007

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 3.860 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
1865.0	100 %	+20(Ref)	1865 000 003	0.0	0.000 000	0.000
	100 %	-30	1865 000 014	10.5	0.000 001	0.006
	100 %	-20	1865 000 009	5.8	0.000 000	0.003
	100 %	-10	1865 000 015	12.1	0.000 001	0.006
	100 %	0	1865 000 006	3.0	0.000 000	0.002
	100 %	+10	1865 000 011	7.8	0.000 000	0.004
	100 %	+30	1865 000 008	4.8	0.000 000	0.003
	100 %	+40	1865 000 018	14.7	0.000 001	0.008
	100 %	+50	1865 000 014	10.7	0.000 001	0.006
	Batt. Endpoint	+20	1865 000 010	7.1	0.000 000	0.004
1900.0	100 %	+20(Ref)	1900 000 013	0.0	0.000 000	0.000
	100 %	-30	1900 000 028	14.4	0.000 001	0.008
	100 %	-20	1900 000 024	10.6	0.000 001	0.006
	100 %	-10	1900 000 022	8.6	0.000 000	0.005
	100 %	0	1900 000 024	10.3	0.000 001	0.005
	100 %	+10	1900 000 018	4.4	0.000 000	0.002
	100 %	+30	1900 000 017	3.3	0.000 000	0.002
	100 %	+40	1900 000 020	7.1	0.000 000	0.004
	100 %	+50	1900 000 028	14.7	0.000 001	0.008
	Batt. Endpoint	+20	1900 000 021	7.7	0.000 000	0.004

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 3.860 VDC

▣ Batt. Endpoint: 3.400 VDC

▣ LIMIT: Emission must remain in band

Test. Frequncy (MHz)	Voltage (%)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
1870.0	100 %	+20(Ref)	1870 000 010	0.0	0.000 000	0.000
	100 %	-30	1870 000 025	15.2	0.000 001	0.008
	100 %	-20	1870 000 023	12.5	0.000 001	0.007
	100 %	-10	1870 000 025	14.9	0.000 001	0.008
	100 %	0	1870 000 014	4.3	0.000 000	0.002
	100 %	+10	1870 000 014	4.4	0.000 000	0.002
	100 %	+30	1870 000 019	9.2	0.000 000	0.005
	100 %	+40	1870 000 015	4.8	0.000 000	0.003
	100 %	+50	1870 000 014	4.3	0.000 000	0.002
	Batt. Endpoint	+20	1870 000 014	4.2	0.000 000	0.002
1895.0	100 %	+20(Ref)	1895 000 016	0.0	0.000 000	0.000
	100 %	-30	1895 000 029	12.4	0.000 001	0.007
	100 %	-20	1895 000 027	10.4	0.000 001	0.005
	100 %	-10	1895 000 028	11.2	0.000 001	0.006
	100 %	0	1895 000 022	5.3	0.000 000	0.003
	100 %	+10	1895 000 029	12.9	0.000 001	0.007
	100 %	+30	1895 000 021	4.6	0.000 000	0.002
	100 %	+40	1895 000 029	12.2	0.000 001	0.006
	100 %	+50	1895 000 028	12.1	0.000 001	0.006
	Batt. Endpoint	+20	1895 000 029	12.2	0.000 001	0.006

9. TEST PLOTS

Sub6 n25(2). Occupied Bandwidth Plot (5 M BW Ch.376500 BPSK_ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (5 M BW Ch.376500 QPSK_ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (5 M BW Ch.376500 16QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (5 M BW Ch.376500 64QAM_ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (5 M BW Ch.376500 256QAM_ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (10 M BW Ch.376500 BPSK _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (10 M BW Ch.376500 QPSK _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (10 M BW Ch.376500 16QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (10 M BW Ch.376500 64QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (10 M BW Ch.376500 256QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (15 M BW Ch.376500 BPSK_ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (15 M BW Ch.376500 QPSK _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (15 M BW Ch.376500 16QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (15 M BW Ch.376500 64QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (15 M BW Ch.376500 256QAM _ Full RB _0

Sub6 n25(2). Occupied Bandwidth Plot (20 M BW Ch.376500 BPSK _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (20 M BW Ch.376500 QPSK _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (20 M BW Ch.376500 16QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (20 M BW Ch.376500 64QAM _ Full RB _0)

Sub6 n25(2). Occupied Bandwidth Plot (20 M BW Ch.376500 256QAM _ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (25 M BW Ch.376500 BPSK _ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (25 M BW Ch.376500 QPSK _ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (25 M BW Ch.376500 16QAM _ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (25 M BW Ch.376500 64QAM _ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (25 M BW Ch.376500 256QAM _ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (30 M BW Ch.376500 BPSK_ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (30 M BW Ch.376500 QPSK_ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (30 M BW Ch.376500 16QAM _ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (30 M BW Ch.376500 64QAM_ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (30 M BW Ch.376500 256QAM_ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (40 M BW Ch.376500 BPSK_ Full RB _0)

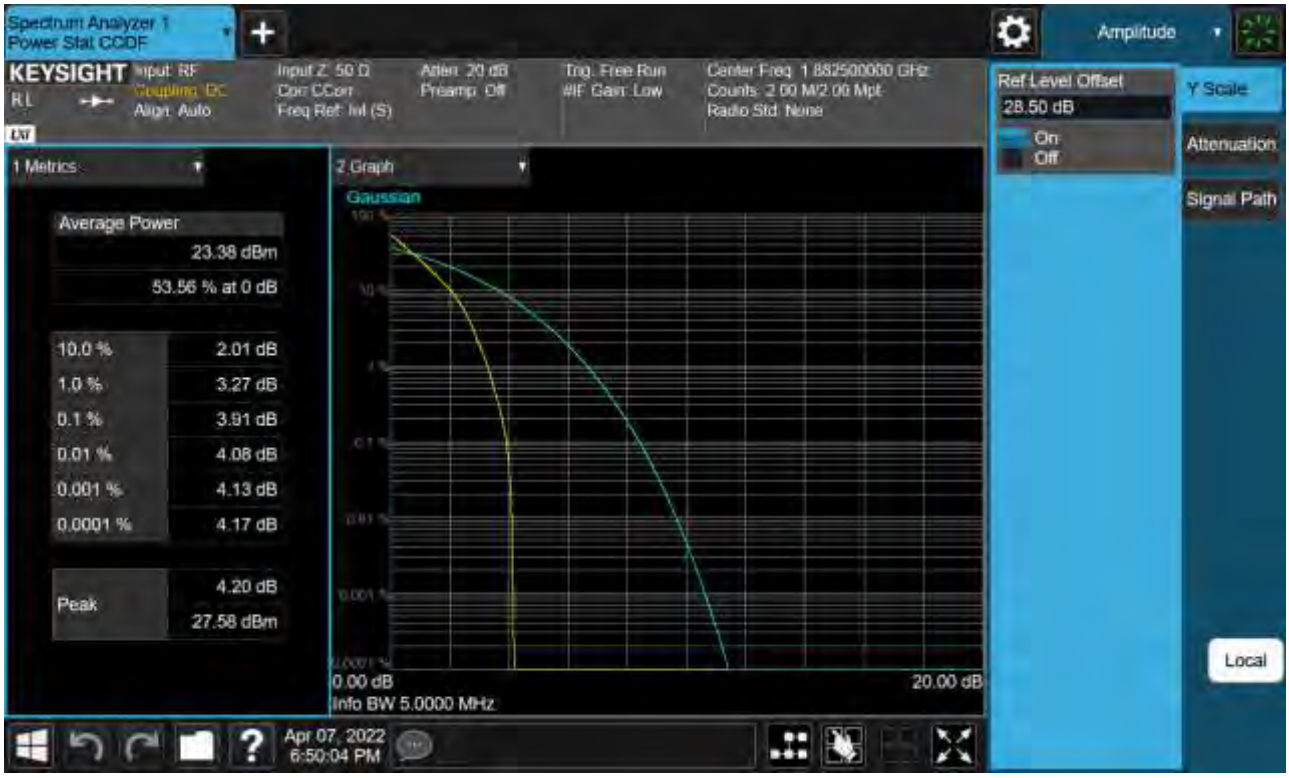
Sub6 n25. Occupied Bandwidth Plot (40 M BW Ch.376500 QPSK_ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (40 M BW Ch.376500 16QAM_ Full RB _0)

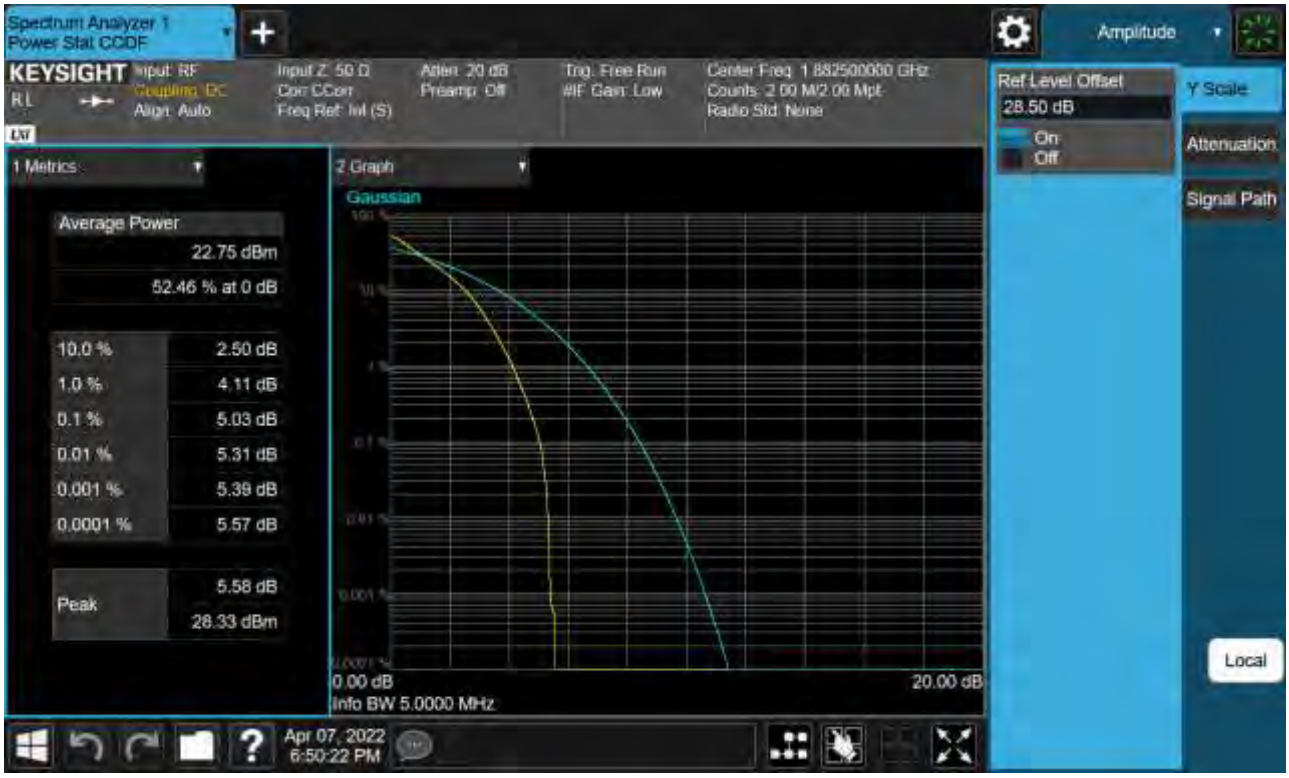
Sub6 n25. Occupied Bandwidth Plot (40 M BW Ch.376500 64QAM_ Full RB _0)

Sub6 n25. Occupied Bandwidth Plot (40 M BW Ch.376500 256QAM_ Full RB _0)

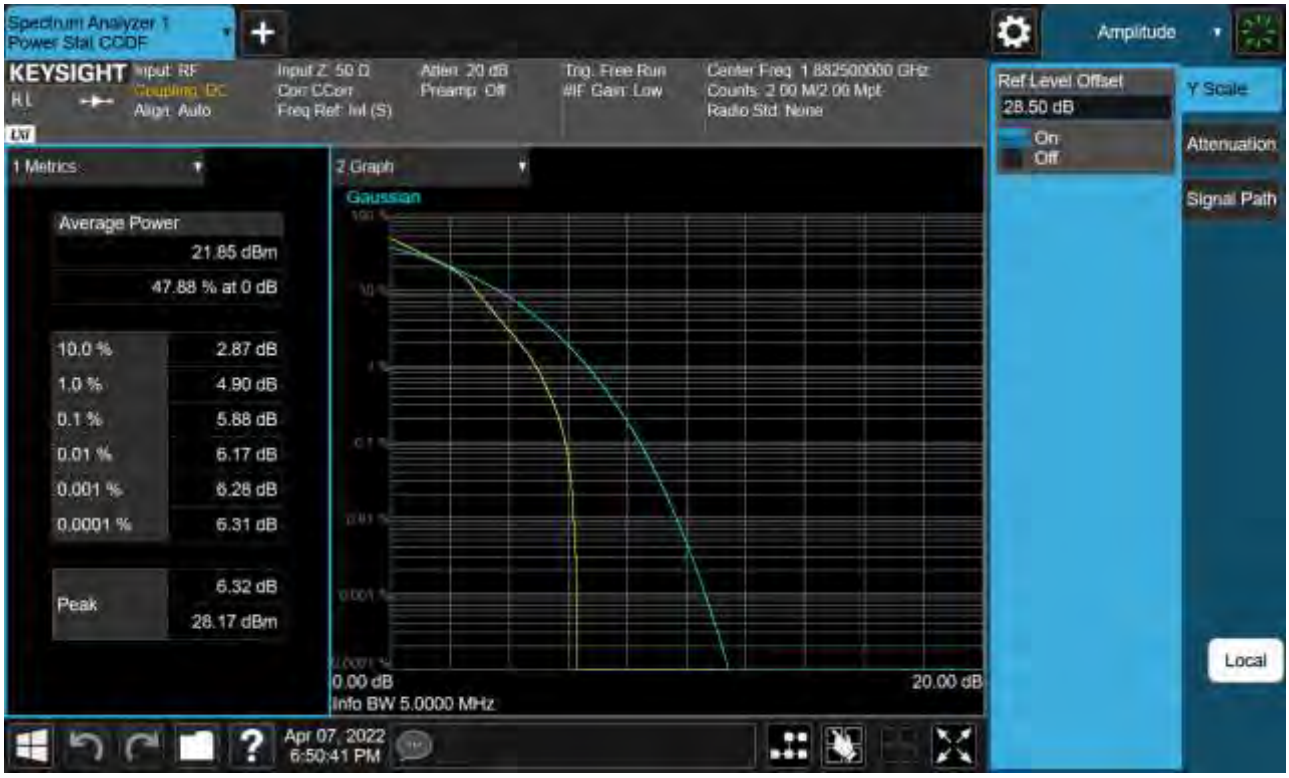
Sub6 n25(2). PAR Plot (5 M BW Ch.376500 BPSK_ Full RB _0)



Sub6 n25(2). PAR Plot (5 M BW Ch.376500 QPSK _ Full RB _0)



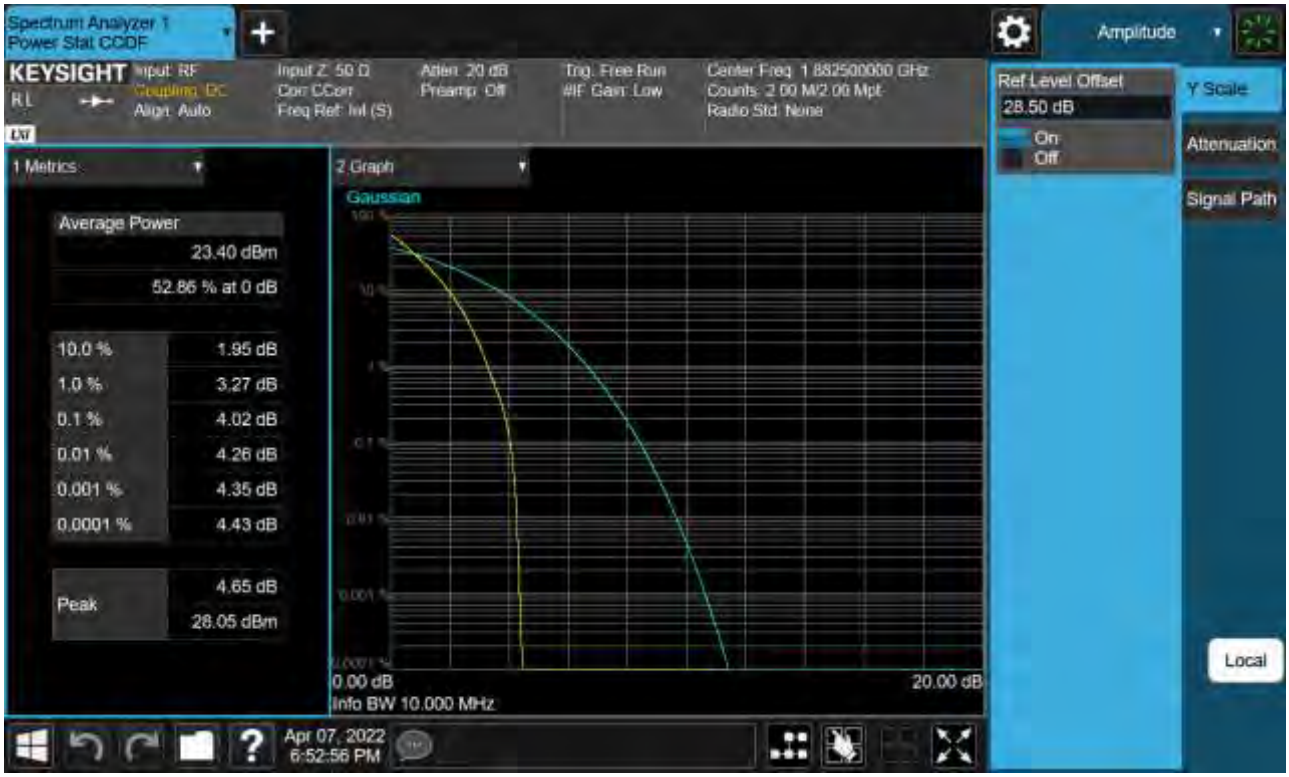
Sub6 n25(2). PAR Plot (5 M BW Ch.376500 16QAM_ Full RB _0)



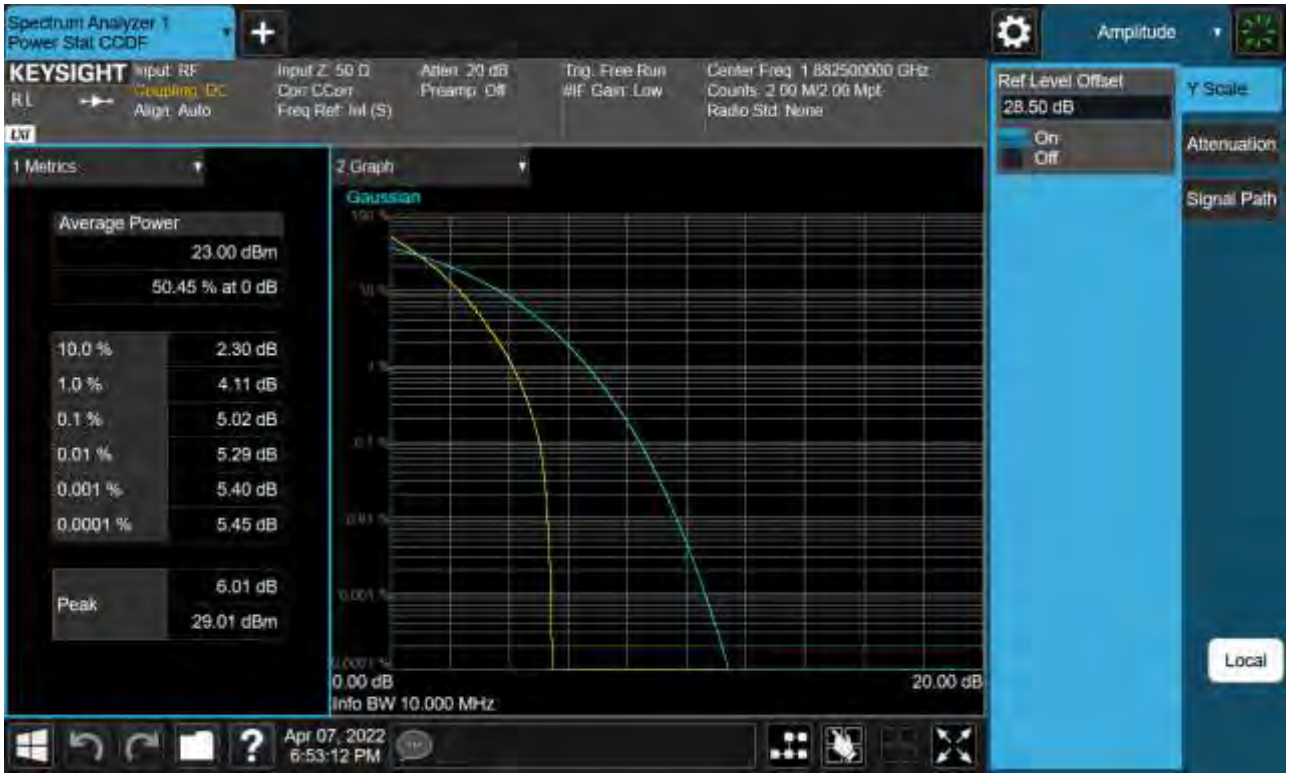
Sub6 n25(2). PAR Plot (5 M BW Ch.376500 64QAM_ Full RB _0)

Sub6 n25(2). PAR Plot (5 M BW Ch.376500 256QAM_ Full RB _0)

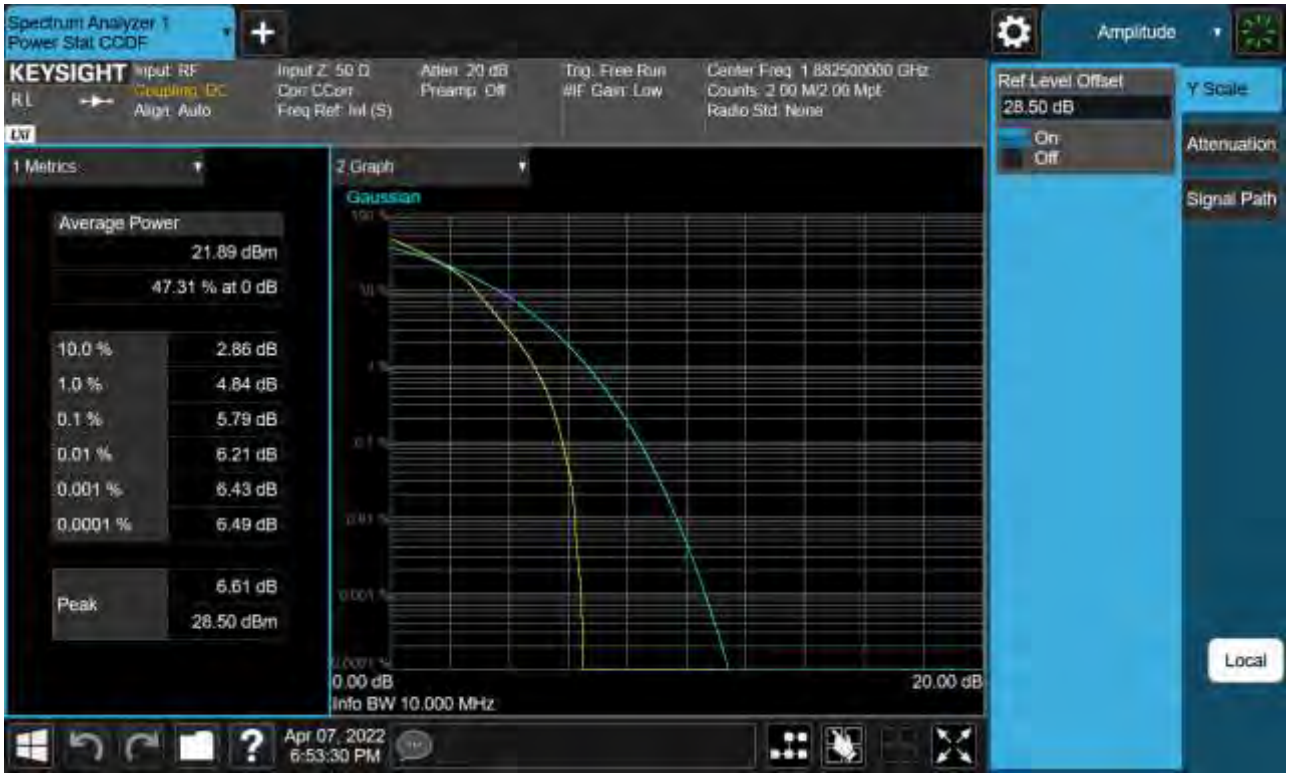
Sub6 n25(2). PAR Plot (10 M BW Ch.376500 BPSK _ Full RB _0)



Sub6 n25(2). PAR Plot (10 M BW Ch.376500 QPSK _ Full RB _0)

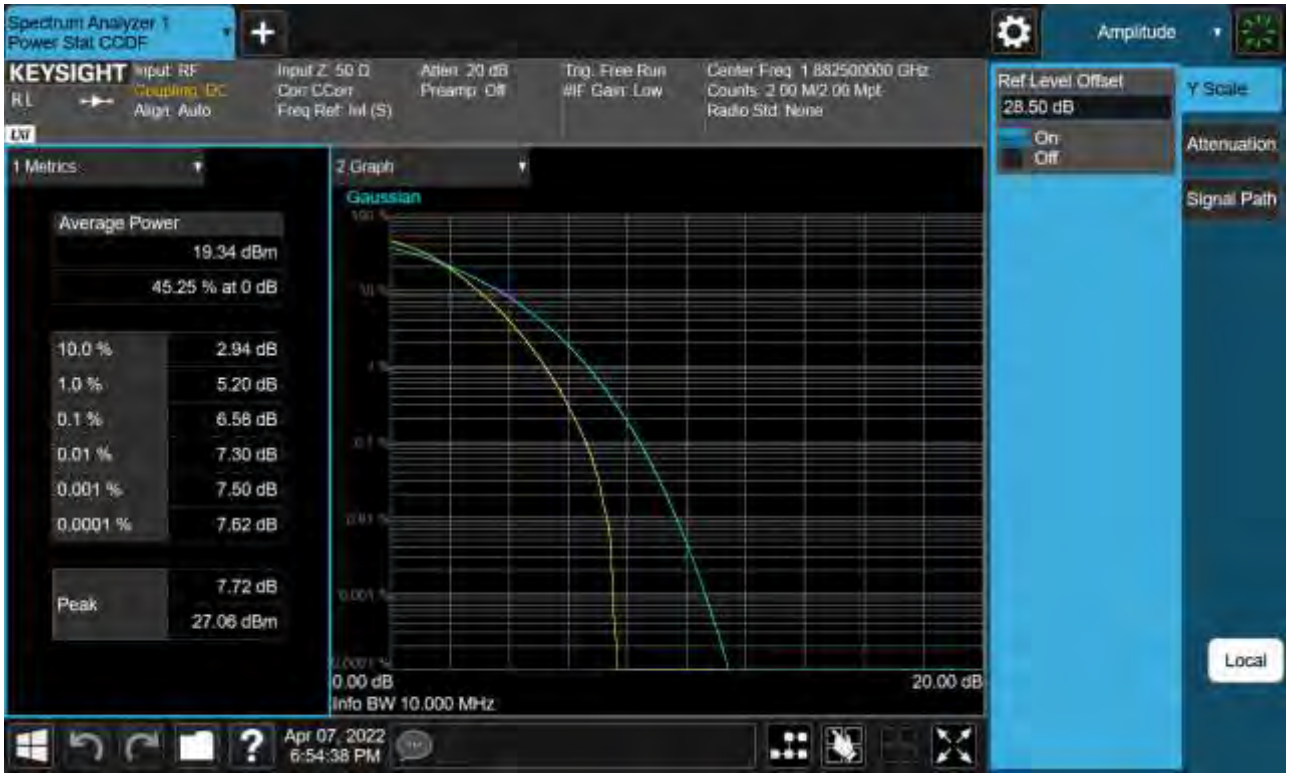


Sub6 n25(2). PAR Plot (10 M BW Ch.376500 16QAM _ Full RB _0)



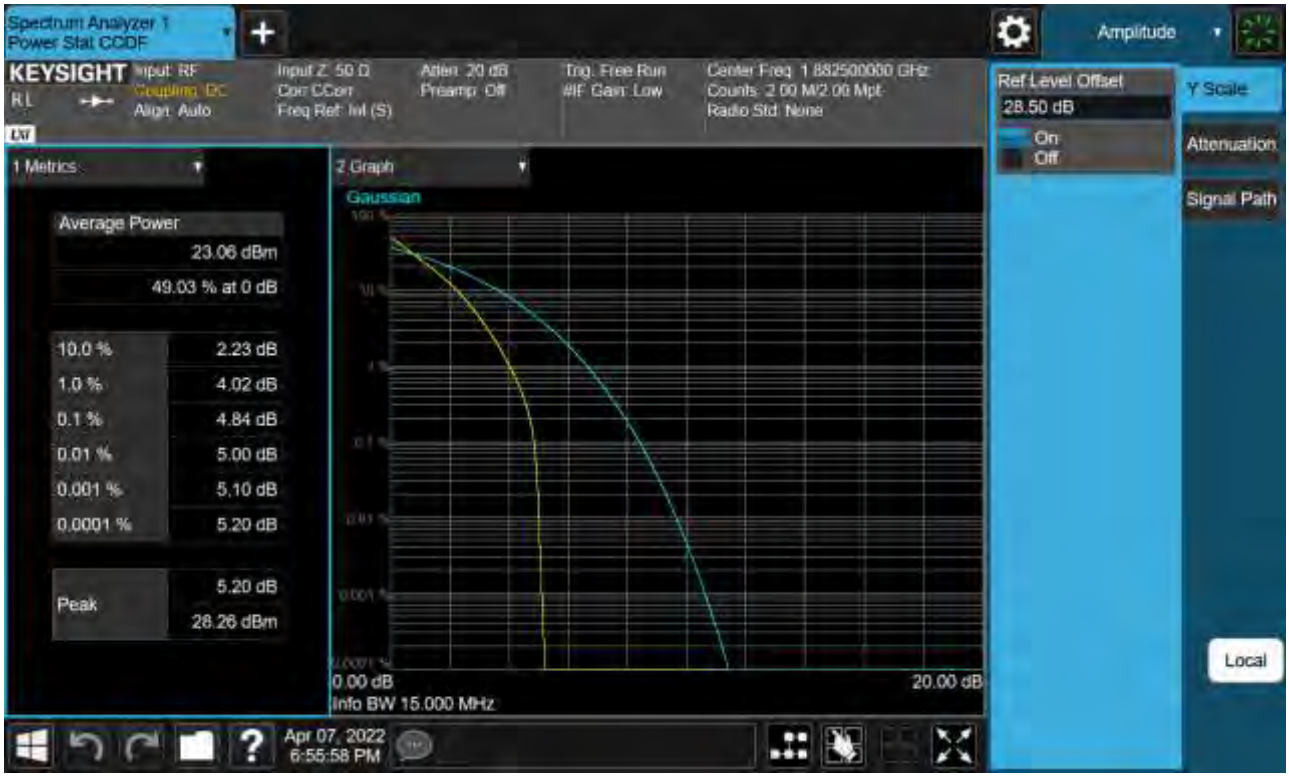
Sub6 n25(2). PAR Plot (10 M BW Ch.376500 64QAM _ Full RB _0)

Sub6 n25(2). PAR Plot (10 M BW Ch.376500 256QAM _ Full RB _0)



Sub6 n25(2). PAR Plot (15 M BW Ch.376500 BPSK _ Full RB _0)

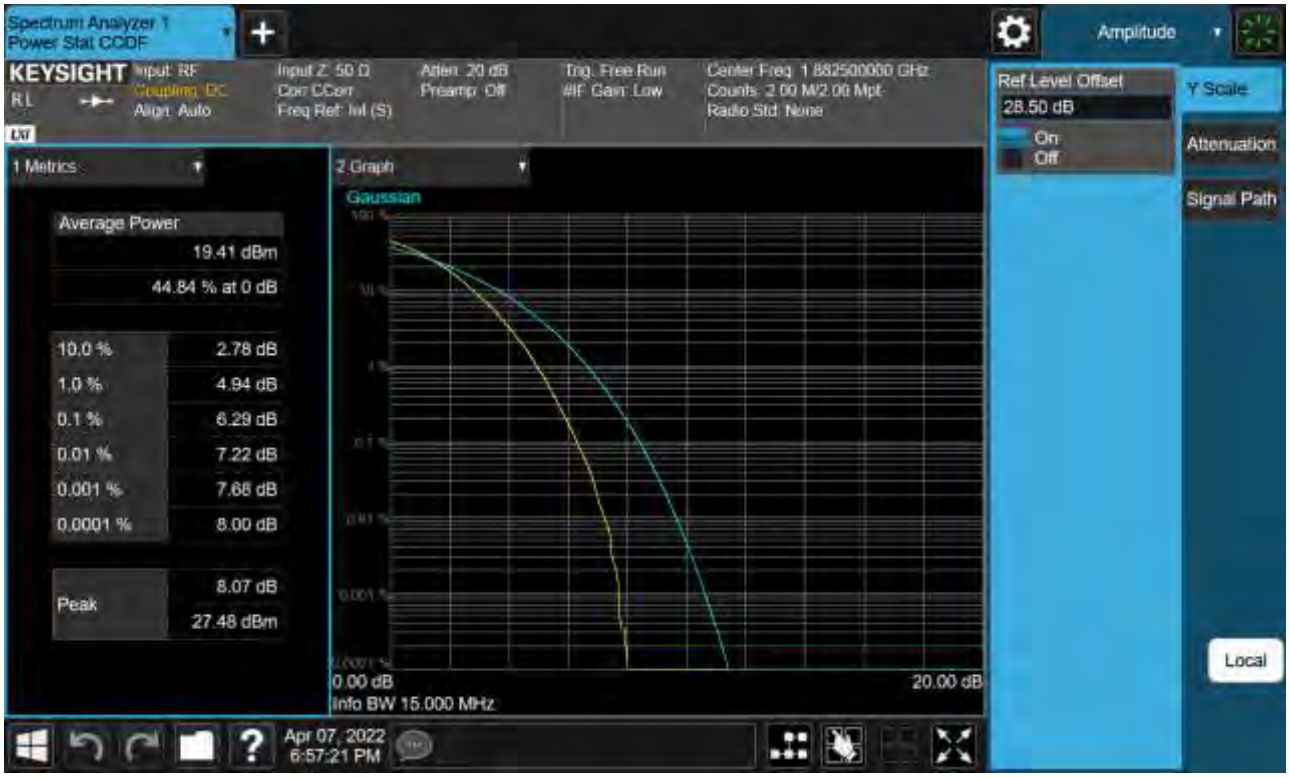
Sub6 n25(2). PAR Plot (15 M BW Ch.376500 QPSK _ Full RB _0)



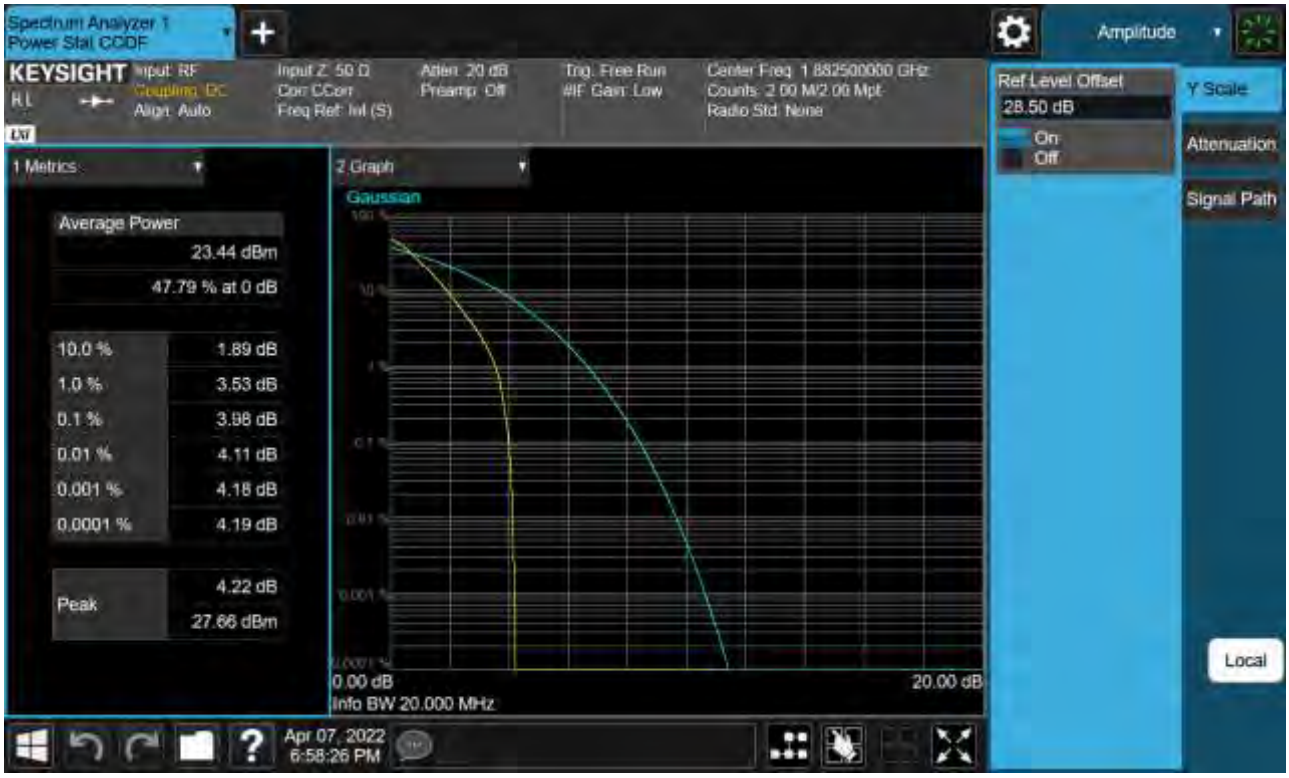
Sub6 n25(2). PAR Plot (15 M BW Ch.376500 16QAM _ Full RB _0)

Sub6 n25(2). PAR Plot (15 M BW Ch.376500 64QAM _ Full RB _0)

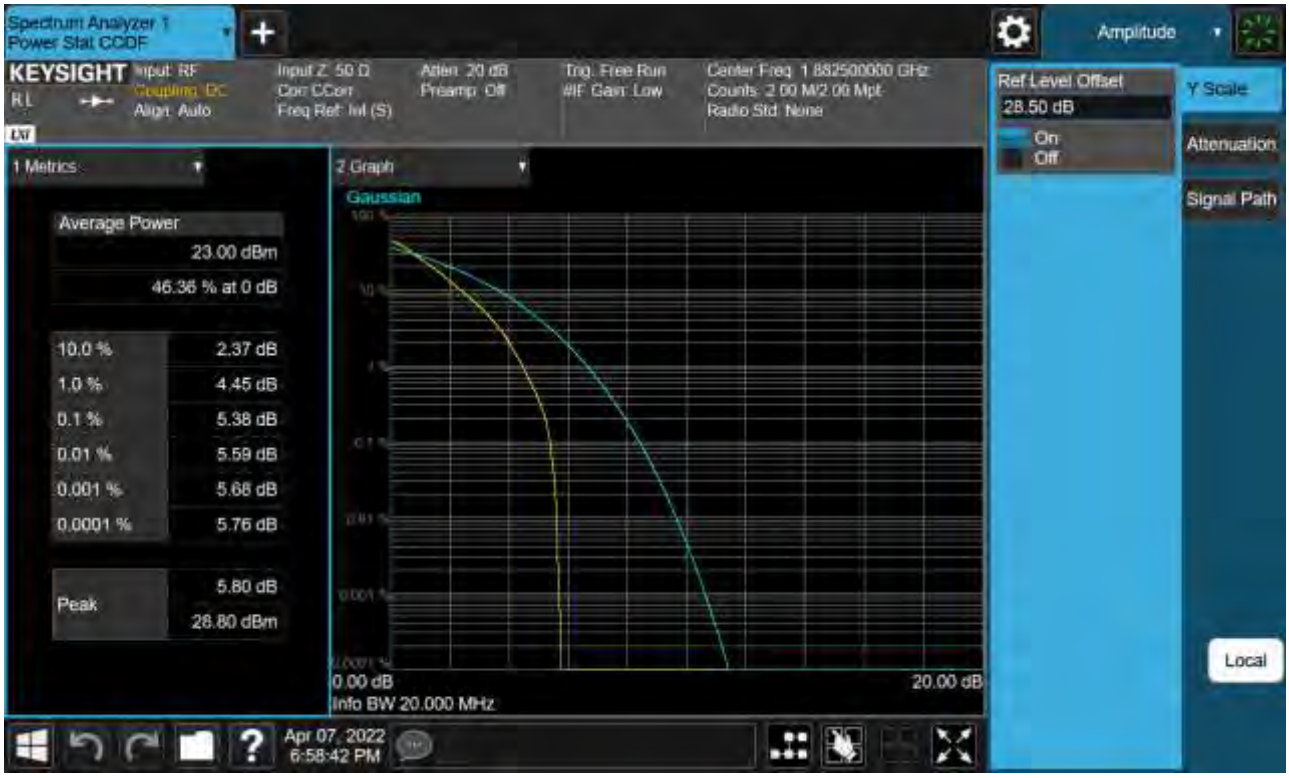
Sub6 n25(2). PAR Plot (15 M BW Ch.376500 256QAM _ Full RB _0)



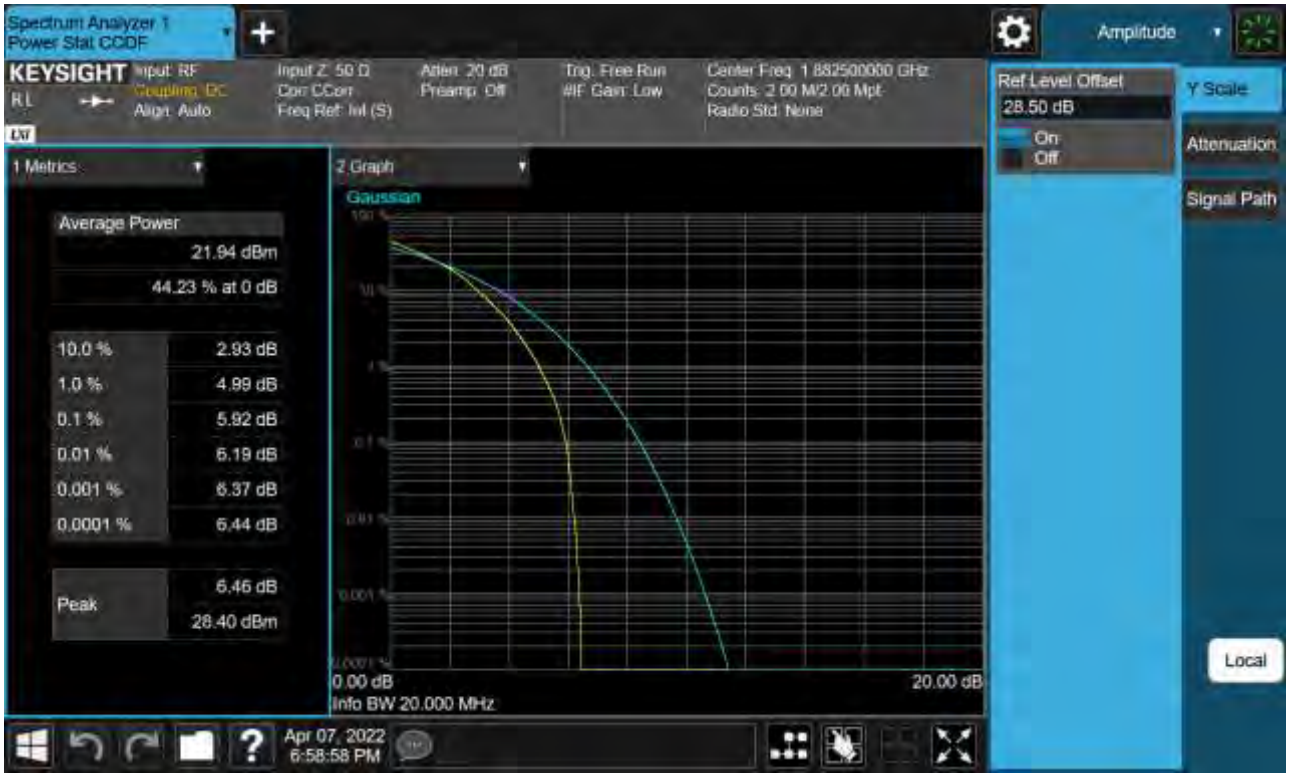
Sub6 n25(2). PAR Plot (20 M BW Ch.376500 BPSK _ Full RB _0)



Sub6 n25(2). PAR Plot (20 M BW Ch.376500 QPSK _ Full RB _0)



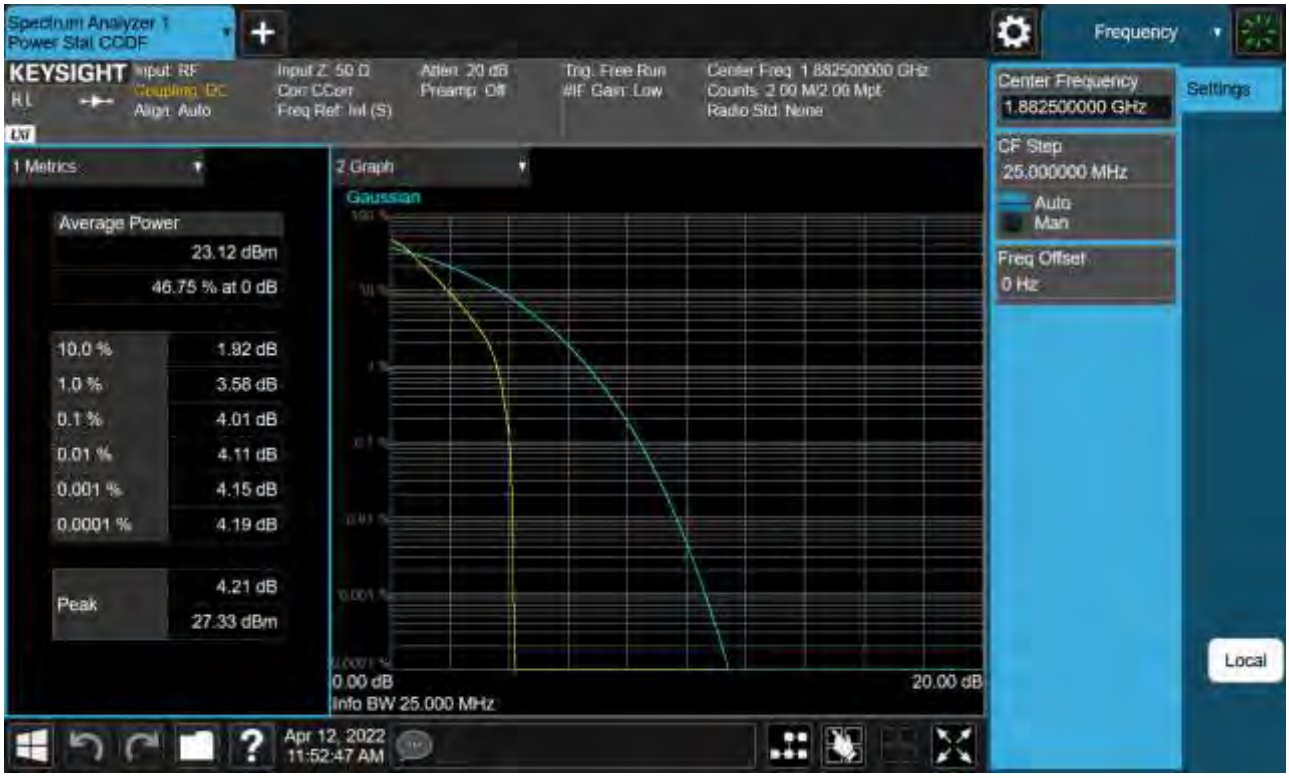
Sub6 n25(2). PAR Plot (20 M BW Ch.376500 16QAM _ Full RB _0)



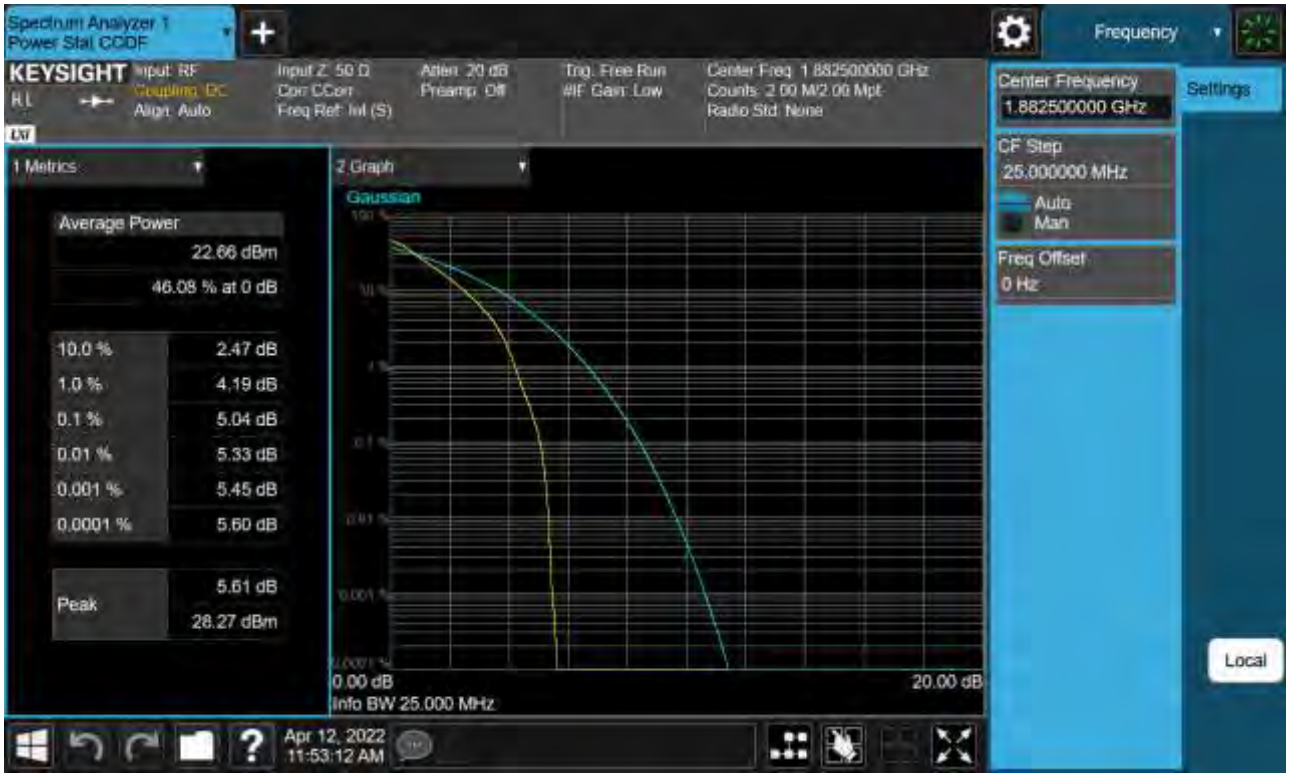
Sub6 n25(2). PAR Plot (20 M BW Ch.376500 64QAM _ Full RB _0)

Sub6 n25(2). PAR Plot (20 M BW Ch.376500 256QAM _ Full RB _0)

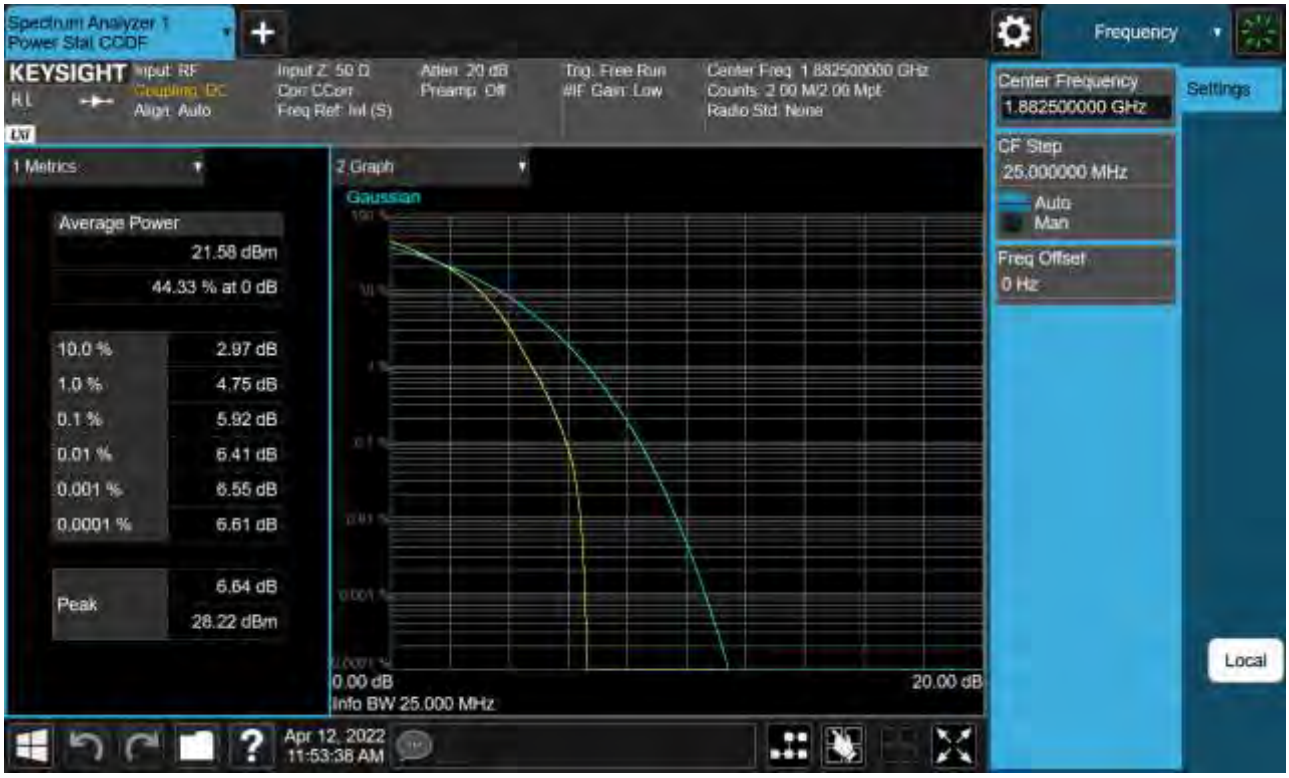
Sub6 n25. PAR Plot (25 M BW Ch.376500 BPSK _ Full RB _0)



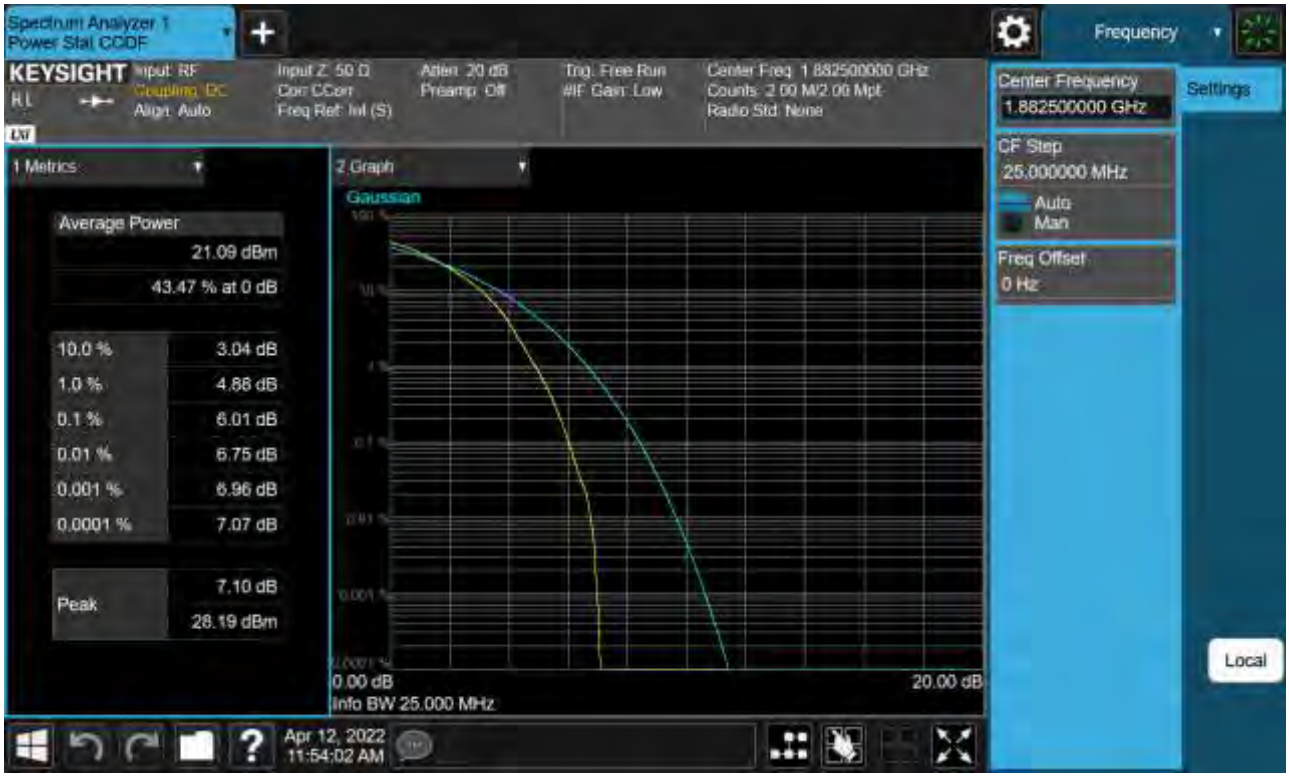
Sub6 n25. PAR Plot (25 M BW Ch.376500 QPSK _ Full RB _0)



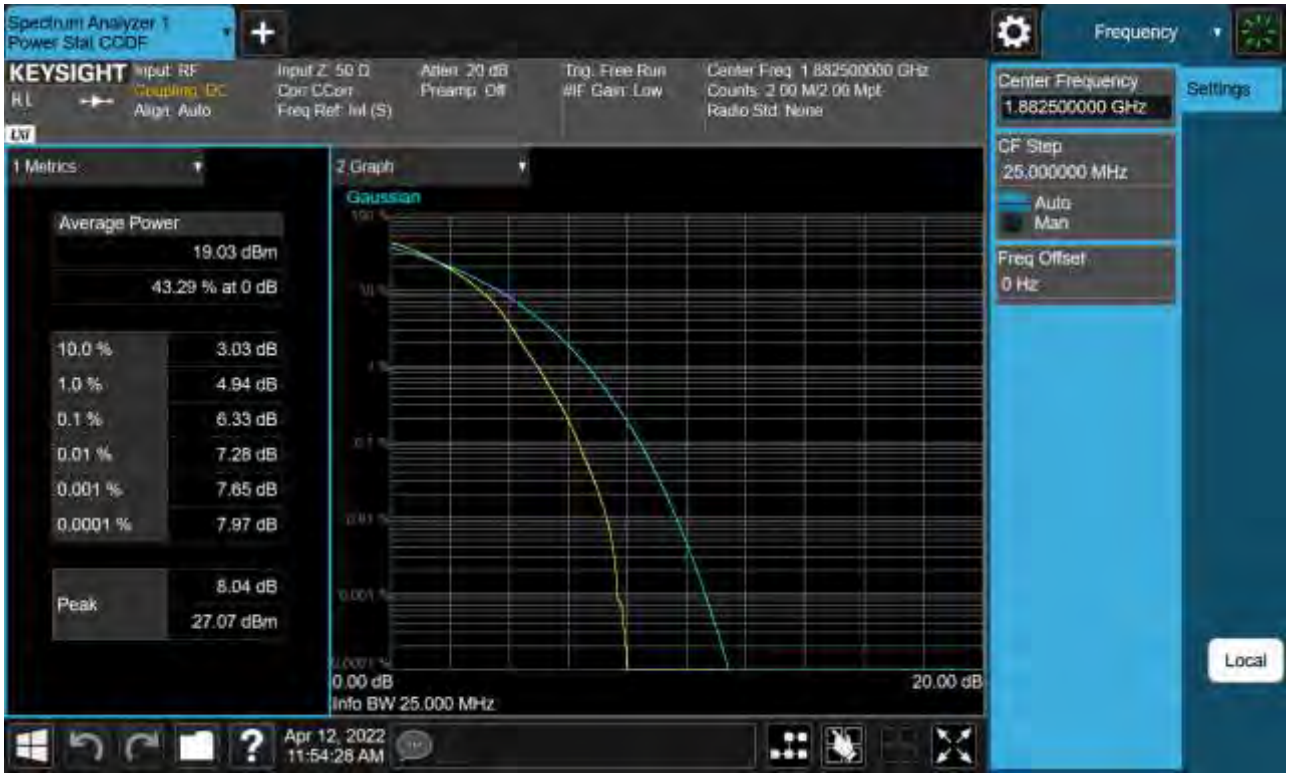
Sub6 n25. PAR Plot (25 M BW Ch.376500 16QAM _ Full RB _0)



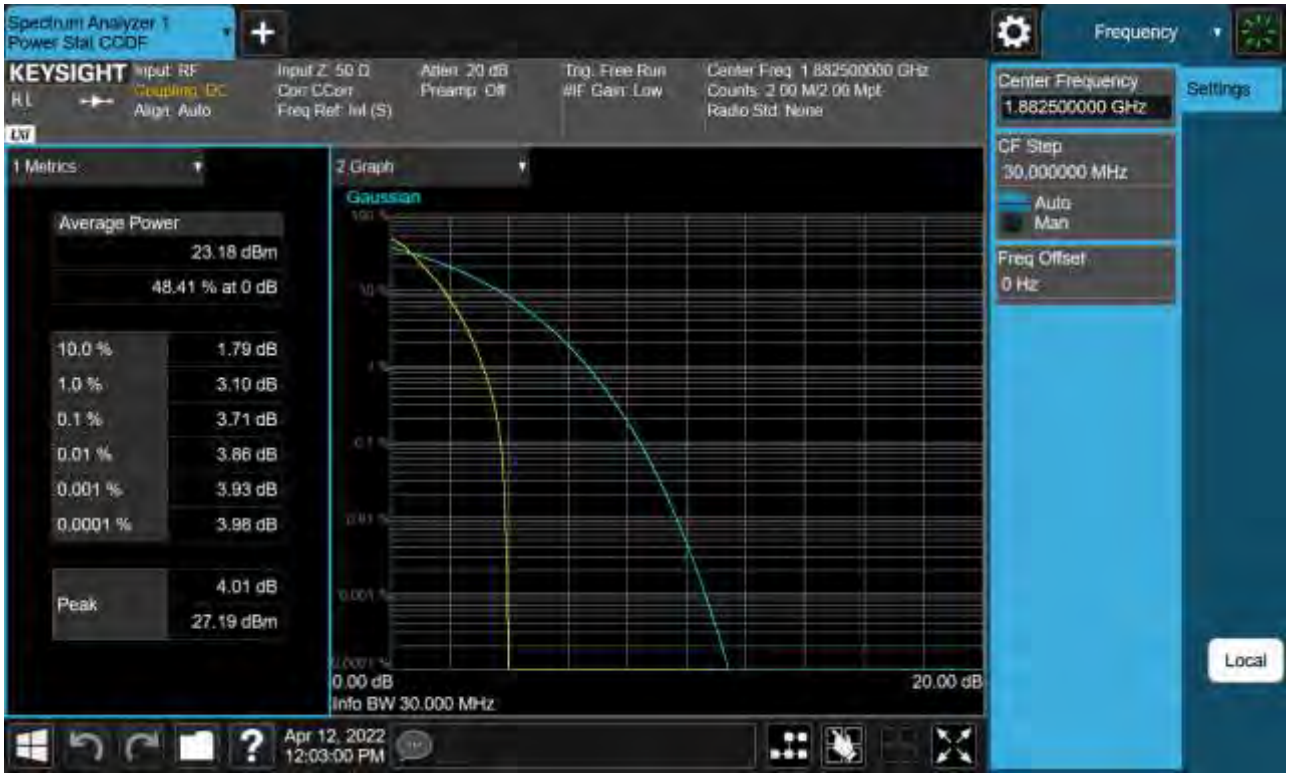
Sub6 n25. PAR Plot (25 M BW Ch.376500 64QAM _ Full RB _0)



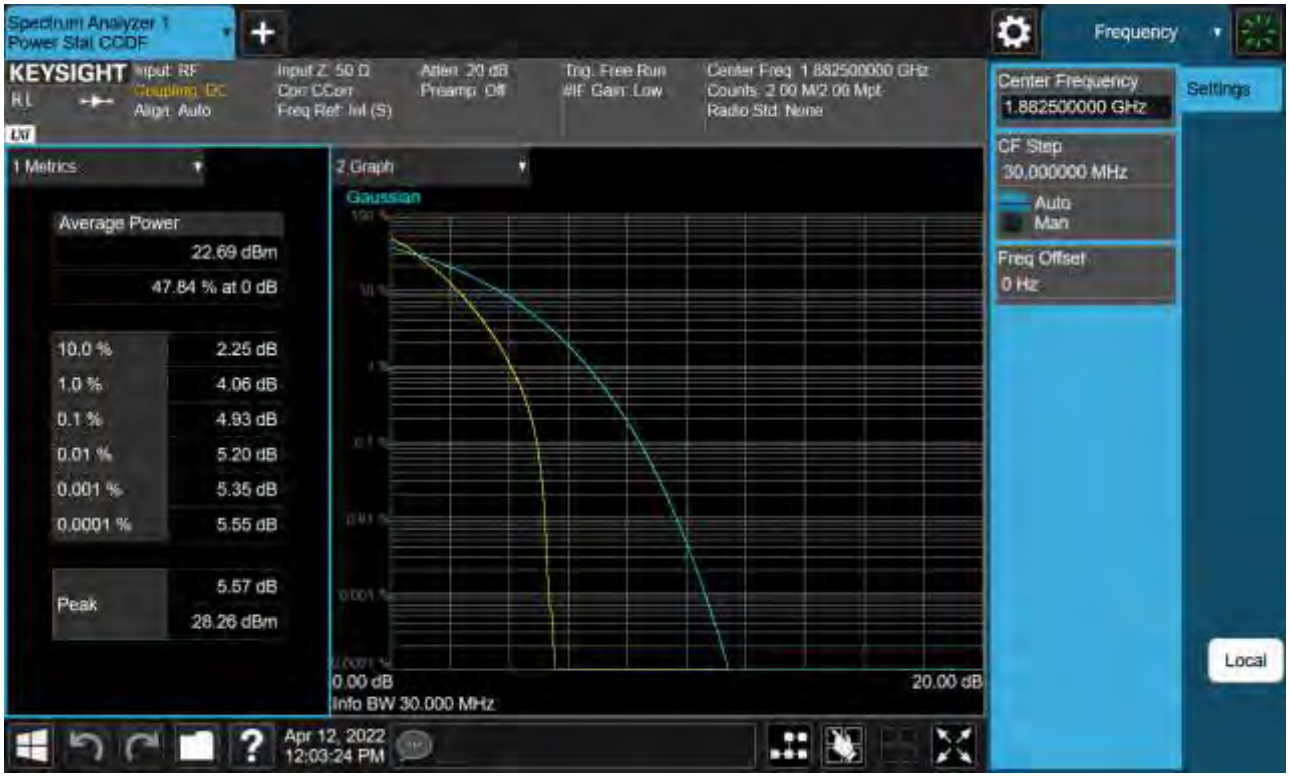
Sub6 n25. PAR Plot (25 M BW Ch.376500 256QAM _ Full RB _0)



Sub6 n25. PAR Plot (30 M BW Ch.376500 BPSK_ Full RB _0)



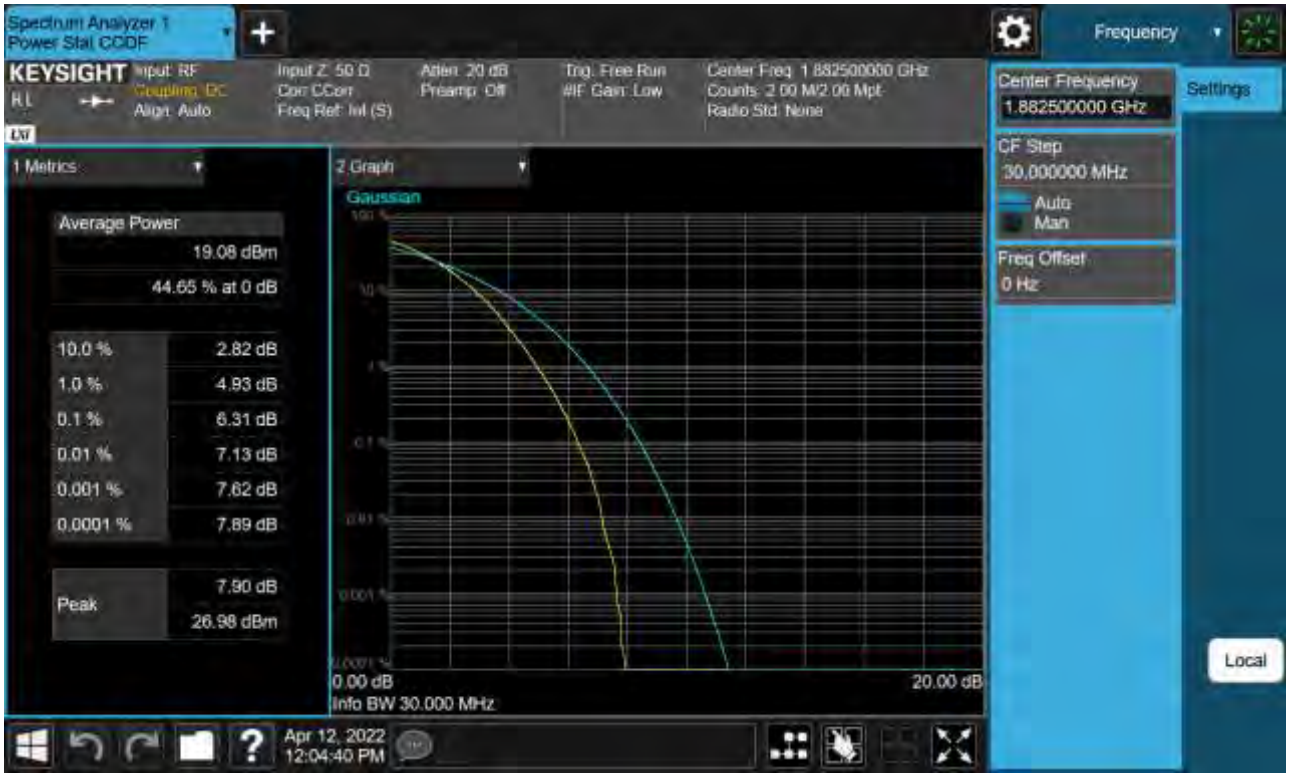
Sub6 n25. PAR Plot (30 M BW Ch.376500 QPSK_ Full RB _0)



Sub6 n25. PAR Plot (30 M BW Ch.376500 16QAM_ Full RB _0)

Sub6 n25. PAR Plot (30 M BW Ch.376500 64QAM_ Full RB _0)

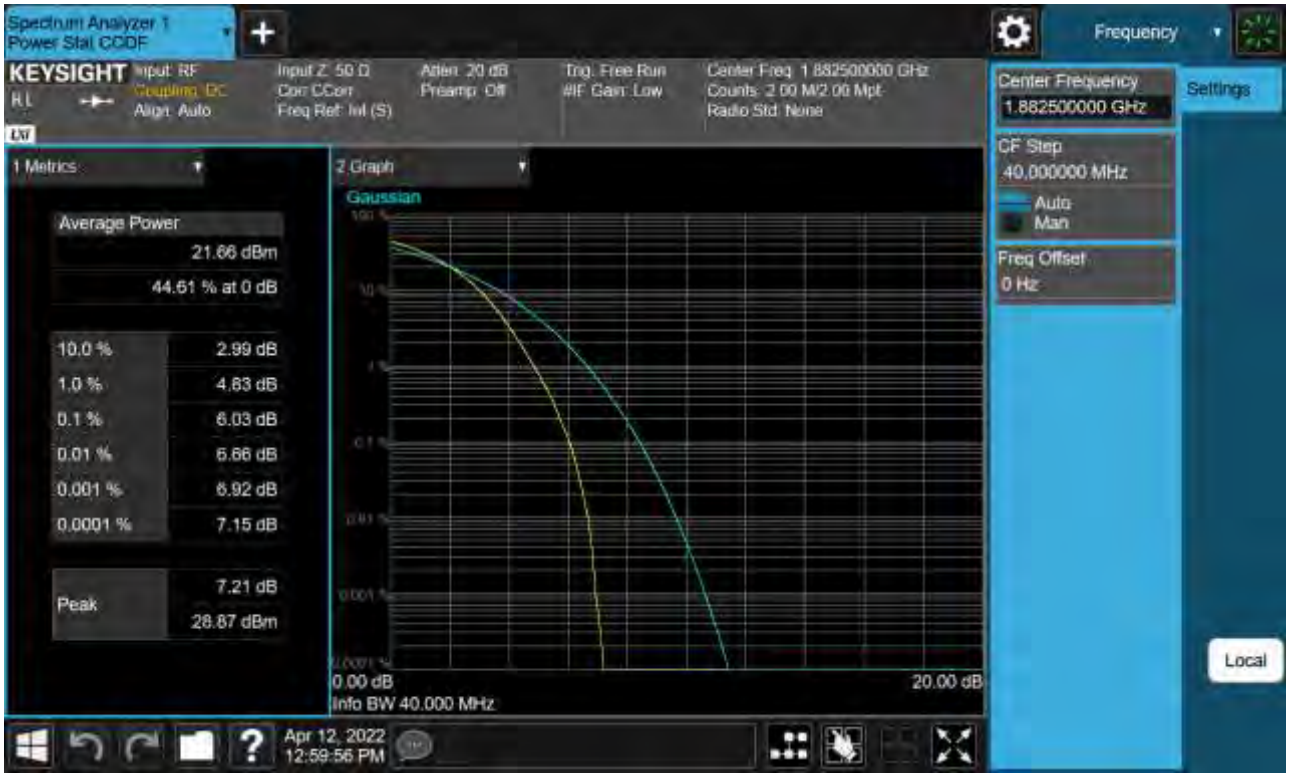
Sub6 n25. PAR Plot (30 M BW Ch.376500 256QAM_ Full RB _0)



Sub6 n25. PAR Plot (40 M BW Ch.376500 BPSK_ Full RB _0)

Sub6 n25. PAR Plot (40 M BW Ch.376500 QPSK_ Full RB _0)

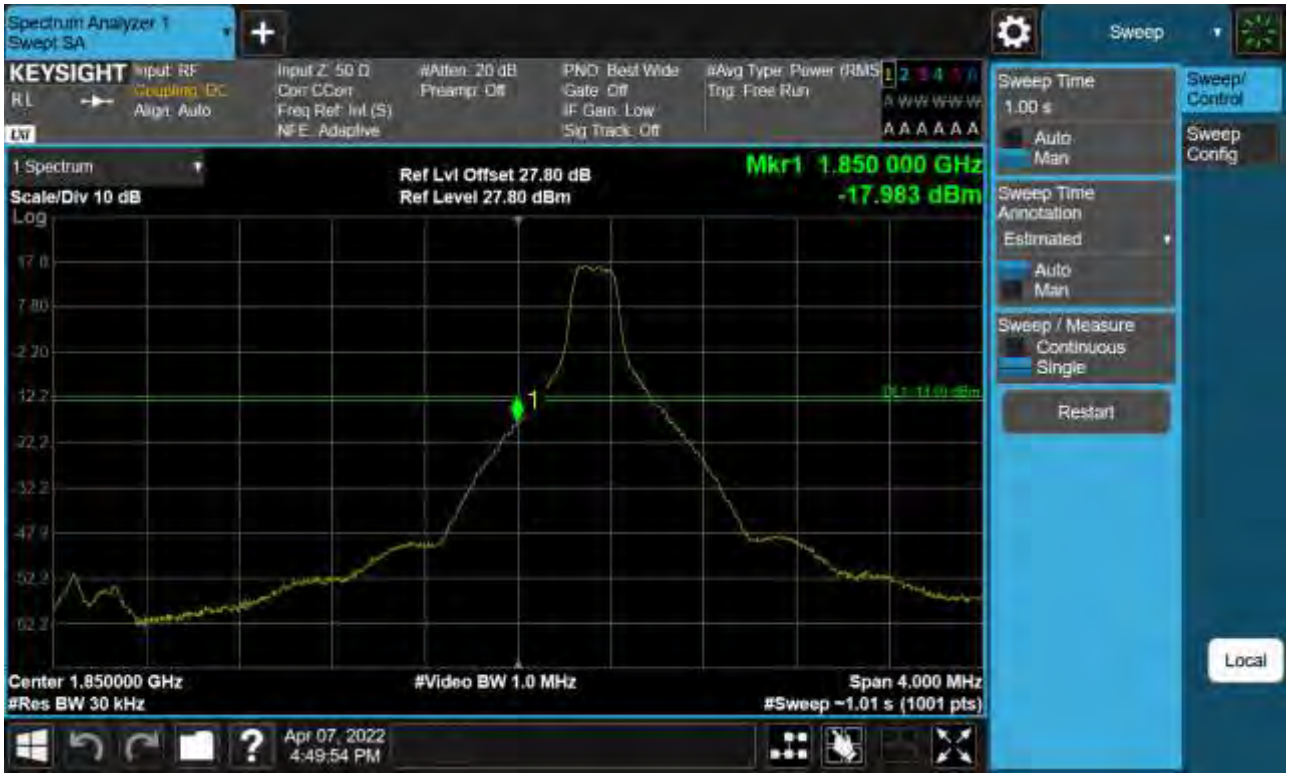
Sub6 n25. PAR Plot (40 M BW Ch.376500 16QAM_ Full RB _0)



Sub6 n25. PAR Plot (40 M BW Ch.376500 64QAM_ Full RB _0)

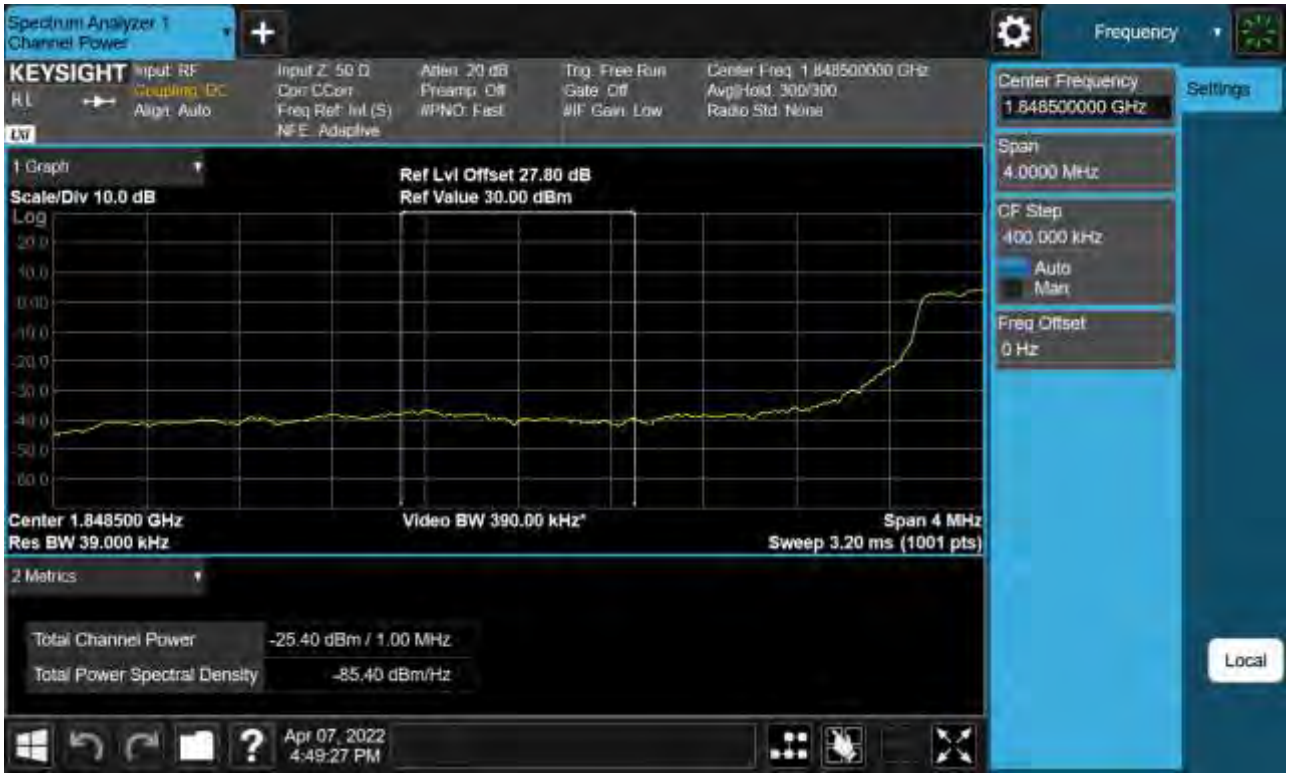
Sub6 n25. PAR Plot (40 M BW Ch.376500 256QAM_ Full RB _0)

Sub6 n25(2). Lower Band Edge Plot (5 M BW Ch.370500 BPSK_RB1_Offset 0)

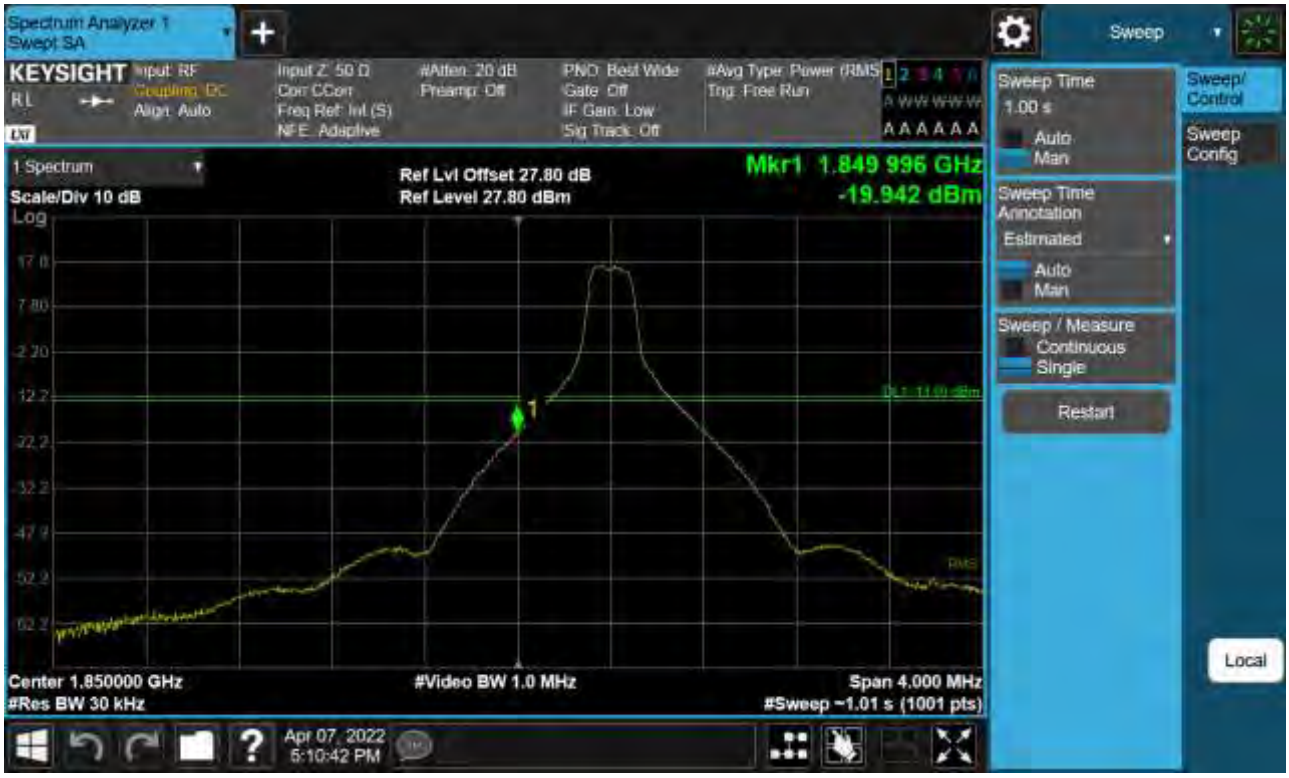


Sub6 n25(2). Lower Band Edge Plot (5 M BW Ch.370500 BPSK_RB25_Offset 0) -1

Sub6 n25(2). Lower Extended Band Edge Plot (5 M BW Ch.370500 BPSK_RB25_0) -2



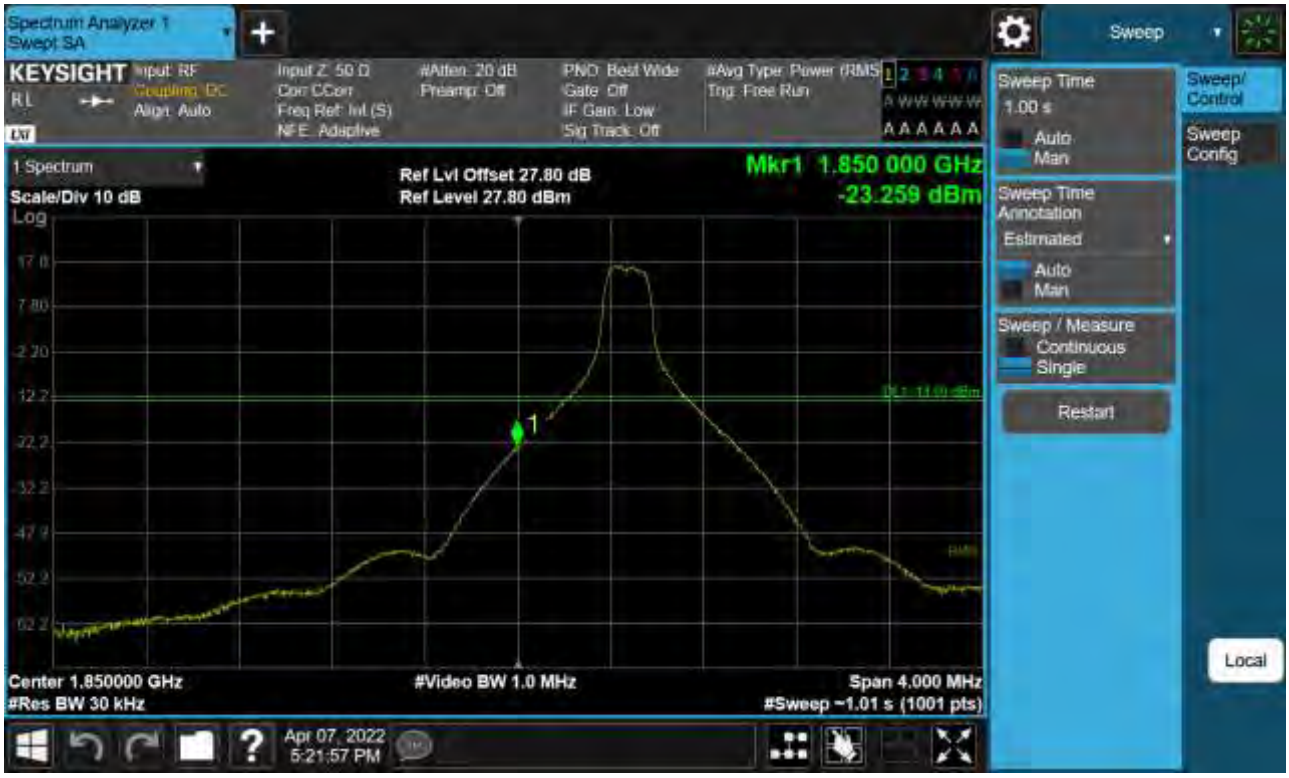
Sub6 n25(2). Lower Band Edge Plot (10 M BW Ch.371000 BPSK_RB1_Offset 0)



Sub6 n25(2). Lower Band Edge Plot (10 M BW Ch.371000 BPSK_RB50_Offset 0) -1

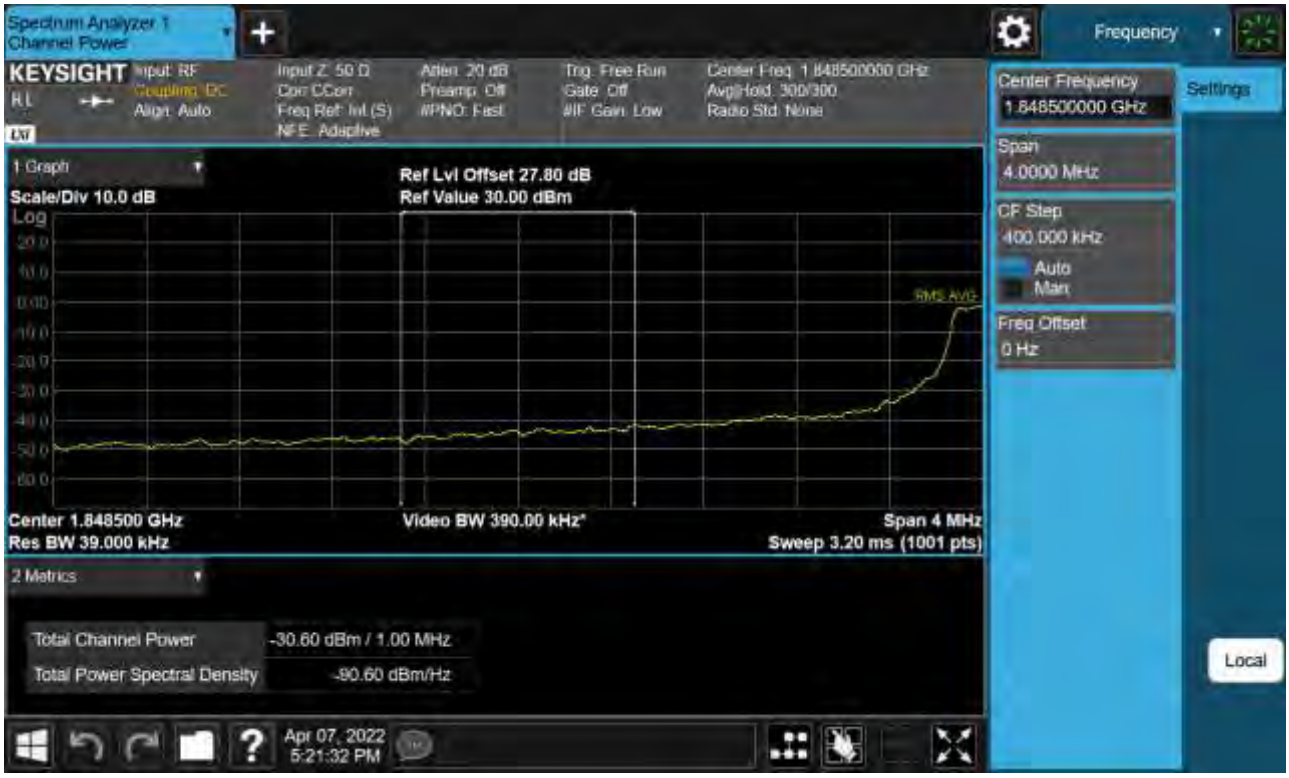
Sub6 n25(2). Lower Extended Band Edge Plot (10 M BW Ch.371000 BPSK_RB50_0) -2

Sub6 n25(2). Lower Band Edge Plot (15 M BW Ch.371500 BPSK_RB1_Offset 0)

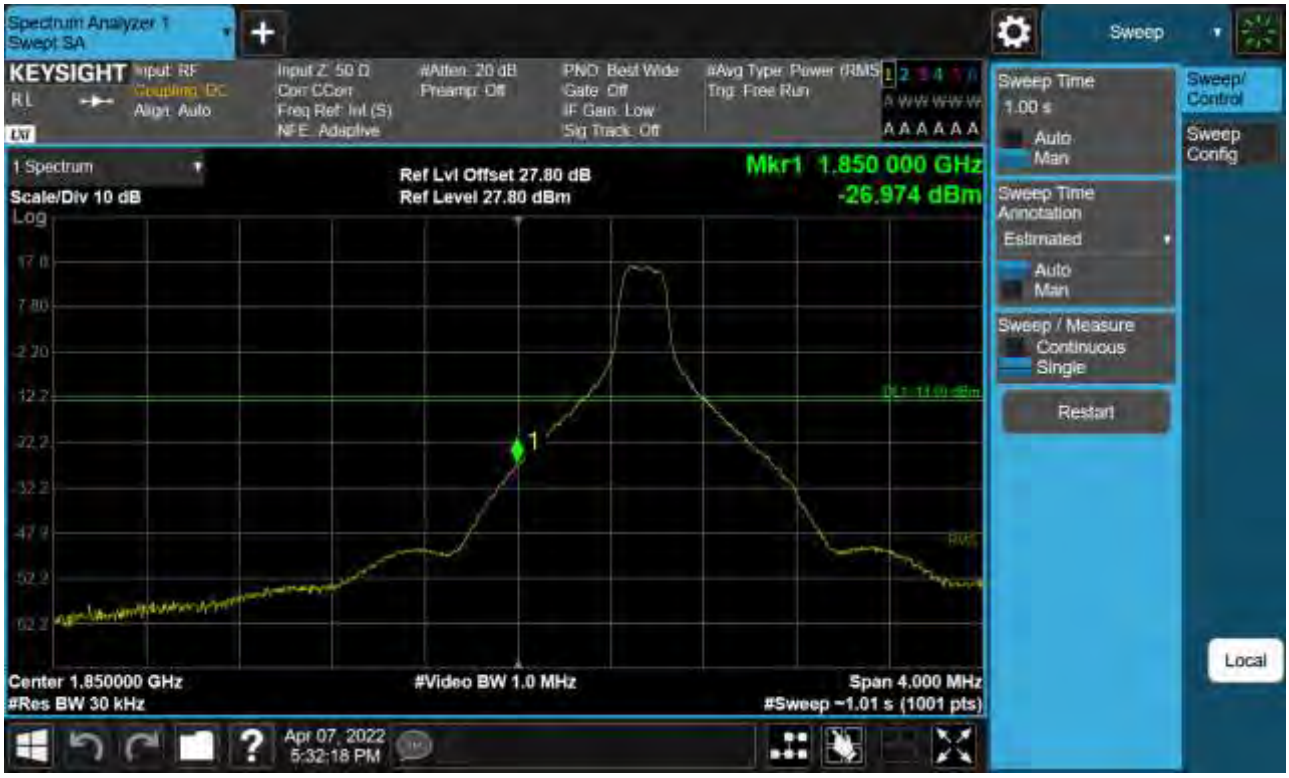


Sub6 n25(2). Lower Band Edge Plot (15 M BW Ch.371500 BPSK_RB75_Offset 0) -1

Sub6 n25(2). Lower Extended Band Edge Plot (15 M BW Ch.371500 BPSK_RB75_0) -2

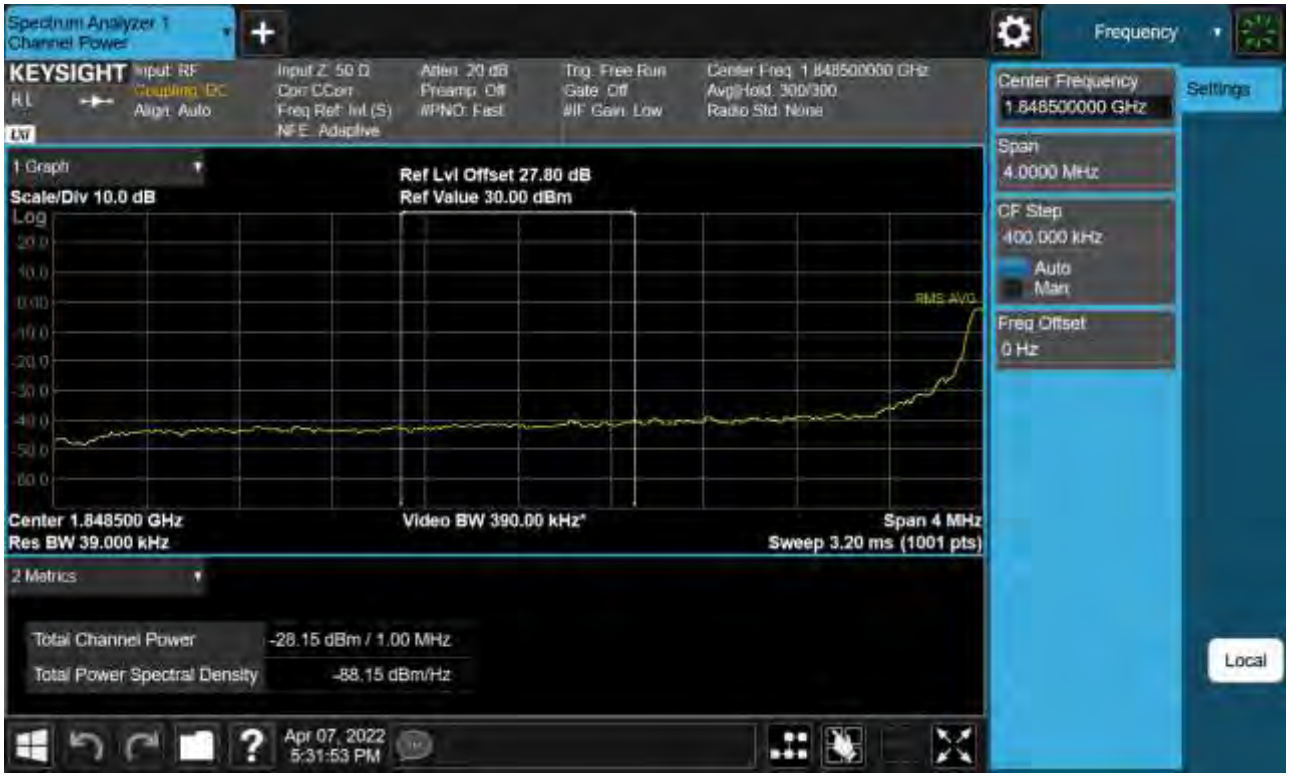


Sub6 n25(2). Lower Band Edge Plot (20 M BW Ch.372000 BPSK_RB1_Offset 0)



Sub6 n25(2). Lower Band Edge Plot (20 M BW Ch.372000 BPSK_RB100_Offset 0) -1

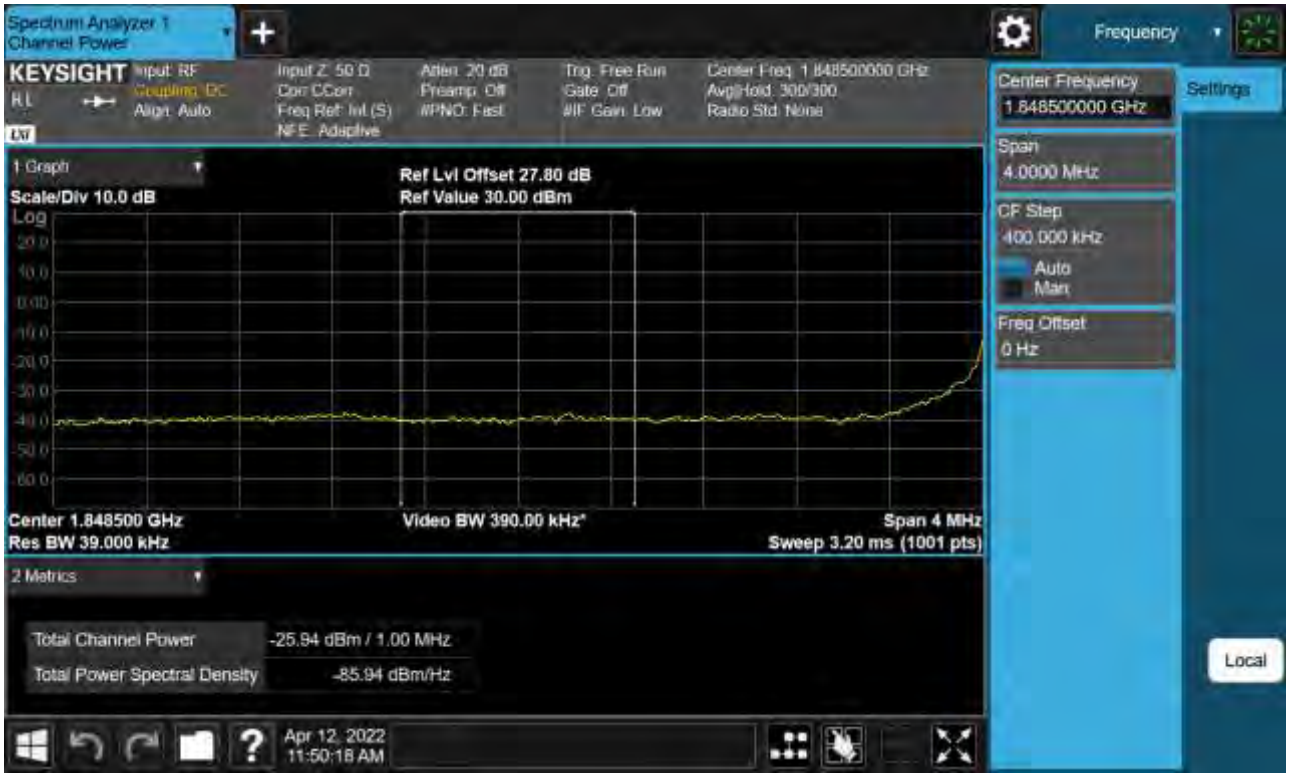
Sub6 n25(2). Lower Extended Band Edge Plot (20 M BW Ch.372000 BPSK_RB100_0) -2



Sub6 n25. Lower Band Edge Plot (25 M BW Ch.372500 BPSK_RB1_Offset 0)

Sub6 n25. Lower Band Edge Plot (25 M BW Ch.372500 BPSK_RB100_Offset 0) -1

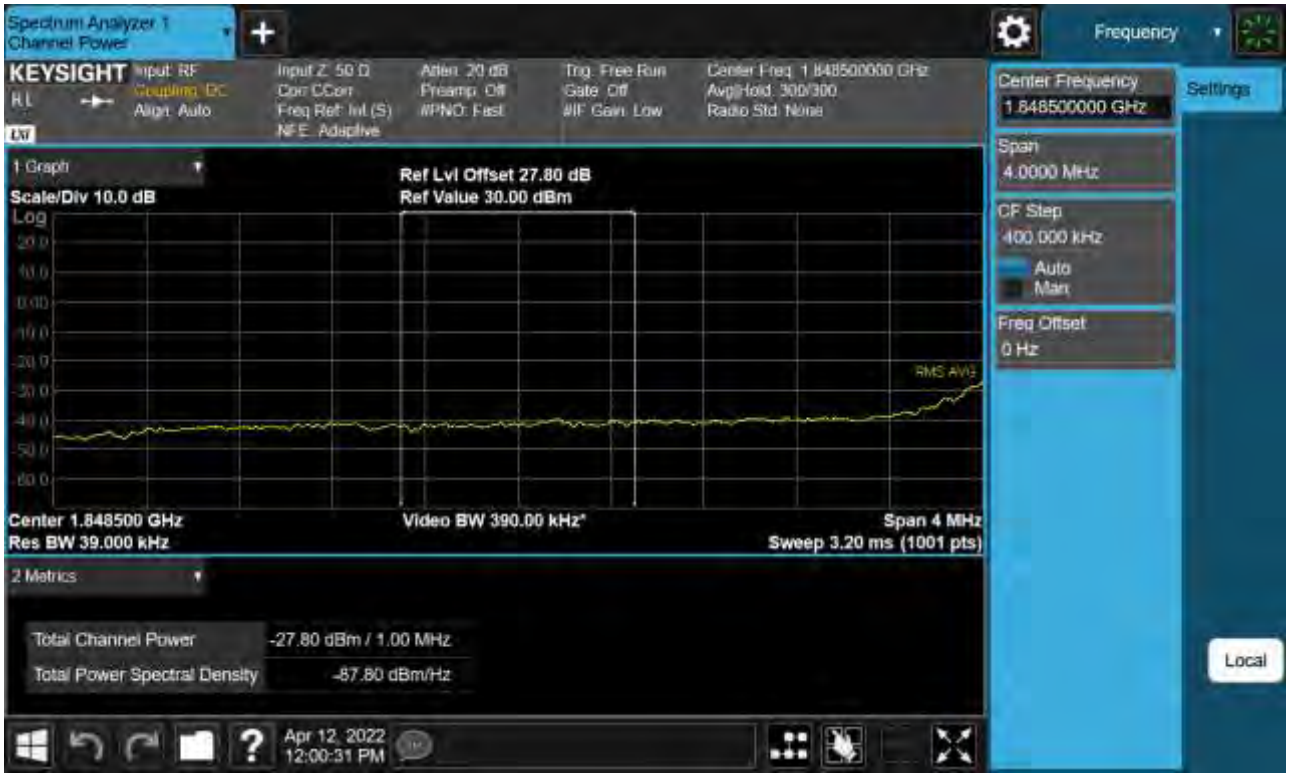
Sub6 n25. Lower Extended Band Edge Plot (25 M BW Ch.372500 BPSK_RB100_0) -2



Sub6 n25. Lower Band Edge Plot (30 M BW Ch.373000 BPSK_RB1_Offset 0)

Sub6 n25. Lower Band Edge Plot (30 M BW Ch.373000 BPSK_RB160_Offset 0) -1

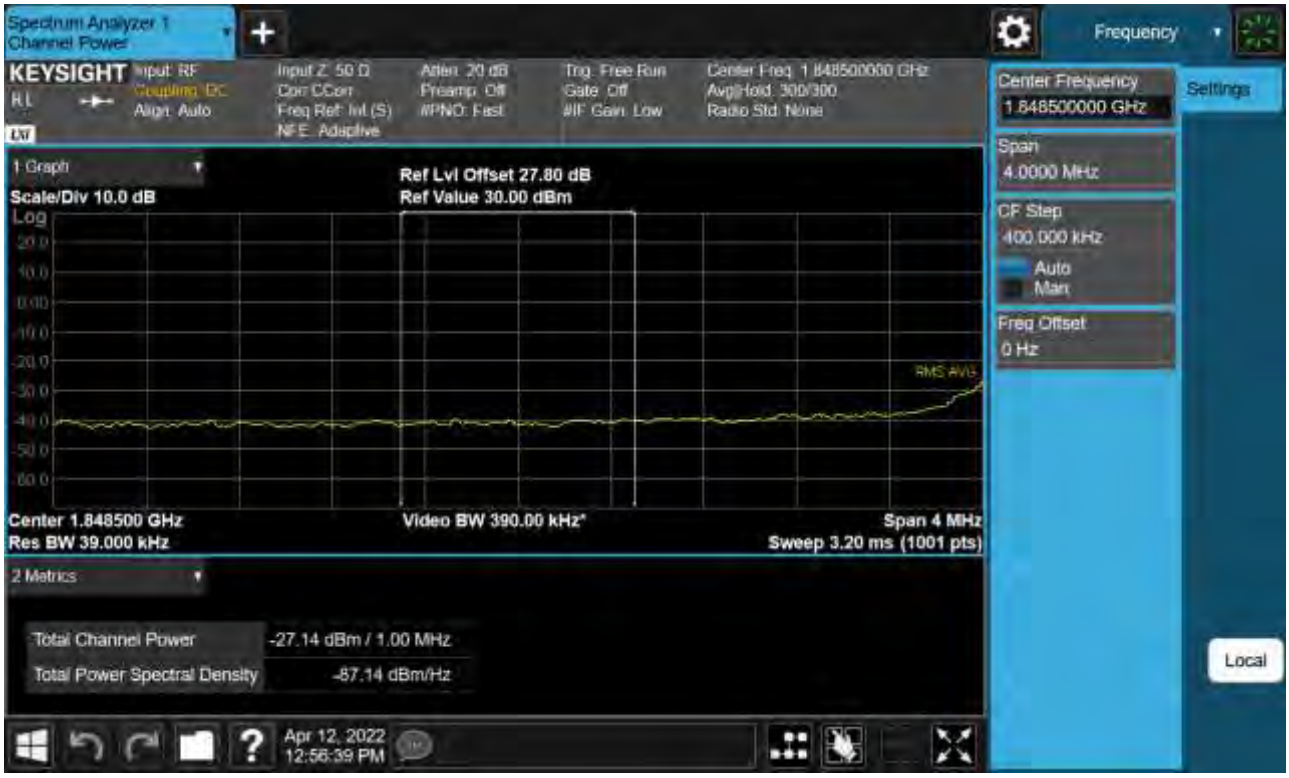
Sub6 n25. Lower Extended Band Edge Plot (30 M BW Ch.373000 BPSK_RB160_0) -2



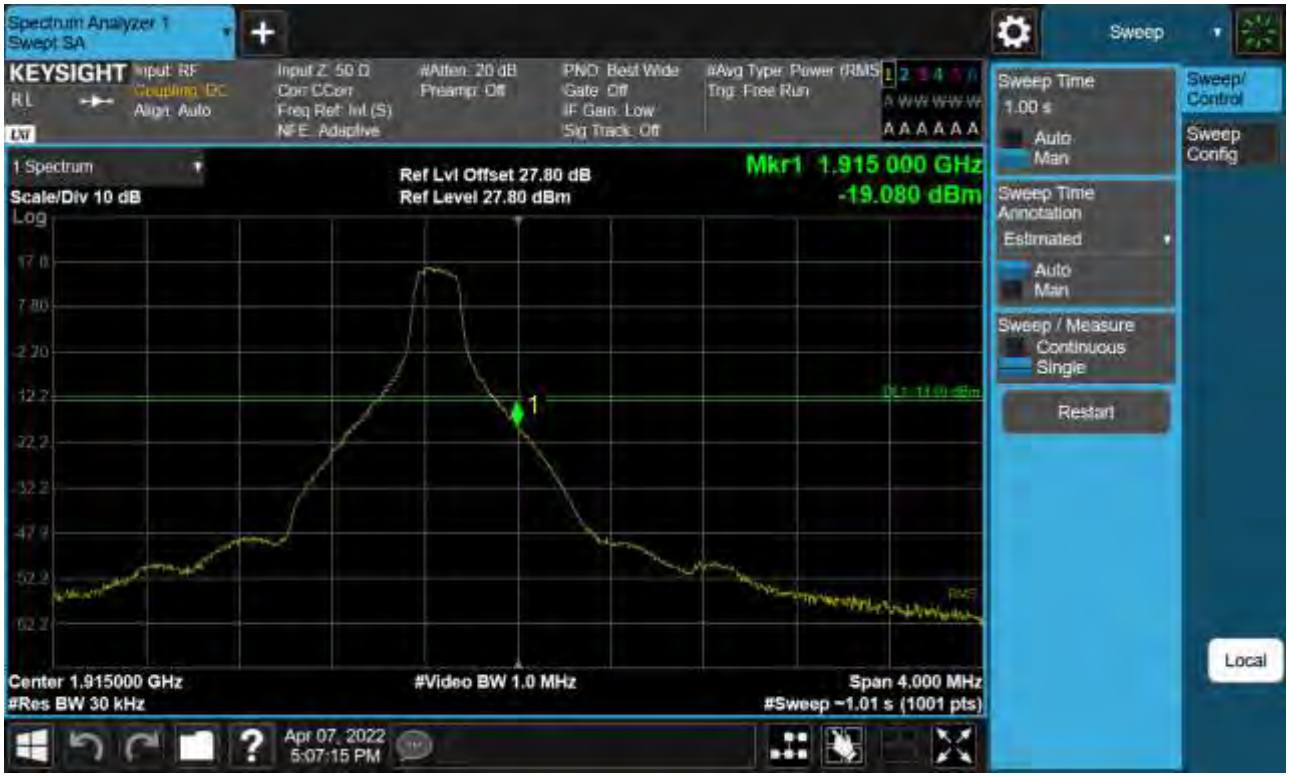
Sub6 n25. Lower Band Edge Plot (40 M BW Ch.374000 BPSK_RB1_Offset 0)

Sub6 n25. Lower Band Edge Plot (40 M BW Ch.374000 BPSK_RB216_Offset 0) -1

Sub6 n25. Lower Extended Band Edge Plot (40 M BW Ch.374000 BPSK_RB216_0) -2

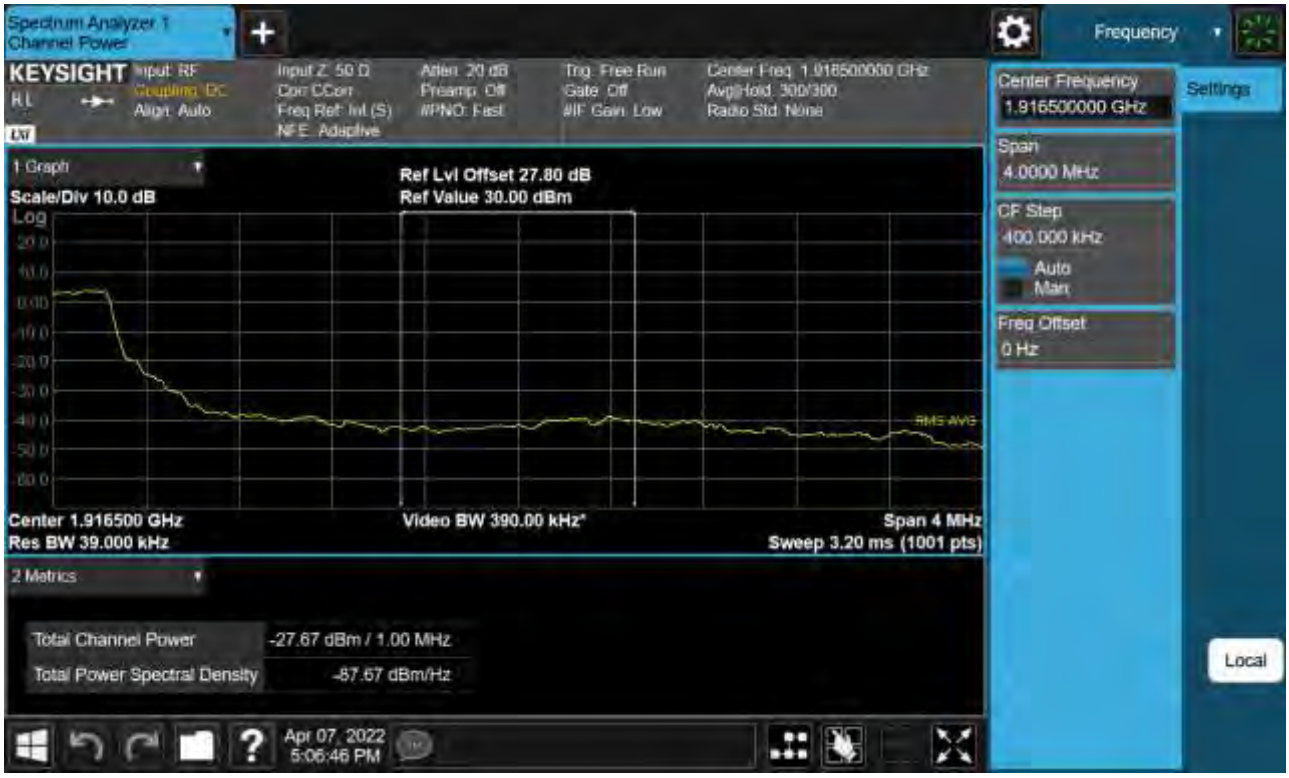


Sub6 n25(2). Upper Band Edge Plot (5 M BW Ch.382500 BPSK_RB1_Offset 24)

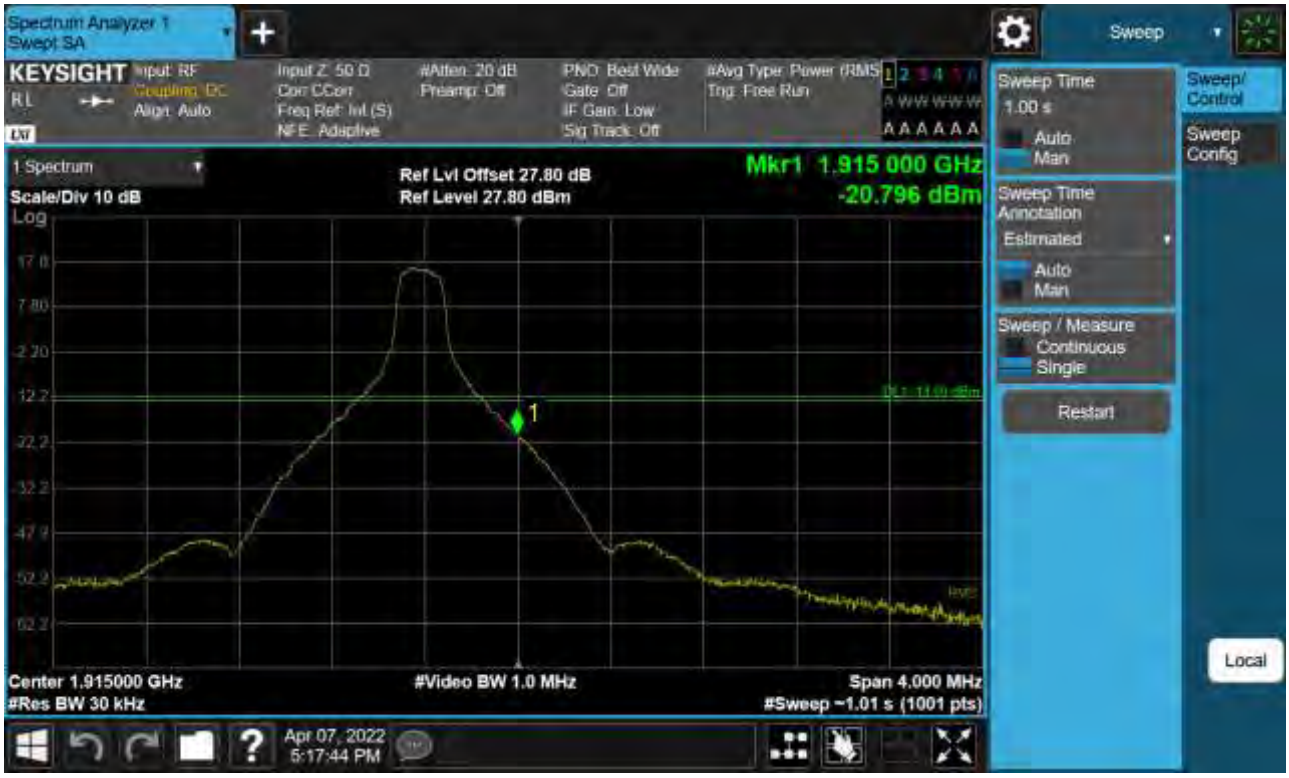


Sub6 n25(2). Upper Band Edge Plot (5 M BW Ch.382500 BPSK_RB25_Offset 0) -1

Sub6 n25(2). Upper Extended Band Edge Plot (5 M BW Ch.382500 BPSK_RB25_0) -2

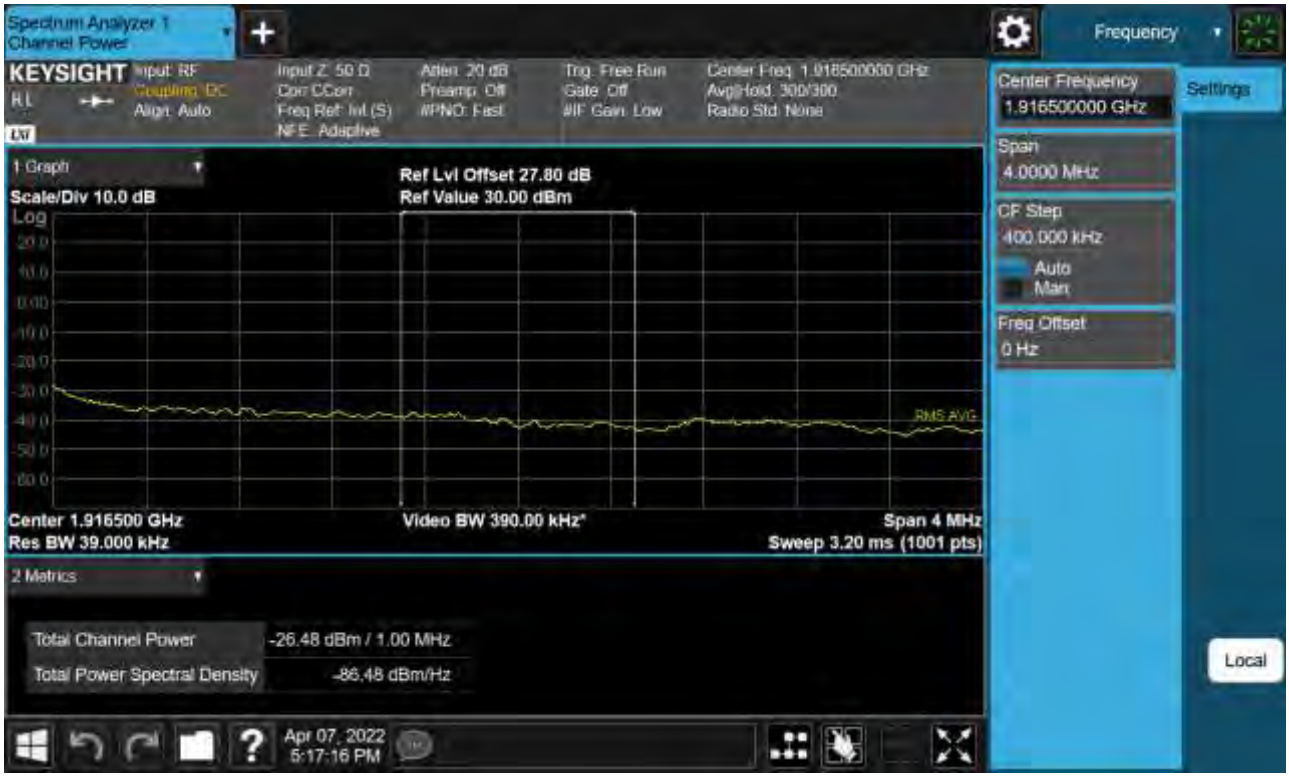


Sub6 n25(2). Upper Band Edge Plot (10 M BW Ch.382000 BPSK_RB1_Offset 49)

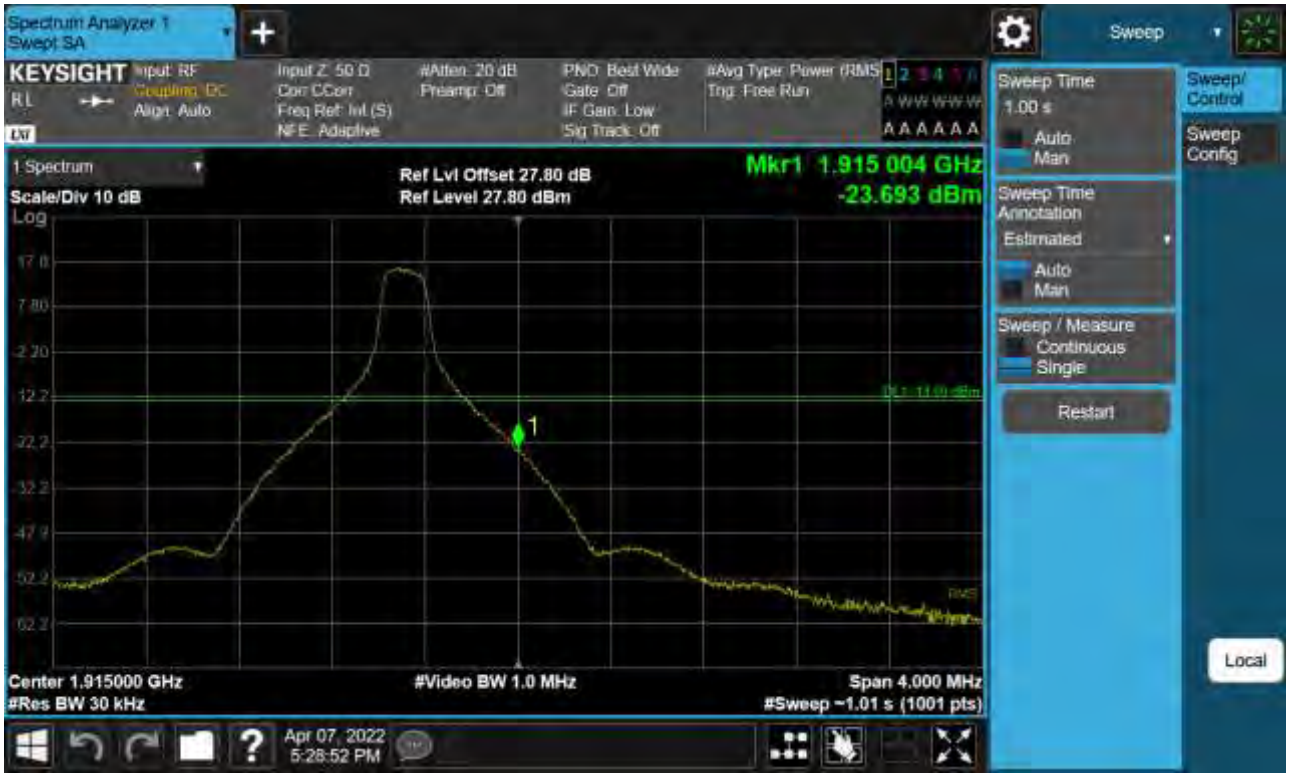


Sub6 n25(2). Upper Band Edge Plot (10 M BW Ch.382000 BPSK_RB50_Offset 0) -1

Sub6 n25(2). Upper Extended Band Edge Plot (10 M BW Ch.382000 BPSK_RB50_0) -2



Sub6 n25(2). Upper Band Edge Plot (15 M BW Ch.381500 BPSK_RB1_Offset 74)



Sub6 n25(2). Upper Band Edge Plot (15 M BW Ch.381500 BPSK_RB75_Offset 0) -1

Sub6 n25(2). Upper Extended Band Edge Plot (15 M BW Ch.381500 BPSK_RB75_0) -2

Sub6 n25(2). Upper Band Edge Plot (20 M BW Ch.381000 BPSK_RB1_Offset 99)

Sub6 n25(2). Upper Band Edge Plot (20 M BW Ch.381000 BPSK_RB100_Offset 0) -1

Sub6 n25(2). Upper Extended Band Edge Plot (20 M BW Ch.381000 BPSK_RB100_0) -2

Sub6 n25. Upper Band Edge Plot (25 M BW Ch.380500 BPSK_RB1_Offset 99)

Sub6 n25. Upper Band Edge Plot (25 M BW Ch.380500 BPSK_RB100_Offset 0) -1

Sub6 n25. Upper Extended Band Edge Plot (25 M BW Ch.380500 BPSK_RB100_0) -2

Sub6 n25. Upper Band Edge Plot (30 M BW Ch.380000 BPSK_RB1_Offset 159)

Sub6 n25. Upper Band Edge Plot (30 M BW Ch.380000 BPSK_RB160_Offset 0) -1

Sub6 n25. Upper Extended Band Edge Plot (30 M BW Ch.380000 BPSK_RB160_0) -2

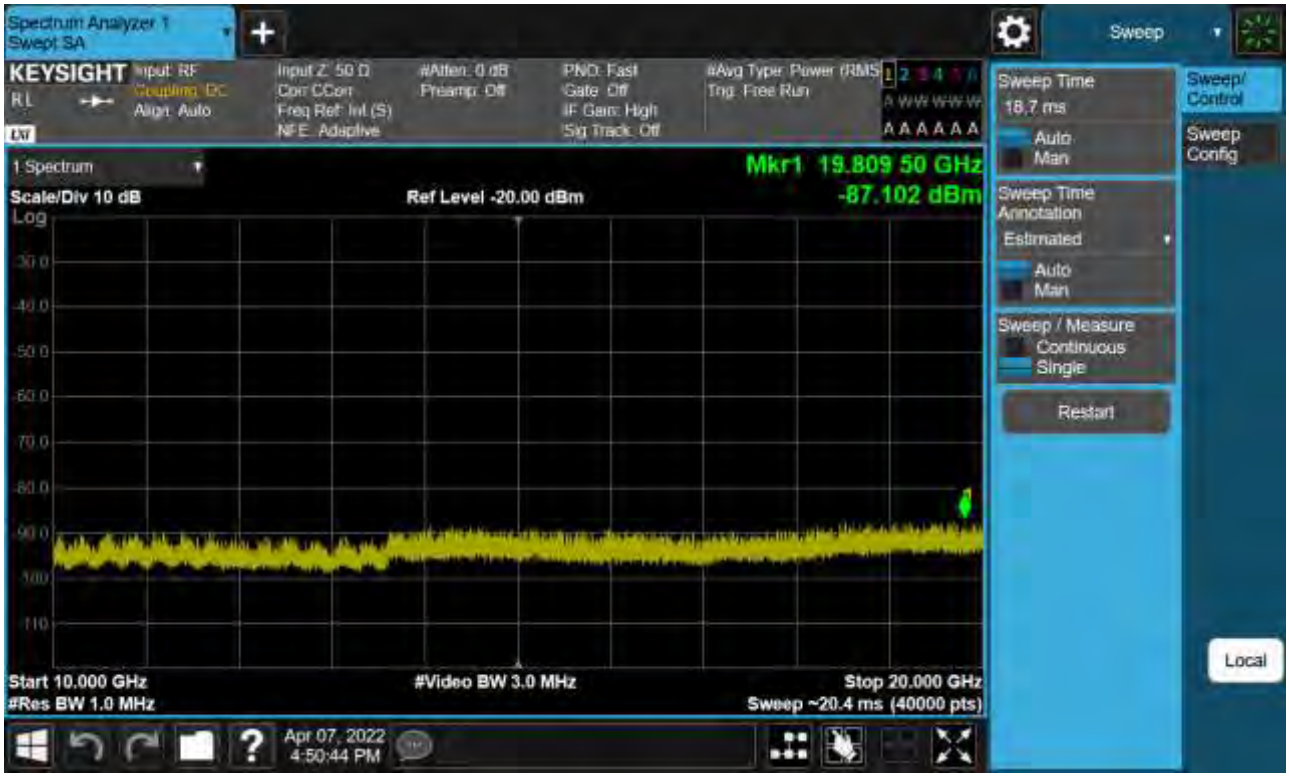
Sub6 n25. Upper Band Edge Plot (40 M BW Ch.379000 BPSK_RB1_Offset 215)

Sub6 n25. Upper Band Edge Plot (40 M BW Ch.379000 BPSK_RB216_Offset 0) -1

Sub6 n25. Upper Extended Band Edge Plot (40 M BW Ch.379000 BPSK_RB216_0) -2

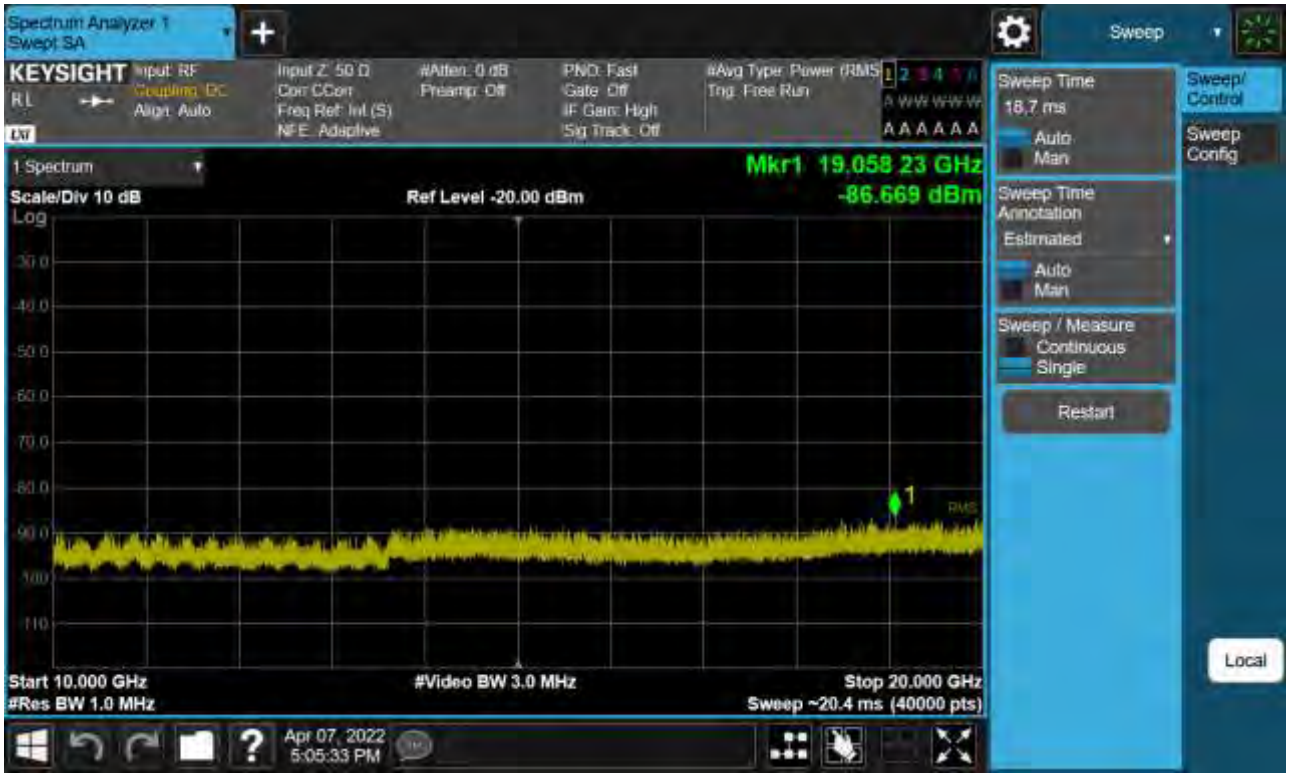
Sub6 n25(2). Conducted Spurious_1 (370500ch_5 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (370500ch_5 MHz_BPSK_RB 1_1)



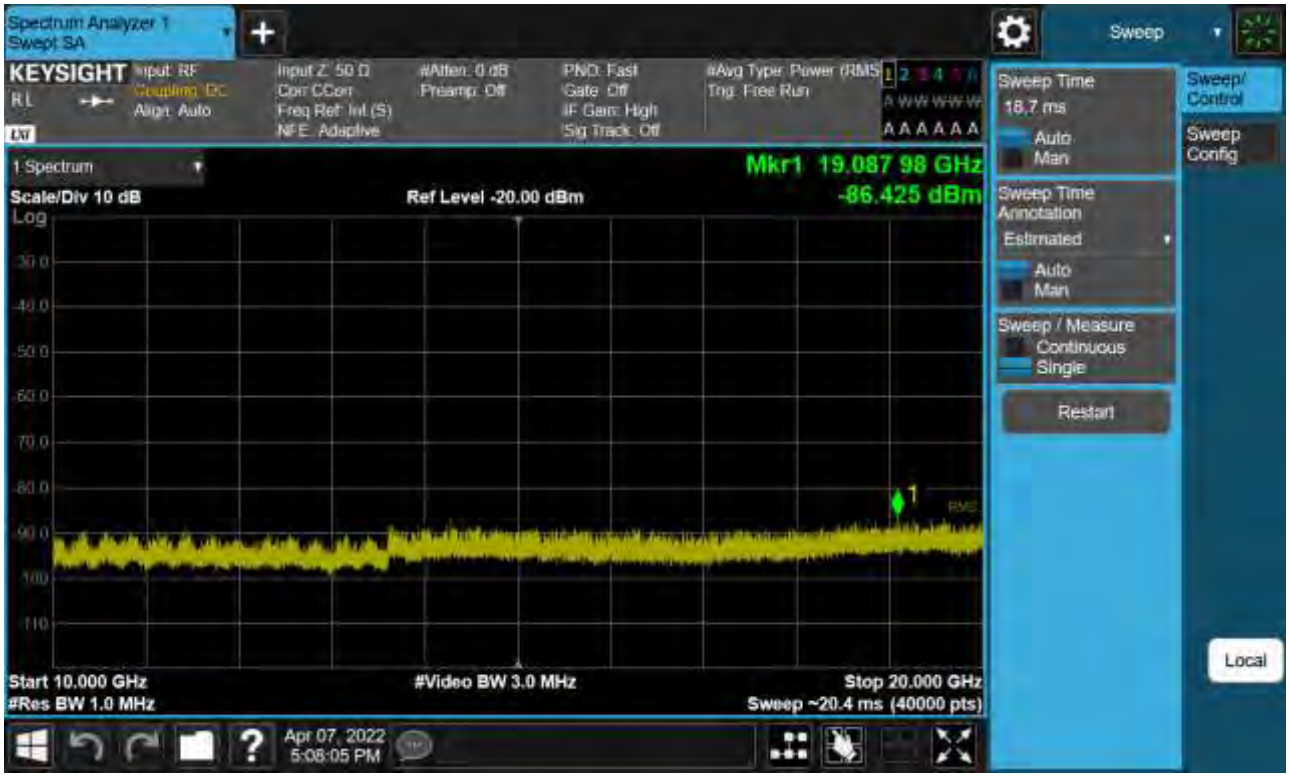
Sub6 n25(2). Conducted Spurious_1 (376500ch_5 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (376500ch_5 MHz_BPSK_RB 1_1)



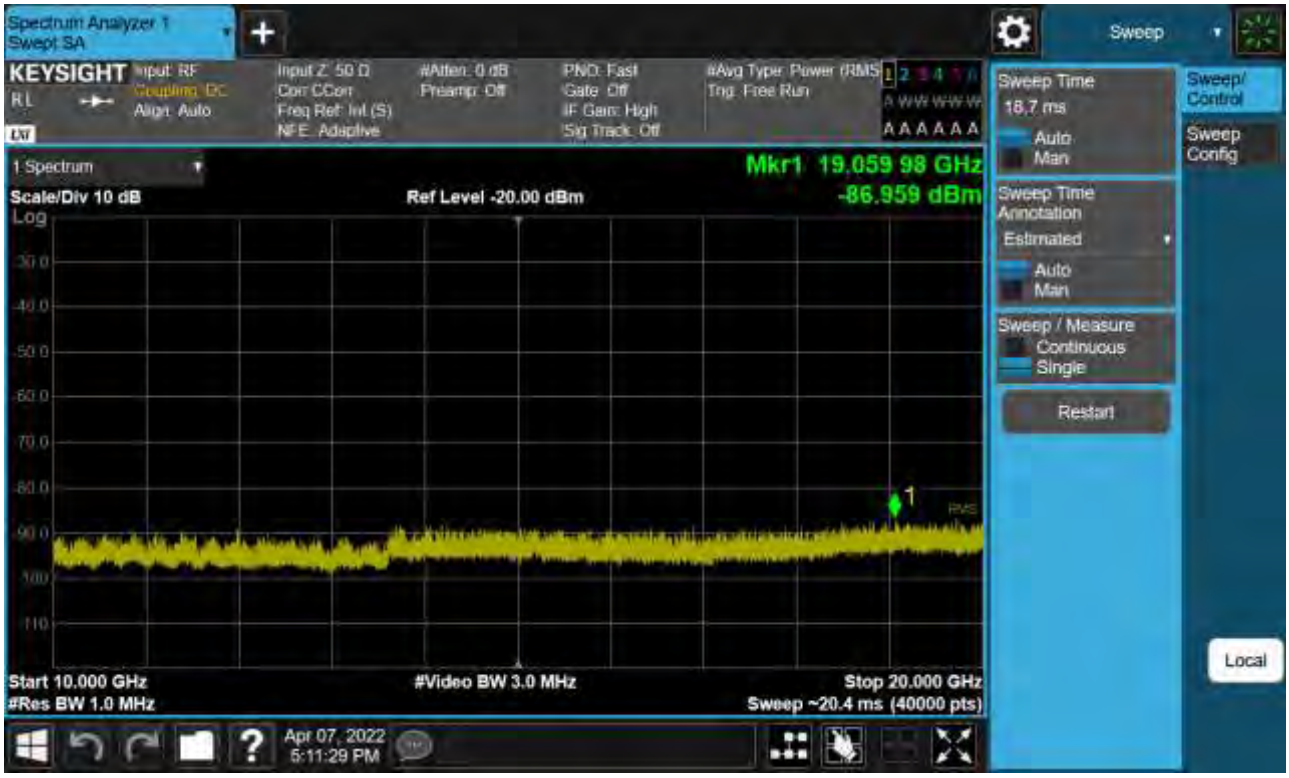
Sub6 n25(2). Conducted Spurious_1 (382500ch_5 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (382500ch_5 MHz_BPSK_RB 1_1)



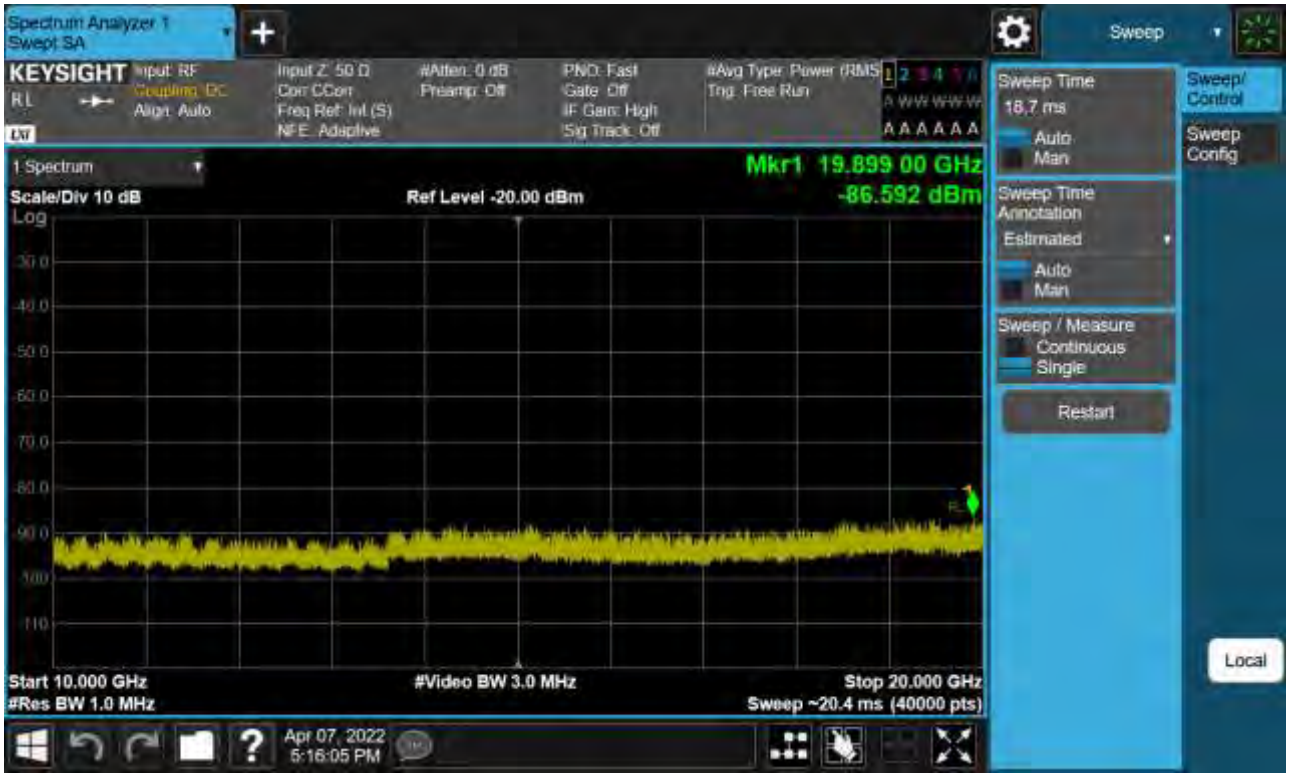
Sub6 n25(2). Conducted Spurious_1 (371000ch_10 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (371000ch_10 MHz_BPSK_RB 1_1)



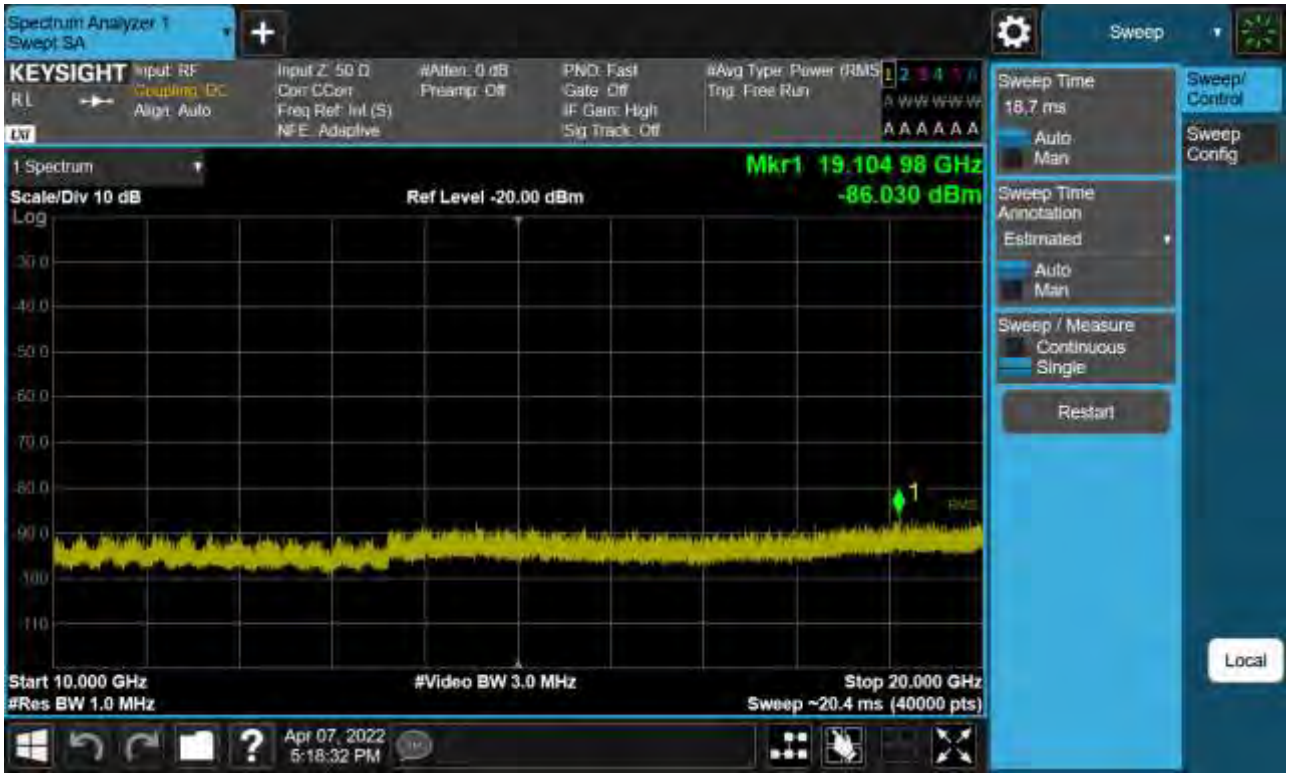
Sub6 n25(2). Conducted Spurious_1 (376500ch_10 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (376500ch_10 MHz_BPSK_RB 1_1)



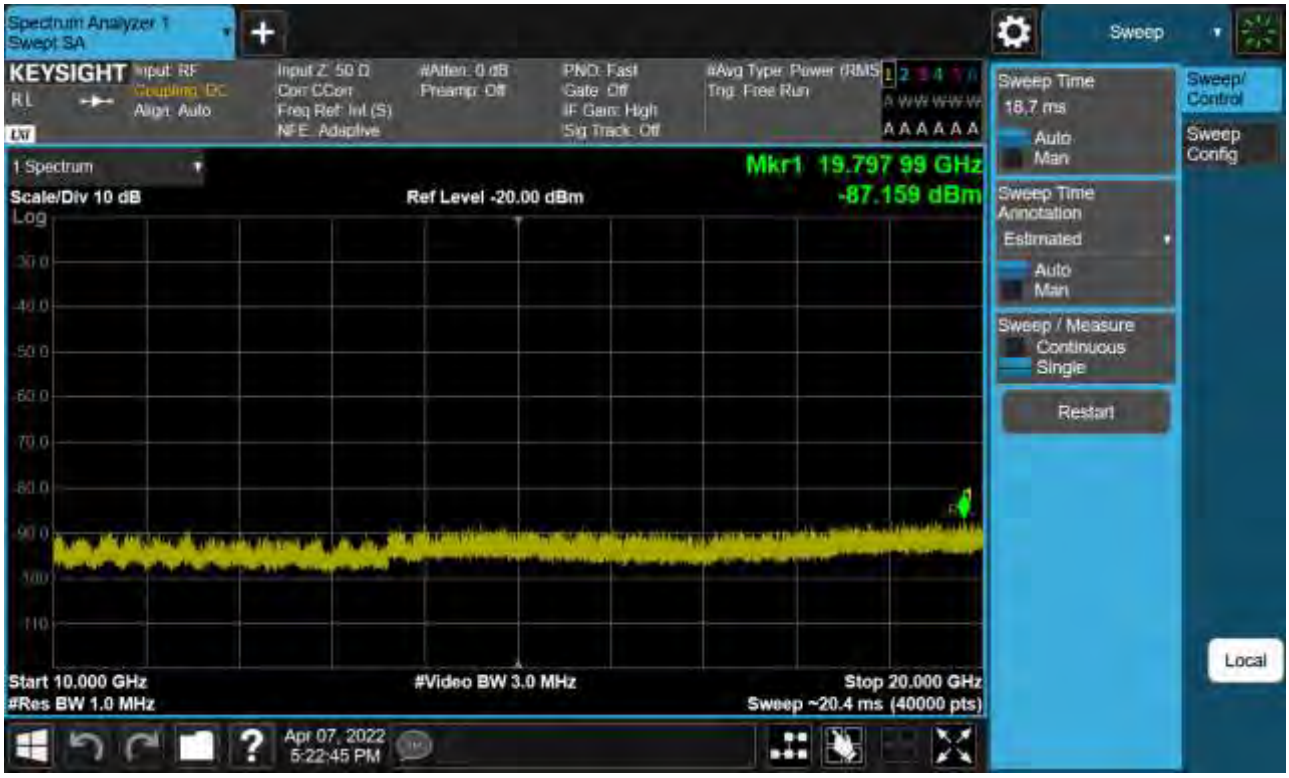
Sub6 n25(2). Conducted Spurious_1 (382000ch_10 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (382000ch_10 MHz_BPSK_RB 1_1)



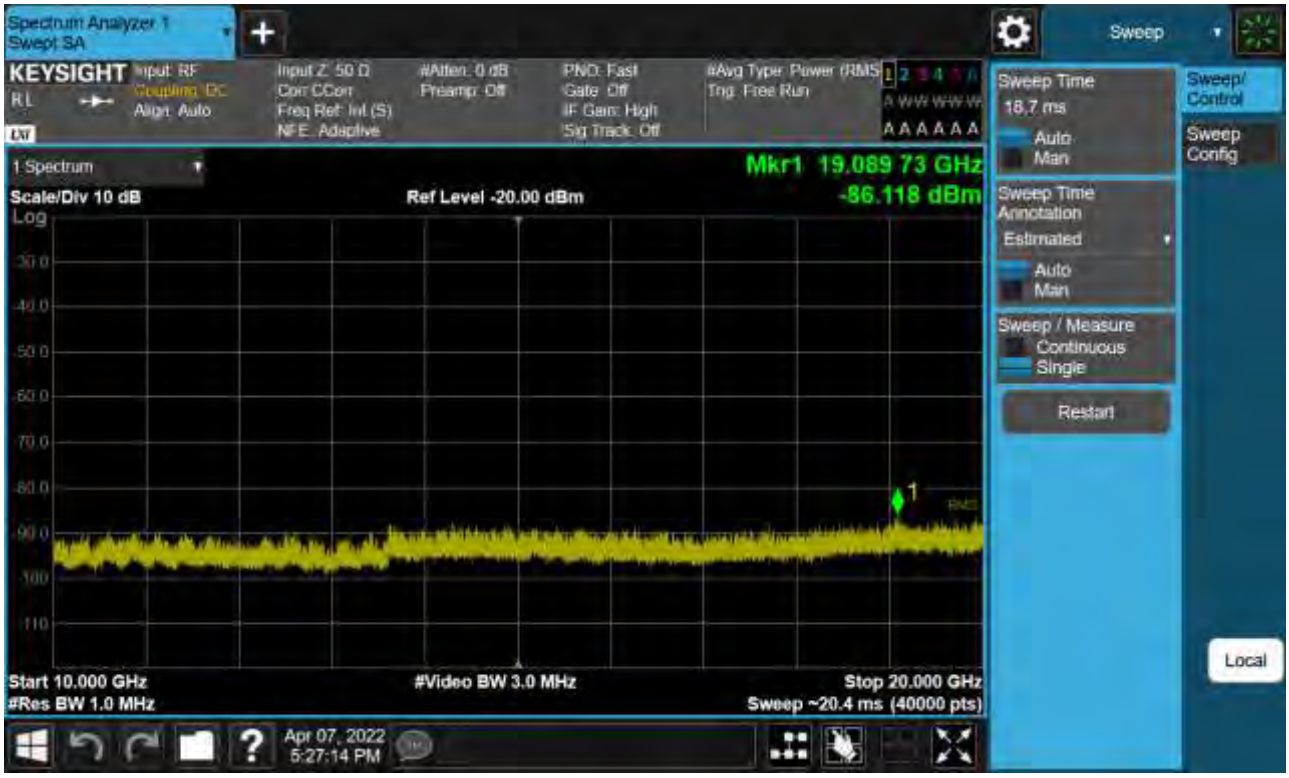
Sub6 n25(2). Conducted Spurious_1 (371500ch_15 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (371500ch_15 MHz_BPSK_RB 1_1)



Sub6 n25(2). Conducted Spurious_1 (376500ch_15 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (376500ch_15 MHz_BPSK_RB 1_1)



Sub6 n25(2). Conducted Spurious_1 (381500ch_15 MHz_BPSK_RB 1_1)

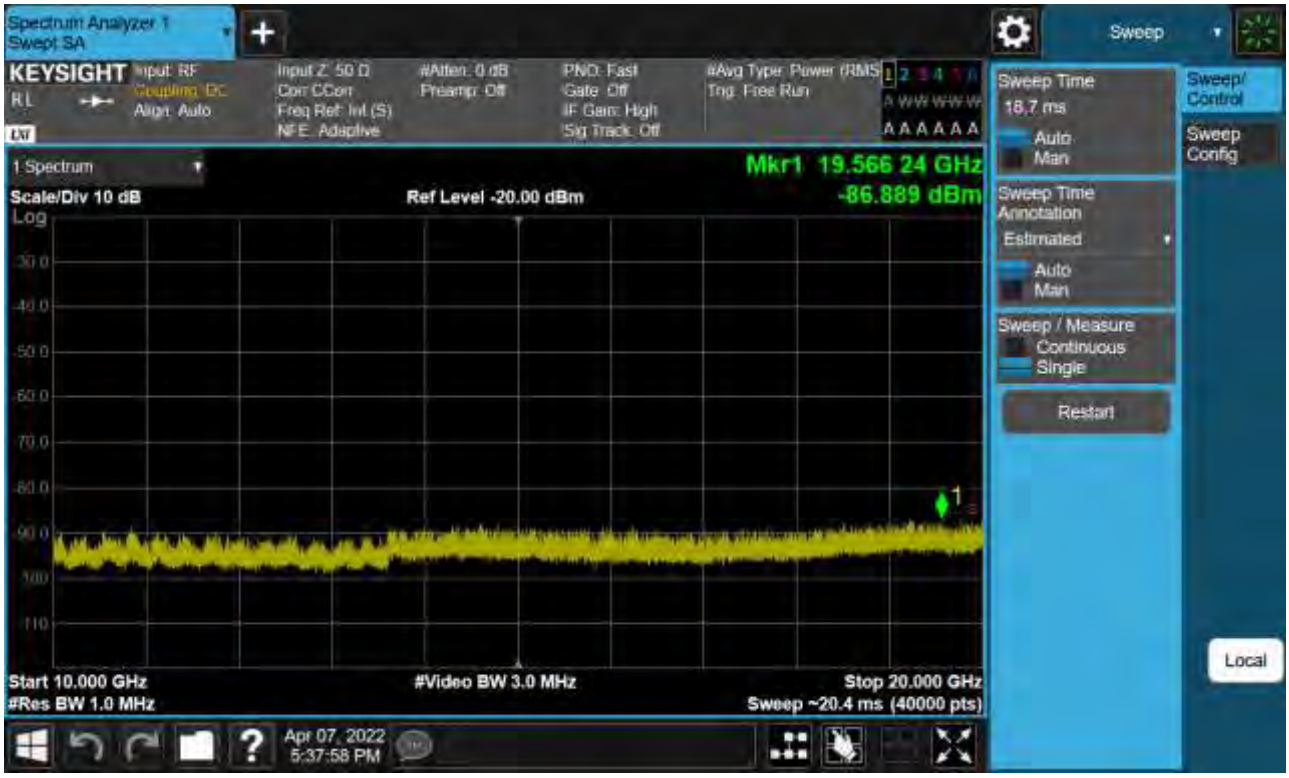
Sub6 n25(2). Conducted Spurious_2 (381500ch_15 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_1 (372000ch_20 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (372000ch_20 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_1 (376500ch_20 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (376500ch_20 MHz_BPSK_RB 1_1)



Sub6 n25(2). Conducted Spurious_1 (381000ch_20 MHz_BPSK_RB 1_1)

Sub6 n25(2). Conducted Spurious_2 (381000ch_20 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (372500ch_25 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (372500ch_25 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (376500ch_25 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (376500ch_25 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (380500ch_25 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (380500ch_25 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (373000ch_30 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (373000ch_30 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (376500ch_30 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (376500ch_30 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (380000ch_30 MHz_BPSK_RB 1_1)

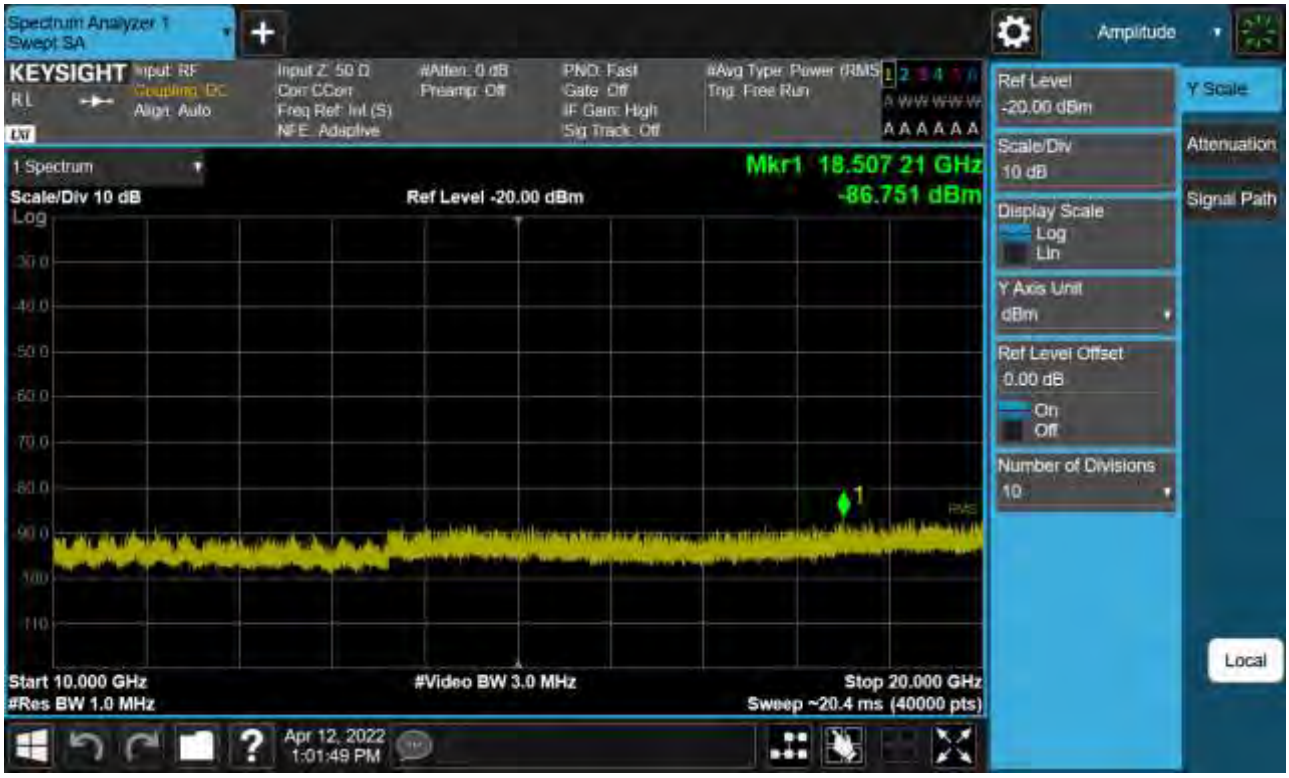
Sub6 n25. Conducted Spurious_2 (380000ch_30 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (374000ch_40 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (374000ch_40 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_1 (376500ch_40 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (376500ch_40 MHz_BPSK_RB 1_1)



Sub6 n25. Conducted Spurious_1 (379000ch_40 MHz_BPSK_RB 1_1)

Sub6 n25. Conducted Spurious_2 (379000ch_40 MHz_BPSK_RB 1_1)

10. APPENDIX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2205-FC068-P