

ELEMENT WASHINGTON DC LLC

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PART 27 MEASUREMENT REPORT

Applicant Name:

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

Date of Testing:

5/24/2023 - 7/31/2023 **Test Report Issue Date:** 8/1/2023 **Test Site/Location:** Element lab., Columbia, MD, USA **Test Report Serial No.:** 1M2304260060-07.A3L

FCC ID: APPLICANT:

A3LSMS711U

Samsung Electronics Co., Ltd.

Application Type: Model: Additional Model(s): EUT Type: FCC Classification: FCC Rule Part: Test Procedure(s): Certification SM-S711U SM-S711U1 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



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| Antenna A | | | | | | | | |
|--------------|------------|------------|-----------------------------|-------------------|---------------------|-------------------|---------------------|------------------------|
| | | | | E | RP | EI | RP | |
| Mode I | Bandwidth | Modulation | Tx Frequency Range [MHz] | Max. Power [W] | Max. Power [dBm] | Max. Power [W] | Max. Power [dBm] | Emission Designator |
| | 00.0415 | QPSK | 673.0 - 688.0 | 0.060 | 17.80 | 0.099 | 19.95 | 18M0G7D |
| | 20 MHz | 16QAM | 673.0 - 688.0 | 0.051 | 17.10 | 0.084 | 19.25 | 18M0W7D |
| | | QPSK | 670.5 - 690.5 | 0.060 | 17.79 | 0.099 | 19.94 | 13M5G7D |
| LTE Band 71 | 15 MHz | 16QAM | 670.5 - 690.5 | 0.050 | 16.98 | 0.082 | 19.13 | 13M5W7D |
| LIE Dang / I | 10 MHz | QPSK | 668.0 - 693.0 | 0.062 | 17.92 | 0.102 | 20.07 | 9M00G7D |
| | | 16QAM | 668.0 - 693.0 | 0.052 | 17.20 | 0.086 | 19.35 | 9M05W7D |
| | 5 MHz | QPSK | 665.5 - 695.5 | 0.063 | 17.97 | 0.103 | 20.12 | 4M56G7D |
| | 5 10112 | 16QAM | 665.5 - 695.5 | 0.054 | 17.34 | 0.089 | 19.49 | 4M54W7D |
| | 10 MHz | QPSK | 704.0 - 711.0 | 0.087 | 19.41 | 0.143 | 21.56 | 9M04G7D |
| | | 16QAM | 704.0 - 711.0 | 0.076 | 18.79 | 0.124 | 20.94 | 9M03W7D |
| | 5 MHz | QPSK | 701.5 - 713.5 | 0.086 | 19.32 | 0.140 | 21.47 | 4M55G7D |
| LTE Band 12 | 5 1011 12 | 16QAM | 701.5 - 713.5 | 0.076 | 18.80 | 0.124 | 20.95 | 4M56W7D |
| | 3 MHz | QPSK | 700.5 - 714.5 | 0.086 | 19.35 | 0.141 | 21.50 | 2M72G7D |
| | | 16QAM | 700.5 - 714.5 | 0.076 | 18.81 | 0.125 | 20.96 | 2M73W7D |
| | 1.4 MHz | QPSK | 699.7 - 715.3 | 0.086 | 19.35 | 0.141 | 21.50 | 1M10G7D |
| 1.4 1011 12 | 1.4 101112 | 16QAM | 699.7 - 715.3 | 0.074 | 18.71 | 0.122 | 20.86 | 1M11W7D |
| LTE Band 13 | 10 MHz | QPSK | 782.0 | 0.098 | 19.91 | 0.161 | 22.06 | 9M04G7D |
| | 10 10112 | 16QAM | 782.0 | 0.082 | 19.13 | 0.134 | 21.28 | 9M01W7D |
| | 5 MHz | QPSK | 779.5 - 784.5 | 0.098 | 19.92 | 0.161 | 22.07 | 4M55G7D |
| | 5 1011 12 | 16QAM | 779.5 - 784.5 | 0.086 | 19.34 | 0.141 | 21.49 | 4M56W7D |
| | | π/2 BPSK | 673.0 - 688.0 | 0.062 | 17.92 | 0.102 | 20.07 | 17M9G7D |
| | 20 MHz | QPSK | 673.0 - 688.0 | 0.062 | 17.89 | 0.101 | 20.04 | 18M9G7D |
| | | 16QAM | 673.0 - 688.0 | 0.050 | 17.01 | 0.082 | 19.16 | 19M0W7D |
| | | π/2 BPSK | 670.5 - 690.5 | 0.065 | 18.10 | 0.106 | 20.25 | 13M5G7D |
| | 15 MHz | QPSK | 670.5 - 690.5 | 0.062 | 17.92 | 0.102 | 20.07 | 14M1G7D |
| NR Band n71 | | 16QAM | 670.5 - 690.5 | 0.049 | 16.92 | 0.081 | 19.07 | 14M1W7D |
| | | π/2 BPSK | 668.0 - 693.0 | 0.064 | 18.07 | 0.105 | 20.22 | 8M99G7D |
| | 10 MHz | QPSK | 668.0 - 693.0 | 0.061 | 17.82 | 0.099 | 19.97 | 9M36G7D |
| | | 16QAM | 668.0 - 693.0 | 0.047 | 16.70 | 0.077 | 18.85 | 9M35W7D |
| | | π/2 BPSK | 665.5 - 695.5 | 0.064 | 18.05 | 0.105 | 20.20 | 4M51G7D |
| | 5 MHz | QPSK | 665.5 - 695.5 | 0.059 | 17.68 | 0.096 | 19.83 | 4M51G7D |
| | | 16QAM | 665.5 - 695.5 | 0.048 | 16.77 | 0.078 | 18.92 | 4M55W7D |
| | | π/2 BPSK | 706.5 - 708.5 | 0.074 | 18.69 | 0.121 | 20.84 | 13M5G7D |
| | 15 MHz | QPSK | 706.5 - 708.5 | 0.075 | 18.76 | 0.123 | 20.91 | 14M1G7D |
| | | 16QAM | 706.5 - 708.5 | 0.058 | 17.61 | 0.095 | 19.76 | 14M1W7D |
| | | π/2 BPSK | 704.0 - 711.0 | 0.073 | 18.61 | 0.119 | 20.76 | 8M99G7D |
| NR Band n12 | 10 MHz | QPSK | 704.0 - 711.0 | 0.072 | 18.57 | 0.118 | 20.72 | 9M32G7D |
| | | 16QAM | 704.0 - 711.0 | 0.056 | 17.52 | 0.093 | 19.67 | 9M31W7D |
| | | π/2 BPSK | 701.5 - 713.5 | 0.072 | 18.59 | 0.119 | 20.74 | 4M51G7D |
| | 5 MHz | QPSK | 701.5 - 713.5 | 0.069 | 18.38 | 0.113 | 20.53 | 4M52G7D |
| | | 16QAM | 701.5 - 713.5 | 0.056 | 17.51 | 0.092 | 19.66 | 4M50W7D |

Overview Table (<1GHz Bands)

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| Antenna A | | | | | | |
|---------------|-----------|--|-----------------|-------------------|---------------------|------------------------|
| | | | | EI | RP | |
| Mode | Bandwidth | Modulation Tx Frequency Range [MHz] | | Max. Power [W] | Max. Power [dBm] | Emission Designator |
| WCDMA1700 | N/A | Spread Spectrum | 1712.4 - 1752.6 | 0.208 | 23.17 | 4M18F9W |
| | 20 MHz | QPSK | 1720.0 - 1770.0 | 0.214 | 23.31 | 18M0G7D |
| | | 16QAM | 1720.0 - 1770.0 | 0.184 | 22.65 | 18M1W7D |
| | | QPSK | 1717.5 - 1772.5 | 0.205 | 23.12 | 13M6G7D |
| | 15 MHz | 16QAM | 1717.5 - 1772.5 | 0.186 | 22.69 | 13M5W7D |
| | 10 MHz | QPSK | 1715.0 - 1775.0 | 0.206 | 23.14 | 9M06G7D |
| LTE Band 66/4 | | 16QAM | 1715.0 - 1775.0 | 0.185 | 22.67 | 9M05W7D |
| | 5 MHz | QPSK | 1712.5 - 1777.5 | 0.208 | 23.17 | 4M55G7D |
| | | 16QAM | 1712.5 - 1777.5 | 0.189 | 22.76 | 4M55W7D |
| | 3 MHz | QPSK | 1711.5 - 1778.5 | 0.203 | 23.08 | 2M72G7D |
| | 3 MITZ | 16QAM | 1711.5 - 1778.5 | 0.187 | 22.73 | 2M74W7D |
| 1.4.1 | | QPSK | 1710.7 - 1779.3 | 0.207 | 23.15 | 1M11G7D |
| | 1.4 MHz | 16QAM | 1710.7 - 1779.3 | 0.191 | 22.82 | 1M12W7D |
| | | π/2 BPSK | 1730.0 - 1760.0 | 0.252 | 24.01 | 38M8G7D |
| | 40 MHz | QPSK | 1730.0 - 1760.0 | 0.253 | 24.04 | 38M8G7D |
| | | 16QAM | 1730.0 - 1760.0 | 0.202 | 23.05 | 38M7W7D |
| | | π/2 BPSK | 1725.0 - 1765.0 | 0.241 | 23.81 | 28M8G7D |
| | 30 MHz | QPSK | 1725.0 - 1765.0 | 0.253 | 24.04 | 28M7G7D |
| | | 16QAM | 1725.0 - 1765.0 | 0.208 | 23.17 | 28M8W7D |
| | | π/2 BPSK | 1720.0 - 1770.0 | 0.241 | 23.81 | 18M0G7D |
| | 20 MHz | QPSK | 1720.0 - 1770.0 | 0.242 | 23.85 | 19M0G7D |
| NR Band n66 | | 16QAM | 1720.0 - 1770.0 | 0.185 | 22.67 | 19M0W7D |
| INK Danu noo | | π/2 BPSK | 1717.5 - 1772.5 | 0.235 | 23.71 | 13M5G7D |
| | 15 MHz | QPSK | 1717.5 - 1772.5 | 0.244 | 23.87 | 14M2G7D |
| - | | 16QAM | 1717.5 - 1772.5 | 0.193 | 22.85 | 14M2W7D |
| | | π/2 BPSK | 1715.0 - 1775.0 | 0.229 | 23.60 | 9M02G7D |
| | 10 MHz | QPSK | 1715.0 - 1775.0 | 0.238 | 23.77 | 9M37G7D |
| | | 16QAM | 1715.0 - 1775.0 | 0.193 | 22.85 | 9M35W7D |
| | | π/2 BPSK | 1712.5 - 1777.5 | 0.228 | 23.58 | 4M51G7D |
| | 5 MHz | QPSK | 1712.5 - 1777.5 | 0.239 | 23.79 | 4M52G7D |
| | | 16QAM | 1712.5 - 1777.5 | 0.188 | 22.75 | 4M53W7D |

Overview Table (>1GHz Bands)

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| | Antenna F | | | | | | |
|----------------|-----------|--|-------------------|-------------------|---------------------|------------------------|--|
| | | | | EI | | | |
| Mode Bandwidth | | Modulation Tx Frequency Range [MHz] | | Max. Power [W] | Max. Power [dBm] | Emission Designator | |
| | 20 MHz | QPSK | 1720.0 - 1770.0 | 0.148 | 21.72 | 18M0G7D | |
| | | 16QAM | 1720.0 - 1770.0 | 0.124 | 20.95 | 18M0W7D | |
| - | 15 MHz | QPSK | 1717.5 - 1772.5 | 0.149 | 21.74 | 13M5G7D | |
| | | 16QAM | 1717.5 - 1772.5 | 0.125 | 20.98 | 13M5W7D | |
| | 10 MHz | QPSK | 1715.0 - 1775.0 | 0.152 | 21.81 | 9M02G7D | |
| LTE Band 66/4 | | 16QAM | 1715.0 - 1775.0 | 0.131 | 21.17 | 9M01W7D | |
| LIE Band 66/4 | E MUL | QPSK | 1712.5 - 1777.5 | 0.154 | 21.88 | 8M81G7D | |
| | 5 MHz | 16QAM | 1712.5 - 1777.5 | 0.132 | 21.20 | 4M52W7D | |
| | | QPSK | 1711.5 - 1778.5 | 0.151 | 21.78 | 2M71G7D | |
| | 3 MHz | 16QAM | 1711.5 - 1778.5 | 0.127 | 21.05 | 2M72W7D | |
| | 1.4 MHz | QPSK | 1710.7 - 1779.3 | 0.150 | 21.77 | 1M10G7D | |
| | | 16QAM | 1710.7 - 1779.3 | 0.123 | 20.88 | 1M10W7D | |
| | 40 MHz | π/2 BPSK | 1730.0 - 1760.0 | 0.145 | 21.61 | 38M8G7D | |
| | | QPSK | 1730.0 - 1760.0 | 0.143 | 21.56 | 38M9G7D | |
| | | 16QAM | 1730.0 - 1760.0 | 0.115 | 20.59 | 38M8W7D | |
| | | π/2 BPSK | 1725.0 - 1765.0 | 0.145 | 21.63 | 28M7G7D | |
| | 30 MHz | QPSK | 1725.0 - 1765.0 | 0.143 | 21.54 | 28M8G7D | |
| | | 16QAM | 1725.0 - 1765.0 | 0.116 | 20.66 | 28M8W7D | |
| | | π/2 BPSK | 1720.0 - 1770.0 | 0.143 | 21.55 | 18M0G7D | |
| | 20 MHz | QPSK | 1720.0 - 1770.0 | 0.141 | 21.48 | 19M0G7D | |
| NB Band aCC | | 16QAM | 1720.0 - 1770.0 | 0.118 | 20.72 | 19M1W7D | |
| NR Band n66 | | π/2 BPSK | 1717.5 - 1772.5 | 0.143 | 21.54 | 13M5G7D | |
| | 15 MHz | QPSK | 1717.5 - 1772.5 | 0.144 | 21.57 | 14M2G7D | |
| | | 16QAM | 1717.5 - 1772.5 | 0.107 | 20.28 | 14M2W7D | |
| | | π/2 BPSK | 1715.0 - 1775.0 | 0.140 | 21.46 | 9M01G7D | |
| | 10 MHz | QPSK | 1715.0 - 1775.0 | 0.140 | 21.46 | 9M38G7D | |
| | | 16QAM | 1715.0 - 1775.0 | 0.108 | 20.33 | 9M36W7D | |
| | | π/2 BPSK | 1712.5 - 1777.5 | 0.143 | 21.56 | 4M51G7D | |
| | 5 MHz | QPSK | 1712.5 - 1777.5 | 0.141 | 21.50 | 4M53G7D | |
| | | 16QAM | 1712.5 - 1777.5 | 0.110 | 20.40 | 4M54W7D | |
| ·I | | Overview Ta | able (>1GHz Bands | 5) | | | |

Overview Table (>1GHz Bands)

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1.0 INTRODUCTION

1.1 Scope

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

1.2 Element Test Location

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

1.3 Test Facility / Accreditations

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

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

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMS711U**. The test data contained in this report pertains only to the emissions due to the EUT's licensed transmitters that operate under the provisions of Part 27.

Test Device Serial No.: 0325M, 0602M, 0588M, 0182M, 0594M, 0640M, 0597M, 1200M, 0660M, 0590M, 0754M, 0656M, 0591M, 0604M

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, Wireless Power

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

2.3 Test Configuration

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

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

2.4 Software and Firmware

Testing was performed on device(s) using software/firmware version S711USQU0AWG7 installed on the EUT.

2.5 EMI Suppression Device(s)/Modifications

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

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3.0 DESCRIPTION OF TESTS

3.1 Evaluation Procedure

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

Deviation from Measurement Procedure......None

3.2 Radiated Power and Radiated Spurious Emissions

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

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

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

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

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.

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4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

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

| FCC ID: A3LSMS711U | | Approved by: Technical Manager | |
|---------------------|-----------------------|-----------------------------------|---------------|
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5.0 TEST EQUIPMENT CALIBRATION DATA

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

| Manufacturer | Model | Description | Cal Date | Cal Interval | Cal Due | Serial Number |
|-----------------------|----------|--------------------------------------|-----------|--------------|-----------|---------------|
| - | AP2-001 | EMC Cable and Switch System | 1/11/2023 | Annual | 1/11/2024 | AP2-001 |
| - | AP2-002 | EMC Cable and Switch System | 1/11/2023 | Annual | 1/11/2024 | AP2-002 |
| - | ETS-001 | EMC Cable and Switch System | 1/11/2023 | Annual | 1/11/2024 | ETS-001 |
| - | ETS-002 | EMC Cable and Switch System | 1/11/2023 | Annual | 1/11/2024 | ETS-002 |
| - | LTX1 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTX1 |
| - | LTX2 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTX2 |
| - | LTX3 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTX3 |
| - | LTX4 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTX4 |
| - | LTX5 | Licensed Transmitter Cable Set | 1/12/2023 | Annual | 1/12/2024 | LTX5 |
| Anritsu | MT8821C | Radio Communication Analyzer | | N/A | | 620152694 |
| EMCO | 3115 | Horn Antenna (1-18GHz) | 8/8/2022 | Biennial | 8/8/2024 | 9704-5182 |
| EMCO | 3116 | Horn Antenna (18-40GHz) | 7/20/2021 | Biennial | 8/30/2023 | 9203-2178 |
| Keysight Technologies | N9030A | PXA Signal Analyzer (3Hz-26.5GHz) | 9/6/2022 | Annual | 9/6/2023 | MY54490576 |
| Keysight Technologies | N9030A | PXA Signal Analyzer (44GHz) | 3/15/2023 | Annual | 3/15/2024 | MY52350166 |
| Rohde & Schwarz | CMW500 | Radio Communication Tester | | N/A | | 112347 |
| Rohde & Schwarz | TC-TA18 | Cross Polarized Vivaldi Test Antenna | 9/28/2022 | Biennial | 9/28/2024 | 101058 |
| Rohde & Schwarz | ESU26 | EMI Test Receiver (26.5GHz) | 8/29/2022 | Annual | 8/29/2023 | 100342 |
| Rohde & Schwarz | ESW44 | EMI Test Receiver (2Hz-44GHz) | 3/1/2023 | Annual | 3/1/2024 | 101716 |
| Rohde & Schwarz | VULB9162 | Bi-Log Antenna | 2/21/2023 | Biennial | 2/21/2025 | 00301 |
| Sunol | JB5 | Bi-Log Antenna (30M - 5GHz) | 8/30/2022 | Biennial | 8/30/2024 | A051107 |

Table 5-1. Test Equipment

Notes:

- 1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
- 2. Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

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6.0 SAMPLE CALCULATIONS

Emission Designator

QPSK Modulation

Emission Designator = 8M62G7D

LTE BW = 8.62 MHz

- G = Phase Modulation
- 7 = Quantized/Digital Info
- D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M45W7D

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

Spurious Radiated Emission – LTE Band

Example: Middle Channel LTE Mode 2nd Harmonic (1564 MHz)

The average spectrum analyzer reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the spectrum analzyer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 1564 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm – (-24.80) = 50.3 dBc.

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|--------------------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 11 of 200 | | |
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7.0 TEST RESULTS

7.1 Summary

| Company Name: Samsung Electronic | s Co., Ltd. |
|----------------------------------|-------------|
|----------------------------------|-------------|

FCC ID: <u>A3LSMS711U</u>

FCC Classification: <u>PCS Licensed Transmitter Held to Ear (PCE)</u>

Mode(s):

WCDMA/LTE/NR/ULCA

| 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 |
| | Occupied Bandwidth | 2.1049(h) | N/A | PASS | Section 7.3 |
| B | Conducted Band Edge / Spurious Emissions (LTE Band 13) | 2.1051, 27.53(c), 27.53(f) | Undesirable emissions must meet the limits detailed in sections 27.53(c) and 27.53(f) | PASS | Sections 7.4, 7.5 |
| CONDUCTED | Conducted Band Edge / Spurious Emissions (LTE Band 12, 17, 71; NR Band n12, n71) | 2.1051, 27.53(g) | ≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power | PASS | Sections 7.4, 7.5 |
| 00 | Conducted Band Edge / Spurious Emissions (WCDMA AWS; LTE Band 4, 66; NR Band n66) | 2.1051, 27.53(h) | ≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power | PASS | Sections 7.4, 7.5 |
| | Peak-to-Average Ratio (WCDMA AWS; LTE Band 4, 66; NR Band n66) | 27.50(d)(5) | ≤ 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 (LTE Band 13) | 27.50(b)(10) | ≤ 3 Watts max. ERP | PASS | Section 7.7 |
| | Effective Radiated Power (LTE Band 12, 17, 71; NR Band n12, n71) | 27.50(c)(10) | ≤ 3 Watts max. ERP | PASS | Section 7.7 |
| RADIATED | Equivalent Isotropic Radiated Power (WCDMA AWS; LTE Band 4, 66; NR Band n66) | 27.50(d)(4) | ≤ 1 Watt max. EIRP | PASS | Section 7.7 |
| RADI | Radiated Spurious Emissions (LTE Band 13) | 2.1053, 27.53(c), 27.53(f) | Undesirable emissions must meet the limits detailed in sections 27.53(c) and 27.53(f) | PASS | Section 7.8 |
| | Radiated Spurious Emissions (LTE Band 12, 17, 71; NR Band n12, n71) | 2.1053, 27.53(g) | ≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power | PASS | Section 7.8 |
| | Radiated Spurious Emissions (WCDMA AWS; LTE Band 4, 66; NR Band n66) | 2.1053, 27.53(h)(1) | ≥ 43 + 10 log (P[Watts]) dB of attenuation below transmitter power | PASS | Section 7.8 |

Table 7-1. Summary of Test Results (FCC)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|--------------------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 12 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | 24/2023 - 7/31/2023 Portable Handset | | | |
| © 2023 ELEMENT | · | | V3.0 1/5/2022 | | |



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 shown in Section 7.0 were taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.0.

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | |
|---------------------|-----------------------|----------------------------|----------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 13 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 13 01 200 | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | |



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

Test Setup

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



Figure 7-1. Test Instrument & Measurement Setup

Test Notes

- 1. Uplink carrier aggregation is only supported in this EUT while operating in Power Class 3.
- 2. Conducted power measurements were evaluated using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
- 3. All other conducted power measurements are contained in the RF exposure report for this filing.
- 4. Conducted power was found to reduce for the higher order QAM modulations when compared to 16QAM. Due to this trend, only the worst-case QAM (16QAM) powers are included in this section.

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|-----------------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 14 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | 2023 - 7/31/2023 Portable Handset | | | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | | |



| Bandwidth | Modulation | Channel | Frequency [MHz] | RB Size/Offset | Conducted Power [dBm] |
|-----------|------------|---------|--------------------|-------------------|--------------------------|
| | | 132072 | 1720.0 | 1 / 50 | 21.80 |
| N | QPSK | 132322 | 1745.0 | 1 / 0 | 22.10 |
| 20 MHz | | 132572 | 1770.0 | 1 / 99 | 21.92 |
| 0 1 | 16-QAM | 132072 | 1720.0 | 1 / 50 | 21.09 |
| 7 | 64-QAM | 132072 | 1720.0 | 1 / 99 | 20.01 |
| | 256-QAM | 132072 | 1720.0 | 1 / 99 | 17.08 |
| | | 132047 | 1717.5 | 1 / 74 | 21.82 |
| N | QPSK | 132322 | 1745.0 | 1 / 0 | 22.26 |
| НИ | | 132597 | 1772.5 | 1 / 74 | 21.80 |
| 15 MHz | 16-QAM | 132047 | 1717.5 | 1 / 74 | 21.12 |
| - | 64-QAM | 132047 | 1717.5 | 1 / 74 | 19.96 |
| | 256-QAM | 132597 | 1772.5 | 1 / 74 | 17.10 |
| | | 132022 | 1715.0 | 1 / 49 | 21.89 |
| N | QPSK | 132322 | 1745.0 | 1 / 25 | 22.07 |
| НИ | | 132622 | 1775.0 | 1 / 49 | 22.01 |
| 10 MHz | 16-QAM | 132322 | 1745.0 | 1 / 0 | 21.57 |
| ~ | 64-QAM | 132322 | 1745.0 | 1/0 | 20.14 |
| | 256-QAM | 132322 | 1745.0 | 1 / 25 | 17.16 |
| | | 131997 | 1712.5 | 1 / 12 | 21.96 |
| N | QPSK | 132322 | 1745.0 | 1 / 12 | 22.12 |
| IHz | | 132647 | 1777.5 | 1 / 12 | 22.03 |
| 5 MHz | 16-QAM | 132322 | 1745.0 | 1 / 12 | 21.60 |
| 2, | 64-QAM | 132647 | 1777.5 | 1 / 12 | 20.26 |
| | 256-QAM | 132322 | 1745.0 | 1 / 12 | 17.22 |
| | | 131987 | 1711.5 | 1 / 7 | 21.86 |
| N | QPSK | 132322 | 1745.0 | 1 / 7 | 22.06 |
| IHz | | 132657 | 1778.5 | 1 / 7 | 22.06 |
| N S | 16-QAM | 132322 | 1745.0 | 1 / 7 | 21.31 |
| 3 | 64-QAM | 132657 | 1778.5 | 1 / 7 | 20.15 |
| | 256-QAM | 132322 | 1745.0 | 1 / 7 | 17.32 |
| | | 131979 | 1710.7 | 1 / 5 | 21.85 |
| N | QPSK | 132322 | 1745.0 | 1/3 | 22.02 |
| 1.4 MHz | | 132665 | 1779.3 | 1/3 | 22.03 |
| 4 | 16-QAM | 132665 | 1779.3 | 1 / 5 | 21.34 |
| | 64-QAM | 132322 | 1745.0 | 1/5 | 20.19 |
| | 256-QAM | 132322 | 1745.0 | 1/3 | 17.12 |

Table 7-2. Conducted Powers (LTE Band 66/4 – ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|-------------------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 15 of 200 | | |
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| Bandwidth | Modulation | Channel | Frequency [MHz] | RB Size/Offset | Conducted Power [dBm] |
|---------------------------------------|-------------------|------------------|--------------------|-------------------|--------------------------|
| | | 346000 | 1730.0 | 1 / 108 | 23.44 |
| | Π/2 BPSK | 349000 | 1745.0 | 1 / 54 | 23.45 |
| | | 352000 | 1760.0 | 1 / 54 | 23.36 |
| 러 | | 346000 | 1730.0 | 1 / 108 | 23.46 |
| 40 MHz | QPSK | 349000 | 1745.0 | 1 / 54 | 23.42 |
| 40 | | 352000 | 1760.0 | 1 / 54 | 23.34 |
| | 16-QAM | 349000 | 1745.0 | 1 / 54 | 22.50 |
| | 64-QAM | 346000 | 1730.0 | 1 / 108 | 21.06 |
| | 256-QAM | 349000 | 1745.0 | 1 / 54 | 18.80 |
| | | 345000 | 1725.0 | 1 / 80 | 23.43 |
| | π/2 BPSK | 349000 | 1745.0 | 1 / 40 | 23.46 |
| | | 353000 | 1765.0 | 1 / 40 | 23.41 |
| 30 MHz | | 345000 | 1725.0 | 1 / 80 | 23.48 |
| N | QPSK | 349000 | 1745.0 | 1 / 40 | 23.40 |
| 3(| | 353000 | 1765.0 | 1 / 40 | 23.41 |
| | 16-QAM | 349000 | 1745.0 | 1 / 40 | 22.57 |
| | 64-QAM | 349000 | 1745.0 | 1 / 40 | 21.11 |
| | 256-QAM | 349000 | 1745.0 | 1 / 40 | 18.65 |
| | | 344000 | 1720.0 | 1 / 79 | 23.49 |
| | π/2 BPSK | 349000 | 1745.0 | 1 / 26 | 23.39 |
| | | 354000 | 1770.0 | 1 / 79 | 23.26 |
| 20 MHz | QPSK | 344000 | 1720.0 | 1 / 79 | 23.40 |
| N N N N N N N N N N N N N N N N N N N | | 349000 | 1745.0 | 1 / 26 | 23.34 |
| 5(| | 354000 | 1770.0 | 1 / 79 | 23.30 |
| | 16-QAM | 349000 | 1745.0 | 1 / 26 | 22.62 |
| | 64-QAM | 349000 | 1745.0 | 1 / 26 | 21.11 |
| | 256-QAM | 344000 | 1720.0 | 1 / 79 | 18.59 |
| | | 343500 | 1717.5 | 1 / 58 | 23.45 |
| | π/2 BPSK | 349000 | 1745.0 | 1 / 20 | 23.38 |
| N | | 354500 | 1772.5 | 1 / 58 | 23.31 |
| 15 MHz | 00014 | 343500 | 1717.5 | 1 / 58 | 23.42 |
| 2 2 | QPSK | 349000 | 1745.0 | 1 / 20 | 23.44 |
| ÷ | 10.000 | 354500 | 1772.5 | 1 / 58 | 23.22 |
| | 16-QAM | 343500 | 1717.5 | 1 / 58 | 22.47 |
| | 64-QAM | 354500 | 1772.5 | 1 / 58 | 21.06 |
| | 256-QAM | 349000 | 1745.0 | 1 / 20 | 18.47 |
| | | 343000 | 1715.0 | 1/38 | 23.42 |
| | π/2 BPSK | 349000 355000 | 1745.0 1775.0 | 1/38 | 23.30 |
| N | | | | 1/38 | 23.23 |
| 10 MHz | OBSK | 343000 | 1715.0 | 1/38 | 23.43 |
| 0 | QPSK | 349000 | 1745.0 | 1/38 | 23.33 |
| - | 16 OAM | 355000 | 1775.0 | 1/38 | 23.29 |
| | 16-QAM | 343000 | 1715.0 | 1/38 | 22.45 |
| | 64-QAM 256-QAM | 343000 349000 | 1715.0 | 1/38 | 21.03 |
| | 200-04111 | 349000 | 1745.0 1712.5 | 1 / 38 1 / 12 | 18.35 |
| | π/2 BPSK | 342300 | 1745.0 | | 23.40 |
| | II/2 DF OK | 355500 | | 1 / 12 1 / 18 | 23.40 23.42 |
| N | | 342500 | 1777.5 1712.5 | 1 / 18 | |
| MHz | QPSK | 342300 | 1712.5 | 1 / 12 | 23.28 23.36 |
| 5 N | | 349000 | 1745.0 | | |
| | 16-QAM | 355500 | | 1 / 18 | 23.22 |
| | | | 1777.5 | 1 / 18 | 22.50 |
| | 64-QAM | 342500 | 1712.5 | 1 / 12 | 20.94 |
| | 256-QAM | 349000 | 1745.0 | 1 / 12 | 18.39 |

Table 7-3. Conducted Powers (NR Band n66 – ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
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| @ 2022 ELEMENT | | | V/2 0 4/E/2022 |



| Power | _ | Bandwidth | | PCC | | | scc | | | | ULCA TX. | | | |
|-------|---------|---------------|------------|------------|-----------------|---------|-----------------|------------|------------|-----------------|----------|-----------------|----------------|-------|
| State | Band | (PCC + SCC) | Modulation | UL Channel | UL Frequency | UL # RB | UL RB Offset | Modulation | UL Channel | UL Frequency | UL # RB | UL RB Offset | Power [dBm] | |
| | | | | 132072 | 1720.0 | 1 | 99 | | 132270 | 1739.8 | 1 | 0 | 22.83 | |
| | | | | QPSK | 132322 | 1745.0 | 1 | 99 | QPSK | 132520 | 1764.8 | 1 | 0 | 23.91 |
| | | | | 132572 | 1770.0 | 1 | 0 | 1 | 132374 | 1750.2 | 1 | 99 | 23.96 | |
| Max | LTE B66 | 20MHz + 20MHz | QPSK | 132572 | 1770 | 100 | 0 | QPSK | 132374 | 1750.2 | 100 | 0 | 22.02 | |
| | | 16-QA | 16-QAM | 132572 | 1770 | 100 | 0 | 16-QAM | 132374 | 1750.2 | 100 | 0 | 21.01 | |
| | | | 64-QAM | 132572 | 1770 | 100 | 0 | 64-QAM | 132374 | 1750.2 | 100 | 0 | 20.73 | |
| | | | 256-QAM | 132572 | 1770 | 100 | 0 | 256-QAM | 132374 | 1750.2 | 100 | 0 | 18.97 | |

Table 7-4. Conducted Powers (Uplink CA LTE Band 66B/C – ANT A)

| Power | | Bandwidth | | PCC | | | scc | | | | ULCA Tx. | | |
|-------|---------|---------------|------------|------------|-----------------|---------|-----------------|------------|------------|-----------------|----------|-----------------|----------------|
| State | Band | (PCC + SCC) | Modulation | UL Channel | UL Frequency | UL # RB | UL RB Offset | Modulation | UL Channel | UL Frequency | UL # RB | UL RB Offset | Power [dBm] |
| | | | | 132072 | 1720.0 | 1 | 99 | | 132270 | 1739.8 | 1 | 0 | 23.06 |
| | | | QPSK | 132322 | 1745.0 | 1 | 99 | QPSK | 132520 | 1764.8 | 1 | 0 | 22.74 |
| | | | | 132572 | 1770.0 | 1 | 0 | 1 | 132374 | 1750.2 | 1 | 99 | 22.46 |
| Max | LTE B66 | 20MHz + 20MHz | QPSK | 132072 | 1720 | 100 | 0 | QPSK | 132270 | 1739.8 | 100 | 0 | 21.12 |
| | | | 16-QAM | 132072 | 1720 | 100 | 0 | 16-QAM | 132270 | 1739.8 | 100 | 0 | 20.09 |
| | | | 64-QAM | 132072 | 1720 | 100 | 0 | 64-QAM | 132270 | 1739.8 | 100 | 0 | 20.10 |
| | | | 256-QAM | 132072 | 1720 | 100 | 0 | 256-QAM | 132270 | 1739.8 | 100 | 0 | 18.08 |

Table 7-5. Conducted Powers (Uplink CA LTE Band 66B/C – ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
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7.3 Occupied Bandwidth

Test Overview

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

Test Procedure Used

ANSI C63.26-2015 - Section 5.4.4

Test Settings

- 1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = 1 5% of the expected OBW
- 3. VBW \geq 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. The trace was allowed to stabilize
- 8. If necessary, steps 2 7 were repeated after changing the RBW such that it would be within
 - 1-5% of the 99% occupied bandwidth observed in Step 7

Test Setup

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



Figure 7-2. Test Instrument & Measurement Setup

Test Notes

None.

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
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| Mode | Bandwidth | Modulation | OBW [MHz] |
|-------------|-----------|------------|-----------|
| LTE Band 71 | 20 MHz | QPSK | 17.97 |
| | | 16QAM | 17.97 |
| | 15 MHz | QPSK | 13.51 |
| | | 16QAM | 13.53 |
| | 10 MHz | QPSK | 9.00 |
| | | 16QAM | 9.05 |
| | 5 MHz | QPSK | 4.56 |
| | | 16QAM | 4.54 |
| LTE Band 12 | 10 MHz | QPSK | 9.04 |
| | | 16QAM | 9.03 |
| | 5 MHz | QPSK | 4.55 |
| | | 16QAM | 4.56 |
| | 3 MHz | QPSK | 2.72 |
| | | 16QAM | 2.73 |
| | 1.4 MHz | QPSK | 1.10 |
| | | 16QAM | 1.11 |
| LTE Band 13 | 10 MHz | QPSK | 9.04 |
| | | 16QAM | 9.01 |
| | 5 MHz | QPSK | 4.55 |
| | | 16QAM | 4.56 |
| NR Band n71 | 20 MHz | π/2 BPSK | 17.91 |
| | | QPSK | 18.91 |
| | | 16QAM | 19.01 |
| | 15 MHz | π/2 BPSK | 13.47 |
| | | QPSK | 14.12 |
| | | 16QAM | 14.11 |
| | 10 MHz | π/2 BPSK | 8.99 |
| | | QPSK | 9.36 |
| | | 16QAM | 9.35 |
| | 5 MHz | π/2 BPSK | 4.51 |
| | | QPSK | 4.51 |
| | | 16QAM | 4.55 |
| NR Band n12 | 15 MHz | π/2 BPSK | 13.49 |
| | | QPSK | 14.15 |
| | | 16QAM | 14.12 |
| | 10 MHz | π/2 BPSK | 8.99 |
| | | QPSK | 9.32 |
| | | 16QAM | 9.31 |
| | 5 MHz | π/2 BPSK | 4.51 |
| | | QPSK | 4.52 |
| | | 16QAM | 4.50 |

Table 7-6. Occupied Bandwidth Test Results (Below 1GHz – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 19 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 19 01 200 |
| © 2023 ELEMENT | • | · | V3.0 1/5/2022 |



LTE Band 71 – ANT A

| www. Keysight Spectrum Analyzer - Occupi | ied BW | | | | |
|--|----------------------|--|----------------------|---------------------------------|------------------|
| <mark>LX/</mark> RL RF 50Ω A | | SENSE:INT | ALIGN AUTO | 09:17:38 AM Jun 0 | |
| | | Center Freq: 680.500000 MH Trig: Free Run Avg | z Hold: 100/100 | Radio Std: None | |
| | | #Atten: 30 dB | | Radio Device: B | TS |
| | | | | | |
| 10 dB/div Ref 40.00 d | 1Bm | | | | |
| Log | | | | | |
| 30.0 | | | | | |
| 20.0 | | | | | Clear Write |
| 10.0 | Abraham and a second | mandon the house the massive | ~ | | |
| | | | | | |
| 0.00 | | | | | |
| -10.0 | | | h | | Average |
| -20.0 | monthill | | hand all and a state | The second in the second second | |
| -30.0 | | | | | - Andrea |
| -40.0 | | | | | |
| | | | | | Max Hold |
| -50.0 | | | | | |
| Center 680.50 MHz | | | | Span 50.00 | MHZ |
| Res BW 470 kHz | | #VBW 1.6 MHz | | Sweep | |
| | | | | | |
| Occupied Bandw | idth | Total Power | 32. | 6 dBm | |
| | | | | | |
| | 17.966 MH | Z | | | Detector Peak |
| Transmit Freq Error | r -15.013 k⊦ | z % of OBW P | ower 90 | 9.00 % | Auto Man |
| | | | | | |
| x dB Bandwidth | 19.81 MH | lz xdB | -26 | .00 dB | |
| | | | | | |
| | | | | | |
| | | | | | |
| MSG | | | STATU | S | |
| | | | JIATO | | |

Plot 7-1. Occupied Bandwidth Plot (LTE Band 71 - 20MHz QPSK - Full RB - ANT A)



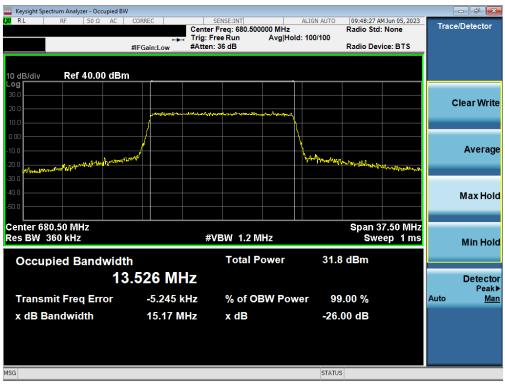
Plot 7-2. Occupied Bandwidth Plot (LTE Band 71 - 20MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dega 20 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 20 of 200 |
| © 2023 ELEMENT | | | V3.0 1/5/2022 |



| Keysight Spectrum Analyzer - Occupied B | | | | 1 | | | |
|---|-------------------|--|-------------------|---------------------------|-----------------------|------------|------------|
| LX RL RF 50Ω AC | CORREC | SENSE:INT Center Freq: 680.500 | ALIGN AUTO | 09:47:51 AM Radio Std: | 1Jun 05, 2023 None | Trace/Dete | ctor |
| | ↔ #IFGain:I ow | Trig: Free Run #Atten: 36 dB | Avg Hold:>100/100 | Radio Devi | ce: BTS | | |
| , | #IFGaIn:Low | #Atten: 00 dB | | Radio Devi | ce. B13 | | |
| 10 dB/div Ref 40.00 dB | m | | | | | | |
| Log 30.0 | | | | | | | |
| 20.0 | | | | | | Clear | Write |
| 10.0 | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | how down on | | | | |
| 0.00 | / | | <u> </u> | | | | |
| -10.0 | | | <u> </u> | | | Ave | erage |
| -20.0 | Longroff | | mont | - Carrielander Martine | the state of the | | |
| -30.0 | | | | | | | |
| -40.0 | | | | | | Мах | Hold |
| -50.0 | | | | | | | |
| Center 680.50 MHz | | | | Spap 3 | 7.50 MHz | | |
| Res BW 360 kHz | | #VBW 1.2 M | Hz | | ep 1 ms | Min | Hold |
| Occupied Bandwid | th | Total P | ower 33 | 1 dBm | | | |
| | 3.514 M⊦ | Iz | | | | Det | tector |
| | | | | 0.00.0/ | | | Peak▶ |
| Transmit Freq Error | -4.968 k | | | 9.00 % | | Auto | <u>Man</u> |
| x dB Bandwidth | 15.10 M | Hz xdB | -26 | .00 dB | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | 16 | | | |
| MSG | | | STAT | US | | | |

Plot 7-3. Occupied Bandwidth Plot (LTE Band 71 - 15MHz QPSK - Full RB - ANT A)



Plot 7-4. Occupied Bandwidth Plot (LTE Band 71 - 15MHz 16-QAM - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 21 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 21 of 200 |
| © 2023 ELEMENT | • | | V3.0 1/5/2022 |



| Keysight Spectrum Analyzer - Occupied BV | | | | - | |
|--|-------------|--|-------------------|---|---|
| LXU RE 50Ω AC | CORREC | SENSE:INT Center Freg: 680.5000 | ALIGN AUTO | 09:52:16 AM Jun 05, 2023 Radio Std: None | Trace/Detector |
| | •• | Trig: Free Run | Avg Hold: 100/100 | | |
| | #IFGain:Low | #Atten: 36 dB | | Radio Device: BTS | |
| | | | | | |
| 10 dB/div Ref 40.00 dBr | n | | | | |
| 30.0 | | | | | |
| 20.0 | | and the state of t | | | Clear Write |
| 10.0 | | and the second | -Itan + mm/ | | |
| 0.00 | / | | <u> </u> | | |
| -10.0 | _/ | | <u> </u> | | Average |
| -20.0 | dand t | | montrolog | and the state of the same a little of the | , in the second s |
| -20.0 walk and the second second | | | | | |
| -40.0 | | | | | Manuliald |
| -50.0 | | | | | Max Hold |
| | | | | | |
| Center 680.50 MHz | | | | Span 25.00 MHz | |
| Res BW 240 kHz | | #VBW 750 k | Hz | Sweep 1 ms | Min Hold |
| Occupied Bandwidt | h | Total Po | ower 32.5 | 5 dBm | |
| | 0032 MH | 1- | | | |
| 9. | | ٦٢ | | | Detector Peak► |
| Transmit Freq Error | -1.235 k | Hz % of OE | SW Power 99 | 0.00 % | Auto <u>Man</u> |
| x dB Bandwidth | 10.17 M | IHz x dB | -26 | 00 dB | |
| | | | 20. | | |
| | | | | | |
| | | | | | |
| MSG | | | STATU | | |
| 100 | | | STATU: | 5 | |

Plot 7-5. Occupied Bandwidth Plot (LTE Band 71 - 10MHz QPSK - Full RB - ANT A)



Plot 7-6. Occupied Bandwidth Plot (LTE Band 71 - 10MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager | |
|---------------------|----------------------------|------------------|-----------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 22 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 22 of 200 | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | |



| Keysight Spectrum Analyzer - Occupied BV | | | | | | | |
|--|-------------|--|----------------|--------------------------------|---------------------|--------|------------|
| LX RL RF 50Ω AC | CORREC | SENSE:INT Center Freq: 680.50 | ALIGN / | AUTO 10:01:56 At Radio Std: | MJun 05, 2023 | Trace/ | Detector |
| | #FC 1 1 | Trig: Free Run #Atten: 36 dB | Avg Hold:>100/ | 100 Radio Dev | ion: BTS | | |
| | #IFGain:Low | #Atten: 36 dB | | Radio Dev | ICE. DTS | | |
| | | | | | | | |
| 10 dB/div Ref 40.00 dBn | n | | | | | | |
| 30.0 | | | | | | - | |
| 20.0 | mon | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | mmm | | | C | ear Write |
| 10.0 | | | <u>}</u> | | | | |
| 0.00 | / | | \\\ | | | | |
| -10.0 | | | \ | | | | Average |
| -20.0 Manana mark | ~^ | | V\∧ | - Markent - Alar - Walt | - Jawa | | |
| -30.0 | | | | | | | |
| -40.0 | | | | | | | Max Hold |
| -50.0 | | | | | | | |
| | | | | 0 7.57 4 | 0.50 8411- | | |
| Center 680.500 MHz Res BW 120 kHz | | VBW 1.2 M | Hz | | 2.50 MHz ep 1 ms | | |
| | | | | 0.00 | ep 1 ms | | Min Hold |
| Occupied Bandwidt | h | Total | Power | 32.8 dBm | | | |
| 4 | 5648 MI | -17 | | | | | Detector |
| | | | | | | | Peak► |
| Transmit Freq Error | -7.534 | kHz % of O | BW Power | 99.00 % | | Auto | <u>Man</u> |
| x dB Bandwidth | 5.177 N | IHz x dB | | -26.00 dB | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| MSG | | | | STATUS | | | |
| | | | | | | | |

Plot 7-7. Occupied Bandwidth Plot (LTE Band 71 - 5MHz QPSK - Full RB - ANT A)



Plot 7-8. Occupied Bandwidth Plot (LTE Band 71 - 5MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | |
|---------------------|-----------------------|----------------------------|----------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 23 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 23 01 200 |
| © 2023 ELEMENT | | | V3.0 1/5/2022 |



LTE Band 12 – ANT A

| | er - Occupie | d BW | | | | | | | | | |
|---------------------|------------------|--|--------------------|-------------|--------------|--|------------|-------------------|-------------------------|-------|------------|
| LXIRL RF | 50 Ω A | C CORR | EC | | NSE:INT | | ALIGN AUTO | | M Jun 05, 2023 | Trace | /Detector |
| | | | | | req: 707.500 | | d:>100/100 | Radio Std | I: None | mac | |
| | | #IEG | ↔ ain:Low | #Atten: 3 | | Avginoi | u.>100/100 | Radio Dev | vice: BTS | | |
| | | 211 0 | | | | | | | | | |
| | | | | | | | | | | | |
| | 10.00 d | Bm | | _ | _ | | | | | | |
| Log 30.0 | | | | | | | | | | | |
| 30.0 | | | | | | | | | | | lear Write |
| 20.0 | | | معار والمعين مناور | manger | al Manager | and the second states of the s | | | | | |
| 10.0 | | | í | | | | | | | | |
| 0.00 | | ; | · | | | | \ | | | | |
| | | 1 | | | | | 1 | | | | Average |
| -10.0 | | | | | | | Harring | | | | Average |
| -20.0 Hostowy Jones | (+1/1-1/1-1-4-4- | de la companya de la | | | | | "" Wallyow | too man month and | | | |
| -30.0 | | | | | | | | | and a low to the second | | |
| -40.0 | | | | | | | | | | | |
| -50.0 | | | | | | | | | | | Max Hold |
| -50.0 | | | | | | | | | | | |
| Center 707.50 MH | 7 | | | | | | | Snan 2 | 25.00 MHz | | |
| Res BW 240 kHz | 2 | | | #\/ | 3W 750I | (H7 | | | eep 1 ms | | |
| | | | | <i></i> e i | 500 1001 | 112 | | 014 | сер тта | | Min Hold |
| Occupied Ba | ndwi | dth | | | Total F | ower | 32 8 | 3 dBm | | | |
| Occupied Ba | | | | _ | i otar i | | 02.0 | | | | |
| | | 9.039 | 92 MI | z | | | | | | | Detector |
| | _ | | | | | | | | | | Peak▶ |
| Transmit Freq | Error | - | 16.230 k | (Hz | % of O | BW Pow | /er 99 | 0.00 % | | Auto | Mar |
| x dB Bandwid | th | | 10.08 M | IH7 | x dB | | -26 | 00 dB | | | |
| | | | 10100 11 | | | | 201 | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MSG | | | | | | | STATU | 5 | | | |
| DI (7.0 | - | | | | | 1.40 | | | | | |

Plot 7-9. Occupied Bandwidth Plot (LTE Band 12 - 10MHz QPSK - Full RB - ANT A)



Plot 7-10. Occupied Bandwidth Plot (LTE Band 12 - 10MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|--|----------------------------|--|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 24 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | | Page 24 of 200 | | |
| © 2023 ELEMENT | | | | V3.0 1/5/2022 | | |



| Keysight Spectrum Analyzer - Occupied BW | | | | | |
|---|------------------|------------------------------------|-------------------|---|-----------------|
| LXX RL RF 50Ω AC | CORREC | SENSE:INT Center Freq: 707.5000 | | 10:19:25 AM Jun 05, 2023 Radio Std: None | Trace/Detector |
| | ↔ #IFGain:Low | Trig: Free Run #Atten: 36 dB | Avg Hold: 100/100 | Radio Device: BTS | |
| | | | | | |
| 10 dB/div Ref 40.00 dBm | | | | | |
| 20.0 | | | | | |
| 20.0 | | | | | Clear Write |
| 10.0 | - man | www. | mann. | | |
| 0.00 | _/ | | <u> </u> | | |
| -10.0 | | | \ | | Average |
| -20.0 mmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmmm | | | - Mallana | mar and the second | |
| -30.0 | | | | | |
| -40.0 | | | | | Max Hold |
| -50.0 | | | | | |
| Center 707.500 MHz | | | | Span 12.50 MHz | |
| Res BW 120 kHz | | #VBW 390 k | HZ | Sweep 1 ms | Min Hold |
| Occupied Bandwidth | | Total Po | ower 32.2 | 2 dBm | |
| 4.5 | 503 MH | Z | | | Detector |
| | | | | 00.00 | Peak► |
| Transmit Freq Error | 7.331 kl | | | 9.00 % | Auto <u>Man</u> |
| x dB Bandwidth | 5.166 MH | Hz xdB | -26. | 00 dB | |
| | | | | | |
| | | | | | |
| MSG | | | STATU | s | |

Plot 7-11. Occupied Bandwidth Plot (LTE Band 12 - 5MHz QPSK - Full RB - ANT A)



Plot 7-12. Occupied Bandwidth Plot (LTE Band 12 - 5MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | ates: EUT Type: | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 25 of 200 |
| © 2023 ELEMENT | | | V3.0 1/5/2022 |



| www.www.com analyzer - Occupied BW | / | | | | |
|--------------------------------------|-------------|---|---|--|-------------------|
| 🗶 RL RF 50Ω AC | CORREC | | ALIGN AUTO 000 MHz Avg Hold:>100/100 | 10:23:11 AM Jun 05, 202 Radio Std: None | Trace/Detector |
| | #IFGain:Low | #Atten: 36 dB | | Radio Device: BTS | _ |
| 10 dB/div Ref 40.00 dBm | ۱ <u> </u> | | | | |
| 30.0 | | | | | Clear Write |
| 20.0 | alernan | ๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛ | mannen | | |
| 0.00 | / | | l l | | |
| -10.0 | | | <u> </u> | | Average |
| -20.0 | <u>₩</u> | | mark the second | and Allemander and an | |
| -30.0 | | | | | |
| -40.0 | | | | | Max Hold |
| -50.0 | | | | | |
| Center 707.500 MHz #Res BW 75 kHz | | #VBW 240 k | Ш - | Span 7.500 MF Sweep 12.53 m | |
| | | #VDW 240 K | Π2 | Sweep 12.55 II | S Min Hold |
| Occupied Bandwidt | h | Total P | ower 32.4 | dBm | |
| 2. | 7227 MH | lz | | | Detector Peak▶ |
| Transmit Freq Error | -2.188 k | Hz % of OE | 3W Power 99 | .00 % | Auto <u>Man</u> |
| x dB Bandwidth | 3.099 M | lHz x dB | -26. | 00 dB | |
| | | | | | |
| | | | | | |
| MSG | | | STATUS | 3 | |

Plot 7-13. Occupied Bandwidth Plot (LTE Band 12 - 3MHz QPSK - Full RB - ANT A)



Plot 7-14. Occupied Bandwidth Plot (LTE Band 12 - 3MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 26 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 20 01 200 |
| © 2023 ELEMENT | | · | V3.0 1/5/2022 |





Plot 7-15. Occupied Bandwidth Plot (LTE Band 12 - 1.4MHz QPSK - Full RB - ANT A)



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

| FCC ID: A3LSMS711U | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 27 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 27 01 200 |
| © 2023 ELEMENT | | | V3.0 1/5/2022 |



LTE Band 13 – ANT A

| Keysight Spectrum Analyzer - Occupied BW | | | | | |
|--|--------------------------|---|----------------------|-------------------------|---------------------|
| RL RF 50Ω AC | | | 82.000000 MHz R | | 2023 Trace/Detector |
| 10 dB/div Ref 40.00 dBm | | | | | |
| 20.0 | how where the form | Land Same Strang Strang Same Same Same Same Same Same Same Same | | | Clear Writ |
| 10.0 | | | h h hulloodure | Lumant Myanon | Averaç |
| 000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | | | Max Ho |
| enter 782.00 MHz es BW 240 kHz | # | VBW 750 kHz | | Span 25.00 N Sweep 1 | |
| Occupied Bandwidt | ^h 0361 MHz | Total Power | 32.3 | dBm | Detect Peal |
| Transmit Freq Error | 24.382 kHz | % of OBW Po | wer 99 | .00 % | Auto <u>M</u> |
| x dB Bandwidth | 10.01 MHz | x dB | -26. | 00 dB | |
| G | | | STATUS | | |

Plot 7-17. Occupied Bandwidth Plot (LTE Band 13 - 10MHz QPSK - Full RB - ANT A)



Plot 7-18. Occupied Bandwidth Plot (LTE Band 13 - 10MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager | |
|---------------------|-----------------------|--|--|-----------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | | Page 28 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | 5/24/2023 - 7/31/2023 Portable Handset | | | |
| © 2023 ELEMENT | • | | | V3.0 1/5/2022 | |



| 🔤 Keysight Spectrum Analyzer - Occupied BW | | | | | | | |
|--|-----------|-----------------------------------|-------------------|-----------------------------|--|----------|-------------------|
| LXX RL RF 50Ω AC C | ORREC | SENSE:INT Center Freq: 782.000 | ALIGN AUTO | D 10:43:42 Al Radio Std: | M Jun 05, 2023 | Trace | /Detector |
| | | | Avg Hold: 100/100 | Radio Dev | In DTC | | |
| # | FGain:Low | #Atten: 36 dB | | Radio Dev | ICE: BIS | | |
| 10 dB/div Ref 40.00 dBm | | | | | | | |
| | | | | | | | |
| 30.0 | | | | | | <u>_</u> | lear Write |
| 20.0 | mm | wanter marken the | mm | | | č | |
| 10.0 | | | <u> </u> | | | | |
| 0.00 | | | h h | | | | |
| -10.0 | | | <u>م</u> ر | | | | Average |
| -20.0 | | | - Martin | production and the | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | |
| -30.0 | | | | | | | |
| -40.0 | | | | | | | Max Hold |
| -50.0 | | | | | | | |
| Center 782.000 MHz | | | | Span 1 | 2.50 MHz | | |
| Res BW 120 kHz | | #VBW 390 k | Hz | Swe | ep 1 ms | | Min Hold |
| Occupied Bandwidth | | Total P | ower 32 | .3 dBm | | | |
| | 500 MIL | | | | | | |
| 4.5 | 532 MH | IZ | | | | | Detector Peak▶ |
| Transmit Freq Error | -3.489 k | Hz % of OE | BW Power | 99.00 % | | Auto | Man |
| x dB Bandwidth | 5.216 MI | Hz xdB | -2 | 6.00 dB | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| MSG | | | STA | TUS | | | |

Plot 7-19. Occupied Bandwidth Plot (LTE Band 13 - 5MHz QPSK - Full RB - ANT A)



Plot 7-20. Occupied Bandwidth Plot (LTE Band 13 - 5MHz 16-QAM - Full RB - ANT A)

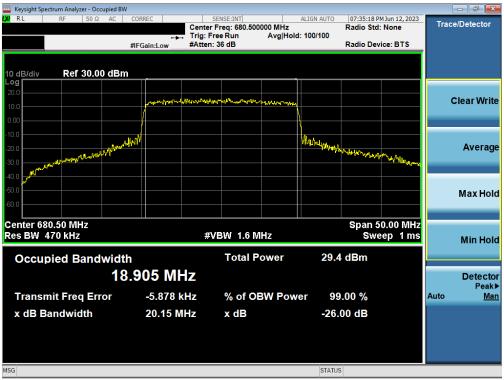
| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 29 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 29 01 200 | | |
| © 2023 ELEMENT | | · | V3.0 1/5/2022 | | |



NR Band n71 – ANT A

| Keysight Spect | trum Analyz | zer - Occi | upied BW | | | | | | | | | | | |
|----------------------|-------------|------------|----------|---------|----------|--------|----------------------------|-------------|--------------|------------|-------------------------|----------------|------|---------------------|
| L <mark>XI</mark> RL | RF | 50 Ω | AC | CORREC | | | SENSE:INT | | | IGN AUTO | 07:36:10 P Radio Std | M Jun 12, 2023 | Trac | e/Detector |
| | | | | | | | r Freq: 680.50 Free Run | | | 100/100 | Radio Std | : None | | |
| | | | | #IFGain | | | n: 36 dB | | | | Radio Dev | vice: BTS | | |
| | | | | | | | | | | | | | | |
| | B-6 | | | | | | | | | | | | | |
| 10 dB/div Log | Rer | 40.00 |) dBm | | | | | | | | | | | |
| 30.0 | | | | | | | | | | | | | | |
| 20.0 | | | | | | | | | | | | | 0 | Clear Write |
| | | | | me | montered | hanger | Morth Wineson | buchdydarya | | | | | | |
| 10.0 | | | | 1 | | | | | | | | | | |
| 0.00 | | | | | | | | | \mathbf{t} | | | | | |
| -10.0 | | | | | | | | | ╏┼ | | | | | Average |
| -20.0 | | | | and I | | | | | ha. | | an know a | | | |
| -30.0 | A March | house | month | , | | | | | | MAL IN MAN | mar have | m m | | |
| -40.0 | ~ | | | | | | | | | | | ~ ~ | | |
| ~~ | | | | | | | | | | | | | | Max Hold |
| -50.0 | | | | | | | | | | | | | | |
| Center 680 |) 50 ME | 47 | | | | | | | | | Snan 5 | 0.00 MHz | | |
| Res BW 4 | | | | | | # | VBW 1.6 | MH7 | | | | ep 1 ms | | |
| | | | | | | | | 1112 | | | | sep into | | Min Hold |
| Occup | ied B | and | widt | 1 | | | Total | Power | | 31.6 | dBm | | | |
| | | | | | 7 | _ | | | | | | | | - |
| | | | 17 | .90/ | 7 Mł | ΠZ | | | | | | | | Detector Peak► |
| Transm | it Fred | q Err | or | -58 | 1.07 | kHz | % of C | BW Po | wer | 99 | .00 % | | Auto | Peak► <u>Man</u> |
| x dB Ba | Indwic | ith | | 19 | 9.03 N | IHz | x dB | | | -26. | 00 dB | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| MSG | | | | | | | | | | STATUS | 3 | | | |

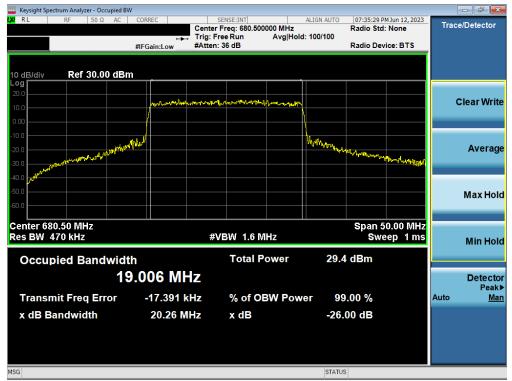
Plot 7-21. Occupied Bandwidth Plot (NR Band n71 - 20MHz DFT-s-OFDM BPSK - Full RB - ANT A)



Plot 7-22. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM QPSK - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|----------------------------|-----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Degra 20 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 30 of 200 | | |
| © 2023 ELEMENT | | ÷ | V3 0 1/5/2022 | | |





Plot 7-23. Occupied Bandwidth Plot (NR Band n71 - 20MHz CP-OFDM 16-QAM - Full RB - ANT A)



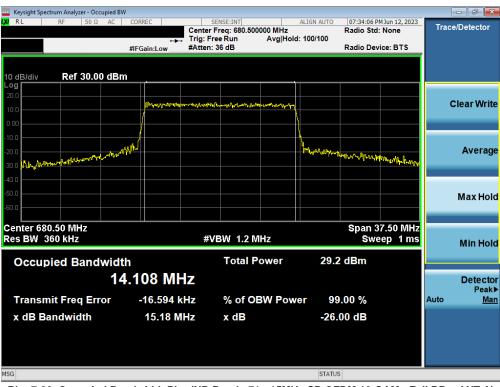
Plot 7-24. Occupied Bandwidth Plot (NR Band n71 - 15MHz DFT-s-OFDM BPSK - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 31 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage ST 01 200 | | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | | |



| Keysight Spectrum Analyzer - Occupied BV | V | | | | |
|--|------------|--|---------------|---|-----------------|
| 💢 RL RF 50Ω AC | | SENSE:INT Center Freq: 680.500000 M | | 07:33:55 PM Jun 12, 2023 Radio Std: None | Trace/Detector |
| | | Trig: Free Run Avg #Atten: 36 dB | Hold: 100/100 | Radio Device: BTS | |
| | | | | | |
| 10 dB/div Ref 30.00 dBr | n | | | | |
| 20.0 | | | | | |
| 10.0 | -harlwer - | งา _ไ ประกอบของเราะสุบัญษณะเราะให้ไห้ที่ส่วงสามารร | ne-Mu | | Clear Write |
| 0.00 | | | | | |
| -10.0 | | | N | | A |
| -20.0 -30.0 ~ M/M ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | | | PUNKILAND | sol working marine | Average |
| -40.0 | | | | | |
| -50.0 | | | | | Max Hold |
| -60.0 | | | | | maxmona |
| Center 680.50 MHz | | | | Span 37.50 MHz | |
| Res BW 360 kHz | | #VBW 1.2 MHz | | Sweep 1 ms | Min Hold |
| Occupied Bandwidt | h | Total Powe | r 29.3 | dBm | |
| | 4.119 MH: | 7 | | | Detector |
| | | | | | Peak▶ |
| Transmit Freq Error | -15.153 kH | | | 00 % | Auto <u>Man</u> |
| x dB Bandwidth | 15.11 MH | z xdB | -26.0 | 0 dB | |
| | | | | | |
| | | | | | |
| MSG | | | STATUS | | |

Plot 7-25. Occupied Bandwidth Plot (NR Band n71 - 15MHz QPSK - Full RB - ANT A)



Plot 7-26. Occupied Bandwidth Plot (NR Band n71 - 15MHz CP-OFDM 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|--------------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 32 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | 3 - 7/31/2023 Portable Handset | | | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | | |



| Keysight Spectrum Analyzer - Occupied B | | | | | | | |
|---|--|-----------------------------------|-------------------|-----------------|-----------|---------|--------------|
| LXU RF 50Ω AC | CORREC | SENSE:INT Center Freq: 680.500 | | 07:37:17 PM | | Trace/I | Detector |
| | ↔ #IFGain:Low | Trig: Free Run #Atten: 36 dB | Avg Hold: 100/100 | Radio Devic | e: BTS | | |
| | In Gam.cow | | | | | | |
| 10 dB/div Ref 40.00 dBr | n | | | | | | |
| Log | | | | | | | _ |
| 30.0 | | | | | | CI | ear Write |
| 20.0 | and the second s | Www.www.www.m | homenanity | | | | |
| 0.00 | | | | | | | |
| -10.0 | 8 | | | | | | Average |
| -20.0 | / | | <u> </u> | | | | |
| -30.0 | | | | m www. | ~ 1 | | |
| -40.0 | | | | | | | /ax Hold |
| -50.0 | | | | | | ľ | |
| | | | | 0 | 0.0 8411- | | |
| Center 680.50 MHz Res BW 240 kHz | | #VBW 7501 | (H7 | Span 25 Swee | ep 1 ms | | |
| | | | | | .p. 1113 | | Min Hold |
| Occupied Bandwid | th | Total P | ower 31 | .4 dBm | | | |
| 8. | 9924 MI | Ιz | | | | | Detector |
| Transmit Freq Error | -198.78 | | BW Power 9 | 99.00 % | | Auto | Peak▶ Man |
| | | | | | | Auto | man |
| x dB Bandwidth | 9.745 M | IHz x dB | -20 | 6.00 dB | | | |
| | | | | | | | |
| | | | | | | | |
| MSG | | | STA | TUS | | | |
| | | | STA | | | | |

Plot 7-27. Occupied Bandwidth Plot (NR Band n71 - 10MHz DFT-s-OFDM BPSK - Full RB – ANT A)



Plot 7-28. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM QPSK - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 33 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 33 01 200 | | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | | |



| Keysight Spectrum Analyzer - Occupied B | | | | | | _ | |
|---|------------------|----------------------------------|----------------|--------------------------------|--------------------------|--------|-------------------|
| LXI RL RF 50Ω AC | CORREC | SENSE:INT Center Freq: 680.50 | ALIGN | AUTO 07:33:27 PI Radio Std: | M Jun 12, 2023 : None | Trace/ | Detector |
| | ↔ #IFGain:Low | Trig: Free Run #Atten: 36 dB | Avg Hold: 100/ | 100 Radio Dev | rice: BTS | | |
| , | #IFGaIII.LOW | "Maten. oo ub | | Rudio Ber | | | |
| 10 dB/div Ref 30.00 dBr | n | | | | | | |
| Log | | | | | | | |
| 20.0 | man anthro | J. Marthan . John Straft | NESSA - Prove | | | С | ear Write |
| 10.0 | | | | | | | |
| 0.00 | | | 1 | | | | |
| -10.0 | ~ | | Ma | | | | • |
| -20.0 -30.0 manufacture | ٢٠٠٩ | | | Whomp the who profilm | malling | | Average |
| | | | | | the track of | | |
| -40.0 | | | | | | | |
| -50.0 | | | | | | | Max Hold |
| -60.0 | | | | | | _ | |
| Center 680.50 MHz | | | | | 5.00 MHz | | |
| Res BW 240 kHz | | #VBW 7501 | kHz | Swe | ep 1 ms | | Min Hold |
| Occupied Bandwid | th | Total F | ower | 29.0 dBm | | | |
| | | | | | | | |
| J. | 3513 101 | 72 | | | | | Detector Peak▶ |
| Transmit Freq Error | -15.894 | KHz % of O | BW Power | 99.00 % | | Auto | Man |
| x dB Bandwidth | 10.21 M | IHz x dB | | -26.00 dB | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| MSG | | | | STATUS | | | |
| | | | | | | | |

Plot 7-29. Occupied Bandwidth Plot (NR Band n71 - 10MHz CP-OFDM 16-QAM - Full RB – ANT A)



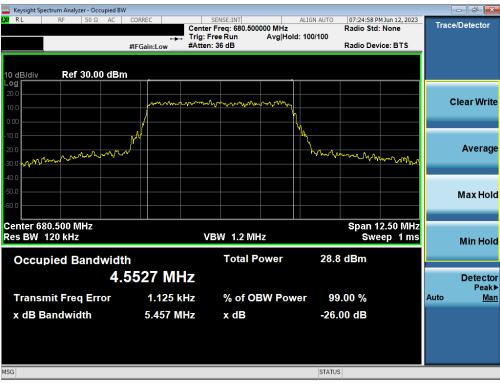
Plot 7-30. Occupied Bandwidth Plot (NR Band n71 - 5MHz DFT-s-OFDM BPSK - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 24 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 34 of 200 | | |
| © 2023 ELEMENT | • | | V3.0 1/5/2022 | | |





Plot 7-31. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM QPSK - Full RB - ANT A)



Plot 7-32. Occupied Bandwidth Plot (NR Band n71 - 5MHz CP-OFDM 16-QAM - Full RB – ANT A)

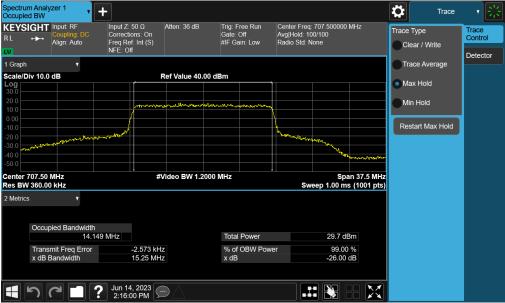
| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 35 of 200 | | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 55 01 200 | | | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | | | |



NR Band n12 – ANT A

| Spectrum Occupied | I BW | ` | + | | | | | | | | | | ₽ | Trace | v 🛃 |
|-----------------------------|----------|--|---|------------------|-------------|----------|------------------------|------------|---|----------------------|---|------------------------------|------------------|----------|----------|
| | | nput: RF Coupling: DC Align: Auto | Input Z: 50 Ω Corrections: On Freq Ref: Int (S) NFE: Off | | | | Gate: Off | | Center Freq: 707.500000 MHz Avg Hold: 100/100 Radio Std: None | | | Trace Type Clear / Write | Trace Control | | |
| 1 Graph | | • | NFE. U | | | | | | | | | | Trace | Average | Detector |
| Scale/Di | v 10.0 d | iB | | | Ref Value 4 | 0.00 dB | m | | | | | | Max H | lold | |
| Log 30.0 20.0 10.0 | | | | mon | mun | | | ᢉᡃᡗᠬ᠆ᡧᡪᠺ᠋ᡘ | | | | | Min H | | |
| 0.00 | | | | / | | | | | h | | | | Restar | Max Hold | |
| -20.0 -30.0 -40.0 | | and the state of t | and the start of | | | | | | | when glanne | - and - a | 1.hortherand sectors and | | | |
| -50.0 Center 7 Res BW | | | | # | Video BW 1 | 1.2000 M | Hz | | | Su | | an 37.5 MHz is (1001 pts) | | | |
| 2 Metrics | 300.00 | v | | | | | | | | 51 | eep 1.00 m | | | | |
| | Occupi | ed Bandwidth | | | | | | _ | | | | | | | |
| | - | | 88 MHz | | | | | Power | | - | 32.0 d | | | | |
| | | | 366.94 kH 14.59 MH | | | | % of OBW Power x dB | | | 99.00 % -26.00 dB | | | | | |
| | う (| ۲ ا | | 4, 2023 16 PM | | | | | | | | | | | |

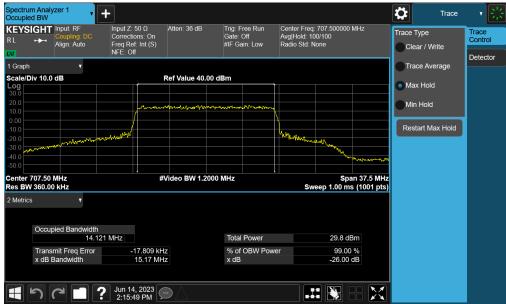
Plot 7-33. Occupied Bandwidth Plot (NR Band n12 - 15MHz DFT-s-OFDM BPSK - Full RB – ANT A)



Plot 7-34. Occupied Bandwidth Plot (NR Band n12 - 15MHz CP-OFDM QPSK - Full RB – ANT A)

| FCC ID: A3LSMS711U | | Approved by: Technical Manager | | |
|---------------------|-----------------------|-----------------------------------|----------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 26 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 36 of 200 | |
| © 2023 ELEMENT | • | · | V3.0 1/5/2022 | |





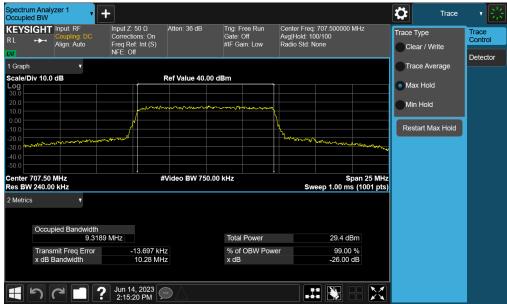
Plot 7-35. Occupied Bandwidth Plot (NR Band n12 - 15MHz CP-OFDM 16-QAM - Full RB – ANT A)



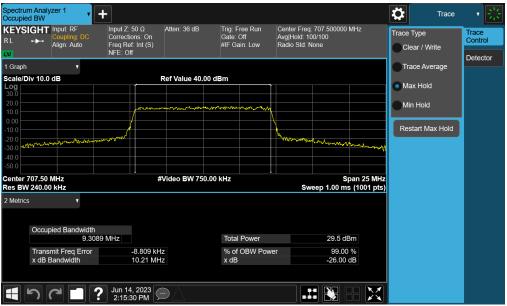
Plot 7-36. Occupied Bandwidth Plot (NR Band n12 - 10MHz DFT-s-OFDM BPSK - Full RB – ANT A)

| FCC ID: A3LSMS711U | | Approved by: Technical Manager | | |
|---------------------|-----------------------|-----------------------------------|----------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 37 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 37 01 200 | |
| © 2023 ELEMENT | • | | V3.0 1/5/2022 | |





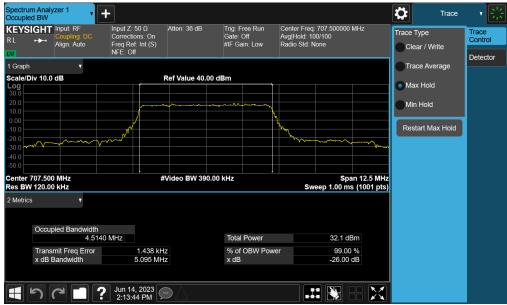
Plot 7-37. Occupied Bandwidth Plot (NR Band n12 - 10MHz CP-OFDM QPSK - Full RB – ANT A)



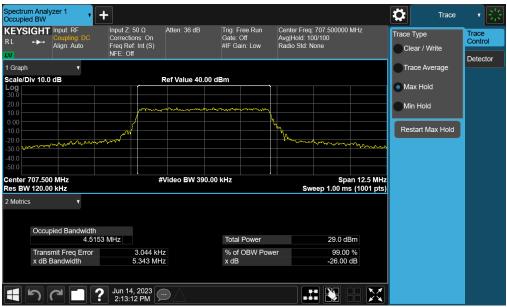
Plot 7-38. Occupied Bandwidth Plot (NR Band n12 - 10MHz CP-OFDM 16-QAM - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | |
|------------------------|-----------------------|----------------------------|----------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Daga 28 of 200 | | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 38 of 200 | | | |
| © 2023 ELEMENT V3.0 1/ | | | | | | |





Plot 7-39. Occupied Bandwidth Plot (NR Band n12 - 5MHz DFT-s-OFDM BPSK - Full RB – ANT A)



Plot 7-40. Occupied Bandwidth Plot (NR Band n12 - 5MHz CP-OFDM QPSK - Full RB - ANT A)

| FCC ID: A3LSMS711U | | Approved by: Technical Manager | | |
|---------------------|-----------------------|-----------------------------------|----------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 39 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 39 01 200 | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | |



| Spectrum Analyzer 1 | - | | | \$ | Trace 🔻 🔆 |
|--|--|---|---|---|---------------------|
| KEYSIGHT Input: RF R L Imput: RF Align: Auto | Input Z: 50 Ω Atten: 3 Corrections: On Freq Ref: Int (S) NFE: Off | i dB Trig: Free Run Gate: Off #IF Gain: Low | Center Freq: 707.500000 M Avg Hold: 100/100 Radio Std: None | Hz Trace Typ Clear | Control |
| <mark>.∨/</mark> 1 Graph v | NFE. OII | | | Trace | Detector Average |
| Scale/Div 10.0 dB Log | Ref Valu | e 40.00 dBm | | Max H | lold |
| 20.0 | | vy. man man and man | | Min H | bld |
| 0.00 | | | hourses of a | | t Max Hold |
| -20.0 -30.0 -40.0 | | | | when the second | |
| -50.0 Center 707.500 MHz | #Video B | W 390.00 kHz | | 12.5 MHz | |
| Res BW 120.00 kHz 2 Metrics | | | Sweep 1.00 ms | (1001 pts) | |
| | | | | | |
| Occupied Bandwidth 4.4994 | MHz | Total Power | 29.2 dBn | n | |
| Transmit Freq Error | 3.198 kHz | % of OBW Po | wer 99.00 % | 6 | |
| x dB Bandwidth | 5.132 MHz | x dB | -26.00 dB | 3 | |
| ? | Jun 14, 2023 | | | | |

Plot 7-41. Occupied Bandwidth Plot (NR Band n12 - 5MHz CP-OFDM 16-QAM - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | |
|----------------------------|-----------------------|----------------------------|----------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 40 of 200 | | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 40 of 200 | | | |
| © 2023 ELEMENT V3.0 1/5/20 | | | | | | |



| Mode | Bandwidth | Modulation | OBW [MHz] |
|---------------|-----------|-----------------|-----------|
| WCDMA1700 | N/A | Spread Spectrum | 4.18 |
| LTE Band 66/4 | 20 MHz | QPSK | 18.01 |
| | | 16QAM | 18.07 |
| | 15 MHz | QPSK | 13.57 |
| | | 16QAM | 13.54 |
| | 10 MHz | QPSK | 9.06 |
| | | 16QAM | 9.05 |
| | 5 MHz | QPSK | 4.55 |
| | | 16QAM | 4.55 |
| | 3 MHz | QPSK | 2.72 |
| | | 16QAM | 2.74 |
| | 1.4 MHz | QPSK | 1.11 |
| | | 16QAM | 1.12 |
| NR Band n66 | 40 MHz | π/2 BPSK | 38.78 |
| | | QPSK | 38.79 |
| | | 16QAM | 38.72 |
| | 30 MHz | π/2 BPSK | 28.80 |
| | | QPSK | 28.72 |
| | | 16QAM | 28.76 |
| | 20 MHz | π/2 BPSK | 18.00 |
| | | QPSK | 19.03 |
| | | 16QAM | 19.03 |
| | 15 MHz | π/2 BPSK | 13.53 |
| | | QPSK | 14.17 |
| | | 16QAM | 14.18 |
| | 10 MHz | π/2 BPSK | 9.02 |
| | | QPSK | 9.37 |
| | | 16QAM | 9.35 |
| | 5 MHz | π/2 BPSK | 4.51 |
| | | QPSK | 4.52 |
| | | 16QAM | 4.53 |

Table 7-7. Occupied Bandwidth Test Results (Above 1GHz – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 41 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 41 of 200 | | |
| © 2023 ELEMENT | | • | V3.0 1/5/2022 | | |



WCDMA AWS – ANT A

| Keysight Spectrum Analyze | | | | | | | | | | - 7 × |
|---------------------------|---------|----------|----------|--|-----------|---------------|-------------------------|----------------|------------|-----------|
| RL RF | 50 Ω AC | CORREC | Co | SENSE:INT nter Freg: 1.7326 | | ALIGN AUTO | 03:26:14 P Radio Std | M Jun 09, 2023 | Trace | /Detector |
| | | | Tri | g: Free Run | Avg Hold: | 100/100 | Raulo Stu | . None | | |
| | | #IFGain: | _ow#At | tten: 36 dB | | | Radio Dev | /ice: BTS | | |
| | | | | | | | | | | |
| 0 dB/div Ref 4 | 0.00 dE | 3m | | | | | | | | |
| og | | | | | | | | | | |
| 30.0 | | | | | | | | | 6 | lear Wri |
| 0.0 | | | mound | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | ~ | | | | | |
| 0.0 | | | <i>(</i> | | | | | | | |
|).00 | | | | | | | | | | |
| 0.0 | | | | | | | | | | Avera |
| 20.0 | | may part | | | - ma | 100 m - 100 m | | | | |
| 0.0 | - | | | | | -ليمري محار | munny | | | |
| 0.0 ma man and the | | | | | | | | howberry | | |
| 50.0 | | | | | | | | | | Max Ho |
| 0.0 | | | | | | | | | _ | _ |
| enter 1.732600 G | Hz | | | | | | Span 1 | 5.00 MHz | | |
| les BW 150 kHz | | | | VBW 1.5 M | Hz | | | eep 1 ms | | Min Ho |
| | | | | T - 4 - 1 I | | 202 | | | | |
| Occupied Ba | | | | Total | ower | 32.4 | dBm | | | |
| | 4 | 1.1767 | MHz | | | | | | | Detect |
| | | | | | | | | | . . | Peal |
| Transmit Freq | Error | -202 | 2.99 kHz | % of O | BW Powe | er 99 | .00 % | | Auto | Ma |
| x dB Bandwidt | th | 4.7 | 75 MHz | x dB | | -26. | 00 dB | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| G | | | | | | STATUS | | | | |
| | | | | | | STATUS | | | | |

Plot 7-42. Occupied Bandwidth Plot (WCDMA, Ch. 1413 - ANT A)

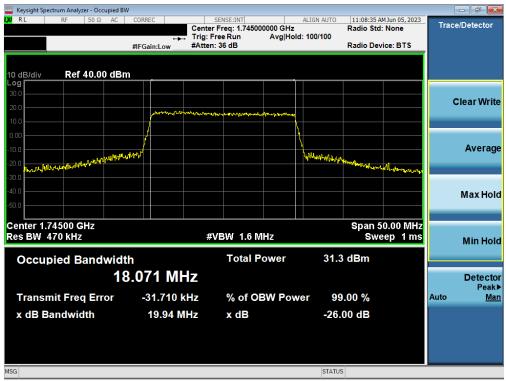
| FCC ID: A3LSMS711U | | Approved by: Technical Manager | | |
|---------------------|-----------------------|-----------------------------------|----------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 42 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 42 01 200 | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | |



LTE Band 66/4 - ANT A

Keysight Spectrum Analyzer - Occupied BW 05:19:05 PM Jun 12, 2023 SENSE:IN ALIGN AUTO Center Freq: 1.745000000 GHz Trig: Free Run Avg|Hol Trace/Detector Radio Std: None Avg|Hold: 100/100 Radio Device: BTS #Atten: 36 dB #IFGain:Low Ref 40.00 dBm 10 dB/div .og **Clear Write** Average Maladyly ho have we Max Hold Center 1.74500 GHz Span 50.00 MHz Res BW 470 kHz #VBW 1.6 MHz Sweep 1 ms Min Hold Occupied Bandwidth Total Power 29.0 dBm 18.009 MHz Detector Peak Transmit Freq Error 5.614 kHz % of OBW Power 99.00 % Auto Man x dB Bandwidth 19.56 MHz -26.00 dB x dB STATUS MSG

Plot 7-43. Occupied Bandwidth Plot (LTE Band 66/4 - 20MHz QPSK - Full RB - ANT A)



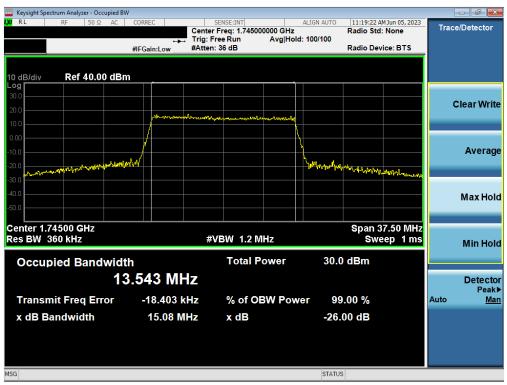
Plot 7-44. Occupied Bandwidth Plot (LTE Band 66/4 - 20MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | |
|----------------------------|---|----------------------------|----------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Demo 42 of 200 | | | |
| 1M2304260060-07.A3L | 304260060-07.A3L 5/24/2023 - 7/31/2023 Portable Handset | | Page 43 of 200 | | | |
| © 2023 ELEMENT V3.0 1/5/20 | | | | | | |



| Keysight Spectrum Analyzer - Occupi | | | | | | | | | | | |
|-------------------------------------|-------------|-----------|--------------------------|-----------------------|---------------|----------|-------------|--|----------------|------|---------------------|
| LXU RL RF 50Ω A | AC CORRE | | Center Fre | SE:INT eq: 1.74500 | 0000 GHz | ALIGN A | | 11:19:00 A Radio Std: | M Jun 05, 2023 | Trac | e/Detector |
| | #IEGa | | Trig: Free #Atten: 36 | | Avg Hol | d:>100/1 | | Radio Dev | ice: BTS | | |
| | <i>"</i> | | | | | | | | | | |
| 10 dB/div Ref 40.00 c | dBm | | | | | | | | | | |
| Log 30.0 | | | | | | | | | | | |
| 20.0 | | | | | | | | | | | Clear Write |
| 10.0 | | portunity | | ᢤᡁᠵᡳᡊᡵ᠆ᡁᡰ᠕ᡅᠯᢂᡪ | many | | | | | | |
| 0.00 | / | | | | | <u>ا</u> | | | | | |
| -10.0 | / | | | | | \ | | | | | Average |
| -20.0 | WARNING NH | | | | | | data . | | | | Ŭ |
| -30.0 monter and when the second | u | | | | | | ~તામ- બીતાય | the the states of the states o | hardenter | | |
| -40.0 | | | | | | | | | | | Max Hold |
| -50.0 | | | | | | | | | | | maxiloia |
| Center 1.74500 GHz | | | | | | | | Enon 2 | 7.50 MHz | | |
| Res BW 360 kHz | | | #VB | W 1.2 M | IHz | | | | ep 1 ms | | Min Hold |
| | | | | | | | | 10 | | | Will Hold |
| Occupied Bandw | | | | Total P | ower | | 29.9 | dBm | | | |
| | 13.56 | 5 MH | Z | | | | | | | | Detector Peak▶ |
| Transmit Freq Error | r <u>-1</u> | 6.283 kH | z | % of O | SW Pov | ver | 99. | 00 % | | Auto | Peak≱ <u>Man</u> |
| x dB Bandwidth | | 5.11 M⊦ | 17 | x dB | | | -26 0 | 0 dB | | | |
| | | | | | | | 2010 | o all | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MSG | | | | | | S | STATUS | | | | |

Plot 7-45. Occupied Bandwidth Plot (LTE Band 66/4 - 15MHz QPSK - Full RB - ANT A)



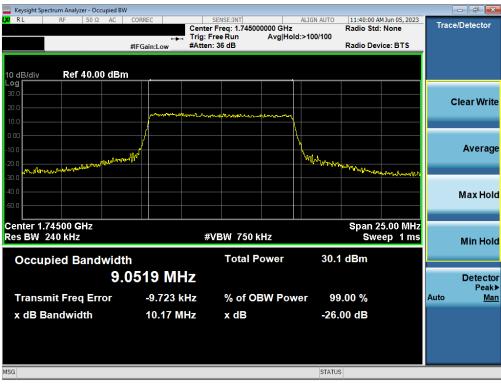
Plot 7-46. Occupied Bandwidth Plot (LTE Band 66/4 - 15MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 44 of 200 | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 44 of 200 | | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | | |



| 🔤 Keysight Spectrum Analyzer - Occupie | | | | | |
|--|--|------------------------------|-----------------|---|-----------------|
| L <mark>X/</mark> RL RF 50Ω A | | SENSE:INT | ALIGN AUTO | 11:39:45 AM Jun 05, 2023 Radio Std: None | Trace/Detector |
| | | rig: Free Run Av | g Hold:>100/100 | | |
| | #IFGain:Low # | Atten: 36 dB | | Radio Device: BTS | - |
| | | | | | |
| 10 dB/div Ref 40.00 d | IBm | | | | |
| Log 30.0 | | | | | |
| 20.0 | | | | | Clear Write |
| | mound | May Manage Marshaft Marshaft | -arty | | |
| 10.0 | | | N N | | |
| 0.00 | | | | | |
| -10.0 | | | <u>\</u> | | Average |
| -20.0 -30.0 marinhanananaharan | where the second s | | hall lover and | Harnhurton magazilian | |
| -30.0 (~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | | | a and marker when the the the | |
| -40.0 | | | | | Max Hold |
| -50.0 | | | | | |
| Center 1.74500 GHz | | | | Span 25.00 MHz | |
| Res BW 240 kHz | | #VBW 750 kHz | | Sweep 1 ms | |
| | | | | encop inte | Min Hold |
| Occupied Bandwi | idth | Total Powe | er 29. | 8 dBm | |
| | 9.0551 MHz | 7 | | | Detector |
| | | | | | Peak |
| Transmit Freq Error | -18.778 kH | z % of OBW | Power 99 | 9.00 % | Auto <u>Man</u> |
| x dB Bandwidth | 10.31 MH | z x dB | -26 | .00 dB | |
| | | | | | |
| | | | | | |
| | | | | | |
| MCC | | | CTATI | | |
| MSG | | | STATU | 5 | |

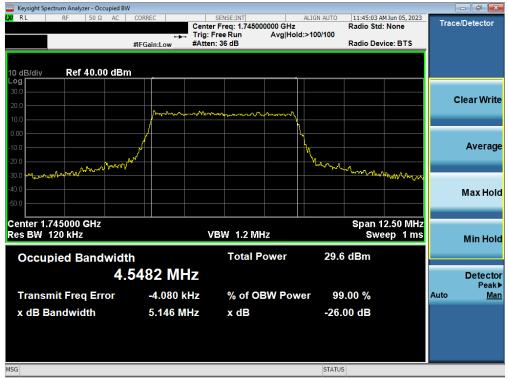
Plot 7-47. Occupied Bandwidth Plot (LTE Band 66/4 - 10MHz QPSK - Full RB - ANT A)



Plot 7-48. Occupied Bandwidth Plot (LTE Band 66/4 - 10MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|--|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 45 of 200 | | | | | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | | | | | | | |
| © 2023 ELEMENT | | | | | | | | | |





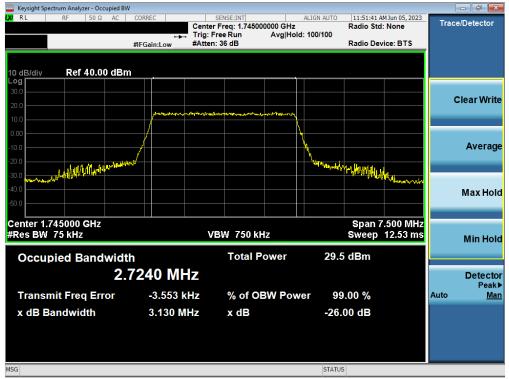
Plot 7-49. Occupied Bandwidth Plot (LTE Band 66/4 - 5MHz QPSK - Full RB - ANT A)



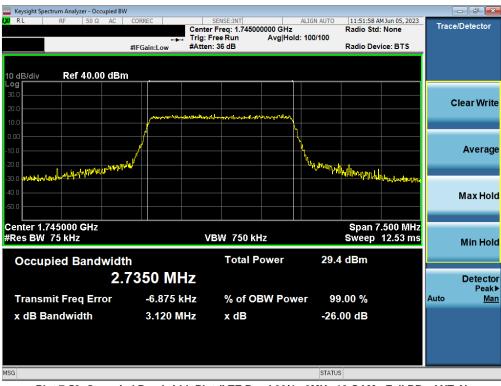
Plot 7-50. Occupied Bandwidth Plot (LTE Band 66/4 - 5MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|--|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 46 of 200 | | | | | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 40 01 200 | | | | | | |
| © 2023 ELEMENT | | | | | | | | | |





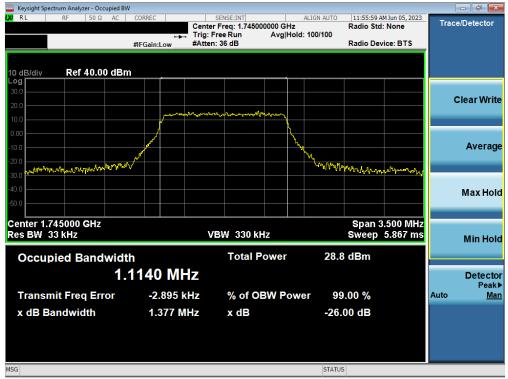
Plot 7-51. Occupied Bandwidth Plot (LTE Band 66/4 - 3MHz QPSK - Full RB - ANT A)



Plot 7-52. Occupied Bandwidth Plot (LTE Band 66/4 - 3MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | | | | |
|---------------------|-----------------------|----------------------------|----------------|--|--|--|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 47 of 200 | | | | | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 47 01 200 | | | | | | |
| 0 2023 ELEMENT | | | | | | | | | |





Plot 7-53. Occupied Bandwidth Plot (LTE Band 66/4 - 1.4MHz QPSK - Full RB - ANT A)



Plot 7-54. Occupied Bandwidth Plot (LTE Band 66/4 - 1.4MHz 16-QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager | |
|---------------------|--|----------------------------|-----------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 48 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 Portable Handset | | Fage 40 01 200 | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | |



NR Band n66 – ANT A

| Spectrun Occupied | n Analyzer 1 d BW | • + | | | | | | | | ₽ | Trace | , |
|----------------------|---|---------------------|--|--------------------------------------|----------------------|-----------------------------|---|---------------------|--------------------------|-----------------------|----------|------------------|
| RL | GHT Input: RF ↔ Coupling: Align: Aut | DC Correc | Z: 50 Ω ctions: On Ref: Int (S) Off | Atten: 36 dB | Gate: | Free Run Off ain: Low | Center Fre Avg Hold: 1 Radio Std: | | GHz | Trace Type Clear / | | Trace Control |
| 1 Graph | • | | 511 | | | | | | | Trace A | verage | Detector |
| Log 🖂 | iv 10.0 dB | | | Ref Value 40. | 00 dBm | | 1 | | | Max Ho | bld | |
| 30.0 20.0 10.0 | | | Jummanus | ger ^{age} anangagtatan keng | aborting despondents | ang and a second | v | | | Min Ho | ld | |
| 0.00 | | | | | | | | | | Restart | Max Hold | |
| -30.0 -40.0 | and the second | | | | | | | | and marked | | | |
| | .74500 GHz V 1.0000 MHz | | . # | Video BW 3.0 | 000 MHz | | | Spa weep 1.00 ms | an 100 MHz (1001 pts) | | | |
| 2 Metrics | | | | | | | | | (1001 ptc) | | | |
| | Occupied Band | width 38.784 MHz | | | Toto | l Power | | 31.0 dB | m | | | |
| | Transmit Freq E x dB Bandwidth | Error | -5.321 kH 41.03 MH | | | OBW Pow | /er | 99.00 -26.00 c | % | | | |
| | | | | | A GL | | | 20.000 | | | | |
| | って「 | ? Jun 7:08 | 14, 2023 5:57 PM | $\Box \triangle$ | | | | | | | | |

Plot 7-55. Occupied Bandwidth Plot (NR Band n66 - 40.0MHz DFT-s-OFDM BPSK - Full RB – ANT A)



Plot 7-56. Occupied Bandwidth Plot (NR Band n66 - 40.0MHz CP-OFDM QPSK - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 49 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 49 01 200 |
| © 2023 ELEMENT | | · | V3.0 1/5/2022 |



| Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF | Input Ζ: 50 Ω Atten: 36 dB | Tria: Free Run Cent | ter Freg: 1.745000000 GHz | Trace | - * 影 |
|--|--------------------------------------|--|--|------------------|------------------|
| RL + Align: Auto | Corrections: On Freq Ref: Int (S) | Gate: Off Avg | Hold: 100/100 io Std: None | Clear / Write | Trace Control |
| 1 Graph v Scale/Div 10.0 dB | Ref Value 30. | 00 dBm | | Trace Average | Detector |
| Log 20.0 10.0 0.00 | , Norman Anna Sanar an Anna an An | dereyad operature (for a volume of shelong | | Max Hold | |
| -10.0 -20.0 -30.0 -40.0 | www.webstrow | | MAANNA WARIAN NA MAANAANA | Restart Max Hold | |
| -50.0 -60.0 Center 1.74500 GHz #Res BW 1.0000 MHz | #Video BW 3.0 | 000 MHz | Span 100 MHz Sweep 1.00 ms (1001 pts) | | |
| 2 Metrics | | | | | |
| Occupied Bandwidth 38.721 | 1 MHz | Total Power | 28.9 dBm | | |
| Transmit Freq Error x dB Bandwidth | -20.502 kHz 41.02 MHz | % of OBW Power x dB | 99.00 % -26.00 dB | | |
| 4 7 7 7 ? | Jun 14, 2023 7:11:06 PM | | | | |

Plot 7-57. Occupied Bandwidth Plot (NR Band n66 - 40.0MHz CP-OFDM 16QAM - Full RB – ANT A)

| Occupie | | ' | + Input Z: Correctio Freq Ret | ons: On f: Int (S) | Atten: 36 dB | Gate: | Free Run Off ain: Low | Center Freq Avg Hold: 10 Radio Std: N | 00/100 | 0 GHz | Trace Type | Trace | Trace Control |
|---------------|---|---------------------|--|-----------------------|---------------|---------------------|-----------------------------|---|---|----------------------------|------------|----------|------------------|
| LN 1 Graph | | • | NFE: Of | f | | | | | | | Trace Av | | Detector |
| | iv 10.0 dE | | | F | Ref Value 40. | 00 dBm | | | | | | | |
| Log 30.0 | | | | | | | | | | | Max Hol | d | |
| 20.0 10.0 | | | | prominent | | Markey and a second | mannahl | | | | Min Hold | 1 | |
| 0.00 | | | | | | | | | | | Restart N | lax Hold | |
| -20.0 | and the state of the | maynortheadress | James and and | | | | | homeno | and the second states | and the second second | | | |
| -40.0 | | | | | | | | | | | | | |
| | 1.74500 G N 750.00 I | | | ↓ #\ | /ideo BW 2.4 | 000 MHz | | | | pan 75 MHz s (1001 pts) | | | |
| 2 Metrics | | кп 2 Т | | | | | | 3 | eep 1.00 m | s (1001 pts) | | | |
| | | | | | | | | | | | | | |
| | Occupied | d Bandwidth 28.8 | 00 MHz | | | Tota | l Power | | 30.9 d | Bm | | | |
| | | t Freq Error | | 10.299 kHz | | | f OBW Powe | er | 99.00 | | | | |
| | x dB Bar | ndwidth | | 30.50 MHz | Z | x dE | | | -26.00 | dB | | | |
| | とって | | ? Jun 16 1:25:5 | , 2023 59 PM | | | | | | | | | |

Plot 7-58. Occupied Bandwidth Plot (NR Band n66 - 30.0MHz DFT-s-OFDM BPSK - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager | |
|---------------------|-----------------------|----------------------------|-----------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 50 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 50 of 200 | |
| © 2023 ELEMENT | | · | V3.0 1/5/2022 | |



| Occupie | | • | + | | | | | | | | \$ | Trace | ۲ | 21× 21× |
|--------------------|---------------------------------|----------------|-----------------------------------|-----------------------|---|---|---|---------------------------------------|------------------------------|----------------------------|-------|---------------------|--------------|------------|
| KEYS RL | IGHT Input: Coupli Align: | ng: DC | Input Z: Correctio Freq Ret | ons: On f: Int (S) | Atten: 36 dB | Gate: | Free Run Off ain: Low | Center Fre Avg Hold: Radio Std: | | 0 GHz | Trace | Type ear / Write | Trac Cont | |
| | | - | NFE: Of | f | | | | | | | | ace Average | Dete | ctor |
| 1 Graph Scale/D | iv 10.0 dB | | | | Ref Value 30. | 00 dBm | | | | | | | | |
| 20.0 | | | | | | | | | | | • M | ax Hold | | |
| 10.0 | | | | pro-facebook | ใจรักระห์แห _{าสาร} ระหุท _{ัญ} ง | ๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛ | angan nganan sa | \backslash | | | М | in Hold | | |
| -10.0 | | | | | | | | Water | | | Re | start Max Hold | | |
| -30.0 | myhmapproper | hursharhurdert | Part of calling . | | | | | 11. A. M. M. M. | and affection and a strating | metruman | | | | |
| -40.0 | | | | | | | | | | | | | | |
| -50.0 -60.0 | | | | | | | | | | | | | | |
| | 1.74500 GHz N 750.00 kHz | | | # | Video BW 2.4 | 1000 MHz | | s | S weep 1.00 m | pan 75 MHz s (1001 pts) | | | | |
| 2 Metrics | | V | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | Occupied Ba | | | | | | | | | | | | | |
| | | | 19 MHz | | | | l Power | | 28.6 dl | | | | | |
| | Transmit Fre | | | 88.869 kH 30.43 MH | | % of x dB | OBW Pow | er | 99.00 -26.00 | | | | | |
| | | | | | | Adb | | | 20.00 | | | | Γ_ | |
| | って | | Jun 16 1:27:1 | | | | | | | | | | | |

Plot 7-59. Occupied Bandwidth Plot (NR Band n66 - 30.0MHz CP-OFDM QPSK - Full RB – ANT A)

| Spectrum Occupied | d BW | | + | | | | | | | | * | Trace | · * |
|-------------------------|--------------------|--|---|-------------------------|----------------|---------------------------|--------------------------------|---|------------------|----------------------------|-------------------------|-----------|------------------|
| KEYSI RL | C | nput: RF Coupling: DC Jign: Auto | Input Z: Correctie Freq Re NFF: Of | ons: On f: Int (S) | Atten: 36 dB | Gate | Free Run : Off Gain: Low | Center Freq Avg Hold: 10 Radio Std: N | | 0 GHz | Trace Type Clear / \ | Vrite | Trace Control |
| 1 Graph | | • | INFL. OI | | | | | | | | Trace A | verage | Detector |
| Scale/Di | iv 10.0 d | В | | F | Ref Value 30.0 | 00 dBm | | 7 | | | Max Ho | ld | |
| 20.0 10.0 0.00 | | | | and the second second | Attanan Carro | ቁካ _ቢ ያኪ.አ.ኒ.ትං | within the second | | | | Min Hol | d | |
| -30.0 | bermuland | manination | manhitan | | | | | Marykana Lawra | arton to Marilan | | Restart N | /lax Hold | |
| -40.0 -50.0 -60.0 | | | | | | | | | | | | | |
| Center 1 #Res BV | | | | #\ | /ideo BW 2.4 | 000 MHz | | Sw | | pan 75 MHz s (1001 pts) | | | |
| 2 Metrics | | T | | | | | | | | / | | | |
| | Occupie | ed Bandwidth 28. | ו 759 MHz | | | Tota | al Power | | 28.7 d | Bm | | | |
| | Transmi x dB Ba | it Freq Error Indwidth | | 14.371 kHz 30.42 MHz | | % c x di | of OBW Pow 3 | er | 99.00 -26.00 | | | | |
| | า (| | ? Jun 16 | , 2023 4 PM | | | | ŀ | | | | | |

Plot 7-60. Occupied Bandwidth Plot (NR Band n66 - 30.0MHz CP-OFDM 16QAM - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dere E1 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 51 of 200 |
| © 2023 ELEMENT | • | | V3.0 1/5/2022 |



| Spectrum Analyzer 1 Occupied BW | + | | | Trace | - 张 |
|---|--|---------------------------------------|--|--|------------------|
| KEYSIGHT Input: RF RL Coupling: DC Align: Auto | Input Z: 50 Ω Atten: 36 dB Corrections: On Freq Ref: Int (S) NFE: Off | Gate: Off Avg H | r Freq: 1.745000000 GHz old: 100/100 Std: None | Trace Type Clear / Write | Trace Control |
| LXI 1 Graph ▼ | | | | Trace Average | Detector |
| Scale/Div 10.0 dB Log 20.0 10.0 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0 - | Ref Value 30. | | sys | Max Hold Min Hold Restart Max Hold | |
| Res BW 470.00 kHz 2 Metrics v Occupied Bandwidth |)2 MHz ∣ -557.76 kHz 19.27 MHz | Total Power % of OBW Power x dB | Sweep 1.00 ms (1001 pts) 30.6 dBm 99.00 % -26.00 dB | | |
| | Jun 14, 2023 7:21:38 PM | Xub | | | |

Plot 7-61. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz DFT-s-OFDM BPSK - Full RB – ANT A)

| Spectrum Analyzer 1 Occupied BW | • + | | | | | | Trace | 7 米 |
|--|--|-------------------------|-------------------------------------|-----------|---|------------------------------------|-----------------------------|------------------|
| RL +++ Align: Al | Correct | ions: On ef: Int (S) | Gate: | Off Avç | nter Freq: 1.7450 g Hold: 100/100 dio Std: None | 00000 GHz | Trace Type Clear / Write | Trace Control |
| 1 Graph | v | | | | | | Trace Average | Detector |
| Scale/Div 10.0 dB Log | | Ref Valu | ue 30.00 dBm | | | | Max Hold | |
| 20.0 10.0 0.00 | | jownenson honors | han half and a second second second | minnen | | | Min Hold | |
| -10.0 -20.0 -30.0 | mater of the particular of the | | | | Mmmunu | and and found for the second state | Restart Max Hold | |
| -40.0 -50.0 -60.0 | | | | | | | | |
| Center 1.74500 GHz Res BW 470.00 kHz | | #Video B | W 1.6000 MHz | | Sweep 1. | Span 50 MHz 00 ms (1001 pts) | | |
| 2 Metrics | v | | | | | | | |
| Occupied Ban | dwidth 19.030 MHz | | Total | Power | 2 | 8.3 dBm | | |
| Transmit Freq x dB Bandwid | Error | -9.384 kHz 20.17 MHz | | OBW Power | | 99.00 % 6.00 dB | | |
| 1 7 7 | Jun 14 7:23: | 4, 2023 | | | | | | |

Plot 7-62. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz CP-OFDM QPSK - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Page 52 of 200 |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 52 01 200 |
| © 2023 ELEMENT | · · · · | | V3.0 1/5/2022 |



| Spectrur Occupie | m Analyzer 1 | + | | | | | | | | Trace | ۲ | $\frac{S^{1}Z}{Z^{1}S}$ |
|---------------------|---|--|----------------------------|---------------------------------------|------------------------------------|--|--------------------|----------------------------|------------------------|--------------------|----------------|-------------------------|
| KEYSI RL | IGHT Input: RF ↔ Coupling: DC Align: Auto | Input Z: 50 Correction Freq Ref: | is: On | Gat | : Free Run :e: Off Gain: Low | Center Free Avg Hold: 1 Radio Std: | | GHz | Trace | Гуре ar / Write | Trace Contr | |
| | | NFE: Off | | | | | | | | | Deteo | ctor |
| | iv 10.0 dB | | Ref Va | alue 30.00 dBm | | | | | | ce Average | | |
| 20.0 | | | | | | | | | Ma | x Hold | | |
| 10.0 | | ſ | ur Marthalan yan ing Bayan | ๛๚๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛ | w.Murrison | 1 | | | Mir | Hold | | |
| -10.0 | | | | | | | | | - | | | |
| -20.0 | quella manage der de la company | an Hr Mt. I | | | | Walnut | - | yn in mary fyr | Res | tart Max Hold | | |
| -40.0 | | | | | | | | | | | | |
| -50.0 | | | | | | | | | | | | |
| | 1.74500 GHz / 470.00 kHz | ! | #Video | BW 1.6000 MHz | | Sv | Sp weep 1.00 ms | oan 50 MHz ; (1001 pts) | | | | |
| 2 Metrics | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | Occupied Bandwidth | | | - | | | 00.0.15 | | | | | |
| | | 034 MHz | 005 111 | | tal Power | | 28.3 dB | | | | | |
| | Transmit Freq Error x dB Bandwidth | | .805 kHz).23 MHz | % x (| of OBW Pow dB | er | 99.00 -26.00 c | | | | | |
| | | | | | | | | | | | | |
| | 50 | ? Jun 14, 17, 17, 17, 23, 16 | | | | | | | | | | |

Plot 7-63. Occupied Bandwidth Plot (NR Band n66 - 20.0MHz CP-OFDM 16QAM - Full RB – ANT A)

| KEYSIGHT Input RF Input Z 50 0. Atten: 36 dB Trig: Free Run Gate: Off Center Freq: 174500000 GHz August 2:00 0. Trace Type Centrol I Graph * Scale/Div 10.0 dB Ref Value 40.00 dBm Max Hold Detector 200 | Spectrun Occupied | | zer 1 🔻 | + | | | | | | | | | ₽ | Trace | ▼ <mark>\$</mark> ** |
|---|----------------------|--|--------------------|---------------------|-----------------------|-----------------|---------|-------------|-----------|--------------|-------------------|--------|-----------|-----------|----------------------|
| I Graph I Detector 1 Graph I Graph 1 Graph I Graph Cale/Div 10.0 dB Ref Value 40.00 dBm Log I manual data and the second data and th | RL | | Coupling: DC | Correcti Freq Re | ons: On f: Int (S) | Atten: 36 dB | Gate | : Off | | Avg Hold: 10 | 0/100 | 00 GHz | | Vrite | |
| Log Image: Control of the second | | | • | NI 2. 01 | | | | | | | | | Trace A | verage | Detector |
| 300 | | iv 10.0 | dB | | ,I | Ref Value 40. | 00 dBm | | . | | | | Max Ho | h | |
| 100 200 And a second seco | 30.0 20.0 | | | | moment | WWww.trapwarato | frank | non for she | \$ | | | | | | |
| 30 | 0.00 | | | | | | | | | | | | Restart M | /lax Hold | |
| Occupied Bandwidth Total Power 30.6 dBm Transmit Freq Error -376.44 kHz % of OBW Power 99.00 % | -30.0 -40.0 | And the second s | Arran Carrowski ar | and a second part | | | | | | | TUN THANK THEY AN | | | | |
| Occupied Bandwidth 13.533 MHz Total Power 30.6 dBm Transmit Freq Error -376.44 kHz % of OBW Power 99.00 % | | | | | ! #\ | /ideo BW 1.2 | 000 MHz | | • | Sw | | | | | |
| 13.533 MHz Total Power 30.6 dBm Transmit Freq Error -376.44 kHz % of OBW Power 99.00 % | 2 Metrics | | T | | | | | | | | | | | | |
| | | Occupi | | | | | Tot | al Power | | | 30.6 | dBm | | | |
| | | | | | | | | | owe | ۲ | | | | | |
| | | 5 | 3 | 9 Jun 14 | , 2023 | | | | | | | | | | |

Plot 7-64. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz DFT-s-OFDM BPSK - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
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| Spectrum Analyzer 1 | + | | | Trace | - 7 炭 |
|--|--|------------------------|--|-----------------------------|------------------|
| KEYSIGHT Input: RF R L Implies Align: Auto | Input Z: 50 Ω Atten: 36 dB Corrections: On Freq Ref: Int (S) NFE: Off | Gate: Off Avg | ter Freq: 1.745000000 GHz Hold: 100/100 io Std: None | Trace Type Clear / Write | Trace Control |
| 1 Graph ▼ Scale/Div 10.0 dB | Ref Value 30.0 | | | Trace Average | Detector |
| Log 20.0 | | | | Max Hold | |
| 10.0 | and a state of the | | | Min Hold | |
| -10.0 -20.0 -30.0 Harlow Marine Marine | mmummed | իդութ | mark and the second and | Restart Max Hold | |
| -40.0 | | | | | |
| -60.0 Center 1.74500 GHz Res BW 360.00 kHz | #Video BW 1.20 | 00 MHz | Span 37.5 MHz Sweep 1.00 ms (1001 pts) | | |
| 2 Metrics | | | | | |
| Occupied Bandwidth | | | | | |
| | 1 MHz | Total Power | 28.2 dBm | | |
| Transmit Freq Error x dB Bandwidth | -10.875 kHz 15.23 MHz | % of OBW Power x dB | 99.00 % -26.00 dB | | |
| 1007 | Jun 14, 2023 7:28:03 PM | | | | |

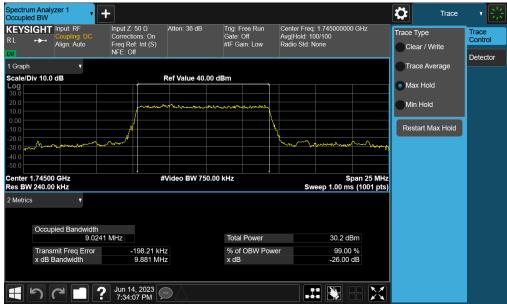
Plot 7-65. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz CP-OFDM QPSK - Full RB – ANT A)

| Spectrur Occupie | dBW | zer 1 Input: RF | • | + | 50.0 | Atten: 36 dB | Tria | Free Run | Center Free | : 1.74500000 |) GHz | \$ | Trace | ، 😤 |
|-------------------------------|--------------|-------------------------|--------|------------------------|--|-------------------------|-------------------------|--------------------------|-----------------------------|-----------------|----------------------------------|-------------------------|-----------|------------------|
| RL | • • • | Coupling: Align: Aut | | Correction Freq Ref | ons: On : Int (S) | | Gate | | Avg Hold: 1 Radio Std: 1 | 00/100 | | Trace Type Clear / \ | Vrite | Trace Control |
| LN 1 Graph | _ | , | , | NFE: Of | | | | | | | | Trace A | verage | Detector |
| Scale/D | iv 10.0 | dB | | | F | tef Value 30.0 | 0 dBm | | | | | Max Ho | ld | |
| 20.0 10.0 0.00 | | | | / | and the second | mar and a second second | \sh~~b ^p ~~v | <u>๙ๅ๛</u> ปใก้๛สงหารับก | | | | Min Hol | d | |
| -30.0 | py/~Matra | n Martin | rhutin | andrad | | | | | howman | hrmnhrmmhun | fnthater (the Australia for the | Restart M | /lax Hold | |
| -40.0 -50.0 -60.0 | | | | | | | | | | | | | | |
| Center [/] Res BW | | | | | #V | /ideo BW 1.20 | 00 MHz | | Sw | | an 37.5 MHz s (1001 pts) | | | |
| 2 Metrics | 5 | ۲ | , | | | | | | | | | | | |
| | Occup | oied Band | | 82 MHz | | | Tota | al Power | | 28.4 df | Зm | | | |
| | | mit Freq I Bandwidtł | | | 23.844 kHz 15.14 MHz | | % o x dE | f OBW Pow 3 | er | 99.00 -26.00 | | | | |
| | 5 | | | Jun 14 7:28:1 | , 2023 8 PM 💭 | | | | | | | | | |

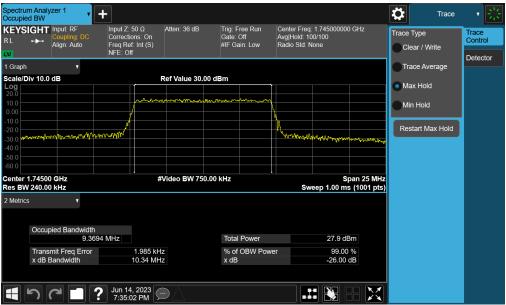
Plot 7-66. Occupied Bandwidth Plot (NR Band n66 - 15.0MHz CP-OFDM 16QAM - Full RB – ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
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| Test Report S/N: Test Dates: EUT Type: | | EUT Type: | Page 54 of 200 |
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| © 2023 ELEMENT | • | · | V3.0 1/5/2022 |





Plot 7-67. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz DFT-s-OFDM BPSK - Full RB – ANT A)



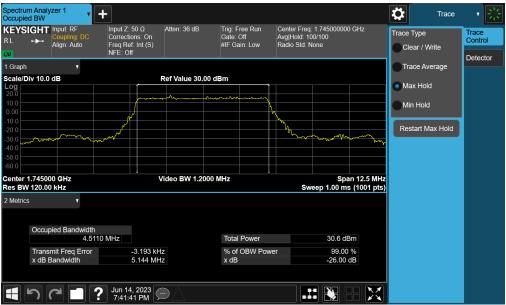
Plot 7-68. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz CP-OFDM QPSK - Full RB - ANT A)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|---------------------------------|----------------------------|-----------------------------------|
| Test Report S/N: | port S/N: Test Dates: EUT Type: | | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Page 55 of 200 |
| © 2023 ELEMENT | | | V3.0 1/5/2022 |



| Spectru Occupi | um Analyz ed BW | er 1 🔻 | + | | | | | | | | ₽ | Trace | · · 迷 |
|--------------------|--------------------|---|-----------------------------------|-----------------------|---------------|--|--------------------------------|--------------------------------------|-------------|--------------|------------|----------------------|------------------|
| KEYS RL | | nput: RF Coupling: DC Align: Auto | Input Z: Correctio Freq Rel | ons: On f: Int (S) | Atten: 36 dB | Gate | Free Run : Off Bain: Low | Center Fre Avg Hold: Radio Std | | 0 GHz | Trace | Type lear / Write | Trace Control |
| LNI | | | NFE: Of | f | | | | | | | | | Detector |
| 1 Graph Scale/I | n Div 10.0 d | т 1В | | | Ref Value 30. | 00 dBm | | | | | | ace Average | |
| Log | | | | | | | | | | | • M | ax Hold | |
| 10.0 | | | | manna | whenter | and the second | mon many | | | | М | in Hold | |
| 0.00 | | | | | | | | \ | | | | | |
| -20.0 | with | | mm | | | | | Way Warry | mmmmmm | ************ | Re | start Max Hold | |
| -40.0 | | | | | | | | | | | | | |
| -50.0 -60.0 | | | | | | | | | | | | | |
| | 1.74500 | | | # | Video BW 75 | 0.00 kHz | | - | | pan 25 MHz | | | |
| 2 Metric | N 240.00 | kHz - | | | | | | 5 | weep 1.00 m | s (1001 pts) | | | |
| Zimeuro | 13 | · · | | | | | | | | | | | |
| | Occupi | ed Bandwidth | | | | | | | | | | | |
| | Occupi | | , 481 MHz | | | Tota | al Power | | 27.9 d | Bm | | | |
| | | nit Freq Error andwidth | | 4.888 kH | | | f OBW Pow | rer | 99.00 | | | | |
| | X OB Ba | anowioth | | 10.10 MH | 2 | x di | | | -26.00 | uБ | | | |
| | | | a km 44 | 0000 | ~ ^ | | | | | | | | |
| H | า (| | ? Jun 14 7:35:1 | , 2023 4 PM | | | | | | | | | |

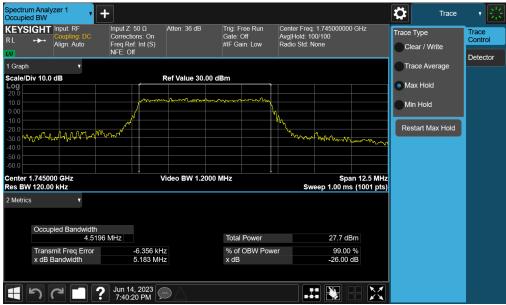
Plot 7-69. Occupied Bandwidth Plot (NR Band n66 - 10.0MHz CP-OFDM 16QAM - Full RB – ANT A)



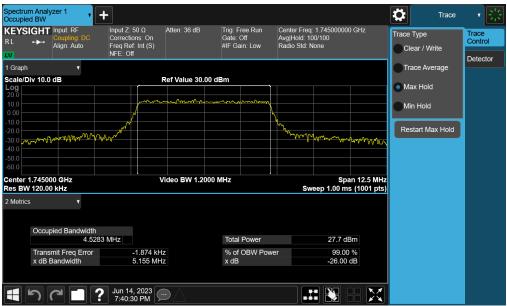
Plot 7-70. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz DFT-s-OFDM BPSK - Full RB - ANT A)

| FCC ID: A3LSMS711U | PART 27 MEASUREMENT REPORT | | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager |
|---------------------|----------------------------|------------------|----------------------------|--|-----------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage F6 of 200 | | |
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| © 2023 ELEMENT | - | • | V3.0 1/5/2022 | | |





Plot 7-71. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz CP-OFDM QPSK - Full RB – ANT A)



Plot 7-72. Occupied Bandwidth Plot (NR Band n66 - 5.0MHz CP-OFDM 16QAM - Full RB – ANT A)

| FCC ID: A3LSMS711U | PART 27 MEASUREMENT REPORT | | Approved by: Technical Manager | |
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| Test Report S/N: | Test Dates: | EUT Type: | Page 57 of 200 | |
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| © 2023 ELEMENT | • | · | V3.0 1/5/2022 | |



| Mode | Bandwidth | Modulation | OBW [kHz] |
|---------------|-----------|------------|-----------|
| LTE Band 66/4 | 20 MHz | QPSK | 18.02 |
| | | 16QAM | 18.03 |
| | 15 MHz | QPSK | 13.55 |
| | | 16QAM | 13.54 |
| | 10 MHz | QPSK | 9.02 |
| | | 16QAM | 9.01 |
| | 5 MHz | QPSK | 4.53 |
| | | 16QAM | 4.52 |
| | 3 MHz | QPSK | 2.71 |
| | | 16QAM | 2.72 |
| | 1.4 MHz | QPSK | 1.10 |
| | | 16QAM | 1.10 |
| NR Band n66 | 40 MHz | π/2 BPSK | 38.78 |
| | | QPSK | 38.87 |
| | | 16QAM | 38.85 |
| | 30 MHz | π/2 BPSK | 28.71 |
| | | QPSK | 28.78 |
| | | 16QAM | 28.78 |
| | 20 MHz | π/2 BPSK | 17.97 |
| | | QPSK | 19.01 |
| | | 16QAM | 19.07 |
| | 15 MHz | π/2 BPSK | 13.54 |
| | | QPSK | 14.20 |
| | | 16QAM | 14.23 |
| | 10 MHz | π/2 BPSK | 9.01 |
| | | QPSK | 9.38 |
| | | 16QAM | 9.36 |
| | 5 MHz | π/2 BPSK | 4.51 |
| | | QPSK | 4.53 |
| | | 16QAM | 4.54 |

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | |
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| Test Report S/N: | Test Dates: | EUT Type: | Page 58 of 200 | |
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| © 2023 ELEMENT | | | V3.0 1/5/2022 | |



LTE Band 66/4 - ANT F

Keysight Spectrum Analyzer - Occupied BW 08:47:08 PM Jun 12, 2023 SENSE:IN ALIGN AUTO Center Freq: 1.745000000 GHz Trig: Free Run Avg|Hol Trace/Detector Radio Std: None Avg|Hold: 100/100 Radio Device: BTS #Atten: 36 dB #IFGain:Low Ref 40.00 dBm 10 dB/div .og **Clear Write** Average ndh∰r Max Hold Center 1.74500 GHz Span 50.00 MHz Res BW 470 kHz #VBW 1.6 MHz Sweep 1 ms Min Hold Occupied Bandwidth Total Power 30.5 dBm 18.016 MHz Detector Peak **Transmit Freg Error** -24.916 kHz % of OBW Power 99.00 % Auto Man x dB Bandwidth 20.00 MHz -26.00 dB x dB STATUS MSG

Plot 7-73. Occupied Bandwidth Plot (LTE Band 66/4 - 20MHz QPSK - Full RB - ANT F)



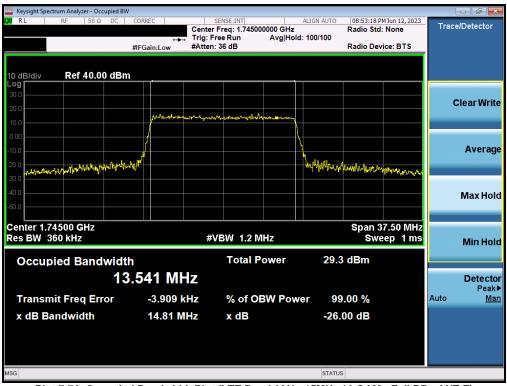
Plot 7-74. Occupied Bandwidth Plot (LTE Band 66/4 - 20MHz 16-QAM - Full RB - ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | PART 27 MEASUREMENT REPORT | | |
|--|-------------|----------------------------|----------------|----------------|----------------------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage E0 of 200 | | | |
| 1M2304260060-07.A3L 5/24/2023 - 7/31/2023 Portable Handset | | | Page 59 of 200 | | | | |
| © 2023 ELEMENT | | • | | V3.0 1/5/2022 | | | |



| 🔤 Keysight Spectrum Analyzer - Occupi | | | | | | |
|--|--|-----------------------------------|-------------------|----------------------------------|----------------------|-------------------|
| LXI RL RF 50Ω [| DC CORREC | SENSE:INT Center Freg: 1.74500 | ALIGN AUTO | 08:53:11 PM Jur Radio Std: No | | Trace/Detector |
| | | Talas France Bran | Avg Hold: 100/100 | Radio Stu. No | | |
| , | #IFGain:Low | #Atten: 36 dB | | Radio Device: | BTS | |
| | | | | | | |
| 10 dB/div Ref 40.00 c | dBm | | | | | |
| Log 30.0 | | | | | | |
| 20.0 | | | | | | Clear Write |
| 10.0 | at allowing a | have when many when | hand | | | |
| 0.00 | | | | | | |
| | / | | 1 | | | Average |
| -10.0 | | | . | | | Average |
| -20.0 | hold the second se | | It which the | When more | had be and | |
| -30.0 Anternet of the second o | | | | | ^ም ጣዎዝም ባለ | |
| -40.0 | | | | | | Max Hold |
| -50.0 | | | | | | |
| | | | | 0 | 0.8411- | |
| Center 1.74500 GHz Res BW 360 kHz | | #VBW 1.2 M | 147 | Span 37.5 Sweep | | |
| ICS BW SOO KIIZ | | #*D** 1.2 M | 112 | Oweep | | Min Hold |
| Occupied Bandw | idth | Total P | ower 29.3 | dBm | | |
| | 13.545 M⊦ | - | | | | Detector |
| | 13.545 MIF | 12 | | | | Detector Peak► |
| Transmit Freq Error | r -18.067 k | Hz % of O | 3W Power 99 | .00 % | | Auto <u>Man</u> |
| x dB Bandwidth | 14.81 M | Hz xdB | -26 | 00 dB | | |
| | 14.01 M | | -20. | UU UB | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| MSG | | | STATUS | 6 | | |

Plot 7-75. Occupied Bandwidth Plot (LTE Band 66/4 - 15MHz QPSK - Full RB - ANT F)



Plot 7-76. Occupied Bandwidth Plot (LTE Band 66/4 - 15MHz 16-QAM - Full RB - ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | |
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| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | Portable Handset | Fage 60 01 200 | |
| © 2023 ELEMENT | | | V3.0 1/5/2022 | |



| Keysight Spectrum Analyzer - Occupied B | | | | | | [| |
|--|--|--|-----------------|---------------------------|---------------|-------|------------|
| LXI RL RF 50Ω DC | CORREC | SENSE:INT Iter Freg: 1.745000000 GH | ALIGN AUTO | 08:53:30 Pt Radio Std: | MJun 12, 2023 | Trace | /Detector |
| | Trig | g: Free Run Avg l | lold: 100/100 | Radio Stu. | None | | |
| | #IFGain:Low #At | ten: 36 dB | | Radio Dev | ice: BTS | | |
| | | | | | | | |
| 10 dB/div Ref 40.00 dB | m | | | | | | |
| Log | | | | | | | |
| 30.0 | | | | | | c | lear Write |
| 20.0 | | | | | | | |
| 10.0 | hand the second se | alliport and an inverse | ~ | | | | |
| 0.00 | | | | | | | |
| -10.0 | | | 4 | | | | Average |
| -20.0 | , r ^a | | ١ | | | | |
| -20.0 -30.0 mil. m. w. M. | ሻኢዮ | | Wy PU VIA V LAL | Maryan | when when | | |
| | | | | | | | |
| -40.0 | | | | | | | Max Hold |
| -50.0 | | | | | | _ | |
| Center 1.74500 GHz | | | | Snan 2 | 5.00 MHz | | |
| Res BW 240 kHz | | #VBW 750 kHz | | | ep 1 ms | | Min Halal |
| | | | | | | | Min Hold |
| Occupied Bandwid | th | Total Power | 29.5 | dBm | | | |
| | .0168 MHz | | | | | | Detector |
| . | | | | | | | Peak ► |
| Transmit Freq Error | -16.160 kHz | % of OBW Po | ower 99 | .00 % | | Auto | Man |
| x dB Bandwidth | 9.983 MHz | x dB | 26 (| 00 dB | | | |
| | 9.903 MITZ | хub | -20.0 | ло ав | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| MSG | | | STATUS | | | | |

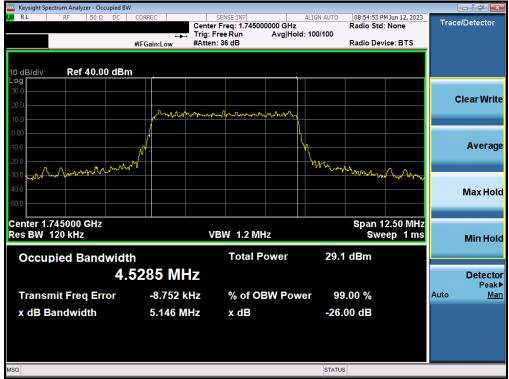
Plot 7-77. Occupied Bandwidth Plot (LTE Band 66/4 - 10MHz QPSK - Full RB - ANT F)



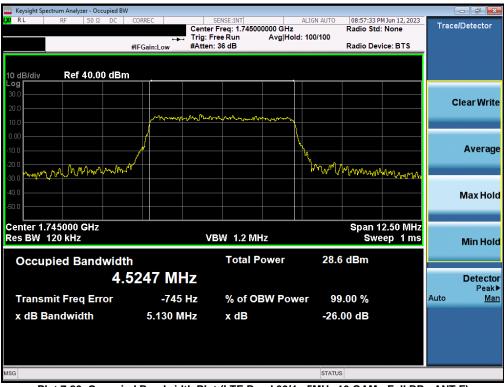
Plot 7-78. Occupied Bandwidth Plot (LTE Band 66/4 - 10MHz 16-QAM - Full RB - ANT F)

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Plot 7-79. Occupied Bandwidth Plot (LTE Band 66/4 - 5MHz QPSK - Full RB - ANT F)



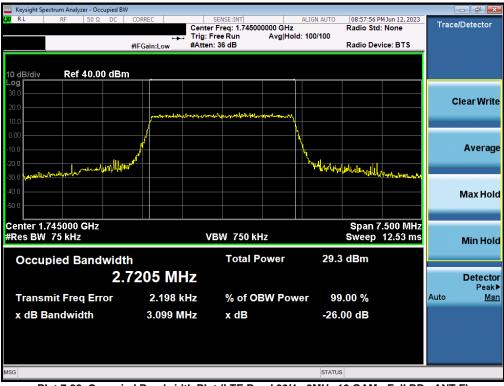
Plot 7-80. Occupied Bandwidth Plot (LTE Band 66/4 - 5MHz 16-QAM - Full RB - ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | PART 27 MEASUREMENT REPORT | |
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| © 2023 ELEMENT | <u>.</u> | · | V3.0 1/5/2022 | | | |



| Keysight Spectrum Analyzer - Occupied B | W | | | | | | - 6 |
|---|--|-------------------------------------|-------------------|------------|----------------|-------|------------|
| LXX RL RF 50Ω DC | CORREC | SENSE:INT enter Freg: 1.74500000 | ALIGN AUTO | 08:57:48 P | M Jun 12, 2023 | Trace | /Detector |
| | Ti | rig: Free Run / | Avg Hold: 100/100 | Raulo Stu | . None | | |
| | #IFGain:Low #/ | Atten: 36 dB | | Radio Dev | ice: BTS | | |
| | | | | | | | |
| 10 dB/div Ref 40.00 dB | m | | | | | | |
| Log | | | | | | | |
| 30.0 | | | | | | c | lear Write |
| 20.0 | - martin martin | www.hummenlaur.se | i dana ba | | | - | icui mine |
| 10.0 | | | | | | | |
| 0.00 | <u>\</u> | | <u>\</u> | | | | |
| -10.0 | | | k | | | | Average |
| -20.0 | where the second s | | | | | | |
| -30.0 - and the same out and the Alt | M | | Will watch | | - Margara | | |
| -40.0 | | | | | a an Marallan | | |
| | | | | | | | Max Hold |
| -50.0 | | | | | | | |
| Center 1.745000 GHz | | | | Span 7 | .500 MHz | | |
| #Res BW 75 kHz | | VBW 750 kHz | | | 12.53 ms | | Min Hold |
| | | | | | | | Minimora |
| Occupied Bandwid | th | Total Pov | ver 29. | 8 dBm | | | |
| 2 | .7128 MHz | | | | | | Detector |
| | | | | | | | Peak▶ |
| Transmit Freq Error | 1.589 kHz | % of OBV | Power 9 | 9.00 % | | Auto | <u>Man</u> |
| x dB Bandwidth | 3.041 MHz | x dB | -26 | .00 dB | | | |
| | 0101111112 | | 20 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | , | | | | |
| MSG | | | STATU | S | | | |

Plot 7-81. Occupied Bandwidth Plot (LTE Band 66/4 - 3MHz QPSK - Full RB - ANT F)



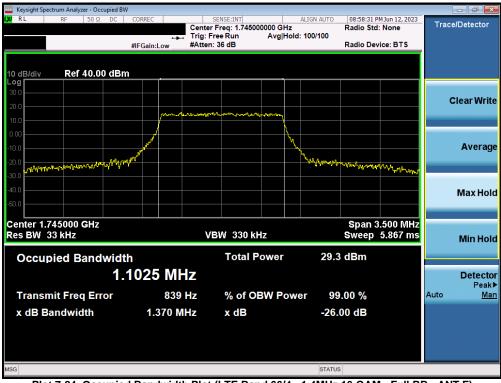
Plot 7-82. Occupied Bandwidth Plot (LTE Band 66/4 - 3MHz 16-QAM - Full RB - ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
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Plot 7-83. Occupied Bandwidth Plot (LTE Band 66/4 - 1.4MHz QPSK - Full RB - ANT F)



Plot 7-84. Occupied Bandwidth Plot (LTE Band 66/4 - 1.4MHz 16-QAM - Full RB - ANT F)

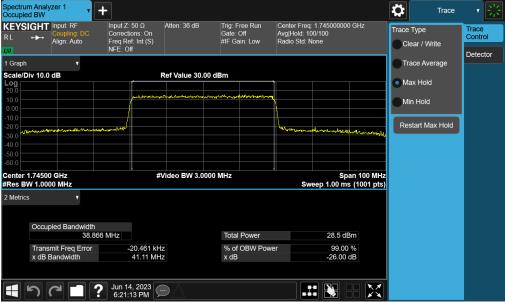
| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager |
|---------------------|-----------------------|----------------------------|-----------------------------------|
| Test Report S/N: | Test Dates: | Dates: EUT Type: | |
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NR Band n66 – ANT F

| Spectrur Occupie | m Analyz d BW | er 1 ү | + | | | | | | | | \$ | Trace | v 💦 |
|------------------------------|---------------------------|---|-----------------|-------------------------|---------------------|-----------------|---|--|--------------------------|----------------------------|--------------------|------------|------------------|
| REYSI | | nput: RF Coupling: DC Align: Auto | | ons: On f: Int (S) | Atten: 36 dB | Gat | : Free Run e: Off Gain: Low | Center Free Avg Hold: 1 Radio Std: | |) GHz | Trace Typ Clear | | Trace Control |
| 1 Graph | | • | NFE. U | | | | | | | | Trace | Average | Detector |
| Scale/D | iv 10.0 d | B | | F | Ref Value 40 | .00 dBm | | | | | Max H | łold | |
| 20.0 10.0 | | | | man | V marganetic market | anter a start a | n ^m annan an a | | | | Min H | old | |
| 0.00 -10.0 -20.0 | | | / | | | | | | | | Restart | t Max Hold | |
| -30.0 -40.0 | and the second diverse of | Mannan | minumai | | | | | tertiningma | halplathers and a second | hiller and the second | | | |
| -50.0 Center 1 #Res BV | | | | #\ | /ideo BW 3.0 | 0000 MHz | | | Sp weep 1.00 ms | an 100 MHz s (1001 pts) | | | |
| 2 Metrics | | v | | | | | | 0 | | 5 (1001 pts) | | | |
| | Occupie | ed Bandwidth | 34 MHz | | | To | tal Power | | 30.6 dE | Bm | | | |
| | | it Freq Error andwidth | - | 36.953 kHz 41.04 MHz | | | of OBW Pow | er | 99.00 -26.00 | % | | | |
| | | | | | | | | | | | | | |
| | う (| | Jun 14 6:17: | 4, 2023 46 PM | | | | | | | | | |

Plot 7-85. Occupied Bandwidth Plot (NR Band n66 - 40.0MHz DFT-s-OFDM BPSK - Full RB – ANT F)



Plot 7-86. Occupied Bandwidth Plot (NR Band n66 - 40.0MHz CP-OFDM QPSK - Full RB – ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | Approved by: Technical Manager | |
|---------------------|-----------------------|----------------------------|-----------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Page 65 of 200 | |
| 1M2304260060-07.A3L | 5/24/2023 - 7/31/2023 | 7/31/2023 Portable Handset | | |
| © 2023 ELEMENT | • | | V3.0 1/5/2022 | |



| Spectrur Occupie | m Analyzer 1 d BW | • + | | | | | | | | ₿ | Trace | - 7 法 |
|----------------------|---|----------------------|-------------------------|-----------------------------|-----------|---|--|--------------------------|----------------------------|---------------------------|--------------------|------------------|
| KEYS RL | IGHT Input: RF ↔ Coupling: D Align: Auto | Freq Re | ions: On ef: Int (S) | Atten: 36 dB | Gate: | ree Run Off iin: Low | Center Fred Avg Hold: 1 Radio Std: I | |) GHz | Trace ⁻ Cle | Гуре ar / Write | Trace Control |
| LXI | | NFE: O | ff | | | | | | | | | Detector |
| 1 Graph | • iv 10.0 dB | | B | ef Value 30.00 | dBm | | | | | Tra | ce Average | |
| Log 🖂 | | | ľ | | иып | | | | | 💿 Ma | x Hold | |
| 20.0 10.0 0.00 | | | underen Milleragen | haphiline phone alpha an an | -Incontro | ymgrou de la de | 1 | | | Mir | Hold | |
| -10.0 | ขมู _{ลสระส} ารเหน่างก่องการการเสียงได้ | 1947 Hang-with World | | | | | harrow with whe | -later - Martin ar saine | Antonio | Res | tart Max Hold | |
| -30.0 | | | | | | | | | | | | |
| -50.0 -60.0 | | | | | | | | | | | | |
| | 1.74500 GHz N 1.0000 MHz | | #Vi | ideo BW 3.00 | 00 MHz | 1 | Sv | Sp veep 1.00 ms | an 100 MHz s (1001 pts) | | | |
| 2 Metrics | s v | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | Occupied Bandw | idth 38.847 MHz | | | Total | Power | | 28.5 dE | 3m | | | |
| | Transmit Freq Er | | 8.048 kHz | | | OBW Pow | er | 99.00 | | | | |
| | x dB Bandwidth | | 41.02 MHz | | x dB | | | -26.00 | dВ | | | |
| | 50 | Jun 14 6:21: | 4, 2023 23 PM | | | | | | | | | |

Plot 7-87. Occupied Bandwidth Plot (NR Band n66 - 40.0MHz CP-OFDM 16QAM - Full RB – ANT F)

| Spectrur Occupie KEYS | d BW | nput: RF Coupling: | | Input Z: 5 | ons: On | Atten: 36 dB | Gate | | Avg Hold: 1 | |) GHz | Ф Тгасе Туре | Trace | Trace Control |
|-----------------------------|-----------|-----------------------|-----------------|----------------------|------------------|---------------|---------|------------|--------------|-------------|-----------------|------------------------|----------|------------------|
| LXI | - / | Align: Auto | D | Freq Ref NFE: Off | | | #I⊢ (| Gain: Low | Radio Std: I | None | | Clear / \ | Vrite | Detector |
| 1 Graph | | V | | | | | | | | | | Trace A | /erage | Detector |
| | iv 10.0 c | iΒ | | | F | tef Value 40. | 00 dBm | | | | | Max Ho | ы | |
| Log 30.0 | | | | | | | | | | | | | u | |
| 20.0 | | | | , | mmateria | the reason | mound | | | | | Min Hol | t | |
| 0.00 | | | | (| | | | | \ | | | | | |
| -10.0 | | | | | | | | | han - | | | Restart N | lax Hold | |
| -30.0 🚧 | magner | and and a series | งะปฏะวัญษณะ | and the second | | | | | - marking | harrow ward | monte agendance | | | |
| -40.0 | | | | | | | | | | | | | | |
| | 1.74500 | | | | #V | ideo BW 2.4 | 000 MHz | | | | pan 75 MHz | | | |
| | N 750.00 |) kHz | | | | | | | Sv | veep 1.00 m | s (1001 pts) | | | |
| 2 Metrics | | V | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | Occupi | ed Band | width 28.712 | MHZ | | | Tot | al Power | | 30.8 dl | Rm | | | |
| | Transm | nit Freg E | | | 0.669 kHz | | | of OBW Pow | er | 99.00 | | | | |
| | | andwidth | | | 30.42 MHz | | x d | | | -26.00 | | | | |
| | | | | | | | | | | | | | | |
| | 5 | | ? | Jun 16 1:48:5 | , 2023 9 PM 💭 | | | | | | | | | |

Plot 7-88. Occupied Bandwidth Plot (NR Band n66 - 30.0MHz DFT-s-OFDM BPSK - Full RB - ANT F)

| FCC ID: A3LSMS711U | | PART 27 MEASUREMENT REPORT | | | | | |
|---------------------|---|----------------------------|----------------|--|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 66 of 200 | | | | |
| 1M2304260060-07.A3L | 3L 5/24/2023 - 7/31/2023 Portable Handset | | Page 66 of 200 | | | | |
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