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Part 96 MEASUREMENT REPORT

Applicant Name:

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Gyeonggi-do, 16677, Korea

Date of Testing:

09/02/2025 - 10/10/2025

Test Report Issue Date:

10/29/2025

Test Site/Location:

Element Lab., Columbia, MD, USA

Test Report Serial No.:

1M2508250078-13.A3L

FCC ID:

A3LSMS948U

APPLICANT:

Samsung Electronics Co., Ltd.

Application Type:

Certification

Model:

SM-S948U

Additional Models:

SM-S948U1

EUT Type:

Portable Handset

FCC Classification:

Citizens Band End User Devices (CBE)

FCC Rule Part(s):

96

Test Procedure(s):

ANSI C63.26-2015, KDB 940660 D01 v03

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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TEST REPORT REVISION HISTORY

Rev. No.	Report S/N	Description	Issue Date
-	1M2508250078-13.A3L	Initial Release	10/29/2025

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FCC Part 96

Antenna-F						
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP		Emission Designator
				Max. Power [W]	Max. Power [dBm]	
LTE Band 48	40 MHz	QPSK	3570.0 - 3680.0	0.131	21.18	37M8G7D
		16QAM	3570.0 - 3680.0	0.103	20.14	37M8W7D
	35 MHz	QPSK	3567.5 - 3682.5	0.121	20.82	32M7G7D
		16QAM	3567.5 - 3682.5	0.117	20.67	32M8W7D
	30 MHz	QPSK	3565.0 - 3685.0	0.140	21.47	27M9G7D
		16QAM	3565.0 - 3685.0	0.118	20.72	27M8W7D
	25 MHz	QPSK	3562.5 - 3687.5	0.144	21.58	23M0G7D
		16QAM	3562.5 - 3687.5	0.117	20.70	22M9W7D
	20 MHz	QPSK	3560.0 - 3690.0	0.126	21.00	17M9G7D
		16QAM	3560.0 - 3690.0	0.100	20.00	18M0W7D
	15 MHz	QPSK	3557.5 - 3692.5	0.123	20.91	13M5G7D
		16QAM	3557.5 - 3692.5	0.092	19.63	13M5W7D
	10 MHz	QPSK	3555.0 - 3695.0	0.122	20.85	9M01G7D
		16QAM	3555.0 - 3695.0	0.094	19.73	8M98W7D
	5 MHz	QPSK	3552.5 - 3697.5	0.124	20.92	4M51G7D
		16QAM	3552.5 - 3697.5	0.092	19.63	4M48W7D
NR Band n48	40 MHz	$\pi/2$ BPSK	3570.0 - 3680.0	0.122	20.86	36M1G7D
		QPSK	3570.0 - 3680.0	0.115	20.62	38M1G7D
		16QAM	3570.0 - 3680.0	0.093	19.68	38M0W7D
	30 MHz	$\pi/2$ BPSK	3565.0 - 3685.0	0.117	20.70	27M1G7D
		QPSK	3565.0 - 3685.0	0.117	20.67	28M0G7D
		16QAM	3565.0 - 3685.0	0.092	19.62	28M0W7D
	20 MHz	$\pi/2$ BPSK	3560.0 - 3690.0	0.119	20.75	18M1G7D
		QPSK	3560.0 - 3690.0	0.123	20.90	18M3G7D
		16QAM	3560.0 - 3690.0	0.104	20.18	18M4W7D
	15 MHz	$\pi/2$ BPSK	3557.5 - 3692.5	0.119	20.77	13M0G7D
		QPSK	3557.5 - 3692.5	0.126	21.02	13M7G7D
		16QAM	3557.5 - 3692.5	0.121	20.84	13M7W7D
	10 MHz	$\pi/2$ BPSK	3555.0 - 3695.0	0.118	20.73	8M66G7D
		QPSK	3555.0 - 3695.0	0.105	20.21	8M75G7D
		16QAM	3555.0 - 3695.0	0.102	20.07	8M70W7D

Note: EIRP levels shown in the table above are measured over the full channel bandwidth. These values will appear on the Grant of Authorization.

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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.

1.2 Element Test Location

Measurements were conducted at the Element laboratory(ies) indicated in Section 1.3 below. All measurement facilities are compliant with the test site requirements specified in ANSI C63.4:2014 and KDB 414788 D01 v01r01.

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 test laboratory with the site description on file with ISED (Wireless Test Lab number 2451B) and FCC (Designation Number US1113).
- 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 Agreements (MRAs).

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMS948U**. The test data contained in this report pertains only to the emissions due to the EUT's LTE Band 48 operation in the CBRs band. Per FCC Part 96, this device is evaluated as a Citizens Band End User Devices (CBE).

Test Device Serial No.: 0516M, 0545M, 1154M, 0789M, 0490M

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

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-2400 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 Duty Cycle Information

For 5G NR operations, the EUT was set to transmit either via a Factory Test Mode (FTM) software provided by the manufacturer or in an online mode. The EUT duty cycle was set to 100% in all cases during FTM operation. During online operation the EUT duty cycle was set to an operational max using a callbox, where the max duty cycle was determined to be 20.0%. Gated and triggered measurement settings were used in this case. SRS operations were conducted using FTM while all other cases were conducted in an online mode.

For LTE TDD operation, a call box was used to force maximum transmission for each band. For LTE TDD bands, the maximum duty cycle is 63.3% for PC3 and 43.3% for PC2.

This device can transmit in the 5G NR Band n48 band over four separate antennas labelled SRS-1, SRS-2, SRS-3, and SRS-4. SRS operation can occur on the main path. With SRS operations, any of these four antennas can transmit an SRS signal to check the channel quality for transmission in the n48 Band. However, these antennas cannot simultaneously transmit and only the SRS-1 antenna is capable of data transmission. The test data is marked to indicate the specific antenna transmitting in the n48 band. Transmission on SRS-2, SRS-3 and SRS-4 antennas are typically limited to very small pulses; testing on these modes are reported as 1 RB to approximate a worst-case real-world scenario.

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Antenna SRS-Label	Alternate Label
NR Band n48 – Default – SRS-1	Ant F
NR Band n48 – Default – SRS-2	Ant C
NR Band n48 – Default – SRS-3	Ant H
NR Band n48 – Default – SRS-4	Ant D

Table 2-1. Antenna Labelling Scheme Correlation

2.5 Software and Firmware

Testing was performed on device(s) using software/firmware version S948USQU0AYIB installed on the EUT.

2.6 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 Measurement 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:

$$P_d \text{ [dBm]} = P_g \text{ [dBm]} - \text{cable loss [dB]} + \text{antenna gain [dBd/dBi]};$$

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

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:

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

And

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

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

Table 4-1. Measurement Uncertainty Budget

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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
-	MD 1M 40	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	MD 1M 40
-	AP1-002	EMC Cable and Switch System	2/25/2025	Annual	2/25/2026	AP1-002
-	ETS-001	EMC Cable and Switch System	12/11/2024	Annual	12/11/2025	ETS-001
-	ETS-002	EMC Cable and Switch System	12/11/2024	Annual	12/11/2025	ETS-002
-	LTx6-40	Licensed Transmitter Cable Set	2/25/2025	Annual	2/25/2026	LTx6-40
-	WL25-4	Conducted Cable Set (25GHz)	2/25/2025	Annual	2/25/2026	WL25-4
-	WL40-3	Conducted Cable Set (40GHz)	2/25/2025	Annual	2/25/2026	WL40-3
Agilent	N9038A	MXE EMI Receiver	9/16/2024	Annual	11/22/2025	MY51210133
Anritsu	MT8000A	Radio Communication Test Station	6/4/2025	Annual	6/4/2026	6261914237
Anritsu	MT8821C	Radio Communication Analyzer	9/15/2025	Annual	9/15/2026	6201381794
EMCO	3115	Horn Antenna (1-18GHz)	9/6/2024	Biennial	9/6/2026	9704-5182
Espec	ESX-2CA	Environmental Chamber	11/20/2024	Biennial	11/20/2026	17620
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	6/4/2025	Biennial	6/4/2027	125518
Keysight Technologies	N9038A	MXE EMI Receiver	9/16/2024	Annual	11/22/2025	MY51210133
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	6/6/2025	Annual	6/6/2026	MY52350166
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	11/25/2024	Annual	11/25/2025	100348
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	12/10/2024	Annual	12/10/2025	167286
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	9/11/2024	Biennial	9/11/2026	A051107
Sunol Sciences	DRH-118	Horn (Small)	2/13/2024	Biennial	2/13/2026	A042511

Table 5-1. Test Equipment Calibration Table

Notes:

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

Component	Serial Number
MegaPhase Cable TM40-K1K1-30	20233002-004
UTIPLEX Cable, 64639	232063-001
Rohde & Schwarz Pre-amp TS-PR1840 18G-40G	9037.7670.02

Table 5-2. MD 1M 18-40 EMC Cable and Switch System Components

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Component	Serial Number
Sucoflex 106A Cable	501992
MegaPhase Cable N29-N1N1-324	20335606 001
Rohde & Schwarz SF Unit	102133
MiniCircuits Cable CBL-2FT-SMSM+	77745
MegaPhase Cable 10511-1	15034701 001
MiniCircuits Switch RC 2SPDT-A18	11703270 041
Sucoflex 104 Cable	320259/4
Sucoflex 104 Cable	321999/4
Sucoflex 104 Cable	321995/4

Table 5-3. AP1-002 EMC Cable and Switch System Components

Component	Serial Number
Pasternack Cable RG214/U	111815
MegaPhase (CAGE 1GVT4) Cable GR18-N5N5-24	14042714 001

Table 5-4. ETS-001 EMC Cable and Switch System Components

Component	Serial Number
MegaPhase (CAGE 1GVT4) Cable GR18-N5N5-24	14042714 001
MegaPhase (CAGE 1GVT4) Cable NC29-N1N1-324	20502201 001
Rohde & Schwarz SF Unit	102134
Minicircuits Cable CBL=0.5M-NMNM+	15440

Table 5-5. ETS-002 EMC Cable and Switch System Components

Component	Serial Number
Fairview Microwave Directional Coupler, FM2CP1122-10	2122
MCL 6dB Attenuator, Model: BW-K6 2W44+	2013
MegaPhase Cable, Model: TM40-K1K1-30	20233002 003

Table 5-6. LTx6 Licensed Transmitter Cable Set

Component	Serial Number
MegaPhase Cable, Model: TM26-S1S1-30	20335604 001
Pasternack 10dB Attenuator, Model: BW-S10 2W263+	2105

Table 5-7. WL25-4 Licensed Transmitter Cable Set

Component	Serial Number
MegaPhase Cable, Model: TM40-K1K1-30	20335602 001
MCL 10dB Attenuator, Model: BW-K10 2W44+	2108

Table 5-8. WL40-3 Licensed Transmitter Cable Set

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6.0 SAMPLE EMISSION DESIGNATORS

Emission Designator

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

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7.0 TEST RESULTS

7.1 Summary

Company Name: Samsung Electronics Co., Ltd.
 FCC ID: A3LSMS948U
 FCC Classification: Citizens Band End User Devices (CBE)
 Mode(s): LTE/NR/ULCA

Test Condition	Test Description	FCC Part Section(s)	Test Limit	Test Result	Reference
CONDUCTED	Conducted 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 (EUD)	2.1051, 96.41(e)(ii)	-13 dBm/MHz at frequencies within 0-B MHz of channel edge (where B is the bandwidth of the assigned channel) -25 dBm/MHz at frequencies greater than B MHz above and below channel edge -40 dBm/MHz at frequencies below 3530 MHz and above 3720 MHz	PASS	Sections 7.4, 7.5
	Additional Maximum Power Reduction (A-MPR)	2.1046	N/A	PASS	Section 7.2
	Frequency Stability	2.1055	Fundamental emissions stay within authorized frequency block	PASS	Section 7.8
	End User Device Additional Requirements (CBSD Protocol)	96.47	End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation. An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.	PASS	Section 7.9
	Uplink Carrier Aggregation	96.41(e)	> 43 + 10log(P[Watts]) at Band Edge and for all out-of-band emissions	PASS	Sections 7.4, 7.5
RADIATED	Equivalent Isotropic Radiated Power (EIRP) (EUD)	96.41(b)	23 dBm/10MHz	PASS	Section 7.6
	Radiated Spurious Emissions	2.1053, 96.41(e)	-40 dBm/MHz	PASS	Section 7.7

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) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v2.3.0.

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7.2 Conducted Output Power Data

Test Overview

The EUT is set up to transmit at maximum power for LTE. All power levels 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.

A-MPR is implemented in this device per the A-MPR specification in 3GPP TS 36.101. The conducted powers are shown herein to cover the different A-MPR levels specified in the standard. Measurement equipment was set up with triggering/gating on the spectrum analyzer such that powers were measured only during the on-time of the signal.

Test Procedure Used

ANSI C63.26:2015 – Section 5.2

Test Settings

1. Span = 2 x OBW to 3 x OBW
2. RBW = 1% to 5% of the OBW
3. Number of measurement points in sweep $\geq 2 \times \text{span} / \text{RBW}$
4. Sweep = auto-couple (less than transmission burst duration)
5. Detector = RMS (power)
6. Trigger was set to enable power measurements only on full power bursts
7. Trace was allowed to stabilize
8. Spectrum analyzer's "Channel Power" function was used to compute the power by integrating the spectrum across the OBW of the signal

Test Setup

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

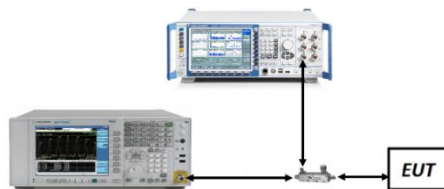


Figure 7-1. Test Instrument & Measurement Setup

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Test Notes

1. A-MPR was only applied for test purposes to the 2CC case since the 1CC case was compliant for all testing at max power.
2. A-MPR was verified to comply with the "CA_NS_10" specification in the 3GPP TS 36.101 standard by setting the MCC to a U.S. code and the MNC to a U.S. carrier supporting LTE B48 operation.
3. 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.
4. 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]
20 MHz	QPSK	55340	3560.0	1 / 1	22.85
		55990	3625.0	1 / 25	22.91
		56640	3690.0	1 / 25	22.91
	16-QAM	56640	3690.0	1 / 25	22.22
15 MHz	QPSK	55315	3557.5	1 / 36	22.65
		55990	3625.0	1 / 19	22.89
		56665	3692.5	1 / 19	22.82
	16-QAM	56665	3692.5	1 / 19	21.85
10 MHz	QPSK	55290	3555.0	1 / 1	22.88
		55990	3625.0	1 / 12	22.96
		56690	3695.0	1 / 12	22.76
	16-QAM	56690	3695.0	1 / 12	21.95
5 MHz	QPSK	55265	3552.5	1 / 5	22.77
		55990	3625.0	1 / 5	22.91
		56715	3697.5	1 / 1	22.83
	16-QAM	56715	3697.5	1 / 9	21.85

Table 7-2. Conducted Power Output Data (LTE Band 48 – Ant F)

Bandwidth	Modulation	PCC			SCC			Conducted Power [dBm]
		Bandwidth [MHz]	Frequency [MHz]	RB / Offset	Bandwidth [MHz]	Frequency [MHz]	RB / Offset	
40 MHz	QPSK	20	3560.0	1 / 99	20	3579.8	1 / 0	22.56
		20	3625.0	1 / 99	20	3644.8	1 / 0	22.68
		20	3690.0	1 / 0	20	3670.2	1 / 99	22.02
	16-QAM	20	3690.0	1 / 0	20	3670.2	1 / 99	19.96
35 MHz	QPSK	20	3560.0	1 / 99	15	3577.1	1 / 0	22.48
		20	3625.0	1 / 99	15	3642.1	1 / 0	22.93
		20	3690.0	1 / 0	15	3672.9	1 / 74	21.63
	16-QAM	20	3690.0	1 / 0	15	3672.9	1 / 74	20.49
30 MHz	QPSK	20	3560.0	1 / 99	10	3574.4	1 / 0	22.28
		20	3625.0	1 / 99	10	3639.4	1 / 0	22.78
		20	3690.0	1 / 0	10	3675.6	1 / 49	22.31
	16-QAM	20	3690.0	1 / 0	10	3675.6	1 / 49	20.54
25 MHz	QPSK	20	3560.0	1 / 99	5	3571.7	1 / 0	22.62
		20	3625.0	1 / 99	5	3636.7	1 / 0	21.25
		20	3690.0	1 / 0	5	3678.3	1 / 24	22.42
	16-QAM	20	3690.0	1 / 0	5	3678.3	1 / 24	20.52

Table 7-3. Conducted Power Output Data (ULCA LB48 – Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Test Case	NS	MCC	MNC	Channel BW [MHz]	PCC			SCC			A-MPR [dB]	Modulation	MPR [dB]	Maximum Target Output Power [dBm]	A-MPR Measured Power [dBm]
					Channel Frequency [MHz]	RB Size	RB Offset	Channel Frequency [MHz]	RB Size	RB Offset					
1	NS_01	310	910	20 + 20	3560	100	0	3579.8	100	0	≤ 11	QPSK	0	23.00	12.17
												16-QAM	1	22.00	12.07
2				20 + 20	3560	1	99	3579.8	1	0	≤ 11	QPSK	0	23.00	19.42
												16-QAM	1	22.00	18.72
3				20 + 20	3625	100	0	3644.8	100	0	≤ 4.5	QPSK	0	23.00	18.72
												16-QAM	1	22.00	18.60
4				20 + 20	3625	1	99	3644.8	1	0	≤ 4.5	QPSK	0	23.00	22.13
												16-QAM	1	22.00	21.88
5				20 + 20	3670.2	100	0	3690	100	0	≤ 11	QPSK	0	23.00	11.95
												16-QAM	1	22.00	11.84
6				20 + 20	3670.2	1	0	3690	1	99	≤ 11	QPSK	0	23.00	18.38
												16-QAM	1	22.00	17.73

Table 7-4. A-MPR Conducted Power Output Data (ULCA LB48 – Ant F)

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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
40 MHz	π/2 BPSK	638000	3570.0	1 / 104	22.99
		641666	3625.0	1 / 1	22.78
		645332	3680.0	1 / 53	22.97
	QPSK	638000	3570.0	1 / 104	22.61
		641666	3625.0	1 / 1	22.78
		645332	3680.0	1 / 53	22.49
	16-QAM	645332	3680.0	1 / 53	21.29
30 MHz	π/2 BPSK	637666	3565.0	75 / 0	22.57
		641666	3625.0	1 / 39	22.91
		645666	3685.0	1 / 39	22.80
	QPSK	637666	3565.0	1 / 39	22.43
		641666	3625.0	1 / 39	22.63
		645666	3685.0	1 / 39	22.53
	16-QAM	645666	3685.0	1 / 39	21.23
20 MHz	π/2 BPSK	637334	3560.0	1 / 1	22.94
		641666	3625.0	1 / 1	22.88
		646000	3690.0	1 / 1	22.86
	QPSK	637334	3560.0	1 / 1	22.88
		641666	3625.0	1 / 1	22.85
		646000	3690.0	1 / 1	22.77
	16-QAM	646000	3690.0	1 / 1	21.79
15 MHz	π/2 BPSK	637166	3557.5	1 / 1	22.85
		641666	3625.0	1 / 19	22.99
		646166	3692.5	1 / 19	22.88
	QPSK	637166	3557.5	1 / 1	22.34
		641666	3625.0	1 / 19	22.69
		646166	3692.5	1 / 19	22.89
	16-QAM	646166	3692.5	1 / 19	22.44
10 MHz	π/2 BPSK	637000	3555.0	1 / 1	22.97
		641666	3625.0	1 / 12	22.43
		646332	3695.0	1 / 1	22.83
	QPSK	637000	3555.0	1 / 1	22.76
		641666	3625.0	1 / 12	22.41
		646332	3695.0	1 / 1	22.08
	16-QAM	646332	3695.0	1 / 1	21.68

Table 7-5. Conducted Power Output Data (NR Band n48 – Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
40 MHz	π/2 BPSK	638000	3570.0	1 / 53	17.74
		641666	3625.0	1 / 1	17.59
		645332	3680.0	1 / 1	17.77
	QPSK	638000	3570.0	1 / 53	17.62
		641666	3625.0	1 / 1	17.68
		645332	3680.0	1 / 1	17.69
	16-QAM	638000	3570.0	1 / 53	16.46
		641666	3625.0	1 / 1	16.83
		645332	3680.0	1 / 1	16.62

Table 7-6. Conducted Power Output Data (NR Band n48 – Ant C)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
40 MHz	π/2 BPSK	638000	3570.0	1 / 104	21.53
		641666	3625.0	1 / 1	21.81
		645332	3680.0	1 / 53	21.67
	QPSK	638000	3570.0	1 / 104	21.55
		641666	3625.0	1 / 1	21.67
		645332	3680.0	1 / 53	21.55
	16-QAM	638000	3570.0	1 / 104	20.95
		641666	3625.0	1 / 1	20.73
		645332	3680.0	1 / 53	20.99

Table 7-7. Conducted Power Output Data (NR Band n48 – Ant H)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
40 MHz	π/2 BPSK	638000	3570.0	1 / 1	17.15
		641666	3625.0	1 / 53	17.49
		645332	3680.0	1 / 1	17.36
	QPSK	638000	3570.0	1 / 1	17.08
		641666	3625.0	1 / 53	17.35
		645332	3680.0	1 / 1	17.31
	16-QAM	638000	3570.0	1 / 1	16.05
		641666	3625.0	1 / 53	16.27
		645332	3680.0	1 / 1	16.38

Table 7-8. Conducted Power Output Data (NR Band n48 – Ant D)

FCC ID: A3LSMS948U	PART 96 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.

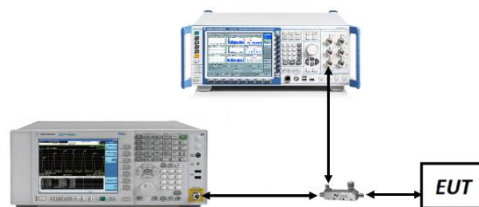


Figure 7-2. Test Instrument & Measurement Setup

Test Notes

Since, SRS-1 (Antenna F) has the highest target power, only Antenna F OBW is reported for the overall n48 worst case.

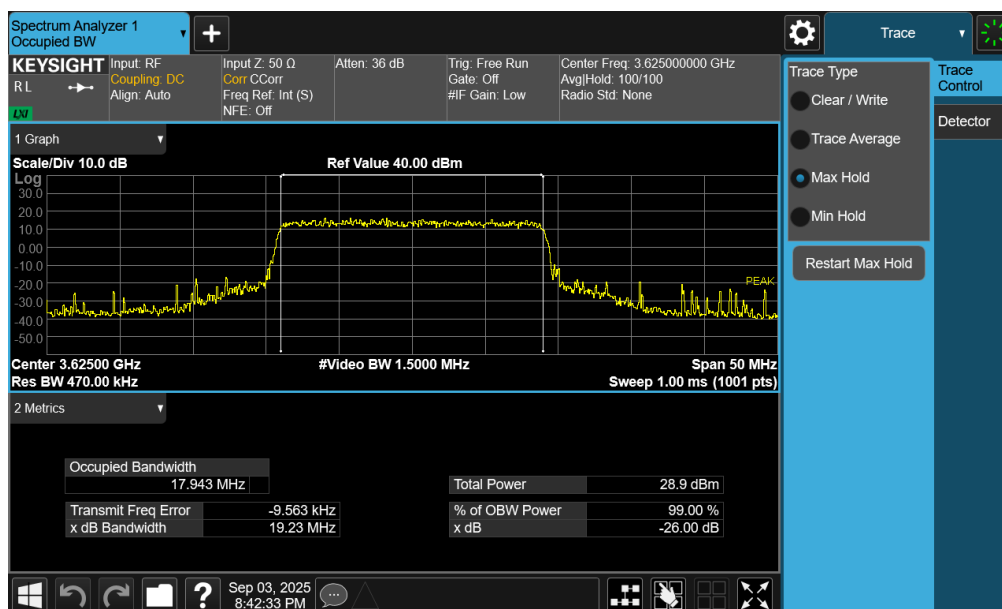
FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode	Bandwidth	Modulation	OBW [MHz]
LTE-B48	20MHz	QPSK	17.94
		16QAM	17.95
	15MHz	QPSK	13.54
		16QAM	13.52
	10MHz	QPSK	9.01
		16QAM	8.98
	5MHz	QPSK	4.51
		16QAM	4.48
ULCA LTE-B48	20+20MHz	QPSK	37.78
		16QAM	37.81
	20+15MHz	QPSK	32.73
		16QAM	32.78
	20+10MHz	QPSK	27.91
		16QAM	27.75
	20+5MHz	QPSK	23.02
		16QAM	22.92
NR-n48	40MHz	BPSK	36.07
		QPSK	38.07
		16QAM	37.97
	30MHz	BPSK	27.09
		QPSK	27.96
		16QAM	28.03
	20MHz	BPSK	18.08
		QPSK	18.32
		16QAM	18.37
	15MHz	BPSK	13.03
		QPSK	13.71
		16QAM	13.73
	10MHz	BPSK	8.66
		QPSK	8.75
		16QAM	8.70

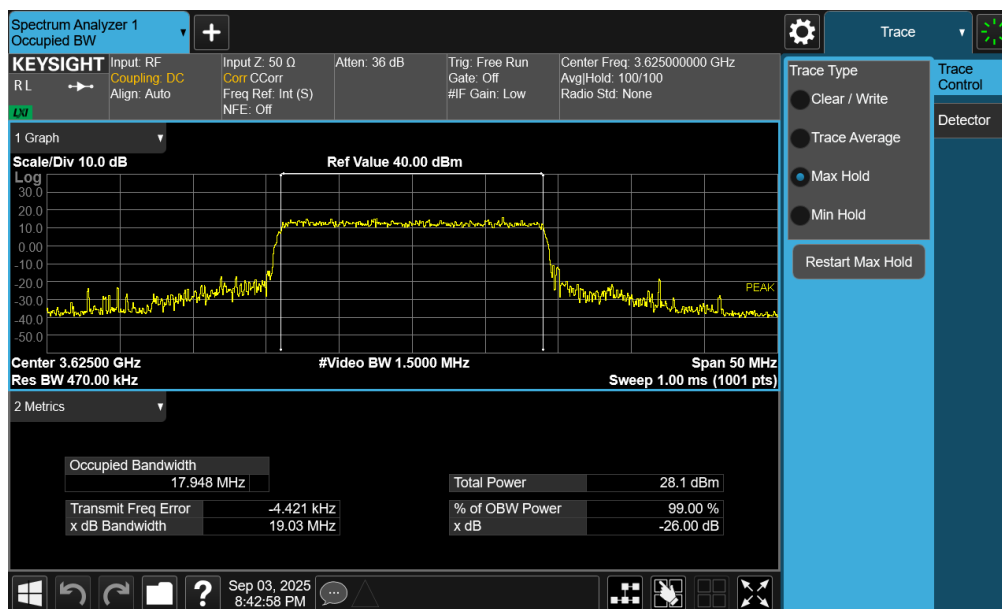
Table 7-9. Occupied Bandwidth Test Results – Ant F

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 48 – Ant F

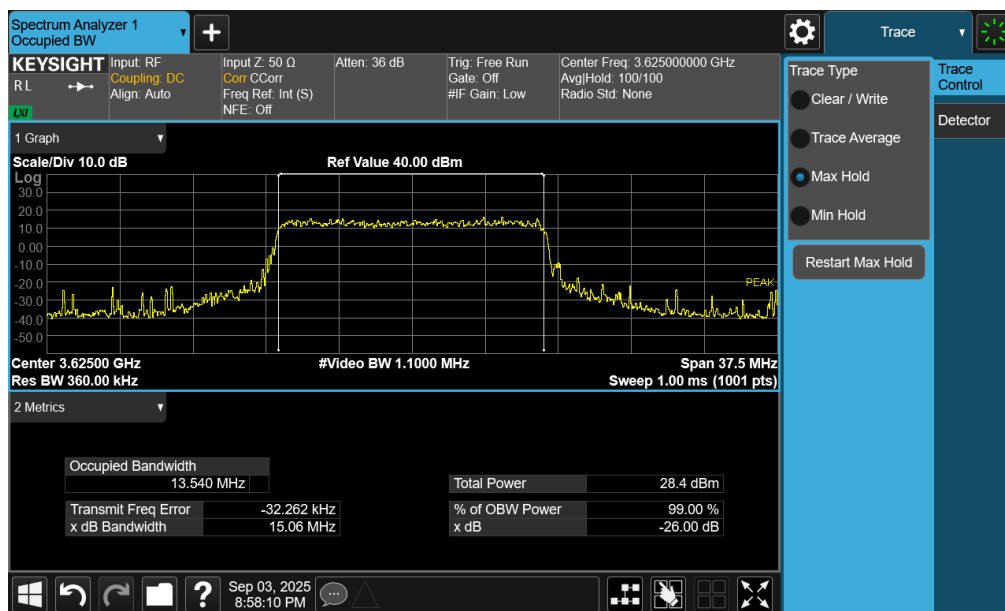


Plot 7-1. Occupied Bandwidth Plot (LTE Band 48 - 20MHz QPSK - Full RB Configuration - Ant F)

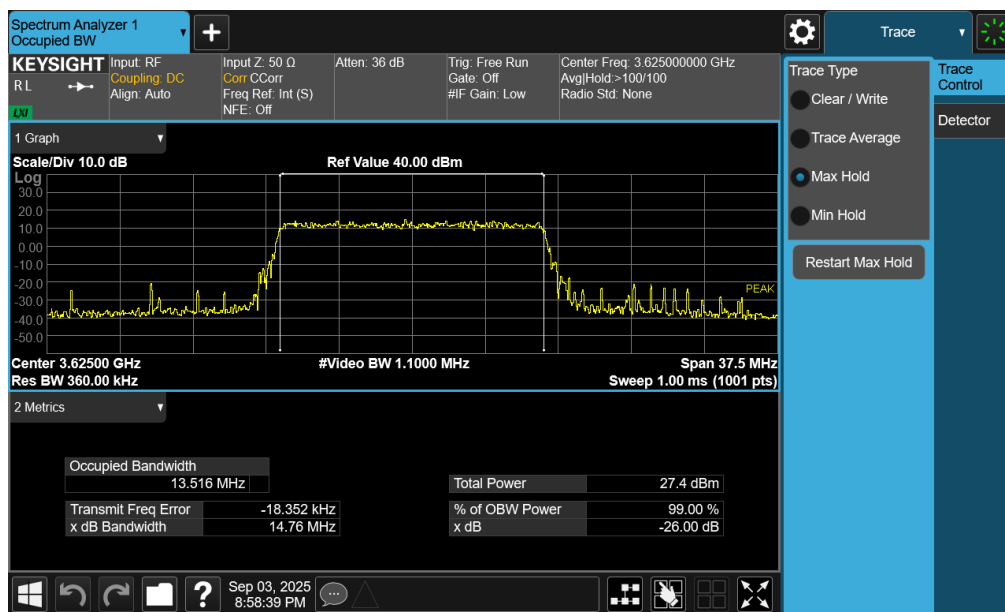


Plot 7-2. Occupied Bandwidth Plot (LTE Band 48 - 20MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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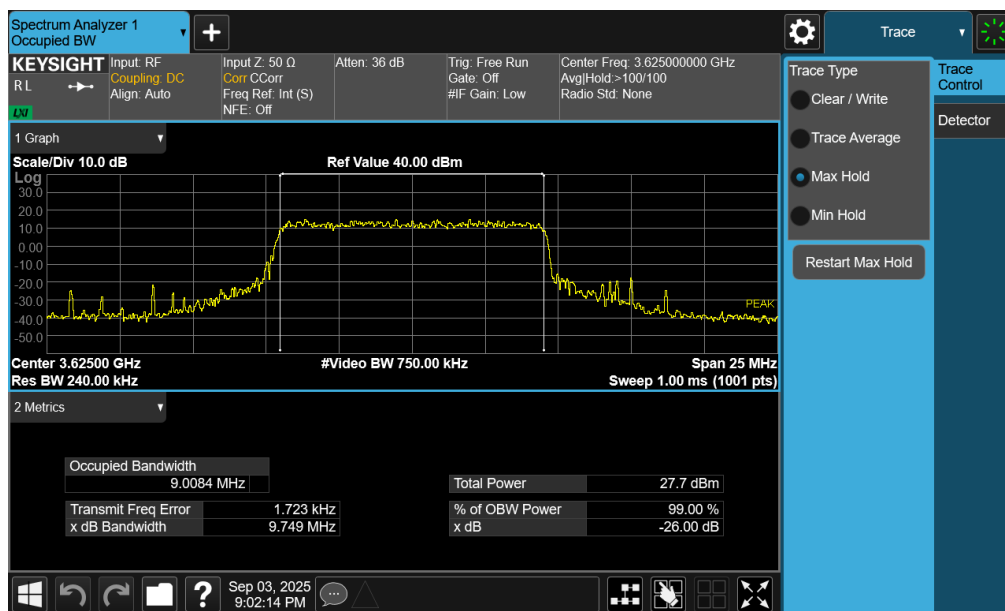


Plot 7-3. Occupied Bandwidth Plot (LTE Band 48 - 15MHz QPSK - Full RB Configuration - Ant F)

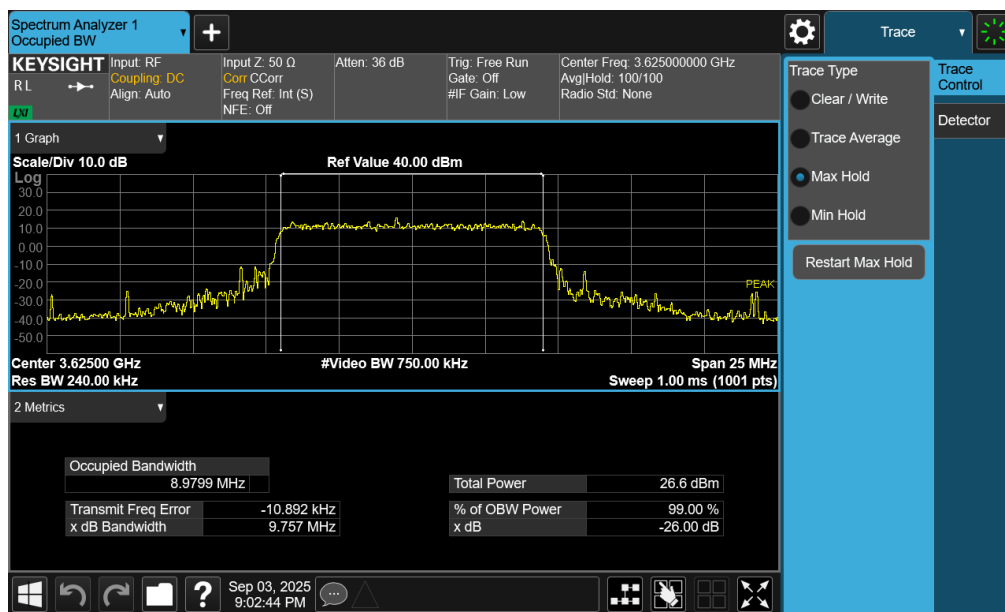


Plot 7-4. Occupied Bandwidth Plot (LTE Band 48 - 15MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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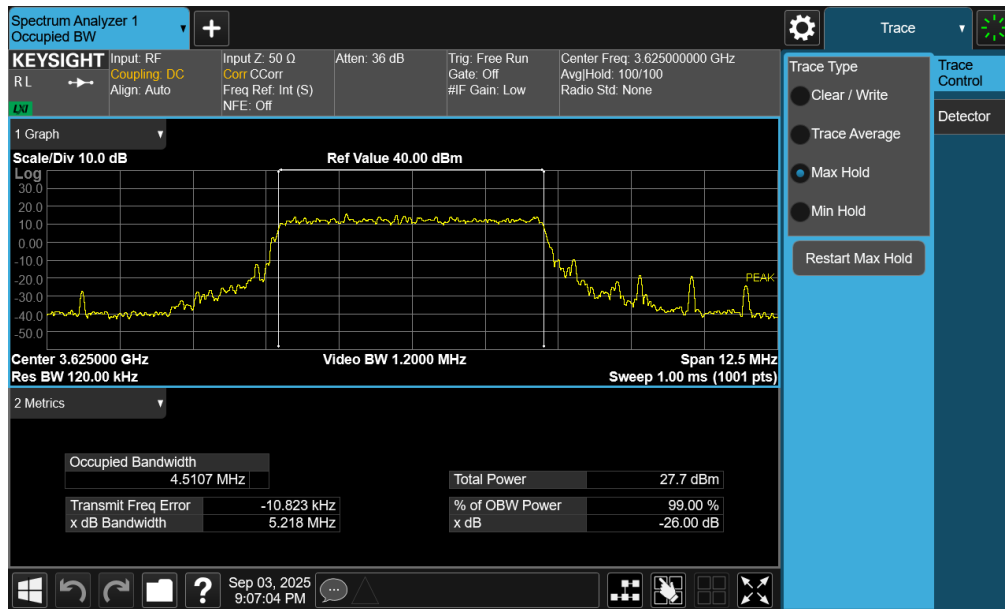


Plot 7-5. Occupied Bandwidth Plot (LTE Band 48 - 10MHz QPSK - Full RB Configuration - Ant F)

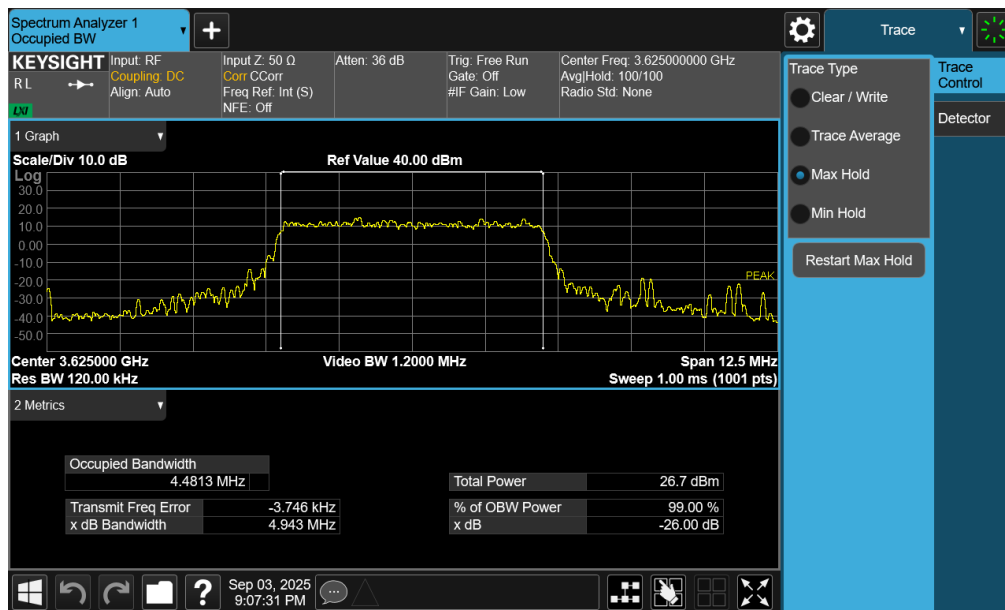


Plot 7-6. Occupied Bandwidth Plot (LTE Band 48 - 10MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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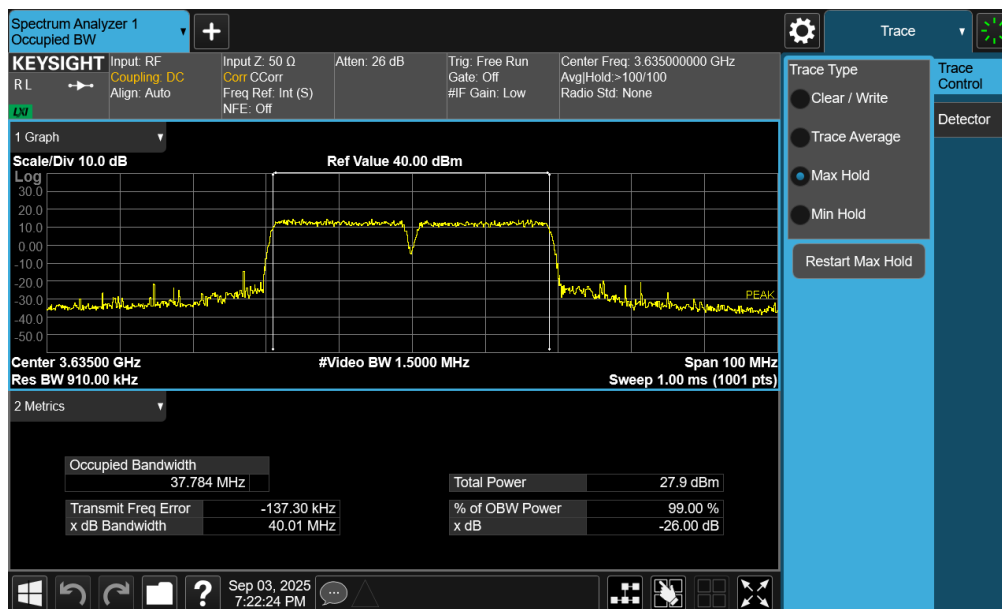
Plot 7-7. Occupied Bandwidth Plot (LTE Band 48 - 5MHz QPSK - Full RB Configuration - Ant F)



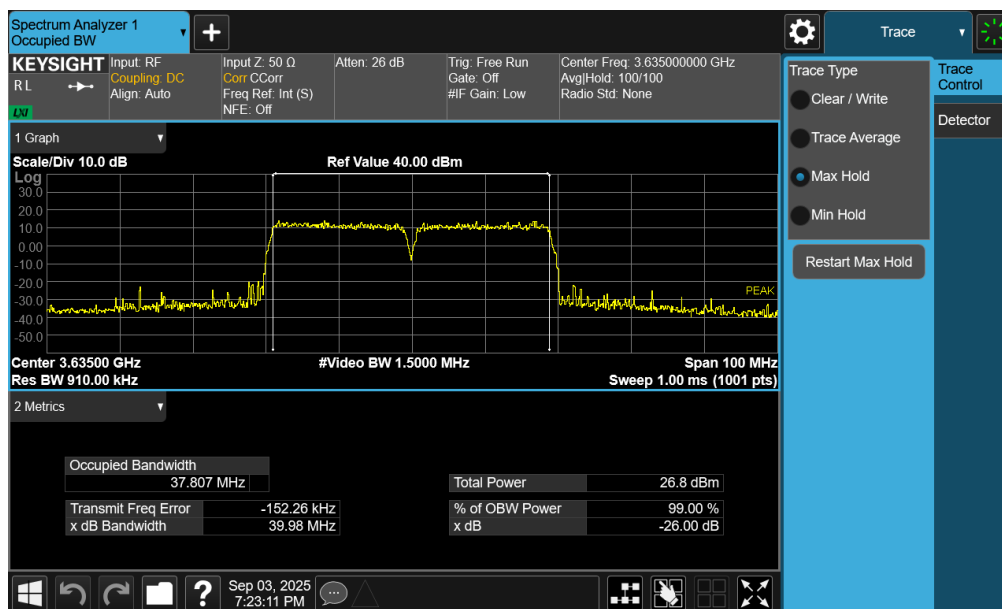
Plot 7-8. Occupied Bandwidth Plot (LTE Band 48 - 5MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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ULCA LTE Band 48 – Ant F

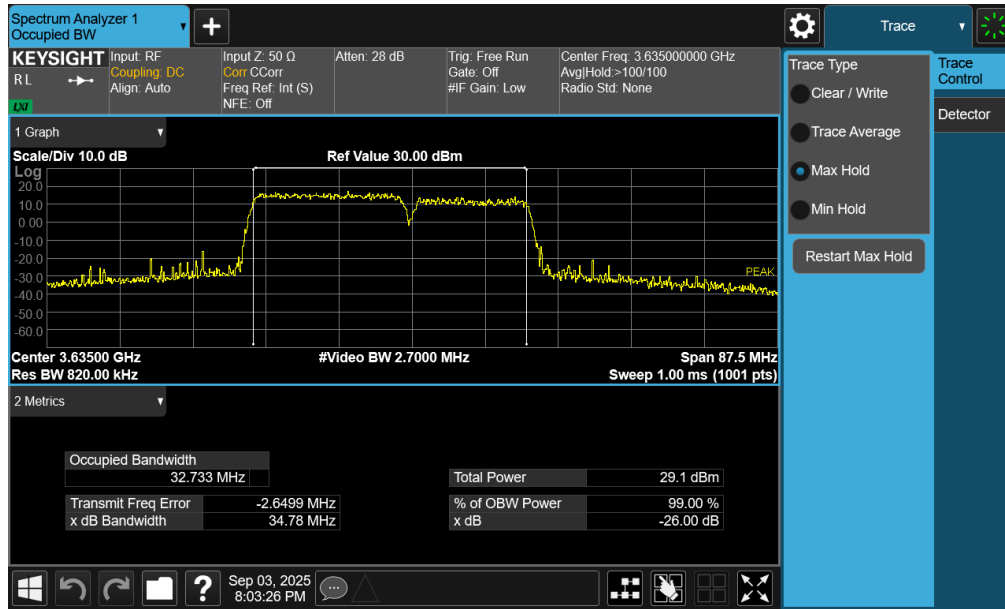


Plot 7-9. Occupied Bandwidth Plot (ULCA LB48 - 20+20MHz QPSK - Full RB Configuration - Ant F)

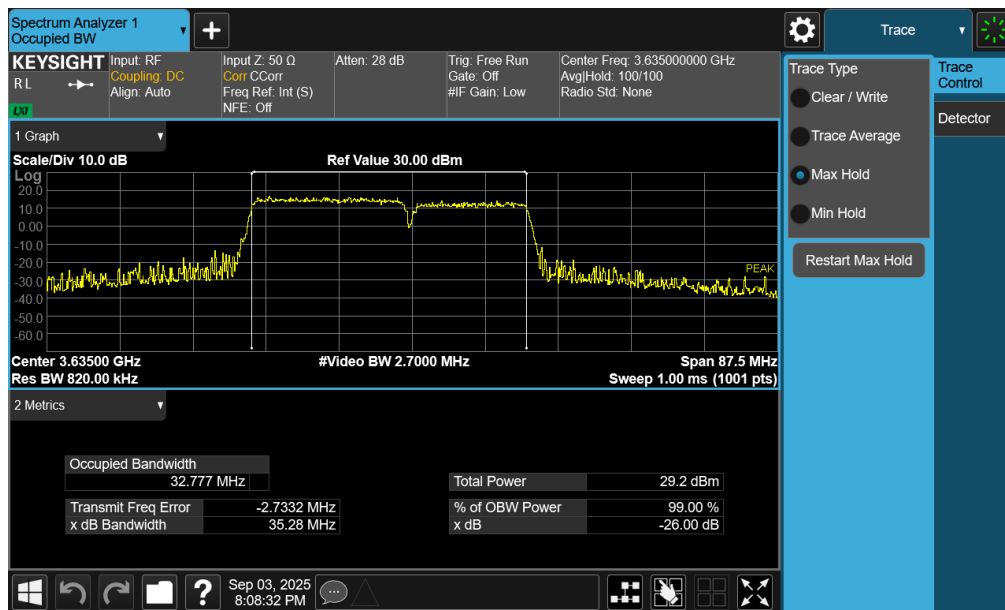


Plot 7-10. Occupied Bandwidth Plot (ULCA LB48 - 20+20MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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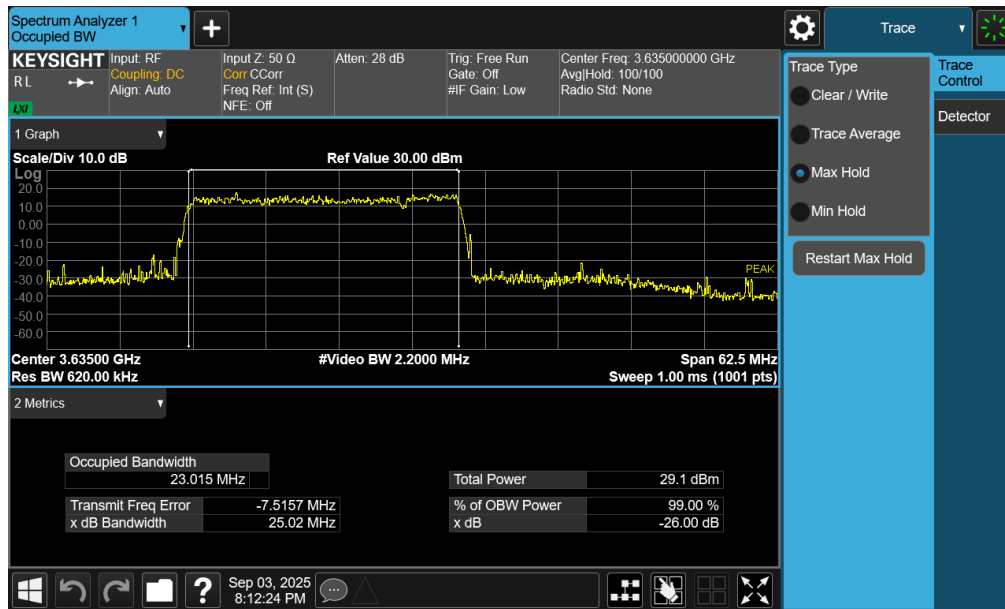


Plot 7-11. Occupied Bandwidth Plot (ULCA LB48 - 20+15MHz QPSK - Full RB Configuration - Ant F)

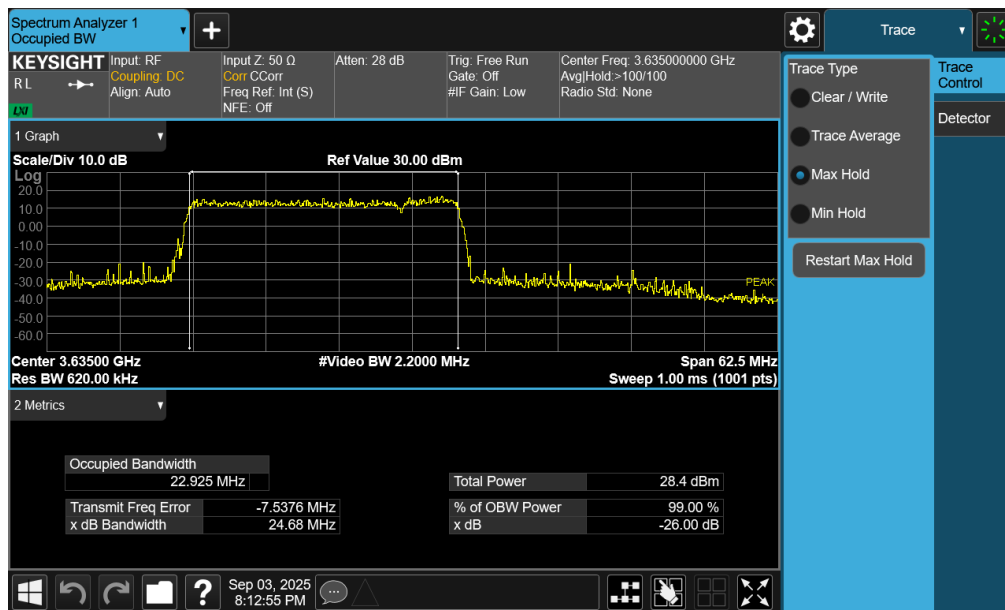


Plot 7-12. Occupied Bandwidth Plot (ULCA LB48 - 20+15MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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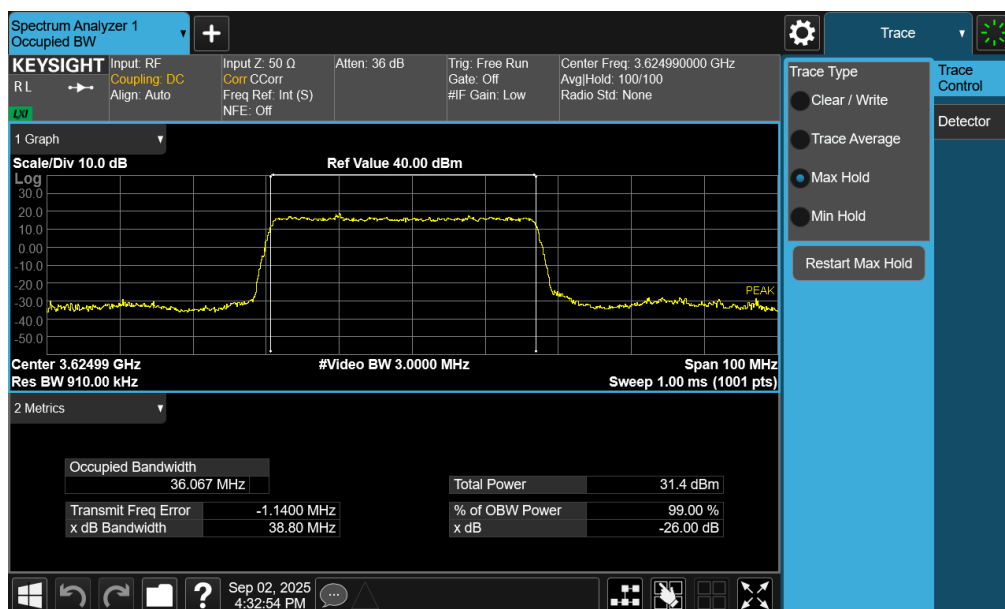
Plot 7-15. Occupied Bandwidth Plot (ULCA LB48 - 20+5MHz QPSK - Full RB Configuration - Ant F)



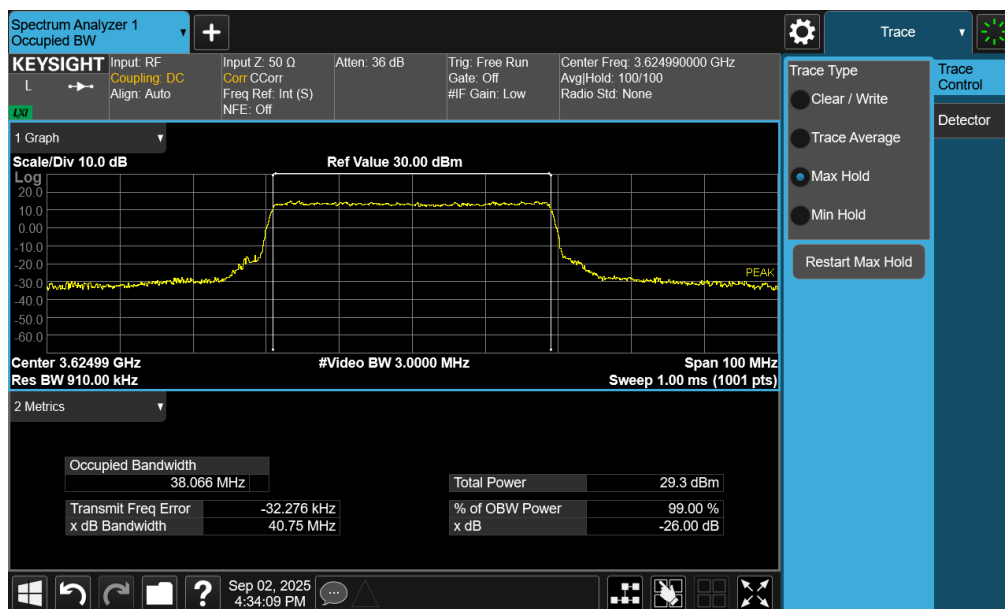
Plot 7-16. Occupied Bandwidth Plot (ULCA LB48 - 20+5MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n48 – Ant F

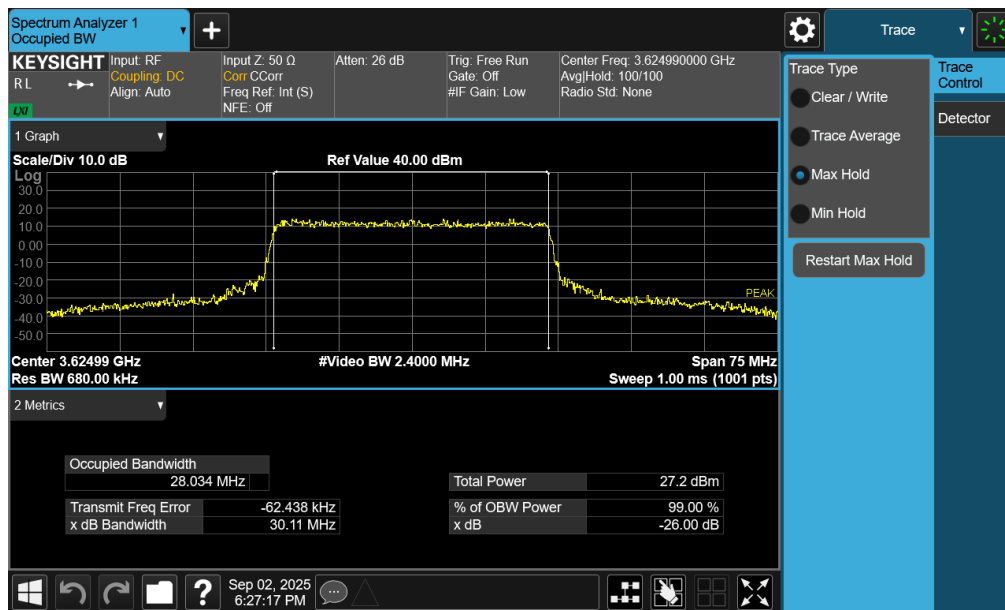


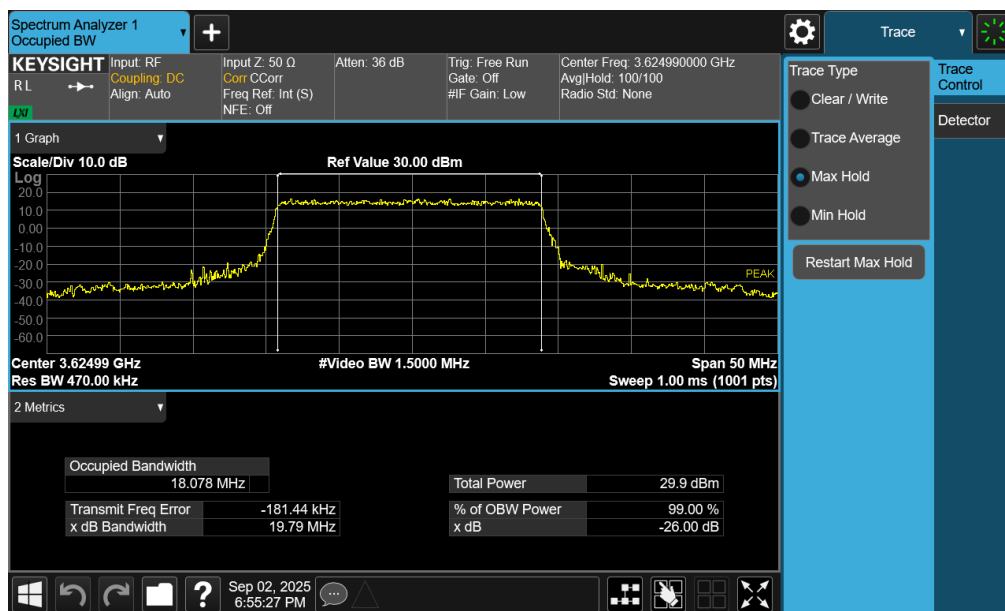
Plot 7-17. Occupied Bandwidth Plot (NR Band n48 - 40MHz $\pi/2$ BPSK - Full RB Configuration - Ant F)



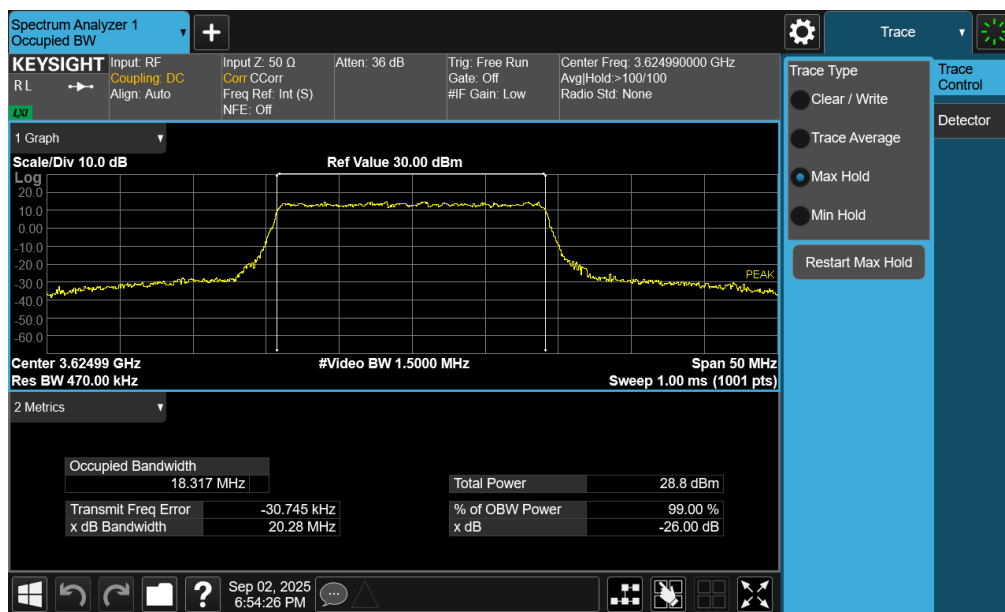
Plot 7-18. Occupied Bandwidth Plot (NR Band n48 - 40MHz QPSK - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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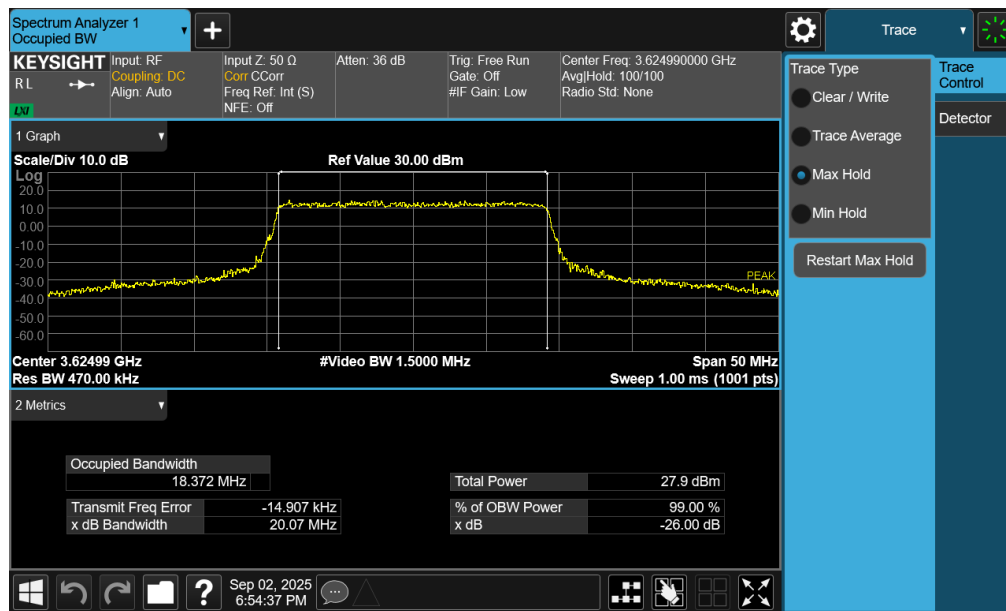


Plot 7-23. Occupied Bandwidth Plot (NR Band n48 - 20MHz $\pi/2$ BPSK - Full RB Configuration - Ant F)

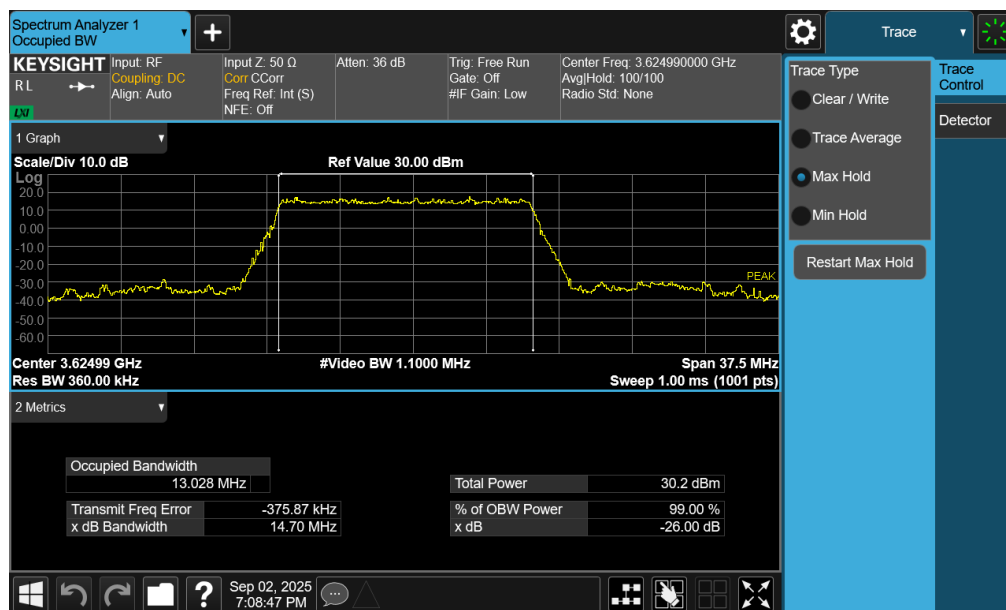


Plot 7-24. Occupied Bandwidth Plot (NR Band n48 - 20MHz QPSK - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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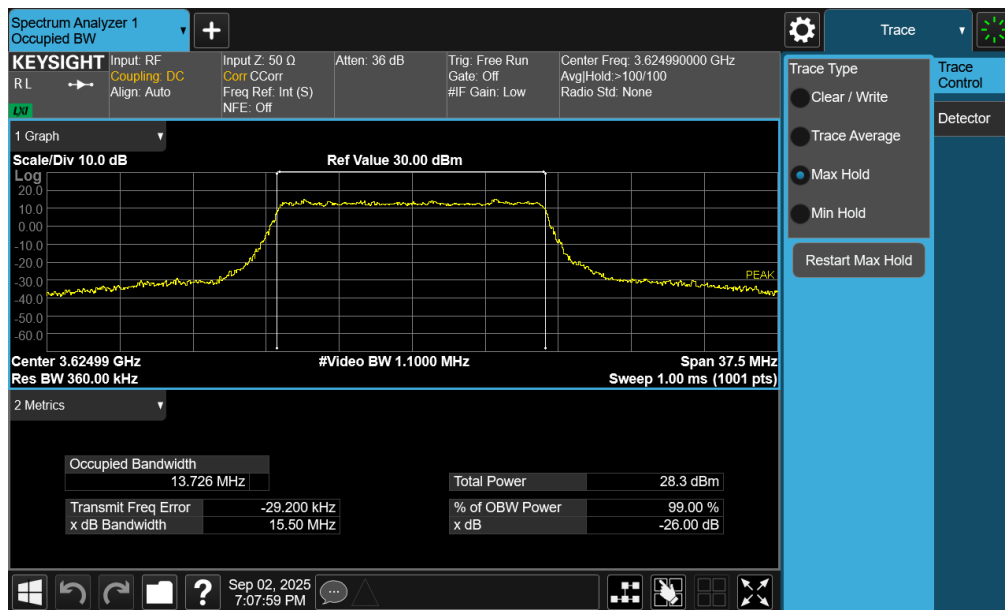
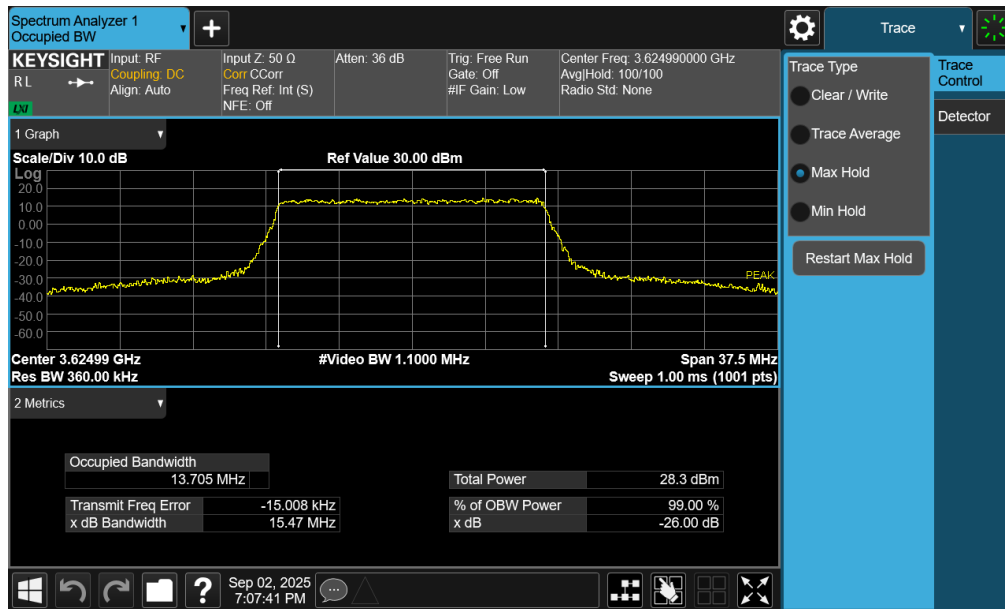


Plot 7-25. Occupied Bandwidth Plot (NR Band n48 - 20MHz 16-QAM - Full RB Configuration - Ant F)

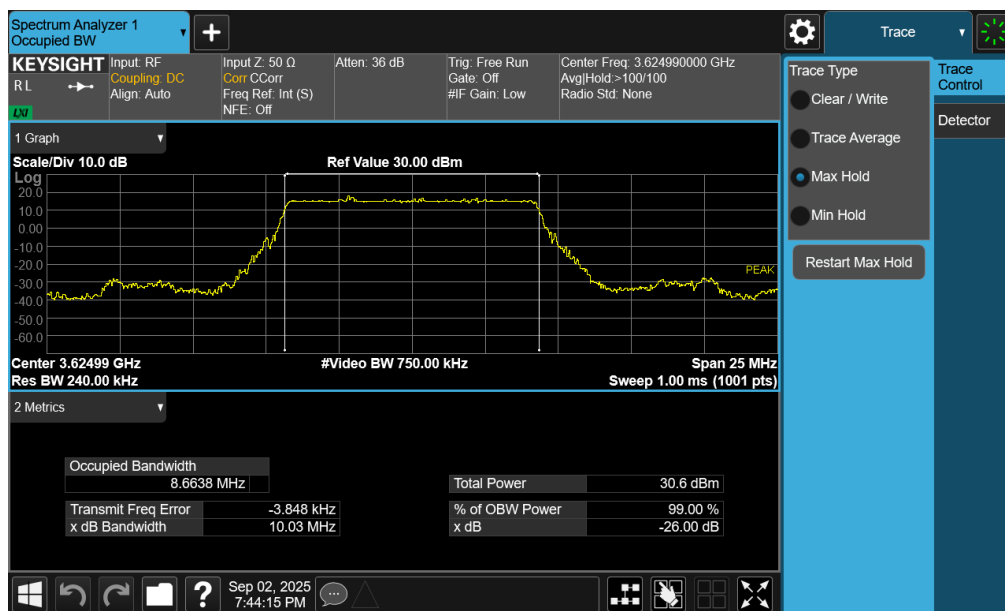


Plot 7-26. Occupied Bandwidth Plot (NR Band n48 - 15MHz $\pi/2$ BPSK - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 34 of 84



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Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 35 of 84



Plot 7-29. Occupied Bandwidth Plot (NR Band n48 - 10MHz $\pi/2$ BPSK - Full RB Configuration - Ant F)



Plot 7-30. Occupied Bandwidth Plot (NR Band n48 - 10MHz QPSK - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 36 of 84



Plot 7-31. Occupied Bandwidth Plot (NR Band n48 - 10MHz 16-QAM - Full RB Configuration - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 37 of 84

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 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.

The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

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 at least 10 * the fundamental frequency (separated into at least two plots per channel)
2. Detector = RMS
3. Trace mode = Max Hold
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.

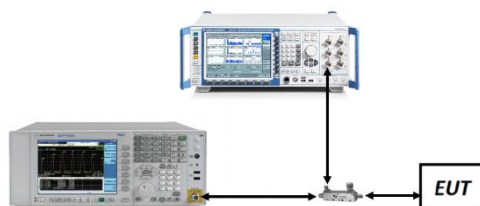


Figure 7-3. Test Instrument & Measurement Setup

Test Notes

1. 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.
3. Since, SRS-1 (Antenna F) has the highest target power, only Antenna F CSE is reported for the overall n48 worst case.

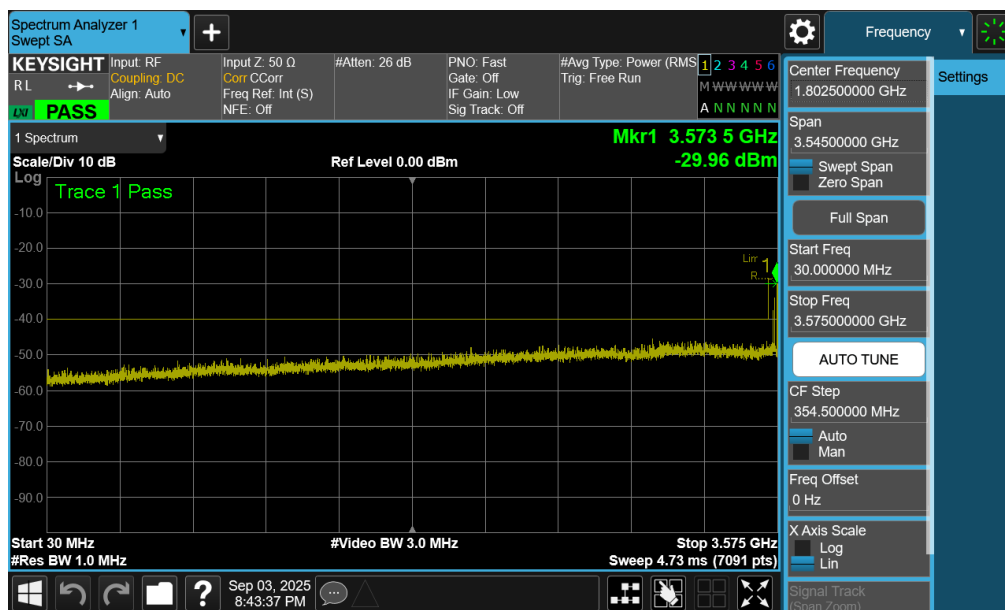
FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 38 of 84

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B48	20MHz	Low	30.0 - 3510.0	-44.29	-40	-4.28
		Low	3610.0 - 15000.0	-45.93	-40	-5.93
		Low	15000.0 - 27000.0	-51.89	-40	-11.89
		Low	27000.0 - 40000.0	-50.27	-40	-10.27
		Mid	30.0 - 3575.0	-29.96	-25	-4.96
		Mid	3675.0 - 15000.0	-41.12	-38	-3.22
		Mid	15000.0 - 27000.0	-52.09	-40	-12.09
		Mid	27000.0 - 40000.0	-45.11	-40	-5.11
		High	30.0 - 3640.0	-33.40	-25	-8.40
		High	3740.0 - 15000.0	-43.86	-40	-3.85
		High	15000.0 - 27000.0	-51.43	-40	-11.42
		High	27000.0 - 40000.0	-46.91	-40	-6.91
ULCA LTE-B48	20+20MHz	Low	30.0 - 3510.0	-47.69	-40	-7.69
		Low	3540.0 - 3630.0	-43.11	-40	-3.11
		Low	15000.0 - 27000.0	-55.77	-40	-15.77
		Low	27000.0 - 40000.0	-50.37	-40	-10.37
		Mid	30.0 - 3575.0	-50.30	-40	-10.30
		Mid	3675.0 - 15000.0	-43.51	-40	-3.51
		Mid	15000.0 - 27000.0	-52.41	-40	-12.41
		Mid	27000.0 - 40000.0	-46.48	-40	-6.48
		High	30.0 - 3640.0	-44.84	-40	-4.84
		High	3740.0 - 15000.0	-43.53	-40	-3.53
		High	15000.0 - 27000.0	-52.10	-40	-12.10
		High	27000.0 - 40000.0	-46.75	-40	-6.75
NR-n48	40MHz	Low	30.0 - 3510.0	-49.57	-40	-9.57
		Low	3610.0 - 15000.0	-48.19	-40	-8.19
		Low	15000.0 - 27000.0	-52.29	-40	-12.29
		Low	27000.0 - 40000.0	-46.14	-40	-6.14
		Mid	30.0 - 3575.0	-45.46	-40	-5.46
		Mid	3675.0 - 15000.0	-44.44	-40	-4.44
		Mid	15000.0 - 27000.0	-52.14	-40	-12.14
		Mid	27000.0 - 40000.0	-45.84	-40	-5.84
		High	30.0 - 3640.0	-43.15	-40	-3.15
		High	3740.0 - 15000.0	-43.08	-40	-3.08
		High	15000.0 - 27000.0	-52.04	-40	-12.04
		High	27000.0 - 40000.0	-44.98	-40	-4.98

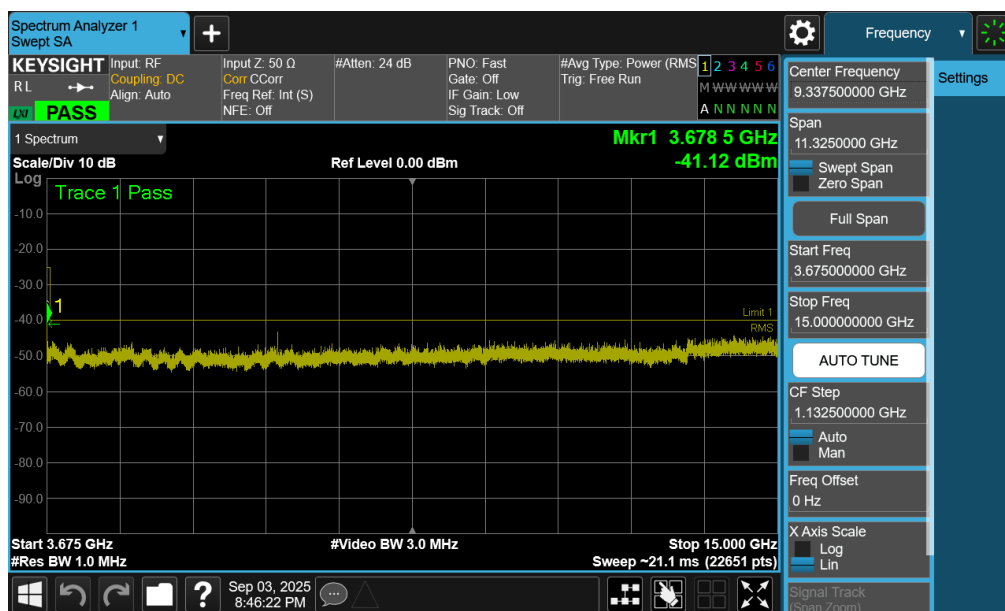
Table 7-10. Conducted Emission Test Results – Ant F

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 39 of 84

LTE Band 48 – Ant F

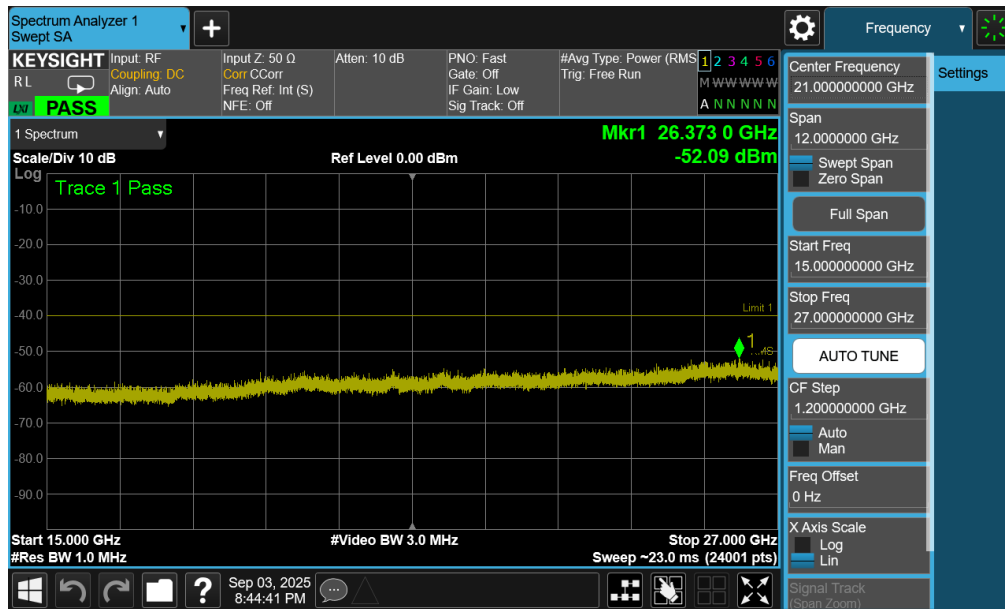


Plot 7-32. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - Mid Channel - Ant F)

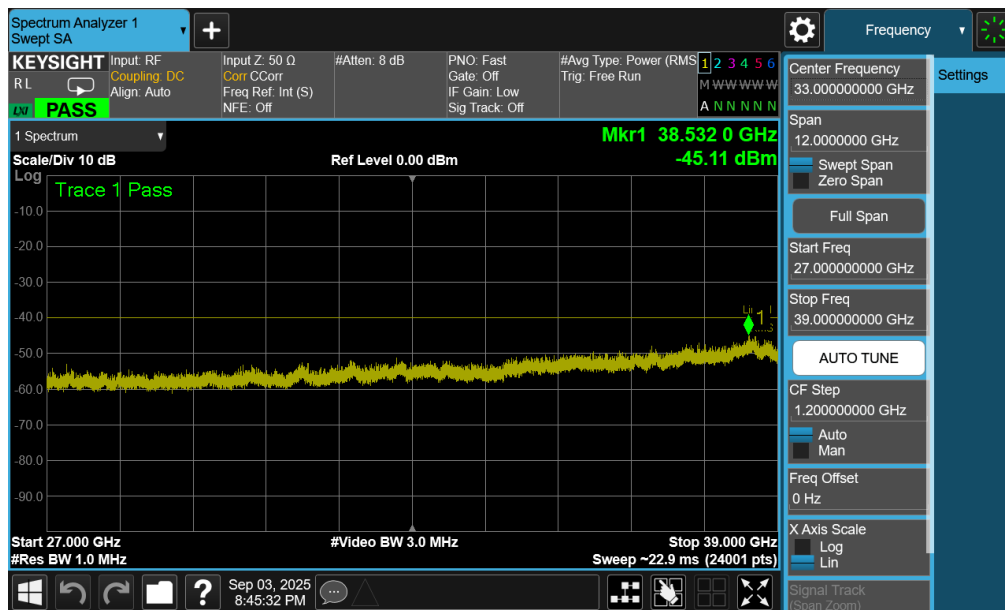


Plot 7-33. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - Mid Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 40 of 84



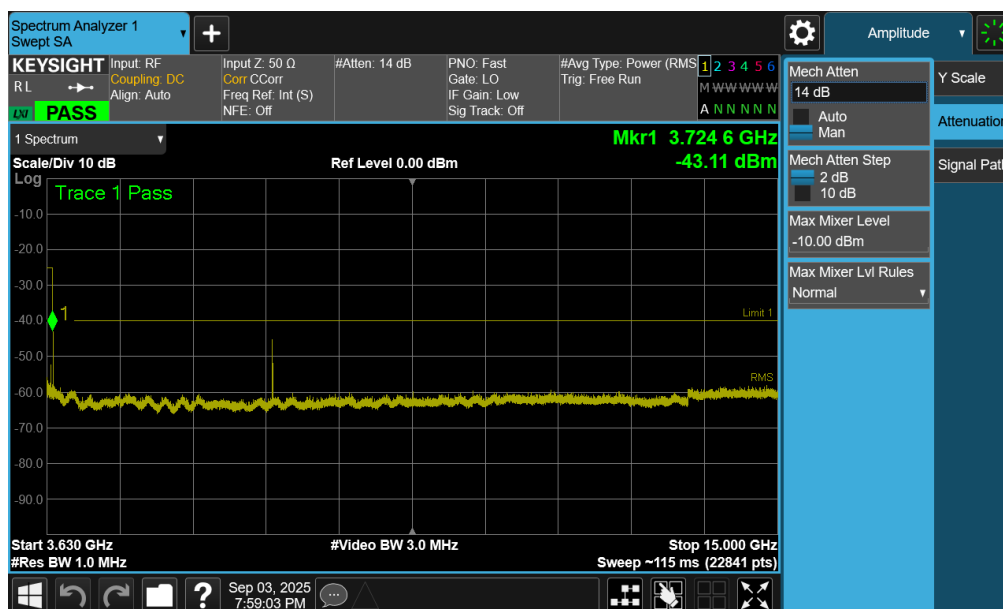
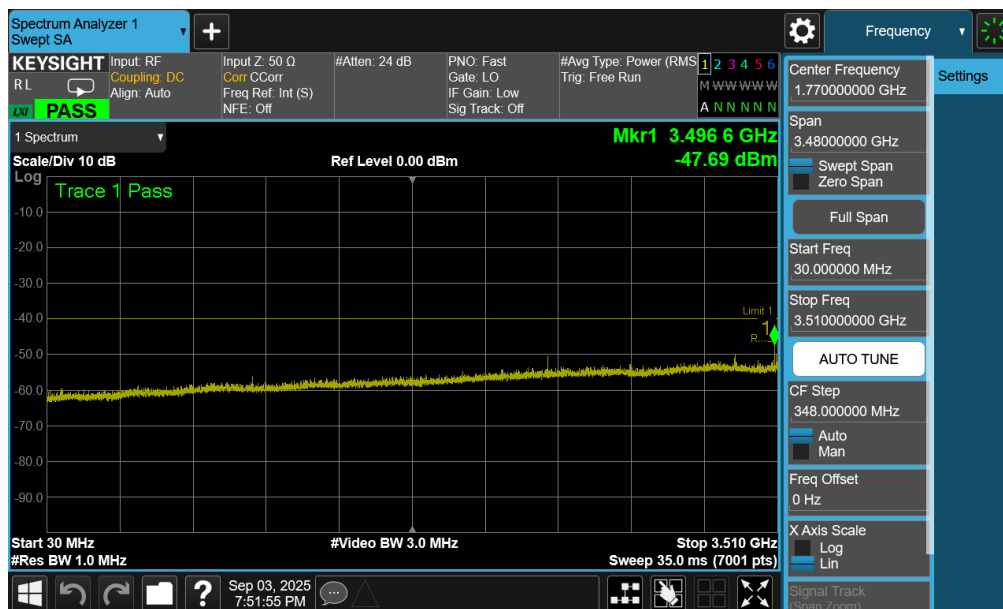
Plot 7-34. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - Mid Channel - Ant F)



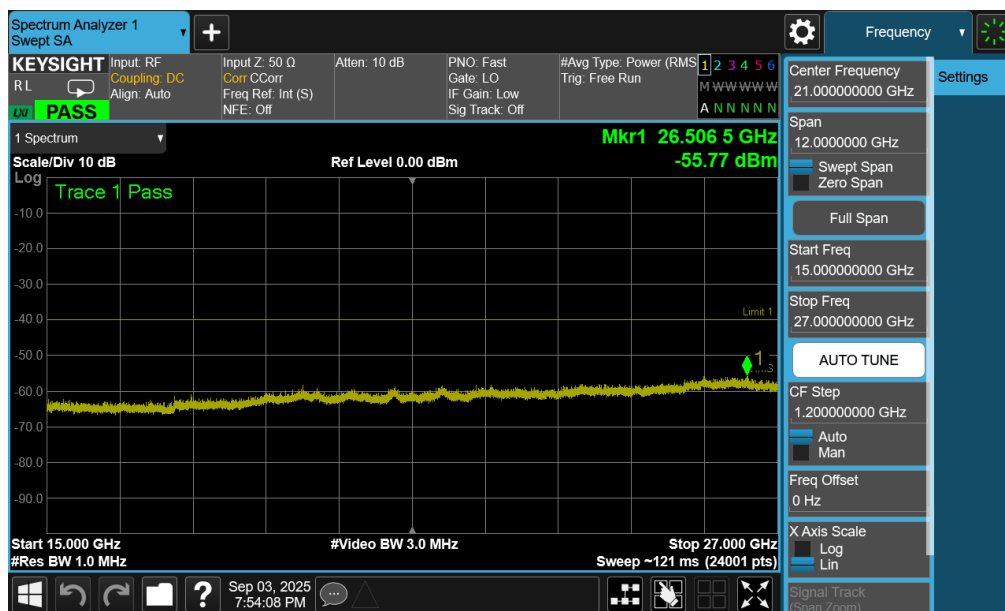
Plot 7-35. Conducted Spurious Plot (LTE Band 48 - 20MHz QPSK - Mid Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 41 of 84

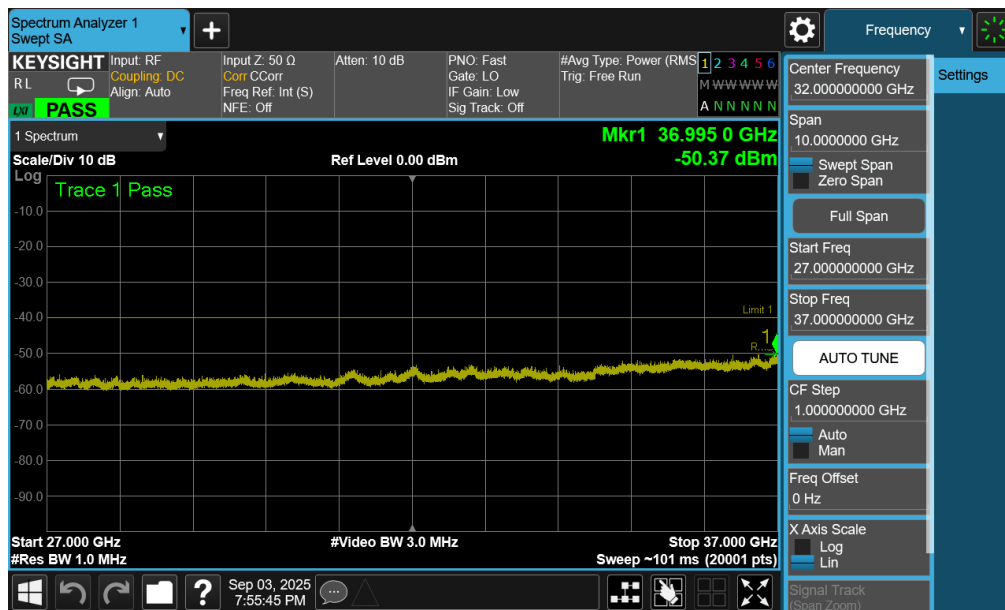
ULCA LB48 – Ant F



FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 42 of 84



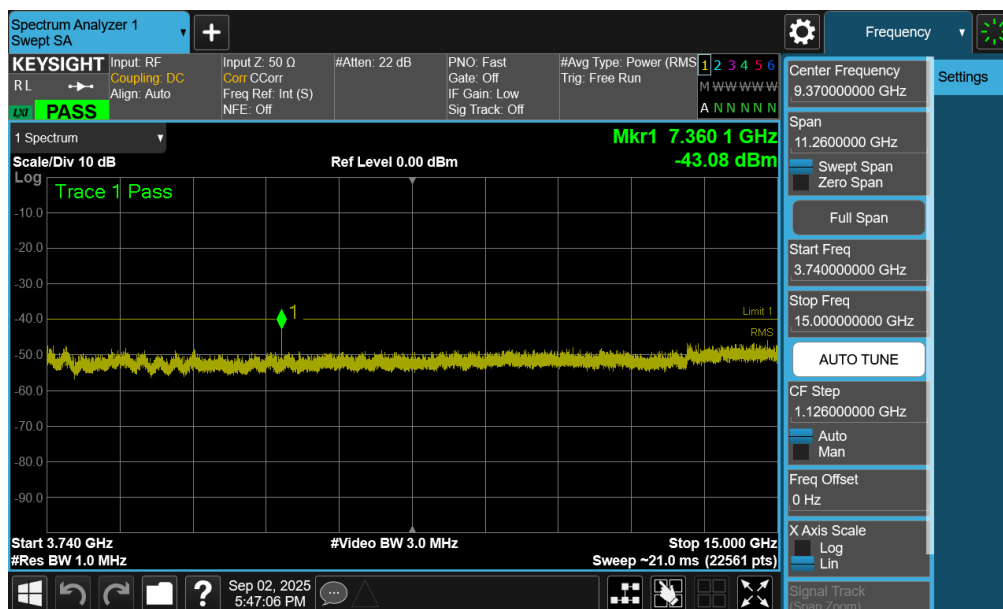
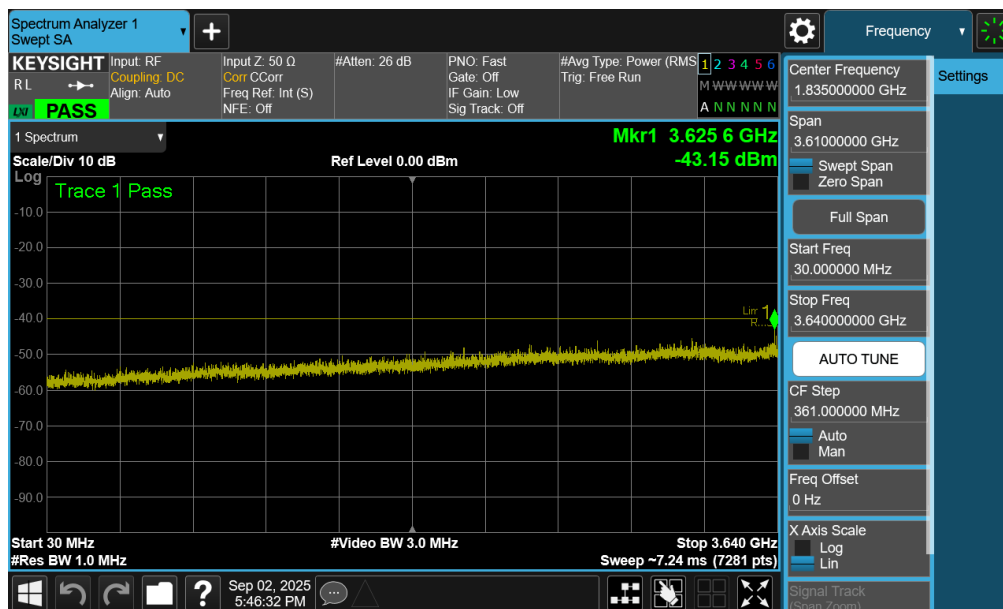
Plot 7-38. Conducted Spurious Plot (ULCA LB48 - 20+20MHz QPSK - Low Channel - Ant F)



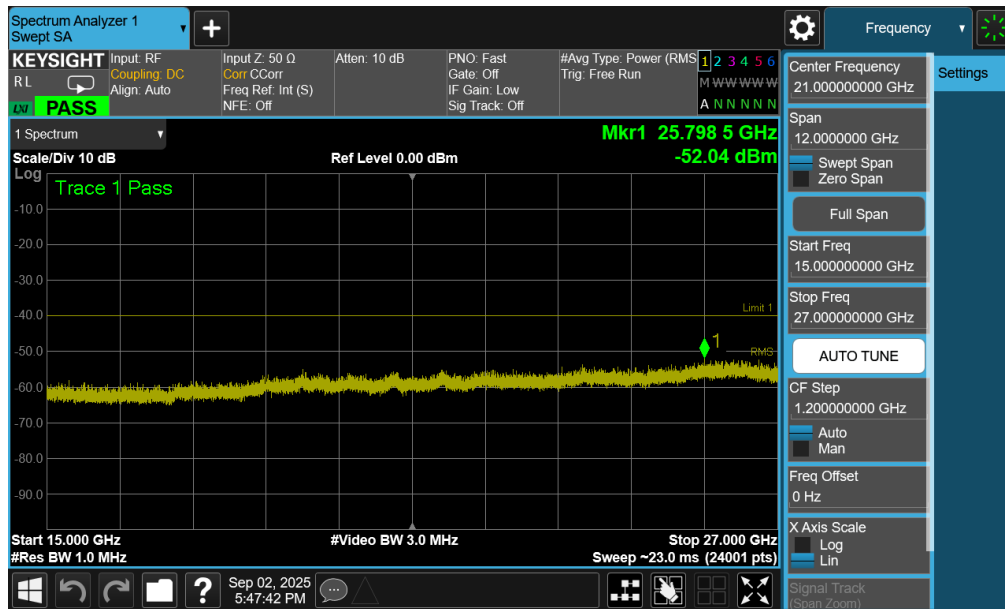
Plot 7-39. Conducted Spurious Plot (ULCA LB48 - 20+20MHz QPSK - Low Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 43 of 84

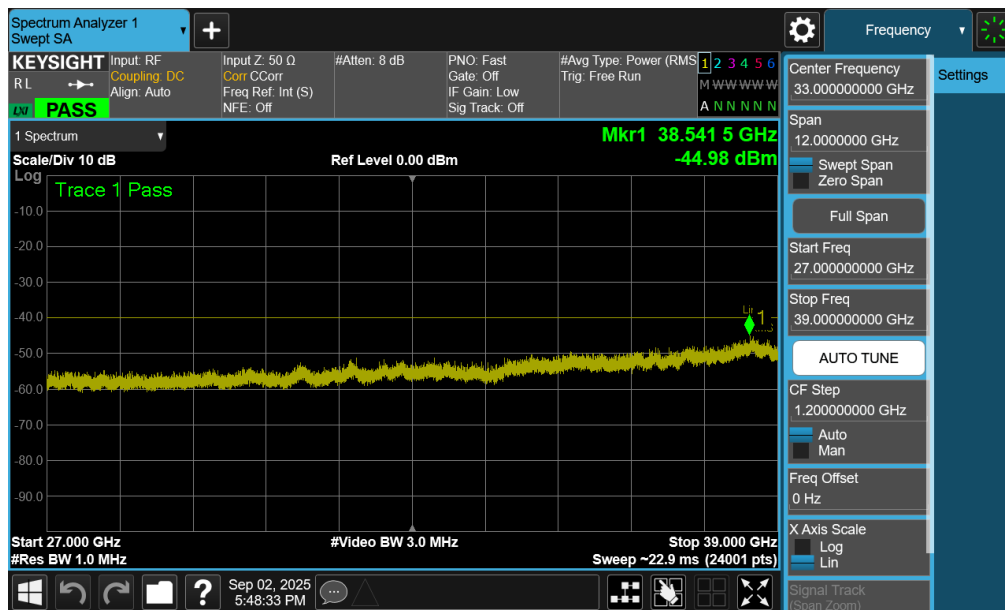
NR Band n48 – Ant F



FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 44 of 84



Plot 7-42. Conducted Spurious Plot (NR Band n48 - 40MHz QPSK - High Channel - Ant F)



Plot 7-43. Conducted Spurious Plot (NR Band n48 - 40MHz QPSK - High Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 45 of 84

7.5 Band Edge Emissions at Antenna Terminal

Test Overview

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

For an End User Device, the conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B MHz (where B is the bandwidth in MHz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B MHz below the lower CBSD-assigned channel edge. At all frequencies greater than B MHz above the upper CBSD assigned channel edge and less than B MHz below the lower CBSD-assigned channel edge, the conducted power of any end user device emission shall not exceed -25 dBm/MHz. The conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

Test Procedure Used

ANSI C63.26:2015 – Section 5.7.3

Test Settings

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

Test Setup

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

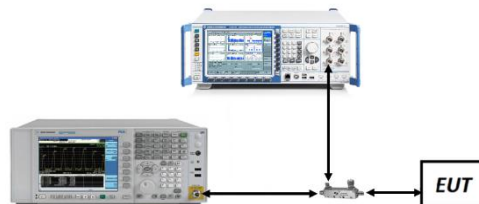


Figure 7-4. Test Instrument & Measurement Setup

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Test Notes

1. Per 96.41(e)(3)(i), compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's authorized frequency channel, a resolution bandwidth of no less than one percent of the fundamental emission bandwidth may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full reference bandwidth (i.e., 1 MHz or 1 percent of emission bandwidth, as specified). The fundamental emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
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.
3. Since, SRS-1 (Antenna F) has the highest target power, only Antenna F CBE is reported for the overall n48 worst case.

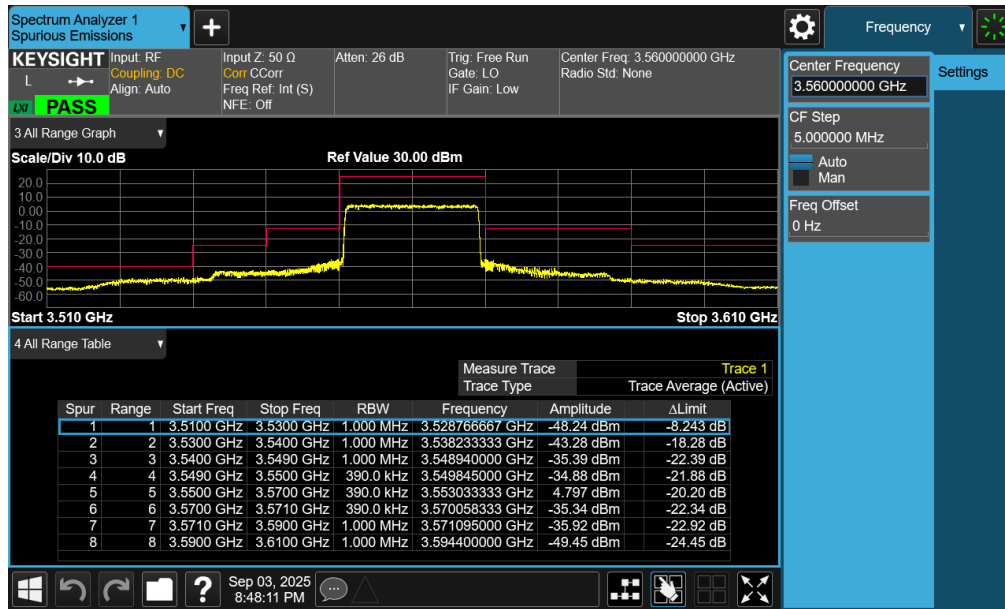
FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B48	20MHz	Low	Band Edge	-48.24	-40	-8.24
		Mid	Band Edge	-34.48	-13	-21.48
		High	Band Edge	-46.81	-40	-6.81
	15MHz	Low	Band Edge	-47.50	-40	-7.50
		Mid	Band Edge	-46.85	-25	-21.85
		High	Band Edge	-47.61	-40	-7.61
	10MHz	Low	Band Edge	-53.76	-40	-13.76
		Mid	Band Edge	-33.54	-13	-20.54
		High	Band Edge	-52.17	-40	-12.17
	5MHz	Low	Band Edge	-27.24	-13	-14.24
		Mid	Band Edge	-28.65	-13	-15.65
		High	Band Edge	-27.85	-13	-14.85
ULCA LTE-B48	20+20MHz	Low	Band Edge	-57.18	-40	-17.18
		Mid	Band Edge	-33.30	-13	-20.30
		High	Band Edge	-53.96	-40	-13.96
NR-n48	40MHz	Low	Band Edge	-45.88	-40	-5.88
		Mid	Band Edge	-35.21	-13	-22.21
		High	Band Edge	-42.69	-40	-2.69
	30MHz	Low	Band Edge	-46.14	-40	-6.14
		Mid	Band Edge	-33.22	-13	-20.22
		High	Band Edge	-42.37	-40	-2.37
	20MHz	Low	Band Edge	-51.24	-40	-11.24
		Mid	Band Edge	-34.70	-13	-21.70
		High	Band Edge	-49.92	-40	-9.92
	15MHz	Low	Band Edge	-53.20	-40	-13.20
		Mid	Band Edge	-33.90	-13	-20.90
		High	Band Edge	-50.09	-40	-10.09
	10MHz	Low	Band Edge	-55.66	-40	-15.66
		Mid	Band Edge	-31.06	-13	-18.06
		High	Band Edge	-55.67	-40	-15.67

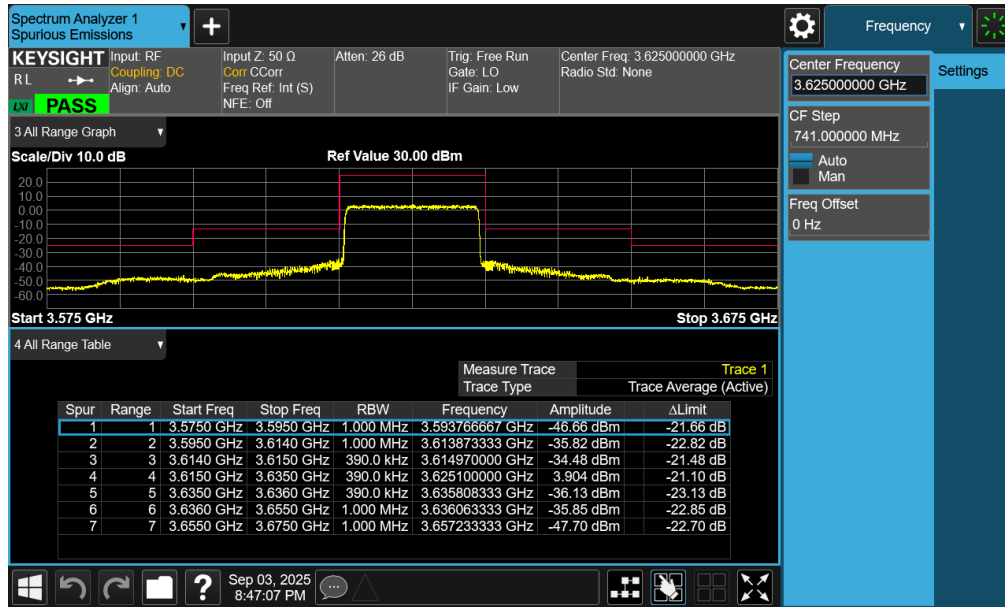
Table 7-11. Conducted Band Edge Test Results – Ant F

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 48 – Ant F

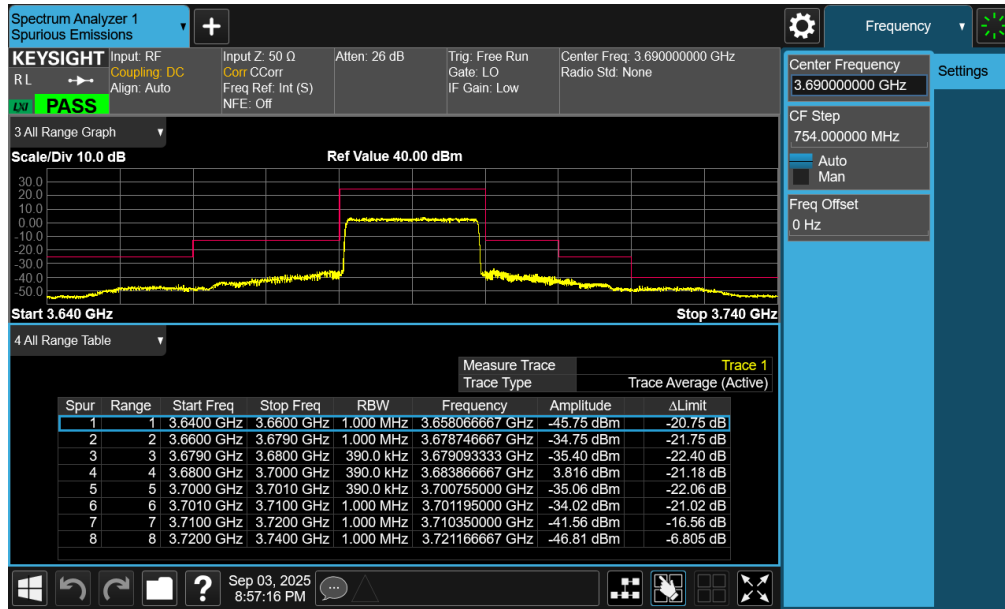


Plot 7-44. Channel Edge Plot (LTE Band 48 - 20MHz QPSK - Low Channel - Ant F)



Plot 7-45. Channel Edge Plot (LTE Band 48 - 20MHz QPSK - Mid Channel - Ant F)

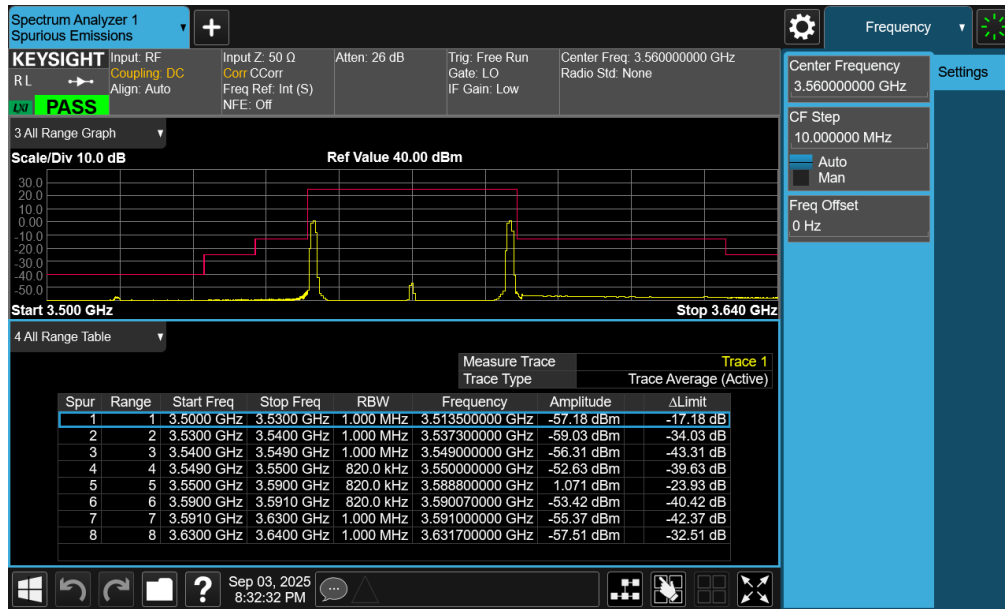
FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 49 of 84



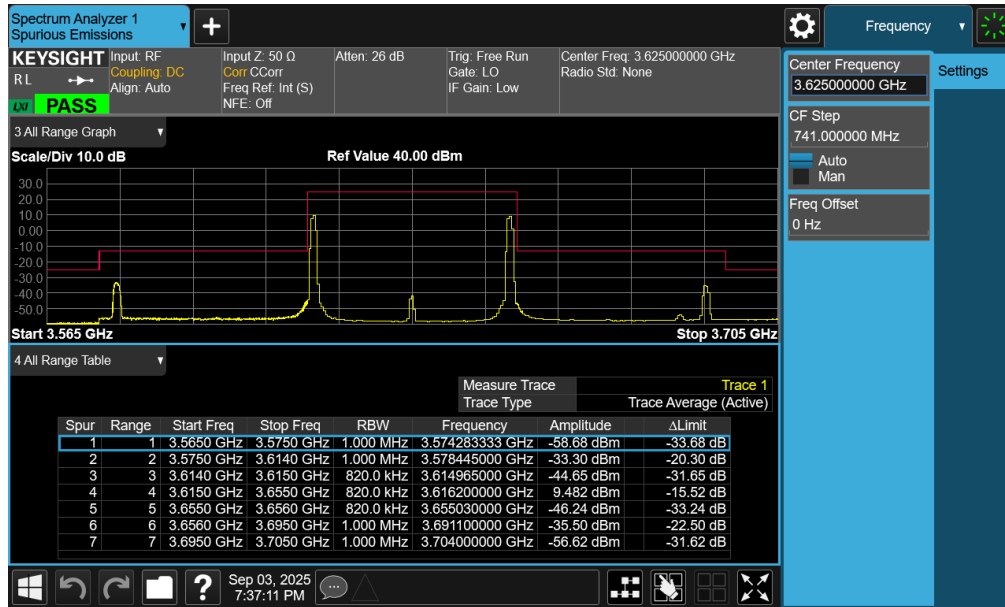
Plot 7-46. Channel Edge Plot (LTE Band 48 - 20MHz QPSK - High Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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ULCA LB48 – Ant F

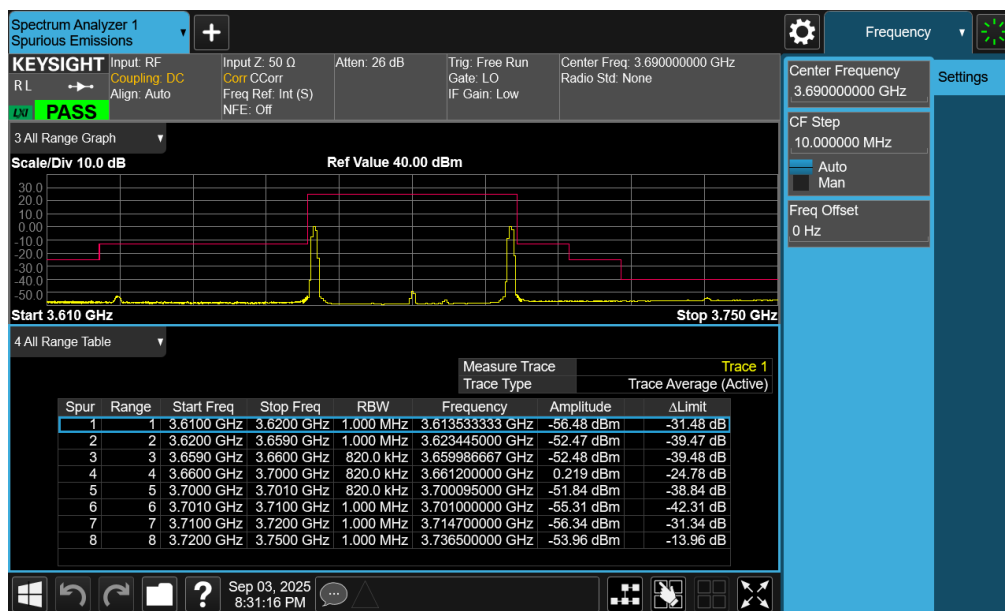


Plot 7-47. Channel Edge Plot (LTE Band 48 – 20+20MHz QPSK - Low Channel - Ant F)



Plot 7-48. Channel Edge Plot (LTE Band 48 – 20+20MHz QPSK - Mid Channel - Ant F)

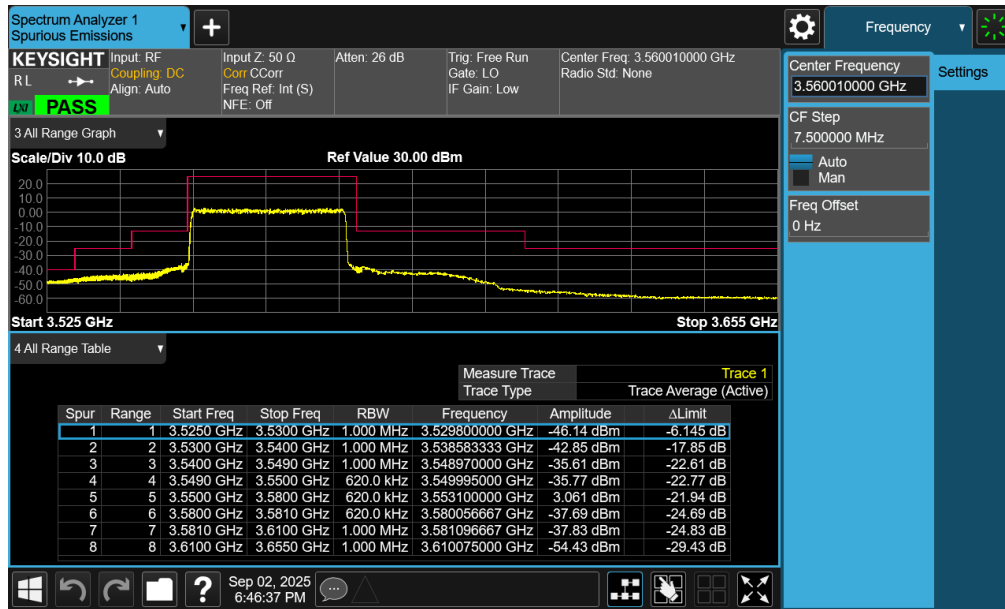
FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 51 of 84



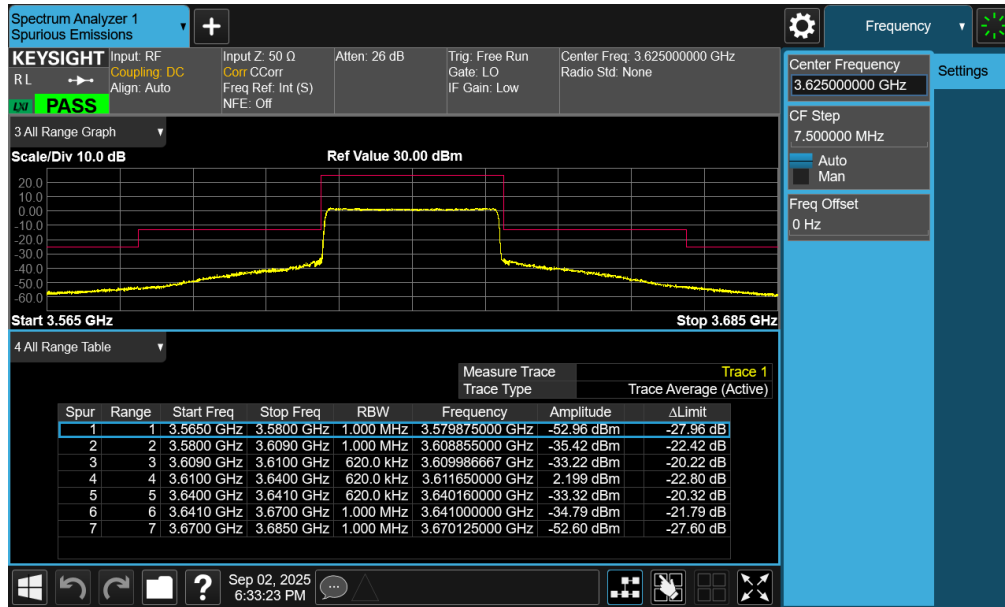
Plot 7-49. Channel Edge Plot (LTE Band 48 – 20+20MHz QPSK - High Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2508250078-13.A3L	Test Dates: 09/02/2025 - 10/10/2025	EUT Type: Portable Handset	Page 52 of 84

NR Band n48 – Ant F

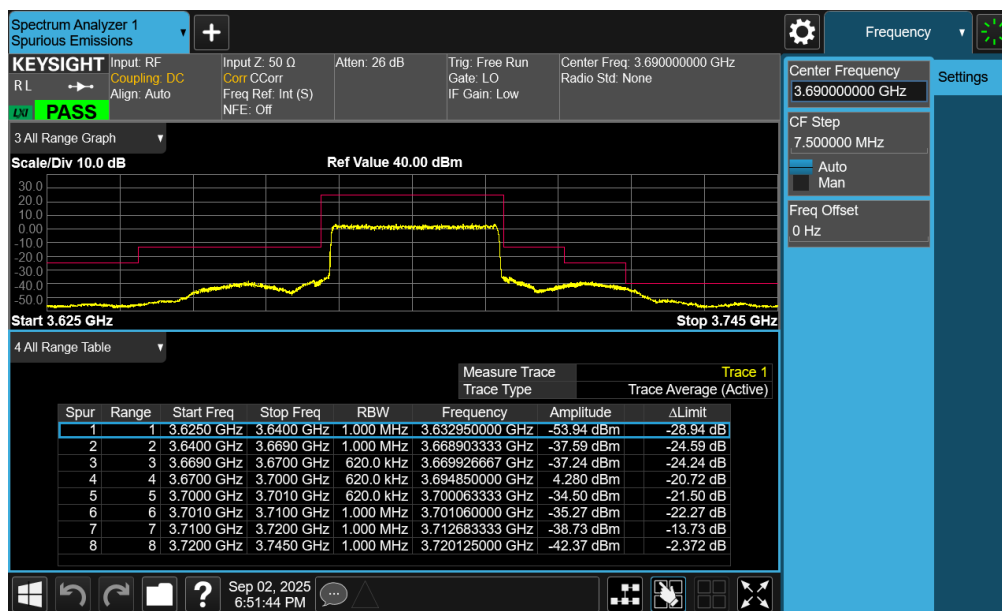


Plot 7-50. Channel Edge Plot (NR Band n48 - 30MHz CP-OFDM-QPSK - Low Channel - Ant F)



Plot 7-51. Channel Edge Plot (NR Band n48 - 30MHz DFT-s-OFDM-BPSK – Mid Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-52. Channel Edge Plot (NR Band n48 - 30MHz DFT-s-OFDM-BPSK - High Channel - Ant F)

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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7.6 Radiated Power (EIRP)

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26:2015 with the EUT transmitting into an integral antenna. Measurements are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26:2015 – Section 5.2.4.4

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration.
8. The integration bandwidth was set equal to 10MHz. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize.

FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Test Setup

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

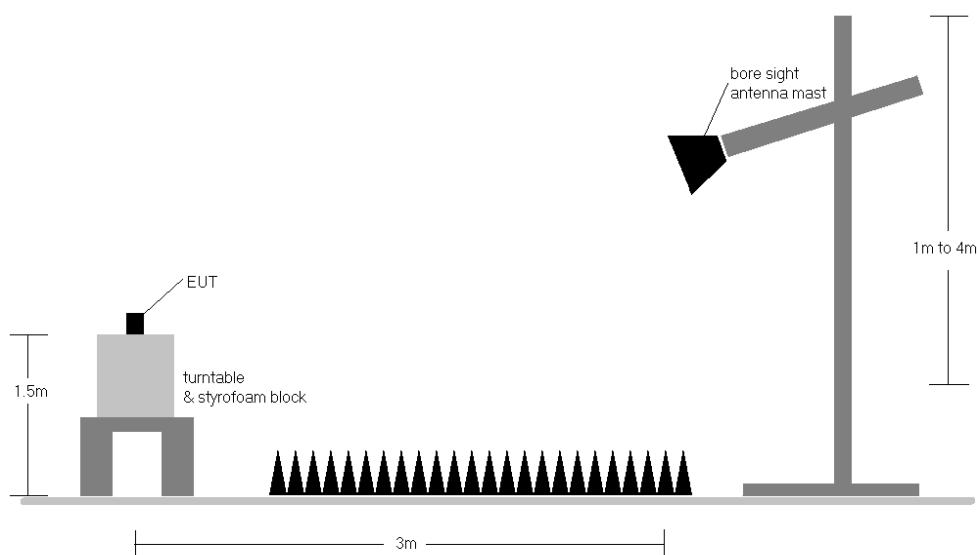


Figure 7-5. Radiated Test Setup >1GHz

Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) 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.
- 4) The worst case EIRP shown in this section is found with LTE operating only using 1RB. As such, the EIRP/10MHz and full channel EIRP values will be identical since 1RB is fully contained within all available channel bandwidths for LTE Band 48 (i.e. 5, 10, 15, 20MHz).
- 5) Since, SRS-1 (Antenna F) has the highest target power, only Antenna F EIRP is reported for the overall n48 worst case.

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm/10MHz]	EIRP [Watts/10MHz]	EIRP Limit [dBm/10MHz]	Margin [dB]
20 MHz	QPSK	3560.00	H	163	335	6.51	1 / 99	13.15	19.66	0.093	23.00	-3.34
	QPSK	3625.00	H	179	336	6.70	1 / 99	13.79	20.49	0.112	23.00	-2.51
	QPSK	3690.00	H	162	330	6.86	1 / 50	14.14	21.00	0.126	23.00	-2.00
	16-QAM	3690.00	H	162	330	6.86	1 / 50	13.14	20.00	0.100	23.00	-3.00
15 MHz	QPSK	3557.50	H	163	335	6.51	1 / 36	12.96	19.46	0.088	23.00	-3.54
	QPSK	3625.00	H	179	336	6.70	1 / 19	13.77	20.47	0.111	23.00	-2.53
	QPSK	3692.50	H	162	330	6.86	1 / 19	14.05	20.91	0.123	23.00	-2.09
	16-QAM	3692.50	H	162	330	6.86	1 / 19	12.77	19.63	0.092	23.00	-3.37
10 MHz	QPSK	3555.00	H	163	335	6.50	1 / 1	13.19	19.69	0.093	23.00	-3.31
	QPSK	3625.00	H	179	336	6.70	1 / 12	13.84	20.54	0.113	23.00	-2.46
	QPSK	3695.00	H	162	330	6.86	1 / 12	13.98	20.85	0.122	23.00	-2.15
	16-QAM	3695.00	H	162	330	6.86	1 / 12	12.86	19.73	0.094	23.00	-3.27
5 MHz	QPSK	3552.50	H	163	335	6.50	1 / 5	13.09	19.58	0.091	23.00	-3.42
	QPSK	3625.00	H	179	336	6.70	1 / 5	13.79	20.49	0.112	23.00	-2.51
	QPSK	3697.50	H	162	330	6.87	1 / 1	14.05	20.92	0.124	23.00	-2.08
	16-QAM	3697.50	H	162	330	6.87	1 / 9	12.76	19.63	0.092	23.00	-3.37
20 MHz	QPSK (Opposite Pol.)	3690.00	V	355	358	6.68	1 / 99	12.14	18.82	0.076	23.00	-4.18
	QPSK (WCP)	3690.00	H	215	336	6.86	1 / 99	11.77	18.63	0.073	23.00	-4.37

Table 7-12. EIRP Data (LTE Band 48 – Ant F)

Bandwidth	Modulation	PCC			SCC			Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degrees]	Ant. Gain [dBi]	Substitute Level [dBm]	EIRP [dBm/10MHz]	EIRP [Watts/10MHz]	EIRP Limit [dBm/10MHz]	Margin [dB]
		Bandwidth [MHz]	Frequency [MHz]	RB / Offset	Bandwidth [MHz]	Frequency [MHz]	RB / Offset									
40 MHz	QPSK	20	3560.0	1 / 99	20	3579.8	1 / 0	H	169	331	6.51	13.19	19.70	0.093	23.00	-3.30
		20	3625.0	1 / 99	20	3644.8	1 / 0	H	179	330	6.70	13.87	20.57	0.114	23.00	-2.43
		20	3690.0	1 / 0	20	3670.2	1 / 99	H	172	325	6.86	14.32	21.18	0.131	23.00	-1.82
	16-QAM	20	3690.0	1 / 0	20	3670.2	1 / 99	H	172	325	6.86	13.28	20.14	0.103	23.00	-2.86
35 MHz	QPSK	20	3557.5	1 / 99	15	3577.1	1 / 0	H	169	331	6.51	13.12	19.62	0.092	23.00	-3.38
		20	3625.0	1 / 99	15	3642.1	1 / 0	H	179	330	6.70	14.12	20.82	0.121	23.00	-2.18
		20	3692.5	1 / 0	15	3672.9	1 / 74	H	172	325	6.86	13.93	20.79	0.120	23.00	-2.21
	16-QAM	20	3692.5	1 / 0	15	3672.9	1 / 74	H	172	325	6.86	13.81	20.67	0.117	23.00	-2.33
30 MHz	QPSK	20	3555.0	1 / 99	10	3574.4	1 / 0	H	169	331	6.50	12.92	19.42	0.088	23.00	-3.58
		20	3625.0	1 / 99	10	3639.4	1 / 0	H	179	330	6.70	13.97	20.67	0.117	23.00	-2.33
		20	3695.0	1 / 0	10	3678.3	1 / 49	H	172	325	6.86	14.60	21.47	0.140	23.00	-1.53
	16-QAM	20	3695.0	1 / 0	10	3678.3	1 / 49	H	172	325	6.86	13.85	20.72	0.118	23.00	-2.28
25 MHz	QPSK	20	3552.5	1 / 99	5	3571.7	1 / 0	H	169	331	6.50	13.27	19.76	0.095	23.00	-3.24
		20	3625.0	1 / 99	5	3636.7	1 / 0	H	179	330	6.70	12.44	19.14	0.082	23.00	-3.86
		20	3697.5	1 / 0	5	3678.3	1 / 24	H	172	325	6.87	14.71	21.58	0.144	23.00	-1.42
	16-QAM	20	3697.5	1 / 0	5	3678.3	1 / 24	H	172	325	6.87	13.83	20.70	0.117	23.00	-2.30

Table 7-13. EIRP Data (ULCA LTE Band 48 – Ant F)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm/10MHz]	EIRP [Watts/10MHz]	EIRP Limit [dBm/10MHz]	Margin [dB]
40 MHz	$\pi/2$ BPSK	3570.00	H	159	337	6.53	1 / 104	13.05	19.58	0.091	23.00	-3.42
	$\pi/2$ BPSK	3625.00	H	156	335	6.70	1 / 53	13.49	20.19	0.104	23.00	-2.81
	$\pi/2$ BPSK	3680.00	H	172	331	6.84	1 / 53	14.02	20.86	0.122	23.00	-2.14
	QPSK	3570.00	H	159	337	6.53	1 / 104	13.12	19.65	0.092	23.00	-3.35
	QPSK	3625.00	H	156	335	6.70	1 / 53	13.21	19.91	0.098	23.00	-3.09
	QPSK	3680.00	H	172	331	6.84	1 / 53	13.78	20.62	0.115	23.00	-2.38
30 MHz	16-QAM	3680.00	H	172	331	6.84	1 / 53	12.84	19.68	0.093	23.00	-3.32
	$\pi/2$ BPSK	3565.00	H	159	337	6.52	75 / 0	12.65	19.17	0.083	23.00	-3.83
	$\pi/2$ BPSK	3625.00	H	156	335	6.70	1 / 39	13.61	20.31	0.107	23.00	-2.69
	$\pi/2$ BPSK	3685.00	H	172	331	6.85	1 / 39	13.85	20.70	0.117	23.00	-2.30
	QPSK	3565.00	H	159	337	6.52	1 / 39	12.96	19.48	0.089	23.00	-3.52
	QPSK	3625.00	H	156	335	6.70	1 / 39	13.06	19.76	0.095	23.00	-3.24
20 MHz	QPSK	3685.00	H	172	331	6.85	1 / 39	13.82	20.67	0.117	23.00	-2.33
	16-QAM	3685.00	H	172	331	6.85	1 / 39	12.77	19.62	0.092	23.00	-3.38
	$\pi/2$ BPSK	3560.00	H	159	337	6.51	1 / 1	13.02	19.54	0.090	23.00	-3.46
	$\pi/2$ BPSK	3625.00	H	156	335	6.70	1 / 1	13.59	20.28	0.107	23.00	-2.72
	$\pi/2$ BPSK	3690.00	H	172	331	6.86	1 / 1	13.90	20.75	0.119	23.00	-2.25
	QPSK	3560.00	H	159	337	6.51	1 / 1	13.42	19.93	0.098	23.00	-3.07
15 MHz	QPSK	3625.00	H	156	335	6.70	1 / 1	13.28	19.98	0.100	23.00	-3.02
	QPSK	3690.00	H	172	331	6.86	1 / 1	14.04	20.90	0.123	23.00	-2.10
	16-QAM	3690.00	H	172	331	6.86	1 / 1	13.33	20.18	0.104	23.00	-2.82
	$\pi/2$ BPSK	3557.50	H	159	337	6.51	1 / 1	12.94	19.44	0.088	23.00	-3.56
	$\pi/2$ BPSK	3625.00	H	156	335	6.70	1 / 19	13.70	20.40	0.110	23.00	-2.60
	$\pi/2$ BPSK	3692.50	H	172	331	6.86	1 / 19	13.91	20.77	0.119	23.00	-2.23
10 MHz	QPSK	3557.50	H	159	337	6.51	1 / 1	12.88	19.39	0.087	23.00	-3.61
	QPSK	3625.00	H	156	335	6.70	1 / 19	13.13	19.82	0.096	23.00	-3.18
	QPSK	3692.50	H	172	331	6.86	1 / 19	14.16	21.02	0.126	23.00	-1.98
	16-QAM	3692.50	H	172	331	6.86	1 / 19	13.98	20.84	0.121	23.00	-2.16
	$\pi/2$ BPSK	3555.00	H	159	337	6.50	1 / 1	13.06	19.56	0.090	23.00	-3.44
	$\pi/2$ BPSK	3625.00	H	156	335	6.70	1 / 12	13.14	19.84	0.096	23.00	-3.16
40 MHz	$\pi/2$ BPSK	3695.00	H	172	331	6.86	1 / 1	13.86	20.73	0.118	23.00	-2.27
	QPSK	3555.00	H	159	337	6.50	1 / 1	13.31	19.81	0.096	23.00	-3.19
	QPSK	3625.00	H	156	335	6.70	1 / 12	12.84	19.54	0.090	23.00	-3.46
	QPSK	3695.00	H	172	331	6.86	1 / 1	13.35	20.21	0.105	23.00	-2.79
	16-QAM	3695.00	H	172	331	6.86	1 / 1	13.21	20.07	0.102	23.00	-2.93
	QPSK (CP-OFDM)	3680.00	H	175	325	6.80	1 / 1	12.14	18.94	0.078	23.00	-4.06
40 MHz	QPSK (Opposite Pol.)	3680.00	V	355	356	6.80	1 / 53	12.17	18.97	0.079	23.00	-4.03
	QPSK (WCP)	3680.00	H	149	337	6.80	1 / 104	11.57	18.37	0.069	23.00	-4.63

Table 7-14. EIRP Data (NR Band n48 – Ant F)

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7.7 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26:2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26:2015 – Section 5.5.4

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = RMS
6. Trace mode = Max Hold (In cases where the level is within 2dB of the limit, the final measurement is taken using triggering/gating and trace averaging.)
7. The trace was allowed to stabilize

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Test Setup

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

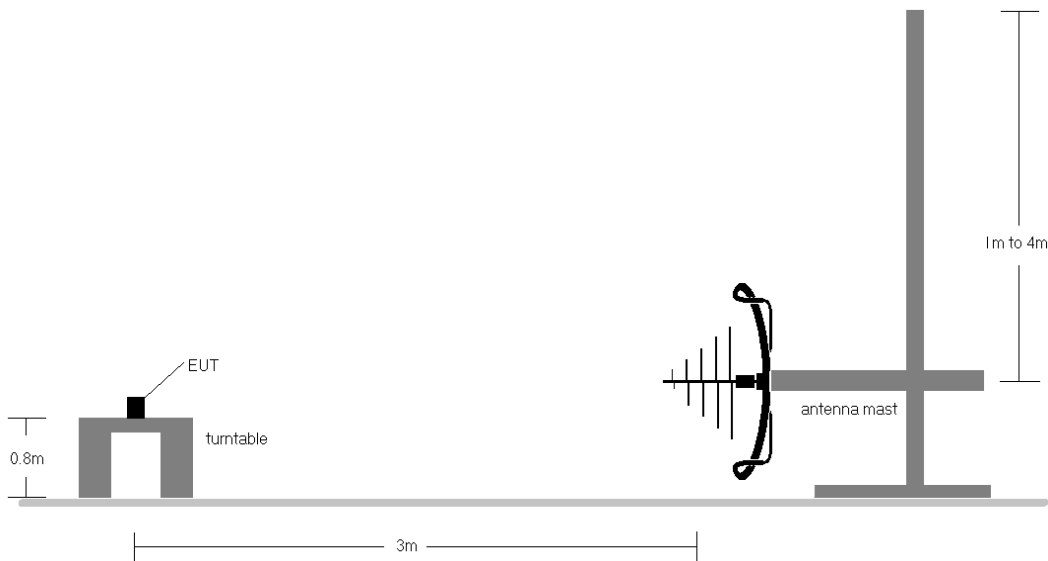


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

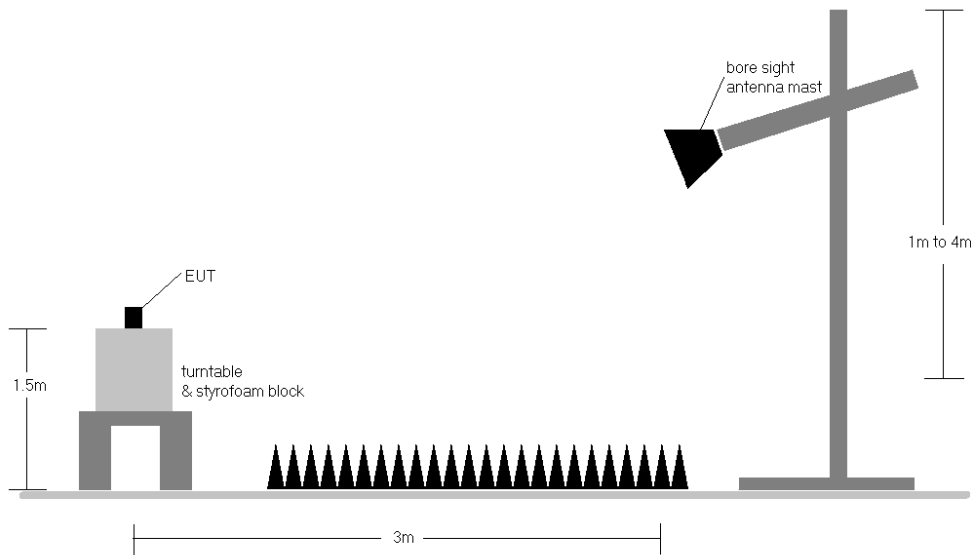


Figure 7-7. Test Instrument & Measurement Setup >1 GHz

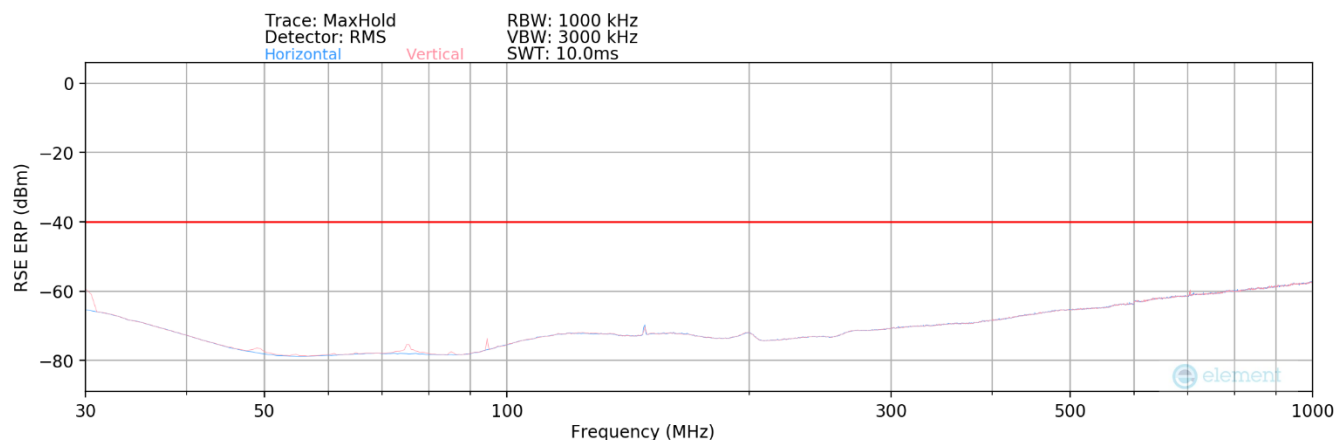
FCC ID: A3LSMS948U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
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Test Notes

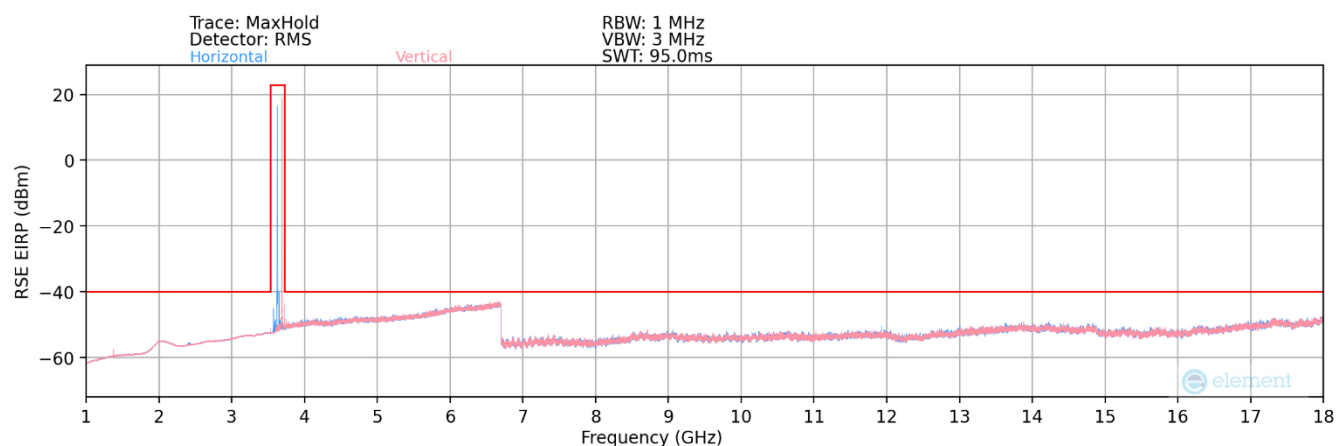
- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26:2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 3) This unit was tested with its standard battery.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 7) 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.
- 8) Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case. Spurious emissions from the NR carrier device are subject to the rules under which the NR carrier operates. Spurious emissions caused by the LTE carrier must meet the requirements of the rules under which the LTE carrier operates.
- 9) Since, SRS-1 (Antenna F) has the highest target power, only Antenna F RSE is reported for the overall n48 worst case. All the other SRS-2, SRS-3, and SRS-4 have been checked and was found to be not to be the worst case.

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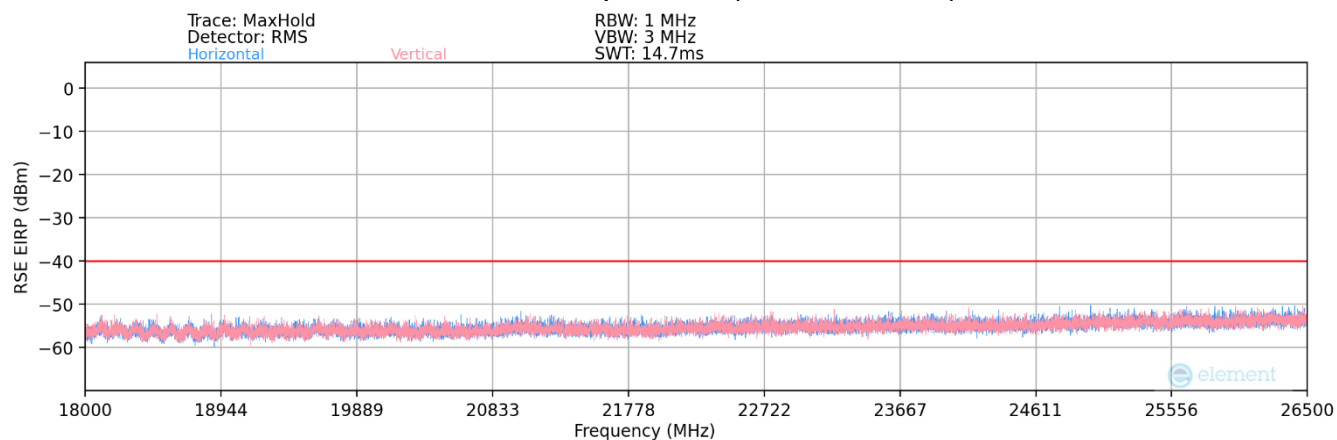
LTE Band 48 – Ant F



Plot 7-53. Radiated Spurious Plot (LTE Band 48 – Ant F)

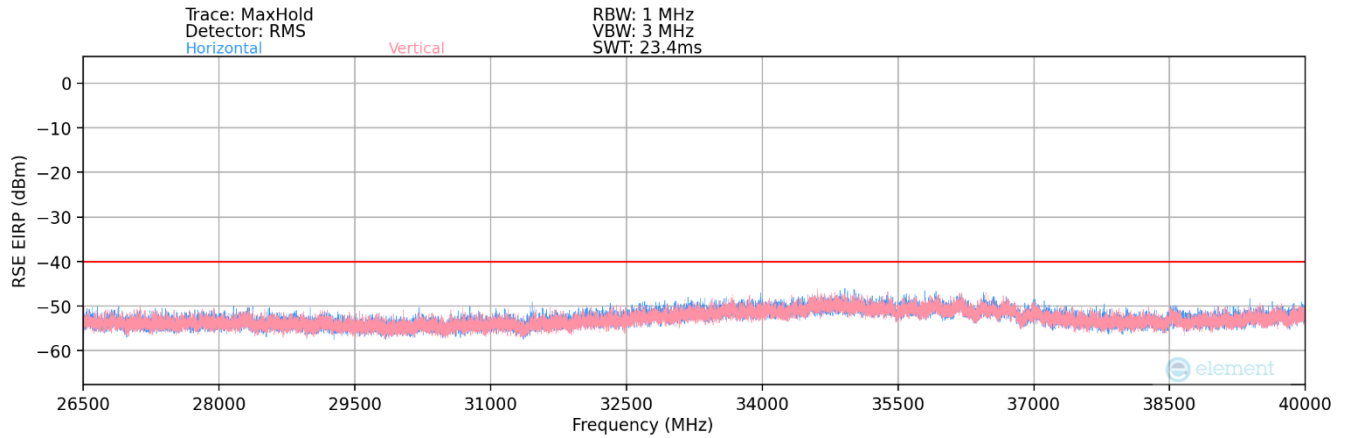


Plot 7-54. Radiated Spurious Plot (LTE Band 48 – Ant F)



Plot 7-55. Radiated Spurious Plot (LTE Band 48 – Ant F)

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Plot 7-56. Radiated Spurious Plot (LTE Band 48 – Ant F)

Bandwidth (MHz):	20
Frequency (MHz):	3625.0
RB Config (Size / Offset):	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	ERP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
76.00	V	-	-	-95.53	14.69	26.16	-71.25	-40.00	-31.25
95.00	V	-	-	-97.78	15.88	25.10	-72.31	-40.00	-32.31
160.00	V	194	249	-97.41	19.87	29.46	-67.95	-40.00	-27.95

Table 7-15. Radiated Spurious Data (LTE Band 48 – Mid Channel - Ant F)

Bandwidth (MHz):	20
Frequency (MHz):	3560.0
RB Config (Size / Offset):	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7120.00	H	-	-	-77.82	9.70	38.88	-56.38	-40.00	-16.38
10680.00	H	-	-	-79.08	13.08	41.00	-54.26	-40.00	-14.26
14240.00	H	132	24	-77.59	15.38	44.79	-50.47	-40.00	-10.47
17800.00	H	-	-	-79.19	17.11	44.92	-50.33	-40.00	-10.33
21360.00	H	-	-	-51.62	2.91	58.29	-46.51	-40.00	-6.51
24920.00	H	-	-	-50.86	4.45	60.59	-44.21	-40.00	-4.21

Table 7-16. Radiated Spurious Data (LTE Band 48 – Low Channel - Ant F)

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Bandwidth (MHz):	20
Frequency (MHz):	3625.0
RB Config (Size / Offset):	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7250.00	H	-	-	-76.99	9.31	39.32	-55.94	-40.00	-15.94
10875.00	H	-	-	-79.07	12.69	40.62	-54.64	-40.00	-14.64
14500.00	H	133	46	-76.71	15.58	45.87	-49.39	-40.00	-9.39
18125.00	H	-	-	-50.03	1.10	58.07	-46.73	-40.00	-6.73
21750.00	H	-	-	-51.01	2.78	58.77	-46.03	-40.00	-6.03
25375.00	H	-	-	-51.70	4.84	60.14	-44.66	-40.00	-4.66

Table 7-17. Radiated Spurious Data (LTE Band 48 – Mid Channel - Ant F)

Bandwidth (MHz):	20
Frequency (MHz):	3690.0
RB Config (Size / Offset):	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7380.00	H	-	-	-77.85	10.14	39.29	-55.97	-40.00	-15.97
11070.00	H	-	-	-79.11	12.63	40.52	-54.74	-40.00	-14.74
14760.00	H	142	55	-75.26	15.48	47.22	-48.04	-40.00	-8.04
18450.00	H	-	-	-50.42	1.15	57.73	-47.07	-40.00	-7.07
22140.00	H	-	-	-51.71	3.27	58.56	-46.24	-40.00	-6.24
25830.00	H	-	-	-51.50	4.77	60.27	-44.53	-40.00	-4.53

Table 7-18. Radiated Spurious Data (LTE Band 48 – High Channel - Ant F)

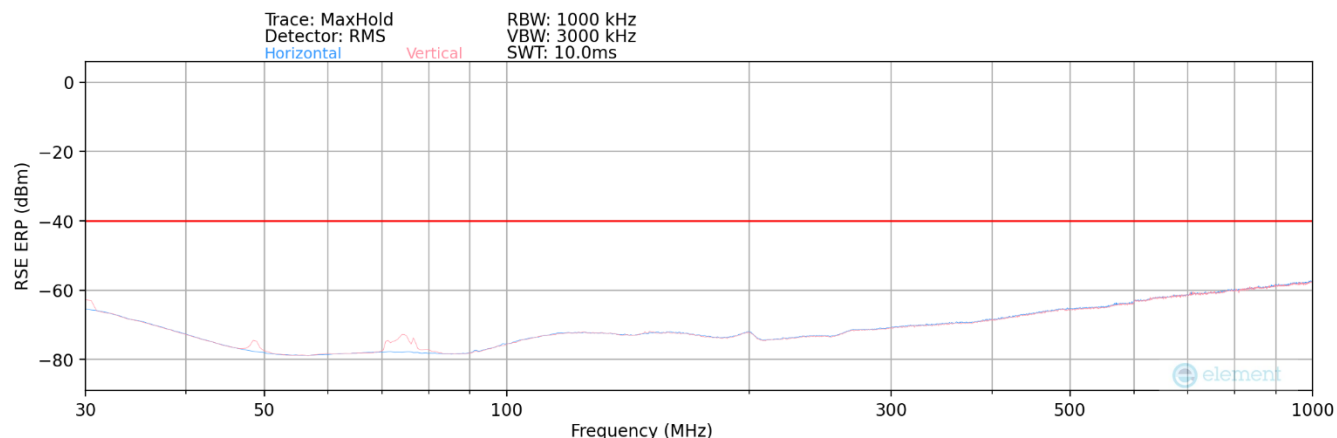
Case:	w/ Wireless Charging Pad
Bandwidth (MHz):	20
Frequency (MHz):	3690.0
RB Config (Size / Offset):	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7380.00	H	-	-	-78.07	10.14	39.07	-56.19	-40.00	-16.19
11070.00	H	-	-	-79.10	12.63	40.53	-54.73	-40.00	-14.73
14760.00	H	108	66	-76.99	15.48	45.49	-49.77	-40.00	-9.77
18450.00	H	-	-	-50.12	1.15	58.03	-46.77	-40.00	-6.77
22140.00	H	-	-	-51.38	3.27	58.89	-45.91	-40.00	-5.91
25830.00	H	-	-	-51.22	4.77	60.55	-44.25	-40.00	-4.25

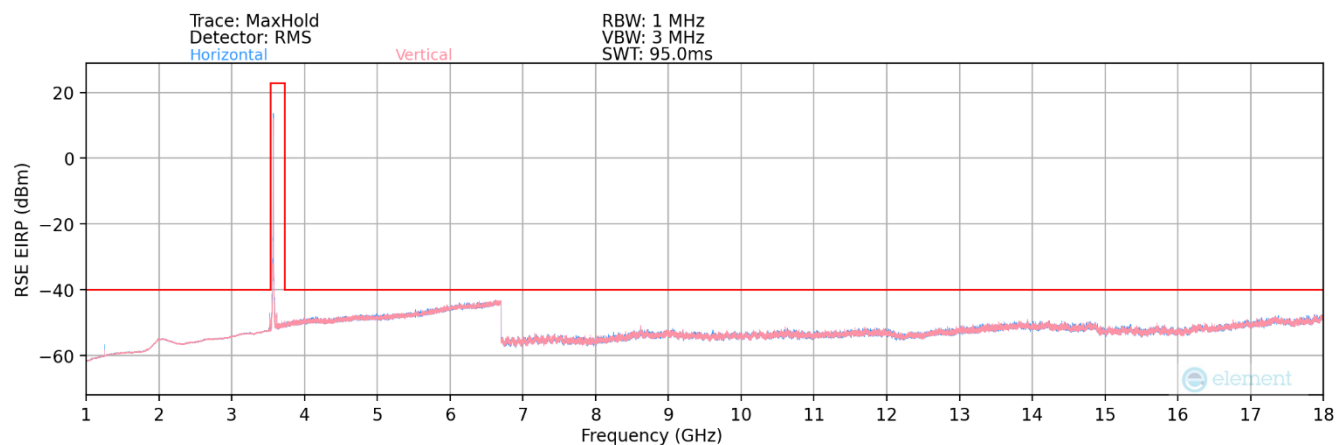
Table 7-19. Radiated Spurious Data (LTE Band 48 – High Channel – WCP - Ant F)

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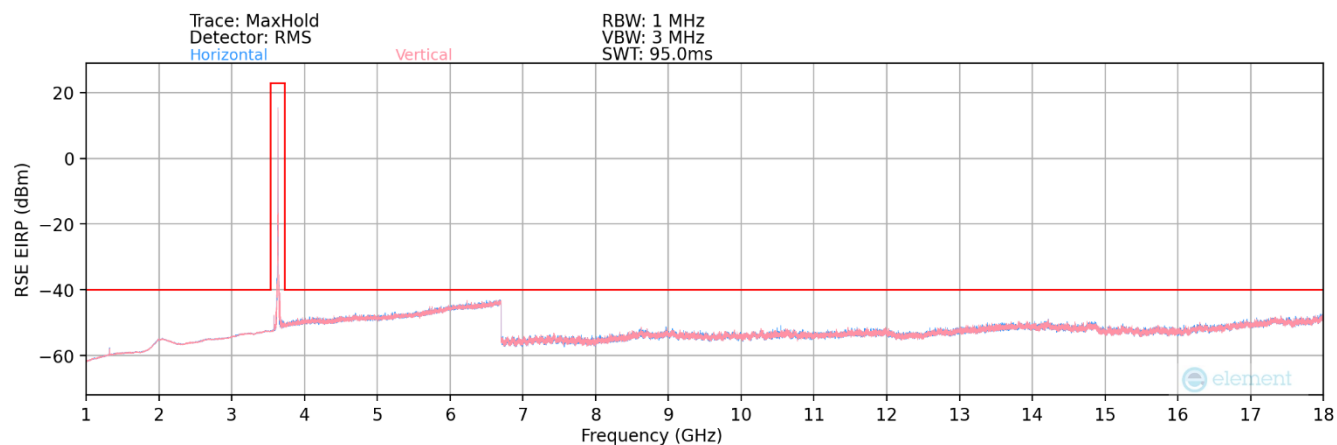
ULCA LB48 – Ant F



Plot 7-57. Radiated Spurious Plot (ULCA LB48 – Ant F – High Channel)



Plot 7-58. Radiated Spurious Plot (ULCA LB48 – Ant F – Low Channel)



Plot 7-59. Radiated Spurious Plot (ULCA LB48 – Ant F – Mid Channel)

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