



## Appendix A. Radiated Spurious Emission

|                 |            |                     |         |
|-----------------|------------|---------------------|---------|
| Test Engineer : | Donny Tang | Temperature :       | 22~25°C |
|                 |            | Relative Humidity : | 40~44%  |

15E Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

| WIFI                         | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                         |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                            |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 149<br>5745MHz |      | 5722.68   | 60.23      | -13.77 | 74         | 49.93    | 35.13    | 9.16   | 33.99  | 101    | 298     | P       | H       |
|                              |      | 5724.76   | 44.67      | -9.33  | 54         | 34.37    | 35.13    | 9.16   | 33.99  | 101    | 298     | A       | H       |
|                              | *    | 5747      | 103.01     | -      | -          | 92.64    | 35.14    | 9.22   | 33.99  | 101    | 298     | P       | H       |
|                              | *    | 5747      | 92.45      | -      | -          | 82.08    | 35.14    | 9.22   | 33.99  | 101    | 298     | A       | H       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |      | 5724.76   | 65.12      | -8.88  | 74         | 54.82    | 35.13    | 9.16   | 33.99  | 107    | 349     | P       | V       |
|                              |      | 5725      | 45.88      | -8.12  | 54         | 35.58    | 35.13    | 9.16   | 33.99  | 107    | 349     | A       | V       |
|                              | *    | 5743      | 105.99     | -      | -          | 95.62    | 35.14    | 9.22   | 33.99  | 107    | 349     | P       | V       |
|                              | *    | 5743      | 95.74      | -      | -          | 85.37    | 35.14    | 9.22   | 33.99  | 107    | 349     | A       | V       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |
|                              |      |           |            |        |            |          |          |        |        |        |         |         | V       |



| WIFI                         | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                         |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                            |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a<br>CH 157<br>5785MHz |      | 5722.44   | 54.29      | -19.71 | 74         | 43.99    | 35.13    | 9.16   | 33.99  | 101    | 297     | P     | H     |
|                              |      | 5717.48   | 43.17      | -10.83 | 54         | 32.88    | 35.12    | 9.16   | 33.99  | 101    | 297     | A     | H     |
|                              | *    | 5783      | 102.45     | -      | -          | 92.01    | 35.17    | 9.27   | 34     | 101    | 297     | P     | H     |
|                              | *    | 5783      | 92.53      | -      | -          | 82.09    | 35.17    | 9.27   | 34     | 101    | 297     | A     | H     |
|                              |      | 5881.52   | 54.38      | -19.62 | 74         | 43.79    | 35.23    | 9.36   | 34     | 101    | 297     | P     | H     |
|                              |      | 5851.68   | 43.35      | -10.65 | 54         | 32.79    | 35.21    | 9.35   | 34     | 101    | 297     | A     | H     |
|                              |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                              |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                              |      | 5706.28   | 54.12      | -19.88 | 74         | 43.83    | 35.12    | 9.16   | 33.99  | 104    | 192     | P     | V     |
|                              |      | 5717.64   | 43.25      | -10.75 | 54         | 32.95    | 35.13    | 9.16   | 33.99  | 104    | 192     | A     | V     |
|                              | *    | 5787      | 106.17     | -      | -          | 95.67    | 35.18    | 9.32   | 34     | 104    | 192     | P     | V     |
|                              | *    | 5787      | 95.4       | -      | -          | 84.9     | 35.18    | 9.32   | 34     | 104    | 192     | A     | V     |
|                              |      | 5852.32   | 54.48      | -19.52 | 74         | 43.92    | 35.21    | 9.35   | 34     | 104    | 192     | P     | V     |
|                              |      | 5852.72   | 43.48      | -10.52 | 54         | 32.92    | 35.21    | 9.35   | 34     | 104    | 192     | A     | V     |
|                              |      |           |            |        |            |          |          |        |        |        |         |       | V     |
|                              |      |           |            |        |            |          |          |        |        |        |         |       | V     |



| WIFI                         | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                         |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                            |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a<br>CH 165<br>5825MHz | *                                                                                           | 5827      | 100.94     | -      | -          | 90.4     | 35.2     | 9.34   | 34     | 100    | 297     | P     | H     |
|                              | *                                                                                           | 5827      | 90.52      | -      | -          | 79.98    | 35.2     | 9.34   | 34     | 100    | 297     | A     | H     |
|                              |                                                                                             | 5887.2    | 54.43      | -19.57 | 74         | 43.82    | 35.23    | 9.38   | 34     | 100    | 297     | P     | H     |
|                              |                                                                                             | 5877.12   | 43.71      | -10.29 | 54         | 33.12    | 35.23    | 9.36   | 34     | 100    | 297     | A     | H     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                              | *                                                                                           | 5823      | 104.88     | -      | -          | 94.35    | 35.19    | 9.34   | 34     | 104    | 194     | P     | V     |
|                              | *                                                                                           | 5823      | 94.65      | -      | -          | 84.12    | 35.19    | 9.34   | 34     | 104    | 194     | A     | V     |
|                              |                                                                                             | 5877.2    | 55.16      | -18.84 | 74         | 44.57    | 35.23    | 9.36   | 34     | 104    | 194     | P     | V     |
|                              |                                                                                             | 5877.6    | 44.64      | -9.36  | 54         | 34.05    | 35.23    | 9.36   | 34     | 104    | 194     | A     | V     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |       |       |



## 15E Band 4 5725~5850MHz

## WIFI 802.11a (Harmonic @ 3m)

| WIFI                         | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                         |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                            |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11a<br>CH 149<br>5745MHz |                                                                                             | 11490     | 44.19      | -29.81 | 74         | 50.17    | 38.09    | 14.45  | 58.52  | 100    | 0       | P       | H       |
|                              |                                                                                             | 17232     | 47.12      | -26.88 | 74         | 46.6     | 41.11    | 18.01  | 58.6   | 100    | 0       | P       | H       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |                                                                                             | 11490     | 45.31      | -28.69 | 74         | 51.29    | 38.09    | 14.45  | 58.52  | 100    | 0       | P       | V       |
|                              |                                                                                             | 17232     | 47.72      | -26.28 | 74         | 47.2     | 41.11    | 18.01  | 58.6   | 100    | 0       | P       | V       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| 802.11a<br>CH 157<br>5785MHz |                                                                                             | 11570     | 45.47      | -28.53 | 74         | 51.23    | 38.2     | 14.58  | 58.54  | 100    | 0       | P       | H       |
|                              |                                                                                             | 17352     | 48.2       | -25.8  | 74         | 47.69    | 41.02    | 18.09  | 58.6   | 100    | 0       | P       | H       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |                                                                                             | 11570     | 44.42      | -29.58 | 74         | 50.18    | 38.2     | 14.58  | 58.54  | 100    | 0       | P       | V       |
|                              |                                                                                             | 17352     | 48.28      | -25.72 | 74         | 47.77    | 41.02    | 18.09  | 58.6   | 100    | 0       | P       | V       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| 802.11a<br>CH 165<br>5825MHz |                                                                                             | 11650     | 44.57      | -29.43 | 74         | 50.17    | 38.29    | 14.69  | 58.58  | 100    | 0       | P       | H       |
|                              |                                                                                             | 17472     | 48.45      | -25.55 | 74         | 47.93    | 40.93    | 18.19  | 58.6   | 100    | 0       | P       | H       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                              |                                                                                             | 11650     | 45.34      | -28.66 | 74         | 50.94    | 38.29    | 14.69  | 58.58  | 100    | 0       | P       | V       |
|                              |                                                                                             | 17472     | 48.15      | -25.85 | 74         | 47.63    | 40.93    | 18.19  | 58.6   | 100    | 0       | P       | V       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                              |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



## 15E Band 4 5725~5850MHz

## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI                                 | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|--------------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                                 |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                                    |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n<br>HT20<br>CH 149<br>5745MHz |      | 5725      | 63.5       | -10.5  | 74         | 53.2     | 35.13    | 9.16   | 33.99  | 102    | 297     | P     | H     |
|                                      |      | 5725      | 45.24      | -8.76  | 54         | 34.94    | 35.13    | 9.16   | 33.99  | 102    | 297     | A     | H     |
|                                      | *    | 5747      | 102.54     | -      | -          | 92.17    | 35.14    | 9.22   | 33.99  | 102    | 297     | P     | H     |
|                                      | *    | 5747      | 92.14      | -      | -          | 81.77    | 35.14    | 9.22   | 33.99  | 102    | 297     | A     | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      | 5724.92   | 64.87      | -9.13  | 74         | 54.57    | 35.13    | 9.16   | 33.99  | 106    | 189     | P     | V     |
|                                      |      | 5725      | 47.11      | -6.89  | 54         | 36.81    | 35.13    | 9.16   | 33.99  | 106    | 189     | A     | V     |
|                                      | *    | 5743      | 106.7      | -      | -          | 96.33    | 35.14    | 9.22   | 33.99  | 106    | 189     | P     | V     |
|                                      | *    | 5743      | 95.84      | -      | -          | 85.47    | 35.14    | 9.22   | 33.99  | 106    | 189     | A     | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |



| WIFI                                 | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|--------------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                                 |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                                    |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n<br>HT20<br>CH 157<br>5785MHz |      | 5724.52   | 53.62      | -20.38 | 74         | 43.32    | 35.13    | 9.16   | 33.99  | 101    | 298     | P     | H     |
|                                      |      | 5717.8    | 43.13      | -10.87 | 54         | 32.83    | 35.13    | 9.16   | 33.99  | 101    | 298     | A     | H     |
|                                      | *    | 5783      | 102.21     | -      | -          | 91.77    | 35.17    | 9.27   | 34     | 101    | 298     | P     | H     |
|                                      | *    | 5783      | 92.13      | -      | -          | 81.69    | 35.17    | 9.27   | 34     | 101    | 298     | A     | H     |
|                                      |      | 5876.48   | 54.03      | -19.97 | 74         | 43.44    | 35.23    | 9.36   | 34     | 101    | 298     | P     | H     |
|                                      |      | 5885.44   | 43.24      | -10.76 | 54         | 32.63    | 35.23    | 9.38   | 34     | 101    | 298     | A     | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      | 5719.56   | 54.15      | -19.85 | 74         | 43.85    | 35.13    | 9.16   | 33.99  | 104    | 189     | P     | V     |
|                                      |      | 5716.92   | 43.36      | -10.64 | 54         | 33.07    | 35.12    | 9.16   | 33.99  | 104    | 189     | A     | V     |
|                                      | *    | 5787      | 106.01     | -      | -          | 95.51    | 35.18    | 9.32   | 34     | 104    | 189     | P     | V     |
|                                      | *    | 5787      | 95.74      | -      | -          | 85.24    | 35.18    | 9.32   | 34     | 104    | 189     | A     | V     |
|                                      |      | 5860.8    | 54.61      | -19.39 | 74         | 44.03    | 35.22    | 9.36   | 34     | 104    | 189     | P     | V     |
|                                      |      | 5851.76   | 43.43      | -10.57 | 54         | 32.87    | 35.21    | 9.35   | 34     | 104    | 189     | A     | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |



| WIFI                                 | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|--------------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                                 |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                                    |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n<br>HT20<br>CH 165<br>5825MHz | *                                                                                           | 5827      | 101.14     | -      | -          | 90.61    | 35.19    | 9.34   | 34     | 100    | 298     | P     | H     |
|                                      | *                                                                                           | 5827      | 90.56      | -      | -          | 80.03    | 35.19    | 9.34   | 34     | 100    | 298     | A     | H     |
|                                      |                                                                                             | 5855.04   | 54.46      | -19.54 | 74         | 43.89    | 35.22    | 9.35   | 34     | 100    | 298     | P     | H     |
|                                      |                                                                                             | 5876.88   | 44.02      | -9.98  | 54         | 33.43    | 35.23    | 9.36   | 34     | 100    | 298     | A     | H     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      | *                                                                                           | 5823      | 105.41     | -      | -          | 94.88    | 35.19    | 9.34   | 34     | 103    | 181     | P     | V     |
|                                      | *                                                                                           | 5823      | 94.76      | -      | -          | 84.23    | 35.19    | 9.34   | 34     | 103    | 181     | A     | V     |
|                                      |                                                                                             | 5878.4    | 55.66      | -18.34 | 74         | 45.07    | 35.23    | 9.36   | 34     | 103    | 181     | P     | V     |
|                                      |                                                                                             | 5876.56   | 44.92      | -9.08  | 54         | 34.33    | 35.23    | 9.36   | 34     | 103    | 181     | A     | V     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |       | V     |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |       |       |



## 15E Band 4 5725~5850MHz

## WIFI 802.11n HT20 (Harmonic @ 3m)

| WIFI                                 | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|--------------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                                 |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                                    |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11n<br>HT20<br>CH 149<br>5745MHz |                                                                                             | 11490     | 44.2       | -29.8  | 74         | 50.18    | 38.09    | 14.45  | 58.52  | 100    | 0       | P       | H       |
|                                      |                                                                                             | 17232     | 47.25      | -26.75 | 74         | 46.73    | 41.11    | 18.01  | 58.6   | 100    | 0       | P       | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             | 11490     | 45.26      | -28.74 | 74         | 51.24    | 38.09    | 14.45  | 58.52  | 100    | 0       | P       | V       |
|                                      |                                                                                             | 17232     | 47.38      | -26.62 | 74         | 46.86    | 41.11    | 18.01  | 58.6   | 100    | 0       | P       | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| 802.11n<br>HT20<br>CH 157<br>5785MHz |                                                                                             | 11570     | 45.77      | -28.23 | 74         | 51.53    | 38.2     | 14.58  | 58.54  | 100    | 0       | P       | H       |
|                                      |                                                                                             | 17352     | 48.11      | -25.89 | 74         | 47.6     | 41.02    | 18.09  | 58.6   | 100    | 0       | P       | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             | 11570     | 45.96      | -28.04 | 74         | 51.72    | 38.2     | 14.58  | 58.54  | 100    | 0       | P       | V       |
|                                      |                                                                                             | 17352     | 48.09      | -25.91 | 74         | 47.58    | 41.02    | 18.09  | 58.6   | 100    | 0       | P       | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| 802.11n<br>HT20<br>CH 165<br>5825MHz |                                                                                             | 11650     | 45.32      | -28.68 | 74         | 50.92    | 38.29    | 14.69  | 58.58  | 100    | 0       | P       | H       |
|                                      |                                                                                             | 17472     | 47.3       | -26.7  | 74         | 46.78    | 40.93    | 18.19  | 58.6   | 100    | 0       | P       | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             | 11650     | 45.68      | -28.32 | 74         | 51.28    | 38.29    | 14.69  | 58.58  | 100    | 0       | P       | V       |
|                                      |                                                                                             | 17472     | 47.81      | -26.19 | 74         | 47.29    | 40.93    | 18.19  | 58.6   | 100    | 0       | P       | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |





## 15E Band 4 5725~5850MHz

## WIFI 802.11n HT40 (Band Edge @ 3m)

| WIFI                                 | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|--------------------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                                 |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                                    |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n<br>HT40<br>CH 151<br>5755MHz |      | 5724.04   | 63.27      | -10.73 | 74         | 52.97    | 35.13    | 9.16   | 33.99  | 100    | 4       | P     | H     |
|                                      |      | 5724.92   | 46.12      | -7.88  | 54         | 35.82    | 35.13    | 9.16   | 33.99  | 100    | 4       | A     | H     |
|                                      | *    | 5755      | 98.36      | -      | -          | 87.97    | 35.16    | 9.22   | 33.99  | 100    | 4       | P     | H     |
|                                      | *    | 5755      | 87.92      | -      | -          | 77.53    | 35.16    | 9.22   | 33.99  | 100    | 4       | A     | H     |
|                                      |      | 5883.04   | 53.54      | -20.46 | 74         | 42.95    | 35.23    | 9.36   | 34     | 100    | 4       | P     | H     |
|                                      |      | 5857.76   | 43.16      | -10.84 | 54         | 32.58    | 35.22    | 9.36   | 34     | 100    | 4       | A     | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                      |      | 5725      | 65.76      | -8.24  | 74         | 55.46    | 35.13    | 9.16   | 33.99  | 109    | 329     | P     | V     |
|                                      |      | 5723.8    | 46.37      | -7.63  | 54         | 36.07    | 35.13    | 9.16   | 33.99  | 109    | 329     | A     | V     |
|                                      | *    | 5755      | 100.17     | -      | -          | 89.78    | 35.16    | 9.22   | 33.99  | 109    | 329     | P     | V     |
|                                      | *    | 5755      | 89.23      | -      | -          | 78.84    | 35.16    | 9.22   | 33.99  | 109    | 329     | A     | V     |
|                                      |      | 5868.96   | 53.61      | -20.39 | 74         | 43.03    | 35.22    | 9.36   | 34     | 109    | 329     | P     | V     |
|                                      |      | 5860.8    | 43.23      | -10.77 | 54         | 32.65    | 35.22    | 9.36   | 34     | 109    | 329     | A     | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                      |      |           |            |        |            |          |          |        |        |        |         |       | V     |



| WIFI                                 | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|--------------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                                 |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                                    |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11n<br>HT40<br>CH 159<br>5795MHz |                                                                                             | 5699.88   | 54.09      | -19.91 | 74         | 43.86    | 35.11    | 9.11   | 33.99  | 101    | 296     | P       | H       |
|                                      |                                                                                             | 5691.8    | 43.03      | -10.97 | 54         | 32.8     | 35.11    | 9.11   | 33.99  | 101    | 296     | A       | H       |
|                                      | *                                                                                           | 5795      | 99.28      | -      | -          | 88.78    | 35.18    | 9.32   | 34     | 101    | 296     | P       | H       |
|                                      | *                                                                                           | 5795      | 89.56      | -      | -          | 79.06    | 35.18    | 9.32   | 34     | 101    | 296     | A       | H       |
|                                      |                                                                                             | 5868.96   | 53.66      | -20.34 | 74         | 43.08    | 35.22    | 9.36   | 34     | 101    | 296     | P       | H       |
|                                      |                                                                                             | 5857.44   | 43.16      | -10.84 | 54         | 32.59    | 35.22    | 9.35   | 34     | 101    | 296     | A       | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             | 5702.84   | 53.83      | -20.17 | 74         | 43.59    | 35.12    | 9.11   | 33.99  | 103    | 182     | P       | V       |
|                                      |                                                                                             | 5689.56   | 43.14      | -10.86 | 54         | 32.91    | 35.11    | 9.11   | 33.99  | 103    | 182     | A       | V       |
|                                      | *                                                                                           | 5795      | 101.67     | -      | -          | 91.17    | 35.18    | 9.32   | 34     | 103    | 182     | P       | V       |
|                                      | *                                                                                           | 5795      | 91.76      | -      | -          | 81.26    | 35.18    | 9.32   | 34     | 103    | 182     | A       | V       |
|                                      |                                                                                             | 5888.8    | 53.52      | -20.48 | 74         | 42.9     | 35.24    | 9.38   | 34     | 103    | 182     | P       | V       |
|                                      |                                                                                             | 5850.96   | 43.21      | -10.79 | 54         | 32.65    | 35.21    | 9.35   | 34     | 103    | 182     | A       | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



## 15E Band 4 5725~5850MHz

## WIFI 802.11n HT40 (Harmonic @ 3m)

| WIFI                                 | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|--------------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                                 |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                                    |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11n<br>HT40<br>CH 151<br>5755MHz |                                                                                             | 11510     | 44.51      | -29.49 | 74         | 50.43    | 38.1     | 14.48  | 58.5   | 100    | 0       | P       | H       |
|                                      |                                                                                             | 17265     | 47.67      | -26.33 | 74         | 47.15    | 41.09    | 18.03  | 58.6   | 100    | 0       | P       | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             | 11510     | 44.28      | -29.72 | 74         | 50.2     | 38.1     | 14.48  | 58.5   | 100    | 0       | P       | V       |
|                                      |                                                                                             | 17265     | 48.41      | -25.59 | 74         | 47.89    | 41.09    | 18.03  | 58.6   | 100    | 0       | P       | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| 802.11n<br>HT40<br>CH 159<br>5795MHz |                                                                                             | 11590     | 43.17      | -30.83 | 74         | 48.92    | 38.22    | 14.58  | 58.55  | 100    | 0       | P       | H       |
|                                      |                                                                                             | 17385     | 48.15      | -25.85 | 74         | 47.63    | 40.99    | 18.13  | 58.6   | 100    | 0       | P       | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                      |                                                                                             | 11590     | 44.74      | -29.26 | 74         | 50.49    | 38.22    | 14.58  | 58.55  | 100    | 0       | P       | V       |
|                                      |                                                                                             | 17385     | 47.77      | -26.23 | 74         | 47.25    | 40.99    | 18.13  | 58.6   | 100    | 0       | P       | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                      |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| Remark                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



## 15E Band 4 5725~5850MHz

## WIFI 802.11ac VHT80 (Band Edge @ 3m)

| WIFI                                   | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|----------------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                                   |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                                      |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11ac<br>VHT80<br>CH 155<br>5775MHz |                                                                                             | 5725      | 64.53      | -9.47  | 74         | 54.23    | 35.13    | 9.16   | 33.99  | 102    | 297     | P       | H       |
|                                        |                                                                                             | 5724.84   | 45.78      | -8.22  | 54         | 35.48    | 35.13    | 9.16   | 33.99  | 102    | 297     | A       | H       |
|                                        | *                                                                                           | 5775      | 95.79      | -      | -          | 85.35    | 35.17    | 9.27   | 34     | 102    | 297     | P       | H       |
|                                        | *                                                                                           | 5775      | 85.31      | -      | -          | 74.87    | 35.17    | 9.27   | 34     | 102    | 297     | A       | H       |
|                                        |                                                                                             | 5853.2    | 54.22      | -19.78 | 74         | 43.66    | 35.21    | 9.35   | 34     | 102    | 297     | P       | H       |
|                                        |                                                                                             | 5856.48   | 43.31      | -10.69 | 54         | 32.74    | 35.22    | 9.35   | 34     | 102    | 297     | A       | H       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                        |                                                                                             | 5725      | 65.74      | -8.26  | 74         | 55.44    | 35.13    | 9.16   | 33.99  | 104    | 174     | P       | V       |
|                                        |                                                                                             | 5724.52   | 46.73      | -7.27  | 54         | 36.43    | 35.13    | 9.16   | 33.99  | 104    | 174     | A       | V       |
|                                        | *                                                                                           | 5775      | 98.29      | -      | -          | 87.85    | 35.17    | 9.27   | 34     | 104    | 174     | P       | V       |
|                                        | *                                                                                           | 5775      | 88.53      | -      | -          | 78.09    | 35.17    | 9.27   | 34     | 104    | 174     | A       | V       |
|                                        |                                                                                             | 5858.56   | 54.93      | -19.07 | 74         | 44.35    | 35.22    | 9.36   | 34     | 104    | 174     | P       | V       |
|                                        |                                                                                             | 5854.4    | 43.58      | -10.42 | 54         | 33.01    | 35.22    | 9.35   | 34     | 104    | 174     | A       | V       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                        | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |
| Remark                                 |                                                                                             |           |            |        |            |          |          |        |        |        |         |         |         |



## 15E Band 4 5725~5850MHz

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

| WIFI                                   | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|----------------------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                                   |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                                      |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11ac<br>VHT80<br>CH 155<br>5775MHz |                                                                                             | 11550     | 43.06      | -30.94 | 74         | 48.87    | 38.17    | 14.55  | 58.53  | 100    | 0       | P       | H       |
|                                        |                                                                                             | 17325     | 48.75      | -25.25 | 74         | 48.23    | 41.05    | 18.07  | 58.6   | 100    | 0       | P       | H       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                        |                                                                                             | 11550     | 44.14      | -29.86 | 74         | 49.95    | 38.17    | 14.55  | 58.53  | 100    | 0       | P       | V       |
|                                        |                                                                                             | 17325     | 49.46      | -24.54 | 74         | 48.94    | 41.05    | 18.07  | 58.6   | 100    | 0       | P       | V       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                        |                                                                                             |           |            |        |            |          |          |        |        |        |         |         | V       |
| Remark                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



## 15E Emission below 1GHz

## 5GHz WIFI 802.11a (LF @ 3m)

| WIFI                  | Note                                                                       | Frequency | Level      | Over   | Limit      | Read   | Antenna  | Cable  | Preamp | Ant    | Table   | Peak  | Pol.  |
|-----------------------|----------------------------------------------------------------------------|-----------|------------|--------|------------|--------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                  |                                                                            |           |            | Limit  | Line       | Level  | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1                     |                                                                            | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | (dBμV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 5GHz<br>802.11a<br>LF |                                                                            | 60.24     | 19.89      | -20.11 | 40         | 44.19  | 6.6      | 0.87   | 31.77  |        |         | P     | H     |
|                       |                                                                            | 101.55    | 21.52      | -21.98 | 43.5       | 41.04  | 11.12    | 1.11   | 31.75  |        |         | P     | H     |
|                       |                                                                            | 182.55    | 24.72      | -18.78 | 43.5       | 45.83  | 9.18     | 1.46   | 31.75  | 173    | 205     | P     | H     |
|                       |                                                                            | 364.4     | 22.58      | -23.42 | 46         | 37.4   | 14.85    | 2.11   | 31.78  |        |         | P     | H     |
|                       |                                                                            | 546.4     | 22.12      | -23.88 | 46         | 32.23  | 19.34    | 2.54   | 31.99  |        |         | P     | H     |
|                       |                                                                            | 769       | 25.1       | -20.9  | 46         | 33.91  | 20.11    | 3.05   | 31.97  |        |         | P     | H     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                       |                                                                            | 34.86     | 27.81      | -12.19 | 40         | 43.41  | 15.5     | 0.69   | 31.79  | 100    | 67      | P     | V     |
|                       |                                                                            | 41.34     | 24.75      | -15.25 | 40         | 44.21  | 11.58    | 0.75   | 31.79  |        |         | P     | V     |
|                       |                                                                            | 87.24     | 23.91      | -16.09 | 40         | 46.51  | 8.12     | 1.04   | 31.76  |        |         | P     | V     |
|                       |                                                                            | 455.4     | 24.01      | -21.99 | 46         | 36.49  | 17.08    | 2.32   | 31.88  |        |         | P     | V     |
|                       |                                                                            | 546.4     | 26.4       | -19.6  | 46         | 36.51  | 19.34    | 2.54   | 31.99  |        |         | P     | V     |
|                       |                                                                            | 769       | 24.72      | -21.28 | 46         | 33.53  | 20.11    | 3.05   | 31.97  |        |         | P     | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
| Remark                | 1. No other spurious found.<br>2. All results are PASS against limit line. |           |            |        |            |        |          |        |        |        |         |       |       |



**Note symbol**

|     |                                                                                                                                                                        |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *   | <b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency per 15.209(c). |
| !   | Test result is <b>over limit</b> line.                                                                                                                                 |
| P/A | <b>Peak</b> or <b>Average</b>                                                                                                                                          |
| H/V | <b>H</b> orizontal or <b>V</b> ertical                                                                                                                                 |



A calculation example for radiated spurious emission is shown as below:

| WIFI                        | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Cable  | Preamp | Ant    | Table   | Peak    | Pol.    |
|-----------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                        |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1                           |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11b<br>CH 01<br>2412MHz |      | 2390      | 55.45      | -18.55 | 74         | 54.51    | 32.22    | 4.58   | 35.86  | 103    | 308     | P       | H       |
|                             |      | 2390      | 43.54      | -10.46 | 54         | 42.6     | 32.22    | 4.58   | 35.86  | 103    | 308     | A       | H       |

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

**For Average Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

**Both peak and average measured complies with the limit line, so test result is “PASS”.**