

ELEMENT WASHINGTON DC LLC

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

PART 27 MEASUREMENT REPORT

Applicant Name:

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

Date of Testing:

10/13/2022 - 11/16/2022 **Test Report Issue Date:** 11/16/2012 **Test Site/Location:** Element lab., Columbia, MD, USA **Test Report Serial No.:** 1M2209010098-10.A3L

FCC ID:

A3LSMS918U

Applicant Name:

Samsung Electronics Co., Ltd.

Application Type: Model: Additional Model(s): EUT Type: FCC Classification: FCC Rule Part: Test Procedure(s):

Certification SM-S918U SM-S918U1 Portable Handset PCS Licensed Transmitter Held to Ear (PCE) 27 ANSI C63.26-2015, KDB 648474 D03 v01r04

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

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

RJ Ortanez Executive Vice President



FCC ID: A3LSMS918U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 1 of 100
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 1 of 199
© 2022 ELEMENT	•		V11.0 9/14/2022



TABLE OF CONTENTS

1.0	INTR	ODUCTION	5
	1.1	Scope	5
	1.2	Element Test Location	5
	1.3	Test Facility / Accreditations	5
2.0	PROD	DUCT INFORMATION	6
	2.1	Equipment Description	6
	2.2	Device Capabilities	6
	2.3	Test Configuration	6
	2.4	Software and Firmware	7
	2.5	EMI Suppression Device(s)/Modifications	7
3.0	DESC	RIPTION OF TESTS	8
	3.1	Evaluation Procedure	8
	3.2	Radiated Power and Radiated Spurious Emissions	8
4.0	MEAS	SUREMENT UNCERTAINTY	9
5.0	TEST	EQUIPMENT CALIBRATION DATA	10
6.0	SAMF	PLE CALCULATIONS	11
7.0	TEST	RESULTS	12
	7.1	Summary	12
	7.2	Conducted Output Power Data	13
	7.3	Occupied Bandwidth	21
	7.4	Spurious and Harmonic Emissions at Antenna Terminal	
	7.5	Band Edge Emissions at Antenna Terminal	87
	7.6	Peak-Average Ratio	119
	7.7	Radiated Power (EIRP)	156
	7.8	Radiated Spurious Emissions Measurements	
	7.9	Frequency Stability / Temperature Variation	
8.0	CON	CLUSION	199

FCC ID: A3LSMS918U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 2 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 2 01 199
© 2022 ELEMENT			V11.0 9/14/2022



PART 27 MEASUREMENT REPORT

		EIRP				
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Emission Designator
		π/2 BPSK	3500.0	0.257	24.10	96M9G7D
	100 MHz	QPSK	3500.0	0.262	24.19	97M9G7D
		16QAM	3500.0	0.233	23.68	98M0W7D
		π/2 BPSK	3495.0 - 3505.0	0.288	24.59	87M1G7D
	90 MHz	QPSK	3495.0 - 3505.0	0.269	24.30	87M9G7D
		16QAM	3495.0 - 3505.0	0.243	23.85	88M0W7D
		π/2 BPSK	3490.0 - 3510.0	0.268	24.28	77M5G7D
	80 MHz	QPSK	3490.0 - 3510.0	0.282	24.51	77M7G7D
		16QAM	3490.0 - 3510.0	0.250	23.98	77M7W7D
		π/2 BPSK	3485.0 - 3515.0	0.279	24.45	64M6G7D
	70 MHz	QPSK	3485.0 - 3515.0	0.269	24.30	67M7G7D
		16QAM	3485.0 - 3515.0	0.229	23.60	67M7W7D
		π/2 BPSK	3480.0 - 3520.0	0.294	24.69	58M2G7D
	60 MHz	QPSK	3480.0 - 3520.0	0.299	24.75	57M8G7D
		16QAM	3480.0 - 3520.0	0.253	24.03	58M1W7D
	50 MHz	π/2 BPSK	3475.0 - 3525.0	0.284	24.53	46M0G7D
		QPSK	3475.0 - 3525.0	0.315	24.99	47M8G7D
NR Band n77 PC2		16QAM	3475.0 - 3525.0	0.277	24.42	47M6W7D
(3450 - 3550MHz)		π/2 BPSK	3470.0 - 3530.0	0.316	25.00	36M0G7D
	40 MHz	QPSK	3470.0 - 3530.0	0.342	25.34	38M0G7D
		16QAM	3470.0 - 3530.0	0.336	25.26	38M1W7D
	30 MHz	π/2 BPSK	3465.0 - 3535.0	0.298	24.74	27M0G7D
		QPSK	3465.0 - 3535.0	0.324	25.11	28M0G7D
		16QAM	3465.0 - 3535.0	0.294	24.69	28M0W7D
		π/2 BPSK	3462.5 - 3537.5	0.254	24.04	23M0G7D
	25 MHz	QPSK	3462.5 - 3537.5	0.270	24.31	23M3G7D
		16QAM	3462.5 - 3537.5	0.236	23.72	23M3W7D
		π/2 BPSK	3460.0 - 3540.0	0.305	24.84	18M0G7D
	20 MHz	QPSK	3460.0 - 3540.0	0.316	25.00	18M4G7D
		16QAM	3460.0 - 3540.0	0.278	24.44	18M4W7D
		π/2 BPSK	3457.5 - 3542.5	0.305	24.84	13M0G7D
	15 MHz	QPSK	3457.5 - 3542.5	0.333	25.23	13M7G7D
		16QAM	3457.5 - 3542.5	0.268	24.29	13M7W7D
		π/2 BPSK	3455.0 - 3545.0	0.293	24.67	8M67G7D
	10 MHz	QPSK	3455.0 - 3545.0	0.333	25.23	8M68G7D
		16QAM	3455.0 - 3545.0	0.310	24.91	8M70W7D
EUT Overview (n77 PC2 - DoD Band)						

EUT Overview (n77 PC2 - DoD Band)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Dage 2 of 100
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 3 of 199
© 2022 ELEMENT			V11.0 9/14/2022



	EIRP					
Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	Max. Power [W]	Max. Power [dBm]	Emission Designator
		π/2 BPSK	3750.0 - 3930.0	0.256	24.08	96M6G7D
	100 MHz	QPSK	3750.0 - 3930.0	0.260	24.14	97M8G7D
		16QAM	3750.0 - 3930.0	0.206	23.14	97M7W7D
		π/2 BPSK	3745.0 - 3935.0	0.289	24.61	87M3G7D
	90 MHz	QPSK	3745.0 - 3935.0	0.268	24.28	87M9G7D
		16QAM	3745.0 - 3935.0	0.177	22.47	87M7W7D
		π/2 BPSK	3740.0 - 3940.0	0.269	24.29	77M4G7D
	80 MHz	QPSK	3740.0 - 3940.0	0.264	24.22	77M8G7D
		16QAM	3740.0 - 3940.0	0.212	23.26	77M7W7D
		π/2 BPSK	3735.0 - 3945.0	0.001	0.00	58M1G7D
	70 MHz	QPSK	3735.0 - 3945.0	0.282	24.50	67M8G7D
		16QAM	3735.0 - 3945.0	0.270	24.31	67M7W7D
		π/2 BPSK	3730.0 - 3950.0	0.270	24.31	58M0G7D
	60 MHz	QPSK	3730.0 - 3950.0	0.269	24.30	58M1G7D
		16QAM	3730.0 - 3950.0	0.236	23.74	58M2W7D
	50 MHz	π/2 BPSK	3725.0 - 3955.0	0.284	24.54	45M9G7D
		QPSK	3725.0 - 3955.0	0.296	24.71	47M6G7D
NR Band n77 PC2		16QAM	3725.0 - 3955.0	0.210	23.22	47M6W7D
(3700 - 3980MHz)	40 MHz	π/2 BPSK	3720.0 - 3960.0	0.303	24.81	35M9G7D
		QPSK	3720.0 - 3960.0	0.317	25.01	38M0G7D
		16QAM	3720.0 - 3960.0	0.243	23.86	38M1W7D
	30 MHz	π/2 BPSK	3715.0 - 3965.0	0.272	24.35	27M1G7D
		QPSK	3715.0 - 3965.0	0.228	23.58	28M0G7D
		16QAM	3715.0 - 3965.0	0.286	24.57	28M0W7D
		π/2 BPSK	3712.5 - 3967.5	0.261	24.16	22M9G7D
	25 MHz	QPSK	3712.5 - 3967.5	0.266	24.25	23M3G7D
		16QAM	3712.5 - 3967.5	0.195	22.90	23M3W7D
		π/2 BPSK	3710.0 - 3970.0	0.264	24.22	18M1G7D
	20 MHz	QPSK	3710.0 - 3970.0	0.265	24.24	18M3G7D
		16QAM	3710.0 - 3970.0	0.196	22.92	18M3W7D
		π/2 BPSK	3707.5 - 3972.5	0.264	24.21	13M0G7D
	15 MHz	QPSK	3707.5 - 3972.5	0.270	24.32	13M7G7D
		16QAM	3707.5 - 3972.5	0.189	22.76	13M7W7D
		π/2 BPSK	3705.0 - 3975.0	0.248	23.94	8M65G7D
	10 MHz	QPSK	3705.0 - 3975.0	0.250	23.98	8M65G7D
		16QAM	3705.0 - 3975.0	0.186	22.70	8M70W7D
	1		(n77 PC2 - C-Band			

EUT Overview (n77 PC2 - C-Band)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	est Dates: EUT Type:	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 4 of 199
© 2022 ELEMENT	· · · · ·	·	V11.0 9/14/2022



1.0 INTRODUCTION

1.1 Scope

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

1.2 Element Test Location

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

1.3 Test Facility / Accreditations

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

- Element Washington DC LLC is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- Element Washington DC LLC TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).
- Element Washington DC LLC facility is a registered (2451B) test laboratory with the site description on file with ISED.
- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutual Recognition Agreement.

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	est Dates: EUT Type:	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 5 of 199
© 2022 ELEMENT	•		V11.0 9/14/2022

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element. If you have any questions about this or have an inquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.



2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID:** A3LSMS918U. This device has n77 operation over four total antennas in both the DoD Band (3.45 - 3.55GHz) and the C-Band (3.7 - 3.98GHz). The test data contained in this report pertains to both supported n77 bands and all four antennas.

Test Device Serial No.: 02606M, 1616M, 1667M

2.2 Device Capabilities

This device contains the following capabilities:

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

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

This device can transmit in the 5G NR Band n77 over four separate antennas labelled SRS-1, SRS-2, SRS-3, and SRS-4. With SRS operations, any of these four antennas can transmit an SRS signal to check the channel quality for transmission in the n77 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 n77 band.

Each of the transmission antennas investigated in this report may have an alternate labelling in other exhibits and filings. The correlation between these labelling schemes is displayed in the following table.

Antenna SRS-label	Alternate Label
SRS-1	Ant G
SRS-2	Ant C
SRS-3	Ant I
SRS-4	Ant D

Table 2-1. Antenna Labelling Scheme Correlation

2.3 Test Configuration

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

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

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Page 6 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 6 of 199
© 2022 ELEMENT	· · · · ·	·	V11.0 9/14/2022



2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version S918USQU0AVJH 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: A3LSMS918U	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 7 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage / 01 199
© 2022 ELEMENT			V11.0 9/14/2022



3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

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

Deviation from Measurement Procedure......None

3.2 Radiated Power and Radiated Spurious Emissions

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

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

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

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

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 [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:

$$\begin{split} E_{[dB\mu V/m]} &= Measured \ amplitude \ level_{[dBm]} + 107 + Cable \ Loss_{[dB]} + Antenna \ Factor_{[dB/m]} \\ And \\ EIRP_{[dBm]} &= E_{[dB\mu V/m]} + 20logD - 104.8; \ where \ D \ is the measurement \ distance \ in \ meters. \end{split}$$

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: A3LSMS918U		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	est Dates: EUT Type:	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 8 of 199
© 2022 ELEMENT	•		V11.0 9/14/2022



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: A3LSMS918U		Approved by: Technical Manager	
Test Report S/N:	Test Dates: EUT Type:		Page 9 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 9 01 199
© 2022 ELEMENT			V11.0 9/14/2022



5.0 TEST EQUIPMENT CALIBRATION DATA

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

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

Table 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: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	Test Dates: EUT Type:			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 10 of 199		
© 2022 ELEMENT			V11.0 9/14/2022		



6.0 SAMPLE CALCULATIONS

QPSK Modulation

Emission Designator = 8M62G7D

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

QAM Modulation

Emission Designator = 8M45W7D

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

Spurious Radiated Emission

Example: Spurious emission at 3700.40 MHz

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

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	Test Dates: EUT Type:			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	/13/2022 - 11/16/2022 Portable Handset			
© 2022 ELEMENT	•		V11.0 9/14/2022		



7.0 TEST RESULTS

7.1 Summary

Company Name:	Samsung Electronics Co., Ltd.
FCC ID:	A3LSMS918U
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
Mode(s):	NR

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

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

Table 7-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.1.
- 5) This device operates in the n77 band on four different transmission antennas. The main antenna (label: SRS-1) operates at the highest transmit power. The three additional antennas each operate at a lower power compared to the main antenna. Therefore, to demonstrate compliance for each antenna, a complete set of test data is shown for antenna SRS-1 and only a subset of test data is included for the additional three antennas.

FCC ID: A3LSMS918U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	Page 12 of 199	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 12 01 199
© 2022 ELEMENT			V11 0 9/14/2022



7.2 Conducted Output Power Data

Test Overview

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

Test Procedure Used

ANSI C63.26-2015 – Section 5.2

Test Settings

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

Test Setup

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



Figure 7-1. Test Instrument & Measurement Setup

Test Notes

- 1) Standalone NR conducted power measurements were evaluated using various combinations of RB size, RB offset, modulation, and channel bandwidth. For each supported combination of channel bandwidth/modulation, the worst case data is displayed in this section.
- 2) For transmission in EN-DC mode, conducted power measurements were investigated with the NR carrier set to transmit from the worst case antenna in standalone mode (SRS-1).

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	ates: EUT Type:			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	0/13/2022 - 11/16/2022 Portable Handset			
© 2022 ELEMENT			V11.0 9/14/2022		



NR Band n77 (PC2) - DoD Band

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
	π/2 BPSK	633334	3500.01	1 / 136	26.07
100 MHz	QPSK	633334	3500.01	1 / 136	25.84
	16-QAM	633334	3500.01	1 / 136	25.11
		633000	3495.00	1 / 122	26.56
	π/2 BPSK	633334	3500.01	1 / 122	26.46
90 MHz		633666	3504.99	1 / 122	26.56
X		633000	3495.00	1 / 61	25.95
06	QPSK	633334	3500.01	1 / 61	25.88
		633666	3504.99	1 / 61	25.89
	16-QAM	633000	3495.00	1 / 61	25.27
		632668	3490.02	1 / 108	26.05
	π/2 BPSK	633334	3500.01	1 / 54	26.00
Я Н		634000	3510.00	1 / 108	26.25
80 MHz		632668	3490.02	1 / 54	26.16
80	QPSK	633334	3500.01	1 / 54	26.15
		634000	3510.00	1 / 54	26.15
	16-QAM	633334	3500.01	1 / 162	25.41
	π/2 BPSK	632334	3485.01	1 / 47	26.40
		633334	3500.01	1 / 47	26.42
H		634332	3514.98	1 / 47	26.40
70 MHz		632334	3485.01	1 / 94	25.94
70	QPSK	633334	3500.01	1 / 94	25.94
		634332	3514.98	1 / 94	25.85
	16-QAM	632334	3485.01	1 / 94	25.03
		632000	3480.00	1 / 81	25.78
	π/2 BPSK	633334	3500.01	1 / 81	26.28
원		634666	3519.99	1 / 40	26.65
60 MHz		632000	3480.00	1 / 81	25.71
60	QPSK	633334	3500.01	1 / 81	26.32
		634666	3519.99	1 / 81	26.40
	16-QAM	634666	3519.99	1 / 81	25.37
		631668	3475.02	1 / 66	26.50
	π/2 BPSK	633334	3500.01	1 / 66	26.43
H H		635000	3525.00	1 / 66	26.43
50 MHz		631668	3475.02	1 / 99	26.64
50	QPSK	633334	3500.01	1 / 99	26.58
		635000	3525.00	1 / 99	26.56
	16-QAM	631668	3475.02	1 / 99	25.85

Table 7-2. Conducted Power Data (NR Band n77 - DoD Band – 50MHz-100MHz Bandwidths – SRS-1)

FCC ID: A3LSMS918U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	Page 14 of 199	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 14 01 199
© 2022 ELEMENT			V11.0 9/14/2022



Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		631334	3470.01	1 / 53	26.96
	π/2 BPSK	633334	3500.01	1 / 79	26.83
Чz		635332	3529.98	1 / 26	26.36
40 MHz		631334	3470.01	1 / 53	26.52
40	QPSK	633334	3500.01	1 / 26	26.99
		635332	3529.98	1 / 26	25.62
	16-QAM	631334	3470.01	1 / 26	26.69
		631000	3465.00	1 / 39	26.48
	π/2 BPSK	633334	3500.01	1 / 19	26.71
Hz		635666	3534.99	1 / 58	25.80
30 MHz		631000	3465.00	1 / 58	25.86
30	QPSK	633334	3500.01	1 / 58	26.63
		635666	3534.99	1 / 39	26.76
	16-QAM	631000	3465.00	1 / 58	25.86
		630834	3462.51	1 / 48	26.01
	π/2 BPSK	633334	3500.01	1 / 48	25.99
Hz		635832	3537.48	1 / 48	25.95
25 MHz		630834	3462.51	1 / 48	25.96
25	QPSK	633334	3500.01	1 / 48	25.95
		635832	3537.48	1 / 48	25.87
	16-QAM	630834	3462.51	1 / 48	25.15
		630668	3460.02	1 / 25	26.81
	π/2 BPSK	633334	3500.01	1 / 13	26.40
F		636000	3540.00	1 / 25	26.11
20 MHz		630668	3460.02	1 / 37	26.65
20	QPSK	633334	3500.01	1 / 25	26.58
		636000	3540.00	1 / 37	26.25
	16-QAM	633334	3500.01	1 / 25	25.87
		630500	3457.50	1 / 28	26.81
	π/2 BPSK	633334	3500.01	1 / 28	26.74
Hz		636166	3542.49	1 / 9	26.35
15 MHz		630500	3457.50	1 / 28	26.76
15	QPSK	633334	3500.01	1 / 28	26.88
		636166	3542.49	1 / 28	26.77
	16-QAM	636166	3542.49	1 / 19	25.07
		630334	3455.01	1 / 6	26.63
	π/2 BPSK	633334	3500.01	1 / 12	25.90
Hz		636332	3544.98	1 / 17	25.99
10 MHz		630334	3455.01	1 / 17	26.87
10	QPSK	633334	3500.01	1 / 6	26.65
		636332	3544.98	1 / 17	26.88
	16-QAM	633334	3500.01	1 / 6	26.34

Table 7-3. Conducted Power Data (NR Band n77 - DoD Band – 10MHz-40MHz Bandwidths – SRS-1)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	est Dates: EUT Type:				
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 15 of 199			
© 2022 ELEMENT	·		V11.0 9/14/2022			



Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
	π/2 BPSK	633334	3500.01	1 / 68	21.31
100 MHz	QPSK	633334	3500.01	1 / 68	21.06
	16-QAM	633334	3500.01	1 / 68	20.29

Table 7-4. Conducted Power Data (NR Band n77 - DoD Band – SRS-2)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
	π/2 BPSK	633334	3500.01	1 / 68	23.82
100 MHz	QPSK	633334	3500.01	1 / 68	23.72
	16-QAM	633334	3500.01	1 / 68	22.81
Table 7-5	Conducted	Power Data	(NR Band n7	7 - DoD Band	-SRS-3

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
	π/2 BPSK	633334	3500.01	1 / 204	21.61
100 MHz	QPSK	633334	3500.01	1 / 204	21.59
	16-QAM	633334	3500.01	1 / 204	20.91
	Conducated	Davis Pate	AD Dand n		

Table 7-6. Conducted Power Data (NR Band n77 - DoD Band – SRS-4)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	est Dates: EUT Type:			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 16 of 199		
© 2022 ELEMENT			V11.0 9/14/2022		



NR Band n77 (PC2) - C-Band

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
100 MHz		650000	3750.00	1 / 204	25.49
	π/2 BPSK	656000	3840.00	1 / 136	25.87
		662000	3930.00	1 / 136	25.85
		650000	3750.00	1 / 204	25.46
10	QPSK	656000	3840.00	1 / 204	25.69
		662000	3930.00	1 / 204	25.76
	16-QAM	662000	3930.00	1 / 136	25.10
		649668	3745.02	1 / 183	25.55
	π/2 BPSK	656000	3840.00	1 / 183	25.21
E E		662332	3934.98	1 / 61	26.37
90 MHz		649668	3745.02	1 / 183	25.55
)6	QPSK	656000	3840.00	1 / 183	25.76
		662332	3934.98	1 / 183	25.89
	16-QAM	662332	3934.98	1 / 61	24.43
		649334	3740.01	1 / 108	25.65
	π/2 BPSK	656000	3840.00	1 / 108	25.81
E E		662666	3939.99	1 / 108	26.05
80 MHz	QPSK	649334	3740.01	1 / 54	25.50
õ		656000	3840.00	1 / 162	25.64
		662666	3939.99	1 / 54	25.83
	16-QAM	662666	3939.99	1 / 162	25.22
		649000	3735.00	1 / 141	25.67
N	π/2 BPSK	656000	3840.00	1 / 141	25.66
70 MHz		663000	3945.00	1 / 94	26.04
2		649000	3735.00	1 / 141	25.81
N N	QPSK	656000	3840.00	1 / 94	25.68
		663000	3945.00	1 / 141	26.11
	16-QAM	649000	3735.00	1 / 141	25.52
		648668	3730.02	1 / 40	25.89
N	π/2 BPSK	656000	3840.00	1 / 81	25.99
IHz		663332	3949.98	1 / 81	26.07
2	0.501/	648668	3730.02	1 / 40	25.89
60	QPSK	656000	3840.00	1 / 121	25.96
		663332	3949.98	1 / 81	25.91
	16-QAM	663332	3949.98	1 / 40	25.69
		648334	3725.01	1 / 66	25.58
N	π/2 BPSK	656000	3840.00	1 / 66	26.14
50 MHz		663666	3954.99	1/66	26.30
0	0001/	648334	3725.01	1/33	25.53
2 2	QPSK	656000	3840.00	1 / 99	25.82
	40.0414	663666	3954.99	1 / 99	26.32
	16-QAM	663666	3954.99	1 / 33	25.17

Table 7-7. Conducted Power Data (NR Band n77 - C-Band – 50MHz-100MHz Bandwidths – SRS-1)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	est Dates: EUT Type:			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 17 of 199		
© 2022 ELEMENT	-		V11.0 9/14/2022		



Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
40 MHz		648000	3720.00	1 / 26	26.39
	π/2 BPSK	656000	3840.00	1 / 26	26.50
		664000	3960.00	1 / 26	26.57
		648000	3720.00	1 / 53	25.99
	QPSK	656000	3840.00	1 / 26	26.63
		664000	3960.00	1 / 26	26.62
	16-QAM	664000	3960.00	1 / 79	25.82
		647668	3715.02	1 / 19	26.89
	π/2 BPSK	656000	3840.00	1 / 39	25.86
원		664332	3964.98	1 / 19	26.11
30 MHz		647668	3715.02	1 / 19	26.02
30	QPSK	656000	3840.00	1 / 58	26.40
		664332	3964.98	1 / 39	25.19
	16-QAM	656000	3840.00	1 / 39	26.56
		647500	3712.50	1 / 48	25.36
	π/2 BPSK	656000	3840.00	1 / 48	25.42
F		664500	3967.50	1 / 48	25.92
25 MHz	QPSK	647500	3712.50	1 / 48	25.27
25		656000	3840.00	1 / 48	25.38
		664500	3967.50	1 / 48	25.86
	16-QAM	664500	3967.50	1 / 48	24.86
		647334	3710.01	1 / 37	25.27
	π/2 BPSK	656000	3840.00	1 / 37	25.40
F		664666	3969.99	1 / 37	25.98
20 MHz		647334	3710.01	1 / 37	25.20
20	QPSK	656000	3840.00	1 / 37	25.26
		664666	3969.99	1 / 37	25.85
	16-QAM	664666	3969.99	1 / 25	24.88
		647168	3707.52	1 / 28	25.24
	π/2 BPSK	656000	3840.00	1 / 28	25.34
Ϋ́		664832	3972.48	1 / 28	25.97
N		647168	3707.52	1 / 28	25.10
15	QPSK	656000	3840.00	1 / 28	25.26
		664832	3972.48	1 / 28	25.93
	16-QAM	664832	3972.48	1 / 28	24.72
		647000	3705.00	1 / 6	25.00
	π/2 BPSK	656000	3840.00	1 / 12	25.19
Hz		665000	3975.00	1 / 17	25.70
10 MHz		647000	3705.00	1 / 12	24.92
10	QPSK	656000	3840.00	1 / 12	25.07
		665000	3975.00	1 / 17	25.59
	16-QAM	665000	3975.00	1 / 17	24.66

Table 7-8. Conducted Power Data (NR Band n77 - C-Band – 10MHz-40MHz Bandwidths – SRS-1)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	Test Dates: EUT Type:			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 18 of 199		
© 2022 ELEMENT			V11.0 9/14/2022		



Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		650000	3750.00	1 / 136	20.72
	THM THE	656000	3840.00	1 / 204	20.54
E E		662000	3930.00	1 / 68	20.49
		650000	3750.00	1 / 136	20.70
100	QPSK	656000	3840.00	1 / 204	20.64
		662000	3930.00	1 / 68	20.25
	16-QAM	662000	3930.00	1 / 68	19.65

Table 7-9. Conducted Power Data (NR Band n77 - C-Band – SRS-2)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		650000	3750.00	1 / 204	23.78
	THE THE TRANSPORT	656000	3840.00	1 / 68	23.51
Hz		662000	3930.00	1 / 68	23.74
	QPSK	650000	3750.00	1 / 204	23.74
100		656000	3840.00	1 / 68	23.28
		662000	3930.00	1 / 68	23.98
	16-QAM	650000	3750.00	1 / 204	22.39

Table 7-10. Conducted Power Data (NR Band n77 - C-Band – SRS-3)

Bandwidth	Modulation	Channel	Frequency [MHz]	RB Size/Offset	Conducted Power [dBm]
		650000	3750.00	1 / 136	21.16
	π/2 BPSK	656000	3840.00	1 / 136	20.60
MHz		662000	3930.00	1 / 204	20.93
		650000	3750.00	1 / 136	21.00
100	QPSK	656000	3840.00	1 / 136	19.57
		662000	3930.00	1 / 204	20.97
	16-QAM	662000	3930.00	1 / 204	19.76

Table 7-11. Conducted Power Data (NR Band n77 - C-Band – SRS-4)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 19 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 19 01 199
© 2022 ELEMENT	· · · ·	·	V11.0 9/14/2022



EN-DC - n77 (PC2) - C-Band + LTE

		NR (S	CS 30kHz)						LTE			NR	LTE	EN-DC
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset	Power	Conducted Power [dBm]	Total Tx. Power [dBm]
				QPSK	270/0					QPSK	50/0	17.18	22.91	23.94
				QPSK	270/0					QPSK	1/25	17.16	22.88	23.91
n77	100	Mid	3840	QPSK	1/136	B13	10	Mid	782	QPSK	50/0	16.86	22.84	23.82
				QPSK	1/136					QPSK	1/25	16.87	22.87	23.84
				16-QAM	1/136					16Q	1/25	16.80	23.18	24.08

Table 7-12. Conducted Power Data (NR Band n77 - C-Band + EN-DC Anchor B13)

		NR (SCS 30kHz)							LTE			NR	LTE	EN-DC
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset	Power	Conducted Power [dBm]	Total Tx. Power [dBm]
				QPSK	270/0					QPSK	100/0	18.22	22.30	23.73
				QPSK	270/0					QPSK	1/50	17.47	22.77	23.89
n77	100	Mid	3840	QPSK	1/136	B66	20	Mid	1745	QPSK	100/0	17.89	22.29	23.64
				QPSK	1/136					QPSK	1/50	16.80	22.81	23.78
				16-QAM	1/136					16Q	1/50	18.39	22.60	24.00

 Table 7-13. Conducted Power Data (NR Band n77 - C-Band + EN-DC Anchor B66)

	NR (SCS 30kHz)								LTE			NR	LTE	EN-DC
NR Band	NR Bandwidth [MHz]	NR Channel	NR Frequency [MHz]	Mod.	NR RB#/Offset	LTE Band	LTE Bandwidth [MHz]	LTE Channel	LTE Frequency [MHz]	Mod.	LTE RB#/Offset	Power	Conducted Power [dBm]	Total Tx. Power [dBm]
				QPSK	270/0					QPSK	50/0	20.40	20.90	23.67
				QPSK	270/0					QPSK	1/25	18.67	21.92	23.60
n77	100	Mid	3840	QPSK	1/136	B30	10	Mid	2310	QPSK	50/0	20.03	20.81	23.45
				QPSK	1/136					QPSK	1/25	18.33	21.90	23.48
				16-QAM	1/136					16Q	1/25	20.08	21.14	23.65

Table 7-14. Conducted Power Data (NR Band n77 - C-Band + EN-DC Anchor B30)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 20 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 20 01 199
© 2022 ELEMENT		•	V11.0 9/14/2022



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 (SRS-1) 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.

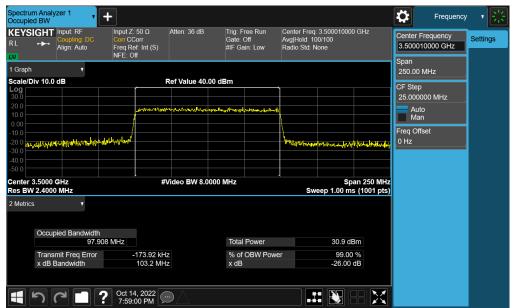
FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 21 of 199	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 21 01 199	
© 2022 ELEMENT	•	·	V11.0 9/14/2022	



NR Band n77 (PC2) - DoD Band

Spectrur Occupie	m Analyz :d BW	zer 1 🔻	+								₽	Frequency	- * 景
RL	-	Input: RF Coupling: DC Align: Auto	Input Z: Corr CC Freq Re NFE: O	orr f: Int (S)	Atten: 36 dB	Gate:	ree Run Off ain: Low	Center Freq Avg Hold: 10 Radio Std: N) GHz	3.50001	requency 0000 GHz	Settings
1 Graph		•									Span .250.00 I	MHz	
Scale/D	iv 10.0 o	dB		I	Ref Value 40.0	0 dBm					CF Step		
Log 30.0											25.0000	00 MHz	
20.0 10.0 0.00				rathran	and a state of the second s	una para para para para para para para pa	Malin Months Intel				Auto Mar		
-10.0	mpilent		- Audomet					Marman	and the second	mundyonar	Freq Offs 0 Hz	set	
-30.0 -40.0 -50.0													
Center : Res BW				#	/ideo BW 8.00	000 MHz		l Sw		an 250 MHz s (1001 pts)			
2 Metrics	s	•											
	Occupi	ied Bandwidth 96.9) 911 MHz			Tota	l Power		33.5 di	3m			
	Transn	nit Freq Error		716.67 kH	z		OBW Pow	er	99.00				
		andwidth		102.5 MH		x dB			-26.00				
	5		Oct 14 7:58:	i, 2022 31 PM									

Plot 7-1. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 100MHz – $\pi/2$ BPSK - Full RB)



Plot 7-2. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 100MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 22 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 22 01 199
© 2022 ELEMENT			V11.0 9/14/2022



Spectrum Analyz Occupied BW	zer 1 🗸 🕇	-				Frequency	- 7 器
	Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph	•					Span 250.00 MHz	
Scale/Div 10.0	dB		Ref Value 40.00	dBm		CF Step 25.000000 MHz	
20.0 10.0 0.00		a the second second	when we have a strength of the second	r-maratherenethyrr-territertiesen		Auto Man	
-10.0	nation and the states of the s	typu-held			L. L. Martin and L. Martin Construction	Freq Offset 0 Hz	
-40.0 -50.0							
Center 3.5000 (Res BW 2.4000		#	Video BW 8.000	00 MHz	Span 250 M Sweep 1.00 ms (1001 ا		
2 Metrics	T						
Occup	ied Bandwidth 98.014	MHz		Total Power	31.5 dBm		
	nit Freq Error andwidth	-171.61 kH 103.4 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
1 5	3 7 2	Oct 14, 2022 7:59:52 PM					

Plot 7-3. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 100MHz – 16-QAM - Full RB)

Spectrum A Occupied B	Analyzer 1 BW	+					Frequen	cy y 🕌
KEYSIG RL ⊶	HT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 Avg Hold: 100/100 Radio Std: None	GHz	Center Frequency 3.500010000 GHz	Settings
1 Graph							Span 225.00 MHz	
Scale/Div 7 Log 30.0 20.0 10.0	10.0 dB		Ref Value 40.00				CF Step 22.500000 MHz Auto Man	
-40.0	hand a start and the start and	My/serte My			Vernenigentressel	Jaugheffaftaracha	Freq Offset 0 Hz	
-50.0 Center 3.50 Res BW 2.3			Video BW 8.000	00 MHz	Spa Sweep 1.00 ms	n 225 MHz (1001 pts)		
2 Metrics O	▼ Occupied Bandwidth							
		05 MHz		Total Power	33.1 dB	m		
	ransmit Freq Error dB Bandwidth	-475.14 kH 92.27 MH		% of OBW Pow x dB	er 99.00 -26.00 c			
		Oct 14, 2022 9:01:35 PM	\Box					

Plot 7-4. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 90MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 23 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 25 01 199
© 2022 ELEMENT	•		V11.0 9/14/2022



Spectrum Analyzer	1 1	F				Frequency	影
	it: RF pling: DC n: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GH Avg Hold: 100/100 Radio Std: None	Z Center Frequency 3.500010000 GHz	Settings
1 Graph	v					Span 225.00 MHz	
Scale/Div 10.0 dB Log 30.0 20.0			Ref Value 40.00			CF Step 22.500000 MHz	
10.0		Ludwining and the	ad ⁱⁿ varen iller franken och delvy	ppersonallympolympory		Auto Man	
-10.0 -20.0 -30.0	utung gu daran da	e-storet de la			Mary day allowed a low and a straight	Freq Offset 0 Hz	
-40.0							
Center 3.5000 GHz Res BW 2.2000 MH		#	Video BW 8.000		Span 2 Sweep 1.00 ms (10		
2 Metrics Occupied I	▼ Bandwidth						
	87.928	MHz		Total Power	30.8 dBm		
Transmit F x dB Band		-197.10 kH 92.71 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
1 1 1	2	Oct 14, 2022 9:02:04 PM				X	

Plot 7-5. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 90MHz – QPSK - Full RB)

Spectrum Analyz Occupied BW	ter 1 ү	F					₽	Frequency v	影
кі н	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010 Avg Hold: 100/100 Radio Std: None	000 GHz	Center Freq 3.50001000		ings
uvar 1 Graph	v	NFE: Off					Span 225.00 MH:	z	
Scale/Div 10.0 c	јВ 		Ref Value 40.00) dBm			CF Step 22.500000	MHz	
20.0 10.0 0.00		phananan	norgensed and and the	~} }}.~~?~?~?~~?~~?~~?~~?~~?~~~?~~~~?~~~	`		Auto Man		
-10.0 -20.0 -30.0	-maralladiradira	www.and			Murathanton	many	Freq Offset 0 Hz		
-40.0 -50.0									
Center 3.5000 G Res BW 2.2000		#	Video BW 8.000	00 MHz		Span 225 MHz ms (1001 pts)			
2 Metrics	•								
Occupi	ed Bandwidth 88.000) MHz		Total Power	31.1	dBm			
	nit Freq Error andwidth	-83.940 kH 92.86 MH		% of OBW Pov x dB		00 % 00 dB			
		0-1144 0000	~ ^						
50		Oct 14, 2022 9:02:36 PM							

Plot 7-6. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 90MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Page 24 of 199		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 24 01 199		
© 2022 ELEMENT			V11.0 9/14/2022		



Spectrum Analyzer 1 Occupied BW	• +								\$	Frequency	*
RL 🗭 Align	bling: DC Col Col: Auto Fre	r CCorr q Ref: Int (S)	Atten: 32 dB	Trig: Free R Gate: Off #IF Gain: Lo		Center Freq: Avg Hold: 10 Radio Std: N		GHz		Frequency 10000 GHz	Settings
LXI 1 Graph	NF V	E: Off							Span 200.00	MHz	
Scale/Div 10.0 dB Log 30.0 20.0			Ref Value 40.00 (Sel and by				CF Step 20.000	000 MHz	
10.0 0.00 -10.0									Ma Freq Off	n	
-40.0	and a second sec					hunnying	وريو رويو وروي ورويو	and the first state of the second state of the	0 Hz		
-50.0 Center 3.5000 GHz Res BW 1.8000 MH:	z	<u> </u> #\	/ideo BW 6.0000) MHz		Sw	Spa eep 1.00 ms	an 200 MHz ; (1001 pts)			
2 Metrics	v										
Occupied E	Bandwidth 77.480 MH:	z		Total Pow	er		32.7 dB	im			
Transmit Fi x dB Bandy		-242.80 kHz 81.61 MHz		% of OBV x dB	V Power	•	99.00 -26.00 c				
1 50		ct 14, 2022									

Plot 7-7. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 80MHz – $\pi/2$ BPSK - Full RB)

Spectrum Occupied	Analyzer 1 BW	+					Frequenc	y v 🔆
KEYSIC RL •	GHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 Avg Hold: 100/100 Radio Std: None		Center Frequency 3.500010000 GHz	Settings
1 Graph	•						Span 200.00 MHz	
Scale/Div Log 30.0 20.0 10.0	7 10.0 dB		Ref Value 40.00	dBm herbyrouten Herbergene Langere			CF Step 20.000000 MHz Auto Man	
-40.0	hada furusfi varaf da dhiki fina karan k	ush-p			"Wennessley-ephonesol.com		Freq Offset 0 Hz	
-50.0 Center 3.5 Res BW 1	5000 GHz 1.8000 MHz	. #	Video BW 6.000	00 MHz	Spa Sweep 1.00 ms	an 200 MHz (1001 pts)		
2 Metrics	۲							
C	Occupied Bandwidth 77.69	1 MHz		Total Power	30.7 dE	m		
	Transmit Freq Error x dB Bandwidth	-75.167 kH 81.98 MH		% of OBW Pow x dB	ver 99.00 -26.00 d			
H r		Oct 14, 2022 9:34:22 PM						

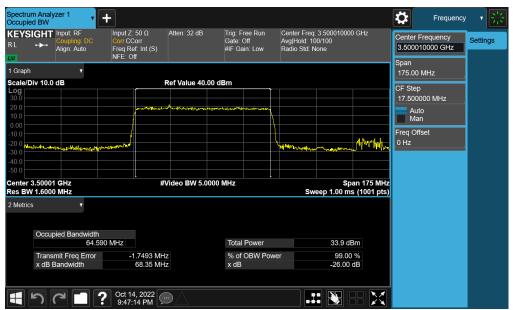
Plot 7-8. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 80MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Page 25 of 199		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 25 01 199		
© 2022 ELEMENT	•		V11.0 9/14/2022		



Spectrum Analyzer 1	F				Frequency	- * 送
KEYSIGHT Input: RF R L Image: Coupling: DC Align: Auto Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph					Span 200.00 MHz	
Scale/Div 10.0 dB		Ref Value 40.00			CF Step 20.000000 MHz	
10.0	and a start of the	alana, nanafalataa Maada	olongerogenoa dha afallara		Auto Man Freq Offset	
-10.0 -20.0 -30.0 -40.0	ulewskither			here was and an in a solution by a stranger	0 Hz	
-40.0 -50.0 Center 3.5000 GHz		Video B W 6.000	00 MHz	Span 200 MHz		
Res BW 1.8000 MHz 2 Metrics				Sweep 1.00 ms (1001 pts		
Occupied Bandwidth 77.734			Total Power	30.4 dBm		
Transmit Freq Error x dB Bandwidth	-66.589 kH 82.06 MH		% of OBW Power x dB			
	Oct 14, 2022					
1 つ つ う ?	Oct 14, 2022 9:34:43 PM	$\Box \triangle$		E 🔣 🔀		

Plot 7-9. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 80MHz – 16-QAM - Full RB)



Plot 7-10. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 70MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Page 26 of 199		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 20 01 199		
© 2022 ELEMENT	•	•	V11.0 9/14/2022		



Spectrum Analyzer 1	+				Frequency	· ※
KEYSIGHT Input: RF R L Imput: RF Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph 🔹					Span 175.00 MHz	
Scale/Div 10.0 dB		Ref Value 40.00	dBm		CF Step 17.500000 MHz	
10.0 0.00 -10.0 -20.0				Walking to I am a second second	Man Freq Offset	
-20.0 <mark>4</mark>	күлтитар. 			Wangan and an and a second and a second		
Center 3.50001 GHz Res BW 1.6000 MHz	. #	Video BW 5.000	0 MHz	Span 175 MH Sweep 1.00 ms (1001 pts		
2 Metrics v						
Occupied Bandwidth 67.69	1 MHz		Total Power	30.4 dBm		
Transmit Freq Error x dB Bandwidth	-128.09 kH 71.56 MH		% of OBW Powe x dB	er 99.00 % -26.00 dB		
4 56 1 7	Oct 14, 2022 9:46:39 PM					

Plot 7-11. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 70MHz – QPSK - Full RB)

Spectrum Analyzer 1 Occupied BW				Frequency	• *
KEYSIGHT Input: RF Input Z: 50 R L → Coupling: DC Corr Ccorr Align: Auto Freq Ref: I NFE: Off		Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph v	D-61/-lu- 40.00 d	.	1	Span 175.00 MHz	
Scale/Div 10.0 dB	Ref Value 40.00 d			CF Step 17.500000 MHz	
20.0 10.0 0.00	¹ ่งไขสาวรูโลการูปสาวสีขึ้นไปสาว _ส าว _า นุษณฑ์ ⁴⁴	hand day of the second derived		Auto Man	
-10.0 -20.0 -30.0			manth programme the production of the second second	Freq Offset 0 Hz	
-40.0 -50.0 Center 3.50001 GHz	#Video BW 5.0000	MHz	Span 175 MHz		
Res BW 1.6000 MHz 2 Metrics			Sweep 1.00 ms (1001 pts)		
Occupied Bandwidth 67.709 MHz		Total Power	30.4 dBm		
	750 kHz .54 MHz	% of OBW Powe x dB	er 99.00 % -26.00 dB		
Ct 14,2 9:46:53	2022				

Plot 7-12. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 70MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Page 27 of 199		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 27 01 199		
© 2022 ELEMENT			V11.0 9/14/2022		



Spectrum Analyzer 1 Occupied BW	• +				ť,	Frequency	▼ ¹ / ₂ / ₂
KEYSIGHT Input: RF RL +++ Align: Auto	C Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 Avg Hold: 100/100 Radio Std: None	Ce 3.	.500010000 GHz	Settings
1 Graph 🔻					Sp 15	ban 50.00 MHz	
Scale/Div 10.0 dB		Ref Value 40.00 d				^E Step 5.000000 MHz Auto Man	
0.00 -10.0 -20.0 -30.0 -40.0	hubunding			and and a start of the start of		eq Offset Hz	
-50.0 Center 3.50001 GHz Res BW 1.5000 MHz		#Video BW 5.0000	MHz	Sp Sweep 1.00 ms	an 150 MHz s (1001 pts)		
2 Metrics V							
Occupied Bandw	idth 68.150 MHz		Total Power	32.7 dE	Bm		
Transmit Freq Er x dB Bandwidth	ror -26.101 ki 61.59 Mi		% of OBW Powe x dB	er 99.00 -26.00			
H 5 C 1	Oct 14, 2022 10:05:29 PM						

Plot 7-13. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 60MHz – $\pi/2$ BPSK - Full RB)

Spectrum Analyzer 1	+				Frequency	- * 影
KEYSIGHT Input: RF RL ↔ Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph v Scale/Div 10.0 dB	NFE: Off	Ref Value 40.00 (dPm		Span 150.00 MHz	
Log 30.0 20.0			นอาก เกาะของเลือนสู่ประเทศ		CF Step 15.000000 MHz	
10.0 0.00 -10.0 -20.0					Man Freq Offset 0 Hz	
-20.0 -30.0 -40.0 -50.0	Mudella Internetion			han in harren ar an		
Center 3.50001 GHz Res BW 1.5000 MHz	#\	/ideo BW 5.0000) MHz	Span 150 M Sweep 1.00 ms (1001 p		
2 Metrics v						
Occupied Bandwidth 57.75	51 MHz		Total Power	30.3 dBm		
Transmit Freq Error x dB Bandwidth	-30.638 kHz 61.41 MHz		% of OBW Pow x dB	er 99.00 % -26.00 dB		
4 h C L	Oct 14, 2022					

Plot 7-14. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 60MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	
Test Report S/N:	Test Dates:	EUT Type:	Page 28 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 20 01 199
© 2022 ELEMENT	·	·	V11.0 9/14/2022



Spectrum Analyzer 1 Occupied BW	• +						₽	Frequency	- * 影
KEYSIGHT Input: F RL +++ Couplir Align: A	ig: DC Corr CC	Corr ef: Int (S)	Gate:	Off	Center Freq: 3 Avg Hold: 100 Radio Std: No			Frequency 10000 GHz	Settings
1 Graph	•						Span 150.00	MHz	
Scale/Div 10.0 dB		Ref Valu	ue 40.00 dBm				CF Step 15.000) 000 MHz	
20.0 10.0 0.00		abardar, morant Saulthay	need the second s	ne en un ann			Aut Ma		
-10.0 -20.0	monument				menoner		Freq Off Addition 0 Hz	fset	
-30.0 -40.0 -50.0									
Center 3.50001 GHz Res BW 1.5000 MHz		↓ #Video B	W 5.0000 MHz	<u> </u>	Swee	Span 150 N ep 1.00 ms (1001 p			
2 Metrics	•								
Occupied Ba				D					
Too a south Frank	58.082 MHz	47.000 kt l=		Power		31.7 dBm			
Transmit Free x dB Bandwid		-47.302 kHz 61.70 MHz	% of x dB	OBW Power		99.00 % -26.00 dB			
		4, 2022					~		
1 1 1		4, 2022							

Plot 7-15. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 60MHz – 16-QAM - Full RB)



Plot 7-16. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 50MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Dogo 20 of 100		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 29 of 199		
© 2022 ELEMENT			V11.0 9/14/2022		



Spectrum Analyzer 1 Occupied BW	ł				Frequency	- * 崇
KEYSIGHT Input: RF R L Imple: Coupling: DC Align: Auto Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph ▼ Scale/Div 10.0 dB		Ref Value 40.00	-17		Span 125.00 MHz	
Scale/Div 10.0 dB			abm		CF Step 12.500000 MHz	
10.0					Man Freq Offset	
-20.0 -30.0 youth when the first of the second of the seco	heronavar have			hall have more and a more hard from a	0 Hz	
-50.0 Center 3,50001 GHz Res BW 1,2000 MHz	#	/ideo BW 4.000	0 MHz	Span 125 MHz Sweep 1.00 ms (1001 pts		
2 Metrics v				Sweep 1.00 ms (1001 pts	1	
Occupied Bandwidth 47 76	8 MHz		Total Power	30.9 dBm		
Transmit Freq Error x dB Bandwidth	-141.81 kH 50.64 MH		% of OBW Pow x dB			
	Oct 14, 2022					

Plot 7-17. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 50MHz – QPSK - Full RB)

Spectrum Occupied	Analyzer 1 BW	+				Frequency	[茶
	GHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph	•					125.00 MHz	
Scale/Div Log 30.0 20.0 10.0	/ 10.0 dB		Ref Value 40.00	dBm ฟาาหาล่างเหนือเหนือเป็นเป็นเป็นเป็นเป็นเป็นเป็นเป็นเป็นเป็น		CF Step 12.500000 MHz Auto Man	
0.00 -10.0 -20.0 -30.0 -40.0 -50.0	l _อ การในการจะมีประสูประการ	honolumenta			Winnerskip Januarski Japolski signer	Freq Offset 0 Hz	
Center 3.5	50001 GHz I.2000 MHz	#	/ideo BW 4.000	0 MHz	Span 125 MH Sweep 1.00 ms (1001 pt		
2 Metrics	•					2	
C	Occupied Bandwidth 47.57	1 MHz		Total Power	30.3 dBm		
	Transmit Freq Error x dB Bandwidth	-42.748 kH 50.71 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
4		Oct 14, 2022					

Plot 7-18. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 50MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 20 of 100	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 30 of 199	
© 2022 ELEMENT			V11.0 9/14/2022	



Spectrum Occupied	Analyzer 1	+				Frequency	
	GHT Input: RF ↔ Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph						Span 100.00 MHz	
Log 30.0 20.0 10.0	v 10.0 dB	malate more	Ref Value 40.00	dBm		CF Step 10.000000 MHz Auto Man	
0.00 -10.0 -20.0 -30.0 -40.0 -50.0	- son and the son the son all	H-malitud			Anna and a start a sta	Freq Offset 0 Hz	
Center 3.	.50001 GHz 910.00 kHz		Video BW 3.000	D MHz	Span 100 M Sweep 1.00 ms (1001 p		
2 Metrics	٣						
	Occupied Bandwidth 35.99	92 MHz		Total Power	34.4 dBm		
	Transmit Freq Error x dB Bandwidth	-1.1280 MH 38.41 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
		Nov 04, 2022					

Plot 7-19. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 40MHz – $\pi/2$ BPSK - Full RB)

Coupling: DC					Frequency	
Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph v	NFE: Off				Span 100.00 MHz	
Scale/Div 10.0 dB		Ref Value 40.00 d			CF Step 10.000000 MHz	
10.0 0.00 -10.0			and and a long of the long of		Auto Man Freq Offset	
-20.0 -30.0 -40.0	where the second s			Martin Martin Martin Martin Martin Martin Star	0 Hz	
-50.0 Center 3.50001 GHz	#\	/ideo BW 3.0000	MHz	Span 100 MH		
Res BW 910.00 kHz 2 Metrics				Sweep 1.00 ms (1001 pts)	
Occupied Bandwidth 37.997 I	MHz		Total Power	32.3 dBm		
Transmit Freq Error x dB Bandwidth	-56.530 kH; 40.49 MH;		% of OBW Pow x dB			
	Nov 04, 2022					

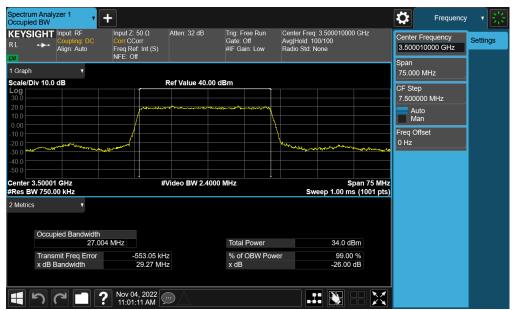
Plot 7-20. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 40MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Dogo 21 of 100	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 31 of 199	
© 2022 ELEMENT	•		V11.0 9/14/2022	



Spectrum Analyzer 1 Occupied BW	+			Frequency •	尝
KEYSIGHT Input: RF RL Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 3; Corr CCorr Freq Ref: Int (S) NFE: Off	Gate: Off A	enter Freq: 3.500010000 GHz vg Hold: 100/100 adio Std: None	Center Frequency 3.500010000 GHz	s
1 Graph 🔻				Span 100.00 MHz	
Scale/Div 10.0 dB	Ref Valu	e 40.00 dBm		CF Step 10.000000 MHz	
20.0 10.0 0.00	rest tradition	างการการการการการการการการการการการการการก		Auto Man	
-10.0 -20.0 -20.0	NY WANT		รับไสกรัพที่จุดสมกับสามาร์ (การการการการการการการการการการการการการก	Freq Offset 0 Hz	
-30.0 -40.0 -50.0					
Center 3.50001 GHz Res BW 910.00 kHz	#Video B\	V 3.0000 MHz	Span 100 MHz Sweep 1.00 ms (1001 pts)		
2 Metrics v					
Occupied Bandwidth	98 MHz	Total Power	31.9 dBm		
Transmit Freq Error x dB Bandwidth	-22.431 kHz 40.65 MHz	% of OBW Power x dB	99.00 % -26.00 dB		
X db Bandwidth			20.00 40		
4 h C L 1	Nov 04, 2022				

Plot 7-21. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 40MHz – 16-QAM - Full RB)



Plot 7-22. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 30MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT			
Test Report S/N:	Test Dates:	EUT Type:	Dogo 22 of 100		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 32 of 199		
© 2022 ELEMENT			V11.0 9/14/2022		



Spectrum Analyzer 1 Occupied BW	+				Frequency	- * 崇
KEYSIGHT Input: RF R L Image: Coupling: DC Align: Auto Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
LNI 1 Graph V	NFE. UI				Span 75.000 MHz	
Scale/Div 10.0 dB		Ref Value 40.00	abm		CF Step 7.500000 MHz	
0.00 -10.0 -20.0	And the state of t			How And BUT BOUNDARY MEDIC - A HAMMAN	Man Freq Offset 0 Hz	
-30.0 -40.0 -50.0 Center 3,50001 GHz		Video BW 2.400	0 MHz			
#Res BW 750.00 kHz				Sweep 1.00 ms (1001 pt		
2 Metrics v Occupied Bandwidth 27.5	1 978 MHz		Total Power	32.0 dBm		
Transmit Freq Error x dB Bandwidth	-43.803 kH 30.21 MH		% of OBW Pow x dB			
4 7 C 1	? Nov 04, 2022 11:01:29 AM					

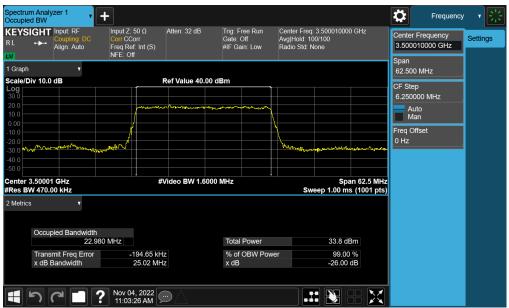
Plot 7-23. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 30MHz – QPSK - Full RB)

Spectrum Occupied	Analyzer 1 💡	+				Frequency	· · ※
RL •	GHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
<mark>⊥xı</mark> 1 Graph	*					Span 75.000 MHz	
Scale/Div Log 30.0 20.0	/ 10.0 dB		Ref Value 40.00			CF Step 7.500000 MHz	
10.0			M			Auto Man	
-10.0 -20.0 -30.0	ruhun myalalan di dan dalamatan	energies and a second			how malene hy the hyperbolist all and all well	Freq Offset 0 Hz	
-40.0							
	50001 GHz 750.00 kHz	#	Video BW 2.400	DO MHZ	Span 75 Mi Sweep 1.00 ms (1001 pt		
2 Metrics	▼ Occupied Bandwidth	1					
	. 28.0	012 MHz		Total Power	32.2 dBm		
	Transmit Freq Error x dB Bandwidth	-42.993 kH 30.27 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
-		? Nov 04, 2022 11:01:50 AM					

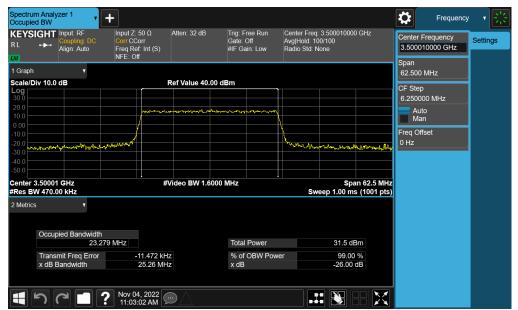
Plot 7-24. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 30MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		Approved by: Technical Manager	
Test Report S/N:	Test Dates:	est Dates: EUT Type:	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 33 of 199
© 2022 ELEMENT			V11.0 9/14/2022





Plot 7-25. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 25MHz – $\pi/2$ BPSK - Full RB)



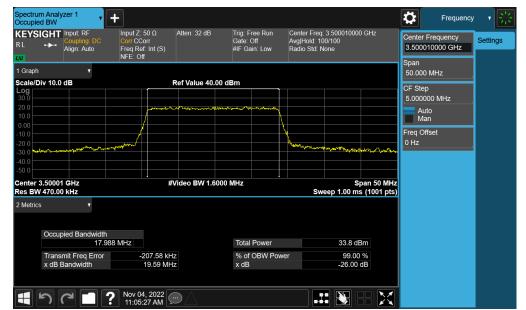
Plot 7-26. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 25MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		Approved by: Technical Manager		
Test Report S/N:	Test Dates:	es: EUT Type:		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 34 of 199	
© 2022 ELEMENT	•		V11.0 9/14/2022	



Spectrum Analyzer 1 Occupied BW				Frequency	- T 🕄
R L + Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 32 c Corr CCorr Freq Ref: Int (S) NFE: Off	Gate: Off Avg	er Freq: 3.500010000 GHz Hold: 100/100 o Std: None	Center Frequency 3.500010000 GHz	Settings
I Graph				Span 62.500 MHz	
Scale/Div 10.0 dB _og 30.0 20.0	Ref Value			CF Step 6.250000 MHz	
10.0 0.00 10.0		drawing Manager and a strategy		Auto Man Freq Offset	
-20.0 -30.0		- hu	montallistichenseiten ministeren för		
-40.0 -50.0 Center 3.50001 GHz	#Video BW	1.6000 MHz	Span 62.5 MH	z	
#Res BW 470.00 kHz			Sweep 1.00 ms (1001 pts	2	
2 Metrics v					
Occupied Bandwidth 23.299 N	1Hz	Total Power	31.2 dBm		
Transmit Freq Error x dB Bandwidth	-9.548 kHz 25.48 MHz	% of OBW Power x dB	99.00 % -26.00 dB		
	Nov 04, 2022				

Plot 7-27. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 25MHz – 16-QAM - Full RB)



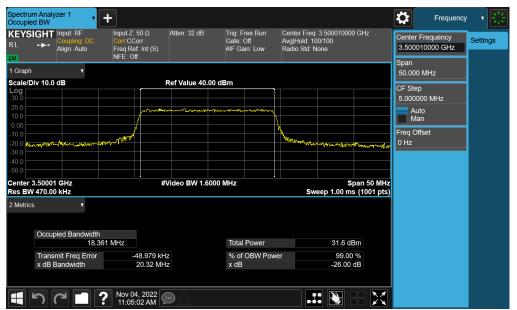
Plot 7-28. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 20MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		Approved by: Technical Manager		
Test Report S/N:	Test Dates:	est Dates: EUT Type:		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 35 of 199	
© 2022 ELEMENT			V11.0 9/14/2022	



Spectrum Analyzer Occupied BW	r 1 🛛 🕇	F				Frequency	- ※
	put: RF pupling: DC ign: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph	v					Span 50.000 MHz	
Scale/Div 10.0 dE Log 30.0 20.0 10.0	3		Ref Value 40.00			CF Step 5.000000 MHz Auto Man	
0.00 -10.0 -20.0 -30.0 -40.0	il	want and a second			Mangana wana ana ana ana ana ana ana ana ana	Freq Offset 0 Hz	
-50.0 Center 3.50001 G Res BW 470.00 kl		#	Video BW 1.600	00 MHz	Span 50 Sweep 1.00 ms (1001		
2 Metrics	V						l l
Occupied	d Bandwidth 18.392	2 MHz		Total Power	31.4 dBm		
Transmit x dB Bar	: Freq Error ndwidth	-15.236 kH 20.29 MH		% of OBW Pow x dB	ver 99.00 % -26.00 dB		
1 16		Nov 04, 2022 11:04:47 AM					

Plot 7-29. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 20MHz – QPSK - Full RB)



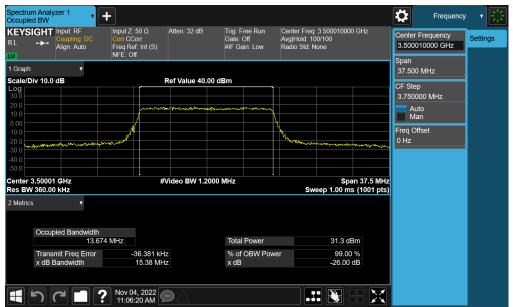
Plot 7-30. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 20MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		Approved by: Technical Manager		
Test Report S/N:	Test Dates:	Test Dates: EUT Type:		
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 36 of 199	
© 2022 ELEMENT		•	V11.0 9/14/2022	



Spectrum Analyzer 1 Occupied BW	+			Frequency	・影
KEYSIGHT Input: RF R L Imput: RF Align: Auto	Input Z: 50 Ω Atter Corr CCorr Freq Ref: Int (S) NFE: Off	n: 32 dB Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.500010000 GHz Avg Hold:>100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph v Scale/Div 10.0 dB		alue 40.00 dBm		Span 37.500 MHz	
Log 30.0 10.0 10.0 -20.0		BW 1.2000 MHz	Span 37.5 MH;	CF Step 3.750000 MHz Auto Man Freq Offset 0 Hz	
Res BW 360.00 kHz 2 Metrics Coccupied Bandwidth 13.013 Transmit Freq Error x dB Bandwidth	-378.95 kHz 14.67 MHz	Total Power % of OBW Pov x dB	Sweep 1.00 ms (1001 pts 33.9 dBm		
	Nov 04, 2022				

Plot 7-31. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 15MHz – $\pi/2$ BPSK - Full RB)



Plot 7-32. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 15MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT					
Test Report S/N:	Test Dates:	EUT Type:	Page 37 of 199				
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 37 01 199				
© 2022 ELEMENT			V11.0 9/14/2022				



Spectrum Analyzer 1 Occupied BW	• +				Frequency	- 7 ※
KEYSIGHT Input: RF R L Imput: RF Align: Auto		Atten: 32 dB Trig: Free Run Gate: Off #/F Gain: Low		Center Freq: 3.500010000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.500010000 GHz	Settings
1 Graph 🔹					Span 37.500 MHz	
Scale/Div 10.0 dB Log 30.0 20.0 10.0		Ref Value 40.00	dBm		CF Step 3.750000 MHz Auto Man	
0.00 -10.0 -20.0 -30.0 -40.0	And the second s			Mar Marine Marine	Freq Offset 0 Hz	
-50.0 Center 3.50001 GHz Res BW 360.00 kHz		#Video BW 1.200	0 MHz	Span 37.5 M Sweep 1.00 ms (1001 p		
2 Metrics V						
Occupied Bandy	width 13.655 MHz		Total Power	31.6 dBm		
Transmit Freq E x dB Bandwidth			% of OBW Pow x dB	er 99.00 % -26.00 dB		
1 50	Nov 04, 2022 11:06:51 AM					

Plot 7-33. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 15MHz – 16-QAM - Full RB)



Plot 7-34. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 10MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT					
Test Report S/N:	Test Dates:	EUT Type:	Page 38 of 199				
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage So UL 199				
© 2022 ELEMENT	·		V11.0 9/14/2022				



Spectrum Occupied	Analyzer 1	+						\$	Frequency	,崇
RL	GHT Input: RF ↔ Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	A	center Freq: 3.50001000 vg Hold:>100/100 tadio Std: None	00 GHz	Center Fre 3.500010		Settings
1 Graph	v	NFE: UII						Span _25.000 M	IHz	
Log 30.0	v 10.0 dB		Ref Value 40.00	dBm				CF Step 2.500000) MHz	
20.0 10.0 0.00			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	มใการะไฟไละสูกไฟฟูเค <mark>า</mark> การหนูโหนไฟฟิน				Auto Man		
-10.0 -20.0 -30.0	R-smanna mark	Annow Barrow				Www.martanalashin	and a state of the	Freq Offse 0 Hz	et	
-40.0 -50.0										
	.50001 GHz 240.00 kHz	1	Video BW 750.0	0 kHz		s Sweep 1.00 m	Span 25 MHz ns (1001 pts)			
2 Metrics	T									
	Occupied Bandwidth 8.676	i0 MHz		Total Power		30.8 d	IBm			
	Transmit Freq Error x dB Bandwidth	-41.966 k⊦ 10.11 M⊦		% of OBW F x dB	ower	99.0 -26.00				
		Nov 04, 2022								
		11:07:31 AM								

Plot 7-35. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 10MHz – QPSK - Full RB)



Plot 7-36. Occupied Bandwidth Plot (NR Band n77 - DoD Band – 10MHz – 16-QAM - Full RB)

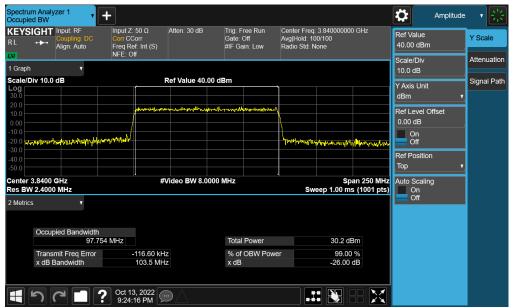
FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT					
Test Report S/N:	Test Dates:	EUT Type:	Page 39 of 199				
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 39 01 199				
© 2022 ELEMENT			V11.0 9/14/2022				



NR Band n77 (PC2) - C-Band

Spectrum Ana Occupied BW		ł					Amplitude	- * 崇
KEYSIGH	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 30 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.84000000 Avg Hold: 100/100 Radio Std: None	0 GHz	Ref Value 40.00 dBm	Y Scale
1 Graph	•						Scale/Div 10.0 dB	Attenuation
Scale/Div 10.	0 dB		Ref Value 40.00 d	iBm			Y Axis Unit dBm v	Signal Path
20.0 10.0 -10.0			Y freedom and the second second	การใช้ไปว่างอย่างในสร้างกับสุดภูมิคร			Ref Level Offset 0.00 dB On	
-20.0 -30.0 -40.0 -50.0	ay, ang halaya may hada ay hada	proposition			kaphanahasaan dolaraad	∖ ∮ _₽ ₽₩₽₽₽ _{₽₽} ₽₽	Off Ref Position Top •	
Center 3.8400 Res BW 2.400		. #	Video BW 8.0000	MHz	Sweep 1.00 m	oan 250 MHz s (1001 pts)	Auto Scaling On Off	
2 Metrics Occu	▼ upied Bandwidth 96.602			Total Power	32.0 d	Bm		
	96.002 smit Freq Error Bandwidth	-606.47 kH 102.4 MH		% of OBW Pow x dB) %		
H 5	C □ ?	Oct 13, 2022 9:22:39 PM	\mathbb{D}					

Plot 7-37. Occupied Bandwidth Plot (NR Band n77 - C-Band – 100MHz – $\pi/2$ BPSK - Full RB)



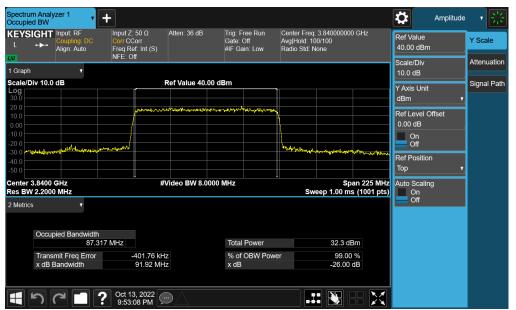
Plot 7-38. Occupied Bandwidth Plot (NR Band n77 - C-Band – 100MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT						
Test Report S/N:	Test Dates:	EUT Type:	Dogo 40 of 100					
1M2209010098-10.A3L	Portable Handset	Page 40 of 199						
© 2022 ELEMENT	•		V11.0 9/14/2022					



Spectrum Ar Occupied B	alyzer 1 V	+							₽	Amplitude	7 器
RL +>	Coupling: DC	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 30 dB	Gate: Off Avg Ho		Avg Hold: 10	Center Freq: 3.840000000 GHz Avg Hold: 100/100 Radio Std: None		Ref Value 40.00 dBm	1	Y Scale
1 Graph	V	NFE. OII							Scale/Div 10.0 dB		Attenuation
Scale/Div 1	0.0 dB		Ref Value 40.						Y Axis Unit dBm	: •	Signal Path
20.0 10.0 0.00		frontient	Jertheydragoad	₩₩₩₩₩₩₩₩₩	******				Ref Level 0 0.00 dB	Offset	
-10.0 -20.0 -30.0	_{เพิ่} มหมางจะสาว	manenterphete				-	Harman Harrison Harrison	nd management	On Off		
-40.0									Ref Positio Top	· · · · · · · · · · · · · · · · · · ·	
Center 3.84 Res BW 2.4 2 Metrics			#Video BW 8.0	000 MHz		Sw		an 250 MHz s (1001 pts)	Auto Scalir On Off	ng	
2 Metrics											
Oc	cupied Bandwidth 97.7	i 725 MHz		Total	Power		30.1 di	Зm			
	nsmit Freq Error B Bandwidth	9.008 103.2 M		% of x dB	OBW Powe	r	99.00 -26.00				
1 5		? Oct 13, 2022 9:24:49 PM									

Plot 7-39. Occupied Bandwidth Plot (NR Band n77 - C-Band – 100MHz – 16-QAM - Full RB)



Plot 7-40. Occupied Bandwidth Plot (NR Band n77 - C-Band – 90MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT						
Test Report S/N:	Test Dates:	EUT Type:	Page 41 of 199					
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 41 01 199					
© 2022 ELEMENT	· · · ·	·	V11.0 9/14/2022					



Spectrui Occupie	m Analy. d BW	zer 1 🗸	+										Ampli	tude	- * 絵
RL		Input: RF Coupling: DC Align: Auto	Input Z: Corr CC Freq Re NFE: Of	orr f: Int (S)	Atten: 36 dB	Gate: Off Avg Hold		Avg Hold: 10	Center Freq: 3.840000000 GHz wg Hold: 100/100 Radio Std: None		Ref Va 40.00			Y Scale	
1 Graph		۲	NFE. OI									Scale/I 10.0 d			Attenuation
Scale/D Log 30.0	iv 10.0	dB			Ref Value 40	.00 dBr	n					Y Axis dBm	Unit	Ţ	Signal Path
20.0 10.0 0.00				, er testetetetetetetetetetetetetetetetetete	whattelenes/pilogen	a filoso a Nexa	an Albert	a				Ref Le 0.00 c	vel Offset IB		
-30.0	den ile-hare	international and the second	₩ſĮIJŢĸŧŔŧŔĸŔſĬŢ						Maran Wrad	(htps://www.adv.ydys)	nalmalana	O O Ref Po	ff		
-40.0 -50.0	2 9400 /	244			/ideo BW 8.0	000 M	U. .				an 225 MHz	Тор		•	
Res BW	2.2000			#		000 141	ΠZ		Sw		s (1001 pts)		'n		
2 mounds	,														
	Occup	ied Bandwidth 87.8	n 870 MHz				Total	Power		30.8 di	3m				
		nit Freq Error landwidth		118.98 kH 92.88 MH			% of x dB	OBW Powe	er	99.00 -26.00					
	り (2		i, 2022 23 PM					- F						

Plot 7-41. Occupied Bandwidth Plot (NR Band n77 - C-Band – 90MHz – QPSK - Full RB)

Spectrum Ar Occupied B	nalyzer 1 N	+							\	Amplitude	- * ※
KEYSIGH RL ↔	Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Gate: Off Avg H		enter Freq: 3.840000000 GHz vg Hold: 100/100 tadio Std: None			Ref Value 40.00 dBm		Y Scale
LN 1 Graph	•								Scale/Div 10.0 dB	/	Attenuation
Scale/Div 1 Log 30.0	0.0 dB		Ref Value 40.00	dBm					Y Axis U dBm	nit 🔻	Signal Path
20.0 10.0 0.00 -10.0			garager Minne annually air sinn	**************************************		Part Int			Ref Leve 0.00 dB On	l Offset	
-20.0 -30.0 -40.0 -50.0 -20.0	Mpunporturturtaria					"Talahikin darah	(referentille serferenze	halluyol Woldowya	Off Ref Posi Top	iion T	
Center 3.84 Res BW 2.2		1	Video BW 8.000	00 MHz		Sweep		n 225 MHz (1001 pts)	Auto Sca On	ling	
2 Metrics Oc	▼ cupied Bandwidth 87.7	n 747 MHz		Total Powe	r		31.4 dBr	n	Off		
	ansmit Freq Error IB Bandwidth	-73.535 kł 92.88 Mł		% of OBW x dB	Power		99.00 % -26.00 dl				
1 5		? Oct 13, 2022 9:53:32 PM	\mathbb{D}								

Plot 7-42. Occupied Bandwidth Plot (NR Band n77 - C-Band – 90MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Page 42 of 199			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 42 01 199			
© 2022 ELEMENT			V11.0 9/14/2022			



Spectrum Analyzer 1 Occupied BW	• +						₽	Amplitude	- 7 絵
KEYSIGHT Input: RF R L Input: RF Align: Auto	C Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Gat	te: Off	Center Freq: 3 Avg Hold: 100 Radio Std: No	/100	GHz	Ref Value 40.00 dBm		Y Scale
LXI 1 Graph ▼	NFE. UII						Scale/Div 10.0 dB		Attenuation
Scale/Div 10.0 dB		Ref Value 40.00 dBm					Y Axis Unit dBm	•	Signal Path
20.0 10.0 0.00 -10.0 -20.0		าะสมุที่ไข่/มีอุลส์มุกระวาสการให้แห่ง/มูลม	narha laborato constata da				Ref Level C 0.00 dB On Off	Dffset	
-30.0 -40.0 -50.0				and and a second second			Ref Position Top		
Center 3.8400 GHz Res BW 1.8000 MHz		#Video BW 6.0000 MHz		Swe	Spa ep 1.00 ms	n 200 MHz (1001 pts)	Auto Scalin On Off	g	
2 Metrics v	vidth 77.376 MHz	Το	ital Power		32.1 dBi	m			
Transmit Freq E x dB Bandwidth		Hz %	of OBW Power	r	99.00 ° -26.00 d	%			
= こ こ	Oct 13, 2022 10:13:28 PM	\square							

Plot 7-43. Occupied Bandwidth Plot (NR Band n77 - C-Band – 80MHz – $\pi/2$ BPSK - Full RB)

Spectrum A Occupied B		t							*	Amplitude	- * 詳
RL ↔	HT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Fr Gate: C #IF Gai		Center Freq: Avg Hold:>1 Radio Std: N		θHz	Ref Value 40.00 dBr	n	Y Scale
1 Graph	*								Scale/Div 10.0 dB		Attenuation
Scale/Div 1	10.0 dB		Ref Value 40.00	dBm					Y Axis Uni dBm	t v	Signal Path
20.0 10.0 0.00 -10.0		http://personalitation	herenan en herenan here	ndyingginunda	mhr Manthalan				Ref Level 0.00 dB	Offset	
	hallow million and the	mann				WWW/wwwwww	duk Markety rakali An	whencen	On Off Ref Positio	on	
-50.0 Center 3.84		#	/ideo BW 6.000	0 MHz				200 MHz	Top Auto Scali	v ng	
Res BW 1.8 2 Metrics	3000 MHz *					Sw	eep 1.00 ms (1001 pts)	On Off		
0	ccupied Bandwidth	5 MHz		Total	Power		30.5 dBm				
	ansmit Freq Error dB Bandwidth	-160.50 kH 81.92 MH			OBW Pow	er	99.00 % -26.00 dB	•			
		Oct 13, 2022 10:13:57 PM						X			

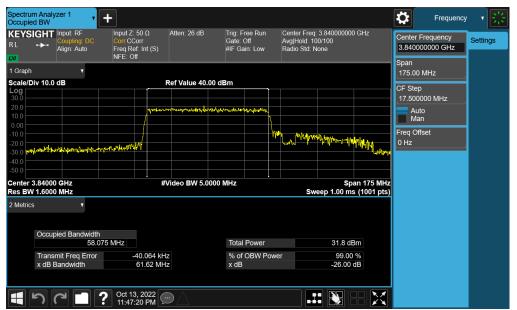
Plot 7-44. Occupied Bandwidth Plot (NR Band n77 - C-Band – 80MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT					
Test Report S/N:	Test Dates:	EUT Type:	Page 43 of 199				
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 45 01 199				
© 2022 ELEMENT		·	V11.0 9/14/2022				



Spectrum Ar Occupied BV	alyzer 1	+							\$	Amplitude	・景
KEYSIGH	Coupling: DC	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Gate: (ree Run Off iin: Low	Center Freq: Avg Hold: 10 Radio Std: N	0/100) GHz	Ref Valu 40.00 di	-	Y Scale
LN 1 Graph	•								Scale/Di 10.0 dB		Attenuation
Scale/Div 10 30.0	0.0 dB		Ref Value 40.00	dBm					Y Axis U dBm	nit •	Signal Path
20.0 10.0 0.00 -10.0 -20.0	el-milledulledulleduleur	Metter by		n halppender	~~~le~~gets&fl~~,	ulogilan and a	mar hall be about	S Lite all Accession	Ref Leve 0.00 dB On Off		
-30.0 -40.0 -50.0 Center 3.84			Video BW 6.000	0 MHz				an 200 MHz	Ref Posi Top Auto Sca	•	
Res BW 1.8						Sw		s (1001 pts)	On Off		
Oc	cupied Bandwidth 77.71	9 MHz		Total	Power		31.2 df	3m			
	nsmit Freq Error B Bandwidth	-95.642 kH 82.18 MH		% of x dB	OBW Powe	er	99.00 -26.00				
1 5		Oct 13, 2022 10:14:06 PM	\square								

Plot 7-45. Occupied Bandwidth Plot (NR Band n77 - C-Band – 80MHz – 16-QAM - Full RB)



Plot 7-46. Occupied Bandwidth Plot (NR Band n77 - C-Band – 70MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Page 44 of 199			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	10/13/2022 - 11/16/2022 Portable Handset				
© 2022 ELEMENT			V11.0 9/14/2022			



Spectrur Occupie	m Analyzer 1 d BW	• +								₽	Amplitude	▼ [*]/₁[*]
RL	IGHT Input: R Coupline Align: A	g:DC Co uto Fre	out Z: 50 Ω orr CCorr eq Ref: Int (S) E: Off	Atten: 32 dB	Gate:	iree Run Off ain: Low	Center Freq: Avg Hold: 10 Radio Std: N) GHz	Ref Valu 40.00 di		Y Scale
Lvi 1 Graph		v	-E. Uli							Scale/Di 10.0 dB	v	Attenuation
Log 30.0	iv 10.0 dB			Ref Value 40.	00 dBm					Y Axis U dBm	nit T	Signal Path
20.0 10.0 0.00			fan de fan en ser	Arenne Alektristeristeristeristeristeristeristerist	₽ŗγ⊷vq⊷,¶∕'nĮkħ⊶λs	₽₽₽₩₽₽ [₩] ₽₽₽₩₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽₽				Ref Leve 0.00 dB		
-30.0	horrowskim hote	the way way the a	10000				40mm of the	wertheren wentw	nnt munini	On Off Ref Posi	tion	
-40.0 -50.0	3.84000 GHz			fVideo BW 5.0	000 MH-				an 175 MHz	Тор	Ţ	
	1.6000 MHz	•					Sw		s (1001 pts)	On Off	anng	
	Occupied Ban	ndwidth 67.753 MH	z		Tota	Power		30.7 dE	3m			
	Transmit Freq x dB Bandwid		-42.534 kH 71.59 MH		% of x dB	OBW Powe	er	99.00 -26.00				
	ッつ		Oct 13, 2022 0:27:38 PM									

Plot 7-47. Occupied Bandwidth Plot (NR Band n77 - C-Band – 70MHz – QPSK - Full RB)

Spectrur Occupie		er 1 🔻	+									Amplitude	- * 崇
RL RL		nput: RF Coupling: DC Align: Auto	Input Z: Corr CC Freq Re NFE: Of	orr f: Int (S)	Atten: 32 dB	Gate	Free Run : Off Sain: Low	Center Freq Avg Hold:>1 Radio Std: N	00/100	0 GHz	Ref Val 40.00 c		Y Scale
LN 1 Graph		Ţ	NFE: Of								Scale/D 10.0 dB		Attenuation
Log 30.0	iv 10.0 c	1B		F	Ref Value 40.	00 dBm					Y Axis I dBm	Jnit •	Signal Path
20.0 10.0 0.00			(مەر _{ىھە} يەسىرىيەرلىر	*******	- and a second	and tank on the				Ref Lev 0.00 dl	rel Offset 3	
-10.0 -20.0 -30.0	dualuary	Way Karnet	mecrolar prophet					huldynewserfe	hanghanga	alannantilla	Or Of		
-40.0 -50.0											Ref Pos Top	,,	
	3.84000 / 1.6000	MHz		#\	/ideo BW 5.0	000 MHz		Sw		an 175 MHz s (1001 pts)	Auto So Or Of	າັ	
2 Metrics	5	T											
	Occupi	ed Bandwidth 67.6	i 654 MHz			Tota	al Power		30.7 dl	Bm			
		nit Freq Error andwidth		-2.077 kHz 71.60 MHz		% a x dE	f OBW Pow 3	er	99.00 -26.00				
	ょ)		? Oct 13										

Plot 7-48. Occupied Bandwidth Plot (NR Band n77 - C-Band – 70MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Page 45 of 199			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 45 01 199			
© 2022 ELEMENT	•		V11.0 9/14/2022			



Spectrur	n Analyzer 1 d BW	+				Frequency	/ · · 😤
RL	IGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg Hold:>100/100 Radio Std: None	Center Frequency 3.840000000 GHz	Settings
1 Graph	▼ iv 10.0 dB	NFE. OII	Ref Value 40.00	dBm		Span 150.00 MHz	
Log 30.0 20.0 10.0						CF Step 15.000000 MHz Auto Man	
0.00 -10.0 -20.0 -30.0	and the state of the	Swardowald			Manual grand water of the second	Freq Offset 0 Hz	
	3.84000 GHz 1.5000 MHz		Video BW 5.000	00 MHz	Span 150 Sweep 1.00 ms (1001		
2 Metrics	5 v						
	Occupied Bandwidth 58.00	08 MHz		Total Power	33.5 dBm		
	Transmit Freq Error x dB Bandwidth	-86.843 kł 61.61 Mł		% of OBW Pow x dB	ver 99.00 % -26.00 dB		
	500	Oct 14, 2022 12:39:10 AM					

Plot 7-49. Occupied Bandwidth Plot (NR Band n77 - C-Band – 60MHz – $\pi/2$ BPSK - Full RB)

Spectrum	n Analyzer 1	+				Frequenc	y v 🔆
RL	GHT Input: RF ← Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg[Hold: 100/100 Radio Std: None	Center Frequency 3.840000000 GHz	Settings
1 Graph				I		Span 150.00 MHz	
Log 30.0 20.0 10.0	v 10.0 dB		Ref Value 40.00	dBm		CF Step 15.000000 MHz Auto Man	, ,
-40.0	langtung/lunn planten figureska fint	alu fara Nev			Warden Martine Martine Martine	Freq Offset 0 Hz	
	.84000 GHz 1.5000 MHz	#	Video BW 5.000	0 MHz	Span 150 M Sweep 1.00 ms (1001 p		
2 Metrics	۲						
	Occupied Bandwidth 58.09	98 MHz		Total Power	32.6 dBm		
	Transmit Freq Error x dB Bandwidth	-40.907 kH 61.63 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
	って - 「	Cct 14, 2022				1	

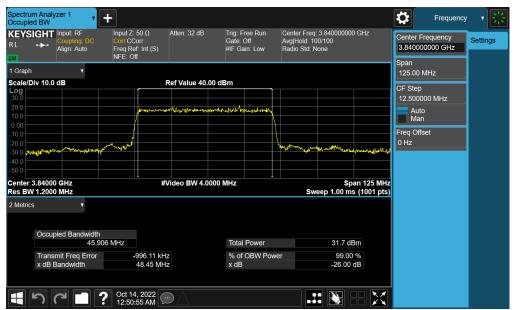
Plot 7-50. Occupied Bandwidth Plot (NR Band n77 - C-Band – 60MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT				
Test Report S/N:	Test Dates:	EUT Type:	Page 46 of 199			
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 40 01 199			
© 2022 ELEMENT			V11.0 9/14/2022			



Spectrum Analyzer 1 Occupied BW	+							₽	Frequency	· ₩
KEYSIGHT Input: RF R L ↔ Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 36 dB	Trig: Fre Gate: Of #IF Gair	ff	Center Freq: Avg Hold: 10 Radio Std: N		GHz	3.8400	Frequency 00000 GHz	Settings
1 Graph 🔹								Span 150.00	MHz	
Scale/Div 10.0 dB		Ref Value 40.00		B-marent dynam				CF Step 15.000 Aut Ma	000 MHz	
0.00 -10.0 -20.0 -30.0 -40.0	I A A A A A A A A A A A A A A A A A A A				4.m raymen	operation and a contract of the		Freq Of 0 Hz	fset	
-50.0 Center 3.84000 GHz Res BW 1.5000 MHz	. #	Video BW 5.000	00 MHz		Sw	Sp eep 1.00 ms	an 150 MHz s (1001 pts)			
2 Metrics v										
Occupied Bandwidth 58.19	1 MHz		Total F	Power		31.8 dE	ŝm			
Transmit Freq Error x dB Bandwidth	-98.065 kH 61.65 MH		% of C x dB	BW Powe	er	99.00 -26.00				
4 502?	Oct 14, 2022 12:39:32 AM									

Plot 7-51. Occupied Bandwidth Plot (NR Band n77 - C-Band – 60MHz – 16-QAM - Full RB)



Plot 7-52. Occupied Bandwidth Plot (NR Band n77 - C-Band – 50MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 47 of 100
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 47 of 199
© 2022 ELEMENT	-	·	V11.0 9/14/2022



Spectrum Analyzer 1 Occupied BW	+				Frequency	- 7 詳
KEYSIGHT Input: RF RL Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.840000000 GHz	Settings
1 Graph					Span 125.00 MHz	
Scale/Div 10.0 dB		Ref Value 40.00 d	IBm		CF Step 12.500000 MHz	
20.0		and a start of the second start	ารใจสารใหญ่และอาจไลการวามจะเกม		Auto Man	
-10.0 -20.0 -30.0	halloofmenter the			Monte Marine Marine Monte Marine Marine	Freq Offset 0 Hz	
-40.0						
Center 3.84000 GHz Res BW 1.2000 MHz	#	Video BW 4.0000	MHz	Span 125 MH Sweep 1.00 ms (1001 pt		
2 Metrics v						
	13 MHz		Total Power	30.4 dBm		
Transmit Freq Error x dB Bandwidth	-32.383 kH 50.74 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
H 2GD	Oct 14, 2022					

Plot 7-53. Occupied Bandwidth Plot (NR Band n77 - C-Band – 50MHz – QPSK - Full RB)

Spectrur Occupie	d BW	``L	+									\$	Frequency	- * 法
KEYSI RL		nput: RF Coupling: DC Align: Auto	Input Z: : Corr CCo Freq Ret NFE: Off	orr E Int (S)	Atten: 32 dB	Gat	e: Of	e Run f :: Low	Center Fr Avg Hold: Radio Sto	>100/100	00000 GHz		Frequency 00000 GHz	Settings
1 Graph	iv 10.0 d	T IB	NI E. OI		Ref Value 40.	00 dBm						Span 125.00		
Log 30.0 20.0 10.0				raserera	- Marine Port		M					Au	000 MHz to	
0.00 -10.0 -20.0	Mar Market	สมาร์ไปได้เห็น	www.						will be with with	ulgrand 1	mlAan Weadheans	Freq Of 0 Hz		
-30.0 -40.0 -50.0														
	3.84000 (1.2000			#\	/ideo BW 4.0	000 MHz			5	weep 1.	Span 125 Mi 00 ms (1001 pt			
2 Metrics		▼ ed Bandwidth												
			27 MHz			То	tal P	ower		3'	I.2 dBm			
		it Freq Error andwidth		78.747 kH; 50.66 MH;		% x 0		BW Powe	er		99.00 % 6.00 dB			
	า (Oct 14 12:51:											

Plot 7-54. Occupied Bandwidth Plot (NR Band n77 - C-Band – 50MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 48 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 40 01 199
© 2022 ELEMENT			V11.0 9/14/2022



Spectrum Analyzer	1 1 +								\$	Frequency	- * 影
	pling: DC n: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Fre Gate: Of #IF Gain	ť		Center Freq: 3.8400000 Avg Hold: 100/100 Radio Std: None	000 GHz	3.84000	Center Frequency 3.840000000 GHz	
1 Graph	•								Span 100.00	MHz	
Scale/Div 10.0 dB Log 30.0 20.0 10.0			Ref Value 40.00		งาระบาฟรูกัง โ				CF Step 10.0000 Auto Mar	000 MHz o	
0.00 -10.0 -20.0 -30.0 -40.0 -50.0	Merchellinghyperni	yhytyteren d				١.,	athread and a stand and a s	Mounderstalling	Freq Off 0 Hz	set	
Center 3.84000 GH Res BW 910.00 kHz		i	#Video BW 3.000	0 MHz				pan 100 MHz ns (1001 pts)			
2 Metrics	v							<u> (1 p)</u>			
Occupied I	Bandwidth 35.935 N	ИНz		Total P	ower		32.1	dBm			
Transmit F x dB Band		-1.1016 Mi 38.07 Mi		% of O x dB	BW Pov	ver	99.0 -26.0	00 % 0 dB			
1 2 2	2	Oct 14, 2022 1:04:00 AM									

Plot 7-55. Occupied Bandwidth Plot (NR Band n77 - C-Band – 40MHz – $\pi/2$ BPSK - Full RB)

Spectrur	n Analyzer 1 💡	+						\	Frequency	- 7 器
RL	GHT Input: RF ← Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg Hold: 100/100 Radio Std: None		GHz	Center Frequency 3.840000000 GHz		Settings
1 Graph								Span 100.00 I	MHz	
Log 30.0 20.0 10.0	iv 10.0 dB		Ref Value 40.00	dBm _{Unt} houseun, water				CF Step 10.0000 Auto Mar		
0.00 -10.0 -20.0 -30.0 -40.0	b-stift-phy-mark-phy-to-so	interrutions of the			Winnelwanna	Monenner	carya aplanara p	Freq Offs 0 Hz	set	
Res BW	3.84000 GHz 910.00 kHz	#	Video BW 3.000	0 MHz	Sw	Spar eep 1.00 ms	100 MHz (1001 pts)			
2 Metrics	• •									
	Occupied Bandwidth 37.9	986 MHz		Total Power		29.9 dBn	n			
	Transmit Freq Error x dB Bandwidth	-26.844 kH 40.08 MH		% of OBW Pow x dB	er	99.00 % -26.00 dE				
	5 C	Oct 14, 2022 1:04:18 AM			.:		\mathbf{X}			

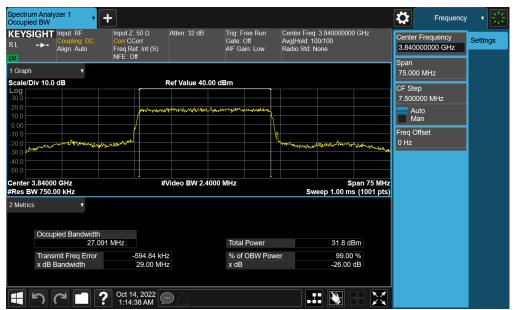
Plot 7-56. Occupied Bandwidth Plot (NR Band n77 - C-Band – 40MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 49 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 49 01 199
© 2022 ELEMENT			V11.0 9/14/2022



Spectrum Analyzer 1 Occupied BW	+								₽	Frequency	· · · *
Align	pling: DC n: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Fre Gate: O #IF Gair	ff	Center Freq: Avg Hold: 10 Radio Std: N		GHz		Frequency 00000 GHz	Settings
1 Graph	v								Span 100.00	MHz	
Scale/Div 10.0 dB			Ref Value 40.00	0 dBm					CF Step 10.000) 000 MHz	
20.0		protocolory	www.and.anninagalpii	เป็นปีการการเกิดไปการก	مىمەرەرمەرلىر <u>ا</u>				Aut Ma		
-10.0 -20.0 http://www.www.mig.	mbranaphallam	mart				March March	ntur and sold the fight	Mater and the state of the	Freq Off 0 Hz	fset	
-30.0 -40.0 -50.0											
Center 3.84000 GH Res BW 910.00 kHz		#	Video BW 3.000	00 MHz		Sw	Spa eep 1.00 ms	n 100 MHz (1001 pts)			
2 Metrics	•										
Occupied E	3andwidth 38.112 N	ИНz		Total F	Power		30.9 dB	m			
Transmit F x dB Band		-28.521 kH 40.54 MH		% of C x dB	BW Pow	er	99.00 -26.00 d				
ک لا 🖡	2	Oct 14, 2022 1:04:28 AM									

Plot 7-57. Occupied Bandwidth Plot (NR Band n77 - C-Band – 40MHz – 16-QAM - Full RB)



Plot 7-58. Occupied Bandwidth Plot (NR Band n77 - C-Band – 30MHz – $\pi/2$ BPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 50 of 199
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 50 01 199
© 2022 ELEMENT		•	V11.0 9/14/2022



Spectrum Analyzer 1 Occupied BW	+				Frequency	· · · *
R L Horak Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.840000000 GHz	Settings
1 Graph v Scale/Div 10.0 dB		Ref Value 40.00 d	.		Span 75.000 MHz	
Log		Ret value 40.00 ด			CF Step 7.500000 MHz Auto Man	
0.00 -10.0 -20.0 -30.0	manum			halleluplice	From Offsot	
-40.0 -50.0 Center 3.84000 GHz #Res BW 750.00 kHz	#\	Video BW 2.4000	MHz	Span 75 MI Sweep 1.00 ms (1001 pt	łz	
2 Metrics				Sweep 1.00 ms (1001 pr	5)	
Occupied Bandwidth 27.9	55 MHz		Total Power	30.5 dBm		
Transmit Freq Error x dB Bandwidth	-61.985 kH 30.07 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
4 h C L (Cct 14, 2022					

Plot 7-59. Occupied Bandwidth Plot (NR Band n77 - C-Band – 30MHz – QPSK - Full RB)

KEYSIGHT RL Input Z 50 Ω Contro Corr Freq Ref. Int (S) NFE. Off Atten: 32 dB Trig: Freq Run Gale: Off Center Freq 384000000 GHz Center Frequency Settings IV Align: Auto Preq Ref. Int (S) NFE. Off Atten: 32 dB Trig: Freq Run Gale: Off Center Freq 384000000 GHz Span Span Span 75.000 MHz Span CF Step CF Step CF Step CF Step 75.0000 MHz CF Step Auto Span Span 75.0000 MHz CF Step CF Step Auto Auto Span 75.000 MHz CF Step Span Span Span 75.000 MHz Span Span 75.0000 MHz Span 75.000 MHz Span Span 75.0000 MHz Span Span 75.0000 MHz Span 75.0000 MHz Span Span 75.0000 MHz Span Span 75.0000 MHz Span 75.0000 MHz Span Span 75.0000 MHz Span Span 75.0000 MHz Span Span 75.0000 MHz Span Span Span 75.0000 MHz Span		Frequency	\$								+	ter 1 🔻	um Analy: ed BW	Spectru Occupi
Span Span 1 Graph 75.000 MHz Scale/Div 10.0 dB Ref Value 40.00 dBm 200 75.0000 MHz 200 7.500000 MHz	ngs			00 GHz	0/100	Avg Hold: 10	Off	Gate:	Atten: 32 dB	orr f: Int (S)	Corr CC Freq Re	Coupling: DC		RL
Log CF Step 7.50000 MHz		ИНz						00 dBm	ef)/elue 40		INFL. OI			1 Grapi
													Div 10.0	
			Man Freq Offs		केनी सभा कर क	Lanninh.n.								0.00
0.00 20.0 -30.0 -0.0			0 Hz	what had the the stand as the st	uranter (a a a a a a a a a a a a a a a a a a a					afra harring	and Maria and Anna Anna Anna Anna Anna Anna Anna	WARTER AND	-30.0
-50.0 Center 3.84000 GHz #Video BW 2.4000 MHz Span 75 MHz #Res BW 750.00 kHz Sweep 1.00 ms (1001 pts)						Su		000 MHz	/ideo BW 2.4	#\				Center
2 Metrics V				115 (1001 pts)	eep 1.00 m	5								
Occupied Bandwidth 28.043 MHz Total Power 31.6 dBm				dBm	31.6 dl		Power	Tota					Occup	
Transmit Freq Error 27.289 kHz % of OBW Power 99.00 % x dB Bandwidth 34.97 MHz x dB -26.00 dB				00 %	99.00	r		% of				nit Freq Error		
										. 2022 🦳	• Oct 14			

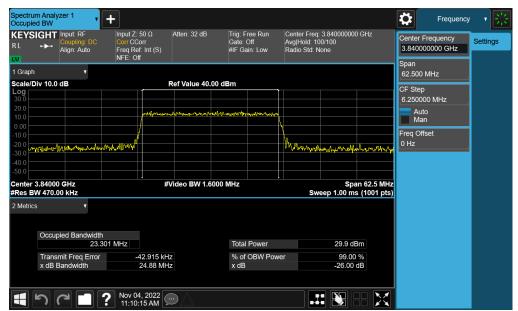
Plot 7-60. Occupied Bandwidth Plot (NR Band n77 - C-Band – 30MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dogo E1 of 100	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Page 51 of 199	
© 2022 ELEMENT			V11.0 9/14/2022	



Spectrur Occupie	n Analyzer 1	+				Frequency	- " 崇
RL	GHT Input: RF Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.840000000 GHz	Settings
1 Graph	▼ iv 10.0 dB		Ref Value 40.00 d	IBm		Span 62.500 MHz	
30.0 20.0 10.0			AP value 40.00 u			CF Step 6.250000 MHz	
0.00 -10.0 -20.0 -30.0	an sharkala	menghrund			Wither marker berger a bei	Man Freq Offset 0 Hz	
-40.0	3.84000 GHz		Video BW 1.6000	MU~	Span 62.5 MH		
#Res BV	V 470.00 kHz	#	VIGEO BW 1.0000		Sweep 1.00 ms (1001 pts		
2 Metrics	Occupied Bandwidth			7.1.12			
	22.93 Transmit Freq Error x dB Bandwidth	33 MHz -207.14 kH 24.04 MH		Total Power % of OBW Pow x dB	32.2 dBm ver 99.00 % -26.00 dB		
	n c	Nov 04, 2022 11:09:21 AM					

Plot 7-61. Occupied Bandwidth Plot (NR Band n77 - C-Band – 25MHz – π/2 BPSK - Full RB)



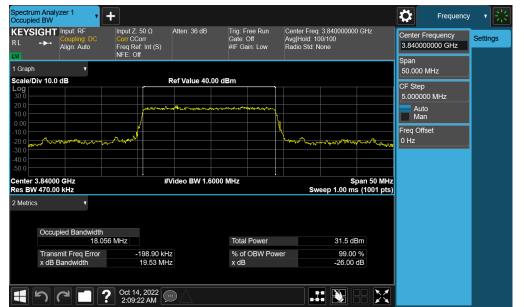
Plot 7-62. Occupied Bandwidth Plot (NR Band n77 - C-Band – 25MHz – QPSK - Full RB)

FCC ID: A3LSMS918U		PART 27 MEASUREMENT REPORT		
Test Report S/N:	Test Dates:	EUT Type:	Page 52 of 199	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 52 01 199	
© 2022 ELEMENT	•		V11.0 9/14/2022	



Spectrum Analyzer 1 Occupied BW	+				Frequency	- * 😤
KEYSIGHT Input: RF R L Coupling: DC Align: Auto	Input Ζ: 50 Ω Corr CCorr Freq Ref: Int (S) NFE: Off	Atten: 32 dB	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.840000000 GHz	Settings
LVT 1 Graph V					Span 62.500 MHz	
Scale/Div 10.0 dB		Ref Value 40.00	dBm		CF Step 6.250000 MHz	
20.0 10.0 0.00	Judiane	aliensuntergenneetensser	<u>ትላሉሌ-መቆንዋ</u> ም ላይ <mark>ት</mark> ሌቂ የኢትዮጵያ		Auto Man	
-10.0 -20.0 -30.0 -40.0	lin multer			Man all propries marine aprese	Freq Offset 0 Hz	
-50.0 Center 3.84000 GHz #Res BW 470.00 kHz	#\	/ideo BW 1.600	0 MHz	Span 62.5 MH Sweep 1.00 ms (1001 pts		
2 Metrics v						
Occupied Bandwidth 23.30	98 MHz		Total Power	29.7 dBm		
Transmit Freq Error x dB Bandwidth	-19.277 kH 25.23 MH		% of OBW Pow x dB	er 99.00 % -26.00 dB		
4 500	Nov 04, 2022					

Plot 7-63. Occupied Bandwidth Plot (NR Band n77 - C-Band – 25MHz – 16-QAM - Full RB)



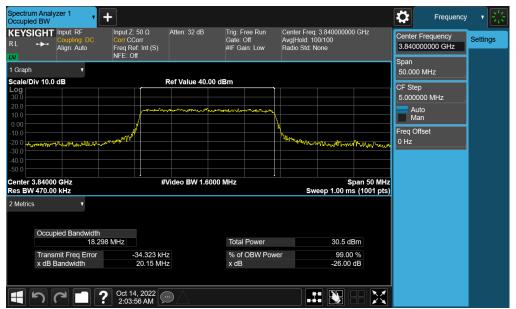
Plot 7-64. Occupied Bandwidth Plot (NR Band n77 - C-Band – 20MHz – π/2 BPSK - Full RB)

FCC ID: A3LSMS918U		Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Page 53 of 199	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 55 01 199	
© 2022 ELEMENT	*		V11.0 9/14/2022	



Spectrum Analyzer 1	+			Frequency	· · · ※
KEYSIGHT Input: RF RL Input: RF Align: Auto	Input Z: 50 Ω Atten Corr CCorr Freq Ref: Int (S) NFE: Off	: 32 dB Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 3.840000000 GHz Avg Hold: 100/100 Radio Std: None	Center Frequency 3.840000000 GHz	Settings
1 Graph v				Span 50.000 MHz	
Scale/Div 10.0 dB	Ref Va	lue 40.00 dBm		CF Step 5.000000 MHz	
20.0 10.0 0.00	production of a state of the st	๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛		Auto Man	
-10.0 -20.0 -30.0			H Mary Mary prophing the proprieties	Freq Offset 0 Hz	
-40.0 -50.0 Center 3.84000 GHz		BW 1.6000 MHz			
Res BW 470.00 kHz	#video	BW 1.0000 MHZ	Span 50 MH Sweep 1.00 ms (1001 pts		
2 Metrics					
	6 MHz	Total Power	29.0 dBm		
Transmit Freq Error x dB Bandwidth	-15.426 kHz 19.81 MHz	% of OBW Pow x dB	ver 99.00 % -26.00 dB		
	Oct 14, 2022	7			

Plot 7-65. Occupied Bandwidth Plot (NR Band n77 - C-Band – 20MHz – QPSK - Full RB)



Plot 7-66. Occupied Bandwidth Plot (NR Band n77 - C-Band – 20MHz – 16-QAM - Full RB)

FCC ID: A3LSMS918U		Approved by: Technical Manager		
Test Report S/N:	Test Dates:	EUT Type:	Page 54 of 199	
1M2209010098-10.A3L	10/13/2022 - 11/16/2022	Portable Handset	Fage 54 01 199	
© 2022 ELEMENT		•	V11.0 9/14/2022	