ELEMENT WASHINGTON DC LLC
7185 Oakland Mills Road, Columbia, MD 21046 USA
Tel. 410.290.6652 / Fax 410.290.6654
http://www.element.com

PART 24 MEASUREMENT REPORT

Applicant Name:
Samsung Electronics Co., Ltd.
129, Samsung-ro,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:
9/12/2022 - 11/08/2022
Test Report Issue Date:
11/15/2022
Test Site/Location:
Element lab., Columbia, MD, USA
Test Report Serial No.:
1M2209010098-06.A3L

FCC ID:	**A3LSMS918U**
Applicant Name:	**Samsung Electronics Co., Ltd.**

Application Type:	Certification
Model:	SM-S918U
Additional Model(s):	SM-S918U1
EUT Type:	Portable Handset
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part:	24
Test Procedure(s):	ANSI C63.26-2015, KDB 648474 D03 v01r04

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

RJ Ortanez
Executive Vice President

ACCREDITED
CERT #2041.01

TABLE OF CONTENTS

PART 24 MEASUREMENT REPORT

Antenna A						
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
GSM/GPRS	N/A	GMSK	1850.2 - 1909.8	0.891	29.50	244KGXW
EDGE	N/A	8-PSK	1850.2 - 1909.8	0.340	25.31	241KG7W
WCDMA	N/A	Spread Spectrum	1852.4 - 1907.6	0.205	23.12	4M16F9W
LTE Band 25/2	20 MHz	QPSK	1860 - 1905	0.135	21.32	18M0G7D
		16QAM	1860 - 1905	0.126	21.00	18M0W7D
	15 MHz	QPSK	1857.5 - 1907.5	0.132	21.19	13M6G7D
		16QAM	1857.5 - 1907.5	0.127	21.05	13M5W7D
	10 MHz	QPSK	1855 - 1910	0.142	21.53	9M03G7D
		16QAM	1855 - 1910	0.137	21.37	9M04W7D
	5 MHz	QPSK	1852.5 - 1912.5	0.144	21.59	4M53G7D
		16QAM	1852.5 - 1912.5	0.136	21.33	4M53W7D
	3 MHz	QPSK	1851.5 - 1913.5	0.141	21.48	2M73G7D
		16QAM	1851.5 - 1913.5	0.133	21.25	2M72W7D
	1.4 MHz	QPSK	1850.7 - 1914.3	0.142	21.51	1M11G7D
		16QAM	1850.7 - 1914.3	0.132	21.21	1M11W7D
NR Band n25/2	40 MHz	π/2 BPSK	1870 - 1895	0.243	23.86	38M8G7D
		QPSK	1870 - 1895	0.241	23.82	38M7G7D
		16QAM	1870 - 1895	0.203	23.08	38M8W7D
	30 MHz	π/2 BPSK	1865 - 1900	0.245	23.89	28M8G7D
		QPSK	1865 - 1900	0.241	23.83	28M7G7D
		16QAM	1865 - 1900	0.202	23.05	28M7W7D
	25 MHz	π/2 BPSK	1862.5 - 1902.5	0.235	23.72	23M0G7D
		QPSK	1862.5 - 1902.5	0.232	23.65	23M9G7D
		16QAM	1862.5 - 1902.5	0.192	22.83	23M8W7D
	20 MHz	π/2 BPSK	1860 - 1905	0.236	23.74	18M0G7D
		QPSK	1860 - 1905	0.234	23.68	19M0G7D
		16QAM	1860 - 1905	0.194	22.89	19M0W7D
	15 MHz	π/2 BPSK	1857.5 - 1907.5	0.248	23.95	13M5G7D
		QPSK	1857.5 - 1907.5	0.231	23.63	14M2G7D
		16QAM	1857.5 - 1907.5	0.190	22.79	14M1W7D
	10 MHz	π/2 BPSK	1855 - 1910	0.236	23.73	9M02G7D
		QPSK	1855 - 1910	0.227	23.57	9M34G7D
		16QAM	1855 - 1910	0.192	22.84	9M36W7D
	5 MHz	π/2 BPSK	1852.5 - 1912.5	0.242	23.84	4M51G7D
		QPSK	1852.5 - 1912.5	0.234	23.69	4M51G7D
		16QAM	1852.5 - 1912.5	0.189	22.77	4M51W7D

Antenna F						
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
LTE Band 25/2	20 MHz	QPSK	1860 - 1905	0.073	18.61	18M0G7D
		16QAM	1860 - 1905	0.063	18.01	18M1W7D
	15 MHz	QPSK	1857.5 - 1907.5	0.070	18.43	13M6G7D
		16QAM	1857.5 - 1907.5	0.060	17.78	13M5W7D
	10 MHz	QPSK	1855 - 1910	0.074	18.70	9M07G7D
		16QAM	1855 - 1910	0.063	17.99	9M04W7D
	5 MHz	QPSK	1852.5 - 1912.5	0.074	18.71	4M53G7D
		16QAM	1852.5 - 1912.5	0.073	18.64	4M53W7D
	3 MHz	QPSK	1851.5 - 1913.5	0.072	18.58	2M71G7D
		16QAM	1851.5 - 1913.5	0.062	17.90	2M73W7D
	1.4 MHz	QPSK	1850.7 - 1914.3	0.072	18.56	1M11G7D
		16QAM	1850.7 - 1914.3	0.065	18.13	1M11W7D
NR Band n25/2	40 MHz	π/2 BPSK	1870 - 1895	0.171	22.32	38M8G7D
		QPSK	1870 - 1895	0.163	22.13	38M8G7D
		16QAM	1870 - 1895	0.136	21.32	38M7W7D
	30 MHz	π/2 BPSK	1865 - 1900	0.166	22.20	28M8G7D
		QPSK	1865 - 1900	0.157	21.95	28M8G7D
		16QAM	1865 - 1900	0.133	21.25	28M8W7D
	25 MHz	π/2 BPSK	1862.5 - 1902.5	0.168	22.27	23M0G7D
		QPSK	1862.5 - 1902.5	0.161	22.07	23M0G7D
		16QAM	1862.5 - 1902.5	0.139	21.44	23M0W7D
	20 MHz	π/2 BPSK	1860 - 1905	0.168	22.24	18M0G7D
		QPSK	1860 - 1905	0.163	22.12	17M9G7D
		16QAM	1860 - 1905	0.137	21.35	18M0W7D
	15 MHz	π/2 BPSK	1857.5 - 1907.5	0.177	22.48	13M5G7D
		QPSK	1857.5 - 1907.5	0.166	22.20	13M6G7D
		16QAM	1857.5 - 1907.5	0.134	21.27	13M5W7D
	10 MHz	π/2 BPSK	1855 - 1910	0.162	22.09	9M03G7D
		QPSK	1855 - 1910	0.156	21.94	9M05G7D
		16QAM	1855 - 1910	0.133	21.23	9M04W7D
	5 MHz	π/2 BPSK	1852.5 - 1912.5	0.166	22.20	4M53G7D
		QPSK	1852.5 - 1912.5	0.155	21.91	4M51G7D
		16QAM	1852.5 - 1912.5	0.129	21.12	4M50W7D

1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 Element Test Location

These measurement tests were conducted at the Element laboratory located at 7185 Oakland Mills Road, Columbia, MD 21046. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

1.3 Test Facility / Accreditations

Measurements were performed at Element lab located in Columbia, MD 21046, U.S.A.

- Element Washington DC LLC is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.

- Element Washington DC LLC TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).

- Element Washington DC LLC facility is a registered (2451B) test laboratory with the site description on file with ISED.

- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutual Recognition Agreement.

2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMS918U**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 24 and RSS-133.

Test Device Serial No.: 0178M,

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, Multi-band 5G NR (FR1 and FR2), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII (5GHz and 6GHz), Bluetooth (1x, EDR, LE), NFC, UWB, Wireless Power Transfer

This device uses a tuner circuit that dynamically updates the antenna impedance parameters to optimize antenna performance for certain bands and modes of operation. The tuner for this device was set to simulate a "free space" condition where the transmit antenna is matched to the medium into which it is transmitting and, thus, the power is at its maximum level.

2.3 Test Configuration

The EUT was tested per the guidance of ANSI C63.26-2015. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

This device supports wireless charging capability and, thus, is subject to the test requirements of KDB 648474 D03 v01r04. Additional radiated spurious emission measurements were performed with the EUT lying flat on an authorized wireless charging pad (WCP) Model: EP-N5100 while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version S918USQU0AVI3 installed on the EUT.

2.5 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

The measurement procedures described in the "American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services" (ANSI C63.26-2015) were used in the measurement of the EUT**.**

Deviation from Measurement Procedure……..……None

3.2 Radiated Power and Radiated Spurious Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer.

For radiated power measurements, substitution method is used per the guidance of ANSI C63.26-2015. For emissions below 1GHz, a half-wave dipole is substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_{d\ [dBm]} = P_{g\ [dBm]} - \text{cable loss}_{\ [dB]} + \text{antenna gain}_{\ [dBd/dBi]};$$

where P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_{g\ [dBm]}$ – cable loss $_{[dB]}$.

For radiated spurious emissions measurements, the field strength conversion method is used per the formulas in Section 5.2.7 of ANSI C63.26-2015. Field Strength (EIRP) is calculated using the following formulas:

$$E_{[dB\mu V/m]} = \text{Measured amplitude level}_{[dBm]} + 107 + \text{Cable Loss}_{[dB]} + \text{Antenna Factor}_{[dB/m]}$$

And

$$EIRP_{[dBm]} = E_{[dB\mu V/m]} + 20\log D - 104.8;$$ where D is the measurement distance in meters.

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 414788 D01 v01r01.

Radiated power and radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI C63.26-2015.

4.0 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 uncertainty shown below 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.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	AP2	EMC Cable and Switch System	8/11/2022	Annual	8/11/2023	AP2
-	AP1	EMC Cable and Switch System	8/15/2022	Annual	8/15/2023	AP1
-	ETS	EMC Cable and Switch System	8/11/2022	Annual	8/11/2023	ETS
-	LTx1	Licensed Transmitter Cable Set	7/29/2022	Annual	7/29/2023	LTx1
-	LTx2	Licensed Transmitter Cable Set	8/15/2022	Annual	8/15/2023	LTx2
-	LTx3	LIcensed Transmitter Cable Set	8/15/2022	Annual	8/15/2023	LTx3
-	LTx4	Licensed Transmitter Cable Set	7/29/2022	Annual	7/29/2023	LTx4
-	LTx5	LIcensed Transmitter Cable Set	7/29/2022	Annual	7/29/2023	LTx5
Agilent	E5515C	Wireless Communications Test Set	N/A			GB45360985
Agilent	E5515C	Wireless Communications Test Set	N/A			GB46310798
Anritsu	MT8820C	Radio Communication Analyzer	N/A			6201300731
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6201381794
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6200901190
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6201525694
Com-Power	AL-130R	Active Loop Antenna	1/19/2022	Biennial	1/19/2024	121085
Emco	3115	Horn Antenna (1-18GHz)	8/8/2022	Biennial	8/8/2024	9704-5182
Espec	ESX-2CA	Environmental Chamber	5/25/2022	Biennial	5/25/2024	17620
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	4/20/2021	Biennial	4/20/2023	00125518
ETS Lindgren	3164-10	Quad Ridge Horn 400MHz - 10000MHz	5/10/2021	Biennial	5/10/2023	00166283
ETS Lindgren	3816/2NM	LISN	8/11/2022	Biennial	8/11/2024	00114451
Keysight Technologies	N9020A	MXA Signal Analyzer	3/15/2022	Annual	3/15/2023	MY54500644
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	8/18/2022	Annual	8/18/2023	MY49430494
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	2/14/2022	Annual	2/14/2023	MY52350166
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator	N/A			11208010032
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator	N/A			11403100002
Rohde & Schwarz	CMU200	Base Station Simulator	N/A			836371/0079
Rohde & Schwarz	CMU200	Base Station Simulator	N/A			833855/0010
Rohde & Schwarz	CMU200	Base Station Simulator	N/A			107826
Rohde & Schwarz	CMU200	Base Station Simulator	N/A			109892
Rohde & Schwarz	CMU200	Base Station Simulator	N/A			836536/0005
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			100976
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			112347
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	8/29/2022	Annual	8/29/2023	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	8/25/2022	Annual	8/25/2023	100348
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	3/28/2022	Annual	3/28/2023	101716
Rohde & Schwarz	FSW26	2Hz-26.5GHz Signal and Spectrum Analyzer	4/14/2022	Annual	4/14/2023	103187
Sunol	JB6	LB6 Antenna	11/13/2020	Biennial	11/13/2022	A082816

Table 1. Test Equipment

Notes:

1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

2. Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

6.0 SAMPLE CALCULATIONS

GSM Emission Designator

Emission Designator = 250KGXW
GSM BW = 250 kHz
G = Phase Modulation
X = Cases not otherwise covered
W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 250KG7W
EDGE BW = 250 kHz
G = Phase Modulation
7 = Quantized/Digital Info
W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M16F9W
WCDMA BW = 4.16 MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 8M62G7D
LTE BW = 8.62 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M45W7D
LTE BW = 8.45 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission, telemetry, telecommand

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

The receive spectrum analyzer reading at 3 meters with the EUT on the turntable was –81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of –81.0 dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3700.40 MHz. So 6.1 dB is added to the signal generator reading of –30.9 dBm yielding –24.80 dBm. The fundamental EIRP was 25.50 dBm so this harmonic was 25.50 dBm – (-24.80) = 50.3 dBc.

7.0 TEST RESULTS

7.1 Summary

Company Name: Samsung Electronics Co., Ltd.

FCC ID: A3LSMS918U

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

Mode(s): GSM/GPRS/EDGE/WCDMA/LTE/NR

Test Condition	Test Description	FCC Part Section(s)	RSS Section(s)	Test Limit	Test Result	Reference
CONDUCTED	Transmitter Conducted Output Power*	2.1046(a), 2.1046(c)	RSS-Gen(6.12)	N/A	PASS	See RF Exposure Report
	Occupied Bandwidth	2.1049(h)	RSS-Gen(6.7)	N/A	PASS	Section 7.2
	Conducted Band Edge / Spurious Emissions	2.1051, 24.238(a)	RSS-Gen(6.13), RSS-133(6.5)	> 43 + 10log10(P[Watts]) at Band Edge and for all out-of-band emissions	PASS	Sections 7.3, 7.4
	Peak-to-Average Ratio	24.232(d)	RSS-133(6.4)	≤ 13 dB	PASS	Section 7.5
	Frequency Stability	2.1055, 24.235	RSS-Gen(6.11), RSS-133(6.3)	Fundamental emissions stay within authorized frequency block **Carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm	PASS	Section 7.8
RADIATED	Equivalent Isotropic Radiated Power	24.232(c)	RSS-Gen(6.12), RSS-133(6.4)	< 2 Watts max. EIRP	PASS	Section 7.6
	Radiated Spurious Emissions	2.1053, 24.238(a)	RSS-Gen(6.13), RSS-133(6.5)	≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power **Spurious emissions from receivers shall not exceed the limits detailed in RSS-Gen(7.3)	PASS	Section 7.7

* The only transmitter output conducted powers included in this report are those where the Pmax value, per the tune-up document, is higher than any of the DSI power levels. For the remaining conducted power measurements, see the **RF Exposure Report**.

** Test limit applies to ISED

Table 2. Summary of Test Results

Notes:

1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
2) The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
4) All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.1.

7.2 Conducted Output Power Data

Test Overview

All 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 Procedure Used

ANSI C63.26-2015 – Section 5.2

Test Settings

1. Detector = RMS
2. Trace mode = trace average for continuous emissions, max hold for pulse emissions
3. Sweep time = auto couple
4. The trace was allowed to stabilize
5. Please see test notes below for RBW and VBW settings

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

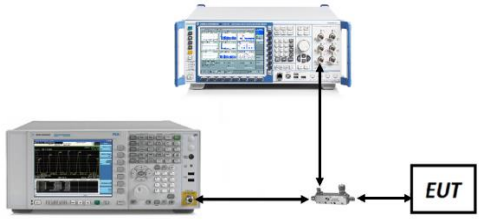


Figure 7-1. Test Instrument & Measurement Setup

Test Notes

1. Uplink carrier aggregation is only supported in this EUT while operating in Power Class 3.

2. Conducted power measurements were evaluated using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.

3. All other conducted power measurements are contained in the RF exposure report for this filing.

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
20 MHz	QPSK	26140	1860.0	1 / 99	23.92
		26365	1882.5	1 / 99	23.84
		26590	1905.0	1 / 50	24.01
	16-QAM	26590	1905.0	1 / 50	23.24
15 MHz	QPSK	26115	1857.5	1 / 74	23.84
		26365	1882.5	1 / 37	23.89
		26615	1907.5	1 / 74	23.82
	16-QAM	26615	1907.5	1 / 74	23.01
10 MHz	QPSK	26090	1855.0	1 / 25	23.97
		26365	1882.5	1 / 25	24.04
		26640	1910.0	1 / 49	24.10
	16-QAM	26640	1910.0	1 / 49	23.22
5 MHz	QPSK	26065	1852.5	1 / 24	24.02
		26365	1882.5	1 / 12	24.09
		26665	1912.5	1 / 0	24.11
	16-QAM	26665	1912.5	1 / 0	23.87
3 MHz	QPSK	26055	1851.5	1 / 14	23.85
		26365	1882.5	1 / 7	24.02
		26675	1913.5	1 / 7	23.98
	16-QAM	26675	1913.5	1 / 7	23.13
1.4 MHz	QPSK	26047	1850.7	1 / 3	24.07
		26365	1882.5	1 / 0	24.05
		26683	1914.3	1 / 5	23.96
	16-QAM	26683	1914.3	1 / 5	23.36

Table 3. Conducted Max Powers (LTE Band B25/2 – Ant F)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
40 MHz	π/2 BPSK	374000	1870.0	1 / 54	23.26
		376500	1882.5	1 / 108	23.24
		379000	1895.0	1 / 54	23.31
	QPSK	374000	1870.0	1 / 54	23.14
		376500	1882.5	1 / 108	23.05
		379000	1895.0	1 / 54	23.13
	16-QAM	379000	1895.0	1 / 54	22.18
30 MHz	π/2 BPSK	372000	1865.0	1 / 119	23.39
		376500	1882.5	1 / 40	23.41
		381000	1900.0	1 / 80	23.19
	QPSK	372000	1865.0	1 / 119	23.01
		376500	1882.5	1 / 40	23.07
		381000	1900.0	1 / 80	22.95
	16-QAM	381000	1900.0	1 / 80	22.11
25 MHz	π/2 BPSK	372000	1862.5	1 / 66	23.28
		376500	1882.5	1 / 66	23.19
		381000	1902.5	1 / 99	23.26
	QPSK	372000	1862.5	1 / 66	23.06
		376500	1882.5	1 / 66	22.87
		381000	1902.5	1 / 99	23.07
	16-QAM	381000	1902.5	1 / 99	22.30
20 MHz	π/2 BPSK	372000	1860.0	1 / 26	23.14
		376500	1882.5	1 / 26	23.16
		381000	1905.0	1 / 53	23.24
	QPSK	372000	1860.0	1 / 26	22.89
		376500	1882.5	1 / 26	22.97
		381000	1905.0	1 / 53	23.12
	16-QAM	381000	1905.0	1 / 53	22.21
15 MHz	π/2 BPSK	371500	1857.5	1 / 20	23.15
		376500	1882.5	1 / 20	23.26
		381500	1907.5	1 / 20	23.47
	QPSK	371500	1857.5	1 / 20	22.92
		376500	1882.5	1 / 39	23.02
		381500	1907.5	1 / 20	23.19
	16-QAM	381500	1907.5	1 / 20	22.13
10 MHz	π/2 BPSK	371000	1855.0	1 / 26	23.12
		376500	1882.5	1 / 26	23.25
		382000	1910.0	1 / 26	23.08
	QPSK	371000	1855.0	1 / 26	22.93
		376500	1882.5	1 / 26	23.02
		382000	1910.0	1 / 26	22.94
	16-QAM	382000	1910.0	1 / 26	22.09
5 MHz	π/2 BPSK	370500	1852.5	1 / 18	23.29
		376500	1882.5	1 / 18	23.11
		382500	1912.5	1 / 18	23.19
	QPSK	370500	1852.5	1 / 18	22.90
		376500	1882.5	1 / 18	23.17
		382500	1912.5	1 / 18	22.91
	16-QAM	382500	1912.5	1 / 18	21.98

Table 4. Conducted Max Powers (NR Band n25/2 – Ant F)

NR (SCS 15kHz)						LTE						NR Conducted Power [dBm]	LTE Conducted Power [dBm]	EN-DC Total Tx. Power [dBm]
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset			
n25/2	20	Mid	1882.5	QPSK	100/0	B5	10	Mid	836.5	QPSK	50/0	16.49	22.78	23.70
				QPSK	100/0					QPSK	1/25	16.50	22.79	23.71
				QPSK	1/53					QPSK	50/0	16.45	22.88	23.77
				QPSK	1/53					QPSK	1/25	16.45	22.90	23.79
				16Q	1/53					16Q	1/25	16.46	22.54	23.50

Table 5. Conducted Max Powers (EN-DC Combo n2 [ANT A] – B5)

NR (SCS 15kHz)						LTE						NR Conducted Power [dBm]	LTE Conducted Power [dBm]	EN-DC Total Tx. Power [dBm]
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset			
n2	20	Mid	1880	QPSK	100/0	B30	10	Mid	2310	QPSK	50/0	20.46	20.75	23.62
				QPSK	100/0					QPSK	1/25	19.75	21.41	23.67
				QPSK	1/53					QPSK	50/0	20.41	20.76	23.60
				QPSK	1/53					QPSK	1/25	19.25	21.78	23.71
				16Q	1/53					16Q	1/25	19.01	21.20	23.25

Table 6. Conducted Max Powers (EN-DC Combo n2 [ANT F] – B30)

NR (SCS 15kHz)						LTE						NR Conducted Power [dBm]	LTE Conducted Power [dBm]	EN-DC Total Tx. Power [dBm]
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset			
n2	20	Mid	1880	QPSK	100/0	B48	20	Mid	3625	QPSK	100/0	19.35	19.89	22.64
				QPSK	100/0					QPSK	1/50	16.92	20.88	22.35
				QPSK	1/53					QPSK	100/0	17.01	20.92	22.40
				QPSK	1/53					QPSK	1/50	16.88	20.89	22.34
				16Q	100/0					16Q	1/50	19.77	20.22	23.01

Table 7. Conducted Max Powers (EN-DC Combo n2 [ANT A] – B48)

NR (SCS 15kHz)						LTE						NR Conducted Power [dBm]	LTE Conducted Power [dBm]	EN-DC Total Tx. Power [dBm]
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset			
n25/2	20	Mid	1882.5	QPSK	100/0	B66	20	Mid	1745	QPSK	100/0	18.57	21.92	23.57
				QPSK	100/0					QPSK	1/50	16.93	22.39	23.48
				QPSK	1/53					QPSK	100/0	18.23	21.90	23.45
				QPSK	1/53					QPSK	1/50	16.69	22.42	23.45
				16Q	1/53					16Q	1/50	18.64	22.07	23.70

Table 8. Conducted Max Powers (EN-DC Combo n25/2 [ANT F] – B66)

NR (SCS 15kHz)						LTE						NR Conducted Power [dBm]	LTE Conducted Power [dBm]	EN-DC Total Tx. Power [dBm]
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset			
n25	20	Mid	1882.5	QPSK	100/0	B12	10	Mid	707.5	QPSK	50/0	16.52	23.01	23.89
				QPSK	100/0					QPSK	1/25	16.48	23.08	23.94
				QPSK	1/53					QPSK	50/0	16.33	23.11	23.94
				QPSK	1/53					QPSK	1/25	16.35	23.13	23.96
				16Q	1/53					16Q	1/25	16.40	23.39	24.18

Table 9. Conducted Max Powers (EN-DC Combo n25/2 [ANT F] – B12)

7.3 Occupied Bandwidth

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst-case configuration results are reported in this section.

Test Procedure Used

ANSI C63.26-2015 – Section 5.4.4

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

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

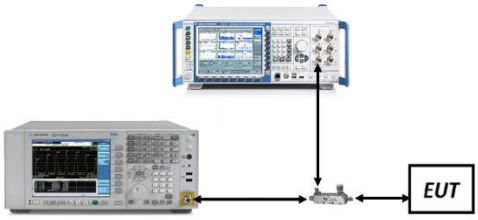
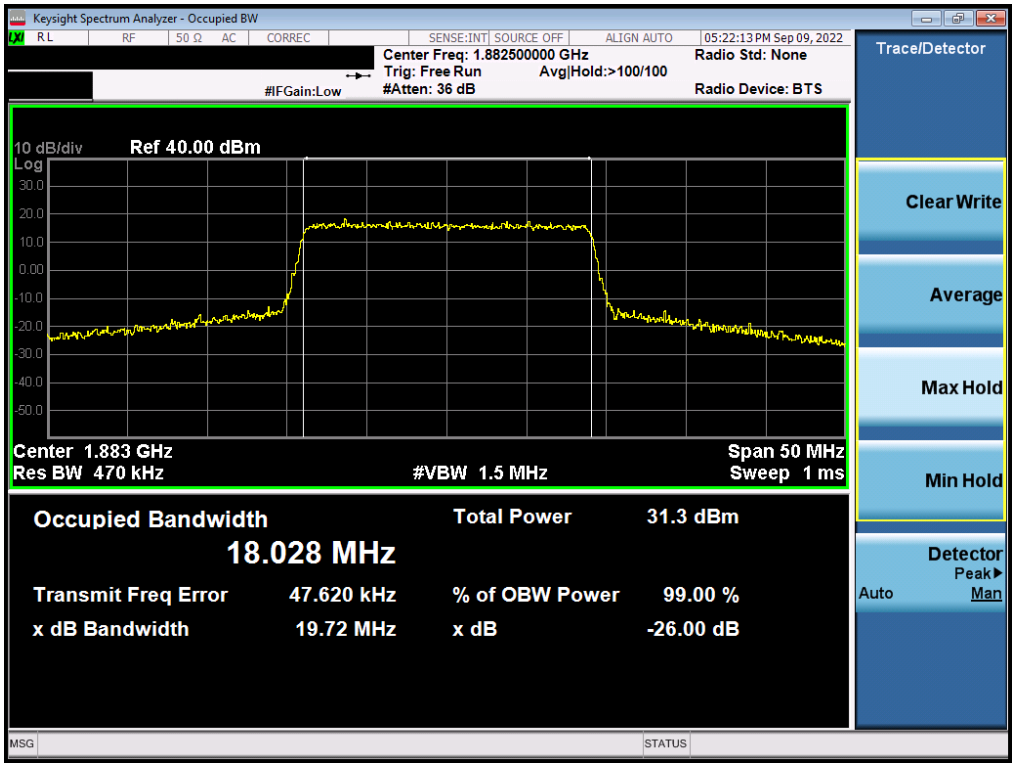


Figure 7-2. Test Instrument & Measurement Setup

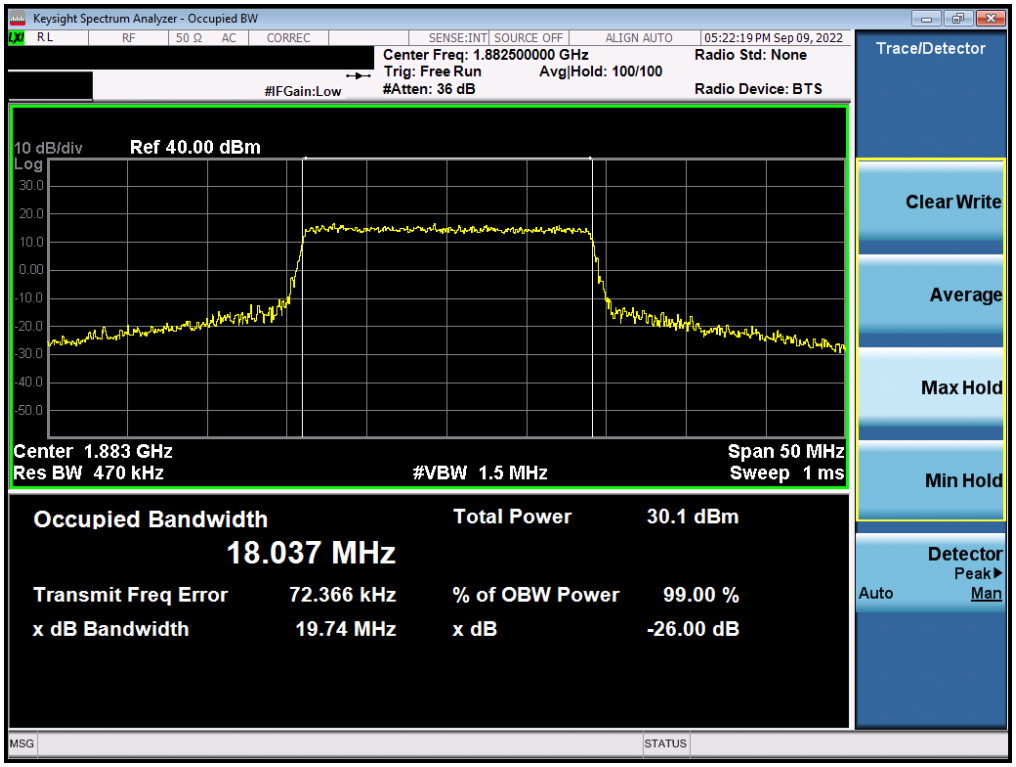
Test Notes

None.

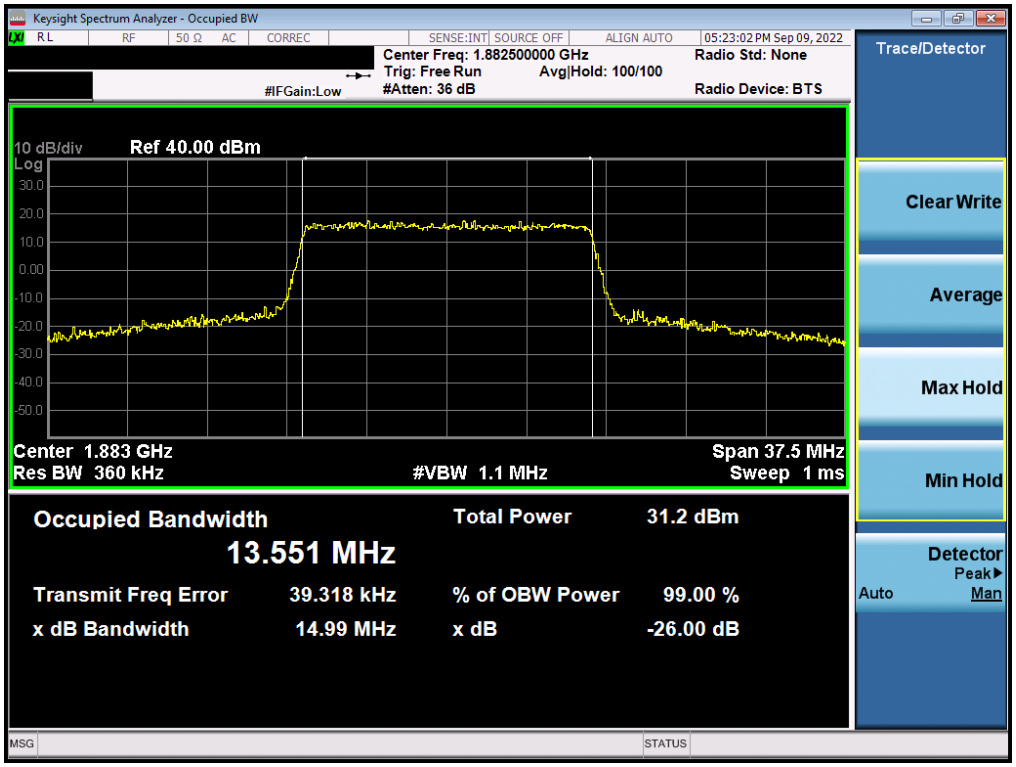
LTE Band 25/2 – ANT A



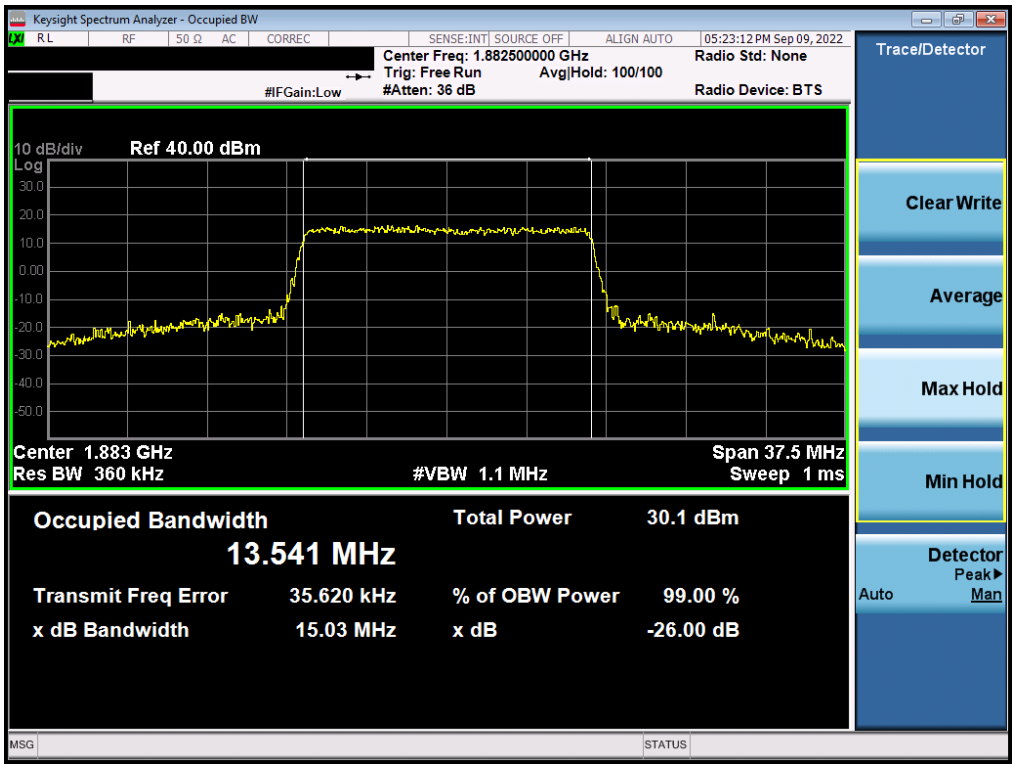
Plot 7-1. Occupied Bandwidth Plot (LTE Band 25/2 - 20MHz QPSK - Full RB - ANT A)



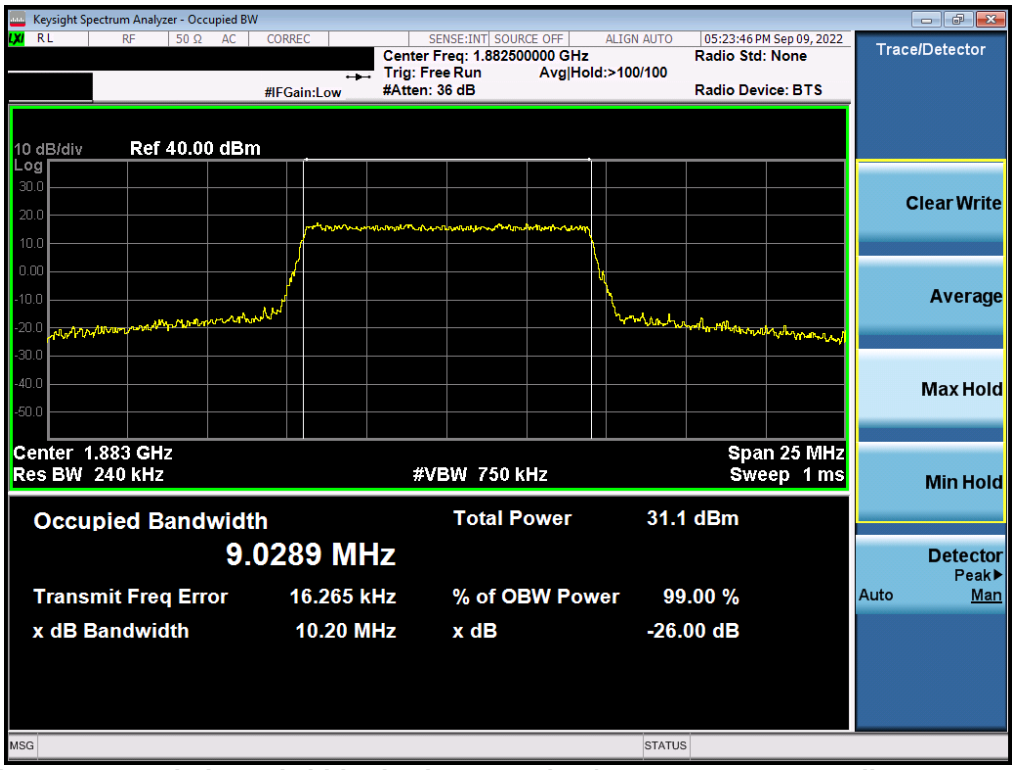
Plot 7-2. Occupied Bandwidth Plot (LTE Band 25/2 - 20MHz 16-QAM - Full RB - ANT A)



Plot 7-3. Occupied Bandwidth Plot (LTE Band 25/2 - 15MHz QPSK - Full RB - ANT A)

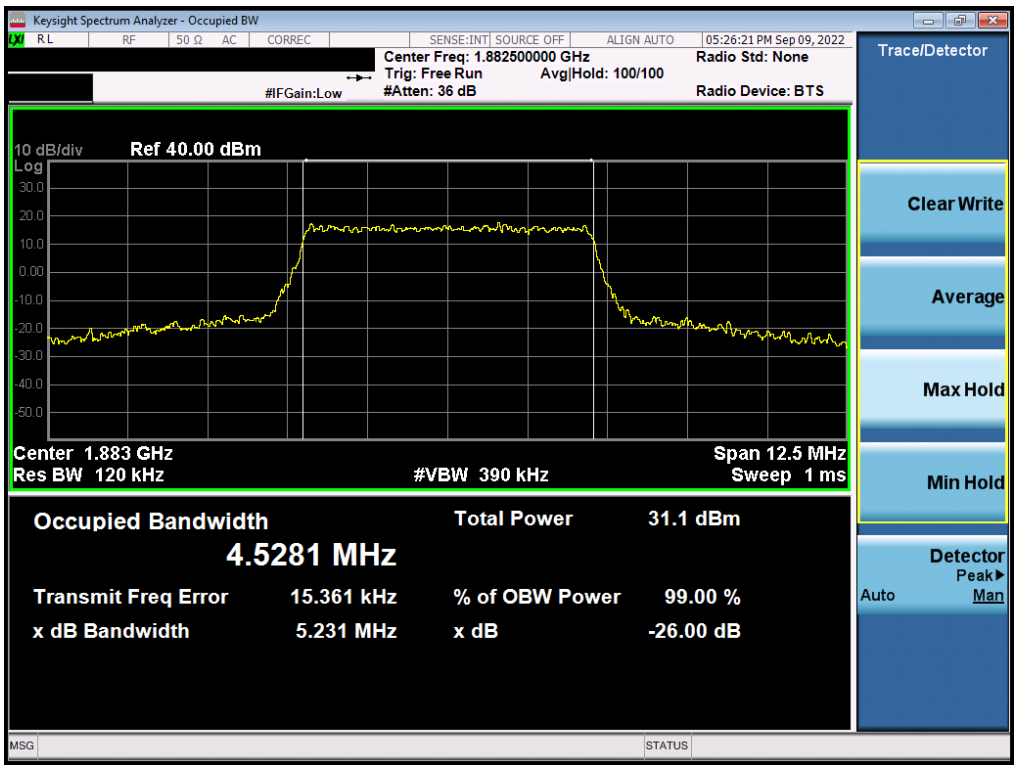


Plot 7-4. Occupied Bandwidth Plot (LTE Band 25/2 - 15MHz 16-QAM - Full RB - ANT A)



Plot 7-5. Occupied Bandwidth Plot (LTE Band 25/2 - 10MHz QPSK - Full RB - ANT A)

Plot 7-6. Occupied Bandwidth Plot (LTE Band 25/2 - 10MHz 16-QAM - Full RB - ANT A)



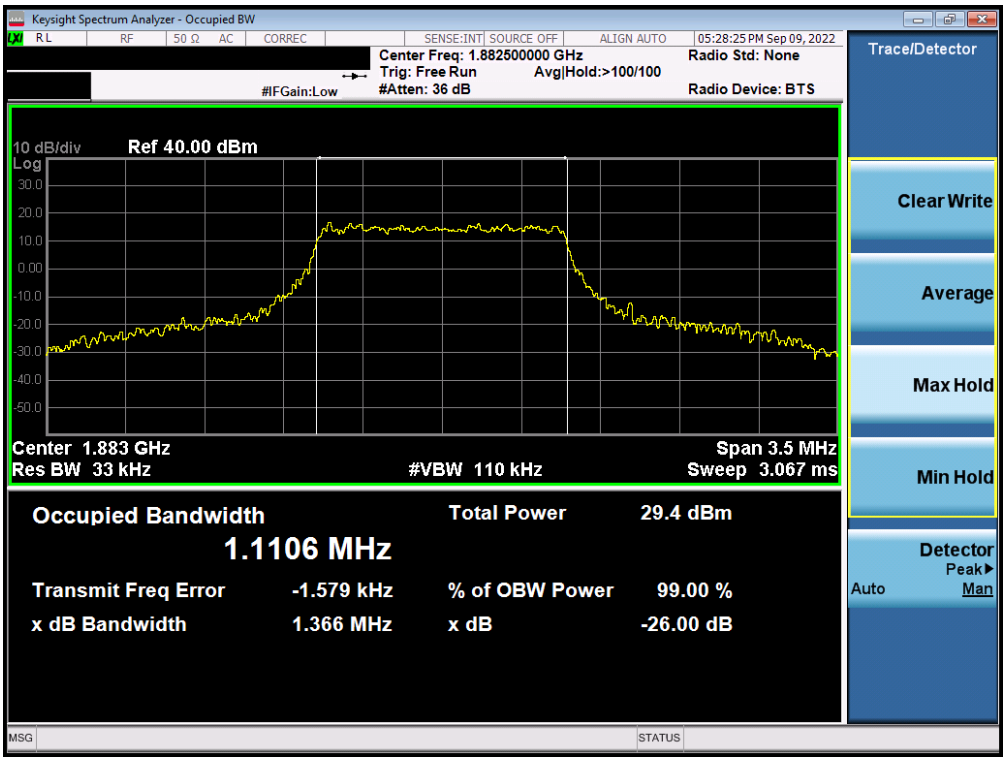
Plot 7-7. Occupied Bandwidth Plot (LTE Band 25/2 - 5MHz QPSK - Full RB - ANT A)

Plot 7-8. Occupied Bandwidth Plot (LTE Band 25/2 - 5MHz 16-QAM - Full RB - ANT A)

Plot 7-9. Occupied Bandwidth Plot (LTE Band 25/2 - 3MHz QPSK - Full RB - ANT A)

Plot 7-10. Occupied Bandwidth Plot (LTE Band 25/2 - 3MHz 16-QAM - Full RB - ANT A)

Plot 7-11. Occupied Bandwidth Plot (LTE Band 25/2 - 1.4MHz QPSK - Full RB - ANT A)

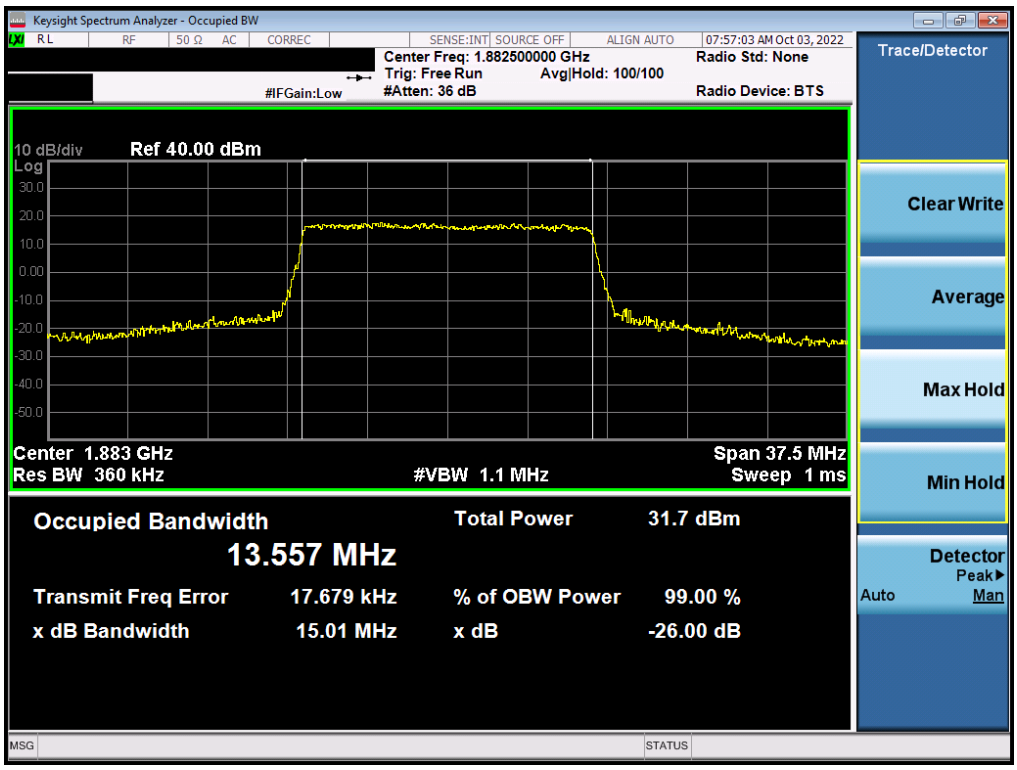


Plot 7-12. Occupied Bandwidth Plot (LTE Band 25/2 - 1.4MHz 16-QAM - Full RB - ANT A)

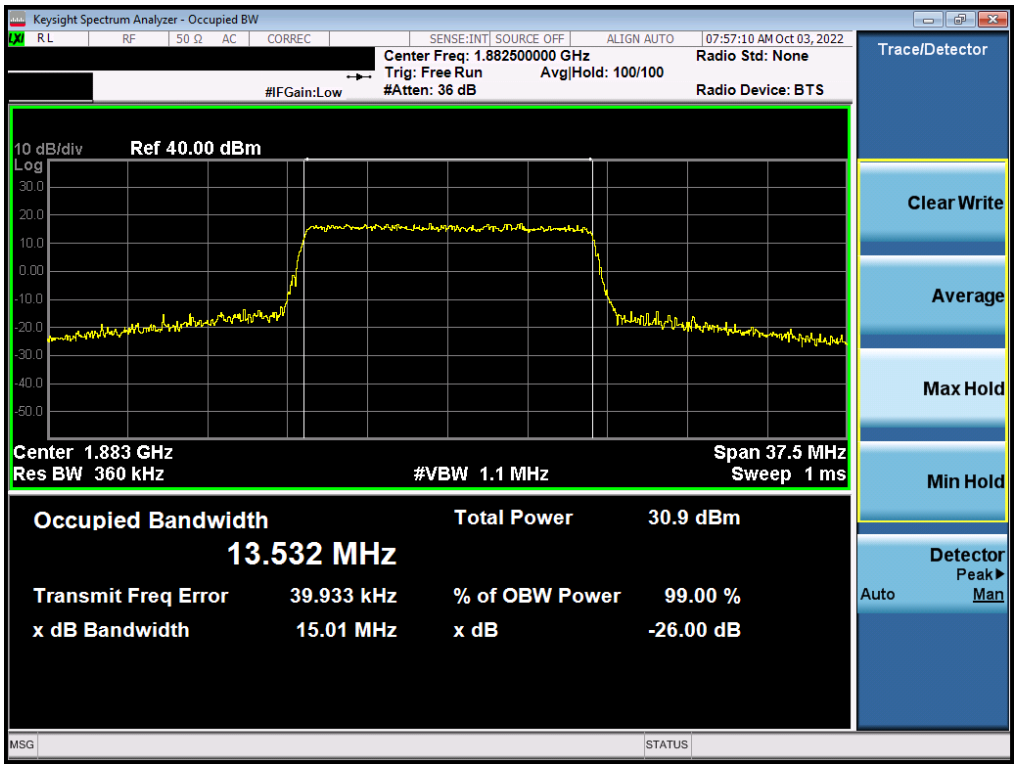
LTE Band 25/2 – ANT F

Plot 7-13. Occupied Bandwidth Plot (LTE Band 25/2 - 20MHz QPSK - Full RB - ANT F)

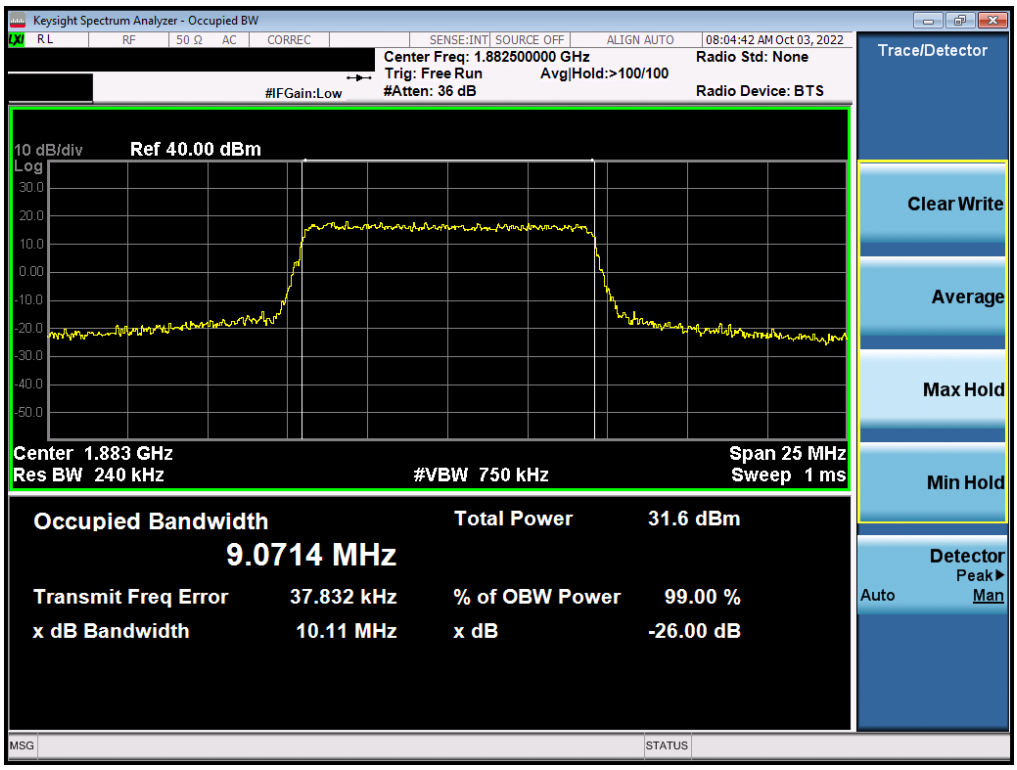
Plot 7-14. Occupied Bandwidth Plot (LTE Band 25/2 - 20MHz 16-QAM - Full RB - ANT F)



Plot 7-15. Occupied Bandwidth Plot (LTE Band 25/2 - 15MHz QPSK - Full RB - ANT F)

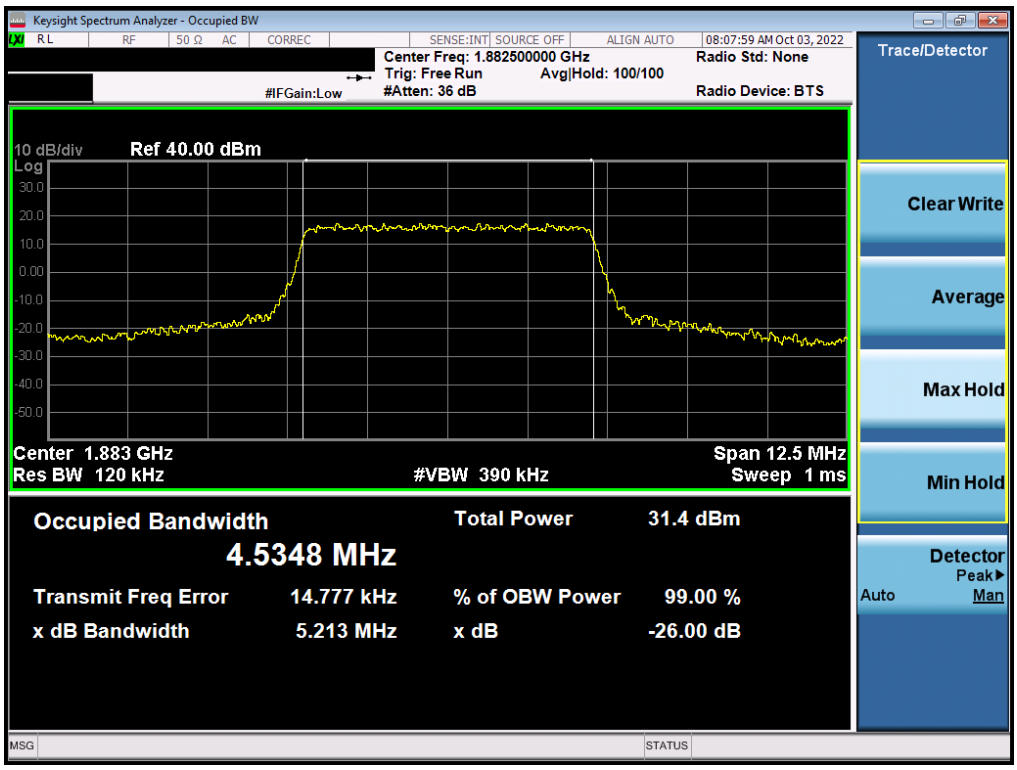


Plot 7-16. Occupied Bandwidth Plot (LTE Band 25/2 - 15MHz 16-QAM - Full RB - ANT F)

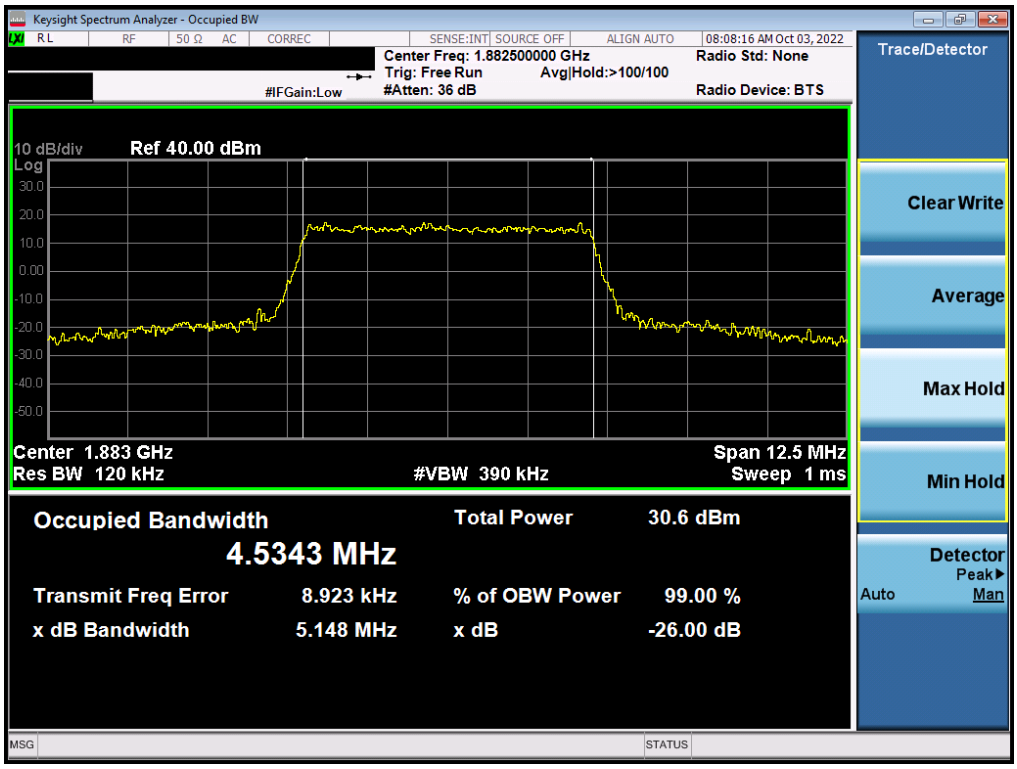


Plot 7-17. Occupied Bandwidth Plot (LTE Band 25/2 - 10MHz QPSK - Full RB - ANT F)

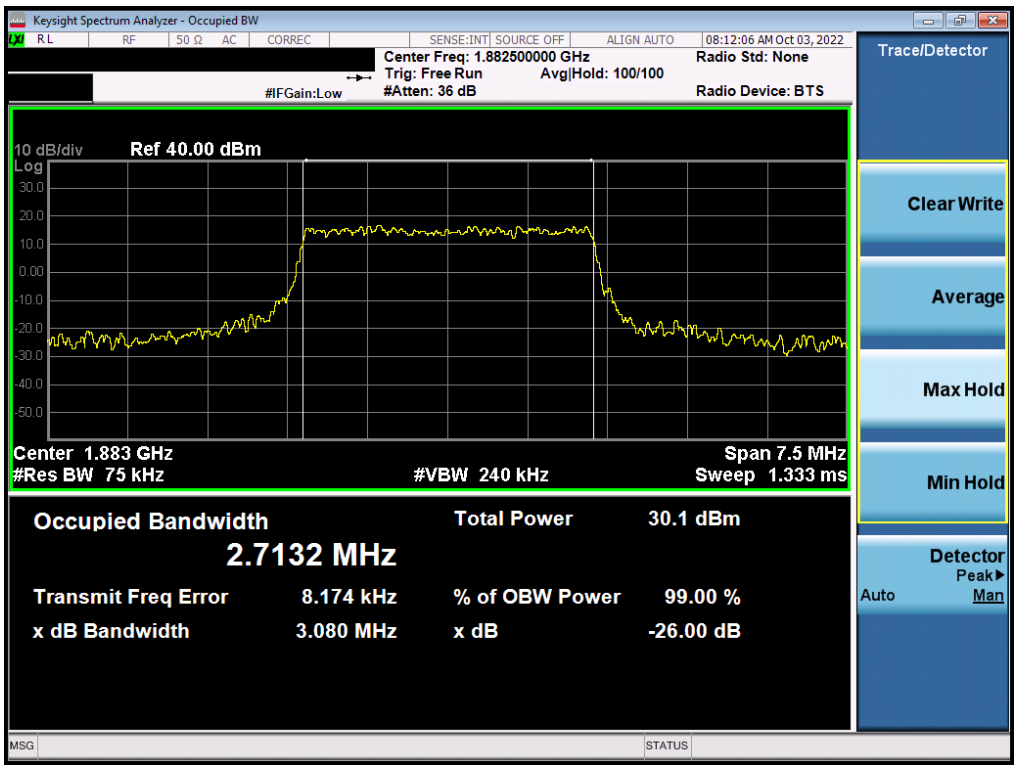
Plot 7-18. Occupied Bandwidth Plot (LTE Band 25/2 - 10MHz 16-QAM - Full RB - ANT F)



Plot 7-19. Occupied Bandwidth Plot (LTE Band 25/2 - 5MHz QPSK - Full RB - ANT F)

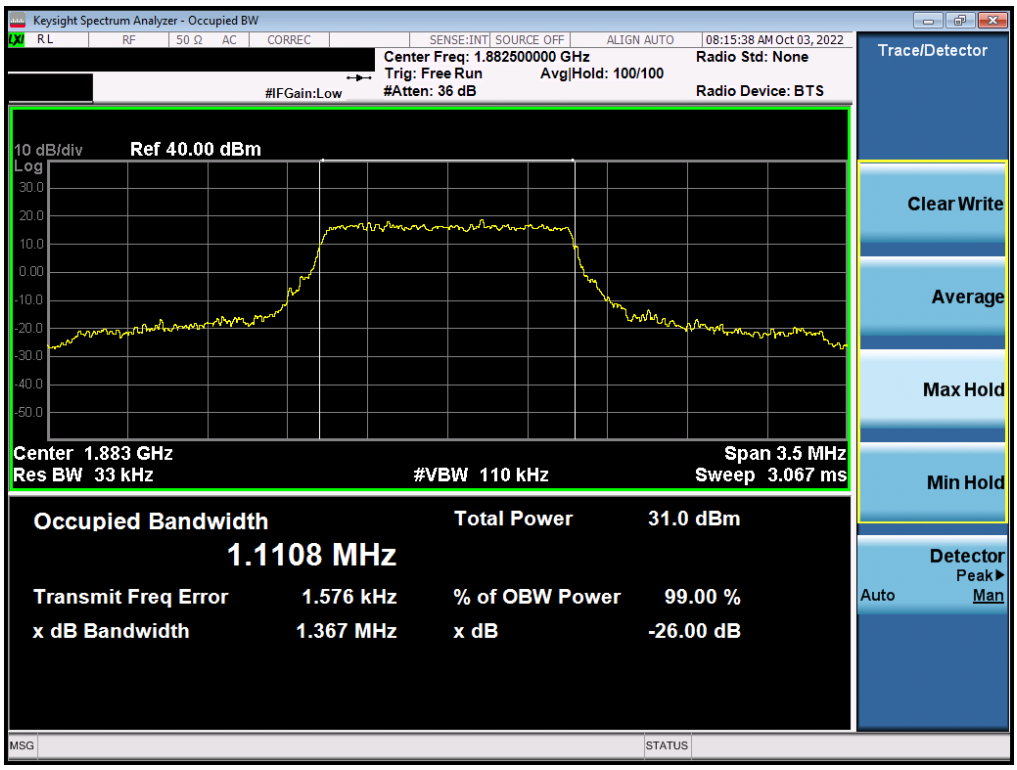


Plot 7-20. Occupied Bandwidth Plot (LTE Band 25/2 - 5MHz 16-QAM - Full RB - ANT F)

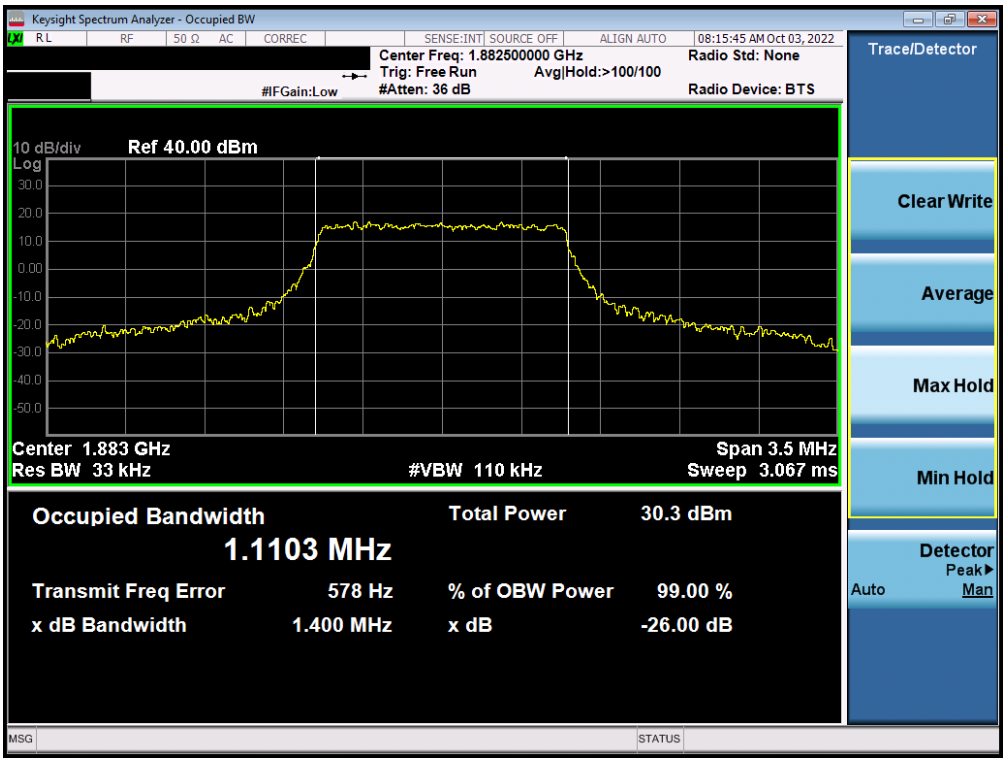


Plot 7-21. Occupied Bandwidth Plot (LTE Band 25/2 - 3MHz QPSK - Full RB - ANT F)

Plot 7-22. Occupied Bandwidth Plot (LTE Band 25/2 - 3MHz 16-QAM - Full RB - ANT F)

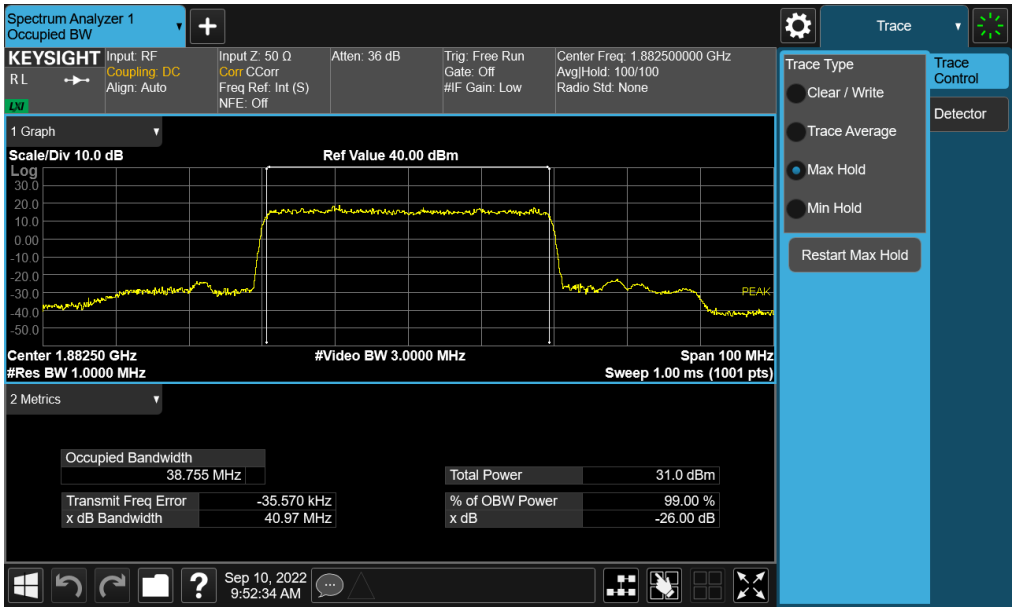


Plot 7-23. Occupied Bandwidth Plot (LTE Band 25/2 - 1.4MHz QPSK - Full RB - ANT F)

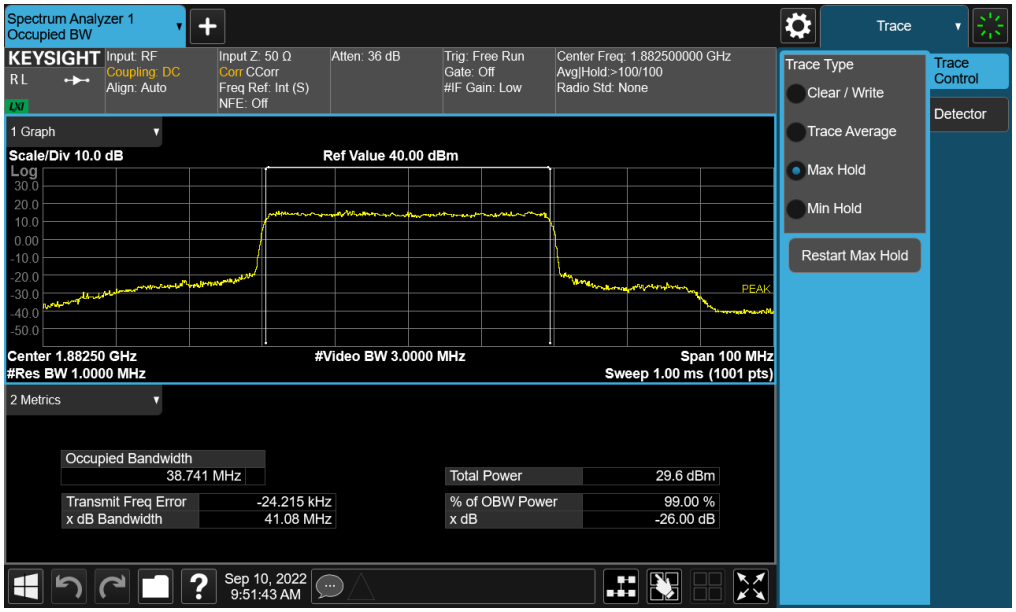


Plot 7-24. Occupied Bandwidth Plot (LTE Band 25/2 - 1.4MHz 16-QAM - Full RB - ANT F)

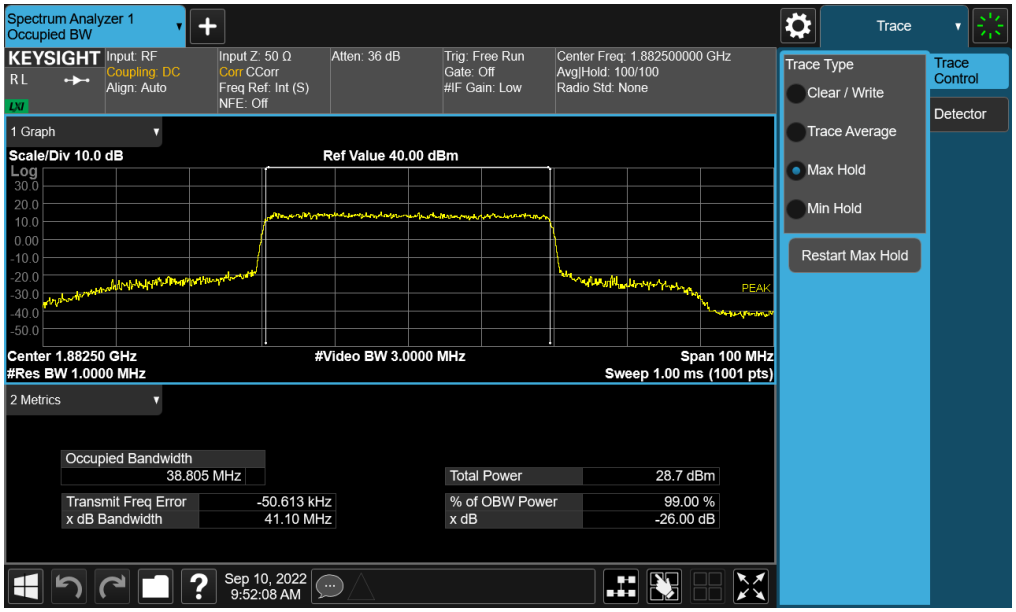
NR Band n25/2 – ANT A



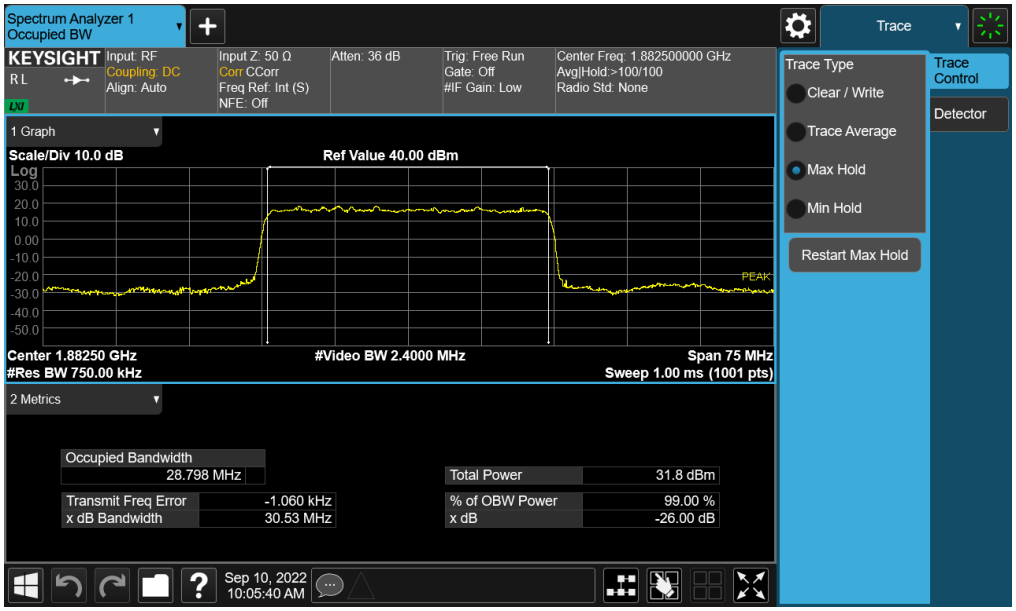
Plot 7-25. Occupied Bandwidth Plot (NR Band n25/2 - 40.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)



Plot 7-26. Occupied Bandwidth Plot (NR Band n25/2 - 40.0MHz CP-OFDM QPSK - Full RB - ANT A)

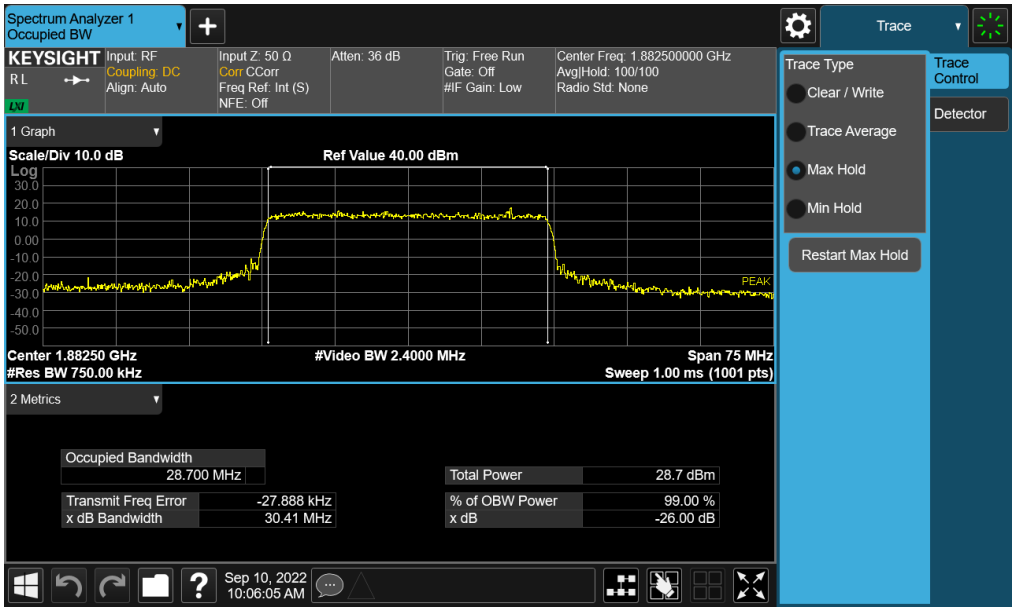


Plot 7-27. Occupied Bandwidth Plot (NR Band n25/2 - 40.0MHz CP-OFDM 16QAM - Full RB - ANT A)

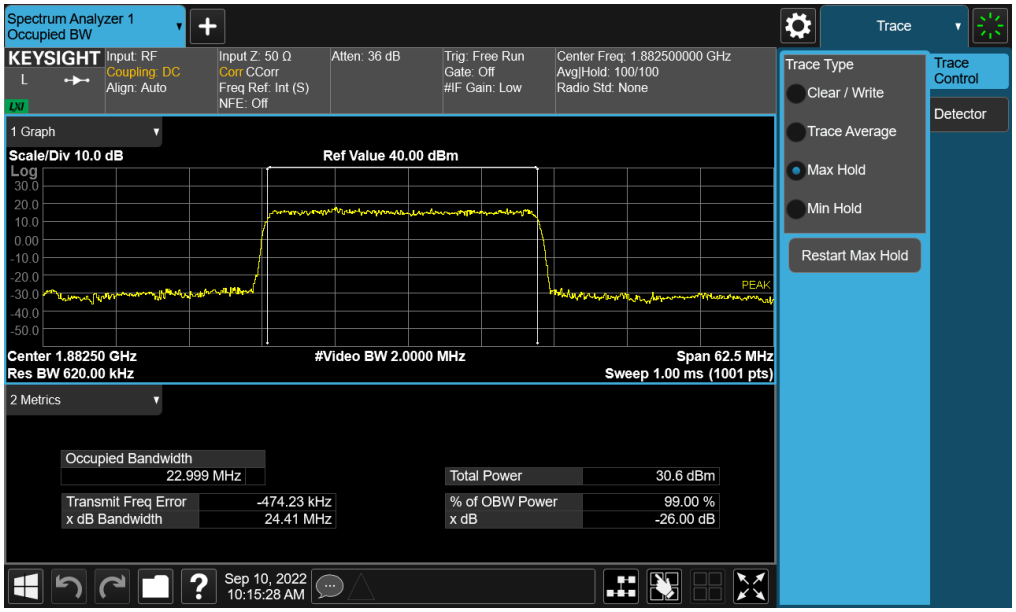


Plot 7-28. Occupied Bandwidth Plot (NR Band n25/2 - 30.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)

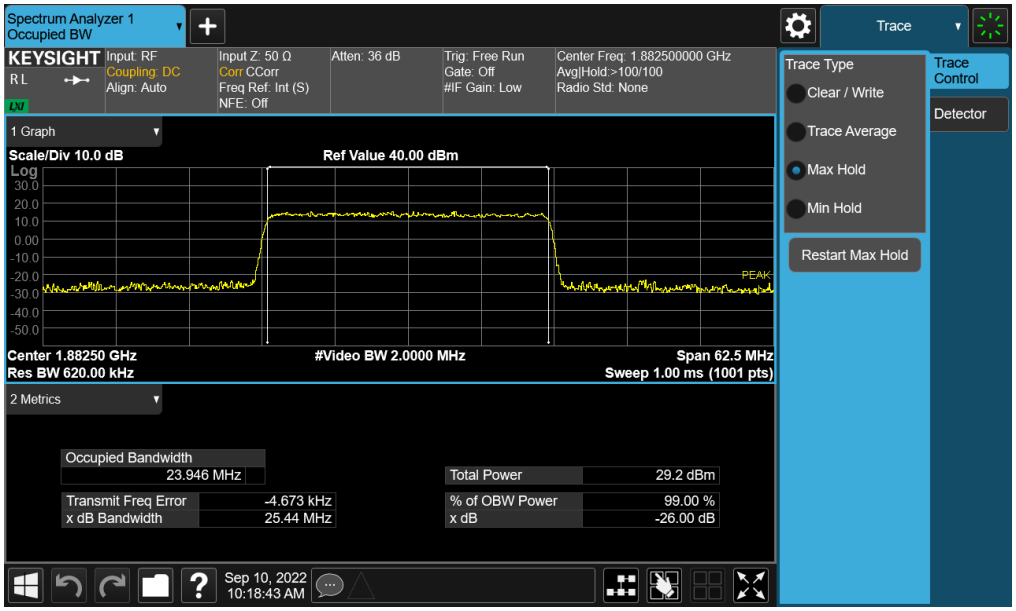
Plot 7-29. Occupied Bandwidth Plot (NR Band n25/2 - 30.0MHz CP-OFDM QPSK - Full RB - ANT A)



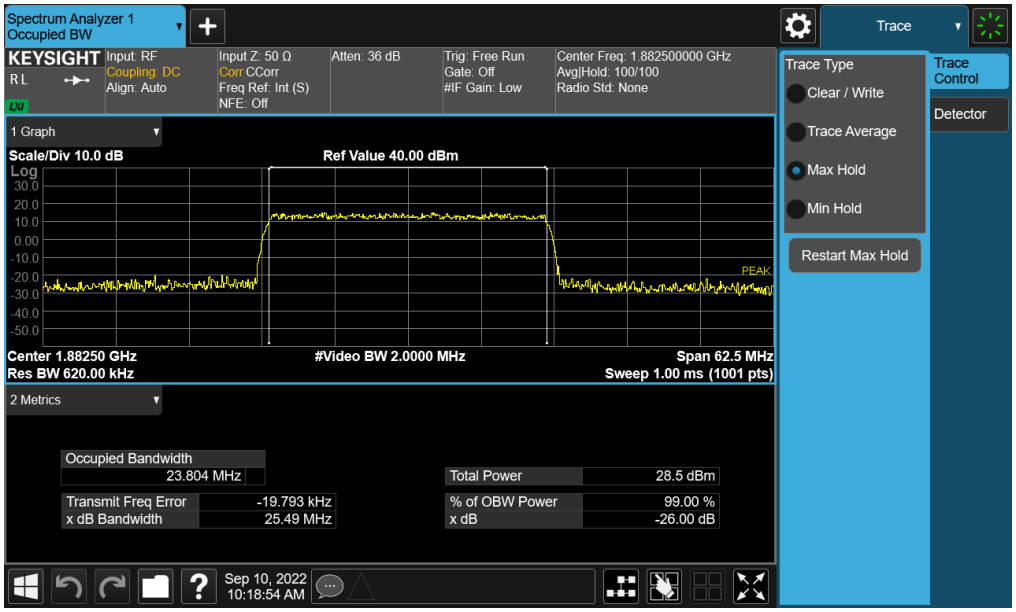
Plot 7-30. Occupied Bandwidth Plot (NR Band n25/2 - 30.0MHz CP-OFDM 16QAM - Full RB - ANT A)



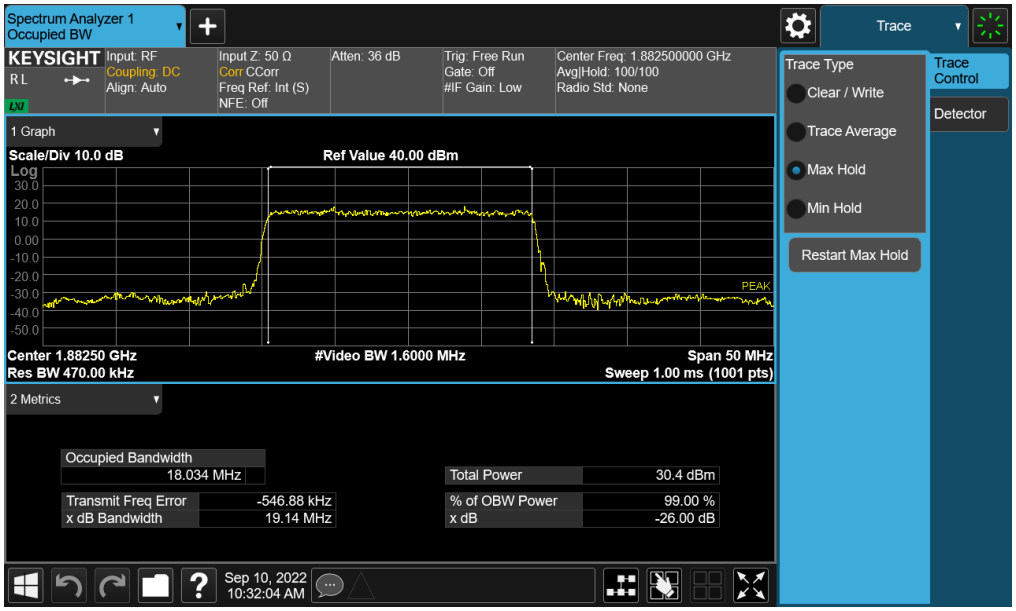
Plot 7-31. Occupied Bandwidth Plot (NR Band n25/2 - 25.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)



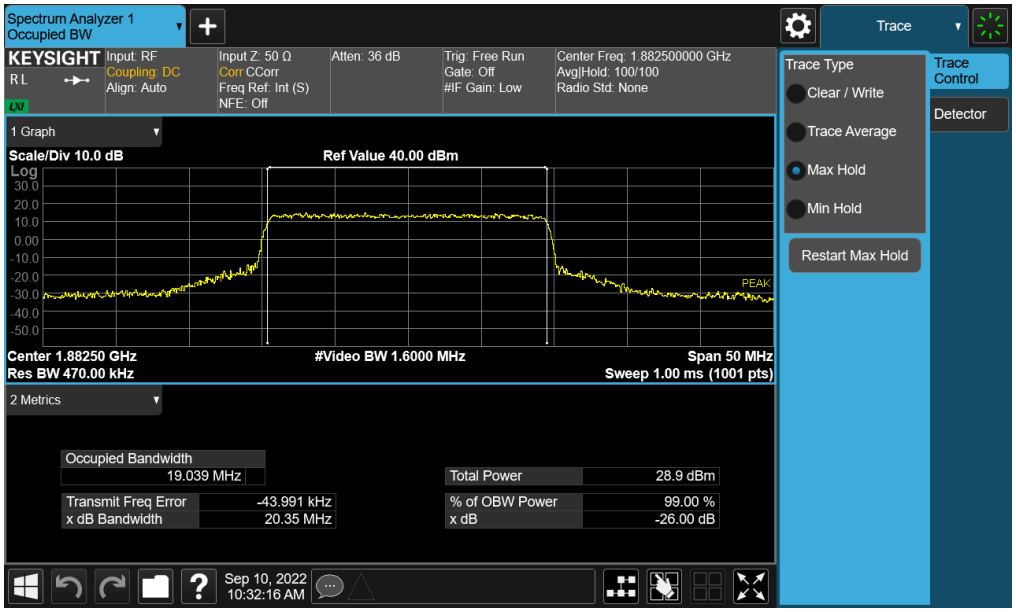
Plot 7-32. Occupied Bandwidth Plot (NR Band n25/2 - 25.0MHz CP-OFDM QPSK - Full RB - ANT A)



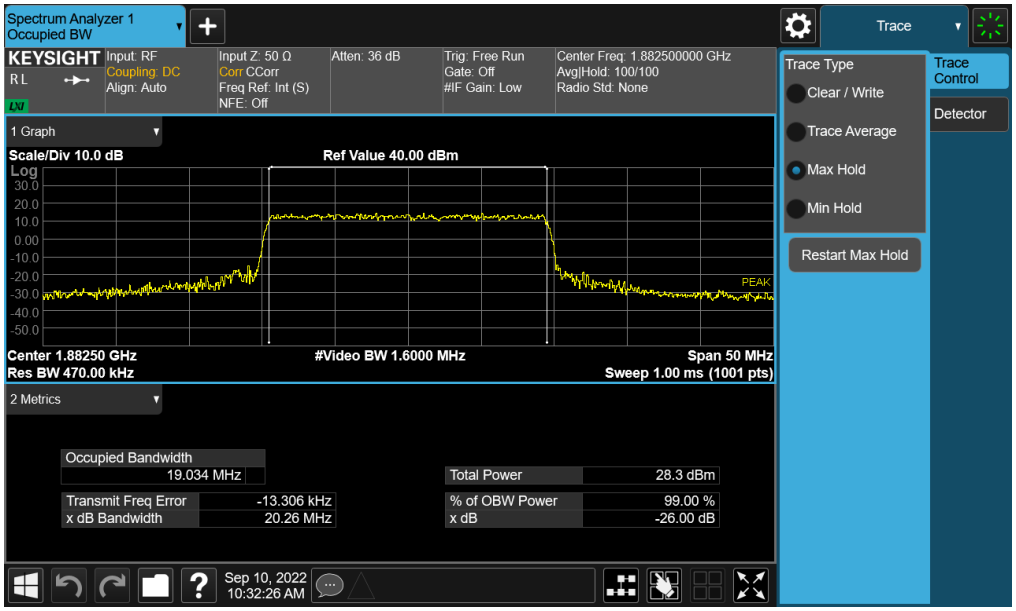
Plot 7-33. Occupied Bandwidth Plot (NR Band n25/2 - 25.0MHz CP-OFDM 16QAM - Full RB - ANT A)



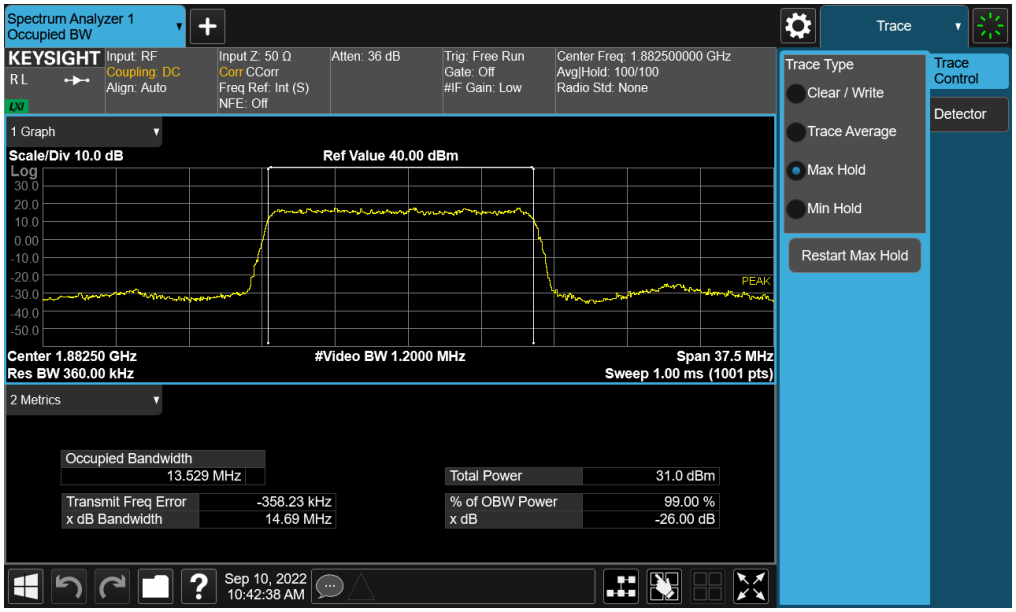
Plot 7-34. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)



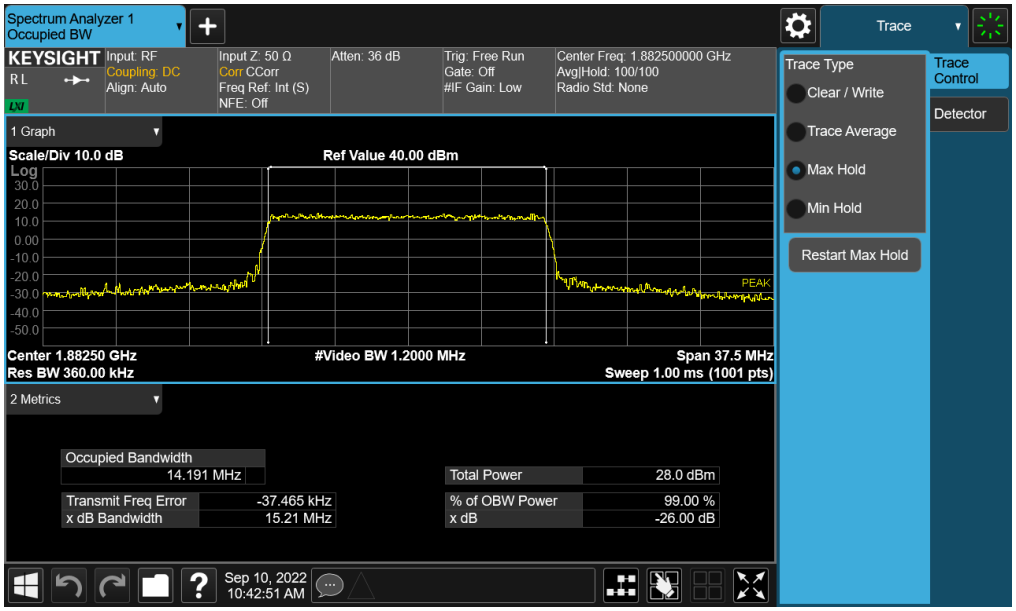
Plot 7-35. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM QPSK - Full RB - ANT A)



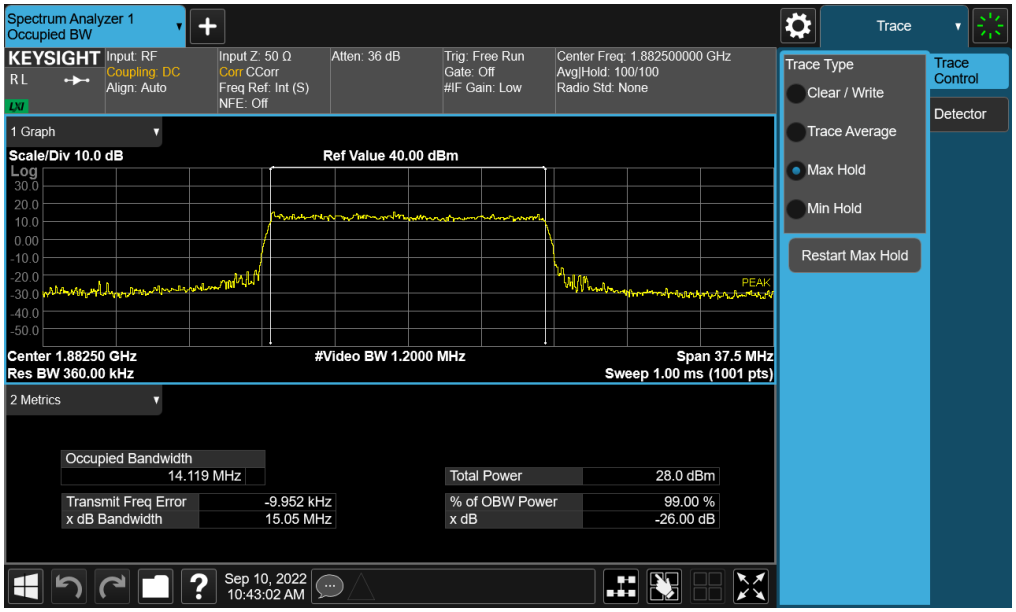
Plot 7-36. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM 16QAM - Full RB - ANT A)



Plot 7-37. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)

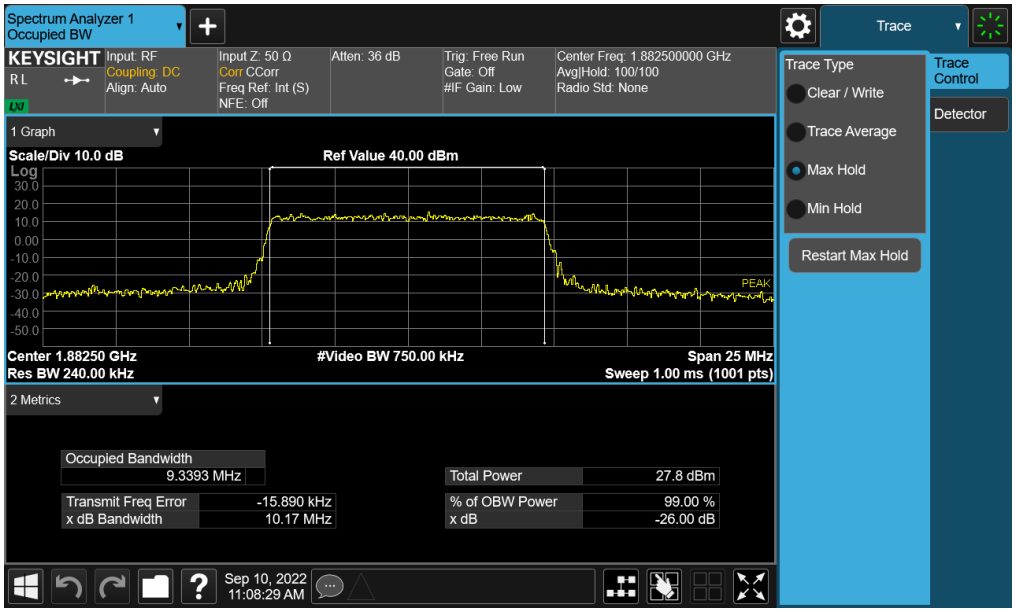


Plot 7-38. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM QPSK - Full RB - ANT A)

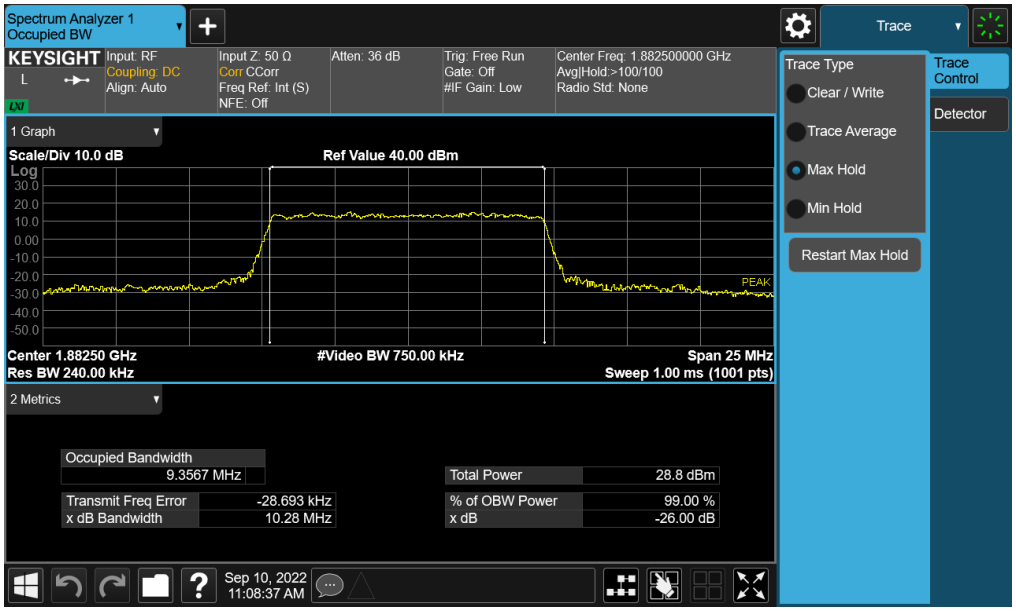


Plot 7-39. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM 16QAM - Full RB - ANT A)

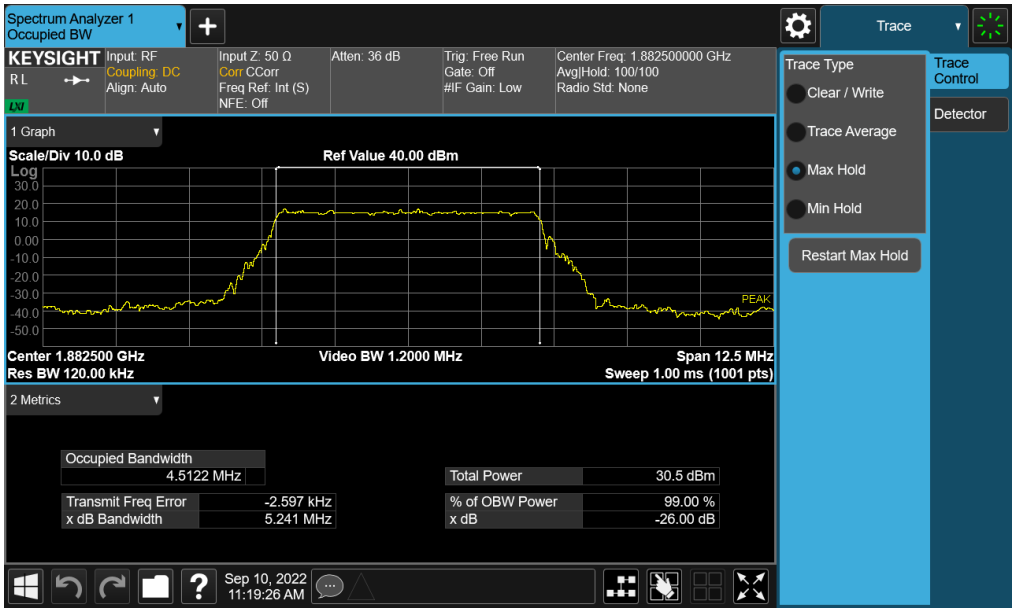
Plot 7-40. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)



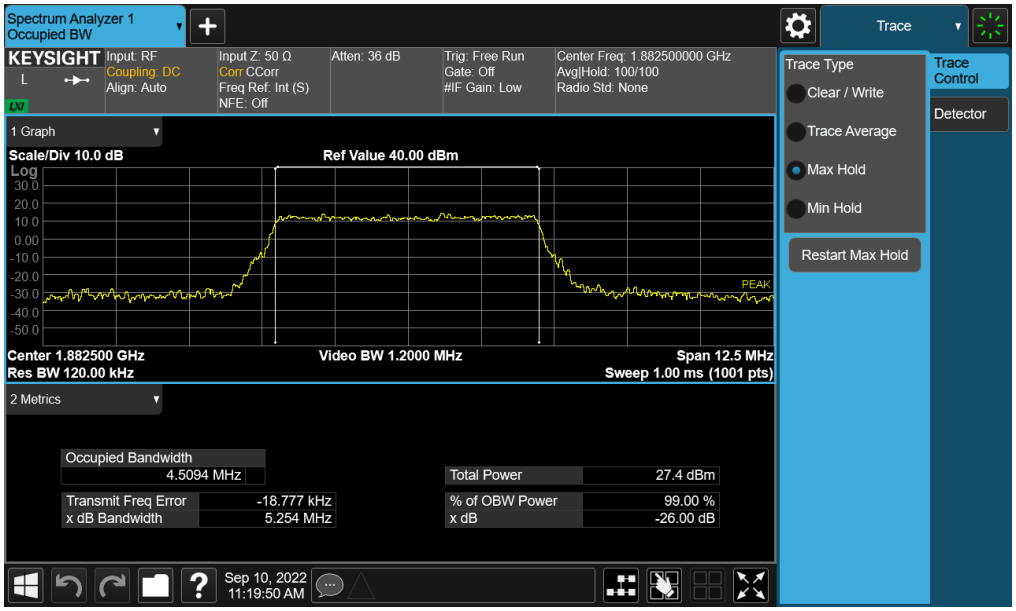
Plot 7-41. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM QPSK - Full RB - ANT A)



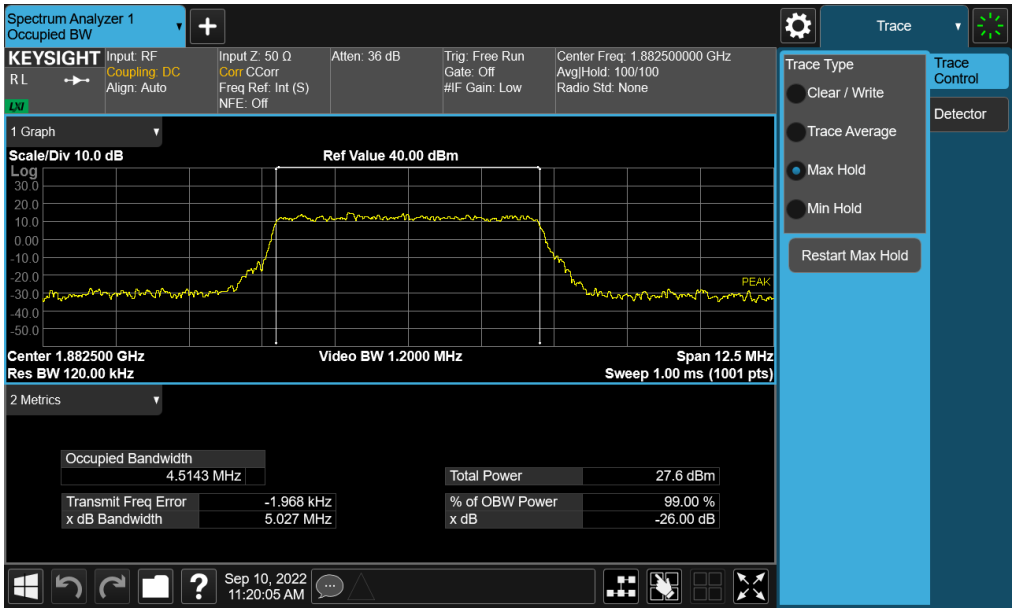
Plot 7-42. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM 16QAM - Full RB - ANT A)



Plot 7-43. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)



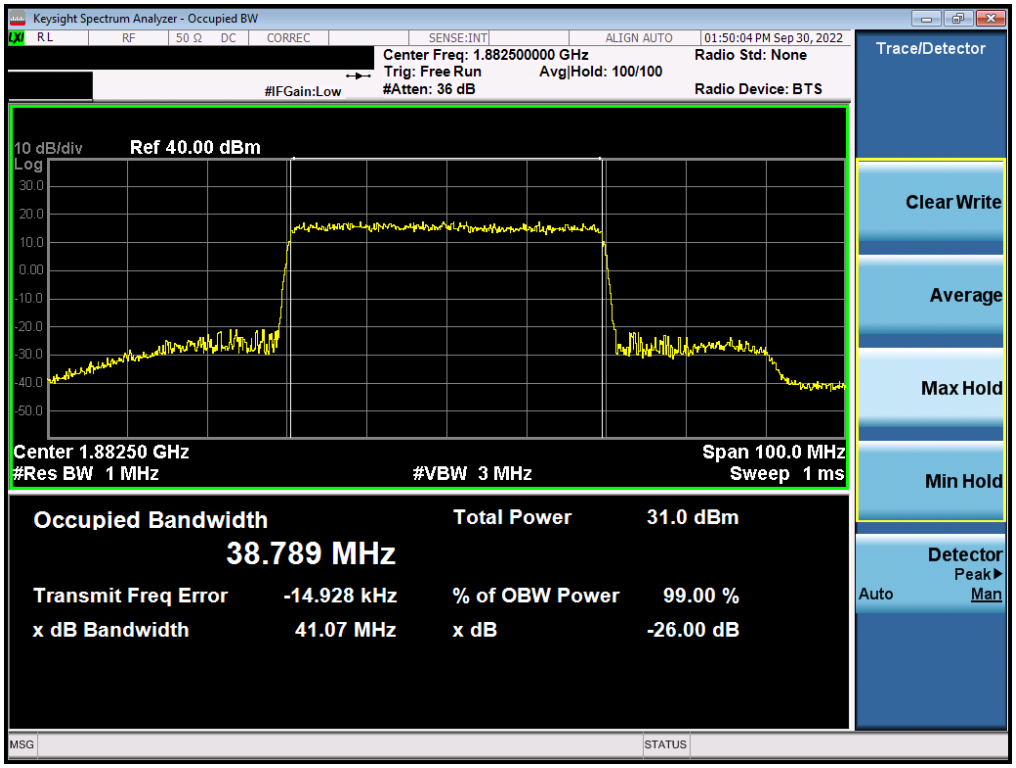
Plot 7-44. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM QPSK - Full RB - ANT A)



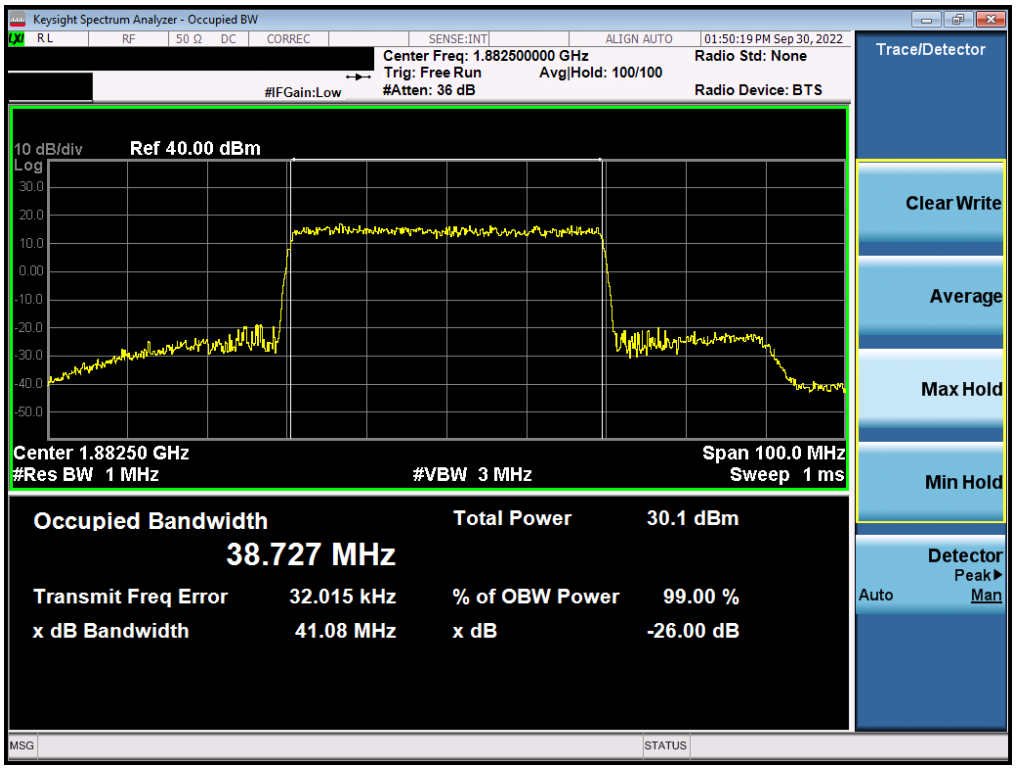
Plot 7-45. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM 16QAM - Full RB - ANT A)

NR Band n25/2 – ANT F

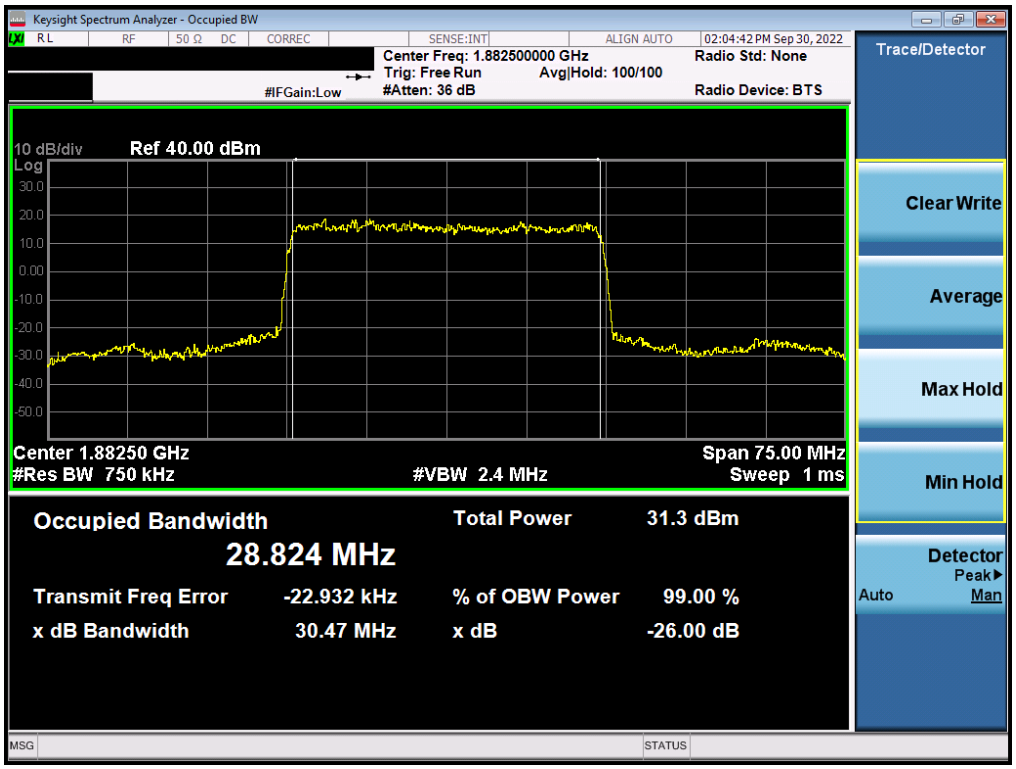
Plot 7-46. Occupied Bandwidth Plot (NR Band n25/2 - 40.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)



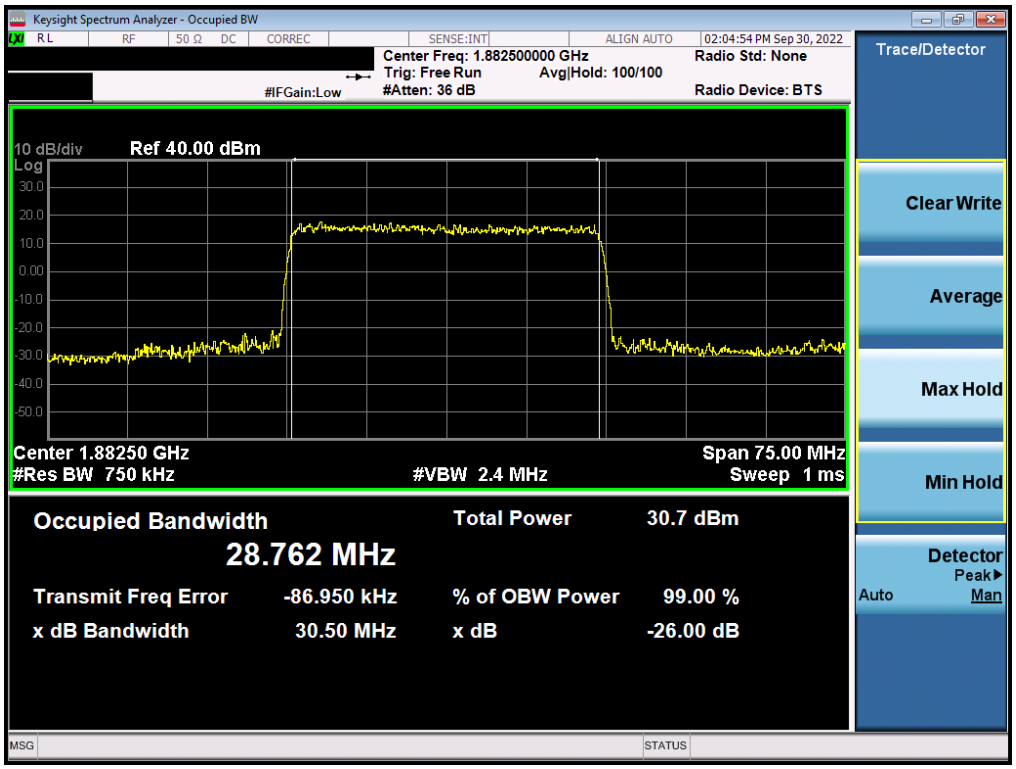
Plot 7-47. Occupied Bandwidth Plot (NR Band n25/2 - 40.0MHz CP-OFDM QPSK - Full RB - ANT F)



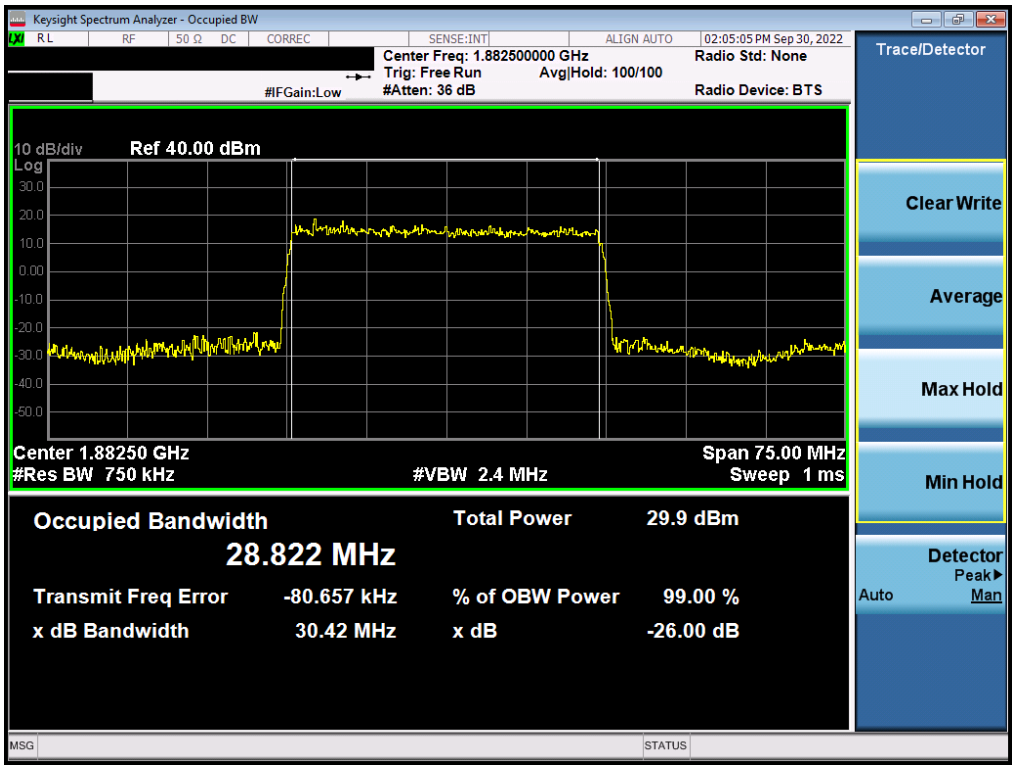
Plot 7-48. Occupied Bandwidth Plot (NR Band n25/2 - 40.0MHz CP-OFDM 16QAM - Full RB - ANT F)



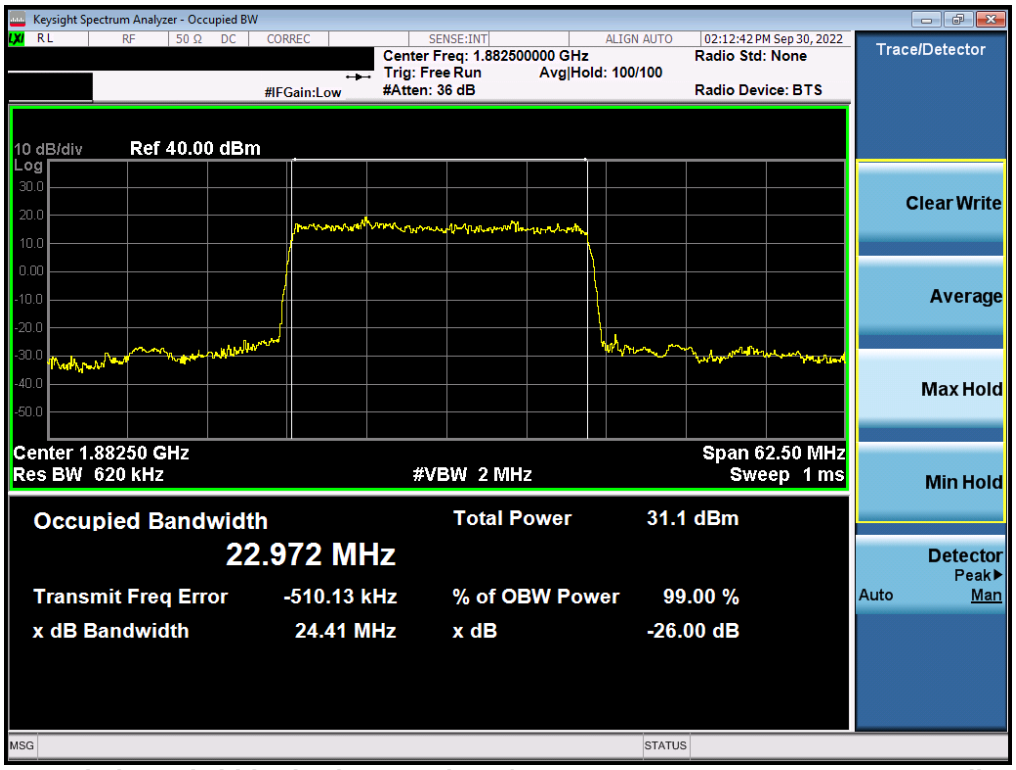
Plot 7-49. Occupied Bandwidth Plot (NR Band n25/2 - 30.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)



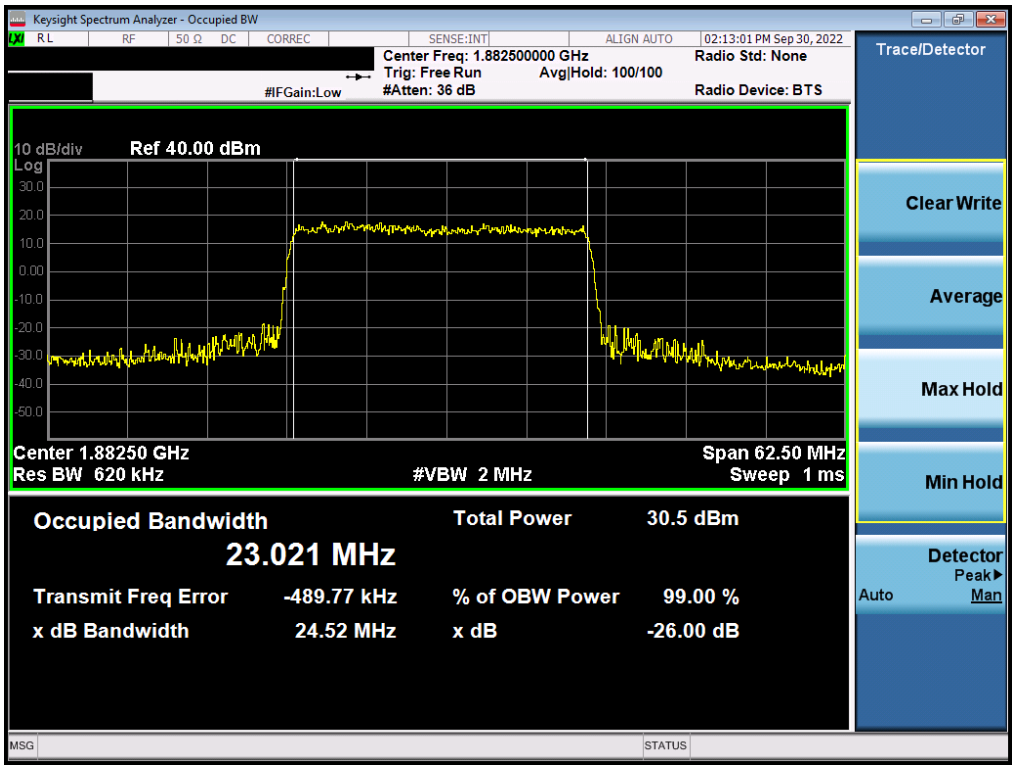
Plot 7-50. Occupied Bandwidth Plot (NR Band n25/2 - 30.0MHz CP-OFDM QPSK - Full RB - ANT F)



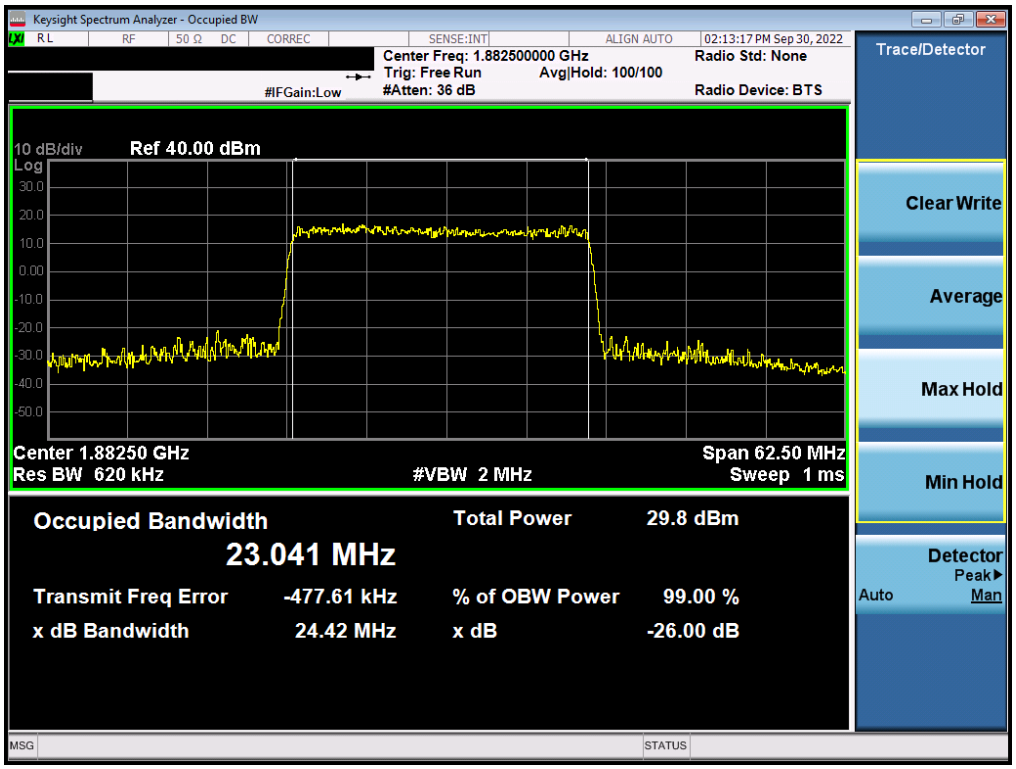
Plot 7-51. Occupied Bandwidth Plot (NR Band n25/2 - 30.0MHz CP-OFDM 16QAM - Full RB - ANT F)



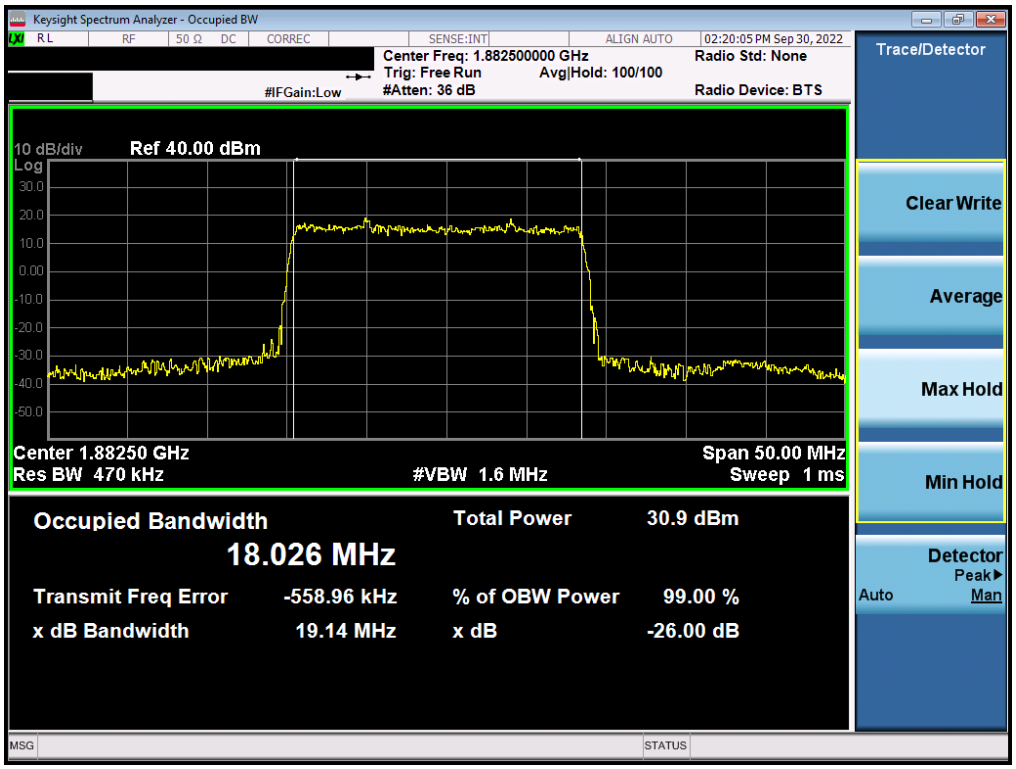
Plot 7-52. Occupied Bandwidth Plot (NR Band n25/2 - 25.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)



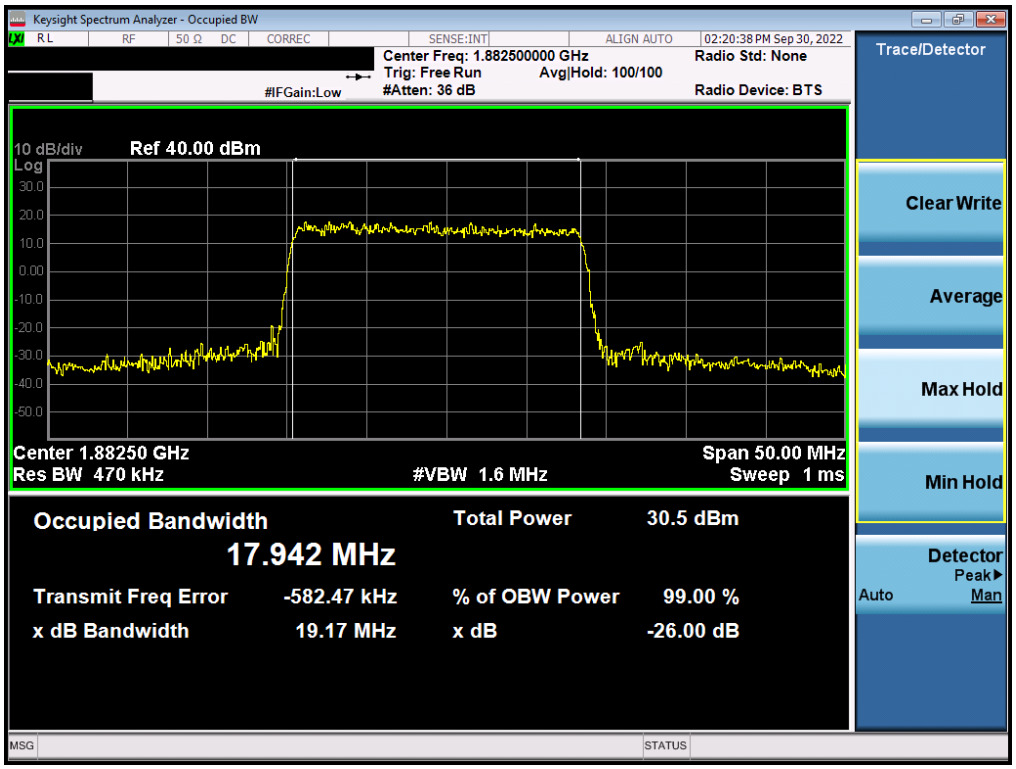
Plot 7-53. Occupied Bandwidth Plot (NR Band n25/2 - 25.0MHz CP-OFDM QPSK - Full RB - ANT F)



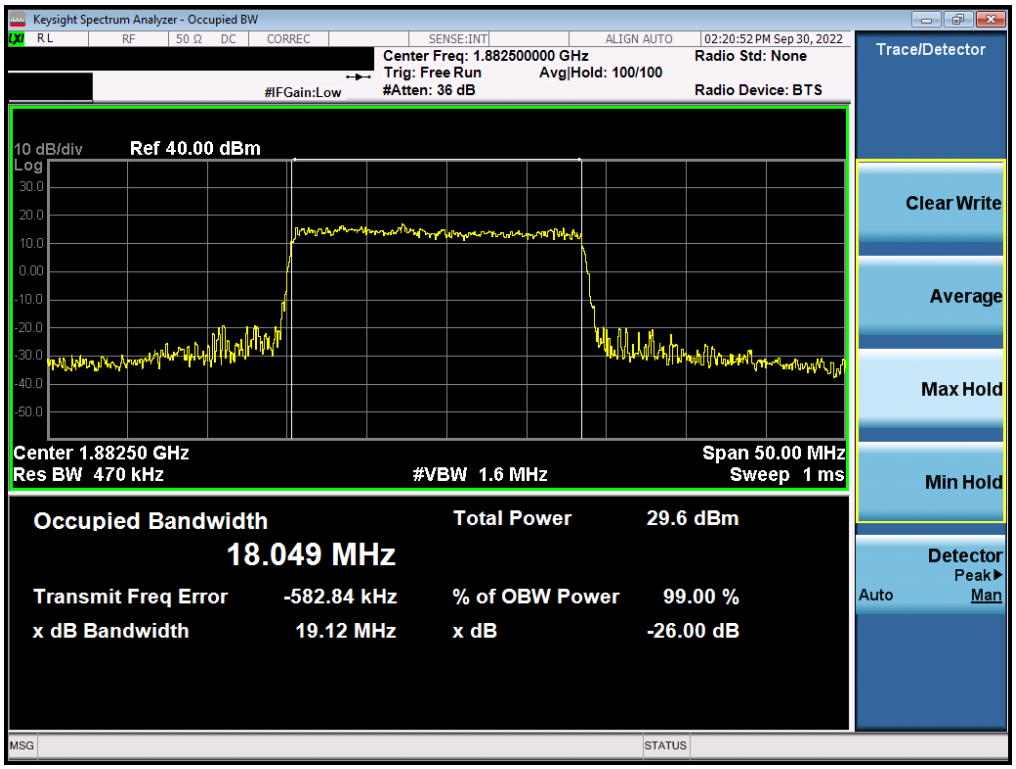
Plot 7-54. Occupied Bandwidth Plot (NR Band n25/2 - 25.0MHz CP-OFDM 16QAM - Full RB - ANT F)



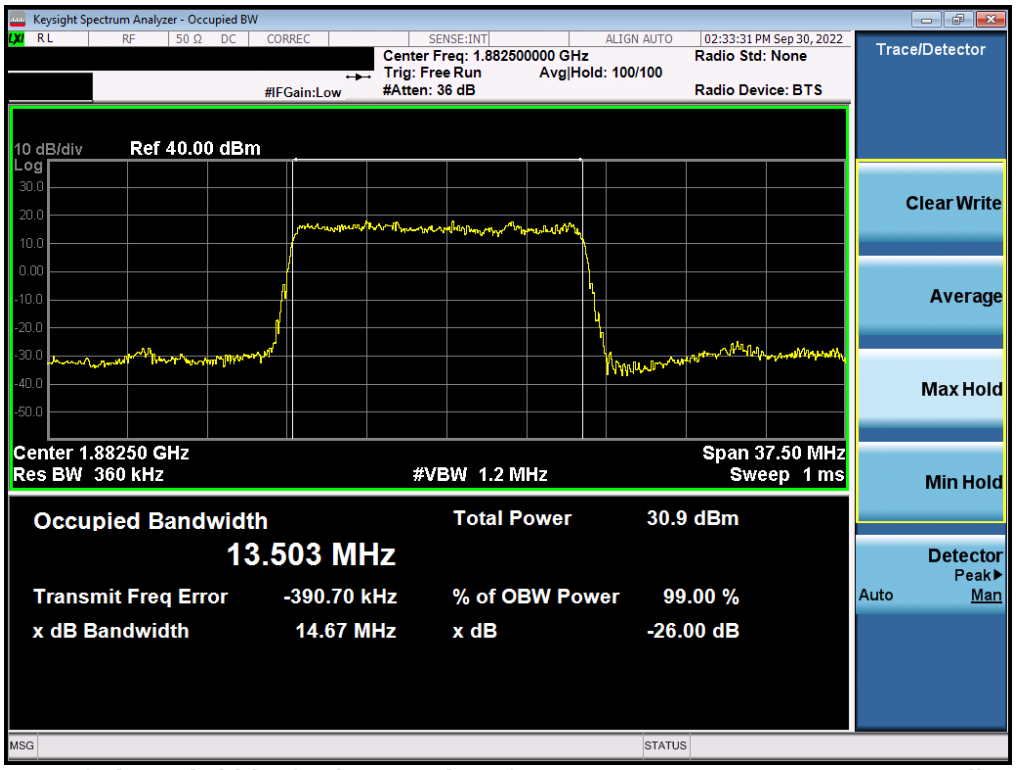
Plot 7-55. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)



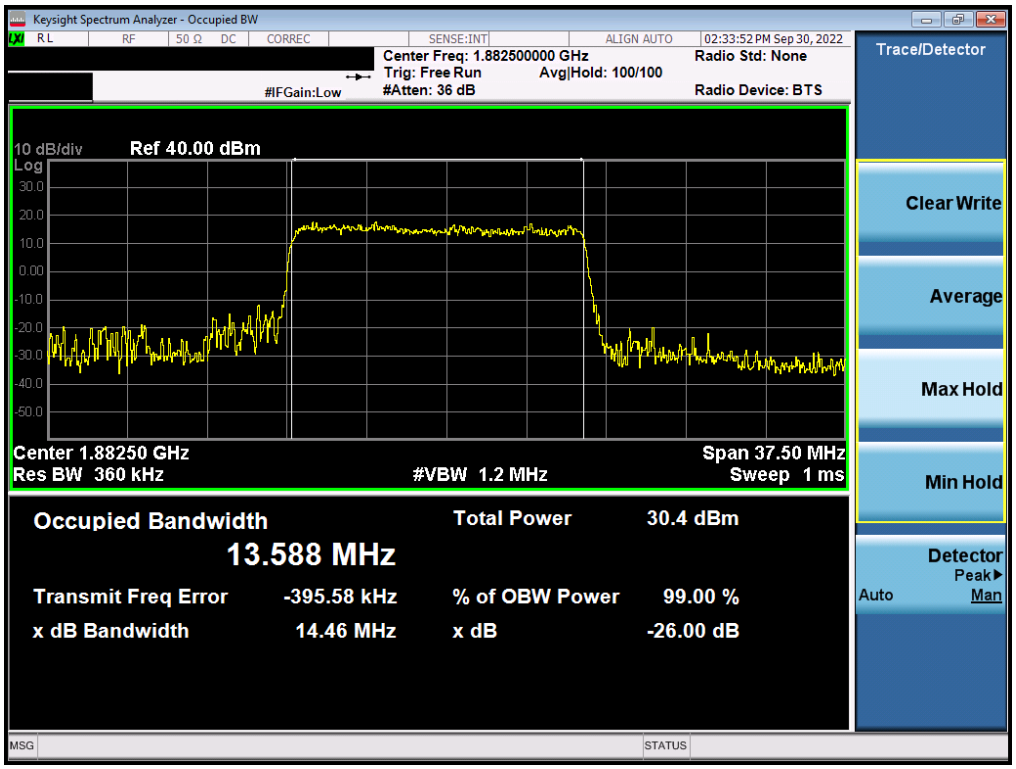
Plot 7-56. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM QPSK - Full RB - ANT F)



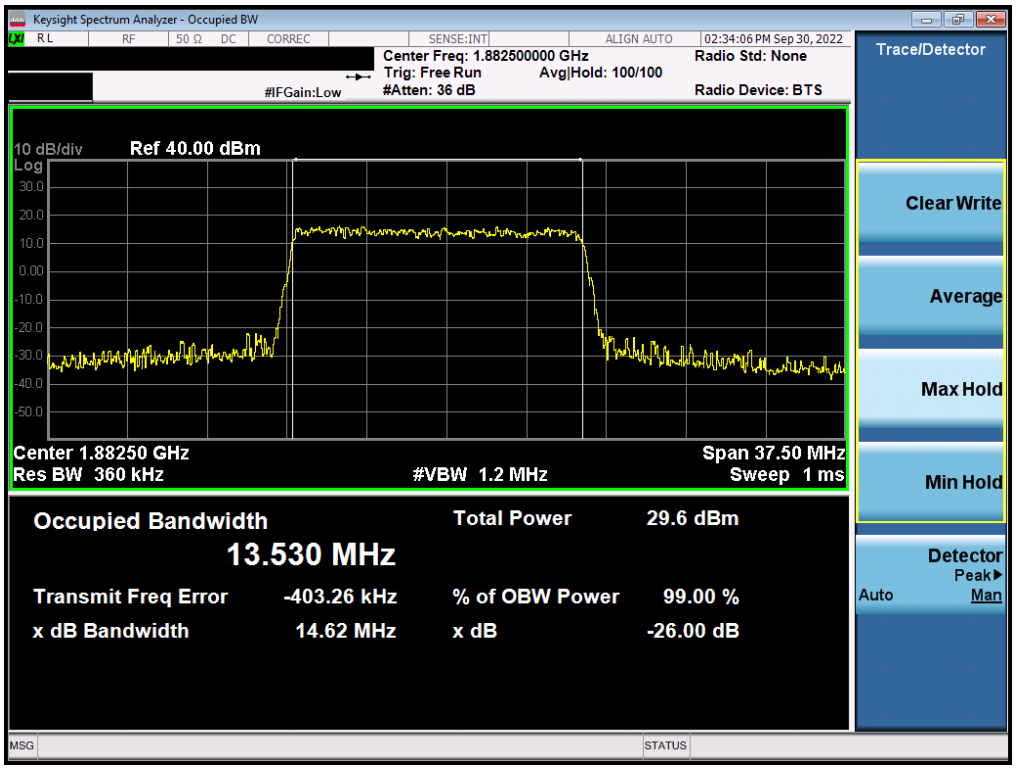
Plot 7-57. Occupied Bandwidth Plot (NR Band n25/2 - 20.0MHz CP-OFDM 16QAM - Full RB - ANT F)



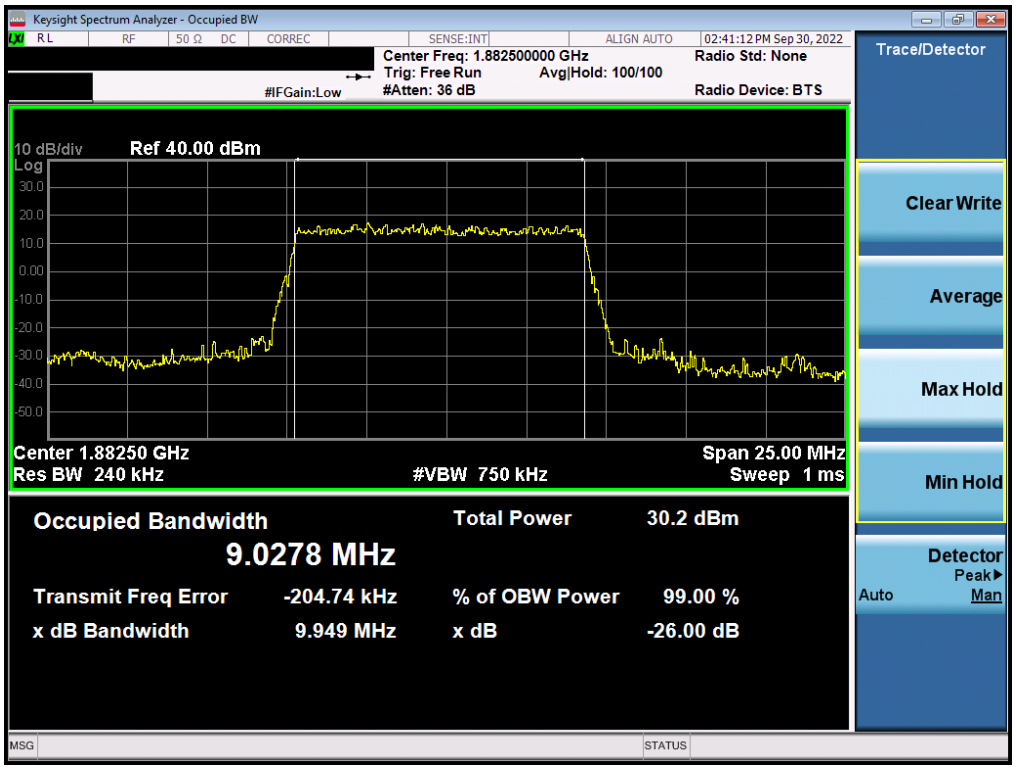
Plot 7-58. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)



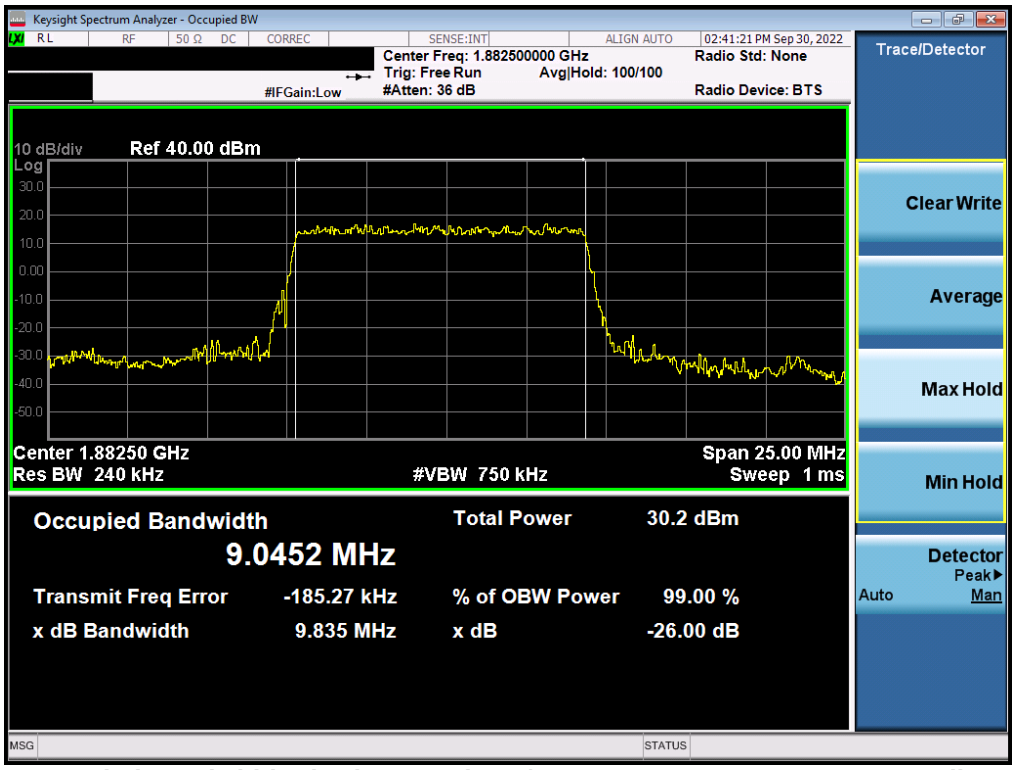
Plot 7-59. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM QPSK - Full RB - ANT F)



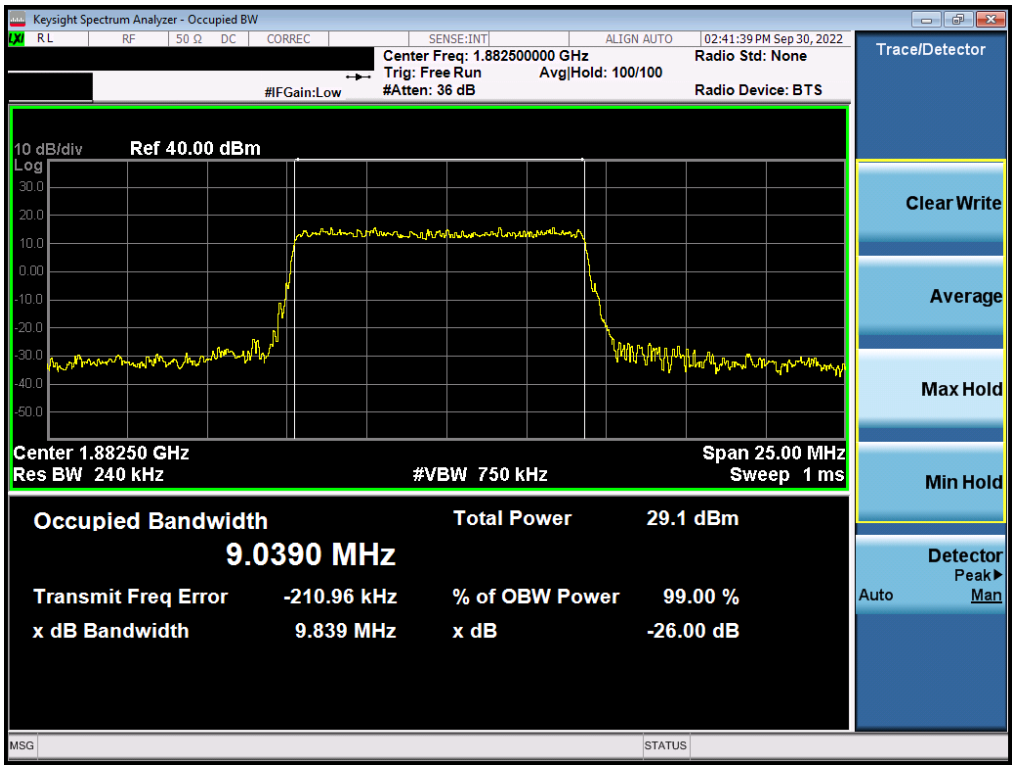
Plot 7-60. Occupied Bandwidth Plot (NR Band n25/2 - 15.0MHz CP-OFDM 16QAM - Full RB - ANT F)



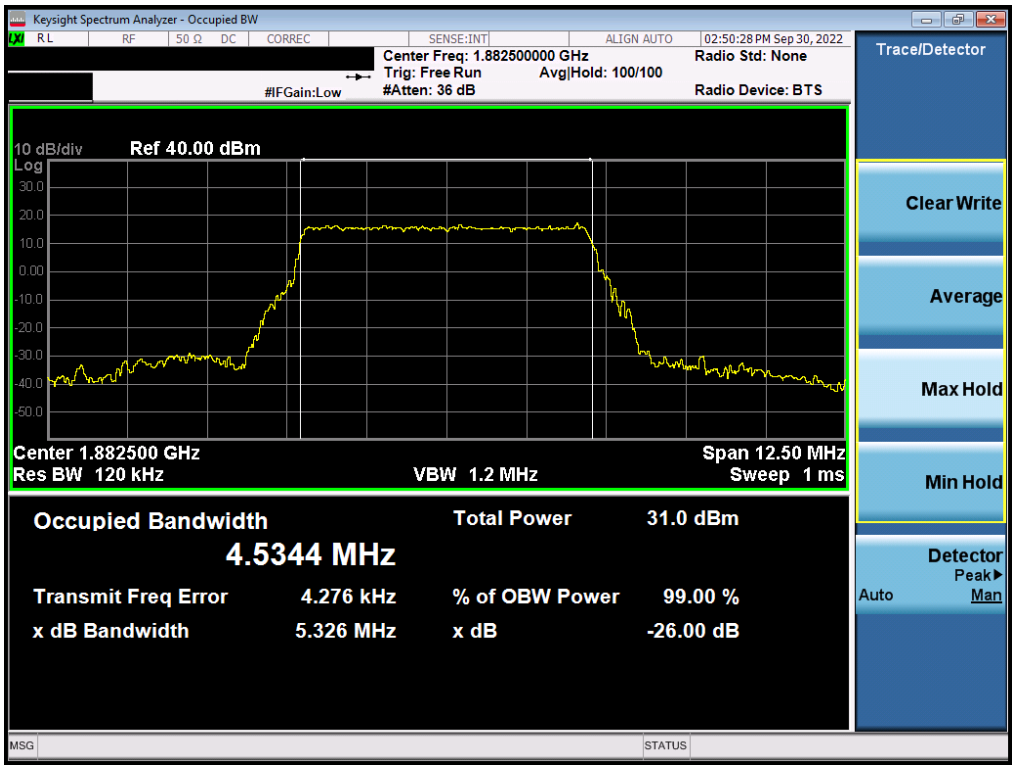
Plot 7-61. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)



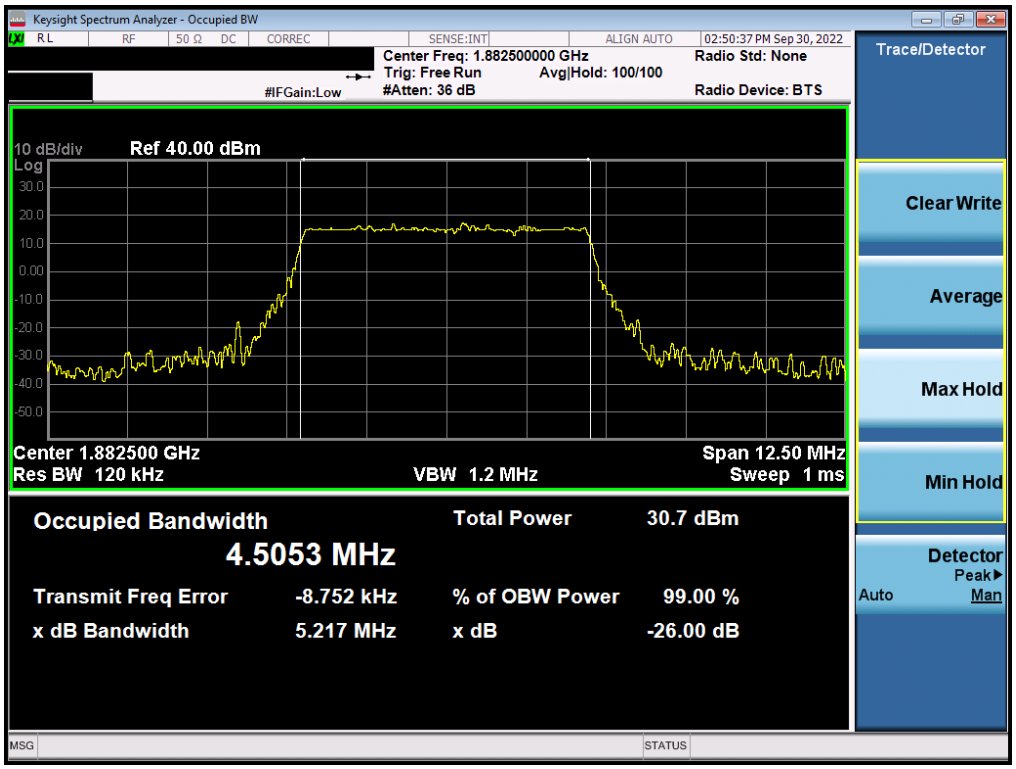
Plot 7-62. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM QPSK - Full RB - ANT F)



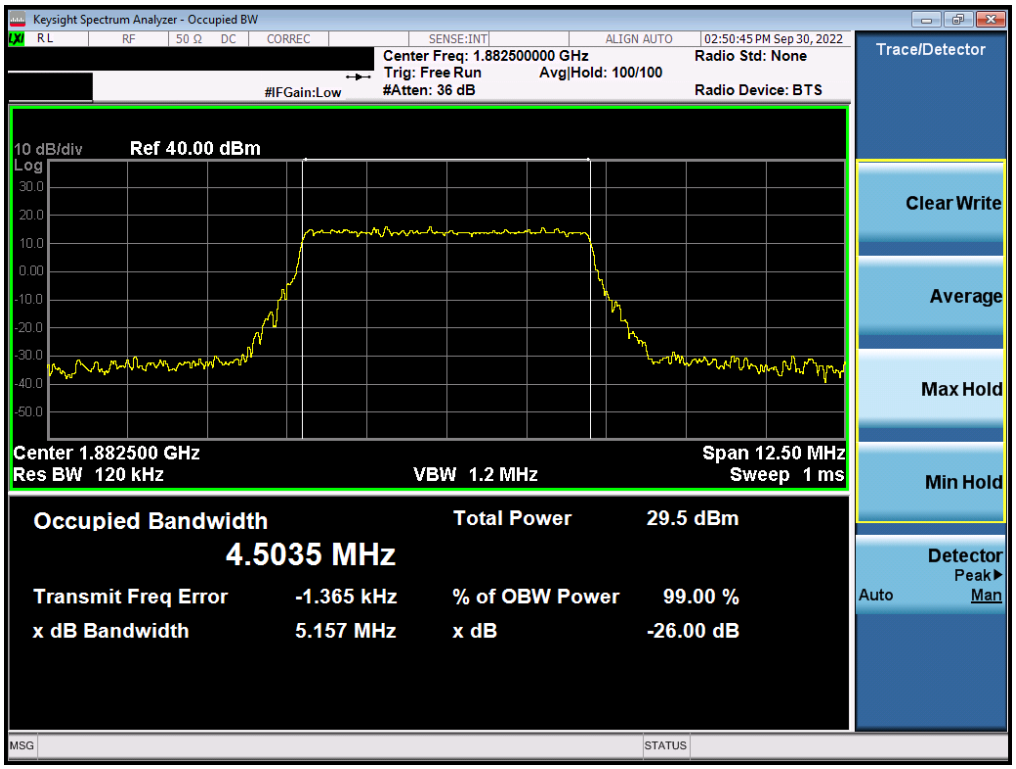
Plot 7-63. Occupied Bandwidth Plot (NR Band n25/2 - 10.0MHz CP-OFDM 16QAM - Full RB - ANT F)



Plot 7-64. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)

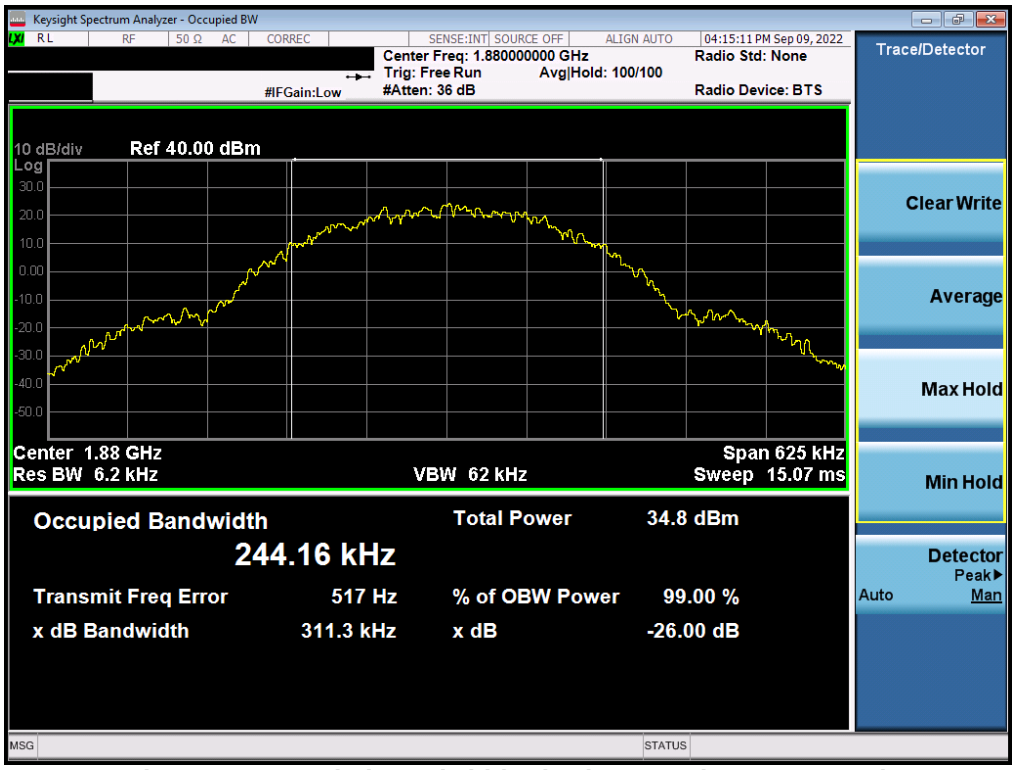


Plot 7-65. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM QPSK - Full RB - ANT F)

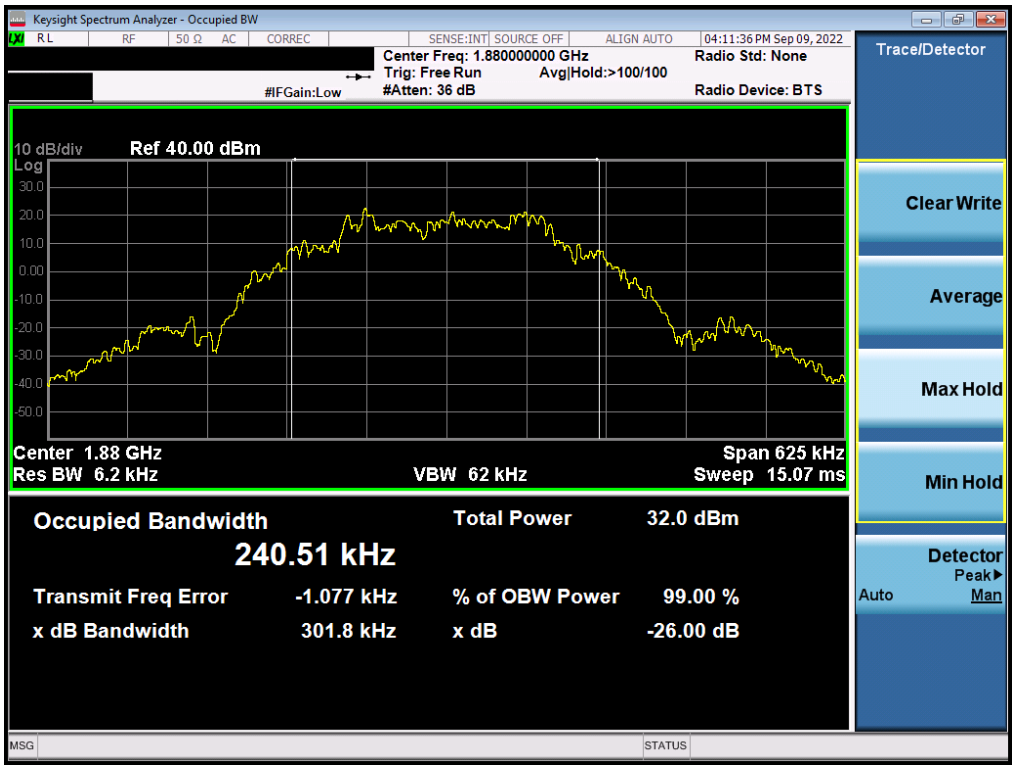


Plot 7-66. Occupied Bandwidth Plot (NR Band n25/2 - 5.0MHz CP-OFDM 16QAM - Full RB - ANT F)

GSM/GPRS PCS – ANT A

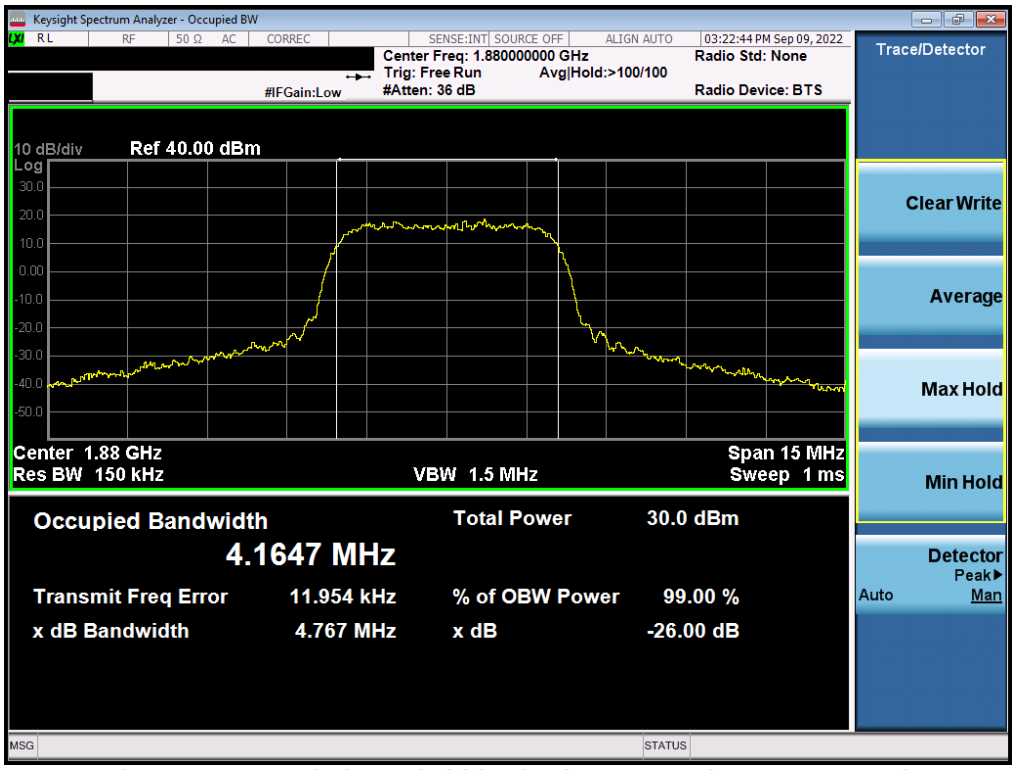


Plot 7-67. Occupied Bandwidth Plot (GPRS, Ch. 661 - ANT A)



Plot 7-68. Occupied Bandwidth Plot (EDGE, Ch. 661 - ANT A)

WCDMA PCS – ANT A



Plot 7-69. Occupied Bandwidth Plot (WCDMA, Ch. 9400 - ANT A)

7.4 Spurious and Harmonic Emissions at Antenna Terminal

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 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.

The minimum permissible attenuation level of any spurious emission is 43 + 10 $log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.4

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to 20GHz (separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = trace average for continuous emissions, max hold for pulse emissions
4. Sweep time = auto couple
5. The trace was allowed to stabilize
6. Please see test notes below for RBW and VBW settings

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

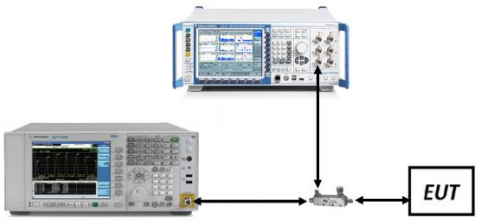


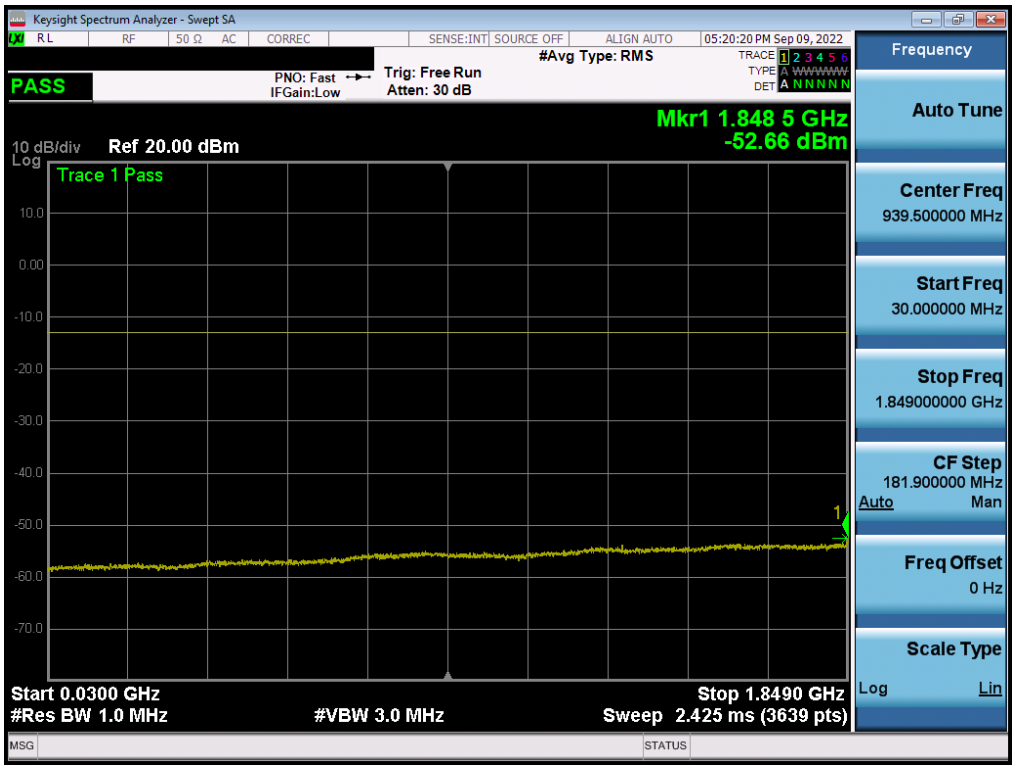
Figure 7-3. Test Instrument & Measurement Setup

Test Notes

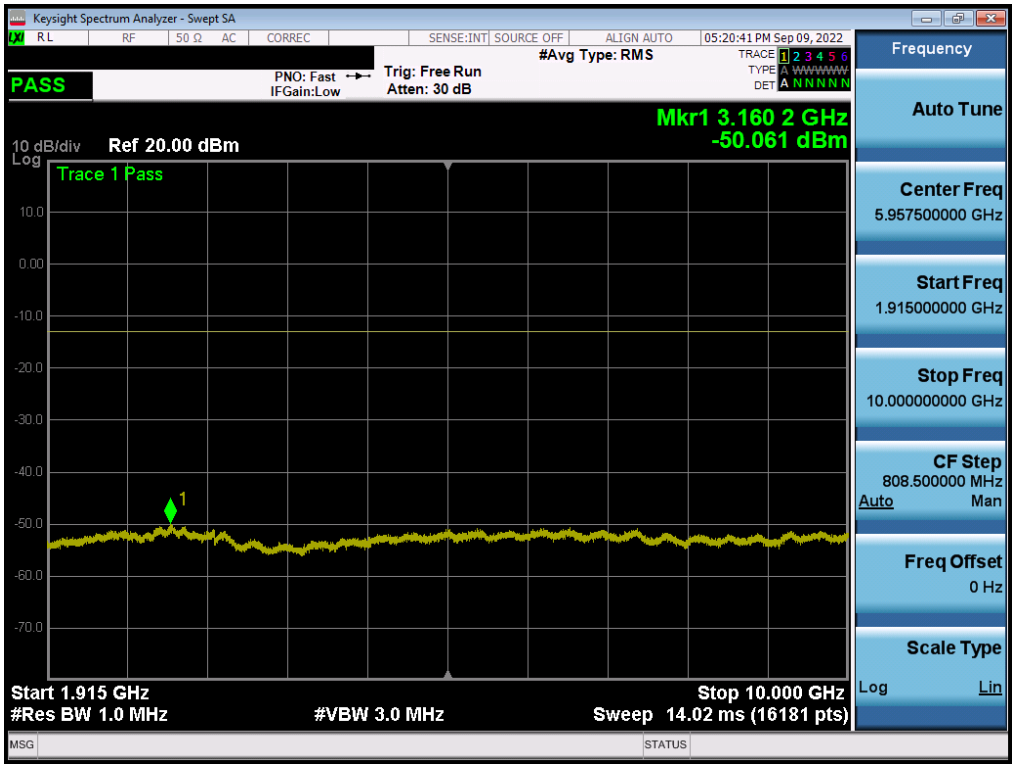
1. Per Part 24 and RSS-133, compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz.

2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) 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.

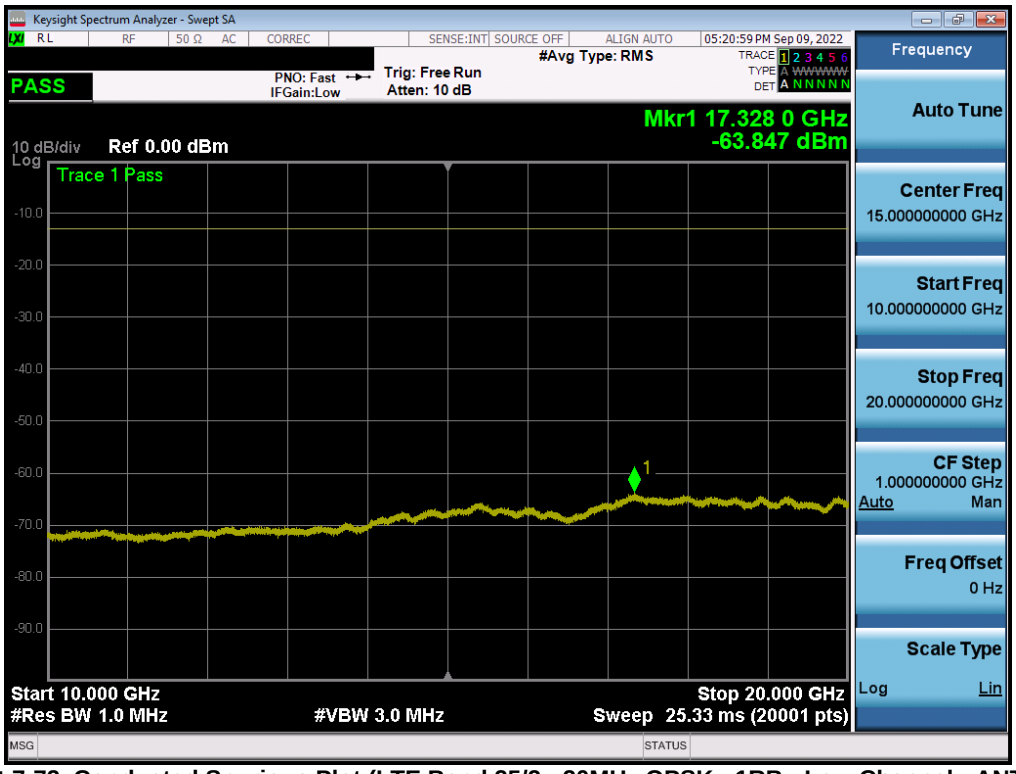
LTE Band 25/2 – ANT A



Plot 7-70. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - ANT A)

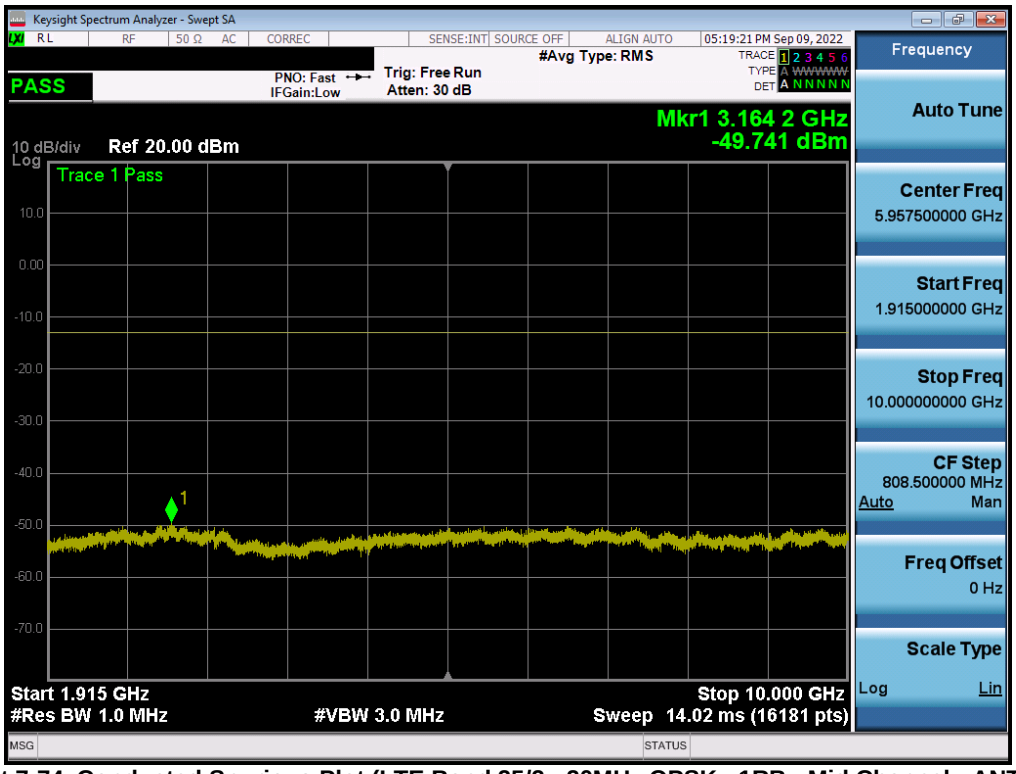


Plot 7-71. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - ANT A)

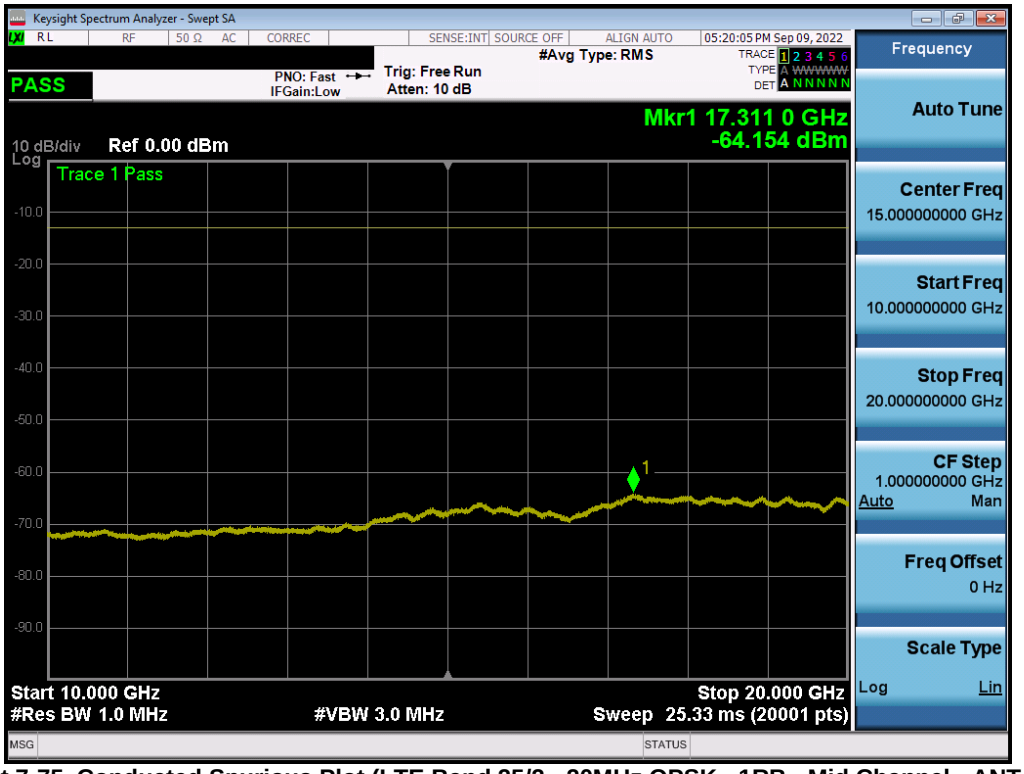


Plot 7-72. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - ANT A)

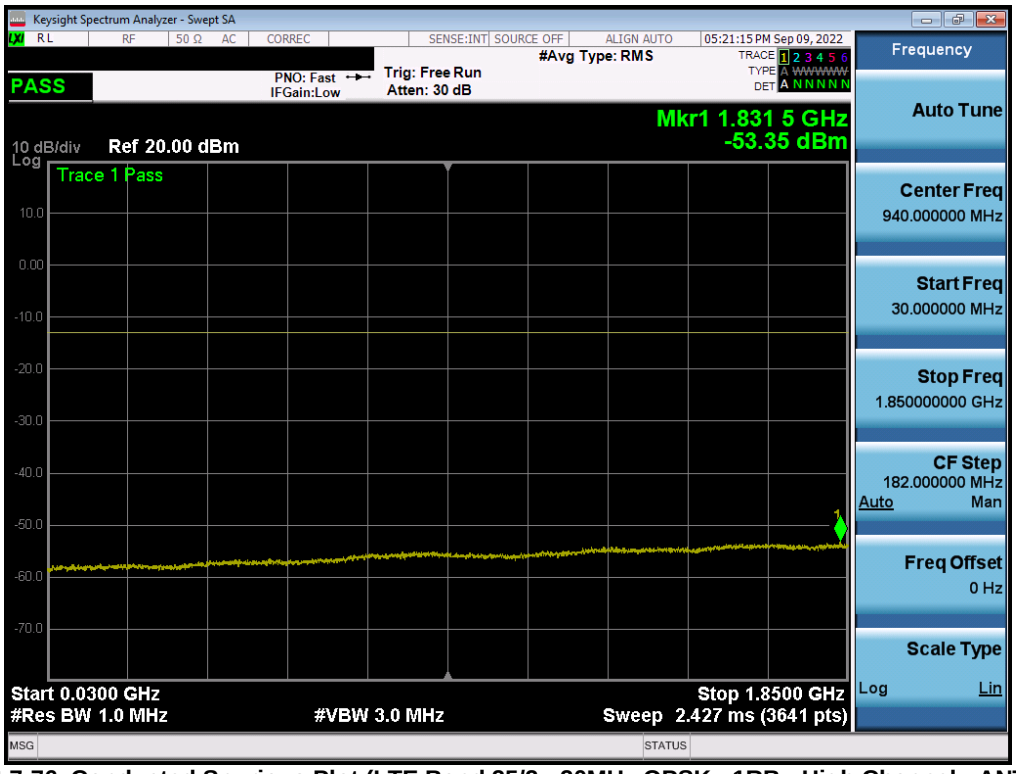
Plot 7-73. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - ANT A)



Plot 7-74. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - ANT A)



Plot 7-75. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - ANT A)

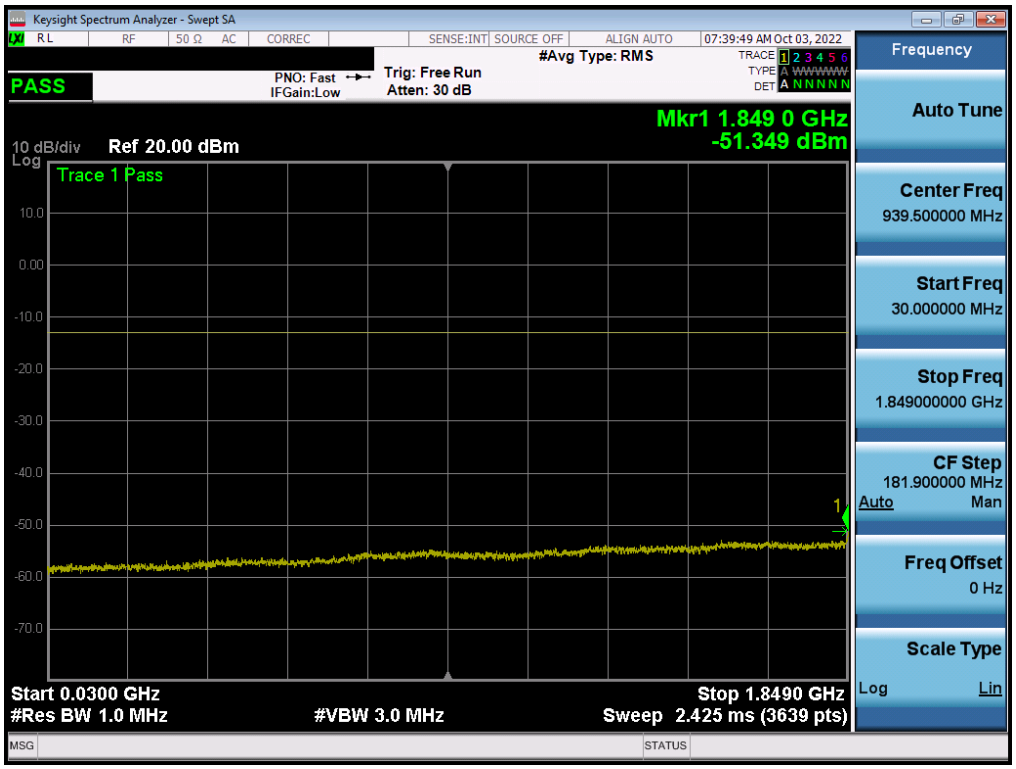


Plot 7-76. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - ANT A)

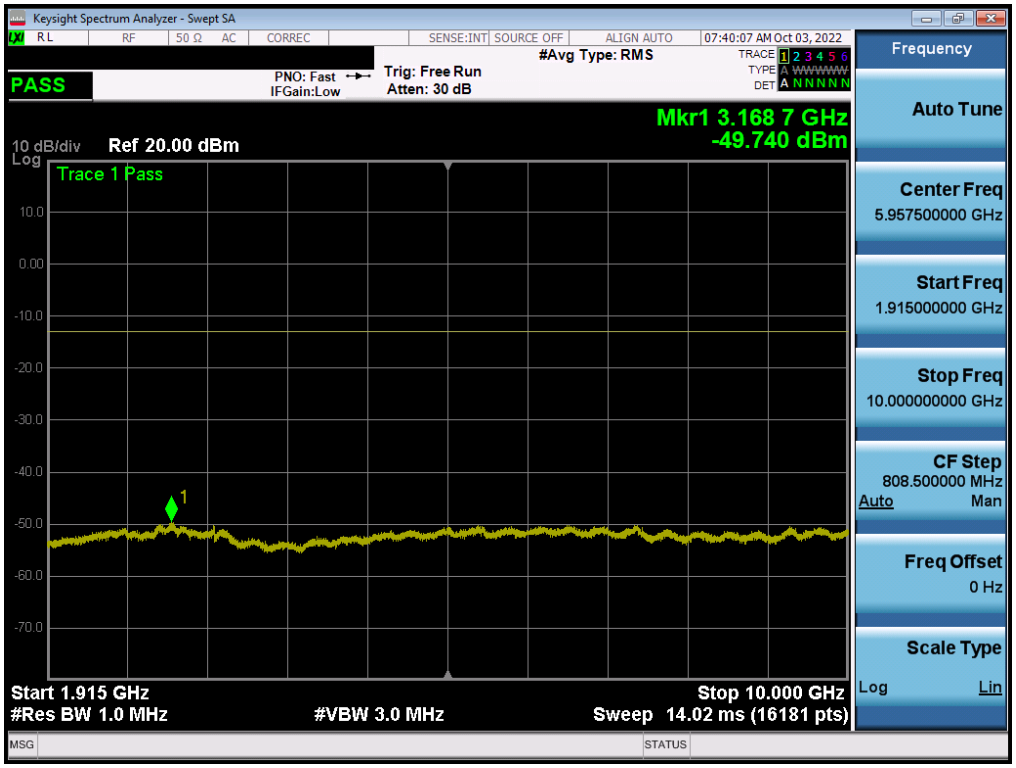
Plot 7-77. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - ANT A)

Plot 7-78. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - ANT A)

LTE Band 25/2 – ANT F



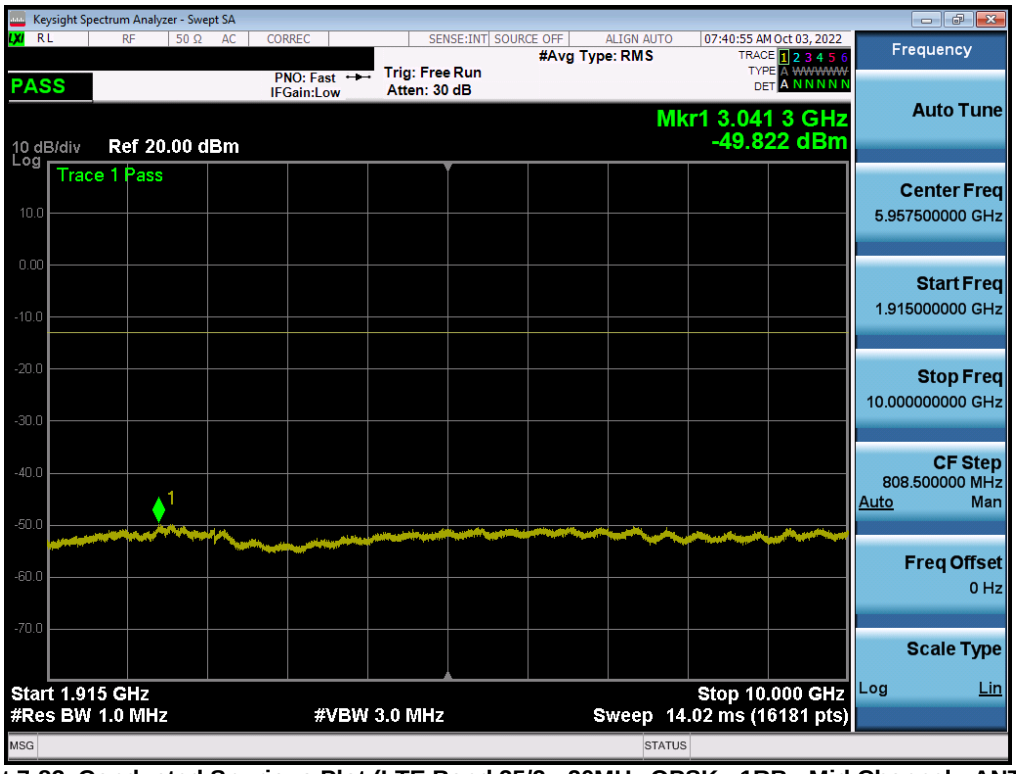
Plot 7-79. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - ANT F)



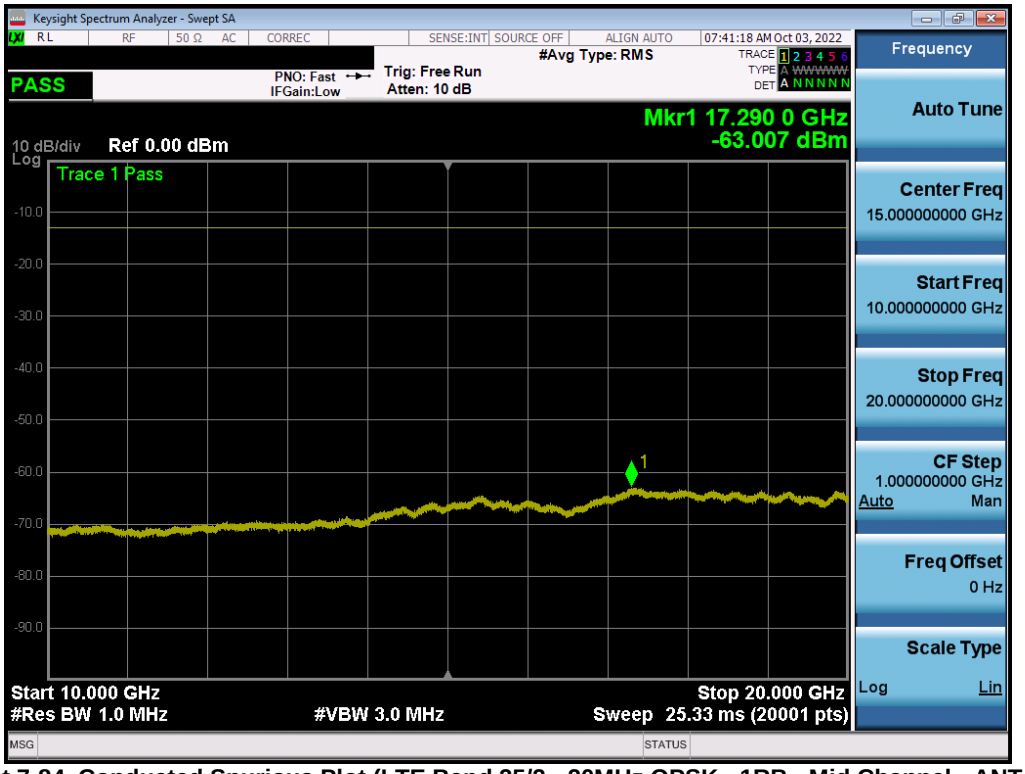
Plot 7-80. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - ANT F)

Plot 7-81. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - ANT F)

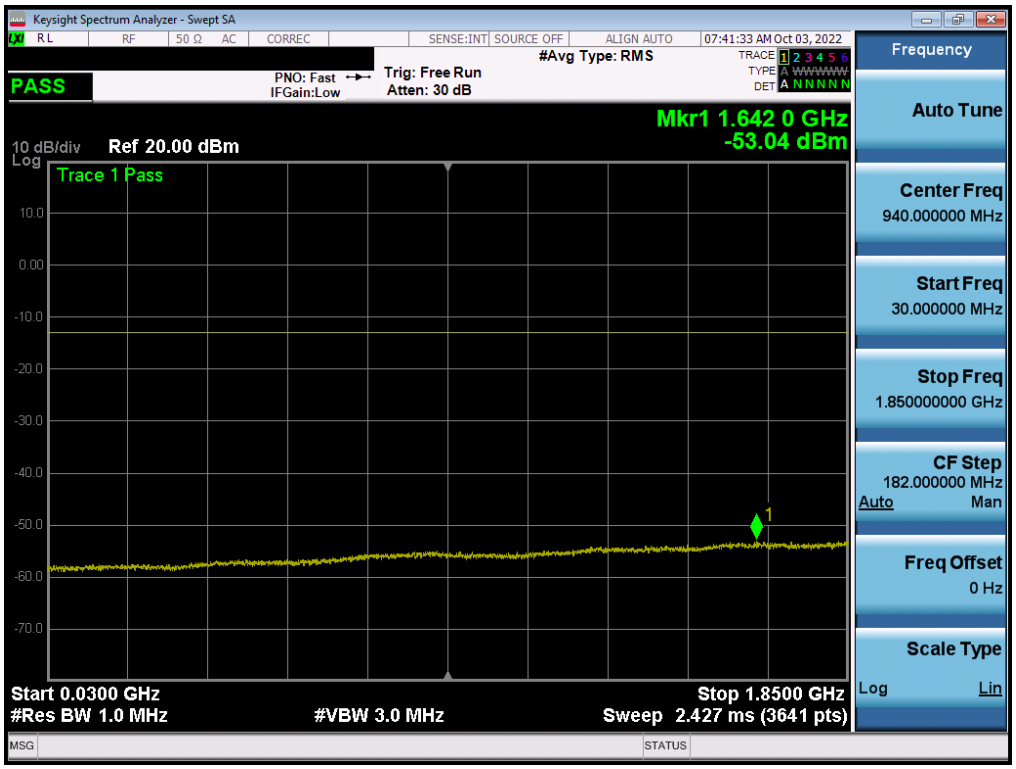
Plot 7-82. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - ANT F)



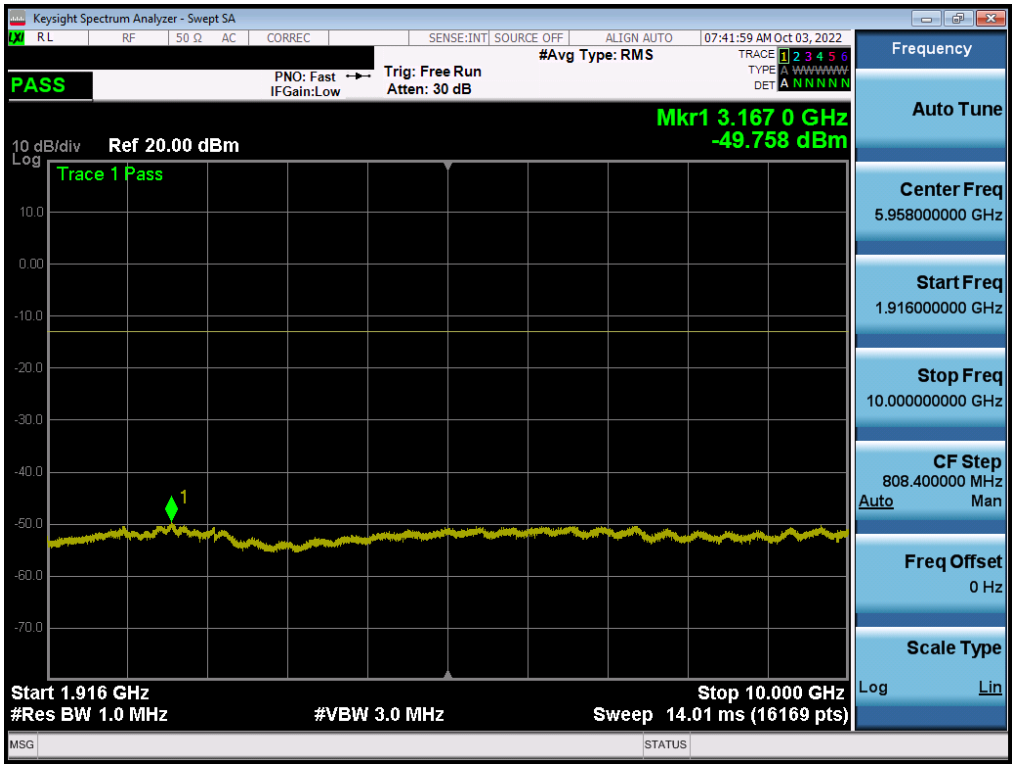
Plot 7-83. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - ANT F)



Plot 7-84. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - ANT F)



Plot 7-85. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - ANT F)

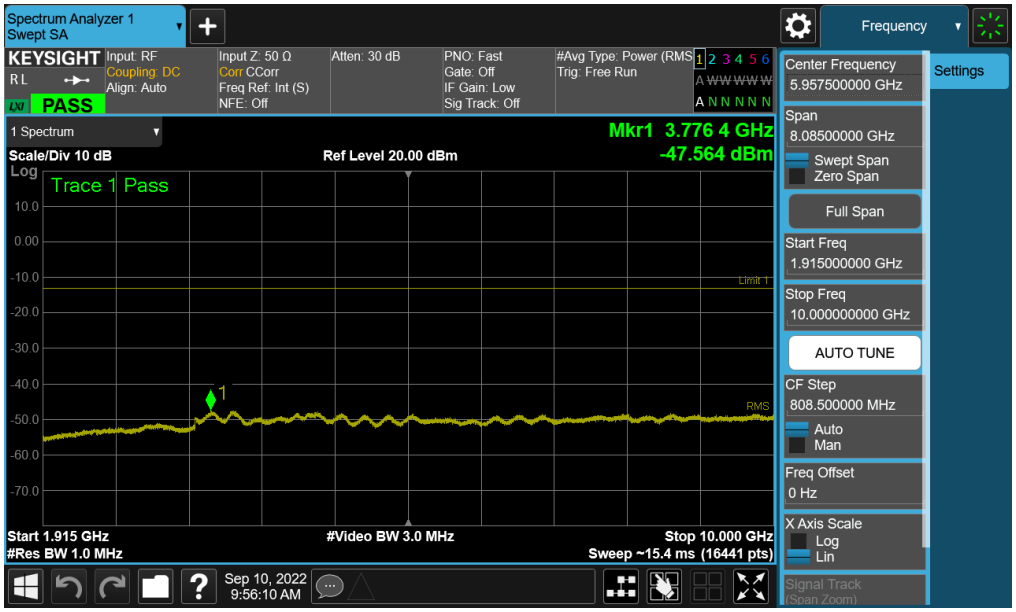


Plot 7-86. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - ANT F)

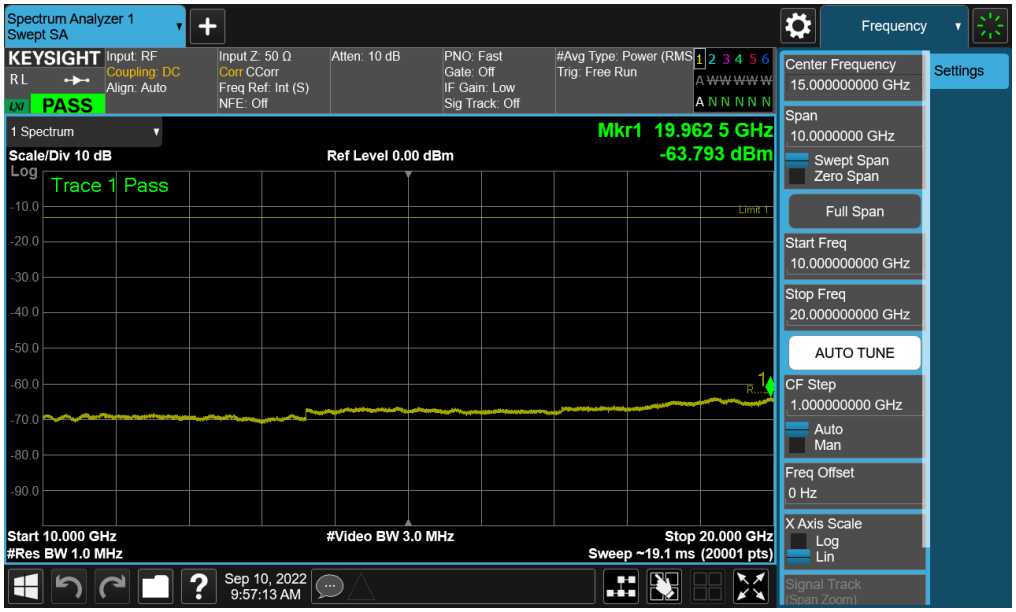
Plot 7-87. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - ANT F)

NR Band n25/2 – ANT A

Plot 7-88. Conducted Spurious Plot (NR Band n25/2 -40.0MHz - 1RB - Low Channel - ANT A)



Plot 7-89. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Low Channel - ANT A)



Plot 7-90. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Low Channel - ANT A)

Plot 7-91. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Mid Channel - ANT A)