



# **CERTIFICATION TEST REPORT**

**Report Number.** : 4790101669-E5V3

**Applicant** : SAMSUNG ELECTRONICS CO., LTD.  
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,  
GYEONGGI-DO, 16677, KOREA

**Model** : SM-X900

**FCC ID** : A3LSMX900

**IC** : 649E-SMX900

**EUT Description** : DTS/UNII a/b/g/n/ac/ax Tablet + BT/BLE and WPT

**Test Standard(s)** : FCC 47 CFR PART 15 SUBPART E  
INDUSTRY CANADA RSS-247 Issue 2  
INDUSTRY CANADA RSS-GEN Issue 5

**Date Of Issue:**  
2021-12-15

**Prepared by:**  
UL Korea, Ltd.  
26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Suwon Test Site: UL Korea, Ltd. Suwon Laboratory  
218 Maeyeong-ro, Yeongtong-gu,  
Suwon-si, Gyeonggi-do, 16675, Korea  
TEL: (031) 337-9902  
FAX: (031) 213-5433



**Testing Laboratory**  
**TL-637**

Revision History

| Rev. | Issue Date | Revisions                         | Revised By  |
|------|------------|-----------------------------------|-------------|
| V1   | 2021-11-30 | Initial issue                     | Hyunsik Yun |
| V2   | 2021-12-13 | Updated to address TCB's question | Hyunsik Yun |
| V3   | 2021-12-15 | Updated to address TCB's question | Hyunsik Yun |

## TABLE OF CONTENTS

|                                                                   |           |
|-------------------------------------------------------------------|-----------|
| <b>1. ATTESTATION OF TEST RESULTS .....</b>                       | <b>6</b>  |
| 1.1. INTRODUCTION OF TEST DATA REUSE .....                        | 7         |
| 1.2. DIFFERENCE .....                                             | 7         |
| 1.3. SPOT CHECK VERIFICATION DATA .....                           | 7         |
| 1.4. REFERENCE DETAIL .....                                       | 8         |
| <b>2. TEST METHODOLOGY .....</b>                                  | <b>9</b>  |
| <b>3. FACILITIES AND ACCREDITATION .....</b>                      | <b>9</b>  |
| <b>4. CALIBRATION AND UNCERTAINTY .....</b>                       | <b>10</b> |
| 4.1. MEASURING INSTRUMENT CALIBRATION .....                       | 10        |
| 4.2. SAMPLE CALCULATION .....                                     | 10        |
| 4.3. MEASUREMENT UNCERTAINTY .....                                | 10        |
| 4.4. DECISION RULE .....                                          | 10        |
| <b>5. EQUIPMENT UNDER TEST .....</b>                              | <b>11</b> |
| 5.1. DESCRIPTION OF EUT .....                                     | 11        |
| 5.2. DESCRIPTION OF AVAILABLE ANTENNAS .....                      | 16        |
| 5.3. List of test reduction and modes covering other modes: ..... | 17        |
| 5.4. WORST-CASE CONFIGURATION AND MODE .....                      | 17        |
| 5.5. DESCRIPTION OF TEST SETUP .....                              | 20        |
| <b>6. TEST AND MEASUREMENT EQUIPMENT .....</b>                    | <b>22</b> |
| <b>7. SUMMARY TABLE .....</b>                                     | <b>23</b> |
| <b>8. MEASUREMENT METHODS .....</b>                               | <b>24</b> |
| <b>9. REFERENCE MEASUREMENTS RESULTS .....</b>                    | <b>25</b> |
| 9.1. ON TIME AND DUTY CYCLE RESULTS .....                         | 25        |
| 9.2. DUTY CYCLE PLOTS .....                                       | 26        |
| 9.3. 26 dB BANDWIDTH & 99% BANDWIDTH .....                        | 31        |
| 9.3.1. 802.11a .....                                              | 37        |
| 9.3.2. 802.11n HT20 .....                                         | 37        |
| 9.3.3. 802.11n HT40 .....                                         | 37        |
| 9.3.4. 802.11ac VHT80 .....                                       | 38        |
| 9.3.5. 802.11ac VHT160 .....                                      | 38        |
| 9.3.6. 802.11ax HE20 .....                                        | 38        |
| 9.3.7. 802.11ax HE40 .....                                        | 39        |
| 9.3.8. 802.11ax HE80 .....                                        | 39        |

|            |                                                        |            |
|------------|--------------------------------------------------------|------------|
| 9.3.9.     | 802.11ax HE160 .....                                   | 39         |
| 9.3.10.    | STRADDLE CHANNEL.....                                  | 40         |
| 9.3.11.    | 802.11ax HE20(RU).....                                 | 40         |
| 9.3.12.    | 802.11ax HE40(RU).....                                 | 41         |
| 9.3.13.    | 802.11ax HE80(RU).....                                 | 41         |
| 9.3.14.    | 802.11ax HE160(RU).....                                | 42         |
| 9.3.15.    | 802.11ax STRADDLE CHANNEL(RU).....                     | 42         |
| <b>10.</b> | <b>ANTENNA PORT TEST RESULTS.....</b>                  | <b>43</b>  |
| 10.1.      | 6 dB BANDWIDTH & 99% BANDWIDTH.....                    | 43         |
| 10.1.1.    | UNII-3 & 4 BAND (6dB BANDWIDTH).....                   | 48         |
| 10.1.2.    | UNII-3 & 4 BAND(RU) (6dB BANDWIDTH).....               | 48         |
| 10.1.3.    | UNII-3 & 4 BAND (99% BANDWIDTH).....                   | 49         |
| 10.1.4.    | UNII-3 & 4 BAND(SU) (99% BANDWIDTH) .....              | 49         |
| 10.2.      | OUTPUT POWER AND PPSD .....                            | 50         |
| 10.2.1.    | 802.11a MODE .....                                     | 53         |
| 10.2.2.    | 802.11n HT20 MODE .....                                | 54         |
| 10.2.3.    | 802.11n HT40 MODE .....                                | 55         |
| 10.2.4.    | 802.11ac VHT80 MODE .....                              | 56         |
| 10.2.5.    | 802.11ac VHT160 MODE .....                             | 57         |
| 10.2.6.    | STRADDLE CHANNEL.....                                  | 58         |
| 10.2.7.    | 802.11ax HE20 MODE .....                               | 59         |
| 10.2.8.    | 802.11ax HE40 MODE .....                               | 66         |
| 10.2.9.    | 802.11ax HE80 MODE .....                               | 73         |
| 10.2.10.   | 802.11ax HE160 MODE .....                              | 77         |
| 10.2.11.   | STRADDLE CHANNEL(802.11ax).....                        | 80         |
| 10.2.12.   | OUTPUT POWER AND PPSD PLOTS(WORST CASE).....           | 81         |
| <b>11.</b> | <b>TRANSMITTER ABOVE 1 GHz.....</b>                    | <b>94</b>  |
| 11.1.      | TX ABOVE 1GHz 2Tx MODE IN THE 5.2GHz BAND.....         | 97         |
| 11.2.      | TX ABOVE 1GHz 2Tx MODE IN THE 5.3GHz BAND.....         | 101        |
| 11.3.      | TX ABOVE 1GHz 2Tx MODE IN THE 5.5 GHz BAND.....        | 105        |
| 11.4.      | TX ABOVE 1GHz 2Tx MODE IN THE 5.8 GHz BAND.....        | 111        |
| 11.5.      | TX ABOVE 1GHz 2Tx MODE IN THE 5.9 GHz BAND.....        | 115        |
| 11.6.      | Spurious Emissions for Simultaneous Transmission ..... | 119        |
| 11.6.1.    | Worst test case RSDB condition .....                   | 119        |
| 11.6.1.    | Test Results.....                                      | 120        |
| <b>12.</b> | <b>WORST-CASE BELOW 1 GHz .....</b>                    | <b>123</b> |
| <b>13.</b> | <b>AC POWER LINE CONDUCTED EMISSIONS.....</b>          | <b>124</b> |
| <b>14.</b> | <b>DYNAMIC FREQUENCY SELECTION.....</b>                | <b>127</b> |
| 14.1.      | OVERVIEW.....                                          | 127        |
| 14.1.1.    | LIMITS.....                                            | 127        |

|         |                                                          |     |
|---------|----------------------------------------------------------|-----|
| 14.1.2. | TEST AND MEASUREMENT SYSTEM .....                        | 130 |
| 14.1.3. | SETUP OF EUT .....                                       | 133 |
| 14.1.4. | DESCRIPTION OF EUT .....                                 | 134 |
| 14.2.   | <i>RESULTS FOR 80 MHz BANDWIDTH (UNII-2A BAND)</i> ..... | 135 |
| 14.2.1. | TEST CHANNEL .....                                       | 135 |
| 14.2.2. | RADAR WAVEFORM AND TRAFFIC .....                         | 135 |
| 14.2.3. | OVERLAPPING CHANNEL TESTS .....                          | 136 |
| 14.2.4. | MOVE AND CLOSING TIME .....                              | 136 |
| 14.3.   | <i>RESULTS FOR 80 MHz BANDWIDTH (UNII-2C BAND)</i> ..... | 139 |
| 14.3.1. | TEST CHANNEL .....                                       | 139 |
| 14.3.2. | RADAR WAVEFORM AND TRAFFIC .....                         | 139 |
| 14.3.3. | OVERLAPPING CHANNEL TESTS .....                          | 140 |
| 14.3.4. | MOVE AND CLOSING TIME .....                              | 140 |

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** SAMSUNG ELECTRONICS CO., LTD.

**EUT DESCRIPTION:** DTS/UNII a/b/g/n/ac/ax Tablet + BT/BLE and WPT

**MODEL NUMBER:** SM-X900

**SERIAL NUMBER:** R32RA0033ST (CONDUCTED, ORIGINAL);  
R32RA0036VV, R32RA0034NV, R32RB006W3E, R32RB006XEP,  
R32RB006X0H (RADIATED, ORIGINAL);  
6e356103, R32RB00B40E, R32RB00B3WH (RADIATED, SPOT-CHECK)

**DATE TESTED:** 2021-09-23 ~ 2021-11-24 (Original);  
2021-11-22 ~ 2021-11-30 (Spot-Check)

| APPLICABLE STANDARDS            |              |
|---------------------------------|--------------|
| STANDARD                        | TEST RESULTS |
| CFR 47 Part 15 Subpart E        | Complies     |
| INDUSTRY CANADA RSS-247 Issue 2 | Complies     |
| INDUSTRY CANADA RSS-GEN Issue 5 | Complies     |

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For  
UL Korea, Ltd. By:



Seokhwan Hong  
Suwon Lab Engineer  
UL Korea, Ltd.

Tested By:



Hyunsik Yun  
Suwon Lab Engineer  
UL Korea, Ltd.

## 1.1. INTRODUCTION OF TEST DATA REUSE

This report referenced from the FCC ID: A3LSMX906B DTS(FCC CFR 47 Part 15C).  
And the applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID.

## 1.2. DIFFERENCE

The FCC ID: A3LSMX900 (Model number : SM-X900) shares the same enclosure and circuit board as FCC ID: A3LSMX906B (Model number : SM-X906B). The WLAN antennas and surrounding circuitry and layout are identical between these two units for re-used bands.

In SM-X900 model, all of the RF parts(5G/LTE/WCDMA/GSM) are removed from the PCB.

After confirming through preliminary radiated emissions that the performance of the FCC ID: A3LSMX906B (Model number : SM-X906B) remains representative of FCC ID: A3LSMX900 (Model number : SM-X900). The test data of FCC ID: A3LSMX906B (Model number : SM-X906B) being submitted for this application to cover WLAN features.

Model number, SM-X906B, is not certified for ISED certification.

## 1.3. SPOT CHECK VERIFICATION DATA

Comparison of two models, upper deviation is within 3dB range and all test results are under FCC technical limits.

| Band     | Test Item | Mode              | Frequency | Test Limit   | Original model                          | Spot check model                      | Deviation | Remark      |
|----------|-----------|-------------------|-----------|--------------|-----------------------------------------|---------------------------------------|-----------|-------------|
|          |           |                   |           |              | SM-X906B Results<br>FCC ID : A3LSMX906B | SM-X900 Results<br>FCC ID : A3LSMX900 |           |             |
| U-NII 1  | Band Edge | 802.11ac VHT160   | 5250 MHz  | 54 dBuV/m    | 51.23 dBuV/m                            | 47.49 dBuV/m                          | -3.74 dB  |             |
|          | RSE       | 802.11a           | 5180 MHz  | 68.2 dBuV/m  | 59.88 dBuV/m                            | 60.43 dBuV/m                          | 0.55 dB   | Noise Floor |
|          | Band Edge | 802.11ax HE160 SU | 5250 MHz  | 54 dBuV/m    | 50.12 dBuV/m                            | 45.67 dBuV/m                          | -4.45 dB  |             |
|          | RSE       | 802.11ax HE20 4RU | 5180 MHz  | 68.2 dBuV/m  | 59.78 dBuV/m                            | 60.75 dBuV/m                          | 0.97 dB   |             |
| U-NII 2A | Band Edge | 802.11ac VHT160   | 5250 MHz  | 54 dBuV/m    | 49.04 dBuV/m                            | 51.30 dBuV/m                          | 2.26 dB   |             |
|          | RSE       | 802.11a           | 5320 MHz  | 54 dBuV/m    | 45.46 dBuV/m                            | 38.96 dBuV/m                          | -6.50 dB  | Noise Floor |
|          | Band Edge | 802.11ax HE160 SU | 5250 MHz  | 54 dBuV/m    | 48.71 dBuV/m                            | 45.43 dBuV/m                          | -3.28 dB  |             |
|          | RSE       | 802.11ax HE20 4RU | 5320 MHz  | 68.2 dBuV/m  | 58.73 dBuV/m                            | 55.82 dBuV/m                          | -2.91 dB  |             |
| U-NII 2C | Band Edge | 802.11n HT40      | 5510 MHz  | 74 dBuV/m    | 65.42 dBuV/m                            | 55.83 dBuV/m                          | -9.59 dB  |             |
|          | RSE       | 802.11n HT20      | 5500 MHz  | 68.2 dBuV/m  | 61.68 dBuV/m                            | 60.63 dBuV/m                          | -1.05 dB  |             |
|          | Band Edge | 802.11ax HE80 SU  | 5530 MHz  | 54 dBuV/m    | 51.33 dBuV/m                            | 46.54 dBuV/m                          | -4.79 dB  |             |
|          | RSE       | 802.11ax HE20 4RU | 5500 MHz  | 68.2 dBuV/m  | 57.60 dBuV/m                            | 56.73 dBuV/m                          | -0.87 dB  |             |
| U-NII 3  | Band Edge | 802.11ac VHT80    | 5775 MHz  | -27 dBm      | -35.90 dBm                              | -36.03 dBm                            | -0.13 dB  |             |
|          | RSE       | 802.11a           | 5825 MHz  | 68.2 dBuV/m  | 51.09 dBuV/m                            | 52.61 dBuV/m                          | 1.52 dB   |             |
|          | Band Edge | 802.11ax HE160 SU | 5815 MHz  | -27 dBm      | -34.42 dBm                              | -36.10 dBm                            | -1.68 dB  |             |
|          | RSE       | 802.11ax HE20 4RU | 5785 MHz  | 68.2 dBuV/m  | 56.49 dBuV/m                            | 56.27 dBuV/m                          | -0.22 dB  |             |
| U-NII 4  | Band Edge | 802.11n HT20      | 5885 MHz  | 89.97 dBuV/m | 74.48 dBuV/m                            | 75.27 dBuV/m                          | 0.79 dB   |             |
|          | RSE       | 802.11a           | 5845 MHz  | 68.2 dBuV/m  | 51.12 dBuV/m                            | 51.56 dBuV/m                          | 0.44 dB   |             |
|          | Band Edge | 802.11ax HE20 SU  | 5885 MHz  | 90.00 dBuV/m | 82.65 dBuV/m                            | 81.39 dBuV/m                          | -1.26 dB  |             |
|          | RSE       | 802.11ax HE20 4RU | 5865 MHz  | 68.2 dBuV/m  | 52.00 dBuV/m                            | 49.51 dBuV/m                          | -2.49 dB  |             |

**Note1: ISED not supported U-NII 4 Band (include U-NII 4 160 MHz)**

**Note2: Update U-NII 3 High channel band-edge data for ISED.**

## 1.4. REFERENCE DETAIL

Reference application that contains the re-used reference data.

| Equipment Class | Reference FCC ID | Type Grant/Permissive Change | Reference Application | Folder Test/RF Exposure | Report Title / Section                         |
|-----------------|------------------|------------------------------|-----------------------|-------------------------|------------------------------------------------|
| DTS             | A3LSMX906B       | Grant                        | 4790101660-E4         | Test                    | Report DTS [b, g, n ax] WLAN / All sections    |
|                 |                  |                              | 4790101660-E5         | Test                    | Report BLE / All sections                      |
| DSS             | A3LSMX906B       | Grant                        | 4790101660-E6         | Test                    | Report BT / All sections                       |
| NII             | A3LSMX906B       | Grant                        | 4790101660-E7         | Test                    | Report UNII [a, n, ac, ax] WLAN / All sections |
| NII 6E (FCC)    | A3LSMX906B       | Grant                        | 4790101660-E8         | Test                    | Report UNII 6E [a, ax] WLAN / All sections     |
| WPT             | A3LSMX906B       | Grant                        | 4790101660-E9         | Test                    | Report WPT / All sections                      |

**Note: ISED not supported U-NII 6E.**

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. FCC CFR 47 Part 15.
3. IC RSS-GEN Issue 5.
4. IC RSS-247 Issue 2.
5. KDB 789033 D02 General UNII Test Procedures New Rules v02r01
6. KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02
7. KDB 905462 D03 UNII Clients Without Radar Detection New Rules v01r02
8. KDB 662911 D01 v02r01
9. KDB 291071 DR01-44460(Sept 21, 2021)
10. ANSI C63.10-2013.
11. KDB 484596 D01 Referencing Test Data v01

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

| 218 Maeyeong-ro                     |           |
|-------------------------------------|-----------|
| <input checked="" type="checkbox"/> | Chamber 1 |
| <input checked="" type="checkbox"/> | Chamber 2 |
| <input checked="" type="checkbox"/> | Chamber 3 |

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

Used ISED Test Site Reg.(company number) : 2324L  
CAB Identifier: KR0161

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER                              | UNCERTAINTY |
|----------------------------------------|-------------|
| Conducted Disturbance, 0.15 to 30 MHz  | 3.02 dB     |
| Radiated Disturbance, 30 MHz to 1 GHz  | 4.05 dB     |
| Radiated Disturbance, 1 GHz to 18 GHz  | 5.78 dB     |
| Radiated Disturbance, 18 GHz to 40 GHz | 5.58 dB     |

Uncertainty figures are valid to a confidence level of 95%.

### 4.4. DECISION RULE

Decision rule for statement(s) of conformity is based on Procedure 2, Clause 4.4.3 in IEC Guide 115:2007.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a DTS/UNII a/b/g/n/ac/ax Tablet + BT/BLE and WPT.  
This test report addresses the NII (WLAN) operational mode.

#### WiFi operating mode

| Frequency range               | Mode          | ANT1  | ANT2  |
|-------------------------------|---------------|-------|-------|
| 5GHz<br>(5180 MHz ~ 5885 MHz) | 802.11a MIMO  | TX/RX | TX/RX |
|                               | 802.11n MIMO  | TX/RX | TX/RX |
|                               | 802.11ac MIMO | TX/RX | TX/RX |
|                               | 802.11ax MIMO | TX/RX | TX/RX |

#### Simultaneous TX Condition

Simultaneous Tx Condition: RSDB

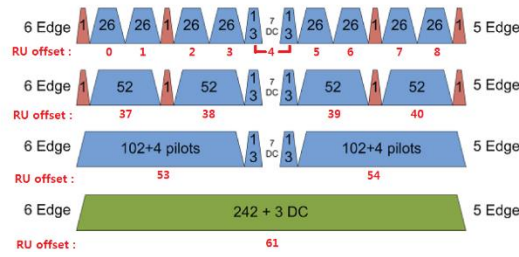
| Mode                    | # of TX | 5GHz WLAN |      | 2.4GHz WLAN |      | Test Case |
|-------------------------|---------|-----------|------|-------------|------|-----------|
|                         |         | ANT1      | ANT2 | ANT1        | ANT2 |           |
| 2.4GHz SISO + 5GHz MIMO | 3       | O         | O    | O           | -    | -         |
| 2.4GHz MIMO + 5GHz MIMO | 4       | O         | O    | O           | O    | O(Worst)  |

Simultaneous Tx Condition: RSDB + Bluetooth

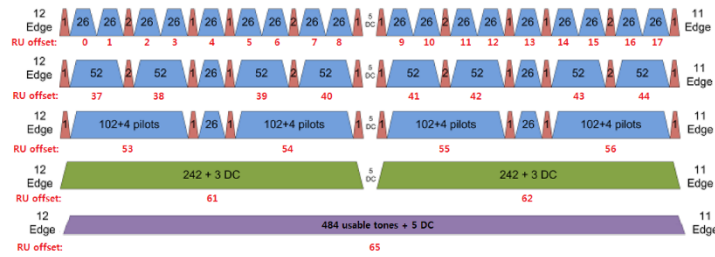
| Mode                                     | # of TX | 5GHz WLAN |      | 2.4GHz Bluetooth | 2.4GHz WLAN | Test Case |
|------------------------------------------|---------|-----------|------|------------------|-------------|-----------|
|                                          |         | ANT1      | ANT2 | ANT1             | ANT2        |           |
| 2.4GHz ANT2 + Bluetooth ANT1 + 5GHz MIMO | 4       | O         | O    | O                | O           | O(Worst)  |

## 802.11ax RU allocations

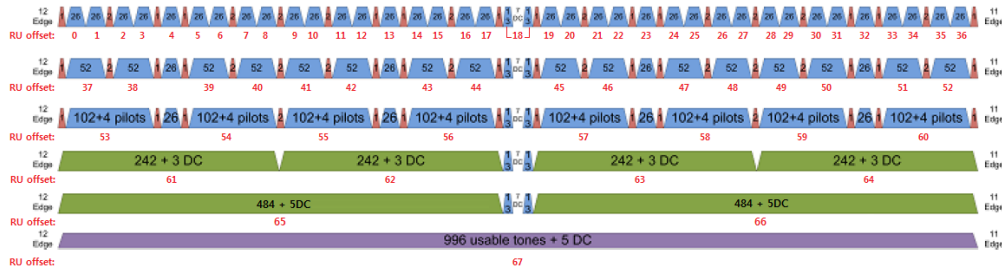
### - HE 20 Mode - 20 MHz



### - HE 40 Mode - 40 MHz



### - HE 80(996T) & 160 Mode(996T + 996T) -



**Test RU offset for tones in each modes**

| Mode | Tones                         | RU offset |
|------|-------------------------------|-----------|
| HE20 | 26T                           | 0         |
|      |                               | 4         |
|      |                               | 8         |
|      | 52T                           | 37        |
|      |                               | 38        |
|      |                               | 40        |
|      | 106T                          | 53        |
|      | 242T / SU <small>Note</small> | 54        |
| HE40 | 26T                           | 61 / -    |
|      |                               | 0         |
|      |                               | 9         |
|      | 52T                           | 17        |
|      |                               | 37        |
|      |                               | 41        |
|      | 106T                          | 44        |
|      |                               | 53        |
|      |                               | 54        |
|      | 242T                          | 56        |
|      |                               | 61        |
|      |                               | 62        |
| HE80 | 26T                           | 63 / -    |
|      |                               | 0         |
|      |                               | 18        |
|      | 52T                           | 36        |
|      |                               | 37        |
|      |                               | 45        |
|      | 106T                          | 52        |
|      |                               | 53        |
|      |                               | 57        |
|      | 242T                          | 60        |
|      |                               | 61        |
|      |                               | 62        |
|      | 484T                          | 64        |
|      |                               | 65        |
|      |                               | 66        |
|      | 996T / SU <small>Note</small> | 67 / -    |

Note: Full RU(Resource Unit) mode and SU(Single Unit) mode have no difference in physical waveform. This report has been reported the SU mode with highest output power in MIMO.

| Mode         | Position           | Tones | RU offset |
|--------------|--------------------|-------|-----------|
| HE160        | Lower 80 MHz       | 26T   | 0         |
|              |                    |       | 18        |
|              |                    |       | 36        |
|              | Upper 80 MHz       |       | 0         |
|              |                    |       | 18        |
|              |                    |       | 36        |
|              | Lower 80 MHz       | 52T   | 37        |
|              |                    |       | 45        |
|              |                    |       | 52        |
|              | Upper 80 MHz       |       | 37        |
|              |                    |       | 45        |
|              |                    |       | 52        |
|              | Lower 80 MHz       | 106T  | 53        |
|              |                    |       | 57        |
|              |                    |       | 60        |
|              | Upper 80 MHz       |       | 53        |
|              |                    |       | 57        |
|              |                    |       | 60        |
|              | Lower 80 MHz       | 242T  | 61        |
|              |                    |       | 62        |
|              |                    |       | 64        |
|              | Upper 80 MHz       |       | 61        |
|              |                    |       | 62        |
|              |                    |       | 64        |
| Lower 80 MHz | 484T               | 65    |           |
|              |                    | 66    |           |
|              |                    | 65    |           |
| Upper 80 MHz |                    | 66    |           |
|              |                    | 66    |           |
|              |                    | 66    |           |
| Lower 80 MHz | 996T               | 67    |           |
|              |                    | 67    |           |
| -            | SU <sup>Note</sup> | -     |           |

Note: Full RU(Resource Unit) 996T + 996T mode and SU(Single Unit) mode have no difference in physical waveform. This report has been reported the SU mode with highest output power in MIMO.

#### Band portion of RU allocation about straddle channels

| Mode | Channel              | Tones     | RU offset | Portion          |
|------|----------------------|-----------|-----------|------------------|
| HE20 | Straddle<br>5720 MHz | 26T       | 6         | UNII 2C & UNII 3 |
|      |                      | 242T / SU | 61 / -    |                  |
| HE40 | Straddle<br>5710 MHz | 26T       | 15        | UNII 2C & UNII 3 |
|      |                      | 484T / SU | 65 / -    |                  |
| HE80 | Straddle<br>5690 MHz | 26T       | 34        | UNII 2C & UNII 3 |
|      |                      | 996T / SU | 67 / -    |                  |

Note: In case of RU straddle channel, test was performed overlapping RU position.

## MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted average output power as follows:

| Band    | Frequency Range [MHz] | Mode                  | Output Power [dBm] | Output Power [mW] |
|---------|-----------------------|-----------------------|--------------------|-------------------|
| UNII-1  | 5180 - 5240           | 802.11a MIMO          | 19.32              | 85.51             |
|         |                       | 802.11n(HT20) MIMO    | 18.96              | 78.70             |
|         |                       | 802.11ax(HE20) MIMO   | 19.07              | 80.72             |
|         | 5190 - 5230           | 802.11n(HT40) MIMO    | 19.20              | 83.18             |
|         |                       | 802.11ax(HE40) MIMO   | 19.22              | 83.56             |
|         | 5210                  | 802.11ac(VHT80) MIMO  | 17.93              | 62.09             |
|         |                       | 802.11ax(HE80) MIMO   | 17.22              | 52.72             |
| UNII-2A | 5260 - 5320           | 802.11a MIMO          | 19.12              | 81.66             |
|         |                       | 802.11n(HT20) MIMO    | 18.77              | 75.34             |
|         |                       | 802.11ax(HE20) MIMO   | 18.88              | 77.27             |
|         | 5190 - 5230           | 802.11n(HT40) MIMO    | 19.01              | 79.62             |
|         |                       | 802.11ax(HE40) MIMO   | 19.05              | 80.35             |
|         | 5270 - 5310           | 802.11ac(VHT80) MIMO  | 17.71              | 59.02             |
|         |                       | 802.11ax(HE80) MIMO   | 18.48              | 70.47             |
|         | 5250 <sup>Note1</sup> | 802.11ac(VHT160) MIMO | 17.30              | 53.70             |
|         |                       | 802.11ax(HE160) MIMO  | 17.34              | 54.20             |
| UNII-2C | 5500 - 5720           | 802.11a MIMO          | 19.17              | 82.60             |
|         |                       | 802.11n(HT20) MIMO    | 18.83              | 76.38             |
|         |                       | 802.11ax(HE20) MIMO   | 19.11              | 81.47             |
|         | 5510 - 5710           | 802.11n(HT40) MIMO    | 19.14              | 82.04             |
|         |                       | 802.11ax(HE40) MIMO   | 19.39              | 86.90             |
|         | 5530 - 5690           | 802.11ac(VHT80) MIMO  | 17.84              | 60.81             |
|         |                       | 802.11ax(HE80) MIMO   | 18.57              | 71.94             |
|         | 5570                  | 802.11ac(VHT160) MIMO | 16.92              | 49.20             |
|         |                       | 802.11ax(HE160) MIMO  | 17.04              | 50.58             |
| UNII-3  | 5745 - 5825           | 802.11a MIMO          | 19.16              | 82.41             |
|         |                       | 802.11n(HT20) MIMO    | 18.79              | 75.68             |
|         |                       | 802.11ax(HE20) MIMO   | 19.05              | 80.35             |
|         | 5755 - 5795           | 802.11n(HT40) MIMO    | 19.06              | 80.54             |
|         |                       | 802.11ax(HE40) MIMO   | 19.52              | 89.54             |
|         | 5775                  | 802.11ac(VHT80) MIMO  | 17.59              | 57.41             |
|         |                       | 802.11ax(HE80) MIMO   | 18.41              | 69.34             |
| UNII-4  | 5845 - 5885           | 802.11a MIMO          | 19.01              | 79.62             |
|         |                       | 802.11n(HT20) MIMO    | 18.64              | 73.11             |
|         |                       | 802.11ax(HE20) MIMO   | 19.08              | 80.91             |
|         | 5835 - 5875           | 802.11n(HT40) MIMO    | 18.64              | 73.11             |
|         |                       | 802.11ax(HE40) MIMO   | 19.10              | 81.28             |
|         | 5855                  | 802.11ac(VHT80) MIMO  | 17.36              | 54.45             |
|         |                       | 802.11ax(HE80) MIMO   | 18.10              | 64.57             |
|         | 5815 <sup>Note2</sup> | 802.11ac(VHT160) MIMO | 16.66              | 46.34             |
|         |                       | 802.11ax(HE160) MIMO  | 17.21              | 52.60             |

Note1. Overlap channel(UNII-1 & 2A)

Note2. Overlap channel(UMNII-3 & 4)

## 5.2. DESCRIPTION OF AVAILABLE ANTENNAS

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 internal antenna was Permanently attached.  
Therefore this E.U.T Complies with the requirement of §15.203.**

The radio utilizes a internal antenna, with a maximum gain of:

| Frequency Band [MHz]   | ANT1 Gain [dBi] | ANT2 Gain [dBi] | Correlated Chains Directional Gain [dBi] |
|------------------------|-----------------|-----------------|------------------------------------------|
| UNII 1<br>5150 - 5250  | -3.5            | -4.3            | -0.88                                    |
| UNII 2A<br>5250 - 5350 | -3.4            | -3.3            | -0.34                                    |
| UNII 2C<br>5470 - 5725 | -3.5            | -2.3            | 0.13                                     |
| UNII 3<br>5725 - 5850  | -3.5            | -2.6            | -0.03                                    |
| UNII 4<br>5850 - 5925  | -3.5            | -2.6            | -0.03                                    |

Directional gain for the MIMO operations is determined using KDB 662911 D01 Multiple Transmitter Output section F (2)(d)(1) for *Unequal antenna gains, with equal transmit powers*. The gain is calculated using the formula for correlated transmissions across the two transmit antennas.

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$  dBi.

Sample calculation for this device with  $N_{ANT} = 2$

Directional gain =  $10 \log[(10^{-3.5/20} + 10^{-7.1/20})^2 / 2] = -2.1$  dBi

### 5.3. List of test reduction and modes covering other modes:

The output power on covered modes is equal to or less than one referenced.

| Authorized Frequency Band |                |                               |                       |
|---------------------------|----------------|-------------------------------|-----------------------|
| Mode                      | Antenna Stream | Mode                          | Covered by            |
| 802.11a                   | MIMO           | 802.11a 2TX                   |                       |
| 802.11n HT20              |                | 802.11n HT20 2TX              |                       |
| 802.11ac VHT20            |                | 802.11ac VHT20 2TX            | 802.11n HT20 2TX      |
| 802.11ax HE20(SU)         |                | 802.11ax HE20 RU(242T) 2TX    | 802.11ax HE20 SU 2TX  |
| 802.11n HT40              |                | 802.11n HT40 2TX              |                       |
| 802.11ac VHT40            |                | 802.11ac VHT40 2TX            | 802.11n HT40 2TX      |
| 802.11ax HE40(SU)         |                | 802.11ax HE40 RU(484T) 2TX    | 802.11ax HE40 SU 2TX  |
| 802.11ac VHT80            |                | 802.11ac VHT80 2TX            |                       |
| 802.11ax HE80(SU)         |                | 802.11ax HE80 RU(996T) 2TX    | 802.11ax HE80 SU 2TX  |
| 802.11ac VHT160           |                | 802.11ac VHT160 2TX           |                       |
| 802.11ax HE160(SU)        |                | 802.11ax HE160 RU(996T*2) 2TX | 802.11ax HE160 SU 2TX |

### 5.4. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 1GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Radiated emission above 1GHz was performed with the EUT set to transmit low/mid/high channels.

For MIMO, the fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z it was determined that Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

Based on the baseline scan, the worst-case data rates were:

|                          |                                |                               |
|--------------------------|--------------------------------|-------------------------------|
| 802.11a mode: 6 Mbps 2Tx | 802.11n HT20 mode: MCS0 2Tx    | 802.11ax HE20 mode: MCS0 2Tx  |
|                          | 802.11n HT40 mode: MCS0 2Tx    | 802.11ax HE40 mode: MCS0 2Tx  |
|                          | 802.11ac VHT80 mode: MCS0 2Tx  | 802.11ax HE80 mode: MCS0 2Tx  |
|                          | 802.11ac VHT160 mode: MCS0 2Tx | 802.11ax HE160 mode: MCS0 2Tx |

Radiation test for 802.11a / n HT20 & HT40 / ac VHT80 & VHT160 / ax HE20 & HE40 & HE80 & HE160 were evaluated at MIMO mode.

Note : All radiated and power line conducted tests were performed connected with charger for evaluation of worst case mode.

Worst-case selection criteria for 802.11ax test items :

- For the 6dB Bandwidth, it was tested at the RU allocation with lowest tones number for each bandwidth.

Note : All radiated and power line conducted tests were performed connected with charger for evaluation of worst case mode.

**Test case configuration for 802.11a, 802.11n HT20 & 40, 802.11ac VHT20 & 40 & 80 & 160, 802.11ax HE20 & 40 & 80 & 160(SU) modes :**

| Mode           | Band        | SISO Target[dBm] |         |          |               | MIMO Target[dBm] |         |          |               |
|----------------|-------------|------------------|---------|----------|---------------|------------------|---------|----------|---------------|
|                |             | 802.11a          | 802.11n | 802.11ac | 802.11ax (SU) | 802.11a          | 802.11n | 802.11ac | 802.11ax (SU) |
| 5GHz (20 MHz)  | UNII-1      |                  |         |          |               | 19               | 19      | 19       | 19            |
|                | 5240 MHz    |                  |         |          |               | 16               | 17      | 17       | 19            |
|                | UNII-2A     |                  |         |          |               | 19               | 19      | 19       | 19            |
|                | UNII-2C     |                  |         |          |               | 19               | 19      | 19       | 19            |
|                | UNII-3      |                  |         |          |               | 19               | 19      | 19       | 19            |
|                | UNII-4      |                  |         |          |               | 19               | 19      | 19       | 19            |
| 5GHz (40 MHz)  | UNII-1      |                  |         |          |               |                  | 19      | 19       | 19            |
|                | UNII-2A     |                  |         |          |               |                  | 19      | 19       | 19            |
|                | UNII-2C     |                  |         |          |               |                  | 19      | 19       | 19            |
|                | UNII-3      |                  |         |          |               |                  | 19      | 19       | 19            |
|                | UNII-4      |                  |         |          |               |                  | 19      | 19       | 19            |
| 5GHz (80 MHz)  | UNII-1      |                  |         |          |               |                  |         | 18       | 18            |
|                | UNII-2A     |                  |         |          |               |                  |         | 18       | 18            |
|                | UNII-2C     |                  |         |          |               |                  |         | 18       | 18            |
|                | UNII-3      |                  |         |          |               |                  |         | 18       | 18            |
|                | UNII-4      |                  |         |          |               |                  |         | 18       | 18            |
| 5GHz (160 MHz) | UNII-1 & 2A |                  |         |          |               |                  |         | 17       | 17            |
|                | UNII-2C     |                  |         |          |               |                  |         | 17       | 17            |
|                | UNII-3 & 4  |                  |         |          |               |                  |         | 17       | 17            |

|  |                                          |
|--|------------------------------------------|
|  | Band-Edge & Spurious Emission            |
|  | Band-Edge & Spurious Emission Spot-Check |
|  | Band-Edge                                |
|  | Change Target Power and retest           |

Note. Compared to the 802.11a mode, target power is the same or lower and the density is low, so only the spot-check test was performed in the 802.11n & 802.11ac & 802.11ax mode. Spot check test was performed in the worst tested band of 802.11a mode.

**Test case configuration for 802.11ax HE20 & 40 & 80 & 160 (RU) modes :**

| Band    | Mode | Freq. | Tone | RU offset | Test Case |      |      |
|---------|------|-------|------|-----------|-----------|------|------|
|         |      |       |      |           | ANT1      | ANT2 | MIMO |
| UNII-1  | HE20 | 5180  | 26 T | 0         |           |      |      |
|         |      |       |      | 4         |           |      | O    |
|         |      |       |      | 8         |           |      |      |
|         |      | 5200  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
|         |      | 5240  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
| UNII-2A | HE20 | 5260  | 26 T | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
|         |      | 5300  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
|         |      | 5320  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      | O    |
|         |      |       |      | 8         |           |      |      |
| UNII-2C | HE20 | 5500  | 26 T | 0         |           |      |      |
|         |      |       |      | 4         |           |      | O    |
|         |      |       |      | 8         |           |      |      |
|         |      | 5580  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
|         |      | 5700  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
| UNII-3  | HE20 | 5745  | 26 T | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
|         |      | 5785  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      | O    |
|         |      |       |      | 8         |           |      |      |
|         |      | 5825  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
| UNII-4  | HE20 | 5845  | 26 T | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |
|         |      | 5865  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      | O    |
|         |      |       |      | 8         |           |      |      |
|         |      | 5885  |      | 0         |           |      |      |
|         |      |       |      | 4         |           |      |      |
|         |      |       |      | 8         |           |      |      |

Note1. Radiated spurious test was performed on the lower tone(26T) with worst average power.

Note2. Since the target of 26 tones are all the same, spurious test was performed once in each UNII band.

## 5.5. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

| Support Equipment List |              |             |                |        |
|------------------------|--------------|-------------|----------------|--------|
| Description            | Manufacturer | Model       | Serial Number  | FCC ID |
| Charger                | SAMSUNG      | EP-TA800    | R37R8YN0CD1RC3 | N/A    |
| Data Cable             | SAMSUNG      | EP-DW767JWE | N/A            | N/A    |

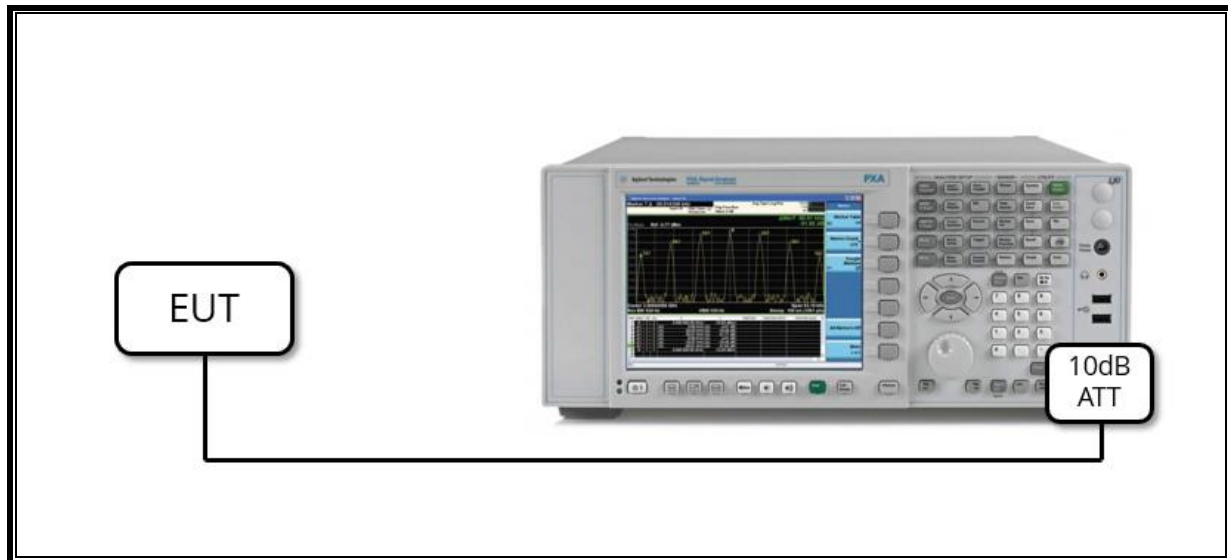
### I/O CABLE

| I/O Cable List |          |                      |                |            |                  |         |
|----------------|----------|----------------------|----------------|------------|------------------|---------|
| Cable No.      | Port     | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1              | DC Power | 1                    | C Type         | Shielded   | 1.0 m            | N/A     |

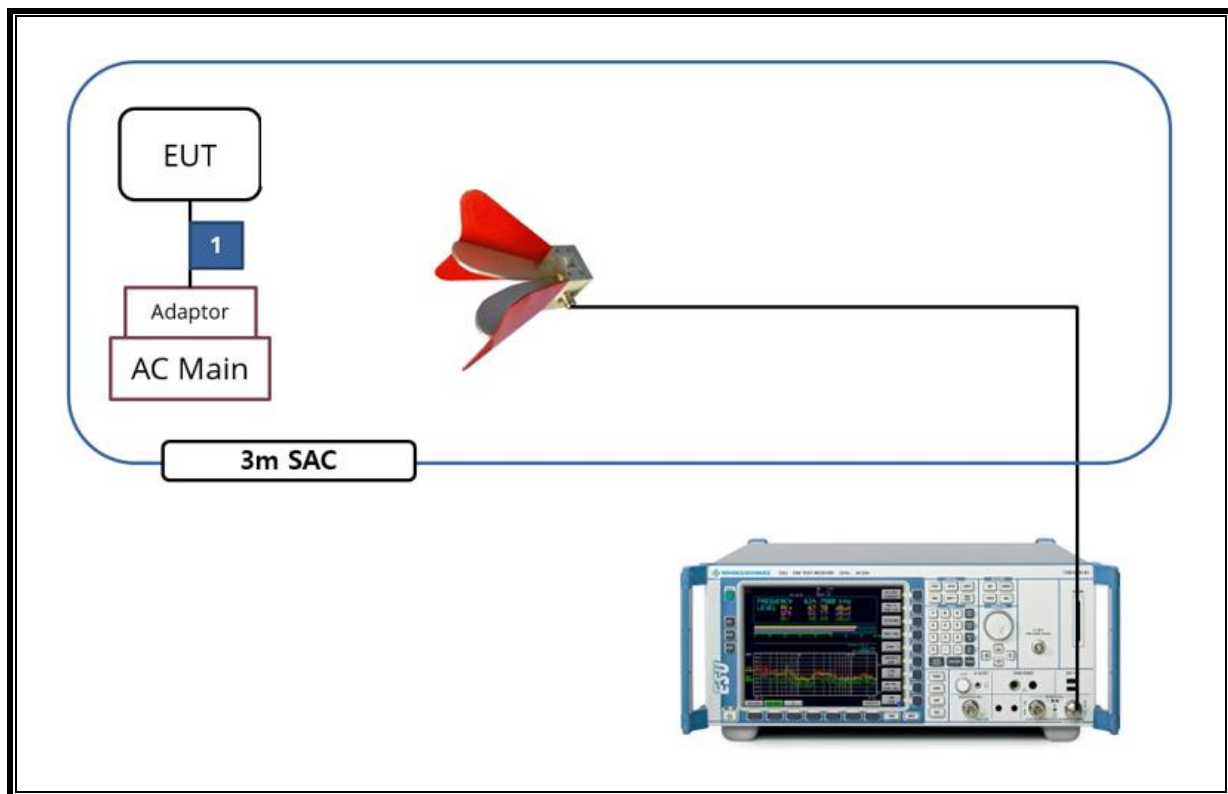
### TEST SETUP

The EUT is a stand-alone unit during the tests.  
Test software exercised the EUT to enable NII mode.

**SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)**



**SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| Test Equipment List        |               |                        |            |            |
|----------------------------|---------------|------------------------|------------|------------|
| Description                | Manufacturer  | Model                  | S/N        | Cal Due    |
| Antenna, Bilog, 30MHz-1GHz | SCHWARZBECK   | VULB9163               | 750        | 2022-08-19 |
| Antenna, Bilog, 30MHz-1GHz | SCHWARZBECK   | VULB9163               | 749        | 2022-08-13 |
| Antenna, Bilog, 30MHz-1GHz | SCHWARZBECK   | VULB9163               | 845        | 2022-08-13 |
| Antenna, Horn, 18 GHz      | ETS           | 3115                   | 00167211   | 2022-07-27 |
| Antenna, Horn, 18 GHz      | ETS           | 3115                   | 00161451   | 2022-08-15 |
| Antenna, Horn, 18 GHz      | ETS           | 3117                   | 00168724   | 2022-07-27 |
| Antenna, Horn, 18 GHz      | ETS           | 3117                   | 00168717   | 2022-08-15 |
| Antenna, Horn, 18 GHz      | ETS           | 3117                   | 00218957   | 2023-01-15 |
| Antenna, Horn, 40 GHz      | ETS           | 3116C                  | 00166155   | 2023-01-15 |
| Antenna, Horn, 40 GHz      | ETS           | 3116C                  | 00168645   | 2023-10-13 |
| Preamplifier               | ETS           | 3116C-PA               | 00168841   | 2022-08-04 |
| Preamplifier, 1000 MHz     | Sonoma        | 310N                   | 341282     | 2022-08-02 |
| Preamplifier, 1000 MHz     | Sonoma        | 310N                   | 351741     | 2022-08-02 |
| Preamplifier, 1000 MHz     | Sonoma        | 310N                   | 370599     | 2022-08-02 |
| Preamplifier, 18 GHz       | Miteq         | AFS42-00101800-25-S-42 | 1876511    | 2022-08-02 |
| Preamplifier, 18 GHz       | Miteq         | AFS42-00101800-25-S-42 | 1896138    | 2022-08-02 |
| Preamplifier, 18 GHz       | Miteq         | AFS42-00101800-25-S-42 | 2029168    | 2022-08-02 |
| Spectrum Analyzer, 44 GHz  | Agilent / HP  | N9030A                 | MY54170614 | 2022-08-04 |
| Spectrum Analyzer, 44 GHz  | Agilent / HP  | N9030A                 | MY54490312 | 2022-08-04 |
| Average Power Sensor       | Agilent / HP  | U2000                  | MY54270007 | 2022-08-04 |
| Average Power Sensor       | Agilent / HP  | U2000                  | MY54260010 | 2022-08-04 |
| Attenuator                 | PASTERNAK     | PE7087-10              | A001       | 2022-08-03 |
| Attenuator                 | PASTERNAK     | PE7087-10              | A008       | 2022-08-03 |
| Attenuator                 | PASTERNAK     | PE7004-10              | 2          | 2022-08-02 |
| Attenuator                 | PASTERNAK     | PE7087-10              | A009       | 2022-08-03 |
| EMI Test Receive, 40 GHz   | R&S           | ESU40                  | 100439     | 2022-08-02 |
| EMI Test Receive, 40 GHz   | R&S           | ESU40                  | 100457     | 2022-08-02 |
| EMI Test Receive, 3 GHz    | R&S           | ESR3                   | 101832     | 2022-08-02 |
| Notch Filter               | Micro-Tronics | BRM50702-02            | G037       | 2022-08-03 |
| Notch Filter               | Micro-Tronics | BRM50716-2             | 006        | 2022-08-02 |
| Low Pass Filter 5GHz       | Micro-Tronics | LPS17541               | 009        | 2022-08-02 |
| Low Pass Filter 5GHz       | Micro-Tronics | LPS17541               | 015        | 2022-08-02 |
| Low Pass Filter 5GHz       | Micro-Tronics | LPS17541               | 019        | 2022-08-02 |
| High Pass Filter 3GHz      | Micro-Tronics | HPM17543               | 010        | 2022-08-02 |
| High Pass Filter 3GHz      | Micro-Tronics | HPM17543               | 015        | 2022-08-02 |
| High Pass Filter 3GHz      | Micro-Tronics | HPM17543               | 020        | 2022-08-02 |
| High Pass Filter 6GHz      | Micro-Tronics | HPS17542               | 009        | 2022-08-02 |
| High Pass Filter 6GHz      | Micro-Tronics | HPS17542               | 016        | 2022-08-02 |
| High Pass Filter 6GHz      | Micro-Tronics | HPS17542               | 020        | 2022-08-02 |
| LISN                       | R&S           | ENV-216                | 101837     | 2022-08-05 |
| Antenna, Loop, 9kHz-30MHz  | R&S           | HFH2-Z2                | 100418     | 2023-10-06 |
| Termination                | WEINSCHEL     | M1406A                 | T09        | 2022-08-03 |
| Attenuator                 | WEINSCHEL     | WA76-30-21             | A015       | 2022-08-03 |
| UL Software                |               |                        |            |            |
| Description                | Manufacturer  | Model                  | Version    |            |
| Radiated software          | UL            | UL EMC                 | Ver 9.5    |            |
| AC Line Conducted software | UL            | UL EMC                 | Ver 9.5    |            |

## 7. SUMMARY TABLE

| FCC Part Section           | Test Description                            | Test Limit                     | Test Condition | Test Result              |
|----------------------------|---------------------------------------------|--------------------------------|----------------|--------------------------|
| 15.407(e)                  | 6dB Band width (5.8GHz)                     | > 500kHz                       | Conducted      | Complies                 |
| 15.407 (a)(1)(iv)          | TX Cond. Power (5.150-5.250)                | < 24dBm                        |                | Complies                 |
| 15.407 (a)(2)              | TX Cond. Power (5.250-5.350 & 5.470-5.725)  | < 24dBm or 11+10Log(26dB BW)   |                | Complies                 |
| 15.407 (a)(3)(i)           | TX Cond. Power (5.725-5.850)                | < 30dBm                        |                | Complies                 |
| 15.407 (a)(3)(iii)         | TX Cond. Power (5.850-5.895)                | < 30dBm e.i.r.p.               |                | Complies                 |
| 15.407 (a)(1)(iv) & (a)(2) | PSD (5.150-5.250 5.250-5.350 & 5.470-5.725) | < 11dBm/MHz                    |                | Complies                 |
| 15.407 (a)(3)              | PSD (5.725-5.850)                           | < 30dBm/500kHz                 |                | Complies                 |
| 15.407 (a)(3)(iii)         | PSD (5.850-5.895)                           | < 14dBm/MHz e.i.r.p.           |                | Complies                 |
| 15.207 (a)                 | AC Power Line conducted emissions           | Section 13                     | Radiated       | Complies                 |
| 15.407 (b) & 15.209        | Radiated Spurious Emission                  | < 74dBuV/m PK<br>< 54dBuV/m AV |                | Complies                 |
| 15.407 (h)(2)              | Dynamic Frequency Selection                 | N/A                            | Condcuted      | Complies <sup>Note</sup> |

| IC Part Section                 | Test Description                                 | Test Limit   | Test Condition | Test Result |
|---------------------------------|--------------------------------------------------|--------------|----------------|-------------|
| RSS-247 6.2.4.1                 | 6dB Band width (5.8GHz)                          | > 500 kHz    | Condcuted      | PASS        |
| RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 | TX Cond. Power 5.15-2.25, 5.25-5.35 & 5.47-5.725 | Section 10.2 |                | PASS        |
| RSS-247 6.2.4.1                 | TX Cond. Power 5.725-5.825                       | Section 10.2 |                | PASS        |
| RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 | PSD (5.2,5.3,5.5GHz)                             | Section 10.2 |                | PASS        |
| RSS-247 6.2.4.1                 | PSD (5.8GHz)                                     | Section 10.2 |                | PASS        |
| RSS-GEN Clause 8.8              | AC Power Line conducted emissions                | Section 13   | Radiated       | PASS        |
| RSS-GEN Clause 7 & 8.9          | Radiated Spurious Emission                       | < 54dBuV/m   |                | PASS        |
| RSS-247 6.3                     | Dynamic Frequency Selection                      | N/A          | Condcuted      | PASS        |

Note. This EUT does not support channel puncturing.

## 8. MEASUREMENT METHODS

On-Time and Duty Cycle : KDB 789033 D02 v02r01, Section II.B.

6dB Emission BW : KDB 789033 D02 v02r01, Section II.C.2.

26dB Emission BW : KDB 789033 D02 v02r01, Section II.C.1.

99% Occupied BW : KDB 789033 D02 v02r01, Section II.D.

Conducted Output Power : KDB 789033 D02 v02r01, Section II.E.3.b(Method PM-G)

Conducted Output Power for Straddle Channel (ch144/142/138 for 20/40/80MHz BW):

KDB 789033 D02 v02r01, Section II.E.2.b(Method SA-1)

Power Spectral Density : KDB 789033 D02 v02r01, Section II.F.

Unwanted emissions in restricted bands : KDB 789033 D02 v02r01, Section II.G.3 – II.G.6.

Unwanted emissions in non-restricted bands : KDB 789033 D02 v02r01, Section II.G.3 – II.G.6.

AC Power Line Conducted Emission : ANSI C63.10-2013, Section 6.2.

## 9. REFERENCE MEASUREMENTS RESULTS

### 9.1. ON TIME AND DUTY CYCLE RESULTS

| Mode                  | On Time [ms] | Period [ms] | Duty Cycle X [Linear] | Duty Cycle X [%] | Duty Cycle Correction Factor[dB] |
|-----------------------|--------------|-------------|-----------------------|------------------|----------------------------------|
| 802.11a MIMO          | 2.764        | 2.862       | 0.966                 | 96.576           | 0.15                             |
| 802.11n(HT20) MIMO    | 2.452        | 2.550       | 0.962                 | 96.157           | 0.17                             |
| 802.11n(HT40) MIMO    | 2.384        | 2.481       | 0.961                 | 96.090           | 0.17                             |
| 802.11ac(VHT80) MIMO  | 1.680        | 1.776       | 0.946                 | 94.595           | 0.24                             |
| 802.11ac(VHT160) MIMO | 1.406        | 1.504       | 0.935                 | 93.484           | 0.29                             |

| Mode           | ANT. | Tone | On Time [ms] | Period [ms] | Duty Cycle X [Linear] | Duty Cycle X [%] | Duty Cycle Correction Factor[dB] |
|----------------|------|------|--------------|-------------|-----------------------|------------------|----------------------------------|
| 802.11ax HE20  | MIMO | 26T  | 2.595        | 2.612       | 0.993                 | 99.349           | -                                |
|                |      | 52T  | 2.590        | 2.608       | 0.993                 | 99.310           | -                                |
|                |      | 106T | 2.433        | 2.450       | 0.993                 | 99.306           | -                                |
|                |      | SU   | 5.451        | 5.470       | 0.997                 | 99.653           | -                                |
| 802.11ax HE40  | MIMO | 26T  | 2.558        | 2.610       | 0.980                 | 98.008           | -                                |
|                |      | 52T  | 2.560        | 2.608       | 0.982                 | 98.160           | -                                |
|                |      | 106T | 2.415        | 2.455       | 0.984                 | 98.371           | -                                |
|                |      | 242T | 2.385        | 2.403       | 0.993                 | 99.251           | -                                |
|                |      | SU   | 5.443        | 5.465       | 0.996                 | 99.597           | -                                |
| 802.11ax HE80  | MIMO | 26T  | 2.563        | 2.611       | 0.982                 | 98.162           | -                                |
|                |      | 52T  | 2.558        | 2.607       | 0.981                 | 98.120           | -                                |
|                |      | 106T | 2.412        | 2.451       | 0.984                 | 98.409           | -                                |
|                |      | 242T | 2.386        | 2.403       | 0.993                 | 99.293           | -                                |
|                |      | 484T | 2.381        | 2.399       | 0.992                 | 99.250           | -                                |
|                |      | SU   | 5.435        | 5.456       | 0.996                 | 99.615           | -                                |
| 802.11ax HE160 | MIMO | 26T  | 2.564        | 2.611       | 0.982                 | 98.200           | -                                |
|                |      | 52T  | 2.559        | 2.606       | 0.982                 | 98.196           | -                                |
|                |      | 106T | 2.399        | 2.452       | 0.978                 | 97.838           | 0.09                             |
|                |      | 242T | 2.355        | 2.387       | 0.987                 | 98.659           | -                                |
|                |      | 484T | 2.379        | 2.405       | 0.989                 | 98.919           | -                                |
|                |      | 996T | 2.416        | 2.435       | 0.992                 | 99.220           | -                                |
|                |      | SU   | 5.439        | 5.462       | 0.996                 | 99.579           | -                                |

Note. If the duty cycle is over 98%, compensation is not included in average measurement.

#### LIMITS

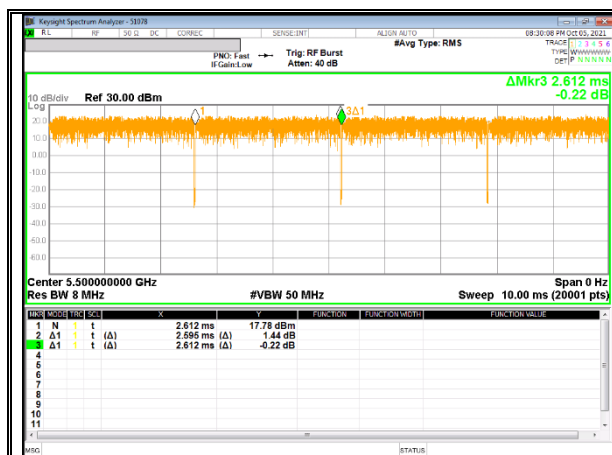
None; for reporting purposes only.

#### PROCEDURE

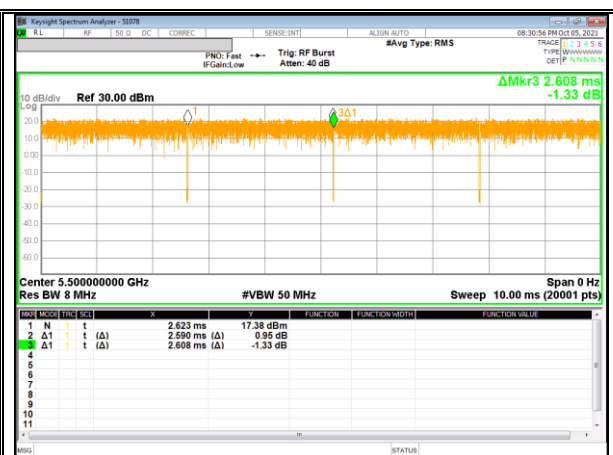
KDB 789033 D02 v02r01 Zero-Span Spectrum Analyzer Method.

## 9.2. DUTY CYCLE PLOTS

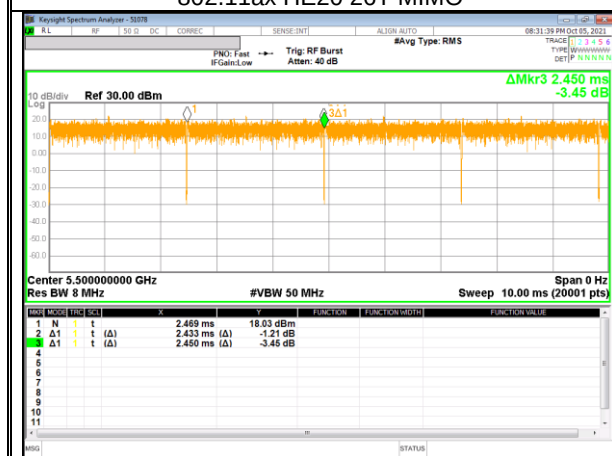




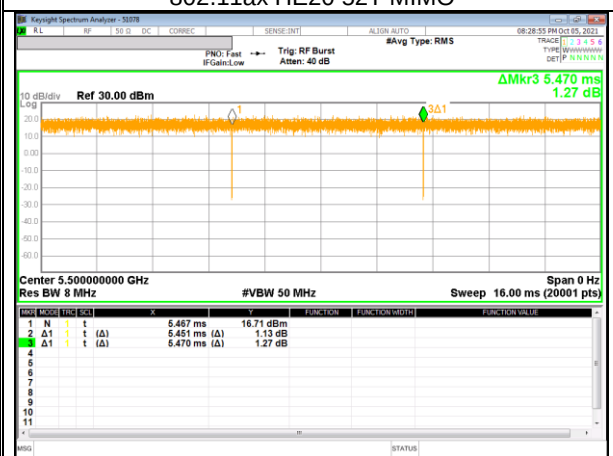
802.11ax HE20 26T MIMO



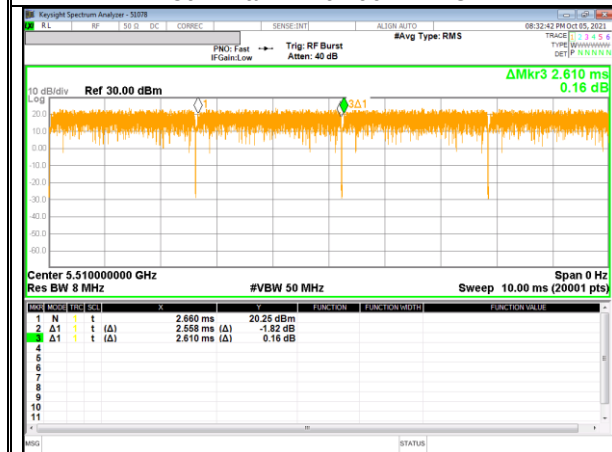
802.11ax HE20 52T MIMO



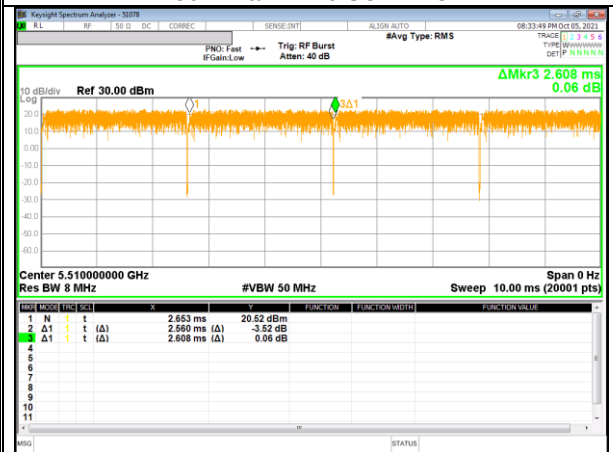
802.11ax HE20 106T MIMO



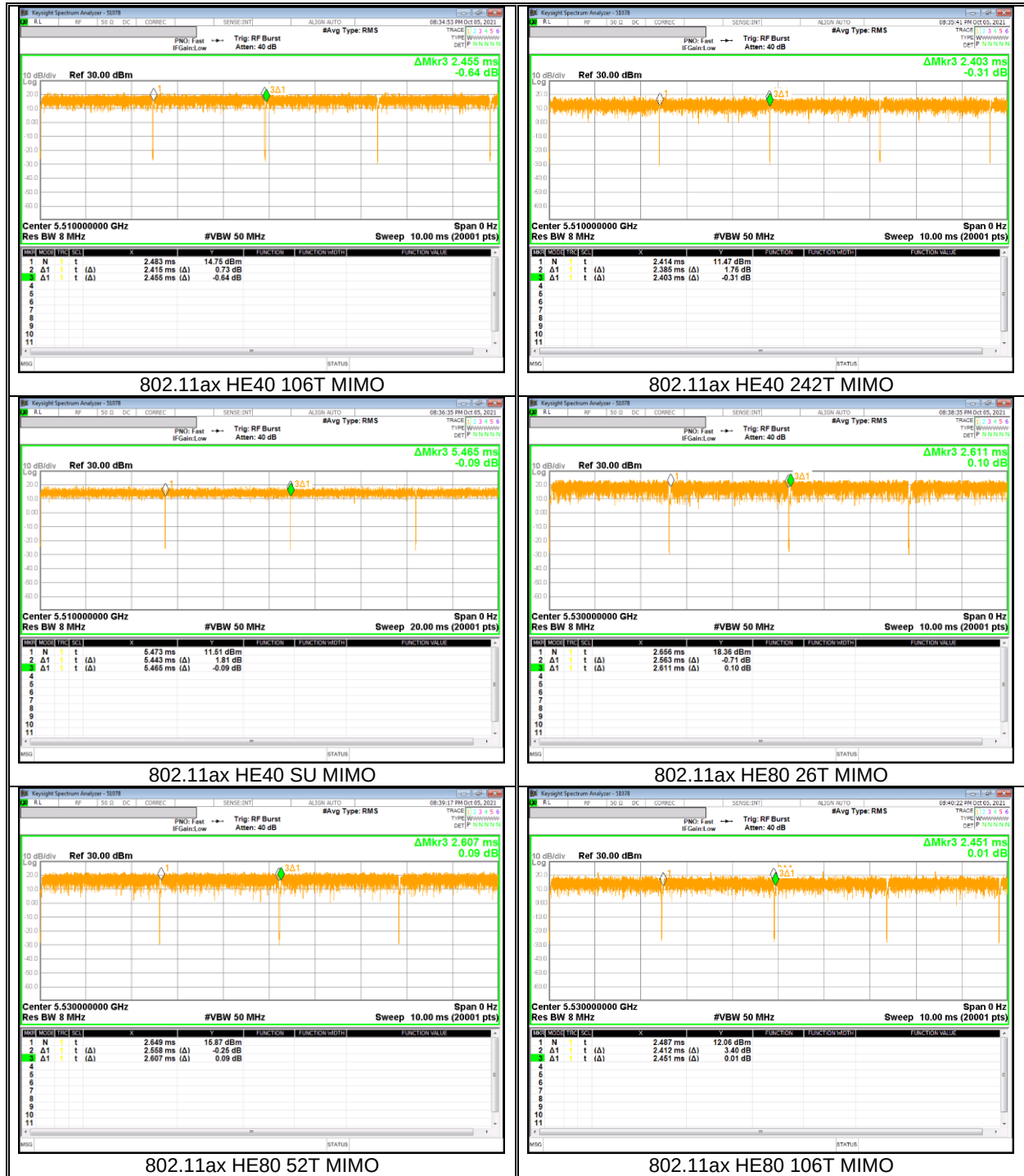
802.11ax HE20 SU MIMO

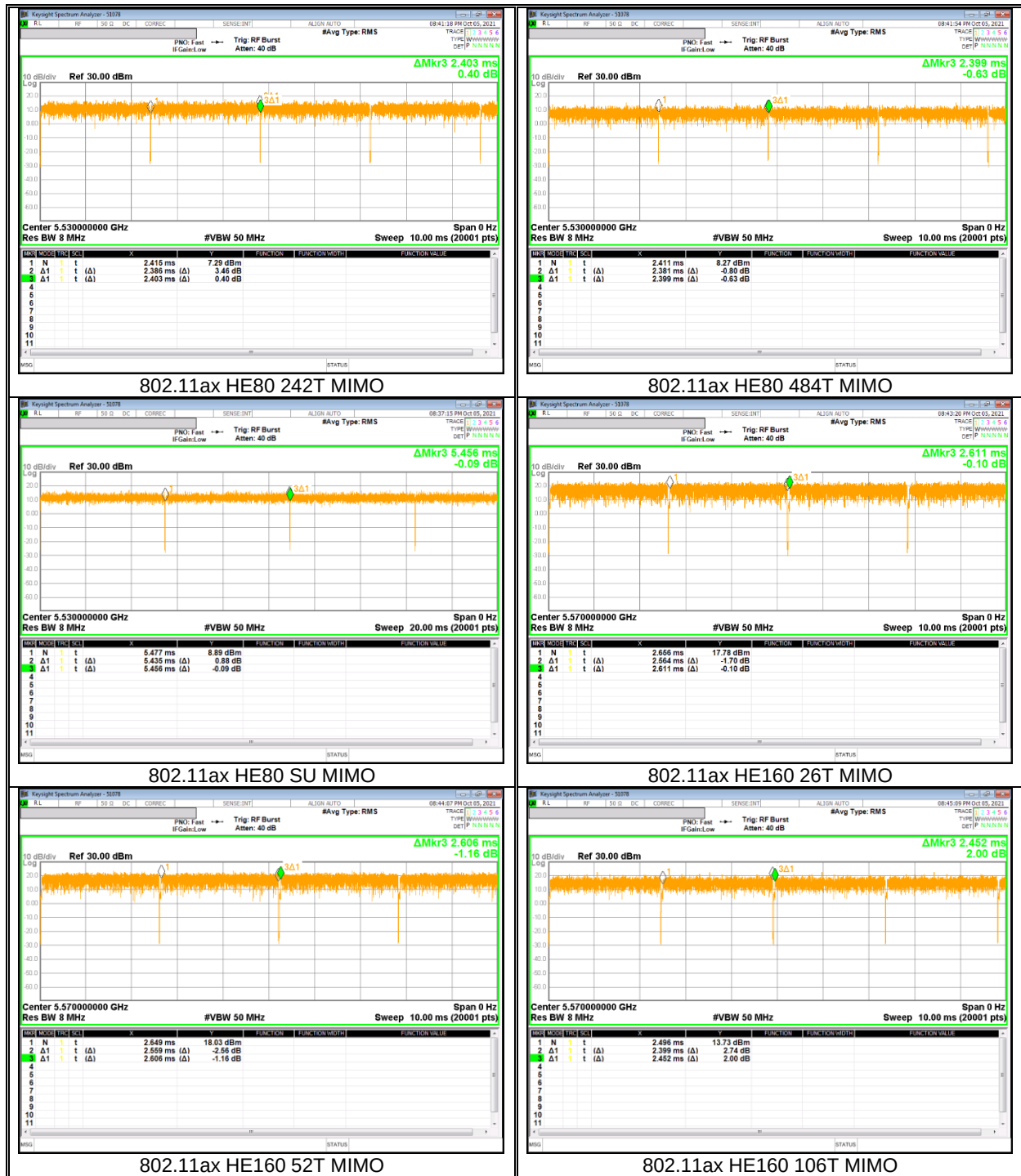


802.11ax HE40 26T MIMO



802.11ax HE40 52T MIMO







### **9.3. 26 dB BANDWIDTH & 99% BANDWIDTH**

#### **LIMITS**

None; for reporting purposes only.

#### **TEST PROCEDURE**

Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% of EBW, the VBW > RBW, peak detector and max hold.

- 26 dB Bandwidth

RBW set to approximately 1% of EBW, the VBW > RBW, peak detector and max hold.

- 99% Bandwidth

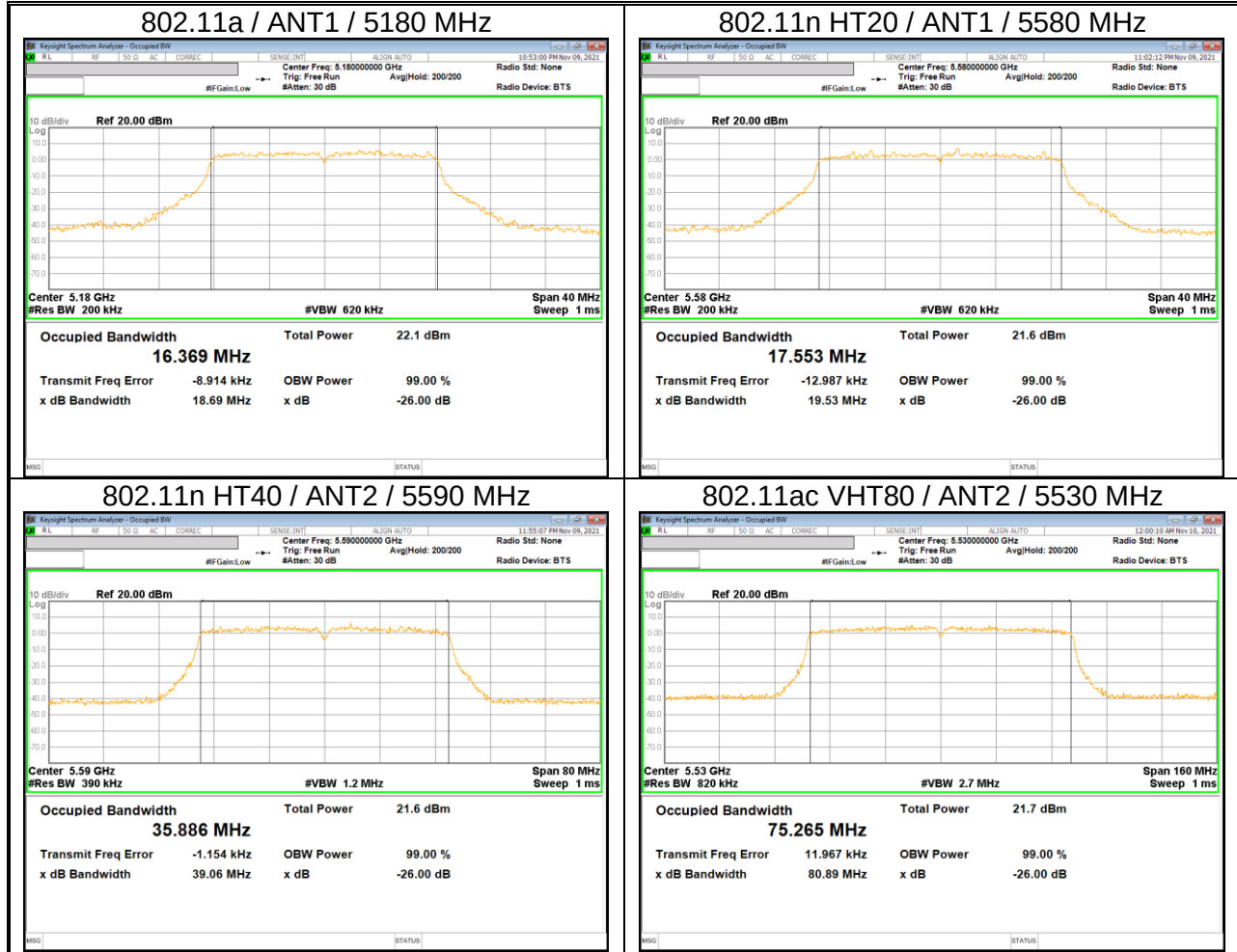
RBW: 1 ~ 5% of 99% Bandwidth, VBW >= 3 x RBW, sample detector.

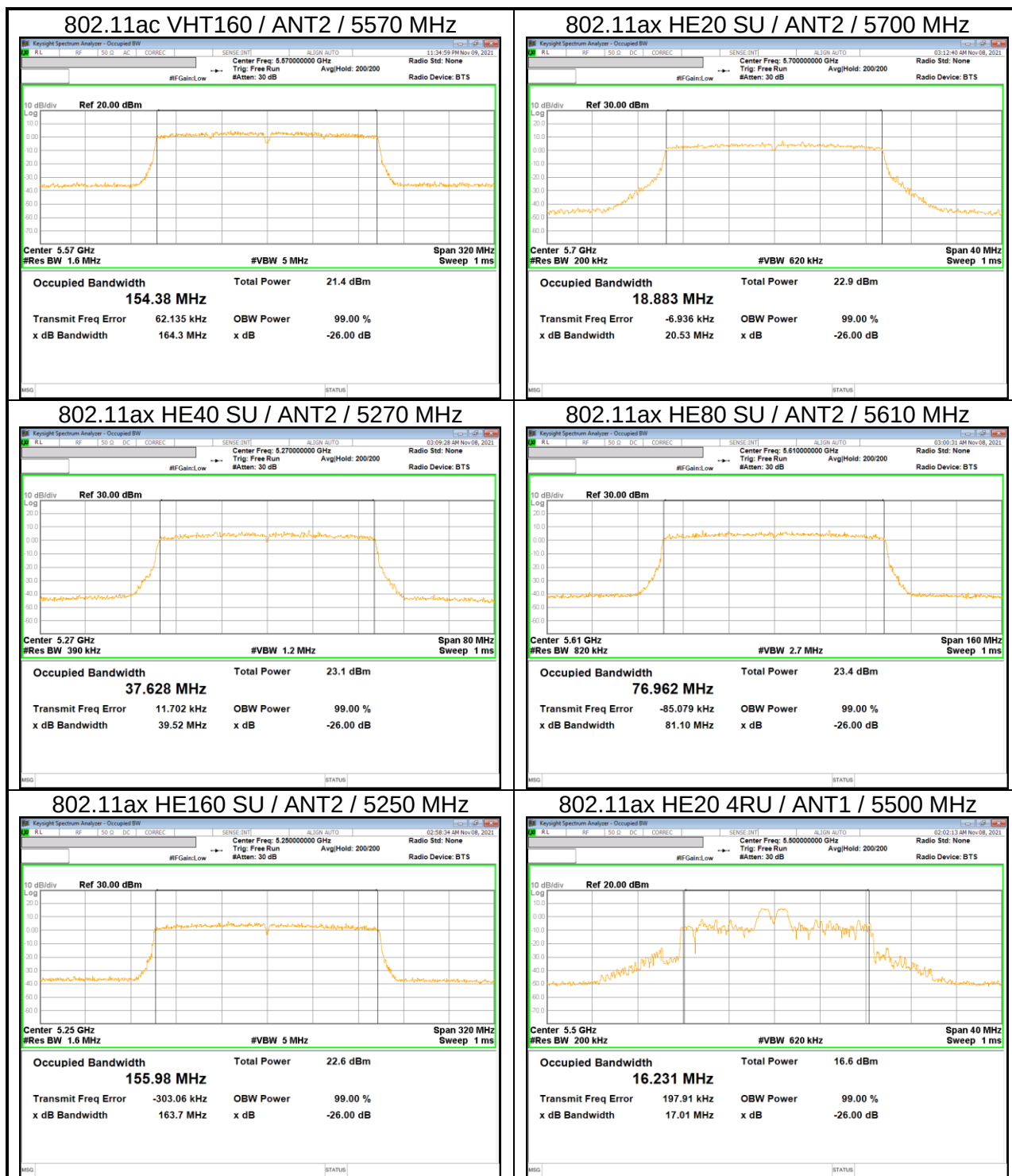
#### **RESULTS**

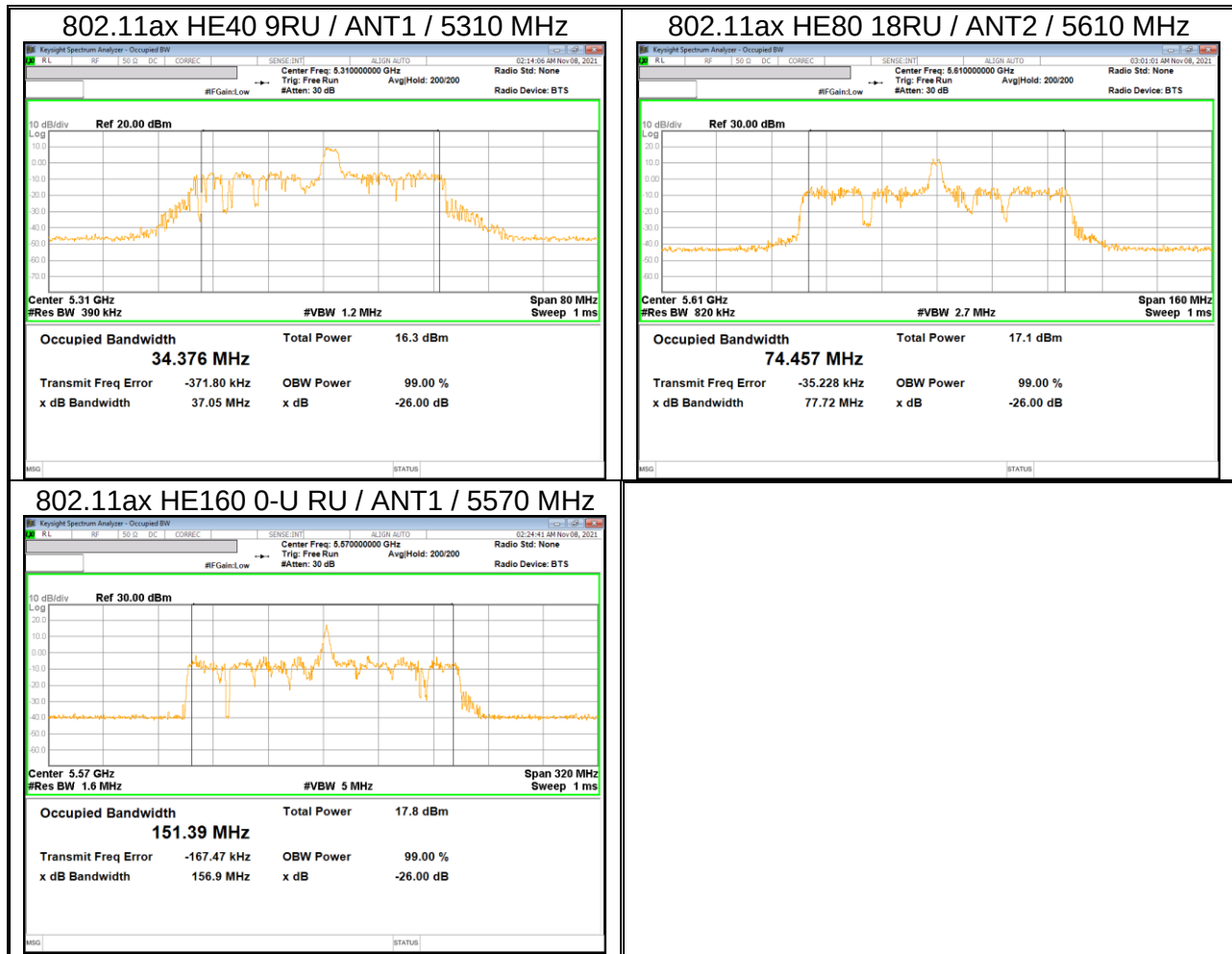
- Please refer to the next page

## WORST CASE TEST PLOTS

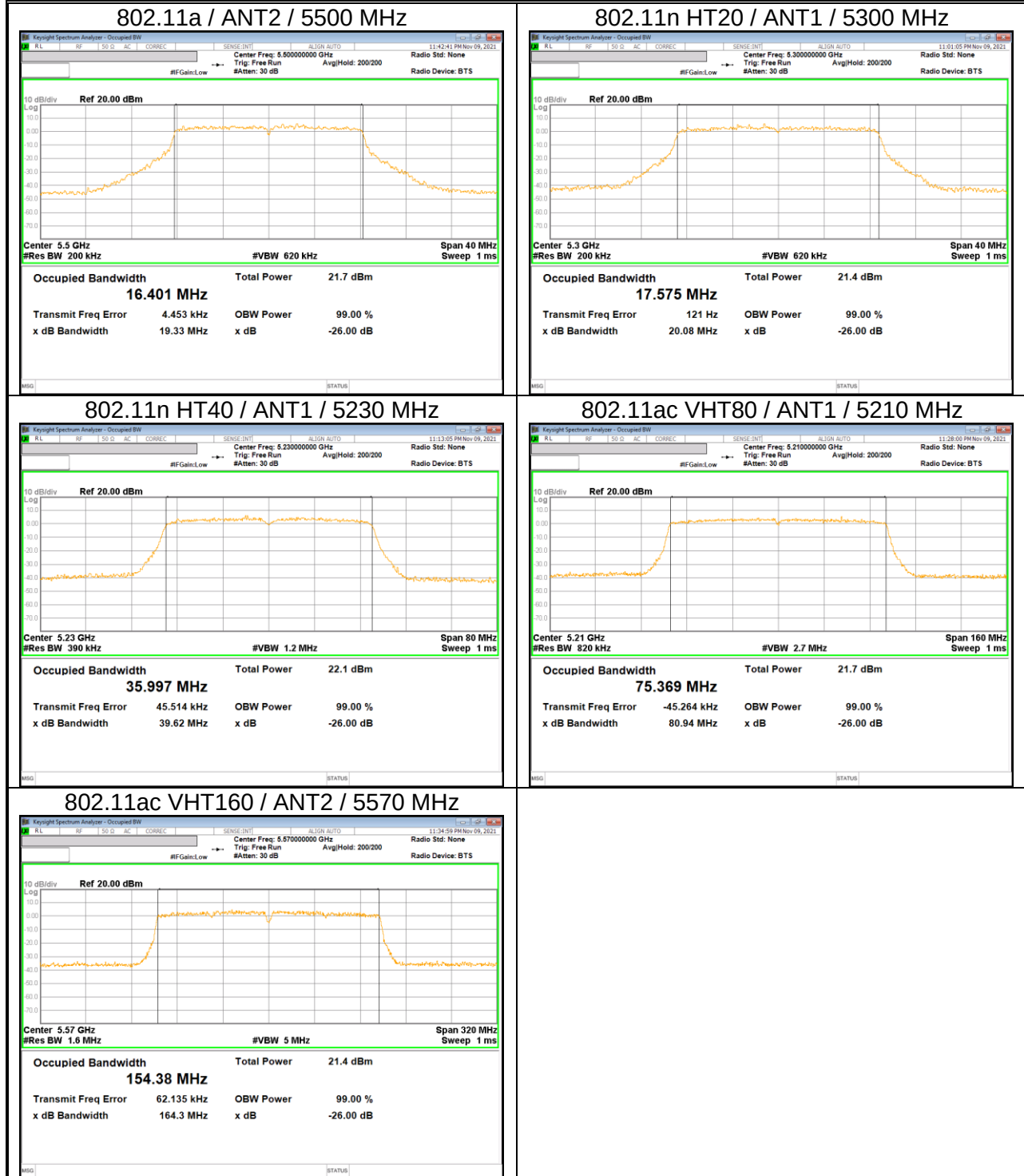
### - 26 dB BANDWIDTH

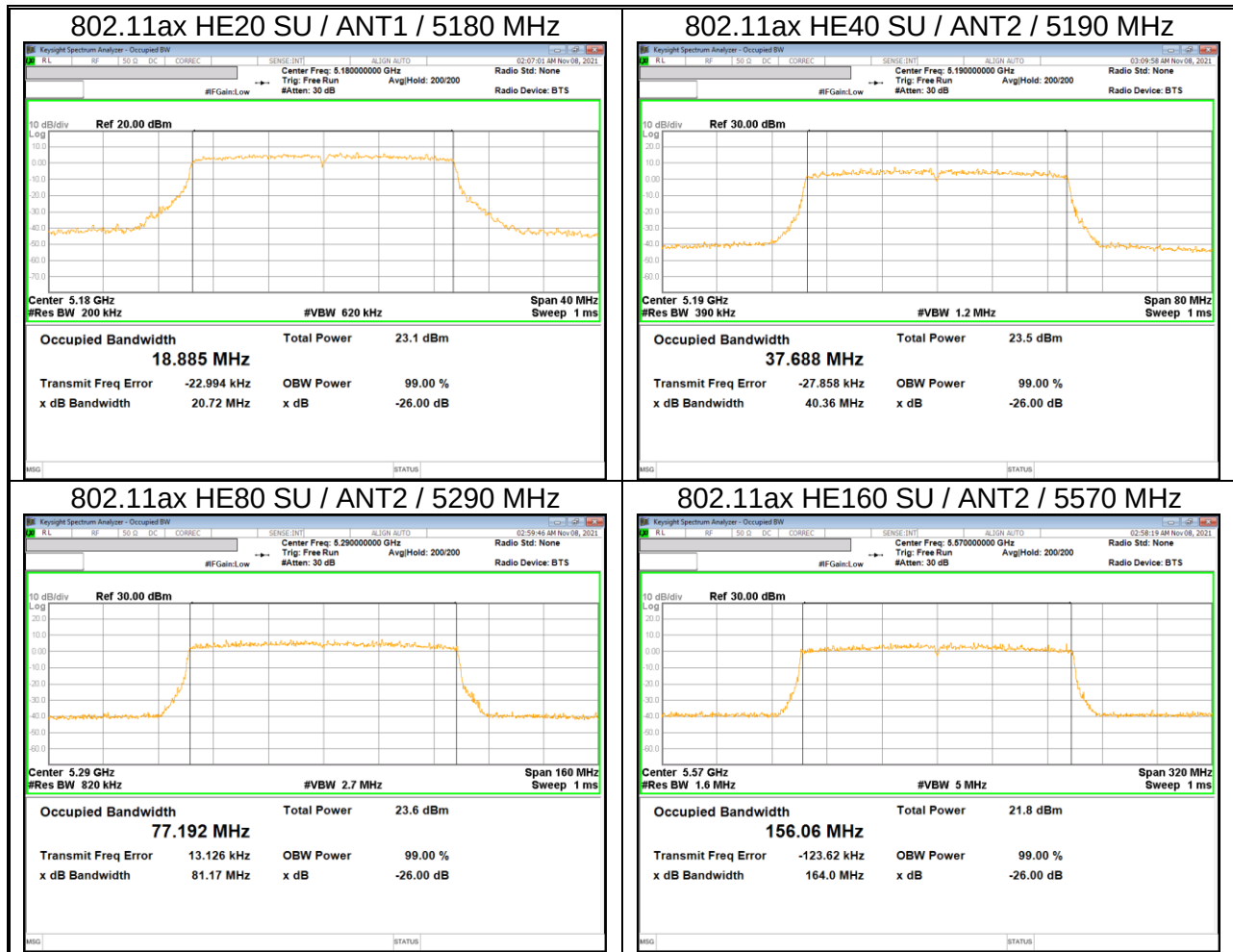






- 99% BANDWIDTH





### 9.3.1. 802.11a

| Band                    | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |       | Worst | 99% BW [MHz] |       |
|-------------------------|---------|--------------------|----------------|-------|-------|--------------|-------|
|                         |         |                    | ANT1           | ANT2  |       | ANT1         | ANT2  |
| UNII-1 <sup>Note</sup>  | 36      | 5180               | 18.69          | 19.46 | 18.69 | 16.37        | 16.37 |
|                         | 40      | 5200               | 19.02          | 19.05 |       | 16.35        | 16.36 |
|                         | 48      | 5240               | 19.09          | 19.53 |       | 16.36        | 16.37 |
| UNII-2A <sup>Note</sup> | 52      | 5260               | 18.89          | 19.37 | 18.79 | 16.35        | 16.39 |
|                         | 60      | 5300               | 18.79          | 19.27 |       | 16.34        | 16.38 |
|                         | 64      | 5320               | 19.93          | 19.20 |       | 16.38        | 16.39 |
| UNII-2C                 | 100     | 5500               | 19.89          | 19.33 | 18.96 | 16.35        | 16.40 |
|                         | 116     | 5580               | 18.96          | 19.23 |       | 16.35        | 16.38 |
|                         | 140     | 5700               | 19.01          | 19.63 |       | 16.36        | 16.38 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.2. 802.11n HT20

| Band                    | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |       | Worst | 99% BW [MHz] |       |
|-------------------------|---------|--------------------|----------------|-------|-------|--------------|-------|
|                         |         |                    | ANT1           | ANT2  |       | ANT1         | ANT2  |
| UNII-1 <sup>Note</sup>  | 36      | 5180               | 20.11          | 20.00 | 19.89 | 17.53        | 17.53 |
|                         | 40      | 5200               | 20.29          | 20.04 |       | 17.54        | 17.54 |
|                         | 48      | 5240               | 20.17          | 19.89 |       | 17.55        | 17.53 |
| UNII-2A <sup>Note</sup> | 52      | 5260               | 19.92          | 19.93 | 19.85 | 17.54        | 17.54 |
|                         | 60      | 5300               | 20.08          | 20.11 |       | 17.58        | 17.54 |
|                         | 64      | 5320               | 19.85          | 19.96 |       | 17.53        | 17.52 |
| UNII-2C                 | 100     | 5500               | 20.07          | 20.17 | 19.53 | 17.55        | 17.53 |
|                         | 116     | 5580               | 19.53          | 20.23 |       | 17.55        | 17.53 |
|                         | 140     | 5700               | 20.00          | 19.72 |       | 17.56        | 17.53 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.3. 802.11n HT40

| Band                    | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |       | Worst | 99% BW [MHz] |       |
|-------------------------|---------|--------------------|----------------|-------|-------|--------------|-------|
|                         |         |                    | ANT1           | ANT2  |       | ANT1         | ANT2  |
| UNII-1 <sup>Note</sup>  | 38      | 5190               | 39.87          | 39.59 | 39.59 | 35.94        | 35.91 |
|                         | 46      | 5230               | 39.62          | 39.77 |       | 36.00        | 35.91 |
| UNII-2A <sup>Note</sup> | 54      | 5270               | 39.56          | 39.47 | 39.47 | 35.99        | 35.91 |
|                         | 62      | 5310               | 39.86          | 39.55 |       | 35.96        | 35.91 |
| UNII-2C                 | 102     | 5510               | 39.72          | 39.55 | 39.06 | 35.99        | 35.91 |
|                         | 118     | 5590               | 40.04          | 39.06 |       | 35.98        | 35.89 |
|                         | 134     | 5670               | 39.53          | 39.33 |       | 35.98        | 35.93 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.4. 802.11ac VHT80

| Band                    | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |       | Worst | 99% BW [MHz] |       |
|-------------------------|---------|--------------------|----------------|-------|-------|--------------|-------|
|                         |         |                    | ANT1           | ANT2  |       | ANT1         | ANT2  |
| UNII-1 <sup>Note</sup>  | 42      | 5210               | 80.94          | 81.24 | 80.94 | 75.37        | 75.30 |
| UNII-2A <sup>Note</sup> | 58      | 5290               | 81.91          | 80.95 | 80.95 | 75.29        | 75.09 |
| UNII-2C                 | 106     | 5530               | 81.67          | 80.89 | 80.89 | 75.36        | 75.27 |
|                         | 122     | 5610               | 81.49          | 81.05 |       | 75.32        | 75.17 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.5. 802.11ac VHT160

| Band      | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |        | Worst  | 99% BW [MHz] |        |
|-----------|---------|--------------------|----------------|--------|--------|--------------|--------|
|           |         |                    | ANT1           | ANT2   |        | ANT1         | ANT2   |
| UNII-1&2A | 50      | 5250               | 164.60         | 164.50 | 164.50 | 154.17       | 154.13 |
| UNII-2C   | 114     | 5570               | 165.00         | 164.30 | 164.30 | 154.36       | 154.38 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.6. 802.11ax HE20

| Band                    | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |       | Worst | 99% BW [MHz](Note) |       |
|-------------------------|---------|--------------------|----------------|-------|-------|--------------------|-------|
|                         |         |                    | ANT1           | ANT2  |       | ANT1               | ANT2  |
| UNII-1 <sup>Note</sup>  | 36      | 5180               | 20.72          | 21.06 | 20.66 | 18.89              | 18.89 |
|                         | 40      | 5200               | 20.71          | 20.66 |       | 18.86              | 18.86 |
|                         | 48      | 5240               | 20.93          | 20.81 |       | 18.85              | 18.87 |
| UNII-2A <sup>Note</sup> | 52      | 5260               | 20.80          | 20.85 | 20.59 | 18.87              | 18.87 |
|                         | 60      | 5300               | 20.88          | 20.88 |       | 18.88              | 18.86 |
|                         | 64      | 5320               | 20.59          | 20.72 |       | 18.88              | 18.86 |
| UNII-2C                 | 100     | 5500               | 21.09          | 20.88 | 20.53 | 18.88              | 18.88 |
|                         | 116     | 5580               | 20.87          | 20.74 |       | 18.88              | 18.88 |
|                         | 140     | 5700               | 21.04          | 20.53 |       | 18.88              | 18.88 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.7. 802.11ax HE40

| Band                    | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |       | Worst | 99% BW [MHz](Note) |       |
|-------------------------|---------|--------------------|----------------|-------|-------|--------------------|-------|
|                         |         |                    | ANT1           | ANT2  |       | ANT1               | ANT2  |
| UNII-1 <sup>Note</sup>  | 38      | 5190               | 40.10          | 40.36 | 39.93 | 37.62              | 37.69 |
|                         | 46      | 5230               | 39.93          | 40.10 |       | 37.60              | 37.65 |
| UNII-2A <sup>Note</sup> | 54      | 5270               | 40.05          | 39.52 | 39.52 | 37.58              | 37.63 |
|                         | 62      | 5310               | 40.44          | 39.97 |       | 37.59              | 37.66 |
| UNII-2C                 | 102     | 5510               | 39.98          | 40.39 | 39.98 | 37.63              | 37.68 |
|                         | 118     | 5590               | 40.05          | 40.15 |       | 37.62              | 37.60 |
|                         | 134     | 5670               | 40.01          | 40.03 |       | 37.57              | 37.58 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.8. 802.11ax HE80

| Band                    | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |       | Worst | 99% BW [MHz](Note) |       |
|-------------------------|---------|--------------------|----------------|-------|-------|--------------------|-------|
|                         |         |                    | ANT1           | ANT2  |       | ANT1               | ANT2  |
| UNII-1 <sup>Note</sup>  | 42      | 5210               | 81.86          | 81.45 | 81.45 | 76.94              | 76.81 |
| UNII-2A <sup>Note</sup> | 58      | 5290               | 81.38          | 81.17 | 81.17 | 76.97              | 77.19 |
| UNII-2C                 | 106     | 5530               | 81.45          | 81.21 | 81.10 | 76.86              | 77.02 |
|                         | 122     | 5610               | 82.27          | 81.10 |       | 76.94              | 76.96 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.9. 802.11ax HE160

| Band      | Channel | Center Freq. [MHz] | 26 dB BW [MHz] |        | Worst  | 99% BW [MHz](Note) |        |
|-----------|---------|--------------------|----------------|--------|--------|--------------------|--------|
|           |         |                    | ANT1           | ANT2   |        | ANT1               | ANT2   |
| UNII-1&2A | 50      | 5250               | 164.10         | 163.70 | 163.70 | 155.80             | 155.98 |
| UNII-2C   | 114     | 5570               | 164.20         | 164.00 | 164.00 | 155.94             | 156.06 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.10. STRADDLE CHANNEL

| Mode              | Channel  | Center Freq. [MHz] | 26 dB BW [MHz] |        |         |        |
|-------------------|----------|--------------------|----------------|--------|---------|--------|
|                   |          |                    | ANT1           |        | ANT2    |        |
|                   |          |                    | UNII-2C        | UNII-3 | UNII-2C | UNII-3 |
| 802.11a           | Straddle | 5720               | 14.58          | 4.70   | 14.66   | 4.51   |
| 802.11n HT20      | Straddle | 5720               | 15.25          | 5.30   | 15.27   | 5.21   |
| 802.11n HT40      | Straddle | 5710               | 34.41          | 4.38   | 34.49   | 4.49   |
| 802.11ac VHT80    | Straddle | 5690               | 74.97          | 4.71   | 74.65   | 5.16   |
| 802.11ax HE20(SU) | Straddle | 5720               | 15.39          | 5.74   | 15.31   | 5.45   |
| 802.11ax HE40(SU) | Straddle | 5710               | 35.34          | 5.05   | 34.84   | 4.88   |
| 802.11ax HE80(SU) | Straddle | 5690               | 75.91          | 6.00   | 75.61   | 5.66   |

### 9.3.11. 802.11ax HE20(RU)

| Band Mode               | Center Freq. [MHz] | Tones | RU offset | 26 dB BW [MHz] |       | 99% BW [MHz] |       |
|-------------------------|--------------------|-------|-----------|----------------|-------|--------------|-------|
|                         |                    |       |           | ANT1           | ANT2  | ANT1         | ANT2  |
| UNII-1 <sup>Note</sup>  | 5180               | 26T   | 0         | 20.15          | 20.05 | 18.23        | 18.40 |
|                         |                    |       | 4         | 17.52          | 18.12 | 16.53        | 16.49 |
|                         |                    |       | 8         | 20.37          | 19.90 | 17.70        | 18.24 |
|                         | 5200               |       | 0         | 20.39          | 20.34 | 18.46        | 18.38 |
|                         |                    |       | 4         | 18.43          | 17.98 | 16.88        | 16.99 |
|                         |                    |       | 8         | 20.42          | 19.63 | 17.54        | 18.29 |
|                         | 5240               |       | 0         | 20.43          | 19.97 | 18.47        | 17.65 |
|                         |                    |       | 4         | 18.44          | 18.27 | 17.31        | 15.85 |
|                         |                    |       | 8         | 19.84          | 20.01 | 18.35        | 18.05 |
| UNII-2A <sup>Note</sup> | 5260               | 26T   | 0         | 20.15          | 18.93 | 18.40        | 17.74 |
|                         |                    |       | 4         | 18.00          | 18.00 | 16.82        | 17.12 |
|                         |                    |       | 8         | 20.10          | 19.76 | 18.26        | 18.34 |
|                         | 5300               |       | 0         | 20.53          | 19.84 | 18.31        | 18.37 |
|                         |                    |       | 4         | 18.64          | 17.94 | 17.30        | 16.87 |
|                         |                    |       | 8         | 20.22          | 20.21 | 18.37        | 18.20 |
|                         | 5320               |       | 0         | 20.73          | 19.80 | 18.19        | 18.36 |
|                         |                    |       | 4         | 18.69          | 18.12 | 16.59        | 16.81 |
|                         |                    |       | 8         | 19.80          | 19.77 | 17.95        | 17.62 |
| UNII-2C                 | 5500               | 26T   | 0         | 19.97          | 19.47 | 18.17        | 18.08 |
|                         |                    |       | 4         | 17.01          | 18.36 | 16.23        | 16.90 |
|                         |                    |       | 8         | 20.35          | 19.96 | 17.42        | 18.20 |
|                         | 5580               |       | 0         | 20.01          | 19.19 | 18.43        | 18.01 |
|                         |                    |       | 4         | 18.82          | 17.51 | 17.22        | 16.58 |
|                         |                    |       | 8         | 20.10          | 19.77 | 18.45        | 18.37 |
|                         | 5700               |       | 0         | 17.99          | 19.85 | 16.69        | 18.01 |
|                         |                    |       | 4         | 18.46          | 18.28 | 16.82        | 16.92 |
|                         |                    |       | 8         | 20.33          | 20.11 | 18.37        | 18.38 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.12. 802.11ax HE40(RU)

| Band                    | Center Freq. [MHz] | Tones | RU offset | 26 dB BW [MHz] |       | 99% BW [MHz] |       |
|-------------------------|--------------------|-------|-----------|----------------|-------|--------------|-------|
|                         |                    |       |           | ANT1           | ANT2  | ANT1         | ANT2  |
| UNII-1 <sup>Note</sup>  | 5190               | 26T   | 0         | 40.19          | 39.76 | 37.93        | 37.43 |
|                         |                    |       | 9         | 37.29          | 37.70 | 35.73        | 35.68 |
|                         |                    |       | 17        | 40.45          | 39.67 | 37.92        | 37.81 |
|                         | 5230               |       | 0         | 40.22          | 39.83 | 37.96        | 37.73 |
|                         |                    |       | 9         | 38.01          | 37.31 | 36.04        | 35.04 |
|                         |                    |       | 17        | 40.00          | 40.04 | 38.00        | 37.72 |
| UNII-2A <sup>Note</sup> | 5270               | 26T   | 0         | 40.41          | 40.05 | 38.08        | 37.79 |
|                         |                    |       | 9         | 38.20          | 37.21 | 36.02        | 35.33 |
|                         |                    |       | 17        | 39.93          | 38.54 | 37.97        | 36.96 |
|                         | 5310               |       | 0         | 40.17          | 38.12 | 37.68        | 36.00 |
|                         |                    |       | 9         | 37.05          | 37.50 | 34.38        | 35.76 |
|                         |                    |       | 17        | 39.85          | 40.03 | 37.88        | 37.77 |
| UNII-2C                 | 5510               | 26T   | 0         | 40.53          | 38.58 | 38.13        | 36.86 |
|                         |                    |       | 9         | 38.32          | 37.92 | 36.31        | 36.18 |
|                         |                    |       | 17        | 40.07          | 39.53 | 37.92        | 37.18 |
|                         | 5590               |       | 0         | 40.37          | 40.03 | 37.48        | 37.65 |
|                         |                    |       | 9         | 37.86          | 38.00 | 35.69        | 35.91 |
|                         |                    |       | 17        | 40.29          | 39.24 | 37.37        | 37.32 |
|                         | 5670               |       | 0         | 39.55          | 39.81 | 37.49        | 37.19 |
|                         |                    |       | 9         | 37.99          | 37.88 | 36.03        | 35.82 |
|                         |                    |       | 17        | 38.75          | 39.65 | 36.99        | 37.93 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.13. 802.11ax HE80(RU)

| Band                    | Center Freq. [MHz] | Tones | RU offset | 26 dB BW [MHz] |       | 99% BW [MHz] |       |
|-------------------------|--------------------|-------|-----------|----------------|-------|--------------|-------|
|                         |                    |       |           | ANT1           | ANT2  | ANT1         | ANT2  |
| UNII-1 <sup>Note</sup>  | 5210               | 26T   | 0         | 81.08          | 81.35 | 77.96        | 76.81 |
|                         |                    |       | 18        | 77.92          | 77.84 | 74.89        | 74.62 |
|                         |                    |       | 36        | 81.64          | 77.93 | 78.13        | 75.08 |
| UNII-2A <sup>Note</sup> | 5290               | 26T   | 0         | 82.13          | 80.74 | 77.75        | 78.01 |
|                         |                    |       | 18        | 78.11          | 77.84 | 74.81        | 74.75 |
|                         |                    |       | 36        | 81.91          | 82.54 | 78.79        | 78.52 |
| UNII-2C                 | 5530               | 26T   | 0         | 81.42          | 81.40 | 74.39        | 77.67 |
|                         |                    |       | 18        | 78.15          | 78.16 | 70.94        | 74.45 |
|                         |                    |       | 36        | 81.57          | 80.99 | 78.10        | 78.02 |
|                         | 5610               | 26T   | 0         | 77.88          | 80.90 | 74.62        | 77.34 |
|                         |                    |       | 18        | 78.79          | 77.72 | 75.13        | 74.46 |
|                         |                    |       | 36        | 81.69          | 81.12 | 78.61        | 78.00 |

Note. As a result of 99% bandwidth test, the bandwidth of UNII-1 does not interfere with UNII-2A.

### 9.3.14. 802.11ax HE160(RU)

| Band      | Center Freq. [MHz] | Tones | RU offset | 26 dB BW [MHz] |        | 99% BW [MHz] |        |
|-----------|--------------------|-------|-----------|----------------|--------|--------------|--------|
|           |                    |       |           | ANT1           | ANT2   | ANT1         | ANT2   |
| UNII-1&2A | 5250               | 26T   | 0 L       | 164.00         | 162.30 | 158.07       | 156.73 |
|           |                    |       | 0 U       | 157.60         | 157.40 | 152.33       | 152.70 |
|           |                    |       | 36 U      | 162.30         | 163.30 | 158.53       | 157.98 |
| UNII-2C   | 5570               | 26T   | 0 L       | 163.20         | 163.50 | 157.61       | 158.02 |
|           |                    |       | 0 U       | 156.90         | 157.40 | 151.39       | 151.95 |
|           |                    |       | 36 U      | 163.20         | 162.80 | 155.60       | 158.57 |

### 9.3.15. 802.11ax STRADDLE CHANNEL(RU)

| Band             | Mode | Center Freq. [MHz] | Tones | RU offset | 26 dB BW [MHz] |        |         |        |
|------------------|------|--------------------|-------|-----------|----------------|--------|---------|--------|
|                  |      |                    |       |           | ANT1           |        | ANT2    |        |
|                  |      |                    |       |           | UNII-2C        | UNII-3 | UNII-2C | UNII-3 |
| Straddle Channel | HE20 | 5720               | 26T   | 6         | 14.34          | 3.25   | 14.17   | 4.05   |
|                  | HE40 | 5710               |       | 15        | 34.08          | 3.07   | 34.07   | 2.12   |
|                  | HE80 | 5690               |       | 34        | 74.20          | 4.38   | 73.38   | 3.53   |

## 10. ANTENNA PORT TEST RESULTS

### 10.1. 6 dB BANDWIDTH & 99% BANDWIDTH

#### LIMITS

FCC §15.407 / RSS-247 6.2.4.1

The minimum 6 dB bandwidth shall be at least 500 kHz.

#### TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v02r01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW  $\geq 3 \times$  RBW, peak detector and max hold.

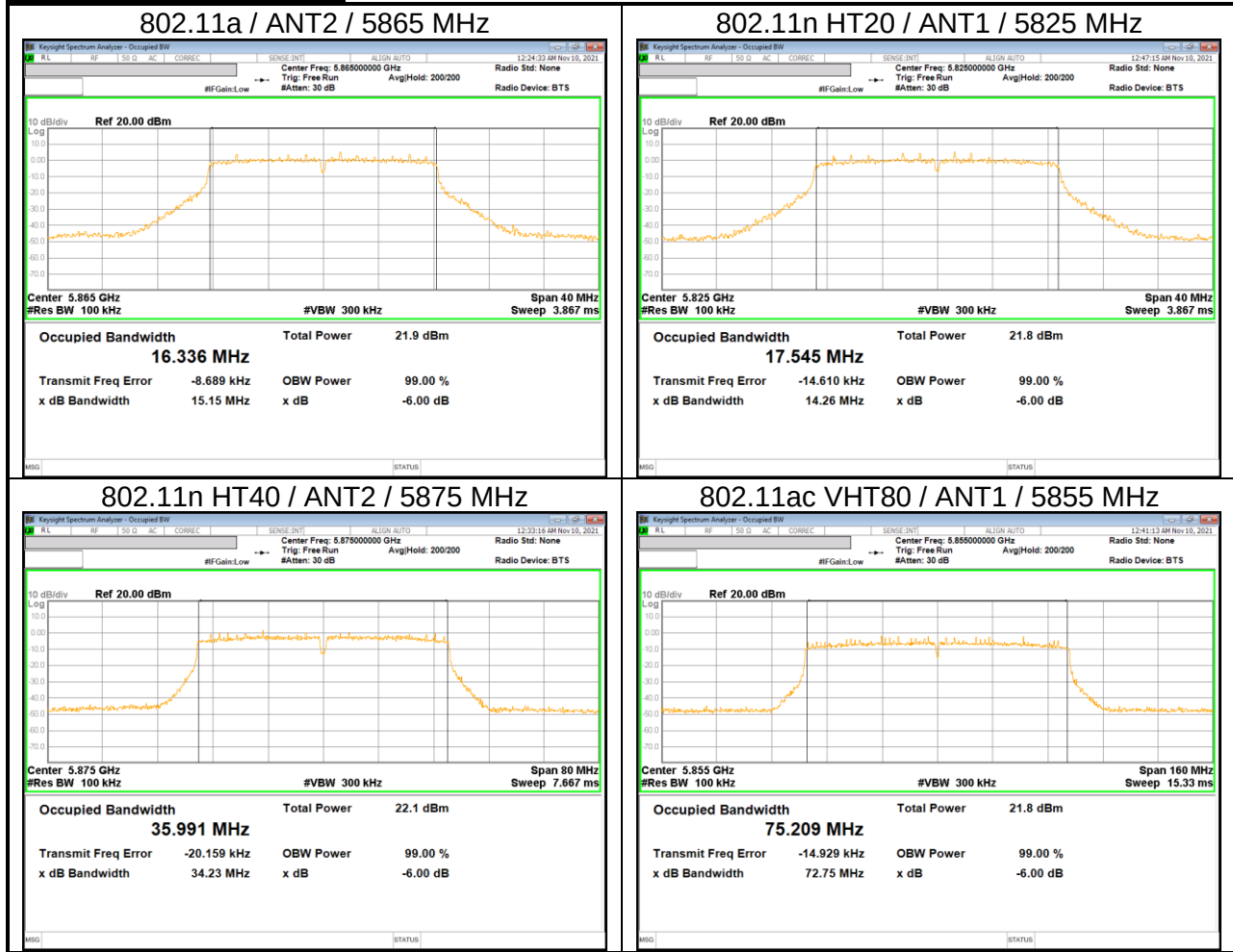
- 99% Bandwidth

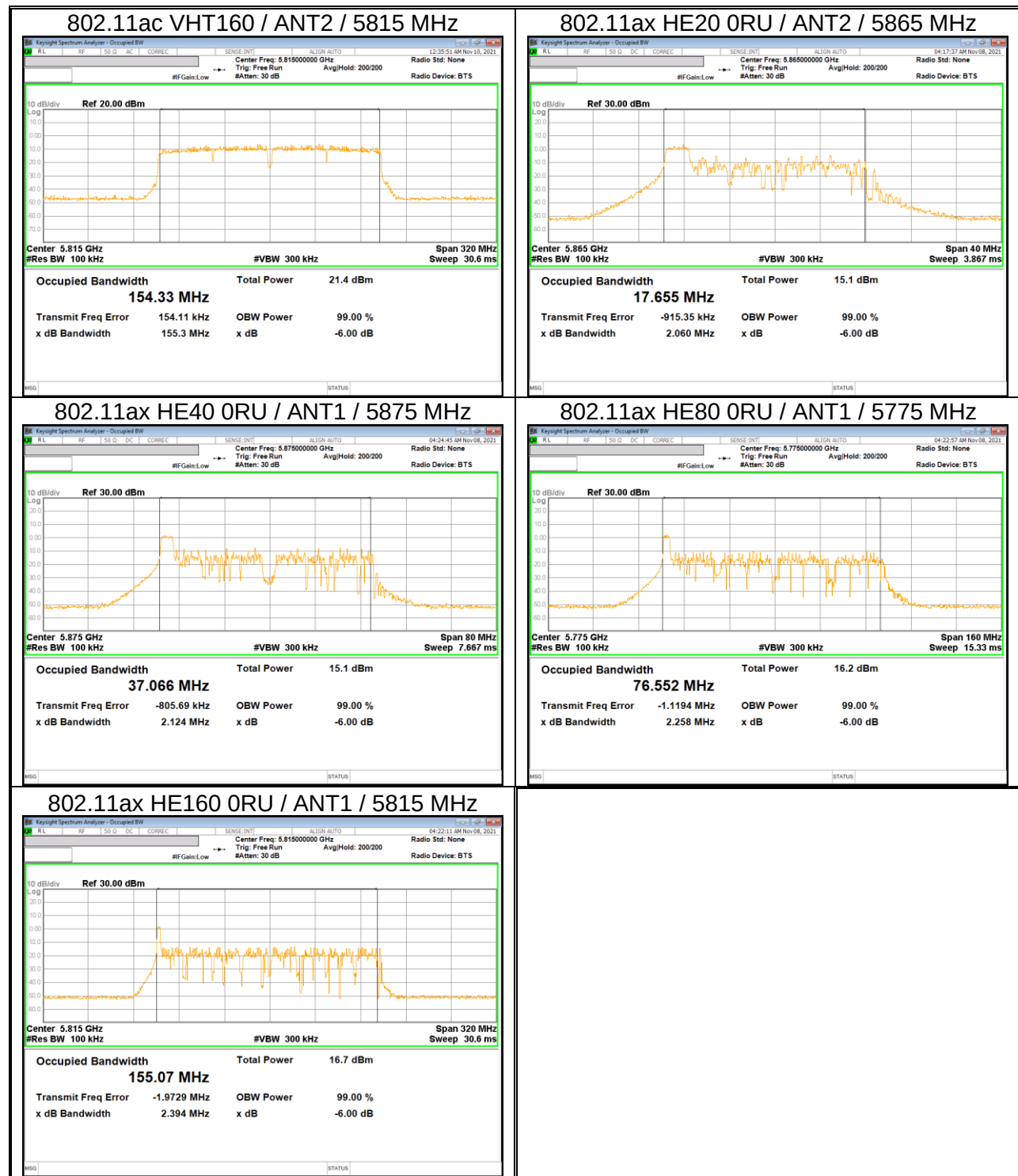
RBW: 1 ~ 5% of 99% Bandwidth, VBW  $\geq 3 \times$  RBW, sample detector.

#### RESULTS

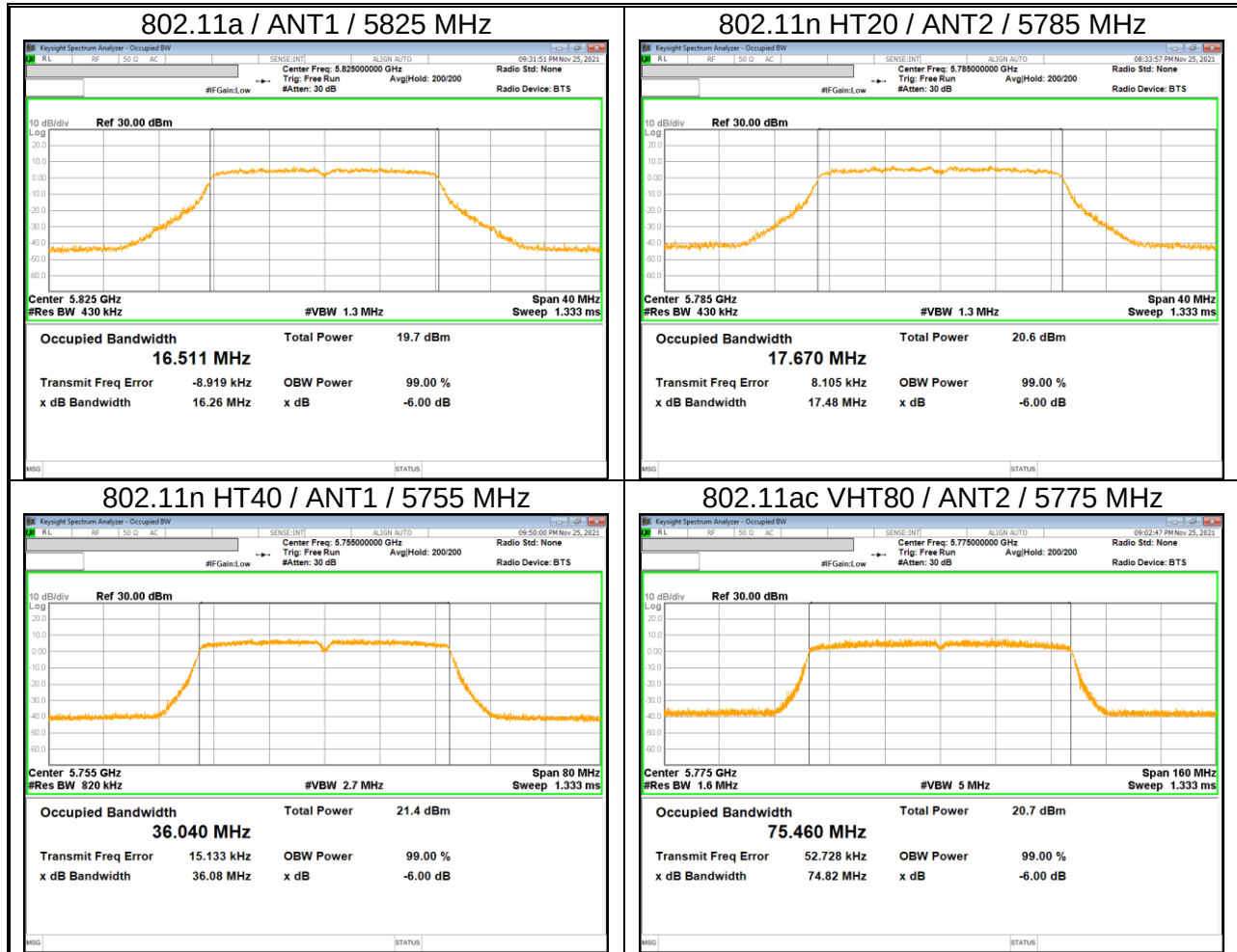
- Please refer to the next page

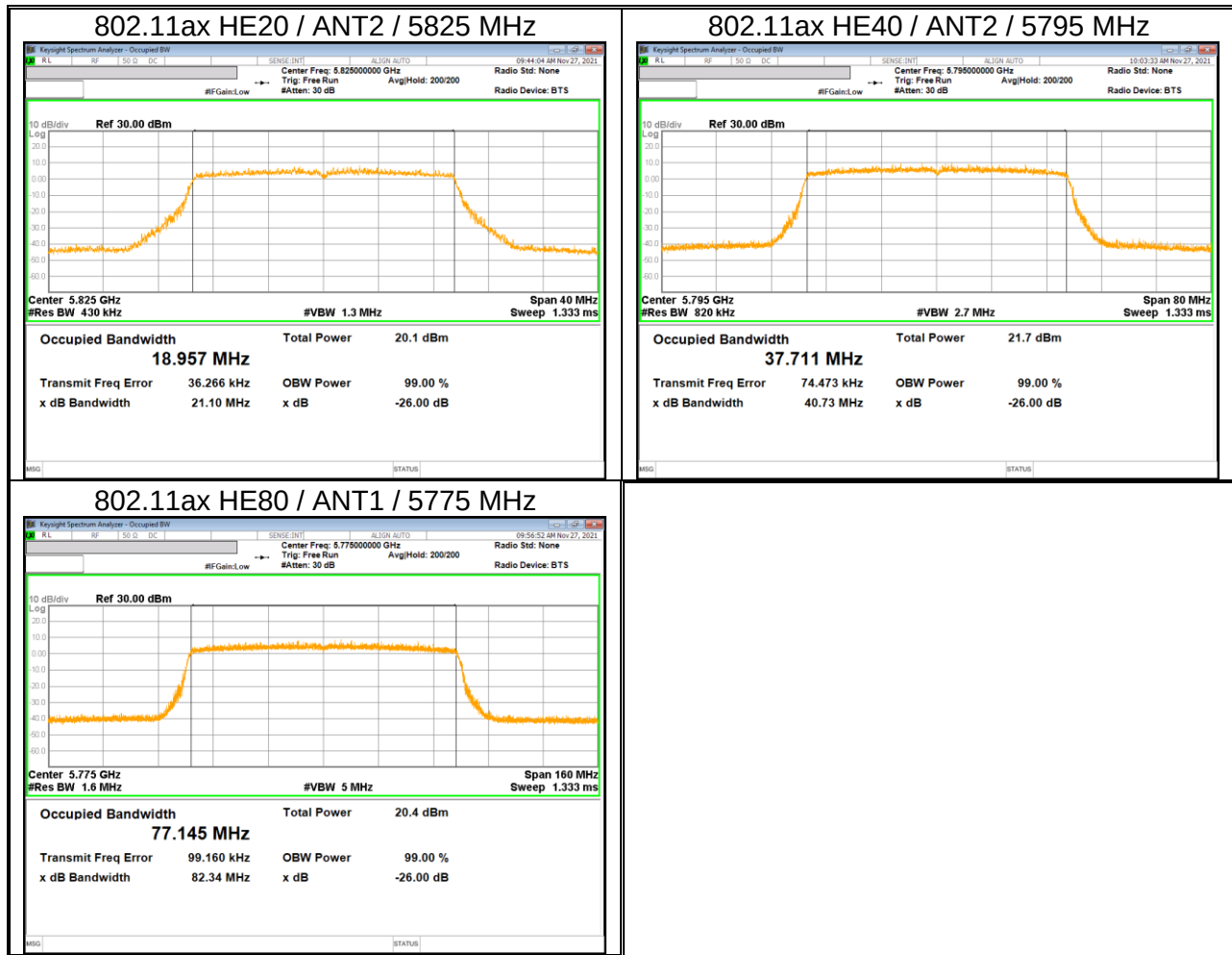
# WORST CASE TEST PLOTS





- 99% Bandwidth





### 10.1.1. UNII-3 & 4 BAND (6dB BANDWIDTH)

| Mode            | Channel | Center Freq. [MHz] | 6 dB BW [MHz] |        | Worst  | Minimum Limit [MHz] |
|-----------------|---------|--------------------|---------------|--------|--------|---------------------|
|                 |         |                    | ANT1          | ANT2   |        |                     |
| 802.11a         | 149     | 5745               | 15.60         | 15.97  | 15.15  | 0.5                 |
|                 | 157     | 5785               | 15.76         | 16.07  |        |                     |
|                 | 165     | 5825               | 16.30         | 15.80  |        |                     |
|                 | 169     | 5845               | 15.69         | 16.04  |        |                     |
|                 | 173     | 5865               | 15.56         | 15.15  |        |                     |
|                 | 177     | 5885               | 15.81         | 16.01  |        |                     |
| 802.11n HT20    | 149     | 5745               | 16.53         | 15.42  | 14.26  |                     |
|                 | 157     | 5785               | 16.33         | 16.30  |        |                     |
|                 | 165     | 5825               | 14.26         | 16.22  |        |                     |
|                 | 169     | 5845               | 16.82         | 16.80  |        |                     |
|                 | 173     | 5865               | 15.67         | 16.85  |        |                     |
|                 | 177     | 5885               | 15.36         | 16.06  |        |                     |
| 802.11n HT40    | 151     | 5755               | 34.49         | 35.53  | 34.23  |                     |
|                 | 159     | 5795               | 35.42         | 35.23  |        |                     |
|                 | 167     | 5835               | 35.21         | 35.11  |        |                     |
|                 | 175     | 5875               | 35.71         | 34.23  |        |                     |
| 802.11ac VHT80  | 155     | 5775               | 73.95         | 75.37  | 72.75  |                     |
|                 | 171     | 5855               | 72.75         | 75.24  |        |                     |
| 802.11ac VHT160 | 163     | 5815               | 155.30        | 155.30 | 155.30 |                     |

Note. The 6dB bandwidth test was performed in worst case mode(RU)

### 10.1.2. UNII-3 & 4 BAND(RU) (6dB BANDWIDTH)

| Mode  | Channel               | Center Freq. [MHz] | Tones | RU offset | 6 dB BW [MHz] |      | Minimum Limit [MHz] |
|-------|-----------------------|--------------------|-------|-----------|---------------|------|---------------------|
|       |                       |                    |       |           | ANT1          | ANT2 |                     |
| HE20  | 149                   | 5745               | 26T   | 0         | 12.06         | 2.08 | 0.5                 |
|       | 157                   | 5785               |       |           | 2.13          | 2.11 |                     |
|       | 165                   | 5825               |       |           | 17.04         | 2.10 |                     |
|       | 169                   | 5845               |       |           | 2.13          | 2.08 |                     |
|       | 173                   | 5865               |       |           | 2.10          | 2.06 |                     |
|       | 177                   | 5885               |       |           | 2.09          | 2.12 |                     |
|       | Minimum 6dB Bandwidth |                    |       | 2.06      |               |      |                     |
| HE40  | 151                   | 5755               | 26T   | 0         | 2.13          | 2.15 |                     |
|       | 159                   | 5795               |       |           | 2.13          | 2.14 |                     |
|       | 167                   | 5835               |       |           | 2.13          | 2.19 |                     |
|       | 175                   | 5875               |       |           | 2.12          | 2.15 |                     |
|       | Minimum 6dB Bandwidth |                    |       | 2.12      |               |      |                     |
| HE80  | 155                   | 5775               | 26T   | 0         | 2.26          | 2.27 |                     |
|       | 171                   | 5855               |       |           | 2.29          | 2.29 |                     |
|       | Minimum 6dB Bandwidth |                    |       | 2.26      |               |      |                     |
| HE160 | 163                   | 5815               | 26T   | 0         | 2.39          | 2.39 |                     |
|       | Minimum 6dB Bandwidth |                    |       | 2.39      |               |      |                     |

### 10.1.3. UNII-3 & 4 BAND (99% BANDWIDTH)

| Mode           | Channel | Center Freq. [MHz] | 99% BW [MHz] |       | Worst | Minimum Limit [MHz] |
|----------------|---------|--------------------|--------------|-------|-------|---------------------|
|                |         |                    | ANT1         | ANT2  |       |                     |
| 802.11a        | 149     | 5745               | 16.50        | 16.49 | 16.51 | -                   |
|                | 157     | 5785               | 16.50        | 16.50 |       |                     |
|                | 165     | 5825               | 16.51        | 16.48 |       |                     |
| 802.11n HT20   | 149     | 5745               | 17.65        | 17.64 | 17.67 |                     |
|                | 157     | 5785               | 17.66        | 17.67 |       |                     |
|                | 165     | 5825               | 17.65        | 17.65 |       |                     |
| 802.11n HT40   | 151     | 5755               | 36.04        | 36.02 | 36.04 |                     |
|                | 159     | 5795               | 36.04        | 36.01 |       |                     |
| 802.11ac VHT80 | 155     | 5775               | 75.44        | 75.46 | 75.46 |                     |

### 10.1.4. UNII-3 & 4 BAND(SU) (99% BANDWIDTH)

| Mode          | Channel | Center Freq. [MHz] | 99% BW [MHz] |       | Worst | Minimum Limit [MHz] |
|---------------|---------|--------------------|--------------|-------|-------|---------------------|
|               |         |                    | ANT1         | ANT2  |       |                     |
| 802.11ax HE20 | 149     | 5745               | 18.95        | 18.92 | 18.96 | -                   |
|               | 157     | 5785               | 18.93        | 18.96 |       |                     |
|               | 165     | 5825               | 18.96        | 18.96 |       |                     |
| 802.11ax HE40 | 151     | 5755               | 37.66        | 37.68 | 37.71 |                     |
|               | 159     | 5795               | 37.70        | 37.71 |       |                     |
| 802.11ax HE80 | 155     | 5775               | 77.15        | 77.14 | 77.15 |                     |

## 10.2. OUTPUT POWER AND PPSD

### LIMITS

FCC §15.407 (a)(1)(iv), (a)(2), (a)(3)(i), (a)(3)(iii), RSS-247

### FCC

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

## **IC**

For client devices in the 5.15-5.25 GHz band,  
For other devices, the maximum e.i.r.p. shall not exceed 200 mW or  $10 + 10 \log_{10} B$ , dBm, whichever power is less. B is the 99% emission bandwidth in megahertz.  
The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands,  
The maximum conducted output power shall not exceed 250 mW or  $11 + 10 \log_{10} B$ , dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.  
The maximum e.i.r.p. shall not exceed 1.0 W or  $17 + 10 \log_{10} B$ , dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

## **TEST PROCEDURE**

KDB 789033 Method PM is used for output power.

KDB 789033 Method SA-2 is used for only power of straddle Ch. and PPSD. RBW set to 1MHz(500kHz for the band 5.725-5.85 GHz, the VBW  $\geq 3 \times$  RBW, RMS detector and trace averaging). Band power function used for power and peak marker value of the spectrum is used for PSD. For the band 5.850-5.895 GHz, The correlated gain is added to the result to convert e.i.r.p.

## **DIRECTIONAL ANTENNA GAIN**

For OUTPUT POWER and PSD: The TX chains are correlated and the antenna gains are unequal among the chains. The directional gain is:

| Frequency Band [MHz]   | ANT1 Gain [dBi] | ANT2 Gain [dBi] | Correlated Chains Directional Gain [dBi] |
|------------------------|-----------------|-----------------|------------------------------------------|
| UNII 1<br>5150 - 5250  | -3.5            | -4.3            | -0.88                                    |
| UNII 2A<br>5250 - 5350 | -3.4            | -3.3            | -0.34                                    |
| UNII 2C<br>5470 - 5725 | -3.5            | -2.3            | 0.13                                     |
| UNII 3<br>5725 - 5850  | -3.5            | -2.6            | -0.03                                    |
| UNII 4<br>5850 - 5925  | -3.5            | -2.6            | -0.03                                    |

Note. Since the correlated gain does not exceed 6dBi, bands except for UNII-4 do not consider the antenna gain.

## 10.2.1. 802.11a MODE

### Output Power Results

| Band     | Channel | Center Freq.<br>[MHz] | Average Power<br>[dBm] |       | Direct.<br>Gain<br>[dBi] | Corr'd<br>Power<br>[dBm] | Limit<br>[dBm]             |
|----------|---------|-----------------------|------------------------|-------|--------------------------|--------------------------|----------------------------|
|          |         |                       | ANT1                   | ANT2  |                          |                          |                            |
| UNII-1   | 36      | 5180                  | 16.15                  | 16.02 |                          | 19.10                    | 23.98                      |
|          | 40      | 5200                  | 16.14                  | 16.12 |                          | 19.14                    |                            |
|          | 48      | 5240                  | 13.93                  | 12.74 |                          | 16.39                    |                            |
| UNII-2A  | 52      | 5260                  | 16.02                  | 16.10 |                          | 19.07                    | 23.74                      |
|          | 60      | 5300                  | 16.01                  | 16.20 |                          | 19.12                    |                            |
|          | 64      | 5320                  | 16.41                  | 15.58 |                          | 19.03                    |                            |
| UNII-2C  | 100     | 5500                  | 16.42                  | 15.89 |                          | 19.17                    | 23.78                      |
|          | 116     | 5580                  | 16.10                  | 15.92 |                          | 19.02                    |                            |
|          | 140     | 5700                  | 15.76                  | 15.91 |                          | 18.85                    |                            |
| UNII-3   | 149     | 5745                  | 16.14                  | 16.15 |                          | 19.16                    | 30.00                      |
|          | 157     | 5785                  | 15.72                  | 16.16 |                          | 18.96                    |                            |
|          | 165     | 5825                  | 15.83                  | 15.59 |                          | 18.72                    |                            |
| UNII-3&4 | 169     | 5845                  | 15.77                  | 15.66 |                          | 18.73                    | 30.00                      |
|          |         | 5845                  | 15.77                  | 15.66 | -0.03                    | 18.70                    | 30.00 <sub>(e.i.r.p)</sub> |
| UNII-4   | 173     | 5865                  | 15.70                  | 15.66 | -0.03                    | 18.66                    | 30.00 <sub>(e.i.r.p)</sub> |
|          | 177     | 5885                  | 16.13                  | 15.87 | -0.03                    | 18.98                    |                            |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

### PSD Results

| Band     | Channel | Center Freq.<br>[MHz] | Meas PSD<br>[dBm/MHz] |      | DCCF. | Direct.<br>Gain<br>[dBi] | Corr'd<br>PSD<br>[dBm] | Limit<br>[dBm/<br>MHz]     |
|----------|---------|-----------------------|-----------------------|------|-------|--------------------------|------------------------|----------------------------|
|          |         |                       | ANT1                  | ANT2 |       |                          |                        |                            |
| UNII-1   | 36      | 5180                  | 4.89                  | 4.83 | 0.15  |                          | 8.02                   | 11.00                      |
|          | 40      | 5200                  | 4.70                  | 4.86 | 0.15  |                          | 7.94                   |                            |
|          | 48      | 5240                  | 1.61                  | 1.46 | 0.15  |                          | 4.70                   |                            |
| UNII-2A  | 52      | 5260                  | 5.05                  | 4.85 | 0.15  |                          | 8.11                   | 11.00                      |
|          | 60      | 5300                  | 4.83                  | 4.77 | 0.15  |                          | 7.96                   |                            |
|          | 64      | 5320                  | 5.38                  | 4.30 | 0.15  |                          | 8.03                   |                            |
| UNII-2C  | 100     | 5500                  | 5.20                  | 4.69 | 0.15  |                          | 8.11                   | 11.00                      |
|          | 116     | 5580                  | 5.02                  | 4.81 | 0.15  |                          | 8.08                   |                            |
|          | 140     | 5700                  | 4.15                  | 4.57 | 0.15  |                          | 7.53                   |                            |
| UNII-3   | 149     | 5745                  | 2.04                  | 1.87 | 0.15  |                          | 5.11                   | 30.00/500kHz               |
|          | 157     | 5785                  | 1.76                  | 1.94 | 0.15  |                          | 5.01                   |                            |
|          | 165     | 5825                  | 1.45                  | 1.22 | 0.15  |                          | 4.50                   |                            |
| UNII-3&4 | 169     | 5845                  | 1.44                  | 1.13 | 0.15  |                          | 4.44                   | 30.00/500kHz               |
|          |         | 5845                  | 3.87                  | 3.88 | 0.15  | -0.03                    | 7.01                   | 14.00 <sub>(e.i.r.p)</sub> |
| UNII-4   | 173     | 5865                  | 4.41                  | 4.09 | 0.15  | -0.03                    | 7.38                   | 14.00 <sub>(e.i.r.p)</sub> |
|          | 177     | 5885                  | 4.87                  | 4.64 | 0.15  | -0.03                    | 7.89                   |                            |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

## 10.2.2. 802.11n HT20 MODE

### Output Power Results

| Band     | Channel | Center Freq.<br>[MHz] | Average Power<br>[dBm] |       | Direct.<br>Gain<br>[dBi] | Corr'd<br>Power<br>[dBm] | Limit<br>[dBm]             |
|----------|---------|-----------------------|------------------------|-------|--------------------------|--------------------------|----------------------------|
|          |         |                       | ANT1                   | ANT2  |                          |                          |                            |
| UNII-1   | 36      | 5180                  | 15.78                  | 15.71 |                          | 18.76                    | 23.98                      |
|          | 40      | 5200                  | 15.73                  | 15.82 |                          | 18.79                    |                            |
|          | 48      | 5240                  | 13.50                  | 12.43 |                          | 16.01                    |                            |
| UNII-2A  | 52      | 5260                  | 15.67                  | 15.78 |                          | 18.74                    | 23.98                      |
|          | 60      | 5300                  | 15.61                  | 15.91 |                          | 18.77                    |                            |
|          | 64      | 5320                  | 16.02                  | 15.25 |                          | 18.66                    |                            |
| UNII-2C  | 100     | 5500                  | 16.06                  | 15.56 |                          | 18.83                    | 23.91                      |
|          | 116     | 5580                  | 15.72                  | 15.58 |                          | 18.66                    |                            |
|          | 140     | 5700                  | 15.36                  | 15.63 |                          | 18.51                    |                            |
| UNII-3   | 149     | 5745                  | 15.76                  | 15.79 |                          | 18.79                    | 30.00                      |
|          | 157     | 5785                  | 15.34                  | 15.87 |                          | 18.62                    |                            |
|          | 165     | 5825                  | 15.47                  | 15.21 |                          | 18.35                    |                            |
| UNII-3&4 | 169     | 5845                  | 15.39                  | 15.29 |                          | 18.35                    | 30.00                      |
|          |         | 5845                  | 15.39                  | 15.29 | -0.03                    | 18.32                    | 30.00 <sub>(e.i.r.p)</sub> |
| UNII-4   | 173     | 5865                  | 15.33                  | 15.37 | -0.03                    | 18.33                    | 30.00 <sub>(e.i.r.p)</sub> |
|          | 177     | 5885                  | 15.75                  | 15.50 | -0.03                    | 18.61                    |                            |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

### PSD Results

| Band     | Channel | Center Freq.<br>[MHz] | Meas PSD<br>[dBm/MHz] |      | DCCF. | Direct.<br>Gain<br>[dBi] | Corr'd<br>PSD<br>[dBm] | Limit<br>[dBm/<br>MHz]     |
|----------|---------|-----------------------|-----------------------|------|-------|--------------------------|------------------------|----------------------------|
|          |         |                       | ANT1                  | ANT2 |       |                          |                        |                            |
| UNII-1   | 36      | 5180                  | 4.36                  | 4.06 | 0.17  |                          | 7.39                   | 11.00                      |
|          | 40      | 5200                  | 4.14                  | 4.00 | 0.17  |                          | 7.25                   |                            |
|          | 48      | 5240                  | 2.13                  | 1.98 | 0.17  |                          | 5.24                   |                            |
| UNII-2A  | 52      | 5260                  | 4.27                  | 4.62 | 0.17  |                          | 7.63                   | 11.00                      |
|          | 60      | 5300                  | 4.11                  | 4.40 | 0.17  |                          | 7.44                   |                            |
|          | 64      | 5320                  | 4.77                  | 3.91 | 0.17  |                          | 7.54                   |                            |
| UNII-2C  | 100     | 5500                  | 4.88                  | 4.23 | 0.17  |                          | 7.75                   | 11.00                      |
|          | 116     | 5580                  | 4.52                  | 4.67 | 0.17  |                          | 7.78                   |                            |
|          | 140     | 5700                  | 3.84                  | 4.01 | 0.17  |                          | 7.10                   |                            |
| UNII-3   | 149     | 5745                  | 1.42                  | 1.18 | 0.17  |                          | 4.48                   | 30.00/500kHz               |
|          | 157     | 5785                  | 1.03                  | 1.61 | 0.17  |                          | 4.51                   |                            |
|          | 165     | 5825                  | 1.08                  | 0.60 | 0.17  |                          | 4.02                   |                            |
| UNII-3&4 | 169     | 5845                  | 0.86                  | 0.90 | 0.17  |                          | 4.06                   | 30.00/500kHz               |
|          |         | 5845                  | 3.77                  | 3.10 | 0.17  | -0.03                    | 6.60                   | 14.00 <sub>(e.i.r.p)</sub> |
| UNII-4   | 173     | 5865                  | 4.15                  | 4.13 | 0.17  | -0.03                    | 7.29                   | 14.00 <sub>(e.i.r.p)</sub> |
|          | 177     | 5885                  | 4.30                  | 3.99 | 0.17  | -0.03                    | 7.30                   |                            |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

### 10.2.3. 802.11n HT40 MODE

#### Output Power Results

| Band     | Channel | Center Freq.<br>[MHz] | Average Power<br>[dBm] |       | Direct.<br>Gain<br>[dBi] | Corr'd<br>Power<br>[dBm] | Limit<br>[dBm]             |
|----------|---------|-----------------------|------------------------|-------|--------------------------|--------------------------|----------------------------|
|          |         |                       | ANT1                   | ANT2  |                          |                          |                            |
| UNII-1   | 38      | 5190                  | 16.02                  | 15.95 |                          | 19.00                    | 23.98                      |
|          | 46      | 5230                  | 16.00                  | 16.37 |                          | 19.20                    |                            |
| UNII-2A  | 54      | 5270                  | 15.97                  | 16.03 |                          | 19.01                    | 23.98                      |
|          | 62      | 5310                  | 16.29                  | 15.56 |                          | 18.95                    |                            |
| UNII-2C  | 102     | 5510                  | 16.36                  | 15.89 |                          | 19.14                    | 23.98                      |
|          | 118     | 5590                  | 16.08                  | 15.66 |                          | 18.89                    |                            |
|          | 134     | 5670                  | 15.20                  | 15.82 |                          | 18.53                    |                            |
| UNII-3   | 151     | 5755                  | 16.05                  | 16.05 |                          | 19.06                    | 30.00                      |
|          | 159     | 5795                  | 15.70                  | 16.07 |                          | 18.90                    |                            |
| UNII-3&4 | 167     | 5835                  | 15.70                  | 15.56 |                          | 18.64                    | 30.00                      |
|          |         | 5835                  | 15.70                  | 15.56 | -0.03                    | 18.61                    | 30.00 <sub>(e.i.r.p)</sub> |
| UNII-4   | 175     | 5875                  | 15.58                  | 15.65 | -0.03                    | 18.60                    | 30.00 <sub>(e.i.r.p)</sub> |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

#### PSD Results

| Band     | Channel | Center Freq.<br>[MHz] | Meas PSD<br>[dBm/MHz] |       | DCCF. | Direct.<br>Gain<br>[dBi] | Corr'd<br>PSD<br>[dBm] | Limit<br>[dBm/<br>MHz]     |
|----------|---------|-----------------------|-----------------------|-------|-------|--------------------------|------------------------|----------------------------|
|          |         |                       | ANT1                  | ANT2  |       |                          |                        |                            |
| UNII-1   | 38      | 5190                  | 1.35                  | 1.25  | 0.17  |                          | 4.48                   | 11.00                      |
|          | 46      | 5230                  | 1.65                  | 1.69  | 0.17  |                          | 4.85                   |                            |
| UNII-2A  | 54      | 5270                  | 1.66                  | 1.75  | 0.17  |                          | 4.89                   | 11.00                      |
|          | 62      | 5310                  | 1.84                  | 1.12  | 0.17  |                          | 4.68                   |                            |
| UNII-2C  | 102     | 5510                  | 2.11                  | 1.90  | 0.17  |                          | 5.19                   | 11.00                      |
|          | 118     | 5590                  | 1.61                  | 1.32  | 0.17  |                          | 4.65                   |                            |
|          | 134     | 5670                  | 0.65                  | 1.11  | 0.17  |                          | 4.07                   |                            |
| UNII-3   | 151     | 5755                  | -1.17                 | -1.39 | 0.17  |                          | 1.90                   | 30.00/500kHz               |
|          | 159     | 5795                  | -1.62                 | -1.53 | 0.17  |                          | 1.61                   |                            |
| UNII-3&4 | 167     | 5835                  | -1.75                 | -2.34 | 0.17  |                          | 1.14                   | 30.00/500kHz               |
|          |         | 5835                  | -0.19                 | -0.49 | 0.17  | -0.03                    | 2.81                   | 14.00 <sub>(e.i.r.p)</sub> |
| UNII-4   | 175     | 5875                  | 1.17                  | 1.09  | 0.17  | -0.03                    | 4.28                   | 14.00 <sub>(e.i.r.p)</sub> |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

## 10.2.4. 802.11ac VHT80 MODE

### Output Power Results

| Band     | Channel | Center Freq. [MHz] | Average Power [dBm] |       | Direct. Gain [dBi] | Corr'd Power [dBm] | Limit [dBm]                |
|----------|---------|--------------------|---------------------|-------|--------------------|--------------------|----------------------------|
|          |         |                    | ANT1                | ANT2  |                    |                    |                            |
| UNII-1   | 42      | 5210               | 14.77               | 15.07 |                    | 17.93              | 23.98                      |
| UNII-2A  | 58      | 5290               | 14.65               | 14.74 |                    | 17.71              | 23.98                      |
| UNII-2C  | 106     | 5530               | 15.10               | 14.54 |                    | 17.84              | 23.98                      |
|          | 122     | 5610               | 14.69               | 14.32 |                    | 17.52              |                            |
| UNII-3   | 155     | 5775               | 14.43               | 14.72 |                    | 17.59              | 30.00                      |
| UNII-3&4 | 171     | 5855               | 14.45               | 14.25 |                    | 17.36              | 30.00                      |
|          |         | 5855               | 14.45               | 14.25 | -0.03              | 17.33              | 30.00 <sub>(e.i.r.p)</sub> |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

### PSD Results

| Band     | Channel | Center Freq. [MHz] | Meas PSD [dBm/MHz] |       | DCCF. | Direct. Gain [dBi] | Corr'd PSD [dBm] | Limit [dBm/MHz]            |
|----------|---------|--------------------|--------------------|-------|-------|--------------------|------------------|----------------------------|
|          |         |                    | ANT1               | ANT2  |       |                    |                  |                            |
| UNII-1   | 42      | 5210               | -2.99              | -2.99 | 0.24  |                    | 0.26             | 11.00                      |
| UNII-2A  | 58      | 5290               | -2.95              | -3.07 | 0.24  |                    | 0.24             | 11.00                      |
| UNII-2C  | 106     | 5530               | -2.27              | -3.92 | 0.24  |                    | 0.23             | 11.00                      |
|          | 122     | 5610               | -3.07              | -3.85 | 0.24  |                    | -0.19            |                            |
| UNII-3   | 155     | 5775               | -5.93              | -5.88 | 0.24  |                    | -2.65            | 30.00/500kHz               |
| UNII-3&4 | 171     | 5855               | -6.27              | -6.78 | 0.24  |                    | -3.27            | 30.00/500kHz               |
|          |         | 5855               | -3.20              | -3.57 | 0.24  | -0.03              | -0.16            | 14.00 <sub>(e.i.r.p)</sub> |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

## 10.2.5. 802.11ac VHT160 MODE

### Output Power Results

| Band      | Channel | Center Freq. [MHz] | Average Power [dBm] |       | Direct. Gain [dBi] | Corr'd Power [dBm] | Limit [dBm]                 |
|-----------|---------|--------------------|---------------------|-------|--------------------|--------------------|-----------------------------|
|           |         |                    | ANT1                | ANT2  |                    |                    |                             |
| UNII-1&2A | 50      | 5250               | 14.02               | 14.55 |                    | 17.30              | 23.98                       |
| UNII-2C   | 114     | 5570               | 14.14               | 13.66 |                    | 16.92              | 23.98                       |
| UNII-3&4  | 163     | 5815               | 13.79               | 13.50 |                    | 16.66              | 30.00                       |
|           | 163     | 5815               | 13.79               | 13.50 | -0.03              | 16.63              | 30.00 <sub>(e.i.r.p.)</sub> |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power

### PSD Results

| Band      | Channel | Center Freq. [MHz] | Meas PSD [dBm/MHz] |        | DCCF. | Direct. Gain [dBi] | Corr'd PSD [dBm] | Limit [dBm/MHz]             |
|-----------|---------|--------------------|--------------------|--------|-------|--------------------|------------------|-----------------------------|
|           |         |                    | ANT1               | ANT2   |       |                    |                  |                             |
| UNII-1&2A | 50      | 5250               | -6.62              | -6.22  | 0.29  |                    | -3.12            | 11.00                       |
| UNII-2C   | 114     | 5570               | -6.46              | -7.13  | 0.29  |                    | -3.48            | 11.00                       |
| UNII-3&4  | 163     | 5815               | -9.69              | -10.03 | 0.29  |                    | -6.56            | 30.00/500kHz                |
|           | 163     | 5815               | -7.27              | -7.54  | 0.29  | -0.03              | -4.13            | 14.00 <sub>(e.i.r.p.)</sub> |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

## 10.2.6. STRADDLE CHANNEL

### Output Power Results

| Mode           | Band    | Center Freq. [MHz] | Meas Power [dBm] |       | DCCF. | Corr'd Power [dBm] | Limit [dBm] |
|----------------|---------|--------------------|------------------|-------|-------|--------------------|-------------|
|                |         |                    | ANT1             | ANT2  |       |                    |             |
| 802.11a        | UNII-2C | 5720               | 15.47            | 15.74 | 0.15  | 18.77              | 22.64       |
|                | UNII-3  |                    | 8.91             | 9.38  | 0.15  | 12.31              | 30.00       |
| 802.11n HT20   | UNII-2C | 5720               | 15.18            | 15.34 | 0.17  | 18.44              | 22.83       |
|                | UNII-3  |                    | 9.01             | 8.97  | 0.17  | 12.17              | 30.00       |
| 802.11n HT40   | UNII-2C | 5710               | 15.50            | 15.66 | 0.17  | 18.76              | 23.98       |
|                | UNII-3  |                    | 4.09             | 4.24  | 0.17  | 7.34               | 30.00       |
| 802.11ac VHT80 | UNII-2C | 5690               | 14.58            | 14.13 | 0.24  | 17.61              | 23.98       |
|                | UNII-3  |                    | -0.47            | -0.76 | 0.24  | 2.64               | 30.00       |

\* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]

### PSD Results

| Mode           | Band    | Center Freq. [MHz] | Meas PSD [dBm/MHz] |       | DCCF. | Corr'd PSD [dBm] | Limit [dBm/MHz] |
|----------------|---------|--------------------|--------------------|-------|-------|------------------|-----------------|
|                |         |                    | ANT1               | ANT2  |       |                  |                 |
| 802.11a        | UNII-2C | 5720               | 4.43               | 4.61  | 0.15  | 7.68             | 11.00           |
|                | UNII-3  |                    | 0.78               | 1.13  | 0.15  | 4.12             | 30.00/500kHz    |
| 802.11n HT20   | UNII-2C | 5720               | 3.57               | 4.08  | 0.17  | 7.01             | 11.00           |
|                | UNII-3  |                    | 0.26               | 0.44  | 0.17  | 3.53             | 30.00/500kHz    |
| 802.11n HT40   | UNII-2C | 5710               | 1.06               | 1.26  | 0.17  | 4.34             | 11.00           |
|                | UNII-3  |                    | -3.45              | -3.29 | 0.17  | -0.19            | 30.00/500kHz    |
| 802.11ac VHT80 | UNII-2C | 5690               | -3.81              | -3.39 | 0.24  | -0.34            | 11.00           |
|                | UNII-3  |                    | -8.56              | -8.67 | 0.24  | -5.37            | 30.00/500kHz    |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

### 10.2.7. 802.11ax HE20 MODE

#### Output Power Results

| Band   | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|--------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|        |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-1 | 36      | 5180               | 26T   | 0         | 7.82                | 7.88  | 10.86              | 23.98       |
|        |         |                    |       | 4         | 7.89                | 7.90  | 10.91              |             |
|        |         |                    |       | 8         | 7.77                | 7.76  | 10.78              |             |
|        |         |                    | 52T   | 37        | 9.64                | 9.98  | 12.82              |             |
|        |         |                    |       | 38        | 9.70                | 10.03 | 12.88              |             |
|        |         |                    |       | 40        | 9.57                | 9.87  | 12.73              |             |
|        |         |                    | 106T  | 53        | 13.16               | 13.13 | 16.16              |             |
|        |         |                    |       | 54        | 13.12               | 13.07 | 16.11              |             |
|        |         |                    | SU    | -         | 15.87               | 15.82 | 18.86              |             |
|        | 40      | 5200               | 26T   | 0         | 7.33                | 7.51  | 10.43              |             |
|        |         |                    |       | 4         | 7.38                | 7.53  | 10.47              |             |
|        |         |                    |       | 8         | 7.24                | 7.38  | 10.32              |             |
|        |         |                    | 52T   | 37        | 9.60                | 10.06 | 12.85              |             |
|        |         |                    |       | 38        | 9.68                | 10.16 | 12.94              |             |
|        |         |                    |       | 40        | 9.54                | 9.94  | 12.75              |             |
|        |         |                    | 106T  | 53        | 13.14               | 13.22 | 16.19              |             |
|        |         |                    |       | 54        | 13.10               | 13.18 | 16.15              |             |
|        |         |                    | SU    | -         | 15.85               | 15.93 | 18.90              |             |
|        | 48      | 5240               | 26T   | 0         | 7.26                | 7.85  | 10.58              |             |
|        |         |                    |       | 4         | 7.31                | 7.87  | 10.61              |             |
|        |         |                    |       | 8         | 7.22                | 7.74  | 10.50              |             |
|        |         |                    | 52T   | 37        | 9.55                | 10.35 | 12.98              |             |
|        |         |                    |       | 38        | 9.65                | 10.44 | 13.07              |             |
|        |         |                    |       | 40        | 9.49                | 10.25 | 12.90              |             |
|        |         |                    | 106T  | 53        | 12.83               | 13.57 | 16.23              |             |
|        |         |                    |       | 54        | 12.78               | 13.51 | 16.17              |             |
|        |         |                    | SU    | -         | 15.75               | 16.35 | 19.07              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|---------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|         |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-2A | 52      | 5260               | 26T   | 0         | 7.20                | 7.41  | 10.32              | 23.54       |
|         |         |                    |       | 4         | 7.24                | 7.45  | 10.36              |             |
|         |         |                    |       | 8         | 7.12                | 7.28  | 10.21              |             |
|         |         |                    | 52T   | 37        | 9.45                | 9.78  | 12.63              |             |
|         |         |                    |       | 38        | 9.53                | 9.87  | 12.71              |             |
|         |         |                    |       | 40        | 9.41                | 9.70  | 12.57              |             |
|         |         |                    | 106T  | 53        | 12.76               | 13.15 | 15.97              |             |
|         |         |                    |       | 54        | 12.70               | 13.12 | 15.93              |             |
|         |         |                    | SU    | -         | 15.73               | 15.90 | 18.83              |             |
|         | 60      | 5300               | 26T   | 0         | 7.13                | 7.47  | 10.31              |             |
|         |         |                    |       | 4         | 7.22                | 7.51  | 10.38              |             |
|         |         |                    |       | 8         | 7.11                | 7.40  | 10.27              |             |
|         |         |                    | 52T   | 37        | 9.43                | 9.89  | 12.68              |             |
|         |         |                    |       | 38        | 9.51                | 9.97  | 12.76              |             |
|         |         |                    |       | 40        | 9.35                | 9.81  | 12.60              |             |
|         |         |                    | 106T  | 53        | 12.71               | 13.27 | 16.01              |             |
|         |         |                    |       | 54        | 12.67               | 13.20 | 15.95              |             |
|         |         |                    | SU    | -         | 15.70               | 16.03 | 18.88              |             |
|         | 64      | 5320               | 26T   | 0         | 7.50                | 6.88  | 10.21              |             |
|         |         |                    |       | 4         | 7.55                | 6.90  | 10.25              |             |
|         |         |                    |       | 8         | 7.43                | 6.81  | 10.14              |             |
|         |         |                    | 52T   | 37        | 10.03               | 9.24  | 12.66              |             |
|         |         |                    |       | 38        | 10.09               | 9.34  | 12.74              |             |
|         |         |                    |       | 40        | 9.95                | 9.16  | 12.58              |             |
|         |         |                    | 106T  | 53        | 13.25               | 12.43 | 15.87              |             |
|         |         |                    |       | 54        | 13.22               | 12.39 | 15.84              |             |
|         |         |                    | SU    | -         | 16.08               | 15.41 | 18.77              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|---------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|         |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-2C | 100     | 5500               | 26T   | 0         | 7.56                | 7.29  | 10.44              | 23.31       |
|         |         |                    |       | 4         | 7.62                | 7.35  | 10.50              |             |
|         |         |                    |       | 8         | 7.52                | 7.24  | 10.39              |             |
|         |         |                    | 52T   | 37        | 10.22               | 9.60  | 12.93              |             |
|         |         |                    |       | 38        | 10.27               | 9.69  | 13.00              |             |
|         |         |                    |       | 40        | 10.15               | 9.55  | 12.87              |             |
|         |         |                    | 106T  | 53        | 13.86               | 13.23 | 16.57              |             |
|         |         |                    |       | 54        | 13.84               | 13.21 | 16.55              |             |
|         |         |                    | SU    | -         | 16.09               | 15.72 | 18.92              |             |
|         | 116     | 5580               | 26T   | 0         | 7.31                | 7.06  | 10.20              |             |
|         |         |                    |       | 4         | 7.30                | 7.10  | 10.21              |             |
|         |         |                    |       | 8         | 7.18                | 6.97  | 10.09              |             |
|         |         |                    | 52T   | 37        | 9.58                | 9.46  | 12.53              |             |
|         |         |                    |       | 38        | 9.62                | 9.54  | 12.59              |             |
|         |         |                    |       | 40        | 9.45                | 9.39  | 12.43              |             |
|         |         |                    | 106T  | 53        | 13.51               | 13.18 | 16.36              |             |
|         |         |                    |       | 54        | 13.44               | 13.15 | 16.31              |             |
|         |         |                    | SU    | -         | 15.83               | 15.74 | 18.80              |             |
|         | 140     | 5700               | 26T   | 0         | 6.79                | 7.27  | 10.05              |             |
|         |         |                    |       | 4         | 6.85                | 7.34  | 10.11              |             |
|         |         |                    |       | 8         | 6.78                | 7.25  | 10.03              |             |
|         |         |                    | 52T   | 37        | 9.55                | 9.66  | 12.62              |             |
|         |         |                    |       | 38        | 9.64                | 9.76  | 12.71              |             |
|         |         |                    |       | 40        | 9.52                | 9.64  | 12.59              |             |
|         |         |                    | 106T  | 53        | 13.06               | 13.49 | 16.29              |             |
|         |         |                    |       | 54        | 13.05               | 13.48 | 16.28              |             |
|         |         |                    | SU    | -         | 15.93               | 16.27 | 19.11              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band   | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|--------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|        |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-3 | 149     | 5745               | 26T   | 0         | 7.29                | 7.44  | 10.38              | 30.00       |
|        |         |                    |       | 4         | 7.36                | 7.53  | 10.46              |             |
|        |         |                    |       | 8         | 7.25                | 7.45  | 10.36              |             |
|        |         |                    | 52T   | 37        | 9.52                | 9.84  | 12.69              |             |
|        |         |                    |       | 38        | 9.61                | 9.96  | 12.80              |             |
|        |         |                    |       | 40        | 9.50                | 9.89  | 12.71              |             |
|        |         |                    | 106T  | 53        | 13.41               | 13.48 | 16.46              |             |
|        |         |                    |       | 54        | 13.39               | 13.53 | 16.47              |             |
|        |         |                    | SU    | -         | 15.88               | 15.95 | 18.93              |             |
|        | 157     | 5785               | 26T   | 0         | 6.84                | 7.44  | 10.16              |             |
|        |         |                    |       | 4         | 6.95                | 7.56  | 10.28              |             |
|        |         |                    |       | 8         | 6.84                | 7.55  | 10.22              |             |
|        |         |                    | 52T   | 37        | 9.34                | 9.89  | 12.63              |             |
|        |         |                    |       | 38        | 9.44                | 10.02 | 12.75              |             |
|        |         |                    |       | 40        | 9.33                | 9.99  | 12.68              |             |
|        |         |                    | 106T  | 53        | 13.02               | 13.61 | 16.34              |             |
|        |         |                    |       | 54        | 13.01               | 13.67 | 16.36              |             |
|        |         |                    | SU    | -         | 15.44               | 16.00 | 18.74              |             |
|        | 165     | 5825               | 26T   | 0         | 6.87                | 6.80  | 9.85               |             |
|        |         |                    |       | 4         | 6.95                | 6.96  | 9.97               |             |
|        |         |                    |       | 8         | 6.87                | 6.93  | 9.91               |             |
|        |         |                    | 52T   | 37        | 9.52                | 9.22  | 12.38              |             |
|        |         |                    |       | 38        | 9.61                | 9.35  | 12.49              |             |
|        |         |                    |       | 40        | 9.50                | 9.31  | 12.42              |             |
|        |         |                    | 106T  | 53        | 13.03               | 13.00 | 16.03              |             |
|        |         |                    |       | 54        | 13.03               | 13.04 | 16.05              |             |
|        |         |                    | SU    | -         | 16.05               | 16.02 | 19.05              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band     | Channel     | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Direct. Gain [dBi] | Corr'd Power [dBm] | Limit [dBm]                                   |
|----------|-------------|--------------------|-------|-----------|---------------------|-------|--------------------|--------------------|-----------------------------------------------|
|          |             |                    |       |           | ANT1                | ANT2  |                    |                    |                                               |
| UNII-3&4 | 169 Overlap | 5845               | 26T   | 0         | 7.21                | 7.29  |                    | 10.26              | 30.00<br>or<br>30.00 e.i.r.p. <sup>Note</sup> |
|          |             |                    |       | 4         | 7.30                | 7.44  |                    | 10.38              |                                               |
|          |             |                    |       | 8         | 7.25                | 7.39  |                    | 10.33              |                                               |
|          |             |                    | 52T   | 37        | 10.01               | 9.80  |                    | 12.92              |                                               |
|          |             |                    |       | 38        | 10.11               | 9.97  |                    | 13.05              |                                               |
|          |             |                    |       | 40        | 10.01               | 9.91  |                    | 12.97              |                                               |
|          |             |                    | 106T  | 53        | 13.49               | 13.53 |                    | 16.52              |                                               |
|          |             |                    |       | 54        | 13.50               | 13.59 |                    | 16.56              |                                               |
|          |             |                    | SU    | -         | 16.00               | 16.08 |                    | 19.05              |                                               |
| UNII-4   | 173         | 5865               | 26T   | 0         | 7.13                | 7.35  | -0.03              | 10.25              | 30.00 e.i.r.p.                                |
|          |             |                    |       | 4         | 7.26                | 7.50  | -0.03              | 10.39              |                                               |
|          |             |                    |       | 8         | 7.20                | 7.45  | -0.03              | 10.34              |                                               |
|          |             |                    | 52T   | 37        | 9.95                | 9.87  | -0.03              | 12.92              |                                               |
|          |             |                    |       | 38        | 10.05               | 10.01 | -0.03              | 13.04              |                                               |
|          |             |                    |       | 40        | 9.96                | 9.98  | -0.03              | 12.98              |                                               |
|          |             |                    | 106T  | 53        | 13.42               | 13.55 | -0.03              | 16.50              |                                               |
|          |             |                    |       | 54        | 13.44               | 13.62 | -0.03              | 16.54              |                                               |
|          |             |                    | SU    | -         | 15.94               | 16.13 | -0.03              | 19.05              |                                               |
|          | 177         | 5885               | 26T   | 0         | 7.20                | 7.10  | -0.03              | 10.16              |                                               |
|          |             |                    |       | 4         | 7.33                | 7.25  | -0.03              | 10.30              |                                               |
|          |             |                    |       | 8         | 7.30                | 7.21  | -0.03              | 10.27              |                                               |
|          |             |                    | 52T   | 37        | 10.45               | 10.05 | -0.03              | 13.26              |                                               |
|          |             |                    |       | 38        | 10.55               | 10.21 | -0.03              | 13.39              |                                               |
|          |             |                    |       | 40        | 10.49               | 10.15 | -0.03              | 13.33              |                                               |
|          |             |                    | 106T  | 53        | 12.65               | 12.28 | -0.03              | 15.48              |                                               |
|          |             |                    |       | 54        | 12.69               | 12.35 | -0.03              | 15.53              |                                               |
|          |             |                    | SU    | -         | 11.80               | 11.42 | -0.03              | 14.62              |                                               |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

**Note.** Since the correrated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

# PSD Results

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm/MHz] |      | Corr'd PSD [dBm/MHz] | PSD Limit [dBm/MHz] |
|---------|---------|--------------------|-------|-----------|--------------------|------|----------------------|---------------------|
|         |         |                    |       |           | ANT1               | ANT2 |                      |                     |
| UNII-1  | 36      | 5180               | 26T   | 0         | 4.96               | 5.44 | 8.22                 | 11.00               |
|         |         |                    |       | 4         | 4.53               | 4.25 | 7.40                 |                     |
|         |         |                    |       | 8         | 5.06               | 5.19 | 8.13                 |                     |
|         |         |                    | SU    | -         | 4.26               | 4.29 | 7.29                 |                     |
|         | 40      | 5200               | 26T   | 0         | 4.16               | 4.86 | 7.53                 |                     |
|         |         |                    |       | 4         | 3.60               | 3.58 | 6.60                 |                     |
|         |         |                    |       | 8         | 4.27               | 4.90 | 7.61                 |                     |
|         |         |                    | SU    | -         | 4.28               | 4.70 | 7.51                 |                     |
|         | 48      | 5240               | 26T   | 0         | 4.62               | 4.75 | 7.69                 |                     |
|         |         |                    |       | 4         | 3.47               | 3.90 | 6.70                 |                     |
|         |         |                    |       | 8         | 4.50               | 4.65 | 7.59                 |                     |
|         |         |                    | SU    | -         | 4.32               | 4.66 | 7.51                 |                     |
| UNII-2A | 52      | 5260               | 26T   | 0         | 4.44               | 4.71 | 7.59                 | 11.00               |
|         |         |                    |       | 4         | 3.61               | 3.21 | 6.42                 |                     |
|         |         |                    |       | 8         | 4.18               | 4.32 | 7.26                 |                     |
|         |         |                    | SU    | -         | 4.30               | 4.22 | 7.27                 |                     |
|         | 60      | 5300               | 26T   | 0         | 4.39               | 4.52 | 7.46                 |                     |
|         |         |                    |       | 4         | 3.33               | 3.54 | 6.45                 |                     |
|         |         |                    |       | 8         | 4.43               | 4.42 | 7.44                 |                     |
|         |         |                    | SU    | -         | 4.57               | 4.28 | 7.43                 |                     |
|         | 64      | 5320               | 26T   | 0         | 4.66               | 4.09 | 7.39                 |                     |
|         |         |                    |       | 4         | 3.67               | 3.21 | 6.45                 |                     |
|         |         |                    |       | 8         | 4.80               | 3.98 | 7.42                 |                     |
|         |         |                    | SU    | -         | 4.60               | 3.91 | 7.28                 |                     |
| UNII-2C | 100     | 5500               | 26T   | 0         | 4.81               | 4.42 | 7.63                 | 11.00               |
|         |         |                    |       | 4         | 3.85               | 3.92 | 6.89                 |                     |
|         |         |                    |       | 8         | 5.02               | 4.34 | 7.70                 |                     |
|         |         |                    | SU    | -         | 4.70               | 4.22 | 7.48                 |                     |
|         | 116     | 5580               | 26T   | 0         | 4.54               | 4.15 | 7.36                 |                     |
|         |         |                    |       | 4         | 3.37               | 3.10 | 6.24                 |                     |
|         |         |                    |       | 8         | 4.49               | 4.23 | 7.37                 |                     |
|         |         |                    | SU    | -         | 4.55               | 4.40 | 7.49                 |                     |
|         | 140     | 5700               | 26T   | 0         | 4.03               | 4.31 | 7.18                 |                     |
|         |         |                    |       | 4         | 3.10               | 3.52 | 6.33                 |                     |
|         |         |                    |       | 8         | 4.25               | 4.49 | 7.38                 |                     |
|         |         |                    | SU    | -         | 4.38               | 4.88 | 7.65                 |                     |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

| Band     | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm] |       | Direct. Gain [dBi] | Corr'd PSD [dBm] | PSD Limit [dBm]        |
|----------|---------|--------------------|-------|-----------|----------------|-------|--------------------|------------------|------------------------|
|          |         |                    |       |           | ANT1           | ANT2  |                    |                  |                        |
| UNII-3   | 149     | 5745               | 26T   | 0         | 1.50           | 2.38  |                    | 4.97             | 30.00<br>/500kHz       |
|          |         |                    |       | 4         | 2.00           | 2.01  |                    | 5.01             |                        |
|          |         |                    |       | 8         | 1.77           | 2.02  |                    | 4.91             |                        |
|          |         |                    | SU    | -         | 1.87           | 1.63  |                    | 4.76             |                        |
|          | 157     | 5785               | 26T   | 0         | 1.44           | 2.19  |                    | 4.84             |                        |
|          |         |                    |       | 4         | 1.20           | 2.00  |                    | 4.63             |                        |
|          |         |                    |       | 8         | 1.47           | 1.99  |                    | 4.74             |                        |
|          |         |                    | SU    | -         | 1.28           | 1.77  |                    | 4.54             |                        |
|          | 165     | 5825               | 26T   | 0         | 1.45           | 1.37  |                    | 4.42             |                        |
|          |         |                    |       | 4         | 1.34           | 1.57  |                    | 4.46             |                        |
|          |         |                    |       | 8         | 1.41           | 1.70  |                    | 4.57             |                        |
|          |         |                    | SU    | -         | 2.01           | 1.29  |                    | 4.67             |                        |
| UNII-3&4 | 169     | 5845               | 26T   | 0         | 1.74           | 1.57  |                    | 4.67             | 30.00<br>/500kHz       |
|          |         |                    |       | 4         | 1.81           | 1.30  |                    | 4.57             |                        |
|          |         |                    |       | 6(L)      | 2.03           | 2.48  |                    | 5.27             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       | 6(U)      | 3.10           | 3.32  | -0.03              | 6.19             |                        |
|          |         |                    |       | 8         | 4.64           | 4.80  | -0.03              | 7.70             |                        |
|          |         |                    | SU(L) | -         | 1.68           | 1.69  |                    | 4.69             | 30.00<br>/500kHz       |
|          |         |                    | SU(U) | -         | 3.64           | 3.86  | -0.03              | 6.73             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       |           |                |       |                    |                  |                        |
| UNII-4   | 173     | 5865               | 26T   | 0         | 4.35           | 4.45  | -0.03              | 7.38             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       | 4         | 3.45           | 3.95  | -0.03              | 6.69             |                        |
|          |         |                    |       | 8         | 4.45           | 4.91  | -0.03              | 7.67             |                        |
|          |         |                    | SU    | -         | 4.30           | 4.91  | -0.03              | 7.60             |                        |
|          | 177     | 5885               | 26T   | 0         | 4.24           | 4.53  | -0.03              | 7.37             |                        |
|          |         |                    |       | 4         | 3.36           | 3.74  | -0.03              | 6.53             |                        |
|          |         |                    |       | 8         | 4.41           | 4.41  | -0.03              | 7.39             |                        |
|          |         |                    | SU    | -         | -0.03          | -0.12 | -0.03              | 2.91             |                        |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

## 10.2.8. 802.11ax HE40 MODE

### Output Power Results

| Band   | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|--------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|        |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-1 | 38      | 5190               | 26T   | 0         | 7.14                | 7.25  | 10.21              | 23.98       |
|        |         |                    |       | 9         | 7.52                | 7.59  | 10.57              |             |
|        |         |                    |       | 17        | 6.97                | 7.00  | 10.00              |             |
|        |         |                    | 52T   | 37        | 9.61                | 10.04 | 12.84              |             |
|        |         |                    |       | 41        | 9.93                | 10.28 | 13.12              |             |
|        |         |                    |       | 44        | 9.42                | 9.77  | 12.61              |             |
|        |         |                    | 106T  | 53        | 12.04               | 12.15 | 15.11              |             |
|        |         |                    |       | 54        | 12.26               | 12.36 | 15.32              |             |
|        |         |                    |       | 56        | 11.90               | 11.91 | 14.92              |             |
|        |         |                    | 242T  | 61        | 12.13               | 12.12 | 15.14              |             |
|        |         |                    |       | 62        | 12.02               | 12.05 | 15.05              |             |
|        |         |                    | SU    | -         | 15.53               | 15.49 | 18.52              |             |
|        | 46      | 5230               | 26T   | 0         | 7.10                | 7.57  | 10.35              |             |
|        |         |                    |       | 9         | 7.46                | 7.90  | 10.70              |             |
|        |         |                    |       | 17        | 6.91                | 7.31  | 10.12              |             |
|        |         |                    | 52T   | 37        | 9.58                | 10.29 | 12.96              |             |
|        |         |                    |       | 41        | 9.36                | 10.00 | 12.70              |             |
|        |         |                    |       | 44        | 8.90                | 9.51  | 12.23              |             |
|        |         |                    | 106T  | 53        | 11.86               | 12.58 | 15.25              |             |
|        |         |                    |       | 54        | 12.07               | 12.78 | 15.45              |             |
|        |         |                    |       | 56        | 11.71               | 12.36 | 15.06              |             |
|        |         |                    | 242T  | 61        | 11.93               | 12.63 | 15.30              |             |
|        |         |                    |       | 62        | 11.83               | 12.51 | 15.19              |             |
|        |         |                    | SU    | -         | 15.98               | 16.43 | 19.22              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|---------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|         |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-2A | 54      | 5270               | 26T   | 0         | 6.99                | 7.24  | 10.13              | 23.98       |
|         |         |                    |       | 9         | 7.37                | 7.57  | 10.48              |             |
|         |         |                    |       | 17        | 6.82                | 6.98  | 9.91               |             |
|         |         |                    | 52T   | 37        | 9.45                | 9.82  | 12.65              |             |
|         |         |                    |       | 41        | 9.77                | 10.08 | 12.94              |             |
|         |         |                    |       | 44        | 9.27                | 9.57  | 12.43              |             |
|         |         |                    | 106T  | 53        | 11.70               | 12.09 | 14.91              |             |
|         |         |                    |       | 54        | 11.91               | 12.28 | 15.11              |             |
|         |         |                    |       | 56        | 11.52               | 11.84 | 14.69              |             |
|         |         |                    | 242T  | 61        | 11.76               | 12.17 | 14.98              |             |
|         |         |                    |       | 62        | 11.66               | 12.01 | 14.85              |             |
|         |         |                    | SU    | -         | 15.98               | 16.09 | 19.05              |             |
|         | 62      | 5310               | 26T   | 0         | 7.36                | 6.60  | 10.01              |             |
|         |         |                    |       | 9         | 7.75                | 6.94  | 10.37              |             |
|         |         |                    |       | 17        | 7.16                | 6.40  | 9.81               |             |
|         |         |                    | 52T   | 37        | 10.06               | 9.21  | 12.67              |             |
|         |         |                    |       | 41        | 10.34               | 9.49  | 12.95              |             |
|         |         |                    |       | 44        | 9.87                | 8.98  | 12.46              |             |
|         |         |                    | 106T  | 53        | 12.41               | 11.49 | 14.98              |             |
|         |         |                    |       | 54        | 12.61               | 11.68 | 15.18              |             |
|         |         |                    |       | 56        | 12.12               | 11.19 | 14.69              |             |
|         |         |                    | 242T  | 61        | 12.44               | 11.50 | 15.01              |             |
|         |         |                    |       | 62        | 12.33               | 11.37 | 14.89              |             |
|         |         |                    | SU    | -         | 16.29               | 15.59 | 18.96              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|---------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|         |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-2C | 102     | 5510               | 26T   | 0         | 7.35                | 7.05  | 10.21              | 23.98       |
|         |         |                    |       | 9         | 7.75                | 7.47  | 10.62              |             |
|         |         |                    |       | 17        | 7.25                | 6.94  | 10.11              |             |
|         |         |                    | 52T   | 37        | 9.41                | 9.10  | 12.27              |             |
|         |         |                    |       | 41        | 9.77                | 9.45  | 12.62              |             |
|         |         |                    |       | 44        | 9.30                | 9.00  | 12.16              |             |
|         |         |                    | 106T  | 53        | 12.31               | 11.57 | 14.97              |             |
|         |         |                    |       | 54        | 12.58               | 11.80 | 15.22              |             |
|         |         |                    |       | 56        | 12.27               | 11.53 | 14.93              |             |
|         |         |                    | 242T  | 61        | 12.42               | 11.66 | 15.07              |             |
|         |         |                    |       | 62        | 12.35               | 11.61 | 15.01              |             |
|         |         |                    | SU    | -         | 16.31               | 15.97 | 19.15              |             |
|         | 118     | 5590               | 26T   | 0         | 7.48                | 7.32  | 10.41              |             |
|         |         |                    |       | 9         | 7.81                | 7.71  | 10.77              |             |
|         |         |                    |       | 17        | 7.22                | 7.18  | 10.21              |             |
|         |         |                    | 52T   | 37        | 10.10               | 9.99  | 13.06              |             |
|         |         |                    |       | 41        | 10.32               | 10.28 | 13.31              |             |
|         |         |                    |       | 44        | 9.81                | 9.83  | 12.83              |             |
|         |         |                    | 106T  | 53        | 12.56               | 12.07 | 15.33              |             |
|         |         |                    |       | 54        | 12.76               | 12.30 | 15.55              |             |
|         |         |                    |       | 56        | 12.31               | 11.99 | 15.16              |             |
|         |         |                    | 242T  | 61        | 12.65               | 12.15 | 15.42              |             |
|         |         |                    |       | 62        | 12.48               | 12.04 | 15.28              |             |
|         |         |                    | SU    | -         | 16.42               | 16.34 | 19.39              |             |
|         | 134     | 5670               | 26T   | 0         | 6.55                | 7.42  | 10.02              |             |
|         |         |                    |       | 9         | 6.95                | 7.86  | 10.44              |             |
|         |         |                    |       | 17        | 6.34                | 7.32  | 9.87               |             |
|         |         |                    | 52T   | 37        | 9.12                | 10.04 | 12.61              |             |
|         |         |                    |       | 41        | 9.43                | 10.43 | 12.97              |             |
|         |         |                    |       | 44        | 8.94                | 9.99  | 12.51              |             |
|         |         |                    | 106T  | 53        | 11.55               | 12.35 | 14.98              |             |
|         |         |                    |       | 54        | 11.75               | 12.55 | 15.18              |             |
|         |         |                    |       | 56        | 11.38               | 12.26 | 14.85              |             |
|         |         |                    | 242T  | 61        | 11.58               | 12.39 | 15.01              |             |
|         |         |                    |       | 62        | 11.47               | 12.35 | 14.94              |             |
|         |         |                    | SU    | -         | 15.51               | 16.25 | 18.91              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band   | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|--------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|        |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-3 | 151     | 5755               | 26T   | 0         | 7.05                | 7.16  | 10.12              | 30.00       |
|        |         |                    |       | 9         | 7.45                | 7.63  | 10.55              |             |
|        |         |                    |       | 17        | 6.95                | 7.21  | 10.09              |             |
|        |         |                    | 52T   | 37        | 9.03                | 9.26  | 12.16              |             |
|        |         |                    |       | 41        | 9.41                | 9.69  | 12.56              |             |
|        |         |                    |       | 44        | 8.97                | 9.33  | 12.16              |             |
|        |         |                    | 106T  | 53        | 12.37               | 12.38 | 15.39              |             |
|        |         |                    |       | 54        | 12.60               | 12.67 | 15.65              |             |
|        |         |                    |       | 56        | 12.26               | 12.40 | 15.34              |             |
|        |         |                    | 242T  | 61        | 12.42               | 12.44 | 15.44              |             |
|        |         |                    |       | 62        | 12.37               | 12.52 | 15.46              |             |
|        |         |                    | SU    | -         | 16.47               | 16.55 | 19.52              |             |
|        | 159     | 5795               | 26T   | 0         | 6.57                | 7.12  | 9.86               |             |
|        |         |                    |       | 9         | 7.02                | 7.71  | 10.39              |             |
|        |         |                    |       | 17        | 6.53                | 7.33  | 9.96               |             |
|        |         |                    | 52T   | 37        | 9.29                | 9.79  | 12.56              |             |
|        |         |                    |       | 41        | 9.68                | 10.30 | 13.01              |             |
|        |         |                    |       | 44        | 9.23                | 9.94  | 12.61              |             |
|        |         |                    | 106T  | 53        | 12.02               | 12.53 | 15.29              |             |
|        |         |                    |       | 54        | 12.19               | 12.79 | 15.51              |             |
|        |         |                    |       | 56        | 11.88               | 12.61 | 15.27              |             |
|        |         |                    | 242T  | 61        | 12.09               | 12.65 | 15.39              |             |
|        |         |                    |       | 62        | 12.04               | 12.75 | 15.42              |             |
|        |         |                    | SU    | -         | 16.04               | 16.62 | 19.35              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band     | Channel     | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Direct. Gain [dBi] | Corr'd Power [dBm] | Limit [dBm]                                   |
|----------|-------------|--------------------|-------|-----------|---------------------|-------|--------------------|--------------------|-----------------------------------------------|
|          |             |                    |       |           | ANT1                | ANT2  |                    |                    |                                               |
| UNII-3&4 | 167 Overlap | 5835               | 26T   | 0         | 7.06                | 6.99  |                    | 10.04              | 30.00<br>or<br>30.00 e.i.r.p <sup>Not e</sup> |
|          |             |                    |       | 9         | 7.51                | 7.54  |                    | 10.54              |                                               |
|          |             |                    |       | 17        | 7.00                | 7.16  |                    | 10.09              |                                               |
|          |             |                    | 52T   | 37        | 9.49                | 9.14  |                    | 12.33              |                                               |
|          |             |                    |       | 41        | 9.85                | 9.66  |                    | 12.77              |                                               |
|          |             |                    |       | 44        | 9.45                | 9.35  |                    | 12.41              |                                               |
|          |             |                    | 106T  | 53        | 11.95               | 12.00 |                    | 14.99              |                                               |
|          |             |                    |       | 54        | 12.22               | 12.32 |                    | 15.28              |                                               |
|          |             |                    |       | 56        | 11.84               | 12.10 |                    | 14.98              |                                               |
|          |             |                    | 242T  | 61        | 12.02               | 12.13 |                    | 15.09              |                                               |
|          |             |                    |       | 62        | 12.01               | 12.27 |                    | 15.15              |                                               |
|          |             |                    | SU    | -         | 16.13               | 16.04 |                    | 19.10              |                                               |
| UNII-4   | 175         | 5875               | 26T   | 0         | 6.86                | 7.10  | -0.03              | 9.99               | 30.00 e.i.r.p.                                |
|          |             |                    |       | 9         | 7.36                | 7.71  | -0.03              | 10.55              |                                               |
|          |             |                    |       | 17        | 6.88                | 7.29  | -0.03              | 10.10              |                                               |
|          |             |                    | 52T   | 37        | 9.33                | 9.30  | -0.03              | 12.33              |                                               |
|          |             |                    |       | 41        | 9.72                | 9.79  | -0.03              | 12.77              |                                               |
|          |             |                    |       | 44        | 9.36                | 9.44  | -0.03              | 12.41              |                                               |
|          |             |                    | 106T  | 53        | 11.80               | 12.14 | -0.03              | 14.98              |                                               |
|          |             |                    |       | 54        | 11.98               | 12.38 | -0.03              | 15.19              |                                               |
|          |             |                    |       | 56        | 11.80               | 12.25 | -0.03              | 15.04              |                                               |
|          |             |                    | 242T  | 61        | 11.87               | 12.19 | -0.03              | 15.04              |                                               |
|          |             |                    |       | 62        | 11.90               | 12.32 | -0.03              | 15.13              |                                               |
|          |             |                    | SU    | -         | 16.01               | 16.08 | -0.03              | 19.06              |                                               |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

**Note.** Since the correlated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

# PSD Results

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm/MHz] |      | Corr'd PSD [dBm/MHz] | PSD Limit [dBm/MHz] |
|---------|---------|--------------------|-------|-----------|--------------------|------|----------------------|---------------------|
|         |         |                    |       |           | ANT1               | ANT2 |                      |                     |
| UNII-1  | 38      | 5190               | 26T   | 0         | 4.47               | 4.45 | 7.47                 | 11.00               |
|         |         |                    |       | 9         | 4.76               | 4.70 | 7.74                 |                     |
|         |         |                    |       | 17        | 4.35               | 3.95 | 7.16                 |                     |
|         |         |                    | SU    | -         | 1.72               | 1.01 | 4.39                 |                     |
|         | 46      | 5230               | 26T   | 0         | 4.51               | 4.72 | 7.63                 |                     |
|         |         |                    |       | 9         | 4.96               | 5.08 | 8.03                 |                     |
|         |         |                    |       | 17        | 4.28               | 4.40 | 7.35                 |                     |
|         |         |                    | SU    | -         | 1.78               | 1.93 | 4.87                 |                     |
| UNII-2A | 54      | 5270               | 26T   | 0         | 4.41               | 4.30 | 7.36                 | 11.00               |
|         |         |                    |       | 9         | 4.65               | 5.10 | 7.89                 |                     |
|         |         |                    |       | 17        | 3.95               | 4.00 | 6.99                 |                     |
|         |         |                    | SU    | -         | 1.81               | 1.52 | 4.68                 |                     |
|         | 62      | 5310               | 26T   | 0         | 4.51               | 3.79 | 7.18                 |                     |
|         |         |                    |       | 9         | 5.20               | 4.11 | 7.70                 |                     |
|         |         |                    |       | 17        | 4.36               | 3.57 | 6.99                 |                     |
|         |         |                    | SU    | -         | 1.99               | 1.05 | 4.56                 |                     |
| UNII-2C | 102     | 5510               | 26T   | 0         | 4.68               | 3.97 | 7.35                 | 11.00               |
|         |         |                    |       | 9         | 5.31               | 4.58 | 7.97                 |                     |
|         |         |                    |       | 17        | 4.54               | 4.35 | 7.46                 |                     |
|         |         |                    | SU    | -         | 2.00               | 1.40 | 4.72                 |                     |
|         | 118     | 5590               | 26T   | 0         | 4.69               | 4.71 | 7.71                 |                     |
|         |         |                    |       | 9         | 5.21               | 4.44 | 7.85                 |                     |
|         |         |                    |       | 17        | 4.61               | 4.37 | 7.50                 |                     |
|         |         |                    | SU    | -         | 2.30               | 1.20 | 4.80                 |                     |
|         | 134     | 5670               | 26T   | 0         | 3.91               | 4.51 | 7.23                 |                     |
|         |         |                    |       | 9         | 4.40               | 5.13 | 7.79                 |                     |
|         |         |                    |       | 17        | 3.88               | 4.60 | 7.26                 |                     |
|         |         |                    | SU    | -         | 1.51               | 1.40 | 4.47                 |                     |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

| Band     | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm] |       | Direct. Gain [dBi] | Corr'd PSD [dBm] | PSD Limit [dBm]        |
|----------|---------|--------------------|-------|-----------|----------------|-------|--------------------|------------------|------------------------|
|          |         |                    |       |           | ANT1           | ANT2  |                    |                  |                        |
| UNII-3   | 151     | 5755               | 26T   | 0         | 1.94           | 1.92  |                    | 4.94             | 30.00<br>/500kHz       |
|          |         |                    |       | 9         | 2.36           | 2.03  |                    | 5.21             |                        |
|          |         |                    |       | 17        | 1.49           | 2.06  |                    | 4.79             |                        |
|          |         |                    | SU    | -         | -0.52          | -0.69 |                    | 2.41             |                        |
|          | 159     | 5795               | 26T   | 0         | 1.21           | 1.77  |                    | 4.51             |                        |
|          |         |                    |       | 9         | 1.90           | 2.14  |                    | 5.03             |                        |
|          |         |                    |       | 17        | 1.28           | 1.98  |                    | 4.65             |                        |
|          |         |                    | SU    | -         | -1.07          | -0.60 |                    | 2.18             |                        |
| UNII-3&4 | 167     | 5835               | 26T   | 0         | 1.62           | 1.57  |                    | 4.60             | 30.00<br>/500kHz       |
|          |         |                    |       | 9         | 2.20           | 2.25  |                    | 5.24             |                        |
|          |         |                    |       | 16(L)     | 0.13           | 0.41  |                    | 3.28             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       | 16(U)     | 4.58           | 4.50  | -0.03              | 7.52             |                        |
|          |         |                    |       | 17        | 4.49           | 4.09  | -0.03              | 7.28             |                        |
|          |         |                    | SU(L) | -         | -0.85          | -1.10 |                    | 2.04             | 30.00<br>/500kHz       |
|          |         |                    | SU(U) | -         | 0.25           | -0.13 | -0.03              | 3.04             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       |           |                |       |                    |                  |                        |
| UNII-4   | 175     | 5875               | 26T   | 0         | 4.22           | 4.81  | -0.03              | 7.50             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       | 9         | 4.79           | 5.03  | -0.03              | 7.89             |                        |
|          |         |                    |       | 17        | 4.28           | 4.51  | -0.03              | 7.38             |                        |
|          |         |                    | SU    | -         | 1.83           | 1.78  | -0.03              | 4.78             |                        |
|          |         |                    |       |           |                |       |                    |                  |                        |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

## 10.2.9. 802.11ax HE80 MODE

### Output Power Results

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|---------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|         |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-1  | 42      | 5210               | 26T   | 0         | 6.95                | 7.35  | 10.16              | 23.98       |
|         |         |                    |       | 18        | 7.11                | 7.40  | 10.27              |             |
|         |         |                    |       | 36        | 6.57                | 6.77  | 9.68               |             |
|         |         |                    | 52T   | 37        | 9.33                | 9.85  | 12.61              |             |
|         |         |                    |       | 45        | 9.46                | 9.87  | 12.68              |             |
|         |         |                    |       | 52        | 8.96                | 9.30  | 12.14              |             |
|         |         |                    | 106T  | 53        | 10.99               | 11.65 | 14.34              |             |
|         |         |                    |       | 57        | 11.08               | 11.56 | 14.34              |             |
|         |         |                    |       | 60        | 10.60               | 11.06 | 13.85              |             |
|         |         |                    | 242T  | 61        | 11.07               | 11.69 | 14.40              |             |
|         |         |                    |       | 62        | 11.14               | 11.70 | 14.44              |             |
|         |         |                    |       | 64        | 10.76               | 11.21 | 14.00              |             |
|         |         |                    | 484T  | 65        | 11.08               | 11.70 | 14.41              |             |
|         |         |                    |       | 66        | 10.87               | 11.37 | 14.14              |             |
|         |         |                    | SU    | -         | 14.01               | 14.41 | 17.22              |             |
| UNII-2A | 58      | 5290               | 26T   | 0         | 6.88                | 7.15  | 10.03              | 23.98       |
|         |         |                    |       | 18        | 7.01                | 7.20  | 10.12              |             |
|         |         |                    |       | 36        | 6.41                | 6.54  | 9.49               |             |
|         |         |                    | 52T   | 37        | 9.25                | 9.59  | 12.43              |             |
|         |         |                    |       | 45        | 9.37                | 9.62  | 12.51              |             |
|         |         |                    |       | 52        | 8.80                | 9.00  | 11.91              |             |
|         |         |                    | 106T  | 53        | 10.88               | 11.05 | 13.98              |             |
|         |         |                    |       | 57        | 10.90               | 10.99 | 13.96              |             |
|         |         |                    |       | 60        | 10.45               | 10.55 | 13.51              |             |
|         |         |                    | 242T  | 61        | 10.95               | 11.15 | 14.06              |             |
|         |         |                    |       | 62        | 10.99               | 11.18 | 14.10              |             |
|         |         |                    |       | 64        | 10.60               | 10.70 | 13.66              |             |
|         |         |                    | 484T  | 65        | 10.94               | 11.17 | 14.07              |             |
|         |         |                    |       | 66        | 10.68               | 10.87 | 13.79              |             |
|         |         |                    | SU    | -         | 15.36               | 15.58 | 18.48              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|---------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|         |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-2C | 106     | 5530               | 26T   | 0         | 7.69                | 7.28  | 10.50              | 23.98       |
|         |         |                    |       | 18        | 7.90                | 7.50  | 10.71              |             |
|         |         |                    |       | 36        | 7.40                | 7.11  | 10.27              |             |
|         |         |                    | 52T   | 37        | 9.65                | 9.21  | 12.45              |             |
|         |         |                    |       | 45        | 9.82                | 9.39  | 12.62              |             |
|         |         |                    |       | 52        | 9.34                | 8.99  | 12.18              |             |
|         |         |                    | 106T  | 53        | 11.40               | 10.77 | 14.11              |             |
|         |         |                    |       | 57        | 11.51               | 10.90 | 14.23              |             |
|         |         |                    |       | 60        | 11.12               | 10.63 | 13.89              |             |
|         |         |                    | 242T  | 61        | 11.50               | 10.93 | 14.23              |             |
|         |         |                    |       | 62        | 11.61               | 10.94 | 14.30              |             |
|         |         |                    |       | 64        | 11.27               | 10.68 | 14.00              |             |
|         |         |                    | 484T  | 65        | 11.53               | 10.93 | 14.25              |             |
|         |         |                    |       | 66        | 11.38               | 10.92 | 14.17              |             |
|         |         |                    | SU    | -         | 15.70               | 15.41 | 18.57              |             |
|         | 122     | 5610               | 26T   | 0         | 7.52                | 7.11  | 10.33              |             |
|         |         |                    |       | 18        | 7.53                | 7.28  | 10.42              |             |
|         |         |                    |       | 36        | 6.90                | 6.78  | 9.85               |             |
|         |         |                    | 52T   | 37        | 9.43                | 9.10  | 12.28              |             |
|         |         |                    |       | 45        | 9.42                | 9.24  | 12.34              |             |
|         |         |                    |       | 52        | 8.81                | 8.80  | 11.82              |             |
|         |         |                    | 106T  | 53        | 11.02               | 10.48 | 13.77              |             |
|         |         |                    |       | 57        | 10.96               | 10.48 | 13.74              |             |
|         |         |                    |       | 60        | 10.45               | 10.17 | 13.32              |             |
|         |         |                    | 242T  | 61        | 11.10               | 10.47 | 13.81              |             |
|         |         |                    |       | 62        | 11.07               | 10.58 | 13.84              |             |
|         |         |                    |       | 64        | 10.59               | 10.25 | 13.43              |             |
|         |         |                    | 484T  | 65        | 11.08               | 10.51 | 13.81              |             |
|         |         |                    |       | 66        | 10.74               | 10.36 | 13.56              |             |
|         |         |                    | SU    | -         | 15.47               | 15.16 | 18.33              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band     | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm]                                  |
|----------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|----------------------------------------------|
|          |         |                    |       |           | ANT1                | ANT2  |                    |                                              |
| UNII-3   | 155     | 5775               | 26T   | 0         | 7.04                | 7.32  | 10.19              | 30.00                                        |
|          |         |                    |       | 18        | 7.31                | 7.73  | 10.54              |                                              |
|          |         |                    |       | 36        | 6.83                | 7.53  | 10.20              |                                              |
|          |         |                    | 52T   | 37        | 9.56                | 9.78  | 12.68              |                                              |
|          |         |                    |       | 45        | 9.81                | 10.20 | 13.02              |                                              |
|          |         |                    |       | 52        | 9.40                | 10.02 | 12.73              |                                              |
|          |         |                    | 106T  | 53        | 11.18               | 11.43 | 14.32              |                                              |
|          |         |                    |       | 57        | 11.36               | 11.78 | 14.59              |                                              |
|          |         |                    |       | 60        | 11.01               | 11.61 | 14.33              |                                              |
|          |         |                    | 242T  | 61        | 11.30               | 11.53 | 14.43              |                                              |
|          |         |                    |       | 62        | 11.41               | 11.71 | 14.57              |                                              |
|          |         |                    |       | 64        | 11.15               | 11.69 | 14.44              |                                              |
|          |         |                    | 484T  | 65        | 11.32               | 11.62 | 14.48              |                                              |
|          |         |                    |       | 66        | 11.22               | 11.74 | 14.50              |                                              |
|          |         |                    | SU    | -         | 15.21               | 15.59 | 18.41              |                                              |
| UNII-3&4 | 171     | 5855               | 26T   | 0         | 7.30                | 7.03  | 10.18              | 30.00<br>or<br>30.00 e.i.r.p <sup>Note</sup> |
|          |         |                    |       | 18        | 7.58                | 7.61  | 10.61              |                                              |
|          |         |                    |       | 36        | 7.26                | 7.44  | 10.36              |                                              |
|          |         |                    | 52T   | 37        | 9.59                | 9.10  | 12.36              |                                              |
|          |         |                    |       | 45        | 9.87                | 9.65  | 12.77              |                                              |
|          |         |                    |       | 52        | 9.56                | 9.46  | 12.52              |                                              |
|          |         |                    | 106T  | 53        | 11.06               | 10.92 | 14.00              |                                              |
|          |         |                    |       | 57        | 11.25               | 11.41 | 14.34              |                                              |
|          |         |                    |       | 60        | 11.01               | 11.26 | 14.15              |                                              |
|          |         |                    | 242T  | 61        | 11.15               | 11.09 | 14.13              |                                              |
|          |         |                    |       | 62        | 11.29               | 11.35 | 14.33              |                                              |
|          |         |                    |       | 64        | 11.12               | 11.37 | 14.26              |                                              |
|          |         |                    | 484T  | 65        | 11.19               | 11.24 | 14.23              |                                              |
|          |         |                    |       | 66        | 11.19               | 11.40 | 14.31              |                                              |
|          |         |                    | SU    | -         | 15.01               | 15.17 | 18.10              |                                              |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

**Note.** Since the correrrated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

### PSD Results

| Band    | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm/MHz] |       | Corr'd PSD [dBm/MHz] | PSD Limit [dBm/MHz] |
|---------|---------|--------------------|-------|-----------|--------------------|-------|----------------------|---------------------|
|         |         |                    |       |           | ANT1               | ANT2  |                      |                     |
| UNII-1  | 42      | 5210               | 26T   | 0         | 4.73               | 4.28  | 7.52                 | 11.00               |
|         |         |                    |       | 18        | 3.66               | 3.57  | 6.63                 |                     |
|         |         |                    |       | 36        | 4.14               | 3.90  | 7.03                 |                     |
|         |         |                    | SU    | -         | -3.12              | -3.24 | -0.17                |                     |
| UNII-2A | 58      | 5290               | 26T   | 0         | 4.51               | 4.45  | 7.49                 | 11.00               |
|         |         |                    |       | 18        | 3.19               | 3.03  | 6.12                 |                     |
|         |         |                    |       | 36        | 3.62               | 3.12  | 6.38                 |                     |
|         |         |                    | SU    | -         | -1.93              | -2.20 | 0.95                 |                     |
| UNII-2C | 106     | 5530               | 26T   | 0         | 4.95               | 4.27  | 7.63                 | 11.00               |
|         |         |                    |       | 18        | 4.41               | 3.56  | 7.02                 |                     |
|         |         |                    |       | 36        | 4.57               | 4.01  | 7.31                 |                     |
|         |         |                    | SU    | -         | -1.52              | -2.10 | 1.21                 |                     |
|         | 122     | 5610               | 26T   | 0         | 4.58               | 4.18  | 7.40                 |                     |
|         |         |                    |       | 18        | 3.66               | 3.27  | 6.48                 |                     |
|         |         |                    |       | 36        | 4.46               | 3.59  | 7.05                 |                     |
|         |         |                    | SU    | -         | -1.54              | -2.52 | 1.01                 |                     |

| Band     | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm] |       | Direct. Gain [dBi] | Corr'd PSD [dBm] | PSD Limit [dBm]        |
|----------|---------|--------------------|-------|-----------|----------------|-------|--------------------|------------------|------------------------|
|          |         |                    |       |           | ANT1           | ANT2  |                    |                  |                        |
| UNII-3   | 155     | 5775               | 26T   | 0         | 1.82           | 1.47  |                    | 4.66             | 30.00<br>/500kHz       |
|          |         |                    |       | 18        | 1.91           | 1.49  |                    | 4.71             |                        |
|          |         |                    |       | 36        | 1.48           | 1.72  |                    | 4.61             |                        |
|          |         |                    | SU    | -         | -4.67          | -4.76 |                    | -1.70            |                        |
| UNII-3&4 | 171     | 5855               | 26T   | 0         | 2.16           | 1.39  |                    | 4.80             | 30.00<br>/500kHz       |
|          |         |                    |       | 16(L)     | 2.07           | 2.25  |                    | 5.17             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       | 16(U)     | 5.03           | 5.05  | -0.03              | 8.02             |                        |
|          |         |                    |       | 18        | 3.97           | 3.72  | -0.03              | 6.82             |                        |
|          |         |                    |       | 36        | 4.52           | 4.57  | -0.03              | 7.52             |                        |
|          |         |                    | SU(L) | -         | -4.62          | -5.20 |                    | -1.89            | 30.00<br>/500kHz       |
|          |         |                    | SU(U) | -         | -2.08          | -2.31 | -0.03              | 0.79             | 14.00<br>/MHz e.i.r.p. |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)

## 10.2.10. 802.11ax HE160 MODE

### Output Power Results

| Band      | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|-----------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------|
|           |         |                    |       |           | ANT1                | ANT2  |                    |             |
| UNII-1&2A | 50      | 5250               | 26T   | 0(LB)     | 7.01                | 7.64  | 10.35              | 23.98       |
|           |         |                    |       | 0(UB)     | 7.12                | 7.57  | 10.36              |             |
|           |         |                    |       | 36(BU)    | 6.74                | 7.04  | 9.90               |             |
|           |         |                    | 52T   | 37(LB)    | 9.33                | 10.12 | 12.75              |             |
|           |         |                    |       | 37(UB)    | 9.44                | 9.98  | 12.73              |             |
|           |         |                    |       | 52(UB)    | 9.05                | 9.64  | 12.37              |             |
|           |         |                    | 106T  | 53(LB)    | 9.83                | 10.67 | 13.28              |             |
|           |         |                    |       | 53(UB)    | 9.85                | 10.48 | 13.19              |             |
|           |         |                    |       | 60(UB)    | 9.56                | 10.22 | 12.91              |             |
|           |         |                    | 242T  | 61(LB)    | 9.96                | 10.80 | 13.41              |             |
|           |         |                    |       | 61(UB)    | 9.86                | 10.50 | 13.20              |             |
|           |         |                    |       | 64(UB)    | 9.21                | 9.76  | 12.50              |             |
|           |         |                    | 484T  | 65(LB)    | 9.95                | 10.73 | 13.37              |             |
|           |         |                    |       | 65(UB)    | 9.73                | 10.32 | 13.05              |             |
|           |         |                    |       | 66(UB)    | 9.28                | 9.87  | 12.60              |             |
|           |         |                    | 996T  | 67(LB)    | 9.91                | 10.65 | 13.31              |             |
|           |         |                    |       | 67(UB)    | 9.47                | 10.08 | 12.80              |             |
|           |         |                    | SU    | -         | 14.02               | 14.61 | 17.34              |             |
| UNII-2C   | 114     | 5570               | 26T   | 0(LB)     | 7.63                | 6.88  | 10.28              | 23.98       |
|           |         |                    |       | 0(UB)     | 7.58                | 7.25  | 10.43              |             |
|           |         |                    |       | 36(UB)    | 7.05                | 7.22  | 10.15              |             |
|           |         |                    | 52T   | 37(LB)    | 10.40               | 9.30  | 12.90              |             |
|           |         |                    |       | 37(UB)    | 10.36               | 9.59  | 13.00              |             |
|           |         |                    |       | 52(UB)    | 9.35                | 9.16  | 12.27              |             |
|           |         |                    | 106T  | 53(LB)    | 10.38               | 9.26  | 12.87              |             |
|           |         |                    |       | 53(UB)    | 10.85               | 9.97  | 13.44              |             |
|           |         |                    |       | 60(UB)    | 9.94                | 9.59  | 12.78              |             |
|           |         |                    | 242T  | 61(LB)    | 10.50               | 9.38  | 12.99              |             |
|           |         |                    |       | 61(UB)    | 10.84               | 9.97  | 13.44              |             |
|           |         |                    |       | 64(UB)    | 10.09               | 9.72  | 12.92              |             |
|           |         |                    | 484T  | 65(LB)    | 10.48               | 9.42  | 12.99              |             |
|           |         |                    |       | 65(UB)    | 10.68               | 9.91  | 13.32              |             |
|           |         |                    |       | 66(UB)    | 10.19               | 9.75  | 12.99              |             |
|           |         |                    | 996T  | 67(LB)    | 10.41               | 9.40  | 12.94              |             |
|           |         |                    |       | 67(UB)    | 10.41               | 9.78  | 13.12              |             |
|           |         |                    | SU    | -         | 14.20               | 13.85 | 17.04              |             |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]  
Corr'd Power = Ant1 Average Power + Ant2 Average Power

| Band     | Channel | Center Freq. [MHz] | Tones | RU offset | Average Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm]                                     |
|----------|---------|--------------------|-------|-----------|---------------------|-------|--------------------|-------------------------------------------------|
|          |         |                    |       |           | ANT1                | ANT2  |                    |                                                 |
| UNII-3&4 | 163     | 5815               | 26T   | 0(LB)     | 7.38                | 6.80  | 10.11              | 30.00<br>or<br>30.00<br>e.i.r.p <sup>Note</sup> |
|          |         |                    |       | 0(UB)     | 7.72                | 7.59  | 10.67              |                                                 |
|          |         |                    |       | 36(UB)    | 7.25                | 7.51  | 10.39              |                                                 |
|          |         |                    | 52T   | 37(LB)    | 9.67                | 8.78  | 12.26              |                                                 |
|          |         |                    |       | 37(UB)    | 9.99                | 9.52  | 12.77              |                                                 |
|          |         |                    |       | 52(UB)    | 9.51                | 9.47  | 12.50              |                                                 |
|          |         |                    | 106T  | 53(LB)    | 10.23               | 9.33  | 12.81              |                                                 |
|          |         |                    |       | 53(UB)    | 10.47               | 10.04 | 13.27              |                                                 |
|          |         |                    |       | 60(UB)    | 10.05               | 10.00 | 13.04              |                                                 |
|          |         |                    | 242T  | 61(LB)    | 10.34               | 9.45  | 12.93              |                                                 |
|          |         |                    |       | 61(UB)    | 10.51               | 10.09 | 13.32              |                                                 |
|          |         |                    |       | 64(UB)    | 10.17               | 10.08 | 13.14              |                                                 |
|          |         |                    | 484T  | 65(LB)    | 10.38               | 9.56  | 13.00              |                                                 |
|          |         |                    |       | 65(UB)    | 10.40               | 10.08 | 13.25              |                                                 |
|          |         |                    |       | 66(UB)    | 10.20               | 10.10 | 13.16              |                                                 |
|          |         |                    | 996T  | 67(LB)    | 10.40               | 9.67  | 13.06              |                                                 |
|          |         |                    |       | 67(UB)    | 10.27               | 10.03 | 13.16              |                                                 |
|          |         |                    | SU    | -         | 14.28               | 14.12 | 17.21              |                                                 |

\* Calculation of Output Power : Average Power = Meas Power + Duty CF[dB]

Corr'd Power = Ant1 Average Power + Ant2 Average Power(in case of UNII-4: added directional gain)

**Note.** Since the correrated antenna gain is less than 0 dBi, it satisfies both the limits of UNII-3 and UNII-4.

# PSD Results

| Band      | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm/MHz] |       | Corr'd PSD [dBm/MHz] | PSD Limit [dBm/MHz] |
|-----------|---------|--------------------|-------|-----------|--------------------|-------|----------------------|---------------------|
|           |         |                    |       |           | ANT1               | ANT2  |                      |                     |
| UNII-1&2A | 50      | 5250               | 26T   | 0(LB)     | 3.90               | 4.27  | 7.10                 | 11.00               |
|           |         |                    |       | 0(UB)     | 4.08               | 4.35  | 7.23                 |                     |
|           |         |                    |       | 36(UB)    | 3.76               | 4.14  | 6.97                 |                     |
|           |         |                    | SU    | -         | -6.31              | -5.66 | -2.96                |                     |
| UNII-2C   | 114     | 5570               | 26T   | 0(LB)     | 5.06               | 4.03  | 7.59                 | 11.00               |
|           |         |                    |       | 0(UB)     | 4.35               | 3.69  | 7.05                 |                     |
|           |         |                    |       | 36(UB)    | 4.04               | 3.73  | 6.90                 |                     |
|           |         |                    | SU    | -         | -5.50              | -6.18 | -2.82                |                     |

| Band     | Channel | Center Freq. [MHz] | Tones | RU offset | Meas PSD [dBm] |       | Direct. Gain [dBi] | Corr'd PSD [dBm] | PSD Limit [dBm]        |
|----------|---------|--------------------|-------|-----------|----------------|-------|--------------------|------------------|------------------------|
|          |         |                    |       |           | ANT1           | ANT2  |                    |                  |                        |
| UNII-3&4 | 171     | 5815               | 26T   | 0(LB)     | 1.61           | 1.18  |                    | 4.41             | 30.00<br>/500kHz       |
|          |         |                    |       | 0(UB)     | 2.14           | 1.78  |                    | 4.97             |                        |
|          |         |                    |       | 16(UB,L)  | 1.37           | 1.92  |                    | 4.66             |                        |
|          |         |                    |       | 16(UB,U)  | 5.14           | 5.07  | -0.03              | 8.08             | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       | 36(U)     | 4.03           | 4.67  | -0.03              | 7.34             |                        |
|          |         |                    | SU(L) | -         | -8.74          | -9.16 |                    | -5.93            | 30.00<br>/500kHz       |
|          |         |                    | SU(U) | -         | -6.61          | -6.68 | -0.03              | -3.67            | 14.00<br>/MHz e.i.r.p. |
|          |         |                    |       |           |                |       |                    |                  |                        |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB] (in case of UNII-4: added directional gain)  
Note. LB=Lower band(Lower 996T),UB=Upper band(Upper 996T), L=Lower side, U=Upper side

### 10.2.11. STRADDLE CHANNEL(802.11ax)

#### Output Power Results(SU)

| Mode | Band    | Center Freq. [MHz] | Meas Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|------|---------|--------------------|------------------|-------|--------------------|-------------|
|      |         |                    | ANT1             | ANT2  |                    |             |
| HE20 | UNII-2C | 5720               | 15.04            | 15.90 | 18.50              | 22.85       |
|      | UNII-3  |                    | 9.33             | 10.23 | 12.81              | 30.00       |
| HE40 | UNII-2C | 5710               | 16.27            | 16.22 | 19.25              | 23.98       |
|      | UNII-3  |                    | 5.74             | 5.76  | 8.76               | 30.00       |
| HE80 | UNII-2C | 5690               | 15.14            | 15.25 | 18.20              | 23.98       |
|      | UNII-3  |                    | 0.82             | 1.02  | 3.93               | 30.00       |

\* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]

#### PSD Results(SU)

| Mode | Band    | Center Freq. [MHz] | Meas PSD [dBm/MHz] |       | DCCF. | Corr'd PSD [dBm] | Limit [dBm/MHz] |
|------|---------|--------------------|--------------------|-------|-------|------------------|-----------------|
|      |         |                    | ANT1               | ANT2  |       |                  |                 |
| HE20 | UNII-2C | 5720               | 5.24               | 5.51  | 0.00  | 8.38             | 11.00           |
|      | UNII-3  |                    | 1.70               | 2.22  | 0.00  | 4.98             | 30.00/500kHz    |
| HE40 | UNII-2C | 5710               | 2.79               | 3.35  | 0.00  | 6.09             | 11.00           |
|      | UNII-3  |                    | -1.87              | -1.30 | 0.00  | 1.43             | 30.00/500kHz    |
| HE80 | UNII-2C | 5690               | -1.03              | -0.27 | 0.00  | 2.38             | 11.00           |
|      | UNII-3  |                    | -6.65              | -5.81 | 0.00  | -3.20            | 30.00/500kHz    |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

#### Output Power Results(RU)

| Mode | Band    | Center Freq. [MHz] | Meas Power [dBm] |       | Corr'd Power [dBm] | Limit [dBm] |
|------|---------|--------------------|------------------|-------|--------------------|-------------|
|      |         |                    | ANT1             | ANT2  |                    |             |
| HE20 | UNII-2C | 5720 (6RU)         | 7.12             | 7.23  | 10.18              | 22.51       |
|      | UNII-3  |                    | 0.55             | 0.66  | 3.62               | 30.00       |
| HE40 | UNII-2C | 5710 (15RU)        | 7.58             | 7.31  | 10.46              | 23.98       |
|      | UNII-3  |                    | -6.40            | -7.00 | -3.68              | 30.00       |
| HE80 | UNII-2C | 5690 (34RU)        | 7.24             | 7.17  | 10.22              | 23.98       |
|      | UNII-3  |                    | -7.03            | -7.08 | -4.04              | 30.00       |

\* Calculation of Output Power : Corr'd Power = Ant1 meas. Power + Ant2 meas. Power + Duty CF [dB]

#### PSD Results(RU)

| Mode | Band    | Center Freq. [MHz] | Meas PSD [dBm/MHz] |       | DCCF. | Corr'd PSD [dBm] | Limit [dBm/MHz] |
|------|---------|--------------------|--------------------|-------|-------|------------------|-----------------|
|      |         |                    | ANT1               | ANT2  |       |                  |                 |
| HE20 | UNII-2C | 5720 (6RU)         | 4.79               | 5.87  | 0.00  | 8.38             | 11.00           |
|      | UNII-3  |                    | 1.35               | 2.59  | 0.00  | 5.02             | 30.00/500kHz    |
| HE40 | UNII-2C | 5710 (15RU)        | 5.57               | 6.08  | 0.00  | 8.84             | 11.00           |
|      | UNII-3  |                    | -6.96              | -6.36 | 0.00  | -3.64            | 30.00/500kHz    |
| HE80 | UNII-2C | 5690 (34RU)        | 5.39               | 5.81  | 0.00  | 8.61             | 11.00           |
|      | UNII-3  |                    | -6.75              | -5.80 | 0.00  | -3.24            | 30.00/500kHz    |

\* Calculation of PSD: Corr'd PSD = Ant1 PSD + Ant2 PSD + Duty CF [dB]

## 10.2.12. OUTPUT POWER AND PPSD PLOTS(WORST CASE)

