



ELEMENT WASHINGTON DC LLC

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PART 27 MEASUREMENT REPORT

Applicant Name:
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Gyeonggi-do, 16677, Korea

Date of Testing:
9/12/2023 - 10/13/2023
Test Report Issue Date:
11/7/2023
Test Site/Location:
Element lab., Columbia, MD, USA
Test Report Serial No.:
1M2308210093-05.A3L

FCC ID:	A3LSMS928B
Applicant Name:	Samsung Electronics Co., Ltd.

Application Type:	Certification
Model:	SM-S928B/DS
Additional Model(s):	SM-S928B
EUT Type:	Portable Handset
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part:	27
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



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Antenna-1						
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
NR Band n77 PC2 (3700 - 3980MHz)	100 MHz	$\pi/2$ BPSK	3750.0 - 3930.0	0.295	24.70	97M2G7D
		QPSK	3750.0 - 3930.0	0.302	24.79	98M2G7D
		16QAM	3750.0 - 3930.0	0.245	23.89	97M9W7D
	90 MHz	$\pi/2$ BPSK	3745.0 - 3935.0	0.302	24.80	87M5G7D
		QPSK	3745.0 - 3935.0	0.310	24.91	87M8G7D
		16QAM	3745.0 - 3935.0	0.235	23.71	87M9W7D
	80 MHz	$\pi/2$ BPSK	3740.0 - 3940.0	0.291	24.63	77M3G7D
		QPSK	3740.0 - 3940.0	0.302	24.79	77M8G7D
		16QAM	3740.0 - 3940.0	0.230	23.62	77M7W7D
	70 MHz	$\pi/2$ BPSK	3735.0 - 3945.0	0.288	24.59	64M6G7D
		QPSK	3735.0 - 3945.0	0.297	24.73	67M8G7D
		16QAM	3735.0 - 3945.0	0.236	23.73	67M8W7D
	60 MHz	$\pi/2$ BPSK	3730.0 - 3950.0	0.289	24.60	58M4G7D
		QPSK	3730.0 - 3950.0	0.304	24.82	58M2G7D
		16QAM	3730.0 - 3950.0	0.228	23.58	58M1W7D
	50 MHz	$\pi/2$ BPSK	3725.0 - 3955.0	0.293	24.67	46M1G7D
		QPSK	3725.0 - 3955.0	0.304	24.82	47M7G7D
		16QAM	3725.0 - 3955.0	0.238	23.77	47M8W7D
	40 MHz	$\pi/2$ BPSK	3720.0 - 3960.0	0.285	24.54	35M9G7D
		QPSK	3720.0 - 3960.0	0.293	24.66	38M0G7D
		16QAM	3720.0 - 3960.0	0.224	23.50	38M2W7D
	30 MHz	$\pi/2$ BPSK	3715.0 - 3965.0	0.296	24.71	27M1G7D
		QPSK	3715.0 - 3965.0	0.302	24.79	28M2G7D
		16QAM	3715.0 - 3965.0	0.237	23.74	28M1W7D
	20 MHz	$\pi/2$ BPSK	3710.0 - 3970.0	0.283	24.52	18M1G7D
		QPSK	3710.0 - 3970.0	0.292	24.65	18M5G7D
		16QAM	3710.0 - 3970.0	0.223	23.48	18M4W7D
	15 MHz	$\pi/2$ BPSK	3707.5 - 3972.5	0.285	24.54	13M1G7D
		QPSK	3707.5 - 3972.5	0.295	24.70	13M8G7D
		16QAM	3707.5 - 3972.5	0.224	23.50	13M7W7D
	10 MHz	$\pi/2$ BPSK	3705.0 - 3975.0	0.287	24.58	8M75G7D
		QPSK	3705.0 - 3975.0	0.297	24.72	8M67G7D
		16QAM	3705.0 - 3975.0	0.224	23.49	8M72W7D

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Antenna-1						
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
NR Band n77 PC3 (3450 - 3550MHz)	100 MHz	π/2 BPSK	3500.0	0.231	23.63	96M8G7D
		QPSK	3500.0	0.228	23.57	98M0G7D
		16QAM	3500.0	0.183	22.62	97M9W7D
	90 MHz	π/2 BPSK	3495.0 - 3505.0	0.233	23.66	87M6G7D
		QPSK	3495.0 - 3505.0	0.225	23.52	87M7G7D
		16QAM	3495.0 - 3505.0	0.183	22.62	87M8W7D
	80 MHz	π/2 BPSK	3490.0 - 3510.0	0.234	23.68	77M3G7D
		QPSK	3490.0 - 3510.0	0.230	23.61	77M8G7D
		16QAM	3490.0 - 3510.0	0.179	22.53	77M8W7D
	70 MHz	π/2 BPSK	3485.0 - 3515.0	0.227	23.55	64M6G7D
		QPSK	3485.0 - 3515.0	0.220	23.41	67M7G7D
		16QAM	3485.0 - 3515.0	0.177	22.48	67M7W7D
	60 MHz	π/2 BPSK	3480.0 - 3520.0	0.227	23.55	58M4G7D
		QPSK	3480.0 - 3520.0	0.222	23.46	58M2G7D
		16QAM	3480.0 - 3520.0	0.169	22.28	58M1W7D
	50 MHz	π/2 BPSK	3475.0 - 3525.0	0.235	23.71	46M1G7D
		QPSK	3475.0 - 3525.0	0.229	23.59	47M7G7D
		16QAM	3475.0 - 3525.0	0.172	22.35	47M8W7D
	40 MHz	π/2 BPSK	3470.0 - 3530.0	0.230	23.62	36M1G7D
		QPSK	3470.0 - 3530.0	0.225	23.52	38M0G7D
		16QAM	3470.0 - 3530.0	0.172	22.35	38M2W7D
	30 MHz	π/2 BPSK	3465.0 - 3535.0	0.233	23.66	27M1G7D
		QPSK	3465.0 - 3535.0	0.226	23.54	28M0G7D
		16QAM	3465.0 - 3535.0	0.175	22.42	28M1W7D
	20 MHz	π/2 BPSK	3460.0 - 3540.0	0.226	23.54	18M1G7D
		QPSK	3460.0 - 3540.0	0.220	23.42	18M4G7D
		16QAM	3460.0 - 3540.0	0.171	22.32	18M4W7D
	15 MHz	π/2 BPSK	3457.5 - 3542.5	0.229	23.60	13M0G7D
		QPSK	3457.5 - 3542.5	0.223	23.48	13M7G7D
		16QAM	3457.5 - 3542.5	0.172	22.36	13M7W7D
10 MHz	π/2 BPSK	3455.0 - 3545.0	0.234	23.69	8M7G7D	
	QPSK	3455.0 - 3545.0	0.227	23.56	8M65G7D	
	16QAM	3455.0 - 3545.0	0.175	22.43	8M69W7D	

EUT Overview

Antenna-2					
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP	
				Max. Power [W]	Max. Power [dBm]
NR Band n77 PC3 (3450 - 3550MHz)	100 MHz	π/2 BPSK	3500.0	0.375	25.73
		QPSK	3500.0	0.382	25.82
		16QAM	3500.0	0.316	24.99
NR Band n77 PC3 (3700 - 3980MHz)	100 MHz	π/2 BPSK	3750.0 - 3930.0	0.359	25.55
		QPSK	3750.0 - 3930.0	0.351	25.45
		16QAM	3750.0 - 3930.0	0.286	24.56

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Antenna-3					
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP	
				Max. Power [W]	Max. Power [dBm]
NR Band n77 PC3 (3450 - 3550MHz)	100 MHz	$\pi/2$ BPSK	3500.0	0.131	21.16
		QPSK	3500.0	0.134	21.26
		16QAM	3500.0	0.108	20.33
NR Band n77 PC3 (3700 - 3980MHz)	100 MHz	$\pi/2$ BPSK	3750.0 - 3930.0	0.278	24.43
		QPSK	3750.0 - 3930.0	0.281	24.48
		16QAM	3750.0 - 3930.0	0.224	23.50

EUT Overview

Antenna-4					
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP	
				Max. Power [W]	Max. Power [dBm]
NR Band n77 PC3 (3450 - 3550MHz)	100 MHz	$\pi/2$ BPSK	3500.0	0.112	20.48
		QPSK	3500.0	0.105	20.22
		16QAM	3500.0	0.086	19.33
NR Band n77 PC3 (3700 - 3980MHz)	100 MHz	$\pi/2$ BPSK	3750.0 - 3930.0	0.152	21.81
		QPSK	3750.0 - 3930.0	0.147	21.67
		16QAM	3750.0 - 3930.0	0.118	20.72

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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.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMS928B**. 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 27.

Test Device Serial No.: 0358M, 0747M, 0741M

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), 802.11b/g/n/ac/ax/be WLAN, 802.11a/n/ac/ax/be UNII (5GHz and 6GHz), Bluetooth (1x, EDR, LE), NFC, Wireless Power Transfer, UWB

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.

Band	Ant1	Ant2	Ant3	Ant4
NR n77 C-Band	Ant7	Ant2	Ant10	Ant3
NR n77 DoD	Ant7	Ant2	Ant10	Ant3

Table 2-1. Antenna Naming Convention

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 S928BXXU0AWI8 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.

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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 $P_g [dBm] - \text{cable loss} [dB]$.

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

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

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.

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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 (\pm dB)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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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
-	AP1-002	EMC Cable and Switch System	1/11/2023	Annual	1/11/2024	AP1-002
-	ETS-001	EMC Cable and Switch System	1/11/2023	Annual	1/11/2024	ETS-001
-	ETS-002	EMC Cable and Switch System	1/11/2023	Annual	1/11/2024	ETS-002
-	MD 1M 18-40	EMC Cable and Switch System	1/11/2023	Annual	1/11/2024	MD 1M 18-40
-	WL40-1	Conducted Cable Set (40GHz)	1/12/2023	Annual	1/12/2024	WL40-1
-	WL25-1	Conducted Cable Set (25GHz)	1/12/2023	Annual	1/12/2024	WL25-1
Anritsu	MA24406A	Microwave Peak Power Sensor	9/7/2023	Annual	9/7/2024	11240
Emco	3115	Horn Antenna (1-18GHz)	8/8/2022	Biennial	8/8/2024	9704-5182
Emco	3116	Horn Antenna (18 - 40GHz)	7/5/2022	Biennial	7/5/2024	9203-2178
Pastermack	MNLC-2	Line Conducted Emission Cable (NM)	1/11/2023	Annual	1/11/2024	MNLC-2
ETS-Lindgren	3816/2NM	Line Impedance Stabilization Network	8/11/2022	Biennial	8/11/2024	114451
ETS Lindgren	3116C	1-18 GHz DRG Horn Antenna	2/27/2023	Biennial	2/27/2024	00218893
ETS Lindgren	3115	Double Ridged Guide Horn	4/12/2022	Biennial	4/12/2024	82333
Com-Power	AL-130	9kHz - 30MHz Loop Antenna	4/13/2022	Biennial	4/13/2025	121034
Keysight Technologies	N9020A	MXA Signal Analyzer	3/15/2023	Annual	3/15/2024	MY54500644
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	3/15/2023	Annual	3/15/2024	MY52350166
Keysight Technologies	N9030A	PXA Signal Analyzer	1/31/2023	Annual	1/31/2024	MY55410501
Keysight Technologies	N9030B	PXA Signal Analyzer, Multi-touch	9/7/2023	Annual	9/7/2024	MY57141001
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	9/25/2023	Annual	9/25/2024	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	9/11/2023	Annual	9/11/2024	100348
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	3/1/2023	Annual	3/1/2024	101716
Rohde & Schwarz	FSW67	Signal / Spectrum Analyzer	1/13/2023	Annual	1/13/2024	103200
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	2/21/2023	Biennial	2/21/2025	A051107
Sunol	JB6	LB6 Antenna	3/2/2023	Biennial	3/2/2025	A082816

Table 5-1. 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.

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6.0 SAMPLE CALCULATIONS

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.

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7.0 TEST RESULTS

7.1 Summary

Company Name: Samsung Electronics Co., Ltd.
 FCC ID: A3LSMS928B
 FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
 Mode(s): NR

Test Condition	Test Description	FCC Part Section(s)	Test Limit	Test Result	Reference
CONDUCTED	Transmitter Conducted Output Power	2.1046(a), 2.1046(c)	N/A	PASS	Section 7.2
	Occupied Bandwidth	2.1049(h)	N/A	PASS	Section 7.3
	Conducted Band Edge / Spurious Emissions (NR Band n77)	2.1051, 27.53(l), 27.53(n)	≤ 13 dBm / MHz	PASS	Sections 7.4, 7.5
	Peak-to-Average Ratio (NR Band n77)	27.50(j)(4), 27.50(k)(4)	≤ 13 dB	PASS	Section 7.6
	Frequency Stability	2.1055, 27.54	Fundamental emissions stay within authorized frequency block.	PASS	Section 7.9
RADIATED	Effective Radiated Power / Equivalent Isotropic Radiated Power (NR Band n77)	27.50(j)(3), 27.50(k)(3)	≤ 1 Watt EIRP	PASS	Section 7.7
	Radiated Spurious Emissions (NR Band n77)	2.1053, 27.53(l), 27.53(n)	≤ 13 dBm / MHz	PASS	Section 7.8

* 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**.

Table 7-1. 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.

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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. Span = 2 x OBW to 3 x OBW
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.

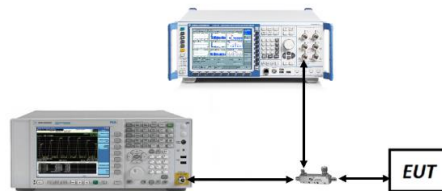


Figure 7-1. Test Instrument & Measurement Setup

Test Notes

1. 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.
2. All other conducted power measurements are contained in the RF exposure report for this filing.
3. Conducted power was found to reduce for the higher order QAM modulations when compared to 16QAM. Due to this trend, only the worst-case QAM (16QAM) powers are included in this section.

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	π/2 BPSK	650000	3750.00	1 / 1	24.65
		656000	3840.00	1 / 1	24.36
		662000	3930.00	1 / 271	24.22
	QPSK	650000	3750.00	1 / 1	24.61
		656000	3840.00	1 / 1	24.35
		662000	3930.00	1 / 1	24.19
16-QAM	656000	3840.00	1 / 1	23.61	
90 MHz	π/2 BPSK	649668	3745.02	1 / 1	24.63
		656000	3840.00	1 / 1	24.46
		662332	3934.98	1 / 122	24.37
	QPSK	649668	3745.02	1 / 1	24.65
		656000	3840.00	1 / 1	24.47
		662332	3934.98	1 / 122	24.33
16-QAM	656000	3840.00	1 / 1	23.43	
80 MHz	π/2 BPSK	649334	3740.01	1 / 1	24.56
		656000	3840.00	1 / 1	24.29
		662666	3939.99	1 / 1	24.29
	QPSK	649334	3740.01	1 / 215	24.59
		656000	3840.00	1 / 1	24.35
		662666	3939.99	1 / 1	24.32
16-QAM	656000	3840.00	1 / 1	23.34	
70 MHz	π/2 BPSK	649000	3735.00	1 / 1	24.36
		656000	3840.00	1 / 94	24.25
		663000	3945.00	1 / 1	24.21
	QPSK	649000	3735.00	1 / 1	24.40
		656000	3840.00	1 / 1	24.29
		663000	3945.00	1 / 1	24.21
16-QAM	656000	3840.00	1 / 1	23.45	
60 MHz	π/2 BPSK	648668	3730.02	1 / 1	24.43
		656000	3840.00	1 / 1	24.26
		663332	3949.98	1 / 1	24.13
	QPSK	648668	3730.02	1 / 1	24.49
		656000	3840.00	1 / 1	24.38
		663332	3949.98	1 / 1	24.14
16-QAM	656000	3840.00	1 / 1	23.30	
50 MHz	π/2 BPSK	648334	3725.01	1 / 1	24.58
		656000	3840.00	1 / 1	24.33
		663666	3954.99	1 / 131	24.58
	QPSK	648334	3725.01	1 / 1	24.63
		656000	3840.00	1 / 1	24.38
		663666	3954.99	1 / 131	24.57
16-QAM	656000	3840.00	1 / 1	23.49	
40 MHz	π/2 BPSK	648000	3720.00	1 / 1	24.51
		656000	3840.00	1 / 1	24.20
		664000	3960.00	1 / 104	24.39
	QPSK	648000	3720.00	1 / 1	24.51
		656000	3840.00	1 / 1	24.22
		664000	3960.00	1 / 104	24.41
16-QAM	656000	3840.00	1 / 1	23.22	
30 MHz	π/2 BPSK	647668	3715.02	1 / 39	24.46
		656000	3840.00	1 / 1	24.37
		664332	3964.98	1 / 76	24.58
	QPSK	647668	3715.02	1 / 1	24.51
		656000	3840.00	1 / 1	24.35
		664332	3964.98	1 / 76	24.56
16-QAM	656000	3840.00	1 / 1	23.46	
20 MHz	π/2 BPSK	647334	3710.01	1 / 1	24.42
		656000	3840.00	1 / 1	24.18
		664666	3969.99	1 / 49	24.34
	QPSK	647334	3710.01	1 / 1	24.40
		656000	3840.00	1 / 1	24.21
		664666	3969.99	1 / 49	24.40
16-QAM	656000	3840.00	1 / 1	23.20	
15 MHz	π/2 BPSK	647168	3707.52	1 / 1	24.39
		656000	3840.00	1 / 1	24.20
		664832	3972.48	1 / 36	24.44
	QPSK	647168	3707.52	1 / 1	24.44
		656000	3840.00	1 / 1	24.26
		664832	3972.48	1 / 36	24.51
16-QAM	656000	3840.00	1 / 1	23.22	
10 MHz	π/2 BPSK	647000	3705.00	1 / 12	24.42
		656000	3840.00	1 / 12	24.24
		664332	3975.00	1 / 22	24.42
	QPSK	647000	3705.00	1 / 12	24.43
		656000	3840.00	1 / 12	24.28
		664332	3975.00	1 / 22	24.43
16-QAM	656000	3840.00	1 / 1	23.21	

Table 7-2. Conducted Power Measurement (NR n77 C-Band) – Ant1

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	$\pi/2$ BPSK	633334	3500.01	1 / 1	24.69
	QPSK	633334	3500.01	1 / 1	24.74
	16-QAM	633334	3500.01	1 / 1	23.95
90 MHz	$\pi/2$ BPSK	633000	3495.00	1 / 1	24.72
		633334	3500.01	1 / 1	24.69
		633666	3504.99	1 / 1	24.68
	QPSK	633000	3495.00	1 / 1	24.69
		633334	3500.01	1 / 1	24.65
		633666	3504.99	1 / 1	24.68
16-QAM	633000	3495.00	1 / 1	23.95	
80 MHz	$\pi/2$ BPSK	632668	3490.02	1 / 1	24.74
		633334	3500.01	1 / 1	24.70
		634000	3510.00	1 / 1	24.70
	QPSK	632668	3490.02	1 / 1	24.75
		633334	3500.01	1 / 1	24.74
		634000	3510.00	1 / 1	24.78
16-QAM	632668	3490.02	1 / 1	23.86	
70 MHz	$\pi/2$ BPSK	632334	3485.01	1 / 1	24.61
		633334	3500.01	1 / 1	24.57
		634332	3514.98	1 / 1	24.46
	QPSK	632334	3485.01	1 / 1	24.58
		633334	3500.01	1 / 1	24.55
		634332	3514.98	1 / 1	24.44
16-QAM	632334	3485.01	1 / 1	23.81	
60 MHz	$\pi/2$ BPSK	632000	3480.00	1 / 1	24.61
		633334	3500.01	1 / 1	24.60
		634666	3519.99	1 / 1	24.42
	QPSK	632000	3480.00	1 / 1	24.63
		633334	3500.01	1 / 1	24.54
		634666	3519.99	1 / 1	24.41
16-QAM	632000	3480.00	1 / 1	23.61	
50 MHz	$\pi/2$ BPSK	631668	3475.02	1 / 1	24.77
		633334	3500.01	1 / 1	24.73
		635000	3525.00	1 / 1	24.65
	QPSK	631668	3475.02	1 / 1	24.76
		633334	3500.01	1 / 1	24.75
		635000	3525.00	1 / 1	24.62
16-QAM	631668	3475.02	1 / 1	23.68	
40 MHz	$\pi/2$ BPSK	631334	3470.01	1 / 1	24.68
		633334	3500.01	1 / 1	24.52
		635332	3529.98	1 / 1	24.46
	QPSK	631334	3470.01	1 / 1	24.69
		633334	3500.01	1 / 1	24.50
		635332	3529.98	1 / 1	24.44
16-QAM	631334	3470.01	1 / 1	23.68	
30 MHz	$\pi/2$ BPSK	631000	3465.00	1 / 1	24.72
		633334	3500.01	1 / 1	24.66
		635666	3534.99	1 / 1	24.45
	QPSK	631000	3465.00	1 / 1	24.71
		633334	3500.01	1 / 1	24.65
		635666	3534.99	1 / 1	24.43
16-QAM	631000	3465.00	1 / 1	23.75	
20 MHz	$\pi/2$ BPSK	630668	3460.02	1 / 1	24.60
		633334	3500.01	1 / 1	24.47
		636000	3540.00	1 / 1	24.26
	QPSK	630668	3460.02	1 / 1	24.59
		633334	3500.01	1 / 1	24.45
		636000	3540.00	1 / 1	24.20
16-QAM	630668	3460.02	1 / 1	23.65	
15 MHz	$\pi/2$ BPSK	630500	3457.50	1 / 19	24.66
		633334	3500.01	1 / 1	24.47
		636166	3542.49	1 / 1	24.31
	QPSK	630500	3457.50	1 / 19	24.65
		633334	3500.01	1 / 1	24.45
		636166	3542.49	1 / 1	24.27
16-QAM	630500	3457.50	1 / 1	23.69	
10 MHz	$\pi/2$ BPSK	630334	3455.01	1 / 1	24.75
		633334	3500.01	1 / 1	24.58
		636332	3544.98	1 / 1	24.32
	QPSK	630334	3455.01	1 / 1	24.73
		633334	3500.01	1 / 1	24.57
		636332	3544.98	1 / 1	24.30
16-QAM	630334	3455.01	1 / 1	23.76	

Table 7-3. Conducted Power Measurement (NR n77 DoD) – Ant1

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	π/2 BPSK	650000	3750.00	1 / 1	23.70
		656000	3840.00	1 / 1	23.22
		662000	3930.00	1 / 136	23.35
	QPSK	650000	3750.00	1 / 1	23.65
		656000	3840.00	1 / 1	23.28
		662000	3930.00	1 / 136	23.35
	16-QAM	650000	3750.00	1 / 1	22.58

Table 7-4. Conducted Power Measurement (NR n77 C-Band) – Ant2

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	π/2 BPSK	633334	3500.01	1 / 1	23.82
	QPSK	633334	3500.01	1 / 1	23.76
	16-QAM	633334	3500.01	1 / 1	22.68

Table 7-5. Conducted Power Measurement (NR n77 DoD) – Ant2

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	π/2 BPSK	650000	3750.00	1 / 136	22.25
		656000	3840.00	1 / 136	21.98
		662000	3930.00	1 / 136	22.55
	QPSK	650000	3750.00	1 / 136	22.22
		656000	3840.00	1 / 136	21.99
		662000	3930.00	1 / 136	22.58
	16-QAM	662000	3930.00	1 / 136	21.57

Table 7-6. Conducted Power Measurement (NR n77 C-Band) – Ant3

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	π/2 BPSK	633334	3500.01	1 / 1	21.83
	QPSK	633334	3500.01	1 / 1	21.85
	16-QAM	633334	3500.01	1 / 1	20.84

Table 7-7. Conducted Power Measurement (NR n77 DoD) – Ant3

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	π/2 BPSK	650000	3750.00	1 / 1	23.46
		656000	3840.00	1 / 1	22.60
		662000	3930.00	1 / 1	22.64
	QPSK	650000	3750.00	1 / 1	23.27
		656000	3840.00	1 / 1	22.58
		662000	3930.00	1 / 1	22.53
16-QAM	650000	3750.00	1 / 1	22.26	

Table 7-8. Conducted Power Measurement (NR n77 C-Band) – Ant4

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz	π/2 BPSK	633334	3500.01	1 / 1	23.95
	QPSK	633334	3500.01	1 / 1	23.79
	16-QAM	633334	3500.01	1 / 1	22.72

Table 7-9. Conducted Power Measurement (NR n77 DoD) – Ant4

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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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 $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Test Setup

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

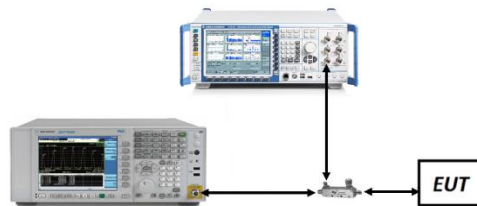


Figure 7-2. Test Instrument & Measurement Setup

Test Notes

None.

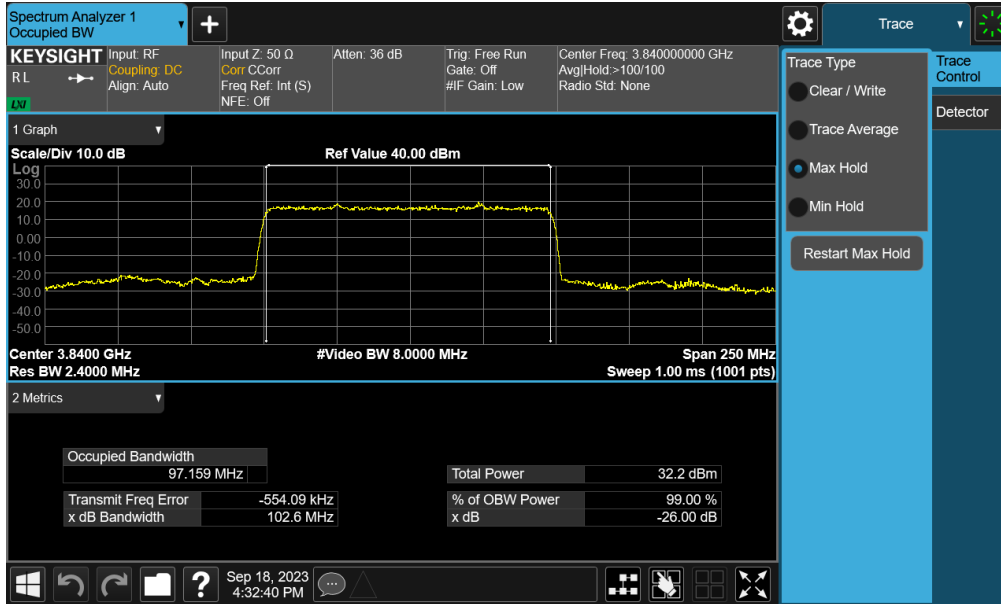
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode	Bandwidth	Modulation	OBW [MHz]
NR-n77PC3 C-Band	100MHz	$\pi/2$ BPSK	97.16
		QPSK	98.23
		16QAM	97.93
	90MHz	$\pi/2$ BPSK	87.46
		QPSK	87.77
		16QAM	87.86
	80MHz	$\pi/2$ BPSK	77.29
		QPSK	77.79
		16QAM	77.73
	70MHz	$\pi/2$ BPSK	64.61
		QPSK	67.79
		16QAM	67.77
	60MHz	$\pi/2$ BPSK	58.40
		QPSK	58.23
		16QAM	58.14
	50MHz	$\pi/2$ BPSK	46.11
		QPSK	47.72
		16QAM	47.75
	40MHz	$\pi/2$ BPSK	35.93
		QPSK	38.04
		16QAM	38.20
	30MHz	$\pi/2$ BPSK	27.07
		QPSK	28.20
		16QAM	28.10
	20MHz	$\pi/2$ BPSK	18.09
		QPSK	18.46
		16QAM	18.39
15MHz	$\pi/2$ BPSK	13.07	
	QPSK	13.78	
	16QAM	13.69	
10MHz	$\pi/2$ BPSK	8.75	
	QPSK	8.67	
	16QAM	8.72	

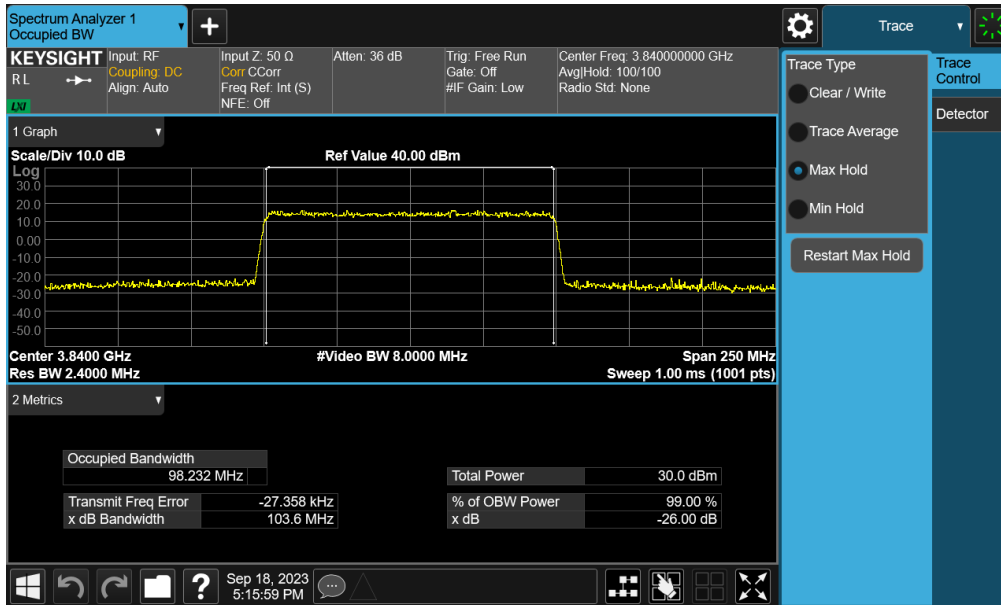
Table 7-10. Occupied Bandwidth Test Results – Ant1

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n77PC3 – Ant1

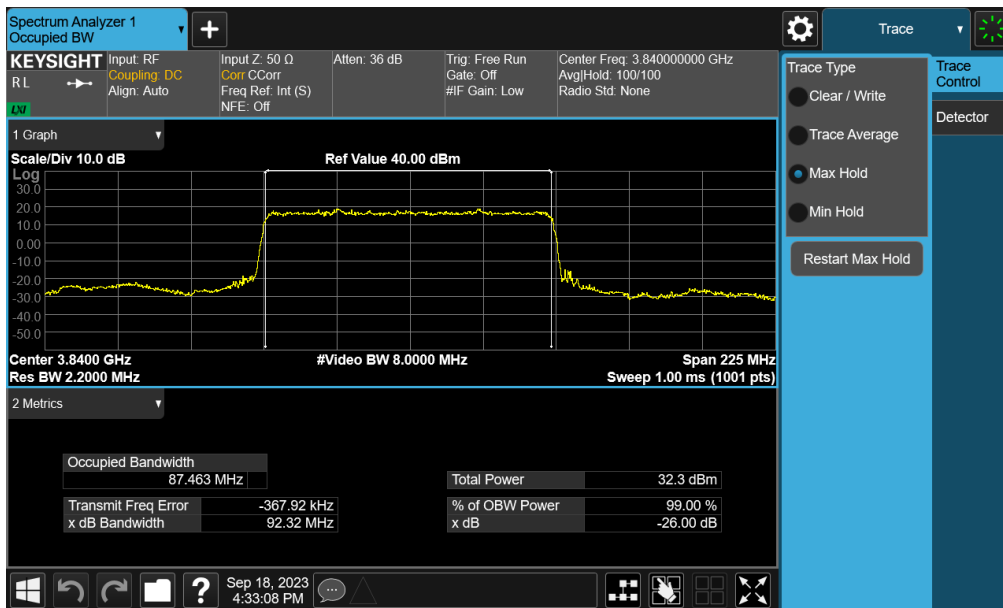
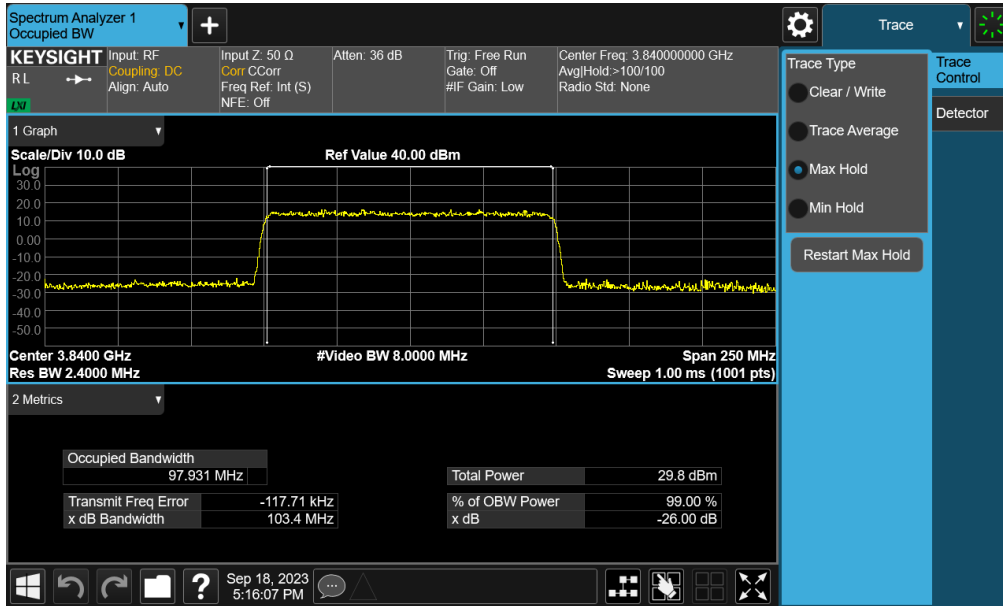


Plot 7-1. Occupied Bandwidth Plot (NR Band n77PC3 - 100MHz $\pi/2$ BPSK - Full RB - Ant1)

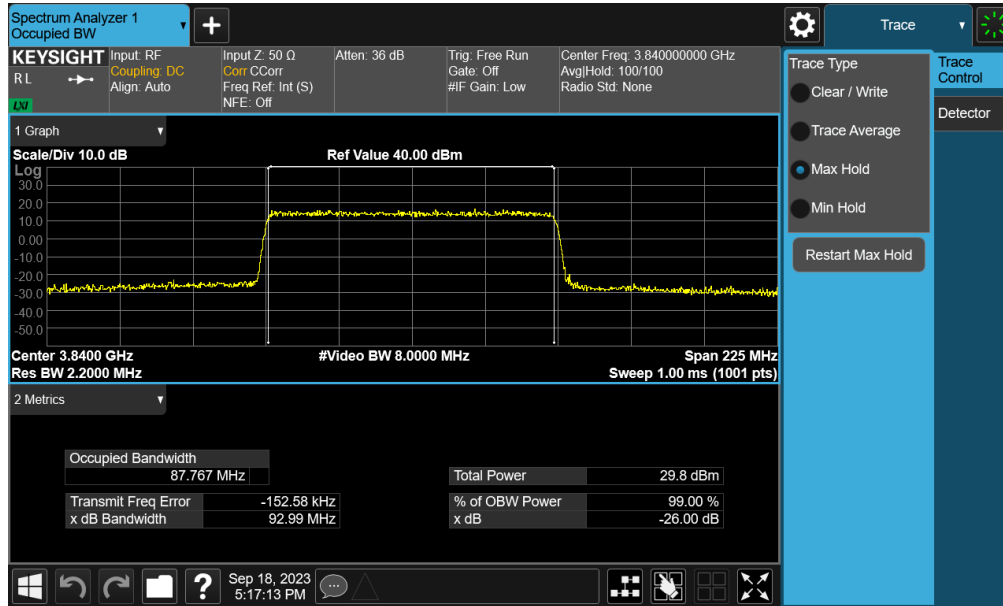


Plot 7-2. Occupied Bandwidth Plot (NR Band n77PC3 - 100MHz QPSK - Full RB - Ant1)

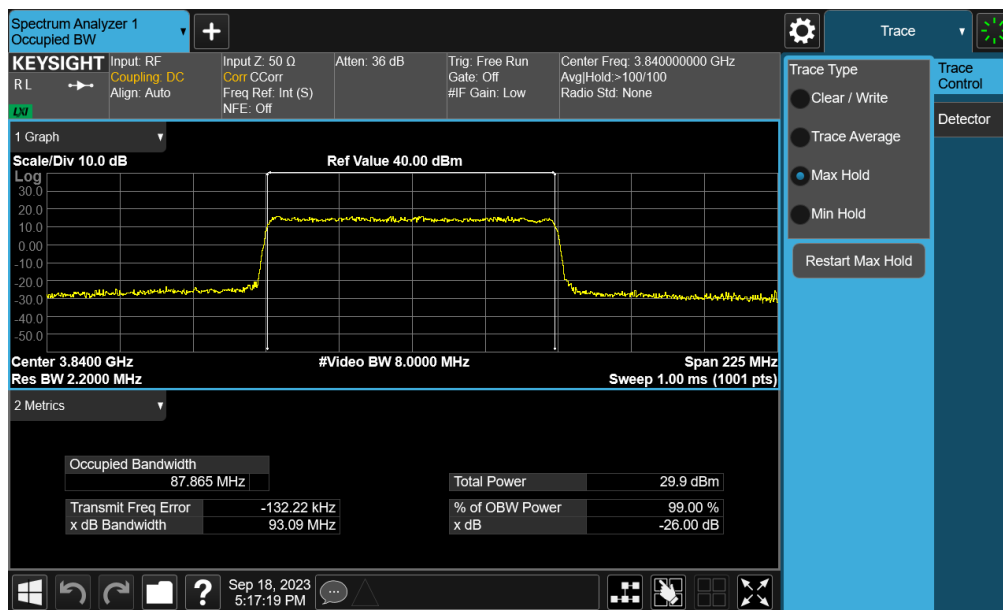
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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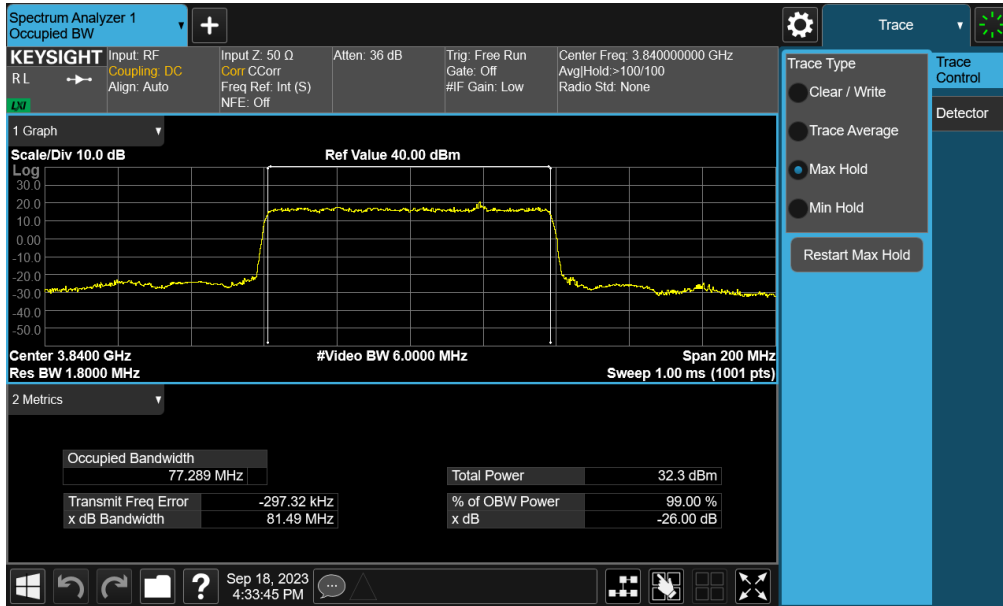


Plot 7-5. Occupied Bandwidth Plot (NR Band n77PC3 - 90MHz QPSK - Full RB - Ant1)

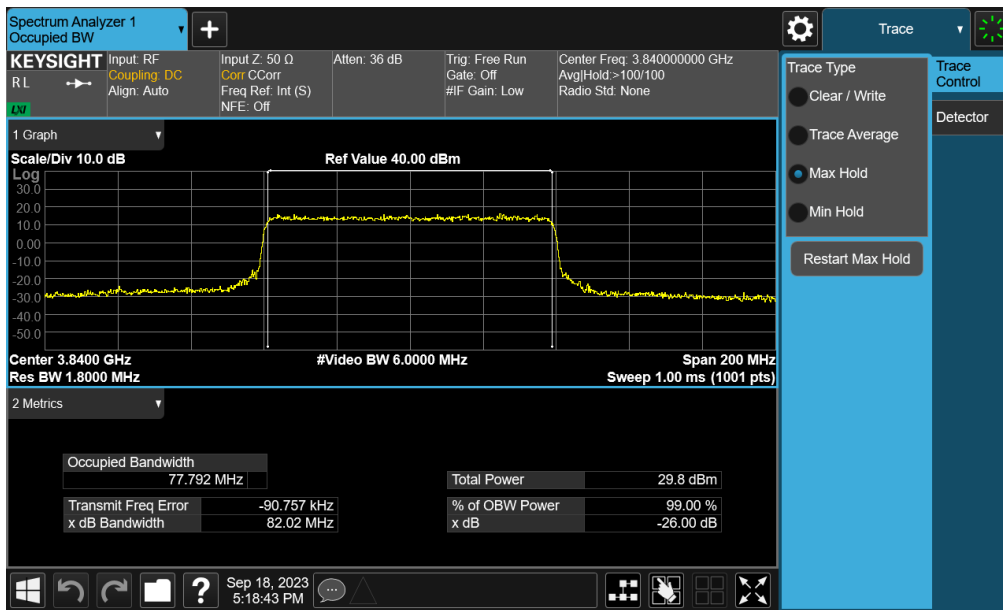


Plot 7-6. Occupied Bandwidth Plot (NR Band n77PC3 - 90MHz 16-QAM - Full RB - Ant1)

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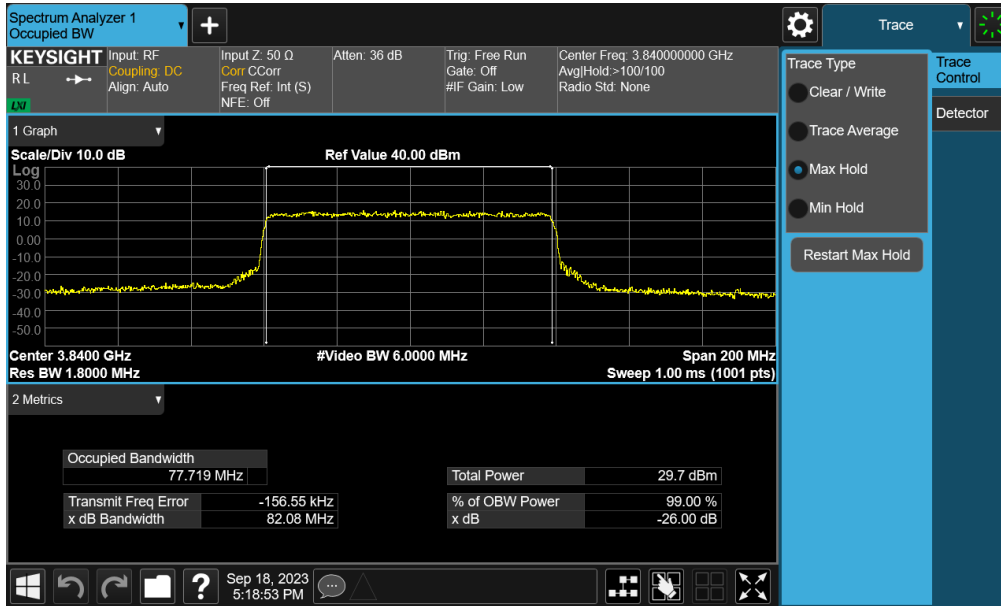


Plot 7-7. Occupied Bandwidth Plot (NR Band n77PC3 - 80MHz $\pi/2$ BPSK - Full RB - Ant1)

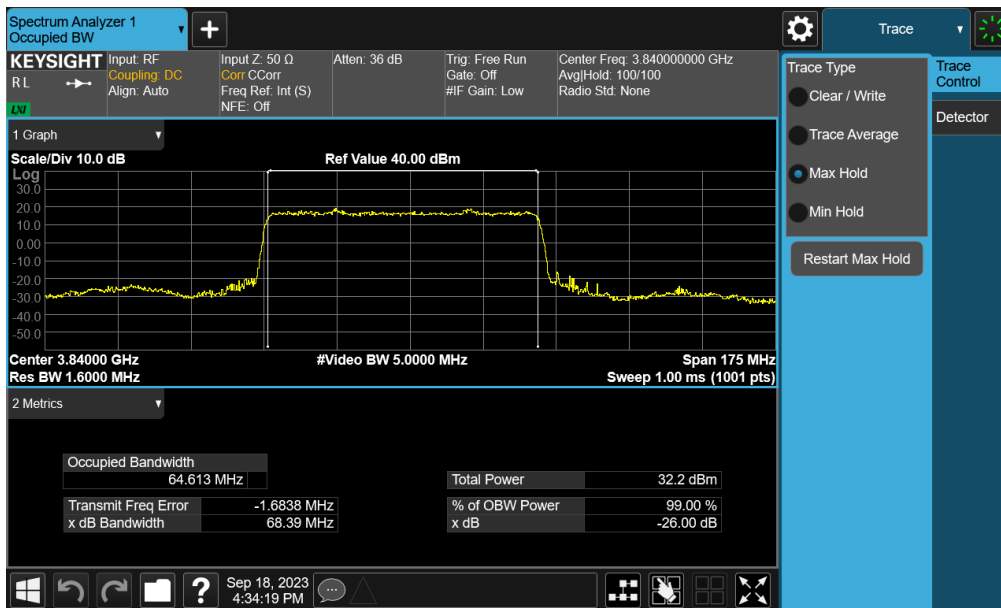


Plot 7-8. Occupied Bandwidth Plot (NR Band n77PC3 - 80MHz QPSK - Full RB - Ant1)

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210093-05.A3L	Test Dates: 9/12/2023 - 10/13/2023	EUT Type: Portable Handset	Page 23 of 136

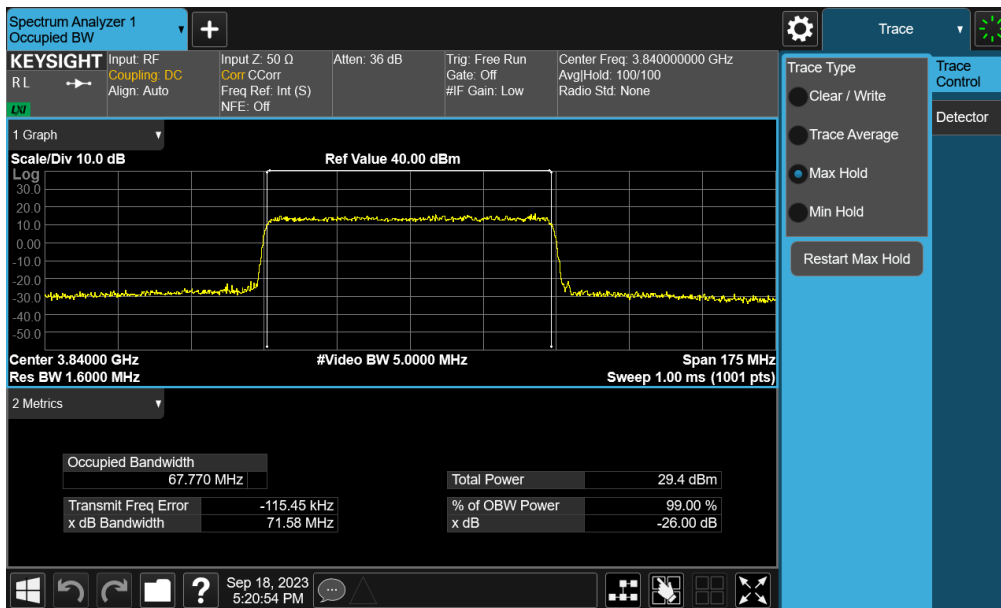
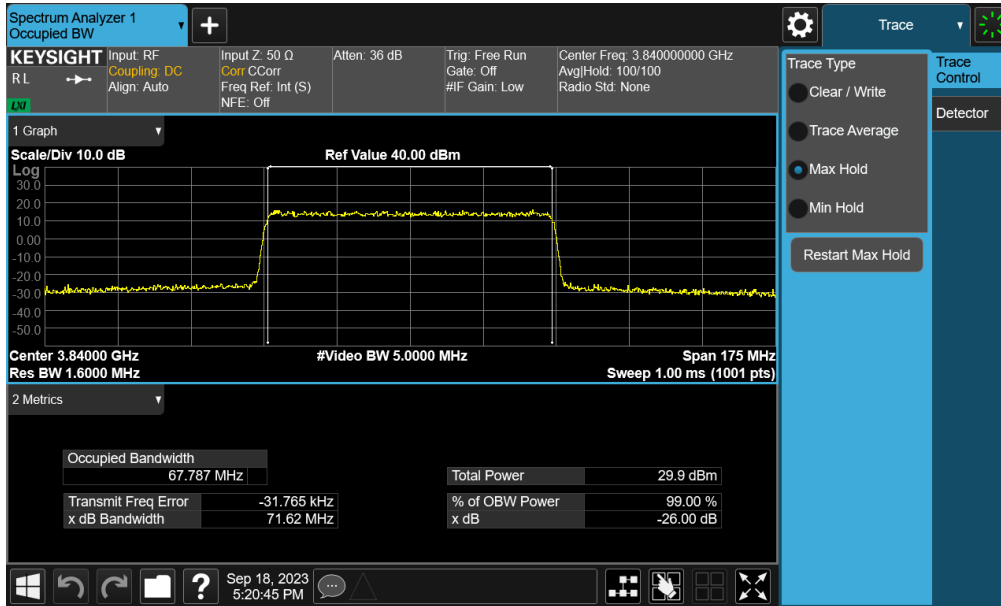


Plot 7-9. Occupied Bandwidth Plot (NR Band n77PC3 - 80MHz 16-QAM - Full RB - Ant1)

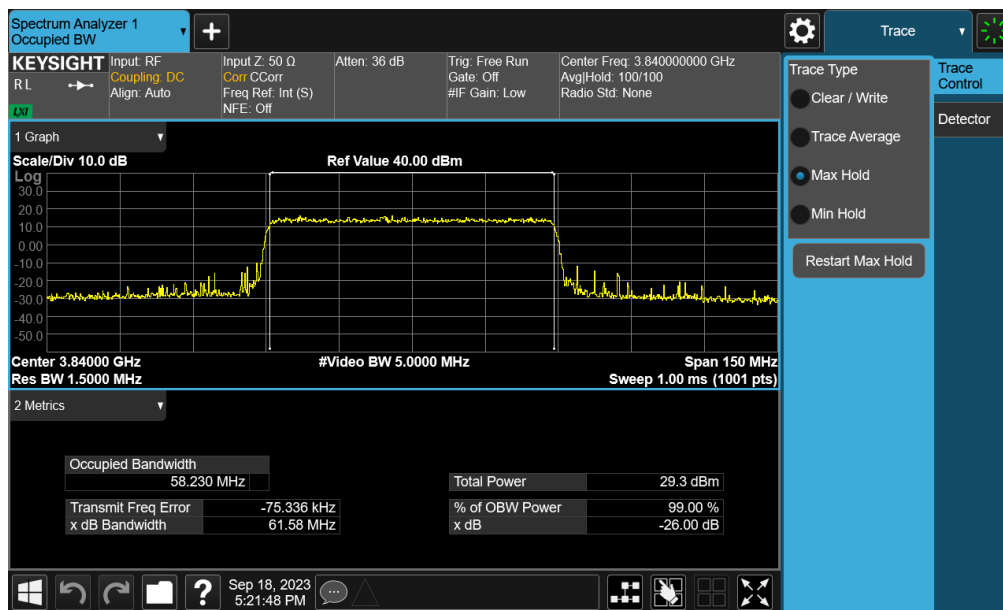
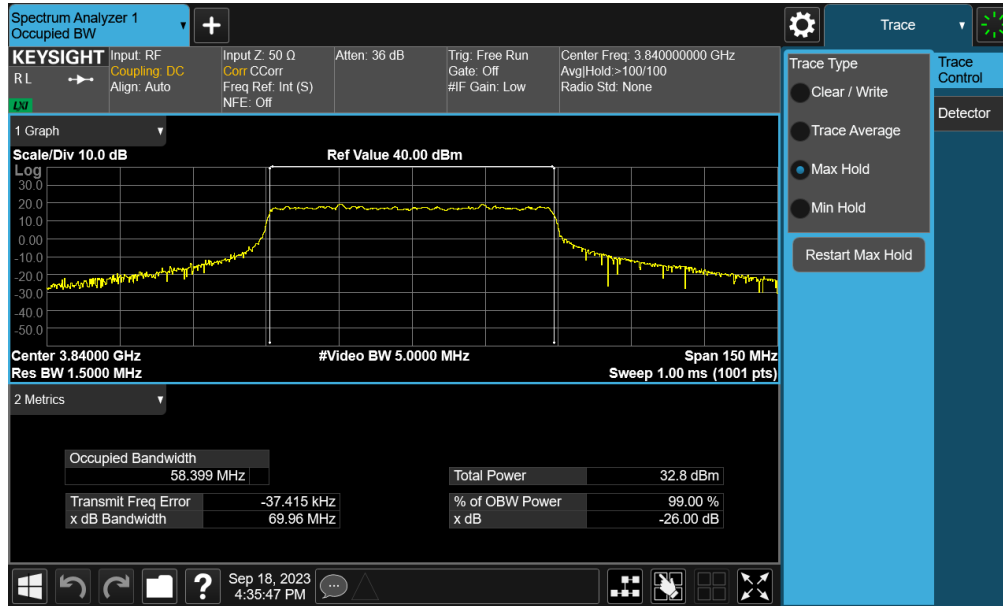


Plot 7-10. Occupied Bandwidth Plot (NR Band n77PC3 - 70MHz $\pi/2$ BPSK - Full RB - Ant1)

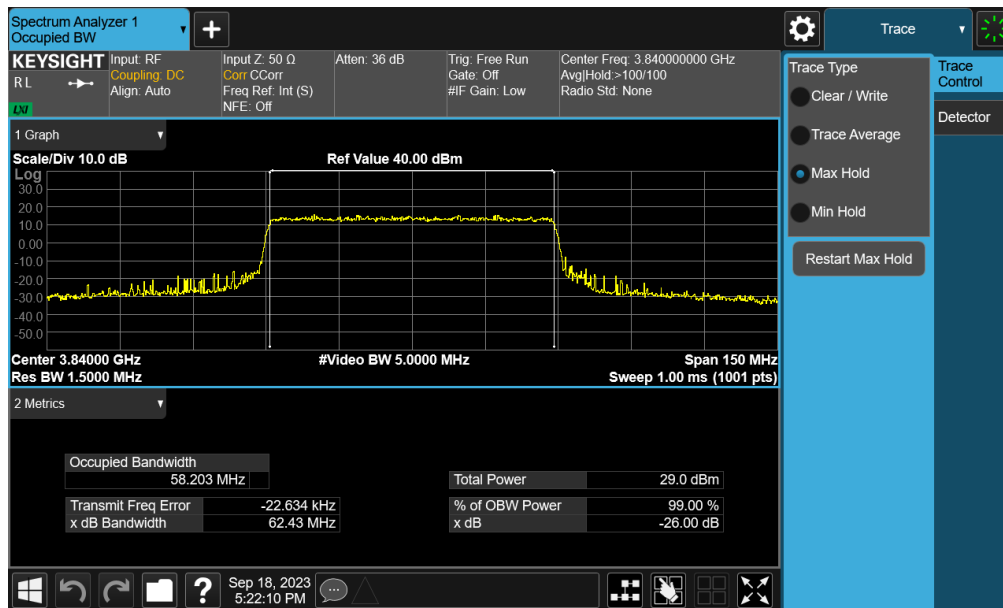
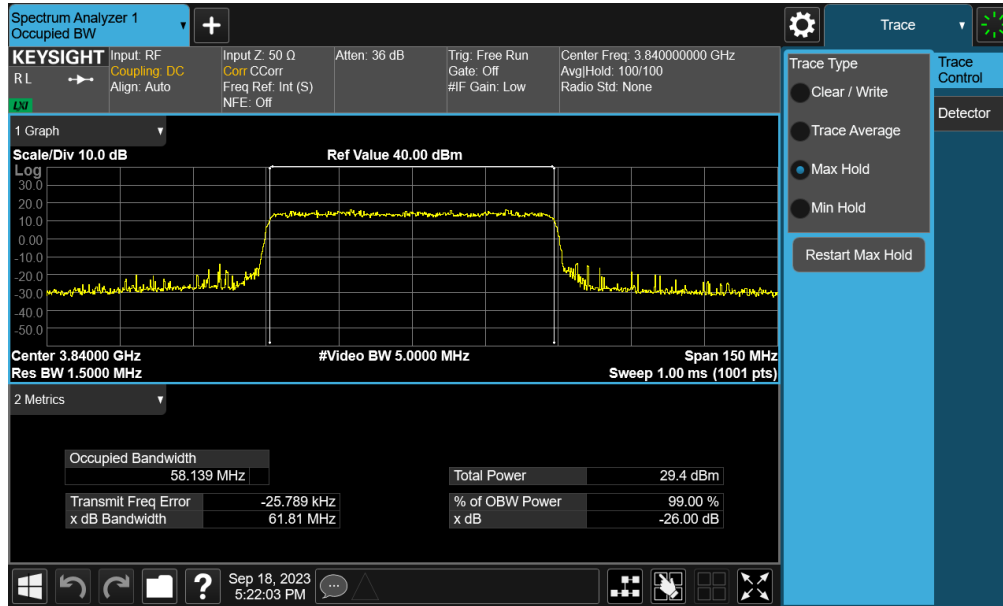
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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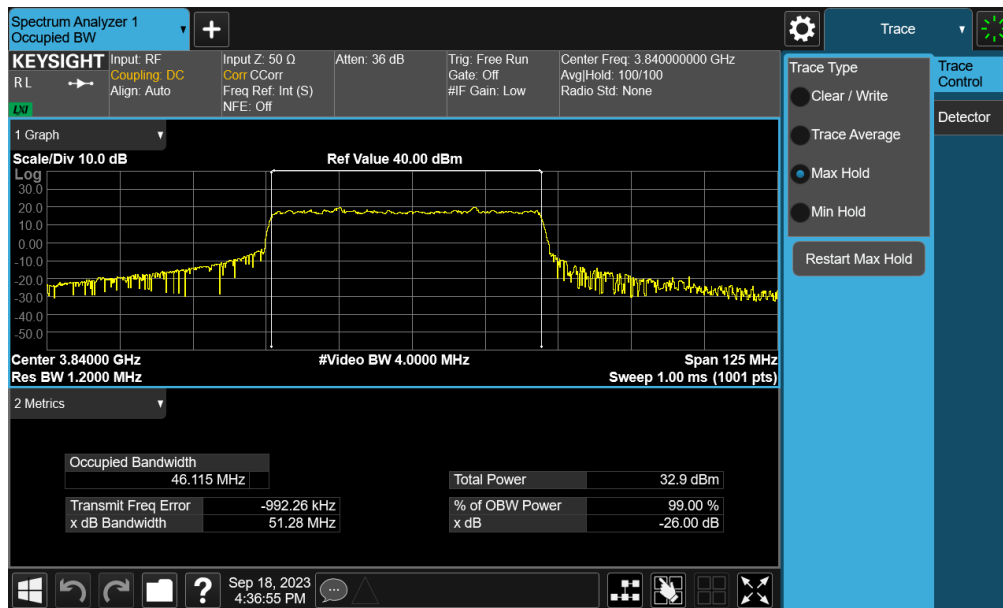
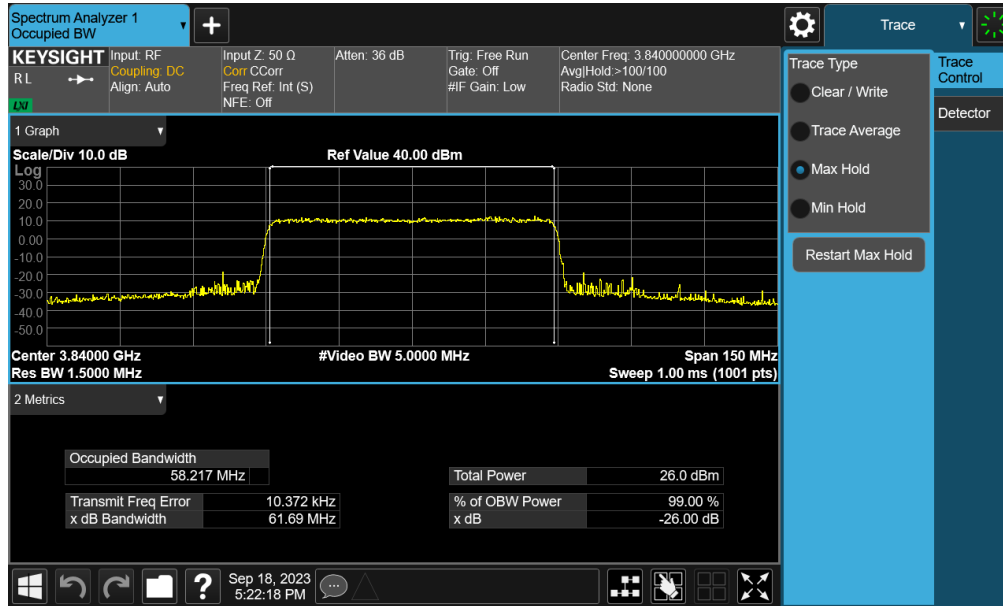
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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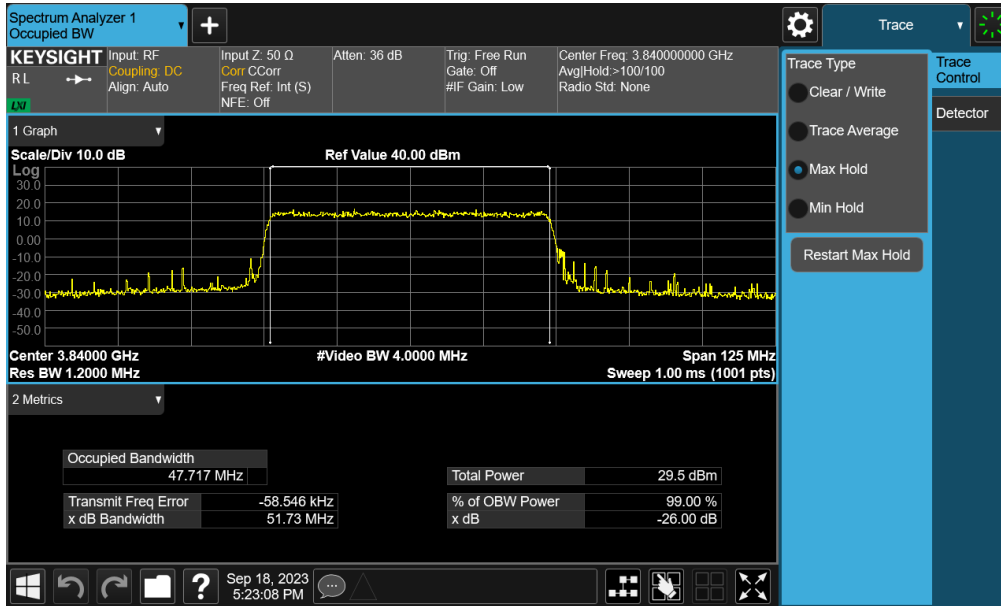
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2308210093-05.A3L	Test Dates: 9/12/2023 - 10/13/2023	EUT Type: Portable Handset	Page 26 of 136



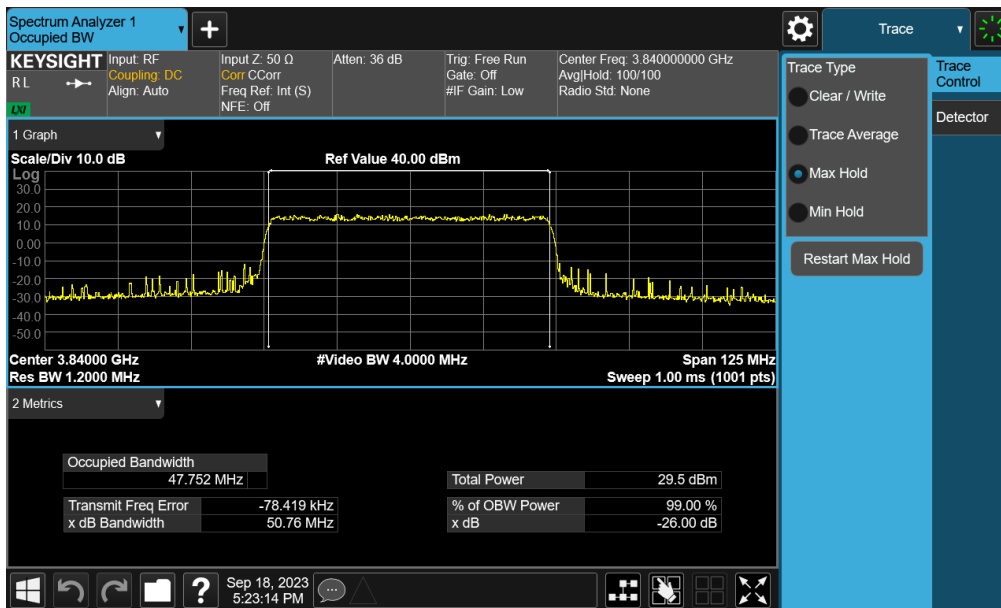
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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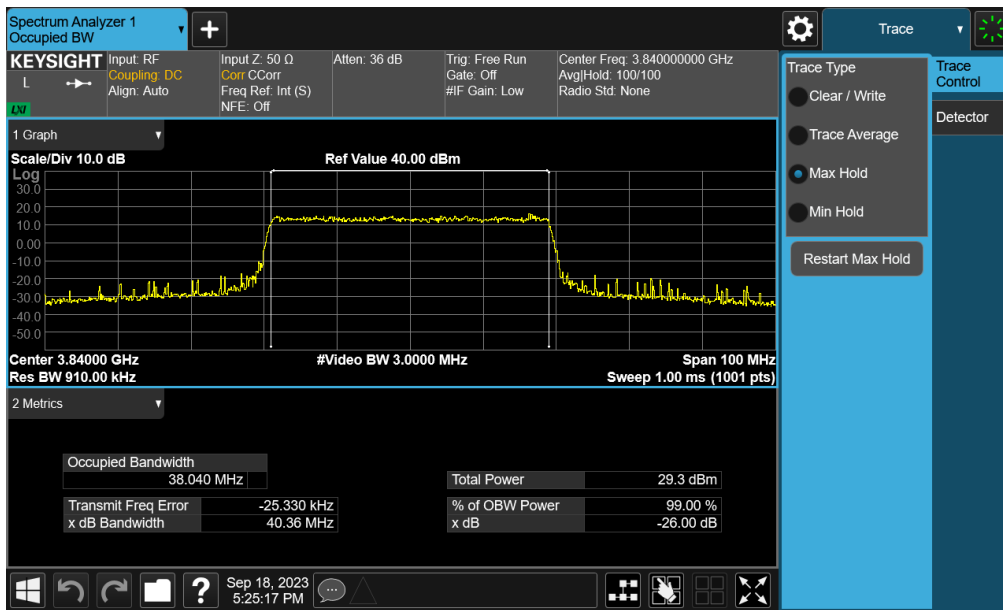
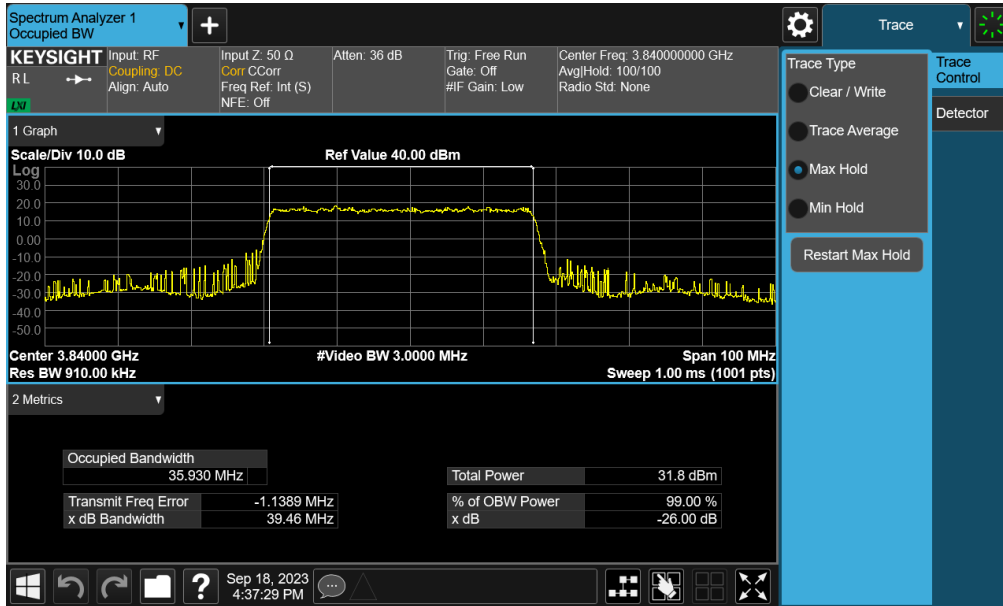


Plot 7-19. Occupied Bandwidth Plot (NR Band n77PC3 - 50MHz QPSK - Full RB - Ant1)

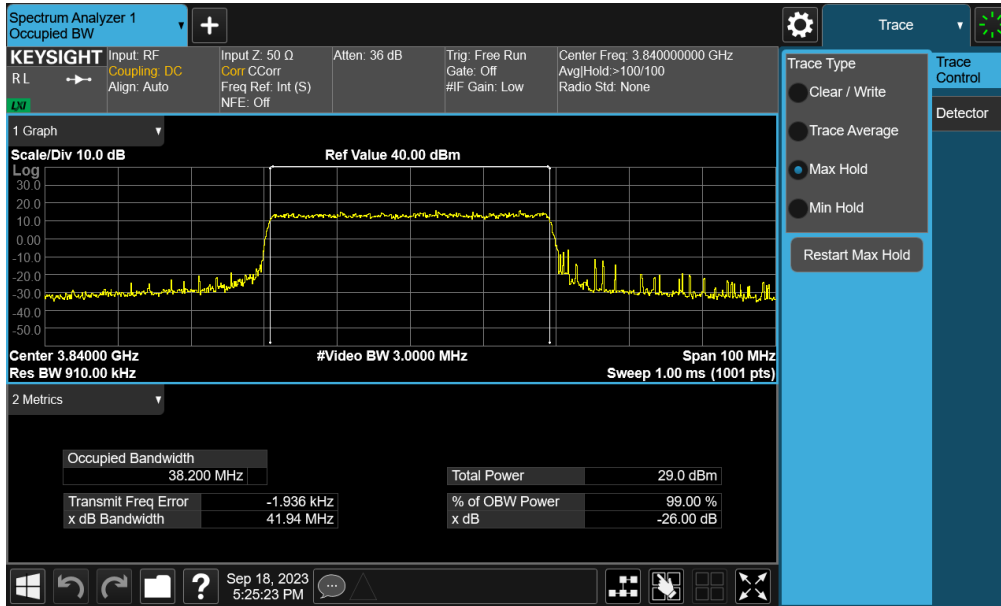


Plot 7-20. Occupied Bandwidth Plot (NR Band n77PC3 - 50MHz 16-QAM - Full RB - Ant1)

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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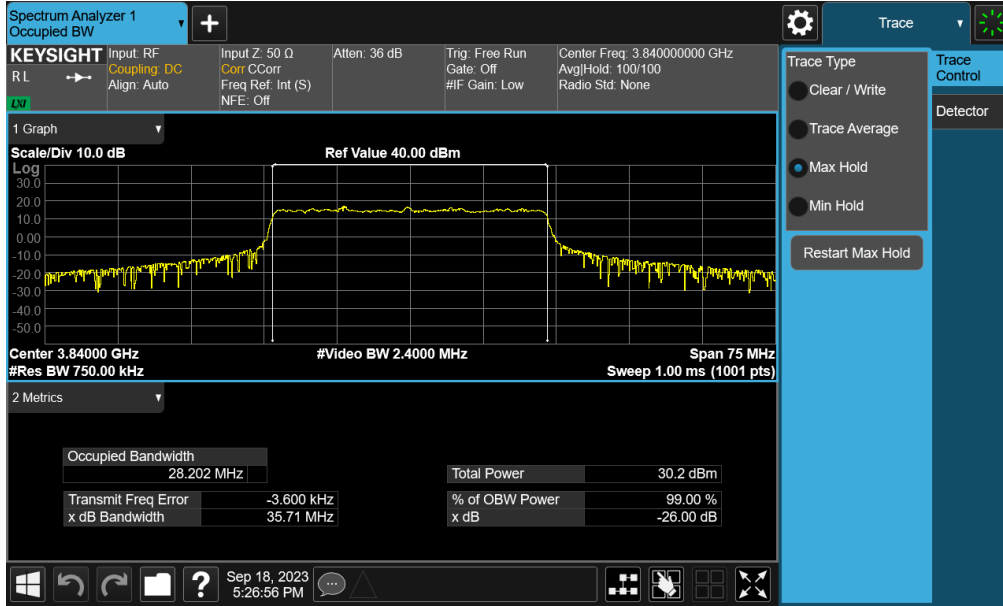


Plot 7-23. Occupied Bandwidth Plot (NR Band n77PC3 - 40MHz 16-QAM - Full RB - Ant1)

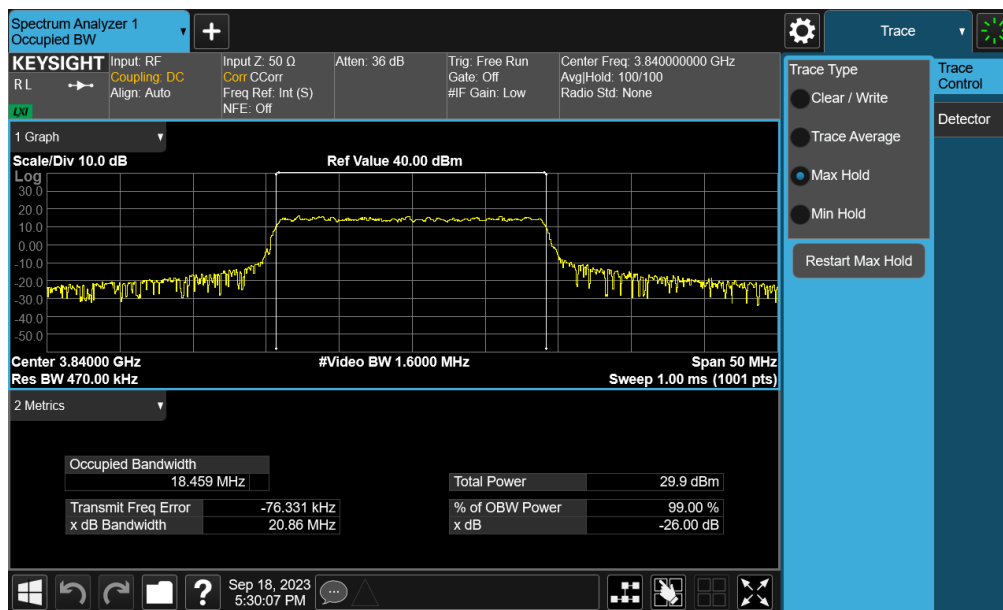
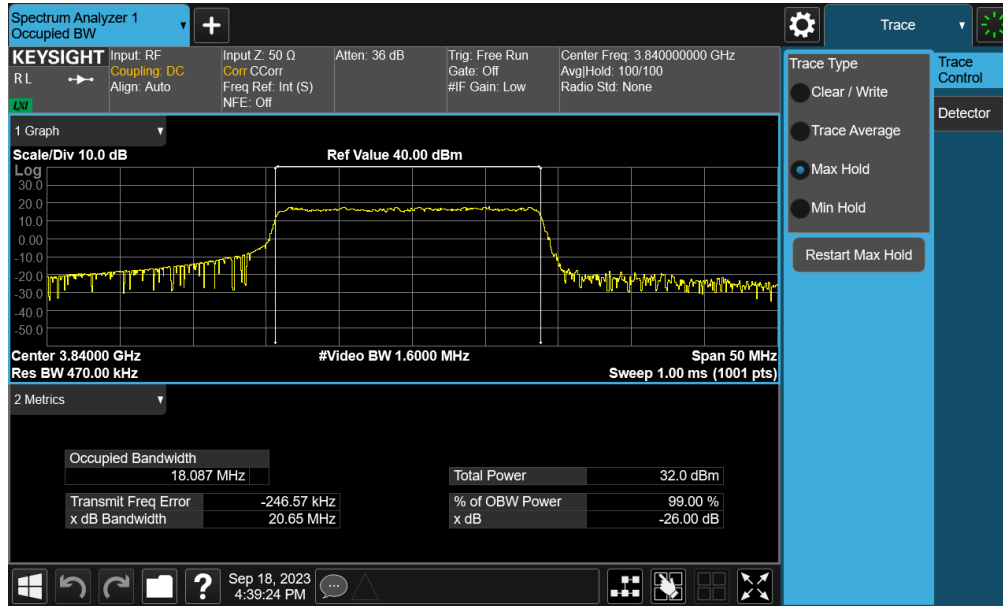


Plot 7-24. Occupied Bandwidth Plot (NR Band n77PC3 - 30MHz $\pi/2$ BPSK - Full RB - Ant1)

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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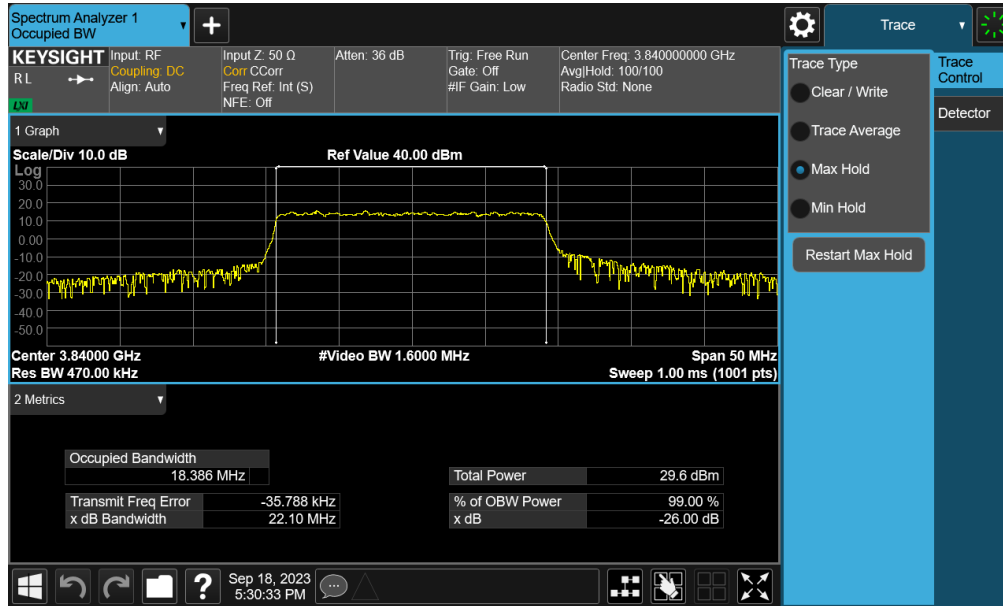


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Plot 7-28. Occupied Bandwidth Plot (NR Band n77PC3 - 20MHz QPSK - Full RB - Ant1)

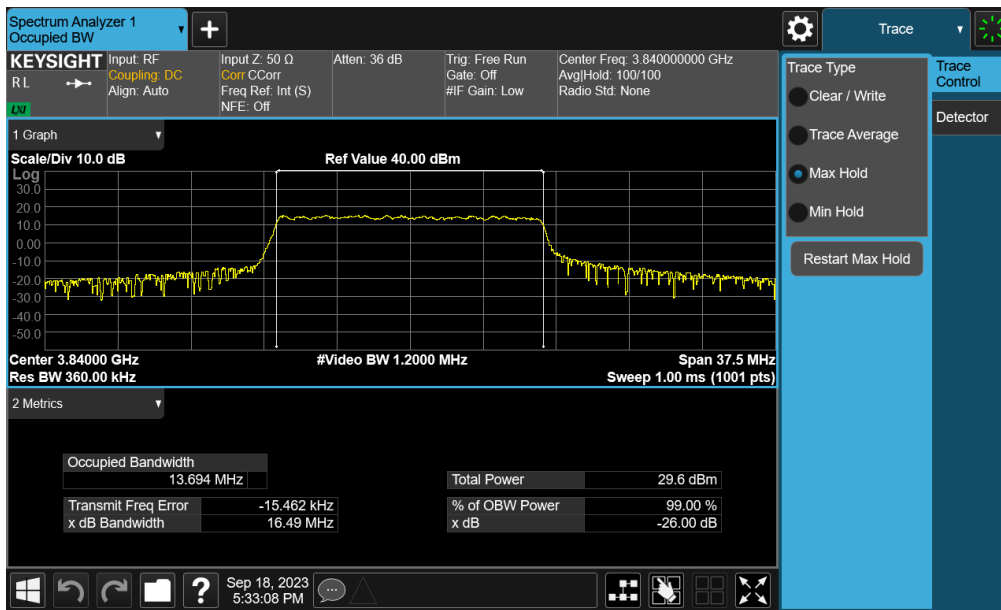
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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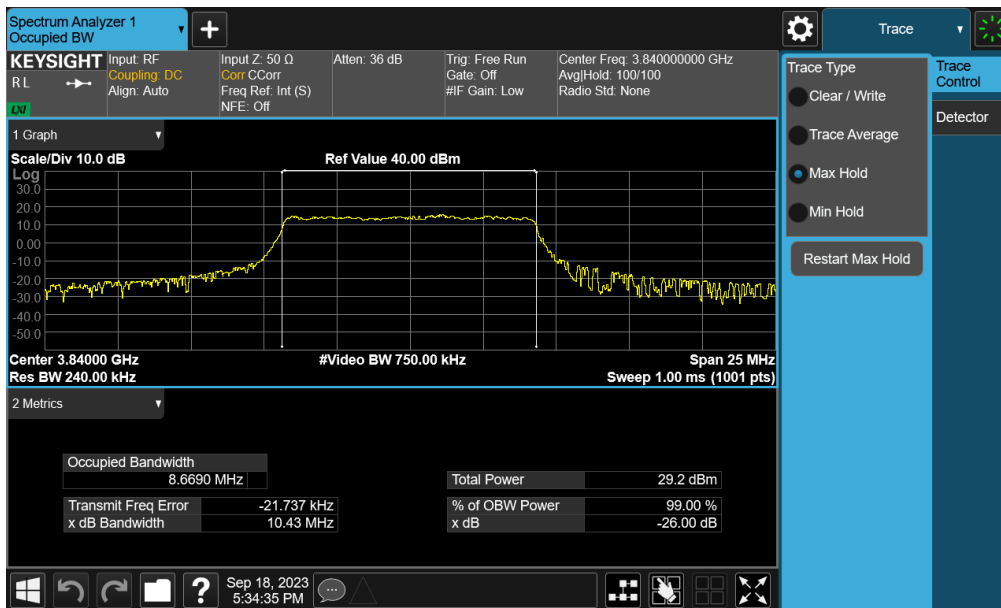
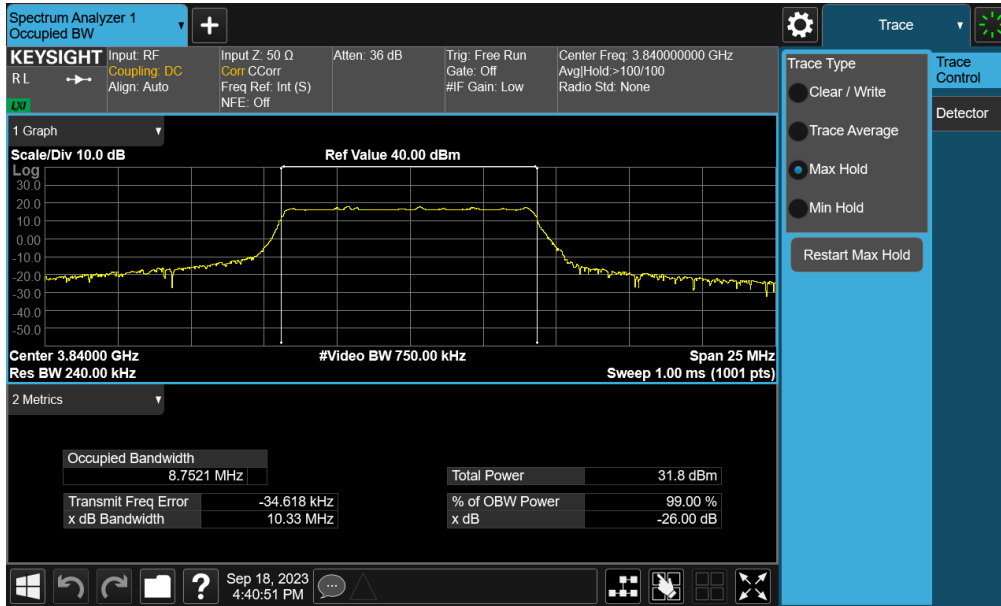


Plot 7-31. Occupied Bandwidth Plot (NR Band n77PC3 - 15MHz QPSK - Full RB - Ant1)

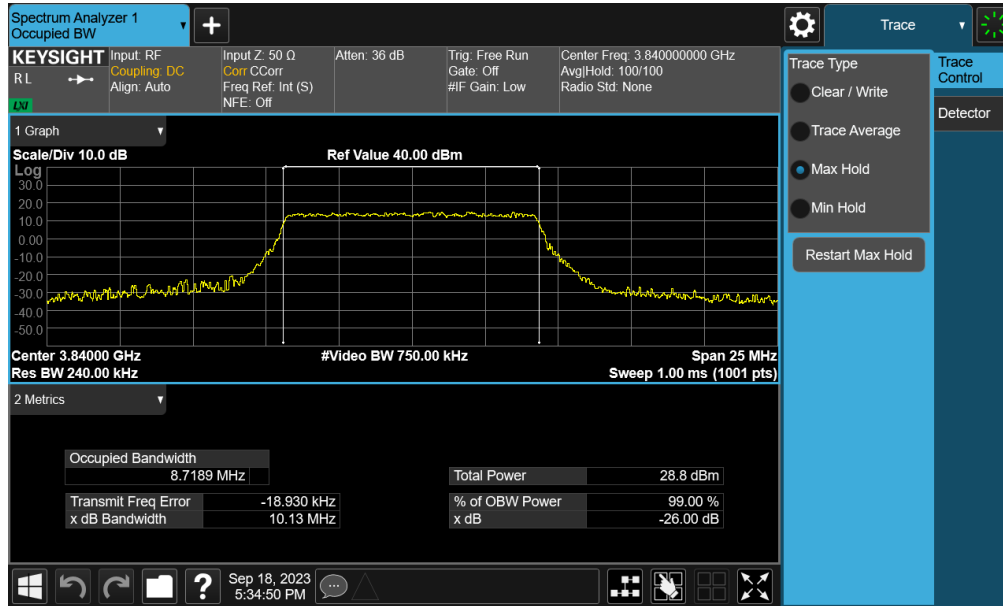


Plot 7-32. Occupied Bandwidth Plot (NR Band n77PC3 - 15MHz 16-QAM - Full RB - Ant1)

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-35. Occupied Bandwidth Plot (NR Band n77PC3 - 10MHz 16-QAM - Full RB - Ant1)

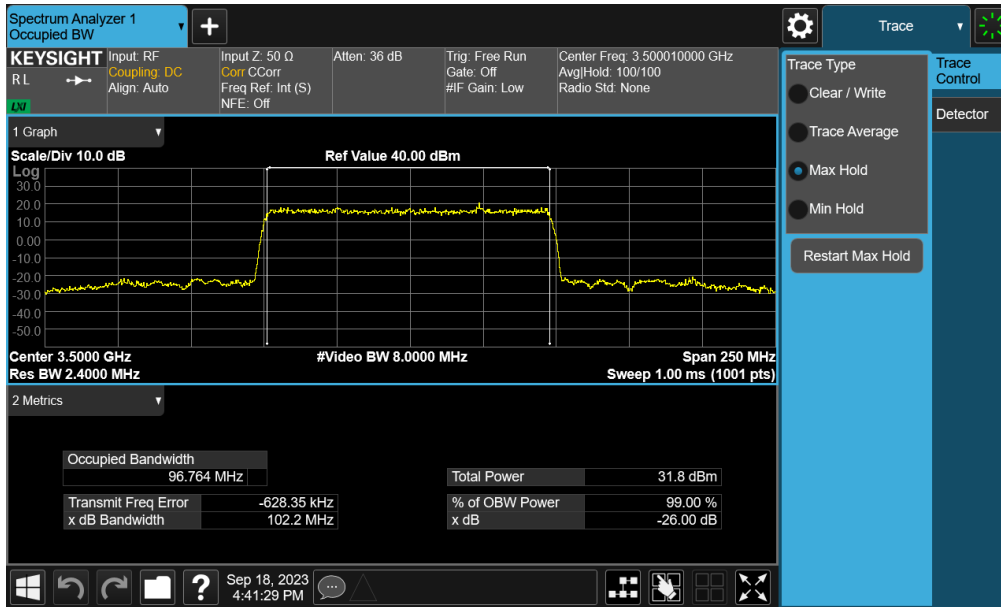
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode	Bandwidth	Modulation	OBW [MHz]
NR-n77PC3 DoD	100MHz	$\pi/2$ BPSK	96.76
		QPSK	98.01
		16QAM	97.91
	90MHz	$\pi/2$ BPSK	87.57
		QPSK	87.74
		16QAM	87.78
	80MHz	$\pi/2$ BPSK	77.29
		QPSK	77.83
		16QAM	77.79
	70MHz	$\pi/2$ BPSK	64.56
		QPSK	67.73
		16QAM	67.73
	60MHz	$\pi/2$ BPSK	58.45
		QPSK	58.24
		16QAM	58.14
	50MHz	$\pi/2$ BPSK	46.14
		QPSK	47.73
		16QAM	47.78
	40MHz	$\pi/2$ BPSK	36.13
		QPSK	38.03
		16QAM	38.18
	30MHz	$\pi/2$ BPSK	27.15
		QPSK	27.99
		16QAM	28.07
20MHz	$\pi/2$ BPSK	18.07	
	QPSK	18.45	
	16QAM	18.42	
15MHz	$\pi/2$ BPSK	13.04	
	QPSK	13.71	
	16QAM	13.67	
10MHz	$\pi/2$ BPSK	8.76	
	QPSK	8.65	
	16QAM	8.69	

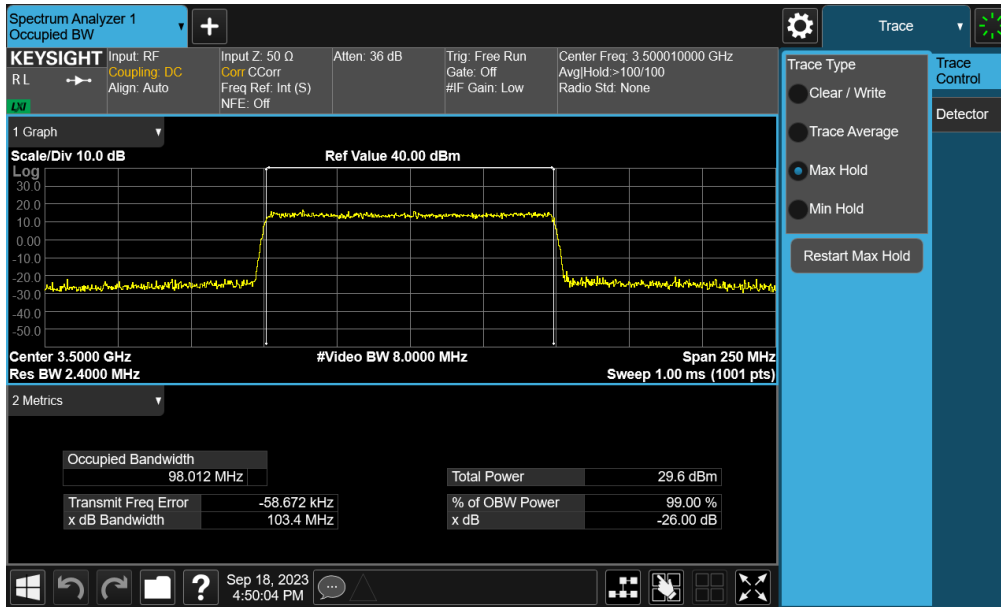
Table 7-11. Occupied Bandwidth Test Results – Ant1

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n77PC3 DoD – Ant1

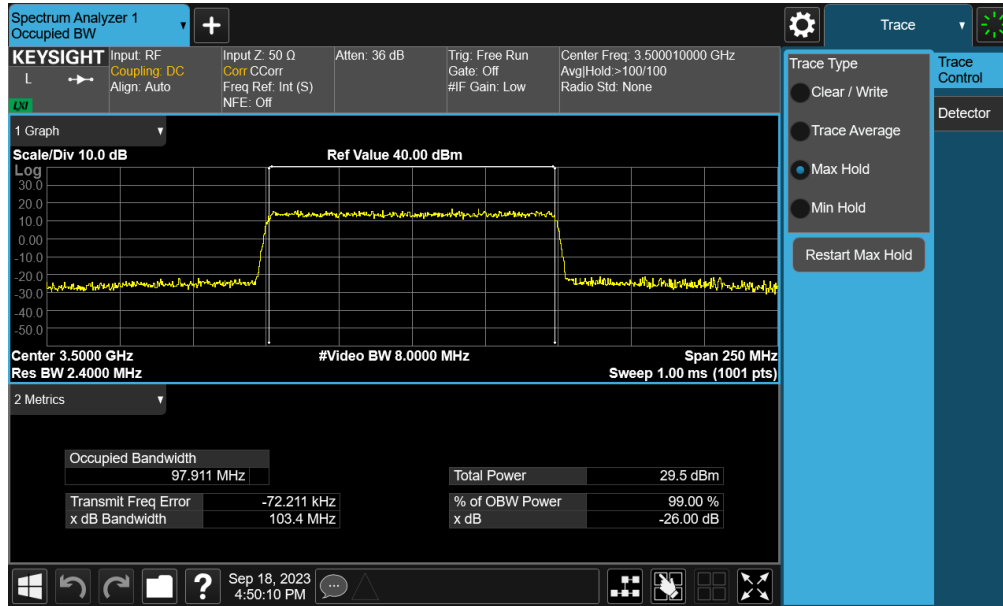


Plot 7-36. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 100MHz $\pi/2$ BPSK - Full RB - Ant1)

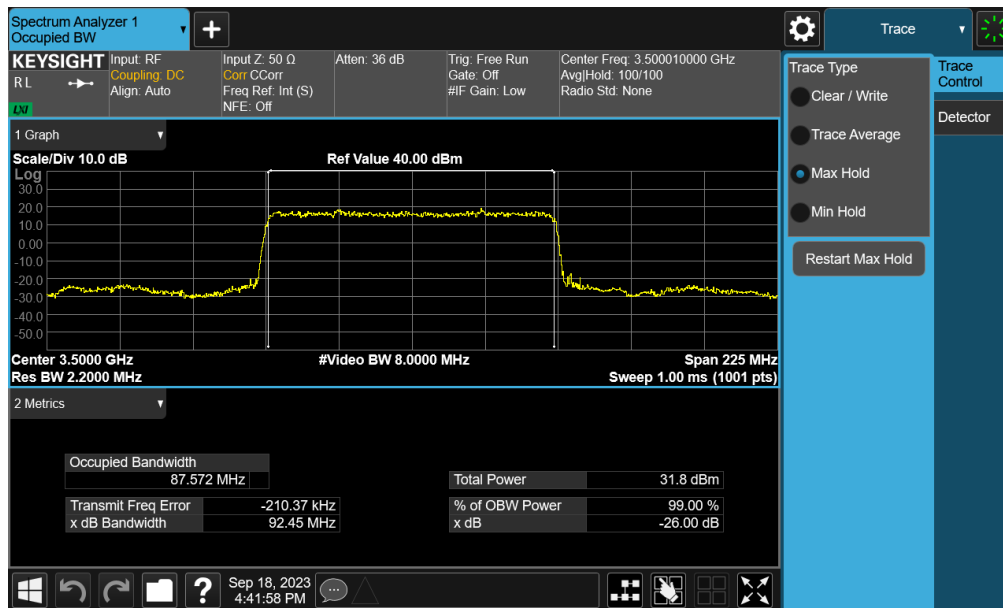


Plot 7-37. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 100MHz QPSK - Full RB - Ant1)

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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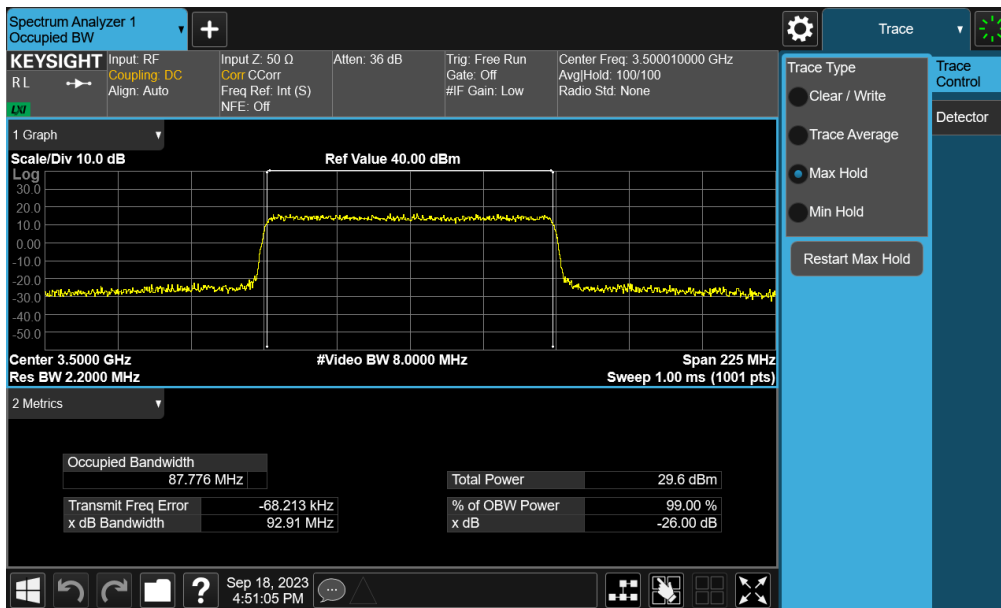
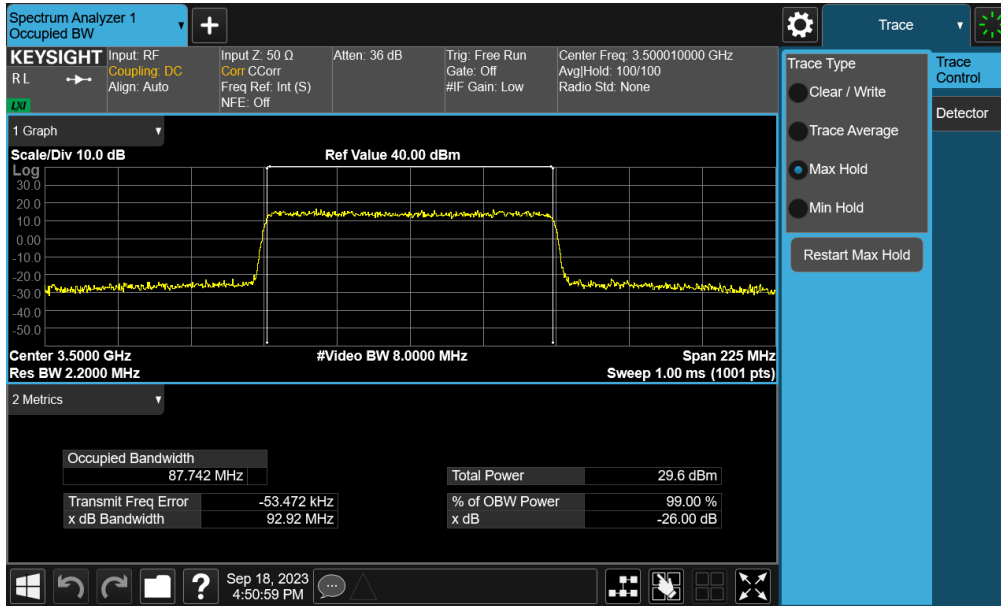


Plot 7-38. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 100MHz 16-QAM - Full RB - Ant1)

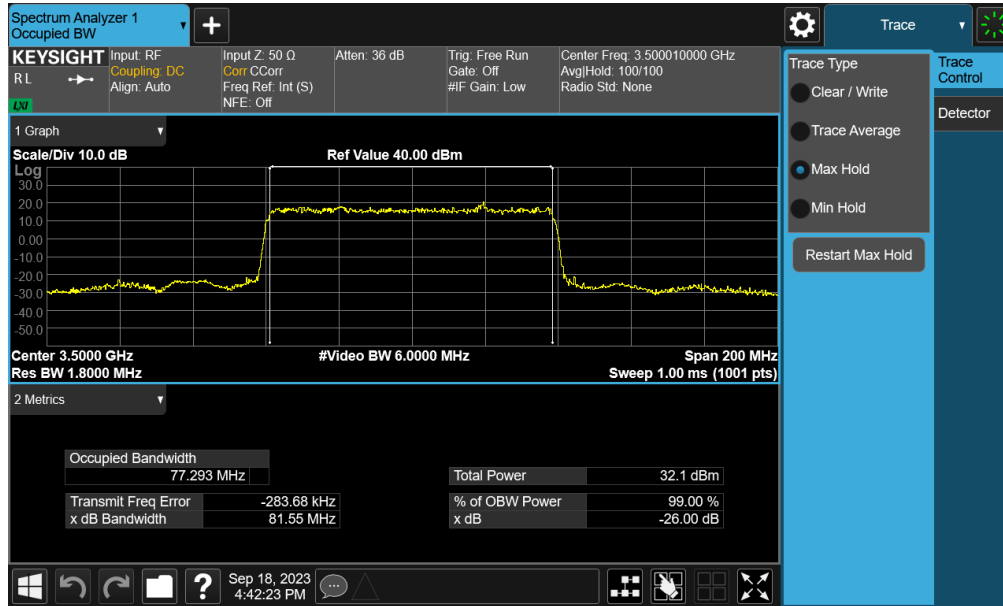


Plot 7-39. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 90MHz $\pi/2$ BPSK - Full RB - Ant1)

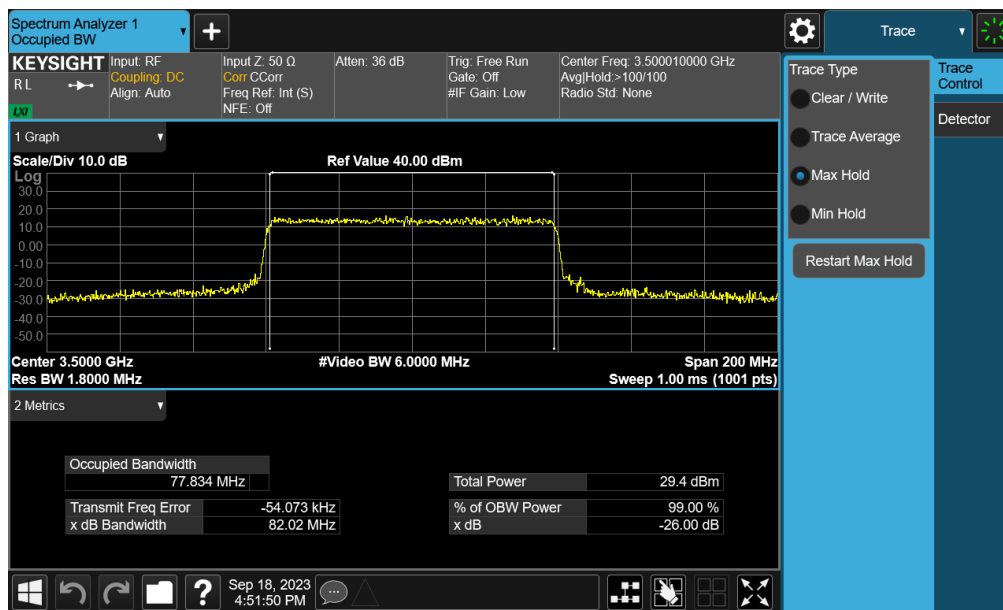
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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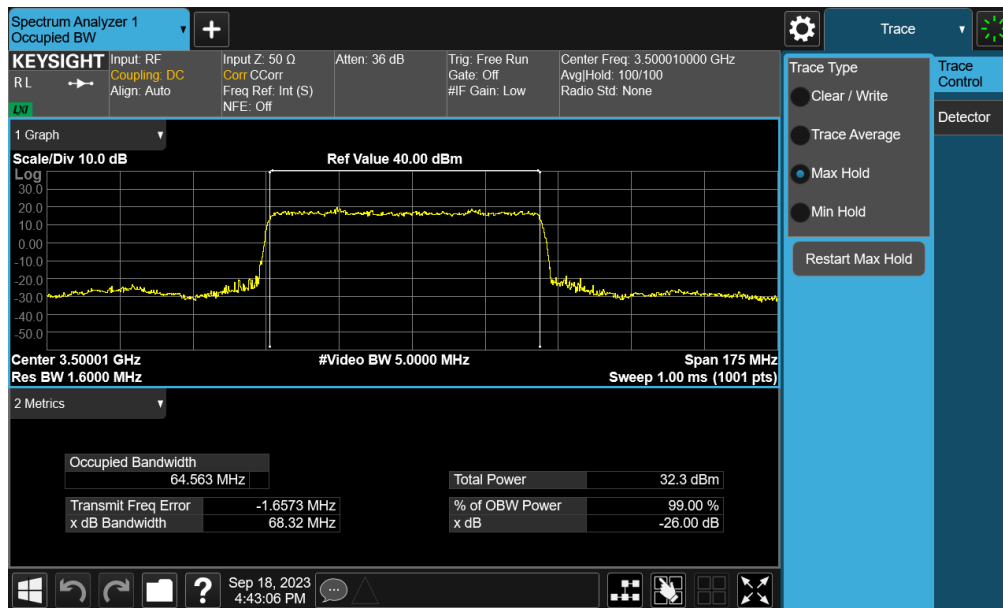
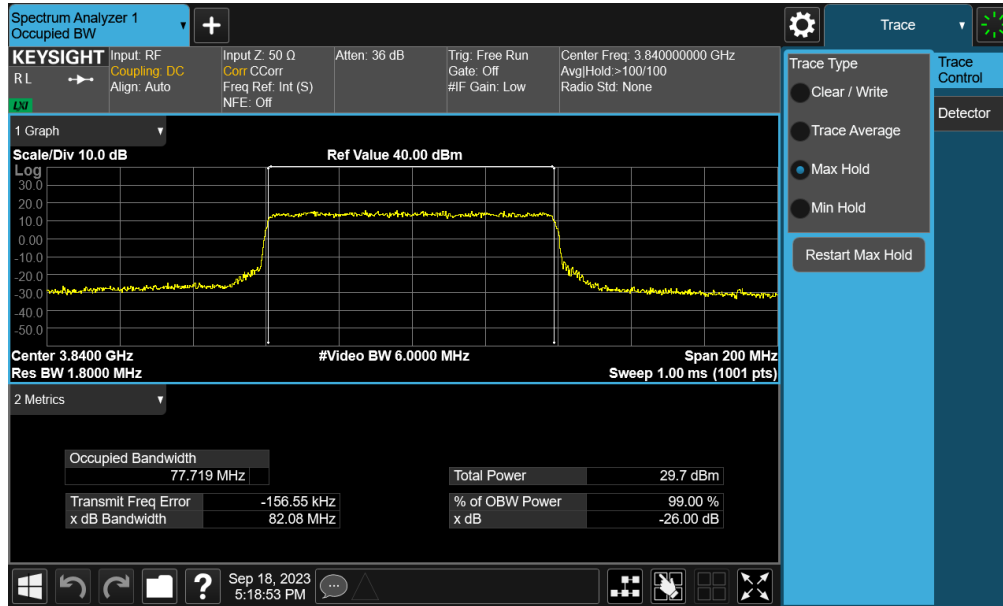


Plot 7-42. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 80MHz $\pi/2$ BPSK - Full RB - Ant1)



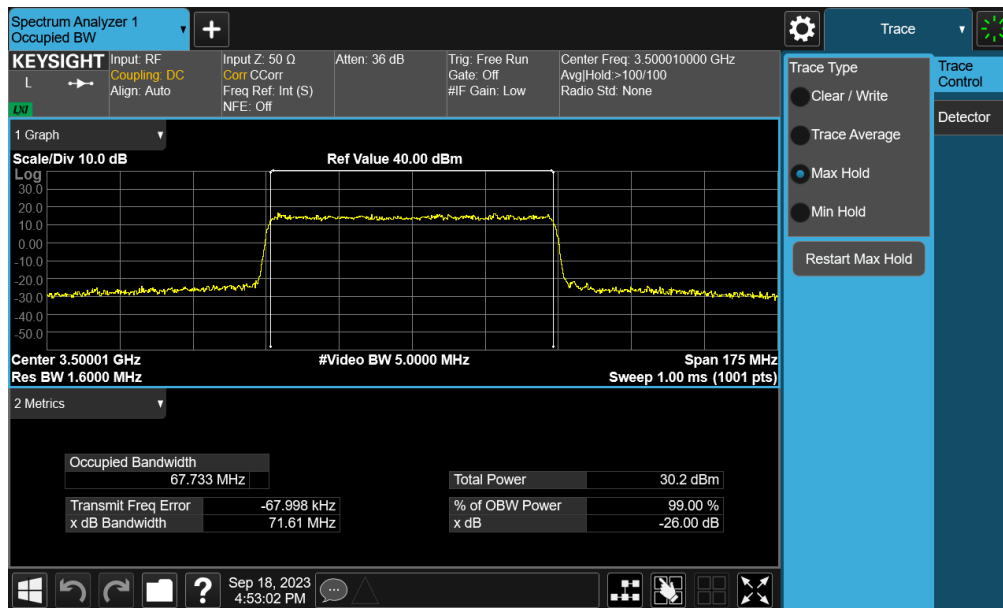
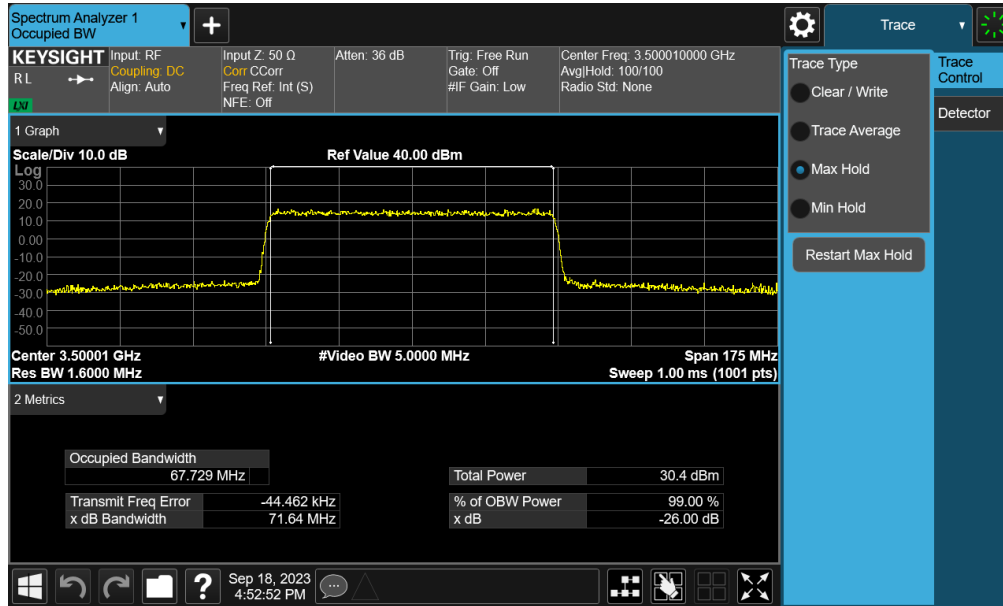
Plot 7-43. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 80MHz QPSK - Full RB - Ant1)

FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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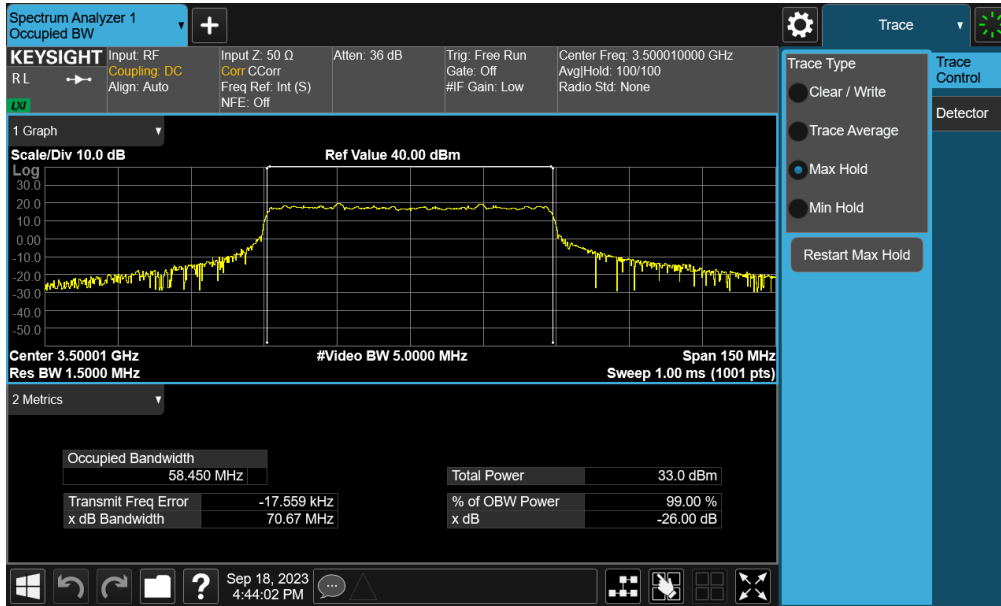


Plot 7-45. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 70MHz $\pi/2$ BPSK - Full RB - Ant1)

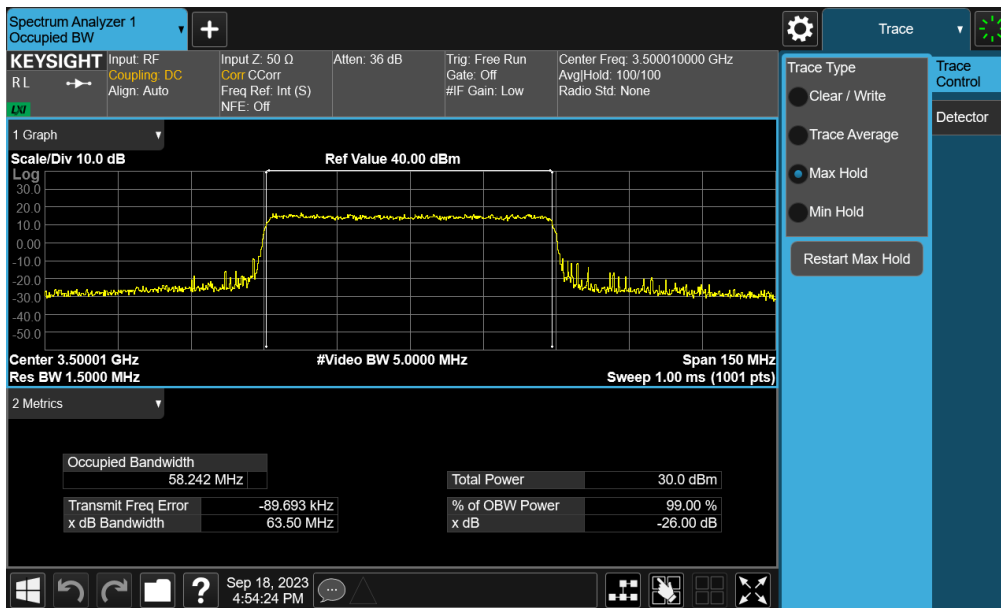
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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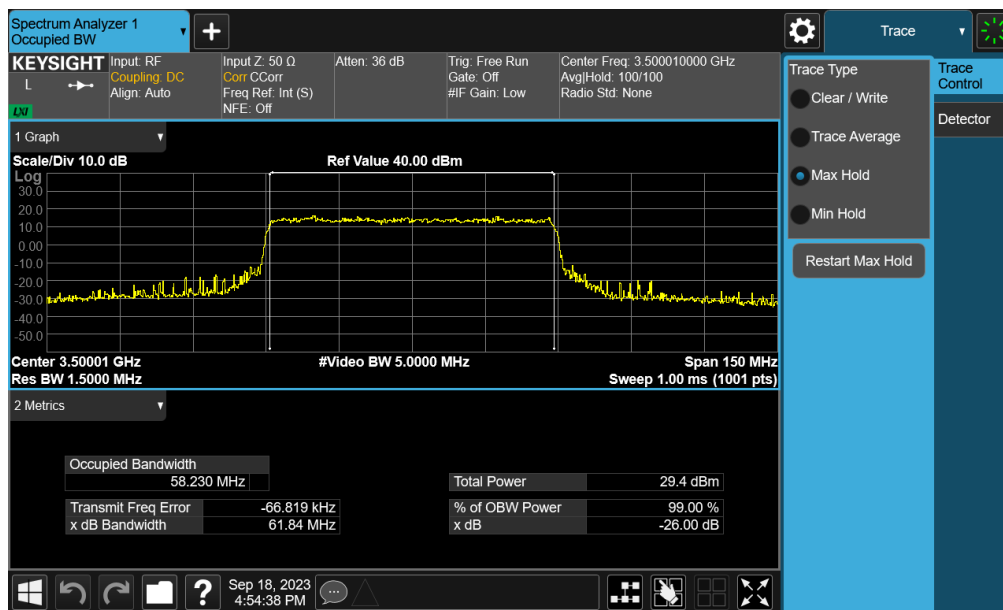
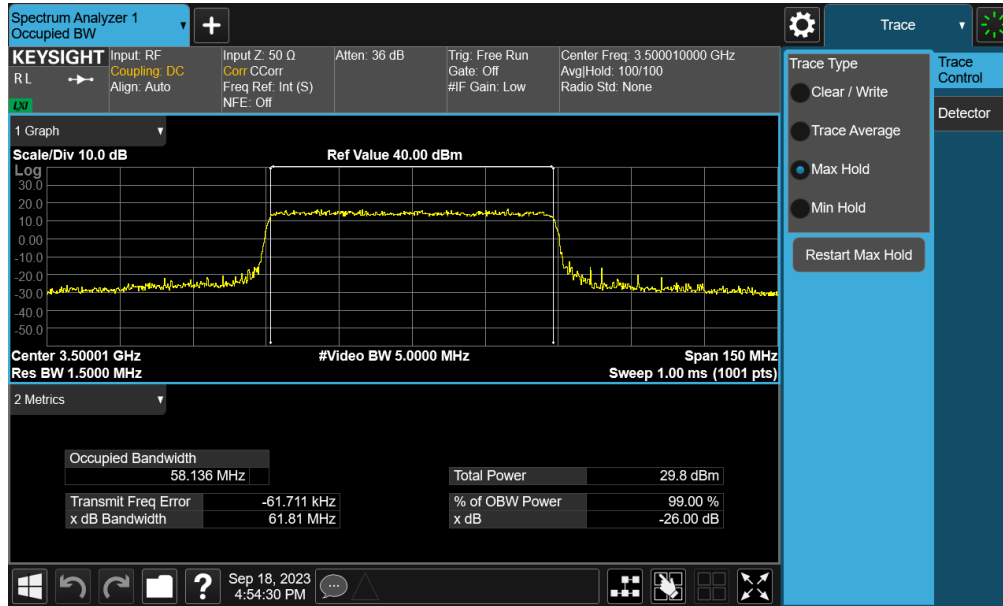


Plot 7-48. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 60MHz $\pi/2$ BPSK - Full RB - Ant1)

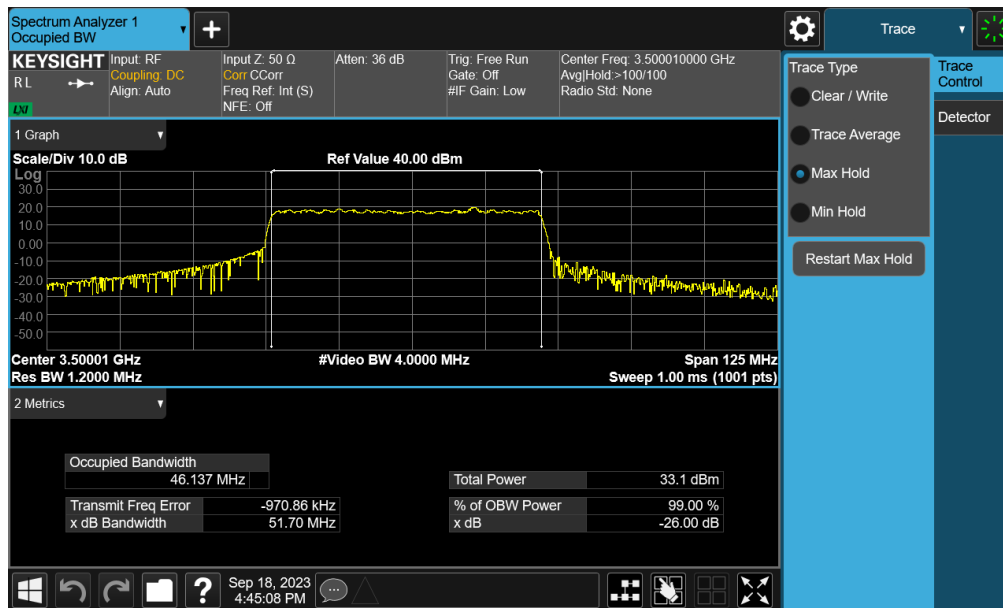
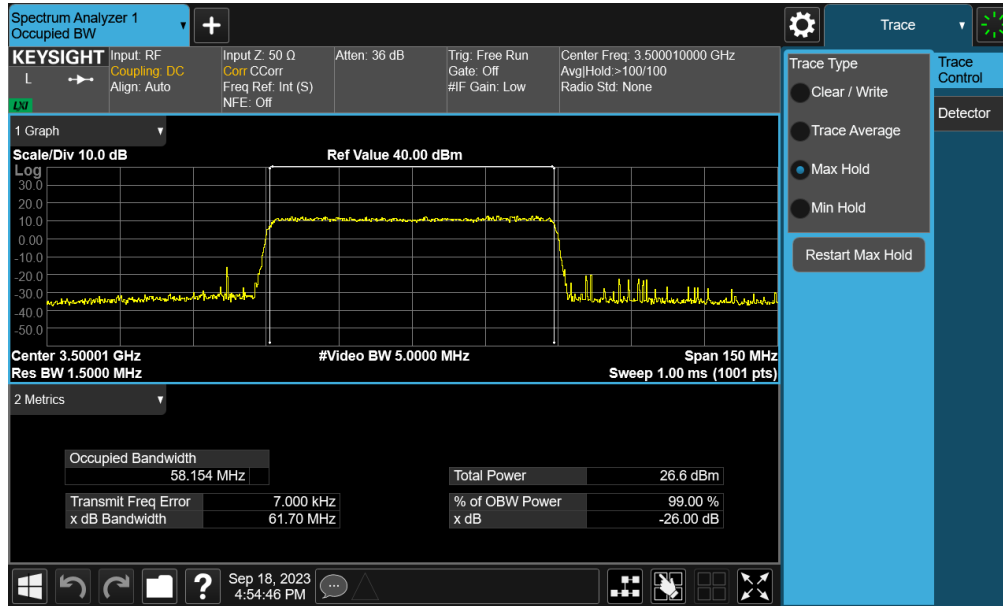


Plot 7-49. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 60MHz QPSK - Full RB - Ant1)

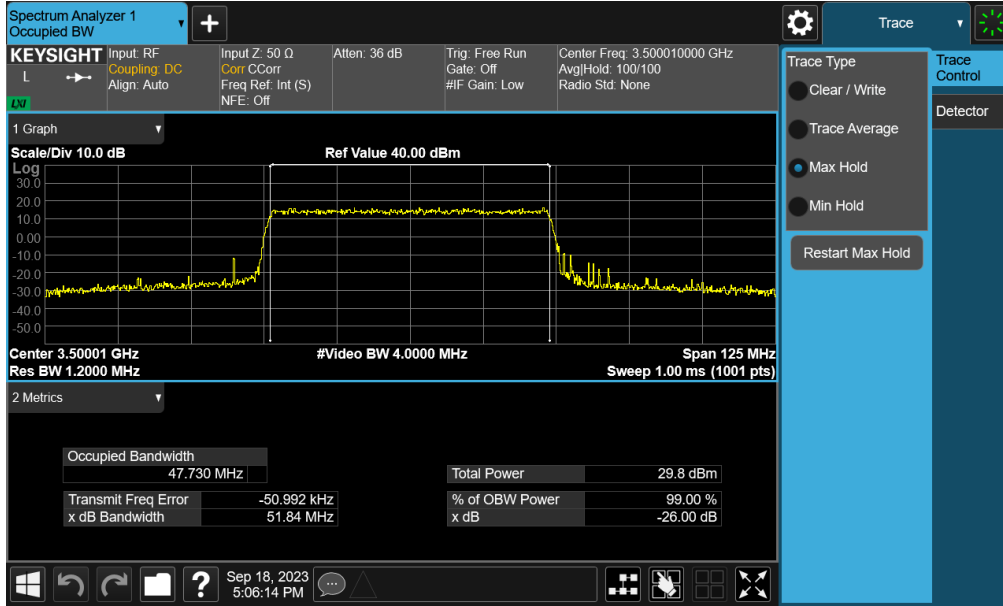
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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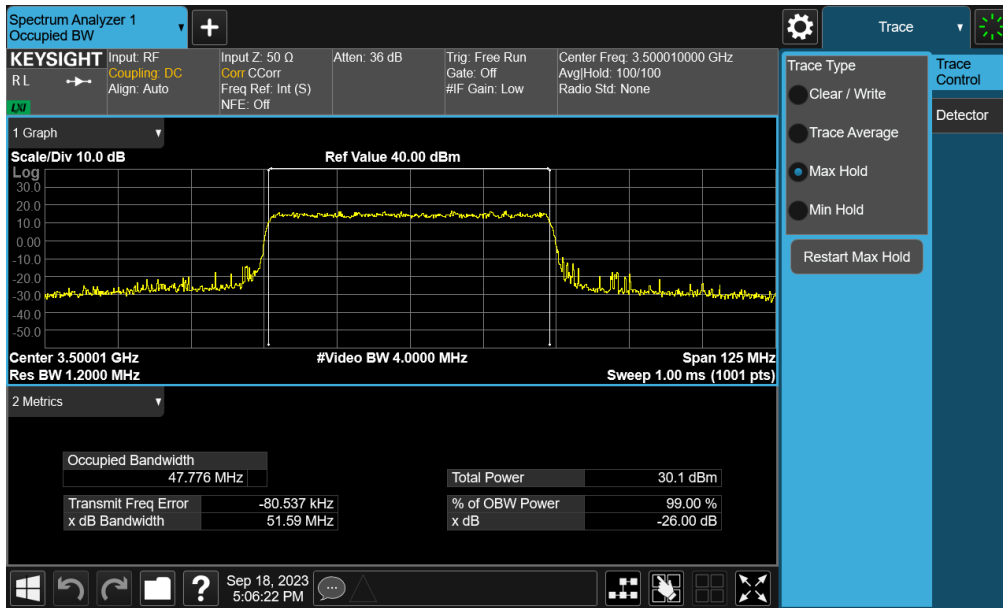
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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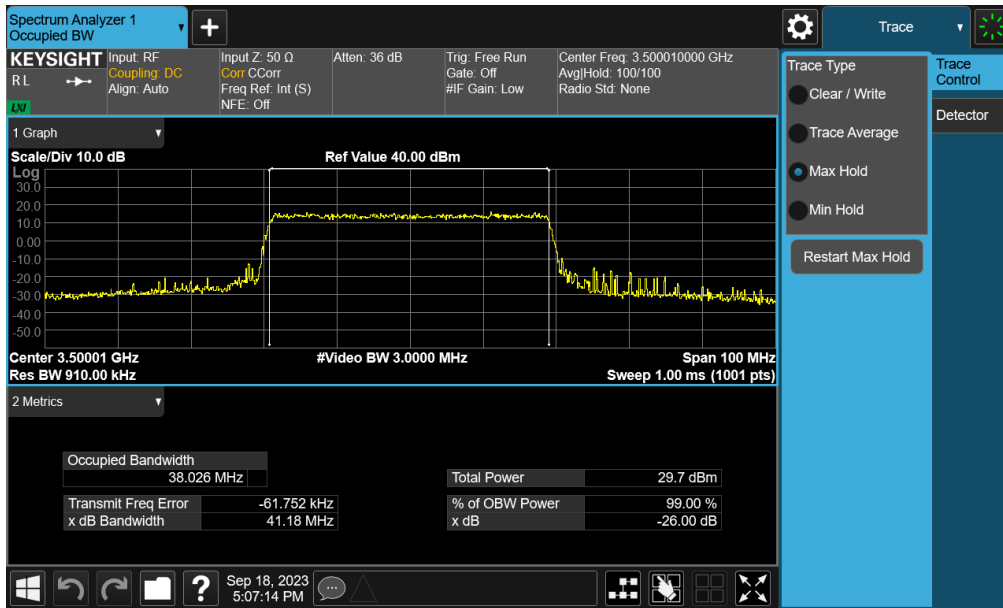
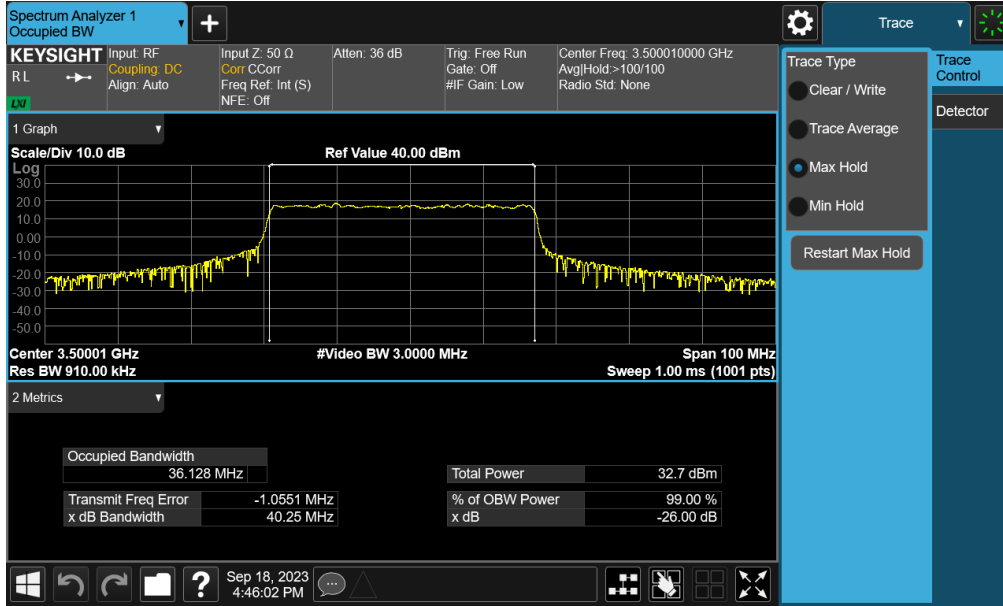


Plot 7-54. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 50MHz QPSK - Full RB - Ant1)

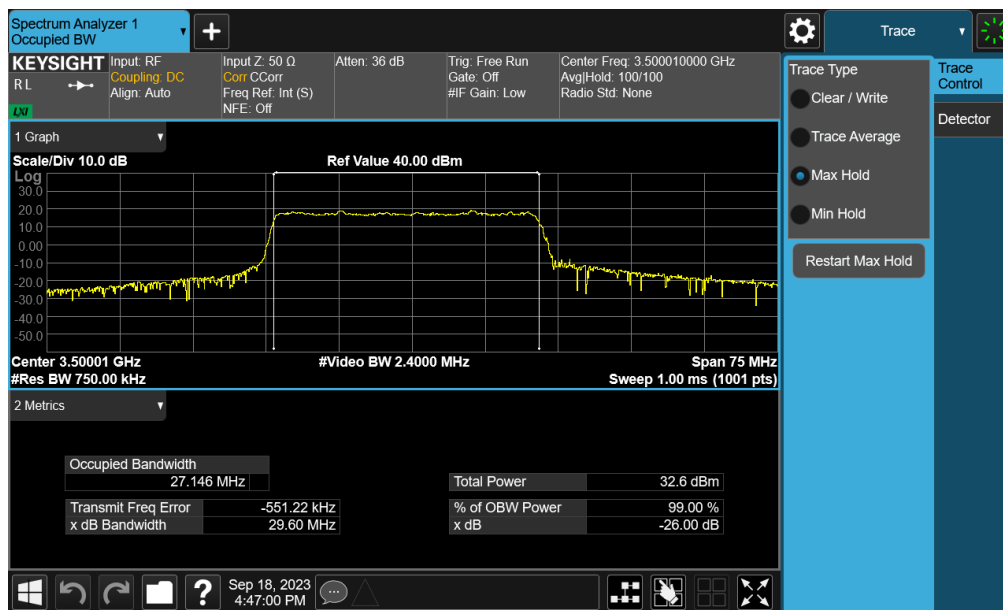
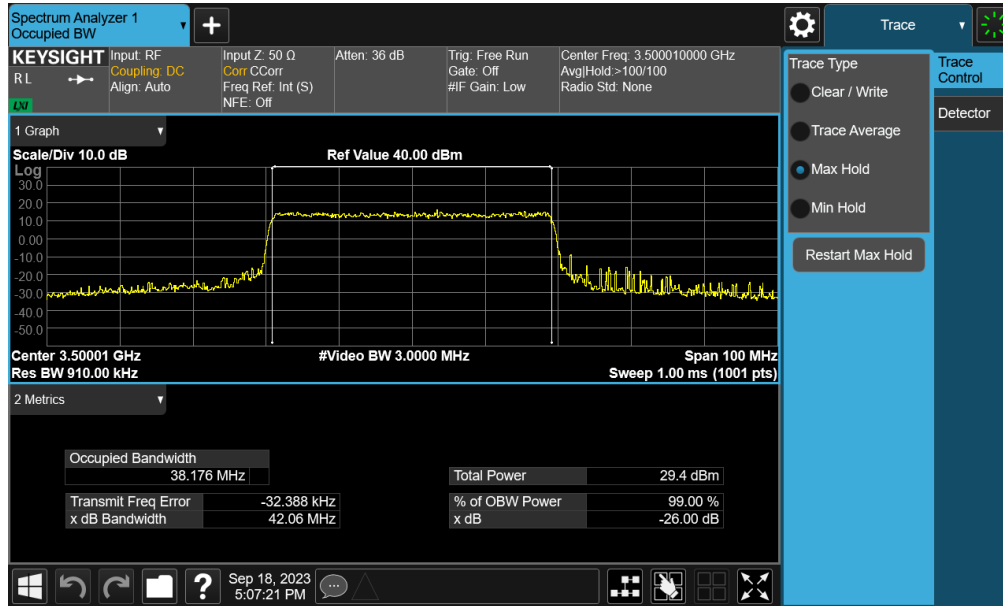


Plot 7-55. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 50MHz 16-QAM - Full RB - Ant1)

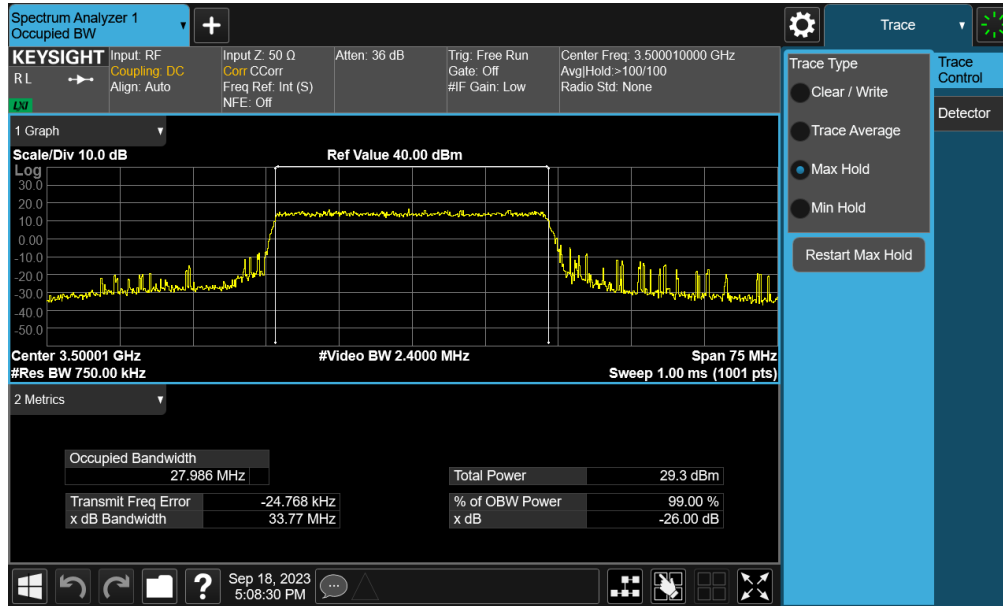
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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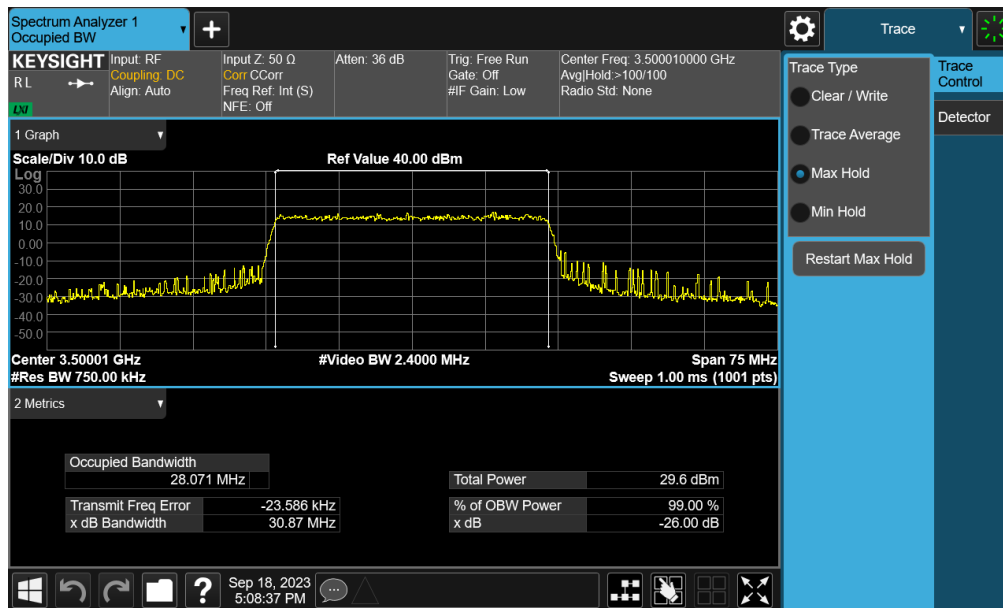
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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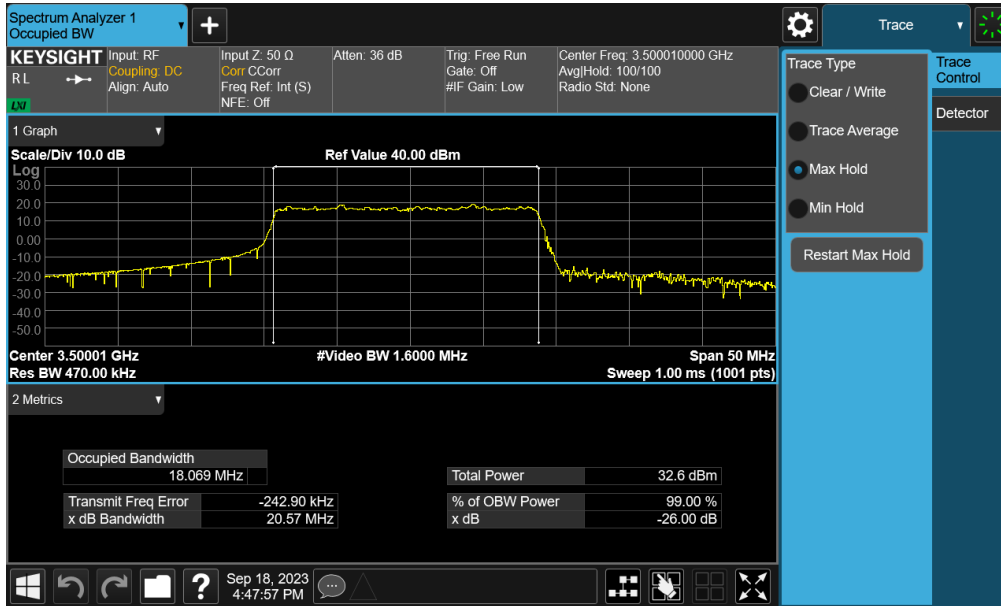


Plot 7-60. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 30MHz QPSK - Full RB - Ant1)

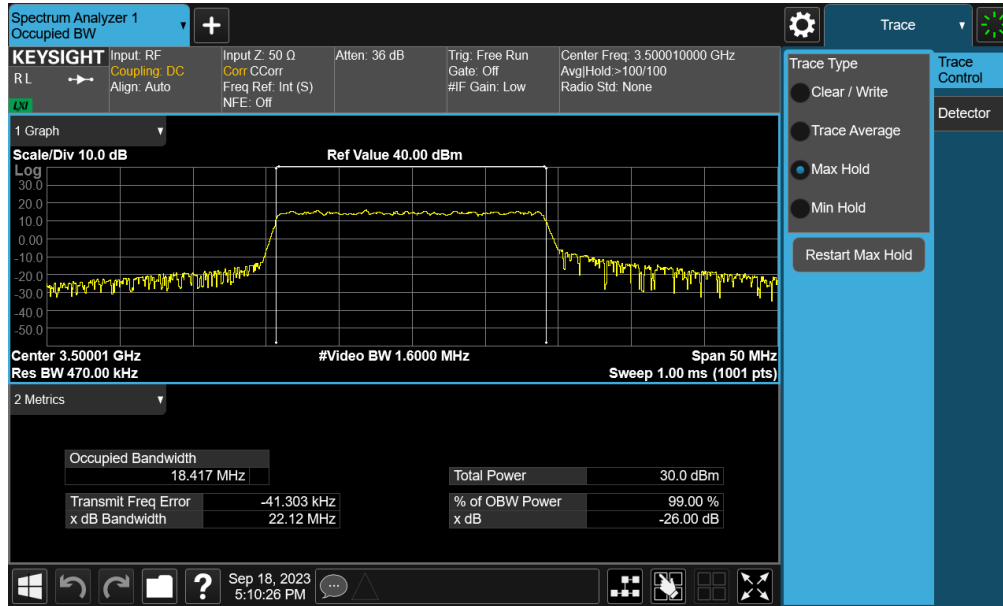


Plot 7-61. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 30MHz 16-QAM - Full RB - Ant1)

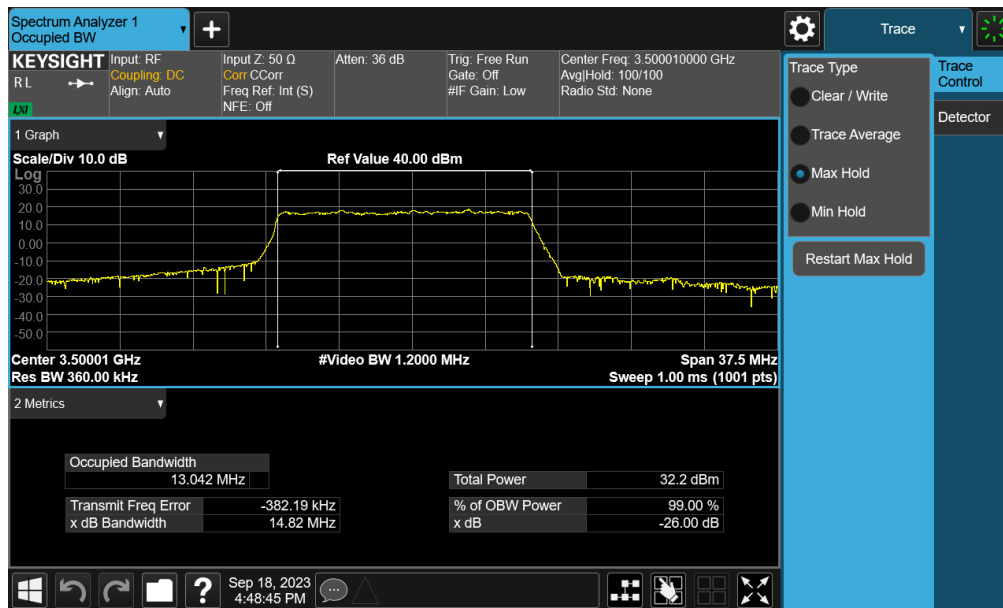
FCC ID: A3LSMS928B	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-64. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 20MHz 16-QAM - Full RB - Ant1)



Plot 7-65. Occupied Bandwidth Plot (NR Band n77PC3 DoD- 15MHz $\pi/2$ BPSK - Full RB - Ant1)

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