

ELEMENT WASHINGTON DC LLC

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## MEASUREMENT REPORT FCC PART 15.407 802.11ax (OFDMA)

#### **Applicant Name:**

Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, 16677, Korea Date of Testing: 5/24-7/31/2023 Test Report Issue Date: 8/9/2023 Test Site/Location: Element lab., Columbia, MD, USA Test Report Serial No.: 1M2304260060-18.A3L

## FCC ID: APPLICANT:

## A3LSMS711U

### Samsung Electronics Co., Ltd.

| Application Type:    | Certification   |
|----------------------|---|
| Model:               | SM-S711U  |
| Additional Model(s): | SM-S711U1   |
| EUT Type:            | Portable Handset  |
| Frequency Range:     | 5180 – 5885MHz  |
| Modulation Type:     | OFDMA   |
| FCC Equipment Class: | Unlicensed National Information Infrastructure TX (NII) |
| FCC Rule Part(s):    | Part 15 Subpart E (15.407)                              |
| Test Procedure(s):   | ANSI C63.10-2013, 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 ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

Note: This revised Test Report (S/N: 1M2304260060-18.A3L) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

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

RJ Ortanez Executive Vice President



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# **MEASUREMENT REPORT**

| Channel Tx         |           | МІМО  |       |                     |  |
|--------------------|-----------|---|-------|---------------------|--|
| Bandwidth<br>[MHz] | UNII Band | Frequency         Max. Power           [MHz]         [mW] |       | Max. Power<br>[dBm] |  |
|                    | 1         | 5180 - 5240   | 98.85 | 19.95               |  |
|                    | 2A        | 5260 - 5320   | 94.78 | 19.77               |  |
| 20                 | 2C        | 5500 - 5720   | 97.34 | 19.88               |  |
|                    | 3         | 5745 - 5825   | 96.51 | 19.85               |  |
|                    | 4         | 5845 - 5885   | 66.22 | 18.21               |  |
|                    | 1         | 5190 - 5230   | 98.98 | 19.96               |  |
|                    | 2A        | 5270 - 5310   | 94.51 | 19.75               |  |
| 40                 | 2C        | 5510 - 5710   | 97.15 | 19.87               |  |
|                    | 3         | 5755 - 5795   | 97.82 | 19.90               |  |
|                    | 4         | 5835 - 5875   | 66.11 | 18.20               |  |
|                    | 1         | 5210  | 95.77 | 19.81               |  |
|                    | 2A        | 5290  | 97.58 | 19.89               |  |
| 80                 | 2C        | 5530 - 5690   | 97.74 | 19.90               |  |
|                    | 3         | 5775  | 94.37 | 19.75               |  |
|                    | 4         | 5855  | 67.96 | 18.32               |  |
|                    | 1/2A      | 5250  | 98.35 | 19.93               |  |
| 160                | 2C        | 5570  | 99.61 | 19.98               |  |
|                    | 3/4       | 5815  | 66.20 | 18.21               |  |
| EUT Overview       |           |   |       |                     |  |

Note: The UNII Band 4 max power values shown in the above table are e.i.r.p values.

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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 Agreements (MRAs).

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#### **PRODUCT INFORMATION** 2.0

#### 2.1 **Equipment Description**

The Equipment Under Test (EUT) is the Samsung Portable Handset FCC ID: A3LSMS711U. The test data contained in this report pertains only to the emissions due to the EUT's UNII transmitter.

Test Device Serial No.: 0543M, 0540M, 0429M, 0441M

#### 2.2 **Device Capabilities**

This device contains the following capabilities:

Ch.

54

62

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

|     | Band 1             | nd 1 Band 2A |                    |     | Band 2C            |     | Band 3             |     |     | Band 3/4           |
|-----|--------------------|--------------|--------------------|-----|--------------------|-----|--------------------|-----|-----|--------------------|
| Ch. | Frequency<br>(MHz) | Ch.          | Frequency<br>(MHz) | Ch. | Frequency<br>(MHz) | Ch. | Frequency<br>(MHz) | ] [ | Ch. | Frequency<br>(MHz) |
| 36  | 5180               | 52           | 5260               | 100 | 5500               | 149 | 5745               | 1 [ | 169 | 5845               |
|     | :                  | :            | :                  | :   | :                  | :   | :                  | 1 [ | :   | :                  |
| 40  | 5200               | 56           | 5280               | 120 | 5600               | 157 | 5785               | 1 [ | 173 | 5865               |
| :   | :                  | :            | :                  | :   | :                  | :   | :                  |     | :   | :                  |
| 48  | 5240               | 64           | 5320               | 144 | 5720               | 165 | 5825               | ] [ | 177 | 5885               |

Table 2-1. 802.11ax (20MHz) Frequency / Channel Operations

Band 2C

Frequency

(MHz)

5510 ÷

5590

5710

|     | Band 1             |
|-----|--------------------|
| Ch. | Frequency<br>(MHz) |
| 38  | 5190               |
| :   | :                  |
| 46  | 5230               |
|     |                    |

| Band 2A            |     |
|--------------------|-----|
| Frequency<br>(MHz) | Ch. |
| 5270               | 102 |
| :                  | :   |
| 5310               | 118 |
|                    | :   |
|                    |     |

142

|     | Band 3             |
|-----|--------------------|
| Ch. | Frequency<br>(MHz) |
| 151 | 5755               |
| :   | :                  |
| 159 | 5795               |

|     | Band 3/4           |
|-----|--------------------|
| Ch. | Frequency<br>(MHz) |
| 167 | 5835               |
| :   | :                  |
| 175 | 5875               |

Table 2-2. 802.11ax (40MHz BW) Frequency / Channel Operations

|     | Band 1  |     | Band 2A            |     | Band 2C            |     | Band 3             |   |     | Band 3/4           |
|-----|---|-----|--------------------|-----|--------------------|-----|--------------------|---|-----|--------------------|
| Ch. | Frequency<br>(MHz)  | Ch. | Frequency<br>(MHz) | Ch. | Frequency<br>(MHz) | Ch. | Frequency<br>(MHz) |   | Ch. | Frequency<br>(MHz) |
| 42  | 5210  | 58  | 5290               | 106 | 5530               | 155 | 5775               |   | 167 | 5835               |
|     |   |     |                    | :   | :                  | -   |                    | - |     |                    |
|     |   |     |                    | 122 | 5610               |     |                    |   |     |                    |
|     |   |     |                    | :   | :                  |     |                    |   |     |                    |
|     |   |     |                    | 138 | 5690               |     |                    |   |     |                    |
|     | Table 2-3. 802.11ax (80MHz BW) Frequency / Channel Operations |     |                    |     |                    |     |                    |   |     |                    |

|  | Band 1/2A       |  |     | Band 2C         |  | Band 3/4 |                 |  |  |
|--|-----------------|--|-----|-----------------|--|----------|-----------------|--|--|
| Ch.  | Frequency (MHz) |  | Ch. | Frequency (MHz) |  | Ch.      | Frequency (MHz) |  |  |
| 50   | 5250            |  | 114 | 5570            |  | 163      | 5815            |  |  |
| Table 2-4, 802 11ax (160MHz BW) Frequency / Channel Operations |                 |  |     |                 |  |          |                 |  |  |

Table 2-4. 802.11ax (160MHz BW) Frequency / Channel Operations

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#### Notes:

5GHz NII operation is possible in 20MHz, 40MHz, 80MHz, and 160MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = peak per the guidance of Section B)2)b) of ANSI C63.10-2013. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

| Mode     | Antenna  | Bandwidth<br>[MHz] | Tone   | Duty Cycle |
|----------|----------|--------------------|--------|------------|
|          |          |                    | 26T    | 99.31      |
| 802.11ax | MIMO     | 20                 | 52T    | 99.31      |
| NII RU   | IVIIIVIO | 20                 | 106T   | 99.27      |
|          |          |                    | 242T   | 99.25      |
|          |          |                    | 26T    | 99.31      |
| 802.11ax |          |                    | 52T    | 99.31      |
| NII RU   | MIMO     | 40                 | 106T   | 98.94      |
|          |          |                    | 242T   | 99.33      |
|          |          |                    | 484T   | 99.33      |
|          |          |                    | 26T    | 98.41      |
|          |          |                    | 52T    | 98.48      |
| 802.11ax | MIMO     | 80                 | 106T   | 99.19      |
| NII RU   |          |                    | 242T   | 98.76      |
|          |          |                    | 484T   | 99.33      |
|          |          |                    | 996T   | 99.34      |
|          |          |                    | 26T    | 98.19      |
|          |          |                    | 52T    | 98.19      |
| 802.11ax |          |                    | 106T   | 98.07      |
| NII RU   | MIMO     | 160                | 242T   | 98.02      |
|          |          |                    | 484T   | 99.09      |
|          |          |                    | 996T   | 99.02      |
|          |          |                    | 996*2T | 99.60      |

| Table 2-5. Measured Duty Cycles |
|---------------------------------|
|---------------------------------|

2. The device employs MIMO technology. Below are the possible configurations.

|         | ofigurationa | SI   | SO   | SE   | DM   | CDD          |              |  |
|---------|--------------|------|------|------|------|--------------|--------------|--|
| VIFI CO | nfigurations | ANT1 | ANT2 | ANT1 | ANT2 | ANT1         | ANT2         |  |
|         | 11a          | ×    | ×    | √    | ✓    | ✓            | √            |  |
|         | 11n          | ×    | ×    | ✓    | ✓    | ✓            | ✓            |  |
| 5GHz    | 11ac         | ×    | ×    | √    | ✓    | ✓            | $\checkmark$ |  |
|         | 11ax         | ×    | ×    | ✓    | ✓    | $\checkmark$ | ✓            |  |

#### Table 2-6. Frequency / Channel Operations

 $\checkmark$  = Support;  $\times$  = NOT Support

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**SISO** = Single Input Single Output **SDM** = Spatial Diversity Multiplexing – MIMO function **CDD** = Cyclic Delay Diversity – 2Tx Function

3. The device supports the following data rates (shown in Mbps):

| MCS   |         |          |          |          |          |          |          |          |          |          | OFD      | MA (802.1 | 1ax)     |          |          |          |          |          |          |          |          |          |
|-------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Index | Spatial |          |          |          |          |          |          |          |          |          |          |           |          |          |          |          |          |          |          |          |          |          |
|       | Stream  |          | 26T      |          |          | 52T      |          |          | 106T     |          |          | 242T      |          |          | 484T     |          |          | 996T     |          |          | 2x996T   |          |
| HE    |         | 0.8µs Gl | 1.6µs Gl | 3.2µs Gl | 0.8µs GI | 1.6µs Gl | 3.2µs GI | 0.8µs GI | 1.6µs GI | 3.2µs GI | 0.8µs GI | 1.6µs GI  | 3.2µs GI | 0.8µs GI | 1.6µs Gl | 3.2µs GI | 0.8µs GI | 1.6µs GI | 3.2µs Gl | 0.8µs GI | 1.6µs GI | 3.2µs GI |
| 0     | 1       | 0.9      | 0.8      | 0.8      | 1.8      | 1.7      | 1.5      | 3.8      | 3.5      | 3.2      | 8.6      | 8.1       | 7.3      | 17.2     | 16.3     | 14.6     | 36       | 34       | 30.6     | 72.1     | 68.1     | 61.3     |
| 1     | 1       | 1.8      | 1.7      | 1.5      | 3.5      | 3.3      | 3        | 7.5      | 7.1      | 6.4      | 17.2     | 16.3      | 14.6     | 34.4     | 32.5     | 29.3     | 72.1     | 68.1     | 61.3     | 144.1    | 136.1    | 122.5    |
| 2     | 1       | 2.6      | 2.5      | 2.3      | 5.3      | 5        | 4.5      | 11.3     | 10.6     | 9.6      | 25.8     | 24.4      | 21.9     | 51.6     | 48.8     | 43.9     | 108.1    | 102.1    | 91.9     | 216.2    | 204.2    | 183.8    |
| 3     | 1       | 3.5      | 3.3      | 3        | 7.1      | 6.7      | 6        | 15       | 14.2     | 12.8     | 34.4     | 32.5      | 29.3     | 68.8     | 65       | 58.5     | 144.1    | 136.1    | 122.5    | 288.2    | 272.2    | 245      |
| 4     | 1       | 5.3      | 5        | 4.5      | 10.6     | 10       | 9        | 22.5     | 21.3     | 19.1     | 51.6     | 48.8      | 43.9     | 103.2    | 97.5     | 87.8     | 216.2    | 204.2    | 183.8    | 432.4    | 408.3    | 367.5    |
| 5     | 1       | 7.1      | 6.7      | 6        | 14.1     | 13.3     | 12       | 30       | 28.3     | 25.5     | 68.8     | 65        | 58.5     | 137.6    | 130      | 117      | 288.2    | 272.2    | 245      | 576.5    | 544.4    | 490      |
| 6     | 1       | 7.9      | 7.5      | 6.8      | 15.9     | 15       | 13.5     | 33.8     | 31.9     | 28.7     | 77.4     | 73.1      | 65.8     | 154.9    | 146.3    | 131.6    | 324.3    | 306.3    | 275.6    | 648.5    | 612.5    | 551.3    |
| 7     | 1       | 8.8      | 8.3      | 7.5      | 17.6     | 16.7     | 15       | 37.5     | 35.4     | 31.9     | 86       | 81.3      | 73.1     | 172.1    | 162.5    | 146.3    | 360.3    | 340.3    | 306.3    | 720.6    | 680.6    | 612.5    |
| 8     | 1       | 10.6     | 10       | 9        | 21.2     | 20       | 18       | 45       | 42.5     | 38.3     | 103.2    | 97.5      | 87.8     | 206.5    | 195      | 175.5    | 432.4    | 408.3    | 367.5    | 864.7    | 816.7    | 735      |
| 9     | 1       | 11.8     | 11.1     | 10       | 23.5     | 22.2     | 20       | 50       | 47.2     | 42.5     | 114.7    | 108.3     | 97.5     | 229.4    | 216.7    | 195      | 480.4    | 453.7    | 408.3    | 960.8    | 907.4    | 816.7    |
| 10    | 1       | 13.2     | 12.5     | 11.3     | 26.5     | 25       | 22.5     | 56.3     | 53.1     | 47.8     | 129      | 121.9     | 109.7    | 258.1    | 243.8    | 219.4    | 540.4    | 510.4    | 459.4    | 1080.9   | 1020.8   | 918.8    |
| 11    | 1       | 14.7     | 13.9     | 12.5     | 29.4     | 27.8     | 25       | 62.5     | 59       | 53.1     | 143.4    | 135.4     | 121.9    | 286.8    | 270.8    | 243.8    | 600.5    | 567.1    | 510.4    | 1201     | 1134.3   | 1020.8   |
| 0     | 2       | 1.8      | 1.7      | 1.5      | 3.5      | 3.3      | 3        | 7.5      | 7.1      | 6.4      | 17.2     | 16.3      | 14.6     | 34.4     | 32.5     | 29.3     | 72.1     | 68.1     | 61.3     | 144.1    | 136.1    | 122.5    |
| 1     | 2       | 3.5      | 3.3      | 3        | 7.1      | 6.7      | 6        | 15       | 14.2     | 12.8     | 34.4     | 32.5      | 29.3     | 68.8     | 65       | 58.5     | 144.1    | 136.1    | 122.5    | 288.2    | 272.2    | 245      |
| 2     | 2       | 5.3      | 5        | 4.5      | 10.6     | 10       | 9        | 22.5     | 21.3     | 19.1     | 51.6     | 48.8      | 43.9     | 103.2    | 97.5     | 87.8     | 216.2    | 204.2    | 183.8    | 432.4    | 408.3    | 367.5    |
| 3     | 2       | 7.1      | 6.7      | 6        | 14.1     | 13.3     | 12       | 30       | 28.3     | 25.5     | 68.8     | 65        | 58.5     | 137.6    | 130      | 117      | 288.2    | 272.2    | 245      | 576.5    | 544.4    | 490      |
| 4     | 2       | 10.6     | 10       | 9        | 21.2     | 20       | 18       | 45       | 42.5     | 38.3     | 103.2    | 97.5      | 87.8     | 206.5    | 195      | 175.5    | 432.4    | 408.3    | 367.5    | 864.7    | 816.7    | 735      |
| 5     | 2       | 14.1     | 13.3     | 12       | 28.2     | 26.7     | 24       | 60       | 56.7     | 51       | 137.6    | 130       | 117      | 275.3    | 260      | 234      | 576.5    | 544.4    | 490      | 1152.9   | 1088.9   | 980      |
| 6     | 2       | 15.9     | 15       | 13.5     | 31.8     | 30       | 27       | 67.5     | 63.8     | 57.4     | 154.9    | 146.3     | 131.6    | 309.7    | 292.5    | 263.3    | 648.5    | 612.5    | 551.3    | 1297.1   | 1225     | 1102.5   |
| 7     | 2       | 17.6     | 16.7     | 15       | 35.3     | 33.3     | 30       | 75       | 70.8     | 63.8     | 172.1    | 162.5     | 146.3    | 344.1    | 325      | 292.5    | 720.6    | 680.6    | 612.5    | 1441.2   | 1361.1   | 1225     |
| 8     | 2       | 21.2     | 20       | 18       | 42.4     | 40       | 36       | 90       | 85       | 76.5     | 206.5    | 195       | 175.5    | 412.9    | 390      | 351      | 864.7    | 816.7    | 735      | 1729.4   | 1633.3   | 1470     |
| 9     | 2       | 23.5     | 22.2     | 20       | 47.1     | 44.4     | 40       | 100      | 94.4     | 85       | 229.4    | 216.7     | 195      | 458.8    | 433.3    | 390      | 960.8    | 907.4    | 816.7    | 1921.6   | 1814.8   | 1633.3   |
| 10    | 2       | 26.5     | 25       | 22.5     | 52.9     | 50       | 45       | 112.5    | 106.3    | 95.6     | 258.1    | 243.8     | 219.4    | 516.2    | 487.5    | 438.8    | 1080.9   | 1020.8   | 918.8    | 2161.8   | 2041.7   | 1837.5   |
| 11    | 2       | 29.4     | 27.8     | 25       | 58.8     | 55.6     | 50       | 125      | 118.1    | 106.3    | 286.8    | 270.8     | 243.8    | 573.5    | 541.7    | 487.5    | 1201     | 1134.3   | 1020.8   | 2402     | 2268.5   | 2041.7   |
| -     |         |          |          |          |          |          |          |          |          |          |          |           |          |          |          |          |          |          |          |          |          |          |

 Table 2-7. Supported Data Rates

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|---------------------|----------------|--------------------|------------------|--|--|--|--|
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## 2.3 Antenna Description

| Frequency [GHz] | Antenna 1 Gain<br>[dBi] | Antenna 2 Gain<br>[dBi] | Directional Ant.<br>Gain [dBi] |  |
|-----------------|-------------------------|-------------------------|--------------------------------|--|
| 5.20            | -5.01                   | -5.68                   | -2.33                          |  |
| 5.30            | -6.38                   | -6.72                   | -3.54                          |  |
| 5.50            | -2.04                   | -5.22                   | -0.47                          |  |
| 5.80            | -1.77                   | -4.11                   | 0.15                           |  |
| 5.85            | -3.87                   | -5.58                   | -1.67                          |  |
|                 |                         |                         |                                |  |

The following antenna gains were used for the testing.

Table 2-8. Antenna Peak Gain

## 2.4 Test Configuration

ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing. See Sections 7.6 for radiated emissions test setups, and 7.2, 7.3, 7.4, and 7.5 for antenna port conducted emissions test setups.

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

### 2.5 Software and Firmware

The test was conducted with software/firmware version S711USQU0AWG7 installed on the EUT.

## 2.6 EMI Suppression Device(s) / Modifications

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

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|---------------------------------|----------------|--------------------|---------------|--|--|--|--|--|
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## 3.0 DESCRIPTION OF TESTS

#### 3.1 Evaluation Procedure

The measurement procedures described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2013) was used in the measurement of the EUT.

Deviation from measurement procedure......None

## 3.2 Radiated 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. An 80cm tall test table made of Styrodur is placed on top of the turn table. For measurements above 1GHz, an additional Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33 depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, mode of operation, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions.

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.

## 3.3 Environmental Conditions

The temperature is controlled within range of 15°C to 35°C. The relative humidity is controlled within range of 10% to 75%. The atmospheric pressure is monitored within the range 86-106kPa (860-1060mbar).

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## 4.0 ANTENNA REQUIREMENTS

#### Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- The antennas of the EUT are permanently attached.
- There are no provisions for connection to an external antenna.

#### **Conclusion:**

The EUT complies with the requirement of §15.203.

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## 5.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. 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                       |
| Line Conducted Disturbance          | 3.09                       |
| Radiated Disturbance (<1GHz)        | 4.98                       |
| Radiated Disturbance (>1GHz)        | 5.07                       |
| Radiated Disturbance (>18GHz)       | 5.09                       |

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## 6.0 TEST EQUIPMENT CALIBRATION DATA

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

| Manufacturer          | Model            | Description                                | Cal Date  | Cal Interval | Cal Due   | Serial Number |
|-----------------------|------------------|--|-----------|--------------|-----------|---------------|
| -                     | AP2-001          | EMC Cable and Switch System                | 1/11/2023 | Annual       | 1/11/2024 | AP2-001       |
| -                     | AP2-002          | EMC Cable and Switch System                | 1/11/2023 | Annual       | 1/11/2024 | AP2-002       |
| -                     | ETS-001          | EMC Cable and Switch System                | 1/11/2023 | Annual       | 1/11/2024 | ETS-001       |
| -                     | ETS-002          | EMC Cable and Switch System                | 1/11/2023 | Annual       | 1/11/2024 | ETS-002       |
| -                     | WL25-1           | Conducted Cable Set (25GHz)                | 1/12/2023 | Annual       | 1/12/2024 | WL25-1        |
| -                     | WL40-1           | Conducted Cable Set (40GHz)                | 1/12/2023 | Annual       | 1/12/2024 | WL40-1        |
| Anritsu               | MA24408A         | Microwave Peak Power Sensor                | 6/1/2022  | Annual       | 8/30/2023 | 11675         |
| Anritsu               | MA24408A         | Microwave Peak Power Sensor                | 4/12022   | Annual       | 8/30/2023 | 11676         |
| EMCO                  | 3115             | Horn Antenna (1-18GHz)                     | 8/8/2022  | Biennial     | 8/8/2024  | 9704-5182     |
| EMCO                  | 3116             | Horn Antenna (18-40GHz) 7/20/2021 Biennial |           | 8/30/2023    | 9203-2178 |               |
| Keysight Technologies | N9030A           | PXA Signal Analyzer (3Hz-26.5GHz)          | 9/6/2022  | Annual       | 9/6/2023  | MY54490576    |
| Keysight Technologies | N9030A           | PXA Signal Analyzer (44GHz)                | 3/15/2023 | Annual       | 3/15/2024 | MY52350166    |
| Keysight Technologies | N9038A           | MXE EMI Receiver                           | 1/21/2022 | Annual       | 7/31/2023 | MY51210133    |
| Pasternack            | NMLC-2           | Line Conducted Emissions Cable (NM)        | 1/11/203  | Annual       | 1/11/2024 | NMLC-2        |
| Rohde & Schwarz       | TC-TA18          | Cross Polarized Vivaldi Test Antenna       | 9/28/2022 | Biennial     | 9/28/2024 | 101058        |
| Rohde & Schwarz       | ESU26            | EMI Test Receiver (26.5GHz)                | 8/29/2022 | Annual       | 8/29/2023 | 100342        |
| Rohde & Schwarz       | ESW44            | EMI Test Receiver (2Hz-44GHz)              | 3/1/2023  | Annual       | 3/1/2024  | 101716        |
| Rohde & Schwarz       | VULB9162         | Bi-Log Antenna                             | 2/21/2023 | Biennial     | 2/21/2025 | 00301         |
| Solar Electronics     | 8012-50-R-24-BNC | Line Impedance Stabilization Network       | 9/21/2021 | Biennial     | 9/21/2023 | 310233        |
| Sunol                 | DRH-118          | Horn Antenna (1-18GHz)                     | 2/14/2022 | Biennial     | 2/14/2024 | A050307       |
| Sunol                 | JB5              | Bi-Log Antenna (30M - 5GHz)                | 8/30/2022 | Biennial     | 8/30/2024 | A051107       |
| Sunol                 | JB6              | JB6 Antenna                                | 3/2/2023  | Biennial     | 3/2/2025  | A082816       |

Table 6-1. Annual Test Equipment Calibration Schedule

#### Note:

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.

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## 7.0 TEST RESULTS

### 7.1 Summary

| Company Name:       | Samsung Electronics Co., Ltd.                         |
|---------------------|---|
| FCC ID:             | A3LSMS711U  |
| FCC Classification: | Unlicensed National Information Infrastructure (UNII) |

| FCC Part<br>Section(s)                                | RSS<br>Section(s) | Test Description Test Limit  |  | Test<br>Condition | Test<br>Result | Reference              |
|---|-------------------|--|--|-------------------|----------------|------------------------|
| N/A   | RSS-Gen [6.7]     | 26dB Bandwidth   | N/A  |                   | PASS           | Section 7.2            |
| 15.407(e)   | RSS-Gen [6.7]     | 6dB Bandwidth  | dB Bandwidth >500kHz (5725-5850MHz and 5850 – 5895MHz)   |                   | PASS           | Section 7.3            |
| 15.407<br>(a)(1)(iv),<br>(a)(2), (a)(3)               | RSS-247 [6.2]     | Maximum Conducted<br>Output Power  | meet the limits detailed in $15.407$ (a)   |                   | PASS           | Section 7.4            |
| 15.407<br>(a)(1)(iv),<br>(a)(2), (a)(3)               | RSS-247 [6.2]     | Maximum Power<br>Spectral Density  | Maximum power spectral density must<br>meet the limits detailed in 15.407 (a)<br>(RSS-247 [6.2])     |                   | PASS           | Section 7.5            |
| 15.407(h)   | RSS-247 [6.3]     | Dynamic Frequency<br>Selection   |  |                   | PASS           | See DFS<br>Test Report |
| 15.407(b)(1),<br>(b)(2), (b)(3),<br>(b)(4)            | RSS-247 [6.2]     | Undesirable Emissions  | Undesirable emissions must meet the limits detailed in 15.407(b) (RSS-247 [6.2])                     |                   | PASS           | Section 7.6            |
| 15.205,<br>15.407(b)(1),<br>(b)(4), (b)(5),<br>(b)(6) | RSS-Gen [8.9]     | General Field Strength<br>Limits (Restricted Bands<br>and Radiated Emission<br>Limits) | Emissions in restricted bands must<br>meet the radiated limits detailed in<br>15.209 (RSS-Gen [8.9]) | RADIATED          | PASS           | Section 7.6,<br>7.7    |

Table 7-1. Summary of Test Results

#### Notes:

- 1) All channels, modes, and modulations/data rates were investigated among all UNII bands. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer 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 and attenuators.
- 4) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is Element "UNII Automation," Version 4.7.
- 5) For radiated band edge, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is Element "Chamber Automation," Version 1.5.0.
- 802.11ax OFDMA testing was performed for all signal tone configurations as specified by the 802.11ax standard. Worst case results are determined and reported per the guidance provided at the October 2018 TCB Workshop.
- Only one RU index could be selected at a time, so no contiguous or non-contiguous RUs were considered for testing.

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## 7.2 26dB Bandwidth Measurement

#### Test Overview and Limit

The bandwidth at 26dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 26dB bandwidth.

#### The 26dB bandwidth is used to determine the conducted power limits.

#### Test Procedure Used

ANSI C63.10-2013 - Section 12.4

#### Test Settings

- The signal analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 26. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = approximately 1% of the emission bandwidth
- 3. VBW <u>></u> 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold

#### 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

The 26dB Bandwidth measurement for each channel was measured with the RU index showing the highest conducted power.

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## **MIMO 26dB Bandwidth Measurements**

|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 26dB<br>Bandwidth<br>[MHz] |
|-----------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|
|           | 5180               | 36             | ax (20MHz)  | 26T   | MCS0                | 20.30                               |
|           | 5200               | 40             | ax (20MHz)  | 26T   | MCS0                | 18.64                               |
| l bi      | 5240               | 48             | ax (20MHz)  | 26T   | MCS0                | 20.44                               |
| Band 1    | 5190               | 38             | ax (40MHz)  | 26T   | MCS0                | 38.19                               |
|           | 5230               | 46             | ax (40MHz)  | 26T   | MCS0                | 40.87                               |
|           | 5210               | 42             | ax (80MHz)  | 26T   | MCS0                | 78.48                               |
| Band 1/2A | 5250               | 50             | ax (160MHz) | 26T   | MCS0                | 158.60                              |
|           | 5260               | 52             | ax (20MHz)  | 26T   | MCS0                | 18.88                               |
| ٩         | 5280               | 56             | ax (20MHz)  | 26T   | MCS0                | 19.03                               |
| d 2/      | 5320               | 64             | ax (20MHz)  | 26T   | MCS0                | 18.49                               |
| Band 2A   | 5270               | 54             | ax (40MHz)  | 26T   | MCS0                | 40.09                               |
| ш         | 5310               | 62             | ax (40MHz)  | 26T   | MCS0                | 40.35                               |
|           | 5290               | 58             | ax (80MHz)  | 26T   | MCS0                | 81.40                               |
|           | 5500               | 100            | ax (20MHz)  | 26T   | MCS0                | 20.41                               |
|           | 5600               | 120            | ax (20MHz)  | 26T   | MCS0                | 18.90                               |
|           | 5720               | 144            | ax (20MHz)  | 26T   | MCS0                | 18.58                               |
| с         | 5510               | 102            | ax (40MHz)  | 26T   | MCS0                | 38.18                               |
| d 2       | 5550               | 110            | ax (40MHz)  | 26T   | MCS0                | 40.39                               |
| Band 2C   | 5670               | 134            | ax (40MHz)  | 26T   | MCS0                | 40.54                               |
| ш         | 5530               | 106            | ax (80MHz)  | 26T   | MCS0                | 82.22                               |
|           | 5610               | 122            | ax (80MHz)  | 26T   | MCS0                | 78.50                               |
|           | 5690               | 138            | ax (80MHz)  | 26T   | MCS0                | 78.38                               |
|           | 5570               | 114            | ax (160MHz) | 26T   | MCS0                | 164.40                              |

Table 7-2. Bands 1, 2A, 2C Conducted 26dB Bandwidth Measurements MIMO ANT1 (26 Tones)

| FCC ID: A3LSMS711U  | MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|--------------------|------------------|-----------------------------------|
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|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 26dB<br>Bandwidth<br>[MHz] |
|-----------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|
|           | 5180               | 36             | ax (20MHz)  | 26T   | MCS0                | 19.88                               |
|           | 5200               | 40             | ax (20MHz)  | 26T   | MCS0                | 18.34                               |
| l bi      | 5240               | 48             | ax (20MHz)  | 26T   | MCS0                | 20.15                               |
| Band 1    | 5190               | 38             | ax (40MHz)  | 26T   | MCS0                | 38.08                               |
|           | 5230               | 46             | ax (40MHz)  | 26T   | MCS0                | 39.86                               |
|           | 5210               | 42             | ax (80MHz)  | 26T   | MCS0                | 78.13                               |
| Band 1/2A | 5250               | 50             | ax (160MHz) | 26T   | MCS0                | 158.30                              |
|           | 5260               | 52             | ax (20MHz)  | 26T   | MCS0                | 18.40                               |
| ∢         | 5280               | 56             | ax (20MHz)  | 26T   | MCS0                | 18.41                               |
| d 2,      | 5320               | 64             | ax (20MHz)  | 26T   | MCS0                | 18.30                               |
| Band 2A   | 5270               | 54             | ax (40MHz)  | 26T   | MCS0                | 40.01                               |
| ш         | 5310               | 62             | ax (40MHz)  | 26T   | MCS0                | 40.49                               |
|           | 5290               | 58             | ax (80MHz)  | 26T   | MCS0                | 81.10                               |
|           | 5500               | 100            | ax (20MHz)  | 26T   | MCS0                | 20.03                               |
|           | 5600               | 120            | ax (20MHz)  | 26T   | MCS0                | 18.43                               |
|           | 5720               | 144            | ax (20MHz)  | 26T   | MCS0                | 18.37                               |
| O         | 5510               | 102            | ax (40MHz)  | 26T   | MCS0                | 38.08                               |
| Band 2C   | 5550               | 110            | ax (40MHz)  | 26T   | MCS0                | 40.06                               |
| and       | 5670               | 134            | ax (40MHz)  | 26T   | MCS0                | 40.03                               |
| ш         | 5530               | 106            | ax (80MHz)  | 26T   | MCS0                | 81.23                               |
|           | 5610               | 122            | ax (80MHz)  | 26T   | MCS0                | 78.06                               |
|           | 5690               | 138            | ax (80MHz)  | 26T   | MCS0                | 78.18                               |
|           | 5570               | 114            | ax (160MHz) | 26T   | MCS0                | 162.90                              |

Table 7-3. Bands 1, 2A, 2C Conducted 26dB Bandwidth Measurements MIMO ANT2 (26 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |
|---------------------|----------------|--------------------|------------------|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                  |  |
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|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 26dB<br>Bandwidth<br>[MHz] |
|-----------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|
|           | 5180               | 36             | ax (20MHz)  | 242T  | MCS0                | 22.54                               |
|           | 5200               | 40             | ax (20MHz)  | 242T  | MCS0                | 22.73                               |
| 1 hd      | 5240               | 48             | ax (20MHz)  | 242T  | MCS0                | 22.06                               |
| Band 1    | 5190               | 38             | ax (40MHz)  | 484T  | MCS0                | 43.63                               |
|           | 5230               | 46             | ax (40MHz)  | 484T  | MCS0                | 44.02                               |
|           | 5210               | 42             | ax (80MHz)  | 996T  | MCS0                | 85.73                               |
| Band 1/2A | 5250               | 50             | ax (160MHz) | 26T   | MCS0                | 165.50                              |
|           | 5260               | 52             | ax (20MHz)  | 242T  | MCS0                | 22.63                               |
|           | 5280               | 56             | ax (20MHz)  | 242T  | MCS0                | 22.34                               |
| Band 2A   | 5320               | 64             | ax (20MHz)  | 242T  | MCS0                | 22.64                               |
| Ban       | 5270               | 54             | ax (40MHz)  | 484T  | MCS0                | 43.47                               |
|           | 5310               | 62             | ax (40MHz)  | 484T  | MCS0                | 44.50                               |
|           | 5290               | 58             | ax (80MHz)  | 996T  | MCS0                | 87.00                               |
|           | 5500               | 100            | ax (20MHz)  | 242T  | MCS0                | 22.36                               |
|           | 5600               | 120            | ax (20MHz)  | 242T  | MCS0                | 22.08                               |
|           | 5720               | 144            | ax (20MHz)  | 242T  | MCS0                | 22.59                               |
|           | 5510               | 102            | ax (40MHz)  | 484T  | MCS0                | 43.39                               |
| d 2C      | 5590               | 118            | ax (40MHz)  | 484T  | MCS0                | 42.29                               |
| Band 2C   | 5710               | 142            | ax (40MHz)  | 484T  | MCS0                | 44.68                               |
|           | 5530               | 106            | ax (80MHz)  | 996T  | MCS0                | 86.22                               |
|           | 5610               | 122            | ax (80MHz)  | 996T  | MCS0                | 87.78                               |
|           | 5690               | 138            | ax (80MHz)  | 996T  | MCS0                | 87.63                               |
|           | 5570               | 114            | ax (160MHz) | 996T  | MCS0                | 164.30                              |

Table 7-4. Bands 1, 2A, 2C Conducted 26dB Bandwidth Measurements MIMO ANT1 (Full Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 17 of 157   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 17 of 157   |
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|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 26dB<br>Bandwidth<br>[MHz] |
|-----------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|
|           | 5180               | 36             | ax (20MHz)  | 242T  | MCS0                | 22.96                               |
|           | 5200               | 40             | ax (20MHz)  | 242T  | MCS0                | 22.61                               |
| Band 1    | 5240               | 48             | ax (20MHz)  | 242T  | MCS0                | 22.93                               |
| Bar       | 5190               | 38             | ax (40MHz)  | 484T  | MCS0                | 43.96                               |
|           | 5230               | 46             | ax (40MHz)  | 484T  | MCS0                | 44.39                               |
|           | 5210               | 42             | ax (80MHz)  | 996T  | MCS0                | 89.08                               |
| Band 1/2A | 5250               | 50             | ax (160MHz) | 26T   | MCS0                | 166.10                              |
|           | 5260               | 52             | ax (20MHz)  | 242T  | MCS0                | 22.72                               |
|           | 5280               | 56             | ax (20MHz)  | 242T  | MCS0                | 22.88                               |
| Band 2A   | 5320               | 64             | ax (20MHz)  | 242T  | MCS0                | 22.03                               |
| Ban       | 5270               | 54             | ax (40MHz)  | 484T  | MCS0                | 44.15                               |
|           | 5310               | 62             | ax (40MHz)  | 484T  | MCS0                | 45.07                               |
|           | 5290               | 58             | ax (80MHz)  | 996T  | MCS0                | 85.48                               |
|           | 5500               | 100            | ax (20MHz)  | 242T  | MCS0                | 24.41                               |
|           | 5600               | 120            | ax (20MHz)  | 242T  | MCS0                | 22.54                               |
|           | 5720               | 144            | ax (20MHz)  | 242T  | MCS0                | 22.59                               |
|           | 5510               | 102            | ax (40MHz)  | 484T  | MCS0                | 44.91                               |
| d 2C      | 5590               | 118            | ax (40MHz)  | 484T  | MCS0                | 44.87                               |
| Band 2C   | 5710               | 142            | ax (40MHz)  | 484T  | MCS0                | 45.30                               |
|           | 5530               | 106            | ax (80MHz)  | 996T  | MCS0                | 90.28                               |
|           | 5610               | 122            | ax (80MHz)  | 996T  | MCS0                | 90.07                               |
|           | 5690               | 138            | ax (80MHz)  | 996T  | MCS0                | 86.34                               |
|           | 5570               | 114            | ax (160MHz) | 996T  | MCS0                | 164.70                              |

Table 7-5. Bands 1, 2A, 2C Conducted 26dB Bandwidth Measurements MIMO ANT2 (Full Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | Dates: EUT Type:   |                  |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 18 of 157   |
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## 7.2.1 MIMO Antenna-1 26dB Bandwidth Measurements



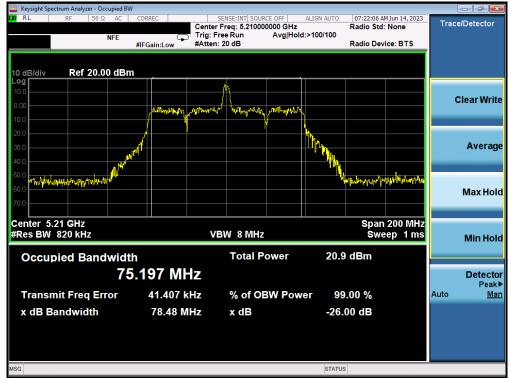
Plot 7-1. 26dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)



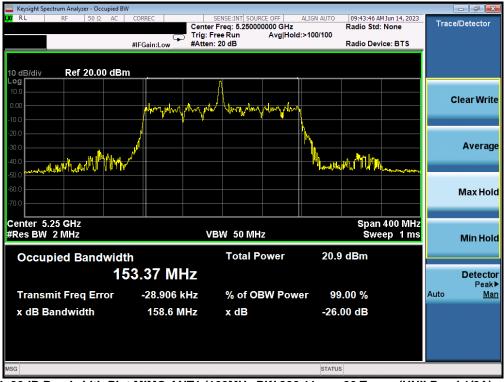
Plot 7-2. 26dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 1) – Ch. 38)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dage 10 of 157   |
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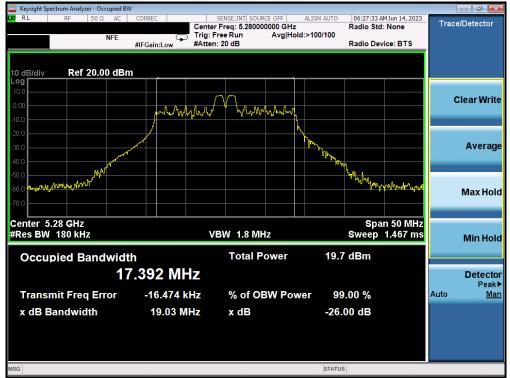
Plot 7-3. 26dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)



Plot 7-4. 26dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax – 26 Tones (UNII Band 1/2A) – Ch. 50)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 00 of 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 20 of 157   |
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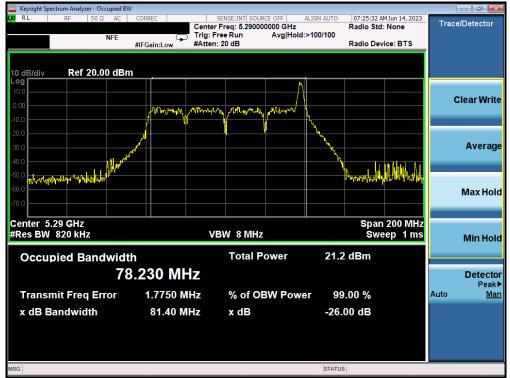
Plot 7-5. 26dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)



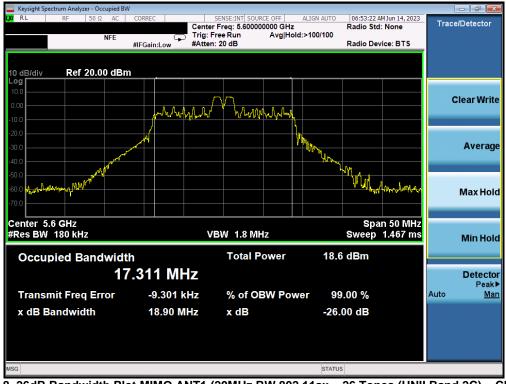
Plot 7-6. 26dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 54)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dana 04 af 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 21 of 157   |
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Plot 7-7. 26dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)



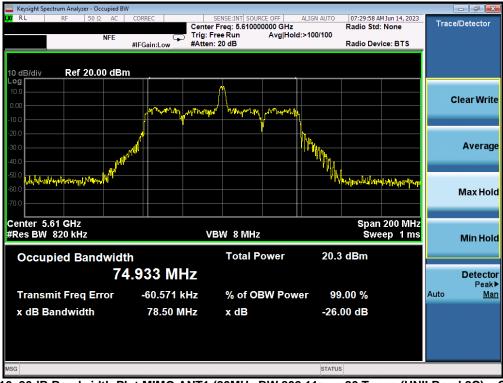
Plot 7-8. 26dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 120)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dara 00 st 157   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 22 of 157   |
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Plot 7-9. 26dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 2C) – Ch. 118)



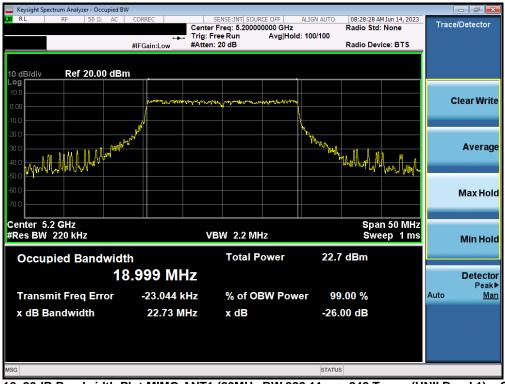
Plot 7-10. 26dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 122)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 22 of 157   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 23 of 157   |
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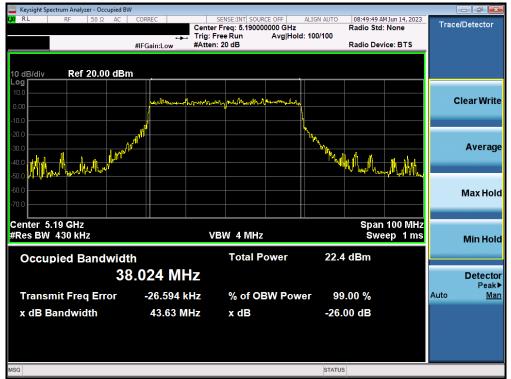
Plot 7-11. 26dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 114)



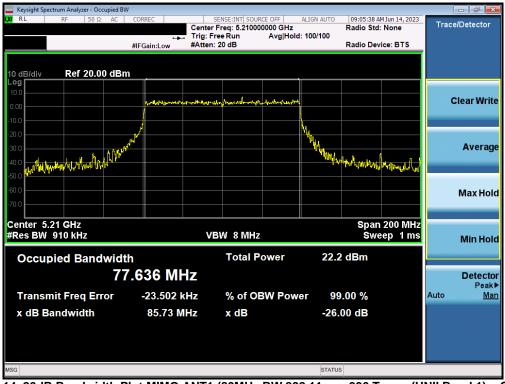
Plot 7-12. 26dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 40)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |
|---------------------|------------------|--------------------|----------------|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dama 04 af 457 |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 24 of 157 |
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Plot 7-13. 26dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax - 484 Tones (UNII Band 1) - Ch. 38)



Plot 7-14. 26dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax – 996 Tones (UNII Band 1) – Ch. 42)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dage 25 of 157   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 25 of 157   |
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| 🔤 Keysight Spectrum Analyzer - Occu   | •  |                    |                 |   |            |            |                    | _    |              |
|---|--|--------------------|-----------------|---|------------|------------|--------------------|------|--------------|
| <b>LXI</b> RL RF 50 Ω   | AC CORREC  |                    | NSE:INT SOUR    |   | ALIGN AUTO | 09:54:20 A | M Jun 14, 2023     | Trac | e/Detector   |
|   |  | Trig: Free         | Run             | Avg Hold  | : 100/100  |            |                    |      |              |
|   | #IFGain:Lo   | w #Atten: 2        | 0 dB            |   |            | Radio Dev  | ice: BTS           |      |              |
|   |  |                    |                 |   |            |            |                    |      |              |
| 10 dB/div Ref 20.00   | dBm  |                    |                 |   |            |            |                    |      |              |
| 10.0  |  |                    |                 |   |            |            |                    |      |              |
| 0.00  | and a state of the | rentmeen when when | moundationsplan | with the second s |            |            |                    | 1    | Clear Write  |
| -10.0   |  |                    |                 |   |            |            |                    |      |              |
| -20.0   | <b>,</b>   |                    |                 |   | l I        |            |                    |      |              |
| -30.0   | 1  |                    |                 |   | 4          |            |                    |      | Average      |
| and the second se | amunt  |                    |                 |   | hundrent   | white made | ka. 41             |      | Average      |
| land the second   |  |                    |                 |   |            |            | harmflandindradera |      |              |
| -50.0   |  |                    |                 |   |            |            |                    |      |              |
| -60.0   |  |                    |                 |   |            |            |                    |      | Max Hold     |
| -70.0   |  |                    |                 |   |            |            |                    |      |              |
| Center 5.25 GHz   |  |                    |                 |   |            | Span       | 400 MHz            |      |              |
| #Res BW 2 MHz   |  | VB                 | V 50 MH;        | z   |            | Swe        | ep 1 ms            |      | Min Hold     |
|   |  |                    | _               |   |            |            |                    |      | minnora      |
| Occupied Bandy  |  |                    | Total Po        | ower  | 22.8       | dBm        |                    |      |              |
|   | 156.02   | MHz                |                 |   |            |            |                    |      | Detector     |
| T   | . 40.4   | C7                 | 0/ -f OF        | NA/ D   | 00         | 00.0/      |                    | Auto | Peak▶<br>Man |
| Transmit Freq Erro  |  | 67 kHz             | % of OE         | W Powe  | er 99      | .00 %      |                    | Auto | ivian        |
| x dB Bandwidth  | 165  | .5 MHz             | x dB            |   | -26.0      | 00 dB      |                    |      |              |
|   |  |                    |                 |   |            |            |                    |      |              |
|   |  |                    |                 |   |            |            |                    |      |              |
|   |  |                    |                 |   |            |            |                    |      |              |
| MSG   |  |                    |                 |   | STATUS     |            |                    |      |              |

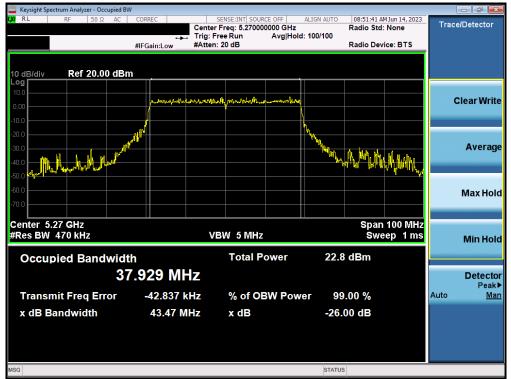
Plot 7-15. 26dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax - 2x996 Tones (UNII Band 1/2A) - Ch. 50)



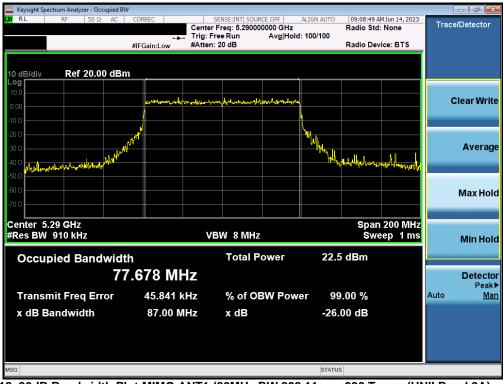
Plot 7-16. 26dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax – 242 Tones (UNII Band 2A) – Ch. 56)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 00 af 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 26 of 157   |
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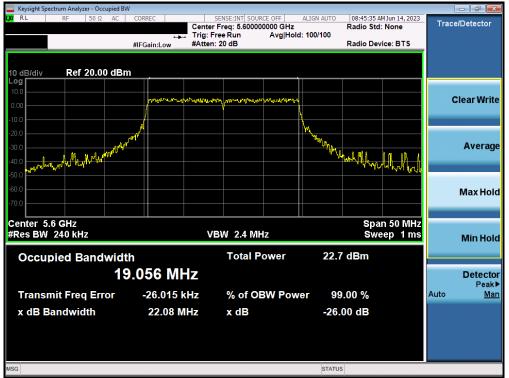
Plot 7-17. 26dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax - 484 Tones (UNII Band 2A) - Ch. 54)



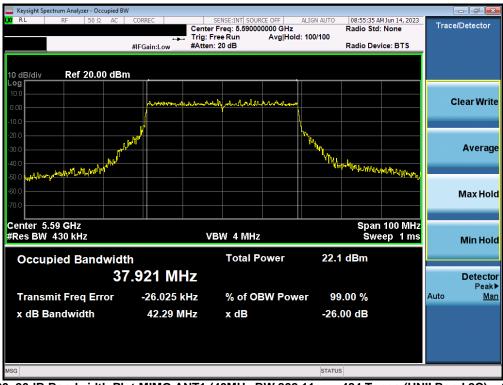
Plot 7-18. 26dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax – 996 Tones (UNII Band 2A) – Ch. 58)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dana 07 af 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 27 of 157   |
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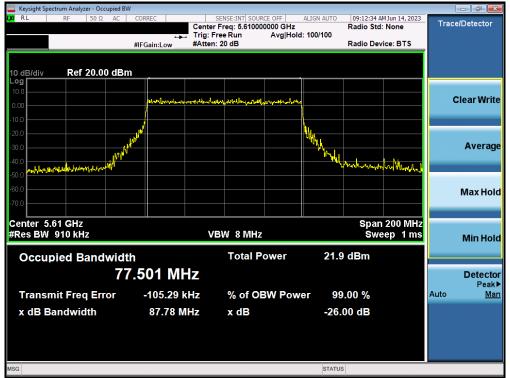
Plot 7-19. 26dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 2C) - Ch. 120)



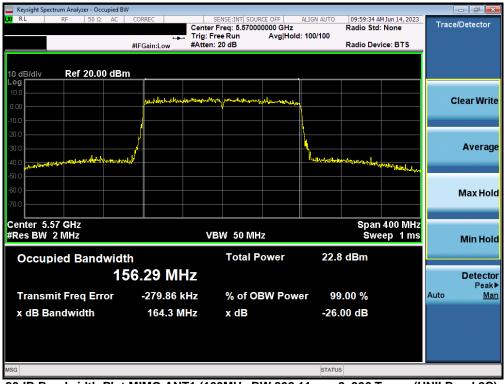
Plot 7-20. 26dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 118)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 00 af 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 28 of 157   |
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Plot 7-21. 26dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax - 996 Tones (UNII Band 2C) - Ch. 122)



Plot 7-22. 26dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax - 2x996 Tones (UNII Band 2C) - Ch. 114)

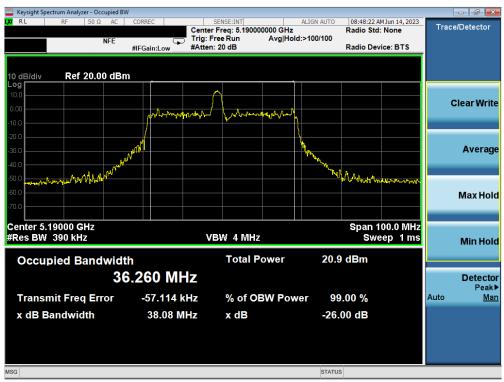
| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Deve 00 of 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 29 of 157   |
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## 7.2.2 MIMO Antenna-2 26dB Bandwidth Measurements



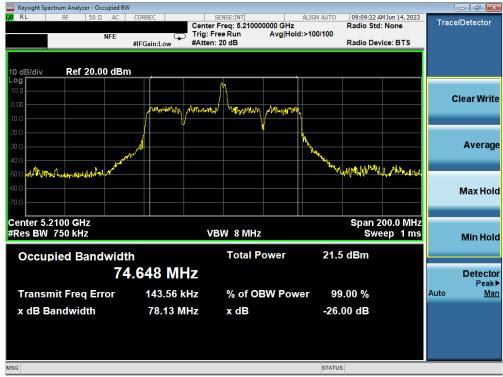
Plot 7-23. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 40)



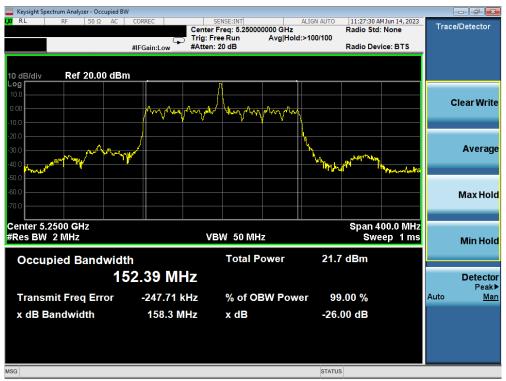
Plot 7-24. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 20 of 157                    |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 30 of 157                    |
| © 2023 ELEMENT      |                |                    | V 9 0 02/01/2019                  |





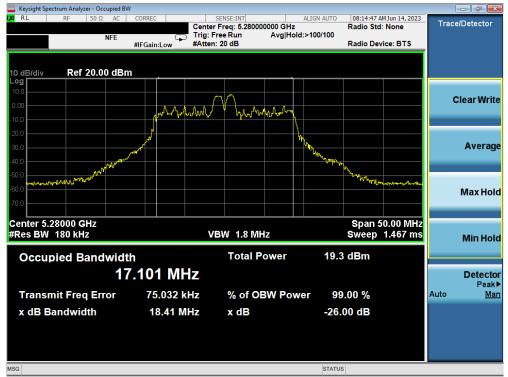
Plot 7-25. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)



Plot 7-26. 26dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dana 04 -6457    |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 31 of 157   |
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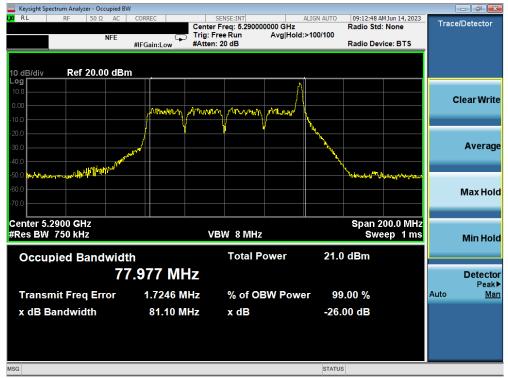
Plot 7-27. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)



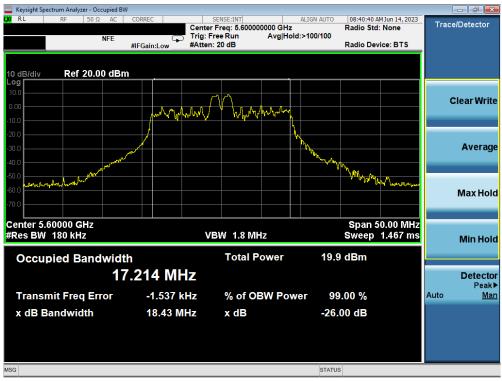
Plot 7-28. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 2A) – Ch. 54)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 20 af 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 32 of 157   |
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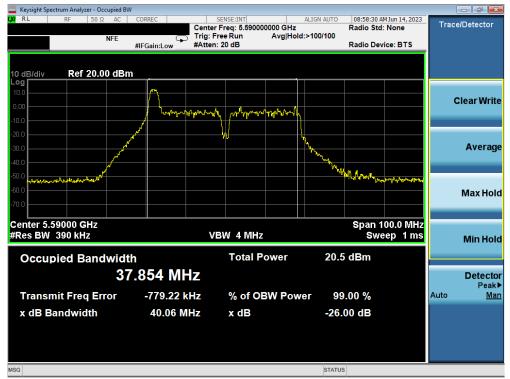
Plot 7-29. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)



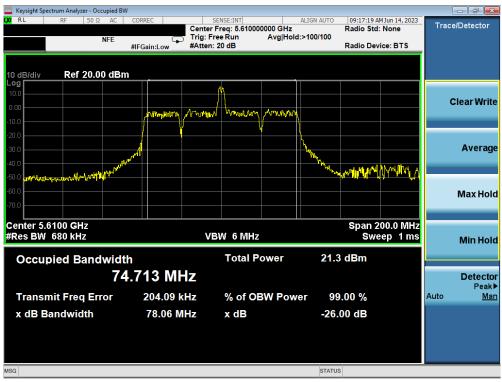
Plot 7-30. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 120)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 00 of 457   |
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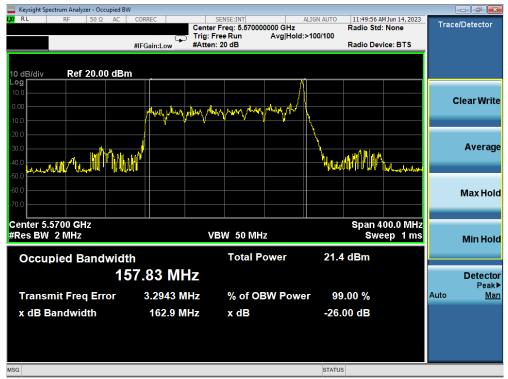
Plot 7-31. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 118)



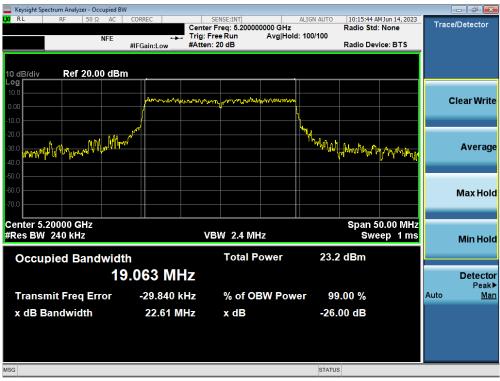
Plot 7-32. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 122)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 04 af 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 34 of 157   |
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Plot 7-33. 26dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 114)



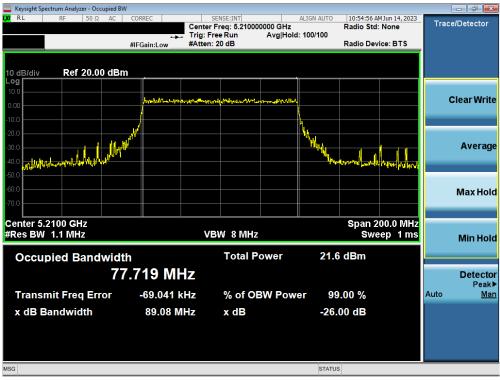
Plot 7-34. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 1) – Ch. 40)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |
|---------------------|------------------|--------------------|----------------|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dage 25 of 157 |
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Plot 7-35. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 1) - Ch. 38)



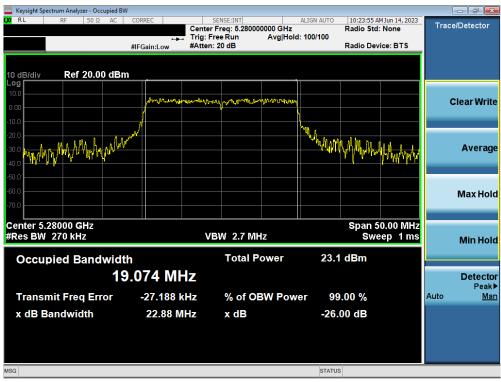
Plot 7-36. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 1) – Ch. 42)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 26 of 157   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 36 of 157   |
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| Keysight Spectrum Analyzer - Occu          | pied BW                               |                                   |                       |                               |                      |        |            |
|--|---------------------------------------|-----------------------------------|-----------------------|-------------------------------|----------------------|--------|------------|
| X RL RF 50 Ω                               | AC CORREC                             | SENSE:INT<br>Center Freq: 5.25000 | ALIGN AUTO            | 11:41:36 AM J<br>Radio Std: N |                      | Trace/ | Detector   |
|  |                                       | Trig: Free Run                    | Avg Hold: 100/100     | Radio Std: N                  | ione                 |        |            |
|  | #IFGain:Low                           | #Atten: 20 dB                     |                       | Radio Device                  | e: BTS               |        |            |
|  |                                       |                                   |                       |                               |                      |        |            |
| 10 dB/div Ref 20.00                        | dBm                                   |                                   |                       |                               |                      |        |            |
| 10 dB/div Ref 20.00                        |                                       |                                   |                       |                               |                      |        |            |
| 10.0                                       |                                       |                                   |                       |                               |                      |        |            |
| 0.00                                       | and a how when the                    | munchingmandersup                 | y more and a strategy |                               |                      | Cl     | ear Write  |
|  |                                       |                                   |                       |                               |                      |        |            |
| -10.0                                      |                                       |                                   |                       |                               |                      |        |            |
| -20.0                                      |                                       |                                   |                       |                               |                      |        |            |
| -30.0                                      | · · · · · · · · · · · · · · · · · · · |                                   |                       |                               |                      |        | Average    |
| -40.0 กลุโศลสาราสประเมาการใหญ่หม่างสาราสาร | www.                                  |                                   | - text ( Cristian     | welling when the second       | worked and have      |        |            |
| -50.0                                      |                                       |                                   |                       |                               |                      |        |            |
|  |                                       |                                   |                       |                               |                      |        |            |
| -60.0                                      |                                       |                                   |                       |                               |                      |        | Max Hold   |
| -70.0                                      |                                       |                                   |                       |                               |                      |        |            |
| Center 5.2500 GHz                          |                                       |                                   |                       | Enon 400                      |                      |        |            |
| #Res BW 2 MHz                              |                                       | VBW 50 MH                         | 7                     | Span 40                       | 0.0 101112<br>p 1 ms |        |            |
| #Res Dov 2 IVINZ                           |                                       |                                   | 2                     | awee                          | p ms                 |        | Min Hold   |
| Occupied Bandy                             | width                                 | Total P                           | ower 23 (             | ) dBm                         |                      |        |            |
| Occupied Balluv                            |                                       |                                   | 20.0                  |                               |                      |        |            |
|  | 156.13 MH                             | Z                                 |                       |                               |                      |        | Detector   |
|  |                                       |                                   |                       |                               |                      |        | Peak►      |
| Transmit Freq Erro                         | or -89.615 kl                         | IZ % of O                         | 3W Power 99           | 0.00 %                        |                      | Auto   | <u>Man</u> |
| x dB Bandwidth                             | 166.1 MI                              | lz xdB                            | -26.                  | 00 dB                         |                      |        |            |
|  |                                       |                                   |                       |                               |                      |        |            |
|  |                                       |                                   |                       |                               |                      |        |            |
|  |                                       |                                   |                       |                               |                      |        |            |
|  |                                       |                                   |                       |                               |                      |        |            |
| MSG  |                                       |                                   | STATU                 | 5                             |                      |        |            |

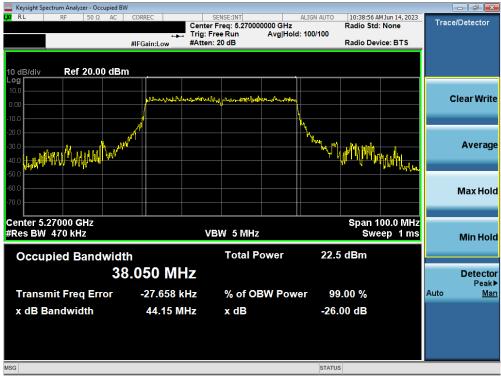
Plot 7-37. 26dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax - 2x996 Tones (UNII Band 1/2A) - Ch. 50)



Plot 7-38. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 2A) - Ch. 56)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |
|---------------------|------------------|--------------------|----------------|
| Test Report S/N:    | Test Dates:      | EUT Type:          | De             |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 37 of 157 |
| © 2023 ELEMENT      | V 9.0 02/01/2019 |                    |                |





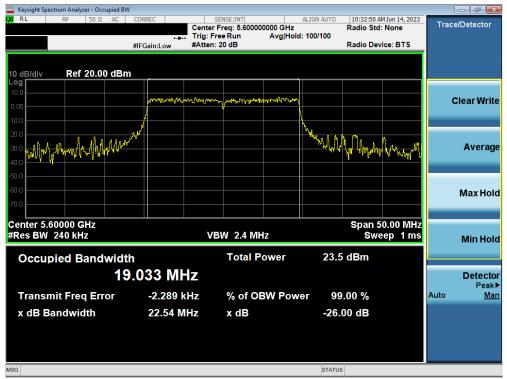
Plot 7-39. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 2A) - Ch. 54)



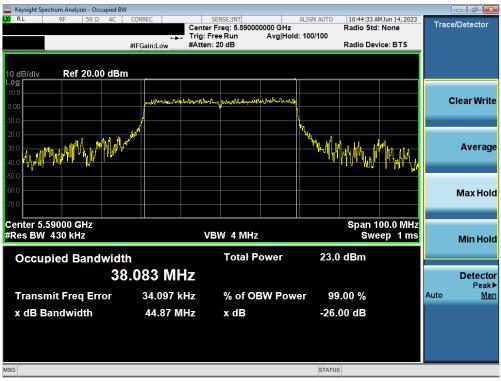
Plot 7-40. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 996 Tones (UNII Band 2A) - Ch. 58)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |
|---------------------|----------------|--------------------|------------------|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dage 20 of 157   |  |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 38 of 157   |  |
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Plot 7-41. 26dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 2C) - Ch. 120)



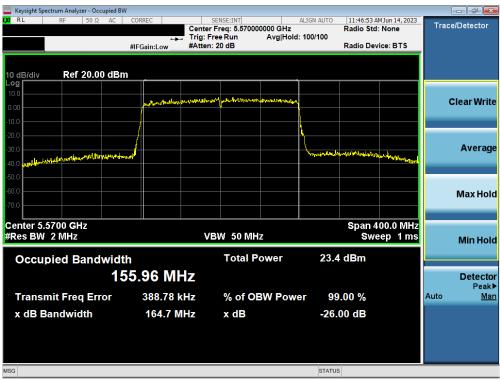
Plot 7-42. 26dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 2C) – Ch. 118)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Deve 20 of 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 39 of 157   |
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Plot 7-43. 26dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 996 Tones (UNII Band 2C) - Ch. 122)



Plot 7-44. 26dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax - 2x996 Tones (UNII Band 2C) - Ch. 114)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |
|---------------------|----------------|--------------------|------------------|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dage 40 of 157   |  |
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| © 2023 ELEMENT      |                |                    | V 9.0 02/01/2019 |  |



### 7.3 6dB Bandwidth Measurement

### **Test Overview and Limit**

The bandwidth at 6dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013, and at the appropriate frequencies. The spectrum analyzer's bandwidth measurement function is configured to measure the 6dB bandwidth.

### In the 5.725 – 5.850GHz and 5.850-5.895GHz bands, the 6dB bandwidth must be $\geq$ 500 kHz.

### Test Procedure Used

ANSI C63.10-2013 - Section 6.9.2

### **Test Settings**

- The signal analyzers' automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = 100 kHz
- 3. VBW  $\geq$  3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple

### 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**

The 6dB Bandwidth measurement for each channel was measured with the RU index showing the highest conducted power.

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### **MIMO 6dB Bandwidth Measurements**

|      | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 6dB<br>Bandwidth<br>[MHz] |
|------|--------------------|----------------|-------------|-------|---------------------|------------------------------------|
|      | 5745               | 149            | ax (20MHz)  | 26T   | MCS0                | 2.11                               |
| ~    | 5785               | 157            | ax (20MHz)  | 26T   | MCS0                | 7.65                               |
| 2q 3 | 5825               | 165            | ax (20MHz)  | 26T   | MCS0                | 2.14                               |
| Band | 5755               | 151            | ax (40MHz)  | 26T   | MCS0                | 2.18                               |
|      | 5795               | 159            | ax (40MHz)  | 26T   | MCS0                | 2.17                               |
|      | 5775               | 155            | ax (80MHz)  | 26T   | MCS0                | 2.98                               |

Table 7-6. Band 3 Conducted 6dB Bandwidth Measurements MIMO ANT1 (26 Tones)

|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate [Mbps] | Measured<br>6dB Bandwidth<br>[MHz] |
|-----------|--------------------|----------------|-------------|-------|------------------|------------------------------------|
| Band 3/4  | 5845               | 169            | ax (20MHz)  | 26T   | MCS0             | 2.13                               |
| Band 4    | 5865               | 173            | ax (20MHz)  | 26T   | MCS0             | 2.15                               |
| Dallu 4   | 5885               | 177            | ax (20MHz)  | 26T   | MCS0             | 2.13                               |
| Band 3/4  | 5835               | 167            | ax (40MHz)  | 26T   | MCS0             | 2.19                               |
| Band 4    | 5875               | 175            | ax (40MHz)  | 26T   | MCS0             | 2.17                               |
| Band 3/4  | 5855               | 171            | ax (80MHz)  | 26T   | MCS0             | 2.28                               |
| Daliu 5/4 | 5815               | 163            | ax (160MHz) | 26T   | MCS0             | 2.61                               |

Table 7-7. Bands 3/4 Conducted 6dB Bandwidth Measurements MIMO ANT1 (26 Tones)

| _    | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 6dB<br>Bandwidth<br>[MHz] |
|------|--------------------|----------------|-------------|-------|---------------------|------------------------------------|
|      | 5745               | 149            | ax (20MHz)  | 26T   | MCS0                | 2.13                               |
| m    | 5785               | 157            | ax (20MHz)  | 26T   | MCS0                | 2.70                               |
|      | 5825               | 165            | ax (20MHz)  | 26T   | MCS0                | 2.11                               |
| Band | 5755               | 151            | ax (40MHz)  | 26T   | MCS0                | 2.24                               |
|      | 5795               | 159            | ax (40MHz)  | 26T   | MCS0                | 2.18                               |
|      | 5775               | 155            | ax (80MHz)  | 26T   | MCS0                | 2.93                               |

Table 7-8. Band 3 Conducted 6dB Bandwidth Measurements MIMO ANT2 (26 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dega 42 of 157   |
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|          | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate [Mbps] | Measured<br>6dB Bandwidth<br>[MHz] |
|----------|--------------------|----------------|-------------|-------|------------------|------------------------------------|
| Band 3/4 | 5845               | 169            | ax (20MHz)  | 26T   | MCS0             | 2.10                               |
| Band 4   | 5865               | 173            | ax (20MHz)  | 26T   | MCS0             | 2.13                               |
| Dallu 4  | 5885               | 177            | ax (20MHz)  | 26T   | MCS0             | 2.12                               |
| Band 3/4 | 5835               | 167            | ax (40MHz)  | 26T   | MCS0             | 2.19                               |
| Band 4   | 5875               | 175            | ax (40MHz)  | 26T   | MCS0             | 2.24                               |
| Band 3/4 | 5855               | 171            | ax (80MHz)  | 26T   | MCS0             | 2.22                               |
|          | 5815               | 163            | ax (160MHz) | 26T   | MCS0             | 2.63                               |

Table 7-9. Bands 3/4 Conducted 6dB Bandwidth Measurements MIMO ANT2 (26 Tones)

|      | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 6dB<br>Bandwidth<br>[MHz] |
|------|--------------------|----------------|-------------|-------|---------------------|------------------------------------|
|      | 5745               | 149            | ax (20MHz)  | 242T  | MCS0                | 19.09                              |
|      | 5785               | 157            | ax (20MHz)  | 242T  | MCS0                | 19.04                              |
| d 3  | 5825               | 165            | ax (20MHz)  | 242T  | MCS0                | 19.05                              |
| Band | 5755               | 151            | ax (40MHz)  | 484T  | MCS0                | 38.26                              |
|      | 5795               | 159            | ax (40MHz)  | 484T  | MCS0                | 38.16                              |
|      | 5775               | 155            | ax (80MHz)  | 996T  | MCS0                | 78.19                              |

Table 7-10. Band 3 Conducted 6dB Bandwidth Measurements MIMO ANT1 (Full Tones)

|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones  | Data Rate [Mbps] | Measured<br>6dB Bandwidth<br>[MHz] |
|-----------|--------------------|----------------|-------------|--------|------------------|------------------------------------|
| Band 3/4  | 5845               | 169            | ax (20MHz)  | 242T   | MCS0             | 19.07                              |
| Band 4    | 5865               | 173            | ax (20MHz)  | 242T   | MCS0             | 19.08                              |
| Dallu 4   | 5885               | 177            | ax (20MHz)  | 242T   | MCS0             | 19.09                              |
| Band 3/4  | 5835               | 167            | ax (40MHz)  | 484T   | MCS0             | 38.20                              |
| Band 4    | 5875               | 175            | ax (40MHz)  | 484T   | MCS0             | 38.19                              |
| Band 3/4  | 5855               | 171            | ax (80MHz)  | 996T   | MCS0             | 78.35                              |
| Daliù 5/4 | 5815               | 163            | ax (160MHz) | 2x996T | MCS0             | 153.06                             |

Table 7-11. Bands 3/4 Conducted 6dB Bandwidth Measurements MIMO ANT1 (Full Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dogo 42 of 157   |
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|      | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Measured 6dB<br>Bandwidth<br>[MHz] |
|------|--------------------|----------------|-------------|-------|---------------------|------------------------------------|
|      | 5745               | 149            | ax (20MHz)  | 242T  | MCS0                | 19.07                              |
|      | 5785               | 157            | ax (20MHz)  | 242T  | MCS0                | 19.11                              |
| 1d 3 | 5825               | 165            | ax (20MHz)  | 242T  | MCS0                | 19.12                              |
| Band | 5755               | 151            | ax (40MHz)  | 484T  | MCS0                | 38.08                              |
|      | 5795               | 159            | ax (40MHz)  | 484T  | MCS0                | 38.16                              |
|      | 5775               | 155            | ax (80MHz)  | 996T  | MCS0                | 78.22                              |

Table 7-12. Band 3 Conducted 6dB Bandwidth Measurements MIMO ANT2 (Full Tones)

|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones  | Data Rate [Mbps] | Measured<br>6dB Bandwidth<br>[MHz] |
|-----------|--------------------|----------------|-------------|--------|------------------|------------------------------------|
| Band 3/4  | 5845               | 169            | ax (20MHz)  | 242T   | MCS0             | 19.09                              |
| Band 4    | 5865               | 173            | ax (20MHz)  | 242T   | MCS0             | 19.09                              |
| Danu 4    | 5885               | 177            | ax (20MHz)  | 242T   | MCS0             | 19.07                              |
| Band 3/4  | 5835               | 167            | ax (40MHz)  | 484T   | MCS0             | 38.15                              |
| Band 4    | 5875               | 175            | ax (40MHz)  | 484T   | MCS0             | 38.16                              |
| Band 3/4  | 5855               | 171            | ax (80MHz)  | 996T   | MCS0             | 78.22                              |
| Dalid 5/4 | 5815               | 163            | ax (160MHz) | 2x996T | MCS0             | 157.67                             |

Table 7-13. Bands 3/4 Conducted 6dB Bandwidth Measurements MIMO ANT2 (Full Tones)

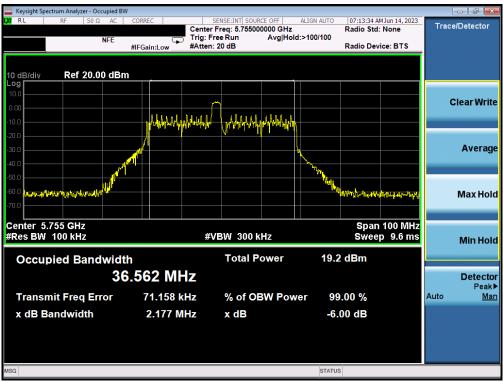
| FCC ID: A3LSMS711U  | MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|--------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:        | EUT Type:        | Dage 44 of 157                    |
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### 7.3.1 MIMO Antenna-1 6dB Bandwidth Measurements



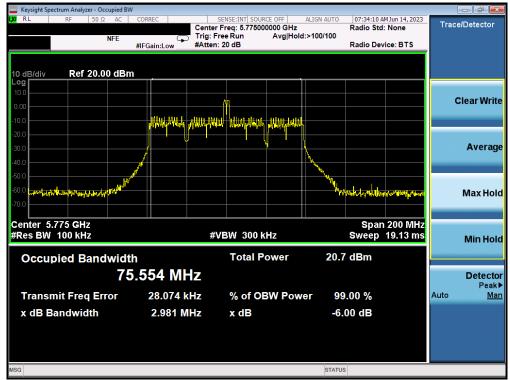
Plot 7-45. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 157)



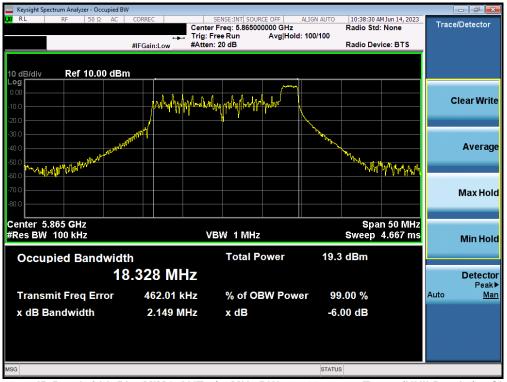
Plot 7-46. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dava 45          |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 45 of 157   |
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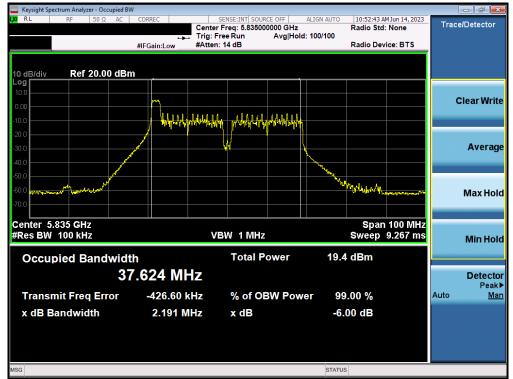
Plot 7-47. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UII Band 3) - Ch. 155)



Plot 7-48. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 173)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 40 at 457   |
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Plot 7-49. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 167)



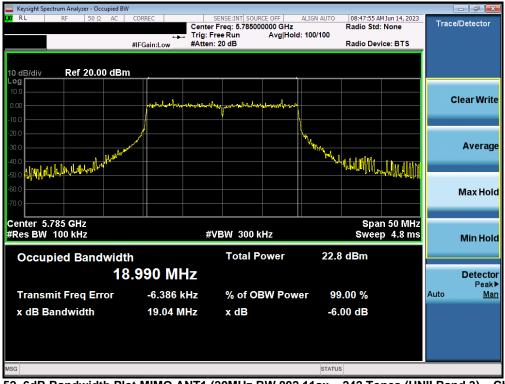
Plot 7-50. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 171)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |
|---------------------|------------------|--------------------|----------------|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Daga 47 of 157 |
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| Keysight Spectrum Analyzer - Occupied E | 3W                                      |                                   |                               |                 | - <b>5</b> ×      |
|---|---|-----------------------------------|-------------------------------|-----------------|-------------------|
| <mark>(X)</mark> RL RF 50Ω AC           |   | SENSE:INT SOURCE OFF              | ALIGN AUTO 10:25:42 A         | AM Jun 14, 2023 | Trace/Detector    |
|   | +++ Trig: F                             | ree Run Avg Hold                  | : 100/100                     |                 |                   |
|   | #IFGain:Low #Atten                      | : 22 dB                           | Radio De                      | vice: BTS       |                   |
|   |   |                                   |                               |                 |                   |
| 10 dB/div Ref 20.00 dB                  | m                                       |                                   |                               |                 |                   |
| Log<br>10.0                             |   |                                   |                               |                 |                   |
| 0.00                                    |   | <u> </u>                          |                               |                 | Clear Write       |
| -10.0                                   |   |                                   |                               |                 |                   |
| -20.0                                   | hana haha haha ha                       | na teatnat teatuar haituar haitua |                               |                 |                   |
| -30.0                                   |   |                                   |                               |                 | Average           |
| -40.0                                   |   |                                   |                               |                 | Averuge           |
|   |   |                                   | <u>\</u>                      |                 |                   |
| and a stand and the sould be with the   | ~~~ · · · · · · · · · · · · · · · · · · |                                   | "Hy conservation and the work | hummendes       |                   |
| -60.0                                   |   |                                   |                               |                 | Max Hold          |
| -70.0                                   |   |                                   |                               |                 |                   |
| Center 5.815 GHz                        |   |                                   | Spar                          | 1400 MHz        |                   |
| #Res BW 100 kHz                         | V                                       | BW 1 MHz                          |                               | 36.93 ms        | Min Hold          |
|   |   | Total Power                       | 21.1 dBm                      |                 |                   |
| Occupied Bandwid                        |   | Total Power                       | 21.1 dBm                      |                 |                   |
| 1                                       | 54.51 MHz                               |                                   |                               |                 | Detector          |
| Transmit Freq Error                     | -227.18 kHz                             | % of OBW Pow                      | er 99.00 %                    |                 | Peak▶<br>Auto Man |
|   |   |                                   |                               |                 |                   |
| x dB Bandwidth                          | 2.613 MHz                               | x dB                              | -6.00 dB                      |                 |                   |
|   |   |                                   |                               |                 |                   |
|   |   |                                   |                               |                 |                   |
|   |   |                                   |                               |                 |                   |
| MSG                                     |   |                                   | STATUS                        |                 |                   |

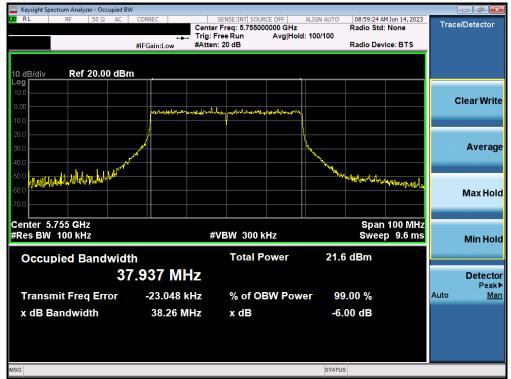
Plot 7-51. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 163)



Plot 7-52. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 157)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |
|---------------------|------------------|--------------------|----------------|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dama 40 of 457 |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 48 of 157 |
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Plot 7-53. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax - 484 Tones (UNII Band 3) - Ch. 151)



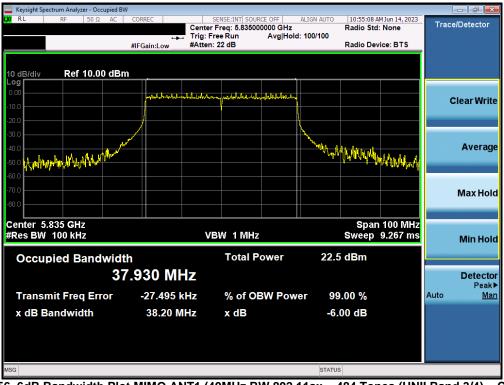
Plot 7-54. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax – 996 Tones (UNII Band 3) – Ch. 155)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dama 40 of 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 49 of 157   |
| © 2023 ELEMENT      |                |                    | V 9.0 02/01/2019 |





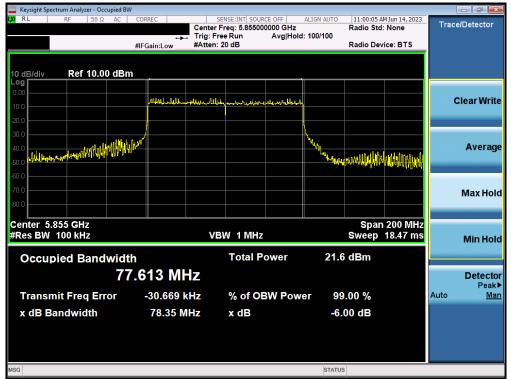
Plot 7-55. 6dB Bandwidth Plot MIMO ANT1 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 173)



Plot 7-56. 6dB Bandwidth Plot MIMO ANT1 (40MHz BW 802.11ax – 484 Tones (UNII Band 3/4) – Ch. 167)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |
|---------------------|------------------|--------------------|----------------|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dege 50 of 157 |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 50 of 157 |
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Plot 7-57. 6dB Bandwidth Plot MIMO ANT1 (80MHz BW 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 171)

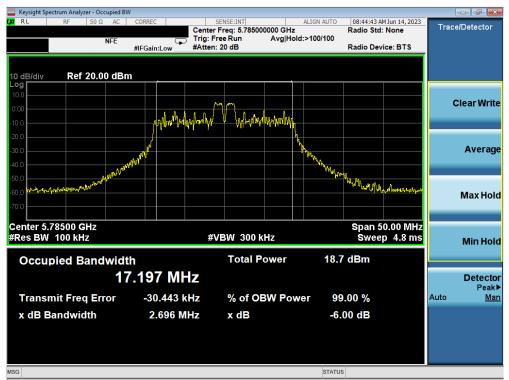


Plot 7-58. 6dB Bandwidth Plot MIMO ANT1 (160MHz BW 802.11ax – 2x996 Tones (UNII Band 3/4) – Ch. 163)

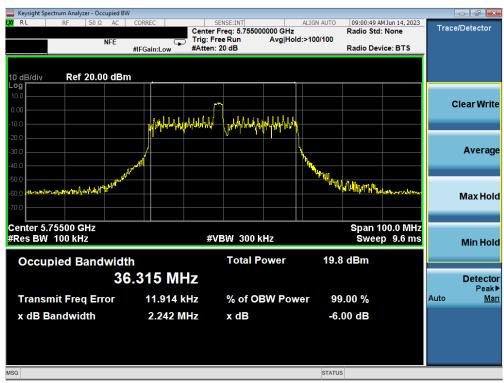
| FCC ID: A3LSMS711U          |                | MEASUREMENT REPORT Approved<br>Technical |                |  |  |  |  |
|-----------------------------|----------------|--|----------------|--|--|--|--|
| Test Report S/N:            | Test Dates:    | EUT Type:                                | Daga 51 of 157 |  |  |  |  |
| 1M2304260060-18.A3L         | 5/24-7/31/2023 | Portable Handset                         | Page 51 of 157 |  |  |  |  |
| © 2023 ELEMENT V 9.0 02/01/ |                |  |                |  |  |  |  |



### 7.3.2 MIMO Antenna-2 6dB Bandwidth Measurements



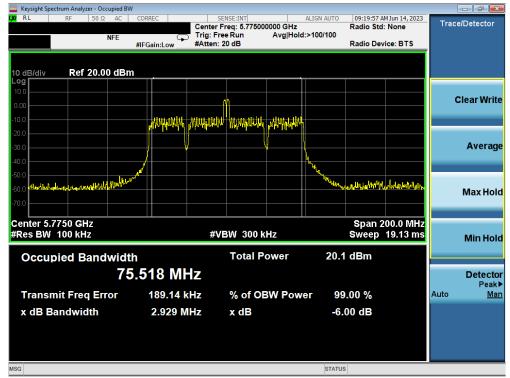
Plot 7-59. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)



Plot 7-60. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax – 26 Tones (UNII Band 3) – Ch. 151)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                                   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 52 of 157                    |
| © 2023 ELEMENT      |                |                    | V 9 0 02/01/2019                  |





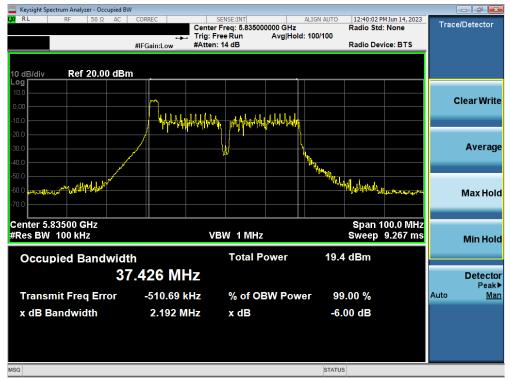
Plot 7-61. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 26 Tones (UII Band 3) - Ch. 155)



Plot 7-62. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax – 26 Tones (UNII Band 4) – Ch. 173)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |  |  |
|---------------------|------------------|--------------------|----------------|--|--|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dana 50 af 457 |  |  |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 53 of 157 |  |  |
| © 2023 ELEMENT      | V 9.0 02/01/2019 |                    |                |  |  |





Plot 7-63. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 167)



Plot 7-64. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax – 26 Tones (UNII Band 3/4) – Ch. 171)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |  |  |
|---------------------|------------------|--------------------|----------------|--|--|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dama 54 af 457 |  |  |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 54 of 157 |  |  |
| © 2023 ELEMENT      | V 9.0 02/01/2019 |                    |                |  |  |



|           | ectrum Analyzer   | - Occup | pied BW      |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
|-----------|-------------------|---------|--------------|----------|-------|-----------------|--------|------------|----------|------|--------|------------|-----------------------|-----------------|------|-------------|
| LXI RL    | RF 5              | 50 Ω    | AC (         | CORREC   |       | _               |        | NSE:IN     |          |      |        | ALIGN AUTO |                       | PM Jun 14, 2023 | Tro  | e/Detector  |
|           |                   |         |              |          |       |                 |        |            | .81500   |      |        |            | Radio Sto             | I: None         | Trac | enderector  |
|           |                   |         |              |          | •     |                 |        | e Run      |          | Avç  | j Hold | : 100/100  |                       |                 |      |             |
|           |                   |         | #            | IFGain:L | w     | #At             | ten: 2 | 2 dB       |          |      |        |            | Radio De              | vice: BTS       |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
| 10 dB/div | Ref 2             | 0.00    | dBm          |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
| Log       |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
| 10.0      |                   |         |              |          |       |                 | _      |            |          |      |        |            |                       |                 |      | <b>O</b> I  |
| 0.00      |                   |         |              |          |       |                 | [      |            |          |      |        |            |                       |                 |      | Clear Write |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
| -10.0     |                   |         |              | Muhi.    | INUH. | <u>/II4.III</u> | UNUN   | <b>DOM</b> | , ANNI   | WH G | huit   |            |                       |                 |      |             |
| -20.0     |                   |         |              | 104000   | 1.444 | (indefinition)  | a dama | Mudawa     | an Lewis | 1000 | 100    |            |                       |                 |      |             |
| -30.0     |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      | Average     |
| -30.0     |                   |         |              | i I      |       | 1               |        |            | ų        |      | 1      |            |                       |                 |      | Average     |
| -40.0     |                   |         |              |          |       |                 |        |            |          |      |        | λ          |                       |                 |      |             |
| -50.0     |                   |         |              | 1        |       |                 |        |            |          |      |        | he.        |                       |                 |      |             |
| الملمطاسف | dealer Miller and | A. A.   | "Will have a |          |       |                 |        |            |          |      |        | The Warder | and With the Property | mananen         |      |             |
| -60.0     |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      | Max Hold    |
| -70.0     |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      | maxmona     |
| -70.0     |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
| Contor 5  | 8150 GHz          |         |              |          |       |                 |        |            |          |      |        |            | - Cnon                | 100.0 MHz       |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
| #Res BW   | 100 kHz           |         |              |          |       |                 | VB     | W 1        | MHz      |      |        |            | sweep                 | 36.93 ms        |      | Min Hold    |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
| Occu      | pied Ba           | ndv     | vidth        |          |       |                 |        | Tot        | tal P    | owe  | r      | 21.        | 3 dBm                 |                 |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
|           |                   |         | 154          | .37      | M     | TZ              |        |            |          |      |        |            |                       |                 |      | Detector    |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      | Peak►       |
| Transi    | mit Freq          | Erro    | r            | 265      | .99 k | ٢Hz             |        | % (        | of OE    | 3W I | owe    | er 9       | 9.00 %                |                 | Auto | <u>Man</u>  |
|           |                   |         |              |          |       |                 |        |            | _        |      |        |            |                       |                 |      |             |
| X dB E    | Bandwidt          | h       |              | 2.6      | 29 N  | Ηz              |        | x d        | в        |      |        | -6         | .00 dB                |                 |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            |                       |                 |      |             |
|           |                   |         |              |          |       |                 |        |            |          |      |        |            | 10                    |                 | -    |             |
| MSG       |                   |         |              |          |       |                 |        |            |          |      |        | STAT       | JS                    |                 |      |             |

Plot 7-65. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 163)



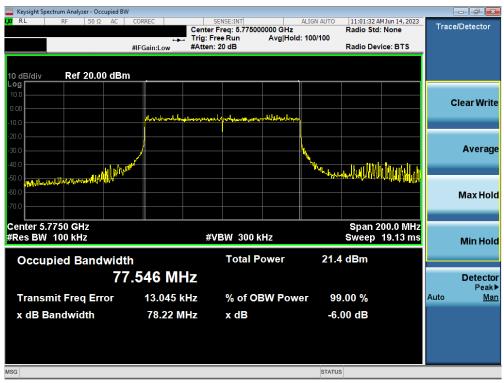
Plot 7-66. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax – 242 Tones (UNII Band 3) – Ch. 157)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                                   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 55 of 157                    |
| © 2023 ELEMENT      |                |                    | V 9.0 02/01/2019                  |





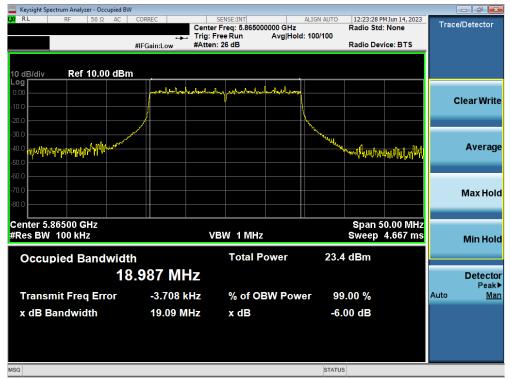
Plot 7-67. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax - 484 Tones (UNII Band 3) - Ch. 151)



Plot 7-68. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax – 996 Tones (UNII Band 3) – Ch. 155)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |  |  |
|---------------------|------------------|--------------------|----------------|--|--|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dama 50 at 457 |  |  |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 56 of 157 |  |  |
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Plot 7-69. 6dB Bandwidth Plot MIMO ANT2 (20MHz BW 802.11ax - 242 Tones (UNII Band 4) - Ch. 173)



Plot 7-70. 6dB Bandwidth Plot MIMO ANT2 (40MHz BW 802.11ax – 484 Tones (UNII Band 3/4) – Ch. 167)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |  |
|---------------------|----------------|--------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 57 of 157   |  |  |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 57 of 157   |  |  |
| © 2023 ELEMENT      |                | ·                  | V 9.0 02/01/2019 |  |  |



| Keysight Spectrum Analyzer - Occ | upied BW                |              |           |                |                      |              |  |                      |      |             |
|----------------------------------|-------------------------|--------------|-----------|----------------|----------------------|--------------|--|----------------------|------|-------------|
| LX/ RL RF 50 Ω                   | AC COR                  | REC          |           | NSE:INT        |                      | ALIGN AUTO   |  | M Jun 14, 2023       | Trac | e/Detector  |
|                                  |                         |              |           | req: 5.85500   | 0000 GHz<br>Avg Hold | . 400/400    | Radio Std                                | : None               | TTAC | erbetector  |
|                                  | #IEG                    | ⊶<br>ain:Low | #Atten: 1 |                | Avginoid             | 1. 100/100   | Radio Dev                                | rice: BTS            |      |             |
|                                  | ""по                    | unicow       |           |                |                      |              |  |                      |      |             |
|                                  |                         |              |           |                |                      |              |  |                      |      |             |
| 10 dB/div Ref 10.00              | ) dBm                   |              |           |                |                      |              |  |                      |      |             |
| Log                              |                         |              |           |                |                      |              |  |                      |      |             |
| 0.00                             |                         | manulu.      | MAMANIA   | A LALLMAN MULT | _uumuulu             |              |  |                      |      | Clear Write |
| -10.0                            |                         |              |           |                |                      |              |  |                      |      |             |
| -20.0                            |                         |              |           |                |                      |              |  |                      |      |             |
| -30.0                            |                         |              |           |                |                      | λ.           |  |                      |      |             |
|                                  | الممر                   |              |           |                |                      |              |  |                      |      | Average     |
| -40.0                            | And and a second second |              |           |                |                      | Nul Internet | WWWW                                     | WWWWWW               |      | Average     |
| -50.0 Motor - Mature Market      | 494 · ·                 |              |           |                |                      |              | aaa a sa s | A CALL OF A          |      |             |
| -60.0                            |                         |              |           |                |                      |              |  |                      |      |             |
| -70.0                            |                         |              |           |                |                      |              |  |                      |      |             |
|                                  |                         |              |           |                |                      |              |  |                      |      | Max Hold    |
| -80.0                            |                         |              |           |                |                      |              |  |                      |      |             |
| Center 5.8550 GHz                |                         |              |           |                |                      |              | Enon 1                                   |                      |      |             |
| #Res BW 100 kHz                  |                         |              | VD        | V 1 MHz        |                      |              |  | 00.0 MHz<br>18.47 ms |      |             |
| #Res BW 100 KH2                  |                         |              | VD        |                |                      |              | aweep                                    | 10.47 1115           |      | Min Hold    |
| Occurried Dand                   |                         |              |           | Total P        | owor                 | 22.6         | i dBm                                    |                      |      |             |
| Occupied Band                    |                         |              |           | TOtal F        | OWEI                 | 22.0         |  |                      |      |             |
|                                  | 77.4                    | 69 MI        | z         |                |                      |              |  |                      |      | Detector    |
|                                  |                         |              |           |                |                      |              |  |                      |      | Peak▶       |
| Transmit Freq Err                | or                      | 15.377 k     | (Hz       | % of OE        | 3W Pow               | er 99        | .00 %                                    |                      | Auto | <u>Man</u>  |
| x dB Bandwidth                   |                         | 78.22 N      | 147       | x dB           |                      | -6           | 00 dB                                    |                      |      |             |
|                                  |                         | 10.22 1      | 11 12     | A UD           |                      | -0.          |  |                      |      |             |
|                                  |                         |              |           |                |                      |              |  |                      |      |             |
|                                  |                         |              |           |                |                      |              |  |                      |      |             |
|                                  |                         |              |           |                |                      |              |  |                      |      |             |
| MSG                              |                         |              |           |                |                      | STATUS       | ,  |                      |      |             |
| Mag                              |                         |              |           |                |                      | STATUS       |  |                      |      |             |

Plot 7-71. 6dB Bandwidth Plot MIMO ANT2 (80MHz BW 802.11ax - 996 Tones (UNII Band 3/4) - Ch. 171)



Plot 7-72. 6dB Bandwidth Plot MIMO ANT2 (160MHz BW 802.11ax – 2x996 Tones (UNII Band 3/4) – Ch. 163)

| FCC ID: A3LSMS711U  |                  | MEASUREMENT REPORT |                |  |  |
|---------------------|------------------|--------------------|----------------|--|--|
| Test Report S/N:    | Test Dates:      | EUT Type:          | Dama 50 at 457 |  |  |
| 1M2304260060-18.A3L | 5/24-7/31/2023   | Portable Handset   | Page 58 of 157 |  |  |
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### 7.4 UNII Output Power Measurement

### Test Overview and Limits

A transmitter antenna terminal of the EUT is connected to the input of an RF pulse power sensor. Measurement is made using a broadband average power meter while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013, and at the appropriate frequencies.

### The output power limits are specified in the tables below.

| UNII Fraguenav Banga |                  | Maximum Conducted Pov                        | wer Limit | Maximum e.i.r.p |   |  |
|----------------------|------------------|--|-----------|-----------------|---|--|
| Band                 | Frequency Range  | FCC ISED                                     |           | FCC             | ISED  |  |
| UNII 1               | 5.15 – 5.25GHz   | 23.98dBm (250mW)                             | N/A       | N/A             | The lesser of 23.01dBm<br>(200mW) <b>or</b> 10dBm + 10log <sub>10</sub> B |  |
| UNII 2A              | 5.25 – 5.35GHz   |  |           |                 |   |  |
| UNII 2C              | 5.47 – 5.725GHz  | The lesser of 23.98dBm (2<br>11dBm + 10log₁₀ |           | N/A             | The lesser of 30dBm (1W) <b>or</b><br>17dBm + 10log <sub>10</sub> B       |  |
| UNII 3               | 5.725 – 5.850GHz | 30dBm (1W)                                   |           | N/A             | N/A   |  |
| UNII 4               | 5.850 – 5.895GHz | N/A  |           | 30dBm (1W)      | Not Supported   |  |

| UNII    | Fraguanay Panga  | Maximum Conducted Power Limit                                | Maximum e.i.r.p |
|---------|------------------|--|-----------------|
| Band    | Frequency Range  | FCC  | FCC             |
| UNII 1  | 5.15 – 5.25GHz   | 23.98dBm (250mW)   | N/A             |
| UNII 2A | 5.25 – 5.35GHz   |  |                 |
| UNII 2C | 5.47 – 5.725GHz  | The lesser of 23.98dBm (250mW) <b>or</b><br>11dBm + 10log₁₀B | N/A             |
| UNII 3  | 5.725 – 5.850GHz | 30dBm (1W)   | N/A             |
| UNII 4  | 5.850 – 5.895GHz | N/A  | 30dBm (1W)      |

| UNII    | Fraguanay Panga  | Maximum Conducted Power Limit   | Maximum e.i.r.p  |
|---------|------------------|---|--|
| Band    | Frequency Range  | ISED  | ISED   |
| UNII 1  | 5.15 – 5.25GHz   | N/A   | The lesser of 23.01dBm<br>(200mW) <b>or</b> 10dBm +<br>10log <sub>10</sub> B |
| UNII 2A | 5.25 – 5.35GHz   |   |  |
| UNII 2C | 5.47 – 5.725GHz  | The lesser of 23.98dBm (250mW) <b>or</b><br>11dBm + 10log <sub>10</sub> B | The lesser of 30dBm (1W)<br>or 17dBm + 10log <sub>10</sub> B                 |
| UNII 3  | 5.725 – 5.850GHz | 30dBm (1W)  | N/A  |

### Test Procedure Used

ANSI C63.10-2013 – Section 12.3.3.2 Method PM-G ANSI C63.10-2013 – Section 14.2 Measure-and-Sum Technique

### Test Settings

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 50 of 157                    |
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### Test Setup

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



### Figure 7-3. Test Instrument & Measurement Setup

### Test Notes

None.

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                                   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 60 of 157                    |
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## MIMO Conducted Output Power Measurements (26 Tones)

| Bano         UH12         Channel         Iordes         RV mode: 2         RV mode: 4         RV mode: 5         Power Margin         Aff. Gan         Identity           1         5100         36         267         11.13         10.46         13.83         11.26         10.46         13.90         11.25         10.41         13.91         23.98         -10.07         -2.33         11.58           200         40         267         11.13         10.46         13.89         11.26         10.44         13.90         12.98         -10.07         -2.33         11.56           3200         44         2.267         11.33         10.35         13.89         11.52         10.53         13.86         11.43         10.38         13.86         11.43         10.38         13.96         23.86         -9.64         -3.54         10.44           5200         56         267         10.88         10.35         13.81         11.81         10.34         13.99         23.64         -9.64         -3.54         10.44           20         5500         10.0         2.67         10.88         10.07         13.88         10.91         10.72         13.82         23.64         -9.66 <t< th=""><th>Max e.ir.p.<br/>Limit (JBm)         eir.p. Ma           22.63         -11.05           22.83         -11.05           22.83         -11.05           22.83         -10.97           29.62         -19.18           29.62         -19.29           29.64         -16.21           29.64         -16.21           36.00         -22.83           36.00         -21.87           30.00         -17.75           30.00         -17.75           Max e.ir.p.<br/>Limit (BBm)         ei.r.p. ma           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           29.62         -19.40</th><th>[dBm]<br/>11.58<br/>11.57<br/>11.66<br/>10.44<br/>10.45<br/>10.33<br/>13.51<br/>13.52<br/>14.14<br/>13.88<br/>14.13<br/>12.31<br/>12.25<br/>Max e.ir.p.<br/>[dBm]<br/>11.66</th><th>[dBi]<br/>-2.33<br/>-2.33<br/>-3.54<br/>-3.54<br/>-3.54<br/>-3.54<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.15<br/>-0.15<br/>-0.15<br/>-0.15<br/>-1.67<br/>-1.67<br/>-1.67<br/><b>Directional</b><br/>Ant. Gain</th><th>Power Margin<br/>-10.07<br/>-10.08<br/>-9.99<br/>-9.64<br/>-9.63<br/>-9.75<br/>-9.74<br/>-9.66<br/>-9.65<br/>-16.01<br/>-16.27<br/>-16.02<br/>-<br/>-<br/>-<br/>Conducted</th><th>[dBm]<br/>23.98<br/>23.98<br/>23.62<br/>23.62<br/>23.62<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>30.00<br/>30.00<br/></th><th>13.91<br/>13.90<br/>13.59<br/>13.95<br/>13.93<br/>13.82<br/>13.90<br/>13.97<br/>13.99<br/>13.97<br/>13.60<br/>13.88<br/>13.88<br/>13.88</th><th>ANT2<br/>10.51<br/>10.49<br/>10.01<br/>10.38<br/>10.34<br/>10.72<br/>10.62<br/>10.94<br/>10.84<br/>10.99<br/>9.98<br/>10.49<br/>10.52<br/>10.18<br/>10.59</th><th>11.25<br/>11.26<br/>11.09<br/>11.43<br/>10.91<br/>11.15<br/>10.98<br/>11.11<br/>11.03<br/>11.13<br/>11.23<br/>11.19<br/>11.65</th><th>13.90           13.90           13.60           13.98           13.99           13.87           13.88           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.98           13.96           13.59</th><th>ANT2<br/>10.48<br/>10.46<br/>10.03<br/>10.35<br/>10.34<br/>10.81<br/>10.51<br/>10.92<br/>10.83<br/>10.83<br/>10.83<br/>10.04<br/>10.54<br/>10.57<br/>9.78</th><th>ANT1<br/>11.26<br/>11.28<br/>11.10<br/>11.52<br/>11.54<br/>10.92<br/>11.21<br/>11.02<br/>11.21<br/>11.02<br/>11.13<br/>11.12<br/>11.32<br/>11.36</th><th>MIMO           13.83           13.81           13.99           13.89           13.81           13.99           13.83           13.76           13.98           13.96           13.99           13.67</th><th>ANT2<br/>10.49<br/>10.45<br/>10.46<br/>10.37<br/>10.35<br/>10.76<br/>10.33<br/>10.84<br/>10.76</th><th>11.13<br/>11.13<br/>11.45<br/>11.33<br/>11.39<br/>10.88<br/>11.13<br/>11.09<br/>11.14</th><th>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T</th><th>36<br/>40<br/>48<br/>52<br/>56<br/>64<br/>100<br/>120</th><th>[MHz]<br/>5180<br/>5200<br/>5240<br/>5260<br/>5280<br/>5320<br/>5500<br/>5600</th><th>1<br/>2A</th></t<>  | Max e.ir.p.<br>Limit (JBm)         eir.p. Ma           22.63         -11.05           22.83         -11.05           22.83         -11.05           22.83         -10.97           29.62         -19.18           29.62         -19.29           29.64         -16.21           29.64         -16.21           36.00         -22.83           36.00         -21.87           30.00         -17.75           30.00         -17.75           Max e.ir.p.<br>Limit (BBm)         ei.r.p. ma           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           29.62         -19.40 | [dBm]<br>11.58<br>11.57<br>11.66<br>10.44<br>10.45<br>10.33<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.25<br>Max e.ir.p.<br>[dBm]<br>11.66                                  | [dBi]<br>-2.33<br>-2.33<br>-3.54<br>-3.54<br>-3.54<br>-3.54<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.15<br>-0.15<br>-0.15<br>-0.15<br>-1.67<br>-1.67<br>-1.67<br><b>Directional</b><br>Ant. Gain | Power Margin<br>-10.07<br>-10.08<br>-9.99<br>-9.64<br>-9.63<br>-9.75<br>-9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-<br>-<br>Conducted                                | [dBm]<br>23.98<br>23.98<br>23.62<br>23.62<br>23.62<br>23.64<br>23.64<br>23.64<br>23.64<br>30.00<br>30.00<br>  | 13.91<br>13.90<br>13.59<br>13.95<br>13.93<br>13.82<br>13.90<br>13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.88  | ANT2<br>10.51<br>10.49<br>10.01<br>10.38<br>10.34<br>10.72<br>10.62<br>10.94<br>10.84<br>10.99<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59 | 11.25<br>11.26<br>11.09<br>11.43<br>10.91<br>11.15<br>10.98<br>11.11<br>11.03<br>11.13<br>11.23<br>11.19<br>11.65   | 13.90           13.90           13.60           13.98           13.99           13.87           13.88           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.98           13.96           13.59                                 | ANT2<br>10.48<br>10.46<br>10.03<br>10.35<br>10.34<br>10.81<br>10.51<br>10.92<br>10.83<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78 | ANT1<br>11.26<br>11.28<br>11.10<br>11.52<br>11.54<br>10.92<br>11.21<br>11.02<br>11.21<br>11.02<br>11.13<br>11.12<br>11.32<br>11.36                    | MIMO           13.83           13.81           13.99           13.89           13.81           13.99           13.83           13.76           13.98           13.96           13.99           13.67 | ANT2<br>10.49<br>10.45<br>10.46<br>10.37<br>10.35<br>10.76<br>10.33<br>10.84<br>10.76   | 11.13<br>11.13<br>11.45<br>11.33<br>11.39<br>10.88<br>11.13<br>11.09<br>11.14 | 26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T | 36<br>40<br>48<br>52<br>56<br>64<br>100<br>120 | [MHz]<br>5180<br>5200<br>5240<br>5260<br>5280<br>5320<br>5500<br>5600 | 1<br>2A |
|---|--|--|--|--|---|---|--|---|---|--|---|--|---|---|--|--|---|---------|
| No.         ANT         ANT <th>22.63         -11.05           22.63         -11.05           22.63         -10.97           29.62         -19.18           29.62         -19.12           29.62         -19.24           29.64         -16.21           29.64         -16.12           36.00         -22.18           36.00         -22.18           30.00         -17.69           30.00         -17.69           30.00         -17.69           30.00         -17.69           20.60         -21.87           30.00         -17.69           20.61         -10.77           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           29.62         -19.31</th> <th>11.58<br/>11.57<br/>11.66<br/>10.44<br/>10.45<br/>10.33<br/>13.51<br/>13.51<br/>13.52<br/>14.14<br/>13.88<br/>14.13<br/>12.31<br/>12.31<br/>12.31<br/>12.25<br/><b>Max e.i.r.p.</b><br/><b>[dBm]</b><br/>11.66</th> <th>-2.33<br/>-2.33<br/>-2.33<br/>-3.54<br/>-3.54<br/>-3.54<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.15<br/>-0.15<br/>-1.67<br/>-1.67<br/>-1.67<br/><b>Directional</b><br/>Ant. Gain</th> <th>-10.07<br/>-10.08<br/>-9.99<br/>-9.64<br/>-9.63<br/>-9.75<br/>-9.74<br/>-9.66<br/>-9.65<br/>-16.01<br/>-16.27<br/>-16.02<br/>-</th> <th>23.98<br/>23.98<br/>23.98<br/>23.62<br/>23.62<br/>23.62<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64<br/>24.64</th> <th>13.91<br/>13.90<br/>13.59<br/>13.95<br/>13.93<br/>13.82<br/>13.90<br/>13.97<br/>13.99<br/>13.97<br/>13.60<br/>13.88<br/>13.88<br/>13.88</th> <th>10.51<br/>10.49<br/>10.01<br/>10.38<br/>10.34<br/>10.72<br/>10.62<br/>10.94<br/>10.84<br/>10.90<br/>9.98<br/>10.49<br/>10.52<br/>10.18<br/>10.59</th> <th>11.25<br/>11.26<br/>11.09<br/>11.43<br/>10.91<br/>11.15<br/>10.98<br/>11.11<br/>11.03<br/>11.13<br/>11.23<br/>11.19<br/>11.65</th> <th>13.90           13.90           13.60           13.98           13.99           13.87           13.88           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.98           13.96           13.59</th> <th>10.48<br/>10.46<br/>10.03<br/>10.35<br/>10.34<br/>10.81<br/>10.51<br/>10.92<br/>10.83<br/>10.83<br/>10.04<br/>10.54<br/>10.57<br/>9.78</th> <th>11.26<br/>11.28<br/>11.10<br/>11.52<br/>11.54<br/>10.92<br/>11.21<br/>11.02<br/>11.13<br/>11.12<br/>11.32<br/>11.36</th> <th>13.83<br/>13.81<br/>13.99<br/>13.89<br/>13.91<br/>13.83<br/>13.76<br/>13.98<br/>13.96<br/>13.99<br/>13.67</th> <th>10.49           10.45           10.46           10.37           10.35           10.76           10.33           10.84           10.76</th> <th>11.13<br/>11.13<br/>11.45<br/>11.33<br/>11.39<br/>10.88<br/>11.13<br/>11.09<br/>11.14</th> <th>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T</th> <th>40<br/>48<br/>52<br/>56<br/>64<br/>100<br/>120</th> <th>5180<br/>5200<br/>5240<br/>5260<br/>5280<br/>5320<br/>5500<br/>5500<br/>5600</th> <th>2A</th> | 22.63         -11.05           22.63         -11.05           22.63         -10.97           29.62         -19.18           29.62         -19.12           29.62         -19.24           29.64         -16.21           29.64         -16.12           36.00         -22.18           36.00         -22.18           30.00         -17.69           30.00         -17.69           30.00         -17.69           30.00         -17.69           20.60         -21.87           30.00         -17.69           20.61         -10.77           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           29.62         -19.31  | 11.58<br>11.57<br>11.66<br>10.44<br>10.45<br>10.33<br>13.51<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.31<br>12.31<br>12.25<br><b>Max e.i.r.p.</b><br><b>[dBm]</b><br>11.66 | -2.33<br>-2.33<br>-2.33<br>-3.54<br>-3.54<br>-3.54<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.15<br>-0.15<br>-1.67<br>-1.67<br>-1.67<br><b>Directional</b><br>Ant. Gain                                     | -10.07<br>-10.08<br>-9.99<br>-9.64<br>-9.63<br>-9.75<br>-9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-   | 23.98<br>23.98<br>23.98<br>23.62<br>23.62<br>23.62<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>23.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64<br>24.64 | 13.91<br>13.90<br>13.59<br>13.95<br>13.93<br>13.82<br>13.90<br>13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.88  | 10.51<br>10.49<br>10.01<br>10.38<br>10.34<br>10.72<br>10.62<br>10.94<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59         | 11.25<br>11.26<br>11.09<br>11.43<br>10.91<br>11.15<br>10.98<br>11.11<br>11.03<br>11.13<br>11.23<br>11.19<br>11.65   | 13.90           13.90           13.60           13.98           13.99           13.87           13.88           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.98           13.96           13.59                                 | 10.48<br>10.46<br>10.03<br>10.35<br>10.34<br>10.81<br>10.51<br>10.92<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78                  | 11.26<br>11.28<br>11.10<br>11.52<br>11.54<br>10.92<br>11.21<br>11.02<br>11.13<br>11.12<br>11.32<br>11.36  | 13.83<br>13.81<br>13.99<br>13.89<br>13.91<br>13.83<br>13.76<br>13.98<br>13.96<br>13.99<br>13.67  | 10.49           10.45           10.46           10.37           10.35           10.76           10.33           10.84           10.76 | 11.13<br>11.13<br>11.45<br>11.33<br>11.39<br>10.88<br>11.13<br>11.09<br>11.14 | 26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T        | 40<br>48<br>52<br>56<br>64<br>100<br>120       | 5180<br>5200<br>5240<br>5260<br>5280<br>5320<br>5500<br>5500<br>5600  | 2A      |
| 1         5200         40         26T         11.13         10.45         13.81         11.28         10.46         13.90         11.26         10.49         13.90         23.98         -10.08         -2.33         11.57           5200         52         26T         11.45         10.46         13.99         11.10         10.03         13.80         11.35         13.95         23.88         -9.94         -2.33         11.66           2A         520         55         26T         11.33         10.35         13.91         11.54         10.34         13.98         11.33         23.82         -9.64         -3.54         10.45           5300         100         26T         10.88         10.76         13.81         10.24         10.84         13.87         10.91         10.72         13.82         23.62         -9.75         -3.54         10.33           5700         100         28T         11.03         10.33         13.76         11.21         10.81         13.88         10.94         13.97         23.64         -9.66         -0.47         13.31           5725         149         26T         11.18         10.78         13.99         11.11         10.08   | 22.63         -11.06           22.63         -10.97           29.62         -19.18           29.62         -19.29           29.64         -16.21           29.64         -16.13           29.64         -16.21           36.00         -22.18           36.00         -22.18           30.00         -17.69           30.00         -17.69           30.00         -17.69           30.00         -17.69           30.00         -17.69           20.64         -16.12           20.64         -16.12           30.00         -17.69           30.00         -17.69           20.61         -10.77           20.62         -10.97           22.63         -10.97           22.63         -10.97           29.62         -19.31                   | 11.57<br>11.66<br>10.44<br>10.45<br>10.33<br>13.43<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.25<br><b>Max e.ir.p.</b><br><b>[dBm]</b><br>11.66                             | -2.33<br>-2.33<br>-3.54<br>-3.54<br>-3.54<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.15<br>-0.15<br>-0.15<br>-1.67<br>-1.67<br>-1.67<br><b>Directional</b><br>Ant. Gain                                     | -10.08<br>-9.99<br>-9.64<br>-9.63<br>-9.75<br>-9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-  | 23.98<br>23.98<br>23.62<br>23.62<br>23.62<br>23.64<br>23.64<br>23.64<br>30.00<br>30.00<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-  | 13.90<br>13.59<br>13.95<br>13.93<br>13.82<br>13.90<br>13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.88   | 10.49<br>10.01<br>10.38<br>10.34<br>10.72<br>10.62<br>10.94<br>10.84<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59         | 11.26           11.09           11.43           10.91           11.15           10.98           11.11           11.03           11.13           11.23           11.19                 | 13.90           13.60           13.98           13.99           13.87           13.88           13.99           13.87           13.98           13.99           13.99           13.99           13.98           13.99           13.73           13.98           13.98           13.98           13.98           13.98           13.98           13.98           13.98 | 10.46<br>10.03<br>10.35<br>10.34<br>10.81<br>10.51<br>10.92<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78                           | 11.28<br>11.10<br>11.52<br>11.54<br>10.92<br>11.21<br>11.02<br>11.13<br>11.12<br>11.32<br>11.36   | 13.81<br>13.99<br>13.89<br>13.91<br>13.83<br>13.76<br>13.98<br>13.96<br>13.99<br>13.67   | 10.45<br>10.46<br>10.37<br>10.35<br>10.76<br>10.33<br>10.84<br>10.76  | 11.13<br>11.45<br>11.33<br>11.39<br>10.88<br>11.13<br>11.09<br>11.14          | 26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T        | 40<br>48<br>52<br>56<br>64<br>100<br>120       | 5200<br>5240<br>5260<br>5280<br>5320<br>5500<br>5500                  | 2A      |
| S240         48         26T         11.45         10.46         13.99         11.10         10.03         13.80         11.09         10.01         13.59         23.88         -9.99         -2.33         11.66           2A         5200         52         26T         11.33         10.57         13.89         11.52         10.35         13.98         11.43         10.36         13.96         23.62         -9.63         -3.54         10.44           5500         100         28T         11.33         10.54         13.91         11.54         10.34         13.99         11.43         10.32         23.62         -9.63         -3.54         10.45           5500         100         28T         11.13         10.33         13.76         11.21         10.51         13.88         11.15         10.62         13.90         23.64         -9.65         -0.47         13.31           5745         144         28T         11.14         10.78         13.99         11.11         10.83         13.99         11.11         10.84         13.99         23.64         -9.65         -0.47         13.51           5745         157         26T         11.38         10.71         13.81 <td>22.63         -10.97           29.62         -19.17           29.62         -19.27           29.64         -16.13           29.64         -16.13           29.64         -16.21           36.00         -22.12           36.00         -22.12           36.00         -21.87           30.00         -17.69           30.00         -17.77           30.00         -17.77           30.00         -17.79           Max e.i.r.p.         Limit (dBm)           22.63         -10.97           22.63         -10.97           29.62         -19.31</td> <td>11.66<br/>10.44<br/>10.45<br/>10.33<br/>13.43<br/>13.51<br/>13.52<br/>14.14<br/>13.88<br/>14.13<br/>12.31<br/>12.31<br/>12.25<br/><b>Max e.ir.p.</b><br/><b>[dBm]</b><br/>11.66</td> <td>-2.33<br/>-3.54<br/>-3.54<br/>-3.54<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.47<br/>-0.15<br/>-0.15<br/>-1.67<br/>-1.67<br/>-1.67<br/><b>Directional</b><br/>Ant. Gain</td> <td>-9.99<br/>-9.64<br/>-9.63<br/>-9.75<br/>-9.74<br/>-9.66<br/>-9.65<br/>-16.01<br/>-16.27<br/>-16.02<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-<br/>-</td> <td>23.98<br/>23.62<br/>23.62<br/>23.64<br/>23.64<br/>23.64<br/>23.64<br/>30.00<br/>30.00<br/>30.00<br/></td> <td>13.59         13.95         13.93         13.82         13.90         13.97         13.99         13.97         13.98         13.88         13.88         13.88         13.98</td> <td>10.01<br/>10.38<br/>10.34<br/>10.72<br/>10.62<br/>10.94<br/>10.84<br/>10.90<br/>9.98<br/>10.49<br/>10.52<br/>10.18<br/>10.59</td> <td>11.09           11.43           11.43           10.91           11.15           10.98           11.11           11.03           11.13           11.23           11.19           11.65</td> <td>13.60           13.98           13.99           13.87           13.88           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.98           13.98           13.98           13.98           13.98           13.99</td> <td>10.03<br/>10.35<br/>10.34<br/>10.81<br/>10.51<br/>10.92<br/>10.83<br/>10.83<br/>10.04<br/>10.54<br/>10.57<br/>9.78</td> <td>11.10           11.52           11.54           10.92           11.21           11.02           11.13           11.12           11.32           11.36</td> <td>13.99           13.89           13.91           13.83           13.76           13.98           13.96           13.99           13.67</td> <td>10.46<br/>10.37<br/>10.35<br/>10.76<br/>10.33<br/>10.84<br/>10.76</td> <td>11.45<br/>11.33<br/>11.39<br/>10.88<br/>11.13<br/>11.09<br/>11.14</td> <td>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T<br/>26T</td> <td>48<br/>52<br/>56<br/>64<br/>100<br/>120</td> <td>5240<br/>5260<br/>5280<br/>5320<br/>5500<br/>5600</td> <td>2A</td>   | 22.63         -10.97           29.62         -19.17           29.62         -19.27           29.64         -16.13           29.64         -16.13           29.64         -16.21           36.00         -22.12           36.00         -22.12           36.00         -21.87           30.00         -17.69           30.00         -17.77           30.00         -17.77           30.00         -17.79           Max e.i.r.p.         Limit (dBm)           22.63         -10.97           22.63         -10.97           29.62         -19.31   | 11.66<br>10.44<br>10.45<br>10.33<br>13.43<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.31<br>12.25<br><b>Max e.ir.p.</b><br><b>[dBm]</b><br>11.66                             | -2.33<br>-3.54<br>-3.54<br>-3.54<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.15<br>-0.15<br>-1.67<br>-1.67<br>-1.67<br><b>Directional</b><br>Ant. Gain  | -9.99<br>-9.64<br>-9.63<br>-9.75<br>-9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>- | 23.98<br>23.62<br>23.62<br>23.64<br>23.64<br>23.64<br>23.64<br>30.00<br>30.00<br>30.00<br>  | 13.59         13.95         13.93         13.82         13.90         13.97         13.99         13.97         13.98         13.88         13.88         13.88         13.98 | 10.01<br>10.38<br>10.34<br>10.72<br>10.62<br>10.94<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59                           | 11.09           11.43           11.43           10.91           11.15           10.98           11.11           11.03           11.13           11.23           11.19           11.65 | 13.60           13.98           13.99           13.87           13.88           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.98           13.98           13.98           13.98           13.98           13.99 | 10.03<br>10.35<br>10.34<br>10.81<br>10.51<br>10.92<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78                                    | 11.10           11.52           11.54           10.92           11.21           11.02           11.13           11.12           11.32           11.36 | 13.99           13.89           13.91           13.83           13.76           13.98           13.96           13.99           13.67  | 10.46<br>10.37<br>10.35<br>10.76<br>10.33<br>10.84<br>10.76   | 11.45<br>11.33<br>11.39<br>10.88<br>11.13<br>11.09<br>11.14                   | 26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T<br>26T               | 48<br>52<br>56<br>64<br>100<br>120             | 5240<br>5260<br>5280<br>5320<br>5500<br>5600                          | 2A      |
| And Part         S260         52         26T         11.33         10.37         13.89         11.52         10.35         13.88         11.43         10.38         13.95         23.62         -9.64         -3.54         10.44           5320         64         26T         10.38         10.76         13.83         10.92         10.81         13.87         10.91         10.72         13.82         23.62         -9.63         -3.54         10.45           5320         64         26T         10.88         10.76         13.83         10.92         10.81         13.87         10.91         10.72         13.82         23.62         -9.64         -3.54         10.44           500         100         26T         11.03         10.36         11.21         10.51         13.88         11.15         10.62         13.90         23.64         -9.65         -0.47         13.51           5720         11.44         26T         11.18         10.76         13.99         11.11         10.83         13.99         11.11         10.80         13.87         23.64         -9.65         -0.47         13.52           5725         157         26T         11.38         10.52         13   | 29.62         -19.18           29.62         -19.17           29.62         -19.28           29.64         -16.21           29.64         -16.21           36.00         -22.18           36.00         -21.86           36.00         -21.87           30.00         -17.69           30.00         -17.69           30.00         -17.69           22.63         -10.97           22.63         -10.97           22.63         -10.97           29.64         -10.97   | 10.44<br>10.45<br>10.33<br>13.43<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.25<br><b>Max e.ir.p.</b><br><b>[dBm]</b><br>11.66   | -3.54<br>-3.54<br>-3.54<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain  | -9.64<br>-9.63<br>-9.75<br>-9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.02<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-                    | 23.62<br>23.62<br>23.64<br>23.64<br>23.64<br>30.00<br>30.00<br>-<br>-<br>-<br>Conducted<br>Power Limit  | 13.95<br>13.93<br>13.82<br>13.90<br>13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.98   | 10.38<br>10.34<br>10.72<br>10.62<br>10.94<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59                                    | 11.43         11.43         10.91         11.15         10.98         11.11         11.03         11.13         11.23         11.19         11.65                                     | 13.98         13.99         13.87         13.88         13.98         13.99         13.99         13.99         13.99         13.99         13.99         13.99         13.73         13.98         13.96         13.59   | 10.35<br>10.34<br>10.81<br>10.51<br>10.92<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78   | 11.52<br>11.54<br>10.92<br>11.21<br>11.02<br>11.13<br>11.12<br>11.32<br>11.36   | 13.89<br>13.91<br>13.83<br>13.76<br>13.98<br>13.96<br>13.99<br>13.67   | 10.37<br>10.35<br>10.76<br>10.33<br>10.84<br>10.76  | 11.33<br>11.39<br>10.88<br>11.13<br>11.09<br>11.14                            | 26T<br>26T<br>26T<br>26T<br>26T<br>26T                             | 52<br>56<br>64<br>100<br>120                   | 5260<br>5280<br>5320<br>5500<br>5600                                  | -       |
| N         530         64         26T         10.88         10.76         13.83         10.92         10.81         13.87         10.91         10.72         13.82         23.62         -9.75         -3.64         10.33           20         5500         100         26T         11.13         10.33         13.76         11.21         10.51         13.88         11.15         10.62         13.90         23.64         -9.74         -0.47         13.43           5600         120         26T         11.14         10.76         13.96         11.32         10.82         13.88         10.94         13.97         23.64         -9.65         -0.47         13.51           5745         144         26T         11.14         10.76         13.99         11.11         10.83         13.99         11.31         10.82         13.89         10.62         13.80         -0.67         16.01         15         14.14           3         5785         157         26T         11.38         10.52         13.89         11.30         10.57         13.89         11.30         10.57         13.88         -         -         -1.67         12.31           5845         169         26  | 29.62         -19.17           29.62         -19.22           29.64         -16.21           29.64         -16.12           36.00         -22.18           36.00         -22.18           36.00         -21.86           30.00         -17.66           30.00         -17.66           30.00         -17.66           30.00         -17.66           30.00         -17.66           22.63         -10.97           22.63         -10.97           29.62         -19.31   | 10.45<br>10.33<br>13.43<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.25<br><b>Max e.ir.p.</b><br><b>[dBm]</b><br>11.66  | -3.54<br>-3.54<br>-0.47<br>-0.47<br>-0.47<br>-0.47<br>-0.15<br>0.15<br>-1.67<br>-1.67<br><b>-1.67</b><br><b>Directional</b><br>Ant. Gain   | -9.63<br>-9.75<br>-9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-                   | 23.62<br>23.64<br>23.64<br>23.64<br>23.64<br>30.00<br>30.00<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-   | 13.93<br>13.82<br>13.90<br>13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.88  | 10.34<br>10.72<br>10.62<br>10.94<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59   | 11.43<br>10.91<br>11.15<br>10.98<br>11.11<br>11.03<br>11.13<br>11.23<br>11.23<br>11.19<br>11.65   | 13.99           13.87           13.88           13.98           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.99           13.73           13.98           13.96           13.59   | 10.34<br>10.81<br>10.51<br>10.92<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78  | 11.54<br>10.92<br>11.21<br>11.02<br>11.13<br>11.12<br>11.32<br>11.36  | 13.91<br>13.83<br>13.76<br>13.98<br>13.96<br>13.99<br>13.67  | 10.35<br>10.76<br>10.33<br>10.84<br>10.76   | 11.39<br>10.88<br>11.13<br>11.09<br>11.14                                     | 26T<br>26T<br>26T<br>26T<br>26T                                    | 56<br>64<br>100<br>120                         | 5280<br>5320<br>5500<br>5600  | -       |
| N         530         64         26T         10.88         10.76         13.83         10.92         10.81         13.87         10.91         10.72         13.82         23.62         -9.75         -3.64         10.33           20         5500         100         26T         11.13         10.33         13.76         11.21         10.51         13.88         11.15         10.62         13.90         23.64         -9.74         -0.47         13.43           5600         120         26T         11.14         10.76         13.96         11.32         10.82         13.88         10.94         13.97         23.64         -9.65         -0.47         13.51           5745         144         26T         11.14         10.76         13.99         11.11         10.83         13.99         11.31         10.82         13.89         10.62         13.80         -0.67         16.01         15         14.14           3         5785         157         26T         11.38         10.52         13.89         11.30         10.57         13.89         11.30         10.57         13.88         -         -         -1.67         12.31           5845         169         26  | 29.62         -19.23           29.64         -16.21           29.64         -16.13           29.64         -16.13           29.64         -16.13           36.00         -21.87           36.00         -21.87           30.00         -17.68           30.00         -17.69           30.00         -17.75           Max e.ir.p.         Limit (dBm)           22.63         -10.97           22.63         -10.97           29.62         -19.31   | 10.33<br>13.43<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.31<br>12.25<br><b>Max e.ir.p.</b><br>[dBm]<br>11.66   | -3.54<br>-0.47<br>-0.47<br>-0.47<br>0.15<br>0.15<br>0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain  | -9.75<br>-9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-<br>Conducted  | 23.62<br>23.64<br>23.64<br>30.00<br>30.00<br>   | 13.82<br>13.90<br>13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.88   | 10.72<br>10.62<br>10.94<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59  | 10.91<br>11.15<br>10.98<br>11.11<br>11.03<br>11.13<br>11.23<br>11.23<br>11.19<br>11.65  | 13.87           13.88           13.98           13.99           13.99           13.73           13.98           13.98           13.99   | 10.81           10.51           10.92           10.83           10.83           10.04           10.54           10.57           9.78       | 10.92<br>11.21<br>11.02<br>11.13<br>11.12<br>11.32<br>11.36   | 13.83<br>13.76<br>13.98<br>13.96<br>13.99<br>13.67   | 10.76<br>10.33<br>10.84<br>10.76  | 10.88<br>11.13<br>11.09<br>11.14  | 26T<br>26T<br>26T<br>26T   | 64<br>100<br>120                               | 5320<br>5500<br>5600  | -       |
| 3         5745         149         287         11.18         10.78         13.99         11.12         10.83         13.99         11.03         10.30         13.97         30.00         -16.07         0.15         14.14           5785         157         26T         11.28         9.96         13.67         11.32         10.04         13.73         11.13         9.98         13.00         30.00         -16.07         0.15         14.14           5825         165         26T         11.38         10.52         13.98         11.30         10.57         13.38         13.00         30.00         -16.07         0.15         14.13           5825         166         26T         11.38         10.52         13.98         11.12         10.49         13.88         30.00         -16.07         0.15         14.13           5885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -         -         -1.67         12.31           6885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         10.59   | 29.64         -16.21           29.64         -16.12           29.64         -16.12           36.00         -22.18           36.00         -21.86           36.00         -21.87           30.00         -17.69           30.00         -17.69           30.00         -17.69           20.00         -17.75           Max e.ir.p.         e.ir.p. ma           Limit (dBm)         e.ir.p. ma           22.63         -10.97           29.62         -19.31  | 13.43<br>13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.31<br>12.25<br><b>Max e.ir.p.</b><br>[dBm]<br>11.66  | -0.47<br>-0.47<br>-0.47<br>0.15<br>0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain   | -9.74<br>-9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-<br>-<br>-<br>Conducted   | 23.64<br>23.64<br>30.00<br>30.00<br>-<br>-<br>-<br>Conducted<br>Power Limit   | 13.90<br>13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.98  | 10.62<br>10.94<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59   | 11.15<br>10.98<br>11.11<br>11.03<br>11.13<br>11.23<br>11.19<br>11.65  | 13.88<br>13.98<br>13.99<br>13.99<br>13.73<br>13.98<br>13.96<br>13.59  | 10.51<br>10.92<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78  | 11.21<br>11.02<br>11.13<br>11.12<br>11.32<br>11.36  | 13.76<br>13.98<br>13.96<br>13.99<br>13.67  | 10.33<br>10.84<br>10.76   | 11.13<br>11.09<br>11.14   | 26T<br>26T<br>26T  | 100<br>120                                     | 5500<br>5600  | 2C      |
| 3         5745         149         287         11.18         10.78         13.99         11.12         10.83         13.99         11.03         10.30         13.97         30.00         -16.07         0.15         14.14           5785         157         26T         11.28         9.96         13.67         11.32         10.04         13.73         11.13         9.98         13.00         30.00         -16.07         0.15         14.14           5825         165         26T         11.38         10.52         13.98         11.30         10.57         13.38         13.00         30.00         -16.07         0.15         14.13           5825         166         26T         11.38         10.52         13.98         11.12         10.49         13.88         30.00         -16.07         0.15         14.13           5885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -         -         -1.67         12.31           6885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         10.59   | 29.64         -16.13           29.64         -16.13           36.00         -21.86           36.00         -21.87           36.00         -21.87           30.00         -17.66           30.00         -17.69           30.00         -17.69           30.00         -17.69           30.00         -17.69           22.63         -10.97           22.63         -10.97           22.63         -10.97           29.62         -19.31  | 13.51<br>13.52<br>14.14<br>13.88<br>14.13<br>12.31<br>12.25<br>Max e.ir.p.<br>[dBm]<br>11.66   | -0.47<br>-0.47<br>0.15<br>0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain  | -9.66<br>-9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-<br>-<br>Conducted   | 23.64<br>23.64<br>30.00<br>30.00<br>-<br>-<br>-<br>-<br>Conducted<br>Power Limit  | 13.97<br>13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.88   | 10.94<br>10.84<br>10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59  | 10.98<br>11.11<br>11.03<br>11.13<br>11.23<br>11.19<br>11.65   | 13.98         13.99         13.99         13.73         13.98         13.96         13.59   | 10.92<br>10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78   | 11.02<br>11.13<br>11.12<br>11.32<br>11.36   | 13.98<br>13.96<br>13.99<br>13.67   | 10.84<br>10.76  | 11.09<br>11.14  | 26T<br>26T   | 120  | 5600  | 2C      |
| 3         5745         149         287         11.18         10.78         13.99         11.12         10.83         13.99         11.03         10.30         13.97         30.00         -16.07         0.15         14.14           5785         157         26T         11.28         9.96         13.67         11.32         10.04         13.73         11.13         9.98         13.00         30.00         -16.07         0.15         14.14           5825         165         26T         11.38         10.52         13.98         11.30         10.57         13.38         13.00         30.00         -16.07         0.15         14.13           5825         166         26T         11.38         10.52         13.98         11.12         10.49         13.88         30.00         -16.07         0.15         14.13           5885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -         -         -1.67         12.31           6885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         10.59   | 29.64         -16.12           36.00         -21.86           36.00         -21.87           30.00         -17.68           30.00         -17.75           Max e.ir.p.         e.ir.p.           Limit (dBm)         e.ir.p. ma           22.63         -10.97           22.63         -10.97           29.62         -19.31   | 13.52           14.14           13.88           14.13           12.31           12.25           Max e.i.r.p.<br>[dBm]           11.66  | -0.47<br>0.15<br>0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain   | -9.65<br>-16.01<br>-16.27<br>-16.02<br>-<br>-<br>-<br>Conducted  | 23.64<br>30.00<br>30.00<br>-<br>-<br>-<br>-<br>Conducted<br>Power Limit   | 13.99<br>13.97<br>13.60<br>13.88<br>13.88<br>13.98  | 10.84           10.90           9.98           10.49           10.52           10.18           10.59                                       | 11.11<br>11.03<br>11.13<br>11.23<br>11.19<br>11.65  | 13.99           13.99           13.73           13.98           13.96           13.59   | 10.83<br>10.83<br>10.04<br>10.54<br>10.57<br>9.78  | 11.13<br>11.12<br>11.32<br>11.36  | 13.96<br>13.99<br>13.67  | 10.76   | 11.14   | 26T  |  |   | 2C      |
| 3         5745         149         287         11.18         10.78         13.99         11.12         10.83         13.99         11.03         10.30         13.97         30.00         -16.07         0.15         14.14           5785         157         26T         11.28         9.96         13.67         11.32         10.04         13.73         11.13         9.98         13.00         30.00         -16.07         0.15         14.14           5825         165         26T         11.38         10.52         13.98         11.30         10.57         13.38         13.00         30.00         -16.07         0.15         14.13           5825         166         26T         11.38         10.52         13.98         11.12         10.49         13.88         30.00         -16.07         0.15         14.13           5885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -         -         -1.67         12.31           6885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         10.59   | 36.00         -21.86           36.00         -22.17           36.00         -21.87           30.00         -17.69           30.00         -17.69           30.00         -17.75           Max e.ir.p.         e.ir.p. ma           Limit [dBm]         e.ir.p. ma           22.63         -10.97           29.62         -19.31  | 14.14<br>13.88<br>14.13<br>12.31<br>12.25<br>Max e.i.r.p.<br>[dBm]<br>11.66  | 0.15<br>0.15<br>0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain  | -16.01<br>-16.27<br>-16.02<br>-<br>-<br>-<br>Conducted   | 30.00<br>30.00<br>-<br>-<br>-<br>-<br>Conducted<br>Power Limit  | 13.97<br>13.60<br>13.88<br>13.88<br>13.98   | 10.90<br>9.98<br>10.49<br>10.52<br>10.18<br>10.59  | 11.03<br>11.13<br>11.23<br>11.19<br>11.65   | 13.99<br>13.73<br>13.98<br>13.96<br>13.59   | 10.83<br>10.04<br>10.54<br>10.57<br>9.78   | 11.12<br>11.32<br>11.36   | 13.99<br>13.67   |   |   | -  | 144  | 5720  |         |
| 3         5745         149         287         11.18         10.78         13.99         11.12         10.83         13.99         11.03         10.30         13.97         30.00         -16.07         0.15         14.14           5785         157         26T         11.28         9.96         13.67         11.32         10.04         13.73         11.13         9.98         13.00         30.00         -16.07         0.15         14.14           5825         165         26T         11.38         10.52         13.98         11.30         10.57         13.38         13.00         30.00         -16.07         0.15         14.13           5825         166         26T         11.38         10.52         13.98         11.12         10.49         13.88         30.00         -16.07         0.15         14.13           5885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -         -         -1.67         12.31           6885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         10.59   | 36.00         -22.12           36.00         -21.87           30.00         -17.69           30.00         -17.75           Max e.ir.p.         Limit [dBm]           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           22.63         -10.97           29.62         -19.31  | 13.88           14.13           12.31           12.31           12.25           Max e.ir.p.<br>[dBm]           11.66   | 0.15<br>0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain  | -16.27<br>-16.02<br>-<br>-<br>-<br>Conducted   | 30.00<br>30.00<br>-<br>-<br>Conducted<br>Power Limit  | 13.60<br>13.88<br>13.88<br>13.98  | 9.98<br>10.49<br>10.52<br>10.18<br>10.59   | 11.13<br>11.23<br>11.19<br>11.65  | 13.73<br>13.98<br>13.96<br>13.59  | 10.04<br>10.54<br>10.57<br>9.78  | 11.32<br>11.36  | 13.67  | 10.78   | 11.18   |  |  | 5/20  |         |
| S825         166         26T         11.38         10.52         13.38         11.36         10.54         13.38         11.23         10.49         13.88         30.00         -16.02         0.15         14.13           5845         169         26T         11.33         10.59         13.38         11.30         10.57         13.96         11.13         10.69         13.88         -         -         -         -1.67         12.31           5885         177         26T         11.00         10.67         13.89         11.41         10.67         13.92         10.59         13.80         -         -         -         -1.67         12.31           5885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -         -         -1.67         12.31           6885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -         -         -1.67         12.31           1         5190         38         26T         10.67         10.68         13.97         11.98         10   | 36.00         -21.87           30.00         -17.69           30.00         -17.75           30.00         -17.75           Max e.ir.p.<br>Limit [dBm]         e.ir.p. ma           22.63         -10.97           22.63         -10.97           22.62         -19.31   | 14.13<br>12.31<br>12.31<br>12.25<br>Max e.i.r.p.<br>[dBm]<br>11.66   | 0.15<br>-1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain  | -16.02<br>-<br>-<br>Conducted  | 30.00<br>-<br>-<br>Conducted<br>Power Limit   | 13.88<br>13.88<br>13.98   | 10.49<br>10.52<br>10.18<br>10.59   | 11.23<br>11.19<br>11.65   | 13.98<br>13.96<br>13.59   | 10.54<br>10.57<br>9.78   | 11.36   |  |   |   | 26T  | 149  | 5745  |         |
| A         5845         169         26T         11.31         10.99         11.30         10.77         13.96         11.19         10.62         13.88         -  | 30.00         -17.69           30.00         -17.75           30.00         -17.75           Max e.i.r.p.<br>Limit [dBm]         e.i.r.p. ma           22.63         -10.97           22.63         -10.97           29.62         -19.31  | 12.31<br>12.31<br>12.25<br>Max e.i.r.p.<br>[dBm]<br>11.66  | -1.67<br>-1.67<br>-1.67<br>Directional<br>Ant. Gain  | -<br>-<br>-<br>Conducted   | -<br>-<br>Conducted<br>Power Limit  | 13.88<br>13.98  | 10.52<br>10.18<br>10.59  | 11.19<br>11.65  | 13.96<br>13.59  | 10.57<br>9.78  |   |  | 9.96  | 11.26   | 26T  | 157  | 5785  | 3       |
| 4         5865         173         26T         11.30         9.82         13.63         11.26         9.78         13.59         11.65         10.18         13.98         -         -         -         -1.67         12.31           8         11.77         26T         11.30         9.82         13.63         11.26         9.78         13.59         11.65         10.18         13.98         -         -         -         -         -1.67         12.31           8         6         777         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         13.80         -  | 30.00         -17.69           30.00         -17.75           Max e.i.r.p.<br>Limit [dBm]         e.i.r.p. ma           22.63         -10.97           22.63         -10.97           29.62         -19.31   | 12.31<br>12.25<br>Max e.i.r.p.<br>[dBm]<br>11.66   | -1.67<br>-1.67<br>Directional<br>Ant. Gain   | -<br>-<br>Conducted  | -<br>-<br>Conducted<br>Power Limit  | 13.98   | 10.18<br>10.59   | 11.65   | 13.59   | 9.78   | 11.30   | 13.98  | 10.52   | 11.38   | 26T  | 165  | 5825  |         |
| No.         5885         177         26T         11.07         10.67         13.89         11.14         10.67         13.92         10.98         10.59         13.80  | 30.00         -17.75           Max e.ir.p.<br>Limit [dBm]         e.ir.p. ma           22.63         -10.97           22.63         -10.97           29.62         -19.31  | 12.25<br>Max e.i.r.p.<br>[dBm]<br>11.66  | -1.67<br>Directional<br>Ant. Gain  | -<br>Conducted   | -<br>Conducted<br>Power Limit   |   | 10.59  |   |   |  |   | 13.98  | 10.59   | 11.31   | 26T  | 169  | 5845  |         |
| Band         Freq<br>[MHz]         Channel         Tones         RU Index: 0         RU Index: 17         Conducted<br>NU Index: 17         Conducted<br>Power Limit         Directional<br>Ant. Gain         Max e.ir.p.<br>(dBin)         Max e.ir.p.<br>Light)         Max e.ir.p. Light)         Max e.ir.p. Light)         Max e.ir.p. Light)         Max e.ir.p. Light)         Max e.ir.p. Light) </th <td>Max e.i.r.p.<br/>Limit (dBm)         e.i.r.p. ma           22.63         -10.97           22.63         -10.97           29.62         -19.31</td> <td>Max e.i.r.p.<br/>[dBm]<br/>11.66</td> <td>Directional<br/>Ant. Gain</td> <td>Conducted</td> <td>Conducted<br/>Power Limit</td> <td>13.80</td> <td></td> <td>10.98</td> <td>13.92</td> <td></td> <td>11.26</td> <td>13.63</td> <td>9.82</td> <td>11.30</td> <td>26T</td> <td>173</td> <td>5865</td> <td>4</td>  | Max e.i.r.p.<br>Limit (dBm)         e.i.r.p. ma           22.63         -10.97           22.63         -10.97           29.62         -19.31   | Max e.i.r.p.<br>[dBm]<br>11.66   | Directional<br>Ant. Gain   | Conducted  | Conducted<br>Power Limit  | 13.80   |  | 10.98   | 13.92   |  | 11.26   | 13.63  | 9.82  | 11.30   | 26T  | 173  | 5865  | 4       |
| Band         Freq<br>[UHz]         Channel         Tones         RU Index: 0         RU Index: 1         Power Limit<br>(BB)         Conducted<br>Power Margin<br>(BB)         Ant: Gain<br>(BB)         Max e.i.r.p.<br>(BB)         Max<br>(BB)           1         5190         38         26T         10.26         13.59         11.35         10.58         10.99         10.63         13.82         10.95         10.35         13.67         23.98         -9.99         -2.33         11.66         2.33         10.61         13.99         10.95         13.77         2.362         -9.77         -3.54         10.16           24         5510         10.2   | Limit [dBm]<br>22.63 -10.97<br>22.63 -10.97<br>29.62 -19.31  | [dBm]<br>11.66   | Ant. Gain  |  | Power Limit   |   |  |   |   | 10.67  | 11.14   | 13.89  | 10.67   | 11.07   | 26T  | 177  | 5885  |         |
| Ballion         UHHzi         Challment         Form House   | Limit [dBm]<br>22.63 -10.97<br>22.63 -10.97<br>29.62 -19.31  | [dBm]<br>11.66   |  |  |   |   |  |   | ver (dBm)   | onducted Por   | Average Co  |  |   |   |  |  | <b>-</b>  |         |
| V         ANT         ANT2         MMO         ANT1         ANT2         MMO         Identity         Constraints           1         5190         38         26T         10.26         13.59         11.35         10.87         11.99         11.66         13.61         23.88         -9.99         -2.33         11.66           2A         5270         54         26T         11.13         10.82         13.99         10.63         13.82         20.95         13.67         23.88         -9.99         -2.33         11.66           2A         5270         54         26T         10.26         13.99         10.19         13.85         23.82         -9.99         -2.33         11.66           5310         62         26T         10.76         10.60         13.59         10.35         10.57         10.42         13.70         23.62         -9.77         -3.54         10.16           5510         10.2         26T         10.69         13.69         10.64         10.35         13.77         13.70         23.62         -9.77         -3.54         10.16           5550         118         26T         10.76         10.59         13.70         23.64         -  | 22.63 -10.97<br>22.63 -10.97<br>29.62 -19.31   | 11.66  | [dBi]  | Fower margin   |   |   | RU Index: 17   |   |   | RU Index: 8  |   |  | RU Index: 0   |   | Tones  | Channel  |   | Band    |
| 1         5230         46         26T         11.13         10.82         13.99         10.63         13.82         10.95         10.35         13.67         23.98         -9.99         -2.33         11.66           2A         5270         64         26T         11.12         10.18         13.74         11.09         9.95         13.57         11.40         10.19         13.85         23.62         -9.77         -3.54         10.31           5310         62         26T         10.76         10.69         13.69         10.64         10.83         13.85         10.75         10.62         -9.77         -3.54         10.16           5510         102         26T         10.68         13.69         10.64         10.83         10.55         13.77         23.64         -9.85         -0.47         13.52           20         5550         118         28T         10.06         13.56         10.74         13.63         10.78         10.88         13.84         -9.85         -0.47         13.52           3         5755         1142         28T         11.05         10.52         13.84         10.42         13.84         10.88         13.84         23.64         <  | 22.63 -10.97<br>29.62 -19.31   |  |  |  | [dBm]   | MIMO  | ANT2   | ANT1  | MIMO  | ANT2   | ANT1  | MIMO   | ANT2  | ANT1  |  |  | [wiriz]   |         |
| DA         5310         62         26T         10.76         10.60         13.69         10.64         10.63         13.65         10.75         10.62         13.70         23.62         -9.92         -3.54         10.16           26         5510         102         26T         10.98         10.06         13.56         11.33         10.61         13.99         10.96         13.77         23.64         -9.92         -3.54         10.16           26         5590         118         26T         11.05         10.59         13.84         10.71         10.54         13.63         10.78         10.88         13.84         -9.85         -0.47         13.82           5750         1142         26T         11.05         10.59         13.84         10.78         13.84         10.78         13.84         23.64         -9.80         -0.47         13.42           3         5755         151         26T         10.99         10.39         10.62         13.84         10.78         13.86         23.64         -9.80         -0.47         13.42           3         5755         151         26T         10.90         10.39         13.66         10.51         13.84         <  | 29.62 -19.31   | 11.66  | -2.33  | -9.99  | 23.98   | 13.81   | 10.36  | 11.19   | 13.99   | 10.58  | 11.35   | 13.59  | 10.26   | 10.87   | 26T  | 38   | 5190  | 1       |
| DA         5310         62         26T         10.76         10.60         13.69         10.64         10.63         13.65         10.75         10.62         13.70         23.62         -9.92         -3.54         10.16           26         5510         102         26T         10.98         10.06         13.56         11.33         10.61         13.99         10.96         13.77         23.64         -9.92         -3.54         10.16           26         5590         118         26T         11.05         10.59         13.84         10.71         10.54         13.63         10.78         10.88         13.84         -9.85         -0.47         13.82           5750         1142         26T         11.05         10.59         13.84         10.78         13.84         10.78         13.84         23.64         -9.80         -0.47         13.42           3         5755         151         26T         10.99         10.39         10.62         13.84         10.78         13.86         23.64         -9.80         -0.47         13.42           3         5755         151         26T         10.90         10.39         13.66         10.51         13.84         <  |  |  | -2.33  | -9.99  | 23.98   | 13.67   | 10.35  | 10.95   | 13.82   | 10.63  | 10.99   | 13.99  | 10.82   | 11.13   | 26T  | 46   | 5230  |         |
| Still         62         26T         10.76         10.60         13.69         10.64         10.83         13.65         10.75         10.62         13.70         23.62         -9.92         -3.54         10.16           5510         102         26T         10.97         10.06         13.66         11.39         10.96         13.77         23.64         -9.85         -0.47         13.52           5500         118         26T         11.05         10.99         13.84         10.71         10.54         13.89         10.96         13.84         23.64         -9.85         -0.47         13.52           5705         118         26T         11.21         10.52         13.84         10.78         10.88         13.84         23.64         -9.85         -0.47         13.37           3         5755         151         26T         11.21         10.52         13.84         10.62         13.84         10.80         13.87         23.64         -9.75         -0.47         13.42           3         5755         151         26T         10.99         13.66         11.03         10.62         13.84         10.68         13.80         30.00         -61.66         0.15   | 29.62 -19.46   | 10.31  | -3.54  | -9.77  | 23.62   | 13.85   | 10.19  | 11.40   | 13.57   | 9.95   | 11.09   | 13.74  | 10.18   | 11.21   | 26T  | 54   | 5270  | 24      |
| <u>3 5/55 151 261 10.90 10.39 13.66 11.03 10.62 13.84 10.68 10.51 13.60 30.00 -16.16 0.15 13.99</u>   | -13.40   | 10.16  | -3.54  | -9.92  | 23.62   | 13.70   |  | 10.75   | 13.65   | 10.63  | 10.64   |  | 10.60   | 10.76   | 26T  | 62   | 5310  | 24      |
| <u>3 5/55 151 261 10.90 10.39 13.66 11.03 10.62 13.84 10.68 10.51 13.60 30.00 -16.16 0.15 13.99</u>   | 29.64 -16.12   | 13.52  | -0.47  | -9.65  | 23.64   | 13.77   | 10.55  | 10.96   | 13.99   | 10.61  | 11.33   | 13.56  | 10.06   | 10.98   | 26T  | 102  | 5510  |         |
| <u>3 5/55 151 261 10.90 10.39 13.66 11.03 10.62 13.84 10.68 10.51 13.60 30.00 -16.16 0.15 13.99</u>   | 29.64 -16.27   | 13.37  | -0.47  | -9.80  | 23.64   | 13.84   | 10.88  | 10.78   | 13.63   | 10.54  | 10.71   | 13.84  | 10.59   | 11.05   | 26T  | 118  | 5590  | 2C      |
| <u>3 5/55 151 261 10.90 10.39 13.66 11.03 10.62 13.84 10.68 10.51 13.60 30.00 -16.16 0.15 13.99</u>   | 29.64 -16.22   | 13.42  | -0.47  | -9.75  | 23.64   | 13.87   | 10.80  | 10.92   | 13.64   | 10.42  | 10.83   | 13.89  | 10.52   | 11.21   | 26T  | 142  | 5710  |         |
|   | 36.00 -22.01   |  |  |  |   |   |  |   |   |  |   |  |   |   |  |  |   | 3       |
| 5795 159 26T 11.44 10.41 13.97 11.06 10.23 13.67 11.18 10.44 13.84 30.00 -16.03 0.15 14.12  | 36.00 -21.88   | 14.12  | 0.15   | -16.03   | 30.00   | 13.84   | 10.44  | 11.18   | 13.67   | 10.23  | 11.06   | 13.97  | 10.41   | 11.44   | 26T  | 159  | 5795  | 3       |
| 4 5835 167 26T 11.30 10.46 13.91 10.95 10.25 13.62 11.02 10.46 13.76  | 30.00 -17.76   | 12.24  | -1.67  | -  | -   | 13.76   | 10.46  | 11.02   | 13.62   | 10.25  | 10.95   | 13.91  | 10.46   | 11.30   | 26T  | 167  | 5835  | 4       |
| <sup>4</sup> 5875 175 26T 11.24 10.21 13.77 11.36 10.40 13.92 10.99 10.07 13.561.67 12.25   | 30.00 -17.75   | 12.25  | -1.67  | -  | -   | 13.56   | 10.07  | 10.99   | 13.92   | 10.40  | 11.36   | 13.77  | 10.21   | 11.24   | 26T  | 175  | 5875  | 4       |
| Average Conducted Power (dBm) Conducted Conducted Conducted Directional Max e.ir.p. M   | Max e.i.r.p.   | Maxoirn  |  | Conducted  |   |   |  |   | ver (dBm)   |  |   |  |   |   |  |  | From  |         |
|   | Limit [dBm] e.i.r.p. ma  |  |  |  |   |   |  |   |   |  |   |  |   |   | Tones  | Channel  |   | Band    |
| ANT1 ANT2 MIMO ANT1 ANT2 MIMO ANT1 ANT2 MIMO [dbm] [dbm] [dbm]  |  |  |  | -  |   |   |  |   |   |  |   |  |   |   |  |  |   |         |
|   | 22.63 -10.97   |  |  |  |   |   |  |   |   |  |   |  |   |   |  |  |   |         |
| P         2A         5290         58         26T         11.39         10.19         13.84         11.30         10.02         13.72         11.63         10.20         13.88         23.62         -9.64         -3.54         10.44           F         5530         106         26T         10.96         10.50         13.75         10.62         13.79         10.29         13.88         23.62         -9.64         -3.54         10.44           5530         106         26T         10.96         10.50         13.75         10.52         13.79         10.29         13.88         23.64         -9.66         -0.47         13.32           5630         122         26T         10.99         10.06         13.56         10.94         10.62         13.79         10.29         10.91         13.82         -0.47         13.32           5690         138         26T         10.89         10.10         13.53         10.87         10.75         13.82         10.25         10.78         13.53         23.64         -9.82         -0.47         13.32           5690         138         26T         10.89         10.10         13.53         10.75         13.82         10.25   | 29.62 -19.18   |  |  |  |   |   |  |   |   |  |   |  |   |   |  |  |   | 2A      |
| 5530 106 26T 10.96 10.50 13.75 10.52 10.75 13.65 10.56 11.34 13.98 23.64 -9.66 -0.47 13.51  | 29.64 -16.13   |  |  |  |   |   |  |   |   |  |   |  |   |   |  |  |   |         |
| 2C 5610 122 26T 10.99 10.06 13.56 10.94 10.62 13.79 10.29 10.91 13.62 23.64 -9.85 -0.47 13.32   | 29.64 -16.32   |  | -  |  |   |   |  |   |   |  |   |  |   |   |  |  |   | 2C      |
| <b>5</b> 690 138 26T 10.89 10.10 13.53 10.87 10.75 13.82 10.25 10.78 13.53 23.64 -9.82 -0.47 13.35  | 29.64 -16.29   |  | -  |  |   |   |  |   |   |  |   |  |   |   | -  |  |   |         |
| <u>3 5775 155 26T 11.59 9.79 13.79 11.63 10.21 13.99 11.02 10.04 13.57 30.00 -16.01 0.15 14.14</u>  | 36.00 -21.86   |  |  | -16.01   | 30.00   |   |  |   |   | -  |   |  |   |   |  |  |   |         |
| 4 5855 171 26T 11.07 10.08 13.62 11.10 10.28 13.72 11.11 10.37 13.771.67 12.10  | 30.00 -17.90   | 12.10  |  | -  | -   | 13.77   | 10.37  | 11.11   |   |  |   | 13.62  | 10.08   | 11.07   | 26T  | 171  | 5855  | 4       |
| Prog<br>0         Prod<br>1         State         Freq<br>(MHz)         Channel         Tome         Functional<br>(BB)         RU Index: 36 (U)         RU Index: 36 (U)         Power Limit<br>(BB)         Conducted<br>(MHz)         Directional<br>(MB)         Max e.i.r.p.<br>(BB)  | Max e.i.r.p.   | Max e.i.r.p.   |  | Conducted  |   | n   | 11-1 00/1  |   |   |  |   |  | DI 1. 1   |   | <b>T</b>   |  | Freq  |         |
| Band [MHz] Band [MHz] Channel Tones RU Index: 0 (L) RU Index: 36 (L) RU Index: 36 (U) Power Limit [dBm] Li [dBm] Li   | Limit [dBm] e.i.r.p. ma  | [dBm]  |  | Power Margin   |   | .,  |  |   |   |  |   |  |   |   | Iones  | Channel  | [MHz]   | Band    |
| Control         Control <t< th=""><td>22.63 -11.09</td><td></td><td>[uDI]</td><td>40.44</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>OCT</td><td>50</td><td>5050</td><td></td></t<>  | 22.63 -11.09   |  | [uDI]  | 40.44  |   |   |  |   |   |  |   |  |   |   | OCT  | 50   | 5050  |         |
| Q UI 1 2520 50 2.61 11.05 10.21 13.56 11.49 10.17 13.67 11.43 3.60 13.70 23.96 -10.11 -2.33 11.54 10.33 11.09 13.74 23.96 -0.47 13.27 13.   |  |  | 0.00   |  |   |   |  |   |   | -  | -   |  |   |   |  | 50   |   |         |
|   | 20.64 40.27  | 11.54  | -2.33  |  |   |   |  |   |   |  |   |  |   | 11.50   | COL  | 114  | 6670  | 20      |
| 4 5815 163 26T 11.33 9.72 13.61 11.19 10.33 13.79 10.88 10.38 13.65 1.67 12.12  | 29.64 -16.37<br>30.00 -17.88   | 11.54<br>13.27<br>12.12  | -2.33<br>-0.47<br>-1.67  | -9.90  | 20.04   | 12.65   |  |   | 13.79   | 10.33  | 11.19   | 13.58  | 9.39  | 11.50<br>11.33  | 26T<br>26T   | 114<br>163                                     | 5570<br>5815  | 2C      |

Table 7-14. MIMO (UNII) Maximum Conducted Output Power (26 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dage 61 of 157                    |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 61 of 157                    |
| © 2023 ELEMENT      |                |                    | V 9.0 02/01/2019                  |



# MIMO Conducted Output Power Measurements (52 Tones)

|             |      | _             |         |            |               |                       |            | Average C     | onducted Po           | wer (dBm)  |               |                       |            | Conducted            |                           | Directional        |                       |                             |                 |
|-------------|------|---------------|---------|------------|---------------|-----------------------|------------|---------------|-----------------------|------------|---------------|-----------------------|------------|----------------------|---------------------------|--------------------|-----------------------|-----------------------------|-----------------|
| i i         | Band | Freq<br>[MHz] | Channel | Tones      |               | RU Index: 37          |            | -             | RU Index: 39          | )          |               | RU Index: 40          | )          | Power Limit          | Conducted<br>Power Margin | Ant. Gain          | Max e.i.r.p.<br>[dBm] | Max e.i.r.p.<br>Limit (dBm) | e.i.r.p. margin |
| i i         |      | [IVITIZ]      |         |            | ANT1          | ANT2                  | MIMO       | ANT1          | ANT2                  | MIMO       | ANT1          | ANT2                  | MIMO       | [dBm]                | Power wargin              | [dBi]              | Lapini                | стин (авта)                 |                 |
| ĺ           |      | 5180          | 36      | 52T        | 13.49         | 13.28                 | 16.40      | 13.59         | 13.37                 | 16.49      | 13.61         | 13.30                 | 16.47      | 23.98                | -7.49                     | -2.33              | 14.16                 | 22.63                       | -8.47           |
| 1           | 1    | 5200          | 40      | 52T        | 13.53         | 13.27                 | 16.41      | 13.62         | 13.30                 | 16.47      | 13.67         | 13.29                 | 16.49      | 23.98                | -7.49                     | -2.33              | 14.16                 | 22.63                       | -8.47           |
|             |      | 5240          | 48      | 52T        | 13.54         | 12.93                 | 16.25      | 13.35         | 12.72                 | 16.05      | 13.63         | 12.97                 | 16.32      | 23.98                | -7.66                     | -2.33              | 13.99                 | 22.63                       | -8.64           |
| BV          |      | 5260          | 52      | 52T        | 13.67         | 13.13                 | 16.42      | 13.45         | 12.92                 | 16.20      | 13.72         | 13.13                 | 16.45      | 23.62                | -7.17                     | -3.54              | 12.91                 | 29.62                       | -16.71          |
| E CO        | 2A   | 5280          | 56      | 52T        | 13.64         | 13.08                 | 16.38      | 13.49         | 12.87                 | 16.20      | 13.73         | 13.11                 | 16.44      | 23.62                | -7.18                     | -3.54              | 12.90                 | 29.62                       | -16.72          |
| N           |      | 5320          | 64      | 52T        | 13.01         | 13.35                 | 16.19      | 13.29         | 13.55                 | 16.43      | 13.00         | 13.38                 | 16.21      | 23.62                | -7.19                     | -3.54              | 12.89                 | 29.62                       | -16.73          |
| I           |      | 5500          | 100     | 52T        | 13.41         | 12.87                 | 16.16      | 13.60         | 13.17                 | 16.40      | 13.41         | 13.10                 | 16.27      | 23.64                | -7.24                     | -0.47              | 15.93                 | 29.64                       | -13.71          |
| Σ           | 2C   | 5600          | 120     | 52T        | 13.13         | 13.09                 | 16.12      | 13.45         | 13.31                 | 16.39      | 12.97         | 13.20                 | 16.10      | 23.64                | -7.25                     | -0.47              | 15.92                 | 29.64                       | -13.72          |
| 20MHz       |      | 5720          | 144     | 52T        | 13.50         | 13.42                 | 16.47      | 13.36         | 13.29                 | 16.34      | 13.47         | 13.49                 | 16.49      | 23.64                | -7.15                     | -0.47              | 16.02                 | 29.64                       | -13.62          |
| ~           |      | 5745          | 149     | 52T        | 13.52         | 13.43                 | 16.48      | 13.35         | 13.32                 | 16.35      | 13.42         | 13.50                 | 16.47      | 30.00                | -13.52                    | 0.15               | 16.63                 | 36.00                       | -19.37          |
|             | 3    | 5785          | 157     | 52T        | 13.60         | 12.28                 | 16.00      | 13.90         | 12.83                 | 16.41      | 13.50         | 12.31                 | 15.96      | 30.00                | -13.59                    | 0.15               | 16.56                 | 36.00                       | -19.44          |
|             |      | 5825          | 165     | 52T        | 13.56         | 12.98                 | 16.29      | 13.37         | 12.75                 | 16.08      | 13.45         | 12.99                 | 16.24      | 30.00                | -13.71                    | 0.15               | 16.44                 | 36.00                       | -19.56          |
|             |      | 5845          | 169     | 52T        | 13.53         | 12.99                 | 16.28      | 13.30         | 12.74                 | 16.04      | 13.40         | 12.95                 | 16.19      | -                    | -                         | -1.67              | 14.61                 | 30.00                       | -15.39          |
|             | 4    | 5865          | 173     | 52T        | 13.48         | 12.48                 | 16.02      | 13.73         | 12.81                 | 16.30      | 13.88         | 13.01                 | 16.48      | -                    | -                         | -1.67              | 14.81                 | 30.00                       | -15.19          |
|             |      | 5885          | 177     | 52T        | 13.44         | 13.48                 | 16.47      | 13.14         | 13.21                 | 16.19      | 13.39         | 13.39                 | 16.40      | -                    | -                         | -1.67              | 14.80                 | 30.00                       | -15.20          |
|             |      | Free          |         |            |               |                       |            | Average C     | onducted Po           | wer (dBm)  |               |                       |            | Conducted            | Conducted                 | Directional        | Max e.i.r.p.          | Max e.i.r.p.                |                 |
|             | Band | Freq<br>[MHz] | Channel | Tones      |               | RU Index: 37          |            |               | RU Index: 40          | )          |               | RU Index: 44          | 1          | Power Limit          | Power Margin              | Ant. Gain          | [dBm]                 | Limit [dBm]                 | e.i.r.p. margin |
|             |      | [111112]      |         |            | ANT1          | ANT2                  | MIMO       | ANT1          | ANT2                  | MIMO       | ANT1          | ANT2                  | MIMO       | [dBm]                | r ower margin             | [dBi]              | [ubiii]               | Ennie (GDing                |                 |
| >           | 1    | 5190          | 38      | 52T        | 13.51         | 13.33                 | 16.43      | 13.41         | 13.15                 | 16.29      | 13.21         | 12.87                 | 16.05      | 23.98                | -7.55                     | -2.33              | 14.10                 | 22.63                       | -8.53           |
| ΒW          | · .  | 5230          | 46      | 52T        | 12.93         | 13.45                 | 16.21      | 12.80         | 13.26                 | 16.05      | 13.14         | 13.44                 | 16.30      | 23.98                | -7.68                     | -2.33              | 13.97                 | 22.63                       | -8.66           |
| m           | 2A   | 5270          | 54      | 52T        | 13.77         | 13.15                 | 16.48      | 13.59         | 12.95                 | 16.29      | 13.82         | 13.10                 | 16.49      | 23.62                | -7.13                     | -3.54              | 12.95                 | 29.62                       | -16.67          |
| 40MHz       | 2.   | 5310          | 62      | 52T        | 13.09         | 13.44                 | 16.28      | 13.33         | 13.62                 | 16.49      | 13.17         | 13.44                 | 16.32      | 23.62                | -7.13                     | -3.54              | 12.95                 | 29.62                       | -16.67          |
| I I I       |      | 5510          | 102     | 52T        | 13.54         | 12.87                 | 16.23      | 13.37         | 12.82                 | 16.12      | 13.46         | 13.26                 | 16.37      | 23.64                | -7.27                     | -0.47              | 15.90                 | 29.64                       | -13.74          |
| ≥           | 2C   | 5590          | 118     | 52T        | 13.28         | 13.06                 | 16.18      | 13.51         | 13.39                 | 16.46      | 13.03         | 13.46                 | 16.26      | 23.64                | -7.18                     | -0.47              | 15.99                 | 29.64                       | -13.65          |
| 윾           |      | 5710          | 142     | 52T        | 13.27         | 12.82                 | 16.06      | 13.48         | 13.40                 | 16.45      | 13.02         | 13.05                 | 16.04      | 23.64                | -7.19                     | -0.47              | 15.98                 | 29.64                       | -13.66          |
|             | 3    | 5755          | 151     | 52T        | 13.47         | 13.06                 | 16.28      | 13.58         | 13.35                 | 16.48      | 13.18         | 13.21                 | 16.21      | 30.00                | -13.52                    | 0.15               | 16.63                 | 36.00                       | -19.37          |
|             | Ŭ    | 5795          | 159     | 52T        | 13.47         | 12.66                 | 16.09      | 13.70         | 13.10                 | 16.42      | 13.25         | 12.72                 | 16.00      | 30.00                | -13.58                    | 0.15               | 16.57                 | 36.00                       | -19.43          |
|             | 4    | 5835          | 167     | 52T        | 13.75         | 13.13                 | 16.46      | 13.42         | 12.93                 | 16.19      | 13.44         | 13.13                 | 16.30      | -                    | -                         | -1.67              | 14.79                 | 30.00                       | -15.21          |
|             |      | 5875          | 175     | 52T        | 13.77         | 13.16                 | 16.48      | 13.74         | 13.15                 | 16.47      | 13.53         | 13.09                 | 16.33      | -                    | -                         | -1.67              | 14.81                 | 30.00                       | -15.19          |
|             |      | Frea          |         |            |               |                       |            |               | onducted Po           |            | -             |                       |            | Conducted            | Conducted                 | Directional        | Max e.i.r.p.          | Max e.i.r.p.                |                 |
| >           | Band | [MHz]         | Channel | Tones      |               | RU Index: 37          |            |               | RU Index: 44          |            |               | RU Index: 52          |            | Power Limit          | Power Margin              | Ant. Gain          | [dBm]                 | Limit [dBm]                 | e.i.r.p. margin |
| BW          |      |               |         |            | ANT1          | ANT2                  | MIMO       | ANT1          | ANT2                  | MIMO       | ANT1          | ANT2                  | MIMO       | [dBm]                |                           | [dBi]              |                       |                             |                 |
|             | 1    | 5210          | 42      | 52T        | 12.89         | 13.45                 | 16.19      | 12.96         | 13.31                 | 16.15      | 13.42         | 13.48                 | 16.46      | 23.98                | -7.52                     | -2.33              | 14.13                 | 22.63                       | -8.50           |
| ₽_          | 2A   | 5290          | 58      | 52T        | 13.79         | 13.13                 | 16.48      | 13.72         | 12.94                 | 16.36      | 13.66         | 12.60                 | 16.17      | 23.62                | -7.14                     | -3.54              | 12.94                 | 29.62                       | -16.68          |
| 80MHz       |      | 5530          | 106     | 52T        | 13.40         | 13.39                 | 16.40      | 13.06         | 13.59                 | 16.35      | 12.64         | 13.71                 | 16.22      | 23.64                | -7.24                     | -0.47              | 15.93                 | 29.64                       | -13.71          |
| N S         | 2C   | 5610          | 122     | 52T        | 13.58         | 12.87                 | 16.25      | 13.11         | 12.96                 | 16.05      | 12.95         | 13.76                 | 16.38      | 23.64                | -7.26                     | -0.47              | 15.91                 | 29.64                       | -13.73          |
| 8           |      | 5690          | 138     | 52T        | 13.68         | 12.60                 | 16.18      | 13.60         | 13.33                 | 16.48      | 13.00         | 13.26                 | 16.14      | 23.64                | -7.16                     | -0.47              | 16.01                 | 29.64                       | -13.63          |
|             | 3    | 5775          | 155     | 52T        | 14.14         | 12.29                 | 16.33      | 13.62         | 12.36                 | 16.04      | 13.52         | 12.53                 | 16.06      | 30.00                | -13.67                    | 0.15               | 16.48                 | 36.00                       | -19.52          |
|             | 4    | 5855          | 171     | 52T        | 13.59         | 12.56                 | 16.12      | 13.48         | 12.91                 | 16.22      | 13.49         | 13.12                 | 16.32      | -                    | -                         | -1.67              | 14.65                 | 30.00                       | -15.35          |
| N           | B    | Freq          |         | <b>-</b>   |               |                       |            |               | onducted Po           |            |               |                       | 10         | Conducted            | Conducted                 | Directional        | Max e.i.r.p.          | Max e.i.r.p.                |                 |
| 60MHz<br>BW | Band | [MHz]         | Channel | Tones      | ANT1          | U Index: 37 (<br>ANT2 | L)<br>MIMO | ANT1          | U Index: 52 (<br>ANT2 | L)<br>MIMO | ANT1          | U Index: 52 (<br>ANT2 | U)<br>MIMO | Power Limit<br>[dBm] | Power Margin              | Ant. Gain<br>[dBi] | [dBm]                 | Limit [dBm]                 | e.i.r.p. margin |
| B W         | 1    | 5250          | 50      | 52T        | AN11<br>13.29 | AN12<br>12.86         | 16.09      | ANT1<br>13.66 | AN12<br>12.80         | 16.26      | ANT1<br>14.06 | 12.80                 | 16.49      | 23.98                | -7.49                     | -2.33              | 14.16                 | 22.63                       | -8.47           |
| <u>ю</u> ш  | 2C   | 5250          | 114     | 521<br>52T | 13.29         | 12.65                 | 16.09      | 13.00         | 13.31                 | 16.20      | 12.30         | 12.80                 | 16.49      | 23.96                | -7.49                     | -2.33              | 14.16                 | 22.63                       | -0.47           |
| ÷.          | 20   | 5815          | 163     | 521<br>52T | 13.87         | 12.65                 | 16.20      | 13.20         | 13.13                 | 16.43      | 12.30         | 13.95                 | 16.21      | 23.04                | -1.30                     | -0.47              | 14.76                 | 29.64                       | -15.24          |
|             | 4    | - 3013        | 103     | 521        | 13.07         | 12.42                 | 10.21      | 13.70         | 13.13                 | 10.45      | 13.40         | 13.22                 | 10.30      |                      |                           | -1.07              | 14.70                 | 30.00                       | -13.24          |

Table 7-15. MIMO (UNII) Maximum Conducted Output Power (52 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dage 62 of 157                    |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 62 of 157                    |
| © 2023 ELEMENT      |                |                    | V 9.0 02/01/2019                  |



# MIMO Conducted Output Power Measurements (106 Tones)

|             |      | _             |          |              |                |                      |                | Average C      | onducted Po    | ower (dBm)     |                |                      |                | Conducted            |                           | Directional          |                       |                             |                 |
|-------------|------|---------------|----------|--------------|----------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------------|----------------|----------------------|---------------------------|----------------------|-----------------------|-----------------------------|-----------------|
|             | Band | Freq<br>[MHz] | Channel  | Tones        |                | RU Index: 53         |                | -              | RU Index: 54   | ŧ <u>, , ,</u> |                | N/A                  |                | Power Limit          | Conducted<br>Power Margin | Ant. Gain            | Max e.i.r.p.<br>[dBm] | Max e.i.r.p.<br>Limit [dBm] | e.i.r.p. margin |
|             |      | [WIFIZ]       |          |              | ANT1           | ANT2                 | MIMO           | ANT1           | ANT2           | MIMO           | ANT1           | ANT2                 | MIMO           | [dBm]                | Power wargin              | [dBi]                | [abm]                 | τιπίτ (αδη)                 |                 |
|             |      | 5180          | 36       | 106T         | 15.72          | 15.50                | 18.62          | 15.83          | 15.53          | 18.69          |                |                      |                | 23.98                | -5.29                     | -2.33                | 16.36                 | 22.63                       | -6.27           |
|             | 1    | 5200          | 40       | 106T         | 15.73          | 15.46                | 18.61          | 15.85          | 15.48          | 18.68          |                |                      |                | 23.98                | -5.30                     | -2.33                | 16.35                 | 22.63                       | -6.28           |
|             |      | 5240          | 48       | 106T         | 15.89          | 15.53                | 18.72          | 15.96          | 15.50          | 18.75          |                |                      |                | 23.98                | -5.23                     | -2.33                | 16.42                 | 22.63                       | -6.21           |
| BW          |      | 5260          | 52       | 106T         | 15.95          | 15.42                | 18.70          | 15.98          | 15.41          | 18.72          |                |                      |                | 23.62                | -4.90                     | -3.54                | 15.18                 | 29.62                       | -14.44          |
|             | 2A   | 5280          | 56       | 106T         | 16.09          | 15.39                | 18.76          | 16.13          | 15.38          | 18.78          |                |                      |                | 23.62                | -4.84                     | -3.54                | 15.24                 | 29.62                       | -14.38          |
| 20MHz       |      | 5320          | 64       | 106T         | 15.27          | 15.76                | 18.53          | 15.31          | 15.75          | 18.54          |                |                      |                | 23.62                | -5.08                     | -3.54                | 15.00                 | 29.62                       | -14.62          |
| . <u> </u>  |      | 5500          | 100      | 106T         | 15.74          | 15.48                | 18.62          | 15.72          | 15.66          | 18.70          |                |                      |                | 23.64                | -4.94                     | -0.47                | 18.23                 | 29.64                       | -11.41          |
| 2           | 2C   | 5600          | 120      | 106T         | 16.02          | 15.84                | 18.94          | 15.95          | 15.94          | 18.96          |                |                      |                | 23.64                | -4.68                     | -0.47                | 18.49                 | 29.64                       | -11.15          |
|             |      | 5720          | 144      | 106T         | 15.90          | 15.84                | 18.88          | 15.83          | 15.94          | 18.90          |                |                      |                | 23.64                | -4.74                     | -0.47                | 18.43                 | 29.64                       | -11.21          |
|             |      | 5745          | 149      | 106T         | 15.94          | 15.88                | 18.92          | 15.89          | 15.93          | 18.92          |                |                      |                | 30.00                | -11.08                    | 0.15                 | 19.07                 | 36.00                       | -16.93          |
|             | 3    | 5785          | 157      | 106T         | 16.00          | 15.23                | 18.64          | 15.94          | 15.28          | 18.63          |                |                      |                | 30.00                | -11.36                    | 0.15                 | 18.79                 | 36.00                       | -17.21          |
|             |      | 5825          | 165      | 106T         | 16.02          | 15.46                | 18.76          | 15.88          | 15.44          | 18.68          |                |                      |                | 30.00                | -11.24                    | 0.15                 | 18.91                 | 36.00                       | -17.09          |
|             |      | 5845          | 169      | 106T         | 15.95          | 15.48                | 18.73          | 15.84          | 15.45          | 18.66          |                |                      |                | -                    | -                         | -1.67                | 17.06                 | 30.00                       | -12.94          |
|             | 4    | 5865          | 173      | 106T         | 16.46          | 15.23                | 18.90          | 16.39          | 15.20          | 18.84          |                |                      |                | -                    | -                         | -1.67                | 17.23                 | 30.00                       | -12.77          |
|             |      | 5885          | 177      | 106T         | 15.80          | 15.55                | 18.69          | 15.73          | 15.49          | 18.62          |                |                      |                | -                    | -                         | -1.67                | 17.02                 | 30.00                       | -12.98          |
|             |      | Freq          |          |              |                |                      |                |                | onducted Po    |                | -              |                      |                | Directional          |                           | Directional          | Max e.i.r.p.          | Max e.i.r.p.                |                 |
|             | Band | [MHz]         | Channel  | Tones        |                | RU Index: 53         |                |                | RU Index: 54   |                |                | RU Index: 56         |                | Ant. Gain            | e.i.r.p. margin           | Ant. Gain            | [dBm]                 | Limit [dBm]                 | e.i.r.p. margin |
|             |      |               |          |              | ANT1           | ANT2                 | MIMO           | ANT1           | ANT2           | MIMO           | ANT1           | ANT2                 | MIMO           | [dBi]                |                           | [dBi]                |                       |                             |                 |
| >           | 1    | 5190          | 38       | 106T         | 14.58          | 14.84                | 17.72          | 14.54          | 14.71          | 17.64          | 14.91          | 14.89                | 17.91          | 23.98                | -6.07                     | -2.33                | 15.58                 | 22.63                       | -7.05           |
| 40MHz BW    |      | 5230          | 46       | 106T         | 15.55          | 15.65                | 18.61          | 15.94          | 15.95          | 18.95          | 15.73          | 15.60                | 18.68          | 23.98                | -5.03                     | -2.33                | 16.62                 | 22.63                       | -6.01           |
|             | 2A   | 5270          | 54       | 106T         | 16.02          | 15.47                | 18.76          | 15.95          | 15.30          | 18.65          | 16.18          | 15.44                | 18.84          | 23.62                | -4.78                     | -3.54                | 15.30                 | 29.62                       | -14.32          |
| N           |      | 5310          | 62       | 106T         | 13.61          | 14.68                | 17.19          | 13.48          | 14.54          | 17.05          | 13.68          | 14.71                | 17.24          | 23.62                | -6.38                     | -3.54                | 13.70                 | 29.62                       | -15.92          |
| ± .         |      | 5510          | 102      | 106T         | 14.56          | 14.72                | 17.65          | 14.44          | 14.71          | 17.59          | 14.58          | 14.99                | 17.80          | 23.64                | -5.84                     | -0.47                | 17.33                 | 29.64                       | -12.31          |
| N S         | 2C   | 5590          | 118      | 106T         | 16.15          | 15.80                | 18.99          | 15.94          | 15.78          | 18.87          | 15.90          | 16.05                | 18.99          | 23.64                | -4.65                     | -0.47                | 18.52                 | 29.64                       | -11.12          |
| 4<br>V      |      | 5710          | 142      | 106T         | 16.08          | 15.83                | 18.97          | 15.87          | 15.77          | 18.83          | 15.81          | 16.05                | 18.95          | 23.64                | -4.67                     | -0.47                | 18.50                 | 29.64                       | -11.14          |
|             | 3    | 5755          | 151      | 106T         | 16.01          | 15.58                | 18.81          | 15.77          | 15.49          | 18.64          | 15.77          | 15.72                | 18.76          | 30.00                | -11.19                    | 0.15                 | 18.96                 | 36.00                       | -17.04          |
|             |      | 5795          | 159      | 106T         | 16.07          | 15.19                | 18.66          | 16.12          | 15.52          | 18.84          | 15.80          | 15.23                | 18.54          | 30.00                | -11.16                    | 0.15                 | 18.99                 | 36.00                       | -17.01          |
|             | 4    | 5835          | 167      | 106T         | 16.09          | 15.63                | 18.88          | 15.84          | 15.46          | 18.66          | 15.87          | 15.60                | 18.75          | -                    | -                         | -1.67                | 17.21                 | 30.00                       | -12.79          |
|             |      | 5875          | 175      | 106T         | 16.17          | 15.48                | 18.85          | 15.94          | 15.29          | 18.64          | 15.99          | 15.34                | 18.69          | -                    | -                         | -1.67                | 17.18                 | 30.00                       | -12.82          |
|             |      | Freq          |          | _            |                |                      |                |                | onducted Po    |                |                |                      |                | Conducted            | Conducted                 | Directional          | Max e.i.r.p.          | Max e.i.r.p.                |                 |
| 2           | Band | [MHz]         | Channel  | Tones        | ANT1           | RU Index: 53<br>ANT2 | MIMO           | ANT1           | RU Index: 56   | MIMO           | ANT1           | RU Index: 60<br>ANT2 | MIMO           | Power Limit<br>[dBm] | Power Margin              | Ant. Gain<br>[dBi]   | [dBm]                 | Limit [dBm]                 | e.i.r.p. margin |
| BW          | 1    | 5040          | 40       | 1007         |                |                      | -              |                | ANT2           | -              |                |                      |                |                      | 0.00                      |                      | 44.00                 | 00.00                       | 7.07            |
|             | 2A   | 5210<br>5290  | 42<br>58 | 106T<br>106T | 13.93<br>13.85 | 14.03<br>13.76       | 16.99<br>16.82 | 13.97<br>13.83 | 13.95<br>13.58 | 16.97<br>16.72 | 13.97<br>13.78 | 13.63<br>13.35       | 16.81<br>16.58 | 23.98<br>23.62       | -6.99<br>-6.80            | -2.33                | 14.66<br>13.28        | 22.63<br>29.62              | -7.97<br>-16.34 |
| 우           | 2A   | 5290          | 106      | 106T         | 13.65          | 15.56                | 18.23          | 13.63          | 15.74          | 18.22          | 14.13          | 15.89                | 18.11          | 23.62                | -5.41                     | -0.47                | 17.76                 | 29.62                       | -10.34          |
| ŧ.          | 2C   | 5610          | 106      | 106T         | 14.04          | 15.00                | 18.61          | 14.60          | 15.74          | 18.88          | 14.13          | 15.89                | 18.67          | 23.64                | -5.41                     | -0.47                | 18.41                 | 29.64                       | -11.00          |
| 80MHz       | 20   | 5690          | 122      | 106T         | 16.07          | 15.07                | 18.61          | 15.95          | 15.87          | 18.92          | 15.42          | 15.00                | 18.60          | 23.64                | -4.70                     | -0.47                | 18.45                 | 29.64                       | -11.23          |
| õ           | 3    | 5775          | 155      | 106T         | 16.04          | 15.12                | 18.92          | 16.08          | 15.07          | 18.65          | 15.41          | 15.76                | 18.73          | 30.00                | -4.72                     | -0.47                | 10.45                 | 29.64                       | -16.93          |
|             | 4    | 5775          | 155      | 106T         | 16.51          | 15.21                | 18.92          | 15.08          | 15.14          | 18.65          | 15.99          | 15.42                | 18.73          | 30.00                | -11.06                    | -1.67                | 19.07                 | 36.00                       | -16.93          |
|             | 4    | 3855          | 171      | 1001         | 10.31          | 13.00                | 10.90          |                | onducted Po    |                | 13.04          | 15.45                | 10.05          | Conducted            | -                         | -1.67<br>Directional | 17.31                 | 30.00                       | -12.09          |
| N           | Band | Freq          | Channel  | Tones        | P              | U Index: 53 (        | 1)             |                | U Index: 60 (  |                | P              | U Index: 60 (        | 10             | Power Limit          | Conducted                 | Ant. Gain            | Max e.i.r.p.          | Max e.i.r.p.                | e.i.r.p. margin |
| 60MHz<br>BW | Canu | [MHz]         | Shamer   | 101103       | ANT1           | ANT2                 | MIMO           | ANT1           | ANT2           | MIMO           | ANT1           | ANT2                 | MIMO           | [dBm]                | Power Margin              | [dBi]                | [dBm]                 | Limit [dBm]                 | op. margin      |
|             | 1    | 5250          | 50       | 106T         | 15.68          | 15.51                | 18.60          | 15.96          | 15.35          | 18.67          | 16.48          | 15.37                | 18.97          | 23.98                | -5.01                     | -2.33                | 16.64                 | 22.63                       | -5.99           |
| 60          | 2C   | 5570          | 114      | 106T         | 16.26          | 14.64                | 18.53          | 16.00          | 15.64          | 18.84          | 15.13          | 16.28                | 18.75          | 23.64                | -4.80                     | -0.47                | 18.37                 | 29.64                       | -11.27          |
| <b>~</b>    | 4    | 5815          | 163      | 106T         | 16.45          | 14.95                | 18.78          | 15.95          | 15.42          | 18.71          | 15.65          | 15.54                | 18.61          |                      | -                         | -1.67                | 17.11                 | 30.00                       | -12.89          |
|             |      |               |          |              |                |                      | 10.10          | 10.00          |                |                | 10.00          | 10.01                |                |                      |                           |                      |                       | 00.00                       | 12.00           |

Table 7-16. MIMO (UNII) Maximum Conducted Output Power (106 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dage 62 of 157                    |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 63 of 157                    |
| © 2023 ELEMENT      |                |                    | V 9.0 02/01/2019                  |



## MIMO Conducted Output Power Measurements (242 Tones)

|             |      | _             |         |       |       |               |       | Average C | onducted Po   | ower (dBm) |       |               |       | Conducted   |                           | Directional |                       |                             |                 |
|-------------|------|---------------|---------|-------|-------|---------------|-------|-----------|---------------|------------|-------|---------------|-------|-------------|---------------------------|-------------|-----------------------|-----------------------------|-----------------|
| Ì           | Band | Freq<br>[MHz] | Channel | Tones |       | RU Index: 61  |       |           | N/A           |            |       | N/A           |       | Power Limit | Conducted<br>Power Margin | Ant. Gain   | Max e.i.r.p.<br>[dBm] | Max e.i.r.p.<br>Limit [dBm] | e.i.r.p. margin |
|             |      | [IVIFIZ]      |         |       | ANT1  | ANT2          | MIMO  | ANT1      | ANT2          | MIMO       | ANT1  | ANT2          | MIMO  | [dBm]       | Power wargin              | [dBi]       | [abin]                | τιπίτ (αδη)                 |                 |
|             |      | 5180          | 36      | 242T  | 16.81 | 16.60         | 19.72 |           |               |            |       |               |       | 23.98       | -4.26                     | -2.33       | 17.39                 | 22.63                       | -5.24           |
|             | 1    | 5200          | 40      | 242T  | 16.76 | 16.57         | 19.67 |           |               |            |       |               |       | 23.98       | -4.31                     | -2.33       | 17.34                 | 22.63                       | -5.29           |
| <u> </u>    |      | 5240          | 48      | 242T  | 17.34 | 16.50         | 19.95 |           |               |            |       |               |       | 23.98       | -4.03                     | -2.33       | 17.62                 | 22.63                       | -5.01           |
| BW          |      | 5260          | 52      | 242T  | 17.10 | 16.39         | 19.77 |           |               |            |       |               |       | 23.62       | -3.85                     | -3.54       | 16.23                 | 29.62                       | -13.39          |
|             | 2A   | 5280          | 56      | 242T  | 17.11 | 16.35         | 19.76 |           |               |            |       |               |       | 23.62       | -3.86                     | -3.54       | 16.22                 | 29.62                       | -13.40          |
| N           |      | 5320          | 64      | 242T  | 16.48 | 16.80         | 19.65 |           |               |            |       |               |       | 23.62       | -3.97                     | -3.54       | 16.11                 | 29.62                       | -13.51          |
|             |      | 5500          | 100     | 242T  | 16.61 | 16.54         | 19.58 |           |               |            |       |               |       | 23.64       | -4.06                     | -0.47       | 19.11                 | 29.64                       | -10.53          |
| 2           | 2C   | 5600          | 120     | 242T  | 16.85 | 16.90         | 19.88 |           |               |            |       |               |       | 23.64       | -3.76                     | -0.47       | 19.41                 | 29.64                       | -10.23          |
| 20MHz       |      | 5720          | 144     | 242T  | 16.88 | 16.77         | 19.83 |           |               |            |       |               |       | 23.64       | -3.81                     | -0.47       | 19.36                 | 29.64                       | -10.28          |
| ~           |      | 5745          | 149     | 242T  | 16.85 | 16.82         | 19.85 |           |               |            |       |               |       | 30.00       | -10.15                    | 0.15        | 20.00                 | 36.00                       | -16.00          |
|             | 3    | 5785          | 157     | 242T  | 16.97 | 16.02         | 19.53 |           |               |            |       |               |       | 30.00       | -10.47                    | 0.15        | 19.68                 | 36.00                       | -16.32          |
|             |      | 5825          | 165     | 242T  | 17.11 | 16.52         | 19.84 |           |               |            |       |               |       | 30.00       | -10.16                    | 0.15        | 19.99                 | 36.00                       | -16.01          |
|             |      | 5845          | 169     | 242T  | 17.07 | 16.52         | 19.81 |           |               |            |       |               |       | -           | -                         | -1.67       | 18.14                 | 30.00                       | -11.86          |
|             | 4    | 5865          | 173     | 242T  | 17.46 | 16.18         | 19.88 |           |               |            |       |               |       | -           | -                         | -1.67       | 18.21                 | 30.00                       | -11.79          |
|             |      | 5885          | 177     | 242T  | 16.72 | 16.64         | 19.69 |           |               |            |       |               |       | -           | -                         | -1.67       | 18.02                 | 30.00                       | -11.98          |
|             |      | -             |         |       |       |               |       | Average C | onducted Po   | wer (dBm)  |       |               |       | Directional |                           | Directional |                       |                             |                 |
|             | Band | Freq          | Channel | Tones |       | RU Index: 61  |       |           | RU Index: 62  |            |       | N/A           |       | Ant. Gain   | e.i.r.p. margin           | Ant. Gain   | Max e.i.r.p.          | Max e.i.r.p.                | e.i.r.p. margin |
|             |      | [MHz]         |         |       | ANT1  | ANT2          | MIMO  | ANT1      | ANT2          | MIMO       | ANT1  | ANT2          | MIMO  | [dBi]       |                           | [dBi]       | [dBm]                 | Limit [dBm]                 |                 |
| _           |      | 5190          | 38      | 242T  | 14.57 | 14.69         | 17.64 | 14.77     | 14.76         | 17.78      |       |               |       | 23.98       | -6.20                     | -2.33       | 15.45                 | 22.63                       | -7.18           |
| ΒW          | 1    | 5230          | 46      | 242T  | 16.96 | 16.93         | 19.96 | 16.67     | 16.52         | 19.61      |       |               |       | 23.98       | -4.02                     | -2.33       | 17.63                 | 22.63                       | -5.00           |
| ш           |      | 5270          | 54      | 242T  | 17.02 | 16.35         | 19.71 | 17.12     | 16.34         | 19.75      |       |               |       | 23.62       | -3.87                     | -3.54       | 16.21                 | 29.62                       | -13.41          |
| N           | 2A   | 5310          | 62      | 242T  | 13.49 | 14.52         | 17.05 | 13.58     | 14.56         | 17.11      |       |               |       | 23.62       | -6.51                     | -3.54       | 13.57                 | 29.62                       | -16.05          |
| 40MHz       |      | 5510          | 102     | 242T  | 14.41 | 14.69         | 17.56 | 14.42     | 14.96         | 17.71      |       |               |       | 23.64       | -5.93                     | -0.47       | 17.24                 | 29.64                       | -12.40          |
| Σ           | 2C   | 5590          | 118     | 242T  | 16.89 | 16.80         | 19.86 | 16.92     | 16.81         | 19.87      |       |               |       | 23.64       | -3.77                     | -0.47       | 19.40                 | 29.64                       | -10.24          |
| 2           |      | 5710          | 142     | 242T  | 16.93 | 16.68         | 19.82 | 16.77     | 16.82         | 19.81      |       |               |       | 23.64       | -3.82                     | -0.47       | 19.35                 | 29.64                       | -10.29          |
| v           | 3    | 5755          | 151     | 242T  | 16.99 | 16.44         | 19.73 | 16.85     | 16.52         | 19.70      |       |               |       | 30.00       | -10.27                    | 0.15        | 19.88                 | 36.00                       | -16.12          |
|             | 3    | 5795          | 159     | 242T  | 17.28 | 16.47         | 19.90 | 17.16     | 16.50         | 19.85      |       |               |       | 30.00       | -10.10                    | 0.15        | 20.05                 | 36.00                       | -15.95          |
|             | 4    | 5835          | 167     | 242T  | 17.16 | 16.54         | 19.87 | 17.01     | 16.50         | 19.77      |       |               |       | -           | -                         | -1.67       | 18.20                 | 30.00                       | -11.80          |
|             | 4    | 5875          | 175     | 242T  | 16.99 | 16.20         | 19.62 | 16.90     | 16.12         | 19.54      |       |               |       | -           | -                         | -1.67       | 17.95                 | 30.00                       | -12.05          |
|             |      | <b>5</b>      |         |       |       |               |       | Average C | onducted Po   | wer (dBm)  |       |               |       | Conducted   | Our track                 | Directional |                       |                             |                 |
| <u> </u>    | Band | Freq<br>[MHz] | Channel | Tones |       | RU Index: 61  |       |           | RU Index: 62  | 2          |       | RU Index: 64  |       | Power Limit | Conducted<br>Power Margin | Ant. Gain   | Max e.i.r.p.<br>[dBm] | Max e.i.r.p.<br>Limit [dBm] | e.i.r.p. margin |
| BW          |      | [1411.12]     |         |       | ANT1  | ANT2          | MIMO  | ANT1      | ANT2          | MIMO       | ANT1  | ANT2          | MIMO  | [dBm]       | r ower margin             | [dBi]       | [ubiii]               | Ennie (GDing                |                 |
|             | 1    | 5210          | 42      | 242T  | 13.11 | 13.85         | 16.51 | 13.15     | 13.73         | 16.46      | 13.65 | 13.79         | 16.73 | 23.98       | -7.25                     | -2.33       | 14.40                 | 22.63                       | -8.23           |
| N           | 2A   | 5290          | 58      | 242T  | 13.86 | 13.71         | 16.80 | 13.84     | 13.59         | 16.73      | 14.13 | 13.72         | 16.94 | 23.62       | -6.68                     | -3.54       | 13.40                 | 29.62                       | -16.22          |
| Ξ_          |      | 5530          | 106     | 242T  | 14.81 | 15.61         | 18.24 | 14.64     | 15.72         | 18.22      | 14.08 | 15.71         | 17.98 | 23.64       | -5.40                     | -0.47       | 17.77                 | 29.64                       | -11.87          |
| Σ           | 2C   | 5610          | 122     | 242T  | 16.97 | 16.14         | 19.58 | 17.03     | 16.75         | 19.90      | 16.41 | 16.87         | 19.66 | 23.64       | -3.74                     | -0.47       | 19.43                 | 29.64                       | -10.21          |
| 80MHz       |      | 5690          | 138     | 242T  | 16.95 | 16.21         | 19.61 | 16.67     | 16.85         | 19.77      | 16.41 | 16.80         | 19.62 | 23.64       | -3.87                     | -0.47       | 19.30                 | 29.64                       | -10.34          |
|             | 3    | 5775          | 155     | 242T  | 17.38 | 15.92         | 19.72 | 17.42     | 15.93         | 19.75      | 16.96 | 16.13         | 19.58 | 30.00       | -10.25                    | 0.15        | 19.90                 | 36.00                       | -16.10          |
|             | 4    | 5855          | 171     | 242T  | 17.35 | 16.58         | 19.99 | 17.15     | 16.49         | 19.84      | 16.99 | 16.48         | 19.75 | -           | -                         | -1.67       | 18.32                 | 30.00                       | -11.68          |
| N           |      | Freq          |         |       |       |               |       |           | onducted Po   |            |       |               |       | Conducted   | Conducted                 | Directional | Max e.i.r.p.          | Max e.i.r.p.                |                 |
| 60MHz<br>BW | Band | [MHz]         | Channel | Tones |       | U Index: 61 ( |       |           | U Index: 64 ( |            |       | U Index: 64 ( |       | Power Limit | Power Margin              | Ant. Gain   | [dBm]                 | Limit [dBm]                 | e.i.r.p. margin |
| ΞŇ          |      |               |         |       | ANT1  | ANT2          | MIMO  | ANT1      | ANT2          | MIMO       | ANT1  | ANT2          | MIMO  | [dBm]       | . ene. margin             | [dBi]       | Lanut                 | Line (ability               |                 |
| <b>b m</b>  | 1    | 5250          | 50      | 242T  | 17.19 | 16.61         | 19.92 | 17.38     | 16.40         | 19.93      | 17.35 | 15.89         | 19.69 | 23.98       | -4.05                     | -2.33       | 17.60                 | 22.63                       | -5.03           |
| 9           | 2C   | 5570          | 114     | 242T  | 17.28 | 15.66         | 19.56 | 17.36     | 16.55         | 19.98      | 16.26 | 17.15         | 19.74 | 23.64       | -3.66                     | -0.47       | 19.51                 | 29.64                       | -10.13          |
| <b>-</b>    | 4    | 5815          | 163     | 242T  | 17.58 | 16.02         | 19.88 | 17.19     | 16.42         | 19.83      | 16.91 | 16.53         | 19.74 | -           | -                         | -1.67       | 18.21                 | 30.00                       | -11.79          |
|             |      |               |         |       | Table | 7-17          | MIMC  | ) (LINI   | N May         | imum       | Cond  | luctod        | Outp  |             | r (242 T                  | [onoc]      |                       |                             |                 |

Table 7-17. MIMO (UNII) Maximum Conducted Output Power (242 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                                   |
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## MIMO Conducted Output Power Measurements (484 Tones)

|            |      | Frea     |         |       |       |              |       | Average C | onducted Po   | ower (dBm) |       |               |       | Conducted   | Conducted     | Directional | Max e.i.r.p. | Max e.i.r.p. |                 |
|------------|------|----------|---------|-------|-------|--------------|-------|-----------|---------------|------------|-------|---------------|-------|-------------|---------------|-------------|--------------|--------------|-----------------|
|            | Band | [MHz]    | Channel | Tones |       | RU Index: 65 |       |           | N/A           |            |       | N/A           |       | Power Limit | Power Margin  | Ant. Gain   | [dBm]        | Limit [dBm]  | e.i.r.p. margin |
|            |      | [101112] |         |       | ANT1  | ANT2         | MIMO  | ANT1      | ANT2          | MIMO       | ANT1  | ANT2          | MIMO  | [dBm]       | r ower margin | [dBi]       | [ubiii]      | Ennie (GDing |                 |
|            | 1    | 5190     | 38      | 484T  | 14.82 | 14.48        | 17.66 |           |               |            |       |               |       | 23.98       | -6.32         | -2.33       | 15.33        | 22.63        | -7.30           |
| BW         |      | 5230     | 46      | 484T  | 15.97 | 15.95        | 18.97 |           |               |            |       |               |       | 23.98       | -5.01         | -2.33       | 16.64        | 22.63        | -5.99           |
| m          | 2A   | 5270     | 54      | 484T  | 15.99 | 15.37        | 18.70 |           |               |            |       |               |       | 23.62       | -4.92         | -3.54       | 15.16        | 29.62        | -14.46          |
| N          | 24   | 5310     | 62      | 484T  | 14.14 | 14.78        | 17.48 |           |               |            |       |               |       | 23.62       | -6.14         | -3.54       | 13.94        | 29.62        | -15.68          |
| I I I      |      | 5510     | 102     | 484T  | 14.46 | 14.88        | 17.69 |           |               |            |       |               |       | 23.64       | -5.95         | -0.47       | 17.22        | 29.64        | -12.42          |
| Σ          | 2C   | 5590     | 118     | 484T  | 15.96 | 15.87        | 18.92 |           |               |            |       |               |       | 23.64       | -4.72         | -0.47       | 18.45        | 29.64        | -11.19          |
| 40MHz      |      | 5710     | 142     | 484T  | 15.93 | 15.88        | 18.91 |           |               |            |       |               |       | 23.64       | -4.73         | -0.47       | 18.44        | 29.64        | -11.20          |
| 7          | 3    | 5755     | 151     | 484T  | 15.83 | 15.58        | 18.71 |           |               |            |       |               |       | 30.00       | -11.29        | 0.15        | 18.86        | 36.00        | -17.14          |
|            | 3    | 5795     | 159     | 484T  | 16.11 | 15.58        | 18.86 |           |               |            |       |               |       | 30.00       | -11.14        | 0.15        | 19.01        | 36.00        | -16.99          |
|            | 4    | 5835     | 167     | 484T  | 15.91 | 15.51        | 18.73 |           |               |            |       |               |       | -           | -             | -1.67       | 17.06        | 30.00        | -12.94          |
|            | 4    | 5875     | 175     | 484T  | 15.98 | 15.33        | 18.68 |           |               |            |       |               |       | -           | -             | -1.67       | 17.01        | 30.00        | -12.99          |
|            |      | Freq     |         |       |       |              |       |           | onducted Po   |            |       |               |       | Conducted   | Conducted     | Directional | Max e.i.r.p. | Max e.i.r.p. |                 |
|            | Band | [MHz]    | Channel | Tones |       | RU Index: 65 |       |           | RU Index: 66  |            |       | N/A           |       | Power Limit | Power Margin  | Ant. Gain   | [dBm]        | Limit [dBm]  | e.i.r.p. margin |
| BV         |      |          |         |       | ANT1  | ANT2         | MIMO  | ANT1      | ANT2          | MIMO       | ANT1  | ANT2          | MIMO  | [dBm]       |               | [dBi]       |              |              |                 |
|            | 1    | 5210     | 42      | 484T  | 13.61 | 14.21        | 16.93 | 13.36     | 13.77         | 16.58      |       |               |       | 23.98       | -7.05         | -2.33       | 14.60        | 22.63        | -8.03           |
| N          | 2A   | 5290     | 58      | 484T  | 13.69 | 13.61        | 16.66 | 13.88     | 13.63         | 16.77      |       |               |       | 23.62       | -6.85         | -3.54       | 13.23        | 29.62        | -16.39          |
| 80MHz      |      | 5530     | 106     | 484T  | 14.57 | 15.14        | 17.87 | 13.96     | 15.14         | 17.60      |       |               |       | 23.64       | -5.77         | -0.47       | 17.40        | 29.64        | -12.24          |
| _ ≥        | 2C   | 5610     | 122     | 484T  | 16.19 | 15.62        | 18.93 | 15.81     | 16.11         | 18.97      |       |               |       | 23.64       | -4.67         | -0.47       | 18.50        | 29.64        | -11.14          |
| 2          |      | 5690     | 138     | 484T  | 16.16 | 15.78        | 18.98 | 15.78     | 16.15         | 18.98      |       |               |       | 23.64       | -4.66         | -0.47       | 18.51        | 29.64        | -11.13          |
|            | 3    | 5775     | 155     | 484T  | 16.19 | 15.12        | 18.70 | 15.89     | 15.26         | 18.60      |       |               |       | 30.00       | -11.30        | 0.15        | 18.85        | 36.00        | -17.15          |
|            | 4    | 5855     | 171     | 484T  | 16.07 | 15.45        | 18.78 | 15.85     | 15.35         | 18.62      |       |               |       | -           | -             | -1.67       | 17.11        | 30.00        | -12.89          |
| N          |      | Freq     |         |       |       |              |       |           | onducted Po   |            |       |               |       | Conducted   | Conducted     | Directional | Max e.i.r.p. | Max e.i.r.p. |                 |
| 0MHz<br>BW | Band | [MHz]    | Channel | Tones |       | RU Index: 65 |       |           | U Index: 66 ( |            |       | U Index: 66 ( |       | Power Limit | Power Margin  | Ant. Gain   | [dBm]        | Limit [dBm]  | e.i.r.p. margin |
| 23         |      |          |         |       | ANT1  | ANT2         | MIMO  | ANT1      | ANT2          | MIMO       | ANT1  | ANT2          | MIMO  | [dBm]       | -             | [dBi]       |              |              |                 |
| o m        | 1    | 5250     | 50      | 484T  | 15.79 | 15.48        | 18.65 | 15.86     | 15.34         | 18.62      | 16.33 | 15.35         | 18.88 | 23.98       | -5.10         | -2.33       | 16.55        | 22.63        | -6.08           |
| 16         | 2C   | 5570     | 114     | 484T  | 16.54 | 15.23        | 18.94 | 16.12     | 15.48         | 18.82      | 15.51 | 16.41         | 18.99 | 23.64       | -4.65         | -0.47       | 18.52        | 29.64        | -11.12          |
|            | 4    | 5815     | 163     | 484T  | 16.29 | 14.97        | 18.69 | 16.08     | 15.41         | 18.77      | 15.72 | 15.54         | 18.64 | -           | -             | -1.67       | 17.10        | 30.00        | -12.90          |

Table 7-18. MIMO (UNII) Maximum Conducted Output Power (484 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |  |  |  |
|---------------------|----------------|--------------------|-----------------------------------|--|--|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                                   |  |  |  |
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## MIMO Conducted Output Power Measurements (996 Tones)

|     |      | Freq          |         |       |       | Aver          | age Conduc | ted Power ( | dBm)          |       | Conducted   | Conducted                 | Directional | Max e.i.r.p.          | Mayainn                     |                 |
|-----|------|---------------|---------|-------|-------|---------------|------------|-------------|---------------|-------|-------------|---------------------------|-------------|-----------------------|-----------------------------|-----------------|
|     | Band | [MHz]         | Channel | Tones |       | RU Index: 67  |            |             | N/A           |       | Power Limit | Power Margin              | Ant. Gain   | [dBm]                 | Max e.i.r.p.<br>Limit [dBm] | e.i.r.p. margin |
| 3   |      | [1411.12]     |         |       | ANT1  | ANT2          | MIMO       | N/A         | ANT2          | MIMO  | [dBm]       | rower margin              | [dBi]       | [ubiii]               | Chine (GDing                |                 |
| m   | 1    | 5210          | 42      | 996T  | 14.82 | 14.91         | 17.87      |             |               |       | 23.98       | -6.11                     | -2.33       | 15.54                 | 22.63                       | -7.09           |
| N   | 2A   | 5290          | 58      | 996T  | 15.15 | 14.15         | 17.69      |             |               |       | 23.62       | -5.93                     | -3.54       | 14.15                 | 29.62                       | -15.47          |
| I   |      | 5530          | 106     | 996T  | 14.45 | 14.85         | 17.66      |             |               |       | 23.64       | -5.98                     | -0.47       | 17.19                 | 29.64                       | -12.45          |
| ≥   | 2C   | 5610          | 122     | 996T  | 14.96 | 14.68         | 17.83      |             |               |       | 23.64       | -5.81                     | -0.47       | 17.36                 | 29.64                       | -12.28          |
| 80M |      | 5690          | 138     | 996T  | 14.88 | 14.67         | 17.79      |             |               |       | 23.64       | -5.85                     | -0.47       | 17.32                 | 29.64                       | -12.32          |
| ω.  | 3    | 5775          | 155     | 996T  | 15.07 | 14.19         | 17.66      |             |               |       | 30.00       | -12.34                    | 0.15        | 17.81                 | 36.00                       | -18.19          |
|     | 4    | 5855          | 171     | 996T  | 14.95 | 14.20         | 17.60      |             |               |       | -           | -                         | -1.67       | 15.93                 | 30.00                       | -14.07          |
| N   |      | Free          |         |       |       | Aver          | age Conduc | ted Power ( | dBm)          |       | Conducted   | Conducted                 | Directional | Maxainn               |                             |                 |
| ÷.  | Band | Freq<br>[MHz] | Channel | Tones | R     | U Index: 67 ( | L)         | R           | U Index: 67 ( | U)    | Power Limit | Conducted<br>Power Margin | Ant. Gain   | Max e.i.r.p.<br>[dBm] | Max e.i.r.p.<br>Limit [dBm] | e.i.r.p. margin |
| 23  |      | [1411.12]     |         |       | ANT1  | ANT2          | MIMO       | ANT1        | ANT2          | MIMO  | [dBm]       | rower margin              | [dBi]       | [ubiii]               | Linic [abiii]               |                 |
|     | 1    | 5250          | 50      | 996T  | 15.14 | 14.66         | 17.92      | 15.23       | 14.11         | 17.71 | 23.98       | -6.06                     | -2.33       | 15.59                 | 22.63                       | -7.04           |
| 6   | 2C   | 5570          | 114     | 996T  | 15.14 | 14.31         | 17.75      | 14.63       | 15.13         | 17.90 | 23.64       | -5.74                     | -0.47       | 17.43                 | 29.64                       | -12.21          |
| ~   | 4    | 5815          | 163     | 996T  | 15.31 | 14.17         | 17.79      | 14.87       | 14.23         | 17.57 | -           | -                         | -1.67       | 16.12                 | 30.00                       | -13.88          |

Table 7-19. MIMO (UNII) Maximum Conducted Output Power (996 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
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## MIMO Conducted Output Power Measurements (2x996 Tones)

|          | N   |      | - Freq |         |        | Average Conducted Power (dBm) |              |       | Conducted Conducted | Directional  | Max e.i.r.p. | Max e.i.r.p. |             |                 |
|----------|-----|------|--------|---------|--------|-------------------------------|--------------|-------|---------------------|--------------|--------------|--------------|-------------|-----------------|
|          |     | Band | [MHz]  | Channel | Tones  |                               | RU Index: 68 |       | Power Limit         | Power Margin | Ant. Gain    | IdBml        | Limit [dBm] | e.i.r.p. margin |
| 5        | - 3 |      |        |         |        | ANT1                          | ANT2         | MIMO  | [dBm]               | rower margin | [dBi]        | [abiii]      |             |                 |
| C        | 5 0 | 1    | 5250   | 50      | 2x996T | 14.97                         | 14.37        | 17.69 | 23.98               | -6.29        | -2.33        | 15.36        | 22.63       | -7.27           |
| <u>u</u> |     | 2C   | 5570   | 114     | 2x996T | 15.17                         | 14.78        | 17.99 | 23.64               | -5.65        | -0.47        | 17.52        | 29.64       | -12.12          |
|          |     | 4    | 5815   | 163     | 2x996T | 15.26                         | 14.48        | 17.90 | -                   | -            | -1.67        | 16.23        | 30.00       | -13.77          |

Table 7-20. MIMO 160MHz BW (UNII) Maximum Conducted Output Power (2x996 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |  |
|---------------------|----------------|--------------------|-----------------------------------|--|
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#### Note:

Per ANSI C63.10-2013 and KDB 662911 v02r01 Section E)1), the conducted powers at Antenna 1 and Antenna 2 were first measured separately during MIMO transmission as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

Per ANSI C63.10-2013 Section 14.4.3, the directional gain is calculated using the following formula, where  $G_N$  is the gain of the nth antenna and  $N_{ANT}$ , the total number of antennas used.

Directional gain =  $10 \log[(10^{G_{1/20}} + 10^{G_{2/20}} + ... + 10^{G_{N/20}})^2 / N_{ANT}] dBi$ 

### Sample MIMO Calculation:

At 5180MHz in 802.11ax (20MHz BW 242T) mode, the average conducted output power was measured to be 16.81 dBm for Antenna 1 and 16.60 dBm for Antenna 2.

Antenna 1 + Antenna 2 = MIMO

(16.81 dBm + 16.60 dBm) = (47.97 mW + 45.70 mW) = 93.67 mW = 19.72 dBm

### Sample e.i.r.p. Calculation:

At 5180MHz in 802.11ax (20MHz BW 242T) mode, the average MIMO conducted power was calculated to be 19.72 dBm with directional gain of -2.33 dBi.

e.i.r.p. (dBm) = Conducted Power (dBm) + Ant gain (dBi)

19.72 dBm + -2.33 dBi = 17.39 dBm

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### 7.5 Maximum Power Spectral Density

### **Test Overview and Limit**

The spectrum analyzer was connected to the antenna terminal while the EUT was operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013, and at the appropriate frequencies. Method SA-1, as defined in ANSI C63.10-2013, was used to measure the power spectral density.

#### The output power density limits are as specified in the tables below.

| UNII    |                     | Maximum Power Spectral Density  |                   |  |  |  |
|---------|---------------------|---------------------------------|-------------------|--|--|--|
| Band    | Frequency Range FCC |                                 | ISED              |  |  |  |
| UNII 1  | 5.15 – 5.25GHz      | 11dBm/MHz                       | 10dBm/MHz e.i.r.p |  |  |  |
| UNII 2A | 5.25 – 5.35GHz      |                                 |                   |  |  |  |
| UNII 2C | 5.47 – 5.725GHz     | 11dBn                           | n/MHz             |  |  |  |
| UNII 3  | 5.725 – 5.850GHz    | 30dBm/500kHz                    |                   |  |  |  |
| UNII 4  | 5.850 – 5.895GHz    | 14dBm/MHz e.i.r.p Not Supported |                   |  |  |  |

| UNII    | Frequency Range  | Maximum Conducted Power Limit |  |  |  |  |
|---------|------------------|-------------------------------|--|--|--|--|
| Band    | Frequency Range  | FCC                           |  |  |  |  |
| UNII 1  | 5.15 – 5.25GHz   |                               |  |  |  |  |
| UNII 2A | 5.25 – 5.35GHz   | 11dBm/MHz                     |  |  |  |  |
| UNII 2C | 5.47 – 5.725GHz  | I IUDII//WINZ                 |  |  |  |  |
| UNII 3  | 5.725 – 5.850GHz | 30dBm/500kHz                  |  |  |  |  |
| UNII 4  | 5.850 – 5.895GHz | 14dBm/MHz e.i.r.p             |  |  |  |  |

| UNII    | Fraguanay Panga  | Maximum Conducted Power Limit |
|---------|------------------|-------------------------------|
| Band    | Frequency Range  | ISED                          |
| UNII 1  | 5.15 – 5.25GHz   | 10dBm/MHz e.i.r.p             |
| UNII 2A | 5.25 – 5.35GHz   |                               |
| UNII 2C | 5.47 – 5.725GHz  | 11dBm/MHz                     |
| UNII 3  | 5.725 – 5.850GHz | 30dBm/500kHz                  |

### **Test Procedure Used**

ANSI C63.10-2013 – Section 12.3.2.2 (Method SA-1) ANSI C63.10-2013 – Section 14.3.2.2 Measure-and-Sum Technique

### **Test Settings**

- 1. Analyzer was set to the center frequency of the UNII channel under investigation
- 2. Span was set to encompass the entire emission bandwidth of the signal
- 3. RBW = 1MHz
- 4. VBW = 3MHz
- 5. Number of sweep points  $\geq 2 \times (\text{span/RBW})$
- 6. Sweep time = auto

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- 7. Detector = power averaging (RMS)
- 8. Trigger was set to free run for all modes
- 9. Trace was averaged over 100 sweeps
- 10. The peak search function of the spectrum analyzer was used to find the peak of the spectrum.

### Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

### Test Notes

The power spectral density for each channel was measured with the RU index showing the highest conducted power.

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|---------------------|----------------|--------------------|------------------|--|--|
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# Summed MIMO Power Spectral Density Measurements

|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Antenna-1<br>Power Density<br>[dBm] | Antenna-2<br>Power Density<br>[dBm] | Summed MIMO<br>Power Density<br>[dBm] | Max Power<br>Density<br>[dBm/MHz] | Margin<br>[dB] |
|-----------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|-------------------------------------|---------------------------------------|-----------------------------------|----------------|
|           | 5180               | 36             | ax (20MHz)  | 26T   | MCS0                | 7.57                                | 6.94                                | 10.28                                 | 11.00                             | -0.72          |
|           | 5200               | 40             | ax (20MHz)  | 26T   | MCS0                | 6.62                                | 6.54                                | 9.59                                  | 11.00                             | -1.41          |
| d 1       | 5240               | 48             | ax (20MHz)  | 26T   | MCS0                | 7.94                                | 7.71                                | 10.83                                 | 11.00                             | -0.17          |
| Band 1    | 5190               | 38             | ax (40MHz)  | 26T   | MCS0                | 7.59                                | 7.59                                | 10.60                                 | 11.00                             | -0.40          |
|           | 5230               | 46             | ax (40MHz)  | 26T   | MCS0                | 7.31                                | 7.74                                | 10.54                                 | 11.00                             | -0.46          |
|           | 5210               | 42             | ax (80MHz)  | 26T   | MCS0                | 6.72                                | 6.66                                | 9.70                                  | 11.00                             | -1.30          |
| Band 1/2A | 5250               | 50             | ax (160MHz) | 26T   | MCS0                | 7.71                                | 6.99                                | 10.38                                 | 12.00                             | -1.62          |
|           | 5260               | 52             | ax (20MHz)  | 26T   | MCS0                | 6.89                                | 6.51                                | 9.71                                  | 11.00                             | -1.29          |
| ⊲         | 5280               | 56             | ax (20MHz)  | 26T   | MCS0                | 7.03                                | 6.77                                | 9.91                                  | 11.00                             | -1.09          |
| d 2A      | 5320               | 64             | ax (20MHz)  | 26T   | MCS0                | 6.45                                | 6.84                                | 9.66                                  | 11.00                             | -1.34          |
| Band      | 5270               | 54             | ax (40MHz)  | 26T   | MCS0                | 7.65                                | 7.09                                | 10.39                                 | 11.00                             | -0.61          |
| -         | 5310               | 62             | ax (40MHz)  | 26T   | MCS0                | 7.04                                | 7.44                                | 10.25                                 | 11.00                             | -0.75          |
|           | 5290               | 58             | ax (80MHz)  | 26T   | MCS0                | 7.97                                | 7.21                                | 10.61                                 | 11.00                             | -0.39          |
|           | 5500               | 100            | ax (20MHz)  | 26T   | MCS0                | 7.29                                | 7.76                                | 10.54                                 | 11.00                             | -0.46          |
|           | 5600               | 120            | ax (20MHz)  | 26T   | MCS0                | 6.11                                | 7.03                                | 9.60                                  | 11.00                             | -1.40          |
|           | 5720               | 144            | ax (20MHz)  | 26T   | MCS0                | 6.37                                | 7.16                                | 9.79                                  | 11.00                             | -1.21          |
| 0         | 5510               | 102            | ax (40MHz)  | 26T   | MCS0                | 7.35                                | 7.90                                | 10.64                                 | 11.00                             | -0.36          |
| 9 2       | 5550               | 110            | ax (40MHz)  | 26T   | MCS0                | 6.92                                | 7.48                                | 10.22                                 | 11.00                             | -0.78          |
| Band 2C   | 5670               | 134            | ax (40MHz)  | 26T   | MCS0                | 7.29                                | 7.96                                | 10.65                                 | 11.00                             | -0.35          |
| -         | 5530               | 106            | ax (80MHz)  | 26T   | MCS0                | 7.00                                | 8.36                                | 10.74                                 | 11.00                             | -0.26          |
|           | 5610               | 122            | ax (80MHz)  | 26T   | MCS0                | 5.80                                | 6.42                                | 9.13                                  | 11.00                             | -1.87          |
|           | 5690               | 138            | ax (80MHz)  | 26T   | MCS0                | 5.87                                | 6.83                                | 9.39                                  | 11.00                             | -1.61          |
|           | 5570               | 114            | ax (160MHz) | 26T   | MCS0                | 6.16                                | 7.79                                | 10.06                                 | 12.00                             | -1.94          |

Table 7-21. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)

|      | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Antenna-1<br>Power Density<br>[dBm] | Antenna-2<br>Power Density<br>[dBm] | Summed MIMO<br>Power Density<br>[dBm] | Permissihle | Margin<br>[dB] |
|------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|-------------------------------------|---------------------------------------|-------------|----------------|
|      | 5745               | 149            | ax (20MHz)  | 26T   | MCS0                | 4.88                                | 5.10                                | 8.00                                  | 30.00       | -22.00         |
|      | 5785               | 157            | ax (20MHz)  | 26T   | MCS0                | 4.68                                | 4.36                                | 7.53                                  | 30.00       | -22.47         |
|      | 5825               | 165            | ax (20MHz)  | 26T   | MCS0                | 4.91                                | 4.89                                | 7.91                                  | 30.00       | -22.09         |
| Band | 5755               | 151            | ax (40MHz)  | 26T   | MCS0                | 4.65                                | 4.80                                | 7.74                                  | 30.00       | -22.26         |
|      | 5795               | 159            | ax (40MHz)  | 26T   | MCS0                | 5.20                                | 4.69                                | 7.97                                  | 30.00       | -22.03         |
|      | 5775               | 155            | ax (80MHz)  | 26T   | MCS0                | 4.97                                | 4.58                                | 7.79                                  | 30.00       | -22.21         |

Table 7-22. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)

|          | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Antenna-1<br>Power Density<br>[dBm/MHz] | Antenna-2<br>Power Density<br>[dBm/MHz] | MIMO Summed<br>Power Density<br>[dBm/MHz] | Max Permissible<br>Power Density<br>[dBm/500kHz] | Margin<br>[dB] | Directional<br>Antenna Gain<br>[dBi] | EIRP Power<br>Density<br>[dBm/MHz] | Max EIRP<br>Power Density<br>[dBm/MHz] | Margin<br>[dB] |
|----------|--------------------|----------------|-------------|-------|---------------------|---|---|---|--|----------------|--------------------------------------|------------------------------------|--|----------------|
| Band 3/4 | 5845               | 169            | ax (20MHz)  | 26T   | MCS0                | 7.37                                    | 7.60                                    | 10.50                                     | 30.00  | -19.50         | -1.67                                | 8.82                               | 14.00                                  | -5.18          |
| Band 4   | 5865               | 173            | ax (20MHz)  | 26T   | MCS0                | 7.73                                    | 7.16                                    | 10.47                                     |  |                | -1.67                                | 8.79                               | 14.00                                  | -5.21          |
| Band 4   | 5885               | 177            | ax (20MHz)  | 26T   | MCS0                | 7.59                                    | 8.13                                    | 10.88                                     |  |                | -1.67                                | 9.20                               | 14.00                                  | -4.80          |
| Band 3/4 | 5835               | 167            | ax (40MHz)  | 26T   | MCS0                | 7.53                                    | 7.29                                    | 10.42                                     | 30.00  | -19.58         | -1.67                                | 8.75                               | 14.00                                  | -5.25          |
| Band 4   | 5875               | 175            | ax (40MHz)  | 26T   | MCS0                | 7.56                                    | 7.27                                    | 10.43                                     |  |                | -1.67                                | 8.76                               | 14.00                                  | -5.24          |
| Band 3/4 | 5855               | 171            | ax (80MHz)  | 26T   | MCS0                | 7.24                                    | 7.07                                    | 10.16                                     | 30.00  | -19.84         | -1.67                                | 8.49                               | 14.00                                  | -5.51          |
| Danu 5/4 | 5815               | 163            | ax (160MHz) | 26T   | MCS0                | 6.85                                    | 7.06                                    | 9.96                                      | 30.00  | -20.04         | -1.67                                | 8.29                               | 14.00                                  | -5.71          |
|          |                    |                |             |       |                     |   |   |   |  |                |                                      |                                    |  |                |

Table 7-23. Bands 3/4 MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |  |
|---------------------|----------------|--------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 74 of 157   |  |  |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 71 of 157   |  |  |
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|           | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Antenna-1<br>Power Density<br>[dBm] | Antenna-2<br>Power Density<br>[dBm] | Summed MIMO<br>Power Density<br>[dBm] | Max Power<br>Density<br>[dBm/MHz] | Margin<br>[dB] |
|-----------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|-------------------------------------|---------------------------------------|-----------------------------------|----------------|
|           | 5180               | 36             | ax (20MHz)  | 242T  | MCS0                | 4.16                                | 4.49                                | 7.34                                  | 11.00                             | -3.66          |
|           | 5200               | 40             | ax (20MHz)  | 242T  | MCS0                | 4.16                                | 4.62                                | 7.40                                  | 11.00                             | -3.60          |
| d 1       | 5240               | 48             | ax (20MHz)  | 242T  | MCS0                | 4.81                                | 4.44                                | 7.64                                  | 11.00                             | -3.36          |
| Band 1    | 5190               | 38             | ax (40MHz)  | 484T  | MCS0                | 0.08                                | 0.20                                | 3.15                                  | 11.00                             | -7.85          |
|           | 5230               | 46             | ax (40MHz)  | 484T  | MCS0                | 0.64                                | 0.92                                | 3.79                                  | 11.00                             | -7.21          |
|           | 5210               | 42             | ax (80MHz)  | 996T  | MCS0                | -3.78                               | -3.16                               | -0.45                                 | 11.00                             | -11.45         |
| Band 1/2A | 5250               | 50             | ax (160MHz) | 996T  | MCS0                | -6.15                               | -6.02                               | -3.07                                 | 12.00                             | -15.07         |
|           | 5260               | 52             | ax (20MHz)  | 242T  | MCS0                | 4.77                                | 4.29                                | 7.55                                  | 11.00                             | -3.45          |
|           | 5280               | 56             | ax (20MHz)  | 242T  | MCS0                | 4.75                                | 4.21                                | 7.50                                  | 11.00                             | -3.50          |
| Band 2A   | 5320               | 64             | ax (20MHz)  | 242T  | MCS0                | 4.16                                | 4.54                                | 7.37                                  | 11.00                             | -3.63          |
| Ban       | 5270               | 54             | ax (40MHz)  | 484T  | MCS0                | 0.57                                | 0.44                                | 3.52                                  | 11.00                             | -7.48          |
|           | 5310               | 62             | ax (40MHz)  | 484T  | MCS0                | 0.22                                | 1.15                                | 3.72                                  | 11.00                             | -7.28          |
|           | 5290               | 58             | ax (80MHz)  | 996T  | MCS0                | -3.51                               | -3.80                               | -0.64                                 | 11.00                             | -11.64         |
|           | 5500               | 100            | ax (20MHz)  | 242T  | MCS0                | 4.12                                | 4.34                                | 7.24                                  | 11.00                             | -3.76          |
|           | 5600               | 120            | ax (20MHz)  | 242T  | MCS0                | 4.14                                | 4.80                                | 7.49                                  | 11.00                             | -3.51          |
|           | 5720               | 144            | ax (20MHz)  | 242T  | MCS0                | 4.32                                | 4.55                                | 7.44                                  | 11.00                             | -3.56          |
|           | 5510               | 102            | ax (40MHz)  | 484T  | MCS0                | 0.05                                | 0.49                                | 3.29                                  | 11.00                             | -7.71          |
| d 2C      | 5590               | 118            | ax (40MHz)  | 484T  | MCS0                | -0.10                               | 0.89                                | 3.44                                  | 11.00                             | -7.56          |
| Band 2C   | 5710               | 142            | ax (40MHz)  | 484T  | MCS0                | 0.07                                | 0.60                                | 3.35                                  | 11.00                             | -7.65          |
|           | 5530               | 106            | ax (80MHz)  | 996T  | MCS0                | -4.32                               | -2.61                               | -0.37                                 | 11.00                             | -11.37         |
|           | 5610               | 122            | ax (80MHz)  | 996T  | MCS0                | -3.92                               | -3.03                               | -0.44                                 | 11.00                             | -11.44         |
|           | 5690               | 138            | ax (80MHz)  | 996T  | MCS0                | -3.96                               | -3.20                               | -0.55                                 | 11.00                             | -11.55         |
|           | 5570               | 114            | ax (160MHz) | 996T  | MCS0                | -6.19                               | -5.34                               | -2.73                                 | 12.00                             | -14.73         |

Table 7-24. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones)

|      | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Antenna-1<br>Power Density<br>[dBm] | Antenna-2<br>Power Density<br>[dBm] | Summed MIMO<br>Power Density<br>[dBm] | Max<br>Permissible<br>Power<br>Density | Margin<br>[dB] |
|------|--------------------|----------------|-------------|-------|---------------------|-------------------------------------|-------------------------------------|---------------------------------------|--|----------------|
|      | 5745               | 149            | ax (20MHz)  | 242T  | MCS0                | 1.64                                | 1.96                                | 4.82                                  | 30.00                                  | -25.18         |
|      | 5785               | 157            | ax (20MHz)  | 242T  | MCS0                | 1.87                                | 1.03                                | 4.48                                  | 30.00                                  | -25.52         |
| nd 3 | 5825               | 165            | ax (20MHz)  | 242T  | MCS0                | 1.64                                | 1.48                                | 4.57                                  | 30.00                                  | -25.43         |
| Band | 5755               | 151            | ax (40MHz)  | 484T  | MCS0                | -2.72                               | -2.25                               | 0.53                                  | 30.00                                  | -29.47         |
|      | 5795               | 159            | ax (40MHz)  | 484T  | MCS0                | -2.20                               | -2.50                               | 0.66                                  | 30.00                                  | -29.34         |
|      | 5775               | 155            | ax (80MHz)  | 996T  | MCS0                | -6.35                               | -6.84                               | -3.58                                 | 30.00                                  | -33.58         |

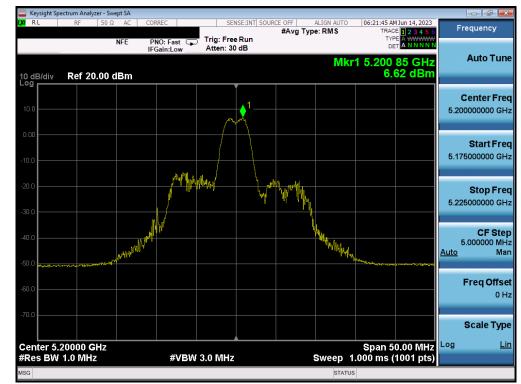
Table 7-25. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones)

|          | Frequency<br>[MHz] | Channel<br>No. | 802.11 Mode | Tones | Data Rate<br>[Mbps] | Antenna-1<br>Power Density<br>[dBm/MHz] | Antenna-2<br>Power Density<br>[dBm/MHz] | MIMO Summed<br>Power Density<br>[dBm/MHz] | Max Permissible<br>Power Density<br>[dBm/500kHz] | Margin<br>[dB] | Directional<br>Antenna Gain<br>[dBi] | EIRP Power<br>Density<br>[dBm/MHz] | Max EIRP<br>Power Density<br>[dBm/MHz] | Margin<br>[dB] |
|----------|--------------------|----------------|-------------|-------|---------------------|---|---|---|--|----------------|--------------------------------------|------------------------------------|--|----------------|
| Band 3/4 | 5845               | 169            | ax (20MHz)  | 26T   | MCS0                | 4.28                                    | 4.22                                    | 7.26                                      | 30.00  | -22.74         | -1.67                                | 5.59                               | 14.00                                  | -8.41          |
| Band 4   | 5865               | 173            | ax (20MHz)  | 26T   | MCS0                | 4.63                                    | 4.14                                    | 7.40                                      |  |                | -1.67                                | 5.73                               | 14.00                                  | -8.27          |
| Dallu 4  | 5885               | 177            | ax (20MHz)  | 26T   | MCS0                | 4.00                                    | 4.39                                    | 7.21                                      |  |                | -1.67                                | 5.54                               | 14.00                                  | -8.46          |
| Band 3/4 | 5835               | 167            | ax (40MHz)  | 26T   | MCS0                | -0.08                                   | 0.39                                    | 3.17                                      | 30.00  | -26.83         | -1.67                                | 1.50                               | 14.00                                  | -12.50         |
| Band 4   | 5875               | 175            | ax (40MHz)  | 26T   | MCS0                | 0.41                                    | 0.17                                    | 3.30                                      |  |                | -1.67                                | 1.63                               | 14.00                                  | -12.37         |
| Band 3/4 | 5855               | 171            | ax (80MHz)  | 26T   | MCS0                | -3.60                                   | -3.77                                   | -0.67                                     | 30.00  | -30.67         | -1.67                                | -2.35                              | 14.00                                  | -16.35         |
| Dan0 3/4 | 5815               | 163            | ax (160MHz) | 26T   | MCS0                | -5.75                                   | -5.67                                   | -2.70                                     | 30.00  | -32.70         | -1.67                                | -4.37                              | 14.00                                  | -18.37         |

Table 7-26. Bands 3/4 MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT | Approved by:<br>Technical Manager |
|---------------------|----------------|--------------------|-----------------------------------|
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## 7.5.1 MIMO Antenna-1 Power Spectral Density Measurements





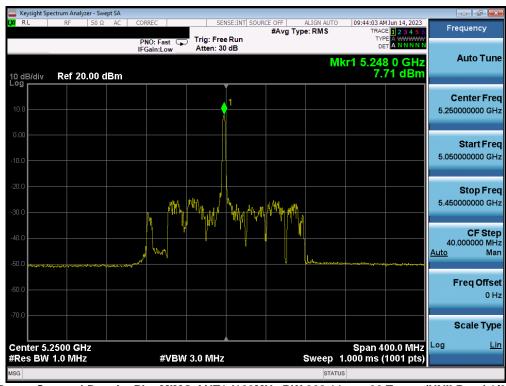
Plot 7-74. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 38)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | t Dates: EUT Type: |                  |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 73 of 157   |
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Plot 7-75. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 1) - Ch. 42)



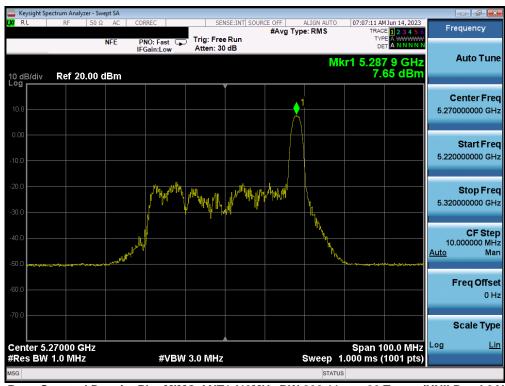
Plot 7-76. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - 26 Tones (UNII Band 1/2A) - Ch. 50)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                  |
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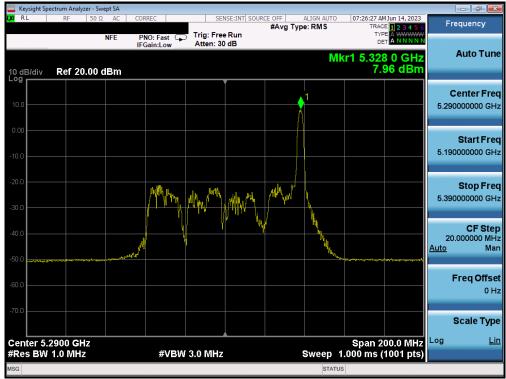
Plot 7-77. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 56)



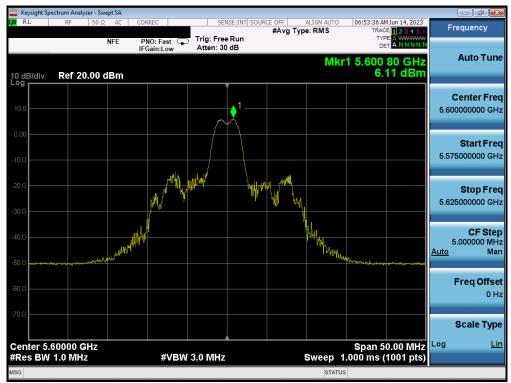
Plot 7-78. Powr Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 54)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 75 of 157   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 75 of 157   |
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Plot 7-79. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2A) - Ch. 58)



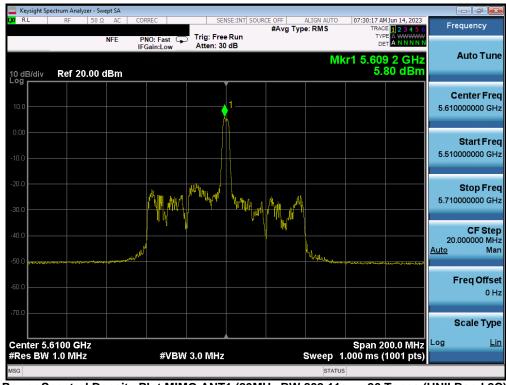
Plot 7-80. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 120)

| FCC ID: A3LSMS711U  | MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|--------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:        | EUT Type:        | Page 76 of 157                    |
| 1M2304260060-18.A3L | 5/24-7/31/2023     | Portable Handset | Page 76 01 157                    |
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Plot 7-81. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 118)



Plot 7-82. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 2C) - Ch. 122)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Dava 77 of 457   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 77 of 157   |
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Plot 7-83. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - 2 Tones (UNII Band 2C) - Ch. 114)



Plot 7-84. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 157)

| FCC ID: A3LSMS711U  | MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|--------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:        | EUT Type:        | Dage 79 of 157                    |
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Plot 7-85. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 151)



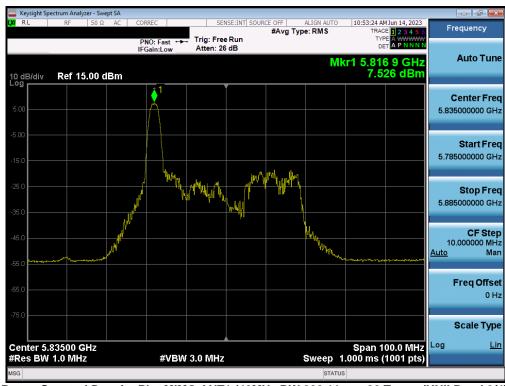
Plot 7-86. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3) - Ch. 155)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
|---------------------|----------------|--------------------|------------------|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 70 of 157   |
| 1M2304260060-18.A3L | 5/24-7/31/2023 | Portable Handset   | Page 79 of 157   |
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Plot 7-87. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - 26 Tones (UNII Band 4) - Ch. 173)



Plot 7-88. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 167)

| FCC ID: A3LSMS711U  | MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|--------------------|------------------|-----------------------------------|
| Test Report S/N:    | Test Dates:        | EUT Type:        | Daga 90 of 157                    |
| 1M2304260060-18.A3L | 5/24-7/31/2023     | Portable Handset | Page 80 of 157                    |
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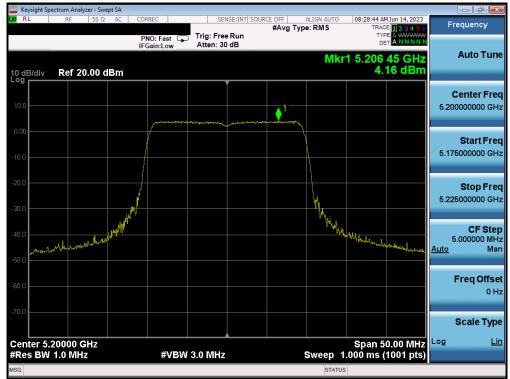
Plot 7-89. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 171)



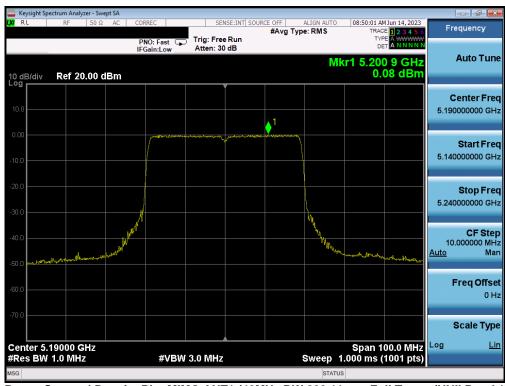
Plot 7-90. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - 26 Tones (UNII Band 3/4) - Ch. 163)

| FCC ID: A3LSMS711U  | MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |
|---------------------|--------------------|------------------|-----------------------------------|
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Plot 7-91. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 40)



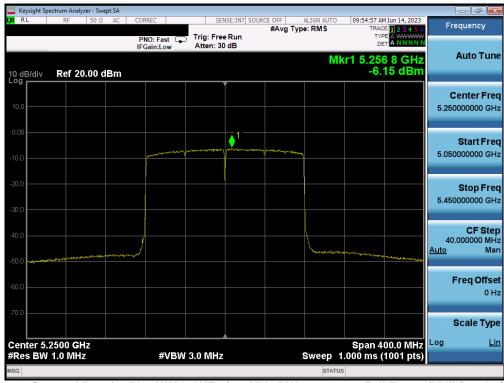
Plot 7-92. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax – Full Tones (UNII Band 1) – Ch. 38)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |
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|                             | um Analyzer - Swept SA              |                           |  |                  |  |                          |                |   |
|-----------------------------|-------------------------------------|---------------------------|--|------------------|--|--------------------------|----------------|---|
| LXU RL                      | RF 50 Ω AC                          | CORREC                    | SENSE:INT  | SOURCE OFF       | ALIGN AUTO<br>e: RMS   | 09:05:59 AM Ju<br>TRACE  | n 14, 2023     | Frequency                                   |
| 10 dB/div                   | Ref 20.00 dBm                       | PNO: Fast 🖵<br>IFGain:Low | Atten: 30 dB   |                  | М  | DET 4                    | B GHz<br>B dBm | Auto Tune                                   |
| 10.0                        |                                     |                           |  |                  |  |                          |                | Center Freq<br>5.210000000 GHz              |
| -10.0                       |                                     | ,                         | nderlaur wegeneren Merina son generalen og som | vane and and and |  |                          |                | <b>Start Freq</b><br>5.110000000 GHz        |
| -20.0                       |                                     |                           |  |                  |  |                          |                | <b>Stop Freq</b><br>5.310000000 GHz         |
| -40.0                       | - marine and the second free states | N<br>APM                  |  |                  | My the type of the | normal and a loss of the | vandynant      | CF Step<br>20.000000 MHz<br><u>Auto</u> Man |
| -60.0                       |                                     |                           |  |                  |  |                          |                | <b>Freq Offset</b><br>0 Hz                  |
| Center 5.210<br>#Res BW 1.0 |                                     | #VBW                      | 3.0 MHz  |                  | Sweep  | Span 200<br>1.000 ms (10 | .0 MHz         | <b>Scale Type</b><br>Log <u>Lin</u>         |
| MSG                         |                                     |                           |  |                  | STATU  | `                        |                |   |

Plot 7-93. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 1) - Ch. 42)

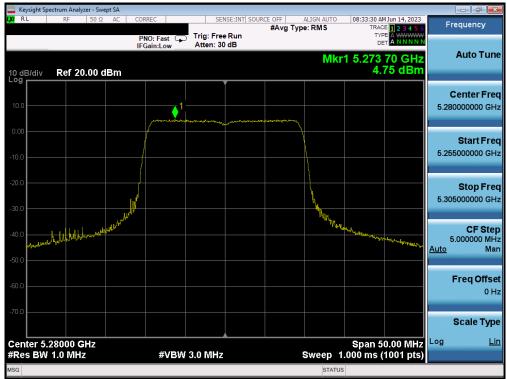


Plot 7-94. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - Full Tones (UNII Band 1/2A) - Ch. 50)

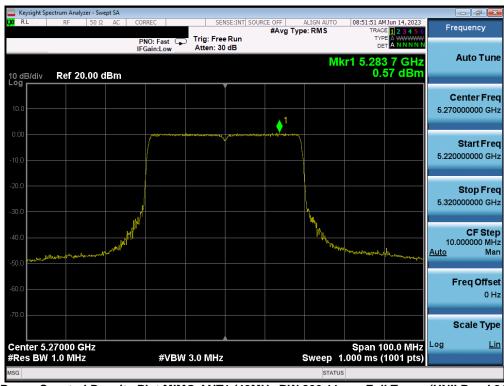
| FCC ID: A3LSMS711U  | MEASUREMENT REPORT |                  | Approved by:<br>Technical Manager |  |
|---------------------|--------------------|------------------|-----------------------------------|--|
| Test Report S/N:    | Test Dates:        | EUT Type:        | Dama 00 af 457                    |  |
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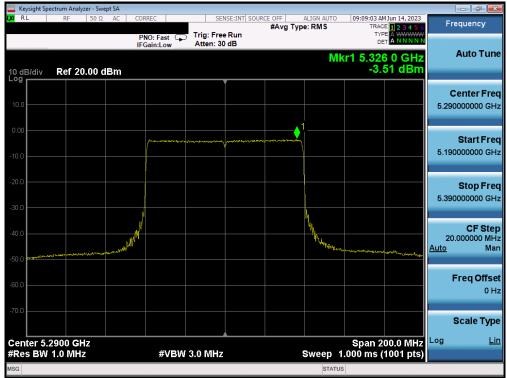
Plot 7-95. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 56)



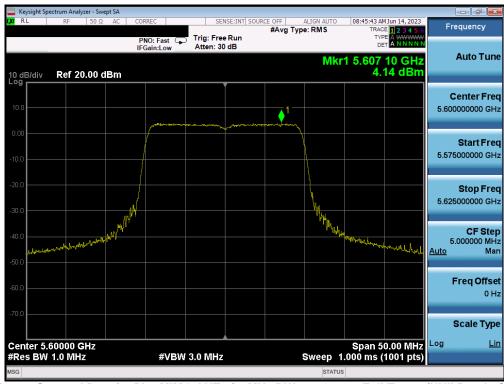
Plot 7-96. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 54)

| FCC ID: A3LSMS711U  |                | Approved by:<br>Technical Manager |                  |  |
|---------------------|----------------|-----------------------------------|------------------|--|
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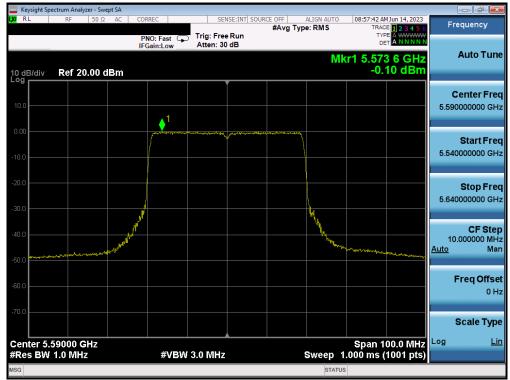
Plot 7-97. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2A) - Ch. 58)



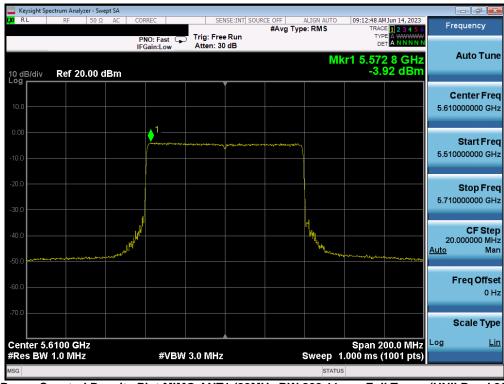
Plot 7-98. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 120)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |  |
|---------------------|----------------|--------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 95 of 157   |  |  |
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Plot 7-99. Power Spectral Density Plot MIMO ANT1 (40MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 118)



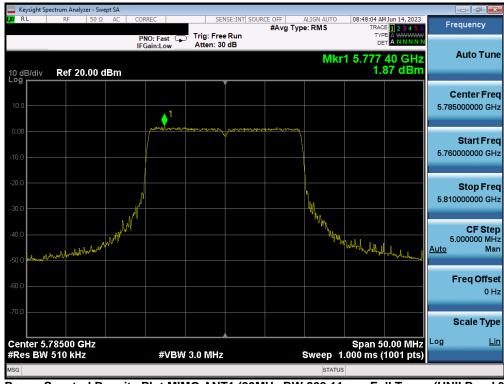
Plot 7-100. Power Spectral Density Plot MIMO ANT1 (80MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 122)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |  |
|---------------------|----------------|--------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          |                  |  |  |
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|                  | oectrum Analyzer - Swept      |          |  |                         |              |                       |                      |                      |  | - 6 -                                       |
|------------------|-------------------------------|----------|--|-------------------------|--------------|-----------------------|----------------------|----------------------|--|---|
| I,XI RL          | RF 50 Ω                       | AC CORR  |  |                         | ISE:INT SOUR | CE OFF<br>#Avg Typ    | ALIGN AUTO<br>e: RMS | TRAC                 | 1 Jun 14, 2023<br>E 1 2 3 4 5 6<br>E A WWWWW | Frequency                                   |
| 10 dB/div<br>Log | Ref 20.00 dB                  | IFGa     | D: Fast 😱<br>ain:Low   | Trig: Free<br>Atten: 30 |              |                       | M                    | <sup>DE</sup>        | ANNNN  | Auto Tune                                   |
| 10.0             |                               |          |  |                         |              |                       |                      |                      |  | Center Freq<br>5.570000000 GHz              |
| -10.0            |                               | م<br>ا   | , and a second | A.,                     | 1            | and the second second |                      |                      |  | Start Freq<br>5.370000000 GHz               |
| -20.0            |                               |          |  |                         |              |                       |                      |                      |  | <b>Stop Freq</b><br>5.770000000 GHz         |
| -40.0<br>-50.0   | Margan and a strategy and and | arrow of |  |                         |              |                       | Lunar                | unungang             | -Waymol chapelo                              | CF Step<br>40.000000 MHz<br><u>Auto</u> Man |
| -60.0            |                               |          |  |                         |              |                       |                      |                      |  | Freq Offset<br>0 Hz                         |
|                  | 5700 GHz<br>1.0 MHz           |          | #VBW   | 3.0 MHz                 |              |                       | Sweep 7              | Span 4<br>1.000 ms ( | 00.0 MHz<br>1001 pts)                        | Scale Type<br>Log <u>Lin</u>                |
| MSG              |                               |          |  |                         |              |                       | STATU                | s                    |  |   |

Plot 7-101. Power Spectral Density Plot MIMO ANT1 (160MHz BW 802.11ax - Full Tones (UNII Band 2C) - Ch. 114)



Plot 7-102. Power Spectral Density Plot MIMO ANT1 (20MHz BW 802.11ax - Full Tones (UNII Band 3) - Ch. 157)

| FCC ID: A3LSMS711U  |                | MEASUREMENT REPORT |                  |  |  |
|---------------------|----------------|--------------------|------------------|--|--|
| Test Report S/N:    | Test Dates:    | EUT Type:          | Daga 07 of 157   |  |  |
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