



Test Report

(Class II Permissive Change)

| | |
|--------------|----------------------------------|
| Product Name | Intel® Centrino® Ultimate-N 6300 |
| Model No | 633ANHMW |
| FCC ID | PD9633ANH |

| | |
|-----------|--|
| Applicant | Intel Corporation |
| Address | 100 Center Point Circle Suite 200 Columbia, SC 29210 |

| | |
|-----------------|--------------------|
| Date of Receipt | Oct. 13, 2011 |
| Issued Date | Dec. 15, 2011 |
| Report No. | 11A219R-RFUSP46V01 |
| Report Version | V1.0 |

The test results relate only to the samples tested.


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This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Test Report Certification

Issued Date: Dec. 15, 2011

Report No.: 11A219R-RFUSP46V01



| | | |
|---------------------|---|---|
| Product Name | Intel® Centrino® Ultimate-N 6300 | |
| Applicant | Intel Corporation | |
| Address | 100 Center Point Circle Suite 200 Columbia, SC 29210 | |
| Manufacturer | Intel Corporation | |
| Model No. | 633ANHMW | |
| FCC ID. | PD9633ANH | |
| EUT Rated Voltage | DC 3.3V (via Mini-PCI Express slot) | |
| EUT Test Voltage | AC 120V/60Hz | |
| Trade Name | Intel | |
| Applicable Standard | FCC CFR Title 47 Part 15 Subpart E: 2010 ANSI C63.4: 2003+2009; FCC KDB-789033 |  NVLAP Lab Code: 200533-0 |
| Test Result | Complied | |

The Test Results relate only to the samples tested.
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1. GENERAL INFORMATION

1.1. EUT Description

| | |
|--------------------|---|
| Product Name | Intel® Centrino® Ultimate-N 6300 |
| Trade Name | Intel |
| FCC ID. | PD9633ANH |
| Model No. | 633ANHMW |
| Frequency Range | 802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz 802.11n-40MHz: 5190-5310, 5510-5670MHz |
| Number of Channels | 802.11a/n-20MHz: 19; 802.11n-40MHz: 9 |
| Data Rate | 802.11a: 6 - 54Mbps 802.11n: up to 450Mbps |
| Channel Control | Auto |
| Type of Modulation | 802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM |
| Antenna type | Dipole Antenna |
| Antenna Gain | Refer to the table “Antenna List” |

Antenna List

| No. | Manufacturer | Part No. | Peak Gain |
|-----|----------------------------|---|---|
| 1 | Air802 + Amphenol + Hirose | Air 802 Antenna: ANRD245X05-RTP Amphenol Connector: 901-10097 Hirose Cable: U.FL-2LP-04N1-A-(100) | -1.65dBi for 2.4GHz 0.25dBi for 5.15-5.35GHz 0.12dBi for 5.47-5.725GHz -0.80dBi for 5.725-5.850GHz |

Note: The antenna of EUT is conform to FCC 15.203

802.11a/n-20MHz Center Working Frequency of Each Channel:

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
| Channel 36: | 5180 MHz | Channel 40: | 5200 MHz | Channel 44: | 5220 MHz | Channel 48: | 5240 MHz |
| Channel 52: | 5260 MHz | Channel 56: | 5280 MHz | Channel 60: | 5300 MHz | Channel 64: | 5320 MHz |
| Channel 100: | 5500 MHz | Channel 104: | 5520 MHz | Channel 108: | 5540 MHz | Channel 112: | 5560 MHz |
| Channel 116: | 5580 MHz | Channel 120: | 5600 MHz | Channel 124: | 5620 MHz | Channel 128: | 5640 MHz |
| Channel 132: | 5660 MHz | Channel 136: | 5680 MHz | Channel 140: | 5700 MHz | | |

802.11n-40MHz Center Working Frequency of Each Channel:

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|
| Channel 38: | 5190 MHz | Channel 46: | 5230 MHz | Channel 54: | 5270 MHz | Channel 62: | 5310 MHz |
| Channel 102: | 5510 MHz | Channel 110: | 5550 MHz | Channel 118: | 5590 MHz | Channel 126: | 5630 MHz |
| Channel 134: | 5670 MHz | | | | | | |

Note:

1. This device is an Intel® Centrino® Ultimate-N 6300 with a built-in 2.4GHz and 5GHz WLAN transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps 、 802.11b is 1Mbps 、 802.11g is 6Mbps 、 802.11n(20M-BW) is 21.7Mbps and 、 802.11n(40M-BW) is 45Mbps).
4. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.
5. This is to request a Class II permissive change for **FCC ID: PD9633ANH**, originally granted on **08/10/2009**.

The major change filed under this application is:

Change #1: Addition new antenna

Antenna type: Dipole antenna

| | |
|-----------|--|
| Test Mode | Mode 1: Transmit (802.11a-6Mbps) Mode 2: Transmit (802.11n-20BW 21.7Mbps) Mode 3: Transmit (802.11n-40BW 45Mbps) |
|-----------|--|

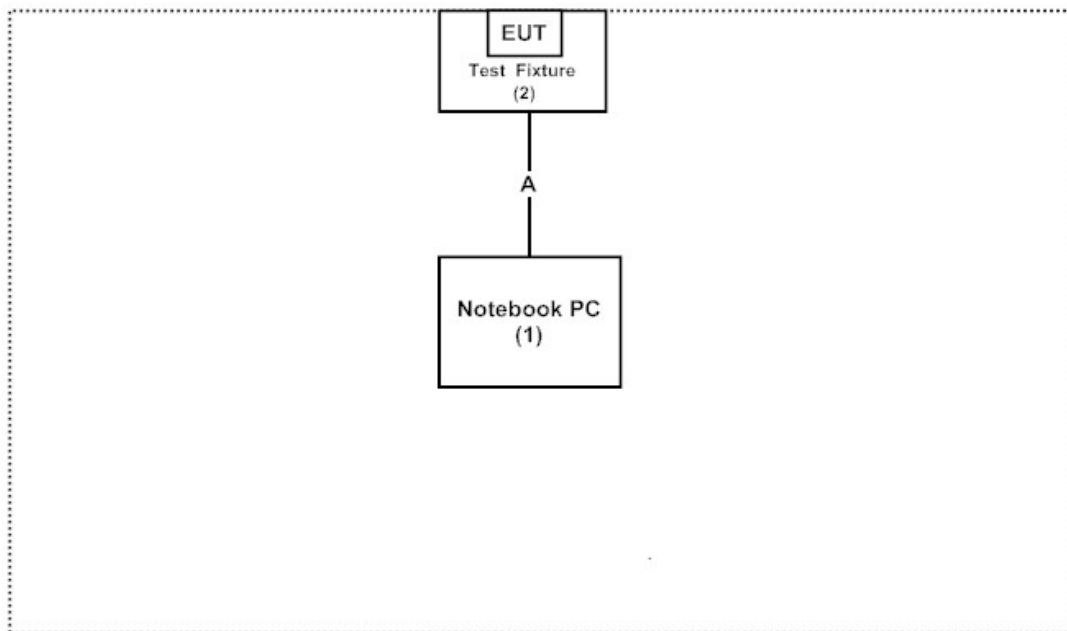
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

| Product | Manufacturer | Model No. | Serial No. | Power Cord |
|------------------|--------------|-----------|------------|--------------------|
| (1) Notebook PC | Intel | N/A | N/A | Non-Shielded, 1.8m |
| (2) Test Fixture | Intel | N/A | N/A | N/A |

| Signal Cable Type | Signal cable Description |
|-------------------|--------------------------|
| A Control Cable | Non-shielded, 0.15m |

1.4. Configuration of tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute “DRTU v1.5.3-0320” program on the Notebook.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press “OK” to start the continuous Transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

| Items | Required (IEC 68-1) | Actual |
|----------------------------|---------------------|----------|
| Temperature (°C) | 15-35 | 20-30 |
| Humidity (%RH) | 25-75 | 50-65 |
| Barometric pressure (mbar) | 860-1060 | 950-1000 |

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://www.quietek.com/tw/ctg/cts/accreditations.htm>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : <http://www.quietek.com/>

Site Description: File on
 Federal Communications Commission
 FCC Engineering Laboratory
 7435 Oakland Mills Road
 Columbia, MD 21046
 Registration Number: 92195



Accreditation on NVLAP
 NVLAP Lab Code: 200533-0



Site Name: Quietek Corporation
 Site Address: No.5-22, Ruishukeng Linkou Dist., New Taipei City
 24451, Taiwan, R.O.C.
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 E-Mail : service@quietek.com

FCC Accreditation Number: TW1014



Testing Laboratory
0914

2. Peak Transmit Power

2.1. Test Equipment

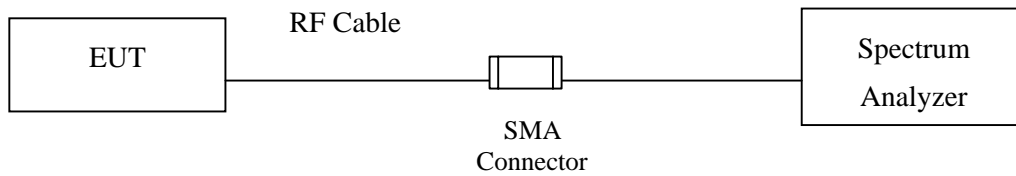
| | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|---|-------------------|--------------|----------------------|------------|
| X | Power Meter | Anritsu | ML2495A/6K00003357 | May, 2011 |
| X | Power Sensor | Anritsu | MA2411B/0738448 | Jun, 2011 |
| X | Spectrum Analyzer | Agilent | N9010A / MY48030495 | Apr., 2011 |

Note:

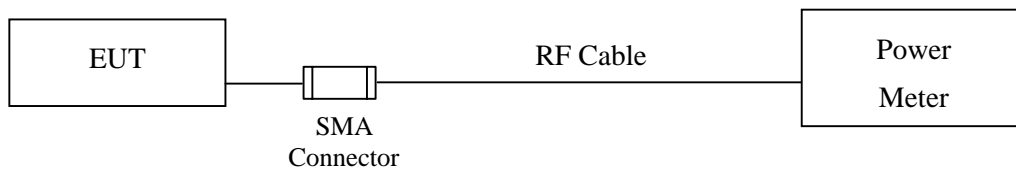
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

2.2. Test Setup

26dBc Occupied Bandwidth



Conduction Power Measurement



2.3. Limits

- (1) For the band 5.15-5.25 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 50 mW or $4 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (2) For the band 5.25-5.35 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.
- (3) For the band 5.725-5.825 GHz, the peak transmit power over the frequency band of operation shall not exceed the lesser of 1W or $17 \text{ dBm} + 10\log B$, where B is the 26-dB emission bandwidth in MHz. If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that directional gain of the antenna exceeds 6 dBi.

2.4. Test Procedur

As an alternative to FCC KDB-789033, the EUT peak power was measured with a peak power meter employing a video bandwidth greater than 6dB BW of the emission under test. Peak output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

2.5. Uncertainty

$\pm 1.27 \text{ dB}$

2.6. Test Result of Peak Transmit Power

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Peak Transmit Power
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)

Peak Transmit Power Measurement:

| Channel Number | Frequency (MHz) | 26dB Bandwidth (MHz) | Output Power (dBm) | Output Power Limit | |
|----------------|-----------------|----------------------|--------------------|--------------------|---------------|
| | | | | (dBm) | dBm+10log(BW) |
| 36 | 5180 | 20.920 | 16.42 | 17 | 17.21 |
| 44 | 5220 | 20.330 | 16.54 | 17 | 17.08 |
| 48 | 5240 | 20.750 | 16.78 | 17 | 17.17 |
| 52 | 5260 | 20.670 | 16.51 | 24 | 24.15 |
| 60 | 5300 | 20.580 | 16.63 | 24 | 24.13 |
| 64 | 5320 | 20.580 | 16.73 | 24 | 24.13 |
| 100 | 5500 | 23.000 | 16.59 | 24 | 24.62 |
| 120 | 5600 | 23.170 | 16.55 | 24 | 24.65 |
| 140 | 5700 | 23.670 | 16.54 | 24 | 24.74 |

Note: Power Output Value =Reading value on peak power meter + cable loss

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Peak Transmit Power
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps)

Peak Transmit Power Measurement:

| Channel Number | Frequency (MHz) | 26dB Bandwidth (MHz) | Chain A Power (dBm) | Chain B Power (dBm) | Chain C Power (dBm) | Output Power (dBm) | Output Power Limit | |
|----------------|-----------------|----------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------|
| | | | | | | | (dBm) | dBm+10log(BW) |
| 36 | 5180 | 21.080 | 11.78 | 11.75 | 11.48 | 16.44 | 17 | 17.24 |
| 44 | 5220 | 21.170 | 11.47 | 11.79 | 11.94 | 16.51 | 17 | 17.26 |
| 48 | 5240 | 21.330 | 11.78 | 11.71 | 11.97 | 16.59 | 17 | 17.29 |
| 52 | 5260 | 21.170 | 12.05 | 11.58 | 11.98 | 16.65 | 24 | 24.26 |
| 60 | 5300 | 21.170 | 11.77 | 11.71 | 11.66 | 16.48 | 24 | 24.26 |
| 64 | 5320 | 21.330 | 11.84 | 11.48 | 11.48 | 16.37 | 24 | 24.29 |
| 100 | 5500 | 21.330 | 11.58 | 11.53 | 11.89 | 16.44 | 24 | 24.29 |
| 120 | 5600 | 21.250 | 11.74 | 11.80 | 11.69 | 16.51 | 24 | 24.27 |
| 140 | 5700 | 21.750 | 11.73 | 11.94 | 11.82 | 16.60 | 24 | 24.37 |

Note:

1. Power Output Value = Reading value on peak power meter + cable loss
2. Output Power (dBm) = 10*LOG (Chain A Power (mW)+ Chain B Power (mW) + Chain C Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Peak Transmit Power
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps)

Peak Transmit Power Measurement:

| Channel Number | Frequency (MHz) | 26dB Bandwidth (MHz) | Chain A Power (dBm) | Chain B Power (dBm) | Chain C Power (dBm) | Output Power (dBm) | Output Power Limit | |
|----------------|-----------------|----------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------|
| | | | | | | | (dBm) | dBm+10log(BW) |
| 38 | 5190 | 38.170 | 11.65 | 11.91 | 11.74 | 16.54 | 17 | 19.82 |
| 46 | 5230 | 38.000 | 11.73 | 11.88 | 11.66 | 16.53 | 17 | 19.80 |
| 54 | 5270 | 38.330 | 11.91 | 11.73 | 11.61 | 16.52 | 17 | 26.84 |
| 62 | 5310 | 38.170 | 12.15 | 11.77 | 11.74 | 16.66 | 24 | 26.82 |
| 102 | 5510 | 39.670 | 11.68 | 11.84 | 11.78 | 16.54 | 24 | 26.98 |
| 118 | 5590 | 38.500 | 11.63 | 11.84 | 11.83 | 16.54 | 24 | 26.85 |
| 134 | 5670 | 39.500 | 11.89 | 11.56 | 11.79 | 16.52 | 24 | 26.97 |

Note:

1. Power Output Value = Reading value on peak power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW) + Chain C Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.

3. Radiated Emission

3.1. Test Equipment

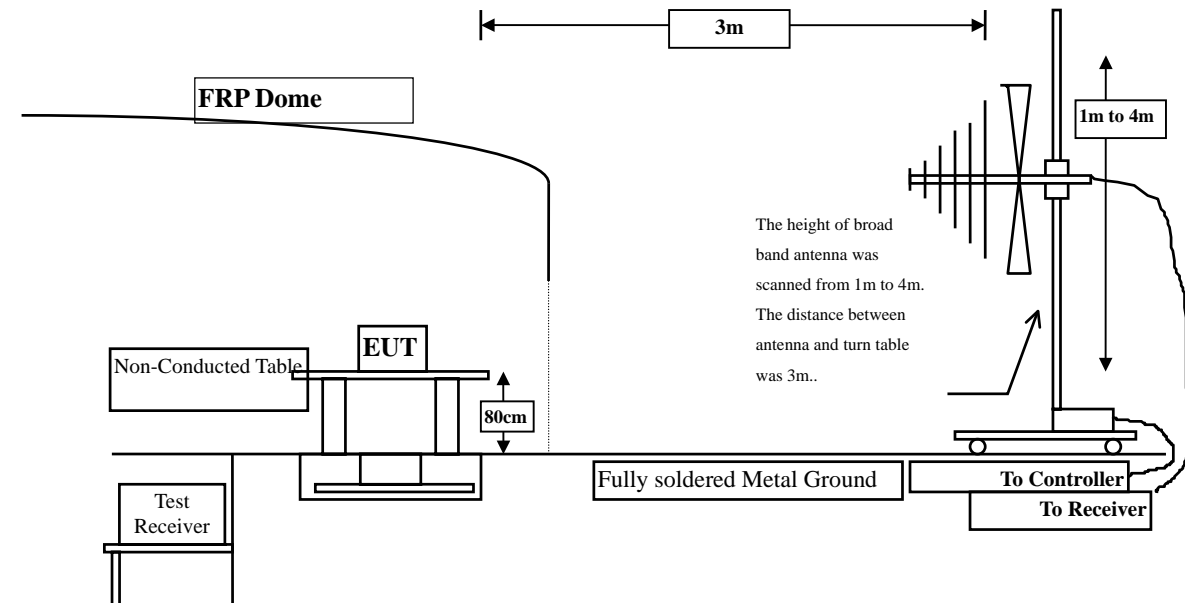
The following test equipments are used during the radiated emission test:

| Test Site | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|------------|---------------------|-----------------|--------------------------------|------------|
| ☒ Site # 3 | X Bilog Antenna | Schaffner Chase | CBL6112B/2673 | Sep., 2011 |
| | X Horn Antenna | Schwarzbeck | BBHA9120D/D305 | Sep., 2011 |
| | X Horn Antenna | Schwarzbeck | BBHA9170/208 | Jul., 2011 |
| | X Pre-Amplifier | QTK | QTK-AMP-03 / 0003 | May, 2011 |
| | X Pre-Amplifier | QTK | AP-180C / CHM_0906076 | Sep., 2011 |
| | X Pre-Amplifier | MITEQ | AMF-4D-180400-45-6P/ 925975 | Mar, 2011 |
| | X Spectrum Analyzer | Agilent | E4407B / US39440758 | May, 2011 |
| | X Test Receiver | R & S | ESCS 30/ 825442/018 | Sep., 2011 |
| | X Coaxial Cable | QuieTek | QTK-CABLE/ CAB5 | Feb., 2011 |
| | X Controller | QuieTek | QTK-CONTROLLER/ CTRL3 | N/A |
| | X Coaxial Switch | Anritsu | MP59B/6200265729 | N/A |

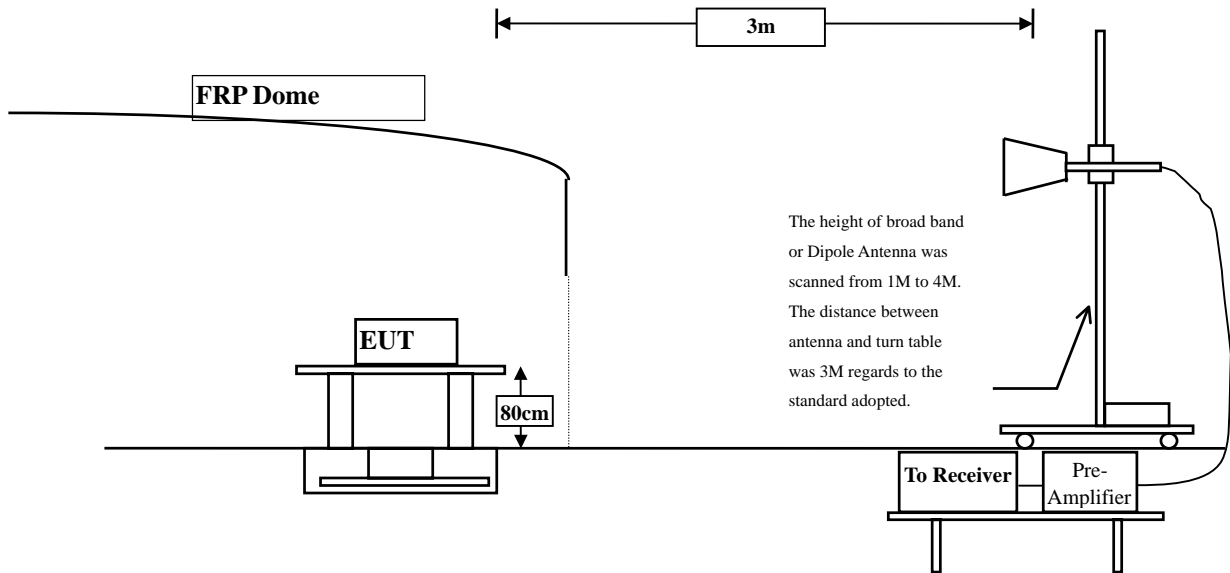
- Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

3.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.3. 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 | uV/m @ 3m | dBuV/m@3m |
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |

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

3.4. Test Procedure

The EUT was setup according to ANSI C63.4, 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 C63.4:2009 on radiated measurement.

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

Radiated emission measurements below 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 form 30MHz - 10th Harmonic of fundamental was investigated.

3.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

3.6. Test Result of Radiated Emission

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|-----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 10360.000 | 12.930 | 36.920 | 49.850 | -24.150 | 74.000 |
| 15540.000 | * | * | * | * | 74.000 |
| 20720.000 | * | * | * | * | 74.000 |
| 25900.000 | * | * | * | * | 74.000 |
| 31080.000 | * | * | * | * | 74.000 |
| 36260.000 | * | * | * | * | 74.000 |

Average Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10360.000 | 13.724 | 37.090 | 50.814 | -23.186 | 74.000 |
| 15540.000 | * | * | * | * | 74.000 |
| 20720.000 | * | * | * | * | 74.000 |
| 25900.000 | * | * | * | * | 74.000 |
| 31080.000 | * | * | * | * | 74.000 |
| 36260.000 | * | * | * | * | 74.000 |

Average Detector:

--

Note:

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

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10440.000 | 13.322 | 37.130 | 50.452 | -23.548 | 74.000 |
| 15660.000 | * | * | * | * | 74.000 |
| 20880.000 | * | * | * | * | 74.000 |
| 26100.000 | * | * | * | * | 74.000 |

Average Detector:

--

Vertical
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10440.000 | 14.245 | 37.100 | 51.345 | -22.655 | 74.000 |
| 15660.000 | * | * | * | * | 74.000 |
| 20880.000 | * | * | * | * | 74.000 |
| 26100.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10480.000 | 13.693 | 37.120 | 50.814 | -23.186 | 74.000 |
| 15720.000 | * | * | * | * | 74.000 |
| 20960.000 | * | * | * | * | 74.000 |
| 26200.000 | * | * | * | * | 74.000 |

Average Detector:

--

Vertical
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10480.000 | 14.620 | 37.000 | 51.621 | -22.379 | 74.000 |
| 15720.000 | * | * | * | * | 74.000 |
| 20960.000 | * | * | * | * | 74.000 |
| 26200.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10520.000 | 14.015 | 36.960 | 50.975 | -23.025 | 74.000 |
| 15780.000 | * | * | * | * | 74.000 |
| 21040.000 | * | * | * | * | 74.000 |
| 26300.000 | * | * | * | * | 74.000 |

Average Detector:

--

Vertical
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10520.000 | 14.818 | 43.400 | 58.218 | -15.782 | 74.000 |
| 15780.000 | * | * | * | * | 74.000 |
| 21040.000 | * | * | * | * | 74.000 |
| 26300.000 | * | * | * | * | 74.000 |

Average Detector:

| | | | | | |
|-----------|--------|--------|--------|--------|--------|
| 10520.000 | 14.818 | 30.340 | 45.158 | -8.842 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 10600.000 | 14.550 | 41.450 | 55.999 | -18.001 | 74.000 |
| 15900.000 | * | * | * | * | 74.000 |
| 21200.000 | * | * | * | * | 74.000 |
| 26500.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 10600.000 | 14.550 | 26.590 | 41.139 | -12.861 | 54.000 |
| Vertical | | | | | |
| Peak Detector: | | | | | |
| 10600.000 | 14.881 | 43.510 | 58.391 | -15.609 | 74.000 |
| 15900.000 | * | * | * | * | 74.000 |
| 21200.000 | * | * | * | * | 74.000 |
| 26500.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 10600.000 | 14.881 | 29.800 | 44.681 | -9.319 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 10640.000 | 14.690 | 41.490 | 56.180 | -17.820 | 74.000 |
| 15960.000 | * | * | * | * | 74.000 |
| 21280.000 | * | * | * | * | 74.000 |
| 26600.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 10640.000 | 14.690 | 27.460 | 42.150 | -11.850 | 54.000 |
| Vertical | | | | | |
| Peak Detector: | | | | | |
| 10640.000 | 15.083 | 44.280 | 59.363 | -14.637 | 74.000 |
| 15960.000 | * | * | * | * | 74.000 |
| 21280.000 | * | * | * | * | 74.000 |
| 26600.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 10640.000 | 15.083 | 29.790 | 44.873 | -9.127 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 11000.000 | 16.399 | 37.790 | 54.189 | -19.811 | 74.000 |
| 16500.000 | * | * | * | * | 74.000 |
| 22000.000 | * | * | * | * | 74.000 |
| 27500.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 11000.000 | 16.399 | 22.640 | 39.039 | -14.961 | 54.000 |
| Peak Detector: | | | | | |
| 11000.000 | 17.132 | 43.360 | 60.492 | -13.508 | 74.000 |
| 16500.000 | * | * | * | * | 74.000 |
| 22000.000 | * | * | * | * | 74.000 |
| 27500.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 11000.000 | 17.132 | 25.840 | 42.972 | -11.028 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5600MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 11200.000 | 16.656 | 39.860 | 56.516 | -17.484 | 74.000 |
| 16800.000 | * | * | * | * | 74.000 |
| 22400.000 | * | * | * | * | 74.000 |
| 28000.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 11200.000 | 16.656 | 24.830 | 41.486 | -12.514 | 54.000 |
| Peak Detector: | | | | | |
| 11200.000 | 17.726 | 47.550 | 65.276 | -8.724 | 74.000 |
| 16800.000 | * | * | * | * | 74.000 |
| 22400.000 | * | * | * | * | 74.000 |
| 28000.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 11200.000 | 17.726 | 30.670 | 48.396 | -5.604 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 11400.000 | 16.530 | 39.150 | 55.681 | -18.319 | 74.000 |
| 17100.000 | * | * | * | * | 74.000 |
| 22800.000 | * | * | * | * | 74.000 |
| 28500.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 11400.000 | 16.530 | 24.360 | 40.891 | -13.109 | 54.000 |
| Vertical | | | | | |
| Peak Detector: | | | | | |
| 11400.000 | 17.138 | 47.650 | 64.788 | -9.212 | 74.000 |
| 17100.000 | * | * | * | * | 74.000 |
| 22800.000 | * | * | * | * | 74.000 |
| 28500.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 11400.000 | 17.138 | 31.330 | 48.468 | -5.532 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5180MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10360.000 | 12.930 | 37.330 | 50.260 | -23.740 | 74.000 |
| 15540.000 | * | * | * | * | 74.000 |
| 20720.000 | * | * | * | * | 74.000 |
| 25900.000 | * | * | * | * | 74.000 |

Average Detector:

--

Vertical
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10360.000 | 13.724 | 37.530 | 51.254 | -22.746 | 74.000 |
| 15540.000 | * | * | * | * | 74.000 |
| 20720.000 | * | * | * | * | 74.000 |
| 25900.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5220MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 10440.000 | 13.322 | 37.700 | 51.022 | -22.978 | 74.000 |
| 15660.000 | * | * | * | * | 74.000 |
| 20880.000 | * | * | * | * | 74.000 |
| 26100.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| -- | | | | | |
| Peak Detector: | | | | | |
| 10440.000 | 14.245 | 37.500 | 51.745 | -22.255 | 74.000 |
| 15660.000 | * | * | * | * | 74.000 |
| 20880.000 | * | * | * | * | 74.000 |
| 26100.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5240MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10480.000 | 13.693 | 36.980 | 50.674 | -23.326 | 74.000 |
| 15720.000 | * | * | * | * | 74.000 |
| 20960.000 | * | * | * | * | 74.000 |
| 26200.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10480.000 | 14.620 | 36.420 | 51.041 | -22.959 | 74.000 |
| 15720.000 | * | * | * | * | 74.000 |
| 20960.000 | * | * | * | * | 74.000 |
| 26200.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5260MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10520.000 | 14.015 | 36.250 | 50.265 | -23.735 | 74.000 |
| 15780.000 | * | * | * | * | 74.000 |
| 21040.000 | * | * | * | * | 74.000 |
| 26300.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10520.000 | 14.818 | 36.290 | 51.108 | -22.892 | 74.000 |
| 15780.000 | * | * | * | * | 74.000 |
| 21040.000 | * | * | * | * | 74.000 |
| 26300.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5300MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10600.000 | 14.550 | 36.180 | 50.729 | -23.271 | 74.000 |
| 15900.000 | * | * | * | * | 74.000 |
| 21200.000 | * | * | * | * | 74.000 |
| 26500.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10600.000 | 14.881 | 36.790 | 51.671 | -22.329 | 74.000 |
| 15900.000 | * | * | * | * | 74.000 |
| 21200.000 | * | * | * | * | 74.000 |
| 26500.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5320MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10640.000 | 14.690 | 36.430 | 51.120 | -22.880 | 74.000 |
| 15960.000 | * | * | * | * | 74.000 |
| 21280.000 | * | * | * | * | 74.000 |
| 26600.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10640.000 | 15.083 | 36.570 | 51.653 | -22.347 | 74.000 |
| 15960.000 | * | * | * | * | 74.000 |
| 21280.000 | * | * | * | * | 74.000 |
| 26600.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5500MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11000.000 | 16.399 | 36.900 | 53.299 | -20.701 | 74.000 |
| 16500.000 | * | * | * | * | 74.000 |
| 22000.000 | * | * | * | * | 74.000 |
| 27500.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11000.000 | 17.132 | 36.470 | 53.602 | -20.398 | 74.000 |
| 16500.000 | * | * | * | * | 74.000 |
| 22000.000 | * | * | * | * | 74.000 |
| 27500.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5600MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11200.000 | 16.656 | 35.620 | 52.276 | -21.724 | 74.000 |
| 16800.000 | * | * | * | * | 74.000 |
| 22400.000 | * | * | * | * | 74.000 |
| 28000.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11200.000 | 17.726 | 41.210 | 58.936 | -15.064 | 74.000 |
| 16800.000 | * | * | * | * | 74.000 |
| 22400.000 | * | * | * | * | 74.000 |
| 28000.000 | * | * | * | * | 74.000 |

Average Detector:

| | | | | | |
|-----------|--------|--------|--------|--------|--------|
| 11200.000 | 17.726 | 26.600 | 44.326 | -9.674 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5700MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11400.000 | 16.530 | 35.890 | 52.421 | -21.579 | 74.000 |
| 17100.000 | * | * | * | * | 74.000 |
| 22800.000 | * | * | * | * | 74.000 |
| 28500.000 | * | * | * | * | 74.000 |

Average Detector:

--

Vertical
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11400.000 | 17.138 | 40.120 | 57.258 | -16.742 | 74.000 |
| 17100.000 | * | * | * | * | 74.000 |
| 22800.000 | * | * | * | * | 74.000 |
| 28500.000 | * | * | * | * | 74.000 |

Average Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11400.000 | 17.138 | 25.560 | 42.698 | -11.302 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10380.000 | 12.939 | 38.640 | 51.579 | -22.421 | 74.000 |
| 15570.000 | * | * | * | * | 74.000 |
| 20760.000 | * | * | * | * | 74.000 |
| 25950.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10380.000 | 13.796 | 37.100 | 50.896 | -23.104 | 74.000 |
| 15570.000 | * | * | * | * | 74.000 |
| 20760.000 | * | * | * | * | 74.000 |
| 25950.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5230MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10460.000 | 13.508 | 36.790 | 50.298 | -23.702 | 74.000 |
| 15690.000 | * | * | * | * | 74.000 |
| 20920.000 | * | * | * | * | 74.000 |
| 26150.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10460.000 | 14.433 | 36.940 | 51.373 | -22.627 | 74.000 |
| 15690.000 | * | * | * | * | 74.000 |
| 20920.000 | * | * | * | * | 74.000 |
| 26150.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10540.000 | 14.151 | 36.570 | 50.720 | -23.280 | 74.000 |
| 15810.000 | * | * | * | * | 74.000 |
| 21080.000 | * | * | * | * | 74.000 |
| 26350.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10540.000 | 14.829 | 36.540 | 51.368 | -22.632 | 74.000 |
| 15810.000 | * | * | * | * | 74.000 |
| 21080.000 | * | * | * | * | 74.000 |
| 26350.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5310MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal
Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10620.000 | 14.623 | 36.050 | 50.673 | -23.327 | 74.000 |
| 15930.000 | * | * | * | * | 74.000 |
| 21240.000 | * | * | * | * | 74.000 |
| 26550.000 | * | * | * | * | 74.000 |

Average Detector:

--

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 10620.000 | 14.970 | 37.430 | 52.400 | -21.600 | 74.000 |
| 15930.000 | * | * | * | * | 74.000 |
| 21240.000 | * | * | * | * | 74.000 |
| 26550.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5510MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11020.000 | 16.474 | 35.730 | 52.203 | -21.797 | 74.000 |
| 15930.000 | * | * | * | * | 74.000 |
| 21240.000 | * | * | * | * | 74.000 |
| 26550.000 | * | * | * | * | 74.000 |

Average Detector:

--

Vertical

Peak Detector:

| | | | | | |
|-----------|--------|--------|--------|---------|--------|
| 11020.000 | 17.224 | 35.920 | 53.144 | -20.856 | 74.000 |
| 15930.000 | * | * | * | * | 74.000 |
| 21240.000 | * | * | * | * | 74.000 |
| 26550.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5590MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 11180.000 | 16.657 | 34.660 | 51.316 | -22.684 | 74.000 |
| 16770.000 | * | * | * | * | 74.000 |
| 22360.000 | * | * | * | * | 74.000 |
| 27950.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| -- | | | | | |
| Vertical | | | | | |
| Peak Detector: | | | | | |
| 11180.000 | 17.681 | 39.190 | 56.870 | -17.130 | 74.000 |
| 16770.000 | * | * | * | * | 74.000 |
| 22360.000 | * | * | * | * | 74.000 |
| 27950.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| 11180.000 | 17.681 | 24.750 | 42.430 | -11.570 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5670MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|--------------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector: | | | | | |
| 11340.000 | 16.408 | 35.420 | 51.827 | -22.173 | 74.000 |
| 17010.000 | * | * | * | * | 74.000 |
| 22680.000 | * | * | * | * | 74.000 |
| 28350.000 | * | * | * | * | 74.000 |
| Average Detector: | | | | | |
| -- | | | | | |
| Peak Detector: | | | | | |
| 11340.000 | 17.167 | 35.460 | 52.627 | -21.373 | 74.000 |
| 17010.000 | * | * | * | * | 74.000 |
| 22680.000 | * | * | * | * | 74.000 |
| 28350.000 | * | * | * | * | 74.000 |

Average Detector:

--

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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal

Peak Detector

| | | | | | |
|---------|--------|--------|--------|---------|--------|
| 94.020 | -8.189 | 42.456 | 34.266 | -9.234 | 43.500 |
| 258.920 | -5.050 | 40.233 | 35.183 | -10.817 | 46.000 |
| 499.480 | 0.048 | 35.364 | 35.412 | -10.588 | 46.000 |
| 600.360 | 3.977 | 30.493 | 34.470 | -11.530 | 46.000 |
| 749.740 | 3.320 | 28.853 | 32.173 | -13.827 | 46.000 |
| 864.200 | 5.671 | 26.406 | 32.077 | -13.923 | 46.000 |

Vertical

Peak Detector

| | | | | | |
|---------|--------|--------|--------|---------|--------|
| 61.040 | -4.316 | 40.025 | 35.709 | -4.291 | 40.000 |
| 107.600 | -0.318 | 36.148 | 35.830 | -7.670 | 43.500 |
| 229.820 | -8.512 | 35.883 | 27.371 | -18.629 | 46.000 |
| 398.600 | -4.678 | 31.529 | 26.851 | -19.149 | 46.000 |
| 499.480 | -0.852 | 30.153 | 29.301 | -16.699 | 46.000 |
| 689.600 | 2.538 | 22.780 | 25.318 | -20.682 | 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.

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector | | | | | |
| 94.020 | -8.189 | 43.804 | 35.614 | -7.886 | 43.500 |
| 258.920 | -5.050 | 40.763 | 35.713 | -10.287 | 46.000 |
| 499.480 | 0.048 | 34.492 | 34.540 | -11.460 | 46.000 |
| 600.360 | 3.977 | 28.750 | 32.727 | -13.273 | 46.000 |
| 749.740 | 3.320 | 26.660 | 29.980 | -16.020 | 46.000 |
| 875.840 | 5.271 | 27.796 | 33.067 | -12.933 | 46.000 |
| Vertical | | | | | |
| Peak Detector | | | | | |
| 66.860 | -6.015 | 42.170 | 36.155 | -3.845 | 40.000 |
| 111.480 | -0.954 | 37.049 | 36.095 | -7.405 | 43.500 |
| 336.520 | -4.630 | 34.453 | 29.823 | -16.177 | 46.000 |
| 499.480 | -0.852 | 32.321 | 31.469 | -14.531 | 46.000 |
| 697.360 | 1.311 | 26.064 | 27.375 | -18.625 | 46.000 |
| 961.200 | 7.260 | 29.191 | 36.451 | -17.549 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector | | | | | |
| 94.020 | -8.189 | 43.707 | 35.517 | -7.983 | 43.500 |
| 231.760 | -8.338 | 40.497 | 32.159 | -13.841 | 46.000 |
| 375.320 | -1.209 | 31.234 | 30.025 | -15.975 | 46.000 |
| 499.480 | 0.048 | 34.662 | 34.710 | -11.290 | 46.000 |
| 600.360 | 3.977 | 29.759 | 33.736 | -12.264 | 46.000 |
| 875.840 | 5.271 | 27.860 | 33.131 | -12.869 | 46.000 |
| Vertical | | | | | |
| Peak Detector | | | | | |
| 61.040 | -4.316 | 38.708 | 34.392 | -5.608 | 40.000 |
| 138.640 | -5.795 | 36.876 | 31.081 | -12.419 | 43.500 |
| 299.660 | -6.855 | 35.718 | 28.863 | -17.137 | 46.000 |
| 499.480 | -0.852 | 32.552 | 31.700 | -14.300 | 46.000 |
| 679.900 | 1.000 | 23.720 | 24.720 | -21.280 | 46.000 |
| 961.200 | 7.260 | 28.553 | 35.813 | -18.187 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5220MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector | | | | | |
| 111.480 | -7.914 | 40.438 | 32.524 | -10.976 | 43.500 |
| 258.920 | -5.050 | 40.176 | 35.126 | -10.874 | 46.000 |
| 375.320 | -1.209 | 31.184 | 29.975 | -16.025 | 46.000 |
| 499.480 | 0.048 | 35.291 | 35.339 | -10.661 | 46.000 |
| 600.360 | 3.977 | 28.742 | 32.719 | -13.281 | 46.000 |
| 875.840 | 5.271 | 27.959 | 33.230 | -12.770 | 46.000 |
| Vertical | | | | | |
| Peak Detector | | | | | |
| 61.040 | -4.316 | 38.754 | 34.438 | -5.562 | 40.000 |
| 107.600 | -0.318 | 35.877 | 35.559 | -7.941 | 43.500 |
| 299.660 | -6.855 | 37.901 | 31.046 | -14.954 | 46.000 |
| 499.480 | -0.852 | 31.904 | 31.052 | -14.948 | 46.000 |
| 749.740 | 2.510 | 25.456 | 27.966 | -18.034 | 46.000 |
| 961.200 | 7.260 | 28.859 | 36.119 | -17.881 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5300MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector | | | | | |
| 94.020 | -8.189 | 43.757 | 35.567 | -7.933 | 43.500 |
| 198.780 | -10.661 | 43.185 | 32.524 | -10.976 | 43.500 |
| 297.720 | -3.633 | 35.793 | 32.161 | -13.839 | 46.000 |
| 499.480 | 0.048 | 34.575 | 34.623 | -11.377 | 46.000 |
| 625.580 | 1.770 | 28.022 | 29.792 | -16.208 | 46.000 |
| 875.840 | 5.271 | 28.249 | 33.520 | -12.480 | 46.000 |
| Vertical | | | | | |
| Peak Detector | | | | | |
| 57.160 | -4.403 | 38.510 | 34.107 | -5.893 | 40.000 |
| 109.540 | -0.418 | 38.590 | 38.172 | -5.328 | 43.500 |
| 299.660 | -6.855 | 35.593 | 28.738 | -17.262 | 46.000 |
| 499.480 | -0.852 | 32.505 | 31.653 | -14.347 | 46.000 |
| 749.740 | 2.510 | 24.564 | 27.074 | -18.926 | 46.000 |
| 961.200 | 7.260 | 28.523 | 35.783 | -18.217 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5600MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector | | | | | |
| 64.920 | -12.353 | 42.312 | 29.959 | -10.041 | 40.000 |
| 156.100 | -10.461 | 43.502 | 33.040 | -10.460 | 43.500 |
| 297.720 | -3.633 | 38.626 | 34.994 | -11.006 | 46.000 |
| 499.480 | 0.048 | 35.289 | 35.337 | -10.663 | 46.000 |
| 600.360 | 3.977 | 30.913 | 34.890 | -11.110 | 46.000 |
| 875.840 | 5.271 | 27.519 | 32.790 | -13.210 | 46.000 |
| Vertical | | | | | |
| Peak Detector | | | | | |
| 61.040 | -4.316 | 38.878 | 34.562 | -5.438 | 40.000 |
| 138.640 | -5.795 | 37.130 | 31.335 | -12.165 | 43.500 |
| 328.760 | -5.099 | 34.628 | 29.529 | -16.471 | 46.000 |
| 499.480 | -0.852 | 32.448 | 31.596 | -14.404 | 46.000 |
| 699.300 | 0.695 | 27.697 | 28.392 | -17.608 | 46.000 |
| 961.200 | 7.260 | 27.820 | 35.080 | -18.920 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector | | | | | |
| 94.020 | -8.189 | 42.207 | 34.017 | -9.483 | 43.500 |
| 198.780 | -10.661 | 45.197 | 34.536 | -8.964 | 43.500 |
| 299.660 | -3.585 | 36.179 | 32.594 | -13.406 | 46.000 |
| 499.480 | 0.048 | 34.656 | 34.704 | -11.296 | 46.000 |
| 625.580 | 1.770 | 29.005 | 30.775 | -15.225 | 46.000 |
| 875.840 | 5.271 | 28.152 | 33.423 | -12.577 | 46.000 |
| Vertical | | | | | |
| Peak Detector | | | | | |
| 66.860 | -6.015 | 40.889 | 34.874 | -5.126 | 40.000 |
| 138.640 | -5.795 | 37.284 | 31.489 | -12.011 | 43.500 |
| 299.660 | -6.855 | 37.428 | 30.573 | -15.427 | 46.000 |
| 499.480 | -0.852 | 32.998 | 32.146 | -13.854 | 46.000 |
| 875.840 | 1.621 | 27.946 | 29.567 | -16.433 | 46.000 |
| 961.200 | 7.260 | 28.800 | 36.060 | -17.940 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|----------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
| Horizontal | | | | | |
| Peak Detector | | | | | |
| 109.540 | -7.488 | 40.022 | 32.534 | -10.966 | 43.500 |
| 239.520 | -6.851 | 40.630 | 33.780 | -12.220 | 46.000 |
| 499.480 | 0.048 | 34.871 | 34.919 | -11.081 | 46.000 |
| 600.360 | 3.977 | 30.172 | 34.149 | -11.851 | 46.000 |
| 749.740 | 3.320 | 26.671 | 29.991 | -16.009 | 46.000 |
| 875.840 | 5.271 | 27.309 | 32.580 | -13.420 | 46.000 |
| Vertical | | | | | |
| Peak Detector | | | | | |
| 61.040 | -4.316 | 39.678 | 35.362 | -4.638 | 40.000 |
| 95.960 | -2.790 | 40.714 | 37.924 | -5.576 | 43.500 |
| 340.400 | -3.899 | 32.867 | 28.968 | -17.032 | 46.000 |
| 499.480 | -0.852 | 32.377 | 31.525 | -14.475 | 46.000 |
| 720.640 | -0.099 | 26.740 | 26.641 | -19.359 | 46.000 |
| 961.200 | 7.260 | 28.805 | 36.065 | -17.935 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5590MHz)

| Frequency MHz | Correct Factor dB | Reading Level dBuV | Measurement Level dBuV/m | Margin dB | Limit dBuV/m |
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|
|------------------|-------------------------|--------------------------|--------------------------------|--------------|-----------------|

Horizontal

Peak Detector

| | | | | | |
|---------|---------|--------|--------|---------|--------|
| 198.780 | -10.661 | 46.019 | 35.358 | -8.142 | 43.500 |
| 297.720 | -3.633 | 36.818 | 33.186 | -12.814 | 46.000 |
| 499.480 | 0.048 | 34.988 | 35.036 | -10.964 | 46.000 |
| 666.320 | 2.031 | 29.538 | 31.570 | -14.430 | 46.000 |
| 749.740 | 3.320 | 26.673 | 29.993 | -16.007 | 46.000 |
| 875.840 | 5.271 | 29.215 | 34.486 | -11.514 | 46.000 |

Vertical

Peak Detector

| | | | | | |
|---------|--------|--------|--------|---------|--------|
| 66.860 | -6.015 | 41.040 | 35.025 | -4.975 | 40.000 |
| 146.400 | -6.248 | 36.136 | 29.888 | -13.612 | 43.500 |
| 297.720 | -7.143 | 38.469 | 31.327 | -14.673 | 46.000 |
| 499.480 | -0.852 | 32.260 | 31.408 | -14.592 | 46.000 |
| 697.360 | 1.311 | 24.744 | 26.055 | -19.945 | 46.000 |
| 961.200 | 7.260 | 28.693 | 35.953 | -18.047 | 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.

4. Band Edge

4.1. Test Equipment

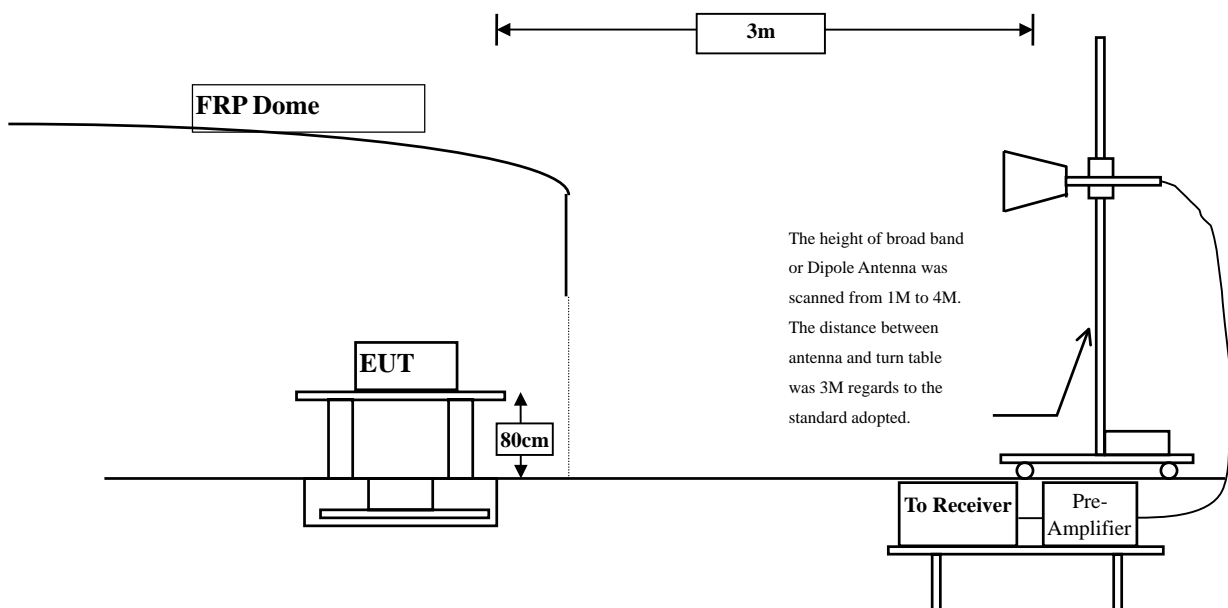
The following test equipments are used during the band edge tests:

| Test Site | Equipment | Manufacturer | Model No./Serial No. | Last Cal. |
|------------|---------------------|-----------------|--------------------------------|------------|
| ☒ Site # 3 | Bilog Antenna | Schaffner Chase | CBL6112B/2673 | Sep., 2011 |
| | X Horn Antenna | Schwarzbeck | BBHA9120D/D305 | Sep., 2011 |
| | Horn Antenna | Schwarzbeck | BBHA9170/208 | Jul., 2011 |
| | Pre-Amplifier | QTK | QTK-AMP-03 / 0003 | May, 2011 |
| | X Pre-Amplifier | QTK | AP-180C / CHM_0906076 | Sep., 2011 |
| | Pre-Amplifier | MITEQ | AMF-4D-180400-45-6P/ 925975 | Mar, 2011 |
| | X Spectrum Analyzer | Agilent | E4407B / US39440758 | May, 2011 |
| | Test Receiver | R & S | ESCS 30/ 825442/018 | Sep., 2011 |
| | X Coaxial Cable | QuieTek | QTK-CABLE/ CAB5 | Feb., 2011 |
| | 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.

4.2. Test Setup

RF Radiated Measurement:



4.3. 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:

| FCC Part 15 Subpart C Paragraph 15.209 Limits | | |
|--|----------|-----------|
| Frequency MHz | uV/m @3m | dBuV/m@3m |
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |

- Remarks :
1. RF Voltage (dBuV) = 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.

4.4. 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 C63.4:2009 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 C63.4, 2009; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

4.5. Uncertainty

- ± 3.8 dB below 1GHz
- ± 3.9 dB above 1GHz

4.6. Test Result of Band Edge

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak) | 5148.200 | 0.802 | 56.259 | 57.061 | 74.00 | 54.00 | Pass |
| 36 (Peak) | 5150.000 | 0.796 | 55.418 | 56.214 | 74.00 | 54.00 | Pass |
| 36 (Peak) | 5176.000 | 0.710 | 94.436 | 95.145 | -- | -- | -- |
| 36 (Average) | 5150.000 | 0.796 | 40.237 | 41.033 | 74.00 | 54.00 | Pass |
| 36 (Average) | 5176.800 | 0.707 | 84.093 | 84.799 | -- | -- | -- |

Figure Channel 36: Horizontal (Peak)

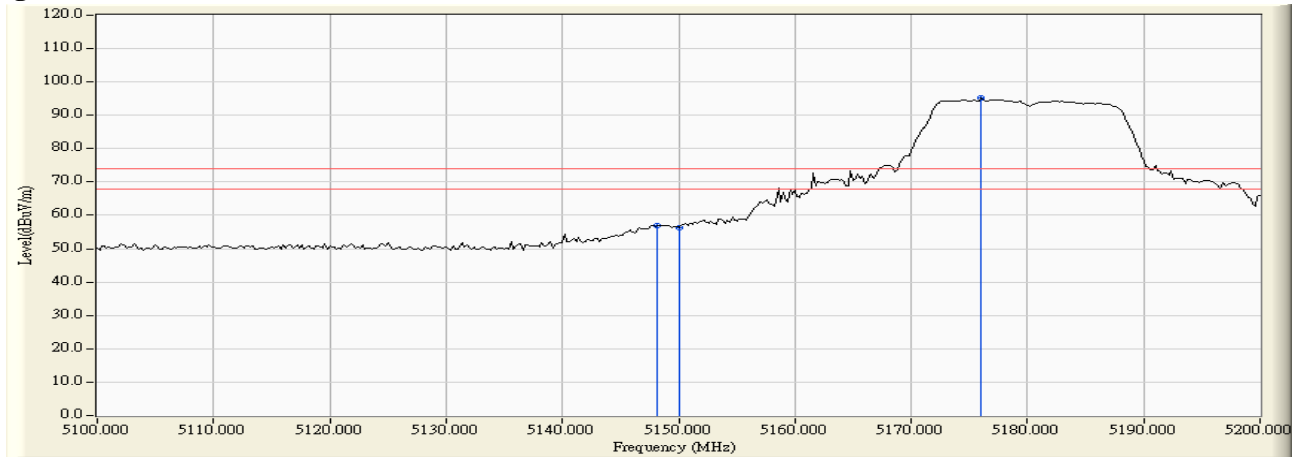
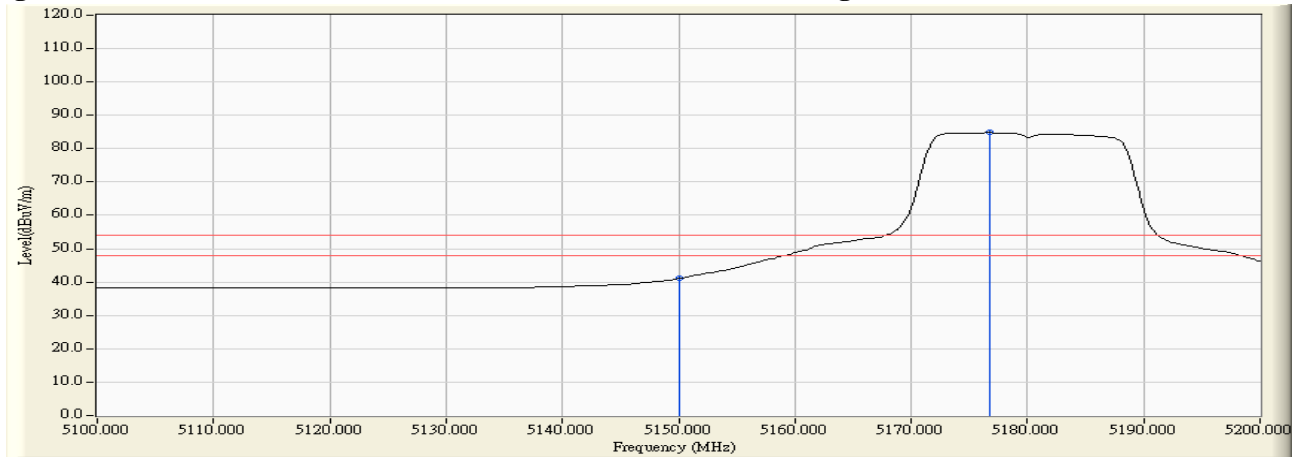


Figure Channel 36: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak) | 5150.000 | 1.331 | 71.311 | 72.643 | 74.00 | 54.00 | Pass |
| 36 (Peak) | 5175.400 | 1.451 | 109.601 | 111.052 | -- | -- | -- |
| 36 (Average) | 5150.000 | 1.331 | 52.053 | 53.385 | 74.00 | 54.00 | Pass |
| 36 (Average) | 5176.800 | 1.458 | 98.951 | 100.409 | -- | -- | -- |

Figure Channel 36: Vertical (Peak)

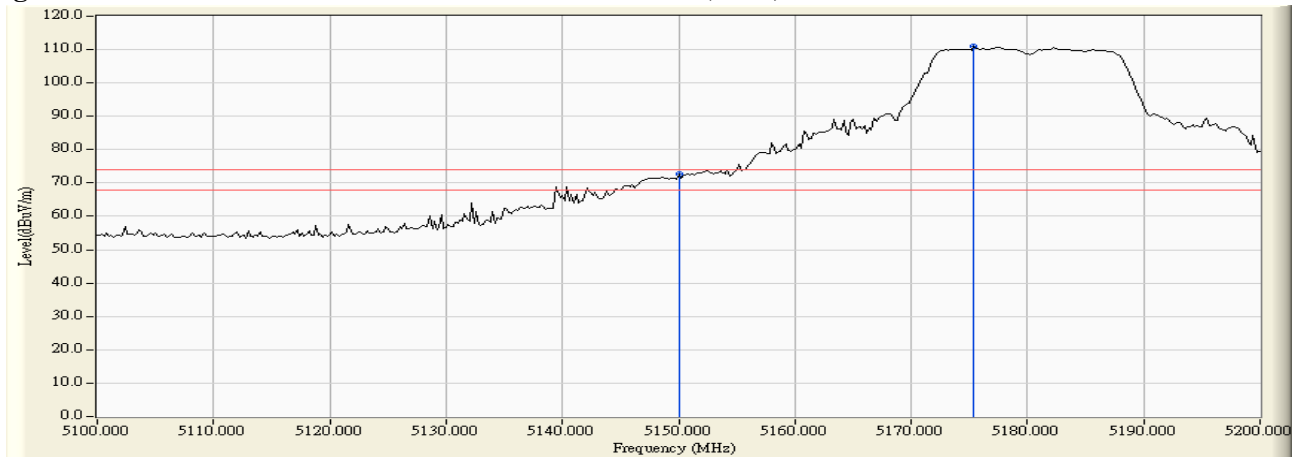
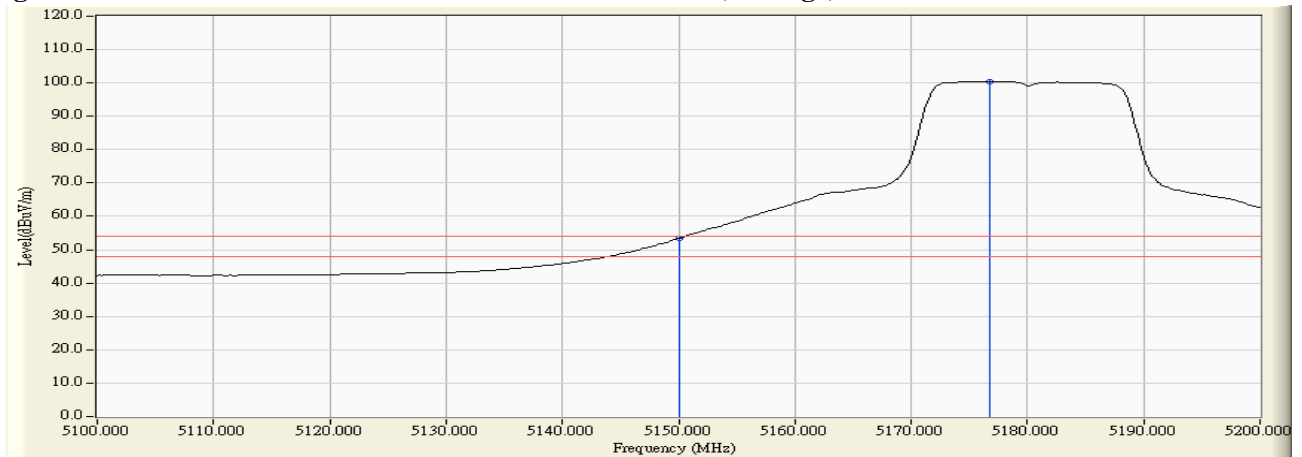


Figure Channel 36: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak) | 5315.400 | 1.652 | 93.624 | 95.275 | -- | -- | -- |
| 64 (Peak) | 5350.000 | 1.575 | 54.729 | 56.304 | 74.00 | 54.00 | Pass |
| 64 (Peak) | 5353.400 | 1.558 | 56.256 | 57.815 | 74.00 | 54.00 | Pass |
| 64 (Average) | 5323.000 | 1.637 | 82.733 | 84.370 | -- | -- | -- |
| 64 (Average) | 5350.000 | 1.575 | 41.197 | 42.772 | 74.00 | 54.00 | Pass |

Figure Channel 64: Horizontal (Peak)

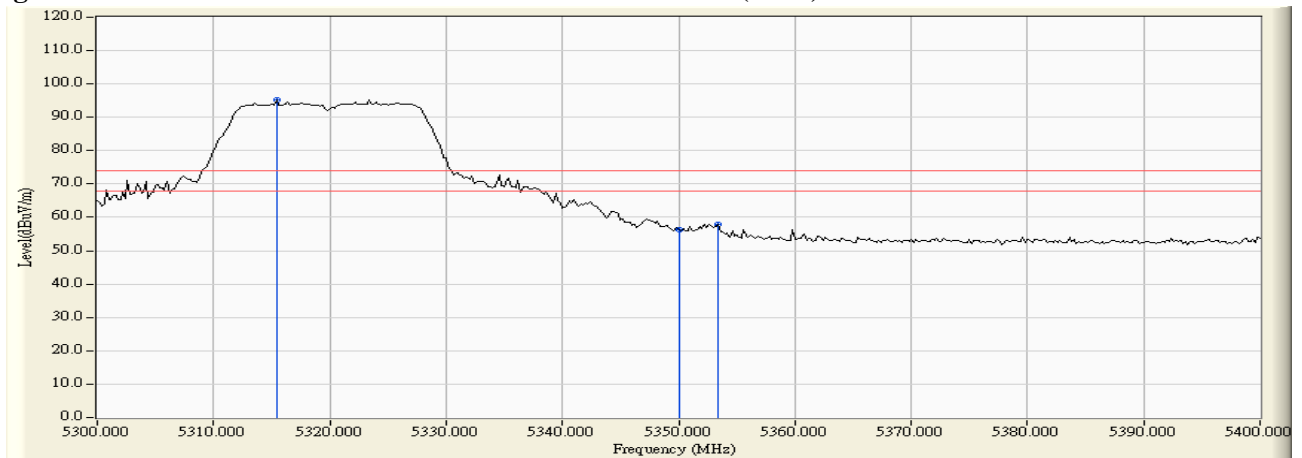
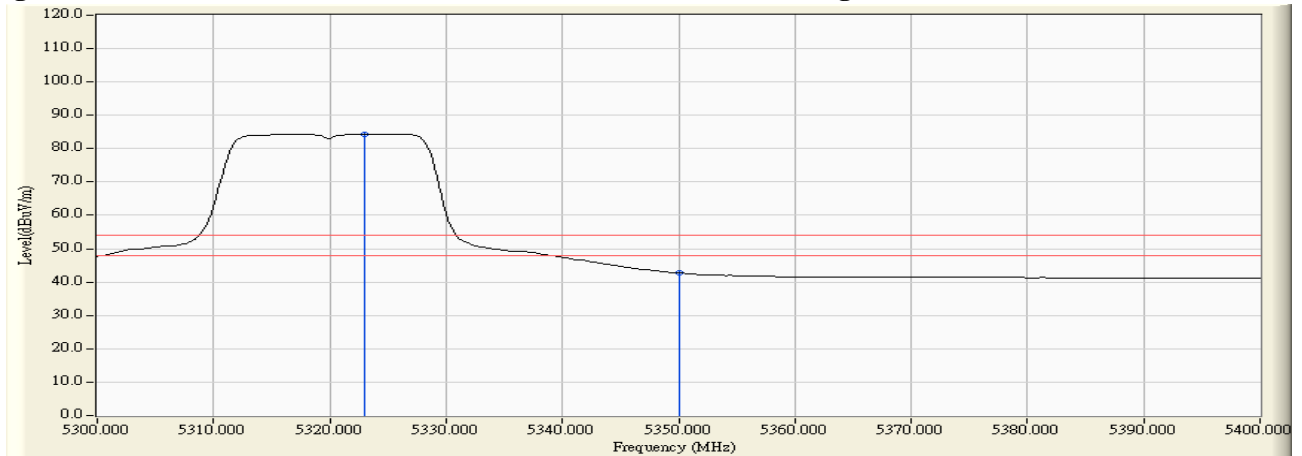


Figure Channel 64: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

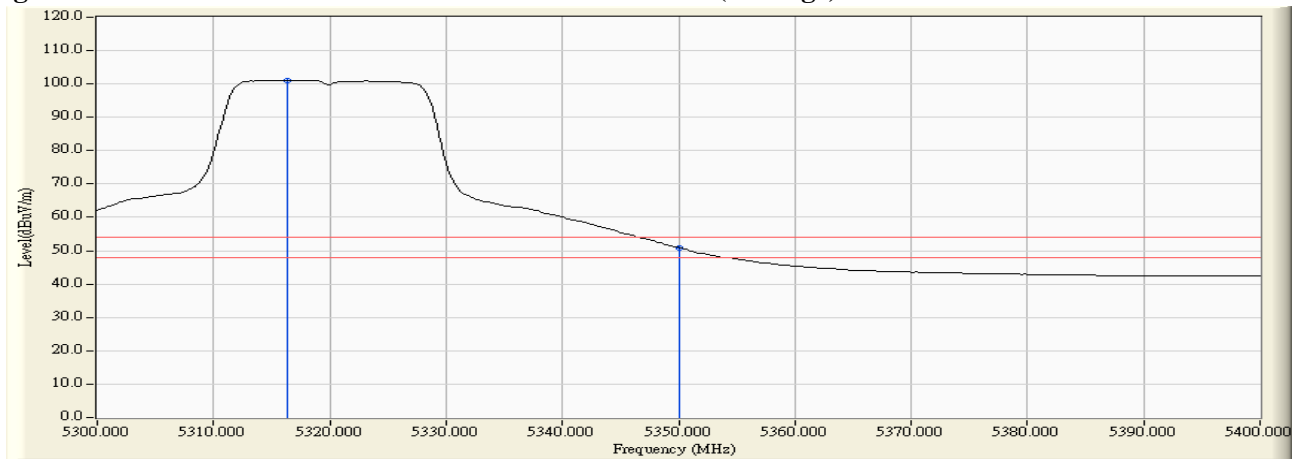
RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak) | 5315.400 | 1.883 | 110.454 | 112.337 | -- | -- | -- |
| 64 (Peak) | 5350.000 | 1.900 | 68.111 | 70.011 | 74.00 | 54.00 | Pass |
| 64 (Peak) | 5352.800 | 1.896 | 68.626 | 70.522 | 74.00 | 54.00 | Pass |
| 64 (Average) | 5316.400 | 1.884 | 99.270 | 101.154 | -- | -- | -- |
| 64 (Average) | 5350.000 | 1.900 | 49.070 | 50.970 | 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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak) | 5460.000 | 1.775 | 53.105 | 54.880 | 74.00 | 54.00 | Pass |
| 100 (Peak) | 5502.000 | 2.505 | 93.868 | 96.374 | -- | -- | -- |
| 100 (Average) | 5460.000 | 1.775 | 39.977 | 41.752 | 74.00 | 54.00 | Pass |
| 100 (Average) | 5505.200 | 2.546 | 83.818 | 86.364 | -- | -- | -- |

Figure Channel 100: Horizontal (Peak)

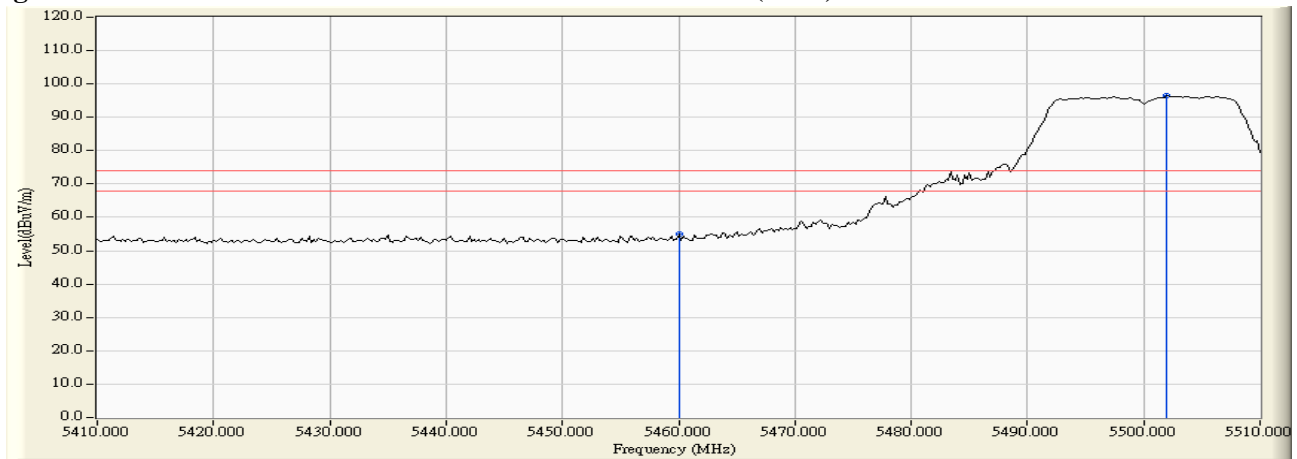
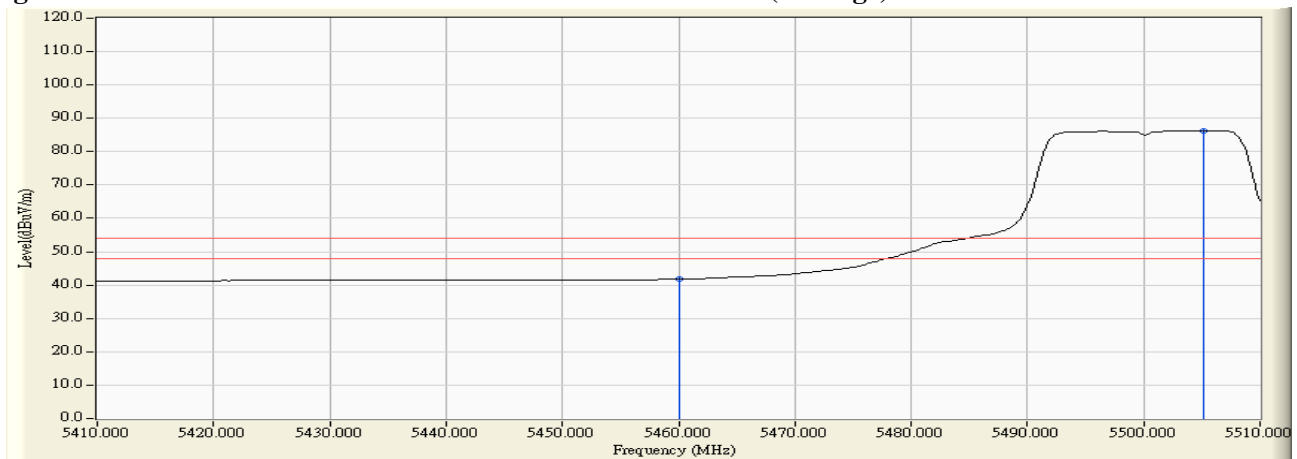


Figure Channel 100: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak) | 5458.800 | 1.917 | 64.361 | 66.279 | 74.00 | 54.00 | Pass |
| 100 (Peak) | 5460.000 | 1.934 | 60.436 | 62.371 | 74.00 | 54.00 | Pass |
| 100 (Peak) | 5496.600 | 2.425 | 105.790 | 108.215 | -- | -- | -- |
| 100 (Average) | 5460.000 | 1.934 | 43.685 | 45.620 | 74.00 | 54.00 | Pass |
| 100 (Average) | 5503.000 | 2.491 | 95.373 | 97.864 | -- | -- | -- |

Figure Channel 100: Vertical (Peak)

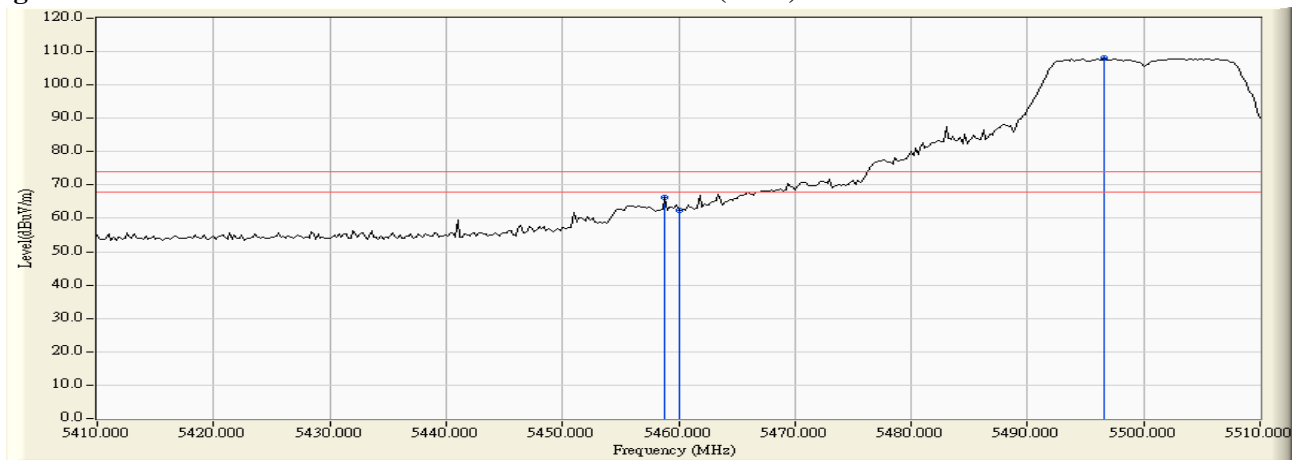
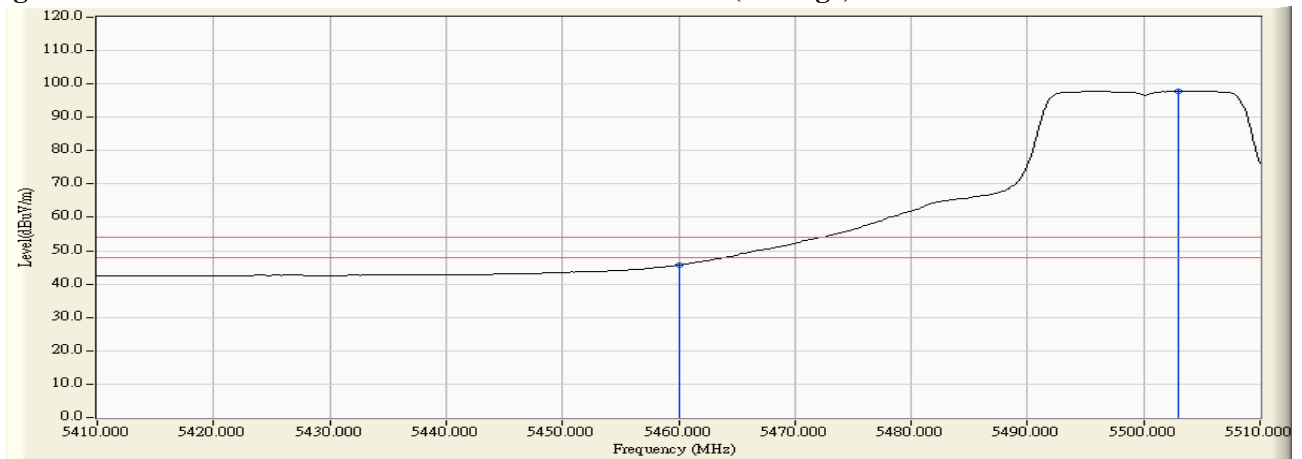


Figure Channel 100: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

RF Radiated Measurement:

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5470.000 | 18.334 | -68.040 | -49.706 | -22.706 | -27.000 | Pass |

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5470.000 | 19.335 | -66.090 | -46.755 | -19.755 | -27.000 | Pass |

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

RF Radiated Measurement:

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5725.000 | 18.649 | -61.920 | -43.271 | -16.271 | -27.000 | Pass |

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5725.000 | 19.372 | -61.920 | -42.548 | -15.548 | -27.000 | Pass |

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5180MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak) | 5147.400 | 0.805 | 55.499 | 56.304 | 74.00 | 54.00 | Pass |
| 36 (Peak) | 5150.000 | 0.796 | 54.352 | 55.148 | 74.00 | 54.00 | Pass |
| 36 (Peak) | 5177.400 | 0.704 | 93.958 | 94.662 | -- | -- | -- |
| 36 (Average) | 5150.000 | 0.796 | 42.350 | 43.146 | 74.00 | 54.00 | Pass |
| 36 (Average) | 5173.800 | 0.716 | 80.514 | 81.230 | -- | -- | -- |

Figure Channel 36: Horizontal (Peak)

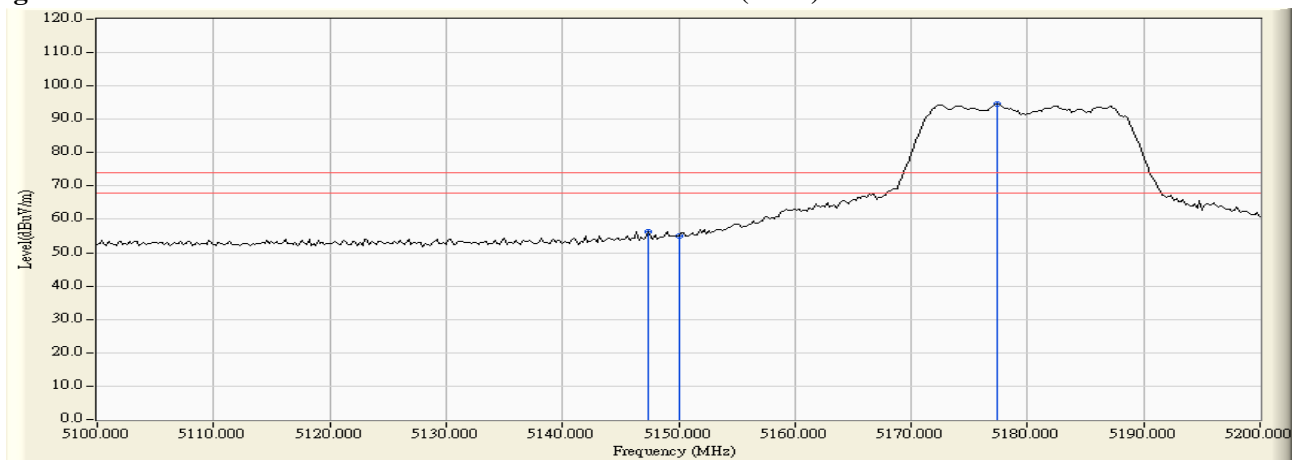
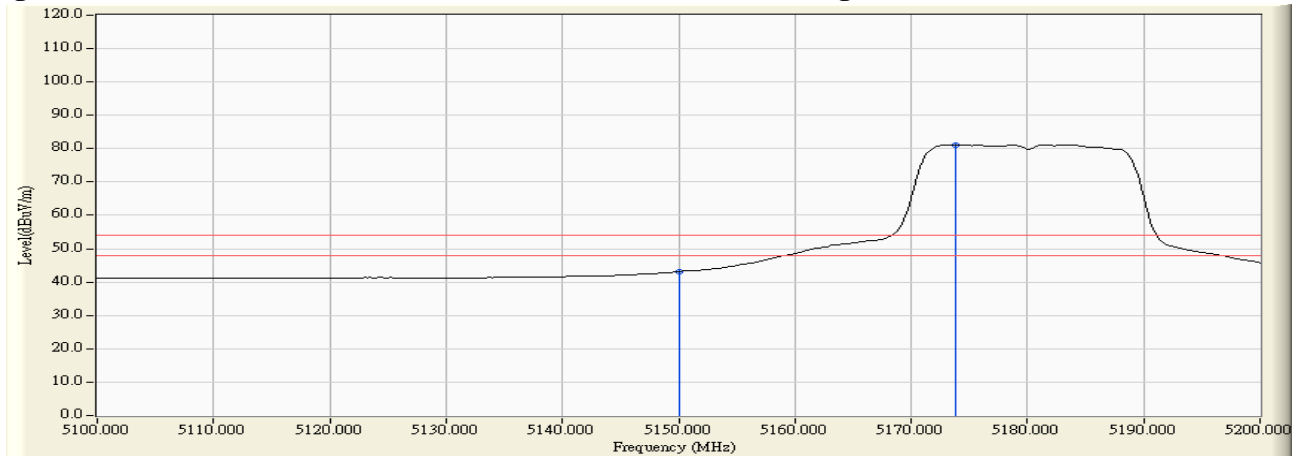


Figure Channel 36: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5180MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 36 (Peak) | 5150.000 | 1.331 | 60.172 | 61.504 | 74.00 | 54.00 | Pass |
| 36 (Peak) | 5182.400 | 1.484 | 105.845 | 107.329 | -- | -- | -- |
| 36 (Average) | 5150.000 | 1.331 | 46.689 | 48.021 | 74.00 | 54.00 | Pass |
| 36 (Average) | 5181.400 | 1.479 | 91.599 | 93.078 | -- | -- | -- |

Figure Channel 36: Vertical (Peak)

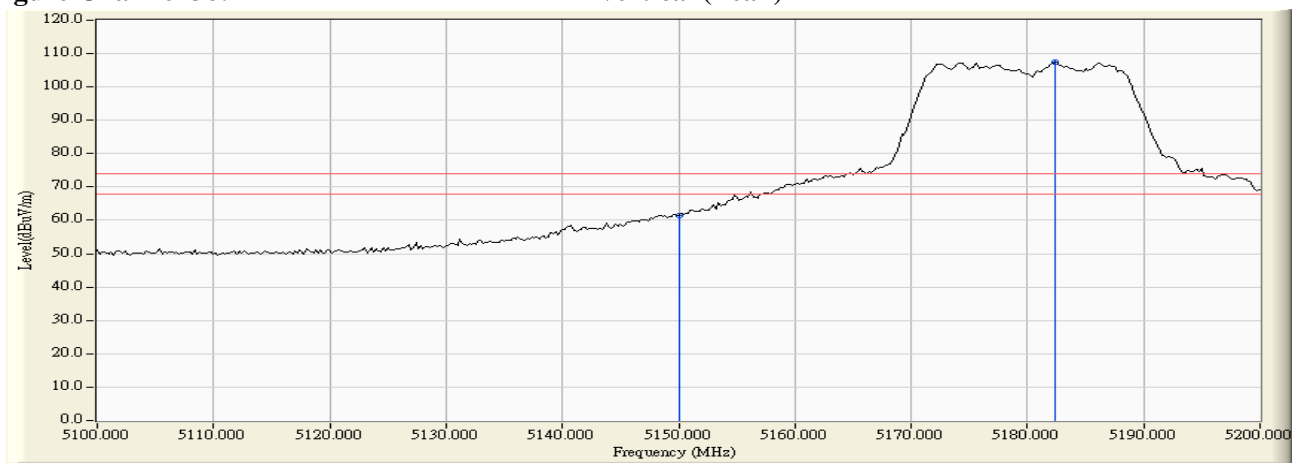
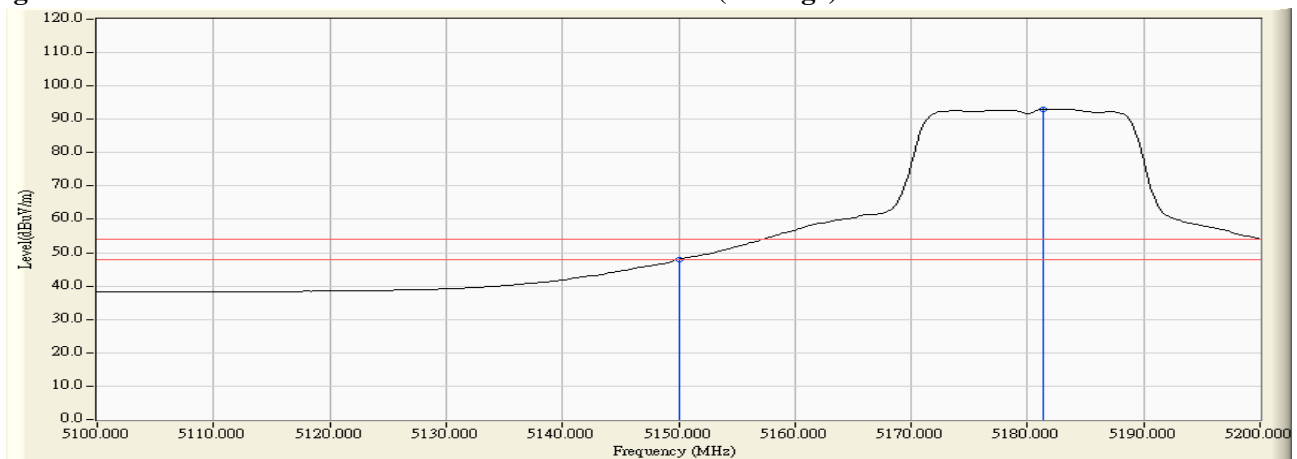


Figure Channel 36: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5320MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak) | 5312.400 | 1.656 | 94.111 | 95.768 | -- | -- | -- |
| 64 (Peak) | 5350.000 | 1.575 | 52.224 | 53.799 | 74.00 | 54.00 | Pass |
| 64 (Peak) | 5352.200 | 1.568 | 53.229 | 54.797 | 74.00 | 54.00 | Pass |
| 64 (Average) | 5313.400 | 1.655 | 80.535 | 82.190 | -- | -- | -- |
| 64 (Average) | 5350.000 | 1.575 | 40.532 | 42.107 | 74.00 | 54.00 | Pass |

Figure Channel 64: Horizontal (Peak)

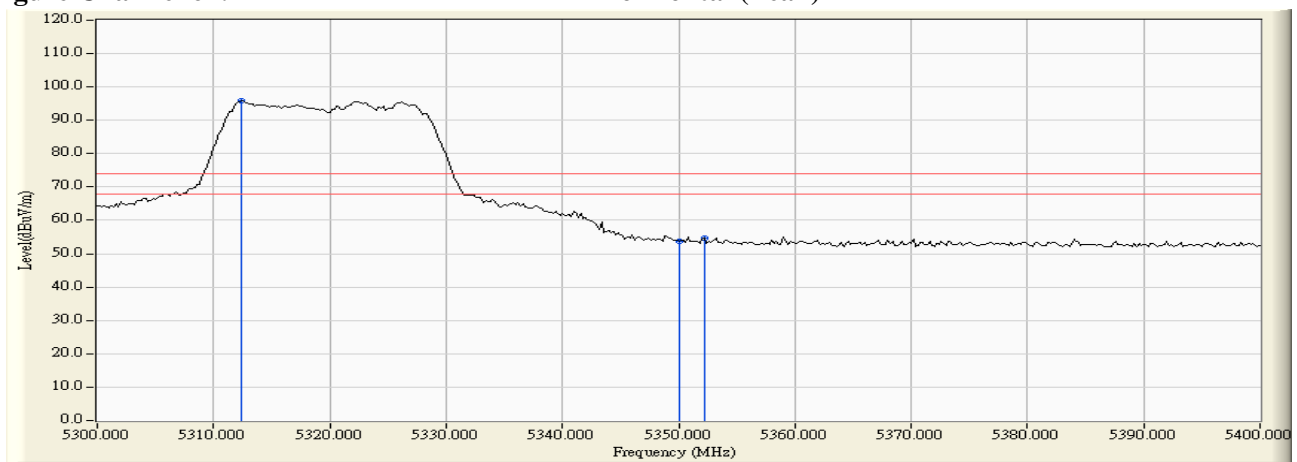
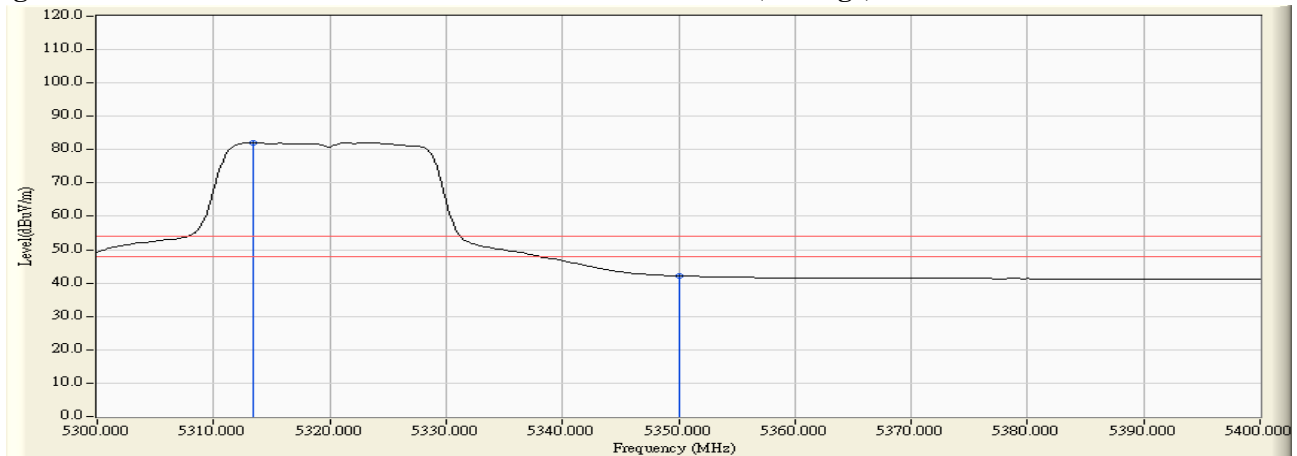


Figure Channel 64: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5320MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 64 (Peak) | 5322.200 | 1.888 | 110.636 | 112.525 | -- | -- | -- |
| 64 (Peak) | 5350.000 | 1.900 | 62.008 | 63.908 | 74.00 | 54.00 | Pass |
| 64 (Average) | 5321.400 | 1.887 | 96.357 | 98.245 | -- | -- | -- |
| 64 (Average) | 5350.000 | 1.900 | 47.496 | 49.396 | 74.00 | 54.00 | Pass |

Figure Channel 64: Vertical (Peak)

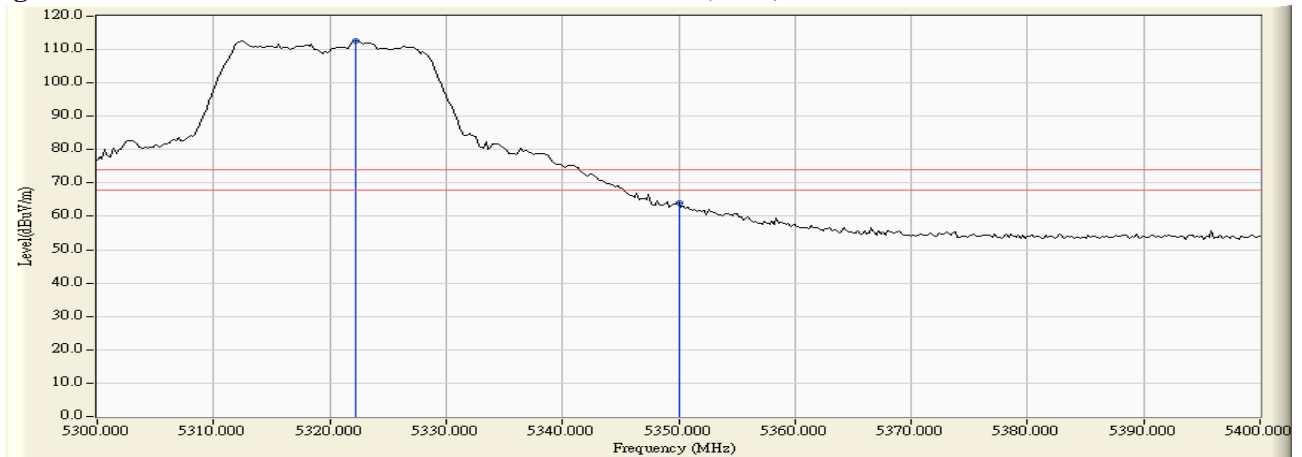
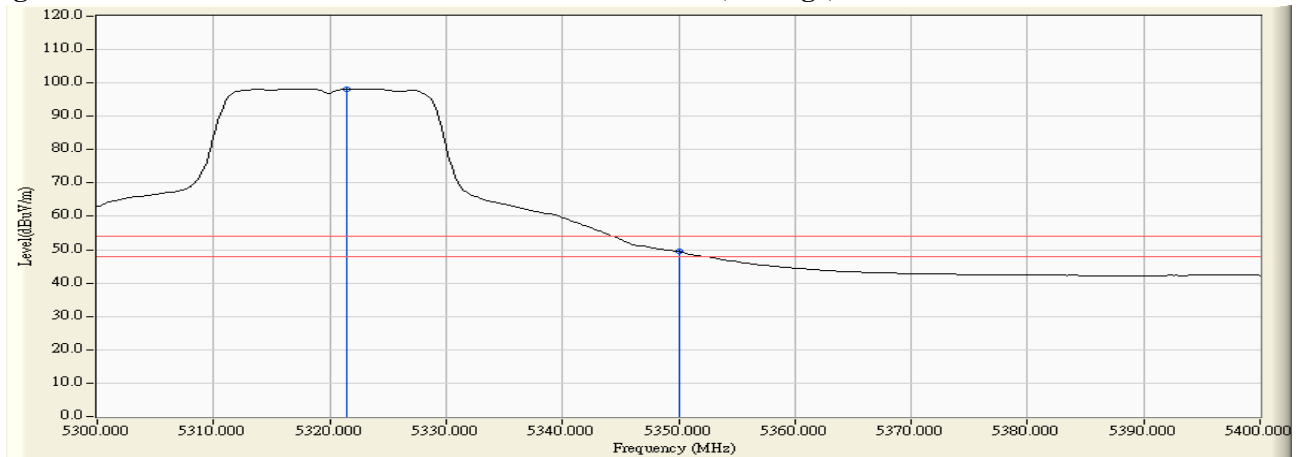


Figure Channel 64: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5500MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak) | 5459.000 | 1.755 | 53.244 | 55.000 | 74.00 | 54.00 | Pass |
| 100 (Peak) | 5460.000 | 1.775 | 52.334 | 54.109 | 74.00 | 54.00 | Pass |
| 100 (Peak) | 5506.200 | 2.545 | 91.614 | 94.159 | -- | -- | -- |
| 100 (Average) | 5460.000 | 1.775 | 40.177 | 41.952 | 74.00 | 54.00 | Pass |
| 100 (Average) | 5504.200 | 2.535 | 79.079 | 81.614 | -- | -- | -- |

Figure Channel 100: Horizontal (Peak)

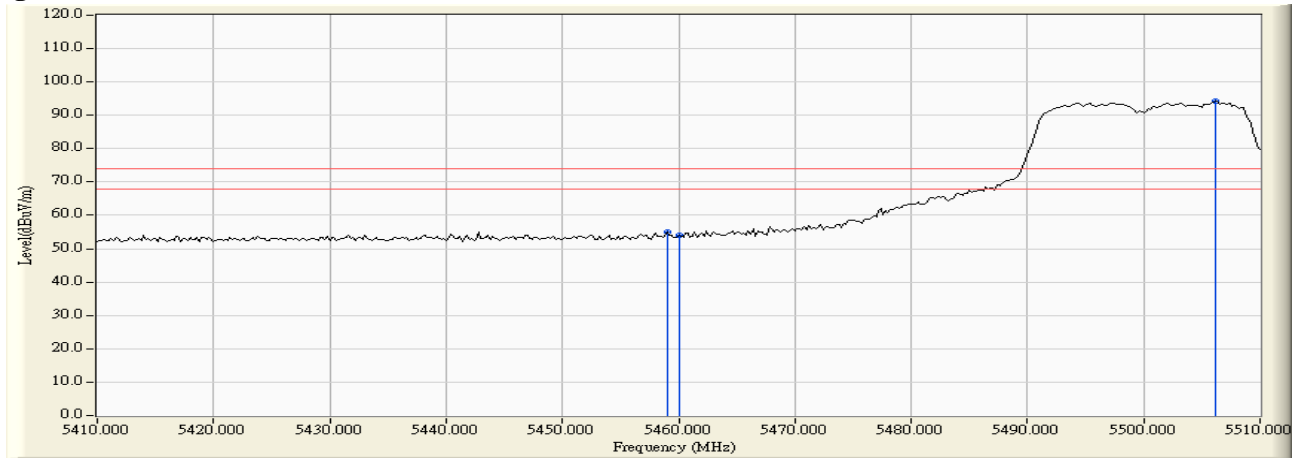
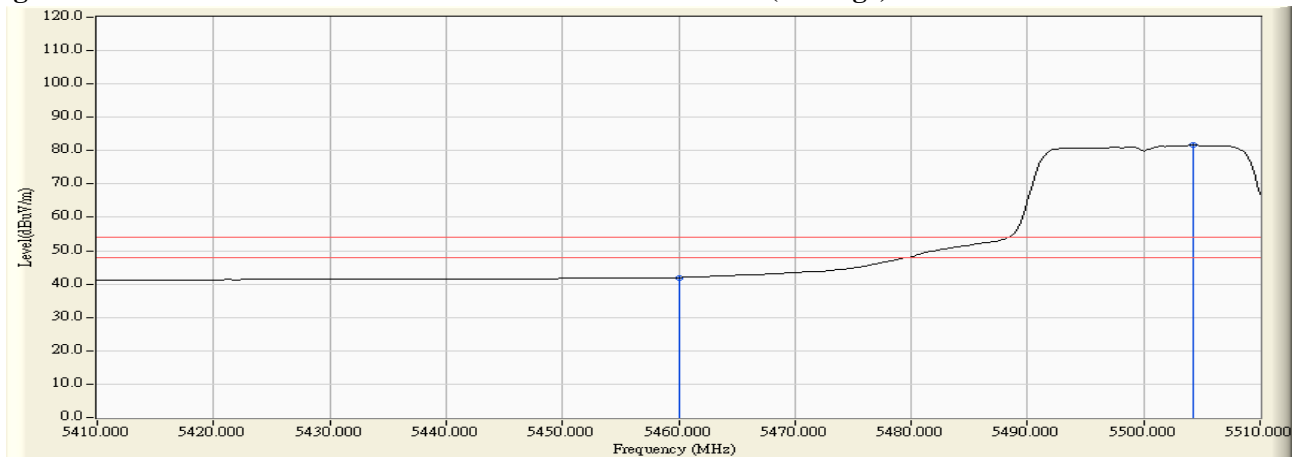


Figure Channel 100: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5500MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 100 (Peak) | 5459.400 | 1.927 | 59.149 | 61.075 | 74.00 | 54.00 | Pass |
| 100 (Peak) | 5460.000 | 1.934 | 57.992 | 59.927 | 74.00 | 54.00 | Pass |
| 100 (Peak) | 5492.600 | 2.384 | 107.887 | 110.271 | -- | -- | -- |
| 100 (Average) | 5460.000 | 1.934 | 44.036 | 45.971 | 74.00 | 54.00 | Pass |
| 100 (Average) | 5503.600 | 2.496 | 93.023 | 95.520 | -- | -- | -- |

Figure Channel 100: Vertical (Peak)

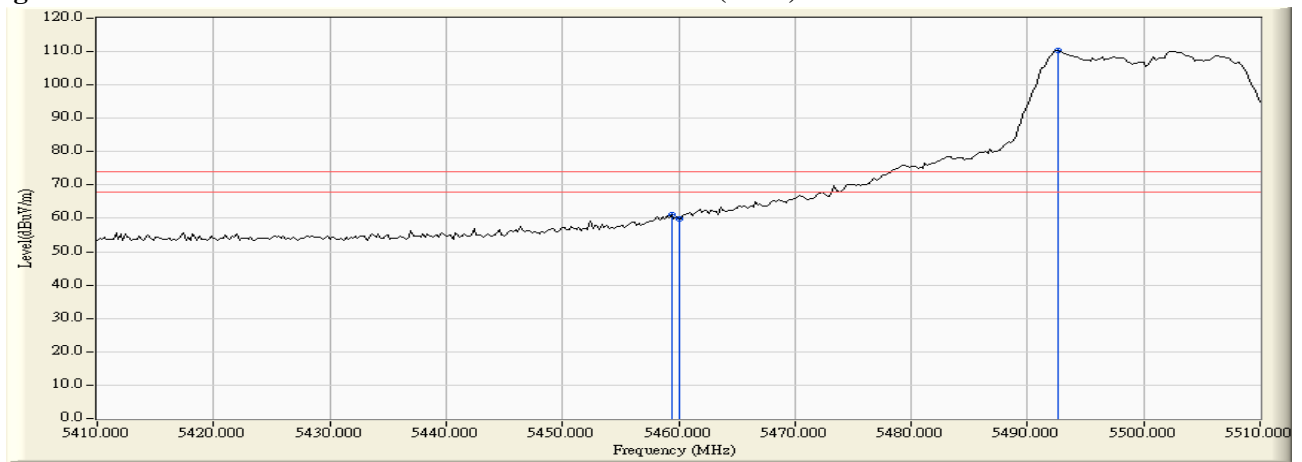
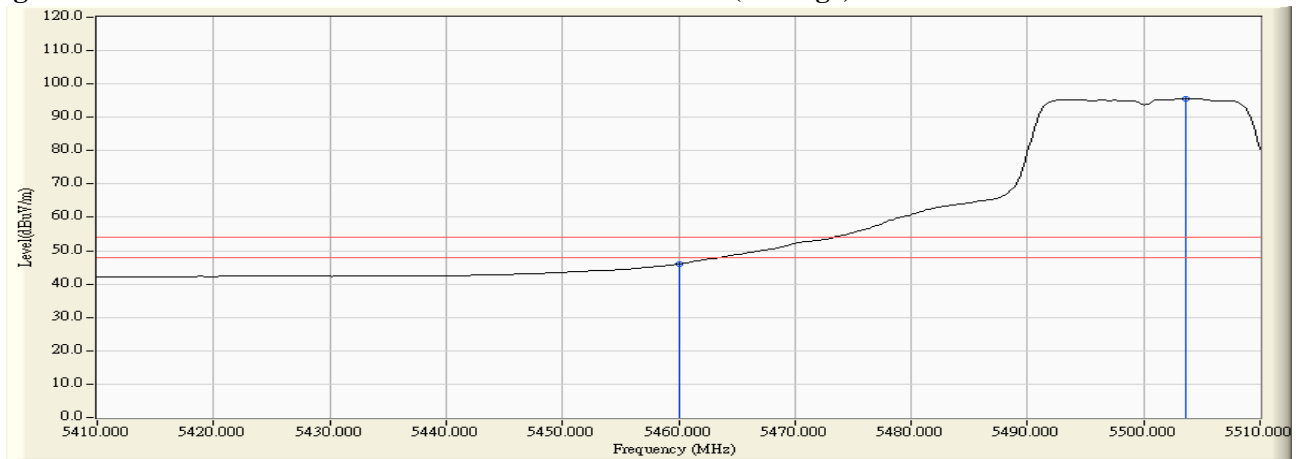


Figure Channel 100: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5500MHz)

RF Radiated Measurement:

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5470.000 | 18.334 | -71.410 | -53.076 | -26.076 | -27.000 | Pass |

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5470.000 | 19.335 | -67.580 | -48.245 | -21.245 | -27.000 | Pass |

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5700MHz)

RF Radiated Measurement:

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5725.000 | 18.649 | -66.540 | -47.891 | -20.891 | -27.000 | Pass |

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5725.000 | 19.372 | -67.360 | -47.988 | -20.988 | -27.000 | Pass |

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 38 (Peak) | 5150.000 | 0.796 | 57.294 | 58.090 | 74.00 | 54.00 | Pass |
| 38 (Peak) | 5184.400 | 0.681 | 91.663 | 92.344 | -- | -- | -- |
| 38 (Average) | 5150.000 | 0.796 | 44.212 | 45.008 | 74.00 | 54.00 | Pass |
| 38 (Average) | 5193.600 | 0.651 | 76.965 | 77.616 | -- | -- | -- |

Figure Channel 38: Horizontal (Peak)

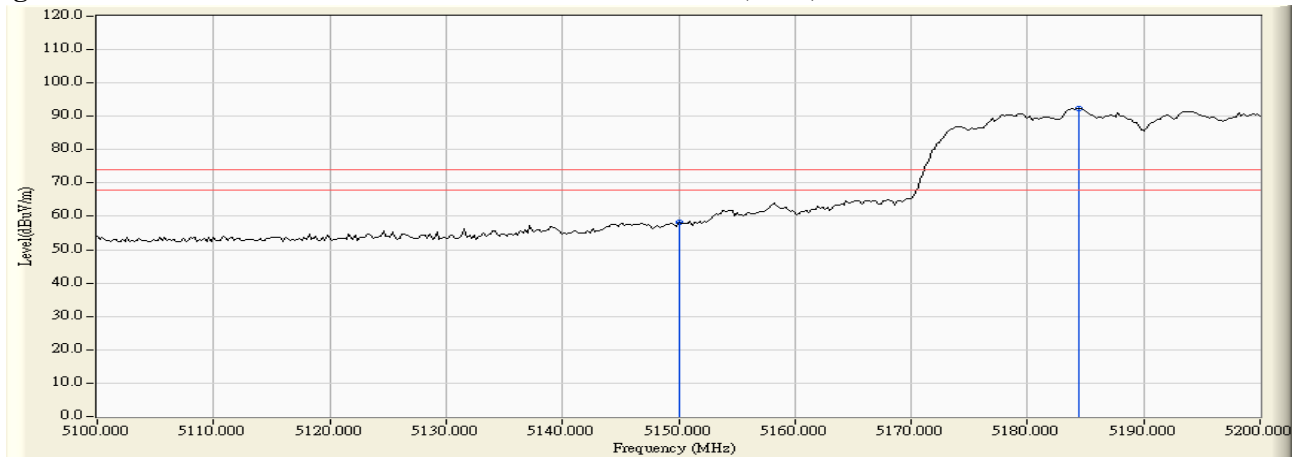
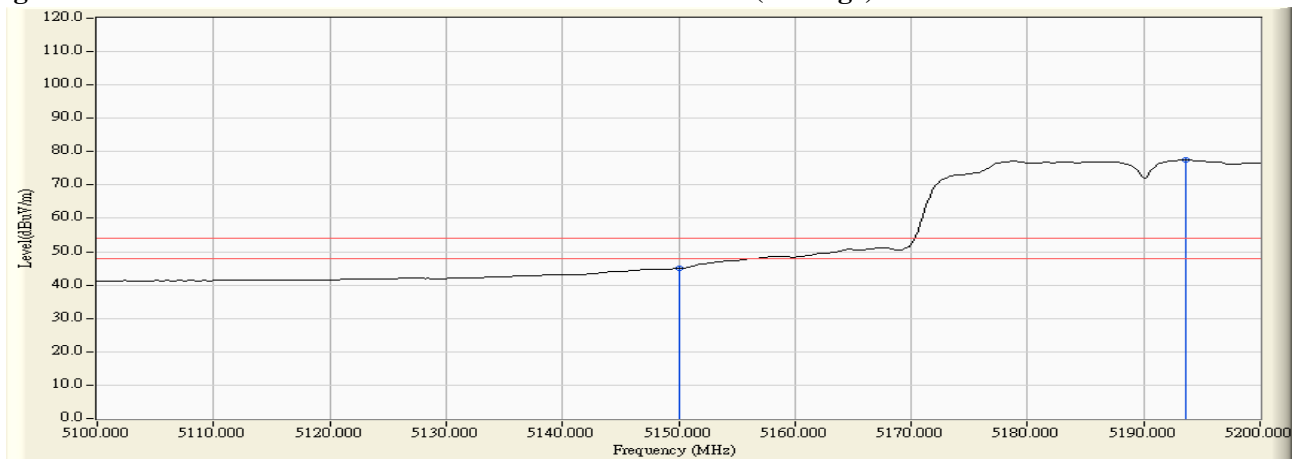


Figure Channel 38: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 38 (Peak) | 5150.000 | 1.331 | 66.246 | 67.578 | 74.00 | 54.00 | Pass |
| 38 (Peak) | 5196.000 | 1.550 | 103.602 | 105.152 | -- | -- | -- |
| 38 (Average) | 5150.000 | 1.331 | 51.670 | 53.002 | 74.00 | 54.00 | Pass |
| 38 (Average) | 5194.600 | 1.544 | 87.209 | 88.752 | -- | -- | -- |

Figure Channel 38: Vertical (Peak)

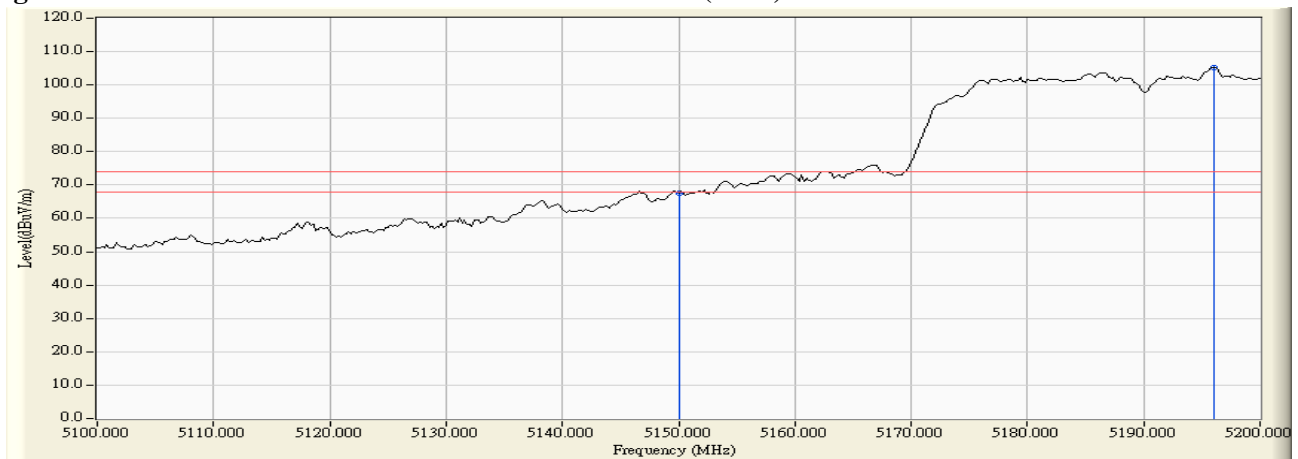
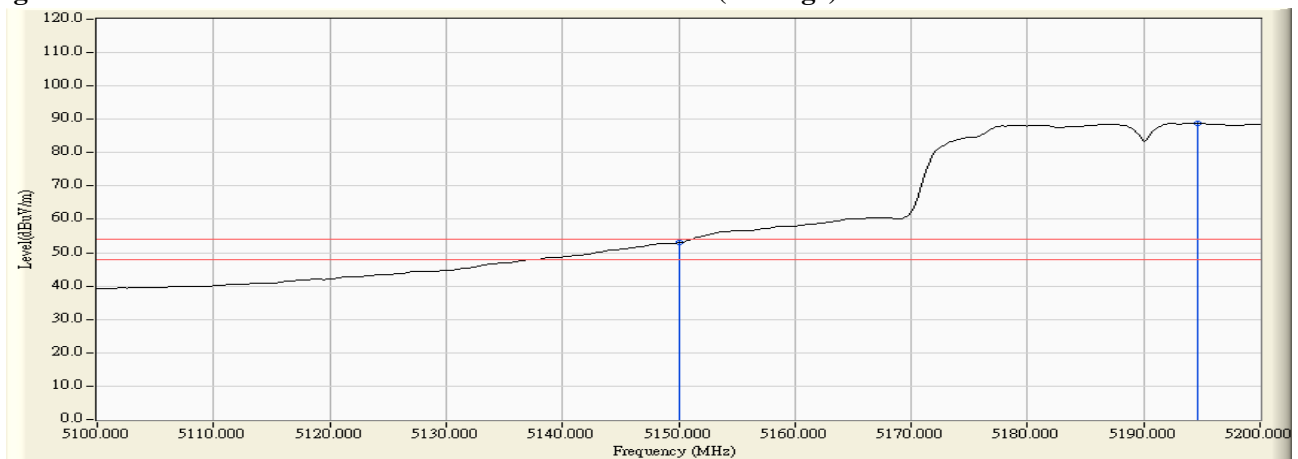


Figure Channel 38: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5310MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 62 (Peak) | 5303.600 | 1.673 | 86.177 | 87.851 | -- | -- | -- |
| 62 (Peak) | 5350.000 | 1.575 | 47.987 | 49.562 | 74.00 | 54.00 | Pass |
| 62 (Peak) | 5350.600 | 1.573 | 48.784 | 50.357 | 74.00 | 54.00 | Pass |
| 62 (Average) | 5313.400 | 1.655 | 70.847 | 72.502 | -- | -- | -- |
| 62 (Average) | 5350.000 | 1.575 | 36.372 | 37.947 | 74.00 | 54.00 | Pass |

Figure Channel 62: Horizontal (Peak)

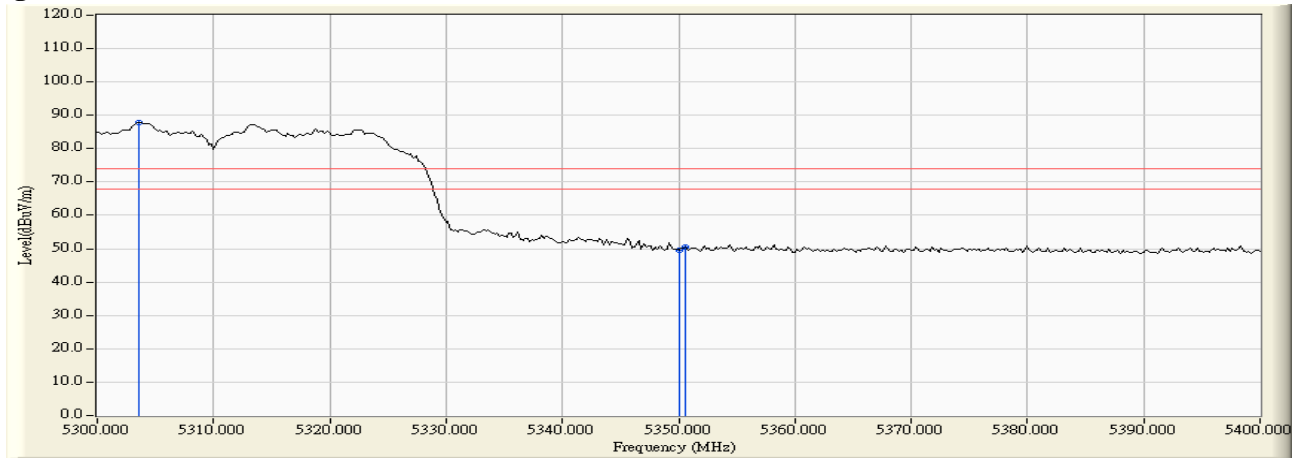
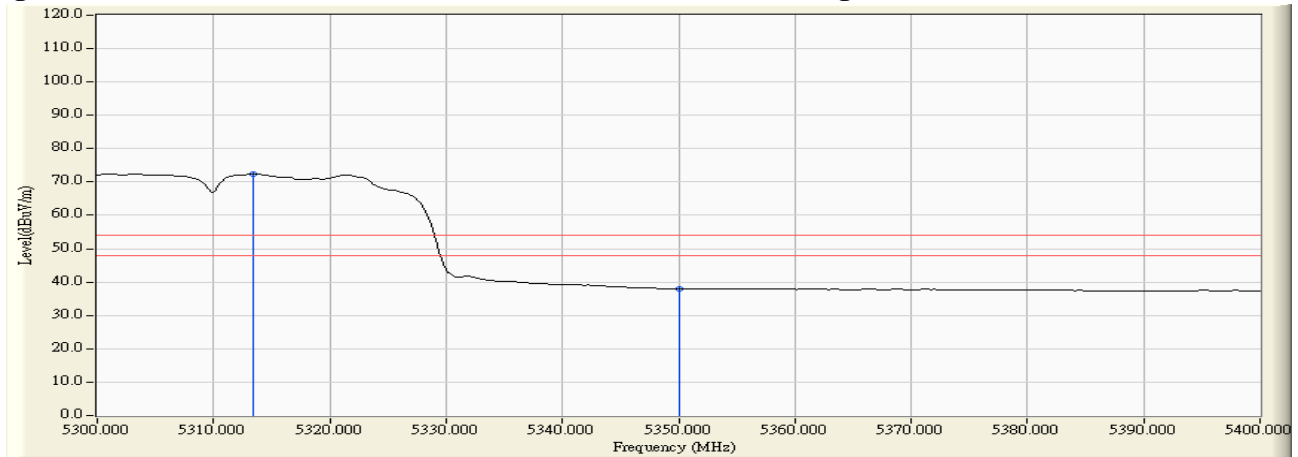


Figure Channel 62: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5310MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|--------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 62 (Peak) | 5304.200 | 1.874 | 104.891 | 106.765 | -- | -- | -- |
| 62 (Peak) | 5350.000 | 1.900 | 63.701 | 65.601 | 74.00 | 54.00 | Pass |
| 62 (Average) | 5313.400 | 1.881 | 89.128 | 91.009 | -- | -- | -- |
| 62 (Average) | 5350.000 | 1.900 | 48.330 | 50.230 | 74.00 | 54.00 | Pass |

Figure Channel 62: Vertical (Peak)

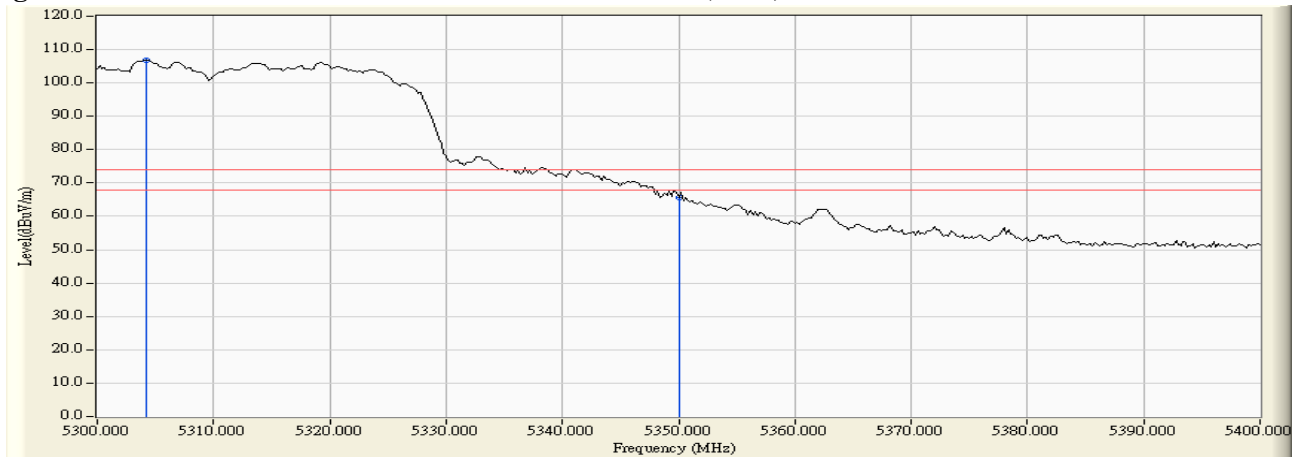
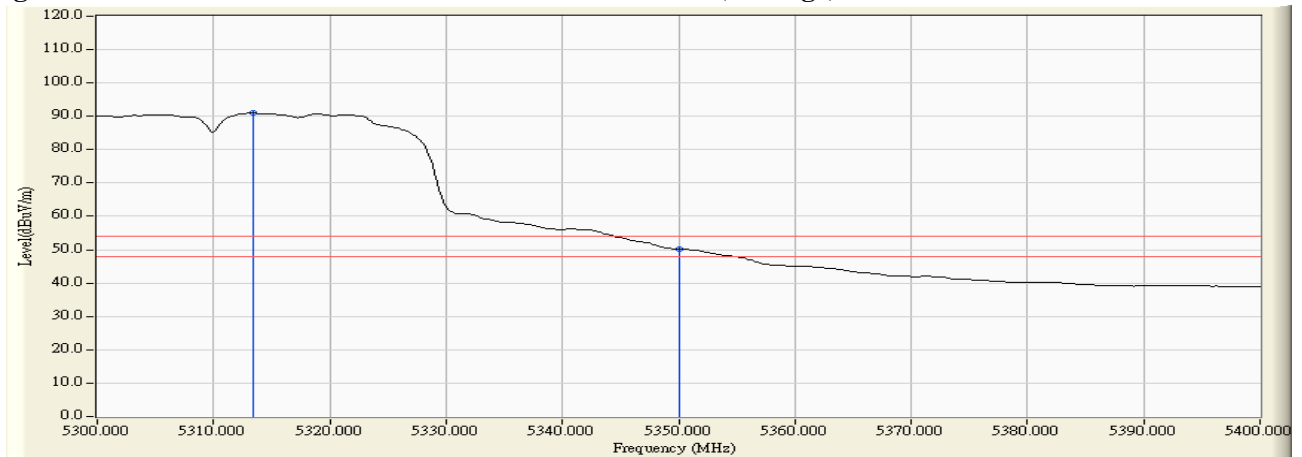


Figure Channel 62: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5510MHz)

RF Radiated Measurement (Horizontal):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 102 (Peak) | 5452.000 | 1.637 | 49.711 | 51.349 | 74.00 | 54.00 | Pass |
| 102 (Peak) | 5460.000 | 1.775 | 48.173 | 49.948 | 74.00 | 54.00 | Pass |
| 102 (Peak) | 5500.200 | 2.481 | 84.771 | 87.252 | -- | -- | -- |
| 102 (Average) | 5460.000 | 1.775 | 36.705 | 38.480 | 74.00 | 54.00 | Pass |
| 102 (Average) | 5505.800 | 2.545 | 69.653 | 72.198 | -- | -- | -- |

Figure Channel 102: Horizontal (Peak)

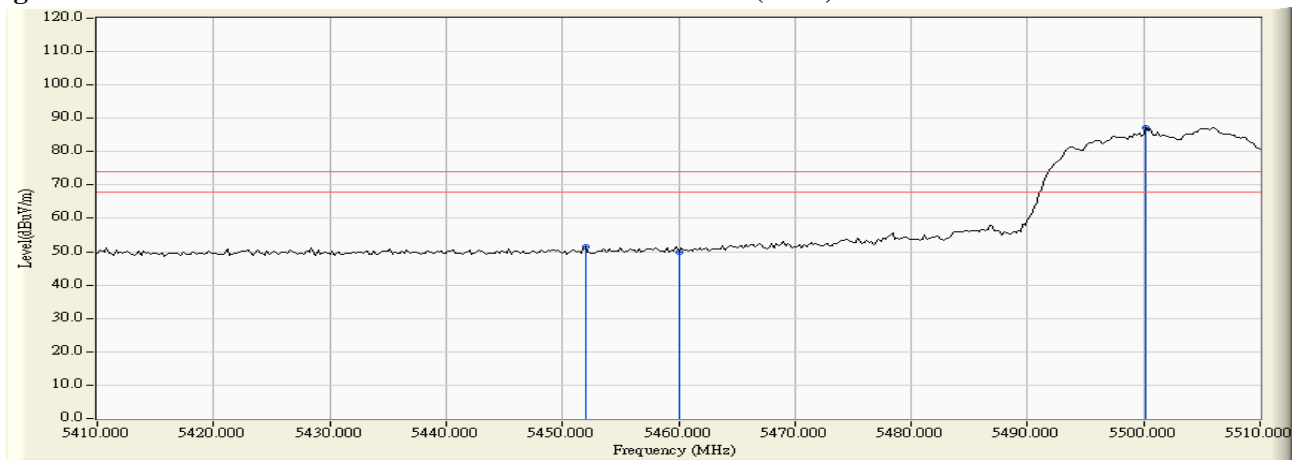
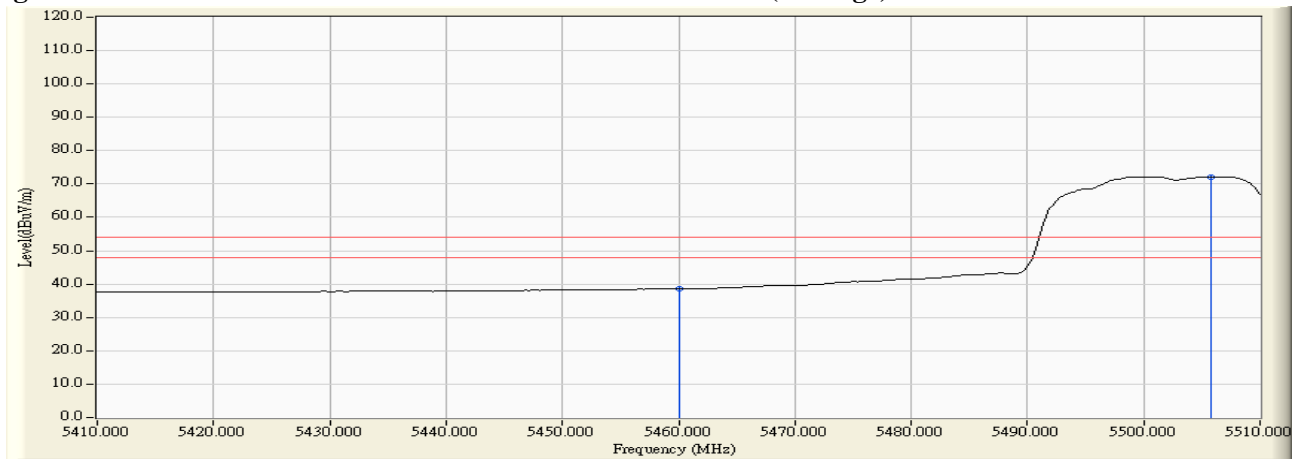


Figure Channel 102: Horizontal (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5510MHz)

RF Radiated Measurement (Vertical):

| Channel No. | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Emission Level (dBuV/m) | Peak Limit (dBuV/m) | Average Limit (dBuV/m) | Result |
|---------------|-----------------|---------------------|----------------------|-------------------------|---------------------|------------------------|--------|
| 102 (Peak) | 5460.000 | 1.934 | 63.208 | 65.143 | 74.00 | 54.00 | Pass |
| 102 (Peak) | 5505.000 | 2.511 | 103.184 | 105.695 | -- | -- | -- |
| 102 (Average) | 5460.000 | 1.934 | 48.348 | 50.283 | 74.00 | 54.00 | Pass |
| 102 (Average) | 5505.600 | 2.511 | 87.022 | 89.533 | -- | -- | -- |

Figure Channel 102: Vertical (Peak)

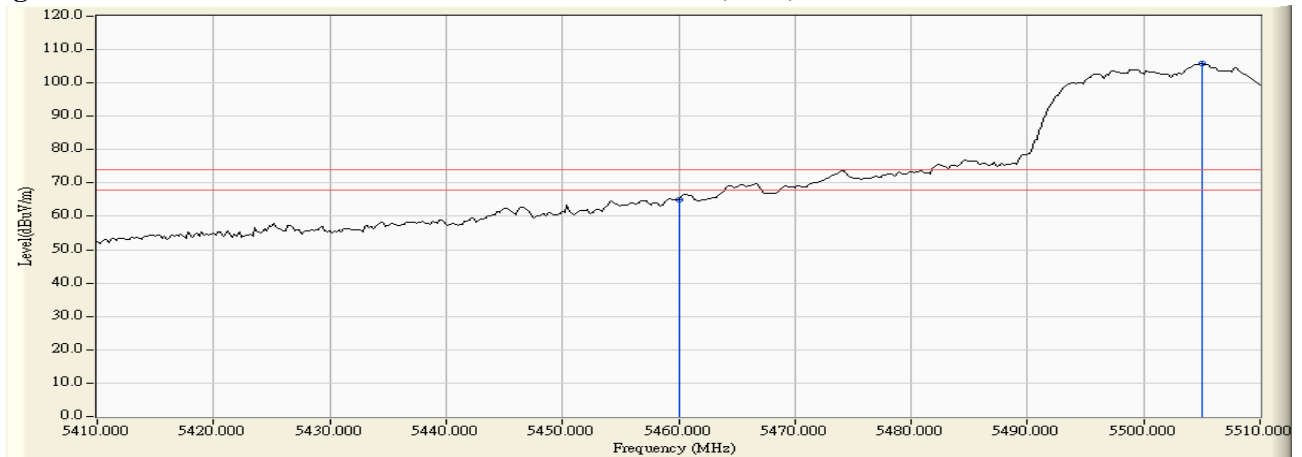
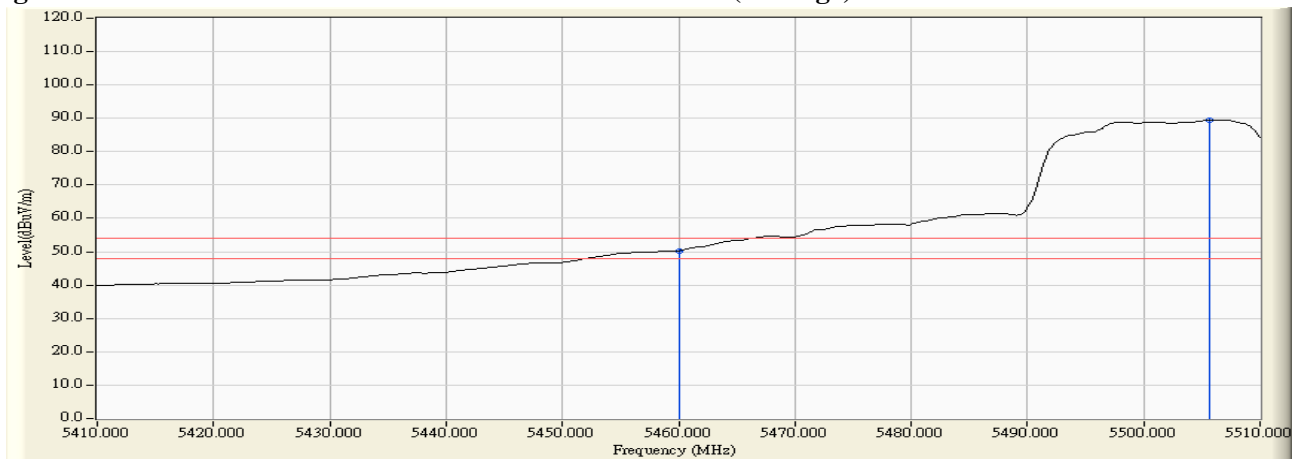


Figure Channel 102: Vertical (Average)



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 : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5510MHz)

RF Radiated Measurement:

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5470.000 | 18.334 | -65.430 | -47.096 | -20.096 | -27.000 | Pass |

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5470.000 | 19.335 | -61.670 | -42.335 | -15.335 | -27.000 | Pass |

Product : Intel® Centrino® Ultimate-N 6300
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5670MHz)

RF Radiated Measurement:

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|------------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Horizontal | 5725.000 | 18.649 | -72.390 | -53.741 | -26.741 | -27.000 | Pass |

| | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBm) | Measure Level (dBm/m) | Margin (dB) | Limit (dBm/m) | Result |
|----------|-----------------|---------------------|---------------------|-----------------------|-------------|---------------|--------|
| Vertical | 5725.000 | 19.372 | -72.600 | -53.228 | -26.228 | -27.000 | Pass |

5. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs