EMC Test Report
Application for Grant of Equipment Authorization
Industry Canada RSS-Gen Issue 3 / RSS 210 Issue 8
FCC Part 15, Subpart E

Intel® Centrino® Advanced-N 6235, Models 6235ANHMRW and 6235ANHRU

IC CERTIFICATION #:	1000M-6235ANHR and 1000M-6235ANHRU
FCC ID:	PD96235ANHR and PD96235ANHRU
APPLICANT:	Intel Corporation 100 Center Point Circle Suite 200 Columbia, SC 29210
TEST SITE(S):	Elliott Laboratories 41039 Boyce Road. Fremont, CA. 94538-2435
IC SITE REGISTRATION #:	2845B-3; 2845B-4, 2845B-5, 2845B-7
REPORT DATE:	May 24, 2012
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REVISION HISTORY

Rev#	Date	Comments	Modified By
-	05-24-2012	First release	

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SCOPE

An electromagnetic emissions test has been performed on the Intel Corporation model Intel® Centrino® Advanced-N 6235, Models 6235ANHMRW and 6235ANHRU, pursuant to the following rules:

Industry Canada RSS-Gen Issue 3
RSS 210 Issue 8 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15, Subpart E requirements for UNII Devices (using FCC KDB 789033)

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in Elliott Laboratories test procedures:

ANSI C63.4:2003
FCC UNII test procedure KDB 789033

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Prior to marketing in Canada, Class I transmitters, receivers and transceivers require certification. Class II devices are required to meet the appropriate technical requirements but are exempt from certification requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested sample of Intel Corporation Intel® Centrino® Advanced-N 6235, Models 6235ANHMRW and 6235ANHRU complied with the requirements of the following regulations:

RSS 210 Issue 8 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"
FCC Part 15, Subpart E requirements for UNII Devices

Maintenance of compliance is the responsibility of the manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the device with respect to the standards detailed in this test report.

The test results recorded herein are based on a single type test of Intel Corporation Intel® Centrino® Advanced-N 6235, Models 6235ANHMRW and 6235ANHRU and therefore apply only to the tested sample. The sample was selected and prepared by Steve Hackett of Intel Corporation.

DEVIATIONS FROM THE STANDARDS

No deviations were made from the published requirements listed in the scope of this report.

TEST RESULTS SUMMARY

UNII / LELAN DEVICES

Operation in the 5.15 – 5.25 GHz Band

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.407(e)		Indoor operation only	Refer to user's manual	N/A	Complies
15.407(a) (2)		26dB Bandwidth	> 20MHz for all modes	N/A – limits output power if < 20MHz	N/A
15.407 (a) (1)	A9.2(1)	Output Power	802.11a: 37 mW 802.11n20: 35 mW 802.11n40: 30 mW (Max eirp: 0.115 W) Note 1	17dBm (50mW)	Complies
15.407 (a) (1)	-	Power Spectral Density	802.11a: 3.3 dBm/MHz 802.11n20: 2.7dBm/MHz 802.11n40: 2.2 dBm/MHz	4 dBm/MHz	Complies
-	A9.5 (2)			6.4 dBm/MHz	Complies
Note 1: EIRP calculated using antenna gain of 3.6 dBi for the highest EIRP system.					

Operation in the 5.25 – 5.35 GHz Band

Note: The device is restricted to indoor use only, therefore the spectral density of spurious emissions in the 5.15 – 5.25 GHz band were limited to the power spectral limits for intentional signals detailed in FCC 15.407(a)(1) and RSS 210 6.2.2 q1 (i)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.407(a) (2)		26dB Bandwidth	> 20MHz for all modes	N/A – limits output power if < 20MHz	N/A
15.407(a) (2)	A9.2(2)	Output Power	802.11a: 41 mW 802.11n20: 41 mW 802.11n40: 31 mW (Max eirp: 0.104 W) Note 1	24dBm (250mW)	Complies
15.407(a) (2)	-	Power Spectral Density	802.11a: 3.7 dBm/MHz 802.11n20: 3.6 dBm/MHz 802.11n40: 1.5 dBm/MHz	11 dBm/MHz	Complies
-	A9.2(2) / A9.5 (2)			11 dBm / MHz	Complies
Note 1: EIRP calculated using antenna gain of 3.7 dBi for the highest EIRP system.					

Operation in the 5.47 – 5.725 GHz Band

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.407(a) (2)		26dB Bandwidth	> 20MHz for all modes	N/A – limits output power if < 20MHz	N/A
15.407(a) (2)	A9.2(2)	Output Power	802.11a: 37 mW 802.11n20: 41.6 mW 802.11n40: 42.3 mW (Max eirp: 0.252 W)	24 dBm / 250mW (eirp < 30dBm)	Complies
15.407(a) (2))		Power Spectral Density	802.11a: 3.0 dBm/MHz 802.11n20MHz: 3.8 dBm/MHz 802.11n40MHz: 1.2 dBm/MHz	11 dBm/MHz	Complies
	A9.2(2) / A9.5 (2)			11 dBm / MHz	Complies
KDB 443999	A9	Non-operation in 5600 – 5650 MHz sub band	Device cannot operate in the 5600 – 5650 MHz band –refer to Operational Description and 20dB BW plots		Complies
Note 1: EIRP calculated using antenna gain of 4.8 dBi for both chains for the highest EIRP system.					

Requirements for all U-NII/LELAN bands

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.407	A9.5a	Modulation	Digital Modulation is used	Digital modulation is required	Complies
15.407(b) (5) / 15.209	A9.3	Spurious Emissions below 1GHz	38.0 dBµV/m @ 58.48 MHz	Refer to page 24	Complies (-2.0 dB)
15.407(b) (5) / 15.209	A9.3	Spurious Emissions above 1GHz	53.6 dBµV/m @ 5459.8 MHz		Complies (-0.4 dB)
15.407(a)(6)	-	Peak Excursion Ratio	11.5 dB	< 13dB	Complies
	A9.5 (3)	Channel Selection	Spurious emissions tested at outermost channels in each band	Device was tested on the top, bottom and center channels in each band	Complies
15			Measurements on three channels in each band		Complies
15.407 (c)	A9.5(4)	Operation in the absence of information to transmit	Operation is discontinued in the absence of information (Operational Description page 9)	Device shall automatically discontinue operation in the absence of information to transmit	Complies
15.407 (g)	A9.5 (5)	Frequency Stability	Frequency stability is better than 20ppm (Operational Description page 9)	Signal shall remain within the allocated band	Complies
15.407 (h1)	A9.4	Transmit Power Control	TPC is not required as the device operates at below 500mW eirp	The U-NII device shall have the capability to operate with a mean EIRP value lower than 24dBm (250mW)	Complies
15.407 (h2)	A9.4	Dynamic frequency Selection (device without radar detection)	Refer to separate test report, reference R87446	Channel move time < 10s Channel closing transmission time < 260ms	Complies
	A9.9g	User Manual information	Refer to pages 11 and 2 of the user's manual for details	Warning regarding interference from Satellite Systems	Complies

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	-	RF Connector	Unique connector used	Unique or integral antenna required	Complies
15.207	RSS GEN Table 2	AC Conducted Emissions	39.7 dBµV @ 15.416 MHz	Refer to page 21	Complies (-20.3dB)
15.247 (b) (5) 15.407 (f)	RSS 102	RF Exposure Requirements	Refer to SAR report, RSS 102 declaration and User Manual pages 11, 14 and 15	Refer to OET 65, FCC Part 1 and RSS 102	Complies
-	RSP 100 RSS GEN 7.1.5	User Manual	Refer to page 11 of the user's manual	Statement required regarding non-interference	Complies
-	RSP 100 RSS GEN 7.1.5	User Manual	Not applicable, antenna is integral to host systems.	Statement for products with detachable antenna	Complies
-	RSP 100 RSS GEN 4.4.1	99% Bandwidth Chain A	802.11a: 18.8 MHz 802.11n20: 19.3 MHz 802.11n40: 36.9 MHz	Information only	N/A

ADDITIONAL MEASUREMENTS

As both Bluetooth and 802.11 transmissions can occur simultaneously, radiated spurious measurements were made with both Bluetooth and 802.11 devices transmitting simultaneously.

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.209	RSS 210	Spurious emissions	46.1 dBµV/m @ 10400.0 MHz	15.209 in restricted bands, all others < -20dBc	Complies (-7.9dB)
Signal was actually second harmonic of 802.11 signal and not an inter-modulation product, but this was the highest level signal observed with both Bluetooth and Wi-Fi transmitters operational simultaneously.					

MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Measurement Unit	Frequency Range	Expanded Uncertainty
RF power, conducted (power meter)	dBm	25 to 7000 MHz	± 0.52 dB
RF power, conducted (Spectrum analyzer)	dBm	25 to 7000 MHz	± 0.7 dB
Conducted emission of transmitter	dBm	25 to 26500 MHz	± 0.7 dB
Conducted emission of receiver	dBm	25 to 26500 MHz	± 0.7 dB
Radiated emission (substitution method)	dBm	25 to 26500 MHz	± 2.5 dB
Radiated emission (field strength)	dBµV/m	25 to 1000 MHz	± 3.6 dB
		1000 to 40000 MHz	± 6.0 dB
Conducted Emissions (AC Power)	dBµV	0.15 to 30 MHz	± 2.4 dB

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The Intel Corporation Intel® Centrino® Advanced-N 6235, Models 6235ANHMRW and 6235ANHRU are PCIe Half Mini Card form factor Bluetooth/IEEE 802.11a/b/g/n wireless network adapters. The card supports MIMO (2x2) for 802.11n modes and MISO (1x2) for 802.11a/b/g modes.
Bluetooth operates on a single chain and supports Basic rate, Enhanced data rate and Low Energy modes. The Basic and Enhanced data rates fully support frequency hopping while the Low Energy (LE) mode can operate in both hoping and non-hopping modes. The LE mode was evaluated under the rules for digital modulation systems while the other modes were evaluated as FHSS.
When Bluetooth is operational then 802.11b/g/n modes operate as SISO (1x1). 802.11a/n modes still operate as MIMO (2x2) with Bluetooth operational.
The card is sold under two different FCC/IC ID numbers (see table below). The ID's ending in "U" are intended to allow user install conditions and host systems must be provided with a BIOS locking feature that prevents installation of unauthorized devices.
For radio testing purposes the card was installed in a test fixture that exposed all sides of the card. For digital device testing for certification under equipment code JBP the card was installed inside a laptop PC.

The sample was received on April 16, 2012 and tested on April 23, 24, 25, 26, 28 and 29 and May 2, 7, 9, 10, 11, 12 and 20, 2012. The EUT consisted of the following component(s):

Company	Model	Description	Serial Number	FCC ID
Intel Corporation	6235ANHMRW	PCIe Half Mini Card form factor Bluetooth / IEEE 802.11a/b/g/n wireless network adapter	44850006303D	PD96235ANHR PD96235ANHRU 1000M-6235ANHR
	6235ANHRU			1000M-6235ANHRU

ANTENNA SYSTEM

The EUT antenna is a a two-antenna PIFA antenna system – Shanghai Universe Communication Electron Co., Ltd. The antenna connects to the EUT via a non-standard antenna connector, thereby meeting the requirements of FCC 15.203.

ENCLOSURE

The EUT does not have an enclosure as it is designed to be installed within the enclosure of a host computer or system.

MODIFICATIONS

No modifications were made to the EUT during the time the product was at Elliott.

SUPPORT EQUIPMENT

The following equipment was used as support equipment for testing:

Company	Model	Description	Serial Number	FCC ID
Intel Corporation	-	Test Fixture		N/A
Dell	PP17L	Laptop PC	CN-ONF743-48643-7B6-0727	N/A
Agilent	E3610A	DC Supply	100708	N/A

No remote support equipment was used during testing.

EUT INTERFACE PORTS

The I/O cabling configuration during testing was as follows:

Port		Cable(s)		
From	To	Description	Shielded/Unshielded	Length(m)
Laptop USB	Fixture USB	USB cable	Shielded	1.5
Laptop Mini PCI	Fixture PCIe	Ribbon	unshielded	0.7
DC Power	Fixture DC power	2-wire	unshielded	0.7

EUT OPERATION

The EUT was installed into a test fixture that exposed all sides of the card. The test fixture interfaced to a laptop computer and dc power supply. The laptop computer was used to configure the EUT to continuously transmit at a specified output power or continuously receive on the channel specified in the test data. For transmit mode measurements the system was configured to operate in each of the available operating modes –802.11a, 802.11n (20 MHz channel bandwidth) and 802.11n (40MHz channel bandwidth), Bluetooth 1Mb/s and Bluetooth 3Mb/s. In addition radiated spurious tests were repeated with the device operating in both Bluetooth and 802.11 modes to determine if any spurious emissions due to inter-modulation products were created.

The data rates used for all tests were the lowest data rates for each 802.11 mode – 6Mb/s for 802.11a, 6.5MB/s for 802.11n (20MHz), and 13 Mb/s for 802.11n (40MHz). The device operates at its maximum output power at the lowest data rate (this was confirmed through separate measurements – refer to test data for actual measurements). Bluetooth operation was evaluated at both 1Mb/s and 3Mb/s data rates. 2Mb/s data rate was found, through preliminary testing, to produce emissions similar to those for 3Mb/s.

The field strength at the band edges was evaluated for each mode and on each chain individually on the lowest and highest channels at the rated power for the channel under test. Where the power at the edge channels was lower than the power at the center channels additional measurements were made at the adjacent channels. MIMO and SISO modes were fully evaluated.

Spurious emissions measurements at frequencies away from the band edges were made at the highest power rating for the band in each mode. For 802.11n modes both chains were active (MIMO mode) but with each chain at the highest power rating per chain (MIMO power setting) to cover both modes of operation at the same time.

The PC was using the Intel test utility DRTU Version 1.5.4.0399 and the device driver was version 15.1.0.99.

TEST SITE

GENERAL INFORMATION

Final test measurements were taken at the test sites listed below. Pursuant to section 2.948 of the FCC's Rules and section 3.3 of RSP-100, construction, calibration, and equipment data has been filed with the Commission and with industry Canada.

Site	Registration Numbers		Location
	FCC	Canada	
Chamber 3	769238	2845B-3	41039 Boyce Road Fremont, CA 94538-2435
Chamber 4	211948	2845B-4	
Chamber 5	211948	2845B-5	
Chamber 7	A2LA accreditation	2845B-7	

ANSI C63.4:2003 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement. The test site(s) contain separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4:2003.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.4:2003. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4:2003 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4:2003.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

The receivers utilize either a Rohde & Schwarz EZM Spectrum Monitor/Controller or contain an internal Spectrum Monitor/Controller to view and convert the receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers.

The Spectrum Monitor provides a visual display of the signal being measured. In addition, the controller or a personal computer run automated data collection programs which control the receivers. This provides added accuracy since all site correction factors, such as cable loss and antenna factors are added automatically.

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a non-conductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.4:2003 specifies that the test height above ground for table mounted devices shall be 80 centimeters. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.4:2003, and the worst-case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.

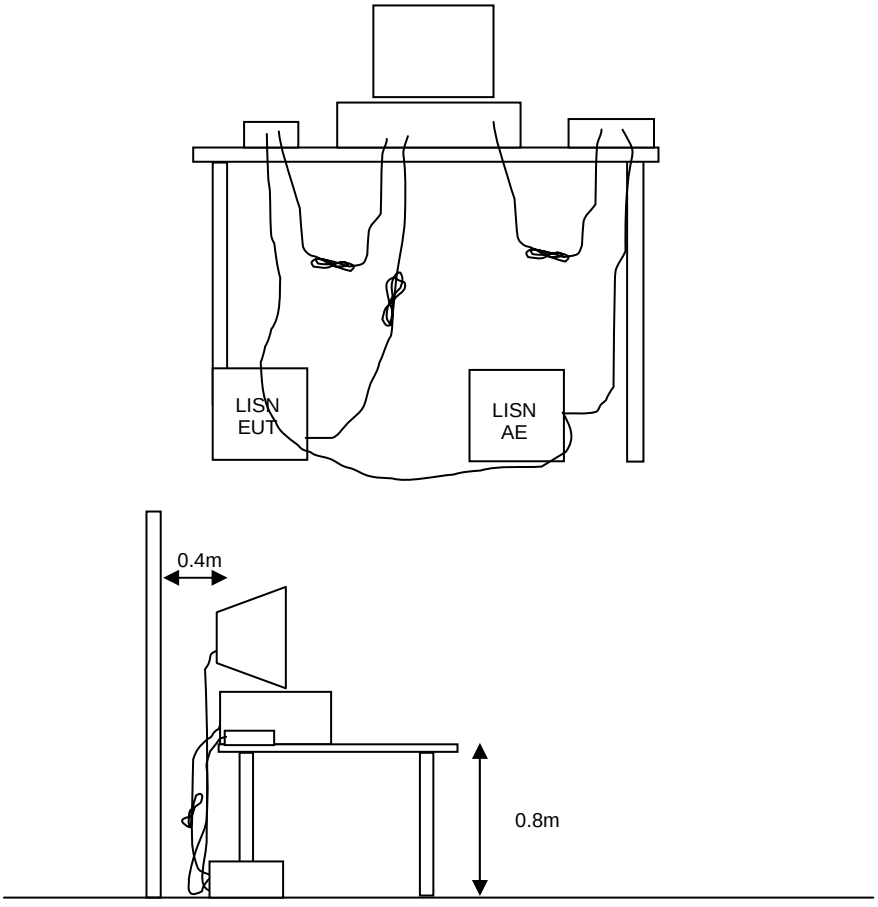


Figure 1 Typical Conducted Emissions Test Configuration

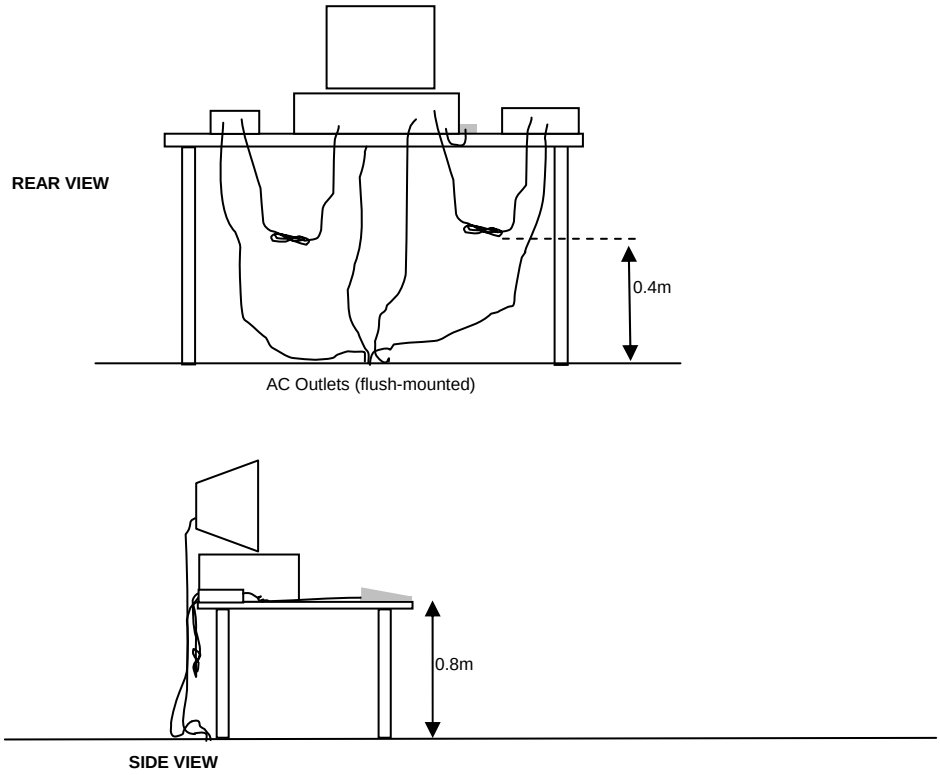
RADIATED EMISSIONS

A preliminary scan of the radiated emissions is performed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360˚, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

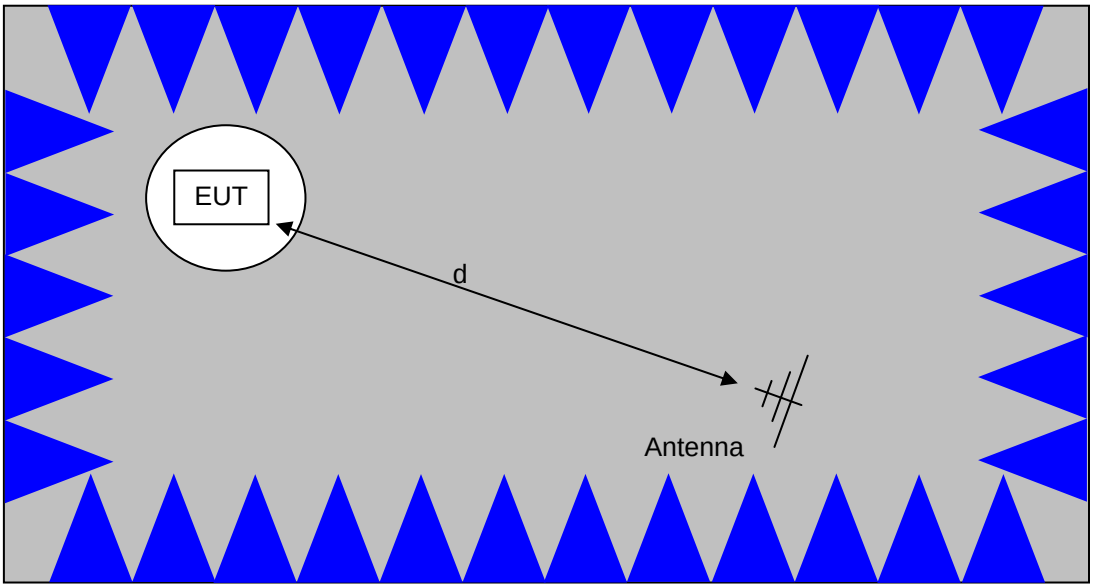
A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.

When testing above 18 GHz, the receive antenna is located at 1meter from the EUT and the antenna height is restricted to a maximum of 2.5 meters.

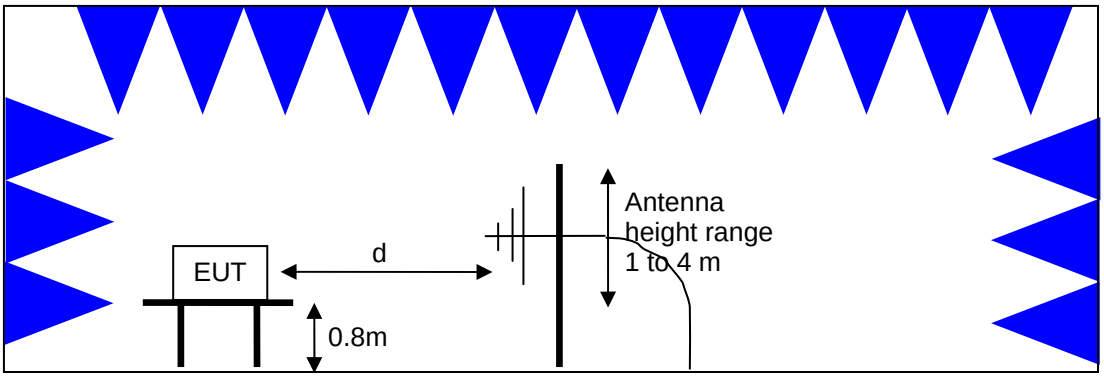


Typical Test Configuration for Radiated Field Strength Measurements



The anechoic materials on the walls and ceiling ensure compliance with the normalized site attenuation requirements of CISPR 16 / CISPR 22 / ANSI C63.4 for an alternate test site at the measurement distances used.

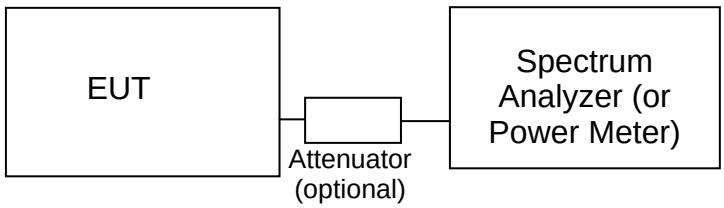
Floor-standing equipment is placed on the floor with insulating supports between the unit and the ground plane.



Test Configuration for Radiated Field Strength Measurements
Semi-Anechoic Chamber, Plan and Side Views

CONDUCTED EMISSIONS FROM ANTENNA PORT

Direct measurements of power, bandwidth and power spectral density are performed, where possible, with the antenna port of the EUT connected to either the power meter or spectrum analyzer via a suitable attenuator and/or filter. These are used to ensure that the front end of the measurement instrument is not overloaded by the fundamental transmission.



Test Configuration for Antenna Port Measurements

Measurement bandwidths (video and resolution) are set in accordance with the relevant standards and Elliott's test procedures for the type of radio being tested. When power measurements are made using a resolution bandwidth less than the signal bandwidth the power is calculated by summing the power across the signal bandwidth using either the analyzer channel power function or by capturing the trace data and calculating the power using software. In both cases the summed power is corrected to account for the equivalent noise bandwidth (ENBW) of the resolution bandwidth used.

If power averaging is used (typically for certain digital modulation techniques), the EUT is configured to transmit continuously. Power averaging is performed using either the built-in function of the analyzer or, if the analyzer does not feature power averaging, using external software. In both cases the average power is calculated over a number of sweeps (typically 100). When the EUT cannot be configured to continuously transmit then either the analyzer is configured to perform a gated sweep to ensure that the power is averaged over periods that the device is transmitting or power averaging is disabled and a max-hold feature is used.

If a power meter is used to make output power measurements the sensor head type (peak or average) is stated in the test data table.

BANDWIDTH MEASUREMENTS

The 6dB, 20dB and/or 26dB signal bandwidth is measured in using the bandwidths recommended by ANSI C63.4. When required, the 99% bandwidth is measured using the methods detailed in RSS GEN.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

CONDUCTED EMISSIONS SPECIFICATION LIMITS: FCC 15.207; FCC 15.107(a), RSS GEN

The table below shows the limits for the emissions on the AC power line from an intentional radiator and a receiver.

Frequency (MHz)	Average Limit (dBuV)	Quasi Peak Limit (dBuV)
0.150 to 0.500	Linear decrease on logarithmic frequency axis between 56.0 and 46.0	Linear decrease on logarithmic frequency axis between 66.0 and 56.0
0.500 to 5.000	46.0	56.0
5.000 to 30.000	50.0	60.0

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands[1] (with the exception of transmitters operating under FCC Part 15 Subpart D and RSS 210 Annex 9), the limits for all emissions from a low power device operating under the general rules of RSS 310 (tables 3 and 4), RSS 210 (table 2) and FCC Part 15 Subpart C section 15.209.

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	$2400/F_{KHz}$ @ 300m	$67.6-20*\log_{10}(F_{KHz})$ @ 300m
0.490-1.705	$24000/F_{KHz}$ @ 30m	$87.6-20*\log_{10}(F_{KHz})$ @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

RECEIVER RADIATED SPURIOUS EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from receivers as detailed in FCC Part 15.109, RSS 210 Table 2, RSS GEN Table 1 and RSS 310 Table 3. Note that receivers operating outside of the frequency range 30 MHz – 960 MHz are exempt from the requirements of 15.109.

Frequency Range (MHz)	Limit (uV/m @ 3m)	Limit (dBuV/m @ 3m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

[1] The restricted bands are detailed in FCC 15.203, RSS 210 Table 1 and RSS 310 Table 2

FCC 15.407 (a) OUTPUT POWER LIMITS

The table below shows the limits for output power and output power density. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
5150 – 5250	50mW (17 dBm)	4 dBm/MHz
5250 – 5350	250 mW (24 dBm)	11 dBm/MHz
5725 – 5825	1 Watts (30 dBm)	17 dBm/MHz

For system using antennas with gains exceeding 6dBi, the output power and power spectral density limits are reduced by 1dB for every dB the antenna gain exceeds 6dBi. Fixed point-to-point applications using the 5725 – 5825 MHz band may use antennas with gains of up to 23dBi without this limitation. If the gain exceeds 23dBi then the output power limit of 1 Watt is reduced by 1dB for every dB the gain exceeds 23dBi.

The peak excursion envelope is limited to 13dB.

OUTPUT POWER LIMITS –LELAN DEVICES

The table below shows the limits for output power and output power density defined by RSS 210. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
5150 – 5250	200mW (23 dBm) eirp	10 dBm/MHz eirp
5250 – 5350	250 mW (24 dBm)[2] 1W (30dBm) eirp	11 dBm/MHz
5470 – 5725	250 mW (24 dBm)[3] 1W (30dBm) eirp	11 dBm/MHz
5725 – 5825	1 Watts (30 dBm) 4W eirp	17 dBm/MHz

In addition, the power spectral density limit shall be reduced by 1dB for every dB the highest power spectral density exceeds the "average" power spectral density) by more than 3dB. The "average" power spectral density is determined by dividing the output power by 10log(EBW) where EBW is the 99% power bandwidth.

Fixed point-to-point applications using the 5725 – 5825 MHz band may use antennas with gains of up to 23dBi without this limitation. If the gain exceeds 23dBi then the output power limit of 1 Watt is reduced by 1dB for every dB the gain exceeds 23dBi.

[2] If EIRP exceeds 500mW the device must employ TPC
[3] If EIRP exceeds 500mW the device must employ TPC

SPURIOUS EMISSIONS LIMITS –UNII and LELAN DEVICES

The spurious emissions limits for signals below 1GHz are the FCC/RSS-GEN general limits. For emissions above 1GHz, signals in restricted bands are subject to the FCC/RSS GEN general limits. All other signals have a limit of –27dBm/MHz, which is a field strength of 68.3dBuV/m/MHz at a distance of 3m. This is an average limit so the peak value of the emission may not exceed –7dBm/MHz (88.3dBuV/m/MHz at a distance of 3m). For devices operating in the 5725-5850Mhz bands under the LELAN/UNII rules, the limit within 10Mhz of the allocated band is increased to –17dBm/MHz.

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

$$R_r - S = M$$

where:

R_r = Receiver Reading in dBuV

S = Specification Limit in dBuV

M = Margin to Specification in +/- dB

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

$$F_d = 20*LOG_{10} (D_m/D_s)$$

where:

F_d = Distance Factor in dB

D_m = Measurement Distance in meters

D_s = Specification Distance in meters

For electric field measurements below 30MHz the extrapolation factor is either determined by making measurements at multiple distances or a theoretical value is calculated using the formula:

$$F_d = 40*LOG_{10} (D_m/D_s)$$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_c = R_r + F_d$$

and

$$M = R_c - L_s$$

where:

R_r = Receiver Reading in dBuV/m

F_d = Distance Factor in dB

R_c = Corrected Reading in dBuV/m

L_s = Specification Limit in dBuV/m

M = Margin in dB Relative to Spec

SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp), or where a field strength measurement of output power is made in lieu of a direct measurement, the following formula is used to convert between eirp and field strength at a distance of d (meters) from the equipment under test:

$$E = \frac{1000000 \sqrt{30 P}}{d} \quad \text{microvolts per meter}$$

where P is the eirp (Watts)

For a measurement at 3m the conversion from a logarithmic value for field strength (dBuV/m) to an eirp power (dBm) is -95.3dB.

Appendix A Test Equipment Calibration Data

T87211

Manufacturer	Description	Model	Asset #	Cal Due
Radiated Emissions, 1000 - 6,500 MHz, 17-Apr-12				
EMCO	Antenna, Horn, 1-18GHz	3115	868	6/8/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1630	6/8/2012
Radiated Emissions, 1000 - 6,500 MHz, 18-Apr-12				
EMCO	Antenna, Horn, 1-18 GHz (SA40-Red)	3115	1142	8/2/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1538	12/6/2012
Radiated Emissions, 1,000 - 6,500 MHz, 19-Apr-12				
EMCO	Antenna, Horn, 1-18GHz	3115	868	6/8/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-40 GHz	ESIB40 (1088.7490.40)	2493	12/9/2012
Radiated Emissions, Band Edge, 23-Apr-12				
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1538	12/6/2012
EMCO	Antenna, Horn, 1-18 GHz	3115	1561	6/22/2012
Radiated Emissions, 1000 - 6,500 MHz, 24-Apr-12				
EMCO	Antenna, Horn, 1-18 GHz	3115	487	7/6/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1630	6/8/2012
Radiated Emissions, 1000 - 6,500 MHz, 24-Apr-12				
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	9/21/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1630	6/8/2012
Radiated Emissions, Band Edge, 24-Apr-12				
EMCO	Antenna, Horn, 1-18GHz	3115	868	6/8/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-40 GHz	ESIB40 (1088.7490.40)	2493	12/9/2012
Radiated Emissions, 30 - 18,000 MHz, 25-Apr-12				
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	3/29/2013
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	9/21/2012
Sunol Sciences	Biconilog, 30-3000 MHz	JB3	1657	5/28/2012
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	1771	3/23/2013
Micro-Tronics	Band Reject Filter, 5150-5350 MHz	BRC50703-02	2239	10/4/2012
Micro-Tronics	Band Reject Filter, 2400-2500 MHz	BRM50702-02	2249	10/11/2012
Com-Power Corp.	Preamplifier, 30-1000 MHz	PA-103A	2359	2/14/2013
Rohde & Schwarz	EMI Test Receiver, 20 Hz-40 GHz	ESIB40 (1088.7490.40)	2493	12/9/2012
Radiated Emissions, 1000 - 26,500 MHz, 25-Apr-12				
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	3/29/2013
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	9/21/2012

Manufacturer	Description	Model	Asset #	Cal Due
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	1771	3/23/2013
A.H. Systems	Blue System Horn, 18-40GHz	SAS-574, p/n: 2581	2159	5/23/2012
Micro-Tronics	Band Reject Filter, 2400-2500 MHz	BRM50702-02	2249	10/11/2012
Radiated Emissions, 1,000 - 18,000 MHz, 25-Apr-12				
EMCO	Antenna, Horn, 1-18 GHz	3115	786	12/19/2013
Micro-Tronics	Band Reject Filter, 5725-5875 MHz	BRC50705-02	1682	3/23/2013
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	2199	2/23/2013
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	2415	7/28/2012
Radiated Emissions, 1000 - 40000MHz, 27-Apr-12				
EMCO	Antenna, Horn, 1-18 GHz (SA40-Red)	3115	1142	8/2/2012
Hewlett Packard	SpecAn 30 Hz -40 GHz, SV (SA40) Red	8564E (84125C)	1148	8/15/2012
Micro-Tronics	Band Reject Filter, 5470-5725 MHz	BRC50704-02	1681	9/8/2012
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	1780	11/22/2012
Micro-Tronics	Band Reject Filter, 5150-5350 MHz	BRC50703-02	2239	10/4/2012
Radiated Spurious Emissions, 1000 - 40,000 MHz, 27-Apr-12				
Hewlett Packard	High Pass filter, 8.2 GHz	P/N 84300-80039	1156	6/24/2012
EMCO	Antenna, Horn, 1-18 GHz	3115	1561	6/22/2012
Micro-Tronics	Band Reject Filter, 5470-5725 MHz	BRC50704-02	1730	8/5/2012
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	2199	2/23/2013
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	2415	7/28/2012
Radiated Emissions, 1,000 - 18,000 MHz, 28-Apr-12				
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	3/29/2013
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	9/21/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1630	6/8/2012
Hewlett Packard	High Pass filter, 8.2 GHz (Purple System)	P/N 84300-80039 (84125C)	1767	11/29/2012
Radiated Emissions, 1000 - 26,500 MHz, 30-Apr-12				
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	3/29/2013
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	9/21/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1630	6/8/2012
Micro-Tronics	Band Reject Filter, 2400-2500 MHz	BRM50702-02	1683	8/3/2012
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	1771	3/23/2013
A.H. Systems	Blue System Horn, 18-40GHz	SAS-574, p/n: 2581	2159	5/23/2012

Manufacturer	Description	Model	Asset #	Cal Due
Radiated Emissions, 30 - 1,000 MHz, 01-May-12				
Engineer: Chris Groat				
Manufacturer	Description	Model #	Asset #	Cal Due
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1538	12/6/2012
Sunol Sciences	Biconilog, 30-3000 MHz	JB3	1548	6/24/2012
Hewlett Packard	9KHz-1300MHz pre-amp	8447F	2328 CG0177	3/16/2013
Conducted Emissions - AC Power Ports, 01-May-12				
Rohde & Schwarz	Pulse Limiter	ESH3 Z2	1401	5/12/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1538	12/6/2012
Fischer Custom Comm	LISN, 25A, 150kHz to 30MHz, 25 Amp,	FCC-LISN-50-25-2-09	2000	10/18/2012
Fischer Custom Comm	LISN, 25A, 150kHz to 30MHz, 25 Amp,	FCC-LISN-50-25-2-09	2001	2/15/2013
Radiated Emissions, 1000 - 10,000 MHz, 02-May-12				
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	3/29/2013
EMCO	Antenna, Horn, 1-18 GHz (SA40-Red)	3115	1142	8/2/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1630	6/8/2012
Micro-Tronics	Band Reject Filter, 2400-2500 MHz	BRM50702-02	1683	8/3/2012
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	1771	3/23/2013
Radiated Emissions, 1000 - 15,000 MHz, Simultaneous Transmisison, 02-May-12				
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	3/29/2013
EMCO	Antenna, Horn, 1-18GHz	3115	868	6/8/2012
Hewlett Packard	High Pass filter, 8.2 GHz	P/N 84300-80039	1156	6/24/2012
Micro-Tronics	Band Reject Filter, 2400-2500 MHz	BRM50702-02	1683	8/3/2012
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	1771	3/30/2013
Micro-Tronics	Band Reject Filter, 5150-5350 MHz	BRC50703-02	2239	10/4/2012
Radio Antenna Port (Power and Spurious Emissions), 04-May-12				
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	1771	3/30/2013
Radiated Emissions, 1,000- 6,500 MHz, 09-May-12				
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	9/21/2012
Rohde & Schwarz	EMI Test Receiver, 20 Hz-40 GHz	ESIB40 (1088.7490.40)	2493	12/9/2012
Radiated Emissions, 30 - 1,000 MHz, 11-May-12				
Sunol Sciences	Biconilog, 30-3000 MHz	JB3	1657	5/28/2012
Com-Power Corp.	Preamplifier, 30-1000 MHz	PA-103A	2359	2/14/2013
Rohde & Schwarz	EMI Test Receiver, 20 Hz-40 GHz	ESIB40 (1088.7490.40)	2493	12/9/2012
Conducted Emissions - AC Power Ports, 11-May-12				

Manufacturer	Description	Model	Asset #	Cal Due
Rohde & Schwarz	Pulse Limiter	ESH3 Z2	1594	5/17/2012
Fischer Custom Comm	LISN, 25A, 150kHz to 30MHz, 25 Amp,	FCC-LISN-50-25-2-09	2000	10/18/2012
Fischer Custom Comm	LISN, 25A, 150kHz to 30MHz, 25 Amp,	FCC-LISN-50-25-2-09	2001	2/15/2013
Rohde & Schwarz	EMI Test Receiver, 20 Hz-40 GHz	ESIB40 (1088.7490.40)	2493	12/9/2012
Radiated Emissions, 30 - 1,000 MHz, 21-May-12				
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1538	12/6/2012
Sunol Sciences	Biconilog, 30-3000 MHz	JB3	1548	6/24/2012
Hewlett Packard	9KHz-1300MHz pre-amp	8447F	2328	5/2/2013
Conducted Emissions - AC Power Ports, 21-May-12				
Rohde & Schwarz	Pulse Limiter	ESH3 Z2	1401	5/15/2012
Fischer Custom Comm	LISN, 25A, 150kHz to 30MHz, 25 Amp,	FCC-LISN-50-25-2-09	2000	10/18/2012
Fischer Custom Comm	LISN, 25A, 150kHz to 30MHz, 25 Amp,	FCC-LISN-50-25-2-09	2001	2/15/2013

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Radio Antenna Port (Power and Spurious Emissions), 2-May-12

Manufacturer	Description	Model #	Asset #	Cal Due
Hewlett Packard	SpecAn 9 kHz - 40 GHz, FT (SA40) Blue	8564E (84125C)	1393	01-May-13

Radio Antenna Port (Power and Spurious Emissions), 3-May-12

Manufacturer	Description	Model #	Asset #	Cal Due
Rohde & Schwarz	Power Meter, Dual Channel	NRVD	1071	26-May-12
Rohde & Schwarz	Power Sensor 100 uW - 2 Watts use with 20dB attenuator sn:100059 only	NRV-Z32	1423	01-Sep-12
Agilent	PSA, Spectrum Analyzer, (installed options, 111, 115, 123, 1DS, B7J, HYX,	E4446A	2139	23-Feb-13

Radio Antenna Port (Power and Spurious Emissions), 4-May-12

Manufacturer	Description	Model #	Asset #	Cal Due
Rohde & Schwarz	Power Meter, Dual Channel	NRVD	1071	26-May-12
Rohde & Schwarz	Power Sensor 100 uW - 2 Watts use with 20dB attenuator sn:100059 only	NRV-Z32	1423	01-Sep-12
Agilent	PSA, Spectrum Analyzer, (installed options, 111, 115, 123, 1DS, B7J, HYX,	E4446A	2139	23-Feb-13

Radio Antenna Port (Power and Spurious Emissions), 7-May-12

Manufacturer	Description	Model #	Asset #	Cal Due
Rohde & Schwarz	Power Meter, Dual Channel	NRVD	1071	26-May-12
Rohde & Schwarz	Power Sensor 100 uW - 2 Watts use with 20dB attenuator sn:100059 only	NRV-Z32	1423	01-Sep-12
Agilent	PSA, Spectrum Analyzer, (installed options, 111, 115, 123, 1DS, B7J, HYX,	E4446A	2139	23-Feb-13

Radio Antenna Port (Power and Spurious Emissions), 9-May-12

Manufacturer	Description	Model #	Asset #	Cal Due
Rohde & Schwarz	Power Meter, Dual Channel	NRVD	1071	26-May-12
Rohde & Schwarz	Power Sensor 100 uW - 2 Watts use with 20dB attenuator sn:100059 only	NRV-Z32	1423	01-Sep-12
Agilent	PSA, Spectrum Analyzer, (installed options, 111, 115, 123, 1DS, B7J, HYX,	E4446A	2139	23-Feb-13

Appendix B Test Data

T87211 Pages 32 – 143
T87656 Pages 144 - 219

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		-
Emissions Standard(s):	FCC 15.247, 15.407	Class:	B
Immunity Standard(s):	-	Environment:	-

EMC Test Data

For The

Intel Corporation

Model

Intel® Centrino® Advanced-N 6235

Date of Last Test: 5/22/2012

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manger:	Christine Krebill
Contact:	Steve Hackett		
Emissions Standard(s):	FCC 15.247, 15.407	Class:	B
Immunity Standard(s):	-	Environment:	-

Power vs. Data Rate

In normal operating modes the card uses power settings stored on EEPROM to set the output power. For a given nominal output power the actual transmit power is redcued as the data rate increases, therefore testing was performed at the lowest data rate in each mode as this data rate to determine compliance with the requirements at the highest power seting.

The following power measurements were made using an average power meter and the with the device configured in a continuous transmit mode on Chain A at the various data rates in each mode to verify this:

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Date of Test: 5/20/2012 Config. Used: 1

Test Engineer: Jack Liu Config Change: none

Test Location: FT Chamber#4 Host Unit Voltage 120V/60Hz

802.11 DTS 2.4GHz ChainA

Mode	Data Rate	Power (dBm)	Power setting
802.11b	1	16.5	22.5
	2	16.4	
	5.5	16.5	
	11	16.4	
802.11g	6	16.5	28.5
	9	16.4	
	12	16.4	
	18	16.4	
	24	16.3	
	36	16.2	
	48	16.2	
	54	16.2	
802.11n 20MHz	6.5	15.9	28.0
	13	15.8	
	19.5	15.9	
	26	15.8	
	39	15.8	
	52	15.8	
	58.5	15.7	
	65	15.7	
802.11n 40MHz	13.5	12.9	24.0
	27	12.8	
	40.5	12.7	
	54	12.5	
	81	12.4	
	108	12.3	
	121.5	12.4	
	135	12.3	

Note : Power setting - the software power setting used during testing, included for reference only.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Radiated Emissions 30-1000 MHz, Wireless Module (FCC 15.247/RSS 210)

(Elliott Laboratories Fremont Facility, Semi-Anechoic Chamber)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 5/10/2012
Test Engineer: Joseph Cadigal
Test Location: FT Chamber#5

Config. Used: Modular Test
Config Change: None
Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and any local support equipment were located on the turntable for radiated emissions testing.

The test distance and extrapolation factor (if applicable) are detailed under each run description.

Note, preliminary testing indicates that the emissions were maximized by orientation of the EUT and elevation of the measurement antenna. Maximized testing indicated that the emissions were maximized by orientation of the EUT, elevation of the measurement antenna, and manipulation of the EUT's interface cables.

Ambient Conditions:

Temperature: 21 °C
Rel. Humidity: 34 %

Summary of Results

MAC Address: 44850006301F DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Test Performed	Limit	Result	Margin
1	Radiated Emissions 30 - 1000 MHz	FCC 15.209 / RSS 210	Pass	38.0 dBµV/m @ 58.48 MHz (-2.0 dB)

Note - preliminary measurements indicated that the radiated emissions from the combination of test fixture and EUT were not affected by the modules operating frequency or mode (transmit versus receive mode). The system was therefore evaluated against the most stringent set of limits from FCC 15.247, FCC 15E and RSS 210 with the device operating at max power (16.5dBm) on Chain A at 2437MHz, 802.11b mode and max power (7dBm) on the top channel in Bluetooth mode (1Mb/s data rate).

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

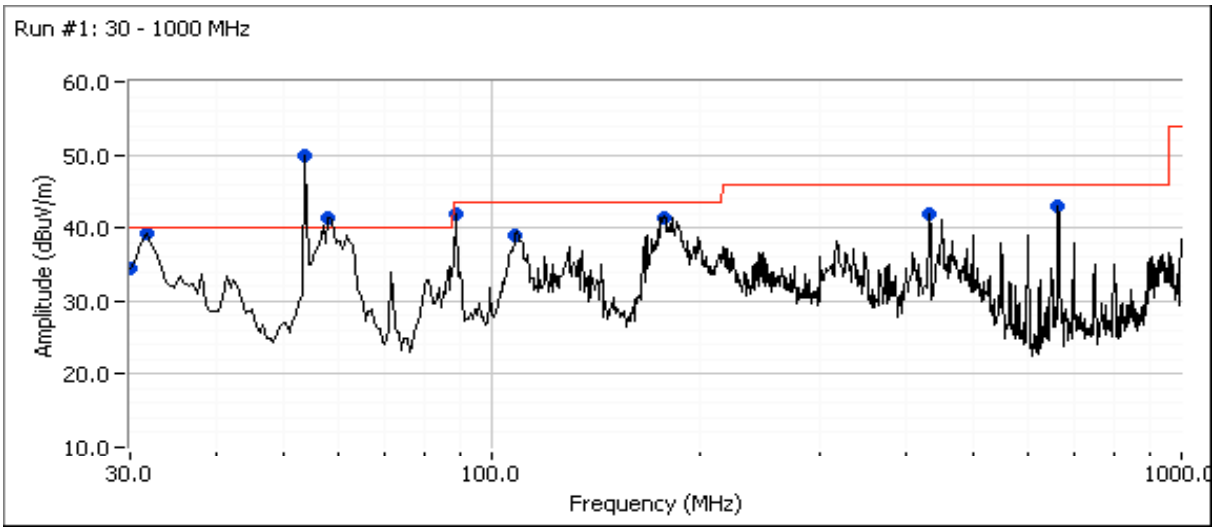
No deviations were made from the requirements of the standard.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1: Preliminary Radiated Emissions, 30 - 1000 MHz

Configured to TX , 802.11b 16.5dBm on each chain (settings 22.5) on channel 6, Bluetooth 7dBm, 1Mb/s (settings 8.0)

Frequency Range	Test Distance	Limit Distance	Extrapolation Factor
30 - 1000 MHz	3	3	0.0



Preliminary peak readings captured during pre-scan

Frequency	Level	Pol	FCC 15.209 / RSS 210		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
54.342	50.0	V	40.0	10.0	Peak	0	2.5	
31.815	39.3	V	40.0	-0.7	Peak	2	1.5	
431.996	41.9	H	46.0	-4.1	Peak	12	1.0	
178.100	41.3	V	43.5	-2.2	Peak	29	1.0	
663.571	43.1	V	46.0	-2.9	Peak	87	1.0	
30.022	34.6	V	40.0	-5.4	Peak	138	1.0	
108.350	38.9	H	43.5	-4.6	Peak	267	3.0	
58.477	41.5	V	40.0	1.5	Peak	279	1.0	
89.397	41.9	V	43.5	-1.6	Peak	286	1.5	

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Maximized quasi-peak readings (includes manipulation of EUT interface cables)

Frequency	Level	Pol	FCC 15.209 / RSS 210		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
58.477	38.0	V	40.0	-2.0	QP	280	1.0	QP (1.00s)
108.350	38.1	H	43.5	-5.4	QP	270	3.0	QP (1.00s)
431.996	40.0	H	46.0	-6.0	QP	13	1.0	QP (1.00s)
31.815	33.6	V	40.0	-6.4	QP	6	1.5	QP (1.00s)
178.100	36.7	V	43.5	-6.8	QP	33	1.0	QP (1.00s)
30.022	30.8	V	40.0	-9.2	QP	141	1.0	QP (1.00s)
663.571	35.0	V	46.0	-11.0	QP	90	1.0	QP (1.00s)
54.342	24.4	V	40.0	-15.6	QP	0	2.5	QP (1.00s)
89.397	26.1	V	43.5	-17.4	QP	287	1.5	QP (1.00s)

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	B

Conducted Emissions

(Elliott Laboratories Fremont Facility, Semi-Anechoic Chamber)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 5/10/2012
Test Engineer: Joseph Cadigal
Test Location: FT Chamber#5

Config. Used: Modular Test
Config Change: None
Host Unit Voltage 120V/60Hz

General Test Configuration

The test fixture was located on a wooden table inside the semi-anechoic chamber, 40 cm from a vertical coupling plane and 80cm from the LISN. A second LISN was used for all local support equipment.

Ambient Conditions:

Temperature: 21 °C
Rel. Humidity: 34 %

Summary of Results

MAC Address: 44850006301F DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Test Performed	Limit	Result	Margin
1	CE, AC Power,120V/60Hz	RSS 210 / 15.207	Pass	39.7 dBµV @ 15.416 MHz (-20.3 dB)

Modifications Made During Testing

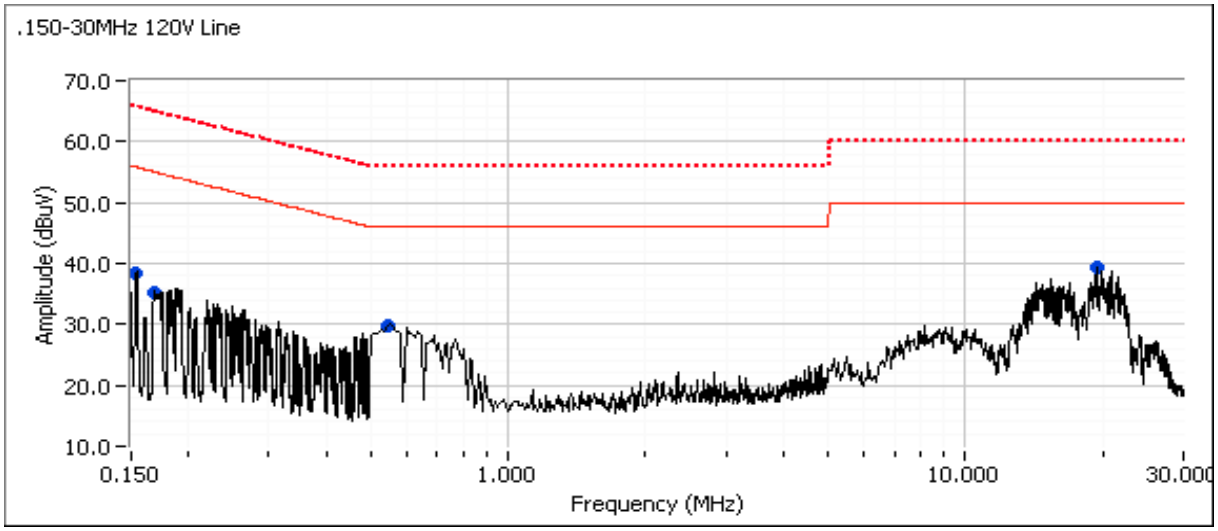
No modifications were made to the EUT during testing

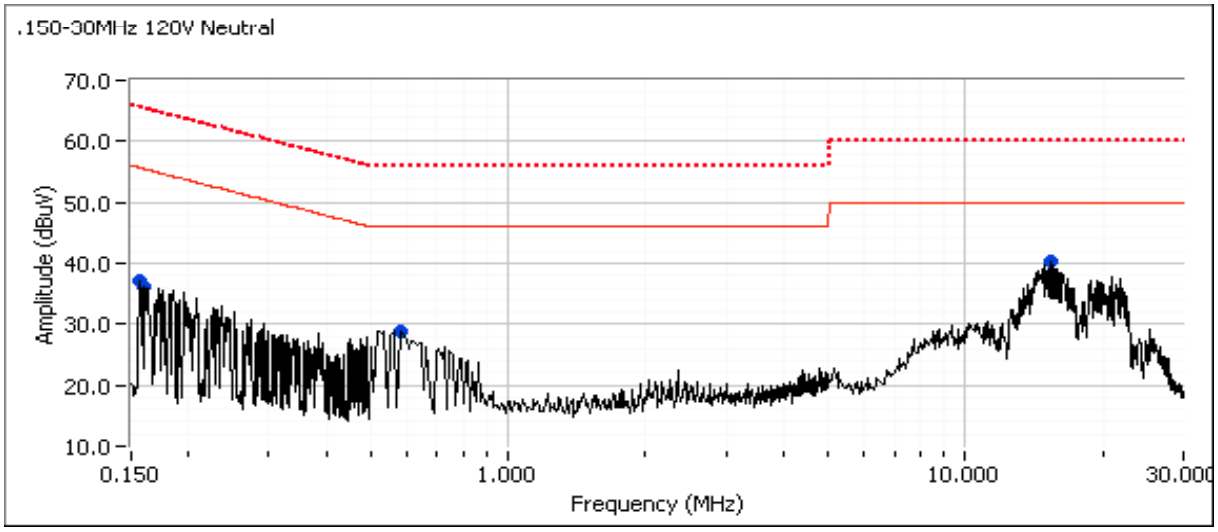
Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	B

Run #1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz





Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	B

Preliminary peak readings captured during pre-scan (peak readings vs. average limit)

Frequency	Level	AC	RSS 210 / 15.207		Detector	Comments
MHz	dBµV	Line	Limit	Margin	QP/Ave	
0.153	38.5	Line 1	55.8	-17.3	Peak	
19.320	39.4	Line 1	50.0	-10.6	Peak	
0.553	29.9	Line 1	46.0	-16.1	Peak	
0.168	35.2	Line 1	55.0	-19.8	Peak	
0.157	37.1	Neutral	55.6	-18.5	Peak	
15.416	40.3	Neutral	50.0	-9.7	Peak	
0.573	28.9	Neutral	46.0	-17.1	Peak	
0.161	36.1	Neutral	55.4	-19.3	Peak	

Final quasi-peak and average readings

Frequency	Level	AC	RSS 210 / 15.207		Detector	Comments
MHz	dBµV	Line	Limit	Margin	QP/Ave	
15.416	39.7	Neutral	60.0	-20.3	QP	QP (1.00s)
19.320	28.9	Line 1	50.0	-21.1	AVG	AVG (0.10s)
19.320	36.0	Line 1	60.0	-24.0	QP	QP (1.00s)
0.553	21.5	Line 1	56.0	-34.5	QP	QP (1.00s)
0.153	30.6	Line 1	65.8	-35.2	QP	QP (1.00s)
0.573	20.5	Neutral	56.0	-35.5	QP	QP (1.00s)
0.168	28.3	Line 1	65.1	-36.8	QP	QP (1.00s)
0.157	26.9	Neutral	65.6	-38.7	QP	QP (1.00s)
0.161	26.3	Neutral	65.4	-39.1	QP	QP (1.00s)
0.553	4.2	Line 1	46.0	-41.8	AVG	AVG (0.10s)
0.573	3.8	Neutral	46.0	-42.2	AVG	AVG (0.10s)
0.153	11.4	Line 1	55.8	-44.4	AVG	AVG (0.10s)
0.168	9.8	Line 1	55.1	-45.3	AVG	AVG (0.10s)
0.161	9.5	Neutral	55.4	-45.9	AVG	AVG (0.10s)
0.157	9.4	Neutral	55.6	-46.2	AVG	AVG (0.10s)

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS 210 and FCC 15.407 (UNII) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located outside the chamber with cables routed beneath the floor.
For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Summary of Results

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
Run #1	n20 Chain A	#36 5180MHz	14.5	14.8	Restricted Band Edge at 5150 MHz	15.209	50.0 dBµV/m @ 5150.0 MHz (-4.0 dB)
Run #1		#64 5320MHz	16.5	16.7	Restricted Band Edge at 5350 MHz	15.209	49.2 dBµV/m @ 5350.0 MHz (-4.8 dB)
Run #1		#100 5500MHz	16.5	16.6	Restricted Band Edge at 5460 MHz	15.209	48.4 dBµV/m @ 5460.0 MHz (-5.6 dB)
					Band Edge at 5470 MHz	15 E	65.0 dBµV/m @ 5467.0 MHz (-3.3 dB)
Run #1		#140 5700MHz	16.0	16.0	Band Edge at 5725 MHz	15 E	66.8 dBµV/m @ 5726.4 MHz (-1.5 dB)
Run #2	n40 Chain A	#38 5190MHz	11.5	11.6	Restricted Band Edge at 5150 MHz	15.209	48.5 dBµV/m @ 5150.0 MHz (-5.5 dB)
Run #2		#62 5310MHz	11.5	11.6	Restricted Band Edge at 5350 MHz	15.209	48.6 dBµV/m @ 5350.0 MHz (-5.4 dB)
Run #2		#102 5510MHz	14.5	14.5	Restricted Band Edge at 5460 MHz	15.209	53.6 dBµV/m @ 5459.8 MHz (-0.4 dB)
					Band Edge at 5470 MHz	15 E	67.6 dBµV/m @ 5468.4 MHz (-0.7 dB)
Run #2		#134 5670MHz	16.0	16.1	Band Edge at 5725 MHz	15 E	62.3 dBµV/m @ 5725.1 MHz (-6.0 dB)

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
Run #3	802.11a Chain A	#36 5180MHz	14.5	14.6	Restricted Band Edge at 5150 MHz	15.209	52.7 dBµV/m @ 5150.0 MHz (-1.3 dB)
Run #3		#64 5320MHz	16.5	16.7	Restricted Band Edge at 5350 MHz	15.209	48.1 dBµV/m @ 5350.0 MHz (-5.9 dB)
Run #3		#100 5500MHz	16.0	16.0	Restricted Band Edge at 5460 MHz	15.209	44.5 dBµV/m @ 5459.9 MHz (-9.5 dB)
					Band Edge at 5470 MHz	15 E	60.9 dBµV/m @ 5469.8 MHz (-7.4 dB)
Run #3		#140 5700MHz	16.0	16.1	Band Edge at 5725 MHz	15 E	66.0 dBµV/m @ 5725.4 MHz (-2.3 dB)

Note - the target and measured power are average powers (measured with average power sensor) and are used for reference purposes only. Power is set using " GAIN CONTROL" mode in the DRTU tool.

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Ambient Conditions:

Temperature:	24 °C
Rel. Humidity:	38 %

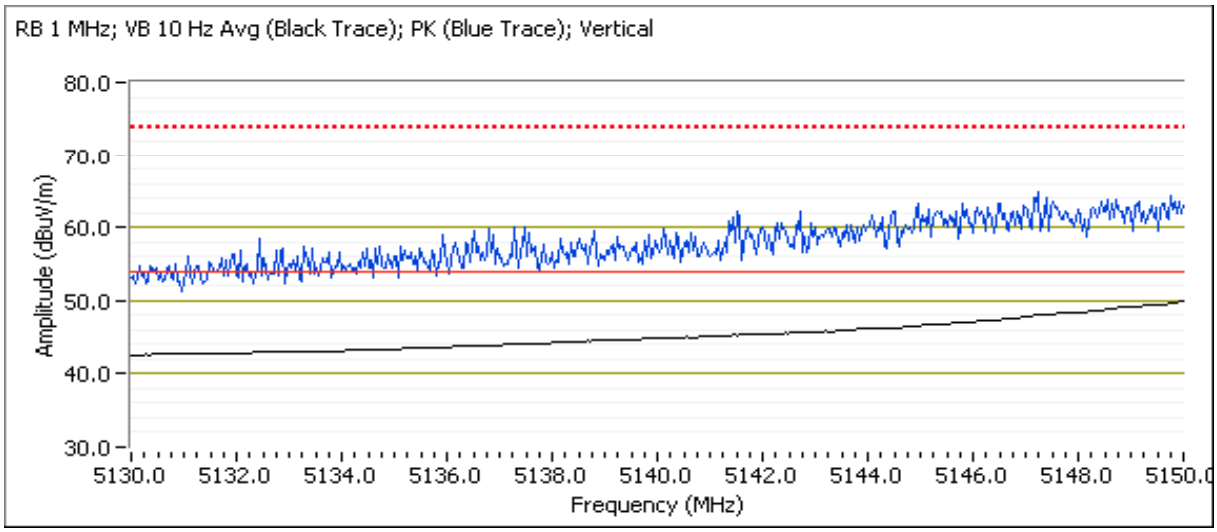
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1, Band Edge Field Strength - HT20, Chain A
Run #1a, EUT on Channel #36 5180MHz - HT20, Chain A
Date of Test: 4/29/2012
Test Engineer: Rafael Varelas
Test Location: FT Chamber#3

Power Setting: 27.0 Target: 14.5

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5149.990	50.0	V	54.0	-4.0	AVG	85	1.0	B 1 MHz; VB: 10 Hz
5148.680	64.3	V	74.0	-9.7	PK	85	1.0	B 1 MHz; VB: 3 MHz
5149.990	47.7	H	54.0	-6.3	AVG	29	1.0	B 1 MHz; VB: 10 Hz
5148.320	62.0	H	74.0	-12.0	PK	29	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

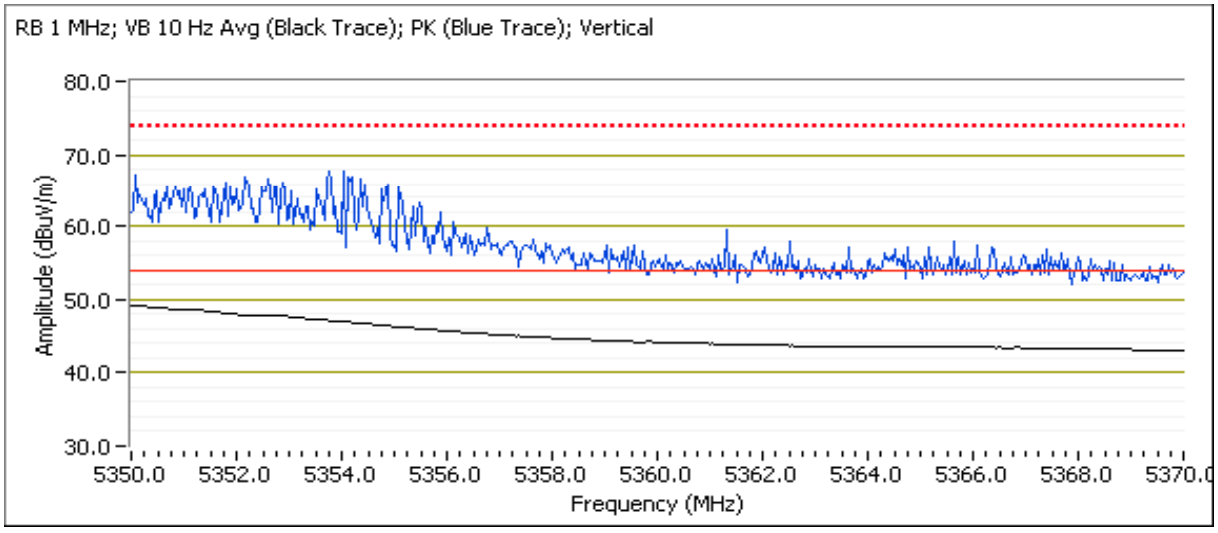
Run #1b, EUT on Channel #64 5320MHz - HT20, Chain A

Date of Test: 4/29/2012
Test Engineer: Rafael Varelas
Test Location: FT Chamber#3

Power Setting: 29.5 Target: 16.5

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.000	49.2	V	54.0	-4.8	AVG	154	1.0	B 1 MHz; VB: 10 Hz
5351.760	67.8	V	74.0	-6.2	PK	154	1.0	B 1 MHz; VB: 3 MHz
5350.010	48.0	H	54.0	-6.0	AVG	261	1.0	B 1 MHz; VB: 10 Hz
5350.630	64.4	H	74.0	-9.6	PK	261	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

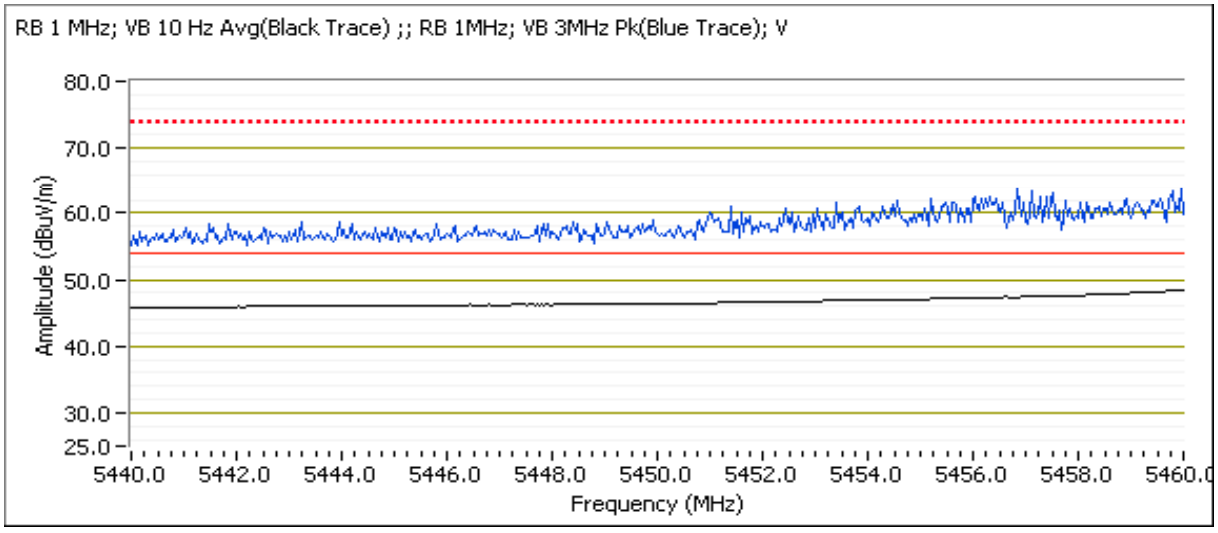
Run #1c, EUT on Channel #100 5500MHz - HT20, Chain A

Date of Test: 5/2/2012
Test Engineer: Jack Liu
Test Location: FT5

Power Setting: 29.0 Target: 16.5

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5460.000	48.4	V	54.0	-5.6	AVG	68	1.0	POS; RB 1 MHz; VB: 10 Hz
5457.400	62.0	V	74.0	-12.0	PK	68	1.0	POS; RB 1 MHz; VB: 3 MHz
5459.960	47.4	H	54.0	-6.6	AVG	144	1.0	POS; RB 1 MHz; VB: 10 Hz
5452.460	60.6	H	74.0	-13.4	PK	144	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

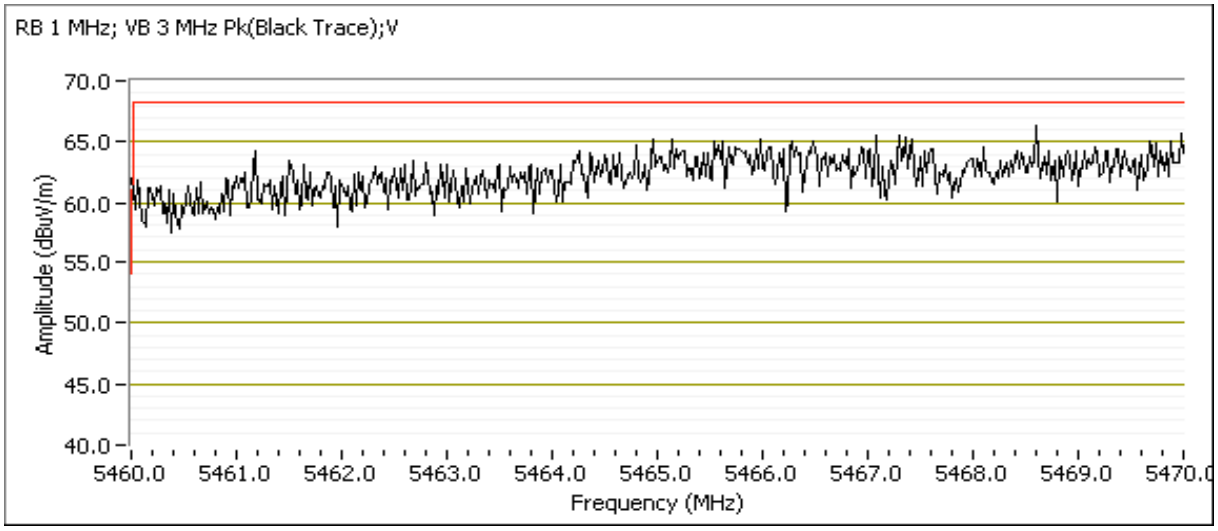
Run #1d, EUT on Channel #100 5500 MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 29.0

5470 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5467.030	65.0	V	68.3	-3.3	PK	182	1.0	B 1 MHz; VB: 3 MHz
5467.030	62.3	H	68.3	-6.0	PK	266	1.1	B 1 MHz; VB: 3 MHz



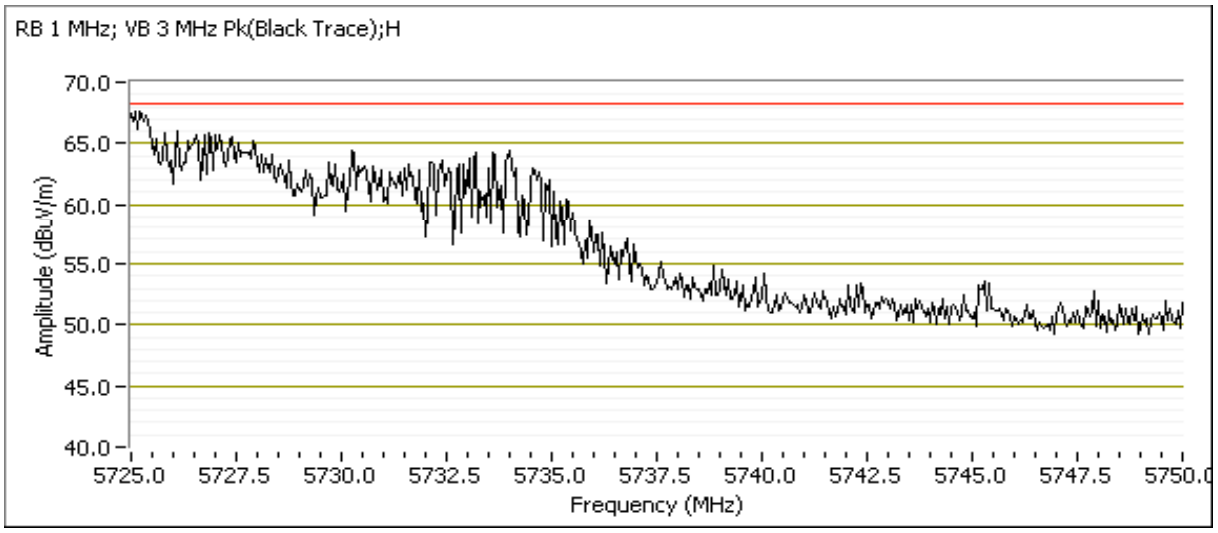
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1e, EUT on channel #140 5700 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4
Power Setting: 30.0

5725 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5726.400	66.8	H	68.3	-1.5	PK	257	1.9	Pwr seeting 30
5725.300	61.9	V	68.3	-6.4	PK	183	1.0	Pwr seeting 30



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2, Band Edge Field Strength - HT40, Chain A

Date of Test: 4/23/2012

Test Engineer: Joseph Cadigal

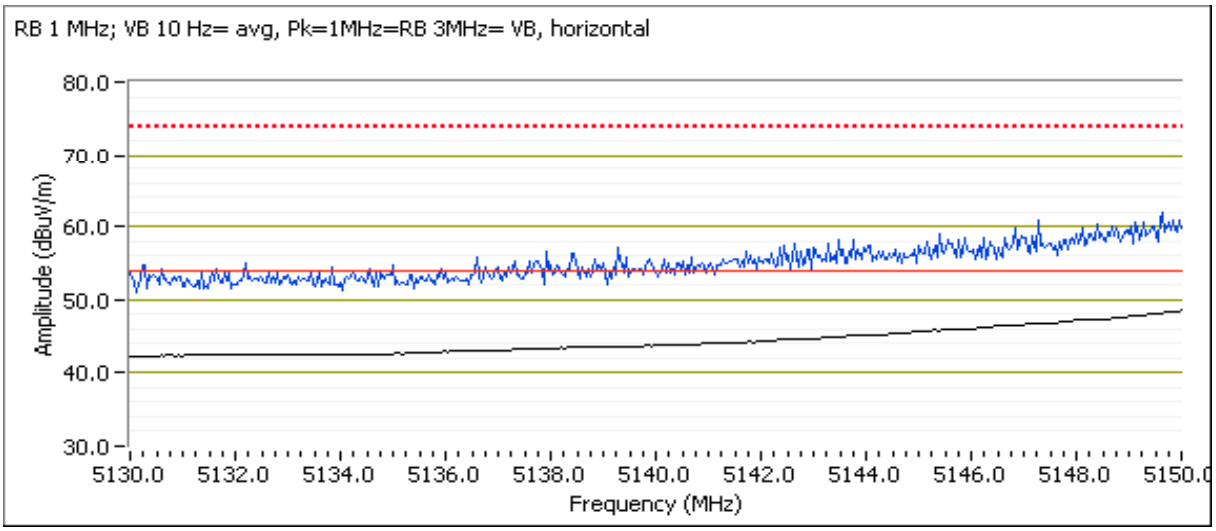
Test Location: FT Chamber#3

Run #2a, EUT on Channel #38 5190MHz - HT40, Chain A

Power Setting: 23.5

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5150.000	48.5	H	54.0	-5.5	AVG	26	1.0	POS; RB 1 MHz; VB: 10 Hz
5149.720	59.9	H	74.0	-14.1	PK	26	1.0	POS; RB 1 MHz; VB: 3 MHz
5150.000	47.7	V	54.0	-6.3	AVG	128	1.0	POS; RB 1 MHz; VB: 10 Hz
5148.080	58.5	V	74.0	-15.5	PK	128	1.0	POS; RB 1 MHz; VB: 3 MHz



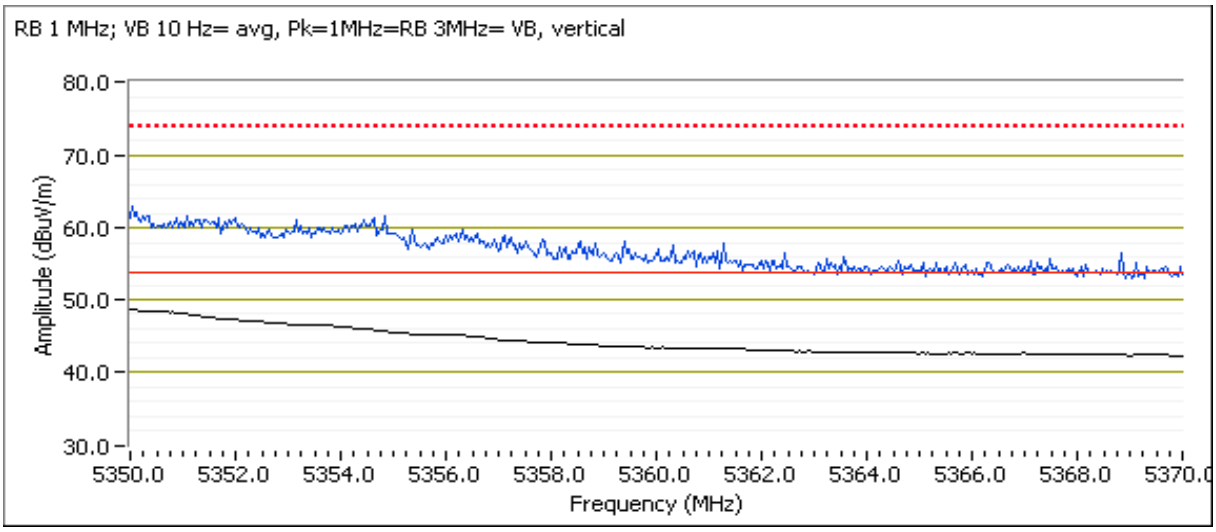
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2b, EUT on Channel #62 5310MHz - HT40, Chain A

Power Setting: 22.5

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.000	48.6	V	54.0	-5.4	AVG	168	1.0	POS; RB 1 MHz; VB: 10 Hz
5350.800	60.7	V	74.0	-13.3	PK	168	1.0	POS; RB 1 MHz; VB: 3 MHz
5350.000	47.7	H	54.0	-6.3	AVG	263	1.0	POS; RB 1 MHz; VB: 10 Hz
5354.410	60.9	H	74.0	-13.1	PK	263	1.0	POS; RB 1 MHz; VB: 3 MHz



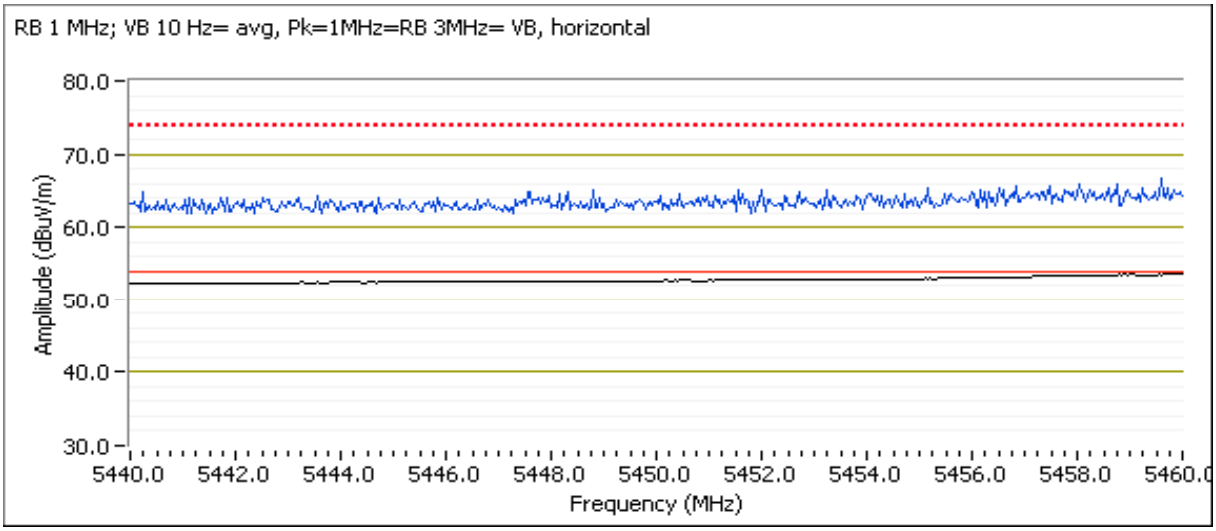
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2c, EUT on Channel #102 5510MHz - HT40, Chain A

Power Setting: 26.5

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5459.800	53.6	H	54.0	-0.4	AVG	260	1.0	POS; RB 1 MHz; VB: 10 Hz
5451.780	65.1	H	74.0	-8.9	PK	260	1.0	POS; RB 1 MHz; VB: 3 MHz
5458.680	49.9	V	54.0	-4.1	AVG	123	1.2	POS; RB 1 MHz; VB: 10 Hz
5459.800	66.1	V	74.0	-7.9	PK	123	1.2	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

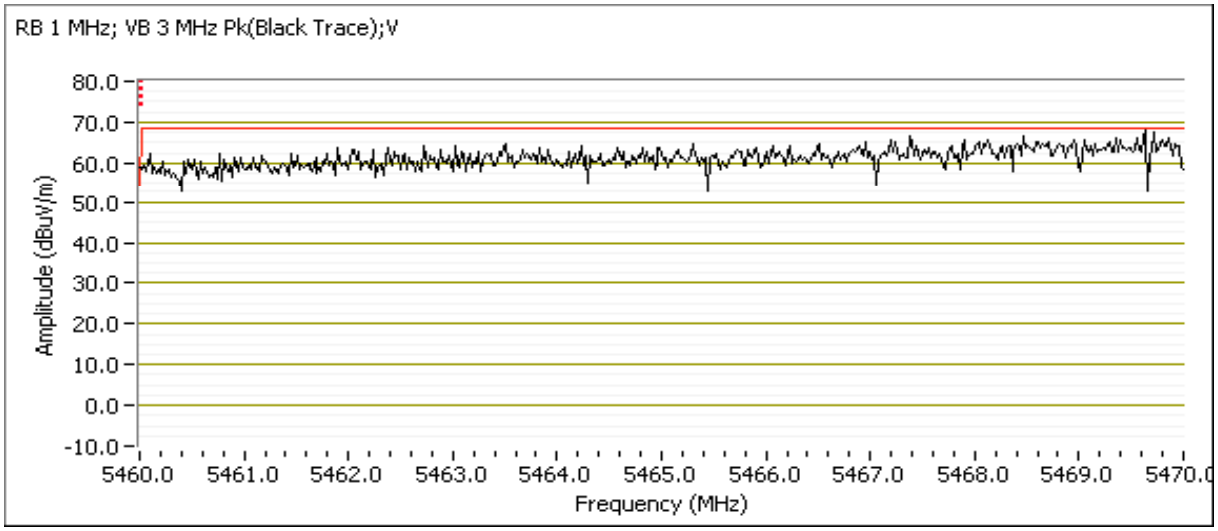
Run #2d, EUT on Channel #102 5510MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 26.5

5470 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5468.440	67.6	V	68.3	-0.7	PK	75	1.0	B 1 MHz; VB: 3 MHz
5469.900	63.4	H	68.3	-4.9	PK	315	0.9	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

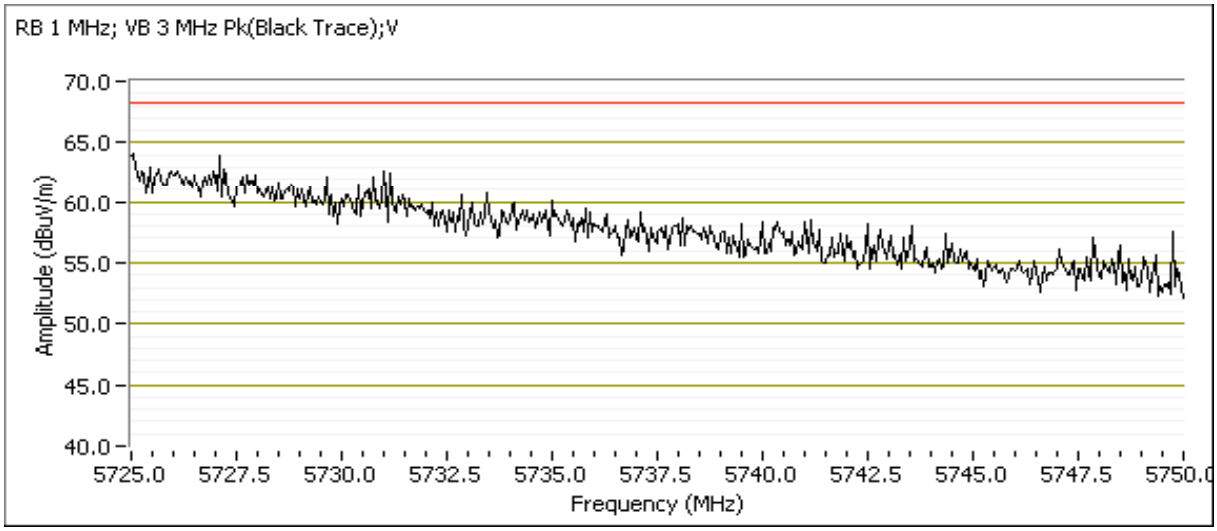
Run #2e, EUT on channel #134 5670 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 31.0

5725MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5725.100	62.3	V	68.3	-6.0	PK	105	1.0	POS; RB 1 MHz; VB: 3 MHz
5725.350	61.6	H	68.3	-6.7	PK	315	1.2	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3, Band Edge Field Strength - 802.11a, Chain A

Date of Test: 4/23/2012

Test Engineer: Joseph Cadigal

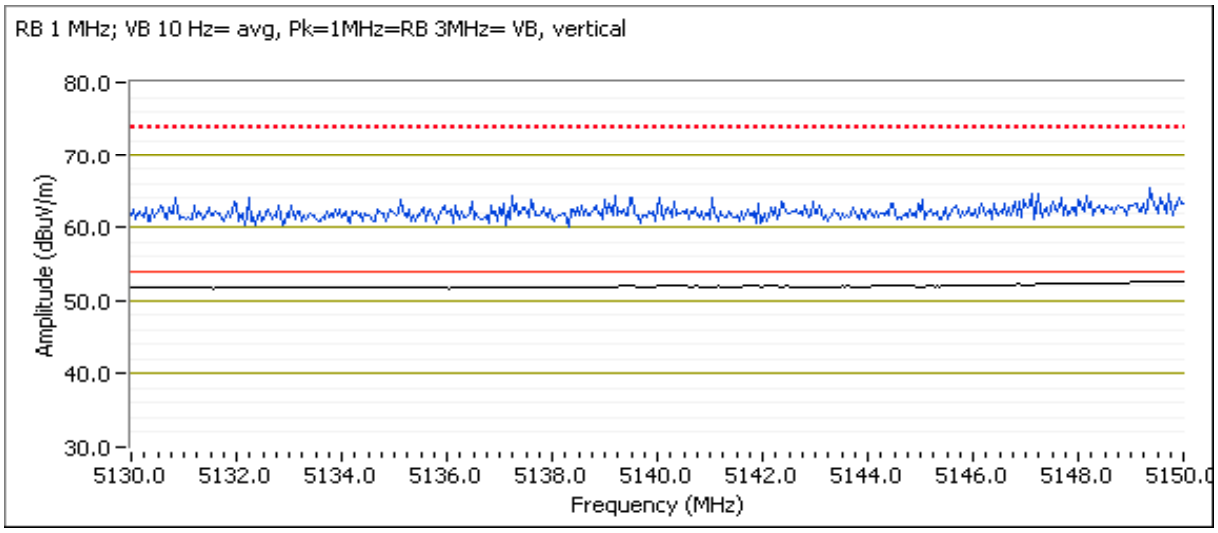
Test Location: FT Chamber#3

Run #3a, EUT on Channel #36 5180MHz - 802.11a, Chain A

Power Setting: 26.5

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5150.000	52.7	V	54.0	-1.3	AVG	88	1.0	POS; RB 1 MHz; VB: 10 Hz
5147.270	64.3	V	74.0	-9.7	PK	88	1.0	POS; RB 1 MHz; VB: 3 MHz
5150.000	46.1	H	54.0	-7.9	AVG	35	1.0	POS; RB 1 MHz; VB: 10 Hz
5149.320	60.4	H	74.0	-13.6	PK	35	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

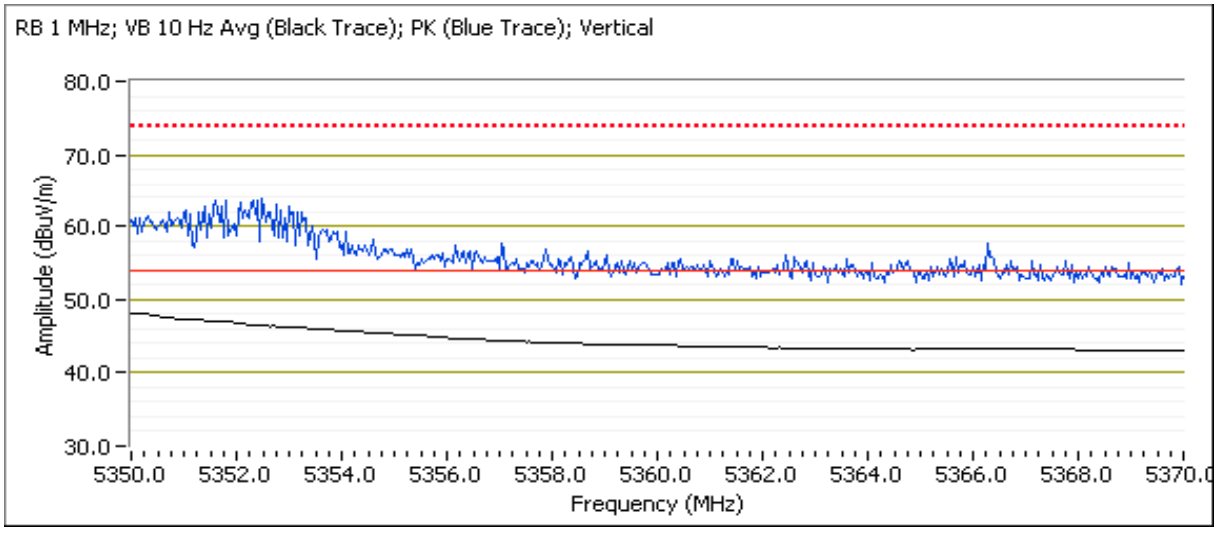
Run #3b, EUT on Channel #64 5320MHz - 802.11a, Chain A

Date of Test: 4/29/2012
Test Engineer: Rafael Varelas
Test Location: FT Chamber#3

Power Setting: 29.0 Target: 16.5

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.000	48.1	V	54.0	-5.9	AVG	154	1.0	B 1 MHz; VB: 10 Hz
5352.000	63.4	V	74.0	-10.6	PK	154	1.0	B 1 MHz; VB: 3 MHz
5350.000	46.8	H	54.0	-7.2	AVG	261	1.1	B 1 MHz; VB: 10 Hz
5352.200	61.6	H	74.0	-12.4	PK	261	1.1	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

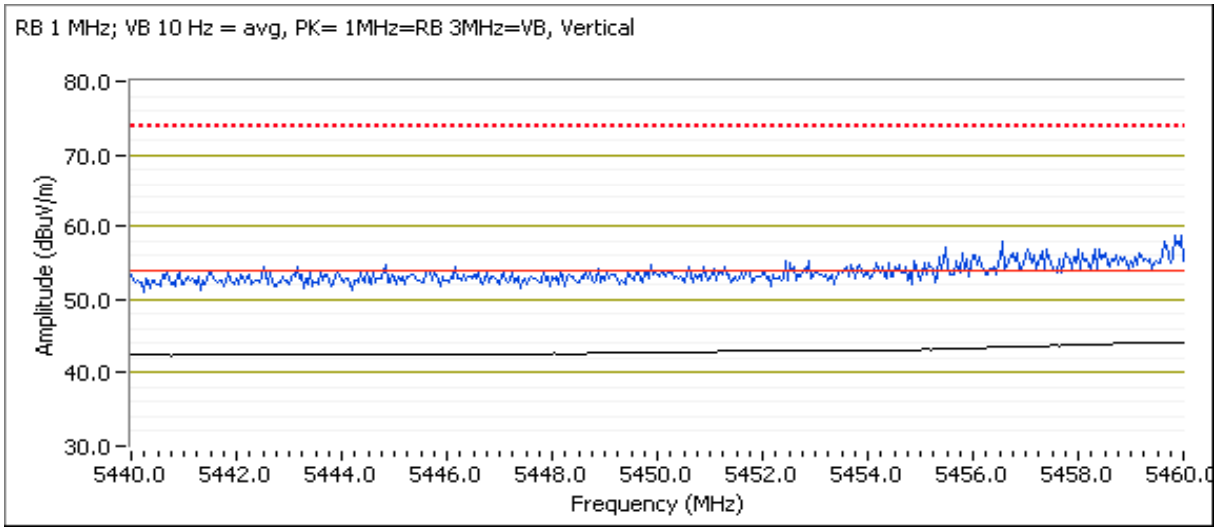
Run #3c, EUT on Channel #100 5500MHz - 802.11a, Chain A

Date of Test: 4/23/2012
Test Engineer: Rafael Varelas
Test Location: FT Chamber#3

Power Setting: 28.0

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5459.880	44.5	V	54.0	-9.5	AVG	120	1.1	POS; RB 1 MHz; VB: 10 Hz
5457.560	57.9	V	74.0	-16.1	PK	120	1.1	POS; RB 1 MHz; VB: 3 MHz
5460.000	44.2	H	54.0	-9.8	AVG	256	1.0	POS; RB 1 MHz; VB: 10 Hz
5458.840	56.0	H	74.0	-18.0	PK	256	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

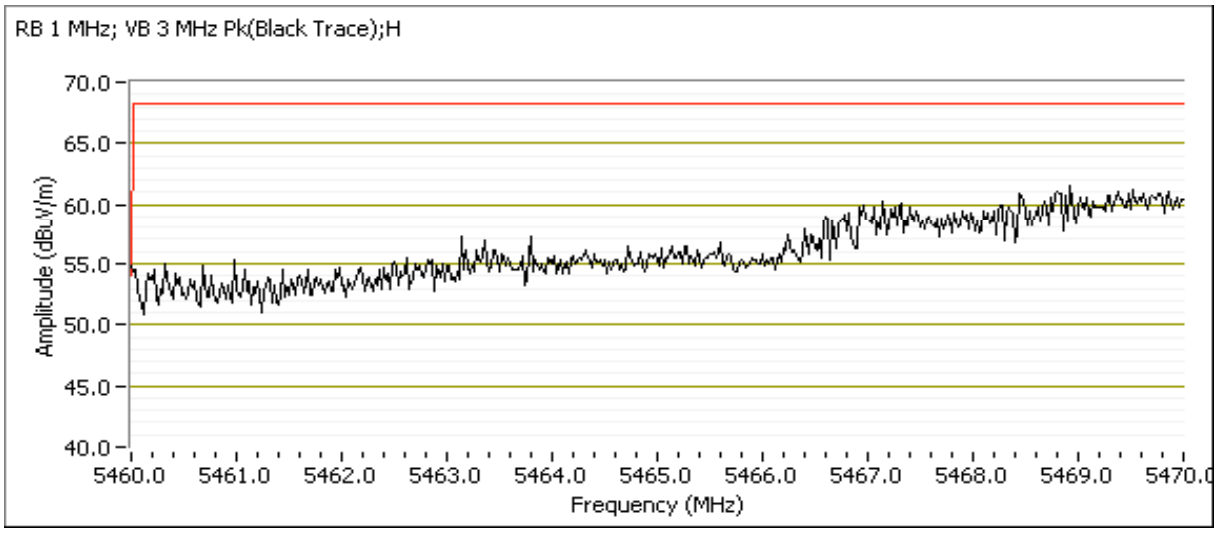
Run #3d, EUT on Channel #100 5500 MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 27.5

5470MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5469.840	60.9	H	68.3	-7.4	PK	61	1.0	B 1 MHz; VB: 3 MHz
5468.900	55.9	V	68.3	-12.4	PK	70	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

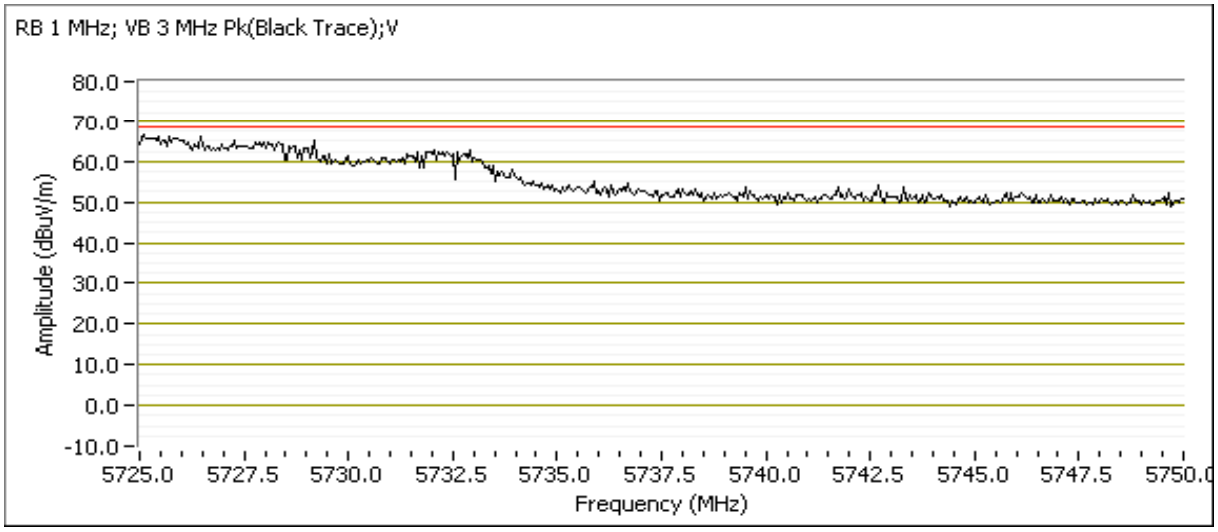
Run #3e, EUT on channel #140 5700 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 30.0

5725MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5725.400	66.0	V	68.3	-2.3	PK	181	1.6	POS; RB 1 MHz; VB: 3 MHz
5725.850	62.8	H	68.3	-5.5	PK	236	1.4	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS 210 and FCC 15.407 (UNII) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located outside the chamber with cables routed beneath the floor.
For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Summary of Results

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
Run #1	n20 Chain B	#36 5180MHz	15.0	15.2	Restricted Band Edge at 5150 MHz	15.209	49.0 dBµV/m @ 5150.0 MHz (-5.0 dB)
Run #1		#64 5320MHz	16.5	16.7	Restricted Band Edge at 5350 MHz	15.209	47.1 dBµV/m @ 5350.0 MHz (-6.9 dB)
Run #1		#100 5500MHz	16.5	16.5	Restricted Band Edge at 5460 MHz	15.209	48.2 dBµV/m @ 5460.0 MHz (-5.8 dB)
					Band Edge at 5470 MHz	15 E	64.3 dBµV/m @ 5466.6 MHz (-4.0 dB)
Run #1		#140 5700MHz	16.0	16.2	Band Edge at 5725 MHz	15 E	64.6 dBµV/m @ 5726.2 MHz (-3.7 dB)
Run #2	n40 Chain B	#38 5190MHz	11.5	11.8	Restricted Band Edge at 5150 MHz	15.209	50.0 dBµV/m @ 5150.0 MHz (-4.0 dB)
Run #2		#62 5310MHz	12.0	12.1	Restricted Band Edge at 5350 MHz	15.209	49.3 dBµV/m @ 5350.0 MHz (-4.7 dB)
Run #2		#102 5510MHz	14.5	14.5	Restricted Band Edge at 5460 MHz	15.209	48.2 dBµV/m @ 5460.0 MHz (-5.8 dB)
					Band Edge at 5470 MHz	15 E	65.1 dBµV/m @ 5469.4 MHz (-3.2 dB)
Run #2		#134 5670MHz	16.0	16.2	Band Edge at 5725 MHz	15 E	57.8 dBµV/m @ 5725.6 MHz (-30.5 dB)

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
Run #3	802.11a Chain B	#36 5180MHz	15.5	15.5	Restricted Band Edge at 5150 MHz	15.209	48.2 dBµV/m @ 5150.0 MHz (-5.8 dB)
Run #3		#64 5320MHz	16.5	16.6	Restricted Band Edge at 5350 MHz	15.209	46.2 dBµV/m @ 5350.0 MHz (-7.8 dB)
Run #3		#100 5500MHz	16.0	15.9	Restricted Band Edge at 5460 MHz	15.209	46.3 dBµV/m @ 5460.0 MHz (-7.7 dB)
					Band Edge at 5470 MHz	15 E	63.3 dBµV/m @ 5468.9 MHz (-5.0 dB)
Run #3		#140 5700MHz	16.0	15.9	Band Edge at 5725 MHz	15 E	63.5 dBµV/m @ 5725.3 MHz (-4.8 dB)

Note - the target and measured power are average powers (measured with average power sensor) and are used for reference purposes only. Power is set using " GAIN CONTROL" mode in the DRTU tool.

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Ambient Conditions:

Temperature:	20 °C
Rel. Humidity:	35 %

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1, Band Edge Field Strength - HT20, Chain B

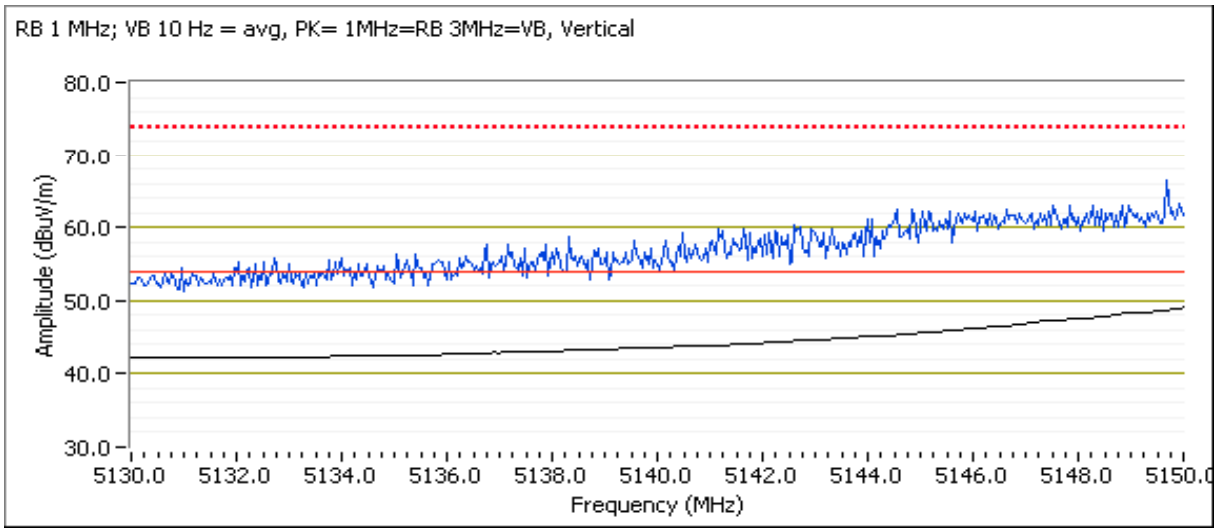
Date of Test: 4/23/2012
Test Engineer: Rafael Varelas
Test Location: FT Chamber#3

Run #1a, EUT on Channel #36 5180MHz - HT20, Chain B

Power Setting: 25.0

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5150.000	49.0	V	54.0	-5.0	AVG	147	1.1	B 1 MHz; VB: 10 Hz
5149.680	62.4	V	74.0	-11.6	PK	147	1.1	B 1 MHz; VB: 3 MHz
5150.000	47.3	H	54.0	-6.7	AVG	106	1.4	B 1 MHz; VB: 10 Hz
5149.520	60.5	H	74.0	-13.5	PK	106	1.4	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

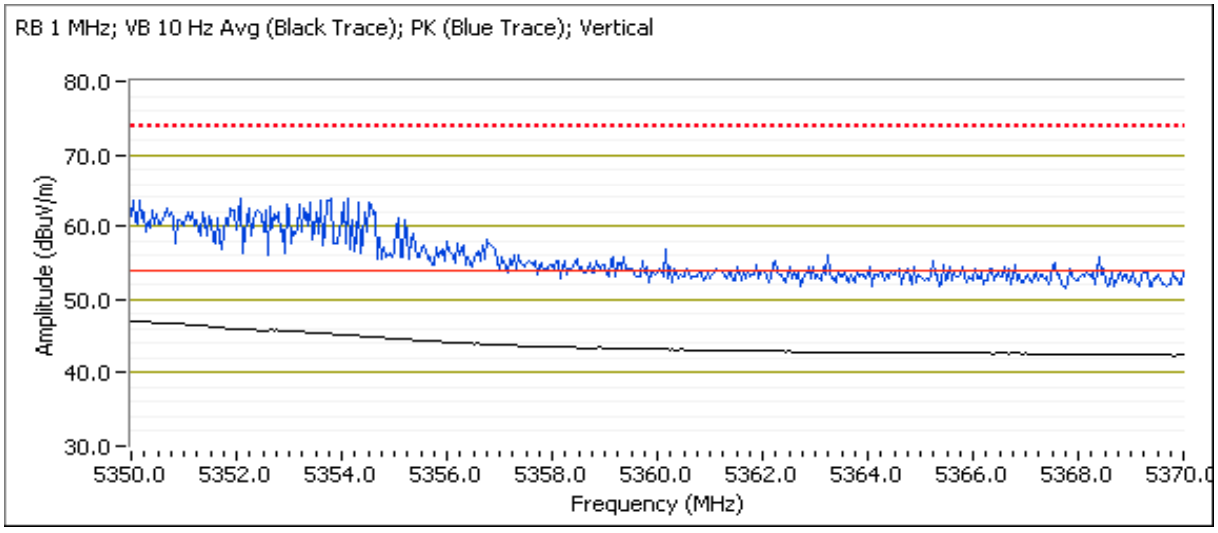
Run #1b, EUT on Channel #64 5320MHz - HT20, Chain B

Date of Test: 4/29/2012
Test Engineer: Rafael Varelas
Test Location: FT Chamber#3

Power Setting: 28.0 Target: 16.5

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.010	47.1	V	54.0	-6.9	AVG	142	1.2	B 1 MHz; VB: 10 Hz
5352.280	64.3	V	74.0	-9.7	PK	142	1.2	B 1 MHz; VB: 3 MHz
5350.000	46.4	H	54.0	-7.6	AVG	108	1.0	B 1 MHz; VB: 10 Hz
5350.280	62.0	H	74.0	-12.0	PK	108	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

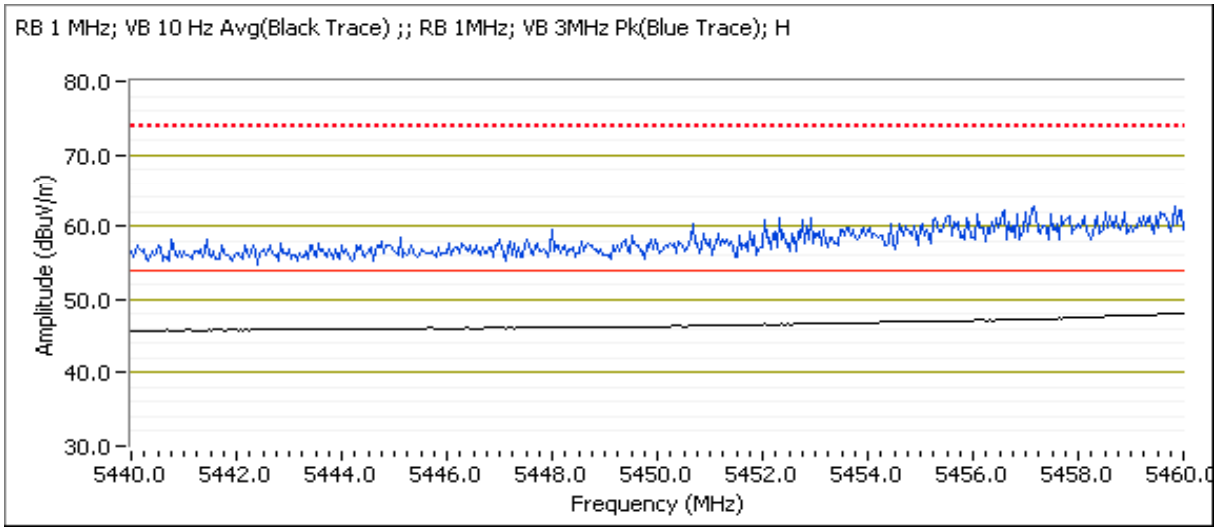
Run #1c, EUT on Channel #100 5500MHz - HT20, Chain B

Date of Test: 5/2/2012
Test Engineer: Jack Liu
Test Location: FT5

Power Setting: 29.0 Target: 16.5

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5460.000	48.2	H	54.0	-5.8	AVG	95	1.1	POS; RB 1 MHz; VB: 10 Hz
5459.680	61.0	H	74.0	-13.0	PK	95	1.1	POS; RB 1 MHz; VB: 3 MHz
5460.000	47.4	V	54.0	-6.6	AVG	158	1.1	POS; RB 1 MHz; VB: 10 Hz
5453.350	59.5	V	74.0	-14.5	PK	158	1.1	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

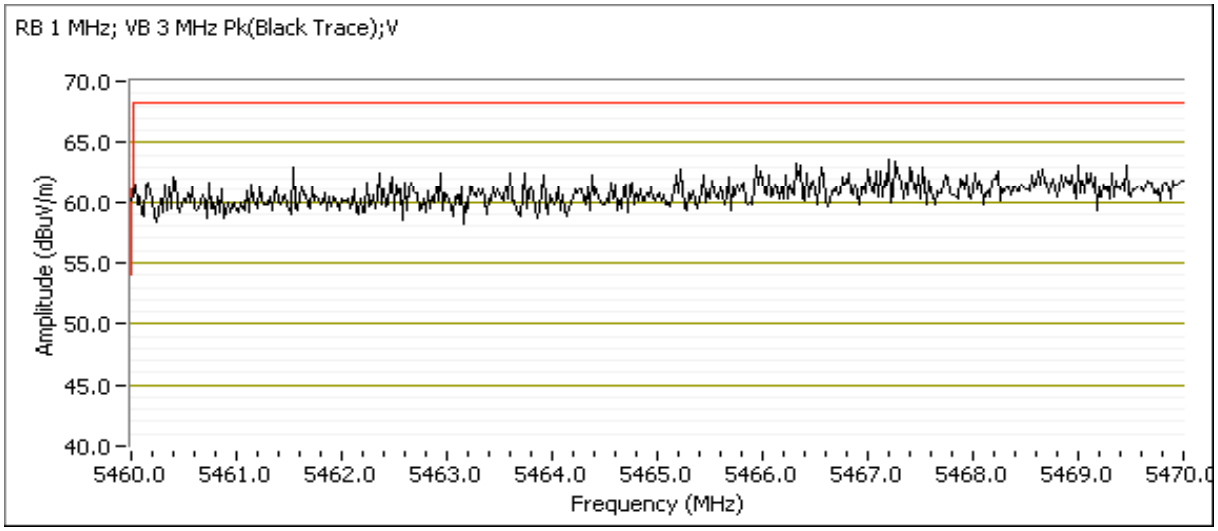
Run #1d, EUT on Channel #100 5500 MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 28.5

5470MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5466.610	64.3	V	68.3	-4.0	PK	224	0.9	B 1 MHz; VB: 3 MHz
5469.820	59.8	H	68.3	-8.5	PK	105	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

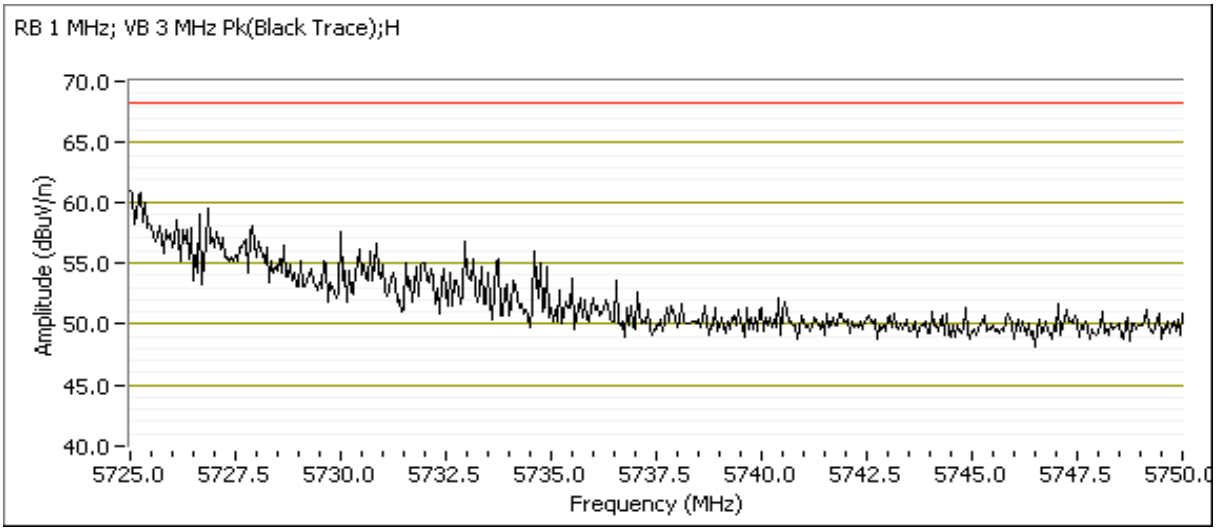
Run #1e, EUT on channel #140 5700 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 29.5

5725MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5726.200	64.6	H	68.3	-3.7	PK	103	1.3	B 1 MHz; VB: 3 MHz
5725.500	59.5	V	68.3	-8.8	PK	182	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2, Band Edge Field Strength - HT40, Chain B

Date of Test: 4/23/2012

Test Engineer: Rafael Varelas

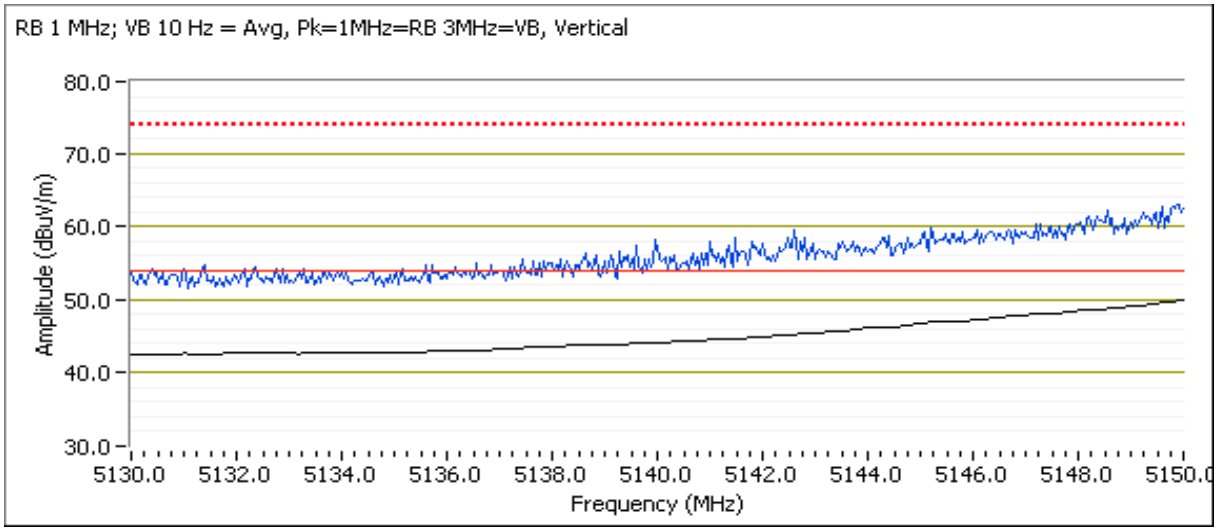
Test Location: FT Chamber#3

Run #2a, EUT on Channel #38 5190MHz - HT40, Chain B

Power Setting: 21.5

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5150.000	50.0	V	54.0	-4.0	AVG	137	1.1	POS; RB 1 MHz; VB: 10 Hz
5148.360	60.8	V	74.0	-13.2	PK	137	1.1	POS; RB 1 MHz; VB: 3 MHz
5150.000	48.9	H	54.0	-5.1	AVG	104	1.0	POS; RB 1 MHz; VB: 10 Hz
5149.180	61.5	H	74.0	-12.5	PK	104	1.0	POS; RB 1 MHz; VB: 3 MHz



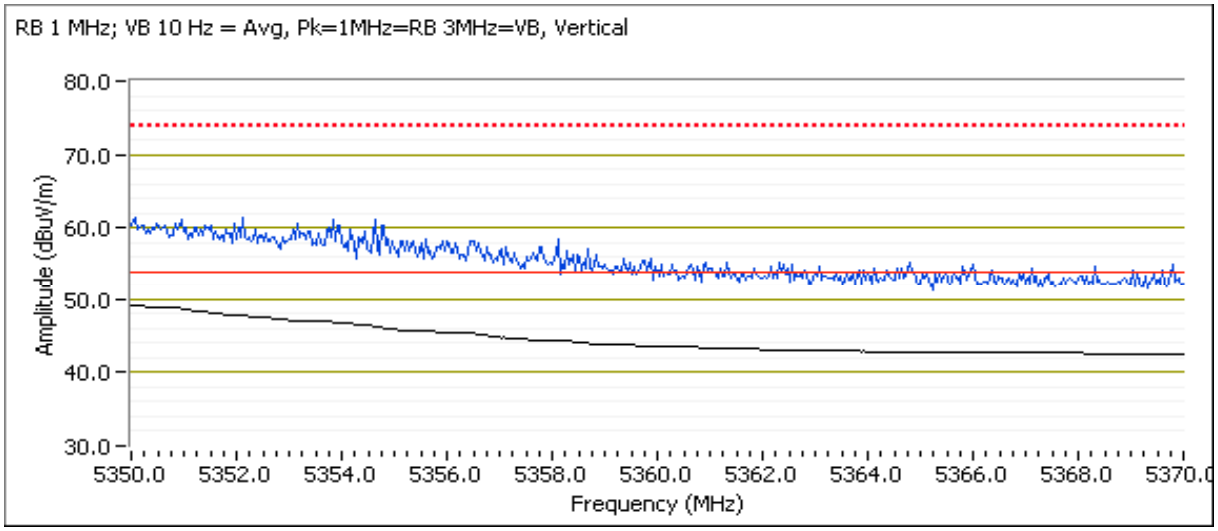
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2b, EUT on Channel #62 5310MHz - HT40, Chain B

Power Setting: 22.0

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.000	49.3	V	54.0	-4.7	AVG	152	1.5	POS; RB 1 MHz; VB: 10 Hz
5350.480	60.4	V	74.0	-13.6	PK	152	1.5	POS; RB 1 MHz; VB: 3 MHz
5350.000	49.1	H	54.0	-4.9	AVG	105	1.0	POS; RB 1 MHz; VB: 10 Hz
5350.280	61.8	H	74.0	-12.2	PK	105	1.0	POS; RB 1 MHz; VB: 3 MHz



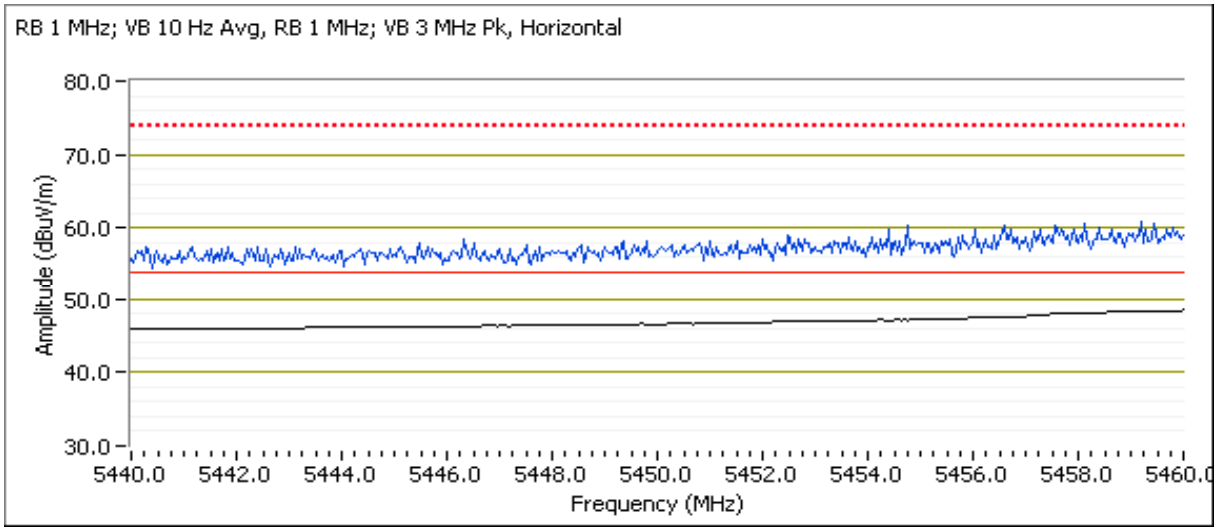
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2c, EUT on Channel #102 5510MHz - HT40, Chain B

Power Setting: 26.0

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5460.000	48.2	V	54.0	-5.8	AVG	293	1.0	POS; RB 1 MHz; VB: 10 Hz
5458.360	60.4	V	74.0	-13.6	PK	293	1.0	POS; RB 1 MHz; VB: 3 MHz
5149.650	48.0	H	54.0	-6.0	AVG	191	1.0	POS; RB 1 MHz; VB: 10 Hz
5148.260	60.3	H	74.0	-13.7	PK	191	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

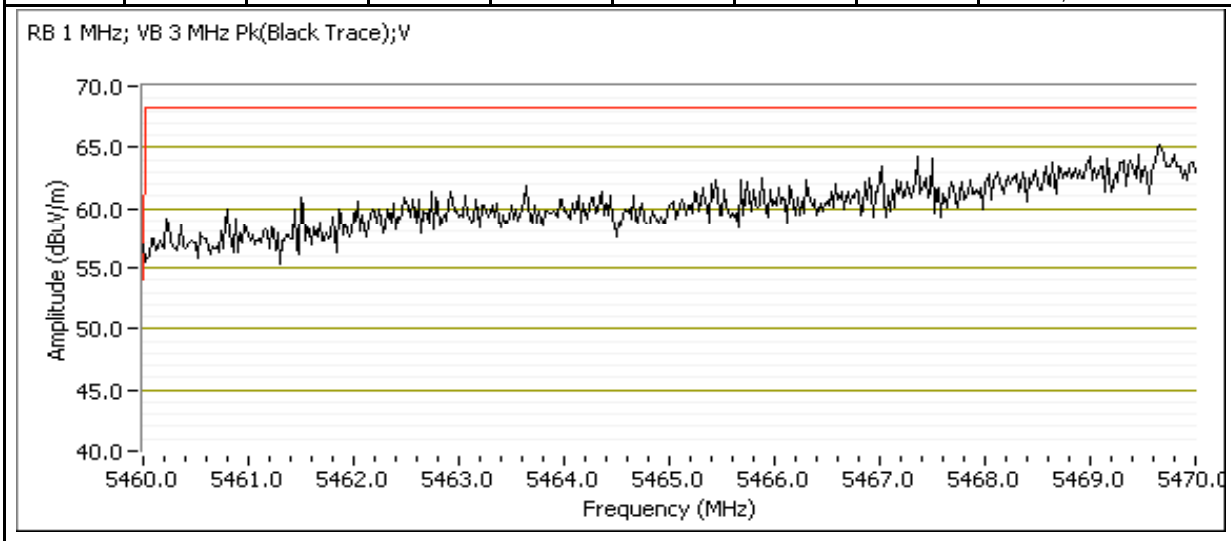
Run #2d, EUT on Channel #102 5510MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 26.5

5470MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5469.400	65.1	V	68.3	-3.2	PK	182	1.0	B 1 MHz; VB: 3 MHz
5469.900	64.6	H	68.3	-3.7	PK	120	1.5	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

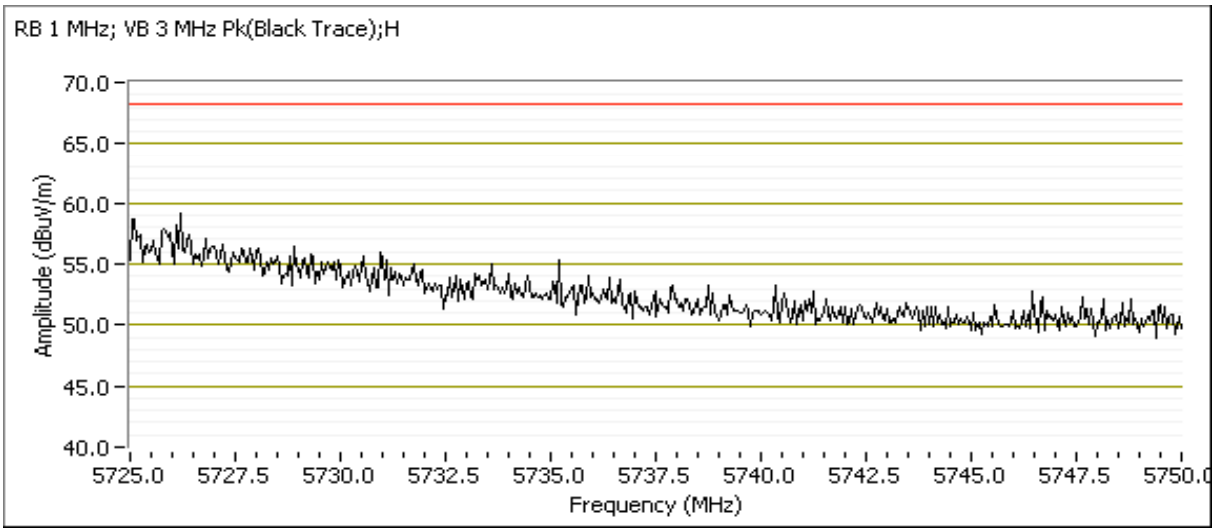
Run #2e, EUT on channel #134 5670 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: 30.5

5725MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5725.600	57.8	H	88.3	-30.5	PK	107	1.3	B 1 MHz; VB: 3 MHz
5725.350	54.7	V	88.3	-33.6	PK	170	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3, Band Edge Field Strength - 802.11a, Chain B

Date of Test: 4/24/2012

Test Engineer: David Bare

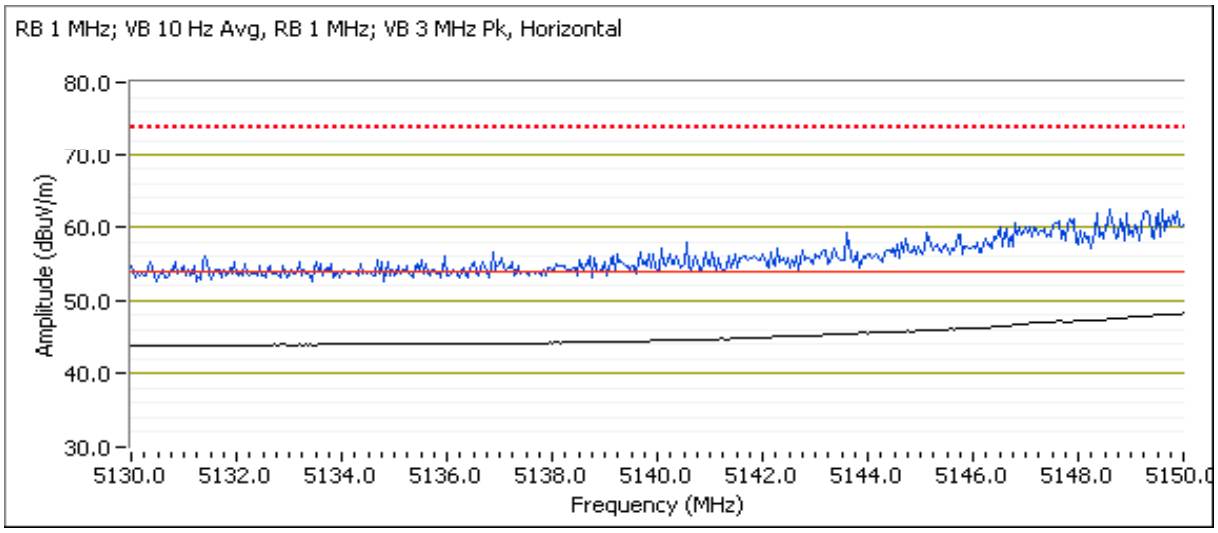
Test Location: Fremont Chamber #5

Run #3a, EUT on Channel #36 5180MHz - 802.11a, Chain B

Power Setting: 24.0

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5150.000	47.6	V	54.0	-6.4	AVG	236	1.0	POS; RB 1 MHz; VB: 10 Hz
5148.840	61.3	V	74.0	-12.7	PK	236	1.0	POS; RB 1 MHz; VB: 3 MHz
5150.000	48.2	H	54.0	-5.8	AVG	194	1.0	POS; RB 1 MHz; VB: 10 Hz
5147.640	61.9	H	74.0	-12.1	PK	194	1.0	POS; RB 1 MHz; VB: 3 MHz



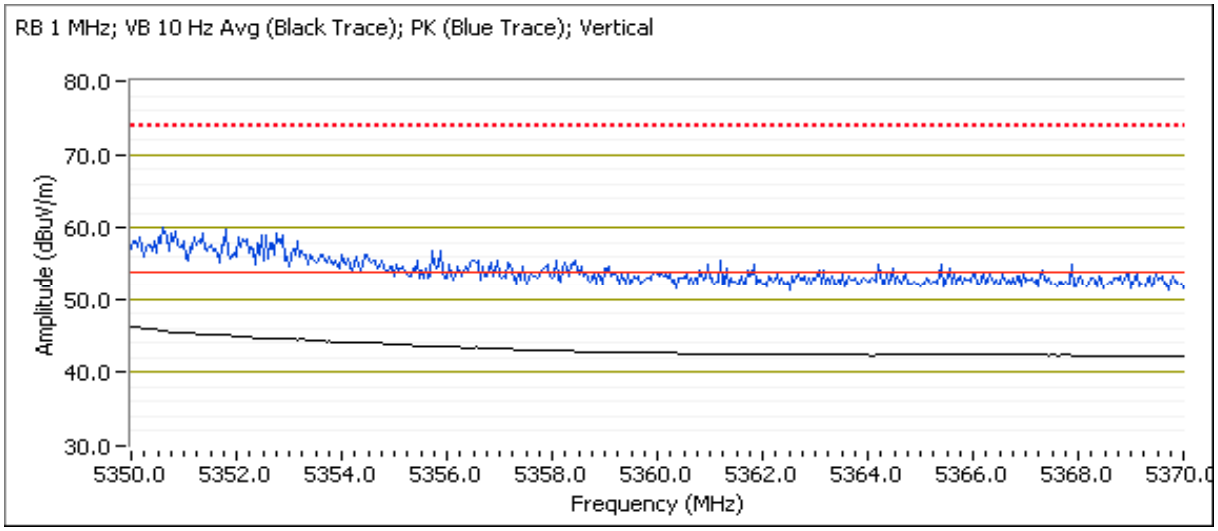
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3b, EUT on Channel #64 5320MHz - 802.11a, Chain B

Power Setting: 27.5 Target: 16.5

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.040	46.2	V	54.0	-7.8	AVG	192	1.3	B 1 MHz; VB: 10 Hz
5352.810	59.1	V	74.0	-14.9	PK	192	1.3	B 1 MHz; VB: 3 MHz
5350.050	46.1	H	54.0	-7.9	AVG	108	1.0	B 1 MHz; VB: 10 Hz
5352.060	59.4	H	74.0	-14.6	PK	108	1.0	B 1 MHz; VB: 3 MHz



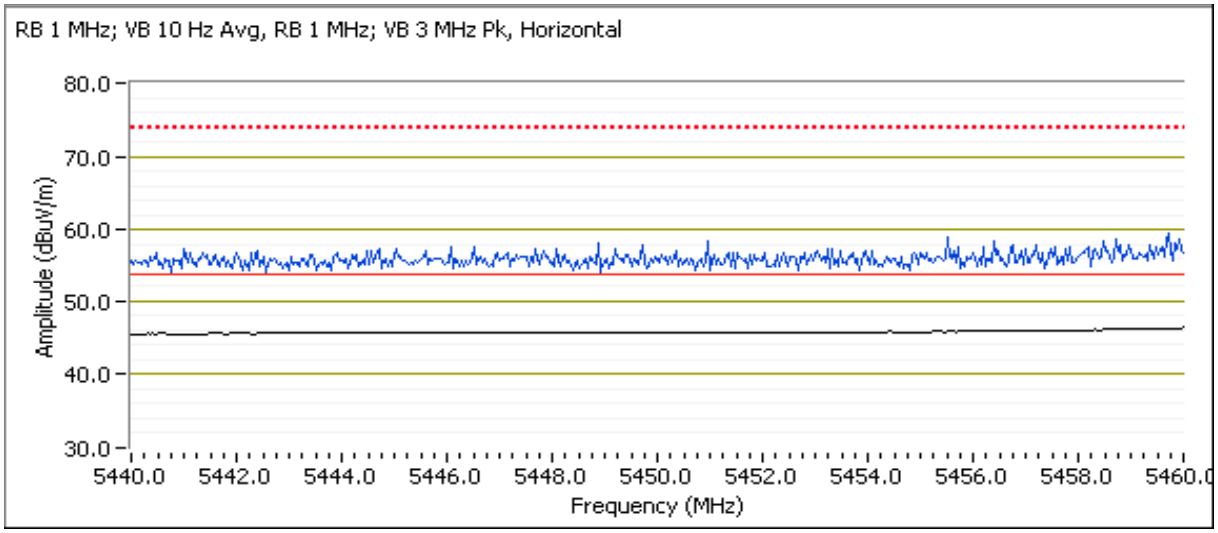
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3c, EUT on Channel #100 5500MHz - 802.11a, Chain B

Power Setting: 26.5

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5459.800	46.1	V	54.0	-7.9	AVG	210	1.4	POS; RB 1 MHz; VB: 10 Hz
5447.090	57.4	V	74.0	-16.6	PK	210	1.4	POS; RB 1 MHz; VB: 3 MHz
5460.000	46.3	H	54.0	-7.7	AVG	190	1.0	POS; RB 1 MHz; VB: 10 Hz
5442.320	57.6	H	74.0	-16.4	PK	190	1.0	POS; RB 1 MHz; VB: 3 MHz



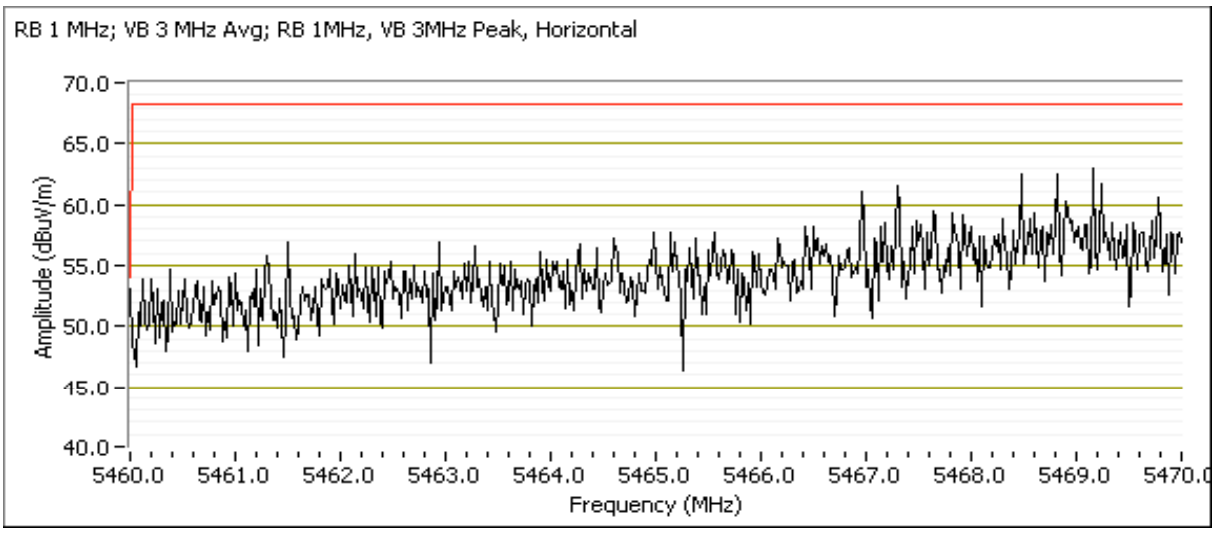
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3d, EUT on Channel #100 5500 MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Power Setting: 26.5

5470 MHz Non-Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5468.860	63.3	H	68.3	-5.0	PK	112	1.0	POS; RB 1 MHz; VB: 3 MHz
5468.680	59.1	V	68.3	-9.2	PK	242	1.0	POS; RB 1 MHz; VB: 3 MHz



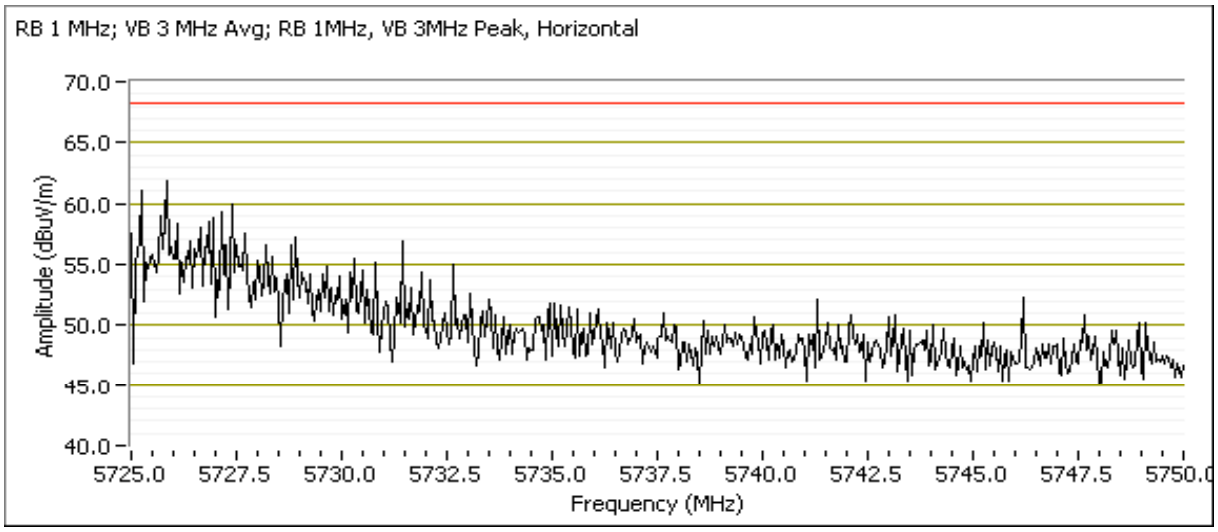
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3e, EUT on channel #140 5700 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Power Setting: 30.0

5725 MHz Non-Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5725.300	63.5	H	68.3	-4.8	PK	100	1.0	POS; RB 1 MHz; VB: 3 MHz
5747.240	61.3	V	68.3	-7.0	PK	191	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS 210 and FCC 15.407 (UNII) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located outside the chamber with cables routed beneath the floor.
For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Summary of Results

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
Run #1	n20 Chain A+B	#36 5180MHz	A: 13.0 B: 13.0	A: 12.9 B: 12.9	Restricted Band Edge at 5150 MHz	15.209	50.4 dBµV/m @ 5150.0 MHz (-3.6 dB)
Run #1		#64 5320MHz	A: 13.5 B: 13.5	A: 13.4 B: 13.4	Restricted Band Edge at 5350 MHz	15.209	45.2 dBµV/m @ 5350.1 MHz (-8.8 dB)
Run #1		#100 5500MHz	A: 13.5 B: 13.5	A: 13.4 B: 13.4	Restricted Band Edge at 5460 MHz	15.209	46.2 dBµV/m @ 5459.6 MHz (-7.8 dB)
					Band Edge at 5470 MHz	15 E	60.9 dBµV/m @ 5469.7 MHz (-7.4 dB)
Run #1		#140 5700MHz	A: 13.5 B: 13.5	A: 13.6 B: 13.5	Band Edge at 5725 MHz	15 E	62.8 dBµV/m @ 5725.3 MHz (-5.5 dB)
Run #2	n40 Chain A+B	#38 5190MHz	A: 9.5 B: 9.5	A: 9.6 B: 9.7	Restricted Band Edge at 5150 MHz	15.209	52.8 dBµV/m @ 5150.0 MHz (-1.2 dB)
Run #2		#62 5310MHz	A: 10.0 B: 10.0	A: 10.1 B: 10.1	Restricted Band Edge at 5350 MHz	15.209	45.9 dBµV/m @ 5350.3 MHz (-8.1 dB)
Run #2		#102 5510MHz	A: 12.5 B: 12.5	A: 12.5 B: 12.4	Restricted Band Edge at 5460 MHz	15.209	49.7 dBµV/m @ 5460.0 MHz (-4.3 dB)
					Band Edge at 5470 MHz	15 E	66.4 dBµV/m @ 5468.0 MHz (-1.9 dB)
Run #2		#134 5670MHz	A: 13.5 B: 13.5	A: 13.4 B: 13.5	Band Edge at 5725 MHz	15 E	61.3 dBµV/m @ 5748.3 MHz (-7.0 dB)

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Note - the target and measured power are average powers (measured with average power sensor) and are used for reference purposes only. Power is set using " GAIN CONTROL" mode in the DRTU tool.

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Ambient Conditions:

Temperature:	19 °C
Rel. Humidity:	42 %

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1, Band Edge Field Strength - HT20, Chain A+B

Date of Test: 4/24/2012

Test Engineer: David Bare

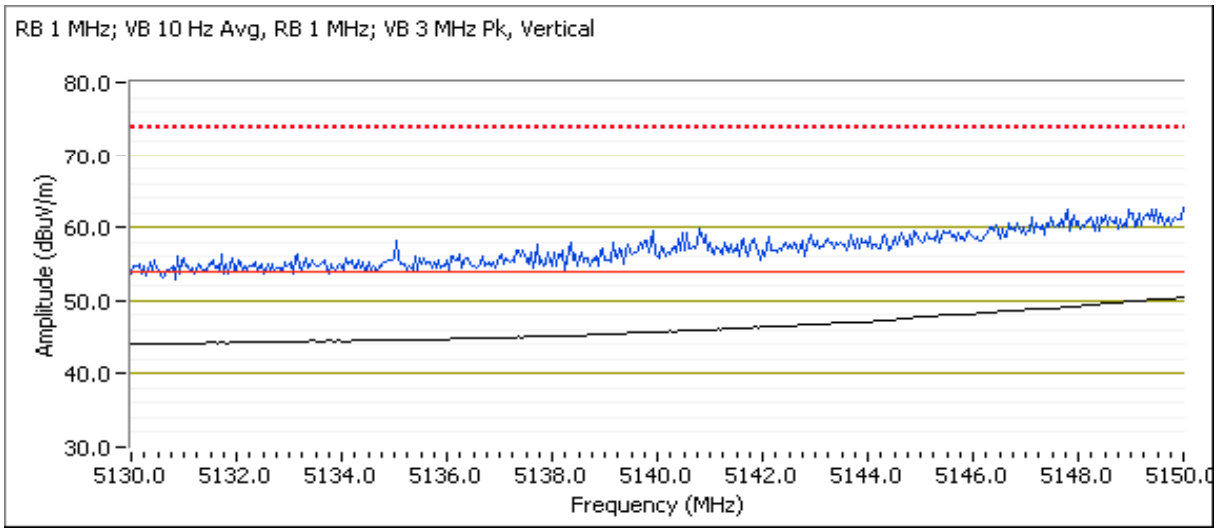
Test Location: Fremont Chamber #5

Run #1a, EUT on Channel #36 5180MHz - HT20, Chain A+B

Power Setting: A: 30.5, B:28.0

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5150.000	50.4	V	54.0	-3.6	AVG	238	1.1	POS; RB 1 MHz; VB: 10 Hz
5149.800	62.2	V	74.0	-11.8	PK	238	1.1	POS; RB 1 MHz; VB: 3 MHz
5150.000	48.9	H	54.0	-5.1	AVG	338	1.2	POS; RB 1 MHz; VB: 10 Hz
5148.280	60.7	H	74.0	-13.3	PK	338	1.2	POS; RB 1 MHz; VB: 3 MHz



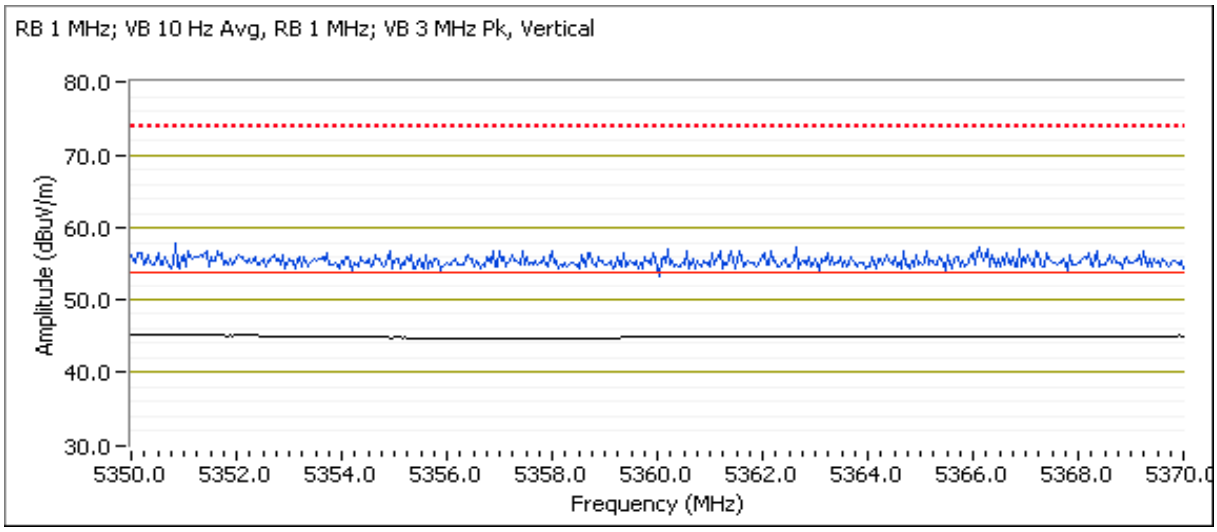
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1b, EUT on Channel #64 5320MHz - HT20, Chain A+B

Power Setting: A: 30.0, B:28.5

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.080	45.2	V	54.0	-8.8	AVG	307	1.0	POS; RB 1 MHz; VB: 10 Hz
5356.410	55.8	V	74.0	-18.2	PK	307	1.0	POS; RB 1 MHz; VB: 3 MHz
5369.840	45.0	H	54.0	-9.0	AVG	96	1.2	POS; RB 1 MHz; VB: 10 Hz
5354.650	56.9	H	74.0	-17.1	PK	96	1.2	POS; RB 1 MHz; VB: 3 MHz



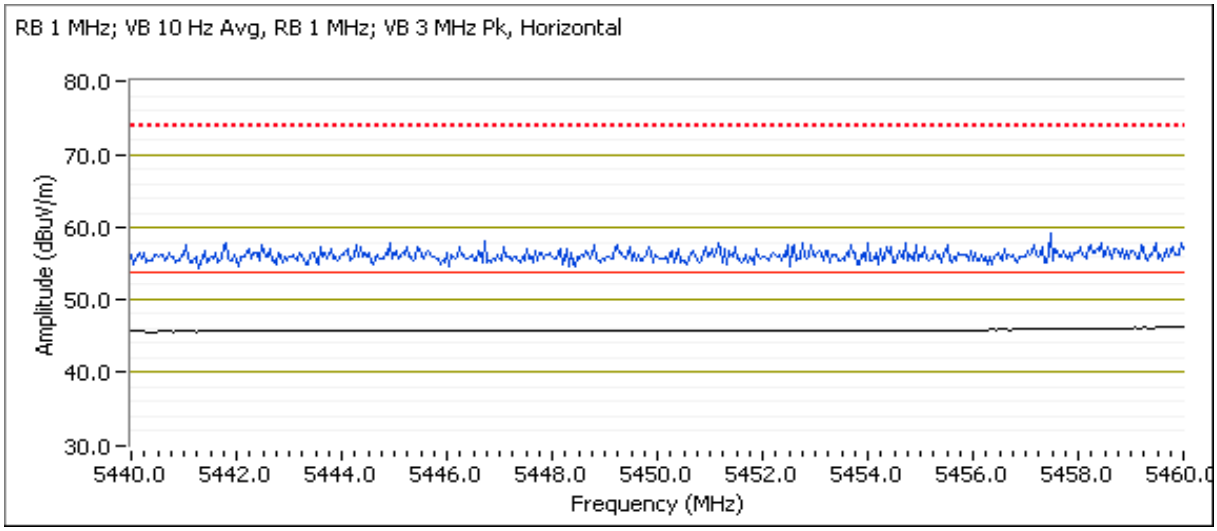
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1c, EUT on Channel #100 5500MHz - HT20, Chain A+B

Power Setting: A:30.0, B:30.0

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5459.960	46.0	V	54.0	-8.0	AVG	195	1.0	POS; RB 1 MHz; VB: 10 Hz
5458.480	57.9	V	74.0	-16.1	PK	195	1.0	POS; RB 1 MHz; VB: 3 MHz
5459.640	46.2	H	54.0	-7.8	AVG	93	1.0	POS; RB 1 MHz; VB: 10 Hz
5453.590	58.0	H	74.0	-16.0	PK	93	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

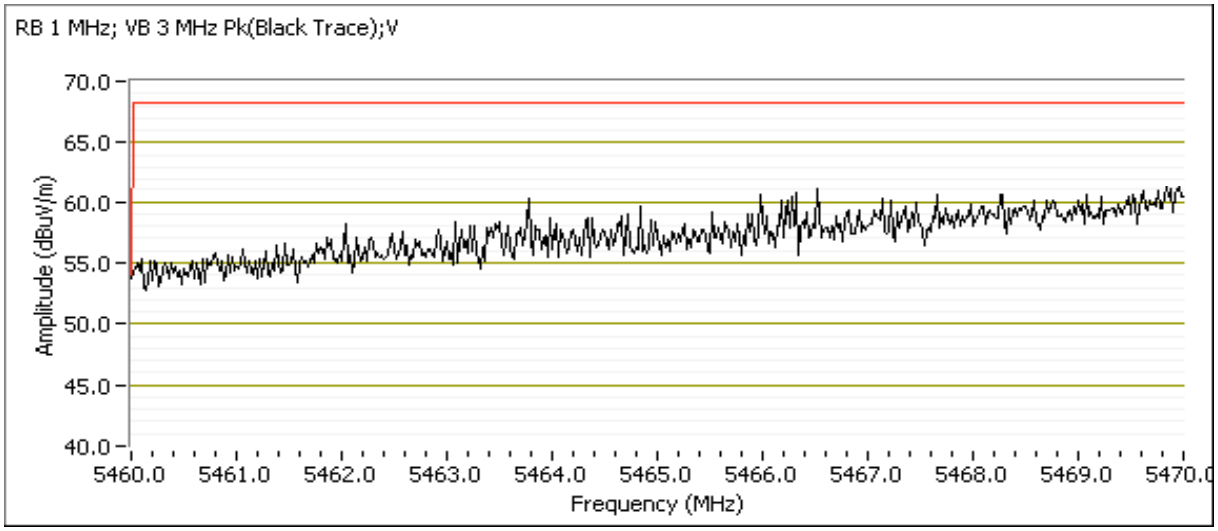
Run #1d, EUT on Channel #100 5500MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: A:31.5 , B:31

5470MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5469.660	60.9	V	68.3	-7.4	PK	224	1.2	B 1 MHz; VB: 3 MHz
5469.660	59.3	H	68.3	-9.0	PK	146	0.9	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

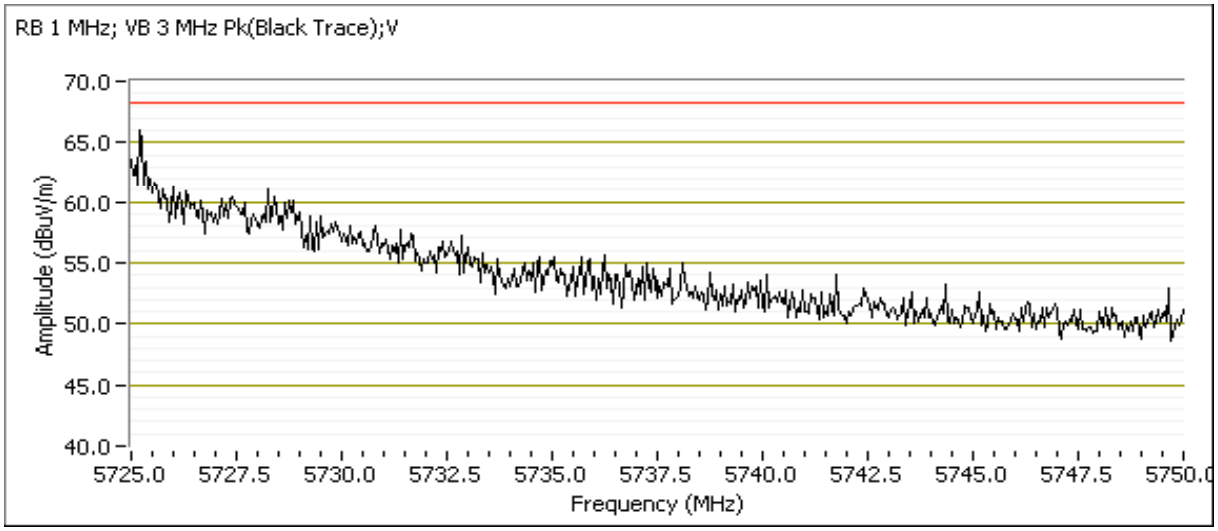
Run #1e, EUT on channel #140 5700 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: A:34 , B:33

5725MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5725.250	62.8	V	68.3	-5.5	PK	111	1.0	B 1 MHz; VB: 3 MHz
5725.550	58.3	H	68.3	-10.0	PK	238	1.0	B 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2, Band Edge Field Strength - HT40, Chain A+B

Date of Test: 4/24/2012

Test Engineer: David Bare

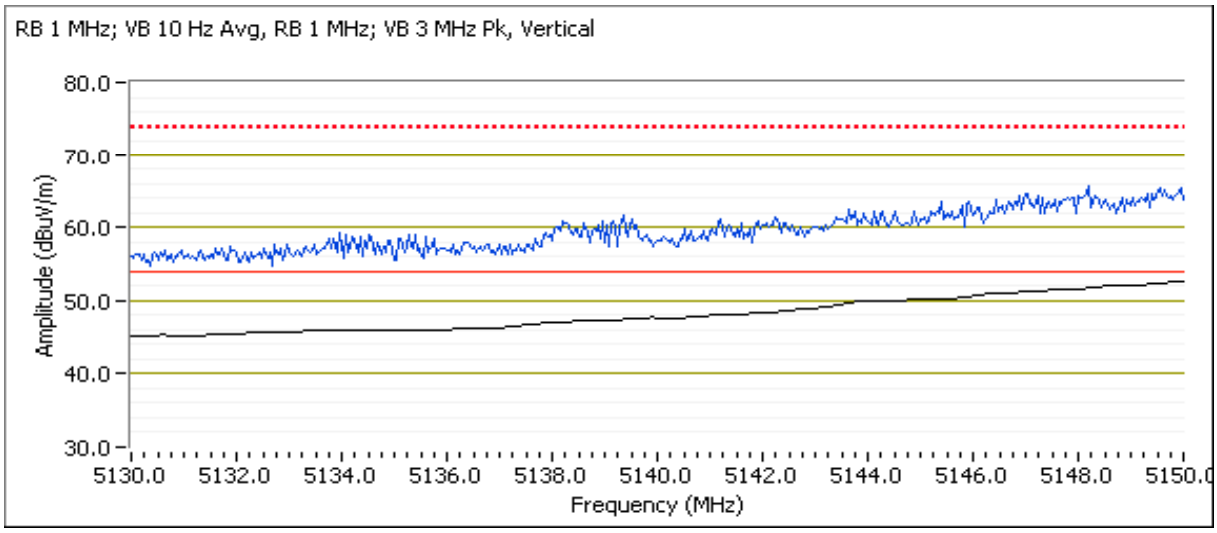
Test Location: Fremont Chamber #5

Run #2a, EUT on Channel #38 5190MHz - HT40, Chain A+B

Power Setting: A:27.0, B:25.0

5150 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5150.000	52.8	V	54.0	-1.2	AVG	233	1.0	POS; RB 1 MHz; VB: 10 Hz
5147.880	63.0	V	74.0	-11.0	PK	233	1.0	POS; RB 1 MHz; VB: 3 MHz
5149.960	50.6	H	54.0	-3.4	AVG	186	1.2	POS; RB 1 MHz; VB: 10 Hz
5147.680	63.0	H	74.0	-11.0	PK	186	1.2	POS; RB 1 MHz; VB: 3 MHz



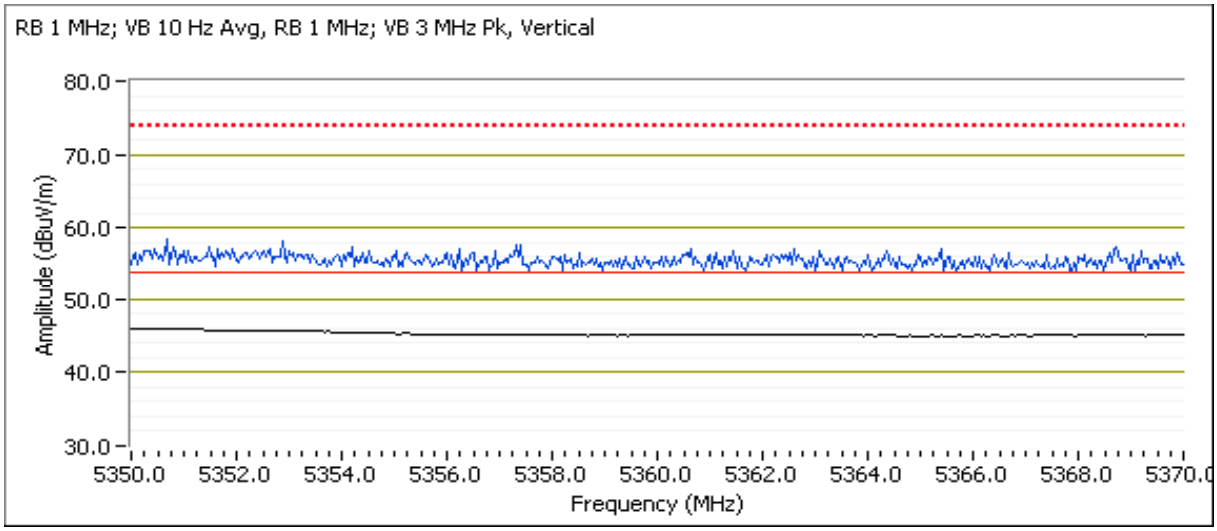
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2b, EUT on Channel #62 5310MHz - HT40, Chain A+B

Power Setting: A:26.5, B:25.5

5350 MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5350.280	45.9	V	54.0	-8.1	AVG	306	1.0	POS; RB 1 MHz; VB: 10 Hz
5352.560	56.8	V	74.0	-17.2	PK	306	1.0	POS; RB 1 MHz; VB: 3 MHz
5350.120	45.4	H	54.0	-8.6	AVG	94	1.2	POS; RB 1 MHz; VB: 10 Hz
5350.720	56.6	H	74.0	-17.4	PK	94	1.2	POS; RB 1 MHz; VB: 3 MHz



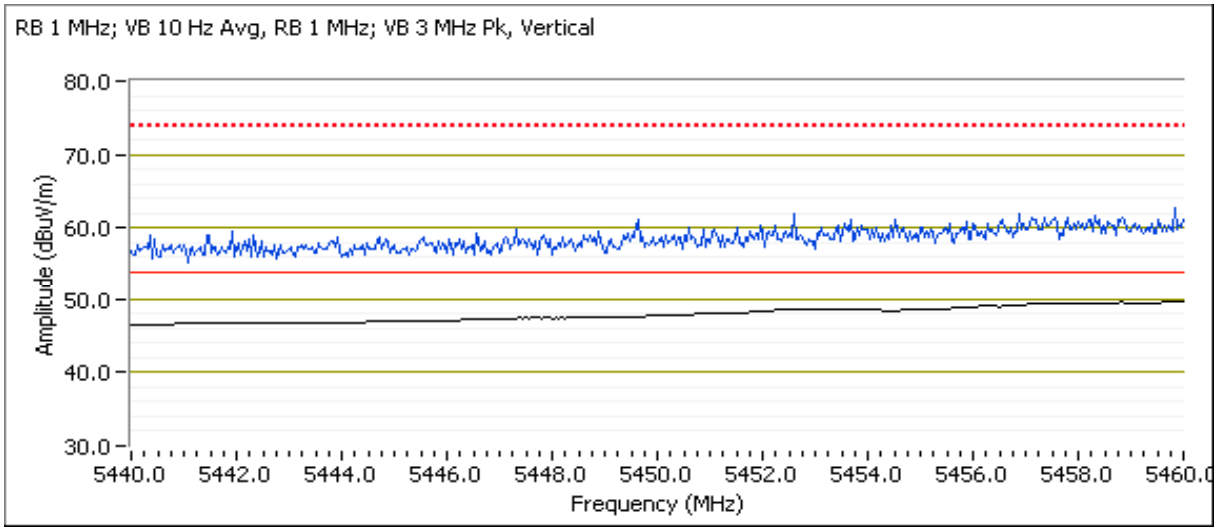
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2c, EUT on Channel #102 5510MHz - HT40, Chain A+B

Power Setting: A:30.0, B:29.5

5460 MHz Restricted Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5460.000	49.7	V	54.0	-4.3	AVG	133	1.0	POS; RB 1 MHz; VB: 10 Hz
5456.870	61.0	V	74.0	-13.0	PK	133	1.0	POS; RB 1 MHz; VB: 3 MHz
5458.800	48.9	H	54.0	-5.1	AVG	95	1.0	POS; RB 1 MHz; VB: 10 Hz
5458.400	61.2	H	74.0	-12.8	PK	95	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

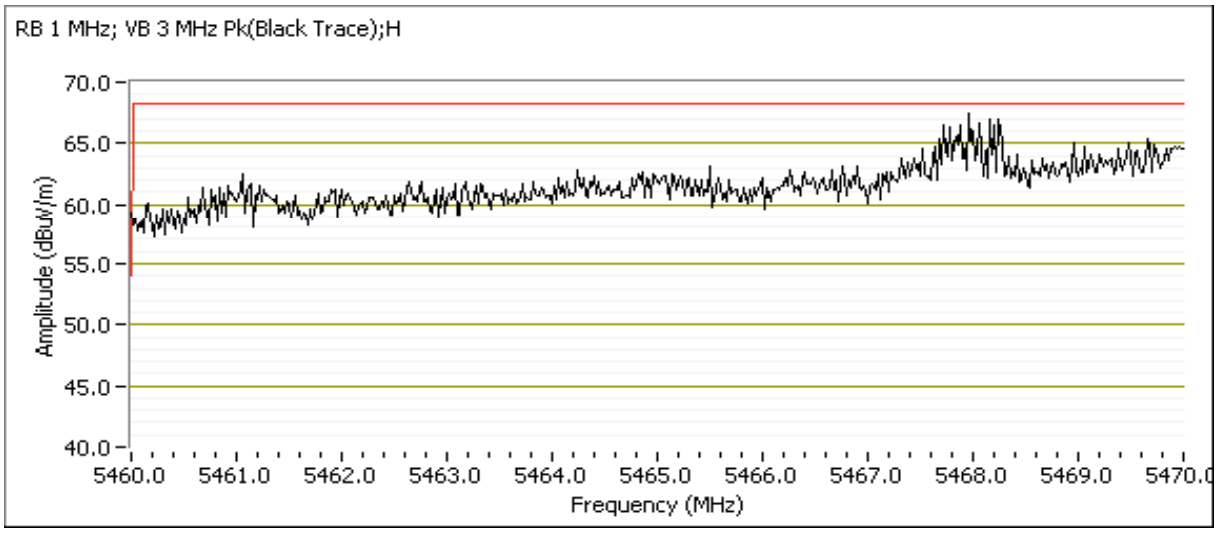
Run #2d, EUT on Channel #102 5510MHz - 5460-5470 MHz Band Edge Signal Radiated Field Strength

Date of Test: 5/20/2012
Test Engineer: Jack Liu
Test Location: FT4

Power Setting: A:30 , B:29.5

5470MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5467.960	66.4	H	68.3	-1.9	PK	104	1.0	B 1 MHz; VB: 3 MHz
5468.500	65.8	V	68.3	-2.5	PK	103	1.0	B 1 MHz; VB: 3 MHz



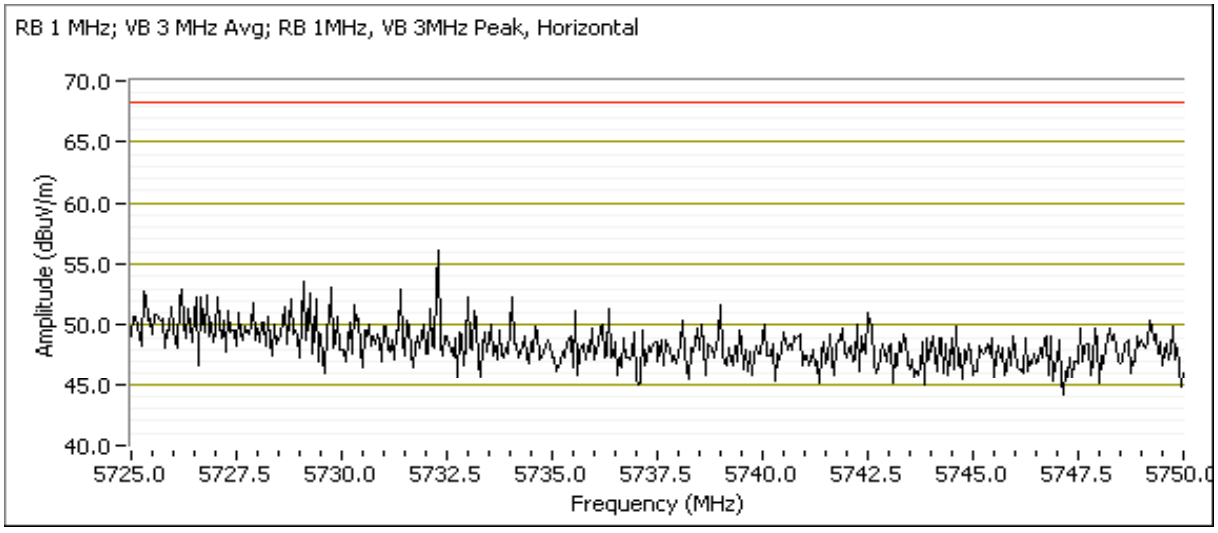
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2e, EUT on channel #134 5670 MHz - 5725 MHz Band Edge Signal Radiated Field Strength

Power Setting: A:35.5 , B:34.5

5725MHz Band Edge Signal Radiated Field Strength

Frequency	Level	Pol	FCC 15.209		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5748.300	61.3	H	68.3	-7.0	PK	69	1.0	POS; RB 1 MHz; VB: 3 MHz
5727.000	58.0	V	68.3	-10.3	PK	106	1.0	POS; RB 1 MHz; VB: 3 MHz



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS 210 and FCC 15.407 (UNII) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT ws installed into a test fixture such that the EUT was exposed (i.e. outside of a host PC).
For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Rel. Humidity: 30-35 %
Temperature: 17-20 °C

Summary of Results

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Mode	Channel	Target power	Measured Power	Test Performed	Limit	Result / Margin
Scans on center channel in all three OFDM modes in each operatintg band were used to determine the worst case. Note that for n20 and n40 modes the output power was set to the single chain power per chain. The maximum power per chain in MIMO mode is always lower than the single chain power but the scans were run at the higher single-chain power level but with both chains active to cover both MIMO and MISO modes.							
Run #1 (5150-5250MHz Band)	802.11a Chain A	#40 5200MHz	16.0	16.0	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	>10dB margin
	802.11a Chain B	#40 5200MHz	16.0	16.1			40.1 dBµV/m @ 2485.0 MHz (-13.9 dB)
	n20 Chain A+B	#40 5200MHz	A: 16.0 B: 16.0	A: 16.0 B: 15.9			37.6 dBµV/m @ 2485.1 MHz (-16.4 dB)
	n40 Chain A+B	#38 5190MHz	A: 11.5 B: 11.5	A: 11.5 B: 11.6			37.2 dBµV/m @ 2494.2 MHz (-16.8 dB)
	Worst case mode - top and bottom channels. As the worst case mode was 802.11n20MHz, 5180MHz in n20 mode was evaluated for the low channel and 5240MHz in n20 mode was evaluated as high channel.						
	n20 Chain A+B	#36 5180MHz	A: 14.5 B: 15	A: 14.6 B: 15.1	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	33.4 dBµV/m @ 1660.6 MHz (-20.6 dB)
		#48 5240MHz	A: 16.5 B: 16.5	A: 15.5 B: 15.5			33.0 dBµV/m @ 1331.9 MHz (-21.0 dB)

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #	Mode	Channel	Target power	Measured Power	Test Performed	Limit	Result / Margin
Run #2 (5250-5350MHz Band)	802.11a Chain A	#60 5300MHz	16.0	15.9	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	30.4 dBµV/m @ 2497.9 MHz (-23.6 dB)
	802.11a Chain B	#60 5300MHz	16.0	16.0			43.8 dBµV/m @ 1330.0 MHz (-10.2 dB)
	n20 Chain A+B	#60 5300MHz	A: 16.0 B: 16.0	A: 16.0 B: 15.9			33.6 dBµV/m @ 1328.3 MHz (-20.4 dB)
	n40 Chain A+B	#62 5310MHz	A: 11.5 B: 12.0	A: 11.5 B: 12.1			34.4 dBµV/m @ 1000.0 MHz (-19.6 dB)
	Worst case mode (802.11a) - top and bottom channels.						
	802.11a Chain B	#52 5260MHz	16.0	16.1	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	32.6 dBµV/m @ 1593.6 MHz (-21.4 dB)
		#64 5320MHz	16.5	16.6			35.9 dBµV/m @ 1596.8 MHz (-18.1 dB)
Run #3 (5470-5725MHz Band)	802.11a Chain A	#116 5580MHz	16.0	16.1	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	39.5 dBµV/m @ 3720.0 MHz (-14.5 dB)
	802.11a Chain B	#116 5580MHz	16.0	16.1			32.1 dBµV/m @ 1329.6 MHz (-21.9 dB)
	n20 Chain A+B	#116 5580MHz	A: 16.0 B: 16.0	A: 16.1 B: 16.3			36.4 dBµV/m @ 1329.6 MHz (-17.6 dB)
	n40 Chain A+B	#110 5550MHz	A: 16.0 B: 16.0	A: 16.0 B: 16.1			42.5dBµV/m @ 11093.3MHz (-11.5dB)
	Worst case mode (n40) - top and bottom channels.						
	n40 Chain A+B	#102 5510MHz	A: 14.5 B: 14.5	A: 14.5 B: 14.6	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	41.2 dBµV/m @ 1330.0 MHz (-12.8 dB)
		#134 5670MHz	A: 16.0 B: 16.0	A: 15.0 B: 15.5			39.6dBµV/m @ 11340.0MHz (-14.4dB)

Note - the target and measured power are average powers (measured with average power sensor) and are used for reference purposes only. Power is set using " GAIN CONTROL" mode in the DRTU tool.

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1, Radiated Spurious Emissions, 1-40GHz, Center Channl 5150-5250MHz - 802.11a, n20, n40, Chain A, B

Date of Test: 4/25/2012 Test Location: FT Chamber #3

Test Engineer: M. Birgani Config Change: None

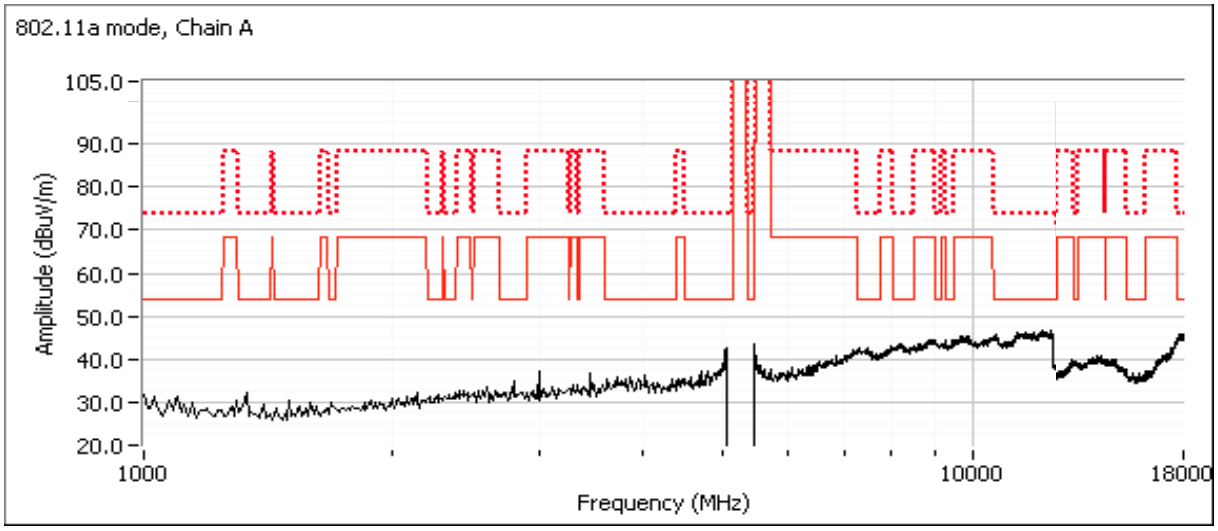
For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit is -27dBm eirp (68.3dBuV/m @3m) Peak.

Run #1a: Channel #40 5200MHz - 802.11a,Chain A

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.0	16.0	30.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
All signals were more than 10dB below limit.								



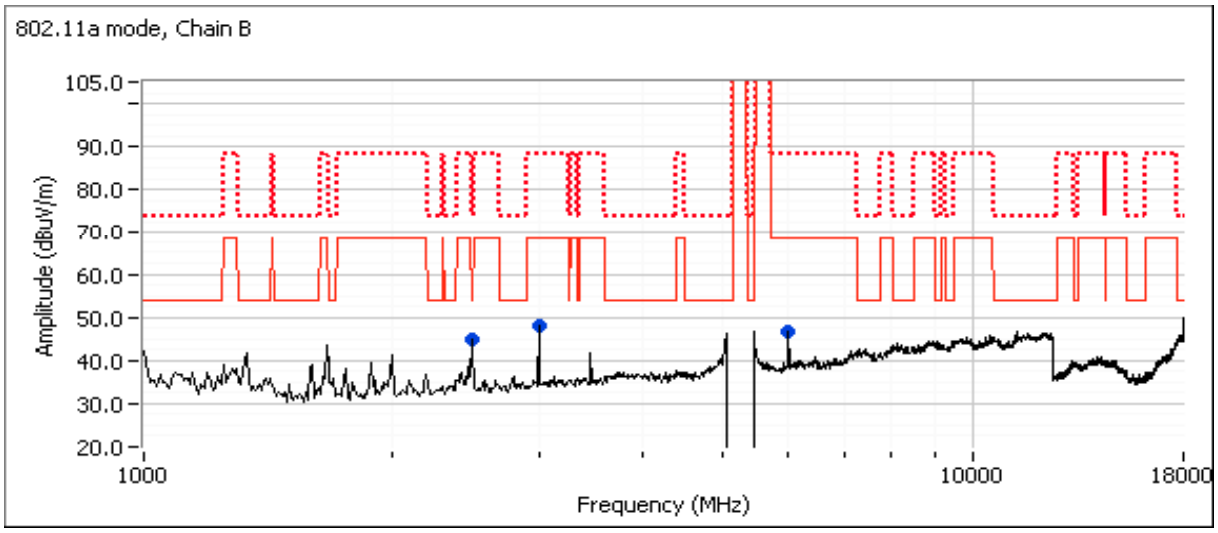
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1b: Channel #40 5200MHz - 802.11a,Chain B

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain B	16.0	16.1	26.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2485.000	40.1	H	54.0	-13.9	AVG	230	1.0	
2998.330	48.0	H	68.3	-20.3	Peak	187	1.0	
6005.000	46.9	V	68.3	-21.4	Peak	159	1.0	
2485.000	48.9	H	74.0	-25.1	PK	230	1.0	



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

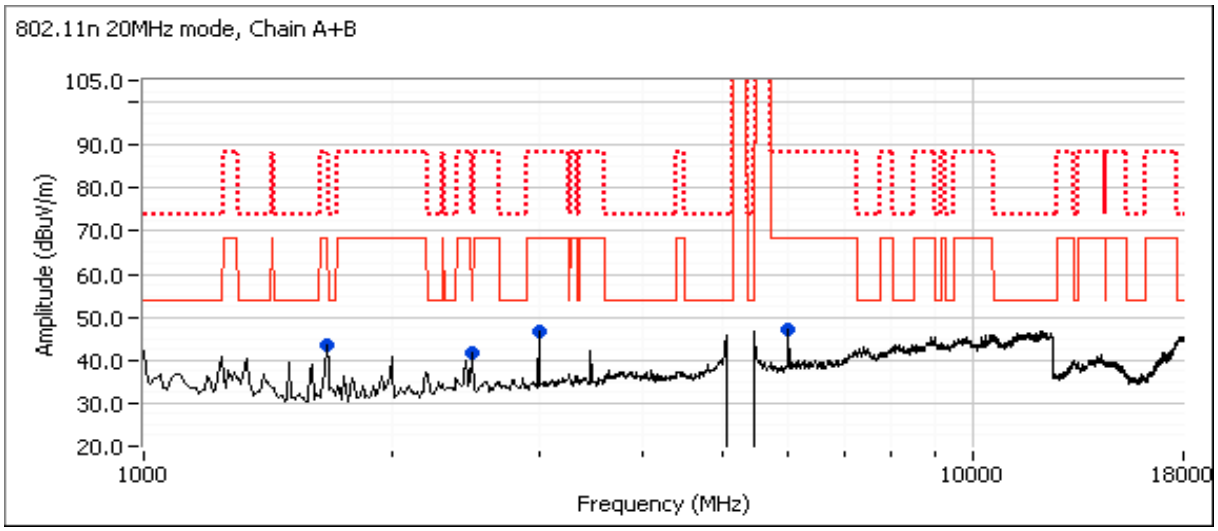
Run #1c: Channel #40 5200MHz - 802.11n20,Chain A + B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	16.0	16.0		19.0	16.0	15.9		19.0	38.5, 35.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2485.100	37.6	H	54.0	-16.4	AVG	169	1.0	
6005.000	47.1	V	68.3	-21.2	Peak	158	1.0	
2998.330	46.8	H	68.3	-21.5	Peak	191	1.0	
1660.000	43.5	V	68.3	-24.8	Peak	199	1.0	
2485.240	47.6	H	74.0	-26.4	PK	169	1.0	

Note 1:	Scans made between 18 - 40GHz with the measurement antenna moved around the card and its antennas 20-50cm from the device indicated there were no signifcant emissions in this frequency range



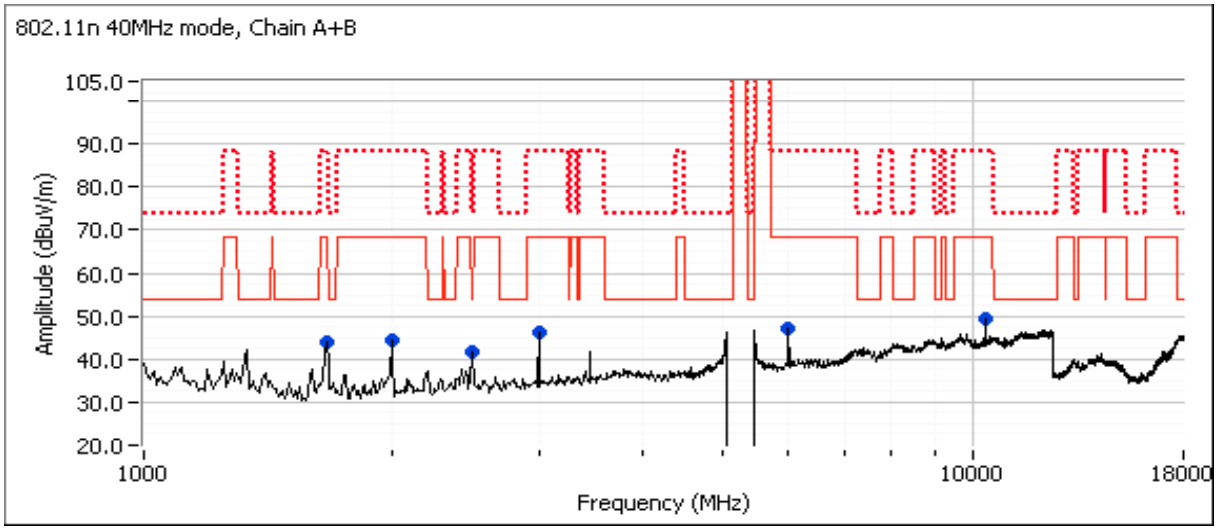
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1d: Channel #38 5190MHz - 802.11n40, Chain A+B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	11.5	11.5		14.5	11.5	11.5		14.5	32.0, 30.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2494.170	37.2	V	54.0	-16.8	Peak	147	1.0	
10390.000	49.6	V	68.3	-18.7	Peak	66	1.0	
6005.000	47.1	V	68.3	-21.2	Peak	159	1.0	
2998.330	46.1	H	68.3	-22.2	Peak	193	1.0	
1990.000	44.4	V	68.3	-23.9	Peak	221	1.3	
1660.000	43.8	V	68.3	-24.5	Peak	209	1.0	
2494.190	46.2	V	74.0	-27.8	Peak	147	1.0	



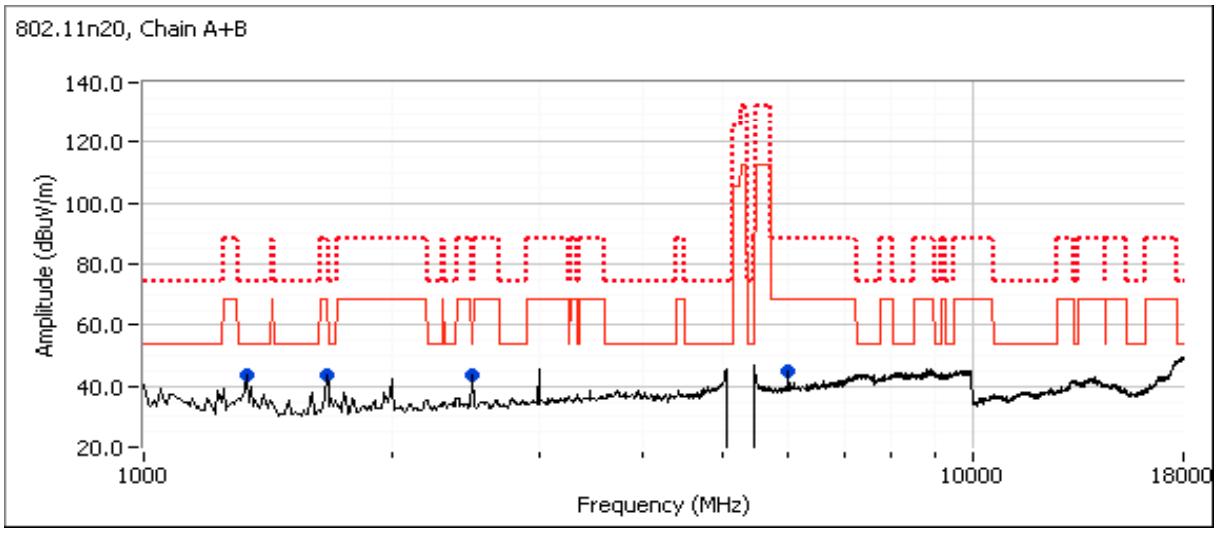
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1e: Channel #36 5180MHz - 802.11n20,Chain A + B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	14.5	15.0		17.8	14.6	15.1		17.9	33,32.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1660.640	33.4	V	54.0	-20.6	AVG	292	1.0	RB 1 MHz;VB 10 Hz;Peak
1328.460	30.4	H	54.0	-23.6	AVG	317	1.0	RB 1 MHz;VB 10 Hz;Peak
1660.720	49.5	V	74.0	-24.5	PK	292	1.0	RB 1 MHz;VB 3 MHz;Peak
2490.530	28.5	H	54.0	-25.5	AVG	149	1.6	RB 1 MHz;VB 10 Hz;Peak
1326.980	48.2	H	74.0	-25.8	PK	317	1.0	RB 1 MHz;VB 3 MHz;Peak
2493.240	42.2	H	74.0	-31.8	PK	149	1.6	RB 1 MHz;VB 3 MHz;Peak



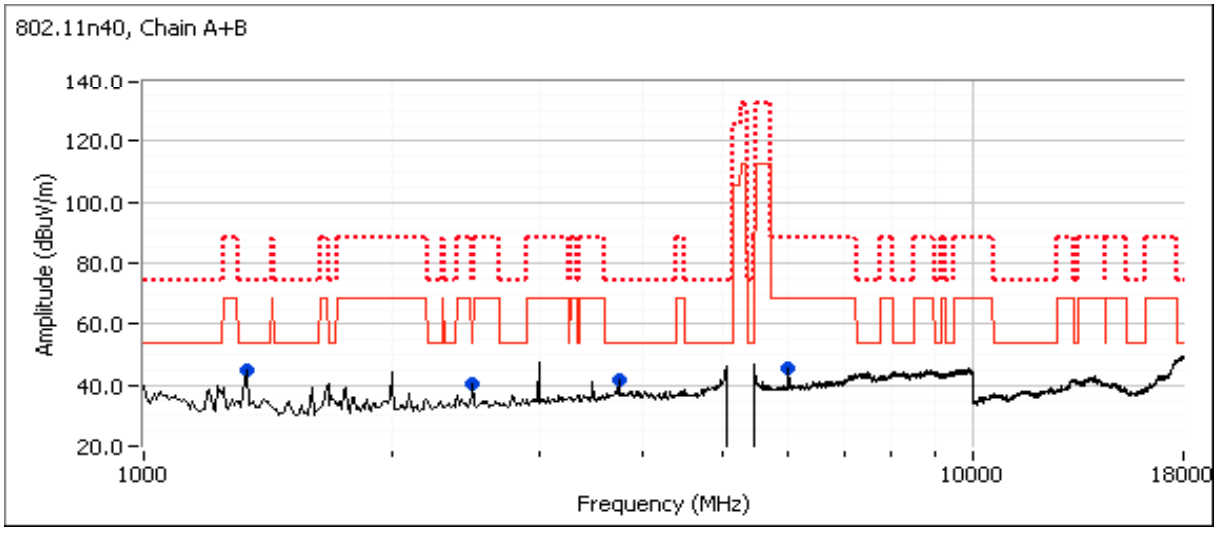
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1f: Channel #48 5240MHz - 802.11n20,Chain A + B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	16.5	16.5		19.5	16.6	16.5		19.6	37.5,36

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1331.890	33.0	V	54.0	-21.0	AVG	147	1.6	RB 1 MHz;VB 10 Hz;Peak
3749.670	31.4	H	54.0	-22.6	AVG	119	1.0	RB 1 MHz;VB 10 Hz;Peak
1333.190	49.9	V	74.0	-24.1	PK	147	1.6	RB 1 MHz;VB 3 MHz;Peak
2488.180	28.4	H	54.0	-25.6	AVG	188	1.6	RB 1 MHz;VB 10 Hz;Peak
2488.240	45.4	H	74.0	-28.6	PK	188	1.6	RB 1 MHz;VB 3 MHz;Peak
3749.630	42.2	H	74.0	-31.8	PK	119	1.0	RB 1 MHz;VB 3 MHz;Peak



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2, Radiated Spurious Emissions, 1-40GHz, Center Channel 5250-5350MHz - 802.11a, n20, n40, Chain A, B

Date of Test: 4/26/2012 Test Location: FT#7

Test Engineer: Mark Hill Config Change: none

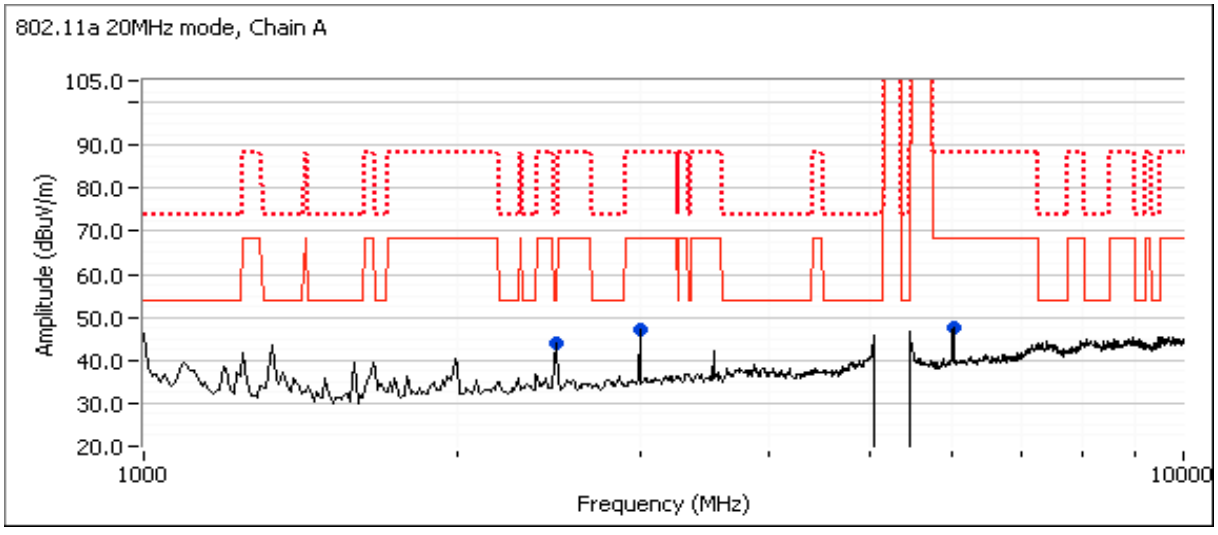
For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit is -27dBm eirp (68.3dBuV/m @3m) Peak.

Run #2a: Channel #60 5300MHz - 802.11a, Chain A

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.0	15.9	28.0

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2497.890	30.4	H	54.0	-23.6	AVG	243	1.0	RB 1 MHz;VB 10 Hz;Peak
2500.410	52.4	H	68.3	-15.9	PK	243	1.0	RB 1 MHz;VB 3 MHz;Peak
3000.280	50.7	H	68.3	-17.6	PK	226	1.0	RB 1 MHz;VB 3 MHz;Peak
6000.810	51.1	V	68.3	-17.2	PK	258	1.0	RB 1 MHz;VB 3 MHz;Peak



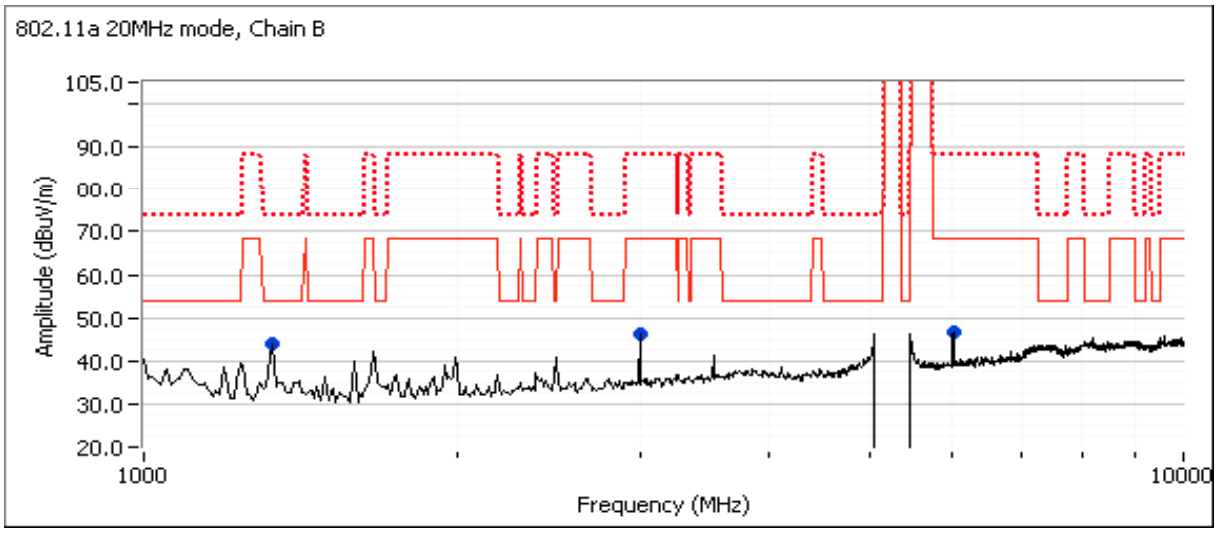
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2b: Channel #60 5300MHz - 802.11a, Chain B

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain B	16.0	16.0	26.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1330.000	*43.8*	*V*	*54.0*	*-10.2*	*Peak*	*198*	*1.0*	
1330.790	35.3	V	54.0	-18.7	AVG	152	1.0	
1329.920	52.5	V	74.0	-21.5	PK	152	1.0	
6005.000	*46.5*	*V*	*68.3*	*-21.8*	*Peak*	*265*	*1.0*	
2998.330	*46.3*	*H*	*68.3*	*-22.0*	*Peak*	*192*	*1.0*	



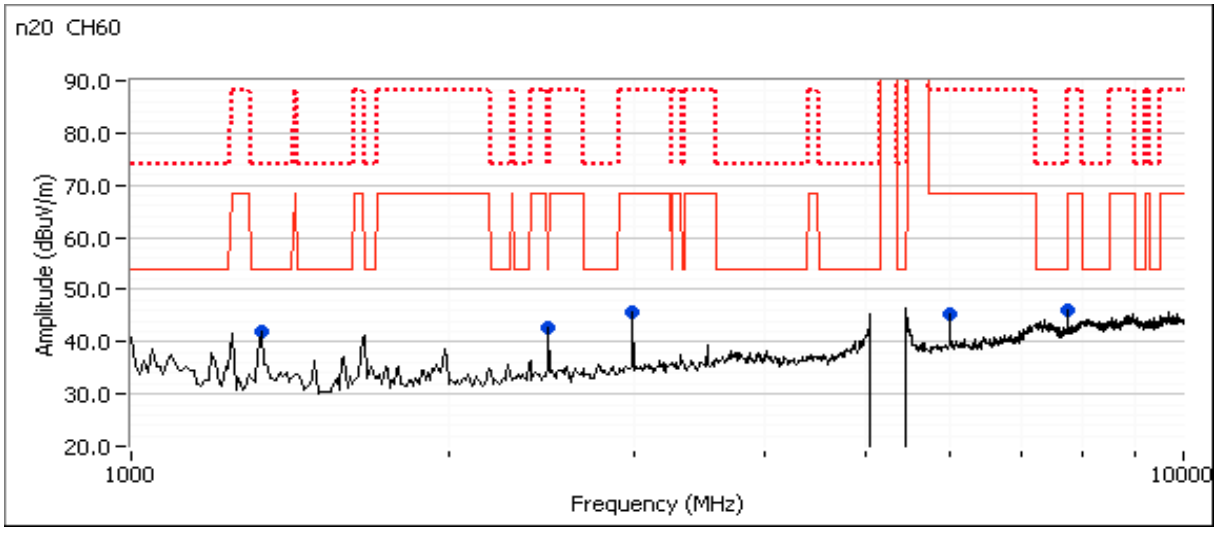
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2c: Channel #60 5300MHz - 802.11n20, Chain A + B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	16.0	16.0		19.0	16.0	15.9		19.0	A: 36 B: 34

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2494.170	*42.7*	*H*	*54.0*	*-11.3*	*Peak*	*123*	*1.3*	
2998.330	*45.8*	*H*	*68.3*	*-22.5*	*Peak*	*183*	*1.0*	
5995.830	*45.5*	*V*	*68.3*	*-22.8*	*Peak*	*258*	*1.0*	
1330.000	*41.8*	*V*	*54.0*	*-12.2*	*Peak*	*165*	*1.6*	
7765.830	*46.0*	*V*	*68.3*	*-22.3*	*Peak*	*347*	*1.0*	*Could not find signal.*
1328.330	33.6	V	54.0	-20.4	AVG	158	1.48	
1329.600	52.3	V	74.0	-21.7	PK	158	1.48	
2499.500	29.5	H	54.0	-24.5	AVG	185	1.29	
2486.330	40.9	H	74.0	-33.1	PK	185	1.29	



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

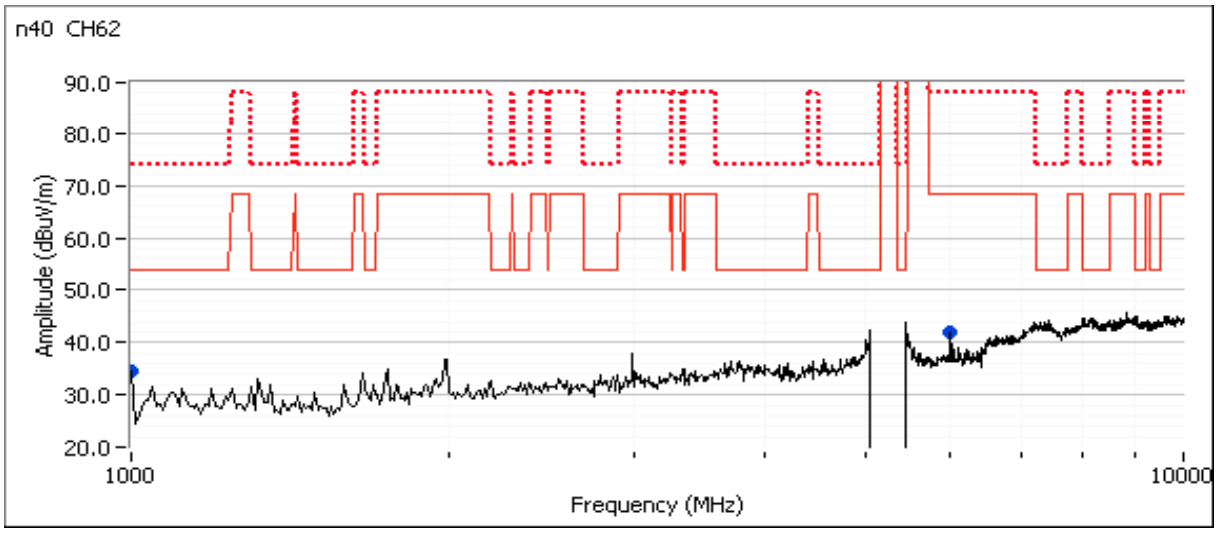
Run #2d: Channel #62 5310MHz - 802.11n40, Chain A+B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	11.5	12.0		14.8	11.5	12.1		14.8	A: 30.5 B: 29

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1000.000	*34.4*	*V*	*54.0*	*-19.6*	*Peak*	*28*	*1.0*	
5995.830	*41.9*	*V*	*68.3*	*-26.4*	*Peak*	*58*	*1.0*	

Note 1:	Scans made between 18 - 40GHz with the measurement antenna moved around the card and its antennas 20-50cm from the device indicated there were no signifcant emissions in this frequency range



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2e: Channel #52 5260MHz - 802.11a, Chain B

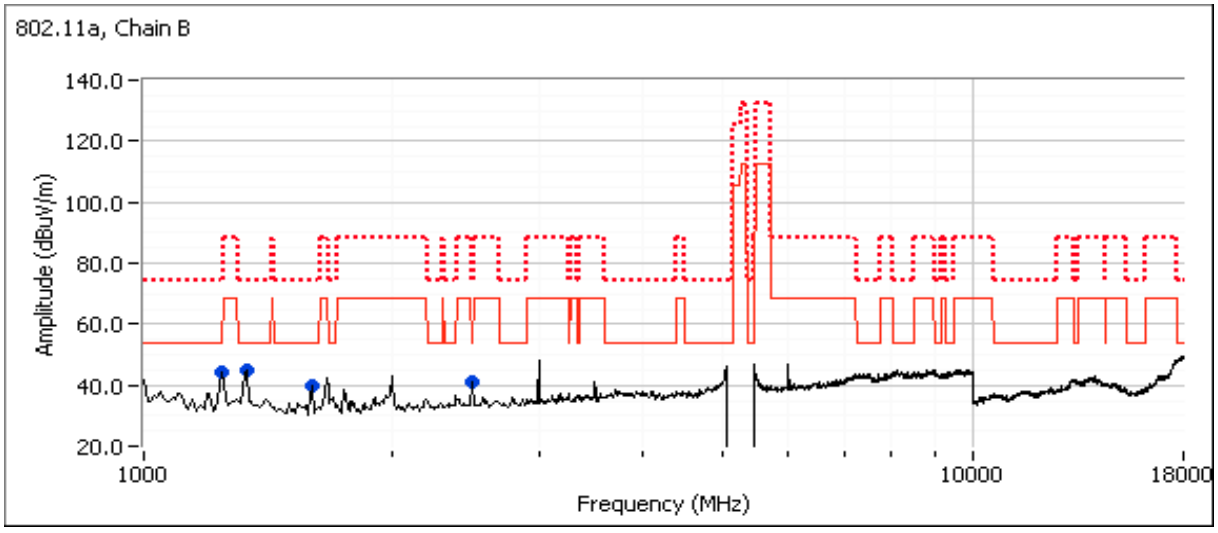
Date of Test: 4/26/2012 Test Location: FT#7

Test Engineer: Joseph Cadigal Config Change: none

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.0	16.1	26.0

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1593.620	32.6	V	54.0	-21.4	AVG	54	1.3	RB 1 MHz;VB 10 Hz;Peak
1330.290	31.4	V	54.0	-22.6	AVG	328	1.9	RB 1 MHz;VB 10 Hz;Peak
1328.790	49.8	V	74.0	-24.2	PK	328	1.9	RB 1 MHz;VB 3 MHz;Peak
2497.770	29.0	H	54.0	-25.0	AVG	169	1.0	RB 1 MHz;VB 10 Hz;Peak
1593.140	46.1	V	74.0	-27.9	PK	54	1.3	RB 1 MHz;VB 3 MHz;Peak
2497.800	45.8	H	74.0	-28.2	PK	169	1.0	RB 1 MHz;VB 3 MHz;Peak
1245.030	44.2	V	68.3	-24.1	PK	159	1.3	RB 1 MHz;VB 3 MHz;Peak



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2f: Channel #64 5320MHz - 802.11a, Chain B

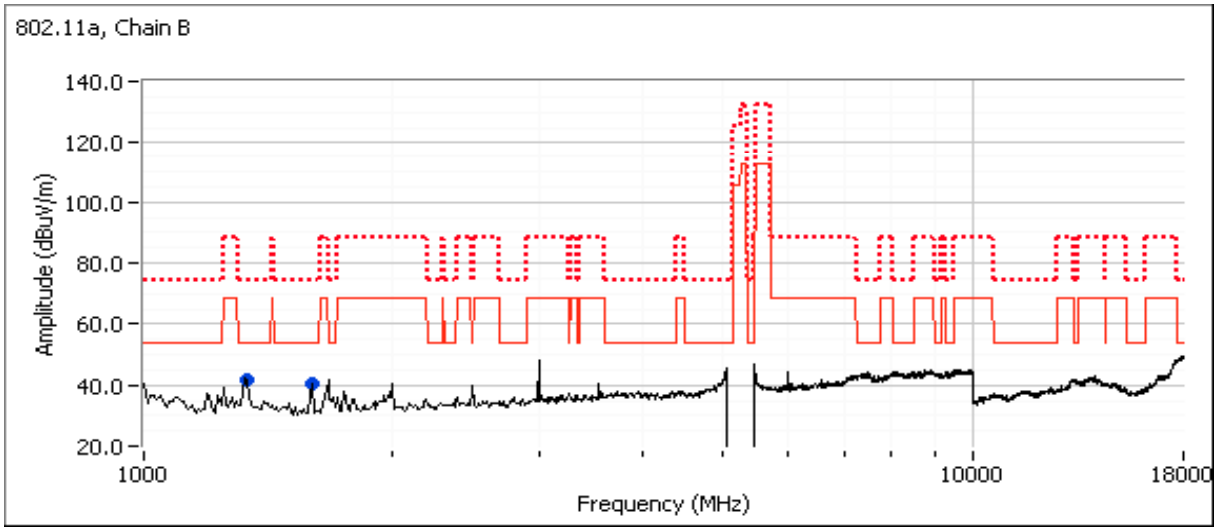
Date of Test: 4/26/2012 Test Location: FT#7

Test Engineer: Joseph Cadigal Config Change: none

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.6	27.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1596.760	35.9	V	54.0	-18.1	AVG	212	1.0	RB 1 MHz;VB 10 Hz;Peak
1330.460	33.2	V	54.0	-20.8	AVG	165	1.0	RB 1 MHz;VB 10 Hz;Peak
1331.430	52.4	V	74.0	-21.6	PK	165	1.0	RB 1 MHz;VB 3 MHz;Peak
1595.780	49.5	V	74.0	-24.5	PK	212	1.0	RB 1 MHz;VB 3 MHz;Peak



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3, Radiated Spurious Emissions, 1-40GHz, Center Channel 5470-5725MHz - 802.11a, n20, n40, Chain A, B

Date of Test: 4/26/2012 Test Location: FT#7

Test Engineer: Joseph Cadigal Config Change: none

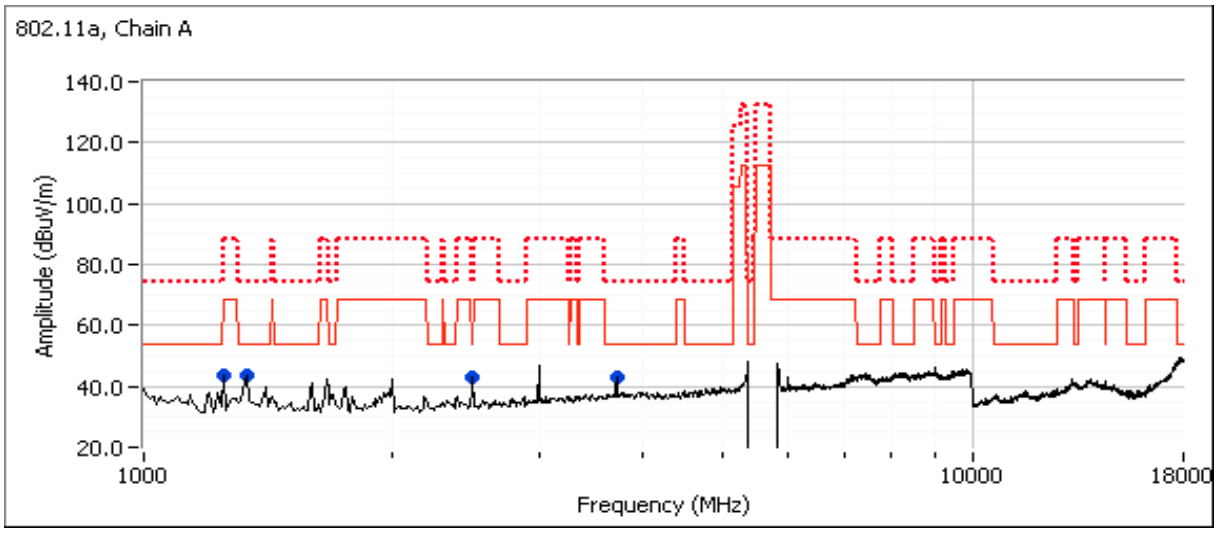
For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit is -27dBm eirp (68.3dBuV/m @3m). As the power measured is average power this is considered an average limit so the peak limit would be 88.3dBuV/m at 3m.

Run #3a: Channel #116 5580MHz - 802.11a, Chain A

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.0	16.1	28.0

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3720.010	39.5	V	54.0	-14.5	AVG	220	1.6	RB 1 MHz;VB 10 Hz;Peak
1332.460	33.3	V	54.0	-20.7	AVG	161	1.0	RB 1 MHz;VB 10 Hz;Peak
1333.620	51.1	V	74.0	-22.9	PK	161	1.0	RB 1 MHz;VB 3 MHz;Peak
2494.990	29.0	H	54.0	-25.0	AVG	170	1.3	RB 1 MHz;VB 10 Hz;Peak
3719.930	46.8	V	74.0	-27.2	PK	220	1.6	RB 1 MHz;VB 3 MHz;Peak
2494.330	44.6	H	74.0	-29.4	PK	170	1.3	RB 1 MHz;VB 3 MHz;Peak



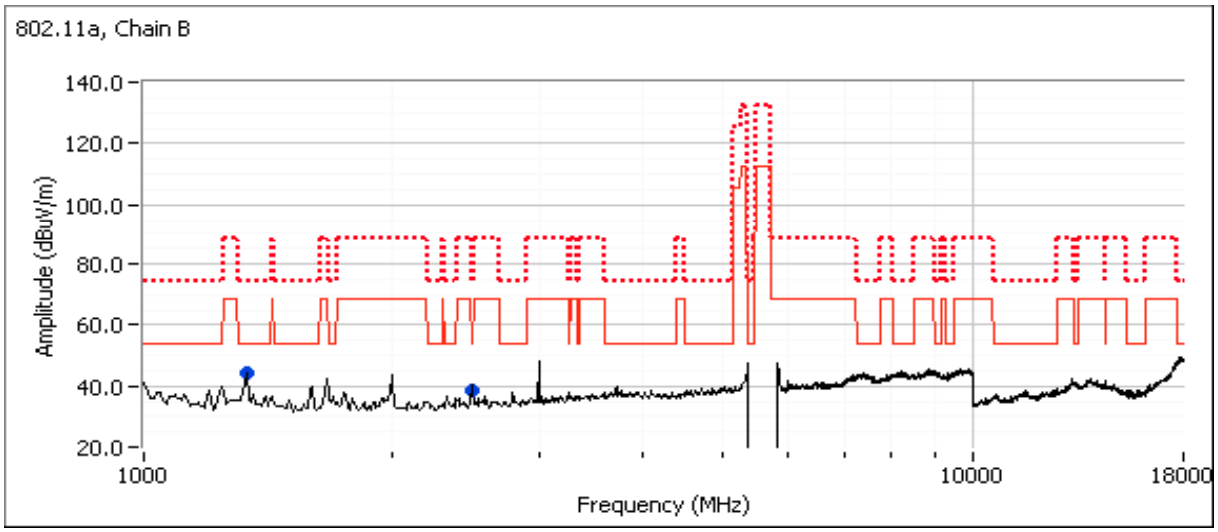
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3b: Channel #116 5580MHz - 802.11a, Chain B

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain B	16.0	16.1	28.0

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1329.630	32.1	V	54.0	-21.9	AVG	335	1.9	MHz;VB 10 Hz;Peak
1330.410	49.4	V	74.0	-24.6	PK	335	1.9	MHz;VB 3 MHz;Peak
2488.430	28.6	V	54.0	-25.4	AVG	109	1.0	MHz;VB 10 Hz;Peak
2489.690	45.1	V	74.0	-28.9	PK	109	1.0	MHz;VB 3 MHz;Peak



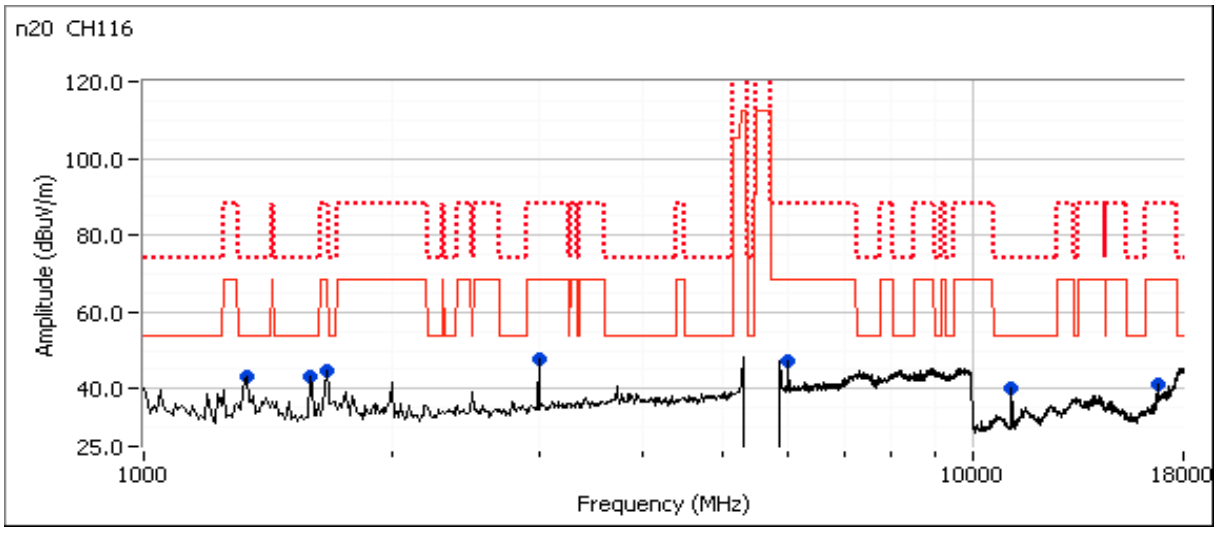
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3c: Channel #116 5580MHz - 802.11n20, Chain A + B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	16.0	16.0		19.0	16.1	16.3		19.2	38.5 / 38.5

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1329.550	36.4	V	54.0	-17.6	AVG	182	1.22	
11160.800	35.4	V	54.0	-18.6	AVG	204	1.24	RB 1 MHz;VB 10 Hz;Peak
1599.600	35.3	V	54.0	-18.7	AVG	146	1.59	
1663.470	35.1	V	54.0	-18.9	AVG	211	1.00	
1328.300	54.9	V	74.0	-19.1	PK	182	1.22	
2998.330	47.8	V	68.3	-20.5	Peak	209	1.0	
5995.830	47.2	V	68.3	-21.1	Peak	259	1.0	
1661.730	51.9	V	74.0	-22.1	PK	211	1.00	
1597.740	49.1	V	74.0	-24.9	PK	146	1.59	
16746.670	41.7	V	68.3	-26.6	Peak	171	1.29	
11160.930	46.5	V	74.0	-27.5	PK	204	1.24	RB 1 MHz;VB 3 MHz;Peak



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

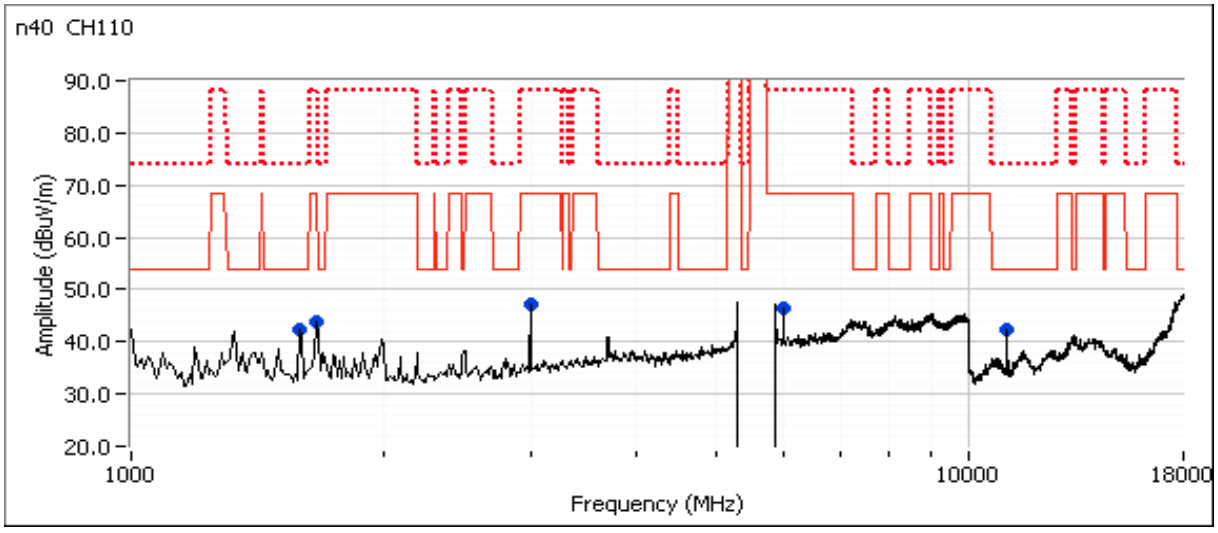
Run #3d: Channel #110 5550MHz - 802.11n40, Chain A+B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	16.0	16.0		19.0	16.0	16.1		19.1	39.0 / 39.0

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
11093.330	42.5	V	54.0	-11.5	Peak	296	1.0	
1664.930	36.2	V	54.0	-17.8	AVG	216	1.00	
1597.100	36.1	V	54.0	-17.9	AVG	212	1.00	
2998.330	47.1	V	68.3	-21.2	Peak	210	1.0	
1660.030	52.3	V	74.0	-21.7	PK	216	1.00	
5995.830	46.4	V	68.3	-21.9	Peak	261	1.0	
1596.000	48.2	V	74.0	-25.8	PK	212	1.00	

Note 1	Scans made between 18 - 40GHz with the measurement antenna moved around the card and its antennas 20-50cm from the device indicated there were no signifcant emissions in this frequency range.



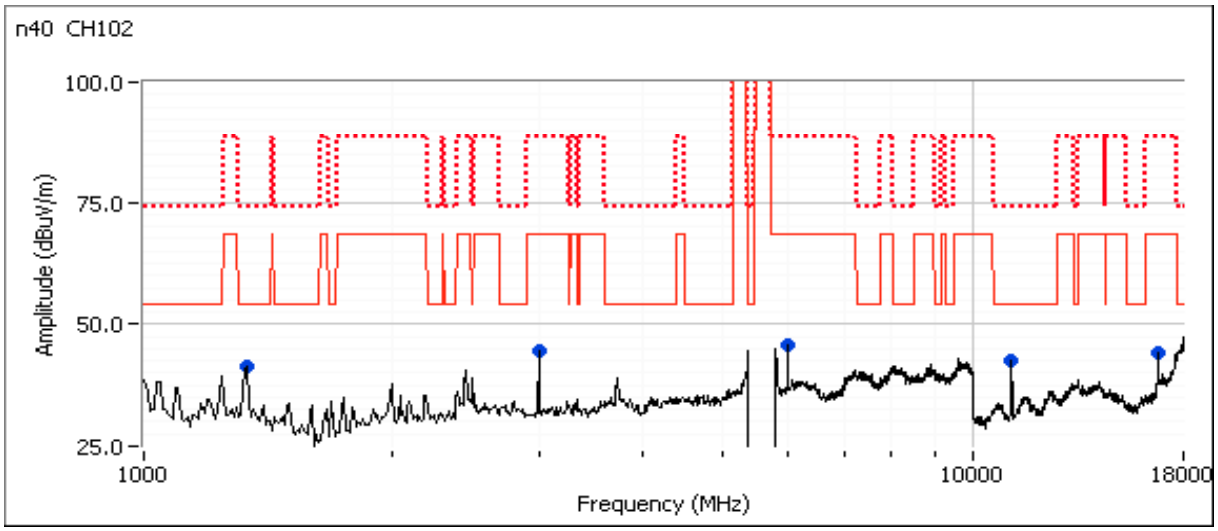
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3e: Channel #102 5510 MHz - 802.11n40, Chain A + B

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	14.5	14.5		17.5	14.5	14.6		17.6	36.0/ 36.0

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1330.000	41.2	H	54.0	-12.8	Peak	146	1.3	
11159.330	38.5	V	54.0	-15.5	AVG	309	1.0	RB 1 MHz;VB 10 Hz;Peak
5995.830	45.9	V	68.3	-22.4	Peak	234	1.0	
11159.730	51.5	V	74.0	-22.5	PK	309	1.0	RB 1 MHz;VB 3 MHz;Peak
2998.330	44.7	H	68.3	-23.6	Peak	188	1.6	
16746.670	44.2	V	68.3	-24.1	Peak	270	1.0	



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #3f: Channel #134 5670MHz - 802.11n40,Chain A + B

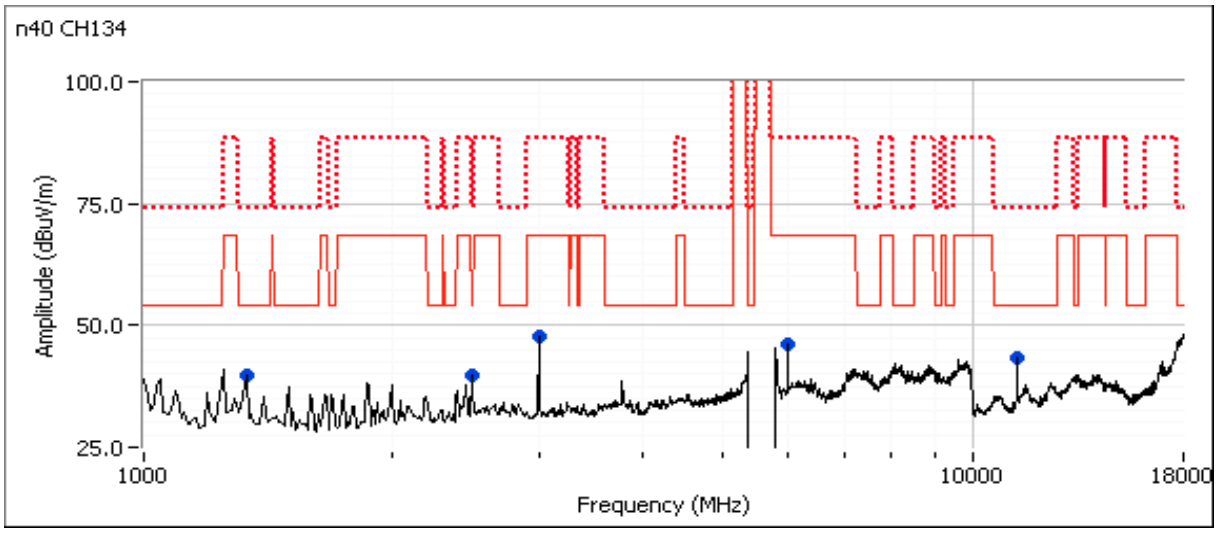
Date of Test: 4/28/2012 Test Location: FT Chamber #3

Test Engineer: Jack Liu Config Change: None

	Power Settings								
	Target (dBm)				Measured (dBm)				Software Setting
Chain	A	B	C	Total	A	B	C	Total	
	16.0	16.0		19.0	15.0	15.5		18.3	39.0/ 39.0

Spurious Radiated Emissions:

Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
11340.000	39.6	V	54.0	-14.4	AVG	68	1.1	
2490.900	54.0	H	74.0	-20.0	PK	162	1.3	
11340.200	53.2	V	74.0	-20.8	PK	68	1.1	
1329.970	30.3	V	54.0	-23.7	AVG	345	1.3	
2490.020	29.2	H	54.0	-24.8	AVG	162	1.3	
1329.070	48.0	V	74.0	-26.0	PK	345	1.3	
3000.250	51.4	H	68.3	-16.9	PK	195	1.0	
6000.560	50.6	V	68.3	-17.7	PK	243	1.0	



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS 210 and FCC 15.247 (DSS) Radiated Spurious Emissions 802.11bgn and Bluetooth LE - Transmitter Mode

Test Specific Details

Objective: The objective of this test session is to perform engineering evaluation testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT was installed into a test fixture such that the EUT was exposed (i.e. outside of a host PC).

Summary of Results

For Bluetooth: Tx is chain B, Rx is chain B. For WiFi, only Chain A is used for transmit in the 2.4GHz band, both chains used in 5GHz bands. The channels and WiFi modes were selected based on the worst case results from evaluating the BLE, EDR and Basic-Rate Bluetooth modes. BT Basic was selected because basic has higher power.

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
1	BT Basic 802.11b	2402MHz 2412MHz	7dBm 16.5dBm	4.5 16.6	Radiated Spurious Emissions	FCC 15.247	45.9 dBµV/m @ 7235.2 MHz (-8.1 dB)
2	BT Basic 802.11b	2480MHz 2462MHz	7dBm 16.5dBm	5.1 16.54	Radiated Spurious Emissions	FCC 15.247	52.1 dBµV/m @ 7386.9 MHz (-1.9 dB)
3	BT Basic 802.11g	2402MHz 2412MHz	7dBm 16.5dBm	4.5 16.47	Radiated Spurious Emissions	FCC 15.247	47.8 dBµV/m @ 7235.5 MHz (-6.2 dB)
4	BT Basic 802.11g	2480MHz 2462MHz	7dBm 16.5dBm	5.1 16.48	Radiated Spurious Emissions	FCC 15.247	48.3 dBµV/m @ 3282.7 MHz (-5.7 dB)
WiFi mode for the following runs based on worst case mode from runs 1 through 4							
5	BT Basic 802.11b	2402MHz 2437MHz	7dBm 16.5dBm	4.5 16.5	Radiated Emissions 1- 10 GHz	FCC 15.247	44.9 dBµV/m @ 7311.7 MHz (-9.1 dB)
6	BT Basic 802.11b	2440MHz 2412MHz	7dBm 16.5dBm	4.9 16.5		FCC 15.247	42.5 dBµV/m @ 9001.0 MHz (-11.5 dB)
7	BT Basic 802.11b	2440MHz 2462MHz	7dBm 16.5dBm	4.9 16.5	Radiated Emissions 1- 10 GHz	FCC 15.247	44.1 dBµV/m @ 7386.6 MHz (-9.9 dB)
8	BT Basic 802.11b	2480MHz 2437MHz	7dBm 16.5dBm	5.1 16.5		FCC 15.247	45.1 dBµV/m @ 7310.1 MHz (-8.9 dB)

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

WiFi mode and channel and Bluetooth channel based on the worst case mode from runs 1 through 8

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
9	BT 3Mb/s 802.11b	2480 MHz 2462 MHz	7dBm 16.5dBm	2.3 16.5	Radiated Emissions 1- 10 GHz	FCC 15.247	46.0 dBµV/m @ 7386.6 MHz (-8.0 dB)

WiFi mode - 802.11n 20MHz with both chains active at 16.5dBm per chain, center channel in each 5GHz band. Bluetooth on center channel, Basic mode.

Run #	Mode	Channel	Target Power	Measured Power	Test Performed	Limit	Result / Margin
10	BT Basic 802.11n20	2440MHz 5200MHz	7dBm 16.5/16.5	4.9 15.0 / 16.0	Radiated Emissions 1- 15 GHz	FCC 15.247	46.1 dBµV/m @ 10400.0 MHz (-7.9 dB)
11	BT Basic 802.11n20	2440MHz 5300MHz	7dBm 16.5/16.5	4.9 15.9 / 16.3		FCC 15.247	38.0 dBµV/m @ 4880.0 MHz (-16.0 dB)
12	BT Basic 802.11n20	2440MHz 5580MHz	7dBm 16.5/16.5	4.9 16.2 / 16.4		FCC 15.247	32.8 dBµV/m @ 1660.7 MHz (-21.2 dB)
13	BT Basic 802.11n20	2440MHz 5785MHz	7dBm 16.5/16.5	4.9 15.2 / 15.6		FCC 15.247	34.1 dBµV/m @ 4880.0 MHz (-19.9 dB)

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Notes:

Bluetooth uses a frequency hopping algorithm that means that the device, during normal operation, is only on a specific channel for a short period of time. The average correction factor is calculated as follows:

A maximum length packet has a duration of 5 time slots.
The hopping rate is 1600 hops/second so the maximum dwell time is 5/1600 seconds, or 3.125ms.
With a minimum of 20 hopping channels a channel will not be used more than 4 times in any 100ms period.
The maximum dwell time in a 100ms period is 4 x 3.125ms = 12.5ms.
The average correction factor is, therefore, 20log(12.5/100) =-18dB

As this is a hopping radio the correction factor can be applied to the average value of the signal provided the average value was measured with the device continuously transmitting. DA 00-0705 permits the use of the average correction on the measured average value for frequency hopping radios.

All measurements in this data sheet do not include the average correction factor.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 1, Jackson Peak 2x2: 1-10GHz, 802.11b @ 2412 MHz Chain A, BT Basic @ 2402 MHz Chain B

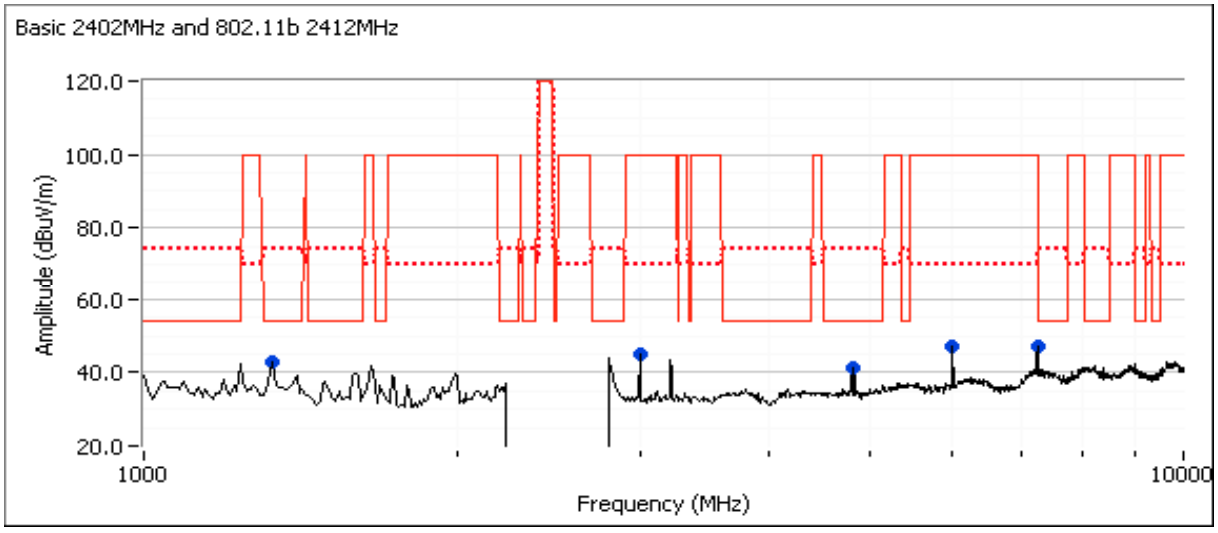
Date of Test: 5/1/2012

Test Engineer: Jack Liu

Test Location: FT 5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.6	23.5
Chain B	7.0	4.5	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1330.000	43.0	V	54.0	-11.0	Peak	317	1.3	
4804.170	41.1	V	54.0	-12.9	Peak	220	1.6	
2998.330	45.2	V	54.0	-8.8	Peak	206	1.0	
5995.830	46.9	V	54.0	-7.1	Peak	263	1.0	
7235.000	47.1	V	54.0	-6.9	Peak	82	1.6	

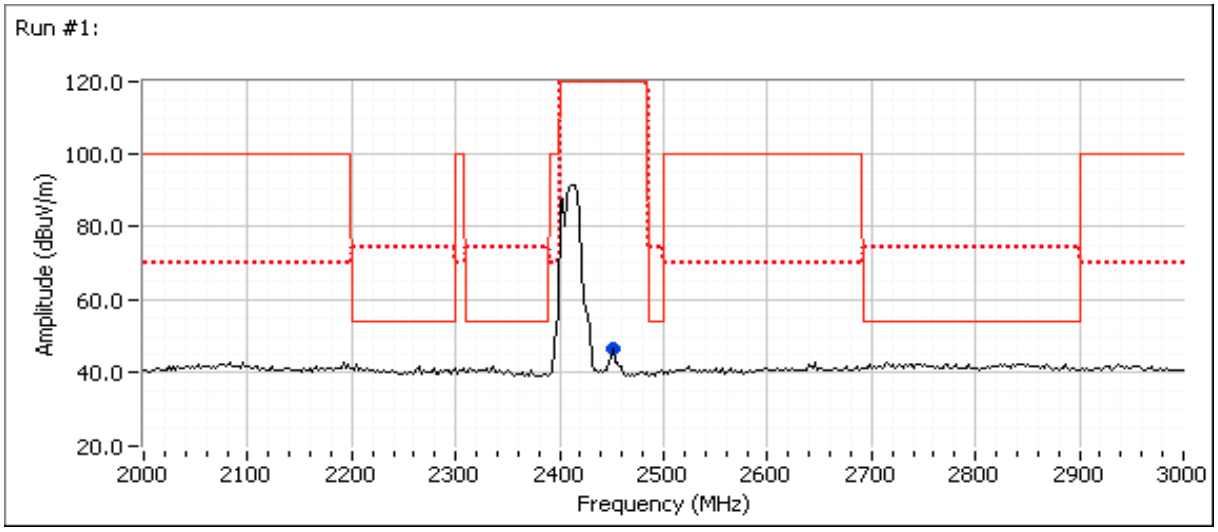
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7235.230	45.9	V	54.0	-8.1	AVG	67	1.7	RB 1 MHz;VB 10 Hz;Peak
6000.650	44.9	V	54.0	-9.1	AVG	141	1.0	RB 1 MHz;VB 10 Hz;Peak
3000.280	44.4	V	54.0	-9.6	AVG	200	1.0	RB 1 MHz;VB 10 Hz;Peak
4803.940	39.4	V	54.0	-14.6	AVG	219	1.6	RB 1 MHz;VB 10 Hz;Peak
1345.250	32.5	V	54.0	-21.5	AVG	94	1.1	RB 1 MHz;VB 10 Hz;Peak
7235.050	51.8	V	74.0	-22.2	PK	67	1.7	RB 1 MHz;VB 3 MHz;Peak
6000.630	49.0	V	74.0	-25.0	PK	141	1.0	RB 1 MHz;VB 3 MHz;Peak
3000.230	48.4	V	74.0	-25.6	PK	200	1.0	RB 1 MHz;VB 3 MHz;Peak
4804.170	45.6	V	74.0	-28.4	PK	219	1.6	RB 1 MHz;VB 3 MHz;Peak
1346.900	44.5	V	74.0	-29.5	PK	94	1.1	RB 1 MHz;VB 3 MHz;Peak

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2450.900	46.7	H	-	-	Peak	153	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 2, Jackson Peak 2x2: 1-10GHz, 802.11b @ 2462 MHz Chain A, BT Basic @ 2480 MHz Chain B

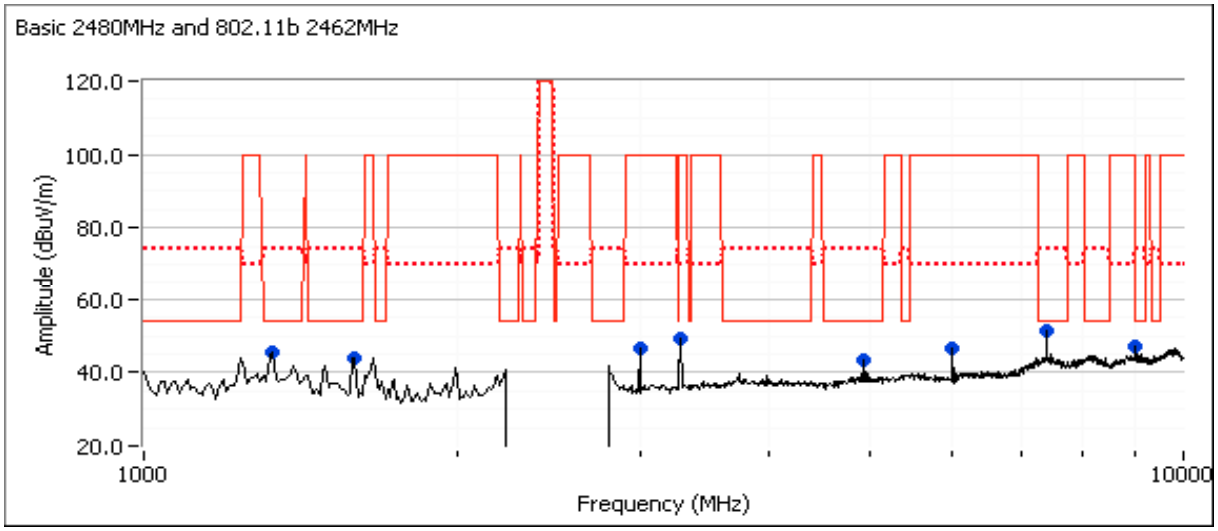
Date of Test: 5/1/2012

Test Engineer: Jack Liu

Test Location: FT 5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	23.5
Chain B	7.0	5.1	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1330.000	45.7	V	54.0	-8.3	Peak	112	1.3	
1595.830	43.8	V	54.0	-10.2	Peak	179	1.0	
4923.330	43.4	V	54.0	-10.6	Peak	133	1.3	
9002.500	47.1	V	54.0	-6.9	Peak	145	1.0	
7386.670	51.4	V	54.0	-2.6	Peak	71	1.6	
2998.330	46.6	V	54.0	-7.4	Peak	193	1.0	
5995.830	46.8	V	54.0	-7.2	Peak	269	1.0	
3282.500	49.2	V	54.0	-4.8	Peak	89	1.0	

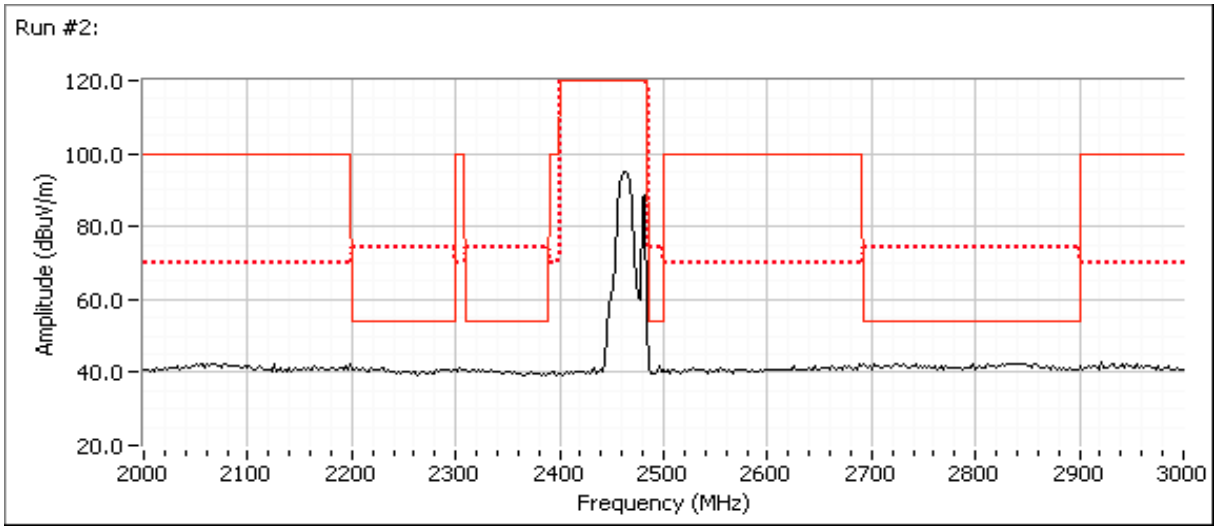
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Final measurements at 3m

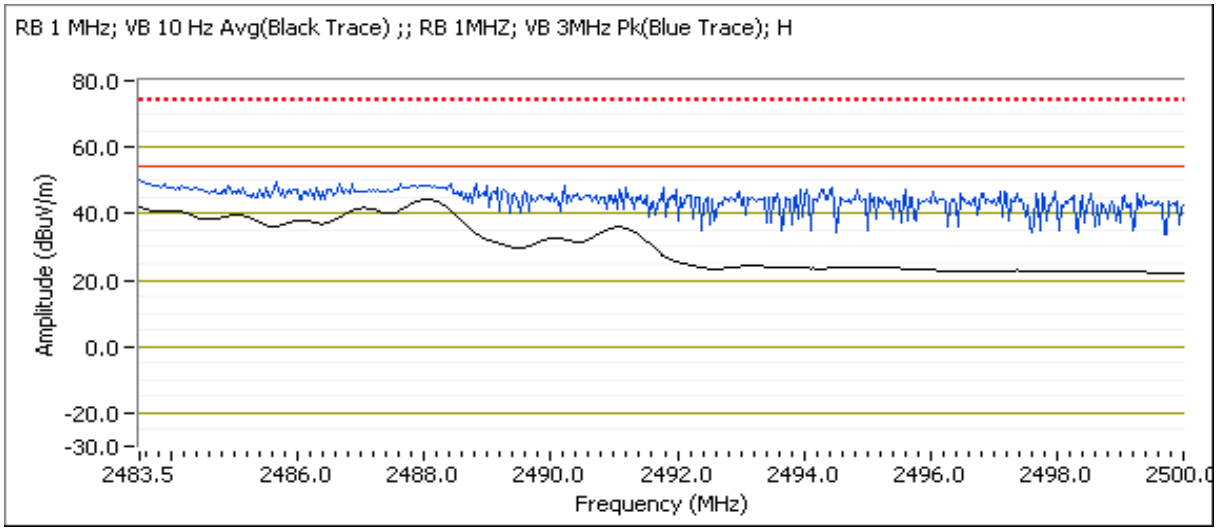
Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7386.870	52.1	V	54.0	-1.9	AVG	63	1.6	RB 1 MHz;VB 10 Hz;Peak
7385.870	58.1	V	74.0	-15.9	PK	63	1.6	RB 1 MHz;VB 3 MHz;Peak
1329.380	35.4	V	54.0	-18.6	AVG	111	1.4	RB 1 MHz;VB 10 Hz;Peak
1332.630	52.7	V	74.0	-21.3	PK	111	1.4	RB 1 MHz;VB 3 MHz;Peak
1595.750	35.8	V	54.0	-18.2	AVG	210	1.0	RB 1 MHz;VB 10 Hz;Peak
1593.210	48.8	V	74.0	-25.2	PK	210	1.0	RB 1 MHz;VB 3 MHz;Peak
4924.050	42.7	V	54.0	-11.3	AVG	134	1.1	RB 1 MHz;VB 10 Hz;Peak
4924.030	48.5	V	74.0	-25.5	PK	134	1.1	RB 1 MHz;VB 3 MHz;Peak
9001.070	45.6	V	54.0	-8.4	AVG	177	1.0	RB 1 MHz;VB 10 Hz;Peak
9001.190	53.7	V	74.0	-20.3	PK	177	1.0	RB 1 MHz;VB 3 MHz;Peak
3000.360	47.1	V	54.0	-6.9	AVG	189	1.0	RB 1 MHz;VB 10 Hz;Peak
3000.390	51.8	V	74.0	-22.2	PK	189	1.0	RB 1 MHz;VB 3 MHz;Peak
3282.720	49.9	V	54.0	-4.1	AVG	82	1.0	RB 1 MHz;VB 10 Hz;Peak
3282.850	52.3	V	74.0	-21.7	PK	82	1.0	RB 1 MHz;VB 3 MHz;Peak
6000.800	46.7	V	54.0	-7.3	AVG	148	1.0	RB 1 MHz;VB 10 Hz;Peak
6000.480	51.0	V	74.0	-23.0	PK	148	1.0	RB 1 MHz;VB 3 MHz;Peak

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A



Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2488.030	44.3	H	54.0	-9.7	AVG	211	1.0	POS; RB 1 MHz; VB: 10 Hz
2483.530	49.0	H	74.0	-25.0	PK	211	1.0	POS; RB 1 MHz; VB: 3 MHz
2483.500	30.9	V	54.0	-23.1	AVG	200	1.2	POS; RB 1 MHz; VB: 10 Hz
2489.820	42.9	V	74.0	-31.1	PK	200	1.2	POS; RB 1 MHz; VB: 3 MHz

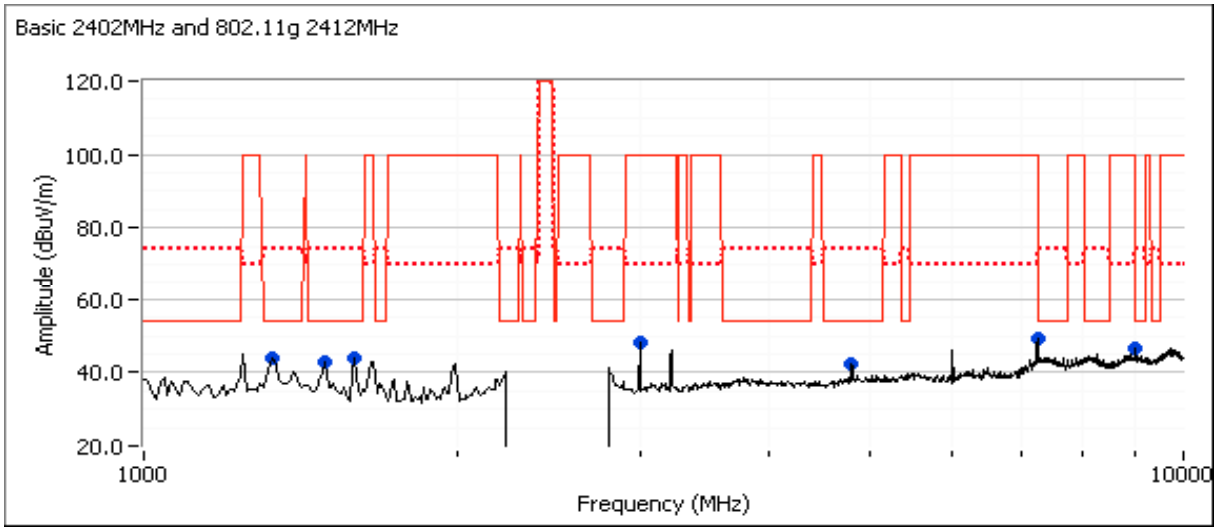
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 3, Jackson Peak 2x2: 1-10GHz, 802.11g @ 2412 MHz Chain A, BT Basic @ 2402 MHz Chain B

Date of Test: 5/1/2012
Test Engineer: Jack Liu
Test Location: FT 5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	29.5
Chain B	7.0	4.5	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1330.000	43.8	V	54.0	-10.2	Peak	317	1.6	
1595.830	44.1	H	54.0	-9.9	Peak	130	1.6	
1495.000	42.9	H	54.0	-11.1	Peak	125	1.0	
4795.000	42.5	H	54.0	-11.5	Peak	150	1.0	
9002.500	46.6	V	54.0	-7.4	Peak	145	1.0	
2998.330	48.2	H	54.0	-5.8	Peak	205	1.0	
7235.000	49.4	V	54.0	-4.6	Peak	226	1.6	

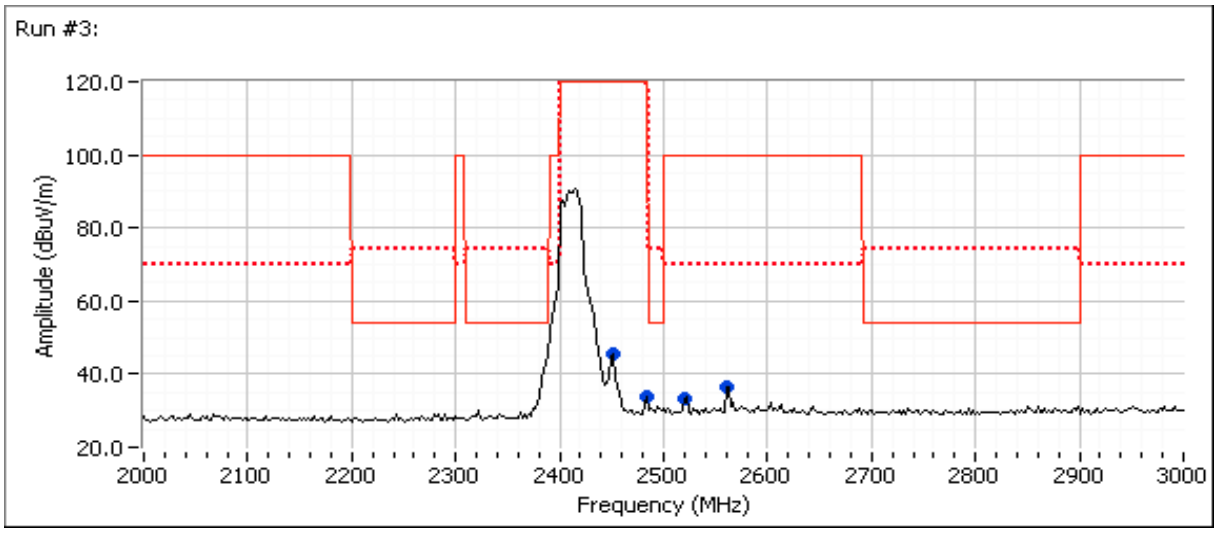
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7235.470	47.8	V	54.0	-6.2	AVG	222	1.6	RB 1 MHz;VB 10 Hz;Peak
3000.420	46.1	H	54.0	-7.9	AVG	177	1.0	RB 1 MHz;VB 10 Hz;Peak
9001.100	45.8	V	54.0	-8.2	AVG	136	1.0	RB 1 MHz;VB 10 Hz;Peak
4804.020	42.6	H	54.0	-11.4	AVG	144	1.0	RB 1 MHz;VB 10 Hz;Peak
7242.730	59.6	V	74.0	-14.4	PK	222	1.6	RB 1 MHz;VB 3 MHz;Peak
1593.830	36.8	H	54.0	-17.2	AVG	133	1.0	RB 1 MHz;VB 10 Hz;Peak
1494.700	35.6	H	54.0	-18.4	AVG	127	1.0	RB 1 MHz;VB 10 Hz;Peak
1333.250	35.5	V	54.0	-18.5	AVG	286	1.5	RB 1 MHz;VB 10 Hz;Peak
9000.490	53.3	V	74.0	-20.7	PK	136	1.0	RB 1 MHz;VB 3 MHz;Peak
1328.200	53.2	V	74.0	-20.8	PK	286	1.5	RB 1 MHz;VB 3 MHz;Peak
3000.000	51.3	H	74.0	-22.7	PK	177	1.0	RB 1 MHz;VB 3 MHz;Peak
4803.850	49.3	H	74.0	-24.7	PK	144	1.0	RB 1 MHz;VB 3 MHz;Peak
1495.570	49.2	H	74.0	-24.8	PK	127	1.0	RB 1 MHz;VB 3 MHz;Peak
1597.700	49.1	H	74.0	-24.9	PK	133	1.0	RB 1 MHz;VB 3 MHz;Peak

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2450.900	45.4	H	54.0	-8.6	Peak	336	1.5	
2482.970	34.0	H	54.0	-20.0	Peak	222	1.0	
2521.040	33.3	H	54.0	-20.7	Peak	180	1.0	
2561.120	36.4	H	54.0	-17.6	Peak	199	1.0	

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 4, Jackson Peak 2x2: 1-10GHz, 802.11g @ 2462 MHz Chain A, BT Basic @ 2480 MHz Chain B

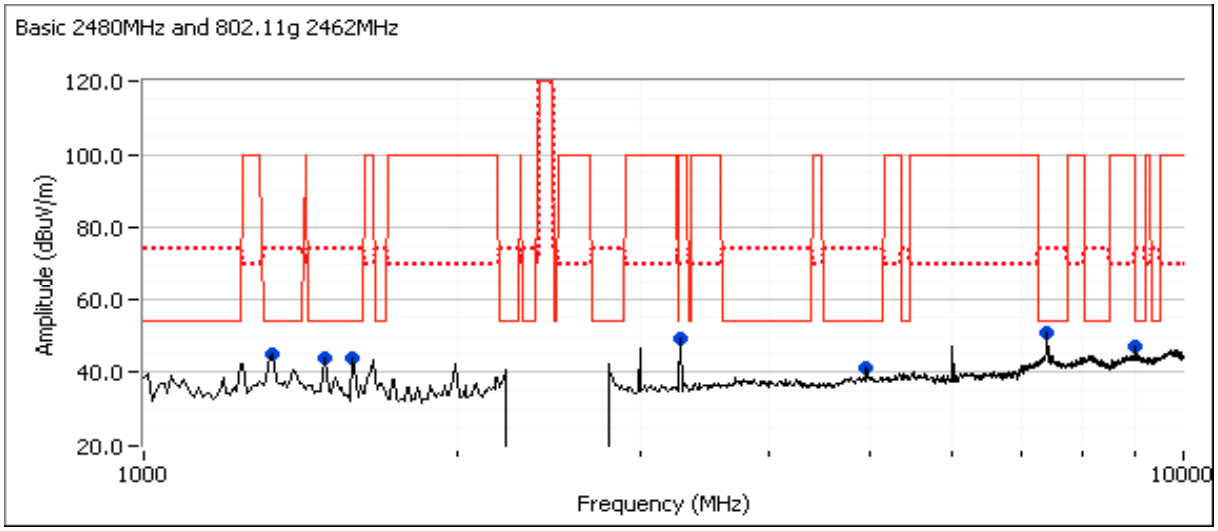
Date of Test: 5/1/2012

Test Engineer: Jack Liu

Test Location: FT 5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	29.0
Chain B	7.0	5.1	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7386.670	50.8	V	54.0	-3.2	Peak	249	1.3	
9002.500	46.9	V	54.0	-7.1	Peak	137	1.0	
1330.000	45.0	V	54.0	-9.0	Peak	348	1.9	
1485.830	40.2	H	54.0	-13.8	Peak	344	1.9	
1586.670	42.3	V	54.0	-11.7	Peak	118	1.6	
4960.000	42.4	V	54.0	-11.6	Peak	140	1.0	
3282.500	49.8	H	54.0	-4.2	Peak	246	1.0	

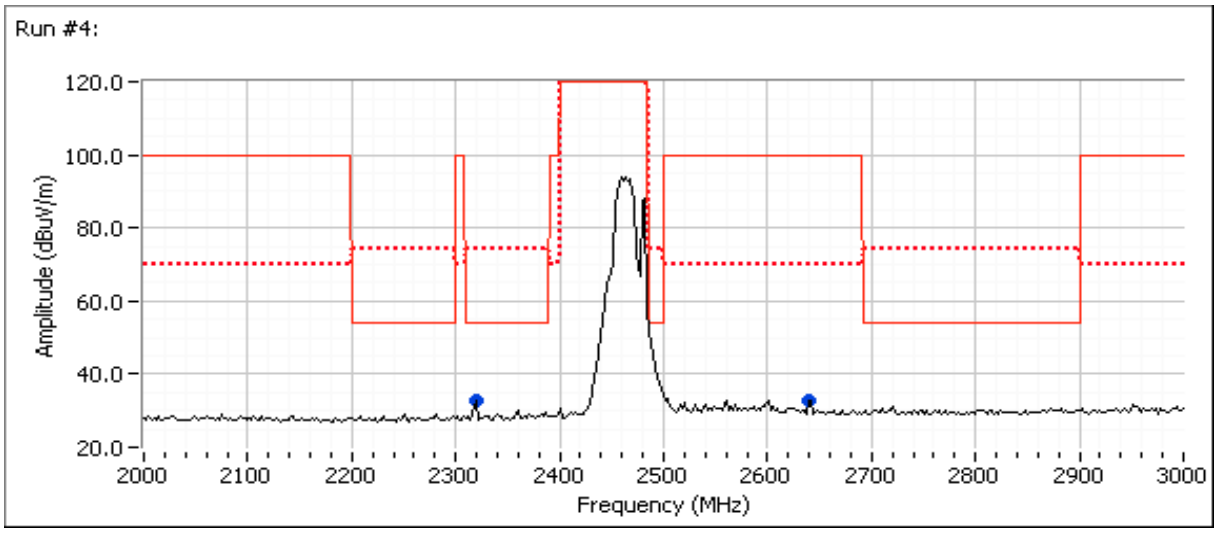
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
3282.720	48.3	H	54.0	-5.7	AVG	244	1.0	RB 1 MHz;VB 10 Hz;Peak
7385.000	47.2	V	54.0	-6.8	AVG	246	1.1	RB 1 MHz;VB 10 Hz;Peak
9001.050	45.3	V	54.0	-8.7	AVG	133	1.0	RB 1 MHz;VB 10 Hz;Peak
7380.540	59.6	V	74.0	-14.4	PK	246	1.1	RB 1 MHz;VB 3 MHz;Peak
4959.970	38.5	V	54.0	-15.5	AVG	85	1.0	RB 1 MHz;VB 10 Hz;Peak
1593.520	37.4	V	54.0	-16.6	AVG	104	1.6	RB 1 MHz;VB 10 Hz;Peak
1328.900	35.0	V	54.0	-19.0	AVG	351	1.9	RB 1 MHz;VB 10 Hz;Peak
9001.420	53.1	V	74.0	-20.9	PK	133	1.0	RB 1 MHz;VB 3 MHz;Peak
1495.130	32.3	H	54.0	-21.7	AVG	333	1.7	RB 1 MHz;VB 10 Hz;Peak
3282.800	52.2	H	74.0	-21.8	PK	244	1.0	RB 1 MHz;VB 3 MHz;Peak
1333.000	51.5	V	74.0	-22.5	PK	351	1.9	RB 1 MHz;VB 3 MHz;Peak
1597.800	50.2	V	74.0	-23.8	PK	104	1.6	RB 1 MHz;VB 3 MHz;Peak
4960.220	47.0	V	74.0	-27.0	PK	85	1.0	RB 1 MHz;VB 3 MHz;Peak
1497.830	44.7	H	74.0	-29.3	PK	333	1.7	RB 1 MHz;VB 3 MHz;Peak

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2320.640	32.6	H	54.0	-21.4	Peak	332	1.0	
2639.280	32.7	H	54.0	-21.3	Peak	225	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2320.070	40.3	H	54.0	-13.7	AVG	117	1.0	POS; RB 1 MHz; VB: 10 Hz
2319.890	45.3	H	74.0	-28.7	PK	117	1.0	POS; RB 1 MHz; VB: 3 MHz

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 5, Jackson Peak 2x2: 1-10GHz, 802.11b @ 2437 MHz Chain A, BT Basic @ 2402 MHz Chain B

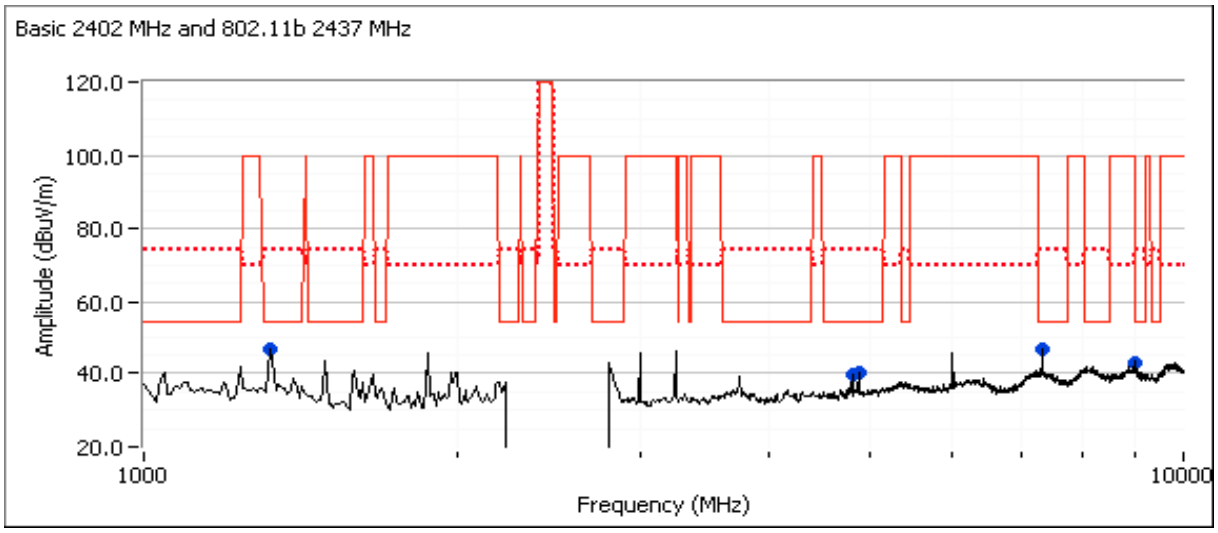
Date of Test: 5/1/2012

Test Engineer: Jack Liu / Rafael Varelas

Test Location: FT 5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	23.5
Chain B	7.0	4.5	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1320.830	*46.6*	*V*	*54.0*	*-7.4*	*Peak*	*314*	*1.6*	
4868.330	*40.1*	*V*	*54.0*	*-13.9*	*Peak*	*108*	*1.6*	
4804.170	*39.8*	*V*	*54.0*	*-14.2*	*Peak*	*229*	*1.9*	
7310.830	*46.4*	*V*	*54.0*	*-7.6*	*Peak*	*249*	*1.9*	
9002.500	*43.1*	*V*	*54.0*	*-10.9*	*Peak*	*146*	*1.0*	

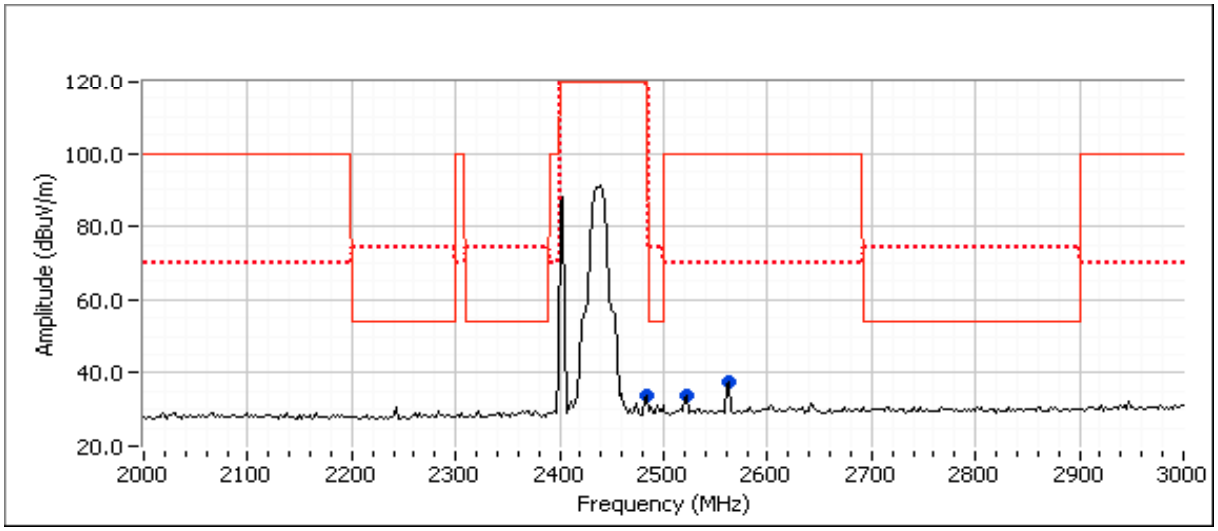
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7311.700	44.9	V	54.0	-9.1	AVG	251	1.9	RB 1 MHz;VB 10 Hz;Pk
7311.960	50.6	V	74.0	-23.4	PK	251	1.9	RB 1 MHz;VB 3 MHz;Pk
1327.430	36.2	V	54.0	-17.8	AVG	318	1.7	RB 1 MHz;VB 10 Hz;Pk
1328.960	51.0	V	74.0	-23.0	PK	318	1.7	RB 1 MHz;VB 3 MHz;Pk
4873.900	40.3	V	54.0	-13.7	AVG	107	1.6	RB 1 MHz;VB 10 Hz;Pk
4873.880	44.7	V	74.0	-29.3	PK	107	1.6	RB 1 MHz;VB 3 MHz;Pk
4803.970	36.9	V	54.0	-17.1	AVG	227	1.9	RB 1 MHz;VB 10 Hz;Pk
4804.340	43.3	V	74.0	-30.7	PK	227	1.9	RB 1 MHz;VB 3 MHz;Pk
9000.980	43.4	V	54.0	-10.6	AVG	145	1.0	RB 1 MHz;VB 10 Hz;Pk
9000.940	49.2	V	74.0	-24.8	PK	145	1.0	RB 1 MHz;VB 3 MHz;Pk

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2482.970	33.6	H	54.0	-20.4	Peak	190	1.0	
2523.050	33.9	H	54.0	-20.1	Peak	225	1.0	
2563.130	37.5	H	54.0	-16.5	Peak	216	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Run # 6, Jackson Peak 2x2: 1-10GHz, 802.11b @ 2412 MHz Chain A, BT Basic @ 2440 MHz Chain B

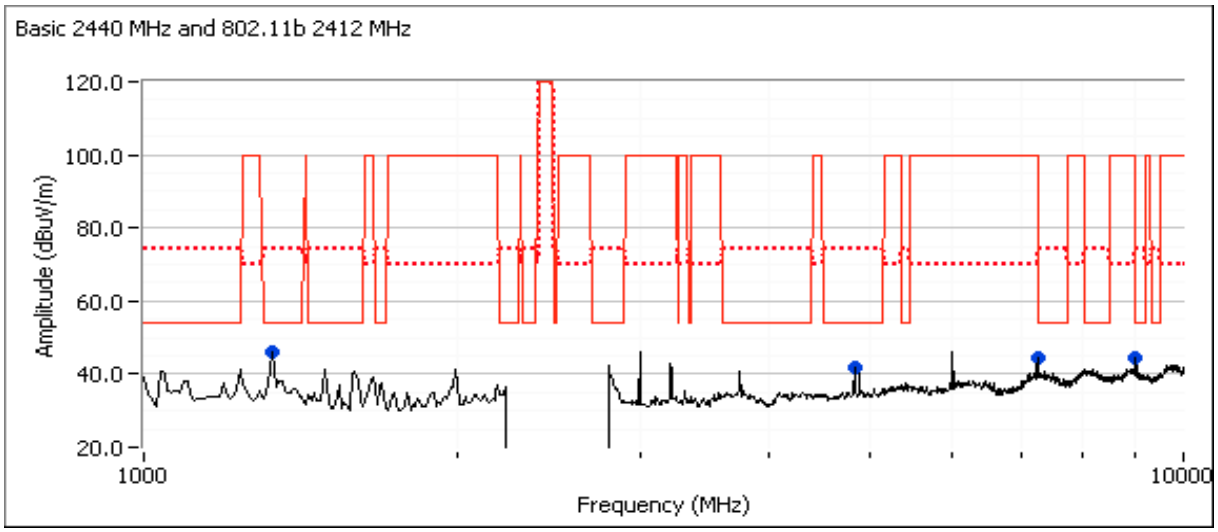
Date of Test: 5/1/2012

Test Engineer: Rafael Varelas

Test Location: FT3

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	23.5
Chain B	7.0	4.9	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary Measurements (Peak versus average limit)

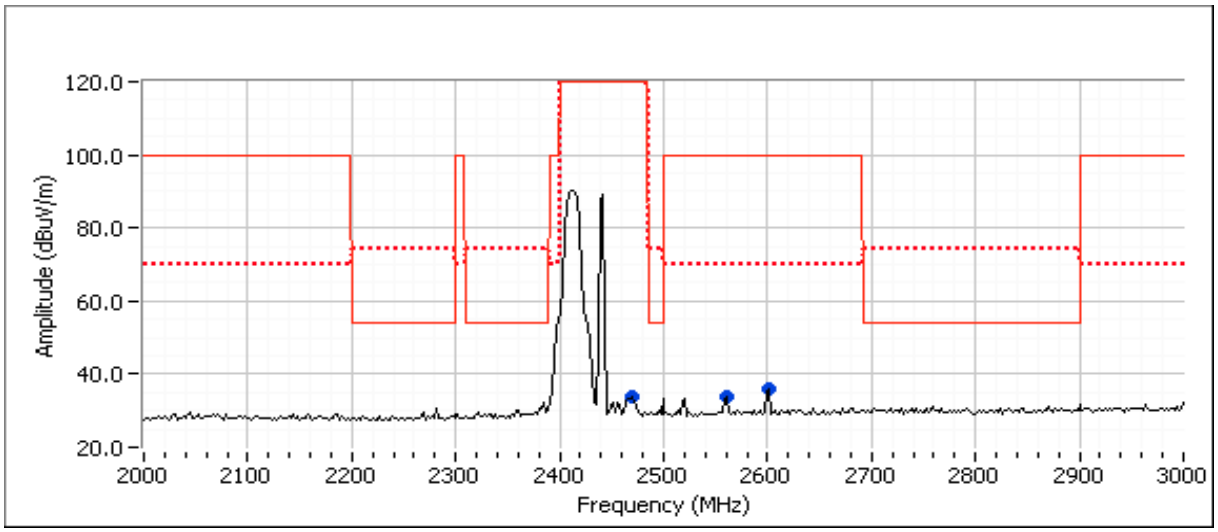
Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1328.930	46.0	V	54.0	-8.0	Peak	313	1.6	
4823.960	42.0	V	54.0	-12.0	Peak	120	1.6	
7234.010	44.3	V	54.0	-9.7	Peak	234	1.6	
9000.330	44.6	V	54.0	-9.4	Peak	186	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
9001.040	42.5	V	54.0	-11.5	AVG	185	1.0	RB 1 MHz;VB 10 Hz;Pk
9001.070	49.4	V	74.0	-24.6	PK	185	1.0	RB 1 MHz;VB 3 MHz;Pk
4823.970	40.7	V	54.0	-13.3	AVG	120	1.7	RB 1 MHz;VB 10 Hz;Pk
4823.870	44.9	V	74.0	-29.1	PK	120	1.7	RB 1 MHz;VB 3 MHz;Pk
1330.730	35.6	V	54.0	-18.4	AVG	312	1.9	RB 1 MHz;VB 10 Hz;Pk
1329.600	54.4	V	74.0	-19.6	PK	312	1.9	RB 1 MHz;VB 3 MHz;Pk

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2468.940	34.0	H	54.0	-20.0	Peak	197	1.0	
2561.120	34.0	H	54.0	-20.0	Peak	227	1.0	
2601.200	36.0	H	54.0	-18.0	Peak	219	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Run # 7, Jackson Peak 2x2: 1-10GHz, 802.11b @ 2462 MHz Chain A, BT Basic @ 2440 MHz Chain B

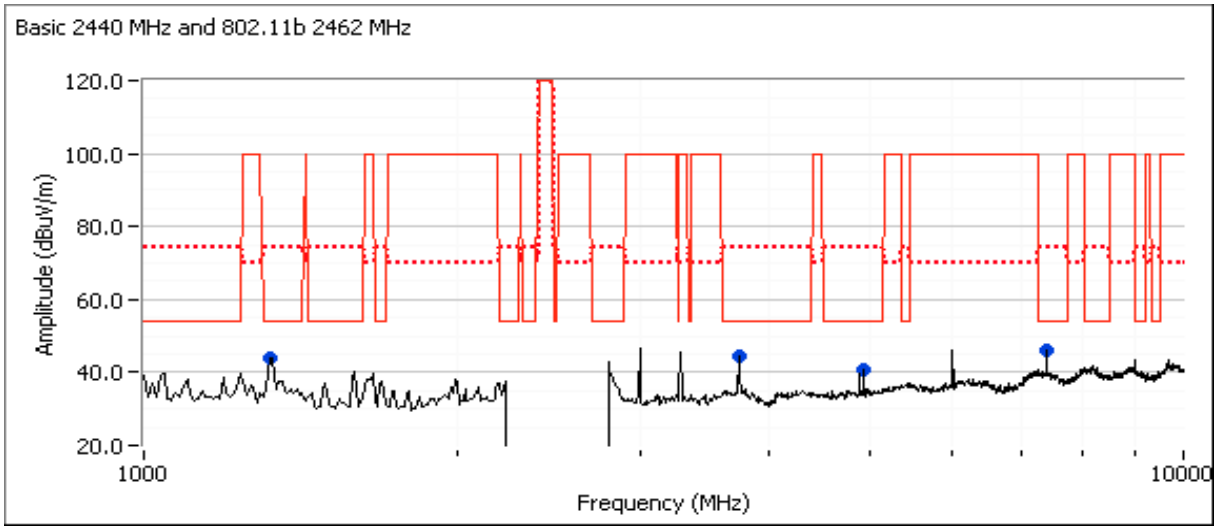
Date of Test: 5/1/2012

Test Engineer: Rafael Varelas

Test Location: FT3

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	23.5
Chain B	7.0	4.9	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary Measurements (Peak versus average limit)

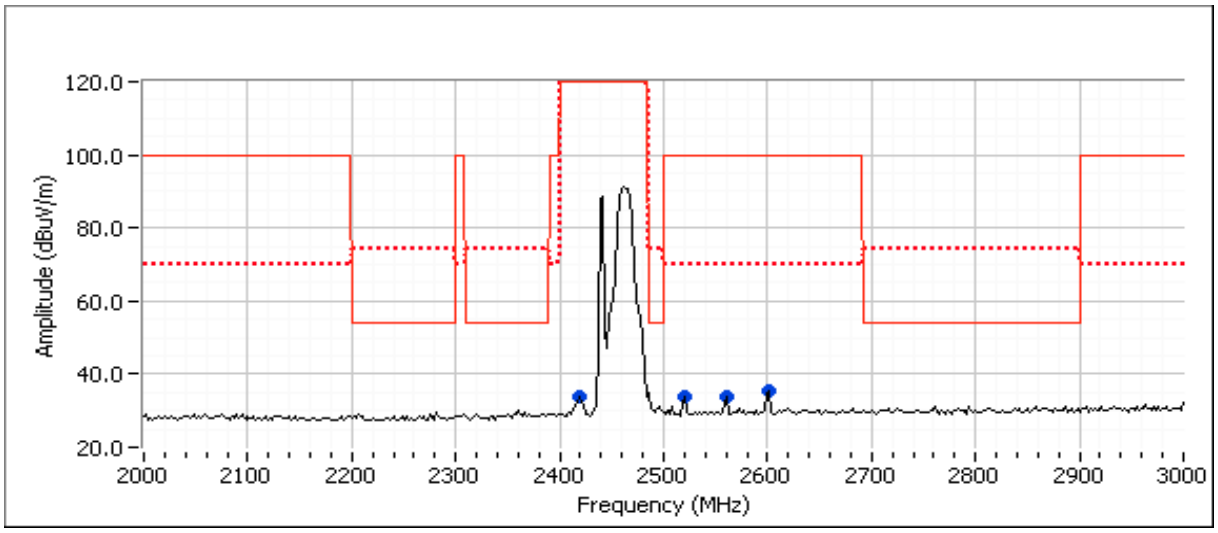
Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1320.830	*44.0*	*V*	*54.0*	*-10.0*	*Peak*	*302*	*1.9*	
3731.700	44.6	H	54.0	-9.4	Peak	130	1.0	
4923.880	40.7	V	54.0	-13.3	Peak	105	1.3	
7386.150	45.8	V	54.0	-8.2	Peak	233	1.6	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7386.620	44.1	V	54.0	-9.9	AVG	238	1.0	RB 1 MHz;VB 10 Hz;Pk
7386.850	49.9	V	74.0	-24.1	PK	238	1.0	RB 1 MHz;VB 3 MHz;Pk
1326.830	30.7	V	54.0	-23.3	AVG	272	2.0	RB 1 MHz;VB 10 Hz;Pk
1327.300	49.1	V	74.0	-24.9	PK	272	2.0	RB 1 MHz;VB 3 MHz;Pk
3750.700	29.1	H	54.0	-24.9	AVG	124	1.0	RB 1 MHz;VB 10 Hz;Pk
3750.300	49.9	H	74.0	-24.1	PK	124	1.0	RB 1 MHz;VB 3 MHz;Pk
4923.920	39.5	V	54.0	-14.5	AVG	78	1.0	RB 1 MHz;VB 10 Hz;Pk
4923.830	44.1	V	74.0	-29.9	PK	78	1.0	RB 1 MHz;VB 3 MHz;Pk

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2418.840	33.9	H	54.0	-20.1	Peak	217	1.0	
2521.040	34.0	H	54.0	-20.0	Peak	218	1.0	
2561.120	34.0	H	54.0	-20.0	Peak	220	1.0	
2601.200	35.4	H	54.0	-18.6	Peak	215	1.0	

Final measurements at 3m

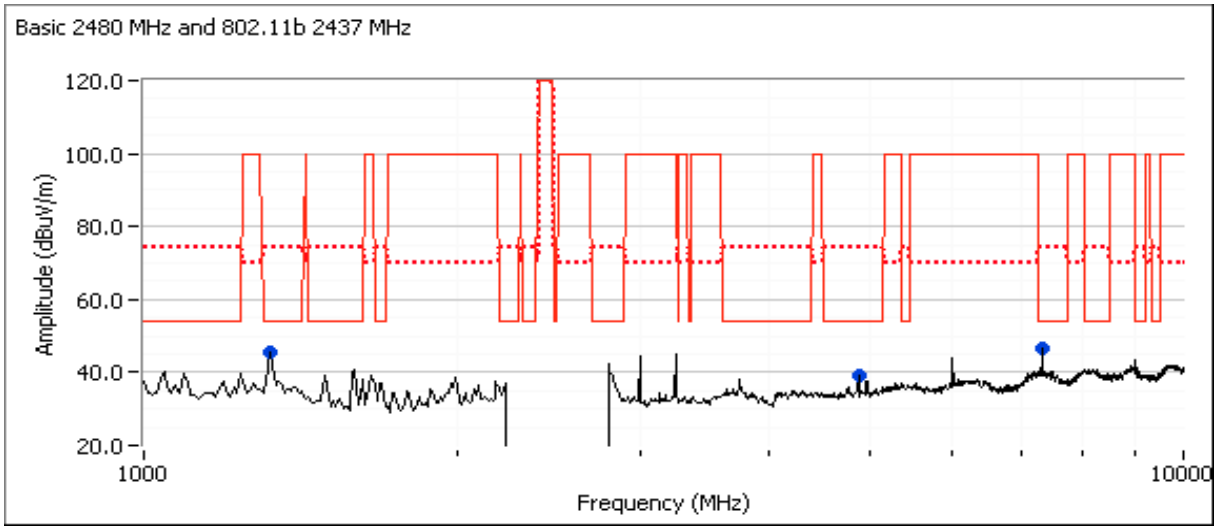
Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Run # 8, Jackson Peak 2x2: 1-10GHz, 802.11b @ 2437 MHz Chain A, BT Basic @ 2480 MHz Chain B

Date of Test: 5/1/2012
Test Engineer: Rafael Varelas
Test Location: FT3

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	23.5
Chain B	7.0	5.1	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary Measurements (Peak versus average limit)

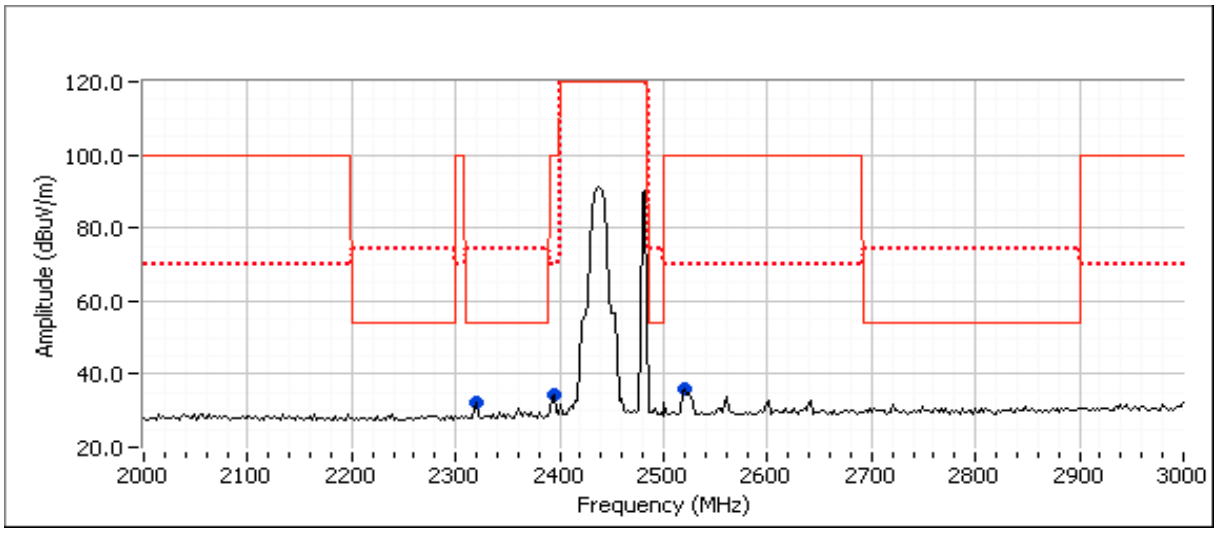
Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1319.980	45.5	V	54.0	-8.5	Peak	313	1.6	
4873.940	39.4	V	54.0	-14.6	Peak	152	1.3	
7310.210	46.4	V	54.0	-7.6	Peak	241	1.9	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7310.140	45.1	V	54.0	-8.9	AVG	234	1.6	RB 1 MHz;VB 10 Hz;Pk
7311.880	50.6	V	74.0	-23.4	PK	234	1.6	RB 1 MHz;VB 3 MHz;Pk
4873.940	37.9	V	54.0	-16.1	AVG	169	1.5	RB 1 MHz;VB 10 Hz;Pk
4873.820	43.8	V	74.0	-30.2	PK	169	1.5	RB 1 MHz;VB 3 MHz;Pk
1331.850	34.7	V	54.0	-19.3	AVG	340	1.5	RB 1 MHz;VB 10 Hz;Pk
1330.910	52.1	V	74.0	-21.9	PK	340	1.5	RB 1 MHz;VB 3 MHz;Pk

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2320.640	32.4	V	54.0	-21.6	Peak	80	1.3	
2394.790	34.6	V	54.0	-19.4	Peak	272	1.0	
2521.040	36.1	H	54.0	-17.9	Peak	214	1.0	

Final measurements at 3m

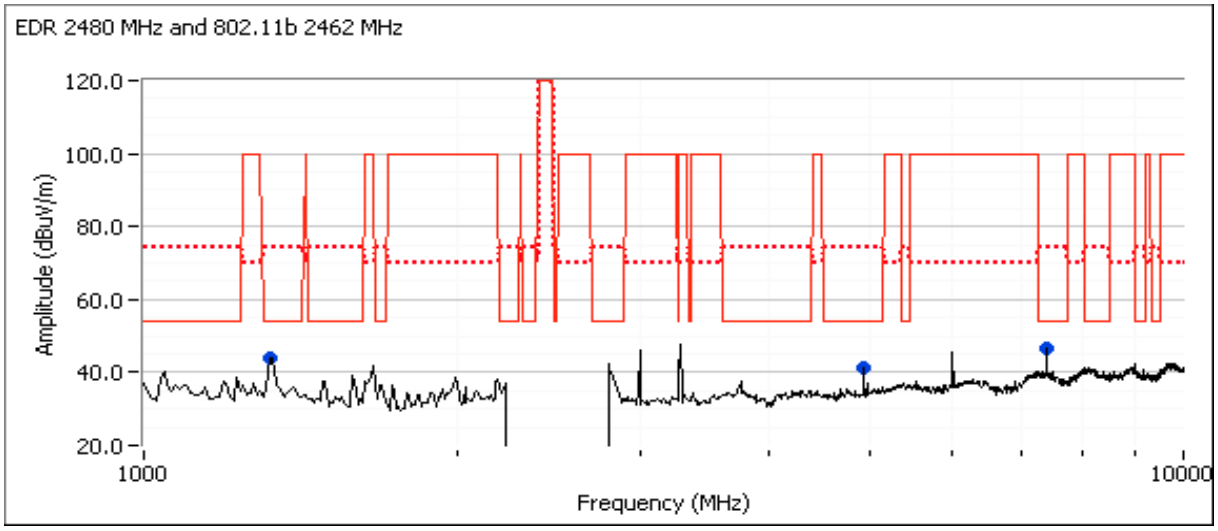
Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2320.050	39.9	V	54.0	-14.1	AVG	91	1.0	POS; RB 1 MHz; VB: 10 Hz
2319.700	46.4	V	74.0	-27.6	PK	91	1.0	POS; RB 1 MHz; VB: 3 MHz

Run # 9, Jackson Peak 2x2: 1-10GHz, 802.11b @ 2462 MHz Chain A, EDR Mode @ 2480 MHz Chain B

Date of Test: 5/1/2012
Test Engineer: Rafael Varelas
Test Location: FT3

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.5	23.5
Chain B	7.0	2.3	8.0

Spurious Radiated Emissions, 1 - 10GHz excluding the allocated band:



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary Measurements (Peak versus average limit)

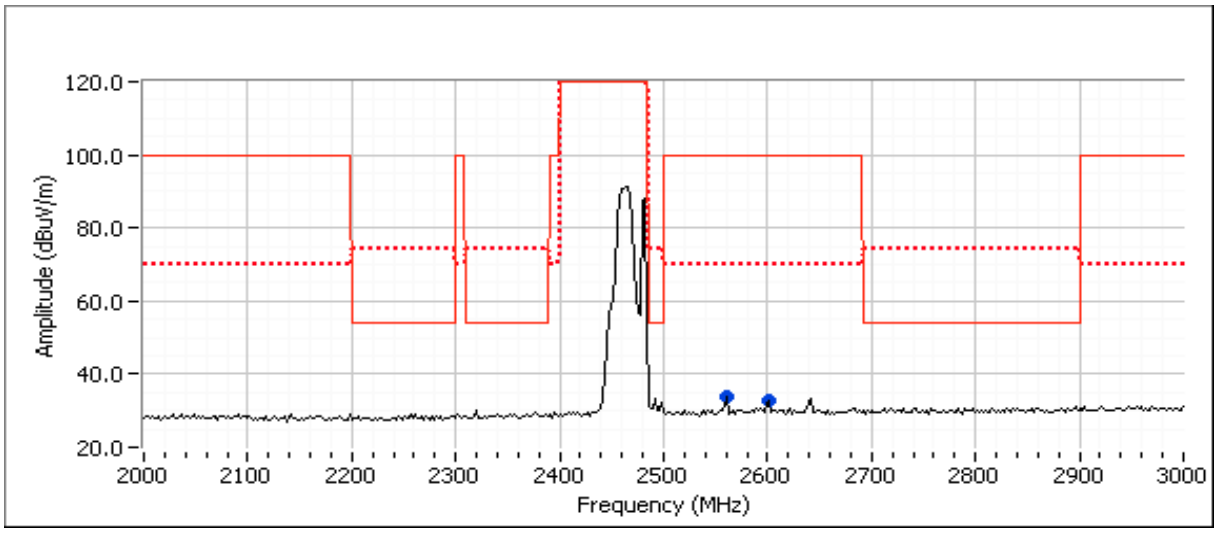
Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1328.210	43.8	V	54.0	-10.2	Peak	296	1.9	
4923.880	41.1	V	54.0	-12.9	Peak	225	1.3	
7387.210	46.5	V	54.0	-7.5	Peak	235	1.6	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
7386.610	46.0	V	54.0	-8.0	AVG	256	1.6	RB 1 MHz;VB 10 Hz;Pk
7383.680	51.1	V	74.0	-22.9	PK	256	1.6	RB 1 MHz;VB 3 MHz;Pk
1328.610	30.5	V	54.0	-23.5	AVG	269	1.6	RB 1 MHz;VB 10 Hz;Pk
1330.610	45.5	V	74.0	-28.5	PK	269	1.6	RB 1 MHz;VB 3 MHz;Pk
4923.860	40.2	V	54.0	-13.8	AVG	237	1.7	RB 1 MHz;VB 10 Hz;Pk
4923.950	44.7	V	74.0	-29.3	PK	237	1.7	RB 1 MHz;VB 3 MHz;Pk

Spurious Radiated Emissions, 2 - 3GHz

Preliminary Scan at ~ 30cm from the product to identify potential signals (Peak versus average limit)



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2561.120	33.6	H	54.0	-20.4	Peak	214	1.0	
2601.200	32.7	H	54.0	-21.3	Peak	215	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

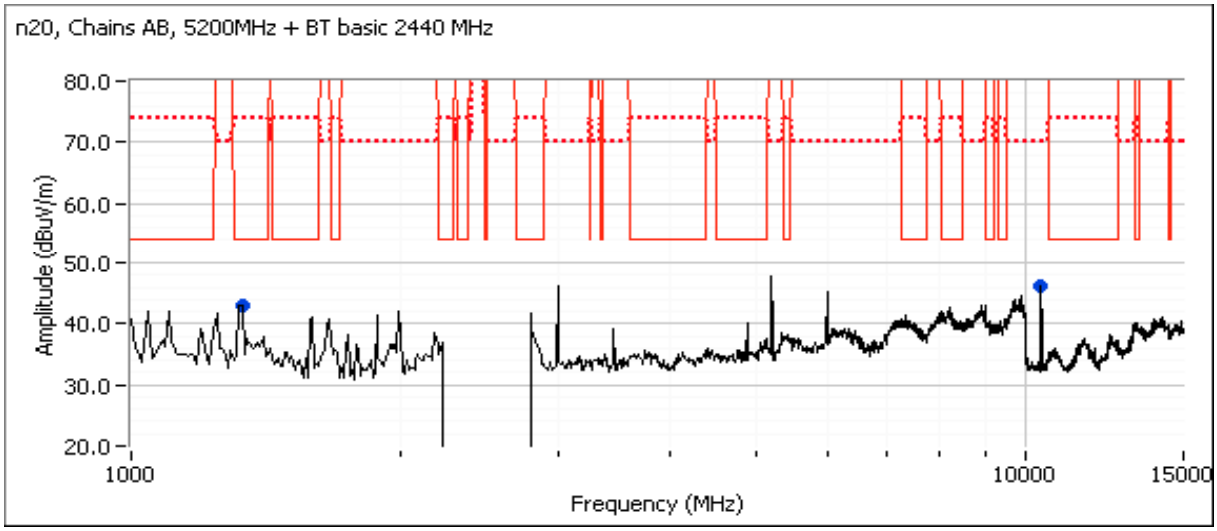
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 10, Jackson Peak 2x2: 1-15 GHz, 802.11n20 @ 5200 MHz, Chains A + B, & BT basic @ 2440 MHz.

Date of Test: 5/2/2012
Test Engineer: John Caizzi
Test Location: FT5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	15.0	39.0
Chain B	16.5 / 7	16.0 / 4.9	39.0 / 8.0

Spurious Radiated Emissions, 1 - 15 GHz, excluding the allocated band.



Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
10400.000	*46.1*	*V*	*54.0*	*-7.9*	*Peak*	*65*	*1.0*	*Note 2*
1330.000	*42.9*	*V*	*54.0*	*-11.1*	*Peak*	*172*	*1.0*	*Note 1*

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Note 1	Not an intermodulation product. Signal present regardless of band, channel, & mode.
Note 2	Not an intermodulation product. 2nd harmonic of WiFi fundamental.

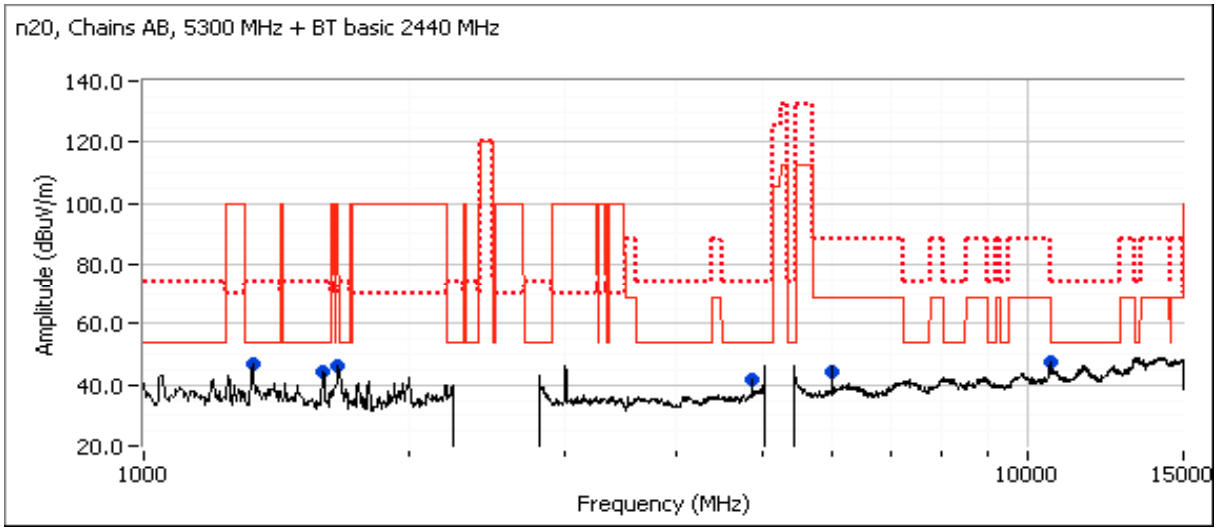
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 11, Jackson Peak 2x2: 1-15 GHz, 802.11n20 @ 5300 MHz, Chains A + B, & BT basic @ 2440 MHz.

Date of Test: 5/2/2012
Test Engineer: John Caizzi / Joseph Cadigal
Test Location: FT5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	15.9	39.0
Chain B	16.5 / 7	16.3 / 4.9	39.0 / 8.0

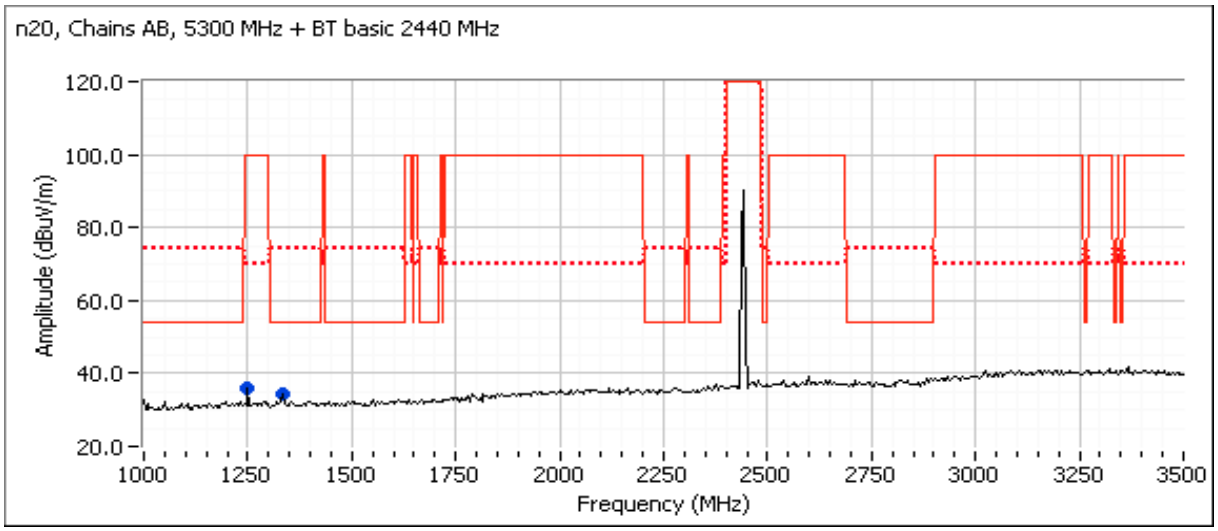
Spurious Radiated Emissions, 1 - 15 GHz, excluding the allocated band.

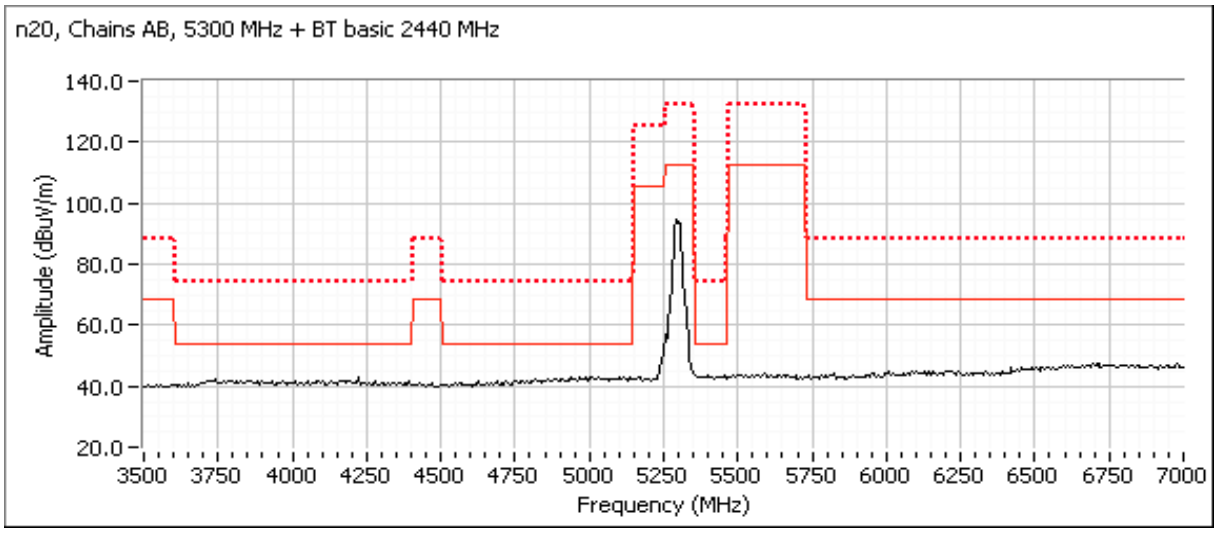


Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Spurious Radiated Emissions, 1 - 7GHz (Scans from 1 - 3.5GHz and 3.5 - 7GHz)

Preliminary Scans at ~ 30cm from the product (card and antenna) to identify potential signals (Peak versus average limit)





Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1253.490	35.8	V	54.0	-18.2	Peak	162	1.0	
1331.570	34.3	V	54.0	-19.7	Peak	341	1.0	

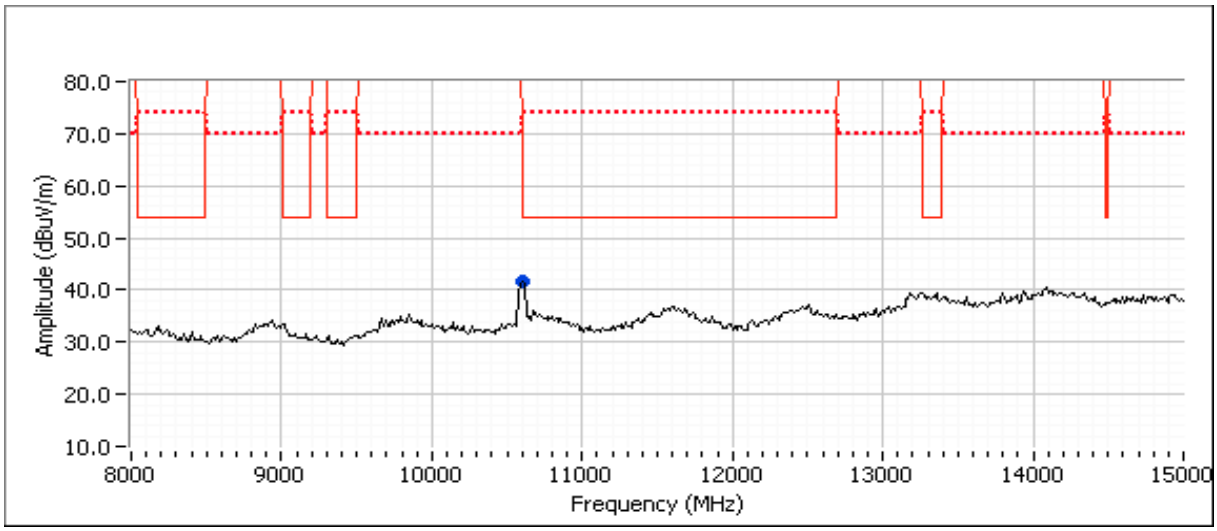
Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit is -30dBc for peak measurements in a measurement bandwidth of 100kHz.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preamplifier and high pass filter used for this scan.



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
10601.670	*41.8*	*V*	*54.0*	*-12.2*	*Peak*	*151*	*1.6*	*Note 1*
1328.340	46.7	V	54.0	-7.3	Peak	163	1.0	
1592.340	44.0	V	54.0	-10.0	Peak	194	1.0	
1658.720	45.9	V	54.0	-8.1	Peak	209	1.0	
6001.410	46.2	V	54.0	-7.8	Peak	135	1.0	
4880.110	41.8	H	54.0	-12.2	Peak	159	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4879.980	38.0	H	54.0	-16.0	AVG	158	1.0	RB 1 MHz;VB 10 Hz;Peak
10601.330	37.1	V	54.0	-16.9	AVG	233	1.5	RB 1 MHz;VB 10 Hz;Peak
1328.330	33.4	V	54.0	-20.6	AVG	160	1.0	RB 1 MHz;VB 10 Hz;Peak
1659.770	49.2	V	70.0	-20.8	PK	210	1.0	RB 1 MHz;VB 3 MHz;Peak
1660.030	32.5	V	54.0	-21.5	AVG	210	1.0	RB 1 MHz;VB 10 Hz;Peak
1593.310	31.6	V	54.0	-22.4	AVG	198	1.0	RB 1 MHz;VB 10 Hz;Peak
1328.570	51.1	V	74.0	-22.9	PK	160	1.0	RB 1 MHz;VB 3 MHz;Peak
10600.120	50.5	V	74.0	-23.5	PK	233	1.5	RB 1 MHz;VB 3 MHz;Peak
4879.840	44.7	H	74.0	-29.3	PK	158	1.0	RB 1 MHz;VB 3 MHz;Peak
1593.310	44.4	V	74.0	-29.6	PK	198	1.0	RB 1 MHz;VB 3 MHz;Peak
6000.560	48.6	V	68.3	-19.7	PK	133	1.0	RB 1 MHz;VB 3 MHz;Peak

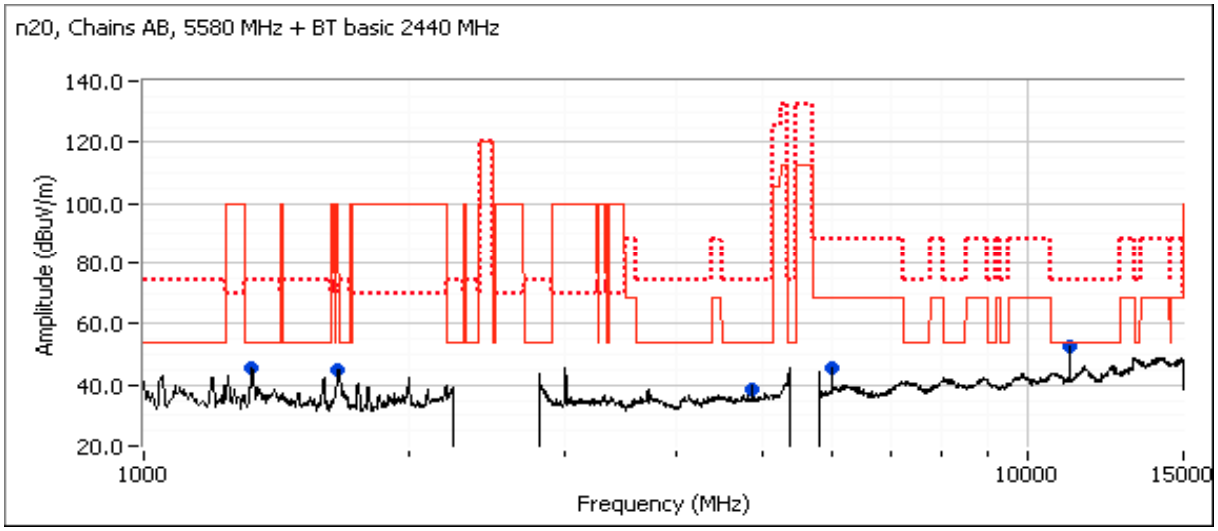
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 12, Jackson Peak 2x2: 1-15GHz, 802.11n20 @ 5580 MHz Chain A + B, BT basic @ 2440 MHz.

Date of Test: 5/2/2012
Test Engineer: John Caizzi / Joseph Cadigal
Test Location: FT5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.2	39.0
Chain B	16.5 / 7	16.4 / 4.9	39.0 / 8.0

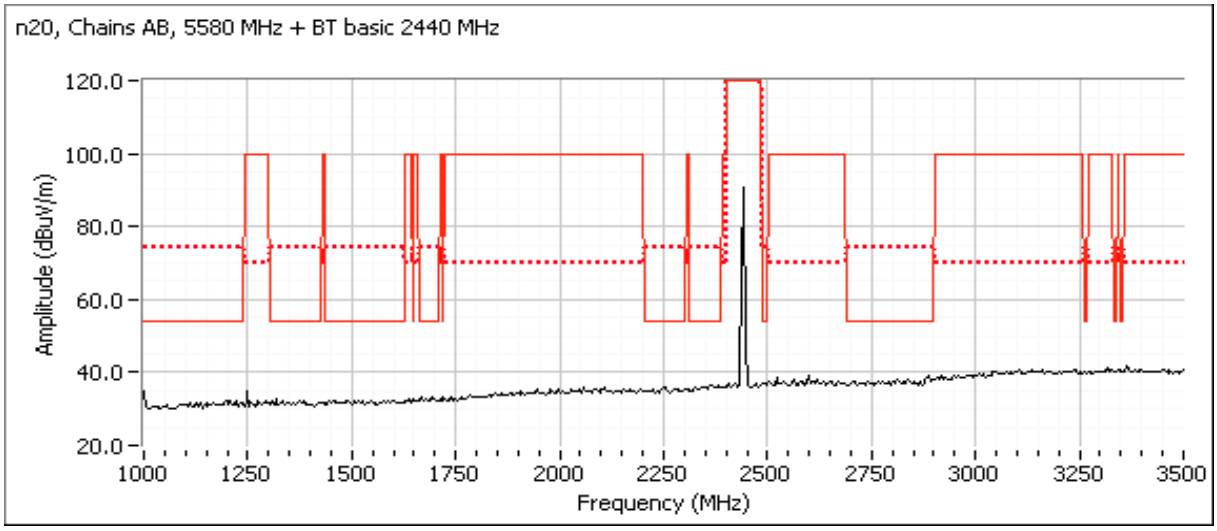
Spurious Radiated Emissions, 1 - 15 GHz:

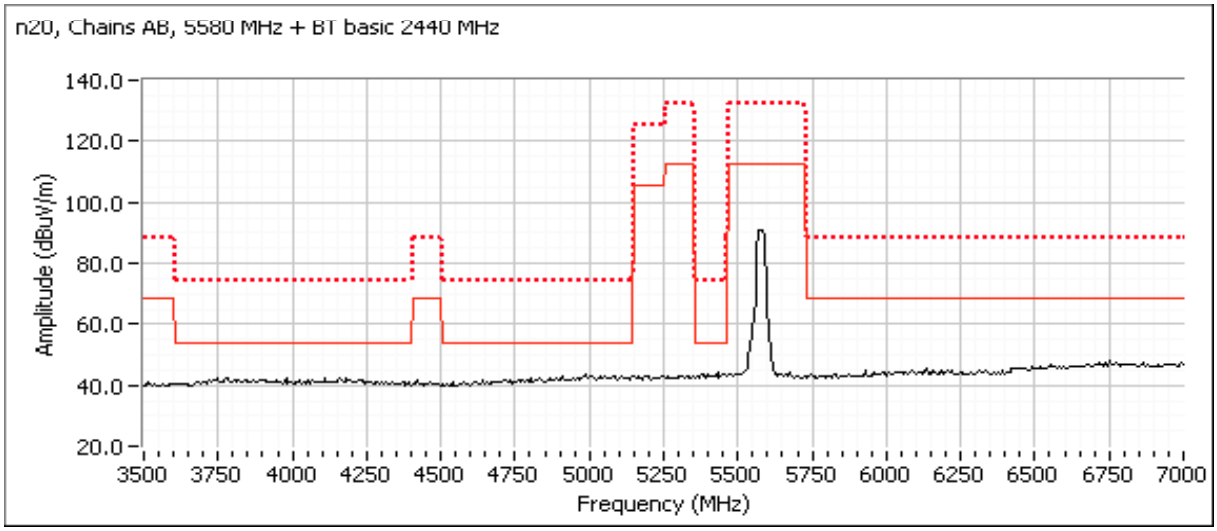


Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Spurious Radiated Emissions, 1 - 7GHz (Scans from 1 - 3.5GHz and 3.5 - 7GHz)

Preliminary Scans at ~ 30cm from the product (card and antenna) to identify potential signals (Peak versus average limit)





Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

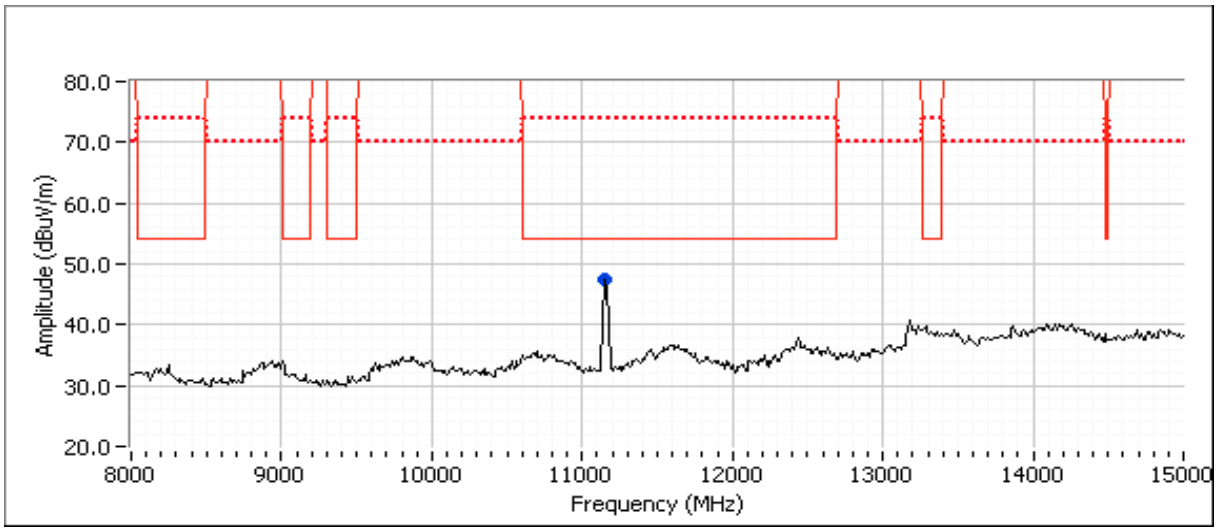
Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit is -30dBc for peak measurements in a measurement bandwidth of 100kHz.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preamplifier and high pass filter used for this scan.



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247/15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
11160.040	52.4	V	54.0	-1.6	Peak	289	1.0	Note 1
4880.360	38.7	H	54.0	-15.3	Peak	119	1.0	
6000.650	45.4	V	68.3	-22.9	Peak	134	1.0	
1661.160	44.8	V	70.0	-25.2	Peak	204	1.0	
1328.770	45.7	V	54.0	-8.3	Peak	292	1.5	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1660.730	32.8	V	54.0	-21.2	AVG	208	1.0	RB 1 MHz;VB 10 Hz;Peak
4880.020	32.1	H	54.0	-21.9	AVG	115	1.0	RB 1 MHz;VB 10 Hz;Peak
1328.160	31.7	V	54.0	-22.3	AVG	295	1.5	RB 1 MHz;VB 10 Hz;Peak
1327.730	49.6	V	74.0	-24.4	PK	295	1.5	RB 1 MHz;VB 3 MHz;Peak
5999.920	41.6	V	68.3	-26.7	AVG	134	1.0	RB 1 MHz;VB 10 Hz;Peak
4879.570	41.0	H	74.0	-33.0	PK	115	1.0	RB 1 MHz;VB 3 MHz;Peak
1659.890	49.4	V	68.3	-18.9	PK	208	1.0	RB 1 MHz;VB 3 MHz;Peak
5999.940	47.0	V	68.3	-21.3	PK	134	1.0	RB 1 MHz;VB 3 MHz;Peak

Note 1	Not an intermodulation product. 2nd harmonic of WiFi fundamental.

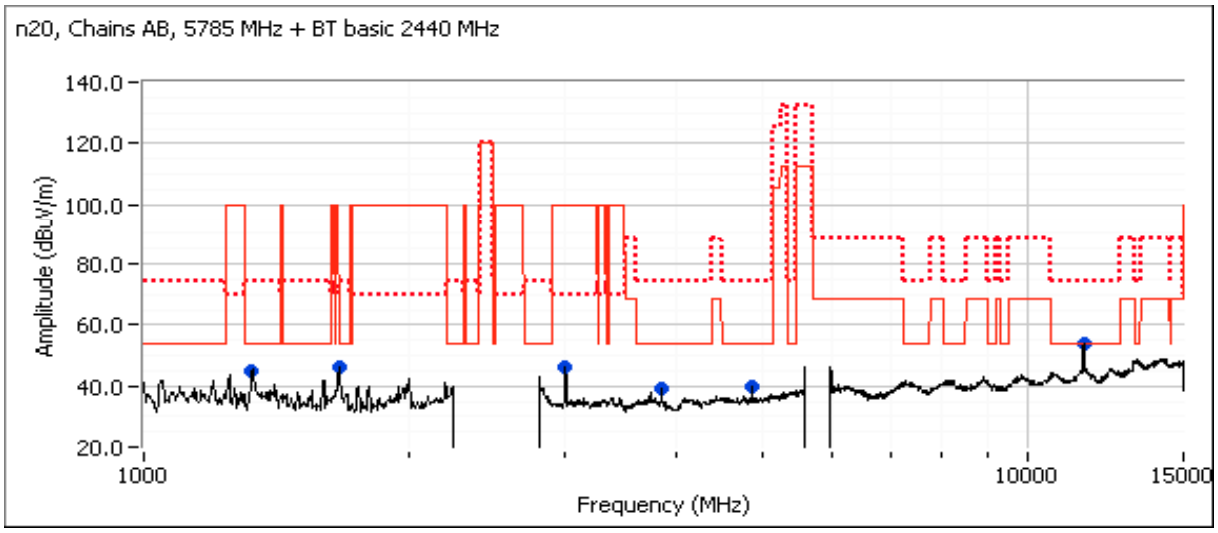
Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run # 13, Jackson Peak 2x2: 1-15GHz, 802.11n20 @ 5785 MHz Chain A + B, BT basic @ 2440 MHz.

Date of Test: 5/2/2012
Test Engineer: John Caizzi / Joseph Cadigal
Test Location: FT5

	Power Settings		
	Target (dBm)	Measured (dBm)	Software Setting
Chain A	16.5	16.2	39.0
Chain B	16.5 / 7	16.4 / 4.9	39.0 / 8.0

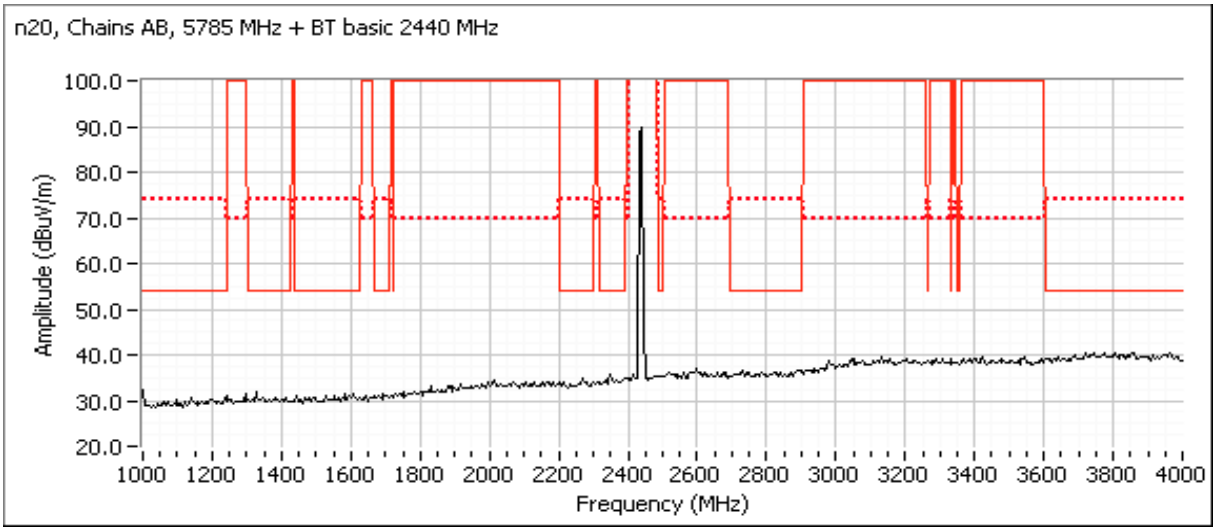
Spurious Radiated Emissions, 1 - 15 GHz:

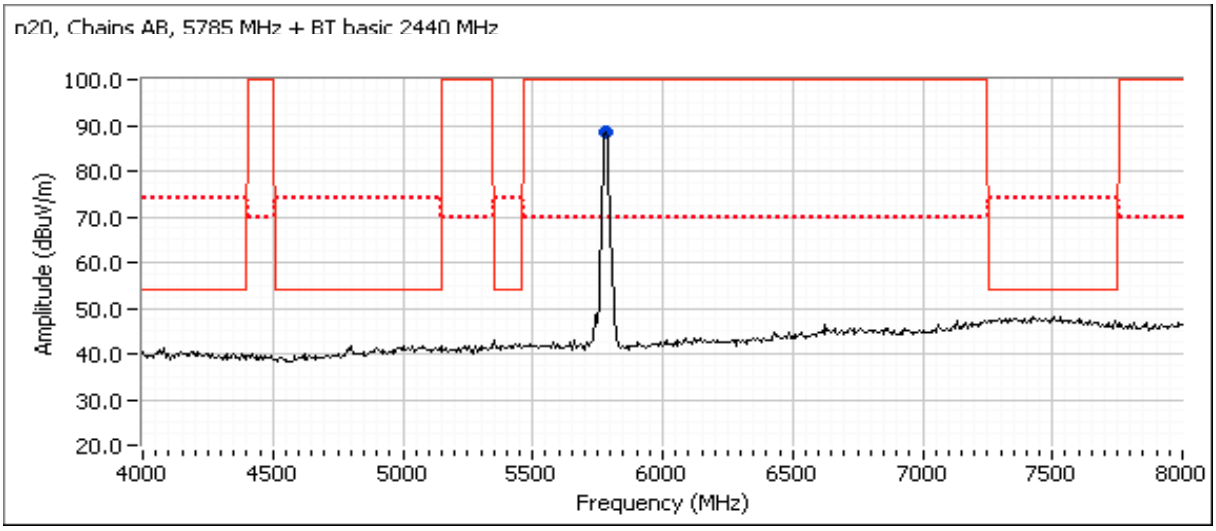


Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Spurious Radiated Emissions, 1 - 7GHz (Scans from 1 - 4GHz and 4 - 8GHz)

Preliminary Scans at ~ 30cm from the product (card and antenna) to identify potential signals (Peak versus average limit)





Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preliminary measurements at ~ 30cm, RB=1MHz, VB=100kHz

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5780.000	*88.5*	*V*	*-*	*-*	*Peak*	*247*	*1.0*	

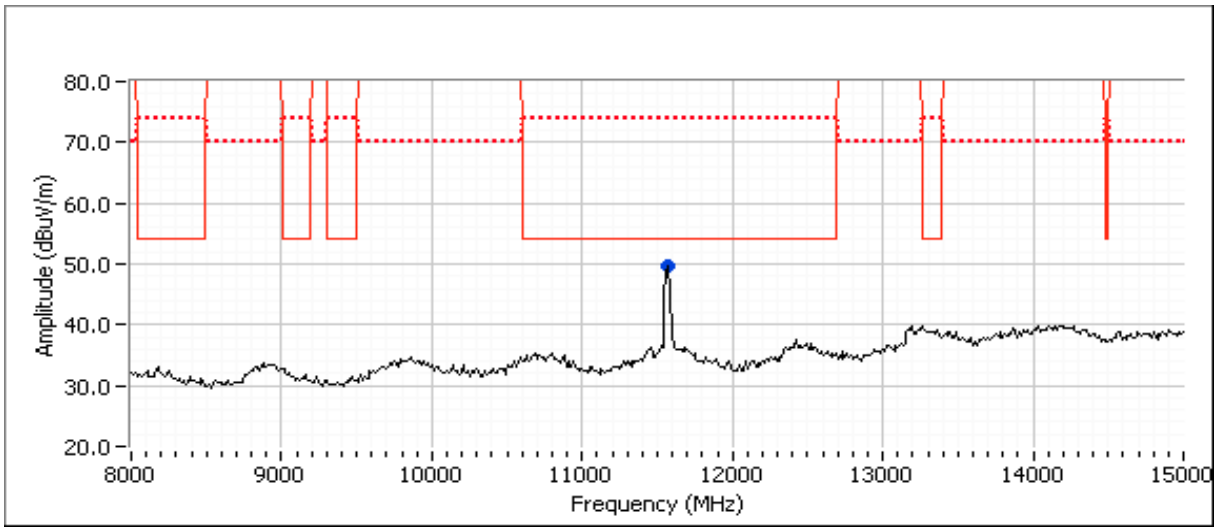
Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit is -30dBc for peak measurements in a measurement bandwidth of 100kHz.

Client:	Intel Corporation	Job Number:	J87129
Model:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87211
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Preamplifier and high pass filter used for this scan.



Preliminary Measurements (Peak versus average limit)

Frequency	Level	Pol	15.209/15.247/15E		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
11561.530	53.7	V	54.0	-0.3	Peak	96	2.5	Note 1
4880.000	40.0	H	54.0	-14.0	Peak	100	1.5	
3850.360	39.2	V	54.0	-14.8	Peak	123	1.0	
1327.140	44.7	V	54.0	-9.3	Peak	145	1.0	
3000.290	46.0	H	70.0	-24.0	Peak	200	1.0	
1661.070	46.1	V	54.0	-7.9	Peak	206	1.0	

Final measurements at 3m

Frequency	Level	Pol	15.209/15.247		Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4880.000	34.1	H	54.0	-19.9	AVG	107	1.5	RB 1 MHz;VB 10 Hz;Peak
1661.810	32.9	V	54.0	-21.1	AVG	207	1.0	RB 1 MHz;VB 10 Hz;Peak
1328.560	31.9	V	54.0	-22.1	AVG	144	1.0	RB 1 MHz;VB 10 Hz;Peak
1327.800	49.7	V	74.0	-24.3	PK	144	1.0	RB 1 MHz;VB 3 MHz;Peak
1660.670	49.0	V	74.0	-25.0	PK	207	1.0	RB 1 MHz;VB 3 MHz;Peak
3850.470	28.4	V	54.0	-25.6	AVG	123	1.0	RB 1 MHz;VB 10 Hz;Peak
4880.290	42.0	H	74.0	-32.0	PK	107	1.5	RB 1 MHz;VB 3 MHz;Peak
3851.510	39.3	V	74.0	-34.7	PK	123	1.0	RB 1 MHz;VB 3 MHz;Peak
3000.190	48.5	H	68.3	-19.8	PK	203	1.0	RB 1 MHz;VB 3 MHz;Peak

Note 1	Not an intermodulation product. 2nd harmonic of WiFi fundamental.

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		-
Emissions Standard(s):	FCC 15.247, 15.407	Class:	B
Immunity Standard(s):	-	Environment:	-

EMC Test Data

For The

Intel Corporation

Model

Intel® Centrino® Advanced-N 6235

Date of Last Test: 5/22/2012

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS-210 (LELAN) and FCC 15.407(UNII)
Antenna Port Measurements - Chain A
Power, PSD, Peak Excursion, Bandwidth and Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 5/7/2012
Test Engineer: Jack Liu, Joseph Cadigal
Test Location: FT Lab3
Config. Used: 1
Config Change: none
Host Unit Voltage 120V/60Hz

Summary of Results - Chain A

MAC Address:44850006301F DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5150 - 5250MHz	15.407(a) (1), (2)	Pass	802.11a: 19 mW 802.11n 20MHz: 19 mW 802.11n 40MHz: 16 mW
1	PSD, 5150 - 5250MHz	15.407(a) (1), (2)	Pass	802.11a: 0.3 dBm/MHz 802.11n 20MHz: 0.1dBm/MHz 802.11n 40MHz: -2.9 dBm/MHz
1	Power, 5250 - 5350MHz	15.407(a) (1), (2)	Pass	802.11a: 25 mW 802.11n 20MHz: 24 mW 802.11n 40MHz: 18 mW
1	PSD, 5250 - 5350MHz	15.407(a) (1), (2)	Pass	802.11a: 1.4 dBm/MHz 802.11n 20MHz: 1.1 dBm/MHz 802.11n 40MHz: -2.9 dBm/MHz
1	Power, 5470 - 5725MHz	15.407(a) (1), (2)	Pass	802.11a: 37 mW 802.11n 20MHz: 36 mW 802.11n 40MHz: 33 mW
1	PSD, 5470 - 5725MHz	15.407(a) (1), (2)	Pass	802.11a: 3.0 dBm/MHz 802.11n20MHz: 2.8 dBm/MHz 802.11n40MHz: 0.2 dBm/MHz
1	26dB Bandwidth	15.407 (Information only)	-	> 20MHz for all modes
1	99% Bandwidth	RSS 210 (Information only)	N/A	802.11a: 17.4 MHz 802.11n 20MHz: 18.5 MHz 802.11n 40MHz: 36.4 MHz
2	Peak Excursion Envelope	15.407(a) (6) 13dB	Pass	9.2dB
3	Antenna Conducted - Out of Band Spurious	15.407(b) -27dBm/MHz	Pass	All emissions below the -27dBm/MHz limit

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	25 °C
Rel. Humidity:	40 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1: Bandwidth, Output Power and Power Spectral Density - Single Chain Systems

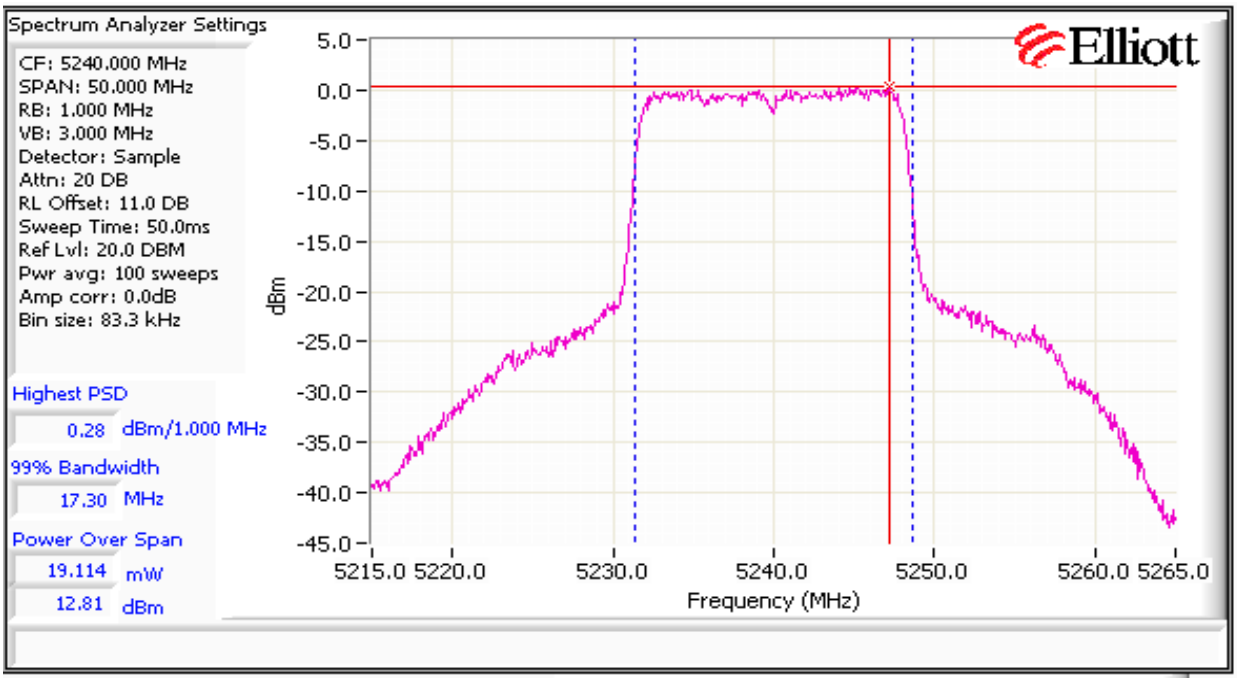
Note 1:	Output power measured using a spectrum analyzer (see plots below). RBW=1MHz, VB=3 MHz, # of points in sweep ≥ 2*span/RBW, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50/100 MHz (method SA-1 of KDB 789033).
Note 2:	Measured using the same analyzer settings used for output power.
Note 3:	For RSS-210 the limit for the 5150 - 5250 MHz band accounts for the antenna gain as the maximum eirp allowed is 10dBm/MHz. The limits are also corrected for instances where the highest measured value of the PSD exceeds the average PSD (calculated from the measured power divided by the measured 99% bandwidth) by more than 3dB by the amount that the measured value exceeds the average by more than 3dB.
Note 4:	99% Bandwidth measured in accordance with RSS GEN - RB > 1% of span and VB >=3xRB

Single Chain Operation, 5150-5250MHz Band

Antenna Gain (dBi): 3.6 EIRP: 43.8 mW 16.4 dBm

Frequency (MHz)	Software Setting	Bandwidth 26dB	Bandwidth 99%[4]	Output Power[1] dBm Measured	Output Power[1] dBm Limit	Power (Watts)	PSD[2] dBm/MHz Measured	PSD[2] dBm/MHz FCC Limit	PSD[2] dBm/MHz RSS Limit[3]	Result
802.11a										
5180	27.0	37.2	17.1	10.9	17.0	0.012	-1.5	4.0	6.4	Pass
5200	29.5	40.7	17.2	12.4	17.0	0.017	-0.2	4.0	6.4	Pass
5240	29.5	38.7	17.3	12.8	17.0	0.019	0.3	4.0	6.4	Pass
802.11n 20MHz										
5180	27.0	40.9	18.1	10.7	17.0	0.012	-2.1	4.0	6.4	Pass
5200	29.5	44.8	18.4	12.3	17.0	0.017	-0.5	4.0	6.4	Pass
5240	29.5	44.2	18.3	12.8	17.0	0.019	0.1	4.0	6.4	Pass
802.11n 40MHz										
5190	23.5	46.3	36.1	7.7	17.0	0.006	-7.6	4.0	6.4	Pass
5230	29.5	70.2	36.3	12.2	17.0	0.016	-2.9	4.0	6.4	Pass

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

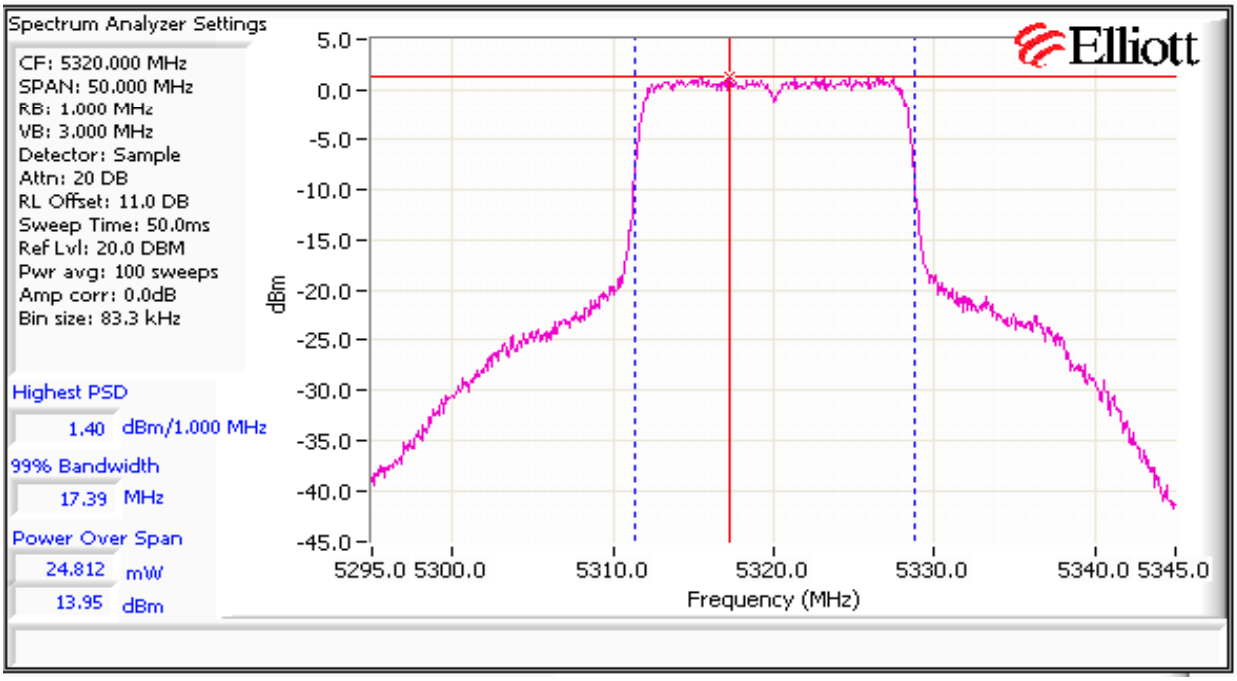


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Single Chain Operation, 5250-5350 MHz Band

Antenna Gain (dBi): 3.7 EIRP: 58.2 mW 17.7 dBm

Frequency (MHz)	Software Setting	Bandwidth 26dB	Bandwidth 99%[4]	Output Power[1] dBm Measured	Output Power[1] dBm Limit	Power (Watts)	PSD[2] dBm/MHz Measured	PSD[2] dBm/MHz FCC Limit	PSD[2] dBm/MHz RSS Limit[3]	Result
802.11a										
5260	29.0	38.5	17.3	13.2	24.0	0.021	0.7	11.0	11.0	Pass
5300	28.5	38.4	17.3	13.3	24.0	0.021	0.8	11.0	11.0	Pass
5320	29.5	38.9	17.4	14.0	24.0	0.025	1.4	11.0	11.0	Pass
802.11n 20MHz										
5260	29.0	45.3	18.3	13.0	24.0	0.020	0.1	11.0	11.0	Pass
5300	28.5	44.0	18.3	13.1	24.0	0.020	0.5	11.0	11.0	Pass
5320	29.5	44.3	18.5	13.8	24.0	0.024	1.1	11.0	11.0	Pass
802.11n 40MHz										
5270	29.0	71.7	36.4	12.5	24.0	0.018	-2.9	11.0	11.0	Pass
5310	23.0	46.5	36.1	8.9	24.0	0.008	-6.3	11.0	11.0	Pass



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Single Chain Operation, 5470- 5725 MHz Band

Antenna Gain (dBi): 4.8 EIRP: 112.2 mW 20.5 dBm

Frequency (MHz)	Software Setting	Bandwidth 26dB	Bandwidth 99%[4]	Output Power[1] dBm Measured	Output Power[1] dBm Limit	Power (Watts)	PSD[2] dBm/MHz Measured	PSD[2] dBm/MHz FCC Limit	PSD[2] dBm/MHz RSS Limit[3]	Result
802.11a										
5500	27.5	36.8	17.0	15.7	24.0	0.037	3.0	11.0	11.0	Pass
5580	27.5	36.5	17.0	14.7	24.0	0.030	2.0	11.0	11.0	Pass
5700	30.0	37.0	17.2	15.2	24.0	0.033	2.6	11.0	11.0	Pass
802.11n 20MHz										
5500	28.0	43.3	18.1	15.6	24.0	0.036	2.8	11.0	11.0	Pass
5580	27.5	41.8	18.1	14.4	24.0	0.028	1.5	11.0	11.0	Pass
5700	30.0	28.9	18.2	15.1	24.0	0.032	2.3	11.0	11.0	Pass
802.11n 40MHz										
5510	26.5	40.1	36.2	13.7	24.0	0.023	-1.6	11.0	11.0	Pass
5550	28.5	69.2	36.2	14.8	24.0	0.030	-0.3	11.0	11.0	Pass
5670	31.0	67.6	36.5	15.2	24.0	0.033	0.2	11.0	11.0	Pass

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2: Peak Excursion Measurement

802.11a: Device meets the requirement for the peak excursion

Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5180	8.0	13.0	5260	8.5	13.0	5500	8.5	13.0
5200	8.4	13.0	5300	8.6	13.0	5580	8.4	13.0
5240	8.4	13.0	5320	8.3	13.0	5700	9.2	13.0

n 20MHz: Device meets the requirement for the peak excursion

Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5180	8.1	13.0	5260	8.4	13.0	5500	8.1	13.0
5200	8.2	13.0	5300	8.4	13.0	5580	8.1	13.0
5240	8.2	13.0	5320	8.4	13.0	5700	8.8	13.0

n 40MHz: Device meets the requirement for the peak excursion

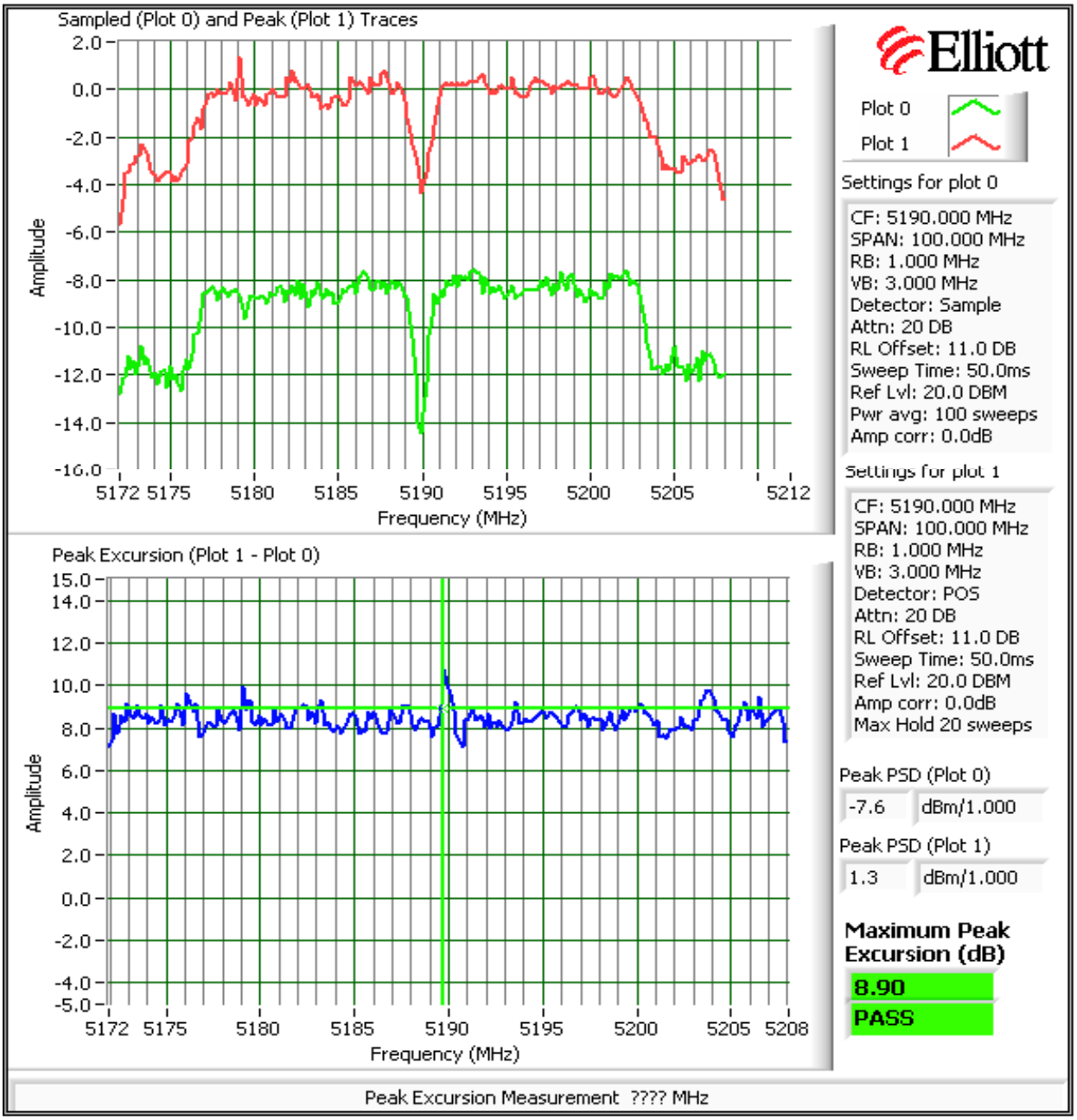
Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5190	8.9	13.0	5270	8.7	13.0	5510	9.0	13.0
5230	8.3	13.0	5310	8.3	13.0	5550	8.4	13.0
						5670	8.9	13.0

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Plots Showing Peak Excursion

Trace A: RBW = 1MHz, VBW = 3MHz, Peak hold

Trace B: Same settings as used for power/PSD measurements (RBW = 1 MHz, VBW = 3MHz, Integrated average power)



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

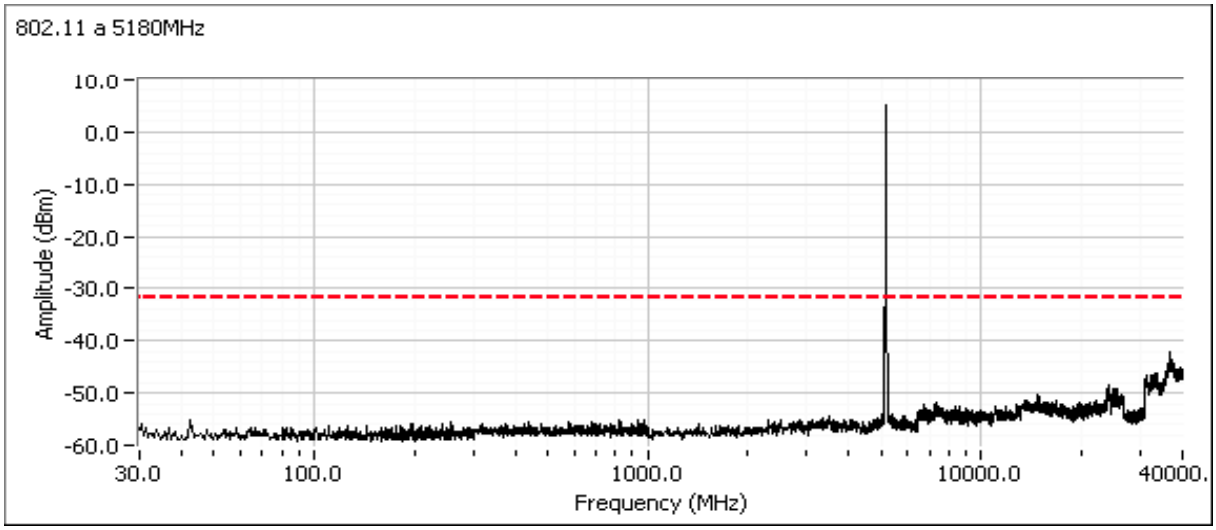
Run #3: Out Of Band Spurious Emissions - Antenna Conducted
802.11a

Maximum Antenna Gain:	4.8	dBi	(worst case for all 3 bands)
Spurious Limit:	-27.0	dBm/MHz eirp	
Limit Used On Plots [Note 1]:	-31.8	dBm/MHz	Peak Limit (RB=1MHz VB=3MHz)

Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during the radiated emissions test.

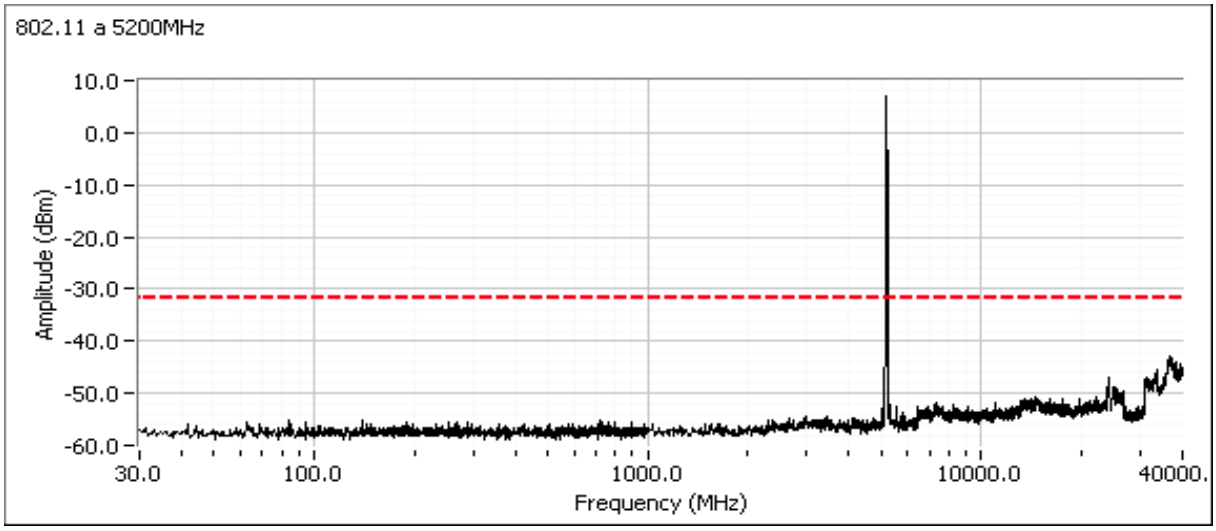
Plots Showing Out-Of-Band - 802.11a Mode Emissions (RBW=VBW=1MHz)

Low channel, 5150 - 5250 MHz Band - 802.11a Mode
Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

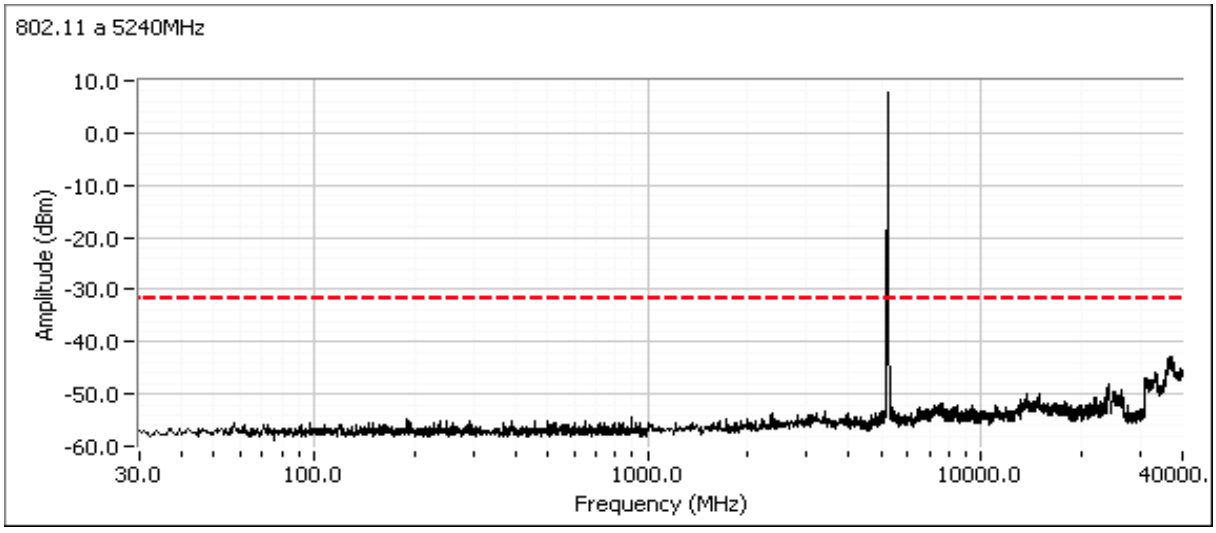


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5150 - 5250 MHz Band - 802.11a Mode

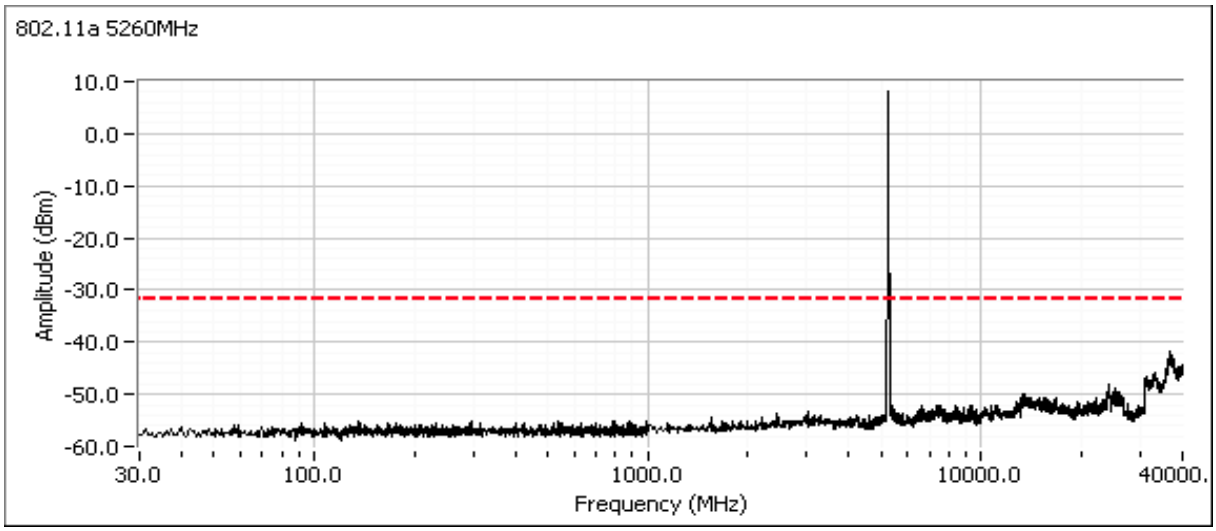


High channel, 5150 - 5250 MHz Band - 802.11a Mode

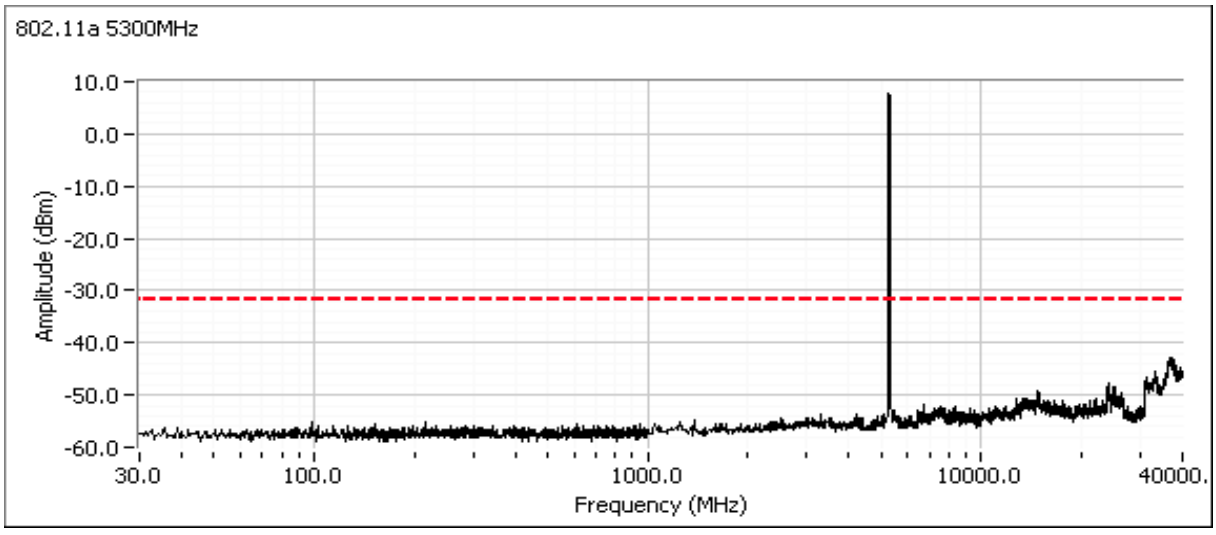


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5250 - 5350 MHz Band - 802.11a Mode



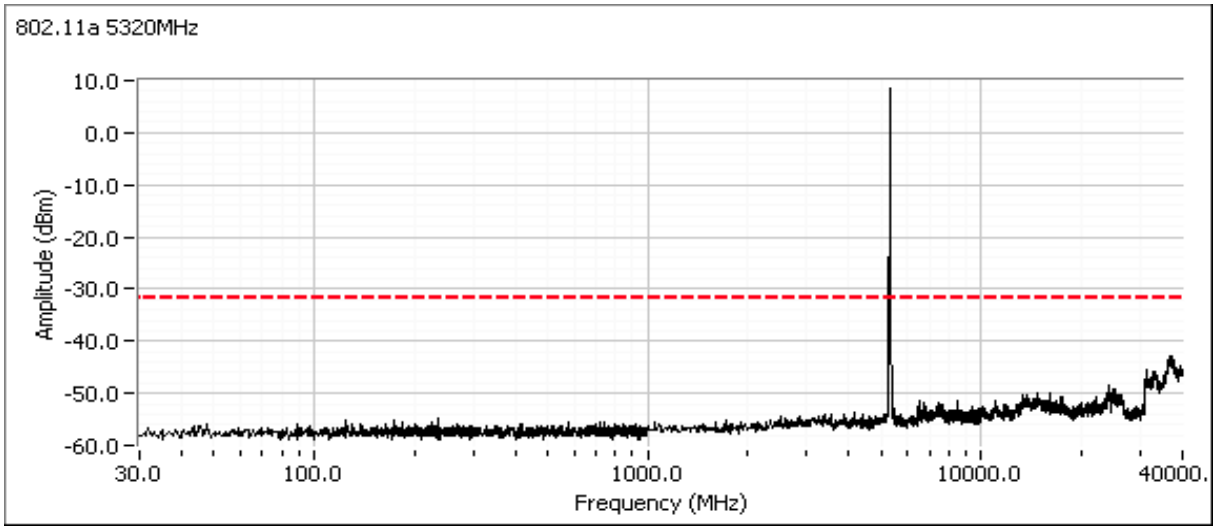
Center channel, 5250 - 5350 MHz Band - 802.11a Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

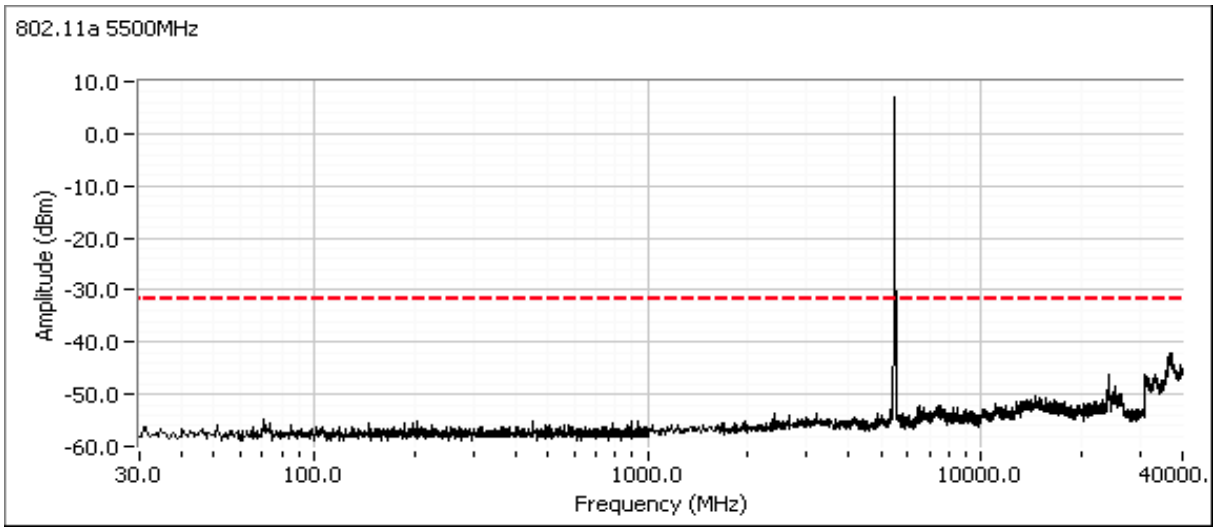
High channel, 5250 - 5350 MHz Band - 802.11a Mode

Compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.



Low channel, 5470 - 5725 MHz Band - 802.11a Mode

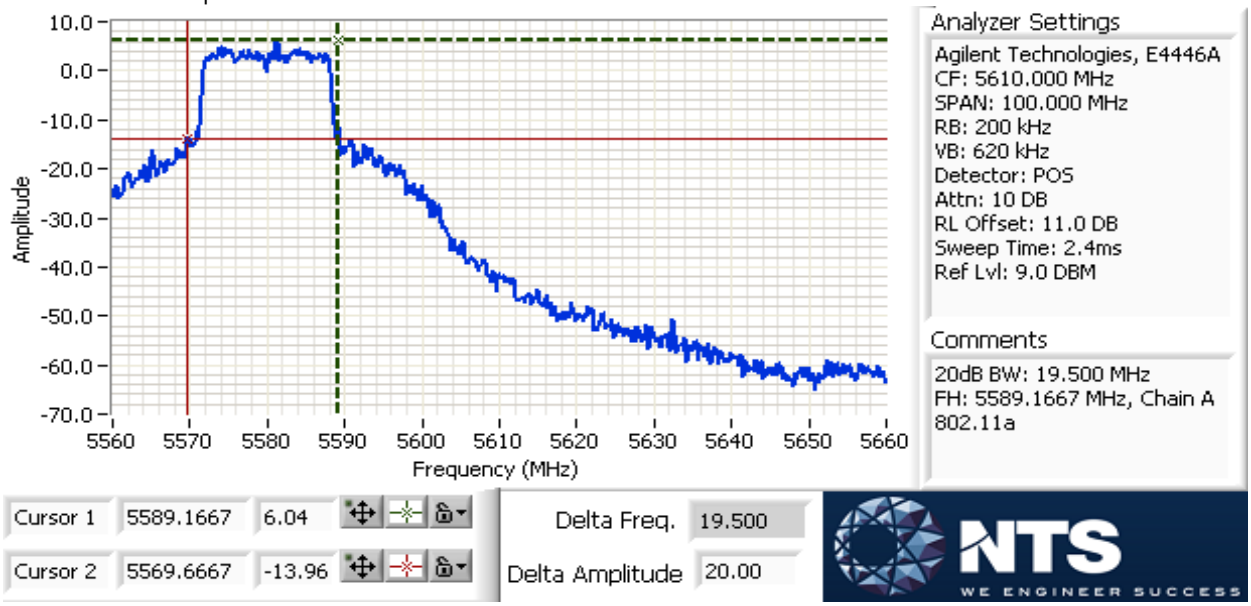
Compliance with the radiated limits for the restricted band below 5460 MHz is demonstrated through the radiated emissions tests.



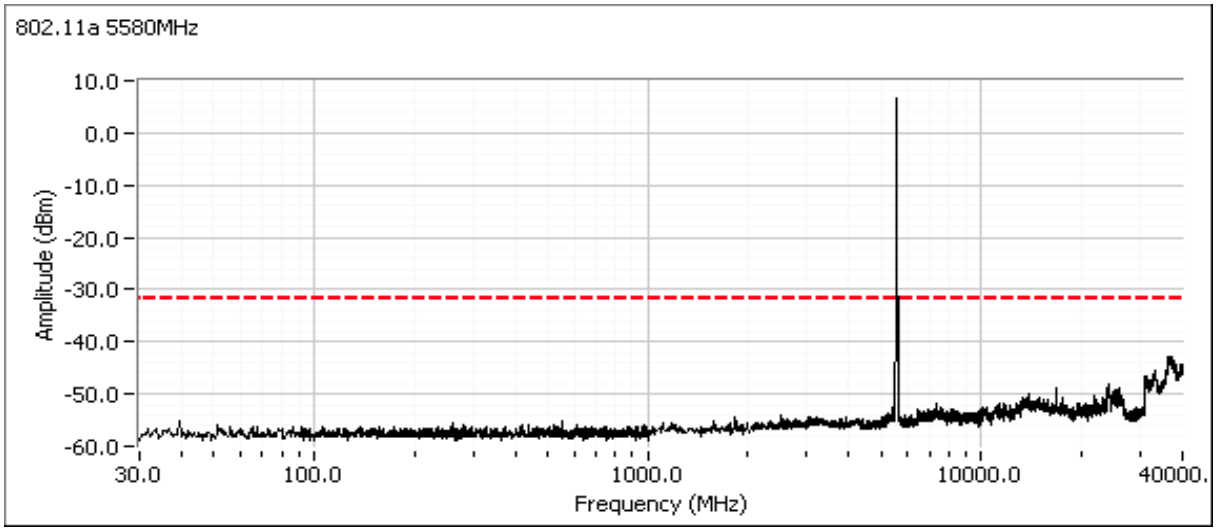
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5470 - 5725 MHz Band - 802.11a Mode

For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



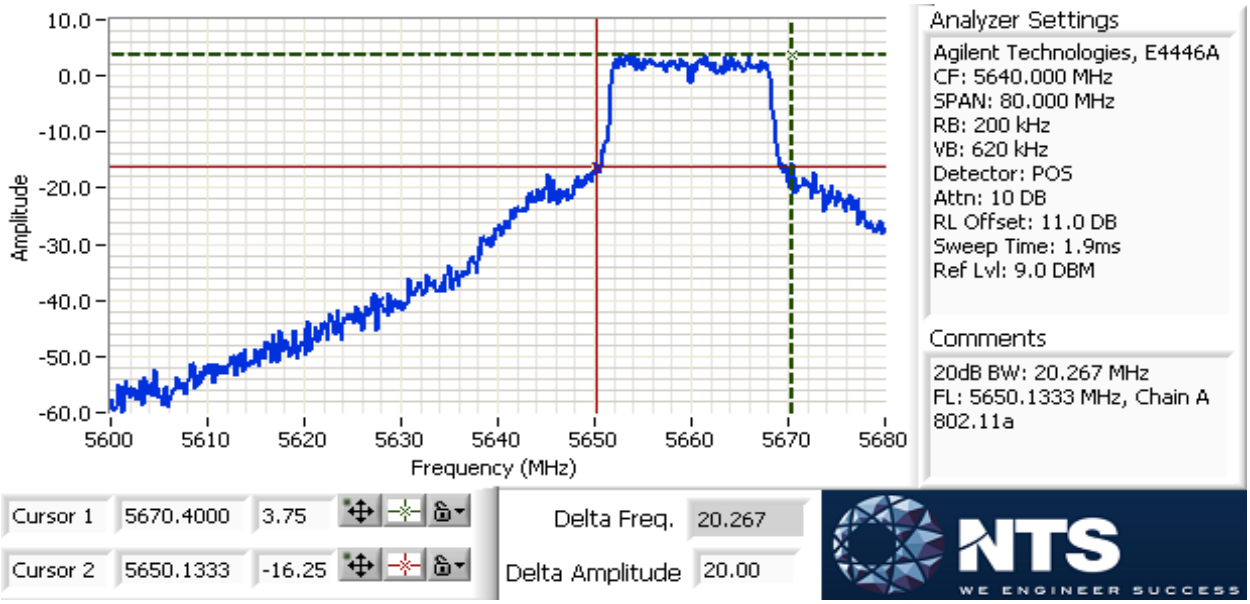
Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).



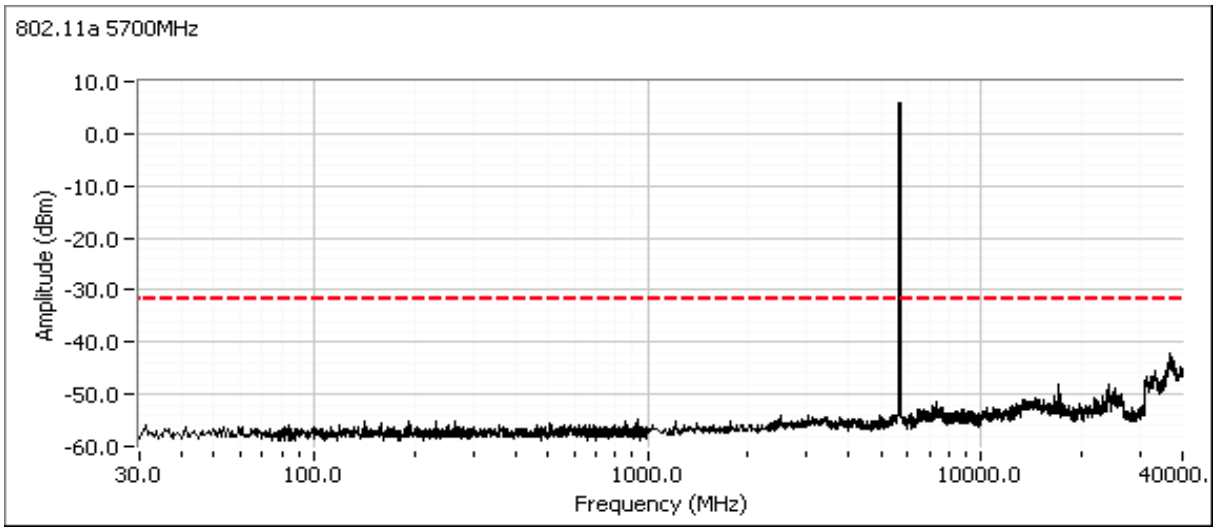
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



High channel, 5470 - 5725 MHz Band - 802.11a Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

802.11n Modes - n 20MHz

MIMO Devices: Antenna gain used is the effective gain calculated in the power section of this data sheet. The plots were obtained for each chain individually and the limit was adjusted to account for all chains transmitting simultaneously

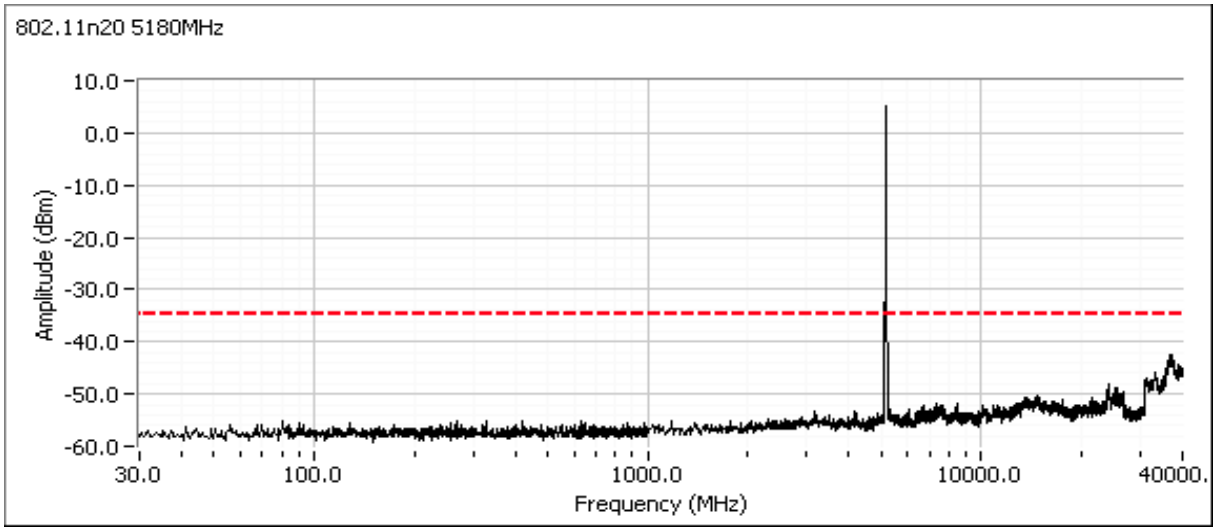
Number of transmit chains:	2		
Maximum Antenna Gain:	4.8	dBi	(worst case for all 3 bands)
Spurious Limit:	-27.0	dBm/MHz eirp	
Limit Used On Plots Note 1:	-34.8	dBm/MHz	Peak Limit (RB=1MHz VB=3MHz)

Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during the radiated emissions test.

Plots Showing Out-Of-Band - 802.11n - 20MHz Mode Emissions (RBW=VBW=1MHz)

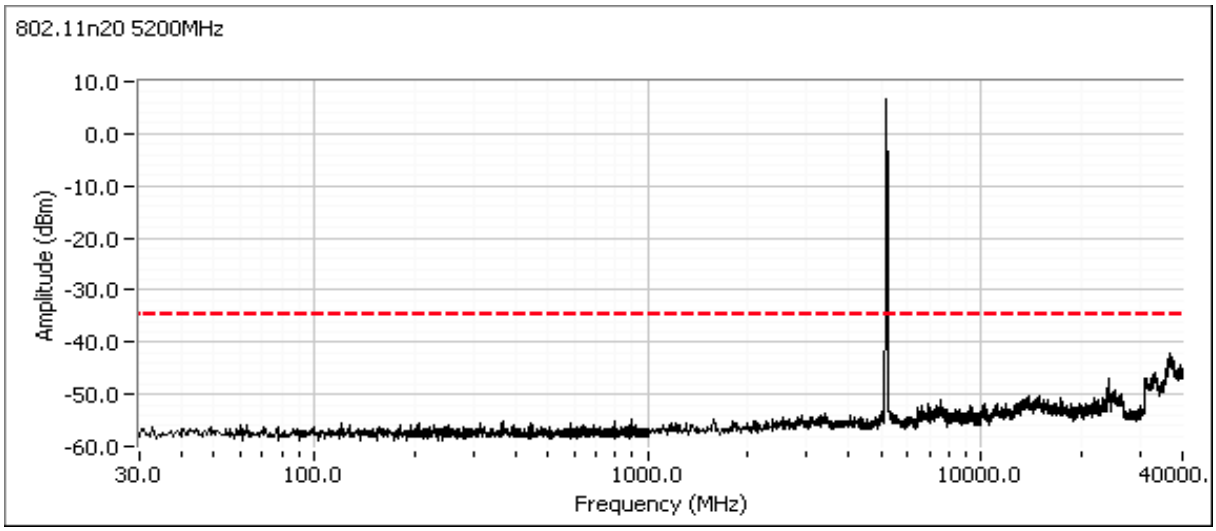
Low channel, 5150 - 5250 MHz Band - 802.11n - 20MHz Mode

Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

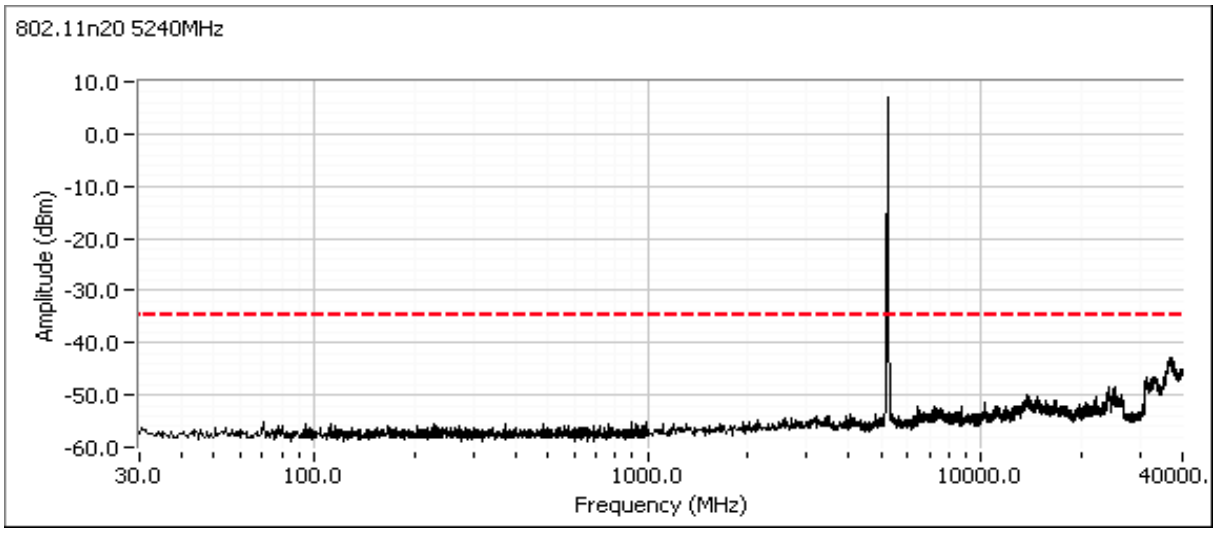


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5150 - 5250 MHz Band - 802.11n - 20MHz Mode

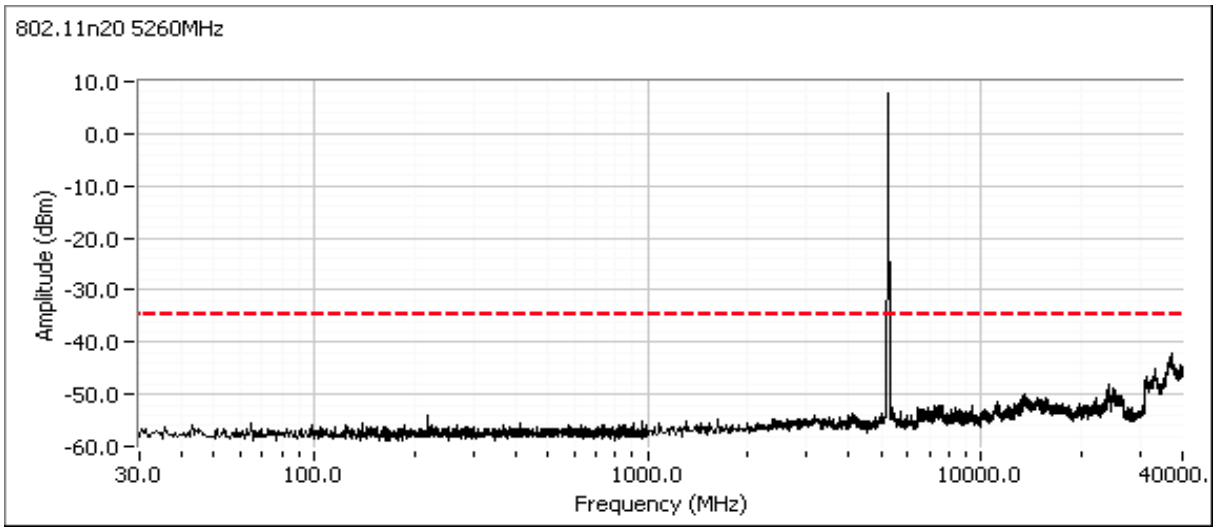


High channel, 5150 - 5250 MHz Band - 802.11n - 20MHz Mode

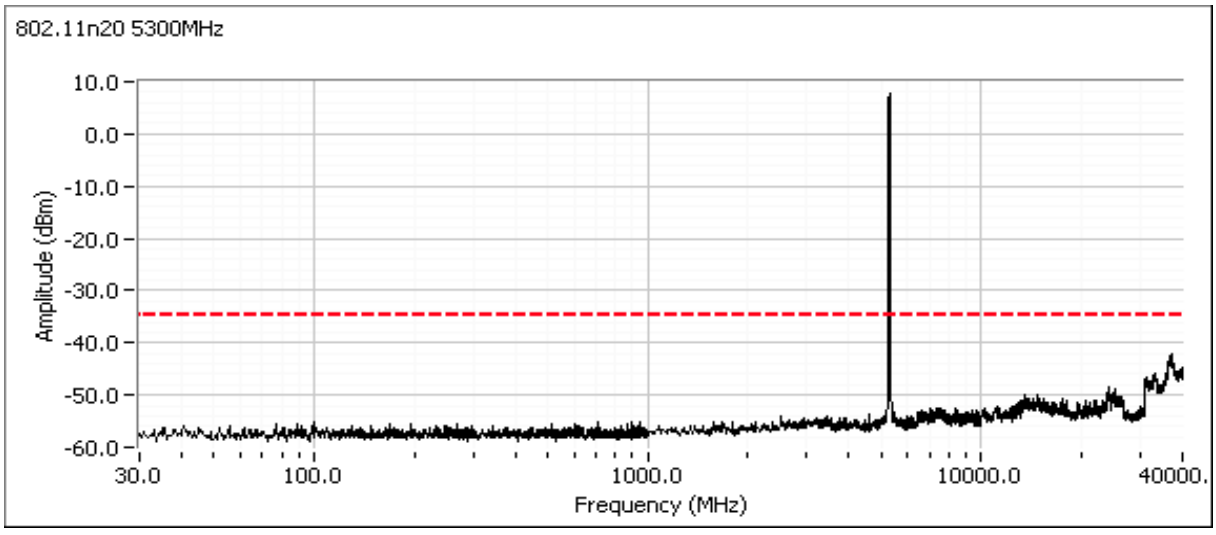


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5250 - 5350 MHz Band - 802.11n - 20MHz Mode



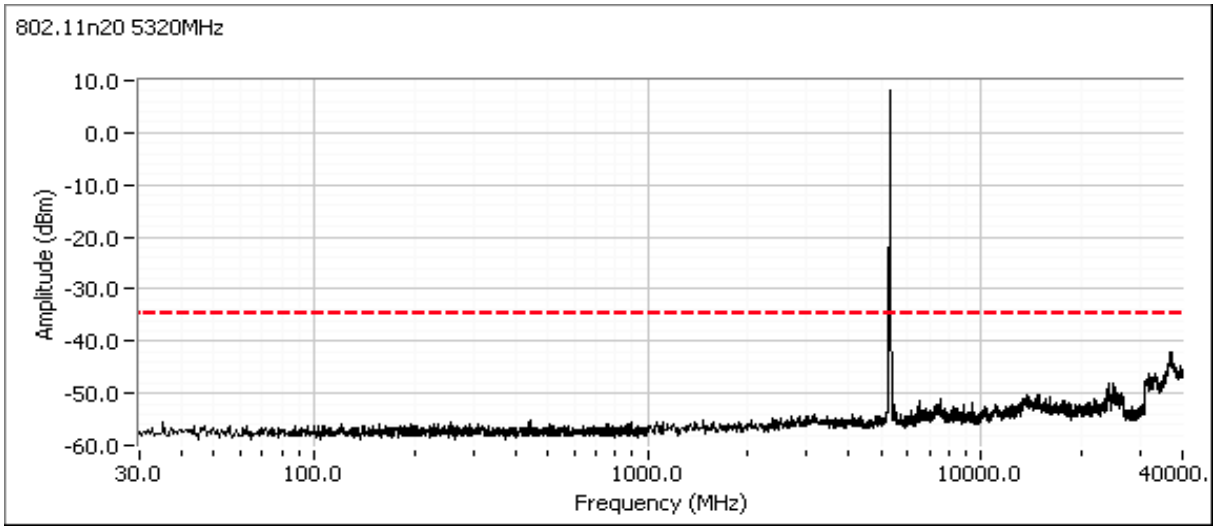
Center channel, 5250 - 5350 MHz Band - 802.11n - 20MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

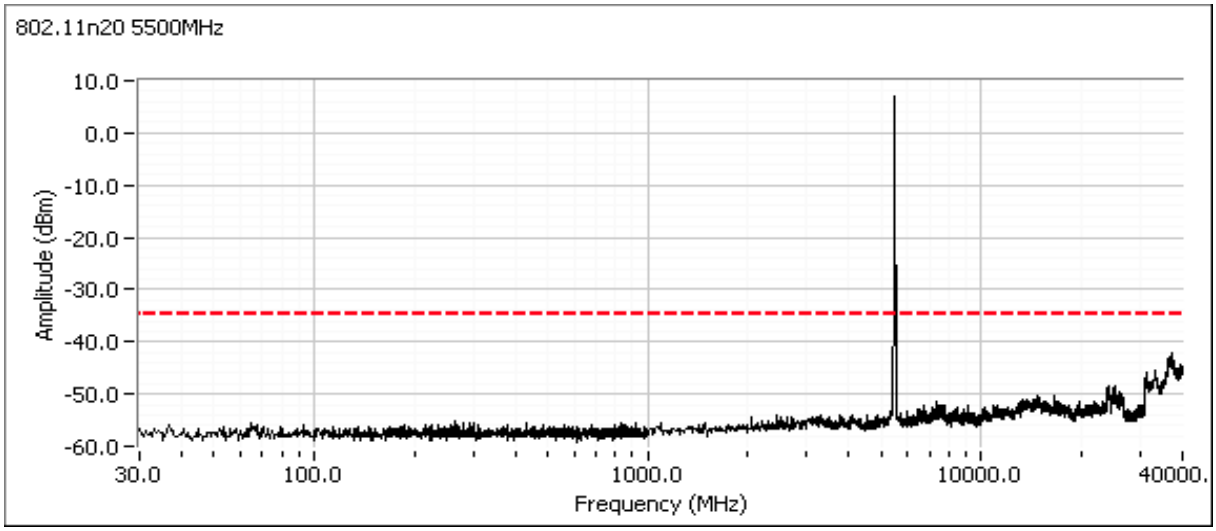
High channel, 5250 - 5350 MHz Band - 802.11n - 20MHz Mode

Compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.



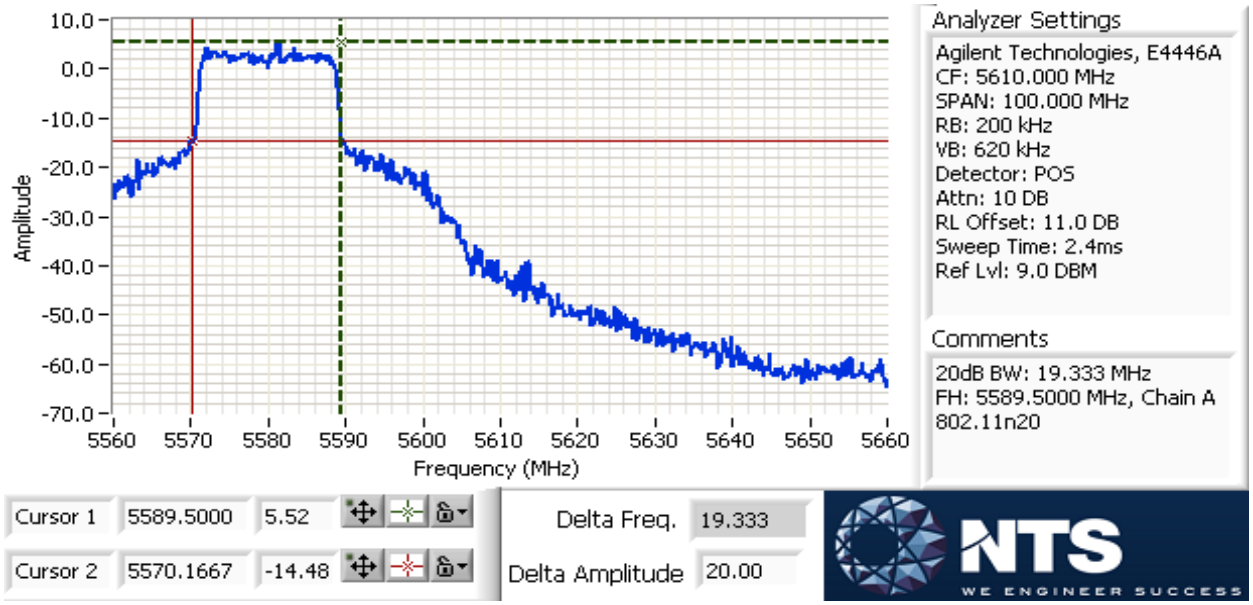
Low channel, 5470 - 5725 MHz Band - 802.11n - 20MHz Mode

Compliance with the radiated limits for the restricted band below 5460 MHz is demonstrated through the radiated emissions tests.

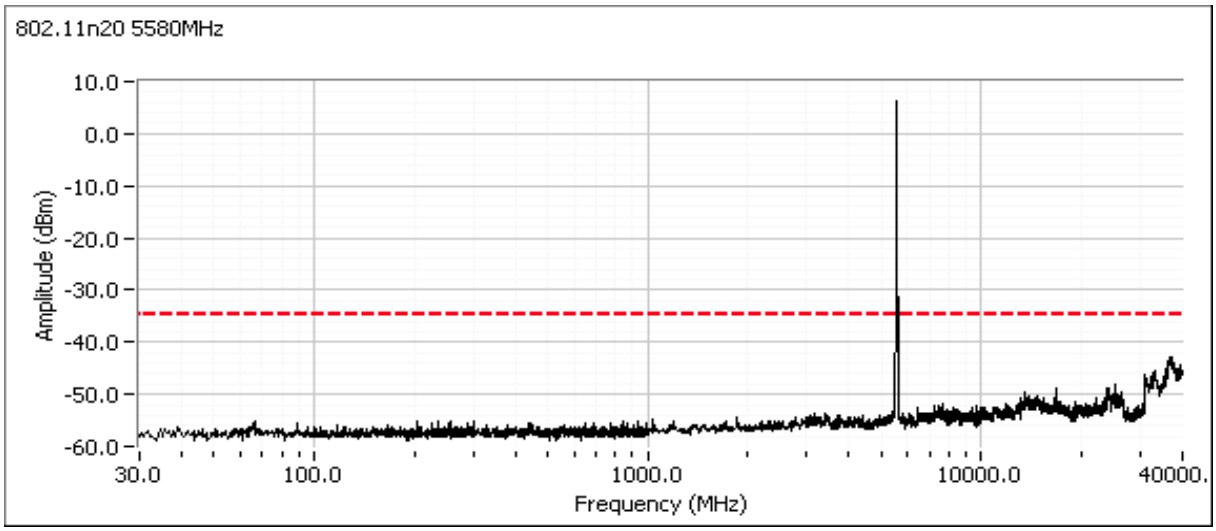


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5470 - 5725 MHz Band - 802.11n - 20MHz Mode (use 5580 MHz)
For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



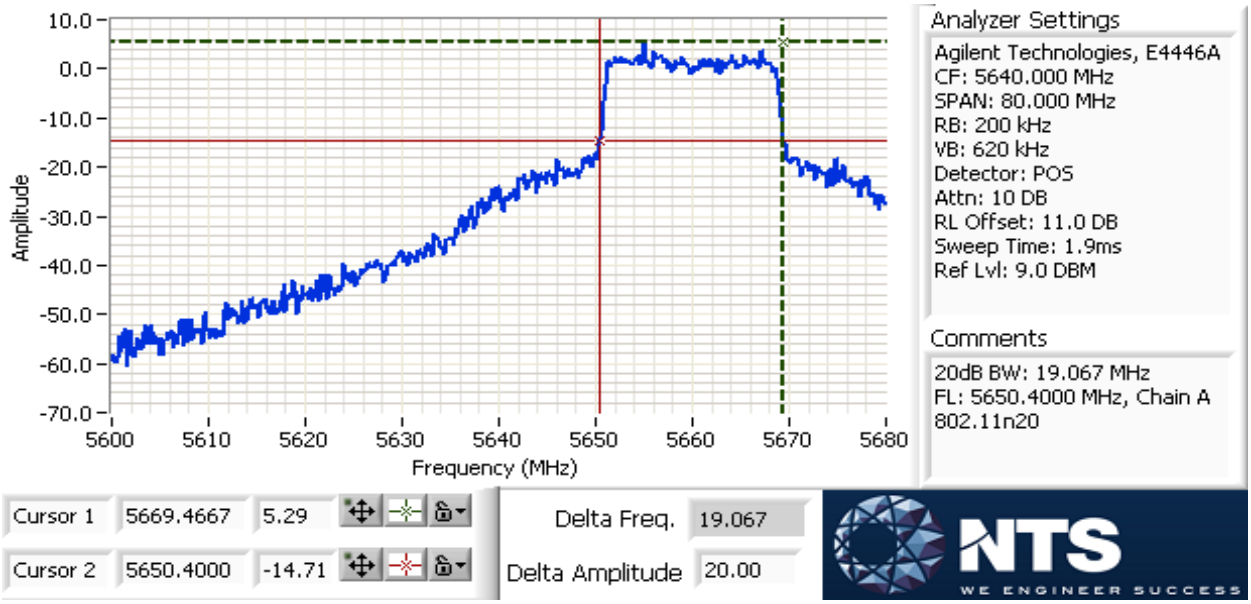
Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).



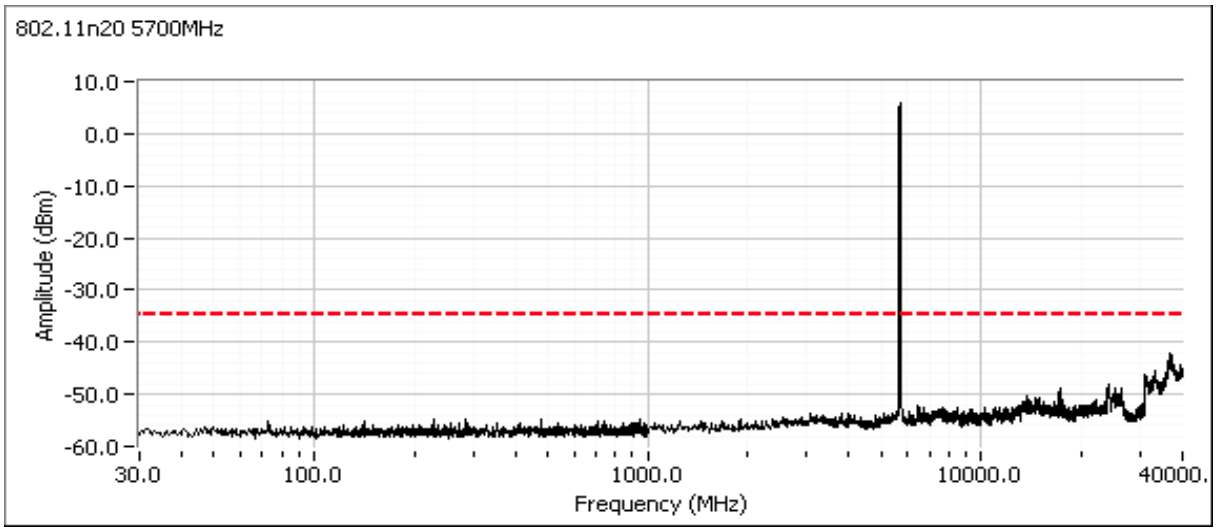
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



High channel, 5470 - 5725 MHz Band - 802.11n - 20MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

802.11n Modes - n40MHz

MIMO Devices: Antenna gain used is the effective gain calculated in the power section of this data sheet. The plots were obtained for each chain individually and the limit was adjusted to account for all chains transmitting simultaneously

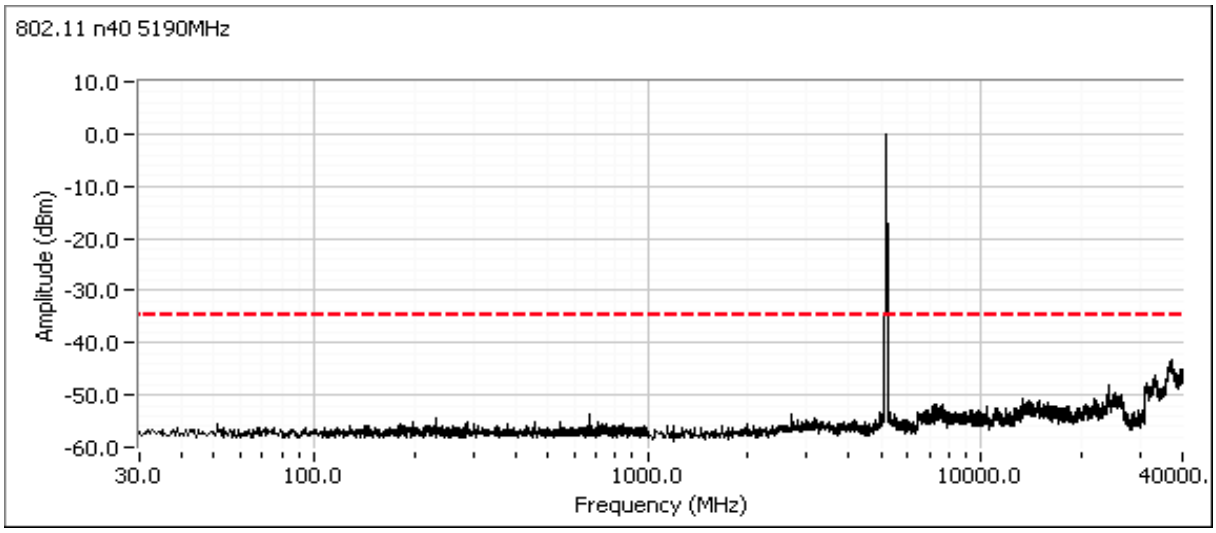
Number of transmit chains:	2		
Maximum Antenna Gain:	4.8	dBi	(worst case for all 3 bands)
Spurious Limit:	-27.0	dBm/MHz eirp	
Limit Used On Plots Note 1.:	-34.8	dBm/MHz	Peak Limit (RB=1MHz VB=3MHz)

Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during the radiated emissions test.

Plots Showing Out-Of-Band - 802.11n - 40MHz Mode Emissions (RBW=VBW=1MHz)

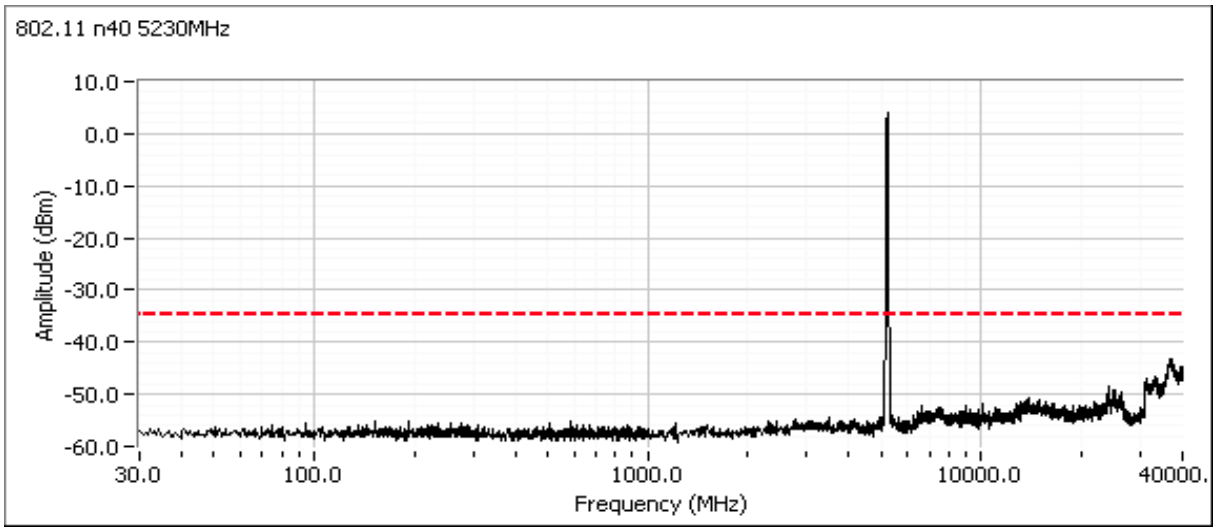
Low channel, 5150 - 5250 MHz Band - 802.11n - 40MHz Mode

Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

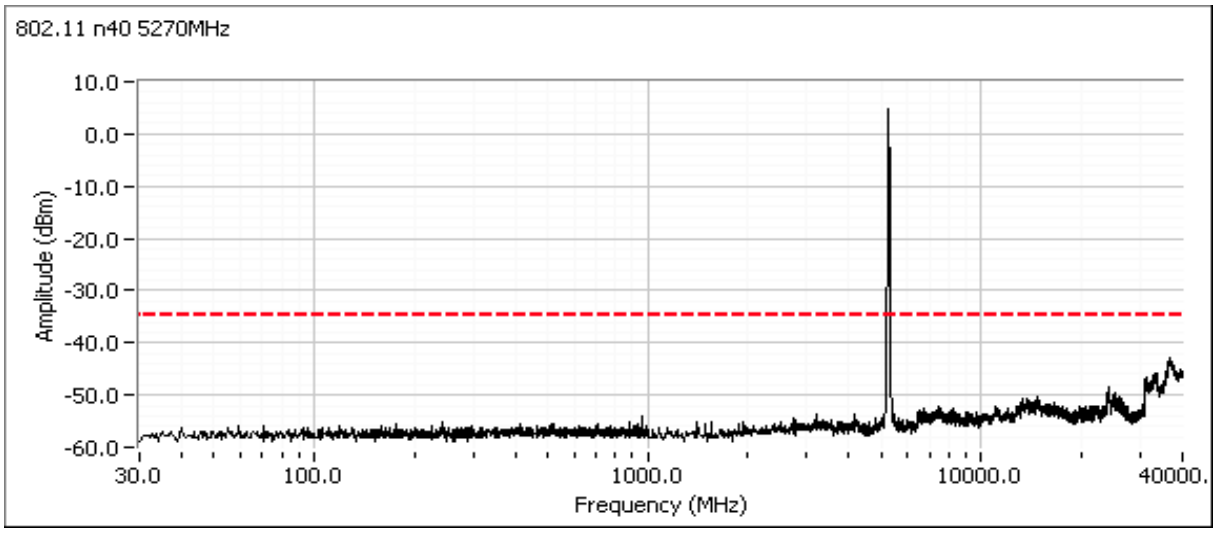


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5150 - 5250 MHz Band - 802.11n - 40MHz Mode



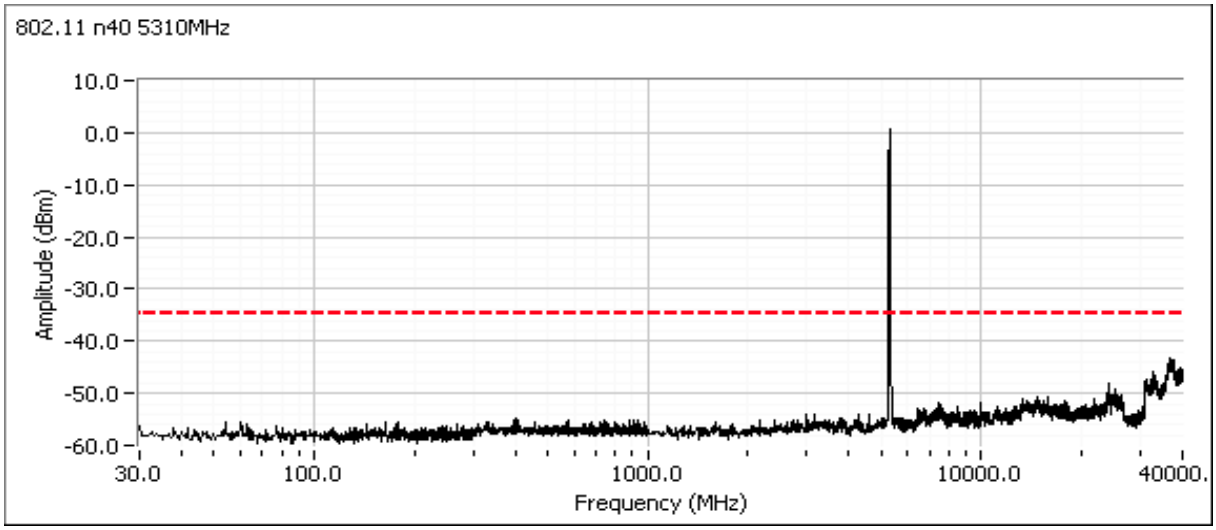
Low channel, 5250 - 5350 MHz Band - 802.11n - 40MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

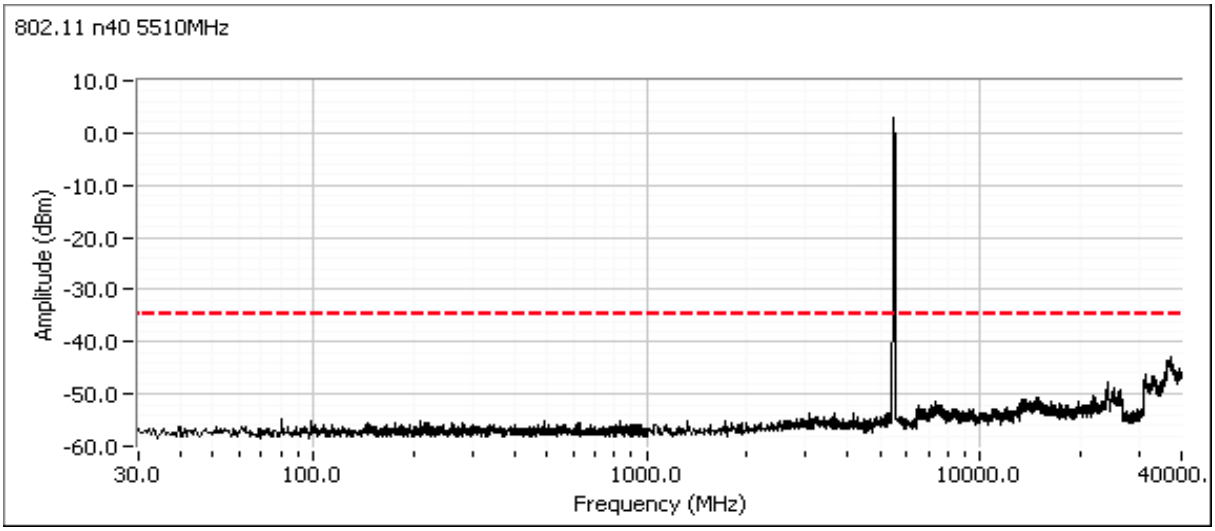
High channel, 5250 - 5350 MHz Band - 802.11n - 40MHz Mode

Compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.



Low channel, 5470 - 5725 MHz Band - 802.11n - 40MHz Mode

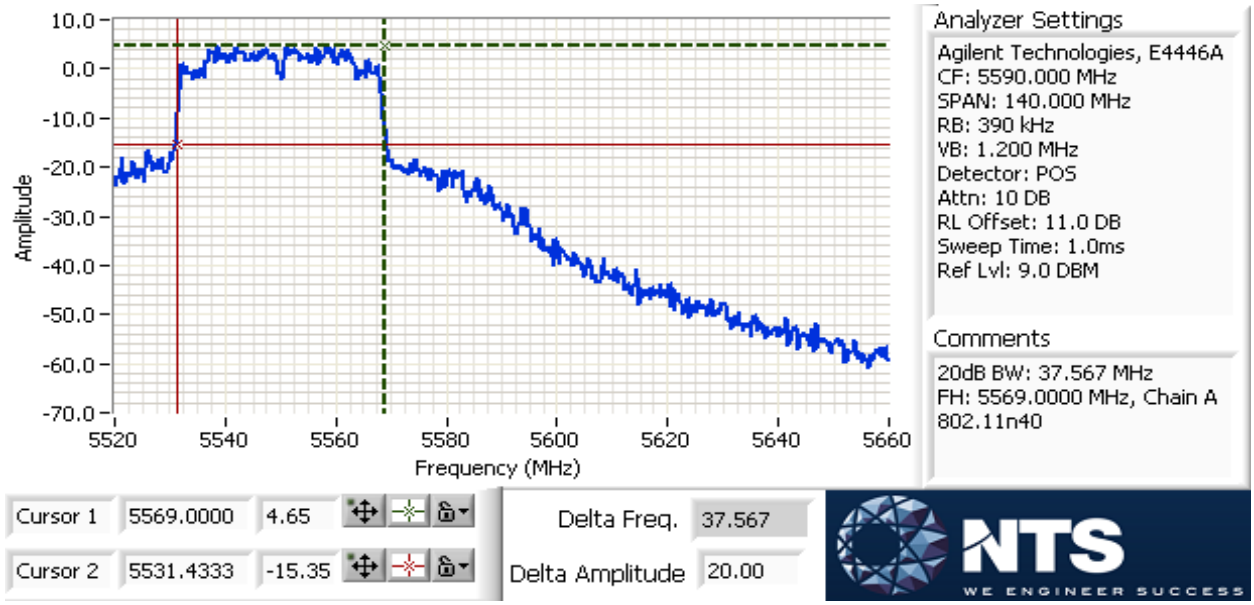
Compliance with the radiated limits for the restricted band below 5460 MHz is demonstrated through the radiated emissions tests.



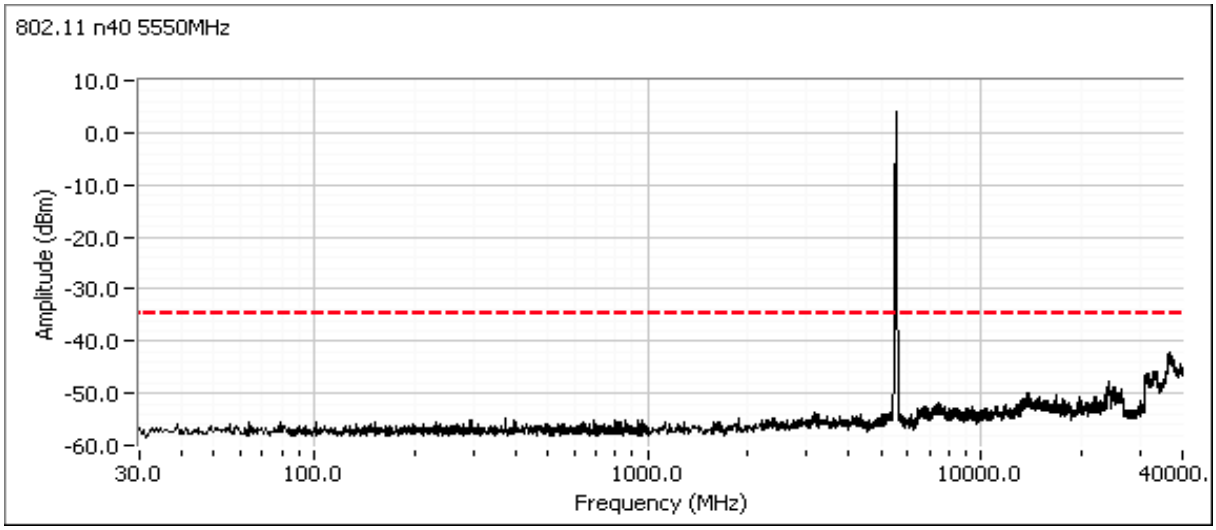
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5470-5725MHz Band - 802.11n 40MHz Mode

For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



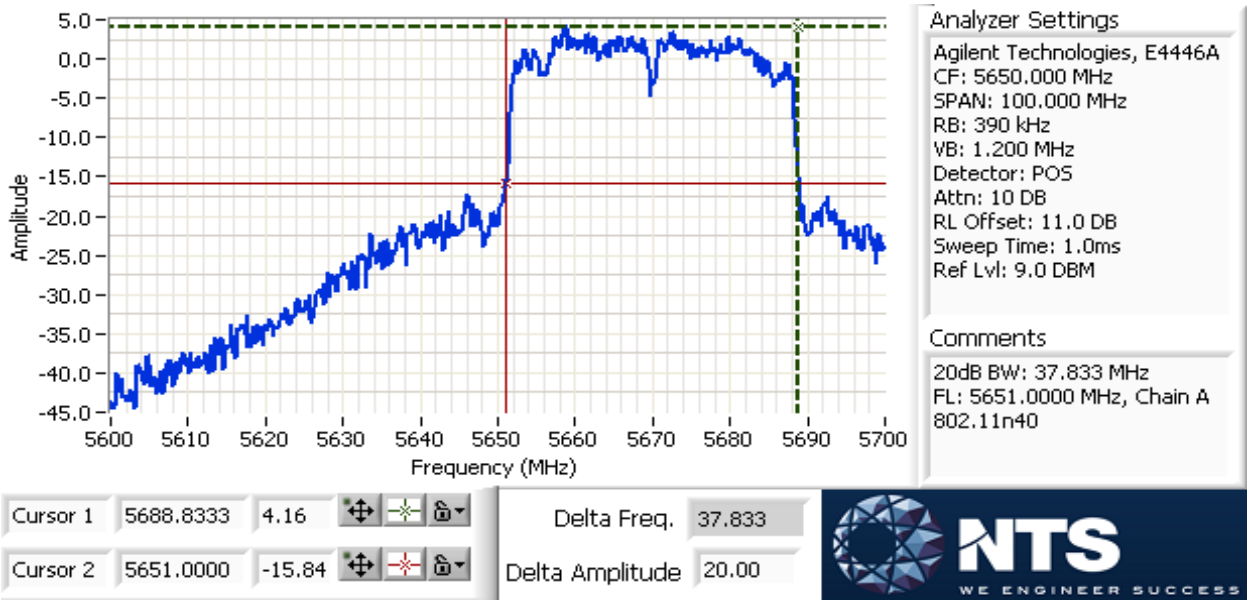
Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).



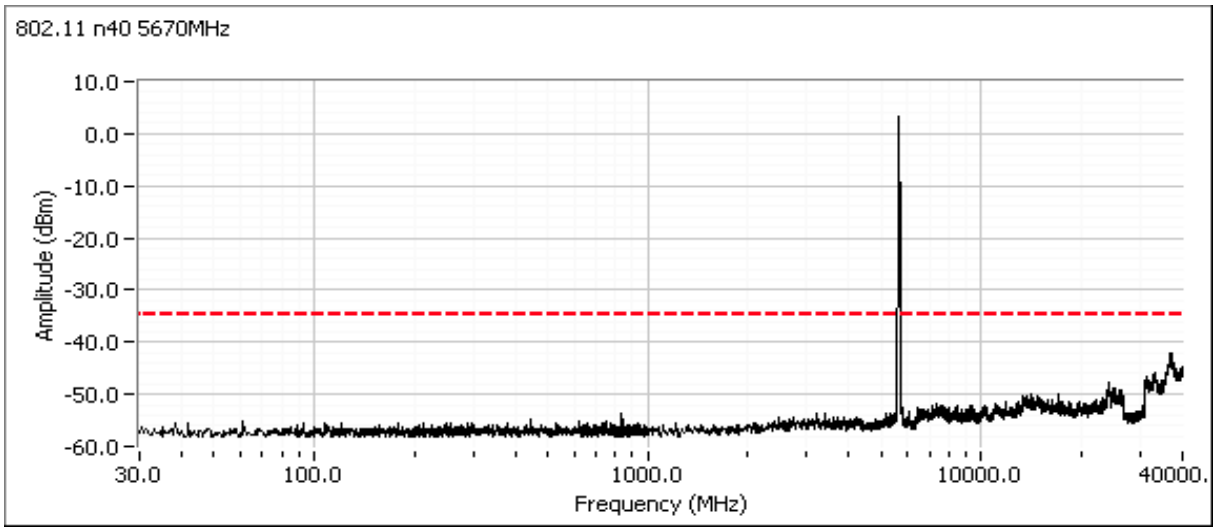
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



High channel, 5470 - 5725 MHz Band - 802.11n - 40MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS-210 (LELAN) and FCC 15.407(UNII)
Antenna Port Measurements - Chain B
Power, PSD, Peak Excursion, Bandwidth and Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 5/9 & 5/10/2012
Test Engineer: Rafael Varelas
Test Location: FT Lab #4

Config. Used: 1
Config Change: none
Host Unit Voltage 120V/60Hz

Summary of Results - Chain B

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5150 - 5250MHz	15.407(a) (1), (2)	Pass	802.11a: 37 mW 802.11n 20MHz: 35 mW 802.11n n40MHz: 30 mW
1	PSD, 5150 - 5250MHz	15.407(a) (1), (2)	Pass	802.11a: 3.3 dBm/MHz 802.11n 20MHz: 2.7 dBm/MHz 802.11n n40MHz: -0.5 dBm/MHz
1	Power, 5250 - 5350MHz	15.407(a) (1), (2)	Pass	802.11a: 41 mW 802.11n 20MHz: 41 mW 802.11n n40MHz: 31 mW
1	PSD, 5250 - 5350MHz	15.407(a) (1), (2)	Pass	802.11a: 3.7 dBm/MHz 802.11n 20MHz: 3.6 dBm/MHz 802.11n n40MHz: -0.3 dBm/MHz
1	Power, 5470 - 5725MHz	15.407(a) (1), (2)	Pass	802.11a: 36 mW 802.11n 20MHz: 37 mW 802.11n n40MHz: 35 mW
1	PSD, 5470 - 5725MHz	15.407(a) (1), (2)	Pass	802.11a: 3.0 dBm/MHz 802.11n 20MHz: 2.9 dBm/MHz 802.11n n40MHz: 0.5 dBm/MHz
1	26dB Bandwidth	15.407 (Information only)	-	> 20MHz for all modes
1	99% Bandwidth	RSS 210 (Information only)	N/A	802.11a: 18.8MHz 802.11n 20MHz: 19.3MHz 802.11n n40MHz: 36.9MHz
2	Peak Excursion Envelope	15.407(a) (6) 13dB	Pass	8.6 dB
3	Antenna Conducted - Out of Band Spurious	15.407(b) -27dBm/MHz	Pass	All emissions below the -27dBm/MHz limit

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.3 °C
Rel. Humidity:	34 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #1: Bandwidth, Output Power and Power Spectral Density - Single Chain Systems

Note 1:	Output power measured using a spectrum analyzer (see plots below). RBW=1MHz, VB=3 MHz, # of points in sweep ≥ 2*span/RBW, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz (method SA-1 of KDB 789033).
Note 2:	Measured using the same analyzer settings used for output power.
Note 3:	For RSS-210 the limit for the 5150 - 5250 MHz band accounts for the antenna gain as the maximum eirp allowed is 10dBm/MHz. The limits are also corrected for instances where the highest measured value of the PSD exceeds the average PSD (calculated from the measured power divided by the measured 99% bandwidth) by more than 3dB by the amount that the measured value exceeds the average by more than 3dB.
Note 4:	99% Bandwidth measured in accordance with RSS GEN - RB > 1% of span and VB >=3xRB

Single Chain Operation, 5150-5250MHz Band

Antenna Gain (dBi): 3.6 EIRP: 85.1 mW 19.3 dBm

Frequency (MHz)	Software Setting	Bandwidth		Output Power[1] dBm		Power (Watts)	PSD[2] dBm/MHz			Result
		26dB	99%[4]	Measured	Limit		Measured	FCC Limit	RSS Limit[3]	
802.11a										
5180	29.5	40.1	17.5	14.0	17.0	0.025	1.5	4.0	6.4	Pass
5200	30.5	41.9	18.4	15.7	17.0	0.037	3.3	4.0	6.4	Pass
5240	30.5	42.2	18.2	15.4	17.0	0.035	3.0	4.0	6.4	Pass
802.11n 20MHz										
5180	29.0	44.7	18.4	14.4	17.0	0.028	1.6	4.0	6.4	Pass
5200	30.5	46.0	18.9	15.4	17.0	0.035	2.5	4.0	6.4	Pass
5240	30.5	46.2	19.0	15.4	17.0	0.035	2.7	4.0	6.4	Pass
802.11n 40MHz										
5190	24.5	55.9	36.2	11.0	17.0	0.013	-4.1	4.0	6.4	Pass
5230	30.5	73.1	36.9	14.8	17.0	0.030	-0.5	4.0	6.4	Pass

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Single Chain Operation, 5250-5350 MHz Band

Antenna Gain (dBi): 3.7 EIRP: 95.5 mW 19.8 dBm

Frequency (MHz)	Software Setting	Bandwidth 26dB	Bandwidth 99%[4]	Output Power[1] dBm Measured	Output Power[1] dBm Limit	Power (Watts)	PSD[2] dBm/MHz Measured	PSD[2] dBm/MHz FCC Limit	PSD[2] dBm/MHz RSS Limit[3]	Result
802.11a										
5260	30.5	41.4	18.5	15.6	24.0	0.036	3.2	11.0	11.0	Pass
5300	30.5	41.1	18.2	16.0	24.0	0.039	3.3	11.0	11.0	Pass
5320	31.0	41.7	18.8	16.1	24.0	0.041	3.7	11.0	11.0	Pass
802.11n 20MHz										
5260	30.5	46.5	19.0	15.6	24.0	0.036	2.7	11.0	11.0	Pass
5300	30.5	46.0	19.0	15.9	24.0	0.039	3.4	11.0	11.0	Pass
5320	31.0	46.4	19.3	16.1	24.0	0.041	3.6	11.0	11.0	Pass
802.11n 40MHz										
5270	30.5	73.5	36.6	14.9	24.0	0.031	-0.3	11.0	11.0	Pass
5310	24.5	54.8	36.3	11.5	24.0	0.014	-3.5	11.0	11.0	Pass

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Single Chain Operation, 5470- 5725 MHz Band

Antenna Gain (dBi): 4.8 EIRP: 107.2 mW 20.3 dBm

Frequency (MHz)	Software Setting	Bandwidth 26dB	Bandwidth 99%[4]	Output Power[1] dBm Measured	Output Power[1] dBm Limit	Power (Watts)	PSD[2] dBm/MHz Measured	PSD[2] dBm/MHz FCC Limit	PSD[2] dBm/MHz RSS Limit[3]	Result
802.11a										
5500	26.5	36.3	16.9	14.9	24.0	0.031	2.3	11.0	11.0	Pass
5580	29.5	39.4	17.1	15.5	24.0	0.035	2.9	11.0	11.0	Pass
5700	30.0	38.3	17.1	15.6	24.0	0.036	3.0	11.0	11.0	Pass
802.11n 20MHz										
5500	29.0	30.4	18.2	15.7	24.0	0.037	2.9	11.0	11.0	Pass
5580	29.5	43.6	18.2	15.4	24.0	0.035	2.7	11.0	11.0	Pass
5700	29.5	35.3	18.1	15.1	24.0	0.032	2.2	11.0	11.0	Pass
802.11n 40MHz										
5510	26.5	40.3	36.1	13.3	24.0	0.021	-1.9	11.0	11.0	Pass
5550	30.5	70.4	36.3	15.5	24.0	0.035	0.5	11.0	11.0	Pass
5670	30.5	69.9	36.3	15.1	24.0	0.032	-0.1	11.0	11.0	Pass

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2: Peak Excursion Measurement

802.11a: Device meets the requirement for the peak excursion

Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5180	8.4	13.0	5260	8.4	13.0	5500	8.1	13.0
5200	8.0	13.0	5300	8.6	13.0	5580	8.5	13.0
5240	8.5	13.0	5320	8.5	13.0	5700	8.1	13.0

n 20MHz: Device meets the requirement for the peak excursion

Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5180	8.6	13.0	5260	8.6	13.0	5500	8.0	13.0
5200	8.5	13.0	5300	8.2	13.0	5580	8.6	13.0
5240	8.5	13.0	5320	8.1	13.0	5700	8.1	13.0

n 40MHz: Device meets the requirement for the peak excursion

Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5190	8.5	13.0	5270	8.3	13.0	5510	8.6	13.0
5230	8.5	13.0	5310	8.0	13.0	5550	8.5	13.0
						5670	8.6	13.0

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Plots Showing Peak Excursion

Trace A: RBW = 1MHz, VBW = 3MHz, Peak hold

Trace B: Same settings as used for power/PSD measurements (RBW = 1 MHz, VBW = 3MHz, Integrated average power)

Run #3: Out Of Band Spurious Emissions - Antenna Conducted

802.11a

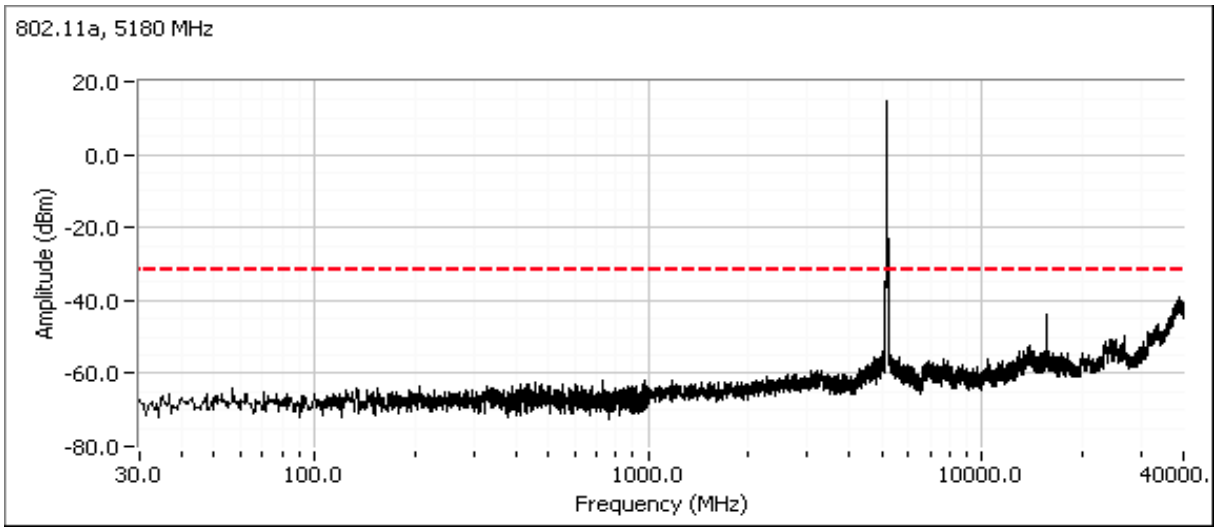
Maximum Antenna Gain:	4.8	dBi	(worst case for all 3 bands)
Spurious Limit:	-27.0	dBm/MHz	eirp
Limit Used On Plots [Note 1]:	-31.8	dBm/MHz	Peak Limit (RB=1MHz VB=3MHz)

Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during the radiated emissions test.

Plots Showing Out-Of-Band - 802.11a Mode Emissions (RBW=VBW=1MHz)

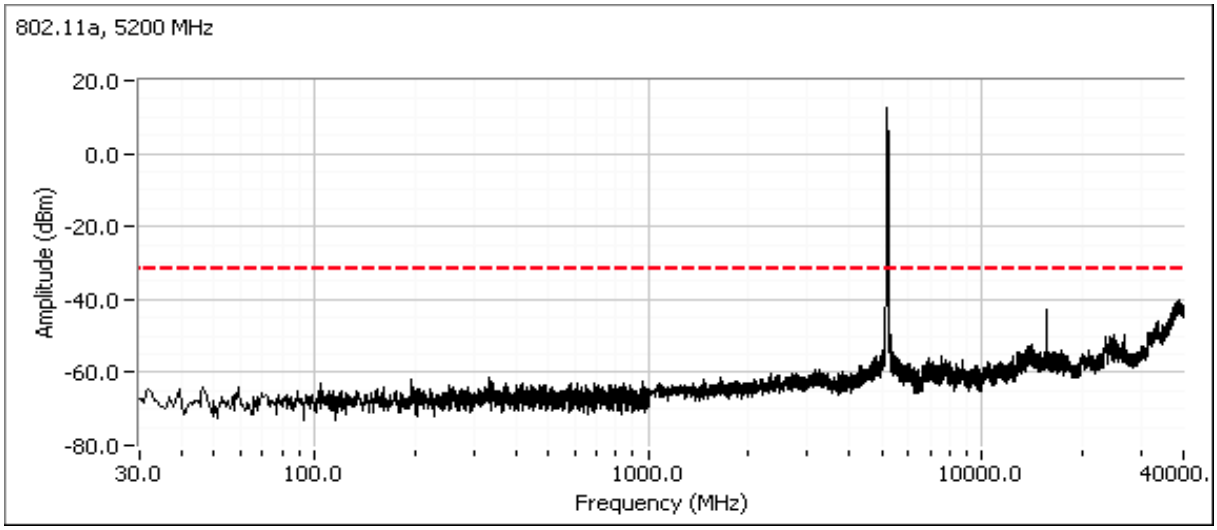
Low channel, 5150 - 5250 MHz Band - 802.11a Mode

Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

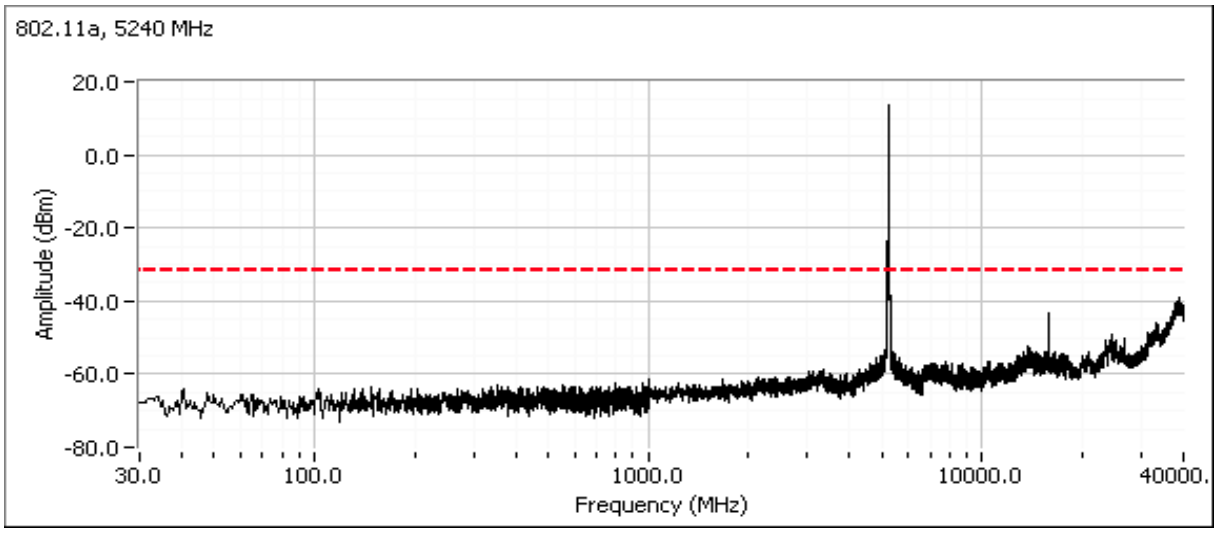


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5150 - 5250 MHz Band - 802.11a Mode

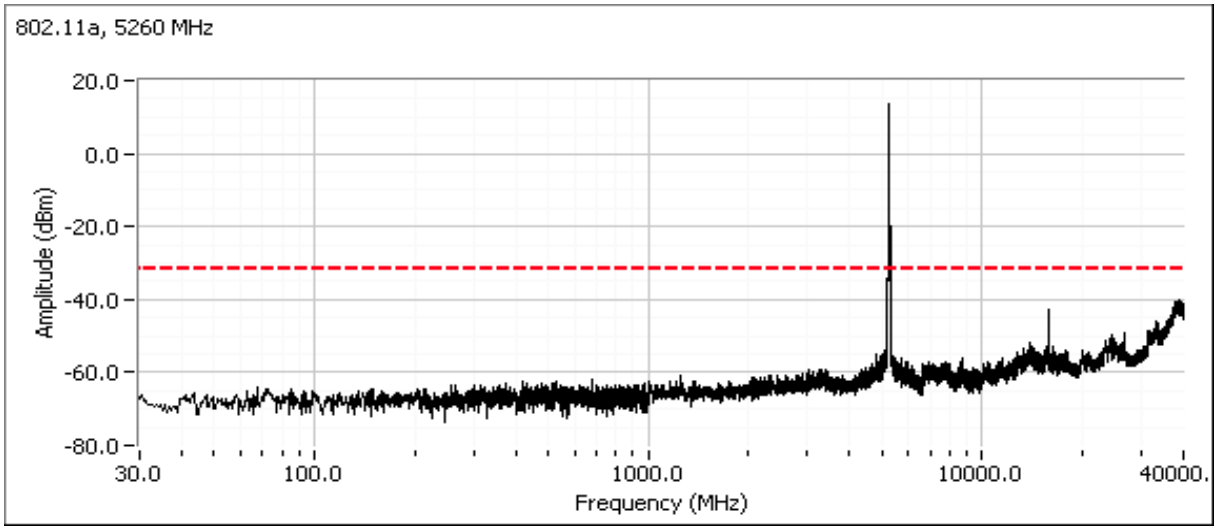


High channel, 5150 - 5250 MHz Band - 802.11a Mode

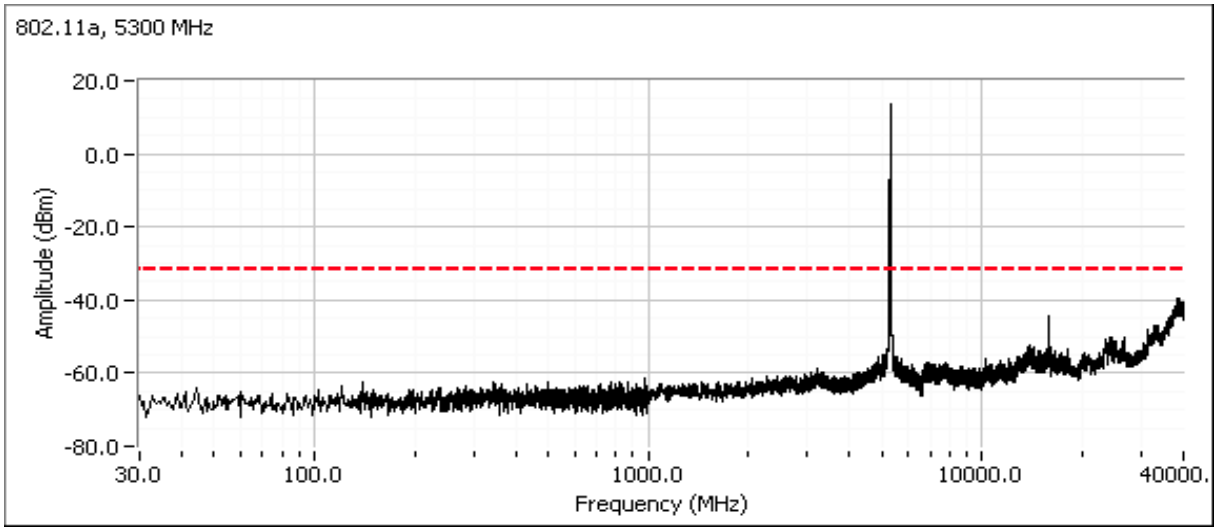


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5250 - 5350 MHz Band - 802.11a Mode



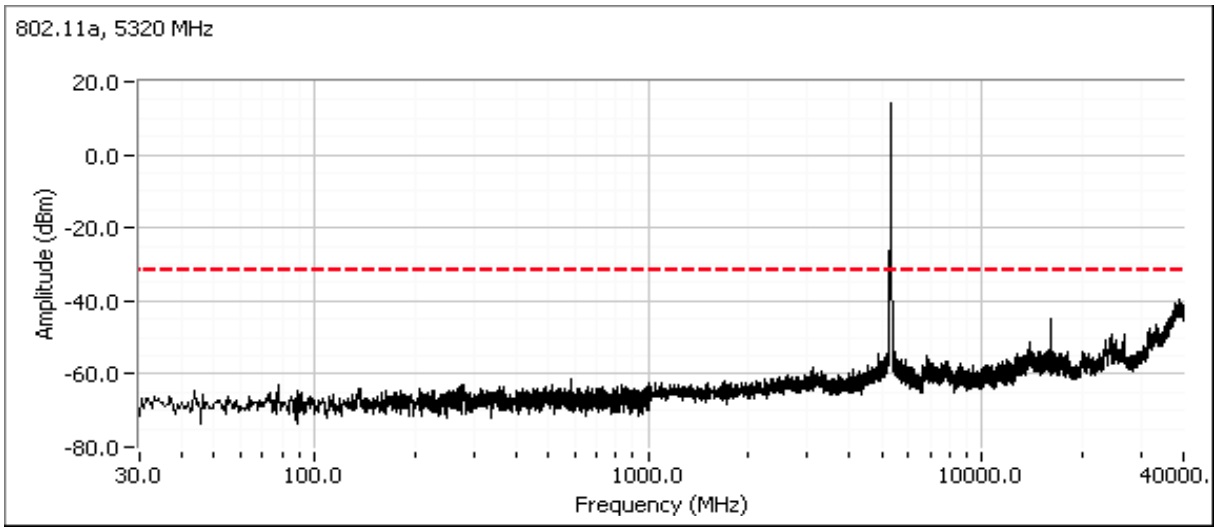
Center channel, 5250 - 5350 MHz Band - 802.11a Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

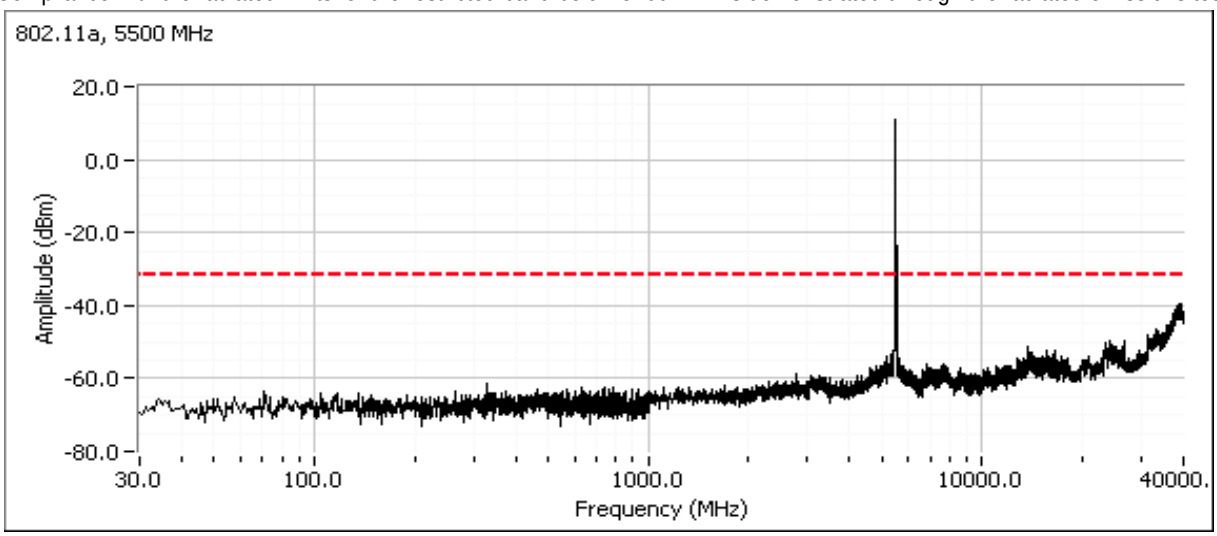
High channel, 5250 - 5350 MHz Band - 802.11a Mode

Compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.



Low channel, 5470 - 5725 MHz Band - 802.11a Mode

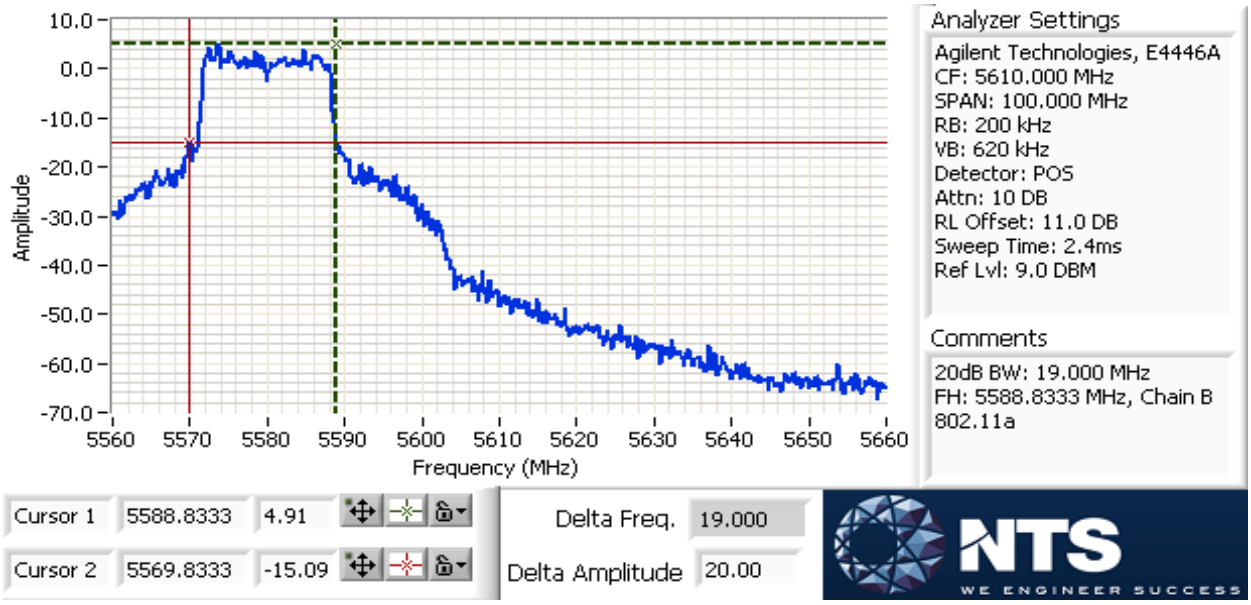
Compliance with the radiated limits for the restricted band below 5460 MHz is demonstrated through the radiated emissions tests.



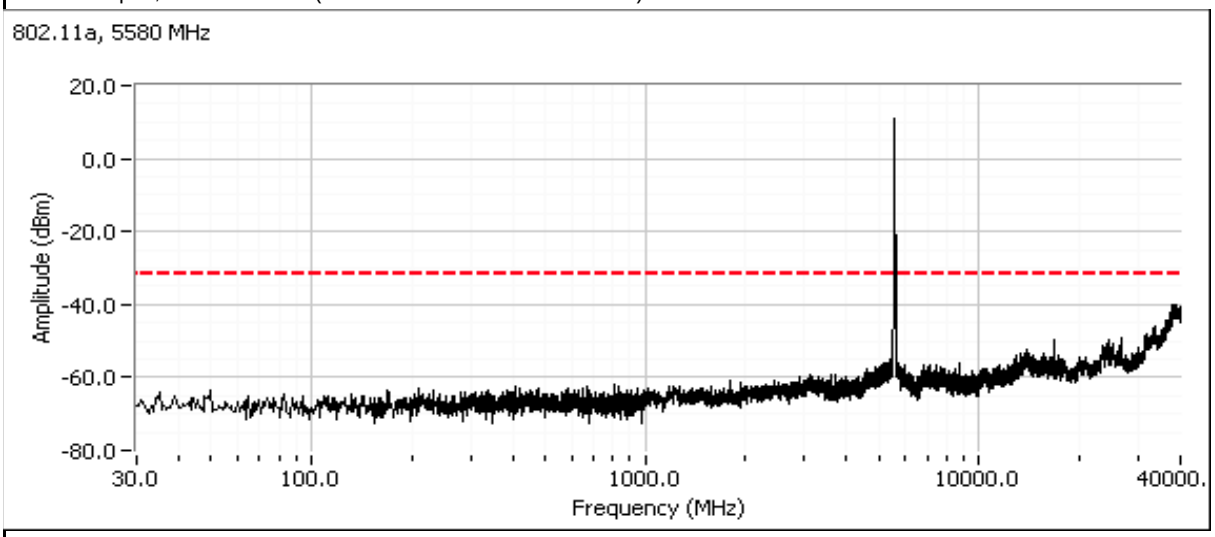
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5470 - 5725 MHz Band - 802.11a Mode

For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



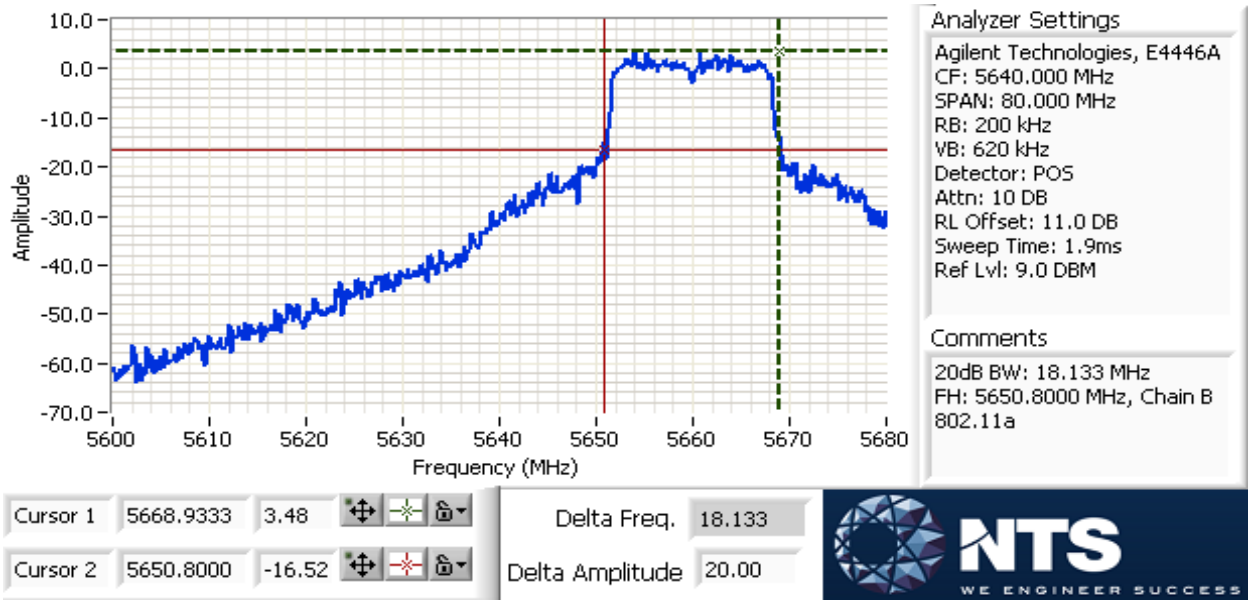
Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).



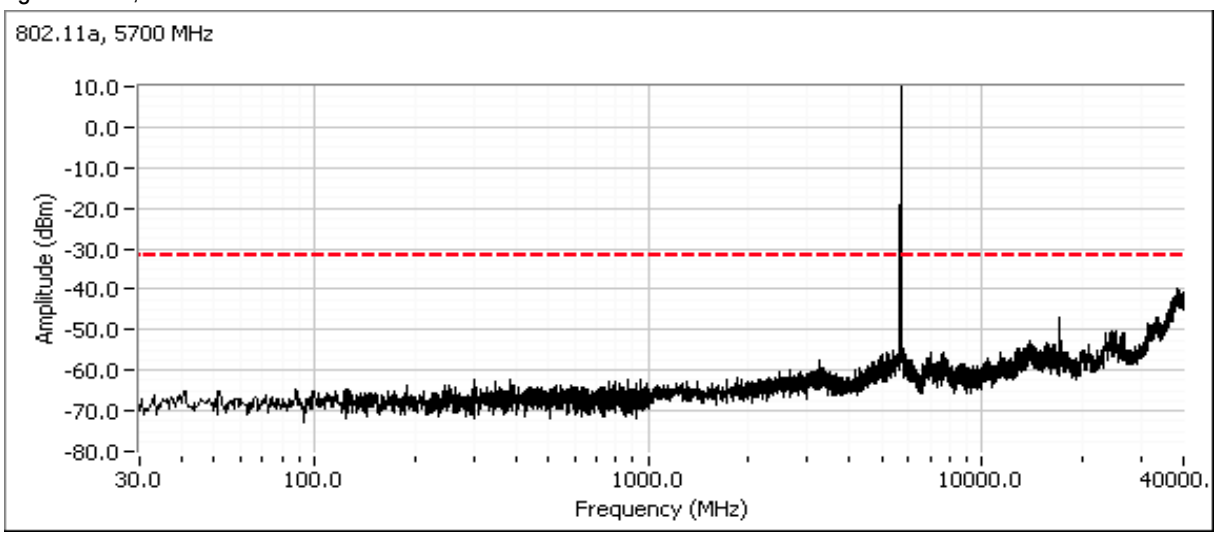
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



High channel, 5470 - 5725 MHz Band - 802.11a Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

802.11n Modes - n 20MHz

MIMO Devices: Antenna gain used is the effective gain calculated in the power section of this data sheet. The plots were obtained for each chain individually and the limit was adjusted to account for all chains transmitting simultaneously

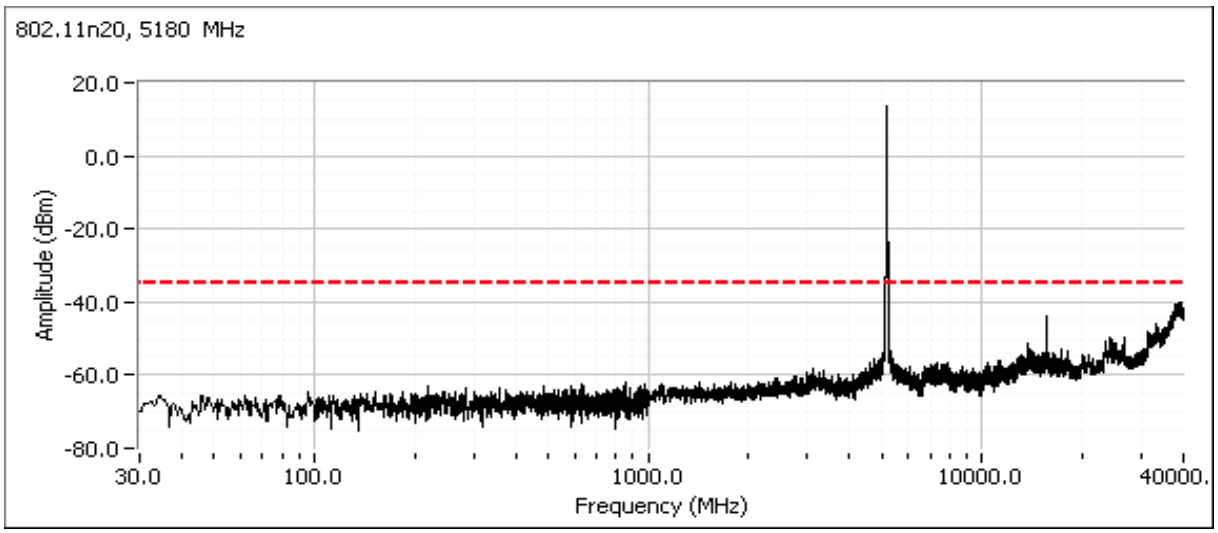
Number of transmit chains:	2		
Maximum Antenna Gain:	4.8	dBi	(worst case for all 3 bands)
Spurious Limit:	-27.0	dBm/MHz eirp	
Limit Used On Plots Note 1.:	-34.8	dBm/MHz	Peak Limit (RB=1MHz VB=3MHz)

Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during the radiated emissions test.

Plots Showing Out-Of-Band - 802.11n - 20MHz Mode Emissions (RBW=VBW=1MHz)

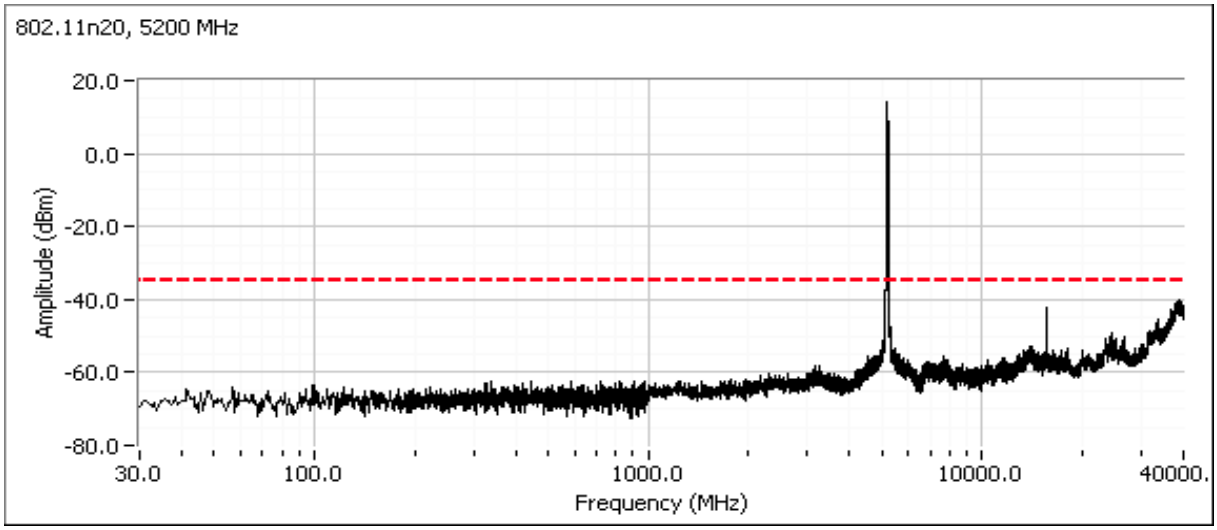
Low channel, 5150 - 5250 MHz Band - 802.11n - 20MHz Mode

Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

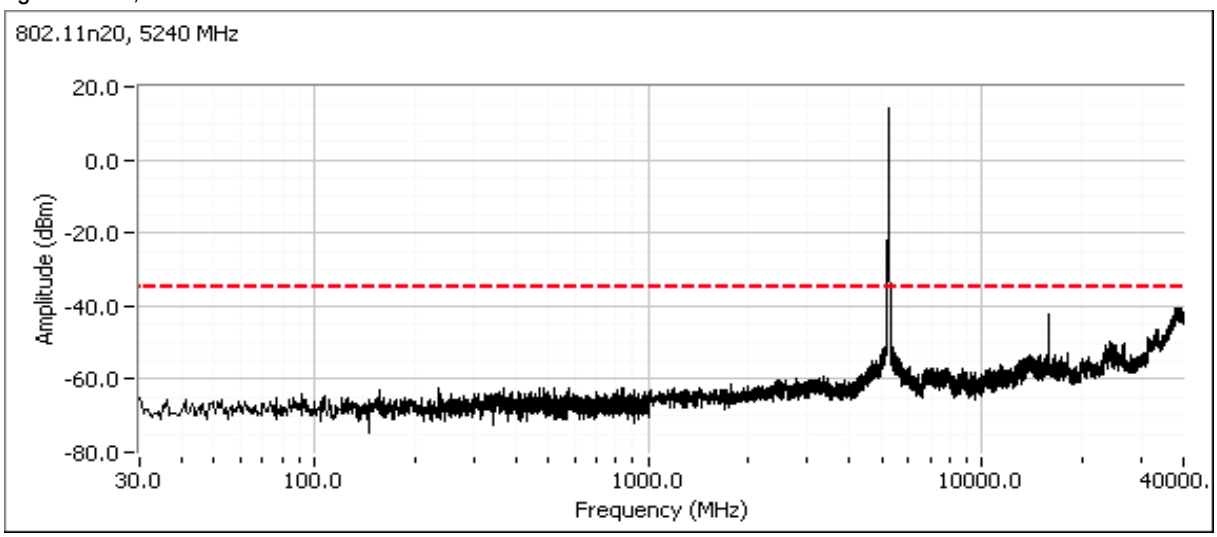


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5150 - 5250 MHz Band - 802.11n - 20MHz Mode

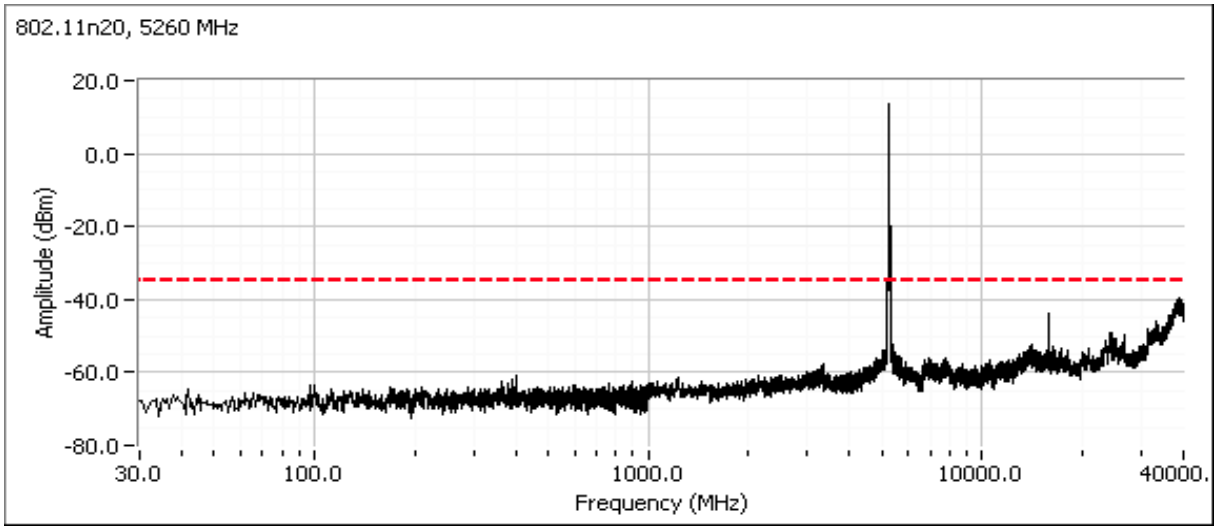


High channel, 5150 - 5250 MHz Band - 802.11n - 20MHz Mode

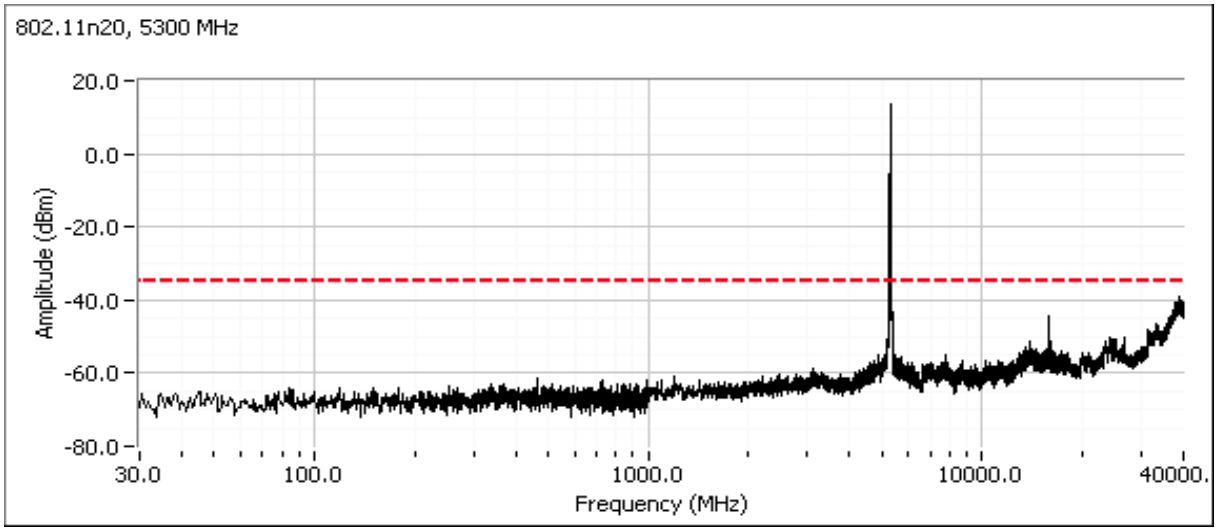


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5250 - 5350 MHz Band - 802.11n - 20MHz Mode



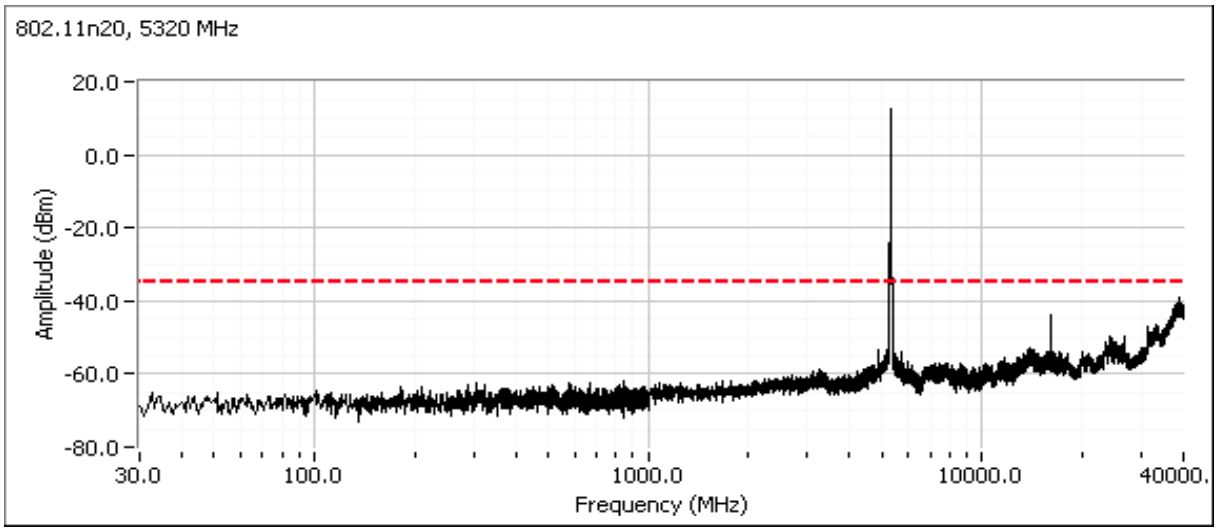
Center channel, 5250 - 5350 MHz Band - 802.11n - 20MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

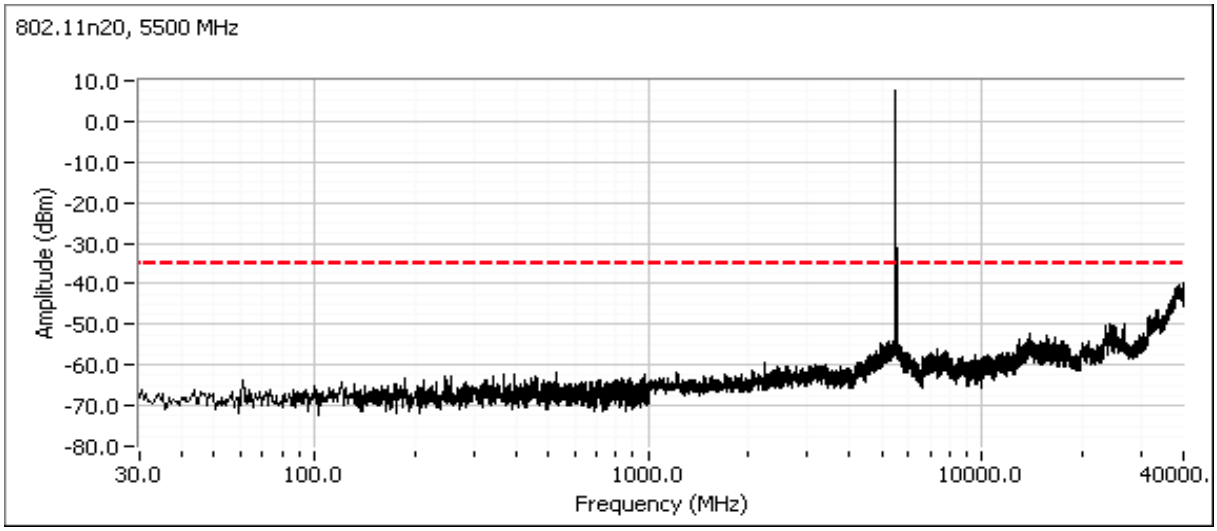
High channel, 5250 - 5350 MHz Band - 802.11n - 20MHz Mode

Compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.



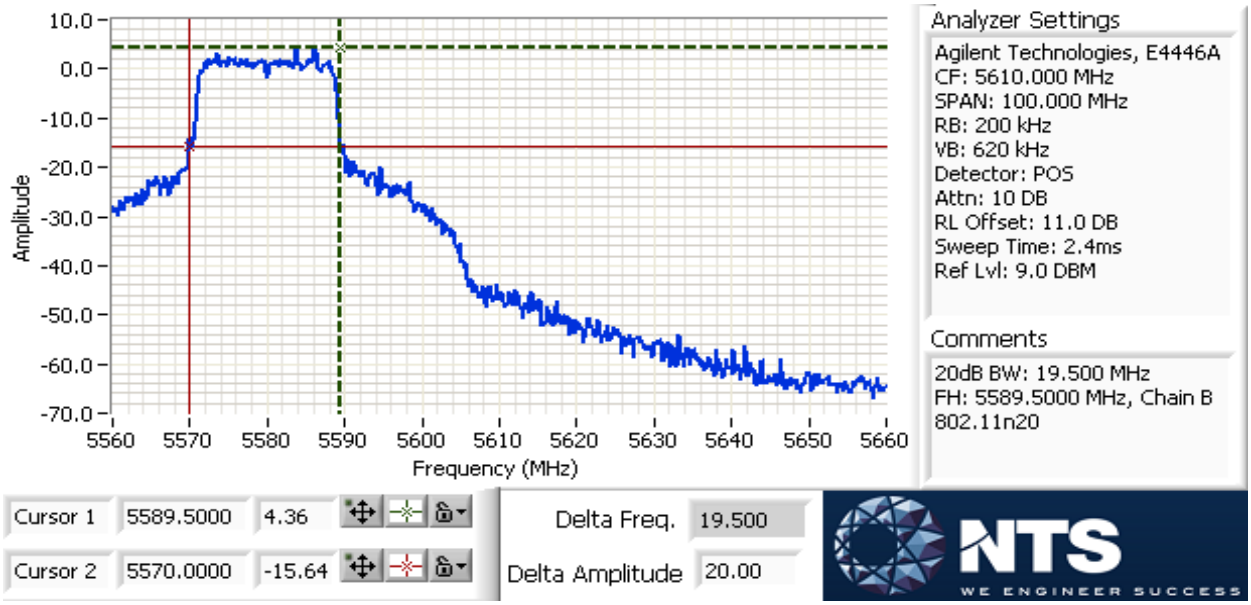
Low channel, 5470 - 5725 MHz Band - 802.11n - 20MHz Mode

Compliance with the radiated limits for the restricted band below 5460 MHz is demonstrated through the radiated emissions tests.

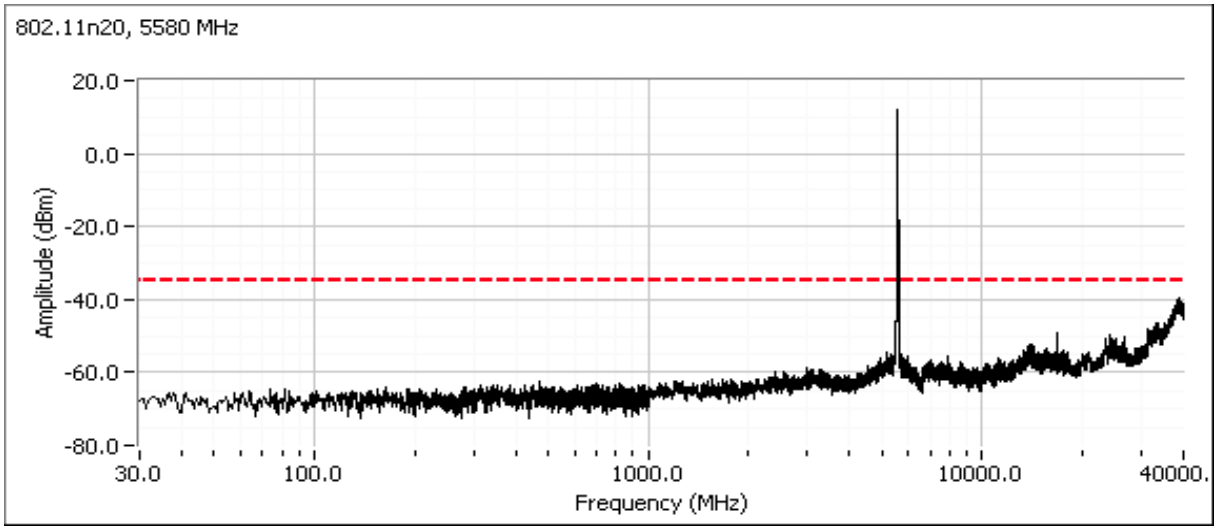


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5470 - 5725 MHz Band - 802.11n - 20MHz Mode (use 5580 MHz)
For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



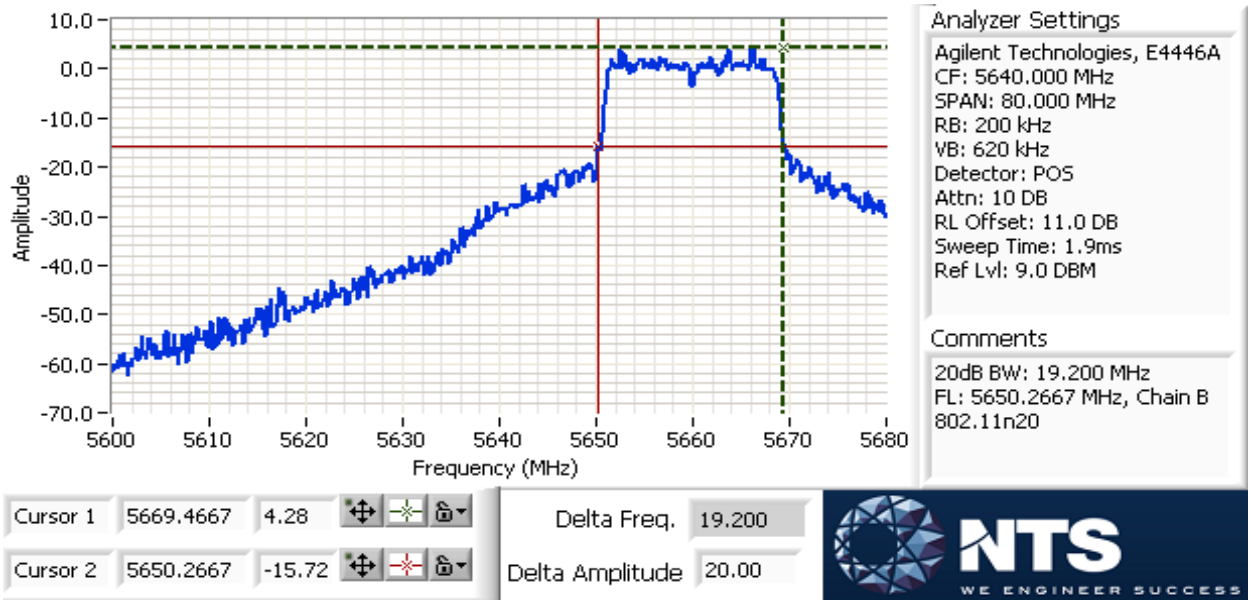
Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).



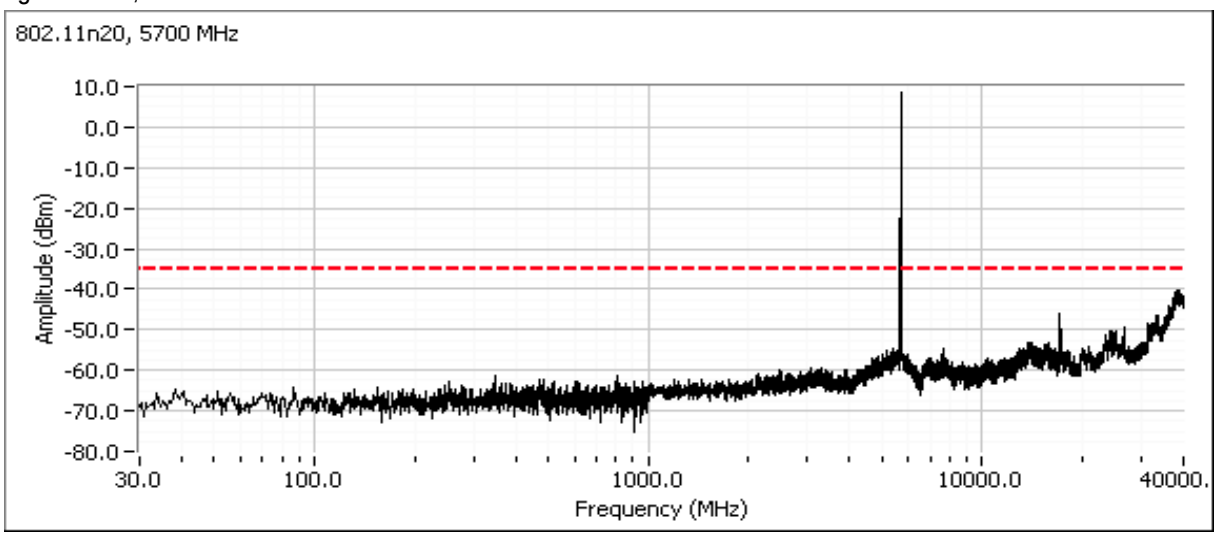
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



High channel, 5470 - 5725 MHz Band - 802.11n - 20MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

802.11n Modes - n40MHz

MIMO Devices: Antenna gain used is the effective gain calculated in the power section of this data sheet. The plots were obtained for each chain individually and the limit was adjusted to account for all chains transmitting simultaneously

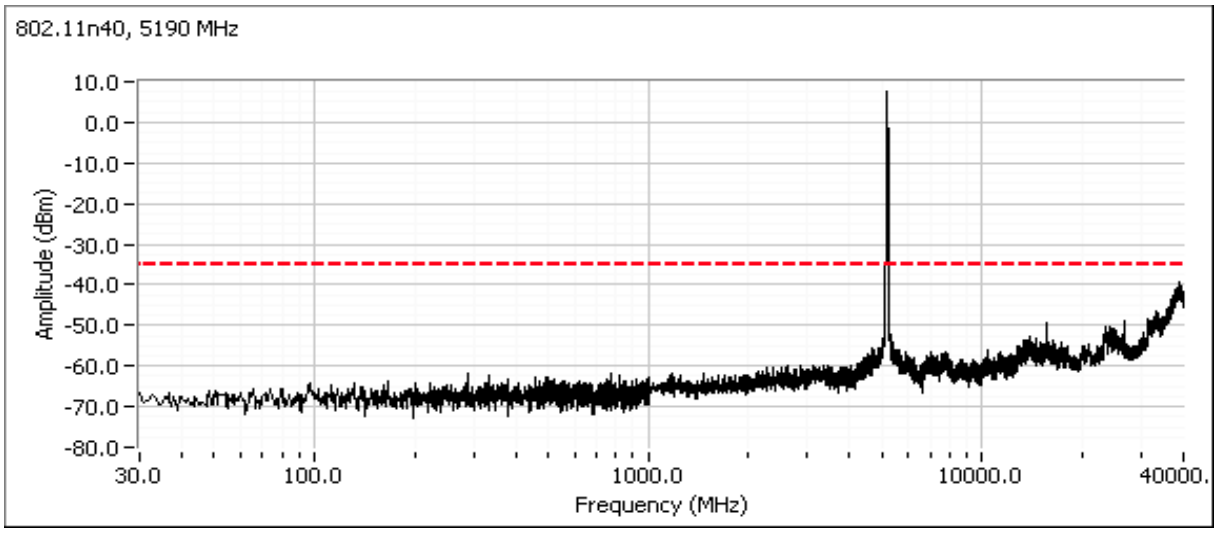
Number of transmit chains:	2		
Maximum Antenna Gain:	4.8	dBi	(worst case for all 3 bands)
Spurious Limit:	-27.0	dBm/MHz eirp	
Limit Used On Plots Note 1:	-34.8	dBm/MHz	Peak Limit (RB=1MHz VB=3MHz)

Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during the radiated emissions test.

Plots Showing Out-Of-Band - 802.11n - 40MHz Mode Emissions (RBW=VBW=1MHz)

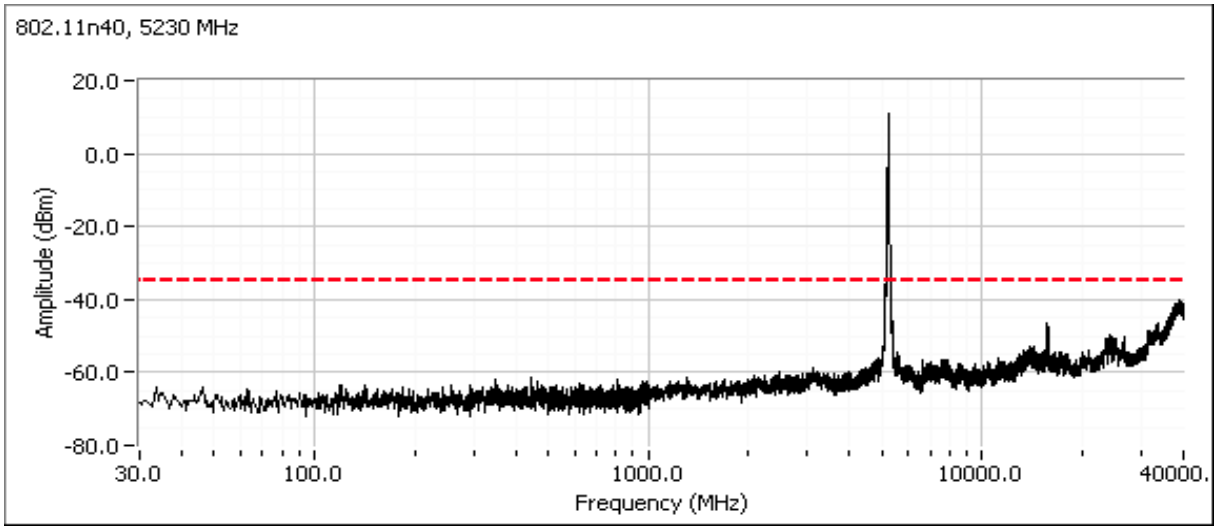
Low channel, 5150 - 5250 MHz Band - 802.11n - 40MHz Mode

Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

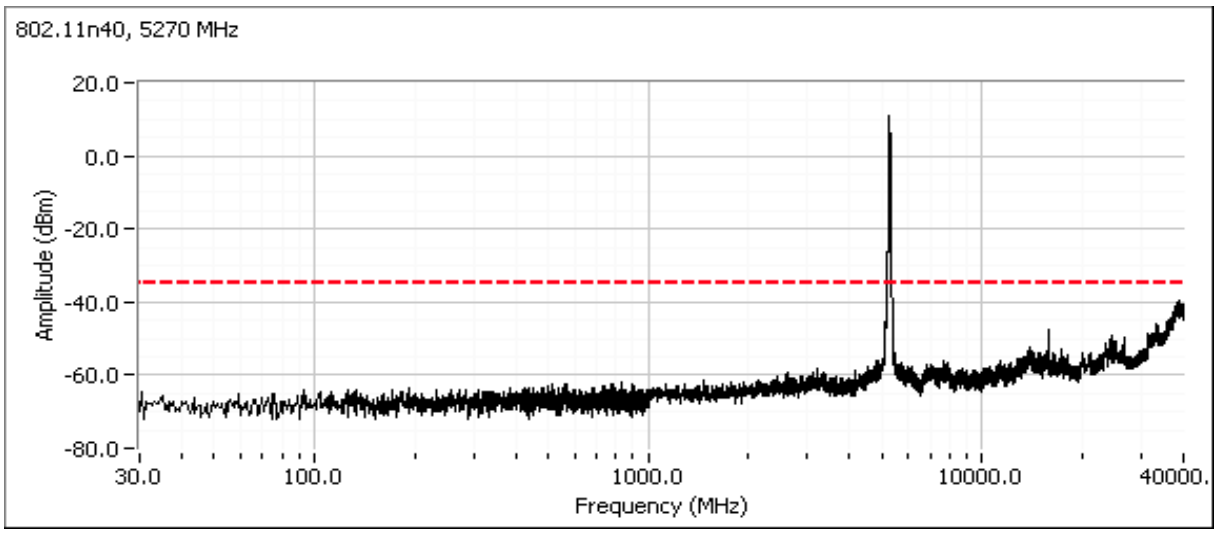


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5150 - 5250 MHz Band - 802.11n - 40MHz Mode



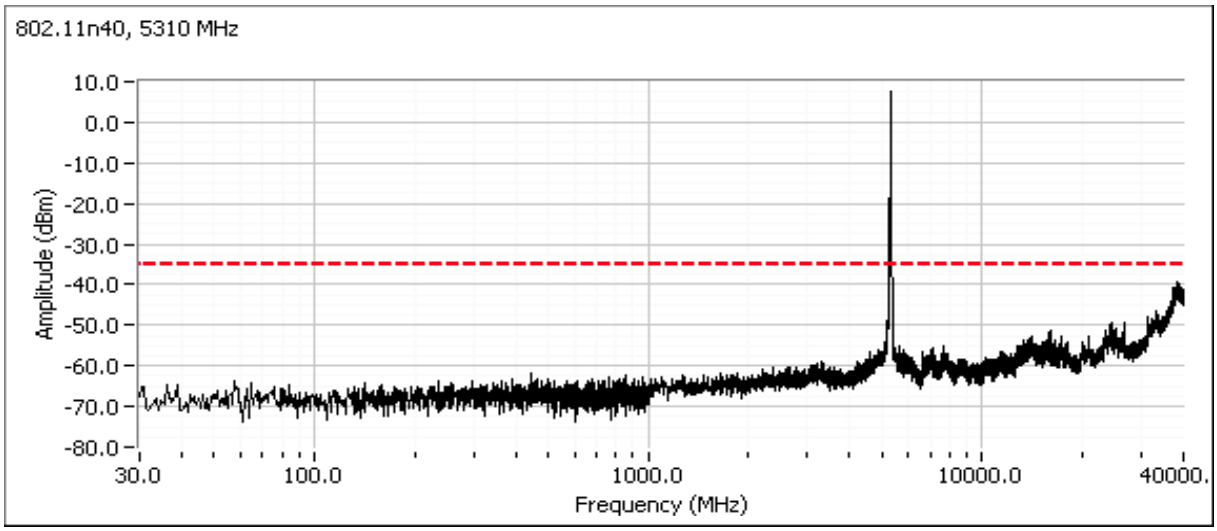
Low channel, 5250 - 5350 MHz Band - 802.11n - 40MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

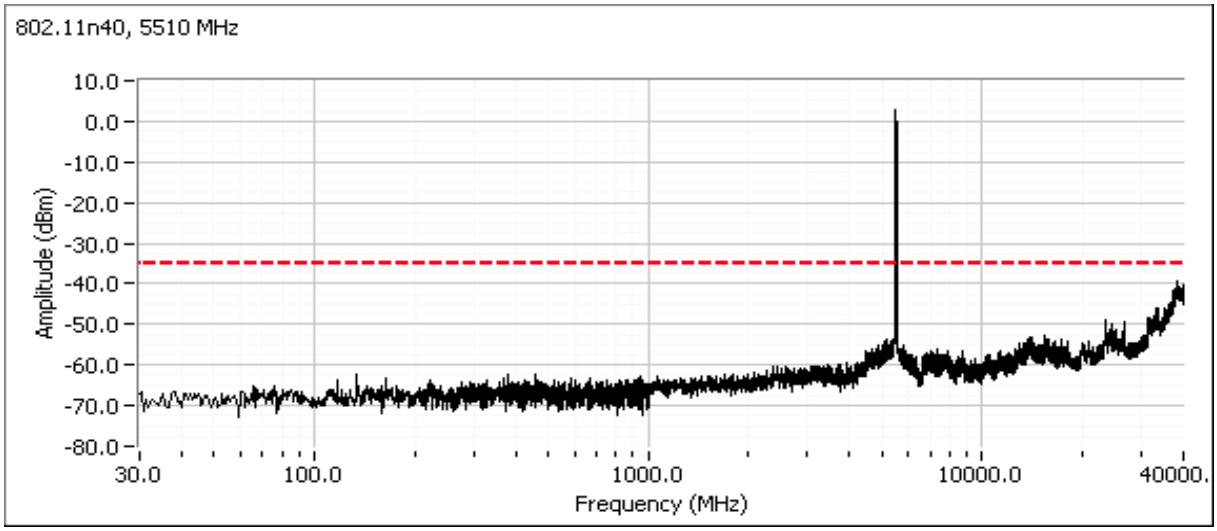
High channel, 5250 - 5350 MHz Band - 802.11n - 40MHz Mode

Compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.



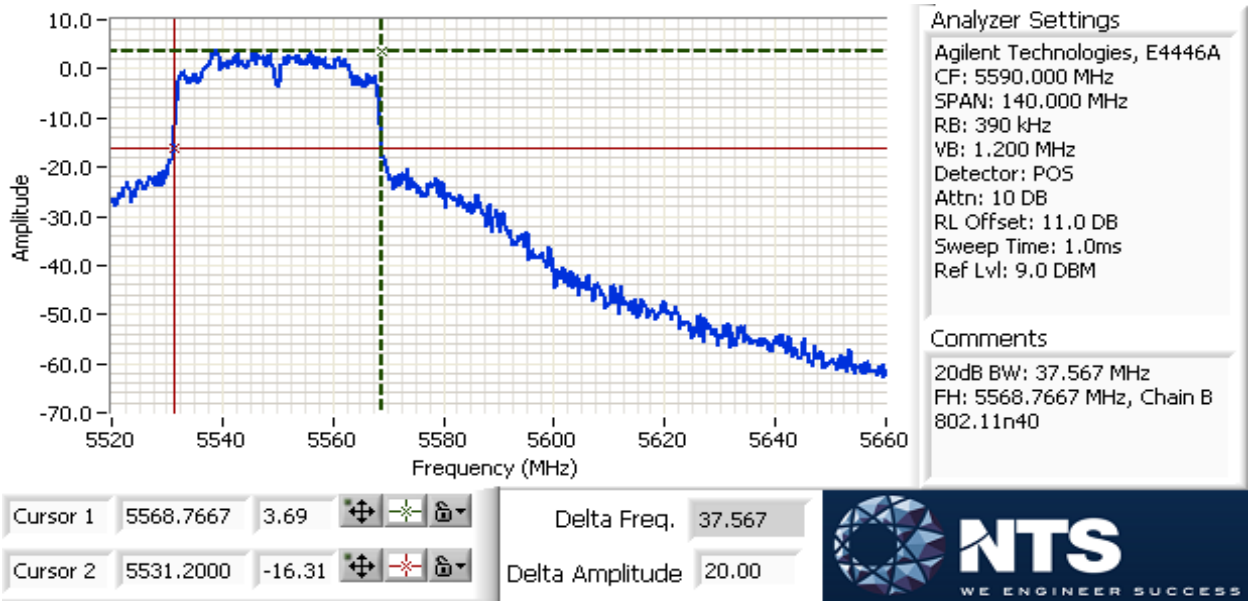
Low channel, 5470 - 5725 MHz Band - 802.11n - 40MHz Mode

Compliance with the radiated limits for the restricted band below 5460 MHz is demonstrated through the radiated emissions tests.

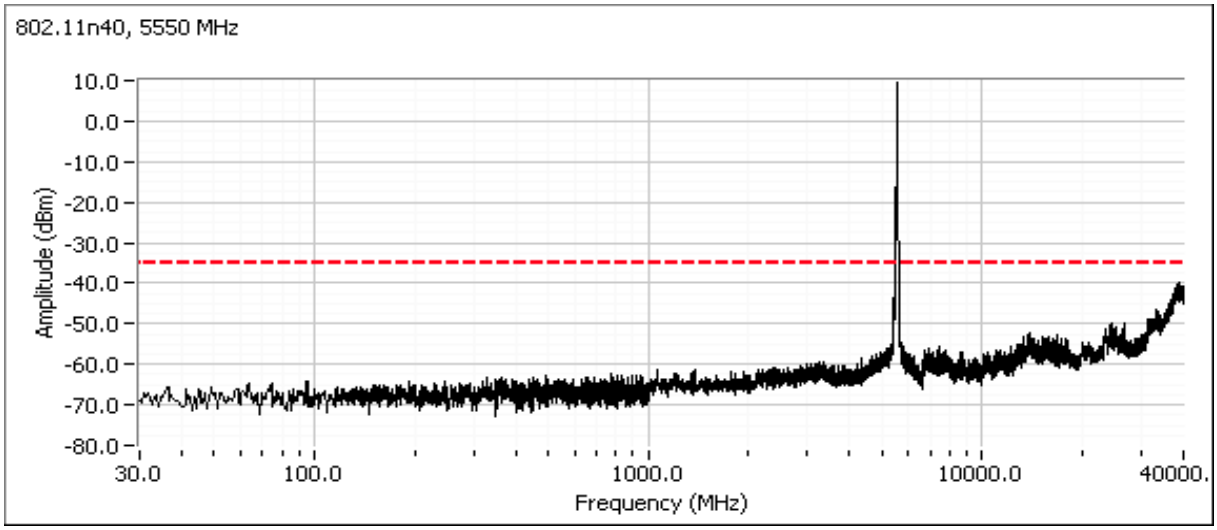


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5470-5725MHz Band - 802.11n 40MHz Mode (20MHz channel use 5580MHz, 40MHz channel use 5550MHz)
For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



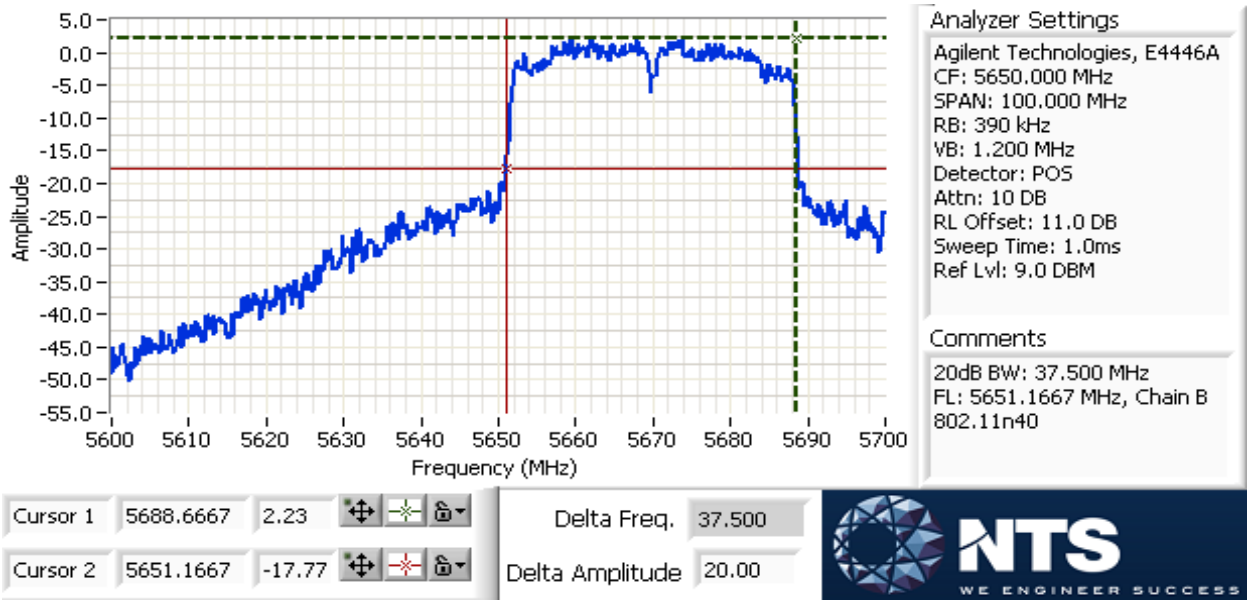
Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).



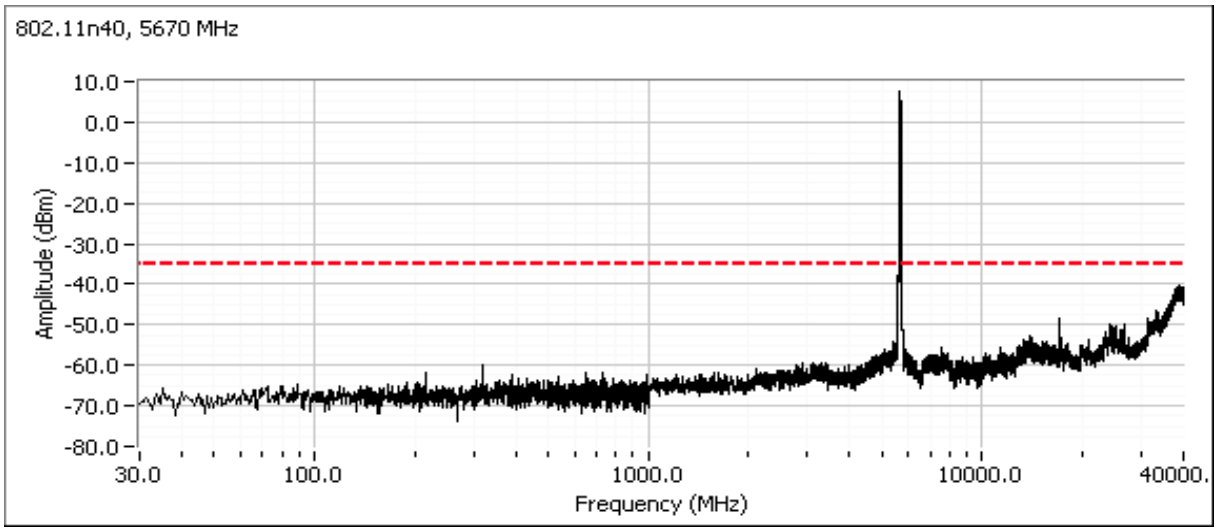
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.



High channel, 5470 - 5725 MHz Band - 802.11n - 40MHz Mode



Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

RSS-210 (LELAN) and FCC 15.407(UNII)
Antenna Port Measurements
Power, PSD, Peak Excursion, Bandwidth and Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 5/10/2012, 5/11/12, 5/12/12
Test Engineer: J. Cadigal / R. Varelas/ J. Liu
Test Location: FT Lab #2, FT 3, FT 4

Config. Used: 1
Config Change: none
EUT Voltage: 120V/60Hz

Summary of Results

MAC Address: 44850006303D DRTU Tool Version 1.5.4.0399 Driver version 15.1.0.99

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5150 - 5250MHz	15.407(a) (1), (2)	Pass	802.11n 20MHz: 25.1 mW 802.11n n40MHz: 19.3 mW
1	PSD, 5150 - 5250MHz	15.407(a) (1), (2)	Pass	802.11n 20MHz: 1.3 dBm/MHz 802.11n n40MHz: -2.2 dBm/MHz
1	Power, 5250 - 5350MHz	15.407(a) (1), (2)	Pass	802.11n 20MHz: 22.2 mW 802.11n n40MHz: 21.7 mW
1	PSD, 5250 - 5350MHz	15.407(a) (1), (2)	Pass	802.11n 20MHz: 0.9 dBm/MHz 802.11n n40MHz: -1.5 dBm/MHz
1	Power, 5470 - 5725MHz	15.407(a) (1), (2)	Pass	802.11n 20MHz: 41.6 mW 802.11n n40MHz: 42.3 mW
1	PSD, 5470 - 5725MHz	15.407(a) (1), (2)	Pass	802.11n 20MHz: 3.8 dBm/MHz 802.11n n40MHz: 1.2 dBm/MHz
1	26dB Bandwidth	15.407 (Information only)	-	> 20MHz for all modes
1	99% Bandwidth	RSS 210 (Information only)	N/A	802.11n 20MHz: 18.3 MHz 802.11n n40MHz: 36.5 MHz
2	Peak Excursion Envelope	15.407(a) (6)	Pass	11.5 dB
3	Antenna Conducted - Out of Band Spurious	15.407(b) -27dBm/MHz	Pass	All emissions below the -27dBm/MHz limit

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.3 °C
Rel. Humidity:	35 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Run #1: Bandwidth, Output Power and Power Spectral Density - MIMO Systems

Note 1:	Output power measured using a spectrum analyzer (see plots below). RBW=1MHz, VB=3 MHz, # of points in sweep ≥ 2*span/RBW, sample detector, power averaging on (transmitted signal was continuous) and power integration over 50 MHz (method SA-1 of KDB 789033).
Note 2:	Measured using the same analyzer settings used for output power.
Note 3:	For RSS-210 the limit for the 5150 - 5250 MHz band accounts for the antenna gain as the maximum eirp allowed is 10dBm/MHz. The limits are also corrected for instances where the highest measured value of the PSD exceeds the average PSD (calculated from the measured power divided by the measured 99% bandwidth) by more than 3dB by the amount that the measured value exceeds the average by more than 3dB.
Note 4:	99% Bandwidth measured in accordance with RSS GEN - RB > 1% of span and VB >=3xRB
Note 5:	For MIMO systems the total output power and total PSD are calculated form the sum of the powers of the individual chains (in linear terms). The antenna gain used to determine the EIRP and limits for PSD/Output power depends on the operating mode of the MIMO device. If the signals on the non-coherent between the transmit chains then the gain used to determine the limits is the highest gain of the individual chains and the EIRP is the sum of the products of gain and power on each chain. If the signals are coherent then the effective antenna gain is the sum (in linear terms) of the gains for each chain and the EIRP is the product of the effective gain and total power.

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

MIMO Device - 5150-5250 MHz Band

	Chain 1	Chain 2	Chain 3	Coherent	Effective[5]	EIRP (mW)	EIRP (dBm)
Antenna Gain (dBi):	3.6	3.6		Yes	6.6	115.2	20.6

Power

Frequency (MHz)	Software Setting	26dB BW (MHz)	Measured Output Power[1] dBm Chain 1	Chain 2	Chain 3	Total mW	Total dBm	Limit (dBm)	Max Power (W)	Pass or Fail
20MHz Mode										
5180	33,31	39.3	10.7	10.9		24.0	13.8	16.4	0.025	PASS
5200	31.5,30	33.1	10.0	10.5		21.3	13.3	16.4		PASS
5240	31.5,30	31.3	11.2	10.8		25.1	14.0	16.4		PASS
40MHz Mode										
5190	29,28.5	44.7	7.6	9.3		14.2	11.5	16.4	0.019	PASS
5230	35,34	72.0	9.8	9.9		19.3	12.9	16.4		PASS

PSD

Frequency (MHz)	99%[4] BW	Total Power	PSD[2] dBm/MHz Chain 1	Chain 2	Chain 3	Total PSD mW/MHz	Total PSD dBm/MHz	Limit FCC	Limit RSS 210[3]	Pass or Fail
20MHz Mode										
5180	17.0	13.8	-1.9	-1.8		1.3	1.2	3.4	3.4	PASS
5200	17.0	13.3	-2.6	-2.1		1.2	0.7	3.4	3.4	PASS
5240	17.0	14.0	-1.5	-2.0		1.3	1.3	3.4	3.4	PASS
40MHz Mode										
5190	34.0	11.5	-7.3	-5.7		0.5	-3.4	3.4	3.4	PASS
5230	36.5	12.9	-5.2	-5.2		0.6	-2.2	3.4	3.4	PASS

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

MIMO Device - 5250-5350 MHz Band

	Chain 1	Chain 2	Chain 3	Coherent	Effective[5]	EIRP (mW)	EIRP (dBm)
Antenna Gain (dBi):	3.7	3.7		Yes	6.7	104.1	20.2

Power

Frequency (MHz)	Software Setting	26dB BW (MHz)	Measured Output Power[1] dBm Chain 1	Chain 2	Chain 3	Total mW	Total dBm	Limit (dBm)	Max Power (W)	Pass or Fail
20MHz Mode										
5260	33.5,32.5	35.1	10.5	10.0		21.2	13.3	23.3	0.022	PASS
5300	34,33	34.7	10.3	9.9		20.5	13.1	23.3		PASS
5320	34,33.5	36.5	10.3	10.6		22.2	13.5	23.3		PASS
40MHz Mode										
5270	35,34	73.6	10.0	10.5		21.2	13.3	23.3	0.021	PASS
5310	29,28	40.3	6.5	6.3		8.7	9.4	23.3		PASS

PSD

Frequency (MHz)	99%[4] BW	Total Power	PSD[2] dBm/MHz Chain 1	Chain 2	Chain 3	Total PSD mW/MHz	dBm/MHz	Limit FCC	RSS 210[3]	Pass or Fail
20MHz Mode										
5260	18.3	13.3	-2.4	-2.8		1.1	0.4	10.3	11.0	PASS
5300	18.3	13.1	-2.4	-3.0		1.1	0.3	10.3	11.0	PASS
5320	18.3	13.5	-2.3	-1.9		1.2	0.9	10.3	11.0	PASS
40MHz Mode										
5270	36.5	13.3	-4.8	-4.3		0.7	-1.5	10.3	11.0	PASS
5310	36.2	9.4	-8.5	-8.9		0.3	-5.7	10.3	11.0	PASS

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

MIMO Device - 5470-5725 MHz Band

	Chain 1	Chain 2	Chain 3	Coherent	Effective[5]	EIRP (mW)	EIRP (dBm)
Antenna Gain (dBi):	4.8	4.8		Yes	7.8	251.5	24.0

Power

Frequency (MHz)	Software Setting	26dB BW (MHz)	Measured Output Power[1] dBm Chain 1	Chain 2	Chain 3	Total mW	Total dBm	Limit (dBm)	Max Power (W)	Pass or Fail
20MHz Mode										
5500	31.5,31.0	22.5	13.3	12.1		37.6	15.8	22.2	0.042	PASS
5580	34,33.5	31.3	13.2	13.2		41.6	16.2	22.2		PASS
5700	34,.33	22.0	12.9	12.7		38.1	15.8	22.2		PASS
40MHz Mode										
5510	30.0,29.5	39.4	11.4	10.7		25.6	14.1	22.2	0.039	PASS
5550	34.5,34	61.7	13.0	12.9		39.5	16.0	22.2		PASS
5670	35.5,34.5	66.5	13.3	13.2		42.3	16.3	22.2		PASS

PSD

Frequency (MHz)	99%[4] BW	Total Power	PSD[2] dBm/MHz Chain 1	Chain 2	Chain 3	Total PSD mW/MHz	dBm/MHz	Limit FCC	RSS 210[3]	Pass or Fail
20MHz Mode										
5500	18.0	15.8	0.9	-0.3		2.2	3.3	9.2	11.0	PASS
5580	18.0	16.2	1.0	0.6		2.4	3.8	9.2	11.0	PASS
5700	18.1	15.8	0.0	0.1		2.0	3.1	9.2	11.0	PASS
40MHz Mode										
5510	36.2	14.1	-3.6	-3.8		0.9	-0.7	9.2	11.0	PASS
5550	36.3	16.0	-1.7	-1.9		1.3	1.2	9.2	11.0	PASS
5670	36.2	16.3	-1.9	-1.8		1.3	1.2	9.2	11.0	PASS

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Run #2: Peak Excursion Measurement

20MHz: Device meets the requirement for the peak excursion

Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5180	9.93/9.62	13.0	5260	10.4/10.1	13.0	5500	9.34/8.83	13.0
5200	10.08/10.10	13.0	5300	10.4/11.5	13.0	5580	8.96/9.17	13.0
5240	9.40/9.63	13.0	5320	10.5/9.9	13.0	5700	9.23/8.73	13.0

40MHz: Device meets the requirement for the peak excursion

Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)		Freq	Peak Excursion(dB)	
(MHz)	Value	Limit	(MHz)	Value	Limit	(MHz)	Value	Limit
5190	9.7	13.0	5270	9.9/10.0	13.0	5510	8.51/8.8	13.0
5230	10.6/10.5	13.0	5310	10.5/10.7	13.0	5550	8.2/8.33	13.0
						5670	7.52/8.61	13.0

Plots Showing Peak Excursion

Trace A: RBW = 1MHz, VBW = 3MHz, Peak hold

Trace B: Same settings as used for power/PSD measurements (RBW = 1 MHz, VBW = 3MHz, Integrated average power)

Run #3: Out Of Band Spurious Emissions - Antenna Conducted

n20 Mode

MIMO Devices: Antenna gain used is the effective gain calculated in the power section of this data sheet. The plots were obtained for each chain individually and the limit was adjusted to account for all chains transmitting simultaneously

Number of transmit chains:	2	
Maximum Antenna Gain:	4.8	dBi
Spurious Limit:	-27.0	dBm/MHz eirp
Adjustment for 2 chains:	-3.0	dB adjustment for multiple chains.
Limit Used On Plots [Note 1.]:	-34.8	dBm/MHz Peak Limit (RB=1MHz VB=3MHz)

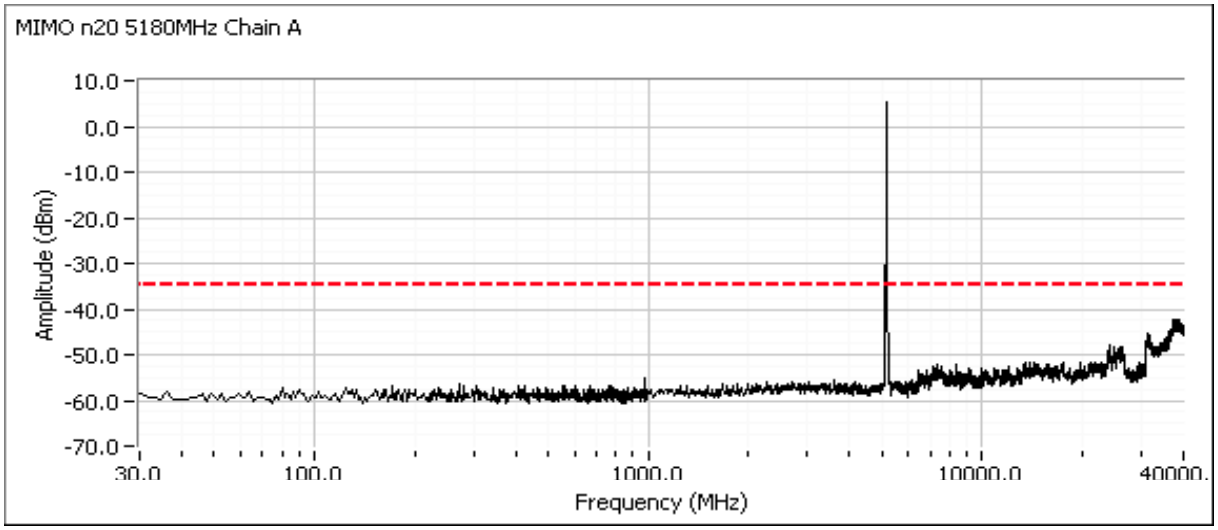
Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during digital device radiated emissions test.
Note 3:	Signals within 10MHz of the 5.725 or 5.825 Band edge are subject to a limit of -17dBm EIRP
Note 4:	If the device is for outdoor use then the -27dBm eirp limit also applies in the 5150 - 5250 MHz band.
Note 5:	Signals that fall in the restricted bands of 15.205 are subject to the limit of 15.209.

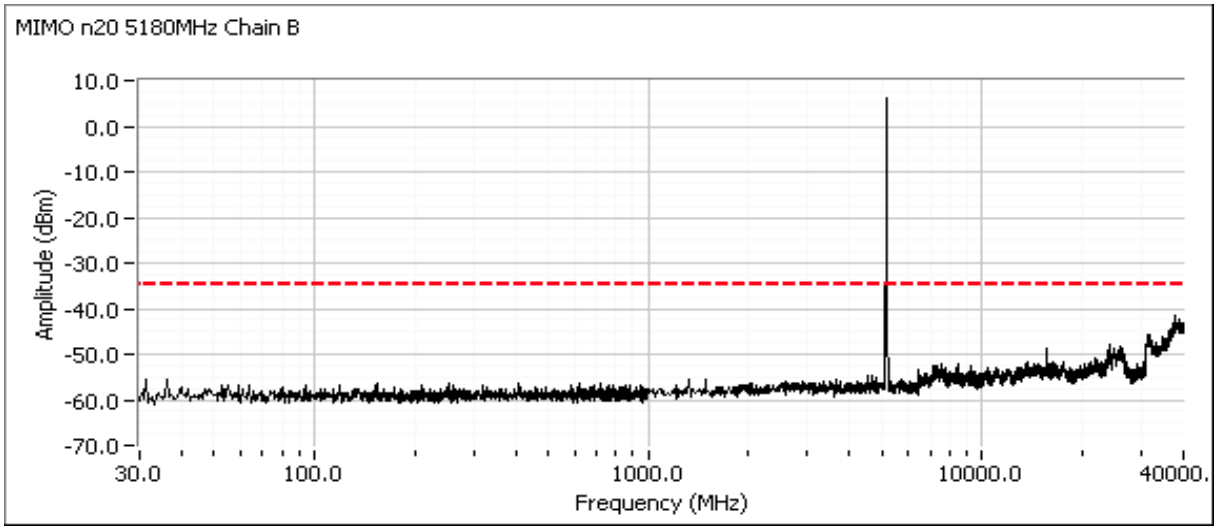
Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Plots Showing Out-Of-Band Emissions (RBW=VBW=1MHz)

Low channel, 5150 - 5250 MHz Band

Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

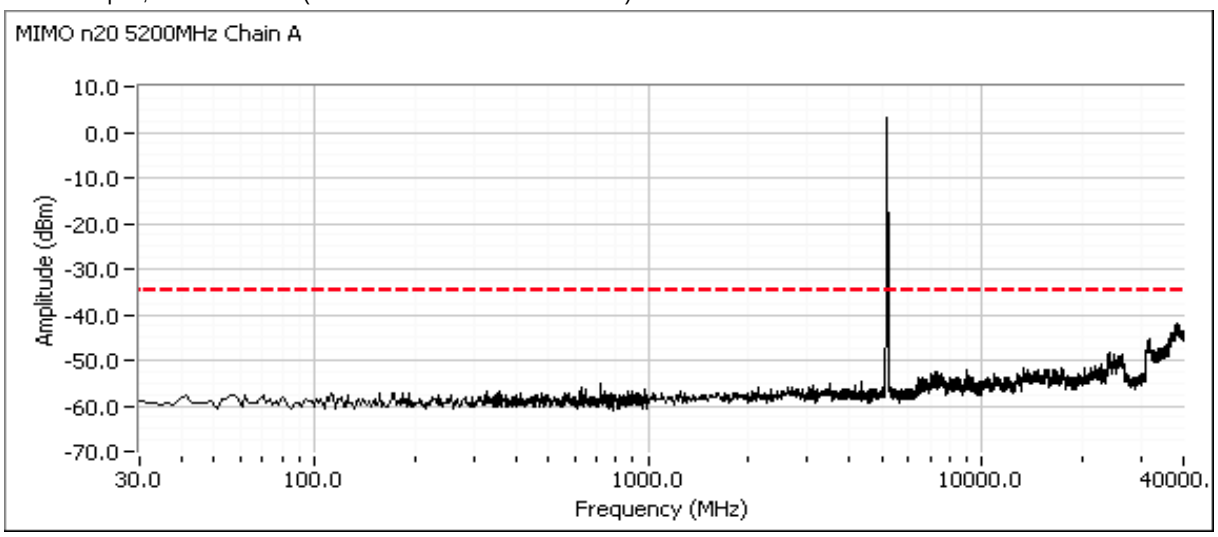


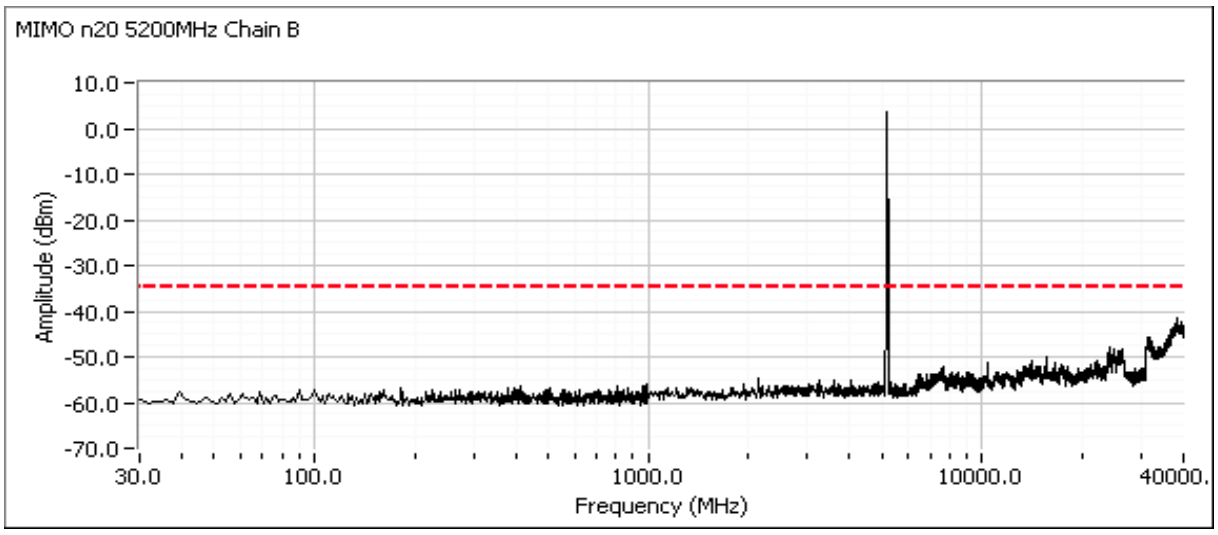


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5150 - 5250 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

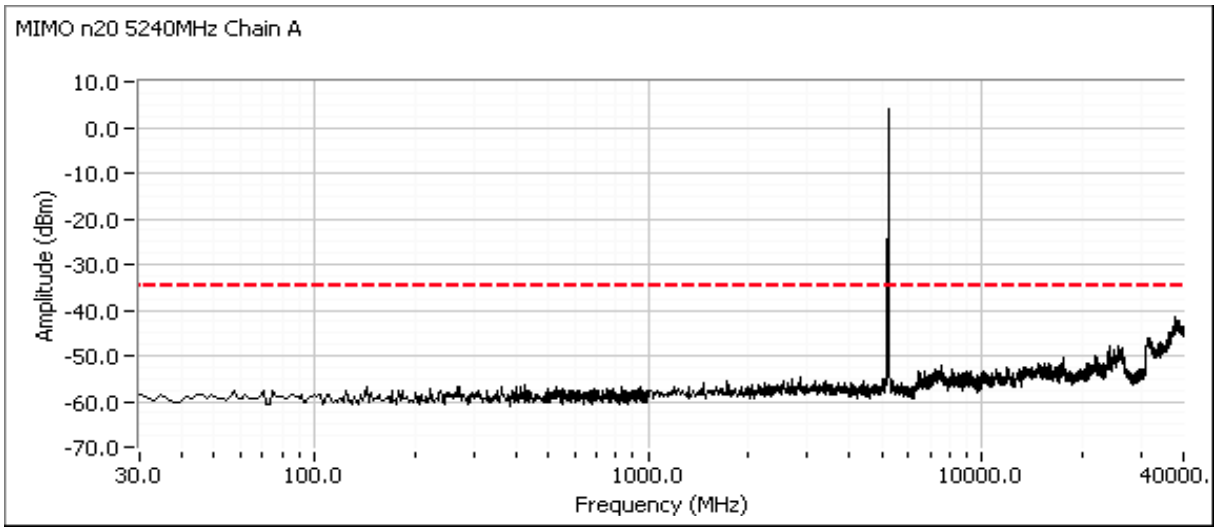


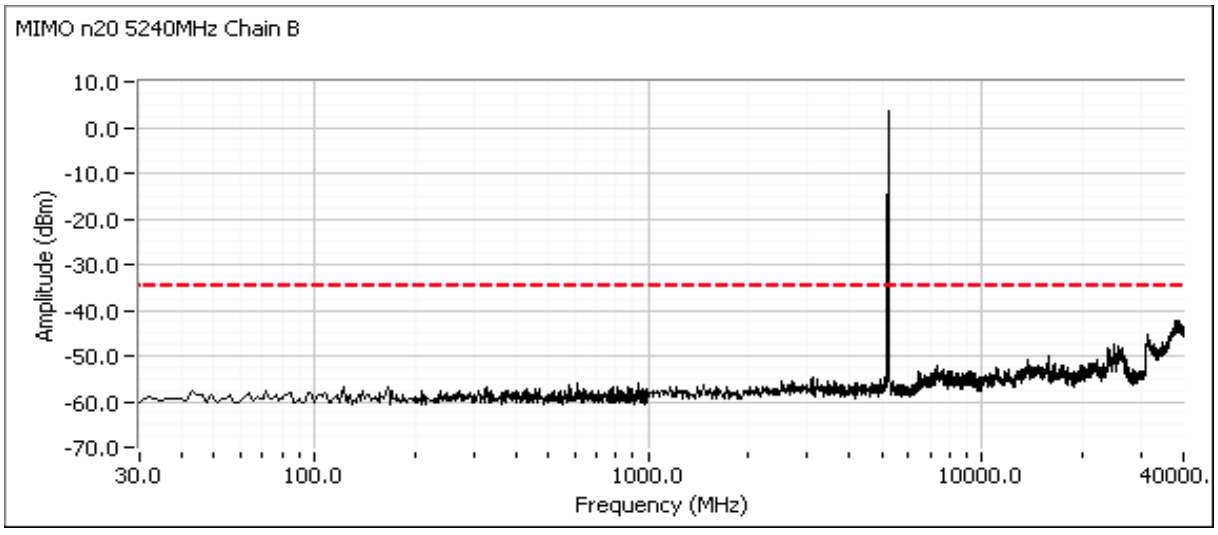


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5150 - 5250 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

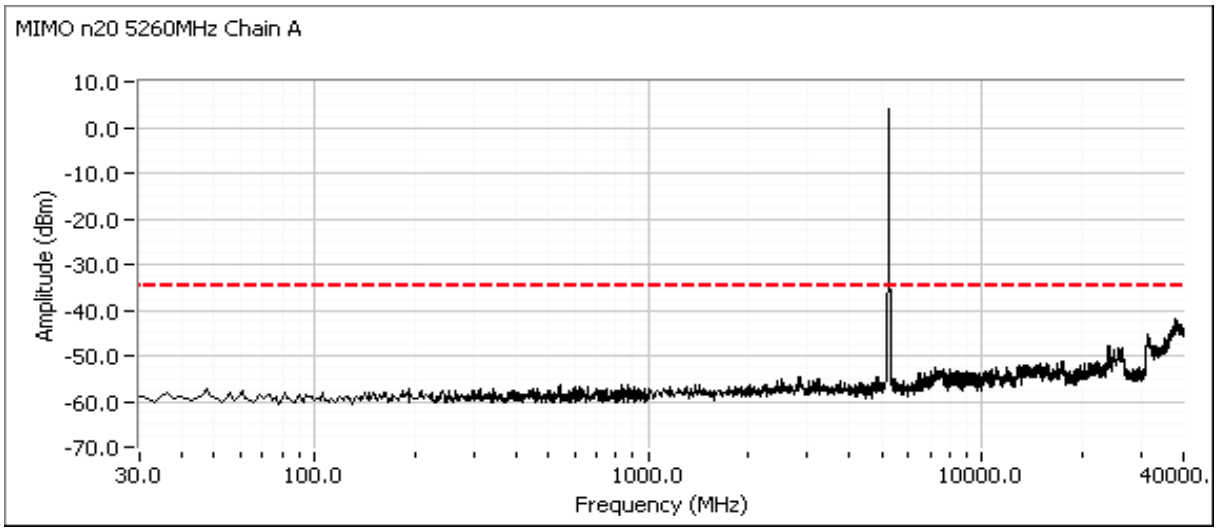


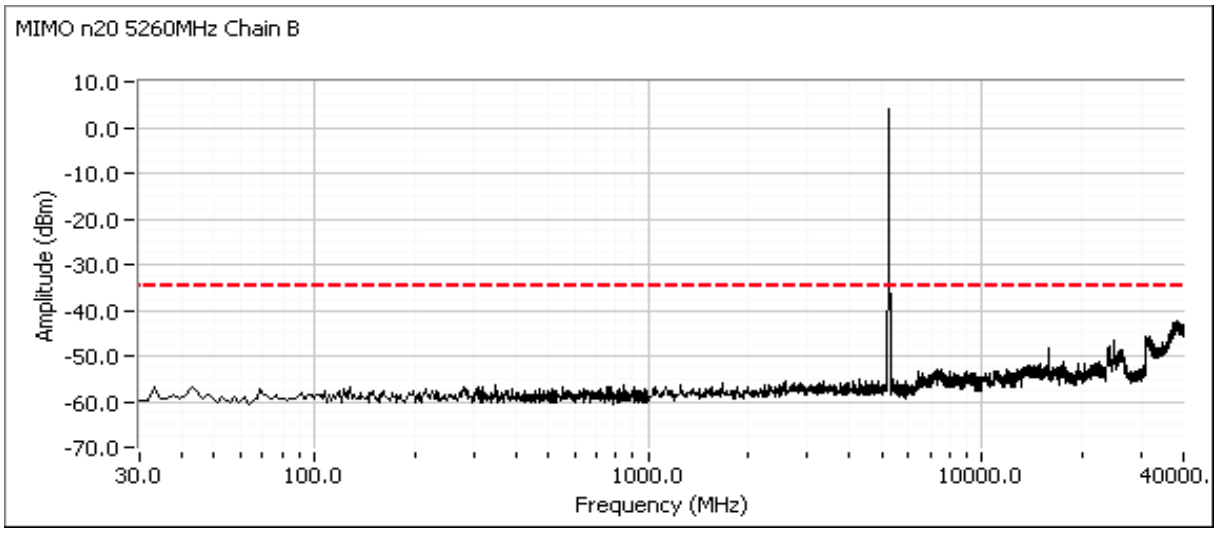


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5250 - 5350 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

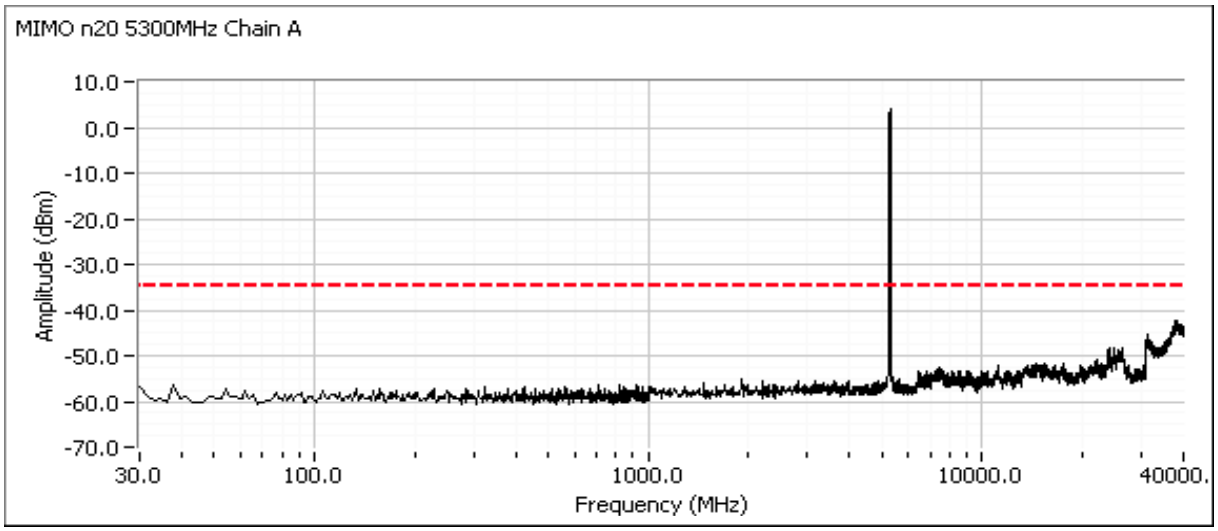


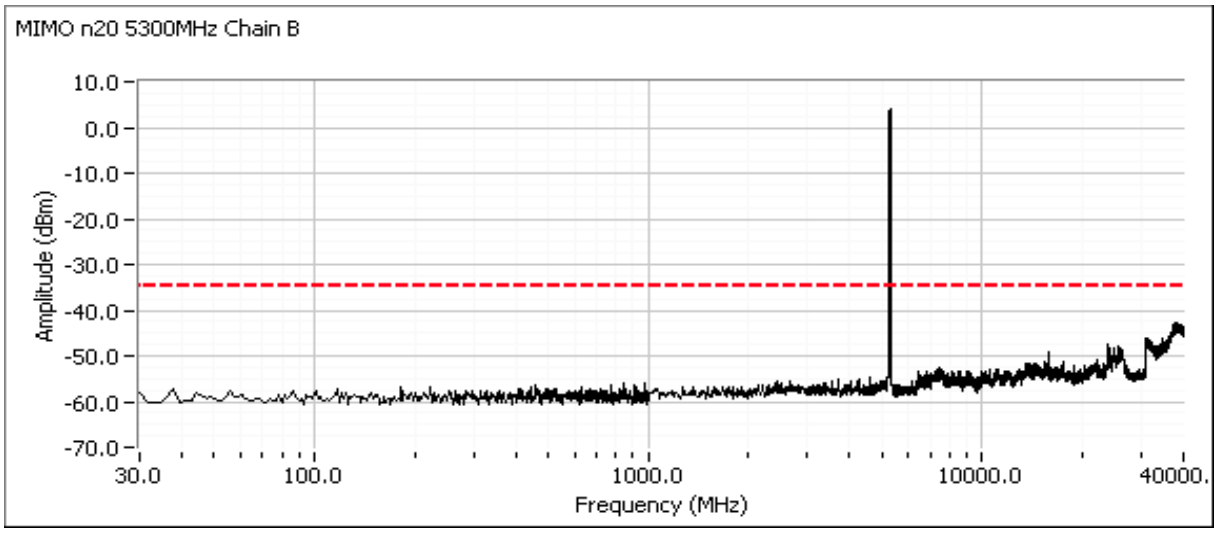


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Center channel, 5250 - 5350 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

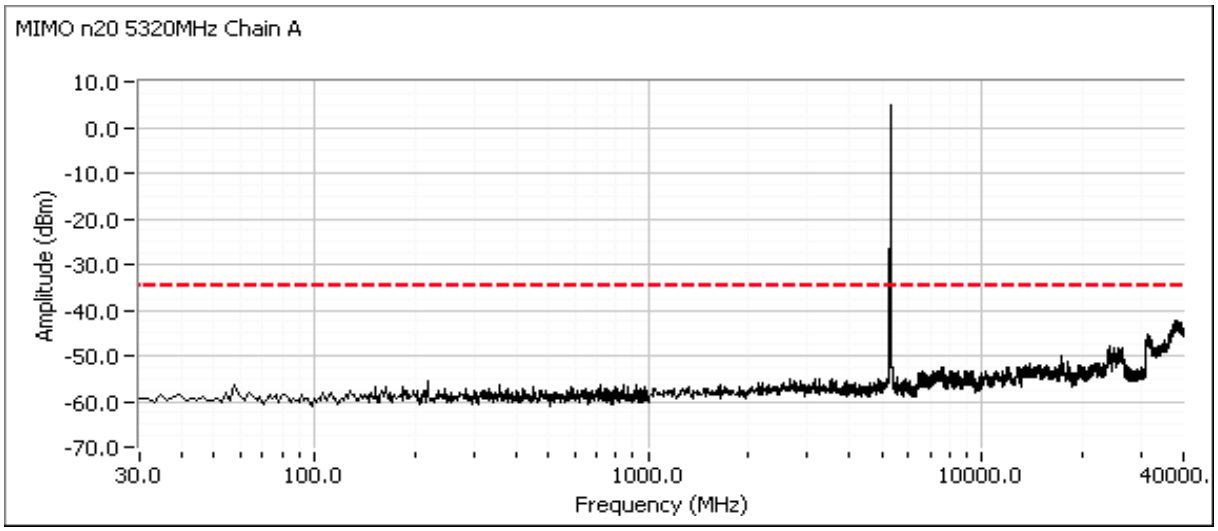


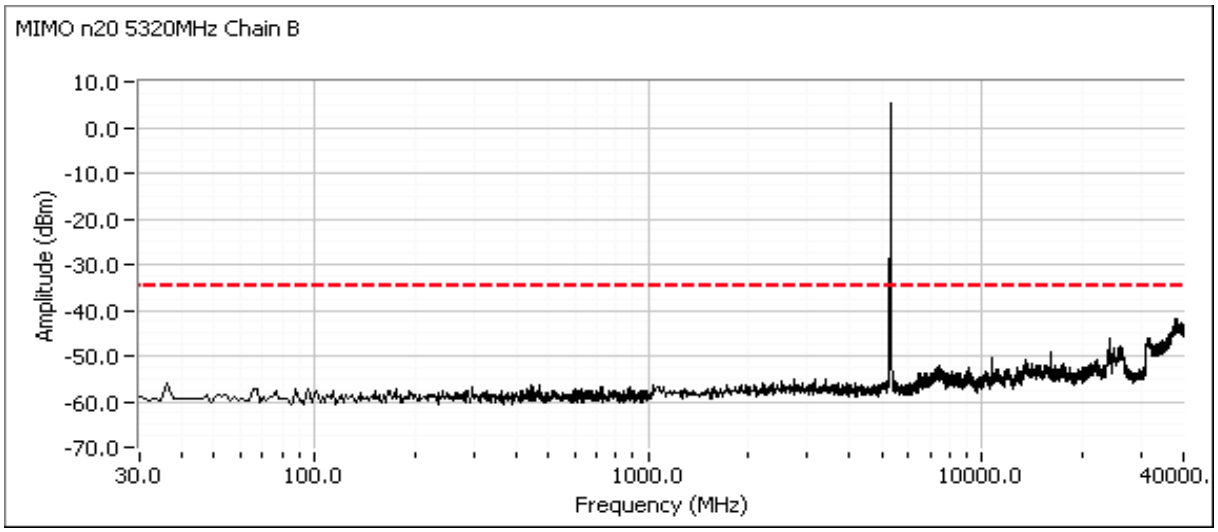


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5250 - 5350 MHz Band

Note - compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.

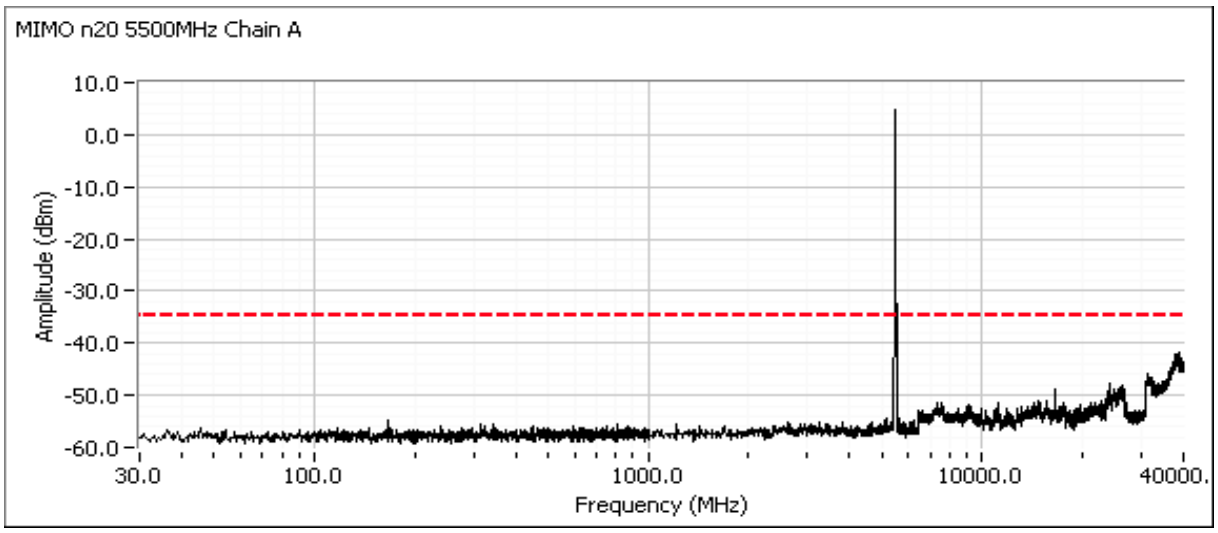


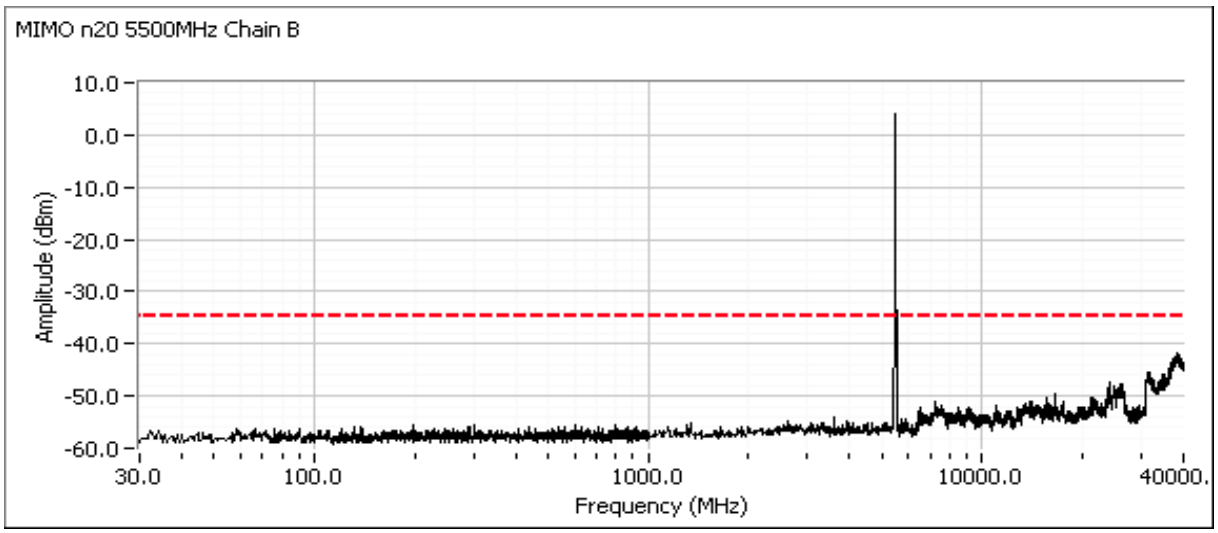


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5470 - 5725 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

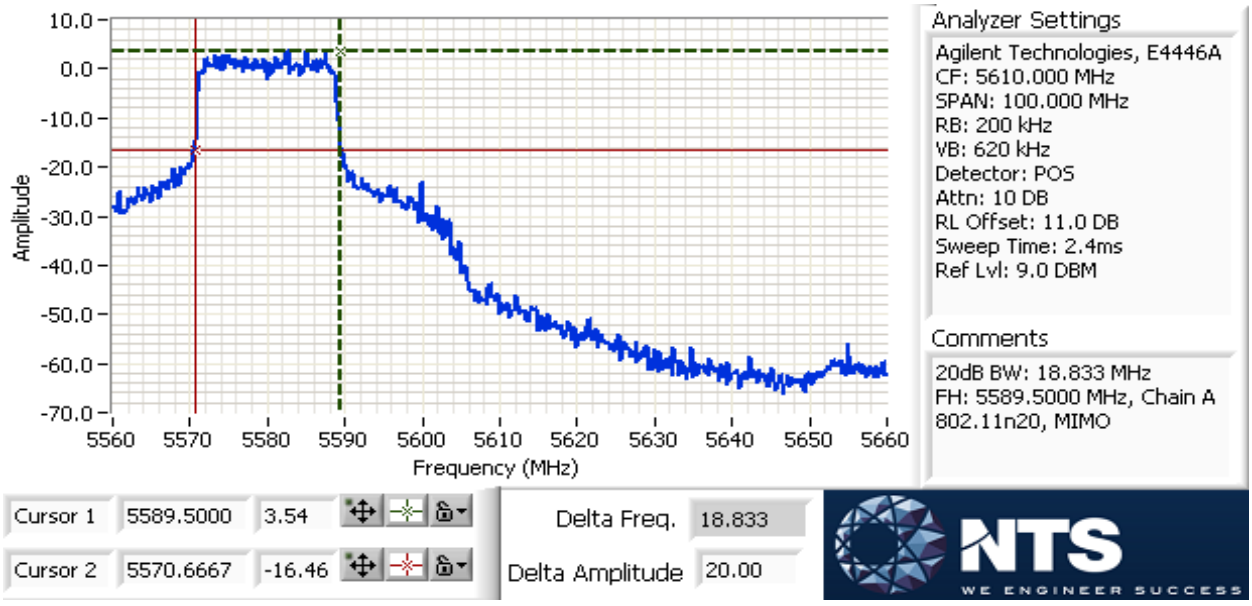


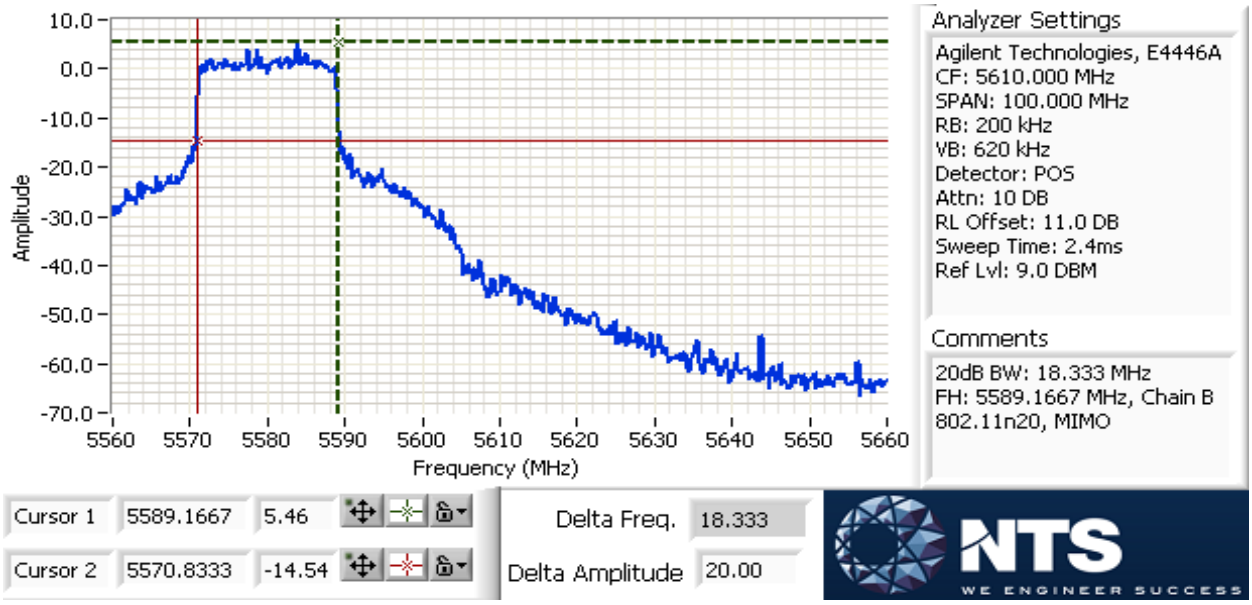


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Middle channel, 5470 - 5725 MHz Band

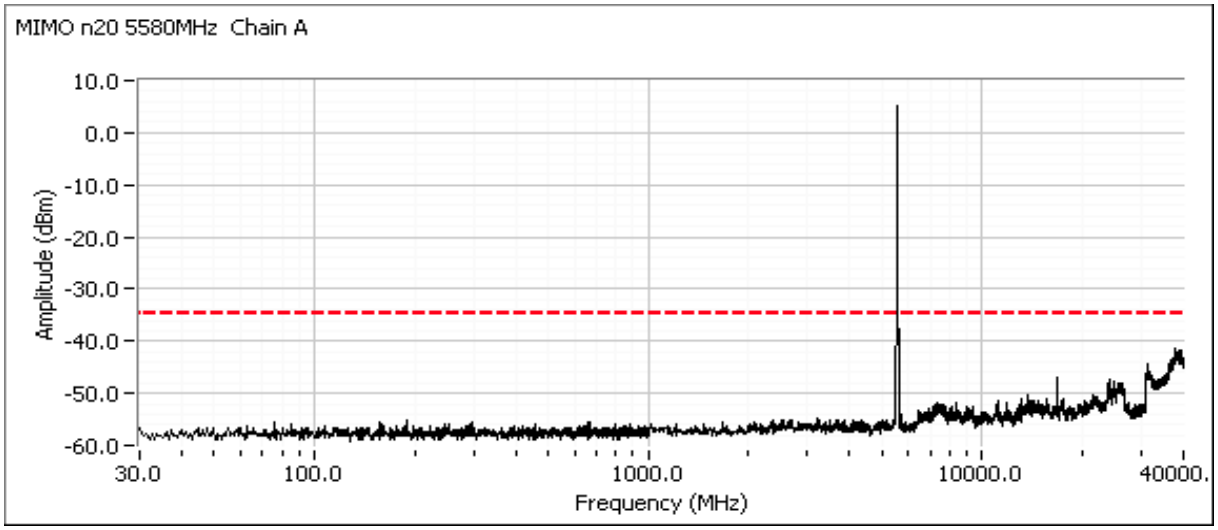
For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.

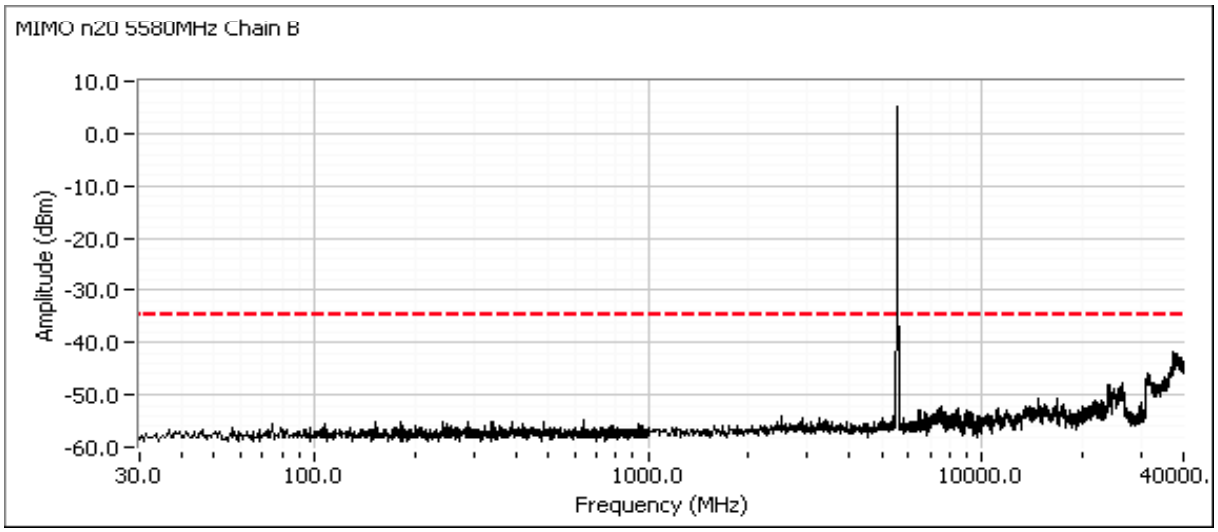




Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

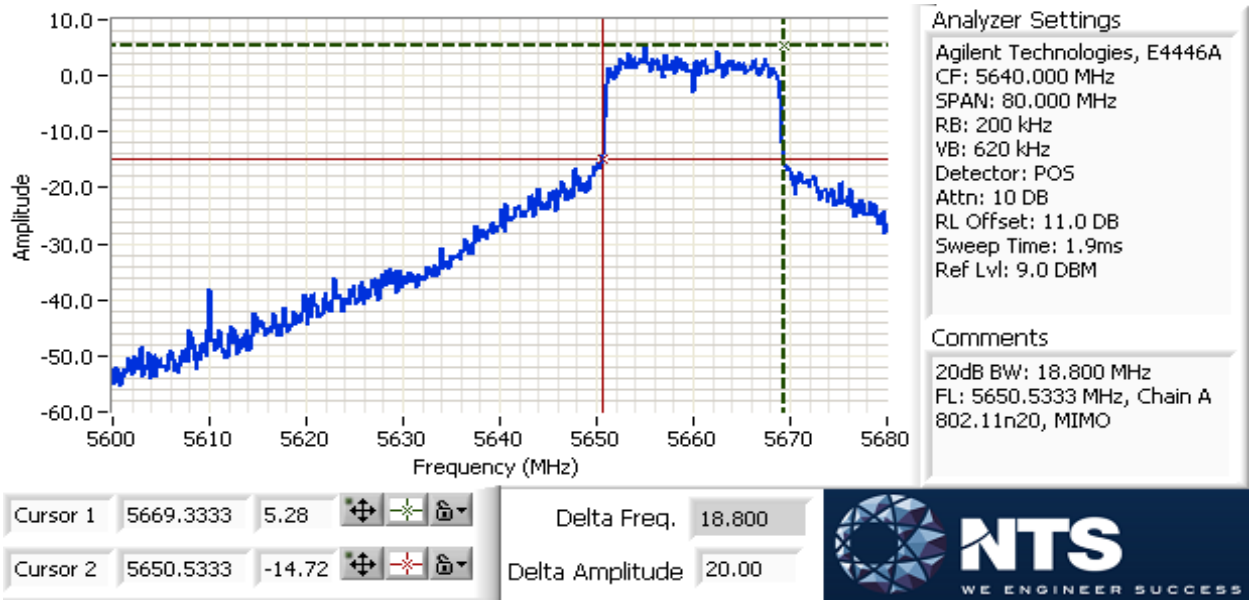


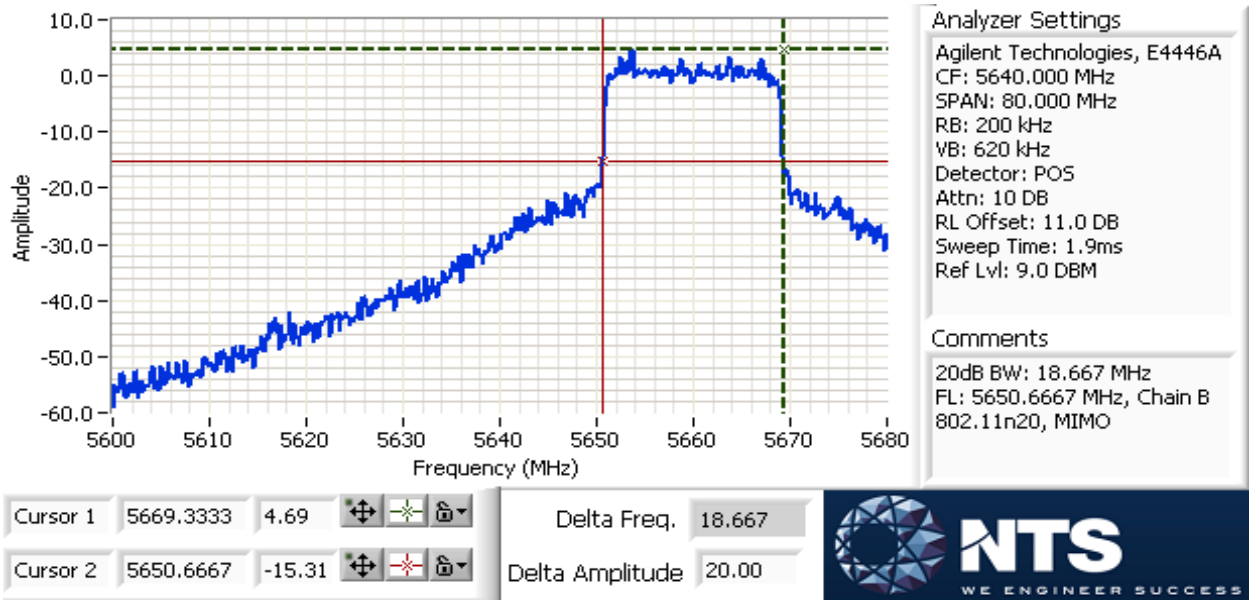


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.

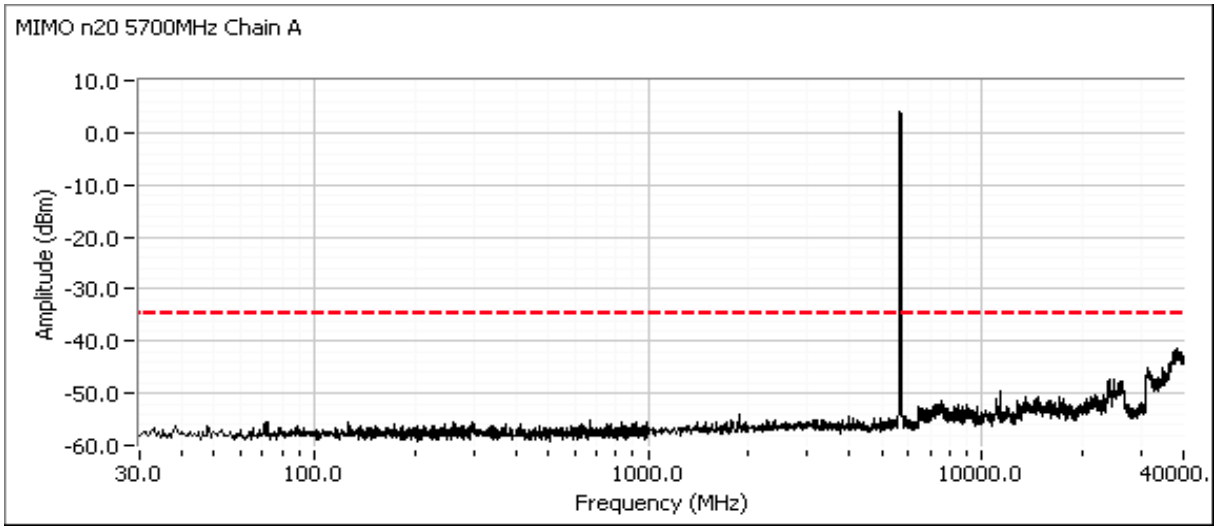


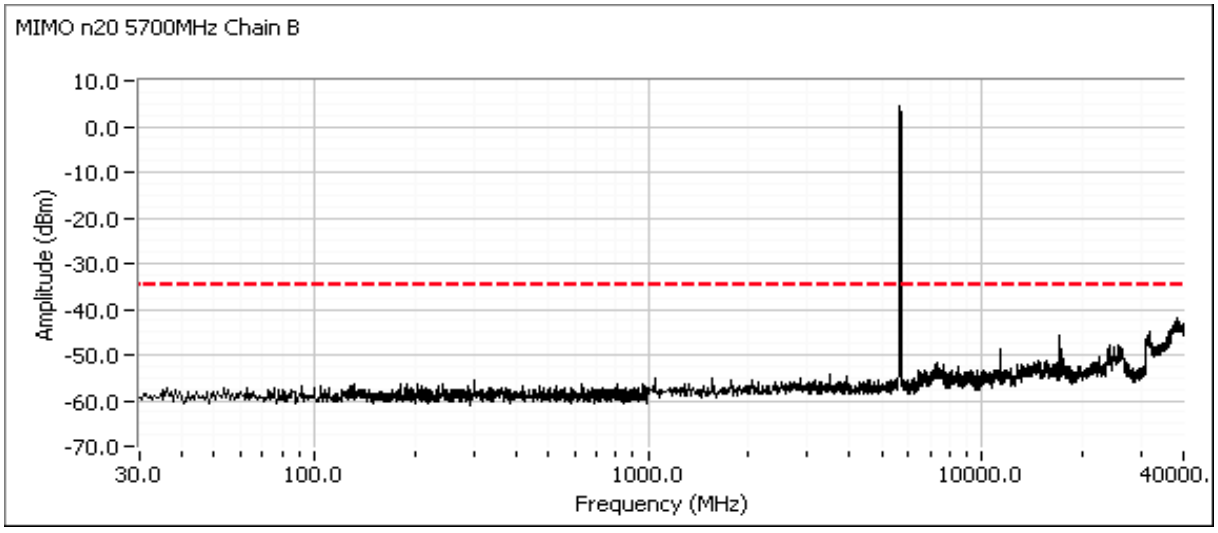


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5470 - 5725 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).





Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

n40 Mode

MIMO Devices: Antenna gain used is the effective gain calculated in the power section of this data sheet. The plots were obtained for each chain individually and the limit was adjusted to account for all chains transmitting simultaneously

Number of transmit chains:	2		
Maximum Antenna Gain:	4.8	dBi	
Spurious Limit:	-27.0	dBm/MHz eirp	
Adjustment for 2 chains:	-3.0	dB adjustment for multiple chains.	
Limit Used On Plots [Note 1]:	-34.8	dBm/MHz	Peak Limit (RB=VB=1MHz)

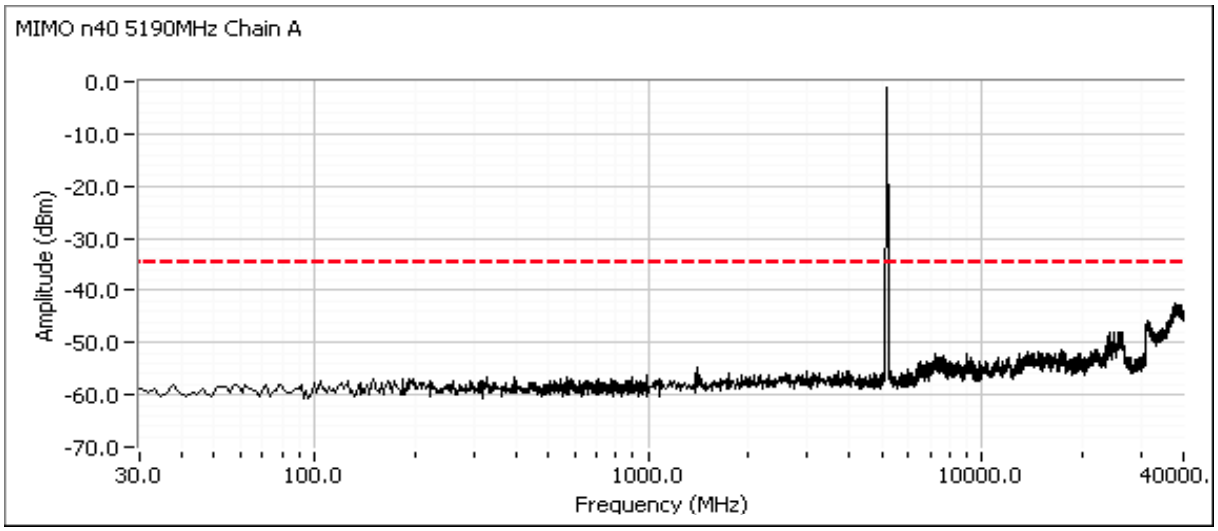
Note 1:	The -27dBm/MHz limit is an eirp limit. The limit for antenna port conducted measurements is adjusted to take into consideration the maximum antenna gain (limit = -27dBm - antenna gain). Radiated field strength measurements for signals more than 50MHz from the bands and that are close to the limit are made to determine compliance as the antenna gain is not known at these frequencies.
Note 2:	All spurious signals below 1GHz are measured during digital device radiated emissions test.
Note 3:	Signals within 10MHz of the 5.725 or 5.825 Band edge are subject to a limit of -17dBm EIRP
Note 4:	If the device is for outdoor use then the -27dBm eirp limit also applies in the 5150 - 5250 MHz band.
Note 5:	Signals that fall in the restricted bands of 15.205 are subject to the limit of 15.209.

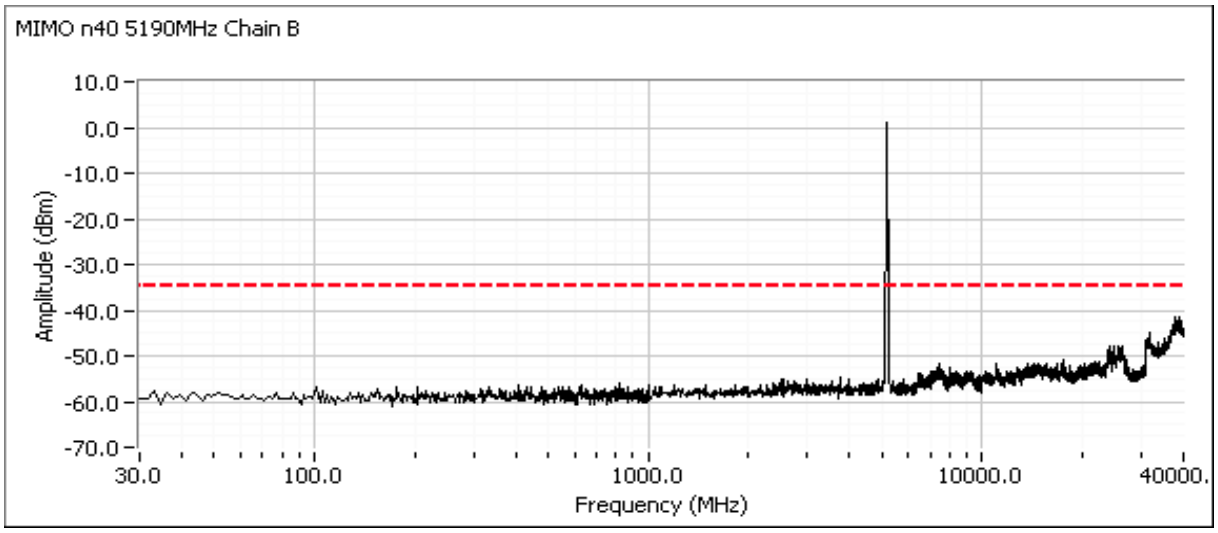
Plots Showing Out-Of-Band Emissions (RBW=VBW=1MHz)

Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5150 - 5250 MHz Band

Compliance with the radiated limits for the restricted band immediately below 5150MHz is demonstrated through the radiated emissions tests.

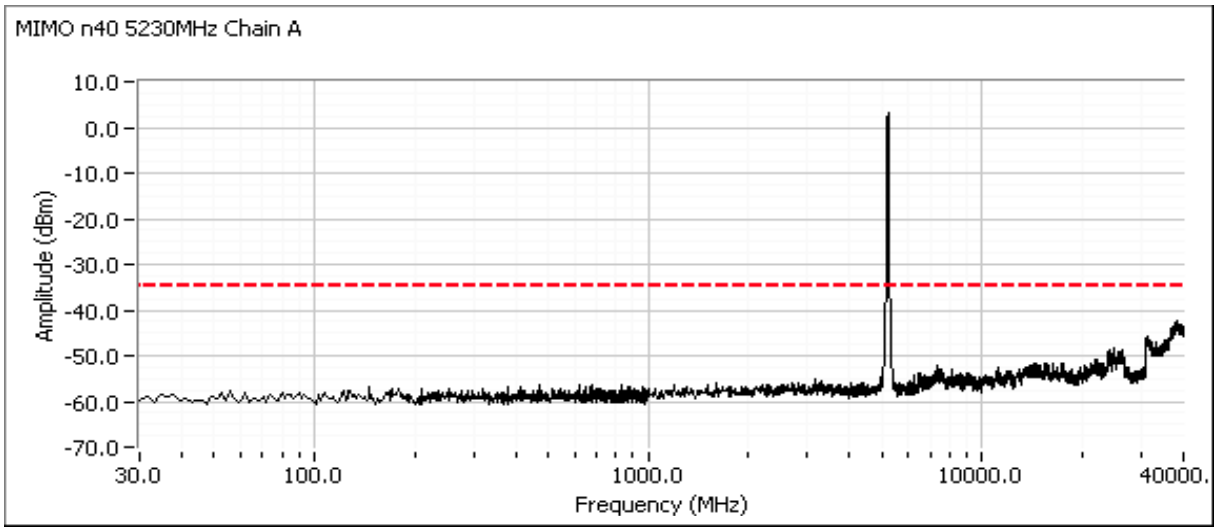


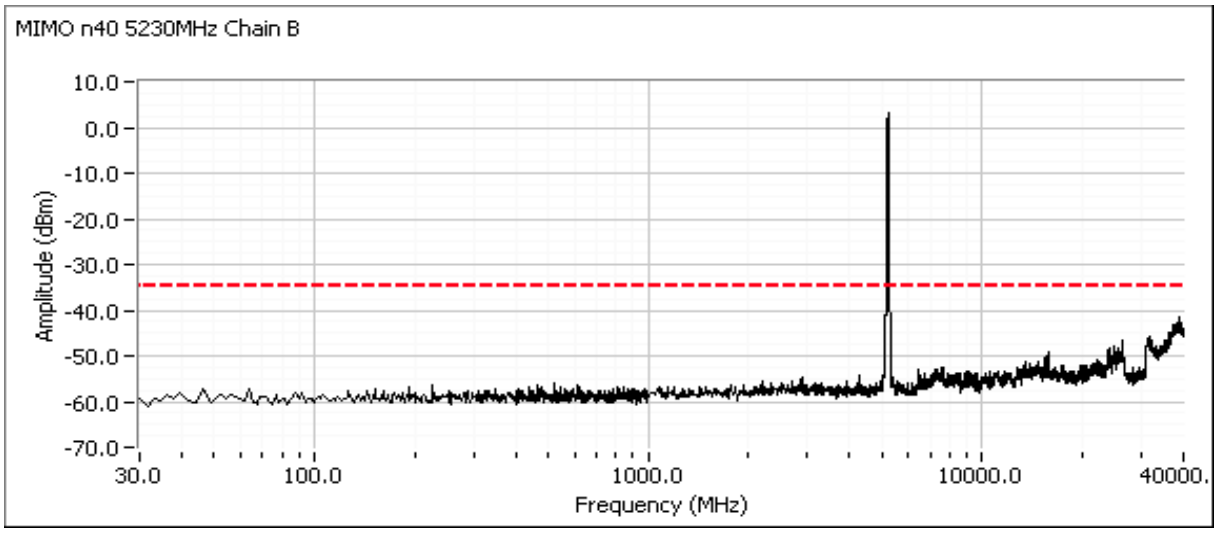


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5150 - 5250 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

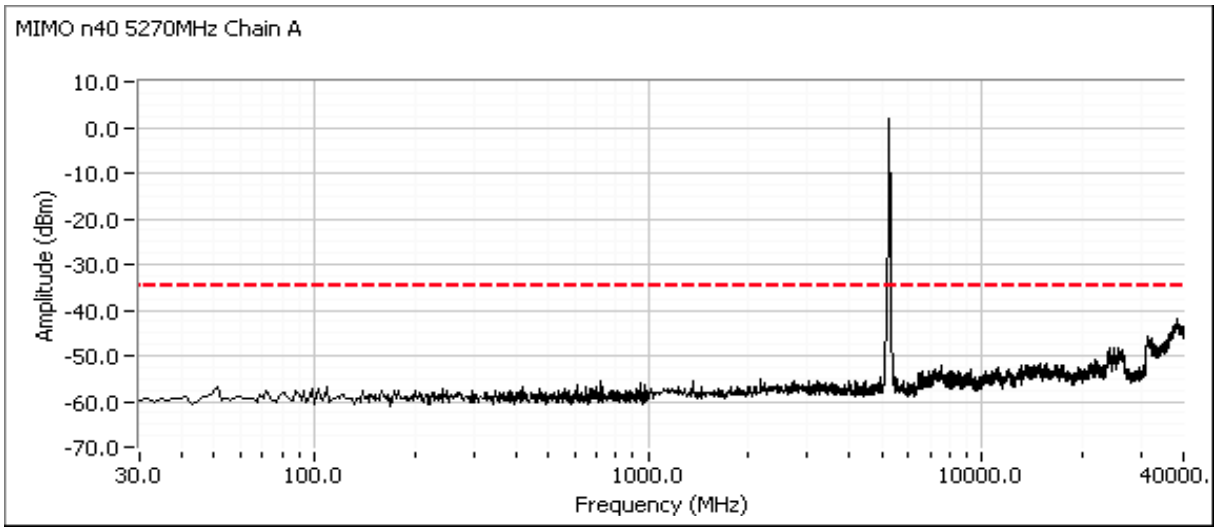


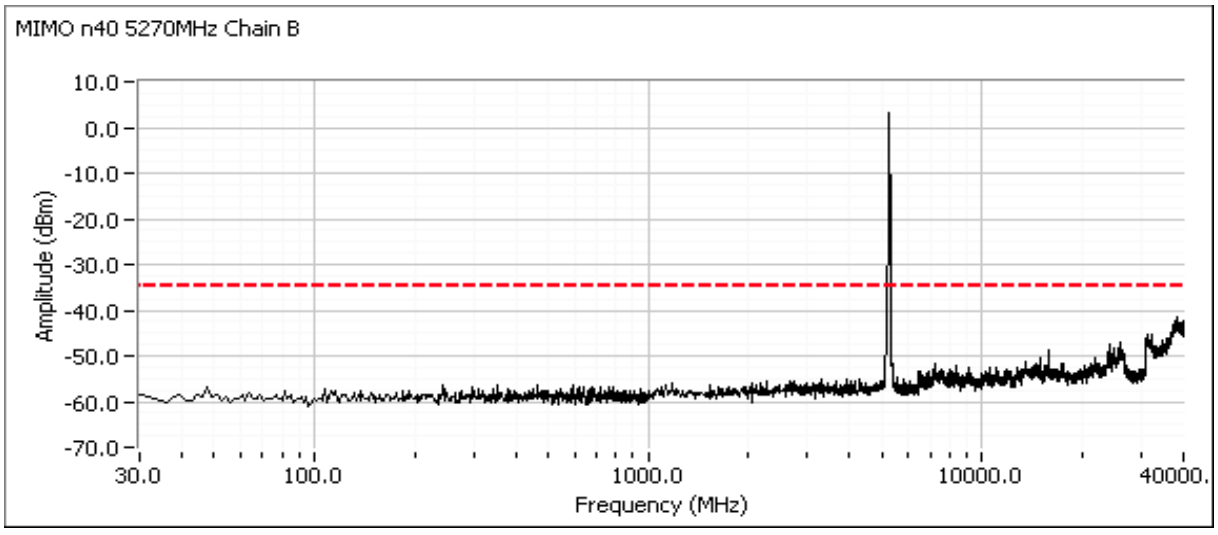


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5250 - 5350 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

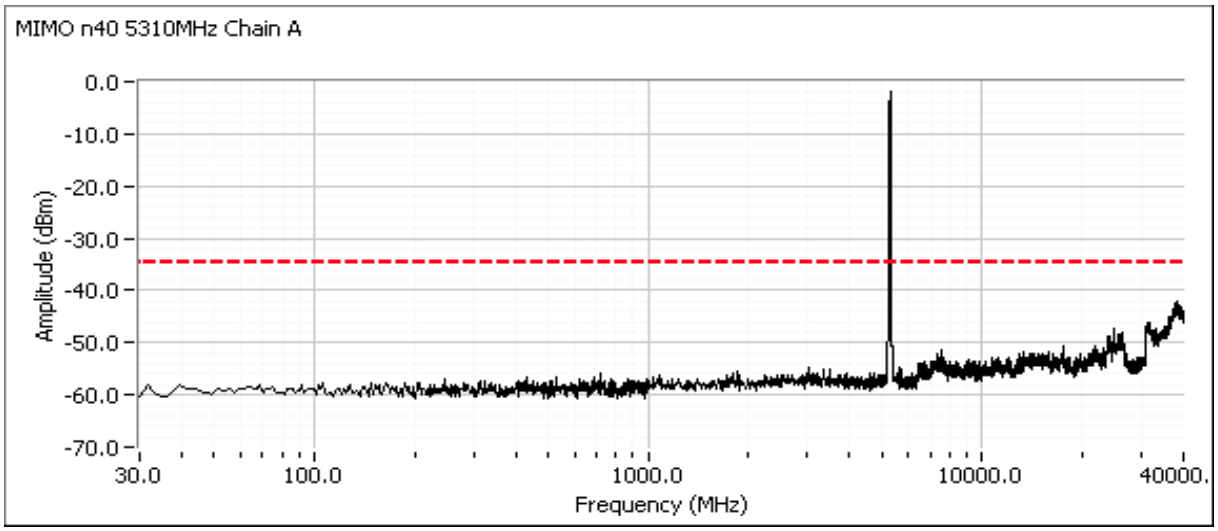


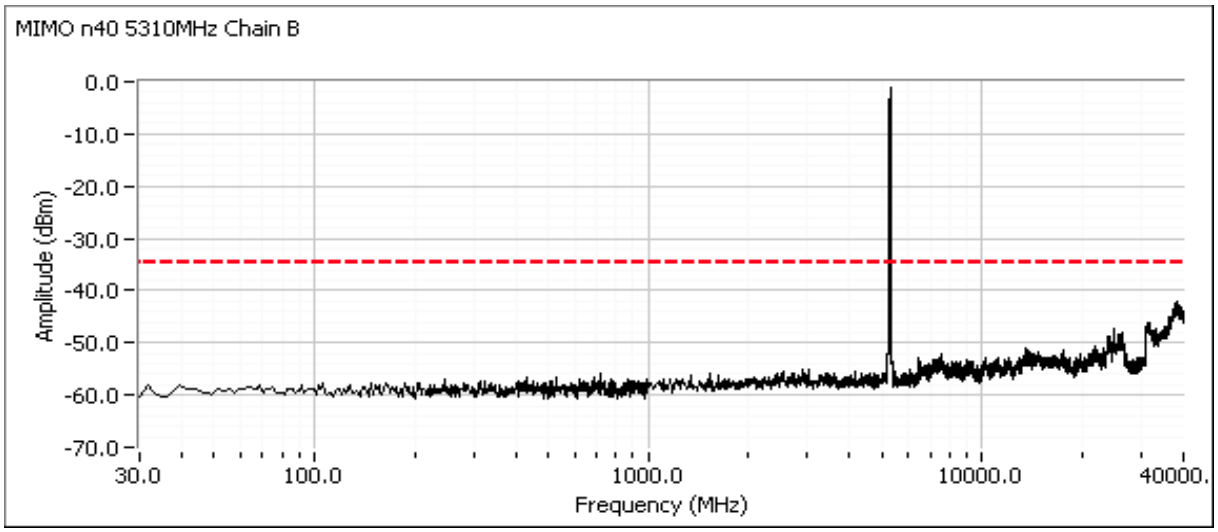


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5250 - 5350 MHz Band

Note - compliance with the radiated limits for the restricted band immediately above 5350MHz is demonstrated through the radiated emissions tests.

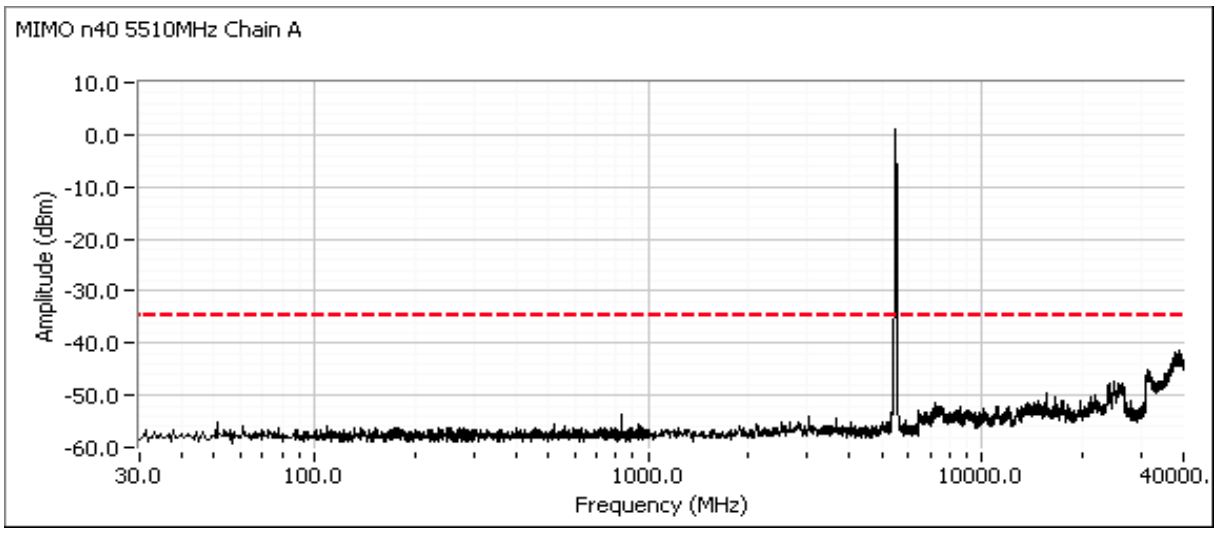


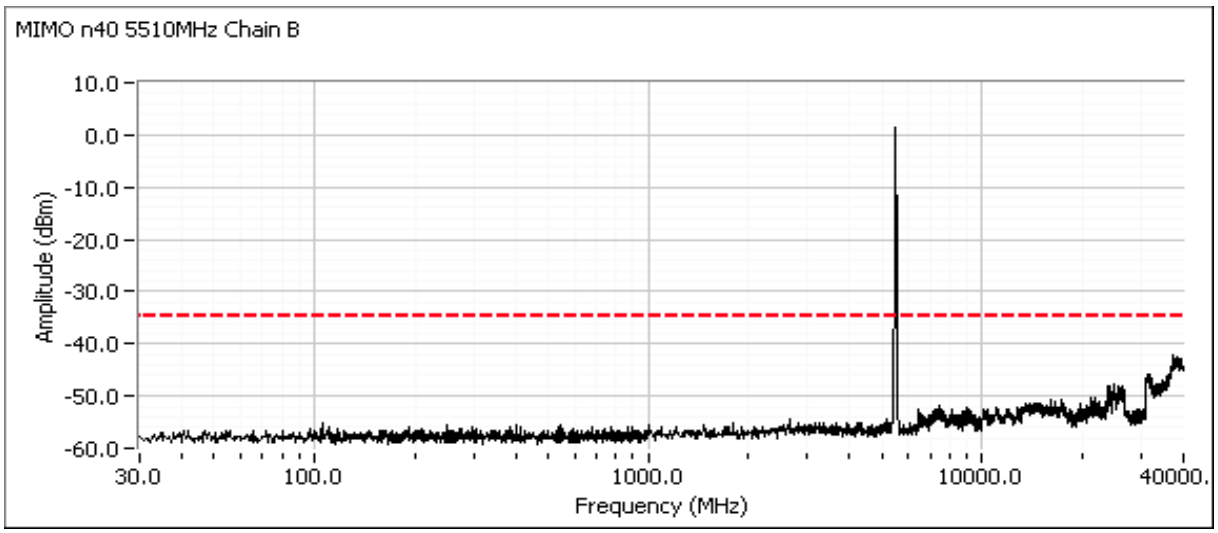


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Low channel, 5470 - 5725 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

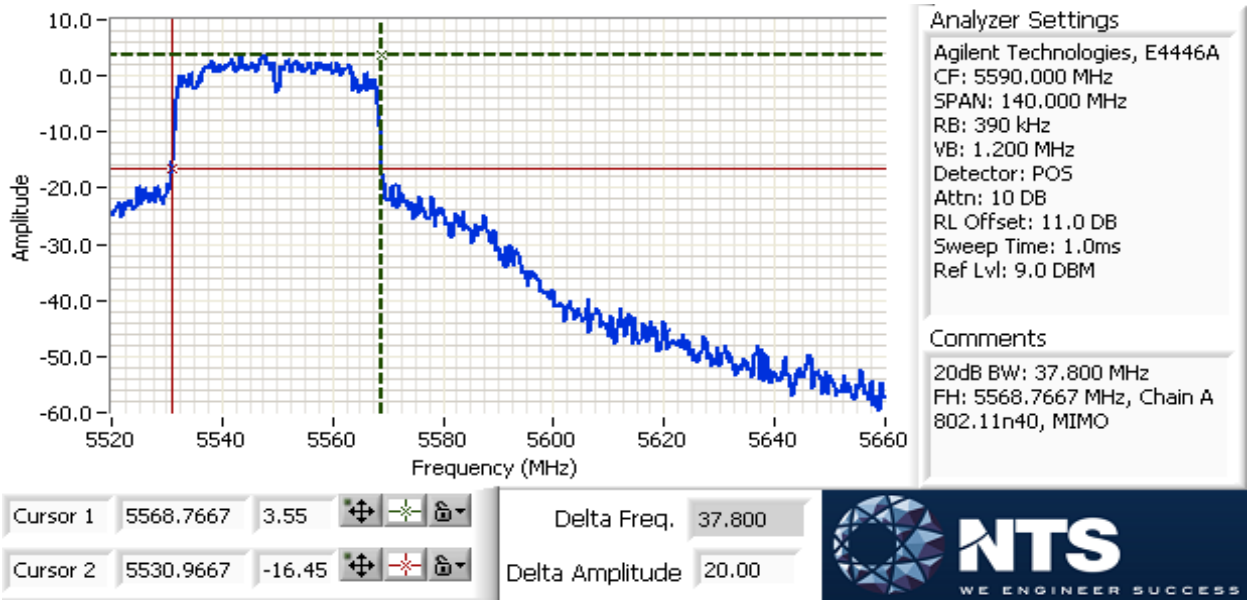


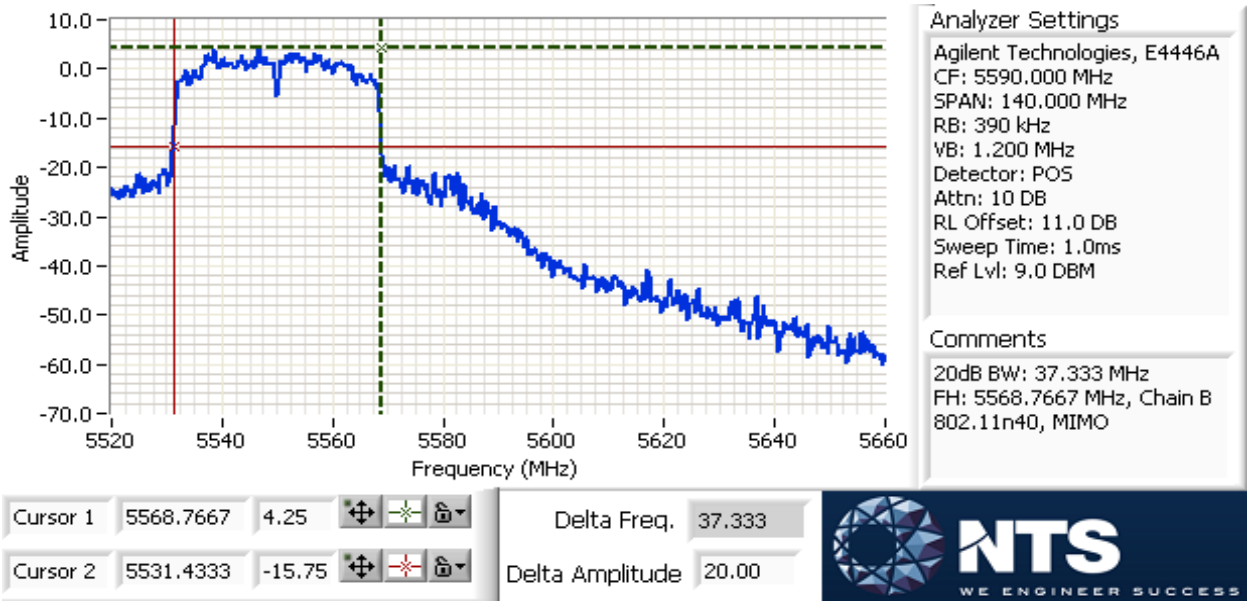


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Middle channel, 5470 - 5725 MHz Band

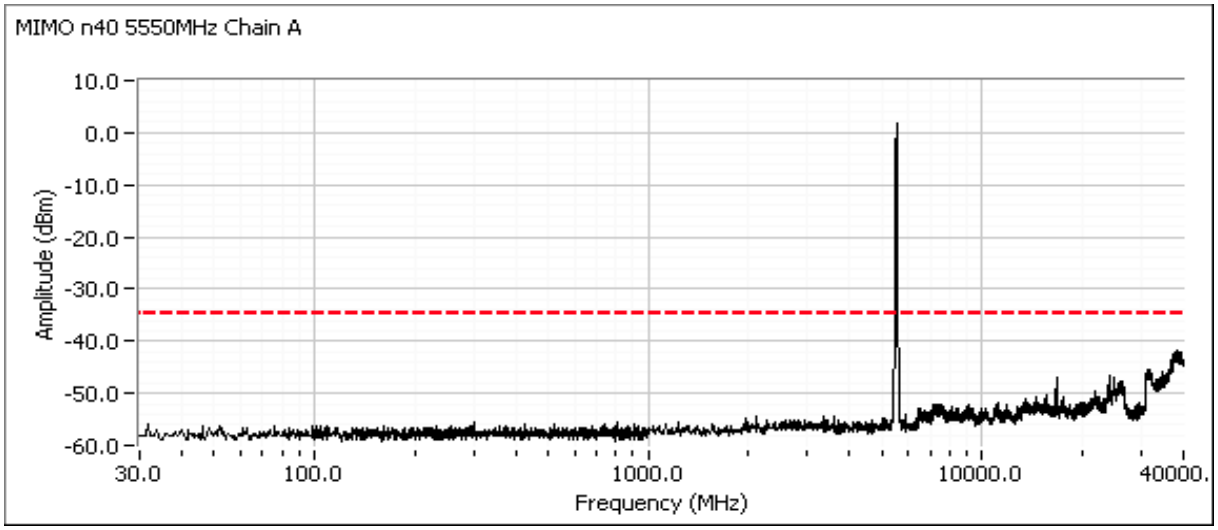
For master devices - This plot is showing hat the 20dB bandwidth of the channel closest to 5600 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.

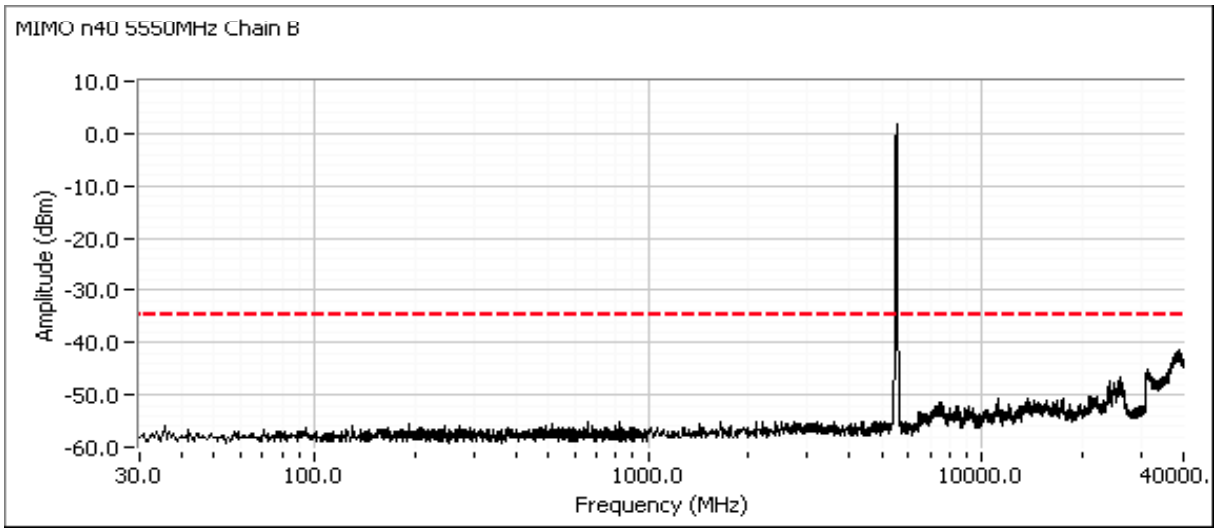




Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).

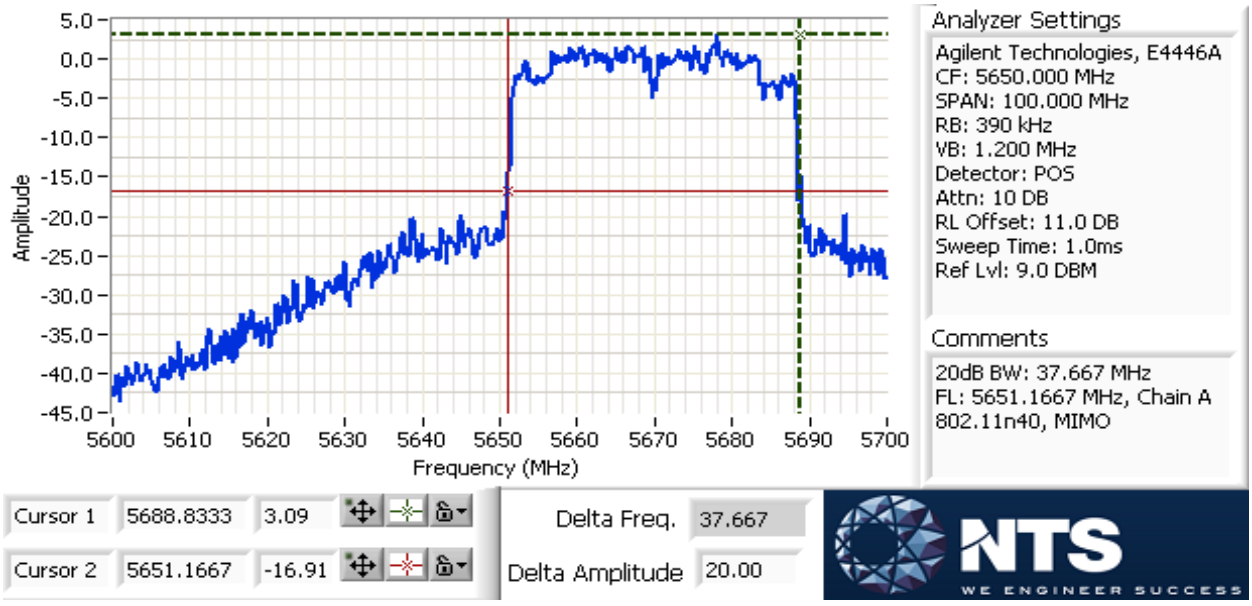


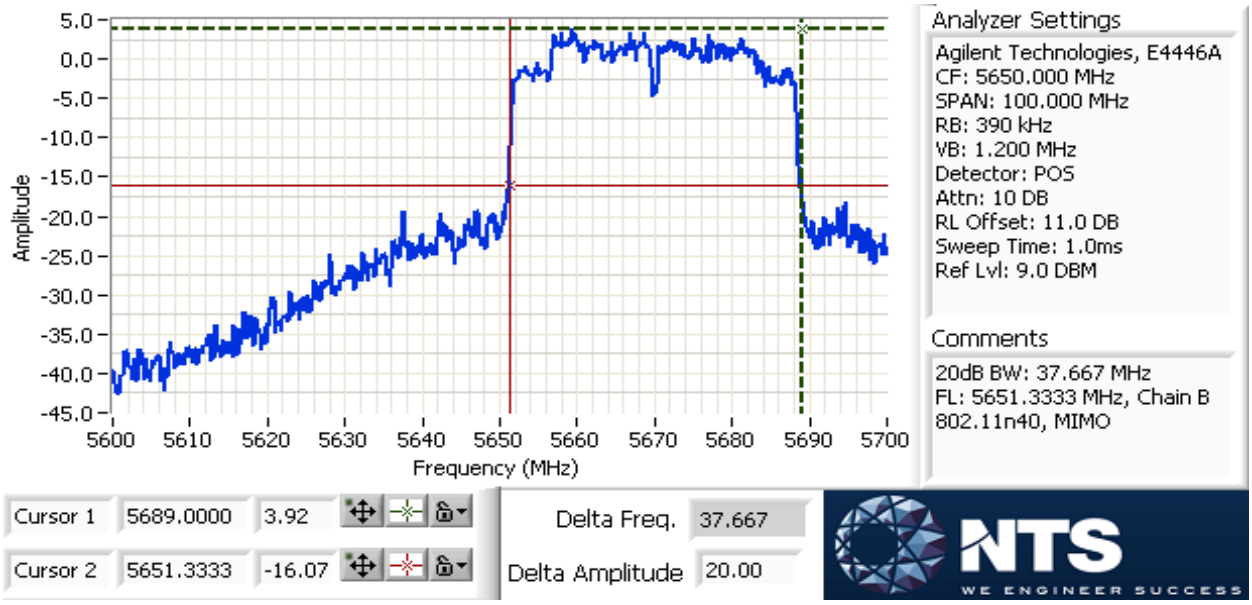


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

Channel adjacent to 5650 MHz (Master Device)

Plots showing that the 20dB bandwidth of the channel closest to 5650 MHz does not spill into the 5600-5650 MHz band. RB > 1% of span.

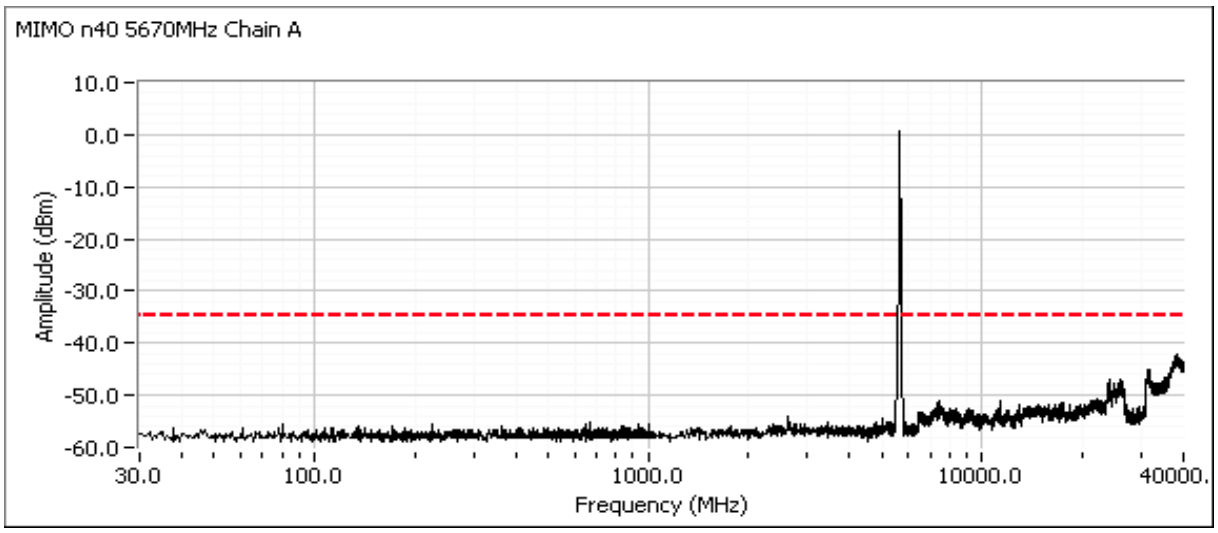


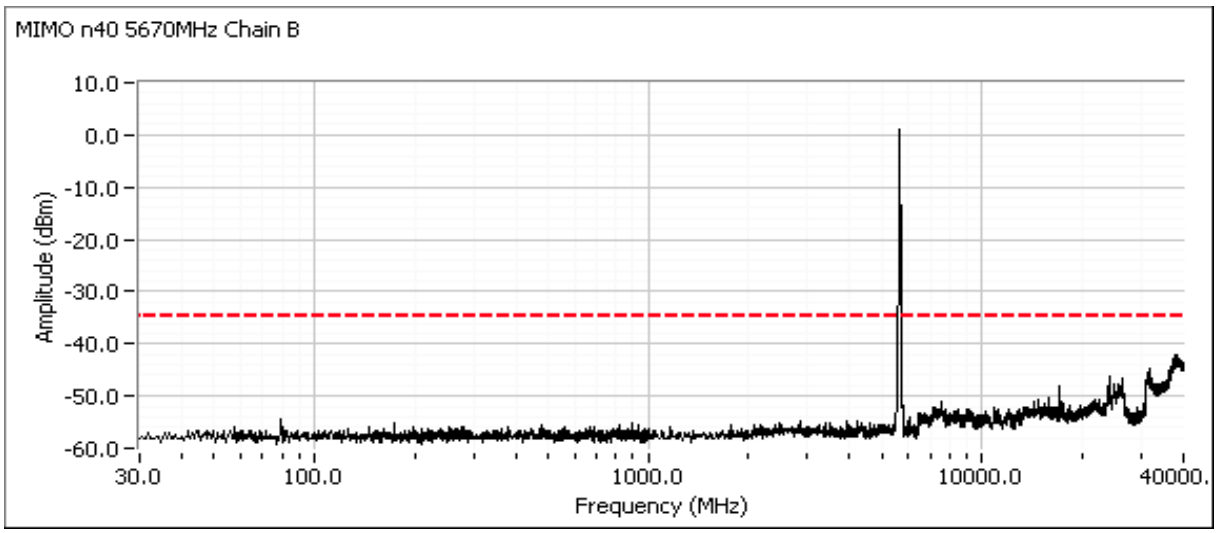


Client:	Intel Corporation	Job Number:	J87129
Product:	Intel® Centrino® Advanced-N 6235	T-Log Number:	T87656
		Account Manager:	Christine Krebill
Contact:	Steve Hackett		
Standard:	FCC 15.247, 15.407	Class:	N/A

High channel, 5470 - 5725 MHz Band

Wide-band plot, RB=VB=1MHz (Peak measurements versus limit).





End of Report

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