

**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:

9/21/2023 - 10/23/2023 **Test Report Issue Date:** 11/7/2023 **Test Site/Location:** Element lab., Columbia, MD, USA **Test Report Serial No.:** 1M2309070100-05.A3L

### FCC ID:

### A3LSMA156U

Applicant Name:

### Samsung Electronics Co., Ltd.

Application Type: Model: Additional Model(s): EUT Type: FCC Classification: FCC Rule Part: Test Procedure(s): Certification SM-A156U SM-A15U1/DS, SM-S156V Portable Handset PCS Licensed Transmitter Held to Ear (PCE) 27 ANSI C63.26-2015, KDB 648474 D03 v01r04

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

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

RJ Ortanez Executive Vice President



| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Dogo 1 of 146                     |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Page 1 of 146                     |
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# TABLE OF CONTENTS

| 1.0 | INTR | ODUCTION  | 7   |
|-----|------|---|-----|
|     | 1.1  | Scope   | 7   |
|     | 1.2  | Element Test Location                               | 7   |
|     | 1.3  | Test Facility / Accreditations                      | 7   |
| 2.0 | PRO  | DUCT INFORMATION                                    | 8   |
|     | 2.1  | Equipment Description                               | 8   |
|     | 2.2  | Device Capabilities                                 | 8   |
|     | 2.3  | Test Configuration                                  | 8   |
|     | 2.4  | Software and Firmware                               | 8   |
|     | 2.5  | EMI Suppression Device(s)/Modifications             | 8   |
| 3.0 | DESC | CRIPTION OF TESTS                                   | 9   |
|     | 3.1  | Evaluation Procedure                                | 9   |
|     | 3.2  | Radiated Power and Radiated Spurious Emissions      | 9   |
| 4.0 | MEAS | SUREMENT UNCERTAINTY                                | 10  |
| 5.0 | TEST | EQUIPMENT CALIBRATION DATA                          | 11  |
| 6.0 | SAMF | PLE CALCULATIONS                                    | 12  |
| 7.0 | TEST | RESULTS   | 13  |
|     | 7.1  | Summary   | 13  |
|     | 7.2  | Conducted Output Power Data                         | 14  |
|     | 7.3  | Occupied Bandwidth                                  | 20  |
|     | 7.4  | Spurious and Harmonic Emissions at Antenna Terminal | 59  |
|     | 7.5  | Band Edge Emissions at Antenna Terminal             | 82  |
|     | 7.6  | Peak-Average Ratio                                  | 99  |
|     | 7.7  | Radiated Power (EIRP)                               | 106 |
|     | 7.8  | Radiated Spurious Emissions Measurements            | 113 |
|     | 7.9  | Frequency Stability / Temperature Variation         |     |
| 8.0 | CON  | CLUSION   | 146 |

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Page 2 of 146                     |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Fage 2 01 140                     |
| © 2023 ELEMENT      | •                          |                  | V11.1 08/28/2023                  |



# PART 27 MEASUREMENT REPORT

|                  |           |            |                             | E                 | RP                  |                        |
|------------------|-----------|------------|-----------------------------|-------------------|---------------------|------------------------|
|                  |           |            |                             |                   |                     |                        |
| Mode             | Bandwidth | Modulation | Tx Frequency<br>Range [MHz] | Max. Power<br>[W] | Max. Power<br>[dBm] | Emission<br>Designator |
|                  |           | π/2 BPSK   | 3750.0 - 3930.0             | 0.351             | 25.45               | 96M7G7D                |
|                  | 100 MHz   | QPSK       | 3750.0 - 3930.0             | 0.373             | 25.71               | 97M7G7D                |
|                  |           | 16QAM      | 3750.0 - 3930.0             | 0.279             | 24.46               | 97M9W7D                |
|                  |           | π/2 BPSK   | 3745.0 - 3935.0             | 0.360             | 25.56               | 87M0G7D                |
|                  | 90 MHz    | QPSK       | 3745.0 - 3935.0             | 0.379             | 25.79               | 87M9G7D                |
|                  |           | 16QAM      | 3745.0 - 3935.0             | 0.281             | 24.48               | 87M7W7D                |
|                  |           | π/2 BPSK   | 3740.0 - 3940.0             | 0.355             | 25.50               | 77M4G7D                |
|                  | 80 MHz    | QPSK       | 3740.0 - 3940.0             | 0.378             | 25.77               | 77M7G7D                |
|                  |           | 16QAM      | 3740.0 - 3940.0             | 0.284             | 24.53               | 77M5W7D                |
|                  |           | π/2 BPSK   | 3735.0 - 3945.0             | 0.357             | 25.53               | 64M9G7D                |
|                  | 70 MHz    | QPSK       | 3735.0 - 3945.0             | 0.383             | 25.83               | 67M7G7D                |
|                  |           | 16QAM      | 3735.0 - 3945.0             | 0.277             | 24.43               | 67M6W7D                |
|                  |           | π/2 BPSK   | 3730.0 - 3950.0             | 0.348             | 25.42               | 58M0G7D                |
|                  | 60 MHz    | QPSK       | 3730.0 - 3950.0             | 0.371             | 25.69               | 58M1G7D                |
|                  |           | 16QAM      | 3730.0 - 3950.0             | 0.277             | 24.42               | 58M0W7D                |
|                  |           | π/2 BPSK   | 3725.0 - 3955.0             | 0.369             | 25.67               | 45M9G7D                |
|                  | 50 MHz    | QPSK       | 3725.0 - 3955.0             | 0.376             | 25.75               | 47M6G7D                |
| NR Band n77 PC2  |           | 16QAM      | 3725.0 - 3955.0             | 0.293             | 24.66               | 47M6W7D                |
| (3700 - 3980MHz) |           | Π/2 BPSK   | 3720.0 - 3960.0             | 0.362             | 25.58               | 35M9G7D                |
|                  | 40 MHz    | QPSK       | 3720.0 - 3960.0             | 0.376             | 25.75               | 38M1G7D                |
|                  |           | 16QAM      | 3720.0 - 3960.0             | 0.288             | 24.59               | 37M9W7D                |
|                  |           | π/2 BPSK   | 3715.0 - 3965.0             | 0.371             | 25.69               | 27M0G7D                |
|                  | 30 MHz    | QPSK       | 3715.0 - 3965.0             | 0.385             | 25.85               | 28M0G7D                |
|                  |           | 16QAM      | 3715.0 - 3965.0             | 0.287             | 24.58               | 28M0W7D                |
|                  |           | Π/2 BPSK   | 3712.5 - 3967.5             | 0.349             | 25.43               | 23M0G7D                |
|                  | 25 MHz    | QPSK       | 3712.5 - 3967.5             | 0.376             | 25.75               | 23M2G7D                |
|                  |           | 16QAM      | 3712.5 - 3967.5             | 0.278             | 24.44               | 23M3W7D                |
|                  |           | π/2 BPSK   | 3710.0 - 3970.0             | 0.359             | 25.55               | 18M0G7D                |
|                  | 20 MHz    | QPSK       | 3710.0 - 3970.0             | 0.379             | 25.78               | 18M3G7D                |
|                  |           | 16QAM      | 3710.0 - 3970.0             | 0.287             | 24.58               | 18M3W7D                |
|                  |           | π/2 BPSK   | 3707.5 - 3972.5             | 0.352             | 25.46               | 12M9G7D                |
|                  | 15 MHz    | QPSK       | 3707.5 - 3972.5             | 0.375             | 25.74               | 13M7G7D                |
|                  |           | 16QAM      | 3707.5 - 3972.5             | 0.286             | 24.56               | 13M7W7D                |
|                  |           | π/2 BPSK   | 3705.0 - 3975.0             | 0.352             | 25.47               | 8M59G7D                |
|                  | 10 MHz    | QPSK       | 3705.0 - 3975.0             | 0.376             | 25.75               | 8M62G7D                |
|                  |           | 16QAM      | 3705.0 - 3975.0             | 0.280             | 24.47               | 8M62W7D                |
|                  | 1         |            |                             |                   |                     |                        |

EUT Overview – Ant1

| FCC ID: A3LSMA156U  |                        | Approved by:<br>Technical Manager |                  |
|---------------------|------------------------|-----------------------------------|------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                         | Page 3 of 146    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset                  | Fage 3 01 140    |
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|                  |           |            |                             | EI                |                     |                        |
|------------------|-----------|------------|-----------------------------|-------------------|---------------------|------------------------|
| Mode             | Bandwidth | Modulation | Tx Frequency<br>Range [MHz] | Max. Power<br>[W] | Max. Power<br>[dBm] | Emission<br>Designator |
|                  |           | π/2 BPSK   | 3500.0                      | 0.354             | 25.48               | 96M5G7D                |
|                  | 100 MHz   | QPSK       | 3500.0                      | 0.347             | 25.40               | 97M7G7D                |
|                  |           | 16QAM      | 3500.0                      | 0.325             | 25.12               | 98M0W7D                |
|                  |           | π/2 BPSK   | 3495.0 - 3505.0             | 0.359             | 25.55               | 87M0G7D                |
|                  | 90 MHz    | QPSK       | 3495.0 - 3505.0             | 0.353             | 25.47               | 87M7G7D                |
|                  |           | 16QAM      | 3495.0 - 3505.0             | 0.331             | 25.19               | 87M7W7D                |
|                  |           | π/2 BPSK   | 3490.0 - 3510.0             | 0.356             | 25.51               | 77M3G7D                |
|                  | 80 MHz    | QPSK       | 3490.0 - 3510.0             | 0.349             | 25.42               | 77M5G7D                |
|                  |           | 16QAM      | 3490.0 - 3510.0             | 0.325             | 25.12               | 77M8W7D                |
|                  |           | π/2 BPSK   | 3485.0 - 3515.0             | 0.348             | 25.41               | 64M3G7D                |
|                  | 70 MHz    | QPSK       | 3485.0 - 3515.0             | 0.342             | 25.34               | 67M9G7D                |
|                  |           | 16QAM      | 3485.0 - 3515.0             | 0.322             | 25.07               | 67M6W7D                |
|                  |           | π/2 BPSK   | 3480.0 - 3520.0             | 0.348             | 25.41               | 57M9G7D                |
|                  | 60 MHz    | QPSK       | 3480.0 - 3520.0             | 0.342             | 25.34               | 58M3G7D                |
|                  |           | 16QAM      | 3480.0 - 3520.0             | 0.318             | 25.02               | 58M1W7D                |
|                  | 50 MHz    | π/2 BPSK   | 3475.0 - 3525.0             | 0.339             | 25.30               | 46M0G7D                |
|                  |           | QPSK       | 3475.0 - 3525.0             | 0.334             | 25.23               | 47M7G7D                |
| NR Band n77 PC2  |           | 16QAM      | 3475.0 - 3525.0             | 0.310             | 24.91               | 47M8W7D                |
| (3450 - 3550MHz) |           | π/2 BPSK   | 3470.0 - 3530.0             | 0.348             | 25.41               | 35M9G7D                |
|                  | 40 MHz    | QPSK       | 3470.0 - 3530.0             | 0.342             | 25.34               | 37M9G7D                |
|                  |           | 16QAM      | 3470.0 - 3530.0             | 0.317             | 25.01               | 37M9W7D                |
|                  | 30 MHz    | π/2 BPSK   | 3465.0 - 3535.0             | 0.358             | 25.54               | 27M1G7D                |
|                  |           | QPSK       | 3465.0 - 3535.0             | 0.356             | 25.51               | 27M9G7D                |
|                  |           | 16QAM      | 3465.0 - 3535.0             | 0.328             | 25.15               | 27M9W7D                |
|                  |           | π/2 BPSK   | 3462.5 - 3537.5             | 0.351             | 25.45               | 23M0G7D                |
|                  | 25 MHz    | QPSK       | 3462.5 - 3537.5             | 0.341             | 25.32               | 23M2G7D                |
|                  |           | 16QAM      | 3462.5 - 3537.5             | 0.317             | 25.01               | 23M3W7D                |
|                  |           | π/2 BPSK   | 3460.0 - 3540.0             | 0.358             | 25.53               | 18M0G7D                |
|                  | 20 MHz    | QPSK       | 3460.0 - 3540.0             | 0.356             | 25.51               | 18M3G7D                |
|                  |           | 16QAM      | 3460.0 - 3540.0             | 0.313             | 24.95               | 18M4W7D                |
|                  |           | π/2 BPSK   | 3457.5 - 3542.5             | 0.358             | 25.53               | 13M0G7D                |
|                  | 15 MHz    | QPSK       | 3457.5 - 3542.5             | 0.348             | 25.41               | 13M6G7D                |
|                  |           | 16QAM      | 3457.5 - 3542.5             | 0.324             | 25.10               | 13M7W7D                |
|                  |           | π/2 BPSK   | 3455.0 - 3545.0             | 0.359             | 25.55               | 8M66G7D                |
|                  | 10 MHz    | QPSK       | 3455.0 - 3545.0             | 0.357             | 25.52               | 8M65G7D                |
|                  | TO WIT 12 | 16QAM      | 3455.0 - 3545.0             | 0.321             | 25.06               | 8M62W7D                |
|                  | 1         |            | 0400.0 - 0040.0             | 0.021             | 20.00               | SHIDLITTD              |

EUT Overview – Ant1

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Page 4 of 146                     |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Fage 4 01 140                     |
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|             |                |          |                             |                   | EIRP                |                        |  |
|-------------|----------------|----------|-----------------------------|-------------------|---------------------|------------------------|--|
| Mode        | Mode Bandwidth |          | Tx Frequency<br>Range [MHz] | Max. Power<br>[W] | Max. Power<br>[dBm] | Emission<br>Designator |  |
|             |                | π/2 BPSK | 3500.0 - 3600.0             | 0.269             | 24.30               | 97M0G7D                |  |
|             | 100 MHz        | QPSK     | 3500.0 - 3600.0             | 0.262             | 24.18               | 99M5G7D                |  |
|             |                | 16QAM    | 3500.0 - 3600.0             | 0.247             | 23.93               | 99M2W7D                |  |
|             |                | π/2 BPSK | 3495.0 - 3605.0             | 0.268             | 24.27               | 87M0G7D                |  |
|             | 90 MHz         | QPSK     | 3495.0 - 3605.0             | 0.261             | 24.17               | 87M9G7D                |  |
|             |                | 16QAM    | 3495.0 - 3605.0             | 0.249             | 23.95               | 87M7W7D                |  |
|             |                | π/2 BPSK | 3490.0 - 3610.0             | 0.269             | 24.29               | 77M5G7D                |  |
|             | 80 MHz         | QPSK     | 3490.0 - 3610.0             | 0.263             | 24.19               | 77M5G7D                |  |
|             |                | 16QAM    | 3490.0 - 3610.0             | 0.248             | 23.94               | 78M0W7D                |  |
|             |                | π/2 BPSK | 3485.0 - 3615.0             | 0.266             | 24.24               | 64M5G7D                |  |
|             | 70 MHz         | QPSK     | 3485.0 - 3615.0             | 0.257             | 24.09               | 67M8G7D                |  |
|             |                | 16QAM    | 3485.0 - 3615.0             | 0.246             | 23.90               | 67M6W7D                |  |
|             |                | π/2 BPSK | 3480.0 - 3620.0             | 0.274             | 24.38               | 58M1G7D                |  |
|             | 60 MHz         | QPSK     | 3480.0 - 3620.0             | 0.267             | 24.26               | 57M9G7D                |  |
|             |                | 16QAM    | 3480.0 - 3620.0             | 0.256             | 24.07               | 57M8W7D                |  |
|             |                | π/2 BPSK | 3475.0 - 3625.0             | 0.267             | 24.26               | 45M9G7D                |  |
|             | 50 MHz         | QPSK     | 3475.0 - 3625.0             | 0.259             | 24.12               | 47M7G7D                |  |
| NR Band n78 |                | 16QAM    | 3475.0 - 3625.0             | 0.251             | 23.99               | 47M5W7D                |  |
| NR Band n/8 |                | π/2 BPSK | 3470.0 - 3630.0             | 0.281             | 24.48               | 36M0G7D                |  |
|             | 40 MHz         | QPSK     | 3470.0 - 3630.0             | 0.269             | 24.29               | 38M1G7D                |  |
|             |                | 16QAM    | 3470.0 - 3630.0             | 0.257             | 24.10               | 38M1W7D                |  |
|             | 30 MHz         | π/2 BPSK | 3465.0 - 3635.0             | 0.273             | 24.35               | 26M9G7D                |  |
|             |                | QPSK     | 3465.0 - 3635.0             | 0.265             | 24.23               | 27M9G7D                |  |
|             |                | 16QAM    | 3465.0 - 3635.0             | 0.254             | 24.04               | 27M9W7D                |  |
|             |                | π/2 BPSK | 3462.5 - 3637.5             | 0.284             | 24.53               | 22M9G7D                |  |
|             | 25 MHz         | QPSK     | 3462.5 - 3637.5             | 0.276             | 24.41               | 23M2G7D                |  |
|             |                | 16QAM    | 3462.5 - 3637.5             | 0.264             | 24.21               | 23M2W7D                |  |
|             |                | π/2 BPSK | 3460.0 - 3640.0             | 0.276             | 24.40               | 18M0G7D                |  |
|             | 20 MHz         | QPSK     | 3460.0 - 3640.0             | 0.273             | 24.35               | 18M2G7D                |  |
|             |                | 16QAM    | 3460.0 - 3640.0             | 0.266             | 24.24               | 18M3W7D                |  |
|             |                | π/2 BPSK | 3457.5 - 3642.5             | 0.271             | 24.33               | 12M9G7D                |  |
|             | 15 MHz         | QPSK     | 3457.5 - 3642.5             | 0.265             | 24.22               | 13M6G7D                |  |
|             |                | 16QAM    | 3457.5 - 3642.5             | 0.250             | 23.97               | 13M6W7D                |  |
|             |                | π/2 BPSK | 3455.0 - 3645.0             | 0.271             | 24.32               | 8M68G7D                |  |
|             | 10 MHz         | QPSK     | 3455.0 - 3645.0             | 0.264             | 24.21               | 8M67G7D                |  |
|             |                | 16QAM    | 3455.0 - 3645.0             | 0.246             | 23.91               | 8M61W7D                |  |

EUT Overview – Ant1

|                                     |           |            |                             | EIRP              |                     |  |
|-------------------------------------|-----------|------------|-----------------------------|-------------------|---------------------|--|
| Mode                                | Bandwidth | Modulation | Tx Frequency<br>Range [MHz] | Max. Power<br>[W] | Max. Power<br>[dBm] |  |
| ND Devel #77 DO0                    | 100 MHz   | π/2 BPSK   | 3500.0                      | 0.021             | 13.29               |  |
| NR Band n77 PC2<br>(3450 - 3550MHz) |           | QPSK       | 3500.0                      | 0.021             | 13.17               |  |
| (3400 - 3000MHZ)                    |           | 16QAM      | 3500.0                      | 0.016             | 12.02               |  |
| NR Band n77 PC2<br>(3700 - 3980MHz) | 100 MHz   | π/2 BPSK   | 3750.0 - 3930.0             | 0.031             | 14.93               |  |
|                                     |           | QPSK       | 3750.0 - 3930.0             | 0.031             | 14.97               |  |
|                                     |           | 16QAM      | 3750.0 - 3930.0             | 0.024             | 13.85               |  |

EUT Overview – Ant2

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Dogo 5 of 146                     |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Page 5 of 146                     |
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|                                     |           |            |                             | EII               | RP                  |
|-------------------------------------|-----------|------------|-----------------------------|-------------------|---------------------|
| Mode                                | Bandwidth | Modulation | Tx Frequency<br>Range [MHz] | Max. Power<br>[W] | Max. Power<br>[dBm] |
| ND Devide 77 DO0                    | 100 MHz   | π/2 BPSK   | 3500.0                      | 0.006             | 7.54                |
| NR Band n77 PC2                     |           | QPSK       | 3500.0                      | 0.006             | 7.53                |
| (3450 - 3550MHz)                    |           | 16QAM      | 3500.0                      | 0.004             | 6.28                |
| NR Band n77 PC2<br>(3700 - 3980MHz) | 100 MHz   | π/2 BPSK   | 3750.0 - 3930.0             | 0.006             | 7.68                |
|                                     |           | QPSK       | 3750.0 - 3930.0             | 0.006             | 7.76                |
|                                     |           | 16QAM      | 3750.0 - 3930.0             | 0.005             | 6.63                |

**EUT Overview – Ant3** 

|                                     |           |            |                             | Ell               | RP                  |
|-------------------------------------|-----------|------------|-----------------------------|-------------------|---------------------|
| Mode                                | Bandwidth | Modulation | Tx Frequency<br>Range [MHz] | Max. Power<br>[W] | Max. Power<br>[dBm] |
| ND Devel #77 DO0                    | 100 MHz   | π/2 BPSK   | 3500.0                      | 0.007             | 8.24                |
| NR Band n77 PC2                     |           | QPSK       | 3500.0                      | 0.007             | 8.23                |
| (3450 - 3550MHz)                    |           | 16QAM      | 3500.0                      | 0.005             | 7.24                |
| NR Band n77 PC2<br>(3700 - 3980MHz) | 100 MHz   | π/2 BPSK   | 3750.0 - 3930.0             | 0.011             | 10.24               |
|                                     |           | QPSK       | 3750.0 - 3930.0             | 0.011             | 10.26               |
|                                     |           | 16QAM      | 3750.0 - 3930.0             | 0.008             | 9.12                |

EUT Overview – Ant4

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT           |                  |  |  |
|---------------------|------------------------|--------------------------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:            | Test Dates: EUT Type:                |                  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | 1/2023 - 10/23/2023 Portable Handset |                  |  |  |
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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.

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |  | Approved by:<br>Technical Manager |
|---------------------|----------------------------|--|-----------------------------------|
| Test Report S/N:    | Test Dates:                | EUT Type:                              | Page 7 of 146                     |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | /21/2023 - 10/23/2023 Portable Handset |                                   |
| © 2023 ELEMENT      |                            |  | V11.1 08/28/2023                  |

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# 2.0 PRODUCT INFORMATION

### 2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSMA156U**. 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.: 0679M, 0674M, 0520M, 0499M, 0504M, 0712M, 0705M

### 2.2 Device Capabilities

This device contains the following capabilities:

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

### 2.3 Test Configuration

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

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-P2400 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 0 installed on the EUT.

### 2.5 EMI Suppression Device(s)/Modifications

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

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT            |                  |
|---------------------|------------------------|---------------------------------------|------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                             | Page 8 of 146    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | 21/2023 - 10/23/2023 Portable Handset |                  |
| © 2023 ELEMENT      | ·                      |                                       | V11.1 08/28/2023 |



# 3.0 DESCRIPTION OF TESTS

### 3.1 Evaluation Procedure

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

Deviation from Measurement Procedure......None

### 3.2 Radiated Power and Radiated Spurious Emissions

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

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

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

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

where  $P_d$  is the dipole equivalent power,  $P_g$  is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to  $P_{g [dBm]}$  – cable loss [dB].

For radiated spurious emissions measurements, the field strength conversion method is used per the formulas in Section 5.2.7 of ANSI C63.26-2015. Field Strength (EIRP) is calculated using the following formulas:

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

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 414788 D01 v01r01.

Radiated power and radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI C63.26-2015.

| FCC ID: A3LSMA156U  |                                       | PART 27 MEASUREMENT REPORT            |                  |  |  |
|---------------------|---------------------------------------|---------------------------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:                           | Test Dates: EUT Type:                 |                  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023                | 21/2023 - 10/23/2023 Portable Handset |                  |  |  |
| © 2023 ELEMENT      | · · · · · · · · · · · · · · · · · · · |                                       | V11.1 08/28/2023 |  |  |



# 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<br>Measurements | 1.13                       |
| Radiated Disturbance (<1GHz)        | 4.98                       |
| Radiated Disturbance (>1GHz)        | 5.07                       |
| Radiated Disturbance (>18GHz)       | 5.09                       |

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT            |                  |  |  |
|---------------------|------------------------|---------------------------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:            | est Dates: EUT Type:                  |                  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | 21/2023 - 10/23/2023 Portable Handset |                  |  |  |
| © 2023 ELEMENT      | ·                      |                                       | V11.1 08/28/2023 |  |  |



# 5.0 TEST EQUIPMENT CALIBRATION DATA

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

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

Table 5-1. Test Equipment

#### Notes:

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

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |
|---------------------|------------------------|----------------------------|------------------|
| Test Report S/N:    | Test Dates:            | Dates: EUT Type:           |                  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 11 of 146   |
| © 2023 ELEMENT      | •                      |                            | V11.1 08/28/2023 |



# 6.0 SAMPLE CALCULATIONS

### **QPSK Modulation**

#### Emission Designator = 8M62G7D

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

### **QAM Modulation**

#### Emission Designator = 8M45W7D

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

### **Spurious Radiated Emission**

#### Example: Spurious emission at 3700.40 MHz

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

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |  |
|---------------------|----------------------------|------------------|-----------------------------------|--|
| Test Report S/N:    | Test Dates: EUT Type:      |                  | Page 12 of 146                    |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Page 12 01 146                    |  |
| © 2023 ELEMENT      | •                          |                  | V11.1 08/28/2023                  |  |



# 7.0 TEST RESULTS

### 7.1 Summary

| Company Name:       | Samsung Electronics Co., Ltd.              |
|---------------------|--|
| FCC ID:             | A3LSMA156U                                 |
| FCC Classification: | PCS Licensed Transmitter Held to Ear (PCE) |
| Mode(s):            | NR   |

| Test<br>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          |
| Ð                 | Occupied Bandwidth  | 2.1049(h)                  | N/A  | PASS        | Section 7.3          |
| CONDUCTED         | Conducted Band Edge / Spurious Emissions<br>(NR Band n77/78)                          | 2.1051, 27.53(I), 27.53(n) | ≤ 13 dBm / MHz   | PASS        | Sections<br>7.4, 7.5 |
| •                 | Peak-to-Average Ratio<br>(NR Band n77/78)   | 27.50(j)(4), 27.50(k)(4)   | ≤ 13 dB  | PASS        | Section 7.6          |
|                   | Frequency Stability   | 2.1055, 27.54              | Fundamental emissions stay within authorized frequency<br>block. | PASS        | Section 7.9          |
| RADIATED          | Effective Radiated Power / Equivalent Isotropic<br>Radiated Power<br>(NR Band n77/78) | 27.50(j)(3), 27.50(k)(3)   | ≤ 1 Watt EIRP  | PASS        | Section 7.7          |
| RADI              | Radiated Spurious Emissions<br>(NR Band n77/78)                                       | 2.1053, 27.53(l), 27.53(n) | ≤ 13 dBm / MHz   | PASS        | Section 7.8          |

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

Table 7-1. Summary of Test Results

#### Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- All conducted emissions measurements are performed with automated test software to capture the corresponding plots necessary to show compliance. The measurement software utilized is EMC Software Tool v1.2.2.

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|----------------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates: EUT Type:      |                  | Dege 12 of 146                    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Page 13 of 146                    |
| © 2023 ELEMENT      | •                          | •                | V11.1 08/28/2023                  |



### 7.2 Conducted Output Power Data

#### **Test Overview**

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

#### Test Procedure Used

ANSI C63.26-2015 – Section 5.2

#### **Test Settings**

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

#### Test Setup

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



Figure 7-1. Test Instrument & Measurement Setup

#### Test Notes

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

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |
|---------------------|------------------------|----------------------------|------------------|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dage 14 of 146   |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 14 of 146   |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |



| Bandwidth | Modulation       | Channel          | Frequency<br>[MHz] | RB<br>Size/Offset | Conducted<br>Power [dBm] |
|-----------|------------------|------------------|--------------------|-------------------|--------------------------|
|           |                  | 650000           | 3750.00            | 1/271             | 26.63                    |
|           | π/2 BPSK         | 656000           | 3840.00            | 1 / 136           | 26.59                    |
| F         |                  | 662000           | 3930.00            | 1 / 271           | 26.67                    |
| 00 MHz    |                  | 650000           | 3750.00            | 1 / 271           | 26.60                    |
| 10        | QPSK             | 656000           | 3840.00            | 1 / 136           | 26.61                    |
|           | 16-QAM           | 662000<br>662000 | 3930.00<br>3930.00 | 1 / 271           | 26.68<br>25.80           |
|           | 10-02-001        | 649668           | 3745.02            | 1 / 243           | 26.61                    |
|           | π/2 BPSK         | 656000           | 3840.00            | 1/1               | 26.55                    |
| 보         |                  | 662332           | 3934.98            | 1 / 122           | 26.78                    |
| 2HM 06    |                  | 649668           | 3745.02            | 1 / 243           | 26.63                    |
| 6         | QPSK             | 656000           | 3840.00            | 1/1               | 26.63                    |
|           | 16-QAM           | 662332<br>662332 | 3934.98            | 1 / 122           | 26.76<br>25.82           |
|           | 16-QAIVI         | 649334           | 3934.98<br>3740.01 | 1 / 122           | 25.82                    |
|           | π/2 BPSK         | 656000           | 3840.00            | 1/213             | 26.60                    |
| 부         |                  | 662666           | 3939.99            | 1 / 215           | 26.72                    |
| 80 MHz    |                  | 649334           | 3740.01            | 1 / 215           | 26.64                    |
| 80        | QPSK             | 656000           | 3840.00            | 1/1               | 26.59                    |
|           |                  | 662666           | 3939.99            | 1 / 215           | 26.74                    |
|           | 16-QAM           | 662666           | 3939.99            | 1 / 215           | 25.87                    |
|           | π/2 BPSK         | 649000<br>656000 | 3735.00<br>3840.00 | 1 / 187<br>1 / 94 | 26.51                    |
| 부         | IIIZ DEOR        | 663000           | 3945.00            | 1/94              | 26.52<br>26.75           |
| 70 MHz    |                  | 649000           | 3735.00            | 1 / 187           | 26.50                    |
| 20        | QPSK             | 656000           | 3840.00            | 1 / 94            | 26.77                    |
|           |                  | 663000           | 3945.00            | 1 / 94            | 26.80                    |
|           | 16-QAM           | 663000           | 3945.00            | 1 / 94            | 25.77                    |
|           |                  | 648668           | 3730.02            | 1 / 160           | 26.42                    |
|           | π/2 BPSK         | 656000           | 3840.00            | 1/1               | 26.72                    |
| 패         |                  | 663332           | 3949.98            | 1 / 81            | 26.64                    |
| 60 MHz    |                  | 648668           | 3730.02            | 1 / 160           | 26.41                    |
| 99        | QPSK             | 656000           | 3840.00            | 1/1               | 26.43                    |
|           | 16-QAM           | 663332<br>663332 | 3949.98<br>3949.98 | 1/81              | 26.66<br>25.76           |
|           | TO-QAIVI         | 648334           | 3725.01            | 1/131             | 26.30                    |
|           | π/2 BPSK         | 656000           | 3840.00            | 1/1               | 26.48                    |
| 주         |                  | 663666           | 3954.99            | 1/66              | 26.89                    |
| 50 MHz    |                  | 648334           | 3725.01            | 1 / 131           | 26.29                    |
| 50        | QPSK             | 656000           | 3840.00            | 1/1               | 26.47                    |
|           |                  | 663666           | 3954.99            | 1 / 66            | 26.72                    |
|           | 16-QAM           | 663666           | 3954.99            | 1 / 66            | 26.00                    |
|           | π/2 BPSK<br>QPSK | 648000           | 3720.00            | 1 / 104           | 26.20                    |
| N         |                  | 656000<br>664000 | 3840.00<br>3960.00 | 1/1<br>1/53       | 26.47                    |
| 40 MHz    |                  | 648000           | 3720.00            | 1/104             | 26.80<br>26.19           |
| 40        |                  | 656000           | 3840.00            | 1/1               | 26.50                    |
|           |                  | 664000           | 3960.00            | 1/53              | 26.72                    |
|           | 16-QAM           | 664000           | 3960.00            | 1 / 53            | 25.93                    |
|           |                  | 647668           | 3715.02            | 1 / 76            | 25.96                    |
| - N       | π/2 BPSK         | 656000           | 3840.00            | 1/1               | 26.46                    |
| 30 MHz    |                  | 664332           | 3964.98            | 1/39              | 26.91                    |
| 2 0       | OPEN             | 647668           | 3715.02            | 1/76              | 26.02                    |
| ę         | QPSK             | 656000<br>664332 | 3840.00<br>3964.98 | 1 / 1<br>1 / 39   | 26.46<br>26.82           |
|           | 16-QAM           | 664332           | 3964.98            | 1/39              | 25.92                    |
|           |                  | 647500           | 3712.50            | 1/63              | 26.02                    |
|           | π/2 BPSK         | 656000           | 3840.00            | 1/32              | 26.49                    |
| MHz       |                  | 664500           | 3967.50            | 1 / 63            | 26.65                    |
|           |                  | 647500           | 3712.50            | 1 / 63            | 26.00                    |
| 25        | QPSK             | 656000           | 3840.00            | 1/32              | 26.61                    |
|           | 10.00            | 664500           | 3967.50            | 1/63              | 26.72                    |
|           | 16-QAM           | 664500           | 3967.50            | 1/63              | 25.78                    |
|           | π/2 BPSK         | 647334<br>656000 | 3710.01<br>3840.00 | 1/25              | 25.97                    |
| N         | 11/2 DP'SK       | 656000<br>664666 | 3840.00            | 1 / 1<br>1 / 49   | 26.45<br>26.77           |
| 20 MHz    |                  | 647334           | 3710.01            | 1 / 25            | 26.23                    |
| 20        | QPSK             | 656000           | 3840.00            | 1/1               | 26.43                    |
|           |                  | 664666           | 3969.99            | 1 / 49            | 26.75                    |
|           | 16-QAM           | 664666           | 3969.99            | 1 / 49            | 25.92                    |
|           |                  | 647168           | 3707.52            | 1 / 36            | 25.75                    |
|           | π/2 BPSK         | 656000           | 3840.00            | 1 / 19            | 26.55                    |
| Ŧ         |                  | 664832           | 3972.48            | 1/19              | 26.68                    |
| 15 MHz    | 0001/            | 647168           | 3707.52            | 1/36              | 25.72                    |
| -         | QPSK             | 656000           | 3840.00            | 1/19              | 26.69                    |
|           | 16-QAM           | 664832<br>664832 | 3972.48<br>3972.48 | 1 / 19<br>1 / 19  | 26.71                    |
|           | 10-QAIVI         | 664832<br>647000 | 3972.48            | 1/19              | 25.90<br>25.63           |
|           | π/2 BPSK         | 656000           | 3840.00            | 1/22              | 25.63                    |
| N         | 5. 5. 5.         | 664332           | 3975.00            | 1/22              | 26.69                    |
| ÷         |                  |                  | 3705.00            | 1/22              | 25.69                    |
| Ŭ H       |                  | 647000           |                    |                   |                          |
| 10 MHz    | QPSK             | 656000           | 3840.00            | 1/1               | 26.43                    |
| 10 MH:    | QPSK<br>16-QAM   |                  |                    |                   |                          |

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

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |
|---------------------|------------------------|----------------------------|------------------|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dage 15 of 146   |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 15 of 146   |  |
| © 2023 ELEMENT      |                        |                            | V11 1 08/28/2023 |  |



| Bandwidth  | Modulation     | Channel          | Frequency<br>[MHz] | RB Size/Offset     | Conducted<br>Power [dBm] |
|------------|----------------|------------------|--------------------|--------------------|--------------------------|
| MF         | π/2 BPSK       | 633334           | 3500.01            | 1 / 271            | 26.56                    |
| 00         | QPSK<br>16-QAM | 633334           | 3500.01            | 1 / 271            | 26.58                    |
| <b>v</b> - | 16-QAM         | 633334<br>633000 | 3500.01<br>3495.00 | 1 / 271            | 25.73                    |
|            | π/2 BPSK       | 633334           | 3495.00            | 1 / 243<br>1 / 243 | 26.30<br>26.45           |
| N          | 1.72 Di oit    | 633666           | 3504.99            | 1 / 243            | 26.63                    |
| 90 MHz     |                | 633000           | 3495.00            | 1 / 243            | 26.35                    |
| 06         | QPSK           | 633334           | 3500.01            | 1 / 243            | 26.46                    |
|            |                | 633666           | 3504.99            | 1 / 243            | 26.65                    |
|            | 16-QAM         | 633666           | 3504.99            | 1 / 243            | 25.80                    |
|            |                | 632668           | 3490.02            | 1 / 215            | 26.25                    |
| м          | π/2 BPSK       | 633334           | 3500.01            | 1 / 215            | 26.43                    |
| 80 MHz     |                | 634000<br>632668 | 3510.00<br>3490.02 | 1 / 215            | 26.59                    |
| ő          | QPSK           | 633334           | 3500.01            | 1 / 215<br>1 / 215 | 26.28<br>26.42           |
| æ          | QF SK          | 634000           | 3510.00            | 1 / 215            | 26.60                    |
|            | 16-QAM         | 634000           | 3510.00            | 1 / 215            | 25.73                    |
|            |                | 632334           | 3485.01            | 1/1                | 26.12                    |
|            | π/2 BPSK       | 633334           | 3500.01            | 1 / 187            | 26.29                    |
| μz         |                | 634332           | 3514.98            | 1 / 187            | 26.49                    |
| 70 MHz     |                | 632334           | 3485.01            | 1/1                | 26.14                    |
| 2          | QPSK           | 633334           | 3500.01            | 1 / 187            | 26.30                    |
|            |                | 634332           | 3514.98            | 1 / 187            | 26.52                    |
|            | 16-QAM         | 634332           | 3514.98            | 1 / 187            | 25.68                    |
|            |                | 632000           | 3480.00            | 1/1                | 25.99                    |
| N          | π/2 BPSK       | 633334           | 3500.01            | 1 / 160            | 26.18                    |
| 60 MHz     |                | 634666<br>632000 | 3519.99<br>3480.00 | 1 / 160<br>1 / 1   | 26.49<br>26.01           |
| 100        | QPSK           | 633334           | 3500.01            | 1 / 160            | 26.19                    |
| •          |                | 634666           | 3519.99            | 1 / 160            | 26.52                    |
|            | 16-QAM         | 634666           | 3519.99            | 1 / 160            | 25.63                    |
|            |                | 631668           | 3475.02            | 1/1                | 26.01                    |
|            | π/2 BPSK       | 633334           | 3500.01            | 1 / 131            | 26.15                    |
| Ηz         |                | 635000           | 3525.00            | 1 / 131            | 26.38                    |
| 50 MHz     |                | 631668           | 3475.02            | 1/1                | 26.05                    |
| 5(         | QPSK           | 633334           | 3500.01            | 1 / 131            | 26.11                    |
|            | 40.0414        | 635000           | 3525.00            | 1 / 131            | 26.41                    |
|            | 16-QAM         | 635000           | 3525.00            | 1 / 131            | 25.52                    |
|            | π/2 BPSK       | 631334<br>633334 | 3470.01<br>3500.01 | 1 / 1<br>1 / 104   | 26.05                    |
| N          | II/2 DF SK     | 635332           | 3529.98            | 1 / 104            | 26.06<br>26.49           |
| 40 MHz     |                | 631334           | 3470.01            | 1/1                | 26.04                    |
| 40         | QPSK           | 633334           | 3500.01            | 1 / 104            | 26.12                    |
|            |                | 635332           | 3529.98            | 1 / 104            | 26.52                    |
|            | 16-QAM         | 635332           | 3529.98            | 1 / 104            | 25.62                    |
|            |                | 631000           | 3465.00            | 1/1                | 26.08                    |
|            | π/2 BPSK       | 633334           | 3500.01            | 1 / 76             | 25.99                    |
| Ŧ          |                | 635666           | 3534.99            | 1 / 76             | 26.62                    |
| 30 MHz     | ODSK           | 631000           | 3465.00            | 1/1                | 26.04                    |
| 3          | QPSK           | 633334<br>635666 | 3500.01<br>3534.99 | 1 / 76<br>1 / 76   | 26.06                    |
|            | 16-QAM         | 635666           | 3534.99            | 1 / 76             | 26.69<br>25.76           |
|            |                | 630834           | 3462.51            | 1/32               | 26.05                    |
|            | π/2 BPSK       | 633334           | 3500.01            | 1 / 63             | 26.00                    |
| ¥          |                | 635832           | 3537.48            | 1 / 63             | 26.53                    |
| 25 MHz     |                | 630834           | 3462.51            | 1 / 32             | 26.45                    |
| 25         | QPSK           | 633334           | 3500.01            | 1 / 63             | 25.98                    |
|            |                | 635832           | 3537.48            | 1 / 63             | 26.50                    |
|            | 16-QAM         | 635832           | 3537.48            | 1 / 63             | 25.62                    |
|            |                | 630668           | 3460.02            | 1/1                | 26.16                    |
| N          | π/2 BPSK       | 633334<br>636000 | 3500.01<br>3540.00 | 1 / 25             | 25.98                    |
| 20 MHz     |                | 630668           | 3540.00<br>3460.02 | 1/25               | 26.61                    |
| 50         | QPSK           | 633334           | 3460.02            | 1 / 1<br>1 / 25    | 26.16<br>26.25           |
|            |                | 636000           | 3540.00            | 1 / 25             | 26.69                    |
|            | 16-QAM         | 636000           | 3540.00            | 1 / 25             | 25.56                    |
|            |                | 630500           | 3457.50            | 1/1                | 26.12                    |
|            | π/2 BPSK       | 633334           | 3500.01            | 1 / 36             | 25.93                    |
| Ŧ          |                | 636166           | 3542.49            | 1 / 36             | 26.61                    |
| 15 MHz     |                | 630500           | 3457.50            | 1/1                | 26.14                    |
| 1          | QPSK           | 633334           | 3500.01            | 1 / 36             | 25.93                    |
|            | 40.000         | 636166           | 3542.49            | 1/36               | 26.59                    |
|            | 16-QAM         | 636166<br>630334 | 3542.49            | 1/36               | 25.71                    |
|            | π/2 BPSK       | 630334<br>633334 | 3455.01<br>3500.01 | 1 / 1<br>1 / 22    | 26.10                    |
| N          | II/2 DPOK      | 636332           | 3500.01            | 1 / 22             | 25.91<br>26.63           |
| ¥          |                | 630334           | 3455.01            | 1/1                | 26.15                    |
| 9          | QPSK           | 633334           | 3500.01            | 1 / 22             | 26.00                    |
|            |                | 636332           | 3544.98            | 1 / 22             | 26.70                    |
|            | 16-QAM         | 636332           | 3544.98            | 1 / 22             | 25.67                    |

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

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |
|---------------------|------------------------|----------------------------|------------------|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dage 16 of 146   |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 16 of 146   |  |
| © 2023 ELEMENT      |                        |                            | V11 1 08/28/2023 |  |



| 30 MHz 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz 90 MHz 100 MHz | π/2 BPSK       16-QAM       π/2 BPSK       0PSK       16-QAM       π/2 BPSK       QPSK       16-QAM       π/2 BPSK       QPSK       16-QAM       π/2 BPSK       QPSK       16-QAM       π/2 BPSK       16-QAM       17/2 BPSK       16-QAM       π/2 BPSK       16-QAM       17/2 BPSK  | 633334<br>636666<br>640000<br>633334<br>636666<br>640000<br>633334<br>633000<br>636666<br>640332<br>633000<br>636666<br>640332<br>633000<br>636666<br>640332<br>636666<br>640332<br>636666<br>640332<br>636666<br>6403666<br>64036666<br>641332<br>632000<br>636666<br>641332<br>632000<br>636666   | 3500.01<br>3449.99<br>3600.00<br>3500.01<br>3449.99<br>3600.00<br>3500.01<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>349 | 1/1<br>1/271<br>1/136<br>1/1<br>1/136<br>1/1<br>1/136<br>1/1<br>1/271<br>1/136<br>1/1<br>1/243<br>1/122<br>1/1<br>1/122<br>1/1<br>1/122<br>1/1<br>1/1  | 25.34<br>26.14<br>26.21<br>25.35<br>26.08<br>24.42<br>25.31<br>26.01<br>26.24<br>25.34<br>26.24<br>25.34<br>26.24<br>25.34<br>26.24<br>26.28<br>24.44<br>25.33<br>26.17<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.21<br>26.25<br>26.13<br>26.10<br>26.26<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26.00<br>26 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|--|---|---|--|--|---|
| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz 90 MHz 1              | QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM | 640000<br>633334<br>636666<br>640000<br>633304<br>633000<br>636666<br>640332<br>633000<br>633000<br>633000<br>633000<br>633000<br>633000<br>633000<br>633000<br>6332668<br>6336666<br>640666<br>641000<br>632668<br>641000<br>632668<br>641000<br>632666<br>641000<br>632666<br>641000<br>632666<br>641000<br>632666<br>641322<br>636666<br>641322<br>636666<br>641322<br>636666<br>641322<br>636666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>641322<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>6326666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>632666<br>633000<br>632666<br>633000<br>632666<br>633000<br>632666<br>633000<br>632666<br>633000<br>632666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>6336<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>633000<br>633666<br>63366<br>633000<br>633666<br>633000<br>63366<br>63366<br>633000<br>63366<br>633000<br>63366<br>6330000<br>63366<br>6330000<br>63366<br>63300000000   | 3600.00<br>3500.01<br>3549.99<br>3600.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3495.00<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3619.98<br>3649.99<br>3619.98<br>3649.99<br>3619.98<br>3649.99<br>3619.98<br>3649.99  | 1/136<br>1/1<br>1/271<br>1/136<br>1/1<br>1/136<br>1/1<br>1/122<br>1/1<br>1/122<br>1/1<br>1/122<br>1/1<br>1/122<br>1/1<br>1/1   | 26.21           25.35           26.08           26.47           24.42           25.31           26.01           26.28           24.44           25.33           26.07           26.28           24.44           25.33           26.17           26.28           24.44           25.36           26.13           26.13           26.13           26.13           26.14           25.26           26.04           25.26           26.05           26.14           26.14           26.14           26.14   |
| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz 90 MHz 1              | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>0PSK<br>16-QAM<br>π/2 BPSK<br>16-QAM  | 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| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz 90 MHz 1              | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>0PSK<br>16-QAM<br>π/2 BPSK<br>16-QAM  | 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| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz                       | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>0PSK<br>16-QAM<br>π/2 BPSK<br>16-QAM  | 640000 633334 63300 633000 6340 633000 6340 633000 6340 633000 6340 633000 6340 633000 6340 66 6326 6 640 66 6326 6 641000 632 6 6 641000 632 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6   | 3600.00<br>3500.01<br>3495.00<br>3549.99<br>3604.98<br>3495.00<br>3549.99<br>3604.98<br>3495.00<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3619.98<br>3649.99<br>3619.98<br>3649.99<br>3619.98<br>3480.00  | 1/136<br>1/1<br>1/1<br>1/243<br>1/122<br>1/1<br>1/243<br>1/122<br>1/1<br>1/122<br>1/1<br>1/122<br>1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/1187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/160<br>1/1  | 26.47<br>24.42<br>25.31<br>26.01<br>26.24<br>25.34<br>26.07<br>26.24<br>25.34<br>26.07<br>26.24<br>25.33<br>26.17<br>26.21<br>25.36<br>26.13<br>26.13<br>26.13<br>26.13<br>26.24<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04<br>26.04 |
| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz                       | π/2 BPSK           OPSK           16-QAM           π/2 BPSK           QPSK           0PSK           0PSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           16-QAM  | 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| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz                       | OPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK  | 636666         640332         6           640332         633000         6           633000         636666         640366           632668         632668         632668           632668         632668         632668           632668         632668         632668           632668         632668         632668           6322668         632668         641000           632666         641000         632666           641000         632666         641332           632666         641332         636666           641332         636666         641332           632666         641332         636666           641332         632666         641332           632666         641332         632666       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| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz                       | OPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK  | 640332<br>633000<br>638666<br>640332<br>632668<br>636666<br>640666<br>632668<br>636666<br>640666<br>632668<br>632668<br>632668<br>632668<br>632668<br>632686<br>641000<br>632334<br>6386666<br>641032<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>638666<br>638666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>641332<br>6386666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>638666<br>63866<br>638666<br>638666<br>63866<br>638666<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>6386<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>63866<br>6386   | 3604.98<br>3495.00<br>3549.99<br>3604.98<br>3495.00<br>3549.99<br>3609.99<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3490.02<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3485.01<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00   | 1/122<br>1/1<br>1/243<br>1/122<br>1/1<br>1/215<br>1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/11<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/194<br>1/1<br>1/160<br>1/1   | 26.24<br>25.34<br>26.07<br>26.28<br>24.44<br>25.33<br>26.17<br>26.21<br>25.36<br>26.13<br>26.13<br>26.18<br>24.43<br>25.28<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.96<br>24.39<br>25.43<br>26.05<br>26.14<br>25.61<br>26.05  |
| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz                       | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>0PSK<br>16-QAM<br>π/2 BPSK<br>QPSK  | 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| 40 MHz 50 MHz 60 MHz 70 MHz 80 MHz                       | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>0PSK<br>16-QAM<br>π/2 BPSK<br>QPSK  | 636666<br>640332<br>633000<br>633000<br>632668<br>632668<br>632668<br>632668<br>640666<br>6432668<br>641000<br>632334<br>638666<br>641000<br>632334<br>638666<br>641000<br>632666<br>641332<br>636666<br>641332<br>636666<br>641332<br>636666<br>641332<br>636666<br>641332   | 3549.99<br>3604.98<br>3495.00<br>3490.02<br>3549.99<br>3609.99<br>3490.02<br>3490.02<br>3490.02<br>3490.02<br>3490.02<br>3490.02<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3619.98<br>3649.00<br>3549.99<br>3619.98<br>3649.00   | 1/243<br>1/122<br>1/1<br>1/1<br>1/215<br>1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/160<br>1/1  | 26.07<br>26.28<br>24.44<br>25.33<br>26.17<br>26.21<br>25.36<br>26.13<br>26.13<br>26.13<br>26.13<br>26.13<br>26.14<br>25.26<br>26.04<br>25.96<br>25.96<br>25.96<br>25.96<br>25.96<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz 60 MHz 70 MHz 80                           | π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM  | 633000<br>632668<br>636666<br>636666<br>632688<br>636666<br>640666<br>632688<br>632634<br>632688<br>641000<br>632334<br>636666<br>641000<br>632686<br>632600<br>632666<br>641332<br>632666<br>641332<br>632666<br>641332<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>63200<br>63200<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>630000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>6320000000000   | 3495.00<br>3490.02<br>3549.99<br>3609.99<br>3490.02<br>3549.99<br>3609.99<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3485.01<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00  | 1/1<br>1/1<br>1/215<br>1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/194<br>1/1<br>1/160<br>1/1<br>1/160<br>1/1  | 24.44<br>25.33<br>26.17<br>26.21<br>25.36<br>26.13<br>26.18<br>26.18<br>26.02<br>26.04<br>25.06<br>25.96<br>25.96<br>25.96<br>25.96<br>25.96<br>25.42<br>26.05<br>25.42<br>26.05<br>25.42<br>26.05  |
| 40 MHz 50 MHz 60 MHz 70 MHz 80                           | π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM           π/2 BPSK           QPSK           16-QAM  | 632668<br>632668<br>640666<br>632668<br>632668<br>632668<br>640666<br>632668<br>641000<br>632666<br>641000<br>632666<br>641000<br>632666<br>641332<br>636666<br>641332<br>632666<br>632000<br>632666<br>632000<br>632666<br>632660<br>632000<br>632666<br>632660<br>632666<br>632660<br>632660<br>632666<br>632660<br>632666<br>632660<br>632666<br>632660<br>632666<br>632660<br>632660<br>632666<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>63260<br>63260<br>632660<br>63260<br>63260<br>63260<br>63260<br>63260<br>63260<br>63260<br>63260<br>63260<br>63260<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>6326660<br>632660<br>6326660<br>6326660<br>6326660<br>6326660<br>6326660<br>6326660<br>6326660<br>632660<br>6326660<br>6326660<br>6326660<br>6326660<br>6326660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>632660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>633660<br>63560<br>63560<br>63560<br>63560<br>63560<br>63560<br>63560<br>63560<br>63560<br>63560<br>6356   | 3490.02<br>3649.99<br>3609.99<br>3490.02<br>3549.99<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3619.98<br>3649.00<br>3549.99<br>3619.98<br>3619.98<br>3619.98  | 1/1<br>1/215<br>1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/108<br>1/1<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/194<br>1/1<br>1/160<br>1/1  | 25.33<br>26.17<br>26.21<br>25.36<br>26.13<br>26.18<br>24.43<br>25.28<br>26.04<br>25.26<br>26.04<br>25.26<br>26.04<br>25.96<br>25.96<br>24.39<br>26.05<br>26.14<br>25.42<br>26.06  |
| 40 MHz 50 MHz 60 MHz 70 MHz 80                           | QPSK<br>16-QAM<br>π/2 BPSK<br>0PSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 636666<br>640666<br>632668<br>632668<br>632668<br>632668<br>632334<br>636666<br>641000<br>632334<br>636666<br>641000<br>6326666<br>641332<br>632000<br>636666<br>641332<br>632000<br>6326666<br>641332<br>632000<br>6326666   | 3649.99<br>3609.99<br>3490.02<br>3549.99<br>3490.02<br>3485.01<br>3485.01<br>3485.01<br>3485.01<br>3485.01<br>3485.01<br>3485.01<br>3485.01<br>3480.00<br>3485.01<br>3480.00<br>3481.99<br>3619.98<br>3480.00  | 1/215<br>1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/11<br>1/187<br>1/14<br>1/1<br>1/187<br>1/147<br>1/147<br>1/147<br>1/147<br>1/147<br>1/140<br>1/1<br>1/160<br>1/1   | 26.17<br>26.21<br>25.36<br>26.13<br>26.13<br>25.28<br>25.28<br>26.02<br>26.04<br>25.26<br>26.06<br>25.96<br>24.39<br>25.42<br>26.05<br>26.43<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz 60 MHz 70 MHz 80                           | QPSK<br>16-QAM<br>π/2 BPSK<br>0PSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 640666<br>632668<br>636666<br>632668<br>632688<br>632334<br>636666<br>641000<br>632334<br>636666<br>641000<br>632334<br>636666<br>641332<br>632000<br>632000<br>6326666<br>641332<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632066<br>6320665<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>632000<br>6320000000000   | 3609.99<br>3490.02<br>3549.99<br>3609.99<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3485.01<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00   | 1/108<br>1/1<br>1/215<br>1/108<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/1<br>1/180<br>1/1<br>1/160<br>1/1  | 26.21<br>25.36<br>26.13<br>26.18<br>24.43<br>25.28<br>26.02<br>25.26<br>25.26<br>25.96<br>24.39<br>25.42<br>26.05<br>25.44<br>26.05<br>25.44<br>26.05   |
| 40 MHz 50 MHz 60 MHz 70 MHz 80                           | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 632668<br>632666<br>640666<br>632688<br>632334<br>636666<br>641000<br>632334<br>636666<br>641000<br>632334<br>632000<br>632334<br>632000<br>632332<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>636666  | 3490.02<br>3649.99<br>3609.99<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3619.98<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00   | 1/1<br>1/215<br>1/108<br>1/1<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/140<br>1/1<br>1/160<br>1/1   | 25.36<br>26.13<br>26.18<br>24.43<br>25.28<br>26.04<br>25.26<br>26.04<br>25.26<br>26.06<br>25.96<br>25.96<br>25.96<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06  |
| 40 MHz 50 MHz 60 MHz 70 MHz 80                           | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 640666<br>632668<br>632334<br>636666<br>641000<br>632334<br>636666<br>641000<br>632334<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332  | 3609.99<br>3490.02<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98  | 1/215<br>1/108<br>1/1<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/140<br>1/1<br>1/160<br>1/1  | 26.13<br>26.18<br>24.43<br>25.28<br>26.02<br>26.04<br>25.26<br>26.06<br>25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz 60 MHz                                     | π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 632668<br>632334<br>636666<br>641000<br>632334<br>636666<br>641000<br>632334<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3490.02<br>3485.01<br>3649.99<br>3615.00<br>3485.01<br>3485.01<br>3485.01<br>3485.01<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00   | 1/1<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/140<br>1/1<br>1/160<br>1/1<br>1/160<br>1/1  | 24.43<br>25.28<br>26.02<br>26.04<br>25.26<br>25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06  |
| 40 MHz 50 MHz 60 MHz                                     | π/2 BPSK<br>QPSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 632334<br>636666<br>641000<br>632334<br>636666<br>641000<br>632334<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>636666  | 3485.01<br>3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00   | 1/1<br>1/187<br>1/94<br>1/1<br>1/187<br>1/187<br>1/187<br>1/1<br>1/1<br>1/1<br>1/160<br>1/1  | 25.28<br>26.02<br>26.04<br>25.26<br>25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz 60 MHz                                     | QPSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 636666<br>641000<br>632334<br>636666<br>641000<br>632334<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3549.99<br>3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98   | 1/187<br>1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/1<br>1/160<br>1/1<br>1/160<br>1/1  | 26.02<br>26.04<br>25.26<br>26.06<br>25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz 60 MHz                                     | QPSK<br>16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 641000<br>632334<br>636666<br>641000<br>632334<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3615.00<br>3485.01<br>3549.99<br>3615.00<br>3485.01<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98   | 1/94<br>1/1<br>1/187<br>1/94<br>1/1<br>1/160<br>1/1<br>1/1<br>1/160<br>1/1   | 26.04<br>25.26<br>26.06<br>25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06  |
| 40 MHz 50 MHz 60 MHz                                     | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 632334<br>636666<br>641000<br>632334<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3485.01<br>3549.99<br>3615.00<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00  | 1/1<br>1/187<br>1/94<br>1/1<br>1/1<br>1/1<br>1/1<br>1/1<br>1/1<br>1/1<br>1/100<br>1/1  | 25.26<br>26.06<br>25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz 60 MHz                                     | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 636666<br>641000<br>632334<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3549.99<br>3615.00<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00   | 1/187<br>1/94<br>1/1<br>1/1<br>1/160<br>1/1<br>1/1<br>1/160<br>1/1   | 26.06<br>25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06  |
| 40 MHz 50 MHz  | 16-QAM<br>π/2 BPSK<br>QPSK<br>16-QAM  | 641000<br>632334<br>632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3615.00<br>3485.01<br>3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00  | 1/94<br>1/1<br>1/1<br>1/160<br>1/1<br>1/1<br>1/160<br>1/1  | 25.96<br>24.39<br>25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz  | π/2 BPSK<br>QPSK<br>16-QAM  | 632000<br>636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3480.00<br>3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00  | 1/1<br>1/160<br>1/1<br>1/1<br>1/160<br>1/1   | 25.42<br>26.05<br>26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz  | QPSK<br>16-QAM  | 636666<br>641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3549.99<br>3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00   | 1/160<br>1/1<br>1/1<br>1/160<br>1/1  | 26.05<br>26.14<br>25.43<br>26.06  |
| 40 MHz 50 MHz  | QPSK<br>16-QAM  | 641332<br>632000<br>636666<br>641332<br>632000<br>631668  | 3619.98<br>3480.00<br>3549.99<br>3619.98<br>3480.00  | 1/1<br>1/1<br>1/160<br>1/1   | 26.14<br>25.43<br>26.06   |
| 40 MHz 50 MHz  | 16-QAM  | 632000<br>636666<br>641332<br>632000<br>631668  | 3480.00<br>3549.99<br>3619.98<br>3480.00   | 1 / 1<br>1 / 160<br>1 / 1  | 25.43<br>26.06  |
| 40 MHz 50 MHz  | 16-QAM  | 636666<br>641332<br>632000<br>631668  | 3549.99<br>3619.98<br>3480.00  | 1 / 160<br>1 / 1   | 26.06   |
| 40 MHz 50 MHz  | 16-QAM  | 641332<br>632000<br>631668  | 3619.98<br>3480.00   | 1/1  |   |
| 40 MHz   |   | 632000<br>631668  | 3480.00  |  | 26.13   |
| 40 MHz   | π/2 BPSK  |   | 3475.02  |  | 24.56   |
| 40 MHz   | π/2 BPSK  | 636666  |  | 1/1  | 25.30   |
| 40 MHz   |   |   | 3549.99  | 1 / 131  | 25.94   |
| 40 MHz   |   | 641666  | 3624.99  | 1/66   | 26.37   |
| 40 MHz   | QPSK  | 631668<br>636666  | 3475.02<br>3549.99   | 1/1  | 25.29   |
|  | Qi UK   | 641666  | 3624.99  | 1 / 131  | 25.94<br>26.23  |
|  | 16-QAM  | 631668  | 3475.02  | 1/1  | 24.48   |
|  |   | 631334  | 3470.01  | 1/1  | 25.52   |
|  | π/2 BPSK  | 636666  | 3549.99  | 1 / 104  | 25.95   |
|  |   | 642000  | 3630.00  | 1/1  | 26.20   |
|  | QPSK  | 631334<br>636666  | 3470.01<br>3549.99   | 1 / 1<br>1 / 104   | 25.46<br>25.91  |
| 30 MHz   |   | 642000  | 3630.00  | 1/1  | 26.15   |
| 30 MHz   | 16-QAM  | 631334  | 3470.01  | 1/1  | 24.59   |
| 30 MHz   |   | 631000  | 3465.00  | 1/1  | 25.39   |
| 30 MH3   | π/2 BPSK  | 636666  | 3549.99  | 1 / 76   | 25.79   |
| 8  |   | 642332<br>631000  | 3634.98<br>3465.00   | 1/1  | 26.28   |
|  | QPSK  | 636666  | 3465.00  | 1/1  | 25.40<br>25.81  |
|  | UP ON   | 642332  | 3634.98  | 1/1  | 26.29   |
|  | 16-QAM  | 631000  | 3465.00  | 1/1  | 24.53   |
|  |   | 630834  | 3462.51  | 1/1  | 25.57   |
| N  | π/2 BPSK  | 636666  | 3549.99  | 1/63   | 25.75   |
| MHz  |   | 642500<br>630834  | 3637.50<br>3462.51   | 1/1  | 26.09<br>25.58  |
| 25 N   | QPSK  | 630834  | 3462.51  | 1/1  | 25.58   |
|  | a, or   | 642500  | 3637.50  | 1/1  | 26.09   |
|  | 16-QAM  | 630834  | 3462.51  | 1/1  | 24.70   |
|  |   | 630668  | 3460.02  | 1/1  | 25.44   |
| N  | π/2 BPSK  | 636666  | 3549.99  | 1 / 49   | 25.63   |
| Ŧ  |   | 642666  | 3639.99  | 1/25   | 26.12   |
| 20 MHz   | QPSK  | 630668<br>636666  | 3460.02<br>3549.99   | 1 / 25<br>1 / 25   | 25.52<br>25.83  |
|  |   | 642666  | 3639.99  | 1/1  | 26.01   |
|  | 16-QAM  | 630668  | 3460.02  | 1 / 25   | 24.73   |
|  |   | 630500  | 3457.50  | 1/1  | 25.37   |
| N  | π/2 BPSK  | 636666  | 3549.99  | 1/36   | 25.58   |
| Ę  |   | 642833  | 3642.50  | 1/19   | 26.12   |
| 5  | QPSK  | 630500<br>636666  | 3457.50<br>3549.99   | 1 / 1<br>1 / 36  | 25.39<br>25.52  |
| -  | ur on   | 642833  | 3549.99<br>3642.50   | 1/36   | 25.52   |
|  | 16-QAM  | 630500  | 3457.50  | 1/1  | 24.46   |
|  |   | 630336  | 3455.04  | 1/1  | 25.36   |
|  |   | 636666  | 3549.99  | 1 / 22   | 25.56   |
| Ŧ  | π/2 BPSK  | 643000  | 3645.00  | 1/1  | 25.87   |
| 10 MHz   |   | 630336  | 3455.04  | 1/1  | 25.38   |
| -  | π/2 BPSK  |   |  |  | 25.60   |
|  |   | 636666<br>643000  | 3549.99<br>3645.00   | 1/22   | 25.90   |

Table 7-4. Conducted Power Measurement (NR n78) – Ant1

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                   |  |
|---------------------|------------------------|----------------------------|-------------------|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dogo 17 of 146    |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 17 of 146    |  |
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| Bandwidth | Modulation | Channel | Frequency<br>[MHz] | RB Size/Offset | Conducted<br>Power [dBm] |
|-----------|------------|---------|--------------------|----------------|--------------------------|
|           | TT/2 BPSK  | 650000  | 3750.00            | 1 / 136        | 14.72                    |
|           |            | 656000  | 3840.00            | 1 / 204        | 14.07                    |
| MHz       |            | 662000  | 3930.00            | 1 / 68         | 14.04                    |
|           | QPSK       | 650000  | 3750.00            | 1 / 136        | 14.80                    |
| 100       |            | 656000  | 3840.00            | 1 / 204        | 14.07                    |
|           |            | 662000  | 3930.00            | 1 / 68         | 14.14                    |
|           | 16-QAM     | 650000  | 3750.00            | 1 / 136        | 13.44                    |

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

| Bandwidth | Modulation | Channel | Frequency<br>[MHz] | RB Size/Offset | Conducted<br>Power [dBm] |
|-----------|------------|---------|--------------------|----------------|--------------------------|
| MF        | π/2 BPSK   | 633334  | 3500.01            | 1 / 136        | 13.71                    |
| 100       | QPSK       | 633334  | 3500.01            | 1 / 136        | 13.54                    |
| 7         | 16-QAM     | 633334  | 3500.01            | 1 / 136        | 12.49                    |

Table 7-6. Conducted Power Measurement (NR n77 DoD) – Ant2

| Bandwidth                            | Modulation | Channel | Frequency<br>[MHz] | RB Size/Offset | Conducted<br>Power [dBm] |
|--------------------------------------|------------|---------|--------------------|----------------|--------------------------|
|                                      |            | 650000  | 3750.00            | 1 / 136        | 10.46                    |
| T/2 BPSK<br><b>PW</b><br><b>QPSK</b> | π/2 BPSK   | 656000  | 3840.00            | 1 / 136        | 9.72                     |
|                                      |            | 662000  | 3930.00            | 1 / 68         | 9.69                     |
| N N                                  |            | 650000  | 3750.00            | 1 / 136        | 10.50                    |
| 100                                  | QPSK       | 656000  | 3840.00            | 1 / 136        | 9.70                     |
|                                      |            | 662000  | 3930.00            | 1 / 68         | 9.77                     |
|                                      | 16-QAM     | 662000  | 3930.00            | 1 / 68         | 8.63                     |

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

| Bandwidth | Modulation | Channel | Frequency<br>[MHz] | RB Size/Offset | Conducted<br>Power [dBm] |
|-----------|------------|---------|--------------------|----------------|--------------------------|
| MF        | π/2 BPSK   | 633334  | 3500.01            | 1 / 136        | 11.53                    |
| 100       | QPSK       | 633334  | 3500.01            | 1 / 136        | 11.52                    |
| 7         | 16-QAM     | 633334  | 3500.01            | 1 / 136        | 10.37                    |

Table 7-8. Conducted Power Measurement (NR n77 DoD) – Ant3

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dage 19 of 146   |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 18 of 146   |  |  |
| © 2023 ELEMENT      | •                      |                            | V11.1 08/28/2023 |  |  |



| Bandwidth | Modulation | Channel | Frequency<br>[MHz] | RB Size/Offset | Conducted<br>Power [dBm] |
|-----------|------------|---------|--------------------|----------------|--------------------------|
|           |            | 650000  | 3750.00            | 1 / 136        | 12.70                    |
|           | π/2 BPSK   | 656000  | 3840.00            | 1 / 204        | 11.71                    |
| MHz       |            | 662000  | 3930.00            | 1 / 68         | 12.01                    |
|           |            | 650000  | 3750.00            | 1 / 136        | 12.77                    |
| 100       | QPSK       | 656000  | 3840.00            | 1 / 204        | 11.74                    |
|           |            | 662000  | 3930.00            | 1 / 68         | 11.94                    |
|           | 16-QAM     | 662000  | 3930.00            | 1 / 68         | 10.65                    |

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

| Bandwidth | Modulation | Channel | Frequency<br>[MHz] | RB Size/Offset | Conducted<br>Power [dBm] |  |
|-----------|------------|---------|--------------------|----------------|--------------------------|--|
| MF        | π/2 BPSK   | 633334  | 3500.01            | 1 / 136        | 11.79                    |  |
| 100       | QPSK       | 633334  | 3500.01            | 1 / 136        | 11.75                    |  |
| 7         | 16-QAM     | 633334  | 3500.01            | 1 / 136        | 10.61                    |  |

Table 7-10. Conducted Power Measurement (NR n77 DoD) – Ant4

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dage 10 of 146   |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 19 of 146   |  |  |  |  |  |
| © 2023 ELEMENT      | ·                      |                            | V11.1 08/28/2023 |  |  |  |  |  |



### 7.3 Occupied Bandwidth

#### **Test Overview**

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

#### Test Procedure Used

ANSI C63.26-2015 - Section 5.4.4

#### **Test Settings**

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

#### Test Setup

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



Figure 7-2. Test Instrument & Measurement Setup

#### Test Notes

None.

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT              |                  |  |  |  |  |  |
|---------------------|------------------------|---|------------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                               | Page 20 of 146   |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | 9/21/2023 - 10/23/2023 Portable Handset |                  |  |  |  |  |  |
| © 2023 ELEMENT      | •                      |   | V11.1 08/28/2023 |  |  |  |  |  |



| Mode          | Bandwidth | Modulation | OBW [MHz] |
|---------------|-----------|------------|-----------|
|               |           | π/2 BPSK   | 96.75     |
|               | 100MHz    | QPSK       | 97.68     |
|               |           | 16QAM      | 97.91     |
|               |           | π/2 BPSK   | 86.98     |
|               | 90MHz     | QPSK       | 87.85     |
|               |           | 16QAM      | 87.67     |
|               |           | π/2 BPSK   | 77.43     |
|               | 80MHz     | QPSK       | 77.68     |
|               |           | 16QAM      | 77.53     |
|               |           | π/2 BPSK   | 64.89     |
|               | 70MHz     | QPSK       | 67.65     |
|               |           | 16QAM      | 67.65     |
|               |           | π/2 BPSK   | 58.03     |
|               | 60MHz     | QPSK       | 58.14     |
|               |           | 16QAM      | 58.03     |
|               |           | π/2 BPSK   | 45.93     |
|               | 50MHz     | QPSK       | 47.64     |
| NR-n77/78 PC2 |           | 16QAM      | 47.64     |
| C-Band        |           | π/2 BPSK   | 35.86     |
|               | 40MHz     | QPSK       | 38.07     |
|               |           | 16QAM      | 37.85     |
|               |           | π/2 BPSK   | 27.04     |
|               | 30MHz     | QPSK       | 27.96     |
|               |           | 16QAM      | 27.99     |
|               |           | π/2 BPSK   | 23.02     |
|               | 25MHz     | QPSK       | 23.18     |
|               |           | 16QAM      | 23.30     |
|               |           | π/2 BPSK   | 18.02     |
|               | 20MHz     | QPSK       | 18.29     |
|               |           | 16QAM      | 18.26     |
|               |           | π/2 BPSK   | 12.94     |
|               | 15MHz     | QPSK       | 13.66     |
|               |           | 16QAM      | 13.67     |
|               |           | π/2 BPSK   | 8.59      |
|               | 10MHz     | QPSK       | 8.62      |
|               |           | 16QAM      | 8.62      |

Table 7-11. Occupied Bandwidth Test Results – Ant1

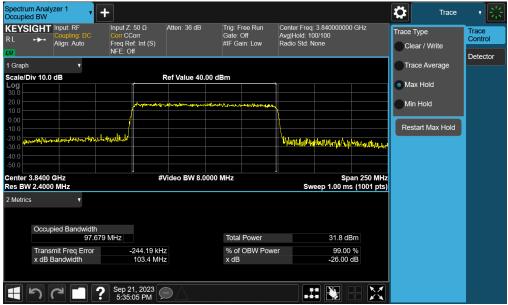
| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dage 21 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 21 of 146   |  |  |  |  |
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# NR Band n77PC2 (C-Band) - Ant1

| Spectrun<br>Occupied | d BW (           |   | • +                |  |   |                     |   |                                       |                           |                            | \$                 | Trace    | • 2              |
|----------------------|------------------|---|--------------------|--|---|---------------------|---|---------------------------------------|---------------------------|----------------------------|--------------------|----------|------------------|
|                      | GHT<br>↔         | Input: RF<br>Coupling: D<br>Align: Auto | DC C               | put Ζ: 50 Ω<br>orr CCorr<br>eq Ref: Int (S)<br>FE: Off | Atten: 36 dB  | Gate:               | Free Run<br>Off<br>ain: Low               | Center Fre<br>Avg Hold:<br>Radio Std: |                           | 0 GHz                      | Trace Typ<br>Clear |          | Trace<br>Control |
| 1 Graph              | _                | •                                       | N                  | FE. UII  |   |                     |   |                                       |                           |                            | Trace              | Average  | Detector         |
| Scale/Di             | iv 10.0          | dB                                      |                    |  | Ref Value 40  | .00 dBm             |   |                                       |                           |                            | o Max ⊦            | lold     |                  |
| 20.0<br>10.0         |                  |   |                    | jularijsti - d-m                                       | kalanda kalang kalan | alanter alan alah s | han an a | 1                                     |                           |                            | Min H              | old      |                  |
| -10.0                | <b>ا</b> لماسم ا | www.                                    | Law array way      | www  |   |                     |   | Wingougermen                          | and the second statements | -may hardwort applicate    | Restart            | Max Hold |                  |
| -40.0                |                  |   |                    |  |   |                     |   |                                       |                           |                            |                    |          |                  |
| Center 3<br>Res BW   |                  |   |                    |  | #Video BW 8.  | 0000 MHz            |   | S                                     | Sp<br>weep 1.00 m         | an 250 MHz<br>s (1001 pts) |                    |          |                  |
| 2 Metrics            |                  | Ţ                                       |                    |  |   |                     |   |                                       |                           |                            |                    |          |                  |
|                      | Occup            | ied Bandw                               | /idth<br>96.745 M⊦ | 1z   |   | Tota                | l Power                                   |                                       | 33.8 dE                   | 3m                         |                    |          |                  |
|                      |                  | mit Freq Er<br>8andwidth                | rror               | -731.27 k<br>102.5 M                                   |   | % o<br>x dE         | f OBW Pow                                 | /er                                   | 99.00<br>-26.00           |                            |                    |          |                  |
|                      | າ                | 2                                       | <b>?</b> *         | Sep 21, 2023<br>5:26:37 PM                             | $\odot$   |                     |   |                                       |                           |                            |                    |          |                  |

Plot 7-1. Occupied Bandwidth Plot (NR Band n77PC2 - 100MHz π/2 BPSK - Full RB - Ant1)



Plot 7-2. Occupied Bandwidth Plot (NR Band n77PC2 - 100MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dogo 22 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 22 of 146   |  |  |  |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |  |  |  |



| Spectrur<br>Occupie | dBW         |  | +                   |                       |                              |                     |                            |   |                   |  |              | Trace               | - 7 詳            |
|---------------------|-------------|--|---------------------|-----------------------|------------------------------|---------------------|----------------------------|---|-------------------|--|--------------|---------------------|------------------|
| KEYSI<br>RL         |             | Input: RF<br>Coupling: DC<br>Align: Auto | Freq R              | Corr<br>ef: Int (S)   | Atten: 36 dB                 | Gate:               | ree Run<br>Off<br>ain: Low | Center Freq<br>Avg Hold: 10<br>Radio Std: N |                   | ) GHz  | Trace<br>Cle | Type<br>ear / Write | Trace<br>Control |
| 1 Graph             |             | <b>.</b>                                 | NFE: C              | )ff                   |                              |                     |                            |   |                   |  | Tr           | ace Average         | Detector         |
| Scale/D             | iv 10.0     | dB                                       |                     | , I                   | Ref Value 40.                | 00 dBm              |                            |   |                   |  |              | ix Hold             |                  |
| 30.0<br>20.0        |             |  |                     |                       |                              |                     |                            |   |                   |  |              |                     |                  |
| 10.0                |             |  |                     | and the second second | naller and the second second | internation company | gallen and a               | ٩   |                   |  | Mi           | n Hold              |                  |
| 0.00<br>-10.0       |             |  |                     |                       |                              |                     |                            | 1   |                   |  | Res          | start Max Hold      |                  |
| -20.0<br>-30.0      | r. And Mary | hadrodyter                               | Annahasustanova     |                       |                              |                     |                            | Wan, Klai-Uni                               | ellaldar hay hily | hthere was a stand of the second stand of the second stand |              |                     |                  |
| -40.0<br>-50.0      |             |  |                     |                       |                              |                     |                            |   |                   |  |              |                     |                  |
| Center 3<br>Res BW  |             |  |                     | ۱<br>#۱               | Video BW 8.0                 | 000 MHz             |                            | Sw  |                   | an 250 MHz<br>s (1001 pts)   |              |                     |                  |
| 2 Metrics           |             | •  |                     |                       |                              |                     |                            |   |                   |  |              |                     |                  |
|                     |             |  |                     |                       |                              |                     |                            |   |                   |  |              |                     |                  |
|                     | Occup       | ied Bandwid<br>9                         | dth<br>7.908 MHz    |                       |                              | Total               | Power                      |   | 31.8 di           | 3m   |              |                     |                  |
|                     |             | nit Freq Erro                            | Dr                  | -254.48 kH            |                              |                     | OBW Powe                   | er  | 99.00             |  |              |                     |                  |
|                     | х ав в      | landwidth                                |                     | 103.3 MH:             | Z                            | x dB                |                            |   | -26.00            | aв   |              |                     |                  |
|                     | う (         |  | <b>?</b> Sep 2 5:35 | 21, 2023<br>:15 PM    |                              |                     |                            |   |                   |  |              |                     |                  |

Plot 7-3. Occupied Bandwidth Plot (NR Band n77PC2 - 100MHz 16-QAM - Full RB - Ant1)

| Spectrum Ana<br>Occupied BW<br>KEYSIGHT<br>R L | Input: RF<br>Coupling: DC             | +<br>Input Z: 50 Ω<br>Corr CCorr<br>Forse Data (Let (C))   | Gate: Off Avg                              |                                 |            |              | Center Freq: 3.840000000 GHz<br>Avg]Hold: 100/100 |                 |           | Trace    | Trace<br>Control |
|--|---------------------------------------|--|--|---------------------------------|------------|--------------|---|-----------------|-----------|----------|------------------|
| LXI  | Align: Auto                           | Freq Ref: Int (S)<br>NFE: Off  |  | #IF Gain: Low Radio             |            |              | Raulo Stu. None                                   |                 |           | Vrite    | Detector         |
| 1 Graph  |                                       |  |  |                                 |            |              |   |                 | Trace A   | rerage   | Delector         |
| Scale/Div 10.                                  | 0 dB                                  |  | Ref Value 40.0                             | 00 dBm                          |            |              |   |                 | Max Hol   | d        |                  |
| <b>Log</b><br>30.0                             |                                       |  |  |                                 |            |              |   |                 | Iviax 110 | u        |                  |
| 20.0   |                                       | and the second s | northeology of a line of the second states | ne-t-Ver-selender <sup>de</sup> | ngharbanad | (            |   |                 | Min Hold  | i        |                  |
| 0.00   |                                       |  |  |                                 |            |              |   |                 | Destant   |          |                  |
| -10.0  | man way wat where all                 | nan manage and   |  |                                 |            |              |   |                 | Restart M | lax Hold |                  |
| -30.0  | And the spectrum and the spectrum and | AR A A A A A A A A A A A A A A A A A A   |  |                                 |            | Williamapler | الا <sup>1</sup> 44 مارسه الرسه الرسوم            | line has been a |           |          |                  |
| -40.0<br>-50.0                                 |                                       |  |  |                                 |            |              |   |                 |           |          |                  |
| Center 3.8400                                  |                                       | #  | Video BW 8.00                              | 000 MHz                         | I          |              |   | an 225 MHz      |           |          |                  |
| Res BW 2.200                                   | 00 MHz                                |  |  |                                 |            | Sw           | eep 1.00 m  | s (1001 pts)    |           |          |                  |
| 2 Metrics                                      | ▼                                     |  |  |                                 |            |              |   |                 |           |          |                  |
|  |                                       |  |  |                                 |            |              |   |                 |           |          |                  |
| Occu   | upied Bandwidth                       | 82 MHz   |  | Total                           | Power      |              | 33.9 d  | R               |           |          |                  |
| Tran   | smit Freq Error                       | -395.54 kH   | 7  |                                 | OBW Powe   | ər           | 99.00   |                 |           |          |                  |
|  | Bandwidth                             | 92.27 MF   |  | x dB                            | OBWI OW    | 51           | -26.00  |                 |           |          |                  |
|  |                                       |  |  |                                 |            |              |   |                 |           |          |                  |
|  |                                       | Sep 21, 2023<br>5:27:04 PM   |  |                                 |            |              |   |                 |           |          |                  |
|  |                                       | 5:27:04 PM   | $\mathbb{D} \triangle$                     |                                 |            |              |   |                 |           |          |                  |

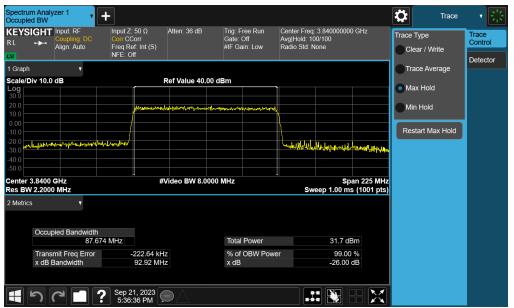
Plot 7-4. Occupied Bandwidth Plot (NR Band n77PC2 - 90MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 23 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 23 01 146   |  |  |  |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |  |  |  |



| Spectrur<br>Occupie            | d BW      |   | +                  |                          |               |              |                            |  |                    |                            |                                      | Trace              | - * 法            |
|--------------------------------|-----------|---|--------------------|--------------------------|---------------|--------------|----------------------------|--|--------------------|----------------------------|--------------------------------------|--------------------|------------------|
| KEYS<br>RL                     | IGHT<br>↔ | Input: RF<br>Coupling: DC<br>Align: Auto        | Freq Re            | Corr<br>ef: Int (S)      | Atten: 36 dB  | Gate:        | ree Run<br>Off<br>ain: Low | Center Freq<br>Avg Hold: 1<br>Radio Std: 1 |                    | ) GHz                      | Trace T<br>Cle                       | īype<br>ar / Write | Trace<br>Control |
| LN<br>1 Graph                  | _         | T   | NFE: O             | #                        |               |              |                            |  |                    |                            | Tra                                  | ce Average         | Detector         |
| Scale/D<br>30.0<br>20.0        | oiv 10.0  | dB  |                    | F                        | Ref Value 40. |              | dural dila da da           |  |                    |                            | <ul> <li>Ma:</li> <li>Min</li> </ul> | K Hold             |                  |
| 10.0<br>0.00<br>-10.0<br>-20.0 |           |   | mitheauther        |                          |               |              |                            |  |                    |                            | Rest                                 | art Max Hold       |                  |
| -30.0<br>-40.0<br>-50.0        | Nerden    | ung laung ang ang ang ang ang ang ang ang ang a | nulukakensiko w    |                          |               |              |                            | WM.Whythe                                  | alandura           | ldhidi bilini ad           |                                      |                    |                  |
| Center 3<br>Res BW             |           |   |                    | . #\                     | /ideo BW 8.0  | 000 MHz      |                            | Sw   | Sp<br>veep 1.00 ms | an 225 MHz<br>s (1001 pts) |                                      |                    |                  |
| 2 Metrics                      |           | ▼<br>bied Bandwic<br>87                         | ith<br>7.852 MHz   |                          |               | Total        | Power                      |  | 31.7 dE            | 3m                         |                                      |                    |                  |
|                                |           | mit Freq Erro<br>3andwidth                      |                    | .150.90 kHz<br>92.76 MHz |               | % of<br>x dB | OBW Powe                   | er   | 99.00<br>-26.00    |                            |                                      |                    |                  |
|                                | 5         |   | <b>Sep 2</b> 5:36: | 1, 2023<br>27 PM         | $\Box$        |              |                            |  |                    |                            |                                      |                    |                  |

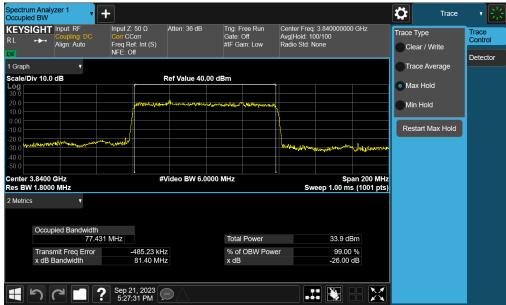
Plot 7-5. Occupied Bandwidth Plot (NR Band n77PC2 - 90MHz QPSK - Full RB - Ant1)



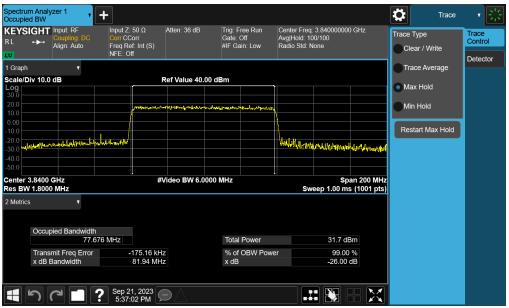
Plot 7-6. Occupied Bandwidth Plot (NR Band n77PC2 - 90MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|------------------------|----------------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 24 of 146                    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Fage 24 01 140                    |
| © 2023 ELEMENT      | •                      | ·                          | V11.1 08/28/2023                  |





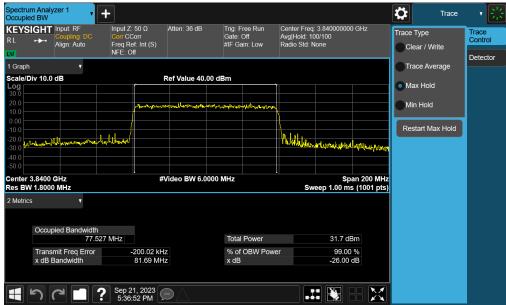
Plot 7-7. Occupied Bandwidth Plot (NR Band n77PC2 - 80MHz π/2 BPSK - Full RB - Ant1)



Plot 7-8. Occupied Bandwidth Plot (NR Band n77PC2 - 80MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |  | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|--|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:  | EUT Type:                  | Page 25 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | M2309070100-05.A3L 9/21/2023 - 10/23/2023 Portable Handset |                            |                  |  |  |  |  |
| © 2023 ELEMENT      |  |                            | V11.1 08/28/2023 |  |  |  |  |





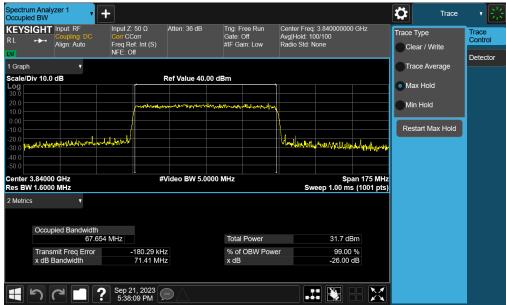
Plot 7-9. Occupied Bandwidth Plot (NR Band n77PC2 - 80MHz 16-QAM - Full RB - Ant1)

| Spectrum Analyzer 1<br>Occupied BW<br>KEYSIGHT Input: RF | +<br>Input Ζ: 50 Ω  | Atten: 36 dB                             | Trig: Free Run             | Center    | Freq: 3.840000  | 0000 GHz                     | <b>‡</b>                  | Trace  | • 崇           |
|--|---|--|----------------------------|-----------|---|------------------------------|---------------------------|--------|---------------|
| RL +++ Coupling: DC<br>Align: Auto                       | Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Off   |  | Gate: Off<br>#IF Gain: Low | Avg Ho    | id: 100/100<br>Std: None  |                              | Trace Type<br>Clear / Wri | te Co  | ace<br>ontrol |
| 1 Graph v  | _   |  | _                          |           |   |                              | Trace Aver                | age    |               |
| Scale/Div 10.0 dB  | R   | ef Value 40.00 d                         | Bm                         |           |   |                              | Max Hold                  |        |               |
| 20.0   | Amerikation   | พระพุษธรรษฐาติขอ <sub>าส</sub> ารกระบบคว | and many when any when     |           |   |                              | Min Hold                  |        |               |
| -10.0  |   |  |                            |           |   |                              | Restart Max               | K Hold |               |
| -20.0<br>-30.0<br>-40.0<br>-50.0                         | And a start and a start |  |                            | hale here | hologen and the state of the second se | han fall hills and a         | u                         |        |               |
| Center 3.84000 GHz<br>Res BW 1.6000 MHz                  | !<br>#Vi  | ideo BW 5.0000                           | MHz                        |           |   | Span 175 MH:<br>ms (1001 pts |                           |        |               |
| 2 Metrics v  |   |  |                            |           |   |                              |                           |        |               |
| Occupied Bandwidth<br>64.89                              | 91 MHz  |  | Total Power                |           | 33.7  | 7 dBm                        |                           |        |               |
| Transmit Freq Error<br>x dB Bandwidth                    | -1.6546 MHz<br>68.14 MHz  |  | % of OBW Pow<br>x dB       | wer       |   | .00 %<br>00 dB               |                           |        |               |
|  |   |  |                            |           |   |                              |                           |        |               |
|  | Sep 21, 2023 5:27:53 PM   |  |                            |           |   |                              |                           |        |               |

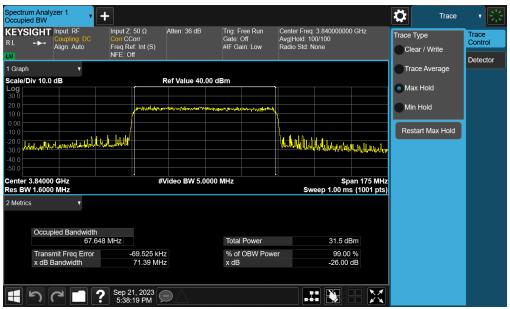
Plot 7-10. Occupied Bandwidth Plot (NR Band n77PC2 - 70MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                  | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|------------------|----------------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:      | EUT Type:                  | Page 26 of 146                    |
| 1M2309070100-05.A3L | Portable Handset | Fage 20 01 140             |                                   |
| © 2023 ELEMENT      |                  |                            | V11.1 08/28/2023                  |





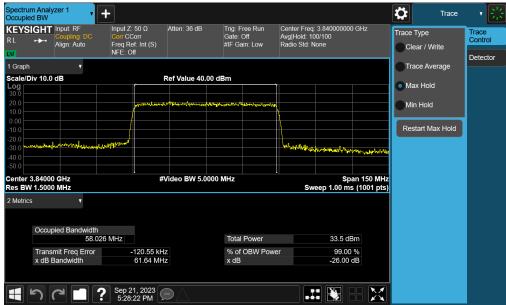
Plot 7-11. Occupied Bandwidth Plot (NR Band n77PC2 - 70MHz QPSK - Full RB - Ant1)



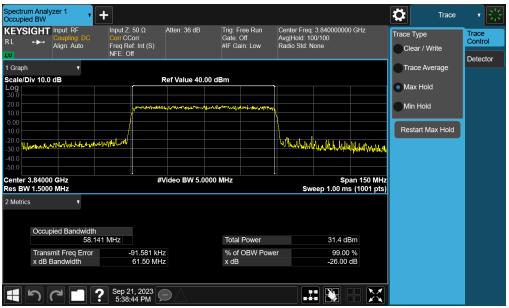
Plot 7-12. Occupied Bandwidth Plot (NR Band n77PC2 - 70MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|------------------------|----------------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dogo 27 of 146                    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 27 of 146                    |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023                  |





Plot 7-13. Occupied Bandwidth Plot (NR Band n77PC2 - 60MHz π/2 BPSK - Full RB - Ant1)



Plot 7-14. Occupied Bandwidth Plot (NR Band n77PC2 - 60MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |   | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|---|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:   | EUT Type:                  | Page 28 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | IM2309070100-05.A3L 9/21/2023 - 10/23/2023 Portable Handset |                            |                  |  |  |  |  |
| © 2023 ELEMENT      |   |                            | V11.1 08/28/2023 |  |  |  |  |



| Occupie                 |   | +  |                 |  |          |   |                 |             | \$                 | Trace        | - <b>*</b> 👫     |
|-------------------------|---|--|-----------------|--|----------|---|-----------------|-------------|--------------------|--------------|------------------|
| RL                      | IGHT Input: RF<br>Coupling: DC<br>Align: Auto | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Off | Atten: 36 dB    | Trig: Free<br>Gate: Off<br>#IF Gain: I | Ave      | enter Freq:<br>/g Hold: 10<br>adio Std: N |                 | GHz         | Trace Typ<br>Clear | e<br>/ Write | Trace<br>Control |
| 1 Graph                 | •   | NFE. UI  |                 |  |          |   |                 |             | Trace              | Average      | Detector         |
| <b>Log</b><br>30.0      | liv 10.0 dB                                   |  | Ref Value 40.0  | 0 dBm                                  |          |   |                 |             | 💿 Max H            | lold         |                  |
| 20.0<br>10.0<br>0.00    |   | moraly   | MANNAN          | unan and and a                         | malnum   |   |                 |             | Min H              |              |                  |
| -10.0<br>-20.0<br>-30.0 | an and the standard and a second              | and as MNN 1   |                 |  | <u> </u> | when                                      | ԱՈՐՈՒՐԵՐՆԱՆՈՐՆՈ | nuthbrandly | Restar             | t Max Hold   |                  |
| -40.0<br>-50.0          | 3.84000 GHz                                   |  | #Video BW 5.00  | 000 MHz                                |          |   | Sn              | an 150 MHz  |                    |              |                  |
|                         | / 1.5000 MHz                                  |  | #11020 011 3.00 |  |          | Swe                                       |                 | (1001 pts)  |                    |              |                  |
|                         | Occupied Bandwidtl                            | h  |                 |  |          |   |                 |             |                    |              |                  |
|                         |   | 032 MHz  |                 | Total Po                               | wer      |   | 31.4 dE         | ۶m          |                    |              |                  |
|                         | Transmit Freq Error<br>x dB Bandwidth         | -35.074  <br>61.42 N   |                 | % of OB<br>x dB                        | W Power  |   | 99.00<br>-26.00 |             |                    |              |                  |
|                         | 500   | Sep 21, 2023<br>5:38:34 PM                                   | $\odot$         |  |          |   |                 |             |                    |              |                  |

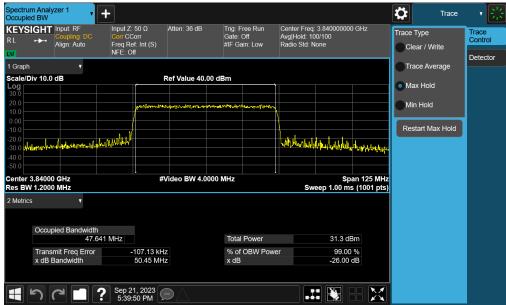
Plot 7-15. Occupied Bandwidth Plot (NR Band n77PC2 - 60MHz 16-QAM - Full RB - Ant1)



Plot 7-16. Occupied Bandwidth Plot (NR Band n77PC2 - 50MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|------------------------|----------------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 29 of 146                    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Fage 29 01 140                    |
| © 2023 ELEMENT      | •                      | ·                          | V11.1 08/28/2023                  |





Plot 7-17. Occupied Bandwidth Plot (NR Band n77PC2 - 50MHz QPSK - Full RB - Ant1)

| Spectrum Analyzer 1<br>Occupied BW<br>KEYSIGHT<br>RL $\leftarrow$ Coupling: DC<br>Align: Auto |  | Atten: 36 dB      | Trig: Free Run<br>Gate: Off<br>#IF Gain: Low | Center Freq: 3.840000000 0<br>Avg Hold: 100/100<br>Radio Std: None | ЭНz          | Trace Type<br>Clear / Write   | Trace<br>Control |
|---|--|-------------------|--|--|--------------|---|------------------|
| 1 Graph v Scale/Div 10.0 dB Log 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0                        | all and a second s | Ref Value 40.00 d | IBm<br>৵Վմիդապետորեատենի                     | นาาของสนองชาวาต มีปลุปปลองรูกอย <sub>างก่</sub> น                  | thymatratics | <ul> <li>Trace Average</li> <li>Max Hold</li> <li>Min Hold</li> <li>Restart Max Hold</li> </ul> | Detector         |
| Center 3.84000 GHz<br>Res BW 1.2000 MHz<br>2 Metrics v<br>Occupied Bandwidth<br>47.643        |  | fideo BW 4.0000   | MHz<br>Total Power                           | Spar<br>Sweep 1.00 ms (<br>31.3 dBn                                |              |   |                  |
| Transmit Freq Error<br>x dB Bandwidth   | -20.670 kHz<br>50.31 MHz<br>Sep 21, 2023<br>5:39:59 PM   |                   | % of OBW Powe<br>x dB                        | er 99.00 %<br>-26.00 dE  |              |   |                  |

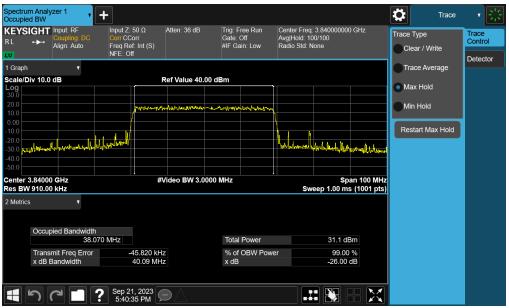
Plot 7-18. Occupied Bandwidth Plot (NR Band n77PC2 - 50MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|------------------------|----------------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 30 of 146                    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Fage 30 01 140                    |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023                  |





Plot 7-19. Occupied Bandwidth Plot (NR Band n77PC2 - 40MHz π/2 BPSK - Full RB - Ant1)



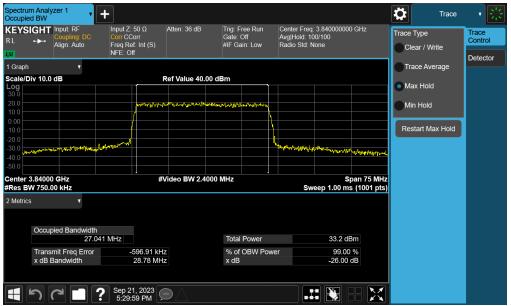
Plot 7-20. Occupied Bandwidth Plot (NR Band n77PC2 - 40MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                  | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|------------------|----------------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:      | EUT Type:                  | Page 31 of 146                    |
| 1M2309070100-05.A3L | Portable Handset | Fage ST 01 140             |                                   |
| © 2023 ELEMENT      |                  |                            | V11.1 08/28/2023                  |



| Occupie                |                                     | •        | +                              |                       |                |   |                             |  |                    |                            |                           | Trace               | · <del>*</del>   |
|------------------------|-------------------------------------|----------|--------------------------------|-----------------------|----------------|---|-----------------------------|--|--------------------|----------------------------|---------------------------|---------------------|------------------|
| L<br>KEYS              | IGHT Input: I<br>Coupli<br>Align: J | ng: DC   | Input Z:<br>Corr CC<br>Freq Re | orr<br>f: Int (S)     | Atten: 36 dB   | Gate:   | Free Run<br>Off<br>ain: Low | Center Freq<br>Avg Hold: 1<br>Radio Std: 1 |                    | ) GHz                      | Trace <sup>-</sup><br>Cle | Type<br>ear / Write | Trace<br>Control |
| 1 Graph                |                                     | v        | NFE: Of                        |                       |                |   |                             |  |                    |                            | Tra                       | ice Average         | Detector         |
| Scale/D<br>Log<br>30.0 | iv 10.0 dB                          |          |                                |                       | Ref Value 40.  | 00 dBm  |                             |  |                    |                            | • Ma                      | x Hold              |                  |
| 20.0<br>10.0           |                                     |          |                                | angengenege           | in minhala men | <b>৵<sup>⋏</sup>⋖⋶⋑⋳⋎⋕⋕</b> ⋏⋒ <sub>⋑</sub> ⋏⋳⋓ | and markers the state       |  |                    |                            | Mir                       | n Hold              |                  |
| -10.0<br>-20.0         | margarethan                         | dia Mort | Jul Para                       |                       |                |   |                             | when when                                  | - with white da    | Antone and                 | Res                       | tart Max Hold       |                  |
| -40.0<br>-50.0         |                                     |          |                                |                       |                |   |                             |  | 4                  |                            |                           |                     |                  |
|                        | 3.84000 GHz<br>/ 910.00 kHz         |          |                                | #                     | Video BW 3.0   | 000 MHz   |                             | Sw   | Sp<br>reep 1.00 ms | an 100 MHz<br>s (1001 pts) |                           |                     |                  |
| 2 Metrics              | Occupied Ba                         |          | 51 MHz                         |                       |                | Tota  | l Power                     |  | 31.1 dE            | am                         |                           |                     |                  |
|                        | Transmit Fre<br>x dB Bandwi         | q Error  |                                | 40.335 kH<br>40.02 MH |                |   | OBW Pow                     | er   | 99.00<br>-26.00    | %                          |                           |                     |                  |
|                        | って                                  |          | <b>?</b> Sep 21<br>5:40:2      | I, 2023<br>26 PM      | $\mathbb{D}$   |   |                             |  |                    |                            |                           |                     |                  |

Plot 7-21. Occupied Bandwidth Plot (NR Band n77PC2 - 40MHz 16-QAM - Full RB - Ant1)



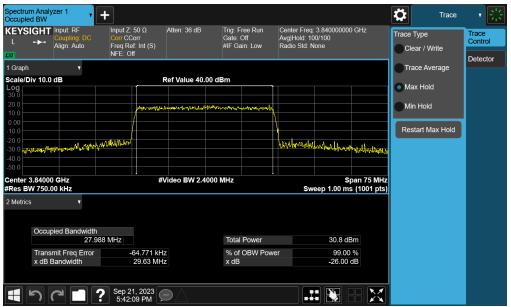
Plot 7-22. Occupied Bandwidth Plot (NR Band n77PC2 - 30MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |  |
|---------------------|----------------------------|------------------|-----------------------------------|--|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Page 32 of 146                    |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Fage 52 01 140                    |  |
| © 2023 ELEMENT      | •                          |                  | V11.1 08/28/2023                  |  |



| Spectrum An<br>Occupied BV          | v <b>*</b>                             | +  |                |  |  | Trace                       | - 7 影            |
|-------------------------------------|--|--|----------------|--|--|-----------------------------|------------------|
| RL +                                | Coupling: DC                           | Input Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)<br>NFE: Off | Atten: 36 dB   | Trig: Free Run<br>Gate: Off<br>#IF Gain: Low | Center Freq: 3.840000000 GHz<br>Avg Hold: 100/100<br>Radio Std: None | Trace Type<br>Clear / Write | Trace<br>Control |
| LXI<br>1 Graph                      |  | NFE. UII   |                |  |  | Trace Average               | Detector         |
| Scale/Div 10<br>Log<br>30.0<br>20.0 | 0.0 dB                                 |  | Ref Value 40.0 |  |  | Max Hold                    |                  |
| 10.0<br>0.00<br>-10.0<br>-20.0      |  |  |                | hull-hall-hall-hall-hall-hall-hall-hall-     |  | Restart Max Hold            |                  |
| -30.0<br>-40.0<br>-50.0             | www.www.www.                           | al Waller and an an  |                |  | halabahalabahalabahalabahalabahalabahalabaha                         | ninda.                      |                  |
| Center 3.840<br>#Res BW 75          |  |  | #Video BW 2.40 | 00 MHz                                       | Span 75<br>Sweep 1.00 ms (100  |                             |                  |
| 2 Metrics<br>Occ                    | v<br>cupied Bandwidtl                  |  |                | 24.0   |  |                             |                  |
|                                     | 27.<br>nsmit Freq Error<br>B Bandwidth | 963 MHz<br>-32.406 H<br>29.65 M                              |                | Total Power<br>% of OBW Pow<br>x dB          | 31.1 dBm<br>er 99.00 %<br>-26.00 dB                                  |                             |                  |
| <b>۲</b>                            |  | <b>Sep 21, 2023</b><br>5:42:01 PM                            | $\Box$         |  |  | X                           |                  |

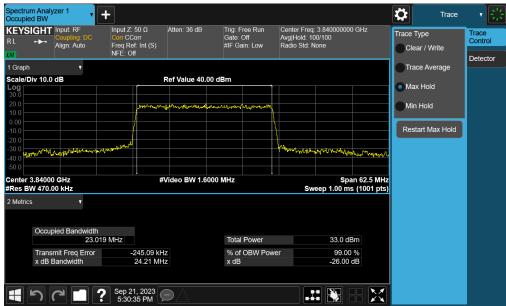
Plot 7-23. Occupied Bandwidth Plot (NR Band n77PC2 - 30MHz QPSK - Full RB - Ant1)



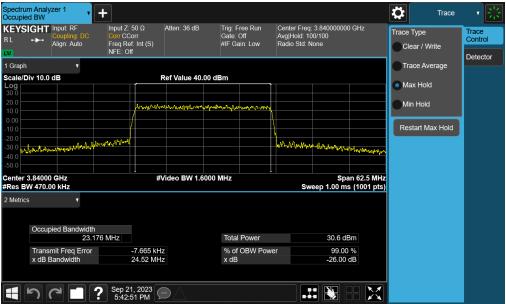
Plot 7-24. Occupied Bandwidth Plot (NR Band n77PC2 - 30MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |  |
|---------------------|----------------------------|------------------|-----------------------------------|--|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Dogo 22 of 146                    |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Page 33 of 146                    |  |
| © 2023 ELEMENT      | •                          | •                | V11.1 08/28/2023                  |  |





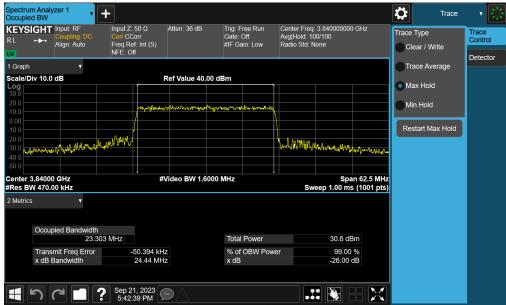
Plot 7-25. Occupied Bandwidth Plot (NR Band n77PC2 - 25MHz π/2 BPSK - Full RB - Ant1)



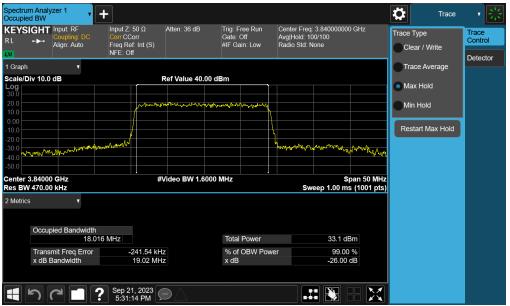
Plot 7-26. Occupied Bandwidth Plot (NR Band n77PC2 - 25MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |  |
|---------------------|----------------------------|------------------|-----------------------------------|--|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Dogo 24 of 146                    |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Page 34 of 146                    |  |
| © 2023 ELEMENT      | •                          |                  | V11.1 08/28/2023                  |  |





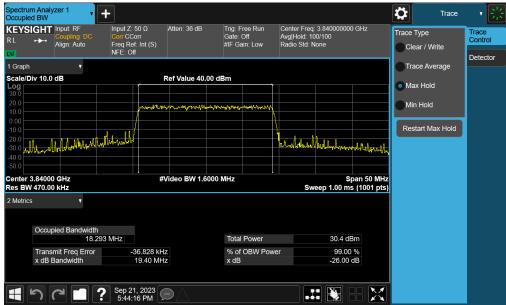
Plot 7-27. Occupied Bandwidth Plot (NR Band n77PC2 - 25MHz 16-QAM - Full RB - Ant1)



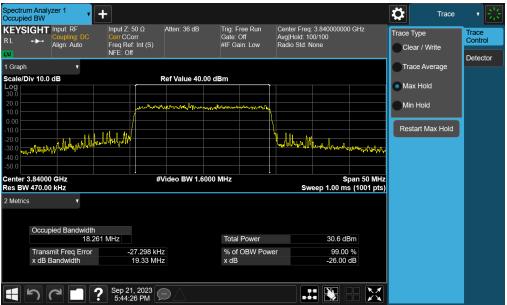
Plot 7-28. Occupied Bandwidth Plot (NR Band n77PC2 - 20MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |  |
|---------------------|----------------------------|------------------|-----------------------------------|--|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Page 35 of 146                    |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Fage 55 01 140                    |  |
| © 2023 ELEMENT      |                            |                  | V11.1 08/28/2023                  |  |





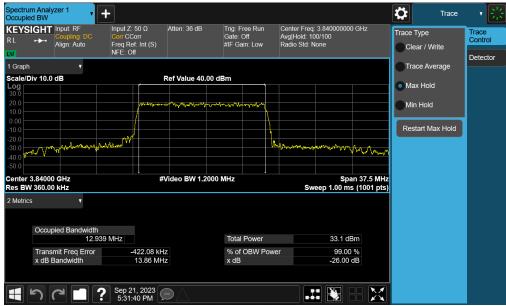
Plot 7-29. Occupied Bandwidth Plot (NR Band n77PC2 - 20MHz QPSK - Full RB - Ant1)



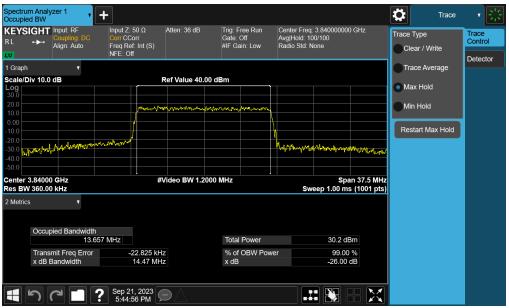
Plot 7-30. Occupied Bandwidth Plot (NR Band n77PC2 - 20MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |
|---------------------|------------------------|----------------------------|------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dega 26 of 146   |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 36 of 146   |
| © 2023 ELEMENT      | •                      |                            | V11.1 08/28/2023 |





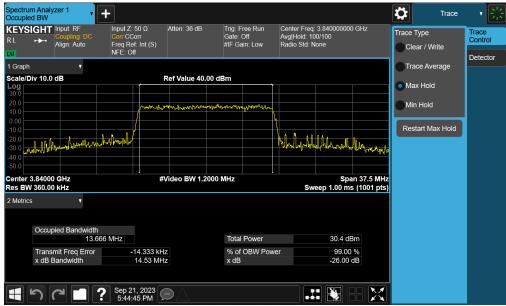
Plot 7-31. Occupied Bandwidth Plot (NR Band n77PC2 - 15MHz π/2 BPSK - Full RB - Ant1)



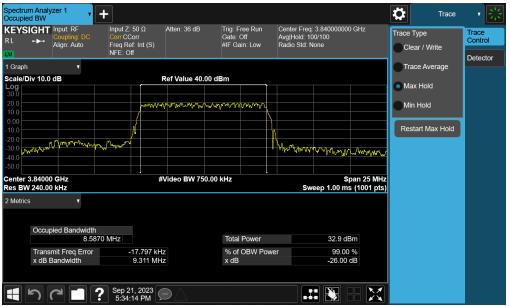
Plot 7-32. Occupied Bandwidth Plot (NR Band n77PC2 - 15MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                |  |  |  |  |  |
|---------------------|------------------------|----------------------------|----------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 37 of 146 |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           |                |  |  |  |  |  |
| © 2023 ELEMENT      |                        |                            |                |  |  |  |  |  |





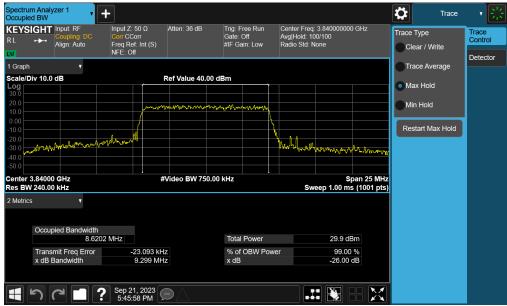
Plot 7-33. Occupied Bandwidth Plot (NR Band n77PC2 - 15MHz 16-QAM - Full RB - Ant1)



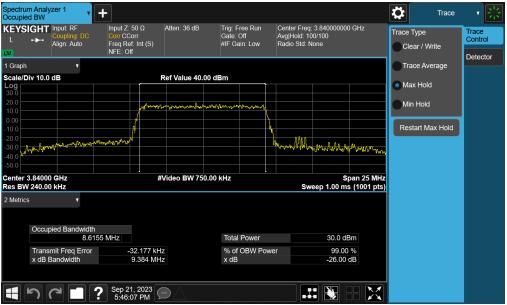
Plot 7-34. Occupied Bandwidth Plot (NR Band n77PC2 - 10MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT        |                |  |  |  |  |  |  |
|---------------------|------------------------|-----------------------------------|----------------|--|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                         | Page 38 of 146 |  |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | 023 - 10/23/2023 Portable Handset |                |  |  |  |  |  |  |
| © 2023 ELEMENT      |                        |                                   |                |  |  |  |  |  |  |





Plot 7-35. Occupied Bandwidth Plot (NR Band n77PC2 - 10MHz QPSK - Full RB - Ant1)



Plot 7-36. Occupied Bandwidth Plot (NR Band n77PC2 - 10MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                |  |  |  |  |  |
|---------------------|------------------------|----------------------------|----------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 39 of 146 |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Fage 39 01 140 |  |  |  |  |  |
| © 2023 ELEMENT      |                        |                            |                |  |  |  |  |  |



| Mode          | Bandwidth | Modulation | OBW [MHz] |
|---------------|-----------|------------|-----------|
|               |           | π/2 BPSK   | 96.53     |
|               | 100MHz    | QPSK       | 97.68     |
|               |           | 16QAM      | 98.02     |
|               |           | π/2 BPSK   | 87.05     |
|               | 90MHz     | QPSK       | 87.67     |
|               |           | 16QAM      | 87.71     |
|               |           | π/2 BPSK   | 77.28     |
|               | 80MHz     | QPSK       | 77.53     |
|               |           | 16QAM      | 77.78     |
|               |           | π/2 BPSK   | 64.30     |
|               | 70MHz     | QPSK       | 67.86     |
|               |           | 16QAM      | 67.61     |
|               |           | π/2 BPSK   | 57.89     |
|               | 60MHz     | QPSK       | 58.30     |
|               |           | 16QAM      | 58.11     |
|               |           | π/2 BPSK   | 45.97     |
|               | 50MHz     | QPSK       | 47.69     |
| NR-n77/78 PC2 |           | 16QAM      | 47.76     |
| DoD           |           | π/2 BPSK   | 35.91     |
|               | 40MHz     | QPSK       | 37.93     |
|               |           | 16QAM      | 37.95     |
|               |           | π/2 BPSK   | 27.08     |
|               | 30MHz     | QPSK       | 27.93     |
|               |           | 16QAM      | 27.94     |
|               |           | π/2 BPSK   | 23.00     |
|               | 25MHz     | QPSK       | 23.23     |
|               |           | 16QAM      | 23.26     |
|               |           | π/2 BPSK   | 17.99     |
|               | 20MHz     | QPSK       | 18.28     |
|               |           | 16QAM      | 18.41     |
|               |           | π/2 BPSK   | 12.99     |
|               | 15MHz     | QPSK       | 13.61     |
|               |           | 16QAM      | 13.70     |
|               | 4.01.4    | π/2 BPSK   | 8.66      |
|               | 10MHz     | QPSK       | 8.65      |
|               |           | 16QAM      | 8.62      |

Table 7-12. Occupied Bandwidth Test Results – Ant1

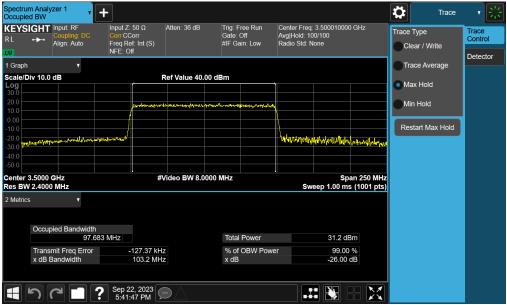
| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 40 of 146   |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Fage 40 01 140   |  |  |  |  |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |  |  |  |  |



## NR Band n77PC2 DoD – Ant1

| Spectrum<br>Occupied     | BW                        |                               | +   |                     |                                |                   |                             |   |  |            | ₽                       | Trace  | , j              |
|--------------------------|---------------------------|-------------------------------|---|---------------------|--------------------------------|-------------------|-----------------------------|---|--|------------|-------------------------|--------|------------------|
|                          | Coup                      | :: RF<br>bling: DC<br>:: Auto | Input Z: 50<br>Corr CCorr<br>Freq Ref: In |                     | n: 36 dB                       | Gate:             | iree Run<br>Off<br>ain: Low | Center Freq<br>Avg Hold: 10<br>Radio Std: N |  | ) GHz      | Trace Type<br>Clear / V | Vrite  | Trace<br>Control |
| LXI<br>1 Graph           |                           | •                             | NFE: Off                                  |                     |                                |                   |                             |   |  |            | Trace Av                | /erage | Detector         |
| Scale/Div<br>Log<br>30.0 | / 10.0 dB                 |                               |   |                     | /alue 40.0                     |                   |                             |   |  |            | Max Hol                 |        |                  |
| 20.0<br>10.0<br>0.00     |                           |                               |   | and many hour       | ∼~/ <mark>antiplani</mark> kan | ana yata di Jua A | ********                    |   |  |            | Min Hold                |        |                  |
| -10.0<br>-20.0<br>-30.0  |                           | Manadelington                 | and a stand                               |                     |                                |                   |                             | hummenter                                   | and the state of t | ~          | Restart M               |        |                  |
| -40.0<br>-50.0           | 5000 GHz                  |                               |   | #Vide               | o BW 8.00                      | 00 MHz            |                             |   | Sp   | an 250 MHz |                         |        |                  |
|                          | 2.4000 MHz                | <u>z</u>                      |   |                     |                                |                   |                             | Sw  | eep 1.00 ms  |            |                         |        |                  |
| C                        | Occupied E                | Bandwidth                     |   |                     |                                |                   |                             |   |  |            |                         |        |                  |
|                          |                           | 96.53                         | 0 MHz                                     |                     |                                | Total             | Power                       |   | 33.4 dE  | 3m         |                         |        |                  |
|                          | Transmit Fi<br>x dB Bandv |                               |   | 1.84 kHz<br>2.2 MHz |                                | % of<br>x dB      | OBW Powe                    | er  | 99.00<br>-26.00  |            |                         |        |                  |
| 4                        | 7 (2                      |                               | Sep 22, 2<br>5:34:44                      | 2023<br>PM 💬        | $\wedge$                       |                   |                             | ļ   |  |            |                         |        |                  |

Plot 7-37. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 100MHz π/2 BPSK - Full RB - Ant1)



Plot 7-38. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 100MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dogo 41 of 146   |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 41 of 146   |  |  |  |  |  |
| © 2023 ELEMENT      |                        | ·                          | V11.1 08/28/2023 |  |  |  |  |  |



| Spectrur<br>Occupie              | dBW            |  | +              |                         |  |                           |                            |  |                             |                            |                           | Trace              | - * 法            |
|----------------------------------|----------------|--|----------------|-------------------------|--|---------------------------|----------------------------|--|-----------------------------|----------------------------|---------------------------|--------------------|------------------|
| KEYSI<br>RL                      | IGHT<br>·≁·    | Input: RF<br>Coupling: DC<br>Align: Auto   | Freq Re        | Corr<br>ef: Int (S)     | Atten: 36 dB                               | Gate:                     | ree Run<br>Off<br>ain: Low | Center Freq<br>Avg Hold: 1<br>Radio Std: 1 |                             | 0 GHz                      | Trace <sup>-</sup><br>Cle | Type<br>ar / Write | Trace<br>Control |
| LN<br>1 Graph                    |                | •  | NFE: O         |                         |  |                           |                            |  |                             |                            | Tra                       | ice Average        | Detector         |
| Scale/D<br>Log<br>30.0<br>20.0   | iv 10.0        | dB   |                |                         | Ref Value 40.                              |                           |                            |  |                             |                            |                           | x Hold<br>1 Hold   |                  |
| 10.0<br>0.00<br>-10.0            |                |  |                |                         | 4,2 <sup>1</sup> 4-0,19,096,193,473,073,19 | en al frank and a start a |                            |  |                             |                            |                           | tart Max Hold      |                  |
| -20.0<br>-30.0<br>-40.0<br>-50.0 | الإلىيين وسعدا | han affan yn yn de dydanen | Andrew Market  |                         |  |                           |                            | iiniindadh                                 | htrakshikali <sub>N</sub> y | hrhdlænluknar              |                           |                    |                  |
| Center 3<br>Res BW               |                |  |                | #\                      | /ideo BW 8.0                               | 000 MHz                   |                            | Sv   |                             | an 250 MHz<br>s (1001 pts) |                           |                    |                  |
| 2 Metrics                        |                | T  |                |                         |  |                           |                            |  |                             |                            |                           |                    |                  |
|                                  | Occup          | vied Bandwid<br>98   | th<br>.020 MHz |                         |  | Total                     | Power                      |  | 31.0 dl                     | Зm                         |                           |                    |                  |
|                                  |                | mit Freq Erro<br>3andwidth   | r -            | 194.45 kH;<br>103.2 MH; |  | % of<br>x dB              | OBW Powe                   | er   | 99.00<br>-26.00             |                            |                           |                    |                  |
|                                  | う (            |  |                | 2, 2023<br>57 PM        |  |                           |                            |  |                             |                            |                           |                    |                  |

Plot 7-39. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 100MHz 16-QAM - Full RB - Ant1)

| Spectrur<br>Occupie<br>KEYSI<br>R L | d BW                      | zer 1<br>Input: RF<br>Coupling:<br>Align: Aut | DC  | hput Z:<br>Corr CC<br>Freq Re<br>NFE: Of | orr<br>f: Int (S)     | Atten: 36 dB              | Ga      | te: C                                    | ee Run<br>Off<br>in: Low | Center F<br>Avg Hold<br>Radio St | d: 10 |                 | 0 GHz  | Trace Typ<br>Clear |            | Trace<br>Control |
|-------------------------------------|---------------------------|---|-----|--|-----------------------|---------------------------|---------|--|--------------------------|----------------------------------|-------|-----------------|--|--------------------|------------|------------------|
| 1 Graph                             |                           | •   |     |  |                       |                           |         |  |                          |                                  |       |                 |  | Trace              | Average    | Detector         |
| Scale/D                             | iv 10.0                   | dB  |     |  |                       | Ref Value 40              | .00 dBm |  |                          |                                  |       |                 |  | - · · ·            |            |                  |
| Log<br>30.0                         |                           |   |     |  |                       |                           |         |  |                          |                                  |       |                 |  | Max H              | lold       |                  |
| 20.0                                |                           |   |     |  | ليتوس والإولام الموتر | والعراس والمعاري والمحالي |         | n an |                          |                                  |       |                 |  | Min H              | old        |                  |
| 0.00                                |                           |   |     | (  |                       |                           |         |  |                          | ]                                |       |                 |  |                    |            |                  |
| -10.0                               |                           |   |     | /  |                       |                           |         |  |                          |                                  |       |                 |  | Restart            | t Max Hold |                  |
| -30.0                               | اسر موادو <sub>س</sub> مر | NITHONN                                       | man | - and the second second                  |                       |                           |         |  |                          | White was                        | e-de  | phonorphoneth   | and the second |                    |            |                  |
| -40.0                               |                           |   |     |  |                       |                           |         |  |                          |                                  |       |                 |  |                    |            |                  |
| Center                              | 3.5000 (                  | GHz   |     |  |                       | /ideo BW 8.0              | 0000 MH | ,  |                          |                                  |       | Sn              | an 225 MHz   |                    |            |                  |
| Res BW                              |                           |   |     |  |                       |                           |         |  |                          |                                  | Sw    |                 | s (1001 pts)   |                    |            |                  |
| 2 Metrics                           |                           | •   |     |  |                       |                           |         |  |                          |                                  |       |                 |  |                    |            |                  |
|                                     |                           |   |     |  |                       |                           |         |  |                          |                                  |       |                 |  |                    |            |                  |
|                                     | Occup                     | ied Band                                      |     |  |                       |                           |         |  |                          |                                  |       |                 |  |                    |            |                  |
|                                     |                           |   |     | 9 MHz                                    |                       |                           |         |  | Power                    |                                  |       | 33.3 dl         |  |                    |            |                  |
|                                     |                           | nit Freq E<br>andwidth                        |     |  | 466.33 kH<br>92.12 MH |                           |         | of (<br>dB                               | OBW Powe                 | er                               |       | 99.00<br>-26.00 |  |                    |            |                  |
|                                     |                           | anannau                                       |     |  |                       |                           | X       | æ  |                          |                                  |       | 20.00           | 48   |                    |            |                  |
|                                     |                           |   |     | 0 0                                      | 0000                  | ~ ^                       |         |  |                          |                                  |       |                 |  |                    |            |                  |
|                                     | າ (                       |   |     | 5:35:                                    | 2, 2023<br>34 PM      |                           |         |  |                          |                                  |       |                 |  |                    |            |                  |

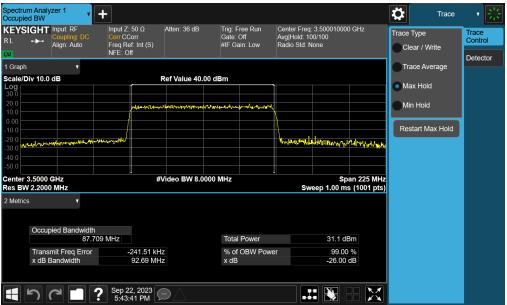
Plot 7-40. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 90MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dogo 42 of 146   |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 42 of 146   |  |  |  |  |  |
| © 2023 ELEMENT      |                        | ·                          | V11.1 08/28/2023 |  |  |  |  |  |



| Spectrur<br>Occupie            | d BW       |  | +                              |                        |               |              |                            |  |                   |                            |                                   | Trace             | - * 法            |
|--------------------------------|------------|--|--------------------------------|------------------------|---------------|--------------|----------------------------|--|-------------------|----------------------------|-----------------------------------|-------------------|------------------|
| RL                             |            | Input: RF<br>Coupling: DC<br>Align: Auto | Input Z:<br>Corr CC<br>Freq Re | orr<br>f: Int (S)      | Atten: 36 dB  | Gate:        | ree Run<br>Off<br>ain: Low | Center Freq<br>Avg Hold: 1<br>Radio Std: 1 |                   | ) GHz                      | Trace T<br>Clea                   | ype<br>ar / Write | Trace<br>Control |
| Lvi<br>1 Graph                 |            | *  | NFE: Of                        |                        |               |              |                            |  |                   |                            | Trac                              | ce Average        | Detector         |
| Log<br>30.0<br>20.0            | 0iv 10.0 d |  |                                |                        | Ref Value 40. |              | an and a start             |  |                   |                            | <ul><li>Max</li><li>Min</li></ul> | Hold<br>Hold      |                  |
| 10.0<br>0.00<br>-10.0<br>-20.0 | المرجر م   | munut                                    | anal-rate for the product      |                        |               |              |                            | Wathant                                    | nut Matalilarum   | 1 Juto A. M                | Rest                              | art Max Hold      |                  |
| -40.0                          |            |  |                                |                        |               |              |                            |  |                   |                            |                                   |                   |                  |
|                                | / 2.2000   |  |                                | #\                     | /ideo BW 8.0  | 000 MHz      |                            | Sw   | Sp<br>veep 1.00 m | an 225 MHz<br>s (1001 pts) |                                   |                   |                  |
| 2 Metrics                      |            | ▼<br>ed Bandwidth<br>87.0                | n<br>673 MHz                   |                        |               | Total        | Power                      |  | 30.9 dI           | 3m                         |                                   |                   |                  |
|                                |            | nit Freq Error<br>andwidth               |                                | 9.755 kHz<br>93.08 MHz |               | % of<br>x dB | OBW Powe                   | er   | 99.00<br>-26.00   |                            |                                   |                   |                  |
|                                | 5          |  | ? Sep 22<br>5:43:              | 2, 2023<br>32 PM       | $\mathbf{D}$  |              |                            |  |                   |                            |                                   |                   |                  |

Plot 7-41. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 90MHz QPSK - Full RB - Ant1)



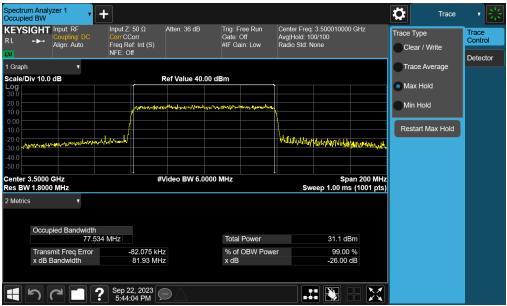
Plot 7-42. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 90MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 43 of 146   |  |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Fage 43 01 140   |  |  |  |  |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |  |  |  |  |



| Öccup         | rum Anal<br>bied BW    |  | +                |                          |   |                         |   |          |  |                       | ₽                       | Trace            | - 7 詳    |
|---------------|------------------------|--|------------------|--------------------------|---|-------------------------|---|----------|--|-----------------------|-------------------------|------------------|----------|
| KEY<br>RL     | SIGHT                  | Input: RF<br>Coupling: DC<br>Align: Auto | Freq Re          | Corr<br>ef: Int (S)      | Atten: 36 dB Trig: Free Run<br>Gate: Off<br>#IF Gain: Low |                         | Center Freq: 3.500010000 GHz<br>Avg Hold: 100/100<br>Radio Std: None  |          |  | Trace T<br>Clea       | ype<br>ar / Write       | Trace<br>Control |          |
| 1 Gra         | oh                     |  | NFE: O           | off                      |   |                         |   |          |  |                       | Trac                    | ce Average       | Detector |
|               | /Div 10.0              | dB                                       |                  | , F                      | Ref Value 40.0  | 00 dBm                  |   |          |  |                       | <ul> <li>Max</li> </ul> |                  |          |
| 30.0<br>20.0  |                        |  |                  | purport                  | Marina ang ang ang ang ang ang ang ang ang a              | ternant belantikustrand | and an and a star of the star |          |  |                       |                         | Hold             |          |
| 0.00<br>-10.0 |                        |  |                  |                          |   |                         |   |          |  |                       | Rest                    | art Max Hold     |          |
| -40.0         | ypeljangtimet (†       | growthe way and the second               | and a start      |                          |   |                         |   | hannelle | - and the second s | and the second second |                         |                  |          |
|               | er 3.5000              |  |                  | #\                       | /ideo BW 6.00   | 000 MHz                 |   |          |  | an 200 MHz            |                         |                  |          |
| 2 Metr        | <b>W 1.800</b><br>rics | U MHZ                                    |                  |                          |   |                         |   | SW       | eep 1.00 m   | s (1001 pts)          |                         |                  |          |
|               | Occu                   | pied Bandwid<br>77                       | ith<br>7.276 MHz |                          |   | Total                   | Power   |          | 33.2 df  | 3m                    |                         |                  |          |
|               |                        | smit Freq Erro<br>Bandwidth              | Dr -             | -329.91 kHz<br>81.63 MHz |   | % of<br>x dB            | OBW Pow   | er       | 99.00<br>-26.00  |                       |                         |                  |          |
|               | 5                      | 2  | Sep 2<br>5:36:   | 2, 2023<br>:00 PM        |   |                         |   | ļ.       |  |                       |                         |                  |          |

Plot 7-43. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 80MHz π/2 BPSK - Full RB - Ant1)



Plot 7-44. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 80MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|------------------------|----------------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dogo 44 of 146                    |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 44 of 146                    |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023                  |



| Occupie                 |                               | ۲             | +                    |                       |                |                           |                      |               |                 |                            |                         | Trace            | - 7 法    |
|-------------------------|-------------------------------|---------------|----------------------|-----------------------|----------------|---------------------------|----------------------|---------------|-----------------|----------------------------|-------------------------|------------------|----------|
| KEYS<br>RL              | Align: Auto Freq Ref: Int     |               | orr<br>f: Int (S)    | Gate:                 |                | ree Run<br>Off<br>in: Low | Off Avg Hold: 100/10 |               | ) GHz           | Trace T<br>Clea            | ype<br>ar / Write       | Trace<br>Control |          |
| 1 Graph                 |                               | •             | NFE: O               | ff                    |                |                           |                      |               |                 |                            |                         | ce Average       | Detector |
|                         | 0iv 10.0 dB                   |               |                      | ,I                    | Ref Value 40.0 | 10 dBm                    |                      | •             |                 |                            | <ul> <li>Max</li> </ul> |                  |          |
| 30.0<br>20.0            |                               |               |                      | mann                  | monthermontree | manalense                 | aldauterten          |               |                 |                            |                         | Hold             |          |
| 10.0<br>0.00            |                               |               |                      |                       |                |                           |                      |               |                 |                            | <u> </u>                | art Max Hold     |          |
| -10.0<br>-20.0<br>-30.0 | unkappin Mallocrean           | May And Maria | tin theme            |                       |                |                           |                      | Patrillapines | actional physic | MULLANN                    | Resi                    |                  |          |
| -40.0<br>-50.0          |                               |               |                      |                       |                |                           |                      |               |                 | 1 a signadu                |                         |                  |          |
|                         | 3.8400 GHz<br>/ 1.8000 MHz    |               |                      | . #                   | Video BW 6.00  | 000 MHz                   |                      | ı<br>Sw       |                 | an 200 MHz<br>s (1001 pts) |                         |                  |          |
| 2 Metric                | s                             | T             |                      |                       |                |                           |                      |               |                 |                            |                         |                  |          |
|                         | Occupied Ba                   | ndwidth       |                      |                       |                |                           |                      |               |                 |                            |                         |                  |          |
|                         | Occupied Ba                   |               | 27 MHz               |                       |                | Total                     | Power                |               | 31.7 dl         | 3m                         |                         |                  |          |
|                         | Transmit Free<br>x dB Bandwid |               |                      | 200.02 kH<br>81.69 MH |                | % of<br>x dB              | OBW Pow              | er            | 99.00<br>-26.00 |                            |                         |                  |          |
|                         | って                            |               | <b>?</b> Sep 2 5:36: | 1, 2023<br>52 PM      |                |                           |                      |               |                 |                            |                         |                  |          |

Plot 7-45. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 80MHz 16-QAM - Full RB - Ant1)

| Occupie     | Align: Auto Freq Ref: Int (S) |            |       |                            | Corr<br>ef: Int (S) | Atten: 36 dB        | Gate: Off Avg Hd |          |     | Avg Hold: 10 | nter Freq: 3.500010000 GHz<br>gHold: 100/100<br>dio Std: None   |                  |           | Trace Type<br>Clear / Write |          |  |
|-------------|-------------------------------|------------|-------|----------------------------|---------------------|---------------------|------------------|----------|-----|--------------|---|------------------|-----------|-----------------------------|----------|--|
| 1 Graph     |                               | •          |       |                            |                     |                     |                  |          |     |              |   |                  | Trace A   | verage                      | Detector |  |
| Scale/D     | iv 10.0 (                     | dB         |       |                            |                     | Ref Value 40        | 0.00 dBm         |          |     |              |   |                  | Max Ho    | Id                          |          |  |
| Log<br>30.0 |                               |            |       |                            |                     |                     |                  |          | +   |              |   |                  | Widx Ho   | iu iu                       |          |  |
| 20.0        |                               |            |       |                            | Alteratives         | we want             | -                | helemen  | ŀη  |              |   |                  | Min Hol   | d                           |          |  |
| 0.00        |                               |            |       |                            |                     |                     |                  |          | 4   |              |   |                  | <b></b>   |                             |          |  |
| -10.0       |                               |            |       |                            |                     |                     |                  |          | t   |              |   |                  | Restart M | Max Hold                    |          |  |
| -20.0       | a free and a star             | wannend    | muy   | and the state of the state |                     |                     |                  |          |     | - Munhan     | and the start | water a variable |           |                             |          |  |
| -40.0       |                               |            |       |                            |                     |                     |                  |          | +   |              |   |                  |           |                             |          |  |
| Center 3    | 50004                         | <u></u>    |       |                            |                     | Video BW 5.         | 0000 MU-         |          | ļ   |              |   | pan 175 MHz      |           |                             |          |  |
| Res BW      |                               |            |       |                            | #                   | VIGEO BVV 5.        |                  |          |     | Sw           |   | ns (1001 pts)    |           |                             |          |  |
| 2 Metrics   | ;                             | •          |       |                            |                     |                     |                  |          |     |              |   |                  |           |                             |          |  |
|             |                               |            |       |                            |                     |                     |                  |          |     |              |   |                  |           |                             |          |  |
|             | Occup                         | ied Band   | width |                            |                     |                     |                  |          |     |              |   |                  |           |                             |          |  |
|             | oocup                         | ioa-Bana   |       | 01 MHz                     |                     |                     | Tot              | al Power |     |              | 32.9  | dBm              |           |                             |          |  |
|             |                               | nit Freq I |       | -                          | 1.6946 MF           |                     |                  | of OBW P | owe | ۲            |   | 00 %             |           |                             |          |  |
|             | x dB B                        | andwidth   | ۱     |                            | 68.26 MH            | z                   | x d              | В        |     |              | -26.0   | 0 dB             |           |                             |          |  |
|             |                               |            |       |                            |                     |                     |                  |          |     |              |   |                  |           |                             |          |  |
|             | う (                           | 7          |       | Sep 2<br>5:36:             | 2, 2023<br>27 PM    | $\square \triangle$ |                  |          |     |              |   |                  |           |                             |          |  |

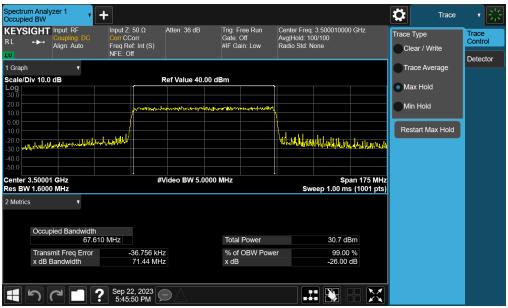
Plot 7-46. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 70MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 45 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 45 01 146   |  |  |  |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |  |  |  |



| Occupie                        |   | +                       |                         |               |       |  |                          |                     |                            | \$                                     | Trace            | - 7 ※    |
|--------------------------------|---|-------------------------|-------------------------|---------------|-------|--|--------------------------|---------------------|----------------------------|--|------------------|----------|
| L                              | KEYSIGHT Input: RF<br>L →→ Coupling: DC<br>Align: Auto Align: Auto NFE: Off |                         | orr<br>f: Int (S)       | Gate: Off Av  |       | Center Freq: 3.500010000 GHz<br>Avg Hold: 100/100<br>Radio Std: None |                          |                     | Trace Ty<br>Clea           | rpe<br>r / Write                       | Trace<br>Control |          |
| 1 Graph                        | •<br>Viv 10.0 dB  | NFE: U                  |                         | Value 40.00 d | Bm    |  |                          |                     |                            | Trac                                   | e Average        | Detector |
| Log<br>30.0<br>20.0            |   |                         |                         | value 40.00 น |       | -  |                          |                     |                            | <ul> <li>Max</li> <li>Min I</li> </ul> |                  |          |
| 10.0<br>0.00<br>-10.0<br>-20.0 |   |                         |                         |               |       |  | 4<br>Controller Lathered | mhhalmaa            |                            | Resta                                  | rt Max Hold      |          |
| -30.0 444<br>-40.0<br>-50.0    | and an                                  |                         |                         |               |       |  |                          | ******************  | litelihenellere            |  |                  |          |
|                                | 3.50001 GHz<br>/ 1.6000 MHz   |                         | #Vide                   | eo BW 5.0000  | MHz   |  | Sw                       | Spa<br>veep 1.00 ms | an 175 MHz<br>s (1001 pts) |  |                  |          |
| 2 Metrics                      | Occupied Bandwid  | th<br>2.856 MHz         |                         |               | Total | Power  |                          | 30.9 dE             | 2                          |  |                  |          |
|                                | Transmit Freq Erro<br>x dB Bandwidth  | r                       | -3.586 kHz<br>71.42 MHz |               |       | OBW Powe   | er                       | 99.00<br>-26.00     | %                          |  |                  |          |
|                                | 500   | <b>?</b> Sep 2<br>5:45: | 2, 2023<br>43 PM        | $\triangle$   |       |  |                          |                     |                            |  |                  |          |

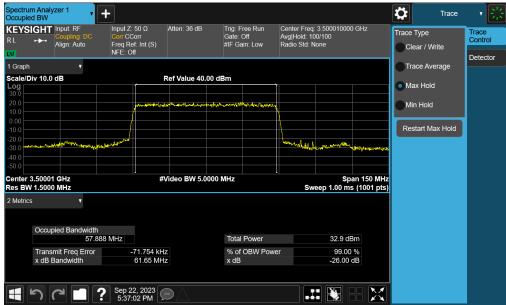
Plot 7-47. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 70MHz QPSK - Full RB - Ant1)



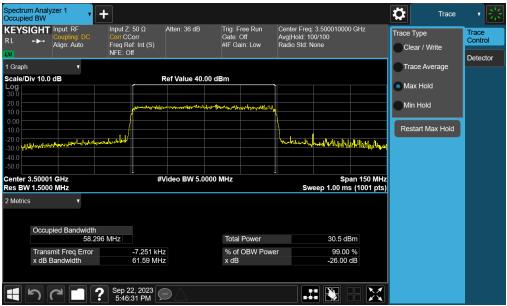
Plot 7-48. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 70MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 46 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | 23/2023 Portable Handset   |                  |  |  |  |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |  |  |  |





Plot 7-49. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 60MHz π/2 BPSK - Full RB - Ant1)



Plot 7-50. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 60MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Dogo 47 of 146   |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 47 of 146   |  |  |  |
| © 2023 ELEMENT      |                        | ·                          | V11.1 08/28/2023 |  |  |  |



| Spectrur<br>Occupie                 | d BW                        |                       | +                    |                  |               |         |                   |  |                   |                            |                                      | Trace            | - * 法    |
|-------------------------------------|-----------------------------|-----------------------|----------------------|------------------|---------------|---------|-------------------|--|-------------------|----------------------------|--------------------------------------|------------------|----------|
| KEYS<br>RL                          | Align: Auto Freq Ref: Int ( |                       | orr<br>f: Int (S)    | Atten: 36 dB     | Gate: Off Av  |         | Avg Hold: 1       | Center Freq: 3.500010000 GHz<br>Avg Hold: 100/100<br>Radio Std: None |                   |                            | ype<br>ar / Write                    | Trace<br>Control |          |
| LN<br>1 Graph                       |                             | <b>v</b>              | NFE: 01              |                  |               |         |                   |  |                   |                            | Trac                                 | e Average        | Detector |
| Scale/D<br>Log<br>30.0<br>20.0      | 0iv 10.0                    | dB                    |                      |                  | Ref Value 40. |         | un seis Mails.    |  |                   |                            | <ul> <li>Max</li> <li>Min</li> </ul> | Hold<br>Hold     |          |
| 10.0<br>0.00<br>-10.0               |                             |                       |                      |                  |               |         |                   |  |                   |                            |                                      | art Max Hold     |          |
| -20.0<br>-30.0 **<br>-40.0<br>-50.0 | hymrywyddfr                 | ninghar har dhirron   | Nordand LN Ingerter/ |                  |               |         |                   | AN BY LY AN  | Union Shold       | artaqoʻyoTalikobilya       |                                      |                  |          |
| Center :<br>Res BW                  |                             |                       |                      | :<br>#\          | /ideo BW 5.0  | 000 MHz |                   | Sw   | Sp<br>veep 1.00 m | an 150 MHz<br>s (1001 pts) |                                      |                  |          |
| 2 Metrics                           |                             | ▼<br>bied Bandwidt    | h                    |                  |               |         |                   |  |                   |                            |                                      |                  |          |
|                                     | Transi                      | 58.<br>mit Freq Error | 107 MHz              | 24.561 kHz       | z             |         | Power<br>OBW Powe | er   | 30.7 dE<br>99.00  |                            |                                      |                  |          |
|                                     | x dB E                      | 3andwidth             |                      | 61.55 MHz        | z             | x dB    |                   |  | -26.00            | dB                         |                                      |                  |          |
|                                     | 5                           |                       |                      | 2, 2023<br>40 PM |               |         |                   |  |                   |                            |                                      |                  |          |

Plot 7-51. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 60MHz 16-QAM - Full RB - Ant1)

| Spectrum Analyzer 1   |                     |                        |  | Trace                       | - 、 崇            |
|---|---------------------|------------------------|--|-----------------------------|------------------|
| KEYSIGHT         Input RF         Input Z: 50 Ω           RL         →         Coupling DC         Orr CCorr           Align: Auto         Freq Ref: Int (S)         NFE: Off | Ga                  | ate: Off               | Center Freq: 3.500010000 GHz<br>Avg Hold: 100/100<br>Radio Std: None | Trace Type<br>Clear / Write | Trace<br>Control |
| 1 Graph v   |                     |                        |  | Trace Average               | Detector         |
| Scale/Div 10.0 dB   | Ref Value 40.00 dBm | n                      |  | Max Hold                    |                  |
|   | or Angle Warder and | unclingen angelende    |  | Min Hold                    |                  |
| -10.0   |                     |                        |  | Restart Max Hold            |                  |
| -20.0<br>-30.0<br>-40.0   |                     |                        | Malania and allographic and      |                             |                  |
| -50.0   | Video BW 4.0000 MH  |                        | Span 125 MH  |                             |                  |
| Res BW 1.2000 MHz   |                     |                        | Sweep 1.00 ms (1001 pts  |                             |                  |
| 2 Metrics v   |                     |                        |  |                             |                  |
| Occupied Bandwidth<br>45.969 MHz  | Т                   | Total Power            | 32.7 dBm   |                             |                  |
| Transmit Freq Error-972.32 kHx dB Bandwidth48.85 MH   |                     | % of OBW Power<br>‹ dB | 99.00 %<br>-26.00 dB   |                             |                  |
| <b>5:37:28 PM</b>   |                     |                        |  |                             |                  |

Plot 7-52. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 50MHz π/2 BPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |  |  |  |
|---------------------|------------------------|----------------------------|------------------|--|--|--|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Page 48 of 146   |  |  |  |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Fage 40 01 140   |  |  |  |  |
| © 2023 ELEMENT      |                        |                            | V11.1 08/28/2023 |  |  |  |  |



| Occupie                 |                                       | +                      |                    |                     |  |  |                 |                            | \$                          | Trace      | - 7 法            |
|-------------------------|---------------------------------------|------------------------|--------------------|---------------------|--|--|-----------------|----------------------------|-----------------------------|------------|------------------|
| RL                      | Align: Auto Freq Ref: Int (S)         |                        |                    | Gate: Off           |  | Center Freq: 3.500010000 GHz<br>Avg[Hold: 100/100<br>Radio Std: None |                 |                            | Trace Type<br>Clear / Write |            | Trace<br>Control |
| LNI<br>1 Graph          | •                                     | NFE: Off               |                    |                     |  |  |                 |                            | Trace                       | Average    | Detector         |
| <b>Log</b><br>30.0      | Div 10.0 dB                           |                        | Ref Value 4        | 10.00 dBm           |  |  |                 |                            | 🔵 Max H                     | łold       |                  |
| 20.0<br>10.0<br>0.00    |                                       | , an                   | ๛ฃ๚๚๛ๅ๚๚๛๛๛๛๚๚๛๛๛๛ | nthe manual and the | an a | {  |                 |                            | Min H                       |            |                  |
| -10.0<br>-20.0<br>-30.0 | water and the second                  | holimbulu              |                    |                     |  | halistanist liter  | tellulmander    | 444mA-ph <b>l</b> .He      | Restar                      | t Max Hold |                  |
| -40.0                   | 0.50001.011                           |                        |                    |                     |  |  |                 | 405 Mill                   |                             |            |                  |
| Res BW                  | 3.50001 GHz<br>/ 1.2000 MHz           |                        | #Video BW 4        | 4.0000 MHZ          |  | Sw   |                 | an 125 MHz<br>s (1001 pts) |                             |            |                  |
| 2 Metrics               | s <b>v</b><br>Occupied Bandwidth      |                        |                    |                     |  |  |                 |                            |                             |            |                  |
|                         |                                       | 686 MHz                |                    | Total               | Power                                    |  | 30.6 dl         | Зm                         |                             |            |                  |
|                         | Transmit Freq Error<br>x dB Bandwidth |                        | 511 kHz<br>41 MHz  | % of<br>x dB        | OBW Powe                                 | er   | 99.00<br>-26.00 |                            |                             |            |                  |
|                         | 500                                   | Sep 22, 2<br>5:47:18 F |                    |                     |  |  |                 |                            |                             |            |                  |

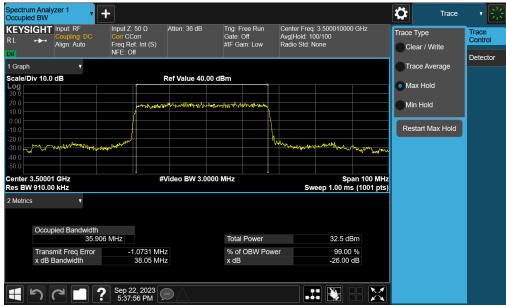
Plot 7-53. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 50MHz QPSK - Full RB - Ant1)

| Spectrum Analyzer 1<br>Occupied BW<br>KEYSIGHT Input: RF<br>RL + Coupling: DC<br>Align: Auto                 | Hoput Z: 50 Ω<br>Corr CCorr<br>Freq Ref: Int (S)   | Atten: 36 dB                 | Gate:        | iree Run<br>Off<br>ain: Low | Center Freq<br>Avg Hold: 10<br>Radio Std: N |                   | GHz              | Trace Type | Trace  | Trace<br>Control |
|--|--|------------------------------|--------------|-----------------------------|---|-------------------|------------------|------------|--------|------------------|
| 1 Graph  | NFE: Off   |                              |              |                             |   |                   |                  | Trace Ave  |        | Detector         |
| Scale/Div 10.0 dB  |  | Ref Value 40.0               | 0 dBm        |                             |   |                   |                  | Max Hold   |        |                  |
| 20.0 10.0 0.00   | provide NM   | <b>ไห</b> ระจะๆะไสารารสงานวิ | Managerthamo | ารรถใจจะที่เลงเจ            |   |                   |                  | Min Hold   |        |                  |
| -10.0<br>-20.0<br>-30.0<br>-40.0<br>-50.0  | North Marine Ma |                              |              |                             | Lannidayio                                  | r-windled, Lydad  | wr.HWr.elur.st.e | Restart Ma | x Hold |                  |
| -50.00<br>Center 3.50001 GHz #Video BW 4.0000 MHz Span 125 MHz<br>Res BW 1.2000 MHz Sweep 1.00 ms (1001 pts) |  |                              |              |                             |   |                   |                  |            |        |                  |
| 2 Metrics v  |  |                              |              |                             |   |                   |                  |            |        |                  |
| Occupied Bandwidth<br>47.75  | 6 MHz  |                              | Total        | Power                       |   | 30.6 dB           | im               |            |        |                  |
| Transmit Freq Error<br>x dB Bandwidth  | -55.581 kH<br>50.43 MH   |                              | % of<br>x dB | OBW Powe                    | ۲<br>ا                                      | 99.00<br>-26.00 c |                  |            |        |                  |
| <b>1</b> 777   | Sep 22, 2023<br>5:47:28 PM   |                              |              |                             |   |                   |                  |            |        |                  |

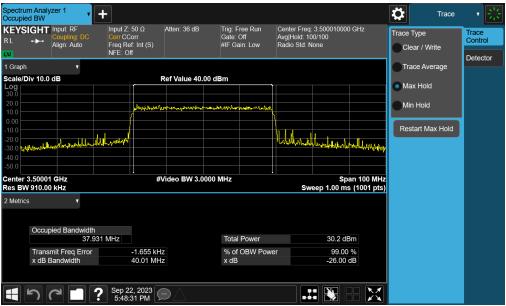
Plot 7-54. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 50MHz 16-QAM - Full RB - Ant1)

| FCC ID: A3LSMA156U  | PART 27 MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |  |
|---------------------|----------------------------|------------------|-----------------------------------|--|
| Test Report S/N:    | Test Dates:                | EUT Type:        | Dogo 40 of 146                    |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023     | Portable Handset | Page 49 of 146                    |  |
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Plot 7-55. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 40MHz π/2 BPSK - Full RB - Ant1)



Plot 7-56. Occupied Bandwidth Plot (NR Band n77PC2 DoD- 40MHz QPSK - Full RB - Ant1)

| FCC ID: A3LSMA156U  |                        | PART 27 MEASUREMENT REPORT |                  |  |
|---------------------|------------------------|----------------------------|------------------|--|
| Test Report S/N:    | Test Dates:            | EUT Type:                  | Daga 50 of 140   |  |
| 1M2309070100-05.A3L | 9/21/2023 - 10/23/2023 | Portable Handset           | Page 50 of 146   |  |
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