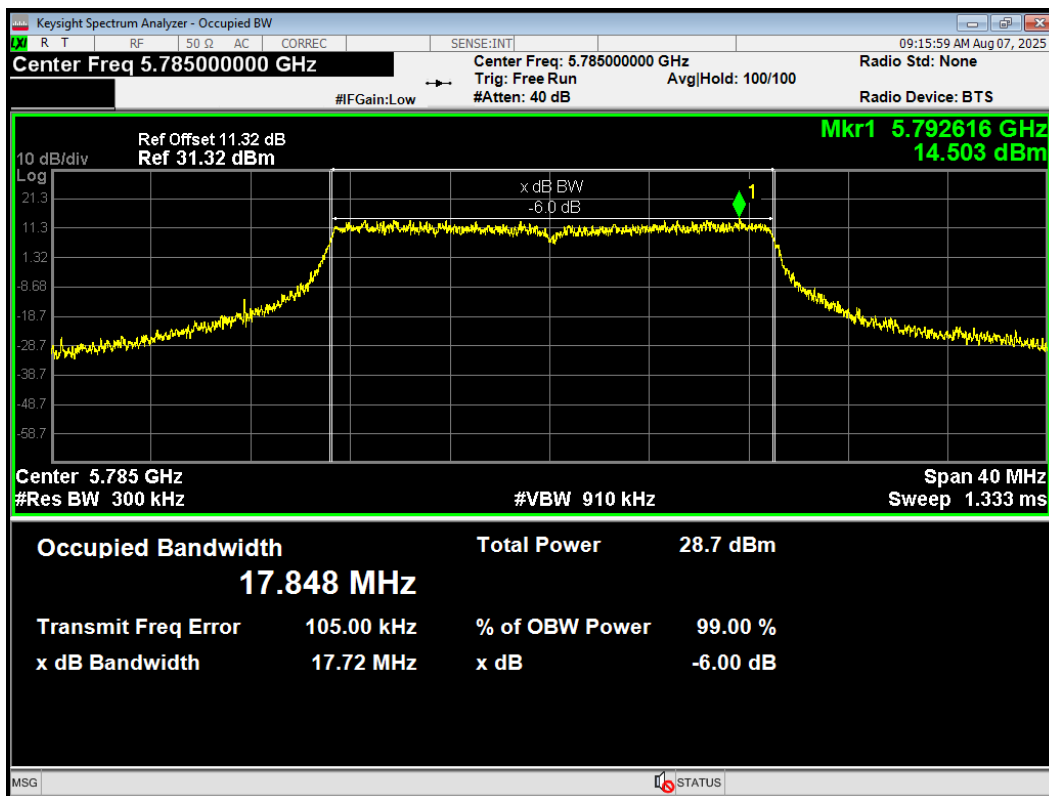
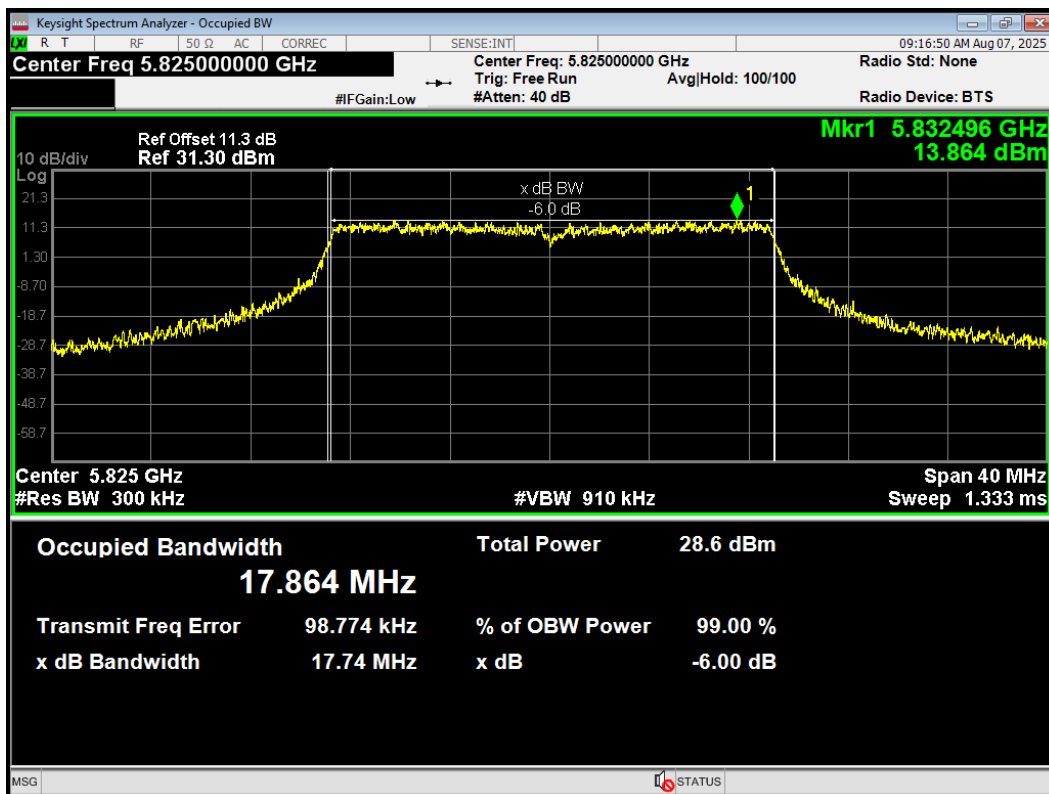


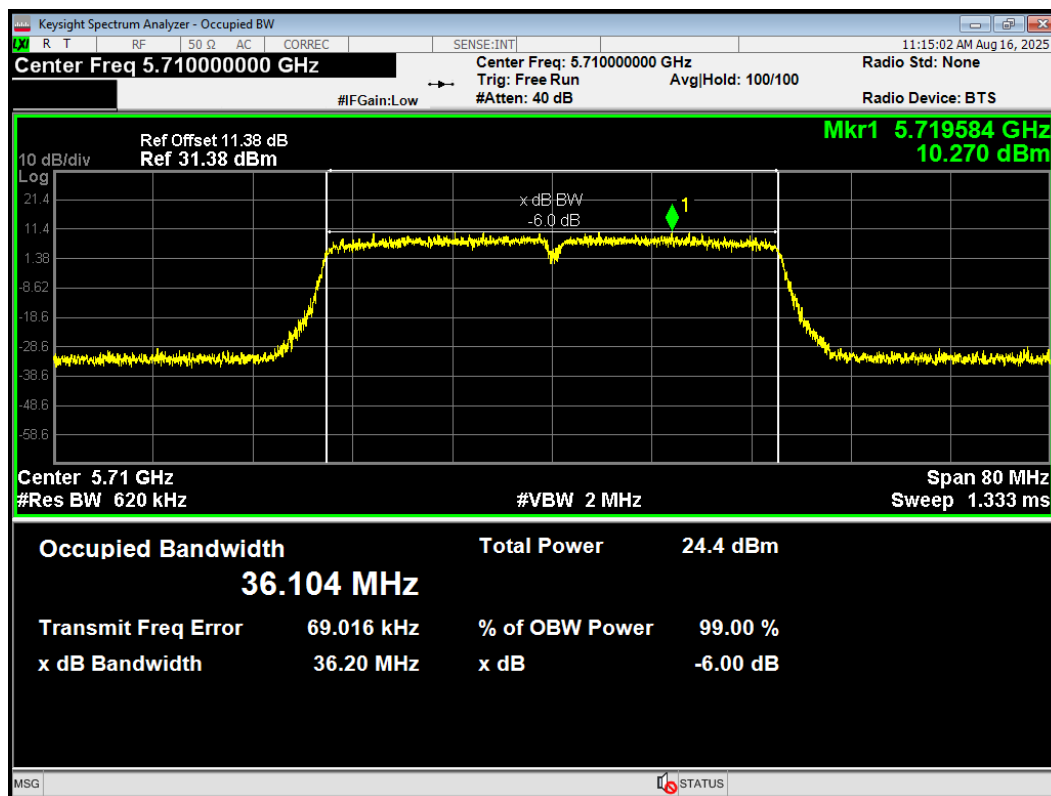
-6dB Bandwidth 802.11ac(VHT20) 5785MHz



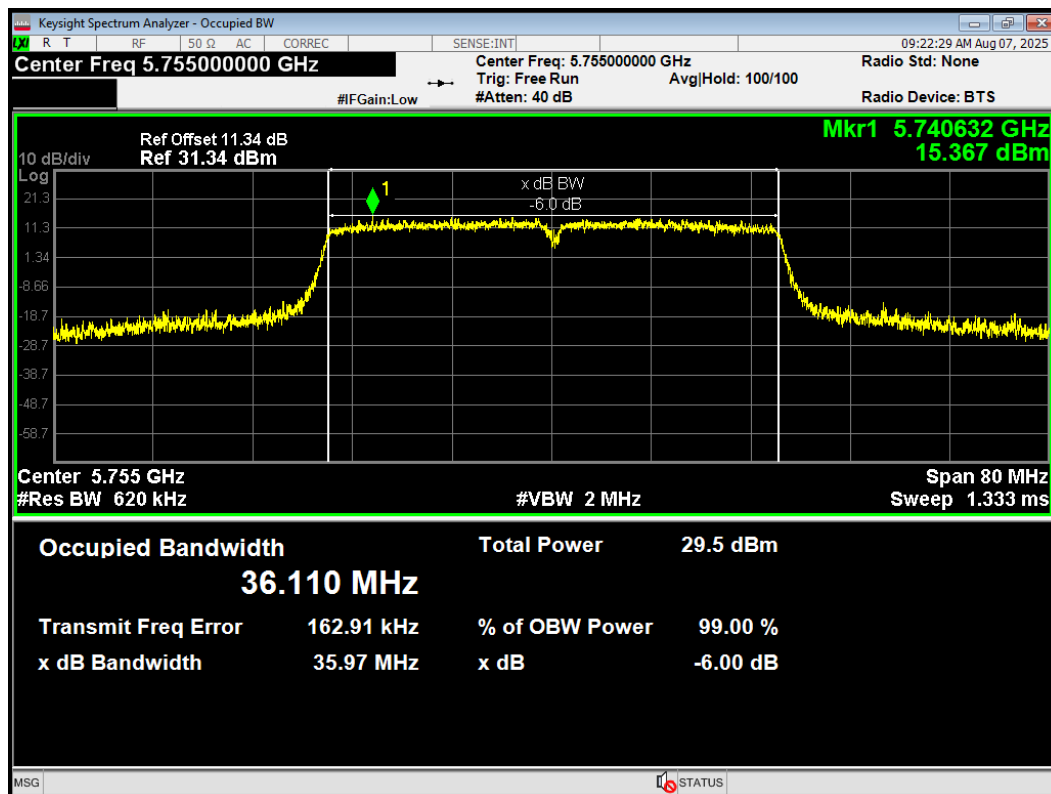
-6dB Bandwidth 802.11ac(VHT20) 5825MHz



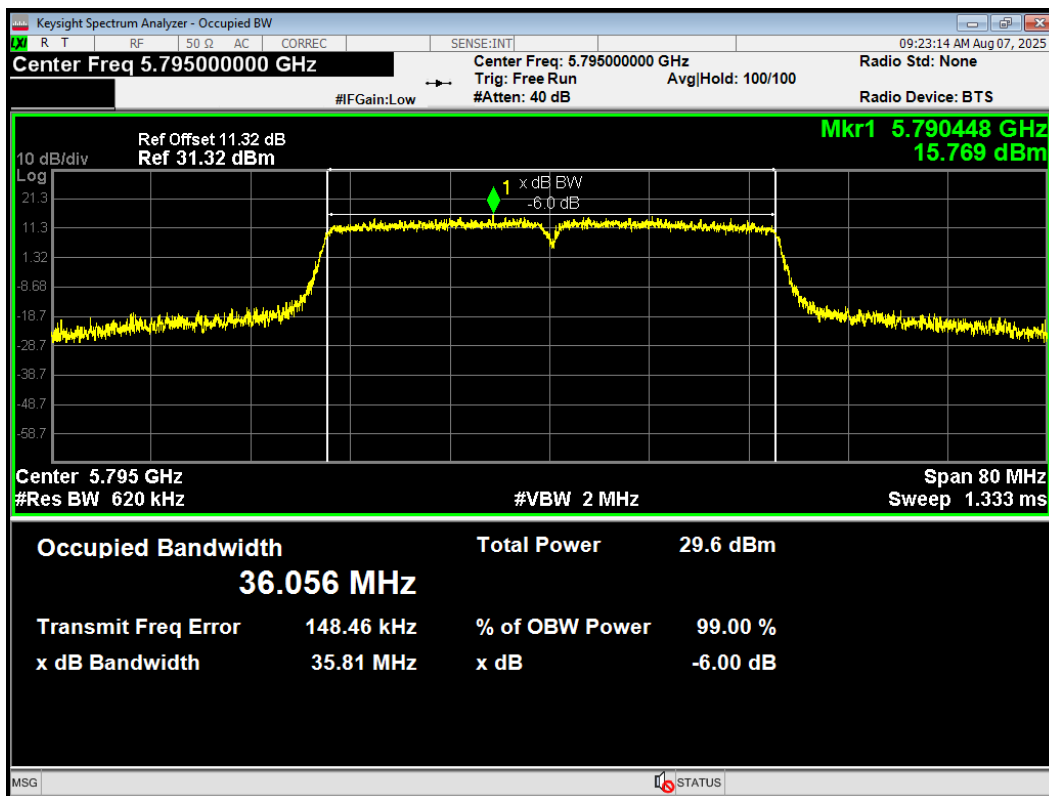
-6dB Bandwidth NVNT 802.11ac(VHT40) 5710MHz Ant1



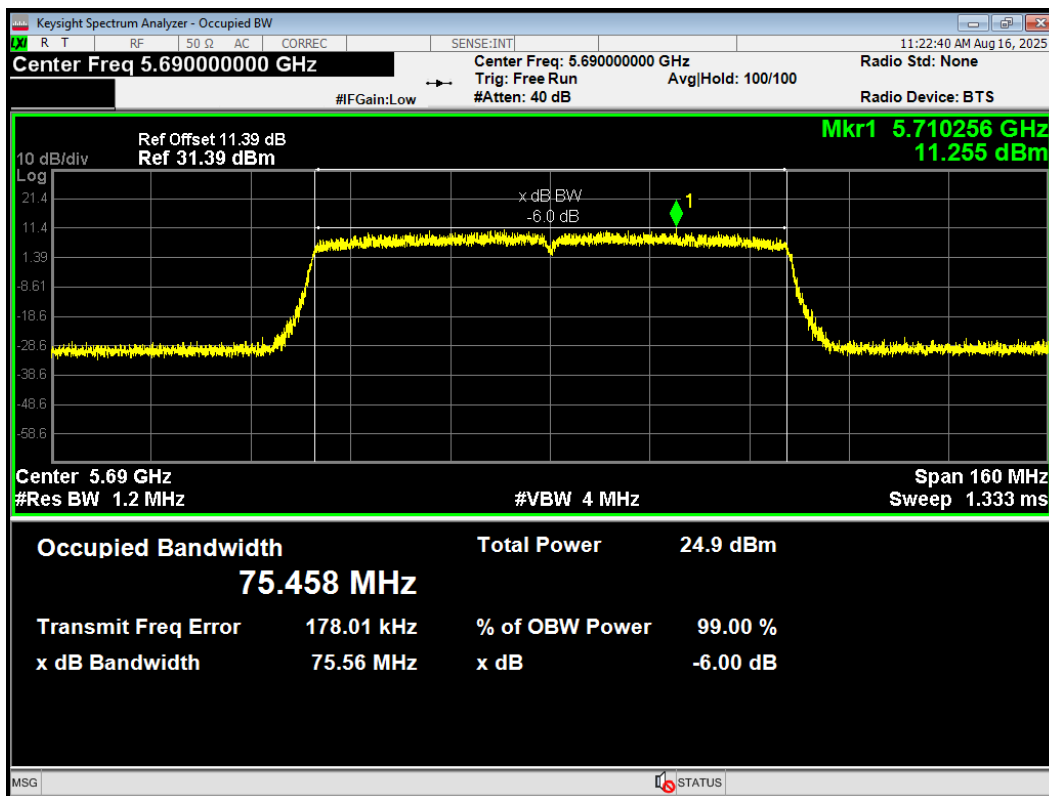
-6dB Bandwidth 802.11ac(VHT40) 5755MHz



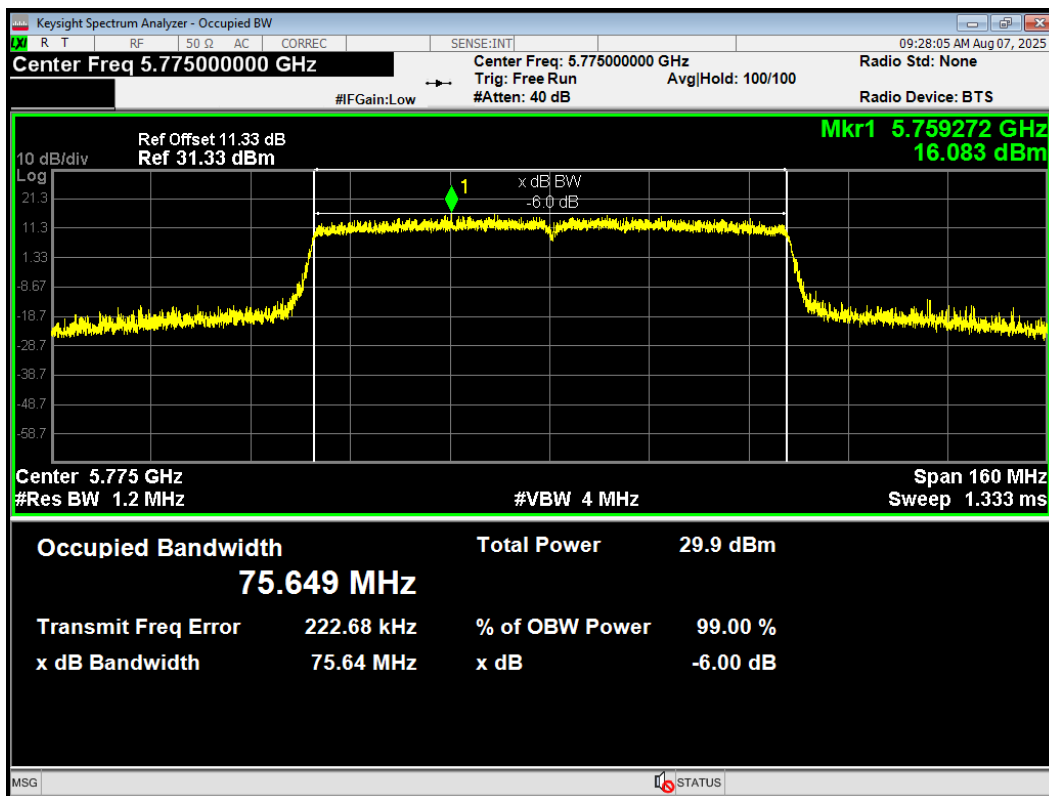
-6dB Bandwidth 802.11ac(VHT40) 5795MHz



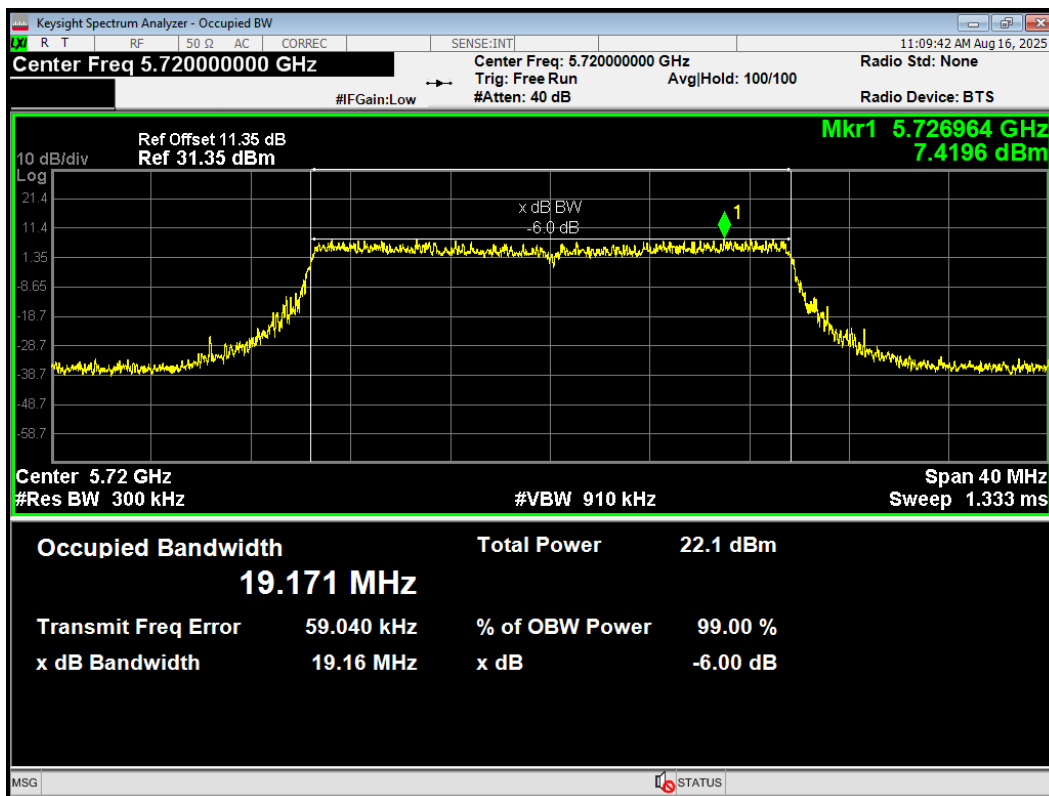
-6dB Bandwidth NVNT 802.11ac(VHT80) 5690MHz Ant1



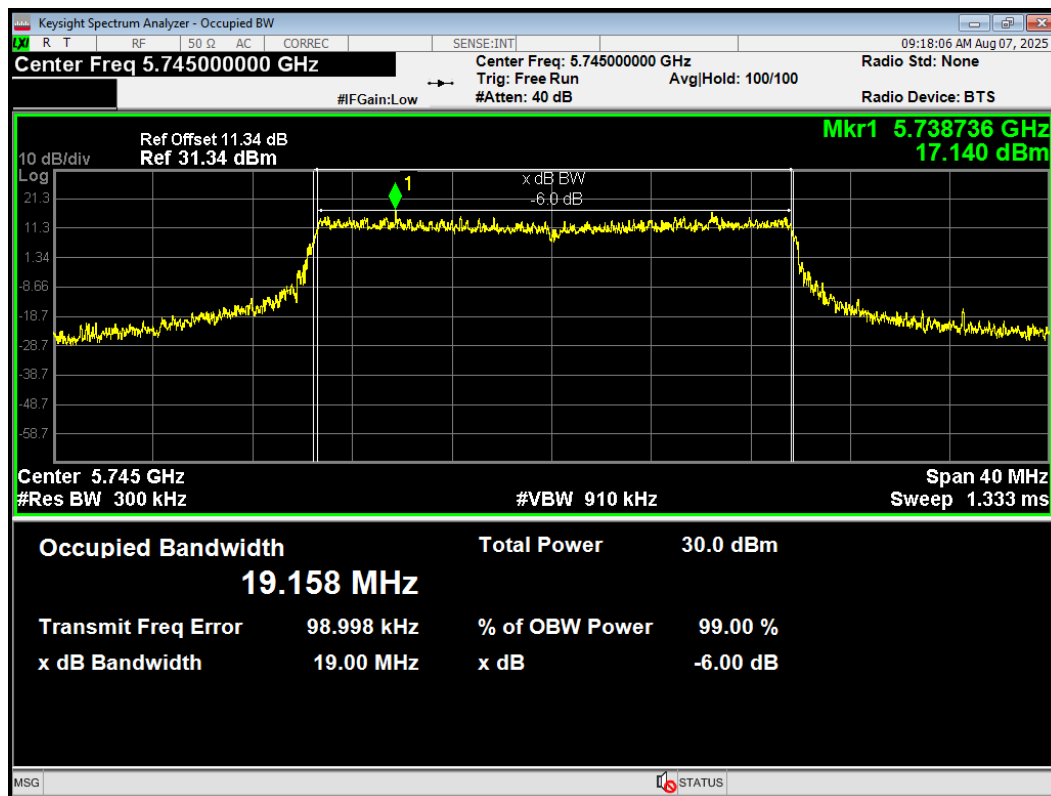
-6dB Bandwidth 802.11ac(VHT80) 5775MHz



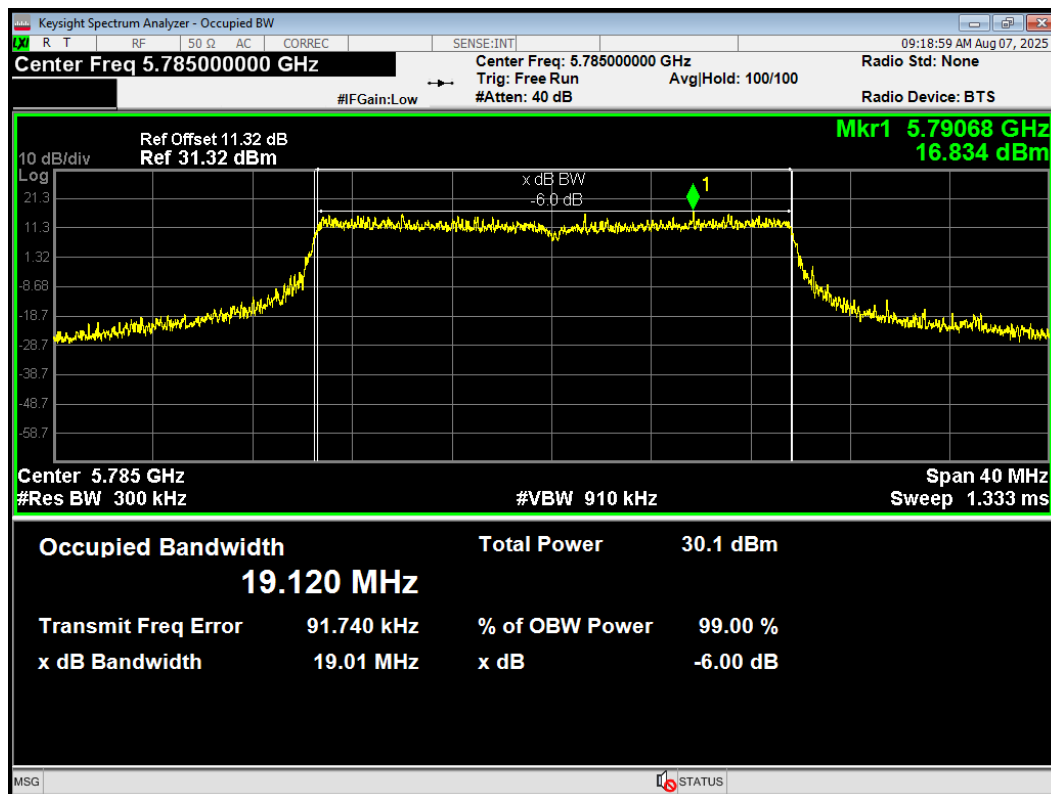
-6dB Bandwidth 802.11ax(HE20) 5720MHz



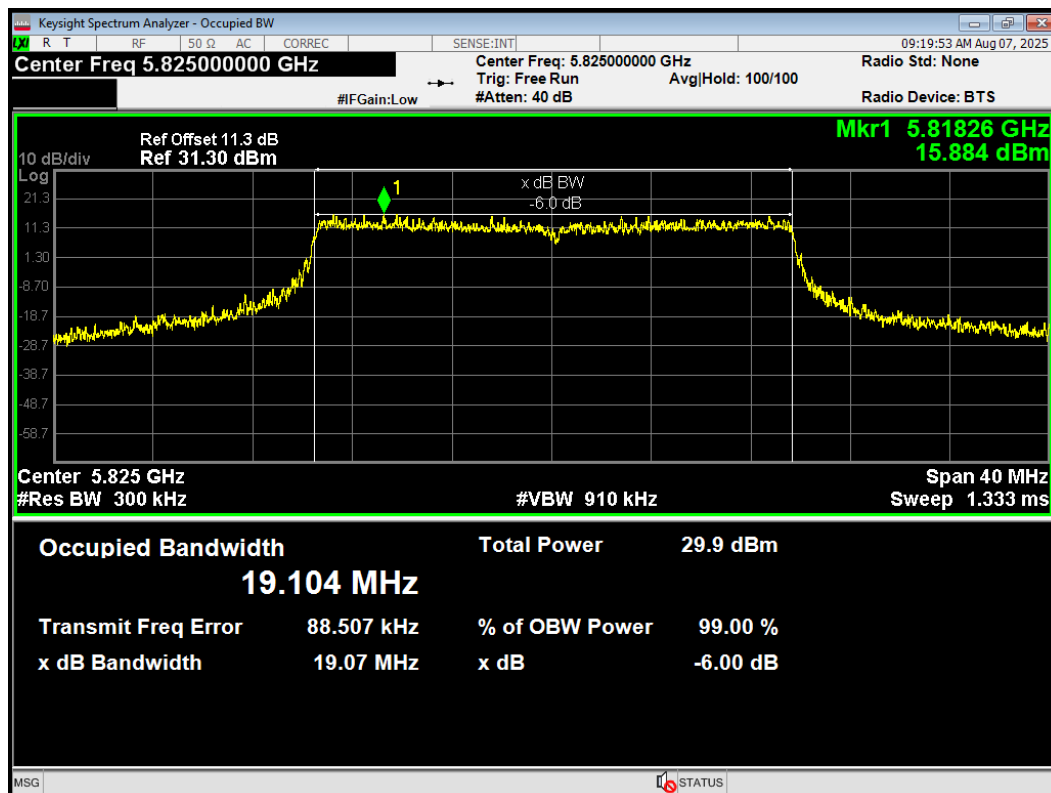
-6dB Bandwidth 802.11ax(HE20) 5745MHz



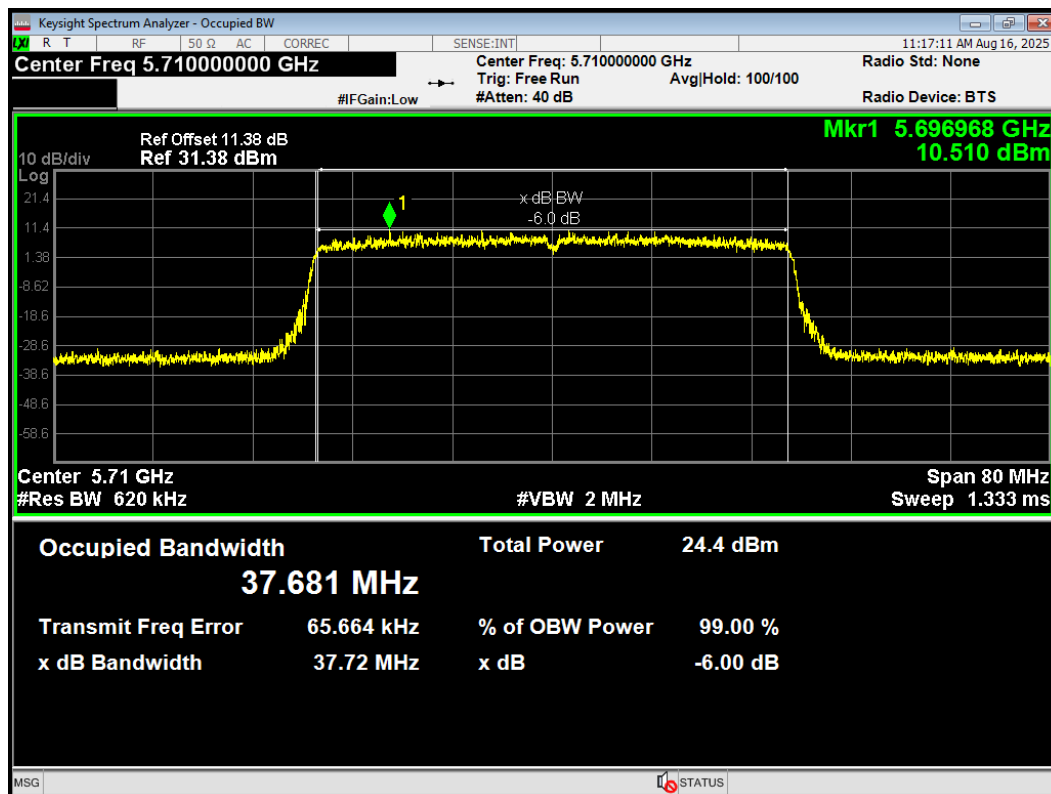
-6dB Bandwidth 802.11ax(HE20) 5785MHz



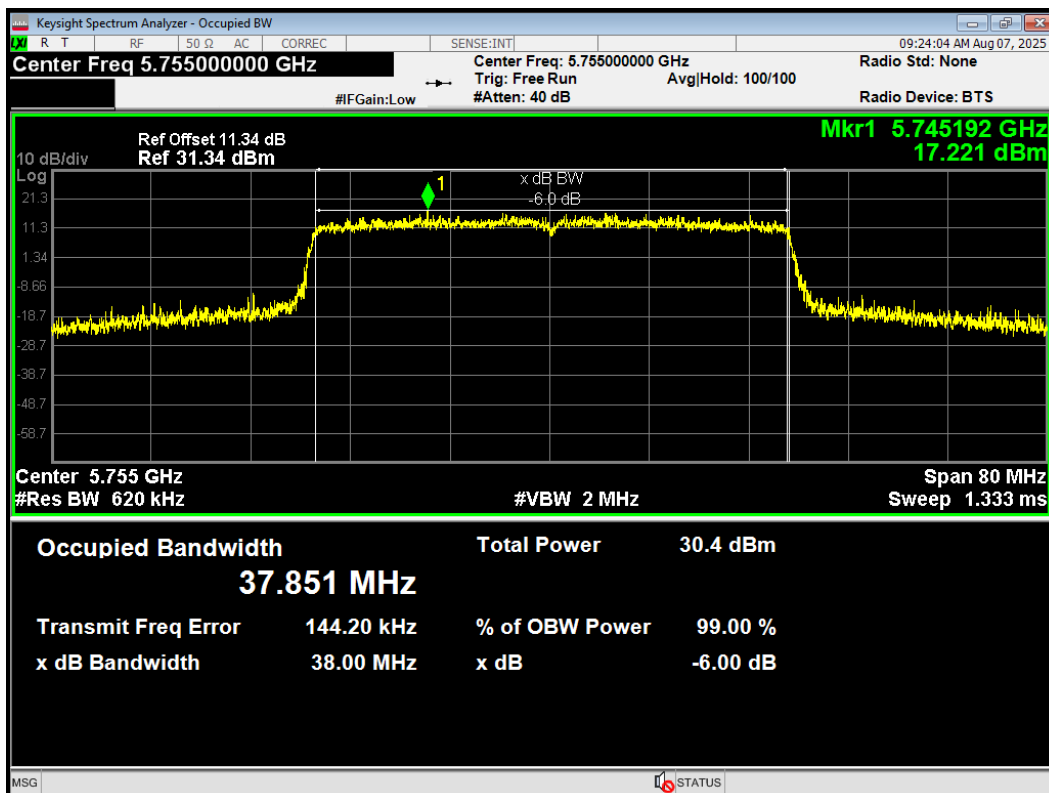
-6dB Bandwidth 802.11ax(HE20) 5825MHz



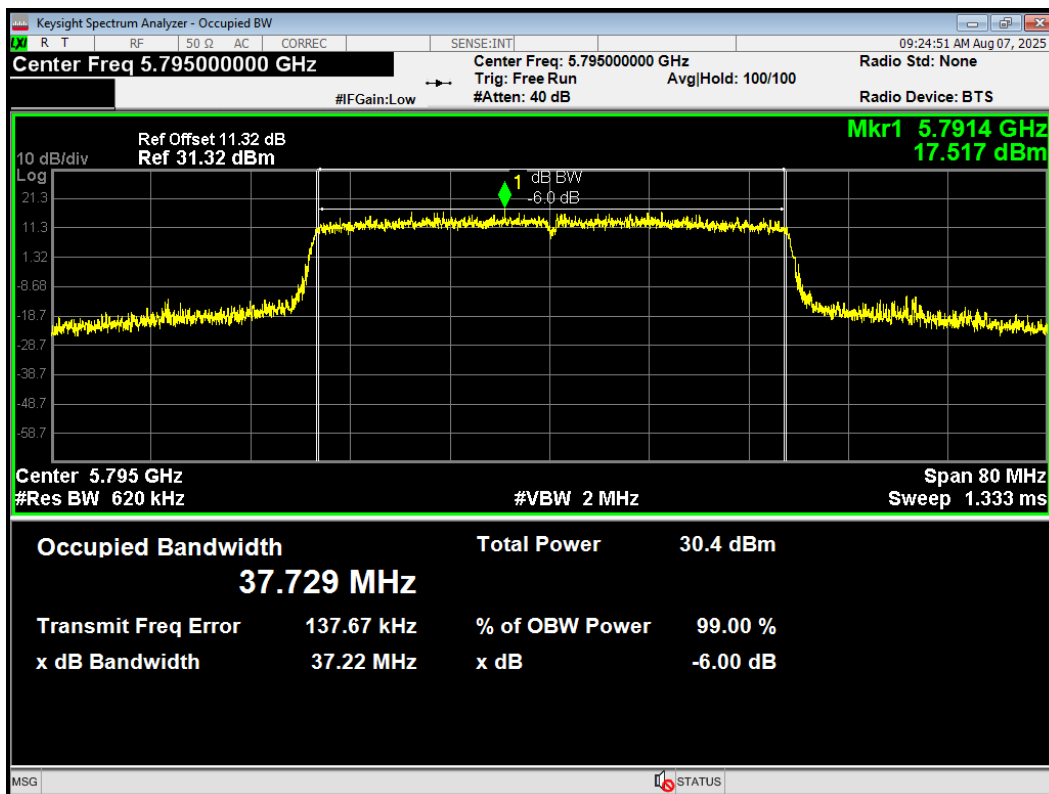
-6dB Bandwidth 802.11ax(HE40) 5710MHz



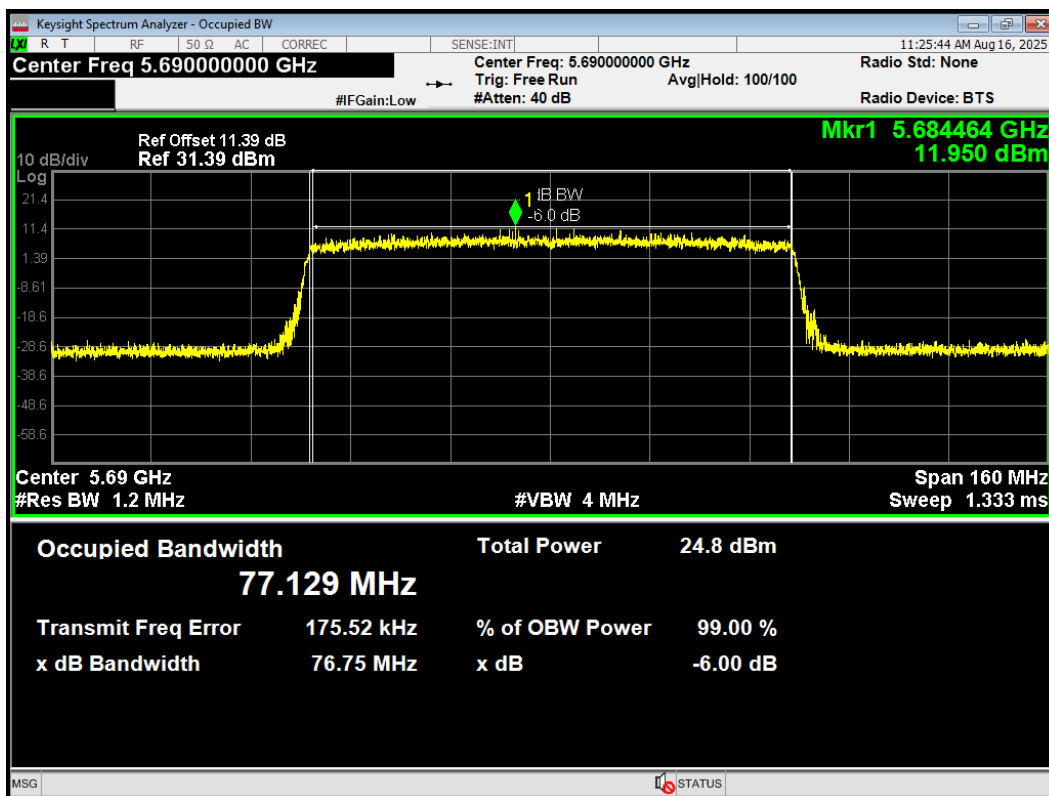
-6dB Bandwidth 802.11ax(HE40) 5755MHz



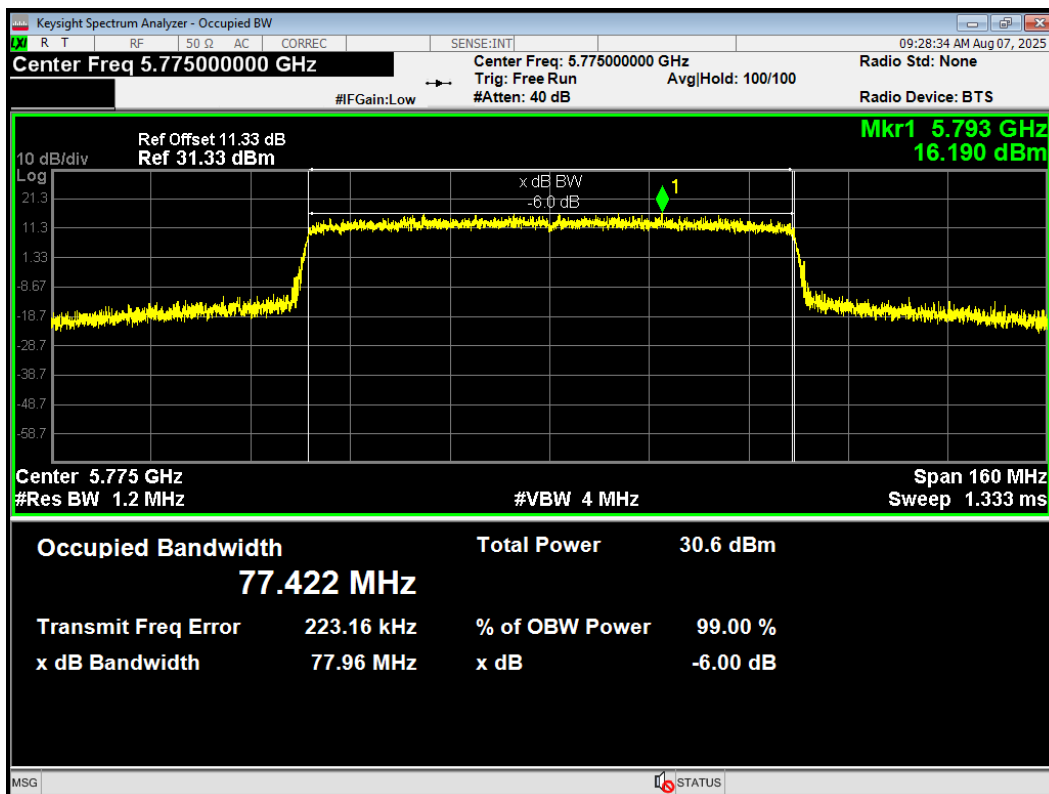
-6dB Bandwidth 802.11ax(HE40) 5795MHz



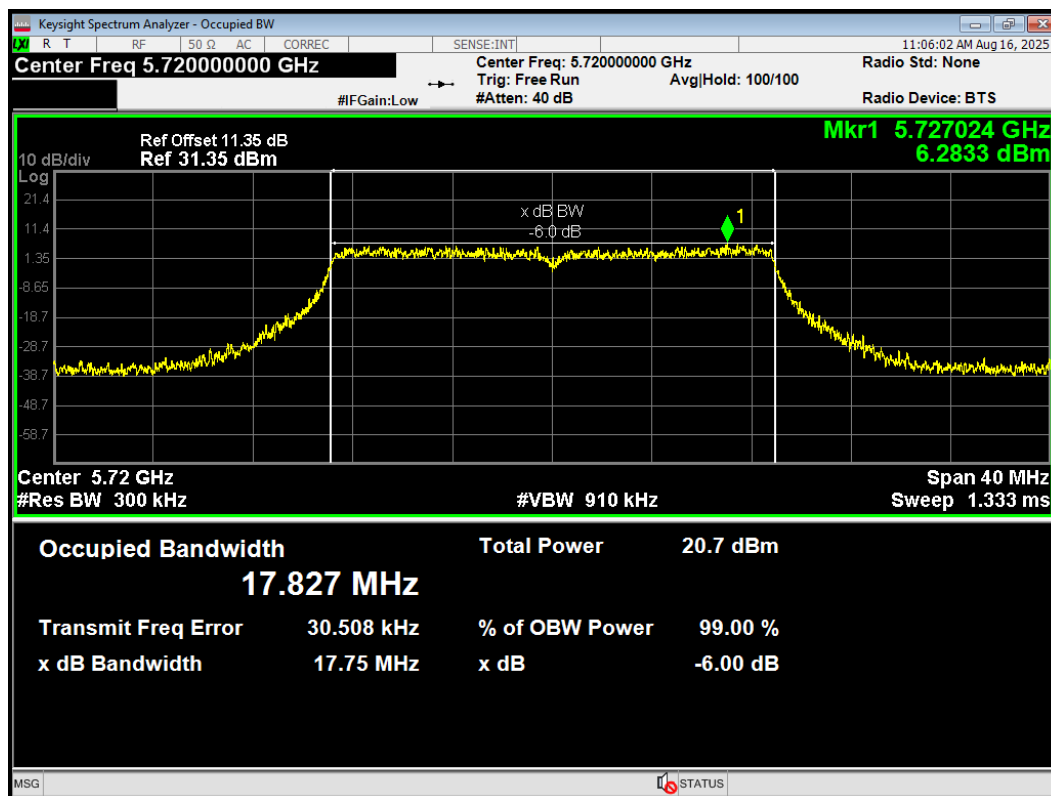
-6dB Bandwidth NVNT 802.11ax(HE80) 5690MHz Ant1



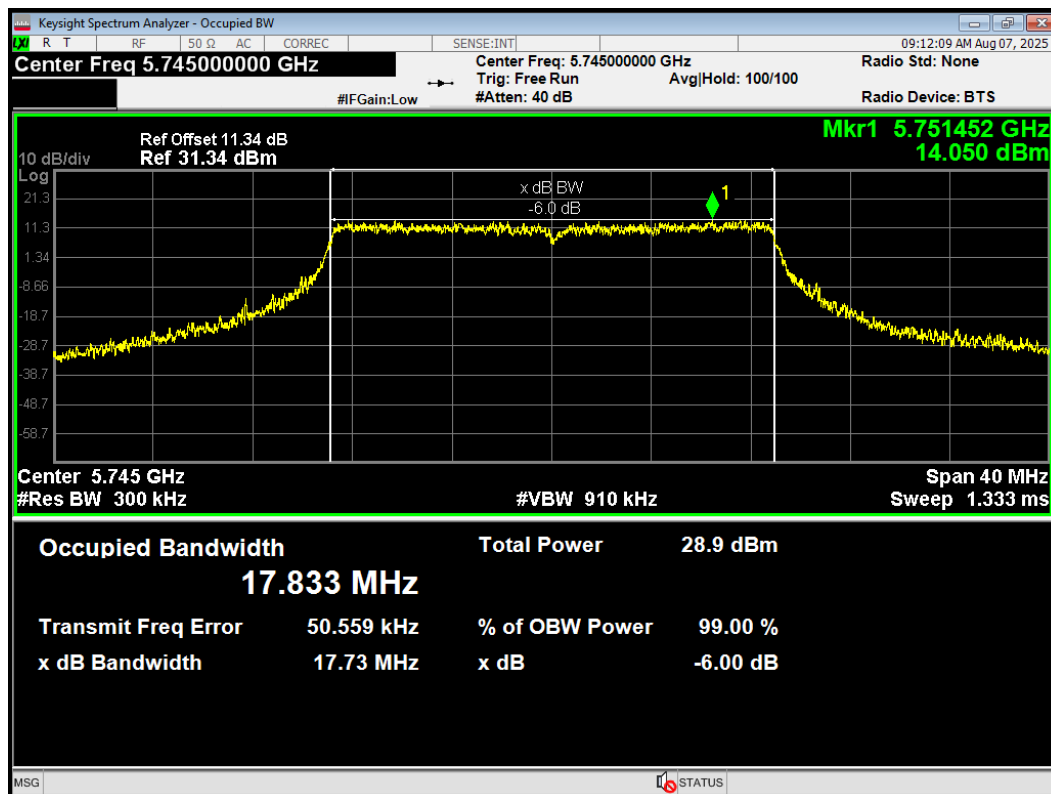
-6dB Bandwidth 802.11ax(HE80) 5775MHz



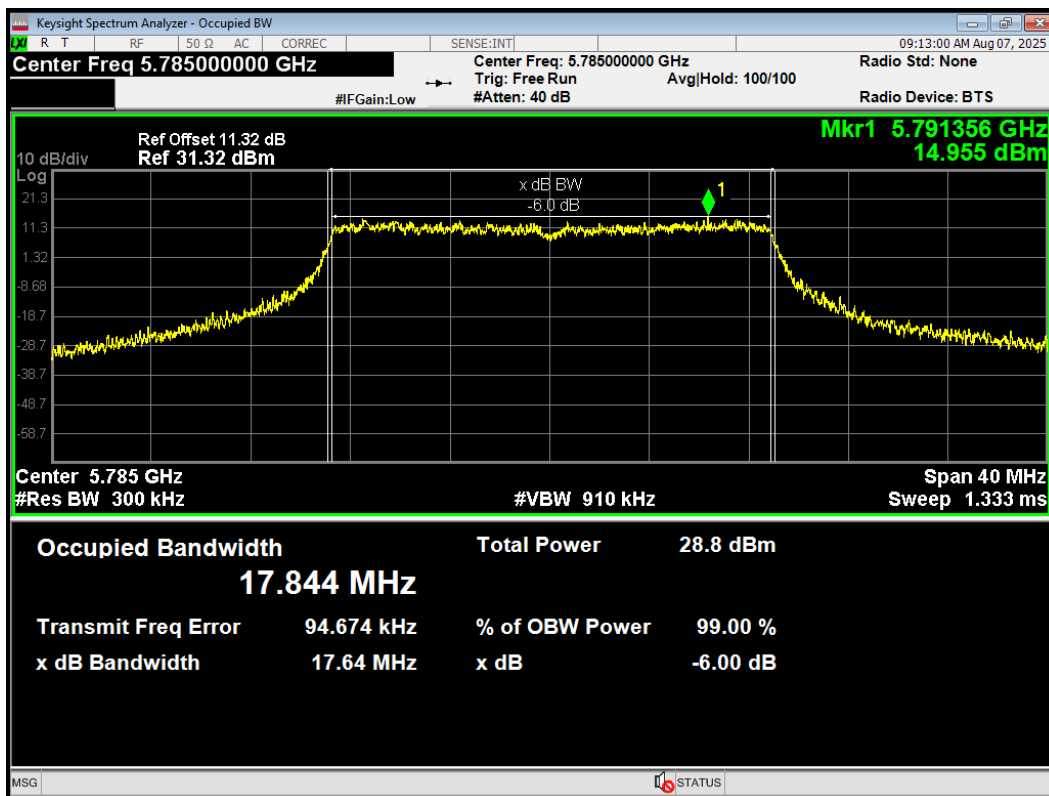
-6dB Bandwidth 802.11n(HT20) 5720MHz



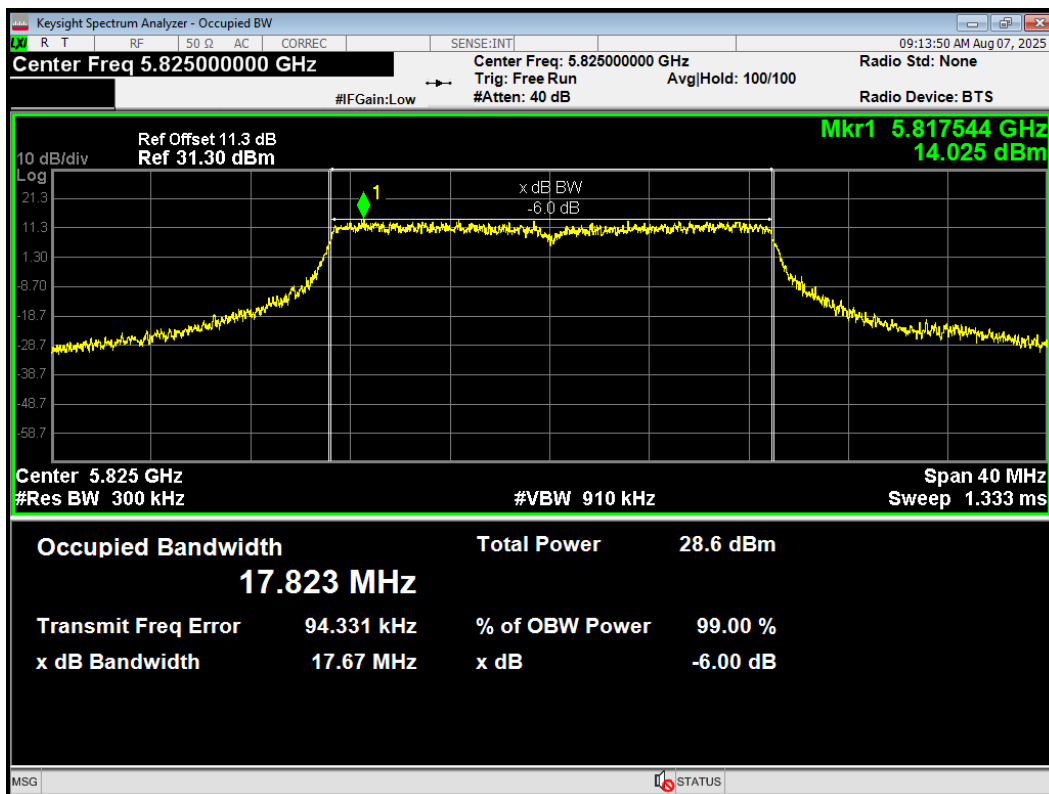
-6dB Bandwidth 802.11n(HT20) 5745MHz



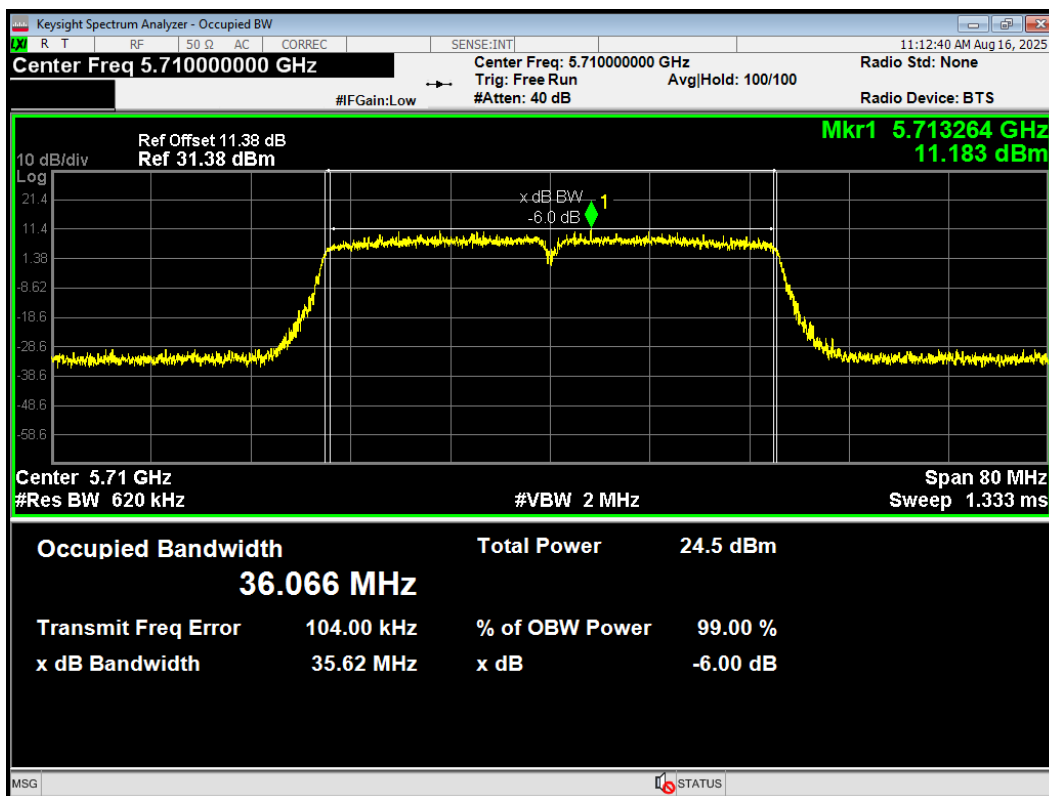
-6dB Bandwidth 802.11n(HT20) 5785MHz



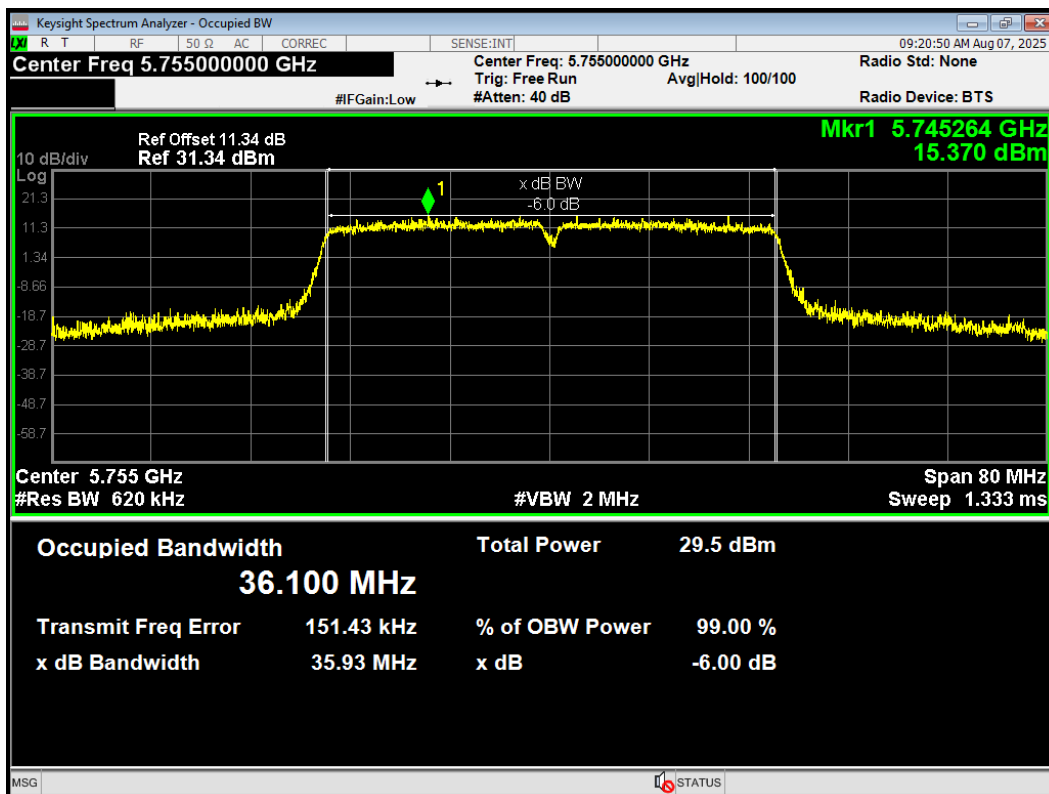
-6dB Bandwidth 802.11n(HT20) 5825MHz



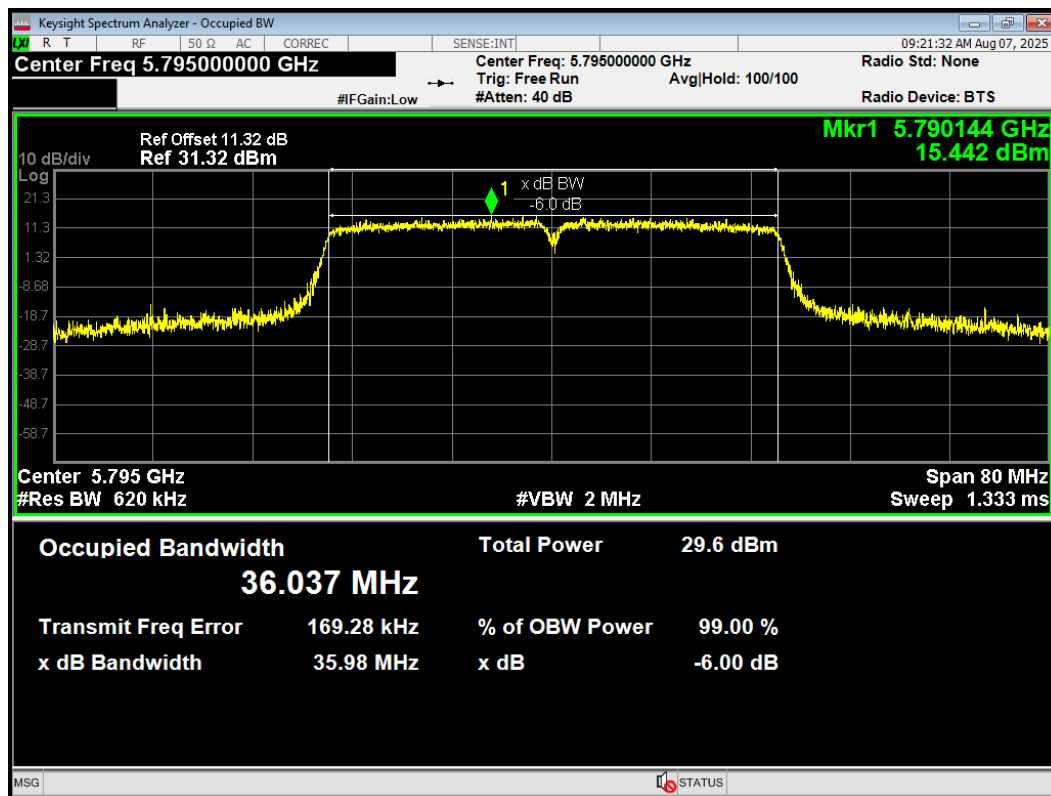
-6dB Bandwidth 802.11n(HT40) 5710MHz



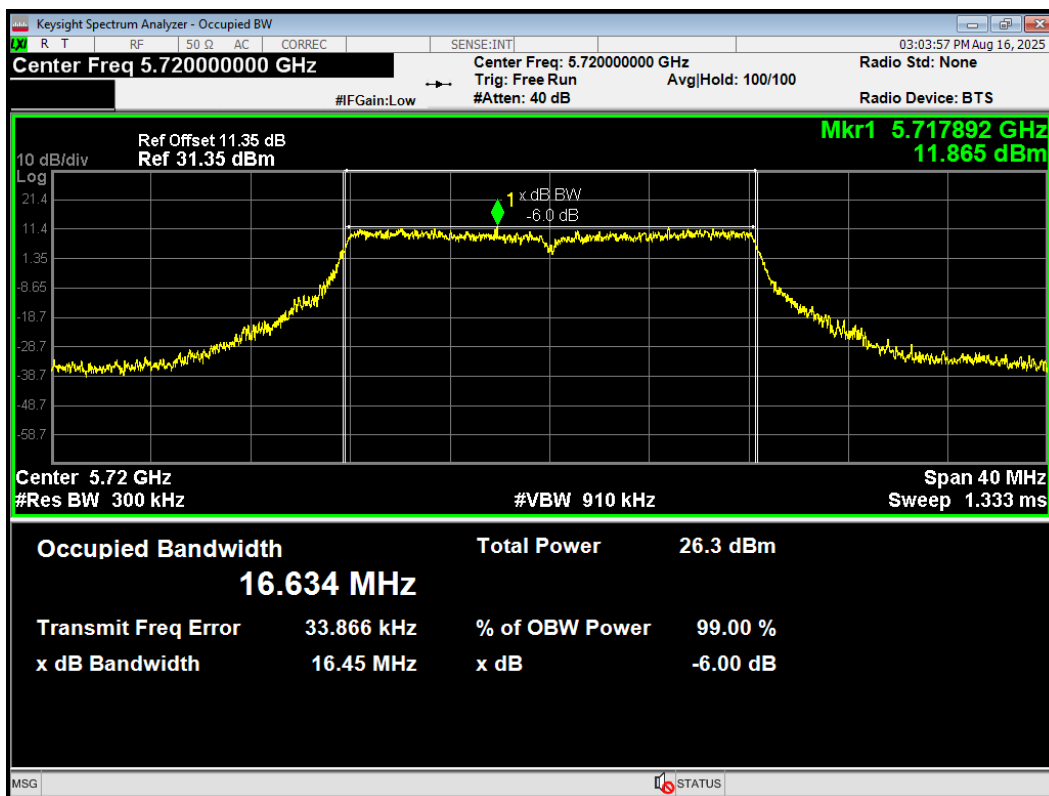
-6dB Bandwidth 802.11n(HT40) 5755MHz



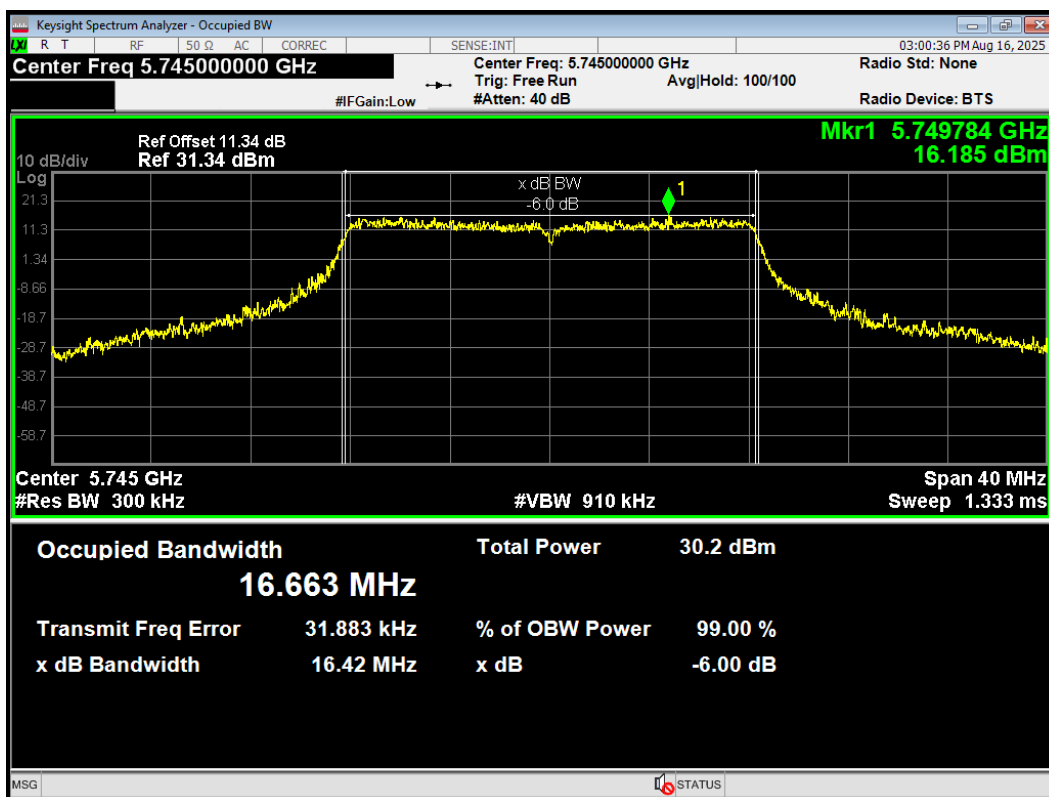
-6dB Bandwidth 802.11n(HT40) 5795MHz



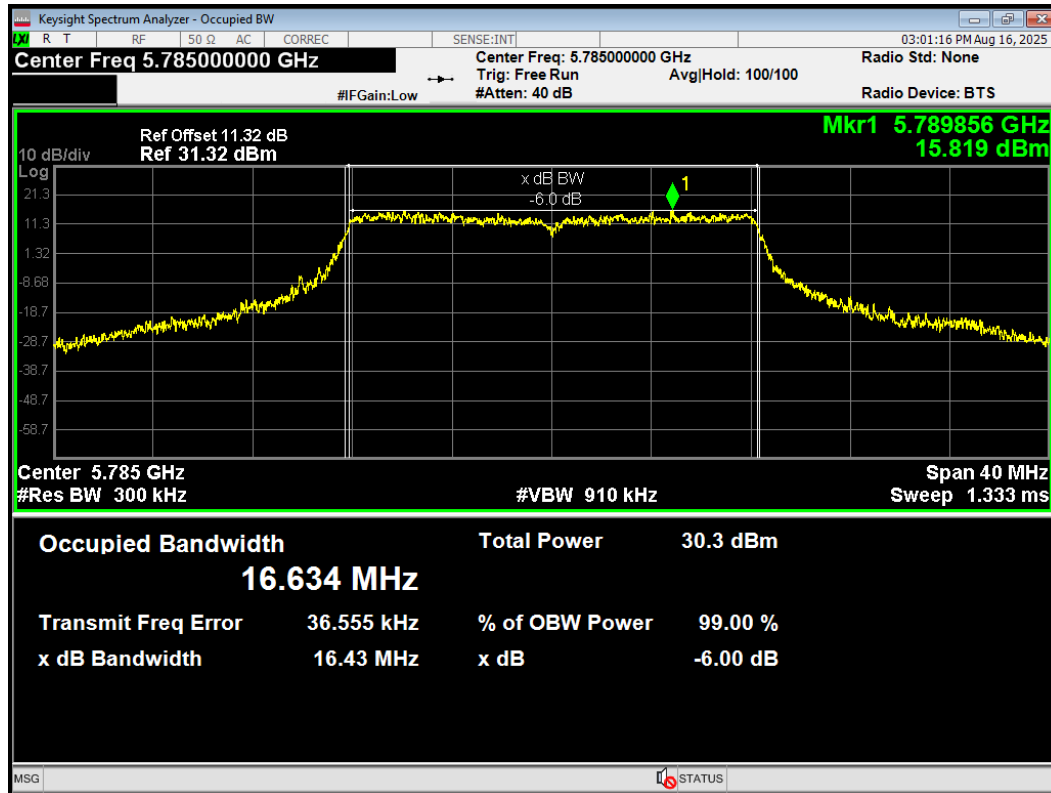
-6dB Bandwidth 802.11a 5720MHz



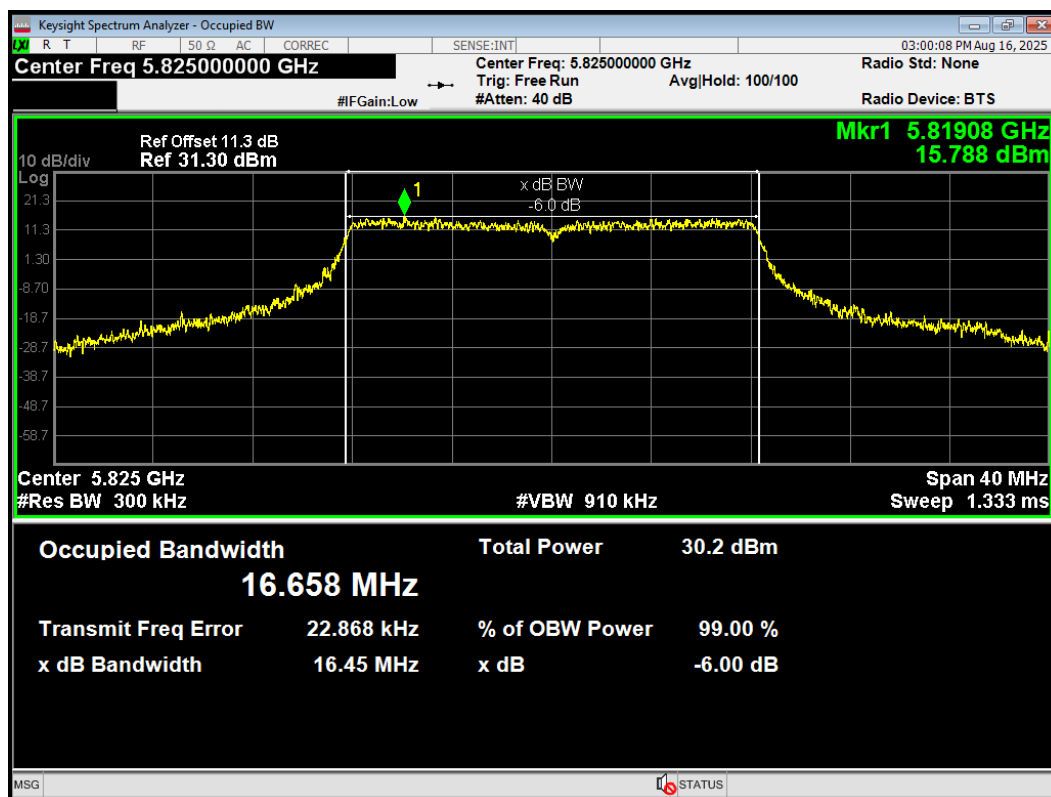
-6dB Bandwidth 802.11a 5745MHz



-6dB Bandwidth 802.11a 5785MHz



-6dB Bandwidth 802.11a 5825MHz



## 5.2. Average Power Output

### Ambient condition

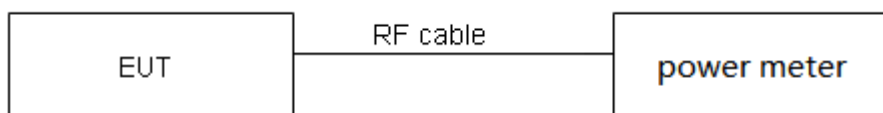
| Temperature | Relative humidity | Pressure         |
|-------------|-------------------|------------------|
| 15°C ~ 35°C | 20% ~ 80%         | 86 kPa ~ 106 kPa |

### Methods of Measurement

During the process of the testing, The EUT was connected to the average power meter through an external attenuator and a known loss cable. The EUT is max power transmission with proper modulation. We use Maximum average Conducted Output Power Level Method in KDB789033 for this test

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

### Test Setup



### Limits

Rule FCC Part 15.407(a)(1) / FCC Part 15.407(a) (2) / FCC Part 15.407(a) (3)

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 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 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23

dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) 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.

(2) 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.

(3) For the band 5.725-5.85 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.

#### **Measurement Uncertainty**

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 0.44 \text{ dB}$ .

## Test Results

| Mode                                                                           | Duty cycle | Duty cycle correction Factor (dB) |
|--------------------------------------------------------------------------------|------------|-----------------------------------|
| 802.11a                                                                        | 0.925      | 0.34                              |
| 802.11n HT20                                                                   | 0.915      | 0.38                              |
| 802.11n HT40                                                                   | 0.902      | 0.45                              |
| 802.11ac VHT20                                                                 | 0.925      | 0.34                              |
| 802.11ac VHT40                                                                 | 0.907      | 0.42                              |
| 802.11ac VHT80                                                                 | 0.918      | 0.37                              |
| 802.11ac VHT160                                                                | 0.904      | 0.44                              |
| 802.11ax HE20                                                                  | 0.924      | 0.34                              |
| 802.11ax HE40                                                                  | 0.927      | 0.33                              |
| 802.11ax HE80                                                                  | 0.927      | 0.33                              |
| 802.11ax HE160                                                                 | 0.923      | 0.35                              |
| Note: when Duty cycle $\geq 0.98$ , Duty cycle correction Factor not required. |            |                                   |

| Band     | Network Standards | Channel/<br>Frequency<br>(MHz) | Power Index |           |           |           |
|----------|-------------------|--------------------------------|-------------|-----------|-----------|-----------|
|          |                   |                                | Antenna 1   | Antenna 2 | Antenna 3 | Antenna 4 |
| U-NII-1  | 802.11a           | 36/5180                        | 23          | 23        | 23        | 23        |
|          |                   | 40/5200                        | 27          | 27        | 27        | 27        |
|          |                   | 48/5240                        | 27          | 27        | 27        | 27        |
| U-NII-2A | 802.11a           | 52/5260                        | 21          | 21        | 21        | 21        |
|          |                   | 60/5300                        | 21          | 21        | 21        | 21        |
|          |                   | 64/5320                        | 21          | 21        | 21        | 21        |
| U-NII-2C | 802.11a           | 100/5500                       | 21          | 21        | 21        | 21        |
|          |                   | 118/5580                       | 21          | 21        | 21        | 21        |
|          |                   | 140/5700                       | 21          | 21        | 21        | 21        |
|          |                   | 144/5720                       | 21          | 21        | 21        | 21        |
| U-NII-3  | 802.11a           | 144/5720                       | 21          | 21        | 21        | 21        |
|          |                   | 149/5745                       | 30          | 30        | 30        | 30        |
|          |                   | 157/5785                       | 30          | 30        | 30        | 30        |
|          |                   | 165/5825                       | 30          | 30        | 30        | 30        |

| Band     | Network Standards | Channel/<br>Frequency<br>(MHz) | Power Index |             |
|----------|-------------------|--------------------------------|-------------|-------------|
|          |                   |                                | MIMO        | Beamforming |
| U-NII-1  | 802.11n HT20      | 36/5180                        | 17          | 17          |
|          |                   | 40/5200                        | 22          | 17          |
|          |                   | 48/5240                        | 22          | 17          |
|          | 802.11n HT40      | 38/5190                        | 16          | 16          |
|          |                   | 46/5230                        | 21          | 18          |
|          | 802.11ac VHT20    | 36/5180                        | 17          | 17          |
|          |                   | 40/5200                        | 22          | 17          |
|          |                   | 48/5240                        | 22          | 17          |
|          | 802.11ac VHT40    | 38/5190                        | 16          | 16          |
|          |                   | 46/5230                        | 21          | 18          |
|          | 802.11ac VHT80    | 42/5210                        | 15          | 15          |
|          | 802.11ax HE20     | 36/5180                        | 16          | 16          |
|          |                   | 40/5200                        | 22          | 16          |
|          |                   | 48/5240                        | 22          | 17          |
|          | 802.11ax HE40     | 38/5190                        | 16          | 16          |
|          |                   | 46/5230                        | 19          | 18          |
|          | 802.11ax HE80     | 42/5210                        | 15          | 15          |
| U-NII-2A | 802.11n HT20      | 52/5260                        | 16          | 12          |

|          |                 |          |    |    |
|----------|-----------------|----------|----|----|
|          | 802.11n HT40    | 60/5300  | 17 | 12 |
|          |                 | 64/5320  | 17 | 11 |
|          |                 | 54/5270  | 18 | 14 |
|          |                 | 62/5310  | 16 | 14 |
|          | 802.11ac VHT20  | 52/5260  | 17 | 12 |
|          |                 | 60/5300  | 17 | 12 |
|          |                 | 64/5320  | 17 | 11 |
|          | 802.11ac VHT40  | 54/5270  | 18 | 14 |
|          |                 | 62/5310  | 16 | 14 |
|          | 802.11ac VHT80  | 58/5290  | 15 | 14 |
|          | 802.11ac VHT160 | 50/5250  | 15 | 15 |
|          | 802.11ax HE20   | 52/5260  | 16 | 12 |
|          |                 | 60/5300  | 17 | 12 |
|          |                 | 64/5320  | 16 | 12 |
|          | 802.11ax HE40   | 54/5270  | 18 | 13 |
|          |                 | 62/5310  | 15 | 14 |
|          | 802.11ax HE80   | 58/5290  | 15 | 13 |
|          | 802.11ax HE160  | 50/5250  | 15 | 15 |
| U-NII-2C | 802.11n HT20    | 100/5500 | 16 | 11 |
|          |                 | 116/5580 | 16 | 11 |
|          |                 | 140/5700 | 16 | 10 |
|          |                 | 144/5720 | 15 | 11 |
|          | 802.11n HT40    | 102/5510 | 15 | 13 |
|          |                 | 110/5550 | 17 | 13 |
|          |                 | 134/5670 | 16 | 13 |
|          |                 | 142/5710 | 18 | 13 |
|          | 802.11ac VHT20  | 100/5500 | 16 | 11 |
|          |                 | 116/5580 | 16 | 11 |
|          |                 | 140/5700 | 16 | 12 |
|          |                 | 144/5720 | 15 | 11 |
|          | 802.11ac VHT40  | 102/5510 | 15 | 13 |
|          |                 | 110/5550 | 17 | 13 |
|          |                 | 134/5670 | 16 | 13 |
|          |                 | 142/5710 | 18 | 13 |
|          | 802.11ac VHT80  | 106/5530 | 15 | 13 |
|          |                 | 138/5690 | 18 | 13 |
|          | 802.11ac VHT160 | 114/5570 | 15 | 13 |
|          | 802.11ax HE20   | 100/5500 | 16 | 11 |
|          |                 | 116/5580 | 17 | 11 |

|         |                   |          |    |    |
|---------|-------------------|----------|----|----|
|         |                   | 140/5700 | 15 | 11 |
|         |                   | 144/5720 | 15 | 10 |
|         | 802.11ax<br>HE40  | 102/5510 | 16 | 13 |
|         |                   | 110/5550 | 16 | 13 |
|         |                   | 134/5670 | 16 | 13 |
|         |                   | 142/5710 | 17 | 13 |
|         | 802.11ax<br>HE80  | 106/5530 | 15 | 13 |
|         |                   | 138/5690 | 17 | 13 |
|         | 802.11ax<br>HE160 | 114/5570 | 15 | 13 |
| U-NII-3 | 802.11n HT20      | 144/5720 | 15 | 11 |
|         |                   | 149/5745 | 24 | 20 |
|         |                   | 157/5785 | 24 | 20 |
|         |                   | 165/5825 | 24 | 20 |
|         | 802.11n HT40      | 142/5710 | 18 | 13 |
|         |                   | 151/5755 | 23 | 19 |
|         |                   | 159/5795 | 23 | 19 |
|         | 802.11ac<br>VHT20 | 144/5720 | 15 | 11 |
|         |                   | 149/5745 | 24 | 20 |
|         |                   | 157/5785 | 24 | 20 |
|         |                   | 165/5825 | 24 | 20 |
|         | 802.11ac<br>VHT40 | 142/5710 | 18 | 13 |
|         |                   | 151/5755 | 23 | 19 |
|         |                   | 159/5795 | 23 | 19 |
|         | 802.11ac<br>VHT80 | 138/5690 | 18 | 13 |
|         |                   | 155/5775 | 24 | 19 |
|         | 802.11ax<br>HE20  | 144/5720 | 15 | 10 |
|         |                   | 149/5745 | 23 | 19 |
|         |                   | 157/5785 | 23 | 19 |
|         |                   | 165/5825 | 23 | 19 |
|         | 802.11ax<br>HE40  | 142/5710 | 17 | 13 |
|         |                   | 151/5755 | 23 | 19 |
|         |                   | 159/5795 | 23 | 19 |
|         | 802.11ax<br>HE80  | 138/5690 | 17 | 13 |
|         |                   | 155/5775 | 23 | 19 |

| Test Mode         |         | Channel/<br>Frequency<br>(MHz) | B=26 dB<br>bandwidth<br>(MHz) | Limit<br>11 dBm + 10 log B<br>(dBm) | Final Limit<br>(dBm) |
|-------------------|---------|--------------------------------|-------------------------------|-------------------------------------|----------------------|
| U-NII-2A          | 802.11a | 52/5260                        | 20.53                         | 24.12                               | 24.00                |
|                   |         | 60/5300                        | 20.24                         | 24.06                               | 24.00                |
|                   |         | 64/5320                        | 20.27                         | 24.07                               | 24.00                |
| U-NII-2C          | 802.11a | 100/5500                       | 20.35                         | 24.09                               | 24.00                |
|                   |         | 118/5580                       | 20.20                         | 24.05                               | 24.00                |
|                   |         | 140/5700                       | 20.03                         | 24.02                               | 24.00                |
|                   |         | 144/5720                       | 19.90                         | 23.99                               | 23.99                |
| Note: 250mW=24dBm |         |                                |                               |                                     |                      |

| Test Mode |                 | Channel/<br>Frequency<br>(MHz) | B=26 dB<br>bandwidth<br>(MHz) | Limit<br>11 dBm + 10 log B<br>(dBm) | Final Limit<br>(dBm) |
|-----------|-----------------|--------------------------------|-------------------------------|-------------------------------------|----------------------|
| U-NII-2A  | 802.11n HT20    | 52/5260                        | 21.97                         | 24.42                               | 24.00                |
|           |                 | 60/5300                        | 21.38                         | 24.30                               | 24.00                |
|           |                 | 64/5320                        | 21.31                         | 24.29                               | 24.00                |
|           | 802.11n HT40    | 54/5270                        | 39.63                         | 26.98                               | 24.00                |
|           |                 | 62/5310                        | 39.78                         | 27.00                               | 24.00                |
|           | 802.11ac VHT20  | 52/5260                        | 21.21                         | 24.26                               | 24.00                |
|           |                 | 60/5300                        | 21.78                         | 24.38                               | 24.00                |
|           |                 | 64/5320                        | 21.29                         | 24.28                               | 24.00                |
|           | 802.11ac VHT40  | 54/5270                        | 39.72                         | 26.99                               | 24.00                |
|           |                 | 62/5310                        | 40.36                         | 27.06                               | 24.00                |
|           | 802.11ac VHT80  | 58/5290                        | 82.85                         | 30.18                               | 24.00                |
|           | 802.11ac VHT160 | 50/5250                        | 164.47                        | 33.16                               | 24.00                |
|           | 802.11ax HE20   | 52/5260                        | 21.60                         | 24.34                               | 24.00                |
|           |                 | 60/5300                        | 21.43                         | 24.31                               | 24.00                |
|           |                 | 64/5320                        | 21.44                         | 24.31                               | 24.00                |
|           | 802.11ax HE40   | 54/5270                        | 40.54                         | 27.08                               | 24.00                |
|           |                 | 62/5310                        | 40.51                         | 27.08                               | 24.00                |
|           | 802.11ax HE80   | 58/5290                        | 83.02                         | 30.19                               | 24.00                |
|           | 802.11ax HE160  | 50/5250                        | 164.31                        | 33.16                               | 24.00                |
| U-NII-2C  | 802.11n HT20    | 100/5500                       | 22.00                         | 24.42                               | 24.00                |
|           |                 | 116/5580                       | 21.57                         | 24.34                               | 24.00                |
|           |                 | 140/5700                       | 21.69                         | 24.36                               | 24.00                |
|           |                 | 144/5720                       | 21.56                         | 24.34                               | 24.00                |
|           | 802.11n HT40    | 102/5510                       | 39.88                         | 27.01                               | 24.00                |

|                   |                 |          |        |       |       |
|-------------------|-----------------|----------|--------|-------|-------|
|                   |                 | 110/5550 | 40.26  | 27.05 | 24.00 |
|                   |                 | 134/5670 | 39.82  | 27.00 | 24.00 |
|                   |                 | 142/5710 | 39.70  | 26.99 | 24.00 |
|                   | 802.11ac VHT20  | 100/5500 | 21.21  | 24.26 | 24.00 |
|                   |                 | 116/5580 | 21.71  | 24.37 | 24.00 |
|                   |                 | 140/5700 | 21.83  | 24.39 | 24.00 |
|                   |                 | 144/5720 | 21.67  | 24.36 | 24.00 |
|                   | 802.11ac VHT40  | 102/5510 | 40.03  | 27.02 | 24.00 |
|                   |                 | 110/5550 | 39.63  | 26.98 | 24.00 |
|                   |                 | 134/5670 | 39.99  | 27.02 | 24.00 |
|                   |                 | 142/5710 | 39.50  | 26.97 | 24.00 |
|                   | 802.11ac VHT80  | 122/5610 | 81.65  | 30.12 | 24.00 |
|                   |                 | 138/5690 | 81.25  | 30.10 | 24.00 |
|                   | 802.11ac VHT160 | 114/5570 | 164.28 | 33.16 | 24.00 |
|                   | 802.11ax HE20   | 100/5500 | 21.51  | 24.33 | 24.00 |
|                   |                 | 116/5580 | 21.42  | 24.31 | 24.00 |
|                   |                 | 140/5700 | 21.47  | 24.32 | 24.00 |
|                   |                 | 144/5720 | 21.75  | 24.38 | 24.00 |
|                   | 802.11ax HE40   | 102/5510 | 40.57  | 27.08 | 24.00 |
|                   |                 | 110/5550 | 40.25  | 27.05 | 24.00 |
|                   |                 | 134/5670 | 40.41  | 27.07 | 24.00 |
|                   |                 | 142/5710 | 40.22  | 27.04 | 24.00 |
|                   | 802.11ax HE80   | 122/5610 | 81.77  | 30.13 | 24.00 |
|                   |                 | 138/5690 | 82.27  | 30.15 | 24.00 |
|                   | 802.11ax HE160  | 114/5570 | 165.67 | 33.19 | 24.00 |
| Note: 250mW=24dBm |                 |          |        |       |       |

**SISO**
**Antenna 1**
**U-NII-1**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 36/5180                        | 22.82                              | 23.16                                      | 30             | PASS       |
|                                                                                             | 40/5200                        | 26.41                              | 26.75                                      | 30             | PASS       |
|                                                                                             | 48/5240                        | 26.27                              | 26.61                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-2A**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 52/5260                        | 20.55                              | 20.89                                      | 24.00          | PASS       |
|                                                                                             | 60/5300                        | 20.12                              | 20.46                                      | 24.00          | PASS       |
|                                                                                             | 64/5320                        | 20.21                              | 20.55                                      | 24.00          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-2C**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 100/5500                       | 20.34                              | 20.68                                      | 24.00          | PASS       |
|                                                                                             | 118/5580                       | 20.44                              | 20.78                                      | 24.00          | PASS       |
|                                                                                             | 140/5700                       | 20.42                              | 20.76                                      | 24.00          | PASS       |
|                                                                                             | 144/5720                       | 19.30                              | 19.64                                      | 23.99          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-3**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 144/5720                       | 14.05                              | 14.39                                      | 30             | PASS       |
|                                                                                             | 149/5745                       | 28.58                              | 28.92                                      | 30             | PASS       |
|                                                                                             | 157/5785                       | 28.66                              | 29.00                                      | 30             | PASS       |
|                                                                                             | 165/5825                       | 28.46                              | 28.80                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

## Antenna 2

### U-NII-1

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 36/5180                        | 22.66                              | 23.00                                      | 30             | PASS       |
|                                                                                             | 40/5200                        | 26.06                              | 26.40                                      | 30             | PASS       |
|                                                                                             | 48/5240                        | 26.18                              | 26.52                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

### U-NII-2A

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 52/5260                        | 20.47                              | 20.81                                      | 24.00          | PASS       |
|                                                                                             | 60/5300                        | 20.38                              | 20.72                                      | 24.00          | PASS       |
|                                                                                             | 64/5320                        | 20.47                              | 20.81                                      | 24.00          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

### U-NII-2C

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 100/5500                       | 20.45                              | 20.79                                      | 24.00          | PASS       |
|                                                                                             | 118/5580                       | 20.66                              | 21.00                                      | 24.00          | PASS       |
|                                                                                             | 140/5700                       | 20.86                              | 21.20                                      | 24.00          | PASS       |
|                                                                                             | 144/5720                       | 19.44                              | 19.78                                      | 23.99          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

### U-NII-3

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 144/5720                       | 14.35                              | 14.69                                      | 30             | PASS       |
|                                                                                             | 149/5745                       | 28.26                              | 28.60                                      | 30             | PASS       |
|                                                                                             | 157/5785                       | 28.69                              | 29.03                                      | 30             | PASS       |
|                                                                                             | 165/5825                       | 28.62                              | 28.96                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**Antenna 3**
**U-NII-1**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 36/5180                        | 22.68                              | 23.02                                      | 30             | PASS       |
|                                                                                             | 40/5200                        | 26.26                              | 26.60                                      | 30             | PASS       |
|                                                                                             | 48/5240                        | 26.17                              | 26.51                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-2A**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 52/5260                        | 20.40                              | 20.74                                      | 24.00          | PASS       |
|                                                                                             | 60/5300                        | 20.05                              | 20.39                                      | 24.00          | PASS       |
|                                                                                             | 64/5320                        | 20.20                              | 20.54                                      | 24.00          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-2C**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 100/5500                       | 20.45                              | 20.79                                      | 24.00          | PASS       |
|                                                                                             | 118/5580                       | 20.56                              | 20.90                                      | 24.00          | PASS       |
|                                                                                             | 140/5700                       | 20.51                              | 20.85                                      | 24.00          | PASS       |
|                                                                                             | 144/5720                       | 19.52                              | 19.86                                      | 23.99          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-3**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 144/5720                       | 14.20                              | 14.54                                      | 30             | PASS       |
|                                                                                             | 149/5745                       | 28.69                              | 29.03                                      | 30             | PASS       |
|                                                                                             | 157/5785                       | 28.79                              | 29.13                                      | 30             | PASS       |
|                                                                                             | 165/5825                       | 28.66                              | 29.00                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**Antenna 4**
**U-NII-1**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 36/5180                        | 23.12                              | 23.46                                      | 30             | PASS       |
|                                                                                             | 40/5200                        | 26.70                              | 27.04                                      | 30             | PASS       |
|                                                                                             | 48/5240                        | 26.46                              | 26.80                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-2A**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 52/5260                        | 20.67                              | 21.01                                      | 24.00          | PASS       |
|                                                                                             | 60/5300                        | 20.37                              | 20.71                                      | 24.00          | PASS       |
|                                                                                             | 64/5320                        | 20.52                              | 20.86                                      | 24.00          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-2C**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 100/5500                       | 20.79                              | 21.13                                      | 24.00          | PASS       |
|                                                                                             | 118/5580                       | 20.50                              | 20.84                                      | 24.00          | PASS       |
|                                                                                             | 140/5700                       | 20.65                              | 20.99                                      | 24.00          | PASS       |
|                                                                                             | 144/5720                       | 19.40                              | 19.74                                      | 23.99          | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**U-NII-3**

| Test Mode                                                                                   | Channel/<br>Frequency<br>(MHz) | Average Power<br>Measured<br>(dBm) | Average Power<br>with duty factor<br>(dBm) | Limit<br>(dBm) | Conclusion |
|---------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------|----------------|------------|
| 802.11a                                                                                     | 144/5720                       | 14.16                              | 14.50                                      | 30             | PASS       |
|                                                                                             | 149/5745                       | 28.37                              | 28.71                                      | 30             | PASS       |
|                                                                                             | 157/5785                       | 28.70                              | 29.04                                      | 30             | PASS       |
|                                                                                             | 165/5825                       | 28.67                              | 29.01                                      | 30             | PASS       |
| Note: Average Power with duty factor = Average Power Measured +Duty cycle correction factor |                                |                                    |                                            |                |            |

**MIMO**
**U-NII-1**

| Network Standards | Channel/<br>Frequency (MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|-----------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                             | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n HT20      | 36/5180                     | 17.21                        | 17.60                                | 16.77                        | 17.15                                | 16.10                        | 16.48                                | 16.56                        | 16.94                                | 23.08             | 30          | PASS       |
|                   | 40/5200                     | 20.67                        | 21.05                                | 21.61                        | 21.99                                | 21.38                        | 21.77                                | 21.37                        | 21.75                                | 27.67             | 30          | PASS       |
|                   | 48/5240                     | 20.44                        | 20.83                                | 21.26                        | 21.65                                | 21.30                        | 21.68                                | 21.38                        | 21.76                                | 27.52             | 30          | PASS       |
| 802.11n HT40      | 38/5190                     | 14.97                        | 15.42                                | 15.89                        | 16.33                                | 15.01                        | 15.46                                | 15.67                        | 16.12                                | 21.87             | 30          | PASS       |
|                   | 46/5230                     | 21.28                        | 21.73                                | 20.89                        | 21.34                                | 20.76                        | 21.21                                | 20.77                        | 21.22                                | 27.40             | 30          | PASS       |
| 802.11ac VHT20    | 36/5180                     | 16.96                        | 17.29                                | 16.62                        | 16.96                                | 16.00                        | 16.34                                | 16.44                        | 16.78                                | 22.88             | 30          | PASS       |
|                   | 40/5200                     | 21.17                        | 21.51                                | 22.21                        | 22.55                                | 21.90                        | 22.24                                | 21.96                        | 22.30                                | 28.19             | 30          | PASS       |
|                   | 48/5240                     | 21.05                        | 21.39                                | 21.84                        | 22.18                                | 21.77                        | 22.11                                | 21.82                        | 22.16                                | 27.99             | 30          | PASS       |
| 802.11ac VHT40    | 38/5190                     | 14.62                        | 15.04                                | 16.01                        | 16.43                                | 14.94                        | 15.36                                | 15.63                        | 16.06                                | 21.78             | 30          | PASS       |
|                   | 46/5230                     | 21.17                        | 21.59                                | 20.67                        | 21.10                                | 20.60                        | 21.03                                | 20.94                        | 21.37                                | 27.30             | 30          | PASS       |
| 802.11ac VHT80    | 42/5210                     | 13.85                        | 14.22                                | 15.00                        | 15.37                                | 14.69                        | 15.06                                | 14.81                        | 15.18                                | 21.00             | 30          | PASS       |
| 802.11ax HE20     | 36/5180                     | 15.87                        | 16.21                                | 15.52                        | 15.87                                | 14.77                        | 15.11                                | 15.41                        | 15.76                                | 21.77             | 30          | PASS       |
|                   | 40/5200                     | 21.18                        | 21.52                                | 22.24                        | 22.59                                | 21.91                        | 22.26                                | 21.87                        | 22.22                                | 28.18             | 30          | PASS       |
|                   | 48/5240                     | 21.04                        | 21.39                                | 21.89                        | 22.24                                | 21.86                        | 22.21                                | 21.74                        | 22.08                                | 28.01             | 30          | PASS       |
| 802.11ax HE40     | 38/5190                     | 15.07                        | 15.40                                | 16.18                        | 16.51                                | 15.38                        | 15.71                                | 15.93                        | 16.26                                | 22.01             | 30          | PASS       |
|                   | 46/5230                     | 19.66                        | 19.99                                | 18.95                        | 19.28                                | 18.67                        | 19.00                                | 19.21                        | 19.54                                | 25.48             | 30          | PASS       |
| 802.11ax HE80     | 42/5210                     | 14.37                        | 14.70                                | 15.68                        | 16.01                                | 15.42                        | 15.75                                | 15.42                        | 15.75                                | 21.60             | 30          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42dBi<6dBi. So the power limit is 30.00 dBm.

**U-NII-2A**

| Network Standards  | Channel/<br>Frequency<br>(MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|--------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                    |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n<br>HT20    | 52/5260                        | 14.32                        | 14.70                                | 15.18                        | 15.57                                | 15.11                        | 15.49                                | 14.94                        | 15.33                                | 21.30             | 24          | PASS       |
|                    | 60/5300                        | 15.45                        | 15.83                                | 15.85                        | 16.24                                | 16.06                        | 16.45                                | 15.36                        | 15.74                                | 22.09             | 24          | PASS       |
|                    | 64/5320                        | 15.03                        | 15.41                                | 15.72                        | 16.11                                | 16.08                        | 16.46                                | 15.27                        | 15.65                                | 21.95             | 24          | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 16.66                        | 17.11                                | 17.40                        | 17.85                                | 17.75                        | 18.20                                | 17.49                        | 17.94                                | 23.81             | 24          | PASS       |
|                    | 62/5310                        | 14.62                        | 15.07                                | 15.00                        | 15.45                                | 15.52                        | 15.97                                | 14.62                        | 15.06                                | 21.42             | 24          | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 15.47                        | 15.81                                | 16.08                        | 16.42                                | 16.33                        | 16.67                                | 16.05                        | 16.39                                | 22.35             | 24          | PASS       |
|                    | 60/5300                        | 15.46                        | 15.80                                | 15.54                        | 15.88                                | 16.02                        | 16.35                                | 15.37                        | 15.70                                | 21.96             | 24          | PASS       |
|                    | 64/5320                        | 15.08                        | 15.42                                | 15.61                        | 15.95                                | 16.03                        | 16.37                                | 15.20                        | 15.54                                | 21.86             | 24          | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 16.72                        | 17.14                                | 17.54                        | 17.97                                | 17.50                        | 17.93                                | 17.52                        | 17.94                                | 23.78             | 24          | PASS       |
|                    | 62/5310                        | 14.79                        | 15.21                                | 15.12                        | 15.55                                | 15.59                        | 16.01                                | 14.79                        | 15.21                                | 21.53             | 24          | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | 13.45                        | 13.82                                | 14.22                        | 14.59                                | 14.61                        | 14.98                                | 14.07                        | 14.44                                | 20.50             | 24          | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | 13.83                        | 14.27                                | 14.95                        | 15.39                                | 15.06                        | 15.50                                | 14.87                        | 15.31                                | 21.16             | 24          | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 14.90                        | 15.24                                | 15.89                        | 16.23                                | 15.71                        | 16.05                                | 15.77                        | 16.12                                | 21.95             | 24          | PASS       |
|                    | 60/5300                        | 16.17                        | 16.51                                | 16.40                        | 16.75                                | 16.65                        | 16.99                                | 16.02                        | 16.37                                | 22.68             | 24          | PASS       |
|                    | 64/5320                        | 14.73                        | 15.07                                | 15.16                        | 15.50                                | 15.59                        | 15.94                                | 14.93                        | 15.27                                | 21.48             | 24          | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 16.95                        | 17.28                                | 17.81                        | 18.14                                | 17.81                        | 18.14                                | 17.84                        | 18.17                                | 23.97             | 24          | PASS       |
|                    | 62/5310                        | 13.89                        | 14.22                                | 14.50                        | 14.83                                | 14.69                        | 15.02                                | 14.37                        | 14.70                                | 20.72             | 24          | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | 13.88                        | 14.21                                | 14.80                        | 15.13                                | 15.17                        | 15.50                                | 14.69                        | 15.02                                | 21.01             | 24          | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | 14.33                        | 14.68                                | 15.30                        | 15.64                                | 15.35                        | 15.69                                | 15.29                        | 15.64                                | 21.45             | 24          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42 dBi<6dBi. So the power limit is 24dBm.

## U-NII-2C

| Network Standards  | Channel/<br>Frequency<br>(MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|--------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                    |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n<br>HT20    | 100/5500                       | 15.06                        | 15.45                                | 15.82                        | 16.21                                | 15.68                        | 16.06                                | 15.24                        | 15.62                                | 21.87             | 24          | PASS       |
|                    | 116/5580                       | 15.10                        | 15.48                                | 15.47                        | 15.85                                | 15.62                        | 16.00                                | 15.41                        | 15.79                                | 21.81             | 24          | PASS       |
|                    | 140/5700                       | 15.23                        | 15.61                                | 15.13                        | 15.51                                | 16.02                        | 16.41                                | 15.34                        | 15.73                                | 21.85             | 24          | PASS       |
|                    | 144/5720                       | 13.25                        | 13.63                                | 13.29                        | 13.67                                | 13.26                        | 13.64                                | 13.26                        | 13.64                                | 19.67             | 24          | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 14.13                        | 14.58                                | 15.02                        | 15.47                                | 15.22                        | 15.67                                | 15.01                        | 15.46                                | 21.34             | 24          | PASS       |
|                    | 110/5550                       | 16.55                        | 17.00                                | 16.56                        | 17.01                                | 16.78                        | 17.23                                | 16.88                        | 17.33                                | 23.16             | 24          | PASS       |
|                    | 134/5670                       | 15.32                        | 15.77                                | 15.79                        | 16.24                                | 15.77                        | 16.22                                | 15.46                        | 15.91                                | 22.06             | 24          | PASS       |
|                    | 142/5710                       | 17.52                        | 17.97                                | 17.71                        | 18.16                                | 17.33                        | 17.78                                | 17.04                        | 17.49                                | 23.88             | 24          | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 15.09                        | 15.43                                | 15.73                        | 16.07                                | 15.82                        | 16.15                                | 15.18                        | 15.52                                | 21.83             | 24          | PASS       |
|                    | 116/5580                       | 15.09                        | 15.42                                | 15.43                        | 15.77                                | 15.61                        | 15.95                                | 15.50                        | 15.83                                | 21.77             | 24          | PASS       |
|                    | 140/5700                       | 15.04                        | 15.38                                | 15.20                        | 15.54                                | 15.91                        | 16.25                                | 15.27                        | 15.61                                | 21.73             | 24          | PASS       |
|                    | 144/5720                       | 13.09                        | 13.43                                | 13.35                        | 13.69                                | 13.48                        | 13.82                                | 13.12                        | 13.46                                | 19.62             | 24          | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 14.36                        | 14.78                                | 15.19                        | 15.61                                | 15.13                        | 15.55                                | 14.74                        | 15.17                                | 21.31             | 24          | PASS       |
|                    | 110/5550                       | 16.51                        | 16.93                                | 16.65                        | 17.07                                | 16.93                        | 17.36                                | 16.89                        | 17.31                                | 23.19             | 24          | PASS       |
|                    | 134/5670                       | 15.40                        | 15.82                                | 15.69                        | 16.11                                | 15.89                        | 16.31                                | 15.67                        | 16.09                                | 22.11             | 24          | PASS       |
|                    | 142/5710                       | 17.48                        | 17.90                                | 17.90                        | 18.32                                | 17.52                        | 17.95                                | 17.04                        | 17.47                                | 23.94             | 24          | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 13.96                        | 14.33                                | 14.97                        | 15.34                                | 14.99                        | 15.36                                | 14.86                        | 15.24                                | 21.11             | 24          | PASS       |
|                    | 138/5690                       | 17.44                        | 17.81                                | 17.76                        | 18.13                                | 17.10                        | 17.47                                | 17.19                        | 17.56                                | 23.77             | 24          | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | 14.58                        | 15.02                                | 15.27                        | 15.70                                | 15.48                        | 15.92                                | 14.95                        | 15.39                                | 21.54             | 24          | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 14.28                        | 14.62                                | 15.38                        | 15.73                                | 15.51                        | 15.85                                | 15.21                        | 15.55                                | 21.48             | 24          | PASS       |
|                    | 116/5580                       | 15.83                        | 16.18                                | 16.20                        | 16.55                                | 16.12                        | 16.46                                | 16.06                        | 16.40                                | 22.42             | 24          | PASS       |
|                    | 140/5700                       | 14.62                        | 14.96                                | 15.06                        | 15.40                                | 15.54                        | 15.88                                | 15.17                        | 15.51                                | 21.47             | 24          | PASS       |
|                    | 144/5720                       | 13.86                        | 14.20                                | 14.01                        | 14.36                                | 13.88                        | 14.22                                | 13.63                        | 13.98                                | 20.21             | 24          | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 15.44                        | 15.77                                | 16.39                        | 16.72                                | 16.40                        | 16.73                                | 15.89                        | 16.22                                | 22.40             | 24          | PASS       |
|                    | 110/5550                       | 16.81                        | 17.14                                | 17.16                        | 17.49                                | 17.23                        | 17.56                                | 17.02                        | 17.35                                | 23.41             | 24          | PASS       |
|                    | 134/5670                       | 15.62                        | 15.95                                | 16.05                        | 16.38                                | 16.11                        | 16.44                                | 15.17                        | 15.50                                | 22.10             | 24          | PASS       |
|                    | 142/5710                       | 16.77                        | 17.10                                | 17.09                        | 17.42                                | 16.59                        | 16.92                                | 16.61                        | 16.94                                | 23.12             | 24          | PASS       |
| 802.11ax<br>HE80   | 106/5530                       | 14.68                        | 15.01                                | 15.40                        | 15.73                                | 15.33                        | 15.66                                | 15.89                        | 16.22                                | 21.70             | 24          | PASS       |
|                    | 138/5690                       | 16.73                        | 17.06                                | 17.38                        | 17.71                                | 16.89                        | 17.22                                | 16.77                        | 17.10                                | 23.30             | 24          | PASS       |
| 802.11ax<br>HE160  | 114/5570                       | 15.26                        | 15.61                                | 15.71                        | 16.06                                | 16.01                        | 16.36                                | 15.61                        | 15.96                                | 22.03             | 24          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other,

Directional gain = 5.42 dBi<6dBi. So the power limit is 24.00 dBm.

### U-NII-3

| Network Standards | Channel/<br>Frequency<br>(MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n<br>HT20   | 144/5720                       | 8.71                         | 9.10                                 | 8.98                         | 9.36                                 | 8.76                         | 9.15                                 | 8.21                         | 8.60                                 | 15.08             | 30          | PASS       |
|                   | 149/5745                       | 22.77                        | 23.15                                | 23.44                        | 23.82                                | 23.50                        | 23.88                                | 23.41                        | 23.79                                | 29.69             | 30          | PASS       |
|                   | 157/5785                       | 23.10                        | 23.49                                | 23.58                        | 23.96                                | 23.22                        | 23.60                                | 23.42                        | 23.80                                | 29.74             | 30          | PASS       |
|                   | 165/5825                       | 23.02                        | 23.41                                | 23.34                        | 23.73                                | 22.84                        | 23.22                                | 23.11                        | 23.49                                | 29.49             | 30          | PASS       |
| 802.11n<br>HT40   | 142/5710                       | 6.36                         | 6.81                                 | 6.80                         | 7.25                                 | 6.18                         | 6.63                                 | 6.05                         | 6.50                                 | 12.83             | 30          | PASS       |
|                   | 151/5755                       | 22.28                        | 22.73                                | 22.64                        | 23.09                                | 22.80                        | 23.25                                | 22.98                        | 23.43                                | 29.15             | 30          | PASS       |
|                   | 159/5795                       | 22.57                        | 23.02                                | 22.83                        | 23.27                                | 22.43                        | 22.88                                | 22.69                        | 23.14                                | 29.10             | 30          | PASS       |
| 802.11ac<br>VHT20 | 144/5720                       | 8.47                         | 8.81                                 | 8.92                         | 9.26                                 | 8.68                         | 9.02                                 | 8.40                         | 8.74                                 | 14.98             | 30          | PASS       |
|                   | 149/5745                       | 22.98                        | 23.32                                | 23.26                        | 23.59                                | 23.40                        | 23.73                                | 23.37                        | 23.71                                | 29.61             | 30          | PASS       |
|                   | 157/5785                       | 23.17                        | 23.51                                | 23.47                        | 23.81                                | 23.09                        | 23.43                                | 23.34                        | 23.68                                | 29.63             | 30          | PASS       |
|                   | 165/5825                       | 23.24                        | 23.58                                | 23.42                        | 23.75                                | 22.85                        | 23.18                                | 23.29                        | 23.63                                | 29.56             | 30          | PASS       |
| 802.11ac<br>VHT40 | 142/5710                       | 6.25                         | 6.67                                 | 6.44                         | 6.87                                 | 6.45                         | 6.87                                 | 6.21                         | 6.63                                 | 12.78             | 30          | PASS       |
|                   | 151/5755                       | 22.31                        | 22.73                                | 22.78                        | 23.21                                | 22.71                        | 23.13                                | 22.76                        | 23.18                                | 29.09             | 30          | PASS       |
|                   | 159/5795                       | 22.62                        | 23.04                                | 22.91                        | 23.33                                | 22.35                        | 22.77                                | 22.77                        | 23.19                                | 29.11             | 30          | PASS       |
| 802.11ac<br>VHT80 | 138/5690                       | 2.68                         | 3.05                                 | 2.99                         | 3.36                                 | 2.46                         | 2.83                                 | 2.40                         | 2.77                                 | 9.03              | 30          | PASS       |
|                   | 155/5775                       | 23.27                        | 23.64                                | 23.74                        | 24.11                                | 23.42                        | 23.79                                | 23.57                        | 23.94                                | 29.89             | 30          | PASS       |
| 802.11ax<br>HE20  | 144/5720                       | 10.03                        | 10.37                                | 9.91                         | 10.25                                | 10.03                        | 10.37                                | 9.37                         | 9.72                                 | 16.21             | 30          | PASS       |
|                   | 149/5745                       | 22.39                        | 22.73                                | 23.11                        | 23.45                                | 22.85                        | 23.19                                | 22.94                        | 23.29                                | 29.19             | 30          | PASS       |
|                   | 157/5785                       | 22.69                        | 23.03                                | 23.26                        | 23.60                                | 22.86                        | 23.20                                | 23.12                        | 23.46                                | 29.35             | 30          | PASS       |
|                   | 165/5825                       | 22.68                        | 23.02                                | 23.13                        | 23.47                                | 22.39                        | 22.73                                | 22.77                        | 23.11                                | 29.11             | 30          | PASS       |
| 802.11ax<br>HE40  | 142/5710                       | 6.51                         | 6.84                                 | 6.76                         | 7.09                                 | 6.40                         | 6.73                                 | 6.19                         | 6.52                                 | 12.82             | 30          | PASS       |
|                   | 151/5755                       | 22.55                        | 22.88                                | 23.11                        | 23.44                                | 23.07                        | 23.40                                | 23.32                        | 23.65                                | 29.37             | 30          | PASS       |
|                   | 159/5795                       | 22.61                        | 22.94                                | 23.42                        | 23.75                                | 22.99                        | 23.32                                | 23.25                        | 23.58                                | 29.43             | 30          | PASS       |
| 802.11ax<br>HE80  | 138/5690                       | 3.48                         | 3.81                                 | 3.67                         | 4.00                                 | 2.70                         | 3.03                                 | 2.78                         | 3.11                                 | 9.53              | 30          | PASS       |
|                   | 155/5775                       | 23.10                        | 23.43                                | 23.39                        | 23.72                                | 23.04                        | 23.37                                | 23.42                        | 23.75                                | 29.59             | 30          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42 dBi<6dBi. So the power limit is 30.00 dBm.

# Beamforming

## U-NII-1

| Network Standards | Channel/<br>Frequency<br>(MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n<br>HT20   | 36/5180                        | 15.82                        | 16.20                                | 16.77                        | 17.15                                | 16.23                        | 16.62                                | 16.35                        | 16.73                                | 22.71             | 24.56       | PASS       |
|                   | 40/5200                        | 15.82                        | 16.20                                | 16.72                        | 17.10                                | 16.11                        | 16.49                                | 16.47                        | 16.85                                | 22.70             | 24.56       | PASS       |
|                   | 48/5240                        | 15.77                        | 16.16                                | 16.25                        | 16.63                                | 16.45                        | 16.83                                | 16.32                        | 16.71                                | 22.61             | 24.56       | PASS       |
| 802.11n<br>HT40   | 38/5190                        | 14.97                        | 15.42                                | 15.89                        | 16.33                                | 15.01                        | 15.46                                | 15.67                        | 16.12                                | 21.87             | 24.56       | PASS       |
|                   | 46/5230                        | 16.89                        | 17.34                                | 18.01                        | 18.46                                | 17.57                        | 18.02                                | 17.93                        | 18.38                                | 24.09             | 24.56       | PASS       |
| 802.11ac<br>VHT20 | 36/5180                        | 15.78                        | 16.12                                | 16.71                        | 17.04                                | 15.97                        | 16.31                                | 16.35                        | 16.69                                | 22.58             | 24.56       | PASS       |
|                   | 40/5200                        | 15.87                        | 16.21                                | 16.71                        | 17.05                                | 16.13                        | 16.46                                | 16.36                        | 16.70                                | 22.64             | 24.56       | PASS       |
|                   | 48/5240                        | 15.47                        | 15.81                                | 16.07                        | 16.41                                | 16.40                        | 16.74                                | 16.12                        | 16.46                                | 22.39             | 24.56       | PASS       |
| 802.11ac<br>VHT40 | 38/5190                        | 14.62                        | 15.04                                | 16.01                        | 16.43                                | 14.94                        | 15.36                                | 15.63                        | 16.06                                | 21.78             | 24.56       | PASS       |
|                   | 46/5230                        | 16.79                        | 17.21                                | 17.62                        | 18.04                                | 17.63                        | 18.05                                | 17.89                        | 18.32                                | 23.95             | 24.56       | PASS       |
| 802.11ac<br>VHT80 | 42/5210                        | 13.85                        | 14.22                                | 15.00                        | 15.37                                | 14.69                        | 15.06                                | 14.81                        | 15.18                                | 21.00             | 24.56       | PASS       |
| 802.11ax<br>HE20  | 36/5180                        | 15.36                        | 15.70                                | 16.38                        | 16.72                                | 15.45                        | 15.80                                | 16.07                        | 16.42                                | 22.20             | 24.56       | PASS       |
|                   | 40/5200                        | 15.92                        | 16.26                                | 15.30                        | 15.64                                | 15.76                        | 16.11                                | 16.27                        | 16.62                                | 22.19             | 24.56       | PASS       |
|                   | 48/5240                        | 16.07                        | 16.42                                | 16.87                        | 17.22                                | 17.02                        | 17.37                                | 16.96                        | 17.31                                | 23.11             | 24.56       | PASS       |
| 802.11ax<br>HE40  | 38/5190                        | 15.07                        | 15.40                                | 16.18                        | 16.51                                | 15.38                        | 15.71                                | 15.93                        | 16.26                                | 22.01             | 24.56       | PASS       |
|                   | 46/5230                        | 17.15                        | 17.48                                | 18.14                        | 18.47                                | 17.85                        | 18.18                                | 18.02                        | 18.35                                | 24.16             | 24.56       | PASS       |
| 802.11ax<br>HE80  | 42/5210                        | 14.37                        | 14.70                                | 15.68                        | 16.01                                | 15.42                        | 15.75                                | 15.42                        | 15.75                                | 21.60             | 24.56       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10 \log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi} > 6 \text{ dBi}$ . So the limit is 24.56 dBm.

**U-NII-2A**

| Network Standards  | Channel/<br>Frequency<br>(MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|--------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                    |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n<br>HT20    | 52/5260                        | 9.35                         | 9.74                                 | 10.29                        | 10.68                                | 10.48                        | 10.86                                | 10.38                        | 10.77                                | 16.55             | 18.56       | PASS       |
|                    | 60/5300                        | 9.35                         | 9.74                                 | 9.98                         | 10.36                                | 10.22                        | 10.61                                | 9.47                         | 9.86                                 | 16.18             | 18.56       | PASS       |
|                    | 64/5320                        | 9.08                         | 9.47                                 | 9.67                         | 10.05                                | 9.30                         | 9.69                                 | 9.39                         | 9.78                                 | 15.77             | 18.56       | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 11.10                        | 11.55                                | 12.22                        | 12.67                                | 12.44                        | 12.89                                | 12.34                        | 12.79                                | 18.53             | 18.56       | PASS       |
|                    | 62/5310                        | 11.27                        | 11.72                                | 12.30                        | 12.75                                | 12.60                        | 13.04                                | 12.02                        | 12.47                                | 18.54             | 18.56       | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 9.44                         | 9.78                                 | 10.36                        | 10.70                                | 10.58                        | 10.91                                | 10.29                        | 10.62                                | 16.54             | 18.56       | PASS       |
|                    | 60/5300                        | 9.31                         | 9.65                                 | 9.83                         | 10.17                                | 10.30                        | 10.64                                | 9.52                         | 9.86                                 | 16.12             | 18.56       | PASS       |
|                    | 64/5320                        | 8.92                         | 9.26                                 | 9.56                         | 9.89                                 | 9.29                         | 9.62                                 | 9.43                         | 9.77                                 | 15.66             | 18.56       | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 11.18                        | 11.60                                | 12.26                        | 12.69                                | 12.47                        | 12.90                                | 12.31                        | 12.73                                | 18.53             | 18.56       | PASS       |
|                    | 62/5310                        | 11.31                        | 11.74                                | 12.17                        | 12.60                                | 12.62                        | 13.04                                | 12.08                        | 12.50                                | 18.51             | 18.56       | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | 11.61                        | 11.98                                | 12.30                        | 12.67                                | 12.48                        | 12.86                                | 12.09                        | 12.47                                | 18.52             | 18.56       | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | 10.88                        | 11.32                                | 11.87                        | 12.31                                | 12.25                        | 12.69                                | 12.01                        | 12.45                                | 18.24             | 18.56       | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 9.98                         | 10.33                                | 10.79                        | 11.13                                | 11.08                        | 11.43                                | 10.85                        | 11.19                                | 17.06             | 18.56       | PASS       |
|                    | 60/5300                        | 9.88                         | 10.23                                | 10.66                        | 11.00                                | 10.88                        | 11.22                                | 10.25                        | 10.59                                | 16.80             | 18.56       | PASS       |
|                    | 64/5320                        | 9.80                         | 10.15                                | 10.64                        | 10.98                                | 10.94                        | 11.28                                | 9.97                         | 10.31                                | 16.73             | 18.56       | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 11.00                        | 11.33                                | 11.84                        | 12.17                                | 12.03                        | 12.36                                | 11.98                        | 12.31                                | 18.08             | 18.56       | PASS       |
|                    | 62/5310                        | 11.53                        | 11.86                                | 12.32                        | 12.65                                | 12.59                        | 12.92                                | 12.24                        | 12.57                                | 18.54             | 18.56       | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | 11.25                        | 11.58                                | 12.03                        | 12.36                                | 12.40                        | 12.73                                | 11.84                        | 12.17                                | 18.25             | 18.56       | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | 11.31                        | 11.66                                | 12.31                        | 12.66                                | 12.44                        | 12.79                                | 12.29                        | 12.64                                | 18.48             | 18.56       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44\text{ dBi} > 6\text{dBi}$ . So the limit is 18.56 dBm.

## U-NII-2C

| Network Standards  | Channel/<br>Frequency<br>(MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|--------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                    |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n<br>HT20    | 100/5500                       | 9.41                         | 9.80                                 | 9.58                         | 9.96                                 | 9.53                         | 9.91                                 | 9.50                         | 9.89                                 | 15.91             | 18.56       | PASS       |
|                    | 116/5580                       | 9.45                         | 9.84                                 | 9.59                         | 9.97                                 | 9.45                         | 9.83                                 | 9.57                         | 9.95                                 | 15.92             | 18.56       | PASS       |
|                    | 140/5700                       | 8.46                         | 8.84                                 | 9.08                         | 9.47                                 | 8.36                         | 8.74                                 | 8.33                         | 8.71                                 | 14.97             | 18.56       | PASS       |
|                    | 144/5720                       | 8.23                         | 8.61                                 | 8.68                         | 9.06                                 | 8.63                         | 9.01                                 | 8.57                         | 8.95                                 | 14.93             | 18.56       | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 11.72                        | 12.16                                | 12.23                        | 12.68                                | 12.41                        | 12.85                                | 11.78                        | 12.23                                | 18.51             | 18.56       | PASS       |
|                    | 110/5550                       | 11.51                        | 11.96                                | 11.95                        | 12.40                                | 12.45                        | 12.90                                | 12.01                        | 12.46                                | 18.46             | 18.56       | PASS       |
|                    | 134/5670                       | 11.76                        | 12.21                                | 11.98                        | 12.43                                | 12.35                        | 12.79                                | 11.74                        | 12.18                                | 18.43             | 18.56       | PASS       |
|                    | 142/5710                       | 11.57                        | 12.02                                | 12.02                        | 12.47                                | 11.73                        | 12.18                                | 11.40                        | 11.85                                | 18.16             | 18.56       | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 9.44                         | 9.78                                 | 9.77                         | 10.11                                | 9.52                         | 9.86                                 | 9.57                         | 9.91                                 | 15.94             | 18.56       | PASS       |
|                    | 116/5580                       | 9.43                         | 9.77                                 | 9.66                         | 10.00                                | 9.49                         | 9.82                                 | 9.47                         | 9.81                                 | 15.87             | 18.56       | PASS       |
|                    | 140/5700                       | 10.28                        | 10.61                                | 10.26                        | 10.60                                | 11.01                        | 11.34                                | 10.45                        | 10.79                                | 16.87             | 18.56       | PASS       |
|                    | 144/5720                       | 8.22                         | 8.55                                 | 8.58                         | 8.92                                 | 8.55                         | 8.89                                 | 8.32                         | 8.66                                 | 14.78             | 18.56       | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 11.59                        | 12.02                                | 12.38                        | 12.81                                | 12.32                        | 12.74                                | 12.02                        | 12.44                                | 18.53             | 18.56       | PASS       |
|                    | 110/5550                       | 11.59                        | 12.01                                | 12.01                        | 12.43                                | 12.29                        | 12.71                                | 11.77                        | 12.20                                | 18.37             | 18.56       | PASS       |
|                    | 134/5670                       | 11.62                        | 12.04                                | 12.01                        | 12.43                                | 12.22                        | 12.64                                | 11.91                        | 12.34                                | 18.39             | 18.56       | PASS       |
|                    | 142/5710                       | 11.68                        | 12.10                                | 12.14                        | 12.56                                | 11.85                        | 12.27                                | 11.41                        | 11.83                                | 18.22             | 18.56       | PASS       |
| 802.11ac<br>VHT80  | 106/5530                       | 11.59                        | 11.96                                | 12.10                        | 12.47                                | 12.23                        | 12.60                                | 12.04                        | 12.41                                | 18.39             | 18.56       | PASS       |
|                    | 138/5690                       | 11.64                        | 12.01                                | 11.91                        | 12.29                                | 11.47                        | 11.84                                | 11.50                        | 11.87                                | 18.03             | 18.56       | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | 11.73                        | 12.16                                | 12.05                        | 12.49                                | 12.39                        | 12.82                                | 12.05                        | 12.48                                | 18.52             | 18.56       | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 9.95                         | 10.30                                | 10.67                        | 11.01                                | 10.65                        | 10.99                                | 10.13                        | 10.48                                | 16.73             | 18.56       | PASS       |
|                    | 116/5580                       | 9.94                         | 10.29                                | 10.39                        | 10.73                                | 10.45                        | 10.79                                | 10.32                        | 10.66                                | 16.64             | 18.56       | PASS       |
|                    | 140/5700                       | 9.75                         | 10.09                                | 10.06                        | 10.40                                | 10.66                        | 11.00                                | 10.24                        | 10.58                                | 16.55             | 18.56       | PASS       |
|                    | 144/5720                       | 7.65                         | 8.00                                 | 8.22                         | 8.56                                 | 7.96                         | 8.31                                 | 7.94                         | 8.28                                 | 14.31             | 18.56       | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 11.86                        | 12.19                                | 12.31                        | 12.64                                | 12.40                        | 12.73                                | 12.16                        | 12.49                                | 18.54             | 18.56       | PASS       |
|                    | 110/5550                       | 11.80                        | 12.13                                | 12.30                        | 12.63                                | 12.46                        | 12.79                                | 12.12                        | 12.45                                | 18.53             | 18.56       | PASS       |
|                    | 134/5670                       | 11.71                        | 12.04                                | 12.32                        | 12.65                                | 12.51                        | 12.84                                | 12.20                        | 12.53                                | 18.54             | 18.56       | PASS       |
|                    | 142/5710                       | 11.95                        | 12.28                                | 12.10                        | 12.43                                | 11.99                        | 12.32                                | 11.88                        | 12.21                                | 18.33             | 18.56       | PASS       |
| 802.11ax<br>HE80   | 106/5530                       | 11.99                        | 12.32                                | 12.58                        | 12.91                                | 12.14                        | 12.47                                | 12.01                        | 12.34                                | 18.54             | 18.56       | PASS       |
|                    | 138/5690                       | 12.16                        | 12.49                                | 12.50                        | 12.83                                | 11.84                        | 12.17                                | 11.96                        | 12.29                                | 18.47             | 18.56       | PASS       |
| 802.11ax<br>HE160  | 114/5570                       | 11.40                        | 11.75                                | 11.81                        | 12.16                                | 12.22                        | 12.57                                | 11.89                        | 12.24                                | 18.21             | 18.56       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional

gain =  $G_{ANT} + 10 \log(N_{ANT}) = 5.42 + 6.02 = 11.44 \text{ dBi}$  > 6dBi. So the limit is 18.56 dBm.

## U-NII-3

| Network Standards | Channel/<br>Frequency<br>(MHz) | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|--------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                                | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11n<br>HT20   | 144/5720                       | 3.50                         | 3.89                                 | 4.08                         | 4.46                                 | 3.60                         | 3.98                                 | 3.38                         | 3.77                                 | 10.05             | 24.56       | PASS       |
|                   | 149/5745                       | 18.00                        | 18.39                                | 18.31                        | 18.69                                | 18.09                        | 18.47                                | 18.11                        | 18.49                                | 24.53             | 24.56       | PASS       |
|                   | 157/5785                       | 18.04                        | 18.42                                | 18.32                        | 18.70                                | 19.97                        | 18.35                                | 18.06                        | 18.44                                | 24.50             | 24.56       | PASS       |
|                   | 165/5825                       | 18.11                        | 18.50                                | 18.32                        | 18.71                                | 18.00                        | 18.38                                | 18.06                        | 18.44                                | 24.53             | 24.56       | PASS       |
| 802.11n<br>HT40   | 142/5710                       | 0.83                         | 1.27                                 | 1.14                         | 1.58                                 | 0.51                         | 0.96                                 | 0.12                         | 0.57                                 | 7.13              | 24.56       | PASS       |
|                   | 151/5755                       | 17.29                        | 17.74                                | 17.82                        | 18.27                                | 17.74                        | 18.19                                | 17.65                        | 18.09                                | 24.10             | 24.56       | PASS       |
|                   | 159/5795                       | 17.57                        | 18.02                                | 17.71                        | 18.16                                | 17.41                        | 17.86                                | 17.87                        | 18.31                                | 24.11             | 24.56       | PASS       |
| 802.11ac<br>VHT20 | 144/5720                       | 3.47                         | 3.81                                 | 4.04                         | 4.38                                 | 3.90                         | 4.23                                 | 3.67                         | 4.01                                 | 10.13             | 24.56       | PASS       |
|                   | 149/5745                       | 18.11                        | 18.45                                | 18.30                        | 18.64                                | 18.16                        | 18.50                                | 18.17                        | 18.50                                | 24.54             | 24.56       | PASS       |
|                   | 157/5785                       | 18.03                        | 18.37                                | 18.31                        | 18.65                                | 18.15                        | 18.49                                | 18.16                        | 18.49                                | 24.52             | 24.56       | PASS       |
|                   | 165/5825                       | 18.01                        | 18.35                                | 18.54                        | 18.87                                | 17.84                        | 18.18                                | 18.31                        | 18.65                                | 24.54             | 24.56       | PASS       |
| 802.11ac<br>VHT40 | 142/5710                       | 0.59                         | 1.02                                 | 1.14                         | 1.56                                 | 0.65                         | 1.08                                 | 0.06                         | 0.48                                 | 7.07              | 24.56       | PASS       |
|                   | 151/5755                       | 17.44                        | 17.86                                | 17.86                        | 18.28                                | 17.76                        | 18.18                                | 17.70                        | 18.12                                | 24.14             | 24.56       | PASS       |
|                   | 159/5795                       | 17.68                        | 18.10                                | 17.67                        | 18.09                                | 17.63                        | 18.05                                | 17.92                        | 18.34                                | 24.17             | 24.56       | PASS       |
| 802.11ac<br>VHT80 | 138/5690                       | -3.12                        | -2.75                                | -2.23                        | -1.86                                | -3.36                        | -2.99                                | -3.33                        | -2.96                                | 3.41              | 24.56       | PASS       |
|                   | 155/5775                       | 17.70                        | 18.07                                | 17.72                        | 18.09                                | 17.63                        | 18.00                                | 17.70                        | 18.07                                | 24.08             | 24.56       | PASS       |
| 802.11ax<br>HE20  | 144/5720                       | 3.51                         | 3.85                                 | 4.01                         | 4.35                                 | 3.89                         | 4.23                                 | 3.58                         | 3.93                                 | 10.11             | 24.56       | PASS       |
|                   | 149/5745                       | 17.61                        | 17.95                                | 18.28                        | 18.62                                | 18.17                        | 18.52                                | 18.17                        | 18.51                                | 24.43             | 24.56       | PASS       |
|                   | 157/5785                       | 17.95                        | 18.30                                | 17.98                        | 18.33                                | 17.99                        | 18.33                                | 18.08                        | 18.42                                | 24.37             | 24.56       | PASS       |
|                   | 165/5825                       | 17.77                        | 18.12                                | 18.22                        | 18.57                                | 17.48                        | 17.82                                | 17.92                        | 18.27                                | 24.22             | 24.56       | PASS       |
| 802.11ax<br>HE40  | 142/5710                       | 1.48                         | 1.81                                 | 2.07                         | 2.40                                 | 1.77                         | 2.10                                 | 1.41                         | 1.74                                 | 8.04              | 24.56       | PASS       |
|                   | 151/5755                       | 17.46                        | 17.79                                | 18.14                        | 18.47                                | 18.03                        | 18.36                                | 18.12                        | 18.45                                | 24.30             | 24.56       | PASS       |
|                   | 159/5795                       | 18.09                        | 18.42                                | 18.18                        | 18.51                                | 17.89                        | 18.22                                | 18.19                        | 18.52                                | 24.44             | 24.56       | PASS       |
| 802.11ax<br>HE80  | 138/5690                       | -1.55                        | -1.22                                | -1.17                        | -0.84                                | -1.86                        | -1.53                                | -2.13                        | -1.80                                | 4.69              | 24.56       | PASS       |
|                   | 155/5775                       | 18.07                        | 18.40                                | 18.20                        | 18.53                                | 17.87                        | 18.20                                | 18.29                        | 18.62                                | 24.46             | 24.56       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44\text{ dBi} > 6\text{dBi}$ . So the limit is 24.56 dBm.

**RU Mode**

| Mode                                      | Duty cycle | Duty cycle correction Factor (dB) |
|-------------------------------------------|------------|-----------------------------------|
| 802.11ax HE20<br>52-Tones:RU Index 37     | 0.928      | 0.32                              |
| 802.11ax HE20<br>52-Tones:RU Index 38     | 0.928      | 0.32                              |
| 802.11ax HE20<br>52-Tones:RU Index 40     | 0.924      | 0.35                              |
| 802.11ax HE20<br>106-Tones:RU Index 53    | 0.940      | 0.27                              |
| 802.11ax HE20<br>106-Tones:RU Index 54    | 0.931      | 0.31                              |
| 802.11ax HE20<br>242-Tones:RU Index 61    | 0.910      | 0.41                              |
| 802.11ax HE40<br>484-Tones:RU Index 65    | 0.853      | 0.39                              |
| 802.11ax HE80<br>996-Tones:RU Index 67    | 0.928      | 0.32                              |
| 802.11ax HE160<br>996*2-Tones:RU Index 68 | 0.288      | 5.41                              |

| Band     | Network Standards          | Carrier frequency (MHz) | RU Index | Power Index |             |
|----------|----------------------------|-------------------------|----------|-------------|-------------|
|          |                            |                         |          | MIMO        | Beamforming |
| U-NII-1  | 802.11ax HE20<br>52-Tones  | 36/5180                 | 37       | 18          | 13          |
|          |                            | 40/5200                 | 38       | 19          | 13          |
|          |                            | 48/5240                 | 40       | 18          | 13          |
|          | 802.11ax HE20<br>106-Tones | 36/5180                 | 53       | 21          | 16          |
|          |                            | 40/5200                 | 53       | 21          | 16          |
|          |                            | 48/5240                 | 54       | 21          | 16          |
|          | 802.11ax HE20<br>242-Tones | 36/5180                 | 61       | 16          | 16          |
|          |                            | 40/5200                 | 61       | 16          | 16          |
|          |                            | 48/5240                 | 61       | 16          | 16          |
|          | 802.11ax HE40<br>484-Tones | 38/5190                 | 65       | 15          | 15          |
|          |                            | 46/5230                 | 65       | 15          | 15          |
|          | 802.11ax HE80<br>996-Tones | 42/5210                 | 67       | 13          | 13          |
| U-NII-2A | 802.11ax HE20<br>52-Tones  | 52/5260                 | 37       | 12          | 7           |
|          |                            | 60/5300                 | 38       | 13          | 8           |
|          |                            | 64/5320                 | 40       | 13          | 8           |
|          | 802.11ax HE20<br>106-Tones | 52/5260                 | 53       | 15          | 10          |
|          |                            | 60/5300                 | 53       | 15          | 10          |
|          |                            | 64/5320                 | 54       | 16          | 10          |
|          | 802.11ax HE20              | 52/5260                 | 61       | 16          | 10          |

|          |                               |          |    |    |    |
|----------|-------------------------------|----------|----|----|----|
|          | 242-Tones                     | 60/5300  | 61 | 16 | 10 |
|          |                               | 64/5320  | 61 | 16 | 10 |
|          | 802.11ax HE40<br>484-Tones    | 54/5270  | 65 | 18 | 13 |
|          |                               | 62/5310  | 65 | 18 | 13 |
|          | 802.11ax HE80<br>996-Tones    | 58/5290  | 67 | 15 | 12 |
|          | 802.11ax HE160<br>996*2-Tones | 50/5250  | 68 | 15 | 12 |
| U-NII-2C | 802.11ax HE20<br>52-Tones     | 100/5500 | 37 | 12 | 6  |
|          |                               | 116/5580 | 38 | 13 | 7  |
|          |                               | 140/5700 | 40 | 12 | 6  |
|          |                               | 144/5720 | 37 | 12 | 7  |
|          | 802.11ax HE20<br>106-Tones    | 100/5500 | 53 | 15 | 10 |
|          |                               | 116/5580 | 53 | 15 | 10 |
|          |                               | 140/5700 | 54 | 15 | 10 |
|          |                               | 144/5720 | 53 | 15 | 10 |
|          | 802.11ax HE20<br>242-Tones    | 100/5500 | 61 | 14 | 10 |
|          |                               | 116/5580 | 61 | 14 | 10 |
|          |                               | 140/5700 | 61 | 15 | 10 |
|          |                               | 144/5720 | 61 | 14 | 10 |
|          | 802.11ax HE40<br>484-Tones    | 102/5510 | 65 | 16 | 12 |
|          |                               | 110/5550 | 65 | 16 | 12 |
|          |                               | 134/5670 | 65 | 16 | 12 |
|          |                               | 142/5710 | 65 | 16 | 12 |
|          | 802.11ax HE80<br>996-Tones    | 106/5530 | 67 | 16 | 12 |
|          |                               | 138/5690 | 67 | 16 | 12 |
|          | 802.11ax HE160<br>996*2-Tones | 114/5570 | 68 | 14 | 12 |
| U-NII-3  | 802.11ax HE20<br>52-Tones     | 144/5720 | 40 | 12 | 7  |
|          |                               | 149/5745 | 37 | 24 | 21 |
|          |                               | 157/5785 | 38 | 24 | 21 |
|          |                               | 165/5825 | 40 | 24 | 21 |
|          | 802.11ax HE20<br>106-Tones    | 144/5720 | 54 | 15 | 10 |
|          |                               | 149/5745 | 53 | 24 | 21 |
|          |                               | 157/5785 | 53 | 24 | 21 |
|          |                               | 165/5825 | 54 | 24 | 21 |
|          | 802.11ax HE20<br>242-Tones    | 144/5720 | 61 | 14 | 10 |
|          |                               | 149/5745 | 61 | 23 | 18 |
|          |                               | 157/5785 | 61 | 23 | 18 |
|          |                               | 165/5825 | 61 | 23 | 18 |
|          | 802.11ax HE40<br>484-Tones    | 142/5710 | 65 | 16 | 12 |
|          |                               | 151/5755 | 65 | 22 | 19 |
|          |                               | 159/5795 | 65 | 22 | 19 |
|          | 802.11ax HE80                 | 138/5690 | 67 | 16 | 12 |

|  |           |          |    |    |    |
|--|-----------|----------|----|----|----|
|  | 996-Tones | 155/5775 | 67 | 20 | 19 |
|--|-----------|----------|----|----|----|

## MIMO

## U-NII-1

| Network Standards             | Channel/<br>Frequency<br>(MHz) | RU Index | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------------------|--------------------------------|----------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                               |                                |          | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11ax<br>HE20<br>52-Tones  | 36/5180                        | 37       | 15.24                        | 15.56                                | 15.02                        | 15.34                                | 14.74                        | 15.06                                | 14.98                        | 15.30                                | 21.34             | 30.00       | PASS       |
|                               | 40/5200                        | 38       | 15.41                        | 15.73                                | 15.25                        | 15.57                                | 14.84                        | 15.16                                | 14.96                        | 15.28                                | 21.46             | 30.00       | PASS       |
|                               | 48/5240                        | 40       | 14.94                        | 15.29                                | 14.49                        | 14.84                                | 14.55                        | 14.90                                | 14.45                        | 14.80                                | 20.98             | 30.00       | PASS       |
| 802.11ax<br>HE20<br>106-Tones | 36/5180                        | 53       | 18.54                        | 18.81                                | 17.84                        | 18.11                                | 17.52                        | 17.79                                | 17.70                        | 17.97                                | 24.21             | 30.00       | PASS       |
|                               | 40/5200                        | 53       | 18.27                        | 18.54                                | 17.90                        | 18.17                                | 17.64                        | 17.91                                | 17.67                        | 17.94                                | 24.17             | 30.00       | PASS       |
|                               | 48/5240                        | 54       | 17.78                        | 18.09                                | 17.55                        | 17.86                                | 17.38                        | 17.69                                | 17.63                        | 17.94                                | 23.92             | 30.00       | PASS       |
| 802.11ax<br>HE20<br>242-Tones | 36/5180                        | 61       | 16.16                        | 16.57                                | 15.97                        | 16.38                                | 15.06                        | 15.47                                | 15.72                        | 16.13                                | 22.18             | 30.00       | PASS       |
|                               | 40/5200                        | 61       | 16.30                        | 16.71                                | 16.04                        | 16.45                                | 15.12                        | 15.53                                | 15.81                        | 16.22                                | 22.27             | 30.00       | PASS       |
|                               | 48/5240                        | 61       | 16.01                        | 16.42                                | 15.71                        | 16.12                                | 15.71                        | 16.12                                | 15.59                        | 16.00                                | 22.19             | 30.00       | PASS       |
| 802.11ax<br>HE40<br>484-Tones | 38/5190                        | 65       | 15.52                        | 15.91                                | 15.04                        | 15.43                                | 15.11                        | 15.50                                | 15.49                        | 15.88                                | 21.70             | 30.00       | PASS       |
|                               | 46/5230                        | 65       | 15.31                        | 15.70                                | 14.98                        | 15.37                                | 14.90                        | 15.29                                | 15.15                        | 15.54                                | 21.50             | 30.00       | PASS       |
| 802.11ax<br>HE80<br>996-Tones | 42/5210                        | 67       | 12.84                        | 13.16                                | 12.21                        | 12.53                                | 12.36                        | 12.68                                | 12.77                        | 13.09                                | 18.89             | 30.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42dBi<6dBi. So the power limit is 30.00 dBm.

## U-NII-2A

| Network Standards                | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|----------------------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                                  |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax<br>HE20<br>52-Tones     | 52/5260                        | 37          | 8.95                                  | 9.27                                                | 8.42                                  | 8.74                                                | 8.56                                  | 8.88                                                | 8.58                                  | 8.90                                                | 14.97                   | 24             | PASS       |
|                                  | 60/5300                        | 38          | 8.82                                  | 9.14                                                | 8.14                                  | 8.46                                                | 8.51                                  | 8.83                                                | 8.01                                  | 8.33                                                | 14.72                   | 24             | PASS       |
|                                  | 64/5320                        | 40          | 9.89                                  | 10.24                                               | 8.83                                  | 9.18                                                | 9.35                                  | 9.70                                                | 8.58                                  | 8.93                                                | 15.56                   | 24             | PASS       |
| 802.11ax<br>HE20<br>106-Tones    | 52/5260                        | 53          | 11.83                                 | 12.10                                               | 11.58                                 | 11.85                                               | 11.55                                 | 11.82                                               | 11.44                                 | 11.71                                               | 17.89                   | 24             | PASS       |
|                                  | 60/5300                        | 53          | 11.61                                 | 11.88                                               | 10.82                                 | 11.09                                               | 11.59                                 | 11.86                                               | 11.14                                 | 11.41                                               | 17.59                   | 24             | PASS       |
|                                  | 64/5320                        | 54          | 12.44                                 | 12.75                                               | 11.57                                 | 11.88                                               | 12.00                                 | 12.31                                               | 11.10                                 | 11.41                                               | 18.14                   | 24             | PASS       |
| 802.11ax<br>HE20<br>242-Tones    | 52/5260                        | 61          | 15.08                                 | 15.49                                               | 15.27                                 | 15.68                                               | 15.08                                 | 15.49                                               | 14.91                                 | 15.32                                               | 21.52                   | 24             | PASS       |
|                                  | 60/5300                        | 61          | 15.11                                 | 15.52                                               | 15.13                                 | 15.54                                               | 14.97                                 | 15.38                                               | 15.03                                 | 15.44                                               | 21.49                   | 24             | PASS       |
|                                  | 64/5320                        | 61          | 14.98                                 | 15.39                                               | 15.09                                 | 15.50                                               | 15.28                                 | 15.69                                               | 15.14                                 | 15.55                                               | 21.55                   | 24             | PASS       |
| 802.11ax<br>HE40<br>484-Tones    | 54/5270                        | 65          | 17.48                                 | 17.87                                               | 17.08                                 | 17.47                                               | 17.19                                 | 17.58                                               | 17.13                                 | 17.52                                               | 23.63                   | 24             | PASS       |
|                                  | 62/5310                        | 65          | 17.52                                 | 17.91                                               | 16.93                                 | 17.32                                               | 17.00                                 | 17.39                                               | 17.27                                 | 17.66                                               | 23.60                   | 24             | PASS       |
| 802.11ax<br>HE80<br>996-Tones    | 58/5290                        | 67          | 15.36                                 | 15.68                                               | 15.36                                 | 15.68                                               | 15.17                                 | 15.49                                               | 14.97                                 | 15.29                                               | 21.56                   | 24             | PASS       |
| 802.11ax<br>HE160<br>996*2-Tones | 50/5250                        | 68          | 10.45                                 | 15.86                                               | 10.08                                 | 15.49                                               | 10.02                                 | 15.43                                               | 9.96                                  | 15.37                                               | 21.56                   | 24             | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42 dBi < 6dBi. So the power limit is 24.00 dBm.

## U-NII-2C

| Network Standards | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax          | 100/5500                       | 37          | 9.21                                  | 9.53                                                | 9.17                                  | 9.49                                                | 8.96                                  | 9.28                                                | 8.71                                  | 9.03                                                | 15.36                   | 24.00          | PASS       |
| HE20              | 116/5580                       | 38          | 9.18                                  | 9.50                                                | 8.86                                  | 9.18                                                | 9.18                                  | 9.50                                                | 9.03                                  | 9.35                                                | 15.40                   | 23.68          | PASS       |
| 52-Tones          | 140/5700                       | 40          | 8.99                                  | 9.34                                                | 8.73                                  | 9.08                                                | 9.18                                  | 9.53                                                | 8.92                                  | 9.27                                                | 15.33                   | 24.00          | PASS       |
| 802.11ax          | 100/5500                       | 53          | 12.09                                 | 12.36                                               | 11.83                                 | 12.10                                               | 12.00                                 | 12.27                                               | 11.64                                 | 11.91                                               | 18.18                   | 24.00          | PASS       |
| HE20              | 116/5580                       | 53          | 11.92                                 | 12.19                                               | 11.78                                 | 12.05                                               | 11.80                                 | 12.07                                               | 11.84                                 | 12.11                                               | 18.13                   | 24.00          | PASS       |
| 106-Tones         | 140/5700                       | 54          | 11.85                                 | 12.16                                               | 11.46                                 | 11.77                                               | 11.95                                 | 12.26                                               | 11.66                                 | 11.97                                               | 18.06                   | 24.00          | PASS       |
| 802.11ax          | 100/5500                       | 61          | 14.24                                 | 14.65                                               | 14.09                                 | 14.50                                               | 14.24                                 | 14.65                                               | 14.11                                 | 14.52                                               | 20.60                   | 24.00          | PASS       |
| HE20              | 116/5580                       | 61          | 14.29                                 | 14.70                                               | 14.08                                 | 14.49                                               | 14.00                                 | 14.41                                               | 14.15                                 | 14.56                                               | 20.56                   | 24.00          | PASS       |
| 242-Tones         | 140/5700                       | 61          | 15.02                                 | 15.43                                               | 15.21                                 | 15.62                                               | 14.90                                 | 15.31                                               | 14.97                                 | 15.38                                               | 21.46                   | 24.00          | PASS       |
| 802.11ax          | 102/5510                       | 65          | 15.57                                 | 15.96                                               | 15.59                                 | 15.98                                               | 15.73                                 | 16.12                                               | 15.62                                 | 16.01                                               | 22.04                   | 24.00          | PASS       |
| HE40              | 110/5550                       | 65          | 15.68                                 | 16.07                                               | 15.29                                 | 15.68                                               | 15.61                                 | 16.00                                               | 15.45                                 | 15.84                                               | 21.92                   | 24.00          | PASS       |
| 484-Tones         | 134/5670                       | 65          | 15.68                                 | 16.07                                               | 15.55                                 | 15.94                                               | 15.31                                 | 15.70                                               | 15.26                                 | 15.65                                               | 21.87                   | 24.00          | PASS       |
| 802.11ax          | 106/5530                       | 67          | 15.52                                 | 15.84                                               | 15.62                                 | 15.94                                               | 15.45                                 | 15.77                                               | 15.78                                 | 16.10                                               | 21.93                   | 24.00          | PASS       |
| HE80              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 996-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          | 114/5570                       | 68          | 9.34                                  | 14.75                                               | 9.06                                  | 14.47                                               | 9.14                                  | 14.55                                               | 9.15                                  | 14.56                                               | 20.61                   | 24.00          | PASS       |
| HE160             |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 996*2-Tones       |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42 dBi < 6dBi. So the power limit is 24.00 dBm.

| Network Standards             | Channel/<br>Frequency (MHz) | RU Index | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------------------|-----------------------------|----------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                               |                             |          | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11ax<br>HE20<br>52-Tones  | 144/5720                    | 37       | 9.10                         | 9.42                                 | 9.24                         | 9.56                                 | 9.04                         | 9.36                                 | 9.15                         | 9.47                                 | 15.47             | 24.00       | PASS       |
| 802.11ax<br>HE20<br>106-Tones | 144/5720                    | 53       | 11.89                        | 12.16                                | 12.03                        | 12.30                                | 12.09                        | 12.36                                | 11.93                        | 12.20                                | 18.28             | 24.00       | PASS       |
| 802.11ax<br>HE20<br>242-Tones | 144/5720                    | 61       | 12.75                        | 13.16                                | 13.05                        | 13.46                                | 13.14                        | 13.55                                | 13.06                        | 13.47                                | 19.43             | 24.00       | PASS       |
| 802.11ax<br>HE40<br>484-Tones | 142/5710                    | 65       | 13.09                        | 13.48                                | 13.30                        | 13.69                                | 13.67                        | 14.06                                | 13.77                        | 14.16                                | 19.88             | 24.00       | PASS       |
| 802.11ax<br>HE80<br>996-Tones | 138/5690                    | 67       | 12.64                        | 12.96                                | 12.92                        | 13.24                                | 13.08                        | 13.40                                | 12.85                        | 13.17                                | 19.22             | 24.00       | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42 dBi < 6dBi. So the power limit is 24.00 dBm.

## U-NII-3

| Network Standards | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax          | 149/5745                       | 37          | 20.89                                 | 21.21                                               | 20.83                                 | 21.15                                               | 20.80                                 | 21.12                                               | 20.70                                 | 21.02                                               | 27.15                   | 30.00          | PASS       |
| HE20              | 157/5785                       | 38          | 20.18                                 | 20.50                                               | 20.05                                 | 20.37                                               | 19.68                                 | 20.00                                               | 20.10                                 | 20.42                                               | 26.34                   | 30.00          | PASS       |
| 52-Tones          | 165/5825                       | 40          | 20.67                                 | 21.02                                               | 20.79                                 | 21.14                                               | 20.05                                 | 20.40                                               | 20.78                                 | 21.13                                               | 26.95                   | 30.00          | PASS       |
| 802.11ax          | 149/5745                       | 53          | 20.64                                 | 20.91                                               | 20.60                                 | 20.87                                               | 20.65                                 | 20.92                                               | 20.67                                 | 20.94                                               | 26.93                   | 30.00          | PASS       |
| HE20              | 157/5785                       | 53          | 21.03                                 | 21.30                                               | 20.88                                 | 21.15                                               | 20.55                                 | 20.82                                               | 20.97                                 | 21.24                                               | 27.15                   | 30.00          | PASS       |
| 106-Tones         | 165/5825                       | 54          | 21.05                                 | 21.36                                               | 20.93                                 | 21.24                                               | 20.24                                 | 20.55                                               | 20.61                                 | 20.92                                               | 27.05                   | 30.00          | PASS       |
| 802.11ax          | 149/5745                       | 61          | 22.80                                 | 23.21                                               | 22.75                                 | 23.16                                               | 22.76                                 | 23.17                                               | 22.73                                 | 23.14                                               | 29.19                   | 30.00          | PASS       |
| HE20              | 157/5785                       | 61          | 23.01                                 | 23.42                                               | 22.99                                 | 23.40                                               | 22.59                                 | 23.00                                               | 22.70                                 | 23.11                                               | 29.26                   | 30.00          | PASS       |
| 242-Tones         | 165/5825                       | 61          | 22.83                                 | 23.24                                               | 22.73                                 | 23.14                                               | 22.06                                 | 22.47                                               | 22.52                                 | 22.93                                               | 28.98                   | 30.00          | PASS       |
| 802.11ax          | 151/5755                       | 65          | 21.45                                 | 21.84                                               | 21.08                                 | 21.47                                               | 21.46                                 | 21.85                                               | 21.08                                 | 21.47                                               | 27.68                   | 30.00          | PASS       |
| HE40              | 159/5795                       | 65          | 21.63                                 | 22.02                                               | 20.87                                 | 21.26                                               | 21.29                                 | 21.68                                               | 21.25                                 | 21.64                                               | 27.68                   | 30.00          | PASS       |
| 484-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          | 155/5775                       | 67          | 19.99                                 | 20.31                                               | 19.48                                 | 19.80                                               | 20.01                                 | 20.33                                               | 19.87                                 | 20.19                                               | 26.18                   | 30.00          | PASS       |
| HE80              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 996-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42 dBi<6dBi. So the power limit is 30.00 dBm.

| Network Standards | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax          | 144/5720                       | 40          | 8.67                                  | 9.02                                                | 8.98                                  | 9.33                                                | 8.80                                  | 9.15                                                | 8.90                                  | 9.25                                                | 15.21                   | 30.00          | PASS       |
| HE20              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 52-Tones          |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          | 144/5720                       | 54          | 8.71                                  | 9.02                                                | 9.58                                  | 9.89                                                | 9.66                                  | 9.97                                                | 9.53                                  | 9.84                                                | 15.71                   | 30.00          | PASS       |
| HE20              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 106-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          | 144/5720                       | 61          | 8.18                                  | 8.59                                                | 8.60                                  | 9.01                                                | 8.76                                  | 9.17                                                | 8.66                                  | 9.07                                                | 14.98                   | 30.00          | PASS       |
| HE20              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 242-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |

**RF Test Report**
**Report No.: EFTA25010260-IE-04-R2**

|                               |          |    |       |       |       |       |       |       |       |       |      |       |      |
|-------------------------------|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 802.11ax<br>HE40<br>484-Tones | 142/5710 | 65 | 2.77  | 3.16  | 2.79  | 3.18  | 3.03  | 3.42  | 3.35  | 3.74  | 9.40 | 30.00 | PASS |
| 802.11ax<br>HE80<br>996-Tones | 138/5690 | 67 | -1.31 | -0.99 | -0.91 | -0.59 | -0.78 | -0.46 | -0.79 | -0.47 | 5.40 | 30.00 | PASS |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, Directional gain = 5.42 dBi < 6dBi. So the power limit is 30.00 dBm.

# Beamforming

## U-NII-1

| Network Standards | Channel/Frequency (MHz) | RU Index | Antenna 1                    |                                      | Antenna 2                    |                                      | Antenna 3                    |                                      | Antenna 4                    |                                      | Total Power (dBm) | Limit (dBm) | Conclusion |
|-------------------|-------------------------|----------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------------------------------|--------------------------------------|-------------------|-------------|------------|
|                   |                         |          | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) | Average Power Measured (dBm) | Average Power with duty factor (dBm) |                   |             |            |
| 802.11ax          | 36/5180                 | 37       | 10.24                        | 10.56                                | 10.02                        | 10.34                                | 9.74                         | 10.06                                | 9.98                         | 10.30                                | 16.34             | 24.56       | PASS       |
| HE20              | 40/5200                 | 38       | 9.86                         | 10.18                                | 9.77                         | 10.09                                | 9.83                         | 10.15                                | 10.09                        | 10.41                                | 16.23             | 24.56       | PASS       |
| 52-Tones          | 48/5240                 | 40       | 9.94                         | 10.29                                | 10.49                        | 10.84                                | 10.55                        | 10.90                                | 10.45                        | 10.80                                | 16.73             | 24.56       | PASS       |
| 802.11ax          | 36/5180                 | 53       | 12.54                        | 12.81                                | 12.84                        | 13.11                                | 12.52                        | 12.79                                | 12.70                        | 12.97                                | 18.94             | 24.56       | PASS       |
| HE20              | 40/5200                 | 53       | 12.27                        | 12.54                                | 11.90                        | 12.17                                | 12.64                        | 12.91                                | 12.67                        | 12.94                                | 18.67             | 24.56       | PASS       |
| 106-Tones         | 48/5240                 | 54       | 12.78                        | 13.09                                | 12.55                        | 12.86                                | 12.38                        | 12.69                                | 12.63                        | 12.94                                | 18.92             | 24.56       | PASS       |
| 802.11ax          | 36/5180                 | 61       | 15.21                        | 15.62                                | 15.12                        | 15.53                                | 15.297                       | 15.71                                | 15.565                       | 15.98                                | 21.73             | 24.56       | PASS       |
| HE20              | 40/5200                 | 61       | 15.28                        | 15.69                                | 15.17                        | 15.58                                | 15.154                       | 15.56                                | 15.575                       | 15.99                                | 21.73             | 24.56       | PASS       |
| 242-Tones         | 48/5240                 | 61       | 15.35                        | 15.76                                | 15.07                        | 15.48                                | 14.816                       | 15.23                                | 15.302                       | 15.71                                | 21.57             | 24.56       | PASS       |
| 802.11ax          | 38/5190                 | 65       | 15.52                        | 15.91                                | 15.04                        | 15.43                                | 15.11                        | 15.50                                | 15.49                        | 15.88                                | 21.70             | 24.56       | PASS       |
| HE40              | 46/5230                 | 65       | 15.31                        | 15.70                                | 14.98                        | 15.37                                | 14.90                        | 15.29                                | 15.15                        | 15.54                                | 21.50             | 24.56       | PASS       |
| 484-Tones         |                         |          |                              |                                      |                              |                                      |                              |                                      |                              |                                      |                   |             |            |
| 802.11ax          | 42/5210                 | 67       | 12.84                        | 13.16                                | 12.21                        | 12.53                                | 12.36                        | 12.68                                | 12.77                        | 13.09                                | 18.89             | 24.56       | PASS       |
| HE80              |                         |          |                              |                                      |                              |                                      |                              |                                      |                              |                                      |                   |             |            |
| 996-Tones         |                         |          |                              |                                      |                              |                                      |                              |                                      |                              |                                      |                   |             |            |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi} > 6\text{dBi}$ . So the limit is 24.56 dBm.

## U-NII-2A

| Network Standards                | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|----------------------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                                  |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax<br>HE20<br>52-Tones     | 52/5260                        | 37          | 4.26                                  | 4.58                                                | 3.47                                  | 3.79                                                | 3.13                                  | 3.45                                                | 3.73                                  | 4.05                                                | 10.01                   | 18.48          | PASS       |
|                                  | 60/5300                        | 38          | 3.50                                  | 3.82                                                | 3.45                                  | 3.77                                                | 3.82                                  | 4.14                                                | 3.83                                  | 4.15                                                | 9.99                    | 18.26          | PASS       |
|                                  | 64/5320                        | 40          | 4.31                                  | 4.66                                                | 3.67                                  | 4.02                                                | 3.33                                  | 3.68                                                | 3.92                                  | 4.27                                                | 10.19                   | 18.43          | PASS       |
| 802.11ax<br>HE20<br>106-Tones    | 52/5260                        | 53          | 6.97                                  | 7.24                                                | 6.65                                  | 6.92                                                | 6.53                                  | 6.80                                                | 6.68                                  | 6.95                                                | 13.00                   | 18.56          | PASS       |
|                                  | 60/5300                        | 53          | 6.29                                  | 6.56                                                | 6.45                                  | 6.72                                                | 6.54                                  | 6.81                                                | 6.15                                  | 6.42                                                | 12.65                   | 18.56          | PASS       |
|                                  | 64/5320                        | 54          | 6.10                                  | 6.41                                                | 6.27                                  | 6.58                                                | 6.30                                  | 6.61                                                | 5.68                                  | 5.99                                                | 12.42                   | 18.56          | PASS       |
| 802.11ax<br>HE20<br>242-Tones    | 52/5260                        | 61          | 10.03                                 | 10.44                                               | 9.48                                  | 9.89                                                | 9.63                                  | 10.04                                               | 9.48                                  | 9.89                                                | 16.09                   | 18.56          | PASS       |
|                                  | 60/5300                        | 61          | 10.02                                 | 10.43                                               | 9.16                                  | 9.57                                                | 9.33                                  | 9.74                                                | 9.22                                  | 9.63                                                | 15.88                   | 18.56          | PASS       |
|                                  | 64/5320                        | 61          | 9.69                                  | 10.10                                               | 9.19                                  | 9.60                                                | 9.51                                  | 9.92                                                | 9.19                                  | 9.60                                                | 15.83                   | 18.56          | PASS       |
| 802.11ax<br>HE40<br>484-Tones    | 54/5270                        | 65          | 12.18                                 | 12.57                                               | 12.02                                 | 12.41                                               | 12.01                                 | 12.40                                               | 12.11                                 | 12.50                                               | 18.49                   | 18.56          | PASS       |
|                                  | 62/5310                        | 65          | 12.17                                 | 12.56                                               | 12.16                                 | 12.55                                               | 12.09                                 | 12.48                                               | 12.03                                 | 12.42                                               | 18.52                   | 18.56          | PASS       |
| 802.11ax<br>HE80<br>996-Tones    | 58/5290                        | 67          | 12.16                                 | 12.48                                               | 12.04                                 | 12.36                                               | 11.78                                 | 12.10                                               | 11.73                                 | 12.05                                               | 18.27                   | 18.56          | PASS       |
| 802.11ax<br>HE160<br>996*2-Tones | 50/5250                        | 68          | 6.384                                 | 11.79                                               | 6.347                                 | 11.76                                               | 6.309                                 | 11.72                                               | 6.558                                 | 11.97                                               | 17.83                   | 18.56          | PASS       |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi} > 6\text{dBi}$ . So the limit is 18.56 dBm.

## U-NII-2C

| Network Standards | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax          | 100/5500                       | 37          | 3.66                                  | 3.98                                                | 3.47                                  | 3.79                                                | 1.75                                  | 2.07                                                | 3.89                                  | 4.21                                                | 9.61                    | 18.56          | PASS       |
| HE20              | 116/5580                       | 38          | 3.52                                  | 3.84                                                | 3.22                                  | 3.54                                                | 3.10                                  | 3.42                                                | 3.48                                  | 3.80                                                | 9.67                    | 18.24          | PASS       |
| 52-Tones          | 140/5700                       | 40          | 3.68                                  | 4.03                                                | 3.79                                  | 4.14                                                | 2.61                                  | 2.96                                                | 3.28                                  | 3.63                                                | 9.74                    | 18.56          | PASS       |
| 802.11ax          | 100/5500                       | 53          | 7.06                                  | 7.33                                                | 7.02                                  | 7.29                                                | 6.78                                  | 7.05                                                | 6.81                                  | 7.08                                                | 13.21                   | 18.56          | PASS       |
| HE20              | 116/5580                       | 53          | 6.61                                  | 6.88                                                | 6.59                                  | 6.86                                                | 6.76                                  | 7.03                                                | 6.53                                  | 6.80                                                | 12.91                   | 18.56          | PASS       |
| 106-Tones         | 140/5700                       | 54          | 6.53                                  | 6.84                                                | 6.75                                  | 7.06                                                | 5.97                                  | 6.28                                                | 5.77                                  | 6.08                                                | 12.61                   | 18.56          | PASS       |
| 802.11ax          | 100/5500                       | 61          | 8.91                                  | 9.32                                                | 9.15                                  | 9.56                                                | 9.09                                  | 9.50                                                | 8.76                                  | 9.17                                                | 15.41                   | 18.56          | PASS       |
| HE20              | 116/5580                       | 61          | 9.11                                  | 9.52                                                | 9.33                                  | 9.74                                                | 9.14                                  | 9.55                                                | 9.07                                  | 9.48                                                | 15.59                   | 18.56          | PASS       |
| 242-Tones         | 140/5700                       | 61          | 9.65                                  | 10.06                                               | 9.77                                  | 10.18                                               | 9.25                                  | 9.66                                                | 9.06                                  | 9.47                                                | 15.87                   | 18.56          | PASS       |
| 802.11ax          | 102/5510                       | 65          | 12.09                                 | 12.48                                               | 12.15                                 | 12.54                                               | 12.26                                 | 12.65                                               | 11.92                                 | 12.31                                               | 18.52                   | 18.56          | PASS       |
| HE40              | 110/5550                       | 65          | 11.97                                 | 12.36                                               | 12.05                                 | 12.44                                               | 12.13                                 | 12.52                                               | 11.82                                 | 12.21                                               | 18.40                   | 18.56          | PASS       |
| 484-Tones         | 134/5670                       | 65          | 12.10                                 | 12.49                                               | 12.36                                 | 12.75                                               | 11.91                                 | 12.30                                               | 11.65                                 | 12.04                                               | 18.42                   | 18.56          | PASS       |
| 802.11ax          |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| HE80              | 106/5530                       | 67          | 12.31                                 | 12.63                                               | 12.28                                 | 12.60                                               | 11.93                                 | 12.25                                               | 12.17                                 | 12.49                                               | 18.52                   | 18.56          | PASS       |
| 996-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| HE160             | 114/5570                       | 68          | 7.13                                  | 12.54                                               | 7.03                                  | 12.44                                               | 6.87                                  | 12.28                                               | 7.08                                  | 12.49                                               | 18.46                   | 18.56          | PASS       |
| 996*2-Tones       |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi} > 6\text{dBi}$ . So the limit is 18.56 dBm.

| Network Standards | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax          |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| HE20              | 144/5720                       | 37          | 3.66                                  | 3.98                                                | 3.71                                  | 4.03                                                | 3.58                                  | 3.90                                                | 3.52                                  | 3.84                                                | 9.96                    | 18.56          | PASS       |
| 52-Tones          |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| HE20              | 144/5720                       | 53          | 6.67                                  | 6.94                                                | 6.59                                  | 6.86                                                | 6.65                                  | 6.92                                                | 6.47                                  | 6.74                                                | 12.89                   | 18.56          | PASS       |
| 106-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |

|                               |          |    |       |       |       |       |       |       |       |       |       |       |      |
|-------------------------------|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 802.11ax<br>HE20<br>242-Tones | 144/5720 | 61 | 8.41  | 8.82  | 8.50  | 8.91  | 8.57  | 8.98  | 8.21  | 8.62  | 14.86 | 18.56 | PASS |
| 802.11ax<br>HE40<br>484-Tones | 142/5710 | 65 | 10.88 | 11.27 | 10.96 | 11.35 | 11.42 | 11.81 | 11.10 | 11.49 | 17.51 | 18.56 | PASS |
| 802.11ax<br>HE80<br>996-Tones | 138/5690 | 67 | 10.28 | 10.60 | 10.54 | 10.86 | 10.78 | 11.10 | 10.50 | 10.82 | 16.87 | 18.56 | PASS |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi} > 6\text{dBi}$ . So the limit is 18.56 dBm.

## U-NII-3

| Network Standards | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax          | 149/5745                       | 37          | 18.07                                 | 18.39                                               | 18.16                                 | 18.48                                               | 17.92                                 | 18.24                                               | 18.28                                 | 18.60                                               | 24.45                   | 24.56          | PASS       |
| HE20              | 157/5785                       | 38          | 18.14                                 | 18.46                                               | 18.09                                 | 18.41                                               | 18.07                                 | 18.39                                               | 18.12                                 | 18.44                                               | 24.44                   | 24.56          | PASS       |
| 52-Tones          | 165/5825                       | 40          | 18.12                                 | 18.47                                               | 18.13                                 | 18.48                                               | 18.15                                 | 18.50                                               | 18.23                                 | 18.58                                               | 24.53                   | 24.56          | PASS       |
| 802.11ax          | 149/5745                       | 53          | 18.08                                 | 18.35                                               | 18.17                                 | 18.44                                               | 18.01                                 | 18.28                                               | 18.01                                 | 18.28                                               | 24.36                   | 24.56          | PASS       |
| HE20              | 157/5785                       | 53          | 17.96                                 | 18.23                                               | 18.02                                 | 18.29                                               | 17.99                                 | 18.26                                               | 18.07                                 | 18.34                                               | 24.30                   | 24.56          | PASS       |
| 106-Tones         | 165/5825                       | 54          | 18.00                                 | 18.31                                               | 18.13                                 | 18.44                                               | 18.17                                 | 18.48                                               | 17.87                                 | 18.18                                               | 24.37                   | 24.56          | PASS       |
| 802.11ax          | 149/5745                       | 61          | 17.88                                 | 18.29                                               | 17.95                                 | 18.36                                               | 17.75                                 | 18.16                                               | 17.76                                 | 18.17                                               | 24.27                   | 24.56          | PASS       |
| HE20              | 157/5785                       | 61          | 17.96                                 | 18.37                                               | 17.73                                 | 18.14                                               | 17.56                                 | 17.97                                               | 17.79                                 | 18.20                                               | 24.19                   | 24.56          | PASS       |
| 242-Tones         | 165/5825                       | 61          | 17.83                                 | 18.24                                               | 17.84                                 | 18.25                                               | 17.20                                 | 17.61                                               | 17.68                                 | 18.09                                               | 24.08                   | 24.56          | PASS       |
| 802.11ax          | 151/5755                       | 65          | 18.05                                 | 18.44                                               | 18.18                                 | 18.57                                               | 18.10                                 | 18.49                                               | 18.09                                 | 18.48                                               | 24.52                   | 24.56          | PASS       |
| HE40              | 159/5795                       | 65          | 18.12                                 | 18.51                                               | 18.17                                 | 18.56                                               | 18.03                                 | 18.42                                               | 18.17                                 | 18.56                                               | 24.53                   | 24.56          | PASS       |
| 484-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          | 155/5775                       | 67          | 18.30                                 | 18.62                                               | 18.09                                 | 18.41                                               | 18.06                                 | 18.38                                               | 18.13                                 | 18.45                                               | 24.49                   | 24.56          | PASS       |
| HE80              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 996-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10 \log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi} > 6 \text{ dBi}$ . So the limit is 24.56 dBm.

| Network Standards | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Antenna 1                             |                                                     | Antenna 2                             |                                                     | Antenna 3                             |                                                     | Antenna 4                             |                                                     | Total<br>Power<br>(dBm) | Limit<br>(dBm) | Conclusion |
|-------------------|--------------------------------|-------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------|----------------|------------|
|                   |                                |             | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) | Average<br>Power<br>Measured<br>(dBm) | Average<br>Power<br>with<br>duty<br>factor<br>(dBm) |                         |                |            |
| 802.11ax          | 144/5720                       | 40          | 3.878                                 | 4.23                                                | 3.717                                 | 4.07                                                | 3.518                                 | 3.87                                                | 3.747                                 | 4.10                                                | 10.09                   | 24.56          | PASS       |
| HE20              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 52-Tones          |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          | 144/5720                       | 54          | 3.95                                  | 4.26                                                | 4.37                                  | 4.68                                                | 4.18                                  | 4.49                                                | 3.63                                  | 3.94                                                | 10.37                   | 24.56          | PASS       |
| HE20              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 106-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 802.11ax          | 144/5720                       | 61          | 3.94                                  | 4.35                                                | 4.18                                  | 4.59                                                | 4.23                                  | 4.64                                                | 3.86                                  | 4.27                                                | 10.48                   | 24.56          | PASS       |
| HE20              |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |
| 242-Tones         |                                |             |                                       |                                                     |                                       |                                                     |                                       |                                                     |                                       |                                                     |                         |                |            |

**RF Test Report**
**Report No.: EFTA25010260-IE-04-R2**

|                               |          |    |       |       |       |       |       |       |       |       |      |       |      |
|-------------------------------|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 802.11ax<br>HE40<br>484-Tones | 142/5710 | 65 | 0.73  | 1.12  | 0.90  | 1.29  | 0.87  | 1.26  | 1.01  | 1.40  | 7.29 | 24.56 | PASS |
| 802.11ax<br>HE80<br>996-Tones | 138/5690 | 67 | -3.45 | -3.13 | -2.93 | -2.61 | -3.09 | -2.77 | -3.09 | -2.77 | 3.20 | 24.56 | PASS |

Note: 1. For Total Power, according to KDB 662911 D01 Multiple Transmitter Output v02r01 1),

The Total Power =  $10\log(10^{(\text{Power antenna1 in dBm}/10)} + 10^{(\text{Power antenna2 in dBm}/10)} + 10^{(\text{Power antenna3 in dBm}/10)} + 10^{(\text{Power antenna4 in dBm}/10)})$ .

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi}$  > 6dBi. So the limit is 24.56 dBm.

### 5.3. Frequency Stability

#### Ambient condition

| Temperature | Relative humidity | Pressure         |
|-------------|-------------------|------------------|
| 15°C ~ 35°C | 20% ~ 80%         | 86 kPa ~ 106 kPa |

#### Method of Measurement

##### 1. Frequency stability with respect to ambient temperature

- a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.
- b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.
- c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.
- e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
- f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.
- g) Measure the frequency at each of frequencies specified in 5.6.
- h) Switch OFF the EUT but do not switch OFF the oscillator heater.
- i) Lower the chamber temperature by not more than 10°C, and allow the temperature inside the chamber to stabilize.
- j) Repeat step f) through step i) down to the lowest specified temperature.

##### 2. Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15°C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

- a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

- b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).
- c) Measure the frequency at each of the frequencies specified in 5.6.
- d) Repeat the above procedure at 85% and 115% of the nominal supply voltage.

**Limit**

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

**Measurement Uncertainty**

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 936\text{Hz}$

# Test Results

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-1 Test Results |             |             |             |
|----------------|---------------------|----------------------|-------------|-------------|-------------|
|                |                     | 5200MHz              |             |             |             |
|                |                     | 1min                 | 2min        | 5min        | 10min       |
| 12             | -30                 | 5199.993165          | 5199.990958 | 5199.985465 | 5199.978601 |
| 12             | -20                 | 5199.992205          | 5199.983024 | 5199.983544 | 5199.978180 |
| 12             | -10                 | 5199.982316          | 5199.974999 | 5199.977668 | 5199.974671 |
| 12             | 0                   | 5199.982376          | 5199.977978 | 5199.978645 | 5199.971334 |
| 12             | 10                  | 5199.981853          | 5199.977226 | 5199.971294 | 5199.963699 |
| 12             | 20                  | 5199.975982          | 5199.967721 | 5199.963801 | 5199.956599 |
| 12             | 30                  | 5199.967900          | 5199.960478 | 5199.956208 | 5199.947288 |
| 12             | 40                  | 5199.964801          | 5199.958805 | 5199.954967 | 5199.937883 |
| 12             | 50                  | 5199.956260          | 5199.955895 | 5199.945439 | 5199.934180 |
| 11.4           | 20                  | 5199.952165          | 5199.953656 | 5199.938116 | 5199.931285 |
| 12.6           | 20                  | 5199.944355          | 5199.951896 | 5199.933023 | 5199.927586 |
| Max. ΔMHz      |                     | -0.055645            | -0.048104   | -0.066977   | -0.072414   |
| PPM            |                     | -10.700962           | -9.250769   | -12.880192  | -13.925769  |

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-2A Test Results |             |             |             |
|----------------|---------------------|-----------------------|-------------|-------------|-------------|
|                |                     | 5300MHz               |             |             |             |
|                |                     | 1min                  | 2min        | 5min        | 10min       |
| 12             | -30                 | 5299.999809           | 5299.992052 | 5299.982690 | 5299.978435 |
| 12             | -20                 | 5299.994223           | 5299.983943 | 5299.975725 | 5299.970311 |
| 12             | -10                 | 5299.993842           | 5299.981677 | 5299.970955 | 5299.967198 |
| 12             | 0                   | 5299.988692           | 5299.982295 | 5299.973175 | 5299.964766 |
| 12             | 10                  | 5299.979861           | 5299.974370 | 5299.969573 | 5299.956073 |
| 12             | 20                  | 5299.973302           | 5299.970728 | 5299.961771 | 5299.951949 |
| 12             | 30                  | 5299.965432           | 5299.961937 | 5299.959145 | 5299.949493 |
| 12             | 40                  | 5299.959893           | 5299.958066 | 5299.954976 | 5299.939714 |
| 12             | 50                  | 5299.959291           | 5299.953260 | 5299.946658 | 5299.933708 |
| 11.4           | 20                  | 5299.951320           | 5299.943933 | 5299.945100 | 5299.931811 |
| 12.6           | 20                  | 5299.950835           | 5299.941273 | 5299.944528 | 5299.930401 |
| Max. ΔMHz      |                     | -0.049165             | -0.058727   | -0.055472   | -0.069599   |
| PPM            |                     | -9.276415             | -11.080566  | -10.466415  | -13.131887  |

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-2C Test Results |             |             |             |
|----------------|---------------------|-----------------------|-------------|-------------|-------------|
|                |                     | 5580MHz               |             |             |             |
|                |                     | 1min                  | 2min        | 5min        | 10min       |
| 12             | -30                 | 5579.992549           | 5579.987765 | 5579.984013 | 5579.981569 |
| 12             | -20                 | 5579.985196           | 5579.985161 | 5579.982767 | 5579.973395 |
| 12             | -10                 | 5579.982815           | 5579.975832 | 5579.977969 | 5579.964961 |
| 12             | 0                   | 5579.977700           | 5579.980847 | 5579.982658 | 5579.963565 |
| 12             | 10                  | 5579.976734           | 5579.978723 | 5579.974332 | 5579.958966 |
| 12             | 20                  | 5579.967489           | 5579.977497 | 5579.969503 | 5579.954062 |
| 12             | 30                  | 5579.965018           | 5579.971790 | 5579.960662 | 5579.951475 |
| 12             | 40                  | 5579.956934           | 5579.963101 | 5579.959990 | 5579.944693 |
| 12             | 50                  | 5579.950935           | 5579.956020 | 5579.954408 | 5579.940308 |
| 11.4           | 20                  | 5579.944397           | 5579.949360 | 5579.945851 | 5579.939754 |
| 12.6           | 20                  | 5579.943502           | 5579.941147 | 5579.943926 | 5579.936223 |
| Max. ΔMHz      |                     | -0.056498             | -0.058853   | -0.056074   | -0.063777   |
| PPM            |                     | -10.125090            | -10.547133  | -10.049104  | -11.429570  |

| Voltage<br>(V) | Temperature<br>(°C) | U-NII-3 Test Results |             |             |             |
|----------------|---------------------|----------------------|-------------|-------------|-------------|
|                |                     | 5785MHz              |             |             |             |
|                |                     | 1min                 | 2min        | 5min        | 10min       |
| 12             | -30                 | 5784.992008          | 5784.991088 | 5784.984492 | 5784.975472 |
| 12             | -20                 | 5784.984478          | 5784.987358 | 5784.977092 | 5784.970559 |
| 12             | -10                 | 5784.979732          | 5784.981390 | 5784.968509 | 5784.969201 |
| 12             | 0                   | 5784.982086          | 5784.987023 | 5784.971028 | 5784.962411 |
| 12             | 10                  | 5784.975755          | 5784.981470 | 5784.969147 | 5784.953571 |
| 12             | 20                  | 5784.970607          | 5784.978729 | 5784.960079 | 5784.948604 |
| 12             | 30                  | 5784.965322          | 5784.970548 | 5784.954563 | 5784.947957 |
| 12             | 40                  | 5784.963056          | 5784.961247 | 5784.945068 | 5784.940875 |
| 12             | 50                  | 5784.962942          | 5784.960776 | 5784.941799 | 5784.931818 |
| 11.4           | 20                  | 5784.957306          | 5784.953057 | 5784.935071 | 5784.930595 |
| 12.6           | 20                  | 5784.950082          | 5784.952181 | 5784.925226 | 5784.922996 |
| Max. ΔMHz      |                     | -0.049918            | -0.047819   | -0.074774   | -0.077004   |
| PPM            |                     | -8.628868            | -8.266033   | -12.925497  | -13.310977  |

## 5.4. Power Spectral Density

### Ambient condition

| Temperature | Relative humidity | Pressure         |
|-------------|-------------------|------------------|
| 15°C ~ 35°C | 20% ~ 80%         | 86 kPa ~ 106 kPa |

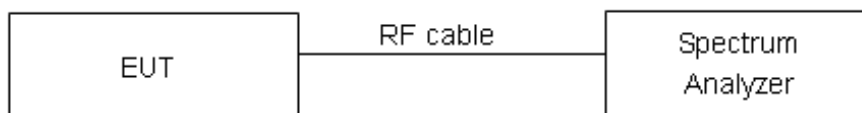
### Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable.

Set RBW = 1MHz, VBW =3MHz for the band 5.150-5.250GHz, 5.250-5.350GHz, 5.470-5.725GHz.  
Set RBW = 470kHz, VBW =1.5MHz for the band 5.725-5.850GHz

The conducted PSD is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

### Test setup



### Limits

Rule FCC Part 15.407(a)(1)/ FCC Part 15.407(a)(2) / FCC Part 15.407(a)(3)

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 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 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 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 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500kHz 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.

| Frequency Bands/GHz      | Limits       |
|--------------------------|--------------|
| 5.15-5.25                | 17dBm/MHz    |
| 5.25-5.35 and 5.47-5.725 | 11dBm/MHz    |
| 5.725-5.85               | 30dBm/500kHz |

### Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 2$ ,  $U = 0.75\text{dB}$ .

**Test Results:**
**SISO**
**Antenna 1**
**U-NII-1**

| Mode    | Channel/<br>Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|---------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a | 36/5180                        | 12.51                    | 12.85                                   | 17                  | PASS       |
|         | 40/5200                        | 16.10                    | 16.44                                   | 17                  | PASS       |
|         | 48/5240                        | 16.19                    | 16.53                                   | 17                  | PASS       |

Note: Power Spectral Density =Read Value+Duty cycle correction factor

**U-NII-2A**

| Mode    | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|---------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a | 52/5260                        | 10.43                    | 10.77                                   | 11                  | PASS       |
|         | 60/5300                        | 10.17                    | 10.51                                   | 11                  | PASS       |
|         | 64/5320                        | 10.02                    | 10.36                                   | 11                  | PASS       |

Note: Power Spectral Density =Read Value+Duty cycle correction factor

**U-NII-2C**

| Mode    | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|---------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a | 100/5500                       | 10.21                    | 10.55                                   | 11                  | PASS       |
|         | 118/5580                       | 10.10                    | 10.44                                   | 11                  | PASS       |
|         | 140/5700                       | 10.32                    | 10.66                                   | 11                  | PASS       |
|         | 144/5720                       | 10.55                    | 10.89                                   | 11                  | PASS       |

Note: Power Spectral Density =Read Value+Duty cycle correction factor

**U-NII-3**

| Mode    | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm/470kHz) | Power Spectral<br>Density<br>(dBm/500kHz) | Limit<br>(dBm/500kHz) | Conclusion |
|---------|--------------------------------|----------------------------|-------------------------------------------|-----------------------|------------|
| 802.11a | 144/5720                       | 6.68                       | 7.29                                      | 30                    | PASS       |
|         | 149/5745                       | 13.40                      | 14.01                                     | 30                    | PASS       |
|         | 157/5785                       | 13.13                      | 13.74                                     | 30                    | PASS       |
|         | 165/5825                       | 12.84                      | 13.45                                     | 30                    | PASS       |

Note: PSD=Read Value+Duty cycle correction factor +10\*log(500/470)

## Antenna 2

### U-NII-1

| Mode                                                                  | Channel/<br>Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 36/5180                        | 12.44                    | 12.78                                   | 17                  | PASS       |
|                                                                       | 40/5200                        | 16.03                    | 16.37                                   | 17                  | PASS       |
|                                                                       | 48/5240                        | 16.05                    | 16.39                                   | 17                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

### U-NII-2A

| Mode                                                                  | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 52/5260                        | 10.43                    | 10.77                                   | 11                  | PASS       |
|                                                                       | 60/5300                        | 10.26                    | 10.60                                   | 11                  | PASS       |
|                                                                       | 64/5320                        | 10.27                    | 10.61                                   | 11                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

### U-NII-2C

| Mode                                                                  | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 100/5500                       | 10.11                    | 10.45                                   | 11                  | PASS       |
|                                                                       | 118/5580                       | 10.34                    | 10.68                                   | 11                  | PASS       |
|                                                                       | 140/5700                       | 10.53                    | 10.87                                   | 11                  | PASS       |
|                                                                       | 144/5720                       | 10.23                    | 10.57                                   | 11                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

### U-NII-3

| Mode                                                               | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm/470kHz) | Power Spectral<br>Density<br>(dBm/500kHz) | Limit<br>(dBm/500kHz) | Conclusion |
|--------------------------------------------------------------------|--------------------------------|----------------------------|-------------------------------------------|-----------------------|------------|
| 802.11a                                                            | 144/5720                       | 7.44                       | 8.05                                      | 30                    | PASS       |
|                                                                    | 149/5745                       | 13.21                      | 13.82                                     | 30                    | PASS       |
|                                                                    | 157/5785                       | 13.17                      | 13.78                                     | 30                    | PASS       |
|                                                                    | 165/5825                       | 12.92                      | 13.53                                     | 30                    | PASS       |
| Note: PSD=Read Value+Duty cycle correction factor +10*log(500/470) |                                |                            |                                           |                       |            |

**Antenna 3**
**U-NII-1**

| Mode                                                                  | Channel/<br>Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 36/5180                        | 12.83                    | 13.17                                   | 17                  | PASS       |
|                                                                       | 40/5200                        | 16.12                    | 16.46                                   | 17                  | PASS       |
|                                                                       | 48/5240                        | 16.13                    | 16.47                                   | 17                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

**U-NII-2A**

| Mode                                                                  | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 52/5260                        | 10.25                    | 10.59                                   | 11                  | PASS       |
|                                                                       | 60/5300                        | 9.89                     | 10.23                                   | 11                  | PASS       |
|                                                                       | 64/5320                        | 9.97                     | 10.31                                   | 11                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

**U-NII-2C**

| Mode                                                                  | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 100/5500                       | 10.19                    | 10.53                                   | 11                  | PASS       |
|                                                                       | 118/5580                       | 10.30                    | 10.64                                   | 11                  | PASS       |
|                                                                       | 140/5700                       | 10.17                    | 10.51                                   | 11                  | PASS       |
|                                                                       | 144/5720                       | 10.40                    | 10.74                                   | 11                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

**U-NII-3**

| Mode                                                               | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm/470kHz) | Power Spectral<br>Density<br>(dBm/500kHz) | Limit<br>(dBm/500kHz) | Conclusion |
|--------------------------------------------------------------------|--------------------------------|----------------------------|-------------------------------------------|-----------------------|------------|
| 802.11a                                                            | 144/5720                       | 6.81                       | 7.42                                      | 30                    | PASS       |
|                                                                    | 149/5745                       | 12.96                      | 13.57                                     | 30                    | PASS       |
|                                                                    | 157/5785                       | 12.76                      | 13.37                                     | 30                    | PASS       |
|                                                                    | 165/5825                       | 12.9                       | 13.51                                     | 30                    | PASS       |
| Note: PSD=Read Value+Duty cycle correction factor +10*log(500/470) |                                |                            |                                           |                       |            |

**Antenna 4**
**U-NII-1**

| Mode                                                                  | Channel/<br>Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 36/5180                        | 13.10                    | 13.44                                   | 17                  | PASS       |
|                                                                       | 40/5200                        | 16.58                    | 16.92                                   | 17                  | PASS       |
|                                                                       | 48/5240                        | 16.29                    | 16.63                                   | 17                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

**U-NII-2A**

| Mode                                                                  | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 52/5260                        | 10.33                    | 10.67                                   | 11                  | PASS       |
|                                                                       | 60/5300                        | 10.23                    | 10.57                                   | 11                  | PASS       |
|                                                                       | 64/5320                        | 10.28                    | 10.62                                   | 11                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

**U-NII-2C**

| Mode                                                                  | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm /MHz) | Power Spectral<br>Density<br>(dBm /MHz) | Limit<br>(dBm /MHz) | Conclusion |
|-----------------------------------------------------------------------|--------------------------------|--------------------------|-----------------------------------------|---------------------|------------|
| 802.11a                                                               | 100/5500                       | 10.45                    | 10.79                                   | 11                  | PASS       |
|                                                                       | 118/5580                       | 10.28                    | 10.62                                   | 11                  | PASS       |
|                                                                       | 140/5700                       | 10.42                    | 10.76                                   | 11                  | PASS       |
|                                                                       | 144/5720                       | 10.31                    | 10.65                                   | 11                  | PASS       |
| Note: Power Spectral Density =Read Value+Duty cycle correction factor |                                |                          |                                         |                     |            |

**U-NII-3**

| Mode                                                               | Channel<br>/Frequency<br>(MHz) | Read Value<br>(dBm/470kHz) | Power Spectral<br>Density<br>(dBm/500kHz) | Limit<br>(dBm/500kHz) | Conclusion |
|--------------------------------------------------------------------|--------------------------------|----------------------------|-------------------------------------------|-----------------------|------------|
| 802.11a                                                            | 144/5720                       | 7.48                       | 8.09                                      | 30                    | PASS       |
|                                                                    | 149/5745                       | 13.85                      | 14.46                                     | 30                    | PASS       |
|                                                                    | 157/5785                       | 13.46                      | 14.07                                     | 30                    | PASS       |
|                                                                    | 165/5825                       | 13.24                      | 13.85                                     | 30                    | PASS       |
| Note: PSD=Read Value+Duty cycle correction factor +10*log(500/470) |                                |                            |                                           |                       |            |

## MIMO

## U-NII-1

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                               | Limit<br>(dBm/<br>MHz) | Conclusion |
|-------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|-------------------------------|------------------------|------------|
|                   |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>PSD<br>(dBm<br>/MHz) |                        |            |
|                   |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                               |                        |            |
| 802.11n<br>HT20   | 36/5180                        | 5.85                           | 6.23                 | 5.60                           | 5.98                 | 4.74                           | 5.12                 | 5.16                           | 5.54                 | 11.76                         | 17                     | PASS       |
|                   | 40/5200                        | 9.41                           | 9.79                 | 10.18                          | 10.56                | 9.92                           | 10.30                | 10.23                          | 10.61                | 16.35                         | 17                     | PASS       |
|                   | 48/5240                        | 9.39                           | 9.77                 | 9.95                           | 10.33                | 9.63                           | 10.01                | 10.03                          | 10.41                | 16.16                         | 17                     | PASS       |
| 802.11n<br>HT40   | 38/5190                        | 1.44                           | 1.89                 | 2.23                           | 2.68                 | 1.28                           | 1.73                 | 1.99                           | 2.44                 | 8.22                          | 17                     | PASS       |
|                   | 46/5230                        | 7.83                           | 8.28                 | 7.76                           | 8.21                 | 7.12                           | 7.57                 | 7.37                           | 7.82                 | 14.00                         | 17                     | PASS       |
| 802.11ac<br>VHT20 | 36/5180                        | 5.44                           | 5.78                 | 5.53                           | 5.87                 | 4.70                           | 5.04                 | 5.25                           | 5.59                 | 11.60                         | 17                     | PASS       |
|                   | 40/5200                        | 10.26                          | 10.60                | 10.31                          | 10.65                | 10.09                          | 10.43                | 10.35                          | 10.69                | 16.61                         | 17                     | PASS       |
|                   | 48/5240                        | 10.14                          | 10.48                | 10.00                          | 10.34                | 10.16                          | 10.49                | 10.06                          | 10.40                | 16.45                         | 17                     | PASS       |
| 802.11ac<br>VHT40 | 38/5190                        | 1.41                           | 1.83                 | 2.56                           | 2.98                 | 1.62                           | 2.04                 | 2.40                           | 2.82                 | 8.47                          | 17                     | PASS       |
|                   | 46/5230                        | 8.01                           | 8.43                 | 7.33                           | 7.75                 | 7.05                           | 7.47                 | 7.49                           | 7.91                 | 13.93                         | 17                     | PASS       |
| 802.11ac<br>VHT80 | 42/5210                        | -2.83                          | -2.46                | -1.59                          | -1.22                | -2.15                          | -1.78                | -1.88                          | -1.51                | 4.30                          | 17                     | PASS       |
| 802.11ax<br>HE20  | 36/5180                        | 4.77                           | 5.11                 | 4.20                           | 4.54                 | 3.37                           | 3.71                 | 4.23                           | 4.57                 | 10.53                         | 17                     | PASS       |
|                   | 40/5200                        | 9.54                           | 9.88                 | 10.63                          | 10.97                | 10.20                          | 10.54                | 10.52                          | 10.86                | 16.61                         | 17                     | PASS       |
|                   | 48/5240                        | 9.43                           | 9.77                 | 10.25                          | 10.59                | 10.34                          | 10.68                | 10.34                          | 10.68                | 16.47                         | 17                     | PASS       |
| 802.11ax<br>HE40  | 38/5190                        | 1.53                           | 1.86                 | 2.88                           | 3.21                 | 1.73                           | 2.06                 | 2.19                           | 2.52                 | 8.46                          | 17                     | PASS       |
|                   | 46/5230                        | 6.21                           | 6.54                 | 5.19                           | 5.52                 | 5.63                           | 5.96                 | 5.73                           | 6.06                 | 12.06                         | 17                     | PASS       |
| 802.11ax<br>HE80  | 42/5210                        | -2.61                          | -2.28                | -0.95                          | -0.62                | -1.21                          | -0.88                | -1.39                          | -1.06                | 4.86                          | 17                     | PASS       |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density =  $10 \log(10^{(\text{PSD antenna 1 in dBm/10})} + 10^{(\text{PSD antenna 2 in dBm/10})} + 10^{(\text{PSD antenna 3 in dBm/10})} + 10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 17 dBm/MHz.

## U-NII-2A

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11n<br>HT20    | 52/5260                        | 3.14                           | 3.52                 | 3.86                           | 4.24                 | 3.83                           | 4.21                 | 3.75                           | 4.13                 | 10.06                           | 11                     | PASS       |
|                    | 60/5300                        | 4.44                           | 4.82                 | 4.54                           | 4.92                 | 4.82                           | 5.20                 | 4.03                           | 4.41                 | 10.87                           | 11                     | PASS       |
|                    | 64/5320                        | 3.93                           | 4.31                 | 4.35                           | 4.73                 | 4.74                           | 5.12                 | 3.72                           | 4.10                 | 10.61                           | 11                     | PASS       |
| 802.11n<br>HT40    | 54/5270                        | 3.50                           | 3.95                 | 3.76                           | 4.21                 | 4.08                           | 4.53                 | 4.18                           | 4.63                 | 10.36                           | 11                     | PASS       |
|                    | 62/5310                        | 1.05                           | 1.50                 | 1.92                           | 2.37                 | 1.91                           | 2.36                 | 1.05                           | 1.50                 | 7.97                            | 11                     | PASS       |
| 802.11ac<br>VHT20  | 52/5260                        | 4.13                           | 4.47                 | 4.40                           | 4.74                 | 4.65                           | 4.99                 | 4.81                           | 5.15                 | 10.86                           | 11                     | PASS       |
|                    | 60/5300                        | 4.10                           | 4.44                 | 4.36                           | 4.70                 | 4.49                           | 4.83                 | 3.93                           | 4.27                 | 10.58                           | 11                     | PASS       |
|                    | 64/5320                        | 3.84                           | 4.18                 | 4.48                           | 4.82                 | 4.91                           | 5.25                 | 3.90                           | 4.24                 | 10.66                           | 11                     | PASS       |
| 802.11ac<br>VHT40  | 54/5270                        | 3.59                           | 4.01                 | 3.76                           | 4.18                 | 3.91                           | 4.33                 | 3.72                           | 4.14                 | 10.19                           | 11                     | PASS       |
|                    | 62/5310                        | 1.39                           | 1.81                 | 1.52                           | 1.94                 | 2.09                           | 2.51                 | 1.36                           | 1.78                 | 8.04                            | 11                     | PASS       |
| 802.11ac<br>VHT80  | 58/5290                        | -3.28                          | -2.91                | -2.32                          | -1.95                | -2.21                          | -1.84                | -2.86                          | -2.49                | 3.75                            | 11                     | PASS       |
| 802.11ac<br>VHT160 | 50/5250                        | -5.60                          | -5.16                | -4.72                          | -4.28                | -4.56                          | -4.12                | -4.92                          | -4.48                | 1.53                            | 11                     | PASS       |
| 802.11ax<br>HE20   | 52/5260                        | 3.16                           | 3.50                 | 4.35                           | 4.69                 | 4.10                           | 4.44                 | 4.06                           | 4.40                 | 10.30                           | 11                     | PASS       |
|                    | 60/5300                        | 4.45                           | 4.79                 | 4.85                           | 5.19                 | 4.73                           | 5.07                 | 4.30                           | 4.64                 | 10.95                           | 11                     | PASS       |
|                    | 64/5320                        | 3.02                           | 3.36                 | 3.40                           | 3.74                 | 4.22                           | 4.56                 | 3.16                           | 3.50                 | 9.84                            | 11                     | PASS       |
| 802.11ax<br>HE40   | 54/5270                        | 3.20                           | 3.53                 | 4.08                           | 4.41                 | 4.53                           | 4.86                 | 4.24                           | 4.57                 | 10.39                           | 11                     | PASS       |
|                    | 62/5310                        | 0.06                           | 0.39                 | 0.93                           | 1.26                 | 1.37                           | 1.70                 | 0.72                           | 1.05                 | 7.15                            | 11                     | PASS       |
| 802.11ax<br>HE80   | 58/5290                        | -2.85                          | -2.52                | -1.83                          | -1.50                | -1.27                          | -0.94                | -2.09                          | -1.76                | 4.38                            | 11                     | PASS       |
| 802.11ax<br>HE160  | 50/5250                        | -5.21                          | -4.86                | -4.12                          | -3.77                | -4.01                          | -3.66                | -4.32                          | -3.97                | 1.98                            | 11                     | PASS       |

Note: 1.For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm}/10)}+10^{(\text{PSD antenna2 in dBm}/10)}+10^{(\text{PSD antenna3 in dBm}/10)}+10^{(\text{PSD antenna4 in dBm}/10)})$

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 11 dBm/MHz.

## U-NII-2C

| Mode               | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|--------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                    |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                    |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11n<br>HT20    | 100/5500                       | 3.63                           | 4.01                 | 4.42                           | 4.80                 | 4.71                           | 5.09                 | 3.91                           | 4.29                 | 10.59                           | 11                     | PASS       |
|                    | 116/5580                       | 3.86                           | 4.24                 | 4.14                           | 4.52                 | 4.17                           | 4.55                 | 4.36                           | 4.74                 | 10.54                           | 11                     | PASS       |
|                    | 140/5700                       | 3.86                           | 4.24                 | 4.04                           | 4.42                 | 4.46                           | 4.84                 | 4.01                           | 4.39                 | 10.50                           | 11                     | PASS       |
|                    | 144/5720                       | 4.08                           | 4.46                 | 4.39                           | 4.77                 | 4.44                           | 4.82                 | 4.17                           | 4.55                 | 10.68                           | 11                     | PASS       |
| 802.11n<br>HT40    | 102/5510                       | 0.37                           | 0.82                 | 1.40                           | 1.85                 | 1.86                           | 2.31                 | 1.24                           | 1.69                 | 7.72                            | 11                     | PASS       |
|                    | 110/5550                       | 3.09                           | 3.54                 | 3.07                           | 3.52                 | 3.24                           | 3.69                 | 3.16                           | 3.61                 | 9.61                            | 11                     | PASS       |
|                    | 134/5670                       | 1.99                           | 2.44                 | 2.08                           | 2.53                 | 2.34                           | 2.79                 | 2.04                           | 2.49                 | 8.58                            | 11                     | PASS       |
|                    | 142/5710                       | 4.48                           | 4.93                 | 4.42                           | 4.87                 | 4.17                           | 4.62                 | 4.26                           | 4.71                 | 10.80                           | 11                     | PASS       |
| 802.11ac<br>VHT20  | 100/5500                       | 3.93                           | 4.27                 | 4.23                           | 4.57                 | 4.37                           | 4.71                 | 3.92                           | 4.26                 | 10.48                           | 11                     | PASS       |
|                    | 116/5580                       | 3.74                           | 4.08                 | 4.30                           | 4.64                 | 4.34                           | 4.68                 | 4.28                           | 4.62                 | 10.53                           | 11                     | PASS       |
|                    | 140/5700                       | 3.78                           | 4.12                 | 3.90                           | 4.24                 | 4.42                           | 4.76                 | 3.82                           | 4.16                 | 10.35                           | 11                     | PASS       |
|                    | 144/5720                       | 3.85                           | 4.19                 | 4.34                           | 4.68                 | 4.11                           | 4.45                 | 4.53                           | 4.87                 | 10.57                           | 11                     | PASS       |
| 802.11ac<br>VHT40  | 102/5510                       | 0.57                           | 0.99                 | 1.65                           | 2.07                 | 1.75                           | 2.17                 | 1.33                           | 1.75                 | 7.79                            | 11                     | PASS       |
|                    | 110/5550                       | 2.85                           | 3.27                 | 3.23                           | 3.65                 | 3.75                           | 4.17                 | 3.08                           | 3.50                 | 9.68                            | 11                     | PASS       |
|                    | 134/5670                       | 1.71                           | 2.13                 | 1.98                           | 2.40                 | 2.31                           | 2.73                 | 2.06                           | 2.48                 | 8.46                            | 11                     | PASS       |
|                    | 142/5710                       | 4.26                           | 4.68                 | 4.76                           | 5.18                 | 4.20                           | 4.62                 | 4.23                           | 4.65                 | 10.81                           | 11                     | PASS       |
| 802.11ac<br>VHT80  | 122/5610                       | -2.58                          | -2.21                | -1.91                          | -1.54                | -1.53                          | -1.16                | -1.92                          | -1.55                | 4.42                            | 11                     | PASS       |
|                    | 138/5690                       | 0.81                           | 1.18                 | 0.79                           | 1.16                 | 0.51                           | 0.88                 | 0.60                           | 0.97                 | 7.07                            | 11                     | PASS       |
| 802.11ac<br>VHT160 | 114/5570                       | -4.74                          | -4.30                | -4.05                          | -3.61                | -4.04                          | -3.60                | -4.25                          | -3.81                | 2.20                            | 11                     | PASS       |
| 802.11ax<br>HE20   | 100/5500                       | 2.81                           | 3.15                 | 3.95                           | 4.29                 | 3.79                           | 4.13                 | 3.35                           | 3.69                 | 9.86                            | 11                     | PASS       |
|                    | 116/5580                       | 4.05                           | 4.39                 | 4.58                           | 4.92                 | 4.44                           | 4.78                 | 4.57                           | 4.91                 | 10.78                           | 11                     | PASS       |
|                    | 140/5700                       | 3.24                           | 3.58                 | 3.63                           | 3.97                 | 4.18                           | 4.52                 | 3.38                           | 3.72                 | 9.99                            | 11                     | PASS       |
|                    | 144/5720                       | 4.56                           | 4.90                 | 4.72                           | 5.06                 | 4.64                           | 4.98                 | 4.34                           | 4.68                 | 10.93                           | 11                     | PASS       |
| 802.11ax<br>HE40   | 102/5510                       | 1.89                           | 2.22                 | 2.77                           | 3.10                 | 2.72                           | 3.05                 | 2.38                           | 2.71                 | 8.80                            | 11                     | PASS       |
|                    | 110/5550                       | 3.03                           | 3.36                 | 3.56                           | 3.89                 | 3.70                           | 4.03                 | 3.54                           | 3.87                 | 9.82                            | 11                     | PASS       |
|                    | 134/5670                       | 2.09                           | 2.42                 | 2.85                           | 3.18                 | 2.36                           | 2.69                 | 2.17                           | 2.50                 | 8.73                            | 11                     | PASS       |
|                    | 142/5710                       | 3.90                           | 4.23                 | 3.81                           | 4.14                 | 3.25                           | 3.58                 | 3.08                           | 3.41                 | 9.87                            | 11                     | PASS       |
| 802.11ax<br>HE80   | 122/5610                       | -1.96                          | -1.63                | -1.14                          | -0.81                | -1.07                          | -0.74                | -1.56                          | -1.23                | 4.93                            | 11                     | PASS       |
|                    | 138/5690                       | 0.50                           | 0.83                 | 0.55                           | 0.88                 | 0.13                           | 0.46                 | 0.17                           | 0.50                 | 6.69                            | 11                     | PASS       |
| 802.11ax<br>HE160  | 114/5570                       | -4.29                          | -3.94                | -3.97                          | -3.62                | -3.28                          | -2.93                | -3.78                          | -3.43                | 2.55                            | 11                     | PASS       |

Note: 1.For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(PSD\ antenna1\ in\ dBm/10)}+10^{(PSD\ antenna2\ in\ dBm/10)}+10^{(PSD\ antenna3\ in\ dBm/10)}+10^{(PSD\ antenna4\ in\ dBm/10)})$

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 11dBm/MHz.

### U-NII-3

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------|--------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                   |                                | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                   |                                | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11n<br>HT20   | 144/5720                       | 0.69                              | 1.34                    | 0.91                              | 1.56                    | 0.84                              | 1.49                    | 0.52                              | 1.17                    | 7.42                               | 30                        | PASS       |
|                   | 149/5745                       | 9.07                              | 9.72                    | 9.60                              | 10.25                   | 9.81                              | 10.46                   | 9.68                              | 10.33                   | 16.22                              | 30                        | PASS       |
|                   | 157/5785                       | 9.07                              | 9.72                    | 9.76                              | 10.41                   | 9.33                              | 9.98                    | 9.98                              | 10.63                   | 16.22                              | 30                        | PASS       |
|                   | 165/5825                       | 9.51                              | 10.16                   | 9.56                              | 10.21                   | 9.15                              | 9.80                    | 9.12                              | 9.77                    | 16.01                              | 30                        | PASS       |
| 802.11n<br>HT40   | 142/5710                       | -0.91                             | -0.19                   | -0.14                             | 0.58                    | -0.37                             | 0.35                    | -0.97                             | -0.25                   | 6.16                               | 30                        | PASS       |
|                   | 151/5755                       | 5.43                              | 6.15                    | 5.74                              | 6.46                    | 5.58                              | 6.30                    | 5.81                              | 6.53                    | 12.38                              | 30                        | PASS       |
|                   | 159/5795                       | 5.37                              | 6.09                    | 5.96                              | 6.68                    | 5.67                              | 6.39                    | 6.03                              | 6.75                    | 12.51                              | 30                        | PASS       |
| 802.11ac<br>VHT20 | 144/5720                       | 1.96                              | 2.57                    | 1.22                              | 1.83                    | 1.48                              | 2.09                    | 0.53                              | 1.14                    | 7.96                               | 30                        | PASS       |
|                   | 149/5745                       | 9.05                              | 9.66                    | 9.60                              | 10.21                   | 9.68                              | 10.29                   | 9.55                              | 10.16                   | 16.11                              | 30                        | PASS       |
|                   | 157/5785                       | 9.39                              | 10.00                   | 9.81                              | 10.42                   | 9.66                              | 10.27                   | 9.30                              | 9.91                    | 16.17                              | 30                        | PASS       |
|                   | 165/5825                       | 9.59                              | 10.20                   | 9.89                              | 10.50                   | 8.81                              | 9.42                    | 9.81                              | 10.42                   | 16.17                              | 30                        | PASS       |
| 802.11ac<br>VHT40 | 142/5710                       | -0.85                             | -0.16                   | -0.07                             | 0.62                    | -0.57                             | 0.12                    | -1.03                             | -0.34                   | 6.10                               | 30                        | PASS       |
|                   | 151/5755                       | 5.48                              | 6.17                    | 5.89                              | 6.58                    | 5.81                              | 6.50                    | 6.15                              | 6.84                    | 12.55                              | 30                        | PASS       |
|                   | 159/5795                       | 5.50                              | 6.19                    | 5.87                              | 6.56                    | 5.40                              | 6.09                    | 6.00                              | 6.69                    | 12.41                              | 30                        | PASS       |
| 802.11ac<br>VHT80 | 138/5690                       | -4.32                             | -3.68                   | -4.02                             | -3.38                   | -4.80                             | -4.16                   | -5.19                             | -4.55                   | 2.10                               | 30                        | PASS       |
|                   | 155/5775                       | 3.42                              | 4.06                    | 3.83                              | 4.47                    | 3.35                              | 3.99                    | 3.60                              | 4.24                    | 10.22                              | 30                        | PASS       |
| 802.11ax<br>HE20  | 144/5720                       | 1.96                              | 2.57                    | 1.44                              | 2.05                    | 1.42                              | 2.03                    | 0.74                              | 1.35                    | 8.05                               | 30                        | PASS       |
|                   | 149/5745                       | 8.87                              | 9.48                    | 9.32                              | 9.93                    | 9.06                              | 9.67                    | 9.12                              | 9.73                    | 15.73                              | 30                        | PASS       |
|                   | 157/5785                       | 8.58                              | 9.19                    | 9.20                              | 9.81                    | 8.81                              | 9.42                    | 9.25                              | 9.86                    | 15.60                              | 30                        | PASS       |
|                   | 165/5825                       | 8.78                              | 9.39                    | 9.27                              | 9.88                    | 8.46                              | 9.07                    | 8.93                              | 9.54                    | 15.50                              | 30                        | PASS       |
| 802.11ax<br>HE40  | 142/5710                       | -1.32                             | -0.72                   | -0.69                             | -0.09                   | -0.97                             | -0.37                   | -1.73                             | -1.13                   | 5.46                               | 30                        | PASS       |
|                   | 151/5755                       | 5.24                              | 5.84                    | 6.01                              | 6.61                    | 5.73                              | 6.33                    | 6.42                              | 7.02                    | 12.49                              | 30                        | PASS       |
|                   | 159/5795                       | 5.95                              | 6.55                    | 6.73                              | 7.33                    | 6.28                              | 6.88                    | 6.29                              | 6.89                    | 12.94                              | 30                        | PASS       |
| 802.11ax<br>HE80  | 138/5690                       | -4.51                             | -3.91                   | -4.18                             | -3.58                   | -4.98                             | -4.38                   | -5.57                             | -4.97                   | 1.84                               | 30                        | PASS       |
|                   | 155/5775                       | 2.77                              | 3.37                    | 3.50                              | 4.10                    | 3.03                              | 3.63                    | 3.06                              | 3.66                    | 9.72                               | 30                        | PASS       |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor +  $10 \cdot \log(500/470)$ .

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density =  $10 \log(10^{(\text{PSD antenna 1 in dBm/10})} + 10^{(\text{PSD antenna 2 in dBm/10})} + 10^{(\text{PSD antenna 3 in dBm/10})} + 10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 30 dBm/500kHz.

# Beamforming

## U-NII-1

| Mode              | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                               | Limit<br>(dBm/<br>MHz) | Conclusion |
|-------------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|-------------------------------|------------------------|------------|
|                   |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>PSD<br>(dBm<br>/MHz) |                        |            |
|                   |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                               |                        |            |
| 802.11n<br>HT20   | 36/5180                        | 4.34                           | 4.72                 | 5.57                           | 5.95                 | 4.93                           | 5.31                 | 5.30                           | 5.68                 | 11.46                         | 11.56                  | PASS       |
|                   | 40/5200                        | 4.61                           | 4.99                 | 5.35                           | 5.73                 | 4.05                           | 4.43                 | 5.43                           | 5.81                 | 11.30                         | 11.56                  | PASS       |
|                   | 48/5240                        | 4.13                           | 4.51                 | 4.95                           | 5.33                 | 4.75                           | 5.13                 | 4.85                           | 5.23                 | 11.09                         | 11.56                  | PASS       |
| 802.11n<br>HT40   | 38/5190                        | 1.44                           | 1.89                 | 2.23                           | 2.68                 | 1.28                           | 1.73                 | 1.99                           | 2.44                 | 8.22                          | 11.56                  | PASS       |
|                   | 46/5230                        | 3.63                           | 4.08                 | 4.39                           | 4.84                 | 4.13                           | 4.58                 | 4.47                           | 4.92                 | 10.64                         | 11.56                  | PASS       |
| 802.11ac<br>VHT20 | 36/5180                        | 4.53                           | 4.87                 | 5.58                           | 5.92                 | 4.81                           | 5.15                 | 4.97                           | 5.31                 | 11.35                         | 11.56                  | PASS       |
|                   | 40/5200                        | 4.77                           | 5.11                 | 5.53                           | 5.87                 | 4.54                           | 4.88                 | 5.05                           | 5.39                 | 11.35                         | 11.56                  | PASS       |
|                   | 48/5240                        | 4.25                           | 4.59                 | 4.59                           | 4.93                 | 5.00                           | 5.34                 | 4.89                           | 5.23                 | 11.05                         | 11.56                  | PASS       |
| 802.11ac<br>VHT40 | 38/5190                        | 1.41                           | 1.83                 | 2.56                           | 2.98                 | 1.62                           | 2.04                 | 2.40                           | 2.82                 | 8.47                          | 11.56                  | PASS       |
|                   | 46/5230                        | 3.31                           | 3.73                 | 4.49                           | 4.91                 | 4.05                           | 4.47                 | 4.24                           | 4.66                 | 10.49                         | 11.56                  | PASS       |
| 802.11ac<br>VHT80 | 42/5210                        | -2.83                          | -2.46                | -1.59                          | -1.22                | -2.15                          | -1.78                | -1.88                          | -1.51                | 4.30                          | 11.56                  | PASS       |
| 802.11ax<br>HE20  | 36/5180                        | 3.73                           | 4.07                 | 4.83                           | 5.17                 | 3.97                           | 4.31                 | 4.54                           | 4.88                 | 10.65                         | 11.56                  | PASS       |
|                   | 40/5200                        | 5.33                           | 5.67                 | 4.54                           | 4.88                 | 5.27                           | 5.61                 | 5.34                           | 5.68                 | 11.50                         | 11.56                  | PASS       |
|                   | 48/5240                        | 4.43                           | 4.77                 | 5.07                           | 5.41                 | 5.31                           | 5.65                 | 5.35                           | 5.69                 | 11.42                         | 11.56                  | PASS       |
| 802.11ax<br>HE40  | 38/5190                        | 1.53                           | 1.86                 | 2.88                           | 3.21                 | 1.73                           | 2.06                 | 2.19                           | 2.52                 | 8.46                          | 11.56                  | PASS       |
|                   | 46/5230                        | 3.56                           | 3.89                 | 4.58                           | 4.91                 | 4.41                           | 4.74                 | 4.59                           | 4.92                 | 10.66                         | 11.56                  | PASS       |
| 802.11ax<br>HE80  | 42/5210                        | -2.61                          | -2.28                | -0.95                          | -0.62                | -1.21                          | -0.88                | -1.39                          | -1.06                | 4.86                          | 11.56                  | PASS       |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density =  $10 \log(10^{(\text{PSD antenna 1 in dBm/10})} + 10^{(\text{PSD antenna 2 in dBm/10})} + 10^{(\text{PSD antenna 3 in dBm/10})} + 10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10 \log(N_{\text{ANT}}) = 5.42 + 6.02 = 11.44 \text{ dBi} > 6 \text{ dBi}$ . So the PSD limit is  $17 + 6 - \text{MAX}(6, \text{directional gain}) \text{ dBm/MHz} = 11.56 \text{ dBm/MHz}$ .

## U-NII-2A

| Mode    | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|---------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|         |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|         |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11n | 52/5260                        | -1.77                          | -1.39                | -1.16                          | -0.78                | -0.72                          | -0.34                | -1.05                          | -0.67                | 5.25                            | 5.56                   | PASS       |

|                    |         |       |       |       |       |       |       |       |       |       |      |      |
|--------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| HT20               | 60/5300 | -1.88 | -1.50 | -1.25 | -0.87 | -0.81 | -0.43 | -1.69 | -1.31 | 5.02  | 5.56 | PASS |
|                    | 64/5320 | -1.50 | -1.12 | -1.05 | -0.67 | -1.20 | -0.82 | -0.87 | -0.49 | 5.26  | 5.56 | PASS |
| 802.11n<br>HT40    | 54/5270 | -2.01 | -1.56 | -0.74 | -0.29 | -0.70 | -0.25 | -0.69 | -0.24 | 5.47  | 5.56 | PASS |
|                    | 62/5310 | -1.82 | -1.37 | -1.53 | -1.08 | -0.64 | -0.19 | -1.22 | -0.77 | 5.19  | 5.56 | PASS |
| 802.11ac<br>VHT20  | 52/5260 | -2.27 | -1.93 | -1.22 | -0.88 | -0.71 | -0.37 | -0.97 | -0.63 | 5.11  | 5.56 | PASS |
|                    | 60/5300 | -1.79 | -1.45 | -1.23 | -0.89 | -1.04 | -0.70 | -1.92 | -1.58 | 4.88  | 5.56 | PASS |
|                    | 64/5320 | -1.58 | -1.24 | -0.84 | -0.50 | -1.36 | -1.02 | -1.27 | -0.93 | 5.11  | 5.56 | PASS |
| 802.11ac<br>VHT40  | 54/5270 | -1.97 | -1.55 | -0.88 | -0.46 | -0.56 | -0.14 | -0.69 | -0.27 | 5.45  | 5.56 | PASS |
|                    | 62/5310 | -2.15 | -1.73 | -1.22 | -0.80 | -0.96 | -0.54 | -1.30 | -0.88 | 5.06  | 5.56 | PASS |
| 802.11ac<br>VHT80  | 58/5290 | -5.14 | -4.77 | -4.14 | -3.77 | -4.11 | -3.74 | -4.53 | -4.16 | 1.93  | 5.56 | PASS |
| 802.11ac<br>VHT160 | 50/5250 | -8.61 | -8.17 | -7.75 | -7.31 | -7.44 | -7.00 | -7.90 | -7.46 | -1.45 | 5.56 | PASS |
| 802.11ax<br>HE20   | 52/5260 | -1.54 | -1.20 | -0.76 | -0.42 | -0.54 | -0.20 | -0.56 | -0.22 | 5.53  | 5.56 | PASS |
|                    | 60/5300 | -1.82 | -1.48 | -1.01 | -0.67 | -0.57 | -0.23 | -1.45 | -1.11 | 5.18  | 5.56 | PASS |
|                    | 64/5320 | -1.81 | -1.47 | -1.06 | -0.72 | -0.55 | -0.21 | -1.44 | -1.10 | 5.17  | 5.56 | PASS |
| 802.11ax<br>HE40   | 54/5270 | -2.65 | -2.32 | -1.93 | -1.60 | -1.56 | -1.23 | -1.52 | -1.19 | 4.46  | 5.56 | PASS |
|                    | 62/5310 | -1.72 | -1.39 | -0.82 | -0.49 | -0.78 | -0.45 | -1.08 | -0.75 | 5.27  | 5.56 | PASS |
| 802.11ax<br>HE80   | 58/5290 | -5.38 | -5.05 | -4.40 | -4.07 | -4.40 | -4.07 | -4.95 | -4.62 | 1.59  | 5.56 | PASS |
| 802.11ax<br>HE160  | 50/5250 | -7.87 | -7.52 | -7.09 | -6.74 | -7.18 | -6.83 | -7.21 | -6.86 | -0.96 | 5.56 | PASS |

Note: 1.For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(\text{PSD antenna1 in dBm/10})}+10^{(\text{PSD antenna2 in dBm/10})}+10^{(\text{PSD antenna3 in dBm/10})}+10^{(\text{PSD antenna4 in dBm/10})})$

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10 \log(N_{\text{ANT}})=5.42+6.02=11.44\text{dBi} > 6\text{dBi}$ . So the PSD limit is  $11+6-\text{MAX}(6, \text{directional gain}) \text{ dBm/MHz} = 5.56 \text{ dBm/MHz}$ .

### U-NII-2C

| Mode            | Channel/<br>Frequency<br>(MHz) | Power Spectral Density         |                      |                                |                      |                                |                      |                                |                      |                                 | Limit<br>(dBm/<br>MHz) | Conclusion |
|-----------------|--------------------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|--------------------------------|----------------------|---------------------------------|------------------------|------------|
|                 |                                | Antenna 1                      |                      | Antenna 2                      |                      | Antenna 3                      |                      | Antenna 4                      |                      | Total<br>Power<br>(dBm<br>/MHz) |                        |            |
|                 |                                | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) | Read<br>Value<br>(dBm/<br>MHz) | PSD<br>(dBm/<br>MHz) |                                 |                        |            |
| 802.11n<br>HT20 | 100/5500                       | -1.08                          | -0.70                | -0.79                          | -0.41                | -1.02                          | -0.64                | -0.93                          | -0.55                | 5.45                            | 5.56                   | PASS       |
|                 | 116/5580                       | -1.23                          | -0.85                | -0.82                          | -0.44                | -1.04                          | -0.66                | -0.87                          | -0.49                | 5.42                            | 5.56                   | PASS       |
|                 | 140/5700                       | -1.75                          | -1.37                | -1.28                          | -0.90                | -2.07                          | -1.69                | -2.26                          | -1.88                | 4.58                            | 5.56                   | PASS       |
|                 | 144/5720                       | -1.31                          | -0.93                | -0.82                          | -0.44                | -0.76                          | -0.38                | -0.92                          | -0.54                | 5.46                            | 5.56                   | PASS       |
| 802.11n<br>HT40 | 102/5510                       | -1.98                          | -1.53                | -1.07                          | -0.62                | -1.19                          | -0.74                | -1.40                          | -0.95                | 5.07                            | 5.56                   | PASS       |
|                 | 110/5550                       | -2.09                          | -1.64                | -1.49                          | -1.04                | -1.15                          | -0.70                | -1.55                          | -1.10                | 4.91                            | 5.56                   | PASS       |
|                 | 134/5670                       | -1.79                          | -1.34                | -1.52                          | -1.07                | -1.20                          | -0.75                | -1.57                          | -1.12                | 4.96                            | 5.56                   | PASS       |
|                 | 142/5710                       | -1.41                          | -0.96                | -1.04                          | -0.59                | -1.35                          | -0.90                | -1.68                          | -1.23                | 5.11                            | 5.56                   | PASS       |

|                    |          |       |       |       |       |       |       |       |       |       |      |      |
|--------------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 802.11ac<br>VHT20  | 100/5500 | -1.03 | -0.69 | -0.69 | -0.35 | -0.91 | -0.57 | -0.89 | -0.55 | 5.48  | 5.56 | PASS |
|                    | 116/5580 | -0.74 | -0.40 | -0.84 | -0.50 | -0.94 | -0.60 | -1.08 | -0.74 | 5.46  | 5.56 | PASS |
|                    | 140/5700 | -1.30 | -0.96 | -0.86 | -0.52 | -0.71 | -0.37 | -0.58 | -0.24 | 5.51  | 5.56 | PASS |
|                    | 144/5720 | -1.46 | -1.12 | -0.90 | -0.56 | -0.72 | -0.38 | -0.68 | -0.34 | 5.43  | 5.56 | PASS |
| 802.11ac<br>VHT40  | 102/5510 | -1.80 | -1.38 | -1.06 | -0.64 | -1.12 | -0.70 | -1.76 | -1.34 | 5.02  | 5.56 | PASS |
|                    | 110/5550 | -2.10 | -1.68 | -1.83 | -1.41 | -1.22 | -0.80 | -1.63 | -1.21 | 4.76  | 5.56 | PASS |
|                    | 134/5670 | -1.94 | -1.52 | -1.32 | -0.90 | -0.77 | -0.35 | -1.69 | -1.27 | 5.04  | 5.56 | PASS |
|                    | 142/5710 | -1.50 | -1.08 | -1.19 | -0.77 | -1.67 | -1.25 | -1.61 | -1.19 | 4.96  | 5.56 | PASS |
| 802.11ac<br>VHT80  | 106/5530 | -5.01 | -4.64 | -4.58 | -4.21 | -4.47 | -4.10 | -4.63 | -4.26 | 1.72  | 5.56 | PASS |
|                    | 138/5690 | -4.94 | -4.57 | -4.75 | -4.38 | -4.38 | -4.01 | -5.33 | -4.96 | 1.56  | 5.56 | PASS |
| 802.11ac<br>VHT160 | 114/5570 | -7.56 | -7.12 | -7.21 | -6.77 | -6.90 | -6.46 | -7.07 | -6.63 | -0.72 | 5.56 | PASS |
| 802.11ax<br>HE20   | 100/5500 | -1.49 | -1.15 | -0.90 | -0.56 | -1.23 | -0.89 | -1.51 | -1.17 | 5.09  | 5.56 | PASS |
|                    | 116/5580 | -1.86 | -1.52 | -1.21 | -0.87 | -1.23 | -0.89 | -1.25 | -0.91 | 4.98  | 5.56 | PASS |
|                    | 140/5700 | -1.86 | -1.52 | -1.29 | -0.95 | -1.05 | -0.71 | -1.34 | -1.00 | 4.99  | 5.56 | PASS |
|                    | 144/5720 | -1.40 | -1.06 | -1.05 | -0.71 | -1.24 | -0.90 | -1.44 | -1.10 | 5.08  | 5.56 | PASS |
| 802.11ax<br>HE40   | 102/5510 | -1.77 | -1.44 | -1.09 | -0.76 | -1.03 | -0.70 | -1.54 | -1.21 | 5.00  | 5.56 | PASS |
|                    | 110/5550 | -1.86 | -1.53 | -1.56 | -1.23 | -1.07 | -0.74 | -1.38 | -1.05 | 4.89  | 5.56 | PASS |
|                    | 134/5670 | -1.80 | -1.47 | -1.26 | -0.93 | -1.29 | -0.96 | -1.48 | -1.15 | 4.90  | 5.56 | PASS |
|                    | 142/5710 | -1.10 | -0.77 | -0.67 | -0.34 | -1.49 | -1.16 | -1.73 | -1.40 | 5.12  | 5.56 | PASS |
| 802.11ax<br>HE80   | 106/5530 | -4.50 | -4.17 | -4.05 | -3.72 | -4.14 | -3.81 | -4.25 | -3.92 | 2.12  | 5.56 | PASS |
|                    | 138/5690 | -4.50 | -4.17 | -4.10 | -3.77 | -4.60 | -4.27 | -4.59 | -4.26 | 1.91  | 5.56 | PASS |
| 802.11ax<br>HE160  | 114/5570 | -7.70 | -7.35 | -7.91 | -7.56 | -7.43 | -7.08 | -7.78 | -7.43 | -1.33 | 5.56 | PASS |

Note: 1.For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),the power spectral density= $10\log(10^{(PSD\ antenna1\ in\ dBm/10)}+10^{(PSD\ antenna2\ in\ dBm/10)}+10^{(PSD\ antenna3\ in\ dBm/10)}+10^{(PSD\ antenna4\ in\ dBm/10)})$

2. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{ANT} + 10\log(N_{ANT})=5.42+6.02=11.44\text{dBi} > 6\text{dBi}$ . So the PSD limit is  $11+6-\text{MAX}(6, \text{directional gain})\text{ dBm/MHz} = 5.56\text{ dBm/MHz}$ .

**U-NII-3**

| Mode            | Channel/<br>Frequency<br>(MHz) | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-----------------|--------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                 |                                | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                 |                                | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11n<br>HT20 | 144/5720                       | -4.00                             | -3.35                   | -3.94                             | -3.29                   | -4.03                             | -3.38                   | -4.44                             | -3.79                   | 2.58                               | 24.56                     | PASS       |
|                 | 149/5745                       | 4.51                              | 5.16                    | 5.13                              | 5.78                    | 4.73                              | 5.38                    | 4.51                              | 5.16                    | 11.40                              | 24.56                     | PASS       |
|                 | 157/5785                       | 4.58                              | 5.23                    | 5.02                              | 5.67                    | 4.51                              | 5.16                    | 4.68                              | 5.33                    | 11.38                              | 24.56                     | PASS       |
|                 | 165/5825                       | 5.13                              | 5.78                    | 4.79                              | 5.44                    | 4.24                              | 4.89                    | 4.43                              | 5.08                    | 11.34                              | 24.56                     | PASS       |

|                   |          |        |       |       |       |       |       |        |        |       |       |      |
|-------------------|----------|--------|-------|-------|-------|-------|-------|--------|--------|-------|-------|------|
| 802.11n<br>HT40   | 142/5710 | -6.33  | -5.61 | -5.92 | -5.20 | -6.42 | -5.70 | -6.68  | -5.96  | 0.41  | 24.56 | PASS |
|                   | 151/5755 | 0.24   | 0.96  | 0.52  | 1.24  | 0.61  | 1.33  | 0.76   | 1.48   | 7.28  | 24.56 | PASS |
|                   | 159/5795 | 0.75   | 1.47  | 0.86  | 1.58  | 0.22  | 0.94  | 1.11   | 1.83   | 7.49  | 24.56 | PASS |
| 802.11ac<br>VHT20 | 144/5720 | -3.76  | -3.15 | -4.01 | -3.40 | -3.88 | -3.27 | -4.30  | -3.69  | 2.65  | 24.56 | PASS |
|                   | 149/5745 | 4.20   | 4.81  | 4.73  | 5.34  | 4.69  | 5.30  | 4.92   | 5.53   | 11.27 | 24.56 | PASS |
|                   | 157/5785 | 4.54   | 5.15  | 4.70  | 5.31  | 4.42  | 5.03  | 4.48   | 5.09   | 11.17 | 24.56 | PASS |
|                   | 165/5825 | 4.75   | 5.36  | 4.64  | 5.25  | 3.99  | 4.60  | 4.38   | 4.99   | 11.08 | 24.56 | PASS |
| 802.11ac<br>VHT40 | 142/5710 | -6.71  | -6.02 | -5.74 | -5.05 | -6.15 | -5.46 | -6.53  | -5.84  | 0.45  | 24.56 | PASS |
|                   | 151/5755 | 0.55   | 1.24  | 0.75  | 1.44  | 0.65  | 1.34  | 0.74   | 1.43   | 7.39  | 24.56 | PASS |
|                   | 159/5795 | 0.75   | 1.44  | 0.73  | 1.42  | 0.62  | 1.31  | 1.02   | 1.71   | 7.50  | 24.56 | PASS |
| 802.11ac<br>VHT80 | 138/5690 | -10.41 | -9.77 | -9.52 | -8.88 | -9.87 | -9.23 | -10.82 | -10.18 | -3.46 | 24.56 | PASS |
|                   | 155/5775 | -2.61  | -1.97 | -2.24 | -1.60 | -2.46 | -1.82 | -1.97  | -1.33  | 4.35  | 24.56 | PASS |
| 802.11ax<br>HE20  | 144/5720 | -4.75  | -4.14 | -4.41 | -3.80 | -4.54 | -3.93 | -4.97  | -4.36  | 1.97  | 24.56 | PASS |
|                   | 149/5745 | 4.12   | 4.73  | 4.23  | 4.84  | 4.16  | 4.77  | 4.32   | 4.93   | 10.84 | 24.56 | PASS |
|                   | 157/5785 | 3.95   | 4.56  | 4.18  | 4.79  | 4.02  | 4.63  | 4.52   | 5.13   | 10.81 | 24.56 | PASS |
|                   | 165/5825 | 4.01   | 4.62  | 4.60  | 5.21  | 3.53  | 4.14  | 4.02   | 4.63   | 10.69 | 24.56 | PASS |
| 802.11ax<br>HE40  | 142/5710 | -5.68  | -5.08 | -5.47 | -4.87 | -6.12 | -5.52 | -6.70  | -6.10  | 0.65  | 24.56 | PASS |
|                   | 151/5755 | 0.54   | 1.14  | 1.12  | 1.72  | 1.11  | 1.71  | 1.15   | 1.75   | 7.61  | 24.56 | PASS |
|                   | 159/5795 | 1.29   | 1.89  | 1.14  | 1.74  | 1.00  | 1.60  | 1.17   | 1.77   | 7.77  | 24.56 | PASS |
| 802.11ax<br>HE80  | 138/5690 | -10.15 | -9.55 | -9.20 | -8.60 | -9.71 | -9.11 | -10.31 | -9.71  | -3.20 | 24.56 | PASS |
|                   | 155/5775 | -1.85  | -1.25 | -1.73 | -1.13 | -1.95 | -1.35 | -1.70  | -1.10  | 4.81  | 24.56 | PASS |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor +10\*log(500/470).

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm}/10)}+10^{(\text{PSD antenna 2 in dBm}/10)}+10^{(\text{PSD antenna 3 in dBm}/10)}+10^{(\text{PSD antenna 4 in dBm}/10)})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10 \log(N_{\text{ANT}})=5.42+6.02=11.44\text{dBi} > 6\text{dBi}$ . So the PSD limit is  $30+6-\text{MAX}(6, \text{directional gain}) \text{ dBm}/500\text{kHz} = 24.56 \text{ dBm}/500\text{kHz}$ .

**RU Mode**
**MIMO**
**U-NII-1**

| Mode      | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density     |                  |                            |                  |                            |                  |                            |                  |                               | Limit<br>(dBm/<br>MHz) | Conclusion |      |
|-----------|--------------------------------|-------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|-------------------------------|------------------------|------------|------|
|           |                                |             | Antenna 1                  |                  | Antenna 2                  |                  | Antenna 3                  |                  | Antenna 4                  |                  | Total<br>PSD<br>(dBm<br>/MHz) |                        |            |      |
|           |                                |             | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) |                               |                        |            |      |
| 802.11ax  | 36/5180                        | 37          | 10.45                      | 10.77            | 10.24                      | 10.56            | 10.24                      | 10.56            | 10.42                      | 10.74            | 16.68                         | 17.00                  | PASS       |      |
| 52-Tones  | HE20                           | 40/5200     | 38                         | 10.68            | 11.00                      | 10.33            | 10.65                      | 10.13            | 10.45                      | 10.59            | 10.91                         | 16.78                  | 17.00      | PASS |
|           |                                | 48/5240     | 40                         | 10.10            | 10.45                      | 9.79             | 10.14                      | 9.72             | 10.07                      | 10.04            | 10.39                         | 16.29                  | 17.00      | PASS |
| 802.11ax  | 36/5180                        | 53          | 10.39                      | 10.66            | 10.56                      | 10.83            | 10.29                      | 10.56            | 10.15                      | 10.42            | 16.64                         | 17.00                  | PASS       |      |
| 106-Tones | HE20                           | 40/5200     | 53                         | 10.97            | 11.24                      | 10.21            | 10.48                      | 10.39            | 10.66                      | 10.56            | 10.83                         | 16.83                  | 17.00      | PASS |
|           |                                | 48/5240     | 54                         | 9.74             | 10.05                      | 9.81             | 10.12                      | 9.78             | 10.09                      | 10.54            | 10.85                         | 16.31                  | 17.00      | PASS |
| 802.11ax  | 36/5180                        | 61          | 5.49                       | 5.90             | 5.52                       | 5.93             | 4.75                       | 5.16             | 5.45                       | 5.86             | 11.74                         | 17.00                  | PASS       |      |
| 242-Tones | HE20                           | 40/5200     | 61                         | 5.56             | 5.97                       | 5.23             | 5.64                       | 4.71             | 5.12                       | 5.08             | 5.49                          | 11.59                  | 17.00      | PASS |
|           |                                | 48/5240     | 61                         | 5.43             | 5.84                       | 5.18             | 5.59                       | 5.01             | 5.42                       | 5.07             | 5.48                          | 11.61                  | 17.00      | PASS |
| 802.11ax  | 38/5190                        | 65          | 2.16                       | 2.55             | 1.64                       | 2.03             | 1.60                       | 1.99             | 1.92                       | 2.31             | 8.25                          | 17.00                  | PASS       |      |
| 484-Tones | HE40                           | 46/5230     | 65                         | 1.92             | 2.31                       | 1.26             | 1.65                       | 1.65             | 2.04                       | 1.72             | 2.11                          | 8.05                   | 17.00      | PASS |
| 802.11ax  |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                               |                        |            |      |
| 996-Tones | HE80                           | 42/5210     | 67                         | -3.82            | -3.50                      | -4.45            | -4.13                      | -4.05            | -3.73                      | -3.34            | -3.02                         | 2.44                   | 17.00      | PASS |
|           |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                               |                        |            |      |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}+10^{(\text{PSD antenna 3 in dBm/10})}+10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 17 dBm/MHz.

## U-NII-2A

| Mode                             | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density  |                  |                         |                  |                         |                  |                         |                  |                               | Limit<br>(dBm/<br>MHz) | Conclusion |
|----------------------------------|--------------------------------|-------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|-------------------------------|------------------------|------------|
|                                  |                                |             | Antenna 1               |                  | Antenna 2               |                  | Antenna 3               |                  | Antenna 4               |                  | Total<br>PSD<br>(dBm<br>/MHz) |                        |            |
|                                  |                                |             | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) |                               |                        |            |
| 802.11ax<br>HE20<br>52-Tones     | 52/5260                        | 37          | 4.19                    | 4.51             | 4.04                    | 4.36             | 3.66                    | 3.98             | 4.20                    | 4.52             | 10.37                         | 11.00                  | PASS       |
|                                  | 60/5300                        | 38          | 4.71                    | 5.03             | 3.44                    | 3.76             | 3.93                    | 4.25             | 3.25                    | 3.57             | 10.21                         | 11.00                  | PASS       |
|                                  | 64/5320                        | 40          | 4.90                    | 5.25             | 4.06                    | 4.41             | 4.64                    | 4.99             | 3.69                    | 4.04             | 10.72                         | 11.00                  | PASS       |
| 802.11ax<br>HE20<br>106-Tones    | 52/5260                        | 53          | 4.39                    | 4.66             | 3.94                    | 4.21             | 4.25                    | 4.52             | 4.34                    | 4.61             | 10.52                         | 11.00                  | PASS       |
|                                  | 60/5300                        | 53          | 3.87                    | 4.14             | 3.12                    | 3.39             | 3.72                    | 3.99             | 3.81                    | 4.08             | 9.93                          | 11.00                  | PASS       |
|                                  | 64/5320                        | 54          | 5.00                    | 5.31             | 4.03                    | 4.34             | 4.74                    | 5.05             | 3.90                    | 4.21             | 10.77                         | 11.00                  | PASS       |
| 802.11ax<br>HE20<br>242-Tones    | 52/5260                        | 61          | 4.52                    | 4.93             | 4.22                    | 4.63             | 3.88                    | 4.29             | 4.21                    | 4.62             | 10.64                         | 11.00                  | PASS       |
|                                  | 60/5300                        | 61          | 4.46                    | 4.87             | 3.36                    | 3.77             | 3.91                    | 4.32             | 3.29                    | 3.70             | 10.21                         | 11.00                  | PASS       |
|                                  | 64/5320                        | 61          | 3.84                    | 4.25             | 3.43                    | 3.84             | 3.76                    | 4.17             | 2.95                    | 3.36             | 9.94                          | 11.00                  | PASS       |
| 802.11ax<br>HE40<br>484-Tones    | 54/5270                        | 65          | 3.8                     | 4.19             | 3.42                    | 3.81             | 3.65                    | 4.04             | 3.28                    | 3.67             | 9.95                          | 11.00                  | PASS       |
|                                  | 62/5310                        | 65          | 3.97                    | 4.36             | 3.2                     | 3.59             | 3.37                    | 3.76             | 2.68                    | 3.07             | 9.74                          | 11.00                  | PASS       |
| 802.11ax<br>HE80<br>996-Tones    | 58/5290                        | 67          | -1.36                   | -1.04            | -1.54                   | -1.22            | -1.6                    | -1.28            | -2.03                   | -1.71            | 4.71                          | 11.00                  | PASS       |
| 802.11ax<br>HE160<br>996*2-Tones | 50/5250                        | 68          | -3.61                   | 1.80             | -3.91                   | 1.50             | -4.1                    | 1.31             | -4.24                   | 1.17             | 7.47                          | 11.00                  | PASS       |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm}/10)}+10^{(\text{PSD antenna 2 in dBm}/10)}+10^{(\text{PSD antenna 3 in dBm}/10)}+10^{(\text{PSD antenna 4 in dBm}/10)})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 11dBm/MHz.

## U-NII-2C

| Mode                             | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density  |                  |                         |                  |                         |                  |                         |                  |                      | Limit<br>(dBm/<br>MHz) | Conclusion |
|----------------------------------|--------------------------------|-------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|----------------------|------------------------|------------|
|                                  |                                |             | Antenna 1               |                  | Antenna 2               |                  | Antenna 3               |                  | Antenna 4               |                  | Total                |                        |            |
|                                  |                                |             | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | PSD<br>(dBm<br>/MHz) |                        |            |
| 802.11ax<br>HE20<br>52-Tones     | 100/5500                       | 37          | 4.42                    | 4.74             | 4.48                    | 4.80             | 4.27                    | 4.59             | 4.15                    | 4.47             | 10.67                | 11.00                  | PASS       |
|                                  | 116/5580                       | 38          | 4.77                    | 5.09             | 4.05                    | 4.37             | 4.69                    | 5.01             | 4.21                    | 4.53             | 10.78                | 11.00                  | PASS       |
|                                  | 140/5700                       | 40          | 4.46                    | 4.81             | 4.00                    | 4.35             | 4.54                    | 4.89             | 4.22                    | 4.57             | 10.68                | 11.00                  | PASS       |
| 802.11ax<br>HE20<br>106-Tones    | 100/5500                       | 53          | 4.44                    | 4.71             | 4.09                    | 4.36             | 4.41                    | 4.68             | 4.17                    | 4.44             | 10.57                | 11.00                  | PASS       |
|                                  | 116/5580                       | 53          | 4.37                    | 4.64             | 4.68                    | 4.95             | 4.26                    | 4.53             | 4.26                    | 4.53             | 10.69                | 11.00                  | PASS       |
|                                  | 140/5700                       | 54          | 4.40                    | 4.71             | 4.20                    | 4.51             | 4.37                    | 4.68             | 4.28                    | 4.59             | 10.64                | 11.00                  | PASS       |
| 802.11ax<br>HE20<br>242-Tones    | 100/5500                       | 61          | 3.52                    | 3.93             | 3.62                    | 4.03             | 3.92                    | 4.33             | 3.57                    | 3.98             | 10.09                | 11.00                  | PASS       |
|                                  | 116/5580                       | 61          | 3.8                     | 4.21             | 3.34                    | 3.75             | 3.81                    | 4.22             | 3.65                    | 4.06             | 10.08                | 11.00                  | PASS       |
|                                  | 140/5700                       | 61          | 4.41                    | 4.82             | 4.55                    | 4.96             | 4.43                    | 4.84             | 4.24                    | 4.65             | 10.84                | 11.00                  | PASS       |
| 802.11ax<br>HE40<br>484-Tones    | 102/5510                       | 65          | 2.35                    | 2.74             | 2.52                    | 2.91             | 2.52                    | 2.91             | 2                       | 2.39             | 8.76                 | 11.00                  | PASS       |
|                                  | 110/5550                       | 65          | 2.46                    | 2.85             | 1.1                     | 1.49             | 1.94                    | 2.33             | 2.44                    | 2.83             | 8.43                 | 11.00                  | PASS       |
|                                  | 134/5670                       | 65          | 2.11                    | 2.50             | 1.99                    | 2.38             | 1.86                    | 2.25             | 1.74                    | 2.13             | 8.34                 | 11.00                  | PASS       |
| 802.11ax<br>HE80<br>996-Tones    | 106/5530                       | 67          | -2.02                   | -1.70            | -2.03                   | -1.71            | -1.5                    | -1.18            | -2.05                   | -1.73            | 4.45                 | 11.00                  | PASS       |
| 802.11ax<br>HE160<br>996*2-Tones | 50/5250                        | 68          | -8.87                   | -3.46            | -8.58                   | -3.17            | -8.65                   | -3.24            | -9.38                   | -3.97            | 2.57                 | 11.00                  | PASS       |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density =  $10 \log(10^{(\text{PSD antenna 1 in dBm/10})} + 10^{(\text{PSD antenna 2 in dBm/10})} + 10^{(\text{PSD antenna 3 in dBm/10})} + 10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 11 dBm/MHz.

| Mode                          | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density  |                  |                         |                  |                         |                  |                         |                  |                      | Limit<br>(dBm/<br>MHz) | Conclusion |
|-------------------------------|--------------------------------|-------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|----------------------|------------------------|------------|
|                               |                                |             | Antenna 1               |                  | Antenna 2               |                  | Antenna 3               |                  | Antenna 4               |                  | Total                |                        |            |
|                               |                                |             | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | PSD<br>(dBm<br>/MHz) |                        |            |
| 802.11ax<br>HE20<br>52-Tones  | 144/5720                       | 37          | 4.41                    | 4.73             | 4.35                    | 4.67             | 4.72                    | 5.04             | 4.57                    | 4.89             | 10.86                | 11.00                  | PASS       |
| 802.11ax<br>HE20<br>106-Tones | 144/5720                       | 53          | 4.41                    | 4.68             | 4.35                    | 4.62             | 4.73                    | 5.00             | 4.81                    | 5.08             | 10.87                | 11.00                  | PASS       |
| 802.11ax<br>HE20              | 144/5720                       | 61          | 3.89                    | 4.30             | 3.43                    | 3.84             | 3.92                    | 4.33             | 4.13                    | 4.54             | 10.28                | 11.00                  | PASS       |

**RF Test Report**
**Report No.: EFTA25010260-IE-04-R2**

|                               |          |    |       |       |       |       |       |       |       |       |      |       |      |
|-------------------------------|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 242-Tones                     |          |    |       |       |       |       |       |       |       |       |      |       |      |
| 802.11ax<br>HE40<br>484-Tones | 142/5710 | 65 | 0.10  | 0.49  | 0.37  | 0.76  | 0.56  | 0.95  | 0.39  | 0.78  | 6.77 | 11.00 | PASS |
| 802.11ax<br>HE80<br>996-Tones | 138/5690 | 67 | -3.81 | -3.49 | -3.36 | -3.04 | -3.18 | -2.86 | -3.89 | -3.57 | 2.79 | 11.00 | PASS |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}+10^{(\text{PSD antenna 3 in dBm/10})}+10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 11 dBm/MHz.

## U-NII-3

| Mode      | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-----------|--------------------------------|-------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|           |                                |             | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|           |                                |             | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11ax  | 149/5745                       | 37          | 12.87                             | 13.46                   | 12.72                             | 13.31                   | 13.06                             | 13.65                   | 12.61                             | 13.20                   | 19.43                              | 30.00                     | PASS       |
| HE20      | 157/5785                       | 38          | 12.19                             | 12.78                   | 12.39                             | 12.98                   | 11.58                             | 12.17                   | 11.62                             | 12.21                   | 18.57                              | 30.00                     | PASS       |
| 52-Tones  | 165/5825                       | 40          | 13.03                             | 13.65                   | 12.93                             | 13.55                   | 12.15                             | 12.77                   | 12.47                             | 13.09                   | 19.30                              | 30.00                     | PASS       |
| 802.11ax  | 149/5745                       | 53          | 10.10                             | 10.64                   | 10.12                             | 10.66                   | 9.98                              | 10.52                   | 10.08                             | 10.62                   | 16.63                              | 30.00                     | PASS       |
| HE20      | 157/5785                       | 53          | 10.09                             | 10.63                   | 10.41                             | 10.95                   | 9.59                              | 10.13                   | 10.01                             | 10.55                   | 16.60                              | 30.00                     | PASS       |
| 106-Tones | 165/5825                       | 54          | 9.84                              | 10.42                   | 10.03                             | 10.61                   | 9.44                              | 10.02                   | 9.84                              | 10.42                   | 16.39                              | 30.00                     | PASS       |
| 802.11ax  | 149/5745                       | 61          | 8.82                              | 9.50                    | 9.07                              | 9.75                    | 8.68                              | 9.36                    | 8.96                              | 9.64                    | 15.59                              | 30.00                     | PASS       |
| HE20      | 157/5785                       | 61          | 9.02                              | 9.70                    | 9.05                              | 9.73                    | 8.54                              | 9.22                    | 8.78                              | 9.46                    | 15.55                              | 30.00                     | PASS       |
| 242-Tones | 165/5825                       | 61          | 8.95                              | 9.63                    | 8.95                              | 9.63                    | 8.51                              | 9.19                    | 8.64                              | 9.32                    | 15.47                              | 30.00                     | PASS       |
| 802.11ax  | 151/5755                       | 65          | 4.6                               | 5.26                    | 4.4                               | 5.06                    | 4.47                              | 5.13                    | 4.43                              | 5.09                    | 11.16                              | 30.00                     | PASS       |
| HE40      | 159/5795                       | 65          | 4.71                              | 5.37                    | 4.45                              | 5.11                    | 4.51                              | 5.17                    | 4.34                              | 5.00                    | 11.19                              | 30.00                     | PASS       |
| 484-Tones |                                |             |                                   |                         |                                   |                         |                                   |                         |                                   |                         |                                    |                           |            |
| 802.11ax  | 155/5775                       | 67          | 0.067                             | 0.66                    | -0.705                            | -0.12                   | 0.11                              | 0.70                    | -0.18                             | 0.41                    | 6.45                               | 30.00                     | PASS       |
| HE80      |                                |             |                                   |                         |                                   |                         |                                   |                         |                                   |                         |                                    |                           |            |
| 996-Tones |                                |             |                                   |                         |                                   |                         |                                   |                         |                                   |                         |                                    |                           |            |

Note: 1. Power Spectral Density = Read Value + Duty cycle correction factor +  $10 \cdot \log(500/470)$ .

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density =  $10 \log(10^{(\text{PSD antenna 1 in dBm}/10)} + 10^{(\text{PSD antenna 2 in dBm}/10)} + 10^{(\text{PSD antenna 3 in dBm}/10)} + 10^{(\text{PSD antenna 4 in dBm}/10)})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42

dB<sub>i</sub> < 6dB<sub>i</sub>. So the PSD limit is 30 dBm/500kHz.

| Mode                          | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------------------|--------------------------------|-------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                               |                                |             | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                               |                                |             | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11ax<br>HE20<br>52-Tones  | 144/5720                       | 40          | 0.56                              | 1.18                    | 1.19                              | 1.81                    | 1.07                              | 1.69                    | 1.19                              | 1.81                    | 7.65                               | 30.00                     | PASS       |
| 802.11ax<br>HE20<br>106-Tones | 144/5720                       | 54          | 1.05                              | 1.63                    | 1.37                              | 1.95                    | 1.45                              | 2.03                    | 1.35                              | 1.93                    | 7.91                               | 30.00                     | PASS       |
| 802.11ax<br>HE20<br>242-Tones | 144/5720                       | 61          | -0.07                             | 0.61                    | 0.42                              | 1.10                    | 0.48                              | 1.16                    | 0.27                              | 0.95                    | 6.98                               | 30.00                     | PASS       |

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|                               |          |    |       |       |       |       |       |       |       |       |       |       |      |
|-------------------------------|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 802.11ax<br>HE40<br>484-Tones | 142/5710 | 65 | -4.90 | -4.24 | -4.36 | -3.70 | -4.67 | -4.01 | -4.93 | -4.27 | 1.97  | 30.00 | PASS |
| 802.11ax<br>HE80<br>996-Tones | 138/5690 | 67 | -9.73 | -9.14 | -8.39 | -7.80 | -8.84 | -8.25 | -8.47 | -7.88 | -2.22 | 30.00 | PASS |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor  $+10 \cdot \log(500/470)$ .

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10 \log(10^{(\text{PSD antenna 1 in dBm}/10)} + 10^{(\text{PSD antenna 2 in dBm}/10)} + 10^{(\text{PSD antenna 3 in dBm}/10)} + 10^{(\text{PSD antenna 4 in dBm}/10)})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (ii): If all transmit signals are completely uncorrelated with each other, directional gain = 5.42 dBi < 6dBi. So the PSD limit is 30 dBm/500kHz.

# Beamforming

## U-NII-1

| Mode      | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density     |                  |                            |                  |                            |                  |                            |                  |                               | Limit<br>(dBm/MHz) | Conclusion |      |
|-----------|--------------------------------|-------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|-------------------------------|--------------------|------------|------|
|           |                                |             | Antenna 1                  |                  | Antenna 2                  |                  | Antenna 3                  |                  | Antenna 4                  |                  | Total<br>PSD<br>(dBm<br>/MHz) |                    |            |      |
|           |                                |             | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) |                               |                    |            |      |
| 802.11ax  | 36/5180                        | 37          | 5.16                       | 5.48             | 4.99                       | 5.31             | 4.70                       | 5.02             | 5.13                       | 5.45             | 11.34                         | 11.56              | PASS       |      |
| 52-Tones  | HE20                           | 40/5200     | 38                         | 4.88             | 5.20                       | 4.88             | 5.20                       | 4.89             | 5.21                       | 5.30             | 5.62                          | 11.33              | 11.56      | PASS |
|           |                                | 48/5240     | 40                         | 5.31             | 5.66                       | 4.89             | 5.24                       | 5.03             | 5.38                       | 5.08             | 5.43                          | 11.45              | 11.56      | PASS |
| 802.11ax  | 36/5180                        | 53          | 5.38                       | 5.65             | 5.40                       | 5.67             | 4.47                       | 4.74             | 5.39                       | 5.66             | 11.47                         | 11.56              | PASS       |      |
| 106-Tones | HE20                           | 40/5200     | 53                         | 5.44             | 5.71                       | 5.05             | 5.32                       | 4.28             | 4.55                       | 5.35             | 5.62                          | 11.34              | 11.56      | PASS |
|           |                                | 48/5240     | 54                         | 5.33             | 5.64                       | 5.26             | 5.57                       | 4.98             | 5.29                       | 5.28             | 5.59                          | 11.54              | 11.56      | PASS |
| 802.11ax  | 36/5180                        | 61          | 5.41                       | 5.82             | 4.35                       | 4.76             | 4.32                       | 4.73             | 4.75                       | 5.16             | 11.16                         | 11.56              | PASS       |      |
| 242-Tones | HE20                           | 40/5200     | 61                         | 4.99             | 5.40                       | 4.43             | 4.84                       | 4.58             | 4.99                       | 4.95             | 5.36                          | 11.17              | 11.56      | PASS |
|           |                                | 48/5240     | 61                         | 4.66             | 5.07                       | 4.91             | 5.32                       | 4.37             | 4.78                       | 4.69             | 5.10                          | 11.09              | 11.56      | PASS |
| 802.11ax  | 38/5190                        | 65          | 2.16                       | 2.55             | 1.64                       | 2.03             | 1.60                       | 1.99             | 1.92                       | 2.31             | 8.25                          | 11.56              | PASS       |      |
| 484-Tones | HE40                           | 46/5230     | 65                         | 1.92             | 2.31                       | 1.26             | 1.65                       | 1.65             | 2.04                       | 1.72             | 2.11                          | 8.05               | 11.56      | PASS |
| 802.11ax  |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                               |                    |            |      |
| HE80      | 42/5210                        | 67          | -3.82                      | -3.50            | -4.45                      | -4.13            | -4.05                      | -3.73            | -3.34                      | -3.02            | 2.44                          | 11.56              | PASS       |      |
| 996-Tones |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                               |                    |            |      |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}+10^{(\text{PSD antenna 3 in dBm/10})}+10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10$

$\log(N_{\text{ANT}})=5.42+6.02=11.44\text{dBi} > 6\text{dBi}$ . So the PSD limit is  $17+6-\text{MAX}(6, \text{directional gain}) \text{ dBm/MHz} = 11.56 \text{ dBm/MHz}$ .

## U-NII-2A

| Mode        | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density     |                  |                            |                  |                            |                  |                            |                  |                  | Limit<br>(dBm/MHz) | Conclusion |
|-------------|--------------------------------|-------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|------------------|--------------------|------------|
|             |                                |             | Antenna 1                  |                  | Antenna 2                  |                  | Antenna 3                  |                  | Antenna 4                  |                  | Total            |                    |            |
|             |                                |             | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | PSD<br>(dBm/MHz) |                    |            |
| 802.11ax    | 52/5260                        | 37          | -0.55                      | -0.23            | -1.43                      | -1.11            | -1.68                      | -1.36            | -0.94                      | -0.62            | 5.21             | 5.56               | PASS       |
| HE20        | 60/5300                        | 38          | -1.55                      | -1.23            | -1.16                      | -0.84            | -1.22                      | -0.90            | -0.94                      | -0.62            | 5.13             | 5.56               | PASS       |
| 52-Tones    | 64/5320                        | 40          | -0.47                      | -0.12            | -1.10                      | -0.75            | -1.33                      | -0.98            | -0.59                      | -0.24            | 5.51             | 5.56               | PASS       |
| 802.11ax    | 52/5260                        | 53          | -0.50                      | -0.23            | -0.85                      | -0.58            | -1.14                      | -0.87            | -0.96                      | -0.69            | 5.43             | 5.56               | PASS       |
| HE20        | 60/5300                        | 53          | -1.19                      | -0.92            | -1.27                      | -1.00            | -0.88                      | -0.61            | -1.37                      | -1.10            | 5.12             | 5.56               | PASS       |
| 106-Tones   | 64/5320                        | 54          | -1.48                      | -1.17            | -1.49                      | -1.18            | -1.20                      | -0.89            | -1.48                      | -1.17            | 4.92             | 5.56               | PASS       |
| 802.11ax    | 52/5260                        | 61          | -0.82                      | -0.41            | -0.87                      | -0.46            | -0.91                      | -0.50            | -1.05                      | -0.64            | 5.52             | 5.56               | PASS       |
| HE20        | 60/5300                        | 61          | -0.28                      | 0.13             | -1.36                      | -0.95            | -1.58                      | -1.17            | -1.87                      | -1.46            | 5.20             | 5.56               | PASS       |
| 242-Tones   | 64/5320                        | 61          | -0.99                      | -0.58            | -1.24                      | -0.83            | -1.09                      | -0.68            | -1.77                      | -1.36            | 5.17             | 5.56               | PASS       |
| 802.11ax    | 54/5270                        | 65          | -0.99                      | -0.60            | -1.00                      | -0.61            | -1.22                      | -0.83            | -1.21                      | -0.82            | 5.31             | 5.56               | PASS       |
| HE40        | 62/5310                        | 65          | -1.17                      | -0.78            | -1.34                      | -0.95            | -1.29                      | -0.90            | -1.87                      | -1.48            | 5.00             | 5.56               | PASS       |
| 484-Tones   |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |
| 802.11ax    | 58/5290                        | 67          | -4.39                      | -4.07            | -4.92                      | -4.60            | -4.90                      | -4.58            | -4.47                      | -4.15            | 1.68             | 5.56               | PASS       |
| HE80        |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |
| 996-Tones   |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |
| 802.11ax    | 50/5250                        | 68          | -11.97                     | -6.56            | -11.91                     | -6.50            | -12.38                     | -6.97            | -11.95                     | -6.54            | -0.62            | 5.56               | PASS       |
| HE160       |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |
| 996*2-Tones |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}+10^{(\text{PSD antenna 3 in dBm/10})}+10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10$

$\log(N_{\text{ANT}})=5.42+6.02=11.44\text{dBi} > 6\text{dBi}$ . So the PSD limit is  $11+6-\text{MAX}(6, \text{directional gain}) \text{ dBm/MHz} = 5.56 \text{ dBm/MHz}$ .

## U-NII-2C

| Mode        | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density     |                  |                            |                  |                            |                  |                            |                  |                  | Limit<br>(dBm/MHz) | Conclusion |
|-------------|--------------------------------|-------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|----------------------------|------------------|------------------|--------------------|------------|
|             |                                |             | Antenna 1                  |                  | Antenna 2                  |                  | Antenna 3                  |                  | Antenna 4                  |                  | Total            |                    |            |
|             |                                |             | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read<br>Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | PSD<br>(dBm/MHz) |                    |            |
| 802.11ax    | 100/5500                       | 37          | -1.32                      | -1.00            | -1.45                      | -1.13            | -3.15                      | -2.83            | -0.96                      | -0.64            | 4.70             | 5.56               | PASS       |
| HE20        | 116/5580                       | 38          | -1.15                      | -0.83            | -1.49                      | -1.17            | -1.78                      | -1.46            | -1.37                      | -1.05            | 4.90             | 5.56               | PASS       |
| 52-Tones    | 140/5700                       | 40          | -1.11                      | -0.76            | -1.32                      | -0.97            | -1.93                      | -1.58            | -1.43                      | -1.08            | 4.93             | 5.56               | PASS       |
| 802.11ax    | 100/5500                       | 53          | -0.86                      | -0.59            | -0.61                      | -0.34            | -0.60                      | -0.33            | -1.24                      | -0.97            | 5.47             | 5.56               | PASS       |
| HE20        | 116/5580                       | 53          | -0.83                      | -0.56            | -1.64                      | -1.37            | -0.68                      | -0.41            | -0.94                      | -0.67            | 5.28             | 5.56               | PASS       |
| 106-Tones   | 140/5700                       | 54          | -1.15                      | -0.84            | -0.75                      | -0.44            | -1.38                      | -1.07            | -1.85                      | -1.54            | 5.07             | 5.56               | PASS       |
| 802.11ax    | 100/5500                       | 61          | -1.72                      | -1.31            | -1.32                      | -0.91            | -1.38                      | -0.97            | -1.78                      | -1.37            | 4.89             | 5.56               | PASS       |
| HE20        | 116/5580                       | 61          | -1.57                      | -1.16            | -1.45                      | -1.04            | -1.43                      | -1.02            | -1.33                      | -0.92            | 4.99             | 5.56               | PASS       |
| 242-Tones   | 140/5700                       | 61          | -0.92                      | -0.51            | -0.51                      | -0.10            | -1.52                      | -1.11            | -1.63                      | -1.22            | 5.31             | 5.56               | PASS       |
| 802.11ax    | 102/5510                       | 65          | -1.23                      | -0.84            | -1.48                      | -1.09            | -1.35                      | -0.96            | -1.56                      | -1.17            | 5.01             | 5.56               | PASS       |
| HE40        | 110/5550                       | 65          | -1.5                       | -1.11            | -1.68                      | -1.29            | -1.7                       | -1.31            | -1.72                      | -1.33            | 4.76             | 5.56               | PASS       |
| 484-Tones   | 134/5670                       | 65          | -1.29                      | -0.90            | -1.46                      | -1.07            | -1.51                      | -1.12            | -2.03                      | -1.64            | 4.85             | 5.56               | PASS       |
| 802.11ax    | 106/5530                       | 67          | -4.53                      | -4.21            | -4.18                      | -3.86            | -4.81                      | -4.49            | -4.53                      | -4.21            | 1.83             | 5.56               | PASS       |
| HE80        | 50/5250                        | 68          | -10.71                     | -5.30            | -11.05                     | -5.64            | -10.73                     | -5.32            | -11.1                      | -5.69            | 0.54             | 5.56               | PASS       |
| 996-Tones   |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |
| 802.11ax    | 50/5250                        | 68          | -10.71                     | -5.30            | -11.05                     | -5.64            | -10.73                     | -5.32            | -11.1                      | -5.69            | 0.54             | 5.56               | PASS       |
| HE160       |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |
| 996*2-Tones |                                |             |                            |                  |                            |                  |                            |                  |                            |                  |                  |                    |            |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm/10})}+10^{(\text{PSD antenna 2 in dBm/10})}+10^{(\text{PSD antenna 3 in dBm/10})}+10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10$

$\log(N_{\text{ANT}})=5.42+6.02=11.44\text{dBi} > 6\text{dBi}$ . So the PSD limit is  $11+6-\text{MAX}(6, \text{directional gain}) \text{ dBm/MHz} = 5.56 \text{ dBm/MHz}$ .

| Mode      | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density  |                  |                         |                  |                         |                  |                         |                  |                  | Limit<br>(dBm/<br>MHz) | Conclusion |
|-----------|--------------------------------|-------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|------------------|------------------------|------------|
|           |                                |             | Antenna 1               |                  | Antenna 2               |                  | Antenna 3               |                  | Antenna 4               |                  | Total            |                        |            |
|           |                                |             | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | Read Value<br>(dBm/MHz) | PSD<br>(dBm/MHz) | PSD<br>(dBm/MHz) |                        |            |
| 802.11ax  | 144/5720                       | 37          | -0.78                   | -0.46            | -1.09                   | -0.77            | -0.99                   | -0.67            | -1.16                   | -0.84            | 5.34             | 5.56                   | PASS       |
| HE20      |                                |             |                         |                  |                         |                  |                         |                  |                         |                  |                  |                        |            |
| 52-Tones  |                                |             |                         |                  |                         |                  |                         |                  |                         |                  |                  |                        |            |
| 802.11ax  | 144/5720                       | 53          | -0.73                   | -0.46            | -0.66                   | -0.39            | -0.88                   | -0.61            | -1.12                   | -0.85            | 5.45             | 5.56                   | PASS       |
| HE20      |                                |             |                         |                  |                         |                  |                         |                  |                         |                  |                  |                        |            |
| 106-Tones |                                |             |                         |                  |                         |                  |                         |                  |                         |                  |                  |                        |            |
| 802.11ax  | 144/5720                       | 61          | -1.16                   | -0.75            | -1.07                   | -0.66            | -0.73                   | -0.32            | -0.81                   | -0.40            | 5.49             | 5.56                   | PASS       |
| HE20      |                                |             |                         |                  |                         |                  |                         |                  |                         |                  |                  |                        |            |
| 52-Tones  |                                |             |                         |                  |                         |                  |                         |                  |                         |                  |                  |                        |            |

|                               |          |    |       |       |       |       |       |       |       |       |      |      |      |
|-------------------------------|----------|----|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| HE20<br>242-Tones             |          |    |       |       |       |       |       |       |       |       |      |      |      |
| 802.11ax<br>HE40<br>484-Tones | 142/5710 | 65 | -2.54 | -2.15 | -1.79 | -1.40 | -1.73 | -1.34 | -1.65 | -1.26 | 4.50 | 5.56 | PASS |
| 802.11ax<br>HE80<br>996-Tones | 138/5690 | 67 | -5.86 | -5.54 | -5.53 | -5.21 | -5.81 | -5.49 | -5.65 | -5.33 | 0.63 | 5.56 | PASS |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm/10})} + 10^{(\text{PSD antenna 2 in dBm/10})} + 10^{(\text{PSD antenna 3 in dBm/10})} + 10^{(\text{PSD antenna 4 in dBm/10})})$

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10$

$\log(N_{\text{ANT}})=5.42+6.02=11.44\text{dBi} > 6\text{dBi}$ . So the PSD limit is  $11+6-\text{MAX}(6, \text{directional gain}) \text{ dBm/MHz} = 5.56 \text{ dBm/MHz}$ .

## U-NII-3

| Mode                          | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------------------|--------------------------------|-------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                               |                                |             | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                               |                                |             | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11ax<br>HE20<br>52-Tones  | 149/5745                       | 37          | 12.96                             | 13.55                   | 12.80                             | 13.39                   | 13.08                             | 13.67                   | 12.70                             | 13.29                   | 19.50                              | 24.56                     | PASS       |
|                               | 157/5785                       | 38          | 12.05                             | 12.64                   | 12.17                             | 12.76                   | 11.63                             | 12.22                   | 11.75                             | 12.34                   | 18.52                              | 24.56                     | PASS       |
|                               | 165/5825                       | 40          | 12.74                             | 13.36                   | 12.09                             | 12.71                   | 12.31                             | 12.93                   | 12.71                             | 13.33                   | 19.11                              | 24.56                     | PASS       |
| 802.11ax<br>HE20<br>106-Tones | 149/5745                       | 53          | 10.08                             | 10.62                   | 9.84                              | 10.38                   | 9.59                              | 10.13                   | 9.53                              | 10.07                   | 16.33                              | 24.56                     | PASS       |
|                               | 157/5785                       | 53          | 10.02                             | 10.56                   | 9.62                              | 10.16                   | 10.16                             | 10.70                   | 9.72                              | 10.26                   | 16.45                              | 24.56                     | PASS       |
|                               | 165/5825                       | 54          | 9.73                              | 10.31                   | 9.44                              | 10.02                   | 9.62                              | 10.20                   | 9.61                              | 10.19                   | 16.20                              | 24.56                     | PASS       |
| 802.11ax<br>HE20<br>242-Tones | 149/5745                       | 61          | 4.28                              | 4.96                    | 4.23                              | 4.91                    | 3.74                              | 4.42                    | 3.98                              | 4.66                    | 10.76                              | 24.56                     | PASS       |
|                               | 157/5785                       | 61          | 4.00                              | 4.68                    | 3.83                              | 4.51                    | 3.64                              | 4.32                    | 3.96                              | 4.64                    | 10.56                              | 24.56                     | PASS       |
|                               | 165/5825                       | 61          | 4.00                              | 4.68                    | 3.91                              | 4.59                    | 3.43                              | 4.11                    | 3.69                              | 4.37                    | 10.46                              | 24.56                     | PASS       |
| 802.11ax<br>HE40<br>484-Tones | 151/5755                       | 65          | 1.77                              | 2.43                    | 1.56                              | 2.22                    | 1.59                              | 2.25                    | 1.51                              | 2.17                    | 8.29                               | 24.56                     | PASS       |
|                               | 159/5795                       | 65          | 1.87                              | 2.53                    | 1.83                              | 2.49                    | 1.25                              | 1.91                    | 1.95                              | 2.61                    | 8.41                               | 24.56                     | PASS       |
| 802.11ax<br>HE80<br>996-Tones | 155/5775                       | 67          | -1.28                             | -0.69                   | -1.16                             | -0.57                   | -1.58                             | -0.99                   | -1.24                             | -0.65                   | 5.30                               | 24.56                     | PASS       |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor +10\*log(500/470).

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density=10log(10<sup>(PSD antenna 1 in dBm/10)</sup>+10<sup>(PSD antenna 2 in dBm/10)</sup>+10<sup>(PSD antenna 3 in dBm/10)</sup>)+10<sup>(PSD antenna 4 in dBm/10)</sup>)

3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain = G<sub>ANT</sub> + 10

log(N<sub>ANT</sub>)=5.42+6.02=11.44dBi >6dBi. So the PSD limit is 30+6-MAX(6, directional gain) dBm/500kHz =5.56 dBm/500kHz.

| Mode                          | Channel/<br>Frequency<br>(MHz) | RU<br>Index | Power Spectral Density            |                         |                                   |                         |                                   |                         |                                   |                         |                                    | Limit<br>(dBm/<br>500kHz) | Conclusion |
|-------------------------------|--------------------------------|-------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------|------------------------------------|---------------------------|------------|
|                               |                                |             | Antenna 1                         |                         | Antenna 2                         |                         | Antenna 3                         |                         | Antenna 4                         |                         | Total<br>Power<br>(dBm/<br>500kHz) |                           |            |
|                               |                                |             | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) | Read<br>Value<br>(dBm/<br>470kHz) | PSD<br>(dBm/<br>500kHz) |                                    |                           |            |
| 802.11ax<br>HE20<br>52-Tones  | 144/5720                       | 40          | -4.41                             | -3.79                   | -4.48                             | -3.86                   | -4.21                             | -3.59                   | -3.95                             | -3.33                   | 2.38                               | 24.56                     | PASS       |
| 802.11ax<br>HE20<br>106-Tones | 144/5720                       | 54          | -4.23                             | -3.65                   | -4.21                             | -3.63                   | -3.99                             | -3.41                   | -4.06                             | -3.48                   | 2.48                               | 24.56                     | PASS       |
| 802.11ax<br>HE20<br>242-Tones | 144/5720                       | 61          | -4.72                             | -4.04                   | -3.88                             | -3.20                   | -4.19                             | -3.51                   | -3.45                             | -2.77                   | 2.67                               | 24.56                     | PASS       |

**RF Test Report**
**Report No.: EFTA25010260-IE-04-R2**

|                               |          |    |        |        |        |        |        |        |        |        |       |       |      |
|-------------------------------|----------|----|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|------|
| 802.11ax<br>HE40<br>484-Tones | 142/5710 | 65 | -6.92  | -6.26  | -7.00  | -6.34  | -6.87  | -6.21  | -6.75  | -6.09  | -0.20 | 24.56 | PASS |
| 802.11ax<br>HE80<br>996-Tones | 138/5690 | 67 | -11.71 | -11.12 | -11.07 | -10.48 | -10.71 | -10.12 | -10.79 | -10.20 | -4.44 | 24.56 | PASS |

Note: 1. Power Spectral Density =Read Value+Duty cycle correction factor +10\*log(500/470).

2. For Total PSD, according to KDB 662911 D01 Multiple Transmitter Output v02r01 2)a),

the power spectral density= $10\log(10^{(\text{PSD antenna 1 in dBm}/10)} + 10^{(\text{PSD antenna 2 in dBm}/10)} + 10^{(\text{PSD antenna 3 in dBm}/10)} + 10^{(\text{PSD antenna 4 in dBm}/10)})$

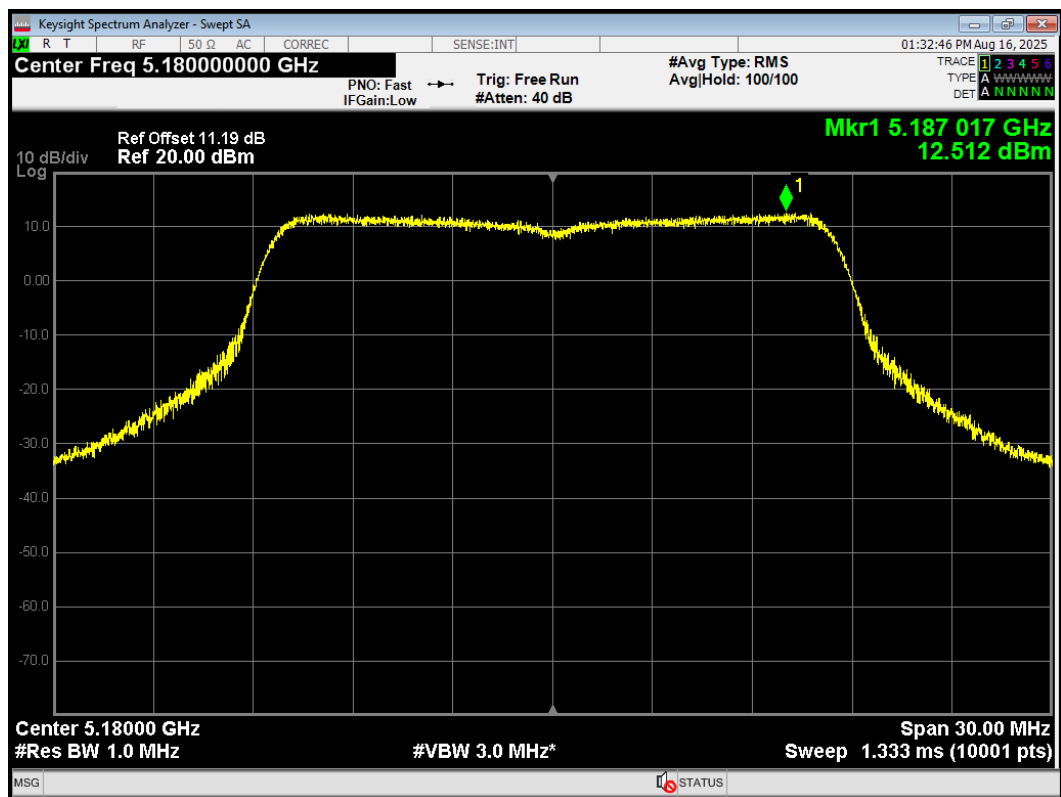
3. According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2) (i): If all transmit signals are correlated with each other, Directional gain =  $G_{\text{ANT}} + 10\log(N_{\text{ANT}})$  = 5.42+6.02=11.44dBi >6dBi. So the PSD limit is 30+6-MAX(6, directional gain) dBm/500kHz =5.56 dBm/500kHz.

SISO

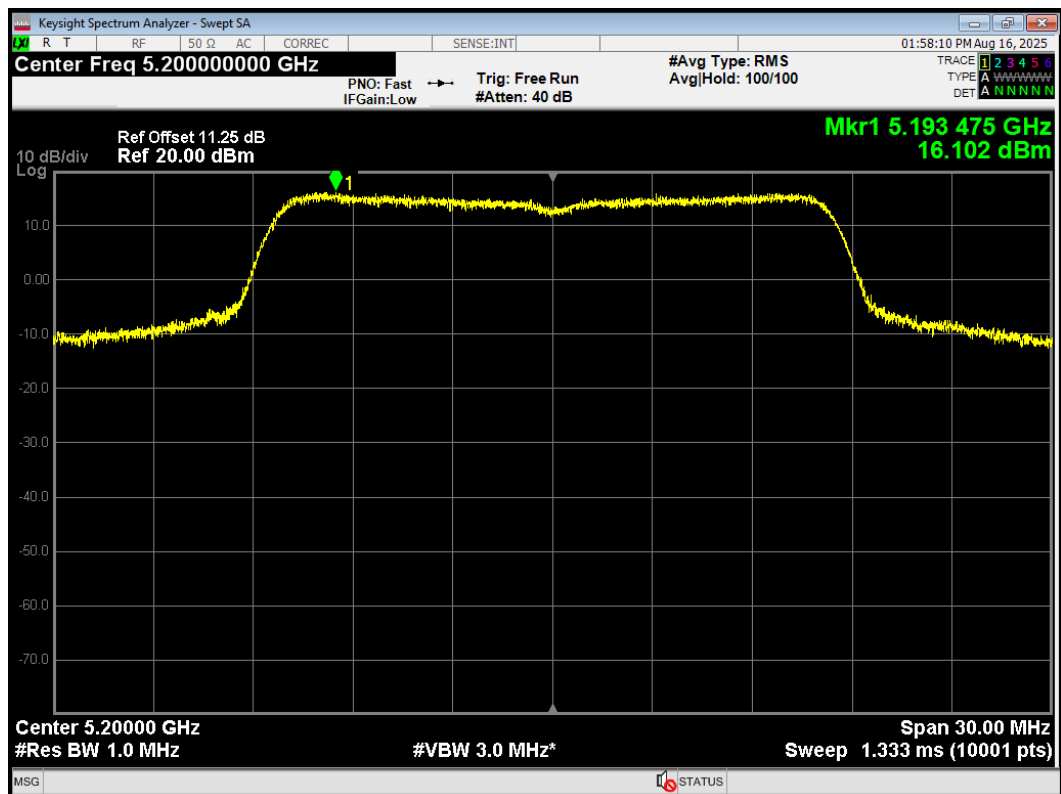
Antenna 1

U-NII-1

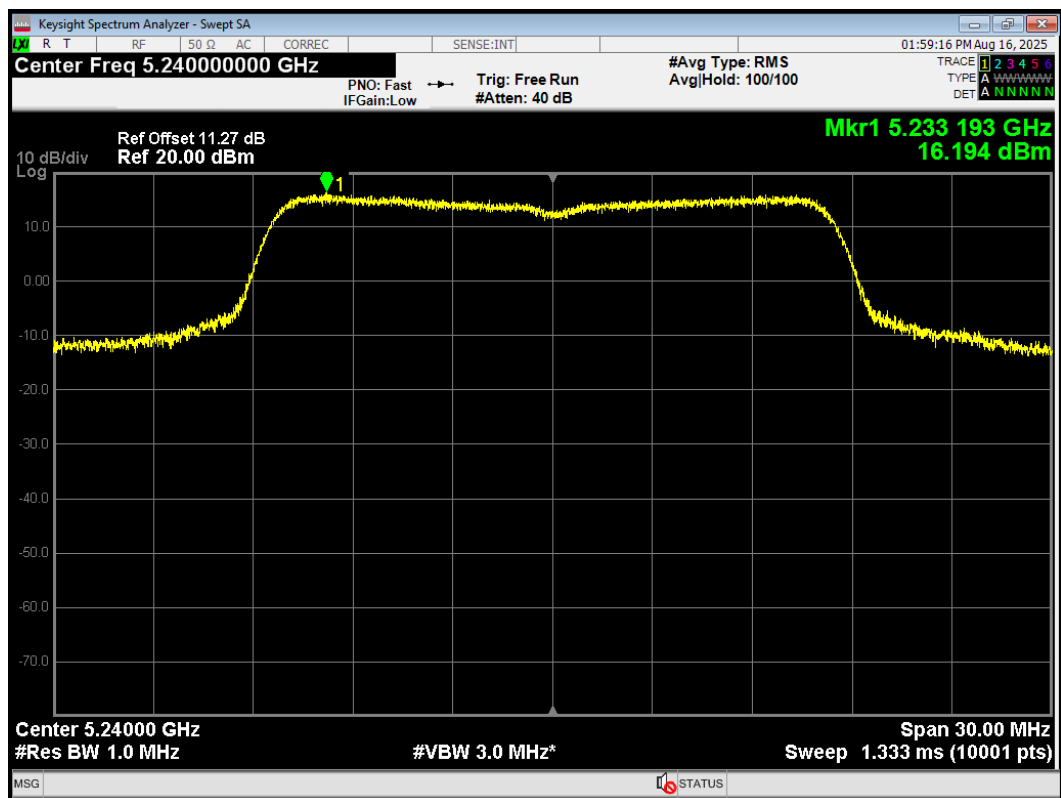
PSD 802.11a 5180MHz



PSD 802.11a 5200MHz

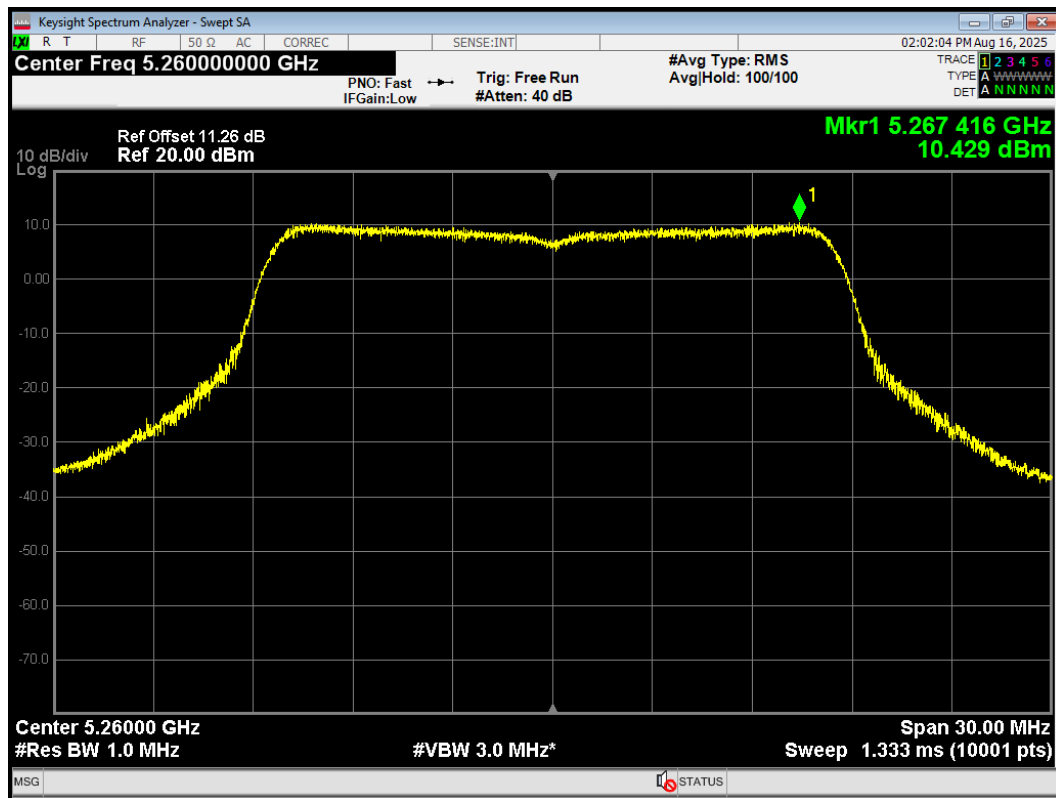


PSD 802.11a 5240MHz

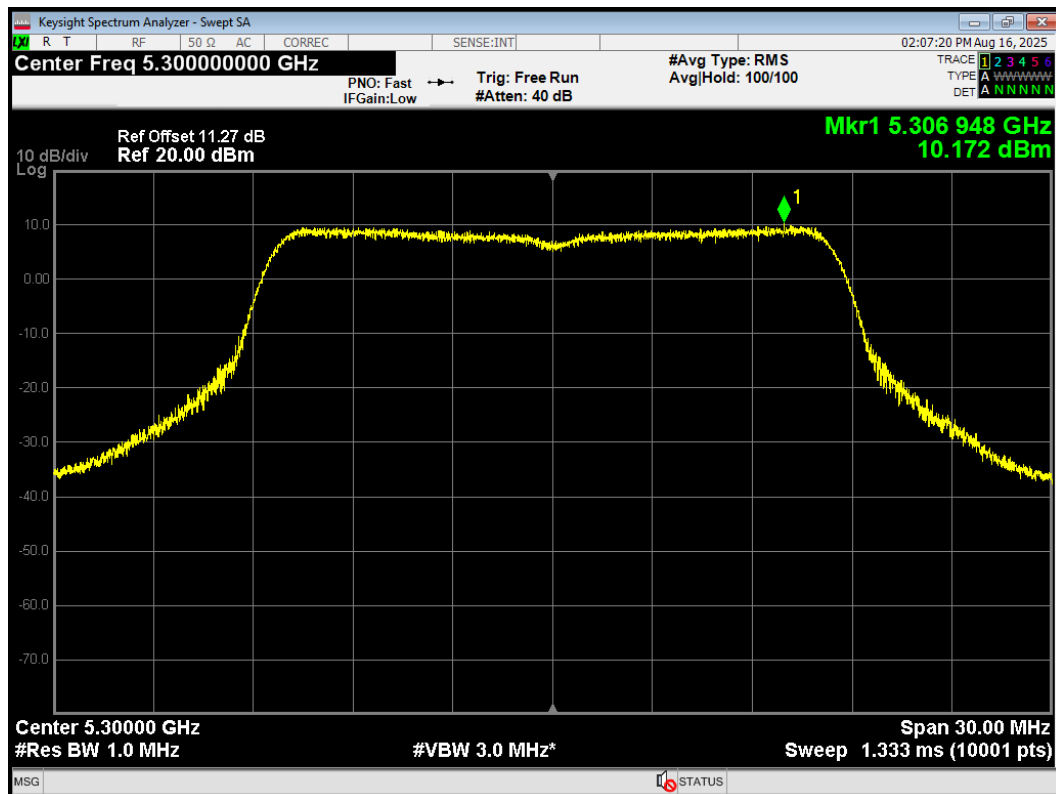


U-NII-2A

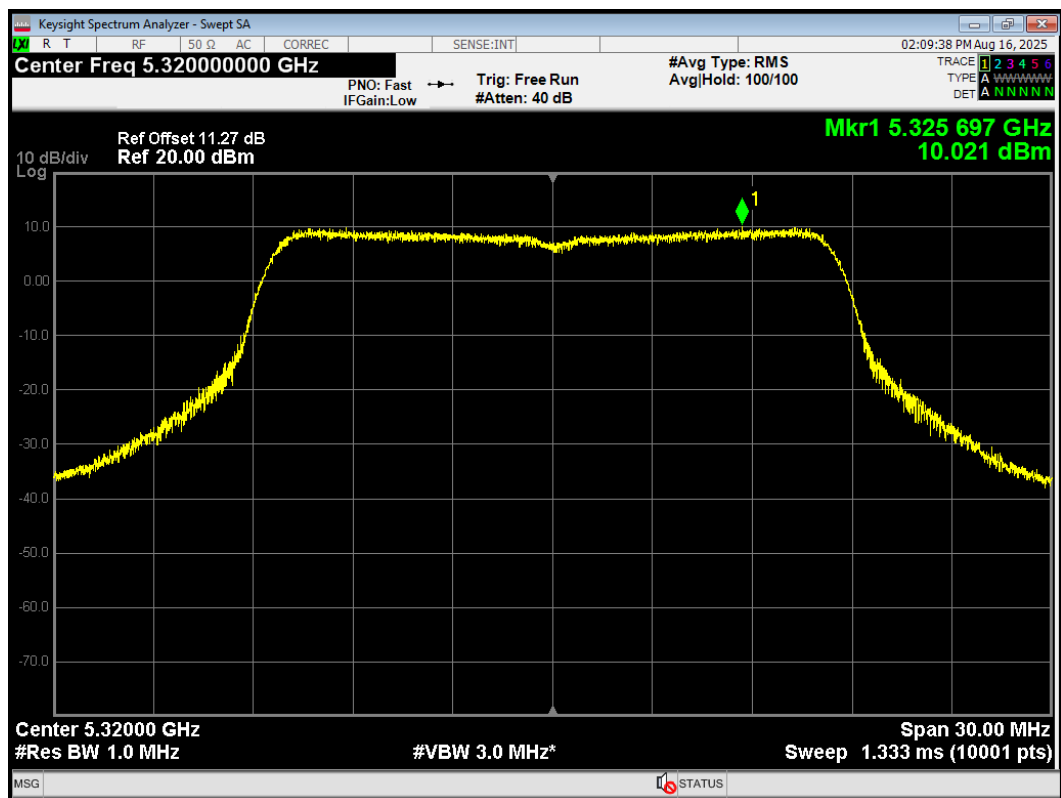
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PSD 802.11a 5300MHz

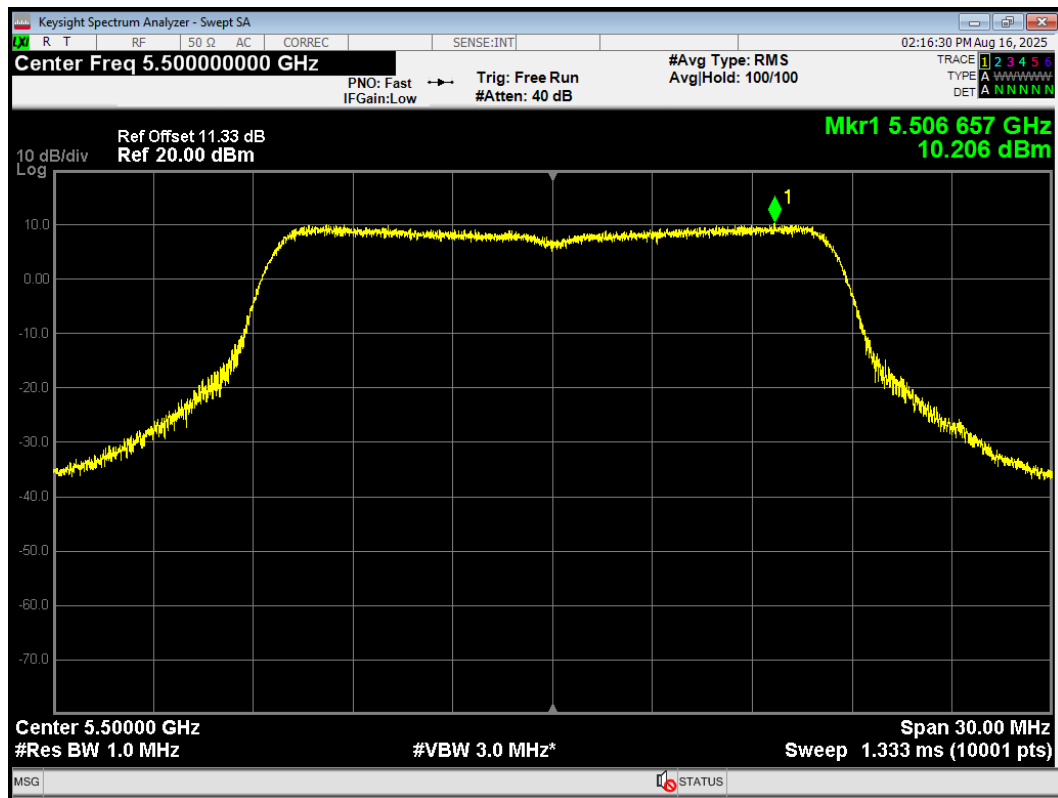


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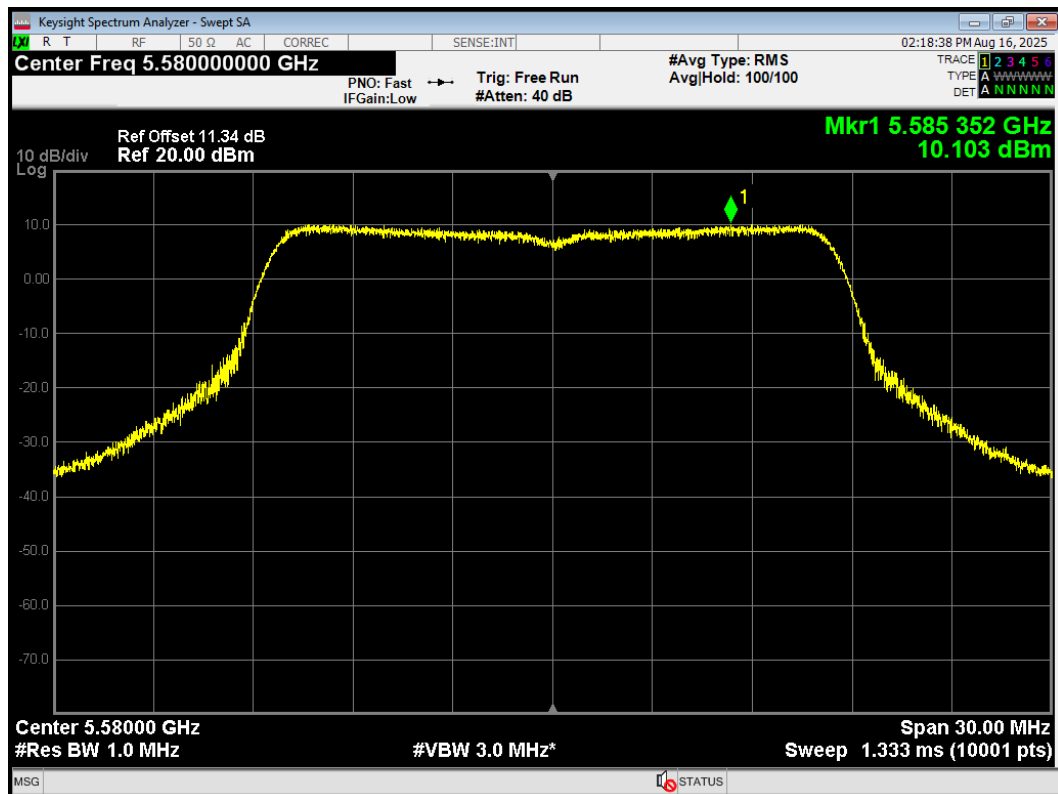


U-NII-2C

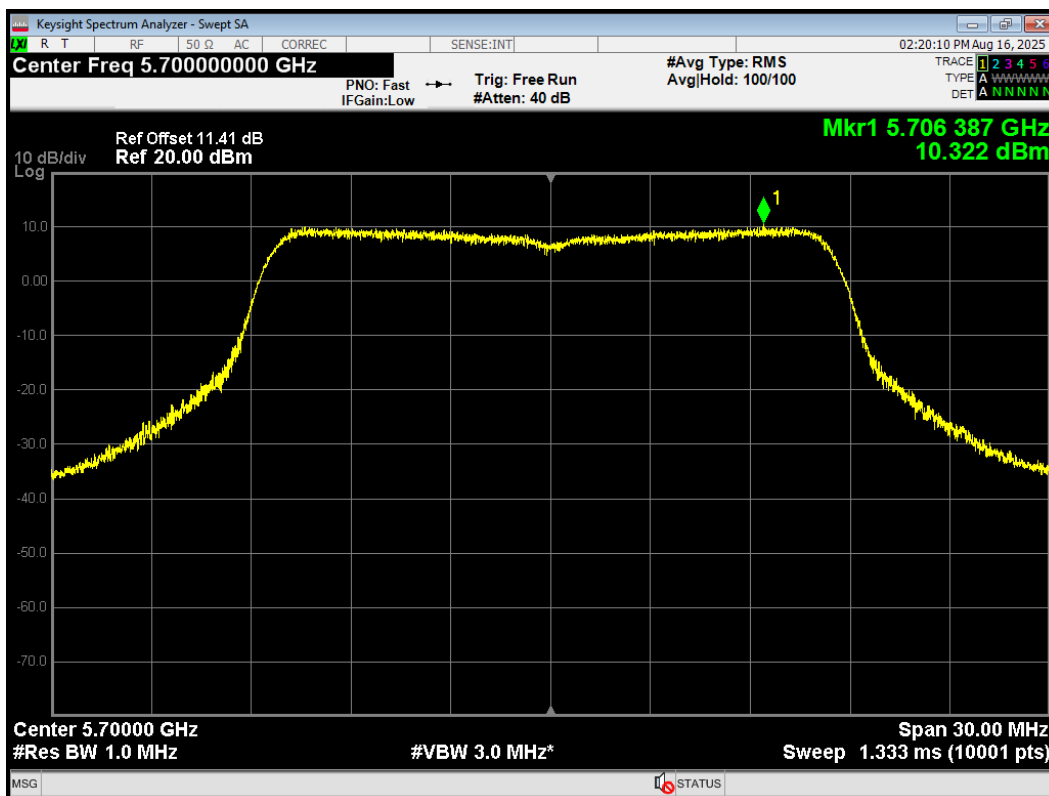
PSD 802.11a 5500MHz



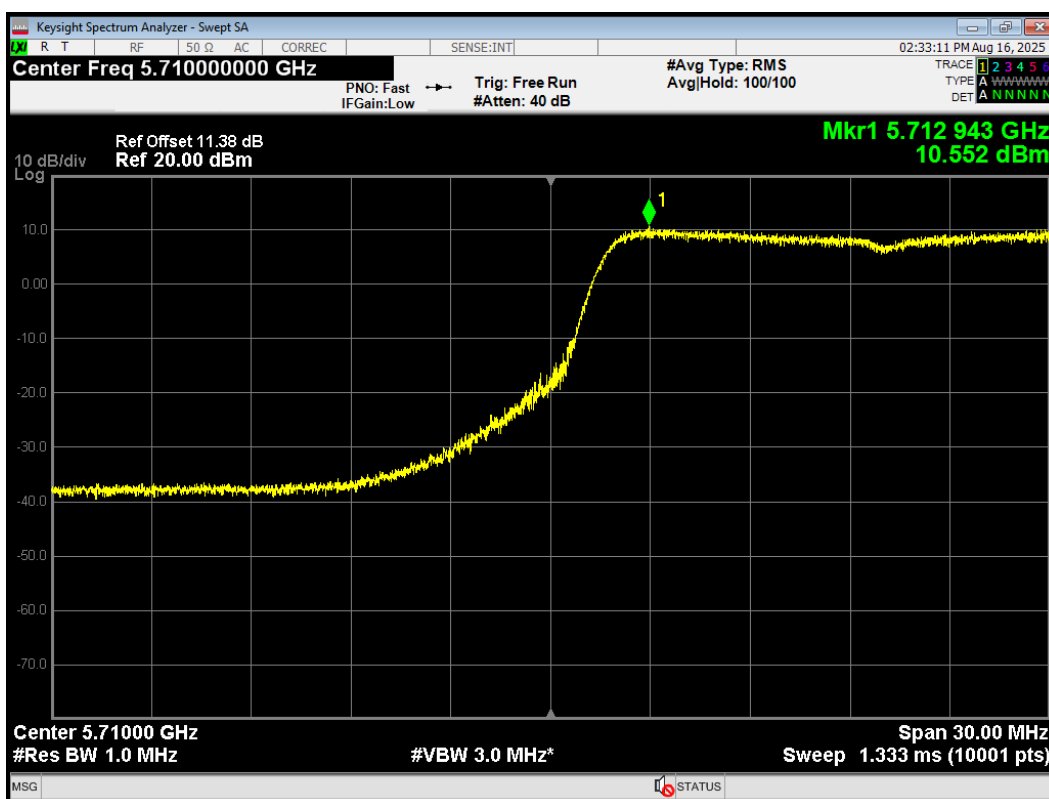
PSD 802.11a 5580MHz



PSD 802.11a 5700MHz

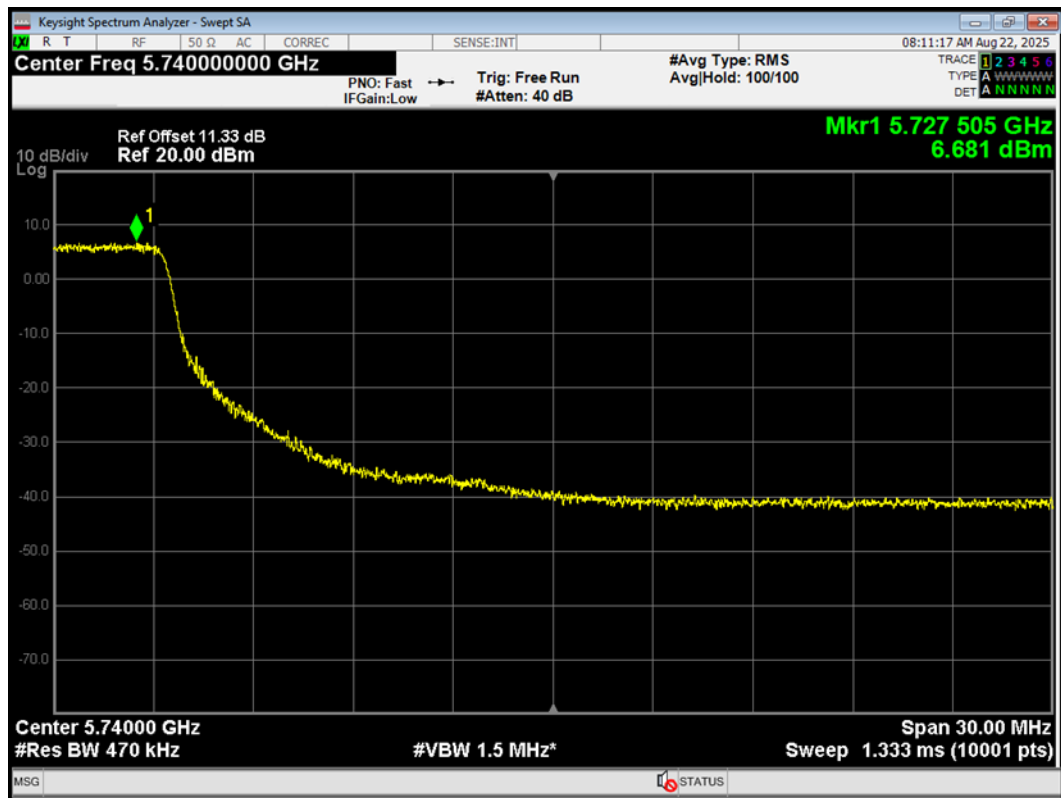


PSD 802.11a 5720MHz

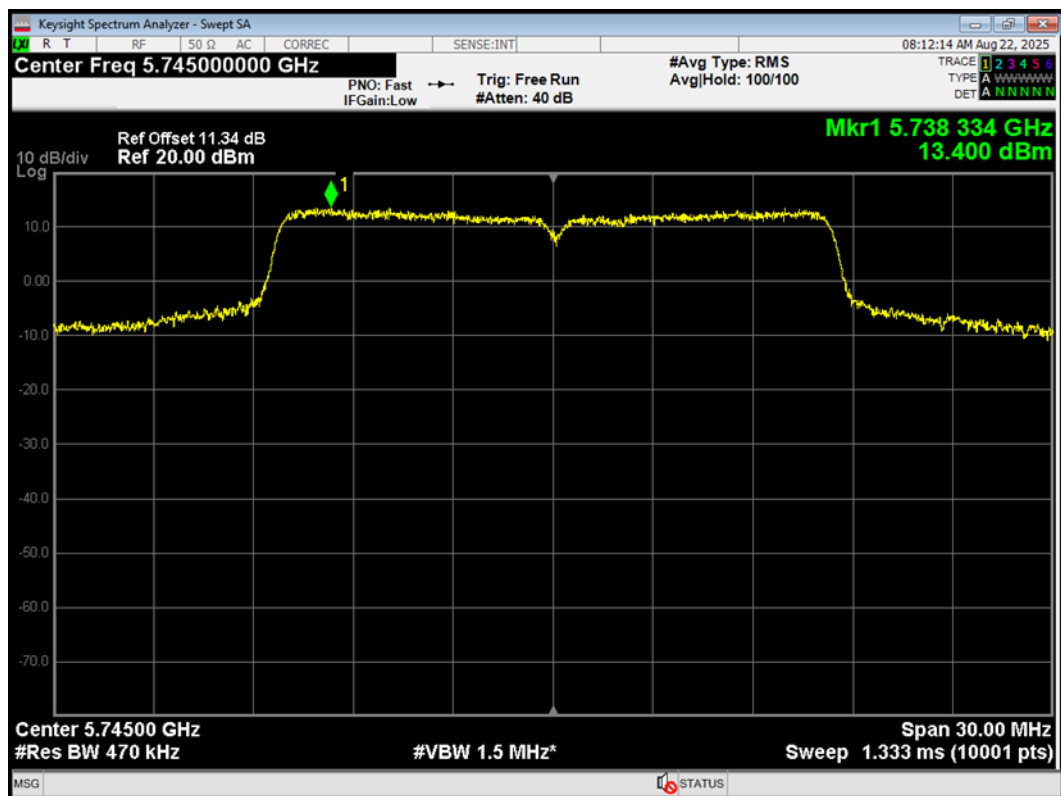


U-NII-3

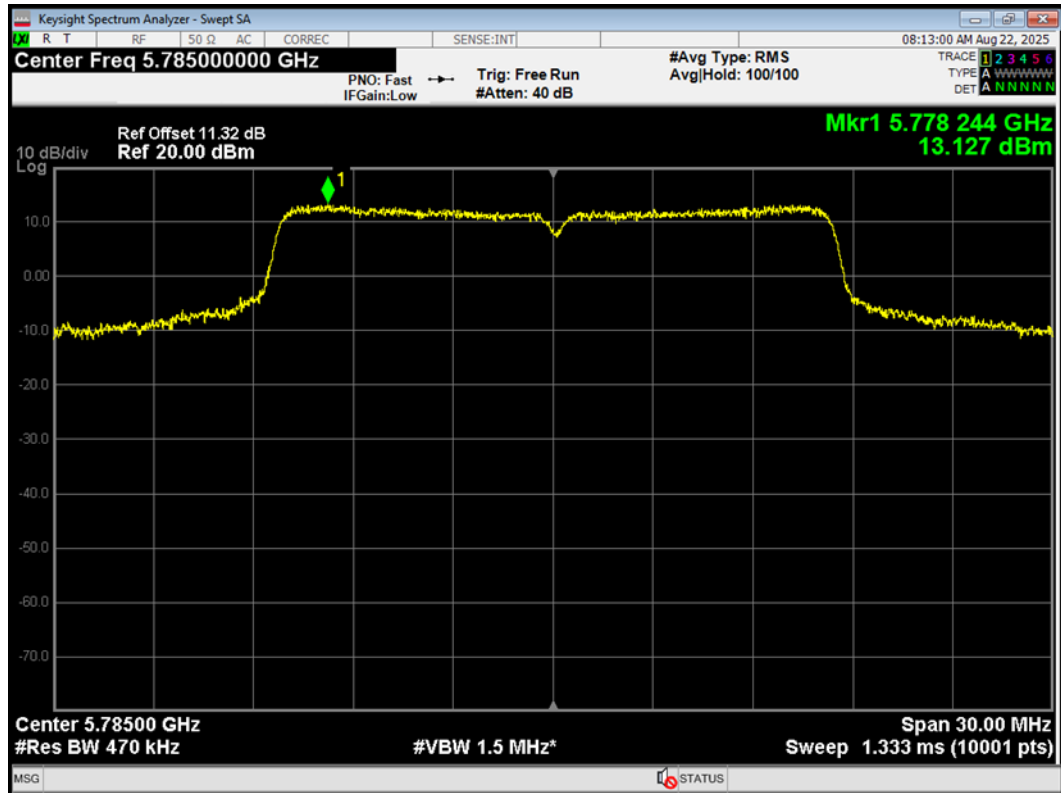
PSD 802.11a 5720MHz



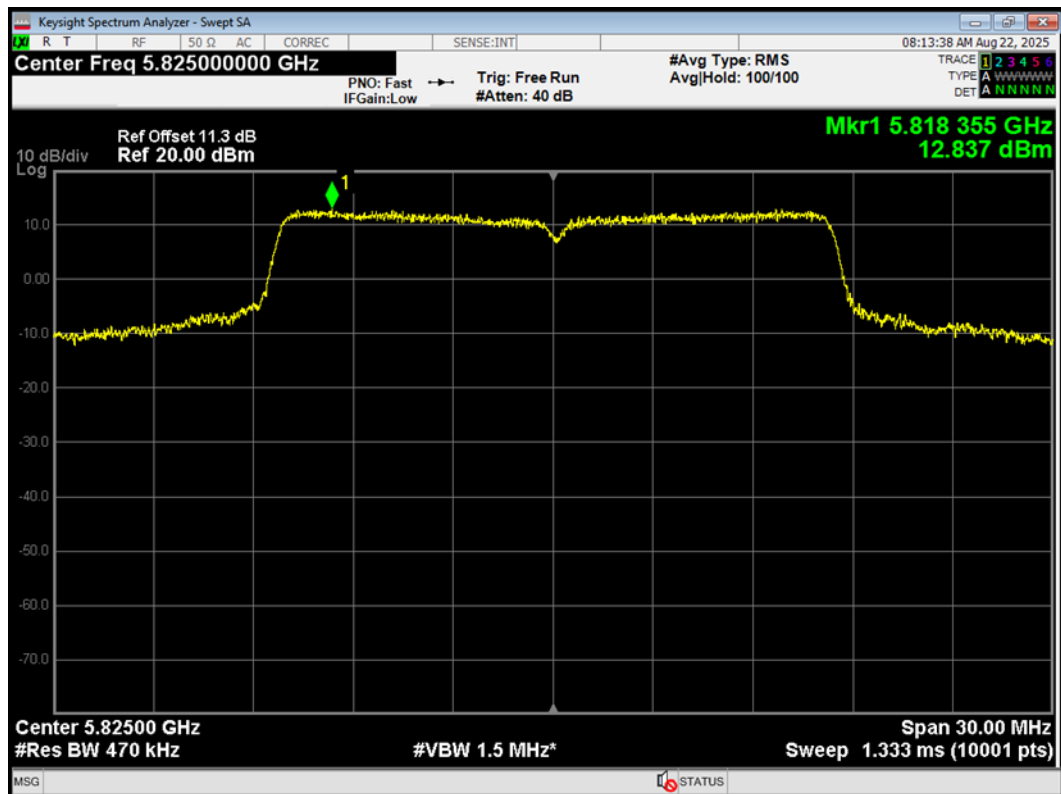
PSD 802.11a 5745MHz



PSD 802.11a 5785MHz



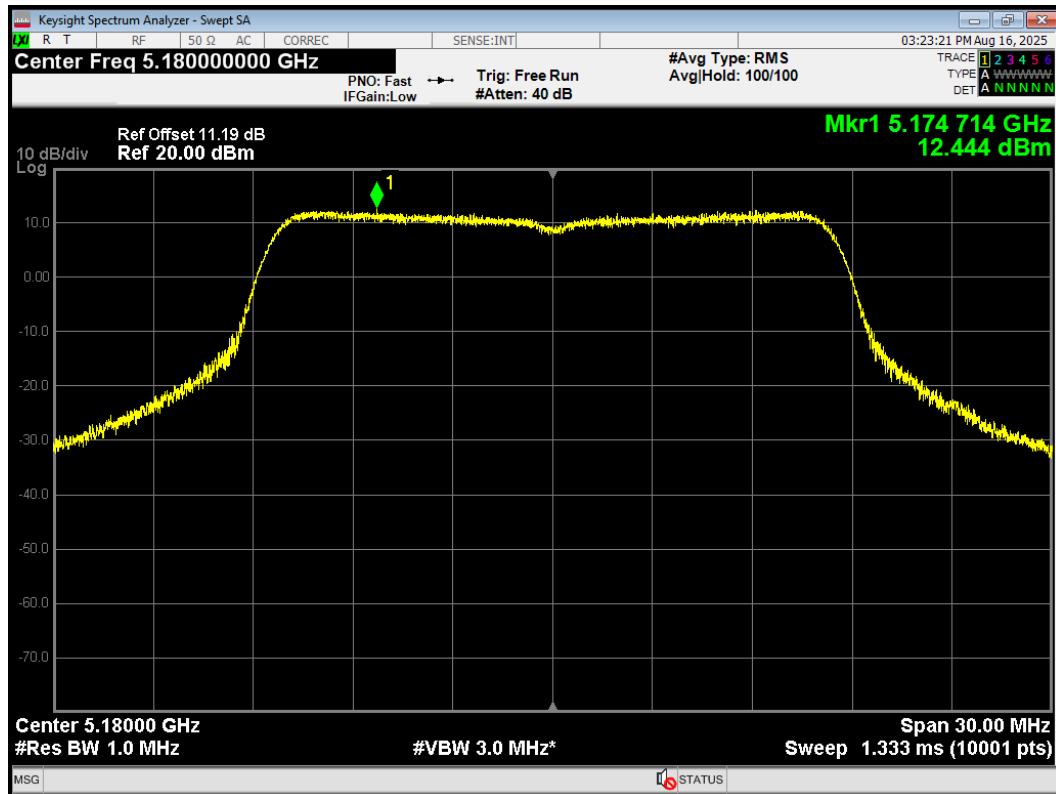
PSD 802.11a 5825MHz



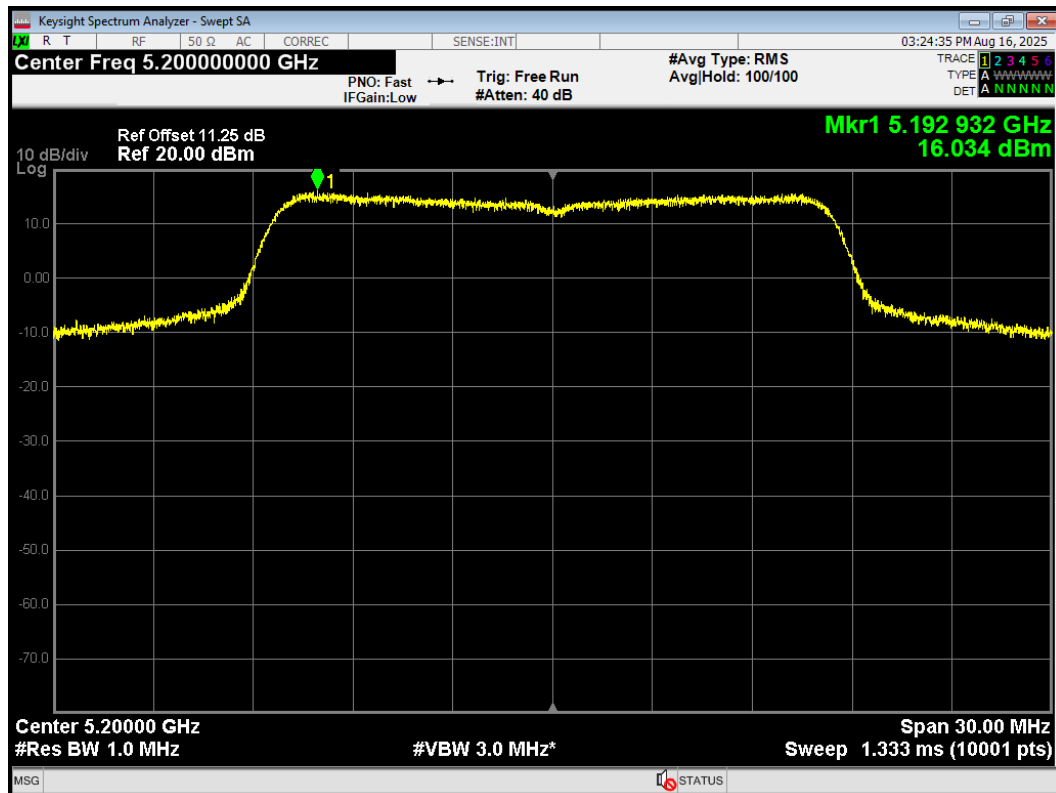
Antenna 2

U-NII-1

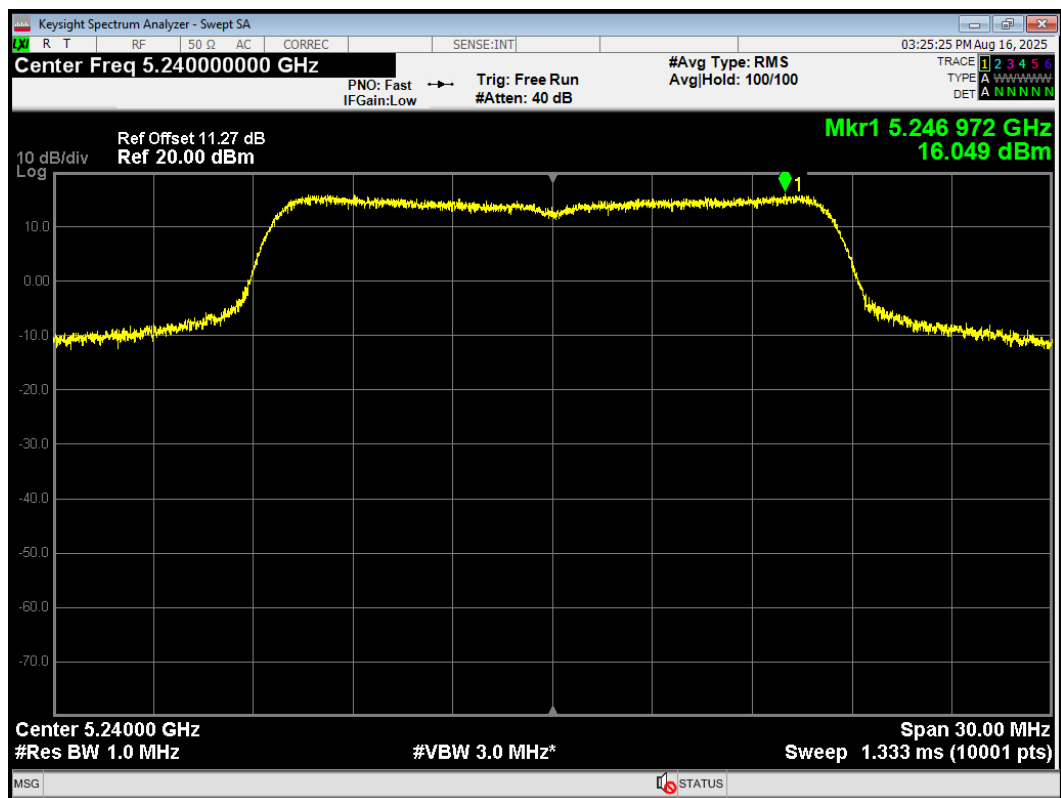
PSD 802.11a 5180MHz



PSD 802.11a 5200MHz

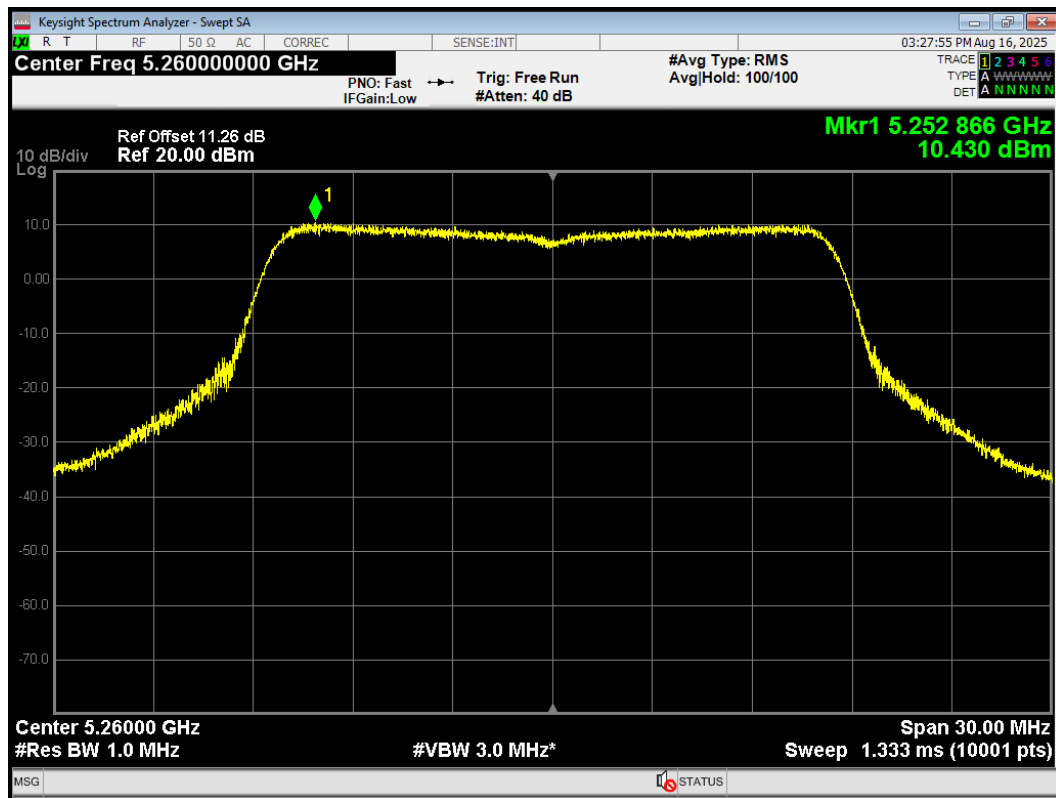


PSD 802.11a 5240MHz

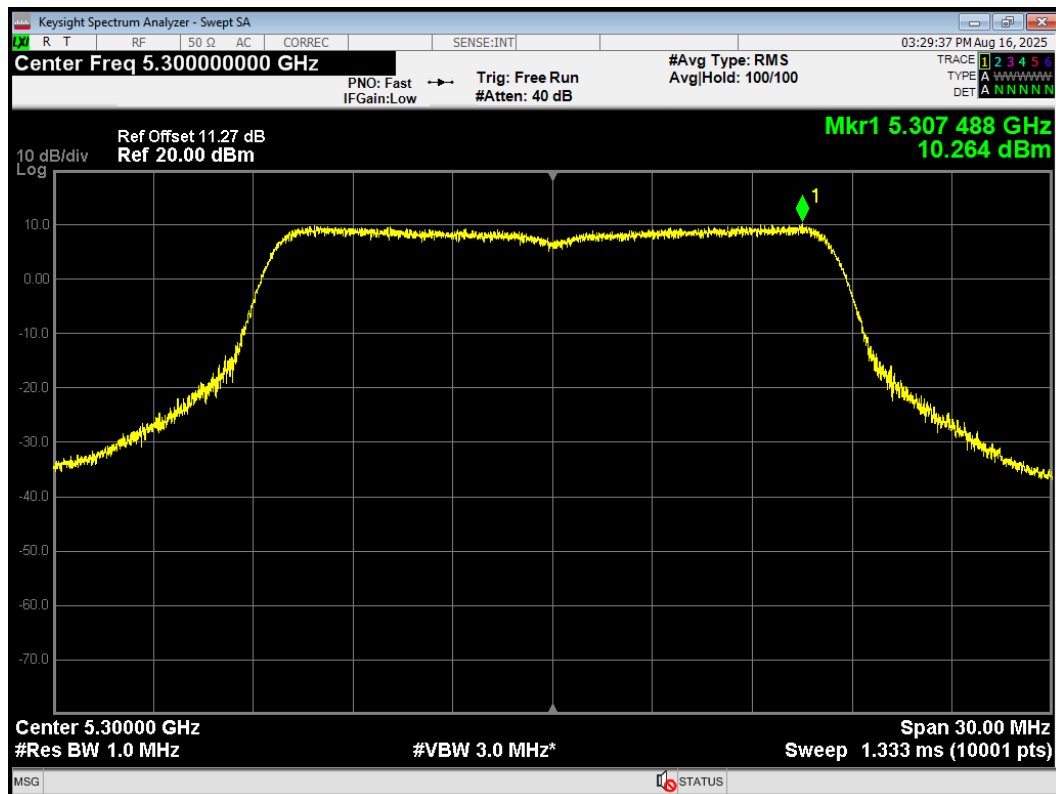


U-NII-2A

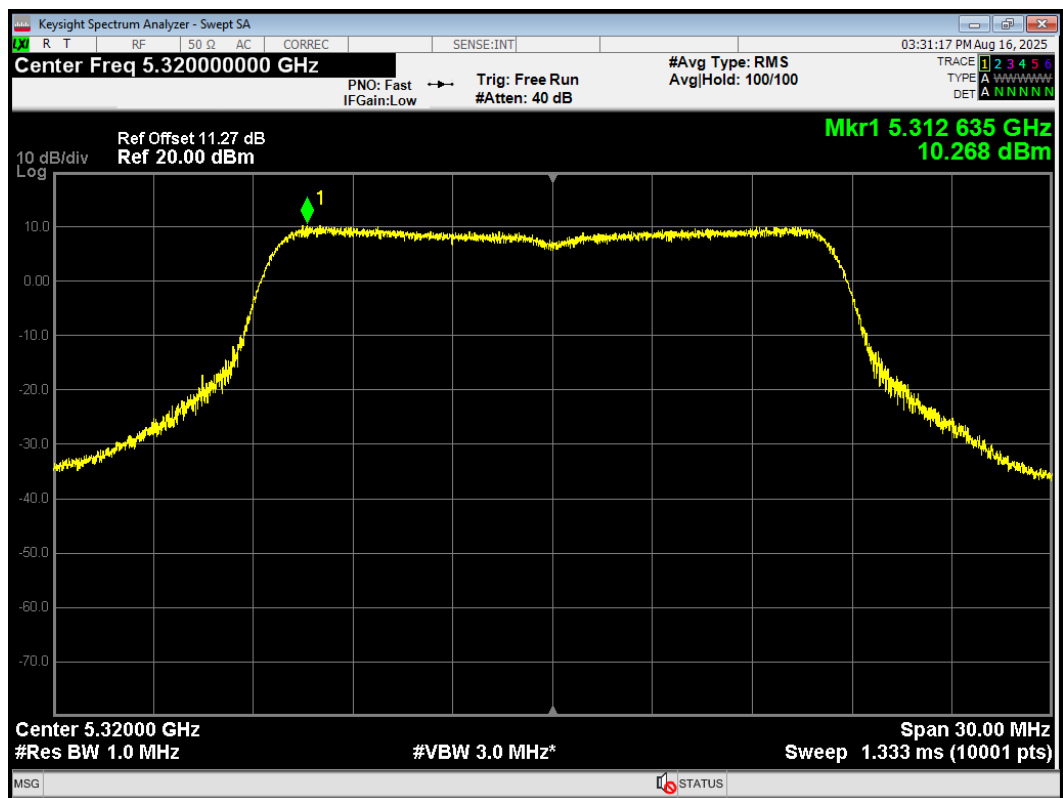
PSD 802.11a 5260MHz



PSD 802.11a 5300MHz

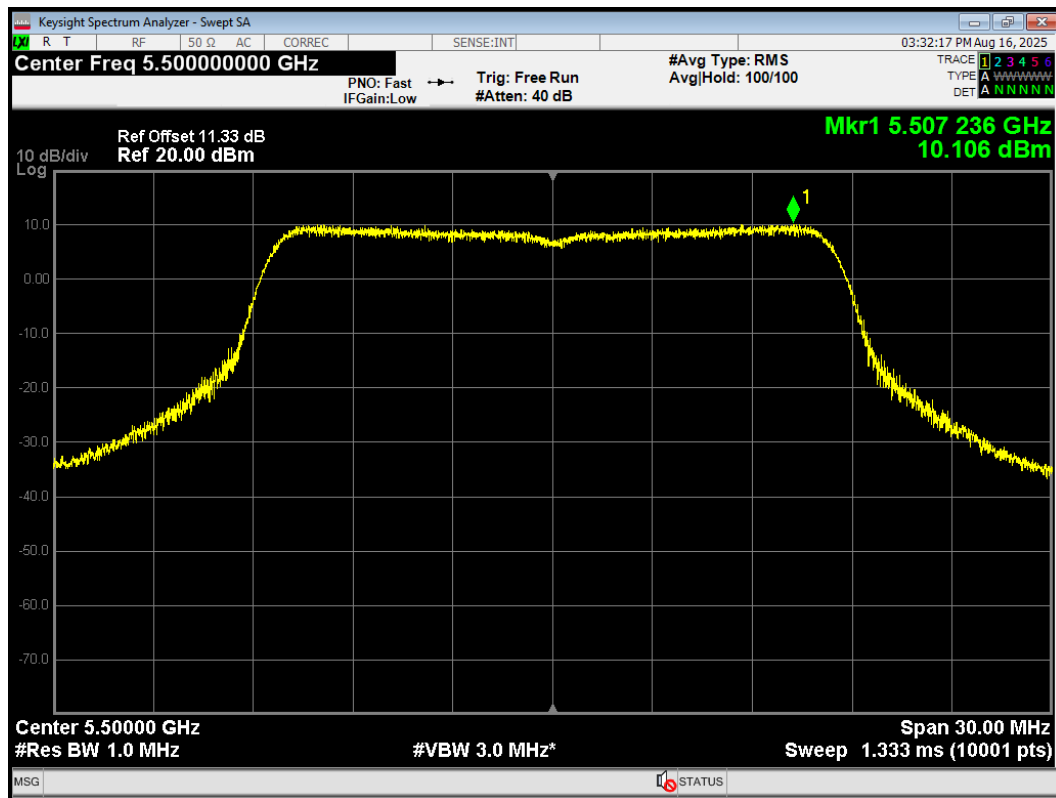


PSD 802.11a 5320MHz

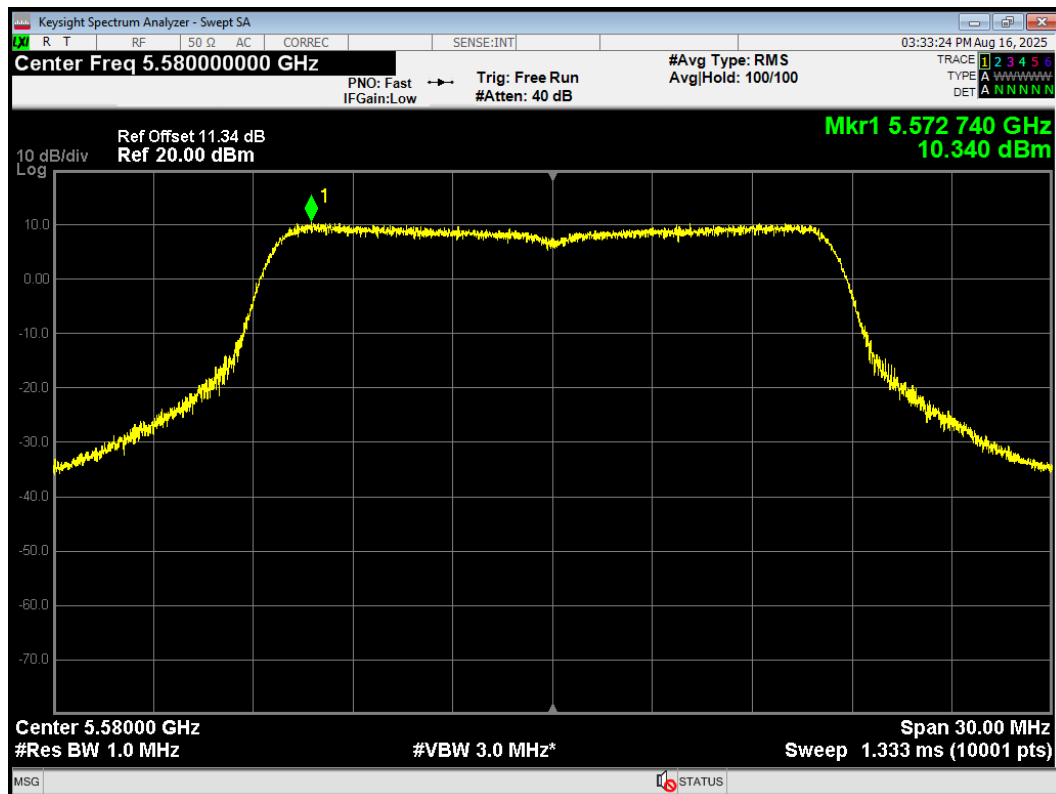


U-NII-2C

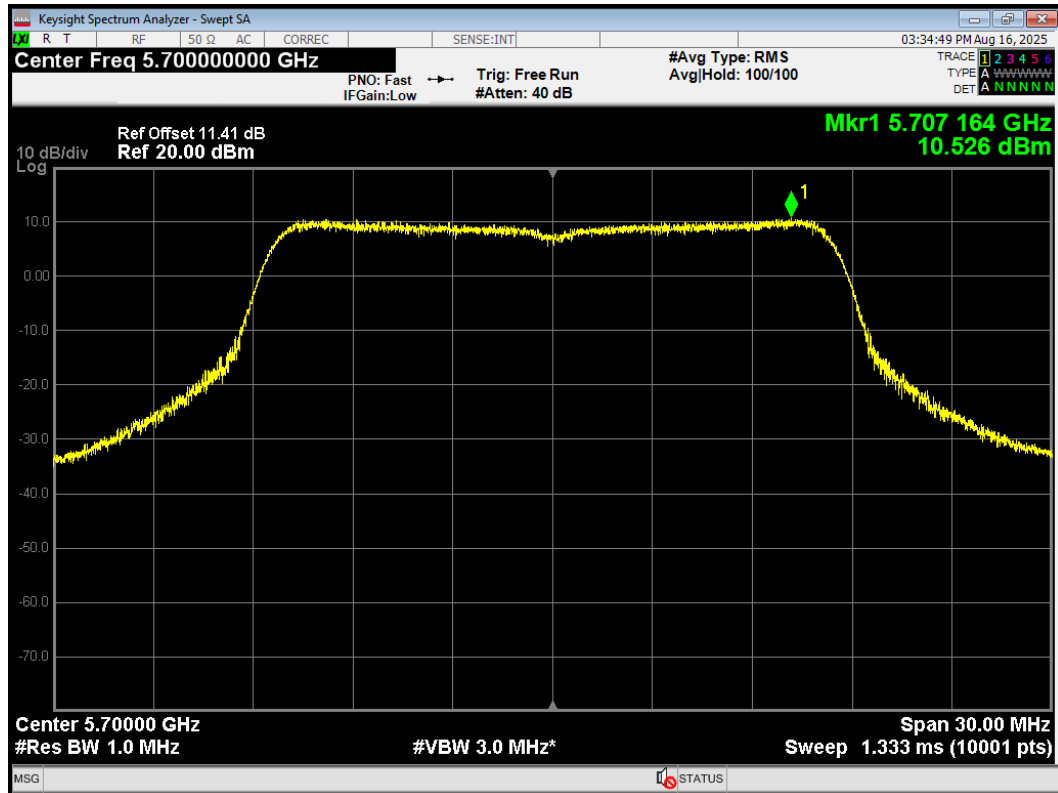
PSD 802.11a 5500MHz



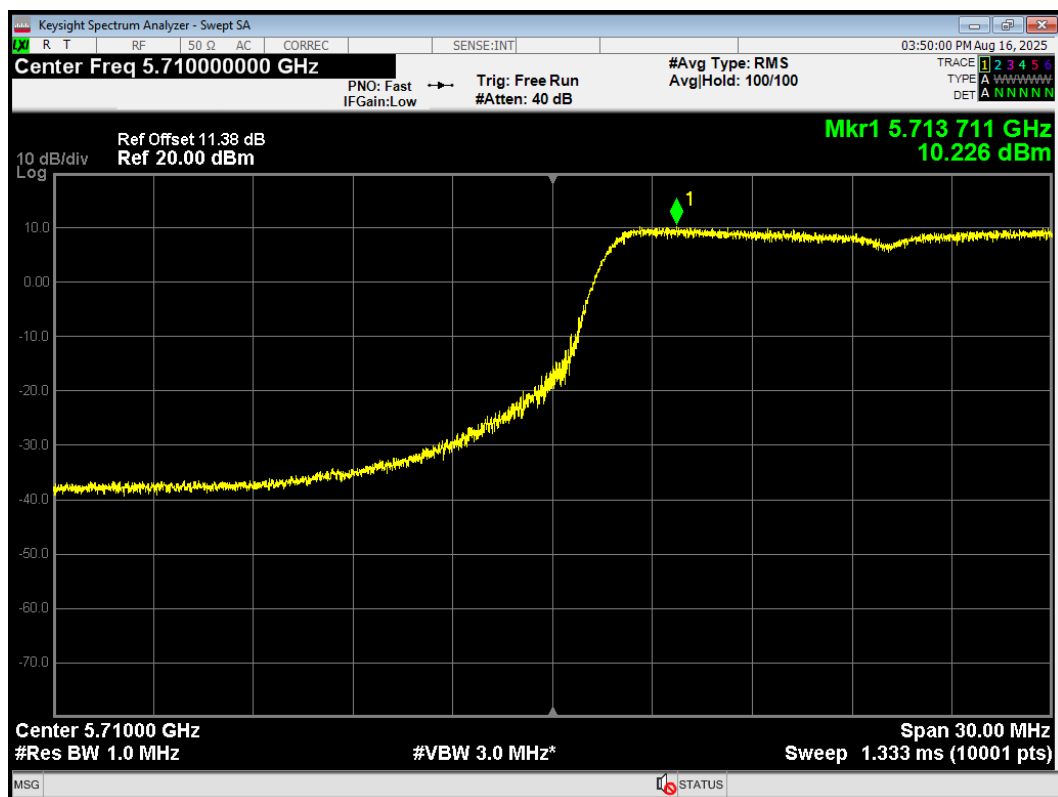
PSD 802.11a 5580MHz



PSD 802.11a 5700MHz

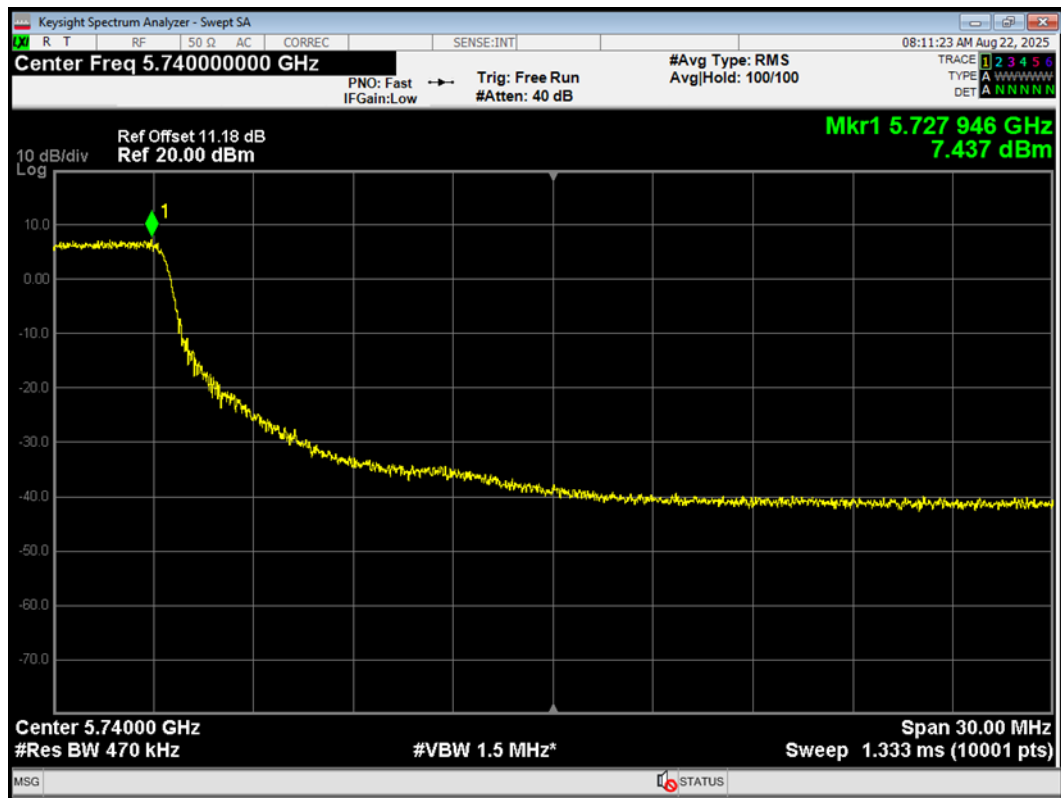


PSD 802.11a 5720MHz

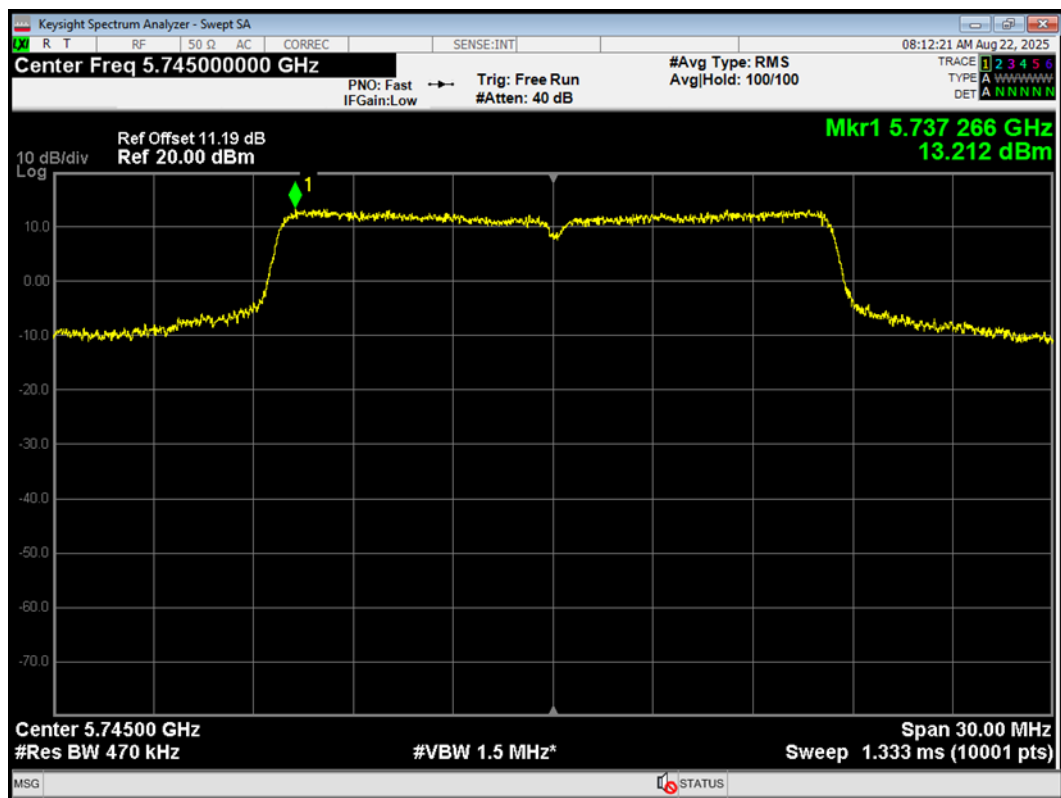


U-NII-3

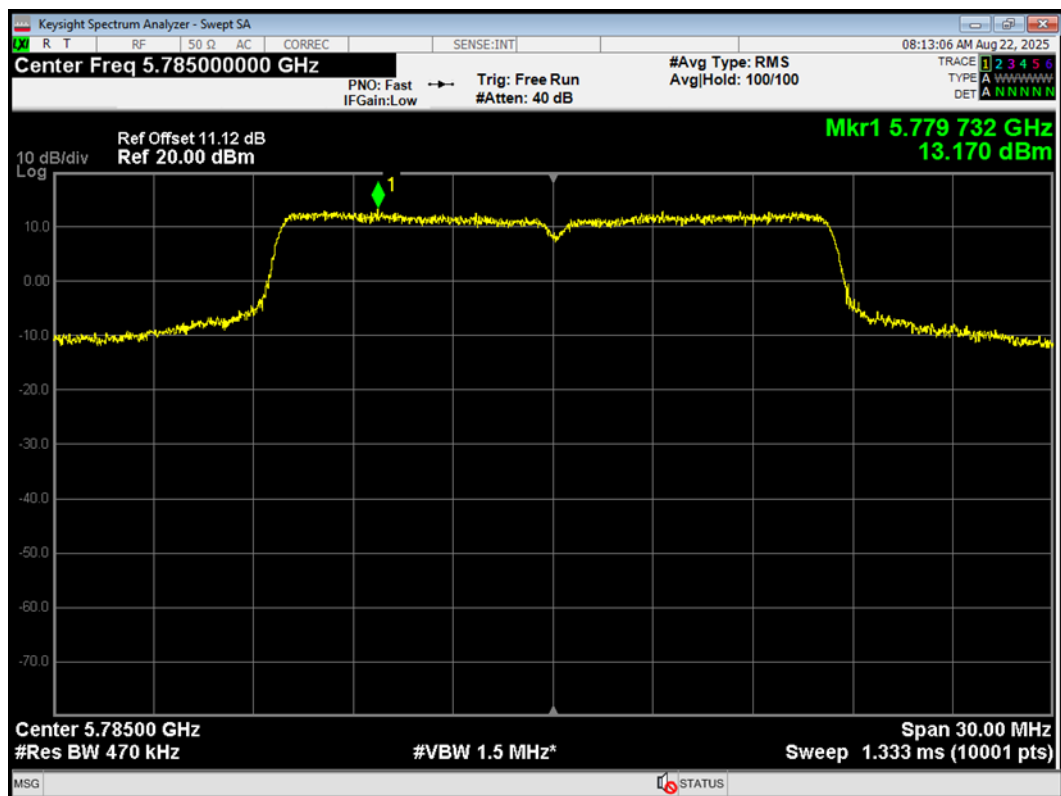
PSD 802.11a 5720MHz



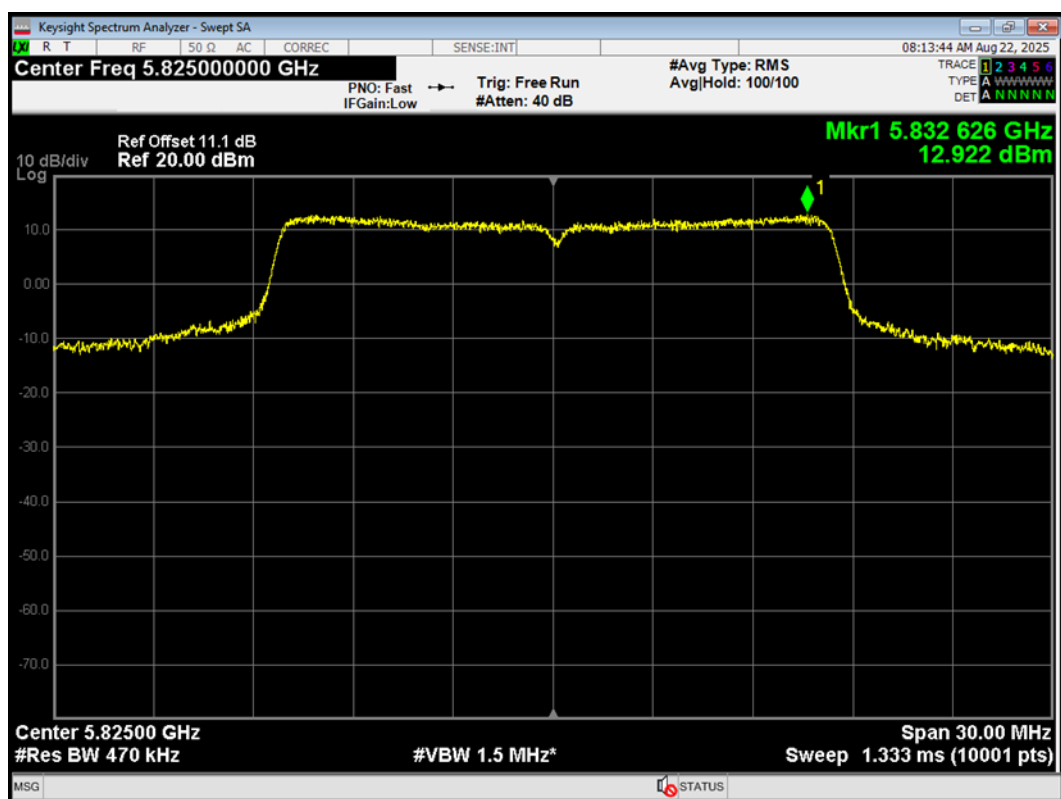
PSD 802.11a 5745MHz



PSD 802.11a 5785MHz



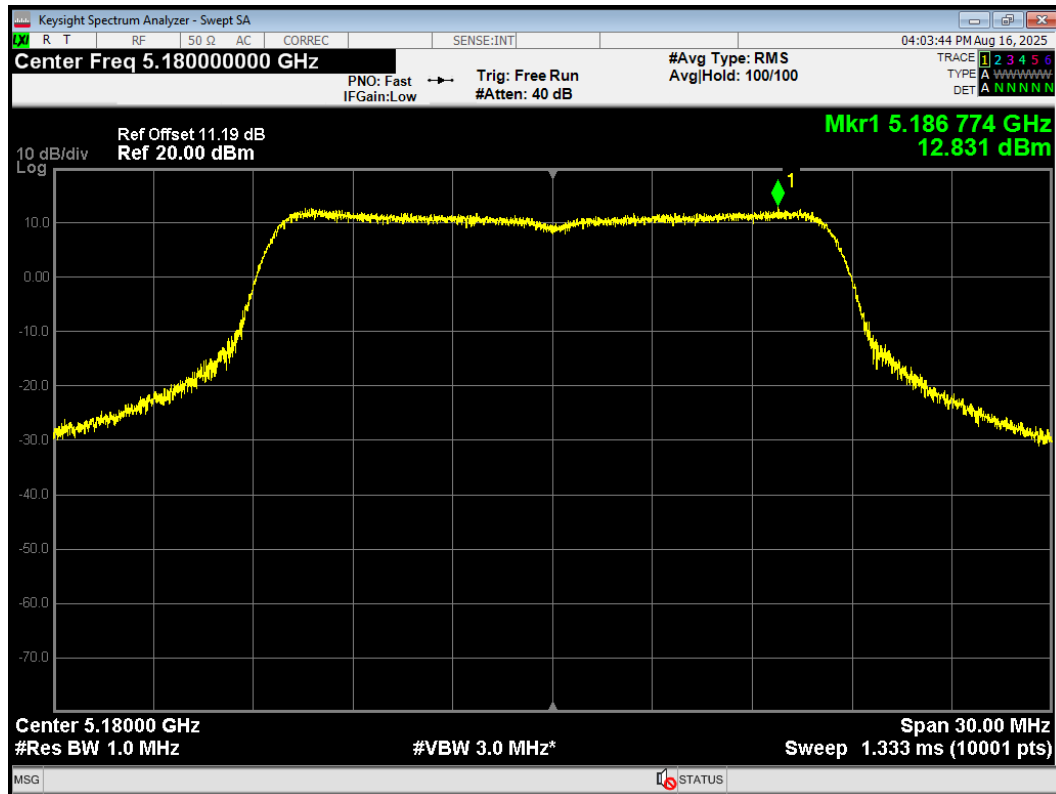
PSD 802.11a 5825MHz



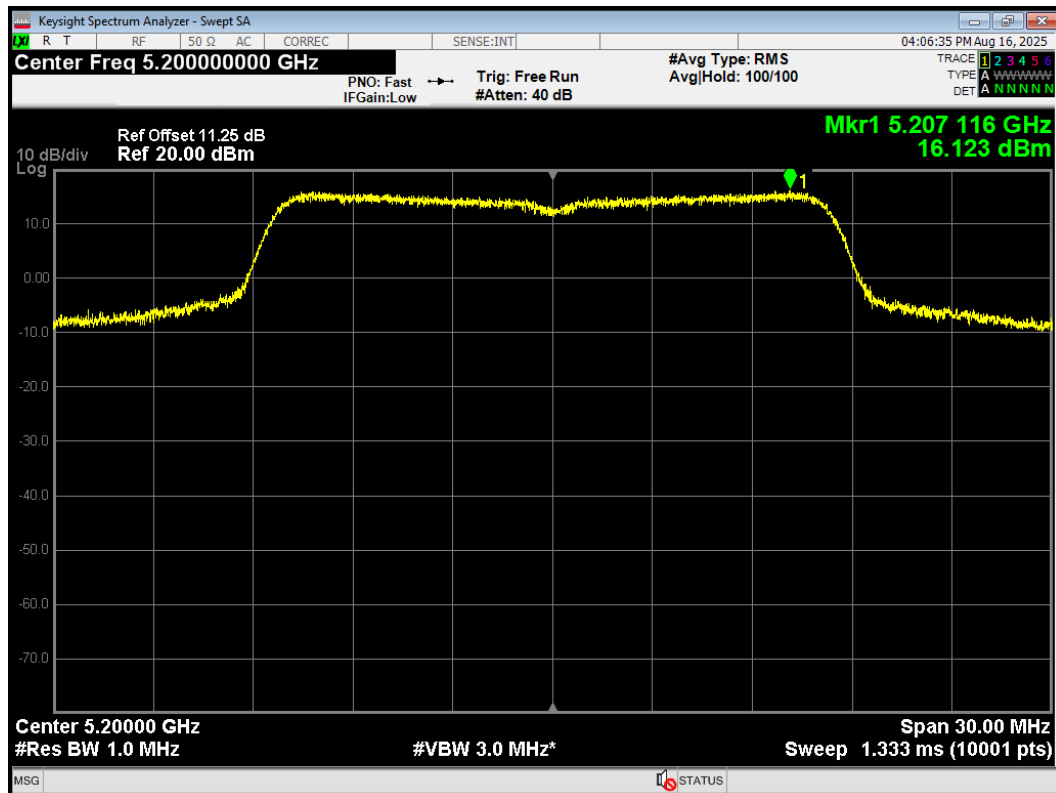
Antenna 3

U-NII-1

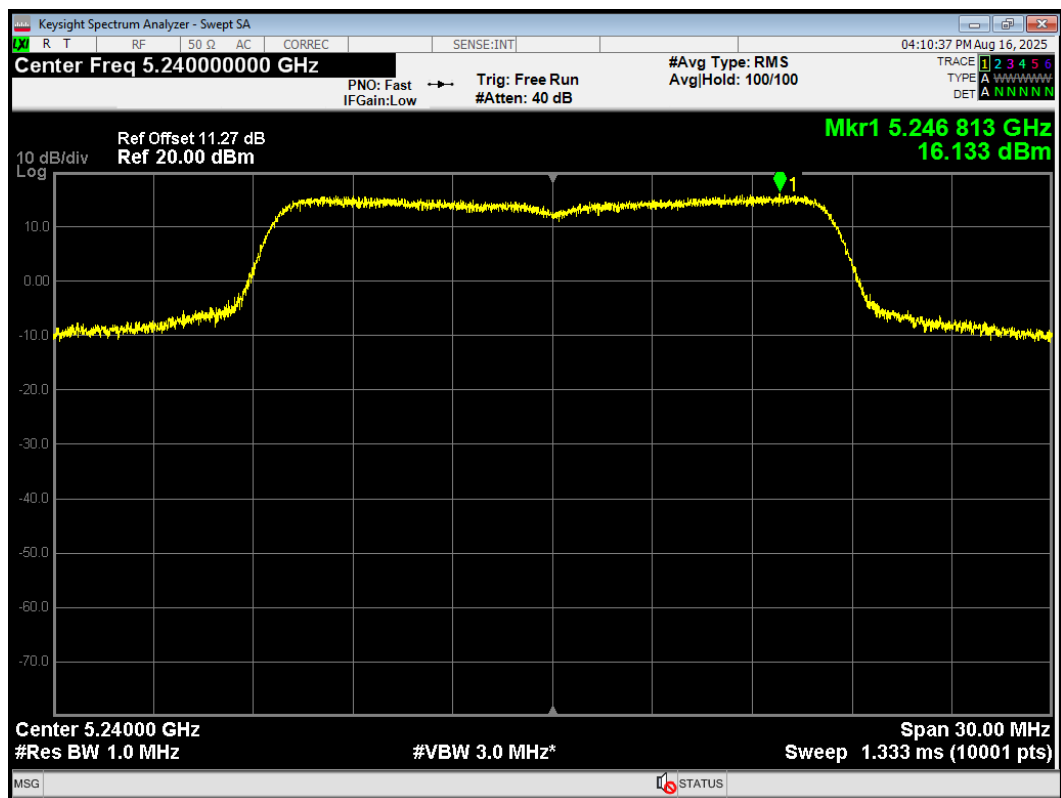
PSD 802.11a 5180MHz



PSD 802.11a 5200MHz

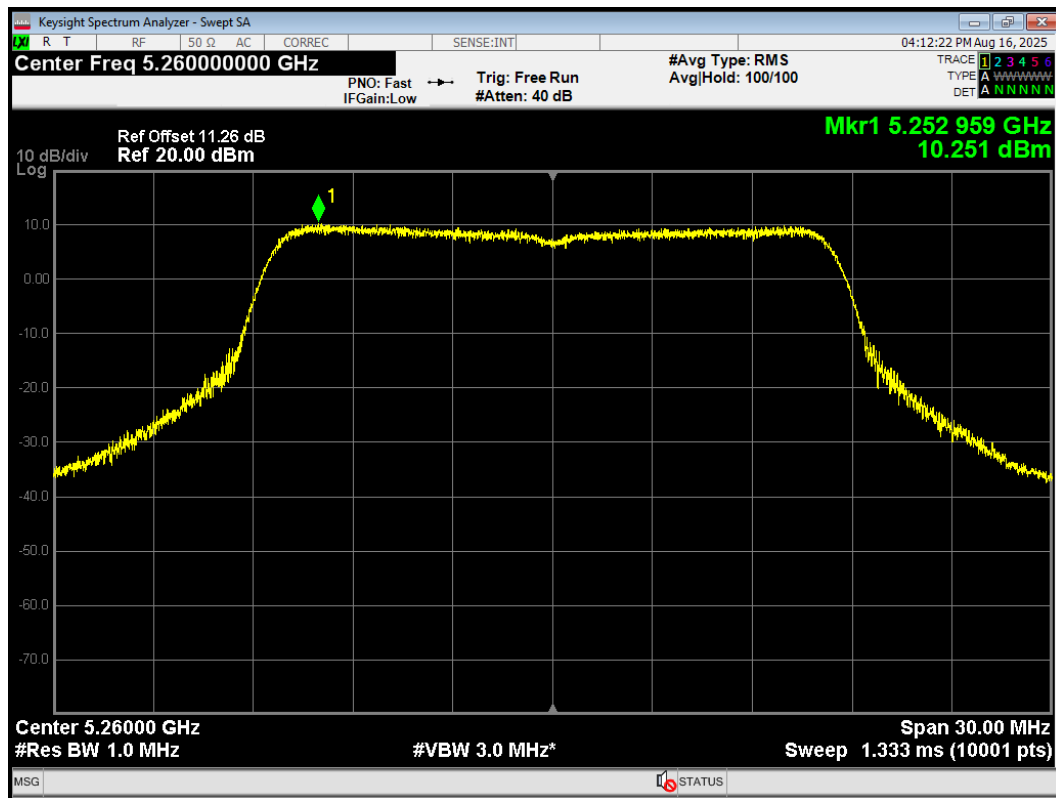


PSD 802.11a 5240MHz

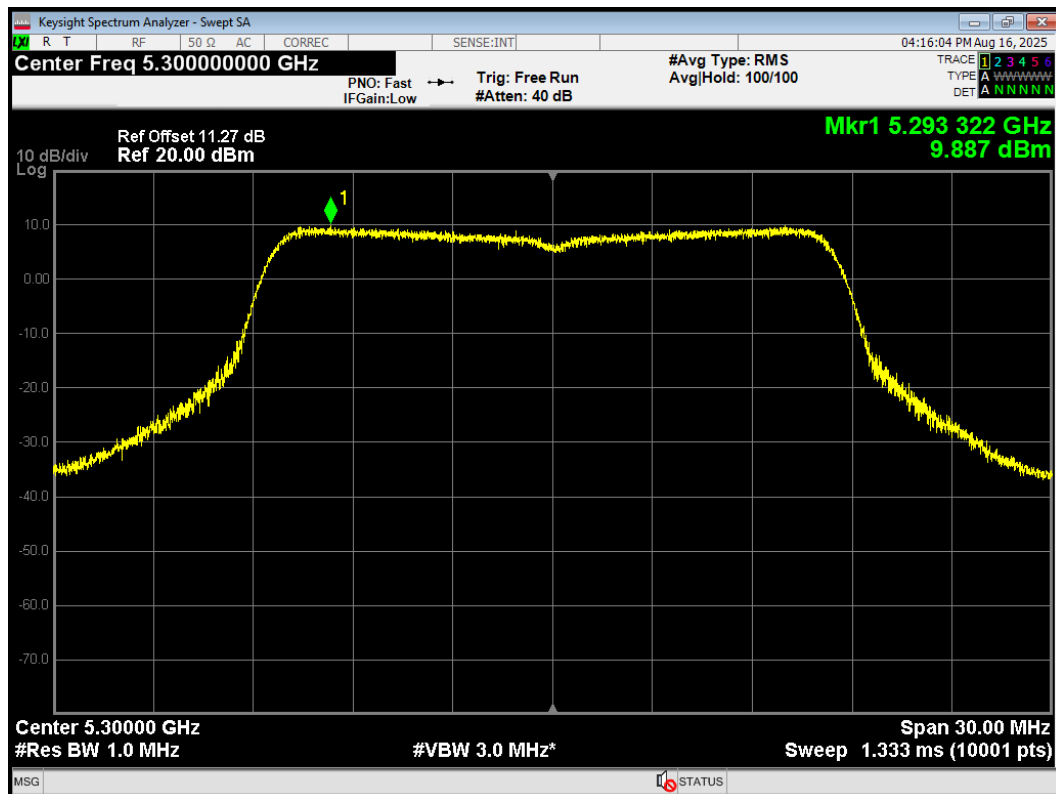


U-NII-2A

PSD 802.11a 5260MHz



PSD 802.11a 5300MHz



PSD 802.11a 5320MHz

