

### 3.7 Radiated emission

#### 3.7.1 Limit

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

The provisions of §15.205 apply to intentional radiators operating under this section.

#### 3.7.2 Test method

1. The EUT is placed on a turntable, which is 0.8m above ground plane for test frequency range below 1GHz, and 1.5m above ground plane for test frequency range above 1GHz.

2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.

3. Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured, RBW = 1 MHz for  $f \geq 1\text{GHz}$ , 100 kHz for  $f < 1\text{GHz}$ , VBW  $\geq$  RBW, Sweep = auto, Detector function = peak, Trace = max hold

4. Follow the guidelines in ANSI C63.4-2014 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

5. The peak level, once corrected, must comply with the limit specified in Section 15.209. Set the RBW = 1MHz, VBW = 3MHz, Detector = RMS for AV value, while maintaining all of the other instrument settings.

#### 3.7.3 Test Result

Remark:

If the PK measured values lower than average mode limit, the EUT shall be deemed to meet average limits and then no additional average mode measurement performed.

$E(\text{dB}\mu\text{V/m}) = \text{EIRP}(\text{dBm}) + 95.2 = 68.2\text{dB}\mu\text{V/m}$ , for  $\text{EIRP}(\text{dBm}) = -27\text{dBm}$

| 802.11a: 5180MHz (ANT1) |                   |                |        |          |        |
|-------------------------|-------------------|----------------|--------|----------|--------|
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBµV/m         | dBµV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5150                    | V                 | 45.36          | 68.2   | PK       |        |
| 5150                    | H                 | 46.58          | 68.2   | PK       |        |
| 10360                   | V                 | 50.27          | 68.2   | PK       |        |
| 10360                   | H                 | 51.39          | 68.2   | PK       |        |
| 15540                   | V                 | 51.24          | 68.2   | PK       |        |
| 15540                   | H                 | 50.14          | 68.2   | PK       |        |
| 802.11a: 5200MHz (ANT1) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBµV/m         | dBµV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 10400                   | V                 | 51.34          | 68.2   | PK       |        |
| 10400                   | H                 | 50.12          | 68.2   | PK       |        |
| 15600                   | V                 | 50.76          | 68.2   | PK       |        |
| 15600                   | H                 | 49.38          | 68.2   | PK       |        |
| 802.11a: 5240MHz (ANT1) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Pass   |
| (MHz)                   | H / V             | dBµV/m         | dBµV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       |        |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5350                    | V                 | 45.86          | 68.2   | PK       |        |
| 5350                    | H                 | 46.87          | 68.2   | PK       |        |
| 10480                   | V                 | 51.39          | 68.2   | PK       |        |
| 10480                   | H                 | 50.72          | 68.2   | PK       |        |
| 15720                   | V                 | 49.32          | 68.2   | PK       |        |
| 15720                   | H                 | 50.59          | 68.2   | PK       |        |

| 802.11a: 5180MHz (ANT2) |                   |                |        |          |        |
|-------------------------|-------------------|----------------|--------|----------|--------|
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5150                    | V                 | 45.87          | 68.2   | PK       |        |
| 5150                    | H                 | 46.36          | 68.2   | PK       |        |
| 10360                   | V                 | 49.64          | 68.2   | PK       |        |
| 10360                   | H                 | 48.75          | 68.2   | PK       |        |
| 15540                   | V                 | 50.55          | 68.2   | PK       |        |
| 15540                   | H                 | 51.51          | 68.2   | PK       |        |
| 802.11a: 5200MHz (ANT2) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 10400                   | V                 | 50.73          | 68.2   | PK       |        |
| 10400                   | H                 | 51.55          | 68.2   | PK       |        |
| 15600                   | V                 | 49.64          | 68.2   | PK       |        |
| 15600                   | H                 | 48.85          | 68.2   | PK       |        |
| 802.11a: 5240MHz (ANT2) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5350                    | V                 | 46.44          | 68.2   | PK       |        |
| 5350                    | H                 | 46.91          | 68.2   | PK       |        |
| 10480                   | V                 | 50.78          | 68.2   | PK       |        |
| 10480                   | H                 | 51.26          | 68.2   | PK       |        |
| 15720                   | V                 | 49.64          | 68.2   | PK       |        |
| 15720                   | H                 | 50.17          | 68.2   | PK       |        |

| 802.11ac20: 5180MHz(ANT1+ANT2) |                   |                |        |          |        |
|--------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5150                           | V                 | 45.28          | 68.2   | PK       |        |
| 5150                           | H                 | 46.59          | 68.2   | PK       |        |
| 10360                          | V                 | 50.36          | 68.2   | PK       |        |
| 10360                          | H                 | 49.64          | 68.2   | PK       |        |
| 15540                          | V                 | 50.53          | 68.2   | PK       |        |
| 15540                          | H                 | 51.17          | 68.2   | PK       |        |
| 802.11ac20: 5200MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 10400                          | V                 | 50.89          | 68.2   | PK       |        |
| 10400                          | H                 | 50.62          | 68.2   | PK       |        |
| 15600                          | V                 | 49.39          | 68.2   | PK       |        |
| 15600                          | H                 | 50.67          | 68.2   | PK       |        |
| 802.11ac20: 5240MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5350                           | V                 | 46.27          | 68.2   | PK       |        |
| 5350                           | H                 | 47.36          | 68.2   | PK       |        |
| 10480                          | V                 | 50.61          | 68.2   | PK       |        |
| 10480                          | H                 | 51.12          | 68.2   | PK       |        |
| 15720                          | V                 | 49.54          | 68.2   | PK       |        |
| 15720                          | H                 | 51.33          | 68.2   | PK       |        |

| 802.11n20: 5180MHz(ANT1+ANT2) |                   |                |        |          |        |
|-------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5150                          | V                 | 45.53          | 68.2   | PK       |        |
| 5150                          | H                 | 46.76          | 68.2   | PK       |        |
| 10360                         | V                 | 50.6           | 68.2   | PK       |        |
| 10360                         | H                 | 51.95          | 68.2   | PK       |        |
| 15540                         | V                 | 50.78          | 68.2   | PK       |        |
| 15540                         | H                 | 50.53          | 68.2   | PK       |        |
| 802.11n20: 5200MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 10400                         | V                 | 50.14          | 68.2   | PK       |        |
| 10400                         | H                 | 50.87          | 68.2   | PK       |        |
| 15600                         | V                 | 49.58          | 68.2   | PK       |        |
| 15600                         | H                 | 51.1           | 68.2   | PK       |        |
| 802.11n20: 5240MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5350                          | V                 | 46.56          | 68.2   | PK       |        |
| 5350                          | H                 | 47.55          | 68.2   | PK       |        |
| 10480                         | V                 | 49.89          | 68.2   | PK       |        |
| 10480                         | H                 | 50.4           | 68.2   | PK       |        |
| 15720                         | V                 | 49.9           | 68.2   | PK       |        |
| 15720                         | H                 | 51.67          | 68.2   | PK       |        |

| 802.11ac40: 5190MHz(ANT1+ANT2) |                   |                |        |          |        |
|--------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5150                           | V                 | 45.31          | 68.2   | PK       |        |
| 5150                           | H                 | 46.28          | 68.2   | PK       |        |
| 10380                          | V                 | 51.34          | 68.2   | PK       |        |
| 10380                          | H                 | 50.46          | 68.2   | PK       |        |
| 15570                          | V                 | 49.57          | 68.2   | PK       |        |
| 15570                          | H                 | 50.34          | 68.2   | PK       |        |
| 802.11ac40: 5230MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5350                           | V                 | 46.42          | 68.2   | PK       |        |
| 5350                           | H                 | 47.23          | 68.2   | PK       |        |
| 10460                          | V                 | 51.13          | 68.2   | PK       |        |
| 10460                          | H                 | 52.22          | 68.2   | PK       |        |
| 15690                          | V                 | 49.34          | 68.2   | PK       |        |
| 15690                          | H                 | 50.18          | 68.2   | PK       |        |

| 802.11n40: 5190MHz(ANT1+ANT2) |                   |                |        |          |        |
|-------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5150                          | V                 | 45.24          | 68.2   | PK       |        |
| 5150                          | H                 | 46.57          | 68.2   | PK       |        |
| 10380                         | V                 | 49.68          | 68.2   | PK       |        |
| 10380                         | H                 | 50.81          | 68.2   | PK       |        |
| 15570                         | V                 | 49.85          | 68.2   | PK       |        |
| 15570                         | H                 | 50.71          | 68.2   | PK       |        |

| 802.11n40: 5230MHz(ANT1+ANT2) |                   |                |        |          |        |
|-------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5350                          | V                 | 45.58          | 68.2   | PK       |        |
| 5350                          | H                 | 47.19          | 68.2   | PK       |        |
| 10460                         | V                 | 50.52          | 68.2   | PK       |        |
| 10460                         | H                 | 50.58          | 68.2   | PK       |        |
| 15690                         | V                 | 49.68          | 68.2   | PK       |        |
| 15690                         | H                 | 50.51          | 68.2   | PK       |        |

| 802.11ac80: 5210MHz(ANT1+ANT2) |                   |                |        |          |        |
|--------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5150                           | V                 | 45.23          | 68.2   | PK       |        |
| 5150                           | H                 | 46.07          | 68.2   | PK       |        |
| 10420                          | V                 | 50.43          | 68.2   | PK       |        |
| 10420                          | H                 | 49.37          | 68.2   | PK       |        |
| 15630                          | V                 | 48.64          | 68.2   | PK       |        |
| 15630                          | H                 | 49.52          | 68.2   | PK       |        |
| 5350                           | V                 | 46.48          | 68.2   | PK       |        |
| 5350                           | H                 | 47.26          | 68.2   | PK       |        |

| 802.11a: 5745MHz (ANT1) |                   |                |        |          |        |
|-------------------------|-------------------|----------------|--------|----------|--------|
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5725                    | V                 | 45.14          | 68.2   | PK       |        |
| 5725                    | H                 | 46.31          | 68.2   | PK       |        |
| 11490                   | V                 | 52.92          | 68.2   | PK       |        |
| 11490                   | H                 | 57.21          | 68.2   | PK       |        |
| 17235                   | V                 | 50.96          | 68.2   | PK       |        |
| 17235                   | H                 | 51.89          | 68.2   | PK       |        |
| 802.11a: 5785MHz (ANT1) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 11570                   | V                 | 50.17          | 68.2   | PK       |        |
| 11570                   | H                 | 51.81          | 68.2   | PK       |        |
| 17355                   | V                 | 48.01          | 68.2   | PK       |        |
| 17355                   | H                 | 49.02          | 68.2   | PK       |        |
| 802.11a: 5825MHz (ANT1) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5850                    | V                 | 46.63          | 68.2   | PK       |        |
| 5850                    | H                 | 47.32          | 68.2   | PK       |        |
| 11650                   | V                 | 50.14          | 68.2   | PK       |        |
| 11650                   | H                 | 51.53          | 68.2   | PK       |        |
| 17475                   | V                 | 49.04          | 68.2   | PK       |        |
| 17475                   | H                 | 50.34          | 68.2   | PK       |        |

| 802.11a: 5745MHz (ANT2) |                   |                |        |          |        |
|-------------------------|-------------------|----------------|--------|----------|--------|
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5725                    | V                 | 44.53          | 68.2   | PK       |        |
| 5725                    | H                 | 46.24          | 68.2   | PK       |        |
| 11490                   | V                 | 50.23          | 68.2   | PK       |        |
| 11490                   | H                 | 51.59          | 68.2   | PK       |        |
| 17235                   | V                 | 50.34          | 68.2   | PK       |        |
| 17235                   | H                 | 51.32          | 68.2   | PK       |        |
| 802.11a: 5785MHz (ANT2) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 11570                   | V                 | 49.73          | 68.2   | PK       |        |
| 11570                   | H                 | 50.29          | 68.2   | PK       |        |
| 17355                   | V                 | 48.04          | 68.2   | PK       |        |
| 17355                   | H                 | 49.43          | 68.2   | PK       |        |
| 802.11a: 5825MHz (ANT2) |                   |                |        |          |        |
| Frequency               | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                   | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                  | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                  | H                 | 35.4           | 43.5   | QP       |        |
| 5850                    | V                 | 45.97          | 68.2   | PK       |        |
| 5850                    | H                 | 46.61          | 68.2   | PK       |        |
| 11650                   | V                 | 50.72          | 68.2   | PK       |        |
| 11650                   | H                 | 50.92          | 68.2   | PK       |        |
| 17475                   | V                 | 48.58          | 68.2   | PK       |        |
| 17475                   | H                 | 49.87          | 68.2   | PK       |        |

| 802.11ac20: 5745MHz(ANT1+ANT2) |                   |                |        |          |        |
|--------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5725                           | V                 | 45.46          | 68.2   | PK       |        |
| 5725                           | H                 | 46.51          | 68.2   | PK       |        |
| 11490                          | V                 | 50.34          | 68.2   | PK       |        |
| 11490                          | H                 | 51.78          | 68.2   | PK       |        |
| 17235                          | V                 | 49.52          | 68.2   | PK       |        |
| 17235                          | H                 | 50.33          | 68.2   | PK       |        |
| 802.11ac20: 5785MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 11570                          | V                 | 50.12          | 68.2   | PK       |        |
| 11570                          | H                 | 49.32          | 68.2   | PK       |        |
| 17355                          | V                 | 49.34          | 68.2   | PK       |        |
| 17355                          | H                 | 50.46          | 68.2   | PK       |        |
| 802.11ac20: 5825MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5850                           | V                 | 46.59          | 68.2   | PK       |        |
| 5850                           | H                 | 47.58          | 68.2   | PK       |        |
| 11650                          | V                 | 50.27          | 68.2   | PK       |        |
| 11650                          | H                 | 50.08          | 68.2   | PK       |        |
| 17475                          | V                 | 49.76          | 68.2   | PK       |        |
| 17475                          | H                 | 50.64          | 68.2   | PK       |        |

| 802.11n20: 5745MHz(ANT1+ANT2) |                   |                |        |          |        |
|-------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBµV/m         | dBµV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5725                          | V                 | 45.75          | 68.2   | PK       |        |
| 5725                          | H                 | 46.49          | 68.2   | PK       |        |
| 11490                         | V                 | 51.62          | 68.2   | PK       |        |
| 11490                         | H                 | 50.06          | 68.2   | PK       |        |
| 17235                         | V                 | 49.88          | 68.2   | PK       |        |
| 17235                         | H                 | 50.67          | 68.2   | PK       |        |
| 802.11n20: 5785MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBµV/m         | dBµV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 11570                         | V                 | 50.39          | 68.2   | PK       |        |
| 11570                         | H                 | 51.53          | 68.2   | PK       |        |
| 17355                         | V                 | 49.77          | 68.2   | PK       |        |
| 17355                         | H                 | 50.74          | 68.2   | PK       |        |
| 802.11n20: 5825MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBµV/m         | dBµV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5850                          | V                 | 46.87          | 68.2   | PK       |        |
| 5850                          | H                 | 47.73          | 68.2   | PK       |        |
| 11650                         | V                 | 50.52          | 68.2   | PK       |        |
| 11650                         | H                 | 50.42          | 68.2   | PK       |        |
| 17475                         | V                 | 50.14          | 68.2   | PK       |        |
| 17475                         | H                 | 51.06          | 68.2   | PK       |        |

| 802.11ac40: 5755MHz(ANT1+ANT2) |                   |                |        |          |        |
|--------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5725                           | V                 | 45.53          | 68.2   | PK       |        |
| 5725                           | H                 | 46.62          | 68.2   | PK       |        |
| 11510                          | V                 | 50.49          | 68.2   | PK       |        |
| 11510                          | H                 | 49.58          | 68.2   | PK       |        |
| 17265                          | V                 | 49.67          | 68.2   | PK       |        |
| 17265                          | H                 | 50.46          | 68.2   | PK       |        |
| 802.11ac40: 5795MHz(ANT1+ANT2) |                   |                |        |          |        |
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5850                           | V                 | 45.61          | 68.2   | PK       |        |
| 5850                           | H                 | 46.75          | 68.2   | PK       |        |
| 11590                          | V                 | 49.43          | 68.2   | PK       |        |
| 11590                          | H                 | 48.59          | 68.2   | PK       |        |
| 17385                          | V                 | 49.55          | 68.2   | PK       |        |
| 17385                          | H                 | 50.43          | 68.2   | PK       |        |

| 802.11n40: 5755MHz(ANT1+ANT2) |                   |                |        |          |        |
|-------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5725                          | V                 | 45.42          | 68.2   | PK       |        |
| 5725                          | H                 | 46.99          | 68.2   | PK       |        |
| 11510                         | V                 | 50.85          | 68.2   | PK       |        |
| 11510                         | H                 | 49.93          | 68.2   | PK       |        |
| 17265                         | V                 | 50.04          | 68.2   | PK       |        |
| 17265                         | H                 | 50.75          | 68.2   | PK       |        |

| 802.11n40: 5795MHz(ANT1+ANT2) |                   |                |        |          |        |
|-------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                     | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                         | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                        | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                        | H                 | 35.4           | 43.5   | QP       |        |
| 5850                          | V                 | 45.97          | 68.2   | PK       |        |
| 5850                          | H                 | 47.09          | 68.2   | PK       |        |
| 11590                         | V                 | 50.76          | 68.2   | PK       |        |
| 11590                         | H                 | 48.93          | 68.2   | PK       |        |
| 17385                         | V                 | 49.91          | 68.2   | PK       |        |
| 17385                         | H                 | 50.93          | 68.2   | PK       |        |

| 802.11ac80: 5775MHz(ANT1+ANT2) |                   |                |        |          |        |
|--------------------------------|-------------------|----------------|--------|----------|--------|
| Frequency                      | Ant. Polarization | Emission level | Limits | Detector | Result |
| (MHz)                          | H / V             | dBμV/m         | dBμV/m |          |        |
| 366.82                         | V                 | 30.1           | 43.5   | QP       | Pass   |
| 366.82                         | H                 | 35.4           | 43.5   | QP       |        |
| 5725                           | V                 | 45.13          | 68.2   | PK       |        |
| 5725                           | H                 | 46.21          | 68.2   | PK       |        |
| 11550                          | V                 | 50.67          | 68.2   | PK       |        |
| 11550                          | H                 | 51.49          | 68.2   | PK       |        |
| 17325                          | V                 | 48.73          | 68.2   | PK       |        |
| 17325                          | H                 | 49.64          | 68.2   | PK       |        |
| 5850                           | V                 | 46.23          | 68.2   | PK       |        |
| 5850                           | H                 | 46.82          | 68.2   | PK       |        |

### **3.8 Frequency stability**

#### **3.8.1 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.

#### **3.8.2 Test method**

##### **Test Procedures for Temperature Variation:**

- 1, The EUT was set up in the thermal chamber and connected with the base station.
- 2, With power off, the temperature was decreased to -30°C and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
- 3, With power off, the temperature was raised in 10°C set up to 50°C and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
- 4, measure the carrier frequency error.

##### **Test Procedures for Voltage Variation:**

- 1, The EUT was placed in a temperature chamber at 25±5°C and connected with the base station.
- 2, Reduce the primary supply voltage to the battery operating end point.
- 3, measure the carrier frequency error.

#### **3.8.3 Test Result**

TX: 5180MHz

| Temperature (°C) | Voltage (V <sub>AC</sub> ) | Test Result (MHz) | Deviation (ppm) |
|------------------|----------------------------|-------------------|-----------------|
| 0                | 120                        | 5180.023015       | 4.443           |
| 10               |                            | 5180.022948       | 4.43            |
| 20               |                            | 5180.023478       | 4.532           |
| 30               |                            | 5180.023078       | 4.455           |
| 40               |                            | 5180.024481       | 4.726           |
| 25               | 138                        | 5180.022648       | 4.372           |
| 25               | 102                        | 5180.022481       | 4.34            |

TX: 5745MHz

| Temperature (°C) | Voltage (V <sub>AC</sub> ) | Test Result (Hz) | Deviation (ppm) |
|------------------|----------------------------|------------------|-----------------|
| 0                | 120                        | 5745.026133      | 4.549           |
| 10               |                            | 5745.024954      | 4.344           |
| 20               |                            | 5745.02743       | 4.775           |
| 30               |                            | 5745.024903      | 4.335           |
| 40               |                            | 5745.027218      | 4.738           |
| 25               | 138                        | 5745.025048      | 4.36            |
| 25               | 102                        | 5745.026045      | 4.534           |

----END OF REPORT----