

## Appendix I): Restricted bands around fundamental frequency (Radiated Emission)

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |        |                  |            |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|------------------|------------|
| Receiver Setup: | Frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Detector            | RBW    | VBW              | Remark     |
|                 | 30MHz-1GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quasi-peak          | 120kHz | 300kHz           | Quasi-peak |
|                 | Above 1GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Peak                | 1MHz   | 3MHz             | Peak       |
|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Peak                | 1MHz   | 10Hz             | Average    |
| Test Procedure: | <p><b>Below 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</li> </ol> <p><b>Above 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre( Above 18GHz the distance is 1 meter and table is 1.5 metre).</li> <li>Test the EUT in the lowest channel , the Highest channel</li> <li>The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.</li> <li>Repeat above procedures until all frequencies measured was complete.</li> </ol> |                     |        |                  |            |
| Limit:          | Frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Limit (dBμV/m @3cm) |        | Remark           |            |
|                 | 30MHz-88MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 40.0                |        | Quasi-peak Value |            |
|                 | 88MHz-216MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 43.5                |        | Quasi-peak Value |            |
|                 | 216MHz-960MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 46.0                |        | Quasi-peak Value |            |
|                 | 960MHz-1GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 54.0                |        | Quasi-peak Value |            |
|                 | Above 1GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 54.0                |        | Average Value    |            |
|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 74.0                |        | Peak Value       |            |

Test plot as follows:

| Worse case mode: |               | 802.11a(6Mbps) |                | Test channel: |        | 36            |           |
|------------------|---------------|----------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor         | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)           | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5150             | 52.65         | -4.26          | 48.39          | 74            | -25.61 | peak          | H         |
| 5150             | 36.99         | -4.26          | 32.73          | 54            | -21.27 | AVG           | H         |
| 5150             | 50.37         | 1.18           | 51.55          | 74            | -22.45 | peak          | V         |
| 5150             | 38.28         | 1.18           | 39.46          | 54            | -14.54 | AVG           | V         |

| Worse case mode: |               | 802.11a(6Mbps) |                | Test channel: |        | 48            |           |
|------------------|---------------|----------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor         | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)           | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5350             | 55.68         | -4.26          | 51.42          | 74            | -22.58 | peak          | H         |
| 5350             | 39.04         | -4.26          | 34.78          | 54            | -19.22 | AVG           | H         |
| 5350             | 50.84         | 1.18           | 52.02          | 74            | -21.98 | peak          | V         |
| 5350             | 35.10         | 1.18           | 36.28          | 54            | -17.72 | AVG           | V         |

| Worse case mode: |               | 802.11a(6Mbps) |                | Test channel: |        | 149           |           |
|------------------|---------------|----------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor         | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)           | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5725             | 52.47         | -4.12          | 48.35          | 74            | -25.65 | peak          | H         |
| 5725             | 37.01         | -4.12          | 32.89          | 54            | -21.11 | AV            | H         |
| 5725             | 48.77         | 1.46           | 50.23          | 74            | -23.77 | peak          | V         |
| 5725             | 36.15         | 1.46           | 37.61          | 54            | -16.39 | AV            | V         |

| Worse case mode: |               | 802.11a(6Mbps) |                | Test channel: |        | 165           |           |
|------------------|---------------|----------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor         | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)           | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5850             | 52.27         | -4.12          | 48.15          | 74            | -25.85 | peak          | H         |
| 5850             | 36.43         | -4.12          | 32.31          | 54            | -21.69 | AV            | H         |
| 5850             | 49.91         | 1.46           | 51.37          | 74            | -22.63 | peak          | V         |
| 5850             | 35.30         | 1.46           | 36.76          | 54            | -17.24 | AV            | V         |

| Worse case mode: |               | 802.11n(HT20)(6.5Mbps) |                | Test channel: |        | 36            |           |
|------------------|---------------|------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                 | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                   | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5150             | 52.92         | -4.03                  | 48.89          | 74            | -25.11 | peak          | H         |
| 5150             | 38.03         | -4.03                  | 34.00          | 54            | -20.00 | AVG           | H         |
| 5150             | 49.72         | 1.66                   | 51.38          | 74            | -22.62 | peak          | V         |
| 5150             | 37.68         | 1.66                   | 39.34          | 54            | -14.66 | AVG           | V         |

| Worse case mode: |               | 802.11n(HT20)(6.5Mbps) |                | Test channel: |        | 48            |           |
|------------------|---------------|------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                 | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                   | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5350             | 55.14         | -4.03                  | 51.11          | 74            | -22.89 | peak          | H         |
| 5350             | 37.66         | -4.03                  | 33.63          | 54            | -20.37 | AVG           | H         |
| 5350             | 49.72         | 1.66                   | 51.38          | 74            | -22.62 | peak          | V         |
| 5350             | 36.66         | 1.66                   | 38.32          | 54            | -15.68 | AVG           | V         |

| Worse case mode: |               | 802.11n(HT20)(6.5Mbps) |                | Test channel: |        | 149           |           |
|------------------|---------------|------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                 | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                   | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5725             | 52.57         | -4.26                  | 48.31          | 74            | -25.69 | peak          | H         |
| 5725             | 37.63         | -4.26                  | 33.37          | 54            | -20.63 | AV            | H         |
| 5725             | 51.45         | 1.18                   | 52.63          | 74            | -21.37 | peak          | V         |
| 5725             | 38.70         | 1.18                   | 39.88          | 54            | -14.12 | AV            | V         |

| Worse case mode: |               | 802.11n(HT20)(6.5Mbps) |                | Test channel: |        | 165           |           |
|------------------|---------------|------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                 | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                   | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5850             | 55.44         | -4.26                  | 51.18          | 74            | -22.82 | peak          | H         |
| 5850             | 38.30         | -4.26                  | 34.04          | 54            | -19.96 | AV            | H         |
| 5850             | 51.91         | 1.18                   | 53.09          | 74            | -20.91 | peak          | V         |
| 5850             | 35.67         | 1.18                   | 36.85          | 54            | -17.15 | AV            | V         |

| Worse case mode: |               | 802.11n(HT40)(13.5Mbps) |                | Test channel: |        | 38            |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5150             | 54.05         | -4.26                   | 49.79          | 74            | -24.21 | peak          | H         |
| 5150             | 37.05         | -4.26                   | 32.79          | 54            | -21.21 | AVG           | H         |
| 5150             | 52.08         | 1.18                    | 53.26          | 74            | -20.74 | peak          | V         |
| 5150             | 38.93         | 1.18                    | 40.11          | 54            | -13.89 | AVG           | V         |

| Worse case mode: |               | 802.11n(HT40)(13.5Mbps) |                | Test channel: |        | 46            |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5350             | 54.79         | -4.26                   | 50.53          | 74            | -23.47 | peak          | H         |
| 5350             | 39.86         | -4.26                   | 35.60          | 54            | -18.40 | AVG           | H         |
| 5350             | 51.22         | 1.18                    | 52.40          | 74            | -21.60 | peak          | V         |
| 5350             | 36.94         | 1.18                    | 38.12          | 54            | -15.88 | AVG           | V         |

| Worse case mode: |               | 802.11n(HT40)(13.5Mbps) |                | Test channel: |        | 151           |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5725             | 53.34         | -4.26                   | 49.08          | 74            | -24.92 | peak          | H         |
| 5725             | 36.17         | -4.26                   | 31.91          | 54            | -22.09 | AV            | H         |
| 5725             | 52.08         | 1.18                    | 53.26          | 74            | -20.74 | peak          | V         |
| 5725             | 37.05         | 1.18                    | 38.23          | 54            | -15.77 | AV            | V         |

| Worse case mode: |               | 802.11n(HT40)(13.5Mbps) |                | Test channel: |        | 159           |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5850             | 55.21         | -4.26                   | 50.95          | 74            | -23.05 | peak          | H         |
| 5850             | 38.56         | -4.26                   | 34.30          | 54            | -19.70 | AV            | H         |
| 5850             | 51.63         | 1.18                    | 52.81          | 74            | -21.19 | peak          | V         |
| 5850             | 35.30         | 1.18                    | 36.48          | 54            | -17.52 | AV            | V         |

| Worse case mode: |               | 802.11ac(HT20)(6.5Mbps) |                | Test channel: |        | 36            |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5150             | 54.31         | -4.26                   | 50.05          | 74            | -23.95 | peak          | H         |
| 5150             | 39.11         | -4.26                   | 34.85          | 54            | -19.15 | AVG           | H         |
| 5150             | 50.58         | 1.18                    | 51.76          | 74            | -22.24 | peak          | V         |
| 5150             | 35.20         | 1.18                    | 36.38          | 54            | -17.62 | AVG           | V         |

| Worse case mode: |               | 802.11ac(HT20)(6.5Mbps) |                | Test channel: |        | 48            |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5350             | 52.40         | -4.12                   | 48.28          | 74            | -25.72 | peak          | H         |
| 5350             | 37.81         | -4.12                   | 33.69          | 54            | -20.31 | AVG           | H         |
| 5350             | 48.46         | 1.46                    | 49.92          | 74            | -24.08 | peak          | V         |
| 5350             | 35.65         | 1.46                    | 37.11          | 54            | -16.89 | AVG           | V         |

| Worse case mode: |               | 802.11ac(HT20)(6.5Mbps) |                | Test channel: |        | 149           |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5725             | 52.94         | -4.12                   | 48.82          | 74            | -25.18 | peak          | H         |
| 5725             | 36.91         | -4.12                   | 32.79          | 54            | -21.21 | AV            | H         |
| 5725             | 49.22         | 1.46                    | 50.68          | 74            | -23.32 | peak          | V         |
| 5725             | 36.33         | 1.46                    | 37.79          | 54            | -16.21 | AV            | V         |

| Worse case mode: |               | 802.11ac(HT20)(6.5Mbps) |                | Test channel: |        | 165           |           |
|------------------|---------------|-------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                  | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                    | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5850             | 52.13         | -4.03                   | 48.10          | 74            | -25.90 | peak          | H         |
| 5850             | 37.60         | -4.03                   | 33.57          | 54            | -20.43 | AV            | H         |
| 5850             | 49.46         | 1.66                    | 51.12          | 74            | -22.88 | peak          | V         |
| 5850             | 37.11         | 1.66                    | 38.77          | 54            | -15.23 | AV            | V         |

| Worse case mode: |               | 802.11ac(VHT40)(13.5Mbps) |                | Test channel: |        | 38            |           |
|------------------|---------------|---------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                    | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                      | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5150             | 53.58         | -4.03                     | 49.55          | 74            | -24.45 | peak          | H         |
| 5150             | 37.98         | -4.03                     | 33.95          | 54            | -20.05 | AVG           | H         |
| 5150             | 49.68         | 1.66                      | 51.34          | 74            | -22.66 | peak          | V         |
| 5150             | 36.06         | 1.66                      | 37.72          | 54            | -16.28 | AVG           | V         |

| Worse case mode: |               | 802.11ac(VHT40)(13.5Mbps) |                | Test channel: |        | 46            |           |
|------------------|---------------|---------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                    | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                      | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5350             | 52.89         | -4.26                     | 48.63          | 74            | -25.37 | peak          | H         |
| 5350             | 37.15         | -4.26                     | 32.89          | 54            | -21.11 | AVG           | H         |
| 5350             | 50.31         | 1.18                      | 51.49          | 74            | -22.51 | peak          | V         |
| 5350             | 37.37         | 1.18                      | 38.55          | 54            | -15.45 | AVG           | V         |

| Worse case mode: |               | 802.11ac(VHT40)(13.5Mbps) |                | Test channel: |        | 151           |           |
|------------------|---------------|---------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                    | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                      | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5725             | 54.60         | -4.26                     | 50.34          | 74            | -23.66 | peak          | H         |
| 5725             | 38.44         | -4.26                     | 34.18          | 54            | -19.82 | AV            | H         |
| 5725             | 51.31         | 1.18                      | 52.49          | 74            | -21.51 | peak          | V         |
| 5725             | 36.42         | 1.18                      | 37.60          | 54            | -16.40 | AV            | V         |

| Worse case mode: |               | 802.11ac(VHT40)(13.5Mbps) |                | Test channel: |        | 159           |           |
|------------------|---------------|---------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                    | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                      | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5850             | 53.12         | -4.12                     | 49.00          | 74            | -25.00 | peak          | H         |
| 5850             | 36.43         | -4.12                     | 32.31          | 54            | -21.69 | AV            | H         |
| 5850             | 49.20         | 1.46                      | 50.66          | 74            | -23.34 | peak          | V         |
| 5850             | 35.54         | 1.46                      | 37.00          | 54            | -17.00 | AV            | V         |

| Worse case mode: |               | 802.11ac(VHT80)(29.3Mbps) |                | Test channel: |        | 42            |           |
|------------------|---------------|---------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                    | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                      | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5150             | 52.59         | -4.12                     | 48.47          | 74            | -25.53 | peak          | H         |
| 5150             | 37.32         | -4.12                     | 33.20          | 54            | -20.80 | AVG           | H         |
| 5150             | 49.21         | 1.46                      | 50.67          | 74            | -23.33 | peak          | V         |
| 5150             | 35.45         | 1.46                      | 36.91          | 54            | -17.09 | AVG           | V         |
| 5350             | 52.52         | -4.03                     | 48.49          | 74            | -25.51 | peak          | H         |
| 5350             | 38.49         | -4.03                     | 34.46          | 54            | -19.54 | AVG           | H         |
| 5350             | 49.94         | 1.66                      | 51.60          | 74            | -22.40 | peak          | V         |
| 5350             | 36.13         | 1.66                      | 37.79          | 54            | -16.21 | AVG           | V         |

| Worse case mode: |               | 802.11ac(VHT80)(29.3Mbps) |                | Test channel: |        | 155           |           |
|------------------|---------------|---------------------------|----------------|---------------|--------|---------------|-----------|
| Frequency        | Meter Reading | Factor                    | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)            | (dBμV)        | (dB)                      | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 5725             | 53.35         | -4.03                     | 49.32          | 74            | -24.68 | peak          | H         |
| 5725             | 38.69         | -4.03                     | 34.66          | 54            | -19.34 | AV            | H         |
| 5725             | 50.04         | 1.66                      | 51.70          | 74            | -22.30 | peak          | V         |
| 5725             | 36.72         | 1.66                      | 38.38          | 54            | -15.62 | AV            | V         |
| 5850             | 52.13         | -4.03                     | 48.10          | 74            | -25.90 | peak          | H         |
| 5850             | 38.14         | -4.03                     | 34.11          | 54            | -19.89 | AV            | H         |
| 5850             | 49.43         | 1.66                      | 51.09          | 74            | -22.91 | peak          | V         |
| 5850             | 37.49         | 1.66                      | 39.15          | 54            | -14.85 | AV            | V         |

Note:

1) Through Pre-scan transmitting mode with all kind of modulation and data rate, Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

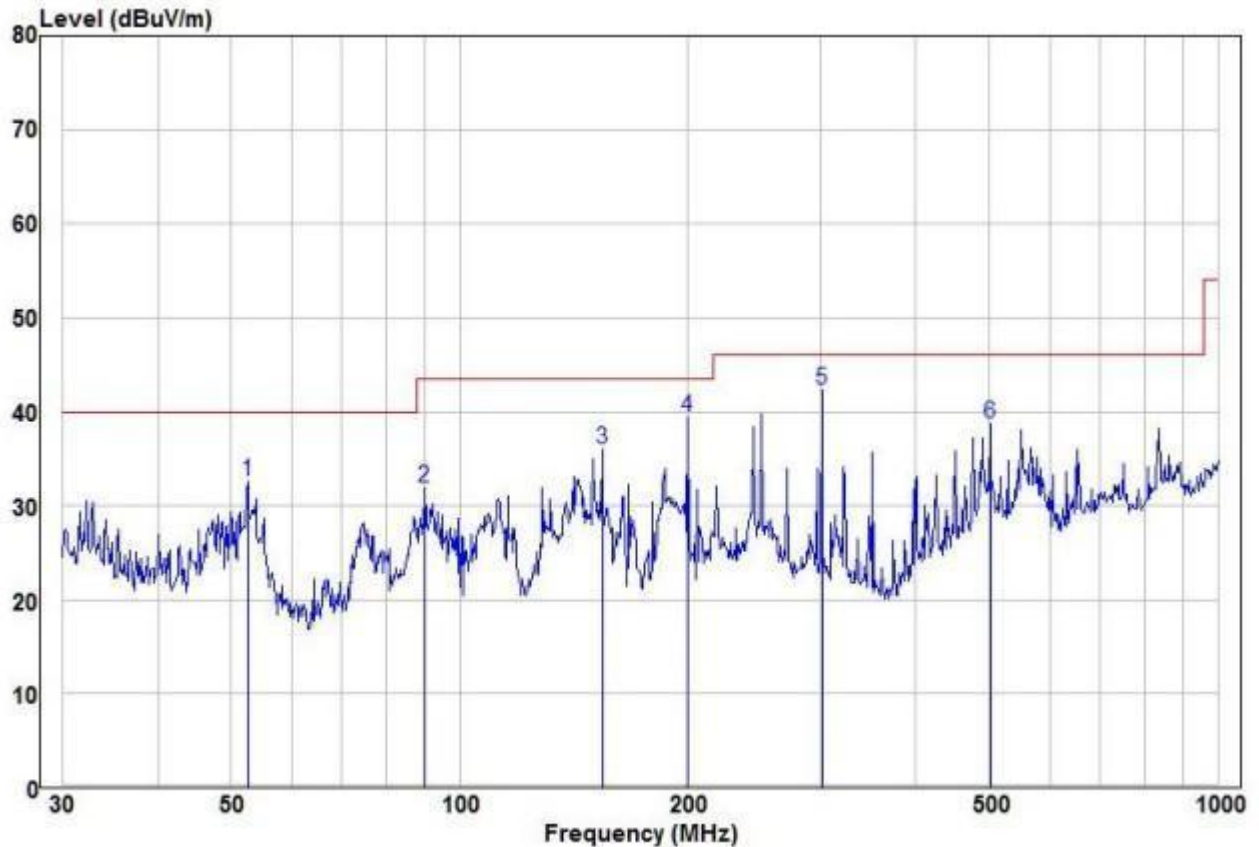
## Appendix J): Radiated Spurious Emissions

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                             |                                  |                 |            |                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------|------------|---------------------------|
| Receiver Setup:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Frequency                                                                                                                                                                                                                                                                   | Detector                         | RBW             | VBW        | Remark                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.009MHz-0.090MHz                                                                                                                                                                                                                                                           | Peak                             | 10kHz           | 30kHz      | Peak                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.009MHz-0.090MHz                                                                                                                                                                                                                                                           | Average                          | 10kHz           | 30kHz      | Average                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.090MHz-0.110MHz                                                                                                                                                                                                                                                           | Quasi-peak                       | 10kHz           | 30kHz      | Quasi-peak                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.110MHz-0.490MHz                                                                                                                                                                                                                                                           | Peak                             | 10kHz           | 30kHz      | Peak                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.110MHz-0.490MHz                                                                                                                                                                                                                                                           | Average                          | 10kHz           | 30kHz      | Average                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.490MHz -30MHz                                                                                                                                                                                                                                                             | Quasi-peak                       | 10kHz           | 30kHz      | Quasi-peak                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 30MHz-1GHz                                                                                                                                                                                                                                                                  | Quasi-peak                       | 120kHz          | 300kHz     | Quasi-peak                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Above 1GHz                                                                                                                                                                                                                                                                  | Peak                             | 1MHz            | 3MHz       | Peak                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                             | Peak                             | 1MHz            | 10Hz       | Average                   |
| Test Procedure:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                             |                                  |                 |            |                           |
| <b>Below 1GHz test procedure as below:</b><br>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.<br>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.<br>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.<br>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.<br>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.<br>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.<br><b>Above 1GHz test procedure as below:</b><br>g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre( Above 18GHz the distance is 1 meter and table is 1.5 metre)<br>h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel<br>i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.<br>j. Repeat above procedures until all frequencies measured was complete. |                                                                                                                                                                                                                                                                             |                                  |                 |            |                           |
| Limit:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Frequency                                                                                                                                                                                                                                                                   | Field strength (microvolt/meter) | Limit (dBµV/cm) | Remark     | Measurement distance (cm) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.009MHz-0.490MHz                                                                                                                                                                                                                                                           | 2400/F(kHz)                      | -               | -          | 300                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.490MHz-1.705MHz                                                                                                                                                                                                                                                           | 24000/F(kHz)                     | -               | -          | 30                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1.705MHz-30MHz                                                                                                                                                                                                                                                              | 30                               | -               | -          | 30                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 30MHz-88MHz                                                                                                                                                                                                                                                                 | 100                              | 40.0            | Quasi-peak | 3                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 88MHz-216MHz                                                                                                                                                                                                                                                                | 150                              | 43.5            | Quasi-peak | 3                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 216MHz-960MHz                                                                                                                                                                                                                                                               | 200                              | 46.0            | Quasi-peak | 3                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 960MHz-1GHz                                                                                                                                                                                                                                                                 | 500                              | 54.0            | Quasi-peak | 3                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Above 1GHz                                                                                                                                                                                                                                                                  | 500                              | 54.0            | Average    | 3                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device. |                                  |                 |            |                           |
| Test result: PASS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                             |                                  |                 |            |                           |

**Test Data:**

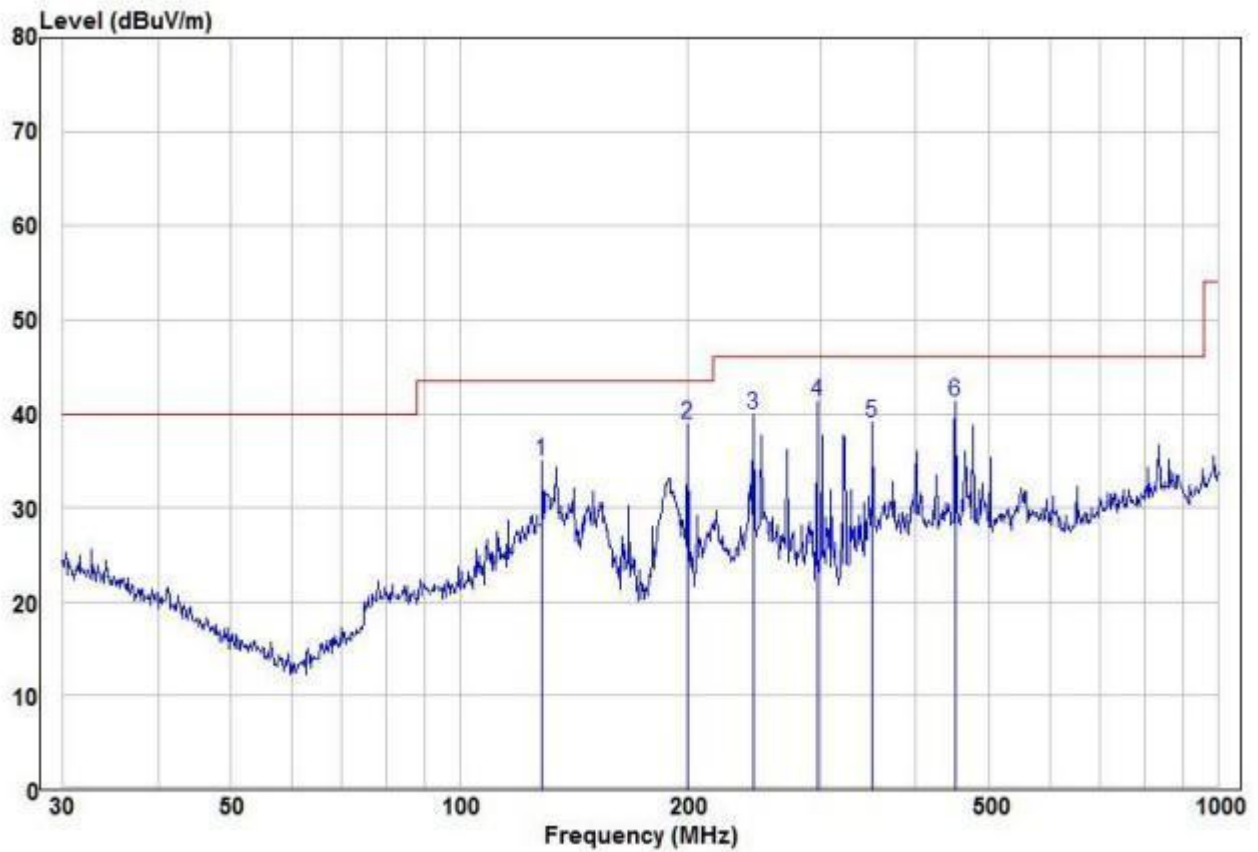
**Radiated Emission below 1GHz**

| 30MHz~1GHz |                             |          |
|------------|-----------------------------|----------|
| Test mode: | Transmitting (802.11a 36CH) | Vertical |



|      | Freq   | Read Level | Factor | Level  | Limit Line | Over Limit | Remark | Pol/Phase |
|------|--------|------------|--------|--------|------------|------------|--------|-----------|
|      | MHz    | dBuV       | dB/m   | dBuV/m | dBuV/m     | dB         |        |           |
| 1    | 52.58  | 32.82      | -0.18  | 32.64  | 40.00      | -7.36      | Peak   | VERTICAL  |
| 2    | 89.90  | 31.47      | 0.42   | 31.89  | 43.50      | -11.61     | Peak   | VERTICAL  |
| 3    | 154.28 | 35.43      | 0.58   | 36.01  | 43.50      | -7.49      | Peak   | VERTICAL  |
| 4    | 199.99 | 38.76      | 0.69   | 39.45  | 43.50      | -4.05      | Peak   | VERTICAL  |
| 5 pp | 300.37 | 39.49      | 2.83   | 42.32  | 46.00      | -3.68      | Peak   | VERTICAL  |
| 6    | 501.18 | 36.54      | 2.18   | 38.72  | 46.00      | -7.28      | Peak   | VERTICAL  |

|            |                             |            |
|------------|-----------------------------|------------|
| Test mode: | Transmitting (802.11a 36CH) | Horizontal |
|------------|-----------------------------|------------|



|   | Freq   | Read  | Factor | Level  | Limit  | Over  | Remark | Pol/Phase  |
|---|--------|-------|--------|--------|--------|-------|--------|------------|
|   | MHz    | dBuV  | dB/m   | dBuV/m | dBuV/m | dB    |        |            |
| 1 | 128.56 | 34.46 | 0.52   | 34.98  | 43.50  | -8.52 | Peak   | HORIZONTAL |
| 2 | 199.99 | 38.24 | 0.69   | 38.93  | 43.50  | -4.57 | Peak   | HORIZONTAL |
| 3 | 244.23 | 37.18 | 2.70   | 39.88  | 46.00  | -6.12 | Peak   | HORIZONTAL |
| 4 | 296.18 | 38.42 | 2.82   | 41.24  | 46.00  | -4.76 | Peak   | HORIZONTAL |
| 5 | 350.48 | 36.20 | 2.90   | 39.10  | 46.00  | -6.90 | Peak   | HORIZONTAL |
| 6 | 451.14 | 39.22 | 2.08   | 41.30  | 46.00  | -4.70 | Peak   | HORIZONTAL |

### Transmitter Emission above 1GHz

| Test mode: |               | 802.11a(6Mbps) |                | Test channel: |        | 36 CH         |           |
|------------|---------------|----------------|----------------|---------------|--------|---------------|-----------|
| Frequency  | Meter Reading | Factor         | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)      | (dBμV)        | (dB)           | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 10360      | 52.93         | -4.03          | 48.90          | 74            | -25.10 | peak          | H         |
| 10360      | 37.40         | -4.03          | 33.37          | 54            | -20.63 | AVG           | H         |
| 15540      | 49.53         | 1.66           | 51.19          | 74            | -22.81 | peak          | H         |
| 15540      | 37.72         | 1.66           | 39.38          | 54            | -14.62 | AVG           | H         |
| 10360      | 53.37         | -4.03          | 49.34          | 74            | -24.66 | peak          | V         |
| 10360      | 38.87         | -4.03          | 34.84          | 54            | -19.16 | AVG           | V         |
| 15540      | 50.32         | 1.66           | 51.98          | 74            | -22.02 | peak          | V         |
| 15540      | 36.73         | 1.66           | 38.39          | 54            | -15.61 | AVG           | V         |

| Test mode: |               | 802.11a(6Mbps) |                | Test channel: |        | 48 CH         |           |
|------------|---------------|----------------|----------------|---------------|--------|---------------|-----------|
| Frequency  | Meter Reading | Factor         | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)      | (dBμV)        | (dB)           | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 10480      | 52.43         | -4.12          | 48.31          | 74            | -25.69 | peak          | H         |
| 10480      | 36.40         | -4.12          | 32.28          | 54            | -21.72 | AVG           | H         |
| 15720      | 49.80         | 1.46           | 51.26          | 74            | -22.74 | peak          | H         |
| 15720      | 35.30         | 1.46           | 36.76          | 54            | -17.24 | AVG           | H         |
| 10480      | 54.04         | -4.12          | 49.92          | 74            | -24.08 | peak          | V         |
| 10480      | 36.74         | -4.12          | 32.62          | 54            | -21.38 | AVG           | V         |
| 15720      | 48.33         | 1.46           | 49.79          | 74            | -24.21 | peak          | V         |
| 15720      | 35.67         | 1.46           | 37.13          | 54            | -16.87 | AVG           | V         |

| Test mode: 802.11a(6Mbps) |               |        |                | Test channel: |        | 149           |           |
|---------------------------|---------------|--------|----------------|---------------|--------|---------------|-----------|
| Frequency                 | Meter Reading | Factor | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)                     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 11490                     | 53.04         | -4.26  | 48.78          | 74            | -25.22 | peak          | H         |
| 11490                     | 37.08         | -4.26  | 32.82          | 54            | -21.18 | AVG           | H         |
| 17235                     | 50.70         | 1.18   | 51.88          | 74            | -22.12 | peak          | H         |
| 17235                     | 37.77         | 1.18   | 38.95          | 54            | -15.05 | AVG           | H         |
| 11490                     | 54.89         | -4.26  | 50.63          | 74            | -23.37 | peak          | V         |
| 11490                     | 39.88         | -4.26  | 35.62          | 54            | -18.38 | AVG           | V         |
| 17235                     | 50.27         | 1.18   | 51.45          | 74            | -22.55 | peak          | V         |
| 17235                     | 36.88         | 1.18   | 38.06          | 54            | -15.94 | AVG           | V         |

| Test mode: 802.11a(6Mbps) |               |        |                | Test channel: |        | 165           |           |
|---------------------------|---------------|--------|----------------|---------------|--------|---------------|-----------|
| Frequency                 | Meter Reading | Factor | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |
| (MHz)                     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |
| 11650                     | 52.42         | -4.12  | 48.30          | 74            | -25.70 | peak          | H         |
| 11650                     | 37.63         | -4.12  | 33.51          | 54            | -20.49 | AVG           | H         |
| 17475                     | 49.60         | 1.46   | 51.06          | 74            | -22.94 | peak          | H         |
| 17475                     | 36.35         | 1.46   | 37.81          | 54            | -16.19 | AVG           | H         |
| 11650                     | 53.25         | -4.12  | 49.13          | 74            | -24.87 | peak          | V         |
| 11650                     | 36.86         | -4.12  | 32.74          | 54            | -21.26 | AVG           | V         |
| 17475                     | 48.90         | 1.46   | 50.36          | 74            | -23.64 | peak          | V         |
| 17475                     | 36.06         | 1.46   | 37.52          | 54            | -16.48 | AVG           | V         |

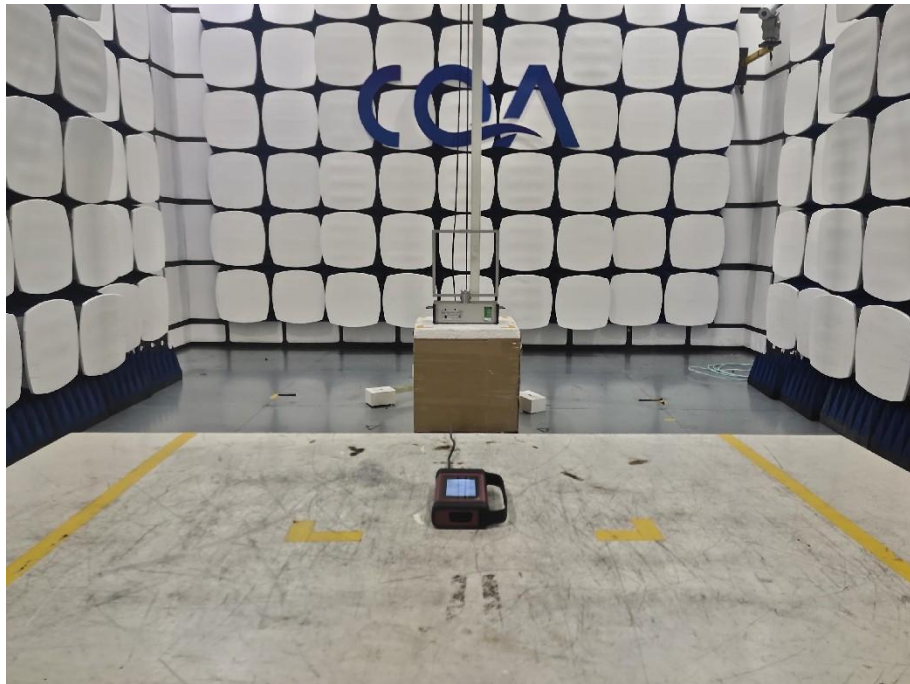
Remark:

- 1) The 802.11a 6Mbps of rate is the worst case, only the worst data recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:  
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 3) Scan from 9kHz to 40GHz, The disturbance above 18GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

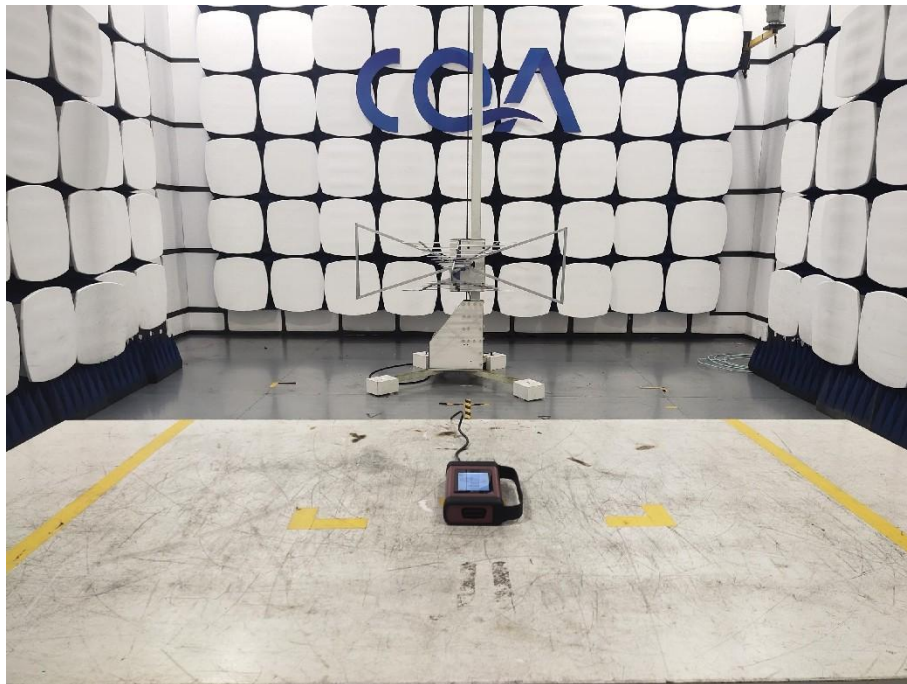
## 8 Photographs - EUT Test Setup

### 8.1 Radiated Emission

9KHz~30MHz:



30MHz~1GHz:



Above 1GHz:



## 8.2 Conducted Emission



## 9 Photographs - EUT Constructional Details

Refer to Photographs - EUT Constructional Details OF EUT for CQASZ20220200239E-01.

\*\*\* END OF REPORT \*\*\*