

**ELEMENT WASHINGTON DC LLC** 

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## Part 96 MEASUREMENT REPORT

#### **Applicant Name:**

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

#### Date of Testing:

11/20 - 12/22/2023 **Test Report Issue Date:** 1/4/2024 **Test Site/Location:** Element lab., Columbia, MD, USA **Test Report Serial No.:** 1M2311010111-07-R1.A3L

## FCC ID: APPLICANT:

## A3LSMA356U

Samsung Electronics Co., Ltd.

Application Type:	Certification
Model:	SM-A356U
Additional Models:	SM-A356U1, SM-S356V
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, WINNF-TS-0122
	v1.0.2

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.

This revised Test Report (S/N: 1M2311010111-07-R1.A3L) supersedes and replaces the previously issued test report (S/N: 1M2311010111-07.A3L) on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

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



FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 1 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 1 of 109
© 2023 ELEMENT	·	·	V11.1 08/28/2023



# TABLE OF CONTENTS

1.0	INTR	DDUCTION	5					
	1.1	Scope	5					
	1.2	Element Test Location	5					
	1.3	Test Facility / Accreditations	5					
2.0	PRO	DUCT INFORMATION	6					
	2.1	Equipment Description	6					
	2.2	Device Capabilities	6					
	2.3	Test Configuration	6					
	2.4	Software and Firmware	6					
	2.5	EMI Suppression Device(s)/Modifications	6					
3.0	DESC	RIPTION OF TESTS	7					
	3.1	Measurement Procedure	7					
	3.2	Radiated Power and Radiated Spurious Emissions	7					
4.0	MEAS	SUREMENT UNCERTAINTY	8					
5.0	TEST	EQUIPMENT CALIBRATION DATA	9					
6.0	SAMF	PLE CALCULATIONS	10					
7.0	TEST	RESULTS	11					
	7.1	Summary	11					
	7.2	Conducted Output Power Data	12					
	7.3	Occupied Bandwidth	18					
	7.4	Spurious and Harmonic Emissions at Antenna Terminal	37					
	7.5	7.5 Band Edge Emissions at Antenna Terminal						
	7.6	Radiated Power (EIRP)	70					
	7.7	Radiated Spurious Emissions Measurements	75					
	7.8	Frequency Stability / Temperature Variation	97					
	7.9 End User Device Additional Requirement (CBSD Protocol)10							
8.0	CON	CLUSION	109					

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 2 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 2 of 109
© 2023 ELEMENT			V11.1 08/28/2023



## MEASUREMENT REPORT FCC Part 96

				EII	RP	Emission
Mode Bandwidth		Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Designator
	40 MHz	QPSK	3570.0 - 3680.0	0.120	20.80	37M7G7D
		16QAM	3570.0 - 3680.0	0.128	21.08	37M9W7D
	35 MHz	QPSK	3567.5 - 3682.5	0.128	21.06	32M8G7D
		16QAM	3567.5 - 3682.5	0.131	21.17	32M8W7D
	20 MU	QPSK	3565.0 - 3685.0	0.123	20.91	28M0G7D
	30 MHz	16QAM	3565.0 - 3685.0	0.127	21.03	28M0W7D
		QPSK	3562.5 - 3687.5	0.123	20.88	23M1G7D
LTE Band 48	25 MHz	16QAM	3562.5 - 3687.5	0.130	21.13	23M1W7D
	20 MHz	QPSK	3560.0 - 3690.0	0.120	20.79	18M0G7D
	20 1011 12	16QAM	3560.0 - 3690.0	0.099	19.95	17M9W7D
	15 MHz	QPSK	3557.5 - 3692.5	0.122	20.88	13M5G7D
	13 1011 12	16QAM	3557.5 - 3692.5	0.099	19.97	13M5W7D
	10 MHz	QPSK	3555.0 - 3695.0	0.121	20.82	9M01G7D
		16QAM	3555.0 - 3695.0	0.102	20.07	8M99W7D
		QPSK	3552.5 - 3697.5	0.124	20.92	4M50G7D
	5 MHz	16QAM	3552.5 - 3697.5	0.107	20.30	4M50W7D

EUT Overview (ANT G)

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

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 2 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 3 of 109
© 2023 ELEMENT		·	V11.1 08/28/2023



			Tx Frequency	EIRP		Emission
Mode	Bandwidth	Modulation	Range [MHz]	Max. Power [W]	Max. Power [dBm]	Designator
		π/2 BPSK	3570.0 - 3680.0	0.107	20.31	36M0G7D
	40 MHz	QPSK	3570.0 - 3680.0	0.108	20.34	38M1G7D
		16QAM	3570.0 - 3680.0	0.069	18.41	38M2W7D
		π/2 BPSK	3565.0 - 3685.0	0.107	20.30	27M1G7D
	30 MHz	QPSK	3565.0 - 3685.0	0.108	20.33	28M0G7D
NR Band n48 20 MHz 15 MHz		16QAM	3565.0 - 3685.0	0.069	18.37	28M1W7D
		π/2 BPSK	3560.0 - 3690.0	0.103	20.13	18M1G7D
	20 MHz	QPSK	3560.0 - 3690.0	0.107	20.29	18M4G7D
	16QAM	3560.0 - 3690.0	0.068	18.35	18M4W7D	
		π/2 BPSK	3557.5 - 3692.5	0.106	20.25	13M0G7D
	15 MHz	QPSK	3557.5 - 3692.5	0.107	20.29	13M7G7D
	16QAM	3557.5 - 3692.5	0.069	18.37	13M8W7D	
		π/2 BPSK	3555.0 - 3695.0	0.106	20.27	8M73G7D
	10 MHz	QPSK	3555.0 - 3695.0	0.108	20.34	8M68G7D
		16QAM	3555.0 - 3695.0	0.068	18.30	8M69W7D

EUT Overview (ANT G)

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

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 4 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 4 of 109
© 2023 ELEMENT V11.1 08/28/2023			



## **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**

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 a OnGo Alliance Approved Test Lab (ATL)
- Element Washington DC LLC is a WInnForum Approved Test Lab
- 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.

FCC ID: A3LSMA356U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Daga E of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 5 of 109
© 2023 ELEMENT			V11.1 08/28/2023

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## 2.0 PRODUCT INFORMATION

## 2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMA356U**. The test data contained in this report pertains only to the emissions due to the EUT's LTE Band 48 and 5G NR Band n48 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.: 2214M, 2317M, 3383M, 3425M, 3440M, 3596M, 3597M

## 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/ax WLAN, 802.11a/n/ac/ax UNII (5GHz), Bluetooth (1x, EDR, LE), NFC

## 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.

### 2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version A356USQU0AWJ2 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.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Daga 6 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 6 of 109
© 2023 ELEMENT			V11.1 08/28/2023



## 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<sub>d [dBm]</sub> = P<sub>g [dBm]</sub> - cable loss [dB] + 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  $P_{g \text{ [dBm]}}$  – 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:

$$\begin{split} & \mathsf{E}_{[\mathsf{dB}\mu\mathsf{V}/\mathsf{m}]} = \mathsf{Measured} \ \mathsf{amplitude} \ \mathsf{level}_{[\mathsf{dB}\mathsf{m}]} + 107 + \mathsf{Cable} \ \mathsf{Loss}_{[\mathsf{dB}]} + \mathsf{Antenna} \ \mathsf{Factor}_{[\mathsf{dB}/\mathsf{m}]} \\ & \mathsf{And} \\ & \mathsf{EIRP}_{[\mathsf{dB}\mathsf{m}]} = \mathsf{E}_{[\mathsf{dB}\mu\mathsf{V}/\mathsf{m}]} + 20\mathsf{log}\mathsf{D} - 104.8; \ \mathsf{where} \ \mathsf{D} \ \mathsf{is} \ \mathsf{the} \ \mathsf{measurement} \ \mathsf{distance} \ \mathsf{in} \ \mathsf{meters}. \end{split}$$

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.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Daga Z of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 7 of 109
© 2023 ELEMENT V11.1 08/28/20			V11.1 08/28/2023

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

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Dere 9 of 100		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 8 of 109		
© 2023 ELEMENT			V11.1 08/28/2023		



## 5.0 TEST EQUIPMENT CALIBRATION DATA

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

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	AP2-001	EMC Cable and Switch System	1/11/2023	Annual	1/11/2024	AP2-001
-	AP2-002	EMC Cable and Switch System	1/11/2023	Annual	1/11/2024	AP2-002
-	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
-	LTX4	Licensed Transmitter Cable Set	1/12/2023	Annual	1/12/2024	LTX4
-	LTX5	Licensed Transmitter Cable Set	1/12/2023	Annual	1/12/2024	LTX5
Anritsu	MT8821C	Radio Communication Analyzer		N/A		620152694
Com-Power	AL-130R	9kHz - 30MHz Loop Antenna	1/18/2022	Biennial	1/19/2024	121085
EMCO	3115	Horn Antenna (1-18GHz)	8/8/2022	Biennial	8/8/2024	9704-5182
EMCO	3116	Horn Antenna (18-40GHz)	7/5/2023	Biennial	7/5/2025	9203-2178
Keysight Technologies	N9030A	PXA Signal Analyzer (3Hz-26.5GHz)	8/7/2023	Annual	8/7/2024	MY54490576
Keysight Technologies	N9030A	PXA Signal Analyzer (44GHz)	3/15/2023	3/15/2023 Annual		MY52350166
Rohde & Schwarz	CMW500	Radio Communication Tester		N/A		112347
Rohde & Schwarz	TC-TA18	Cross Polarized Vivaldi Test Antenna	9/28/2022	Biennial	9/28/2024	101058
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	9/25/2023	Annual	9/25/2024	100342
Rohde & Schwarz	ESW44	EMI Test Receiver (2Hz-44GHz)	3/1/2023	Annual	3/1/2024	101716
Rohde & Schwarz	VULB9162	Bi-Log Antenna	2/21/2023	Biennial	2/21/2025	00301
Sunol	DRH-118	Horn Antenna (1-18GHz)	2/14/2022	Biennial	2/14/2024	A050307
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	8/30/2022	Biennial	8/30/2024	A051107

#### 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.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dage 0 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 9 of 109			
© 2023 ELEMENT	•	•	V11.1 08/28/2023			



## 6.0 SAMPLE CALCULATIONS

### **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

## Spurious Radiated Emission – LTE Band

#### Example: Middle Channel LTE Mode 2<sup>nd</sup> Harmonic (7250 MHz)

The average 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 1564 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm - (-24.80) = 50.3 dBc.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Page 10 of 109		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	20 - 12/22/2023 Portable Handset			
© 2023 ELEMENT	•	•	V11.1 08/28/2023		



## 7.0 TEST RESULTS

### 7.1 Summary

Company Name:	Samsung Electronics Co., Ltd.
FCC ID:	A3LSMA356U
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 Pow er	2.1046(a), 2.1046(c)	NA	PASS	Section 7.2
	Occupied Bandw idth	2.1049(h)	N/A	PASS	Section 7.3
TED	Conducted Band Edge / Spurious Emissions (EUD) 2.1051, 96.41(e)(ii) edge (w h channel) -25 dBm/l and below -40 dBm/l		<ul> <li>-13 dBm/MHz at frequencies within 0-B MHz of channel edge (where B is the bandwidth of the assigned channel)</li> <li>-25 dBm/MHz at frequencies greater than B MHz above and below channel edge</li> <li>-40 dBm/MHz at frequencies below 3530 MHz and above 3720 MHz</li> </ul>	PASS	Sections 7.4, 7.5
CONDUCTED	Additional Maximum Pow er Reduction (A-MPR)	2.1046	NA	PASS	Section 7.2
CON	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 pow er limits for their operation. 96.47 An End User Device must discontinue operations, change frequencies, or change its operational pow er level w ithin 10 seconds of receiving instructions from its associated CBSD.		Section 7.9
	Uplink Carrier Aggregation	96.41(e)	-40dBm/MHz at Band Edge and for all out-of-band emissions	PASS	Section 7.4
RADIATED	Equivalent Isotropic Radiated Pow er (EIRP) (EUD)	96.41(b)	23 dBm/10MHz	PASS	Section 7.6
RADI	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.
- 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 v1.2.2.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Dage 11 of 100		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 11 of 109		
© 2023 ELEMENT			V11.1 08/28/2023		



## 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.

#### **Test Procedure Used**

ANSI C63.26-2015 - Section 5.2

#### **Test Settings**

- 1. Span =  $2 \times OBW$  to  $3 \times OBW$
- 2. RBW = 1% to 5% of the OBW
- 3. Number of measurement points in sweep  $\geq$  2 x span / 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

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Dage 12 of 100		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 12 of 109		
© 2023 ELEMENT		·	V11.1 08/28/2023		



### 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.
- 4. A-MPR was only applied for test purposes to the 2CC case since the 1CC case was compliant for alltesting at max power.
- 5. 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.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Dega 12 of 100		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 13 of 109		
© 2023 ELEMENT		•	V11.1 08/28/2023		



Bandwidth	Modulation		PCC			Conducted		
Bandwidth	Modulation	Bandwidth [MHz]	Frequency [MHz]	RB / Offset	Bandwidth [MHz]	Frequency [MHz]	RB / Offset	Power [dBm]
N		20	3560.0	1 / 99	20	3579.8	1 / 0	22.41
H	QPSK	20	3625.0	1 / 99	20	3644.8	1 / 0	22.34
40 MHz		20	3690.0	1/0	20	3670.2	1 / 99	22.43
4	16-QAM	20	3560.0	1 / 99	20	3579.8	1/0	21.69
N		20	3560.0	1 / 99	15	3577.1	1 / 0	22.48
H	QPSK	20	3625.0	1 / 99	15	3642.1	1 / 0	22.32
35 MHz		20	3690.0	1/0	15	3672.9	1 / 74	22.41
3	16-QAM	20	3625.0	1 / 99	15	3642.1	1 / 0	21.46
N		20	3560.0	1 / 99	10	3574.4	1 / 0	22.43
H	QPSK	20	3625.0	1 / 99	10	3639.4	1/0	22.37
30 MHz		20	3690.0	1/0	10	3675.6	1 / 49	22.32
3	16-QAM	20	3560.0	1 / 99	10	3574.4	1/0	21.68
N		20	3560.0	1 / 99	5	3571.7	1 / 0	22.42
25 MHz	QPSK	20	3625.0	1 / 99	5	3636.7	1 / 0	22.28
		20	3690.0	1 / 0	5	3678.3	1 / 24	22.45
7	16-QAM	20	3690.0	1 / 0	5	3678.3	1 / 24	21.56

Table 7-2. Conducted Power Output Data (LTE ULCA Band 48)

						PCC			scc								
Test Case	NS	мсс	MNC	Channel BW [MHz]	Channel Frequency [MHz]	RB Size	RB Offset	Channel Frequency [MHz]	RB Size	RB Offset	A-MPR [dB]	Modulation	MPR [dB]	Maximum Target Output Power [dBm]	A-MPR Measured Power [dBm]		
1				20 + 20	3560	100	0	3579.8	100	0	≤ 11	QPSK	0	21.50	11.63		
					20 20	0000		ů	0010.0		ů	- • •	16-QAM	1	20.50	11.66	
2				20 + 20	3560	1	99	3579.8	1	0	≤ 11	QPSK	0	21.50	17.61		
2				20 + 20	3300		- 55	3373.0		0	211	16-QAM	1	20.50	17.57		
3				20 + 20	3605.1	100	0	3624.9	100	0	≤ 4.5	QPSK	0	21.50	17.65		
3	NS 01	310	910	20 + 20	3005.1	100	0	3024.9	100	U		16-QAM	1	20.50	17.58		
4	NS_01	310	910	20 + 20	3605.1	4	99	3624.9	4	0	< A 5	QPSK	0	21.50	17.34		
4				20 + 20	3605.1	1	99	3624.9	1	U	≤ 4.5	16-QAM	1	20.50	17.42		
5				00.00	3670.1	100	0	3689.9	100	0	~ 11	QPSK	0	21.50	11.41		
э				20 + 20	3670.1	100	0	3689.9	100	0	≤ 11	16-QAM	1	20.50	11.39		
6				20 + 20	3670.1	1	99	3689.9	1	0	≤ 11	QPSK	0	21.50	17.41		
0				20 + 20	3070.1		99	3069.9		U	211	16-QAM	1	20.50	17.36		

Table 7-3. Conducted Power Output Data (LTE ULCA Band 48 -A-MPR)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Dama 44 af 400		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 14 of 109		
© 2023 ELEMENT	•		V11.1 08/28/2023		



Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
N		55340	3560.0	1 / 49	22.34
HN	QPSK	55990	3625.0	1 / 49	20.83
20 MHz		56640	3690.0	1 / 49	21.41
2	16-QAM	55340	3560.0	1 / 49	21.48
N	QPSK	55315	3557.5	1 / 19	22.37
15 MHz		55990	3625.0	1 / 19	20.92
		56665	3692.5	1 / 19	21.56
	16-QAM	55315	3557.5	1 / 19	21.49
N		55290	3555.0	1 / 22	22.19
MHz	QPSK	55990	3625.0	1 / 22	20.86
10 M		56690	3695.0	1 / 22	21.34
~	16-QAM	55290	3555.0	1/1	21.45
N		55265	3552.5	1 / 5	22.36
MHz	QPSK	55990	3625.0	1 / 5	20.96
5 M		56715	3697.5	1 / 5	21.56
47	16-QAM	56715	3697.5	1 / 1	21.34

Table 7-4. Conducted Power Output Data (LTE Band 48)

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 15 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 15 of 109
© 2023 ELEMENT			V11.1 08/28/2023



Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
40 MHz		638000	3570.0	1 / 53	21.53
	π/2 BPSK	641666	3625.0	1 / 53	21.62
		645332	3680.0	1 / 53	21.43
		638000	3570.0	1 / 53	21.50
	QPSK	641666	3625.0	1 / 53	21.58
		645332	3680.0	1 / 53	21.49
	16-QAM	638000	3570.0	1 / 53	19.69
		637666	3565.0	1 / 39	21.44
N	π/2 BPSK	641666	3625.0	1 / 39	21.61
Hz		645666	3685.0	1 / 39	21.46
W		637666	3565.0	1 / 39	21.44
30 MHz	QPSK	641666	3625.0	1 / 39	21.57
		645666	3685.0	1 / 39	21.57
	16-QAM	641666	3625.0	1 / 39	19.54
	π/2 BPSK	637334	3560.0	1 / 25	21.42
20 MHz		641666	3625.0	1 / 25	21.44
		646000	3690.0	1 / 25	21.48
	QPSK	637334	3560.0	1 / 25	21.48
		641666	3625.0	1 / 25	21.53
		646000	3690.0	1 / 25	21.46
	16-QAM	641666	3625.0	1 / 25	19.52
	π/2 BPSK	637166	3557.5	1 / 19	21.32
		641666	3625.0	1 / 19	21.56
Hz		646166	3692.5	1 / 19	21.46
15 MHz		637166	3557.5	1 / 19	21.42
15	QPSK	641666	3625.0	1 / 19	21.53
		646166	3692.5	1 / 19	21.49
	16-QAM	646166	3692.5	1 / 19	19.55
		637000	3555.0	1 / 12	21.33
	π/2 BPSK	641666	3625.0	1 / 12	21.58
H		646332	3695.0	1 / 12	21.55
10 MHz		637000	3555.0	1 / 12	21.36
10	QPSK	641666	3625.0	1 / 12	21.58
		646332	3695.0	1 / 12	21.55
	16-QAM	646332	3695.0	1 / 12	19.58

Table 7-5. Conducted Power Output Data (NR Band n48 ANT G)

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 16 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 16 of 109
© 2023 ELEMENT		·	V11.1 08/28/2023



Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		638000	3570.0	1 / 104	17.51
MHz	π/2 BPSK	641666	3625.0	1/1	17.97
		645332	3680.0	1 / 1	18.46
	QPSK	638000	3570.0	1 / 104	17.31
		641666	3625.0	1 / 1	17.94
40		645332	3680.0	1/1	18.30
		638000	3570.0	1 / 104	16.24
	16-QAM	641666	3625.0	1 / 1	16.75
		645332	3680.0	1 / 1	16.79

Table 7-6. Conducted Power Output Data (NR Band n48 ANT B)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		638000	3570.0	1 / 53	18.68
MHz	π/2 BPSK	641666	3625.0	1 / 53	18.85
		645332	3680.0	1 / 53	18.99
	QPSK	638000	3570.0	1 / 53	19.07
		641666	3625.0	1 / 53	19.27
40		645332	3680.0	1 / 53	19.49
		638000	3570.0	1 / 53	17.51
	16-QAM	641666	3625.0	1 / 53	17.69
		645332	3680.0	1 / 104	18.13

Table 7-7. Conducted Power Output Data (NR Band n48 ANT K)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		638000	3570.0	1 / 1	16.47
	π/2 BPSK	641666	3625.0	1 / 53	16.42
		645332	3680.0	1 / 53	17.73
MHz	QPSK	638000	3570.0	1 / 1	16.62
		641666	3625.0	1 / 53	16.79
40		645332	3680.0	1 / 53	17.83
		638000	3570.0	1 / 1	15.28
	16-QAM	641666	3625.0	1 / 53	15.05
		645332	3680.0	1 / 53	15.38

Table 7-8. Conducted Power Output Data (NR Band n48 ANT L)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dama 47 af 400	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 17 of 109	
© 2023 ELEMENT			\/11 1 08/28/2023	



## 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 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. The trace was allowed to stabilize
- 8. If necessary, steps 2 7 were repeated after changing the RBW such that it would be within
  - 1-5% of the 99% occupied bandwidth observed in Step 7

#### Test Setup

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



Figure 7-2. Test Instrument & Measurement Setup

#### **Test Notes**

- 1. Occupied Bandwidth was only measured on the antenna (Ant F) with the highest power for each band.
- 2. Only the worst case data for each Modulation/Channel Bandwidth combination is displayed in the following plots.

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 19 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 18 of 109
© 2023 ELEMENT	-	·	V11.1 08/28/2023



## LTE Band 48

Mode	Bandwidth	Modulation	OBW [MHz]
	20MHz	QPSK	17.96
LTE-B48		16QAM	17.94
	15MHz	QPSK	13.55
		16QAM	13.50
	10MHz	QPSK	9.01
		16QAM	8.99
	5MHz	QPSK	4.50
		16QAM	4.50
	20+20MHz	QPSK	37.72
	20+2010172	16QAM	37.87
	20+15MHz	QPSK	32.79
		16QAM	32.81
LTE-B48 ULCA		QPSK	27.97
	20+10MHz	16QAM	27.97
	20+5MHz	QPSK	23.05
		16QAM	23.15

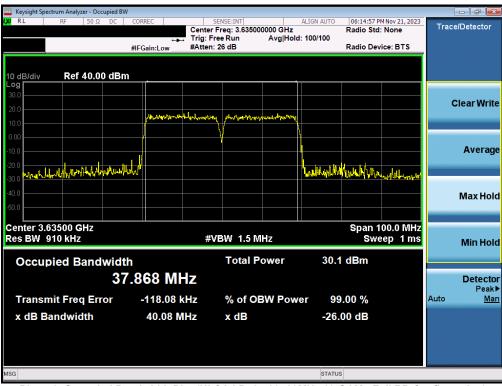
Table 7-9. Occupied Bandwidth Test Result (LTE Band 48)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 10 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 19 of 109
© 2023 ELEMENT	<u>.</u>		V11.1 08/28/2023



Keysight Spectrum Analyzer - Occupied E	BW				
<mark>(X)</mark> RL RF 50Ω DC	CORREC	SENSE:INT r Freg: 3.635000000 GHz	ALIGN AUTO 06:15:23 P Radio Std	MNov 21, 2023	Trace/Detector
	Trig: F	Free Run Avg Hold 1: 26 dB	l: 100/100 Radio Dev	ice: BTS	
	#IFGain:Low #Atter	1. 20 UD	Radio Dev	ice. DT3	
10 dB/div Ref 40.00 dB	m				
30.0					
20.0					Clear Write
10.0	an provident and a second	a manutation			
0.00					
-10.0					Average
-20.0	M		Madell Harnalder of his hardy and		
-30.0 Whether the start and the start of the			. In the standing of the standard of the stand	Will and the second	
-40.0					Max Hold
-50.0					
Center 3.63500 GHz				00.0 MHz	
Res BW 910 kHz	#	VBW 1.5 MHz	Swe	eep 1 ms	Min Hold
Occupied Bandwid	ith	Total Power	30.1 dBm		
	7.718 MHz				Detector
					Peak►
Transmit Freq Error	-102.91 kHz	% of OBW Powe	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	40.15 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-1. Occupied Bandwidth Plot (ULCA LB48 - 20+20MHz QPSK - Full RB Configuration)



Plot 7-2. Occupied Bandwidth Plot (ULCA LB48 - 20+20MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 20 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 20 of 109
© 2023 ELEMENT	•		V11.1 08/28/2023



Keysight Spectrum Analyzer - Occupied					
<mark>(X)</mark> RL RF 50Ω DC		SENSE:INT er Freg: 3.635000000 GHz	ALIGN AUTO 05:45:36 Radio St	PM Nov 21, 2023	Trace/Detector
	Trig:	Free Run Avg Hold	d: 100/100		
	#IFGain:Low #Atte	en: 50 dB	Radio D	evice: BTS	
10 dB/div Ref 40.00 d	Bm				
Log 30.0					
20.0					Clear Write
10.0	Mallana market market bares	my memorian within the			
0.00					Average
-10.0					Average
-20.0 Whowashington maligrange postation	with		Marthe and Marthants	he was the productor	
-30.0					
-40.0					Max Hold
-50.0					
Center 3.63500 GHz			Snan	87.50 MHz	
Res BW 820 kHz		#VBW 2.7 MHz		veep 1 ms	Min Hold
					MITHOL
Occupied Bandwi	dth	Total Power	30.2 dBm		
	32.794 MHz				Detector
					Peak►
Transmit Freq Error	-2.5879 MHz	% of OBW Pow	er 99.00 %		Auto <u>Man</u>
x dB Bandwidth	35.07 MHz	x dB	-26.00 dB		
MSG			STATUS		

Plot 7-3. Occupied Bandwidth Plot (ULCA LB48 - 20+15MHz QPSK - Full RB Configuration)



Plot 7-4. Occupied Bandwidth Plot (ULCA LB48 - 20+15MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 21 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 21 of 109
© 2023 ELEMENT	•	•	V11.1 08/28/2023



- Keysight Spectrum Analyzer - Occupied BW					
LXI RL RF 50Ω DC	CORREC	SENSE:INT Center Freg: 3.635000	ALIGN AUTO	05:47:06 PM Nov 21, 2 Radio Std: None	023 Trace/Detector
	- <b>-</b>	Trig: Free Run	Avg Hold: 100/100		
	#IFGain:Low	#Atten: 50 dB		Radio Device: BTS	
10 dB/div Ref 40.00 dE	3 <u>m</u>				
Log 30.0					
20.0					Clear Write
10.0	moundanthallow	whowever where we wanted	ή		
0.00		V			
					Average
-10.0					Average
-20.0 mounter when the mount phat			Harry and White marked	mulant war and show	AA
-30.0					
-40.0					Max Hold
-50.0					
Center 3.63500 GHz				Span 75.00 M	HZ
Res BW 680 kHz		#VBW 2.4 MI	Iz	Sweep 1 r	
Occupied Bandwid		Total Po	ower 29.9	dBm	
2	27.974 M⊦	z			Detector
T	5 0044 M	N- 600	W D	00.0/	Peak▶ Auto Man
Transmit Freq Error	-5.0241 M		W Power 99	0.00 %	Auto <u>Man</u>
x dB Bandwidth	29.70 M	Hz x dB	-26.	00 dB	
MSG			STATUS	3	

Plot 7-5. Occupied Bandwidth Plot (ULCA LB48 - 20+10MHz QPSK - Full RB Configuration)



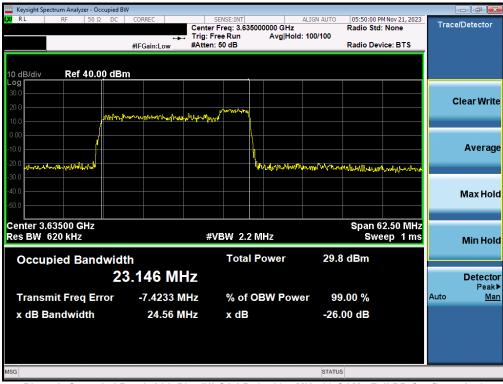
Plot 7-6. Occupied Bandwidth Plot (ULCA LB48 - 20+10MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 22 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 22 of 109
© 2023 ELEMENT	·	·	V11.1 08/28/2023



Keysight Spectrum Analyzer - Occu	pied BW					
<b>LXI</b> RL RF 50 Ω	DC CORREC	SENSE:INT Center Freq: 3.635			8:41 PM Nov 21, 2023	Trace/Detector
		Trig: Free Run	Avg Hold:	100/100		
	#IFGain:Low	#Atten: 50 dB		Radi	o Device: BTS	
10 dB/div Ref 40.00	dBm					
Log 30.0						
20.0						Clear Write
	~ก <sub>ับค</sub> งในส่ <sub>น</sub> ะวังปา <mark>ม</mark> ุก <del>หาย</del> า_/มูมีควองหมือ	And a				
10.0						
0.00						
-10.0			1			Average
-20.0 Huterwyth hor What			l had hill to grow of the p	with white it is a start	Why all weighting the	
-30.0						
-40.0						Max Hold
-50.0						
					60 50 8411-	
Center 3.63500 GHz Res BW 620 kHz		#VBW 2.2	MHz		an 62.50 MHz Sweep 1 ms	
		» (BR 2.2	IVITIE		oncep rins	Min Hold
Occupied Bandy	vidth	Total	Power	29.9 dBr	n	
	23.054 MH	-				Detector
	23.034 1011	2				Peak►
Transmit Freq Erro	or -7.4103 MH	lz % of (	DBW Powe	r 99.00 %	6	Auto <u>Man</u>
x dB Bandwidth	24.44 MH	lz xdB		-26.00 d	в	
	24.444			20.00 0		
MSG				STATUS		

Plot 7-7. Occupied Bandwidth Plot (ULCA LB48 - 20+5MHz QPSK - Full RB Configuration)



Plot 7-8. Occupied Bandwidth Plot (ULCA LB48 - 20+5MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dama 02 of 400
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 23 of 109
© 2023 ELEMENT			V11.1 08/28/2023



🔤 Keysight Spectrum Analyzer - Occupie	ed BW			
<mark>(X)</mark> RL RF 50Ω D	Cent	er Freq: 3.625000000 GHz	ALIGN AUTO 03:39:57 PM Nov 21, 20 Radio Std: None	Trace/Detector
		Free Run Avg Hold: n: 36 dB	100/100 Radio Device: BTS	
10 dB/div Ref 40.00 d	IBm			
30.0				
20.0				Clear Write
10.0	muhidhman	ระทุ <sup>4</sup> ปาวามพิญคริเทศการทำหาริทศาสรรมการการ		
0.00				_
-10.0				Average
-20.0	a bulledin		Made Mitter and the second second	
-30.0 1 July 4 pp from a from a strain of the second of th			and the second of the second s	Maxilaid
-50.0				Max Hold
Center 3.62500 GHz			Span 50.00 Mł	
Res BW 470 kHz	ŧ	#VBW 1.5 MHz	Span 50.00 Mr Sweep 1 m	
	- 141	Total Power	27.2 dBm	
Occupied Bandwi		Total Power	21.2 UBM	
	17.959 MHz			Detector Peak►
Transmit Freq Error	-10.604 kHz	% of OBW Powe	er 99.00 %	Auto <u>Man</u>
x dB Bandwidth	20.14 MHz	x dB	-26.00 dB	
MSG			STATUS	

Plot 7-9. Occupied Bandwidth Plot (LTE Band 48 - 20MHz QPSK - Full RB Configuration)



Plot 7-10. Occupied Bandwidth Plot (LTE Band 48 - 20MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Page 24 of 109
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 24 01 109
© 2023 ELEMENT		·	V11.1 08/28/2023



Keysight Spectrum Analyzer - Occupied B\	N				
LXI RL RF 50Ω DC	CORREC	SENSE:INT Freq: 3.625000000 GHz		30 PM Nov 21, 2023 Std: None	Trace/Detector
	Trig:	Free Run Avg Hold	d: 100/100	Stu. None	
. <u> </u>	#IFGain:Low #Atter	n: 36 dB	Radio	Device: BTS	
10 dB/div Ref 40.00 dBr	n				
Log					
30.0					Clear Write
20.0					
10.0	Jelyler Processing and the second	way of the state of the second state of the se			
0.00					
-10.0	<mark>N</mark>		u.		Average
-20.0			<u>]  </u>		
-30.0	n lln		Mary Mary Manual and	www.	
-40.0				and the decellant red its	Max Hold
-50.0					IVIAX HUIU
Center 3.62500 GHz				n 37.50 MHz	
Res BW 360 kHz	#	≇VBW 1.1 MHz	<u> </u>	Sweep 1ms	Min Hold
		Total Power	27.1 dBm		
Occupied Bandwidt		Total Fower	21.1 UBI		
1:	3.549 MHz				Detector
Transmit Frag Error	20 774 kHz	% of OBW Pow	ver 99.00 %		Peak▶ Auto Man
Transmit Freq Error	-30.771 kHz	% OF OBW FOW	er 99.00 %		Auto <u>Mari</u>
x dB Bandwidth	15.02 MHz	x dB	-26.00 dE		
MSG			STATUS		

Plot 7-11. Occupied Bandwidth Plot (LTE Band 48 - 15MHz QPSK - Full RB Configuration)

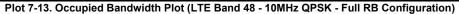


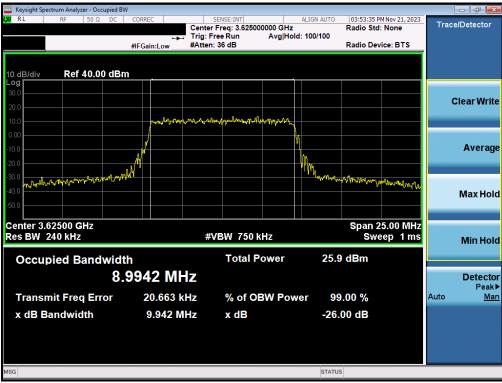
Plot 7-12. Occupied Bandwidth Plot (LTE Band 48 - 15MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 25 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 25 of 109
© 2023 ELEMENT	•	•	V11.1 08/28/2023



🔤 Keysight Spectrum Analyzer - Occupie					
<mark>(X)</mark> RL RF 50Ω D		SENSE:INT er Freg: 3.625000000 GHz	ALIGN AUTO 03:53:06 P Radio Std	M Nov 21, 2023	Trace/Detector
			d: 100/100	: None	
	#IFGain:Low #Atte	en: 36 dB	Radio Dev	/ice: BTS	
10 dB/div Ref 40.00 d	IBm				
Log					
30.0					Clear Write
20.0					
10.0	and the stand	wher this of the all places and the state of the second states and the se			
0.00					
-10.0					Average
-20.0					
-30.0 Jonal March march 100-			Whank for the way you	Will and the same	
-40.0			a sast the	Act of the second	Max Hold
-50.0					Maxitolu
Center 3.62500 GHz				25.00 MHz	
Res BW 240 kHz		#VBW 750 kHz	SW	eep 1 ms	Min Hold
Occupied Bandwi	idth	Total Power	26.6 dBm		
-					
	9.0140 MHz				Detector Peak▶
Transmit Freq Error	7.217 kHz	% of OBW Pow	ver 99.00 %		Auto <u>Man</u>
x dB Bandwidth	10.08 MHz	x dB	-26.00 dB		
MSG			STATUS		





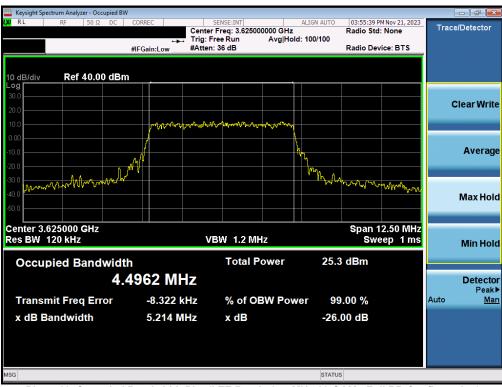
Plot 7-14. Occupied Bandwidth Plot (LTE Band 48 - 10MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U		Approved by: Technical Manager			
Test Report S/N:	Test Dates:	EUT Type:	Dage 26 of 100		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 26 of 109		
© 2023 ELEMENT	-		V11.1 08/28/2023		





Plot 7-15. Occupied Bandwidth Plot (LTE Band 48 - 5MHz QPSK - Full RB Configuration)



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

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dama 07 of 400	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 27 of 109	
© 2023 ELEMENT	•		V11.1 08/28/2023	



## NR Band n48 ANT G

Mode	Bandwidth	Modulation	OBW [MHz]
		BPSK	36.01
	40MHz	QPSK	38.14
		16QAM	38.15
		BPSK	27.06
	30MHz	QPSK	28.02
		16QAM	28.06
		BPSK	18.08
NR-n48	20MHz	QPSK	18.37
		16QAM	18.37
		BPSK	13.03
	15MHz	QPSK	13.69
		16QAM	13.75
		BPSK	8.73
	10MHz	QPSK	8.68
		16QAM	8.69

Table 7-10. Occupied Bandwidth Test Result (NR Band n48)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Page 28 of 109		
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	- 12/22/2023 Portable Handset			
© 2023 ELEMENT	•	·	V11.1 08/28/2023		



Spectrum		er 1 🔻	+				_		_				₽	Trace	- <b>1</b>
KEYSI RL		nput: RF Coupling: DC Align: Auto	Input Z: Corr CC Freq Re NFE: Of	orr f: Int (S)	Atten: 36 dB	G	ate: (	ree Run Off iin: Low		Center Fred Avg Hold: 1 Radio Std: 1		0 GHz	Trace Typ Clear		Trace Control
1 Graph Scale/Di		T	NFE. UI		Ref Value 30		_						Trace	Average	Detector
Log 20.0 10.0 0.00 -10.0 -20.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						<b>M M A</b>				Sp	میں			
	Occupie	v ed Bandwidth	011 MHz -1	.1058 MH 38.81 MH		q		Power OBW Po	owe		29.2 d 99.00 -26.00	) %			
	า (			0, 2023 43 PM											

Plot 7-17. Occupied Bandwidth Plot (NR Band n48 - 40MHz π/2 BPSK - Full RB Configuration)



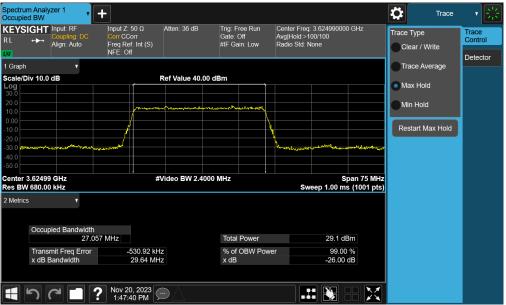
Plot 7-18. Occupied Bandwidth Plot (NR Band n48 - 40MHz QPSK - Full RB Configuration)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dama 00 of 400	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 29 of 109	
© 2023 ELEMENT	-	·	V11.1 08/28/2023	





Plot 7-19. Occupied Bandwidth Plot (NR Band n48 - 40MHz 16-QAM - Full RB Configuration)



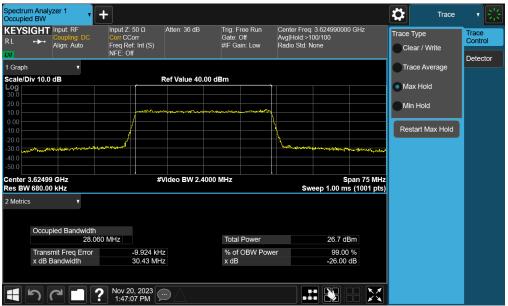
Plot 7-20. Occupied Bandwidth Plot (NR Band n48 - 30MHz π/2 BPSK - Full RB Configuration)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dage 20 of 100	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 30 of 109	
© 2023 ELEMENT	•		V11.1 08/28/2023	





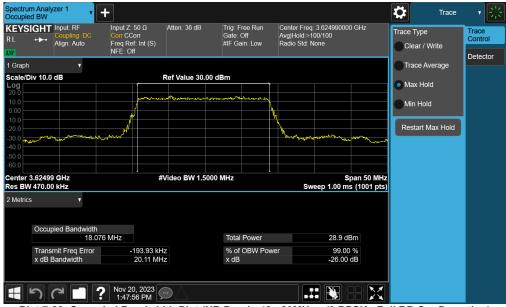
Plot 7-21. Occupied Bandwidth Plot (NR Band n48 - 30MHz QPSK - Full RB Configuration)



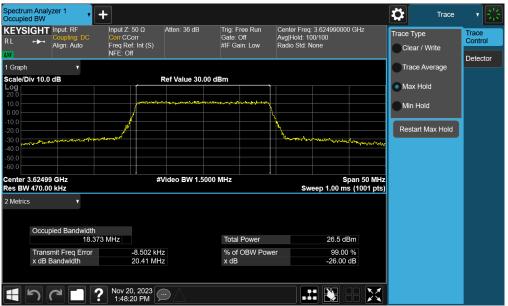
Plot 7-22. Occupied Bandwidth Plot (NR Band n48 - 30MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dega 21 of 100	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 31 of 109	
© 2023 ELEMENT	· · · ·		V11.1 08/28/2023	





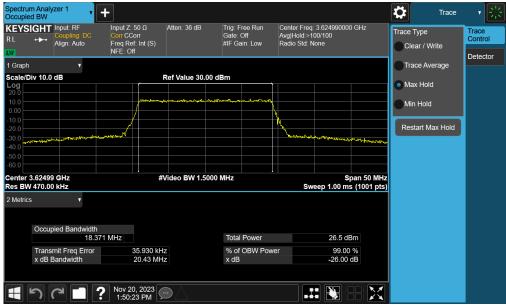
Plot 7-23. Occupied Bandwidth Plot (NR Band n48 - 20MHz π/2 BPSK - Full RB Configuration)



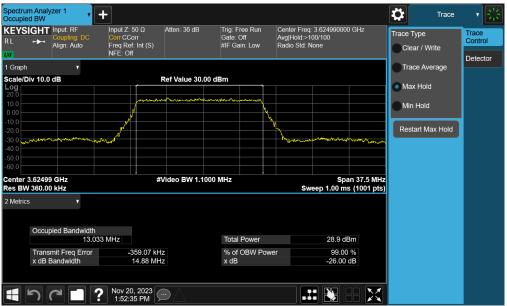
Plot 7-24. Occupied Bandwidth Plot (NR Band n48 - 20MHz QPSK - Full RB Configuration)

FCC ID: A3LSMA356U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dega 22 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 32 of 109
© 2023 ELEMENT	•	·	V11.1 08/28/2023





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



Plot 7-26. Occupied Bandwidth Plot (NR Band n48 - 15MHz π/2 BPSK - Full RB Configuration)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dage 22 of 100	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 33 of 109	
© 2023 ELEMENT	•		V11.1 08/28/2023	





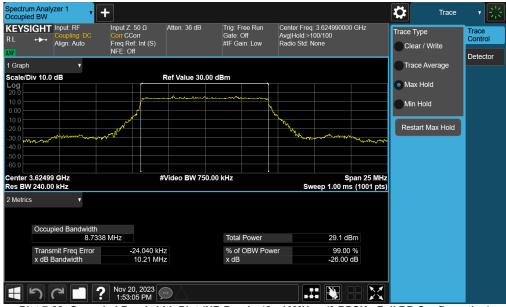
Plot 7-27. Occupied Bandwidth Plot (NR Band n48 - 15MHz QPSK - Full RB Configuration)



Plot 7-28. Occupied Bandwidth Plot (NR Band n48 - 15MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Daga 24 of 100	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 34 of 109	
© 2023 ELEMENT	•		V11.1 08/28/2023	





Plot 7-29. Occupied Bandwidth Plot (NR Band n48 - 10MHz π/2 BPSK - Full RB Configuration)



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

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dega 25 of 100	
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 35 of 109	
© 2023 ELEMENT		·	V11.1 08/28/2023	





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

FCC ID: A3LSMA356U	PART 96 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 36 of 109
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	
© 2023 ELEMENT	•	·	V11.1 08/28/2023



### 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 10<sup>th</sup> 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. All test cases were measured and included in the test result tables. Plots representative of the worst case are included in this section.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT								
Test Report S/N:	Test Dates:	EUT Type:	Dage 27 of 100							
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 37 of 109							
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# LTE Band 48 ULCA

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
		Low	30.0 - 3510.0	-45.29	-40	-5.29
		Low	3540.0 - 3630.0	-30.95	-	-
		Low	3610.0 - 15000.0	-51.81	-40	-11.81
		Low	15000.0 - 27000.0	-51.49	-40	-11.48
	20+20MHz	Low	27000.0 - 40000.0	-48.17	-40	-8.17
		Mid	30.0 - 3575.0	-47.90	-40	-7.90
		Mid	3575.0 - 3720.0	-35.07	-	-
LTE-B48		Mid	3675.0 - 15000.0	-48.70	-40	-8.70
		Mid	15000.0 - 27000.0	-51.08	-40	-11.08
		Mid	27000.0 - 40000.0	-47.35	-40	-7.35
		High	30.0 - 3640.0	-45.74	-40	-5.74
		High	3620.0 - 3710.0	-32.96	-	-
		High	3740.0 - 15000.0	-45.31	-40	-5.31
		High	15000.0 - 27000.0	-51.12	-40	-11.12
	Table 7.44 Oraniana	High	27000.0 - 40000.0	-48.45	-40	-8.45

Table 7-11. Spurious and Harmonic Emissions Test Result (LTE ULCA Band 48)

	ectrum Analyzer -						
RL	RF 5	0Ω DC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	05:15:48 PM Nov 21, 2023 TRACE 1 2 3 4 5 6	Frequency
PASS			PNO: Fast ↔ IFGain:Low	Trig: Free Run #Atten: 24 dB	- //		
0 dB/div	Ref 0.00	dBm			Mł	r1 3.503 0 GHz -45.285 dBm	Auto Tun
og Trac	e 1 Pass			Ĭ			Center Fre
10.0							1.770000000 GH
20.0							Start Fre
30.0							30.000000 MH
10.0						1	Stop Fre
50.0					III		3.510000000 GH
	Ann Marine	Angen Halt a Antonio	pappint, and the last of a starts		e el la la del produce de la tradecia de la construir de la construir de la construir de la construir de la con Construir de pelo construir de la construir de l Construir de pelo construir de la construir de	and the standard and the second s	CF Ste
	lailaine la inidiation i						348.000000 MH <u>Auto</u> Ma
70.0							
30.0							Freq Offs 0 H
90.0							Scale Typ
itart 30 N						Stop 2 510 CHr	Log L
	1.0 MHz		#VBW	3.0 MHz	Sweep 4	Stop 3.510 GHz .667 ms (7001 pts)	
G					STATUS	3	

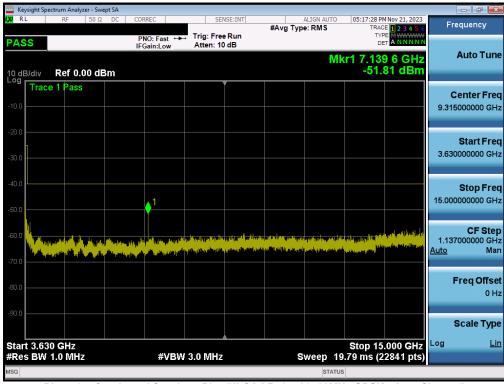
Plot 7-32. Conducted Spurious Plot (ULCA LB48 - 20+20MHz QPSK - Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT						
Test Report S/N:	Test Dates:	Dates: EUT Type:						
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 38 of 109					
0 2023 ELEMENT								



	Spectrum Analyzer - Sw									
L <mark>XI</mark> RL	RF 50 Ω	DC CO	RREC	SEI	NSE:INT	#Avg Typ	ALIGN AUTO e: RMS		MNov 21, 2023	Frequency
PASS			NO: Fast ↔ Gain:Low	Trig: Free #Atten: 3		• ,,		TYP		
	,						Mkr	1 3.620	55 GHz	Auto Tune
10 dB/div Log	Ref 36.35	dBm						-30.	95 dBm	
Tra	ice 1 Pass				Í					Center Freq
26.3										3.585000000 GHz
			ΛA							
16.3			V							Start Freq
6.35										3.54000000 GHz
-3.65										Stop Freq
-13.7										3.63000000 GHz
			) li							
-23.7									1	CF Step 9.000000 MHz
		. "N	M	A						<u>Auto</u> Man
-33.7	Munth Mannah	WANT AND A		"Manageryla	alla plantitution	will have been been been been been been been be	alla bat while your	whitehall	Mappinesty	
-43.7										Freq Offset 0 Hz
										0 H2
-53.7										Scale Type
	54000 GHz N 1.0 MHz		#V/BIA	(30 MHz			Sween 1	Stop 3.63	3000 GHz	Log <u>Lin</u>
MSG										
	Plot 7 22 Conducted Spurious Plot (III CA   P49 20+20MHz OPSK   our C									

Plot 7-33. Conducted Spurious Plot (ULCA LB48 – 20+20MHz QPSK – Low Channel)



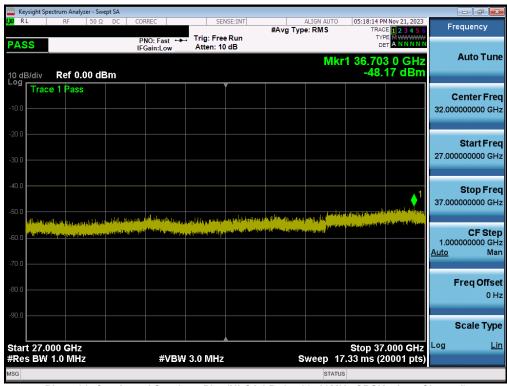
Plot 7-34. Conducted Spurious Plot (ULCA LB48 - 20+20MHz QPSK - Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT						
Test Report S/N:	Test Dates:	Dates: EUT Type:						
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 39 of 109					
2223 ELEMENT								



	nt Spectrum												
L <mark>XI</mark> RL	R	F 50	ΩDC	CORREC		SEI	NSE:INT	#Avg Typ	ALIGN AUTO		HNov 21, 2023	Fr	equency
PASS				PNO: Fas IFGain:Lo		Trig: Fre Atten: 10				TYF DE			
10 dB/di Log	iv Re	f 0.00 (	dBm						Mkı	1 25.94 -51.4	3 5 GHz 85 dBm		Auto Tune
	race 1 F	Pass					Í						enter Freq
-10.0												21.000	000000 GHz
-20.0													Start Freq
-30.0												15.000	000000 GHz
-40.0													Stop Freq
-50.0										يلام .		27.000	0000000 GHz
			program and	Berrie a sur		ang		a da ya d	با معادلة معرفي (19) من المراجع معرفية العمرة الذير القديرين	an sagan - na sa			CF Step
-70.0	ومتيز وأعاروهااني	ليواد فاستوادانا	المان أستاذهم والمحا	AT THE								1.200 <u>Auto</u>	0000000 GHz Man
												F	- req Offset
-80.0													0 Hz
-90.0												:	Scale Type
Start 1 #Res B					(B)AL-	3.0 MHz			woon 20	Stop 27	.000 GHz 4001 pts)	Log	Lin
#Res =	WV 1.U			#\					statu		400 F pts)		
									o i Alto				

Plot 7-35. Conducted Spurious Plot (ULCA LB48 – 20+20MHz QPSK – Low Channel)



Plot 7-36. Conducted Spurious Plot (ULCA LB48 – 20+20MHz QPSK – Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT							
Test Report S/N:	Test Dates:	est Dates: EUT Type:							
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 40 of 109						
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## LTE Band 48

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
		Low	30.0 - 3510.0	-44.78	-40	-4.78
		Low	3610.0 - 15000.0	-47.59	-40	-7.59
		Low	15000.0 - 27000.0	-51.34	-40	-11.34
	20MHz	Low	27000.0 - 40000.0	-47.73	-40	-7.73
		Mid	30.0 - 3575.0	-46.22	-40	-6.22
LTE-B48		Mid	3675.0 - 15000.0	-46.27	-40	-6.27
L1C-D40		Mid	15000.0 - 27000.0	-51.54	-40	-11.54
		Mid	27000.0 - 40000.0	-47.36	-40	-7.36
		High	30.0 - 3640.0	-43.55	-40	-3.55
		High	3740.0 - 15000.0	-45.02	-40	-5.02
		High	15000.0 - 27000.0	-50.96	-40	-10.96
		High	27000.0 - 40000.0	-46.88	-40	-6.88

Table 7-12. Spurious and Harmonic Emissions Test Result (LTE Band 48)

Keysight Spectrum Analyzer - Swept SA					
LX/ RL RF 50Ω D	C CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	03:48:40 PM Nov 21, 2023 TRACE 1 2 3 4 5 6	Frequency
PASS 10 dB/div Ref 0.00 dBm	IFGain:Low #Atte	Free Run en: 20 dB	• //	TYPE MUNITOR DET A NNNNN r1 3.505 0 GHz -43.553 dBm	Auto Tune
-10.0					Center Freq 1.835000000 GHz
-30.0					Start Freq 30.000000 MHz
-40.0				1 -	<b>Stop Freq</b> 3.640000000 GHz
	naltained an a tradition at a faith the Non-typester and faith the second second	ta a fereta kan kan ana ana ana ana ana ana ana an	n yang di pang pang kanang pang kanang pang kanang pang kanang pang pang kanang pang pang pang pang pang pang p Pang pang pang pang pang pang pang pang p		<b>CF Step</b> 361.000000 MHz <u>Auto</u> Man
-80.0					Freq Offset 0 Hz
-90.0					Scale Type
Start 30 MHz #Res BW 1.0 MHz	#VBW 3.0 N	ЛНz	Sweep 6	Stop 3.640 GHz 257 ms (7221 pts)	Log <u>Lin</u>
MSG			STATUS		

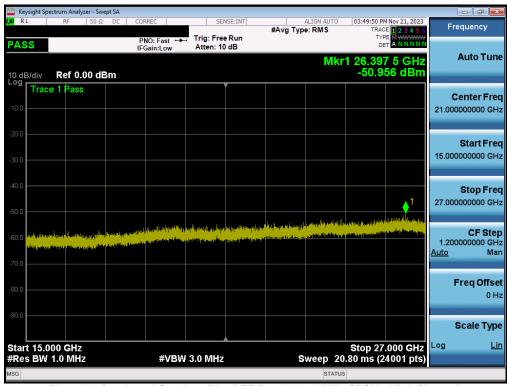
Plot 7-37. Conducted Spurious Plot (LTE Band 48 – 20MHz QPSK – High Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT							
Test Report S/N:	Test Dates:	EUT Type:	Page 41 of 109						
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset							
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Keysight Sp	ectrum Analyz		t SA										
LXI RL	RF	50 Ω	DC	CORREC		SEN	ISE:INT	#Avg Typ	ALIGN AUTO		Nov 21, 2023	Fre	quency
PASS				PNO: F IFGain:	ast ⊶⊶ Low	Trig: Free #Atten: 2				TYF DE			
10 dB/div Log	Ref 0.0	00 dB	m						MI	kr1 7.38 -45.0	0 5 GHz 21 dBm		Auto Tune
-10.0	e 1 Pass												<b>enter Freq</b> 000000 GHz
-20.0												3.740	Start Freq 000000 GHz
-40.0			uniter pr		1	a the second second	<u>lan al i al an</u>	aktressentation and a sublice	to the particulation of the	ting ing Sylvering 199		15.000	Stop Freq 000000 GHz
-60.0			hgilling.		iya mining di <sup>dala</sup> n in	en, eta della d	socie, picky pilon and	Alor Alexandro genigrade	(portfile d)d <sub>to</sub> uries and			1.126 <u>Auto</u>	CF Step 000000 GHz Man
-80.0												F	F <b>req Offset</b> 0 Hz
-90.0												\$	Scale Type
Start 3.74 #Res BW					#VBW	3.0 MHz		s	weep 19	Stop 15 9.52 ms (2	.000 0112	Log	Lin
MSG									STATU	s			

Plot 7-38. Conducted Spurious Plot (LTE Band 48 – 20MHz QPSK – High Channel)



Plot 7-39. Conducted Spurious Plot (LTE Band 48 – 20MHz QPSK – High Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dega 42 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 42 of 109			
© 2023 ELEMENT			V11.1 08/28/2023			



		n Analyzer - S											
LXI RL		RF 50	ΩDC	CORREC		SEN	SE:INT	#Avg Typ	ALIGN AUTO		PM Nov 21, 2023	Fr	equency
PASS	S			PNO: Fas IFGain:Lo		rig: Free Atten: 10		• ,,		1			
				II Gall.EC					M	kr1 38 4	74 5 GHz		Auto Tune
10 dB/ Log	div R	ef 0.00 (	dBm							-46.	879 dBm		
	Trace 1	Pass				Ĭ							Center Freq
-10.0													0000000 GHz
-20.0													Start Freq
-30.0												27.000	0000000 GHz
-30.0													
-40.0											1 _		Stop Freq
											- I - , 🔶 I - I	39.000	0000000 GHz
-50.0	national descention	un das blas	والإسلطناء ورواز	assent all the state		المحربة وأ	al holdes ages		a and a second secon	and a second	Al alla. Taliana a anailtean		
-60.0	engenderander Angenderander	<sup>a</sup> a tradition de la constante A la tradition de la constante	des printes della	in any second	a standing gande	المقتر فيصر وألي	a di dalamana a	Abruard .	a principal information				CF Step
												1.200 Auto	0000000 GHz Man
-70.0												<u>r turo</u>	marr
													Freq Offset
-80.0													0 Hz
-90.0													
												:	Scale Type
Start	27.000									Stop	9.000 GHz	Log	Lin
	BW 1.0			#	VBW 3.0	0 MHz		s	weep	300 3 20.80 ms	(24001 pts)		
MSG									STA				

Plot 7-40. Conducted Spurious Plot (LTE Band 48 – 20MHz QPSK – High Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dega 42 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 43 of 109			
© 2023 ELEMENT			V11.1 08/28/2023			



## NR Band n48 ANT G

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
		Low	30.0 - 3510.0	-43.68	-40	-3.68
		Low	3610.0 - 15000.0	-44.79	-40	-4.79
		Low	15000.0 - 27000.0	-53.03	-40	-13.03
	40MHz	Low	27000.0 - 40000.0	-48.43	-40	-8.43
		Mid	30.0 - 3575.0	-44.52	-40	-4.52
NR-n48		Mid	3675.0 - 15000.0	-46.94	-40	-6.94
INFX-1140		Mid	15000.0 - 27000.0	-51.73	-40	-11.73
		Mid	27000.0 - 40000.0	-53.30	-40	-13.30
		High	30.0 - 3640.0	-44.45	-40	-4.45
		High	3740.0 - 15000.0	-42.60	-40	-2.60
		High	15000.0 - 27000.0	-52.53	-40	-12.53
		High	27000.0 - 40000.0	-48.54	-40	-8.54

Table 7-13. Spurious and Harmonic Emissions Test Result (NR Band n48)

	ectrum Analyzer - Swept S	A				
XIRL	RF 50 Ω D	C CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	10:52:47 AM Dec 29, 2023 TRACE 1 2 3 4 5 6	Frequency
PASS		PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 26 dB	• //		Auto Tune
10 dB/div	Ref 0.00 dBm		•		-43.680 dBm	
-10.0	e 1 Pass					Center Freq 1.770000000 GHz
-20.0						Start Freq 30.000000 MHz
-30.0						
-40.0					<u></u>	<b>Stop Freq</b> 3.51000000 GHz
-50.0	والمراقب والمعاد	ويتقالعها الأحدا المحمدات ومت				3.51000000 GHz
-60.0		and for the first for the second s				CF Step 348.000000 MHz
70.0						<u>Auto</u> Man
80.0						Freq Offset
						0 Hz
-90.0						Scale Type
Start 30 M	MHz 1.0 MHz	#\/B\//	3.0 MHz	Sween 4	Stop 3.510 GHz .667 ms (7001 pts)	Log <u>Lin</u>
ISG	IN WILL		500 WILL 2	Sweep 4		

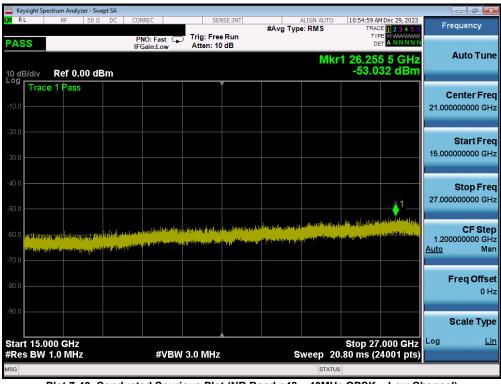
Plot 7-41. Conducted Spurious Plot (NR Band n48 - 40MHz QPSK - Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dage 14 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 44 of 109			
© 2023 ELEMENT	<u>.</u>		V11.1 08/28/2023			



	sight Spec													
LXI RI		RF	50 Ω	DC	CORREC		SEI	NSE:INT	#Avg Typ	ALIGN AUT		AM Dec 29, 2023	F	requency
PAS	S				PNO: F IFGain:	ast 🖵	Trig: Free Atten: 10							
					IFGain:	LOW	Atten. It	ub .			Akr1 3 6	26 5 GHz		Auto Tune
10 dE	Naio	Ref 0.	00 de	tm							-44.	787 dBm		
Log		1 Pass												
	Hace	I Fas:	•											Center Freq
-10.0													9.30	5000000 GHz
-20.0														Start Freq
-30.0													3.61	0000000 GHz
-30.0														
-40.0	1													Oton Ener
	2												15.00	Stop Freq
-50.0													15.00	0000000 GH2
	1													0.7.01
-60.0	A. THE REAL						. In the state of the sole	del 16. destaudéeres	and the second secon	با رامار الأفريط	Hattan and a land all		1.13	CF Step 9000000 GHz
	naye tan			an ann an Anna Anna Anna Anna Anna Anna	1	ann an stàitean Iomhlana chaine	n na shekara na shekara shekar	ويعاقد والاور والعاري	and a state of the second second	ر المر ( الاستأثار ا		مترخلفته والشمنين وخر	<u>Auto</u>	Man
-70.0		() · · · ·	<u>  ज</u> ार'	ागाः ।										
														Freq Offset
-80.0														0 Hz
-90.0														
-50.0														Scale Type
	t 3.610					41/014/	2.0 MIL-				Stop 1	5.000 GHz	Log	Lin
	SBW 1	.U WIH	2			#VBW	3.0 MHz		8			(22841 pts)		
MSG										STA	TUS			

Plot 7-42. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – Low Channel)



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

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dage 45 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 45 of 109			
© 2023 ELEMENT			V11.1 08/28/2023			



Keysight Spectrum Analyzer - Swept SA	
LX RL RF 50 Ω DC CORREC SENSE:INT ALIGN #Avg Type: RM	
PNO: Fast 🖵 Trig: Free Run	
IFGain:Low Atten: 10 dB	Mkr1 36.080 4 GHz Auto Tune
10 dB/div Ref 0.00 dBm	-48.426 dBm
Trace 1 Pass	Center Freq
-10.0	32.00000000 GHz
-20.0	Start Freq
	27.00000000 GHz
-30.0	
-40.0	Oton Eror
	1 Stop Freq 37.00000000 GHz
-50.0 diameter phase and present the second state of the second st	
60.0 отности в представите и составление и отности и отн отности и отности и отно отности и отности и отн отности и отности и отности Отности и отности и отно	CF Step
	1.00000000 GHz Auto Man
-70.0	
	FreqOffset
	0 Hz
-90.0	
	Scale Type
Start 27.000 GHz	Stop 37.000 GHz
	p 17.60 ms (24001 pts)
MSG	STATUS

Plot 7-44. Conducted Spurious Plot (NR Band n48 - 40MHz QPSK - Low Channel)

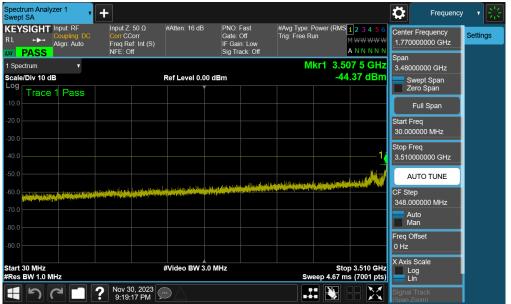
FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 46 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 46 of 109
© 2023 ELEMENT			V11.1 08/28/2023



### NR Band n48 ANT B

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
		Low	30.0 - 3510.0	-44.37	-40	-4.37
		Low	3610.0 - 15000.0	-46.72	-40	-6.72
		Low	15000.0 - 27000.0	-49.43	-40	-9.43
	40MHz	Low	27000.0 - 40000.0	-54.29	-40	-14.29
		Mid	30.0 - 3575.0	-46.10	-40	-6.10
NR-n48		Mid	3675.0 - 15000.0	-47.63	-40	-7.63
INFX-1140		Mid	15000.0 - 27000.0	-49.65	-40	-9.65
		Mid	27000.0 - 40000.0	-51.37	-40	-11.37
		High	30.0 - 3640.0	-46.05	-40	-6.05
		High	3740.0 - 15000.0	-47.03	-40	-7.03
		High	15000.0 - 27000.0	-49.88	-40	-9.88
		High	27000.0 - 40000.0	-52.12	-40	-12.12

Table 7-14. Spurious and Harmonic Emissions Test Result (NR Band n48)



Plot 7-45. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dage 47 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 47 of 109			
© 2023 ELEMENT	•		V11.1 08/28/2023			



Spectrum Analyzer 1 Swept SA	+				Frequency v
KEYSIGHT Input: RF L Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	#Atten: 16 dB	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 Trig: Free Run M WW WW A N N N N	9.315000000 GHz
1 Spectrum v				Mkr1 3.630 0 GH	
Scale/Div 10 dB		Ref Level 0.00 d	IBm	-46.72 dBr	Nept Span Zero Span
-10.0 Trace 1 Pass					Full Span
-20.0					Start Freq 3.63000000 GHz
-30.0					Stop Freq 15.00000000 GHz
		an di tapa ya Upanga Dan.	Terri Dan Diraci		AUTO TUNE
-60.0					CF Step 1.137000000 GHz
-80.0					Auto Man
					Freq Offset 0 Hz
Start 3.630 GHz #Res BW 1.0 MHz		#Video BW 3.0 I	MHz	Stop 15.000 GF Sweep ~21.3 ms (22841 pt	
	<b>?</b> Nov 30, 2023 9:21:23 PM				Signal Track (Span Zoom)

Plot 7-46. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – Low Channel)

Spectrum Analyzer 1	+			Frequency	マ影
KEYSIGHT       Input: RF         R L       Coupling: DC         Align: Auto       Align: Auto	Input Z: 50 Ω     Atten: 10 dB     Orr CCorr     Freq Ref: Int (S)     NFE: Off	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Trig: Free Run M <del>WW WW W</del> A N N N N N	21.00000000 GHz	ettings
1 Spectrum			Mkr1 25.851 5 GHz	12.00000000012	
Scale/Div 10 dB	Ref Level 0.00 d	IBm	-49.43 dBm	Swept Span Zero Span	
-10.0				Full Span	
				Start Freq 15.00000000 GHz	
				Stop Freq 27.00000000 GHz	
-50.0		en <mark>den generatien en beneratien en ben</mark>		AUTO TUNE	
-60.0 ather the labor part of the group of the second second second second second second second second second s				CF Step 1.200000000 GHz	
				Auto Man	
				Freq Offset 0 Hz	
Start 15.000 GHz #Res BW 1.0 MHz	#Video BW 3.0 I	MHz	Stop 27.000 GHz Sweep ~23.0 ms (24001 pts)		
<b>1</b> 7 7 1	Nov 30, 2023 9:22:01 PM			Signal Track (Span Zoom)	

Plot 7-47. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:				
1M2311010111-07-R1.A3L	11/20 - 12/22/2023				
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Spectrum Analyzer 1	+				Frequency 🔻 🛃
KEYSIGHT       Input: RF         R L       Imput: RF         Align: Auto       Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	#Atten: 0 dB	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 Trig: Free Run M WW WW A N N N N	32.000000000 GHz
1 Spectrum v				Mkr1 36.605 8 GI	Span 12 10.0000000 GHz
Scale/Div 10 dB	I	Ref Level -5.64	dBm	-54.29 dB	m Swept Span Zero Span
-15.6					Full Span
-25.6					Start Freq 27.00000000 GHz
-45.6					Stop Freq 37.00000000 GHz
-55.6	unit flage contact of a constant different of a con-	and the second states of the	and the second state of th		AUTO TUNE
-65.6 - <u>1997 - 1997 - 1997 - 1997 - 1997 - 1997</u>	ر رو به ورو <b>مانتاندان</b> المحمد را و بر او و تامیکا است مختصر بر کار . و به و به <b>مانتاندان</b> است را و بر او را اسکا است مختصر بر کار .	and the second	and the second secon		CF Step 1.000000000 GHz
-75.6					Auto Man
-95.6					Freq Offset 0 Hz
Start 27.000 GHz #Res BW 1.0 MHz		¥Video BW 3.0	MHz	Stop 37.000 G Sweep ~19.6 ms (24001 p	
4 h C l	Nov 30, 2023 9:23:01 PM				Signal Track (Span Zoom)

Plot 7-48. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dega 40 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 49 of 109			
© 2023 ELEMENT	-		V11.1 08/28/2023			



### NR Band n48 ANT K

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
		Low	30.0 - 3510.0	-43.87	-40	-3.87
		Low	3610.0 - 15000.0	-46.36	-40	-6.36
		Low	15000.0 - 27000.0	-53.12	-40	-13.12
	40MHz	Low	27000.0 - 40000.0	-48.91	-40	-8.91
		Mid	30.0 - 3575.0	-43.38	-40	-3.38
NR-n48		Mid	3675.0 - 15000.0	-46.99	-40	-6.99
INFX-1140		Mid	15000.0 - 27000.0	-52.69	-40	-12.69
		Mid	27000.0 - 40000.0	-48.22	-40	-8.22
		High	30.0 - 3640.0	-44.11	-40	-4.11
		High	3740.0 - 15000.0	-43.59	-40	-3.59
		High	15000.0 - 27000.0	-52.65	-40	-12.65
		High	27000.0 - 40000.0	-48.36	-40	-8.36

Table 7-15. Spurious and Harmonic Emissions Test Result (NR Band n48)

	Spectrum Analyzer - Swept S					
LXI RL	RF 50 Ω E	DC CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	11:03:44 AM Dec 29, 2023 TRACE 1 2 3 4 5 6	Frequency
PASS		PNO: Fast 😱 IFGain:Low	Trig: Free Run #Atten: 26 dB	• //	rr1 3.251 5 GHz	Auto Tune
10 dB/div	Ref 0.00 dBm	1			-43.872 dBm	
-10.0						Center Freq 1.770000000 GHz
-20.0						Start Freq 30.000000 MHz
-40.0			and a subscription of the	an dan dari da katakata katakata		<b>Stop Freq</b> 3.510000000 GHz
-60.0		a po presente presente de la constante de la co An poste de la constante de la c				CF Step 348.000000 MHz <u>Auto</u> Man
-80.0						Freq Offset 0 Hz
-90.0						Scale Type
Start 30 #Res BV	MHz V 1.0 MHz	#VBW :	3.0 MHz	Sweep 4	Stop 3.510 GHz .667 ms (7001 pts)	Log <u>Lin</u>
MSG				STATUS	3	

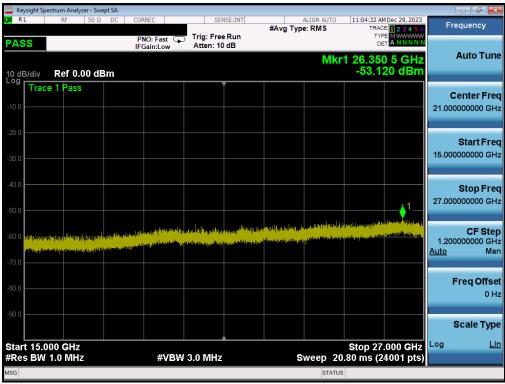
Plot 7-49. Conducted Spurious Plot (NR Band n48 - 40MHz QPSK - Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Daga 50 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 50 of 109			
© 2023 ELEMENT	•		V11.1 08/28/2023			



🔤 Keysight Sp	ectrum Analyz												
L <mark>XI</mark> RL	RF	50 Ω	DC	CORREC		SEI	ISE:INT	#Avg Typ	ALIGN AUTO		M Dec 29, 2023	Fr	equency
PASS				PNO: F IFGain:	ast 🖵 Low	Trig: Free #Atten: 2				TY			
10 dB/div Log	Ref 0.0	)0 dB	m						Mk	r1 13.85 -46.3	1 0 GHz 57 dBm		Auto Tune
-10.0	e 1 Pass												Center Fred 5000000 GH:
-20.0												3.61	Start Free
-40.0	all fur and the second					ر روانه و الم روانه و الما	agen to get a local d	l, din marine	and the second states a second	ور مرکز مرکز مرکز مرکز را ا	1 Ny desidencia Maryy	15.00	<b>Stop Fre</b> 0000000 GH
-60.0			Here and Annual		in a chuir thair	as di dago serie a bilisti e dife		in , shin by such a sector part	i a u 200 ann d'A a stàitiste			1.13 <u>Auto</u>	<b>CF Ste</b> 9000000 GH Ma
-80.0													F <b>req Offs</b> e 0 H
-90.0													Scale Typ
Start 3.61 #Res BW		:			#VBW	3.0 MHz		s	weep 1	Stop 15 9.79 ms (2	5.000 GHz 22841 pts)	Log	Lir
MSG									STAT	US			

Plot 7-50. Conducted Spurious Plot (NR Band n48 - 40MHz QPSK - Low Channel)



Plot 7-51. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Daga 51 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 51 of 109			
© 2023 ELEMENT			V11.1 08/28/2023			



		Analyzer - Swe	•									a X
L <mark>XI</mark> RL	R	F 50 Ω	DC C	ORREC	SEI	NSE:INT	#Avg Typ	ALIGN AUTO e: RMS		M Dec 29, 2023	Frequer	ıcy
PASS				PNO: Fast 🕞 FGain:Low	Trig: Free Atten: 10				TY	PE MWWWWW T A N N N N N		
			1	-Gain:Low	Attent. It	/ub		ML	r1 35.96	0 0 CU-	Auto	Tune
<u>1</u> 0 dB/di	iv Re	f 0.00 dE	3m						-48.9	12 dBm		
	race 1	Pass				Ĭ						_
-10.0											Cente 32.0000000	
10.0											32.0000000	
-20.0												
												tFreq
-30.0											27.0000000	00 GHz
-40.0										1	Sto	p Freq
-50.0 —											37.0000000	00 GHz
	بالم مالي	na la suto	rate to manda and black	بالرويدة أماويسين		فأربط فيقر البطري	and Milling and Area	New York	and the particular states of the states of t			
-60.0	ente tente este necesita de desta de la	an hân tra chân a san c		andra a su	on o se portage a	a a statistica da da se da	بەرلىرىرى ھىرىم ھىز بايغان	a initiation and a statistic	an a			Step
بلير	alla alarta		ana ant fr	. I chulu	al confiction and a						1.0000000 Auto	00 GHz Man
-70.0												
											Freq	Offset
-80.0											Treq	0 Hz
-90.0											Scale	е Туре
	7.000						_		Stop 37	.000 GHz	Log	Lin
	3W 1.0	MIRZ		#VBM	/ 3.0 MHz		s		7.60 ms (2	4001 pts)		
MSG								STAT	US			

Plot 7-52. Conducted Spurious Plot (NR Band n48 - 40MHz QPSK - Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	Test Dates: EUT Type:				
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 52 of 109			
© 2023 ELEMENT			V11.1 08/28/2023			



### NR Band n48 ANT L

Mode	Bandwidth	Channel	Range [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]
		Low	30.0 - 3620.0	-43.96	-40.00	-3.96
		Low	3610.0 - 15000.0	-45.14	-40.00	-5.14
		Low	15000.0 - 27000.0	-48.92	-40.00	-8.92
		Low	27000.0 - 40000.0	-54.21	-40.00	-14.21
		Mid	30.0 - 3575.0	-48.95	-40.00	-8.95
NR-n48	40MHz	Mid	3675.0 - 15000.0	-45.58	-40.00	-5.58
INFX-1140		Mid	15000.0 - 27000.0	-49.75	-40.00	-9.75
		Mid	27000.0 - 40000.0	-52.54	-40.00	-12.54
		High	30.0 - 3640.0	-43.38	-40.00	-3.38
					-40.00	-5.90
		High	15000.0 - 27000.0	-49.81	-40.00	-9.81
		High	27000.0 - 40000.0	-51.80	-40.00	-11.80

Table 7-16. Spurious and Harmonic Emissions Test Result (NR Band n48)



Plot 7-53. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – High Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 52 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 53 of 109
© 2023 ELEMENT	•	·	V11.1 08/28/2023





Plot 7-54. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – High Channel)

Spectrum Analyzer 1 Swept SA	+			Frequency	- ※
KEYSIGHT       Input: RF         R L       Imput: RF         Align: Auto       Align: Auto	Input Z: 50 Ω Atten: 10 dB Corr CCorr Freq Ref: Int (S) NFE: Off	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Trig: Free Run MWWWWW A N N N N N	Center Frequency 21.000000000 GHz	Settings
1 Spectrum v		-	Mkr1 26.004 0 GHz	Span 12.0000000 GHz	
Scale/Div 10 dB	Ref Level 0.00	) dBm	-49.81 dBm	Swept Span Zero Span	
-10.0				Full Span	
-20.0				Start Freq 15.000000000 GHz	
				Stop Freq 27.000000000 GHz	
		the statement of the st		AUTO TUNE	
		an a shine a san a shine a san a shine a san		CF Step 1.200000000 GHz	
-70.0				Auto Man	
				Freq Offset 0 Hz	
Start 15.000 GHz #Res BW 1.0 MHz	#Video BW 3.0	0 MHz	Stop 27.000 GHz Sweep ~23.0 ms (24001 pts)		
45002	Nov 30, 2023 8:17:41 PM			Signal Track (Span Zoom)	

Plot 7-55. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – High Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 54 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 54 of 109
© 2023 ELEMENT	•		V11.1 08/28/2023



Spectrum Analyzer 1	+				Ċ	Frequency	- * 崇
KEYSIGHT       Input: RF         R L       →→         Coupling: DC         Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	#Atten: 0 dB	PNO: Fast Gate: Off IF Gain: High Sig Track: Off		₩₩₩ 33 NNNN	nter Frequency .000000000 GHz	Settings
1 Spectrum v				Mkr1 38.546 5	GHz 12	an .0000000 GHz	
Scale/Div 10 dB	R	ef Level -5.64 c	IBm	-51.80	dBm	Swept Span Zero Span	
-15.6						Full Span	
-25.6						rt Freq .000000000 GHz	
-45.6						p Freq .000000000 GHz	
-55.6	htteng lagters from a grant and be been play		and the state of the			AUTO TUNE	
-65.6	ja Cheng y Jang Kang Santan yang yang di Kilong yang di Kilong yang kanan katalah kang sang yang di Kilong yang di k					Step 200000000 GHz	
-73.0						Auto Man	
-95.6					Fre 0 H	q Offset <del>I</del> z	
Start 27.000 GHz #Res BW 1.0 MHz	#	Video BW 3.0 I	MHz	Stop 39.0 Sweep ~22.9 ms (240	00 GHz	xis Scale Log Lin	
	Nov 30, 2023 8:18:26 PM				(Sp	nal Track an Zoom)	

Plot 7-56. Conducted Spurious Plot (NR Band n48 – 40MHz QPSK – High Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dege EE of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 55 of 109
© 2023 ELEMENT			V11.1 08/28/2023



### 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 -40dBm/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 > 1% of the emission bandwidth
- 4. VBW ≥ 3 x RBW
- 5. Detector = RMS
- 6. Number of sweep points  $\geq 2 \times \text{Span/RBW}$
- 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: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage E6 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 56 of 109
© 2023 ELEMENT	·	·	V11.1 08/28/2023



### Test Notes

- 1. Per 96.41I(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. All test cases were measured and included in the test result tables. Plots representative of the worst case are included in this section.

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dege 57 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 57 of 109
© 2023 ELEMENT			V11.1 08/28/2023



# ULCA LB48

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B48 ULCA		Low	Band Edge	-48.79	-40	-8.79
	20+20MHz	Mid	Band Edge	-47.55	-25	-22.55
		High	Band Edge	-51.45	-40	-11.45

Table 7-17. Band Edge Emissions Test Result (LTE ULCA Band 48)

		Analyzer - Spurio						
PASS	6.4	F 50 Ω e: LO	DC CORREC	🛶 Trig: I	SENSE:INT r Freq: 3.560000000 Free Run n: 26 dB	ALIGN AUTO	05:59:53 PM Nov 21, 2023 Radio Std: None Radio Device: BTS	Frequency
10 dB/c Log	div	Ref 40.00	dBm					
30.0 — 20.0 —								Center Freq 3.56000000 GHz
0.00								
-20.0								
-50.0	3.5 GH						Stop 3.64 GHz	CF Step 10.000000 MH:
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	∆ Limit	<u>Auto</u> Mar
1	1	3.5000 GHz	3.5300 GHz	1.000 MHz	3.529300000 GHz		-8.794 dB	
2	2	3.5300 GHz	3.5400 GHz	1.000 MHz	3.539550000 GHz	-44.62 dBm	-19.62 dB	Eron Office
3	3	3.5400 GHz	3.5490 GHz	1.000 MHz	3.548760000 GHz	-43.02 dBm	-30.02 dB	FreqOffse
4	4	3.5490 GHz	3.5500 GHz	820.0 kHz	3.549873333 GHz	-43.75 dBm	-30.75 dB	0 H
5	5	3.5500 GHz	3.5900 GHz	820.0 kHz	3.5522666667 GHz	-5.173 dBm	-30.17 dB	
6	6	3.5900 GHz	3.5910 GHz	820.0 kHz	3.590000000 GHz	-45.51 dBm	-32.51 dB	
7	7	3.5910 GHz	3.6000 GHz	1.000 MHz	3.591000000 GHz	-44.66 dBm	-31.66 dB	
8	8	3.6000 GHz	3.6400 GHz	1.000 MHz	3.600000000 GHz	-45.72 dBm	-20.72 dB	
//SG						STATU		

Plot 7-57. Channel Edge Plot (LTE Band 48 – 20+20MHz QPSK – Low Channel)

FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 50 of 400
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 58 of 109
© 2023 ELEMENT	•	•	V11.1 08/28/2023



ASS	6-4		0 Ω		COR	EC	<b></b>	Trig: I	SENSE:INT r Freq: 3.625 Free Run n: 26 dB	000000		ALIGN AUTO	Radio S	6 PM Nov 21, 2023 td: None evice: BTS	Frequ	ency
10 dBi Log <b>F</b>		Ref 40	0.00	dBm	IFG	am:Low		#Atter	1. 20 UD				Radio E			
30.0 - 20.0 - 10.0 -											]				Cen 3.625000	ter Fre
0.00 -																
-20.0																
-50.0	3.565 C		نين <sup>ر</sup> يوندرون	n an									Stor	3.705 GHz		
															10.000	CF Ste
Spur	Range				op F	_	RBV		Frequency		Ampli		∆ Limi		<u>Auto</u>	Ma
1	1	3.5650			050				3.60466666				-22.55			
2	2	3.6050			140				3.61203500				-33.64		Fre	q Offs
3	3	3.6140			150				3.61468500				-34.13			<b>q 0</b> 1130 0 ⊦
4	4	3.6150			550				3.61940000				-31.61			UF
5		3.6550			560				3.65566666				-34.09			
6	6	3.6560			650				3.65816000				-34.21			
7	7	3.6650	GHz	3.70	050	GHz	1.000	MHz	3.66500000	0 GHz	-47.92	dBm	-22.92	dB		

Plot 7-58. Channel Edge Plot (LTE Band 48 – 20+20MHz QPSK – Mid Channel)



Plot 7-59. Channel Edge Plot (LTE Band 48 – 20+20MHz QPSK – High Channel)

FCC ID: A3LSMA356U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Degs 50 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 59 of 109
© 2023 ELEMENT	·	·	V11.1 08/28/2023



# LTE Band 48

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
		Low	Band Edge	-46.53	-40	-6.53
	20MHz	Mid	Band Edge	-34.71	-13	-21.71
		High	Band Edge	-47.72	-40	-7.72
		Low	Band Edge	-46.58	-40	-6.58
	15MHz	Mid	Band Edge	-33.25	-13	-20.25
LTE-B48		High	Band Edge	-47.84	-40	-7.84
L I E-D40		Low	Band Edge	-51.26	-40	-11.26
	10MHz	Mid	Band Edge	-43.59	-25	-18.59
		High	Band Edge	-52.95	-40	-12.95
		Low	Band Edge	-50.06	-40	-10.06
	5MHz	Mid	Band Edge	-27.89	-13	-14.89
		High	Band Edge	-52.03	-40	-12.03

Table 7-18. Band Edge Emissions Test Result (LTE Band 48)

X/ RL PASS 10 dB/div Log 20.0 10.0 .10.0		= 50 Ω :: LO Ref 30.00	IF	Gain:Lov	→→→ Trig: w #Atte	SENSE:INT r Freq: 3.56000 Free Run n: 26 dB	0000 GI	ALIGN AUT	D 04:01:25 F Radio Sto Radio De		Frequency Center Freq
10 dB/div Log 20.0				Gain:Low	w #Atte				Radio De	vice: BTS	Center Fred
10 dB/div Log 20.0		Ref 30.00		Gain:Low		n. 20 UB					Center Fred
Log 20.0 10.0 0.00		Ref 30.00	dBm								Center Free
20.0 10.0 0.00		Ref 30.00	dBm								Center Fred
20.0 10.0 0.00											Center Fred
0.00											Center Free
0.00											3.560000000 GH;
						manan					3.56000000 GH
10.0											
10.0											
20.0				-							
-30.0					<mark>,</mark>						
40.0					<u>\</u>		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
			-								
-50.0										and the second s	
-60.0											
Start 3.	51 CH								Ston	3.61 GHz	
SLAIL J.	JIGN	12							Stop	3.01 GHZ	CF Step 10.000000 MH
Spur   R	ange	Start Freq	Stop	Freg	RBW	Frequency		mplitude	∆ Limit		Auto Mar
1 1		3.5100 GHz				3.528866667			-6.528 dl	3	
2 2		3.5300 GHz				3.539883333			-12.46 dl		<b>F</b> === 0#==
3 3		3.5400 GHz	3.549	0 GHz		3.548835000			-21.33 dl	3	Freq Offse
4 4		3.5490 GHz	3.550	0 GHz	390.0 kHz	3.549973333	GHz -3	6.96 dBm	-23.96 dl	3	0 H
5 5		3.5500 GHz	3.570	0 GHz	390.0 kHz	3.566866667	GHz 4.	211 dBm	-20.79 dl	3	
6 6		3.5700 GHz		0 GHz	390.0 kHz	3.570068333	GHz -3	6. <b>21 dBm</b>	-23.21 di	3	
7 7		3.5710 GHz				3.571000000			-21.79 dl		
8 8		3.5900 GHz	3.610	0 GHz	1.000 MHz	3.590733333	GHz -4	6. <b>17 dBm</b>	-21.17 di	3	
SG	_	_	_	_			_	STA	THE		

Plot 7-60. Channel Edge Plot (LTE Band 48 – 20MHz QPSK – Low Channel)

FCC ID: A3LSMA356U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 60 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 60 of 109
© 2023 ELEMENT	·		V11.1 08/28/2023



RL		e:LO	DC	COF	REC		Cente Trig:	r Fre	E:INT q: 3.625 Run	000000	GHz	ALIGN AUT			B PM Nov 2 td: None		Frec	quency
ASS	Sal	e: LO		IFO	Gain:Lov		#Atte						- 1	Radio D	evice: B	TS		
0 dB/	(alia	Ref 30.0	0 40	ma														
ogr	aiv	Kel JU.U	u⊑ ∣															
20.0																	Ce	enter Fre
0.0																		00000 GH
100							ha a market has											
0.0																		
0.0										+								
10.0			1							-l								
10.0 L										l Inne								
			5															
0.0													-		and the second se			
10.0																		
Ļ															0.075			
tart	3.575 C	SHZ												Stop	3.675	GHZ	10.0	CF Ste 00000 MH
Spur	Range	Start Free	1	Stop F	req	RB	N	Fre	quency		Amp	litude		∆ Limit			<u>Auto</u>	Ma
	1	3.5750 GF	z :	3.5950	GHz	1.00	0 MHz	3.59	496666	7 GHz	-48.10	) dBm	İİ	-23.10 (	dB			
	2	3.5950 GH	z :	3.6140	GHz	1.00	0 MHz	3.61	314500	0 GHz	-35.00	) dBm		-22.00 (	dB		Er	eq Offs
	3	3.6140 GH	z :	3.6150	GHz	390.	0 kHz	3.61	493166	7 GHz	-37.20	) dBm		-24.20 (	dB			
	4	3.6150 GH		3.6350					946666					-22.39 (				01
	5	3.6350 GF	_	3.6360					520666				+	-24.08 (				
	-	3.6360 GH		3.6550					615833					-21.71 (				
	6			0.0750	011	1 00	O MILL-	2 65	EDeeee	7 GHz	-47.42	2 dBm		-22.42 (	dB			
	6 7	3.6550 GF	Z	3.6750	GHZ	1.00		3.00	220000			2 ubiii		-2212.	40			
		3.6550 GH	Z	3.6750	GHZ	1.00		5.05	550000			LUDIII		22.42				
		3.6550 GH	Z	3.6750	GHZ	1.00		3.03	050000			2 dbm		-22.12				

Plot 7-61. Channel Edge Plot (LTE Band 48 – 20MHz QPSK – Mid Channel)



Plot 7-62. Channel Edge Plot (LTE Band 48 – 20MHz QPSK – High Channel)

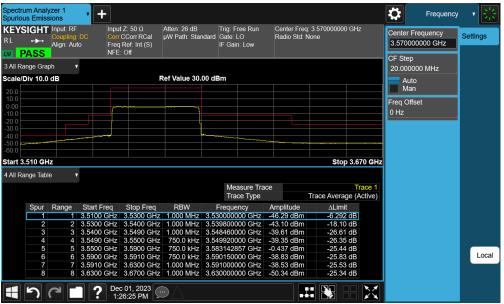
FCC ID: A3LSMA356U		PART 96 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Dega 61 of 100			
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 61 of 109			
© 2023 ELEMENT	•	·	V11.1 08/28/2023			



### NR Band n48 ANT G

Mode	Bandwidth	Channel	Test Case	Level	Limit	Margin
mode	Banawatin	onamer	1000 0400	[dBm]	[dBm]	[dB]
		Low	Band Edge	-46.29	-40	-6.29
	40MHz	Mid	Band Edge	-49.09	-25	-24.09
		High	Band Edge	-47.79	-40	-7.79
		Low	Band Edge	-44.60	-40	-4.60
	30MHz	Mid	Band Edge	-44.22	-25	-19.22
		High	Band Edge	-46.77	-40	-6.77
	20MHz	Low	Band Edge	-46.32	-40	-6.32
NR-n48		Mid	Band Edge	-46.80	-25	-21.80
		High	Band Edge	-47.12	-40	-7.12
	15MHz	Low	Band Edge	-47.03	-40	-7.03
		Mid	Band Edge	-44.57	-25	-19.57
		High	Band Edge	-47.94	-40	-7.94
		Low	Band Edge	-49.60	-40	-9.60
	10MHz	Mid	Band Edge	-41.42	-25	-16.42
		High	Band Edge	-50.93	-40	-10.93

Table 7-19. Band Edge Emissions Test Result (NR Band n48)



Plot 7-63. Channel Edge Plot (NR Band n48 - 40MHz QPSK - Low Channel)

FCC ID: A3LSMA356U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dege 62 of 100
1M2311010111-07-R1.A3L	11/20 - 12/22/2023	Portable Handset	Page 62 of 109
© 2023 ELEMENT	<u>.</u>		V11.1 08/28/2023