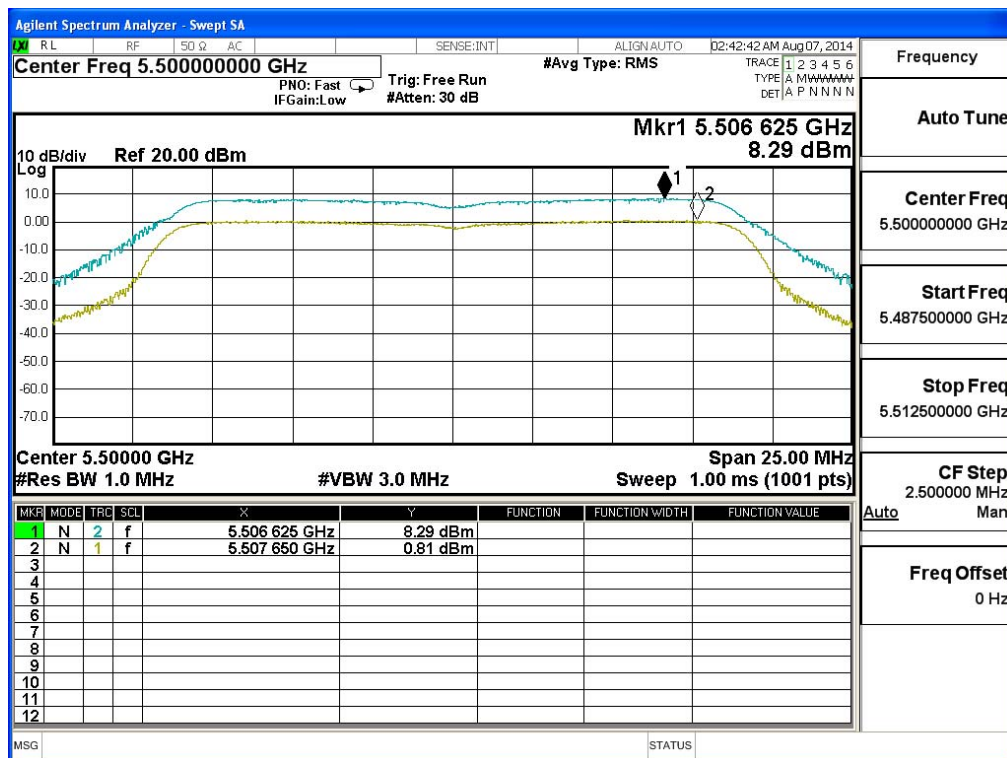
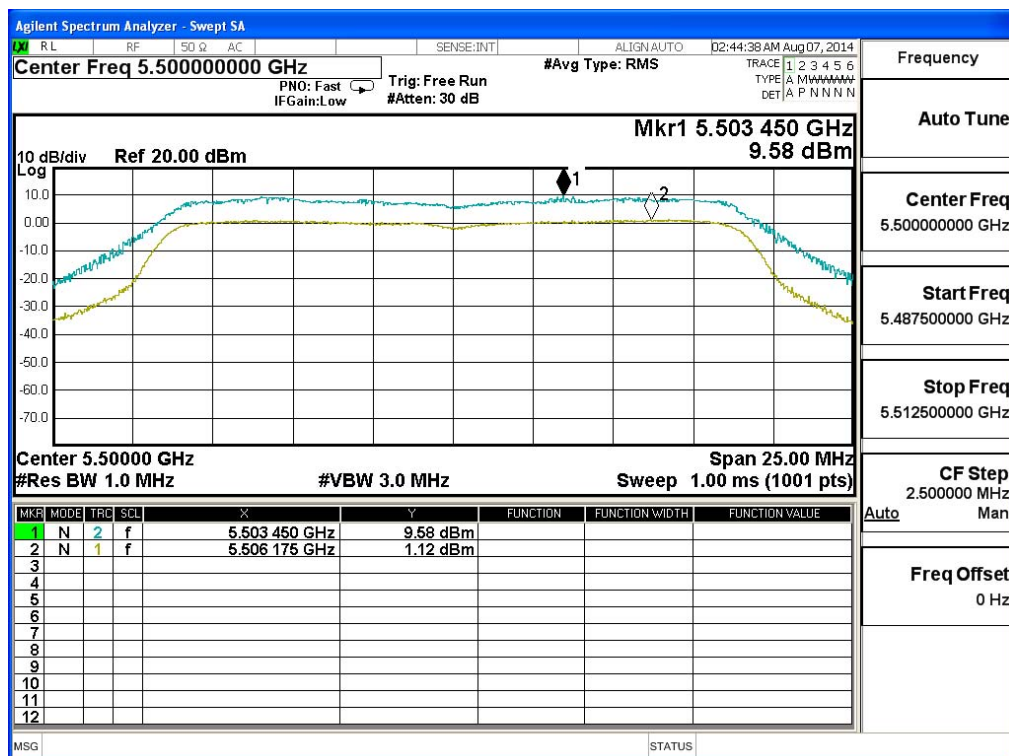
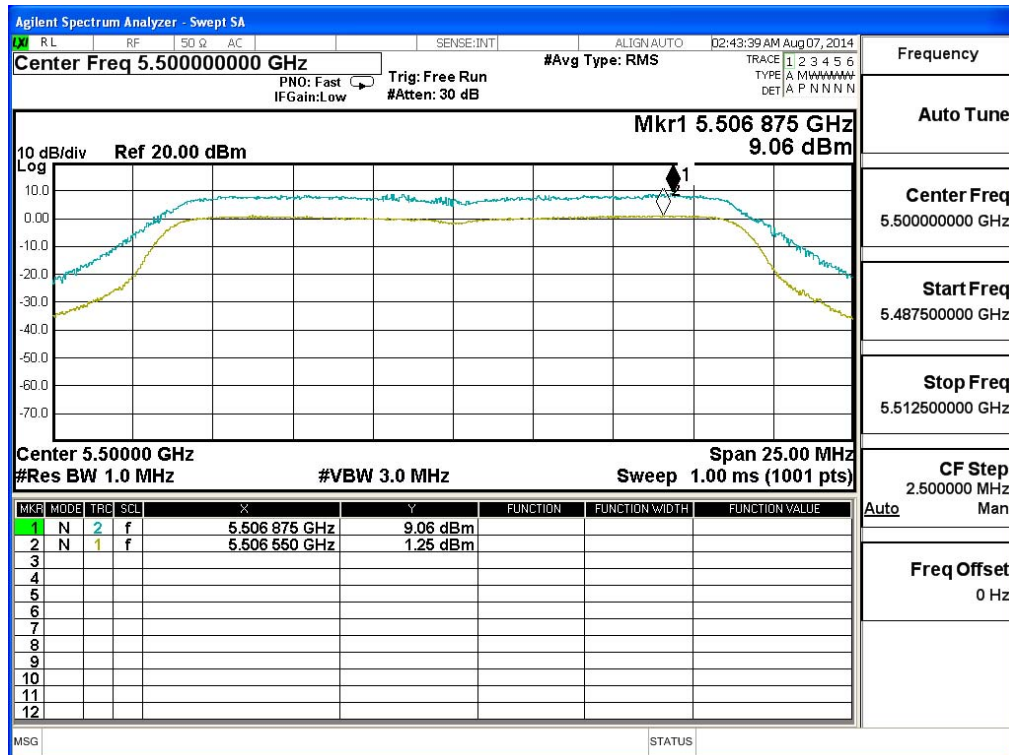


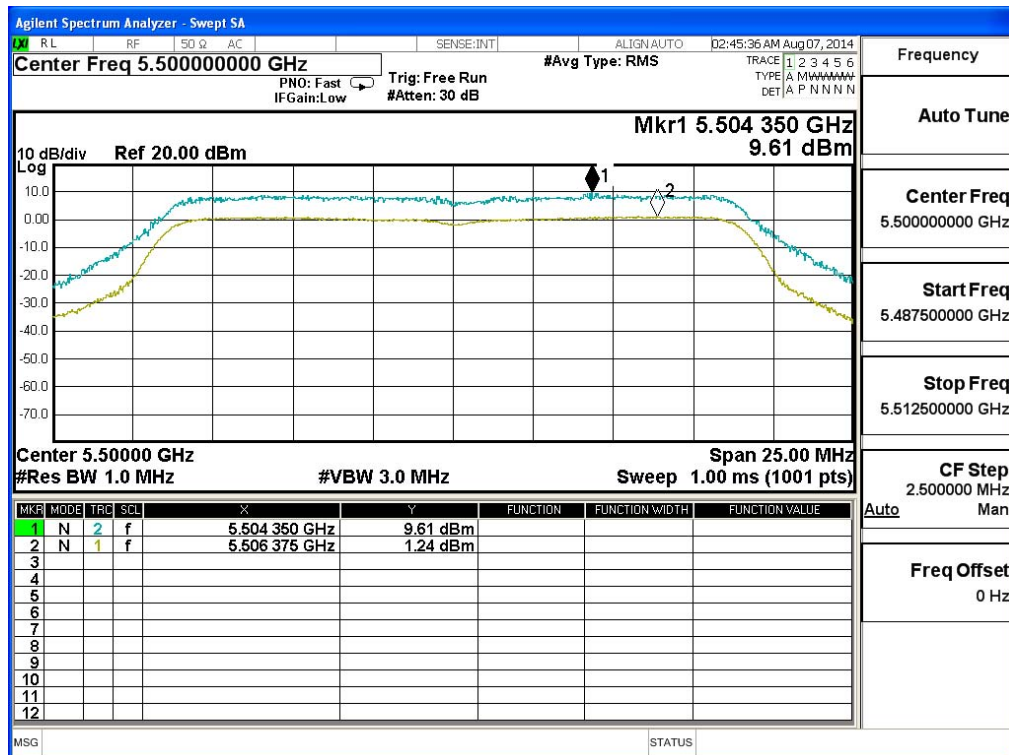
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Excursion  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps)

| Channel No. | Frequency (MHz) | Data Rate (Mbps) | Measurement Level (dB) | Required Limit (dB) | Result |
|-------------|-----------------|------------------|------------------------|---------------------|--------|
| 100         | 5500            | MCS (0)          | 7.480                  | <13                 | Pass   |
|             |                 | MCS (2)          | 7.810                  | <13                 | Pass   |
|             |                 | MCS (4)          | 8.460                  | <13                 | Pass   |
|             |                 | MCS (7)          | 8.370                  | <13                 | Pass   |

Channel 100:



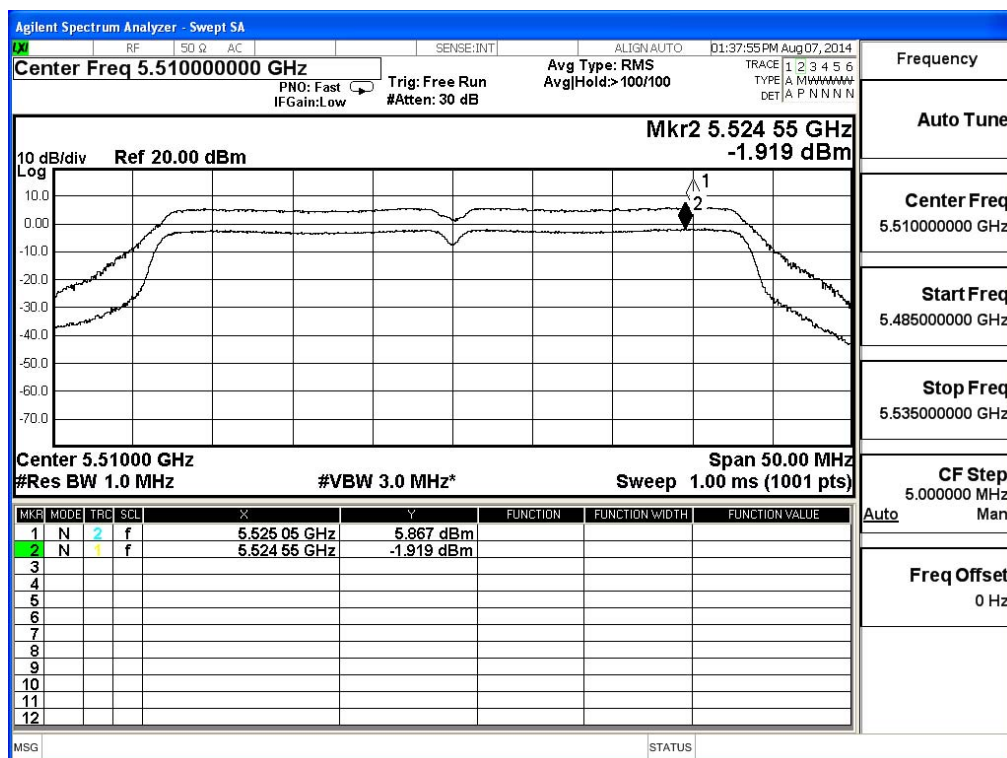


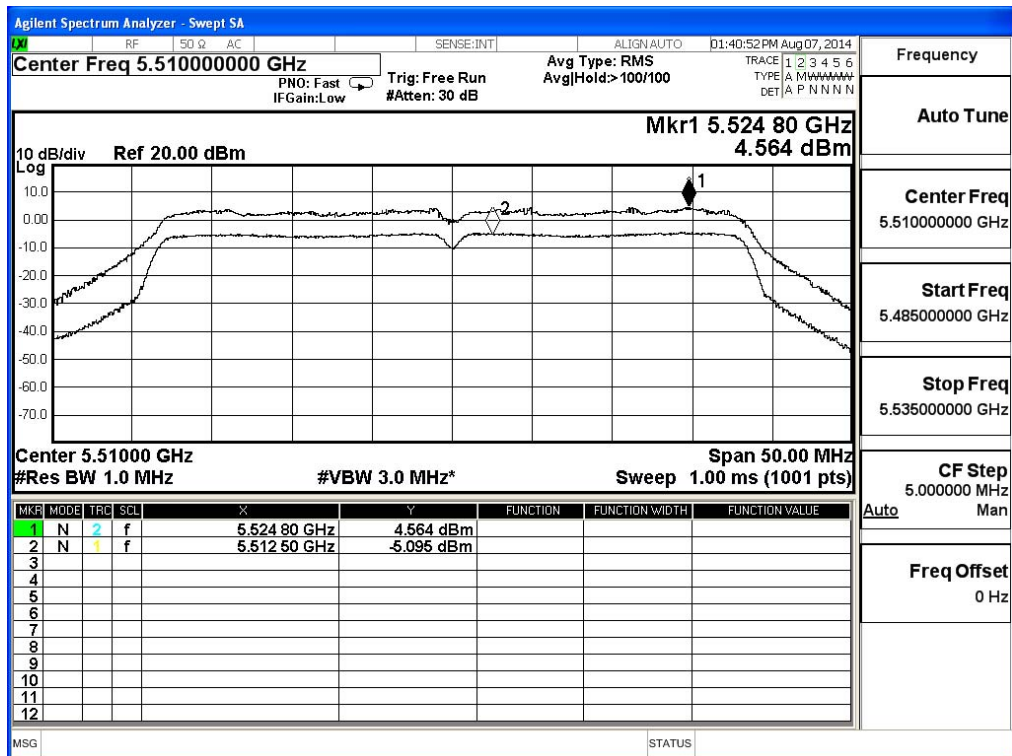
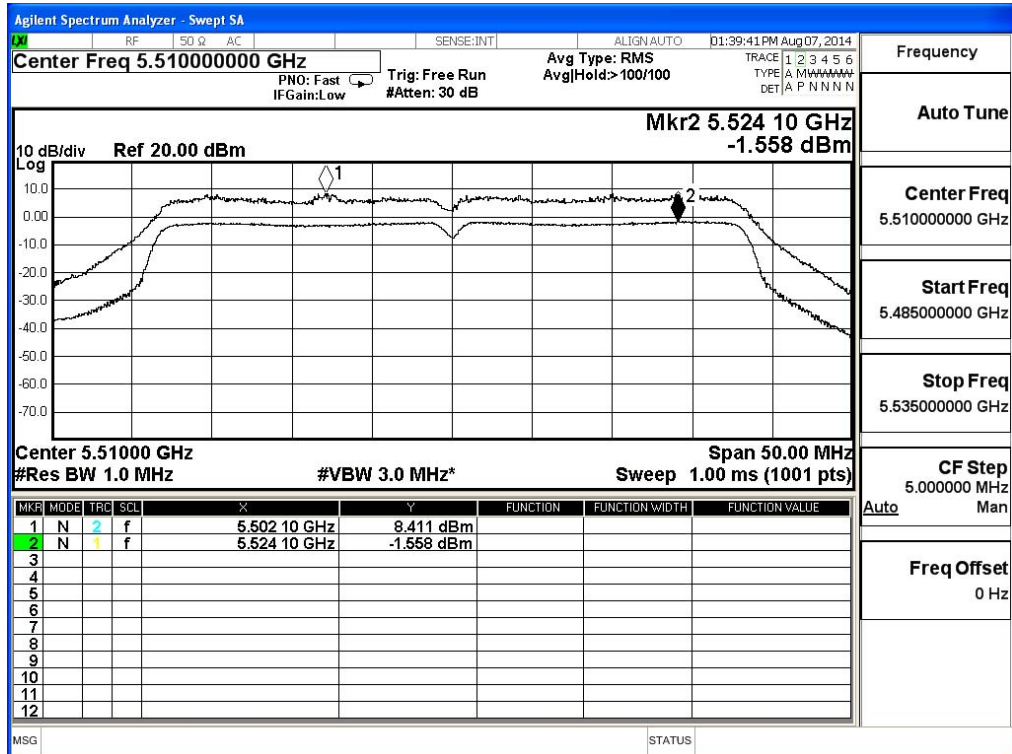


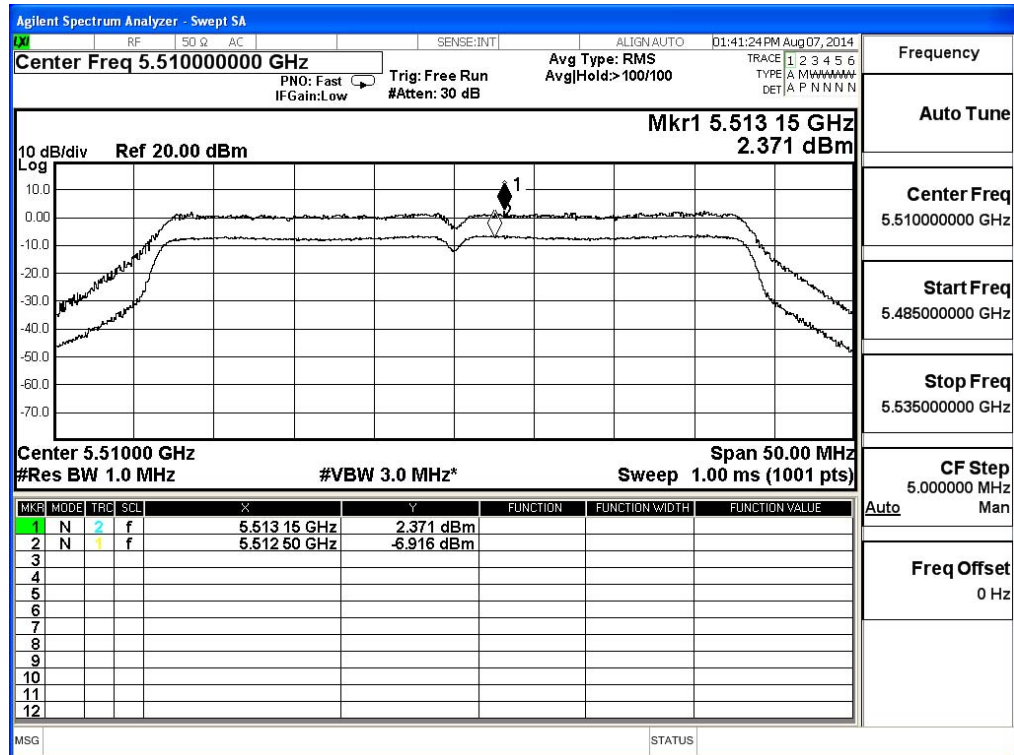
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Excursion  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps)

| Channel No. | Frequency (MHz) | Data Rate (Mbps) | Measurement Level (dB) | Required Limit (dB) | Result |
|-------------|-----------------|------------------|------------------------|---------------------|--------|
| 102         | 5510            | MCS (0)          | 7.786                  | <13                 | Pass   |
|             |                 | MCS (2)          | 9.969                  | <13                 | Pass   |
|             |                 | MCS (4)          | 9.659                  | <13                 | Pass   |
|             |                 | MCS (7)          | 9.287                  | <13                 | Pass   |

### Channel 102:



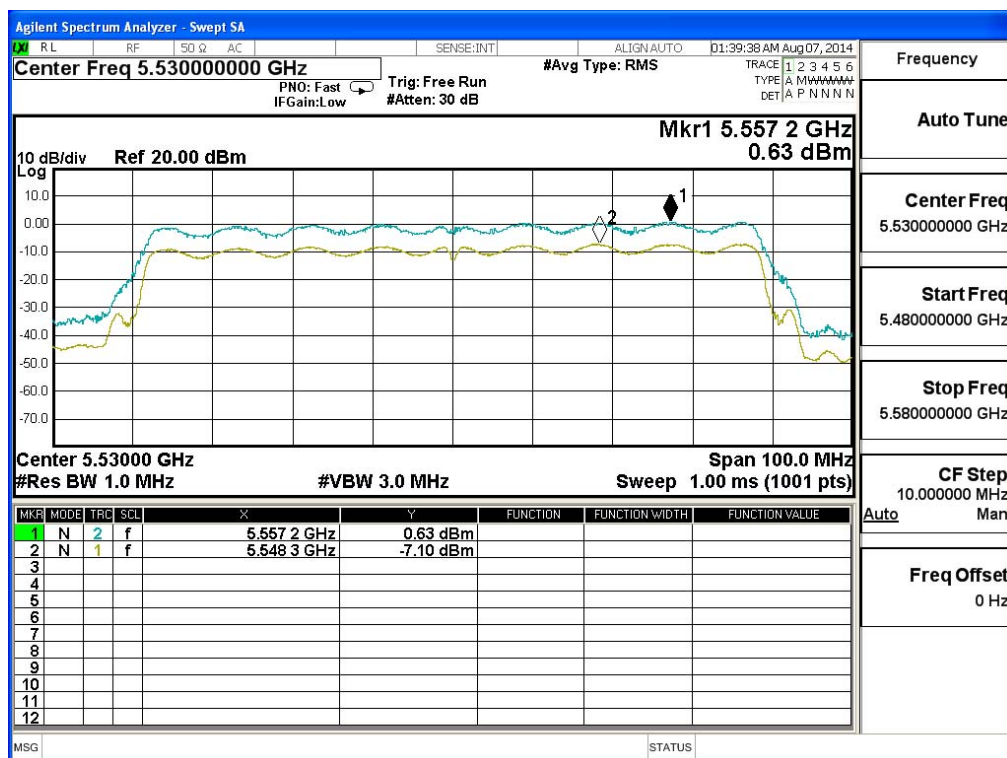




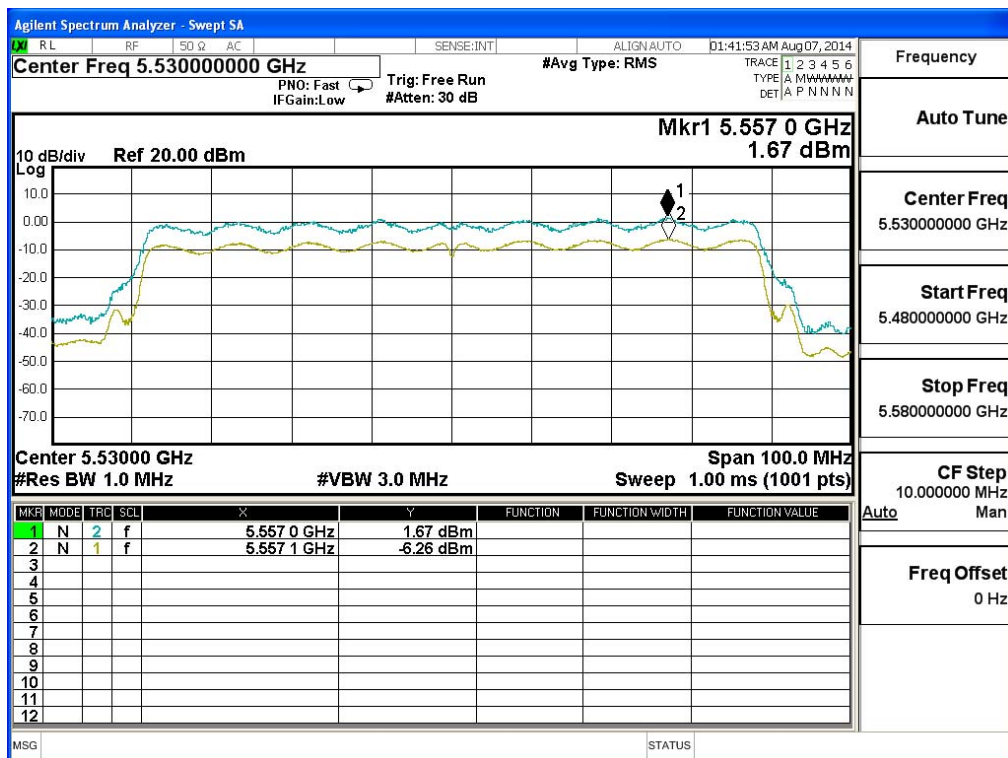
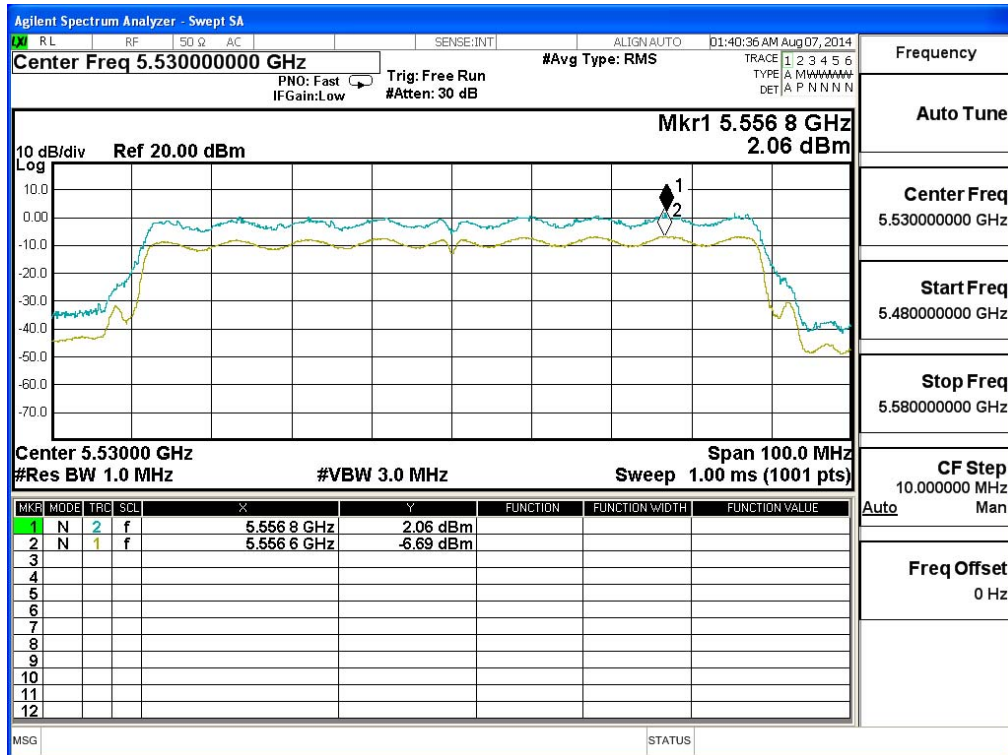
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Peak Excursion  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps)

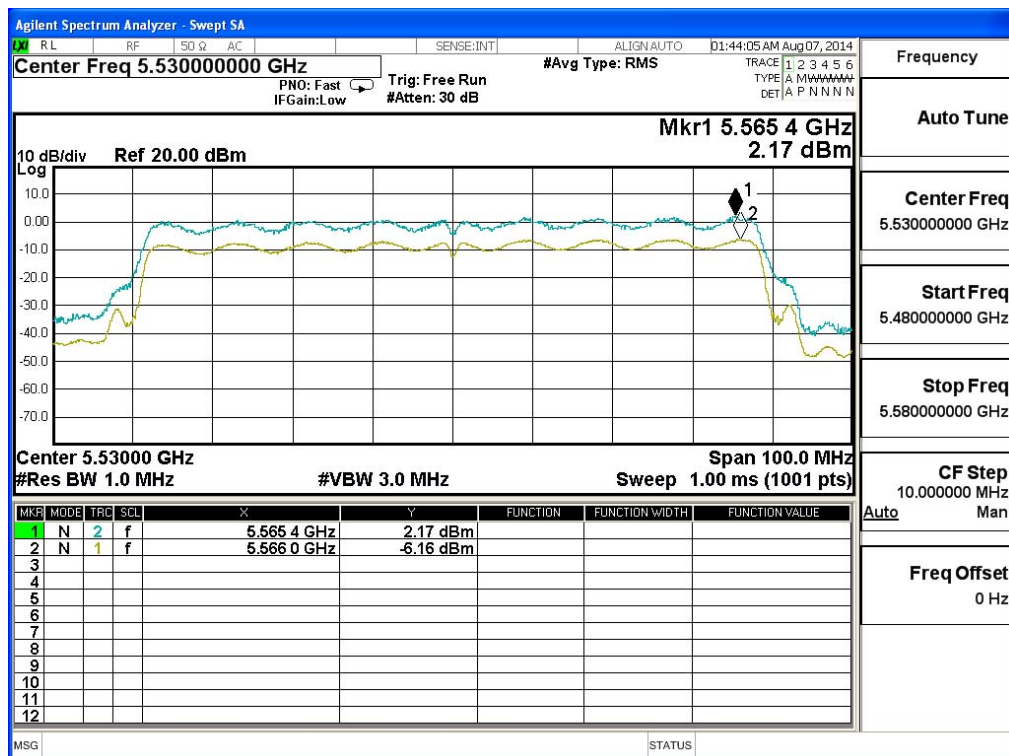
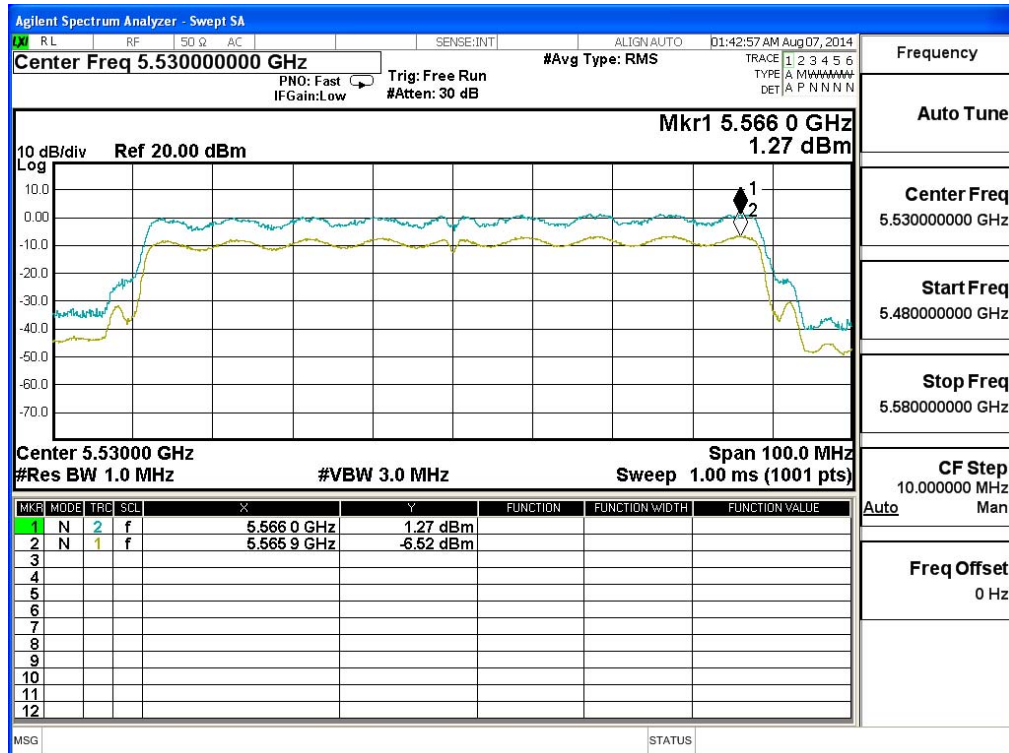
| Channel No. | Frequency (MHz) | Data Rate (Mbps) | Measurement Level (dB) | Required Limit (dB) | Result |
|-------------|-----------------|------------------|------------------------|---------------------|--------|
| 106         | 5530            | (VTH0)           | 7.730                  | <13                 | Pass   |
|             |                 | (VTH2)           | 8.750                  | <13                 | Pass   |
|             |                 | (VTH4)           | 7.930                  | <13                 | Pass   |
|             |                 | (VTH7)           | 7.790                  | <13                 | Pass   |
|             |                 | (VTH9)           | 8.330                  | <13                 | Pass   |

### Channel 106:









## 6. Radiated Emission

### 6.1. Test Equipment

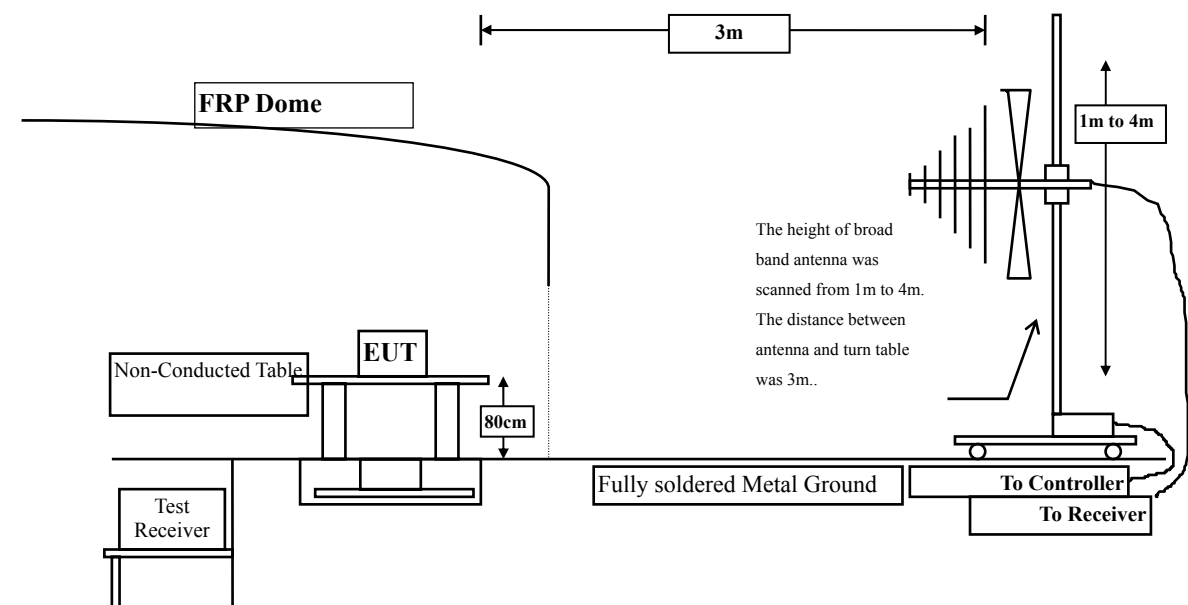
The following test equipments are used during the radiated emission test:

| Test Site |   | Equipment         | Manufacturer    | Model No./Serial No.           | Last Cal.  |
|-----------|---|-------------------|-----------------|--------------------------------|------------|
| Site # 3  | X | Loop Antenna      | Teseq           | HLA6120 / 26739                | Jul., 2014 |
|           | X | Bilog Antenna     | Schaffner Chase | CBL6112B/2673                  | Sep., 2013 |
|           | X | Horn Antenna      | Schwarzbeck     | BBHA9120D/D305                 | Sep., 2013 |
|           | X | Horn Antenna      | Schwarzbeck     | BBHA9170/208                   | Jul., 2014 |
|           | X | Pre-Amplifier     | QTK             | QTK-AMP-03 / 0003              | May, 2014  |
|           | X | Pre-Amplifier     | QTK             | AP-180C / CHM_0906076          | Sep., 2013 |
|           | X | Pre-Amplifier     | MITEQ           | AMF-4D-180400-45-6P/<br>925975 | Mar, 2014  |
|           | X | Spectrum Analyzer | Agilent         | E4407B / US39440758            | May, 2014  |
|           | X | Test Receiver     | R & S           | ESCS 30/ 825442/018            | Sep., 2013 |
|           | X | Coaxial Cable     | QuieTek         | QTK-CABLE/ CAB5                | Feb., 2014 |
|           | X | Controller        | QuieTek         | QTK-CONTROLLER/ CTRL3          | N/A        |
|           | X | Coaxial Switch    | Anritsu         | MP59B/6200265729               | N/A        |

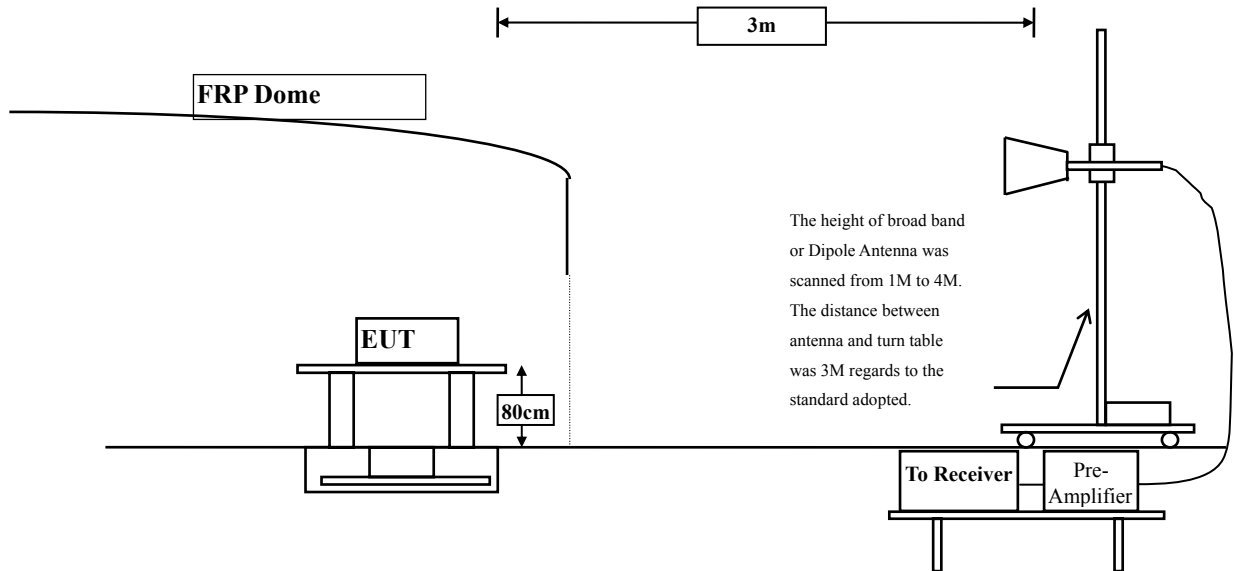
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
  2. The test instruments marked with "X" are used to measure the final test results.

### 6.2. Test Setup

Radiated Emission Below 1GHz



## Radiated Emission Above 1GHz



### 6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

| FCC Part 15 Subpart C Paragraph 15.209(a) Limits |                                   |                              |
|--|-----------------------------------|------------------------------|
| Frequency MHz                                    | Field strength (microvolts/meter) | Measurement distance (meter) |
| 0.009-0.490                                      | 2400/F(kHz)                       | 300                          |
| 0.490-1.705                                      | 24000/F(kHz)                      | 30                           |
| 1.705-30   | 30                                | 30                           |
| 30-88  | 100                               | 40                           |
| 88-216   | 150                               | 43.5                         |
| 216-960  | 200                               | 46                           |
| Above 960  | 500                               | 54                           |

Remarks: E field strength (dBμV/m) = 20 log E field strength (uV/m)

#### **6.4. Test Procedure**

The EUT was setup according to ANSI C63.10, 2009 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2009 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range from 30MHz - 10th Harmonic of fundamental was investigated.

#### **6.5. Uncertainty**

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

## 6.6. Test Result of Radiated Emission

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
Test Item : Harmonic Radiated Emission Data  
Test Site : No.3 OATS  
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

| Frequency<br>MHz             | Correct<br>Factor<br>dB | Reading<br>Level<br>dBμV | Measurement<br>Level<br>dBμV/m | Margin<br>dB | Limit<br>dBμV/m |
|------------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| <b>Horizontal</b>            |                         |                          |                                |              |                 |
| <b>Peak Detector:</b>        |                         |                          |                                |              |                 |
| 10360.000                    | 12.930                  | 52.530                   | 65.460                         | -8.540       | 74.000          |
| 15540.000                    | *                       | *                        | *                              | *            | 74.000          |
| 20720.000                    | *                       | *                        | *                              | *            | 74.000          |
| 25900.000                    | *                       | *                        | *                              | *            | 74.000          |
| 31080.000                    | *                       | *                        | *                              | *            | 74.000          |
| 36260.000                    | *                       | *                        | *                              | *            | 74.000          |
| <b>Average<br/>Detector:</b> |                         |                          |                                |              |                 |
| 10360.000                    | 12.930                  | 38.050                   | 50.980                         | -3.020       | 54.000          |
| <b>Vertical</b>              |                         |                          |                                |              |                 |
| <b>Peak Detector:</b>        |                         |                          |                                |              |                 |
| 10360.000                    | 13.724                  | 51.840                   | 65.564                         | -8.436       | 74.000          |
| 15540.000                    | *                       | *                        | *                              | *            | 74.000          |
| 20720.000                    | *                       | *                        | *                              | *            | 74.000          |
| 25900.000                    | *                       | *                        | *                              | *            | 74.000          |
| 31080.000                    | *                       | *                        | *                              | *            | 74.000          |
| 36260.000                    | *                       | *                        | *                              | *            | 74.000          |
| <b>Average<br/>Detector:</b> |                         |                          |                                |              |                 |
| 10360.000                    | 13.724                  | 38.140                   | 51.864                         | -2.136       | 54.000          |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
Test Item : Harmonic Radiated Emission Data  
Test Site : No.3 OATS  
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

| Frequency             | Correct | Reading    | Measurement  | Margin  | Limit        |
|-----------------------|---------|------------|--------------|---------|--------------|
| MHz                   | Factor  | Level      | Level        |         |              |
|                       | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>     |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 10440.000             | 13.322  | 50.090     | 63.412       | -10.588 | 74.000       |
| 15660.000             | *       | *          | *            | *       | 74.000       |
| 20880.000             | *       | *          | *            | *       | 74.000       |
| 26100.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 10440.000             | 13.322  | 37.450     | 50.772       | -3.228  | 54.000       |
| <b>Vertical</b>       |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 10440.000             | 14.245  | 50.950     | 65.195       | -8.805  | 74.000       |
| 15660.000             | *       | *          | *            | *       | 74.000       |
| 20880.000             | *       | *          | *            | *       | 74.000       |
| 26100.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 10440.000             | 14.245  | 36.960     | 51.205       | -2.795  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

| Frequency             | Correct | Reading    | Measurement  | Margin | Limit        |
|-----------------------|---------|------------|--------------|--------|--------------|
| MHz                   | Factor  | Level      | Level        |        |              |
|                       | dB      | dB $\mu$ V | dB $\mu$ V/m | dB     | dB $\mu$ V/m |
| <b>Horizontal</b>     |         |            |              |        |              |
| <b>Peak Detector:</b> |         |            |              |        |              |
| 10480.000             | 13.693  | 51.570     | 65.264       | -8.736 | 74.000       |
| 15720.000             | *       | *          | *            | *      | 74.000       |
| 20960.000             | *       | *          | *            | *      | 74.000       |
| 26200.000             | *       | *          | *            | *      | 74.000       |
| <b>Average</b>        |         |            |              |        |              |
| <b>Detector:</b>      |         |            |              |        |              |
| 10480.000             | 13.693  | 37.440     | 51.134       | -2.866 | 54.000       |
| <b>Vertical</b>       |         |            |              |        |              |
| <b>Peak Detector:</b> |         |            |              |        |              |
| 10480.000             | 14.620  | 50.490     | 65.111       | -8.889 | 74.000       |
| 15720.000             | *       | *          | *            | *      | 74.000       |
| 20960.000             | *       | *          | *            | *      | 74.000       |
| 26200.000             | *       | *          | *            | *      | 74.000       |
| <b>Average</b>        |         |            |              |        |              |
| <b>Detector:</b>      |         |            |              |        |              |
| 10480.000             | 14.620  | 36.980     | 51.601       | -2.399 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

| Frequency             | Correct | Reading    | Measurement  | Margin | Limit        |
|-----------------------|---------|------------|--------------|--------|--------------|
| MHz                   | Factor  | Level      | Level        |        |              |
|                       | dB      | dB $\mu$ V | dB $\mu$ V/m | dB     | dB $\mu$ V/m |
| <b>Horizontal</b>     |         |            |              |        |              |
| <b>Peak Detector:</b> |         |            |              |        |              |
| 10520.000             | 14.015  | 50.240     | 64.255       | -9.745 | 74.000       |
| 15780.000             | *       | *          | *            | *      | 74.000       |
| 21040.000             | *       | *          | *            | *      | 74.000       |
| 26300.000             | *       | *          | *            | *      | 74.000       |
| <b>Average</b>        |         |            |              |        |              |
| <b>Detector:</b>      |         |            |              |        |              |
| 10520.000             | 14.015  | 35.690     | 49.705       | -4.295 | 54.000       |
| <b>Vertical</b>       |         |            |              |        |              |
| <b>Peak Detector:</b> |         |            |              |        |              |
| 10520.000             | 14.818  | 51.330     | 66.148       | -7.852 | 74.000       |
| 15780.000             | *       | *          | *            | *      | 74.000       |
| 21040.000             | *       | *          | *            | *      | 74.000       |
| 26300.000             | *       | *          | *            | *      | 74.000       |
| <b>Average</b>        |         |            |              |        |              |
| <b>Detector:</b>      |         |            |              |        |              |
| 10520.000             | 14.818  | 36.190     | 51.008       | -2.992 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

| Frequency             | Correct | Reading    | Measurement  | Margin  | Limit        |
|-----------------------|---------|------------|--------------|---------|--------------|
| MHz                   | Factor  | Level      | Level        |         |              |
|                       | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>     |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 10600.000             | 14.550  | 42.570     | 57.119       | -16.881 | 74.000       |
| 15900.000             | *       | *          | *            | *       | 74.000       |
| 21200.000             | *       | *          | *            | *       | 74.000       |
| 26500.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 10600.000             | 14.550  | 28.380     | 42.929       | -11.071 | 54.000       |
| <b>Vertical</b>       |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 10600.000             | 14.881  | 43.620     | 58.501       | -15.499 | 74.000       |
| 15900.000             | *       | *          | *            | *       | 74.000       |
| 21200.000             | *       | *          | *            | *       | 74.000       |
| 26500.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 10600.000             | 14.881  | 28.330     | 43.211       | -10.789 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

| Frequency<br>MHz             | Correct<br>Factor<br>dB | Reading<br>Level<br>dB $\mu$ V | Measurement<br>Level<br>dB $\mu$ V/m | Margin<br>dB | Limit<br>dB $\mu$ V/m |
|------------------------------|-------------------------|--------------------------------|--------------------------------------|--------------|-----------------------|
| <b>Horizontal</b>            |                         |                                |                                      |              |                       |
| <b>Peak Detector:</b>        |                         |                                |                                      |              |                       |
| 10640.000                    | 14.690                  | 43.440                         | 58.130                               | -15.870      | 74.000                |
| 15960.000                    | *                       | *                              | *                                    | *            | 74.000                |
| 21280.000                    | *                       | *                              | *                                    | *            | 74.000                |
| 26600.000                    | *                       | *                              | *                                    | *            | 74.000                |
| <b>Average<br/>Detector:</b> |                         |                                |                                      |              |                       |
| 10640.000                    | 14.690                  | 27.190                         | 41.880                               | -12.120      | 54.000                |
| <b>Vertical</b>              |                         |                                |                                      |              |                       |
| <b>Peak Detector:</b>        |                         |                                |                                      |              |                       |
| 10640.000                    | 15.083                  | 44.330                         | 59.413                               | -14.587      | 74.000                |
| 15960.000                    | *                       | *                              | *                                    | *            | 74.000                |
| 21280.000                    | *                       | *                              | *                                    | *            | 74.000                |
| 26600.000                    | *                       | *                              | *                                    | *            | 74.000                |
| <b>Average<br/>Detector:</b> |                         |                                |                                      |              |                       |
| 10640.000                    | 15.083                  | 29.410                         | 44.493                               | -9.507       | 54.000                |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11000.000                | 16.399  | 42.360     | 58.759       | -15.241 | 74.000       |
| 16500.000                | *       | *          | *            | *       | 74.000       |
| 22000.000                | *       | *          | *            | *       | 74.000       |
| 27500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11000.000                | 16.399  | 27.880     | 44.279       | -9.721  | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11000.000                | 17.132  | 42.960     | 60.092       | -13.908 | 74.000       |
| 16500.000                | *       | *          | *            | *       | 74.000       |
| 22000.000                | *       | *          | *            | *       | 74.000       |
| 27500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11000.000                | 17.132  | 28.460     | 45.592       | -8.408  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

| Frequency             | Correct | Reading    | Measurement  | Margin  | Limit        |
|-----------------------|---------|------------|--------------|---------|--------------|
| MHz                   | Factor  | Level      | Level        |         |              |
|                       | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>     |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 11160.000             | 16.664  | 44.820     | 61.485       | -12.515 | 74.000       |
| 16800.000             | *       | *          | *            | *       | 74.000       |
| 22400.000             | *       | *          | *            | *       | 74.000       |
| 28000.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 11160.000             | 16.664  | 28.150     | 44.815       | -9.185  | 54.000       |
| <b>Vertical</b>       |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 11160.000             | 17.643  | 43.640     | 61.283       | -12.717 | 74.000       |
| 16800.000             | *       | *          | *            | *       | 74.000       |
| 22400.000             | *       | *          | *            | *       | 74.000       |
| 28000.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 11160.000             | 17.643  | 28.410     | 46.053       | -7.947  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11400.000                | 16.530  | 43.180     | 59.711       | -14.289 | 74.000       |
| 17100.000                | *       | *          | *            | *       | 74.000       |
| 22800.000                | *       | *          | *            | *       | 74.000       |
| 28500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11400.000                | 16.530  | 28.050     | 44.581       | -9.419  | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11400.000                | 17.138  | 44.310     | 61.448       | -12.552 | 74.000       |
| 17100.000                | *       | *          | *            | *       | 74.000       |
| 22800.000                | *       | *          | *            | *       | 74.000       |
| 28500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11400.000                | 17.138  | 28.120     | 45.258       | -8.742  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5180MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10360.000                | 12.930  | 51.920     | 64.850       | -9.150  | 74.000       |
| 15540.000                | *       | *          | *            | *       | 74.000       |
| 20720.000                | *       | *          | *            | *       | 74.000       |
| 25900.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10360.000                | 12.930  | 36.040     | 48.970       | -5.030  | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10360.000                | 13.724  | 49.580     | 63.304       | -10.696 | 74.000       |
| 15540.000                | *       | *          | *            | *       | 74.000       |
| 20720.000                | *       | *          | *            | *       | 74.000       |
| 25900.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10360.000                | 13.724  | 36.040     | 49.764       | -4.236  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5220MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin | Limit        |
|--------------------------|---------|------------|--------------|--------|--------------|
| MHz                      | Factor  | Level      | Level        |        |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB     | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |        |              |
| <b>Peak Detector:</b>    |         |            |              |        |              |
| 10440.000                | 13.322  | 53.530     | 66.852       | -7.148 | 74.000       |
| 15660.000                | *       | *          | *            | *      | 74.000       |
| 20880.000                | *       | *          | *            | *      | 74.000       |
| 26100.000                | *       | *          | *            | *      | 74.000       |
| <b>Average Detector:</b> |         |            |              |        |              |
| 10440.000                | 13.322  | 37.540     | 50.862       | -3.138 | 54.000       |
| <b>Vertical</b>          |         |            |              |        |              |
| <b>Peak Detector:</b>    |         |            |              |        |              |
| 10440.000                | 14.245  | 52.130     | 66.375       | -7.625 | 74.000       |
| 15660.000                | *       | *          | *            | *      | 74.000       |
| 20880.000                | *       | *          | *            | *      | 74.000       |
| 26100.000                | *       | *          | *            | *      | 74.000       |
| <b>Average Detector:</b> |         |            |              |        |              |
| 10440.000                | 14.245  | 36.550     | 50.795       | -3.205 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5240MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin | Limit        |
|--------------------------|---------|------------|--------------|--------|--------------|
| MHz                      | Factor  | Level      | Level        |        |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB     | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |        |              |
| <b>Peak Detector:</b>    |         |            |              |        |              |
| 10480.000                | 13.693  | 50.880     | 64.574       | -9.426 | 74.000       |
| 15720.000                | *       | *          | *            | *      | 74.000       |
| 20960.000                | *       | *          | *            | *      | 74.000       |
| 26200.000                | *       | *          | *            | *      | 74.000       |
| <b>Average Detector:</b> |         |            |              |        |              |
| 10480.000                | 13.693  | 36.050     | 49.744       | -4.256 | 54.000       |
| <b>Vertical</b>          |         |            |              |        |              |
| <b>Peak Detector:</b>    |         |            |              |        |              |
| 10480.000                | 14.620  | 49.960     | 64.581       | -9.419 | 74.000       |
| 15720.000                | *       | *          | *            | *      | 74.000       |
| 20960.000                | *       | *          | *            | *      | 74.000       |
| 26200.000                | *       | *          | *            | *      | 74.000       |
| <b>Average Detector:</b> |         |            |              |        |              |
| 10480.000                | 14.620  | 36.060     | 50.681       | -3.319 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5260MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin | Limit        |
|--------------------------|---------|------------|--------------|--------|--------------|
| MHz                      | Factor  | Level      | Level        |        |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB     | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |        |              |
| <b>Peak Detector:</b>    |         |            |              |        |              |
| 10520.000                | 14.015  | 51.890     | 65.905       | -8.095 | 74.000       |
| 15780.000                | *       | *          | *            | *      | 74.000       |
| 21040.000                | *       | *          | *            | *      | 74.000       |
| 26300.000                | *       | *          | *            | *      | 74.000       |
| <b>Average Detector:</b> |         |            |              |        |              |
| 10520.000                | 14.015  | 36.490     | 50.505       | -3.495 | 54.000       |
| <b>Vertical</b>          |         |            |              |        |              |
| <b>Peak Detector:</b>    |         |            |              |        |              |
| 10520.000                | 14.818  | 49.320     | 64.138       | -9.862 | 74.000       |
| 15780.000                | *       | *          | *            | *      | 74.000       |
| 21040.000                | *       | *          | *            | *      | 74.000       |
| 26300.000                | *       | *          | *            | *      | 74.000       |
| <b>Average Detector:</b> |         |            |              |        |              |
| 10520.000                | 14.818  | 36.180     | 50.998       | -3.002 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5300MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10600.000                | 14.550  | 41.490     | 56.039       | -17.961 | 74.000       |
| 15900.000                | *       | *          | *            | *       | 74.000       |
| 21200.000                | *       | *          | *            | *       | 74.000       |
| 26500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10600.000                | 14.550  | 27.690     | 42.239       | -11.761 | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10600.000                | 14.881  | 42.580     | 57.461       | -16.539 | 74.000       |
| 15900.000                | *       | *          | *            | *       | 74.000       |
| 21200.000                | *       | *          | *            | *       | 74.000       |
| 26500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10600.000                | 14.881  | 27.990     | 42.871       | -11.129 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5320MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10640.000                | 14.690  | 42.110     | 56.800       | -17.200 | 74.000       |
| 15960.000                | *       | *          | *            | *       | 74.000       |
| 21280.000                | *       | *          | *            | *       | 74.000       |
| 26600.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10640.000                | 14.690  | 28.170     | 42.860       | -11.140 | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10640.000                | 15.083  | 42.330     | 57.413       | -16.587 | 74.000       |
| 15960.000                | *       | *          | *            | *       | 74.000       |
| 21280.000                | *       | *          | *            | *       | 74.000       |
| 26600.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10640.000                | 15.083  | 27.490     | 42.573       | -11.427 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5500MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11000.000                | 16.399  | 42.690     | 59.089       | -14.911 | 74.000       |
| 16500.000                | *       | *          | *            | *       | 74.000       |
| 22000.000                | *       | *          | *            | *       | 74.000       |
| 27500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11000.000                | 16.399  | 28.430     | 44.829       | -9.171  | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11000.000                | 17.132  | 42.440     | 59.572       | -14.428 | 74.000       |
| 16500.000                | *       | *          | *            | *       | 74.000       |
| 22000.000                | *       | *          | *            | *       | 74.000       |
| 27500.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11000.000                | 17.132  | 28.360     | 45.492       | -8.508  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5580MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11160.000                | 16.664  | 41.560     | 58.225       | -15.775 | 74.000       |
| 16800.000                | *       | *          | *            | *       | 74.000       |
| 22400.000                | *       | *          | *            | *       | 74.000       |
| 28000.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11160.000                | 16.664  | 27.130     | 43.795       | -10.205 | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11160.000                | 17.643  | 42.610     | 60.253       | -13.747 | 74.000       |
| 16800.000                | *       | *          | *            | *       | 74.000       |
| 22400.000                | *       | *          | *            | *       | 74.000       |
| 28000.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11160.000                | 17.643  | 27.310     | 44.953       | -9.047  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5700MHz)

| Frequency             | Correct | Reading    | Measurement  | Margin  | Limit        |
|-----------------------|---------|------------|--------------|---------|--------------|
| MHz                   | Factor  | Level      | Level        |         |              |
|                       | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>     |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 11400.000             | 16.530  | 41.070     | 57.601       | -16.399 | 74.000       |
| 17100.000             | *       | *          | *            | *       | 74.000       |
| 22800.000             | *       | *          | *            | *       | 74.000       |
| 28500.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 11140.000             | 16.672  | 27.030     | 43.702       | -10.298 | 54.000       |
| <b>Vertical</b>       |         |            |              |         |              |
| <b>Peak Detector:</b> |         |            |              |         |              |
| 11400.000             | 17.138  | 42.340     | 59.478       | -14.522 | 74.000       |
| 17100.000             | *       | *          | *            | *       | 74.000       |
| 22800.000             | *       | *          | *            | *       | 74.000       |
| 28500.000             | *       | *          | *            | *       | 74.000       |
| <b>Average</b>        |         |            |              |         |              |
| <b>Detector:</b>      |         |            |              |         |              |
| 11400.000             | 17.138  | 27.460     | 44.598       | -9.402  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5190MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10380.000                | 12.939  | 48.560     | 61.499       | -12.501 | 74.000       |
| 15570.000                | *       | *          | *            | *       | 74.000       |
| 20760.000                | *       | *          | *            | *       | 74.000       |
| 25950.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10380.000                | 12.939  | 33.510     | 46.449       | -7.551  | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10380.000                | 13.796  | 44.960     | 58.756       | -15.244 | 74.000       |
| 15570.000                | *       | *          | *            | *       | 74.000       |
| 20760.000                | *       | *          | *            | *       | 74.000       |
| 25950.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10380.000                | 13.796  | 33.390     | 47.186       | -6.814  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5230MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10460.000                | 13.508  | 48.560     | 62.068       | -11.932 | 74.000       |
| 15690.000                | *       | *          | *            | *       | 74.000       |
| 20920.000                | *       | *          | *            | *       | 74.000       |
| 26150.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10460.000                | 13.508  | 33.120     | 46.628       | -7.372  | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10460.000                | 14.433  | 46.840     | 61.273       | -12.727 | 74.000       |
| 15690.000                | *       | *          | *            | *       | 74.000       |
| 20920.000                | *       | *          | *            | *       | 74.000       |
| 26150.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10460.000                | 14.433  | 33.610     | 48.043       | -5.957  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5270MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10540.000                | 14.151  | 47.510     | 61.660       | -12.340 | 74.000       |
| 15810.000                | *       | *          | *            | *       | 74.000       |
| 21080.000                | *       | *          | *            | *       | 74.000       |
| 26350.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10540.000                | 14.151  | 33.290     | 47.440       | -6.560  | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10540.000                | 14.829  | 46.380     | 61.208       | -12.792 | 74.000       |
| 15810.000                | *       | *          | *            | *       | 74.000       |
| 21080.000                | *       | *          | *            | *       | 74.000       |
| 26350.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10540.000                | 14.829  | 33.540     | 48.368       | -5.632  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5310MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10620.000                | 14.623  | 41.110     | 55.733       | -18.267 | 74.000       |
| 15930.000                | *       | *          | *            | *       | 74.000       |
| 21240.000                | *       | *          | *            | *       | 74.000       |
| 26550.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10620.000                | 14.623  | 27.030     | 41.653       | -12.347 | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 10620.000                | 14.970  | 42.160     | 57.130       | -16.870 | 74.000       |
| 15930.000                | *       | *          | *            | *       | 74.000       |
| 21240.000                | *       | *          | *            | *       | 74.000       |
| 26550.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 10620.000                | 14.970  | 27.040     | 42.010       | -11.990 | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5510MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11020.000                | 16.474  | 41.470     | 57.943       | -16.057 | 74.000       |
| 15930.000                | *       | *          | *            | *       | 74.000       |
| 21240.000                | *       | *          | *            | *       | 74.000       |
| 26550.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11020.000                | 16.474  | 26.980     | 43.453       | -10.547 | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11020.000                | 17.224  | 41.550     | 58.774       | -15.226 | 74.000       |
| 15930.000                | *       | *          | *            | *       | 74.000       |
| 21240.000                | *       | *          | *            | *       | 74.000       |
| 26550.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11020.000                | 17.224  | 27.140     | 44.364       | -9.636  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5550MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11100.000                | 16.681  | 40.070     | 56.751       | -17.249 | 74.000       |
| 16770.000                | *       | *          | *            | *       | 74.000       |
| 22360.000                | *       | *          | *            | *       | 74.000       |
| 27950.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11100.000                | 16.681  | 26.390     | 43.071       | -10.929 | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11100.000                | 17.523  | 41.390     | 58.913       | -15.087 | 74.000       |
| 16770.000                | *       | *          | *            | *       | 74.000       |
| 22360.000                | *       | *          | *            | *       | 74.000       |
| 27950.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11100.000                | 17.523  | 27.420     | 44.943       | -9.057  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5670MHz)

| Frequency                | Correct | Reading    | Measurement  | Margin  | Limit        |
|--------------------------|---------|------------|--------------|---------|--------------|
| MHz                      | Factor  | Level      | Level        |         |              |
|                          | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>        |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11340.000                | 16.408  | 40.360     | 56.767       | -17.233 | 74.000       |
| 17010.000                | *       | *          | *            | *       | 74.000       |
| 22680.000                | *       | *          | *            | *       | 74.000       |
| 28350.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11340.000                | 16.408  | 26.490     | 42.897       | -11.103 | 54.000       |
| <b>Vertical</b>          |         |            |              |         |              |
| <b>Peak Detector:</b>    |         |            |              |         |              |
| 11340.000                | 17.167  | 41.530     | 58.697       | -15.303 | 74.000       |
| 17010.000                | *       | *          | *            | *       | 74.000       |
| 22680.000                | *       | *          | *            | *       | 74.000       |
| 28350.000                | *       | *          | *            | *       | 74.000       |
| <b>Average Detector:</b> |         |            |              |         |              |
| 11340.000                | 17.167  | 27.380     | 44.547       | -9.453  | 54.000       |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps) (5720MHz)

| Frequency<br>MHz             | Correct<br>Factor<br>dB | Reading<br>Level<br>dBuV | Measurement<br>Level<br>dBuV/m | Margin<br>dB | Limit<br>dBuV/m |
|------------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| <b>Horizontal</b>            |                         |                          |                                |              |                 |
| <b>Peak Detector:</b>        |                         |                          |                                |              |                 |
| 11440.000                    | 16.779                  | 36.510                   | 53.289                         | -20.711      | 74.000          |
| 11550.000                    | *                       | *                        | *                              | *            | 74.000          |
| 17325.000                    | *                       | *                        | *                              | *            | 74.000          |
| 20720.000                    | *                       | *                        | *                              | *            | 74.000          |
| 25900.000                    | *                       | *                        | *                              | *            | 74.000          |
| 31080.000                    | *                       | *                        | *                              | *            | 74.000          |
| 36260.000                    | *                       | *                        | *                              | *            | 74.000          |
| <b>Average<br/>Detector:</b> |                         |                          |                                |              |                 |
| --                           |                         |                          |                                |              |                 |
| <b>Vertical</b>              |                         |                          |                                |              |                 |
| <b>Peak Detector:</b>        |                         |                          |                                |              |                 |
| 11440.000                    | 17.519                  | 36.230                   | 53.749                         | -20.251      | 74.000          |
| 11550.000                    | *                       | *                        | *                              | *            | 74.000          |
| 17325.000                    | *                       | *                        | *                              | *            | 74.000          |
| 20720.000                    | *                       | *                        | *                              | *            | 74.000          |
| 25900.000                    | *                       | *                        | *                              | *            | 74.000          |
| 31080.000                    | *                       | *                        | *                              | *            | 74.000          |
| 36260.000                    | *                       | *                        | *                              | *            | 74.000          |
| <b>Average<br/>Detector:</b> |                         |                          |                                |              |                 |
| --                           |                         |                          |                                |              |                 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
Test Item : Harmonic Radiated Emission Data  
Test Site : No.3 OATS  
Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps) (5710MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
| MHz                   | Factor  | Level   | Level       |         |        |
|                       | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| <b>Horizontal</b>     |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11420.000             | 16.648  | 36.430  | 53.077      | -20.923 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |
| <b>Vertical</b>       |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11420.000             | 17.311  | 35.440  | 52.750      | -21.250 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5210MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
| MHz                   | Factor  | Level   | Level       |         |        |
|                       | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| <b>Horizontal</b>     |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 10420.000             | 13.135  | 39.930  | 53.065      | -20.935 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |
| <b>Vertical</b>       |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 10420.000             | 14.057  | 38.554  | 52.611      | -21.389 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5290MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
| MHz                   | Factor  | Level   | Level       |         |        |
|                       | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| <b>Horizontal</b>     |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 10580.000             | 14.423  | 38.386  | 52.809      | -21.191 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |
| <b>Vertical</b>       |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 10580.000             | 14.849  | 37.531  | 52.380      | -21.620 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5530MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
| MHz                   | Factor  | Level   | Level       |         |        |
|                       | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| <b>Horizontal</b>     |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11060.000             | 16.580  | 35.630  | 52.210      | -21.790 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |
| <b>Vertical</b>       |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11060.000             | 17.375  | 35.610  | 52.985      | -21.015 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5610MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
| MHz                   | Factor  | Level   | Level       |         |        |
|                       | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| <b>Horizontal</b>     |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11220.000             | 16.589  | 36.045  | 52.635      | -21.365 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |
| <b>Vertical</b>       |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11220.000             | 17.620  | 34.727  | 52.347      | -21.653 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5690MHz)

| Frequency             | Correct | Reading | Measurement | Margin  | Limit  |
|-----------------------|---------|---------|-------------|---------|--------|
| MHz                   | Factor  | Level   | Level       |         |        |
|                       | dB      | dBuV    | dBuV/m      | dB      | dBuV/m |
| <b>Horizontal</b>     |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11380.000             | 16.480  | 36.090  | 52.571      | -21.429 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |
| <b>Vertical</b>       |         |         |             |         |        |
| <b>Peak Detector:</b> |         |         |             |         |        |
| 11380.000             | 17.125  | 36.510  | 53.636      | -20.364 | 74.000 |
| 11550.000             | *       | *       | *           | *       | 74.000 |
| 17325.000             | *       | *       | *           | *       | 74.000 |
| 20720.000             | *       | *       | *           | *       | 74.000 |
| 25900.000             | *       | *       | *           | *       | 74.000 |
| 31080.000             | *       | *       | *           | *       | 74.000 |
| 36260.000             | *       | *       | *           | *       | 74.000 |
| <b>Average</b>        |         |         |             |         |        |
| <b>Detector:</b>      |         |         |             |         |        |
| --                    |         |         |             |         |        |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

| Frequency            | Correct | Reading    | Measurement  | Margin  | Limit        |
|----------------------|---------|------------|--------------|---------|--------------|
| MHz                  | Factor  | Level      | Level        |         |              |
|                      | dB      | dB $\mu$ V | dB $\mu$ V/m | dB      | dB $\mu$ V/m |
| <b>Horizontal</b>    |         |            |              |         |              |
| <b>Peak Detector</b> |         |            |              |         |              |
| 161.920              | -11.626 | 47.213     | 35.588       | -7.912  | 43.500       |
| 392.780              | -2.096  | 36.327     | 34.231       | -11.769 | 46.000       |
| 483.960              | -0.688  | 36.919     | 36.232       | -9.768  | 46.000       |
| 600.360              | 3.977   | 33.950     | 37.927       | -8.073  | 46.000       |
| 712.880              | 3.569   | 27.806     | 31.375       | -14.625 | 46.000       |
| 961.200              | 6.450   | 43.499     | 49.949       | -4.051  | 54.000       |

|                      |        |        |        |         |        |
|----------------------|--------|--------|--------|---------|--------|
| <b>Vertical</b>      |        |        |        |         |        |
| <b>Peak Detector</b> |        |        |        |         |        |
| 111.480              | -0.954 | 35.740 | 34.786 | -8.714  | 43.500 |
| 181.320              | -9.512 | 44.271 | 34.759 | -8.741  | 43.500 |
| 222.060              | -8.789 | 43.212 | 34.423 | -11.577 | 46.000 |
| 286.080              | -8.097 | 45.106 | 37.009 | -8.991  | 46.000 |
| 365.620              | -2.179 | 34.574 | 32.395 | -13.605 | 46.000 |
| 747.800              | 2.166  | 30.672 | 32.838 | -13.162 | 46.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 222.060              | -10.439 | 45.017  | 34.578      | -11.422 | 46.000 |
| 505.300              | 0.308   | 31.268  | 31.576      | -14.424 | 46.000 |
| 664.380              | 2.062   | 29.952  | 32.014      | -13.986 | 46.000 |
| 747.800              | 3.296   | 29.620  | 32.916      | -13.084 | 46.000 |
| 858.380              | 5.972   | 31.844  | 37.816      | -8.184  | 46.000 |
| 961.200              | 6.450   | 43.202  | 49.652      | -4.348  | 54.000 |

|                      |        |        |        |         |        |
|----------------------|--------|--------|--------|---------|--------|
| <b>Vertical</b>      |        |        |        |         |        |
| <b>Peak Detector</b> |        |        |        |         |        |
| 101.780              | -0.021 | 34.656 | 34.634 | -8.866  | 43.500 |
| 171.620              | -8.752 | 41.884 | 33.132 | -10.368 | 43.500 |
| 229.820              | -8.512 | 44.640 | 36.128 | -9.872  | 46.000 |
| 363.680              | -2.393 | 37.978 | 35.585 | -10.415 | 46.000 |
| 480.080              | -4.359 | 32.641 | 28.282 | -17.718 | 46.000 |
| 961.200              | 7.260  | 33.483 | 40.743 | -13.257 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
Test Item : General Radiated Emission  
Test Site : No.3 OATS  
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 152.220              | -10.135 | 41.859  | 31.724      | -11.776 | 43.500 |
| 402.480              | -2.263  | 33.788  | 31.525      | -14.475 | 46.000 |
| 513.060              | 1.550   | 30.172  | 31.722      | -14.278 | 46.000 |
| 625.580              | 1.770   | 28.788  | 30.558      | -15.442 | 46.000 |
| 697.360              | 3.171   | 27.379  | 30.550      | -15.450 | 46.000 |
| 961.200              | 6.450   | 43.013  | 49.463      | -4.537  | 54.000 |
| <b>Vertical</b>      |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 134.760              | -4.648  | 37.232  | 32.584      | -10.916 | 43.500 |
| 355.920              | -3.488  | 38.783  | 35.295      | -10.705 | 46.000 |
| 480.080              | -4.359  | 36.246  | 31.887      | -14.113 | 46.000 |
| 600.360              | -2.833  | 29.121  | 26.288      | -19.712 | 46.000 |
| 747.800              | 2.166   | 29.746  | 31.912      | -14.088 | 46.000 |
| 961.200              | 7.260   | 36.865  | 44.125      | -9.875  | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5220MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 171.620              | -10.242 | 44.542  | 34.300      | -9.200  | 43.500 |
| 406.360              | -2.500  | 35.772  | 33.272      | -12.728 | 46.000 |
| 559.620              | 1.664   | 33.160  | 34.824      | -11.176 | 46.000 |
| 608.120              | 4.384   | 29.852  | 34.236      | -11.764 | 46.000 |
| 720.640              | 3.511   | 31.804  | 35.315      | -10.685 | 46.000 |
| 961.200              | 6.450   | 43.648  | 50.098      | -3.902  | 54.000 |
| <b>Vertical</b>      |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 159.980              | -6.185  | 38.478  | 32.293      | -11.207 | 43.500 |
| 288.020              | -8.189  | 44.244  | 36.055      | -9.945  | 46.000 |
| 390.840              | -3.099  | 37.207  | 34.108      | -11.892 | 46.000 |
| 509.180              | -0.158  | 31.207  | 31.049      | -14.951 | 46.000 |
| 687.660              | 2.444   | 27.477  | 29.921      | -16.079 | 46.000 |
| 961.200              | 7.260   | 36.351  | 43.611      | -10.389 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5300MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 148.340              | -10.254 | 41.038  | 30.784      | -12.716 | 43.500 |
| 408.300              | -2.866  | 38.357  | 35.491      | -10.509 | 46.000 |
| 474.260              | 0.024   | 36.979  | 37.002      | -8.998  | 46.000 |
| 600.360              | 3.977   | 34.330  | 38.307      | -7.693  | 46.000 |
| 720.640              | 3.511   | 32.508  | 36.019      | -9.981  | 46.000 |
| 961.200              | 6.450   | 43.038  | 49.488      | -4.512  | 54.000 |

|                      |        |        |        |         |        |
|----------------------|--------|--------|--------|---------|--------|
| <b>Vertical</b>      |        |        |        |         |        |
| <b>Peak Detector</b> |        |        |        |         |        |
| 111.480              | -0.954 | 37.405 | 36.451 | -7.049  | 43.500 |
| 235.640              | -9.330 | 48.536 | 39.206 | -6.794  | 46.000 |
| 390.840              | -3.099 | 35.414 | 32.315 | -13.685 | 46.000 |
| 480.080              | -4.359 | 40.738 | 36.379 | -9.621  | 46.000 |
| 666.320              | -1.809 | 32.539 | 30.731 | -15.269 | 46.000 |
| 961.200              | 7.260  | 36.131 | 43.391 | -10.609 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) (5580MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 159.980              | -11.775 | 43.334  | 31.559      | -11.941 | 43.500 |
| 355.920              | -2.528  | 40.571  | 38.043      | -7.957  | 46.000 |
| 460.680              | 1.589   | 34.277  | 35.866      | -10.134 | 46.000 |
| 600.360              | 3.977   | 35.394  | 39.371      | -6.629  | 46.000 |
| 720.640              | 3.511   | 31.599  | 35.110      | -10.890 | 46.000 |
| 825.400              | 6.250   | 24.043  | 30.293      | -15.707 | 46.000 |
| <b>Vertical</b>      |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 159.980              | -6.185  | 41.531  | 35.346      | -8.154  | 43.500 |
| 288.020              | -8.189  | 43.397  | 35.208      | -10.792 | 46.000 |
| 365.620              | -2.179  | 40.213  | 38.034      | -7.966  | 46.000 |
| 480.080              | -4.359  | 36.693  | 32.334      | -13.666 | 46.000 |
| 681.840              | 1.484   | 28.552  | 30.036      | -15.964 | 46.000 |
| 961.200              | 7.260   | 36.174  | 43.434      | -10.566 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5190MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 101.780              | -7.141  | 42.502  | 35.361      | -8.139  | 43.500 |
| 152.220              | -10.135 | 40.694  | 30.559      | -12.941 | 43.500 |
| 369.500              | -1.098  | 35.487  | 34.389      | -11.611 | 46.000 |
| 468.440              | 1.195   | 33.790  | 34.985      | -11.015 | 46.000 |
| 600.360              | 3.977   | 36.226  | 40.203      | -5.797  | 46.000 |
| 961.200              | 6.450   | 42.479  | 48.929      | -5.071  | 54.000 |
| <b>Vertical</b>      |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 119.240              | -3.541  | 34.451  | 30.910      | -12.590 | 43.500 |
| 237.580              | -8.970  | 49.206  | 40.236      | -5.764  | 46.000 |
| 357.860              | -3.734  | 40.629  | 36.895      | -9.105  | 46.000 |
| 480.080              | -4.359  | 35.967  | 31.608      | -14.392 | 46.000 |
| 687.660              | 2.444   | 28.304  | 30.748      | -15.252 | 46.000 |
| 831.220              | 2.561   | 33.565  | 36.126      | -9.874  | 46.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5270MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 49.400               | -11.018 | 44.021  | 33.003      | -6.997  | 40.000 |
| 225.940              | -9.878  | 45.873  | 35.994      | -10.006 | 46.000 |
| 398.600              | -2.268  | 36.141  | 33.873      | -12.127 | 46.000 |
| 600.360              | 3.977   | 35.177  | 39.154      | -6.846  | 46.000 |
| 747.800              | 3.296   | 29.772  | 33.068      | -12.932 | 46.000 |
| 961.200              | 6.450   | 42.999  | 49.449      | -4.551  | 54.000 |

|                      |        |        |        |         |        |
|----------------------|--------|--------|--------|---------|--------|
| <b>Vertical</b>      |        |        |        |         |        |
| <b>Peak Detector</b> |        |        |        |         |        |
| 165.800              | -7.719 | 43.118 | 35.399 | -8.101  | 43.500 |
| 276.380              | -8.653 | 45.953 | 37.300 | -8.700  | 46.000 |
| 369.500              | -2.868 | 38.155 | 35.287 | -10.713 | 46.000 |
| 480.080              | -4.359 | 39.388 | 35.029 | -10.971 | 46.000 |
| 664.380              | -1.918 | 34.414 | 32.496 | -13.504 | 46.000 |
| 961.200              | 7.260  | 36.736 | 43.996 | -10.004 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) (5670MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 175.500              | -10.017 | 46.537  | 36.519      | -6.981  | 43.500 |
| 396.660              | -2.296  | 35.982  | 33.686      | -12.314 | 46.000 |
| 476.200              | -0.252  | 39.170  | 38.918      | -7.082  | 46.000 |
| 600.360              | 3.977   | 33.844  | 37.821      | -8.179  | 46.000 |
| 666.320              | 2.031   | 31.468  | 33.500      | -12.500 | 46.000 |
| 961.200              | 6.450   | 43.395  | 49.845      | -4.155  | 54.000 |

|                      |        |        |        |         |        |
|----------------------|--------|--------|--------|---------|--------|
| <b>Vertical</b>      |        |        |        |         |        |
| <b>Peak Detector</b> |        |        |        |         |        |
| 169.680              | -8.728 | 42.051 | 33.323 | -10.177 | 43.500 |
| 299.660              | -6.855 | 42.258 | 35.403 | -10.597 | 46.000 |
| 373.380              | -2.373 | 35.882 | 33.509 | -12.491 | 46.000 |
| 503.360              | -0.852 | 29.721 | 28.869 | -17.131 | 46.000 |
| 637.220              | -3.649 | 31.262 | 27.613 | -18.387 | 46.000 |
| 961.200              | 7.260  | 34.913 | 42.173 | -11.827 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps) (5720MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 222.060              | -10.439 | 45.017  | 34.578      | -11.422 | 46.000 |
| 505.300              | 0.308   | 31.268  | 31.576      | -14.424 | 46.000 |
| 664.380              | 2.062   | 29.952  | 32.014      | -13.986 | 46.000 |
| 747.800              | 3.296   | 29.620  | 32.916      | -13.084 | 46.000 |
| 858.380              | 5.972   | 31.844  | 37.816      | -8.184  | 46.000 |
| 961.200              | 6.450   | 43.202  | 49.652      | -4.348  | 54.000 |

|                      |        |        |        |         |        |
|----------------------|--------|--------|--------|---------|--------|
| <b>Vertical</b>      |        |        |        |         |        |
| <b>Peak Detector</b> |        |        |        |         |        |
| 101.780              | -0.021 | 34.656 | 34.634 | -8.866  | 43.500 |
| 171.620              | -8.752 | 41.884 | 33.132 | -10.368 | 43.500 |
| 229.820              | -8.512 | 44.640 | 36.128 | -9.872  | 46.000 |
| 363.680              | -2.393 | 37.978 | 35.585 | -10.415 | 46.000 |
| 480.080              | -4.359 | 32.641 | 28.282 | -17.718 | 46.000 |
| 961.200              | 7.260  | 33.483 | 40.743 | -13.257 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps) (5710MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 152.220              | -10.135 | 41.859  | 31.724      | -11.776 | 43.500 |
| 402.480              | -2.263  | 33.788  | 31.525      | -14.475 | 46.000 |
| 513.060              | 1.550   | 30.172  | 31.722      | -14.278 | 46.000 |
| 625.580              | 1.770   | 28.788  | 30.558      | -15.442 | 46.000 |
| 697.360              | 3.171   | 27.379  | 30.550      | -15.450 | 46.000 |
| 961.200              | 6.450   | 43.013  | 49.463      | -4.537  | 54.000 |
| <b>Vertical</b>      |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 134.760              | -4.648  | 37.232  | 32.584      | -10.916 | 43.500 |
| 355.920              | -3.488  | 38.783  | 35.295      | -10.705 | 46.000 |
| 480.080              | -4.359  | 36.246  | 31.887      | -14.113 | 46.000 |
| 600.360              | -2.833  | 29.121  | 26.288      | -19.712 | 46.000 |
| 747.800              | 2.166   | 29.746  | 31.912      | -14.088 | 46.000 |
| 961.200              | 7.260   | 36.865  | 44.125      | -9.875  | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5210MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 148.340              | -10.254 | 41.038  | 30.784      | -12.716 | 43.500 |
| 408.300              | -2.866  | 38.357  | 35.491      | -10.509 | 46.000 |
| 474.260              | 0.024   | 36.979  | 37.002      | -8.998  | 46.000 |
| 600.360              | 3.977   | 34.330  | 38.307      | -7.693  | 46.000 |
| 720.640              | 3.511   | 32.508  | 36.019      | -9.981  | 46.000 |
| 961.200              | 6.450   | 43.038  | 49.488      | -4.512  | 54.000 |

|                      |        |        |        |         |        |
|----------------------|--------|--------|--------|---------|--------|
| <b>Vertical</b>      |        |        |        |         |        |
| <b>Peak Detector</b> |        |        |        |         |        |
| 111.480              | -0.954 | 37.405 | 36.451 | -7.049  | 43.500 |
| 235.640              | -9.330 | 48.536 | 39.206 | -6.794  | 46.000 |
| 390.840              | -3.099 | 35.414 | 32.315 | -13.685 | 46.000 |
| 480.080              | -4.359 | 40.738 | 36.379 | -9.621  | 46.000 |
| 666.320              | -1.809 | 32.539 | 30.731 | -15.269 | 46.000 |
| 961.200              | 7.260  | 36.131 | 43.391 | -10.609 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5290MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 159.980              | -11.775 | 43.334  | 31.559      | -11.941 | 43.500 |
| 355.920              | -2.528  | 40.571  | 38.043      | -7.957  | 46.000 |
| 460.680              | 1.589   | 34.277  | 35.866      | -10.134 | 46.000 |
| 600.360              | 3.977   | 35.394  | 39.371      | -6.629  | 46.000 |
| 720.640              | 3.511   | 31.599  | 35.110      | -10.890 | 46.000 |
| 825.400              | 6.250   | 24.043  | 30.293      | -15.707 | 46.000 |
| <b>Vertical</b>      |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 159.980              | -6.185  | 41.531  | 35.346      | -8.154  | 43.500 |
| 288.020              | -8.189  | 43.397  | 35.208      | -10.792 | 46.000 |
| 365.620              | -2.179  | 40.213  | 38.034      | -7.966  | 46.000 |
| 480.080              | -4.359  | 36.693  | 32.334      | -13.666 | 46.000 |
| 681.840              | 1.484   | 28.552  | 30.036      | -15.964 | 46.000 |
| 961.200              | 7.260   | 36.174  | 43.434      | -10.566 | 54.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
Test Item : General Radiated Emission  
Test Site : No.3 OATS  
Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) (5690MHz)

| Frequency            | Correct | Reading | Measurement | Margin  | Limit  |
|----------------------|---------|---------|-------------|---------|--------|
| MHz                  | Factor  | Level   | Level       |         |        |
|                      | dB      | dBμV    | dBμV/m      | dB      | dBμV/m |
| <b>Horizontal</b>    |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 235.640              | -8.540  | 46.898  | 38.358      | -7.642  | 46.000 |
| 348.160              | -2.268  | 38.870  | 36.602      | -9.398  | 46.000 |
| 480.080              | -0.329  | 39.590  | 39.261      | -6.739  | 46.000 |
| 600.360              | 3.977   | 32.830  | 36.807      | -9.193  | 46.000 |
| 747.800              | 3.296   | 33.520  | 36.816      | -9.184  | 46.000 |
| 959.260              | 6.294   | 30.739  | 37.033      | -8.967  | 46.000 |
| <b>Vertical</b>      |         |         |             |         |        |
| <b>Peak Detector</b> |         |         |             |         |        |
| 123.120              | -3.921  | 39.197  | 35.276      | -8.224  | 43.500 |
| 260.860              | -7.462  | 46.686  | 39.224      | -6.776  | 46.000 |
| 311.300              | -6.856  | 42.177  | 35.321      | -10.679 | 46.000 |
| 406.360              | -6.660  | 32.604  | 25.944      | -20.056 | 46.000 |
| 507.240              | -0.471  | 31.801  | 31.330      | -14.670 | 46.000 |
| 747.800              | 2.166   | 32.868  | 35.034      | -10.966 | 46.000 |

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

## 7. Band Edge

### 7.1. Test Equipment

#### RF Conducted Measurement

The following test equipments are used during the band edge tests:

|   | Equipment         | Manufacturer | Model No./Serial No. | Last Cal.  |
|---|-------------------|--------------|----------------------|------------|
|   | Spectrum Analyzer | R&S          | FSP40 / 100170       | Jun, 2014  |
|   | Spectrum Analyzer | Agilent      | E4407B / US39440758  | Jun, 2014  |
| X | Spectrum Analyzer | Agilent      | N9010A / MY48030495  | Apr., 2014 |

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

#### RF Radiated Measurement:

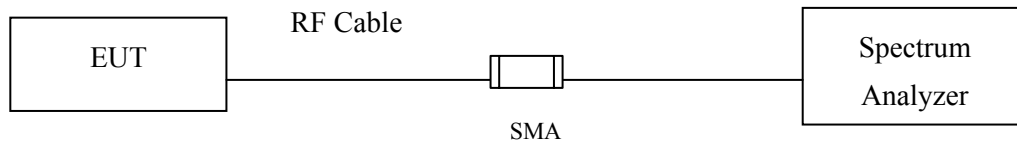
The following test equipments are used during the band edge tests:

| Test Site |   | Equipment         | Manufacturer    | Model No./Serial No.           | Last Cal.  |
|-----------|---|-------------------|-----------------|--------------------------------|------------|
| Site # 3  |   | Bilog Antenna     | Schaffner Chase | CBL6112B/2673                  | Sep., 2013 |
|           | X | Horn Antenna      | Schwarzbeck     | BBHA9120D/D305                 | Sep., 2013 |
|           |   | Horn Antenna      | Schwarzbeck     | BBHA9170/208                   | Jul., 2014 |
|           |   | Pre-Amplifier     | QTK             | QTK-AMP-03 / 0003              | May, 2014  |
|           | X | Pre-Amplifier     | QTK             | AP-180C / CHM_0906076          | Sep., 2013 |
|           |   | Pre-Amplifier     | MITEQ           | AMF-4D-180400-45-6P/<br>925975 | Mar, 2014  |
|           | X | Spectrum Analyzer | Agilent         | E4407B / US39440758            | May, 2014  |
|           |   | Test Receiver     | R & S           | ESCS 30/ 825442/018            | Sep., 2013 |
|           | X | Coaxial Cable     | Quietek         | QTK-CABLE/ CAB5                | Feb., 2014 |
|           | X | Controller        | Quietek         | QTK-CONTROLLER/ CTRL3          | N/A        |
|           | X | Coaxial Switch    | Anritsu         | MP59B/6200265729               | N/A        |

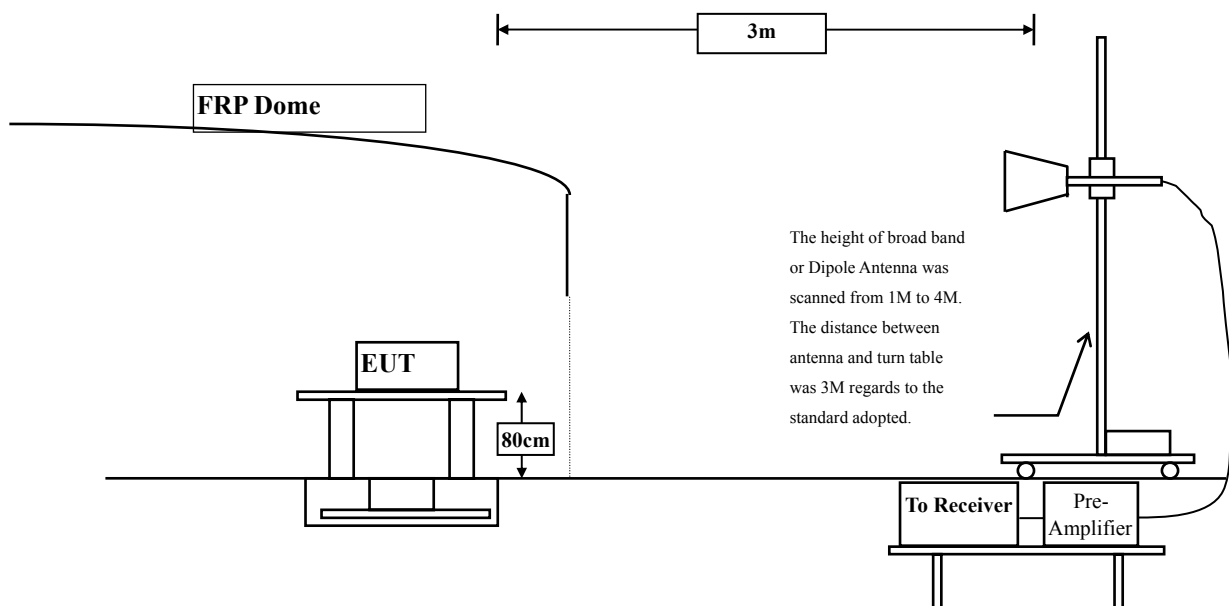
- Note:
1. All instruments are calibrated every one year.
  2. The test instruments marked by "X" are used to measure the final test results.

## 7.2. Test Setup

### RF Conducted Measurement



### RF Radiated Measurement:



### 7.3. Limits

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

Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

| <b>FCC Part 15 Subpart C Paragraph 15.209(a) Limits</b> |                                      |                                 |
|---|--------------------------------------|---------------------------------|
| Frequency<br>MHz  | Field strength<br>(microvolts/meter) | Measurement distance<br>(meter) |
| 0.009-0.490   | 2400/F(kHz)                          | 300                             |
| 0.490-1.705   | 24000/F(kHz)                         | 30                              |
| 1.705-30  | 30                                   | 30                              |
| 30-88   | 100                                  | 3                               |
| 88-216  | 150                                  | 3                               |
| 216-960   | 200                                  | 3                               |
| Above 960   | 500                                  | 3                               |

Remarks :

1. RF Voltage (dBμV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

### 7.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2009 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

## 7.5. Uncertainty

$\pm 3.8$  dB below 1GHz

$\pm 3.9$  dB above 1GHz

## 7.6. Test Result of Band Edge

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

### RF Radiated Measurement (Horizontal):

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak)    | 5148.800        | 3.345               | 53.974               | 57.319                  | 74.00               | 54.00                  | Pass   |
| 36 (Peak)    | 5150.000        | 3.340               | 52.114               | 55.454                  | 74.00               | 54.00                  | Pass   |
| 36 (Peak)    | 5185.600        | 3.215               | 100.013              | 103.227                 | --                  | --                     | --     |
| 36 (Average) | 5150.000        | 3.340               | 34.141               | 37.481                  | 74.00               | 54.00                  | Pass   |
| 36 (Average) | 5186.600        | 3.211               | 90.973               | 94.184                  | --                  | --                     | --     |

Figure Channel 36:

Horizontal (Peak)

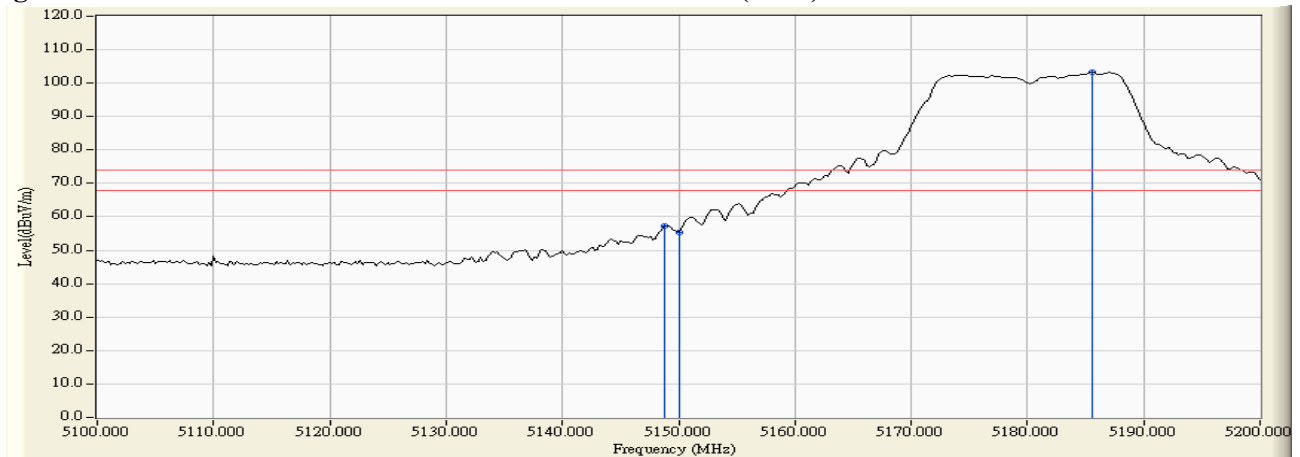
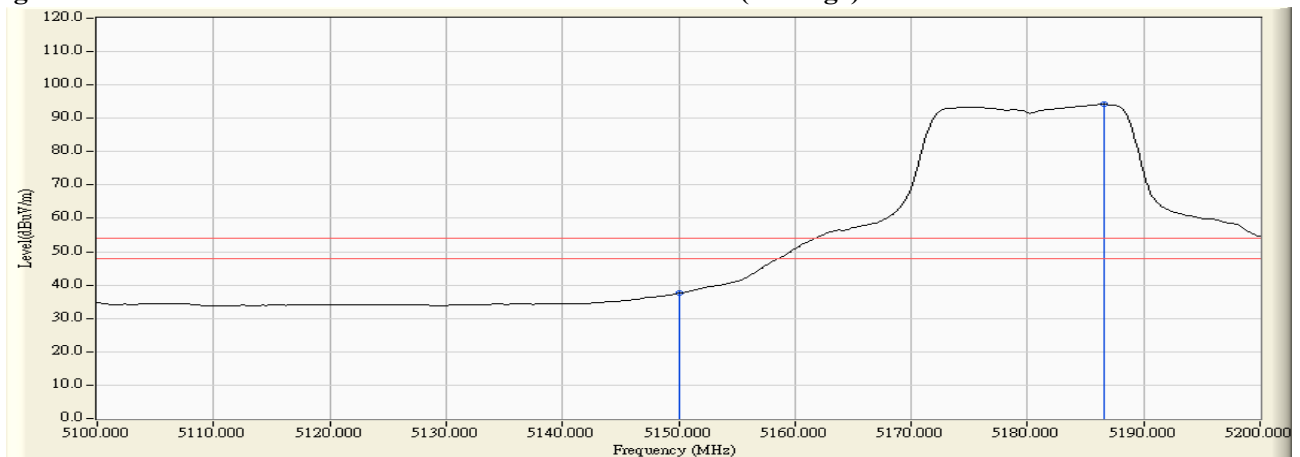


Figure Channel 36:

Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

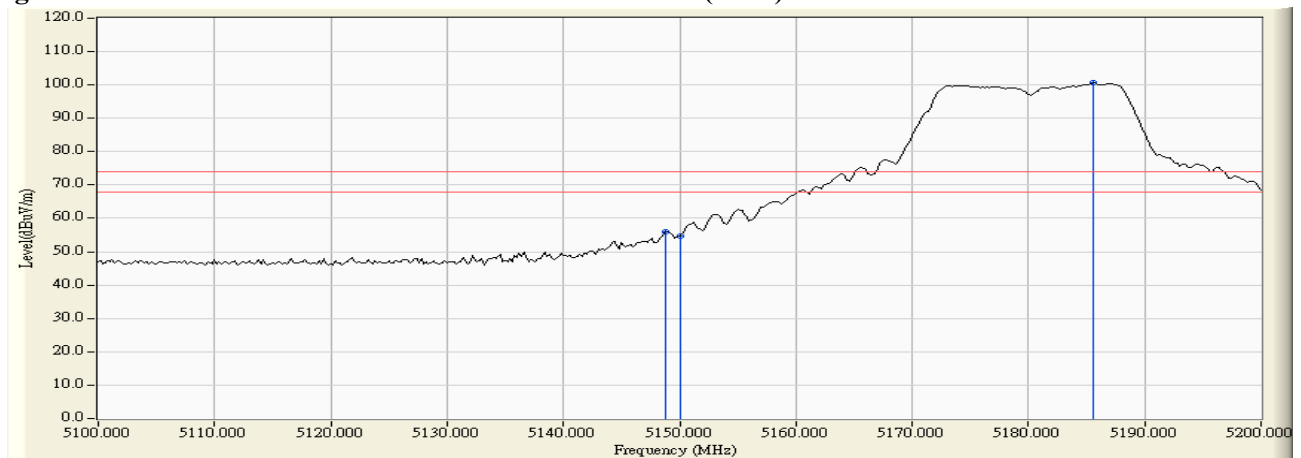


Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

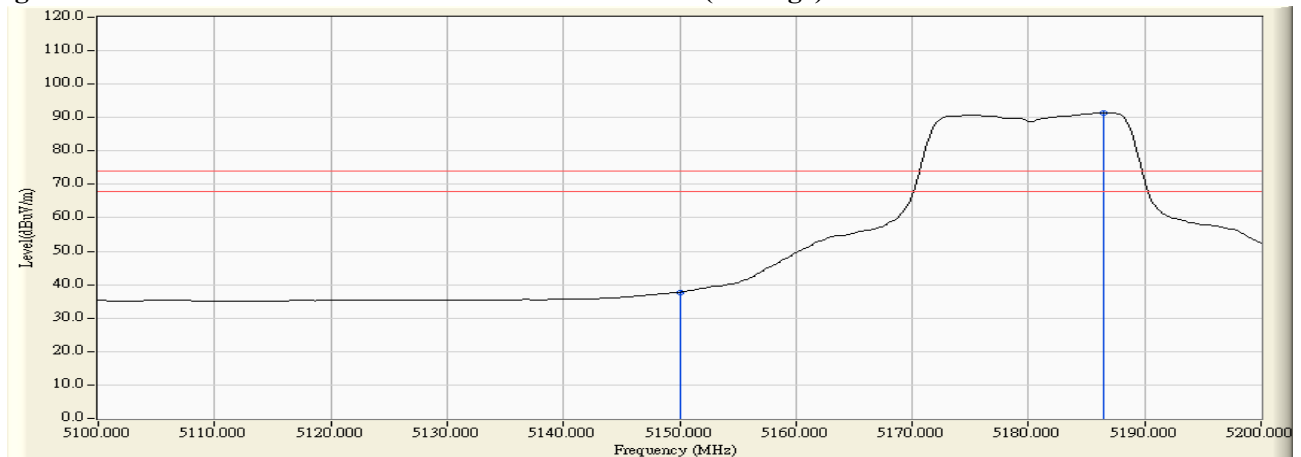
**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak)    | 5148.800        | 5.257               | 50.875               | 56.132                  | 74.00               | 54.00                  | Pass   |
| 36 (Peak)    | 5150.000        | 5.260               | 49.412               | 54.672                  | 74.00               | 54.00                  | Pass   |
| 36 (Peak)    | 5185.600        | 5.358               | 95.194               | 100.551                 | --                  | --                     | --     |
| 36 (Average) | 5150.000        | 5.260               | 32.524               | 37.784                  | 74.00               | 54.00                  | Pass   |
| 36 (Average) | 5186.400        | 5.359               | 86.146               | 91.505                  | --                  | --                     | --     |

**Figure Channel 36: Vertical (Peak)**



**Figure Channel 36: Vertical (Average)**



Note:

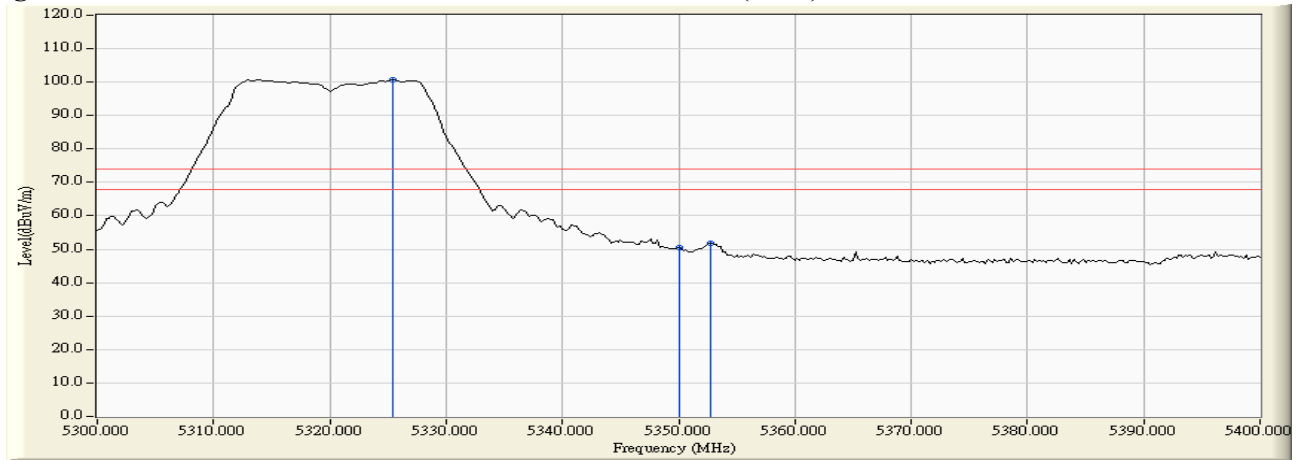
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

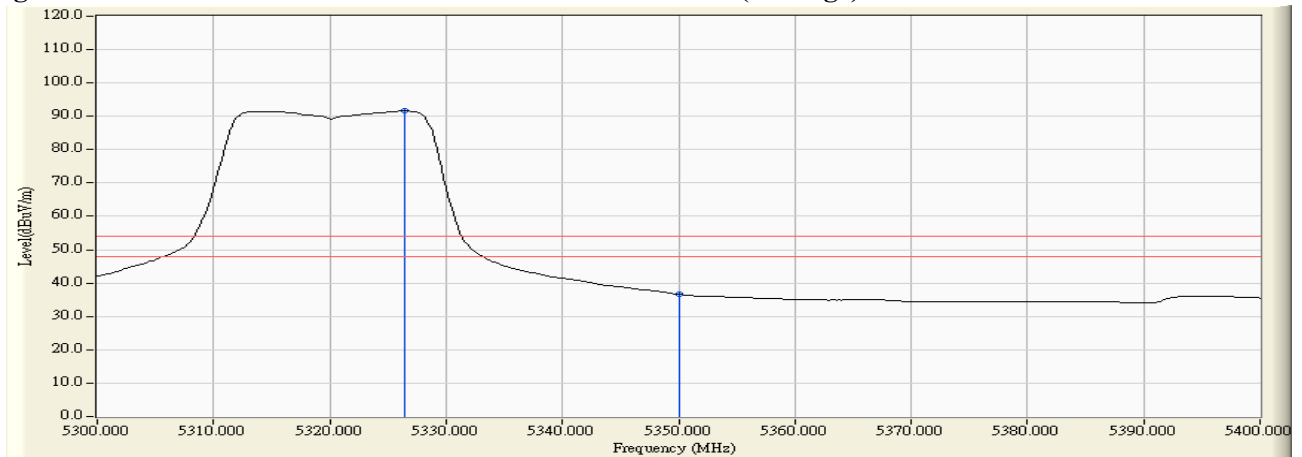
**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak)    | 5325.400        | 3.795               | 96.804               | 100.599                 | --                  | --                     | --     |
| 64 (Peak)    | 5350.000        | 3.716               | 46.836               | 50.553                  | 74.00               | 54.00                  | Pass   |
| 64 (Peak)    | 5352.800        | 3.707               | 48.202               | 51.909                  | 74.00               | 54.00                  | Pass   |
| 64 (Average) | 5326.400        | 3.792               | 87.835               | 91.627                  | --                  | --                     | --     |
| 64 (Average) | 5350.000        | 3.716               | 32.873               | 36.590                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 64: Horizontal (Peak)**



**Figure Channel 64: Horizontal (Average)**



**Note:**

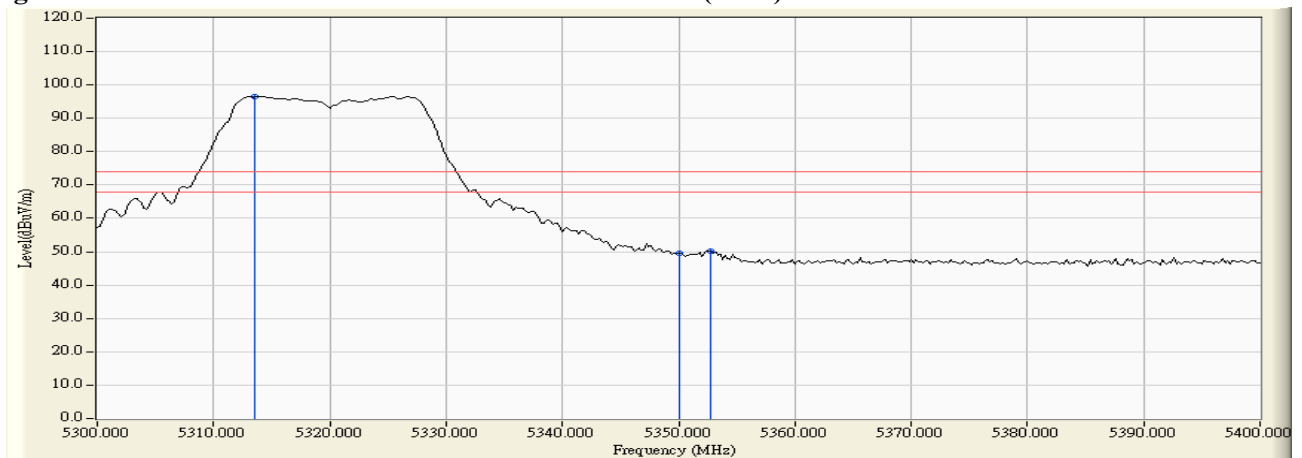
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

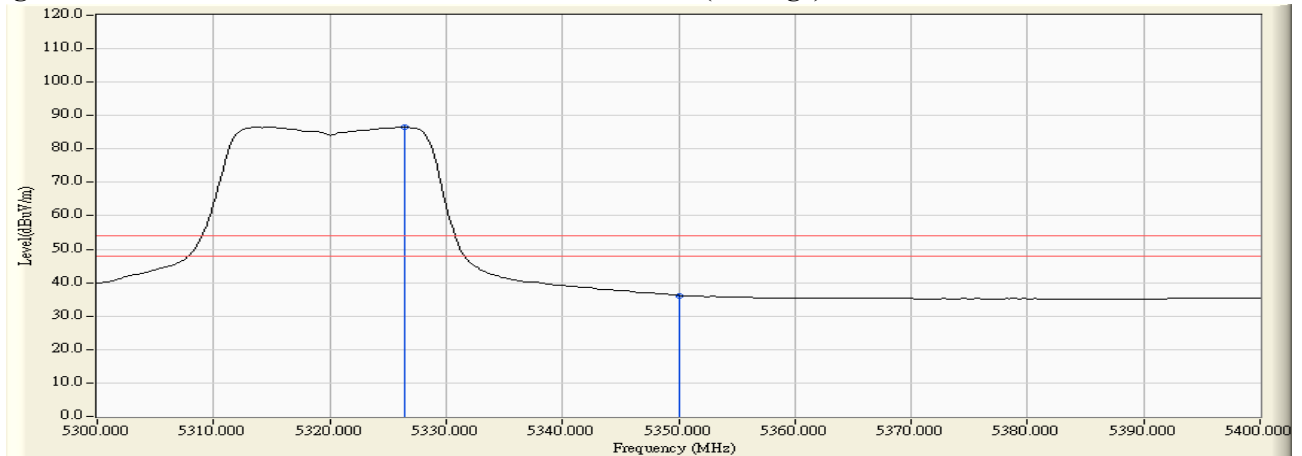
**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak)    | 5313.600        | 5.738               | 90.800               | 96.537                  | --                  | --                     | --     |
| 64 (Peak)    | 5350.000        | 5.691               | 43.759               | 49.451                  | 74.00               | 54.00                  | Pass   |
| 64 (Peak)    | 5352.800        | 5.688               | 44.613               | 50.301                  | 74.00               | 54.00                  | Pass   |
| 64 (Average) | 5326.400        | 5.721               | 80.816               | 86.537                  | --                  | --                     | --     |
| 64 (Average) | 5350.000        | 5.691               | 30.494               | 36.186                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 64: Vertical (Peak)**



**Figure Channel 64: Vertical (Average)**



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

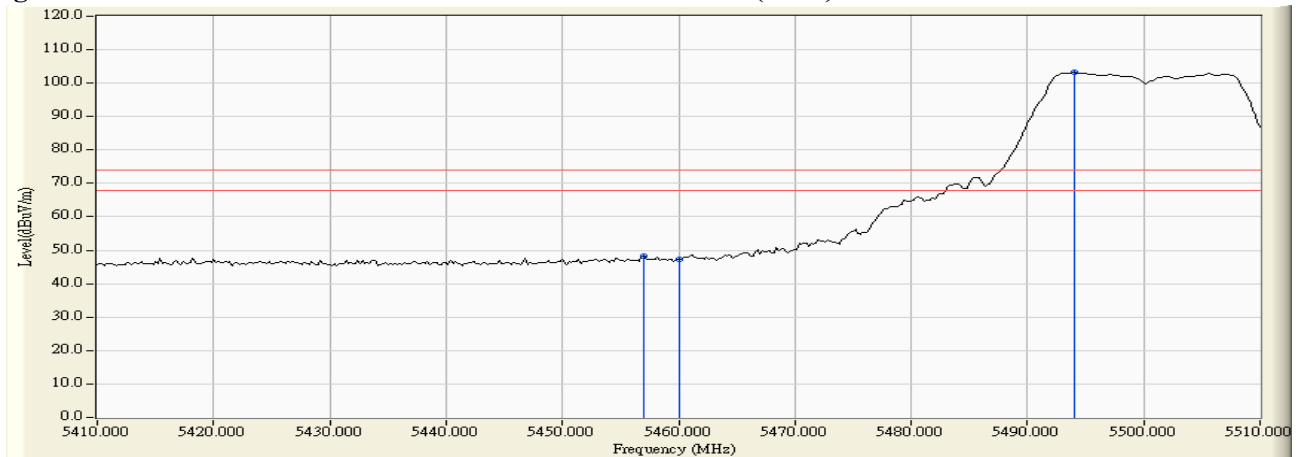
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

**RF Radiated Measurement (Horizontal):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak)    | 5457.000        | 4.314               | 44.077               | 48.391                  | 74.00               | 54.00                  | Pass   |
| 100 (Peak)    | 5460.000        | 4.354               | 42.784               | 47.138                  | 74.00               | 54.00                  | Pass   |
| 100 (Peak)    | 5494.000        | 4.773               | 98.360               | 103.133                 | --                  | --                     | --     |
| 100 (Average) | 5460.000        | 4.354               | 30.622               | 34.976                  | 74.00               | 54.00                  | Pass   |
| 100 (Average) | 5495.200        | 4.781               | 89.212               | 93.993                  | --                  | --                     | --     |

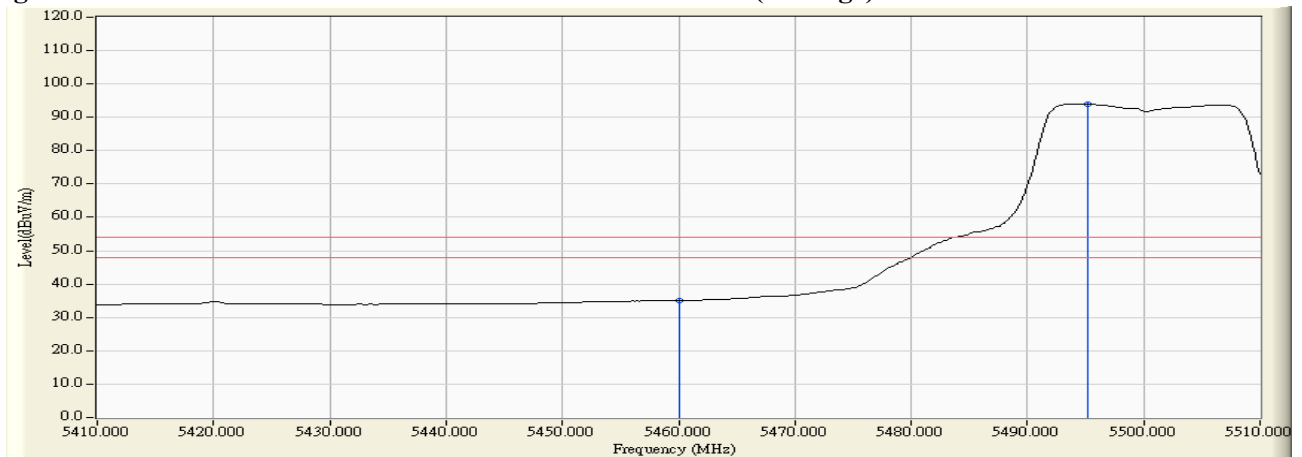
**Figure Channel 100:**

**Horizontal (Peak)**



**Figure Channel 100:**

**Horizontal (Average)**



Note:

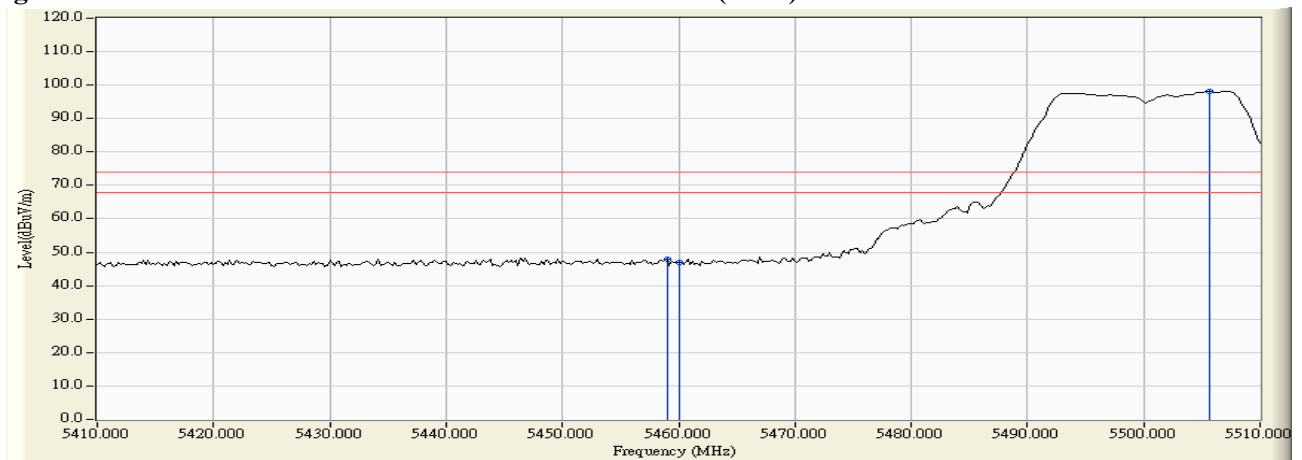
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

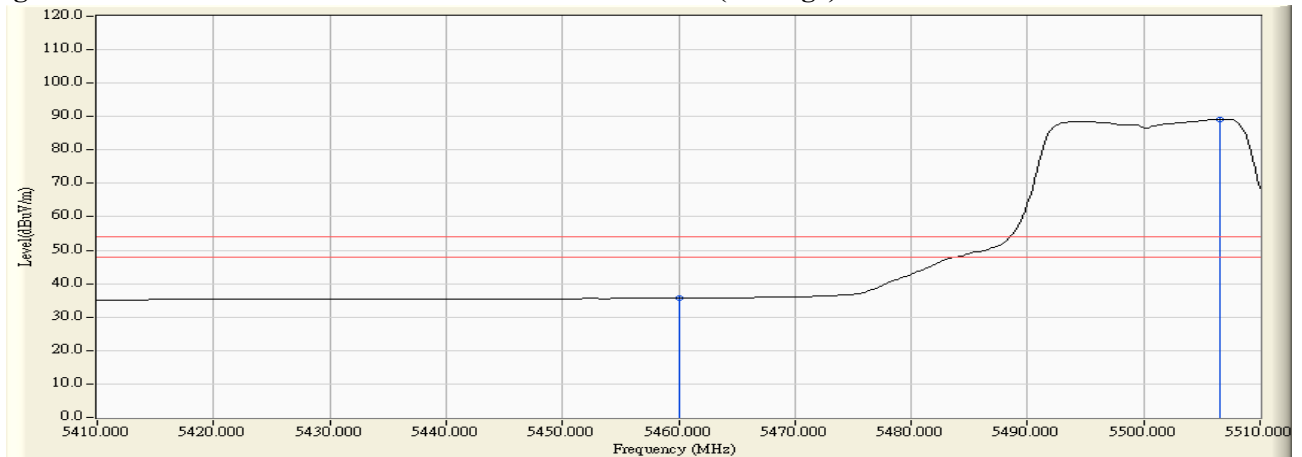
**RF Radiated Measurement (Vertical):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak)    | 5459.000        | 6.033               | 41.760               | 47.794                  | 74.00               | 54.00                  | Pass   |
| 100 (Peak)    | 5460.000        | 6.041               | 40.887               | 46.928                  | 74.00               | 54.00                  | Pass   |
| 100 (Peak)    | 5505.600        | 6.286               | 91.957               | 98.243                  | --                  | --                     | --     |
| 100 (Average) | 5460.000        | 6.041               | 29.556               | 35.597                  | 74.00               | 54.00                  | Pass   |
| 100 (Average) | 5506.600        | 6.280               | 82.985               | 89.265                  | --                  | --                     | --     |

**Figure Channel 100: Vertical (Peak)**



**Figure Channel 100: Vertical (Average)**



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

**RF Radiated Measurement:**

|            | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|------------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Horizontal | 5470.000           | 18.334                 | -76.242                | -57.908                  | -30.908        | -27.000          | Pass   |

|          | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|----------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Vertical | 5470.000           | 19.335                 | -57.390                | -38.055                  | -11.055        | -27.000          | Pass   |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 140

**RF Radiated Measurement:**

|            | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|------------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Horizontal | 5725.000           | 18.649                 | -77.257                | -58.608                  | -31.608        | -27.000          | Pass   |

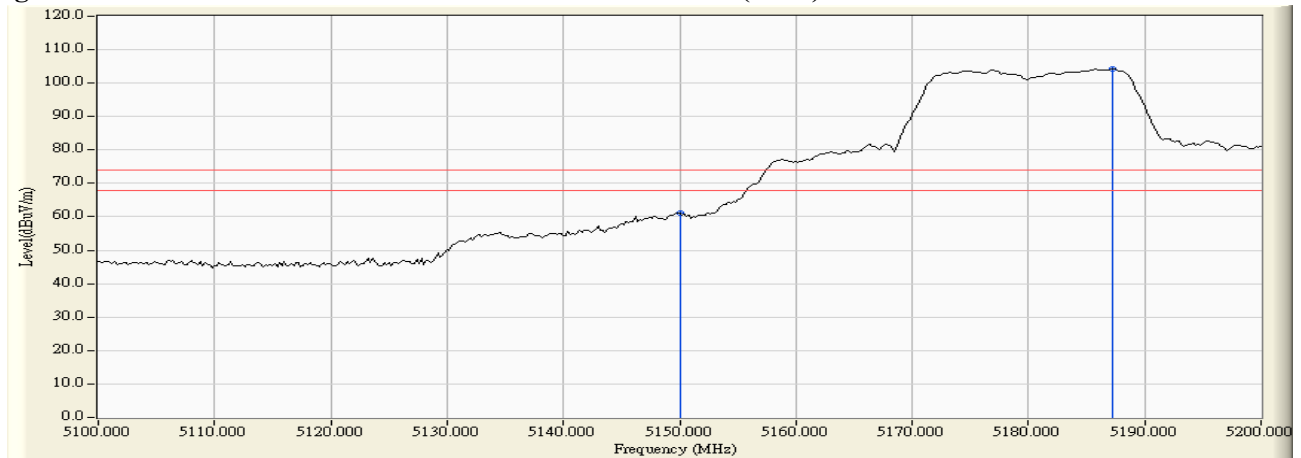
|          | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|----------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Vertical | 5725.000           | 19.372                 | -70.516                | -51.144                  | -24.144        | -27.000          | Pass   |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 36

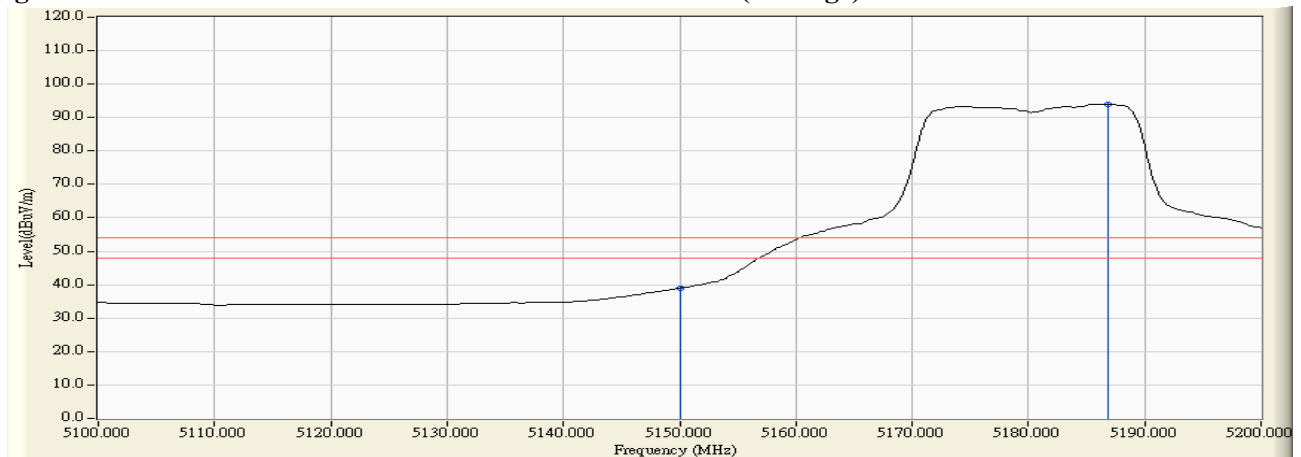
**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak)    | 5150.000        | 3.340               | 57.833               | 61.173                  | 74.00               | 54.00                  | Pass   |
| 36 (Peak)    | 5187.200        | 3.208               | 101.070              | 104.279                 | --                  | --                     | --     |
| 36 (Average) | 5150.000        | 3.340               | 35.608               | 38.948                  | 74.00               | 54.00                  | Pass   |
| 36 (Average) | 5186.800        | 3.210               | 90.857               | 94.067                  | --                  | --                     | --     |

**Figure Channel 36: Horizontal (Peak)**



**Figure Channel 36: Horizontal (Average)**



**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

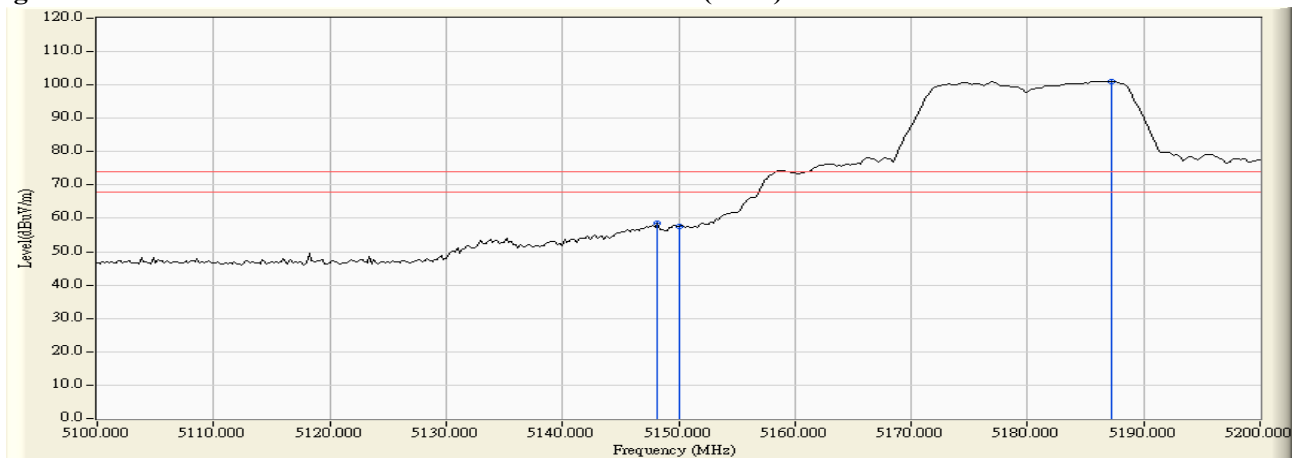


Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 36

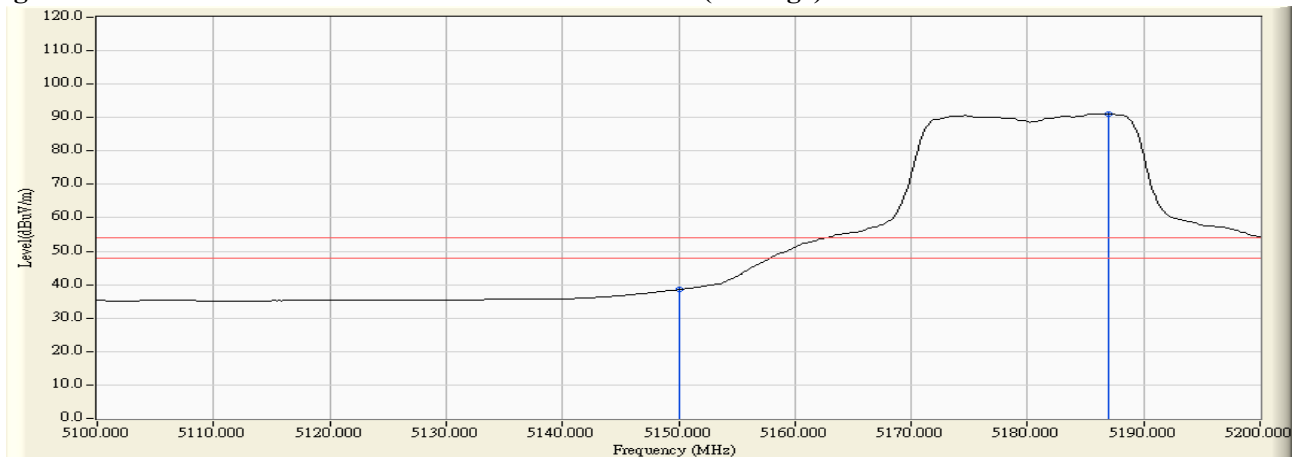
**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak)    | 5148.200        | 5.255               | 53.405               | 58.660                  | 74.00               | 54.00                  | Pass   |
| 36 (Peak)    | 5150.000        | 5.260               | 52.373               | 57.633                  | 74.00               | 54.00                  | Pass   |
| 36 (Peak)    | 5187.200        | 5.361               | 95.812               | 101.174                 | --                  | --                     | --     |
| 36 (Average) | 5150.000        | 5.260               | 33.263               | 38.523                  | 74.00               | 54.00                  | Pass   |
| 36 (Average) | 5187.000        | 5.361               | 85.802               | 91.163                  | --                  | --                     | --     |

**Figure Channel 36: Vertical (Peak)**



**Figure Channel 36: Vertical (Average)**



**Note:**

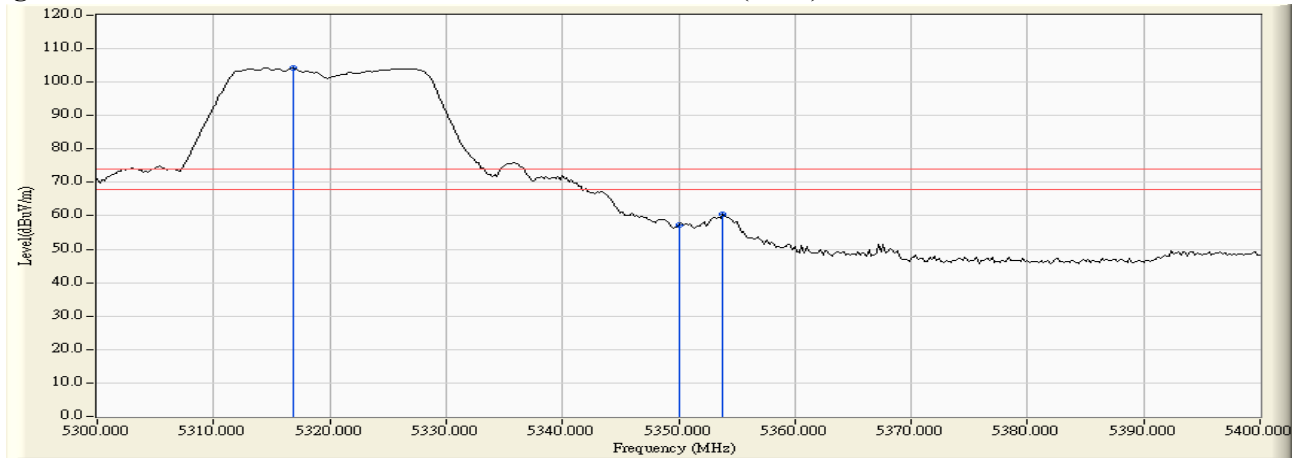
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 64

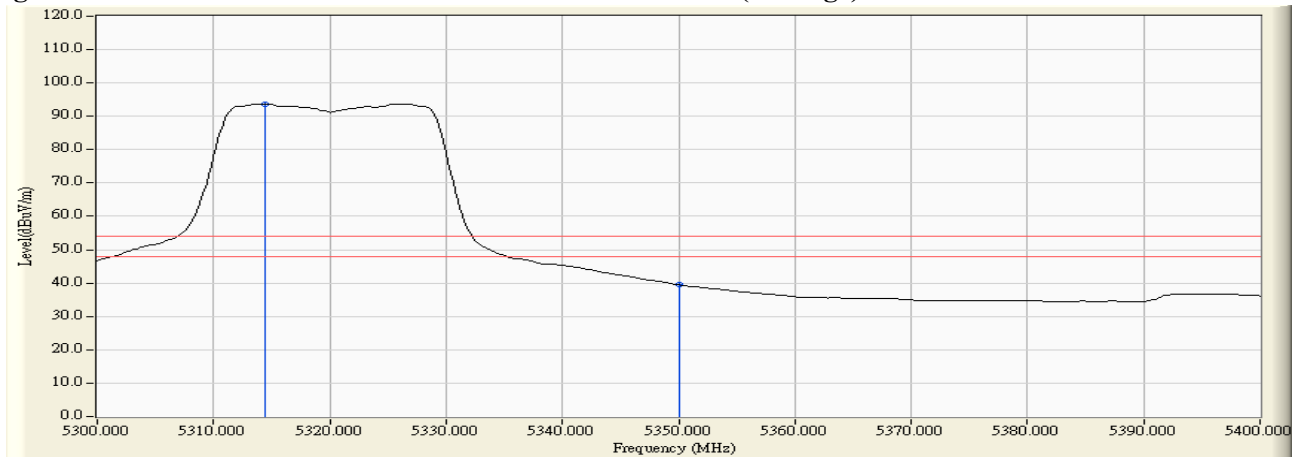
**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak)    | 5316.800        | 3.823               | 100.375              | 104.197                 | --                  | --                     | --     |
| 64 (Peak)    | 5350.000        | 3.716               | 53.621               | 57.338                  | 74.00               | 54.00                  | Pass   |
| 64 (Peak)    | 5353.800        | 3.704               | 56.624               | 60.328                  | 74.00               | 54.00                  | Pass   |
| 64 (Average) | 5314.400        | 3.831               | 89.831               | 93.661                  | --                  | --                     | --     |
| 64 (Average) | 5350.000        | 3.716               | 35.776               | 39.493                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 64: Horizontal (Peak)**



**Figure Channel 64: Horizontal (Average)**



**Note:**

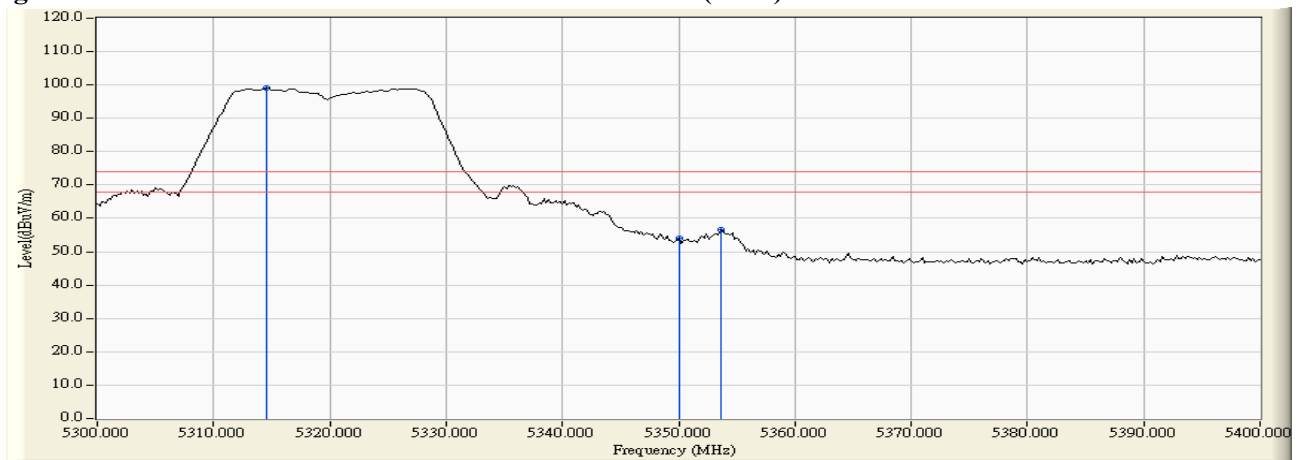
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 64

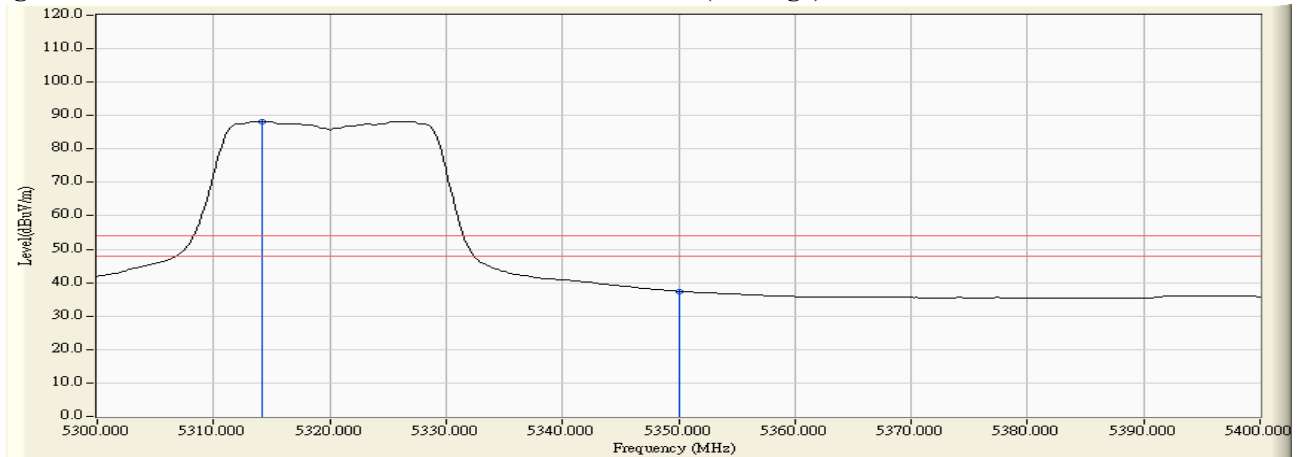
**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak)    | 5314.600        | 5.737               | 93.211               | 98.947                  | --                  | --                     | --     |
| 64 (Peak)    | 5350.000        | 5.691               | 48.360               | 54.052                  | 74.00               | 54.00                  | Pass   |
| 64 (Peak)    | 5353.600        | 5.687               | 50.978               | 56.665                  | 74.00               | 54.00                  | Pass   |
| 64 (Average) | 5314.200        | 5.737               | 82.500               | 88.237                  | --                  | --                     | --     |
| 64 (Average) | 5350.000        | 5.691               | 31.727               | 37.419                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 64: Vertical (Peak)**



**Figure Channel 64: Vertical (Average)**



Note:

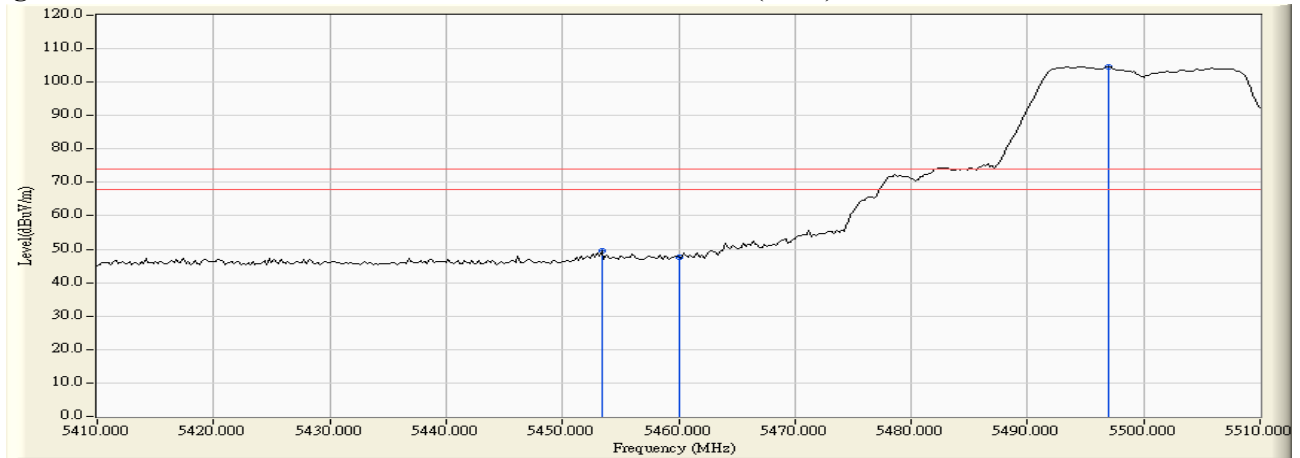
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 100

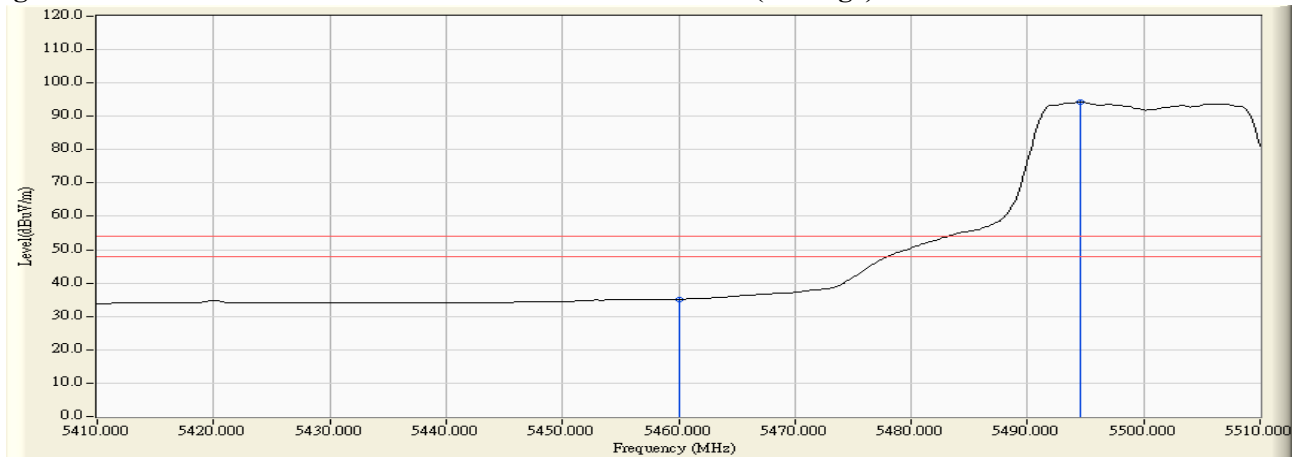
**RF Radiated Measurement (Horizontal):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak)    | 5453.400        | 4.266               | 45.142               | 49.408                  | 74.00               | 54.00                  | Pass   |
| 100 (Peak)    | 5460.000        | 4.354               | 43.401               | 47.755                  | 74.00               | 54.00                  | Pass   |
| 100 (Peak)    | 5497.000        | 4.794               | 99.890               | 104.684                 | --                  | --                     | --     |
| 100 (Average) | 5460.000        | 4.354               | 30.820               | 35.174                  | 74.00               | 54.00                  | Pass   |
| 100 (Average) | 5494.600        | 4.777               | 89.373               | 94.150                  | --                  | --                     | --     |

**Figure Channel 100: Horizontal (Peak)**



**Figure Channel 100: Horizontal (Average)**



**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

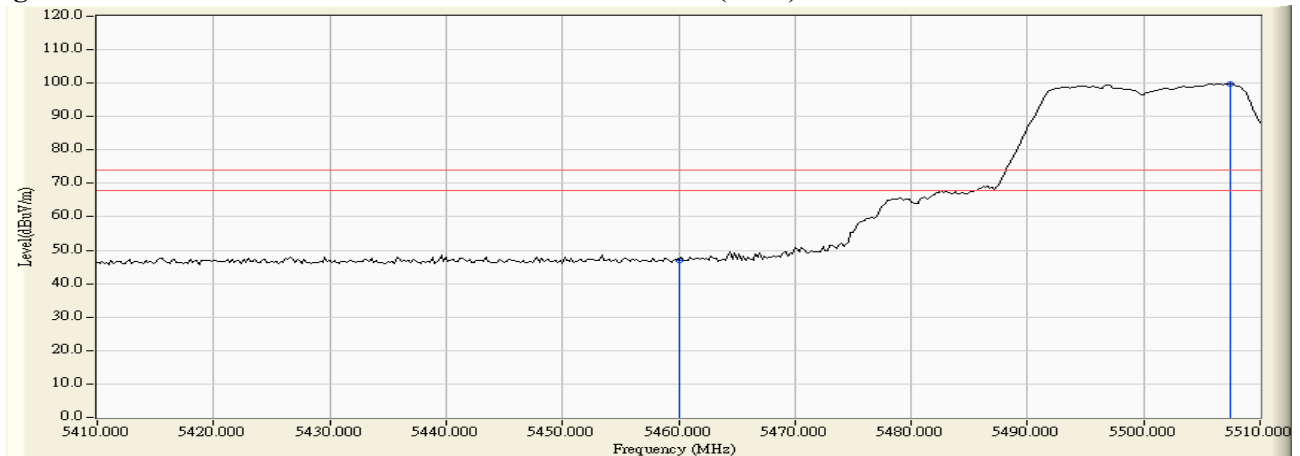
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 100

**RF Radiated Measurement (Vertical):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak)    | 5460.000        | 6.041               | 40.920               | 46.961                  | 74.00               | 54.00                  | Pass   |
| 100 (Peak)    | 5507.400        | 6.275               | 93.572               | 99.847                  | --                  | --                     | --     |
| 100 (Average) | 5460.000        | 6.041               | 29.612               | 35.653                  | 74.00               | 54.00                  | Pass   |
| 100 (Average) | 5505.600        | 6.286               | 83.003               | 89.289                  | --                  | --                     | --     |

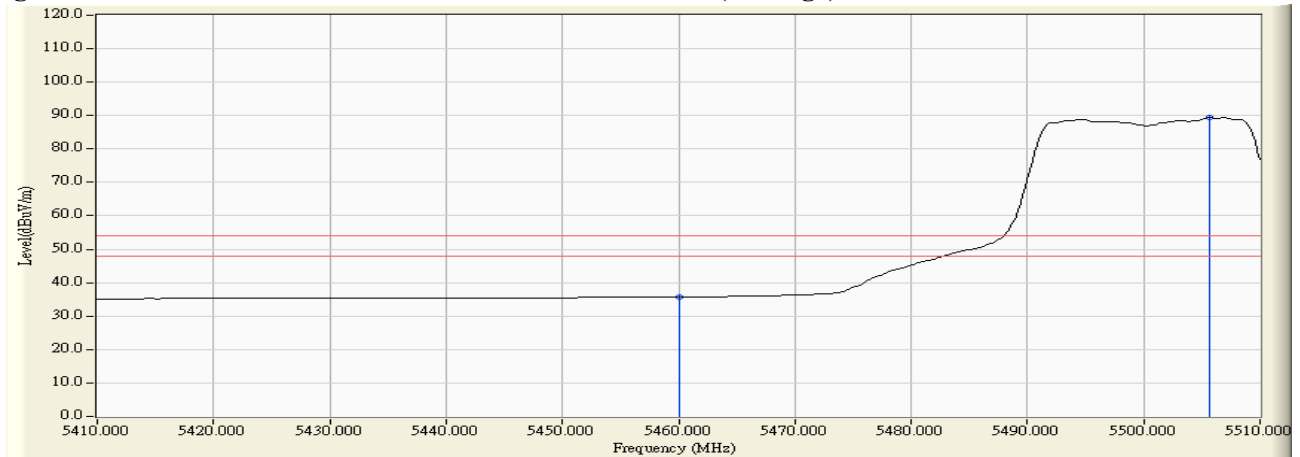
**Figure Channel 100:**

**Vertical (Peak)**



**Figure Channel 100:**

**Vertical (Average)**



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 100

**RF Radiated Measurement:**

|            | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|------------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Horizontal | 5470.000           | 18.334                 | -77.600                | -59.266                  | -32.266        | -27.000          | Pass   |

|          | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|----------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Vertical | 5470.000           | 19.335                 | -68.640                | -49.305                  | -22.305        | -27.000          | Pass   |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps) -Channel 140

**RF Radiated Measurement:**

|            | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|------------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Horizontal | 5725.000           | 18.649                 | -77.832                | -59.183                  | -32.183        | -27.000          | Pass   |

|          | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|----------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Vertical | 5725.000           | 19.372                 | -72.304                | -52.932                  | -25.932        | -27.000          | Pass   |

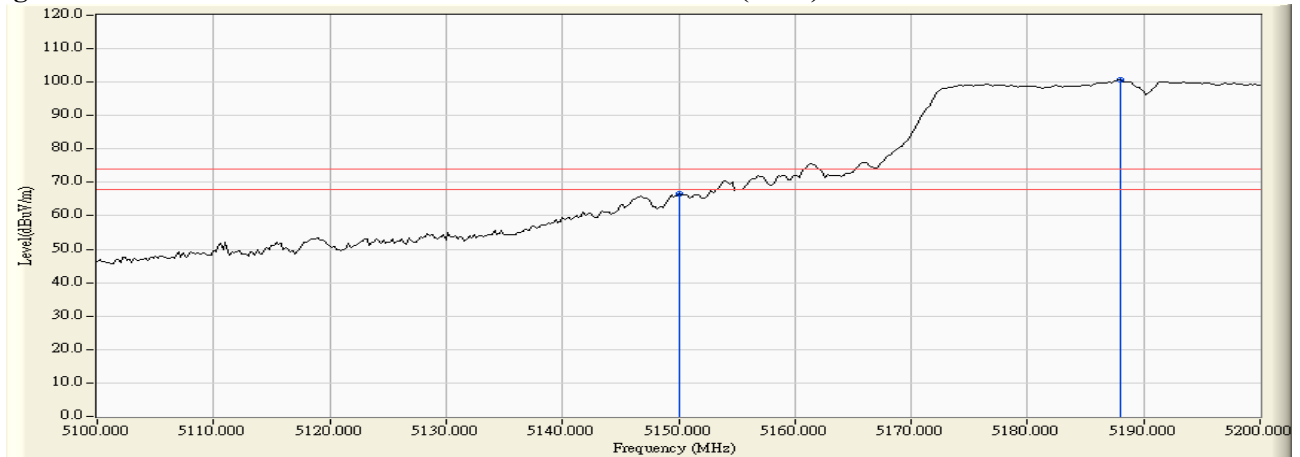
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 38

**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 38 (Peak)    | 5150.000        | 3.340               | 63.337               | 66.677                  | 74.00               | 54.00                  | Pass   |
| 38 (Peak)    | 5188.000        | 3.205               | 97.453               | 100.659                 | --                  | --                     | --     |
| 38 (Average) | 5150.000        | 3.340               | 42.279               | 45.619                  | 74.00               | 54.00                  | Pass   |
| 38 (Average) | 5192.000        | 3.188               | 86.699               | 89.887                  | --                  | --                     | --     |

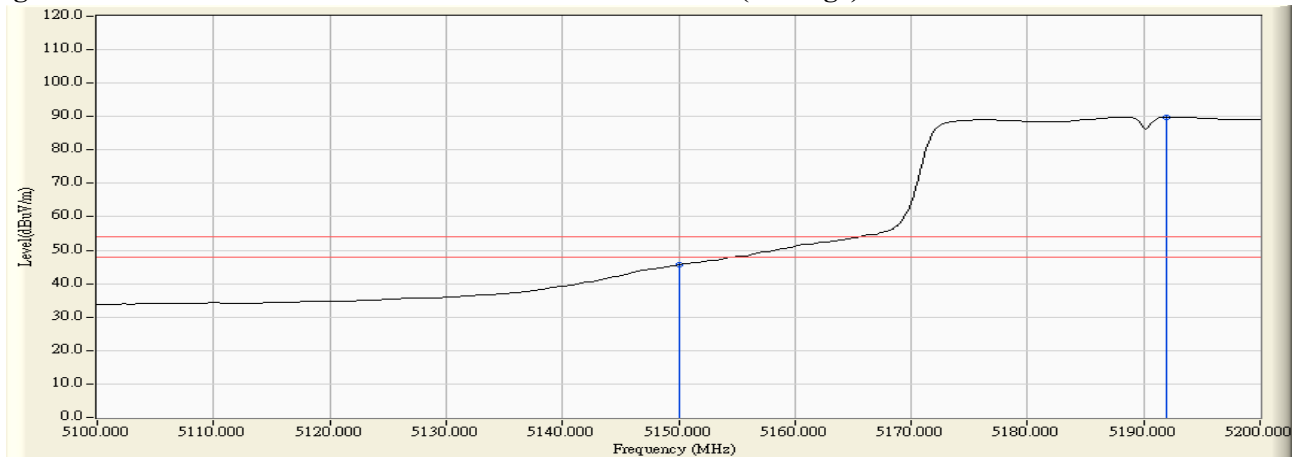
**Figure Channel 38:**

**Horizontal (Peak)**



**Figure Channel 38:**

**Horizontal (Average)**



**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.



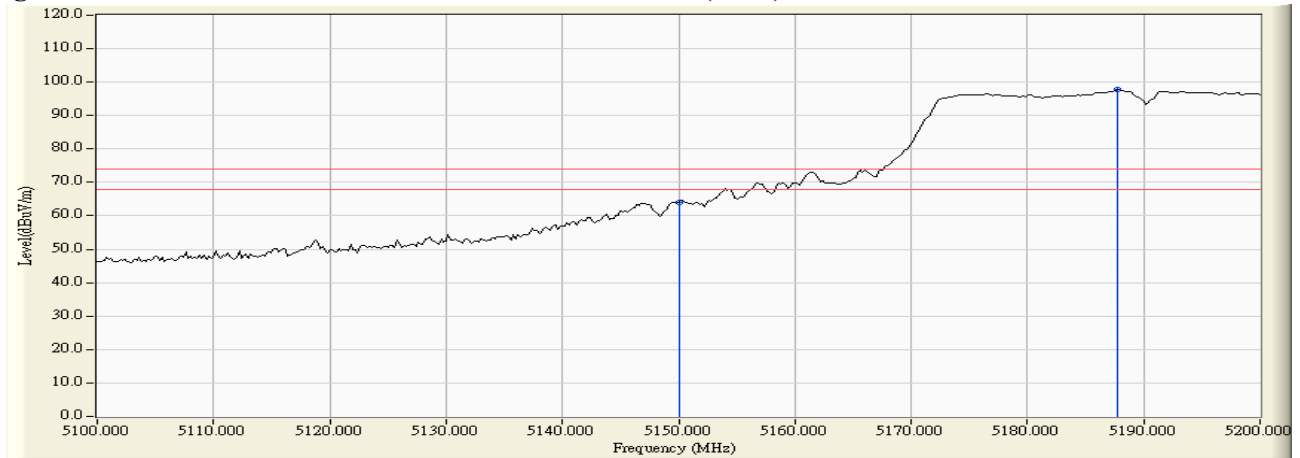
Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 38

**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 38 (Peak)    | 5150.000        | 5.260               | 58.777               | 64.037                  | 74.00               | 54.00                  | Pass   |
| 38 (Peak)    | 5187.800        | 5.363               | 92.482               | 97.845                  | --                  | --                     | --     |
| 38 (Average) | 5150.000        | 5.260               | 39.559               | 44.819                  | 74.00               | 54.00                  | Pass   |
| 38 (Average) | 5192.000        | 5.371               | 81.904               | 87.274                  | --                  | --                     | Pass   |

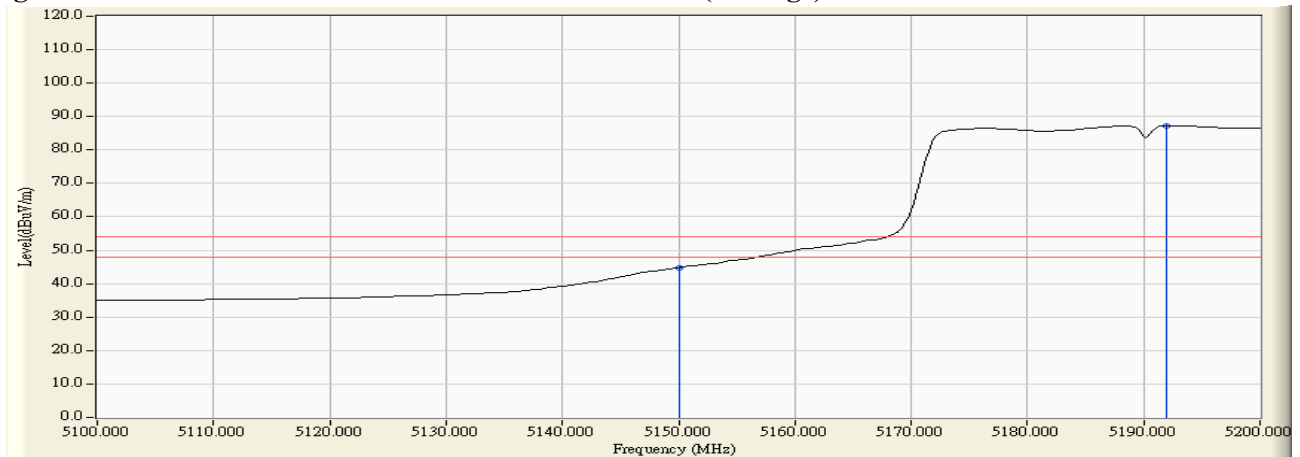
**Figure Channel 38:**

**Vertical (Peak)**



**Figure Channel 38:**

**Vertical (Average)**



Note:

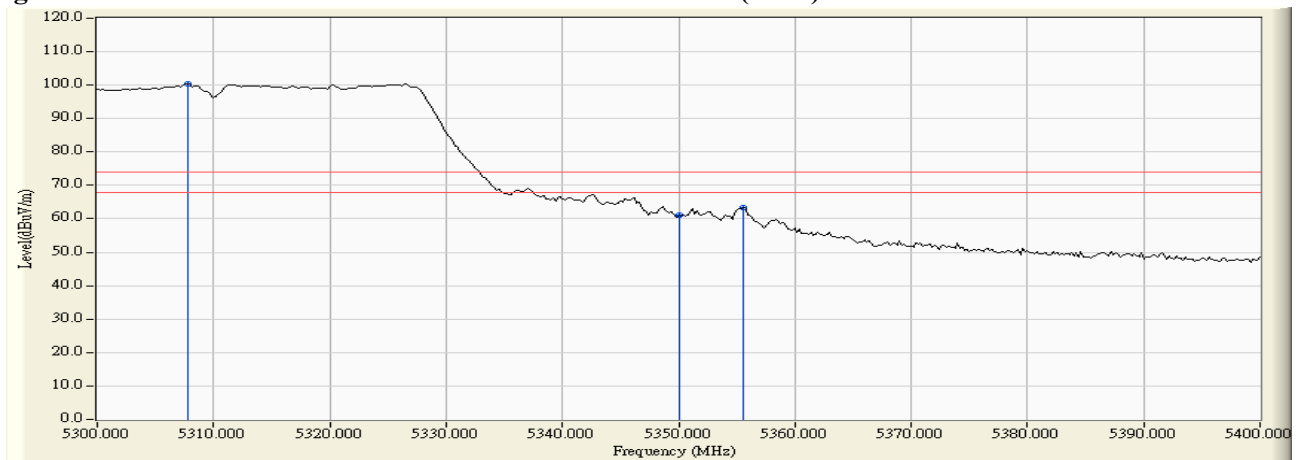
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 62

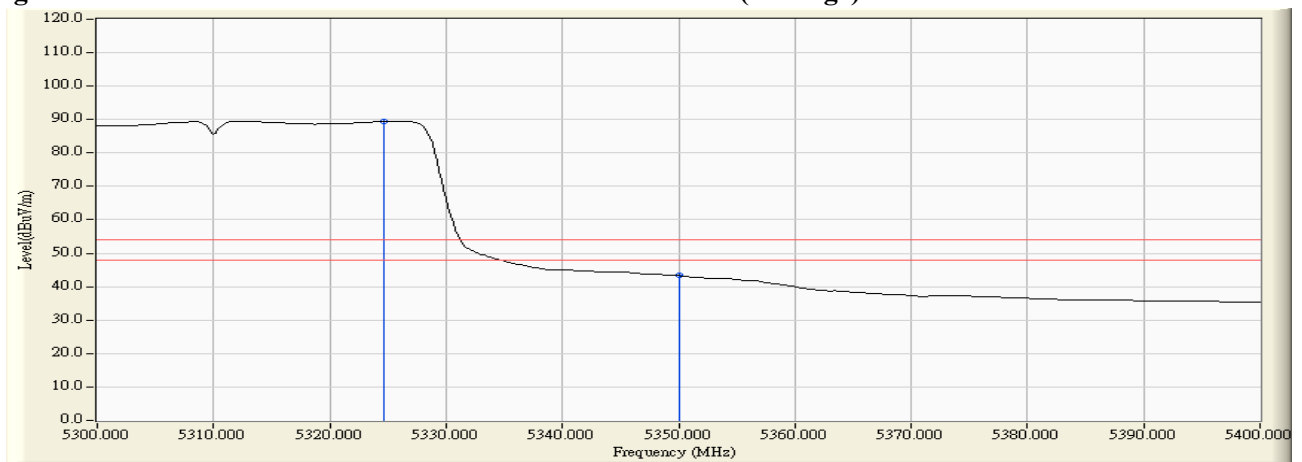
**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 62 (Peak)    | 5307.800        | 3.852               | 96.537               | 100.389                 | --                  | --                     | --     |
| 62 (Peak)    | 5350.000        | 3.716               | 57.469               | 61.186                  | 74.00               | 54.00                  | Pass   |
| 62 (Peak)    | 5355.600        | 3.699               | 59.544               | 63.242                  | 74.00               | 54.00                  | Pass   |
| 62 (Average) | 5324.600        | 3.798               | 85.686               | 89.484                  | --                  | --                     | --     |
| 62 (Average) | 5350.000        | 3.716               | 39.593               | 43.310                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 62: Horizontal (Peak)**



**Figure Channel 62: Horizontal (Average)**



Note:

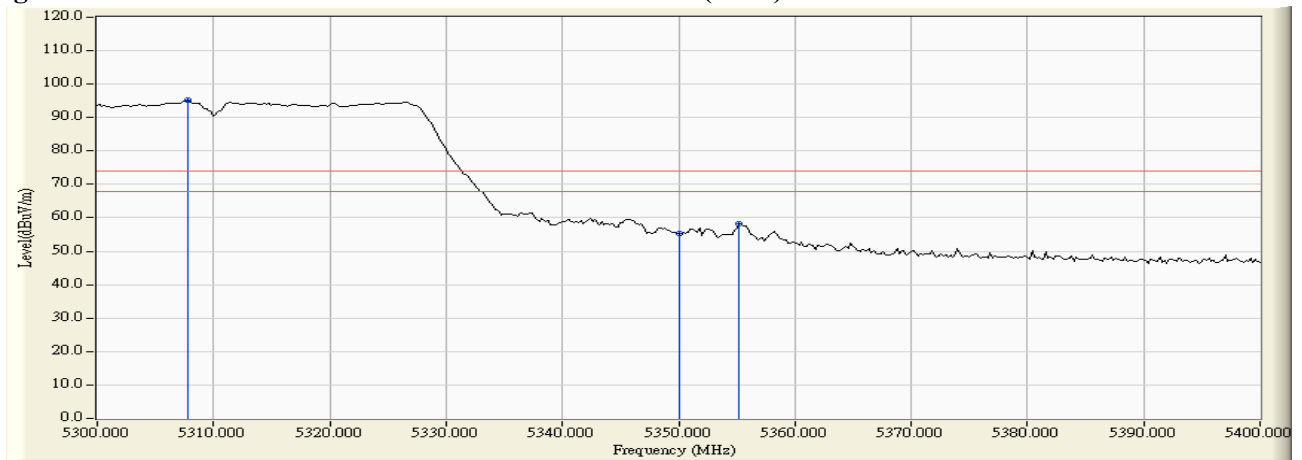
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 62

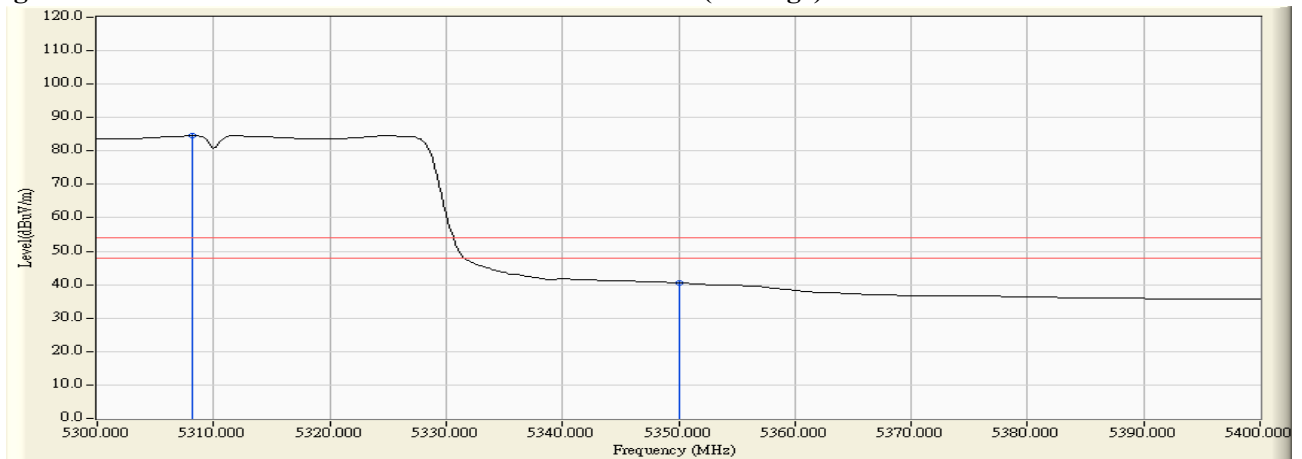
**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 62 (Peak)    | 5307.800        | 5.745               | 89.332               | 95.077                  | --                  | --                     | --     |
| 62 (Peak)    | 5350.000        | 5.691               | 49.680               | 55.372                  | 74.00               | 54.00                  | Pass   |
| 62 (Peak)    | 5355.200        | 5.685               | 52.421               | 58.105                  | 74.00               | 54.00                  | Pass   |
| 62 (Average) | 5308.200        | 5.744               | 78.844               | 84.588                  | --                  | --                     | --     |
| 62 (Average) | 5350.000        | 5.691               | 34.938               | 40.630                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 62: Vertical (Peak)**



**Figure Channel 62: Vertical (Average)**



Note:

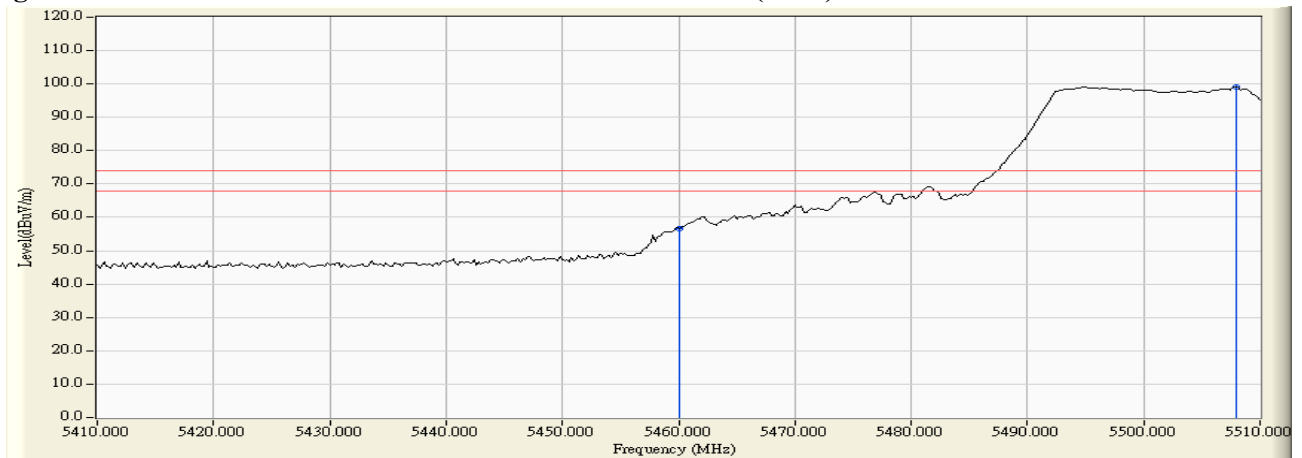
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 102

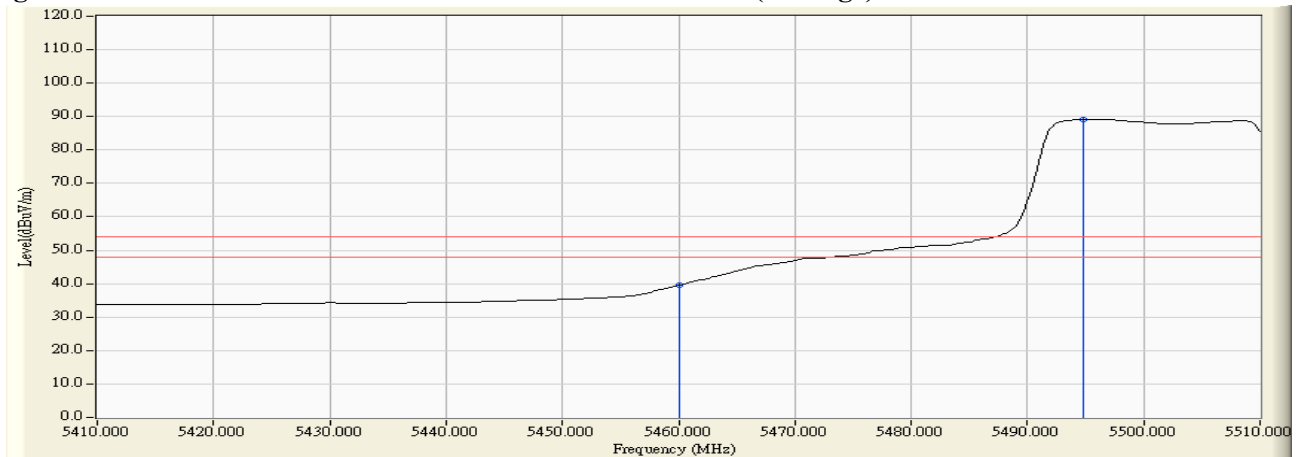
**RF Radiated Measurement (Horizontal):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 102 (Peak)    | 5460.000        | 4.354               | 52.398               | 56.752                  | 74.00               | 54.00                  | Pass   |
| 102 (Peak)    | 5508.000        | 4.824               | 94.306               | 99.131                  | --                  | --                     | --     |
| 102 (Average) | 5460.000        | 4.354               | 35.158               | 39.512                  | 74.00               | 54.00                  | Pass   |
| 102 (Average) | 5494.800        | 4.779               | 84.408               | 89.187                  | --                  | --                     | --     |

**Figure Channel 102: Horizontal (Peak)**



**Figure Channel 102: Horizontal (Average)**



**Note:**

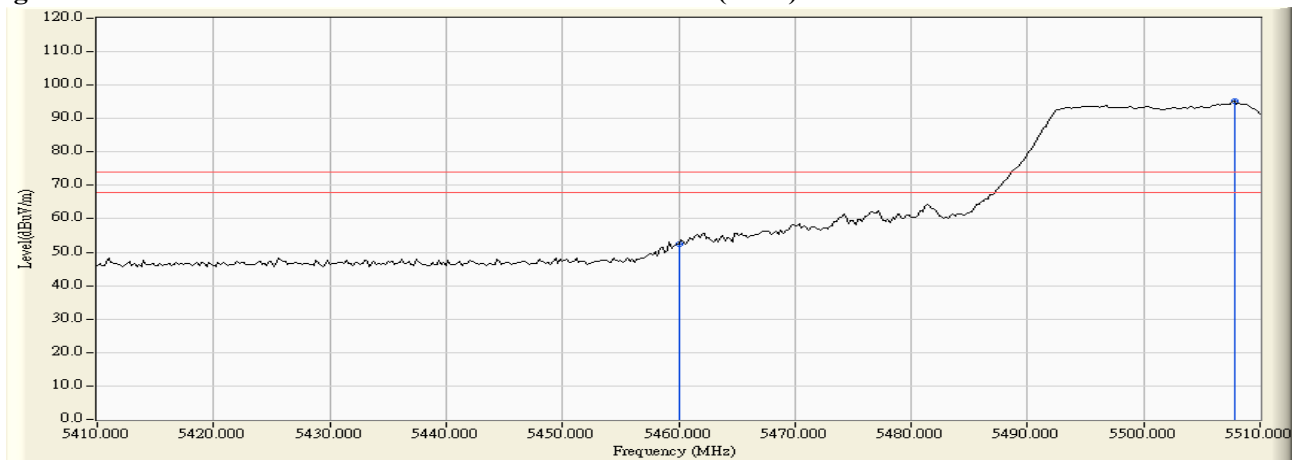
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 102

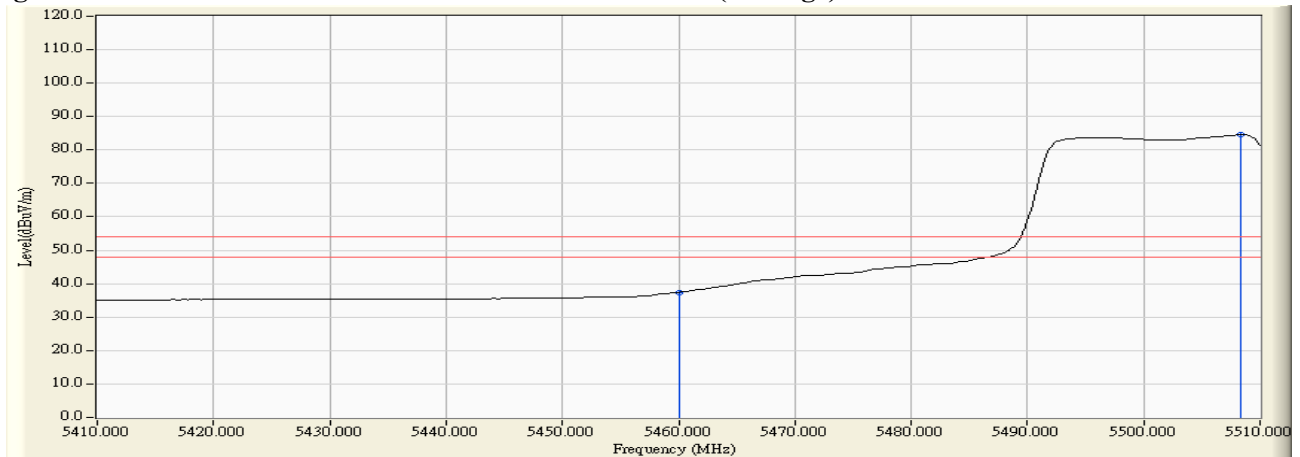
**RF Radiated Measurement (Vertical):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 102 (Peak)    | 5460.000        | 6.041               | 46.384               | 52.425                  | 74.00               | 54.00                  | Pass   |
| 102 (Peak)    | 5507.800        | 6.272               | 88.847               | 95.119                  | --                  | --                     | --     |
| 102 (Average) | 5460.000        | 6.041               | 31.398               | 37.439                  | -16.561             | 54.00                  | Pass   |
| 102 (Average) | 5508.400        | 6.268               | 78.306               | 84.574                  | --                  | --                     | --     |

**Figure Channel 102: Vertical (Peak)**



**Figure Channel 102: Vertical (Average)**



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 102

**RF Radiated Measurement:**

|            | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|------------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Horizontal | 5470.000           | 18.275                 | -79.757                | -61.482                  | -34.482        | -27.000          | Pass   |

|          | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|----------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Vertical | 5470.000           | 19.288                 | -57.554                | -38.266                  | -11.266        | -27.000          | Pass   |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps) -Channel 134

**RF Radiated Measurement:**

|            | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|------------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Horizontal | 5725.000           | 18.649                 | -78.033                | -59.384                  | -32.384        | -27.000          | Pass   |

|          | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|----------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Vertical | 5725.000           | 19.372                 | -74.177                | -54.805                  | -27.805        | -27.000          | Pass   |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit (802.11ac-20BW-7.2Mbps) -Channel 44

**RF Radiated Measurement:**

|            | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5825.000        | 12.438              | -69.180             | -56.742               | -39.742     | -17.000       | Pass   |
| Horizontal | 5835.000        | 12.597              | -69.530             | -56.933               | -29.933     | -27.000       | Pass   |

|          | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5825.000        | 12.285              | -69.260             | -56.975               | -39.975     | -17.000       | Pass   |
| Vertical | 5835.000        | 12.479              | -70.110             | -57.631               | -30.631     | -27.000       | Pass   |



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit (802.11ac-40BW-15Mbps) -Channel 42

**RF Radiated Measurement:**

|            | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5825.000        | 12.438              | -68.980             | -56.542               | -39.542     | -17.000       | Pass   |
| Horizontal | 5835.000        | 12.597              | -69.340             | -56.743               | -29.743     | -27.000       | Pass   |

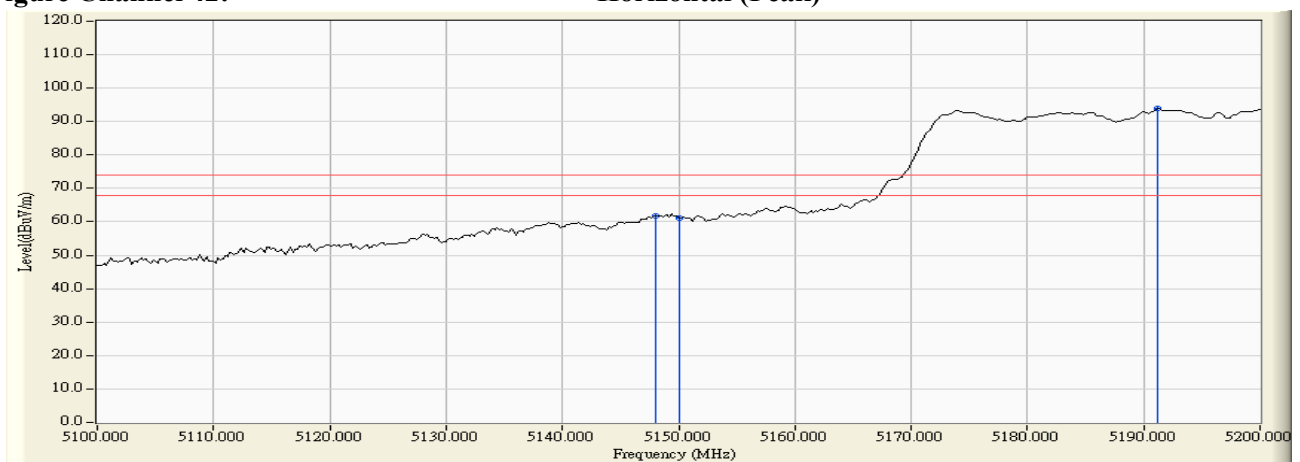
|          | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5825.000        | 12.285              | -69.300             | -57.015               | -40.015     | -17.000       | Pass   |
| Vertical | 5835.000        | 12.479              | -70.090             | -57.611               | -30.611     | -27.000       | Pass   |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 42

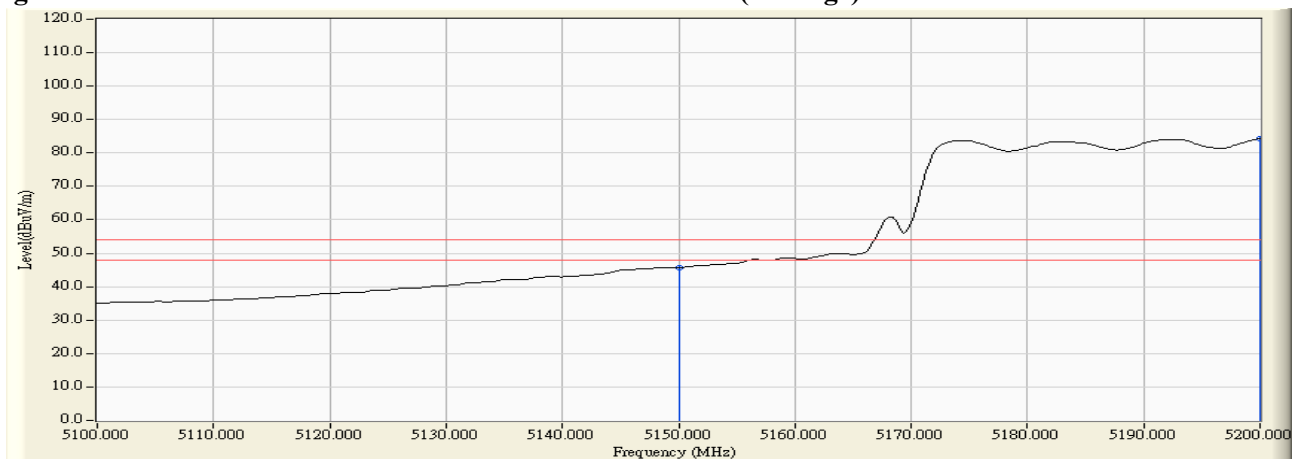
**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 42 (Peak)    | 5148.000        | 3.347               | 58.491               | 61.838                  | 74.00               | 54.00                  | Pass   |
| 42 (Peak)    | 5150.000        | 3.340               | 57.807               | 61.147                  | 74.00               | 54.00                  | Pass   |
| 42 (Peak)    | 5191.200        | 3.191               | 90.597               | 93.788                  | --                  | --                     | --     |
| 42 (Average) | 5150.000        | 3.340               | 42.330               | 45.670                  | 74.00               | 54.00                  | Pass   |
| 42 (Average) | 5200.000        | 3.165               | 81.133               | 84.298                  | --                  | --                     | --     |

**Figure Channel 42: Horizontal (Peak)**



**Figure Channel 42: Horizontal (Average)**



**Note:**

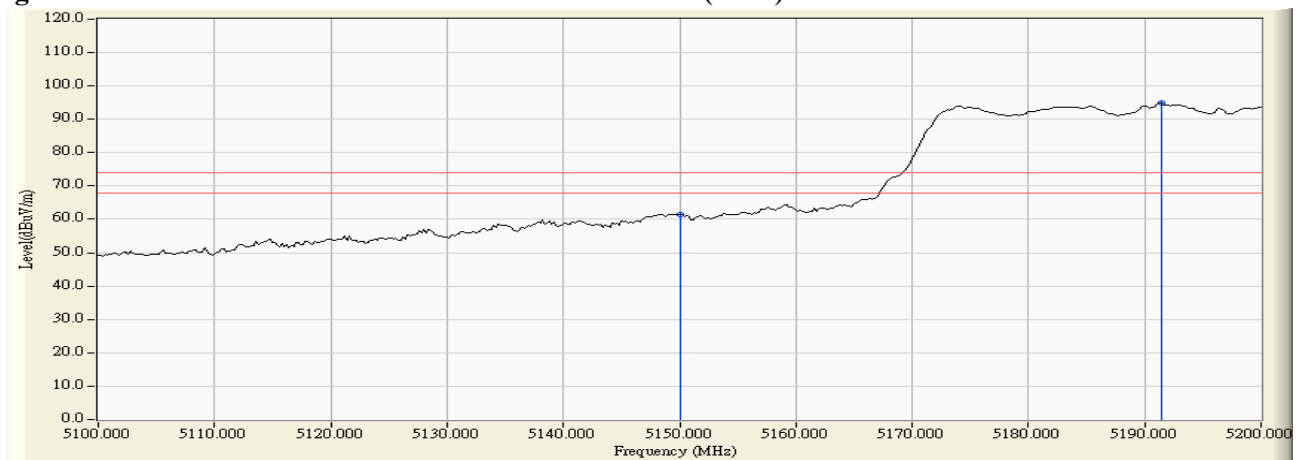
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 42

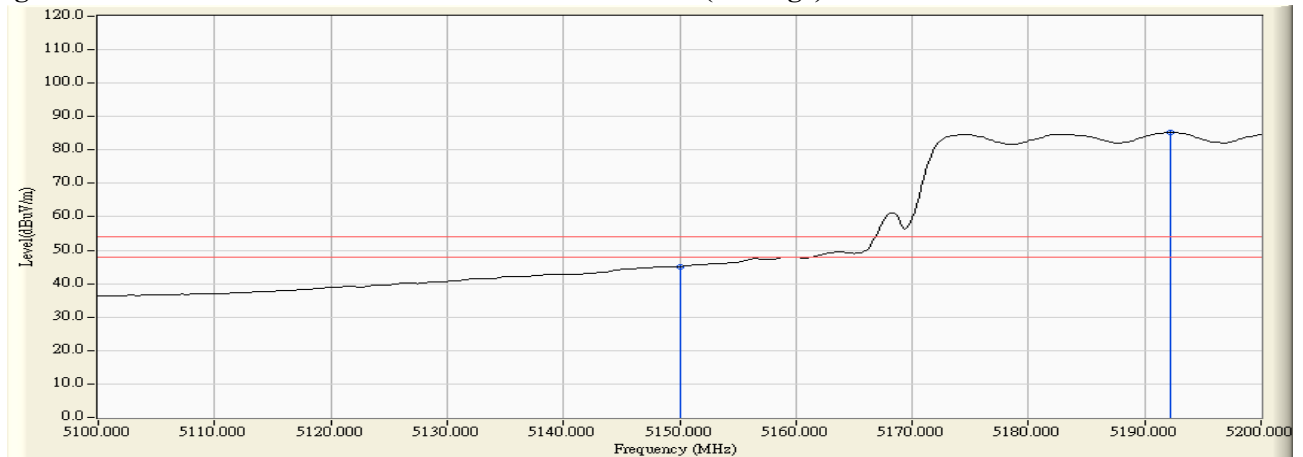
**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 42 (Peak)    | 5150.000        | 5.260               | 56.028               | 61.288                  | 74.00               | 54.00                  | Pass   |
| 42 (Peak)    | 5191.400        | 5.370               | 89.416               | 94.785                  | --                  | --                     | --     |
| 42 (Average) | 5150.000        | 5.260               | 39.820               | 45.080                  | 74.00               | 54.00                  | Pass   |
| 42 (Average) | 5192.200        | 5.371               | 79.801               | 85.172                  | --                  | --                     | --     |

**Figure Channel 42: Vertical (Peak)**



**Figure Channel 42: Vertical (Average)**



Note:

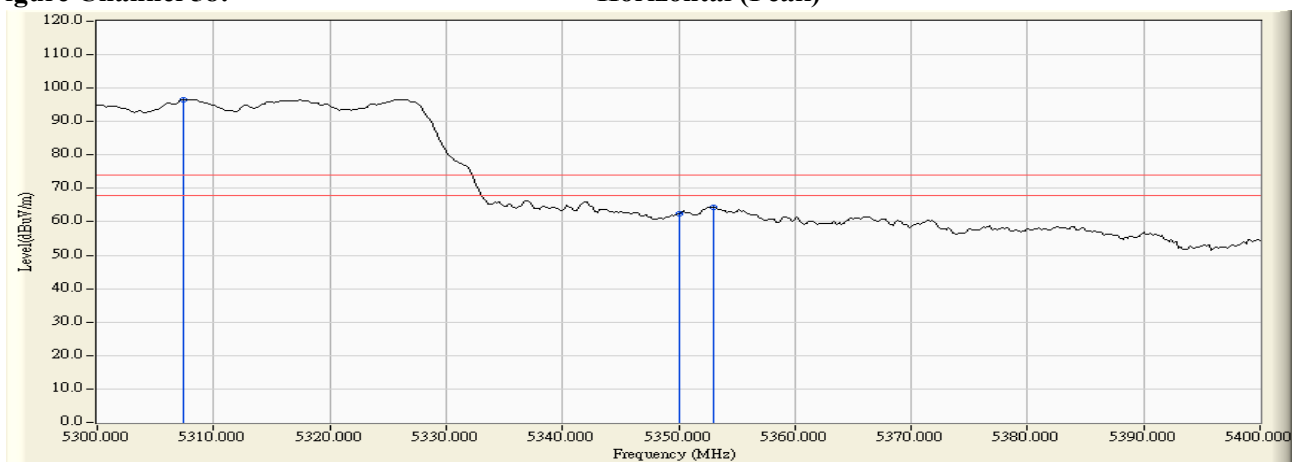
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 58

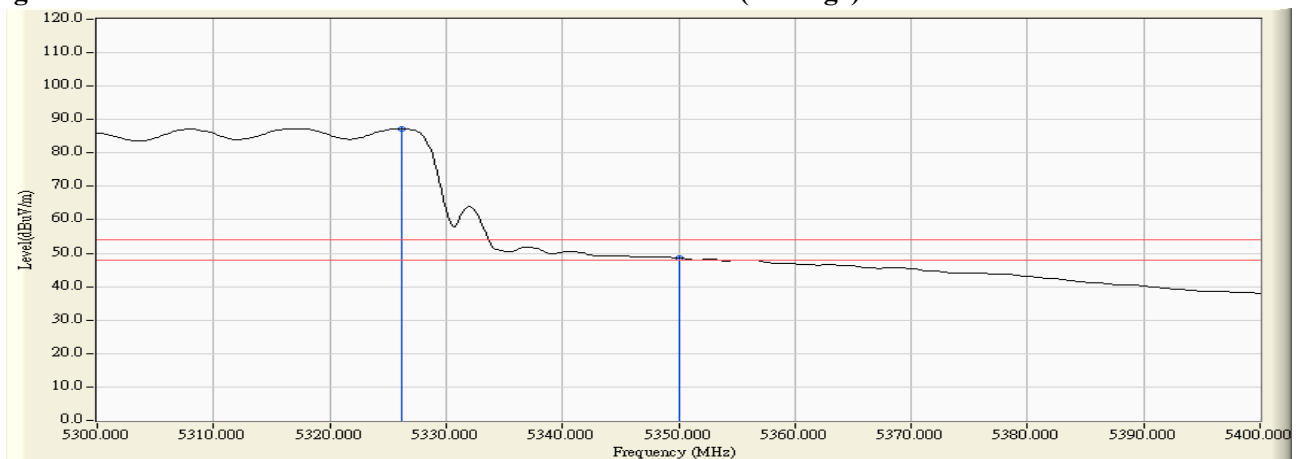
**RF Radiated Measurement (Horizontal):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 58 (Peak)    | 5307.400        | 3.853               | 92.789               | 96.642                  | --                  | --                     | --     |
| 58 (Peak)    | 5350.000        | 3.716               | 58.778               | 62.495                  | 74.00               | 54.00                  | Pass   |
| 58 (Peak)    | 5353.000        | 3.707               | 60.738               | 64.445                  | 74.00               | 54.00                  | Pass   |
| 58 (Average) | 5326.200        | 3.793               | 83.505               | 87.298                  | --                  | --                     | --     |
| 58 (Average) | 5350.000        | 3.716               | 44.855               | 48.572                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 58: Horizontal (Peak)**



**Figure Channel 58: Horizontal (Average)**



**Note:**

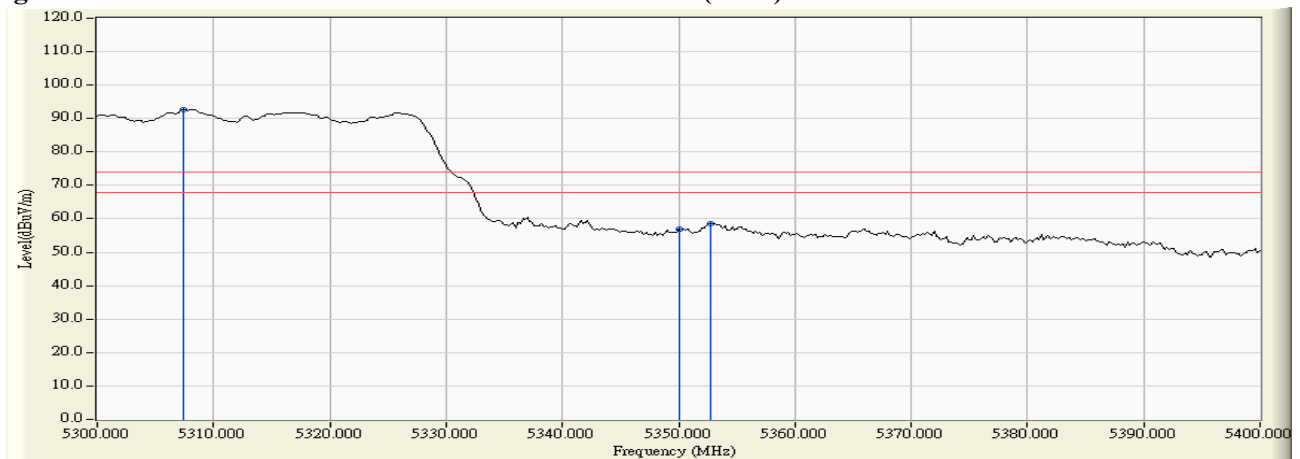
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 58

**RF Radiated Measurement (Vertical):**

| Channel No.  | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 58 (Peak)    | 5307.400        | 5.745               | 86.915               | 92.660                  | --                  | --                     | --     |
| 58 (Peak)    | 5350.000        | 5.691               | 51.406               | 57.098                  | 74.00               | 54.00                  | Pass   |
| 58 (Peak)    | 5352.800        | 5.688               | 52.950               | 58.638                  | 74.00               | 54.00                  | Pass   |
| 58 (Average) | 5307.800        | 5.745               | 77.512               | 83.257                  | --                  | --                     | --     |
| 58 (Average) | 5350.000        | 5.691               | 37.388               | 43.080                  | 74.00               | 54.00                  | Pass   |

**Figure Channel 58: Vertical (Peak)**



**Figure Channel 58: Vertical (Average)**



Note:

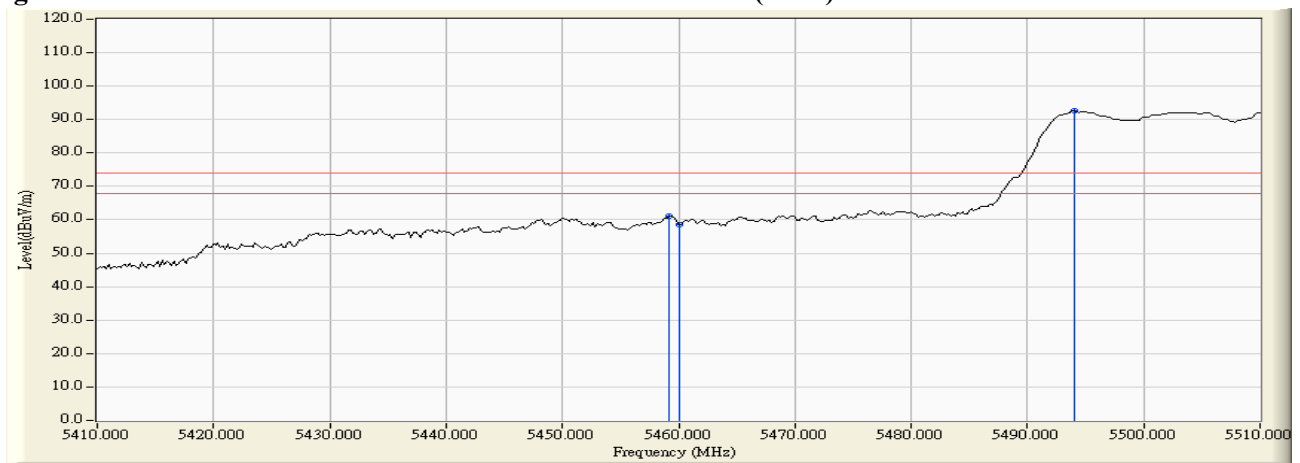
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 106

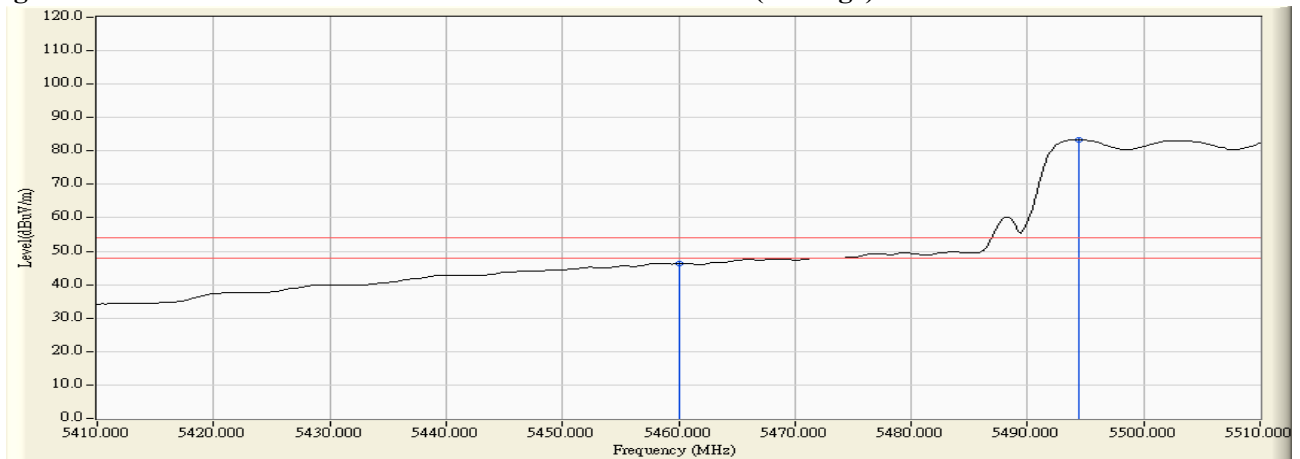
**RF Radiated Measurement (Horizontal):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 106 (Peak)    | 5459.200        | 4.343               | 56.655               | 60.998                  | 74.00               | 54.00                  | Pass   |
| 106 (Peak)    | 5460.000        | 4.354               | 54.178               | 58.532                  | 74.00               | 54.00                  | Pass   |
| 106 (Peak)    | 5494.000        | 4.773               | 87.840               | 92.613                  | --                  | --                     | --     |
| 106 (Average) | 5460.000        | 4.354               | 42.059               | 46.413                  | 74.00               | 54.00                  | Pass   |
| 106 (Average) | 5494.400        | 4.776               | 78.632               | 83.408                  | --                  | --                     | --     |

**Figure Channel 106: Horizontal (Peak)**



**Figure Channel 106: Horizontal (Average)**



**Note:**

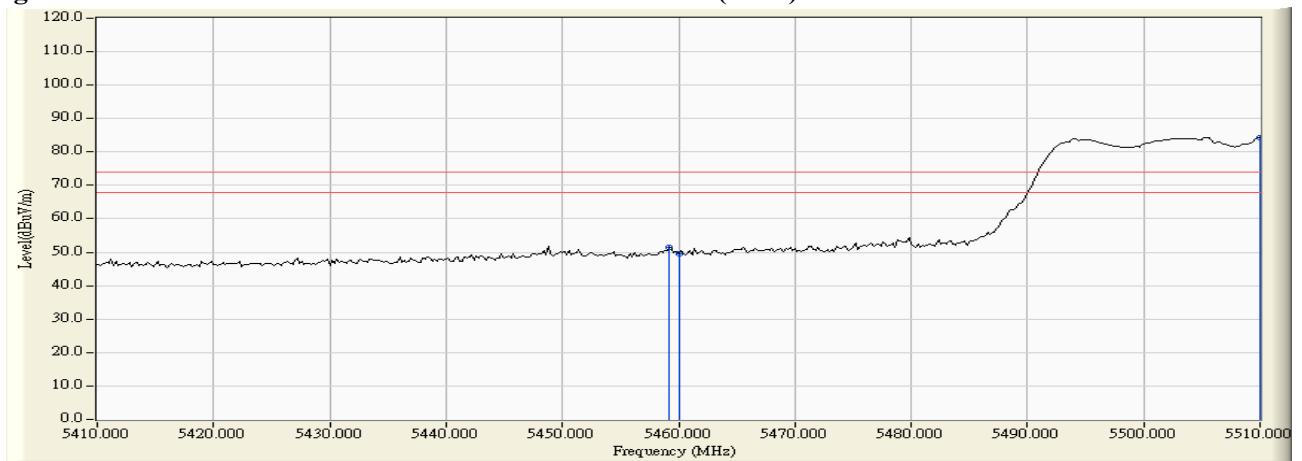
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 106

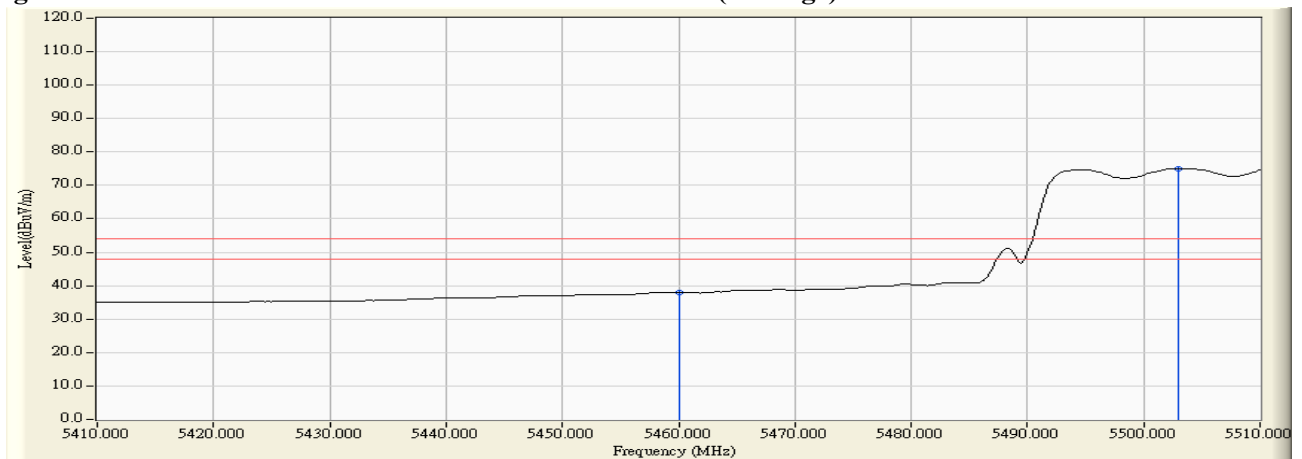
**RF Radiated Measurement (Vertical):**

| Channel No.   | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBμV) | Emission Level (dBμV/m) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 106 (Peak)    | 5459.200        | 6.035               | 45.386               | 51.421                  | 74.00               | 54.00                  | Pass   |
| 106 (Peak)    | 5460.000        | 6.041               | 43.634               | 49.675                  | 74.00               | 54.00                  | Pass   |
| 106 (Peak)    | 5510.000        | 6.258               | 78.190               | 84.448                  | --                  | --                     | --     |
| 106 (Average) | 5460.000        | 6.041               | 31.883               | 37.924                  | 74.00               | 54.00                  | Pass   |
| 106 (Average) | 5503.000        | 6.284               | 68.813               | 75.097                  | --                  | --                     | --     |

**Figure Channel 106: Vertical (Peak)**



**Figure Channel 106: Vertical (Average)**



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 106

**RF Radiated Measurement:**

|            | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|------------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Horizontal | 5470.000           | 13.958                 | -68.380                | -54.422                  | -27.422        | -27.000          | Pass   |

|          | Frequency<br>(MHz) | Correct Factor<br>(dB) | Reading Level<br>(dBm) | Measure Level<br>(dBm/m) | Margin<br>(dB) | Limit<br>(dBm/m) | Result |
|----------|--------------------|------------------------|------------------------|--------------------------|----------------|------------------|--------|
| Vertical | 5470.000           | 14.324                 | -68.380                | -54.056                  | -27.056        | -27.000          | Pass   |



Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps) -Channel 138

**RF Radiated Measurement:**

|            | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5725.000        | 12.135              | -68.265             | -56.130               | -29.130     | -27.000       | Pass   |

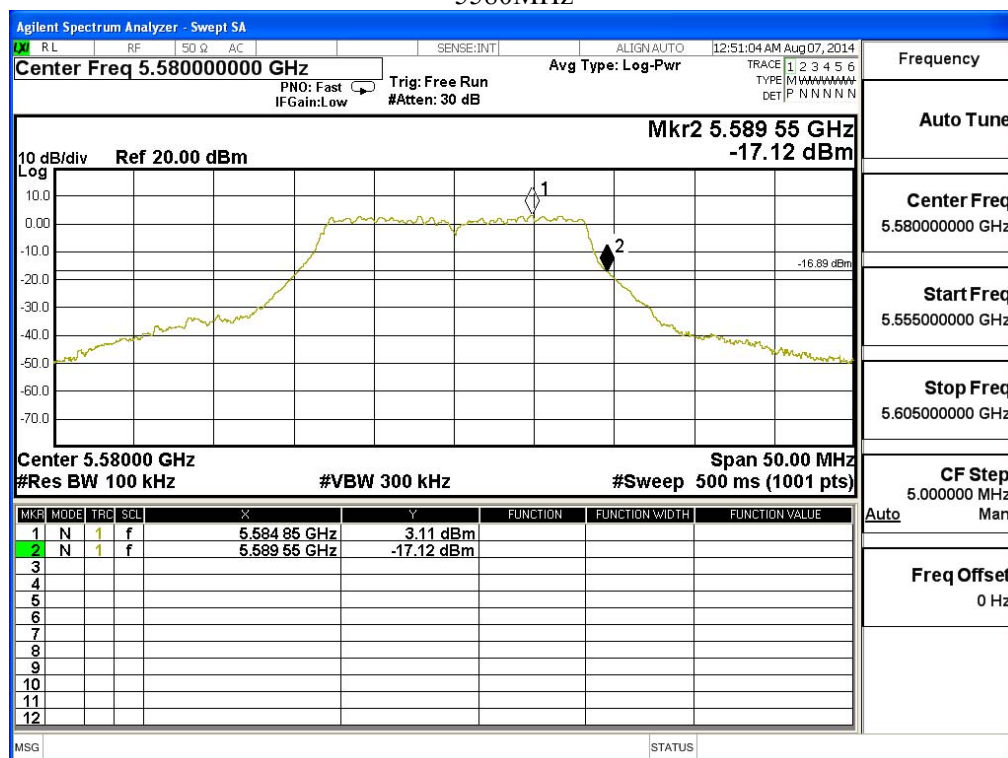
|          | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5725.000        | 12.243              | -70.463             | -58.220               | -31.220     | -27.000       | Pass   |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)

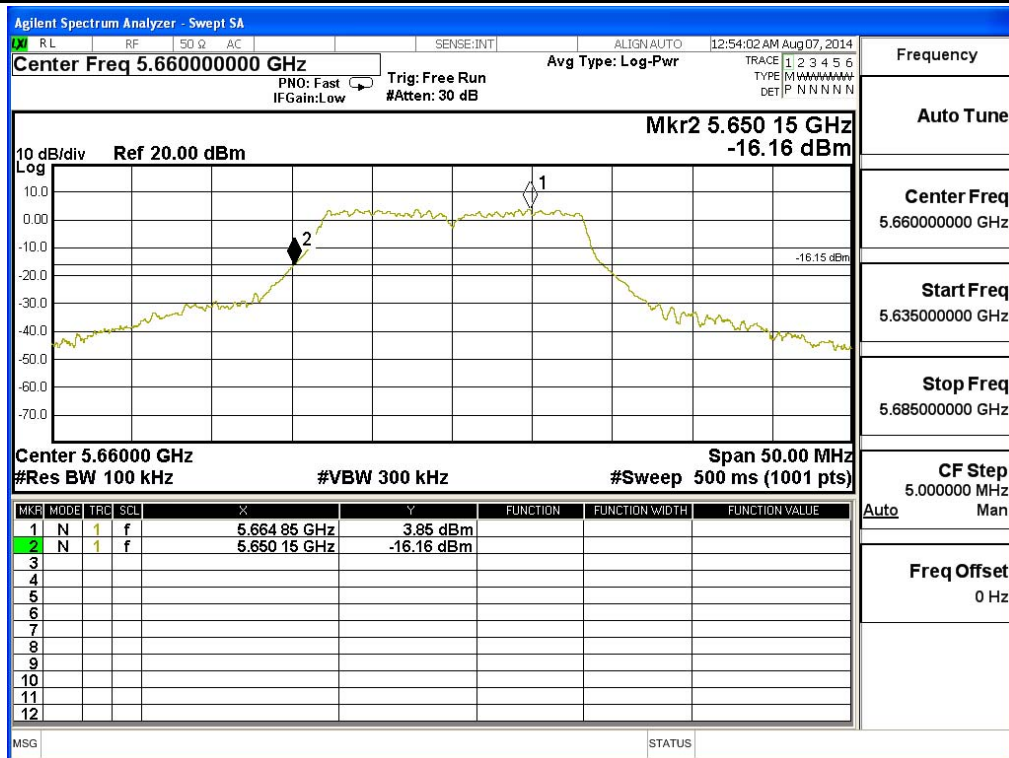
| Test Frequency (MHz) | Measurement Level (20dB BW) (MHz) | Limit (MHz) | Result |
|----------------------|-----------------------------------|-------------|--------|
| 5580                 | 5589.55                           | <5600       | PASS   |
| 5660                 | 5650.15                           | >5650       | PASS   |

NOTE: The 5600~5650MHz band is not used in accordance with 15.215 requirement.

### 5580MHz



### 5660MHz

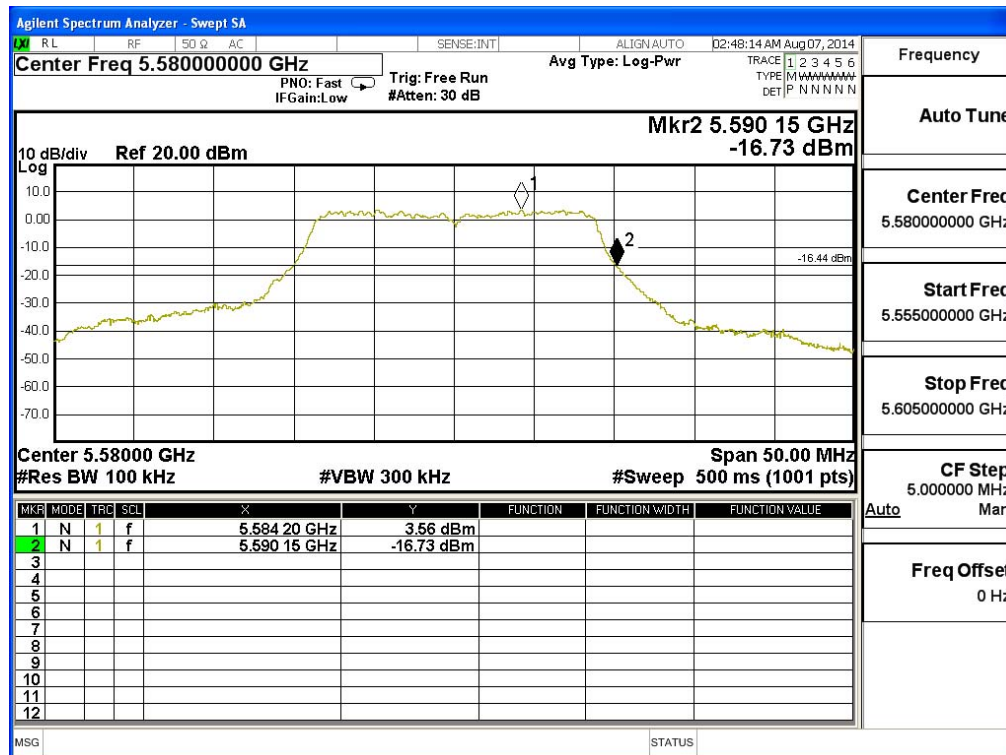


Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 7.2Mbps)

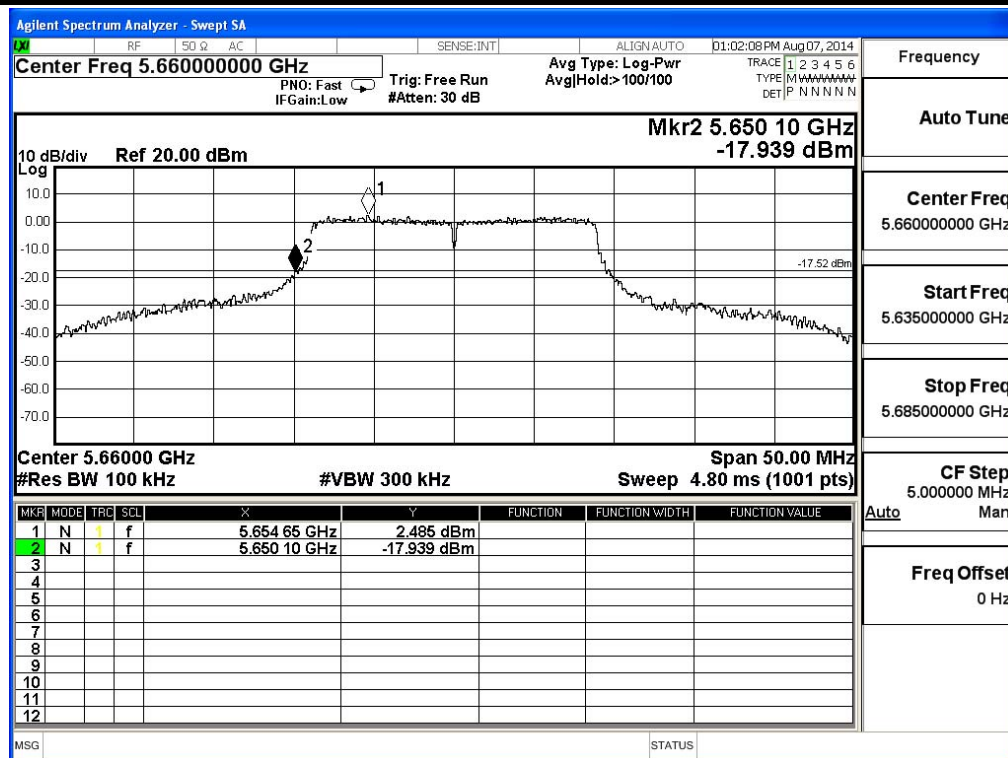
| Test Frequency<br>(MHz) | Measurement Level (20dB BW)<br>(MHz) | Limit<br>(MHz) | Result |
|-------------------------|--------------------------------------|----------------|--------|
| 5580                    | 5590.15                              | <5600          | PASS   |
| 5660                    | 5650.10                              | >5650          | PASS   |

NOTE: The 5600~5650MHz band is not used in accordance with 15.215 requirement.

5580MHz



5660MHz

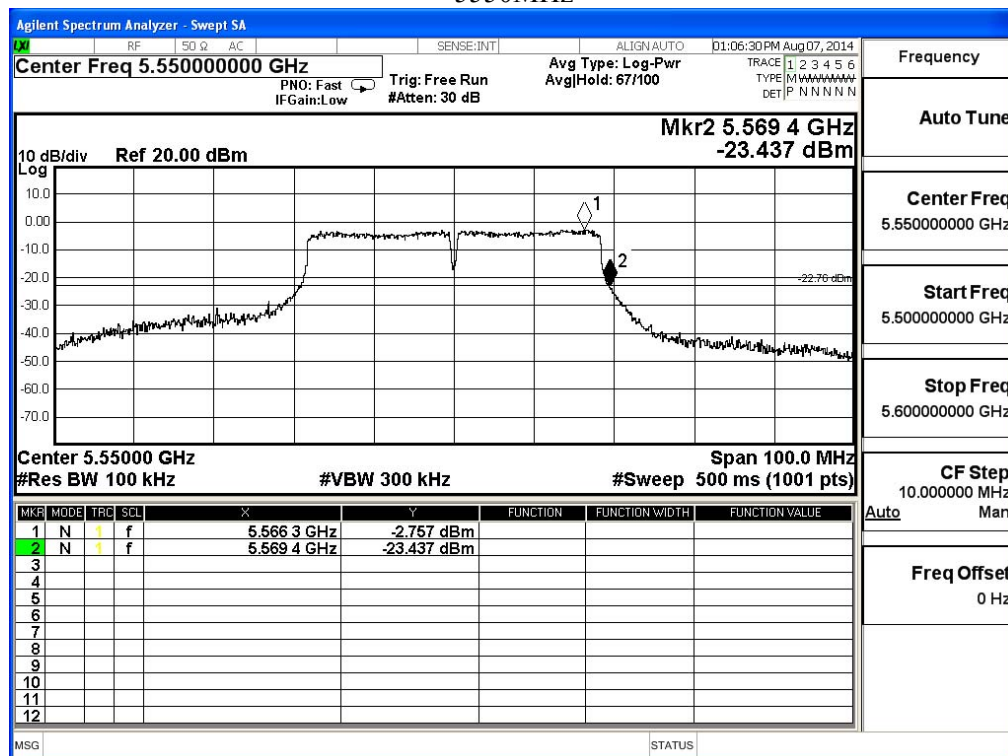


Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 15Mbps)

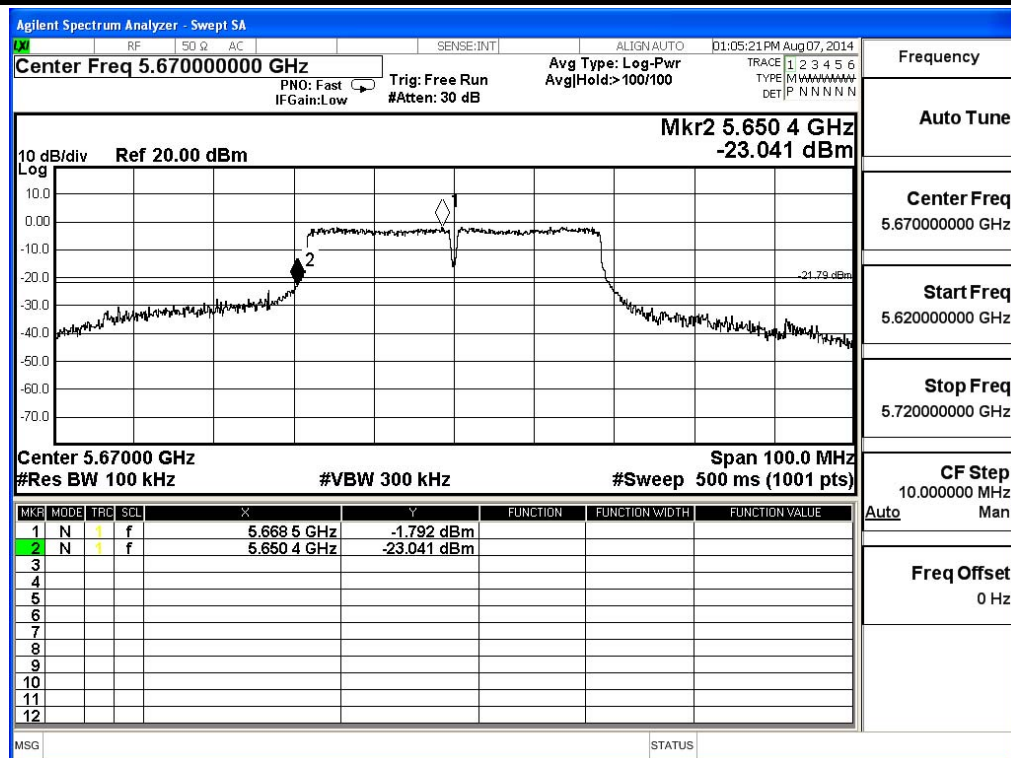
| Test Frequency (MHz) | Measurement Level (20dB BW) (MHz) | Limit (MHz) | Result |
|----------------------|-----------------------------------|-------------|--------|
| 5550                 | 5569.40                           | <5600       | PASS   |
| 5670                 | 5650.40                           | >5650       | PASS   |

NOTE: The 5600~5650MHz band is not used in accordance with 15.215 requirement.

5550MHz



5670MHz

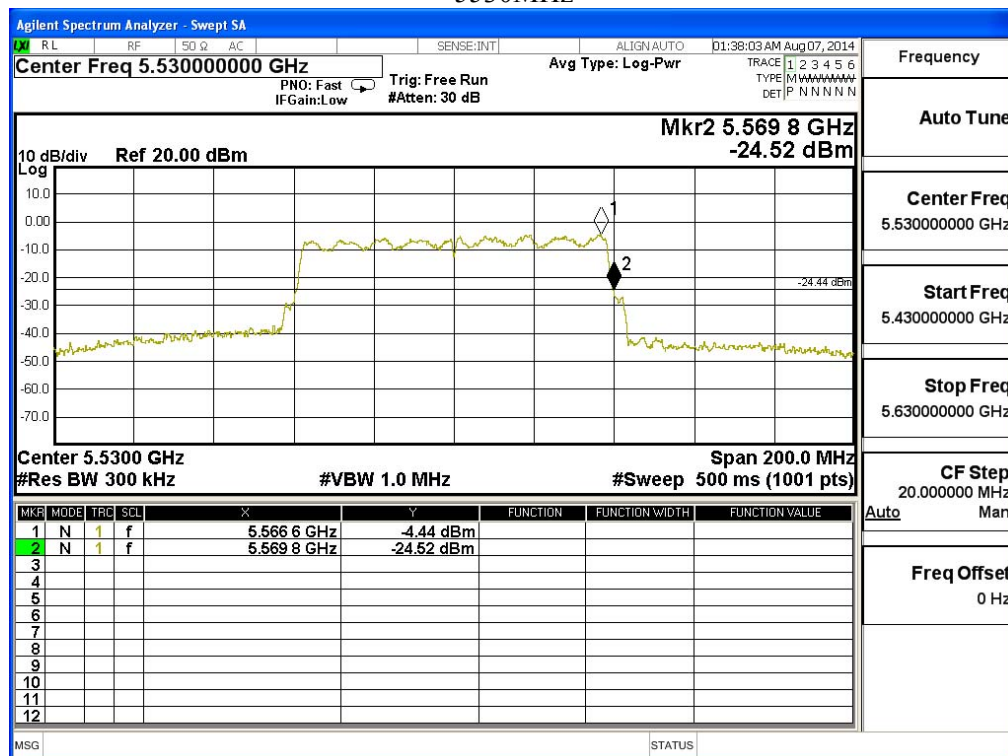


Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit (802.11ac-80BW-32.5Mbps)

| Test Frequency<br>(MHz) | Measurement Level (20dB BW)<br>(MHz) | Limit<br>(MHz) | Result |
|-------------------------|--------------------------------------|----------------|--------|
| 5530                    | 5569.80                              | <5600          | PASS   |
| 5690                    | 5650.40                              | >5650          | PASS   |

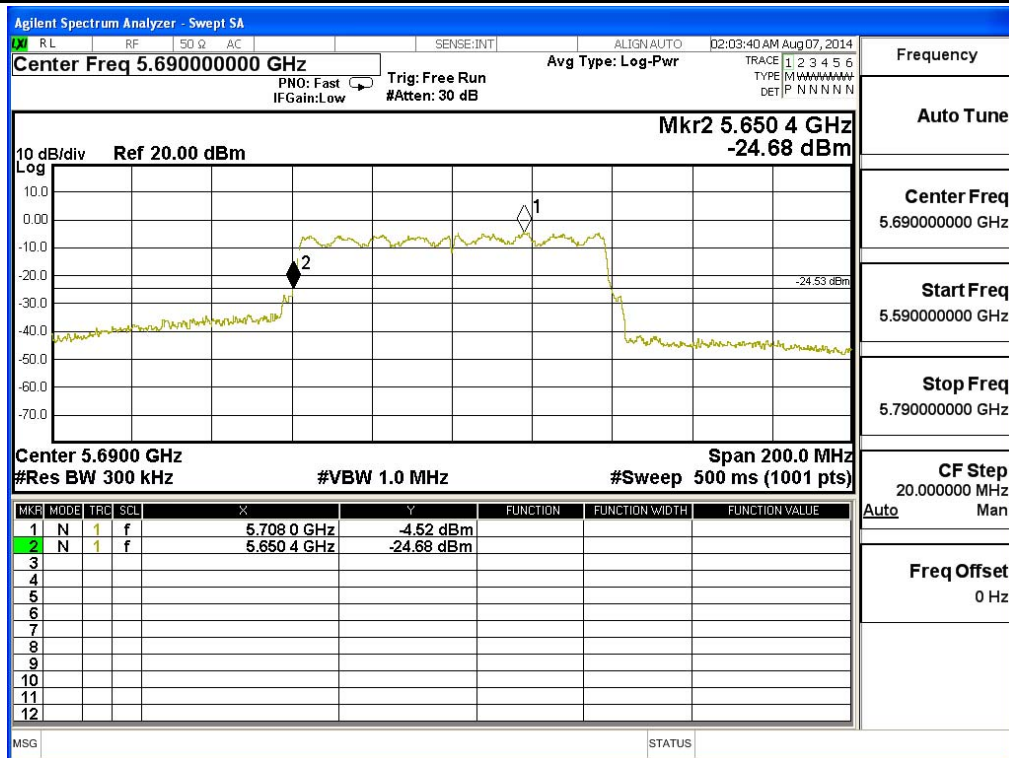
NOTE: The 5600~5650MHz band is not used in accordance with 15.215 requirement.

5530MHz



5690MHz





## 8. Frequency Stability

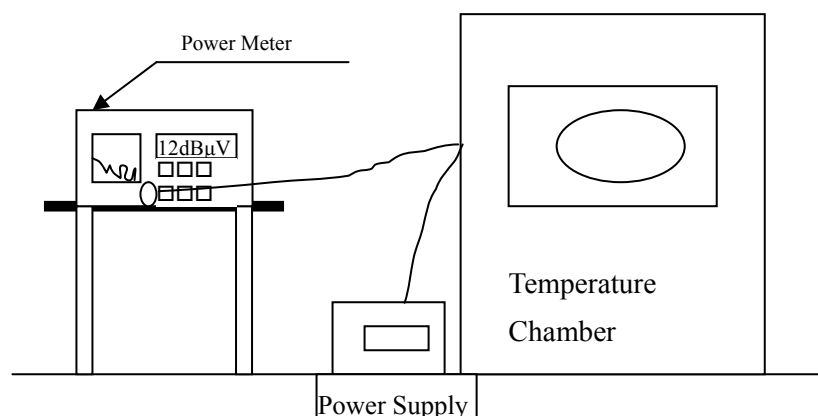
### 8.1. Test Equipment

|   | Equipment         | Manufacturer | Model No./Serial No. | Last Cal.  |
|---|-------------------|--------------|----------------------|------------|
|   | Spectrum Analyzer | R&S          | FSP40 / 100170       | Jun, 2014  |
|   | Spectrum Analyzer | Agilent      | E4407B / US39440758  | Jun, 2014  |
| X | Spectrum Analyzer | Agilent      | N9010A / MY48030495  | Apr., 2014 |

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

### 8.2. Test Setup



### 8.3. Limits

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

### 8.4. Test Procedure

The EUT was setup to ANSI C63.10, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

### 8.5. Uncertainty

$\pm 150$  Hz

## 8.6. Test Result of Frequency Stability

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Frequency Stability  
 Test Site : Temperature Chamber  
 Test Mode : Carrier Wave

| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\Delta F$ (MHz) |
|-----------------|-------------|---------|-----------------|-----------------|------------------|
| Tnom (20) °C    | Vnom (120)V | 36      | 5180.0000       | 5180.0066       | 0.0066           |
|                 |             | 38      | 5190.0000       | 5190.0066       | 0.0066           |
|                 |             | 44      | 5220.0000       | 5220.0064       | 0.0064           |
|                 |             | 46      | 5230.0000       | 5230.0066       | 0.0066           |
|                 |             | 48      | 5240.0000       | 5240.0062       | 0.0062           |
|                 |             | 52      | 5260.0000       | 5260.0066       | 0.0066           |
|                 |             | 54      | 5270.0000       | 5270.0062       | 0.0062           |
|                 |             | 60      | 5300.0000       | 5300.0066       | 0.0066           |
|                 |             | 62      | 5310.0000       | 5310.0066       | 0.0066           |
|                 |             | 64      | 5320.0000       | 5320.0064       | 0.0064           |
|                 |             | 100     | 5500.0000       | 5500.0066       | 0.0066           |
|                 |             | 102     | 5510.0000       | 5510.0062       | 0.0062           |
|                 |             | 110     | 5550.0000       | 5550.0066       | 0.0066           |
|                 |             | 116     | 5580.0000       | 5580.0066       | 0.0066           |
|                 |             | 134     | 5670.0000       | 5670.0064       | 0.0064           |
|                 |             | 140     | 5700.0000       | 5700.0066       | 0.0066           |

| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | △F (MHz) |
|-----------------|-------------|---------|-----------------|-----------------|----------|
| Tmax (50) °C    | Vmax (138)V | 36      | 5180.0000       | 5180.0064       | 0.0064   |
|                 |             | 38      | 5190.0000       | 5190.0066       | 0.0066   |
|                 |             | 44      | 5220.0000       | 5220.0066       | 0.0066   |
|                 |             | 46      | 5230.0000       | 5230.0066       | 0.0066   |
|                 |             | 48      | 5240.0000       | 5240.0062       | 0.0062   |
|                 |             | 52      | 5260.0000       | 5260.0066       | 0.0066   |
|                 |             | 54      | 5270.0000       | 5270.0066       | 0.0066   |
|                 |             | 60      | 5300.0000       | 5300.0068       | 0.0068   |
|                 |             | 62      | 5310.0000       | 5310.0066       | 0.0066   |
|                 |             | 64      | 5320.0000       | 5320.0062       | 0.0062   |
|                 |             | 100     | 5500.0000       | 5500.0066       | 0.0066   |
|                 |             | 102     | 5510.0000       | 5510.0066       | 0.0066   |
|                 |             | 110     | 5550.0000       | 5550.0066       | 0.0066   |
|                 |             | 116     | 5580.0000       | 5580.0064       | 0.0064   |
|                 |             | 134     | 5670.0000       | 5670.0066       | 0.0066   |
|                 |             | 140     | 5700.0000       | 5700.0066       | 0.0066   |
| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | △F (MHz) |
| Tmax (50) °C    | Vmin (102)V | 36      | 5180.0000       | 5180.0066       | 0.0066   |
|                 |             | 38      | 5190.0000       | 5190.0062       | 0.0062   |
|                 |             | 44      | 5220.0000       | 5220.0066       | 0.0066   |
|                 |             | 46      | 5230.0000       | 5230.0066       | 0.0066   |
|                 |             | 48      | 5240.0000       | 5240.0066       | 0.0066   |
|                 |             | 52      | 5260.0000       | 5260.0064       | 0.0064   |
|                 |             | 54      | 5270.0000       | 5270.0066       | 0.0066   |
|                 |             | 60      | 5300.0000       | 5300.0066       | 0.0066   |
|                 |             | 62      | 5310.0000       | 5310.0062       | 0.0062   |
|                 |             | 64      | 5320.0000       | 5320.0066       | 0.0066   |
|                 |             | 100     | 5500.0000       | 5500.0066       | 0.0066   |
|                 |             | 102     | 5510.0000       | 5510.0062       | 0.0062   |
|                 |             | 110     | 5550.0000       | 5550.0066       | 0.0066   |
|                 |             | 116     | 5580.0000       | 5580.0066       | 0.0066   |
|                 |             | 134     | 5670.0000       | 5670.0066       | 0.0066   |
|                 |             | 140     | 5700.0000       | 5700.0066       | 0.0066   |

| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\triangle$ F (MHz) |
|-----------------|-------------|---------|-----------------|-----------------|---------------------|
| Tmin (0) °C     | Vmax (138)V | 36      | 5180.0000       | 5180.0066       | 0.0066              |
|                 |             | 38      | 5190.0000       | 5190.0066       | 0.0066              |
|                 |             | 44      | 5220.0000       | 5220.0064       | 0.0064              |
|                 |             | 46      | 5230.0000       | 5230.0066       | 0.0066              |
|                 |             | 48      | 5240.0000       | 5240.0066       | 0.0066              |
|                 |             | 52      | 5260.0000       | 5260.0066       | 0.0066              |
|                 |             | 54      | 5270.0000       | 5270.0066       | 0.0066              |
|                 |             | 60      | 5300.0000       | 5300.0062       | 0.0062              |
|                 |             | 62      | 5310.0000       | 5310.0066       | 0.0066              |
|                 |             | 64      | 5320.0000       | 5320.0066       | 0.0066              |
|                 |             | 100     | 5500.0000       | 5500.0066       | 0.0066              |
|                 |             | 102     | 5510.0000       | 5510.0066       | 0.0066              |
|                 |             | 110     | 5550.0000       | 5550.0066       | 0.0066              |
|                 |             | 116     | 5580.0000       | 5580.0066       | 0.0066              |
|                 |             | 134     | 5670.0000       | 5670.0066       | 0.0066              |
|                 |             | 140     | 5700.0000       | 5700.0066       | 0.0066              |
| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\triangle$ F (MHz) |
| Tmin (0) °C     | Vmin (102)V | 36      | 5180.0000       | 5180.0066       | 0.0066              |
|                 |             | 38      | 5190.0000       | 5190.0066       | 0.0066              |
|                 |             | 44      | 5220.0000       | 5220.0066       | 0.0066              |
|                 |             | 46      | 5230.0000       | 5230.0068       | 0.0068              |
|                 |             | 48      | 5240.0000       | 5240.0066       | 0.0066              |
|                 |             | 52      | 5260.0000       | 5260.0066       | 0.0066              |
|                 |             | 54      | 5270.0000       | 5270.0064       | 0.0064              |
|                 |             | 60      | 5300.0000       | 5300.0066       | 0.0066              |
|                 |             | 62      | 5310.0000       | 5310.0066       | 0.0066              |
|                 |             | 64      | 5320.0000       | 5320.0062       | 0.0062              |
|                 |             | 100     | 5500.0000       | 5500.0066       | 0.0066              |
|                 |             | 102     | 5510.0000       | 5510.0066       | 0.0066              |
|                 |             | 110     | 5550.0000       | 5550.0066       | 0.0066              |
|                 |             | 116     | 5580.0000       | 5580.0064       | 0.0064              |
|                 |             | 134     | 5670.0000       | 5670.0066       | 0.0066              |
|                 |             | 140     | 5700.0000       | 5700.0062       | 0.0062              |

Product : 802.11A/B/G/N/AC 1T1R WLAN USB Dongle  
 Test Item : Frequency Stability  
 Test Site : Temperature Chamber  
 Test Mode : Carrier Wave

| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\triangle$ F (MHz) |
|-----------------|-------------|---------|-----------------|-----------------|---------------------|
| Tnom (20) °C    | Vnom (120)V | 42ac80  | 5210.0000       | 5209.9400       | 0.0600              |
|                 |             | 58ac80  | 5290.0000       | 5289.9600       | 0.0400              |
|                 |             | 106ac80 | 5530.0000       | 5529.9400       | 0.0600              |
|                 |             | 138ac80 | 5690.0000       | 5689.9400       | 0.0600              |
|                 |             | 142F    | 5710.0000       | 5709.9600       | 0.0400              |
|                 |             | 144     | 5720.0000       | 5719.9400       | 0.0600              |
| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\triangle$ F (MHz) |
| Tmax (50) °C    | Vmax (138)V | 42ac80  | 5210.0000       | 5209.9400       | 0.0600              |
|                 |             | 58ac80  | 5290.0000       | 5289.9600       | 0.0400              |
|                 |             | 106ac80 | 5530.0000       | 5529.9500       | 0.0500              |
|                 |             | 138ac80 | 5690.0000       | 5689.9400       | 0.0600              |
|                 |             | 142F    | 5710.0000       | 5709.9600       | 0.0400              |
|                 |             | 144     | 5720.0000       | 5719.9500       | 0.0500              |
| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\triangle$ F (MHz) |
| Tmax (50) °C    | Vmin (102)V | 42ac80  | 5210.0000       | 5209.9200       | 0.0800              |
|                 |             | 58ac80  | 5290.0000       | 5289.9600       | 0.0400              |
|                 |             | 106ac80 | 5530.0000       | 5529.9500       | 0.0500              |
|                 |             | 138ac80 | 5690.0000       | 5689.9400       | 0.0600              |
|                 |             | 142F    | 5710.0000       | 5709.9500       | 0.0500              |
|                 |             | 144     | 5720.0000       | 5719.9500       | 0.0500              |

| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\triangle$ F (MHz) |
|-----------------|-------------|---------|-----------------|-----------------|---------------------|
| Tmin (0) °C     | Vmax (138)V | 42ac80  | 5210.0000       | 5209.9400       | 0.0600              |
|                 |             | 58ac80  | 5290.0000       | 5289.9600       | 0.0400              |
|                 |             | 106ac80 | 5530.0000       | 5529.9500       | 0.0500              |
|                 |             | 138ac80 | 5690.0000       | 5689.9400       | 0.0600              |
|                 |             | 142F    | 5710.0000       | 5709.9500       | 0.0500              |
|                 |             | 144     | 5720.0000       | 5719.9400       | 0.0600              |
| Test Conditions |             | Channel | Frequency (MHz) | Frequency (MHz) | $\triangle$ F (MHz) |
| Tmin (0) °C     | Vmin (102)V | 42ac80  | 5210.0000       | 5209.9200       | 0.0800              |
|                 |             | 58ac80  | 5290.0000       | 5289.9600       | 0.0400              |
|                 |             | 106ac80 | 5530.0000       | 5529.9400       | 0.0600              |
|                 |             | 138ac80 | 5690.0000       | 5689.9400       | 0.0600              |
|                 |             | 142F    | 5710.0000       | 5709.9500       | 0.0500              |
|                 |             | 144     | 5720.0000       | 5719.9500       | 0.0500              |

## **9. EMI Reduction Method During Compliance Testing**

No modification was made during testing.